CHAPTER

20

STANDARD PRACTICES - AIRFRAME

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A = Added, R = Revised, O = Overflow, D = Deleted

20-EFFECTIVE PAGES

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PART NUMBER: F72959-1, -2, -3, -4, -5, -6, -7, -8, -9, -10, -11, -12, -31, -32, -33, -34, -35, -36, -37, -38, -39, -40, -41, -42

NAME: SPANNER WRENCH - AN STANDARD TYPE

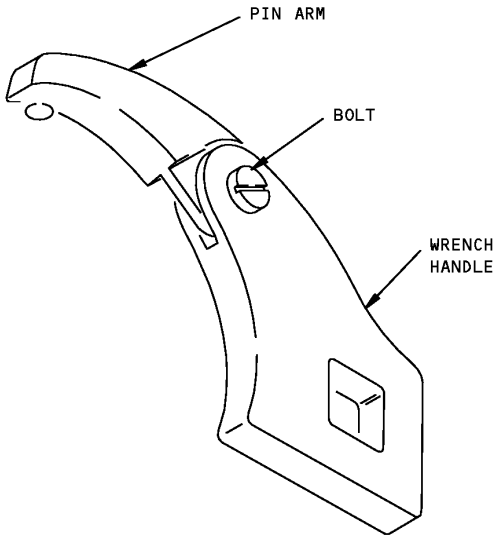
AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: This tool provides a full range of standard AN spanner wrench sizes for maintenance operations throughout the airplane. The twelve dash numbers cover a diameter range of 0.75 to 6.00 inches. Each dash number comprises one complete wrench; consisting of a handle, a pin arm and a bolt. Dash numbers -1 thru -4 are 3/4-inch square drive, the others are 1/2-inch square drive. Dash numbers -31 thru -42 are identical to -1 thru -12 respectively except tolerance.

DIMENSIONS: 2 x 8 x 8 inches (51 x 203 x 203 mm)

NOTE: F72959-1 thru F72959-12 replaced by F72959-31 thru -42 respectively.



-1 THRU -12, -31 THRU -42

AN Standard Type Spanner Wrench
Figure 1

PART NUMBER: A20001-82, -83

NAME: BOOM HOIST - GENERAL

AIRPLANE MAINTENANCE: YES

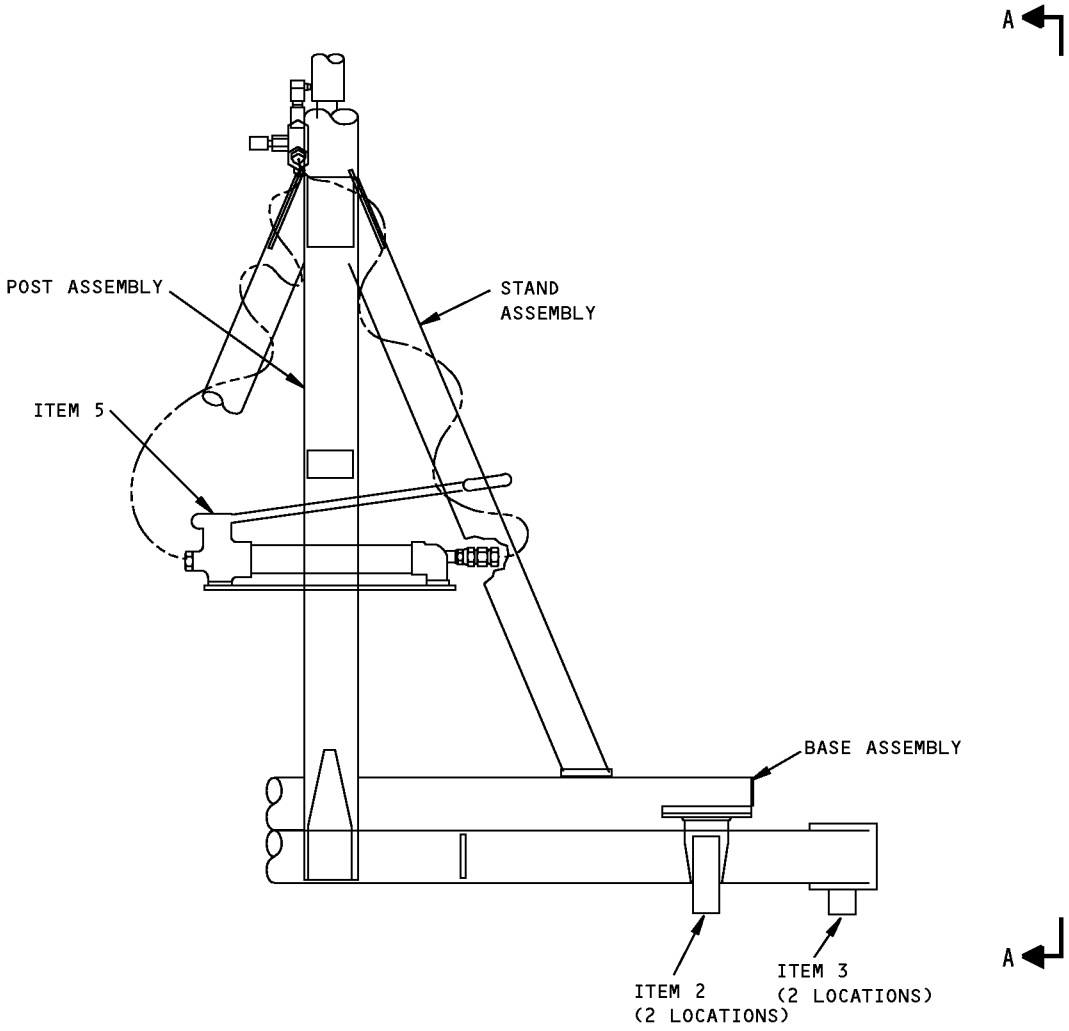
COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The A20001-82 boom hoist in conjunction with an appropriate adapters is used to remove/install various airplane components. The boom hoist is an upright stand with a welded frame and base. The boom hoist has casters and a towbar attach assembly for mobility. The boom hoist has hydraulic components which control the 180 degree radius of operation of the boom and the 9 foot, 10 inch lift extension. The boom hoist is limited to a 400 pound maximum load. The A20001-83 short hoist arm assembly is a 27-inch arm extension with a maximum load of 150 pounds when used with the -82 boom hoist.

WEIGHT: A20001-82 - 416 lbs (189 kg)
A20001-83 - 18 lbs (8 kg)

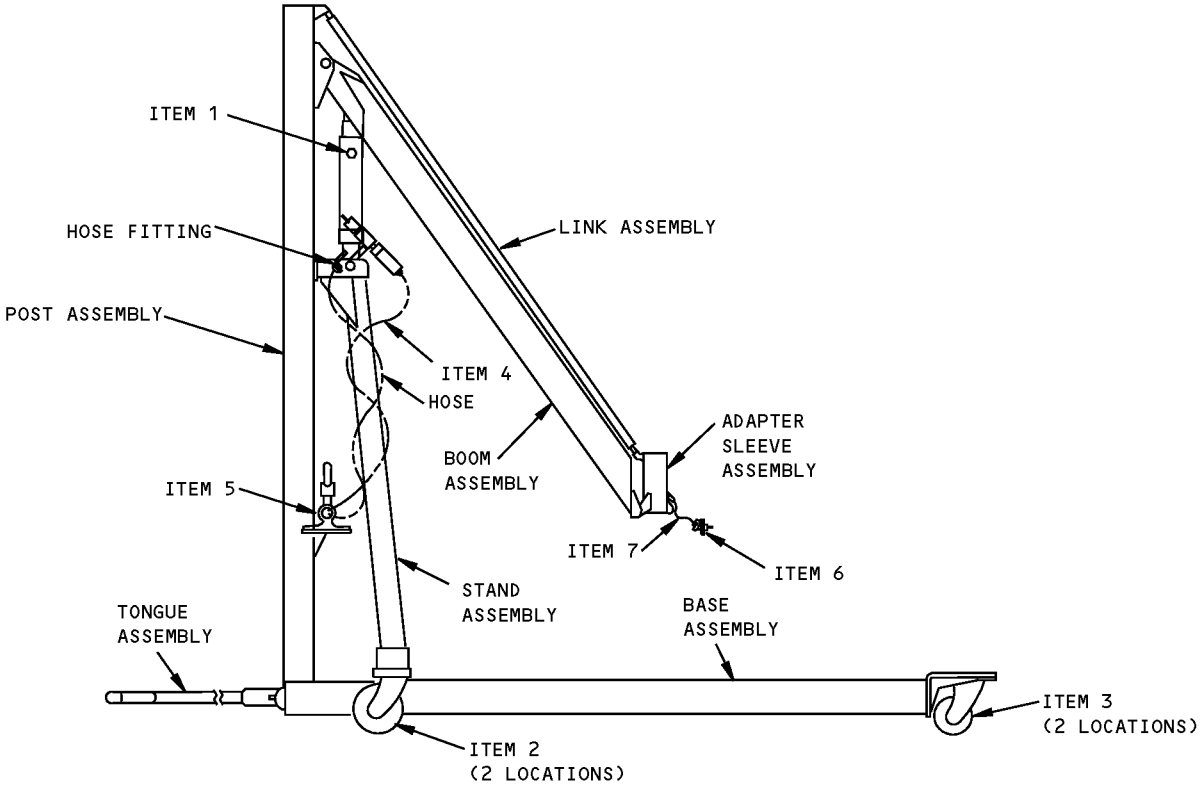
DIMENSIONS: A20001-82 - 46 x 92 x 113 inches (1168 x 2337 x 2870 mm)
A20001-83 - 2 x 10 x 31 inches (51 x 254 x 787 mm)

NOTE: A20001-82 supersedes A20001-79.
A20001-83 supersedes A20001-55.



A20001-82 BOOM HOIST

General Boom Hoist
Figure 1 (Sheet 1 of 2)



General Boom Hoist
Figure 1 (Sheet 2 of 2)

REPAIRABLE/REPLACEABLE PARTS			
ITEM NO.	**PART NO.**	**NOMENCLATURE**	**VENDOR CODE**
1	A20001-86	CYLINDER ASSEMBLY	V26952
2	A20001-11	CASTERS	V96266
3	A20001-12	CASTERS	V96266
4	H-8206	HOSE	V26952
5	P-392	HYDRAULIC HAND PUMP	V26952
6	NAS1334C3C28D	BALL LOCKPIN	
7	CL-63-KA-10.0	CABLE ASSEMBLY	V99862

PART NUMBER: SE20-0002

NAME: REMOVAL TOOL - ACCESS PANEL SCREW

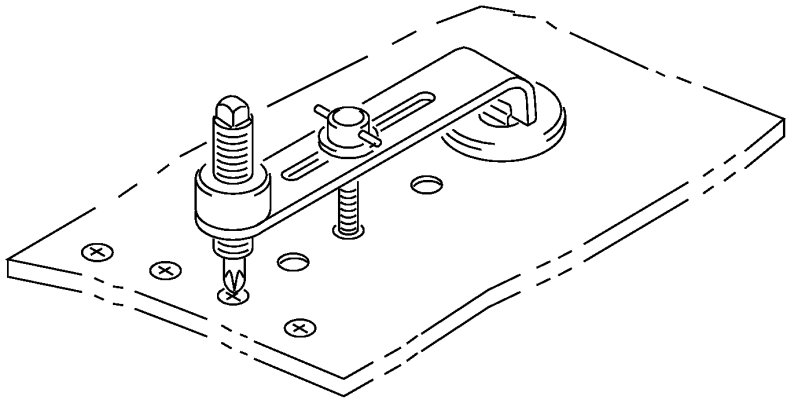
AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: This tool is used with a customersupplied torque wrench to remove damaged or hard-to-loosen access panel screws. The tool consists of a slotted arm with a threaded screwdriver in one end and a pivoted pressure pad at the other end. An attaching screw secures the tool to the aircraft.

DIMENSIONS: 1 x 2 x 9 inches (25 x 51 x 229 mm)

NOTE: Replaced by B20004-1



Access Panel Screw Removal Tool
Figure 1

PART NUMBER: ST895A-3

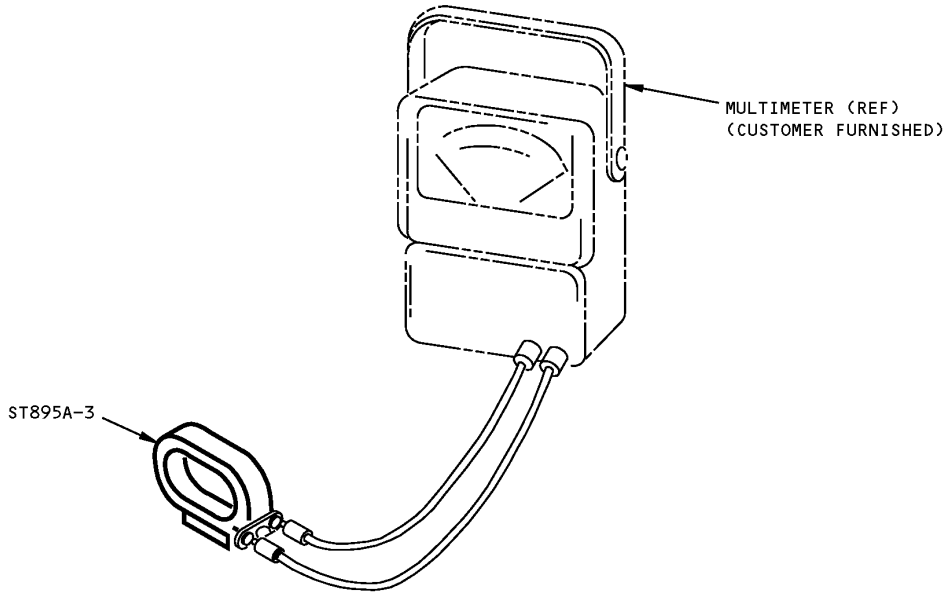
NAME: MEASUREMENT PROBE - SURFACE RESISTIVITY

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: This tool is used to measure surface resistivity of flat panels, fairings and radomes. The tool is a probe assembly which consists of a sponge pad, two wire braid contacts, a mounting plate and two jacks which connect into a customer-supplied multimeter.

