

CHAPTER

24

**ELECTRICAL
POWER**



737-600/700/800/900
ILLUSTRATED TOOL AND EQUIPMENT MANUAL

CHAPTER 24
ELECTRICAL POWER

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PART NUMBER: C24002-31, -39, -77, -78

NAME: JACK ADAPTER - VARIABLE SPEED CONSTANT FREQUENCY (VSCF)
AND INTEGRATED DRIVE GENERATOR (IDG)

AIRPLANE MAINTENANCE: YES

AMM 24-11-11

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C24002-31 (option) or C24002-39 (preferred) variable speed constant frequency (VSCF) and integrated drive generator (IDG) jack adapters are only used on 737-300 thru -500 airplanes equipped with a VSCF generator.

The C24002-77 (option) or C24002-78 (option) variable speed constant frequency and integrated drive generator jack adapters are used on 737-600 thru -900 airplanes.

C24002-31 or -39 is used in conjunction with a customer-furnished, low-profile, transmission jack (such as Hein-Werner No. 54 or No. 62 or Milwaukee No. 3000 transmission jack). C24002-31 or -39 is used to remove or install the variable speed constant frequency (VSCF) generator/converter.

The C24002-77 or -78 are used in conjunction with a customer-furnished, low-profile, transmission jack (such as a Hein-Werner NO. 54 or NO. 62, Lincoln W93718 or the Milwaukee 3000). C24002-77 or -78 is used to remove or install the integrated drive generator on all 737-600 thru -900 airplanes.

C24002-77 is recommended when the customer-furnished, transmission jack is used on floors that are not smooth finished concrete.

C24002-78 is recommended when the customer-furnished, transmission jack is used on floors that are smooth finished concrete.

Refer to the current C24002 tool drawing and AMM 24-11-11 for complete usage instructions.

The C24002-31, -39, -77 and -78 variable speed constant frequency and integrated drive generator jack adapter consist of:

C24002-31		
QUANTITY	NOMENCLATURE	PART NUMBER
1	VSCF ADAPTER ASSEMBLY	C24002-32
1	STORAGE BOX	

C24002-39		
QUANTITY	NOMENCLATURE	PART NUMBER
1	JACK ADAPTER ASSEMBLY	C24002-68
1	STORAGE BOX	

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C24002-77		
QUANTITY	NOMENCLATURE	PART NUMBER
1	JACK ADAPTER ASSEMBLY	C24002-79
1	STORAGE BOX	

C24002-78		
QUANTITY	NOMENCLATURE	PART NUMBER
1	JACK ADAPTER ASSEMBLY	C24002-80
1	STORAGE BOX	

WEIGHT: 43 lbs (20 kg)

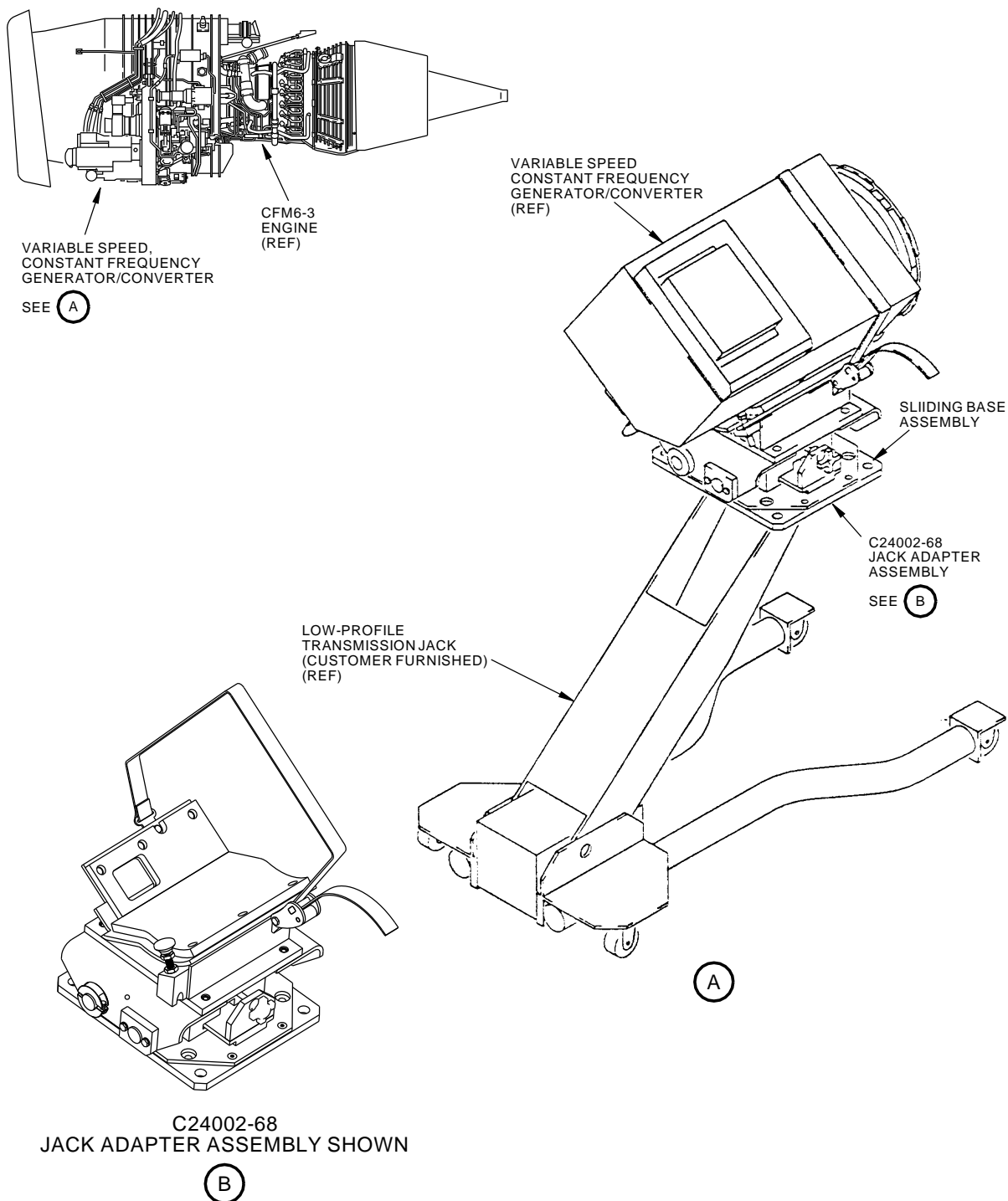
DIMENSIONS: 11 x 14 x 14 inches (279 x 356 x 356 mm)

