REPAIR INSTRUCTION FOR ENGINE REPAIR MANUAL

010VR–01

PRECAUTION

1. TO PREVENT FROM ENTERING FOREIGN SUBSTANCES

(a) When foreign substances such as dust, grain of sand or metallic dust enter inside of the engine, it may causes malfunction of the engine.

(1) Precaution before disassembly.

- Remove adequately all sand and mud adhere outside of the engine.

(2) Precaution at reassembly.

- Protect disassembled parts from dust by using vinyl sheet to cover.

2. TO PREVENT SCRATCHES ON THE PARTS

(a) Scratches on the contact and revolving surfaces may cause oil leaks and seizures.

(1) Precautions at disassembly and reassembly.

- When disassembling the contact surface of the parts, use a plastic hammer striking lightly (Do not pry out by a screwdriver).
- When fixing the parts to the vise, do not directly catch it in the vise. Fix the parts through aluminum bar.

3. TO CLEAN AND WASH THE PARTS

(a) Each parts must be thoroughly cleaned, washed, and dried by air, and apply specified oil before reassembly.

(1) Cleaning and washing by alkaline solvent is prohibited:

- Parts made of aluminum and rubber (ex. cylinder head cover gasket, etc.).

(2) Cleaning and washing by flushing oil (ex. kerosene, white gasoline, etc.) is prohibited:

- Parts made of rubber (ex. cylinder head cover gasket, etc.).

4. POSITION AND DIRECTION OF EACH PARTS

(a) Each parts must be reassembled as the same position and direction as it disassembled.

(1) Precautions at disassembly and reassembly.

- Follow the directions when the manual designates to mark the matchmark and/or direction mark.
- Disassembled parts must be stored so that they return to original positions when reassembling.
- Follow the directions when the manual instructs the position and direction.

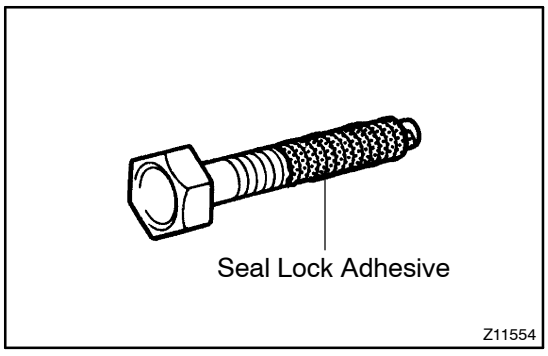
5. INSTALL ENGINE ASSEMBLY TO OVERHAUL STAND WHEN OVERHAUL THE ENGINE

6. PUT THE DISASSEMBLED PARTS IN ORDER AS THEY DISASSEMBLED

7. APPLY ENGINE OIL TO THE SLIDING AND ROTATING SURFACES

8. NON–REUSABLE PARTS SUCH AS GASKET AND SEAL NEEDS TO BE CHANGED TO THE NEW PARTS

9. BASIC REPAIR HINT



(a) Precoated Parts:

(1) Precoated parts are bolts and nuts that are coated with a seal lock adhesive at the factory.

(2) If a precoated part is retightened, loosened or moves in anyway, it must be recoated with the specified adhesive.

(3) When reusing precoated parts, clean off the old adhesive and dry the parts with compressed air. Then apply new seal lock adhesive appropriate to the bolts and nuts.

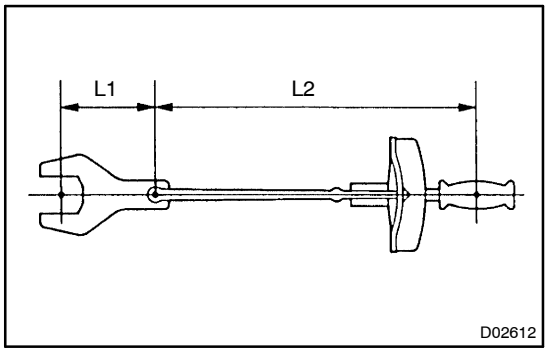
NOTICE:

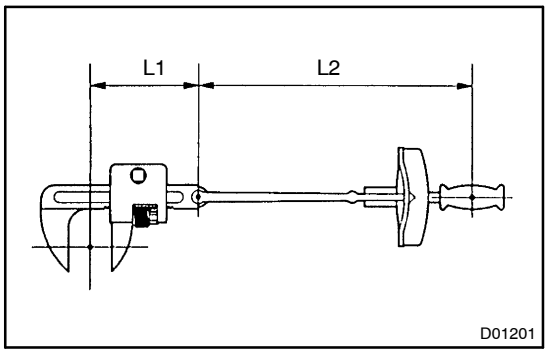
Perform the torque with the lower limit value of the torque tolerance.

