

FUEL LINE JOINTS - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove/install the joints of the fuel lines of the aircraft.
- 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
28-21-13-000-801-A	FUEL LINE JOINTS - REMOVAL	ACFT WITH WET WINGSTUB
28-21-13-400-801-A	FUEL LINE JOINTS - INSTALLATION	ACFT WITH WET WINGSTUB
28-21-13-000-802-A	FUEL LINE JOINTS - REMOVAL	ACFT WITH DRY WINGSTUB
28-21-13-400-802-A	FUEL LINE JOINTS - INSTALLATION	ACFT WITH DRY WINGSTUB

TASK 28-21-13-000-801-A

EFFECTIVITY: ACFT WITH WET WINGSTUB

2. FUEL LINE JOINTS - REMOVAL

A. General

(1) Obey the instructions below to remove the fuel line joints.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 12-11-01-600-802-A/300	FUEL-TANK PRESSURE DEFUELING - SERVICING
AMM TASK 28-11-01-000-801-A/400	FUEL-TANK ACCESS PANELS - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
192	192BR	Center lower fairing
192	192AL	Center lower fairing
155	155DZ	LH main landing gear compartment
155	155EZ	LH main landing gear compartment
156	156CZ	RH wing stub
156	156EZ	RH main landing gear compartment
156	156DZ	RH main landing gear compartment
156	156BZ	RH wing stub

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Wing stub undersurface

I. Preparation

SUBTASK 841-002-A

WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN [AMM MPP 28-00-00/200](#) TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.

- (1) Defuel the RH or LH tank ([AMM TASK 12-11-01-600-802-A/300](#)). If necessary.
- (2) On the circuit breaker panel, open the circuit breakers below and attach a DO-NOT-CLOSE tag to them.
 - FUEL PUMPS 1A/1B/1C.
 - FUEL PUMPS 2A/2B/2C.
 - START 1/2.
- (3) Remove the access panels 192BR, 192AL, 155DZ, 155EZ, 156CZ, 156EZ, 156DZ or 156BZ (AMM MPP 06-41-01/100 and [AMM TASK 28-11-01-000-801-A/400](#)), as applicable.

