

GOVERNOR SYSTEMS

Linkage and Spring Orientation

NOTE: Be sure to note hole position of linkage before removing.

- Figure 1 - Horizontal Shaft Models 110000, 120000, 150000, 200000, 210000.
- Figure 2 - Vertical Shaft Model 97700
- Figure 3 - Vertical Shaft Model 99700
- Figure 4 - Vertical Shaft Models 110000, 120000, 210000 (Primer Carburetors).
- Figure 5 - Vertical Shaft Models 110000, 120000, 210000 (Choke-A-Matic® Carburetors).
- Figure 6 - Models 280000, 310000, 330000 (Choke-A-Matic® Carburetors).
- Figure 7 - Models 280000, 310000, 330000 (Manual Friction).
- Figure 8 - Models 280000, 310000, 330000 (Manual Choke).

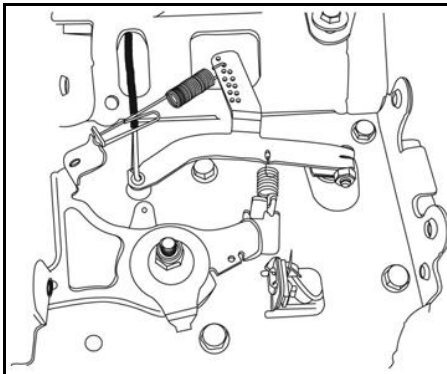


Figure 1

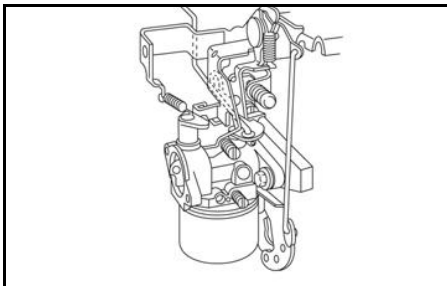


Figure 2

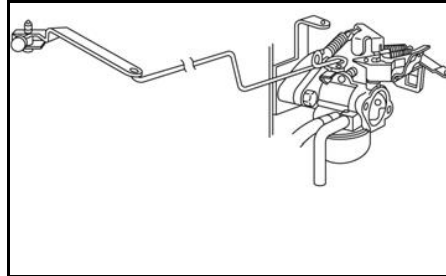


Figure 3

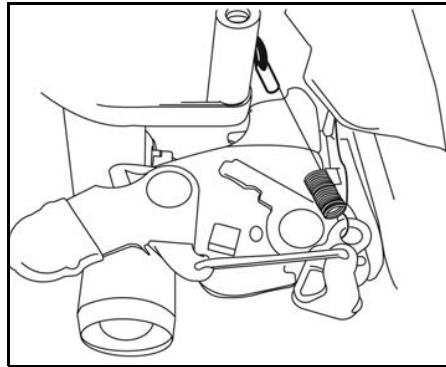


Figure 4

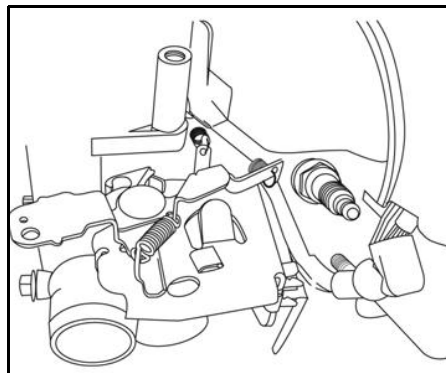


Figure 5

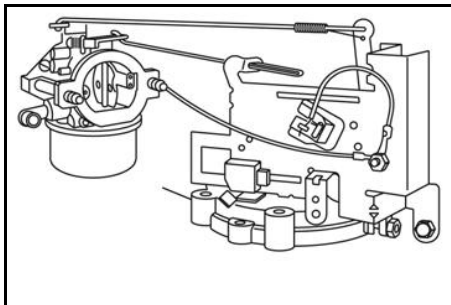


Figure 6

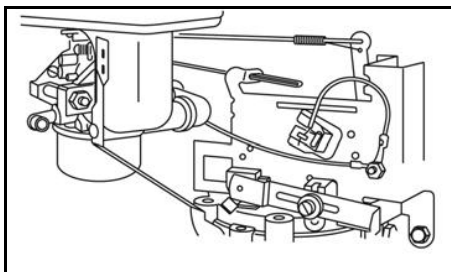


Figure 7

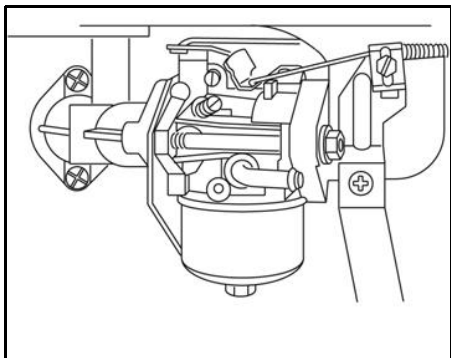


Figure 8

Governed RPM Limits

To comply with specified top governed speed limits, Briggs & Stratton supplies engines with an adjustable top speed limit, which the equipment manufacturers set to their own specifications.

