6. Clean:
   • Spark plug
     (with a spark plug cleaner or wire brush)
7. Measure:
   • Spark plug gap "a"
     (with a wire thickness gauge)
     Out of specification → Regap.

Spark plug gap
   0.8–0.9 mm (0.031–0.035 in)
---

8. Install:
   • Spark plug

Spark plug
   13 Nm (1.3 m·kgf, 9.4 ft·lbf)

TIP
Before installing the spark plug, clean the spark plug and gasket surface.

9. Install:
   • Ignition coil

Ignition coil bolt
   10 Nm (1.0 m·kgf, 7.2 ft·lbf)
   LOCTITE®

10.Install:
   • Air filter case
     Refer to "GENERAL CHASSIS" on page 4-1.

EAS20490
ADJUSTING THE VALVE CLEARANCE
The following procedure applies to all of the valves.
TIP
• Valve clearance adjustment should be made on a cold engine, at room temperature.
• When the valve clearance is to be measured or adjusted, the piston must be at top dead center (TDC) on the compression stroke.

1. Remove:
   • Air filter case
     Refer to "GENERAL CHASSIS" on page 4-1.

• Throttle bodies
  Refer to "THROTTLE BODIES" on page 7-5.
• Clutch cover
  Refer to "CLUTCH" on page 5-52.
• Cylinder head cover
  Refer to "CAMSHAFTS" on page 5-11.
2. Measure:
   • Valve clearance
     Out of specification → Adjust.

Valve clearance (cold)
   Intake
     0.10–0.16 mm (0.0039–0.0063 in)
   Exhaust
     0.22–0.28 mm (0.0087–0.0110 in)

TIP
• If the valve clearance is incorrect, record the measured reading.
• Measure the valve clearance in the following sequence.

Valve clearance measuring sequence
   Cylinder #1 → #2

A. Front

▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼
a. Turn the crankshaft clockwise and align the pickup rotor K mark "a" and crankcase mating surface "b".
   (At this time, check that the intake cam lobes "c" and exhaust cam lobes "d" for cylinder #1 are positioned as shown in the illustration. If the cam lobes are not positioned as shown, turn the crankshaft clockwise 360 degrees and recheck the positions of the cam lobes.)
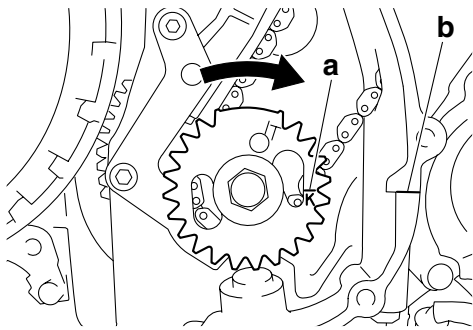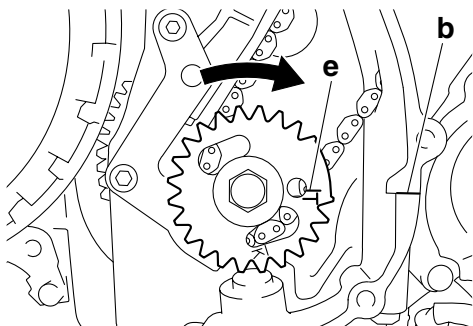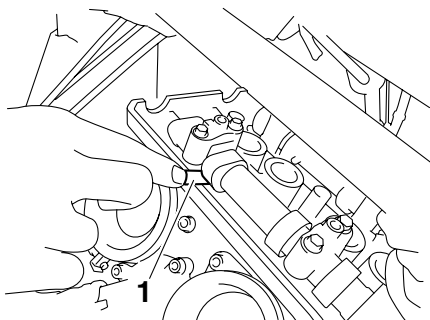
b. Turn the crankshaft 71 degrees in clockwise and align the pickup rotor T mark "e" and crankcase mating surface "b".

