

## TYPE Y-S CARBURETOR, MODEL 6375

## Section I. DESCRIPTION AND DATA

## 89. Description

The type Y-S carburetor (fig. 55) is a single throat unit of water-proof design for use on deep fording vehicles.

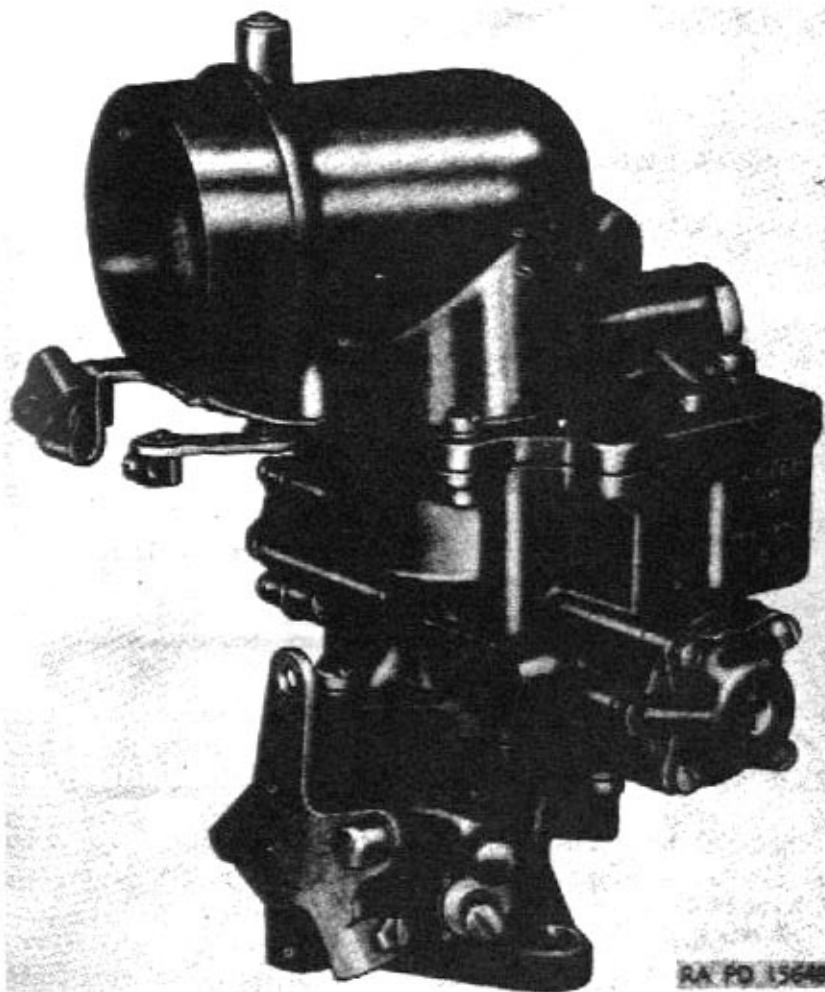


Figure 55. Type Y-S carburetor, model 6375.

**101. General**

The only adjustment which can be made on this carburetor is float level setting. It is important that this be done accurately since the proper functioning of the high-speed circuit depends to a large extent upon the maintaining of the correct fuel level.

**102. Float Level Adjustment**

(fig. 61)

Invert the air horn and hold it level so that only the weight of the float is on the needle. The distance from the lowest point on the seam of the float to the machined surface of the bowl cover should be one-quarter inch as measured with float level gage CAR-T109-81. Adjust level by bending lip of float. Do not bend float.

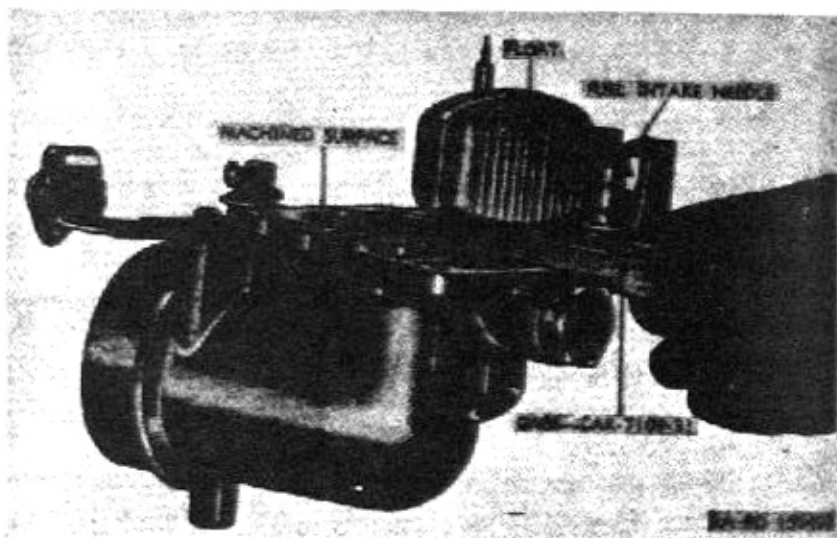


Figure 61. Adjusting float level with gage CAR-T109-81, type Y-S carburetor.

