CHAPTER 49

AUXILIARY POWER



CHAPTER 49 AUXILIARY POWER

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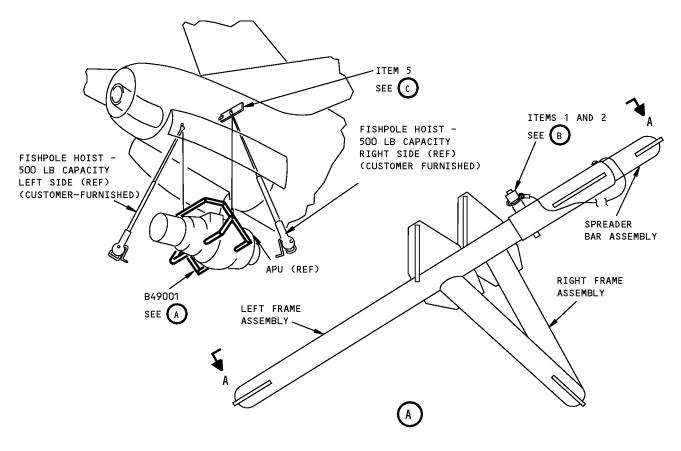


PART NUMBER: B49001-1, -35

NAME:	FRAME - AUXILIARY POWER UNIT (APU) INSTALLATION AND REMOVAL
AIRPLANE MAINTENANCE:	YES
COMPONENT MAINTENANCE:	YES
USAGE & DESCRIPTION:	This tool is a structural frame unit that secures the APU during removal/ installation operations. This tool is used with two customer-furnished fishpole hoists. The B49001-35 is used on both 757/767-200 and -300 airplanes. Refer to CMM 49-11-13, AMM 49-11-01, AMM 49-13-01, and AMM 49-13-02 for further usage instructions. The -1 consists of left and right beam assemblies, a spreader bar assembly and related hardware. The -36 beam assembly is part of the B49001-35 and is used to service the 767-200 and -300 airplanes.
WEIGHT:	55 lbs (25 kg)
DIMENSIONS:	19 x 36 x 43 inches (483 x 914 x 1092 mm)
<u>NOTE</u> :	B49001-1 or -35 frame with B49002-64 stand is an alternate to A49001-3,-73,-77 support cradle. B49001-35 supersedes B49001-34.







Auxiliary Power Unit Installation and Removal Frame Figure 1 (Sheet 1 of 2)

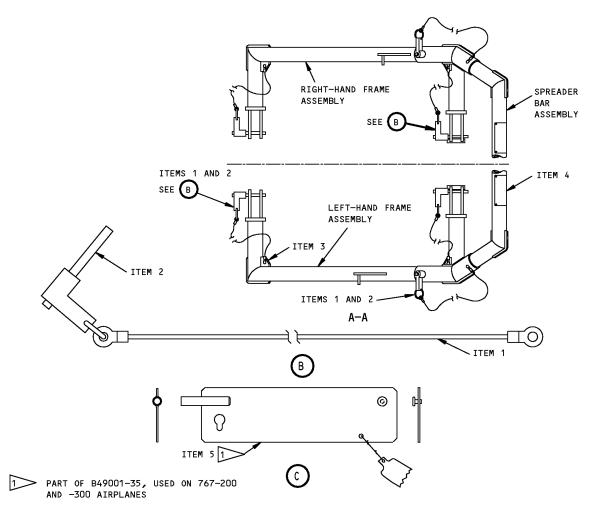


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Auxiliary Power Unit Installation and Removal Frame Figure 1 (Sheet 2 of 2)

	REPAIRABLE/REPLACEABLE PARTS				
ITEM NO.	ITEM NO. PART NO. NOMENCLATURE VENDOR CODE				
1	CL-63-KA-12	CABLE ASSEMBLY	V99862		
2	NAS1335C5C2.OD	BALL LOCKPIN			
3	NAS600-3P	SCREW			
4	F70308-2	PROOF LOAD TAG			
5	-36	BEAM ASSEMBLY			







PART NUMBER: B49002-64

NAME:	MAINTENANCE/TRANSPORTATION	STAND -	AUXILIARY	POWER	UNIT
	(APU)				

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: This tool is used with the B49001 frame to support the APU for lifting, transportation and storage operations. Lifting operations require the use of a customer-supplied commercial transmission jack. Refer to CMM 49–11-13 and AMM 49-00-01 for further usage instructions.

WEIGHT: 260 lbs (118 kg)

DIMENSIONS:

33 x 52 x 86 inches (838 x 132 x 2184 mm)

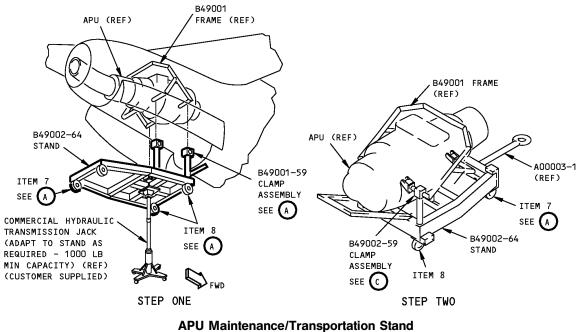
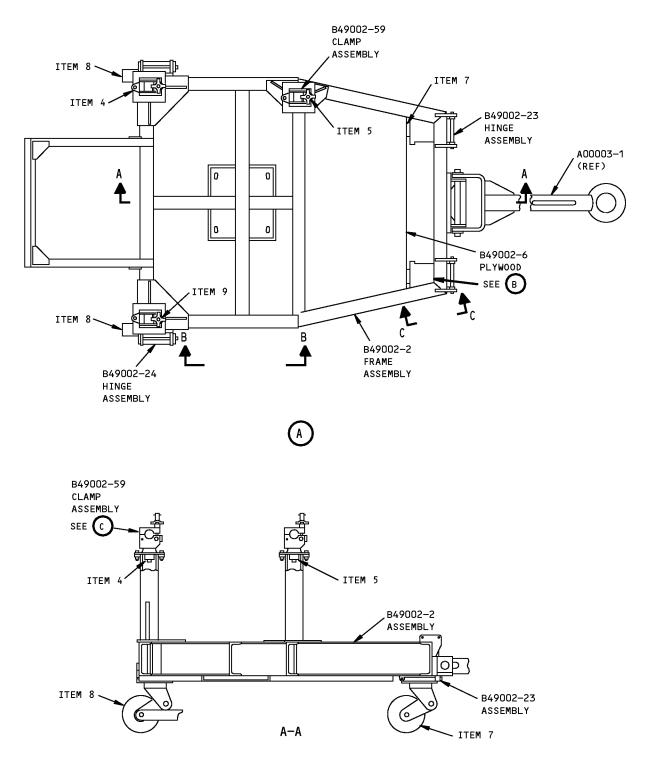


