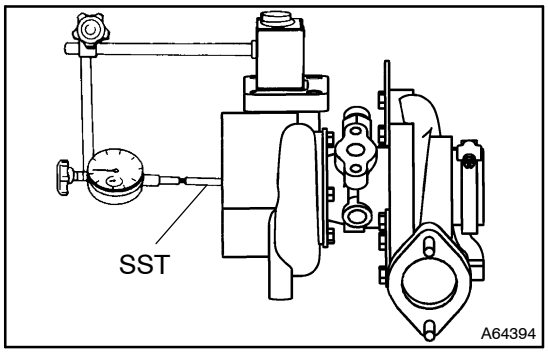
INSPECTION

1. INSPECT RADIAL BEARING CLEARANCE

(a) Remove the 3 bolts of the actuator and hose.
(b) Remove the retainer and measured it.
(c) Attatch a turbocharger gauge set to the unit so that the dial indicator plunger could extend through the oil drain port and contacts the shaft of the turbine wheel assembly.
(d) Using SST and a dial indicator, check the turbine rotor for radial play.
SST 09992–00600
Standard play: 0.05 – 0.13 mm (0.0020 – 0.0051 in.)
Maximum play: 0.13 mm (0.0051 in.)

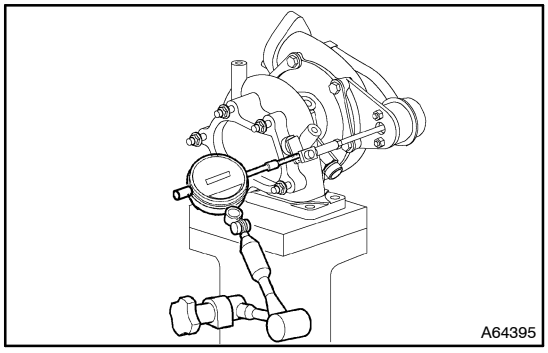
If the radial play is greater than the maximum, the turbocharger is worn or damaged internally and must be overhauled.



2. INSPECT AXIAL BEARING CLEARANCE

(a) Using SST (end play gauge) and a dial indicator, check the turbine rotor (exhaust side) for axial play.
SST 09992–00600
Standard play: 0.01 – 0.10 mm (0.0004 – 0.0039 in.)
Maximum play: 0.10 mm (0.0039 in.)

If the axial play is greater than the maximum, the turbocharger is worn or damaged internally and must be overhauled.



3. INSPECT WASTE GATE PERFORMANCE

(a) Remove the waste gate sensing hose.
(b) Attach a dial gauge set to the turbocharger so that the dial gauge resets on the end of the actuator rod in the plane of the rod, as applicable.
(c) Set the dial indicator to 0.
(d) While gently tapping the turbine housing with a soft mallet, use SST to apply air pressure so that the dial gauge pointer shows the following value.
SST 09992–00242
Rod movement: 0.38 mm (0.015 in.)
(e) Make sure that air pressure is within the specified value.
Air pressure:
148 – 153 kPa (1.5 – 1.6 kgf/cm^2, 21 – 23 psi)
(f) Release the air pressure at the sensing port. Note that the dial gauge pointer returns exactly to 0.
(g) Repeat steps (d) through (f) several times to make sure that the air pressure has been accurately measured.

If the air pressure is not within the specified value, the replaced turbine housing assembly or actuator assembly.

NOTICE:
Operation of the engine with the waste gate calibrated to some value other than that specified can result in reduced performance or severe engine damage.

(h) Reinstall the waste gate sensing hose.