DIMENSIONS: 3 x 4 x 6 inches (76 x 102 x 152 mm) (storage box)



Surface Resistivity Measurement Probe
Figure 1

PART NUMBER: 65-92528-1

NAME: KIT - HYDRAULIC TUBING REPAIR

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: This kit consists of various fittings, unions and tube assemblies that will provide field repair capabilities of hydraulic tubing with operating pressures up to and including 3000 psi. Included in the -1 kit is a -2 data package which includes a copy of the 65-92528 drawing that details common tubing repairs and items included in the -1 kit. The -1 kit also contains tube cutters, a hex key, and a copy of Boeing Standards page BACC42W for tube repair.

PART NUMBER: B20001-5

NAME: ATTACH LANYARD - WING/HORIZONTAL STABILIZER SAFETY HARNESS

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

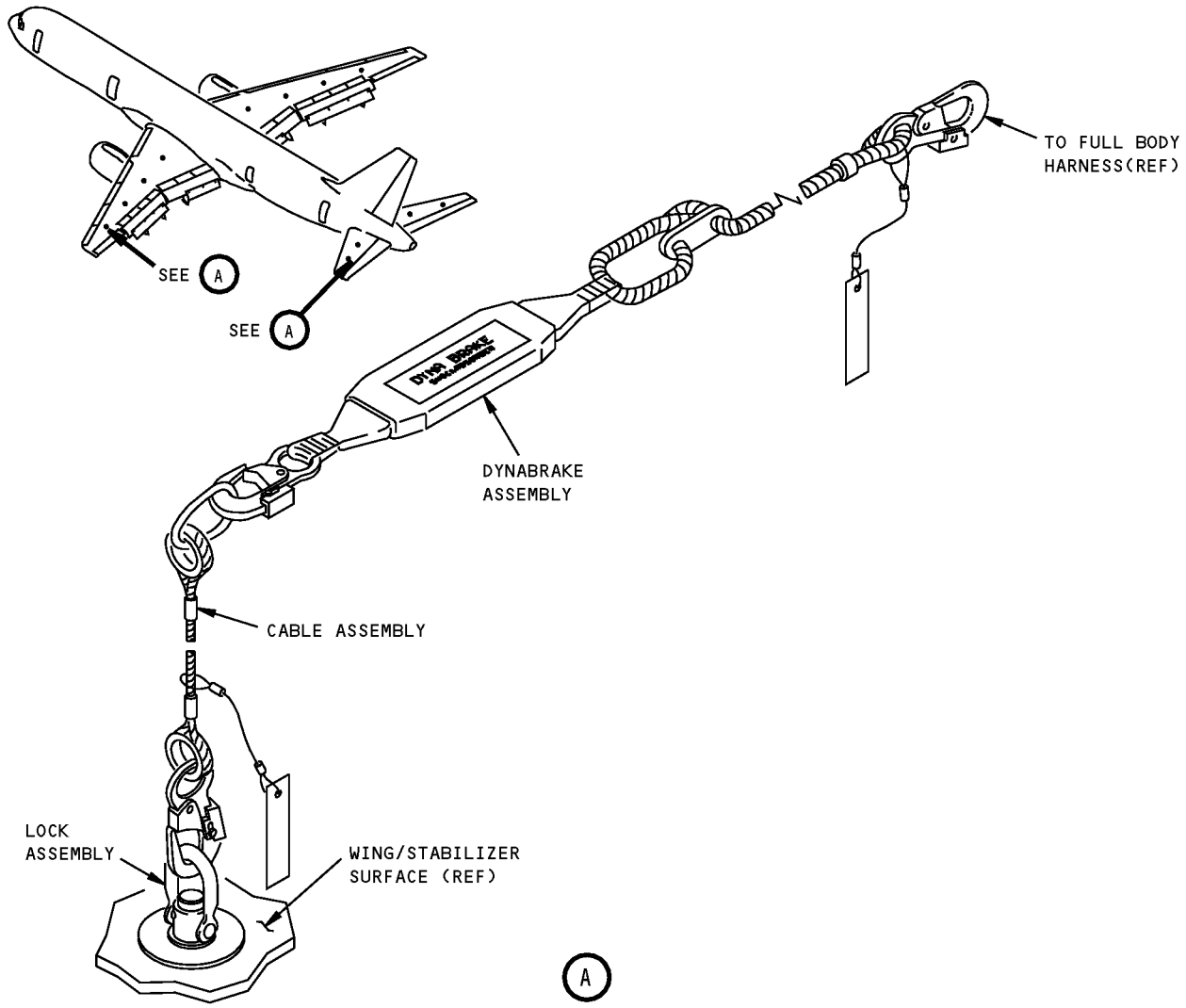
USAGE & DESCRIPTION: The B20001–5 Attach Lanyard is used on all 757 model airplanes. The B20001-5 provides workers fall protection when working on the wing, horizontal stabilizer, or control surfaces. It is a dynamic lock assembly that attaches a safety harness assembly onto the wing or horizontal stablilizer. Refer to AMM 20-10-27 for futher usage instructions.

The B20001 Attach Lanyard consists of:

B20001-5		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	CABLE ASSEMBLY	B20001–6
1	CABLE ASSEMBLY	B20001–7
1	NYLON COATED STEEL CABLE	B20001–8
1	DYNA BRAKE ASSEMBLY	B20001–9
1	STORAGE BOX	F70313–1

WEIGHT: 8 lbs (3.6 kg)

DIMENSIONS: 6 x 10 x 12 inches (152 x 254 x 305 mm)



Wing/Horizontal Stabilizer Safety Harness Attach Lanyard
Figure 1

PART NUMBER: B20003-83, -84, -88, -91

NAME: SET - RIG PIN

AIRPLANE MAINTENANCE: YES

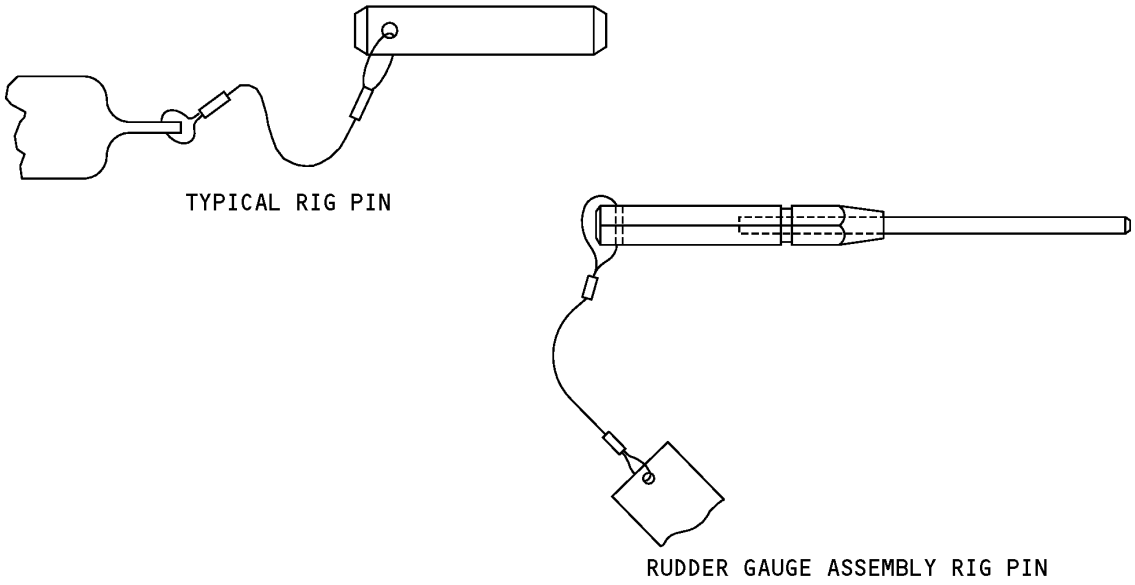
COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The B20003-91 pin set integrates the -83, -84 and -88 pin sets into a single set to improve inventory management. By adding new assemblies, the B20003-83, -84 and -88 may be reworked into a B20003-91 pin set. The B20003-91 can be used on all engine types and all 757 models. The -84 pin set is used on Rolls-Royce engines. The -83 pin set is used on P&W engines. The -88 pin set is used on 757-200 passenger/ freighters with P&W engines. The rigging pin set is used with the following airplane equipment: aileron, rudder, elevator and stabilizer, trailing edge flaps, leading edge slats, landing gear brakes, landing gear alternate extension, nose wheel steering, auto throttle, engine control, and passenger, service, access, and emergency cargo doors. Typical rigging pins are shown below.

WEIGHT: 7 lbs (3.2 lbs)

DIMENSIONS: 6 x 10 x 14 inches (152 x 254 x 356 mm)

NOTE: B20003-91 replaces B20003-83, -84, -88 for future procurement
B20003-83, -84 supersedes B20003-78, -75 respectively
B20003-78 supersedes B20003-74
B20003-74, -75 supersedes B20003-2, -58, -65, -68, -70



Rig Pin Set
Figure 1

PART NUMBER: A20006-32

NAME: INSTALLATION SET - NAS1368 GROMMET

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: YES

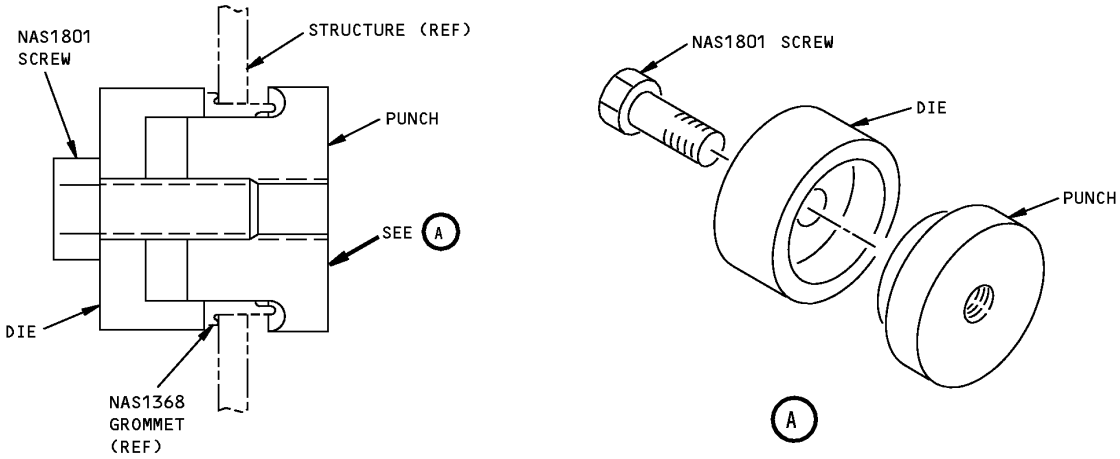
USAGE & DESCRIPTION: This tool is used to install NAS1368 plastic flip grommets. Each tool consists of a punch, die and hex head screw. The set consists of 14 tools.

GROMMET NO. (REF)	PUNCH NO.	DIE NO.	SCREW SIZE
NAS1368-3	-4	-18	NAS1801-06-24
NAS1368-4	-5	-19	NAS1801-08-24
NAS1368-6	-6	-20	NAS1801-4-24
NAS1368-8	-7	-21	NAS1801-4-24
NAS1368-10	-8	-33	NAS1801-6-24
NAS1368-12	-9	-34	NAS1801-6-24
NAS1368-14	-10	-35	NAS1801-6-24
NAS1368-16	-11	-36	NAS1801-6-24
NAS1368-18	-12	-37	NAS1801-6-24
NAS1368-20	-13	-38	NAS1801-6-24
NAS1368-22	-14	-39	NAS1801-6-24
NAS1368-24	-15	-40	NAS1801-6-24
NAS1368-26	-16	-41	NAS1801-6-24
NAS1368-28	-17	-42	NAS1801-6-24

WEIGHT: 6 lbs (3 kg)

DIMENSIONS: 3 x 5 x 12 inches (76 x 127 x 305 mm)

NOTE: A20006-32 supersedes A20006-1.
A20006-32 replaces ST1065C for future procurement.



