

# CARBURETOR SERVICE PROCEDURES

## Tillotson KA, KB, KC Series Carburetor

**Note:** Some models of the above listed Tillotson Series carburetors may vary slightly in general design and appearance from others, but basic cleaning and adjustment procedure will remain the same.

### I. DISASSEMBLY

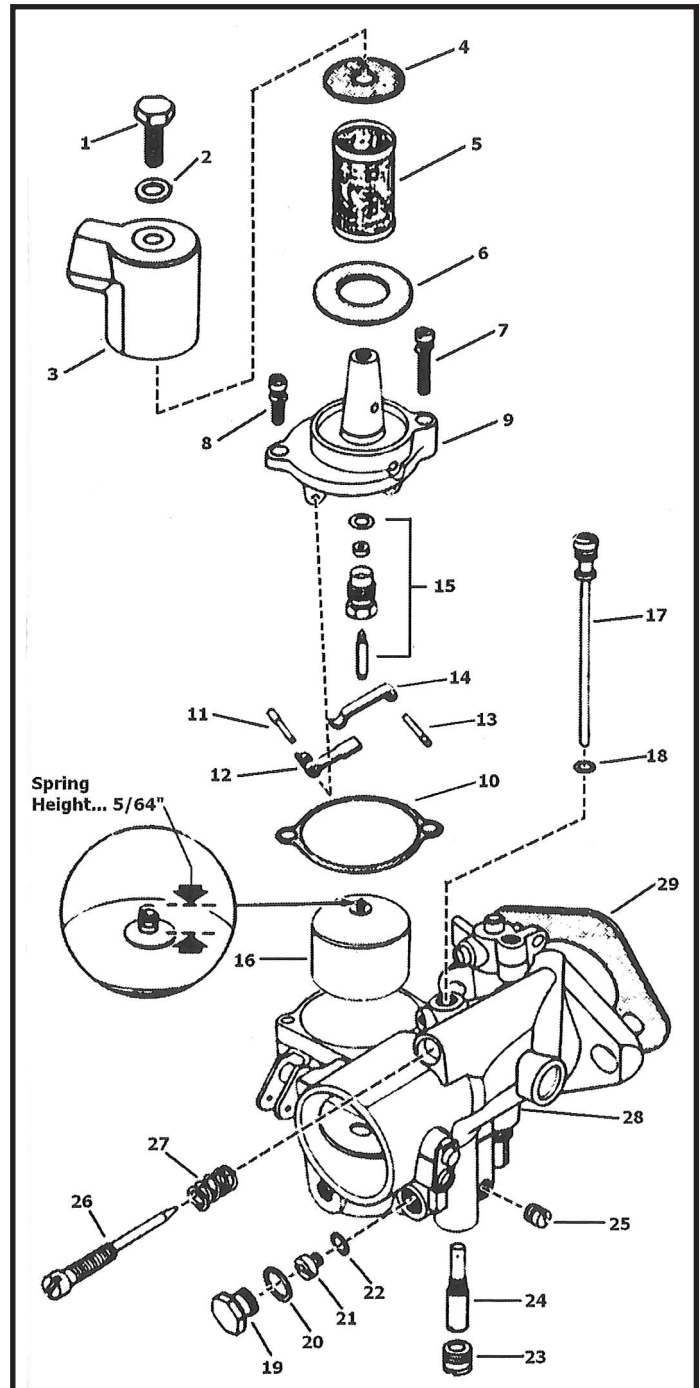
Using the exploded view as guide, disassemble carburetor only far enough to permit a thorough cleaning. Removal of choke or throttle valve assembly is generally not necessary unless parts are damaged requiring repair or replacement. When removing main jet and nozzle (21 and 24) use screw driver of exact size to prevent damage to jets or retaining threads in carburetor body.

### II. CLEANING

Using a regular carburetor cleaning solution, soak parts long enough to give a thorough cleaning. Do not soak any parts containing rubber, cork or plastic if they are to be reused. Use a small bristle brush to aid in cleaning. Rinse parts in a suitable solvent and thoroughly blow out all parts and passages with dry compressed air.

Ref. No.	Nomenclature
1.	Strainer Cover Screw
2.	Strainer Cover Screw Gasket
3.	Strainer Cover
4.	Strainer Cover Gasket (Small)
5.	Strainer Screen
6.	Strainer Cover Gasket (Large)
7.	Float Bowl Cover Screw (Long)
8.	Float Bowl Cover Screw (Short)
9.	Float Bowl Cover
10.	Float Bowl Cover Gasket
11.	Float Lever Pin (Primary)
12.	Float Lever (Primary)
13.	Float Lever Pin (Secondary)
14.	Float Lever (Secondary)
15.	Inlet Needle, Seat and Gasket
16.	Float Assembly
17.	Idle Tube
18.	Idle Tube Gasket
19.	Main Jet Plug Screw
20.	Main Jet Plug Screw Gasket
21.	Main Fuel Jet
22.	Main Fuel Jet Gasket
23.	Main Nozzle Plug Screw
24.	Main Nozzle
25.	Body Channel Plug Screw
26.	Idle Adjusting Screw
27.	Idle Adjusting Screw Spring
28.	Carburetor Body
29.	Flange Gasket

### EXPLODED VIEW OF TYPICAL TILLOTSON KA SERIES CARBURETOR



FORM NO.  
16-SE-14

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### 3. REASSEMBLY

Reassemble carburetor in the reverse order of disassembly, paying particular attention to the following:

**A.** Examine idle adjusting screw (26) making certain tapered tip is not grooved or damaged from excessive tightening. Replace if damaged. When installing, lightly bottom (do not force), then back out screw  $\frac{1}{2}$  to  $\frac{3}{4}$  turn for initial setting. Make final mixture setting as stated in adjustment section 4-C.

