



Mechanical
Products

Swearingen / Fairchild Merlin IIA, IIB, III, IIIA, IV, IVA, IIB, and Metro I, II

SERVICE INFORMATION LETTER

Clarification on the Engine Isolator Inspection Criteria

LM-827-SA2, -SA7, -SA10, -SA11

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SUBJECT: Clarification on the inspection criteria for the LM-827-SA2, -SA7, -SA10, -SA11 engine isolators

A. EFFECTIVITY:

The clarified inspection / rework criteria discussed below needs to be followed for the following Lord assemblies or components thereof:

LM-827-SA2, -SA7, -SA10, -SA11 Isolator Assemblies

B. REASON:

Lord Corporation has been made aware that assemblies in the field may have been put back in service with excessive damage because of a misinterpretation of the component maintenance manual. This Service Letter is a clarification of the criteria for the isolators.

C. APPROVAL:

This is considered service information only and does not require the approval of regulatory agencies.

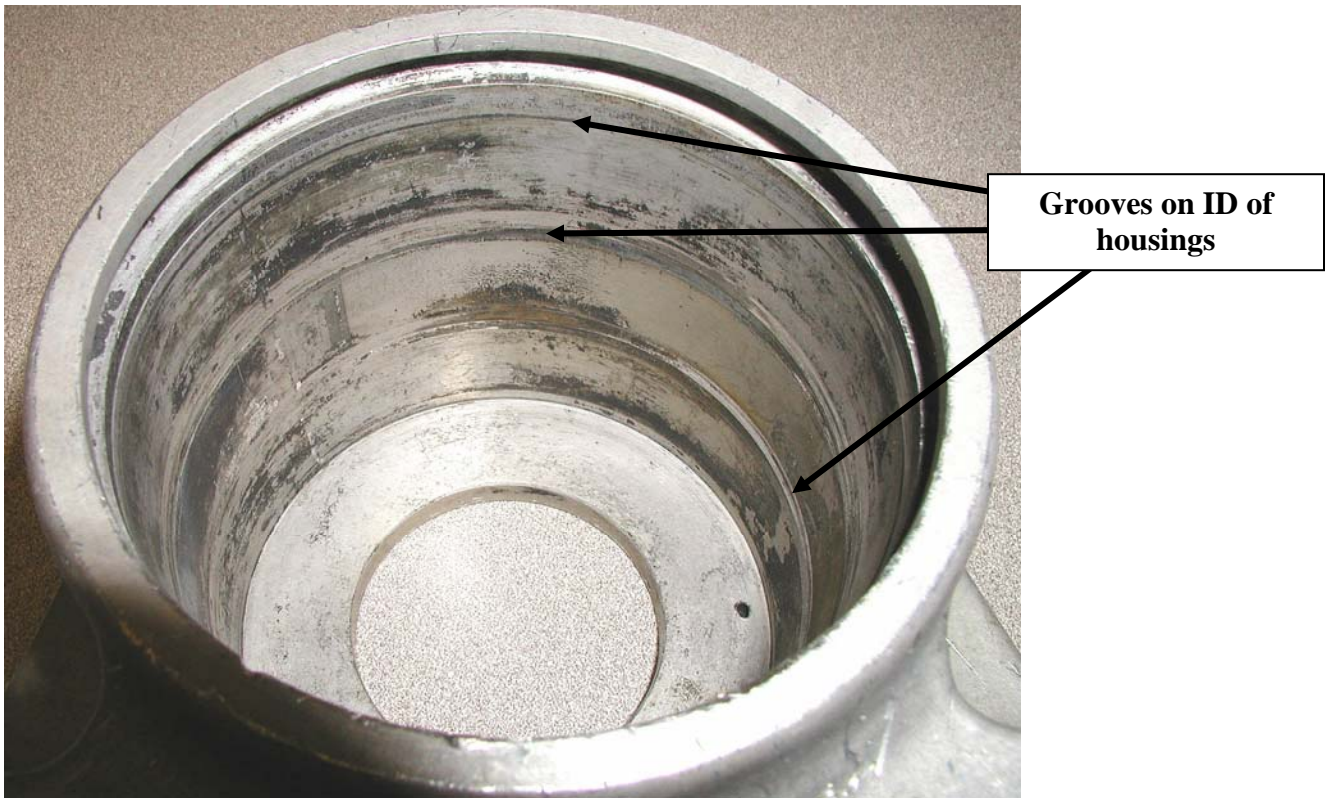
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D. ACTION TO BE TAKEN:

