

GOVERNOR

ADJUSTMENT

- Loosen the governor arm nut on the governor arm.
- Push the governor arm away from the carburetor to open the carburetor throttle valve fully.

GOVERNOR ARM NUT

- Holding the carburetor throttle valve fully open, turn the governor arm shaft clockwise fully, and tighten the governor arm nut to the specified torque.

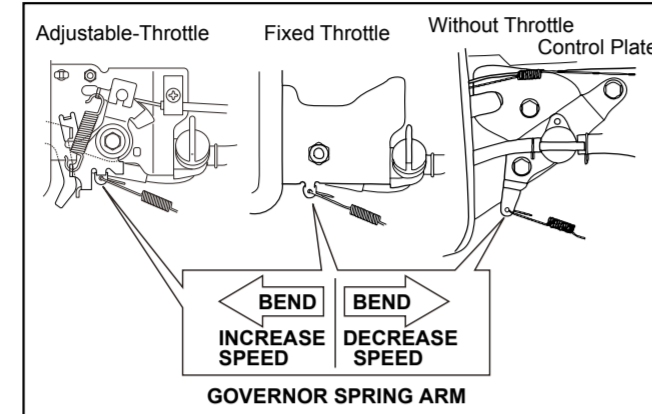
TORQUE: 10 N·m (Adjustable-Throttle Types)

9.8 N·m (Fixed Throttle/ Without Throttle Control Plate Types)

- Check to see whether the governor arm and the carburetor throttle valve arm operate smoothly.
- Start the engine and warm it up to the normal operating temperature. Check the maximum engine speed.

- If adjustment is necessary, bend the governor spring tab on the throttle control plate very slightly.
 - Left increases spring tension and engine speed.
 - Right decreases spring tension and engine speed.

MAXIMUM SPEED ADJUSTMENT

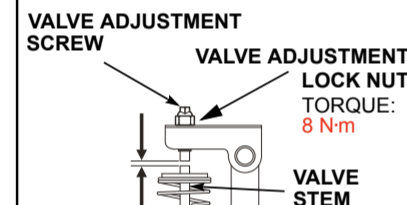
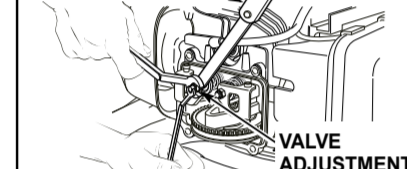


Throttle type	Maximum engine speed
Adjustable-Throttle	2,950 ~ 3,100 rpm
Fixed Throttle(no load)	3,100 ± 150 rpm
Without Throttle Control Plate(no load)	

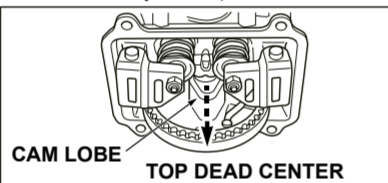
VALVE CLEARANCE

Valve clearance inspection and adjustment must be performed with the engine cold.

FEELER GAUGE



- Remove the spark plug cap from the spark plug.
- Remove the fan cover and fuel tank.
- Remove the four flange bolts from the cylinder head cover.
- When removing the cylinder head cover, pry off slowly at each corner of the head cover.
- Rotate the flywheel until the cam lobe faces directly out, away from the cylinder head as shown. This will set the piston at top dead center of the compression stroke (both valves are fully closed).

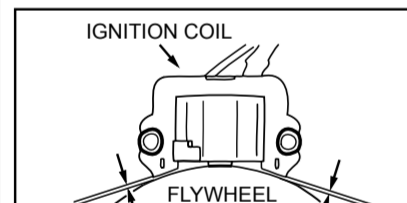


- Insert a feeler gauge between the valve stem and the adjusting screw on the rocker arm.

