



## ADJUSTMENT

Although it is sometimes possible to reuse an old cylinder head cover gasket, in most cases it makes more sense to purchase a new one before beginning the procedure. Some vehicles may require the use of silicone sealant either with or without a new cover gasket. For more details, please refer to the cylinder head cover procedures in Section 3 of this manual and refer to the gasket manufacturer's instructions.

### Z24i Engine

**NOTE: For the intake valves: 1-4-5-8 valve clearance is 0.012 in. (0.30mm). For the exhaust valves: 2-3-6-7 valve clearance is 0.012 in. (0.30mm). The pivot lock-nut torque specification is 12-16 ft. lbs. (16-22 Nm).**

1. The valves must be adjusted with the engine warm, so start the truck and run the engine until the needle on the temperature gauge reaches the middle setting. After the engine is warm, shut it off.
2. Note the location of any wires and hoses which may interfere with cylinder head cover removal, disconnect them and move them to one side. Remove the bolts holding the cylinder head cover in place and remove the cover. Remember, the engine will be hot, so be careful!

Fig. 1: Check the valve clearance with a flat feeler gauge — Z24i engine

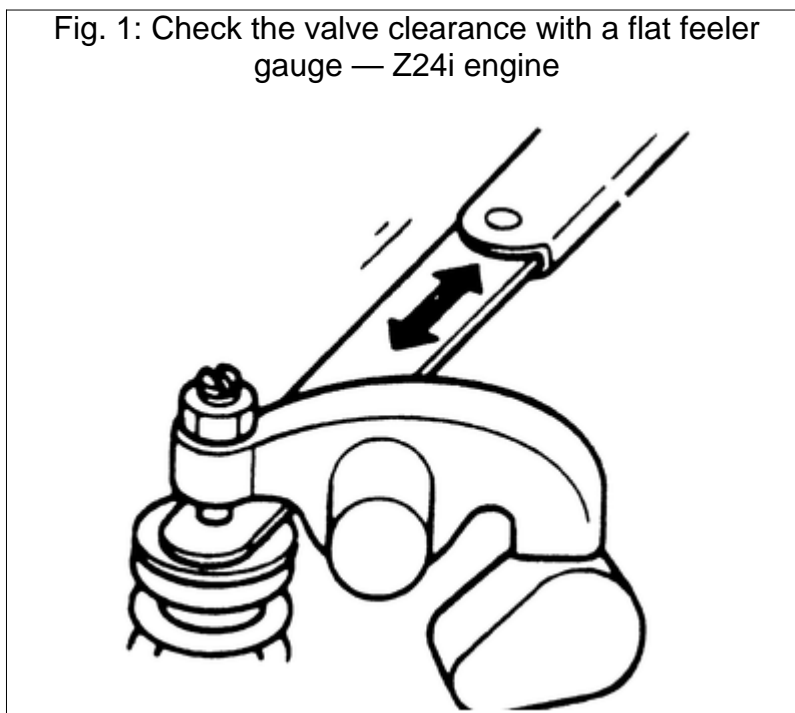
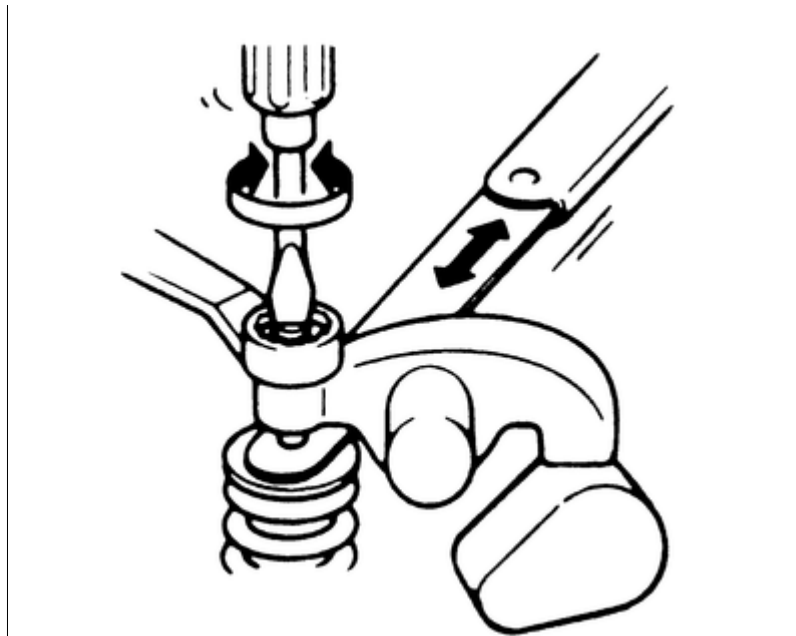


Fig. 2: Loosen the lock-nut and turn the adjusting screw to adjust the valve clearance — Z24i engine



3. Rotate the crankshaft until the timing marks indicate that the No. 1 piston is at TDC of the compression stroke. If you're not sure of which stroke you're on, remove the No. 1 spark plug and hold your thumb over the hole. Pressure will be felt as the piston starts up on the compression stroke.
4. Refer to the accompanying illustration (upper part), then check valves (1), (2), (4) and (6) using a flat bladed feeler gauge. The feeler gauge should pass between the valve stem end and the rocker arm screw with a very slight drag. Insert the feeler gauge straight, not at an angle.
5. If the clearance is not within the specified value, loosen the rocker arm lock nut and turn the rocker arm screw to obtain the proper clearance. After correct clearance is obtained, tighten the lock-nut.
6. Rotate the crankshaft until the timing marks indicate that the No. 4 piston is at TDC of the compression stroke. If you're not sure of which stroke you're on, remove the No. 4 spark plug and hold your thumb over the hole. Pressure will be felt as the piston starts up on the compression stroke.
7. See the illustration (lower part), then check valves (3), (5), (7) and (8). Check and adjust valve clearance as necessary.
8. Install the cylinder head cover gasket, the cover itself and any wires or hoses which were removed. Check the engine oil level.

