

**CARBURETOR SPECIFICATIONS**

Year	Carburetor Make & Model	Carburetor Model	Float Level, Inch	Idle Screw Setting, Turns Open	Pump Adjustment, Inch	Fast Idle Adjustment, Inch	Unloader Adjustment, Inch	Automatic Choke Setting
1949	Carter BB	DTC1	5/64	1/2-1 1/2	2 1/64	None	None	None
1949	Carter BB	ETT1	5/64	1/2-1 1/2	2 5/64	None	None	None
1949	Carter BB	E7F1	5/64	1/2-1 1/2	None	None	None	None
1949	Carter BB	E7C1	5/64	1/2-1 1/2	None	None	None	None
1949	Carter BB	E7B1	5/64	1/2-1 1/2	None	None	None	None
1949	Carter BB	6M1	1/32-1/16	1/2-1	①	None	None	None
1949-58	Carter BB	E7S1	5/64	1/2-1 1/2	None	None	None	None
1950-53	Carter BB	DTE1	5/64	1/2-1 1/2	2 3/64	None	None	None
1950-53	Carter BB	DTE2	5/64	1/2-1 1/2	2 3/64	None	None	None
1950-53	Carter BB	E7T1	5/64	1/2-1 1/2	2 5/64	None	None	None
1950-58	Carter BB	E7T2	5/64	1/2-1 1/2	2 5/64	None	None	None
1950-53	Carter BB	6N1	1/32-1/16	1/2-1	①	None	None	None
1950-56	Carter BB	6N2	1/32-1/16	1/2-1	①	None	None	None
1949-52	Carter BB	E7U1	5/64	1/2-1 1/2	2 5/64	None	None	None
1949-52	Carter BB	E7U2	5/64	1/2-1 1/2	2 5/64	None	None	None
1949-53	Carter BB	DTG1	5/64	1/2-1 1/2	2 3/64	None	None	None
1953-54	Carter BB	E9K1	5/64	1/2-1 1/2	2 5/64	None	None	None
1953-58	Carter BB	E9Y1	5/64	1/2-1 1/2	2 5/64	None	None	None
1953	Carter BB	DTL1	5/64	1/2-1 1/2	2 3/64	None	None	None
1953	Carter BB	DTL2	5/64	1/2-1 1/2	2 3/64	None	None	None
1953-56	Carter BB	E9G1	5/64	1/2-1 1/2	2 5/64	None	None	None
1953-56	Carter BB	E9H1	5/64	1/2-1 1/2	2 5/64	None	None	None
1954	Carter BB	E9X1	5/64	1/2-1 1/2	2 5/64	None	None	None
1953-54	Carter BB	E7R1	5/64	1/2-1 1/2	2 5/64	None	None	None
1953-56	Carter BB	E9J1	5/64	1/2-1 1/2	2 5/64	None	None	None
1954	Carter BBD	907S	②	1/4-1 1/4	5 1/64	None	None	None
1955-56	Carter BBD	2229S	7/32	1/4-1 1/4	1	None	None	None
1957-58	Carter BBD	2550S	9/32	1/2-1 1/2	2 1/32	None	None	None
1957-58	Carter BBD	2620S-SA	9/32	1/2-1 1/2	2 1/32	None	None	None
1957-58	Carter BBR	2335S-SA	5/64	1/2-1 1/2	2 1/32	None	None	None
1957-58	Carter BBR2	2681S	5/64	1-2	2 5/64	None	None	None
1955-57	Carter BBS	2226S	7/32	1/2-1 1/2	5 1/64	.022-.026	5/64	Index
1955-57	Carter BBS	2288S	7/32	1/2-1 1/2	5 1/64	.022-.026	5/64	Index
1955-56	Carter BBS	2227S	9/32	1/4-1	5 5/64	None	None	None
1956-57	Carter BBS	2416S	7/32	1/2-1 3/4	2 1/32	.022-.026	5/64	Index
1956-58	Carter BBS	2421S	9/32	1/4-1	2 1/32	None	None	None
1957-58	Carter BBS	2658S	9/32	1	2 1/32	.021-.025	5/64	Index
1957-58	Carter BBS	2659S	9/32	1	2 1/32	.021-.025	5/64	Index
1953-54	Stromberg WW	3-117	3/16	3/4-1 1/4	3/4	None	None	None
1955-56	Stromberg WW	3-128	3/16	3/4-1 1/4	3/4	None	None	None
1955-56	Stromberg WW	3-134	3/16	1	7/32-1/4	③	③	Index
1957	Stromberg WW	3-151	7/32	1-1 1/2	9/32-5/16	None	None	None
1957	Stromberg WW	3-152	7/32	1-1 1/2	9/32-5/16	None	None	None
1957	Stromberg WW	3-153	7/32	1-1 1/2	9/32-5/16	③	③	④
1957	Stromberg WW	3-154	7/32	1-1 1/2	9/32-5/16	③	③	④
1957	Stromberg WW	3-155	7/32	1-1 1/2	9/32-5/16	③	③	④
1958	Stromberg WW	3-169	7/32	1-1 1/2	9/32-5/16	None	None	None
1958	Stromberg WW	3-170	7/32	1-1 1/2	9/32-5/16	③	③	④
1958	Stromberg WW	3-171	7/32	1-1 1/2	9/32-5/16	③	③	④
1958	Stromberg WW	3-172	7/32	1-1 1/2	9/32-5/16	None	None	None
1958	Stromberg WW	3-173	7/32	1-1 1/2	9/32-5/16	None	None	None
1958	Stromberg WW	3-174	7/32	1-1 1/2	9/32-5/16	None	None	None

① Seasonal setting provided by three holes in pump link.

