

1D



Valve Clearance Inspection and Adjustment

Refer to [Cylinder Head Cover Removal and Installation](#) and [Spark Plug Removal and Installation](#).

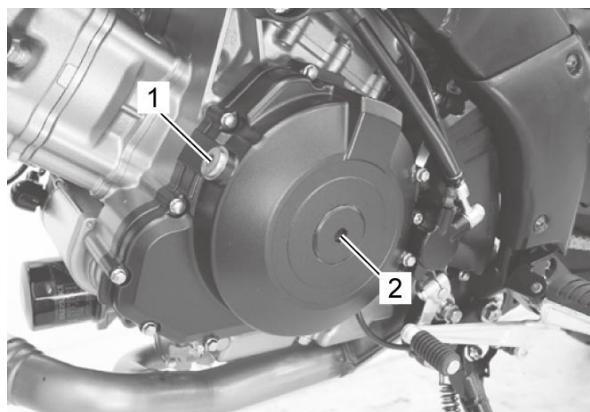
Inspection

Valve clearance adjustment must be checked and adjusted, a) at the time of periodic inspection, b) when the valve mechanism is serviced, and c) when the camshafts are removed for servicing.

NOTE:

The clearance specification is for COLD state.

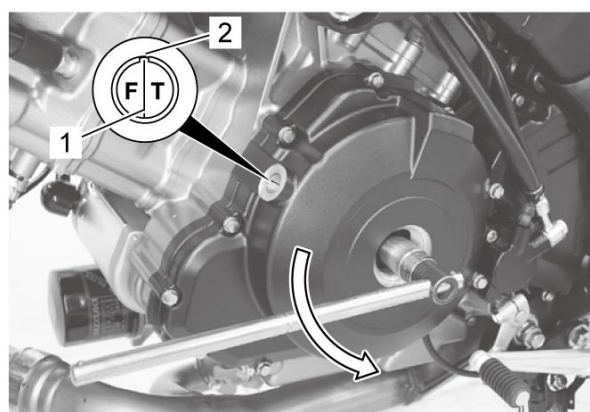
- 1) Remove the valve timing inspection plug (1) and generator cover plug (2).

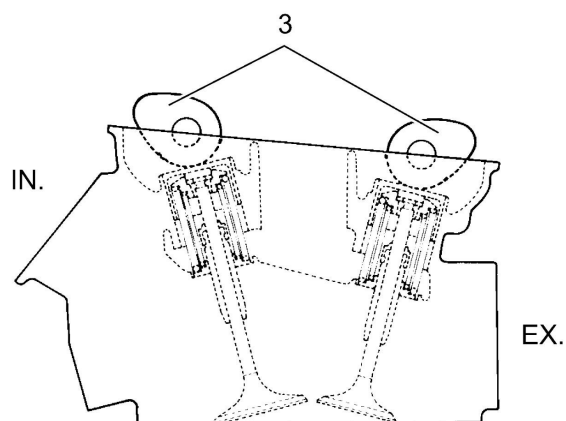


- 2) Turn the crankshaft to set the front cylinder at TDC of compression stroke. (Align the "F | T" line (1) on the generator rotor to the index mark (2) of valve timing inspection hole and also bring the camshafts to the position as shown.)

NOTE:

If the camshafts are not in position (3), turn the crankshaft 360° (1 turns) and confirm the position again.





- 3)** To inspect the front cylinder valve clearance, use a thickness gauge between the tappet and the cam. If the clearance is out of specification, adjust it into the specified range.

Special Tool

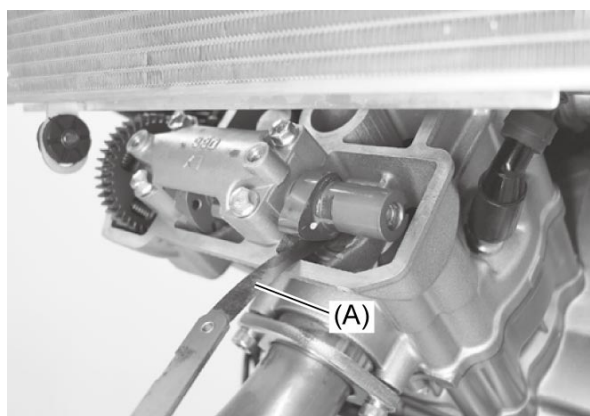
(A): 09900-20803

Valve clearance (cold) (IN.)

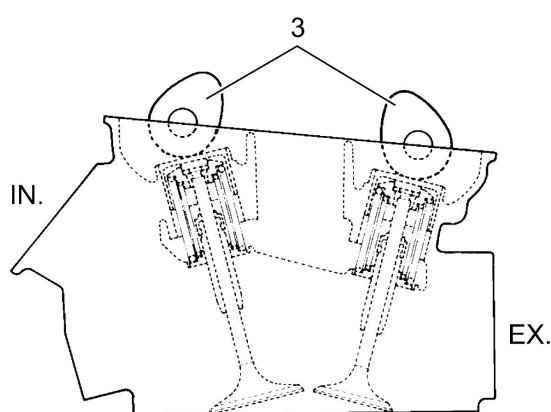
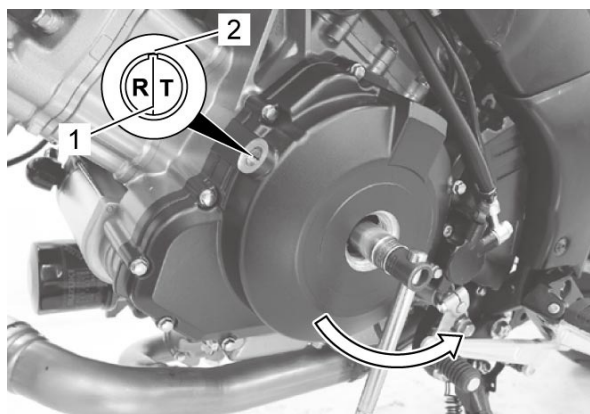
Standard: 0.10 – 0.20 mm (0.004 – 0.008 in)

Valve clearance (cold) (EX.)