NOTE: C24002-77 supersedes C24002-40 and C24002-45.
C24002-78 supersedes C24002-41.
C24002-39 replaces C24002-31 for future procurement.

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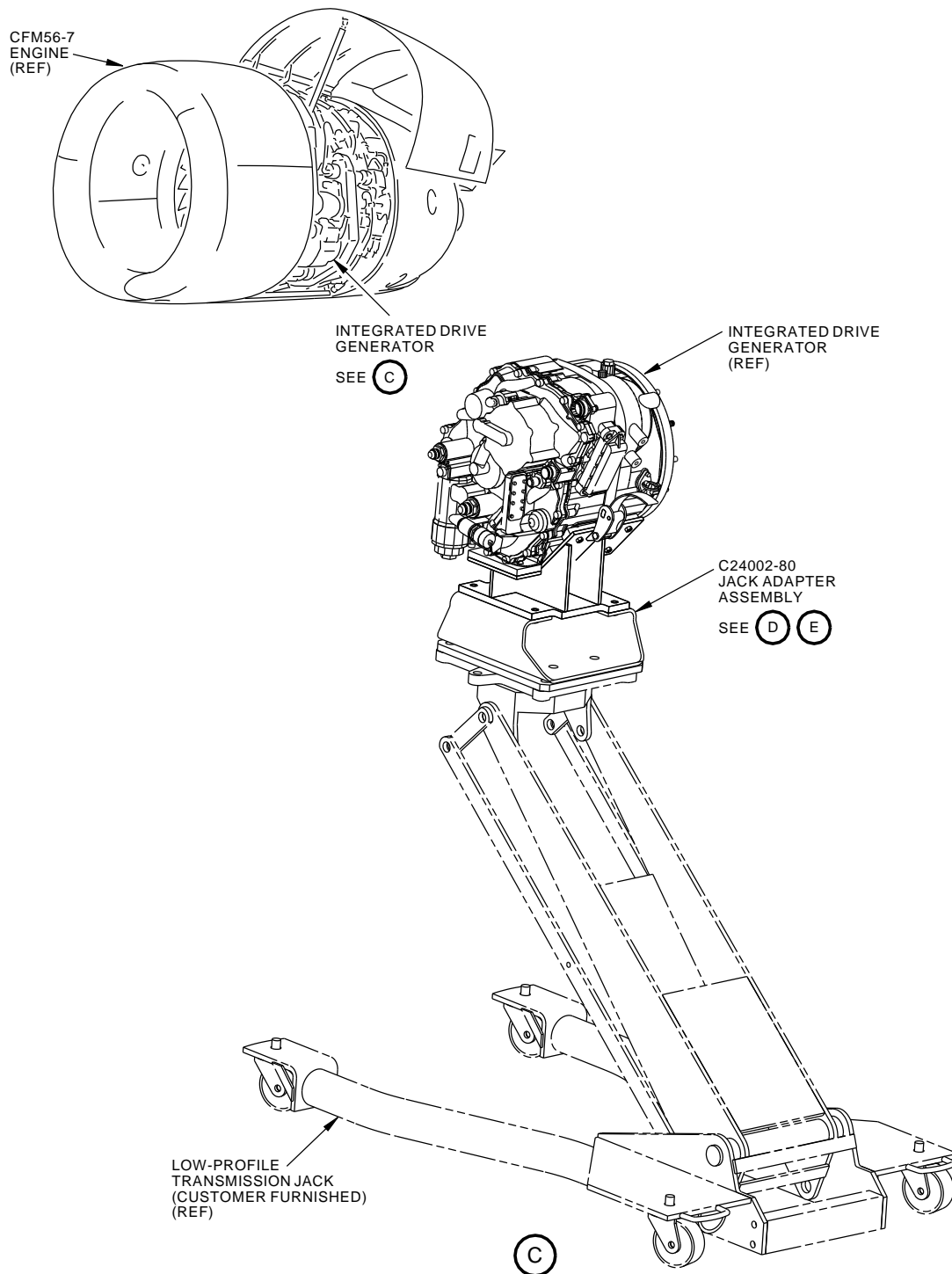
G79220 S0006831455_V3

C24002-31 and -39 VSCF Usage
Figure 1

24-10-01



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H14307 S0006831456_V3

C24002-77 and -78 IDG Usage and Components
Figure 2 (Sheet 1 of 2)

