

# MAINTENANCE INSTRUCTION

## MODERNIZATION RECOMMENDATION

### EXHAUST SCREEN INSPECTION PORT FOR REAR EXHAUST MANIFOLD

- PURPOSE:** The purpose of this Modernization Recommendation is to provide a procedure for applying an exhaust screen inspection port in the rear exhaust manifold.
- APPLICATION:** The inspection port is applicable to turbocharged 645 series engines with the tapered barrel rear exhaust. It is not intended to be used on straight barrel applications.
- DISCUSSION:** The exhaust screen inspection port for the rear exhaust manifold is now available as kit 9336983. This inspection port has a 4" diameter access opening to view the exhaust screen plate. This will allow the customer to inspect the exhaust screen without physically removing the screen from the manifold.
- The heat shield assembly must also be altered to accept the inspection port. This modification may be performed by the customer or a modified heat shield assembly 9320186 is available.
- It should be noted that gasket 9316672 must be replaced at each screen inspection. Therefore, a stock of these gaskets should be kept on hand.

**REFERENCE  
DRAWINGS:**

Fig. 1 of this instruction and drawings 9336983 (supplied with kit 9336983), 9320184, 9320185, and 9320186.

**NEW MATERIAL  
REQUIRED:**

*Inspection Port Kit 9336983 provides material necessary for application of one inspection port. Since application of the port requires removal of the rear section of the exhaust manifold, new gaskets must be obtained.*

| <u>QUANTITY</u> | <u>PART NUMBER</u> | <u>DESCRIPTION</u>                    |
|-----------------|--------------------|---------------------------------------|
| 1               | 9316671            | Flange Assembly                       |
| 1               | 9316673            | Flange                                |
| 1               | 9316672            | Gasket                                |
| 6               | 8287827            | 1/2"-20 Hexagon Bolt                  |
| 6               | 9338626            | 1/2"-20 Nut, Stainless Stl, Silver Pl |
| 1               | 9336982            | 8018-B2 Electrode Welding Rod Kit     |

\*This bulletin is revised and supersedes previous issues of this number.  
Areas of change are indicated by vertical bars in the margins.

The following gaskets are required during exhaust manifold replacement.

| <u>QUANTITY</u> | <u>PART NUMBER</u> | <u>DESCRIPTION</u>           |
|-----------------|--------------------|------------------------------|
| 1               | 8309212            | Gasket, Turbine Inlet        |
| 1               | 8309213            | Gasket, Screen Assembly      |
| 1               | 8358834            | Gasket, Screen Assembly      |
| 1               | 8309214            | Gasket, Chamber              |
| 2               | 8459714            | Gasket, Chamber To Crankcase |

**OPTIONAL MATERIAL:**

| <u>QUANTITY</u> | <u>PART NUMBER</u> | <u>DESCRIPTION</u>            |
|-----------------|--------------------|-------------------------------|
| 1               | 9320186            | Modified Heat Shield Assembly |

**COST OF MATERIAL:**

The approximate price of the inspection port kit is \$178.00. The approximate price of the port gasket is \$1.70. The approximate price of the heat shield assembly is \$138.00. The approximate price of required manifold gaskets is \$37.00. These prices are for job estimating purposes only. Customers will be billed at prices in effect at time of shipment.

**PROCEDURE**

1. Remove rear exhaust manifold from the engine.
2. Cut 4-5/8" diameter hole in the exhaust chamber as shown in 9336983.
3. Clean surface prior to welding by wire brushing any foreign substance. Remove all oily deposits with commercial solvent.
4. Insert flange tube assembly 9316671 so that the tube penetrates the outer body approximately 3/16" and in the orientation and location as shown in 9336983. Tack weld in place.
5. Weld the tube with the special 8018-B2 welding rod supplied as item No. 6 of the kit. A continuous 3/16" fillet weld (no voids) is required on the inside and outside.

**NOTE**

The welding electrodes must be stored in a dry oven at a temperature of 375° F for 2 hours prior to use.

6. Assemble per 9336983 torque all six bolts to 80 ft-lbs.
7. A modified heat shield assembly 9320186 should be used or the original heat shield altered by cutting a 7-1/4" by 6-13/16" slot as shown in 9320184 and 9320185.
8. Remove all welding slag and foreign material from the interior of the assembly. Shot blasting is permissible if all potential shot traps are shielded and the chamber is thoroughly inspected prior to application.

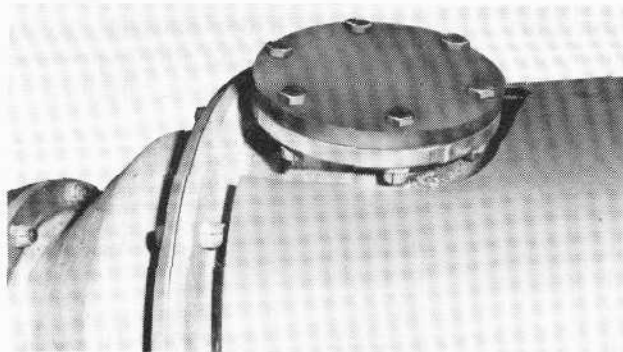


Fig.1 - Exhaust Screen Inspection Port

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Electro-Motive Division Of General Motors La Grange, Illinois 60525