Occupational Analyses Series

Electronics Technician

- Consumer Products

1997

Standards, Planning and Analysis

Human Resources Partnerships Directorate

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Direction des partenariats en ressources humaines

Technicien/technicienne en électronique - Produits du consommateur et de la consommatrice

The Canadian Council of Directors of Apprenticeship (CCDA) recognizes this occupational analysis as the national standard for the occupation of electronics technician - consumer products.

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Brunswick
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This analysis was prepared by the Human Resources Partnerships Directorate. The planning, coordination and processing of the analysis were undertaken by staff members of the Standards, Planning and Analysis Division.

OTHER RELATED OCCUPATIONAL TITLES

This analysis covers tasks found in the occupation having the following names, as identified by the different provinces and territories of Canada:

Radio and TV Service Technician Electronic Technician

TITLE	NOC ^{**} Code
Appliance Service Technician (1997)	7332
Aquaculture Technician (1977)	2221
Arts Administrator (1989)	0114
Automotive Painter (1995)	7322
Automotive Service Technician (1995)	7321
Automotive Technician - Automatic Transmission (1990)	7321
Automotive Technician - Electrical/Electronics (1992)	7321
Automotive Technician - Engine Repair and Fuel Systems (1989)	7321
Automotive Technician - Front-End (1989)	7321
Automotive Technician - Manual Transmission, Driveline and Brakes (1990)	7321
Aviation Machinist (1994)	7231
Baker (1997)	6252
Blaster (Surface) (1987)	7372
Boilermaker (1994)	7262
Bricklayer (1993)	7281
Cabinetmaker (1992)	7272
Carpenter (1993)	7271
Cement Finisher (1995)	7282
Construction Electrician (1994)	7241
Cook (1997)	6242
Electrical Mechanic (1981)	7333
Electronics Technician - Consumer Products (1997)	2242
Electronics Technician Vol. I (1986) (Video Equipment)	2242

LIST OF PUBLISHED OCCUPATIONAL ANALYSES *

* Red Seal analyses are indicated in bold

** National Occupational Classification

Electronics Technician Vol. II (1986) (Audio Equipment)	2242
Electronics Technician Vol. III (1986) (Computer Equipment)	2242
Electronics Technician Vol. IV (1986) (Office Equipment)	2242
Electronics Technician Vol. VI (1986) (Communication Equipment)	2242
Electronics Technician Vol. VII (1986) (Signaling Equipment)	2242
Electronics Technician Vol. VIII (1986) (Navigation Equipment)	2242
Electronics Technician Vol. IX (1986) (Video Game Equipment)	2242
Electronics Technician Vol. X (1987) (CADD Equipment)	2242
Electronics Technician Vol. XI (1987) (CAM Equipment)	2242
Electronics Technician Vol. XII (1987) (Robotics Equipment)	2242
Electronics Technician Vol. XIII (1987) (Biomedical and Laboratory Equipment)	2242
Electronics Technician Vol. XIV (1987) (Industrial Process-Control Equipment)	2243
Farm Equipment Mechanic (1994)	7312
Floorcovering Installer (1997)	7295
Glazier (1994)	7292
Hairstylist (1997)	6271
Heating (Gas and Oil) Servicer - Commercial and Industrial (1978)	7331
Heavy Equipment Mechanic (1987)	7312
Heavy Equipment Operator (1983)	7421
Industrial Electrician (1997)	7242
Industrial Instrument Mechanic (1988)	2243
Industrial Mechanic (Millwright) (1996)	7311
Insulator (Heat and Frost) (1993)	7293
Ironworker (Generalist) (1993)	7264

Lather (Interior Systems Mechanic) (1994)	7284
Logistics (1992)	0713
Machinist (1992)	7231
Major Electrical Appliance Repairer (1984)	7332
Mobile Crane Operator (1997)	7371
Motorcycle Mechanic (1995)	7334
Motor Vehicle Body Repairer (Metal and Paint) (1997)	7322
Motor Vehicle Repairer (Truck and Transport) (1983)	7321
New Home Builder and Residential Renovation Contractor (1992)	0712
Oil Burner Mechanic (1997)	7331
Painter and Decorator (1993)	7294
Partsperson (1995)	1472
Plumber (1996)	7251
Power Engineer (1997)	7351
Powerline Technician (1996)	7244
Refrigeration and Air Conditioning Mechanic (1997)	7313
Roofer (1997)	7291
Sheet Metal Worker (1997)	7261
Sprinkler System Installer (1995)	7252
Steamfitter-Pipefitter (1996)	7252
Steel Fabricator (Fitter) (1994)	7263
Tool and Die Maker (1997)	7232
Truck-Trailer Repairer (1994)	7321
Welder (1996)	7265

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FOREWORD

The first National Conference on Apprenticeship in Trades and Industries, held in Ottawa in 1952, recommended that the federal government be requested to co-operate with provincial apprenticeship committees and officials in preparing analyses of a number of skilled occupations. To this end, Human Resources Development Canada sponsors a program, under the guidance of the Canadian Council of Directors of Apprenticeship (CCDA), to develop a series of occupational analyses.

The Occupational Analysis Program has the following objectives:

- to identify and group the tasks performed by skilled workers in particular occupations;
- to identify those tasks that are performed by skilled workers in every province and territory;
- to develop instruments for use in the preparation of interprovincial standards "Red Seal" examinations and curricula for training leading to the certification of skilled workers;
- to facilitate the mobility, in Canada, of trainees and skilled workers; and
- to supply employers and employees, and their associations, industries, training institutions and governments with analyses of the tasks performed in particular occupations.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	i
OTHER RELATED OCCUPATIONAL TITLES	ii
LIST OF PUBLISHED OCCUPATIONAL ANALYSES	iii
FOREWORD	vii

Guide to Analysis

DEVELOPMENT OF ANALYSIS	XV
STRUCTURE OF ANALYSIS	xv
VALIDATION METHOD	xvi
SCOPE OF ANALYSIS	xvii
OBSERVATIONS AND TRENDS ARISING FROM ANALYSIS	xviii

Analysis

BLOCK A	SAFETY		
	Task 1	Demonstrates safe working practices and techniques.	3
BLOCK B	WORKPLAC	E PRACTICES AND PROCEDURES	
	Task 2	Follows company policies and procedures.	6
	Task 3	Applies written and oral communication skills.	8
	Task 4	Uses and maintains equipment and tools.	12
	Task 5	Disposes of equipment, components or devices	16

			<u>Page</u>
	Task 6	Upgrades skills and knowledge.	17
BLOCK C	SERVICE AU	JDIO EQUIPMENT COMPONENTS AND DEVICES	
	Task 7	Services digital and analog audio recording and playback systems and associated components.	d 19
	Task 8	Services radio receivers and transmitters.	28
	Task 9	Services musical systems and instruments.	38
	Task 10	Services audio amplification systems.	48
BLOCK D	SERVICE VI	DEO EQUIPMENT COMPONENTS AND DEVICES	
	Task 11	Services televisions.	58
	Task 12	Services video players/recorders.	69
	Task 13	Services monitors.	78
	Task 14	Services video entertainment equipment.	87
	Task 15	Services satellite receiver systems.	97
	Task 16	Services video cameras.	106
	Task 17	Services cable converters and decoders.	114
	Task 18	Services video display devices. (Large projection television screens) (NOT COMMON CORE)	124
BLOCK E		CLEPHONE ANSWERING EQUIPMENT TS AND DEVICES	
	Task 19	Services cellular phones. (NOT COMMON CORE)	135
	Task 20	Services cordless phones.	146
	Task 21	Services fax machines.	156
	Task 22	Services answering machines.	166

			Page
	Task 23	Services corded phones.	176
BLOCK F	SERVICE DEVICES	COMPUTER EQUIPMENT COMPONENTS AND	
	Task 24	Services computer monitors.	186
	Task 25	Services computer hardware.	195
	Task 26	Services printers.	204
	Task 27	Services modems. (NOT COMMON CORE)	213
BLOCK G	SERVICE APPLIANO	MICROWAVE EQUIPMENT COMPONENTS AND CES	
	Task 28	Services microwave ovens.	213
	Task 29	Services microwave clothes dryers. (NOT COMMON CORE)	233
BLOCK H	SERVICE AND DEVI	REMOTE CONTROL EQUIPMENT COMPONENTS ICES	
	Task 30	Services radio frequency remote control devices.	244
	Task 31	Services infrared remote control devices.	254
BLOCK I	SERVICE DEVICES	POWER SUPPLY EQUIPMENT COMPONENTS AND	
	Task 32	Services AC/DC generators. (NOT COMMON CORE)	263
	Task 33	Services AC/DC converters/inverters.	276
BLOCK J	SERVICE	ANTENNA SYSTEMS	
	Task 34	Services satellite antenna systems.	287
	Task 35	Services radio antenna systems.	

(NOT COMMON CORE)

298

<u>Page</u>

Task 36	Services television antenna systems.	308
Task 37	Services cellular phone antennas.	319

Appendices

Appendix "A"	Tools and Equipment	333
Appendix "B"	List of Acronyms	337
Appendix "C"	Percentage Ratings	339
Appendix "D"	Block Percentages	347
Appendix "E"	Occupational Analysis Chart	349

GUIDE TO ANALYSIS

DEVELOPMENT OF ANALYSIS

A draft analysis is developed by a knowledgeable consultant who, with the assistance of a committee of industry experts in the field, identifies all the tasks performed in the occupation.

The draft is then assigned to occupational analysts at Human Resources Development Canada for review, translation and edit to ensure conformity with the nationally approved format.

The analysis is forwarded to provincial/territorial authorities for validation by specialists in the field. Their recommendations are assessed and incorporated into the final draft which also includes the identification of the common core tasks performed in the occupation.

The occupational analysis is published in both official languages.

STRUCTURE OF ANALYSIS

To facilitate the understanding of the nature of the occupation, the work performed is divided into the following divisions:

A. BLOCK -	is the largest division within the analysis and reflects a distinct operation relevant to the occupation.
B. TASK -	is the distinct activity that, combined with others, makes up the logical and necessary steps the worker is required to perform to complete a specific assignment within a "BLOCK".
C. SUB-TASK -	is the smallest division into which it is practical to sub-divide any work activity and, combined with others, fully describes all duties constituting a "TASK".

Supporting Knowledge & Abilities

The element of skill and knowledge that an individual must acquire to perform the task adequately.

Trend

Any shifts or changes in technology that affect the sub-tasks are identified under this heading.

VALIDATION METHOD

At the request of the Canadian Council of Directors of Apprenticeship (CCDA), the Standardization Sub-Committee developed a method for the validation of the national Red Seal occupational analyses.

A draft of the analysis is sent to all provinces/territories for validation. Each jurisdiction rates the sub-tasks and applies percentage ratings to blocks and tasks. This method for the validation of the national occupational analyses identifies common core tasks across Canada for a specific occupation. This feature facilitates the weighting of the Interprovincial Red Seal examinations.

DEFINITIONS

YES:	the sub-task is performed.
NO:	the sub-task is not performed.
BLOCK %:	the average time a worker spends performing each block in a given year in relation to other blocks of the analysis, taking into consideration the complexity (importance plus difficulty) of the block. (See Appendices "C" and "D" for numerical and graphical representations of this specific occupation.)
TASK %:	the average time a worker spends performing each task in relation to other tasks within the block, taking into consideration the complexity (importance plus difficulty) of the task. (See Appendix "C" for numerical representation of this specific occupation.)
NV:	Not Validated by the province/territory.
ND:	Not Designated in that province/territory.

COMMON CORE

The criteria for determining common core are dependent on the performance of sub-tasks. If 70% of the responding jurisdictions (excluding NVs and NDs) perform the sub-task, it shall be considered common core.

In the analysis, Block A is reserved for safety practices. Since safety practices are a mandatory feature of all occupations, it is considered common core and ratings are not required.

Interprovincial Red Seal examinations are based on the common core identified through this validation process.

SCOPE OF ANALYSIS

The objective of this occupational analysis is to identify and analyze the tasks performed by Electronics Technicians - Consumer Products (ETCP). In this analysis, Aconsumer products@ means any type of consumer electronic equipment and, without limiting the generality of the foregoing, includes:

- a) audio equipment, components and devices
- b) video equipment, components and devices
- c) telephone answering equipment, components and devices
- d) computer equipment, components and devices
- e) microwave equipment, components, devices and appliances
- f) remote control equipment, components and devices
- g) power supply equipment, components and devices
- h) antenna systems

The practice of the trade consists of the servicing of electronic products.

When practising or otherwise carrying out work in the trade, the following tasks, activities and functions come within the trade:

- \$ interacting with customers and other workers
- s using hand tools, hand power tools, testing equipment and specialty tools required by the trade
- \$ applying electronic theory to electronic products
- \$ terminating and connecting conductors and printed circuit boards contained within electronic products
- \$ maintaining electronic products
- \$ troubleshooting and diagnosing problems in electronic products
- \$ servicing and repairing electronic products

<u>Note</u>: The body of the analysis is limited by the terms of reference to a description of Awork performed@ by an Electronics Technician - Consumer Products and omits identification of other factors, such as aptitudes and capacities, interests and temperaments, and the conditions under which the worker performs this duties. These extra data have been included in the form of appendices, not as a constituent part of the analysis, but as a by-product with the thought that such information may be useful to those agencies responsible for the development of training programs and counselling.

OBSERVATIONS AND TRENDS ARISING FROM ANALYSIS

An individual becoming involved with the electronics industry today, as a technician, must demonstrate a talent for trainability as upgrading to acquire knowledge of newly developed and more highly sophisticated equipment is continually required.

The field of Consumer Electronic Equipment (CEE) is constantly increasing as many types of equipment, formerly deemed as industrial or office related, are now being purchased and used by the average consumer. As a results, the ETCP must now be familiar with equipment that was previously serviced only by specialty repair outlets.

Due to the wide variety of CEE now available, larger shops are turning toward varying degrees of specialization to improve the efficiency of the repair process. This need for specialization is further compounded by the ever-increasing sophistication of and development of new equipment in this field. Another factor is the ver-decreasing cost of purchasing new CEE.

While emphasis is placed on specialization, it is a common occurrence in smaller service shops and rural areas particularly, for a ETCP to be qualified in more than one area due to diversified requirements from local clientele.

The need for retraining on functional and operational procedures, as opposed to matters of theory, is very evident among the senior technicians with more than five years field experience to due to rapid changes within the electronics industry, accompanied by the ever widening usage of electronics and computer applications in numerous, diversified fields. The need for knowledge updating is presently recognized in the following areas as being both extensive and immediate:

- Micro processors
- Digital circuits
- Servo systems
- Video equipment
- Audio equipment
- Telecommunications and data communications
- Microwave consumer device

Today=s Electronics Technician - Consumer Products (ETCP) requires a good functional and operational knowledge of precision mechanisms and fine mechanical adjustments along with the obvious need for strong technical training and a demonstrated ability to adapt quickly when new products and applications are introduced. The industry has also expressed a pronounced necessity for training requirements relevant to customer relations, effective communications and business practice, while further noting that today=s programs generally do not adequately address the skills for soldering and desoldering.

For the aforementioned reasons, the journeyman in this industry may be required to be a highly specialized individual demonstrating expertise involving any one of the functions identified in the Consumer Electronics Technician analysis.

The following major trends were identified:

- More manufacturers joining >the game=
- Increasing stress relating to increasing customer expectations and knowledgeability as well as complexity of repairs
- Environmental requirements
- Changing warranties
- Improved product reliability
- Multi-use equipment
- Reduced service profit margins
- Obsolescence of models and parts
- Heavily increased need for P.R.
- Computerized Technology
- Third world manufacturing
- Frequency and complexity of installations is increasing

ANALYSIS

BLOCK A SAFETY

Task 1Demonstrates safe working practices and techniques.

<u>Trend</u>: There is a noted increase in safety instructions involving survival first aid, Workplace Hazardous Materials Information System (WHMIS) and safe operation and handling of tools, equipment and materials. Increased importance of St. John=s Ambulance and cardiopulmonary resuscitation (CPR) training.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
1.01	Obtains relevant laws and regulations.	ability to read, understand and interpret information such as Canadian Standards Association (CSA), Workers= Compensation Board (WCB) and WHMIS	
		knowledge of first aid and fire protection equipment location	
		knowledge of local police, fire department, emergency response	
1.02	Evaluates safety.	knowledge of applicable safety acts, WCB Regulations and employer's safety rules	first aid kit
		knowledge of location of first aid and fire protection equipment	
		knowledge of fire, police and ambulance telephone numbers	
1.03	Practises safe work habits.	knowledge of correct methods of lifting and carrying materials	
		knowledge of correct methods of loading and unloading material deliveries	
		knowledge of correct methods for handling and storage of cleaning fluids	

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
		knowledge of safety precautions when lifting and kneeling	
1.04	Uses personal protective equipment and clothing.	knowledge of necessity to wear knee pads when kneeling	ladder, knee pads, safety belts
		knowledge of necessity to wear ear protection when testing audio	
		knowledge of necessity to wear eye protection during cathode ray tube (CRT) replacement and cutting	
		knowledge of necessity to wear safety shoes in all designated areas	
1.05	Practises good housekeeping.	ability to maintain cleanliness and order in work areas	
		knowledge of correct methods for storing tools and loose objects	
		ability to recognize hazardous situations	
		ability to dispose of hazardous materials	
		ability to keep walking aisles clear	
		ability to ensure first aid and fire protection equipment are accessible	
1.06	Practises safe use of hand and power tools.	ability to demonstrate safe and proper methods of using and carrying tools	drills, power drivers, glue gun, heat gun
		knowledge of hazards created by using defective tools	
		knowledge of safe use and operation of electrically powered tools	
		ability to ensure power tools and equipment are properly grounded	

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
		knowledge of safe use and operation of equipment	
		knowledge of necessity to regularly check equipment and hand tools for wear and deterioration	
		knowledge of safe use and operation of stretching tools	
		knowledge of proper storage procedures for all tools	
		knowledge of cleaning methods and maintenance of all tools	
1.07	Works safely in enclosed areas.	knowledge of safety regulations when working in enclosed areas using toxic or flammable materials	fire extinguisher, first aid kit
		knowledge of correct placement of ventilation equipment	
		ability to take all necessary safety precautions when working with toxic or flammable materials	
1.08	Ensures proper fire protection.	knowledge of fire prevention, storage and handling of flammable materials, liquids, gases, adhesives and dust	fire extinguisher
		knowledge of hazardous electrical equipment	
		knowledge of fire precautions to be taken when working with flammable materials	
		knowledge of types of fires and operation of extinguishers	
		knowledge of importance to maintain clear exits at all times	

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
		ability to locate fire extinguishers, fire hoses and sprinkler systems and fire department phone numbers	
1.09	Handles hazardous materials correctly and safely.	knowledge of cleaning fluids	
1.10	Attends safety meetings to	ability to communicate effectively	
	obtain information on safety rules and safe work	knowledge of safe work practices	
	habits and procedures.	knowledge of safety rules	
		ability to provide constructive suggestions for work procedures	
1.11	Reports accidents and applies first aid if necessary.	knowledge of survival first aid, correct procedures for artificial respiration, mouth-to-mouth resuscitation, stopping bleeding and treatment for shock, wounds, burns, broken bones and eye injuries ability to notify proper authorities and complete accident report forms	

BLOCK B WORKPLACE PRACTICES AND PROCEDURES

Task 2Follows company policies and procedures.

<u>Trend</u>: Due to economic climate, it is a necessity to follow company policies and procedures because business's profit margins are shrinking.

	Sub-tasks			Supp	Supporting Knowledge & Abilities Tools & Equipment							
2.01	Follows c policies an			ability to access company documents knowledge of relevant policies and procedures								
	<u>NF NS</u> ND ye		<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	
2.02	Follows c customer policies an	relations	ures.	know	ability to access company documents knowledge of relevant policies and procedures							
	<u>NF NS</u> ND ye		<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC_ yes	<u>NT</u> yes	YK NV	
2.03	Follows c policies a			ability to access company documents ability to organize disassembled components and hardware knowledge of relevant policies and								
	<u>NF NS</u> ND ye		<u>NB</u> yes	proce <u>PQ</u> ND	dures <u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	
2.04	Follows c financial j procedure	policies ar	ıd	ability to access company documents knowledge of relevant policies and procedures								
	<u>NF</u> <u>NS</u> ND ye		<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	

2.05 Follows company safety ability to access company documents policies and procedures.

	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment		
						knowledge of relevant policies and procedures							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	YK NV	
2.06		ws com		es	ability	ability to access company documents							
	environmental policies and procedures.					knowledge of relevant policies and procedures							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	
2.07	warra	ws com nty poli dures.	pany cies and	d	ability to access company documents company documents							documents	
	proce	uures.				knowledge of relevant policies and procedures							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	

Task 3Applies written and oral communication skills.

<u>Trend</u>: Since poor communication is a major cause of profit loss, it is recognized that communication skills must improve.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
3.01	Identifies internal and external customers.	ability to analyze personal tasks and identify customer interaction events	
		knowledge of company service procedures	

	Sub-t	asks			Supporting Knowledge & Abilities Tools & Equipment								
						knowledge of company customer relations procedures							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	
3.02	Provides and receives information to/from other employees.					ability to apply interpersonal communication skills							
	Ĩ	2				ability to analyze personal tasks and identify customer interaction events							
						ability to follow company policies and procedures							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	
3.03	custo	ults with mers an concern	d respo		ability to analyze personal tasks and identify customer interaction events ability to follow company policies								
					and procedures								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	
3.04		oletes re nentatio			knowledge of company service procedures								
						ledge of							
					know proce	ledge of dures	f compa	ny fina	ncial				
					know regula	ledge of ations	f govern	ment					
	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment									
3.05	ND yes yes yes Trains and coaches other employees.	ND NV yes yes yes yes knowledge of company service procedures	yes NV									
		knowledge of company safety procedures										
	knowledge of company environmental procedures											
		knowledge of company financial procedures										
		knowledge of technical subject which is being taught										
	NFNSPENBNDyesyesyes	PQ NDON NVMA yesSK yesAB yesBC no	<u>NT</u> <u>YK</u> yes NV									
3.06	Writes technical reports.	ability to construct reports	word processor									
		knowledge of technical terms										

knowledge of report writing

knowledge of company policies and procedures

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

3.07	Reads	technic	cal repor	rts.	ability to read								
					knowledge of technical terms								
					knowledge of schematics, etc.								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	

	Sub-tas	sks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment	
3.08	Interpre termino		hnical		ability	ledge of 7 to tran on-jargo	slate teo	chnical					
		<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	YK NV	
3.09	Reads a instruct		llows		-	v to follo v to follo ions			o writter	1			
					know	ledge of	technic	cal term	S				
					know	ledge of	schem	atics					
		<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV			
3.10	Follows custom satisfac	ers to			ability to respond to customer enquiries								
					•	to expl ustomer		ns on w	ork ord	er			
					(NOT	COM	MON (CORE)					
		<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> no	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> no	<u>YK</u> NV	
3.11	Present courteo custom	ous atti		l and	ability to respond to customer enquiries								
					knowledge of company work policies								
					know	ledge of	compa	ny dres	s code				
	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	<u>MA</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	

	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment			
Task 4	ND U	yes J ses and	yes maint	2		NV nt and 1	2	yes	yes	yes	yes	NV		

<u>Trend</u>: New technologies demand new equipment and more attention to proper care, use and maintenance.

	Sub-t	asks			Suppo	orting K	nowled		Tools & Equipment			
4.01	Uses vehic	and ma les.	intains		ability trucks		rate car	s, vans a	and ligh	nt	Drivers'	license
					ability	y to mai	ntain lo	g books	5			
					to im	nediate	ognize n and lor ince req	ig-term	service			
						ledge of	f mainte	enance				
					(NOI	COM	MON (CORE)				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV
4.02		and ma ical doc	intains suments		ability to locate, read and apply information in blueprints, mechanical diagrams/drawings, logic diagrams, schematic diagrams, equipment specifications, operating procedures, maintenance procedures, installation procedures, testing procedures, safety procedures/standards, manufacturers= manuals/software							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	YK NV

4.03 Uses and maintains hand ability to choose and use appropriate hand tools.

ability to apply written and oral communication

ability to follow company policies and procedures

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

4.04	0000	and mai ring/de- ment.		g	-	to application	ly writte on	en and o	oral				
					ability to follow company policies and procedures								
					•	to safe ing che	ly hand micals	le solde	ering/de	-			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	

4.05	comp	and mai onent ir etion too	nsertion	and	ability to apply written and oral communication ability to follow company policies and procedures							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV
4.06		and mai ration to		cable	ability to apply written and oral communication ability to follow company policies							

and procedures

	Sub-t	asks			Suppo	orting K	nowled	ge & A	bilities	es Tools & Equipment			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
4.07	Uses tools.		intains _J	power	-	y to app nunication	-	en and o	oral				
						y to follo rocedur		pany po	olicies				
					know proce	ledge of dures	felectri	cal safe	ty				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> no	<u>YK</u> NV	
4.08		and ma oment.	intains s	safety	-	y to app nunication	-	en and o	oral				
						to follor		pany po	olicies				
					know locati	ledge of on	f safety	equipm	ent				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> no	<u>YK</u> NV	
4.09		ns tools oment.	and		ability to apply written and oral communication								
					ability to follow company policies and procedures								
					ability to safely handle cleaning materials								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	

4.10 Lubricates tools and ability to apply written and oral

Sub-tasks	Supporting Knowledge & Abilities Tools & Equipment									
equipment.	communication									
	ability to follow company policies and procedures									
	ability to safely handle lubrication materials									
<u>NF NS PE N</u> ND yes yes ye		<u>C NT YK</u> es no NV								

4.11		and ma ment.	intains 1	test	•	ability to apply written and oral communication									
						y to folle rocedur		pany po	olicies						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV			

4.12		and mai equipm		anti	ability to apply written and oral communication								
					•	v to follo rocedur	ow com es	pany po	olicies				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> no	<u>YK</u> NV	

4.13			intains s tools :	and	-	y to app nunication	•	en and o	oral			
					-	y to follo rocedur		pany po	olicies			
	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>

ND y	<i>y</i> es	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV
------	-------------	-----	-----	----	----	-----	-----	-----	-----	-----	----

Task 5Disposes of equipment, components or devices.

<u>Trend</u>: Increased social pressure and government regulations mean this will be an increasingly important task.

	Sub-tasks				Suppo	orting K	Inowled		Tools & Equipment				
5.01	Identifies equipment, components, or devices that require disposal.				knowledge of company policies and procedures								
					knowledge of manufacturers= policies and procedures								
				knowledge of government regulations									
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> no	<u>YK</u> NV	

5.02	5.02 Prepares equipment, components, or devices for disposal.				knowledge of company policies and procedures								
	L			knowledge of manufacturers= policies and procedures									
				knowledge of government regulations									
	<u>NF</u> <u>NS</u> ND yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV		

5.03	Disposes of or arranges for disposal of equipment, components, or devices.	knowledge of company policies and procedures
		knowledge of manufacturers= policies and procedures

knowledge of government regulations

knowledge of disposal "experts" in community

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

Task 6Upgrades skills and knowledge.

<u>Trend</u>: New technologies and efficiency requirements dictate continual upgrade of education and skills.

	Sub-t	asks			Supp	orting K	Lnowled	lge & A	bilities		Tools &	Equipm	ent
6.01		ledge i	ills and 1 theore		traini	ng y to app	ognize n ly new l						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	

6.02	know	ades ski ledge ir ologica	ı	ations.	abilit <u>y</u> traini	·	ognize n	need and	d access	5			
		C			ability to apply new knowledge and skills								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	

6.03	know	ades sk /ledge ii ifacture	n		abilit traini	y to reco ng	ognize r	need an	d access	5		
		ucts and			abilit skills	y to app	ly new	knowle	dge and	l		
	<u>NF</u> ND	<u>NS</u> ves	<u>PE</u> ves	<u>NB</u> ves	<u>PQ</u> ND	<u>ON</u> NV	MA_ves	<u>SK</u> ves	<u>AB</u> ves	<u>BC</u>	<u>NT</u> ves	<u>YK</u> NV

					yes	

6.04	know	ades sk ledge i rnment	n releva	nt	abilit traini		ognize r	need an	d access	5			
	U	orocedu	· 1		ability to apply new knowledge and skills								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> no	<u>YK</u> NV	

6.05	know		ills and 1 releva 1s.		abilit traini	y to reco ng	ognize r	need and	d access	5		
					ability to apply new knowledge and skills							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> no	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV

6.06	know	ades ski ledge ir ons area	n custor	ner	abilit traini	,	ognize r	need and	d access	5			
					-	ability to apply new knowledge and skills							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	

BLOCK C SERVICE AUDIO EQUIPMENT COMPONENTS AND DEVICES

Task 7Services digital and analog audio recording and playback systems and associated
components.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
7.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem ability to probe for specific symptoms	
		ability to reflect back and verify customer's recollection of symptoms	
		ability to respond to unrealistic customer expectations	
		knowledge of unit operation and potential problems	
	NFNSPENBNDyesyesyes	PQ NDON NVMA yesSK yesAB yesBC no	<u>NT</u> <u>YK</u> yes NV
7.02	Processes work orders.	ability to determine name, address and phone numbers of customer ability to determine name and model number of unit ability to write up symptoms	

<u>Trend</u>: Digital audio is a trend which will require education for technicians so they will be efficient at servicing.

	Sub-ta	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment
						•	f compa on proce	•				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV
7.03	repair	time fr	omer of ames ar		ability enqui		oond to	custom	er			
	cost r	esponsi	bilities.		•	y to obta ork orde	ain custo r	omer sig	gnature			
					know	ledge of	f compa	ny worl	k volum	ie		
					know	ledge of	f compa	ny cred	it policy	ý		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV

7.04	Performs pre-service functional tests.	ability to attach to signal source	AF generators, variac, data generators, variable
		ability to power up	voltage/current supplies, db/dbm meters, wow
		ability to check audio	and flutter, head phones, distortion
		ability to check all special features	analyzers, test/alignment,
		ability to check cosmetics of set	diskettes, tapes/CD/ records, test cables
		ability to recognize malfunctions	
		ability to document results	
		ability to communicate results to other technicians	
		knowledge of application of testing devices	
		knowledge of cleaning chemicals and procedures	
		knowledge of troubleshooting	

	Sub-t	asks			Supp	orting K	Inowled	ge & A	bilities		Tools &	Equipment
					techn	iques						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV
7.05	Disas	ssemble	s units.		for di	y to prej sassemt y to sele	oly			a	electric s	rs, hex drivers, crew/nut magnifiers
						y to foll sembly j						
						ledge of ring tecl						
					know techn	ledge o iques	f electro	ge				
						ledge of fication						
					know proce	ledge of dures	f cleanii	nd				
					know techn	ledge of iques	f trouble	eshootii	ng			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV

7.06	Troubleshoots faults.	ability to prepare unit for troubleshooting	manufacturer's software, measuring devices, allen
		ability to perform non-technical inspections	keys, feeler gauges, hex drivers, hammers, alignment tools,
		ability to recognize need to consult with another technician or manufacturer	burnishing tools, solder suckers, solder wicks, flux removers, head pullers, i.c. pullers, isolation transformer,

				ability	to perf	orm vis	ual insp	pection			gun, cleaning acuum brushes,				
				ability	to reco	gnize n	multimeters, continuity testers, oscilloscopes,								
				ability	to read	l schema	atics			data generators, white/pink noise					
				ability defect		gnize n	nechani	cal		generator	rs, circuit omponent				
						ate recei uit/com		lt to sub)-	testers, lo frequenc	ogic probes, y counters, n analyzers,				
				•	ret read	ct, conn ings fro	db/dbm i voltage/c	neters, variable current supplies, ing equipment,							
				ability	to doc	ument re	speakers	, microfiche ariac, AF							
				-	ability to communicate results to other personnel						generators, transistor checker, tracker, capacitor checker,				
				•	ability to recognize warranty and non-warranty situations						Z-meter, wow and flutter, head phones, induction meter, hot air				
				know! techni	-	electro	static c	lischarg	e	equipment, head checker, mats, ground straps, sprays, tension,					
					-	flat-pac ing tech				torque, thickness gauges, test/alignment, diskettes, test strobes,					
					knowledge of component identification methods						ter, video disks, Ø/records,				
			knowledge of replacement part characteristics (physical and electrical)							temperat diagnost	n mirrors, ure probes, ic routines, test nagnifiers, tape				
				know techni		trouble	shootin	g		calculato	A .				
<u>NF</u> ND							<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV						

7.07

Replaces or repairs faulty

ability to remove faulty component

manufacturer's software,

Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
circuits and components.	ability to verify proper installation ability to verify integrity of board and neighboring components	solder irons, solder suckers, solder wicks, flux removers, head pullers, cutters,
	ability to repair mechanical defects	strippers, crimpers, electric drills, electric screw/nut drivers, glue
	ability to select and replace component	gun, heat gun, isolation transformer, anti-static equipment, fan, cleaning fluids,
	ability to order parts	lubricants, swabs, oilers, mini torch, mats,
	ability to repair faulty circuits or components	ground straps, sprays, tension, torque, thickness,
	ability to clean circuits and components	test/alignment, test strobes, micrometer, tapes/CD/records,
	ability to recognize warranty and non-warranty situations	inspection mirrors, magnifiers, electrical tape, measuring devices,
	ability to obtain exact replacement or suitable substitute parts	allen keys, feeler gauges, hex drivers, hammers, alignment
	knowledge of application of testing devices	tools, burnishing tools, de-soldering tools
	knowledge of de-soldering and soldering techniques	
	knowledge of mechanics	
	knowledge of electro static discharge techniques	
	knowledge of flat-pack (surface- mount) servicing techniques	
	knowledge of component identification methods	
	knowledge of cleaning chemicals	
	knowledge of cleaning procedures	

	Sub-ta	asks			Supporting Knowledge & Abilities						Tools & Equipment			
					knowl	knowledge of lubricating procedures								
					knowl techni	-	trouble	shootin	g					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		
7.08	Sets u	ip and te	ests unit	S.			ire unit egulatio		es with		voltage/c	data generators, variable voltage/current supplies, variac, AF generators,		
					ability	to attac	ch to po	wer sou	irce		db/dbm n	neters, wow		
					ability	to attac	ch to sig	nal sou	rce		and flutte phones, d	listortion		
					ability	to pow	ver up					orque gauges,		
					ability	to chec	ek audio)				tapes/CD/		
					ability	to chee	ek tuner				records, test cables, ear protection, fire extinguisher			
					ability	to chec	ck all fe	atures			extinguis	her		
					ability	to chec	ck cosm	etics						
					•	to reco eshoot	ognize n	nalfunct	tions and	d				
					ability	to doci	ument r	esults						
						to com technici	munica ans	te resul	ts to					
					knowl	edge of	mecha	nics						
					knowledge of application of testing devices									
					knowl techni		electro	static d	lischarg	e				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
7.09	Performs routine maintenance.	ability to clean controls	manufacturer's software, cutters, measuring
	municendice.	ability to clean mechanisms	devices, allen keys, feeler gauges, hex
		ability to fine tune channels	drivers, hammers, solder irons, solder
		ability to verify operation of controls	suckers, solder wicks, flux removers, head
		ability to clean cosmetics of item	pullers, i.c. pullers, cutters, strippers,
		ability to align and realign/adjust mechanisms	crimpers, electric drills, electric screw/nut drivers, glue gun, heat
		ability to align electronics	gun, masks, ear protection, isolation
		ability to verify all safety devices are in place and functioning properly	transformer, fan, cleaning fluids, airbrushes, vacuum
		ability to perform routine mechanical and electronic adjustments/ alignments	brushes, ultrasonic cleaner, lubricants, swabs, oilers,
		ability to identify/document weaknesses or potential problems	multimeters, continuity testers, oscilloscopes, data generators, circuit
		knowledge of precision mechanisms and fine mechanical adjustments	testers, frequency counters, distortion analyzers, db/dbm meters, variable
		knowledge of application of testing devices	voltage/current supplies degaussing equipment, test monitors, test
		knowledge of electro static discharge techniques	speakers, microfiche reader, variac, AF generators, wow and
		knowledge of component identification methods	flutter, head phones, inspection mirrors, diagnostic routines, test
		knowledge of mechanical operation	cables, magnifiers, magnifying glass
		knowledge of cleaning chemicals	
		knowledge of cleaning procedures	
		knowledge of lubricating procedures	
		knowledge of replacement part	

					electri	cal) edge of	(physic		g			
7.10		<u>NS</u> yes ms post onal test		NB yes	PQ ND ability ability ability ability ability ability ability	ON NV to attact to attact to attact to chect to chect to chect to chect to chect	k audio	nal sou atures etics alfunct	rce	BC yes	testing pros safety pros standards generators voltage/cu variac, Al db/dbm m and flutte phones, d analyzers gauges, to test/align diskettes,	cedures/ , data s, variable arrent supplies, F generators, neters, wow r, head istortion , tension orque gauges, ment, tapes/CD/ est cables, ear n, fire
						to com echnicia	municat ans	te result	ts to			
					knowle technie	-	electro	static d	ischarg	e		
						•	compor method					
					knowle technie	•	trouble	shootin	g			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	YK NV
7.11	Reass	embles 1	units an	d	ability	to asser	mble				safety pro	ocedures/

Sub-tasks

ability to assemble

ability to prepare unit and work area

safety procedures/ standards, manufacturer's software,

Su	b-1	ta	sl	κs

for assembly

ability to select and use tools

allen keys, hex drivers, electric screw/nut drivers, magnifiers

ability to follow manufacturers= assembly procedures

ability to perform final functional test knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

7.12	Delivers/installs, sets up units, and demonstrates	ability to handle units safely	car, light to medium- sized truck,
	unit operation.	ability to store units	manufacturer's software, cutters, measuring
		ability to drive to job location when applicable	devices, allen keys, hex drivers, hammers, alignment tools,
		ability to deliver units	burnishing tools, chisels, strippers,
		ability to install and set up units	crimpers, electric drills, electric screw/nut
		ability to demonstrate unit to customer	drivers, glue gun, heat gun, ear protection, fire extinguisher, cleaning
		ability to advise customer of company policies and warranty policies	fluids, cloths, lubricants, swabs, oilers, ladder
		ability to communicate pertinent repair/defect information	
		ability to respond to customer concerns and customer satisfaction	

	Sub-ta	asks			Suppo	orting K	nowled	ge & Al	bilities		Tools & Equipment		
7.13	<u>NF</u> ND Comp	<u>NS</u> yes	PE yes	<u>NB</u> yes	ability ability knowl techni <u>PQ</u> ND ability ability ability ability inform	y to obta y to obta ledge of iques <u>ON</u> NV y to bill o y to calcu y to calcu y to tag v y to docu nation ledge of nation	in custo in payn electro <u>MA</u> yes custome plete w ulate cu warrant <u>y</u> iment p	omer sig nent static d <u>SK</u> yes er arranty stomer y parts ertinent nt repai	gn-off lischarg <u>AB</u> yes claim bill t repair	e BC no	<u>NT</u> no calculator	YK NV	
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	knowl <u>PQ</u> ND	ledge of <u>ON</u> NV	<u>MA</u> yes	d parts <u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	YK NV	

Task 8Services radio receivers and transmitters.