24-10-01

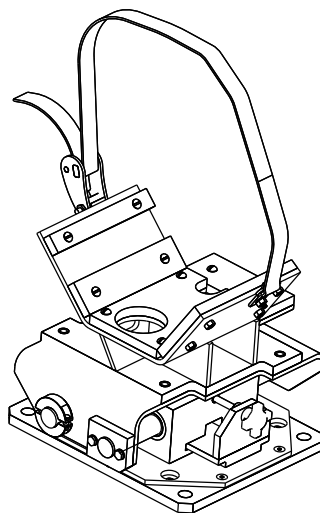
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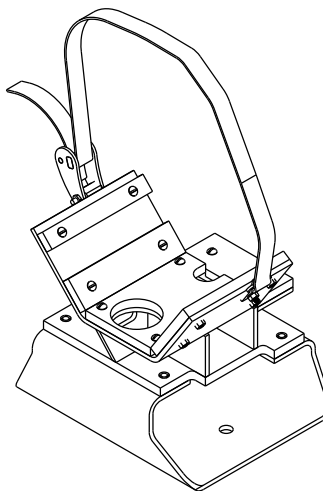


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**C24002-79
JACK ADAPTER ASSEMBLY
(SLIDING BASE)**

(D)



**C24002-80
JACK ADAPTER ASSEMBLY
(FIXED BASE)**

(E)

2079203 S0000436305_V2

**C24002-77 and -78 IDG Usage and Components
Figure 2 (Sheet 2 of 2)**

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PART NUMBER: J24015-1

NAME: PRESSURE TEST EQUIPMENT - ENGINE GENERATORS

AIRPLANE MAINTENANCE: YES

AMM 24-11-00

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The J24015-1 engine generators pressure test equipment is used on all 737 airplanes.

J24015 applies compressed air or nitrogen to the integrated drive generator (IDG), constant speed drive (CSD) or variable speed, constant frequency (VSCF) oil system through the pressure fill fitting. The pressure is monitored for a pressure decrease. A continuous decrease in pressure indicates a leak in the system.

Refer to AMM 24-11-00 and the current J24015 drawing for complete usage instructions.

The J24015-1 engine generators pressure test equipment consists of:

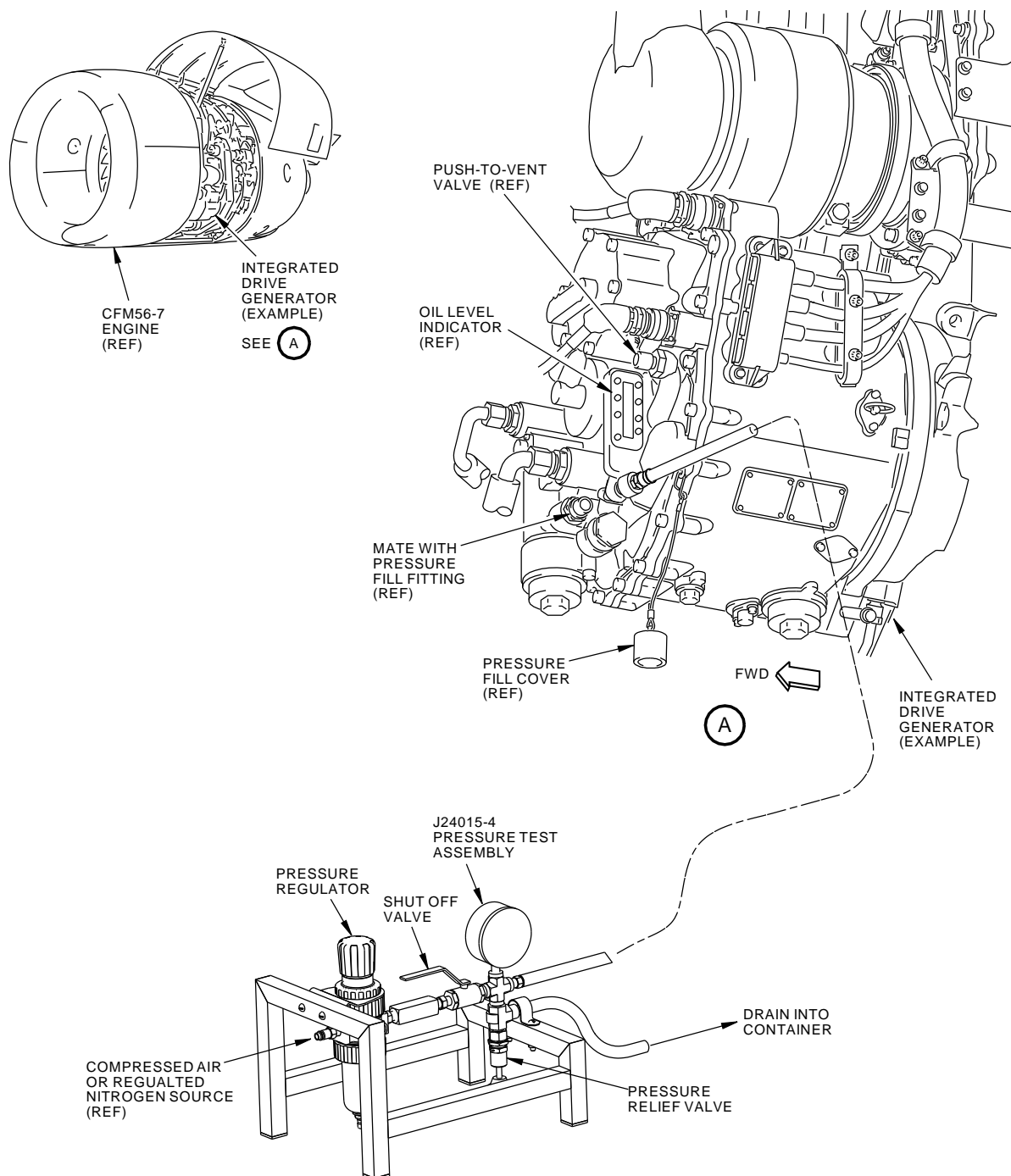
J24015-1		
QUANTITY	NOMENCLATURE	PART NUMBER
1	PRESSURE TEST ASSEMBLY	J24015-4
1	STORAGE BOX	

