

**SERVICE BULLETIN****ENGINE - FUEL AND CONTROL - REPLACE CERTAIN FUEL NOZZLE SUPPLY MANIFOLD ASSEMBLIES AND THE RELATED ATTACHING HARDWARE - CATEGORY CODE 7 - MOD.ENG-73-0131****1. Planning Information****A. Effectivity**

- (1) Aircraft: Airbus A320, A321
- (2) Engine: V2500-A1 Engines Before Serial No. V0362
V2522-A5 Engines before Serial No. V10435
V2524-A5 Engines before Serial No. V10435
V2527-A5 Engines before Serial No. V10435
V2527E-A5 Engines before Serial No. V10435
V2530-A5 Engines Before Serial No. V10435
V2533-A5 Engines Before Serial No. V10435

Concurrent Requirements: This Service Bulletin must be incorporated at the same time as V2500-ENG-72-0329.

B. Reason**(1) Condition:**

Several instances of cracking of the Fuel Manifold Assemblies have been reported from the field. The cracking has occurred in the ferrule-to-tube braze joint at the end of the manifold assembly that attaches to the Fuel Distribution Valve, and has led to fuel leakage. One instance has resulted in a fire.

(2) Background:

The cracking has been attributed to high installation stresses, and some instances of inadequate braze joints.

(3) Objective:

Provide redesigned Fuel Manifold Assemblies which feature welded ferrules for increased durability and rerouted profiles for more flexibility. The new manifold assemblies are made of a nickel based alloy rather than stainless steel.

(4) Substantiation**V2500-ENG-73-0131**



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The manifolds have been extensively analyzed and instrumented. Back to back analysis shows significant improvements in both vibratory and steady stress over the present bill of material designs. These new manifolds were installed on a test engine which ran 47 hours and instrumentation data was recorded. The confirmed improvements were predicted in the analytical models. A nickel alloy is now the norm for small diameter tubes because of its increased strength. There is much more experience on commercial, and military engines, using nickel based alloys in applications similar to the new fuel manifolds.

(5) Effects of Bulletin on Workshop Procedures:

Removal/Installation	Not affected
Disassembly/Assembly	Not affected
Cleaning	Not affected
Inspection/Check	Not affected
Repair	Not affected
Testing	Not affected

(6) Supplemental Information

None.

C. Description

- (1) Replace the Fuel Manifold Assemblies and related hardware at the applicable Locations.

D. Approval

The Part Number Changes and/or part modifications described in Section 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the Engine Model listed.

The 'compliance' statement and the procedures described in paragraph F of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-Approved for the Engine Model listed.

E. Compliance

Category 7

Accomplish when supply of superseded parts has been depleted.

F. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

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Venue	Estimated Manhours
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(1) In service	Not applicable
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(2) At overhaul	Not applicable
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G. Material - Price and Availability

(1) Modification kit is not required. Parts are supplied as single line items.

(2) See "Material Information" section for prices and availability of future spares.

H. Tooling - Price and Availability

Special tools are not required to accomplish this Service Bulletin.

I. Weight and Balance

(1) Weight change	+ .1 lbs (0,05 Kg)
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(2) Moment arm	No effect
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(3) Datum	Engine Front mount Centerline (Power Plant station (PPS) 100)
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J. Electrical Load Data

This Service Bulletin has no effect on the aircraft electrical load.

K. References

(1) Internal Reference No.

96VA012

96VA012Q

(2) Other References

IAE V2500 Service Bulletins

V2500-ENG-73-0088 (Engine - Fuel and Control - Replace The Fuel Nozzle Supply Manifold Assemblies (For The V2500-A1, V2522-A5, V2527-A5, V2530-A5 and V2533-A5 Only) And Remove The Gasket Option And Change The Installation Procedure (For All Models)

V2500-ENG-72-0329 (Engine - Fuel and Control - Fuel System Air Tubes - Introduction of Revised EEC Pipe Support Brackets)

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The V2500-A1 Engine Illustrated Parts Catalog (S-V2500-1IA),
Chapter/Section 73-11-41

The V2500-A5 Engine Illustrated Parts Catalog (S-V2500-2IA,
S-V2500-5IA, S-V2500-6IA), Chapter/Section 73-11-41

The V2500 Engine Manual (E-V2500-1IA), Chapter/Section 72-00-40,
Removal/Installation

This Service Bulletin is subjected to Airbus Aircraft Modification
No. 27771.

L. Other Publications Affected

- (1) The V2500-A1 Engine Illustrated Parts Catalog (S-V2500-1IA),
Chapter/Section 72-40-00 and 73-11-41
- (2) The V2500-A5 Engine Illustrated Parts Catalog (S-V2500-2IA, S-V2500-5IA,
S-V2500-6IA), Chapter/Section 72-40-00 and 73-11-41
- (3) The V2500 Engine Manual (E-V2500-1IA), Chapter/Section 72-00-40,
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2. Accomplishment Instructions

Printed in Great Britain

Parts Set "S#"	Fuel Nozzle Supply Manifold Assemblies New Part Numbers	Fuel Nozzle Supply Manifold Assemblies Replaced Part Numbers	Applicable Figures for Installation
(S1)	2A3256-01, 2A3258-01, 2A3259-01 and 2A3261-01*	2A0504-01, 2A0509-01, 2A0510-01 & 2A0516-01 OR 2A3229-01, 2A3231-01, 2A3232-01 & 2A3236-01	Figure 1 (Sheets 1 and 6 through 10) Figure 2 (Sheets 1 and 2)
(S2)	2A3256-01	2A0504-01 OR 2A3229-01	Figure 1 (Sheets 1 and 6 through 10) Figure 2 (Sheets 1 and 2)
(S3)	2A3258-01	2A0509-01 OR 2A3231-01	Figure 3 (Sheets 1 and 4) Figure 2 (Sheets 1 and 2)
(S4)	2A3259-01	2A0510-01 OR 2A3232-01	Figure 1 (Sheet 10)
(S5)	2A3261-01	2A0516-01 OR 2A3236-01	Figure 1 (Sheet 1)
(S6)	2A3256-01, 2A3258-01	2A0504-01 & 2A0509-01 OR 2A3229-01 & 2A3231-01	Figure 1 (Sheets 1 and 6 through 9)
(S7)	2A3256-01, 2A3256-01, 2A3258-01	2A0504-01 & 2A0510-01 OR 2A3229-01 & 2A3232-01	Figure 1 (Sheet 3)
(S8)	2A3256-01, 2A3261-01	2A0504-01 & 2A0516-01 OR 2A3229-01 & 2A3236-01	Figure 1 (Sheets 4 and 6 through 10) Figure 2 (Sheets 1 and 2)
(S9)	2A3258-01, 2A3259-01	2A0509-01 & 2A0510-01 OR 2A3231-01 & 2A3232-01	Figure 3 (Sheets 2 and 4)
(S10)	2A3256-01, 2A3261-01	2A0509-01 & 2A0516-01 OR	Figure 1 (Sheets 1 and 7 through 9)

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		2A3231-01 & 2A3236-01	
(S11)	2A3259-01, 2A3261-01	2A0510-01 & 2A-0516-01 OR 2A3232-01 & 2A3236-01	Figure 4
(S12)	2A3256-01, 2A3258-01 and 2A3259-01	2A0504-01, 2A0509-01 & 2A0510-01 OR 2A3229-01, 2A3231-01 & 2A3232-01	Figure 2 (Sheets 1 and 2)
(S13)	2A3258-01, 2A3259-01 and 2A3261-01	2A0509-01, 2A0510-01 & 2A0516-01 OR 2A3231-01, 2A3232-01 & 2A3236-01	Figure 1 (Sheets 1, 7 and 8) Figure 2 (Sheets 1 and 2)
(S14)	2A3256-01, 2A3258-01 and 2A3261-01	2A0504-01, 2A0509-01 & 2A0516-01 OR 2A3229-01, 2A3231-01 & 2A3236-01	Figure 1 (Sheets 1 and 6 through 8)
(S15)	2A3256-01, 2A3259-01 and 2A3261-01	2A0504-01, 2A0510-01 & 2A0516-01 OR 2A3229-01, 2A3232-01 & 2A3236-01	Figure 1 (Sheets 1 and 6 through 8)
*Fuel Nozzle Supply Manifold Assemblies can be incorporated a necessary to meet replacement requirements, however, the intent of this Service Bulletin will not be complied with until all the new parts provided by this Service Bulletin are installed.			
Possible Installations Of Fuel Nozzle Supply Manifold Assemblies Table 1			

Removal/Installation of Parts Set (S1) - 4 Fuel Supply Manifold Assemblies 2A3256-01, 2A3258-01, 2A3259-01 and 2A3261-01

- A. Replace the 2A0504-01, 2A0509-01, 2A0510-01 and 2A0516-01 Fuel Nozzle Supply Manifold Assemblies or the 2A3229-01, 2A3231-01, 2A3232-01 and 2A3236-01 Fuel Nozzle Supply Manifold Assemblies with the parts specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-40-00, Removal-07.

NOTE: The 2A2537 Loop Clamp Bracket (holes 87 and 88) and the 2A2546 Loop Clamp Bracket (holes 80 and 81) and the related hardware (Nuts and Bolts and Loop Clamps) are removed from the engine and will not be used with the new configuration.

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NOTE: You can remove and install the 2A3230-01 Fuel Nozzle Supply Manifold Assembly or disconnect and connect the Loop Clamps. This will make it possible to do the modification.

- B. Install the 2A3256-01, 2A3258-01, 2A3259-01 and 2A3261-01 Fuel Nozzle Supply Manifold Assemblies by the procedure given in Reference (4), Engine Manual, Reference (4), Engine Manual, Chapter/Section 72-40-00, Installation-07 and Figure 1 (Sheets 1, and 6 through 10) and applicable views.

NOTE: The 2A1938-01 Bracket Assembly and the 2A1939 Bracket will remain on the engine when the new configuration is installed. See Figure 2 (Sheets 1 and 2). The Flange nuts must be loosened until they are fingertight.

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration except as follows:

- (a) Install the following brackets on "K" Flange by Figure 1 (applicable views) and as specified.

- 1 Replace the 2A2529-01 Loop Clamp Bracket with the 2A3275 Loop Clamp Bracket (1 off) at hole locations 85 and 86.
 - a Install the 4W0649 Bolts (2 off) though the bolt holes in the flange and the bracket.
 - b Install the 4W0003 Nuts (2 off) on the bolts with your fingers.
- 2 Locate the 2A3277 Loop Clamp Bracket (1 off) at hole locations 92, 93 and 94.
 - a Install the 4W0649 Bolts (3 off) though the bolt holes in the flange and the bracket.
 - b Install the 4W0003 Nuts (3 off) on the bolts with your fingers.
- 3 Locate the 2A3279 Loop Clamp Bracket (1 off) at hole locations 98 and 99.
 - a Install the 4W0649 Bolts (2 off) though the bolt holes in the flange and the bracket.
 - b Install the 4W0003 Nuts (2 off) on the bolts with your fingers.
- 4 Locate the 2A3373 Loop Clamp Bracket (1 off) at hole locations 104 and 105.
 - a Install the 4W0649 Bolts (2 off) though the bolt holes in the flange and the bracket.

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- b Install the 4W0003 Nuts (2 off) on the bolts with your fingers.
- 5 Replace the 2A1225 Loop Clamp Bracket (holes 113 and 114) with the 2A3281 Loop Clamp Bracket (1 off) at hole locations 112 and 113.
- a Install the 4W0649 Bolts (2 off) through the bolt holes in the flange and the bracket.
- b Install the 4W0003 Nuts (2 off) on the bolts with your fingers.
- (b) Install the 2A3256-01 (tube AC) Fuel Nozzle Supply Manifold Assembly (1 off) by the procedure given in Reference 4, Engine Manual, Chapter/Section 72-00-40, Installation-07, and as follows:
- 1 Install ST1540-05 Loop Clamps (5 off) at the Bracket locations and position them so the bolt holes line up with the bolt holes in the brackets.
- 2 Install the 4W0103 Bolts (3 off) and the 4W0104 Bolt (1 off) to attach the loop clamps to the brackets.
- NOTE: One 4W0104 Bolt (1 off) is used on the Loop Clamp that attaches to the 2A3281 Bracket. The second 4W0104 Bolt will be installed in step (d) to hold the Loop Clamps on Tubes AC and AK.
- 3 Install 4W0001 Nuts (4 off) on the bolts and tighten them with your fingers.
- (c) Install the 2A3230-01, 2A3231-01 and 2A3232-01 Fuel Nozzle Supply Manifold Assembly (as applicable) now, if you removed it before.
- (d) Install the 2A3258-01 (tube AK) Fuel Nozzle Supply Manifold Assembly (1 off) by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07, and as follows:
- 1 Install ST1540-05 Loop Clamps (2 off) at the Bracket locations and position them so the bolt holes line up with the bolt holes in the brackets.
- 2 Install the 4W0103 Bolt (1 off) and the 4W0104 Bolt (1 off) to attach the loop clamps to the brackets.
- NOTE: The 4W0104 Bolt (1 off) is used on the two Loop Clamps that attach to the 2A3275 Bracket and hold tubes AC and AK.
- 3 Install two 4W0001 Nuts (2 off) to the bolts and tighten them with your fingers.

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- (e) Install the 2A3259-01 (tube AJ) Fuel Nozzle Supply Manifold Assembly (1 off) by the procedure given in Reference 3, Engine Maintenance Manual, Chapter/Section 72-00-40, Removal/Installation, and as follows:
- (f) Install the 2A3261-01 (tube AH) Fuel Nozzle Supply Manifold Assembly (1 off) by the procedure given in Reference 4, Engine Manual, Chapter/Section 72-00-40, Installation-07.
- (g) Torque the flange nuts by the procedure specified in Reference (4) Engine Manual, Chapter/Section 70-00-42, Installation-01.
- (h) Complete the installation by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07.

Removal/Installation of Parts Set (S2) – 2A3256-01 Fuel Supply Manifold Assembly

- A. Replace either the 2A0504-01 or the 2A3229-01 Fuel Nozzle Supply Manifold Assembly with the part specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Removal-07.

NOTE: The 2A2537 Loop Clamp Bracket (holes 87 and 88) and the related hardware (Nut and Bolt and Loop Clamp) is removed from the engine and will not be used with the new configuration.

- B. Install the 2A3256-01 Fuel Nozzle Supply Manifold Assembly (tube AC) by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 1 (Sheets 2 and 6 through 8), Figure 2 (Sheet 2) and applicable views.

NOTE: The 2A1938-01 Bracket Assembly and the 2A1939 Bracket will remain on the engine when the new configuration is installed. See Figure 2 (Sheets 1 and 2). The Flange nuts must be loosened until they are fingertight.