VALVE CLEARANCE	0.15 ± 0.04 mm (IN)	0.20 ± 0.04 mm (EX)
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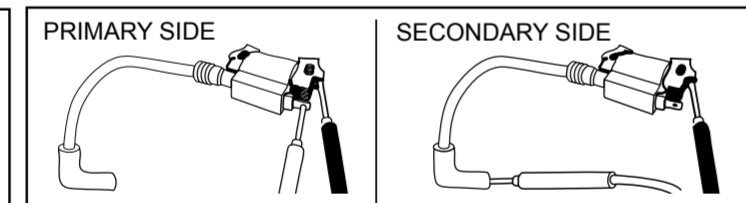
IGNITION COIL

IGNITION COIL AIR GAP



Flywheel type	Clearance
ALUMINUM	0.2 - 0.6 mm
CAST-IRON	0.2 - 0.5 mm

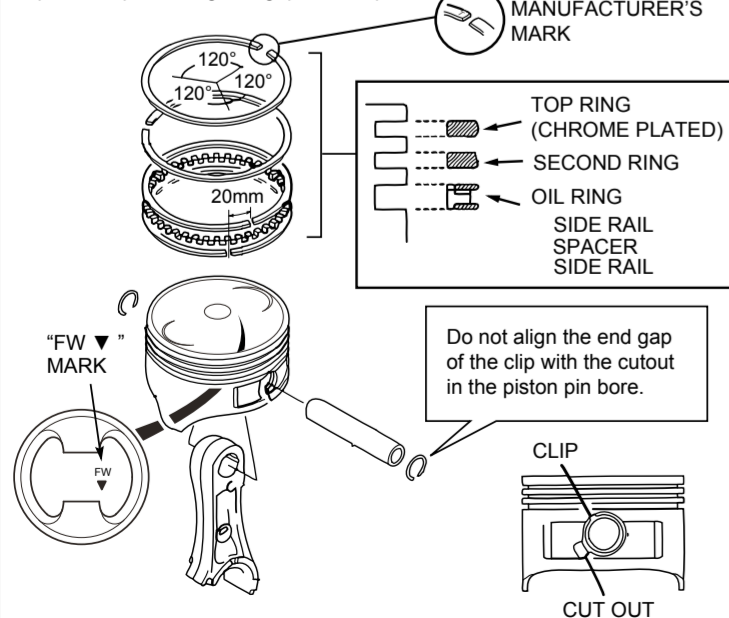
INSPECTION



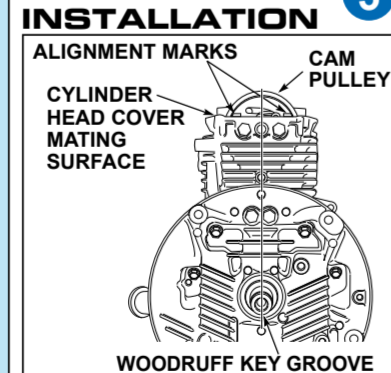
Flywheel type	Primary side resistance value	Flywheel type	Secondary side resistance value
ALUMINUM	1.0 - 1.2 Ω	ALUMINUM	10.6 - 12.8 Ω
CAST-IRON	0.68 - 0.84 Ω	CAST-IRON	5.6 - 6.9 Ω

PISTON DISASSEMBLY/REASSEMBLY

Install all rings with the markings facing up. Space the piston ring end gaps 120° apart.