WEIGHT: 21 lbs (10 kg)

DIMENSIONS: 12 x 15 x 18 inches (305 x 381 x 457 mm)

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1564802 S0000290188_V2

**Engine Generators Pressure Test Equipment
Figure 1**

24-10-02



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PART NUMBER: C24004-1, -43

NAME: POWER DISTRIBUTION PANEL (PDP)- REMOVAL AND INSTALLATION EQUIPMENT

AIRPLANE MAINTENANCE: YES

AMM 24-21-21

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C24004-1 (option) and C24004 -43 (preferred) power distribution panel are used on all 737-600 thru -900 airplanes.

C24004 is used to remove or install the power distribution panels (PDP P91 left and P92 right) on the E2-1 (left) and E3-1 (right) equipment shelves. C24004 includes handles to attach to the PDP's for lifting. C24004 also includes a teflon topped, portable shelf to slide the PDP's out of the airplane. The shelf includes a leg for positioning and stability.

Refer to AMM 24-21-21 and the current C24004 drawing for complete usage instructions.

C24004-1 and -43 consist of:

C24004-1		
QUANTITY	NOMENCLATURE	PART NUMBER
1	BASE ASSEMBLY	C24004-2
2	HANDLE ASSEMBLY	C24004-5
1	STORAGE BOX	

C24004-43		
QUANTITY	NOMENCLATURE	PART NUMBER
1	BASE ASSEMBLY	C24004-44
2	HANDLE ASSEMBLY	C24004-5
1	STORAGE BOX	

WEIGHT: 17 lbs (7.7 kg)

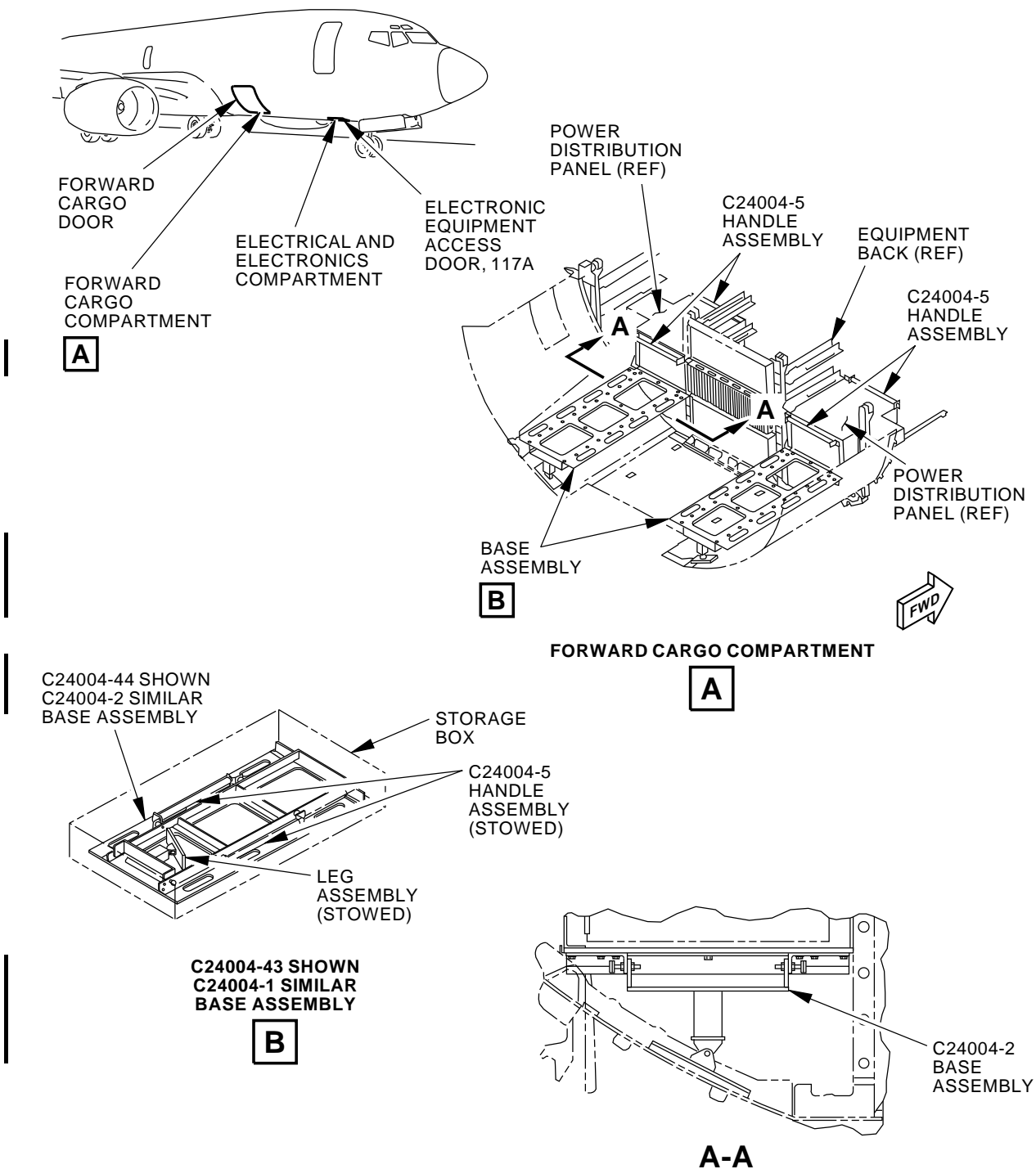
DIMENSIONS: 4 x 22 x 45 inches (102 x 559 x 1143 mm)

NOTE: C24004-43 replaces C24004-1 for future procurement.