<u>Trend</u>: Technological advancements have caused miniaturization and thus the need for a higher skill level to service product.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
8.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem	
	*	ability to probe for specific	

symptoms

ability to reflect back and verify customer's recollection of symptoms

ability to respond to unrealistic customer expectations

knowledge of unit operation and potential problems

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

8.02	Proce	sses wo	rk orde	rs.	ability to determine name, address and phone numbers of customer								
					ability to determine name and model number of unit								
					ability to write up symptoms								
						ledge of nentatio	-	•					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

8.03	Informs customer of repair time frames and cost responsibilities.	ability to respond to customer enquiries
		ability to obtain customer signature on work order
		knowledge of company work volume
		knowledge of company credit policy

	Sub-t	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Tools & Equipment		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	YK NV		
8.04		rms pre ional tes	-service sts. <u>PE</u> yes	<u>NB</u> yes	ability ability ability ability ability ability ability ability other know	y to atta y to pow y to chea y to ch	ck audio ck all sp ck tuner ck cosm ognize n ument r nmunica ians	gnal sou o oecial fe netics of nalfunc esults ite resu ite resu	eatures f set tions lts to nicals ar	nd BC yes	truck, ma software multimet generato detectors generato load, hea Canada Commur (DOC)/U Federal Commur Commis	rs, RF radiation A, AF rs, dummy dphones, Department of hications United States hications sion (FCC) I regulations,		
8.05	Disas	sembles	s units.		ability to prepare unit and work area for disassembly ability to select and use tools							rs, hex drivers, crewdrivers		

ability to follow manufacturers= disassembly procedures

Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
	knowledge of de-soldering and soldering techniques	
	knowledge of electro static discharge techniques	
	knowledge of component identification methods	
	knowledge of cleaning chemicals and procedures knowledge of replacement part characteristics (physical and electrical)	
	knowledge of troubleshooting techniques	
<u>NF NS PE NB</u> ND yes yes yes		

8.06	Troubleshoots faults.	ability to prepare unit for troubleshooting	alignment tools, solder irons, solder wicks, flux removers, RF
		ability to perform non-technical inspections	generators, frequency counters, RF radiation detectors, mats, AF
		ability to recognize need to consult with another technician or manufacturer	generators, dummy loads, ground straps, software, cable assemblies
		ability to perform visual inspection	
		ability to recognize malfunctions	
		ability to recognize mechanical defects	
		ability to read schematics	
		ability to isolate receiver fault to sub- assembly/circuit/component	

ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of mechanics

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

<u>NF</u>	NS	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	<u>NT</u>	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

8.07 Replaces or repairs faulty circuits and components. ability to remove faulty component alignment tools, solder ability to verify proper installation flux removers, cutters, ability to verify integrity of board and neighboring components rubber gloves, isolation transformer, anti-static equipment, de-soldering

NF

			-	ability to select and replace component							
			•	ability to recognize mechanical defects							
			ability	ability to order parts							
			ability compo	-	air faulty	y circui	ts or				
			compo ability	onents to reco	n circui ognize w situatio	varranty	and				
			-		in exac itute pa	-	ement o	or			
			knowl	edge of	mecha	nics					
			knowl device		applica	ation of	testing				
				-	f de-solo nniques	lering a	nd				
			knowl techni	-	felectro	static c	lischarg	<i>g</i> e			
				-	flat-pacing tech						
				•	compo method						
			knowl	edge of	fcleanir	ng chem	nicals				
			knowl	edge of	cleanir	ng proce	edures				
			knowl	edge of	lubrica	ting pro	ocedure	S			
			knowl techni	•	ftrouble	eshootir	ıg				
<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	

Sub-tasks					Supporting Knowledge & Abilities				Tools & Equipment			
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	

8.09	Performs routine maintenance.	ability to clean controls	hex drivers, cleaning fluids, multimeters,			
	mannenance.	ability to clean mechanisms	oscilloscopes, RF generators, frequency			
		ability to fine tune channels	counters, RF power meters, RF radiation			
		ability to verify operation of controls ability to clean cosmetics of item	detectors, variable voltage/current supplies, magnifying glass			
		ability to align and realign/adjust mechanisms	ing fuss			
		ability to align electronics				
		ability to verify all safety devices are in place and functioning properly				
		ability to perform routine mechanical and electronic adjustments/ alignments				
		ability to identify/document weaknesses or potential problems				
		knowledge of precision mechanisms and fine mechanical adjustments				
		knowledge of application of testing devices				
		knowledge of electro static discharge techniques				
		knowledge of component identification methods				
		knowledge of cleaning chemicals				
		knowledge of cleaning procedures				

	Sub-task	S			Suppo	orting K	nowled		Tools &	Equipment				
					knowledge of lubricating procedures									
					know	knowledge of mechanics								
						eteristic	f replace s (physi							
					know techni	-	ftrouble	shootir	ıg					
		<u>IS</u> res	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		
8.10	Performs			e	ability	v to atta	ch to po		ocedures/					
	functiona	al test	ts.		ability	v to attac	ch to sig	gnal sou	irce		standards, manufacturers=			
					ability	v to pow	ver up	manuals and software, hammers, multimeters,						
					ability	ability to check audio						RF generators, RF radiation detectors,		
					ability	to chec	ck tuner				dummy loads			
					ability	to chec	ck all fe	atures						
					ability	to chec	ck cosm	etics						
					ability	to reco	ognize n	nalfunc	tions					
					ability	to doci	ument r	esults						
						ability to communicate results to other technicians								
					knowledge of electro static discharge techniques									
							compo method							
					knowledge of troubleshooting techniques									
		<u>IS</u> es	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		

8.11	Reassembles units and performs final check.	ability to assemble	hex drivers					
	performs milar check.	ability to prepare unit and work area for assembly						
		ability to select and use tools						
		ability to follow manufacturers= assembly procedures						
		ability to perform final functional test knowledge of troubleshooting techniques						
	NFNSPENBNDyesyesyes	PQ NDON NVMA yesSK yesAB yesBC yesNDNVyesyesyesyes						
8.12	Delivers/installs, sets up units, and demonstrates unit operation.	ability to handle units light to media truck, or car ability to store units						
		ability to drive to job location when						

applicable

customer

policies

ability to deliver units

ability to install and set up units

ability to demonstrate unit to

ability to advise customer of company policies and warranty

ability to communicate pertinent

ability to respond to customer concerns and customer satisfaction

ability to obtain customer sign-off

repair/defect information

- 37 -

	Supporting Knowledge & Abilities						Tools & Equipment						
					knowledge of electro static discharge techniques knowledge of component identification methods knowledge of replacement part characteristics (physical and electrical)								
					knowledge of troubleshooting techniques								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
8.13	Com				ability to bill customer						manufacturer's software		
	docui	mentatio	on.		ability	y to con	nplete w	arranty	claim				
					ability	y to calc	culate cu	istomer	bill				
					ability to tag warranty parts								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	BC no	<u>NT</u> yes	YK NV			

Task 9Services musical systems and instruments.

<u>Trend</u>: Integration with computers is causing an increase in the difficulty of repairs to musical systems and instruments.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
9.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer=s description of problem	
		ability to probe for specific symptoms	

	Sub-ta	asks			Suppo	orting K	nowled		Tools & Equipment						
					ability to reflect back and verify customer=s recollection of symptoms ability to respond to unrealistic customer expectations knowledge of unit operation and potential problems ability to determine name, address and phone numbers of customer										
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV			
9.02	Proce	sses wo	rk ordei	rs.		ability to determine name and model number of unit									
					ability	to writ	e up syı	nptoms							
					knowledge of company documentation procedures										
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV			
9.03	repair	ns custo time fra esponsil	ames an	ıd	ability to respond to customer enquiries ability to obtain customer signature on work order										
						owledge of company work volume									
					knowl	edge of	compa	ny cred	it policy	y					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV			

9.04 Performs pre-service functional tests.			ability to apply power						isolation transformer, test speakers				
	luncu	onal tes	sts.		ability	v to attac	ch to sig	gnal sou	rce		test spear	kers	
					ability	to pow	er up						
					ability	to chec	ek audic)					
					ability	ability to check all special features							
					ability	to chec	ek cosm	etics of	set				
						to reco to docu			tions				
					•	to com technici		te resul	ts to				
					know! procee	ledge of dures	cleanin	ng chem	icals ar	nd			
					know! techni	ledge of	trouble	eshootin	g				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	
9.05	Disas	sembles	s units.		for dis	to prep sassemb	ly			ì	allen key vacuum t	s, hex drivers, orushes	,
					-	to sele							
					-	to follo embly p							
					know device	ledge of es	applica						
						ledge of							

	Sub-ta	asks			Suppo	orting K	nowled		Tools & Equipment				
					know techni	ledge of iques	felectro	static d	lischarg	e			
						ledge of fication							
					know! proce	ledge of dures	cleanir	d					
						ledge of cteristics ical)	-						
					know! techni	ledge of iques							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>NT</u> yes	<u>YK</u> NV				
9.06	Troub	oleshoot	ts faults.		-	y to prep eshooti		t for			cutters, a	turer's software, Illen keys, hex	
					ability inspec	to perf ctions	orm no	n-techni	ical		solder su wicks, fl	solder irons, ickers, solder ux removers,	
					with a	to reco mother facturer	technici		consult		multimeters, distortion analyzers, test speakers, AF generators, vacuum tube tester		
					ability	to perf	orm vis	ual insp	oection				
					ability	to reco	ognize n	nalfunct	ions				
					ability defect	y to reco ts	ognize n	nechani	cal				
					ability	to read	l schem	atics					
					ability to select, connect and correctly interpret readings from required test equipment								
					ability	to doci	ument r	esults					
					ability to communicate results to other personnel								

ability to recognize warranty and non-warranty situations

ability to recognize software and hardware faults

knowledge of mechanics

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

9.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component	solder irons, solder suckers, solder wicks,
	Ĩ	ability to verify proper installation	flux removers, de- soldering tools
		ability to verify integrity of board and neighboring components	
		ability to select and replace component	
		ability to recognize mechanical defects	

	ability to order parts									
	ability to repair faulty circuits or components									
	ability to clean circuits and components									
	ability to recognize warranty and non-warranty situations									
	ability to obtain exact replacement or suitable substitute parts									
	knowledge of mechanics									
	knowledge of application of testing devices									
	knowledge of de-soldering and soldering techniques knowledge of electro static discharge techniques									
	knowledge of flat-pack (surface- mount) servicing techniques									
	knowledge of component identification methods									
	knowledge of cleaning chemicals									
	knowledge of cleaning procedures									
	knowledge of lubricating procedures									
	knowledge of troubleshooting techniques									
<u>NF NS PE NB</u> ND yes yes yes	PQ NDON NVMA yesSK yesAB yesBC yesNT yesYK NV									

9.08 Sets

Sets up and tests units.

ability to ensure unit complies with

test speakers

government regulations ability to attach to power source ability to attach to signal source ability to power up ability to check audio ability to check tuner ability to check all features ability to check cosmetics ability to recognize malfunctions and troubleshoot ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of flat-pack (surfacemount) servicing techniques knowledge of component identification methods knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

9.09	Performs routine	ability to clean controls	testing procedures, allen
	maintenance.	ability to clean mechanisms	keys, hex drivers, magnifying glass
		ability to align	
		ability to verify operation of controls	
		ability to clean cosmetics of item	
		ability to align and realign/adjust mechanisms	
		ability to align electronics	
		ability to verify all safety devices are in place and functioning properly	
		ability to perform routine mechanical and electronic adjustments/ alignments	
		ability to identify/document weaknesses or potential problems	
		knowledge of electro static discharge techniques	
		knowledge of component identification methods	
		knowledge of cleaning chemicals	
		knowledge of cleaning procedures	
		knowledge of lubricating procedures	
		knowledge of mechanics	
		knowledge of replacement part characteristics (physical and electrical)	
		knowledge of troubleshooting	

	Sub-t	asks			Suppo	orting K	nowled	Tools & Equipment						
					techn	iques								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV		
9.10		rms pos ional tes		e	ability	ability to attach to power source test speakers, AF generators ability to attach to signal source ability to power up								
					ability to check audio									
					ability	y to che	ck tuner							
					ability	y to che	ck all fe	atures						
					ability	y to che	ck cosm	etics						
					ability to recognize malfunctions									
					ability to document results									
					ability to communicate results to other technicians									
					knowledge of electro static discharge techniques									
							f compo method							
					knowledge of troubleshooting techniques									
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		

9.11 Reassembles units and performs final check.

ability to assemble

allen keys, hex drivers

Sub-tas	sks			Suppo	rting Kr	nowledg	Т	Tools & I	Equipment				
				ability for ass	to prepa embly								
				ability to select and use tools									
				ability to follow manufacturers= assembly procedures									
				ability	to perfo	orm fina	al funct	ional tes	st				
				knowledge of troubleshooting techniques									
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV		

9.12	Delivers/installs, sets up units, and demonstrates	ability to handle units	light to medium-sized truck or car						
	unit operation.	ability to store units							
		ability to drive to job location when applicable							
		ability to deliver units							
		ability to install and set up units							
		ability to demonstrate unit to customer							
		ability to advise customer of company policies and warranty policies							
		ability to communicate pertinent repair/defect information							
		ability to respond to customer concerns and customer satisfaction							
		ability to obtain customer sign-off							

	Sub-ta	asks			Suppo	orting K	nowled		Tools & Equipment						
					ability to obtain payment										
					knowledge of electro static discharge techniques										
					knowledge of component identification methods										
					charac	knowledge of replacement part characteristics (physical and electrical)									
					knowledge of troubleshooting techniques										
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV			
9.13	Comp docum	letes nentatio	n.		ability to bill customer ability to complete warranty claim ability to calculate customer bill ability to tag warranty parts knowledge of replacement part										
					characteristics (physical and electrical) knowledge of troubleshooting										
					knowl techni		trouble	esnootin	g						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV			

Task 10Services audio amplification systems.

<u>Trend</u>: More miniaturization will result in more items becoming disposable.

Tools & Equipment

	Sub-t	asks			Suppo	orting K	Inowled	,	Tools & Equipment			
10.01		erifies u erifies u ems.		ients	ability to listen attentively to customer's description of problem ability to probe for specific symptoms							
					ability to reflect back and verify customer's recollection of symptoms							
					ability to respond to unrealistic customer expectations							
					knowledge of unit operation and potential problems							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV
10.02	Proce	esses wo	ork orde	rs.	ability to determine name, address and phone numbers of customer							
					ability to determine name and model number of unit							
					ability to write up symptoms							
					knowledge of company documentation procedures							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV
10.03	repair	ms custo r time fr	ames a	nd	ability to respond to customer enquiries							
	cost r	esponsi	bilities.		ability to obtain customer signature on work order							

	Sub-t	asks			Suppo	orting K	nowled	Tools & Equipment					
					knowledge of company work volume								
					know	knowledge of company credit policy							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	YK NV	
10.04		rms pre- ional tes		:	-	to app		test speal	manufacturer's software, test speakers, AF generators				
					ability	to pow	ver up						
					ability	to che	ck audio)					
					ability	to che	ck all sp	oecial fe	eatures				
					ability	to che	ek tunei	.					
						to cheory to reco							
					ability	to doc	ument r	esults					
						to con technici		ite resul	lts to				
					know! proce	-	f cleanir	ng chem	nicals ar	nd			
					know! techni	ledge of iques	ftrouble	eshootir	ıg				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	
10.05	Disas	sembles	s units.			to prep sassemb		hex drivers, electric screw/nut drivers					
					ability	to sele	ct and ı	use tools					
					ability	to follo	ow man	ufactur	ers=				

	Sub-ta	asks			Suppo	orting K	nowled	Tools & Equipment							
					disass	embly p	orocedu								
						ledge of									
					know! techni	ledge of iques	electro	e							
					knowledge of component identification methods										
					know] proce	-	cleanir	ng chem	nicals an	d					
					knowledge of replacement part characteristics (physical and electrical)										
					know! techni	ledge of iques	trouble								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV			
10.06	Troub	leshoot	s faults		-	to prep eshootii		isolation	manufacturer's software, isolation transformer, multimeters, cutters						
					ability inspec	to perf ctions	orm noi	multimeters, cutters, oscilloscopes, function generators, white/pink							
					ability to recognize need to consult with another technician or manufacturer						noise generators, circuit testers, component testers, db/dbm meters, distortion analyzers,				
					ability	to perf	òrm vis	ual insp	pection		supplies,	voltage/current power factor			
					ability	to reco	gnize n	nalfunct	tions		variac, A	est speakers, F generators, c checker,			
					ability defect	to reco	ognize n	nechani	cal		tracker, c checker,	capacitor dummy loads,			
					ability	to read	l schem	atics			nead pho	ones, Z-meter			
						/ to isola bly/circ			lt to sub)-					
					ability	to sele	ct, conn	ect and	correct	ly					

	Sub-t	asks			Suppo	orting K	nowled	Tools & Equipment								
					ability	ability to document results										
					ability to communicate results to other personnel											
						ability to recognize warranty and non-warranty situations										
					knowledge of electro static discharge techniques											
					knowledge of flat-pack (surface- mount) servicing techniques											
					knowledge of component identification methods											
					knowledge of replacement part characteristics (physical and electrical)											
					know techni		f trouble	eshootir	ng							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV				
10.07	Replaces or repairs faulty circuits and components.				ability to remove faulty component						cutters, solder suckers, solder wicks, flux					

ability to verify proper installation

ability to verify integrity of board and neighboring components

removers, cleaning fluids, magnifiers, de-

soldering tools

ability to select and replace component

ability to recognize mechanical defects

- 52 -

ability to order parts ability to repair faulty circuits or components ability to clean circuits and components ability to recognize warranty and non-warranty situations ability to obtain exact replacement or suitable substitute parts knowledge of mechanics knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge techniques knowledge of flat-pack (surfacemount) servicing techniques knowledge of component identification methods knowledge of cleaning chemicals knowledge of cleaning procedures knowledge of lubricating procedures knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

	Sub-ta	ısks			Supp	orting K	nowled		Tools & Equipment					
10.08	Sets u	p and t	ests uni	ts.	-	y to ensu ment r			isolation transformer, white/pink noise					
					abilit	y to atta	ch to po	ower so	urce		tools, tes	rs, alignment t speakers, AF rs, power factor		
					ability	y to atta	ch to sig	gnal sou	urce		meters, dummy loads db/dbm meters,			
					ability	y to pow	ver up				distortion analyzers			
					ability	y to chee	ek tunei	•						
					ability	y to chee	ck all fe							
					ability	y to chee	ck cosm							
						y to recc leshoot	ognize n							
					ability	y to doc	ument r							
					-	y to com technici		te resu	lts to					
					devic	ledge of			-					
						ledge of t) servic	-							
						ledge of								
						ledge of cteristic ical)	-	-						
					know techn	ledge of iques	ftrouble	eshootii	ng					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
10.09	Performs routine maintenance.	ability to clean controls	isolation transformer, cleaning fluids,
		ability to clean mechanisms	manufacturer's software, lubricants, swabs, oilers,
		ability to align	power factor meters, test speakers, dummy loads,
		ability to verify operation of controls	white/pink noise generators, db/dbm
		ability to clean cosmetics of item	meters, distortion analyzers, magnifying
		ability to align and realign/adjust mechanisms	glass
		ability to align electronics	
		ability to verify all safety devices are in place and functioning properly	
		ability to perform routine mechanical and electronic adjustments/ alignments	
		ability to identify/document weaknesses or potential problems knowledge of electro static discharge techniques	
		knowledge of component identification methods	
		knowledge of cleaning chemicals	
		knowledge of cleaning procedures	
		knowledge of lubricating procedures	
		knowledge of mechanics	
		knowledge of replacement part characteristics (physical and electrical)	
		knowledge of troubleshooting techniques	

 Sub-tasks					Supporting Knowledge & Abilities					Tools & Equipment		
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	

10.10		Performs post-service functional tests.				y to atta	ch to po		isolation transformer,					
	functi	onal tes	sts.		ability	y to atta	ch to sig	gnal sou	irce		white/pink noise generators, db/dbm meters, distortion analyzers, power factor meters, test speakers, AF generators, dummy loads			
					ability	to pow	ver up							
					ability	to che	ck audio	0						
					ability	to che	ck all fe	atures			loaus			
					ability	to che	ck cosm	netics						
					ability	to reco	ognize n	nalfunct	tions					
					ability	to doc	ument r	esults						
						to con technici	nmunica ians	te resul	ts to					
					know! techni		felectro	static c	e					
						knowledge of component identification methods								
					know! techni	-	f trouble	eshootin	ıg					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV		
10.11			units an al check		ability	y to asse y to prep sembly	emble pare uni	manufacturer's software, electric screw/nut drivers, cleaning fluids						
					ability to select and use tools									

ability to follow manufacturers= assembly procedures

ability to perform final functional test

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

10.12	Delivers/installs, sets up units, and demonstrates unit operation.	ability to handle units ability to store units ability to drive to job location when applicable	light to medium-sized truck, or car
		ability to deliver units	
		ability to install and set up units	
		ability to demonstrate unit to customer	
		ability to advise customer of company policies and warranty policies	
		ability to communicate pertinent repair/defect information	
		ability to respond to customer concerns and customer satisfaction	
		ability to obtain customer sign-off	

ability to obtain payment

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	no	NV

10.13	Comp docun	letes nentatic	on.		ability	to bill	custom		computer, microfiche reader, calculator			
					ability							
					ability to calculate customer bill ability to tag warranty parts							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV

BLOCK D SERVICE VIDEO EQUIPMENT COMPONENTS AND DEVICES

Task 11 Services televisions.

Trend: Larger screens result in increase of in-home service requests.

	Sub-t	asks			Suppo	orting K	nowled	Tools &	Equipment				
11.01	and v	erifies u	views cl init	ients	-		en attent escriptio	-					
	probl	ems.			ability to probe for specific symptoms								
					-		ect back		2	S			
					2	-	oond to rectation		stic				
						ledge of tial prob	f unit op olems	eration	and				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

11.02	Proce	sses wo	rk orde	ſS.	ability to determine name, address and phone numbers of customer									
					2	to dete er of un	ermine n iit	ame an	d mode	1				
					ability	to writ	te up syr	nptoms	5					
						U	f compa on proce	2						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		

11.03	Informs customer of	ability to respond to customer
	repair time frames and	enquiries

Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment				
cost responsibilities.	ability to obtain customer signature on work order					
	knowledge of company work volume					
	knowledge of company credit policy					
<u>NF NS PE NI</u> ND yes yes ye						

ability to attach to signal source mirrors, RF generators ability to power up ability to check video ability to check audio ability to check all special features ability to check tuner ability to check tuner ability to check cosmetics of set ability to recognize malfunctions ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge techniques	11.04 Performs pre-service functional tests.	ability to apply power	light to medium-sized truck, inspection	
ability to check video ability to check audio ability to check all special features ability to check tuner ability to check tuner ability to check cosmetics of set ability to recognize malfunctions ability to document results ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge		functional tests.	ability to attach to signal source	
ability to check audio ability to check all special features ability to check tuner ability to check cosmetics of set ability to recognize malfunctions ability to recognize malfunctions ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge			ability to power up	
ability to check all special features ability to check tuner ability to check cosmetics of set ability to recognize malfunctions ability to document results ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge			ability to check video	
ability to check tuner ability to check cosmetics of set ability to recognize malfunctions ability to document results ability to document results to other technicians knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge			ability to check audio	
ability to check cosmetics of set ability to recognize malfunctions ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge			ability to check all special features	
ability to recognize malfunctions ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge			ability to check tuner	
ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge			ability to check cosmetics of set	
ability to communicate results to other technicians knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge			ability to recognize malfunctions	
other technicians knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge			ability to document results	
devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge				
soldering techniques knowledge of electro static discharge				
			č	
			č	

Sub-tasks						orting K	Inowled	lge & A	bilities		Tools & Equipment		
						ledge o t) servio							
						ledge of fication							
						knowledge of cleaning chemicals and procedures							
					knowledge of replacement part characteristics (physical and electrical)								
					know techn	ledge o iques	f trouble	eshootii	ng				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	YK NV	
11.05	11.05 Disassembles units.			-	y to prej sassemt	-	it and w	ork area	a		ers, electric It drivers,		

hex drivers, electric screw/nut drivers, cleaning fluids, cloths, air brushes, vacuum brushes, swabs, ultrasonic cleaner, lubricants, oilers, mats, ground straps, sprays, solder irons, solder suckers, solder wicks, flux removers

techniques

knowledge of electro static discharge

knowledge of flat-pack (surfacemount) techniques

ability to select and use tools

ability to follow manufacturers=

knowledge of de-soldering and

disassembly procedures

soldering techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

Sub-tasks	Supp	orting Knowled	S .	Tools & Equipment		
		vledge of replace acteristics (physi rical)				
		ledge of trouble				
<u>NF</u> <u>NS</u> <u>PE</u> ND yes yes	<u>NB</u> <u>PQ</u> yes ND	<u>ON</u> <u>MA</u> NV yes	<u>SK</u> <u>AB</u> yes yes	BC yes	<u>NT</u> yes	<u>YK</u> NV

11.06	Troubleshoots faults.	ability to prepare unit for troubleshooting	multimeters, oscilloscopes, dot/bar generators, RF
		ability to perform non-technical inspections	generators, variable voltage/current supplies, degaussing equipment,
		ability to recognize need to consult	microfiche reader, high
		with another technician or	voltage probe, NTSC
		manufacturer	generators, transistor checker, capacitor
		ability to perform visual inspections	checker, CRT checker, manufacturer's software,
		ability to recognize malfunctions	logic diagrams,
		ability to read schematics	equipment specifications,
		ability to isolate receiver fault to sub-	airbrushes, vacuum
		assembly/circuit/component	brushes, swabs, ultrasonic cleaner,
		ability to select, connect and correctly	lubricants, oilers, mats,
		interpret readings from required test equipment	ground straps, sprays, solder irons, solder suckers, solder wicks,
		ability to document results	flux removers, circuit testers, component
		ability to communicate results to	testers, logic probes,
		other personnel	logic analyzers, frequency counters, RF
		ability to recognize warranty and	radiation detectors,
		non-warranty situations	X-ray and particle detectors, AC line
		knowledge of electro static discharge techniques	testers/monitors, test speakers, variac, decade boxes, jumper wire, AF

Sub-tasks	Supporting Kno	Supporting Knowledge & Abilities							
		knowledge of flat-pack (surface- mount) techniques							
		knowledge of component identification methods							
	e	knowledge of replacement part characteristics (physical and electrical)							
	knowledge of tr techniques	knowledge of troubleshooting techniques							
			vector scope, hot air equipment, infrared tester						
<u>NF NS PE</u> ND yes yes		<u>MA SK AB</u> yes yes yes	BCNTYKyesyesNV						

Replaces or repairs faulty circuits and components.	ability to remove faulty component	microfiche reader, solder irons, solder
encults and components.	ability to verify proper installation	suckers, solder wicks, flux removers, de-
	ability to verify integrity of board and neighboring components	soldering tools
	ability to select and replace component	
	ability to order parts	
	ability to repair faulty circuits or components	
	ability to clean circuits and	

components

ability to recognize warranty and non-warranty situations

ability to obtain exact replacement or suitable substitute parts

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

11.08	Sets up and tests units.	ability to ensure unit complies with	multimeters,
		government regulations	oscilloscopes, dot/bar generators, RF
		ability to attach to power source	generators, variable voltage/current supplies,
		ability to attach to signal source	degaussing equipment, microfiche reader, high
		ability to power up	voltage probe, NTSC generators, transistor
		ability to check audio	checker, capacitor checker, CRT checker,
		ability to check video	manufacturer's software, logic diagrams,
		ability to check tuner	equipment specifications, cleaning
		ability to check all features	fluids, cloths,

ability to check cosmetics

ability to recognize malfunctions and troubleshoot

ability to document results

ability to communicate results to other technicians

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

airbrushes, vacuum brushes, swabs, ultrasonic cleaner, lubricants, oilers, mats, ground straps, sprays, solder irons, solder suckers, solder wicks, flux removers, circuit testers, component testers, logic probes, logic analyzers, frequency counters, RF radiation detectors, X-ray and particle detectors, AC line testers/monitors, test speakers, variac, decade boxes, jumper wire, AF generators, tracker, Z-meter, inspection mirrors, reference charts, test charts, diagnostic routines, test cables, equipment dollies/carts, lifting/ leveling devices, magnifiers, electrical tape, freeze spray, maintenance procedures, testing procedures, safety procedures/ standards, electric screw/nut drivers, heat gun, function generators, feeler gauges, hex drivers, alignment tools, vacuum tube tester, vector scope, hot air equipment, infrared tester

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

11.09	Performs			ability	to clear	n contro		cleaning fluids, cloths, lubricants, swabs,			
	maintena	nce.		ability	to aligi	n				magnifyi	
				ability	to fine	tune ch	annels				
				ability	to veri	fy opera	S				
				ability	to clear	n cosme	etics of	item			
				-	ability to verify all safety devices are in place and functioning properly						
				-	to perfe ectronic nents			echanica	al		
				ability to identify/document weaknesses or potential problems							
				knowl device	ledge of es	applica	ation of	testing			
				knowl techni	ledge of ques	electro	static c	lischarg	;e		
					ledge of fication						
				knowledge of cleaning chemicals and procedures knowledge of replacement part characteristics (physical and electrical)							
				knowl techni	ledge of ques	trouble	eshootin	ıg			
	<u>NF N</u> ND ye	<u>S</u> <u>PE</u> es yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
11.10	Performs post-service functional tests.	ability to attach to power source	multimeters, oscilloscopes, dot/bar
	Tunctional tests.	ability to attach to signal source	generators, RF generators, variable
		ability to power up	voltage/current supplies, degaussing equipment,
		ability to check audio	microfiche reader, high voltage probe, NTSC
		ability to check video	generators, transistor checker, capacitor
		ability to check tuner	checker, CRT checker, safety procedures/
		ability to check all features	standards, manufacturer's software,
		ability to check cosmetics	frequency counters
		ability to recognize malfunctions	
		ability to document results	
		ability to communicate results to other technicians	
		knowledge of application of testing devices	
		knowledge of de-soldering and soldering techniques	
		knowledge of electro static discharge techniques	
		knowledge of flat-pack (surface- mount) techniques	
		knowledge of component identification methods	
		knowledge of cleaning chemicals and procedures	
		knowledge of replacement part characteristics (physical and electrical)	

	Sub-t	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment		
					know techn	-	f trouble	eshootir	ng					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		
11.11		embles rms fina			ability	ability to assemble								
	Ĩ				ability to prepare unit and work area for assembly									
					ability	ability to select and use tools								
					ability to follow manufacturers= assembly procedures									
					ability	y to per	form fin	al func	tional te	est				
						knowledge of flat-pack (surface- mount) techniques								
					knowledge of component identification methods									
					knowledge of cleaning chemicals and procedures									
					knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques									
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		
11.12	units,	ers/insta and dep peration	monstra		ability to handle units ability to store units						light to medium-sized truck, computer, equipment dollies/carts,			

equipment dollies/carts, lifting/leveling devices,

Supporting Knowledge & Monities	Tools & Equipment
ability to drive to job location when applicable	installation procedures
ability to deliver units	
ability to install and set up units	
ability to demonstrate unit to customer	
ability to advise customer of company policies and warranty policies	
ability to communicate pertinent repair/defect information	
ability to respond to customer concerns and customer satisfaction	
ability to obtain customer sign-off	
knowledge of application of testing devices	
knowledge of de-soldering and soldering techniques	
knowledge of electro static discharge techniques	
knowledge of flat-pack (surface- mount) techniques	
knowledge of component identification methods	
knowledge of cleaning chemicals and procedures	
knowledge of replacement part characteristics (physical and electrical)	
knowledge of troubleshooting	

	Sub-t	asks			Supporting Knowledge & Abilities					Tools & Equipment			
					techniques								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
11.13	Comp docur	oletes nentatio	on.		-		custom		claim		calculator, computer, microfiche reader		
					ability to calculate customer bill								
					ability	y to tag	warrant	y parts					
	NFNSPENBNDyesyesyes				<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

Task 12Services video players/recorders.

<u>Trend</u>: Due to competetive pricing, pressure to perform cost-efficient repairs is increasing.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
12.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem ability to probe for specific symptoms	
		ability to reflect back and verify customer's recollection of symptoms	
		ability to respond to unrealistic customer expectations	
		knowledge of unit operation and potential problems	

Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment		
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> no	<u>YK</u> NV	
Proce	sses wo	ork orde	rs.									
				ability to determine name and model number of unit								
				ability	y to writ	te up sy	mptoms	5				
<u>NF N</u> ND	I <u>S</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
3 Informs customer of repair time frames and cost responsibilities					-	oond to	custom	er				
				ability to obtain customer signature on work order								
				knowledge of company work volume								
				know	ledge of	f compa	ny cred	it polic	у			
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	
			2	ability to apply power						manufacturer's software, test monitors, video		
				-			gilai sot	lice		uisks, taj	Jes/CD/Tecolus	
				ability to check all special features								
	NF ND Proce NF N ND Inform repain cost r NF ND Perfo	NDyesProcesses workNFNDyesInforms custorrepair time frcost responsiNFNSNDyes	NF NDNS yesPE yesProcesses work orderNF NDNS yesPE yesInforms customer of repair time frames at cost responsibilities.NF NDNS yesNF NDNS yesNF NDNS yesNF NDNS yesNF NDNS yesNF NDNS yesNF NDNS yesYesYes	NF NDNS yesPE yesNB yesProcesses work orders.MF NDYesPE yesNB yesInforms cost responsibilities.NF NDNS yesPE yesNB yesNF NDNS yesPE yesNB yesNF NDNS yesPE yesNB yes	NF NS PE NB PQ ND yes yes yes ND Processes work orders. ability ability NF NS PE NB PQ ND yes yes yes PE NB ND yes yes yes PQ ND yes yes yes PO Informs customer of repair time frames and cost responsibilities. ability ability NN NE PE NB PQ ND yes yes yes ND Row Know know know know ND yes yes yes yes Performs pre-service functional tests. ability ability ability ability ability ability ability ability ability ability	NF NS PE NB PQ ON Processes work orders. ability to dete and phone nu ability to dete number of un ability to write ability to dete number of un ability to write NF NS PE NB PQ ON NF NS PE NB PQ ON NF NS PE NB PQ ON Informs customer of repair time frames and cost responsibilities. ability to respenduiries ability to obta on work ordeted in work or	NF NS PE NB PQ ON MA ND yes yes yes ND NV yes Processes work orders. ability to determine r ability to determine r ability to determine r ability to determine r nd phone numbers of ability to write up syn NF NS PE NB ND yes yes Yes NF NS PE NB ND yes yes Yes Informs customer of repair time frames and cost responsibilities. ability to respond to enquiries ability to obtain custor on work order knowledge of compation work order ND yes yes yes ND yes yes Yes ND yes yes yes Anowledge of compation work order No NV ND yes yes ND NV Performs pre-service functional tests. ability to apply power up ability to check video ability to check video ability to check audio	NFNSPENBPQONMASKProcesses work orders.ability to determine name, a and phone numbers of custo ability to determine name ar number of unit ability to write up symptomsNFNSPENBPQONMASKNDyesyesyesPQONMASKNDyesPENBPQONMASKNDyesyesyesNDNVyesyesInforms customer of repair time frames and cost responsibilities.ability to respond to customer enquiries ability to obtain customer sig on work order knowledge of company work knowledge of company work 	NFNSPENBPQONMASKABProcesses work orders.ability to determine name, address and phone numbers of customer ability to determine name, address and phone numbers of customerNFNSPENBPQONMASKABNDyesyesyesNBNVyesyesyesNFNSPENBNDONMASKABNDyesyesyesyesyesyesyesInforms customer of repair time frames and cost responsibilities.ability to respond to customer enquiries ability to obtain customer signature on work order knowledge of company work volum knowledge of company credit policyNFNSPENBPQONMASKABNDyesyesyespeshttp://www.nowledge.org/listyesyesNDyesyesyesNDNVyesyesyesNDyesyesyespolonMASKABNDyesyesyesyespolyesyesNDyesyesyesyesyesyesyesNDyesyesyesyesyesyesyesPerforms pre-service functional tests.ability to apply power ability to check video ability to check video ability to check audioyesyes	NE NS PE NB PQ ON MA SK AB BC Processes work orders. ability to determine name, address and phone numbers of customer ability to determine name, address and phone numbers of customer Processes work orders. ability to determine name, address and phone numbers of customer ME NS PE NB PQ ON MA SK AB BC NF NS PE NB PQ ON MA SK AB BC ND yes yes yes yes no ability to determine name, address and phone numbers of customer ability to write up symptoms NF NS PE NB PQ ON MA SK AB BC ND yes yes yes yes no NV yes yes no Informs customer of repair time frames and cost responsibilities. ability to respond to customer enquiries ability to obtain customer signature on work order knowledge of company work volume knowledge of company work volume knowledge of company work volume knowledge of company yes yes yes yes yes <td>NF NS PE NB PQ ON MA SK AB BC NT no Processes work orders. ability to determine name, address and phone numbers of customer ability to determine name, address and phone numbers of customer ability to determine name and model number of unit ability to determine name and model number of unit MD yes PE NB PQ ON MA SK AB BC NT no NF NS PE NB PQ ON MA SK AB BC NT yes Informs customer of repair time frames and cost responsibilities. ability to respond to customer signature on work order ability to obtain customer signature on work order ability to obtain customer signature on work order ND yes yes NB PQ ON MA SK AB BC NT ND yes yes yes yes yes yes yes yes Informs customer of repair time frames and cost responsibilities. ability to obtain customer signature on work order ability to apply work volume knowledge of company work volume knowledge of 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ability to check tuner

ability to check cosmetics of set

ability to recognize malfunctions

ability to document results

ability to communicate results to other technicians

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

12.05	Disas	Disassembles units.			•	ability to prepare unit and work area for disassembly					hex drivers, electric screw/nut drivers	
					ability to select and use tools							
					-	ability to follow manufacturers= disassembly procedures						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV
12.06	Trout	oleshoo	ts faults		troubl ability inspec ability with a	leshooti y to perf ctions y to reco	form not ognize n technici	n-techn leed to c			measurin keys, fee drivers, h alignmen burnishir irons, sol solder wi pullers, i	ng tools, solder lder suckers, icks, head

	ability to perform visual inspection	equipment, multimeters, continuity testers,
	ability to recognize malfunctions	oscilloscopes, circuit testers, component
	ability to read schematics	testers, frequency counters, test monitors,
	ability to isolate unit fault to sub-	tension gauges, torque
	assembly/circuit/component	gauges, thickness, test/alignment,
	ability to select, connect and correctly	diskettes, test strobes, video disks,
	interpret readings from required test equipment	tapes/CD/records,
	ability to document results	microfiche reader, NTSC generators, AF
		generators, transistor
	ability to communicate results to other personnel	checker, capacitor checker, wow and
	-	flutter, spectrum
	ability to recognize warranty and non-warranty situations	analyzer, light box, vector scope, hot air
	knowledge of electro static discharge	equipment, mats, ground straps,
	techniques	inspection mirrors,
	knowledge of flat-pack (surface-	reference charts, test charts, diagnostic
	mount) techniques	routines, test cables,
	knowledge of component	magnifiers, electrical tape, heat gun, i.c.
	identification methods	pullers, head checker
	knowledge of replacement part	
	characteristics (physical and electrical)	
	knowledge of troubleshooting	
	techniques	

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

12.07 Repla

Replaces or repairs faulty

ability to remove faulty component

cutters, measuring

Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
Sub-tasks circuits and components.	Supporting Knowledge & Abilities ability to verify proper installation ability to verify integrity of board and neighboring components ability to select and replace component	Tools & Equipment devices, allen keys, feeler gauges, hex drivers, hammers, alignment tools, burnishing tools, allen keys, feeler gauges, solder irons, solder suckers, solder wicks,
	ability to order parts ability to repair faulty circuits or components	flux removers, head pullers, i.c. pullers, electric screw/nut drivers, glue gun, heat gun, anti-static
	ability to clean circuits and components	equipment, cleaning fluids, lubricants, swabs, oilers, de- soldering tools
	ability to recognize warranty and non-warranty situations ability to obtain exact replacement or	
	suitable substitute parts knowledge of de-soldering and soldering techniques	
	knowledge of electro static discharge techniques	
	knowledge of flat-pack (surface- mount) techniques knowledge of component	
	identification methods knowledge of cleaning chemicals and	
	procedures knowledge of troubleshooting techniques	

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

12.08	Sets up and tests units.	ability to ensure unit complies with government regulations	cleaning fluids, distortion analyzers, test monitors, AF
		ability to attach to power source	generators, wow and flutter, diskettes, video
		ability to attach to signal source	disks, tapes/CD/records
		ability to power up	
		ability to check audio	
		ability to check video	
		ability to check tuner	
		ability to check all features	
		ability to check cosmetics	
		ability to recognize malfunctions and troubleshoot	
		ability to document results	
		ability to communicate results to other technicians	
		knowledge of application of testing devices	
		knowledge of electro static discharge techniques	
		knowledge of flat-pack (surface- mount) techniques	
		knowledge of component identification methods	
		knowledge of replacement part characteristics (physical and electrical)	

Su	b-tasks			Suppo	orting K	nowled		Tools & Equipment				
					knowledge of troubleshooting techniques							
<u>NI</u> NI		<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	

12.09	Performs rou maintenance.			ability to clean controls manufacturer's software, measuring devices, allen
				ability to align keys, feeler gauges, hex drivers, hammers,
				ability to fine tune channels alignment tools, burnishing tools,
				ability to verify operation of controls electric screw/nut drivers, isolation
				ability to clean cosmetics of item transformer, cleaning fluids, airbrushes,
				ability to verify all safety devices are vacuum brushes, swabs,
				in place and functioning properly ultrasonic cleaner, lubricants, oilers,
				ability to perform routine mechanical multimeters,
				and electronic adjustments/ oscilloscopes, circuit alignments testers, component testers, distortion
				ability to identify/document analyzers, test monitors,
				weaknesses or potential problems tension gauges, torque gauges, thickness
				knowledge of application of testing devices gauges, test/alignment gauges, diskettes, test strobes, micrometer,
				knowledge of electro static discharge techniques video disks, tapes/CD/ records, wow and flutter, test charts, test
				cables, magnifying glass
				knowledge of component identification methods
				knowledge of cleaning chemicals and procedures
				knowledge of troubleshooting techniques
	<u>NF_NS_</u>	<u>PE N</u>	<u>B</u>	<u>PQ ON MA SK AB BC NT YK</u>

 Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment		
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV	

12.10		rms pos ional tes		e	ability to attach to power source manufacturer's sol cleaning fluids, cl dot/bar generators										
						y to pow						sks, tapes/CD/ test charts			
					abilit	y to che	ck audio)							
					abilit	ability to check video									
					abilit	y to che	ck tunei	•							
					abilit	y to che	ck all fe	atures							
					abilit	y to che	ck cosm	netics							
					abilit	y to reco	ognize n	nalfunc	tions						
					abilit	y to doc	ument r	esults							
						y to con technic		ite resul	ts to						
					know devic	ledge of es	f applica	ation of	testing						
					know techn	ledge of iques	felectro	static o	lischarg	ge					
					identi	ledge of ification ledge of dures	method	ls	nicals ar	nd					
					knowledge of troubleshooting techniques										
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV			

	Sub-t	asks			Supp	orting K	Inowled		Tools & Equipment					
12.11		sembles rms fina			abilit	y to asse y to prej sembly	pare uni	t and w	ork area	a	hex driv	cturer's software, ers, electric ut drivers		
					abilit	ability to select and use tools								
					-	ability to follow manufacturers= assembly procedures								
					ability to perform final functional test									
						knowledge of electro static discharge techniques								
						knowledge of cleaning chemicals and procedures								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	PQ_ ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		

12.12	Delivers/installs, sets up units, and demonstrates	ability to handle units	car or light to medium- sized truck,
ι	unit operation.	ability to store units	manufacturer's software, video disks,
		ability to drive to job location when applicable	tapes/CD/records
		ability to deliver units	
		ability to install and set up units	
		ability to demonstrate unit to customer	
		ability to advise customer of company policies and warranty policies	
		ability to communicate pertinent repair/defect information	
		ability to respond to customer concerns and customer satisfaction	
		ability to obtain customer sign-off	

	Sub-t	asks			Supporting Knowledge & Abilities]	Tools & Equipment		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	ability <u>PQ</u> ND	y to obta <u>ON</u> NV	ain payn <u>MA</u> yes	nent <u>SK</u> yes	AB yes	BC yes	<u>NT</u> no	<u>YK</u> NV	
12.13	Comp docur	oletes nentatio	on.		ability ability ability	ability to bill customer ability to complete warranty claim ability to calculate customer bill ability to tag warranty parts knowledge of warranty rules and							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

Task 13Services monitors.