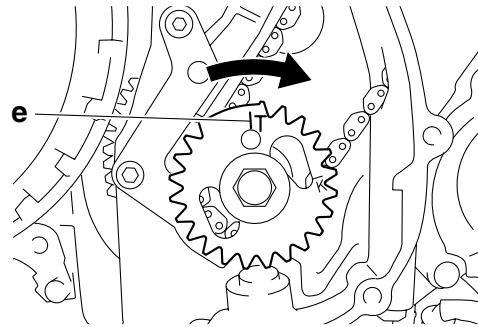c. Measure the valve clearance #1 with a thickness gauge "1".

> **Thickness gauge**
>   **90890-03180**
> **Feeler gauge set**
>   **YU-26900-9**

d. Turn the crankshaft clockwise 270 degrees so that the pickup rotor T mark "e" is pointing up as shown in the illustration.

e. Measure the valve clearance #2 with a thickness gauge.

> **Thickness gauge**
>   **90890-03180**
> **Feeler gauge set**
>   **YU-26900-9**

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3. Remove:
• Camshafts

TIP
• Refer to "CAMSHAFTS" on page 5-11.
• When removing the timing chain and camshafts, fasten the timing chain with a wire to retrieve it if it falls into the crankcase.

4. Adjust:
• Valve clearance

▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼

a. Remove the valve lifter "1" and the valve pad "2" with a valve lapper "3".

> **Valve lapper**
>   **90890-04101**
> **Valve lapping tool**
>   **YM-A8998**

TIP
• Cover the timing chain opening and spark plug holes with a rag to prevent the valve pad from falling into the crankcase.
• Make a note of the position of each valve lifter "1" and valve pad "2" so that they can be installed in the correct place.

3-6
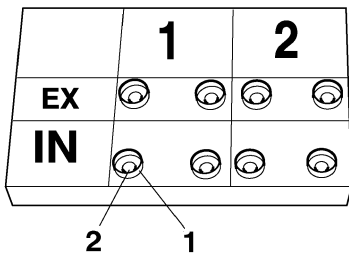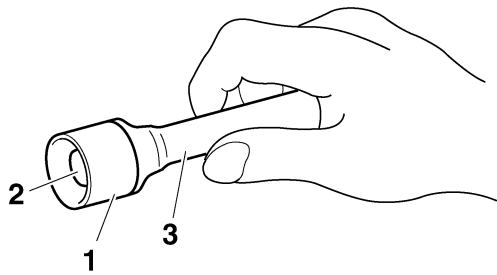
b. Calculate the difference between the specified valve clearance and the measured valve clearance.
Example:
Specified valve clearance = 0.10–0.16 mm (0.0039–0.0063 in)
Measured valve clearance = 0.20 mm (0.0079 in)
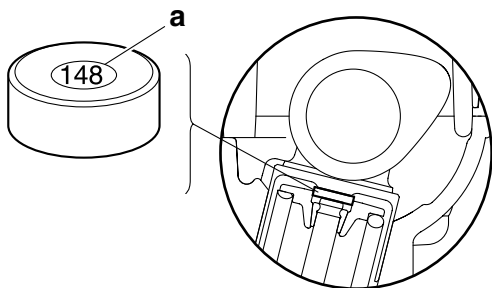0.20 mm (0.0079 in) - 0.16 mm (0.0063 in) = 0.04 mm (0.002 in)

c. Check the thickness of the current valve pad.

TIP

The thickness "a" of each valve pad is marked in hundredths of millimeters on the side that touches the valve lifter.

Example:
If the valve pad is marked "148", the pad thickness is 1.48 mm (0.058 in).

d. Calculate the sum of the values obtained in steps (b) and (c) to determine the required valve pad thickness and the valve pad number.
Example:
1.48 mm (0.058 in) + 0.04 mm (0.002 in) = 1.52 mm (0.060 in)
The valve pad number is 152.

e. Round off the valve pad number according to the following table, and then select the suitable valve pad.

Last digit	Rounded value
0, 1, 2	0
3, 4, 5, 6	5
7, 8, 9	10

TIP

Refer to the following table for the available valve pads.

