

# DACUM Research Chart for Avionics Technician

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Duties		Tasks				
<b>A</b>	<b>Assess Job Requirements</b>	A-1 Obtain work order	A-2 Analyze work order	A-3 Verify affectivity of work order for aircraft	A-4 Identify tools, equipment, & materials needed	A-5 Verify personnel qualifications
<b>B</b>	<b>Service Aircraft Communication System</b>	B-1 Conduct communications functional test (e.g., radio, antenna)	B-2 Replace microphone*	B-3 Replace speakers*	B-4 Replace headphone*	B-5 Replace amp switchbox*
<b>C</b>	<b>Service Aircraft Flight Indicators</b>	C-1 Conduct flight indicator functional test	C-2 Replace turn & bank indicator*	C-3 Replace altitude indicator*	C-4 Replace compass* (e.g., RMI, TMI)	C-5 Replace altimeter*
<b>D</b>	<b>Service Aircraft Engine Indicators</b>	D-1 Conduct engine indicators functional test	D-2 Replace tachometer*	D-3 Replace oil pressure indicator*	D-4 Replace oil temperature indicator*	D-5 Replace fuel flow indicator*
<b>E</b>	<b>Service Aircraft Landing Gear Sensors &amp; Indicators</b>	E-1 Conduct landing gear sensors & indicators function tests	E-2 Replace landing gear sensors*	E-3 Replace landing gear indicators*	E-4 Replace anti-skid sensors*	
<b>F</b>	<b>Service Aircraft Flight Control Sensors &amp; Indicators</b>	F-1 Conduct flight control & indicator functional check	F-2 Monitor servo sensor output	F-3 Replace aileron servo sensor and/or indicator*	F-4 Replace rudder servo sensor and/or indicator*	F-5 Replace flaps servo sensor and/or indicator*
<b>G</b>	<b>Service Cabin Environmental Indicators</b>	G-1 Conduct cabin environmental indicators functional tests	G-2 Replace temperature sensors & indicators* (e.g., heating, cooling)		G-3 Replace cabin pressure sensors & indicators*	
<b>H</b>	<b>Service Aircraft Fuel System Indicators</b>	H-1 Verify safety grounding of aircraft	H-2 Conduct fuel system controls & indicators functional test	H-3 Conduct built-in test equipment check	H-4 Conduct diagnostic checks	H-5 Replace fuel systems indicators*
<b>I</b>	<b>Service Auto Pilot/Land Systems</b>	I-1 Conduct auto-pilot/land functional test	I-2 Check auto-pilot components (e.g., flight director & course indicator)		I-3 Replace auto-pilot components*	
<b>J</b>	<b>Document Service Action on Aircraft</b>	J-1 Enter data on work performed (e.g., part #, serial #, aircraft #)		J-2 Verify work order data (e.g., part #, serial #, aircraft #)		J-3 Obtain "sign-offs" (e.g., QA, mechanics)

\*Before return-to-service, the approved functional test must be performed in its entirety w/o discrepancies.

A-6 Review work order safety requirements	A-7 Consult with supervisor & management to resolve discrepancy					
B-6 Replace radio*	B-7 Replace antenna*	B-8 Rebond antenna*	B-9 Replace coaxial cable*	B-10 Replace communications table*		
C-6 Replace airspeed indicator*	C-7 Replace vertical speed indicator* (e.g., VSI, IVSI)	C-8 Replace horizontal situation indicator*				
D-6 Replace fuel pressure indicator*	D-7 Replace EGT indicator*	D-8 Replace horsepower/thrust indicator*				
F-6 Replace elevator servo sensor and/or indicator*	F-7 Replace spoiler servo sensor and/or indicator*	F-8 Replace air break servo sensor and/or indicator*				
			<p><b>ACRONYMS</b></p> <p>QA – Quality Assurance            IND – Indicator            FAA – Federal Aviation Administration            FAR – Federal Aviation Regulations            FCC – Federal Communication Commission            OSHA – Occupational Safety and Health Administration            OEM – Original Equipment Manufacturer            VSI – Vertical Situation Indicator            IVSI – Instantaneous Vertical Situation Indicator            BITE – Built In Test Equipment            EGT – Engine Gas Temperature            HIS – Horizontal Situation Indicator            FD(I) – Flight Director Indicator            TO – Technical Order            RMI –Radio Magnetic Indicator            TMI – True Magnetic Indicator            T&amp;B – Turn and Bank            PA – Public Address</p>			
J-4 Complete work order (e.g., lock out, tag out, serviceability tag/cards)						

← Tasks →				
<b>K</b> <b>Pursue Professional Development</b>	K-1 Perform self-study (e.g., trade publications, manuals)	K-2 Research on WWW	K-3 Consult with peers	K-4 Complete manufacturers training
	K-5 Pursue professional certification (e.g., licenses, meetings, seminars)	K-6 Participate in industry functions (e.g., conferences, meetings, seminars)		K-7 Complete college courses
	K-8 Participate in on-the-job training			

### Tools, Equipment, Supplies and Materials

Basic hand tools	Automatic direction finding tester
Multimeters	Variable omnirange radio altimeter
Wire-strippers	Radio altimeter test boxes
Crimping Tools	Cabin environmental test boxes
Computers	Light meters
Oscilloscope	Headset
Time domain reflectometer	Dust mask
Audio signal generator	Earplugs
Radio signal generator	Respirator
Frequency meters	Gloves
Audiometers	Safety glasses
Radio frequency power meter	Visor shield
Audio sound level meter	Paper jump suit
Jet calibration	Nomex jump suit
Fuel quantity calibration test box	Tape (masking, duct)
Navigation test box	Paint/stripper
Lubricants	Acetone
Oils	Triclorethane
Hazmet (acids, alkaline, etc.)	Sand paper
Aladine	Grinding Stones
Corrosion prevention	Brushes (wire, bristle)
Cotton Swabs	Alcohol (denaturalized)

### Worker Behaviors

Patient	Punctual
Follow directions, policies, and procedures	Positive attitude
Balance work and family	Safety conscious
Alert to the situation	Appropriate dress
Persistence (in trouble-shooting)	Attention to detail
Drug and alcohol free	No horseplay
Admit mistakes immediately	Analytical

### Future Trends and Concerns

Shortage of skill technicians  
 "Black boxes" will become disposable  
 Major installation of avionic equipment  
 Increase in job openings  
 More emphasis on training of technicians