Figure 1 (Sheet 1 of 3)





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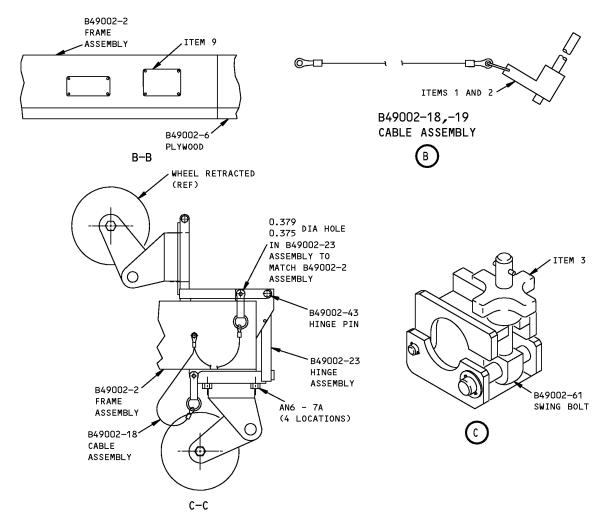


APU Maintenance/Transportation Stand Figure 1 (Sheet 2 of 3)





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APU Maintenance/Transportation Stand Figure 1 (Sheet 3 of 3)

	REPAIRABLE/REPLACEABLE PARTS			
ITEM NO.	PART NO.	NOMENCLATURE	VENDOR CODE	
1	NAS1335C5C5.0D	PIN		
2	NAS1335C5C1.0D	PIN		
3	CL-4-HK-4	KNOB	V99862	
4	507-1-N-S	SHOCK ISOLATOR	V13636	
5	508-5-N-S	SHOCK ISOLATOR	V13636	
6	508-3-N-S	SHOCK ISOLATOR	V13636	
7	33-10-S-6-20-185	CASTER	V01083	
8	33-10-R-6-20-185-WB22	CASTER	V01083	

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REPAIRABLE/REPLACEABLE PARTS				
ITEM NO.	ITEM NO. PART NO. NOMENCLATURE VENDOR CODE			
9	F70308-2	PROOF LOAD TAG		





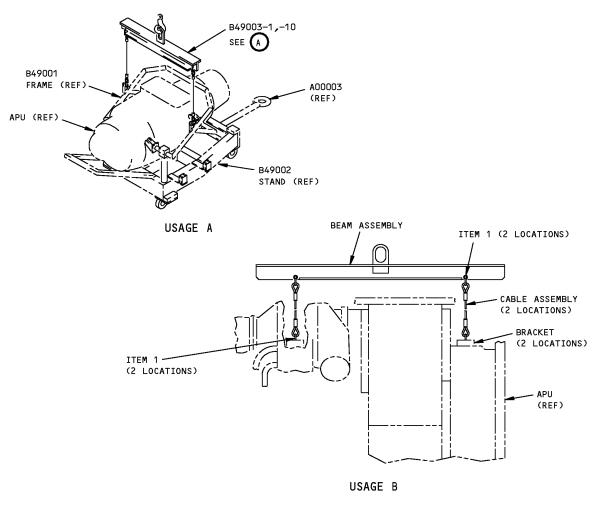


PART NUMBER: B49003-1, -10

NAME:	HANDLING SLING - AUXILIARY POWER UNIT (APU)
AIRPLANE MAINTENANCE:	YES
COMPONENT MAINTENANCE:	YES
USAGE & DESCRIPTION:	This tool is a beam and sling assembly that is used for off-airplane handling of the APU. It can be used to lift the APU mounted in the B49001 frame and B49002 stand (Usage A) or to support the bare APU for installation of the B49001 frame (Usage B). Refer to CMM 49-11-00 and AMM 49-13-03 for complete usage instructions.
DIMENSIONS:	3 x 9 x 45 inches (76 x 229 x 1143 mm)
NOTE:	B49003-10 replaces B49003-1 for future procurement.





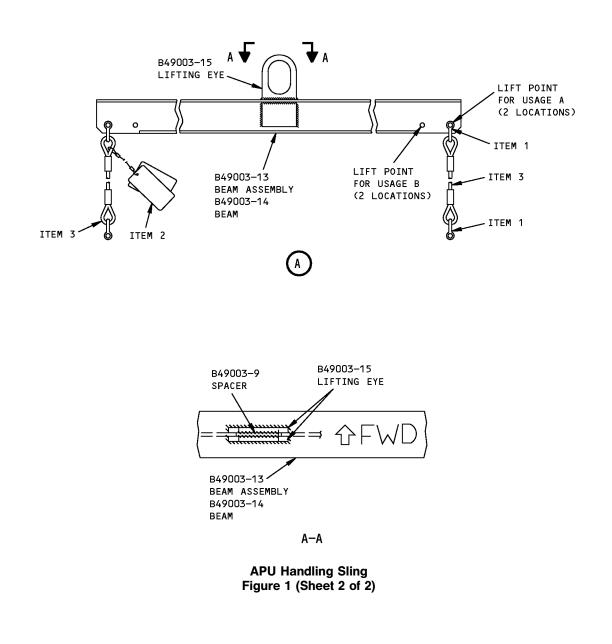


APU Handling Sling Figure 1 (Sheet 1 of 2)





