DME ANTENNA - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

   A. This section gives the procedures to remove and install the DME antenna.

   B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	*DESCRIPTION*	*EFFECTIVITY*
34-51-02-000-801-A	DME ANTENNA - REMOVAL	ALL
34-51-02-400-801-A	DME ANTENNA - INSTALLATION	ALL

TASK 34-51-02-000-801-A
EFFECTIVITY: ALL

2. DME ANTENNA - REMOVAL

A. General

(1) This procedure gives the instructions to remove the DME antenna.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 53-01-02/400	-

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
131		Area below the passenger cabin floor - LH
142		Area below the passenger cabin floor - RH

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Polyethylene spatula	To remove the sealant	AR

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Lower forward fuselage

I. Preparation

SUBTASK 841-002-A

WARNING: MAKE SURE THAT THE AIRCRAFT IS IN A SAFE CONDITION BEFORE YOU DO THE MAINTENANCE PROCEDURES. THIS IS TO PREVENT INJURY TO PERSONS AND/OR DAMAGE TO THE EQUIPMENT.

(1) Make sure that the aircraft is safe for maintenance.

(2) On the circuit breaker panel, open the DME 1 and DME 2 circuit breakers and attach a DO-NOT-CLOSE tag to them.

(3) Remove the floor panel 231 BF to access the DME 1 antenna and/or remove the floor panel 242BF to access the DME2 antenna (AMM MPP 53-01-02/400) .

J. Removal

SUBTASK 020-002-A

(1) (AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET) To remove the DME antenna, do as follows: (Figure 401)

(a) Disconnect the coaxial connector (1) from the DME antenna (2).

CAUTION: BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

(b) Use a spatula to remove the sealant from around the fuselage skin hole and the DME antenna (2), on the inner surface of the fuselage skin hole.

(c) Use a spatula to remove the sealant from around the DME (2) antenna and aircraft skin

(d) Remove the sealant used as protection of the screws (3).

(e) Remove the screws (3).

CAUTION: BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

(f) Use a spatula between the baseplate of the DME antenna (2) and the aircraft skin to make the separation.

(g) Carefully pull the DME antenna (2) away from the fuselage.

(h) Remove the DME antenna (2).

(2) (AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET) To remove the DME antenna, do as follows: (Figure 402)

(a) Disconnect the coaxial connector (1) from the DME antenna (2).

CAUTION: BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

(b) Use a spatula to remove the sealant from around the fuselage skin hole and the DME antenna (2), on the inner surface of the fuselage skin hole.

(c) Use a spatula to remove the sealant from the contour of the DME antenna (2) and aircraft skin.

(d) Remove the sealant used as a protection of the screws (3).

(e) Remove the screws (3).

CAUTION: BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

(f) Use a spatula between the baseplate of the DME antenna (2) and the aircraft skin to make the separation.

