

SECTION

N

**SERVICING THE
CARBURETOR
AND
FUEL PUMP**

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INTRODUCTION

The Carter Model N Carburetor used on the Kohler K241 and K301 engines is a side draft of single venturi design. The fuel bowl is located on the center line of the carburetor together with the float, making it possible to maintain proper metering of air and fuel to the engine. The carburetor is sealed so that all air for the fuel bowl and idling must come thru the air cleaner.

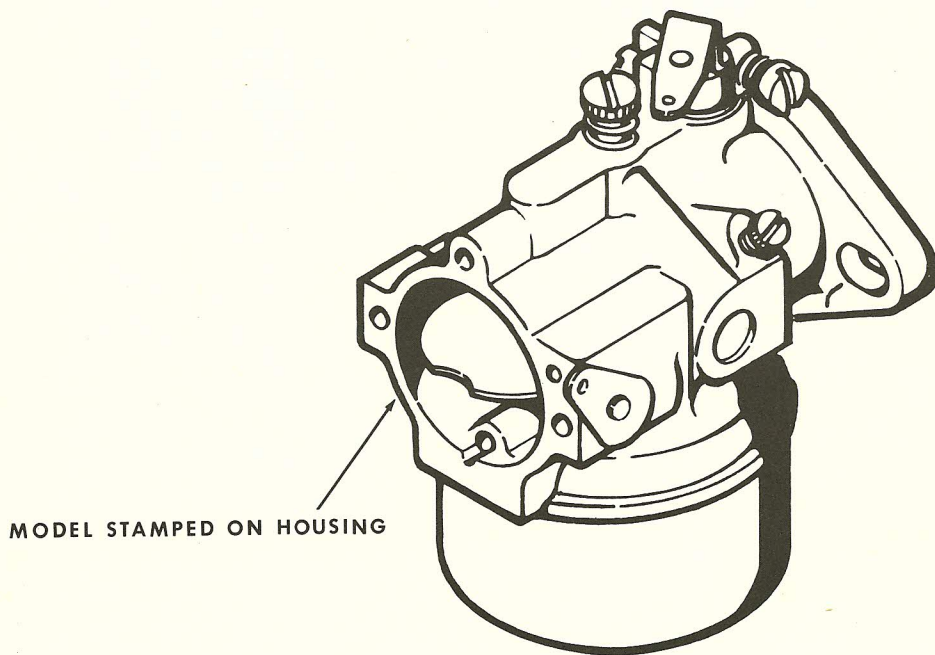
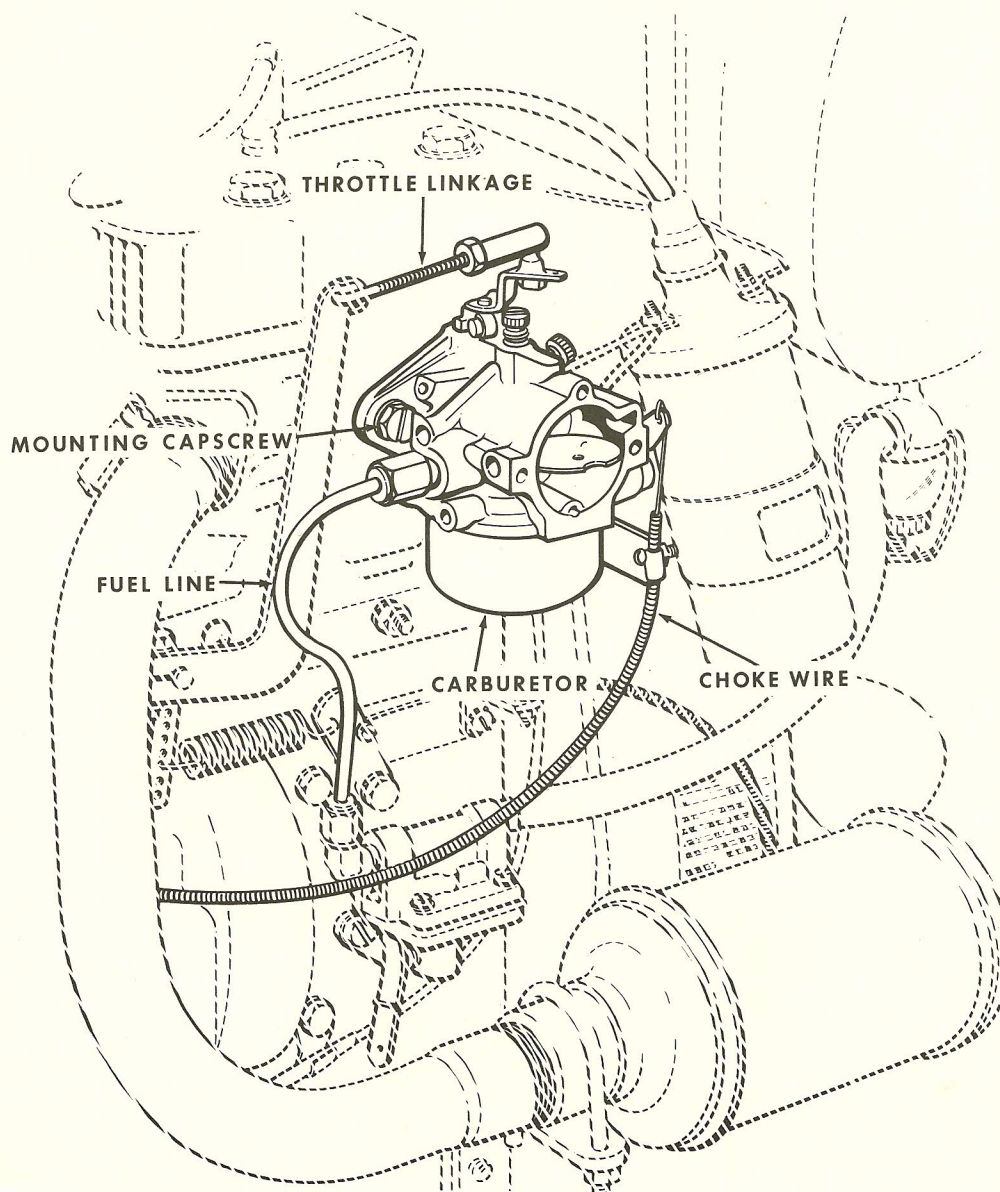


