

Combustion Chamber

Remove combustion chamber deposits every 500 hours or whenever the cylinder head is removed.

With the piston at Top Dead Center (TDC), scrape deposits from top of piston and upper bore with a plastic scraper.

Remove the loosened deposits from around the top ring land area using compressed air or a shop vacuum and a soft bristle brush.

NOTICE: Use care to prevent debris from entering the valve lever or oil return cavities in

cylinder. Do not damage bore, top of piston, cylinder head, or gasket mounting surfaces.

It is not necessary to remove the discoloration marks on the piston, valves, and/or cylinder head. These marks are normal and will not affect engine operation.

ENGINE ADJUSTMENTS

Throttle Cable Adjustment

The remote control wire should measure 2.125" (54mm) when extended outside the casing (A, Figure 1-6). After installation, the travel (B) of the remote control wire must be at least 1.375" (35 mm). If the travel of the remote control wire does not reach the minimum distance, use the following procedure to adjust the cable:

1. Loosen casing clamp screw (C).
2. Move throttle lever to FAST position.
3. Move casing in direction of arrow (D) until slack is removed.
4. Tighten casing clamp screw. Torque to values listed in Section 12 - Engine Specifications.

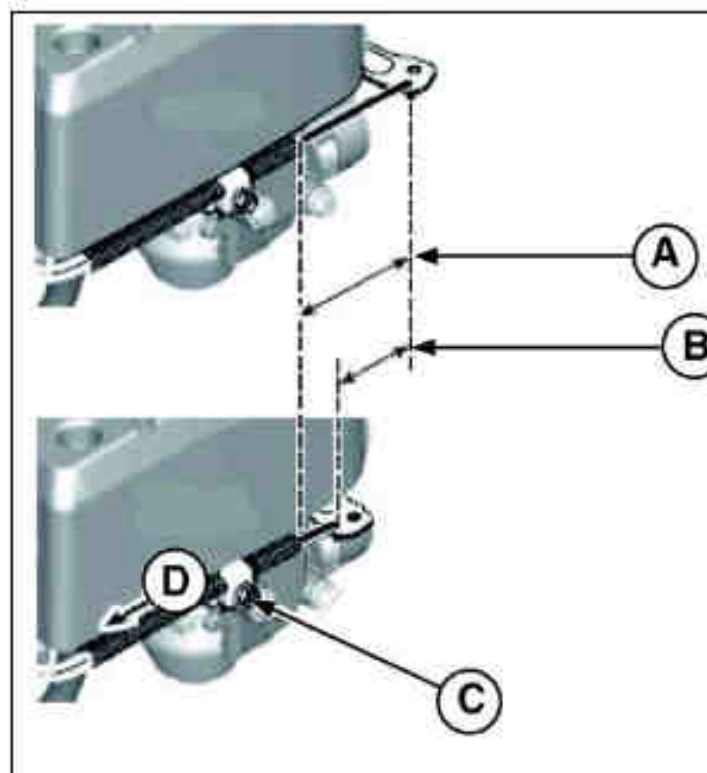


Figure 1 - 6

Governor Adjustments

A complete governor system adjustment includes a static adjustment, engine warm-up, and top no-load adjustment. Be sure to complete all steps.

Static Adjustment

1. Loosen nut (A, Figure 1-7) until governor lever (B) moves freely from governor crank (C).
2. Move throttle linkage (D) until throttle plate (E) is wide open.

NOTE: Choke valve (F) closes when opening the throttle plate.

3. While holding linkage, tighten governor lever nut. Torque to values listed in Section 12 - Engine Specifications.
4. Before starting engine, manually actuate throttle linkage to check for binding.

