

1965-67 ROCHESTER BC, BV SINGLE BARREL

1965 MODELS

	Rochester No.
BUICK SPECIAL	
225" V6	
Synchro-mesh.....	BC 7025149
Auto. Trans.	BC 7025148
CHECKER	
230" 6 Cyl.	
Synchro-mesh (Early).....	BV 7025105
Auto. Trans. (Early).....	BV 7025108
All Trans. (Later).....	BV 7025087
All Trans.	BV 7025182
CHEVROLET, CHEVELLE, CHEVY II	
194" 6 Cyl.	
Synchro-mesh.....	BV 7025105
Auto. Trans.	BV 7025108
230" 6 Cyl.	
Synchro-mesh.....	BV 7025003
Economy Carb.	BV 7025005
230" 6 Cyl.	
Auto. Trans.	BV 7025000
Economy Carb.	BV 7025004
OLDSMOBILE F-85	
225" V6	
Synchro-mesh.....	BC 7025149
Auto. Trans.	BC 7025148
PONTIAC TEMPEST	
215" 6 Cyl.	
Synchro-mesh.....	BV 7025167
Auto. Trans.	BV 7025168
STUDEBAKER	
194" 6 Cyl.	
All (Late).....	BV 7025087
Synchro-mesh (Early).....	BV 7025105
Auto. Trans. (Early).....	BV 7025108

1966 MODELS

CHECKER	
230" 6 Cyl. Engine	BV 7026083
CHEVELLE & CHEVY II	
194" 6 Cyl. Eng. (No A.I.R.) ①	
(Synchro-mesh).....	BV 7025105
(Auto. Trans.).....	BV 7025108
230" 6 Cyl. Eng. (No A.I.R.) ①	
(Synchro-mesh).....	BV 7025003
(Auto. Trans.).....	BV 7025000
CHEVROLET	
250" 6 Cyl. Eng. (No A.I.R.) ①	
(Synchro-mesh).....	BV 7026027
(Auto. Trans.).....	BV 7026028
OLDSMOBILE	
250" 6 Cyl. Eng. (No A.I.R.) ①	
(Synchro-mesh).....	BV 7026027
(Auto. Trans.).....	BV 7026028
PONTIAC TEMPEST	
230" 6 Cyl. Eng. (No A.I.R.)	
(Synchro-mesh).....	BV 7026167
(Auto. Trans.).....	BV 7026168
(Auto. Trans. & Air Cond.).....	BV 7026169
230" 6 Cyl. Eng. (With A.I.R.)	
(Synchro-mesh).....	BV 7036167
(Auto. Trans.).....	BV 7036168

1966 MODELS (Cont.)

	Rochester No.
STUDEBAKER	
194" 6 Cyl. Eng.	
(Synchro-mesh)	BV 7025105 & 7025087
(Auto. Trans.).....	BV 7025108 & 7025087
230" 6 Cyl. Eng.	
(All Trans.).....	BV 7026085

1967 MODELS

CHECKER	
230" 6 Cyl. Eng. (Pass. Cars).....	BV 7025182
230" 6 Cyl. Eng. (Taxicabs).....	BV 7026083
CHEVELLE & CAMARO	
230" 6 Cyl. Eng. (No A.I.R.) ①	
(Synchro-mesh).....	BV 7025003
(Auto. Trans.).....	BV 7025000
250" 6 Cyl. Eng. (No A.I.R.) ①	
(Synchro-mesh).....	BV 7026027
(Auto. Trans.).....	BV 7026028
CHEVROLET	
250" 6 Cyl. Eng. (No A.I.R.) ①	
(Synchro-mesh).....	BV 7026027
(Auto. Trans.).....	BV 7026028
OLDSMOBILE	
250" 6 Cyl. Eng. (No A.I.R.) ①	
(Synchro-mesh).....	BV 7026027
(Auto. Trans.).....	BV 7026028
PONTIAC TEMPEST	
230" 6 Cyl. Eng. (No A.I.R.)	
(Synchro-mesh).....	BV 7027167
(Auto. Trans.).....	BV 7027168
230" 6 Cyl. Eng. (With A.I.R.)	
(Synchro-mesh).....	BV 7037167
(Auto. Trans.).....	BV 7037168

① - Carter YF Carburetor used on A.I.R. Cars.