② Flat top floats 5/32", curved top floats 7/32".

③ See text for procedure.

④ Set index mark halfway between the L and R marks.

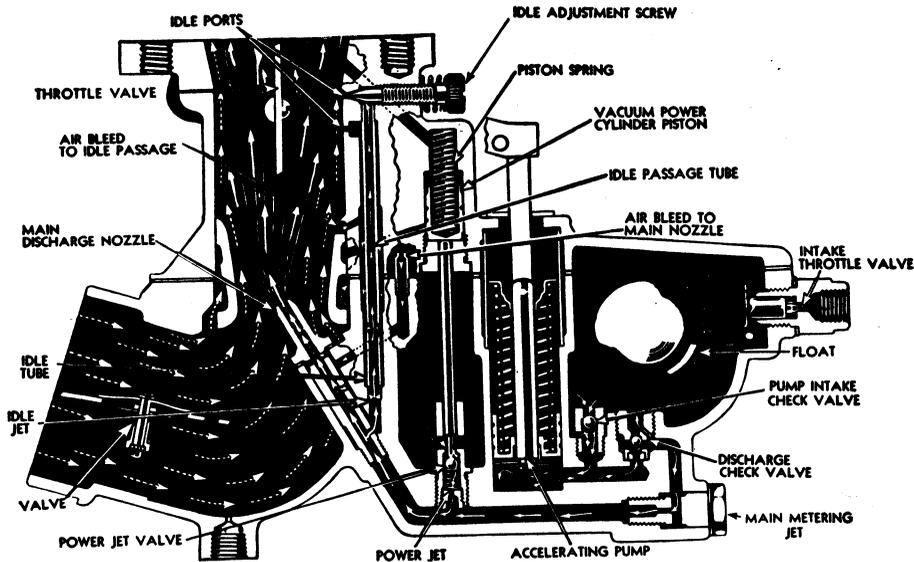


Fig. 40 Carter BB updraft carburetor

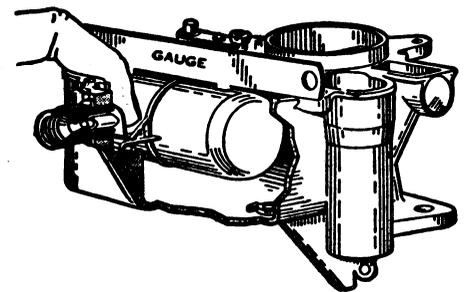


Fig. 42 Carter BB float adjustment

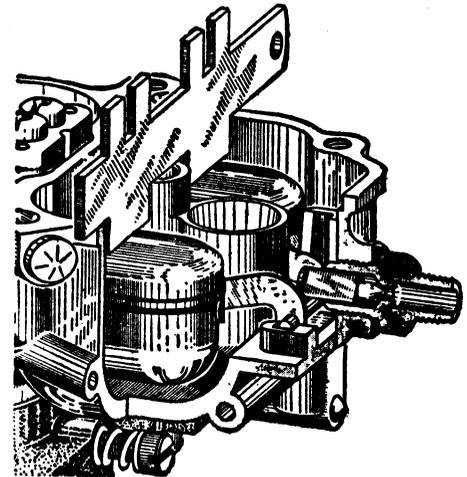


Fig. 43 Carter BBD float adjustment

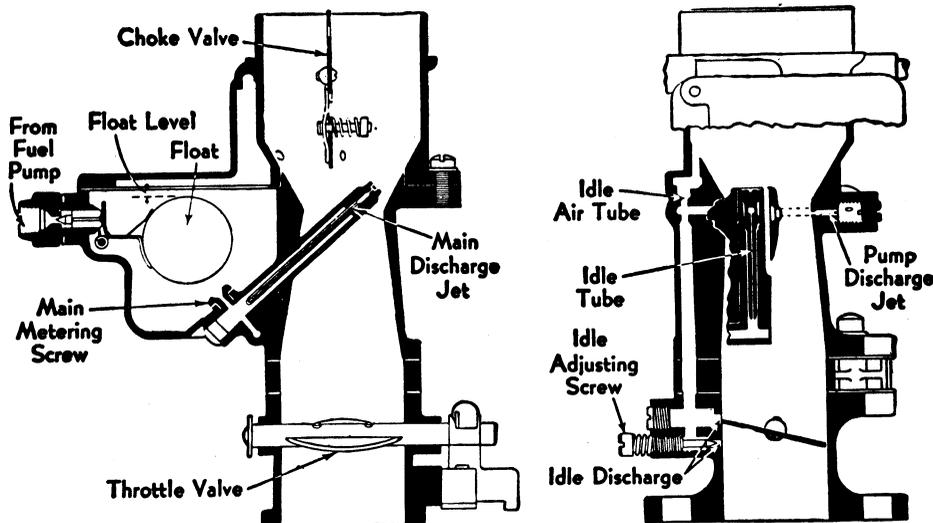


Fig. 41 Carter BB downdraft carburetor

indicator pointer (see *Tune Up & Valve Specifications* table).

Loosen the distributor body clamp and rotate the distributor until the points close. Then turn it in the opposite direction until the breaker points just begin to open and tighten the clamp bolt.

When a timing light is used, the engine should be run at hot idle speed for if it is turning faster the spark may be advanced by the centrifugal weights in the distributor and the timing will not be correct.

To compensate for the grade of fuel being used, and for best performance and fuel economy, it may be necessary to alter the timing slightly from the basic setting.