NAS1368 Grommet Installation Set
Figure 1

PART NUMBER: B20004-21

NAME: LEVERAGE ADAPTER - ACCESS PANEL

AIRPLANE MAINTENANCE: YES

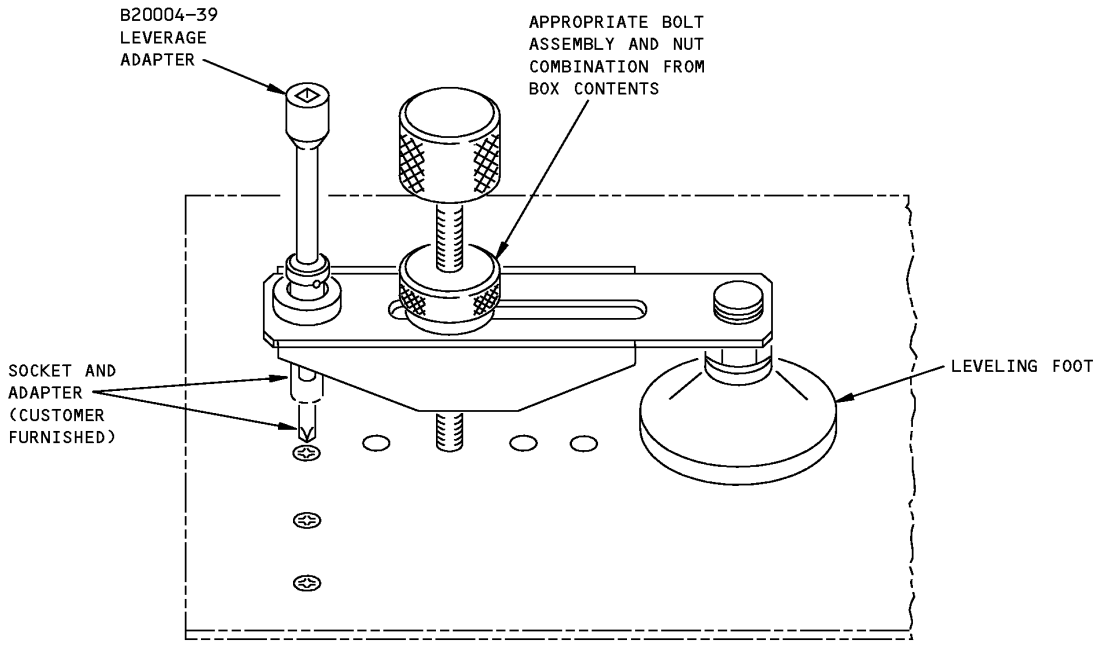
COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: This tool is used with a customer furnished ratchet wrench to remove damaged or hard-to-loosen access panel screws. The tool consists of a slotted arm with a threaded screwdriver in one end, and a pivoted pressure pad at the other end. An attaching screw secures the tool to the airplane.

WEIGHT: 8 lbs (3.6 kg)

DIMENSIONS: 3 x 6 x 10 inches (76 x 152 x 254 mm)

NOTE: B20004-1 replaces SE20-0002 for future procurement.
B20004-13 replaces B20004-1 for future procurement.
B20004-16 supersedes B20004-13.
B20004-21 supersedes B20004-16.



Access Panel Leverage Adapter
Figure 1

PART NUMBER: A20008-1

NAME: SOCKET SET - SPHERICAL BEARING

AIRPLANE MAINTENANCE: YES

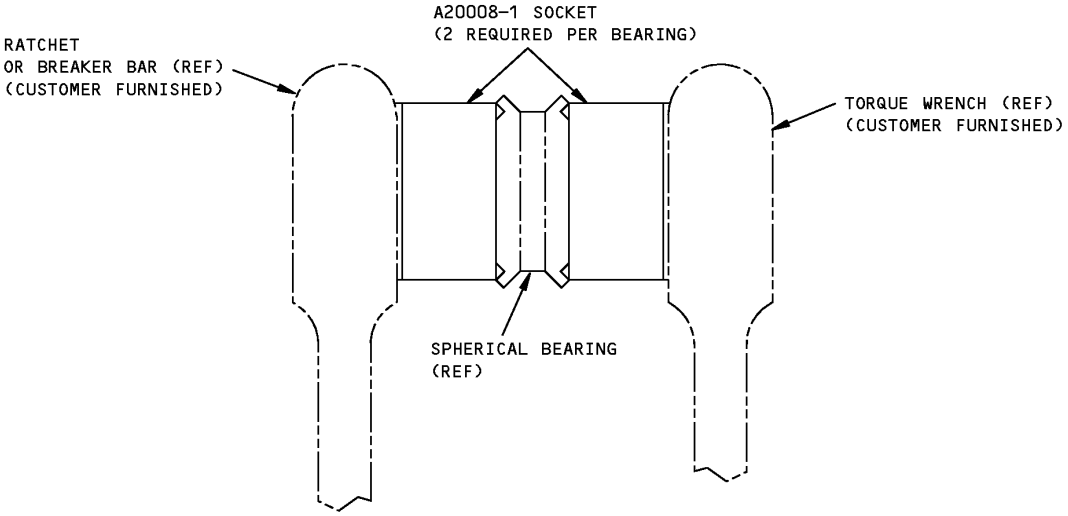
COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The sockets are required to hold the outer race and tighten the retainer ring to the required torque. This tool consists of -3 through -6 sockets and a -10 box assembly. Two sockets are required for bearing and are to be used with a customer furnished torque.

S302T001 BEARINGS	A20008-1		
	-3	-5	-6
-202	X		
-211	X		
-213			
-217		X	
-221			
-224	X		
-225			
-226			
-306			X
-307			X
-406			
-409			

WEIGHT: 3 lbs (1.4 kg)

DIMENSIONS: 1 x 4 x 10 inches (25 x 102 x 254 mm)



Spherical Bearing Socket Set
Figure 1

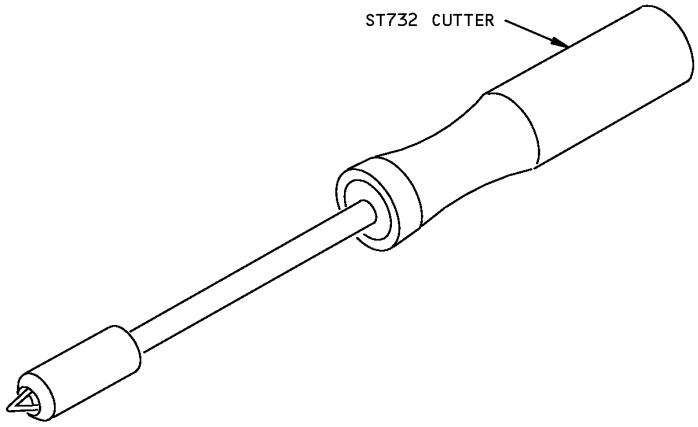
PART NUMBER: ST732

NAME: CUTTER - SCOTCHCAL MARKING MATERIAL

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: Used to cut plastic material (Scotchcal Marking) around head of NAS flat head screws. The ST732-190 is used on #10 size screws, the ST732-250 on 1/4-inch screws and the ST732-312 on 5/16-inch screws.



Scotchcal Marking Material Cutter
Figure 1

PART NUMBER: B20005-41, -52, -75, -82

NAME: TEST EQUIPMENT - VELOCITY/POSITION TRANSDUCER

AIRPLANE MAINTENANCE: NO

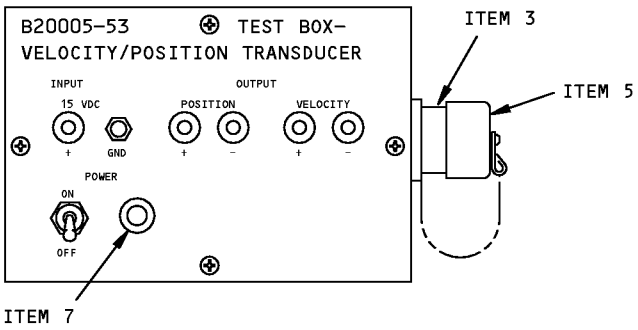
COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: B20005-82 or B20005-75 or B20005-52 test equipment is used with B20005-41 transducer assembly on actuator part numbers 162N0001, 271N6113, 273N1004, 315A1800 and 315A1801. B20005-82 and -75 test equipment provide regulated voltage references for transducer operation and electronic triggering of an x-y plotter or oscilloscope. The B20005-52 is a simple breakout box for connection between transducer and plotter or oscilloscope. The test equipment and transducer assembly define the snubbing action of the actuators being tested. The test equipment and transducer assembly are used in conjunction with other Boeing tools, B78010, B32029 and G32009, to interface with an x-y plotter and/or oscilloscope. Usage instructions are found in CMM 32-34-04, CMM 78-31-03, CMM 78-31-04 and CMM 78-31-05. The B20005-82 test equipment consists of a -83 test box assembly and a -85 data package, contained in a storage box. B20005-75 test equipment consists of a -76 test box assembly and a -81 data package, contained in a storage box. B20005-52 test equipment consists of a -53 test box assembly and a -65 data package, contained in a storage box. The B20005-41 transducer assembly consists of a position velocity transducer and a connector cable assembly.

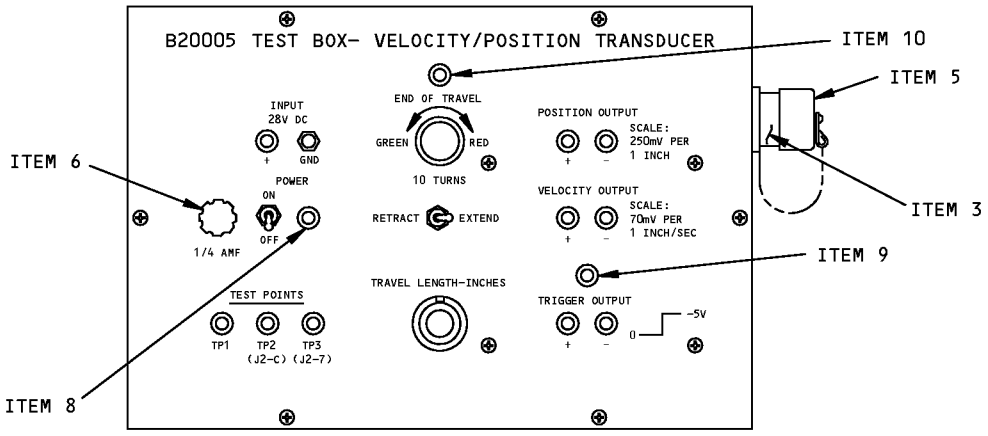
WEIGHT:
B20005-52 - 6 lbs (3 kg)
B20005-75, -82 - 10 lbs (4.5 kg)

DIMENSIONS:
B20005-52 - 3 x 4 x 8 inches (76 x 102 x 203 mm)
B20005-75, -82 - 4 x 8 x 14 (102 x 203 x 356 mm)

NOTE:
B20005-82 replaces -75 for future procurement.
B20005-75 supersede -68, -51, -40 and -11.
B20005-52 supersedes -1.
B20005-41 supersedes -12.
B20005-13, -35 and -45 have been cancelled.

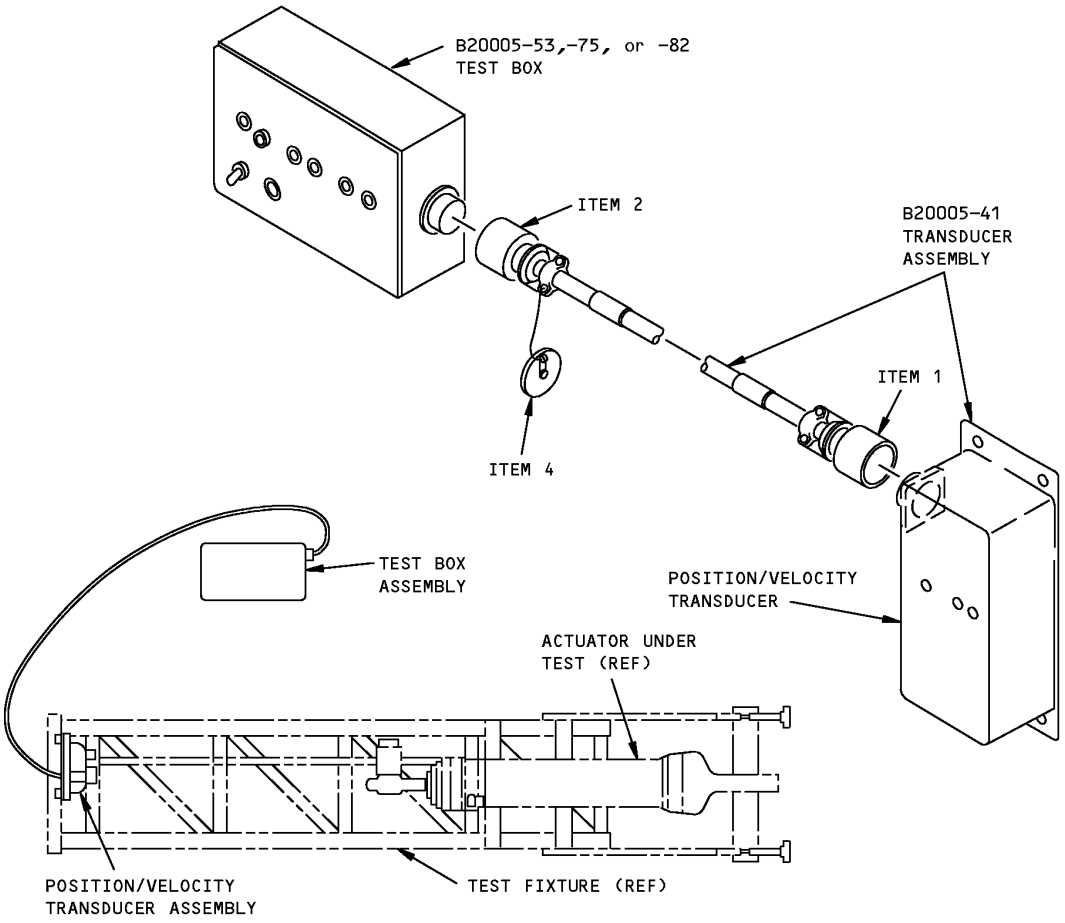


B20005-53 TEST BOX



B20005-76 or -83 TEST BOX

Velocity/Position Transducer Test Equipment
Figure 1 (Sheet 1 of 2)



Velocity/Position Transducer Test Equipment
Figure 1 (Sheet 2 of 2)