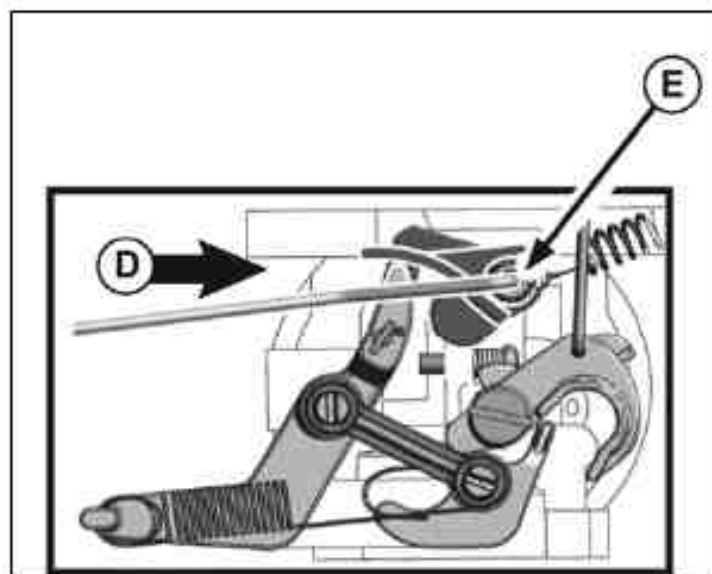
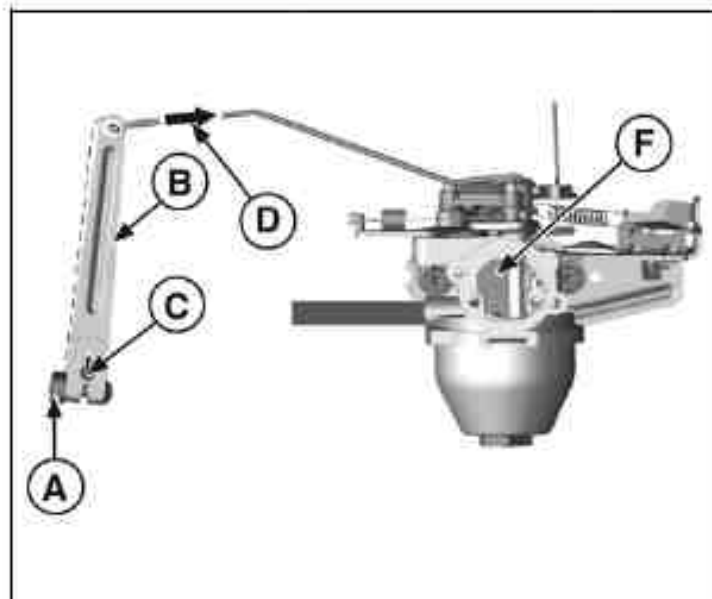