<u>Trend</u>: No apparent change.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
13.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem ability to probe for specific symptoms	
		ability to reflect back and verify customer's recollection of symptoms	
		ability to respond to unrealistic customer expectations	
		knowledge of unit operation and potential problems	

Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment			
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	YK NV		
Proce	sses wo	ork orde	rs.										
				-			name ar	nd mode	el				
				ability	y to writ	te up sy	mptom	8					
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
repair	time fr	ames ai	nd	enqui abilit <u>y</u>	ries y to obta	ain custo							
				know	ledge of	f compa	ny wor	k volun	ne				
				know	ledge of	f compa	ny cred	lit polic	у				
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
			;				gnal sou	gnal source			variable voltage/current supplies, RF generators, test speakers, head		
				ability to check video							g procedures		
				ability to check all special features									
	NF ND Proce NF ND Inform repain cost r ND	ND yes Processes work NF NS ND yes Informs custor repair time fr cost responsi NF NS NF NS ND yes	NFNSPENDyesyesProcesses work ordeMFNSPENDyesyesInforms customer of repair time frames ar cost responsibilities.NFNSPENDyesyes	NF NDNS yesPE yesNB yesProcesses work orders.NF NDNS yesPE yesNB yesInforms customer of repair time frames and cost responsibilities.NB yesNB yesNF NDNS yesPE yesNB yesNF NDNS yesPE yesNB yesNF NDNS yesPE yesNB yesNF NDNS yesPE yesNB yesPerforms pre-serviceNB yesNB yes	NF NS PE NB PQ ND yes yes yes yes ND Processes work orders. ability ability ability NF NS PE NB PQ ND yes yes yes ability NF NS PE NB PQ ND yes yes yes ND Informs customer of repair time frames and cost responsibilities. ability ability on we know ND Yes PE NB PQ ND yes yes yes ND Performs pre-service functional tests. ability ability ability	$\frac{NF}{ND} \frac{NS}{yes} \frac{PE}{yes} \frac{NB}{yes} \frac{PQ}{ND} \frac{ON}{NV}$ $\frac{Processes work orders.}{add phone nu} ability to detern ability to detern ability to detern ability to write ability to write ability to write ability to write NE NS PE NB PQ ON NV NV$	NFNSPENBPQONMANDyesyesyesNDNVyesProcesses work orders.ability to determine r and phone numbers of ability to determine r number of unit ability to write up sysNFNSPENBPQONMANDyesyesyesNDNVyesInforms customer of repair time frames and cost responsibilities.ability to respond to enquiries ability to obtain custo on work order knowledge of compa knowledge of compa 	NFNSPENBPQONMASKProcesses work orders.ability to determine name, a and phone numbers of custo ability to determine name ar number of unit ability to write up symptomsNFNSPENBPQONMASKNDyesyesyesNDNVyesyesNFNSPENBPQONMASKNDyesyesyesNDNVyesyesInforms customer of repair time frames and cost responsibilities.ability to respond to custom enquiries ability to obtain customer si on work order knowledge of company work knowledge of company work knowledge of company work knowledge of company credNFNSPENBPQONMASKNDyesyesyesNDNVyesyesPerforms pre-service functional tests.ability to attach to signal son ability to check videoability to check video	NFNSPENBPQONMASKABNDyesyesyesyesNDNVyesyesyesProcesses work orders.ability to determine name, address and phone numbers of customer ability to determine name and mode number of unit ability to write up symptomsNFNSPENBPQONMASKABNDyesyesyesNDNVyesyesyesInforms customer of repair time frames and cost responsibilities.ability to respond to customer enquiries ability to obtain customer signature on work order knowledge of company work volum knowledge of company work volum knowledge of company work volum knowledge of company credit polic.NFNSPENBPQONMASKABNDyesyesyesyesyesyesPerforms pre-service functional tests.ability to attach to signal source ability to check videoability to check video	NF NS PE NB PQ ON MA SK AB BC Processes work orders. ability to determine name, address and phone numbers of customer ability to determine name, address and phone numbers of customer NF NS PE NB PQ ON MA SK AB BC ND ves yes yes yes yes no NF NS PE NB PQ ON MA SK AB BC ND yes yes yes NB PQ ON MA SK AB BC ND yes yes yes NB ND NV yes yes no Informs customer of repair time frames and cost responsibilities. ability to respond to customer enquiries ability to obtain customer signature on work order ability to obtain customer signature on work order Nowledge of company work volume knowledge of company credit policy NF NS PE NB PQ ON MA SK AB BC ND yes yes ye	NF NS PE NB PQ ON MA SK AB BC NT Processes work orders. ability to determine name, address and phone numbers of customer ability to determine name and model number of unit Processes work orders. ability to determine name and model number of unit ability to write up symptoms NF NS PE NB PQ ON MA SK AB BC NT ND yes yes yes ND NV yes yes yes NT ND yes yes yes ND NV yes yes yes no Yes Informs customer of repair time frames and cost responsibilities. ability to respond to customer enquiries ability to obtain customer signature on work order hnowledge of company work volume knowledge of company work volume knowledge of company credit policy NF NS PE NB PQ ON MA SK AB BC NT ND yes yes ND NV yes yes yes no yes ND yes<		

ability to check cosmetics of set

	Sub-ta	asks			Suppo	orting K	nowled	9e & A	hilities		Tools &	Equipment
	540 4	uSKS				to reco					10013 @	Equipment
						y to doc	-					
						ability to communicate results to other technicians						
					know device	ledge of es	applica					
						devices knowledge of electro static discharge techniques						
					know techni	ledge of iques	trouble	eshootir	ng			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>NT</u> yes	<u>YK</u> NV			
13.05	Disas	sembles	s units.			y to prep sassemb		t and w	ork area	1		crew/nut cemperature
					ability	y to sele	ct and u	ise tool	8		probes	
					-	y to follo embly p			ers=			
					know techni		electro	static o	lischarg	ge		
						ledge of fication						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV

13.06 Troubleshoots faults.

ability to prepare unit for

manufacturer's software,

troubleshooting

ability to perform non-technical inspections

ability to recognize need to consult with another technician or manufacturer

ability to perform visual inspection

ability to recognize malfunctions

ability to read schematics

ability to isolate receiver fault to subassembly/circuit/component

ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical) allen keys, hex drivers, alignment tools, burnishing tools, solder irons, solder suckers, solder wicks, flux removers, i.c. pullers, cutters, strippers, heat gun, isolation transformer, anti-static equipment, fan, cleaning fluids, airbrushes, vacuum brushes, swabs, multimeters, continuity testers, oscilloscopes, function generators, dot/bar generators, circuit testers, component testers, logic probes, frequency counters, db/dbm meters, degaussing equipment, test speakers, microfiche reader, high voltage probe, variac, decade boxes, jumper wire, NTSC generators, AF generators, transistor checker, tracker, capacitor checker, Z-meter, head phones, induction meter, CRT checker, vacuum tube tester, dummy loads, hot air equipment, inspection mirrors, reference charts, diagnostic routines, test cables, equipment dollies/carts, magnifiers, electrical tape

Sub-tasks					Supporting Knowledge & Abilities					Tools & Equipment		
				knowledge of troubleshooting techniques								
 NFND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	

13.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component	manufacturer's software, cutters, allen keys, hex
	ľ	ability to verify proper installation	drivers, alignment tools, burnishing tools, solder
		ability to verify integrity of board and	irons, solder suckers,
		neighboring components	solder wicks, flux
			removers, i.c. pullers,
		ability to select and replace	cutters, strippers, heat
		component	gun, isolation
		••mpenene	transformer, anti-static
		ability to order parts	equipment, fan,
		uonity to order parts	cleaning fluids,
		ability to repair faulty circuits or	airbrushes, vacuum
		components	brushes, swabs,
		components	multimeters, continuity
		ability to clean circuits and	testers, oscilloscopes,
		components	function generators,
		components	dot/bar generators,
		ability to recognize warranty and	circuit testers,
		non-warranty situations	component testers, logic
		non-warranty situations	probes, frequency
		ability to obtain avaat rankaamant or	counters, db/dbm
		ability to obtain exact replacement or suitable substitute parts	
		suitable substitute parts	meters, degaussing
		Importantes of amplication of testing	equipment, test
		knowledge of application of testing	speakers, microfiche
		devices	reader, high voltage
		la se la dese a Cale a se la se inse a se a	probe, variac, decade
		knowledge of de-soldering and	boxes, jumper wire,
		soldering techniques	NTSC generators, AF
			generators, transistor
		knowledge of electro static discharge	checker, tracker,
		techniques	capacitor checker,
			Z-meter, head phones,
		knowledge of flat-pack (surface-	induction meter, CRT
		mount) techniques	checker, vacuum tube
			tester, dummy loads, hot
		knowledge of component	air equipment,

Sub	-tasks			Suppo	orting K	nowled	Tools & Equipment					
				identi	fication	method		inspection mirrors, reference charts, diagnostic routines, test cables, equipment dollies/carts_magnifiers				
				know! proce	0	f cleanir	nd					
	knowledg technique				U	f trouble	eshootir	ıg		dollies/carts, magnifiers, electrical tape, hammers, crimpers, glue gun, de-soldering tools		
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	

13.08	Sets up and tests units.	 ability to ensure unit complies with government regulations ability to attach to power source ability to attach to signal source ability to power up ability to check video ability to check all features ability to check cosmetics ability to recognize malfunctions and troubleshoot ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of troubleshooting techniques 	RF generators, variable voltage/current supplies, test speakers, head phones, test cables, dot/bar generators
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NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
										yes	

13.09	Performs routine maintenance.	ability to clean controls	multimeters, oscilloscopes, function					
	mannenance.	ability to align	generators, dot/bar generators, frequency					
		ability to verify operation of controls	counters, distortion analyzers, db/dbm					
		ability to clean cosmetics of item	meters, variable voltage/current supplies,					
		ability to verify all safety devices are in place and functioning properly	degaussing equipment, microfiche reader,					
		ability to perform routine mechanical and electronic adjustments/ alignments	variac, jumper wire, NTSC generators, cleaning fluids, airbrushes, vacuum					
		ability to identify/document	brushes, swabs, test cables, manufacturer=s					
		weaknesses or potential problems	software, alignment tools, solder irons,					
		knowledge of precision mechanisms and fine mechanical adjustments	solder suckers, solder wicks, magnifying glass					
		knowledge of application of testing devices						
		knowledge of electro static discharge techniques						
		knowledge of component identification methods						
		knowledge of cleaning chemicals and procedures						
		knowledge of replacement part characteristics (physical and electrical)						
		knowledge of troubleshooting						

	Sub-t	asks			Suppo	orting K	Inowled	ge & A	bilities		Tools & Equipment		
					techni	iques							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	
13.10		rms pos ional te	st-servic sts.	e	ability		ch to po ch to sig ver up	voltage/c test speal phones, t	RF generators, variable voltage/current supplies, test speakers, head phones, test cables, operating procedures				
					ability	to che	ck audio						
					ability	to che	ck video)					
					ability	to che	ck all fe	atures					
					ability	to che	ck cosm	netics					
					ability to recognize malfunctions								
					ability to document results								
						to con technic	nmunica ians	ite resul	lts to				
					know techni	•	f electro	static o	discharg	je			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	
13.11			units a al check		ability to assemble ability to prepare unit and work area for assembly						electric screw/nut drivers, temperature probes, operating procedures		

ability to select and use tools

ability to follow manufacturers=

Sub-t	asks			Suppo	orting K	nowled		Tools & Equipment				
				assembly procedures ability to perform final functional test								
				2	edge of	cleanin						
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	

13.12	units,	ers/insta and der	monstra								car or light to medium- sized truck, manufacturer's software,				
	unit operation.					10 5101	e units				electric screw/nut				
					ability applic		e to job	locatio	on when		drivers, c	leaning fluids			
					ability	to deli	ver unit	S							
					ability	v to insta	all and s	set up u	nits						
					ability custor		onstrate	e unit to							
					•	any poli	ise custo cies and								
							imunica informa		nent						
ability to respond concerns and cust															
					ability	/ to obta	in custo								
					ability	v to obta	in payn								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> no	<u>YK</u> NV			

13.13	Comp	oletes nentatio	m		ability	to bill	custome	manufacturer's software, microfiche reader				
documentation.					ability	to com						
		ability to calculate customer bill										
					ability	to tag	warrant					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV

Task 14Services video entertainment equipment.

Trend: Expanding sales and lower prices will require more service and additional training.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment							
14.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem								
	problems.	ability to probe for specific symptoms								
		ability to reflect back and verify customer's recollection of symptoms								
		ability to respond to unrealistic customer expectations								
		knowledge of unit operation and potential problems								
14.02	<u>NF NS PE NB</u> ND yes yes yes Processes work orders.	PQONMASKABBCNDNVyesyesyesnoability to determine name, addressand phone numbers of customer								
		ability to determine name and model number of unit								

	Sub-ta	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment
					know	y to writ ledge of nentatic	f compa	ny	\$			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV
14.03	repair		omer of ames ar bilities.		ability enqui ability on wo							
					know	ledge of	f compa	ny worl	k volum	ne		
					know	ledge of	f compa	ny cred	it policy	у		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV
14.04		rms pre- onal tes	-service sts.									rs, test , NTSC rs, AF rs, head

 p	meaning as appendix as	
functional tests.		test monitors, dot/bar
	ability to attach to signal source	generators, RF
		generators, test
	ability to power up	speakers, NTSC
		generators, AF
	ability to check video	generators, head
		phones, computer,
	ability to check audio	inspection mirrors,
		diagnostic routines,
	ability to check all special features	equipment dollies/carts,
		lifting/leveling devices,
	ability to check cosmetics of set	magnifiers, isolation
		transformer,
	ability to recognize malfunctions	manufacturer's software,
		anti-static equipment,
	ability to document results	fire extinguisher, fan
	abilita ta communicata nomilta ta	
	ability to communicate results to	
	other technicians	

	Sub-t	asks			Suppo	orting K	nowled		Tools & Equipment				
					knowledge of electro static discharge techniques								
					know techn	-	f trouble	eshootii	ıg				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	YK NV	
14.05	Disas	semble	s units.		for di ability ability	sassemb y to sele y to foll	oare uni bly ct and ι ow man orocedu	cutters, measuring devices, allen keys, feeler gauges, hex drivers, hammers, alignment tools, burnishing tools, anti- static equipment					
						ledge of	felectro		discharg	je	Ĩ		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	
14.06	Troul	bleshoo	ts faults		troub ability inspec ability with a	leshooti y to perfections y to reco	form no ognize n technici	cutters, n devices, f feeler gan drivers, h alignmen burnishir	nammers, at tools, ng tools, solder der suckers,				

ability to perform visual inspection ability to recognize malfunctions removers, head pullers,

i.c. pullers, chisels,

cutters, strippers, crimpers, electric drills,

electric screw/nut drivers, glue gun, heat

transformer, anti-static

gun, isolation

ability to read schematics

ability to isolate receiver fault to subassembly/circuit/component

- 90 -

ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

equipment, fire extinguisher, fan, cleaning fluids, cloths, airbrushes, vacuum brushes, swabs, ultrasonic cleaner, lubricants, oilers, multimeters, continuity testers, oscilloscopes, function generators, dot/bar generators, RF generators, circuit testers, component testers, logic probes, logic analyzers, frequency counters, RAM/ROM testers, X-ray and particle detectors, variable voltage/current supplies, AC line testers/ monitors, degaussing equipment, test monitors, test speakers, microfiche reader, high voltage probe, variac, decade boxes, jumper wire, NTSC generators, AF generators, transistor checker, tracker, capacitor checker, Z-meter, head phones, induction meter, computer, hot air equipment, mini torch, inspection mirrors, temperature probes, reference charts, test charts, diagnostic routines, test cables, equipment dollies/carts, lifting/leveling devices, magnifiers, electrical tape, mats, ground straps, sprays, video disks, tapes/CD/records,

	Sub-t	asks			Supp	orting K	Knowled		Tools & Equipment			
											CRT che	ecker
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV
14.07	-	aces or 1 its and o	-	-	ability ability ability ability ability ability ability comp ability ability non-v ability suitab know device know solde know techn know	y to ver boring y to sele onent y to sele onent y to ord y to rep onents y to clea onents y to clea onents y to clea onents y to clea onents y to reco warranty y to obt ole subs cledge o ring tec cledge o iques cledge o iques cledge o iques cledge o	air fault an circu ognize v situatio ain exac titute pa f applic f de-solo hniques f electro f flat-pa	er insta grity of l ents replace y circui its and warranty ons et replace ation of dering a o static o ck (surf	Ilation board an ts or y and cement of testing and discharg	Dr	cutters, f devices, feeler ga drivers, burnishi irons, so solder w remover i.c. pulle cutters, s crimpers electric s drivers, gun, isol transforn equipme extingui cleaning airbrush brushes, ultrason lubrican multime testers, c function dot/bar § generato testers, 1 logic ana frequence RAM/R X-ray ar detectors	ner, anti-static ent, fire sher, fan, fluids, cloths, es, vacuum swabs, ic cleaner, ts, oilers, ters, continuity oscilloscopes, generators, RF ors, circuit component ogic probes, alyzers, ey counters, OM testers, id particle s, variable current supplies,

 Sub-ta	sks			Suppo	orting K	nowled		Tools & Equipment			
Sub-ta	<u>sks</u>			knowl procee	ledge of dures ledge of	cleanir	ng chem	nicals ar	nd	equipmen monitors, microfich voltage p decade be wire, NT AF genen transistor tracker, c checker, p hones, i meter, cc air equipt torch, ins mirrors, t probes, ra- test chart routines, equipmen lifting/lev magnifie tape, mat straps, sp disks, tap	nt, test , test speakers, ne reader, high robe, variac, oxes, jumper SC generators, rators, checker, apacitor Z-meter, head nduction omputer, hot ment, mini
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	YK NV

14.08	Sets up and tests units.	ability to ensure unit complies with government regulations	variac, data generators, test monitors, dot/bar generators, RF
		ability to attach to power source	generators, test speakers, NTSC
		ability to attach to signal source	generators, AF generators, head
		ability to power up	phones, computer, inspection mirrors,
		ability to check audio	diagnostic routines, equipment dollies/carts,
		ability to check video	lifting/leveling devices, magnifiers, isolation

Sub-tasks		Supporting Knowledge & Abilities	Tools & Equipment				
		ability to check all features	transformer,				
		ability to check cosmetics	manufacturer's software, anti-static equipment, fire extinguisher, fan				
		ability to recognize malfunctions and troubleshoot					
		ability to document results					
		ability to communicate results to other technicians					
		knowledge of application of testing devices					
		knowledge of electro static discharge techniques					
		knowledge of troubleshooting techniques					
) ID	<u>PE NB</u> yes yes	PQ NDON NVMA yesSK yesAB yesBC yes	<u>NT</u> <u>YK</u> yes NV				

14.09	Performs routine maintenance.	ability to clean controls	manufacturer's software, cutters, measuring
		ability to align	devices, allen keys, feeler gauges, hex
		ability to verify operation of controls	drivers, alignment tools, burnishing tools, solder
		ability to clean cosmetics of item	irons, solder suckers, solder wicks, flux
		ability to verify all safety devices are in place and functioning properly	removers, head pullers, i.c. pullers, chisels, cutters, strippers,
		ability to perform routine mechanical and electronic adjustments/ alignments ability to identify/document weaknesses or potential problems	crimpers, electric drills, electric screw/nut drivers, glue gun, heat gun, isolation transformer, anti-static equipment, fire
		knowledge of precision mechanisms and fine mechanical adjustments	extinguisher, fan, cleaning fluids, cloths, airbrushes, vacuum brushes, swabs,

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

ultrasonic cleaner, lubricants, oilers, multimeters, continuity testers, oscilloscopes, function generators, dot/bar generators, RF generators, circuit testers, component testers, logic probes, logic analyzers, frequency counters, RAM/ROM testers, X-ray and particle detectors, variable voltage/current supplies, AC line testers/ monitors, degaussing equipment, test monitors, test speakers, microfiche reader, high voltage probe, variac, decade boxes, jumper wire, NTSC generators, AF generators, transistor checker. tracker, capacitor checker, Z-meter, head phones, induction meter, computer, hot air equipment, mini torch, inspection mirrors, temperature probes, reference charts, test charts, diagnostic routines, test cables, equipment dollies/carts, lifting/leveling devices, magnifiers, electrical tape, mats, ground straps, sprays, video disks, tapes/CD/records, magnifying glass, CRT checker

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

14.10			t-servic	e	ability	v to atta	ch to po		variac, data generators,						
	functi	onal tes	sts.		ability	v to atta	ch to sig	gnal sou	irce		test monitors, dot/bar generators, RF generators, test				
					ability	to pow	ver up				speakers	, NTSC			
					ability	to chee	ck audio)			generators, AF generators, head phones, computer, inspection mirrors, diagnostic routines, equipment dollies/carts, lifting/leveling devices,				
					ability	to chee	ck video)							
					ability	to chee	ck all fe	atures							
					ability	to cheo	ck cosm		ers, isolation	~,					
					ability	to reco	ognize n		manufac	· · · · · · · · · · · · · · · · · · ·					
					ability	to doc	ument r		equipment, fire extinguisher, fan						
						to com technici	nmunica ians	ite resul	ts to		C				
					know! device	•	f applica	ation of	testing						
					know techni	•	f electro	static c	lischarg	e					
					know! proce		f cleanir	ng chem	nicals ar	nd					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	YK NV			
14.11			units an I check		ability	to asse	emble				cutters, measuring devices, allen keys,				
	1				ability for as	feeler ga	uges, hex hammers,								

ability to select and use tools

ability to follow manufacturers= assembly procedures

alignment tools, burnishing tools, antistatic equipment

ability to perform final functional test

knowledge of electro static discharge techniques

knowledge of cleaning chemicals and procedures

NF	NS	PE	NB	PQ	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

14.12		ers/inst	-		ability	to han	dle unit		car, light to medium-						
		and deperation		ites	ability	to stor	e units				sized truc manufact cutters, n	urer's software,			
					ability applic		e to job	locatio	on when		devices, a feeler gau	allen keys, 1ges, hex			
					ability	to deli	ver unit	S			drivers, alignment tools, burnishing tools, cutters, strippers,				
					ability	to insta	all and s			electric drills,					
					ability custor		onstrate		drivers, g gun, anti-	lue gun, heat · static					
					•	any poli	ise custo cies and				equipmen diskettes, tapes/CD				
							imunica informa		nent		· ·	nt dollies/carts, /eling devices			
					•		ond to o								
					ability	v to obta	in custo								
					ability	to obta	in payn								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> no	<u>YK</u> NV			

14.13	Comp	oletes nentatio	n		abilit	y to bill	(calculato	r					
	uooun	ionutic			abilit	y to con	nplete w	arranty	claim					
					abilit	ability to calculate customer bill								
					abilit	ability to tag warranty parts								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		

Task 15Services satellite receiver systems.

<u>Trend</u>: Because of the introduction of direct satellite systems (DSS) at a low start up cost, the use of these systems will become more widely spread and consequently some technicians feel they will generate more opportunities for service.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
15.01	Greets, interviews clients and verifies unit problems.	 ability to listen attentively to customer's description of problem ability to probe for specific symptoms ability to reflect back and verify customer's recollection of symptoms ability to respond to unrealistic customer expectations 	
		knowledge of unit operation and potential problems	
		(NOT COMMON CORE)	

	Sub-t	asks			Supp	orting K	Inowled	lge & A	bilities		Tools & Equipment		
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> no	<u>YK</u> NV	
15.02	Proce	esses wo	ork orde	rs.		y to dete hone nu							
						y to dete er of un		name ar	nd mode	el			
					abilit	y to writ	te up sy	mptom	S				
						ledge of nentatio							
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
15.03	repair	r time fi	omer of cames an bilities.	nd	abilit enqui	y to resp ries	oond to	custom	er				
	00511	csponsi	onnees.		-	y to obta ork orde		omer si	gnature				
					know	ledge of	f compa	iny wor	k volun	ne			
					know	ledge of	f compa	iny crec	lit polic	у			
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
15.04		rms pre ional te	sts.	•		y to app y to atta			urce		-	rators, RF eters, satellite	
						y to pow y to che		0					

ability to check audio

	Sub-tasks			Supp	orting K	Inowled	ge & A	bilities		Tools &	Equipment	
				abilit	y to che	ck all sp	oecial fe	atures				
				abilit	y to che	ck tunei						
				abilit	y to che	ck cosm	netics of	set				
				abilit	y to reco	ognize r	nalfunc	tions				
				abilit	y to doc	ument r	esults					
					y to con technic		ite resul	ts to				
				know devic	ledge of es	f applica	ation of	testing				
				know techn	ledge of iques	f electro	static o	lischarg	ge			
	<u>NF</u> <u>NS</u> ND no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
15.05	Disassemble	s units.		for di	y to prej sassemt y to sele	oly			a	hex drive solder w	ers, solder iro	ons

ability to follow manufacturers= disassembly procedures

knowledge of electro static discharge techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

15.06	Troubleshoots faults.	ability to prepare unit for	multimeters,
		troubleshooting	oscilloscopes, RF
			generators transistor

ability to perform non-technical inspections

ability to recognize need to consult with another technician or manufacturer

ability to perform visual inspection

ability to recognize malfunctions

ability to read schematics

ability to isolate receiver fault to subassembly/circuit/component

ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques checker, diagnostic software, monitor, satellite feed

 Sub-t	asks			Supp	orting K	Inowled	ge & A	bilities		Tools &	Equipment	
<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC_ no	<u>NT</u> yes	<u>YK</u> NV	

15.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component	solder irons, solder wicks, flux removers,
	encuris une components.	ability to verify proper installation	hot air equipment, ground straps, de-
		ability to verify integrity of board and neighboring components	soldering tools
		ability to select and replace component	
		ability to order parts	
		ability to repair faulty circuits or components	
		ability to clean circuits and components	
		ability to recognize warranty and non-warranty situations	
		ability to obtain exact replacement or suitable substitute parts	
		knowledge of application of testing devices	
		knowledge of de-soldering and soldering techniques	
		knowledge of electro static discharge techniques	
		knowledge of flat-pack (surface- mount) techniques	
		knowledge of component identification methods	

	Sub-tasks				Supporting Knowledge & Abilities						Tools & Equipment		
					know proce	•	f cleanir	ng chen	nicals ar	nd			
					know techni	•	f trouble	eshootir	ng				
-	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

15.08	Sets up and tests units.	ability to ensure unit complies with government regulations	RF generators, diagnostic software, monitor, satellite feed,
		ability to attach to power source	compass, inclinometer
		ability to attach to signal source	
		ability to power up	
		ability to check audio	
		ability to check video	
		ability to check tuner	
		ability to check all features	
		ability to check cosmetics	
		ability to recognize malfunctions and troubleshoot	
		ability to document results	
		ability to communicate results to other technicians	
		knowledge of application of testing devices	
		knowledge of electro static discharge techniques	

	Sub-t	tasks			Supp	orting K	Knowled	lge & A	bilities		Tools & Equipment		
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
15.09		orms rou tenance				-	an contre e tune cl				fluids, sv	ts, cleaning vabs, ters, magnifying	
					abilit	y to ver	ify opera	ation of	control	S	0		
					abilit	y to clea	an cosm	etics of	item				
							ify all sa function			e			
						lectroni	form rou c adjust		echanica	al			
						-	ntify/do or poten		olems				
					know devic	-	f applica	ation of	testing				
					know techn	-	f electro	static o	discharg	e			
							f compo method						
					know proce	-	f cleanii	ng chen	nicals ar	nd			
						cteristic	f replace s (physi	-					
					know techn	•	f trouble	eshootir	ng				
15.10	<u>NF</u> ND Perfo	<u>NS</u> yes	<u>PE</u> yes st-servic	<u>NB</u> yes	<u>PQ</u> ND abilit	<u>ON</u> NV v to atta	<u>MA</u> yes ich to po	<u>SK</u> yes	<u>AB</u> yes urce	<u>BC</u> no	yes	<u>YK</u> NV rators, safety	
- / - •		ional te				-	ch to sig					res/standards	

- 104 -

15.11

ability to power up ability to check audio ability to check video ability to check tuner ability to check all features ability to check cosmetics ability to recognize malfunctions ability to document results knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of cleaning chemicals and procedures NF NS PE NB PQ ON MA <u>SK</u> AB BC NT YK ND NV ND NV yes yes yes no yes yes yes no Reassembles units and ability to assemble hex drivers, solder irons performs final check. ability to prepare unit and work area for assembly ability to select and use tools

ability to follow manufacturers= assembly procedures

ability to perform final functional test

<u>NF NS PE NB PQ ON MA SK AB BC NT YK</u>

	Sub-t	asks			Supp	orting k	Knowled	lge & A	bilities		Tools & Equipment			
	ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV		
5.12	units,		talls, set emonstra			y to han y to stor		ts			truck, cu drivers,	nedium-sized itters, hex hammers,		
						y to driv cable	ve to joł	o locatio	on when	L	alignment tools, compass, inclinometer			
					abilit	y to del	iver uni	ts						
					abilit	y to inst	tall and	set up u	inits					
						ability to demonstrate unit to customer								
					ability to advise customer of company policies and warranty policies									
						y to con r/defect								
						y to resj erns and								
					abilit	y to obt	ain cust	omer si	gn-off					
					abilit	y to obt	ain payı	ment						
						y to rea amming			ners=					
					(NO	Г СОМ	MON	CORE)						
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		
5.13	Comj				abilit	y to bill	custom	ier			calculate	or		
	docui	mentati	on.		ability to complete warranty claim									

ability to calculate customer bill

ability to tag warranty parts

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

Task 16Services video cameras.

<u>Trend</u>: Shrinking size, greater complexity, more specialized test equipment, and lower prices mean fewer shop repairs and more units shipped to factory for service.

	Sub-t	asks			Supporting Knowledge & Abilities						Tools &	Equipment
16.01		erifies	views cl unit	lients	ability to listen attentively to customer's description of problem ability to probe for specific symptoms							
					ability custor	y to refle mer's re- y to resp	ond to	on of sy unreali	ymptom	S		
					know		ectation f unit op plems		n and			
	<u>NF NS PE NB</u> ND yes yes yes				<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV

16.02	Processes work orders.	ability to determine name, address
		and phone numbers of customer

Sub-tasks		Suppo	Supporting Knowledge & Abilities						Tools & Equipment		
				y to dete er of un	ermine r iit	name ar	ıd mode	el			
			ability to write up symptoms								
						ny dures					
<u>NF</u> <u>NS</u> ND yes	PE yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV	

16.03	repair	time fr	omer of ames ar bilities.		ability to respond to customer enquiries									
					ability to obtain customer signature on work order									
					knowledge of company work volume									
					know	ledge of	f compa	ny cred	it polic	у				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		

16.04	Performs pre-service functional tests.	ability to apply power	tapes/CD/records
		ability to attach to signal source	
		ability to power up	
		ability to check video	
		ability to check audio	
		ability to check all special features	
		ability to check cosmetics of set	
		ability to recognize malfunctions	

 Sub-tasks					orting K	Inowled]	Tools & Equipment					
				ability	ability to document results								
				•	ability to communicate results to other technicians								
					knowledge of troubleshooting techniques								
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		

16.05	Disassembles units.				-	ability to prepare unit and work area for disassembly						manufacturer=s software, allen keys, solder irons, solder		
					ability	ability to select and use tools						wicks		
					-		ow man procedu							
					know techn		f electro							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		
16.06	Troubl	eshoot	s faults		troub ability inspec ability with a manu ability ability	ability to prepare unit for troubleshooting ability to perform non-technical inspections ability to recognize need to consult with another technician or manufacturer ability to perform visual inspection ability to recognize malfunctions ability to read schematics					measuri keys, fea drivers, burnishi alignme irons, so remover i.c. pulle equipme oscillose compon frequene monitor gauges,	eturer's software, ng devices, allen eler gauges, hex hammers, ng tools, nt tools, solder older wicks, flux rs, head pullers, ers, anti-static ent, multimeters, copes, ent testers, cy counters, test s, mats, tension torque gauges, as gauges,		

Sub-tasks			Supporting Knowledge & Abilities Tools & Equipment
			ability to isolate receiver fault to sub- assembly/circuit/component micrometer, tapes/CD/ records, NTSC
			ability to select, connect and correctly interpret readings from required test equipment vector scope, computer,
			ability to document results hot air equipment, head checker, ND tester, infrared tester,
			ability to communicate results to other personnelinspection mirrors, reference charts, test
			ability to recognize warranty and non-warranty situations charts, diagnostic routines, test cables
			knowledge of application of testing devices
			knowledge of electro static discharge techniques
			knowledge of flat-pack (surface- mount) techniques
			knowledge of component identification methods
			knowledge of troubleshooting techniques
NF NS yes	PE yes	<u>NB</u> yes	PQ NDON NVMA yesSK yesAB yesBC yesNT yesYK NV

16.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component	solder irons, solder wicks, flux removers,				
	encurs and components.	ability to verify proper installation	head pullers, i.c. pullers, anti-static equipment,				
		ability to verify integrity of board and neighboring components	mats, hot air gun, de- soldering tools				
		ability to select and replace component					

<u>NF</u> ND

			ability	ability to order parts							
				ability to repair faulty circuits or components							
			-	ability to clean circuits and components							
			•		ognize v v situatio	•	and /				
					ain exac titute pa		ement o	or			
			know device		f applic	ation of	testing				
					f de-solo hniques		ind				
			know techni	•	f electro	static o	lischarg	ge			
				ledge o t) techr	f flat-pa iiques	ck (sur	face-				
					f compo methoo						
			know proce	•	f cleanii	ng chen	nicals ar	nd			
			know techn		f trouble	eshootir	ng				
<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV	

16.08	Sets up and tests units.	ability to ensure unit complies with government regulations	test monitors, test/ alignment, tapes/CD/
		ability to attach to power source	records, light meters, light box, vector scope, test charts, test cables
		ability to attach to signal source	

NF

ND

ability to power up ability to check audio ability to check video ability to check all features ability to check cosmetics ability to recognize malfunctions and troubleshoot ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of flat-pack (surfacemount) techniques knowledge of troubleshooting techniques NS PE NB PQ ON MA SK AB BC NT YK ND NV NV yes yes yes yes yes yes yes yes

16.09	Performs routine	ability to clean controls	cleaning fluids,
	maintenance.		airbrushes, swabs,
		ability to align	lubricants, mats, tension
		ability to verify operation of controls	gauges, torque gauges, test/alignment gauges,
			inspection mirrors,
		ability to clean cosmetics of item	magnifying glass
		ability to verify all safety devices are	

Supporting Knowledge & Abilities	Tools & Equipment										
in place and functioning properly											
ability to perform routine mechanical and electronic adjustments/ alignments											
ability to identify/document weaknesses or potential problems											
knowledge of application of testing devices											
knowledge of electro static discharge techniques											
knowledge of cleaning chemicals and procedures											
knowledge of troubleshooting techniques											
	in place and functioning properly ability to perform routine mechanical and electronic adjustments/ alignments ability to identify/document weaknesses or potential problems knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of cleaning chemicals and procedures knowledge of troubleshooting techniques <u>PQ_ON_MA_SK_AB_BC</u>										

16.10	Performs post-service functional tests.	ability to attach to power source	test monitors, test/alignment gauges,
		ability to attach to signal source	tapes/CD/records, light meters, light box, vector
		ability to power up	scope, test charts, test cables
		ability to check audio	
		ability to check video	
		ability to check all features	
		ability to check cosmetics	
		ability to recognize malfunctions	
		ability to document results	
		knowledge of application of testing	

Sub-tasks		Supporting K	nowledge &	,	Tools & Equipment							
		devices										
		knowledge of electro static discharge techniques										
		knowledge of cleaning chemicals and procedures										
		knowledge of troubleshooting techniques										
100	<u>PE NB</u> yes yes	PQ ON ND NV	<u>MA</u> <u>SK</u> yes yes		<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV					

16.11			units a al check		ability	y to asse	emble	manufacturer's software, allen keys, solder irons,						
	perio				-	ability to prepare unit and work area for assembly						solder wicks, flux removers		
					ability	ability to select and use tools								
					ability to follow manufacturers= assembly procedures									
					ability to perform final functional test				est					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	YK NV		

16.12	Delivers/installs, sets up units, and demonstrates	ability to handle units
	unit operation.	ability to store units
		ability to drive to job location when applicable
		ability to deliver units
		ability to install and set up units
		ability to demonstrate unit to

	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment			
					custor	ner								
						v to advi any poli es								
						to com /defect			nent					
						to resp rns and								
					ability	to obta	ain custo	omer sig	gn-off					
					ability	to obta	ain payr							
					know techni	ledge of iques	felectro							
					know! proce	ledge of dures	f cleanir	nd						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		
16.13	Comp docur	oletes nentatio	on.			ability to bill customer ability to complete warranty claim						vibration testers, calculator		
					-		-							
					ability to calculate customer bill ability to tag warranty parts									
		210	DE		-					DG				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		

Task 17Services cable converters and decoders.

<u>Trend</u>: Expanding use and complexity of cable converters and decoders require additional training for servicing these units.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment							
17.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem ability to probe for specific symptoms								
		ability to reflect back and verify customer's recollection of symptoms								
		ability to respond to unrealistic customer expectations								
		knowledge of unit operation and potential problems								
		(NOT COMMON CORE)								
	NFNSPENBNDyesyesyes	PQ NDON NVMA yesSK noAB yesBC no	<u>NT</u> <u>YK</u> no NV							
17.02	Processes work orders.	ability to determine name, address and phone numbers of customer								
		ability to determine name and model number of unit								
		ability to write up symptoms								
		knowledge of company documentation procedures								
	NFNSPENBNDyesyesyes	PQ NDON NVMA yesSK noAB yesBC no	<u>NT</u> <u>YK</u> yes NV							
17.03	Informs customer of repair time frames and cost responsibilities.	ability to respond to customer enquiries								

ability to obtain customer signature on work order

	Sub-t	asks			Suppo	orting K	nowled	Tools & Equipment						
		NC	DE	ND	know	ledge of ledge of	f compa	ny cred	it policy	y	NT	VIZ		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
17.04		rms pre- ional tes		•	ability	y to app	ly powe	r				manufacturer's software, test monitors, reference		
	Tuncu				ability	y to atta	ch to sig	gnal sou	irce		charts, te	st charts, test		
					ability	y to pow	ver up				cables			
					ability	y to che	ck video							
					ability	y to che	ck audio)						
					ability	y to che	ck all sp	ecial fe	atures					
					ability	y to che	ck tuner							
					ability	y to che	ck cosm	etics of	set					
					ability	y to reco	ognize n	nalfunct	tions					
					ability	y to doc	ument r	esults						
						y to com technici		te resul	ts to					
					know device	ledge of es	fapplica	ation of	testing					
					knowledge of electro static discharge techniques									
					know techn	ledge of iques	f trouble							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV		

17.05	Disas	sembles	s units.		-	y to prep sassemb	hex drivers, solder irons, solder suckers, electric screw/nut							
					ability	to sele	ct and ı	drivers						
					2	y to follo embly p								
					knowledge of de-soldering and soldering techniques									
					know! techni	ledge of iques	felectro	static c	lischarg	e				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		

17.06	Troubleshoots faults.	ability to prepare unit for troubleshooting	manufacturer's software, cutters, burnishing
		ability to perform non-technical inspections	tools, solder irons, solder suckers, solder wicks, flux removers,
		ability to recognize need to consult with another technician or manufacturer	isolation transformer, multimeters, oscilloscopes, RF generators, component
		ability to perform visual inspection	testers, test monitors, transistor checker, capacitor checker,
		ability to recognize malfunctions	reference charts, test charts, test cables
		ability to read schematics	
		ability to isolate receiver fault to sub- assembly/circuit/component	
		ability to select, connect and correctly interpret readings from required test equipment	
		ability to document results	

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	no	yes	no	yes	NV

17.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component	cutters, alignment tools, burnishing tools, solder
	Å	ability to verify proper installation	irons, solder suckers, solder wicks, flux
		ability to verify integrity of board and neighboring components	removers, electric screw/nut drivers, glue
		ability to select and replace component	gun, heat gun, isolation transformer, cleaning fluids, cloths,
		ability to order parts	airbrushes, de-soldering tools
		ability to repair faulty circuits or	

components

ability to clean circuits and components

ability to recognize warranty and non-warranty situations

ability to obtain exact replacement or suitable substitute parts

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	no	yes	no	yes	NV

17.08	Sets up and tests units.	ability to ensure unit complies with government regulations	manufacturer=s software, cleaning fluids, cloths
		ability to attach to power source	
		ability to attach to signal source	
		ability to power up	

	Sub-t	asks			Supporting Knowledge & Abilities					Tools & Equipment			
					ability	to chec	ck audio)					
					ability	to chec	ek video)					
					ability	ability to check tuner							
					ability	to chec	ck all fe	atures					
					ability	to chec	ek cosm	ietics					
					-	ability to recognize malfunctions and troubleshoot							
					ability	to docu	ument r	esults					
					ability to communicate results to other technicians								
					knowledge of application of testing devices								
					know techni	ledge of iques	electro	static c	lischarg	ge			
						ledge of fication							
					know! techni	ledge of	trouble	eshootir	ıg				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes		<u>YK</u> NV
17.09		rms rou enance.			ability to clean controls					cleaning fluids, airbrushes, vacuum brushes, test monitors,			
					ref							nce	charts, test agnifying glass

ability to verify operation of controls

ability to clean cosmetics of item

ability to verify all safety devices are

in place and functioning properly ability to perform routine mechanical and electronic adjustments/ alignments

ability to identify/document weaknesses or potential problems

knowledge of precision mechanisms and fine mechanical adjustments

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	no	yes	no	yes	NV

17.10	Performs post-service functional tests.	ability to attach to power source	manufacturer's software, test monitors, reference				
		ability to attach to signal source	charts, test cables				
		ability to power up					
		ability to check audio ability to check video					
		ability to check video					

Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment							
	ability to check tuner								
	ability to check all features								
	ability to check cosmetics								
	ability to recognize malfunctions								
	ability to document results								
	ability to communicate results to other technicians								
	knowledge of application of testing devices								
	knowledge of electro static discharge techniques								
	knowledge of cleaning chemicals and procedures								
	knowledge of troubleshooting techniques								
<u>NF NS PE NB</u> ND yes yes yes	PQONMASKABBCNDNVyesnoyesno	<u>NT</u> <u>YK</u> yes NV							

17.11	Reassembles units and performs final check.	ability to assemble	manufacturer's software, hex drivers, electric				
	p	ability to prepare unit and work area for assembly	screw/nut drivers				
		ability to select and use tools					
		ability to follow manufacturers= assembly procedures					
		ability to perform final functional test					
		knowledge of electro static discharge techniques					

knowledge of cleaning chemicals and procedures

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	no	yes	no	yes	NV

17.12			alls, sets monstrat	-	ability	y to han	dle unit		car or light to medium- sized truck,					
	unit c	operatio	n.		ability	y to stor	e units				manufacturer=s software, hex driver			
					ability applic	y to driv cable	e to job	1						
					ability	y to deli	ver unit	S						
					ability	y to inst	all and	set up u	inits					
					ability custor	y to dem mer	ionstrat	e unit to	0					
					ability to advise customer of company policies and warranty policies									
					ability to communicate pertinent repair/defect information									
					ability to respond to customer concerns and customer satisfaction									
					ability	y to obta	in cust	omer si	gn-off					
					ability	y to obta	ain payr	nent						
					(NOT	COM	MON (CORE)						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		

	Sub-ta	asks			Supporting Knowledge & Abilities Tools & Equipment								ent
17.13	Comp	oletes nentatio)n		ability	y to bill	custom	er					
	uocui	nentatio	JII.		-	ability to complete warranty claim ability to calculate customer bill							
					ability to tag warranty parts								
					(NOT	COM	MON (CORE)					
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

Task 18Services video display devices. (Large projection television screens)
(NOT COMMON CORE)

<u>Trend</u>: Expanding sales and lower price per unit will result in more service.