1. It has come to Lord Corporation's attention that the housings for the LM-827-SA2, -SA7, -SA10 and -SA11 have some excessive wear and damage both on the exterior of the housing and the inner diameter. The CMM is somewhat vague for these parts and this service letter will clarify the inspections.
2. With time, wear takes place between the rubber sandwiches and the inner diameter of the housing resulting in grooves in the housing as shown in Figure 1.

FIGURE 1

3. These grooves should be machined out locally (the entire ID of the housing does not have to be machined, just where the groove has formed) with 64 micro-inches maximum surface finish with a minimum transition radius of .075 inches (no sharp edges). The maximum inner diameter is as follows:

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- The inner diameter for the LM-827-SA10 housing, LM-827-46, should have a maximum diameter of 3.617 inches. If this value is exceeded, the part should be replaced.
 - The inner diameter for the LM-827-SA11 housing, LM-827-45, should have a maximum diameter of 3.077 inches. If this value is exceeded, the part should be replaced.
 - The inner diameter for the LM-827-SA2 housing, LM-827-15, should have a maximum diameter of 3.077 inches. If this value is exceeded, the part should be replaced.
 - The inner diameter for the LM-827-SA7 housing, LM-827-35, should have a maximum diameter of 3.077 inches. If this value is exceeded, the part should be replaced.
 - If there remains some local wear or damage to the inner diameter after machining, it is acceptable to polish this area (to a 64 micro-inches maximum surface finish with .075 inch minimum radius) if the area is less than an inch long and does not exceed .030 inches deep from the original surface prior to machining the inner diameter. If this is exceeded, replace the part.
4. The exterior of the some of the returned housings have had some gouges / scratches as shown in Figure 2.

Figure 2



**Excessive gouge to
outside of housing**

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If a gouge or scratch exceeds .03 inches deep from the original surface, replace the housing. If less than .03 inches deep and less than 1 inch long, blend the area with 64 micro-inches maximum surface finish with .075 inch minimum radius.

5. If any damage is observed in the snap ring groove as shown in Figure 3 replace the housing. In addition, measure the wall between the snap ring groove and the outside of the housing and if the value is less than .09 inches, replace the housing.

Figure 3



6. If there is any machining or polishing or wear that exposes the bare material on the housings, anodized per MIL-A-8625, Type I, Class 1, Dichromate Seal.
7. These housing must be penetrant inspected per the CMM.
8. The stem brackets LM-827-2 and LM-827-39 should be non-destructive tested (NDT) per the CMM for cracks with special review of the radii as shown in Figure 4. If any cracks are found, replace the part. No nicks or gouges are allowed in these radii.