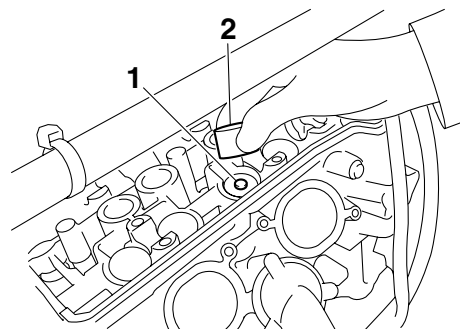| Valve pad range	No. 120–240
Valve pad thickness	1.20–2.40 mm (0.0472–0.0945 in)
Available valve pads	25 thicknesses in 0.05 mm (0.002 in) increments

Example:
Valve pad number = 152
Rounded value = 150
New valve pad number = 150

f. Install the new valve pad "1" and the valve lifter "2".

TIP

• Lubricate the valve pad with molybdenum disulfide oil.
• Lubricate the valve lifter with engine oil.
• The valve lifter must turn smoothly when rotated by hand.
• Install the valve lifter and the valve pad in the correct place.

g. Install the exhaust and intake camshafts, timing chain and camshaft caps.

	Camshaft cap bolt **10 Nm (1.0 m·kgf, 7.2 ft·lbf)**

TIP

• Refer to "CAMSHAFTS" on page 5-11.
• Lubricate the camshaft lobes and camshaft journals with molybdenum disulfide oil.
• First, install the exhaust camshaft.
• Align the camshaft marks with the cylinder head mating surface.
• Turn the crankshaft clockwise several full turns to seat the parts.

h. Measure the valve clearance again.
i. If the valve clearance is still out of specification, repeat all of the valve clearance adjustment steps until the specified clearance is obtained.

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5. Install:
• All removed parts

TIP

For installation, reverse the removal procedure.

EAS20571
SYNCHRONIZING THE THROTTLE BODIES
TIP

Before synchronizing the throttle bodies, check the following items:
• Valve clearance
• Spark plugs
• Air filter element
• Throttle body joints
• Fuel hose
• Exhaust system
• Cylinder head breather hose

Checking the throttle body synchronization
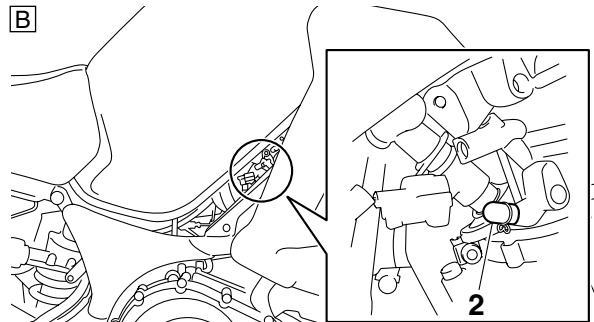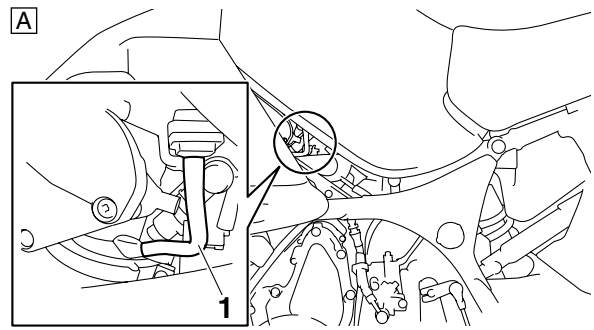1. Stand the vehicle on a level surface.

TIP

Place the vehicle on the centerstand.

2. Disconnect:
• Intake air pressure sensor hose "1"
3. Remove:
• Cap "2"

A. Left side
B. Right side

4. Install:
• Vacuum hose "1" (Parts No.: 5FL-14348-10)
• 3-way joint "2" (Parts No.: 68V-24376-00)
• Intake air pressure sensor hose "3"
• Vacuum gauge hose for #1 "4"
• Vacuum gauge hose for #2 "5"
• Vacuum gauge
• Digital tachometer

	Vacuum gauge **90890-03094** **Vacuummate** **YU-44456**