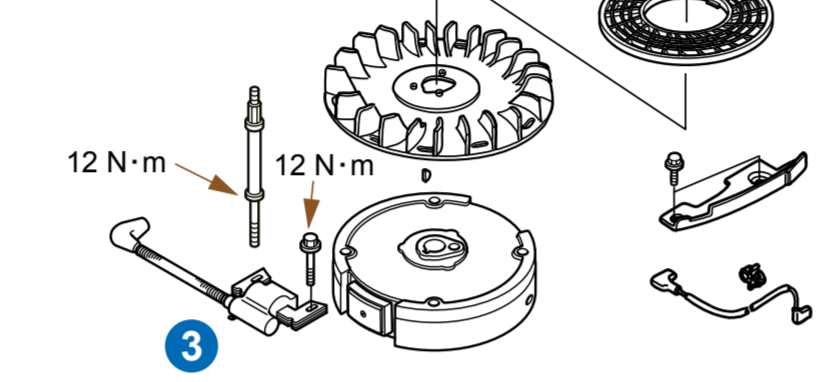
CAM PULLEY INSTALLATION



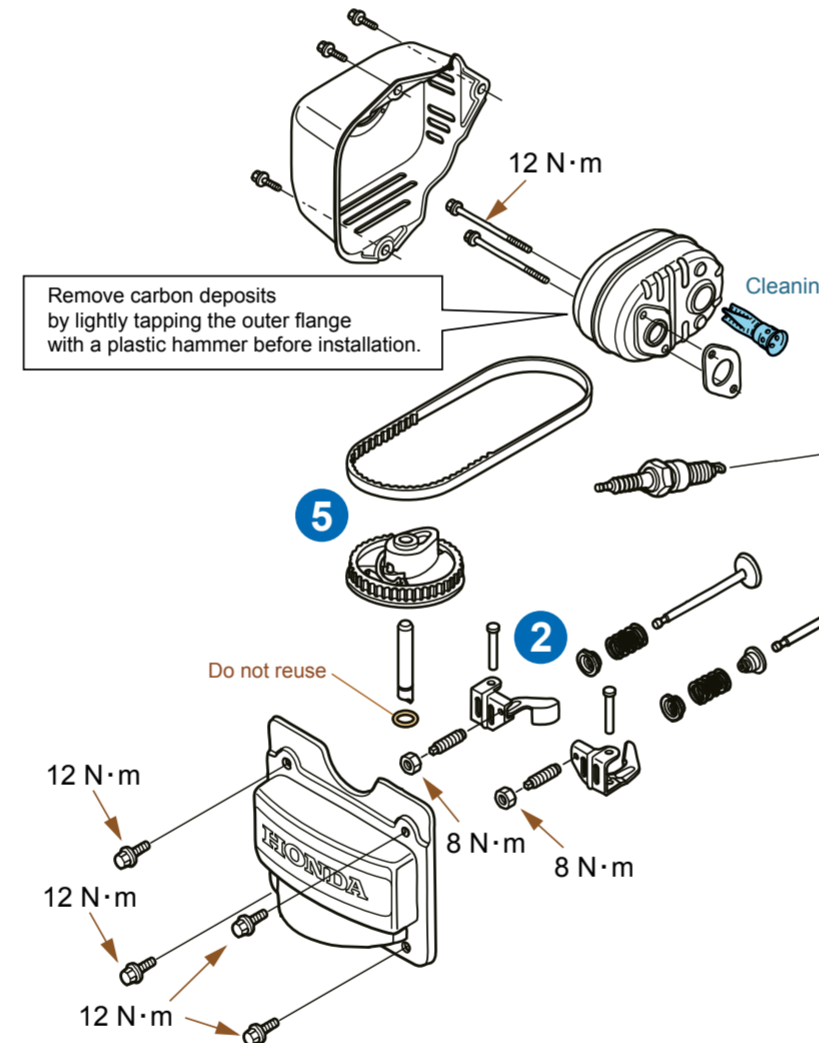
- Turn the crankshaft so the two woodruff key grooves on the PTO side face away from the cylinder block.
- Install the cam pulley on the timing belt so the cam pulley alignment marks are in line with the cylinder head cover mating surfaces.
- Apply oil to the O-ring and install the O-ring on the cam pulley shaft.
- Install the cam pulley shaft in the cylinder block.
- Holding the cam pulley alignment marks in line with the cylinder head cover mating surface, make sure the two woodruff key grooves on the PTO side of the crankshaft are facing away from the cam pulley.
- If the two woodruff key grooves are not facing away from the cam pulley, repeat the procedure from step 1.

Gasoline is highly flammable and explosive. Check to see whether the fuel is not leaking from the fuel system parts.