## CARTER BB CARBURETOR

Figs. 40 and 41 illustrate a Carter BB updraft and downdraft carburetor, re-

spectively. Both units are of the plain tube, fixed jet type which covers all speed ranges except idle, which is controlled by an adjusting needle.

Turning the adjusting screw clockwise gives a leaner mixture and counter-clockwise, a richer mixture. When adjusting the carburetor, a vacuum gauge may be used and the adjustment should be set at the highest reading of the gauge.

In order to provide the additional fuel required for rapid acceleration, the carburetor is equipped with a pump which supplies an extra charge of fuel momentarily, as the throttle is opened.

Two or three positions are provided on the accelerator pump lever in order to give a greater or lesser discharge of fuel, depending upon climatic conditions.

For extremely warm weather or for high altitudes above 3,000 feet, the pump link should be in the hole in the accelerating pump lever which is nearest to the throttle shaft. This position gives the

shortest stroke of the pump.

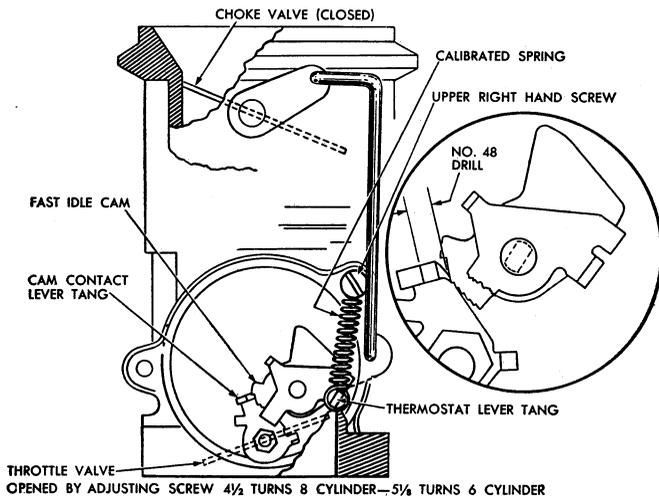
For cold weather operation, the pump link should be in the pump lever hole which is farthest from the throttle shaft. For normal operation the pump link should be in the center hole, if one is provided.

For high altitudes, leaner main metering jets are available, which can be installed by removing the air horn and float. Then, with a special socket wrench which is made for the purpose, unscrew and remove the jet. If leaner main jets are used in lower altitudes, the maximum speed and power developed by the engine will be materially reduced, but slightly greater fuel economy may be obtained. However, it is recommended that the standard jets as furnished with the carburetor be used for best results.

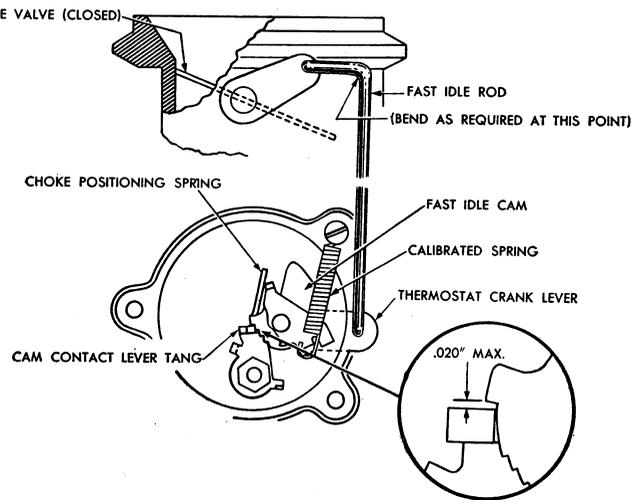
## Float Adjustment

**Units With Solid Needle**—This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on the float arm against the seated intake needle, Fig. 42, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of the float should be as given in the *Carburetor Specifications* table. Adjust by bending lip on float.

**Units With Spring-Loaded Needle**—When using a spring-loaded needle and seat, place a .050" feeler gauge between the lip of the float and the intake needle pin. With intake needle spring fully compressed, the top of the float should be the dimension given in the *Carburetor Speci-*



**Fig. 45 Fast idle setting. Stromberg WW 3-134**



**Fig. 46 Cam position setting. Stromberg WW 3-134**

fications table below the top surface of the carburetor body casting. Adjust by bending the lip on the float.

### Pump Adjustment

To make the adjustment, remove the air horn assembly and back out the throttle adjustment screw. Be sure the pump operating link is in the center hole of the throttle shaft arm.

Place Pump Travel Gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft. Turn the knurled nut of the gauge until the lip contacts the top of the plunger shaft with the throttle valve seated. Take the reading indicated on the gauge. Repeat with the throttle valve wide open and plunger pushed to bottom of cylinder. The difference in reading obtained should be that which is given in the *Carburetor Specifications* table, which is the plunger travel.

Adjust by bending the horizontal por-

tion of the pump lifter link. The pump stroke is adjustable for seasonal operation. Set to the longest stroke for cold weather and shorter stroke for hot weather.

**Dashpot Adjustment**—Engines operating in connection with fluid coupling and torque converter frequently tend to stall during rapid deceleration unless the throttle closes slowly. Slow throttle movement is necessary only during the last part of the closing. The dash-pot or decelerating pump acts as a snubber to the throttle, allowing fast movement to almost closed position, then slow closing from that point to the idle position.