► CHANGES, CAUTIONS, CORRECTIONS

- **"A.I.R." CARBURETOR NOTE:** These carburetors used on engines with Air Injection Reactor exhaust emission control system and are special units with different jet calibrations and adjustment specifications.
- **1966 PONTIAC TEMPEST ENGINE LOADING & POOR CHOKE OPERATION CORRECTION** (Auto. Trans. Cars with A.I.R. Engine & Rochester BV 7036168 Carb.): Correct by changing Vacuum Break Setting to .150" (was .140").
- **1965 PONTIAC SIX HARD STARTING OR LOADING CORRECTION:** If this condition not corrected by Tune-up (with particular attention to breaker point gap and automatic choke setting), it may be caused by improper connection of thermostatic coil in automatic choke unit on exhaust manifold. Correct by replacing Thermostatic Coil and Housing assembly.
- **1965 STUDEBAKER SIX COLD START HIGH-IDLE RPM CORRECTION** (194" Engine with Rochester BV Carburetors): If fast idle speed excessive, correct by changing following carburetor adjustments:
 - Choke Rod Adjustment** - With fast idle screw on second step of fast idle cam (against shoulder of high step), bend choke rod for choke valve opening of .050" (was .090" and .100").

Rochester Carburetors

1965-67 ROCHESTER BC, BV SINGLE BARREL (Cont.)

Vacuum Break Adjustment - With throttle stopscrew on high step of fast idle cam, close choke valve fully. With vacuum break diaphragm in released position, vacuum break rod should be against end of slot in choke lever. Adjust by bending rod as necessary.

CARBURETOR IDENTIFICATION

Rochester carburetor number is stamped on tag attached to carburetor. Do not remove this tag. **NOTE** - A.I.R. carburetors have square tag (all other tags are triangular).

DESCRIPTION

Single barrel downdraft types with integral automatic choke (Model BC); with separate automatic choke (Model BV).

ADJUSTMENT

Idle Speed & Mixture

NOTE - On automatic transmission cars place selector lever in Drive. On air conditioned cars, air conditioning must be ON (except as noted in Specifications). If carburetor has Hot Idle Compensator Valve, make certain valve is closed.