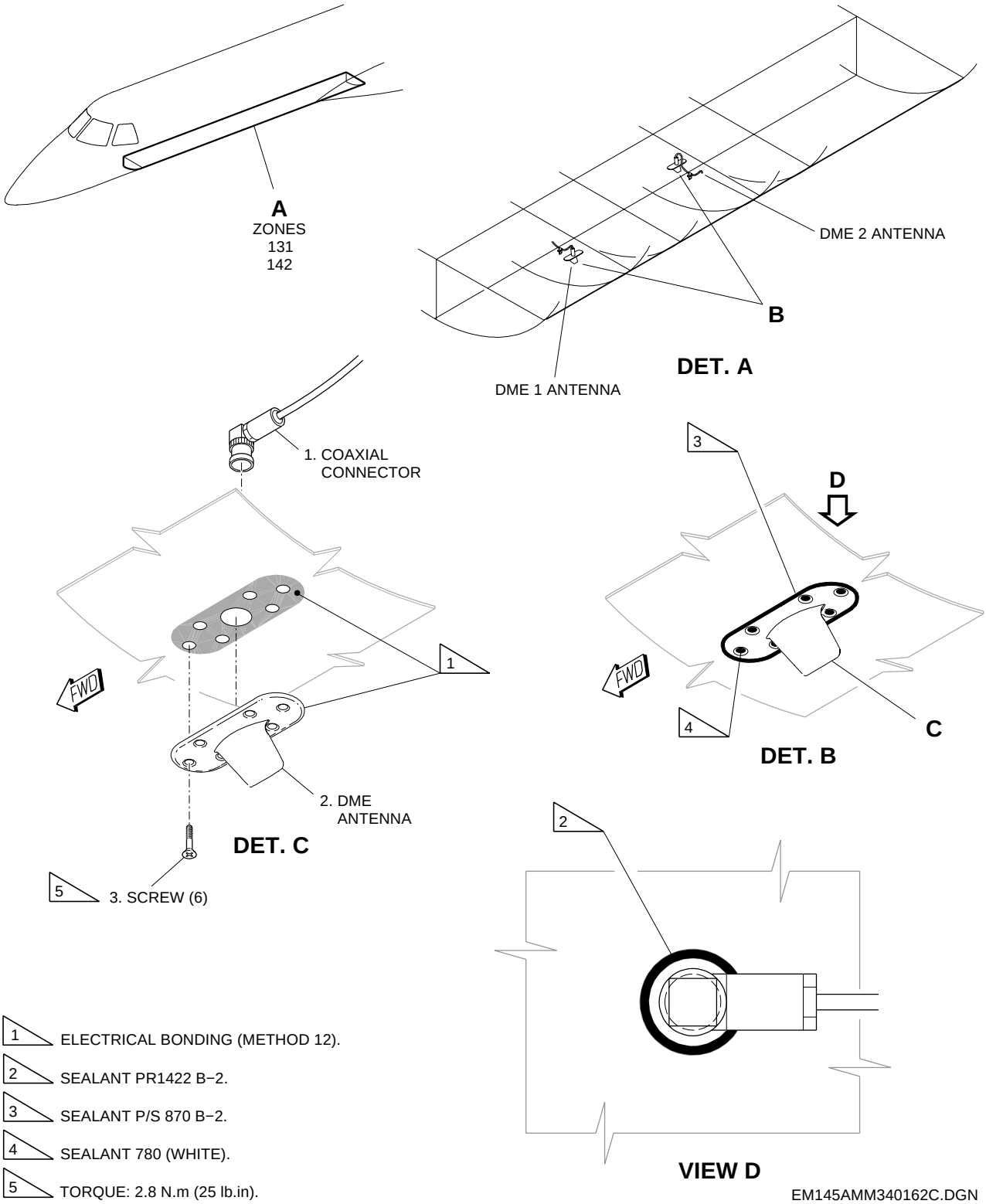
(g) Carefully pull the DME antenna (2) away from the fuselage.

(h) Remove the DME antenna (2).

(i) Remove and discard the gel conductive gasket (4).

(j) Use a spatula to remove the sealant from around the connector of the DME antenna (2).

EFFECTIVITY: AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET
DME Antenna - Removal/Installation
Figure 401



1 ELECTRICAL BONDING (METHOD 12).
2 SEALANT PR1422 B−2.
3 SEALANT P/S 870 B−2.
4 SEALANT 780 (WHITE).
5 TORQUE: 2.8 N.m (25 lb.in).

