Nomad
SERVICE BULLETIN

Reference No. 201

TRANSMITTAL SHEET FOR NOMAD SERVICE BULLETIN

SERVICE BULLETIN NO.: NMD-28-20 DATED: 12th February, 1990

TITLE: Fuel - Auxiliary Tank - Strengthened Pipe Assembly (Modification N681)

REVISION NO. DATED:

ACTION: Insert Service Bulletin NMD-28-20 into Service Bulletin Publication and annotate index accordingly.

REASON: To prevent fuel leakage caused by distortion of the fuel pipes at the rubber hose connection points.

REMARKS: Initial issue.

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FUEL - AUXILIARY TANK - STRENGTHENED PIPE ASSEMBLY (MODIFICATION N681)

1. PLANNING INFORMATION

A. Effectivity

All Nomad N22 Series and N24 Series aircraft that have Option G99 or G99M fitted but whose log books do not record the embodiment of Mod N681 or compliance with Service Bulletin NMD-28-20.

B. Reason

To prevent fuel leakage caused by the clamps distorting the fuel pipes at the rubber hose connection points.

C. Description

The aluminium alloy specification for the fuel pipes is revised and the wall thickness increased from .028 to .035 in. Alternatively, the existing pipes are reworked by the insertion of aluminium alloy bushes that strengthen the pipes in the area of the clips.

D. Compliance

Recommended.

E. Approval

The modification detailed herein has been approved pursuant to CAR 35 and conforms with type certification requirements.

F. Manpower

Page No	1	2	3	4	5	6	7	8	9
Rev No	-	-	-	-	-	-	-		

G. Material - Price and Availability

Material to be obtained from Operator's stock.

H. Tooling

Nil required.

J. Weight and Balance

K. References

MM - Maintenance Manual Chapters 12-10-00 and 28-10-00.
Option G99 or G99M - Illustrated Parts Catalogue.
IPC - Illustrated Parts Catalogue Chapter 28-10-01.

L. Publications Affected

Option G99 or G99M - Auxiliary Fuel Tanks,
Illustrated Parts Catalogue.

2. ACCOMPLISHMENT INSTRUCTIONS

NOTE: This modification may be incorporated by either introducing new pipe assemblies or reworking existing pipe assemblies. This Service Bulletin details the rework method to be used to modify the pipes.

Rework for LH described, RH similar except where noted.

A. Drain the fuel tanks as detailed in MM Chapter 12-10-00.

B. Ensure that all electrical power is switched off.

CAUTION: THE TANK BAY DOOR FORMS PART OF THE STRESSED WING AREA. BEFORE REMOVING A TANK BAY DOOR, THE WING AND ENGINE MUST BE ADEQUATELY SUPPORTED.

C. Position wing trestle 1668-3619 or suitable alternative to support the wing at wsta 171.50 to 174.0.

D. Remove the tank filler cap. Remove the screws securing the filler mounting assembly to the tank bay door. Carefully break the seal between the tank bay door skin and the filler cap adaptor.

E. Compress the tank top sufficiently to give access to release the tank support clips from the tank bay door support fittings.

F. Remove the fasteners securing the outer tank bay door. Lift the tank bay door clear of the wing.

G. Loosen the hose clamps attaching the rubber hoses to pipe assembly 1/N-57-250, refer Figure 1. Remove the bonding lead and remaining screws securing the pipe assembly to the mounting ring. Remove the pipe assembly.

H. Loosen the hose clamps attaching the rubber hoses to pipe assembly 1/N-57-251 (1/N-57-252 RH), refer Figure 1. Remove the screw securing the bonding lead to the clamp. Remove the screws securing the pipe assembly to the mounting ring and remove the pipe assembly.

J. Check the pipe assemblies for serviceability and wall thickness of tubing. If the wall thickness is less than .035 in, proceed with rework. If wall thickness is above .035 in, reinstall pipe assemblies.

K. Measure the inside diameter of the pipe assemblies as shown in Figure 2 (4 places).

L. Referring to Figure 2 Details of Re-inforcing Bushes, turn-up four bushes from .75 in dia aluminium bar QQ-A-225/6 T851 to suit individual measurements taken in K. above.

M. Fit bushes into respective pipes and secure in position with Loctite 635 or similar.

N. Position pipe assemblies and push rubber hoses onto pipes, do not tighten hose clamps. Secure pipe assemblies in position with screws and mounting rings, fitting bonding leads as shown in Figure 1. Check that rubber hoses are fitting correctly and tighten hose clamps.

P. Position the tank bay door on the wing structure. Fit securing screws around periphery of the door and torque tighten to between 20 to 25 lb in.

Q. Using the filler aperature and the fuel quantity transmitter opening as access, engage the tank support clips with the tank bay door support fittings.