	Sub-tasl	ks			Supporting Knowledge & Abilities Tools & Equipmen							
18.01	Greets, and veri problem	ifies u		ients	ability to listen attentively to customer's description of problem ability to probe for specific symptoms ability to reflect back and verify							
					2				mptom	5		
					•	to resp ner exp			stic			
						edge of tial prob		eration	and			
					(NOT	COM	MON C	CORE)				
		<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV

<u>YK</u> NV

18.02 Processes work orders. ability to determine name, address and phone numbers of customer ability to determine name and model number of unit

ability to write up symptoms

knowledge of company documentation procedures

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

18.03	repair	ns custo time fra sponsib	imes an	d	ability to respond to customer enquiries							
					2	to obta rk order		mer sig	nature			
					knowl	edge of	compar	1y work	volum	e		
					knowl	edge of	compai	ny credi	t policy			
					(NOT	COMN	MON C	ORE)				
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	

18.04	Performs pre-service	ability to apply power	variac, isolation
	functional tests.		transformer, data
		ability to attach to signal source	generators, function
			generators, dot/bar
		ability to power up	generators, RF
			generators, test
		ability to check video	monitors, test speakers,
			NTSC generators, AF
		ability to check all special features	generators, head

phones, computer, inspection mirrors, diagnostic routines, test cables, equipment dollies/carts, lifting/leveling devices, manufacturer's software, anti-static equipment, fire extinguisher, fan

ability to check cosmetics of set

ability to recognize malfunctions

ability to document results

ability to communicate results to other technicians

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of troubleshooting techniques

(NOT COMMON CORE)

NF	NS	PE	NB	PQ	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

18.05	Disas	sembles	s units.		•	/ to prep sassemb		cutters, measuring devices, allen keys, feeler gauges, hex							
					ability	ability to select and use tools						drivers, hammers, alignment tools,			
					-	ability to follow manufacturers= disassembly procedures						burnishing tools, anti static equipment			
					know techni	ledge of iques	felectro	static c	lischarg	e					
						ledge of fication									
					(NOT	COM	MON (
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV			

18.06

Troubleshoots faults.

ability to prepare unit for

manufacturer's software,

troubleshooting

ability to perform non-technical inspections

ability to recognize need to consult with another technician or manufacturer

ability to perform visual inspection

ability to recognize malfunctions

ability to read schematics

ability to isolate receiver fault to subassembly/circuit/component

ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical) cutters, measuring devices, allen keys, feeler gauges, hex drivers, hammers, alignment tools. burnishing tools, solder irons, solder suckers, solder wicks, flux removers, head pullers, i.c. pullers, chisels, cutters, strippers, crimpers, electric drills, electric screw/nut drivers, glue gun, heat gun, rubber gloves, masks, ear protection, isolation transformer, anti-static equipment, fire extinguisher, fan, cleaning fluids, cloths, airbrushes, vacuum brushes, swabs, ultrasonic cleaner. lubricants, oilers, multimeters, continuity testers, oscilloscopes, data generators, function generators, dot/bar generators, RF generators, circuit testers, component testers, logic probes, logic analyzers, frequency counters, RAM/ROM testers, X-ray and particle detectors, variable voltage/current supplies, AC line testers/ monitors, degaussing equipment, test monitors, test speakers, microfiche reader, high voltage probe, variac, decade boxes, jumper wire, NTSC generators,

knowledge of troubleshooting techniques

Tools & Equipment

AF generators, transistor checker, tracker, capacitor checker, Z-meter, head phones, induction meter, vacuum tube tester, computer, hot air equipment, mini torch, inspection mirrors, temperature probes, reference charts, test charts, diagnostic routines, test cables, equipment dollies/carts, lifting/leveling devices, magnifiers, electrical tape, mats, ground straps, sprays, video disks, tapes/CD/records

(NOT COMMON CORE)

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

18.07 Replaces or repairs faulty ability to remove faulty component manufacturer's software, circuits and components. cutters, measuring ability to verify proper installation devices, allen keys, feeler gauges, hex drivers, hammers, ability to verify integrity of board and neighboring components alignment tools, burnishing tools, solder irons, solder suckers, ability to select and replace component solder wicks, flux removers, head pullers, i.c. pullers, chisels, ability to order parts cutters, strippers, crimpers, electric drills, ability to repair faulty circuits or components electric screw/nut drivers, glue gun, heat ability to clean circuits and gun, ear protection, components isolation transformer, anti-static equipment, ability to recognize warranty and fire extinguisher, fan, non-warranty situations cleaning fluids, cloths,

ability to obtain exact replacement or suitable substitute parts

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of troubleshooting techniques

airbrushes, vacuum brushes, swabs, ultrasonic cleaner, lubricants, oilers, multimeters, continuity testers, oscilloscopes, data generators, function generators, dot/bar generators, RF generators, circuit testers, component testers, logic probes, logic analyzers, frequency counters, RAM/ROM testers, X-ray and particle detectors, variable voltage/current supplies, AC line testers/ monitors, degaussing equipment, test monitors, test speakers, microfiche reader, high voltage probe, variac, decade boxes, jumper wire, NTSC generators, AF generators, transistor checker, tracker, capacitor checker, Z-meter, head phones, induction meter, vacuum tube tester, computer, hot air equipment, mini torch, inspection mirrors, temperature probes, reference charts, test charts, diagnostic routines, test cables, equipment dollies/carts, lifting/leveling devices, magnifiers, electrical tape, mats, ground straps, sprays, video disks, tapes/CD/records, de-soldering tools

	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV
18.08			ests uni	2	ability gover ability ability ability ability	y to ensument r y to attacy y to attacy y to attacy y to check y to check	ure unit regulation ch to po ch to sig ver up ck video	variac, is transform generator generator generator monitors NTSC ge generator phones, c	olation her, data rs, function rs, dot/bar rs, RF rs, test , test speakers, enerators, AF rs, head computer, n mirrors, test quipment			
					abilit	y to chee			tions an	d	lifting/lev manufact anti-statio	veling devices, urer's software, c equipment,
						leshoot y to doc	ument r	esults			fire extin	guisher, fan
						y to com technici		te resul	ts to			
					know devic	ledge of es	f applica	ation of	testing			
					know techn	ledge of iques	f electro	static o	lischarg	e		
						ledge of fication	-					
					know techn	ledge of iques	f trouble	eshootir	ng			
					(NO7	COM	MON (CORE)				
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	MA yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV

18.09	Performs routine maintenance.	ability to clean controls	manufacturer's software, cutters, measuring
	maintenance.	ability to align	devices, allen keys,
			feeler gauges, hex
		ability to fine tune channels	drivers, hammers,
		ability to work an anotion of controls	alignment tools,
		ability to verify operation of controls	burnishing tools, solder irons, solder suckers,
		ability to clean cosmetics of item	solder wicks, flux
			removers, head pullers,
		ability to verify all safety devices are	i.c. pullers, chisels,
		in place and functioning properly	cutters, strippers,
			crimpers, electric drills,
		ability to perform routine mechanical	electric screw/nut,
		and electronic adjustments/	magnifying glass
		alignments	drivers, glue gun, heat gun, ear protection,
		ability to identify/document	isolation transformer,
		weaknesses or potential problems	anti-static equipment,
		······································	fire extinguisher, fan,
		knowledge of application of testing	cleaning fluids, cloths,
		devices	airbrushes, vacuum
			brushes, swabs,
		knowledge of electro static discharge	ultrasonic cleaner,
		techniques	lubricants, oilers, multimeters, continuity
		knowledge of component	testers, oscilloscopes,
		identification methods	data generators,
			function generators,
		knowledge of cleaning chemicals and	dot/bar generators, RF
		procedures	generators, circuit
			testers, component
		knowledge of replacement part	testers, logic probes,
		characteristics (physical and electrical)	logic analyzers,
		electrical)	frequency counters, RAM/ROM testers,
		knowledge of troubleshooting	X-ray and particle
		techniques	detectors, variable
		-	voltage/current supplies,
			AC line testers/
			monitors, degaussing
			equipment, test
			monitors, test speakers,
			microfiche reader, high

voltage probe, variac, decade boxes, jumper wire, NTSC generators, AF generators, transistor checker, tracker, capacitor checker, Z-meter, head phones, induction meter, vacuum tube tester, computer, hot air equipment, mini torch, inspection mirrors, temperature probes, reference charts, test charts, diagnostic routines, test cables, equipment dollies/carts, lifting/leveling devices, magnifiers, electrical tape, mats, ground straps, sprays, video disks, tapes/CD/records

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

18.10	Performs post-service	ability to attach to power source	variac, isolation
	functional tests.		transformer, data
		ability to attach to signal source	generators, function
			generators, dot/bar
		ability to power up	generators, RF
			generators, test
		ability to check video	monitors, test speakers,
			NTSC generators, AF
		ability to check all features	generators, head
			phones, computer,
		ability to check cosmetics	inspection mirrors,
			diagnostic routines, test
		ability to recognize malfunctions	cables, equipment
			dollies/carts,
		ability to document results	lifting/leveling devices,
			manufacturer's software,

	Sub-t	asks			Suppo	orting K	nowled		Tools & Equipment			
					other	technici ledge of	imunica ans Fapplica			c equipment, guisher, fan		
					knowledge of electro static discharge techniques							
						knowledge of cleaning chemicals and procedures						
						knowledge of troubleshooting techniques						
					(NOT	COM	MON (CORE)				
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>NT</u> yes	<u>YK</u> NV			
18.11		embles rms fina			ability for as ability ability assem ability know	sembly to sele to follo bly pro- to perf ledge of ques	oare unit ct and u ow man cedures form fin	se tool: ufactur al funct static c		st e	devices, a feeler gan drivers, h alignmen	nammers, nt tools, ng tools, anti-
					(NOT	COM	MON C	CORE)				
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	PQONMASKABBCNDNVyesnoyesno						<u>NT</u> yes	<u>YK</u> NV

18.12	Delivers/ins units, and de unit operation	emonstra		ability to handle units ability to store units						car, light to medium- sized truck, equipment manufacturer's software,			
				ability applic		ve to job	locatio	on when		cutters, measuring devices, allen keys, feeler gauges, hex drivers, hammers, alignment tools, burnishing tools, strippers, crimpers, electric drills, electric			
				ability	y to deli	ver unit	S						
				ability	y to inst	all and s	set up u	inits					
				ability custor		nonstrate	e unit to)		screw/nu gun, heat	t drivers, glue gun, anti-		
					any poli	ise custo icies and				static equipment, degaussing equipment, sprays, diskettes, video disks, tapes/CD/records, equipment dollies/carts,			
						nmunica informa		nent		veling devices			
						oond to custom							
				ability	y to obta	ain custo	omer si	gn-off					
				(NO1	СОМ	MON (CORE)						
	<u>NF</u> <u>NS</u> ND no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV				
18.13	Completes			ability to bill customer					calculator				
	documentation.				ability to complete warranty claim								

ability to calculate customer bill

ability to tag warranty parts

Sub-task	TS	S	upporting Kn	e & Abi	lities	Tools & Equipment			
110	<u>NS PE</u> 10 yes	<u> </u>		<u>MA</u> yes		•	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV

BLOCK E SERVICE TELEPHONE ANSWERING EQUIPMENT COMPONENTS AND DEVICES

Task 19Services cellular phones. (NOT COMMON CORE)

<u>Trend</u>: Because of the increasing popularity of voice synthesizers, servicing opportunities are expanding.

	Sub-ta	ısks			Supporting Knowledge & Abilities Tools & Equipmen									
19.01		erifies u	views cl init	lients	-	y to liste mer's de								
	proore	1113.			ability symp	y to prol toms	be for sp	pecific						
					-	y to refle mer's re				S				
					-	y to resp mer exp			stic					
						ledge of tial prob		peration	and					
					(NOT	(NOT COMMON CORE)								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes						<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
19.02	Processes work orders.	ability to determine name, address and phone numbers of customer	
		ability to determine name and model number of unit	
		ability to write up symptoms	

knowledge of company documentation procedures

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

19.03	19.03 Informs customer of repair time frames and cost responsibilities.			ability to respond to customer enquiries									
	cost r	esponsi	onnues.			ability to obtain customer signature on work order							
					know	knowledge of company work volume							
					know	ledge of	f compa	ny cred	it policy	y			
					(NOT	COM	MON (CORE)					
	<u>NF</u> ND					<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
19.04	Performs pre-service functional tests.				ability		ly powe ch to sig ver up		irce		spectrum site simu wattmete		

ability to check audio

ability to check all special features

ability to check transmitter and receiver

ability to check cosmetics of set

ability to recognize malfunctions

ability to document results

ability to communicate results to other technicians

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

10.05	Dian				-1.:1:4			4	1	_			
19.05	Disas	ssemble	s units.			y to prep sassemb		t and w	ork area	a	manufact	turer's software	
					abilit	y to sele	ect and u	ise tool	S				
						y to foll sembly p			ers=				
					know devic	ledge of es	fapplica	ation of	testing				
						knowledge of de-soldering and soldering techniques							
					know techn	ledge of iques	f electro	static o	lischarg	ge			
						ledge of t) techn		ck (sur	face-				
						knowledge of component identification methods							
					know techn	ledge of iques	f trouble	eshootir	ng				
					(NOT	ГСОМ	MON (CORE)					
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
19.06	Trou	bleshoo	ts faults	i.		y to prej leshooti		t for			-	analyzer, turer's software	
					ability to perform non-technical logic diagrams, multimeter, variable voltage/current supp RF power meters, ce						grams, multi riable urrent supplies	-	
					ability to recognize need to consult with another technician or								

ability to perform visual inspection

manufacturer

NF

ND

NS

no

yes

yes

<u>YK</u>

NV

yes

ability to recognize malfunctions ability to read schematics ability to isolate receiver fault to subassembly/circuit/component ability to select, connect and correctly interpret readings from required test equipment ability to document results ability to communicate results to other personnel ability to recognize warranty and non-warranty situations knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of flat-pack (surfacemount) techniques knowledge of component identification methods knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques (NOT COMMON CORE) <u>PQ</u> PE NB ON AB BC NT MA SK

yes

no

yes

no

ND

NV

19.07 Replaces or repairs fault circuits and components.		ability to remove faulty component	spectrum analyzer, manufacturer's software,				
		ability to verify proper installation	logic diagrams, solder irons, solder wicks,				
		ability to verify integrity of board and neighboring components	cutters, microfiche reader, i.c. pullers, de- soldering tools				
		ability to select and replace component	soldoling tools				
		ability to order parts					
		ability to repair faulty circuits or components					
		ability to clean circuits and components					
		ability to recognize warranty and non-warranty situations					
		ability to obtain exact replacement or suitable substitute parts					
		knowledge of application of testing devices					
		knowledge of de-soldering and soldering techniques					
		knowledge of electro static discharge techniques					
		knowledge of flat-pack (surface- mount) techniques					
		knowledge of component identification methods					
		knowledge of cleaning chemicals and procedures					
		knowledge of troubleshooting techniques					

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

19.08	Sets up and tests units.	ability to ensure unit complies with government regulations	spectrum analyzer, manufacturer's software
		ability to attach to power source	
		ability to attach to signal source	
		ability to power up	
		ability to check audio	
		ability to check transmitter and receiver	
		ability to check all features	
		ability to check cosmetics	
		ability to recognize malfunctions and troubleshoot	
		ability to document results	
		ability to communicate results to other technicians	
		knowledge of application of testing devices	
		knowledge of electro static discharge techniques	
		knowledge of flat-pack (surface- mount) techniques	
		knowledge of component	

identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

Performs routine maintenance.	ability to clean controls	alignment tools, cleaning fluids, swabs,
	ability to align	airbrushes, magnifying glass
	ability to check carrier frequency	giass
	ability to verify operation of controls	
	ability to clean cosmetics of item	
	ability to verify all safety devices are in place and functioning properly	
	ability to perform routine mechanical and electronic adjustments/ alignments	
	ability to identify/document weaknesses or potential problems	
	knowledge of application of testing devices	
	knowledge of electro static discharge techniques	

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

19.10	Performs post-service functional tests.	ability to attach to power source	spectrum analyzer, logic probe, cell site
	functional tests.	ability to attach to signal source	simulator, wattmeter
		ability to power up	
		ability to check audio	
		ability to check transmitter and receiver	
		ability to check all features	
		ability to check cosmetics	
		ability to recognize malfunctions	
		ability to document results	
		ability to communicate results to other technicians	
		knowledge of application of testing devices	

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

 Reassembles units and performs final check.	ability to assemble	manufacturer's software
	ability to prepare unit and work area for assembly	
	ability to select and use tools	
	ability to follow manufacturers= assembly procedures	
	ability to perform final functional test	
	knowledge of electro static discharge techniques	

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

19.12	Delivers/installs, sets up units, and demonstrates	ability to handle units					
	unit operation.	ability to store units					
		ability to drive to job location when applicable					
		ability to deliver units					
		ability to install and set up units					
		ability to demonstrate unit to customer					
		ability to advise customer of company policies and warranty policies					
		ability to communicate pertinent repair/defect information					
		ability to respond to customer concerns and customer satisfaction					
		ability to obtain customer sign-off					

ability to obtain payment

(NOT COMMON CORE)

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	no	NV

19.13	Comp docur	oletes nentatic	m		ability to bill customer computer, calculator								
	uovu				ability to complete warranty claim								
ability to calculate customer bill													
					ability to tag warranty parts								
					(NOT COMMON CORE)								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

Task 20 Services cordless phones.

<u>Trend</u>: Because of the portability of the units and comparatively low price, more and more of these units fall into an exchange program, limiting the opportunities for service.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
20.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem	
	1	ability to probe for specific symptoms	
		ability to reflect back and verify customer's recollection of symptoms	
		ability to respond to unrealistic	

	Sub-ta	asks			Suppo	Supporting Knowledge & Abilities						Tools & Equipment		
					customer expectations knowledge of unit operation and potential problems									
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	YK NV		
20.02	Proce	sses wo	ork orde	rs.	ability to determine name, address and phone numbers of customer									
					ability to determine name and model number of unit									
					ability to write up symptoms									
					knowledge of company documentation procedures									
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
					knowledge of company documentation proceduresPQONMASKABBCNTY									

20.03	repair	ns custo time fr esponsi	ames ar		ability to respond to customer enquiries										
	•••••	•op onor			2	ability to obtain customer signature on work order									
					know	knowledge of company work volume									
	<u>NF NS PE NB</u> ND yes yes yes				know	nowledge of company credit policy									
					<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV			

20.04	Performs pre-service functional tests.	ability to apply power	analyzer
		ability to attach to signal source	

ability to power up

ability to check audio

ability to check all special features

ability to check transmitter and receiver

ability to check cosmetics of set

ability to recognize malfunctions ability to document results

ability to communicate results to other technicians

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

20.05	Disas	sembles	s units.		-	y to prep sassemb		t and w	a	mats			
					ability	y to sele	ct and u	ise tool	S				
					-	y to follo embly p			ers=				
					know device	ledge of es	fapplica	ation of	testing				
						ledge of		dering a	and				
					know techni	ledge of iques	felectro	static o	ge				
						ledge of t) techn	-	ck (sur					
						ledge of fication							
					know! proce	ledge of dures	fcleanir	ng chen	nicals a	nd			
						ledge of cteristic ical)	-	_					
					know! techni	ledge of iques	ftrouble	eshootir	ıg				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	
20.06	Trout	oleshoot	ts faults.		troubl	y to prep leshooting y to perf	ng			manufac solder ir	e analyzer, eturer's software, ons, solder c. pullers, glue		
					ability to perform non-technical inspectionswicks, i.c. pullers, glue gun, frequency counters								

ability to recognize need to consult with another technician or manufacturer

ability to perform visual inspection

ability to recognize malfunctions

ability to read schematics

ability to isolate receiver fault to subassembly/circuit/component

ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	<u>NB</u>	PQ	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

20.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component	frequency counters, telephone analyzer, data
	circuits and components.	ability to verify proper installation	generators, function
		ability to verify integrity of board and neighboring components	generators, manufacturers= manuals/software, solder irong solder
		ability to select and replace component	solder irons, solder wicks, i.c. pullers, glue gun, de-soldering tools
		ability to order parts	
		ability to repair faulty circuits or components	
		ability to clean circuits and components	
		ability to recognize warranty and non-warranty situations	
		ability to obtain exact replacement or suitable substitute parts	
		knowledge of application of testing devices	
		knowledge of de-soldering and soldering techniques	
		knowledge of electro static discharge techniques	
		knowledge of flat-pack (surface- mount) techniques	
		knowledge of component identification methods	
		knowledge of cleaning chemicals and procedures	
		knowledge of troubleshooting techniques	

	Sub-t	asks			Supp	orting K	Inowled	ge & A	bilities		Tools & Equipment		
	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	
	ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV	
20.08			ests uni		gover ability	rnment r y to atta y to atta y to atta y to atta y to che y to che ileshoot y to doc y to doc y to con technic ledge of iques ification	ck audio ck trans ck all fe ck cosm ognize n ument r nmunica ians f applica f electro f compo	equipme specifica telephon generato generato wicks, i.u gun	tions, e analyzer, data rs, function rs, turer's software, ons, solder c. pullers, glue				
	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	<u>MA</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>			
	ND	yes	yes	yes	ND	NV	yes	yes	yes	NV			

20.09 Performs routine

ability to clean controls

cleaning fluids, swabs,

Sub-tasks			Supp	orting K	nowled		Tools & Equipment			
maintenance.			abilit	y to alig	n				telephone	y counters, e analyzer, data rs, function
			abilit	y to che	ck carrie	er frequ	iency		generator	rs,
			abilit	y to veri	fy opera	ation of	control	S	manufact manuals/ solder irc	
			abilit	y to clea	n cosm	etics of	item		wicks, i.c	. pullers, glue
				y to veri ice and f	-	-		e	gun, mag	nifying glass
			and e	ability to perform routine mechanical and electronic adjustments/ alignments ability to identify/document						
				ledge of	-			S		
			know devic	ledge of es	fapplica	ation of	testing			
			know techn	ledge of iques	felectro	static o	lischarg	je		
				ledge of						
			know proce	ledge of dures	f cleanir	ng chen	nicals ar	nd		
			chara	knowledge of replacement part characteristics (physical and electrical)						
			knowledge of troubleshooting techniques							
NF NS ND yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	YK NV

	Sub-t	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment
20.10		rms pos		e	ability	y to atta	ch to po	ower sou	urce			
	funct	ional te	sts.		ability	y to atta	ch to sig	gnal sou	irce			
					ability	y to pow	ver up					
					ability	y to chee	ck audio	C				
					ability	y to chee	ck video)				
					receiv	y to cheo ver y to cheo			ind			
					ability	y to chee	ck cosm	netics				
					ability	y to reco	ognize n					
					ability	y to doc	ument r					
					ability to communicate results to other technicians							
					know devic	ledge of es	fapplica	ation of	testing			
					know techn	ledge of iques	felectro	static o	lischarg	e		
						ledge of fication						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV
20.11		sembles rms fina			ability	y to asse y to prep		frequency counters, equipment specifications,				
						for assembly ability to select and use tools						e analyzer, data rs, function rs,
						y to follo ibly pro				manufac software solder w	, solder irons,	

20.12

		Tools of Equipine
	ability to perform final functional test	pullers, glue gun
	ability to perform final functional test	
	knowledge of application of testing devices	
	knowledge of de-soldering and soldering techniques	
	knowledge of electro static discharge techniques	
	knowledge of flat-pack (surface- mount) techniques	
	knowledge of component identification methods	
	knowledge of cleaning chemicals and procedures	
	knowledge of replacement part characteristics (physical and electrical)	
	knowledge of troubleshooting techniques	
<u>NF NS PE NB</u> ND yes yes yes	PQONMASKABBCNDNVyesyesyesyes	
Delivers/installs, sets up units, and demonstrates	ability to handle units	
unit operation.	ability to store units	
	ability to drive to job location when applicable	
	ability to deliver units	
	ability to install and set up units	
	ability to demonstrate unit to customer	

ability to advise customer of company policies and warranty policies

ability to communicate pertinent repair/defect information

ability to respond to customer concerns and customer satisfaction

ability to obtain customer sign-off

ability to obtain payment

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	no	NV

20.13	Comp	letes nentatic	'n		ability to bill customer									
	uocui	liciliatio	<i>л</i> п.		ability	to com	plete w	arranty	claim					
					ability to calculate customer bill									
					ability	to tag	warrant	y parts						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		

Task 21Services fax machines.

<u>Trend</u>: Because of the integration of equipment and increased home use, the demand for service will increase.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment			
21.01	Greets, interviews clients and verifies unit	ability to listen attentively to customer's description of problem				

	Sub-ta	asks			Supporting Knowledge & Abilities						Tools & Equipment		
	proble	ems.			ability to probe for specific symptoms								
					ability to reflect back and verify customer's recollection of symptoms								
					ability to respond to unrealistic customer expectations								
					knowledge of unit operation and potential problems								
21.02	<u>NF</u> ND Proce	<u>NS</u> yes sses wo	<u>PE</u> yes ork orde	<u>NB</u> yes rs.		ON NV to dete hone nu				<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
	ability to determine name and model number of unit												
					ability	to writ	e up sy	mptoms	5				
					knowledge of company documentation procedures								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV	
21.03	repair		omer of ames ar bilities.	nd	ability to respond to customer enquiries ability to obtain customer signature on work order								
					knowledge of company work volume								
					knowledge of company credit policy								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
21.04	Performs pre-service functional tests.	ability to apply power	telephone analyzer, facsimile machine
	Tuffetional tests.	ability to attach to signal source	idesitine indennie
		ability to power up	
		ability to check mechanical operation	
		ability to check dialer operation	
		ability to check audio	
		ability to check all special features	
		ability to check cosmetics of set ability to recognize malfunctions	
		ability to document results	
		ability to communicate results to other technicians	
		knowledge of application of testing devices	
		knowledge of de-soldering and soldering techniques	
		knowledge of electro static discharge techniques	
		knowledge of flat-pack (surface- mount) techniques	
		knowledge of component identification methods	
		knowledge of cleaning chemicals and procedures	
		knowledge of replacement part characteristics (physical and electrical)	
		knowledge of troubleshooting techniques	

	Sub-t	asks			Supp	Supporting Knowledge & Abilities						Tools & Equipment				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV				
21.05	Disas	semble	s units.		for disassembly scre and						and de-se	vers, soldering				
					knowledge of application of testing devices knowledge of de-soldering and											
					soldering techniques knowledge of electro static discharge techniques											
						ledge o t) techn	f flat-pa iques	ck (sur	face-							
							f compo method		nt							
					knowledge of cleaning chemicals and procedures knowledge of replacement part characteristics (physical and electrical)											
					knowledge of troubleshooting techniques											
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV				

21.06 Troubleshoots faults.

ability to prepare unit for

solder irons, solder

Supporting Knowledge & Abilities

troubleshooting

ability to perform non-technical inspections

ability to recognize need to consult with another technician or manufacturer

ability to perform visual inspection

ability to recognize malfunctions

ability to read schematics

ability to isolate receiver fault to subassembly/circuit/component

ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical) wicks, multimeters, telephone analyzer, oscilloscopes, screwdrivers, freeze spray, test documents

	Sub-tasks			Suppo	orting K	nowled	Tools & Equipment				
				know techni	-	f trouble	eshootir	ng			
	<u>NF NS</u> ND yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV
21.07	Replaces or r circuits and c			ability ability neigh ability comp ability ability comp ability comp ability non-w ability suitab know device know solder know technik	y to veri boring of y to sele onent y to sele onent y to ordo y to repa onents y to clea onents y to clea onents y to clea onents y to reco varranty y to obta ble subst ledge of ring tecl ledge of iques ledge of t) techn ledge of	compon ect and r er parts air faulty un circui ognize w situatio ain exac titute pa f applica f de-solo hniques f electro f flat-pa	er insta rity of l ents eplace y circui ts and varranty ons t replac rts ation of dering a static o ck (surf nent	Ilation board ar board ar ts or and cement of testing and lischarg	οr	wicks, m telephon oscillosc pullers, r reader, se	ons, solder nultimeters, e analyzer, opes, i.c. nicrofiche chematic tools, rocedures, de- g tools

knowledge of cleaning chemicals and procedures

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

21.08	Sets up and tests units.	ability to ensure unit complies with government regulations	solder irons, solder wicks, multimeters, telephone analyzer, oscilloscopes							
		ability to attach to power source								
		ability to attach to signal source								
		ability to power up								
		ability to check audio								
		ability to check mechanical operation								
		ability to check dialer operation								
		ability to check all features								
		ability to check cosmetics								
		ability to recognize malfunctions and troubleshoot								
		ability to document results								
		ability to communicate results to other technicians								
		knowledge of application of testing devices								
		knowledge of electro static discharge techniques								
		knowledge of flat-pack (surface-								

	Sub-ta	asks			Supporting Knowledge & Abilities Tools & Equipmen								
					moun	t) techn	iques						
						ledge of fication							
						ledge of cteristic ical)							
					know techni	ledge of iques	trouble						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
21.09		rms rou enance.			ability	to clea	n contro	cleaning fluids, cloths, swabs, magnifying glass					
					ability	to alig	n						
					ability								
					ability	to clea	n cosme	etics of	item				
					-	to veri ce and f	-	-		e			
					-	to perf lectronic nents			echanica	al			
						to ider nesses o			olems				
						ledge of ne mecl				5			
					know device	ledge of es	applica						
					know techni	ledge of iques	electro	static c	lischarg	e			
					knowledge of component identification methods								

Sub-ta	asks			Suppo	rting K	nowled		Tools & I	Equipment		
	knowledge of cleaning chemicals and procedures										
knowledge of replacement part characteristics (physical and electrical)											
				knowledge of troubleshooting techniques							
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV

21.10	Performs post-service functional tests.	ability to attach to power source test doct									
	functional tests.	ability to attach to signal source									
		ability to power up									
		ability to check audio									
		ability to check mechanical operation									
		ability to check transmitter and receiver	•								
		ability to check all features									
		ability to check cosmetics									
		ability to recognize malfunctions									
		ability to document results									
		ability to communicate results to other technicians									
		knowledge of application of testing devices									
		knowledge of electro static discharge techniques									

	Sub-t	asks			Supporting Knowledge & Abilities Tools & Equipr									
					know proce	ledge of dures	f cleanii	ng chen	nicals a	nd				
					know techni	ledge of iques	f trouble	eshootir	ng					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
21.11		embles rms fina			ability	ability to assemble hex drivers								
	perior		II CHEEK		ability to prepare unit and work area for assembly									
					ability	y to sele	ct and u	ise tool	S					
						y to follo ibly pro			ers=					
					ability to perform final functional test									
					knowledge of electro static discharge techniques									
					know proce	ledge of dures	f cleanii	ng chen	nicals a	nd				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes										
21.12	Delivers/installs, sets up ability to handle units													

units, and demonstrates unit operation. ability to store units ability to drive to job l

ability to drive to job location when applicable

ability to deliver units

ability to install and set up units

ability to demonstrate unit to

					ability to advise customer of company policies and warranty policies									
					-	to com /defect i		-	nent					
					ability to respond to customer concerns and customer satisfaction									
					ability to obtain customer sign-off									
					ability	v to obta	in payn	nent						
21.13	<u>NF</u> ND Comp		<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND ability	ON NV to bill	<u>MA</u> yes custom	<u>SK</u> yes er	<u>AB</u> yes	BC no c	<u>NT</u> no alculato	<u>YK</u> NV r, computer		
	docur	nentatio	n.		ability	to com	plete w	arranty	claim					
					ability	to calc	ulate cu	istomer	bill					
					ability to tag warranty parts									
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		

Task 22Services answering machines.

<u>Trend</u>: Due to competetive pricing, pressure to perform cost-efficient repairs is increasing.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
22.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem	
		ability to probe for specific symptoms	

	Sub-ta	asks			Suppo	orting K	nowled	ge & A	bilities		Tools & Equipment				
						y to refle mer's rec				5					
					-	y to resp mer exp			stic						
						ledge of tial prob		peration	and						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV			
22.02	Proce	sses wo	rk orde	rs.	•	ability to determine name, address and phone numbers of customer									
						y to dete er of un		name an	id mode	21					
					ability	y to writ	e up sy	mptoms	5						
					knowledge of company documentation procedures										
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV			
22.03	repair	ns custo time fr esponsil	ames ar	nd	ability to respond to customer enquiries ability to obtain customer signature on work order										
					knowledge of company work volume										
					knowledge of company credit policy										
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV			

	Sub-ta	asks			Suppo	orting K	nowled		Tools &	Equipment		
22.04		rms pre onal tes	-service sts.	;	-	y to app			irce		tapes, tel analyzer	-
					ability	to pow	ver up					
					ability	to chee	ck mecł	on				
					ability	to che	ck audio					
					ability	to che	ck all sp					
					ability	to chee	ck cosm					
					ability	to reco	ognize n					
					ability	to doct to com technici	munica					
					know device	ledge of es	fapplica	ation of	testing			
					know techni	ledge of iques	felectro	static o	lischarg	ge		
						ledge of t) techn	-	ck (surf	face-			
						ledge of fication						
					know! proce	ledge of dures	fcleanin	ng chen	nicals a	nd		
						ledge of cteristic ical)						
					know techni	ledge of iques	ftrouble					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV

22.05	Disass	sembles	units.		ability to prepare unit and work area for disassembly									
					ability	to sele	ct and u	se tools	1					
					ability to follow manufacturers= disassembly procedures									
						knowledge of de-soldering and soldering techniques								
					knowledge of electro static discharge techniques									
					mount knowl	knowledge of flat-pack (surface- mount) techniques knowledge of component identification methods								
					knowl techni	edge of ques	trouble	eshootin	g					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		
22.06	Troub	leshoot	s faults.		ability to prepare unit for troubleshooting						alignment tools, multimeters, oscilloscopes, tension			
					ability inspec	to perf	orm noi	n-techni	cal		test/align			
					with a	ability to recognize need to consult with another technician or manufacturer								
					ability	ability to perform visual inspection								
					ability to recognize malfunctions									
					ability	to read	schem	atics						
					ability to isolate receiver fault to sub-									

assembly/circuit/component

ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

22.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component	microfiche reader, solder irons, solder
	encurs and components.	ability to verify proper installation	suckers, solder wicks, telephone analyzer, de-
		ability to verify integrity of board and neighboring components	soldering tools
		ability to select and replace	

- 171 -

component

ability to order parts

ability to repair faulty circuits or components

ability to clean circuits and components

ability to recognize warranty and non-warranty situations

ability to obtain exact replacement or suitable substitute parts

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

22.08	Sets up and tests units.	ability to ensure unit complies with	alignment tools,
		government regulations	tapes/CDs/records

<u>NF</u> ND

				0		0							
			ability	to attac	ch to po	wer sou	irce						
			ability	to attac	ch to sig	nal sou	rce						
			ability	pility to power up									
			ability	to chec	ek audio)							
			ability	to chec	ck mech	anical	operatio	n					
			ability	to chec	ck all fe	atures							
			ability	to chec	ek cosm	etics							
			ability trouble		ognize m	nalfunct	ions an	d					
			ability	to docu	ument re	esults							
			•	to com	munica ans	te resul	ts to						
			knowl device		applica	tion of	testing						
			knowl techni	-	electro	static d	lischarg	e					
				edge of	flat-pao iques	ck (surf	ace-						
				•	compo method								
				teristics	replace s (physi		art						
			knowl techni		trouble	shootin	g						
<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV			

	Sub-ta	asks			Suppo	orting K	nowled	ge & A	bilities		Tools & Equipment		
22.09		ms rou	tine		ability	to clear	n contro	ols			-	fluids, cloths,	
	mainte	enance.			ability	to aligi	n				tapes/CI	ts, swabs, oilers, D/records,	
					ability	to chec	ek mech	anical	operatio	n		e analyzer, ing glass	
					ability	to veri	fy opera	tion of	control	S			
					ability	to clear	n cosme	etics of	item				
					-	to veri to and f	-	-		e			
					ability to perform routine mechanical and electronic adjustments/ alignments								
					ability to identify/document weaknesses or potential problems								
						edge of ne mecł	-						
					knowl device	ledge of	applica	tion of	testing				
					knowl techni	edge of ques	electro	static o	lischarg	ge.			
						edge of fication							
					knowl procee	edge of dures	cleanir	ig chen	nicals ar	nd			
					knowledge of troubleshooting techniques								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ ON MA SK AB BC N</u> ND NV yes yes yes yes y							<u>YK</u> NV	
22.10	Perfor function	ability to attach to power source ability to attach to signal source						testing procedures, alignment tools, multimeters,					

22.11

oscilloscopes, tension gauges, torque gauges, ability to power up telephone analyzer ability to check audio ability to check mechanical operation ability to check all features ability to check cosmetics ability to recognize malfunctions ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of flat-pack (surfacemount) techniques knowledge of component identification methods knowledge of cleaning chemicals and procedures knowledge of troubleshooting techniques <u>AB</u> NF NS PE PQ NB ON MA <u>SK</u> BC NT <u>YK</u> ND ND NV NV yes yes yes yes yes yes yes yes Reassembles units and ability to assemble performs final check. ability to prepare unit and work area for assembly

ability to select and use tools

ability to follow manufacturers= assembly procedures

ability to perform final functional test

knowledge of application of testing devices

knowledge of electrostatic discharge techniques

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

ability to handle units

ability to store units

22.12 Delivers/installs, sets up units, and demonstrates unit operation.

ability to drive to job location when applicable

ability to deliver units

ability to install and set up units

ability to demonstrate unit to customer

ability to advise customer of company policies and warranty policies

ability to communicate pertinent repair/defect information

ability to respond to customer concerns and customer satisfaction

ability to obtain customer sign-off

ability to obtain payment

	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
22.13	Comp docur	oletes nentatio	on.				custom		computer, calculator, microfiche reader				
					ability	y to calc	ulate cu						
					ability to tag warranty parts								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

Task 23Services corded phones.