When the throttle is released the throttle valve closes rapidly until throttle shaft arm contacts the dash-pot pick-up arm. Then the dash-pot plunger must be pushed to the bottom of the cylinder before the throttle can close. A ball check, located in the lower end of the plunger shaft, seals the larger upper opening and

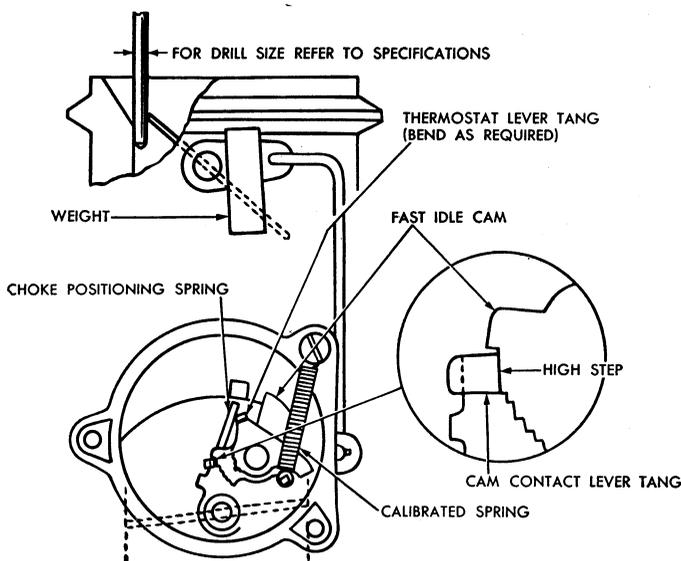
the gasoline must leave the cylinder through the small metered hole in the lower part of the shaft.

The adjustment screw, located in the top of the bowl cover, should be opened five full turns from closed position for average conditions. Under extreme driving conditions, greater openings may be necessary, although extreme dash-pot action will affect gear changes and not enough action will allow engine to stall.

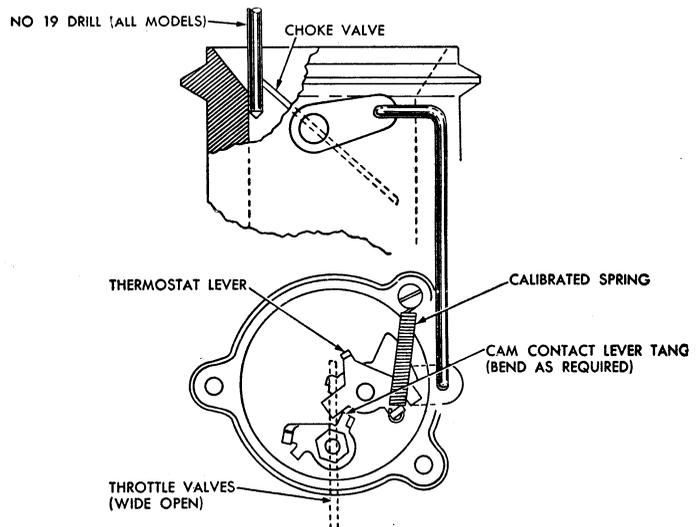
Be sure the leather plunger is soft and pliable and effects a good seal against the cylinder wall.

## CARTER BBD CARBURETOR

This model carburetor can be considered as being two BB carburetors built into one housing.



**Fig. 47 Choke positioning spring adjustment. Stromberg WW 3-134**



**Fig. 48 Unloader adjustment. Stromberg WW 3-134**

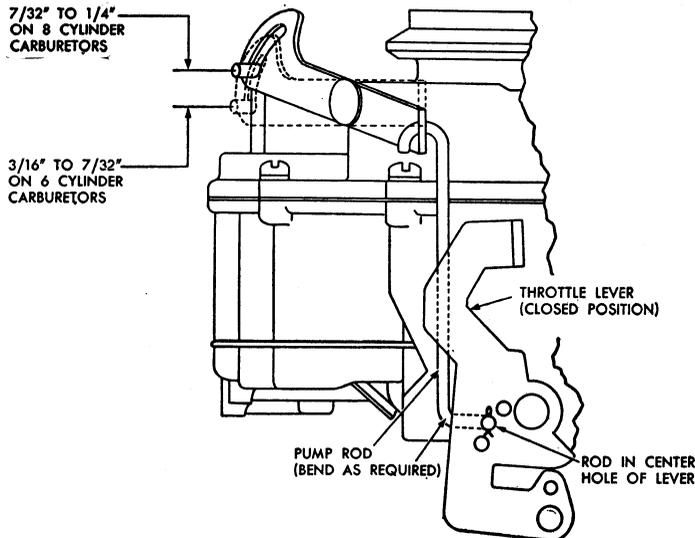


Fig. 49 Accelerator pump adjustment. Stromberg WW 3-134

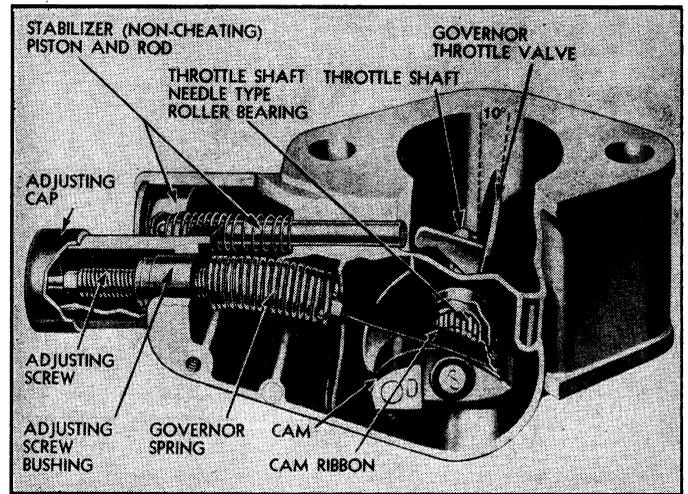


Fig. 52 King-Seeley velocity governor

### Float Adjustment

This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on the float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots.