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H84138 S0006831459_V4

Removal and Installation Equipment, Power Distribution Panel
Figure 1

24-20-01



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PART NUMBER: C24003-1

NAME: TRAY ASSEMBLY - BATTERY, REMOVAL AND INSTALLATION

AIRPLANE MAINTENANCE: YES

AMM 24-31-11

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C24003-1 tray assembly is used on all 737 airplanes except 737-100 thru -500 airplanes.

C24003 is inserted underneath the main battery (and auxiliary battery, if installed). The battery is slid from the battery compartment and removed without damage to the access panel seal on the deck forward of the battery compartment.

Refer to AMM 24-31-11 and the current C24003 drawing for complete usage instructions.

C24003-1 consists of:

C24003-1		
QUANTITY	NOMENCLATURE	PART NUMBER
1	TRAY ASSEMBLY	C24003-2
1	STORAGE BOX	

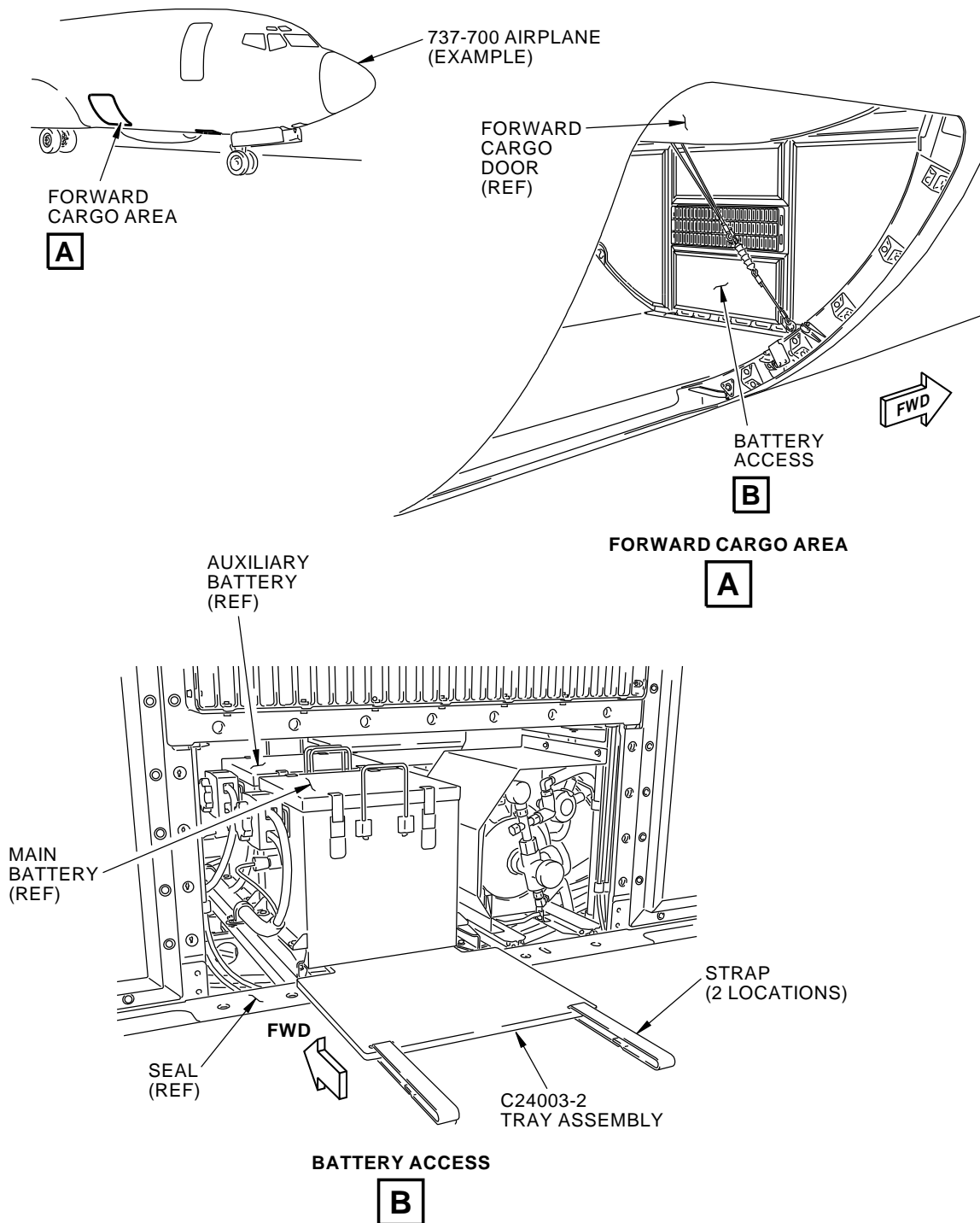
WEIGHT: 9 lbs (4 kg)

DIMENSIONS: 1 x 15 x 25 inches (25 x 381 x 635 mm)

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M52644 S0006831462_V3

Battery Removal and Installation Tray Assembly
Figure 1

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PART NUMBER: C24005

NAME: TEST BOX - P5-4 PANEL, AC SYSTEM GENERATOR AND APU
MODULE

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: YES
CMM 31-37-31

USAGE & DESCRIPTION: C24005 drawing has been transferred to BAE Systems and will no longer be revised by Boeing. C24005 inclusion in the 737 ITEM is for information and historical purposes only.