Figure N-1

CARBURETOR

Removal

1. Remove the air cleaner retainer nut, cover and element.
2. Remove the air cleaner base retainer screws and base.
3. Disconnect the fuel line, choke wire and throttle linkage.
4. Remove carburetor mounting capscrews, carburetor and gasket.



Installation

1. Install the carburetor using a gasket and mounting capscrews.
2. Connect the fuel line, choke wire and throttle linkage.
3. Install the air cleaner base using screws.
4. Install the air cleaner element, cover and retainer nut.

CARBURETOR

(Refer to Figure N-3)

Disassembly

1. Remove the carburetor bowl retainer nut and gasket (1) bowl (2), gasket (3) and gasket ring (4).
2. Remove the float pin (5) float (28) and float move washer (8).
3. Unscrew the float valve seat (7) and remove washer (8).
4. Unscrew and remove the high idle jet seat (27).
5. Remove the choke plate screws (10) and choke plate (9).
6. When pulling out the choke shaft (26) be careful not to lose the ball (11) and spring (12).
7. Remove the high idle jet (15) and spring (14).
8. Remove the throttle lever retainer cap-screw and washer (16) and throttle lever (17).
9. Loosen the throttle shaft stop retainer screw and remove the stop assembly (18) and seal (19).
10. Remove the throttle plate screws (23) plate (24) and throttle shaft (20).
11. Remove the mixture screw (21) and spring (22).

Inspection

With the carburetor completely disassembled, the component parts can easily be cleaned in Bendix Speed Clean and inspected for wear, cracks, score marks and burrs. All parts that are worn or damaged must be replaced. Blow out all passages in the fuel bowl assembly and throttle body. It is advisable to reverse flow compressed air in all passages to insure all dirt has been removed. Never use a wire drill to clean out jets.