The distance from the top surface of the body casting, Fig. 43, to the top of each float should be as given in the *Carburetor Specifications* table. If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending the lip on the float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of the floats.

### Pump Adjustment

Back out the throttle adjusting screw so that the throttle valves seat in the bores of the carburetor. Install the pump connector rod in the outer hole of the throttle lever and pump arm pin in the top hole of the plunger shaft. The distance from the top of the bowl cover to the top of the plunger shaft (not pump arm) should be as given in the *Carburetor Specifications* table. Adjust by

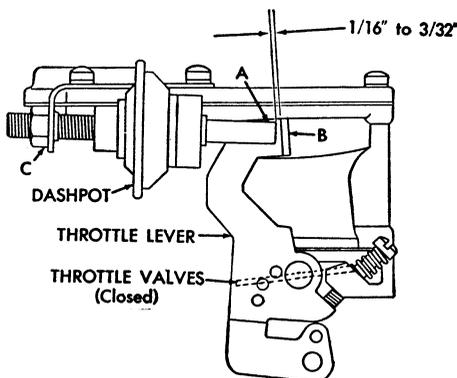


Fig. 50 Dashpot adjustment. Stromberg WW 3-134

bending the pump connector rod at the lower angle.

## CARTER BBR, BBR2 UNITS

These carburetors are essentially the same as the BB units with the exception that the BBR2 is equipped with a kick-down switch for the overdrive transmission.

## CARTER BBS CARBURETOR

### Float Adjustment

This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on the float arm against the seated intake needle,

making sure the float pin is at the bottom of its guide slots.

The distance from the top surface of the body casting to the top of each float should be the dimension given in the chart. If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending the lip on the float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

### Pump Adjustment

Back out the throttle adjusting screw and open the choke valve so that the throttle valve seats in the bore of the carburetor. Install the throttle connector rod in the center hole of the throttle lever.

The distance from the top of the bowl

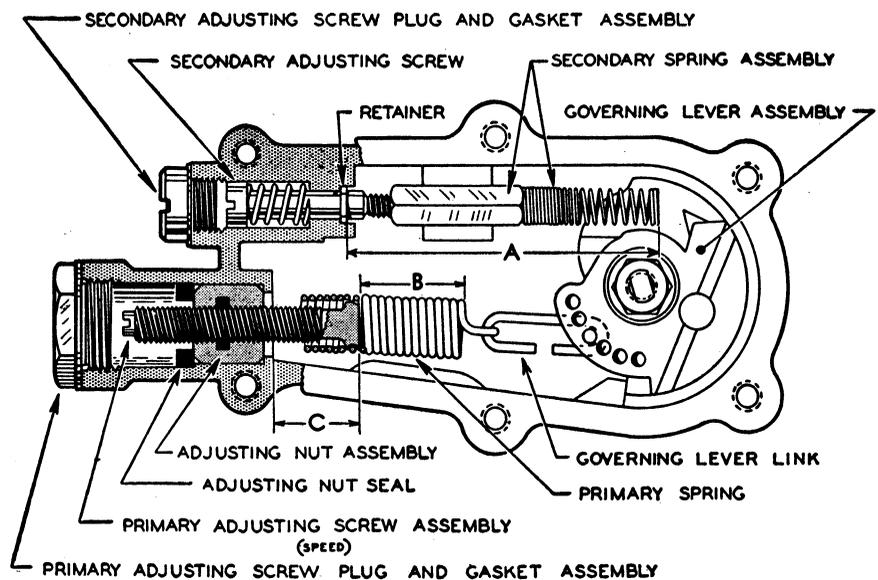


Fig. 51 Carter velocity governor

cover to the top of the plunger shaft (not pump arm) should be as given in the chart. Adjust by bending the throttle connector rod at the lower angle.

## Fast Idle Adjustment

Remove the thermostatic coil housing assembly, gasket and baffle plate. With the throttle adjusting screw backed out, crack the throttle and hold the choke valve in fully closed position. Then close throttle. This will allow the fast idle cam to revolve to the fast idle position. There should now be the specified clearance (see chart) between the throttle valve and bore of carburetor (side opposite idle port). Adjust by bending the choke connector rod at the lower angle.

## Unloader Adjustment

This adjustment must be made after the fast idle adjustment. Hold the throttle valve wide open and close the choke valve as far as possible without forcing. There should now be the specified clearance (see chart) between the upper edge of the choke valve and the inner wall of the air horn. Adjust by bending the arm on the choke trip lever.

When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing and gasket. Set the Climatic Control as specified in the chart, making sure the hook on the coil has picked up the coil shaft lever.

## Dashpot Adjustment

The purpose of the dashpot is to prevent the engine from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by loosening the lock nut and adjusting the dashpot unit so that the dashpot plunger shaft can be moved inward approximately  $\frac{1}{8}$ " with the throttle valve tightly closed. Then tighten lock nut.

## STROMBERG WW CARBURETOR

### Float Setting

The float must be the specified dimension (see chart) from the top of the main body to the top of the float at the center. When checking, be sure float lip is held firmly against the fuel inlet needle. To change the setting, bend the float lip as required.

### Choke Adjustment, All Models

To secure the desired performance from the choke during starting and warm-up, the indicator mark on the choke control housing must be lined up with the projection on the air horn or as otherwise indicated in the chart.