C24005 is used on all 737 airplanes equipped with P5-4 Module Assembly. See CMM 31-37-31.

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PART NUMBER: C24006

NAME: TEST BOX - P5-5 GENERATOR DRIVE AND STANDBY POWER

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: YES

CMM 31-10-41

USAGE & DESCRIPTION: C24006 drawing has been transferred to BAE Systems and will no longer be revised by Boeing. C24006 inclusion in the 737 ITEM is for information and historical purposes only.

C24006 is used on all 737 airplanes equipped with P5-5 module assembly. See CMM 31-10-41.

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PART NUMBER: J24016-1

NAME: BATTERY INSPECTION GAUGE TOOL

AIRPLANE MAINTENANCE: YES

AMM 24-31-11, AMM 24-31-12

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The J24016-1 battery inspection gauge tool is used on all 737 airplanes. J24016 includes a two-ended, cylindrical, probe test tool. One end is machined to a 0.3850+/-0.0002 inch cylinder; the other end is machined to a 0.3700+/-0.0002 inch cylinder.

J24016 is used to test two different types of battery connector power contacts to meet MS25182 requirements. The battery connector is generically identified as MS25182-2 and mates with the main and APU batteries.

Both ends of J24016 are used to test power contacts of the spiral spring type (manufactured by Elcon). The 0.3850-inch end tests the resiliency of expansion to an oversized pin. The 0.3700-inch end checks for proper contact to a worn or undersized pin. The 0.3700-inch end of J24016 is used to test power contacts of the longitudinal spring type (manufactured by Rebling Plastics). The 0.3700-inch end checks for proper contact to a worn or undersized pin.

Refer to AMM 24-31-11, AMM 24-31-12 and the current J24016 drawing for complete usage instructions.

J24016-1 consists of:

J24016-1		
QUANTITY	NOMENCLATURE	PART NUMBER
1	BATTERY INSPECTION GAUGE ASSEMBLY	J24016-2
1	FORCE SCALE	J24016-3
1	STORAGE BOX	

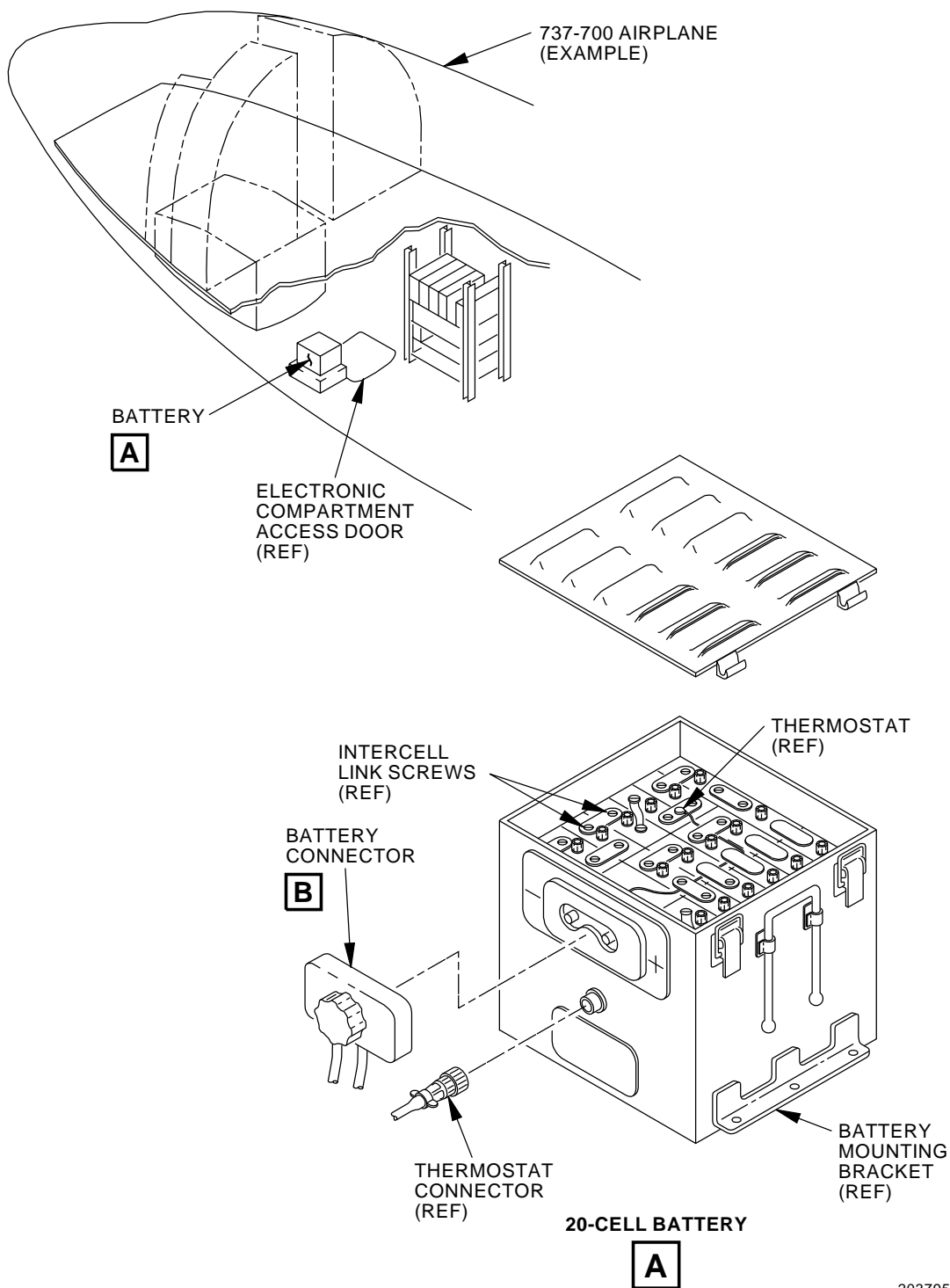
WEIGHT: 2 lbs (1 kg)