### KA24E, VG30i and VG30E Engines

These models utilize hydraulic valve lifters. Periodic adjustment is neither necessary or possible. There is however a bleed down procedure that is necessary when the valve train has been disassembled.

### HYDRAULIC LIFTER BLEED DOWN

1. Remove the cylinder head cover.
2. Check the lifters for proper operation by pushing hard on each lifter with fingertip pressure.
3. If the valve lifter moves more than 0.04 in. (1mm), air may be inside it. Make sure the rocker arm is not on the cam lobe when making this check.
4. Install the cylinder head cover.
5. If there was air in the lifters, bleed the air by running the engine at 1000 rpm for 10 minutes.

Fig. 3: With the No. 1 piston at TDC, adjust the top set of valves FIRST; with the No. 4 piston at TDC, adjust the bottom set of valves SECOND — Z24i engine

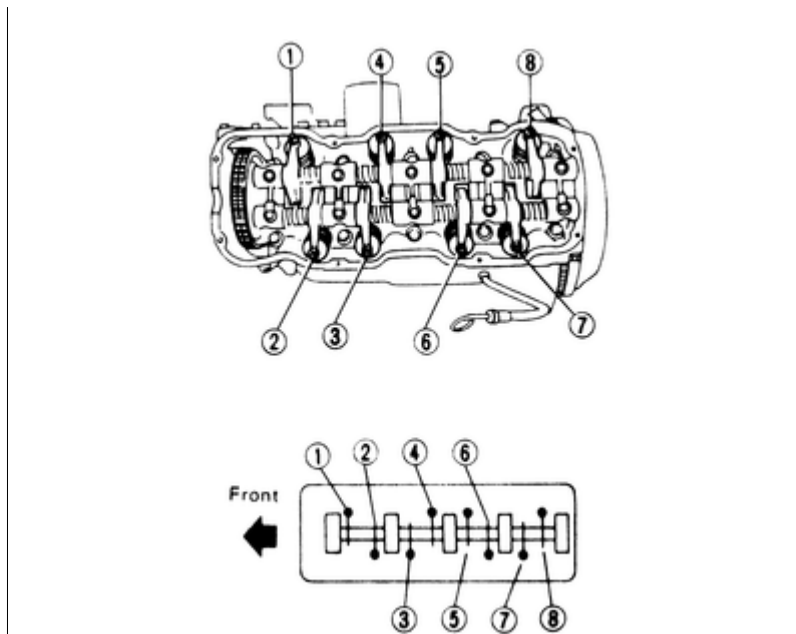


Fig. 4: Cross-sectional view of an installed hydraulic valve lifter — 4 cylinder engine

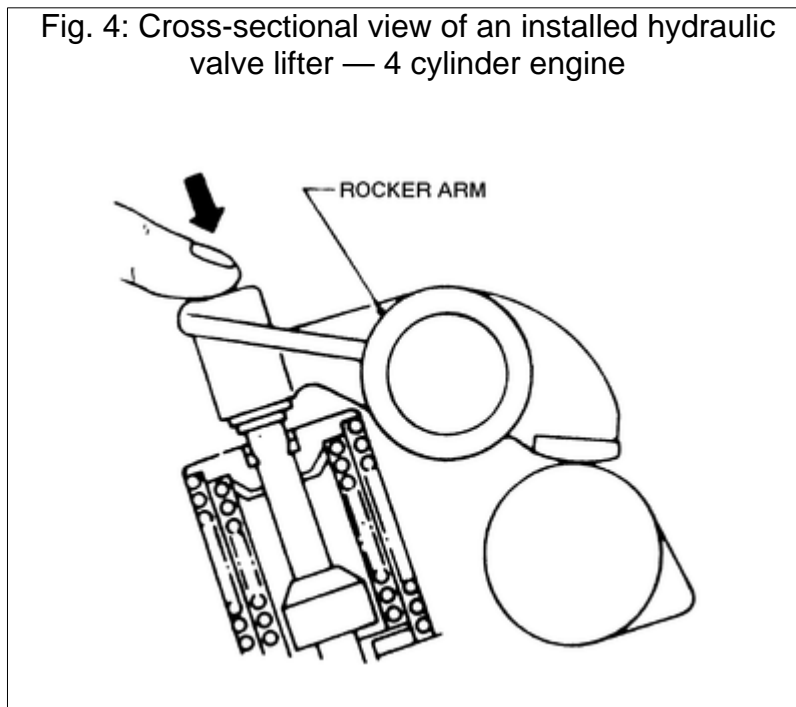


Fig. 5: Cross-sectional view of an installed hydraulic valve lifter — 6 cylinder engine