J. Removal ([Figure 401](#))

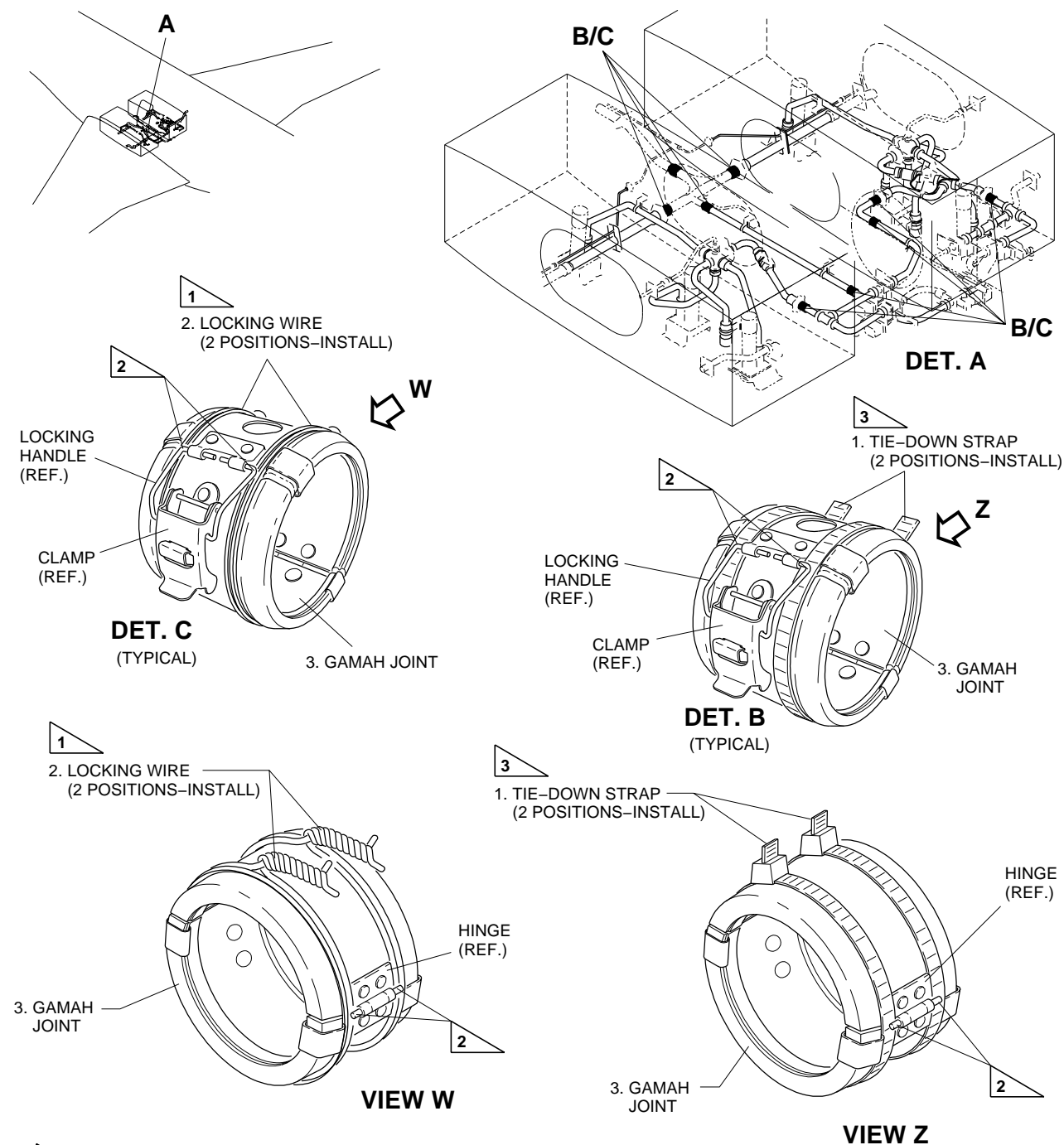
SUBTASK 020-002-A

- (1) Remove the tie-down straps (1) or locking wires (2), as applicable, and discard them. Refer to [Figure 401](#).
- (2) Loosen the clamp and remove the Gamah joints (3).

EFFECTIVITY: ACFT WITH WET WINGSTUB

Fuel Line Joints - Removal/Installation

Figure 401



1 APPLY TWO TURNS OF LOCKING WIRE AT EACH POSITION.

2 IF APPLICABLE, THE LOCKING WIRE/TIE-DOWN STRAP MUST BE POSITIONED UNDER THE HINGE PIN ENDS AND LOCKING HANDLE.

3 NOT APPLICABLE TO FAA-CERTIFIED AIRCRAFT.

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TASK 28-21-13-400-801-A

EFFECTIVITY: ACFT WITH WET WINGSTUB

3. FUEL LINE JOINTS - INSTALLATION

A. General

(1) Obey the instructions below to install the fuel line joints.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM MPP 28-11-01/400	- REMOVAL/INSTALLATION
AMM TASK 12-11-01-600-801-A/300	FUEL-TANK PRESSURE REFUELING - SERVICING
AMM TASK 28-41-00-200-801-A/600	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
192	192BR	Center lower fairing
192	192AL	Center lower fairing
155	155DZ	LH main landing gear compartment
155	155EZ	LH main landing gear compartment
156	156CZ	RH wing stub
156	156EZ	RH main landing gear compartment
156	156DZ	RH main landing gear compartment
156	156BZ	RH wing stub

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MS20995C32	Lockwire	AR
MS3367-7-9	Tie-down straps, if applicable	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Wing stub undersurface

I. Preparation

SUBTASK 841-003-A

WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN **AMM MPP 28-00-00/200** TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.