Replace float if leaking or damaged, also the float needle and seat as both parts wear and may cause improper float level. Replace all gaskets and fiber washers during assembly.

Venturi size ----(No.26) 13/16" at narrowest point. High speed jet -----(No. 49) or.073"

Assembly

1. Install the mixture screw spring (22) and screw (21).
insert the choke shaft (26).
2. Install the throttle shaft (20) throttle plate (24) and plate screws (23).
3. Place a new seal (19) on the throttle shaft (20) and install the throttle stop assembly (18).
4. Install the throttle lever (17) and secure with capscrew and washer (16).
5. Install the high idle jet spring (14) and high idle jet (15).
6. Install the choke shaft spring (12) and ball (11). Compress the spring (12) and
7. Install the choke plate (9) and secure with screws (10).
8. Install the high idle jet seat (27).
9. Install the float valve seat washer (8) and seat (7).
10. Install the float needle (6), float (28) and float pin (5). Refer to inset A for proper float setting 11/64".
11. Install the carburetor bowl gasket ring (4) gasket (3), bowl (2) and secure with gasket and nut (1).

Disassembly — Inspection — Assembly

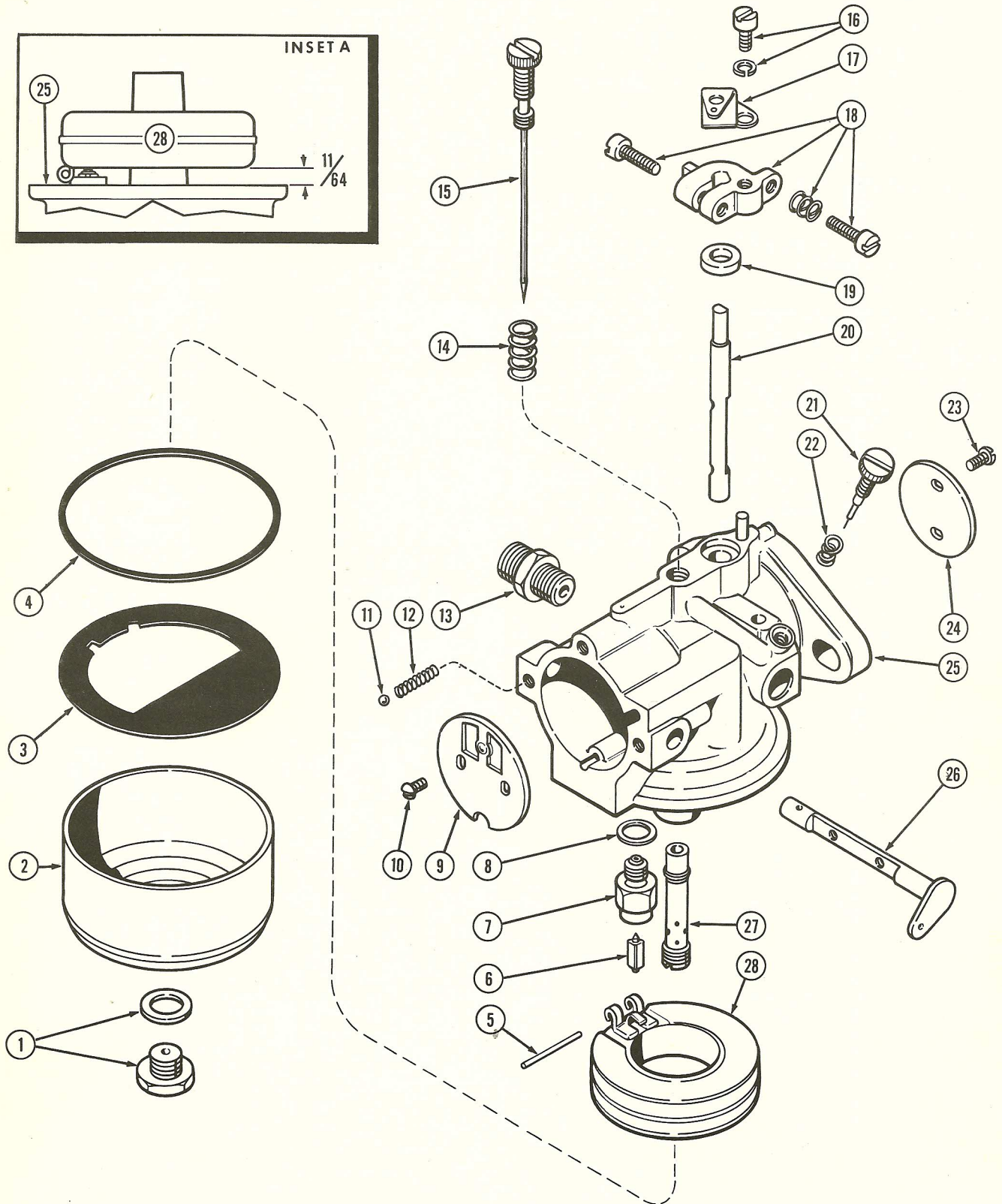


Figure N-3

CARBURETOR

The carburetor has three simple adjustments.

1. High Speed Adjustment
2. Idle Mixture Adjustment
3. Idle - Speed Adjustment

High Speed Adjustment

Adjust the high speed screw Figure N-4 by turning the adjusting screw clockwise (in) until the engine misfires or falls off; then turn the adjusting screw counter-clockwise (out) until the engine runs smoothly. Approximately two turns.

Place the tractor under load and observe how the engine handles the load. Loss of power or tendency to stall indicates a lean mixture. Turn adjusting screw counter-clockwise not more than 1/8 of a turn and again try the engine performance. When the high speed screw is correctly adjusted, it will not be necessary to reset the carburetor unless load conditions or fuel quality have been radically changed.

Operating an engine on too lean a mixture causes loss of power and high exhaust valve heat.