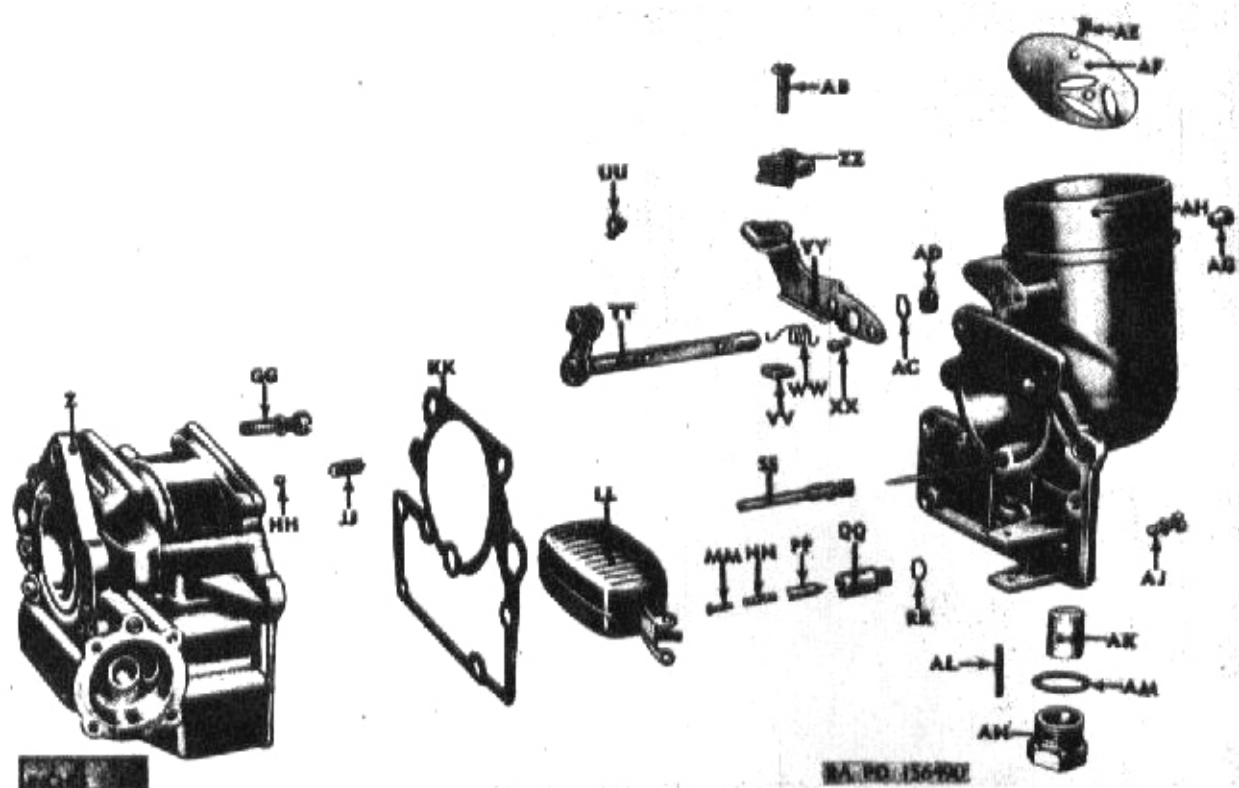
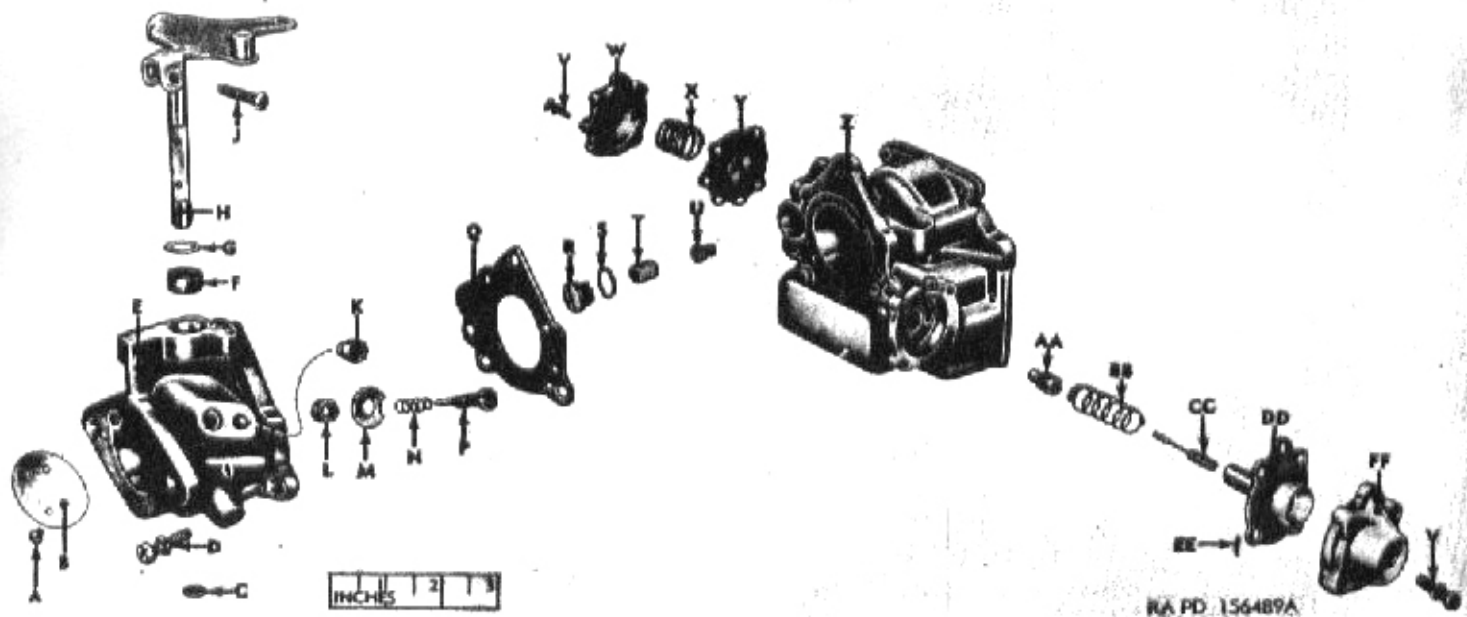