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Repairable/Replaceable Parts				
ITEM NO.	PART NO.	NOMENCLATURE	VENDOR CODE	
1	G209-5/16	SHACKLE	V75535	
2	F70308-15	PROOF LOAD TAG		
3	-6	CABLE ASSEMBLY		







PART NUMBER: B49004-1

NAME:	SUPPORT EQUIPMENT - AUXILIARY POWER UNIT (APU)
AIRPLANE MAINTENANCE:	YES
COMPONENT MAINTENANCE:	NO
USAGE & DESCRIPTION:	This tool is a piece of supporting equipment that is used with B49001-1 Frame and B49002-1 Stand during removal/installation operations on the APU. Refer to AMM 49-11-01 for further usage instructions.
WEIGHT:	70 lbs (32 kg)
DIMENSIONS:	24 x 24 x 30 inches (610 x 610 x 762 mm)





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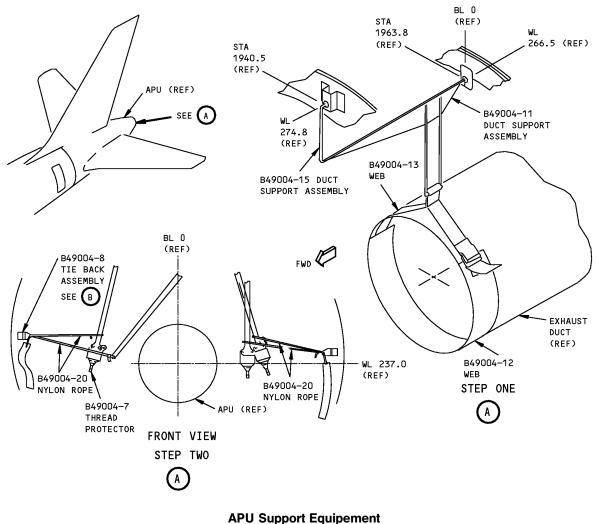
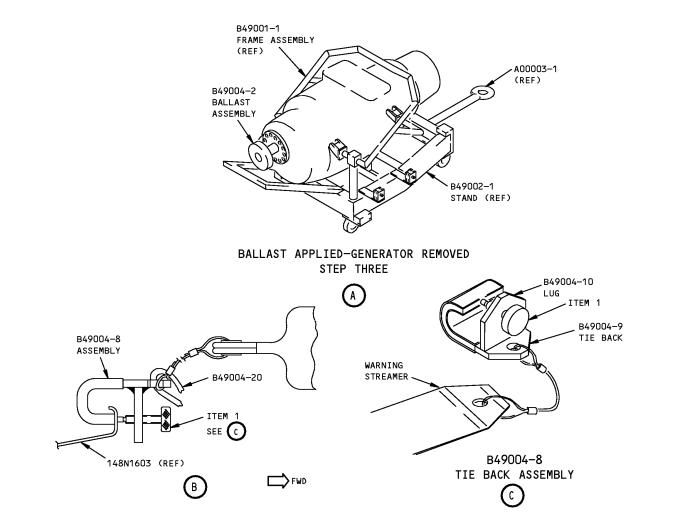


Figure 1 (Sheet 1 of 2)









APU Support Equipement Figure 1 (Sheet 2 of 2)

Repairable/Replaceable Parts				
ITEM NO.	PART NO.	NOMENCLATURE	VENDOR CODE	
1	ADB-52007	TOGGLE SCREW		







PART NUMBER: A49005-1

NAME:

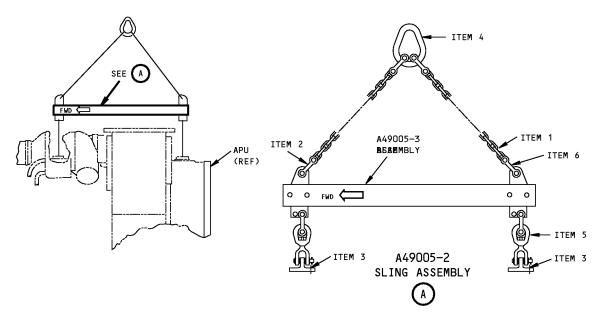
SLING - APU SHOP HANDLING

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: This sling is used in shop handling procedures. The -3 beam assembly consists of welded attach locations that locate items -1 and -2 chains in a fixed position for lifting the APU. Refer to CMM 49-11-11 and CMM 49-11-14 for further usage instructions.

DIMENSIONS: 6 x 25 x 30 inches (152 x 635 x 762 mm)



APU Shop Handling Sling Figure 1

Repairable/Replaceable Parts			
ITEM NO.	PART NO.	NOMENCLATURE	VENDOR CODE
1	-9	CHAIN	V75535
2	-10	CHAIN	V75535
3	AN6-6	BOLT	
4	G341-5/8	SLING LINK	V75535
5	G403-3/8	JAW END	V75535

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Repairable/Replaceable Parts			
ITEM NO.	PART NO.	NOMENCLATURE	VENDOR CODE
6	S247-1/4	DOUBLE CLEVIS LINK	V75535
7	F70308-2	PROOF LOAD TAG	







PART NUMBER: B49006-1

NAME:

DISPATCH KIT - APU GENERATOR (REMOVED)

AIRPLANE MAINTENANCE: YES

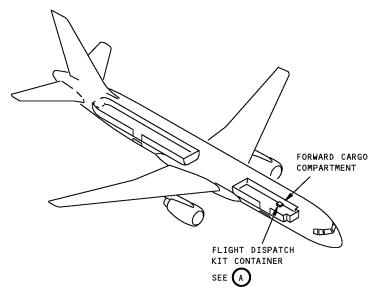
COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The B49006-1 dispatch kit is used on all 757 airplanes. B49006 is used to allow an airplane to be dispatched with the APU generator removed while the APU is kept in service. The B49006-1 dispatch kit is kept on board the airplane in the flight dispatch kit. Refer to AMM 25-13-01 and the 757 Dispatch Deviation Guide, 2-24-00-2.0, for complete usage information. B49006-1 consists of a 3862212-3 generator pad cover, a B49006-4 protective cap and a B49006-5 nylon line assembly, all contained in a storage bag. The storage bag and contents are contained in the airplane's flight dispatch kit container.

