DEPARTMENT
OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT

AND GENERAL SUPPORT MAINTENANCE

MANUAL INCLUDING REPAIR PART LIST

FOR

TEST SET, INJECTOR

(BACHARACH INSTRUMENT COMPANY)
(4910-00-355-6248)
MODEL YHQ

HEADQUARTERS,
DEPARTMENT OF THE ARMY

MARCH 1978

GENERAL

Model YHQ Nozzle Test Fixture, used in conjunction with Model YFL Nozzle Tester and Connector Combination 65-881, is designed to test all General Motors Series 53, 71 and 110 unit injectors by applying factory recommended tests to determine injector condition. Test Fixture is available with two interchangeable Seat Blocks. One Seat Block will test Series 53 and 71 standard and offset body injectors. The other Seat Block is used to test Series 110 standard and offset injectors. Use of these Seat Blocks is discussed in the titled section below.

Connector Combination 65-881 includes a Connector Tube, Nuts and Adapter for testing the spray tip and check valve assembly of the Series 71 needle valve unit injector while it is connected to the Model YFL Nozzle Tester. This test requires that the Nozzle Tester be equipped with a 5000 psi gauge as shown in Fig. 5. Servicing injectors requires specialized equipment, facilities and trained personnel. In all instances, actual test and repair procedures which have been established by the engine builder should be closely followed. Refer to the engine manual for specific performance figures and injector disassembly and assembly instructions.

Figures 5 and 6 identify parts of the Nozzle Test Fixture and Connector Combination referred to in these instructions. Operation and maintenance of the YFL Nozzle Tester is covered in a separate pamphlet, 8-I-54. Nozzle Tester is shown mounted on Test Fixture, but if Fixture and Nozzle Tester were purchased separately, mount Tester on Base Plate (1) using three 3/8" - 16 x 5/8" lg. cap screws.

Nozzle Test Fixture can be permanently mounted to bench or table top with 3/8" bolts through holes in the Base Plate, or it may be used as a portable tool by fastening it to bench or table with C-clamps or similar fasteners.

INSTALLING SEAT BLOCKS

Series 53, 71 and 110 injectors, both offset and standard body, are positioned in the Test Fixture by means of Seat Blocks. Seat Block (2) is used when testing Series 53 and 71 injectors; Seat Block (3) is used with Series 110 injectors.

The photographs and drawings (Figs. 1 through 4) illustrate the position of the Seat Block on the frame of the Test Fixture. The Seat Block must be located in the proper holes so the filter caps of the injector will align and seal properly with the Sockets (4) when the injector is installed in the Test Fixture. Slots in the Seat Blocks receive the injector dowel pin and guide the injector into the Test Fixture.

With the standard body 110 injector pull out the Shift Knob (5), away from the Test Fixture, to change the spacing between the Sockets (4) to accommodate the filter caps. All other injectors are tested with the Shift Knob pushed in toward the Test Fixture Frame.

When the injector is properly positioned in the Test Fixture the leaf spring on the Seat Block will automatically position the injector fuel rack in the full fuel position.

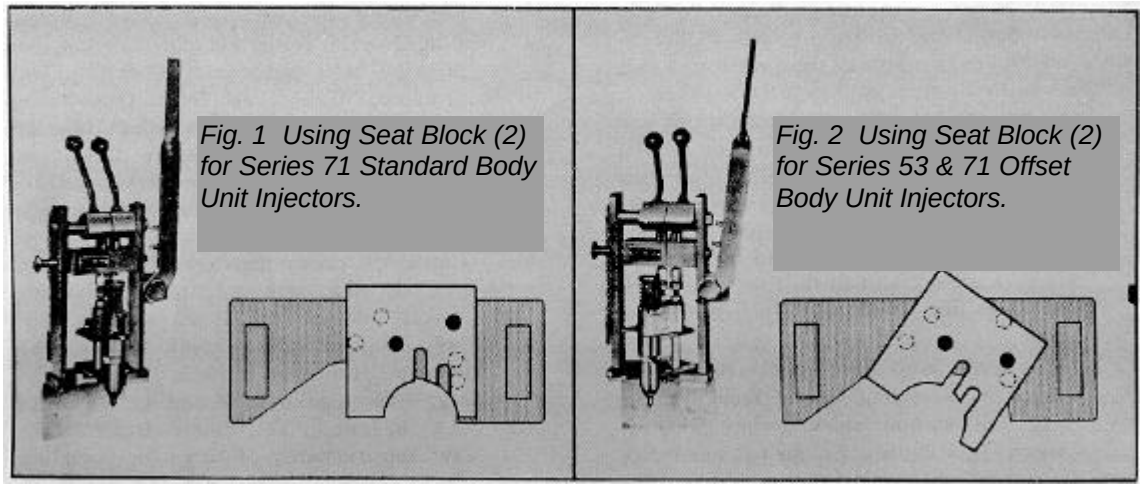

Fig. 1 Using Seat Block (2) for Series 71 Standard Body Unit Injectors.

Fig. 2 Using Seat Block (2) for Series 53 & 71 Offset Body Unit Injectors.