DIMENSIONS: 2 x 2 x 7 inches (51 x 51 x 178 mm)

24-30-04



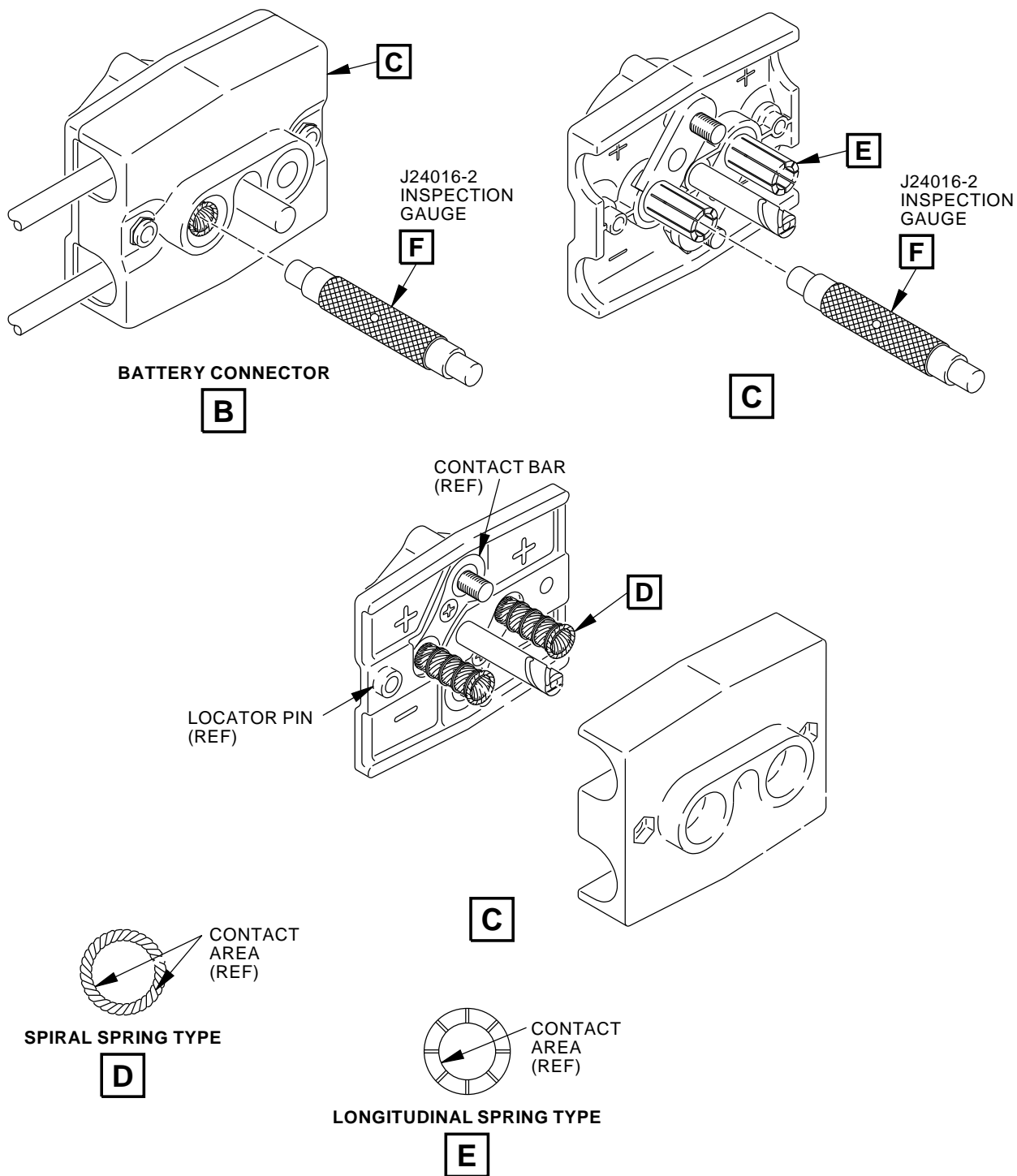
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2037953 S0000410175_V2

Battery Gauge Inspection Tool
Figure 1 (Sheet 1 of 3)

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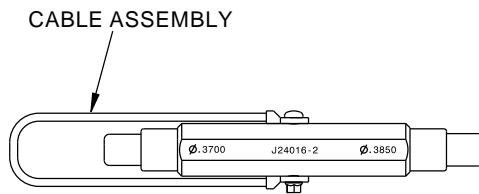
2037956 S0000410179_V3

**Battery Gauge Inspection Tool
Figure 1 (Sheet 2 of 3)**

24-30-04

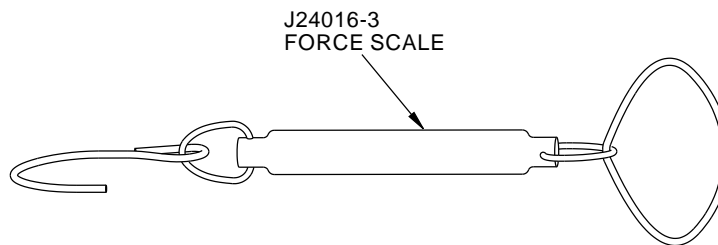


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**J24016-2
BATTERY INSPECTION GAUGE ASSEMBLY**

F



2037959 S0000410185_V3

**Battery Gauge Inspection Tool
Figure 1 (Sheet 3 of 3)**

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PART NUMBER: F70284-1

NAME: WEAR GAUGE SET - PLUG AND RECEPTACLE, GROUND POWER

AIRPLANE MAINTENANCE: YES

AMM 24-41-11

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The F70284-1 wear gauge set is used on all 737 airplanes.