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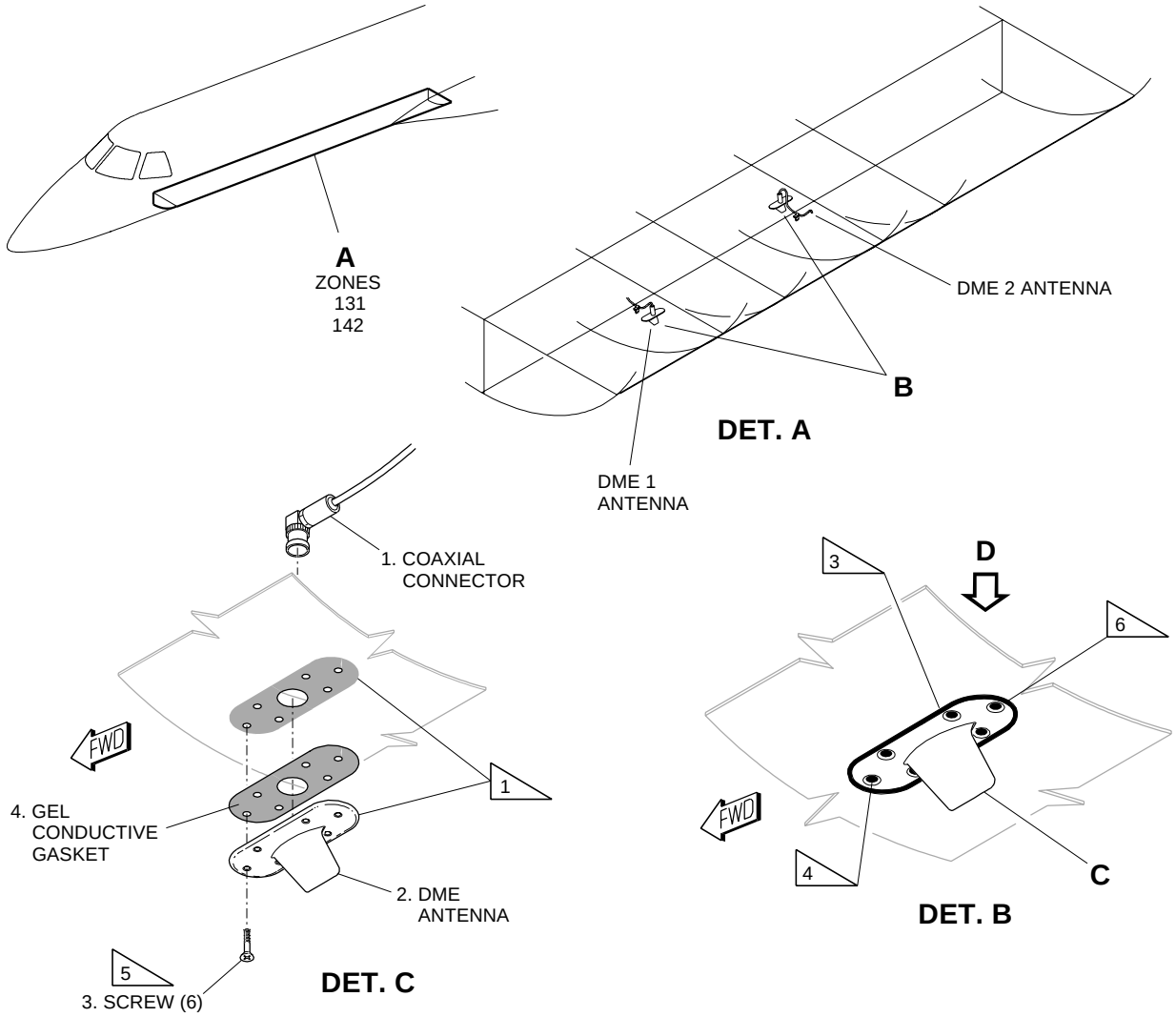
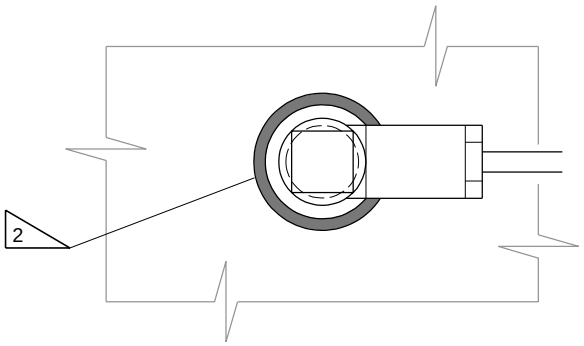
EFFECTIVITY: AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET

DME Antenna - Removal/Installation

Figure 402





VIEW D

1. ELECTRICAL BONDING (METHOD 12).
2. SEALANT PR1422 B−2.
3. SEALANT P/S 870 B−2.
4. SEALANT 780 (WHITE).
5. TORQUE: 2.8 N.m (25 lb.in).
6. PAINT ECL−G−46 / PC−233 / TR109.

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TASK 34-51-02-400-801-A
EFFECTIVITY: ALL

3. DME ANTENNA - INSTALLATION

A. General

(1) This procedure gives the instructions to install the DME antenna.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 53-01-02/400	-
AMM TASK 20-13-21-700-801-A/200	ELECTRICAL BONDING TEST - STANDARD PROCEDURES
AMM TASK 20-13-21-910-801-A/200	TYPES OF ELECTRICAL BONDING AND SURFACE PREPARATION - STANDARD PROCEDURES
AMM TASK 34-51-00-700-801-A/500	DME SYSTEM OPERATIONAL TEST
AMM TASK 34-51-02-000-801-A/400	DME ANTENNA - REMOVAL
CPM 51-21-06	-
IPC 34-51-02	DME ANTENNA
SRM 51-20-01	-

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
131		Area below the passenger cabin floor - LH
142		Area below the passenger cabin floor - RH

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Torque wrench	To torque	

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Polyethylene spatula	To remove the sealant	AR
Commercially available	Clean dry cloth	To clean the antenna base	AR

F. Consumable Materials

SPECIFICATION (BRAND)	*DESCRIPTION*	*QTY*
ASTM-D-740	Methyl Ethyl Ketone (MEK)	AR
780(WHITE) (ASTM-C-920)	Type II Class A White Silicone, Sealant	AR
P/S870 B-2 (MIL-PRF-81733)	Type II CL B-2 Polysulfide Aerodynamic Sealant	AR
PR1422 B-2 (AMS-S-8802)	Type I CL B2 Polysulfide Sealant	AR
ECL-G-46/PC-233/TR109 (MEP 10-069)	High Solids Polyurethane White Paint	AR

G. Expendable Parts

ITEM	*IPC REFERENCE (VENDOR REFERENCE)*	*QTY*
Gel Conductive Gasket	IPC 34-51-02	2

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Lower forward fuselage

I. Installation

SUBTASK 420-002-A

(1) Make sure that the aircraft is in the same configuration as it was at the end of the removal task (AMM TASK 34-51-02-000-801-A/400)

(2) (AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET) To install the DME antenna, do as follows: (Figure 401)

WARNING: BE CAREFUL WHEN YOU USE THE METHYL ETHYL KETONE (MEK). PUT ON SAFETY GOGGLES, PROTECTIVE GLOVES AND CLOTHING. DO NOT BREATHE THE GAS. DO THE WORK IN AN AREA WHICH HAS A GOOD FLOW OF AIR. THE METHYL ETHYL KETONE (MEK) IS POISONOUS AND HIGHLY FLAMMABLE.