REPAIRABLE/REPLACEABLE PARTS			
ITEM NO.	**PART NO.**	**NOMENCLATURE**	**VENDOR CODE**
1	MS3106E14S-6S	CONNECTOR	
2	MS3106E14S-6P	CONNECTOR	
3	MS3102E14S-6S	CONNECTOR	
4	MS25042-14DA	DUST CAP	
5	MS25043-14DA	DUST CAP	
6	312.250	FUSE	V75915
7	507-3914-1471-600	LAMP	V83330
8	507-3918-1471-600	LAMP	V83330

REPAIRABLE/REPLACEABLE PARTS			
ITEM NO.	**PART NO.**	**NOMENCLATURE**	**VENDOR CODE**
9	507-4757-3331-500	LAMP	V83330
10	MV5491A	LAMP (LED)	V50186

PART NUMBER: A32091

NAME: HOLE SAW

AIRPLANE MAINTENANCE: NO

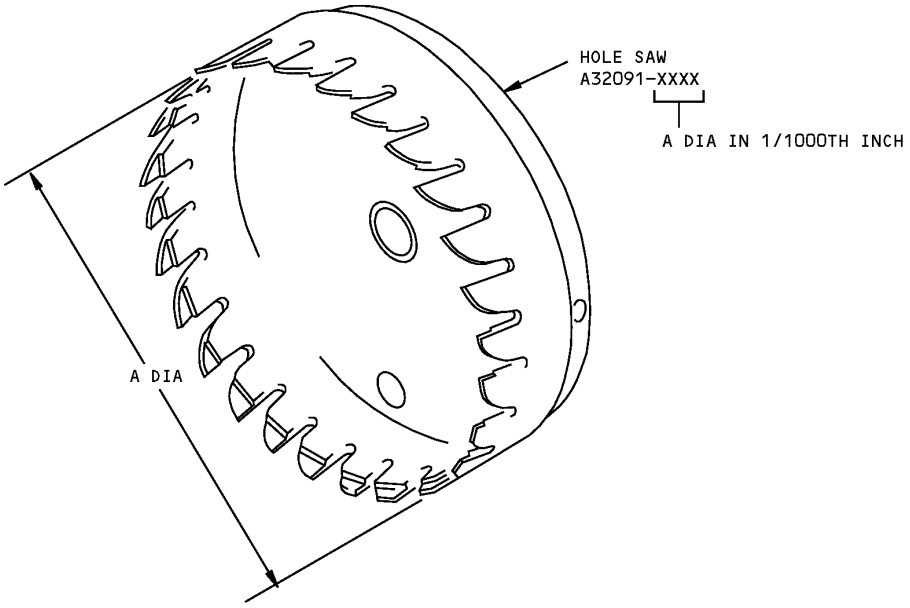
COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: Used together with ST927C or equivalant arbor, pilot and anvil to remove roller swaged bearings. The saw is made of high speed steel and varies in diameter 0.001-inch increments.

PART NUMBER	A DIA +0.001/-0.001 INCREMENTS OF 0.001	NO. OF TEETH
-4001 THRU -4500	4.001 THRU 4.500	28
-3501 THRU -4000	3.501 THRU 4.000	24
-2501 THRU -3500	2.501 THRU 3.500	18
-1501 THRU -2000	1.501 THRU 2.000	12
-1001 THRU -1250	1.001 THRU 1.250	8
-0751 THRU -1000	0.751 THRU 1.000	6

WEIGHT: 1 lb (0.45 kg)

DIMENSIONS: 1.5 x 5 x 5 inches (38 x 127 x 127 mm)



Hole Saw
Figure 1

PART NUMBER: F80113-37, -50, -61, -64, -70, -88

NAME: KIT - ROLLER SWAGE

AIRPLANE MAINTENANCE: NO

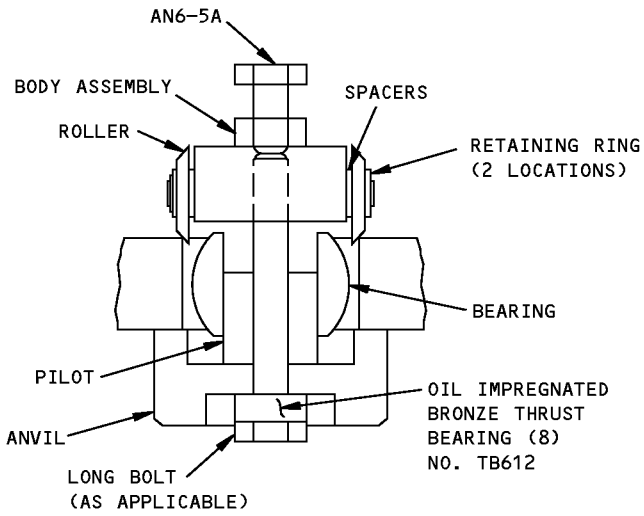
COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: This tool is used to roller swage bearings by hand with a spanner wrench. F80113-37 are used to roller swage bearings having 2-3/8 thru 2 5/8 inch swage diameters, -50 for bearings 5/8 thru 2 3/8 inch swage diameters, -61 bearings 3-7/8 thru 4-1/8 inch swage diameters, -64 for bearings 5/8 thru 2 3/8 inch swage diameter, -70 for bearings 3 thru 5 3/8 inch swage diameters and -88 for bearings 3 thru 3 5/8 inch swage diameters. This tool kit consists of body assemblies, pilots, spacers, rollers, anvils, bolts, nuts, oil impregnated bronze thrust bearings and retaining rings. Each tool kit is contained in a storage box.

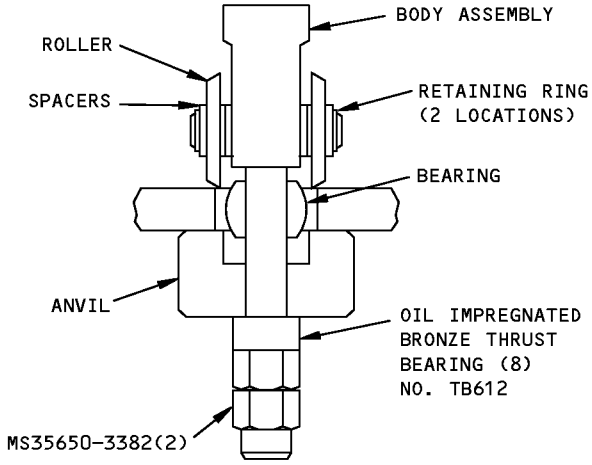
WEIGHT:
F80113-37 - 3 lbs (1.4 kg) (excluding box)
F80113-50 - 12 lbs (5.4 kg) (excluding box)
F80113-61 - 6 lbs (2.7 kg) (excluding box)
F80113-64 - 13 lbs (6 kg) (excluding box)
F80113-70 - 8 lbs (3.6 kg) (excluding box)
F80113-88 - 9 lbs (4 kg) (excluding box)

DIMENSIONS: 8 x 12 x 12 inches (203 x 305 x 305 mm)

NOTE:
F80113-88 replaces F80113-70 for future procurement.
F80113-64 replaces F80113-50 for future porcurement.
F80113-61 supersedes F80113-44.
F80113-50 supersedes F80113-34.



F80113-37,-50,-61,-64,-70,-88
TYPICAL BEARING INSTALLATION



F80113-50,-64
TYPICAL BEARING INSTALLATION

Roller Swage Kit
Figure 1

PART NUMBER: ST927C-*

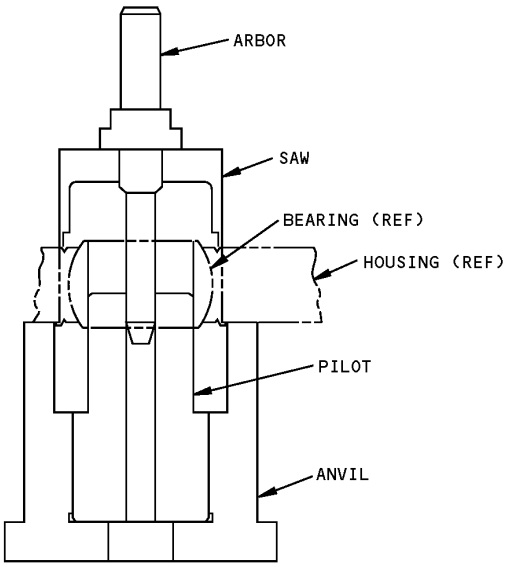
NAME: BEARING REMOVAL TOOL

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: This tool is used to remove roller swaged bearings. The tool consists of a saw, an anvil, and a pilot.

* Refer to Figure 2 for applicable dash numbers.



Bearing Removal Tool
Figure 1

BEARING NO. (REF)	TOOL DASH NO.	SAW	ANVIL	PILOT
60B00180-205	-1	-24	-43	-56
10-60545-207S	-2	-25	-44	-57
MS21230-12	-3	-25	-44	-58
10-60545-154S	-4	-26	-45	-59
60B00180-300 BACB10AB20M	-5	-27	-46	-60
10-60545-155S	-6	-27	-46	-61
10-60545-149S	-7	-28	-47	-62
60B00180-1	-8	-29	-48	-63
60B00180-2	-9	-30	-48	-64
10-60545-64	-10	-31	-48	-65
60B00180-301	-11	-31	-48	-66
10-60545-161S	-12	-31	-48	-67
69B13953-2	-13	-32	-49	-68
10-60545-156S	-14	-33	-49	-69
60B00180-204	-15	-34	-49	-70
60B00180-3	-16	-35	-50	-71
10-60545-60	-17	-36	-50	-72
60B00180-208	-18	-37	-51	-73
60B00180-25 10-60545-63	-19	-38	-52	-73
10-60545-71	-20	-39	-53	-74
60B00180-203	-21	-40	-53	-75
60B00180-12	-22	-41	-54	-76
10-60545-66	-23	-42	-55	-77

Tool Dash Number/Bearing Number Usage
Figure 2 (Sheet 1 of 2)

BEARING NO. (REF)	TOOL DASH NO.	SAW	ANVIL	PILOT
69-57625-1	-80	-87	-94	-101
10-60545-40 10-60545-163S	-81	-88	-95	-102
10-60545-146S	-82	-89	-96	-103
10-60545-144S	-83	-90	-97	-104
10-60545-72	-84	-91	-98	-105
10-60545-205S	-85	-92	-99	-106
10-60545-11	-86	-93	-100	-107
60B00180-20	-108	-109	-111	-110
10-60545-43	-112	-38	-116	-118
10-60545-44	-113	-115	-117	-119
10-60545-204S	-114	-24	-43	-120
10-61970-2 10-61846-3	-121	-122	-123	-124
HUDL24-101	-125	-126	-50	-104
60B90021-1 VTB01310	-127	-128	-129	-130
60B00180-43	-131	A32091-4110	-132	-133
60B00180-48		A32091-4125		
60B00180-49		A32091-4145		
60B00180-50		A32091-4165		
BACB10ES06	-134	A32091-0872	-135	--
BACB10FC10C	-136	A32091-1178	-43	-56
BACB10FH12	-137	A32091-1745	-138	-58
S302T001-215	-139	A32091-1065	-140	-141
S302T001-219	-142	A32091-3000	-143	-144
VTB01310-P01	-145	A32091-1624	-129	-130
VTB01310-P02		A32091-1625		
VTB01310-P05		A32091-1628		
VTB01310-P10		A32091-1633		
VTB01310-P15		A32091-1638		
VTB01310-P20		A32091-1643		
VTB01310-P30		A32091-1653		

Tool Dash Number/Bearing Number Usage
Figure 2 (Sheet 2 of 2)

PART NUMBER: ST922C

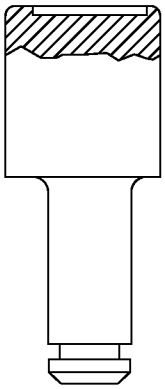
NAME: STAKING TOOL

AIRPLANE MAINTENANCE: NO

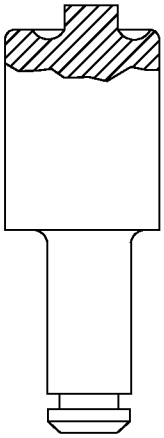
COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: This tool is used for bushing installation and staking. This tool consists of an anvil, curling punch and a flattener.