Standard: 0.20 – 0.30 mm (0.008 – 0.012 in)



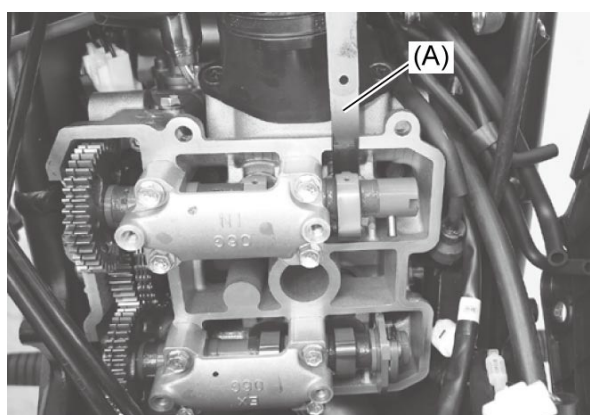
- 4)** Turn the crankshaft 270 degrees (3/4 turn) to set the rear cylinder at TDC of compression stroke. (Align the "R | T" line (1) on the generator rotor to the index mark (2) of valve timing inspection hole and also bring the camshafts to the position (3) as shown.)



- 5)** Inspect the rear cylinder valve clearance as the same manner of front cylinder and adjust the clearance if necessary.


Special Tool

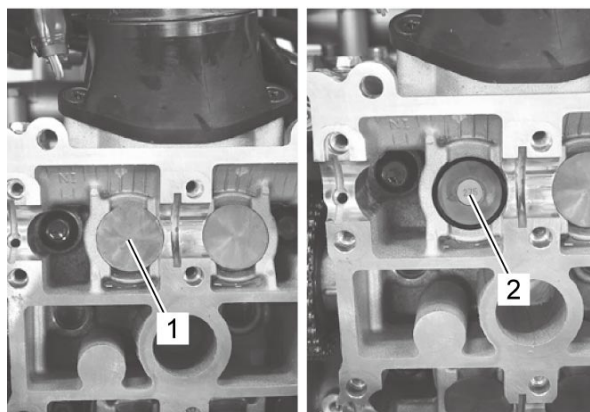
(A): 09900-20803



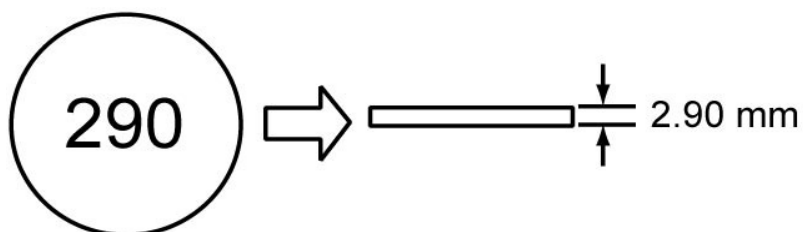
Adjustment

The clearance is adjusted by replacing the existing tappet shim with a thicker or thinner shim.

- 1) Remove the intake camshaft or exhaust camshaft. 
- 2) Remove the tappet (1) and shim (2) by fingers or magnetic hand.



- 3) Check the figures printed on the shim. These figures indicate the thickness of the shim, as illustrated.



- 4) Select a replacement shim that will provide a clearance within the specified range. For the purpose of this adjustment, a total of 25 sizes of tappet shim are available ranging from 2.30 to 3.50 mm (0.091 – 0.138 in) in steps of 0.05 mm (0.002 in).

NOTICE:

Both the right and left valve clearances should be as closely as possible.

- 5) Fit the selected shim (1) to the valve stem end, with numbers toward tappet. Be sure to check shim size with micrometer to ensure its size.

NOTE:

- Apply engine oil to tappet shim top and bottom faces.
- When seating the tappet shim, be sure the figure printed surface faces the tappet.



TAPPET SHIM SELECTION TABLE [INTAKE]
TAPPET SHIM NO. (12892-41C00-XXX)

HOW TO USE THIS CHART:

- I. Measure valve clearance. "ENGINE IS COLD"
- II. Measure present shim size.
- III. Match clearance in vertical column with present shim size in horizontal column.

EXAMPLE

Valve clearance is	0.23 mm
Present shim size	2.70 mm
Shim size to be used	2.80 mm



(EXHAUST SIDE)

TAPPET SHIM SET (12800-41810)

HOW TO USE THIS CHART:

- I. Measure valve clearance. "ENGINE IS COLD"
- II. Measure present shim size.
- III. Match clearance in vertical column with present shim size in horizontal column.

EXAMPLE

Valve clearance is	0.38 mm
Present shim size	2.90 mm
Shim size to be used	3.05 mm