<u>Trend</u>: Because these units are becoming cheaper and cheaper, they are becoming disposable as cost of repair and replacement is too high.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
23.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem ability to probe for specific symptoms	
		ability to reflect back and verify customer's recollection of symptoms	
		ability to respond to unrealistic customer expectations	
		knowledge of unit operation and potential problems	
		(NOT COMMON CORE)	

Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment			
<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> no	<u>YK</u> NV		
Proce	sses wc	ork orde	rs.		ability to determine name, address and phone numbers of customer								
					ability to determine name and model number of unit								
				ability	ability to write up symptoms								
<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV		
repair	r time fr	ames an	nd	ability to respond to customer enquiries ability to obtain customer signature on work order									
				know	ledge of	f compa	ny wor	k volur	ne				
				know	ledge of	f compa	ny cred	it polic	у				
<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
	NF ND Proce	NDnoProcesses workNFNSNDnoInforms custorrepair time frcost responsiNFNS	NFNSPENDnoyesProcesses work orderMFNSPENDnoyes	NF NDNS noPE yesNB yesProcesses work orders.NF NDNS noPE yesNB yesInforms customer of repair time frames and cost responsibilities.NF NDNS PE NBNB	NFNSPENBPQNDnoyesyesyesNDProcesses work orders.ability and pProcesses work orders.ability numb ability numbNFNSPENBPQ NDNDnoPENBPQ NDNFNSPENBPQ NDInforms customer of repair time frames and cost responsibilities.ability enqui ability on wo know knowNFNSPENBPQNFNSPENBPQ	NFNSPENBPQONProcesses work orders.ability to deta and phone nu ability to deta number of ur ability to write knowledge or documentationability to deta number of ur ability to write knowledge or documentationNFNSPENBPQON NVInforms customer of repair time frames and cost responsibilities.ability to resp enquiriesability to resp enquiriesNFNSPENBPQON NV	NFNSPENBPQONMANDnoyesyesNDNVyesProcesses work orders.ability to determine r and phone numbers of ability to determine r number of unit ability to write up sys knowledge of compa documentation procesNFNSPENBPQONMA yesNFNSPENBPQONMA yesInforms customer of repair time frames and cost responsibilities.ability to respond to enquiries ability to obtain custo on work order knowledge of compa knowledge of compaNENSPENBPQONMA	NF NS PE NB PQ ON MA SK Processes work orders. ability to determine name, a and phone numbers of custo ability to determine name ar number of unit ability to write up symptoms knowledge of company documentation procedures NF NS PE NB PQ ON MA SK NF NS PE NB PQ ON MA SK ND no yes yes NB ND NV yes yes NF NS PE NB PQ ON MA SK Informs customer of repair time frames and cost responsibilities. ability to respond to customer sign on work order ability to obtain customer sign on work order NE NS PE NB PQ ON MA SK	NF NS PE NB PQ ON MA SK AB Processes work orders. ability to determine name, address and phone numbers of customer ability to determine name and mode number of unit ability to determine name and mode number of unit ability to write up symptoms Knowledge of company documentation procedures NF NS PE NB PQ ON MA SK AB ND no yes yes yes ND NV yes yes yes NF NS PE NB PQ ON MA SK AB ND no yes yes ND NV yes yes yes Informs customer of repair time frames and cost responsibilities. ability to respond to customer enquiries ability to obtain customer signature on work order ability to obtain customer signature on work order NE NS PE NB PQ ON MA SK AB	NFNSPENBPQONMASKABBCProcesses work orders.ability to determine name, address and phone numbers of customer ability to determine name and model number of unit ability to write up symptoms knowledge of company documentation proceduresability to write up symptoms knowledge of company documentation proceduresNFNSPENBPQONMASKABBCNDnoyesyesyesNDNVyesyesno	NFNSPENBPQONMASKABBCNTProcesses work orders.ability to determine name, address and phone numbers of customer ability to determine name and model number of unit ability to write up symptoms knowledge of company documentation proceduresability to write up symptoms knowledge of company yesNFNSPENBPQONMASKABBCNTNDnoyesyesNDNVyesyesyesnoNFNSPENBPQONMASKABBCNTNDnoyesyesNDNVyesyesyesnoyesInforms customer of repair time frames and cost responsibilities.ability to respond to customer enquiries ability to obtain customer signature on work order knowledge of company work volume knowledge of company credit policyNENSPENBPQONMASKABBCNT		

23.04	Performs pre-service functional tests.	ability to apply power	telephone analyzer
		ability to attach to signal source	
		ability to power up	
		ability to check audio	

ability to check all special features ability to check transmitter and receiver ability to check cosmetics of set ability to recognize malfunctions ability to document results ability to communicate results to other technicians knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge techniques knowledge of flat-pack (surfacemount) techniques knowledge of component identification methods knowledge of cleaning chemicals and procedures knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques NF NS PE NB PQ ON MA SK AB BC NT YK NV ND ND NV no yes yes yes yes yes yes yes

23.05 Disassembles units.

ability to prepare unit and work area for disassembly

manufacturer's software, solder irons, solder

				ability	to sele	ct and u	se tools	5		suckers, s i.c. puller	solder wicks, rs
				-		ow man procedu		ers=			
				know device	-	applica	ation of	testing			
					ledge of	de-sold	lering a	nd			
				know techni	-	felectro	static c	lischarg	je		
					ledge of t) techn	flat-pao iques	ck (surf	àce-			
						compo method					
				know! procee	-	cleanin	ng chem	nicals ar	nd		
					cteristic	f replace s (physi		art			
				know! techni		ftrouble	eshootin	ıg			
<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV

23.06	Troubleshoots faults.	ability to prepare unit for troubleshooting	manufacturer's software, alignment tools, burnishing tools, solder
		ability to perform non-technical inspections	irons, solder suckers, solder wicks, i.c. puller, cutters, strippers, glue
		ability to recognize need to consult with another technician or	gun, heat gun, anti- static equipment,

NF

ND

no

yes

yes

NV

yes

manufacturer cleaning fluids, airbrushes, vacuum ability to perform visual inspection brushes, swabs, multimeters, continuity ability to recognize malfunctions testers, oscilloscopes, circuit testers, logic ability to read schematics probes, frequency counters, variable ability to isolate receiver fault to subvoltage/current supplies, assembly/circuit/component microfiche reader, jumper wire, transistor ability to select, connect and correctly checker, tracker, interpret readings from required test capacitor checker, equipment induction meter. telephone analyzer, inspection mirrors, ability to document results diagnostic routines, test ability to communicate results to cables, magnifiers, other personnel calculator ability to recognize warranty and non-warranty situations knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of flat-pack (surfacemount) techniques knowledge of component identification methods knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques NB NS PE PO ON MA SK AB BC NT YK

yes

yes

yes

yes

ND

NV

	Sub-ta	isks			Supp	orting K	nowled	ge & A	bilities		Tools &	Equipment		
23.07			epairs f		abilit	y to rem	ove fau	lty cor	ponent			turer's software, ocedures/		
	circuit		ompon		abilit	y to veri	fy prop	er insta	llation		standards	s, alignment rnishing tools,		
						y to veri boring c		nd	solder irons, solder suckers, solder wicks, i.c. puller, cutters, strippers, glue gun, heat gun, anti-static					
					-	y to sele onent	ct and r							
					abilit	y to orde	er parts			fluids, ai	nt, cleaning rbrushes, orushes, swabs,			
					-	y to repa onents	ir fault <u></u>	y circui	ts or		multimet testers, o	ers, continuity scilloscopes, sters, logic		
					-	y to clea onents	n circui	ts and			probes, f counters,	requency		
						y to reco varranty	-	-	y and		microficl jumper w	ne reader, vire, transistor		
					-	y to obta ble subst		or	checker, tracker, capacitor checker, induction meter, telephone analyzer,					
					know devic	ledge of es	applica	ation of	testing		inspection mirrors, diagnostic routines, te cables, magnifiers,			
						ledge of ring tech		lering a	and			r, de-soldering		
					know techn	ledge of iques	electro	static	discharg	ge				
						ledge of t) techn		ck (sur	face-					
						ledge of fication								
					know proce	ledge of dures	cleanir	ng chen	nicals a	nd				
					know techn	ledge of iques	trouble	eshooti	ng					
	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	<u>MA</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>		

 Sub-t	tasks			Supp	orting k	Knowled	lge & A	bilities		Tools &	Equipment	
ND	no	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV	

23.08	Sets up and tests units.	ability to ensure unit complies with government regulations	manufacturer's software, alignment tools, burnishing tools, solder
		ability to attach to power source	irons, solder suckers, solder wicks, i.c. puller,
		ability to attach to signal source	cutters, strippers, glue gun, heat gun, anti-
		ability to power up	static equipment, cleaning fluids, cloths,
		ability to check audio	airbrushes, vacuum brushes, swabs,
		ability to check mechanical operation	multimeters, continuity testers, oscilloscopes,
		ability to check all features	circuit testers, logic probes, frequency
		ability to check cosmetics	counters, variable
		ability to recognize malfunctions and	voltage/current supplies,
		troubleshoot	microfiche reader,
		ability to document results	jumper wire, transistor checker, tracker,
		ability to document results	capacitor checker,
		ability to communicate results to	induction meter,
		other technicians	telephone analyzer,
			inspection mirrors,
		knowledge of application of testing devices	diagnostic routines, test cables, magnifiers,
		devices	calculator
		knowledge of electro static discharge techniques	
		knowledge of flat-pack (surface- mount) techniques	
		knowledge of component identification methods	
		knowledge of replacement part characteristics (physical and electrical)	
		knowledge of troubleshooting	

	Sub-t	asks			Suppo	orting K	nowled	Tools & Equipment				
					techni	iques						
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV
23.09		rms rou enance.			ability ability ability ability ability in pla ability and el alignr ability weak know and fi know device know techni know identi know	v to chea v to veri v to clea v to clea v to veri ce and f v to perf lectronia nents v to ider nesses o ledge of iques ledge of fication ledge of fication ledge of dures ledge of cheater of dures ledge of fication ledge of dures	n cosmo fy all sa function form rou c adjust ntify/doo r potent f precisi hanical f applica f electro f compo method	ation of etics of afety deving pro- iting pro- utine me ments/ cument tial prob on mech adjustm ation of static content dis ment dis ng chem ement p cal and	vices are perly echanica blems hanisms hents testing lischarg nicals an art	e Il	alignmen burnishin irons, so solder w cleaning airbrushe brushes, telephon inspectio	ng tools, solder lder suckers, icks, i.c. puller, fluids, es, vacuum

 Sub-t	asks			Suppo	orting K	Inowled	lge & A	bilities		Tools &	Equipment	
<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	

23.10	Performs post-service functional tests.	ability to attach to power source	variable voltage/current
	functional tests.	ability to attach to signal source	supplies, telephone analyzer
		ability to power up	
		ability to check audio	
		ability to check mechanical operation	
		ability to check all features	
		ability to check cosmetics	
		ability to recognize malfunctions ability to document results	
		ability to communicate results to other technicians	
		knowledge of application of testing devices	
		knowledge of de-soldering and soldering techniques	
		knowledge of electro static discharge techniques	
		knowledge of flat-pack (surface- mount) techniques	
		knowledge of component identification methods	
		knowledge of cleaning chemicals and procedures	
		knowledge of replacement part characteristics (physical and	

	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment		
					electri	ical)							
					know techni	-	f trouble	eshootii	ng				
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	
23.11		sembles rms fina			ability	y to asso y to prej sembly		t and w	ork area	ì	solder ire	turer's software, ons, solder solder wicks	
						-	ect and u						
					ability	y to foll	ow man cedures	ufactur					
					ability	to per	form fin	st					
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	
23.12	units,	ers/insta and der operation	nonstra		-	y to han y to stor	dle unit e units	S			cutters, s crimpers	trippers, , multimeters	
					ability applic		ve to job	locatio	on when				
					ability	/ to deli	ver unit	S					
					ability	y to inst	all and s	set up u	inits				
					ability custor		nonstrate	e unit to	0				
						any pol	ise custo icies and						

Sub-t	asks			Supporting Knowledge & Abilities						Tools &	Equipment	
				•		nmunica informa		nent				
				-		oond to custom						
				ability	to obta	ain custo	omer sig	gn-off				
				ability	y to obta	ain payn	nent					
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	

23.13	Comp	oletes nentatio	n		ability to bill customer						manufacturer's software, microfiche reader		
	uocui	nontativ			ability	y to con	nplete w	arranty	claim		meroner		
					ability	y to calc	culate cu	istomer	bill				
					ability	y to tag	warrant	y parts					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

BLOCK F SERVICE COMPUTER EQUIPMENT COMPONENTS AND DEVICES

Task 24 Services computer monitors.

<u>Trend</u>: These items show increasing complexity, and there is a trend toward lower radiation limits. Units will become cheaper and parts harder to find.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment					
	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment					
24.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem						
	problems.	ability to probe for specific symptoms						
		ability to reflect back and verify customer's recollection of symptoms						
		ability to respond to unrealistic customer expectations						
		knowledge of unit operation and potential problems						
	NFNSPENBNDyesyesyes	<u>PQ</u> <u>ON</u> <u>MA</u> <u>SK</u> <u>AB</u> <u>BC</u> ND NV yes yes yes no	<u>NT</u> <u>YK</u> no NV					
24.02	Processes work orders.	ability to determine name, address and phone numbers of customer ability to determine name and model number of unit ability to write up symptoms						

knowledge of company documentation procedures

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

24.03	Informs customer of repair time frames and cost responsibilities.	ability to respond to customer enquiries
	-	ability to obtain customer signature on work order

	Sub-t	asks			Suppo	orting K	Inowled		Tools & Equipment					
					know	knowledge of company work volume								
					know	ledge o	f compa	ny cred	lit policy	y				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
24.04	Disas	sembles	s units.		-	y to prej sassemt	pare uni oly	ì	mechanical diagrams/ drawings, safety procedures/standards,					
					ability	y to sele	ect and u		hex drive					
							ow man procedu							
							f produc specific		pecial					
					know techn	-	f electro	static o	discharg	je				
							f compo method							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
24.05	Troul	oleshoot	ts faults		•	y to prej leshooti	pare uni ng	t for			equipme	c diagrams, nt tions, testing		
					-	y to peri	form no		procedur solder su	res, solder irons, ickers, solder				
					with a		ognize n technic		vacuum multimet oscillosc					
					ability	y to per	form vis	sual insp	pection		detectors	s, degaussing nt, high voltage		
					ability	y to reco	ognize r	nalfunc	tions			ariac, transistor		

ability to read schematics

ability to isolate receiver fault to subassembly/circuit/component

ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

knowledge of basic computer software configuration

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

checker, capacitor checker, induction meter, CRT checker, computer, freeze spray, mats, ground straps,

software

24.06	Replaces or repairs faulty	ability to remove faulty component	cutters, measuring
	circuits and components.	ability to verify proper installation	devices, isolation transformer, anti-static equipment, anti-static
		ability to verify integrity of board and neighboring components	sprays, schematic diagrams, equipment specifications, testing
		ability to select and replace component	procedures, solder irons, solder suckers, solder wicks, flux removers,
		ability to order parts	vacuum brushes, multimeters,
		ability to repair faulty circuits or components	oscilloscopes, frequency counters, RF radiation detectors, degaussing
		ability to clean circuits and components	equipment, high voltage probe, variac, transistor checker, capacitor
		ability to recognize warranty and non-warranty situations	checker, induction meter, CRT checker,
		ability to obtain exact replacement or suitable substitute parts	computer, freeze spray, mats, ground straps, de- soldering tools
		knowledge of product and special features and specifications	
		knowledge of application of testing devices	
		knowledge of de-soldering and soldering techniques	
		knowledge of electro static discharge techniques	
		knowledge of flat-pack (surface- mount) servicing techniques	
		knowledge of component identification methods	
		knowledge of cleaning chemicals and	

	Sub-t	asks			Suppo	orting K	Inowled		Tools & Equipment			
					proce know techn	ledge of	f trouble	eshootir	ıg			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV
24.07	Sets u	ıp and t	ests uni	ts.	gover ability	nment r y to atta y to atta y to atta y to pow y to che y to che g to che y to che y to che g to che y to che g	ck audio ck video ck all fe ck cosm ognize n ument r nmunica ians f produc specifica f applica	ons ower sol gnal sou gnal sou atures hetics halfunc esults ite resul et and sp ations ation of static o	urce urce tions an lts to pecial `testing discharg		diagrams specifica procedur solder su wicks, fl vacuum multime oscillosc counters detectors equipme probe, v checker, checker, meter, C	ters, sopes, frequency , RF radiation s, degaussing ent, high voltage ariac, transistor capacitor induction RT checker, oray, mats,

Sub-t	Suppo	orting K	Inowled	ge & A	Tools & Equipment							
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

24.08	Performs routine	ability to clean controls	maintenance
	maintenance.	ability to align	procedures, allen keys, schematic diagrams,
		ability to verify operation of controls	equipment specifications, testing
		ability to clean cosmetics of item	procedures, solder irons, solder suckers, solder wicks, flux removers,
		ability to verify all safety devices are in place and functioning properly	vacuum brushes, multimeters, oscilloscopes, frequency
		ability to perform routine mechanical and electronic adjustments/ alignments	counters, RF radiation detectors, degaussing equipment, high voltage
		ability to identify/document weaknesses or potential problems	probe, variac, transistor checker, capacitor checker, induction meter, CRT checker,
		knowledge of precision mechanisms and fine mechanical adjustments	computer, freeze spray, mats, ground straps, magnifying glass
		knowledge of product and special features and specifications	
		knowledge of application of testing devices	
		knowledge of electro static discharge techniques	
		knowledge of component identification methods	
		knowledge of cleaning chemicals and procedures	
		knowledge of replacement part characteristics (physical and electrical)	
		knowledge of troubleshooting	

	Sub-t	asks			Suppo	orting K	nowled		Tools & Equipment				
					techni	iques							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
24.09		rms pos ional tes		e	ability ability ability ability ability ability ability ability ability other know featur know device know	 to attact to power to power to check to	ck audic ck video ck all fe ck cosm ognize n ument r innunica ians f produc specifica f applica f electro	gnal sou atures etics nalfunc esults te resul et and sp ations ation of static c	tions ts to pecial testing lischarg		safety pro standards	ocedures/ a, computer	
					knowledge of cleaning chemicals and procedures								
					knowledge of troubleshooting techniques								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

24.10 Reassembles units and performs final check.					ability to assemble allen keys, hex drivers							vs, hex drivers		
	perior		II CHECK			to prep sembly	oare uni	t and w	ork area	l				
					ability	to sele	ct and u	ise tool	8					
					-	/ to follo bly prod			ers=					
					ability	to perf	orm fin	al funct	tional te	st				
					knowledge of electro static discharge techniques									
					know! proce	ledge of dures	cleanir	ng chem	nicals ar	nd				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
24.11			alls, sets		ability	to hand	dle unit	S			safety procedures/ standards, light to			
		and del peration	monstra 1.	tes	ability	to store	e units					s, light to sized truck		
					ability applic	v to driv able	e to job							
					ability	to deliv	ver unit	S						
					ability	to insta	all and s	set up u	nits					
					ability custor	v to dem ner	onstrate	e unit to)					
					-	/ to advi any poli es								
					ability to communicate pertinent repair/defect information									
					ability to respond to customer concerns and customer satisfaction									

ability to obtain customer sign-off

ability to obtain payment

knowledge of product and special features and specifications

knowledge of cleaning chemicals and procedures

NF	NS	PE	NB	PQ	<u>ON</u>	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

24.12 Completes ability to bill customer calculator documentation. ability to complete warranty claim ability to calculate customer bill ability to tag warranty parts

25	S	orvicos	comni	itor hai	dwara							
	ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV
	NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK

Task 25Services computer hardware.

Sub-tasks

<u>Trend</u>: Because of unit obsolescence and a lack of available replacement parts, a technician=s ability to repair declines, resulting in an increase in customer complaints.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
25.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem	
	L	ability to probe for specific symptoms	
		ability to reflect back and verify customer's recollection of symptoms	
		ability to respond to unrealistic	

customer expectations

knowledge of unit operation and potential problems

(NOT COMMON CORE)

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	yes	yes	no	no	NV

25.02	Proce	sses wo	rk orde	rs.	2	to dete nu						
					2	to dete er of un		ame an	d mode	1		
					ability	v to writ	e up syr	nptoms	5			
						ledge of nentatio		2				
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC_ no	<u>NT</u> yes	<u>YK</u> NV

25.03	repair	time fi	omer of ames ar bilities.		ability enqui	, 1	oond to	custom	er					
	0311	csponsi	onnues.			y to obta ork orde	ain custo er	omer sig	gnature					
					know	knowledge of company work volume								
					know	knowledge of company credit policy								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV		
25.04		rms pre ional te:	-service sts.	;	ability to apply power						multimet	ers, diskettes		

25.05

				ability	to attac	h to sig	nal sou	irce				
				ability	to pow	er up						
				ability	to chec	k video	1					
				ability	to chec	k audio	,					
				ability	to chec	k all sp	ecial fe	atures				
				ability	to chec	k cosm	etics of	set				
				ability	to reco	gnize m	alfunct	tions				
				ability	to docu	iment re	esults					
				ability to document results ability to communicate results to other technicians								
					to mair ng data	ntain int	egrity o	of				
						produc pecifica		pecial				
				knowl device		applica	tion of	testing				
				knowl system	-	commo	on opera	ating				
<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes									
Disass	embles	units.		-	to prep assemb		and w	ork area	L		ex driver Idering	rs, mats, irons

ability to select and use tools

ability to follow manufacturers= disassembly procedures

knowledge of local, provincial and

	Sub-ta	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment	
	540 4					l goveri					10010 00	Equipment	
						ledge of		-					
						es and s							
					know! device	ledge of es	applica	ation of	testing				
						ledge of ing tech		lering a	nd				
					know! techni	ledge of iques	electro	static c	lischarg	e			
						ledge of t) servic	-						
						ledge of fication							
					know techni	ledge of iques	trouble	eshootin	ıg				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV	
25.06	Troub	oleshoot	s faults			to prep eshootii		t for			cables, o	ic routines, te scilloscopes,	st
					ability inspec	to perf	orm no	n-techn	ical		ROM tes	ters, RAM/ sters	
					with a	to reco mother t facturer	technici		consult				
					ability	to perf	orm vis	ual insp	pection				
					ability	to reco	gnize n	nalfunct	tions				
					ability	to read	l schem	atics					
					ability	to isola	ate rece	iver fau	lt to sub)-			

assembly/circuit/component

ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

25.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component	solder irons, solder wicks, hot air
	encuns una components.	ability to verify proper installation	equipment, i.c. pullers, de-soldering tools
		ability to verify integrity of board and neighboring components	
		ability to select and replace component	

				ability	to orde	er parts						
				ability compo	-	air fault <u>y</u>	y circuit	s or				
				ability compo		n circui	ts and					
				-		ognize w situatio	-	and				
				-		ain exac titute pa	-	ement c	or			
						f produc specifica		pecial				
				knowl device		fapplica	ation of	testing				
					-	f de-solo nniques	lering a	nd				
				knowl techni	-	felectro	static c	lischarg	e			
				moun knowl	t) servic edge of	f flat-pa cing tecl f compo method	nniques nent					
				knowl procee	•	f cleanir	ng chem	icals an	nd			
				knowl techni		f trouble	eshootin	g				
<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV	

25.08	Sets up and tests units.	ability to ensure unit complies with	data generators,
		government regulations	RAM/ROM testers

			~	0		0				-1. F		
			ability	v to atta	ch to po	ower sou	urce					
			ability	v to atta	ch to sig	gnal sou	irce					
			ability	to pow	ver up							
			ability	to chee	ck audio)						
			ability	to chee	ek video)						
			ability	to chee	ck all fe	atures						
			ability	to chee	ck cosm	netics						
			-	to reco eshoot	ognize n	nalfunc	tions an	d				
			ability	to doc	ument r	esults						
			•	ability to communicate results to other technicians								
				ledge of es and s	-	-	pecial					
			knowl device	ledge of	applica	ation of	testing					
			knowl techni	-	felectro	static c	lischarg	e				
			knowledge of flat-pack (surface- mount) servicing techniques									
			knowledge of component identification methods									
			knowl techni	ledge of ques	ftrouble	eshootir	ıg					
<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV		

25.09 Performs routine

<u>NF</u> ND

ability to clean controls

cleaning fluids,

	Sub-ta	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment
	mainte	enance.			ability	y to alig	n				airbrushe swabs, o magnifyi	· · · · · · · · · · · · · · · · · · ·
					ability	y to veri	fy opera	ation of	control	S	maginiyi	ing glass
					ability	y to clea	n cosm	etics of	item			
						y to veri ce and f				e		
					-	y to perf lectronio nents			echanica	al		
					-	y to ider nesses o	•		olems			
						ledge of ne mecl				5		
						ledge of res and s	-	-	oecial			
					know devic	ledge of es	fapplica	ation of	testing			
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV
25.10			t-servic	e	ability	y to atta	ch to po	ower sou	irce			ocedures/
	Iuncu	onal tes	sts.		ability	y to atta	ch to sig	gnal sou	rce		standard	s, diskettes
					ability	y to pow	ver up					
					ability	y to che	ck audio)				
					ability	y to che	ck video)				
					ability	y to che	ck all fe	atures				
					ability	y to che	ck cosm	netics				
					ability	y to reco	ognize n	nalfunct	ions			
					ability	y to doc	ument r	esults				

ability to communicate results to other technicians

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

NF	NS	PE	NB	PQ	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

25.11	Reassembles units and performs final check.	ability to assemble	hex drivers, solder irons
	Periodina multiplication.	ability to prepare unit and work area for assembly	
		ability to select and use tools	
		ability to follow manufacturers= assembly procedures	
		ability to perform final functional test	
		knowledge of product and special features and specifications	
		knowledge of application of testing devices	

	Sub-t	asks			Suppo	orting K	Inowled	ge & A	bilities		Tools & Equipment			
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
25.12	units,		alls, set monstra n.		-	ability to handle units ability to store units						safety procedures/ standards, hex drivers		
					ability applic		ve to job	locatio	on when					
					ability	y to deli	ver unit	S						
					ability	y to inst	all and	set up u	inits					
					ability custor		nonstrat	e unit to	0					
					-	any pol	ise cust icies and							
							nmunica informa							
					ability to respond to customer concerns and customer satisfaction									
					-		ain custe ain payr		gn-off					
						knowledge of product and special features and specifications								
					(NOT	(NOT COMMON CORE)								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		
25.13	Comj docui	pletes mentatio	on.		ability to bill customer ability to complete warranty claim									

ability to calculate customer bill

ability to tag warranty parts

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

Task 26 Services printers.

<u>Trend</u>: Because of multi uses of printers, they are becoming more and more complex and more difficult to repair.

_	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment		
26.01	Proce	esses wo	ork orde	rs.	and p abilit numb	hone nu y to dete per of ur		of custo name ar	omer nd mode	91			
					abilit	ability to write up symptoms							
					knowledge of company documentation procedures								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
26.02	repair	ms custo t time fi esponsi	ames a	nd	ability to respond to customer enquiries ability to obtain customer signature on work order knowledge of company work volume								

	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment		
					know	ledge of	f compa	ny cred	it policy	T			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	MA yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
		5.52	5-2	5			5	5.52	5-2		5 - 2		
26.03		rms pre-			ability to apply power computer								
	Tunet				ability	v to atta	ch to sig	gnal sou	urce				
					ability	to pow	ver up						
					ability	to che	ck all sp	ecial fe	eatures				
					ability	to che	ck cosm	etics of	fset				
					ability	to reco	ognize n						
					ability	to doc	ument r						
						to con technic	nmunica ians	te resul	ts to				
							f produc specifica		pecial				
					know! device	-	fapplica	ation of	testing				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
26.04	Disas	sembles	s units.		ability to prepare unit and work area mechanical diagrams/ for disassembly drawings, equipment								
					ability	v to sele	ct and u	ise tool	S		procedure	ions, operating es, hex drivers,	
												ns, solder	

knowledge of local, provincial and federal government regulations

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of component identification methods

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

26.05	Troubleshoots faults.	ability to prepare unit for troubleshooting	multimeters, ground straps, diskettes, computer software
		ability to perform non-technical inspections	1
		ability to recognize need to consult with another technician or manufacturer	
		ability to perform visual inspection	
		ability to recognize malfunctions	
		ability to read schematics	
		ability to isolate receiver fault to sub- assembly/circuit/component	

ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

Replaces or repairs faulty	ability to remove faulty component	solder irons, solder
circuits and components.		wicks, flux removers,
	ability to verify proper installation	cutters, de-soldering
		tools
	ability to verify integrity of board and	
	neighboring components	
	Replaces or repairs faulty circuits and components.	circuits and components. ability to verify proper installation ability to verify integrity of board and

				ability comp		ect and r	eplace				
				ability	y to ord	er parts					
				-	ability to repair faulty circuits or components						
				-	y to clea onents	n circui	ts and				
				-		ognize v v situatio	-	and /			
				-		ain exac titute pa	-	ement o	or		
					-	f produc specifica	-	pecial			
				know device	•	f applica	ation of	testing			
					-	f de-solo hniques	-	ind			
				know techn	-	f electro	static o	lischarg	;e		
				moun know	t) service ledge of	f flat-pa cing tecl f compo methoc	hniques ment				
				know proce		f cleanir	ng chen	nicals ar	nd		
				know techn		f trouble	eshootir	ng			
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV

26.07 Sets up and tests units. ability to ensure unit complies with diskettes

NF

ND

NS

yes

government regulations ability to attach to power source ability to attach to signal source ability to power up ability to check all features ability to check cosmetics ability to recognize malfunctions and troubleshoot ability to document results ability to communicate results to other technicians knowledge of product and special features and specifications knowledge of application of testing devices knowledge of component identification methods knowledge of troubleshooting techniques PE NB PQ ON MA <u>SK</u> AB BC NT <u>YK</u> ND NV NV yes yes yes yes yes no yes

 26.08
 Performs routine maintenance.
 ability to clean controls
 cleaning fluids, vacuum brushes, lubricants, magnifying glass

 ability to verify operation of controls
 ability to clean cosmetics of item

ability to verify all safety devices are in place and functioning properly

ability to perform routine mechanical and electronic adjustments/ alignments

ability to identify/document weaknesses or potential problems

knowledge of precision mechanisms and fine mechanical adjustments

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of cleaning chemicals and procedures

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

26.09	Performs post-service functional tests.	ability to attach to power source	safety procedures/ standards, diskettes, test
	functional tests.	ability to attach to signal source ability to power up	documents
		ability to check all features	
		ability to check cosmetics	
		ability to recognize malfunctions	
		ability to document results	
		ability to communicate results to other technicians	
		knowledge of product and special features and specifications	

	Sub-t	asks			Supporting Knowledge & Abilities						Tools &	Equipment			
					devic know techn know	ledge of	f electro f compo	static o							
					know proce	ledge of dures	f cleanii	ng chen	nicals a	nd					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	PQ ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	YK NV			
26.10			units a al check		ability	y to asse y to prep sembly		t and w	ork area	a	hex drive	ers, solder irons			
					ability	ability to select and use tools									
					ability to follow manufacturers= assembly procedures										
					ability	y to perf	form fin	al func	tional te	est					
						ledge of res and s	-								
					knowledge of application of testing devices										
					knowledge of cleaning chemicals and procedures										
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV			

26.11 Delivers/installs, sets up ability to handle units safety procedures/

-					<u>.</u>	U		0				<u> </u>			
		and deperation	monstra n.	ates	ability	y to stor	e units			S	standards	5			
					ability applic	y to driv cable	e to job	locatio	on when						
					ability	y to deli	ver unit	S							
					ability	y to inst	all and s	set up u	nits						
					ability custor	y to dem mer	nonstrate	e unit to)						
					-	y to adv any poli es									
					-	y to com /defect			nent						
					-	y to resp erns and									
					ability	ability to obtain customer sign-off									
					ability	y to obta	ain payn	nent							
						ledge of res and s	-	-	pecial						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV			
26.12	Comp				ability	y to bill	custom	er		C	calculator	r			
	docur	nentatio	on.		ability	y to com	nplete w	arranty	claim						
					ability	y to calc	ulate cu	bill							
					ability	ability to tag warranty parts									
						ledge of res and s			pecial						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC NT YK</u> no yes NV					

Task 27 Services modems. (NOT COMMON CORE)

Trend: Stand alone modems are becoming obsolete, resulting in very little servicing.

	Sub-ta	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment	
27.01		erifies u	views cl unit	ients	custor	y to liste mer's de y to proł	scriptio	n of pro					
					sympt	-							
						y to refle mer's ree				S			
					-	y to resp mer exp			stic				
						knowledge of unit operation and potential problems							
					(NOT COMMON CORE)								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
27.02	Proce	sses wo	ork orde	rs.	ability to determine name, address and phone numbers of customer								
					ability to determine name and model number of unit								
						ability to write up symptoms							
					knowledge of company documentation procedures								
					(NO1	COM	MON (CORE)					

	Sub-t	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV
27.03	repair		omer of ames an bilities.		enqui ability	ries	oond to o ain custo r					
					know	ledge of	f compa	ny wor	k volum	ne		
					know	ledge of	f compa	y				
					(NO1	COM	MON (
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	YK NV
27.04		rms pre	-service		ability ability ability ability ability ability ability ability other know featur	y to atta y to pow y to chea y to chea y to chea y to chea y to chea y to chea y to com technic: ledge of ledge of	ck audio ck all sp ck cosm ognize n ument r	gnal sou pecial fe nalfunc esults ite resul et and sp ations	eatures f set tions lts to pecial		computer	e analyzer, r, diagnostic operating es

equipment

specifications, operating

procedures, testing

procedures, safety

manufacturers= manuals/software,

solder wicks, flux removers, heat gun,

freeze spray,

multimeters,

oscilloscopes,

procedures/standards,

alignment tools, solder irons, solder suckers,

anti-static equipment,

(NOT COMMON CORE)

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

27.05	Disas	sembles	s units.		ability to prepare unit and work area for disassembly						drawings	·	
					ability	y to sele	ect and u	ise tool	S			software, allen drivers, solder	
					-		ow man procedu		ers=		irons, sol solder wi	der suckers, cks, electric t drivers, anti-	L
						knowledge of local, provincial and federal government regulations					static equipment, vacuum brushes		
						-	f produc specific						
					(NOT COMMON CORE)								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes						<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
27.06	Troubleshoots faults.					ability to prepare unit for troubleshooting						grams, c diagrams,	

ability to perform non-technical inspections ability to recognize need to consult with another technician or manufacturer

ability to perform visual inspection

ability to recognize malfunctions

ability to read schematics

ability to isolate receiver fault to subassembly/circuit/component ability to select, connect and correctly interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of troubleshooting techniques

(NOT COMMON CORE)

	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
27.07	-	ices or r ts and c	•	-			ove fau	5			burnishir irons, sol	llen keys, ng tools, sol der suckers cks, flux	
					ability to verify integrity of board and neighboring components ability to select and replace						removers anti-stati cleaning ground s	s, glue gun, c equipmen fluids, mat traps, anti-s	nt, s, static
					comp ability	onent y to orde	er parts				sprays, n soldering	agnifiers, o tools	de-

component testers, RAM/ROM testers, variable voltage/current supplies, variac, jumper wire, transistor checker, capacitor checker, induction meter, telephone analyzer, hot air equipment, mats, ground straps, inspection mirrors, diagnostic routines, magnifiers ability to repair faulty circuits or components

ability to clean circuits and components

ability to recognize warranty and non-warranty situations

ability to obtain exact replacement or suitable substitute parts

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of troubleshooting techniques

(NOT COMMON CORE)

NF	NS	PE	NB	PQ	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

27.08 Sets up and tests units. ability to ensure unit complies with equipment

Supporting Knowledge & Abilities

Tools & Equipment

procedures, manufacturers=

cables

specifications, operating procedures, testing

manuals/software, heat gun, multimeters,

oscilloscopes, telephone analyzer, computer, test

government regulations

ability to attach to power source

ability to attach to signal source

ability to power up

ability to check audio

ability to check all features

ability to check cosmetics

ability to recognize malfunctions and troubleshoot

ability to document results

ability to communicate results to other technicians

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of troubleshooting techniques

(NOT COMMON CORE)

	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV
27.09		rms rout enance.				to clea		ols			fluids, cl	es, cleaning oths, vacuum
					2	to veri		5	analyzer,	telephone computer, n mirrors,		
					ability to clean cosmetics of item ability to verify all safety devices are in place and functioning properly							ng glass

ability to perform routine mechanical and electronic adjustments/ alignments

ability to identify/document weaknesses or potential problems

knowledge of precision mechanisms and fine mechanical adjustments

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

(NOT COMMON CORE)

	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
27.10		rms pos onal tes		e	ability	v to attac	ch to po	wer sou	irce		safety pro	ocedures/	
	ability to attach to signal source										procedures, manufacturers=		
					ability	to pow	ver up		manuals/software, computer				
					ability	to chec	ck audio		· · · · · · · · · · · · · · · · · · ·				
					ability	to chec	ck all fe	atures					

ability to check cosmetics

ability to recognize malfunctions

ability to document results

ability to communicate results to other technicians

knowledge of product and special features and specifications

knowledge of electro static discharge techniques

knowledge of cleaning chemicals and procedures

knowledge of troubleshooting techniques

(NOT COMMON CORE)

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	no	yes	no	yes	NV

27.11	Reassembles units and performs final check.	ability to assemble	mechanical diagrams/ drawings,
	F	ability to prepare unit and work area for assembly	manufacturers= manuals/software, hex
		ability to select and use tools	drivers, solder irons, electric screw/nut drivers
		ability to follow manufacturers= assembly procedures	
		ability to perform final functional test	
		knowledge of electro static discharge techniques	
		(NOT COMMON CORE)	

	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment				
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	YK NV			
27.12	units,	ers/inst and de operation	monstra		ability	y to stor					standard	ocedures/ s, light to sized truck			
					ability		e to job	locatio	n when						
					ability	y to deli	ver unit	S							
					ability	y to inst	all and s	set up u	nits						
					ability custor		nonstrate	e unit to)						
					ability to advise customer of company policies and warranty policies										
						ability to communicate pertinent repair/defect information									
						ability to respond to customer concerns and customer satisfaction									
					ability	y to obta	ain custo	omer sig	gn-off						
					ability	y to obta	ain payn	nent							
							f produc specifica		pecial						
					knowledge of electro static discharge techniques knowledge of cleaning chemicals and procedures										
					(NOT COMMON CORE)										
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV			

27.13	ability	to bill	custome		calculator, safety procedures/standards								
		nentatio			ability	to com	Г						
					ability to calculate customer bill								
					ability to tag warranty parts								
					(NOT COMMON CORE)								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

BLOCK G SERVICE MICROWAVE EQUIPMENT COMPONENTS AND APPLIANCES

Task 28 Services microwave ovens.