**B.** Check float assembly (16) for deterioration, saturation and loss of sealer. Make certain that float spring extending from top of float has not been stretched out of shape.

**C.** With float spring in place, in top of float (16), the distance measured from top of spring to top of float should be  $\frac{5}{64}$ " (see exploded view).

**D.** When installing the fuel inlet needle and seat assembly (15), note that some models will contain a resilient tipped needle valve while others will contain a removable insert type resilient seat. The resilient seat type has one side grooved and the other side smooth. The smooth side must face tip of inlet needle valve.

### 4. ADJUSTMENTS

#### A. Float Lever: (Fig.1)

Invert float bowl cover allowing only weight of levers to close inlet needle in seat. There should now be a distance of  $\frac{13}{32}$ " measured from primary lever to gasket surface on bowl cover. If an adjustment is necessary, bend secondary lever.

#### B. Inlet Needle Clearance: (Fig.2)

Carefully hold float bowl cover upright allowing float levers

to drop, but inlet needle remaining seated. There should now be a distance of  $.040$ " measured between end of inlet needle and secondary lever. If an adjustment is necessary, bend tang on end of primary lever that contacts stop on casting.

**Caution:** Never force inlet needle into resilient seat when checking or making float lever adjustments. An incorrect setting or possible damage could result.

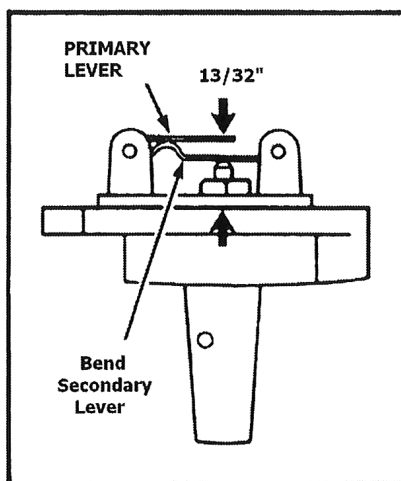
#### C. IDLING: (Fig.3)

Check before starting engine.

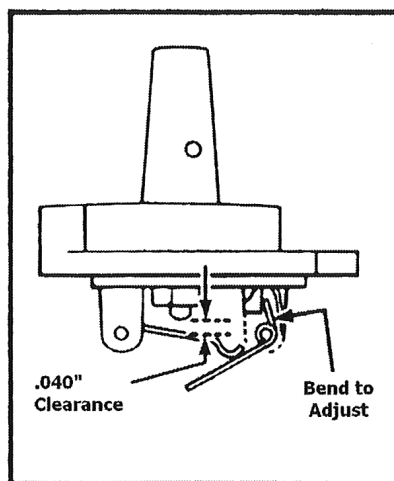
1. Idle adjusting screw should be backed out  $\frac{1}{2}$  to  $\frac{3}{4}$  turn from lightly bottomed position.
2. Proper fuel mixture in tank.
3. Fuel valve open under tank.
4. Loosen air valve on tank cap.

#### To Adjust

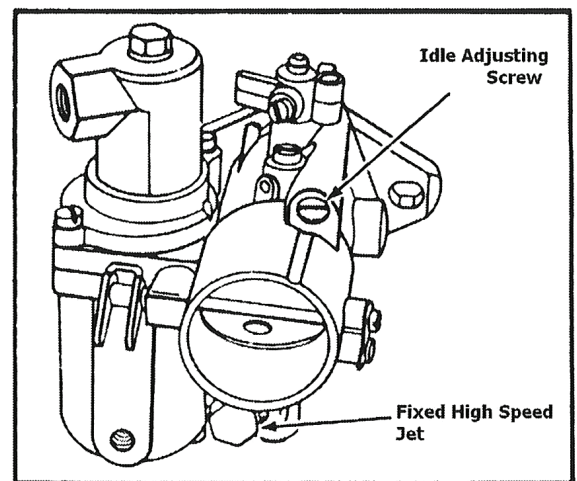
1. Advance throttle control lever to start position. Close choke and pull starting rope vigorously.
2. After starting, open choke and allow engine to warm up thoroughly running at a moderate speed.
3. Close throttle to idle position and slowly turn idle adjusting screw inward until engine speed begins to decrease. Then, slowly turn screw outward until engine speed increases to a point of smooth and steady idle.
4. Open throttle to high speed for a few moments and then recheck idle adjustment for best setting.



Figure# 1



Figure# 2



Figure# 3