R. Fit the filler cap adaptor as follows:

(1) Apply a coating of PR1222B rubber compound to the recess about the upper edge of the filler cap adaptor. Locate the washer into the recess. Apply a coat of PR1222B to the upper face of the washer and position the adaptor washer assembly between the tank filler aperture and the tank bay door skin.

(2) Secure the assembly through the door skin to the filler mounting ring.

(3) Apply a coating of Screw Lock to the screw threads, fit screws and torque tighten to between 20 to 25 lb in.

S. Remove the wing trestle.

T. Fuel tanks sufficiently to allow hose connections to be checked, refer MM 12-10-00.

U. Gain access to the pipe connections at the inbound end of the auxiliary tank and check the blanking plug and hose on the redundant vent pipe for leaks, refer Figure 1 Detail A.

NOTE: The redundant vent pipe may be crimped and welded as an alternative to the blanking plug.

When modified pipe assembly 2/N-57-241 is fitted, the redundant vent pipe is deleted.

V. Allow 30 minutes from first check and recheck all connections for leaks. Rectify any leaks and re-check.

W. Replace all removed access panels.

3. MATERIAL INFORMATION

Items required per aircraft from Operator's stock.

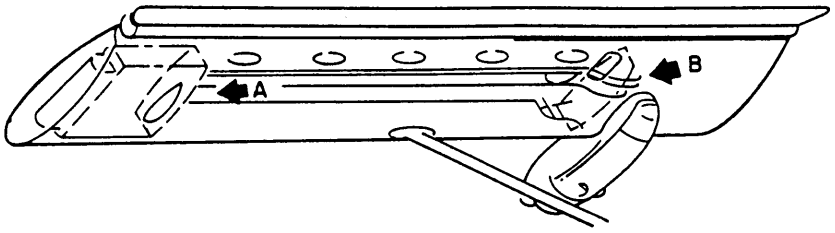
New P/N	Qty	Title	Old P/N	Instructions/ Disposition
1/N-03-867	2	Pipe Assembly	1/N-57-250	Rework
1/N-03-869	1	Pipe Assembly	1/N-57-251	Rework
1/N-03-870	1	Pipe Assembly	1/N-57-252	Rework
NPN	A/R	Loctite 635		
NPN	6 in	Al Alloy Bar .75 in dia QQ-A-225/6 T851		

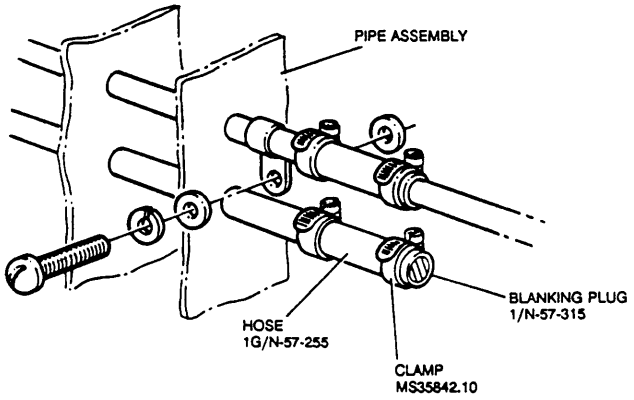
4. **SPECIAL TOOLS AND EQUIPMENT**

A wing trestle 1668-3619 is required.