<u>Trend</u>: Because of the reducing cost of units and increasing cost of parts, service opportunities are reducing.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
28.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem ability to probe for specific symptoms ability to reflect back and verify customer's recollection of symptoms ability to respond to unrealistic	
		ability to respond to unrealistic	

	Sub-ta	asks			Suppo	orting K	nowled	ge & A	bilities		Tools & Equipment			
					custor	mer exp	ectatior	ıs						
						ledge of tial prol	-	peration	and					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	MA yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
28.02	Proce	sses wo	rk orde	rs.		y to dete hone nu								
					ability to determine name and model number of unit									
		ability to write up symptoms												
						ledge of nentatio	-	-						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	YK NV		
28.03	repair	ns custo time fr esponsi	ames ar	ıd	enqui ability	ability to respond to customer enquiries ability to obtain customer signature on work order								
					know	ledge of	f compa	ny worl	k volum	ne				
					know	ledge of	f compa	ny cred	it polic	y				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	AB yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
28.04	28.04 Performs pre-service functional tests.					ability to apply power ability to connect and operate test equipment						leakage tester, micro- wave radiation detectors, high voltage probe, multimeter, soldering iron		

ability to perform safety checks ability to power up ability to check all special features ability to check cosmetics of set ability to recognize malfunctions ability to document results ability to communicate results to other technicians knowledge of product and special features and specifications knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge techniques knowledge of flat-pack (surfacemount) servicing techniques knowledge of component identification methods knowledge of cleaning chemicals and procedures knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques

NF	NS	<u>PE</u>	<u>NB</u>	PQ	<u>ON</u>	MA	<u>SK</u>	AB	BC	<u>NT</u>	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

28.05	Disas	sembles	s units.			y to prep sassemb	hex drive	ers				
					ability	y to sele	ct and u	ise tool	S			
					-	y to follo sembly p			ers=			
						ledge of al gover						
						ledge of res and s	-	-	pecial			
					know devic	ledge of es	fapplica	ation of	testing			
						ledge of ring tech						
					know techn	ledge of iques	felectro	static o	lischarg	ge		
						ledge of t) servic	-					
						ledge of fication						
					know proce	ledge of dures	cleanir	ng chen	nicals ar	nd		
					chara	ledge of cteristic ical)						
					know techn	ledge of iques	ftrouble	eshootir	ng			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV

Troubleshoots faults.	ability to prepare unit for troubleshooting	multimeters, schematic diagrams, amp probe, solder irons, solder
	ability to perform non-technical inspections	wicks, solder suckers, flux removers, micro- wave radiation detector,
	ability to recognize need to consult with another technician or manufacturer	high voltage probe
	ability to perform visual inspection	
	ability to recognize malfunctions	
	ability to read schematics	
	ability to select, connect and correctly interpret readings from required test equipment	
	ability to document results	
	ability to communicate results to other personnel	
	ability to recognize warranty and non-warranty situations	
	knowledge of product and special features and specifications	
	knowledge of application of testing devices	
	knowledge of electro static discharge techniques	
	knowledge of flat-pack (surface- mount) servicing techniques	
	knowledge of component identification methods	
	Troubleshoots faults.	troubleshooting ability to perform non-technical inspections ability to recognize need to consult with another technician or manufacturer ability to perform visual inspection ability to recognize malfunctions ability to recognize malfunctions ability to recognize malfunctions ability to select, connect and correctly interpret readings from required test equipment ability to document results ability to document results ability to communicate results to other personnel ability to recognize warranty and non-warranty situations knowledge of product and special features and specifications knowledge of application of testing devices knowledge of flat-pack (surface- mount) servicing techniques knowledge of component

knowledge of replacement part characteristics (physical and electrical)

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

28.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component ability to verify proper installation	multimeters, schematic diagrams, amp probe, solder irons, solder wigka, solder suckers
		ability to verify integrity of board and neighboring components	wicks, solder suckers, flux removers, micro- wave radiation detector, hex drivers, de-
		ability to select and replace component	soldering tools, scope, high voltage probe
		ability to order parts	
		ability to repair faulty circuits or components	
		ability to clean circuits and components	
		ability to recognize warranty and non-warranty situations	
		ability to obtain exact replacement or suitable substitute parts	
		knowledge of product and special features and specifications	
		knowledge of application of testing devices	
		knowledge of de-soldering and soldering techniques	

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of troubleshooting techniques

knowledge of high voltage safety procedures

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

28.08	Sets up and tests units.	ability to ensure unit complies with government regulations	micro-wave radiation detectors, operating procedures
		ability to attach to power source	procedures
		ability to power up	
		ability to check all features	
		ability to perform safety checks	
		ability to check cosmetics	
		ability to recognize malfunctions and troubleshoot	
		ability to document results ability to communicate results to other technicians	
		knowledge of product and special features and specifications	

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

28.09	Performs routine maintenance.	ability to clean controls	cleaning fluids, cloths, lubricants, swabs, oilers,		
	munitentitiee.	ability to align	micro-wave radiation detector, magnifying		
		ability to verify operation of controls	glass		
		ability to clean cosmetics of item			
		ability to verify all safety devices are in place and functioning properly ability to perform routine mechanical and electronic adjustments/ alignments			
		ability to identify/document			

	Sub-tasks					Supporting Knowledge & Abilities					Tools & Equipment	
	weaknesses or potential problems											
					knowledge of precision mechanisms and fine mechanical adjustments							
		ledge of es and s			pecial							
	know devic	ledge of es	applica	ation of	testing							
					knowledge of electro static discharge techniques							
					knowledge of component identification methods							
					knowledge of cleaning chemicals and procedures							
					chara	knowledge of replacement part characteristics (physical and electrical)						
						knowledge of troubleshooting techniques						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	ON NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV
28.10) Performs post-service functional tests.				ability to attach to power source ability to power up ability to perform safety checks ability to check all features ability to check cosmetics ability to recognize malfunctions ability to document results				safety procedures/ standards, micro-wave radiation detectors, operating procedures			
					aomty			counts				

ability to communicate results to

other technicians knowledge of product and special features and specifications knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge techniques knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

28.11	Reassembles units and performs final check.	ability to assemble	hex drivers, micro-wave radiation detectors,
	performs marcheck.	ability to prepare unit and work area for assembly	operating procedures
		ability to select and use tools ability to follow manufacturers= assembly procedures	
		ability to perform safety checks	
		ability to perform final functional test	

knowledge of product and special features and specifications

knowledge of application of testing devices

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

28.12		ers/insta			ability to handle units safety procedu standards								
	-	and der peration		lles	ability	to store	e units				stanuarus	•	
					ability to drive to job location when applicable								
					ability to deliver units								
					ability to install and set up units								
					ability to demonstrate unit to customer								
						v to advi any poli es							
						to com defect i			nent				
						to resp rns and							
					ability	v to obta	in custo	omer sig	gn-off				
					ability	v to obta	in payn	nent					
					knowledge of product and special features and specifications								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes					<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		

28.13	Comp	oletes nentatio	on		abilit	y to bill	(calculator				
	uocui	nontativ			abilit	y to con	nplete w	arranty	claim			
					abilit	y to cale	culate cu	ustome	bill			
					abilit	y to tag	warrant	y parts				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV

Task 29 Services microwave clothes dryers. (NOT COMMON CORE)

Trend: More manufacturers are bringing these to market, so servicing will increase

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
29.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem ability to probe for specific symptoms ability to reflect back and verify customer's recollection of symptoms ability to respond to unrealistic customer expectations	
		knowledge of unit operation and potential problems (NOT COMMON CORE)	

	Sub-t	asks			Supp	orting K	nowled	ge & A	bilities		Tools & Equipment		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> no	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> no	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
29.02	Proce	esses wo	ork orde	rs.			ermine r Imbers (
						y to dete er of un	ermine r iit	name ar	nd mode	el			
					abilit	y to writ	te up sy	mptom	5				
							f compa on proce						
					(NOT	Г СОМ	MON (CORE)					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> no	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> no	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
29.03	repair	r time fi	omer of	nd	abilit enqui	-	bond to	custom	er				
	cost r	esponsi	bilities.		-	y to obta ork orde	ain custo er	omer si	gnature				
					know	ledge of	f compa	ny wor	k volun	ne			
					know	ledge of	f compa	ny cred	lit polic	у			
					(NOT	Г СОМ	MON (CORE)					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> no	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> no	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
29.04		rms pre ional te	e-service sts.	9	•		ly powe	er			wave rac		
						y to pow	ŕ	C / 1	1		detectors testers/m	s, AC line conitors	
					abilit	y to peri	form saf	tety che	cks				

ability to connect and operate test equipment

ability to check all special features

ability to check cosmetics of set

ability to recognize malfunctions

ability to document results

ability to communicate results to other technicians

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

	Sub-t	asks			Supp	orting K	Knowled	Tools & Equipment							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> no	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> no	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV			
29.05	Disas	semble	s units.			y to prej sassemi		t and w	ork area	ı	allen key	rs, hex drivers			
					abilit	ability to select and use tools									
						-	ow man procedu		ers=						
							f local, j rnment i								
							f produc specific		pecial						
					know devic	-	f applic	ation of	testing						
						-	f de-sol hniques	dering a	ind						
					know techn	-	f electro	static o	lischarg	e					
						-	f flat-pa								
							f compo methoo								
						ledge o dures	f cleanii	ng chen	nicals an	nd					
						cteristic	f replaces (physics)								
					know techn		f trouble	eshootir	ıg						
					(NO)	Г СОМ	MON (CORE)							

	Sub-t	asks			Supp	orting K	Cnowled	Tools & Equipment				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> no	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		
29.06	Trout	bleshoo	ts faults		troub abilit inspe abilit with a abilit abil	leshooti y to per- ctions y to reco another ifactures y to per- y to per- y to reco y to read y to isol ably/circ y to sele oret read orent y to doc y to con persons y to reco warranty fledge o iques cledge o	form no ognize r technic: form vis ognize r d schem late rece cuit/com ect, conr lings fro cument r nmunica nel ognize v v situation f produce f applica	n-techn leed to ian or sual insp nalfunc atics iver fau ponent nect and om requ results ite resu varranty ons et and s ation of o static o ck (sur	consult pection tions It to sub correct ired test Its to y and pecial Stesting discharg face-	ly	drawings high volt micro-wa detector, cleaning	cal diagrams/ s, multimeters, age probe, ave radiation hammers, fluids, s, swabs, oilers

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	no	no	ND	NV	yes	no	no	no	no	NV

29.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component ability to verify proper installation	mechanical diagrams/ drawings, multimeters, high voltage probe,
		ability to verify integrity of board and neighboring components	micro-wave radiation detector, hammers, cleaning fluids, lubricants, swabs, oilers,
		ability to select and replace component	de-soldering tools
		ability to order parts	
		ability to repair faulty circuits or components	
		ability to clean circuits and components	
		ability to recognize warranty and non-warranty situations	
		ability to obtain exact replacement or suitable substitute parts knowledge of product and special features and specifications	
		knowledge of application of testing devices	

	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment		
						-	f de-solo nniques	-	and				
					know techn	•	f electro	static o	discharg	ge			
						-	f flat-pa cing tecl	-					
					knowledge of component identification methods								
					know proce	-	f cleanir	ng chen	nicals ar	nd			
					know techn	-	f trouble	eshootii	ng				
					(NOT	COM	MON (CORE)					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> no	<u>PQ</u> <u>ON</u> <u>MA</u> <u>SK</u> <u>AB</u> <u>BC</u> <u>NT</u> <u>YK</u> ND NV yes no no no no NV								
29.08	Sets ı	ip and t	ests uni	ts.	ability to ensure unit complies with government regulations standards, micro-wave								

government regulations	radiation detectors
ability to attach to power source	
ability to power up	
ability to perform safety checks	
ability to check all features	
ability to check cosmetics	
ability to recognize malfunctions and troubleshoot ability to document results	
ability to communicate results to other technicians	
knowledge of product and special	

features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	YK
ND	yes	no	no	ND	NV	yes	no	no	no	no	NV

29.09	Performs routine maintenance.	ability to clean controls	lubricants, allen keys, hex drivers, micro-wave				
		ability to align	radiation detector, magnifying glass				
		ability to verify operation of controls	magini ying grass				
		ability to clean cosmetics of item					
		ability to verify all safety devices are in place and functioning properly					
		ability to perform routine mechanical and electronic adjustments/ alignments					
		ability to identify/document weaknesses or potential problems					

knowledge of precision mechanisms and fine mechanical adjustments

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	no	no	ND	NV	yes	no	no	no	no	NV

29.10	Performs post-service functional tests.	ability to attach to power source	safety procedures/ standards, multimeters,				
	functional tests.	ability to power up	micro-wave radiation detectors				
		bility to perform safety checks	detectors				
		ability to check all features					
		ability to check cosmetics					
		ability to recognize malfunctions					

ability to document results ability to communicate results to other technicians

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	no	no	ND	NV	yes	no	no	no	no	NV

29.11	Reassembles units and performs final check.	ability to assemble	allen keys, hex drivers
		ability to prepare unit and work area for assembly	

ability to select and use tools

ability to follow manufacturers= assembly procedures

ability to perform safety checks ability to perform final functional test

knowledge of product and special features and specifications

knowledge of application of testing devices

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	yes	no	no	ND	NV	yes	no	no	no	no	NV

29.12	Delivers/installs, sets up units, and demonstrates	ability to handle units	safety procedures/ standards, allen keys,
	unit operation.	ability to store units	hex drivers
		ability to drive to job location when applicable	
		ability to deliver units	
		ability to install and set up units	
		ability to demonstrate unit to customer	
		ability to advise customer of company policies and warranty policies	
		ability to communicate pertinent repair/defect information	
		ability to respond to customer concerns and customer satisfaction	

	Sub-t	asks			Suppo	orting K	Inowled	ge & A	bilities		Tools &	Equipment	
					ability	y to obta	ain custo	omer sig	gn-off				
					ability	y to obta	ain payr	nent					
						ledge of res and s							
					(NOT COMMON CORE)								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> no	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> no	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
29.13	Comj docui	oletes	on.		ability to bill customer								
					ability	y to con	nplete w	arranty	claim				
					ability	y to calc	culate cu	istomer	bill				
					ability	y to tag	warrant	y parts					
					(NOT COMMON CORE)								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> no	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> no	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	

BLOCK H SERVICE REMOTE CONTROL EQUIPMENT COMPONENTS AND DEVICES

Task 30Services radio frequency remote control devices.

<u>Trend</u>: Because of the low cost of product, servicing opportunities are limited.

30.01 Greets, interviews clients ability to listen attentively to customer's description of problem problems.

	Sub-t	asks			Supp	orting K	Inowled	lge & A	bilities		Tools & Equipment			
					abilit <u></u> symp	y to prol toms	be for sj	pecific						
					•	y to refl mer's re			•	5				
					-	y to resp mer exp			stic					
						ledge of tial prol	-	peration	and					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		
30.02	Proce	esses wo	ork orde	TS.	ability to determine name, address and phone numbers of customer									
						y to dete er of ur		name ar	id mode	: 1				
					ability	y to writ	te up sy	mptoms	5					
						ledge of nentatio								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		
30.03	repair	ms custo r time fi responsi	ames a	nd	abilit enqui	y to resp ries	oond to	custom	er					
	00511	csponsi	onneies.			y to obta ork orde		omer si	gnature					
					know	ledge of	f compa	ny wor	k volur	ne				
					know	ledge of	f compa	iny cred	it polic	у				
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		
30.04	Perfo	rms pre	-service	e	abilit	y to app	ly powe	er			operating	g procedures,		

	Sub-t	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment	
	functi	ional tes	sts.		ability	y to atta	ch to sig	gnal sou	irce		manufac manuals/ oscillosc	software,	
					ability	y to pow	ver up					- I	
					ability	y to che	ck all fe						
					ability	y to che	ck cosm	etics of					
					ability	y to reco	ognize n						
					ability	y to doc	ument r						
						y to com technici		te resul	ts to				
						ledge of res and s			pecial				
					know device	ledge of es	fapplica	ation of	testing				
					know proce	ledge of dures	fcleanir	ng chem	nicals ar	nd			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> no	<u>YK</u> NV	
30.05	Disas	sembles	s units.		-	y to prep sassemb		t and w	ork area	1	hex drivers, soldering iron		
					ability	y to sele	ct and u	ise tools	5				
					-	y to follo sembly p			ers=				
						ledge of							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>BC</u> yes	<u>NT</u> no	<u>YK</u> NV			
30.06	Trout	oleshoot	s faults		ability	y to prep	oare uni	t for			oscilloscopes, solder		

troubleshooting irons, solder wicks ability to perform non-technical inspections ability to recognize need to consult with another technician or manufacturer ability to perform visual inspection ability to recognize malfunctions ability to read schematics ability to isolate receiver fault to subassembly/circuit/component ability to select, connect and correctly interpret readings from required test equipment ability to document results ability to communicate results to other personnel ability to recognize warranty and non-warranty situations knowledge of product and special features and specifications knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of flat-pack (surfacemount) servicing techniques knowledge of component identification methods knowledge of troubleshooting

	Sub-t	asks			Suppo	orting K	Inowled		Tools &	Equipment		
					techn	iques						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> no	<u>YK</u> NV
30.07			repairs f	•	ability ability ability ability ability ability ability comp ability comp ability comp ability comp ability comp ability suitab know featur know device know techn know	boring of y to sele onent y to ord y to repa onents y to clea onents y to clea onents y to clea onents y to reco varranty y to obta ble subs ledge of res and s ledge of ring tech	ify prop ify integ compon ect and r er parts air fault an circu ognize v situation ain exact titute parts ain exact titute parts f produces f applica f de-solo hniques f electro f flat-parts	er instat grity of l ents replace y circui its and warranty ons et replac urts et and sp ations ation of dering a o static o ck (surf hniques	Ilation board ar board ar ts or y and cement of pecial `testing und discharg	ρr		ons, solder e-soldering

	ND yes yes yes		Supporting Knowledge & Abilitie						Tools &	Equipment		
					identi	fication	method	ls				
					know legisla	U	f DOC/I	FCC rul	les and			
					know proce	•	f cleanir	ng chen	nicals ar	nd		
					know techn	•	ftrouble	eshootir	ng			
				<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> no	<u>YK</u> NV
30.08	Sets ı	ip and t	ests uni	ts.	-		ure unit regulatio		es with		operating	g procedures, opes

ability to attach to power source

ability to attach to signal source

ability to power up

ability to check all features

ability to check cosmetics

ability to recognize malfunctions and troubleshoot

ability to document results

ability to communicate results to other technicians

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques knowledge of flat-pack (surface-

	Sub-t	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment
					moun	t) servio	cing tecl	nniques				
							f compo methoc					
					know techn		f trouble	eshootir	ng			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> no	YK NV
30.09		rms rou tenance			-	y to clea y to alig	n contro		cleaning magnifyi	fluids, swabs, ng glass		
					ability	v to veri	fy opera	s				
					ability	y to clea	in cosm	etics of	item			
					ability	y to veri	fy all sa function	ifety de	vices ar	e		
						lectroni	form rou c adjust					
					•		ntify/doo or potent		olems			
							f precisi hanical			5		
						•	f produc specifica		pecial			
					know regula	-	f DOC/I	FCC rul	les and			
					know device	-	f applica	ation of	testing			
				techn	iques	f electro f compo		lischarg	je			

	Sub-t	asks			Suppo	orting K	nowled	ge & A		Tools &	Equipment	
					identi	fication	method	ls				
					know! proce	-	cleanir	ng chen	nicals ar	ıd		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> no	<u>YK</u> NV
30.10		rms pos ional tes		e	-		ch to po ch to sig				. –	ocedures/ s, oscilloscopes
					ability	to pow	ver up					
					ability	to che	ck all fe	atures				
					ability	to che	ck cosm	etics				
					ability	to reco	ognize n	nalfunc	tions			
					ability	to doc	ument r	esults				
						to com technici	imunica ians	te resul	lts to			
						-	f produc specifica	-	pecial			
					know! regula	-	f DOC/I	FCC rul	les and			
					know device		applica	ation of	testing			
						-	de-solo niques	lering a	and			
					know techni	-	felectro	static o	discharg	e		
						-	flat-pa					
					know	ledge of	compo	nent				

	Sub-ta	asks			Suppo	orting K	nowled	ge & A	bilities		Tools &	Equipment
					identi	fication	method	ls				
					knowl techni	-	trouble	eshootir	ıg			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> no	<u>YK</u> NV
30.11		embles rms fina			-	to asse					hex drive iron	ers, soldering
					-	to prep sembly	are uni	t and w	ork area	1		
					ability	to sele	ct and u	ise tool	8			
					-		ow man cedures		ers=			
					ability	to perf	òrm fin	st				
							production pecification		pecial			
					knowl regula	-	DOC/I					
						ledge of	de-solo de-solo	dering a	ind			
					knowl techni	•	electro	static c	lischarg	e		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> no	<u>YK</u> NV
30.12	units,	ers/insta and der peratior	nonstra		ability to handle units ability to store units						safety pro standards	ocedures/ S
					applic	able	e to job ver unit					

					ability	v to insta	all and s	set up u	nits			
					ability custor	v to dem ner	onstrate	e unit to)			
					-	v to advi any poli es						
						to com defect i			nent			
						to resp rns and action						
					ability	v to obta	in custo	omer sig	gn-off			
					ability	v to obta	in payn	nent				
						edge of es and s			pecial			
					knowl regula	edge of tions	DOC/I	FCC rul	es and			
					knowl device	ledge of	applica	ation of	testing			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV
30.13	Comp docum	oletes nentatio	n.		ability ability	to bill of to com	plete w ulate cu	arranty Istomer		с	alculator	r
					¹ J	0						

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	no	no	NV

Task 31Services infrared remote control devices.

<u>Trend</u>: Because of the low cost of product, servicing opportunities are limited.

	Sub-t	asks			Suppo	orting K	nowled	lge & A	bilities		Tools &	Equipment
31.01	and v	erifies u	views cl unit	ients	-	y to liste mer's de		-				
	probl	ems.			ability symp	y to prol toms	be for s	pecific				
						y to refle mer's re				s		
						y to resp mer exp			stic			
						ledge of tial prob		peration	and			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV
31.02	Proce	esses wo	ork orde	rs.		y to dete hone nu						
						y to dete per of un		name ar	nd mode	el		
					ability	y to writ	te up sy	mptom	5			
						ledge of nentatic						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV
31.03		ms custo	omer of		ability	y to resp	oond to	custom	er			

repair time frames and enquiries

	Sub-ta	asks			Suppo	orting K	nowled	lge & A	bilities		Tools &	Equipment
	cost r	esponsi	bilities.									
					-	y to obta ork orde		omer si	gnature			
					know	ledge of	f compa	iny wor	k volur	ne		
					know	ledge of	f compa	iny cred	it polic	у		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	YK NV
31.04		rms pre onal tes		•	ability	y to app	ly powe	er			infrared	tester
					ability	y to atta	ch to sig	gnal sou	irce			
					ability	y to pow	ver up					
					ability	y to chee	ck all fe					
					ability	y to chee	ck cosn	netics of	fset			
					ability	y to recc	ognize r	nalfunc	tions			
					ability	y to doc	ument r	results				
					•	y to com technici		ate resul	lts to			
						ledge of res and s	-		pecial			
					know device	ledge of es	fapplic	ation of	testing			
						ledge of dures in			nicals ar	nd		
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	YK NV

31.05 Disassembles units. ability to prepare unit and work area

for disassembly

ability to select and use tools

ability to follow manufacturers= disassembly procedures

knowledge of local, provincial and federal government regulations

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

N	IF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
Ν	ID	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

31.06	Troubleshoots faults.	ability to prepare unit for troubleshooting	infrared tester, multimeters, oscilloscopes, frequency
		ability to perform non-technical inspections	counter

ability to recognize need to consult with another technician or manufacturer ability to perform visual inspection ability to recognize malfunctions ability to read schematics ability to isolate receiver fault to subassembly/circuit/component ability to select, connect and correctly interpret readings from required test equipment ability to document results ability to communicate results to other personnel ability to recognize warranty and non-warranty situations knowledge of product and special features and specifications knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of flat-pack (surfacemount) servicing techniques knowledge of component identification methods knowledge of troubleshooting techniques PE NF NS NB PQ ON MA SK AB BC NT YK

	Sub-t	asks			Supp	orting K	nowled		Tools &	Equipment				
	ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV		
31.07	-		repairs f	-		y to rem y to veri			-		suckers,	ons, solder solder wicks, ring tools		
						y to veri boring o			board ar	nd				
					-	y to sele onent	ect and r	eplace						
					abilit	y to orde	er parts							
						y to repa onents	air fault	y circui	ts or					
						y to clea onents	in circui	its and						
					-	y to reco varranty	-							
					-	y to obta ble subst		or						
						ledge of	-							
					know devic	ledge of es	f applica	ation of	testing					
					knowledge of electro static discharge techniques									
					knowledge of flat-pack (surface- mount) servicing techniques									
						ledge of fication								
					know techn	ledge of iques	f trouble	eshootii	ng					
	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>YK</u>								

	Sub-t	asks			Supp	orting K	Inowled	Tools & Equipment				
	ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV
31.08	Sets ı	ip and t	ests uni	ts.	gover	y to ensume to the total of total of the total of	regulatio	ons			infrared multimet oscillosc	ers,
					ability to attach to power source							
					abilit	y to atta	ch to sig	gnal sou	urce			
						y to pow y to che		eatures				
					abilit	y to che	ck cosn	netics				
					abilit	y to reco	ognize r	nalfunc	tions			
					abilit	y to doc	ument r	esults				
						y to con technic		ate resu	lts to			
					knowledge of product and special features and specifications							
					know devic		f applic	ation of	testing			
					know techn	-	f electro	static o	discharg	e		
						ledge of t) servic						
						ledge of						
						knowledge of troubleshooting techniques						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV

	Sub-t	asks			Suppo	rting K	nowled	ge & A	bilities		Tools &	Equipment			
31.09		rms rou			ability	to clear	n contro	ols			cleaning	fluids, swabs			
	maint	enance.			ability	to verif	fy opera	tion of	control	ls					
					ability	to clear	n cosme	etics of	item						
					ability to verify all safety devices are in place and functioning properly ability to perform routine mechanical and electronic adjustments/ alignments										
					ability to identify/document weaknesses or potential problems										
						edge of ne mech				S					
			knowledge of product and special features and specifications												
					knowl device	edge of s	applica	tion of	testing						
					knowledge of electro static discharge techniques										
						edge of fication									
					knowl procec	edge of lures	cleanin	ig chem	nicals an	nd					
					knowl techni	edge of ques	trouble	shootir	ıg						
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC yes	<u>NT</u> yes	<u>YK</u> NV			
31.10	ability to attach to power source														

ability to attach to signal source

ability to power up

ability to check all features

ability to check cosmetics

ability to recognize malfunctions

ability to document results

ability to communicate results to other technicians

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

31.11	Reassembles units and performs final check.	ability to assemble	safety procedures/standards
	-	ability to prepare unit and work area for assembly	
		ability to select and use tools	

	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment			
					assem	ability to follow manufacturers= assembly procedures and perform safety checks								
					ability	y to per	form fin	al func	tional te	est				
						•	f produc specific							
							f de-solo hniques							
					know techn	•	f electro	ge						
						cteristic	f replace s (physi							
					knowledge of troubleshooting techniques									
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> yes	<u>YK</u> NV		
31.12	units,		alls, sets monstra n.		-	y to han y to stor	dle unit e units	S			safety pr standard	ocedures/ s		

ability to drive to job location when applicable

ability to deliver units

ability to install and set up units

ability to demonstrate unit to customer

ability to advise customer of company policies and warranty policies

ability to communicate pertinent

	Sub-t	asks			Supp	orting K	Inowled		Tools & Equipment				
					repair	repair/defect information							
						ability to respond to customer concerns and customer satisfaction							
					•	y to obta y to obta							
					knowledge of product and special features and specifications								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> no	<u>YK</u> NV	
31.13	Comj docui	oletes nentatio	on.		ability to bill customer ability to complete warranty claim						computer, calculator, microfiche reader		
					•			2					
					ability	y to calc	culate cu	istomer					
					ability to tag warranty parts								
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

BLOCK I SERVICE POWER SUPPLY EQUIPMENT COMPONENTS AND DEVICES

Task 32 Services AC/DC generators. (NOT COMMON CORE)

<u>Trend</u>: Lower prices and unavailability of parts and service information will make it harder to service.

52.01	and ve				G								
	and ve	intor			Suppo	orting K	nowled		Tools & Equipment				
		erifies u	riews cl mit	ients		ability to listen attentively to customer's description of problem							
	proble				ability to probe for specific symptoms ability to reflect back and verify customer's recollection of symptoms								
					ability to respond to unrealistic customer expectations								
						ledge of tial prol	f unit op olems	peration	and				
					(NOI	СОМ	MON (CORE)					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> no	BC no	<u>NT</u> no	<u>YK</u> NV	
32.02	Proces	sses wo	rk orde	rs.	-		ermine r imbers o						
						to deter to deter		name ar	nd mode	1			
					ability	to writ	te up sy	mptoms	5				
					knowledge of company documentation procedures								
					(NOT	COM	MON (CORE)					
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> no	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	

32.03 Informs customer of repair time frames and cost responsibilities. ability to respond to customer enquiries

ability to obtain customer signature on work order

knowledge of company work volume

knowledge of company credit policy

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	yes	no	yes	ND	NV	yes	no	no	no	no	NV

32.04	Performs pre-service	ability to apply power	manufacturers=
	functional tests.		manuals/software,
		ability to attach to signal source	isolation transformer,
			anti-static equipment,
		ability to power up	fire extinguisher,
			multimeters, frequency
		ability to check all special features	counters, variable
			voltage/current supplies,
		ability to check cosmetics of unit	AC line testers/
			monitors, variac, jumper
		ability to recognize malfunctions	wire, induction meter,
			amp probe, dummy
		ability to document results	loads, reference charts,
			test charts, test cables,
		ability to communicate results to	equipment dollies/carts,
		other technicians	lifting/leveling devices
		knowledge of product and special	
		features and specifications	
		knowledge of application of testing	
		knowledge of application of testing devices	
		devices	
		knowledge of de-soldering and	
		soldering techniques	
		soluting teeninques	
		knowledge of electro static discharge	
		techniques	
		1	
		knowledge of flat-pack (surface-	

mount) servicing techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	yes	no	yes	ND	NV	yes	no	no	no	no	NV

32.05	Disassembles units.	ability to prepare unit and work area for disassembly	cutters, allen keys, hex drivers, hammers, solder irons, solder
		ability to select and use tools	suckers, solder wicks, flux removers, chisels,
		ability to follow manufacturers=	electric drills, electric
		disassembly procedures	screw/nut drivers, anti- static equipment, mats,
		knowledge of local, provincial and federal government regulations	ground straps, anti-static sprays, equipment dollies/carts, lifting/
		knowledge of product and special features and specifications	leveling devices
		knowledge of de-soldering and soldering techniques	
		knowledge of electro static discharge techniques	
		knowledge of flat-pack (surface- mount) servicing techniques	
		knowledge of component identification methods	

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	<u>YK</u>
ND	yes	no	yes	ND	NV	yes	no	no	no	no	NV

32.06	Troubleshoots faults.	ability to prepare unit for troubleshooting	mechanical diagrams/ drawings, logic diagrams, schematic
		ability to perform non-technical inspections	diagrams, schemate diagrams, equipment specifications, operating procedures,
		ability to recognize need to consult	maintenance
		with another technician or	procedures, installation
		manufacturer	procedures, testing
			procedures, safety
		ability to perform visual inspection	procedures/standards,
			manufacturers=
		ability to recognize malfunctions	manuals/software,
			cutters, measuring
		ability to read schematics	devices, allen keys,
			feeler gauges, hex
		ability to isolate receiver fault to sub-	drivers, hammers,
		assembly/circuit/component	alignment tools,
			burnishing tools, solder
		ability to select, connect and correctly	irons, solder suckers,
		interpret readings from required test	solder wicks, flux
		equipment	removers, chisels, i.c. pullers, cutters,
		ability to document results	strippers, crimpers,
		ability to document results	electric drills, electric
		ability to communicate results to	screw/nut drivers, glue
		other personnel	gun, heat gun, rubber
		r · · · · · · · · · · · · · · · · · · ·	gloves, isolation
		ability to recognize warranty and	transformer, anti-static

non-warranty situations

knowledge of product and special features and specifications

knowledge of application of testing devices knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

equipment, fire extinguisher, fan, cleaning fluids, cloths, airbrushes, vacuum brushes, swabs, ultrasonic cleaner, lubricants, swabs, oilers, multimeters, continuity testers, oscilloscopes, circuit testers, component testers, logic probes, logic analyzers, frequency counters, variable voltage/current supplies, AC line testers/monitors, variac, jumper wire, transistor checker, capacitor checker, Z-meter, induction meter, amp probe, dummy loads, mini torch, inspection mirrors, temperature probes, reference charts, test charts, diagnostic routines, test cables, equipment dollies/carts, lifting/leveling devices, magnifiers, electrical tape, mats, anti-static sprays, ground straps

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	<u>BC</u>	NT	YK
ND	yes	no	yes	ND	NV	yes	no	no	no	no	NV

32.07	Replaces or repairs faulty	ability to remove faulty component	mechanical diagrams/
	circuits and components.	ability to verify proper installation	drawings, logic diagrams, schematic
		ability to verify proper instantation	diagrams, equipment
		ability to verify integrity of board and	specifications, operating
		neighboring components	procedures,
			maintenance

ability to select and replace component

ability to order parts

ability to repair faulty circuits or components

ability to clean circuits and components

ability to recognize warranty and non-warranty situations

ability to obtain exact replacement or suitable substitute parts

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of troubleshooting techniques

procedures, installation procedures, testing procedures, safety procedures/standards, manufacturers= manuals/software. cutters, measuring devices, allen keys, feeler gauges, hex drivers, hammers, alignment tools, burnishing tools, solder irons, solder suckers, solder wicks. flux removers, chisels, i.c. pullers, cutters, strippers, crimpers, electric drills, electric screw/nut drivers, glue gun, heat gun, rubber gloves, isolation transformer, anti-static equipment, fire extinguisher, fan, cleaning fluids, cloths, airbrushes, vacuum brushes, swabs, ultrasonic cleaner, lubricants, swabs, oilers, multimeters, continuity testers, oscilloscopes, circuit testers, component testers, logic probes, logic analyzers, frequency counters, variable voltage/current supplies, AC line testers/monitors, variac, jumper wire, transistor checker, capacitor checker, Z-meter, induction meter, amp probe, dummy loads, mini torch, inspection mirrors, temperature probes, reference charts,

test charts, diagnostic routines, test cables, equipment dollies/carts, lifting/leveling devices, magnifiers, electrical

tape, mats, anti-static sprays, ground straps, de-soldering tools

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	no	yes	ND	NV	yes	no	no	no	no	NV

32.08	Sets up and tests units.	ability to ensure unit complies with government regulations	operating procedures, maintenance procedures, installation
		ability to attach to power source	procedures, testing procedures, safety
		ability to attach to signal source/load	procedures/standards, manufacturers=
		ability to power up	manuals/software, isolation transformer,
		ability to check all features	anti-static equipment, fire extinguisher,
		ability to check cosmetics	multimeters, frequency counters, variable
		ability to recognize malfunctions and troubleshoot	voltage/current supplies, AC line testers/
		ability to document results	monitors, variac, jumper wire, induction meter, amp probe, dummy
		ability to communicate results to other technicians	loads, reference charts, test charts, test cables, equipment dollies/carts,
		knowledge of product and special features and specifications	lifting/leveling devices, growler
		knowledge of application of testing devices	

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	yes	no	yes	ND	NV	yes	no	no	no	no	NV

32.09	Performs routine	ability to clean controls	mechanical diagrams/
	maintenance.	1.11.	drawings, logic
		ability to align	diagrams, schematic
		ability to fine tune	diagrams, equipment specifications, operating
		ability to fine tune	procedures,
		ability to verify operation of controls	maintenance
			procedures, installation
		ability to clean cosmetics of item	procedures, testing
			procedures, safety
		ability to verify all safety devices are	procedures/standards,
		in place and functioning properly	manufacturers=
			manuals/software,
		ability to perform routine mechanical	cutters, measuring
		and electronic adjustments/ alignments	devices, allen keys, feeler gauges, hex
		angiments	drivers, hammers,
		ability to identify/document	alignment tools,
		weaknesses or potential problems	burnishing tools, solder
			irons, solder suckers,
		knowledge of precision mechanisms	solder wicks, flux
		and fine mechanical adjustments	removers, chisels, i.c.
			pullers, cutters,

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

strippers, crimpers, electric drills, electric screw/nut drivers, glue gun, heat gun, rubber gloves, isolation transformer, anti-static equipment, fire extinguisher, fan, cleaning fluids, cloths, airbrushes, vacuum brushes, ultrasonic cleaner, lubricants, oilers, multimeters, continuity testers. oscilloscopes, circuit testers, component testers, logic probes, logic analyzers, frequency counters, variable voltage/current supplies, AC line testers/monitors, variac, jumper wire, transistor checker, capacitor checker, Z-meter, induction meter, amp probe, dummy loads, mini torch, inspection mirrors, temperature probes, reference charts, test charts, diagnostic routines, test cables, equipment dollies/carts, lifting/leveling devices, magnifiers, electrical tape, mats, anti-static sprays, ground straps, magnifying glass

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	yes	no	yes	ND	NV	yes	no	no	no	no	NV

	Sub-t	asks			Supp	orting K	Inowled	Tools & Equipment								
32.10		orms pos ional te		ce	abilit	y to atta	ch to po	ower so	urce		operating maintena	g procedures, ance				
					abilit	y to atta	ch to sig	gnal so	urce		procedui	es, installation				
					abilit	y to pov	ver up					es, testing es, safety				
							-					es/standards,				
					abilit	y to che	ck all fe	atures			manufacturers= manuals/software,					
					abilit	y to che	ck cosn	netics			isolation transformer, anti-static equipment,					
					abilit	y to reco	ognize r	nalfunc	tions		fire extir					
					abilit	y to doc	ument r	esults			counters	, variable current supplies,				
						y to con technic		ate resu	lts to		AC line monitors					
						vledge over the state of the st	-	amp probe, dummy loads, reference charts, test charts, test cables,								
					know devic	vledge o es	f applic	ation of	ftesting	5		nt dollies/carts, veling devices				
					know techn	ledge o iques	f electro	static	discharg	ge						
					knowledge of component identification methods											
					knowledge of replacement part characteristics (physical and electrical)											
					know techn	ledge o iques	f trouble	eshooti	ng							
					(NOT	г сом	MON (CORE)	1							
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> no	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV				
32.11		sembles			abilit	y to asso	emble				cutters, allen keys, hex					

Reassembles units and performs final check.

ability to prepare unit and work area

cutters, allen keys, hex drivers, hammers, soldering irons, solder

suckers, solder wicks, flux removers, chisels, electric drills, electric

screw/nut drivers, anti-

static equipment, mats, ground straps, anti-static

sprays, equipment

dollies/carts, lifting/ leveling devices, soldering iron

for assembly

ability to select and use tools

ability to follow manufacturers= assembly procedures

ability to perform final functional test

knowledge of product and special features and specifications

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	no	yes	ND	NV	yes	no	no	no	no	NV

medium-
tow motor, suring
en keys,
es, hex
nmers,
impers,
ls, electric
rivers, glue
ın, rubber -static

Supporting Knowledge & Abilities

ability to demonstrate unit to customer

ability to advise customer of company policies and warranty policies

ability to communicate pertinent repair/defect information

ability to respond to customer concerns and customer satisfaction ability to obtain customer sign-off

ability to obtain payment

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

(NOT COMMON CORE)

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	no	yes	ND	NV	yes	no	no	no	no	NV

32.13 Completes documentation.

ability to bill customer

computer, calculator, microfiche reader

ability to complete warranty claim

Tools & Equipment

equipment, multimeters, AC line testers/monitors, mini torch, mats, ground straps, anti-static sprays, test cables, equipment dollies/carts, lifting/leveling devices, electrical tape

Sul	Sub-tasks				Supporting Knowledge & Abilities						Tools & Equipment		
				ability	to calc	ulate cu	istomer	bill					
				ability	ability to tag warranty parts								
				(NOI	(NOT COMMON CORE)								
<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> no	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> no	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		

Task 33Services AC/DC converters/inverters.

<u>Trend</u>: More compact and miniaturized equipment and the use of computers will mean increased consumer demand and more frequent servicing opportunities.

	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment		
33.01	and v	ts, interverifies u		lients	ability to listen attentively to customer's description of problem								
	probl	ems.			ability sympt	-	be for sp	pecific					
					-		ect back collectio		•	S			
					ability to respond to unrealistic customer expectations								
					knowledge of unit operation and potential problems								
	<u>NF</u> ND					<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> yes	<u>NT</u> no	<u>YK</u> NV	
33.02	Proce	esses wo	ork orde	ers.	ability to determine name, address and phone numbers of customer								
					ability to determine name and model number of unit								

ability to write up symptoms

knowledge of company documentation procedures

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	yes	no	NV

33.03 Informs customer of repair time frames and cost responsibilities.

ability to respond to customer enquiries

ability to obtain customer signature on work order

knowledge of company work volume

knowledge of company credit policy

(NOT COMMON CORE)

NF	NS	PE	NB	PQ	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	no	NV

33.04 Performs pre-service ability to apply power schematic diagrams, functional tests. manufacturers= ability to power up manuals/software, hex drivers, multimeters, ability to check all special features oscilloscopes, component testers, ability to check cosmetics of unit variable voltage/current supplies, AC line ability to recognize malfunctions testers/monitors, variac, jumper wire, dummy ability to document results loads, soldering iron ability to communicate results to other technicians knowledge of product and special features and specifications knowledge of application of testing

devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	no	NV

33.05	Disassembles units.	ability to prepare unit and work area for disassembly
		ability to select and use tools
		ability to follow manufacturers= disassembly procedures
		knowledge of local, provincial and federal government regulations
		knowledge of product and special features and specifications
		knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	no	NV

33.06	Troubleshoots faults.	ability to prepare unit for troubleshooting	blueprints, schematic diagrams, cutters, solder irons, solder suckers,
		ability to perform non-technical inspections	solder wicks, flux removers, cutters, strippers, crimpers,
		ability to recognize need to consult with another technician or manufacturer	airbrushes, vacuum brushes, multimeters, continuity testers, AC line testers/monitors,
		ability to perform visual inspection	power factor meters, variac, transistor
		ability to recognize malfunctions	checker
		ability to read schematics	
		ability to isolate fault to sub- assembly/circuit/component	
		ability to select, connect and correctly interpret readings from required test equipment	
		ability to document results	

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of product and special features and specifications

knowledge of application of testing devices knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	no	NV

33.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component	cutters, hex drivers, solder
		ability to verify proper installation	suckers, solder wicks, flux removers, de-
		ability to verify integrity of board and neighboring components	soldering tools
		ability to select and replace component	
		ability to order parts	

ability to repair faulty circuits or components

ability to clean circuits and components

ability to recognize warranty and non-warranty situations

ability to obtain exact replacement or suitable substitute parts

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of flat-pack (surfacemount) servicing techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	no	NV

33.08	Sets up and tests units.	ability to ensure unit complies with	schematics, testing
		government regulations	procedures, safety
			procedures/standards,
		ability to attach to power source	manufacturers=
			manuals/software,

	· · ·
ability to attach to load	multimeters, oscilloscopes,
ability to power up	component testers
ability to check all features	
ability to check cosmetics	
ability to recognize malfunctions and troubleshoot	
ability to document results ability to communicate results to other technicians	
knowledge of product and special features and specifications	
knowledge of application of testing devices	
knowledge of electro static discharge techniques	
knowledge of flat-pack (surface- mount) servicing techniques	
knowledge of component identification methods	
knowledge of replacement part characteristics (physical and electrical)	
knowledge of troubleshooting techniques	

	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	<u>MA</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>
	ND	no	yes	yes	ND	NV	yes	yes	yes	no	no	NV
33.09		rms rou tenance.				y to clea y to alig	n contro	ols]	maintena procedur manufact manuals/	es,

oscilloscopes, variable voltage/current supplies,

monitors, power factor meters, capacitor

checker, dummy loads, magnifying glass

multimeters,

AC line testers/

checker, transistor

ability to fine tune

ability to verify operation of controls ability to clean cosmetics of item

ability to verify all safety devices are in place and functioning properly

ability to perform routine mechanical and electronic adjustments/ alignments

ability to identify/document weaknesses or potential problems

knowledge of precision mechanisms and fine mechanical adjustments

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	no	NV

33.10		rms pos ional tes		e	ability	y to atta	ch to po	ower sou	urce		safety pro		
	Tuncu		sts.		ability	y to atta	ch to loa		standards, schematic diagrams, manufacturers= manuals/software, hex drivers, multimeters,				
					ability	to pow	ver up						
					ability	to chee	ck all fe	atures			oscillosco		
					ability	to chee	ck cosm	netics			-	voltage/current	
					ability	to reco	ognize n	nalfunc	tions		testers/m	onitors, variac, vire, dummy	
					ability	y to doc	ument r	esults			loads	ne, aanny	
						to com technici		ite resul	ts to				
						ledge of res and s	-		pecial				
					know device	ledge of es	fapplica	ation of	testing				
					know techni	ledge of iques	felectro	static c	lischarg	ge			
						ledge of fication							
						ledge of cteristic ical)	-	-					
					know techni	ledge of iques	ftrouble	eshootir	ng				
					(NOT	COM	MON (CORE)					
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	

33.11 Reas

Reassembles units and ability

ability to assemble

manufacturers=

	Sub-t	asks			Suppo	orting K	nowled		Tools &	Equipment		
	perfo	rms fina	al check	ζ.	-	y to prep sembly	oare uni	a	manuals/	'software		
					ability	y to sele	ct and u	ise tool	S			
						y to follo bly pro						
					know	to perf ledge of es and s	f produc	t and s	tional te pecial	est		
					know device	ledge of es	fapplica	ation of	testing			
						ledge of		dering a	and			
					know techni	-	felectro	static o	discharg	ge		
						ledge of fication						
						ledge of cteristic ical)	-	-				
					know techni	ledge of iques	f trouble	eshootii	ng			
	<u>NF</u> ND	<u>NS</u> yes	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV
33.12	units,	ers/inst and de operatio	monstra		-	y to han y to stor		S			standards	ocedures/ s, car, light to sized truck

ability to drive to job location when applicable

ability to deliver units

ability to install and set up units ability to demonstrate unit to customer ability to advise customer of company policies and warranty policies ability to communicate pertinent repair/defect information ability to respond to customer concerns and customer satisfaction ability to obtain customer sign-off ability to obtain payment knowledge of product and special features and specifications knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of component identification methods knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques

(NOT COMMON CORE)

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	yes	yes	no	no	NV

33.13 Completes

ability to bill customer

manufacturers=

Sub-tasks				Suppo	orting K	nowled	,	Tools & Equipment				
docum	entatio	n.		ability	to com	plete w	arranty	claim	1	manuals/software		
				ability	to calc	ulate cu	stomer	bill				
				ability	to tag	warrant	y parts					
				(NOT	COM	MON (CORE)					
<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	

BLOCK J SERVICE ANTENNA SYSTEMS

Task 34Services satellite antenna systems.