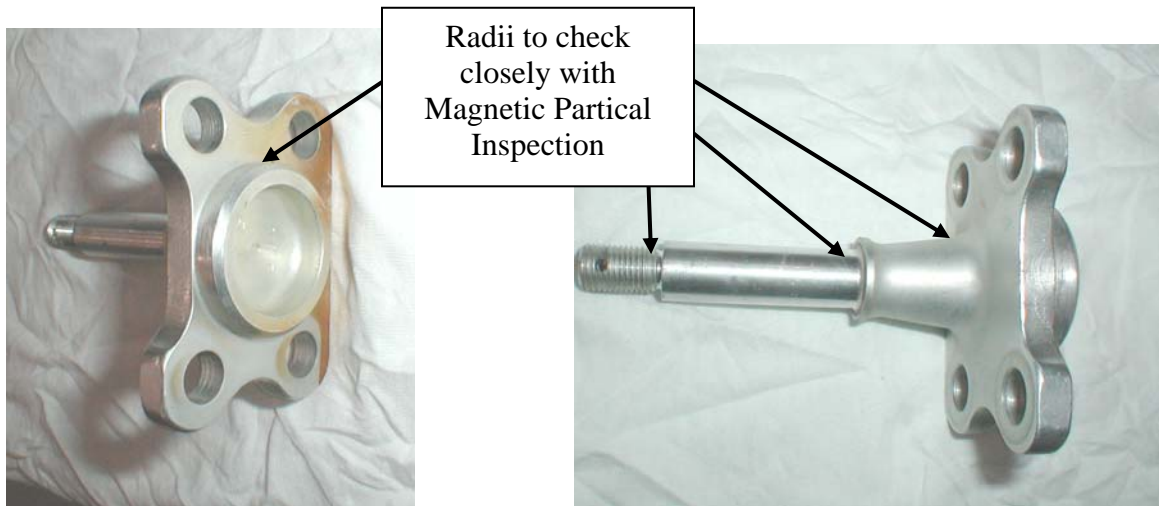
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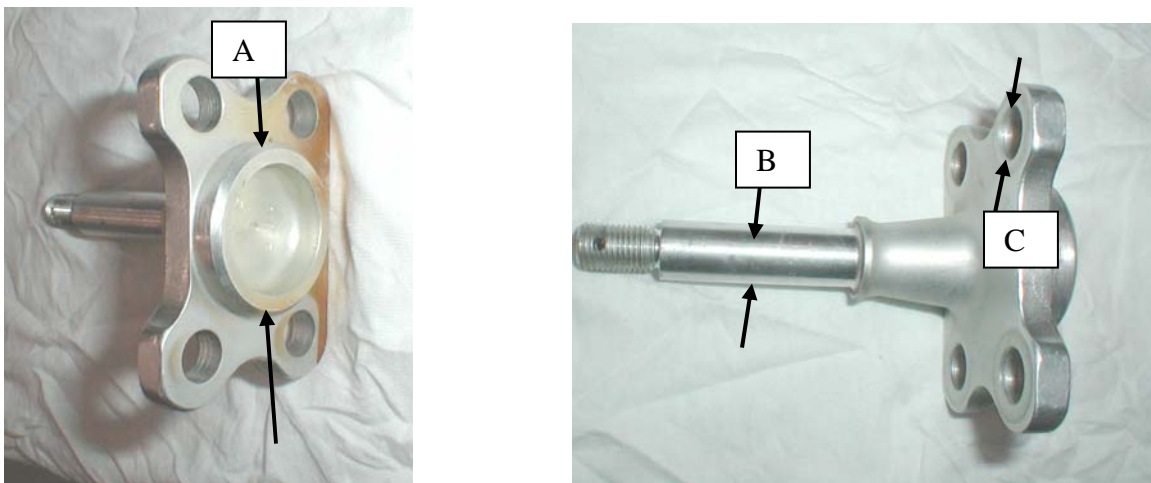
Other areas of the part can have nicks or gouges to a maximum depth of .02 inches from the original surface and no longer than .25 inches. These areas must be blended out with 64 micro-inches maximum surface finish with .075 inch minimum radius. Blended areas must be Cadmium plated per QQ-P-416, Class 3, Type II

Figure 4



9. The LM-827-2 and LM-827-39 brackets should be checked for wear in the areas shown in Figure 5 per the requirements of Table 1. If they don't meet these requirements, replace the parts.

Figure 5



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Table 1

Part Number	A Dimension Min (in.)	B Dimension Min (in.)	C Dimension Max (in.)
LM-827-2	1.493	.555	.464
LM-827-39	1.493	.644	.464

9. The threads on stems LM-827-2 and-39 need be check with thread go and no-go gages to verify that they meet the requirements of 7/16-20 UNF-3A for the LM-827-2 and 9/16-18 UNF-3A for the LM-827-39.