### Fast Idle Adjustment, Model 3-134

To make this adjustment, remove the thermostatic coil housing and insert a thermostat cover screw through the loop of the calibrated spring (Tool T-25906), Fig. 45. (This spring is calibrated for use in making the choke positioning spring setting.)

Remove the spring from the fast idle

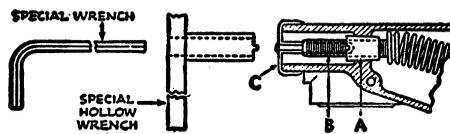


Fig. 53 King-Seeley governor adjustments

adjusting screw, then reinstall the screw without the spring.

With the throttle valves fully closed, turn the fast idle screw *in* so it just contacts the throttle lever. Now turn the screw *in* the number of turns shown in the illustration. This will open the throttle valves a predetermined amount.

With the choke valve closed, and the throttle lever held against the fast idle screw, insert a number 48 drill between the tang on the contact lever and the first step of the fast idle cam. To adjust, bend the tang on the cam contact lever toward or away from the fast idle cam until correct clearance has been obtained. After adjusting, make sure the tang is parallel to the throttle shaft. Remove the fast idle speed adjusting screw and reinstall it with the spring.

### Fast Idle Adjustment, Models 3-153, 3-154, 3-155, 3-170, 3-171

To make this adjustment, turn the idle speed adjusting screw out to clear the throttle lever tang when the throttle valves are closed. Hold the throttle valves closed and turn the fast idle screw out until it just makes contact. From point of contact with step on cam, turn fast idle screw *in*  $5\frac{1}{2}$  turns on models 153, 154, 155 and  $6\frac{1}{2}$  turns on models 170 and 171.

With fast idle screw held in this position, move the choke valve with light pressure toward closed position and insert the proper drill (#24 for 153, 155, #12 for 154,  $9/32$ " for 170, 171) between choke valve and wall of air horn.

Adjust by bending fast idle rod at upper end.

### Fast Idle Cam Adjustment, Model 3-134

To position the fast idle cam, open the throttle valves sufficiently to clear the fast idle cam. Close the choke valve tightly by applying pressure on the valve. Now, force the throttle valves closed against the tension of the cam positioning spring, Fig. 46. In this position the tang on the cam contact lever should just clear the high step of the fast idle cam. This clearance should not exceed .020". Adjust, if necessary, by bending the fast idle rod at the angle until the correct clearance is obtained.

### Choke Positioning Spring Adjustment, Model 3-134

To make this adjustment, be sure the calibrated spring is installed, Fig. 47 (same spring used for fast idle adjustment). Slide weight (Tool T-25864) over choke lever as shown in Fig. 47. Hold carburetor in vertical position. Close throttle valves, making sure cam contact tang is resting on high step of fast idle

cam. Now, lightly close throttle valves. The choke valve should open just enough to insert a number 24 drill between choke valve and wall of air horn.

To adjust, bend the tang of the thermostat lever that contacts the choke positioning spring, using long nose pliers. A *very slight* movement of the tang will result in proper clearance. After adjustment has been made, remove weight from choke lever.

### Unloader Adjust, Model 3-154

To make this adjustment, lightly hold the choke valve closed and open the throttle valves fully. The choke valve should open sufficiently to allow a number 19 drill to be inserted between the choke valve and wall of air horn, Fig. 48. To adjust, bend the tang of the cam contact lever with long nose pliers.

On model 3-134, remove the calibrated spring and screw and reinstall the thermostatic housing and gasket, being sure to align index marks. Hold the choke open and then open and close the throttle valves. Failure to obtain full throttle operation indicates improper assembly or adjustment of the choke mechanism.

With the throttle valves held open, open the choke valve slowly until fully open. There should be no bind throughout the entire travel of the choke mechanism.

### Unloader Adjust, Models 153, 154, 155, 170, 171

Hold choke valve lightly closed and open the throttle valves wide. It should now be possible to insert a #19 drill (153-4-5) or a letter "A" drill (170-1) between choke valve and wall of air horn. Adjust if necessary by bending the tang on the throttle lever.

### Accelerator Pump Adjustment, All Models

*This adjustment is made with the accelerator pump rod in the center hole of the throttle lever, Fig. 49.*

To check the pump travel, hold the carburetor in a vertical position and operate the accelerator pump to permit the check ball at the bottom of the well to take its normal position on the seat.

With the choke valve held open, measure the travel of the accelerator pump as the throttle valves are moved from open to fully closed position. The pump travel should measure as indicated in chart. To adjust, remove the pump rod and bend it as required at the angle.

### Dashpot Adjustment, Model 3-134

With the idle speed adjusting screw set for normal idle speed, there should be  $\frac{1}{16}$ " to  $\frac{3}{32}$ " clearance between points "A" and "B", Fig. 50, when the plunger is pushed to the end of its travel. To adjust, loosen nut "C" and turn the dashpot in the bracket to obtain the correct clearance.

## CARTER GOVERNOR

Before making any governor adjustments, the engine must be tuned to the manufacturer's specifications. Run the

engine until normal operating temperature is reached.

To adjust the governed speed, remove the large cap screw and gasket, Fig. 51, and with a screwdriver, turn the primary adjusting screw clockwise to decrease engine speed, and counterclockwise to increase engine speed.

Do not turn the screw out beyond the end of the governor housing to the extent that it will interfere with the complete tightening of the screw cap. If the adjusting screw is turned too far out the primary spring can become disengaged from the adjusting screw.

## KING-SEELEY GOVERNOR

This governor, Fig. 52, is mounted between the carburetor and intake manifold and automatically governs the maximum speed at which the engine may be operated.