Figure 60. Type Y-8 carburetor, model 837B—exploded view—Continued

A—THROTTLE VALVE PLATE SCREW	U—INTAKE CHECK VALVE	RR—NEEDLE SEAT GASKET
B—THROTTLE VALVE PLATE	V—DIAPHRAGM HOUSING	RS—BLEEDER TUBE
C—EXPANSION PLUG	LOCK WASHER SCREW	TT—CHOKE SHAFT AND LEVER
D—MAIN BODY LOCK WASHER SCREW	W—PUMP DIAPHRAGM HOUS- ING	UU—CHOKE WIRE CLAMP SCREW
E—THROTTLE BODY	X—PUMP SPRING	VV—TUBE CLAMP NUT
F—THROTTLE SHAFT SEAL	Y—PUMP DIAPHRAGM	WW—CHOKE SPRING
G—THROTTLE SHAFT SEAL, WASHER	Z—MAIN BODY	XX—CHOKE TUBE BRACKET LOCK WASHER SCREW
H—THROTTLE SHAFT AND LEVER	AA—METERING ROD JET	YY—CHOKE TUBE BRACKET
J—THROTTLE ADJUSTMENT SCREW	BB—METERING ROD SPRING	ZZ—TUBE CLAMP
K—IDLE PORT PLUG	CC—METERING ROD	AB—TUBE CLAMP SCREW
L—IDLE ADJUSTMENT SCREW, DUST SEAL	DD—METERING ROD DIA- PHRAGM	AC—CHOKE SHAFT SEAL WASHER
M—IDLE ADJUSTMENT SCREW DUST SEAL WASHER	EE—METERING ROD PIN	AD—CHOKE SHAFT SEAL
N—IDLE ADJUSTMENT SCREW, SPRING	FF—METERING ROD DIA- PHRAGM HOUSING	AE—CHOKE VALVE PLATE SCREW
P—IDLE ADJUSTMENT SCREW	GG—MAIN BODY LOCK WASHER SCREW	AF—CHOKE VALVE PLATE
Q—MAIN BODY GASKET	HH—DISCHARGE CHECK BALL	AG—CHOKE SHAFT PLUG
R—INTAKE PASSAGE PLUG	JJ—DISCHARGE CHECK BALL, WEIGHT	AH—AIR HORN
S—INTAKE PASSAGE PLUG GASKET	KK—AIR HORN GASKET	AJ—AIR HORN LOCK WASHER SCREW
T—PUMP STRAINER	LL—FLOAT	AR—STRAINER
	MM—INTAKE NEEDLE PIN	AL—FLOAT PIN
	NN—INTAKE NEEDLE SPRING	AM—STRAINER NUT GASKET
	PP—FUEL INTAKE NEEDLE	AN—STRAINER NUT
	QQ—NEEDLE SEAT	

Figure 60. Type Y-S carburetor, model 657S—exploded view.

## 96. General

Most carburetor troubles are caused by dirt which restricts jets and air bleeds or interferes with the free operation of moving parts. The instructions which follow cover the procedures for completely cleaning and adjusting the carburetor. If the carburetor is to be rebuilt, it is advised that a complete repair parts package be installed. Obviously, if this is done, those parts which are to be replaced need not be cleaned and inspected. Whenever the carburetor is serviced a new gasket assortment should be installed.

## 97. Disassembly

(fig. 60)

a. *Disassemble Main Body.*

- (1) Remove air horn lock washer screws (AJ) and lift air horn (AH) and gasket off.
- (2) Remove discharge check ball (HH) and discharge check ball weight (JJ) by inverting carburetor.
- (3) Remove pump diaphragm housing lock washer screw (V), pump diaphragm housing (W), pump spring (X), and pump diaphragm (Y).
- (4) Remove metering rod diaphragm housing (FF), metering rod spring (BB), metering rod (CC), and metering rod diaphragm (DD). Detach metering rod pin (EE) and metering rod (CC) from diaphragm.
- (5) Unscrew metering rod jet (AA).
- (6) Remove main body lock washer screw (D) and gasket (Q) from main body (Z) and throttle body (E).
- (7) Remove intake passage plug (R), intake passage plug gasket (S), pump strainer (T), and intake check valve (U).

b. *Disassemble Air Horn.*

- (1) Remove float pin (AL) and float (LL).
- (2) Remove fuel intake needle (PP), needle seat (QQ), needle seat gasket (RR), intake needle pin (MM), and intake needle spring (NN).
- (3) Remove choke tube bracket lock washer screw (XX), choke tube bracket (YY), and choke spring (WW).
- (4) Remove choke valve plate screw (AE), choke valve plate (AF), and choke shaft and lever (TT).
- (5) Drive out choke shaft plug (AG).
- (6) Remove choke shaft seal washer (AC) and choke shaft seal (AD).

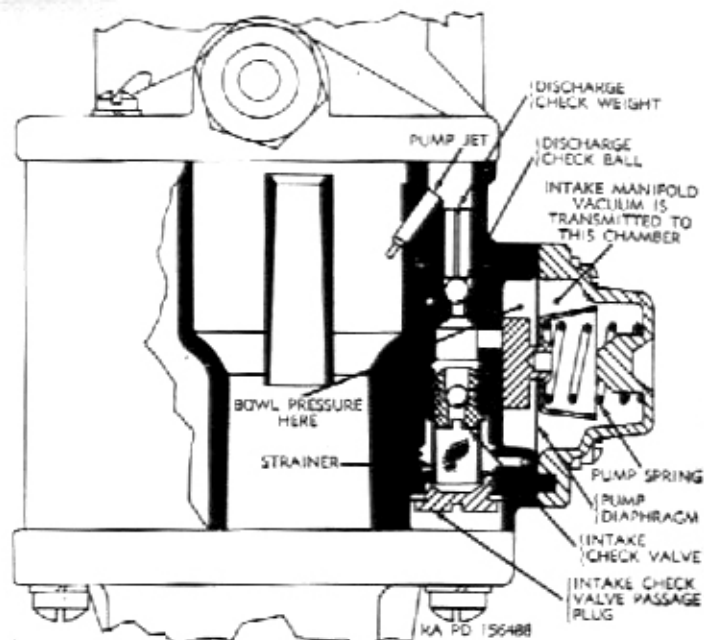


Figure 59. Type Y-S carburetor, pump circuit.

## 94. Choke Circuit

A manually operated choke is used. A poppet valve, built into the choke valve plate, gives inward relief to prevent flooding when the choke is closed.

## 95. Data

Table VIII gives the following data for the Y-S carburetor: sizes of main venturi, bypass, and economizer; stock numbers of the metering rod, metering rod jet, low-speed jet, repair parts package, gasket assortment, float level setting, and gage number.

Table VIII. Y-S carburetor, model 6378.