Top governed speed should be checked with a tachometer when the engine is operating on a completely assembled unit. The equipment should be operated under no load when making these checks.

If a governor spring must be replaced, consult the appropriate Illustrated Parts List for the correct part number.

After a new governor spring is installed, check the engine top governed speed with an accurate tachometer, as noted above, and adjust as required.

Governor Service

Horizontal Models 110000, 120000, 150000, 200000, 210000

The mechanical governor is part of the crankcase cover. The governor gear (A, Figure 9) is driven by the crankshaft timing gear (B) through an idler gear (C). The governor crank (D) is mounted in the cylinder assembly.

NOTE: Stamped side of idler gear faces out.

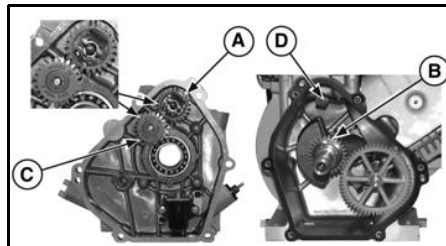


Figure 9

Disassemble

1. Drain oil from engine. Remove burrs and clean crankshaft, then remove crankcase cover. Set aside.
2. Loosen governor lever nut (A, Figure 10).
3. Slide lever off governor crank (B) and disconnect from governor link (C).
4. Remove push nut and washer (D) from governor crank. Remove any burrs from governor crank, and then remove crank from inside cylinder.

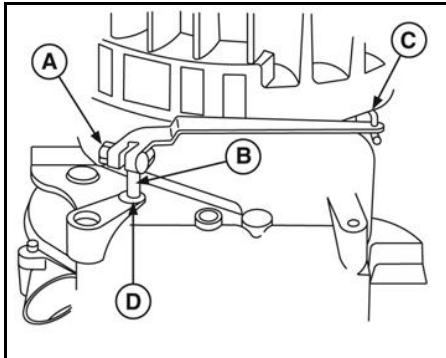


Figure 10

Inspect Governor

1. Check governor gear assembly for worn weight pins, worn or damaged governor cup, and chipped or damaged teeth.
2. If wear or damage is found, remove the governor gear by carefully prying it off the spindle with two flat-bladed screw drivers (A, Figure 11). Discard the washer at the base of the spindle.

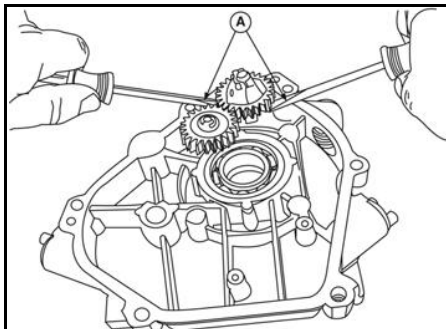


Figure 11

3. Install new washer on spindle, then carefully press new governor gear assembly on spindle until fully seated.
4. Check idler gear for wear or damage. If found, remove retainer clip and gear, then install new gear.
5. Check governor crank for wear or damage. Replace if necessary.

Assemble

1. Install governor crank from inside cylinder. Slide washer (when used) on crank and install new push nut.

2. Slide the governor lever on crank and finger-tighten bolt and nut until crank turns with a slight resistance.
3. Rotate crank until paddle is aligned with cup on governor gear assembly.
4. Install new crankcase cover gasket(s) of same thickness as originally removed from cylinder.
5. Place seal protector in oil seal and slide cover over crankshaft until it seats.

NOTE: It may be necessary to rotate crankshaft to engage idler gear with timing gear.

6. Install cover or sump screws in order shown in Figure 12. Torque to values listed in Section 12 - Engine Specifications.
7. Adjust governor system per Section 1.

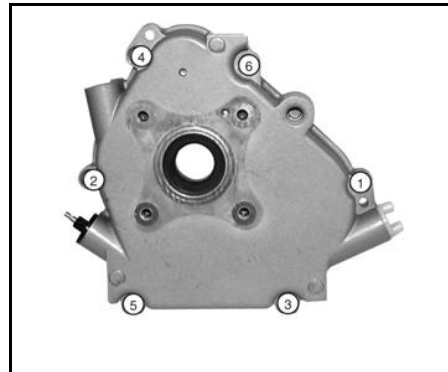


Figure 12

Vertical Models 97700, 99700, 110000, 120000, 210000, 280000, 310000, 330000

The mechanical governor is part of the oil slinger assembly (**A**, Figure 13) attached to the camshaft. The governor crank is mounted in the cylinder assembly.

