



SERVICE DIRECTIVE BULLETIN

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DATE: May 15, 1987

SUBJECT: Wastegate Position Fixity

MODELS: All Enstrom F28F models prior to S/N 746, all 280F models prior to S/N 1519, and all 280FX models prior to S/N 2012.

EFFECTIVITY: As noted in the following text

During regular field maintenance, some incidents of improper wastegate linkage rigging and operation were noted. This misrigging was found to be the direct result of wastegate position change caused by heat distortion combined with exhaust system tolerances. If this condition is allowed to continue, it may restrict the ability of the operator to reach full engine power.

In order to alleviate any recurrence of this problem, the following modification to the wastegate assembly must be accomplished upon receipt of this bulletin or before the next 5 hours in service.

The modification consists of the installation of a stainless steel pin through the lower edge of the wastegate assembly and into the corrosion resistant steel orifice in the exhaust stack stub. The pin is then safetied, by stainless steel safety wire, to the stack and wastegate assembly, as seen in Figure 1.

The installation of this modification is accomplished by the following method:

- (A) First determine that the wastegate assembly is properly positioned and rigged correctly, reference Enstrom's 1985 F Model Maintenance Manual, Section 13, Page MM 13-21, MM 13-22 and MM 13-23, Paragraphs E through I.

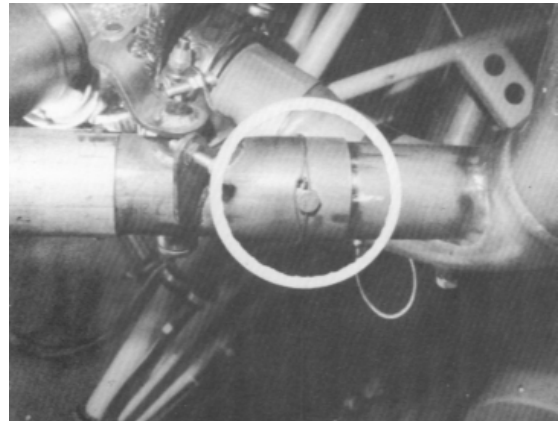


Figure 2

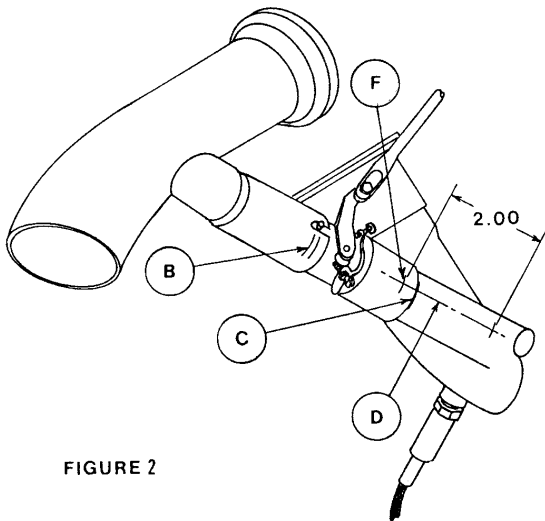


FIGURE 2

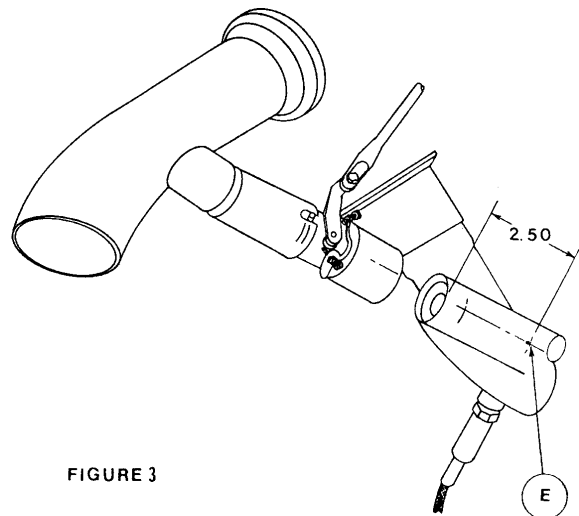


FIGURE 3

- (B) After readjustment or determination that the wastegate position and rigging are correct, its position between the exhaust stack stub and tail pipe stub must be marked for repositioning after drilling and reassembly. Using a 6 inch flexible steel rule and lead pencil, draw (2) lines on either side of the interlock pin parallel to the edge of the tail pipe stub to establish position of wastegate to exhaust stack stub slot. See Figure 2, Point
- (C) Draw another line radially along the lower edge of the wastegate tube to establish its position relative to exhaust stack stub. See Figure 2, Point (C).
- (D) Use the steel scale to draw a centerline parallel to tube sides on the exhaust stub overlapping the wastegate tube by at least 1 inch and extending at least 2 inches on the stub tube. See Figure 2, Point (D).
- (E) Remove stack and slide wastegate upward and off the exhaust stack stub by—pass tube. Measure exactly 2.50 inches from the end of the by—pass tube toward the exhaust stack and mark. See Figure 3, Point (E).

NOTE: Prior to reassembly, the wastegate should be thoroughly inspected for cracks, distortion, or high temperature erosion of the butterfly valve and shaft. Discard lower Aero seal clamp.

- (F) Reassemble exhaust stack and wastegate, reposition wastegate to original location by matching index lines (B), (C), (D) and recheck rigging.
- (G) Measure exactly 2.00 inches from the bench mark (F) along the centerline (D) and mark on wastegate tube. Point (F), see Figure 2.
- (H) Center punch point (F) and drill a .196 diameter hole to a depth of .38 of an inch. Deburr hole and install a stainless steel pin P/N 28-12574-11. The pin must be safety wired in position by using 032 stainless steel safety wire (MS9226-05) by threading through the head and double wrapping around the wastegate then twisting the ends. See Figure 1.
- (I) Check exhaust wastegate system for security, rigging, freedom of movement and proper operation. Ref. paragraph (A) this S.D.B.

NOTE: If in the future the wastegate assembly must be replaced, the new assembly will not be drilled. Before removal of the old wastegate assembly the existing retention pin hole must be referenced so that it may be relocated on the new replacement. This can best be accomplished by redoing Par. (C) and Par. (D).

When doing Par. D, draw centerline through the existing pin hole. Then measure 2.00 inches from the center of the existing hole along centerline on the exhaust stub and mark point (E). Remove the old wastegate and reposition the new assembly per Par. (F). Then redo Par. (G), (H) and (I) to complete the reinstallation.

All F model owners may acquire components for this modification from their nearest Enstrom dealer, Enstrom service center or Enstrom customer service department.