- (1) On the circuit breaker panel, open the circuit breakers below and attach a DO-NOT-CLOSE tag to them.
 - FUEL PUMPS 1A/1B/1C.
 - FUEL PUMPS 2A/2B/2C.
 - START 1/2.
- (2) Remove the protection caps or plugs from the disconnected points, if applicable.

J. Installation (Figure 401)

SUBTASK 420-002-A

CAUTION: MAKE SURE THAT THE FAYING SURFACES BETWEEN THE GAMAH JOINT AND THE FUEL TUBE ARE CLEAN TO PREVENT AN UNSATISFACTORY ELECTRICAL BONDING.

- (1) Install the Gamah joints (3).

CAUTION: DO NOT USE LOCKWIRE ON UNITS OR FITTINGS IN THE FUEL TANKS. THE ENDS OF THE LOCKWIRES CAN BE POINTS OF THE ELECTROSTATIC DISCHARGE.

- (2) (CTA-, JAA- AND IAC-AR-CERTIFIED AIRCRAFT ONLY)

In the wing stub dry region area, install the tie-down straps (1) or locking wires (2).

NOTE: Use a tie-down strap or a locking wire to hold each end of the Gamah joint. If applicable, apply two turns of the locking wire at each position.

- (3) (FAA-CERTIFIED AIRCRAFT ONLY)

In the wing stub dry region area, install the locking wires (2).

NOTE: Use a locking wire to hold each end of the Gamah joint. If applicable, apply two turns of the locking wire at each position.

K. Follow-on

SUBTASK 842-002-A

- (1) Do an inspection on the fuel quantity indication harness (AMM TASK 28-41-00-200-801-A/600).

NOTE: The inspection of fuel quantity indication harness is a part of Critical Design Configuration Control Limitations (CDCCL) in the Airworthiness Limitations of the Maintenance Review Board Report (MRB).

- (2) Install access panels 192BR, 192AL, 155DZ, 155EZ, 156CZ, 156EZ, 156DZ or 156BZ (AMM MPP 06-41-01/100 and [AMM MPP 28-11-01/400](#)), as applicable.
- (3) Refuel the RH or LH tank ([AMM TASK 12-11-01-600-801-A/300](#)), as applicable.
- (4) Examine for fuel leakage the access panels which were removed.
- (5) On the circuit breaker panel, close the circuit breakers below and remove the DO-NOT-CLOSE tag from them:
 - FUEL PUMPS 1A/1B/1C.
 - FUEL PUMPS 2A/2B/2C.
 - START 1/2.

TASK 28-21-13-000-802-A

EFFECTIVITY: ACFT WITH DRY WINGSTUB

4. FUEL LINE JOINTS - REMOVAL

A. General

(1) Obey the instructions below to remove the Fuel Line Joints.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 12-11-01-600-802-A/300	FUEL-TANK PRESSURE DEFUELING - SERVICING

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
192	192AL	Center lower fairing
192	192BR	Center lower fairing

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Center lower fairing

I. Preparation

SUBTASK 841-004-A

WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN [AMM MPP 28-00-00/200](#) TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.

- (1) Defuel the LH or RH tank, as applicable ([AMM TASK 12-11-01-600-802-A/300](#)).
- (2) On the circuit breaker panel, open the circuit breakers below and attach a DO-NOT-CLOSE tag to them.
 - FUEL PUMPS 1A/1B/1C.

- FUEL PUMPS 2A/2B/2C.
- START 1/2.

- (3) Open access panels 192AL and 192BR (AMM MPP 06-41-01/100) to get access to the fuel line joints.