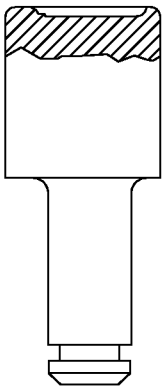
DIMENSIONS: 1 x 1 x 2 inches (25 x 25 x 51 mm)



ANVIL

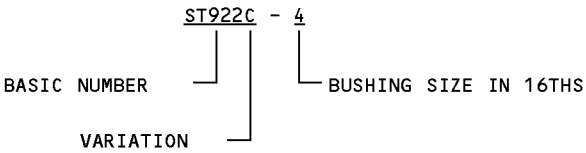


CURLING PUNCH



FLATTENER

TOOL NUMBER CODE:



Staking Tool
Figure 1

PART NUMBER: ST927

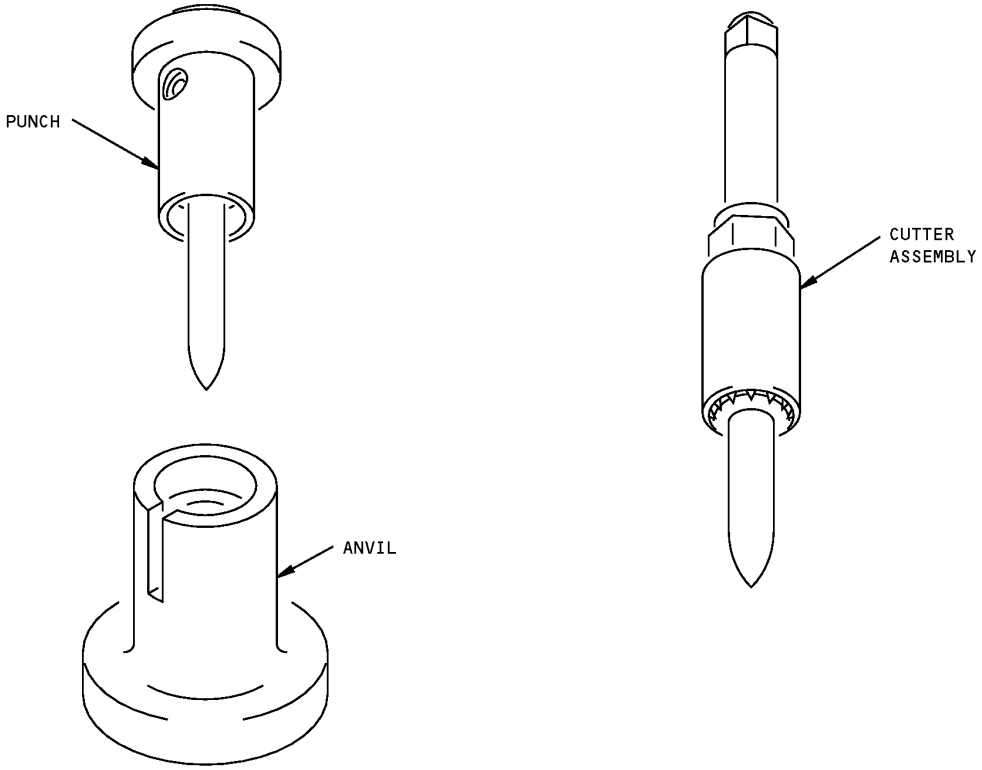
NAME: REMOVAL TOOL - BEARING

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: This tool is used to remove BACB10M series spherical bearings which have been staked into an installation. This tool consists of an anvil, a cutter assembly and a punch. See 20-50-03 for tabulation of tool requirements for installation, retention and removal of specific bearings.

DIMENSIONS: 2 x 2 x 3 to 4 x 4 x 6 inches (51 x 51 x 76 to 102 x 102 x 152 mm)



Bearing Removal Tool
Figure 1

PART NUMBER: ST879A

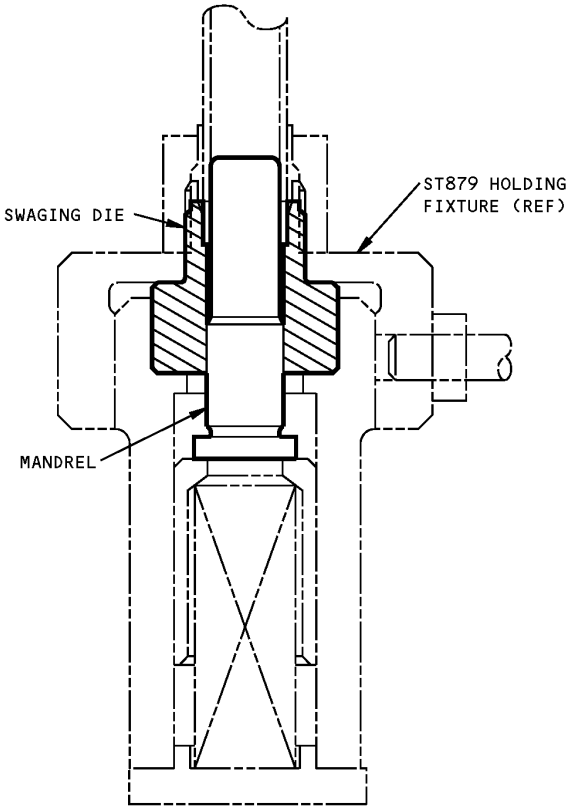
NAME: TUBE PRESETTING TOOL - FLARELESS

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: This tool is used to manually preset flareless coupling sleeve MS21922. The tool is composed of a mandrel and a swaging die.

DIMENSIONS: 4 x 4 x 6 inches (102 x 102 x 152 mm)



Flareless Tube Presetting Tool
Figure 1

PART NUMBER: ST879AF

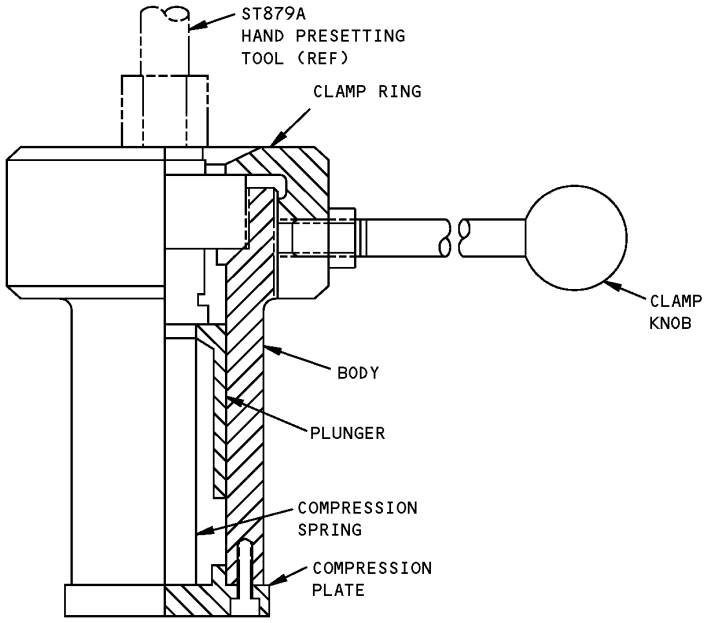
NAME: HOLDING FIXTURE - HAND PRESET TOOLS

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The fixture receives and locks hand preset tools ST879A during manual tube presetting. The fixture is composed of a steel body, threaded clamp ring, plunger, lever and compression spring.

DIMENSIONS: 4 x 4 x 10 inches (102 x 102 x 254 mm)



Hand Preset Tools Holding Fixture
Figure 1

PART NUMBER: A32045-19, -20, -23, -37, -38, -54, -62, -64, -83, -85, -90, -91

NAME: WRENCHES - SPANNER

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: YES

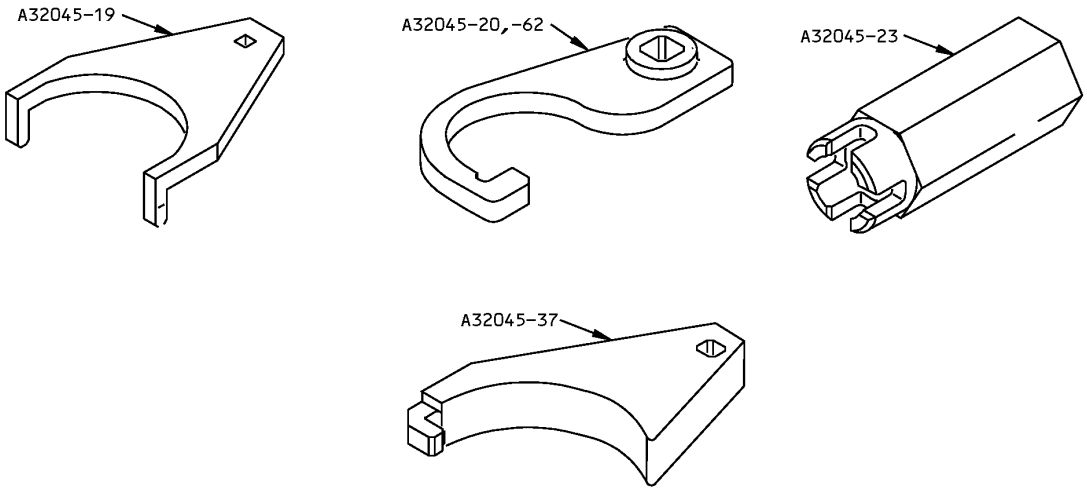
USAGE & DESCRIPTION: This tool is a group of individual spanner wrenches that are used with a customer supplied torque wrench to perform maintenance procedures on the rudder jackshaft, autothrottle assembly, shock struts, and landing gear hydraulic system components.

TABLE 1 - TOOL USAGE

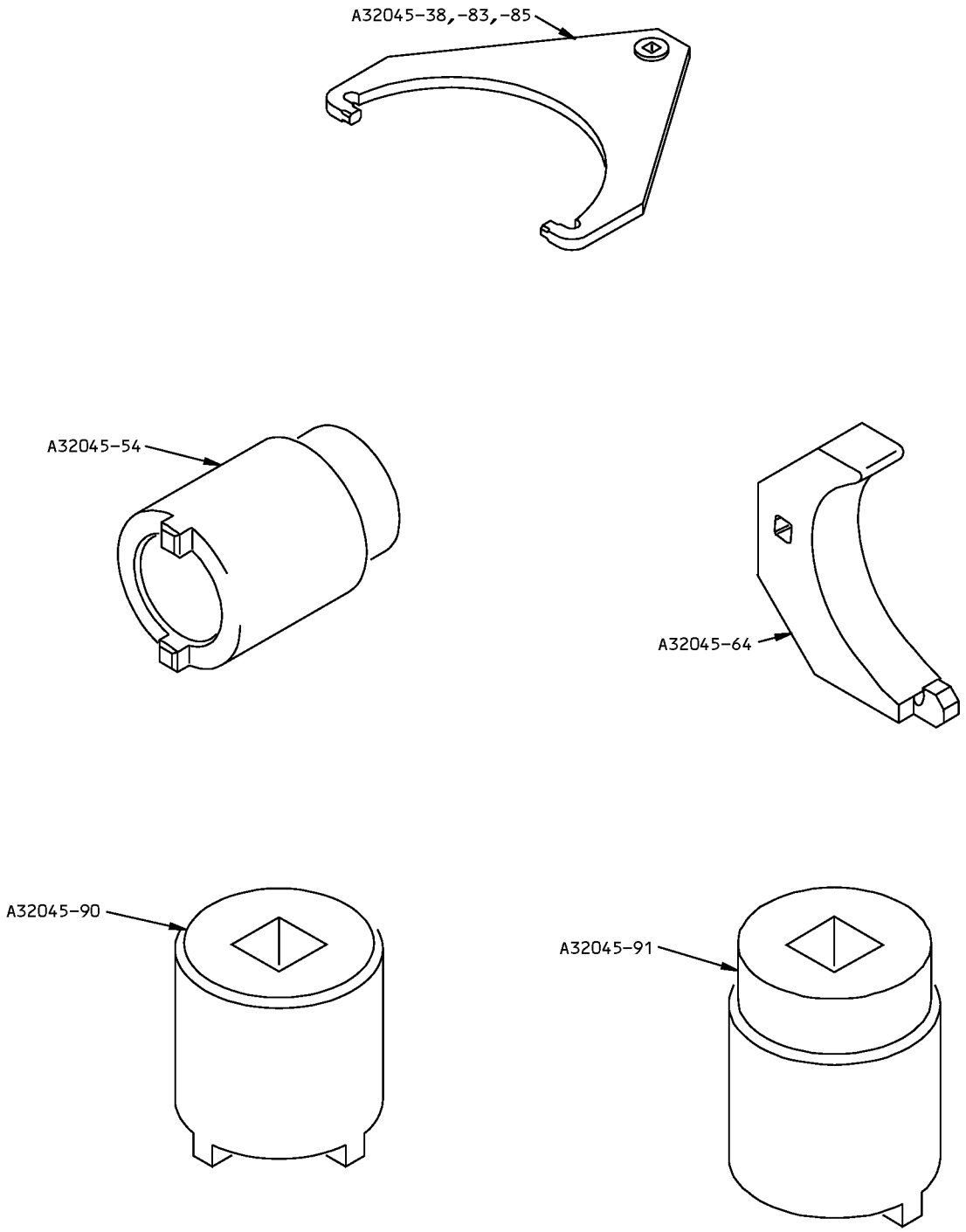
TOOL NO. A32045	TOOL SIZE	PART NO.	COMPONENT NOMENCLATURE	USAGE	
				AMM	CMM
-19	1 x 7 x 9 in.	162N1101	NLG SHOCK STRUT LWR GLAND NUT	X	X
-20	1 x 2 x 4 in.	273N4006	LOCK RELEASE ACTUATOR NUT		X
-23	1 dia x 2 in.	273N4171	INTERLOCK RELEASE ACTUATOR NUT		X
-37	1 x 5 x 6 in.	275N1224	NLG STEERING ACTUATOR CYLINDER NUT		X
-38	1 x 6 x 8 in.	273N1019	NLG ACTUATOR LOCKNUT		X
-54	2 x 4 in.	251N3099	RUDDER JACKSHAFT BRG RET NUT		X
-62	1 x 2 x 4 in.	275N1233	NLG STEERING SEAL ACTUATOR NUT		X
-64	1 x 5 x 4 in.	275N1234	NLG CYLINDER RETAINER ACTUATOR NUT		X
-83	1 x 11 x 12 in.	161N1201	MLG SHOCK STRUT LWR GLAND NUT	X	
-85	1 x 8 x 10 in.	162N1147	NLG STEERING ACTUATOR NUT		X
-90	2 x 2 in.	254N1147	SHAFT NUT		X
-91	2 x 3 in.	254N1058	AUTO THROTTLE NUT		X

DIMENSIONS: See TABLE 1

NOTE:
A32045-91 supersedes A32045-50
A32045-85 supersedes A32045-32
A32045-83 supersedes A32045-16
Deleted A32045-41 and -43



