EFFECTIVITY:
MODEL: 707 MAINTENANCE PLANNING DOCUMENT (D6-7552) REFERENCE: 6-52-04 (Part)

PART 4 - ULTRASONIC

DOORS - PASSENGER/CREW

1. Purpose

   A. To detect cracks, 0.060 x 0.060 inch or greater, at the lower inboard and outboard corner of the splined hole in the forward entry door upper hinge arm, P/N 65-29995-1.

2. Special Instruction

   A. It is recommended that this ultrasonic inspection be performed by experienced personnel only.

3. Equipment

   A. This inspection has been performed using the following equipment:

      (1) Ultrasonic instrument. Any pulse echo ultrasonic instrument that will satisfy the performance requirements of this procedure is suitable for this inspection. The following instruments have been used and found suitable:

         (a) Reflectoscope, Sperry Model UM 700

         (b) Reflectoscope, Sperry Model UCD

         (c) Branson, Sonoray Model 301

      (2) Transducer

         (a) 5.0 MHz, 0.25-inch diameter in a 0.375-inch diameter case

      (3) Transducer Positioning Fixture 123

         (a) Fabricate the transducer positioning fixture as shown in Detail I.

      (4) Reference Standard

         (a) Fabricate the reference standard from a spare part, P/N 65-29995-1 or -2 as shown in Detail II. The 0.060 x 0.060 inch saw cut shall be on the lower inside surface (door closed).

      (5) Couplant

         (a) Light grease or oil

Forward Entry Door Upper Hinge Arm
Figure 1 (Sheet 1)

4. Preparation for Inspection

A. Remove any loose or flaking paint from the lower surface of the hinge arm. Use a medium grade sandpaper to smooth any rough or corroded surfaces.

B. Coat the part surface with couplant.

5. Instrument Calibration

A. Seat the transducer firmly in the transducer positioning fixture with couplant.

B. Coat the reference standard with couplant.

C. Place the transducer positioning fixture on the reference standard, as shown in Detail III and position to obtain the maximum response from the simulated crack.

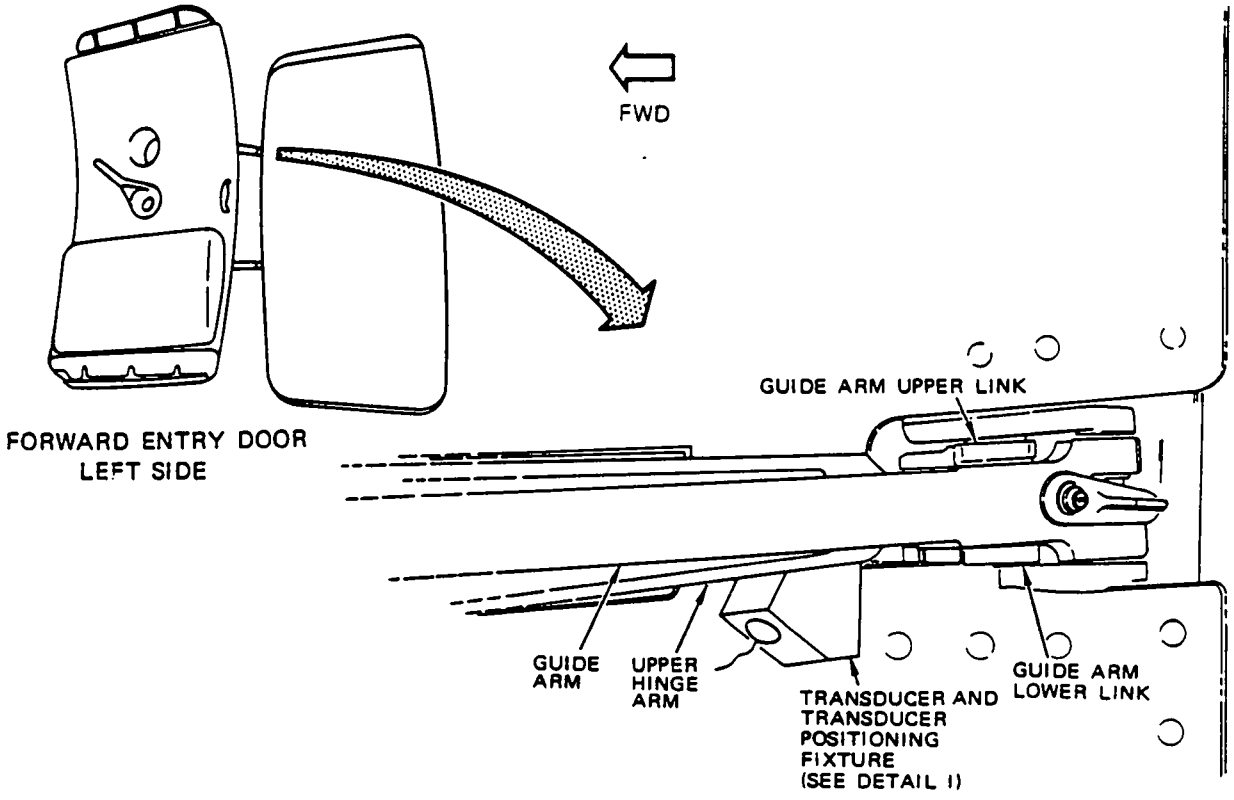
D. Center the crack response on the instrument and adjust the signal level to approximately 50 percent. Note the signal position and its characteristic movement as the transducer assembly is moved. This instrument setting should be used to evaluate indications located during inspection of the hinge arm.