WEIGHT: 4 lbs (2 kg)

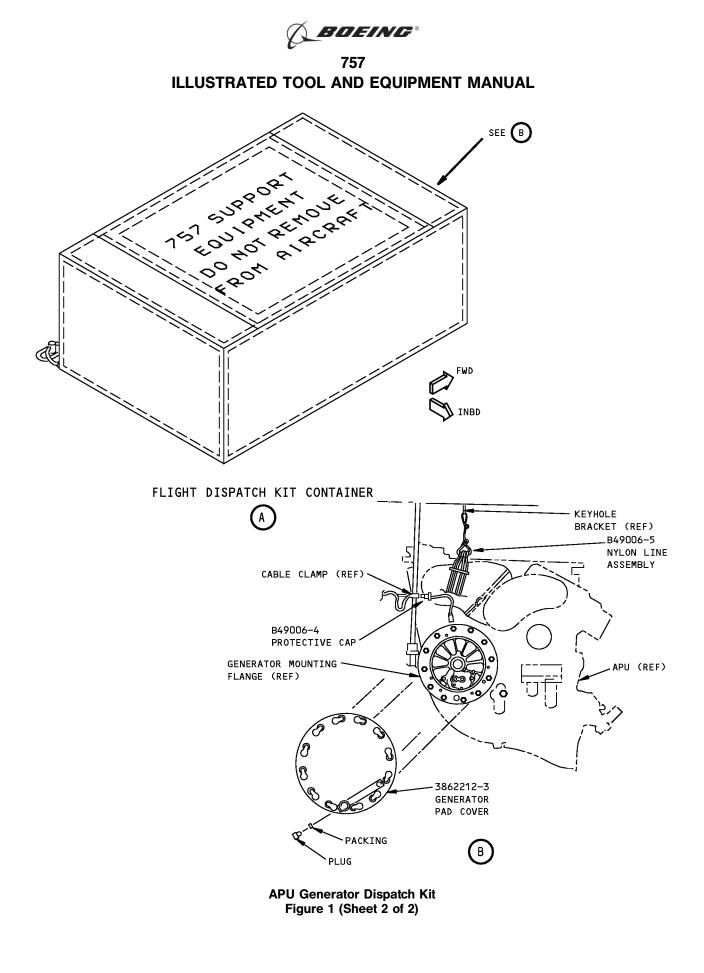
DIMENSIONS:

2 x 14 x 16 inches (51 x 356 x 406 mm)



APU Generator Dispatch Kit Figure 1 (Sheet 1 of 2)





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PART NUMBER: A49001-3, -17, -73, -78, -83, -84

NAME:

CRADLE - APU

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: A49001 cradle equipment is used on all 757 airplanes. Three A49001-17 ballast assemblies, the A49001-83 jack equipment and the A49001-84 hoist equipment replace the A49001-3 ballast assemblies, the A49001-73 jack equipment and the A49001-78 hoist equipment respectively. The A49001 cradle equipment is used for installation and removal of the auxiliary power unit (APU) by means of two, customer furnished, fishpole hoists or jacking equipment. The APU rests in an A49001-85 cradle when using A49001-83 or -84 equipment. The APU rests in an A49001-71 (or optional, A49001-80) cradle when using A49001-73 or -78 equipment. The APU can be transported when mounted on an A49001 hoisting or jacking cradle by using a customerfurnished A49003 transportation dolly. If an APU is to be removed with hoists, A49001-78 or -84 hoist equipment is used, which includes A49001-69 and -70 arm assemblies. Also required are two customer-furnished, fish pole hoists. If an APU is to be removed with jacking equipment, A49001-73 or -83 jack equipment is used (the A49001-69 and -70 arm assemblies are not required), along with a customer-furnished J20009 jacking equipment or a customerfurnished, modified minimum 1000 lb capacity, transmission jack and a scissorlift platform. When an APU is removed or installed with the generator removed, three A49001-17 ballast assemblies are installed for balance of the A49001 hoisting or jacking cradle assembly. The A4900-3 ballast assembly consists of three A49001-17 ballast assemblies contained in a storage box. The A49001-17 consists of 26 lbs of lead or steel ballast and attaching hardware. The required three A49001-17 ballast assemblies may be purchased separately, without the storage box furnished with the A49001-3 ballast assembly. Refer to AMM 49-11-01, CMM 49-11-11, and CMM 49-11-13 for complete usage information. The APU cradle equipment consists of:

