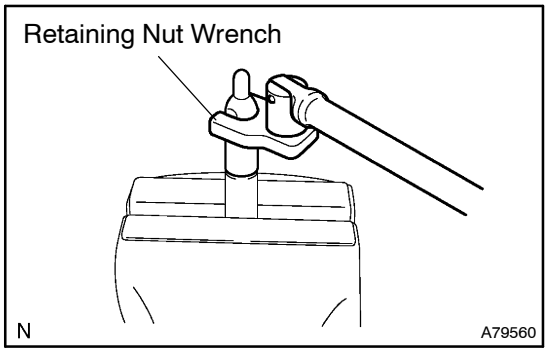
110O0–01

OVERHAUL



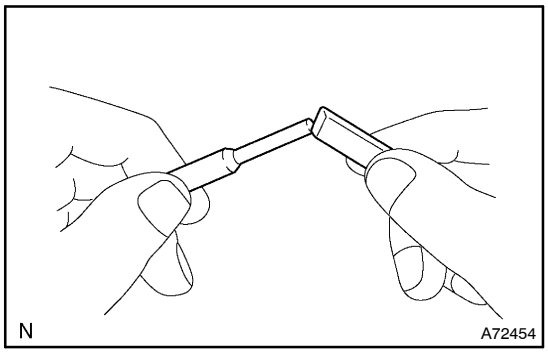
1. REMOVE NOZZLE ASSY

(a) Using a retaining nut wrench, unscrew the retaining nut. Part No. 95092–10500 (DENSO made)

NOTICE:

When disassembling the nozzle, be careful not to drop the inner parts.

(b) Remove the pressure spring, adjusting shim, pressure pin, distance piece and the nozzle assy.



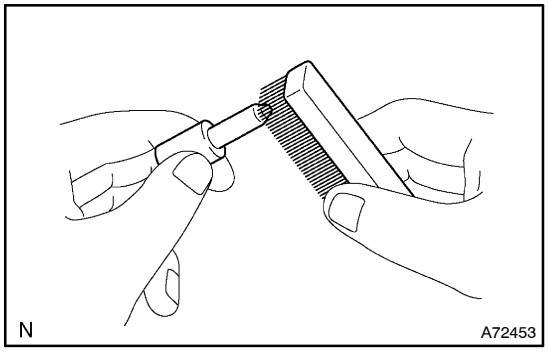
2. CLEAN NOZZLE ASSY

(a) Using a wooden stick and brass brush, clean the nozzle. Wash them in clean diesel fuel before cleaning.

NOTICE:

Do not touch the nozzle mating surfaces with your fingers.

(b) Using a wooden stick, remove the carbon adhering to the nozzle needle tip.

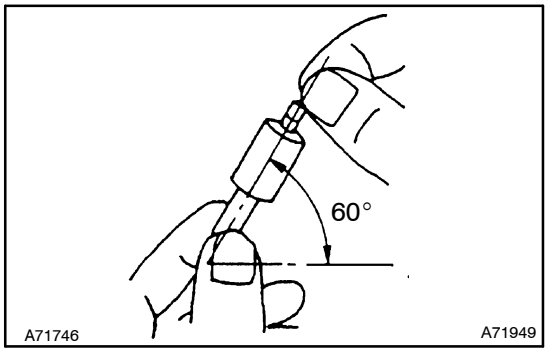


(c) Using a brass brush, remove the carbon from the exterior of the nozzle body (except lapped surface).

(d) Check the nozzle body for burns or corrosion.

(e) Check the nozzle needle tip for damage or corrosion.

If any of these damages are found, replace the nozzle assy.



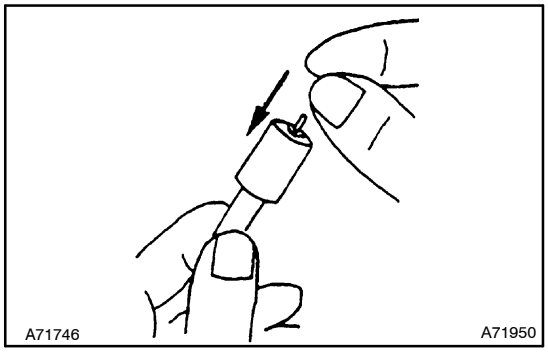
3. INSPECT NOZZLE ASSY

(a) Wash the nozzle in clean diesel fuel.