J. Removal [\(Figure 402\)](#) [\(Figure 403\)](#)

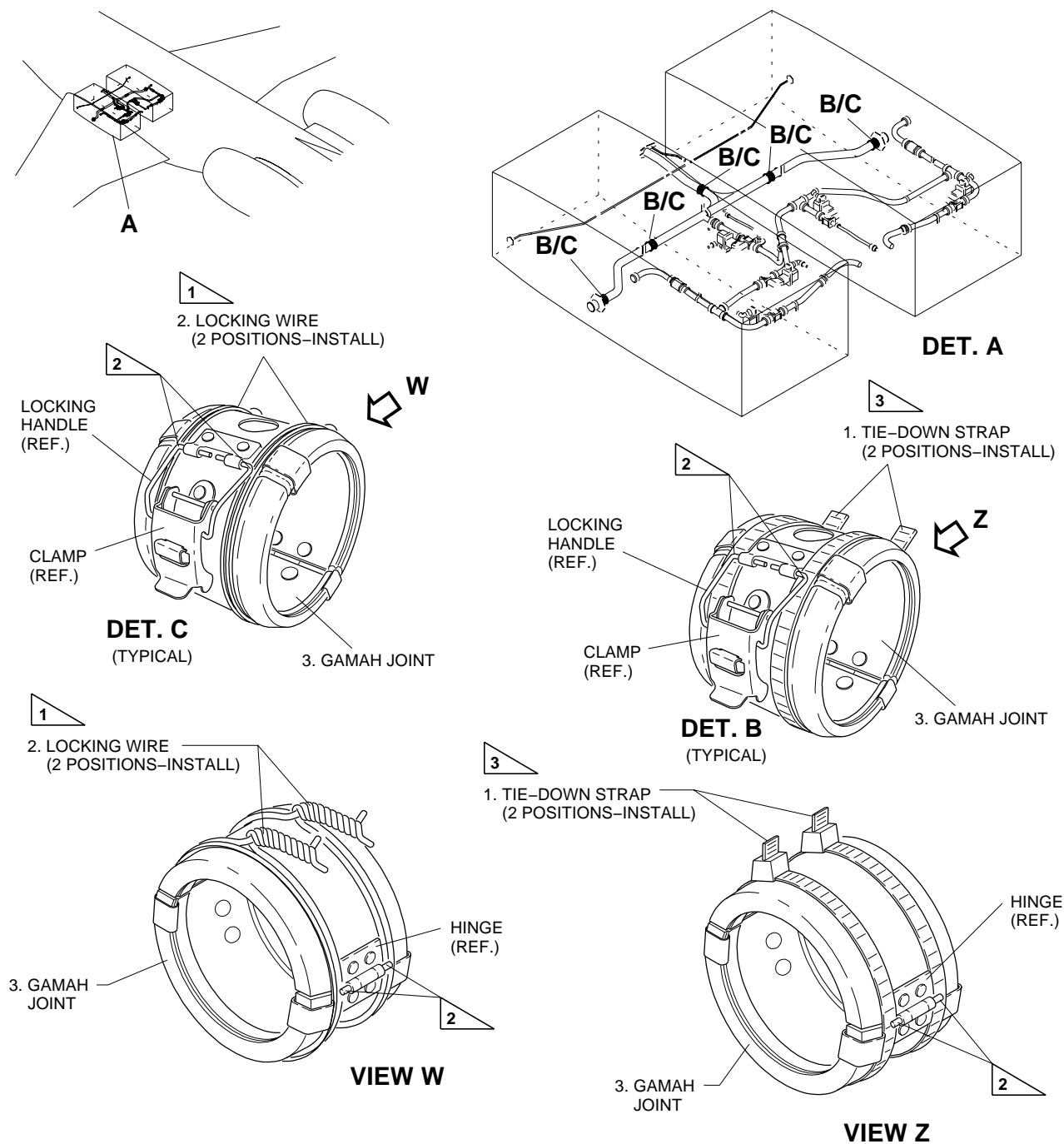
SUBTASK 020-003-A

- (1) Remove the tie-down straps (1) or locking wires (2), as applicable, and discard them. Refer to [Figure 402](#) and [Figure 403](#).
- (2) Loosen the clamp and remove the Gamah joints (3).