A49001-3			
QUANTITY NOMENCLATURE		PART NUMBER	
3	BALLAST ASSEMBLY	A49001-17	
1	STORAGE BOX	F70313-2	

A49001-73		
QUANTITY NOMENCLATURE PA		PART NUMBER
1	ASSEMBLY	A49001-52
1	CRADLE ASSEMBLY	A49001-72



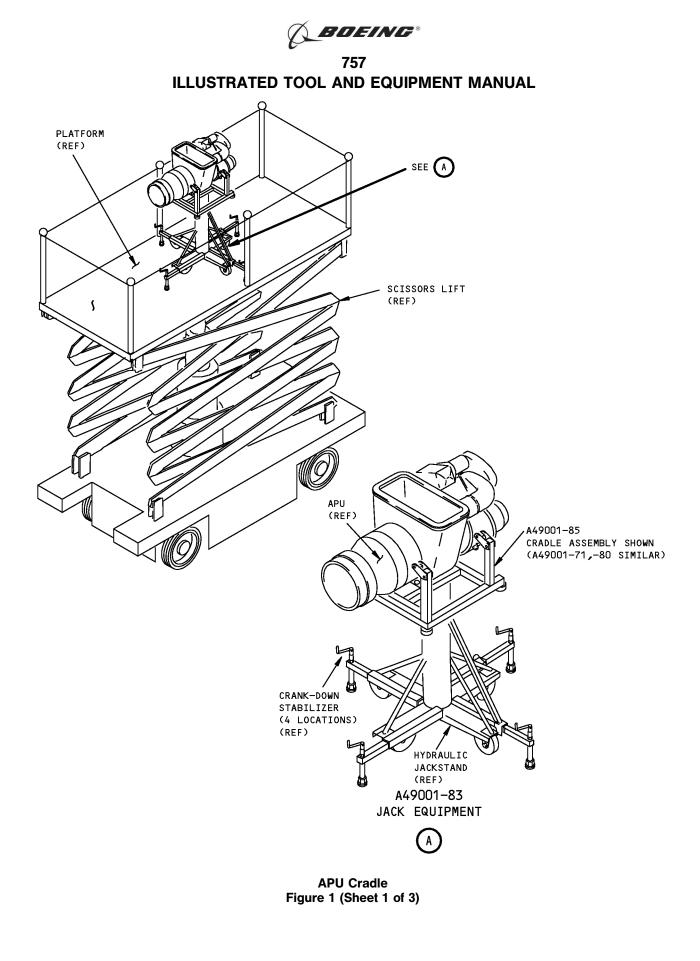
A49001-78			
QUANTITY NOMENCLATURE PART NUMBER		PART NUMBER	
1	ARM ASSEMBLY	A49001-69	
1	ARM ASSEMBLY	A49001-70	
1	BEAM ASSEMBLY	A49001-75	
1	CRADLE ASSEMBLY	A49001-71,-80	

A49001-83			
QUANTITY NOMENCLATURE PART N		PART NUMBER	
1	ASSEMBLY	A49001-52	
1	CRADLE ASSEMBLY	A49001-85	

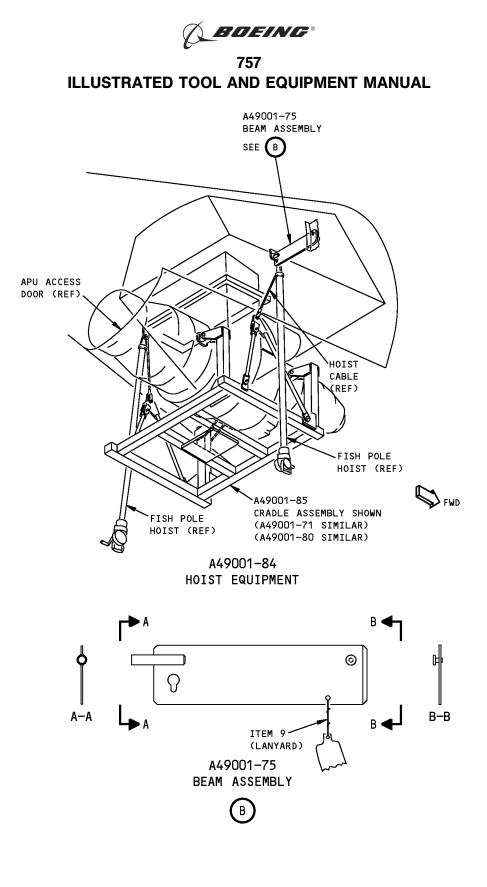
A49001-84			
QUANTITY	NOMENCLATURE	PART NUMBER	
1	ARM ASSEMBLY	A49001-69	
1	ARM ASSEMBLY	A49001-70	
1	BEAM ASSEMBLY	A49001-75	
1	CRADLE ASSEMBLY	A49001-85	

WEIGHT:	A49001-3 - 81lbs (37 kg) - BALLAST ASSEMBLY A49001-17 - 27 lbs (12 kg) - BALLAST ASSEMBLY A49001-69 - 3 lbs (1 kg) - ARM ASSEMBLY A49001-70 - 3 lbs (1 kg) - ARM ASSEMBLY A49001-74 - 3 lbs (1 kg) - BEAM ASSEMBLY A49001-85 - 213 lbs (97 kg) - CRADLE ASSEMBLY
DIMENSIONS:	18 x 35 x 38 inches (457 x 889 x 965 mm)
<u>NOTE</u> :	A49001-85 replaces A49001-78 for future procurement. A49001-83 replaces A49001-73 for future procurement. A49001-78 supersedes A49001-77.







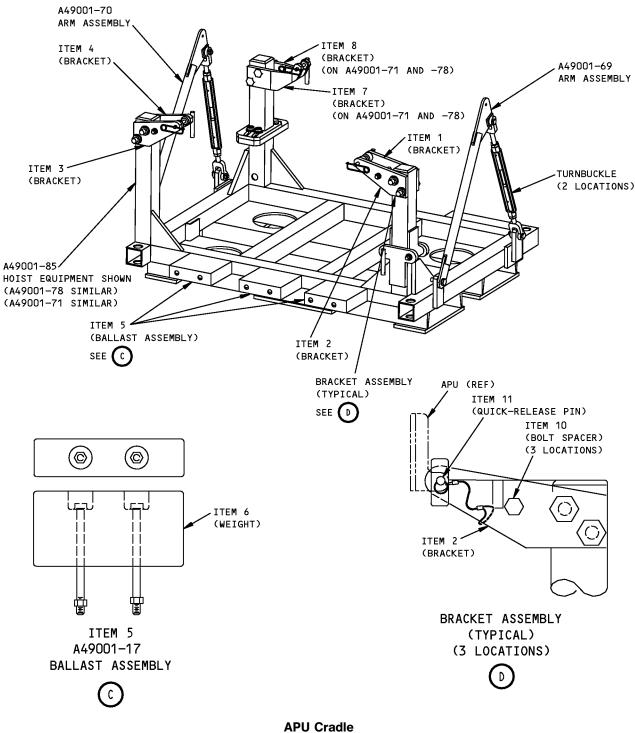


APU Cradle Figure 1 (Sheet 2 of 3)