F70284 is used to check for wear on the pins and sockets of the ground power plug and receptacle.

When used on the ground power plug's sockets, F70284 measures a minimum disengagement force of 10 pounds (4.5 kg) for each large socket and 5 pounds (2.3 kg) for each small socket.

When used on the airplane's ground power receptacle, the F70284 acts as a go/no-go gauge by fitting over the receptacle pins. The receptacle pins are worn if the gauge will fit over the pins.

Refer to AMM 24-41-11 and to the current F70284 drawing for complete usage instructions.

F70284-1 consists of:

F70284-1		
QUANTITY	NOMENCLATURE	PART NUMBER
1	WEAR GAUGE	F70284-2
1	WEAR GAUGE	F70284-3
1	INSTRUMENT SCALE	IN-25
1	STORAGE BOX	

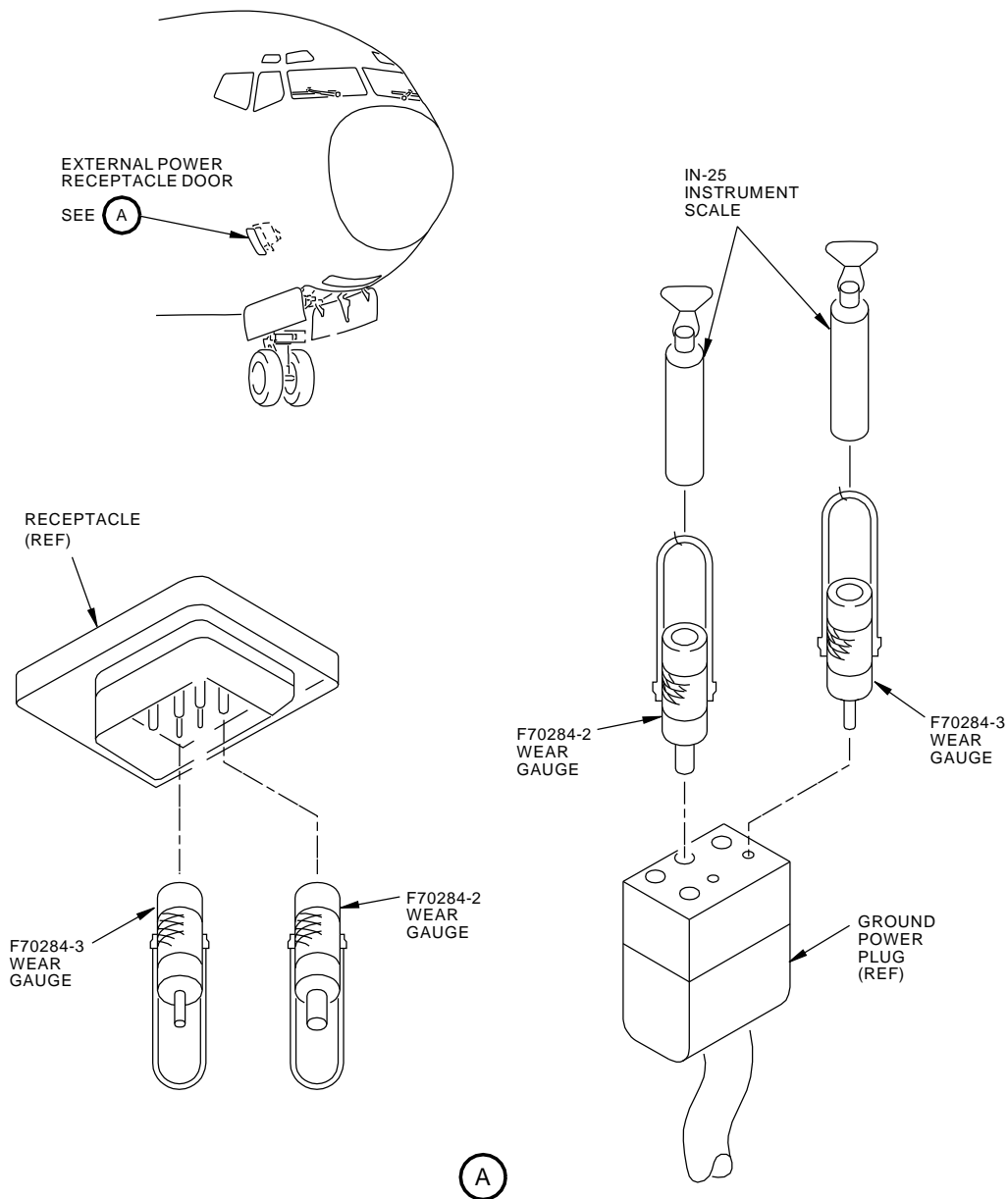
DIMENSIONS: 13 x 7 x 4 inches (330 x 179 x 102 mm)

NOTE: F70284 supersedes SE24-4001.

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M52627 S0006831469_V3

Ground Power Plug and Receptacle Wear Gauge Set
Figure 1

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