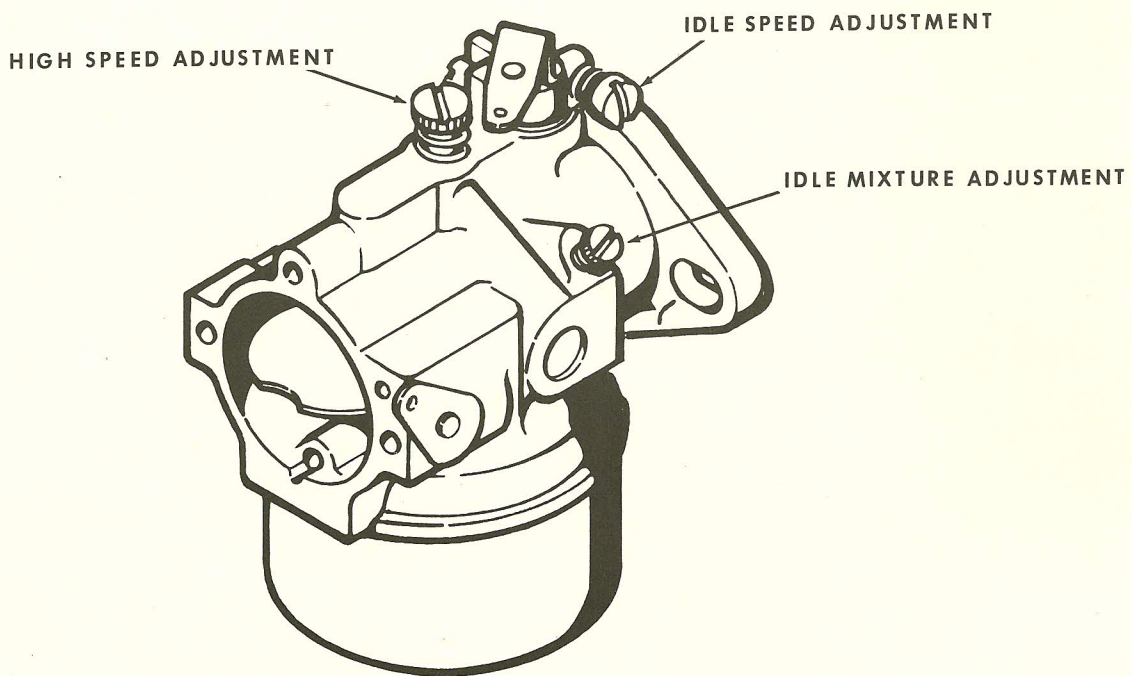


Figure N-4

Idle Mixture and Idle Speed Adjustment

Turn the idle mixture screw, Figure N-4, counter-clockwise approximately 1-1/4 turns from the closed position. Place throttle in 1/2 open position and start engine. With the throttle all the way in, turn idle-speed adjusting screw, Figure N-4, until 1000 RPM is obtained. The idle mixture screw can be adjusted in or out until the engine runs smoothly while maintaining 1000 RPM with the idle speed adjusting screw.

FUEL PUMP

(Refer to Figure N-5)

Disassembly

1. Remove the retainer screws (1), lock-washers (2) and upper body (3).
2. Remove valve retainer screw (9), valve retainer (8), gasket (7), valves (4 & 6) and valves springs (5).
3. To remove diaphragm (10) from the lower pump body (12) turn the diaphragm 90° and lift out the diaphragm (10) and spring (11).

Inspection

With the fuel pump completely disassembled, thoroughly clean the upper and lower pump bodies in Bendix Speed Clean and check for cracks and damaged threads. When fuel pump is disassembled a new kit must be installed.

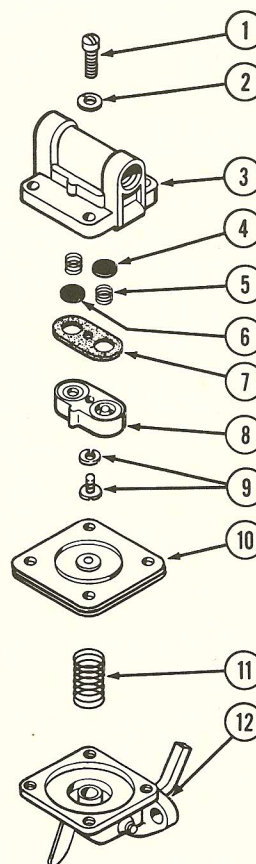
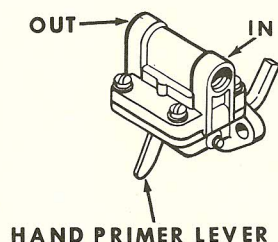


Figure N-5

Assembly

1. Place the diaphragm spring (11) on the lower pump body. Insert the diaphragm (10) in the lower pump body and turn 90° to lock in place.
2. Install the valves (4 & 6) springs (5) gasket (7), valve retainer (8) and secure with screw and washer.
3. Place the upper pump body assembly (3) on the lower pump body assembly with port marked "out" on the same side as the hand primer lever. Secure with washers (2) and screws (1).

THROTTLE AND GOVERNOR ADJUSTMENT

1. With the engine not running hold the throttle shaft and lever on the carburetor in the full open position (against high idle stop).
2. Loosen the governor arm retainer nut and adjust the throttle link so the governor arm is vertical when the throttle is full open.
3. Turn the governor shaft counter-clockwise as far as possible with a pair of pliers and with the governor arm in the vertical position, tighten the governor arm retainer nut.
4. Tighten generator belt to 1/4" deflection (finger tight) between the pulleys. Start the engine and check the high idle engine speed. Use a hand tachometer at the end of the starter - generator pulley. The RPM at the starter - generator is 2.6 times faster than engine speed. The engine high idle speed should be 3250 RPM; therefore the RPM at the starter - generator will be 2.6×3250 or approximately 8,450 RPM at the starter - generator pulley.
5. To adjust the high idle stop on the side of the engine, loosen the hex. head screw and move the stop up or down. With the high idle properly set, tighten the screw.

