VALVE CLEARANCE (W04D–J)

14175–01

ADJUSTMENT

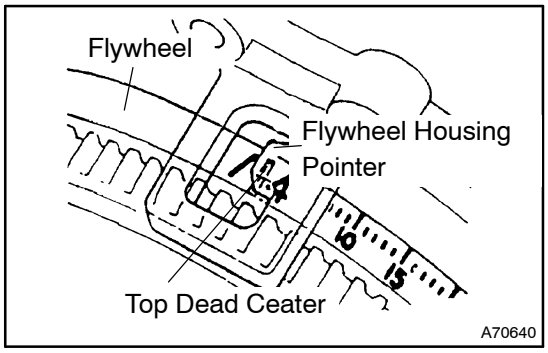
HINT:

Inspect and adjust the valve clearance when the engine is cold.

1. REMOVE CYLINDER HEAD COVER

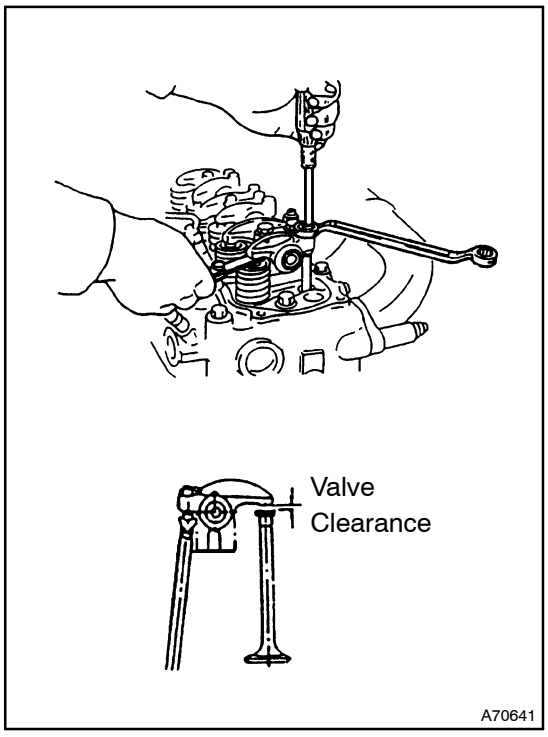
NOTICE:

Clean all dust from around the cylinder head cover before removing it prevent foreign particles from getting in.



2. ADJUST VALVE CLEARANCE

(a) Set the No. 1 piston to top dead center on compression stroke.



(b) With the No. 1 piston positioned at top dead center on compression stroke, adjust the No. 1 valve clearance using a thickness gauge.

(c) The thickness gauge should move with a very slight pull.

(d) Adjust the clearance with the adjusting screw of the rockerarm.

Tighten the lock nut.

Torque: 44.1 N·m (450 kgf·cm, 32 ft·lbf)

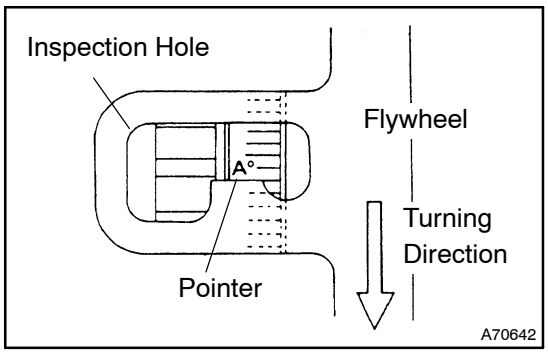
Valve clearance:

Intake	0.35 mm (0.012 in.)
Exhaust	0.55 mm (0.022 in.)

(e) Adjust the other valves.

Turn the crankshaft counterclockwise 180° viewed from flywheel side. Adjust the valve clearance for each cylinder in the firing order.

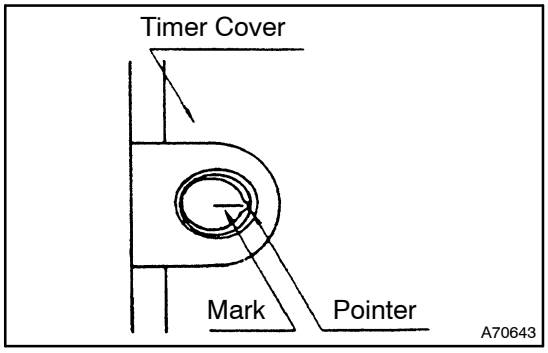
Firing order: 1 – 3 – 4 – 2 (A number of a cylinder is to be counted in order from the timing gear side)



3. INSPECT INJECTION TIMING

(a) Turn the crankshaft counterclockwise viewed from the flywheel side to align the injection timing mark on the flywheel or crankshaft pulley damper at A° before top dead center for No. 1 cylinder on compression stroke with the pointer.