NOTE: You can remove and install the 2A3230-01, 2A3231-01, 2A3231-01 Fuel Nozzle Supply Manifold Assemblies or disconnect and connect the Loop Clamps. This will make it possible to do the modification.

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration except as follows:
 - (a) Install the following brackets on "K" Flange by Figure 1 and as specified.
 - 1 Replace the 2A2529 Loop Clamp Bracket with the 2A3275 Loop Clamp Bracket (1 off) at hole locations 85 and 86.
 - a Install the 4W0649 Bolts (2 off) though the bolt holes in the flange and the bracket.



- b Install the 4W0003 Nuts (2 off) on the bolts with your fingers.
- 2 Locate the 2A3279 Loop Clamp Bracket (1 off) at hole locations 98 and 99.
 - a Install the 4W0649 Bolts (2 off) though the bolt holes in the flange and the bracket.
 - b Install the 4W0003 Nuts (2 off) on the bolts with your fingers.
- 3 Locate the 2A3373 Loop Clamp Bracket (1 off) at hole locations 104 and 105.
 - a Install the 4W0649 Bolts (2 off) though the bolt holes in the flange and the bracket.
 - b Install the 4W0003 Nuts (2 off) on the bolts with your fingers.
- 4 Replace the 2A1225 Loop Clamp Bracket (holes 113 and 114) with the 2A3281 Loop Clamp Bracket (1 off) at hole locations 112 and 113.
 - a Install the 4W0649 Bolts (2 off) though the bolt holes in the flange and the bracket.
 - b Install the 4W0003 Nuts (2 off) on the bolts with your fingers.
- (b) Install the 2A3256-01 (tube AC) Fuel Nozzle Supply Manifold Assembly (1 off) by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and as follows:
 - 1 Install ST1540-05 Loop Clamps (5 off) at the Bracket locations and position them so the bolt holes line up with the bolt holes in the brackets.
 - 2 Install the 4W0103 Bolts (3 off) and the 4W0104 Bolt (2 off) to attach the loop clamps to the brackets.

NOTE: One 4W0104 Bolt (1 off) is used on the Loop Clamp that attaches to the 2A3281 Bracket. The second 4W0104 Bolt is used to hold tubes AC and AK to the 2A3275 Bracket.
 - 3 Install 4W0001 Nuts (4 off) on the bolts and tighten them with your hand.
- (c) Torque the flange nuts by the procedure specified in Reference (4) Engine Manual, Chapter/Section 70-00-42, Installation-01.
- (d) Complete the installation by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07.

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Removal/Installation of Parts Set (S3) – 2A3258-01 Fuel Supply Manifold Assembly

- A. Replace either the 2A0509-01 or the 2A3231-01 Fuel Nozzle Supply Manifold Assembly with the part specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Removal-07.
- B. Install the 2A3258-01 Fuel Nozzle Supply Manifold Assembly (tube AK) by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 3 (Sheets 1 and 4) and applicable views.

NOTE: All Brackets will remain on the engine except the 2A2529-01 Loop Clamp Bracket when the new configuration is installed. See Figure 2 (Sheets 1 and 2). The Flange nuts must be loosened until they are fingertight.

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration except as follows:

- (a) Install the following brackets on "K" Flange by Figure 1 and as specified.

- 1 Locate the 2A3277 Loop Clamp Bracket (1 off) at hole locations 92, 93 and 94.

a Install the 4W0649 Bolts (3 off) through the bolt holes in the flange and the bracket.

b Install the 4W0003 Nuts (3 off) on the bolts with your fingers.

- 2 Replace the 2A2529-01 Loop Clamp Bracket (1 off) with the 2A3288-01 Loop Clamp Bracket at hole locations 85 and 86.

a Install the 4W0649 Bolts (2 off) through the bolt holes in the flange and the bracket.

b Install the 4W0003 Nuts (2 off) on the bolts with your fingers.

- (b) Install the 2A3258-01 (tube AK) Fuel Nozzle Supply Manifold Assembly (1 off) by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07, and as follows:

- 1 Install ST1540-05 Loop Clamps (2 off) at the Bracket locations and position them so the bolt holes line up with the bolt holes in the brackets.

- 2 Install the 4W0103 Bolt (1 off) and the 4W0104 Bolt (1 off) to attach the loop clamps to the brackets.

NOTE: The 4W0104 Bolt (1 off) is used on the Loop Clamp that attaches to the 2A3288-01 Bracket and supports tubes AC and AK.



- 3 Install one 4W0001 Nut (1 off) to the bolts and tighten them with your hand.

NOTE: The 2A3288-01 Bracket Assembly has one integral nut.

- (c) Torque the flange nuts by the procedure specified in Reference (4) Engine Manual, Chapter/Section 70-00-42, Installation-01.
- (d) Complete the installation by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07.

Removal/Installation of Parts Set (S4) – 2A3259-01 Fuel Supply Manifold Assembly

- A. Replace either the 2A0510-01 or the 2A3232-01 Fuel Nozzle Supply Manifold Assembly with the part specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Removal-07.

NOTE: All Brackets will remain on the engine when the new configuration is installed. You will remove one Nut, one Bolt and one clamp. Do not clamp tube AJ to the 2A2546 Bracket. See Figure 1 (Sheet 10).

- B. Install the 2A3259-01 (tube AJ) Fuel Nozzle Supply Manifold Assembly by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 1 (Sheet 10).

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration.

Removal/Installation of Parts set (S5) – 2A3261-01 Fuel Supply Manifold Assembly

- A. Replace either the 2A0516-01 or the 2A3236-01 Fuel Nozzle Supply Manifold Assembly with the part specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40 Removal-07.
- B. Install the 2A3261-01 (tube AH) Fuel Nozzle Supply Manifold Assembly by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 1 (Sheet 1).

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration.

Removal/Installation of Parts Set (S6) – 2A3256-01 and 2A3258-01 Fuel Supply Manifold Assemblies

- A. Replace either the 2A0504-01 and 2A0509-01 or the 2A3229-01 and 2A3231-01 Fuel Nozzle Supply Manifold Assemblies with the parts specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Removal-07.

NOTE: The 2A2537 Loop Clamp Bracket (holes 87 and 88) and the related hardware (Nut and Bolt and Loop Clamp) is removed from the engine and will not be used with the new configuration.

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- B. Install the 2A3256-01 (tube AC) and 2A3258-01 (tube AK) Fuel Nozzle Supply Manifold Assemblies by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 1 (Sheets 1, and 6 through 9) and applicable views.

NOTE: You can remove and install the 2A3230-01 Fuel Nozzle Supply Manifold Assembly or disconnect and connect the Loop Clamps. This will make it possible to do the modification.

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration except as follows:

NOTE: You must loosen the flange nuts that hold the Brackets for tubes AC and AK until fingertight.

- (a) Use the procedure for the (S1) installation, steps (a) through (d), (g) and (h).

Removal/Installation of Parts Set (S7) – 2A3256-01 and 2A3259-01 Fuel Supply Manifold Assemblies

- A. Replace either the 2A0504-01 and 2A0510-01 or the 2A3229-01 and 2A3232-01 Fuel Nozzle Supply Manifold Assemblies with the parts specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Removal-07.

NOTE: The 2A2537 Loop Clamp Bracket (holes 87 and 88) and the related hardware (Nut and Bolt and Loop Clamp) is removed from the engine and will not be used with the new configuration.

NOTE: Remove the Loop Clamp, Bolt and Nut from the 2A2546 Loop Clamp Bracket located on Fuel Supply Manifold Assembly AJ. Do not clamp Fuel Supply Manifold Assembly AJ to the 2A2546 Loop Clamp Bracket.

- B. Install the 2A3256-01 (tube AC) and 2A3259-01 (tube AJ) Fuel Nozzle Supply Manifold Assemblies by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 1 (Sheet 3) and applicable views.

NOTE: You can remove and install the 2A3230-01 and 2A3231-01 Fuel Nozzle Supply Manifold Assemblies or disconnect and connect the Loop Clamps. This will make it possible to do the modification.

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration except as follows:

NOTE: You must loosen the flange nuts that hold the Brackets for tubes AC and AK until fingertight.

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- (a) Use the procedure for the (S1) installation, steps (a) through (c) and steps (e), (g) and (h).

Removal/Installation of Parts Set (S8) – 2A3256-01 and 2A3261-01 Fuel Supply Manifold Assemblies

- A. Replace either the 2A0504-01 and 2A0516-01 or the 2A3229-01 and 2A3236-01 Fuel Nozzle Supply Manifold Assemblies with the parts specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07.

NOTE: The 2A2537 Loop Clamp Bracket (holes 87 and 88) and the related hardware (Nuts and Bolts and Loop Clamps) is removed from the engine and will not be used with the new configuration.

- B. Install the 2A3256-01 (tube AC) and 2A3261-01 (tube AH) Fuel Nozzle Supply Manifold Assemblies by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 1, (Sheets 4, and 6 through 10), Figure 2 (Sheets 1 and 2) and applicable views.

NOTE: You can remove and install the 2A3230-01 and 2A3231-01 Fuel Nozzle Supply Manifold Assemblies or disconnect and connect the Loop Clamps. This will make it possible to do the modification.

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration except as follows:

NOTE: You must loosen the flange nuts that hold the Brackets for tubes AC and AK until fingertight.

- (a) Use the procedure for the (S1) installation, steps (a) through (c) and step (f), (g) and (h).

Removal/Installation of Parts Set (S9) – 2A3258-01 and 2A3259-01 Fuel Supply Manifold Assemblies

- A. Replace either the 2A0509-01 and 2A0510-01 or the 2A3231-01 and 2A3232-01 Fuel Nozzle Supply Manifold Assemblies with the parts specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Removal-07.

- B. Install the 2A3258-01 (tube AK) and 2A3259-01 (tube AJ) Fuel Nozzle Supply Manifold Assemblies by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 3 (Sheets 2 and 4) and applicable views.

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration and as follows:

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NOTE: You must loosen the flange nuts that hold the Brackets for tubes AC and AK until fingertight.

NOTE: Remove the Loop Clamp, Bolt and Nut from the 2A2546 Loop Clamp Bracket located on Fuel Supply Manifold Assembly AJ. Do not clamp Fuel Supply Manifold Assembly AJ to the 2A2546 Loop Clamp Bracket.

- (a) Remove the Clamp, Nut and Bolt from the 2A1938-01 Bracket at the location of tube AK.

NOTE: Do not clamp Fuel Supply Manifold Assembly AK to the 2A1938-01 Loop Clamp Bracket.

- (b) Install the following brackets on "K" Flange by Figure 1 and as specified.

- 1 Locate the 2A3277 Loop Clamp Bracket (1 off) at hole locations 92, 93 and 94.
 - a Install the 4W0649 Bolts (3 off) though the bolt holes in the flange and the bracket
 - b Install the 4W0003 Nuts (3 off) on the bolts with your fingers.
- 2 Replace the 2A2529-01 Loop Clamp Bracket with the 2A3288-01 Loop Clamp Bracket (1 off) at hole locations 85 and 86.
 - a Install the 4W0649 Bolts (2 off) though the bolt holes in the flange and the bracket.
 - b Install the 4W0003 Nuts (2 off) on the bolts with your fingers.

- (2) Use the procedure for the (S1) installation, steps (d), (e), (g) and (h).

Removal/Installation of Parts Set (S10) – 2A3258-01 and 2A3261-01 Fuel Supply Manifold Assemblies

- A. Replace either the 2A0509-01 and 2A0516-01 or the 2A3231-01 and 2A3236-01 Fuel Nozzle Supply Manifold Assemblies with the parts specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Removal-07.
- B. Install the 2A3258-01 (tube AK) and 2A3261-01 (tube AH) Fuel Nozzle Supply Manifold Assemblies by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 1 (Sheet 1 and Sheets 7 through 9) and applicable views.

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration and as follows:

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NOTE: Do not clamp Fuel Supply Manifold Assembly AK to the 2A1938-01 Loop Clamp Bracket.

(a) Install the following brackets on "K" Flange by Figure 1 and as specified.

- 1 Locate the 2A3277 Loop Clamp Bracket (1 off) at hole locations 92, 93 and 94.
 - c Install the 4W0649 Bolts (3 off) through the bolt holes in the flange and the bracket.
 - d Install the 4W0003 Nuts (3 off) on the bolts with your fingers.
- 2 Replace the 2A2529-01 Loop Clamp Bracket with the 2A3288-01 Loop Clamp Bracket (1 off) at hole locations 85 and 86.
 - e Install the 4W0649 Bolts (2 off) through the bolt holes in the flange and the bracket.
 - f Install the 4W0003 Nuts (2 off) on the bolts with your fingers.

(2) Use the procedure for the (S1) installation, steps (d), (f), (g) and (h).

Removal/Installation of Parts Set (S11) – 2A3259-01 and 2A3261-01 Fuel Supply Manifold Assemblies

- A. Replace either the 2A0509-01 and 2A0516-01 or the 2A3231-01 and 2A3236-01 Fuel Nozzle Spray Manifold Assemblies with the parts specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40 Removal-07.

NOTE: Remove the Loop Clamp, Bolt and Nut from the 2A2546 Loop Clamp Bracket located on Fuel Supply Manifold Assembly AJ. Do not clamp Fuel Supply Manifold Assembly AJ to the 2A2546 Loop Clamp Bracket.

- B. Install the 2A3259-01 (tube AJ) and 2A3261-01 (tube AH) Fuel Nozzle Supply Manifold Assemblies by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 4.

(1) Use the procedure for the post V2500-ENG-73-0088 configuration.

Removal/Installation of Parts Set (S12) – 2A3256-01, 2A3258-01 and 2A3259-01 Fuel Supply Manifold Assemblies

- A. Replace either the 2A0504-01, 2A0509-01 and 2A0510-01 or the 2A3229-01, 2A3231-01 and 2A3232-01 Fuel Nozzle Supply Manifold Assemblies with the parts specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Removal-07.

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NOTE: The 2A2537 Loop Clamp Bracket (holes 87 and 88) and the 2A2546 Loop Clamp Bracket (holes 80 and 81) and the related hardware (Nuts and Bolts and Loop Clamps) are removed from the engine and will not be used with the new configuration.

NOTE: You can remove and install the 2A3230-01 Fuel Nozzle Supply Manifold Assembly or disconnect and connect the Loop Clamps. This will make it possible to do the modification.

- B. Install the 2A3256-01 (tube AC), 2A3258-01 (tube AK) and 2A3259-01 (tube AJ) Fuel Nozzle Supply Manifold Assemblies by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 1 (Sheets 5 through 8) and applicable views.