CAST-IRON FLYWHEEL TYPES



ALUMINUM FLYWHEEL TYPES



Remove carbon deposits by lightly tapping the outer flange with a plastic hammer before installation.

SPARK PLUG

Spark plug gap	0.7 - 0.8 mm	
Recommended Spark plug	Pressure washer applications	NGK BPR6ES
	All others	NGK BPR5ES

ENGINE OIL

Engine oil capacity	0.50 L
Recommended oil	SAE 10W-30 API Service Classification SJ or later oil.

ENGINE STOP SWITCH

ROTARY TYPE

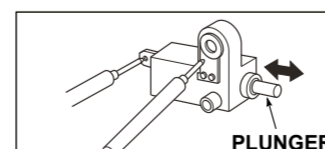
- Disconnect the engine switch terminal end from the ignition coil.
- Turn the switch to both positions and check continuity between the wire and the control base with an ohmmeter.

Switch position	Continuity
ON	No
OFF	Yes

INSPECTION

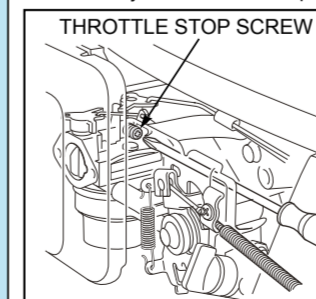
PLUNGER TYPE

There should be continuity when the plunger is pushed in. There should be no continuity when the plunger is released. Replace the engine stop switch if the correct continuity test results are not obtained.



CARBURETOR IDLE SPEED ADJUSTMENT

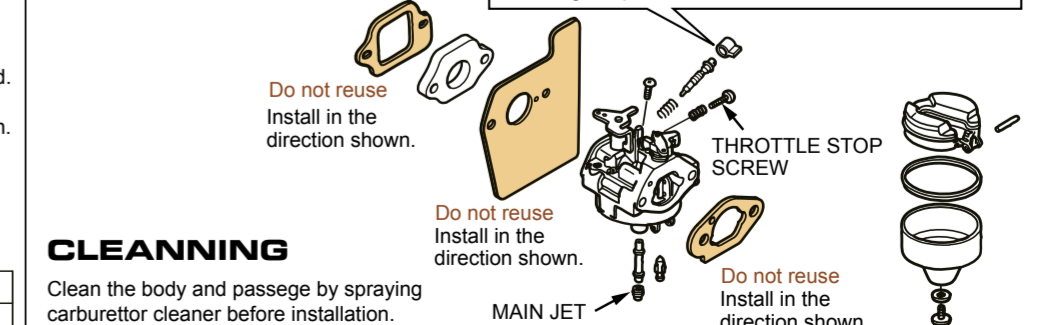
Adjust the throttle stop screw to obtain the specified idle speed.



- On fixed-throttle applications, the idle speed cannot be adjusted.
- The standard idle speed may vary depending on the application. Refer to the equipment manufacturer's recommendation for the idle speed specification.

Standard idle speed	
All other	1,700 ± 150 rpm
GCV190N5AV	2,350 rpm minimum

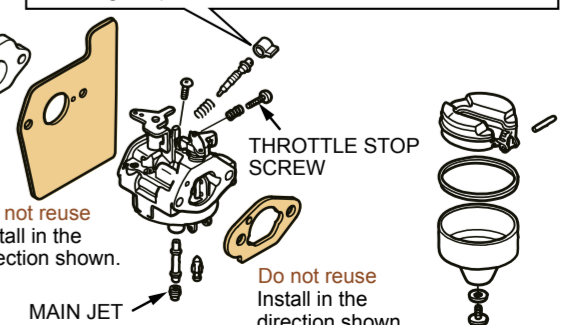
REMOVAL INSTALLATION



CLEANING

Clean the body and passage by spraying carburetor cleaner before installation.

Do not attempt to remove the limiter cap for pilot screw adjustment. The limiter cap cannot be removed without breaking the pilot screw.



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