

Service Information Letter - Fuel Systems

Small Reciprocating
Engines

No. 28

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Page 1 of 2

SUBJECT: MODIFICATION OF RSA-7DA1 AIR DIAPHRAGM P\N 2538313 TO COMPENSATE FOR EXTERNALLY INTRODUCED CONTAMINATION INTO THE AIR SIDE OF THE SERVO REGULATOR.

PURPOSE: To provide modification instructions for air diaphragm P\N 2538313 used only on RSA-7AD1 Model Servo Fuel Injectors.

- A. The complaint "engine hangs at 1,700-1,800 rpm when cold" is common with the onset of cold weather. This engine hang generally occurs with the first start of the day or after a warmed engine is allowed to sit for several hours at temperatures below 50°F (10°C). Once the engine is warmed, operation is normal.

Investigation at Bendix has found that the engine hangs complaint is caused by contamination externally introduced from components of the intake system, primarily due to small amounts of engine oil.

- B. Modification of the air diaphragm assembly is the most effective means of eliminating the symptoms associated with this type of contamination. A contaminated servo with a modified diaphragm assembly was tested to -8°F (-14.4°C). No hang-up symptoms occurred.
- C. Any model RSA-7DA1 should have the air diaphragm modified during the next repair or overhaul per Figure 1.

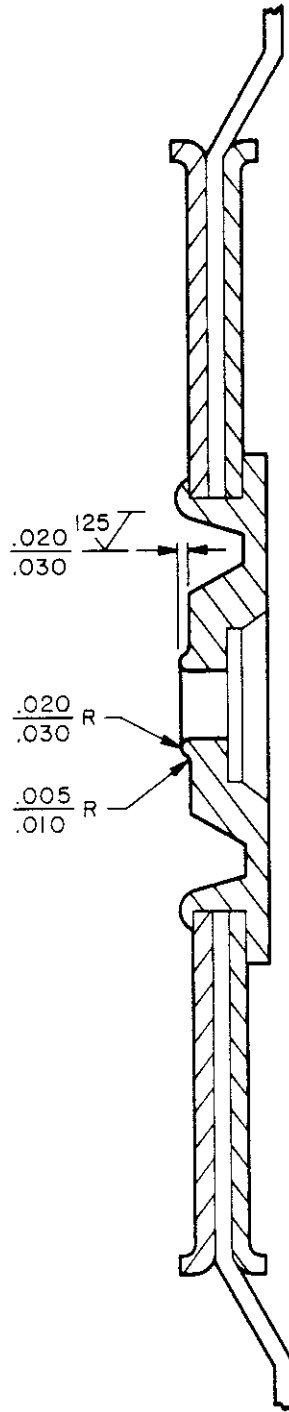
CAUTION: DURING MODIFICATION BE SURE NOT TO DAMAGE RUBBER PORTION OF THE AIR DIAPHRAGM ASSEMBLY.

1. Machine to a minimum surface finish of 125√.
 2. Brush Alodine on modified areas after machining.
 3. All modified servo units must be identified with a letter "D" after the issue number.
- D. Once the formal design change is complete, an up issue number will be assigned to this change.



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RSA-7DA1 Proposed Modification to P/N 2538313 Diaphragm Assembly
Figure 1

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