CARBURETOR ADJUSTMENT SPECIFICATIONS

Rochester Carb. No.	Idle Speed (Engine RPM) ①		Float Level Setting	Float Drop Setting	Idle Vent Setting	Choke Rod Setting	Unloader Setting	Vacuum Break Setting
	Synchro-mesh	Auto. Trans.						
7025000	.....	③	1 9/32"	1 3/4"	.050"	.090"	.350"	.140"
7025003	450-500	.....	1 9/32"	1 3/4"	.050"	.100"	.350"	.160"
7025004	.....	③	1 9/32"	1 3/4"	.050"	.060"	.350"	.160"
7025005	450-500	.....	1 9/32"	1 3/4"	.050"	.060"	.350"	.160"
7025087	500	500 ①	1 9/32"	1 3/4"	.050"	.090"	.350"	.140"
7025105	450-500	.....	1 9/32"	1 3/4"	.050"	.100"	.350"	.160"
7025108	.....	③	1 9/32"	1 3/4"	.050"	.090"	.350"	.140"
7025148	.....	600 ① ④	1 9/32"	1 7/8"	.....	.075"	.300"	.....
7025149	600 ④	.....	1 9/32"	1 7/8"	.....	.075"	.300"	.....
7025167	580-600 ④	.....	1 9/32"	1 7/8"	.040"	.060"	.230"	.160"
7025168	.....	480-500 ① ④	1 9/32"	1 7/8"	.040"	.060"	.230"	.140"
7025182	.....	450-500	1 9/32"	1 3/4"	.050"	.060"	.350"	.160"
7026027	①	.....	1 9/32"	1 3/4"	⊙	.100"	.350"	.160"
7026028	.....	②	1 9/32"	1 3/4"	⊙	.090"	.350"	.140"
7026083	.....	450-500	1 9/32"	1 3/4"	.050"	.090"	.350"	.140"
7026085	525	500-520	1 9/32"	1 3/4"	.0375"	.050"	.350"	⊙
7026167	600 ④	.....	1 5/16"	1 7/8"	.040"	.060"	.230"	.140"
7026168	.....	500 ④	1 5/16"	1 7/8"	.040"	.060"	.230"	.170"
7026169	.....	500 ④	1 5/16"	1 7/8"	.040"	.060"	.230"	.140"
7027167	600 ④	.....	1 5/16"	1 7/8"	.040"	.060"	.230"	.170"
7027168	.....	500 ④	1 5/16"	1 7/8"	.040"	.060"	.230"	.160"
7036167	700 ④	.....	1 5/16"	1 7/8"	.040"	.060"	.230"	.140"
7036168	.....	600 ④	1 5/16"	1 7/8"	.040"	.060"	.230"	.140"
7037167	700 ④	.....	1 5/16"	1 7/8"	.040"	.060"	.230"	.170"
7037168	.....	600 ④	1 5/16"	1 7/8"	.040"	.060"	.230"	.160"

- ① - Chevrolet 450-500 RPM (Air Cond. ON).
Oldsmobile 500 RPM (Without Air Cond.),
550 RPM (1966 Air Cond. Cars), 500 RPM
(1967 Air Cond. Cars) with Air Cond. OFF.
Studebaker 525 RPM.
- ② - Chevrolet 450-500 RPM (As low as possible
for smooth idling to prevent creep in Drive
and harsh shifts in service).
Oldsmobile 500 RPM (Without Air Cond.),
550 RPM (1966 Air Cond. Cars), 500 RPM
(1967 Air Cond. Cars) with Air Cond. OFF.
- ③ - Set as low as possible for smooth idling to

prevent creep in Drive and harsh shifts in
service.

- ④ - Air Cond. OFF (when equipped).
⑤ - Chevrolet .050", Studebaker .0375" (see Ad-
justments).
⑥ - Chevrolet .050", Oldsmobile .070".
⑦ - Chevrolet .100", Studebaker .050".
⑧ - Chevrolet .090", Studebaker .050".
⑨ - Chevrolet only. See Adjustments for special
setting on Studebaker.
⊙ - See Adjustments for special setting.
① - Auto. Trans. in Drive "D". Air Condition-
ing ON (except as noted).

1965-67 ROCHESTER BC, BV SINGLE BARREL (Cont.)

All Models - If preliminary adjustment required to warm up engine, set idle mixture screw 1½ turns out from a lightly seated position. With engine at normal operating temperature (choke valve wide open and throttle stopscrew on low step of fast idle cam), adjust throttle stopscrew for correct idle speed (see Specifications), then adjust idle mixture screw for smooth idle at highest vacuum and engine RPM (see Notes below), recheck idle speed. If necessary to readjust idle speed, repeat idle mixture adjustment.

CHEVROLET NOTE - Final setting of idle mixture screw should be ¼ turn out from "lean roll" position (point at which engine speed drops off 20-30 RPM from maximum as idle mixture screw is turned in to lean the mixture).
OLDSMOBILE NOTE - At point where highest vacuum and RPM obtained, turn screw out ¼ turn for slightly rich mixture (vacuum and RPM will drop off slightly).