NOTICE:

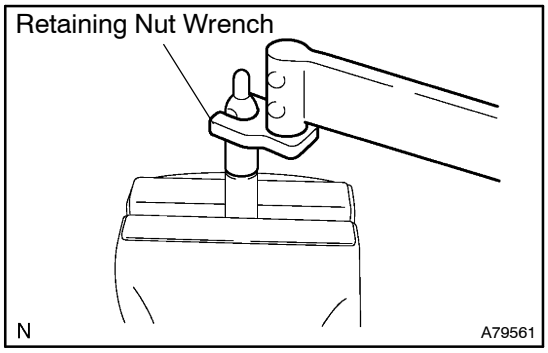
Do not touch the nozzle mating surfaces with your fingers.

(b) Tilt the nozzle body about 60° and pull the needle out about one–third of its length.



(c) Check that the needle falls into the body vent smoothly by its own weight when released.
(d) Repeat this test, rotating the needle slightly every time.

If the needle does not fall smoothly, replace the nozzle assy.

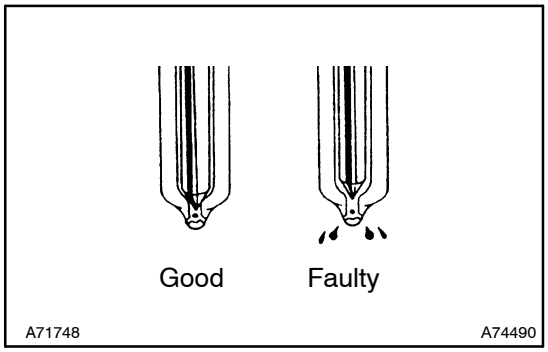


4. INSTALL NOZZLE ASSY

(a) Assemble the nozzle holder body, adjusting shim, pressure spring, pressure pin, distance piece, the nozzle assy and nozzle holder retaining nut, and tighten the nozzle holder body nut with your finger.
(b) Using a retaining nut wrench, tighten the retaining nut.
Part No. 95092–10500 (DENSO made)
Torque: 68.5 N·m (700 kgf·cm, 51 ft·lbf)

HINT:

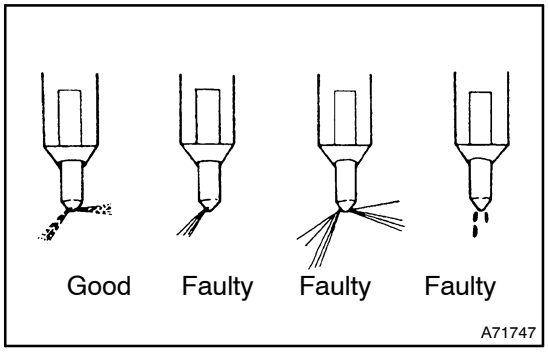
Use a torque wrench with a fulcrum length of 30 cm (11.81 in.).



5. INSPECT NOZZLE HOLDER AND NOZZLE SET

(a) Check for leaks.
(1) While maintaining pressure at about 981 – 1,961 kPa (10 – 20 kgf/cm^2, 142 – 284 psi) below opening pressure (adjust it by the tester handle), check that there is no dripping from the injection hole or around the retaining nut for 10 seconds.

If there is dripping within 10 seconds, replace or clean and overhaul the nozzle holder and nozzle set.



(b) Check the spray pattern.
(1) The injection nozzle should shudder at a certain pumping speed between 15 – 60 times (old nozzle) or 30 – 60 times (new nozzle) per minute.
(2) Check the spray pattern while shuddering.

If the spray pattern is not correct during, replace or clean the nozzle.