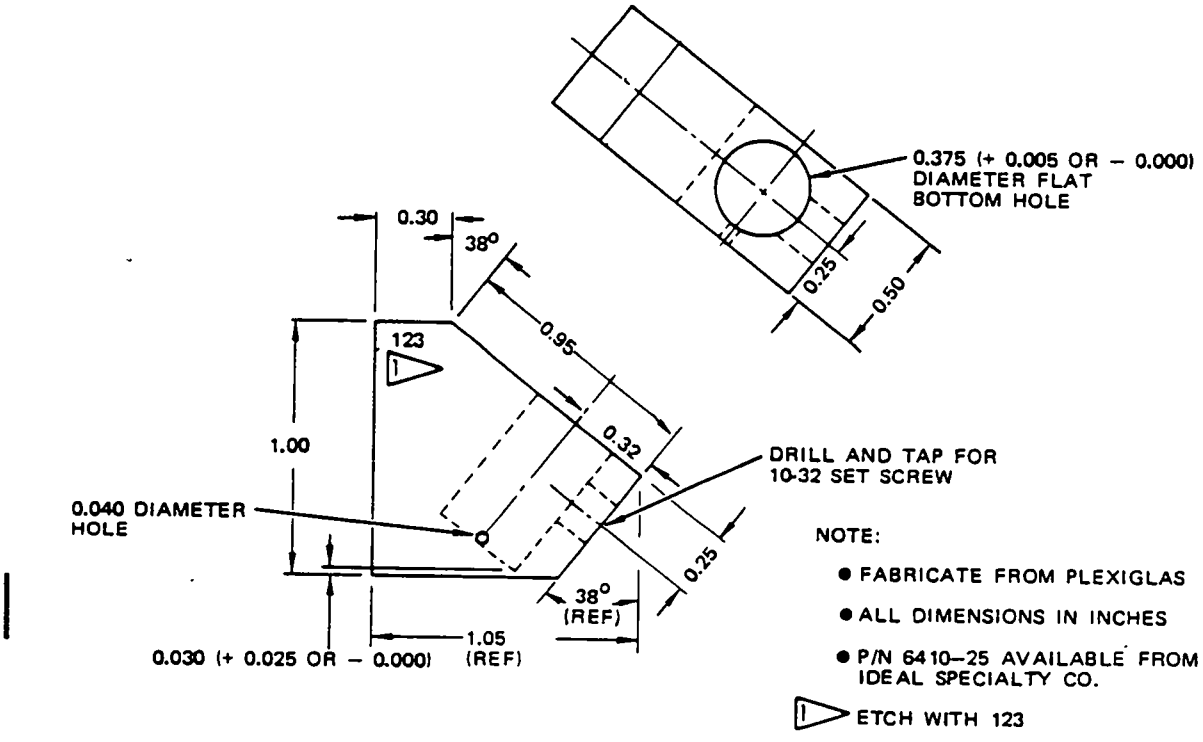
E. Scan the opposite side of the hole (which does not contain a saw cut) to determine the amplitude of indications from the splines.

6. Inspection Procedure

A. Place the transducer positioning fixture on the lower surface of the upper hinge arm and scan in the same manner used to locate the simulated crack in the reference standard (see Detail III).

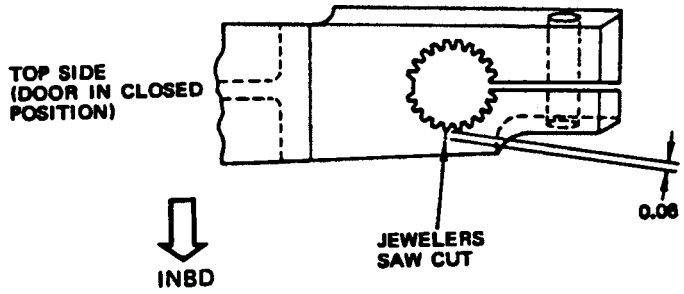
Forward Entry Door Upper Hinge Arm
Figure 1 (Sheet 2)

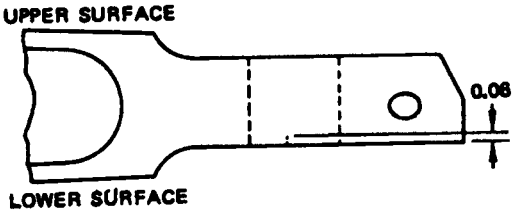




TRANSDUCER POSITIONING FIXTURE 123
DETAIL I

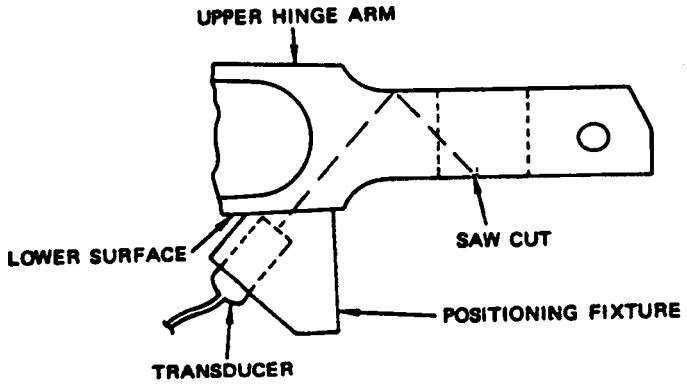
Forward Entry Door Upper Hinge Arm
Figure 1 (Sheet 3)





NOTE:
- REFERENCE STANDARD FABRICATED FROM SPARE PART (REFERENCE 65-29995-1, -2)
- ALL DIMENSIONS IN INCHES

REFERENCE STANDARD
DETAIL II



TRANSDUCER POSITION FOR CALIBRATION AND INSPECTION
DETAIL III

Forward Entry Door Upper Hinge Arm
Figure 1 (Sheet 4)