Main venturi (diam-in).....	1 $\frac{1}{32}$	Metering rod jet.....	7872519
Bowl vent.....	Balance vented by means of tube from air horn to air cleaner.	Repair parts package.....	CAR-120-107 7372520
Bypass (drill size).....	No. 52	Gasket assortment.....	CAR-1500 737251L
Economizer (drill size).....	No. 56	Float level (in).....	CAR-188 $\frac{3}{4}$
Metering rod.....	7372526 CAR 75-5958	Float level gage.....	CAR-T109-31
		Set idle adjustment (turns open).....	1 to 1 $\frac{1}{4}$

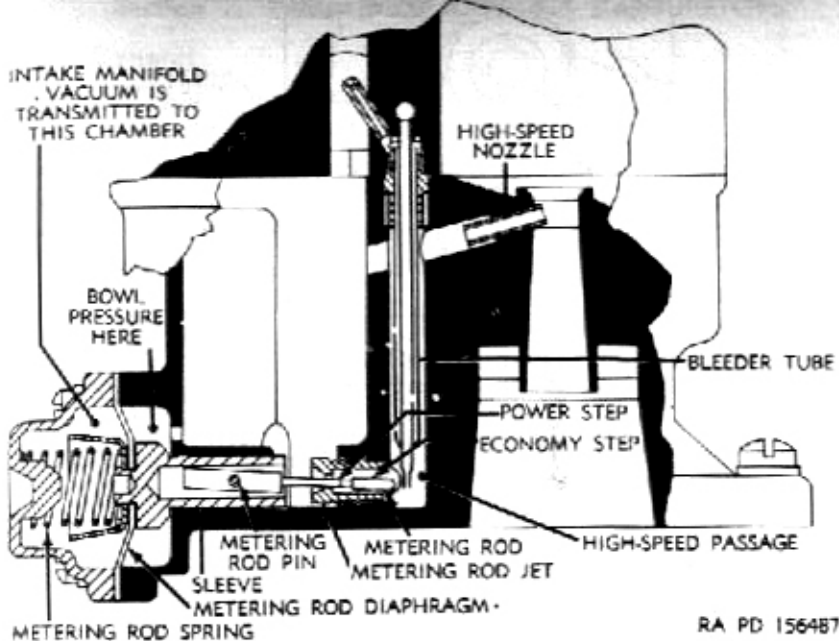


Figure 58. Type Y-8 carburetor, High-speed circuit.

held back against the force of the spring. This results in the positioning of the larger (economy) step of the metering rod in the jet. When manifold vacuum drops, under high load conditions, the spring forces the diaphragm forward, positions the smaller (power) step of the metering rod in the jet and permits the required additional fuel to flow.

### 93. Pump Circuit

(fig. 59)

The operation of the pump circuit is quite similar to that described for the vacuum operated metering rod; however, the movement of the diaphragm, instead of positioning the metering rod, is used to pump a small quantity of fuel from the bowl into the carburetor bore. When the throttle is opened, intake manifold vacuum drops, the spring forces the diaphragm forward, closing the intake check valve and forces a charge of fuel through the discharge check and out of the pump jet into the bore of the carburetor. When the throttle is closed, the intake manifold vacuum increases and the diaphragm is pulled back. This action closes the discharge check valve and draws a supply of fuel from the bowl into the pump via the open intake check valve.

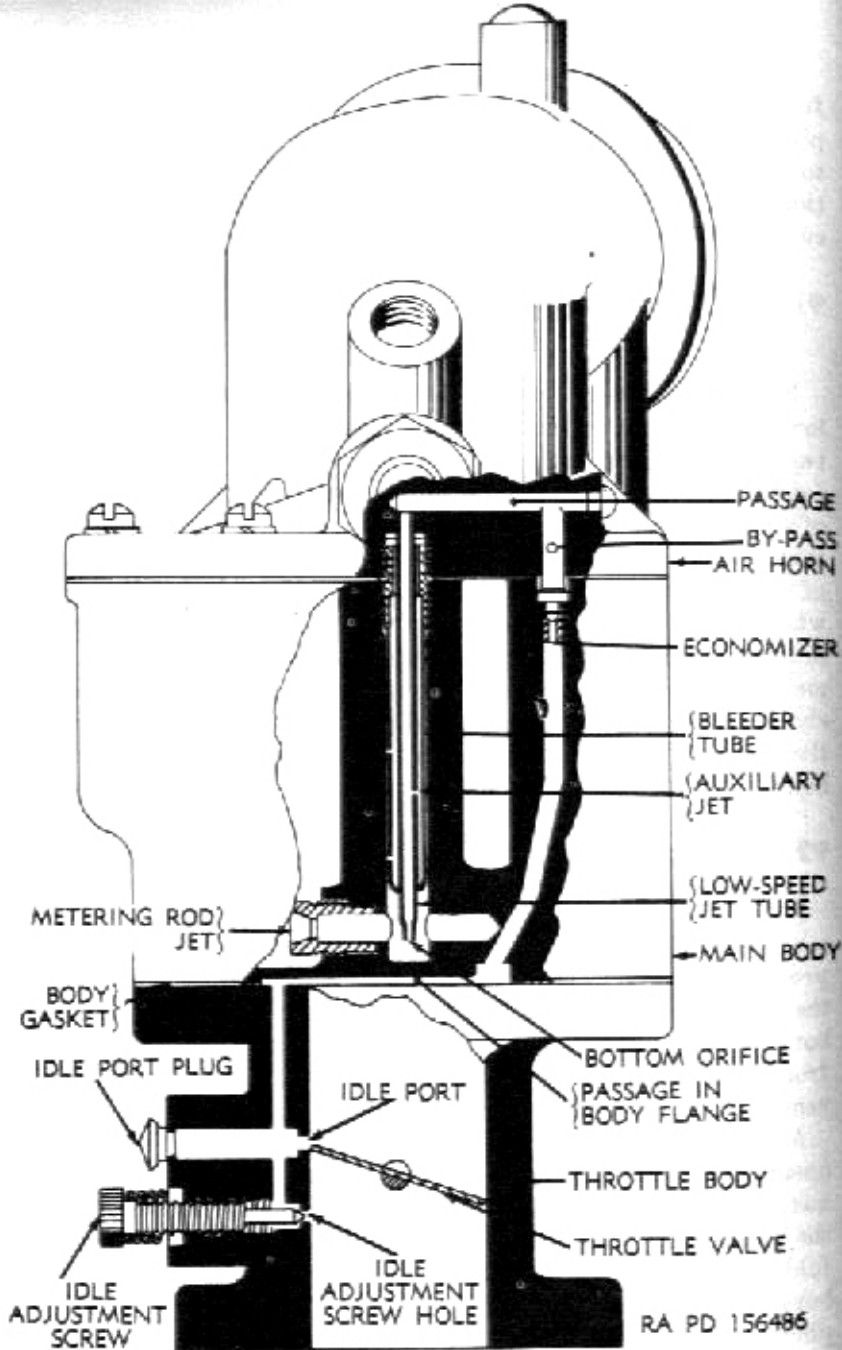


Figure 57. Type Y-8 carburetor, low-speed circuit.