Spanner Wrenches
Figure 1 (Sheet 1 of 2)



Spanner Wrenches
Figure 1 (Sheet 2 of 2)

PART NUMBER: F70321-1, -2, -3, -4, -5, -6, -7, -8, -9, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -30, -31, -32, -33, -34, -35, -36, -37, -38, -39, -40

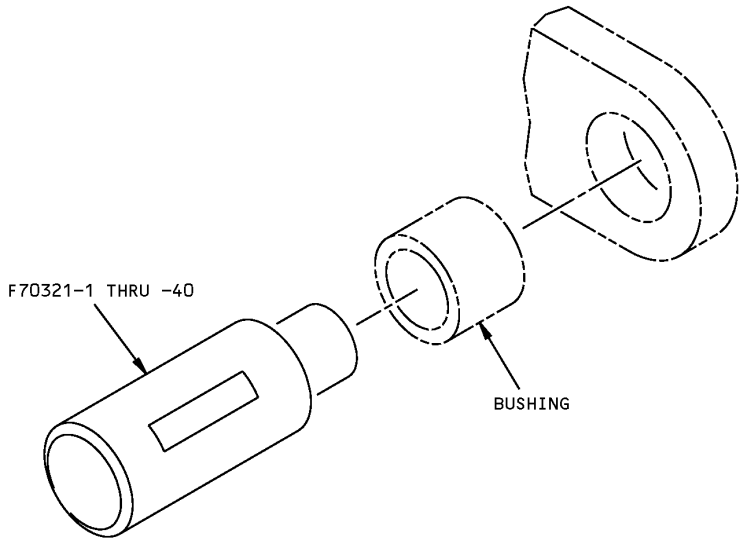
NAME: MANDREL - SHRINK FIT BUSHING INSTALLATION

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: This tool provides a means of installing chilled shrink fit bushings. The mandrel is a step machined brass bar. The smaller diameter of the mandrel is inserted into the I.D. of the chilled bushing and inserted into the appropriate housing. The larger diameter of the mandrel prevents further insertion. The tool also helps maintain installation temperature.

DIMENSIONS: 2 x 2 x 5 inches (51 x 51 x 127 mm)



Shrink Fit Bushing Installation Mandrel
Figure 1

PART NUMBER: F70313-1, -2, -3, -4

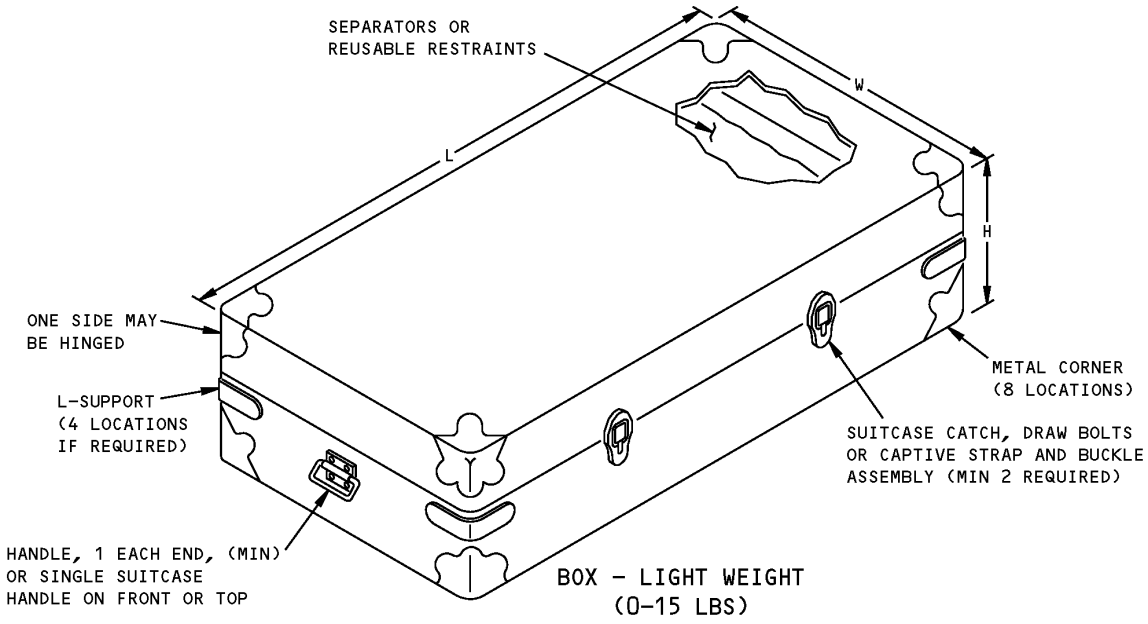
NAME: STANDARD BOX - SUPPORT EQUIPMENT

AIRPLANE MAINTENANCE: YES

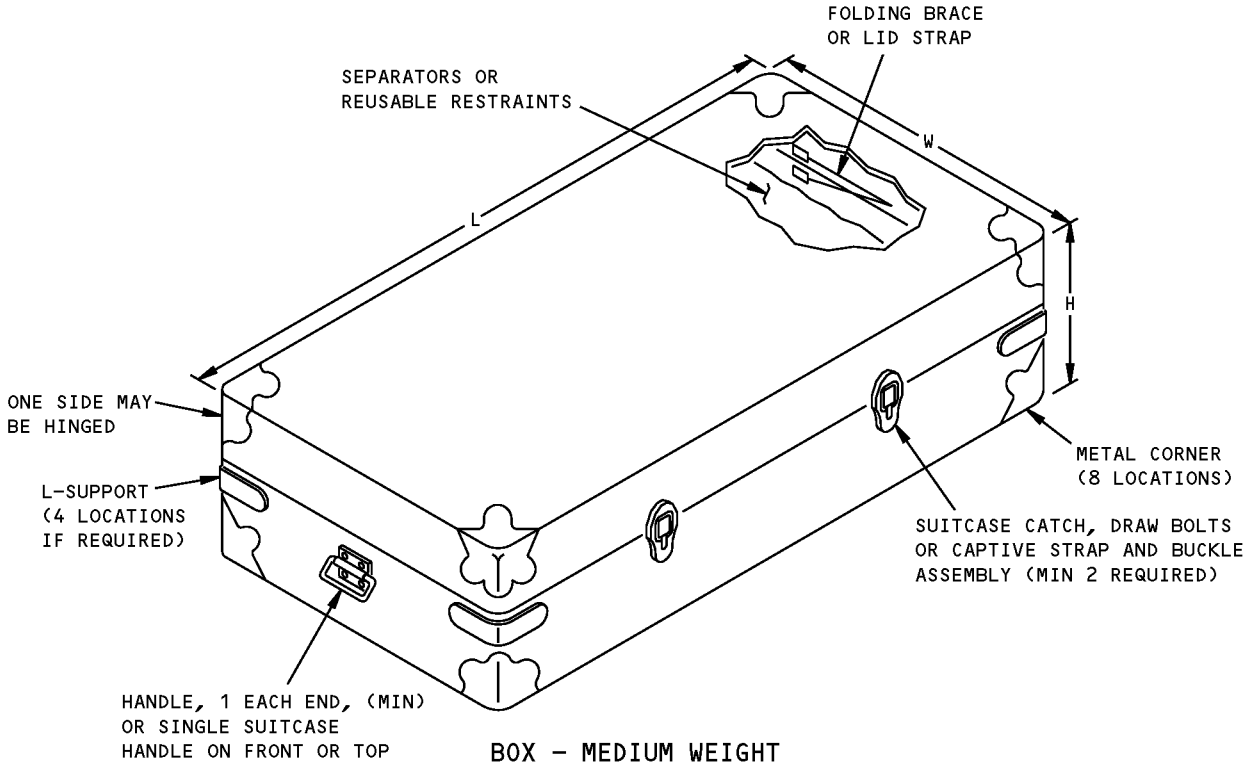
COMPONENT MAINTENANCE: YES

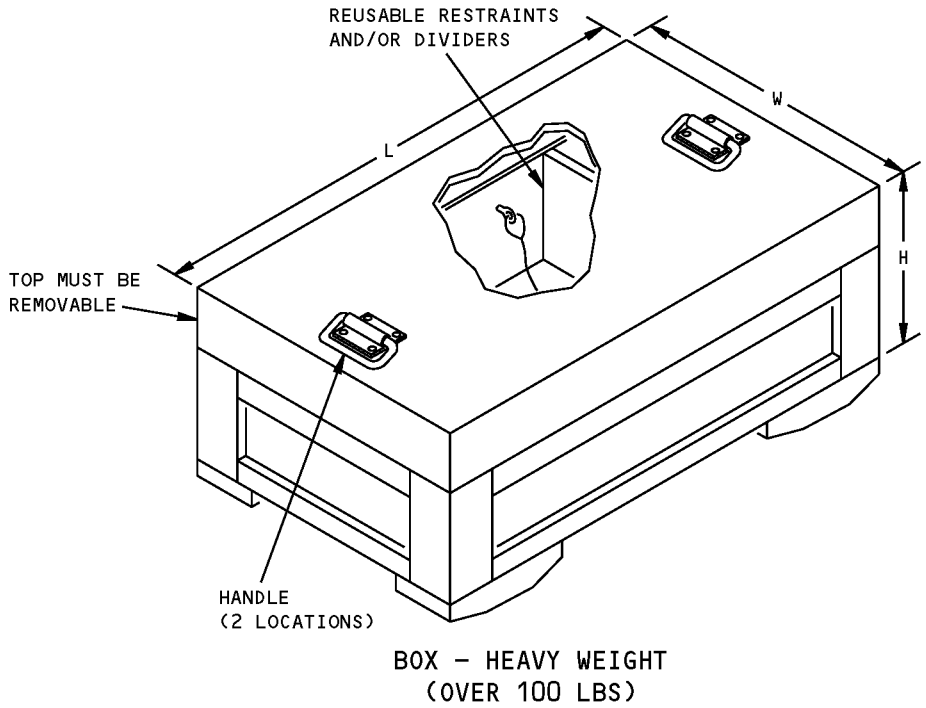
USAGE & DESCRIPTION: This tool is a standard box which is used to protect tools during storage and transportation. It also provides a method of accounting for individual parts of the tool.

NOTE: The box drawing describes the minimum standards for the design or purchase of support equipment tool boxes, and not intended to be a comprehensive design.

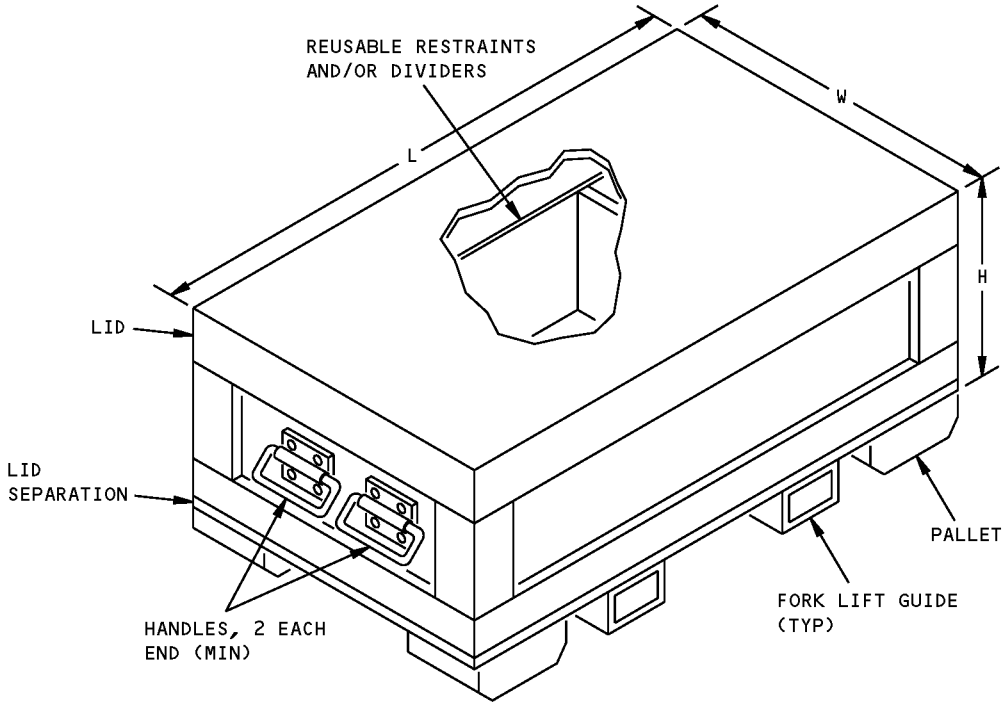


Support Equipment Standard Box
Figure 1 (Sheet 1 of 3)





Support Equipment Standard Box
Figure 1 (Sheet 2 of 3)



BOX - HEAVY WEIGHT, SKID TYPE
(OVER 100 LBS)

Support Equipment Standard Box
Figure 1 (Sheet 3 of 3)

PART NUMBER: A20013-1

NAME: WORK TABLE - PILOT'S AISLE STAND

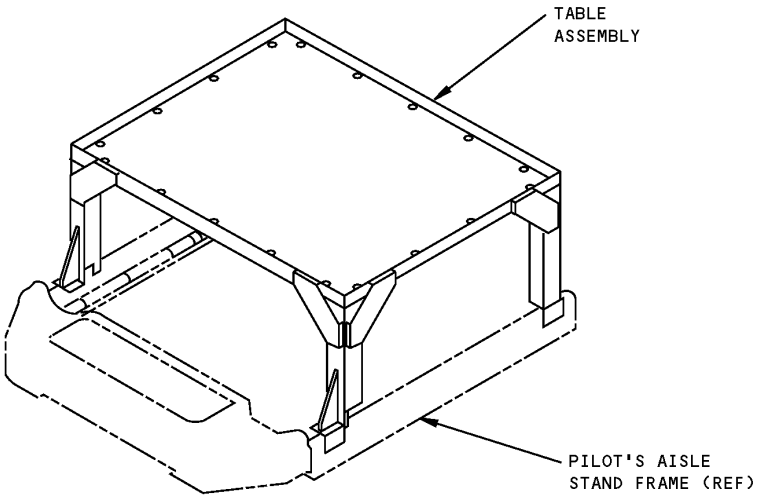
AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: This tool is used to protect modules of P-8 from being scratched or broken when maintenance is being performed. This tool consists of a table assembly and a storage box assembly.