NOTE: The 2A1938-01 Bracket Assembly and the 2A1939 Bracket will remain on the engine when the new configuration is installed. See Figure 2 (Sheets 1 and 2). The Flange nuts must be loosened until they are fingertight.

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration except as follows:

- (a) Use the procedure for the (S1) installation, steps (a) through (e), (g) and (h).

Removal/Installation of Parts Set (S13) - 2A3258-01, 2A3259-01 and 2A3261-01 Fuel Supply Manifold Assemblies

- A. Replace either the 2A0509-01 2A0510-01 and 2A0516-01 or the 2A3231-01 2A3232-01 and 2A3236-01 Fuel Nozzle Supply Manifold Assemblies with the parts specified in B, by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40 Removal-07.
- B. Install the 2A3258-01 (tube AK), 2A3259-01 (tube AJ) and 2A3261-01 (tube AH) Fuel Nozzle Supply Manifold Assemblies by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40 Installation-07 and Figure 1 (Sheets 1, & and 8), Figure 3 (Sheet 2) and applicable views.

- (1) Use the procedure for the poast V2500-ENG-73-0088 configuration and as follows:

NOTE: Remove the Loop Clamp, Bolt and Nut from the 2A2546 Loop Clamp Bracket located on Fuel Supply Manifold Assembly AJ. Do not clamp Fuel Supply Manifold Assembly AJ to the 2A2546 Loop Clamp Bracket.

NOTE: Do not clamp Fuel Supply Manifold Assembly AK to the 2A1938-01 Loop Clamp Bracket.

- (a) Install the following brackets on "K" Flange by Figure 1 and as specified.

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- 1 Locate the 2A3277 Loop Clamp Bracket (1 off) at hole locations 92, 93 and 94.
 - a Install the 4W0649 Bolts (3 off) though the bolt holes in the flange and the bracket.
 - b Install the 4W0003 Nuts (3 off) on the bolts with your fingers.
 - 2 Replace the 2A2529-01 Loop Clamp Bracket with the 2A3288-01 Loop Clamp Bracket (1 off) at hole locations 85 and 86.
 - a Install the 4W0649 Bolts (2 off) though the bolt holes in the flange and the bracket.
 - b Install the 4W0003 Nuts (2 off) on the bolts with your fingers.
- (2) Use the procedure for the (S1) installation, steps (d), (e), (f), (g) and (h).

Removal/Installation of Parts Set (S14) – 2A3256-01, 2A3258-01 and 2A3261-01 Fuel Supply Manifold Assemblies

- A. Replace either the 2A0504-01, 2A0509-01 and 2A0516-01 or the 2A3229-01, 2A3231-01 and 2A3236-01 Fuel Nozzle Supply Manifold Assemblies with the parts specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Removal-07.

NOTE: The 2A2537 Loop Clamp Bracket (holes 87 and 88) and the related hardware (Nut and Bolt and Loop Clamp) is removed from the engine and will not be used with the new configuration.

NOTE: Remove the Loop Clamp, Bolt and Nut from the 2A2546 Loop Clamp Bracket located on Fuel Supply Manifold Assembly AK. Do not clamp Fuel Supply Manifold Assembly AK to the 2A2546 Loop Clamp Bracket.

- B. Install the 2A3256-01 (tube AC), 2A3258-01 (tube AK) and 2A3261-01 (tube AH) Fuel Nozzle Supply Manifold Assemblies by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40, Installation-07 and Figure 1 (Sheet 1 and Sheets 6 through 8) and applicable views.

NOTE: The 2A1938-01 Bracket Assembly and the 2A1939 Bracket will remain on the engine when the new configuration is installed. See Figure 2 (Sheets 1 and 2). The Flange nuts must be loosened until they are fingertight.

NOTE: You can remove and install the 2A3230-01 Fuel Nozzle Supply Manifold Assembly or disconnect and connect the Loop Clamps. This will make it possible to do the modification.

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration except as follows:

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NOTE: Do not clamp Fuel Supply Manifold Assembly AK to the 2A1938-01 Loop Clamp Bracket.

- (a) Use the procedure for the (S1) installation, steps (a) through (d), (f), (g) and (h).

Removal/Installation Parts set (S15) – 2A3256-01, 2A3259-01 and 2A3261-01 Fuel Supply Manifold Assemblies

- A. Replace either the 2A0504-01, 2A0510-01 and 2A0516-01 or the 2A3229-01, 2A3232-01 and 2A3236-01 Fuel Nozzle Supply Manifold Assemblies with the parts specified in B. by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40 Removal-07.

NOTE: The 2A2537 Loop Clamp Bracket (holes 87 and 88) and the related hardware (Nut and Bolt and Loop Clamp) is removed from the engine and will not be used with the new configuration.

NOTE: Remove the Loop Clamp, Bolt and Nut from the 2A2546 Loop Clamp Bracket located on Fuel Supply Manifold Assembly AJ. Do not clamp Fuel Supply Manifold Assembly AJ to the 2A2546 Loop Clamp Bracket.

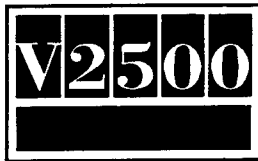
- B. Install the 2A3256-01 (tube AC), 2A3259-01 (tube AJ) and 2A3261-01 (tube AH) Fuel Nozzle Supply Manifold Assemblies by the procedure given in Reference (4), Engine Manual, Chapter/Section 72-00-40 Installation-07 and Figure 1 (Sheet 1 and Sheets 6 through 8) and applicable views.

NOTE: The 2A1938-01 Bracket Assembly and the 2A1939 Bracket will remain on the engine when the new configuration is installed. See Figure 2 (Sheet 1). The Flange nuts must be loosened until they are fingertight.

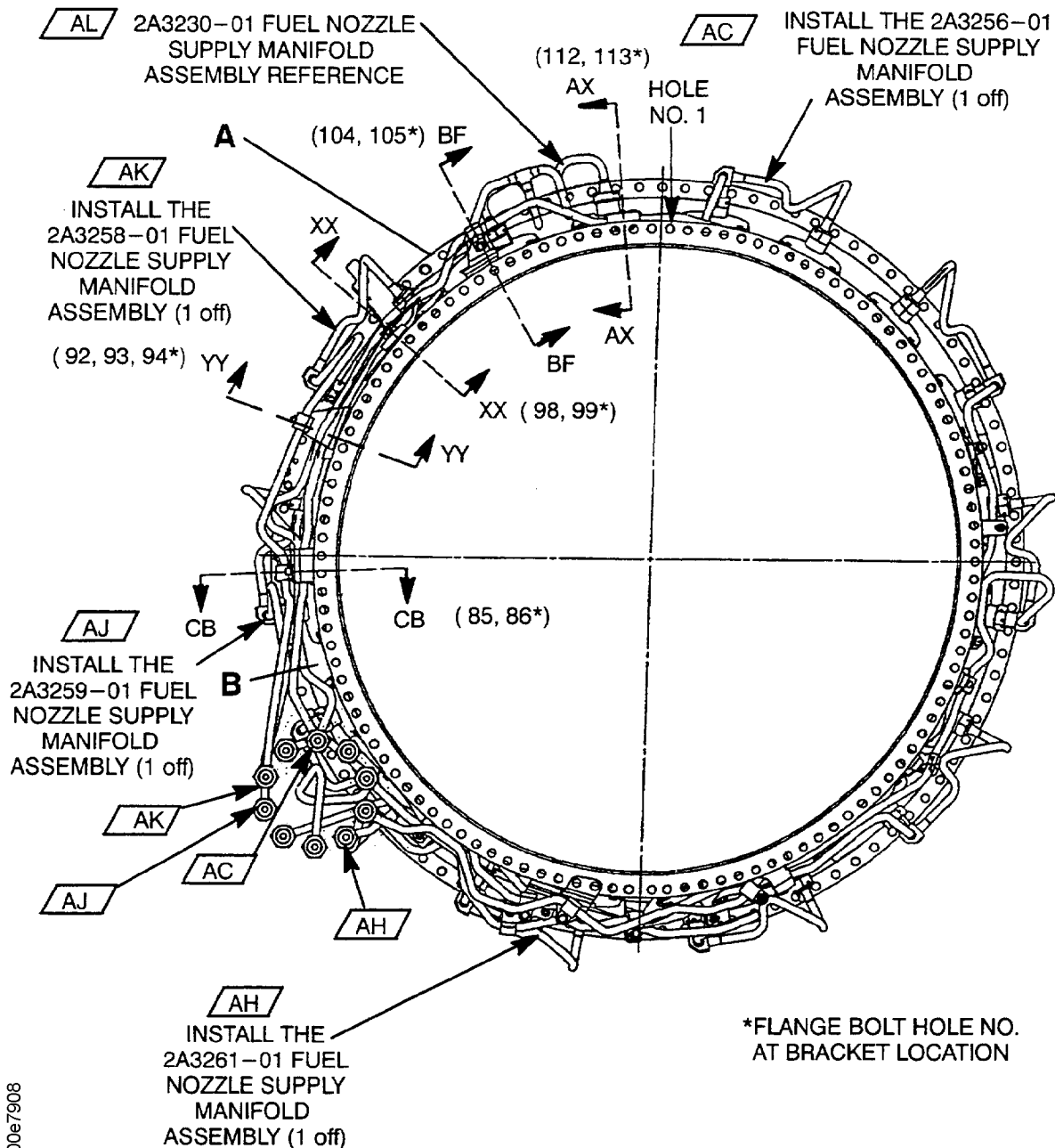
NOTE: You can remove and install the 2A3230-01 and 2A3231-01 Fuel Nozzle Supply Manifold Assemblies or disconnect and connect the Loop Clamps. This will make it possible to do the modification.

- (1) Use the procedure for the post V2500-ENG-73-0088 configuration except as follows:

- (a) Use the procedure for the (S1) installation, steps (a) through (c), (e), (f), (g) and step (h).



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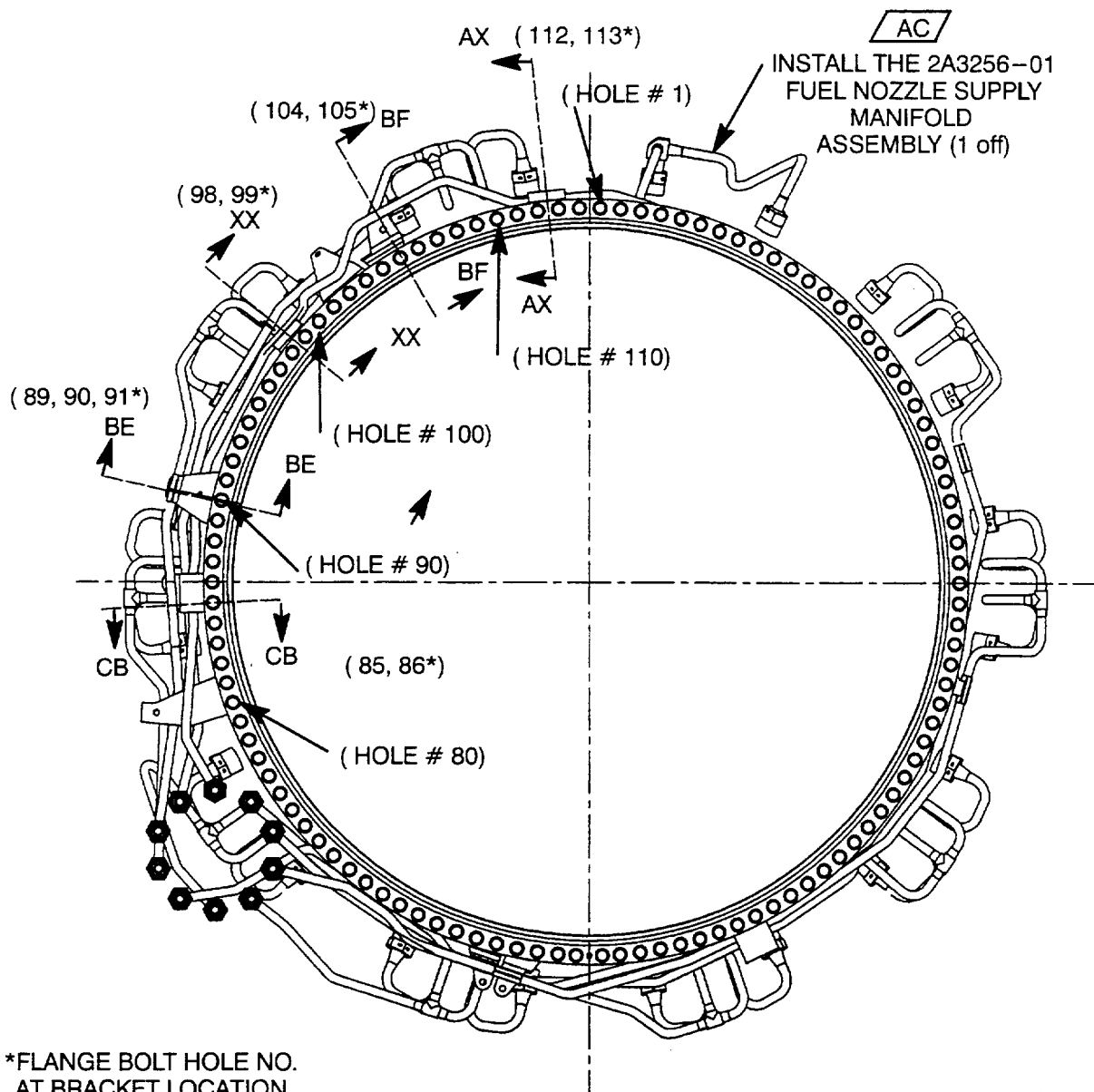
Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.1 (Sheet 1)

V2500-ENG-73-0131



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*FLANGE BOLT HOLE NO.
AT BRACKET LOCATION

VIEW OF FUEL MANIFOLD INSTALLATION WHEN YOU
LOOK FROM THE FRONT (FOR THE S2 PARTS SET)