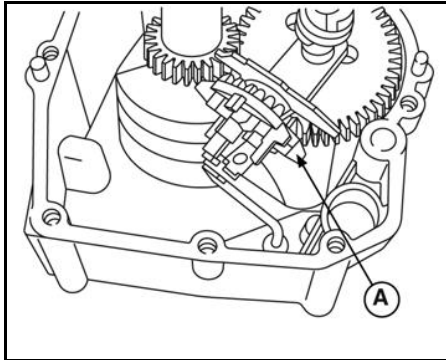


Figure 13

Disassemble

1. Drain oil from engine.
2. Loosen governor lever nut (**A**, Figure 14, Figure 15).

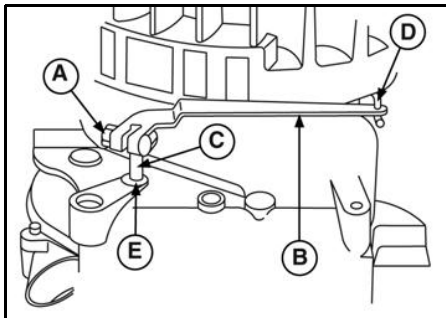


Figure 14

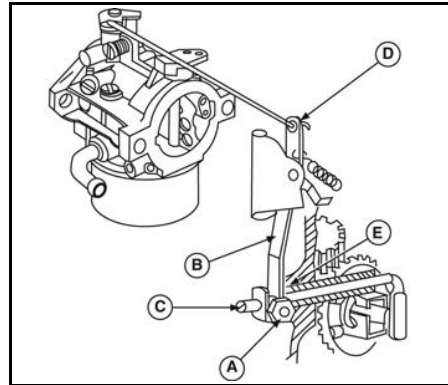


Figure 15

3. Slide lever (**B**) off governor crank (**C**) and disconnect from governor link (**D**).
4. Remove push nut or clip and washer (**E**) from governor crank. Remove burrs from governor crank, and remove crank from inside cylinder.
5. Remove governor crank seal in cylinder, if equipped.

5

Inspect Governor

1. Check governor gear/oil slinger assembly for worn weight pins, worn or damaged governor cup, and chipped or damaged teeth on paddles of oil slinger.
2. If wear or damage is found, replace the governor gear/oil slinger assembly.
3. Check governor crank for wear or damage. Replace if necessary.

Assemble Governor

1. Install new governor crank seal in cylinder, if equipped.
2. Install governor crank from inside cylinder. Slide washer (when used) on crank and install new push nut or clip.
3. Slide governor lever on crank and finger-tighten bolt and nut until crank turns with slight resistance.
4. Rotate crank until paddle contacts cup on governor gear/oil slinger assembly.
5. Install new sump gasket(s) of same thickness as originally removed from cylinder.

6. Place seal protector in oil seal and slide sump over crankshaft until it seats.

NOTE: It may be necessary to rotate crankshaft and cam gear to get oil pump (if equipped) to engage oil pump drive slot in cam gear.

7. Install sump screws in order shown in Figure 16 and Figure 17. Torque to values listed in Section 12 - Engine Specifications.

NOTE: The screw at position four or position nine (Figure 16 or Figure 17) was factory coated with sealant. Coat screw with a non-hardening sealant, such as Permatex® 2 or equivalent, before installing.

8. Adjust governor system per Section 1.

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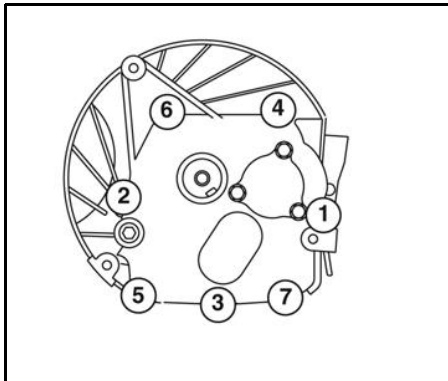


Figure 16

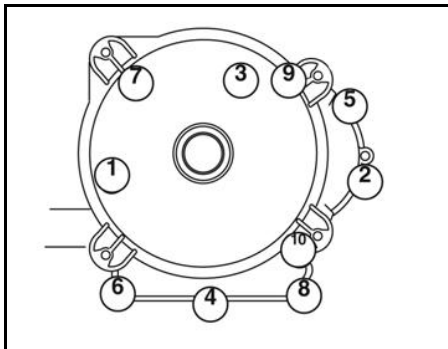


Figure 17