WEIGHT: 8 lbs (3.6 kg) (excluding box)

DIMENSIONS: 10 x 18 x 20 inches (254 x 457 x 508 mm) (excluding box)



Pilot's Aisle Stand Work Table
Figure 1

PART NUMBER: J20002-36

NAME: LOAD POSITIONER - ENGINE ACCESSORIES, 250 LB CAPACITY

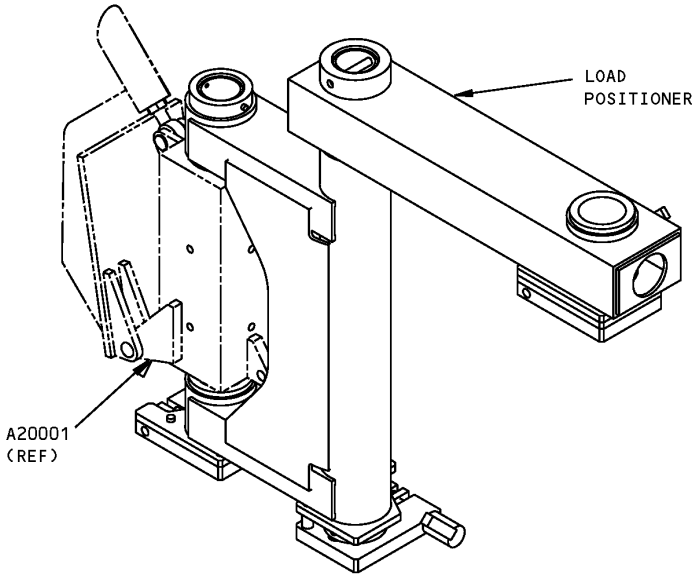
AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The load positioner is used in conjunction with a boom hoist (A20001) and other LRU adapters. The load positioner is used to provide horizontal movement. The -36 is used on all 757 airplanes. The -36 consists of a -37 load positioner assembly and a -38 storage box assembly.

WEIGHT: 41 lbs (19 kg)

DIMENSIONS: 5 x 14 x 25 inches (127 x 356 x 635 mm)



Load Positioner
Figure 1

PART NUMBER: A20005-9

NAME: CLAMP - CONTROL CABLE

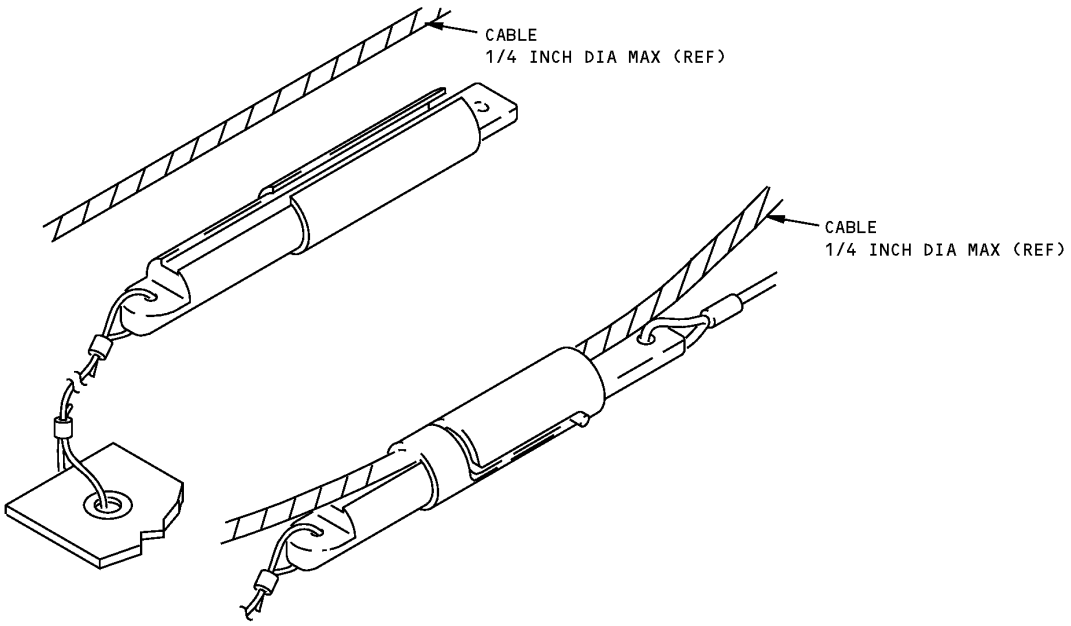
AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The tool is used to clamp a cable at any point while installing or rigging. The tool is a spring-loaded cylindrical assembly which applies a tension load to a cable. Refer to AMM 20-10-03 for further usage information.

DIMENSIONS: 4 x 4 x 6 inches (102 x 102 x 152 mm)

NOTE: A20005-9 supersedes A20005-5



Control Cable Clamp
Figure 1

PART NUMBER: A20007-1

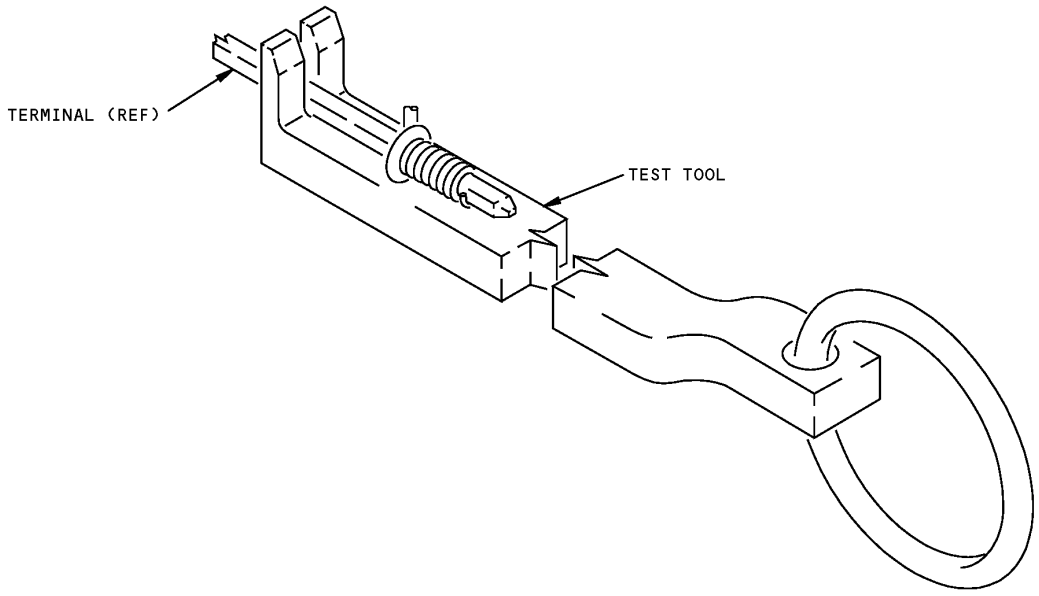
NAME: TEST TOOL - STRIPPING FORCE, WRAPPED WIRE CONNECTION

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: This tool is used to determine the integrity of the applied wire connection.

DIMENSIONS: 0.16 x 0.50 x 2.2 inches (4 x 13 x 56 mm)



Wrapped Wire Connection Stripping Force Test Tool
Figure 1

PART NUMBER: ST848

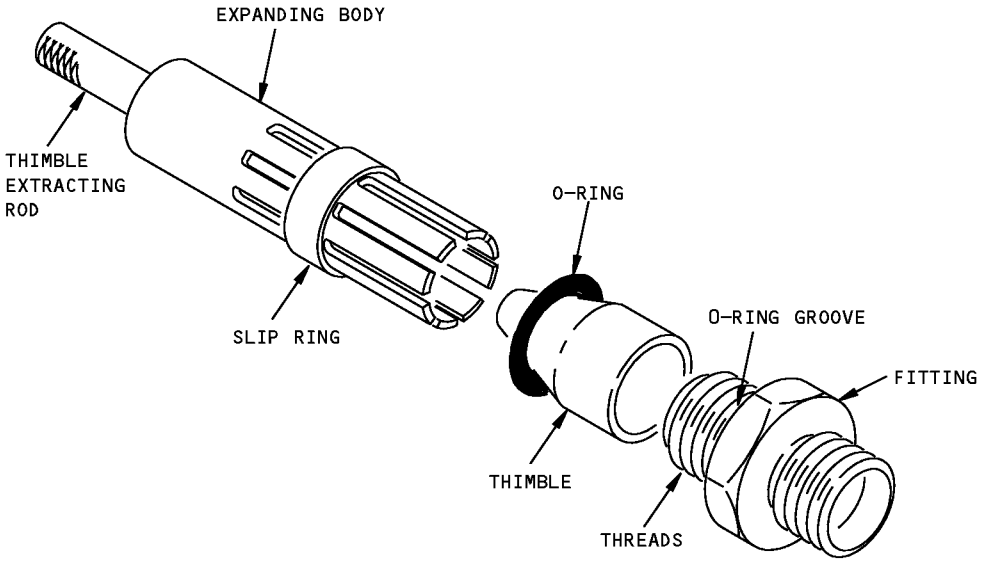
NAME: INSTALLATION TOOL - O-RINGS

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: YES

USAGE & DESCRIPTION: The ST848 installation tool is used on all 757 airplanes. ST848 is used to install O-rings and backup washers, to prevent their being damaged, and to eliminate unnecessary handling. There are 11 tools in the ST848 installation tool to fit flared tube and hose fittings from 0.187 to 1.750 inches. The ST848 installation tools each consist of a thimble to slip over the threads of the hydraulic fitting, an expanding body to act as a guide for the slip ring, a slip ring to push the O-ring over the thimble and into place on the fitting, and an extracting rod to extract the thimble after the O-ring has been installed and the tool removed from the hydraulic fitting. The ''dash number'' after the basic part number indicates the size of the flared tube fitting or hose fitting on which the O-ring is to be installed. As an example, ST848-187 is used on 0.187 inch fittings. Refer to the current ST848 drawing, AMM 20-10-19 and the Standard Overhaul Practices Manual (SOPM) 20-50-06 for complete usage instructions. ST848 consists of:

ST848		
QUANTITY	**TOOL NO.**	**FLARED TUBE OR HOSE FITTING SIZE**
1	ST848-187	3/16 INCH, (0.187 INCH)
1	ST848-250	1/4 INCH. (0.250 INCH)
1	ST848-312	5/16 INCH, (0.312 INCH)
1	ST848-375	3/8 INCH, (0.375 INCH)
1	ST848-500	1/2 INCH, (0.500 INCH)
1	ST848-625	5/8 INCH, (0.625 INCH)
1	ST848-750	3/4 INCH, (0.750 INCH)
1	ST848-1000	1 INCH, (1.000 INCH)
1	ST848-1250	1 1/4 INCH, (1.250 INCH)
1	ST848-1500	1 1/2 INCH, (1.500 INCH)
1	ST848-1750	1 3/4 INCH, (1.750 INCH)