Fast Idle Speed

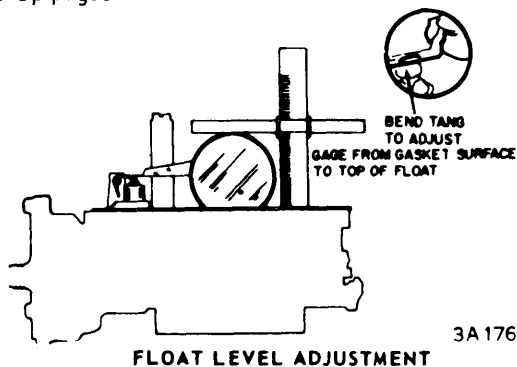
No adjustment required. Fast idle speed will be correct when hot or slow idle speed correctly adjusted.

Auto. Trans. Linkage & Throttle Return Check

See **CARBURETOR** on car model Tune-Up pages.

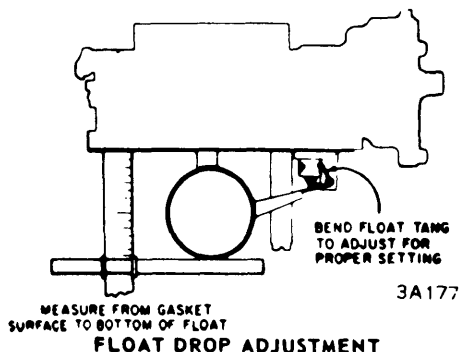
Idle Speed-Up Control

Pontiac Tempest Air Conditioned Cars - Adjust after idle speed adjusted. See **CARBURETOR** on car model Tune-Up pages.



Float Level

Invert air horn (gasket in place), and measure distance from air horn gasket to top of each float (see illustration). Distance should be as indicated in specifications. To adjust, bend float arm tang contacting inlet needle. **NOTE** - Align floats so they are parallel and centered in air horn gasket cutout. Recheck float level if adjustment required.

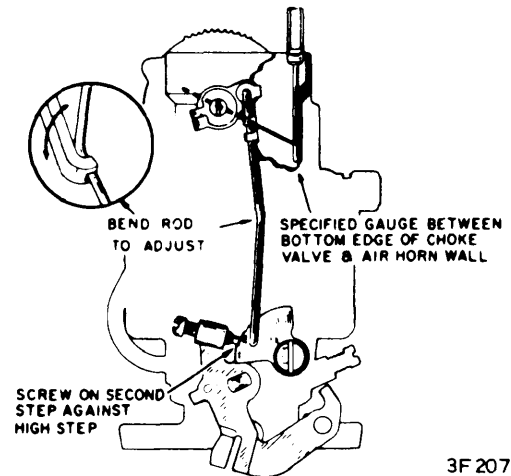


Float Drop

Hold air horn assembly upright with floats hanging free, then measure distance from surface of air horn gasket to bottom of float (see illustration). Distance should be as indicated in specifications.

Choke Rod

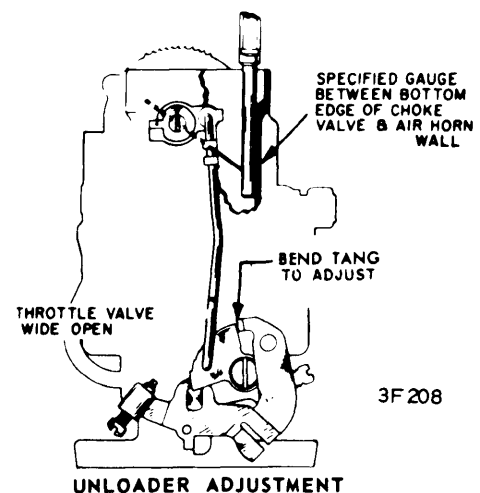
"BC" & "BV" Carbs. - With idle screw on second step of fast idle cam and against highest step, bend choke rod as necessary to obtain proper clearance between lower edge of choke valve and wall of air horn. See specifications.



CHOKE ROD ADJUSTMENT

Unloader

"BC" & "BV" Carbs. - With throttle valve wide open, clearance between lower edge of choke valve and wall of air horn should be as indicated in specifications. To adjust, bend unloader tang on throttle lever.