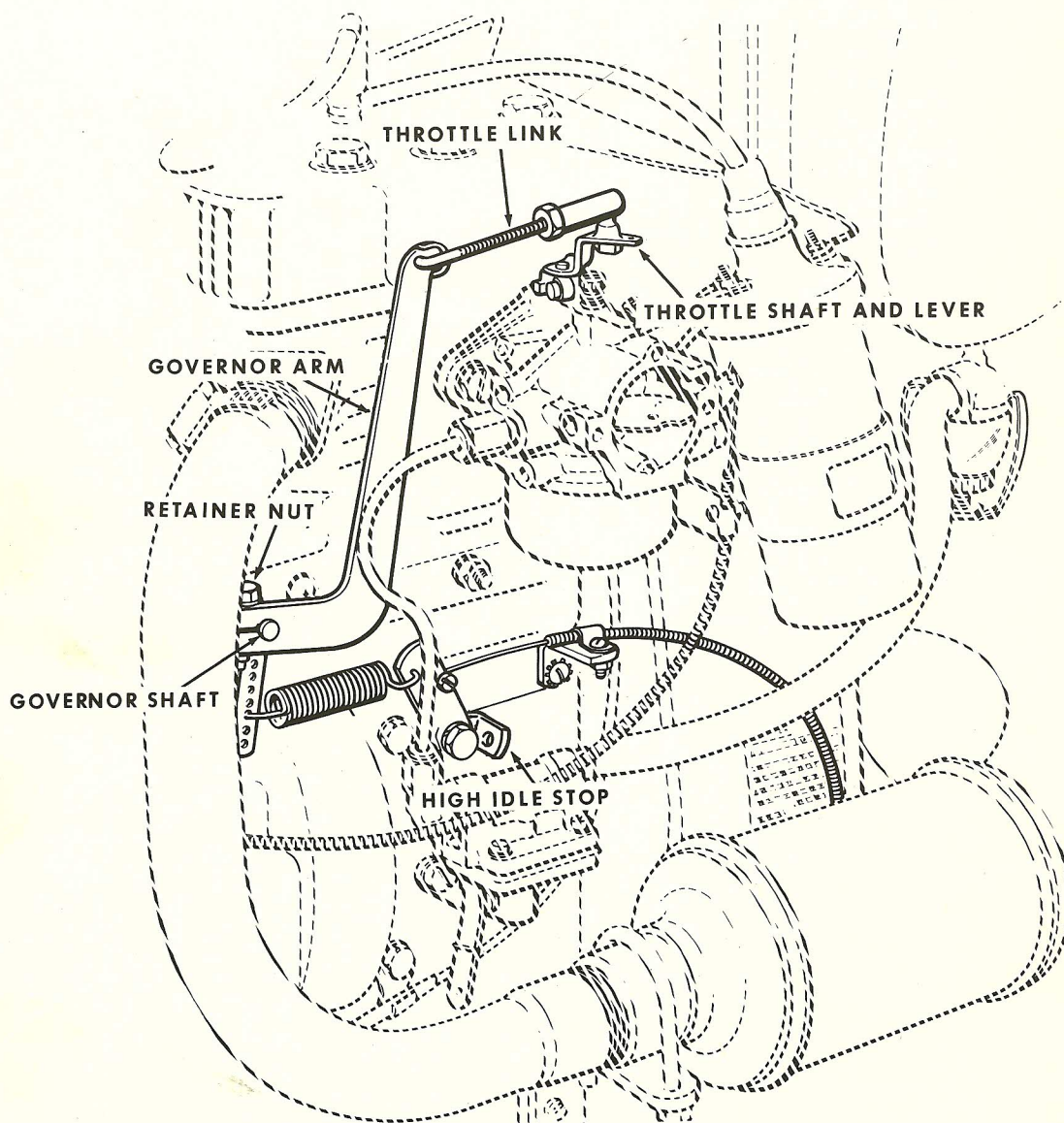


Figure N-6

NOTE: The J. I. Case Company reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.