<u>Trend</u>: Smaller antenna size (i.e., DSS) result in more accessibility to urban areas for sales and service.

	Sub-ta	asks			Supporting Knowledge & Abilities Tools & Equipmer								ļ	
34.01	and v	erifies u	views cl init	ients	ability to listen attentively to customer's description of problem									
	proble	ems.			•	ability to probe for specific symptoms								
					-	ability to respond to unrealistic customer expectations								
						knowledge of unit operation and potential problems								
					(NOT	COM	MON (CORE)						
	<u>NF NS PE NB</u> ND no yes yes			<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV			

34.02 Processes work orders. ability to determine name, address and phone numbers of customer

ability to determine name and model number of unit

ability to write up symptoms

knowledge of company documentation procedures

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

34.03	repair	ns custo time fra esponsil	ames ar		ability to respond to customer enquiries									
		-			ability to obtain customer signature on work order									
						•	f compa f compa	•						
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		

34.04	Performs pre-service functional tests.	ability to attach to receiving source	equipment specifications, safety
	functional tests.	ability to power up	procedures/standards,
		ability to check video signal level	mechanical diagrams/ drawings, field strength
		ability to check audio signal level	meter
		ability to check all special features	
		ability to check transponders	
		ability to recognize malfunctions	
		ability to document results	
		ability to communicate results to other technicians	

34.05

				know	ledge o	f produ	ct and s	pecial				
					res and			L				
				know devic	ledge o es	f applic	ation of	testing				
					ledge o ring tec			ind				
				know techn	ledge o iques							
					ledge of							
					knowledge of cleaning chemicals and procedures							
					ledge o cteristic rical)	-	-					
				know techn	ledge o iques	f trouble	eshootii	ng				
<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
Disas	semble	s units.	hits. ability to prepare unit and work area hex drivers, h for disassembly ladder, test ca lifting/levelin ability to select and use tools manufacturer								est cable veling de	
				abilit	y to foll sembly	ow man	ufactur			manuals safety procedur	/software	

knowledge of product and special features and specifications

knowledge of local, provincial and federal government regulations

nmers, es, devices, re, dards

	Sub-t	asks			Supp	orting K	nowled	ge & A	bilities		Tools & Equipment		
					know devic	ledge of es	fapplica	ation of	testing				
						ledge of ring tecl		•	ind				
					knowledge of electro static discharge techniques								
					knowledge of component identification methods								
					knowledge of cleaning chemicals and procedures knowledge of replacement part characteristics (physical and electrical)								
					knowledge of troubleshooting techniques								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
34.06	Trout	oleshoo	ts faults		ability to prepare unit for troubleshooting ability to perform non-technical					mechanical diagrams/ drawings, testing procedures, safety procedures/standards,			
					inspe	ctions					burnishii cutters, i	ng tools, nclinometer,	

ability to recognize need to consult with another technician or manufacturer spectrum analyzer,

diagnostic routines,

spectrum analyzer, multimeters, lubricants,

oilers, field strength

lifting/leveling devices,

safety belt,

meter

ability to perform visual inspection

ability to recognize malfunctions

ability to read schematics

ability to isolate receiver fault to subassembly/circuit/component

ability to select, connect and correctly

interpret readings from required test equipment

ability to document results

ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

knowledge of satellite transmission

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	<u>NT</u>	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

	Replaces or repairs faulty circuits and components.	ability to remove faulty component	equipment specifications,
	circuits and components.	ability to verify proper installation	installation procedures, safety procedures/
		ability to verify integrity of board and neighboring components	standards, cutters, strippers, crimpers, allen keys, hammers,
		ability to select and replace component	lubricants, oilers, de- soldering tools

NS

no

NF

ND

PE

yes

ability to order parts ability to repair faulty circuits or components ability to clean circuits and components ability to recognize warranty and non-warranty situations ability to obtain exact replacement or suitable substitute parts knowledge of product and special features and specifications knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge techniques knowledge of component identification methods knowledge of cleaning chemicals and procedures knowledge of troubleshooting techniques NB AB PQ MA BC NT ON <u>SK</u> <u>YK</u> ND NV yes NV yes yes yes yes no

34.08	Sets up and tests units.	ability to ensure unit complies with government regulations	spectrum analyzer, testing procedures, safety procedures/
		ability to attach to power source	standards
		ability to attach to receiving source	

lubricants, oilers,

ability to power up ability to check audio ability to check video ability to check transponders ability to check all features ability to recognize malfunctions and troubleshoot ability to document results ability to communicate results to other technicians knowledge of product and special features and specifications knowledge of application of testing devices knowledge of electro static discharge techniques knowledge of component identification methods knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques PE NB SK AB NT NF NS PQ ON MA BC YK NV ND NV ND no yes yes yes yes yes no yes 34.09 Performs routine ability to align maintenance maintenance. procedures, safety ability to fine tune channels procedures/ standards,

			ability in place ability and el alignn ability	bility to verify operation of controls bility to verify all safety devices are n place and functioning properly bility to perform routine mechanical nd electronic adjustments/ lignments bility to identify/document veaknesses or potential problems						der, te ing/lev ctrical	analyzer, st cables, veling devices, tape, s, magnifying
				nowledge of precision mechanisms nd fine mechanical adjustments							
				•	f produc						
				knowledge of application of testing devices							
			knowl techni	-	felectro	static c	lischarg	e			
					f compo methoc						
			knowl procee	-	f cleanir	ng chem	icals ar	nd			
				ledge of	f satellit format	e locati	ons and				
			charac	knowledge of replacement part characteristics (physical and electrical)							
			knowl techni		ftrouble	eshootin	g				
<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no		<u>NT</u> yes	<u>YK</u> NV

34.10 Performs post-service

<u>NF</u> ND

ability to attach to power source spectrum analyzer,

Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment					
functional tests.	ability to attach to receiving source	testing procedures, safety procedures/ standards					
	ability to power up						
	ability to check audio						
	ability to check video						
	ability to check all features						
	ability to check cosmetics ability to recognize malfunctions						
	ability to document results						
	ability to communicate results to other technicians						
	knowledge of product and special features and specifications						
	knowledge of application of testing devices						
	knowledge of de-soldering and soldering techniques						
	knowledge of electro static discharge techniques						
	knowledge of component identification methods						
	knowledge of cleaning chemicals and procedures						
	knowledge of replacement part characteristics (physical and electrical)						
	knowledge of troubleshooting techniques						
<u>NF NS PE NB</u> ND no yes yes							

Delivers/installs, sets up

units, and demonstrates

34.12

light to medium-sized

truck, safety procedures/

34.11			units ar		ability	to asse	mble		equipment specifications, safety					
	perior	ms ma	l check		-	to prep sembly	oare uni	t and w	ork area	a	procedur manufact	es/standards, turers=		
					ability	to sele	ct and u	se tools	5		drivers, ł			
					assem	bly pro	ow manufacturers= lifting/l					er, test cables, g/leveling devices		
	knowledge of product and special features and specifications													
					knowl device	ledge of es	applica	ation of	testing					
	knowledge of de-soldering and soldering techniques													
					knowl techni	ledge of ques	electro	static c	lischarg	<u>g</u> e				
					knowledge of component identification methods									
					knowl procee	ledge of dures	cleanir	ng chem	nicals ar	nd				
						ledge of cteristics ical)								
					knowledge of troubleshooting techniques									
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	YK NV		

ability to handle units

Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
unit operation.	ability to store units	standards, lifting/ levelling devices
	ability to drive to job location when applicable	
	ability to deliver units	
	ability to install and set up units	
	ability to demonstrate unit to customer	
	ability to advise customer of company policies and warranty policies	
	ability to communicate pertinent repair/defect information	
	ability to respond to customer concerns and customer satisfaction	
	ability to obtain customer sign-off	
	ability to obtain payment	
	knowledge of product and special features and specifications	
	knowledge of application of testing devices	
	knowledge of electro static discharge techniques	
	knowledge of component identification methods	
	knowledge of cleaning chemicals and procedures	
	knowledge of replacement part characteristics (physical and electrical)	

	Sub-t	asks			Supporting Knowledge & Abilities						Tools & Equipment		
					knowledge of troubleshooting techniques								
					(NOT COMMON CORE)								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
34.13	Comp	oletes nentatio			ability to bill customer								
	docur	nentatio	n.		ability to complete warranty claim								
					ability	to calc	ulate cu	istomer	bill				
					ability to tag warranty parts								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

Task 35Services radio antenna systems. (NOT COMMON CORE)

<u>Trend</u>: There is a decreasing need for servicing.

	Sub-tasks	Supporting Knowledge & Abilities	Tools & Equipment
35.01	Greets, interviews clients and verifies unit problems.	ability to listen attentively to customer's description of problem	
	1	ability to probe for specific symptoms	
		ability to reflect back and verify customer's recollection of symptoms	
		ability to respond to unrealistic customer expectations	
		knowledge of unit operation and	

	Sub-ta	asks			Suppo	orting K	nowled	ge & A	bilities		Tools & Equipment		
					poten	tial proł	olems						
					(NOI	COM	MON (CORE)					
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	BC no	<u>NT</u> no	<u>YK</u> NV	
35.02	Proce	sses wo	rk orde	rs.	-			name, ac of custo					
						ability to determine name and model number of unit							
					ability to write up symptoms								
						knowledge of company documentation procedures							
					(NOT	COM	MON (CORE)					
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
35.03	repair	ns custo time fr esponsi	ames ar	nd	ability to respond to customer enquiries								
	0511	csponsn	onnies.		•	y to obta ork orde		omer sig	gnature				
					know	ledge of	compa	ny worl	c volum	e			
					know	ledge of	fcompa	ny cred	it policy	/			
					(NOI	COM	MON (CORE)					
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	BC no	<u>NT</u> no	<u>YK</u> NV	
35.04		rms pre- onal tes	-service sts.		ability to apply power						RF power meters, RF radiation detector,		

spectrum analyzer, dummy loads

ability to attach to receiving source ability to power up ability to check audio ability to check all special features ability to check tuner ability to recognize malfunctions ability to document results ability to communicate results to other technicians knowledge of product and special features and specifications knowledge of audible defects knowledge of application of testing devices knowledge of de-soldering and soldering techniques knowledge of electro static discharge techniques knowledge of component identification methods knowledge of cleaning chemicals and procedures knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques (NOT COMMON CORE)

	Sub-t	asks			Suppo	Supporting Knowledge & Abilities						Tools & Equipment		
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV		
35.05	Troul	bleshoot	ts faults.		troubl ability inspec ability with a manu ability	leshooti y to perf ctions y to reco another facturer y to perf y to reco y to reco y to read y to isol ably/circo y to sele oret read ment y to doc y to con personr y to reco varranty ledge of ledge of es ledge of	form no ognize n technici form vis ognize n d schem ate rece cuit/com ect, conr lings fro ument r nmunica nel ognize v v situation f produce specifica f audibli	n-techn aeed to d an or bual insp nalfunc atics iver fau ponent act and om requ esults ate results the results varranty ons et and sp ations e defect ation of	consult pection tions It to sub correct ired test Its to y and pecial ts	ly	radiation spectrum dummy hammer strippers electric s drivers, gun, safe	er meters, RF a detector, a analyzer, loads, cutters, s, crimpers, , electric drills, screw/nut glue gun, heat ety belt, safety res, tool pouch, bots		

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

knowledge of specialized cable and connectors

knowledge of radio transmission systems

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	no	NV

35.06	Replaces or repairs faulty circuits and components.	ability to remove faulty component	RF power meters, RF radiation detector,		
	Ĩ	ability to verify proper installation	spectrum analyzer, dummy loads, cutters,		
		ability to verify integrity of board and neighboring components	hammers, crimpers, strippers, electric drills, electric screw/nut		
		ability to select and replace component	drivers, glue gun, heat gun, safety belt, safety hat, de-soldering tools		
		ability to order parts			
		ability to repair faulty circuits or components			
		ability to clean circuits and components			
		ability to recognize warranty and non-warranty situations			

	Sub-tasks						Supporting Knowledge & Abilities					Tools & Equipment		
					-	y to obta le subst		-	ement o	or				
						ledge of res and s			pecial					
						knowledge of application of testing devices								
						knowledge of de-soldering and soldering techniques								
					know techn	ledge of iques	felectro	static c	lischarg	je				
						knowledge of component identification methods								
						knowledge of cleaning chemicals and procedures								
					know techn	ledge of	ftrouble	eshootir	ıg					
					(NOT	COM	MON (CORE)						
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> no	<u>AB</u> yes	BC no	<u>NT</u> no	<u>YK</u> NV		
35.07	Sets ı	ip and t	ests uni	ts.	ability to ensure unit complies with government regulations ability to attach to power source					RF power meters, RF radiation detector, spectrum analyzer, dummy loads, cutters, hammers, crimpers, strippers, electric drills,				
					ability to attach to receiving source									
					-	/ to pow		U			electric screw/nut drivers, glue gun, heat			
					-	y to chee	-)				ty belt, safety		

ability to check all features

ability to recognize malfunctions and

ability to check tuner

troubleshoot

ability to document results

ability to communicate results to other technicians

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

(NOT COMMON CORE)

NF	NS	PE	NB	PQ	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	no	NV

35.08	Performs routine	ability to align	cleaning fluids,
	maintenance.		lubricants, oilers, RF
		ability to fine tune channels	power meters, RF
			radiation detector,
		ability to verify operation of controls	spectrum analyzer,
			dummy loads, cutters,
		ability to verify all safety devices are	hammers, crimpers,
		in place and functioning properly	strippers, electric drills,
			electric screw/nut
		ability to perform routine mechanical	drivers, glue gun, heat
		and electronic adjustments/	gun, safety belt, safety
		alignments	hat, magnifying glass

ability to identify/document weaknesses or potential problems

knowledge of precision mechanisms and fine mechanical adjustments

knowledge of product and special features and specifications

knowledge of audible defects

knowledge of application of testing devices knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

(NOT COMMON CORE)

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	no	NV

35.09	Performs post-service	ability to attach to power source	safety procedures/
	functional tests.	ability to attach to receiving source	standards, RF power meters, RF radiation
			detector, spectrum
		ability to power up	analyzer, dummy loads,
			cutters, hammers,
		ability to check audio	crimpers, strippers,
			electric drills, electric
		ability to check tuner	screw/nut drivers, glue
			gun, heat gun, safety

Supporting Knowledge & Abinties	Tools & Equipi
ability to check all features	belt, safety hat
ability to recognize malfunctions	
ability to document results	
ability to communicate results to other technicians	
knowledge of product and special features and specifications	
knowledge of audible defects knowledge of application of testing devices	
knowledge of de-soldering and soldering techniques	
knowledge of electro static discharge techniques	
knowledge of component identification methods	
knowledge of cleaning chemicals and procedures	
knowledge of replacement part characteristics (physical and electrical)	
knowledge of troubleshooting techniques	

(NOT COMMON CORE)

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	no	NV

35.10	Reassembles units and performs final check.	ability to assemble	RF power meters, RF radiation detector,
		ability to prepare unit and work area for assembly	spectrum analyzer, dummy loads, cutters,

hammers, crimpers, strippers, electric drills,

electric screw/nut

hat

drivers, glue gun, heat

gun, safety belt, safety

ability to select and use tools

ability to follow manufacturers= assembly procedures

ability to perform final functional test

knowledge of product and special features and specifications

knowledge of audible defects

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques

knowledge of grounding techniques

(NOT COMMON CORE)

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	no	NV

35.11	Delivers/installs, sets up	ability to
	units, and demonstrates	

ability to handle units

safety procedures/ standards

	Sub-tasks			Supporting Knowledge & Abilities Tools & Equipment							
	unit operatio	n.		ability to store units							
				ability to drive to job location when applicable							
				ability to deliver units							
				ability to install and set up units							
				ability to demonstrate unit to customer							
				ability to advise customer of company policies and warranty policies ability to communicate pertinent repair/defect information							
				ability to respond to customer concerns and customer satisfaction							
				ability to obtain customer sign-off							
				ability to obtain payment							
				knowledge of product and special features and specifications							
				knowledge of troubleshooting techniques							
				knowledge of grounding techniques							
				(NOT COMMON CORE)							
	<u>NF</u> <u>NS</u> ND no	<u>PE</u> yes	<u>NB</u> yes	PQ NDON NVMA yesSK noAB yesBC noNT NVYK NV							
35.12	Completes documentatio	on.		ability to bill customer calculator, computer ability to complete warranty claim							

ability to calculate customer bill

ability to tag warranty parts

(NOT COMMON CORE)

NF	NS	PE	NB	<u>PQ</u>	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	no	yes	no	no	NV

Task 36Services television antenna systems.

<u>Trend</u>: There is a decreasing need for servicing.

36.01		ts, interv verifies u		lients			en attent escriptio	•					
	proof				abilit <u></u> symp	-	be for sj	pecific					
							ect back collection		•	8			
						ability to respond to unrealistic customer expectations							
						ledge of tial prol	f unit op blems	peration	and				
					(NOT COMMON CORE)								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> no	<u>YK</u> NV	
36.02	Proce	esses wo	ork orde	ers.			ermine 1 imbers (
					ability to determine name and model number of unit								

ability to write up symptoms

	Sub-t	asks			Suppo	Supporting Knowledge & Abilities					Tools & Equipment		
					knowledge of company documentation procedures								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
36.03 Informs customer of repair time frames and cost responsibilities.				-	ability to respond to customer enquiries								
					-	ability to obtain customer signature on work order							
					knowledge of company work volume								
					knowledge of company credit policy								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	YK NV	
36.04		rms pre ional tes			ability	to che	ch to reo ck video ck audio)	source		truck, me diagrams testing pr safety pre	/drawings, rocedures, ocedures/	
					ability	to che	ck all sp	oecial fe	atures		standards, manufacturers= manuals/software,		
					ability	to che	ck tuner	-				g devices,	
					-		ognize n		tions		electric d	, crimpers, Irills, electric	
					-		ument r		40.40		electric s		
						to con technic	nmunica ians	ite resul	its to		belt, safe	ty hat, RF	
						-	f produc specifica		pecial		radiation detectors, power factor meters, spectrum analyzer, dummy loads		
					know	ledge of	faudible	e defect	S		<u> </u>		

	Sub-tasks					orting K	nowled	ge & A	bilities		Tools & Equipment		
					know devic	ledge of es	fapplica	ation of	testing				
						ledge of ring tecl		dering a	ind				
					know techn	ledge of iques	felectro	static o	lischarg	e			
						ledge of							
						ledge of cteristic rical)							
					knowledge of troubleshooting techniques								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
36.05	Disas	sembles	s units.		for di	y to prep sassemt	oly			ı	solder iro suckers,	ers, hammers, ons, solder electric hand	
						ability to select and use tools grinder, adjustab ability to follow manufacturers= disassembly procedures							
					know	ledge of	f local, p	provinc	ial and				

federal government regulations

knowledge of product and special features and specifications

knowledge of audible defects

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of grounding techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

36.06	Troubleshoots faults.	ability to prepare unit for troubleshooting	blueprints, mechanical diagrams/drawings, safety procedures/
		ability to perform non-technical inspections	standards, manufacturers= manuals/software,
		ability to recognize need to consult	solder irons, solder
		with another technician or	suckers, cutters,
		manufacturer	strippers, crimpers,
			cleaning fluids, cloths,
		ability to perform visual inspection	safety belt, safety hat, multimeters, continuity
		ability to recognize malfunctions	testers, oscilloscopes, RF generators,
		ability to isolate receiver fault to sub- assembly/circuit/component	frequency counters, RF radiation detectors, power factor meters,
		ability to select, connect and correctly interpret readings from required test equipment	ladder, freeze spray, spectrum analyzer

ability to document results ability to communicate results to other personnel

ability to recognize warranty and non-warranty situations

knowledge of product and special features and specifications

knowledge of audible defects

knowledge of application of testing devices

knowledge of matching devices knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

36.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component	blueprints, mechanical diagrams/drawings,
	encents and components.	ability to verify proper installation	safety procedures/ standards,
		ability to select and replace	manufacturers=
		component	manuals/software,
			solder irons, solder
		ability to order parts	suckers, cutters,
			strippers, crimpers,
		ability to repair faulty circuits or	cleaning fluids, cloths,
		components	safety belt, safety hat,
			multimeters, continuity
		ability to clean circuits and	testers, oscilloscopes,
		components	RF generators,

36.08

				non-w ability suitab knowl feature knowl device knowl solder knowl identif	arranty to obta le subst edge of es and s edge of edge of ing tech edge of fication edge of lures edge of	ognize w situatio in exac itute pa produc pecifica audible f audible f applica f de-solc nniques f compo method f cleanin	ns t replace rts t and sp ations e defects ation of lering a nent ls ng chem	ement of becial s testing nd icals an		radiation power a ladder,	ncy counters, RF on detectors, factor meters, spectrum er, de-soldering
<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV
Sets up and tests units. ability to governme							-	es with		-	nts, mechanical ns/drawings,

8
ability to attach to receiving source
ability to power up
ability to check audio
ability to check video
ability to check tuner
ability to check all features

cal diagrams/drawings, safety procedures/ standards, logic probes, solder irons, solder suckers, cutters, strippers, crimpers, safety belt, safety hat, cloths, cleaning fluids, multimeters, continuity testers, oscilloscopes, RF generators, frequency counters, RF radiation detectors, power factor meters

NF

ND

NS

no

<u>YK</u> NV

ability to check cosmetics ability to recognize malfunctions and troubleshoot ability to document results ability to communicate results to other technicians knowledge of product and special features and specifications knowledge of audible defects knowledge of application of testing devices knowledge of component identification methods knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques knowledge of safe work practices PE NB PQ ON NT MA SK AB BC ND NV yes yes yes yes yes yes no

36.09	Performs routine	ability to clean controls	blueprints, mechanical
	maintenance.		diagrams/drawings,
		ability to align	safety procedures/
			standards,
		ability to fine tune channels	manufacturers=
			manuals/software,
		ability to verify all safety devices are	solder irons, solder
		in place and functioning properly	suckers, cutters,
			strippers, crimpers,
		ability to perform routine mechanical	safety belt, safety hat,
		and electronic adjustments/	cleaning fluids, cloths,
		alignments	multimeters, continuity

<u>NF</u> ND NS

no

		ability to identify/document weaknesses or potential problems knowledge of precision mechanisms and fine mechanical adjustments	testers, oscilloscopes, RF generators, frequency counters, RF radiation detectors, power factor meters, ladder, magnifying glass
		knowledge of product and special features and specifications	
		knowledge of audible defects	
		knowledge of application of testing devices	
		knowledge of component identification methods knowledge of cleaning chemicals and procedures	
		knowledge of replacement part characteristics (physical and electrical)	
		knowledge of troubleshooting techniques	
<u>PE</u> yes	<u>NB</u> yes	PQONMASKABBCNDNVyesyesyesno	<u>NT</u> <u>YK</u> yes NV

36.10	Performs post-service functional tests.	ability to attach to receiving source	light to medium-sized truck, mechanical
		ability to power up	diagrams/drawings, installation procedures,
		ability to check audio	testing procedures, safety procedures/
		ability to check video	standards, manufacturers=
		ability to check tuner	manuals/software, measuring devices,
		ability to check all features	hammers, cutters, strippers, crimpers,
		ability to recognize malfunctions	electric drills, electric screw/nut drivers, heat

	Sub-t	asks			Supp	orting K		Tools & Equipment							
					abilit	y to doc	ument r	results			gun, safe hat, RF 1	ety belt, safety			
						y to con technic		detectors, power fact meters, head phones							
						knowledge of product and special features and specifications						dummy loads			
					know	ledge of	faudibl	e defect	ts						
					know devic	ledge of es	f applica	ation of	testing						
						ledge of ring tecl									
						ledge of									
						ledge of dures	f cleanii	ng chen	nicals a	nd					
						ledge of cteristic ical)	-	-							
					know techn	ledge of iques	f trouble								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV			
36.11		sembles units and ability to assemble rms final check.								•	elt, safety hat, ogic probes,				

30.11	performs final check.	ability to assemble	ladder, logic probes,
	F	ability to prepare unit and work area for assembly	soldering irons, solder suckers, cutters, strippers, crimpers
		ability to select and use tools	surppois, eninpers
		ability to follow manufacturers= assembly procedures	
		ability to perform final functional test	

knowledge of product and special features and specifications

knowledge of audible defects

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures knowledge of replacement part characteristics (physical and electrical)

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

tes	safety procedures/ standards, light to
ability to store units	medium-sized truck
ability to drive to job location when applicable	
ability to deliver units	
ability to install and set up units	
ability to demonstrate unit to customer	
ability to advise customer of	
company policies and warranty policies	
	ability to store units ability to drive to job location when applicable ability to deliver units ability to deliver units ability to install and set up units ability to demonstrate unit to customer ability to advise customer of company policies and warranty

ability to communicate pertinent repair/defect information

ability to respond to customer concerns and customer satisfaction

ability to obtain customer sign-off

ability to obtain payment

knowledge of product and special features and specifications

knowledge of audible defects

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

NF	NS	PE	<u>NB</u>	PQ	ON	MA	SK	AB	BC	<u>NT</u>	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

36.13	Completes documentation.	ability to bill customer	manufacturers= manuals/software
	documentation.	ability to complete warranty claim	manuals/software
		ability to calculate customer billability to tag warranty parts	

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
										yes	

Task 37Services cellular phone antennas.

Trend: There is a decreasing need for servicing.

	Sub-t	asks			Supp	orting K	Inowled		Tools & Equipment			
37.01		verifies	views cl unit	lients	custo abilit symp	mer's de y to pro toms	en attent escriptio be for sj ect back	n of pro	oblem			
					customer's recollection of symptoms ability to respond to unrealistic customer expectations							
					know	-	f unit op		and			
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV
37.02	Proce	esses wo	ork orde	ers	abilit	v to dete	ermine r	name a	ddress			

37.02	Processes work orders.	ability to determine name, address and phone numbers of customer
		ability to determine name and model number of unit
		ability to write up symptoms
		knowledge of company documentation procedures

	Sub-t	asks			Suppo	orting K	Inowled	ge & A	bilities	,	Tools &	Equipment		
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV		
37.03	repair	time fr	omer of ames an bilities.		enqui ability	ability to respond to customer enquiries ability to obtain customer signature on work order								
						knowledge of company work volume knowledge of company credit policy								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	MA yes	<u>SK</u> yes	<u>AB</u> yes	BC no	<u>NT</u> yes	<u>YK</u> NV		
37.04		rms pre onal tes	-service		ability ability ability ability ability ability other ability know featur know device	y to atta y to che y to che y to reco y to doc y to doc y to con technic y to che ledge of res and s ledge of es	ly powe ch to rea ck audio ck all sp ognize n ument r nmunica ians ck recei f produc specifica f applica f de-solo hniques	ceiving pecial fe nalfunc esults te resul ver/tran et and sp ations ation of dering a	eatures tions lts to nsmitter pecial `testing					

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

knowledge of troubleshooting techniques RF power meter

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

37.05	Disassembles units.	ability to prepare unit and work area for disassembly	cutters, allen keys, test cables, electrical tape
		ability to select and use tools	
		ability to follow manufacturers= disassembly procedures	
		knowledge of local, provincial and federal government regulations	
		knowledge of product and special features and specifications	
		knowledge of audible defects	
		knowledge of application of testing devices	
		knowledge of de-soldering and soldering techniques	
		knowledge of component identification methods	
		č 1	

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

37.06	Troubleshoots faults.	ability to prepare unit for troubleshooting	RF power meters, cutters, allen keys, test cables, electrical tape,
		ability to perform non-technical inspections	multimeters, continuity testers, RF radiation detector, jumper wire
		ability to recognize need to consult with another technician or manufacturer	
		ability to perform visual inspection	
		ability to recognize malfunctions	
		ability to read schematics	
		ability to isolate receiver fault to sub- assembly/circuit/component	
		ability to select, connect and correctly interpret readings from required test equipment	
		ability to document results	
		ability to communicate results to other personnel	
		ability to recognize warranty and non-warranty situations	

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of specialized cable and connectors

knowledge of radio transmission systems

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical) knowledge of troubleshooting techniques

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

37.07	Replaces or repairs faulty circuits and components.	ability to remove faulty component	cutters, strippers, crimpers, electric drills,
	encurs and components.	ability to verify proper installation	electric screw/nut drivers, glue gun, heat
		ability to verify integrity of board and neighboring components	gun, cutters, allen keys, test cables, electrical
		ability to select and replace component	tape, multimeters, continuity testers, RF jumper wire, de- soldering tools,
		ability to order parts	soldering iron
		ability to repair faulty circuits or components	
		ability to clean circuits and	

components

ability to recognize warranty and non-warranty situations

ability to obtain exact replacement or suitable substitute parts

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of de-soldering and soldering techniques

knowledge of electro static discharge techniques

knowledge of component identification methods knowledge of cleaning chemicals and procedures

NF	NS	PE	NB	<u>PQ</u>	ON	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
ND	yes	yes	yes	ND	NV	yes	yes	yes	yes	yes	NV

37.08	Sets up and tests units.	ability to ensure unit complies with government regulations	RF power meters, RF radiation detector
		ability to attach to power source	
		ability to attach to receiving source	
		ability to check audio	
		ability to check all features	
		ability to recognize malfunctions and troubleshoot	

ability to document results

ability to communicate results to other technicians

knowledge of product and special features and specifications

knowledge of application of testing devices

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of replacement part characteristics (physical and electrical)

NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

	Performs routine maintenance.	ability to verify operation of controls	cleaning fluids, RF power meter, test
	maintenance.	ability to verify all safety devices are in place and functioning properly	cables, electrical tape, magnifying glass
		ability to perform routine mechanical and electronic adjustments/ alignments	
		ability to identify/document weaknesses or potential problems	
		knowledge of precision mechanisms and fine mechanical adjustments	
		knowledge of product and special	

	Sub-ta	ısks			Supporting Knowledge & Abilities						Tools & Equipment		
					featur	es and s	pecifica	ations					
					know! device	•	applica	tion of	testing				
					know] techni		electro	static d	lischarg	e			
						knowledge of component identification methods knowledge of cleaning chemicals and procedures knowledge of replacement part characteristics (physical and electrical)							
					charac								
					know! techni	-	trouble	shootin	g				
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
37.10		-	t-servic	e	ability	v to attac	ch to po	wer sou	irce		safety procedures/ standards, RF power meters, RF radiation		
	functi	onal tes	sts.		ability	v to attac	ch to rec	ceiving	source				
					ability	to chec	ck audic)			detector		
					ability	to chec	ck all fe	atures					
					ability	to reco	ognize n	nalfunct	tions				
					ability	to doci	ument r	esults					
					ability to communicate results to other technicians knowledge of product and special features and specifications								
					knowledge of application of testing devices								
					knowledge of de-soldering and soldering techniques								

knowledge of electro static discharge techniques

knowledge of component identification methods

knowledge of cleaning chemicals and procedures

knowledge of replacement part characteristics (physical and electrical)

NF	NS	PE	<u>NB</u>	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	<u>BC</u>	<u>NT</u>	<u>YK</u>
ND	no	yes	yes	ND	NV	yes	yes	yes	no	yes	NV

37.11	Reassembles units and performs final check.	ability to assemble	cutters, allen keys, feeler gauges, hammers,			
	performs multiciteek.	ability to prepare unit and work area for assembly	cutters, strippers, crimpers			
		ability to select and use tools				
		ability to follow manufacturers= assembly procedures				
		ability to perform final functional test				
		knowledge of product and special features and specifications				
		knowledge of application of testing devices				
		knowledge of de-soldering and soldering techniques				
		knowledge of electro static discharge techniques				

					knowledge of component identification methods									
					know! procee	-	f cleanin	ig chem	icals ar	nd				
					charac	knowledge of replacement part characteristics (physical and electrical)								
					know! techni		f trouble	shootin	g					
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV		
37.12			alls, sets monstra		ability	to hand	dle units	S			safety pro			
		peration		ues	ability	to stor	e units				stanuarus	,		
					ability applic		e to job	locatio	n when					
					ability	to deli	ver unit	S						
					ability	to insta	all and s	set up u	nits					
					ability custor		onstrate	e unit to)					
					-	any poli	ise custo cies and							
					ability to communicate pertinent repair/defect information									
					ability to respond to customer concerns and customer satisfaction									
					ability	to obta	in custo	omer sig	gn-off					
					ability	v to obta	in payn	nent						

	Sub-tasks				Supporting Knowledge & Abilities				1	Tools & Equipment			
					knowledge of product and special features and specifications								
					knowledge of troubleshooting techniques								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	
37.13	Completes				ability to bill customer						calculator, computer		
	documentation.			ability to complete warranty claim									
					ability to calculate customer bill								
					ability to tag warranty parts								
	<u>NF</u> ND	<u>NS</u> no	<u>PE</u> yes	<u>NB</u> yes	<u>PQ</u> ND	<u>ON</u> NV	<u>MA</u> yes	<u>SK</u> yes	<u>AB</u> yes	<u>BC</u> no	<u>NT</u> yes	<u>YK</u> NV	

APPENDICES

TOOLS AND EQUIPMENT

Vehicles

car light to medium-sized truck tow motor

Technical Documents

blueprints equipment specifications installation procedures logic diagrams maintenance procedures manufacturers= manuals/software mechanical diagrams/drawings operating procedures safety procedures/standards schematic diagrams testing procedures

Hand Tools

alignment tools allen keys burnishing tools cutters feeler gauges hammers hex drivers knife measuring devices pliers screwdrivers wrenches

Soldering/De-soldering Equipment

flux removers solder irons

solder suckers solder wicks

Mechanical Gauges

tension	test/strobes
torque	micrometer
thickness	video disks
tapes/CD/records	

Component Insertion and Extraction Tools

chisels

head pullers

Cable Preparation Tools

crimpers cutters strippers

Power Tools

electric drills electric screw/nut drivers glue gun heat gun

Safety Equipment

antistatic equipment ear protection fan fire extinguisher goggles isolation transformer masks rubber gloves safety belt safety hat safety shoes

Cleaning Equipment

airbrushes brushes cleaning fluids cloths swabs ultrasonic cleaner vacuum brushes

Others

calculator diagnostic routines electrical tape equipment dollies/carts flashlight freeze spray inspection mirrors ladder lifting/leveling devices magnifiers reference charts temperature probes test cables test cables test chart

Test Equipment

AC line testers/monitors AF generators amp probe capacitor checker circuit testers computer continuity testers CRT checker and rujuvenator data generators db/dbm meters decade boxes degaussing equipment distortion analysers dot/bar generators dummy loads frequency counters function generators head checker head phones high voltage probe hot air equipment induction meter infrared tester jumper wire laser power meter light box light meters/colour temp logic analysers

logic probes micro-wave radiation detectors microfiche reader mini torch multimeters ND tester NTSC generators oscilloscopes power factor meters RAM/ROM testers **RF** generators RF power meters RF radiation detectors spectrum analyzer telephone analyzer test monitors test speakers tracker transistor checker vacuum tube tester variable voltage/current supplies variac vector scope vibration testers white/pink noise generators wow & flutter X-ray and particle detectors Z-meter

Anti-Static Equipment

mats ground straps sprays

Lubricating Equipment

lubricants swabs oilers

APPENDIX "B"

LIST OF ACRONYMS

A/D	Analog/Digital
AF	Audio Frequency
ALC	Automatic Level Control
AM	Amplitude Modulation
AVC	Automatic Volume Control
BNC	Cable Connector
CAD	Computer-aided Drafting
CADD	Computer-aided Design/drafting
CAE	Computer-aided Engineering
CAM	Computer-aided Manufacturing
CATV	Community Antenna Television
CCD	Charge-coupled Device
ССМ	Computer-controlled Manufacturing
CCTV	Closed Circuit Television
CIM	Computer Integrated Manufacturing
CP/M	Control Program/Microcomputer
CPU	Central Processing Unit
CRT	Cathode Ray Tube
CSA	Canadian Standards Association
db	Decibel
dbm	Decibels Referenced to lmW
dbx	Crosstalk Reference Coupling
DIP	Dual in-line Package
DOC	Department of Communications
DOT	Department of Transport
EOL	End-of-line
EPROM	Electrical Programmable Read Only Memory
F	Cable Connector
FCC	Federal Communication Commission (USA)
FM	Frequency Modulation
FMS	Flexible Manufacturing Systems
HF	High Frequency
I/O	Input/output
IC	Integrated Circuit
IF	Intermediate Frequency
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LF	Low Frequency
LNA	Low Noise Amplifier
LSI	Large-scale Integration

MF MP/M	Medium Frequency Multi-user Computer Operating System
Ν	Cable Connector
NC	Numerical Control
NTSC	National Television Systems Committee (USA)
PC	Programmable Controllers
РСВ	Printed Circuit Board
PC-DOS	Personal Computer-Disk Operating System
РСМ	Pulse Code Modulation
PLC	Programmable Logic Controllers
PROM	Programmable Read Only Memory
R/W	Read/Write
RAM/ROM	Random Access Memory/Read Only Memory
RCA	Radio Corporation of America
RF	Radio Frequency
ROM	Read Only Memory
RS-232	Serial Interface Standard
SSB	Single Sideband
UHF	Ultra High Frequency
ULC	Underwriters Lab
UNIX	Multi-User Computer Operating System
VAX/VMS	Multi-User Computer Operating System
VDU	Video Display Unit
VHF	Very High Frequency
VSWR	Voltage-Standing-wave Ratio
WP	Word Processor

PERCENTAGE RATINGS

BLO	CK A	SAFETY	
	Task 1	Demonstrates safe working practices and techniques.	
BLO	CK B	WORKPLACE PRACTICES AND PROCEDURES	Nat.
%	<u>NF</u> <u>NS</u> ND 8	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Avg.
	Task 2	Follows Company Policies and Procedures.	Nat.
			Avg.
	%	NFNSPENBPQONMASKABBCNTYKND17510NDNV52510256NV	13%
	Task 3	Applies written and verbal communication skills.	
			Nat. Avg.
	%	NFNSPENBPQONMASKABBCNTYKND212820NDNV525401056NV	25%
	Task 4	Uses and maintains equipment and tools.	
			Nat. Avg.
	%	NFNSPENBPQONMASKABBCNTYKND236060NDNV4020304015NV	36%
	Task 5	Disposes of Equipment, Components or Devices.	
			Nat. Avg.
	%	NFNSPENBPQONMASKABBCNTYKND1125NDNV51010108NV	8%

Task 6Upgrades skills and knowledge.

			Nat. Avg.
%		NBPQONMASKABBCNTYK5NDNV4520101515NV	18%

BLOCK C SERVICE AUDIO EQUIPMENT COMPONENTS AND DEVICES

														r	Nat. Avg.
%	NFNSND24	<u>РЕ</u> 15	<u>NB</u> 20		<u>ON</u> NV	<u>MA</u> 21	<u>SK</u> 30	<u>A</u> 21		<u>BC</u> 30	<u>NT</u> 16	<u>YK</u> NV			22%
	Task 7		-	gital an compor		log at	ıdio r	ecor	ding	and	playb	ack sys	tems and		
													r	Nat. Avg.	7
	%	<u>NF</u> ND	$\frac{\text{NS}}{43} \frac{\text{P}}{3}$		<u>B PQ</u> ND						<u>NT</u> 2	<u>YK</u> NV		39%	
	Task 8	Serv	ices rac	dio rece	eivers	and t	ransn	nitte	rs.						
													Г	Nat. Avg.	1
	%	<u>NF</u> ND		<u>PE NI</u> 0 5	<u>B PQ</u> ND	<u>ON</u> NV			<u>AB</u> 20	<u>BC</u> 20	<u>NT</u> 15	<u>YK</u> NV		15%	
	Task 9	Serv	ices m	usical s	ystem	is and	instr	ume	nts.						
													٦	Nat. Avg.	1
	%	<u>NF</u> ND	<u>NS</u> <u>P</u> 13 1	<u>PE NH</u> 0 5	<u>B</u> <u>PQ</u> ND	<u>ON</u> NV		<u>SK</u> 10	<u>AB</u> 5	<u>BC</u> 15	<u>NT</u> 3	<u>YK</u> NV		8%	
	Task 10	Serv	ices au	dio am	plifica	ation	syster	ns.							
													٦	Nat. Avg.	1
	%	<u>NF</u> ND		<u>PE NI</u> 0 40	<u>B</u> <u>PQ</u> ND	<u>ON</u> NV		<u>SK</u> 35	<u>AB</u> 30	<u>BC</u> 40	<u>NT</u> 80	<u>YK</u> NV		38%	

BLOCK D SERVICE VIDEO EQUIPMENT COMPONENTS AND DEVICES

												Nat. Avg.
%	NF NS ND 38	<u>PE</u> 50		Q <u>ON</u> D NV	<u>MA</u> 25			<u>BC</u> 40	<u>NT</u> 27	<u>YK</u> NV		39%
	Task 11	Serv	ices telev	isions.								
	0/	NE	NG DE					DC	NТ	VIZ	Nat. Avg.	
	%	<u>NF</u> ND	$\frac{\text{NS}}{36} \frac{\text{PE}}{40}$		2 <u>ON</u> D NV	<u>MA SI</u> 50 35		<u>вс</u> 55	<u>NT</u> 30	<u>YK</u> NV	39%	
	Task 12	Serv	ices video	players	record	lers.						
											Nat. Avg.	
	%	<u>NF</u> ND	<u>NS</u> <u>PE</u> 36 45			$\frac{\text{MA}}{10} \frac{\text{SI}}{35}$		<u>BC</u> 30	<u>NT</u> 37	<u>YK</u> NV	34%	
	Task 13	Serv	ices moni	tors.								
											Nat. Avg.	
	%	<u>NF</u> ND	$\frac{\text{NS}}{4} \frac{\text{PE}}{2}$		0 <u>ON</u> D NV	<u>MA SI</u> 5 10		<u>BC</u> 5	<u>NT</u> 2	<u>YK</u> NV	5%	
	Task 14	Serv	ices video	o entertai	nment	equipm	nent.					
											Nat. Avg.	
	%	<u>NF</u> ND	$\frac{\text{NS}}{6} \frac{\text{PE}}{3}$	<u>NB</u> <u>P</u> 1 N	0 <u>ON</u> D NV	<u>MA</u> <u>SI</u> 4 5	<u>K AB</u> 5	<u>BC</u> 5	<u>NT</u> 2	<u>YK</u> NV	4%	
	Task 15	Serv	ices satell	ite receiv	ver sys	tems.						
											Nat. Avg.	
	%	<u>NF</u> ND	$\frac{\text{NS}}{3} \frac{\text{PE}}{5}$	<u>NB</u> <u>P(</u> 1 N	2 <u>ON</u> D NV	<u>MA SI</u> 10 5	<u>K AB</u> 5	<u>BC</u> 0	<u>NT</u> 1	<u>YK</u> NV	4%	

Task 16 Services video cameras.