The gas mixture rushing from the carburetor through the governor throat strikes the offset throttle valve and tends to draw it closed. This action is opposed by a governor spring which is

attached to the valve shaft through a cam ribbon and cam. By adjusting the pull of this spring, the governor valve may be made to remain open, and then closed at a predetermined engine speed. Adjustment of the spring pull is accomplished by changing the number of coils operating.

## Governor Adjustment

All governors are calibrated and adjusted in assembly to insure accurate control of the maximum engine speed of the model vehicle for which it is intended. However, there will be occasions when minor adjustments are required to satisfy local conditions where the truck is operating.

To adjust a governor for higher speed, turn the adjusting cap counterclockwise or to the left; for lower speeds turn the cap to the right or clockwise. One turn on the adjusting screw will change the speed 300-400 rpm or between 4 and 5 mph.

When a more sensitive regulation is desired or if the governor is too sensitive

and inclined to surge, correct the adjustment as follows by means of the calibrating nut shown at "A", Fig. 53.

**If Governor is too Sensitive**—If the governor is too sensitive or on the point of surging, remove the adjusting cap and hexagonal shaft assembly and place the special hollow wrench (A-24283) in position on nut "A". Insert the special adjusting wrench (A-25264) through this wrench and turn the main adjusting screw "B" to the right one turn. (These wrenches are available at King-Seeley Distributors.) With the hollow wrench in the slot of nut "A", turn this nut to the right about ¼ turn. The main adjusting screw "B" must be kept from turning while nut "A" is adjusted.

**If Governor is Not Stable**—If a more sensitive governor is desired, adjust main screw "B" to the left one turn and, while holding this screw in the new position, turn nut "A" to the left ¼ turn at a time until the desired regulation is obtained. When the adjustment is completed, tap lightly on the end of the hollow wrench so that nut "A" will seat properly.

# Clutch Section

## BORG & BECK

These clutches, Fig. 1, are single plate, dry disc types with no internal provision for adjustment for wear. However, each release lever is adjusted individually to the correct height, and no attempt should be made to adjust these levers unless the clutch is to be dismantled for overhaul. Overhauling the clutch should not be attempted unless a clutch re-builder is available. Lacking this equipment it is recommended that the clutch cover and pressure plate assembly be exchanged for a rebuilt unit.

## CLUTCH PEDAL, ADJUST

### All C Series Except Y & YX

The clutch pedal free travel is adjusted by loosening both the lock nuts and rotating the turnbuckle to shorten or lengthen the travel as required. Check the distance of free pedal motion to the following specifications:

¾" to 1" on models G8, H8, J8, K8 and R8.

1¼" to 1⅝" on models T8 and V8.

1⅝" to 1¾" on all six-cylinder models.

### C Models Y & YX

Loosen the lock nut on the clutch pedal stop screw and rotate the stop screw to lengthen or shorten the distance of free travel as required to bring it within the limits of 1¼" to 1⅝".

### All B Models Except DU & EU

Loosen the pedal adjusting screw lock

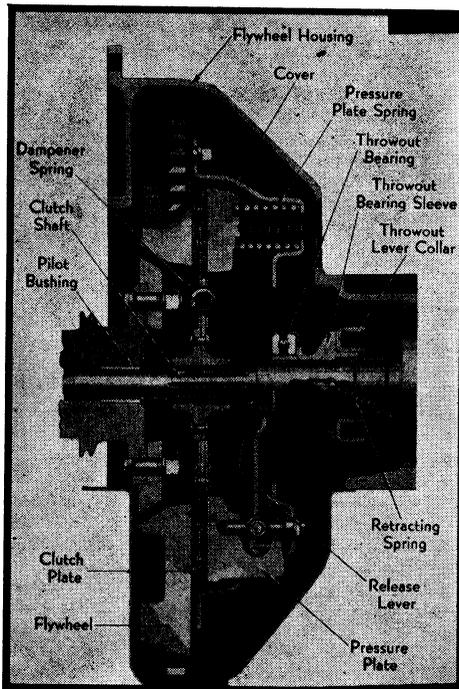


Fig. 1 Borg & Beck clutch. Typical of that used on all models

nuts and turn the pedal adjusting screws until the pedal has 1" to 1⅝" free movement.

On C.O.E. and WFM models, the adjustment for free pedal movement is made by turning the swivel on the connecting rod between the pedal and operating lever.

## B Models DU & EU

Remove the clevis that holds the adjusting rod to the operating lever. Loosen the nut and adjust the rod to obtain 1" to 1⅝" free pedal movement.

## K & L Models

Loosen the lock nut on the clutch pedal stop screw and rotate the turnbuckle to shorten or lengthen travel as required. Check the free play and adjust as necessary to conform to the following specifications:

1½" to 1¾" on 700, 800 and 900 models.

1⅝" to 1¾" on all other models.

## CLUTCH, REMOVE

### C-1 & C-3 Models B, C, D, DU, EU, PW, R, T, V

1. Remove transmission.
2. Remove clutch housing pan.
3. Remove clutch release bearing.
4. Mark clutch cover and flywheel to assure proper balance when clutch is installed.
5. Remove clutch cover retaining screws and take out clutch and disc.

### C-1 & C-3 Models F, G, H, J, K

1. Remove transmission floor cover.
2. Remove transmission.
3. Remove clutch housing pan.
4. Remove clutch release bearing.
5. Mark clutch cover and flywheel to assure proper balance when clutch is installed.
6. Remove clutch cover retaining screws and take out clutch and disc.