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APU Cradle Figure 1 (Sheet 3 of 3)





REPAIRABLE/REPLACEABLE PARTS			
ITEM NO.	PART NO.	NOMENCLATURE	VENDOR CODE
1	A49001-67	BRACKET ASSEMBLY	
2	A49001-68	BRACKET ASSEMBLY (OPPOSITE -67)	
3	A49001-62	BRACKET ASSEMBLY	
4	A49001-63	BRACKET ASSEMBLY (OPPOSITE -62)	
5	A49001-17	BALLAST ASSEMBLY	
6	A49001-43	BALLAST WEIGHT	
7	A49001-82	BALLAST ASSEMBLY (OPTIONAL)	
8	A49001-65	BRACKET ASSEMBLY	
9	A49001-66	BRACKET ASSEMBLY (OPPOSITE -65)	
10	CL-23-KA-10.0LR	LANYARD	V99862
11	NAS43HT6-128	BOLT SPACER	
12	A49001-107	BOLT SPACER (OPTIONAL)	
13	NAS1335C2C31D	QUICK-RELEASE PIN	





PART NUMBER: A49003-1, -12

NAME:	TRANSPORTATION DOLLY - AUXILIARY POWER UNIT
AIRPLANE MAINTENANCE:	YES
COMPONENT MAINTENANCE:	NO
USAGE & DESCRIPTION:	This tool is used with the A49001 APU cradle for storing and transporting the APU. This transportation dolly is a welded structure with both towing and forklift provisions. Refer to AMM 49-11-01 for further usage instructions. The transportation dolly consists of a welded steel frame assembly, a tow bar, casters and four shock isolator mounting points for the APU.
WEIGHT:	500 Lbs (227 kg)
DIMENSIONS:	18 inches x 54 inches x 11 feet (457 x 1372 x 3353 mm)
<u>NOTE</u> :	A49003-12 replaces A49003-1 for future procurement.

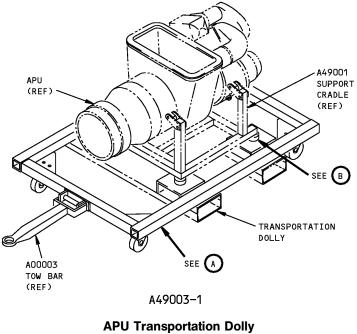
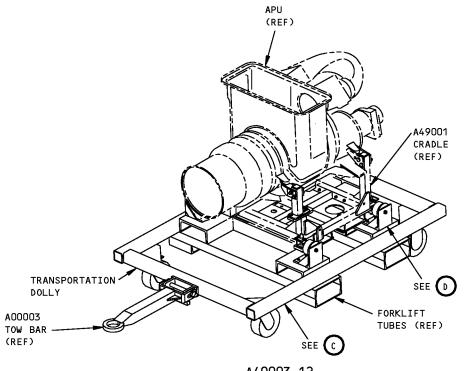


Figure 1 (Sheet 1 of 4)

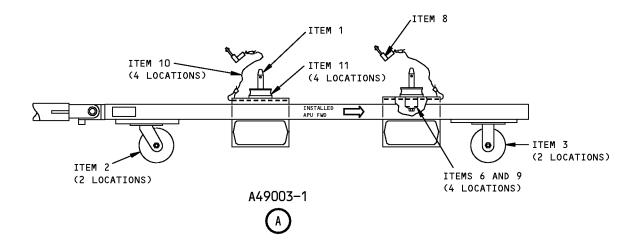




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A49003-12

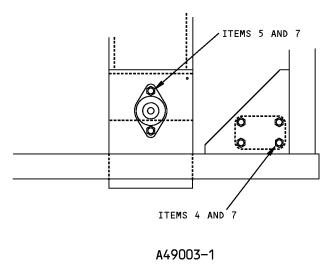


APU Transportation Dolly Figure 1 (Sheet 2 of 4)

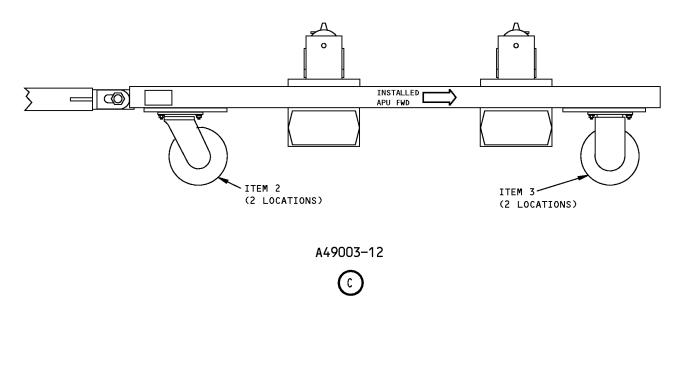












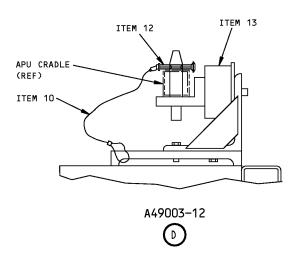
APU Transportation Dolly Figure 1 (Sheet 3 of 4)





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APU Transportation Dolly Figure 1 (Sheet 4 of 4)

	REPAIRABLE/REPLACEABLE PARTS			
ITEM NO.	PART NO.	NOMENCLATURE	VENDOR CODE	
1	-3	LOCATOR PIN		
2	-10	SWIVEL CASTER		
3	-11	RIGID CASTER		
4	AN8-12A	BOLT		
5	AN8-14A	BOLT		
6	NAS1021C12	NUT		
7	NAS1021N8	NUT		
8	NAS1336C5C20D	BALL LOCKPIN		
9	MS35338-51	LOCKWASHER		
10	CL-22-KA-12.0LR	LANYARD	V99862	
11	512-4-N-S	ISOLATOR	V81860	
12	512-4-R-S	ISOLATOR (OPTIONAL)	V81860	
13	28-02	SNAPPER PIN	V96652	
14	J-18101-7	SHOCK ISOLATOR	V30676	







PART NUMBER: J20009-38, -70, -78

NAME:

JACKING EQUIPMENT - HYDRAULIC TELESCOPING

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: Either the J20009-38 or -78 (preferred) hydraulic jack assembly is used with a J20009-70 cradle adapter on all 757 airplanes.