EFFECTIVITY: APPLICABLE TO EMB-145MR/ER/EP/EU AND EMB-135ER/KE MODELS

Fuel Line Joints - Removal/Installation

Figure 402



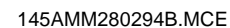
1 APPLY TWO TURNS OF LOCKING WIRE AT EACH POSITION.

2 IF APPLICABLE, THE LOCKING WIRE/TIE-DOWN STRAP MUST BE POSITIONED UNDER THE HINGE PIN ENDS AND LOCKING HANDLE.

3 NOT APPLICABLE TO FAA-CERTIFIED AIRCRAFT.

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Figure 403



TASK 28-21-13-400-802-A

EFFECTIVITY: ACFT WITH DRY WINGSTUB

5. FUEL LINE JOINTS - INSTALLATION

A. General

(1) Obey the instructions below to install the Fuel Line Joints.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM MPP 28-11-01/400	- REMOVAL/INSTALLATION
AMM TASK 12-11-01-600-801-A/300	FUEL-TANK PRESSURE REFUELING - SERVICING
AMM TASK 28-41-00-200-801-A/600	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
192	192AL	Center lower fairing
192	192BR	Center lower fairing

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MS20995C32	Lockwire	AR
MS3367-7-9	Tie-down straps, if applicable	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Center lower fairing

I. Preparation

SUBTASK 841-005-A

WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN [AMM MPP 28-00-00/200](#) TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.

- (1) On the circuit breaker panel, open the circuit breakers below and attach a DO-NOT-CLOSE tag to them.
 - FUEL PUMPS 1A/1B/1C.
 - FUEL PUMPS 2A/2B/2C.
 - START 1/2.
- (2) Remove the protection caps or plugs from the disconnected points, if applicable.

J. Installation (Figure 402) (Figure 403)

SUBTASK 420-003-A

CAUTION: MAKE SURE THAT THE FAYING SURFACES BETWEEN THE GAMAH JOINT AND THE FUEL TUBE ARE CLEAN TO PREVENT AN UNSATISFACTORY ELECTRICAL BONDING.

- (1) Install the Gamah joints (3).

CAUTION: DO NOT USE LOCKWIRE ON UNITS OR FITTINGS IN THE FUEL TANKS. THE ENDS OF THE LOCKWIRES CAN BE POINTS OF THE ELECTROSTATIC DISCHARGE.

- (2) (CTA-, JAA- AND IAC-AR-CERTIFIED AIRCRAFT ONLY)

In the wing stub dry region area, install the tie-down straps (1) or locking wires (2).

NOTE: Use a tie-down strap or a locking wire to hold each end of the Gamah joint. If applicable, apply two turns of the locking wire at each position.

- (3) (FAA-CERTIFIED AIRCRAFT ONLY)

In the wing stub dry region area, install the locking wires (2).

NOTE: Use a locking wire to hold each end of the Gamah joint. If applicable, apply two turns of the locking wire at each position.

K. Follow-on

SUBTASK 842-003-A

- (1) Do an inspection on the fuel quantity indication harness (AMM TASK 28-41-00-200-801-A/600).

NOTE: The inspection of fuel quantity indication harness is a part of Critical Design Configuration Control Limitations (CDCCL) in the Airworthiness Limitations of the Maintenance Review Board Report (MRB).

- (2) Close access panels 192AL and 192BR (AMM MPP 06-41-01/100 and [AMM MPP 28-11-01/400](#)), as applicable.

- (3) Refuel the tanks ([AMM TASK 12-11-01-600-801-A/300](#)), as applicable.
- (4) Examine for fuel leakage the access panels which were removed.
- (5) On the circuit breaker panel, close the circuit breakers below and remove the DO-NOT-CLOSE tag from them:
 - FUEL PUMPS 1A/1B/1C.
 - FUEL PUMPS 2A/2B/2C.
 - START 1/2.