- (7) Remove strainer nut (AN), strainer nut gasket (AM), and strainer (AK).
  - (8) Remove bleeder tube (SS) (use  $\frac{1}{4}$ -inch open end wrench).
- c. Disassemble Throttle Body.*
- (1) Remove idle adjustment screw (P), idle adjustment screw spring (N), idle adjustment screw dust seal washer (M), and idle adjustment screw dust seal (L).
  - (2) Remove idle port plug (K).
  - (3) Remove throttle valve plate screw (A), throttle valve plate (B) and throttle shaft and lever (H).
  - (4) Drive out throttle shaft seal (F) and throttle shaft seal washer (G).

## 98. Cleaning

Soak all parts, except seals and diaphragms, in dry-cleaning solvent or volatile mineral spirits for at least 20 minutes. Blow out all castings with compressed air. Blow out all passages by applying tip of blow gun directly to the opening into the passage. Remove any carbon accumulation from the bore of the throttle body by scraping or with wet or dry sandpaper.

**Caution:** Do not use emery cloth.

Blow out all nozzles and jets, and bleeder tube with compressed air.

## 99. Inspection and Repair

(fig. 60)

### *a. Air Horn, Main Body, and Throttle Body.*

- (1) Check air horn (AH) for warpage, out of roundness, and wear on the choke shaft bearings. Replace if necessary.
- (2) Inspect throttle body (E) for wear on the throttle shaft bearings. Replace if worn.
- (3) Be sure that all passages in air horn (AH), main body (Z), and throttle body (E) are clear.

### *b. Float Circuit.*

- (1) Check fuel intake needle (PP) and needle seat (QQ) for wear (par. 31b(1)). Replace if necessary.
- (2) Inspect float (LL) for loading, damage, and wear. Replace if necessary. If lip of float is worn, it should be smoothed with fine emery cloth.

*Note.*—Do not file.

- (3) Inspect float pin (AL) for wear. Replace if worn.

*c. High-Speed Circuit.* Be sure that metering rod diaphragm housing (FF) is not warped. If it is, true the surface by draw filing. Carefully inspect the diaphragm for damage or wear. Replace if there is any doubt as to its serviceability.

(2) *No black smoke from exhaust pipe. White oxide deposit on spark plugs insulators caused by lean mixture.*

- (a) *Low float level. Reset to specifications (tables IV to XI, pars. 28, 44, 61, 78, 95, 109, 124, and 140).*
- (b) *A too small metering jet or a too large metering rod. Replace with specified rod or jet (tables IV to XI, pars. 28, 44, 61, 78, 95, 109, 124, and 140).*
- (c) *Two gaskets used under high speed nozzle where one should be used (par. 83e(8)). Remove one gasket.*
- (d) *Restriction in high speed passage. Clean passage.*
- (e) *Antipercolator closing too late. Set to specifications (par. 69b).*
- (f) *Main vent tube loose (B-B carburetors). Replace tube (pars. 114d and 145e).*

**b. Hard Starting.**

(1) *Hard starting when cold.*

- (a) *Choke not closing properly. Repair or replace choke linkage and/or choke control cable. Centralize choke valve. Repair automatic choke if used (par. 77).*
- (b) *Bowl being drained. Loose plug in bottom of bowl. Tighten plug.*

(2) *Hard starting when hot.*

- (a) *Overchoking. Automatic choke not opening soon enough. Repair choke (pars. 81f and 88a).*
- (b) *Antipercolator not opening. Adjust antipercolator (par. 69b).*

**c. Lacks Power.** The same causes that give poor mileage will cause a lack of power. In addition, check the following which may cause poor performance at wide open throttle.

(1) *Vacuumeter not operating (WCD carburetors).*

- (a) *Piston stuck in closed position by gummy deposits. Clean piston and cylinder.*
- (b) *Spring left out. Install proper spring.*