J20009-38 and -78 are telescoping hydraulic jacks, used to remove or install various airplane components. The J20009-38 and -78 jack lift is 42.5 inches (1080 mm) and the capacity is 3300 lbs (1497 kg). J20009-38 and -78 jacking equipment include casters for local transportation, but are not to be towed.

The J20009-70 cradle adapter is used with the J20009-38 or -78 hydraulic jack assemblies and a customer-furnished A49001 APU cradle. Refer to the current J20009 drawing and AMM 49-11-01 for complete usage instructions.

J20009-78 hydraulic jack assembly and J20009-70	cradle adapter consist of:

I	J20009-78 HYDRAULIC JACK ASSEMBLY		
	QUANTITY	NOMENCLATURE	PART NUMBER
	16	SOCKET HEAD CAP SCREW	J20009-5
	16	PLAIN WASHER	J20009-6
	4	CASTER	J20009-7
	4	INNER PIN ASSEMBLY	J20009-8
I	4	SPRING PIN	J20009-10
	4	OUTRIGGER ASSEMBLY	J20009-40
	4	OUTER PIN ASSEMBLY	J20009-41
	1	HANDLE ASSEMBLY	J20009-56
	1	WRENCH ASSEMBLY	J20009-60
I	1	JACK BASE ASSEMBLY	J20009-79
I	1	LEVEL ADAPTER	J20009-80
	1	LANYARD	CL-22-KA-48.0LR
	3	SET SCREW	SC2-41
	1	LEVEL	2-6001

I	J20009-70 CRADLE ADAPTER		
	QUANTITY	NOMENCLATURE	PART NUMBER
I	1	CRADLE ADAPTER	J20009-71

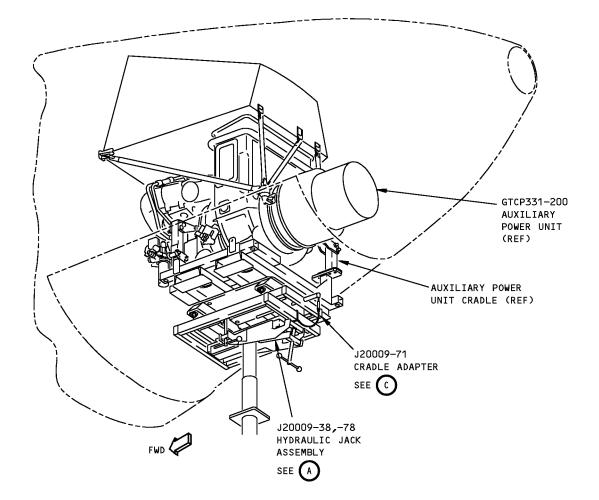




1	J20009-70 CRADLE ADAPTER				
	QUANTITY	NOMENCLATURE	PART NUMBER		
I	1	STORAGE BOX			
WEIGHT:		J20009-38 - 780 lbs (354 kg) J20009-70 - 34 lbs (15 kg) J20009-78 - 780 lbs (354 kg)			
I	DIMENSIONS:	J20009-38 - 48 x 51 x 62 inches (1219 x 1295 x 1 J20009-70 - 11 x 20 x 25 inches (279 x 508 x 635 J20009-78 - 48 x 51 x 62 inches (1219 x 1295 x 1	imm)		
I !	NOTE	J20009-78 replaces J20009-38 for future procure	ment.		



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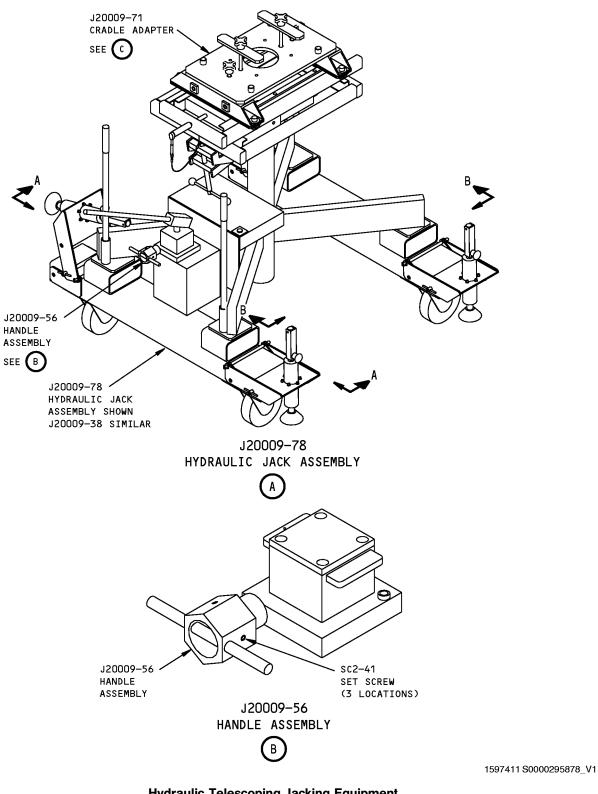
Hydraulic Telescoping Jacking Equipment Figure 1 (Sheet 1 of 4)