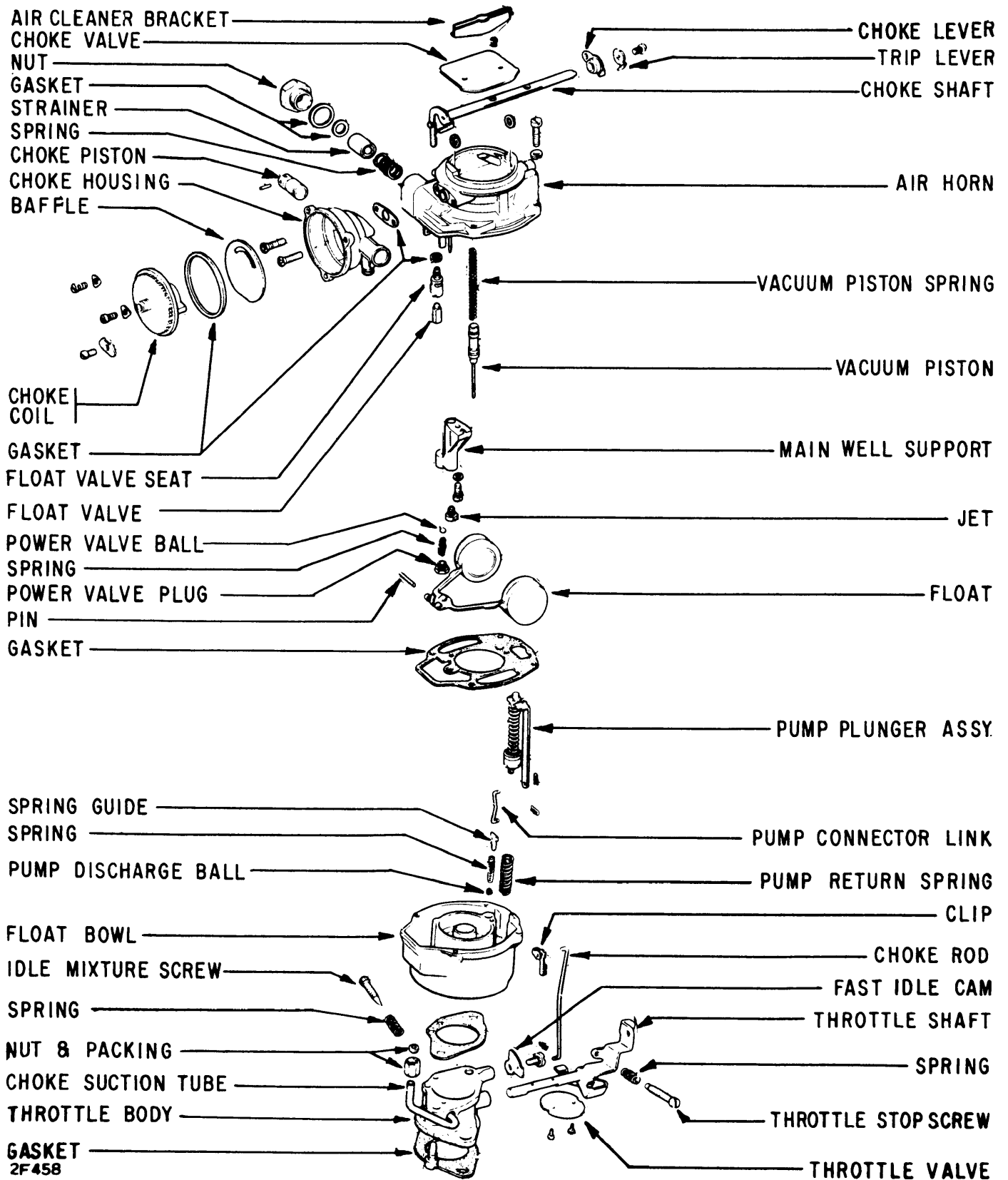
UNLOADER ADJUSTMENT

Idle Vent

NOTE - Not used on all carburetor models. With idle speed properly adjusted and screw on low step of fast idle cam, idle vent valve should be open as shown in specification table. To adjust, turn valve on top of air horn.