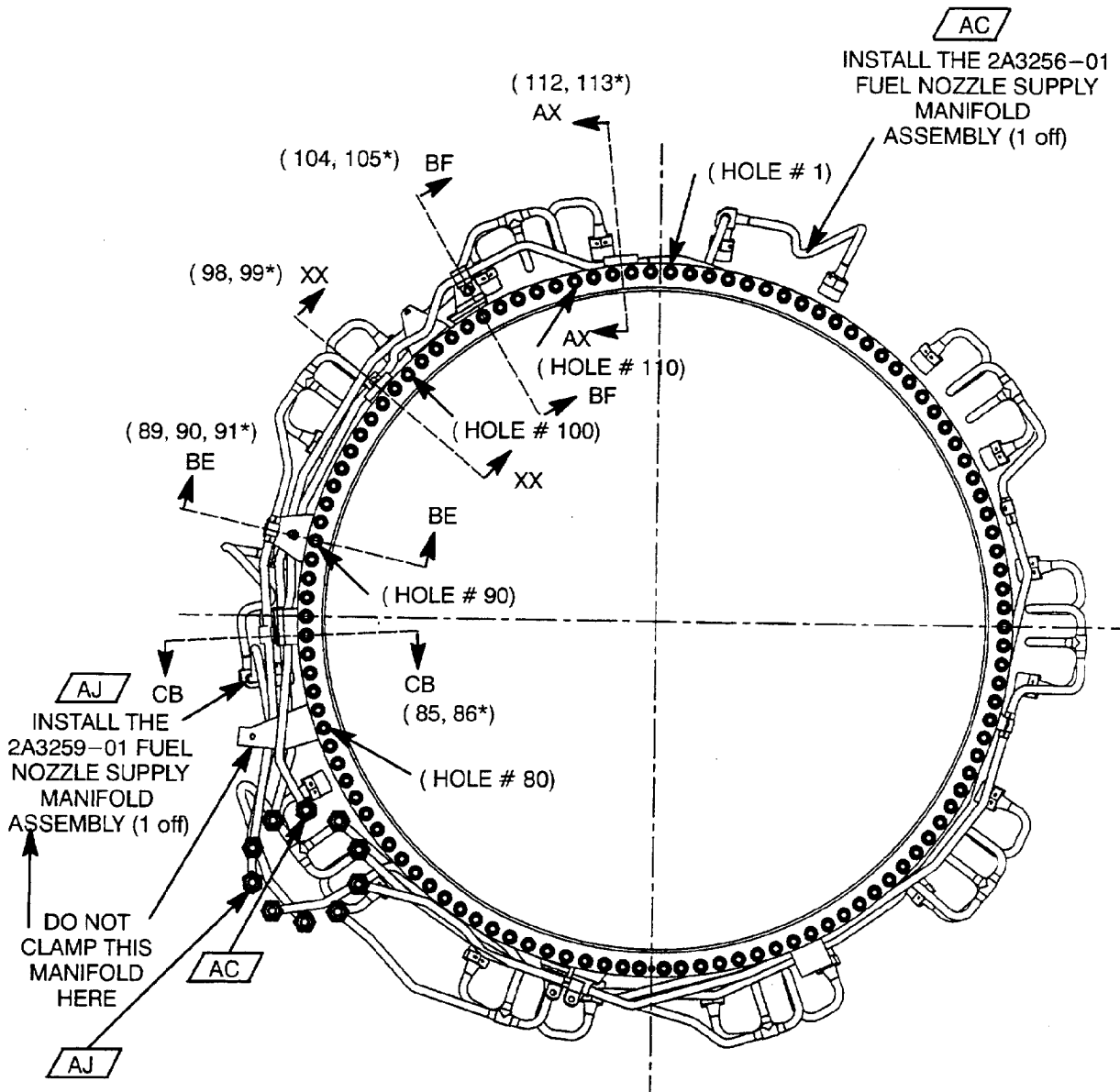
Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.1 (Sheet 2)

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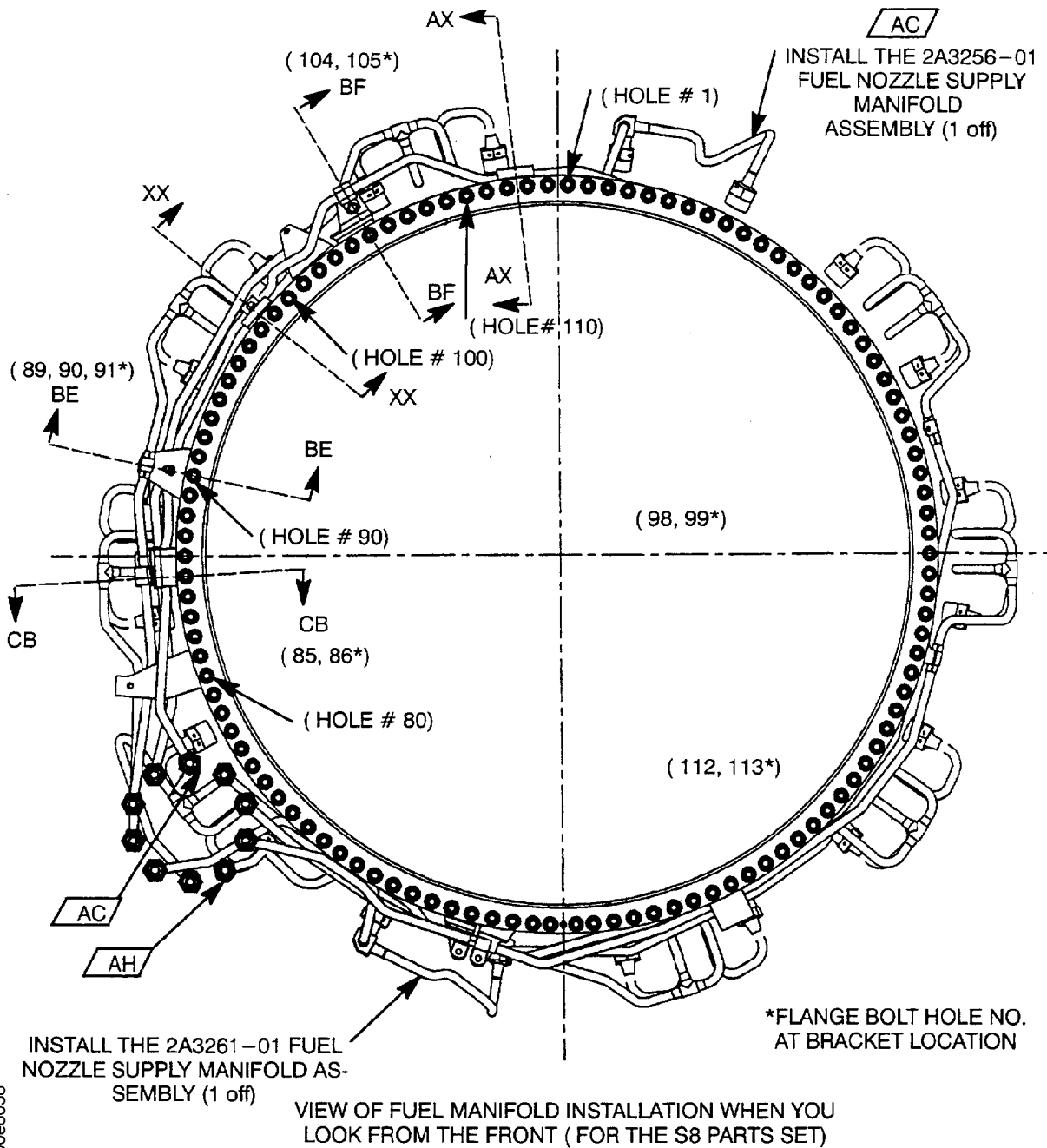


*FLANGE BOLT HOLE NO.
AT BRACKET LOCATION

VIEW OF FUEL MANIFOLD INSTALLATION WHEN YOU
LOOK FROM THE FRONT (FOR THE S7 PARTS SET)

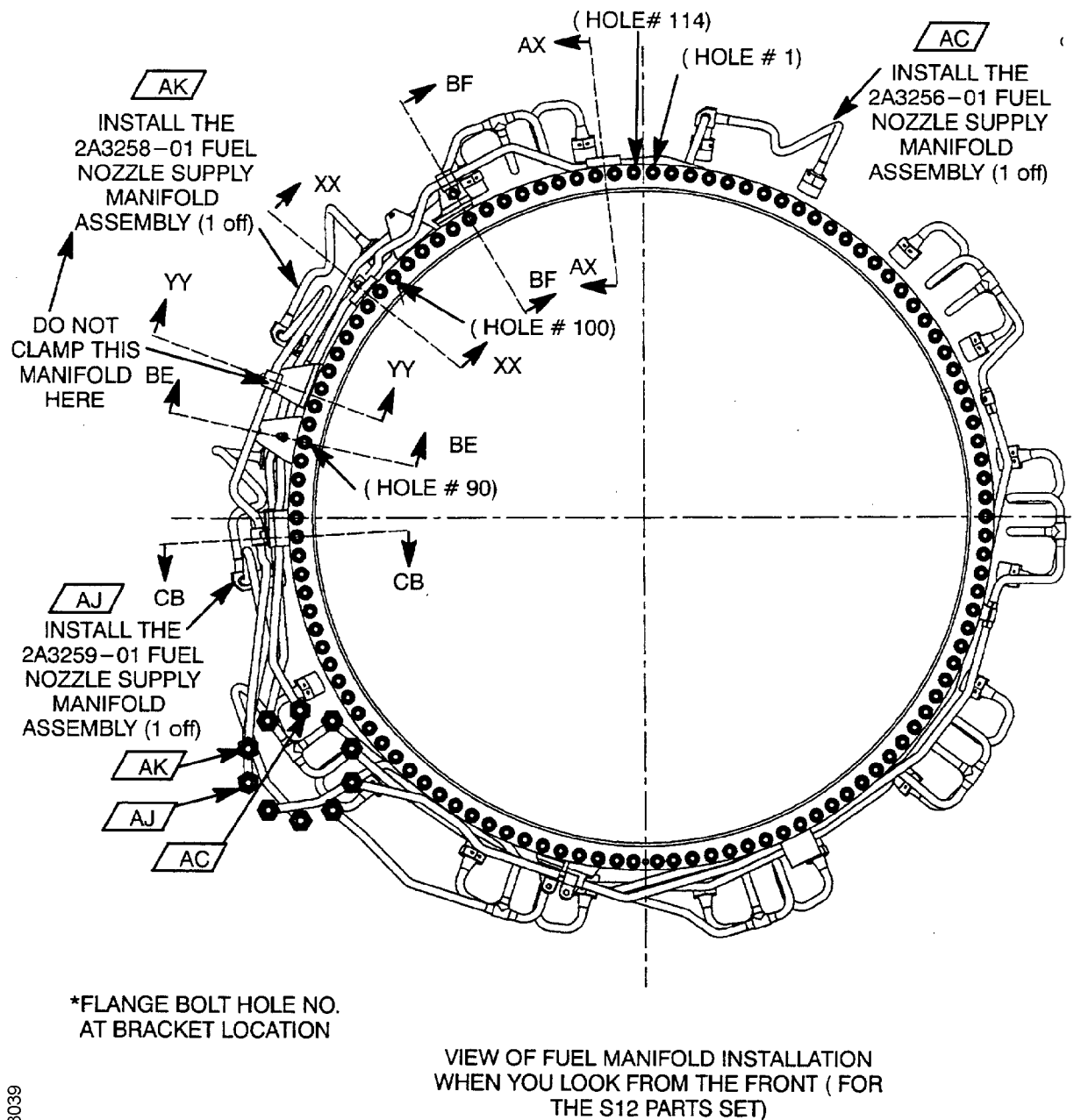
Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.1 (Sheet 3)

V2500-ENG-73-0131



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Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.1 (Sheet 4)



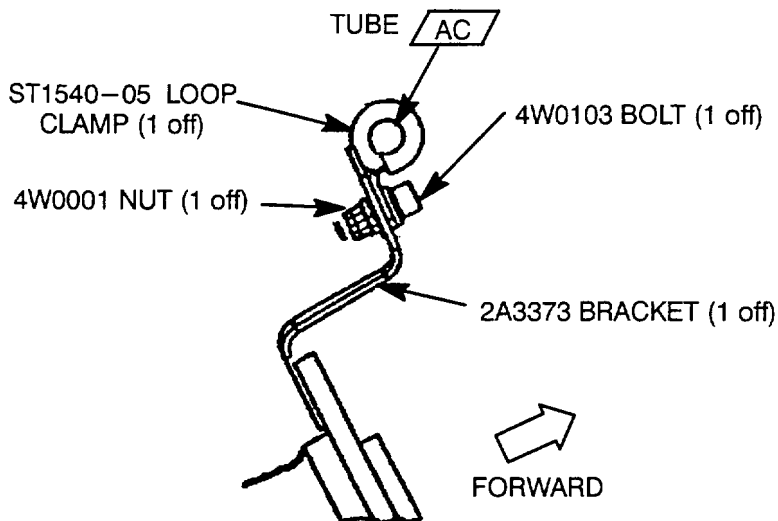
Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.1 (Sheet 5)

V2500-ENG-73-0131

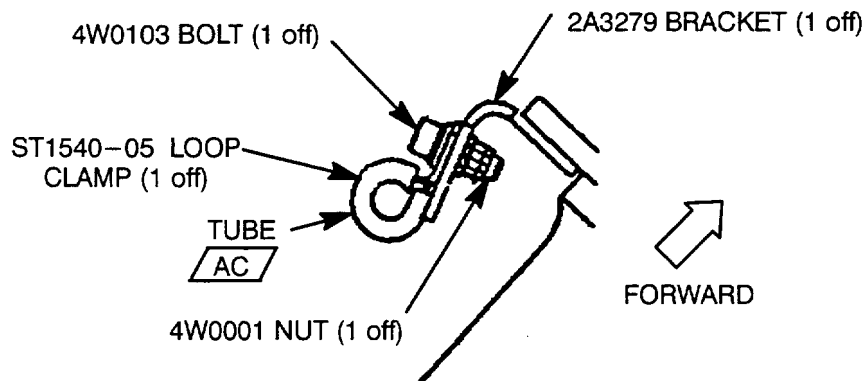


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SECTION BF- BF
(FOR S1, S2, S6, S7, S8, S12, S14, S15 PARTS SETS)



SECTION XX- XX
(FOR S1, S2, S6, S7, S8, S12, S14, S15 PARTS SETS)

Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.1 (Sheet 6)

de000e8012

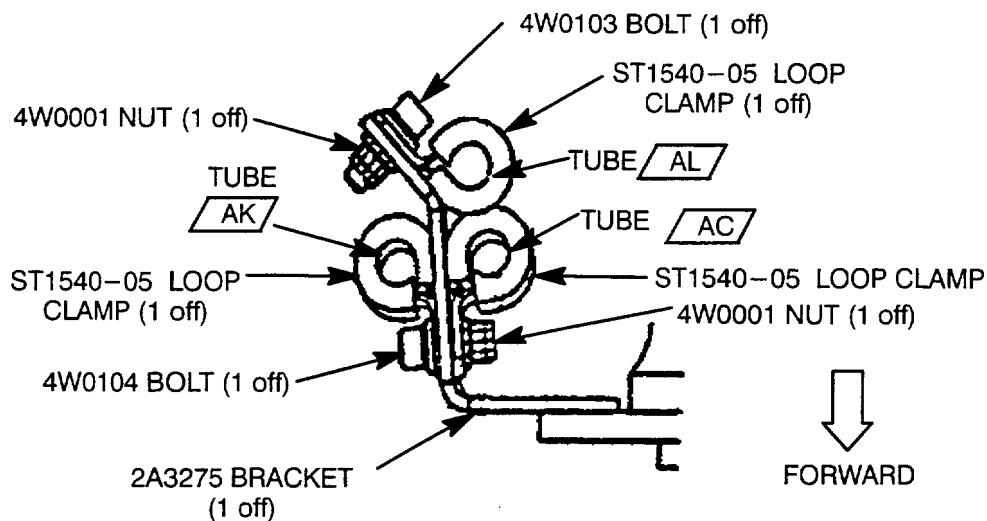
V2500-ENG-73-0131

Oct.30/98

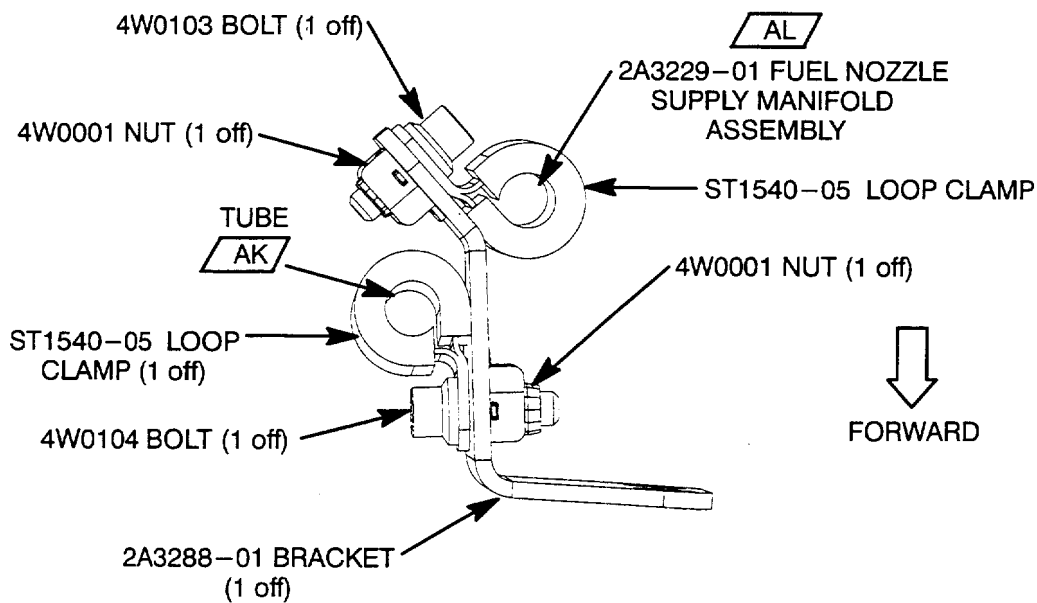
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SERVICE BULLETIN



SECTION CB- CB
(FOR S1, S2, S6, S7, S8, S12, S14 AND S15 PARTS SETS)



SECTION CB - CB (OPTIONAL -
USE WHEN 2A3229-01 FUEL NOZZLE SUPPLY MANIFOLD ASSEMBLY
IS NOT REPLACED FOR S10 AND S13 PARTS SETS)

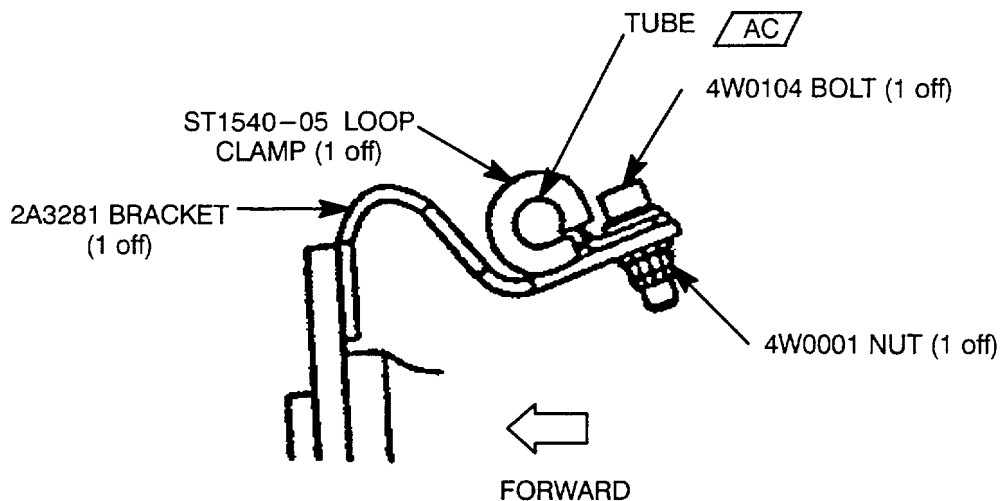
Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.1 (Sheet 7)

V2500-ENG-73-0131

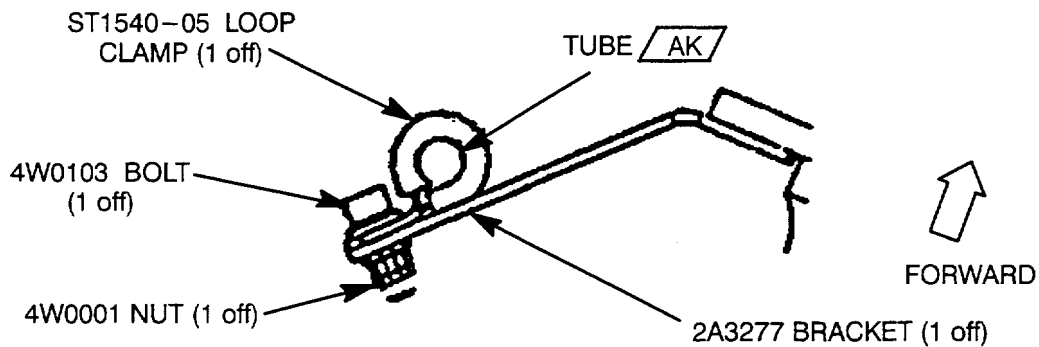


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SECTION AX - AX
(FOR S1, S2, S6, S7, S8, S12, S14 AND S15 PARTS SETS)

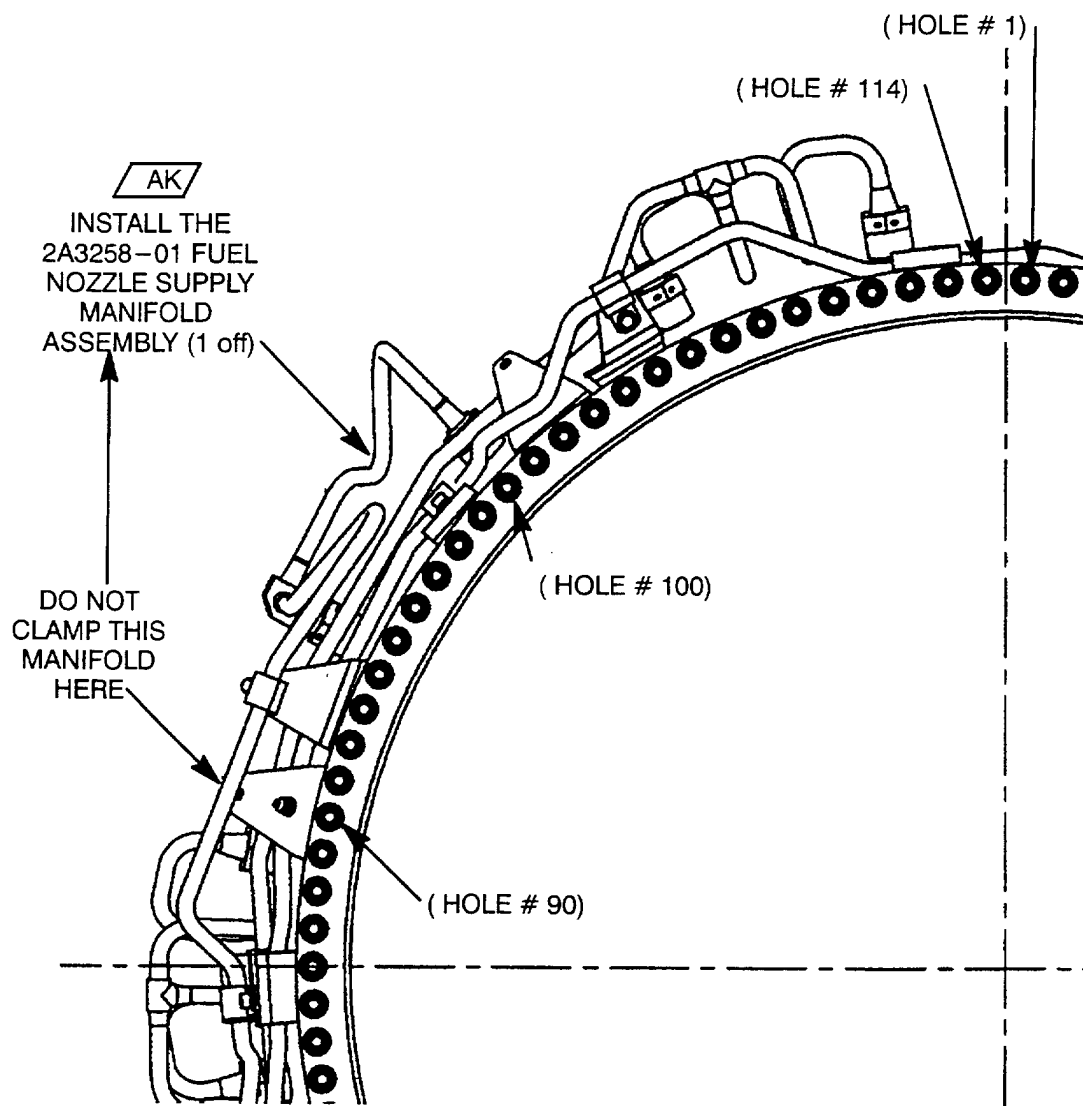


SECTION YY - YY
(FOR S1, S10, S12, S13, S14 AND S15 PARTS SETS)

Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.1 (Sheet 8)

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V2500-ENG-73-0131



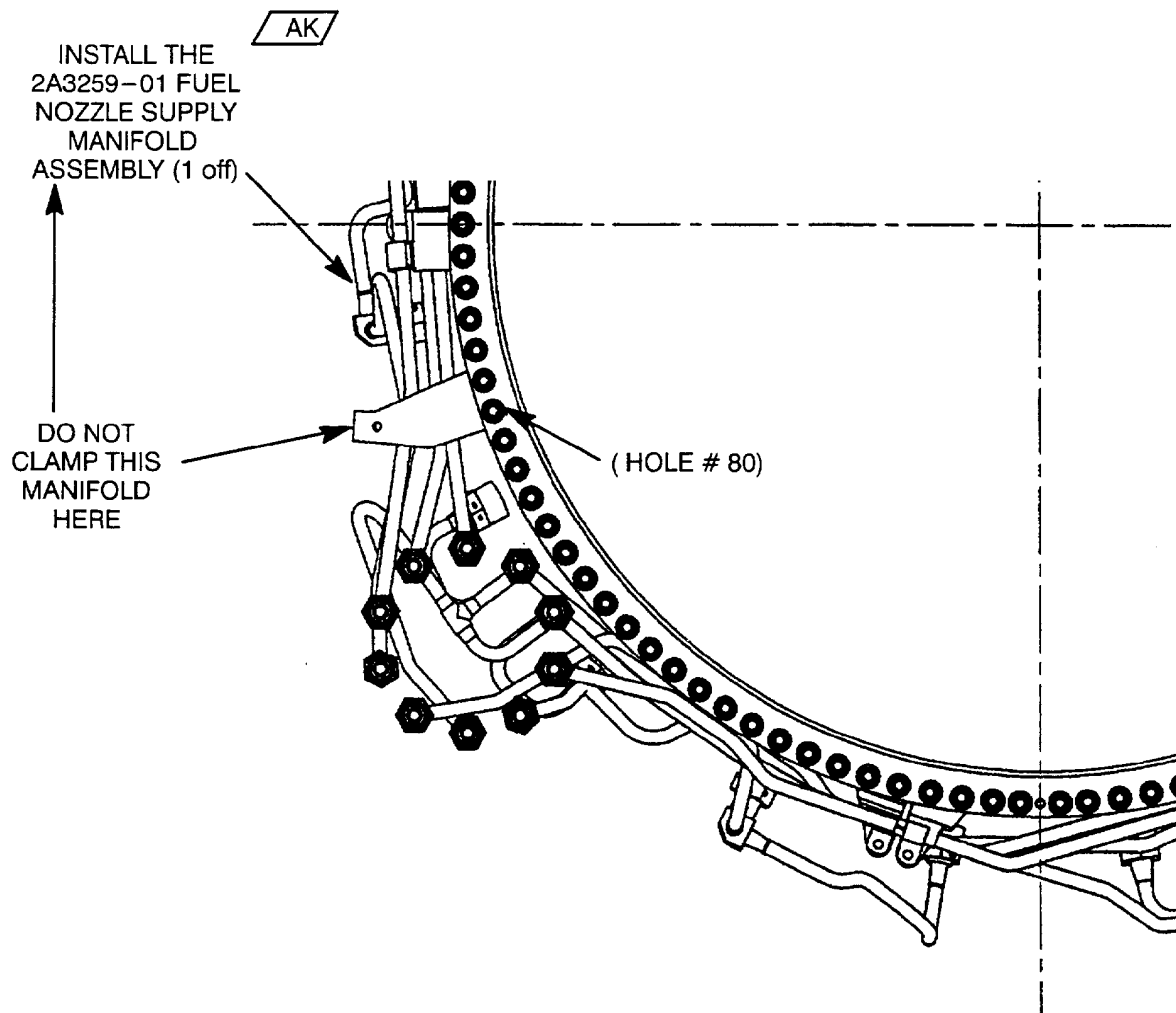
VIEW A

PARTIAL OF FUEL MANIFOLD INSTALLATION WHEN YOU LOOK FROM THE
FRONT (FOR THE S1, S6, S9, S10 AND S11 PARTS SETS)

Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.1 (Sheet 9)