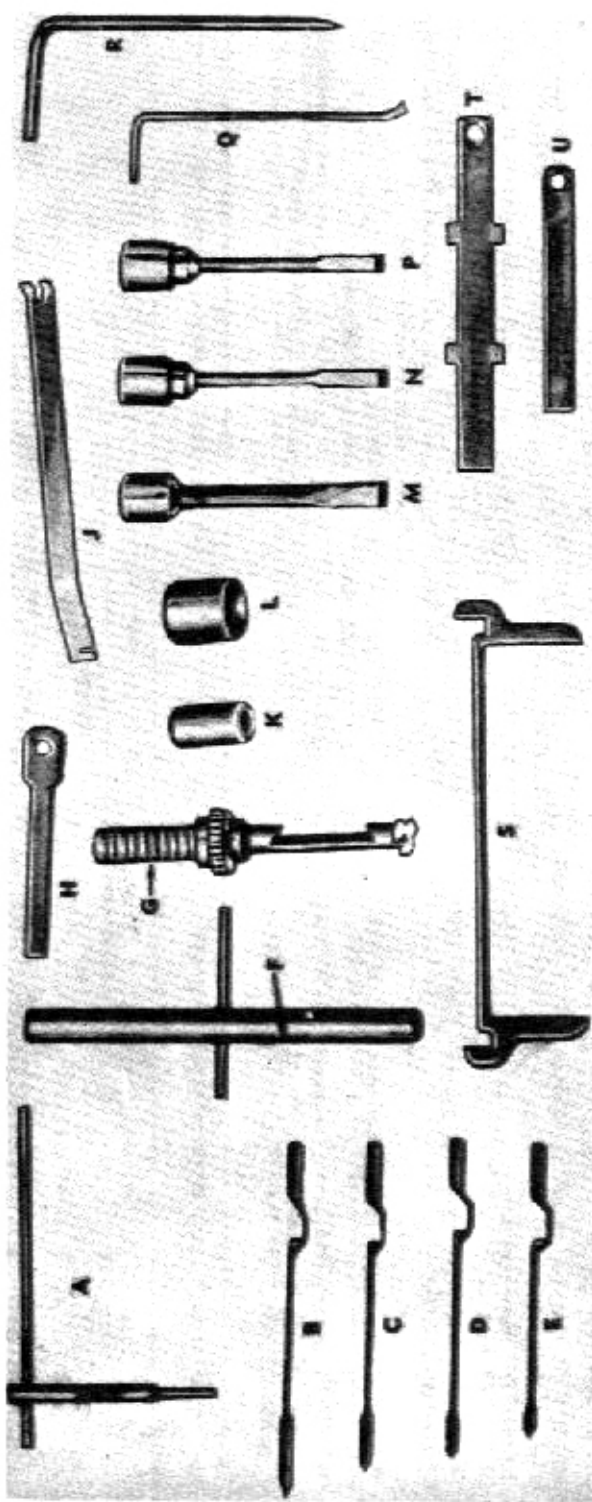
(2) *Step-up system not operating (B-B carburetors).*

- (a) *Step-up piston stuck in closed position by gummy deposits. Clean piston and cylinder.*
- (b) *Spring left out. Install correct spring.*
- (c) *Step-up rod left out (B-B updraft carburetors). Install rod.*
- (d) *Step-up rod installed upside down (B-B updraft carburetor). Install correctly (par. 129c).*

**d. Poor Idle.**

(1) *Engine rolls or gallons caused by a too rich mixture.*

- (a) *Carburetor idle improperly adjusted. Adjust idle.*



A—REMOVER—41-R-2384-25  
 B—GAGE—41-G-234-75  
 C—GAGE—41-G-234-55  
 D—GAGE—41-G-234-50  
 E—GAGE—CAR-T109-27  
 F—WRENCH—41-W-715  
 G—GAGE—41-G-256

H—GAGE—CAR-T109-31  
 J—WRENCH—41-W-1390  
 K—WRENCH—41-W-3734  
 L—CYLINDER—41-C-127  
 M—BIT, SCREWDRIVER—41-B-632  
 N—BIT, SCREWDRIVER—41-B-631

P—BIT, SCREWDRIVER—41-B-630  
 Q—REMOVER—41-R-2372-850  
 R—PULLER—41-P-2951-10  
 S—GAGE—41-G-187-50  
 T—GAGE—41-G-187  
 U—GAGE—41-G-196-25

RA PD 156525A

Figure 10. Special tools.

# CHAPTER 4

## TROUBLE SHOOTING

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### Section I. GENERAL

#### 18. Purpose

*Note.*—Information in this chapter is for use of ordnance maintenance personnel in conjunction with and as a supplement to the trouble shooting section in the pertinent operator's manual. It provides the continuation of instructions where a remedy in the operator's manual refers to ordnance maintenance personnel for corrective action.

Operation of a defective component may cause further damage. By careful inspection and trouble shooting, such damage can be avoided and, in addition, the causes of faulty operation can then be determined without extensive disassembly.

#### 19. General Instructions

The proper operation of a gasoline engine requires that the engine, the fuel system, and the ignition system must operate properly. If any component is not up to specifications, poor engine performance will result. Similar symptoms may result from defective operation of any of the components. The only way of being sure that a given trouble, such as poor gasoline mileage, or hard starting is being caused by the carburetor is to first check the engine, ignition system, and the fuel system excluding the carburetor. It will also be found that many causes of poor gasoline mileage are the result of bad driving habits or conditions such as excessive use of low speeds in accelerating, sustained high speeds, and stop and start "city" driving.

### Section II. PROCEDURES

#### 20. Trouble Shooting

It is obvious that the best way to trouble shoot a carburetor is while it is mounted on an operating engine. The repairs and adjustments required can best be determined while operating the engine under all conditions. Paragraph 21 lists complaints which may be caused by a defective carburetor.

*Note.*—It should not be assumed that, when these symptoms are present, the fault is always in the carburetor.

See paragraph 18 above for other causes.

## 21. Complaints, Causes, and Remedies

### a. Poor Gasoline Mileage.

- (1) *Black smoke from exhaust pipe and sooty deposit on spark plugs caused by rich mixture.*
  - (a) *High float level.* Reset to specifications (tables IV to XI, pars. 28, 44, 61, 78, 95, 109, 124, and 140).
  - (b) *Too large metering jet or a too small metering rod.* Check specifications (tables IV to VIII, pars. 28, 44, 61, 78, and 95). Replace jet or rod.
  - (c) *Nozzle installed without a nozzle gasket, when one is required (par. 38e(8)).* Install gasket.
  - (d) *Metering jet or nozzle loose.* Tighten jet or nozzle plug.
  - (e) *Pump relief port clogged.* Clean port.
  - (f) *Air bleed hole (in air bleed nozzle) stopped up.* Clean nozzle.
  - (g) *Holes in main vent tube clogged.* Install new tube.
  - (h) *High fuel pump pressure.* Repair or replace fuel pump.
  - (i) *Metering rod spring not connected to metering rod.* Connect spring.
  - (j) *Clogged air cleaner (outside vented carburetor).* Clean air cleaner.
  - (k) *Warped bowl cover or damaged bowl cover gasket (inside vented carburetor).* Replace bowl cover or gasket.
  - (l) *Vacuum passage to step-up piston clogged (B-B carburetors).* Clean passage.
  - (m) *Wrong flange gasket used (B-B carburetors).* Refer to paragraph 113d(2).
  - (n) *Flange gasket leaking allowing air to enter vacuum passage to step-up piston (B-B carburetor).* Replace gasket.
  - (o) *Step-up piston stuck in cylinder due to gummy deposits (B-B carburetor).* Clean piston and cylinder.
  - (p) *Two gaskets used under step-up piston, keeping step-up rod from seating (B-B carburetors).* Remove one gasket.
  - (q) *Stretched metering rod spring (Y-S carburetor).* Replace spring.
  - (r) *Worn or ruptured metering rod diaphragm (Y-S carburetor).* Replace diaphragm.
  - (s) *Passage to vacuum cylinder blocked (WCD carburetor).* Clean passage.
  - (t) *Vacuum piston stuck in cylinder (WCD carburetor).* Clean piston and cylinder.
  - (u) *Choke stuck partially closed.* Centralize choke valve. Repair or replace choke linkage and/or choke control cable. Repair automatic choke if used (par. 77).

