

## **DIRECTORATE GENERAL BORDER ROADS**

### **REPAIR INSTRUCTION**

#### **NO. 9**

### **REPLACEMENT OF INJECTORS**

#### **GENERAL**

Best regards, High compression ratio and high Cyl temperature reached in diesel engine may result in gas blow-by and overheating of the nozzle and subsequently nozzle seizure if enough care is not taken while the injectors are replaced. Incorrect fitment of injectors will also have an adverse effect on fuel spray resulting in an incomplete combustion and reduced power. It is therefore, essential that more than ordinary care is taken when installing new injectors.

#### **VEHICLES AND EQPT AFFECTED**

2. All vehicles and equipments fitted with Diesel engines.

#### **SUMMARY**

3. This instruction lays down the precautions, which must be observed while replacing injectors and is issued for the guidance of Field Workshops.

#### **PRECAUTIONS**

4. (a) After removing the old injector ensure that the injector mounting hole in the cylinder head or the injector's sleeve are free from swarf and carbon.
- (b) While withdrawing the old injector, the old copper seating washer should be removed and discarded, if the old washer is not discarded and an additional washer is fitted, the nozzle will not protrude into the combustion chamber and the fuel spray will be not correctly directed in the combustion chamber thus resulting an incomplete combustion and consequently reduced power.
- (c) While re-fitting the injector only the correct type of washers should be used. This will avoid the possibility of gas blow –by and overheating of the nozzle due to poor metal contact. Seating washers already used once should never be used again.

- (d) The securing nuts of the injectors should be tightened with hand initially so that the injector is pulled down squarely on its seat and only then it should be tightened with a spanner to the specified torque i.e. (7 to 10 lbs ft). If the injector is not secured properly the nozzle body will be distorted, causing a sticking nozzle valve and rapid deterioration of the nozzle.
- (e) While connecting the high pressure of fuel pipes to the injectors it should be ensured that each joint is perfect pipe should be offered simultaneously to both injection pump and injector to ensure the pipe fits squarely at both ends.