(a) With a clean cloth soaked in Methyl Ethyl Ketone (MEK), clean the antenna base surface.

CAUTION: MAKE SURE THAT THE ELECTRICAL BONDING GIVES A GOOD ELECTRIC CONDUCTIVE PATH. IF NOT, DAMAGE TO THE AIRCRAFT AND TO THE EQUIPMENT CAN OCCUR.

(b) Do the bonding procedure, method 12, on the antenna installation surface on the aircraft skin (AMM TASK 20-13-21-910-801-A/200)

(c) Put the DME antenna (2) in its installation position.

(d) Install the screws (3).

(e) Use a torque wrench to torque the screws (3) to 2.8 N.m. (25 lb.in) in a crisscross pattern.

(f) Do the bonding test between the connector of the DME antenna (2) and aircraft ground (AMM TASK 20-13-21-700-801-A/200).

(g) Apply aerodynamic sealant P/S870 B-2 around the contour of the DME antenna (2), on the skin (SRM 51-20-01).

(h) Apply sealant 780 (WHITE) on the screw heads until you fully fill the recesses on the antenna body (SRM 51-20-01).

(i) Apply sealant PR1422 B-2 around the fuselage skin hole and the DME antenna base, on the inner surface of the fuselage skin (SRM 51-20-01).

(j) Connect the coaxial connector (1) to the DME antenna (2).

(3) (AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET) To install the DME antenna, do as follows: (Figure 402)

WARNING: BE CAREFUL WHEN YOU USE THE METHYL ETHYL KETONE (MEK). PUT ON SAFETY GOGGLES, PROTECTIVE GLOVES AND CLOTHING. DO NOT BREATHE THE GAS. DO THE WORK IN AN AREA WHICH HAS A GOOD FLOW OF AIR. THE METHYL ETHYL KETONE (MEK) IS POISONOUS AND HIGHLY FLAMMABLE.

(a) With a clean cloth soaked in Methyl Ethyl Ketone (MEK), clean the antenna base surface.

(b) Carefully remove the protective release film identified with "ANTENNA SIDE" from the gel conductive gasket (4).

(c) Carefully align the gel conductive gasket (4) with the screw holes and connector, and install it to the base of the DME antenna (2).

(d) Carefully remove the protective release film identified with "AIRCRAFT SIDE" from the gel conductive gasket (4).

CAUTION: MAKE SURE THAT THE ELECTRICAL BONDING GIVES A GOOD ELECTRIC CONDUCTIVE PATH. IF NOT, DAMAGE TO THE AIRCRAFT AND TO THE EQUIPMENT CAN OCCUR.

(e) Do the bonding procedure, method 12, on the antenna installation surface on the aircraft skin (AMM TASK 20-13-21-910-801-A/200)

(f) Put the DME antenna (2) in its installation position.

(g) Install the screws (3).

(h) Use a torque wrench to torque the screws (3) to 2.8 N.m (25 lb.in) in a crisscross pattern.

CAUTION: BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

(i) If necessary, with a spatula, remove the excess gel of the conductive gel gasket (4) from around the DME antenna (2) and from the aircraft skin.

(j) Do the bonding test between the connector of the DME antenna (2) and aircraft ground (AMM TASK 20-13-21-700-801-A/200).

(k) Apply aerodynamic sealant P/S870 B-2 around the contour of the DME antenna (2), on the skin (SRM 51-20-01).

(l) Apply paint ECL-G-46/PC-233/TR109 on the screw heads (CPM 51-21-06).

(m) Apply sealant 780 (WHITE) on the screw heads until you fully fill the recesses in the antenna body (SRM 51-20-01).

(n) Apply sealant PR1422 B-2 around the fuselage skin hole and the DME antenna base, on the inner surface of the fuselage skin (SRM 51-20-01).

(o) Connect the coaxial connector (1) to the DME antenna (2).

J. Follow-on

SUBTASK 842-002-A

(1) Remove all tools, equipment and unwanted materials from the work area.

(2) Install floor panel(s) (AMM MPP 53-01-02/400).

(3) On the circuit breaker panel, close the DME 1 and DME 2 circuit breakers and remove the DO-NOT-CLOSE tag from them.

(4) Do the DME System Operational Test (AMM TASK 34-51-00-700-801-A/500).