Figure 1 - 7

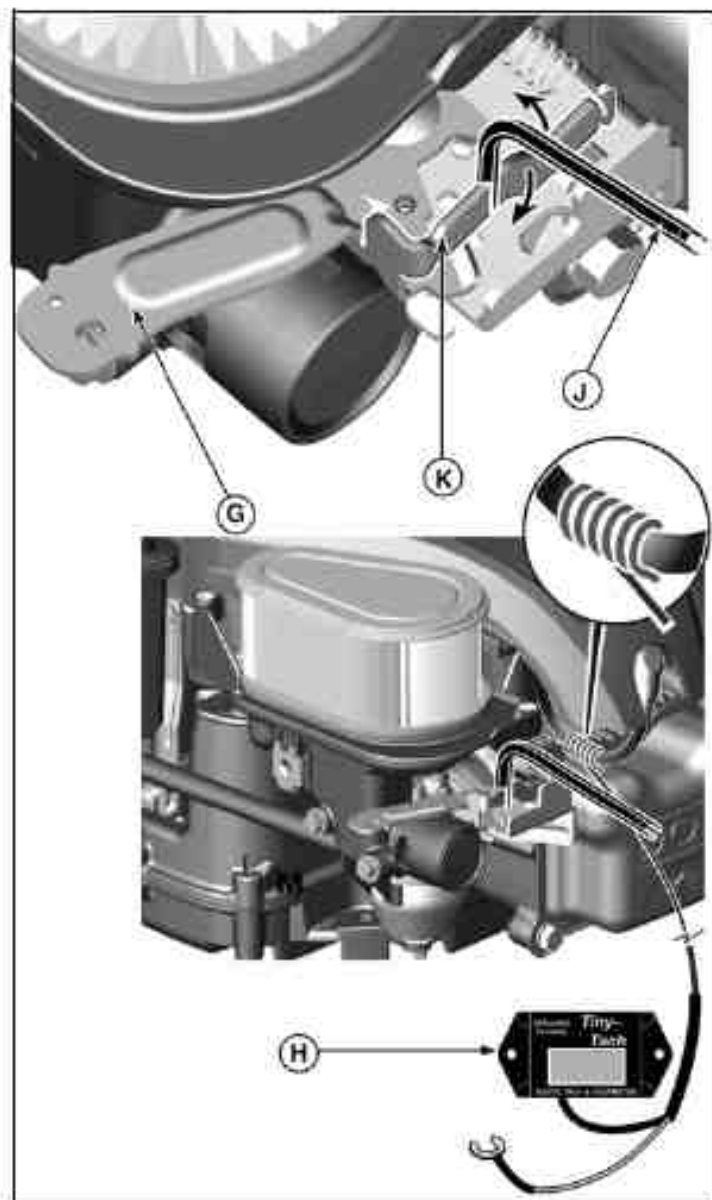


Figure 1 - 8

Top No-Load Adjustment

1. Start engine and run at idle speed until it reaches operating temperature.
2. Place throttle lever (G, Figure 1-8) in FAST position.
3. Using Tachometer #19200 or #19389 (H), and Tang Bender #19229 or #19352 (J), bend spring tang (K) to obtain correct top no-load RPM.

NOTE: Correct top no-load RPM for each model-type-trim can be found in the engine replacement data on Briggs & Stratton websites.

Adjust Valve Clearance

NOTE: Check valve clearance while the engine is cold.

1. Insert a narrow gauge such as a screwdriver, rod, or pencil (A, Figure 1-9) into the spark plug hole (B) until it touches the piston (C). Cut away view is shown.
2. Observe the movement of the gauge and turn the flywheel (D) clockwise past top dead center on the compression stroke until the piston has moved down the bore 0.25 in. (6.4 mm).
3. Valve clearance is checked by placing a feeler gauge (E) between the lever arm adjusting screw (F) and the valve cap (G).
4. Loosen the adjusting screw nut (H) with a wrench.
5. Using an allen wrench, turn the adjusting screw (F) to obtain the correct clearance.
6. Tighten the adjusting screw nut (H) to the torque values listed in Section 12 - Engine Specifications.
7. Recheck clearance after tightening nut.

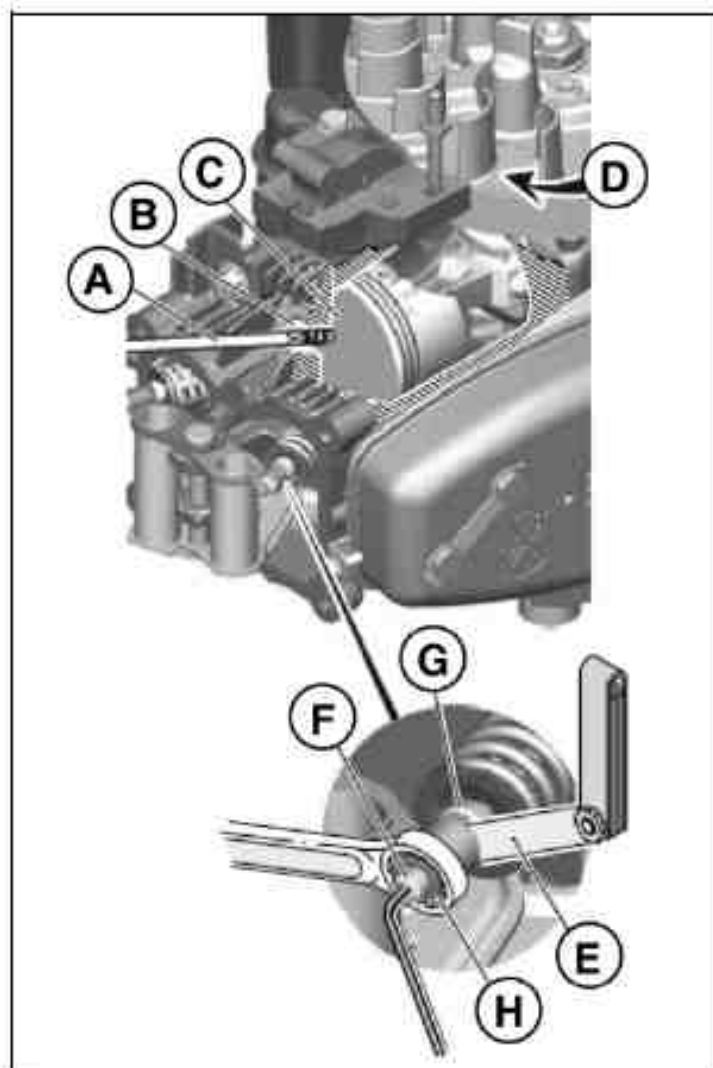


Figure 1 - 9

Adjust ReadyStart Choke Link

Perform this adjustment while the engine is cold.