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V2500-ENG-73-0131



VIEW B

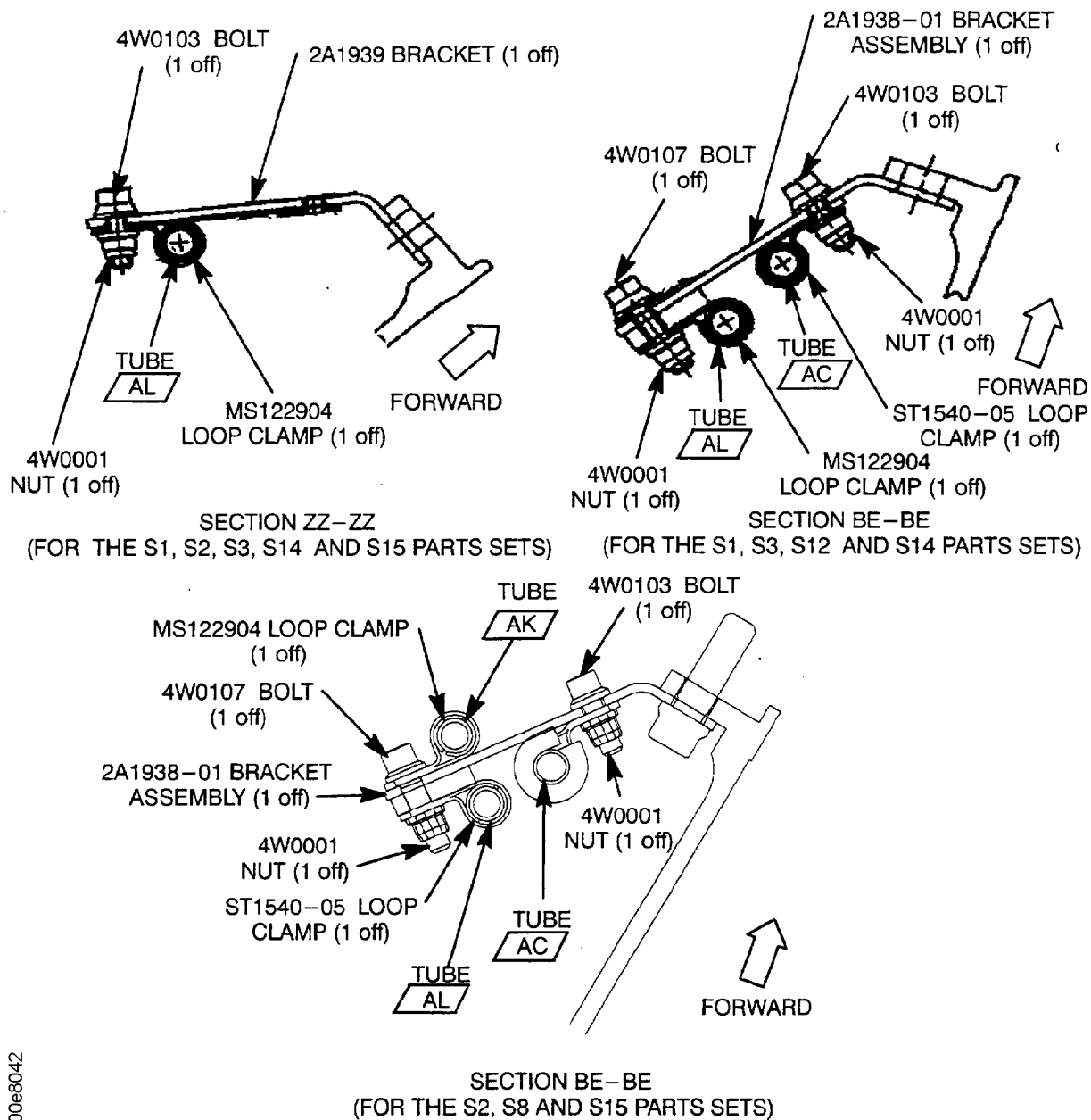
PARTIAL OF FUEL MANIFOLD INSTALLATION WHEN YOU LOOK
FROM THE FRONT (FOR THE S1 AND S4 PARTS SETS)

de000e8041

Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.1 (Sheet 10)



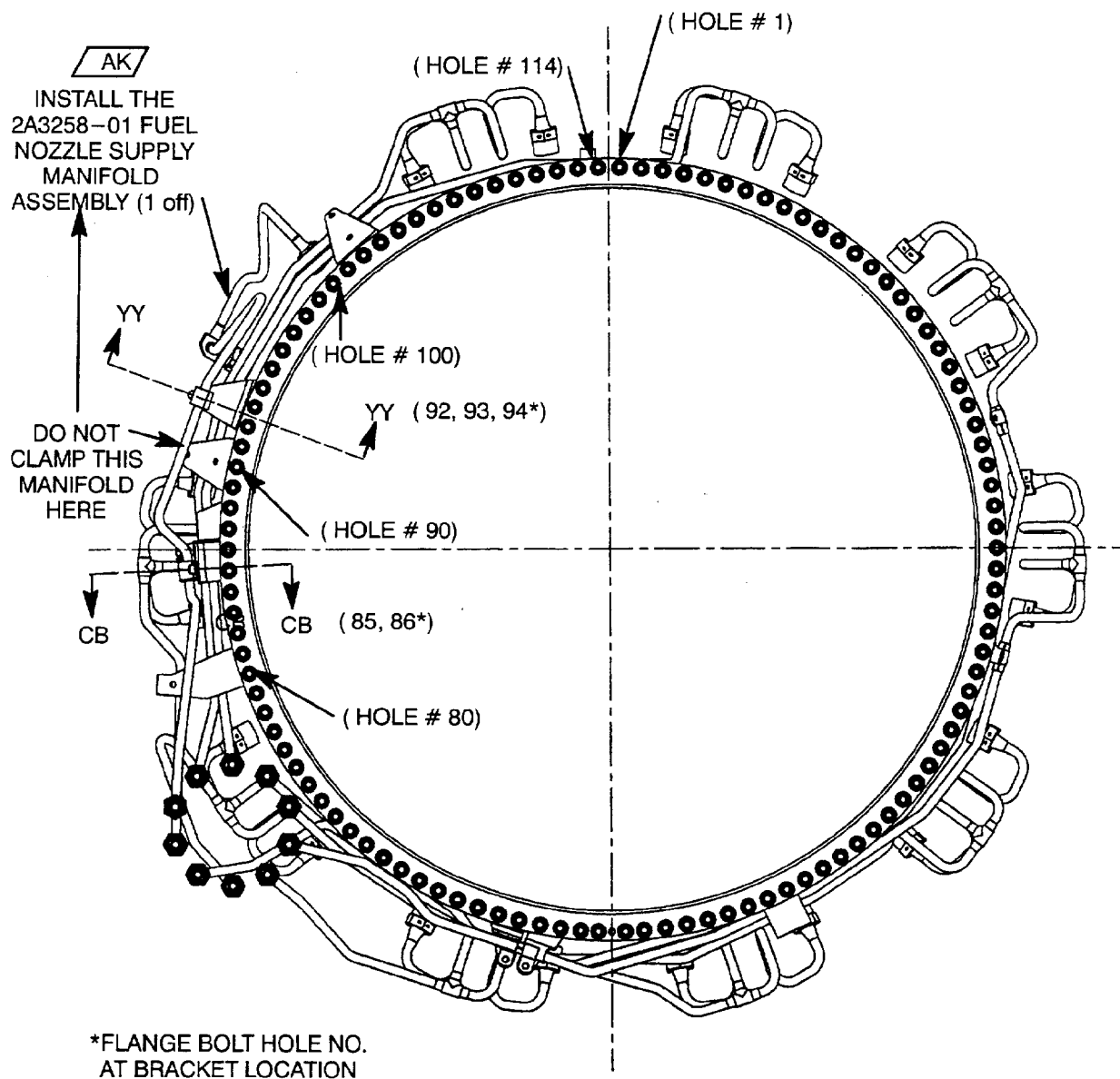
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Location of 2A1939 Bracket And 2A1938-01 Bracket Assembly (Reference Views of Hardware retained From The Prior Configuration)

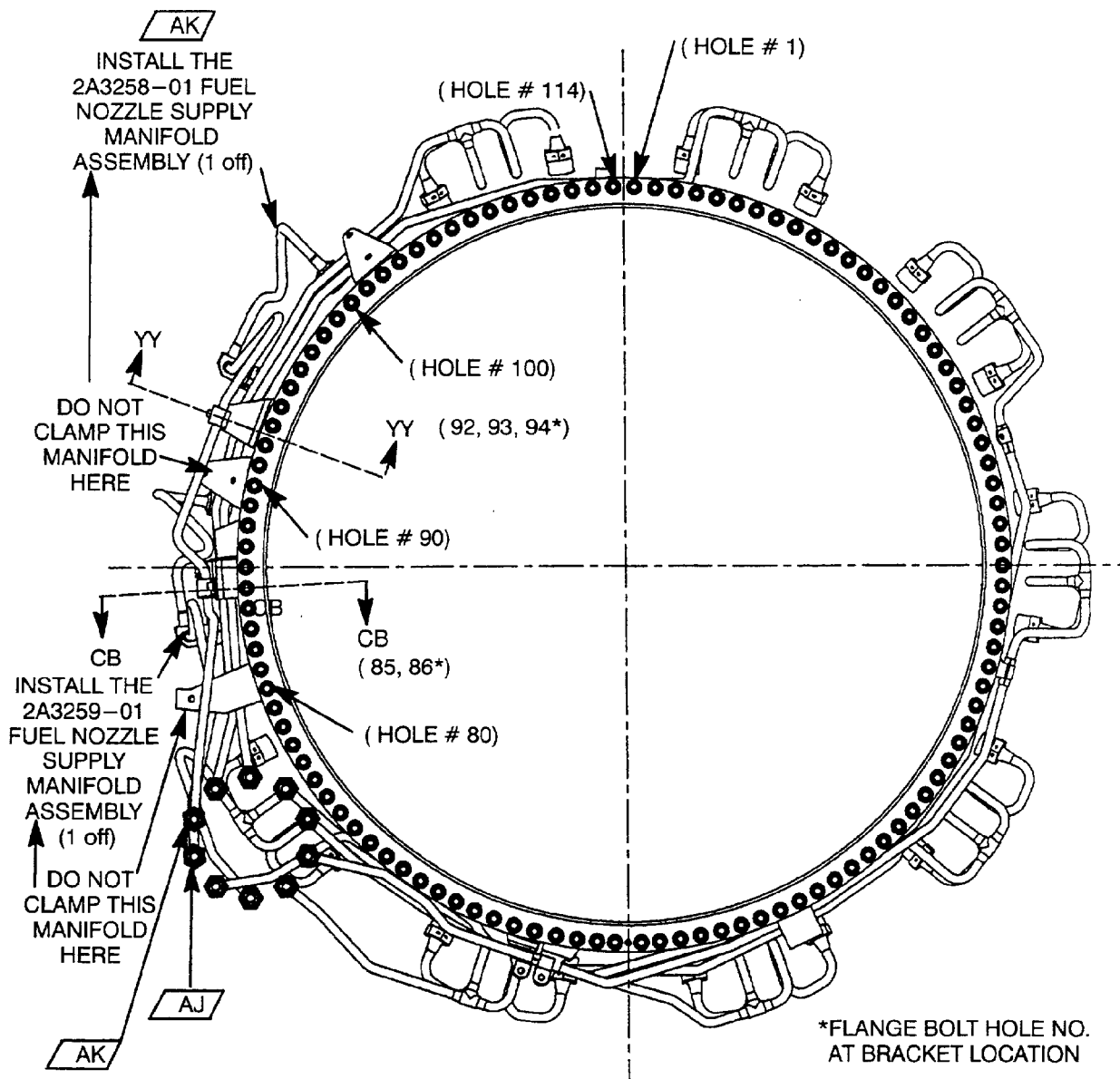
Fig.2 (Sheet 2)

V2500-ENG-73-0131



VIEW OF FUEL MANIFOLD INSTALLATION WHEN YOU LOOK FROM THE FRONT (FOR THE S3 PARTS SET)

Location of the Fuel Nozzle Supply Manifold Assemblies (S3 Parts Set)
Fig.3 (Sheet 1)



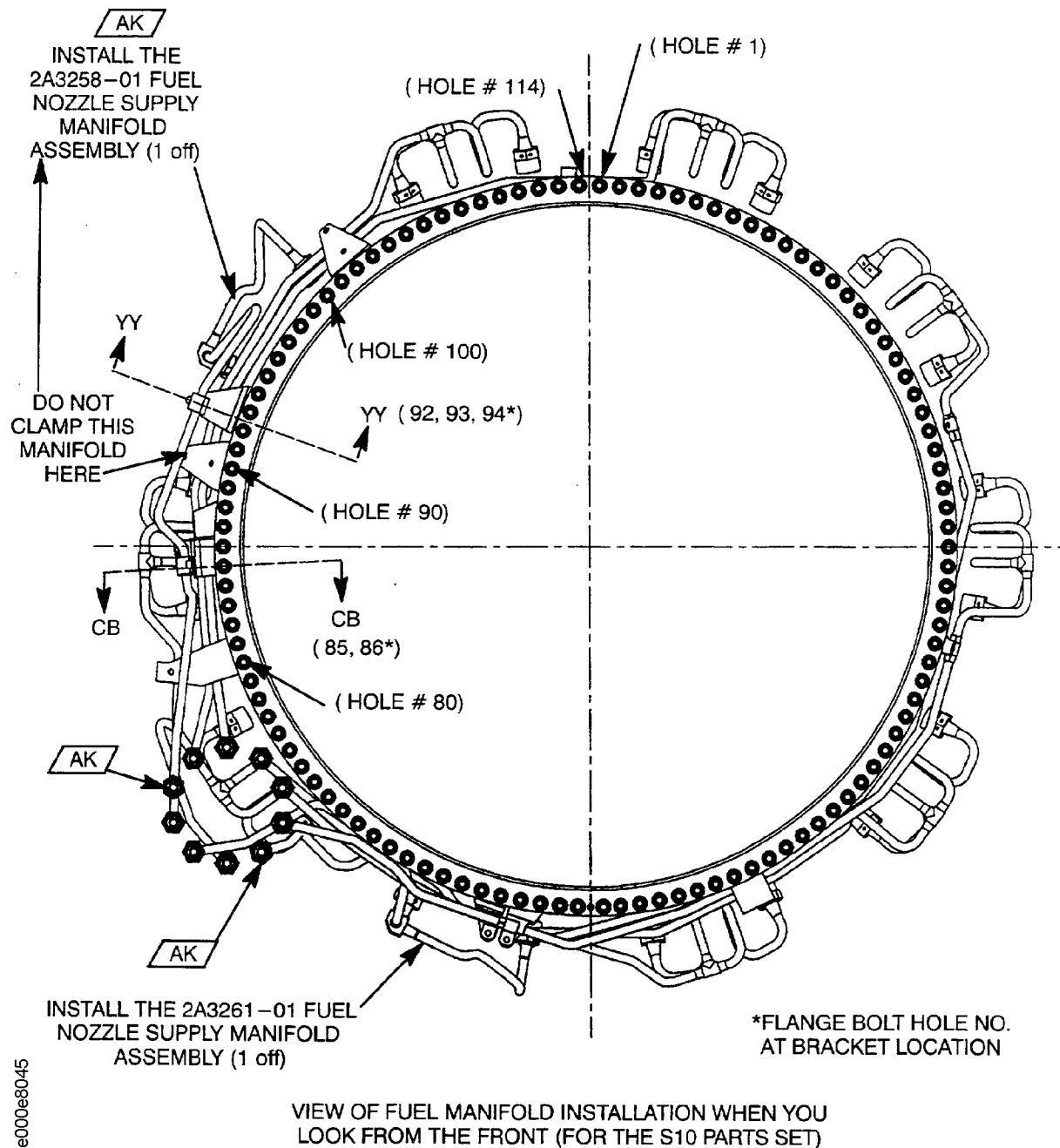
VIEW OF FUEL MANIFOLD INSTALLATION
WHEN YOU LOOK FROM THE FRONT (S9)