**1949-56 Three & Four Speed  
C, D, DU, F, G, GM, PW.**

1. Remove transmission.
2. Remove clutch housing pan.
3. Remove clutch release bearing.
4. Mark clutch cover and flywheel to assure proper balance when clutch is installed.
5. Unfasten clutch cover from flywheel and take out clutch and disc.

**B-1, B-2, B-3 & B-4 Models H,  
HH, J, KA, EU, R, T, V, Y.**

1. Remove all floor boards.
2. Remove transmission.
3. Remove clutch housing pan.
4. Remove clutch release bearing.
5. Disconnect booster brake control valve linkage at brake pedal, master cylinder and frame bracket. Then remove control valve.
6. Disconnect clutch release fork bracket at clutch housing.
7. Remove clutch release fork flange cap screws and pull release fork

with pedal and bushings out of clutch housing far enough to provide clearance for clutch assembly to pass cross shaft clutch release fork.

**K & L Models**

1. Remove the transmission.
2. Remove the clutch housing pan.
3. Remove clutch fork, bearing and sleeve assembly.
4. Mark clutch cover and flywheel to assure proper balance when clutch is installed.
5. Remove clutch cover retaining screws and pull the pressure plate clear of flywheel and, while supporting pressure plate, slide the disc from between flywheel and pressure plate. On some models it may be necessary to rotate the pressure plate to the point of maximum clearance. Then allow plate assembly to drop while tilting the top edge of the clutch cover back to clear the frame crossmember.

**CLUTCH, INSTALL**

**All Models**

When installing the clutch, coat the pilot bearing in the end of the crankshaft with wheel bearing grease. Clean the surfaces of the flywheel and pressure plate, making certain no oil or grease remains on these parts. Hold the cover plate and disc in place and insert a special clutch aligning tool or a spare clutch shaft through the hub of the disc and into the pilot bearing in the crankshaft. Bolt the clutch cover loosely to the flywheel, being sure that punch marks previously made are lined up.

To avoid distortion of the clutch cover, tighten the cover bolts a few turns each in progression until all are tight.

Guide the transmission into place, using care to see that the driven disc is not bent. Use a floor jack to support the transmission so that the clutch shaft may be guided through the driven disc safely. Finally, adjust the clutch pedal free travel.

**Manual Shift Transmission Section**

**TRANSMISSIONS**

Year	Make <sup>①</sup>	Model <sup>①</sup>	Speeds	Type	Oil, Pts.
1949	Dodge	....	3	Synchromesh	3½
1950-58	New Process	....	3	Synchromesh	3½
1955-58	Warner	T87D	3	Synchromesh	6
1949-56	Warner	T9, T9A	4	Spur Gear	6
1950-56	New Process	....	4	Synchromesh	5½
1957-58	New Process	420	4	Synchromesh	5½
1949-56	New Process	....	5	Helical Gear	9¾
1950-56	New Process	....	5	Synchromesh	9½
1957-58	New Process	540 ②	5	Synchromesh	9½
1957-58	Clark	265 ②	5	Synchromesh	12
1954-57	Clark	290 ②	5	Helical Gear	16
1958	Clark	300 ②	5	Synchromesh	12
1956-58	Spicer	5831 ②	3	Auxiliary	4
1958	Spicer	6041 ②	4	Auxiliary	8
1956-58	Spicer	6231 ②	3	Auxiliary	8

① See name plate on housing for make and model identification.

② See the *Stock Transmissions Chapter* for service on this unit.

**TRANSMISSION, REPLACE**

**1949-58 Three & Four Speed  
(Except C.O.E.)**

Remove the lower floor board and mat. Disconnect battery ground cable, speedometer cable, universal joints, and drop center bearing (if so equipped). Remove the nuts which hold the transmission to the clutch housing and insert pilot studs in place of the two upper studs. Withdraw the transmission.

To install, reverse the foregoing operations.

**1949-58 Five Speed  
(Except C.O.E.)**

Remove the floor mat and cover over

transmission. Disconnect speedometer cable, brake cables and propeller shaft. Drop center bearing if so equipped.

Place a jack under the transmission and remove the cap screws which hold the transmission to the clutch housing. Pull the transmission with the jack straight back about 6 inches. Lower the jack slightly and move the transmission to the left so that the main drive gear will clear the clutch housing.

To install, reverse the foregoing operations.

**1949-58 C.O.E. Models**

Because of a frame crossmember at the rear of the transmission, remove the unit as follows:

Remove transmission cover. Discon-

nect propeller shaft and drop center bearing if truck is so equipped. Place a jack under the transmission and detach the transmission from the clutch housing. Pull the transmission straight back with the jack about 6 inches. Lower the jack slightly and move the transmission to the left so that the main drive gear will clear the clutch housing.

To install, reverse the foregoing procedure.

**TRANSMISSION REPAIRS  
1949 THREE SPEED**

**Disassemble**

1. Remove transmission cover assembly.
2. Use puller to remove universal joint flange and brake drum.
3. Remove speedometer pinion and oil seal.
4. Disconnect hand brake rod at brake band and unfasten hand brake linkage from transmission.
5. Remove brake support, oil seal and hand brake assembly.
6. Remove speedometer drive gear.
7. Pull mainshaft far enough to the rear to install a puller on the rear bearing and remove bearing.
8. Lift mainshaft and gears out of case.
9. Slide low and reverse gear off mainshaft.
10. Remove snap ring and slide clutch gear and second speed gear from mainshaft.
11. Remove countershaft lock screw and lock.
12. Drive countershaft out of rear end of case, allowing gear cluster to drop to bottom of case.