O-Rings Installation Tool
Figure 1

PART NUMBER: ST878D

NAME: SLEEVE SET TOOL - FOR PRESETTING BACS13AP FLARELESS TUBE FITTINGS

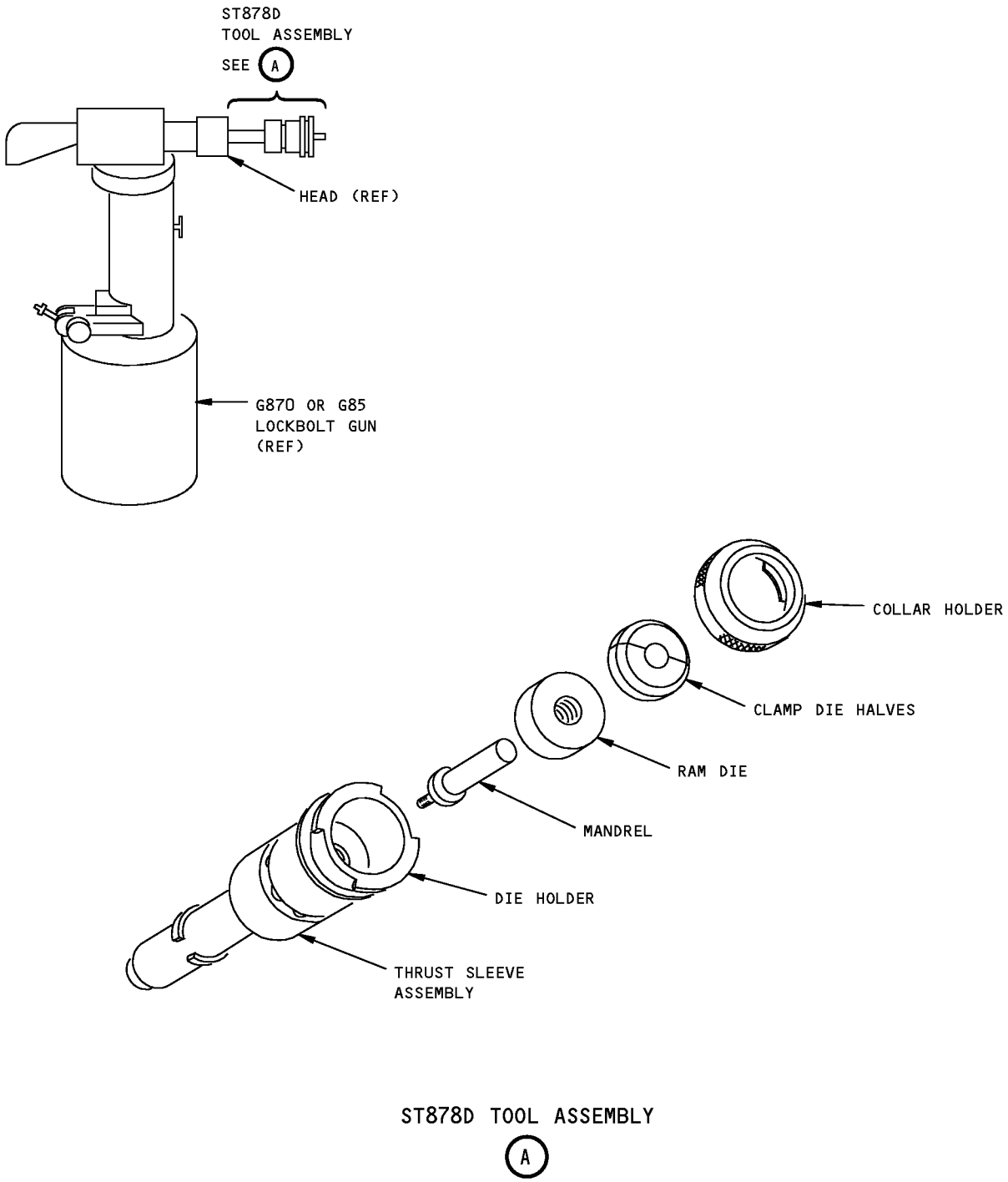
AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The ST878D sleeve set tool is used on all 757 airplanes. ST878D is used to mechanically preset flareless coupling sleeves (BACS13AP or MS21922) on aluminum or steel tubing (not for use on titanium tubing).

The ST878D series tool consists of a housing assembly with provisions for attaching to a customer-furnished G87D (preferred) or G85 lockbolt gun. The housing contains a removable set made up of a ram die, clamp die(s) and a mandrel. A different ram die and clamp die(s) are required for each diameter tubing. A different mandrel is required for each diameter and wall thickness of tube. Die and mandrel sets are available for common tubing diameters from 3/16 inch to, and including, 3/4 inch, and applicable wall thicknesses from 0.020 inch to, and including, 0.083 inch. The ST878D tool is intended for use when regular presetting tools cannot be used, due to limited access, bends close to tube end, or similar situations. Some circumstances may require use of the ST879 Hand Presetting Die, or equivalent. Refer to the current ST878D drawing and AMM 20-10-09 for complete usage instructions.

The G87D lockbolt gun, air pressure regulator, pressure gage and related air hose and fittings are not included as part of tool ST878D. The G87D gun requires an air pressure regulator and pressure gage to provide the regulated pressure specified for each size and material of tube.



Presetting BACS13AP Flareless Tube Fittings Sleeve Set Tool
Figure 1

PART NUMBER: 906-10246-3

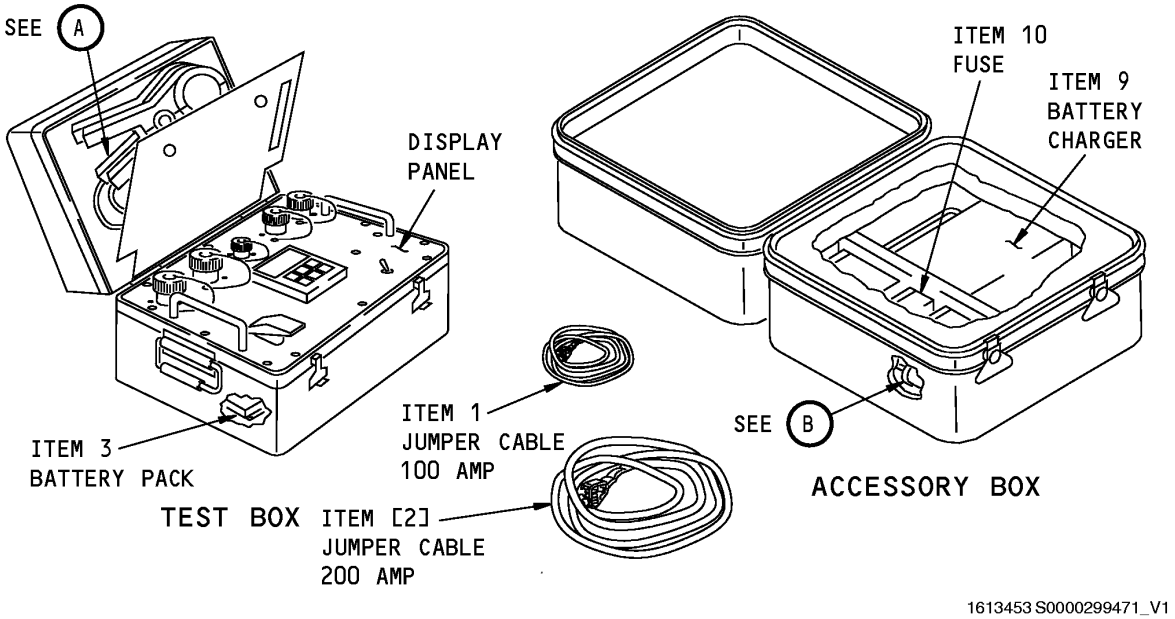
NAME: LOOP RESISTANCE TEST SET

AIRPLANE MAINTENANCE: YES

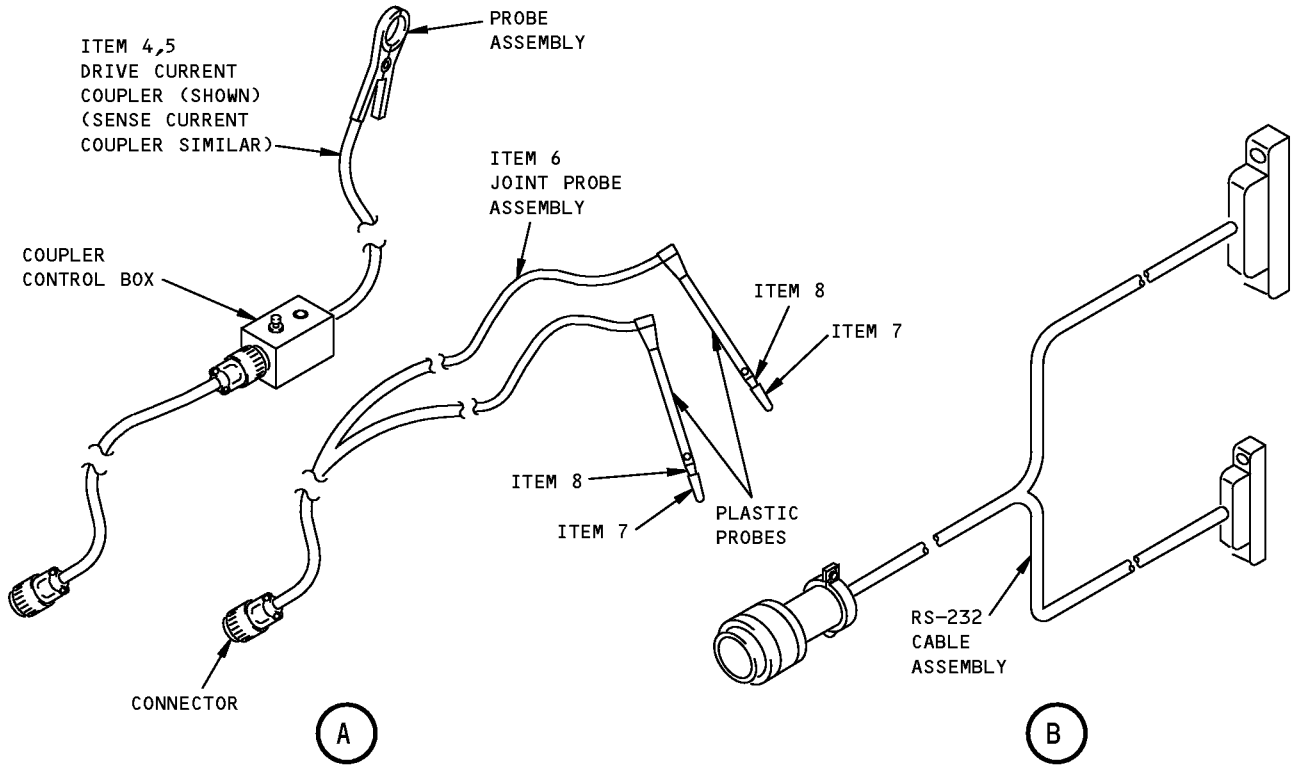
COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The 906-10246 drawing has been transferred to BAE Systems and will no longer be revised by Boeing. The 906-10246 inclusion in the 757 ITEM is for information and historical purposes only.

The 906-10246-3 loop resistance test set is a portable electronic unit for measuring the resistance of electronic cable shielding on fly-by-wire cables installed on 757 airplanes. The 906-10272-5 calibration unit is used for adjusting the calibration for the test set. See the Ground Equipment Technical Manual for maintenance information. Refer to AMM 20-55-54 and AMM 20-56-02 for complete test set usage information. 906-10246-3 consists of an electrical display panel, a 100 amp jumper cable, a 200 amp jumper cable assembly, a drive current coupler, a sense current coupler, a joint probe assembly, and a battery pack contained in a storage box. An accessory box contains a battery charger and RS-232 cable assembly.



Loop Resistance Test Set
Figure 1 (Sheet 1 of 2)



REPAIRABLE/REPLACEABLE PARTS			
ITEM NO.	PART NO.	NOMENCLATURE	VENDOR CODE
1	IA2401-1	JUMPER CABLE, 100 AMP	V0955B
2	IA2402-1	JUMPER CABLE, 200 AMP	V0955B
3	AS700-01	BATTERY PACK	1
4	906-10260-2	DRIVE CURRENT COUPLER	
5	906-10260-1	SENSE CURRENT COUPLER	
6	906-10261-1	JOINT PROBE ASSEMBLY	
7	9500-500-1-5	PROTECTIVE CAP	V62081
8	S-5-B-48-D-S	CONTACT PIN	V51144
9	103486	BATTERY CHARGER	V56878
10	3AG	FUSE	V75915

1 APAK ELECTRONIC, KIRKLAND, WA 98034
TELEPHONE: 425-820-2272
E- MAIL: apak-batteries.com

1613457 S0000299474_V1

Loop Resistance Test Set
Figure 1 (Sheet 2 of 2)

PART NUMBER: 906-10272-5

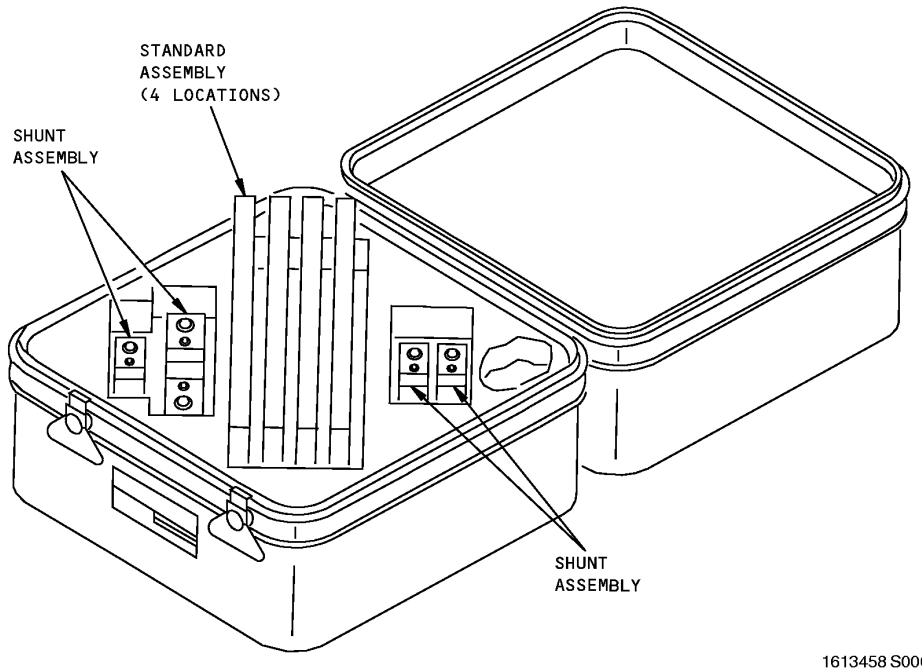
NAME: CALIBRATION UNIT - LOOP RESISTANCE TESTER

AIRPLANE MAINTENANCE: YES

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The 906-10272-5 drawing has been transferred to BAE Systems and will no longer be revised by Boeing. The 905-10272-5 inclusion in the 757 ITEM is for information and historical purposes only.

906-10272-5 is used to perform calibration procedures on the 906-10246-3 loop resistance test set. This procedure is normally performed at 12 month intervals. See the Ground Equipment Technical Manual for additional information. 906-10272-5 consists of several current shunt assemblies and several standard assemblies all contained in a storage box.



Loop Resistance Tester Calibration Unit
Figure 1