Location of the Fuel Nozzle Supply Manifold Assemblies (S9 and S13 Parts Sets)
Fig.3 (Sheet 2)

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Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.3 (Sheet 3)

de000e8045

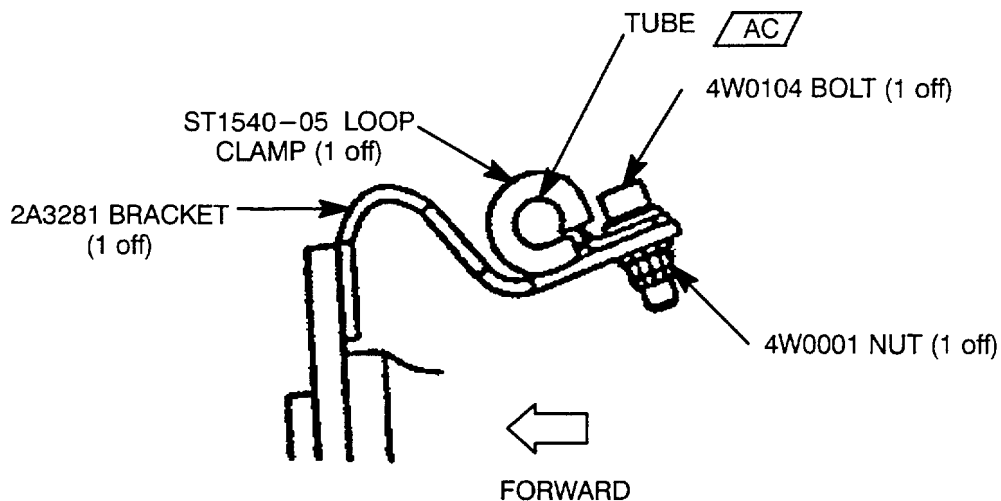
V2500-ENG-73-0131

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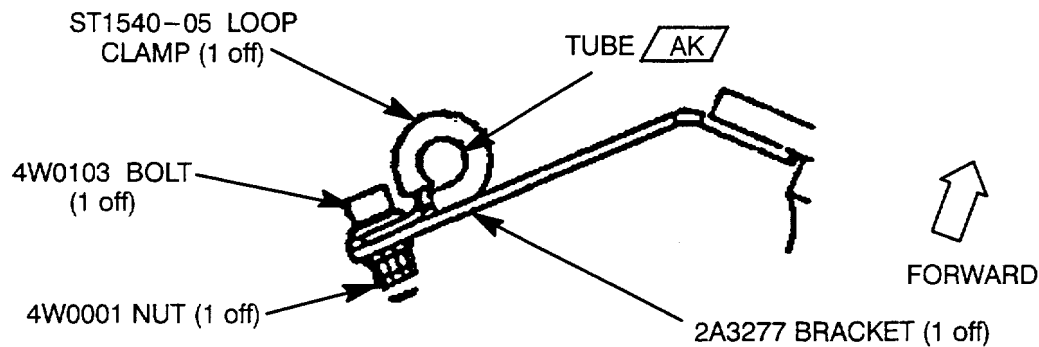
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SERVICE BULLETIN



SECTION AX - AX
(FOR S1, S2, S6, S7, S8, S12, S14 AND S15 PARTS SETS)

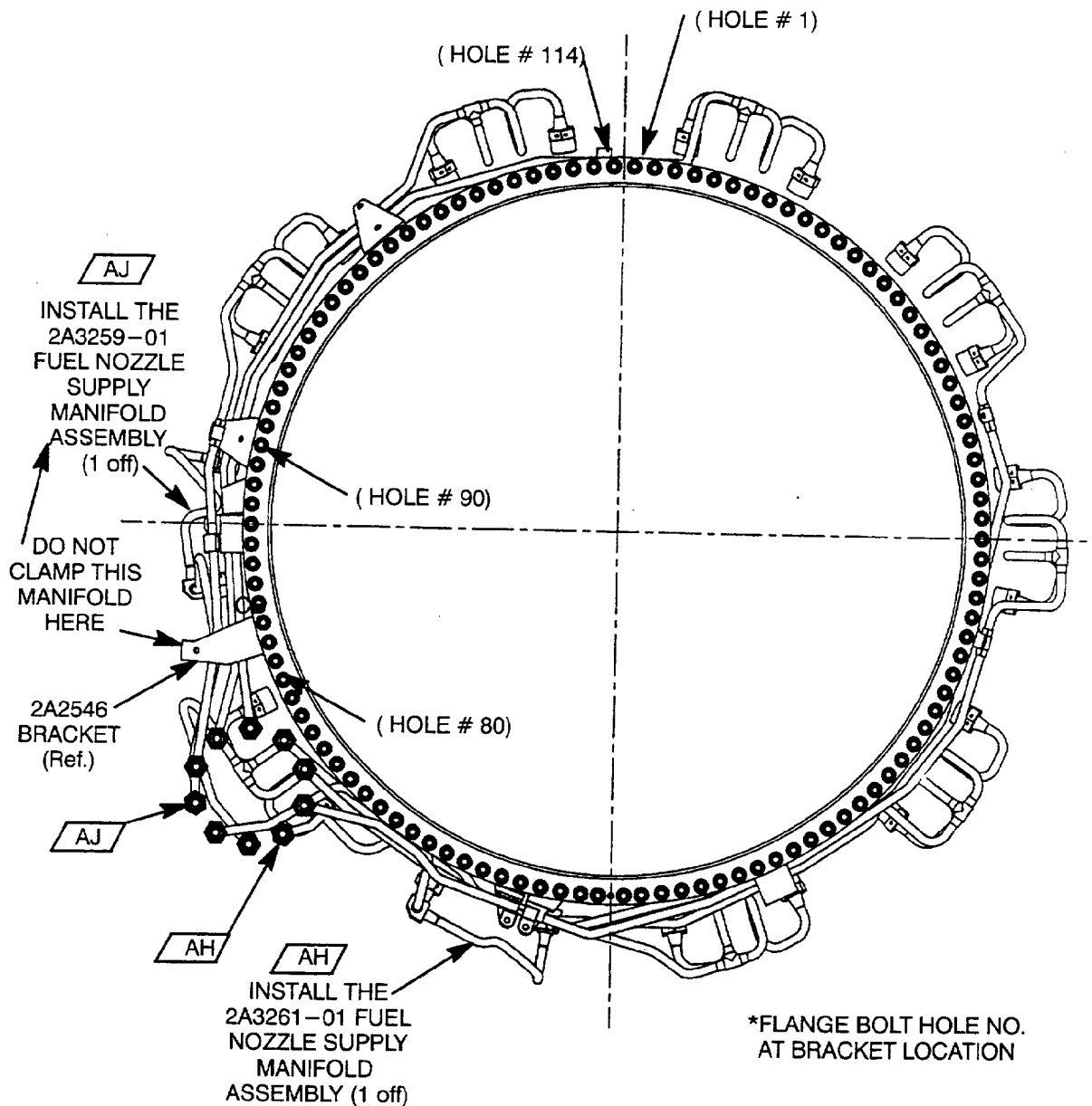


SECTION YY- YY
(FOR S1, S10, S12, S13, S14 AND S15 PARTS SETS)

Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.3 (Sheet 4)

de000e8013

V2500-ENG-73-0131



VIEW OF FUEL MANIFOLD INSTALLATION WHEN YOU LOOK FROM THE FRONT (FOR THE S11 PARTS SET)

Location of the Fuel Nozzle Supply Manifold Assemblies
Fig.4

de000e8046



SERVICE BULLETIN

3. Material InformationA. Kit associated with this bulletin.

None

B. Parts affected by this bulletin.

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
<hr/>					
Applicability: For each V2500-A1, V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5 Engine to incorporate this Bulletin which incorporate V2500-ENG-73-0088.					
2A3281 (72-40-00)	1	57.00	.Bracket Loop Clamp	2A1225 (01-070)	(S1)(S2)(S6)(S7)(S8) (S12)(S14)(S15)(A)(B)
2A3373 (72-40-00)	1	60.90	.Bracket Loop Clamp	2A1939 (01-080)	(S1)(S2)(S6)(S7)(S8) (S12)(S14)(S15)(A)(B)
2A3275 (72-40-00)	1	34.50	.Bracket Loop Clamp	2A2529-01 (01-194)	(S1)(S2)(S3)(S6)(S7) (S8)(S12)(S14)(S15) (A)(B)
(72-40-00)	1		.Bracket Loop Clamp	2A2537 (01-197)	(B)(D)
(72-40-00)	1		.Bracket Loop Clamp	2A2546 (01-194)	(B)(D)
2A3279 (72-40-00)	1	30.50	.Bracket Loop Clamp		(S1)(S2)(S6)(S7)(S8) (S12)(S14)(S15)(A)
2A3256-01 (73-11-41)	1	-	.Manifold Assy Fuel Nozzle	2A3229-01 (01-060)	(S1)(S2)(S6)(S7)(S8) (S12)(S14)(S15)(A)(B)
ST2121-07 (73-11-41)	1	-	..Nut, Tube Coupling	MS9198-07 (01-100)	(A)(B)(C)
ST2121-08 (73-11-41)	2	-	..Nut, Tube Coupling	MS9198-08 (01-102)	(A)(B)(C)
354581 (73-11-41)	2	-	..Wire Thrust		(A)(C)
690704 (73-11-41)	1		..Wire Thrust	(01-145)	(A)(C)
2A3258-01 (73-11-41)	1	-	.Manifold Assy Fuel Nozzle	(01-150)	(A)(C)
ST2121-07 (73-11-41)	1	-	..Nut, Tube Coupling	2A3231-01 (01-260)	(S1)(S3)(S6)(S9)(S10) (S12)(S13)(S14)(A)(B)
ST2121-08 (73-11-41)	2	-	..Nut, Tube Coupling	MS9198-07 (01-300)	(A)(B)(C)
354581 (73-11-41)	2	-	..Wire Thrust	MS9198-08 (01-302)	(A)(B)(C)
690704 (73-11-41)	1	-	..Wire Thrust		(A)(C)
				(01-345)	(A)(C)
				(01-350)	(A)(C)

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2A3277 (73-11-41)	1	34.50	Bracket Loop Clamp	(01-355)	(S1)(S2)(S3)(S6)(S9) (S10)(S12)(S13)(S14) (A)
(73-11-41)	6		Clamp, Loop Type Support	MS122904 (01-360)	(E)
ST1540-05 (73-11-41)	9	4.80	Clamp, Loop Cushion	(01-365)	(F)(G)
(73-11-41)	4		Clamp, Loop Type Support	ST1540-05 (01-365)	(G)
(73-11-41)	8		.Bolt	4W0103 (01-380)	(H)
4W0103 (73-11-41)	6	4.86	.Bolt	(01-380)	(A)(J)
4W0104 (73-11-41)	2	4.86	.Bolt	(01-390)	(F)
(73-11-41)	1		.Bolt	4W0107 (01-400)	(D)
(73-11-41)	9		.Nut Option	4W0001 (01-420)	(E)
4W0001 (73-11-41)	8	2.80	.Nut Option	(01-420)	(A)(K)
2A3259-01 (73-11-41)	1	-	.Manifold Assy Fuel Nozzle	2A3232-01 (02-060)	(S1)(S4)(S7)(S9) (S11)(S12)(S13)(S15) (A)(B)
ST2121-07 (73-11-41)	1	-	..Nut, Tube Coupling	MS9198-07 (02-100)	(A)(B)(C)
ST2121-08 (73-11-41)	2	-	..Nut, Tube Coupling	MS9198-08 (02-102)	(A)(B)(C)
354581 (73-11-41)	2	-	..Wire Thrust	(02-145)	(A)(C)
690704 (73-11-41)	1	-	..Wire Thrust	(02-150)	(A)(C)
35481 (73-11-41)	2	-	..Wire Thrust	(02-245)	(A)(C)
690704 (73-11-41)	1	-	..Wire Thrust	(02-250)	(A)(C)
2A3261-01 (73-11-41)	1	-	.Manifold Assy Fuel Nozzle	2A3236-01 (02-260)	(S1)(S5)(S8)(S10) (S11)(S13)(S14)(S15) (A)(B)
ST2121-07 (73-11-41)	1	-	..Nut, Tube Coupling	MS9198-07 (02-300)	(A)(B)(C)
ST2121-08 (73-11-41)	2	-	..Nut, Tube Coupling	MS9198-08 (02-302)	(A)(B)(C)
354581 (73-11-41)	2	-	..Wire Thrust	(02-345)	(A)(C)
690704 (73-11-41)	1	-	..Wire Thrust	(02-350)	(A)(C)
(73-11-41)	3		.Bolt	ST1540-05 (02-360)	(D)
(73-11-41)	1		.Bolt	4W0103 (02-380)	(D)(H)

V2500-ENG-73-0131



SERVICE BULLETIN

(73-11-41) 1 .Nut Option 4W0001 (E)
(02-420)

The Loop Clamp Bracket Assembly which follows is used in place of 2A3275 when the 2A0504-01 or the 2A3229-01 Fuel Nozzle Supply Manifold Assembly is not installed.

2A3288-01 (72-40-00)	1	-	..Bracket Loop Clamp Assy.	2A3275 (01-210)	(S3)(S4)(S5)(S9)(S10) (S11)(S13)(A)(B)
ST5030-09 (72-40-00)	1	12.20	...Nut Option Consisting of:		(A) (01-215)
ST5032-09	1	-Nut OR		
ST5033-09	1	-Nut		
AN123469 (72-40-00)	2	.41Rivet		(A) (01-217)

Applicability: For each V2500-A1, V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5 Engine to incorporate this Bulletin which does not incorporate V2500-ENG-73-0088.