%

Task 17

										Nat. Avg.
<u>NF</u> ND										10%
Serv	ices c	able	conv	erters	s and	deco	oders	i.		

Nat. Avg.

Nat.

Nat. Avg.

Nat. Avg.

27%

15%

2%

2%

%	NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	<u>BC</u>	NT	<u>YK</u>
	ND	4	2	1	ND	NV	3	0	2	0	3	NV

Task 18 Services video display devices. (NO	T COMMON CORE)
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													Avg.
%	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	2%
	ND	0	1	1	ND	NV	3	0	3	0	5	NV	

SERVICE TELEPHONE ANSWERING EQUIPMENT **BLOCK E COMPONENTS AND DEVICES**

							Nat. Avg.
%		<u>NB</u> 2					7%

Task 19	Services cellular phones.	(NOT COMMON CORE)
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%	NF	NS	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	<u>BC</u>	NT	<u>YK</u>
	ND	0	20	90	ND	NV	5	0	5	0	2	NV

Services cordless phones. Task 20

%	NF	NS	PE	NB	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	AB	BC	NT	<u>YK</u>
	ND	31	20	5	ND	NV	30	25	25	40	40	NV

Task 21 Services fax machines.

%	$\frac{\text{NF}}{\text{ND}} = \frac{\text{NS}}{38} \frac{\text{PE}}{20} = \frac{\text{NB}}{3} \frac{\text{PQ}}{\text{ND}} \frac{\text{ON}}{\text{NV}} \frac{\text{MA}}{30} \frac{\text{SK}}{25} \frac{\text{AB}}{35} \frac{\text{BC}}{0} = \frac{\text{NT}}{5} \frac{\text{YK}}{\text{NV}}$	Nat. Avg. 20%
Task 22	Services answering machines.	Nat. Avg.
% Task 23	$\frac{\text{NF}}{\text{ND}} \frac{\text{NS}}{31} \frac{\text{PE}}{20} \frac{\text{NB}}{1} \frac{\text{PQ}}{\text{ND}} \frac{\text{ON}}{\text{NV}} \frac{\text{MA}}{30} \frac{\text{SK}}{25} \frac{\text{AB}}{30} \frac{\text{BC}}{40} \frac{\text{NT}}{45} \frac{\text{YK}}{\text{NV}}$ Services corded phones.	28%
%	$\frac{\text{NF}}{\text{ND}} \frac{\text{NS}}{0} \frac{\text{PE}}{20} \frac{\text{NB}}{1} \frac{\text{PQ}}{\text{ND}} \frac{\text{ON}}{5} \frac{\text{MA}}{25} \frac{\text{AB}}{5} \frac{\text{BC}}{20} \frac{\text{NT}}{8} \frac{\text{YK}}{\text{NV}}$	Nat. Avg. 10%
BLOCK F	SERVICE COMPUTER EQUIPMENT COMPONENTS AND DEVICES	Nat.
% <u>NF</u> <u>NS</u> ND 4 Task 24	$\frac{PE}{5} \frac{NB}{3} \frac{PQ}{ND} \frac{ON}{NV} \frac{MA}{15} \frac{SK}{7} \frac{AB}{12} \frac{BC}{0} \frac{NT}{6} \frac{YK}{NV}$ Services computer monitors.	Avg.
		Nat. Avg.
% Task 25	$\frac{\text{NF}}{\text{ND}} \frac{\text{NS}}{46} \frac{\text{PE}}{15} \frac{\text{NB}}{50} \frac{\text{PQ}}{\text{ND}} \frac{\text{ON}}{\text{NV}} \frac{\text{MA}}{15} \frac{\text{SK}}{50} \frac{\text{AB}}{40} \frac{\text{BC}}{0} \frac{\text{NT}}{40} \frac{\text{YK}}{\text{NV}}$ Services computer hardware.	37%
%	NFNSPENBPQONMASKABBCNTYKND0405NDNV403025020NV	Nat. Avg. 23%

T 1 0 (a .	•
Task 26	Services	nrintorg
1 ask 20		DIMUTS.

	Task 20	Services printers.	
	%	NF NS PE NB PQ ON MA SK AB BC NT YK 34% ND 46 40 ND NV 40 20 30 0 20 NV 34%	Ó
	Task 27	Services modems. (NOT COMMON CORE)	
	%	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	ó
RL O	CK G	SERVICE MICROWAVE EQUIPMENT COMPONENTS	
DLU		AND APPLIANCES	
			Nat. Avg.
%	<u>NF</u> <u>NS</u> ND 13	PENBPQONMASKABBCNTYK76NDNV51516NV	6%
	Task 28	Services microwave ovens.	
	%	NF NS PE NB PQ ON MA SK AB BC NT YK 100% ND 100 100 ND NV 100 100 100 NV 100%	
	Task 29	Services microwave clothes dryers. (NOT COMMON CORE)	
	%	$ \begin{array}{c} \text{Nat.} \\ \text{Net.} $	ý 0
BLO	СК Н	SERVICE REMOTE CONTROL EQUIPMENT COMPONENTS AND DEVICES	
			Nat.
%	<u>NF</u> NS ND 8	PENBPQONMASKABBCNTYK23NDNV24446NV	Avg. 4%

Task 30 Services radio frequency remote control devices.

		Nat. Avg.
	ONMASKABBCNV10302020	14%

Task 31 Services infrared remote control devices.

	Nat.	
_	Avg.	
	86%	

Nat. Avg.

Nat. Avg.

88%

12%

%	NF	NS	PE	NB	PQ	<u>ON</u>	MA	<u>SK</u>	AB	BC	<u>NT</u>	YK
	ND	83	90	95	ND	NV	90	70	80	80	100	NV

BLOCK I SERVICE POWER SUPPLY EQUIPMENT COMPONENTS AND DEVICES

													Nat.
													Avg.
%	<u>NF</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>PQ</u>	<u>ON</u>	MA	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YK</u>	4%
	ND	1	1	1	ND	NV	20	10	2	0	0	NV	

Task 32Services AC/DC generators. (NOT COMMON CORE)

%	NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK
	ND	63	0	5	ND	NV	5	0	0	0	0	NV

Task 33 Services AC/DC converters/inverters.

%	NF	NS	PE	<u>NB</u>	PQ	<u>ON</u>	MA	<u>SK</u>	AB	BC	<u>NT</u>	YK
	ND	37	100	95	ND	NV	95	100	100	0	0	NV

BLOCK J SERVICE ANTENNA SYSTEMS

													Nat.
													Avg.
%	NF	NS	PE	NB	PQ	ON	MA	SK	AB	BC	NT	YK	3%
							5						

Task 34Services satellite antenna systems.

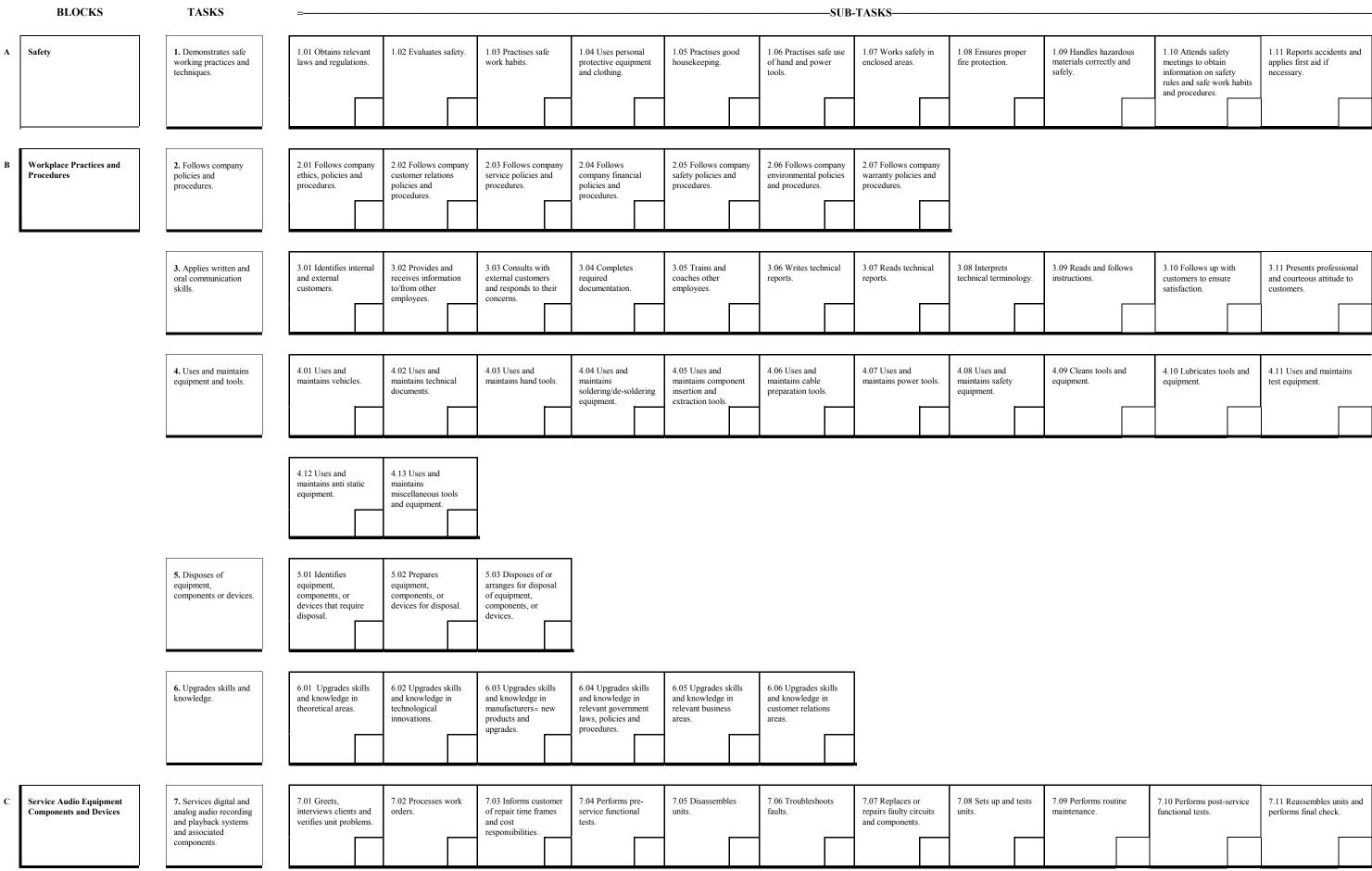
		Nat. Avg.
%	NFNSPENBPQONMASKABBCNTYKND07020NDNV253330014NV	32%
Task 35	Services radio antenna systems. (NOT COMMON CORE)	
		Nat. Avg.
%	NFNSPENBPQONMASKABBCNTYKND055NDNV2501000NV	8%
Task 36	Services television antenna systems.	
		Nat. Avg.
%	NFNSPENBPQONMASKABBCNTYKND02015NDNV303355029NV	30%
Task 37	Services cellular phone antennas.	
		Nat. Avg.
%	NFNSPENBPQONMASKABBCNTYKND0560NDNV20345057NV	30%

APPENDIX "D" ELECTRONICS TECHNICIAN - CONSUMER PRODUCTS

TITLES OF BLOCKS

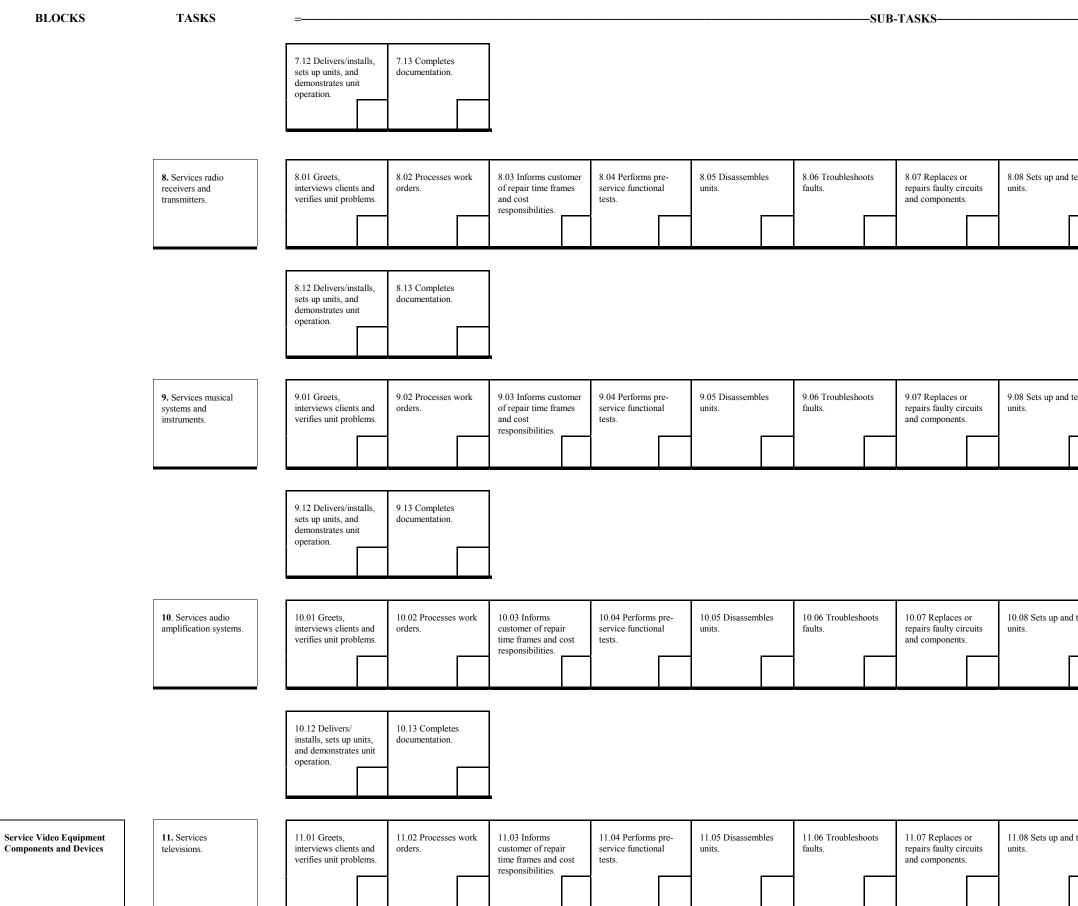
A SAFETY**

- **B WORKPLACE PRACTICES AND PROCEDURES**
- C SERVICE AUDIO EQUIPMENT COMPONENTS AND DEVICES
- D SERVICE VIDEO EQUIPMENT COMPONENTS AND DEVICES
- **E SERVICE TELEPHONE ANSWERING EQUIPMENT COMPONENTS AND DEVICES**
- F SERVICE COMPUTER EQUIPMENT COMPONENTS AND DEVICES
- G SERVICE MICROWAVE EQUIPMENT COMPONENTS AND APPLIANCES
- H SERVICE REMOTE CONTROL EQUIPMENT COMPONENTS AND DEVICES
- I SERVICE POWER SUPPLY EQUIPMENT COMPONENTS AND DEVICES
- J SERVICE ANTENNA SYSTEMS
 - ** Since safety practices are a mandatory feature of all occupations, they are considered common core, ratings are not required and thus Block A does not appear on the chart.



oper	1.09 Handles hazard materials correctly a safely.	 1.10 Attends safety meetings to obtain information on safe rules and safe worl and procedures.	ety	1.11 Reports accider applies first aid if necessary.	nts and

tests	7.09 Performs routine maintenance.	7.10 Performs post-service functional tests.	7.11 Reassembles units and performs final check.



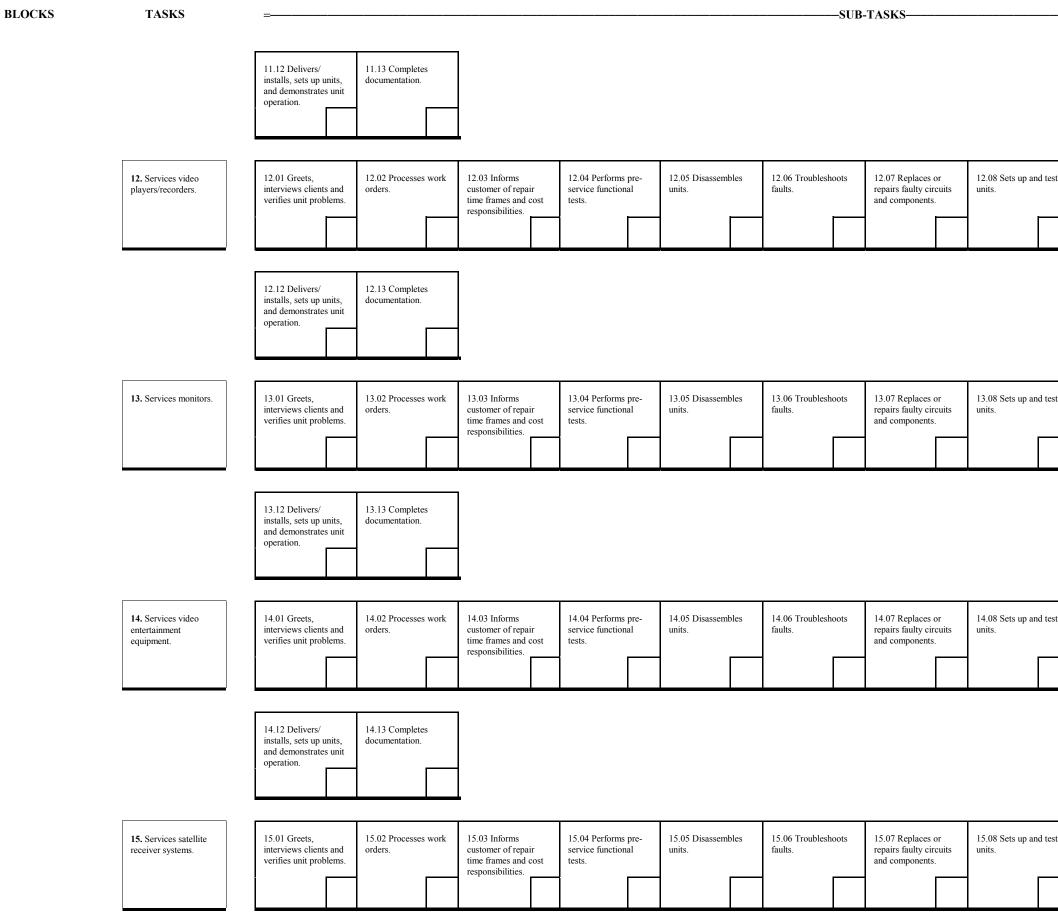
D

l tests	8.09 Performs routin maintenance.	ne	8.10 Performs post-set functional tests.	rvice	8.11 Reassembles ur and performs final cl	
	Γ					

l tests	9.09 Performs routine maintenance.	9.10 Performs post-service functional tests.	9.11 Reassembles units and performs final check.

nd tests	10.09 Performs routine maintenance.	10.10 Performs post-service functional tests.	10.11 Reassembles units and performs final check.

nd tests	11.09 Performs rout maintenance.	ine	11.10 Performs post-s functional tests.	ervice	11.11 Reassembles and performs final	

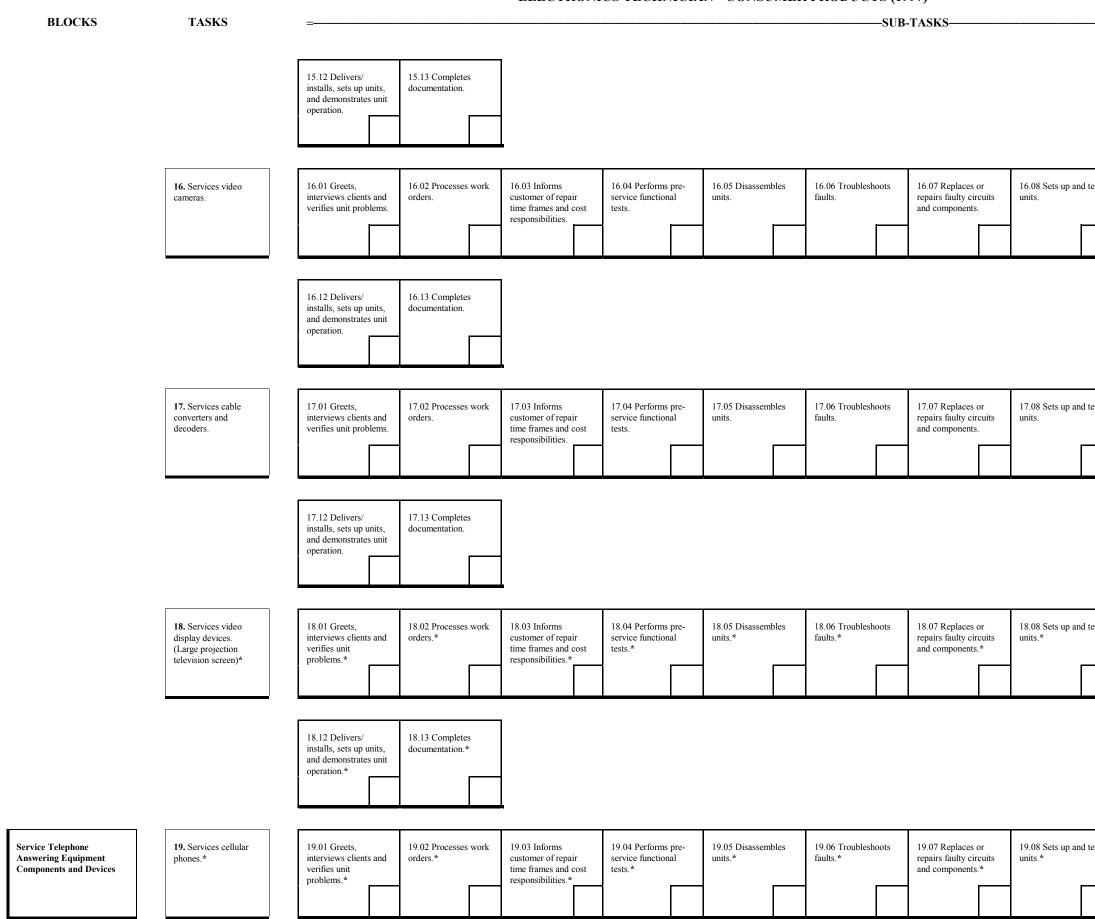


nd tests	12.09 Performs routine maintenance.	12.10 Performs post- service functional tests.	12.11 Reassembles units and performs final check.

nd tests	13.09 Performs routine maintenance.	13.10 Performs post- service functional tests.	13.11 Reassembles units and performs final check.

d tests	14.09 Performs routine maintenance.	14.10 Performs post- service functional tests.	14.11 Reassembles units and performs final check.

d tests	15.09 Performs routine maintenance.	15.10 Performs post- service functional tests.	15.11 Reassembles units and performs final check.



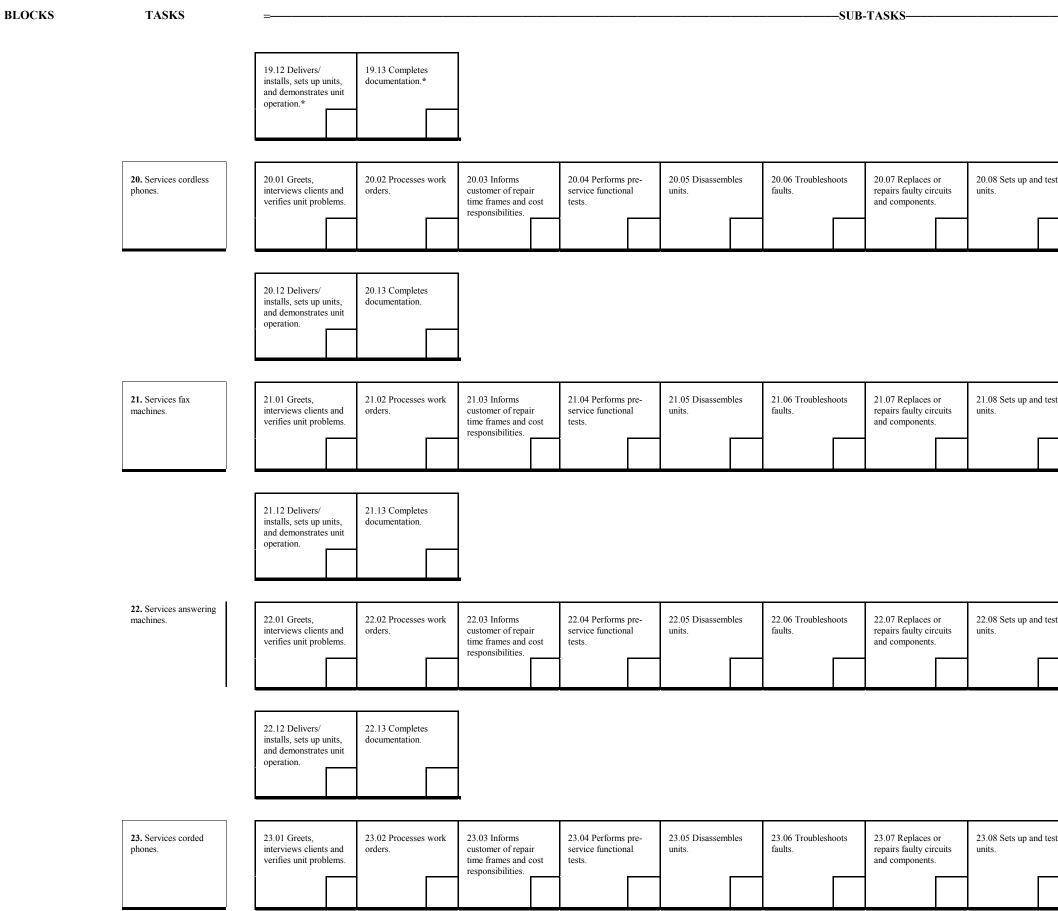
Е

d tests	16.09 Performs routine maintenance.16.10 Performs post-service functional tests.16.11 Reassembles units and performs final check.

nd tests	17.09 Performs routine maintenance.	17.10 Performs post- service functional tests.	17.11 Reassembles units and performs final check.

d tests	18.09 Performs routine maintenance.*	18.10 Performs post- service functional tests.*	18.11 Reassembles units and performs final check.*

id tests	19.09 Performs routine maintenance.*	19.10 Performs post- service functional tests.*	19.11 Reassembles units and performs final check.

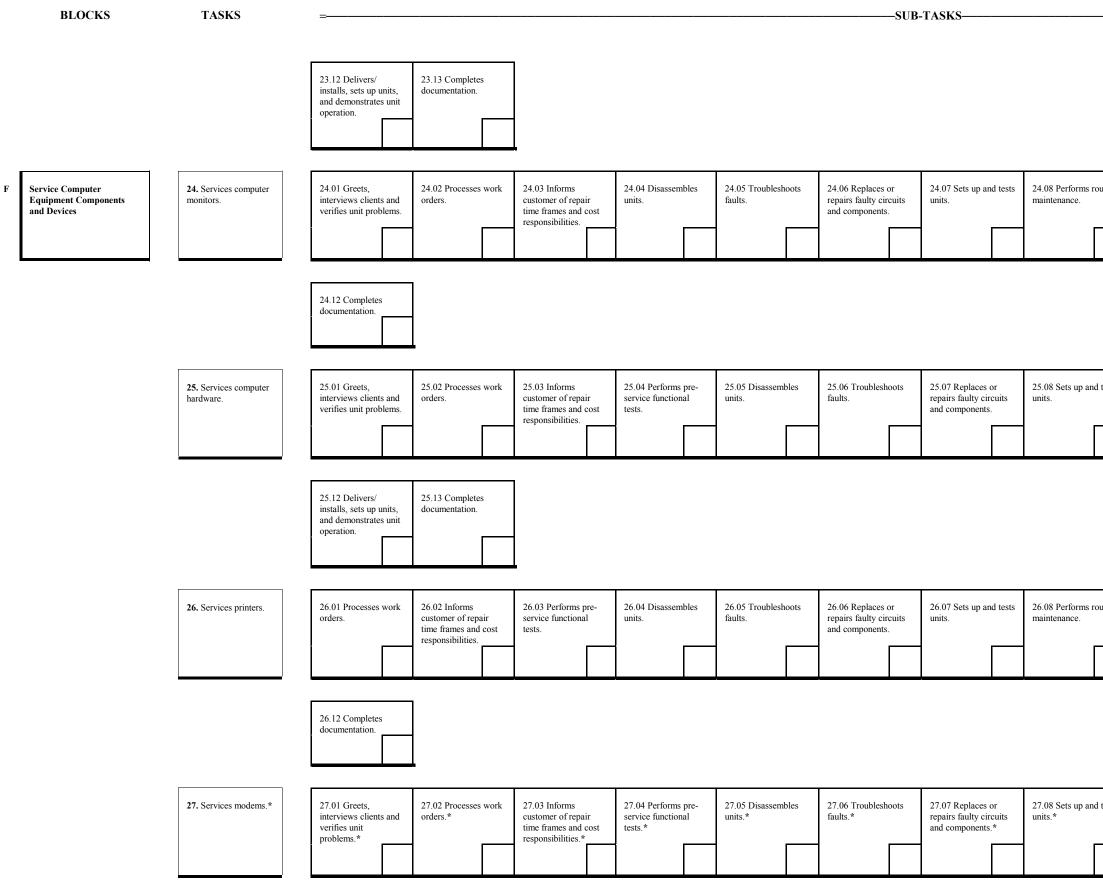


nd tests	20.09 Performs routine maintenance.	20.10 Performs post- service functional tests.	20.11 Reassembles units and performs final check.

nd tests	21.09 Performs routine maintenance.	21.10 Performs post- service functional tests.	21.11 Reassembles units and performs final check.

d tests	22.09 Performs routine maintenance.	22.10 Performs post- service functional tests.	22.11 Reassembles units and performs final check.

d tests	23.09 Performs routine maintenance.	23.10 Performs post- service functional tests.	23.11 Reassembles units and performs final check.



routine	24.09 Performs pos service functional t	24.10 Reassembles u and performs final cl	 24.11 Delivers/inst sets up units, and demonstrates unit operation.	alls,

nd tests	25.09 Performs routine maintenance.	25.10 Perfo service fund	orms post- ctional tests.	25.11 Reassembles and performs final	

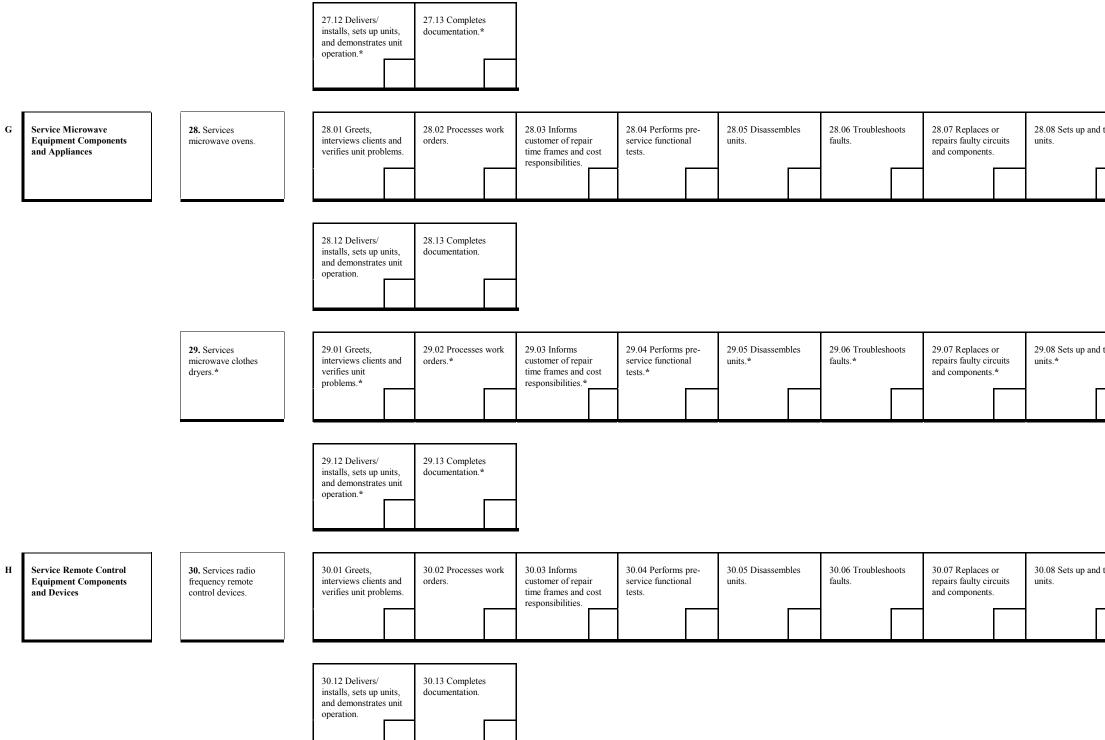
routine	26.09 Performs post- service functional tests.	26.10 Reassembles units and performs final check.	26.11 Delivers/installs, sets up units, and demonstrates unit operation.

nd tests	27.09 Performs routine maintenance.*	27.10 Performs post- service functional tests.*	27.11 Reassembles units and performs final check.

BLOCKS

TASKS

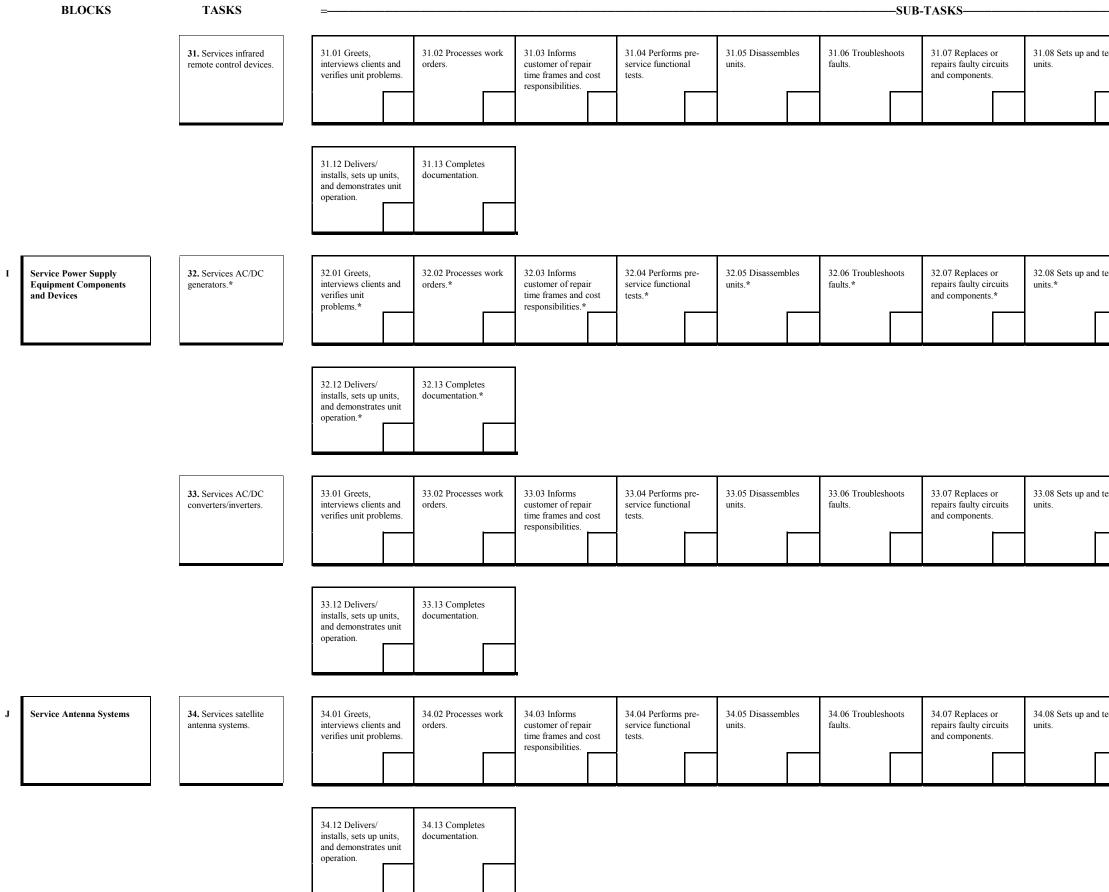
-SUB-TASKS-



nd tests	28.09 Performs routine maintenance.	28.10 Performs post- service functional tests.	28.11 Reassembles units and performs final check.

nd tests	29.09 Performs routine maintenance.*	29.10 Performs post- service functional tests.*	29.11 Reassembles units and performs final check.

ud tests	30.09 Performs routine maintenance.	30.10 Performs post- service functional tests.	30.11 Reassembles units and performs final check.

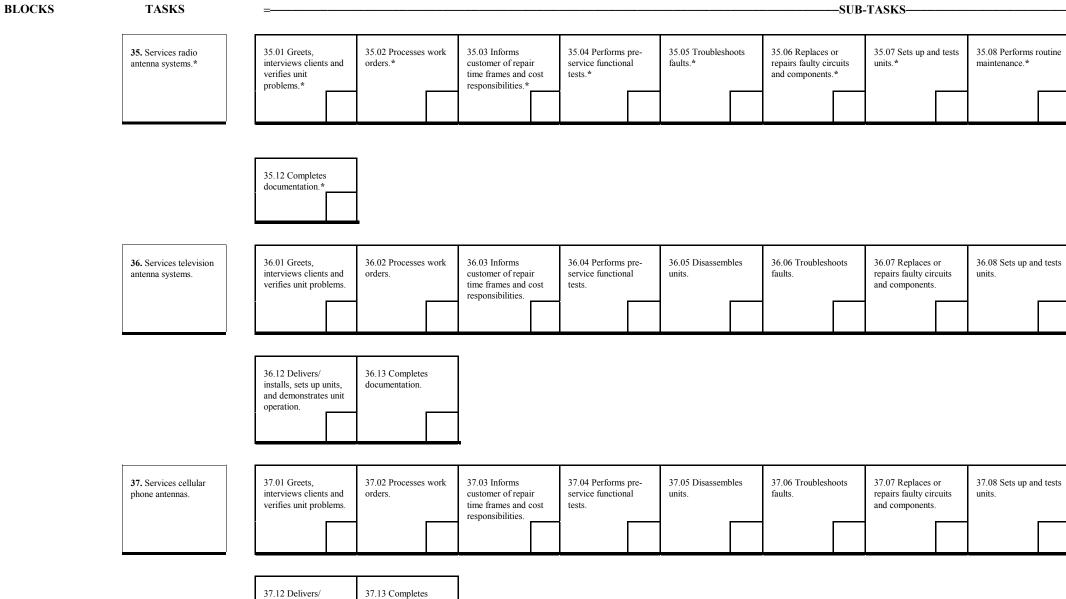


nd tests	31.09 Performs routine maintenance.	31.10 Performs post- service functional tests.	31.11 Reassembles units and performs final check.	

d tests	32.09 Performs routine maintenance.*	32.10 Performs post- service functional tests.*	32.11 Reassembles units and performs final check.

d tests	33.09 Performs routine maintenance.	33.10 Performs post- service functional tests	33.11 Reassembles units and performs final check

d tests	34.09 Performs rout maintenance.	ine	34.10 Performs post- service functional tes	34.11 Reassembles and performs final	



37.12 Delivers/ installs, sets up uni and demonstrates u operation.	37.13 Completes documentation.	3	

routine	35.09 Performs post- service functional tests.*	35.10 Reassembles units and performs final check.*	35.11 Delivers/installs, sets up units, and demonstrates unit operation.*	

d tests	36.09 Performs routine maintenance.	36.10 Performs post- service functional tests.	36.11 Reassembles units and performs final check.

d tests	37.09 Performs routine maintenance.	37.10 Performs post- service functional tests.	37.11 Reassembles units and performs final check.