Injection timing A°: 12°

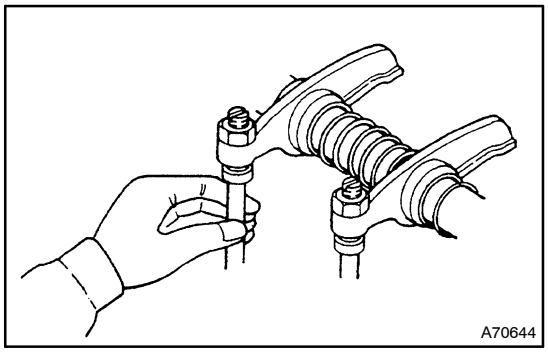


(b) Check that the injection timing mark (the scribe line, not the notch) on the timer housing is aligned with the pointer (the scribe line) timing plate on the pump housing.

If not, adjust the injection timing.

NOTICE:

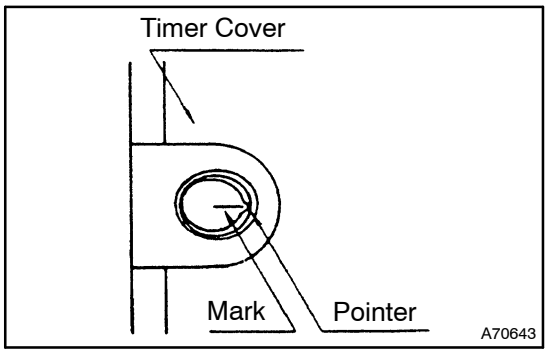
When adjusting the injection timing, refer to "11–190" in section 14–172 for details.



4. METHOD FOR DETERMINING IF NO.1 OR NO.4 PISTON IS AT TOP DEAD CENTER ON COMPRESSION STROKE

NOTICE:

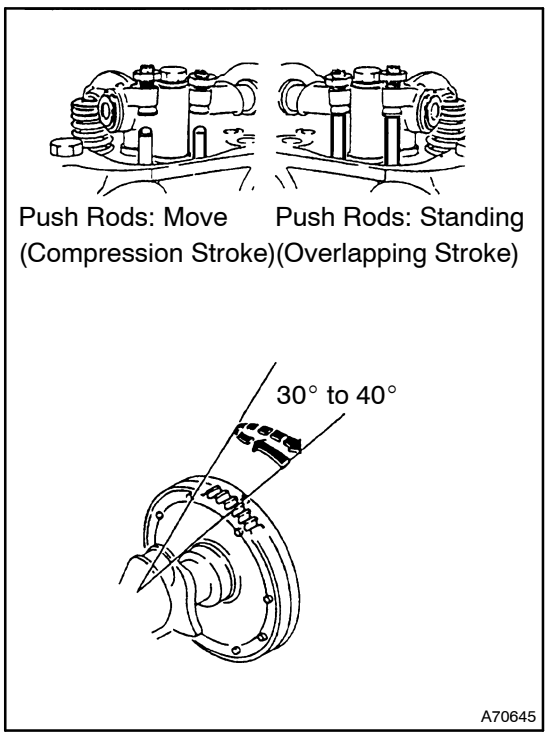
- **Turning the crankshaft, align the mark "1–4" on the flywheel with the pointer on the flywheel housing.**
- **In this position either the No. 1 or No. 4 piston is at the top dead center on compression stroke.**



(a) If both No. 1 intake and exhaust rocker arms can be moved easily by hand, the No. 1 piston is at top dead center on compression stroke.

(b) If the injection timing mark is nearly aligned with the pointer, the No. 1 piston is at top dead center on compression stroke.

If not, turn the crankshaft 1 complete revolution and align marks as above.



(c) While locking at the push rods of No. 1 and No. 4 pistons, turn the crankshaft counterclockwise and clockwise about 30° to 40° (see left figure).

If the piston whose exhaust and inlet push rods do not move during the interval, it is at the top dead center on compression stroke.

If the piston whose push rods have moved, it is at the compression of the exhaust and begun of the intake stroke (overlapping stroke).

5. INSTALL CYLINDER HEAD COVER