1. Using pliers, bend adjusting loop (A, Figure 1-10) on choke link (B) until choke lever gap (C) measures 0.000 - 0.060 in. (0.000 - 1.52 mm). When properly adjusted, the choke plate (D) will be fully closed. Reshape wire to keep it parallel (E) after adjusting loop.

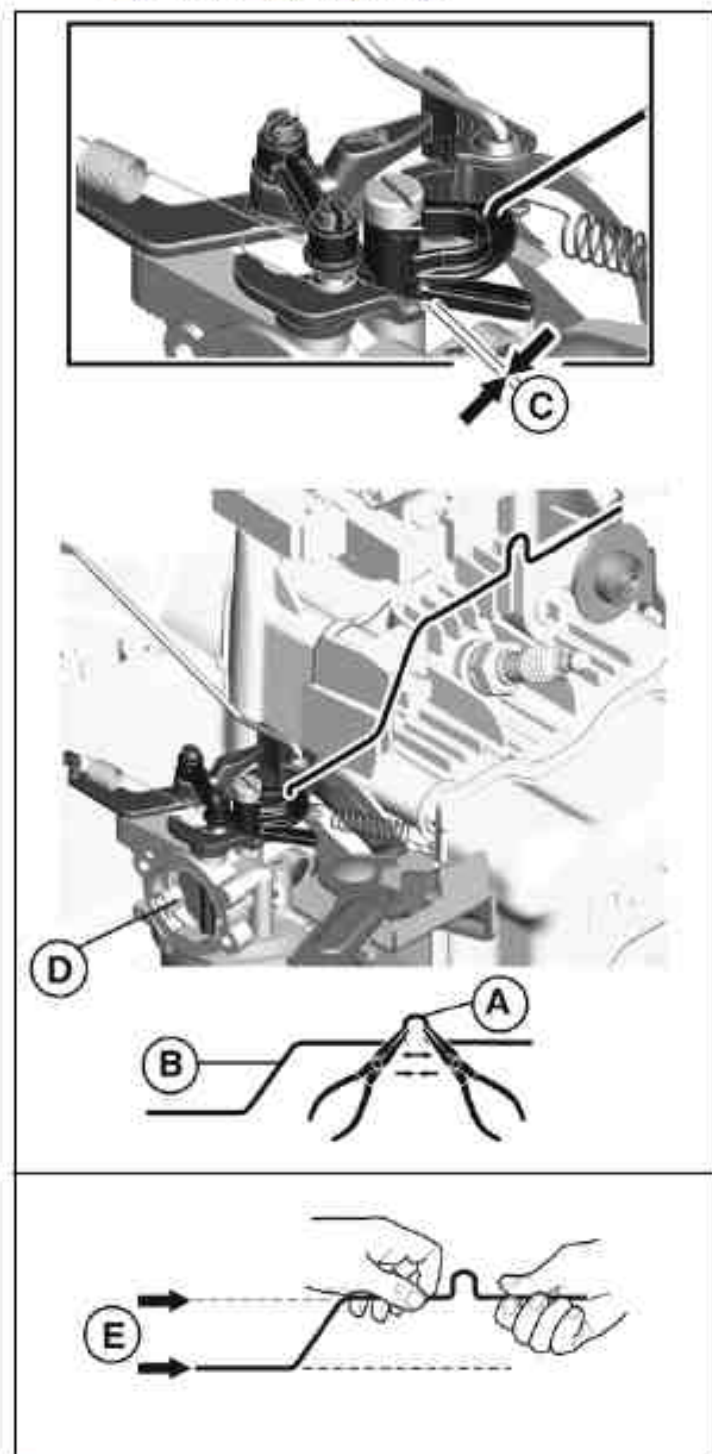


Figure 1 - 10