(2) *No black smoke from exhaust pipe. White oxide deposit on spark plugs insulators caused by lean mixture.*

- (a) *Low float level. Reset to specifications (tables IV to XI, pars. 28, 44, 61, 78, 95, 109, 124, and 140).*
- (b) *A too small metering jet or a too large metering rod. Replace with specified rod or jet (tables IV to XI, pars. 28, 44, 61, 78, 95, 109, 124, and 140).*
- (c) *Two gaskets used under high speed nozzle where one should be used (par. 83e(8)). Remove one gasket.*
- (d) *Restriction in high speed passage. Clean passage.*
- (e) *Antipercolator closing too late. Set to specifications (par. 69b).*
- (f) *Main vent tube loose (B-B carburetors). Replace tube (pars. 114d and 145e).*

**b. Hard Starting.**

(1) *Hard starting when cold.*

- (a) *Choke not closing properly. Repair or replace choke linkage and/or choke control cable. Centralize choke valve. Repair automatic choke if used (par. 77).*
- (b) *Bowl being drained. Loose plug in bottom of bowl. Tighten plug.*

(2) *Hard starting when hot.*

- (a) *Overchoking. Automatic choke not opening soon enough. Repair choke (pars. 81f and 88a).*
- (b) *Antipercolator not opening. Adjust antipercolator (par. 69b).*

**c. Lacks Power.** The same causes that give poor mileage will cause a lack of power. In addition, check the following which may cause poor performance at wide open throttle.

(1) *Vacuumeter not operating (WCD carburetors).*

- (a) *Piston stuck in closed position by gummy deposits. Clean piston and cylinder.*
- (b) *Spring left out. Install proper spring.*

(2) *Step-up system not operating (B-B carburetors).*

- (a) *Step-up piston stuck in closed position by gummy deposits. Clean piston and cylinder.*
- (b) *Spring left out. Install correct spring.*
- (c) *Step-up rod left out (B-B updraft carburetors). Install rod.*
- (d) *Step-up rod installed upside down (B-B updraft carburetor). Install correctly (par. 129c).*

**d. Poor Idle.**

(1) *Engine rolls or gallons caused by a too rich mixture.*

- (a) *Carburetor idle improperly adjusted. Adjust idle.*

- (b) *Carbon deposit in bore near idle port.* Remove deposit by scraping or with wet or dry flint paper.
  - (c) *Clogged air bleeds.* Clean bleeds and passages.
  - (d) *Metering hole in low-speed jet or idle orifice tube oversize.* Check against specifications (tables IV TO XI, pars. 28, 44, 61, 78, 95, 109, 124, and 140). Replace parts.
  - (e) *Upper end of low-speed jet not seating (types W-1, W-O, WDO).* Replace jet.
  - (f) *Economizer oversize (see specifications, tables IV to XI, pars. 28, 44, 61, 78, 95, 109, 124, and 140).* Check with shank end of wire drill. Replace casting.
- (2) *Engine misfires (excessive vibration).* This may be caused by a too lean mixture.
- (a) *Carburetor idle adjustment incorrect.* Adjust idle.
  - (b) *Leaking intake manifold gaskets.* Tighten manifold nuts or replace gaskets.
  - (c) *Leaking carburetor flange gasket.* Tighten flange nuts or replace gaskets.
  - (d) *Leaking main body gasket.* Tighten body screws or replace gasket.
  - (e) *Worn throttle shaft bearings.* Replace throttle body.
  - (f) *Economizer clogged.* Clean economizer.
  - (g) *Metering hole in low-speed jet or idle orifice tube clogged.* Clean or replace jet.
  - (h) *Idle port plug loose.* Tighten plug.

e. *Engine Falts or Pops Back Through Carburetor on Acceleration.* This is caused by an insufficient discharge from the pump circuit. It may be checked as follows: with the ignition off, suddenly open the throttle wide while looking into the carburetor. If the pump circuit is operating, the discharge will be seen. If the pump circuit is found to be faulty, investigate the following:

- (1) *Clogged or sticking intake or discharge check valves.* Clean or replace valves.
- (2) *Worn or damaged plunger leather.* Replace plunger.
- (3) *Weak pump spring (B-B and Y-S carburetors).* Replace spring.
- (4) *Ball checks not seating properly (B-B carburetors).* See paragraph 113e(4) for method of diagnosing and eliminating this trouble.
- (5) *Pump passage blocked.* Clean passage.
- (6) *Insufficient pump travel.* Set to specifications (tables IV to VIII, pars. 28, 44, 61, 78, and 95), or if carburetor has "seasonal" pump adjustment, set for long stroke.
- (7) *Vacuum passage clogged (B-B downdraft with governor and Y-S carburetors).* Clean passage.



