

5. Start the engine and run at half throttle until the engine reaches operating temperature.
6. Connect a tachometer according to manufacturer's instructions.

**NOTE**

*The engine requires approximately 15 seconds to respond to adjustment in Step 7.*

7. Bring engine speed back to 700-750 rpm in gear and adjust low-speed needle to produce the highest rpm and smoothest operation.
8. Reinstall the adjustment knob on its needle without disturbing the needle valve setting.
9. Run the engine in gear at idle and note the tachometer. Adjust the idle screw until the engine idles at 650 rpm in gear.
10. Shut the engine off; remove the test equipment and install the engine cover.

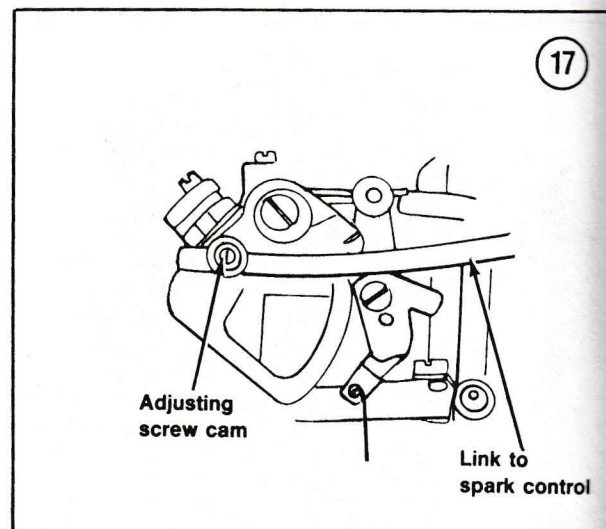
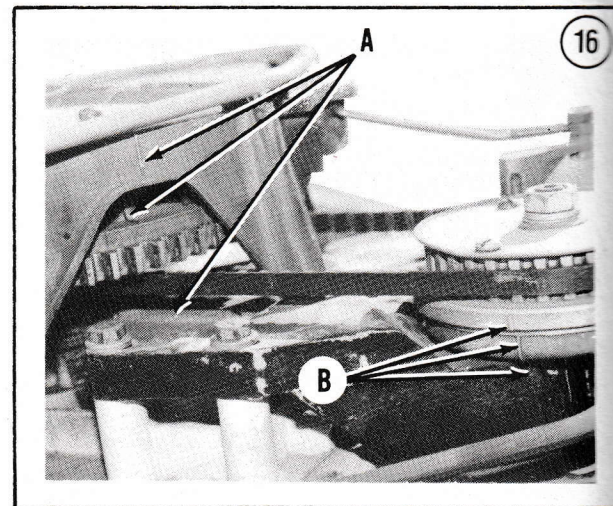
### 3- AND 4-CYLINDER ENGINES

Refer to **Table 2** at the end of the chapter for the appropriate tune-up data for your engine.

#### 1958-1959 50 HP V4

##### *Cam follower and linkage adjustment*

1. Remove the engine cover.
2. Remove the spark plugs and ground the spark plug leads to prevent the engine from accidentally starting.
3. Rotate the flywheel clockwise until the timing marks on the rewind starter housing, flywheel and crankcase align. See A, **Figure 16** (typical).
4. Turn the speed control lever or grip until the timing marks on the distributor pulley, distributor housing and magneto support bracket align. See B, **Figure 16** (typical).
5. When all timing marks are properly aligned, loosen the spark link adjusting screw



on the throttle cam (**Figure 17**). Disconnect the link from the cam.

6. Slowly rotate the throttle cam. As the throttle cam mark aligns with the center of the nylon cam roller, the cam roller should just start to open the throttle valve.

7. If the cam roller does not start to open the throttle valve in Step 6, loosen the adjustment screw under the cam roller enough to properly position the roller, then tighten the screw. See **Figure 18**.

8. Shift the engine into FORWARD gear while rotating the propeller to assure that it engages properly.

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