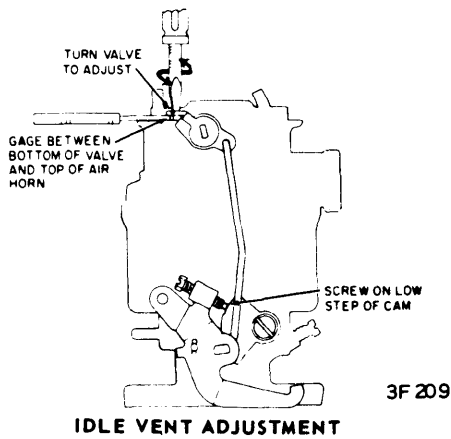
Rochester Carburetors

1965-67 ROCHESTER BC, BV SINGLE BARREL (Cont.)



ROCHESTER BC CARBURETOR ASSEMBLY (BV SIMILAR EXCEPT FOR CHOKE)

1965-67 ROCHESTER BC, BV SINGLE BARREL (Cont.)

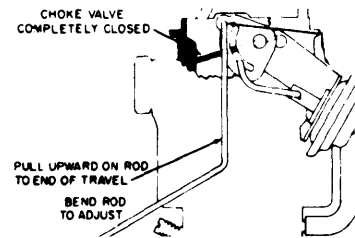


Vacuum Break

"BV" Carbs. - NOTE - This adjustment not required on other carburetor models. Push vacuum break diaphragm plunger in until seated, making sure that choke valve is

Automatic Choke

Integral Type ("BC" Carbs.) - Loosen three retaining screws and rotate thermostat cover until index mark is in alignment with correct calibrated mark on housing as indicated in specifications. Tighten cover retaining screws. NOTE - Centered point on housing is indicated by a raised section on housing casting.



1965-67 ROCHESTER BC, BV SINGLE BARREL (Cont.)

Cleaning & Inspection

Clean carburetor castings and all metal parts thoroughly in carburetor cleaning solvent. Do not immerse pump plunger, vacuum break diaphragm, or synthetic or rubber parts in solvent. Clean pump plunger in clean gasoline only, clean diaphragm unit by wiping with clean cloth. Check all parts and casting passages for carbon deposits, blow out all passages with compressed air. Inspect all parts for wear or damage.

Reassembly

Use all new gaskets. Reverse disassembly procedure and note the following:

Choke Valve Installation - With upper choke rod lever installed on choke shaft and tang on lever pointing in toward air horn, install choke shaft from throttle lever side with tang on trip lever above tang on choke lever. Install choke valve in shaft with "RP" mark upward and install choke valve screws loosely. Position choke shaft for .020" clearance between choke trip lever and choke rod lever, tighten choke valve screws and stake to prevent loosening. Install choke lever on opposite end of

choke shaft (align flats on lever and shaft) with large side of lever downward and identification number outward, tighten lever securely.

Pump Discharge Check Ball Spring Guide - After installing pump discharge check ball and spring, position guide at right angles to pump discharge jet, tap guide lightly so that it is seated flush with top of casting.

Heat Suction Tube (Carburetors With Integral Automatic Choke) - If tightening of loose seal with Tool BT-45 does not correct leakage, install new seal as follows: With carburetor fully assembled, loosen throttle body-to-bowl casting screws, then insert flared end of heat suction tube into hole in throttle body and tap seal lightly into position with Tool BT-45. Rotate tube while tapping to insure starting uniformly into throttle body. Tighten coupling nut at upper end of tube finger tight, using a new packing on tube. Use a light hammer and Tool BT-45 to spread seal securely in throttle body (rotate rod to secure uniform spreading of seal). Loosen coupling nut at upper end of tube and check tube tightness in throttle body (tube should not turn). Tighten coupling nut securely, then tighten throttle body-to-bowl casting screws. Check seal for leakage after carburetor is installed on engine.