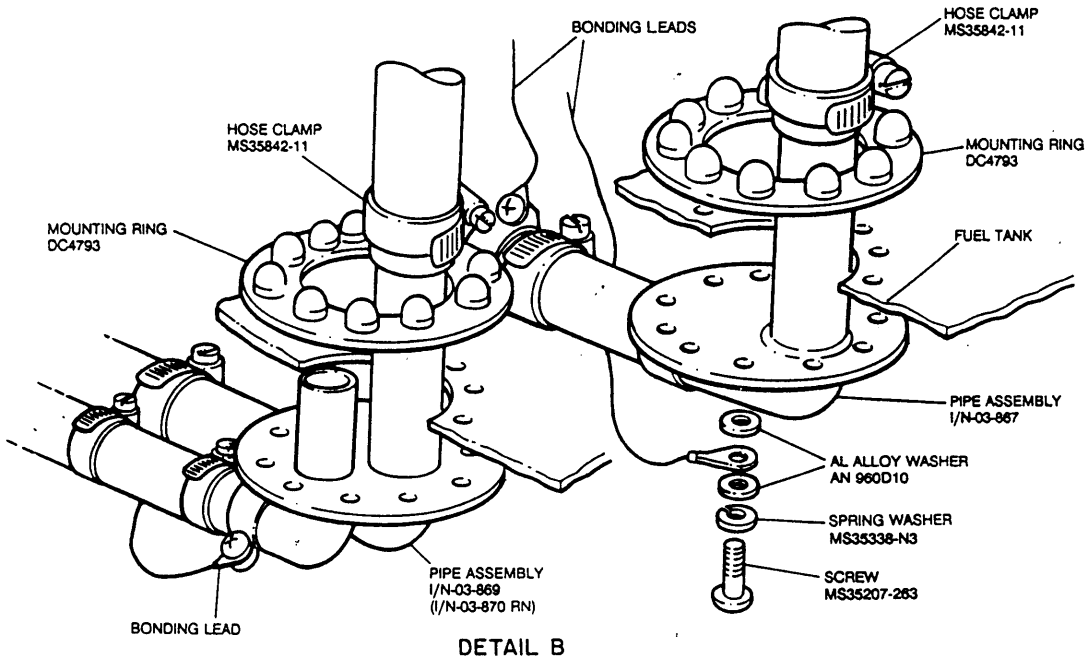
5. **RECORDING ACTION**

Record compliance with Service Bulletin NMD-28-20 in Airframe Log Book.



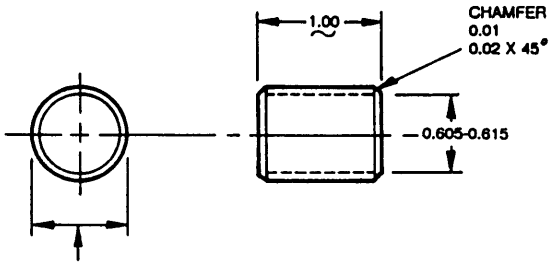


DETAIL A

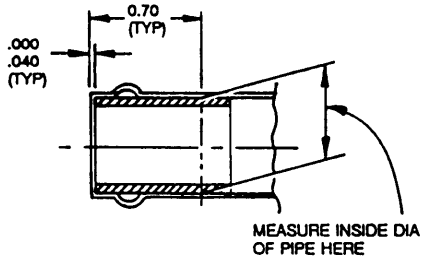


DETAIL B

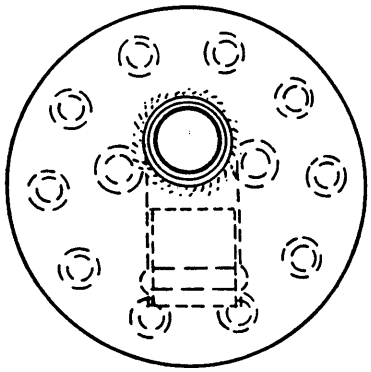
Pipe Assemblies, Location and Installation
Figure 1

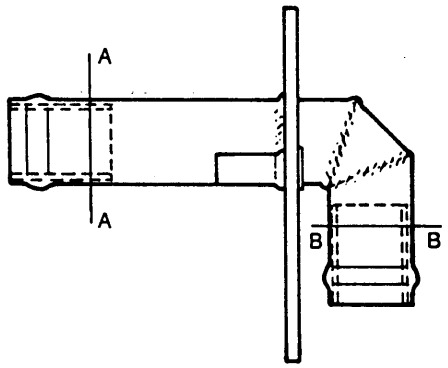


DETAILS OF RE-INFORCING BUSHES

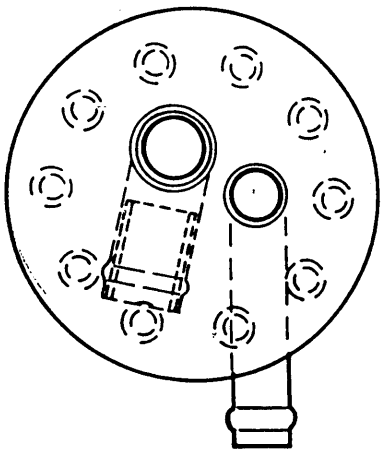


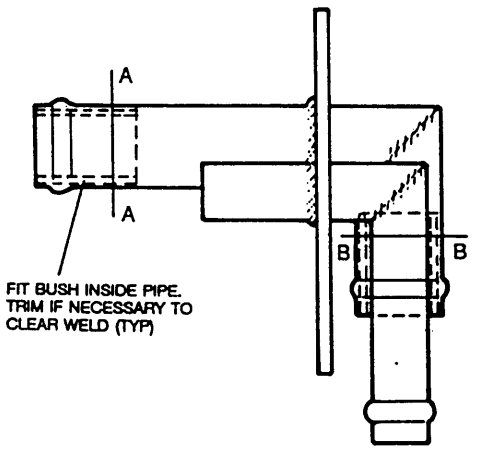
SECTION A-A AND B-B





PART NUMBER I/N-03-867
(REWORKED FROM I/N-57-250)





PART NUMBER LH I/N-03-869 (REWORKED FROM I/N-57-251)
RH I/N-03-870 (REWORKED FROM I/N-57-252)

Details of Pipe Assemblies and Bushes
Figure 2