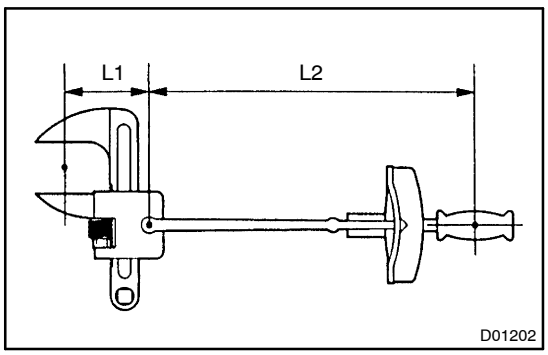
(4) Some seal lock agents harden slowly. You may have to wait for the seal lock agent to harden.

(b) Gaskets:
When necessary, use a sealer on gaskets to prevent leaks.

(c) Bolts, Nuts and Screws:
Carefully follow all specifications for bolt tightening torques. Always use a torque wrench.







(d) Torque When Using Extension Tool with Torque Wrench:

(1) If SST or an extension tool is combined with the torque wrench to extend its length, do not tighten the torque wrench to the specified torque values in this manual. The actual torque will be excessive.

(2) Use the formula below to calculate special torque values for situations where SST or extension tool is combined with the torque wrench.

(3) Formula T' = T x L2/(L1 + L2)

T'	Reading of torque wrench {N·m (kgf·cm, ft·lbf)}
T	Torque {N·m (kgf·cm, ft·lbf)}
L1	Length of SST or extension tool (cm)
L2	Length of torque wrench (cm)

10. REMOVAL AND INSTALLATION OF FUEL CONTROL PARTS

(a) Place for Removing and Installing Fuel System Parts:

(1) Work in a place with good air ventilation that does not have welders, grinders, drills, electric motors, stoves, or any other ignition sources.

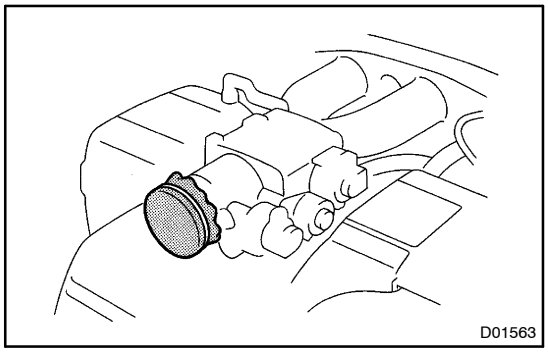
(2) Never work in a pit or near a pit as vaporized fuel will collect in those places.

(b) Removing and Installing of Fuel System Parts:

(1) Prepare a fire extinguisher before starting operation.

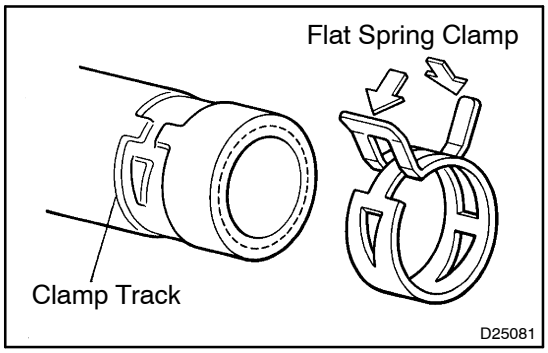
(2) To prevent static electricity, install a ground on the fuel changer, vehicle and fuel tank, and do not spray the area with water. The work surface will become slippery. Do not clean up spills with water as this will spread fuel and create a fire hazard.

(3) Avoid using electric motors, working lights and other electric equipment that can cause sparks or high temperatures.
(4) Avoid using iron hammers as they may create sparks.
(5) Dispose of the fuel–contaminated shop rags separately using a fire resistant container.


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11. REMOVAL AND INSTALLATION OF ENGINE INTAKE PARTS

(a) If any metal particles enters the inlet pass, this may damage the engine.
(b) When removing and installing the inlet system parts, cover the openings of the removed parts and engine openings. Use clean shop rags, gummed tape, or other suitable materials.
(c) When installing the inlet system parts, check that no metal particles have entered the engine or the installed part.



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12. HANDLING OF HOSE CLAMPS

(a) Before removing the hose, check the clamp position so that it can be reinstalled in the same position.
(b) Replace deformed or dented clamps with a new one.
(c) When reusing a hose, attach the clamp on the clamp track portion of the hose.
(d) For a spring type clamp, you may want to spread the tabs slightly after installation by pushing in the direction of the arrow marks as shown in the illustration.