- (b) *Carbon deposit in bore near idle port.* Remove deposit by scraping or with wet or dry flint paper.
- (c) *Clogged air bleeds.* Clean bleeds and passages.
- (d) *Metering hole in low-speed jet or idle orifice tube oversize.* Check against specifications (tables IV TO XI, pars. 28, 44, 61, 78, 95, 109, 124, and 140). Replace parts.
- (e) *Upper end of low-speed jet not seating (types W-1, W-O, WDO).* Replace jet.
- (f) *Economizer oversize (see specifications, tables IV to XI, pars. 28, 44, 61, 78, 95, 109, 124, and 140).* Check with shank end of wire drill. Replace casting.
- (2) *Engine misfires (excessive vibration).* This may be caused by a too lean mixture.
- (a) *Carburetor idle adjustment incorrect.* Adjust idle.
- (b) *Leaking intake manifold gaskets.* Tighten manifold nuts or replace gaskets.
- (c) *Leaking carburetor flange gasket.* Tighten flange nuts or replace gaskets.
- (d) *Leaking main body gasket.* Tighten body screws or replace gasket.
- (e) *Worn throttle shaft bearings.* Replace throttle body.
- (f) *Economizer clogged.* Clean economizer.
- (g) *Metering hole in low-speed jet or idle orifice tube clogged.* Clean or replace jet.
- (h) *Idle port plug loose.* Tighten plug.

e. *Engine Falts or Pops Back Through Carburetor on Acceleration.* This is caused by an insufficient discharge from the pump circuit. It may be checked as follows: with the ignition off, suddenly open the throttle wide while loosing into the carburetor. If the pump circuit is operating, the discharge will be seen. If the pump circuit is found to be faulty, investigate the following:

- (1) *Clogged or sticking intake or discharge check valves.* Clean or replace valves.
- (2) *Worn or damaged plunger leather.* Replace plunger.
- (3) *Weak pump spring (B-B and Y-S carburetors).* Replace spring.
- (4) *Ball checks not seating properly (B-B carburetors).* See paragraph 113e(4) for method of diagnosing and eliminating this trouble.
- (5) *Pump passage blocked.* Clean passage.
- (6) *Insufficient pump travel.* Set to specifications (tables IV to VIII, pars. 28, 44, 61, 78, and 95), or if carburetor has "seasonal" pump adjustment, set for long stroke.
- (7) *Vacuum passage clogged (B-B downdraft with governor and Y-S carburetors).* Clean passage.

- (8) *Air leaking into vacuum passage (B-B downdraft with governor and Y-S carburetors).* Tighten flange screws and main body screws or replace gaskets.
- (9) *Pump diaphragm leaking (Y-S carburetor).* Replace diaphragm.

f. *Carburetor Floods or Leaks.*

- (1) *High float level.* Adjust to specifications (tables IV to XI, pars. 28, 44, 61, 78, 95, 109, 124, and 140).
- (2) *Plugged bowl vent.* Clean vent hole with wire.
- (3) *Warped bowl cover or damaged gasket.* Replace bowl cover or gasket.
- (4) *Damaged gasket on needle seat.* Replace gasket.
- (5) *Worn needle and seat.* Replace with new matched pair.
- (6) *Foreign matter between needle and seat.* Clean needle and seat.
- (7) *Ridge worn in lip of float causing float to bind on needle.* Smooth off lip with emery cloth.

**Caution:** Do not file.

- (8) *Cracked bowl.* Replace main body.
- (9) *Float pin worn or holes in float bracket for float pin worn egg-shaped.* Replace float pin and/or float.

g. *Engine Starts and Runs but Will Not Idle.* Check those items listed under e above (poor idle).

h. *Engine Starts and Idles but Will Not Run at High Speeds.*

- (1) *High speed jet, nozzle, or passage blocked.* Clean.
- (2) *High-speed nozzle installed upside down.* Install correctly.
- (3) *Air cleaner blocked.* Clean or replace.
- (4) *Insufficient flow of fuel from fuel pump.* Repair or replace pump.
- (5) *Clogged gasoline filter.* Clean or replace filter.
- (6) *Blocked muffler or tail pipe.* Clean or replace.

i. *"Flat Spot" on Acceleration.* Improperly adjusted or wrong metering rod. Adjust or replace rod.

j. *Engine Stalls While Idling.* This may be caused by an antiperculator which does not open or by flooding (g above).

k. *Popping Back Through Carburetor.* This may be caused by an extremely lean mixture (b(2) above).

l. *Backfiring.* This may be caused by an excessively rich mixture (b(1) above).



- (8) *Air leaking into vacuum passage (B-B downdraft with governor and Y-S carburetors).* Tighten flange screws and main body screws or replace gaskets.
- (9) *Pump diaphragm leaking (Y-S carburetor).* Replace diaphragm.

*f. Carburetor Floods or Leaks.*

- (1) *High float level.* Adjust to specifications (tables IV to XI, pars. 28, 44, 61, 78, 95, 109, 124, and 140).
- (2) *Plugged bowl vent.* Clean vent hole with wire.
- (3) *Warped bowl cover or damaged gasket.* Replace bowl cover or gasket.
- (4) *Damaged gasket on needle seat.* Replace gasket.
- (5) *Worn needle and seat.* Replace with new matched pair.
- (6) *Foreign matter between needle and seat.* Clean needle and seat.
- (7) *Ridge worn in lip of float causing float to bind on needle.* Smooth off lip with emery cloth.

**Caution:** Do not file.

- (8) *Cracked bowl.* Replace main body.
- (9) *Float pin worn or holes in float bracket for float pin worn egg-shaped.* Replace float pin and/or float.

*g. Engine Starts and Runs but Will Not Idle.* Check those items listed under *e* above (poor idle).

*h. Engine Starts and Idles but Will Not Run at High Speeds.*

- (1) *High speed jet, nozzle, or passage blocked.* Clean.
- (2) *High-speed nozzle installed upside down.* Install correctly.
- (3) *Air cleaner blocked.* Clean or replace.
- (4) *Insufficient flow of fuel from fuel pump.* Repair or replace pump.
- (5) *Clogged gasoline filter.* Clean or replace filter.
- (6) *Blocked muffler or tail pipe.* Clean or replace.

*i. "Flat Spot" on Acceleration.* Improperly adjusted or wrong metering rod. Adjust or replace rod.

*j. Engine Stalls While Idling.* This may be caused by an antipercolator which does not open or by flooding (*g* above).

*k. Popping Back Through Carburetor.* This may be caused by an extremely lean mixture (*b*(2) above).

*l. Backfiring.* This may be caused by an excessively rich mixture (*b*(1) above).