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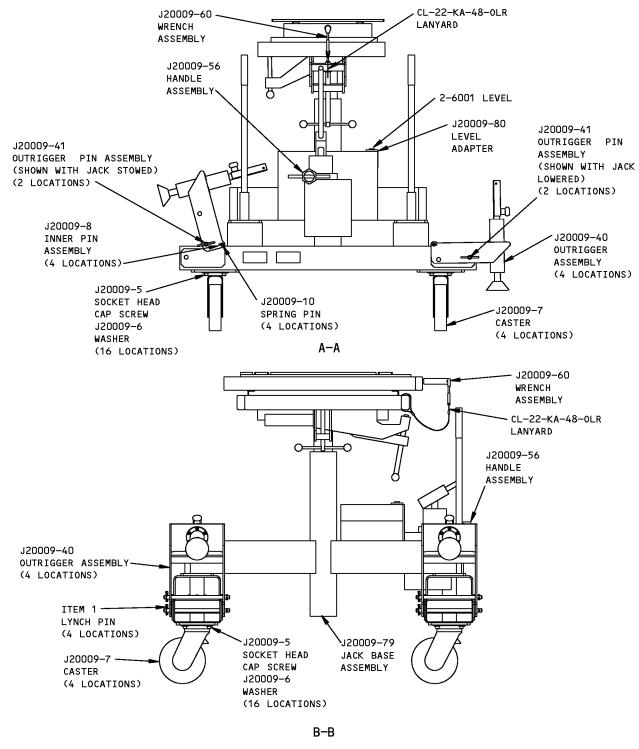


Hydraulic Telescoping Jacking Equipment Figure 1 (Sheet 2 of 4)





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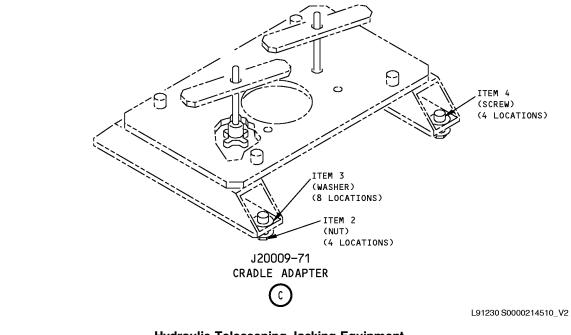
Hydraulic Telescoping Jacking Equipment Figure 1 (Sheet 3 of 4)







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Hydraulic Telescoping Jacking Equipment Figure 1 (Sheet 4 of 4)

I

	REPAIRABLE/REPLACEABLE PARTS				
	ITEM NO.	PART NO.	NOMENCLATURE	VENDOR CODE	
I	1	63–01	LYNCH PIN	7V765	
I	2	J20009-15	HEX NUT		
I	3	J20009-16	PLAIN WASHER		
İ	4	J20009-17	SOCKET HEAD CAP SCREW		







PART NUMBER: 289544-6

NAME:

TESTER - APU FUEL MANIFOLD

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

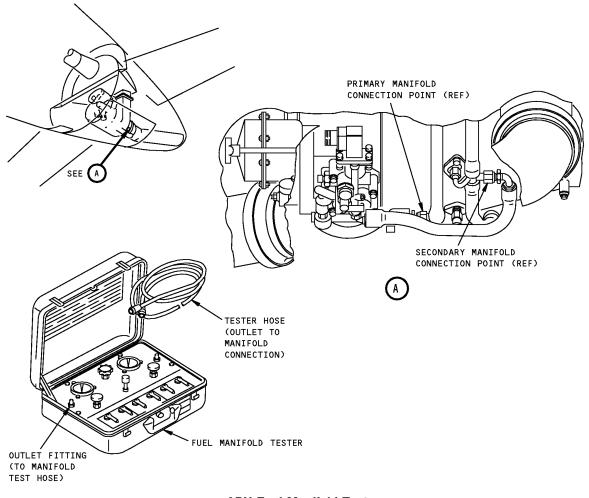
USAGE & DESCRIPTION: This tool is used to check flow through primary and secondary fuel nozzles and to leak check manifold assembly. The tool consists of encased instrumentation. Refer to AMM 49-11-00 for further instructions.

NOTE: This tool is a vendor proprietary item and can only be obtained from AiResearch Manufacturing Division of Garrett Corp., 2525 West 190th Street, Torrance, California 90509

DIMENSIONS: 7 x 13 x 18 inches (178 x 339 x 457 mm)



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APU Fuel Manifold Tester Figure 1





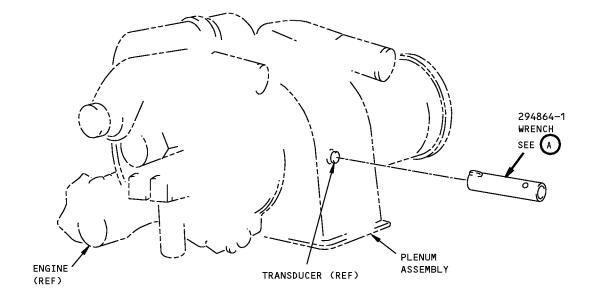
PART NUMBER: 294864-1

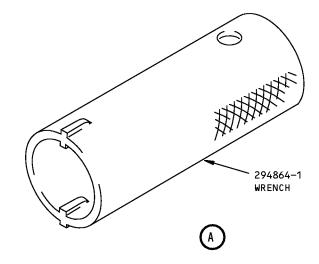
NAME:	WRENCH - APU TRANSDUCER REMOVAL
AIRPLANE MAINTENANCE:	YES
COMPONENT MAINTENANCE:	NO
USAGE & DESCRIPTION:	This tool is used to remove the 3876026-1 or -2 transducer from either side of the plenum assembly, especially during normal operational use. Refer to AMM 49-61-02 for further instructions.
DIMENSIONS:	2 x 2 x 4 inches (51 x 51 x 102 mm)





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APU Transducer Removal Wrench Figure 1





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