2A3281 (72-40-00)	1	57.00	..Bracket Loop Clamp	2A1225 (01-070)	(S1)(S2)(S6)(S7)(S8) (S12)(S14)(S15)(A)(B)
2A3275 (72-40-00)	1	34.50	..Bracket Loop Clamp	2A2529-01 (01-194)	(S1)(S2)(S3)(S6)(S7) (S8)(S12)(S14)(S15) (A)(B)
(72-40-00)	1		..Bracket Loop Clamp	2A2537 (01-197)	(B)(D)
(72-40-00)	1		..Bracket Loop Clamp	2A2546 (01-194)	(B)(D)
2A3279 (72-40-00)	1	30.50	..Bracket Loop Clamp		(S1)(S2)(S6)(S7)(S8) (S12)(S14)(S15)(A)
2A3256-01 (73-11-41)	1	-	..Manifold Assy Fuel Nozzle	2A0504-01 (01-060)	(S1)(S2)(A)(B)
ST2121-07 (73-11-41)	1	-	..Nut, Tube Coupling	MS9198-07 (01-100)	(A)(B)(C)
ST2121-08 (73-11-41)	2	-	..Nut, Tube Coupling	MS9198-08 (01-102)	(A)(B)(C)
354581 (73-11-41)	2	-	..Wire Thrust		(A)(C)
690704 (73-11-41)	1	-	..Wire Thrust		(A)(C)
2A3258-01 (73-11-41)	1	-	..Manifold Assy Fuel Nozzle	2A0509-01 (01-260)	(S1)(S3)(S9)(S10) (S12)(S13)(S14)(A)(B)
ST2121-07 (73-11-41)	1	-	..Nut, Tube Coupling	MS9198-07 (01-300)	(A)(B)(C)
ST2121-08 (73-11-41)	2	-	..Nut, Tube Coupling	MS9198-08 (01-302)	(A)(B)(C)
354581	2	-	..Wire Thrust		(A)(C)

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(73-11-41)				(01-345)	
690704	1	-	..Wire Thrust	(A)(C)	
(73-11-41)				(01-350)	
2A3277	1	34.50	Bracket	(S1)(S2)(S3)(S6)(S9)	
(73-11-41)			Loop Clamp	(01-355)	(S10)(S12)(S13)(S14)
				(A)	
	6		Clamp, Loop	MS122904	(E)
(73-11-41)			Type Support	(01-360)	
ST1540-05	9	4.80	Clamp, Loop		(F)(G)
(73-11-41)			Cushion	(01-365)	
	4		Clamp, Loop	ST1540-05	(G)
(73-11-41)			Type Support	(01-365)	
	8		.Bolt	4W0103	(H)
(73-11-41)				(01-380)	
4W0103	6	4.86	.Bolt		(A)(J)
(73-11-41)				(01-380)	
4W0104	2	4.86	.Bolt		(F)
(73-11-41)				(01-390)	
	1		.Bolt	4W0107	(D)
(73-11-41)				(01-400)	
	9		.Nut Option	4W0001	(E)
(73-11-41)				(01-420)	
4W0001	8	2.80	.Nut Option		(A)(K)
(73-11-41)				(01-420)	
2A3259-01	1	-	.Manifold Assy	2A0510-01	(S1)(S4)(S7)(S9)
(73-11-41)			Fuel Nozzle	(02-060)	(S11)(S12)(S13)(S15)
					(A)(B)
ST2121-07	1	-	..Nut, Tube	MS9198-07	(A)(B)(C)
(73-11-41)			Coupling	(02-100)	
ST2121-08	2	-	..Nut, Tube	MS9198-08	(A)(B)(C)
(73-11-41)			Coupling	(02-102)	
354581	2	-	..Wire Thrust		(A)(C)
(73-11-41)				(02-145)	
690704	1	-	..Wire Thrust		(A)(C)
(73-11-41)				(02-150)	
354581	2	-	..Wire Thrust		(A)(C)
(73-11-41)				(02-245)	
690704	1	-	..Wire Thrust		(A)(C)
(73-11-41)				(02-250)	
2A3261-01	1		.Manifold Assy	2A0516-01	(S1)(S5)(S8)(S10)
(73-11-41)			Fuel Nozzle	(02-260)	(S11)(S13)(S14)(S15)
					(A)(B)
ST2121-07	1	-	..Nut, Tube	MS9198-07	(A)(B)(C)
(73-11-41)			Coupling	(02-300)	
ST2121-08	2	-	..Nut, Tube	MS9198-08	(A)(B)(C)
(73-11-41)			Coupling	(02-302)	
354581	2	-	..Wire Thrust		(A)(C)
(73-11-41)				(02-345)	
690704	1	-	..Wire Thrust		(A)(C)
(73-11-41)				(02-350)	
	3		.Bolt	ST1540-05	(D)

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(73-11-41)			(02-360)
	1	.Bolt	4W0103 (D)(H)
(73-11-41)			(02-380)
	1	.Nut Option	4W0001 (E)
(73-11-41)			(02-420)

The Loop Clamp Bracket Assembly which follows is used in place of 2A3275 when the 2A0504-01 or the 2A3229-01 Fuel Nozzle Supply Manifold Assembly is not installed.

2A3288-01	1	..Bracket	2A3275 (S3)(S9)(S10)(S13)
(72-40-00)		Loop Clamp	(01-210) (A)
		Assy.	
ST5030-09	1	12.20 ...Nut Option	(A)
		Consisting	
(72-40-00)		of:	(01-215)
ST5032-09	1Nut	
		OR	
ST5033-09	1Nut	
AN123469	2	.41Rivet	(A)
(72-40-00)			(01-217)

C. Instructions/Disposition Code Statements:

- (S1) New parts coded (S1) must be installed in a complete set to complete the intent of this Service Bulletin, however individual Fuel Nozzle Supply Manifold Assemblies and the necessary attachment hardware can be incorporated as required. See the additional disposition set codes for parts sets when installing individual Fuel Nozzle Supply Manifold Assemblies.
- (S2) New parts coded (S2) must be installed as a set when installing the 2A3256-01 Fuel Nozzle Supply Manifold Assembly.
- (S3) New parts coded (S3) must be installed as a set when installing the 2A3258-01 Fuel Nozzle Supply Manifold Assembly.
- (S4) New parts coded (S4) must be installed as a set when installing the 2A3259-01 Fuel Nozzle Supply Manifold Assembly.
- (S5) New parts coded (S5) must be installed as a set when installing the 2A3261-01 Fuel Nozzle Supply Manifold Assembly.
- (S6) New parts coded (S6) must be installed as a set when installing the 2A3256-01 and the 2A3258-01 Fuel Nozzle Supply Manifold Assemblies.
- (S7) New parts coded (S7) must be installed as a set when installing the 2A3256-01 and the 2A3259-01 Fuel Nozzle Supply Manifold Assemblies.
- (S8) New parts coded (S8) must be installed as a set when installing the 2A3256-01 and the 2A3261-01 Fuel Nozzle Supply Manifold Assemblies.
- (S9) New parts coded (S9) must be installed as a set when installing the 2A3258-01 and the 2A3259-01 Fuel Nozzle Supply Manifold Assemblies.
- (S10) New parts coded (S10) must be installed as a set when installing the 2A3258-01 and the 2A3261-01 Fuel Nozzle Supply Manifold Assemblies.
- (S11) New parts coded (S11) must be installed as a set when installing the 2A3259-01 and the 2A3261-01 Fuel Nozzle Supply Manifold Assemblies.
- (S12) New parts coded (S12) must be installed as a set when installing the

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2A3256-01, 2A3258-01 and the 2A3259-01 Fuel Nozzle Supply Manifold Assemblies.

- (S13) New parts coded (S13) must be installed as a set when installing the 2A3258-01, 2A3259-01 and the 2A3261-01 Fuel Nozzle Supply Manifold Assemblies.
- (S14) New parts coded (S14) must be installed as a set when installing the 2A3256-01, 2A3258-01 and the 2A3261-01 Fuel Nozzle Supply Manifold Assemblies.
- (S15) New parts coded (S15) must be installed as a set when installing the 2A3256-01, 2A3259-01 and the 2A3261-01 Fuel Nozzle Supply Manifold Assemblies.
- (A) The new part is currently available.
- (B) The old part will no longer be supplied.
- (C) The new part is a saleable detail of the assembly.
- (D) The old part is removed at the applicable location for the new configuration.
- (E) The old part will be retained for lesser units.
- (F) The new part will be retained for greater units.
- (G) The quantity of the ST1540-05 Loop Clamp is increased from "4" to "9".
- (H) The old part will be retained.
- (J) The quantity of the 4W0103 Bolt is decreased from "8" to "6".
- (K) The quantity of the 4W0001 Nut Option is decreased from "9" to "8".

NOTE: The estimated 1998 unit prices shown are provided for planning purposes only and do not constitute a firm quotation. Consult the IAE Price Catalog or contact IAE's Spare Parts Sales Department for information concerning firm prices.



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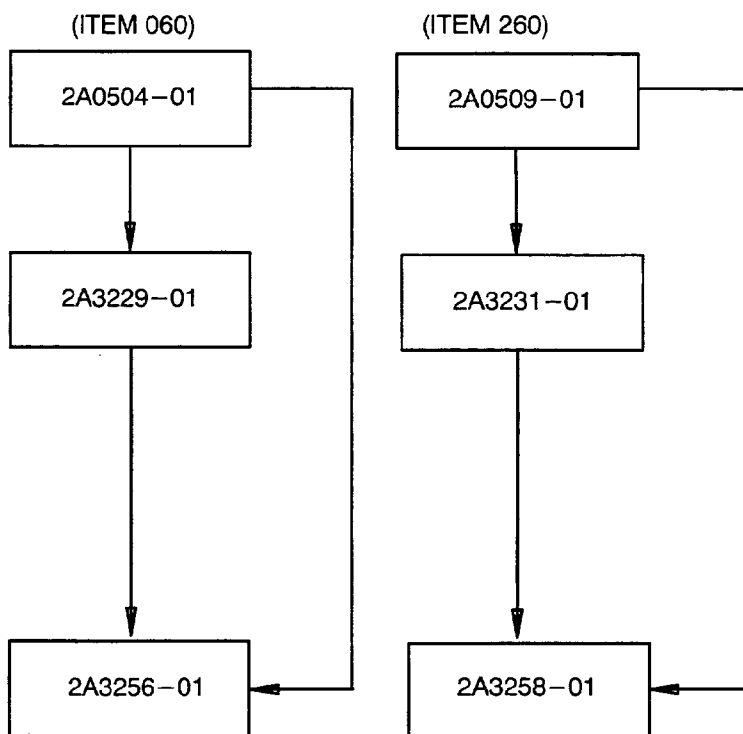
MODIFICATIONS

BASELINE

V2500-ENG-73-0088
ENGINE - FUEL AND CONTROL
- REPLACE THE FUEL NOZZLE
SUPPLY MANIFOLDS
(V2500-A1, V2527-A5 AND
V2530-A5 ONLY) AND REMOVE
THE GASKET OPTION AND
REVISE THE INSTALLATION
PROCEDURE (FOR ALL
MODELS)

V2500-ENG-73-0131
ENGINE - FUEL AND CONTROL
- REPLACE CERTAIN FUEL
NOZZLE SUPPLY MANIFOLD
ASSEMBLIES AND THE RE-
LATED ATTACHING HARDWARE

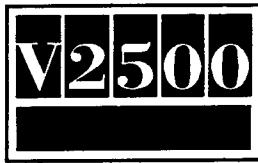
PART NUMBER CHANGE



de000e7911

Family Tree (V2500-A1, V2522-A5, V2524-A5, V2527-A5, V2530-A5 and V2533-A5 Engines) -
Ref. Catalogue Sequence No. 73-11-41. Fig. 01 Items 060, 260
Fig.2

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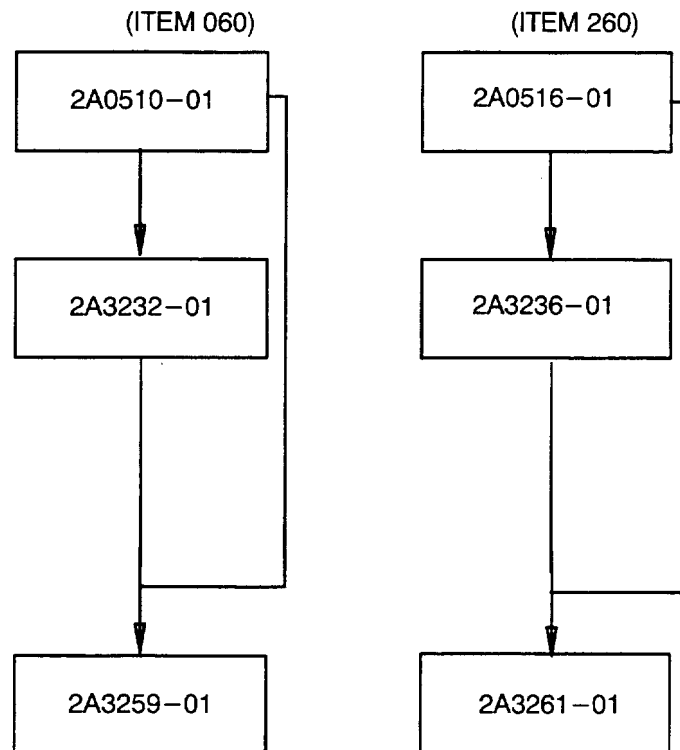
MODIFICATIONS

BASELINE

V2500-ENG-73-0088
ENGINE - FUEL AND CONTROL
- REPLACE THE FUEL NOZZLE
SUPPLY MANIFOLDS
(V2500-A1, V2527-A5 AND
V2530-A5 ONLY) AND REMOVE
THE GASKET OPTION AND
REVISE THE INSTALLATION
PROCEDURE (FOR ALL
MODELS)

V2500-ENG-73-0131
ENGINE - FUEL AND CONTROL
- REPLACE CERTAIN FUEL
NOZZLE SUPPLY MANIFOLD
ASSEMBLIES AND THE RE-
LATED ATTACHING HARDWARE

PART NUMBER CHANGE



de000e7912

Family Tree (V2500-A1, V2522-A5, V2524-A5, V2527-A5, V2530-A5 and V2533-A5 Engines) -
Ref. Catalogue Sequence No. 73-11-41. Fig. 02 Items 060, 260
Fig.3

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International Aero Engines

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