

CARTER YH SINGLE BARREL

CORVAIR (SUPERCHARGED)	Carter No.
1962-63 Spyder	3311S, SA
1963 Spyder.....	3569S
1963 Spyder.....	3586S, SA
1964 Spyder.....	3692S, SA
1965 Corsa Turbocharged	3902S or 4020S
1966 Corsa Turbocharged	4141S, SA

CARBURETOR IDENTIFICATION

Carter number stamped on tag attached to carburetor by air horn screw. Standard suffix "S" indicates basic carburetor design, "SA" etc. indicate changes in parts, jet calibration, or adjustment settings as listed.

DESCRIPTION

Single barrel side draft (horizontal) type with combination throttle and vacuum controlled metering rod and diaphragm type accelerating pump. All carburetors have automatic choke. Carburetor used with Supercharger unit located between carburetor and engine manifold. See "Corvaire Supercharger" in this section.

ADJUSTMENT

Idle Speed & Mixture

NOTE - If initial adjustment required to warm-up engine, turn idle mixture screw out 3/4 turn from lightly seated position. With engine at normal operating temperature, attach tachometer and adjust idle speed to correct RPM (See Specifications). Adjust idle mixture screw for highest vacuum, readjust idle speed, repeat idle mixture adjustment.

Throttle Return Check

With engine at normal operating temperature and correct idle speed (choke valve fully open and fast idle not operating), measure distance between throttle valve lever and return check valve bolt. This distance should be as indicated in "Specification Table". To adjust, hold wrench on flat of diaphragm stem and turn self-locking nut as necessary.

Float Level

Invert bowl cover and measure distance between float at center and gasket surface of bowl cover (gasket removed). Distance should be as indicated in "Specification Table". To adjust, bend float arm.

Float Drop

Hold bowl cover upright so float is hanging free. Distance between gasket surface (gasket removed) and float seam at free end should be as indicated in "Spec-

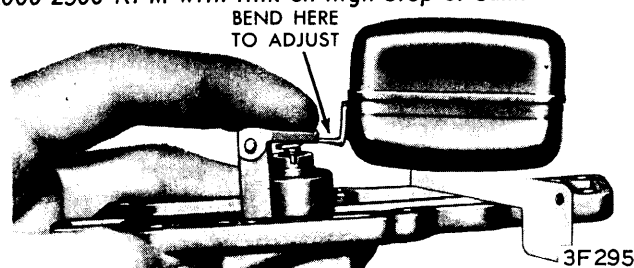
ification Table". To adjust, bend tang at hinge end of float.

Automatic Choke

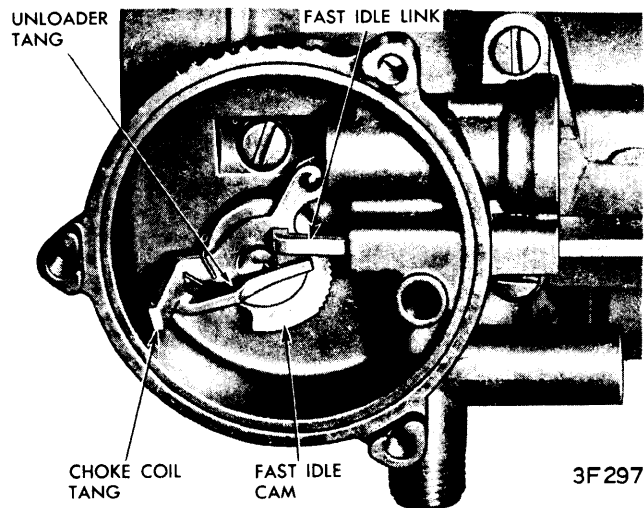
Loosen choke coil housing retaining screws and rotate cover to align index mark on cover with proper graduation on housing. See "Specification Table".

Fast Idle (Off Engine)

NOTE - Fast Idle Adjustment must be made before adjusting Unloader. Remove choke cover and coil assembly, gasket, and baffle plate. Hold choke valve tightly closed and make certain fast idle link is on high step of fast idle cam, close throttle valve as far as possible without forcing. Throttle valve opening or clearance between edge of valve and carburetor wall on side opposite idle ports should be as shown in Specifications. Adjust by bending fast idle connector link. **NOTE** - No fast idle speed adjustment (on engine) is required. With above setting, fast idle speed will be 2000-2500 RPM with link on high step of cam.



FLOAT LEVEL ADJUSTMENT



CHOKE HOUSING & FAST IDLE LINKAGE

CARBURETOR ADJUSTMENT SPECIFICATIONS

Carter Carb. No.	Idle Speed (Eng. RPM)	Throttle Return Check	Float Setting		Fast Idle Setting (Off Eng.)	Unloader Setting	Metering Rod Gauge	Auto. Choke Setting
			Float Level	Float Drop				
3311S, SA	850 Ⓢ	.030"	5/8"	2 3/8"	.033"	7/16"	T109-104	1 Rich
3569S	850 Ⓢ	.030"	5/8"	2 3/8"	.033"	7/16"	T109-104	1 Lean
3586S, SA	850 Ⓢ	.030"	5/8"	2 3/8"	.033"	7/16"	T109-104	1 Lean
3692S, SA	850 Ⓢ	.030"	5/8"	2 3/8"	.033"	7/16"	T109-104	1 Lean
3902S	850 Ⓢ	.030"	5/8"	2 3/8"	.033"	7/16"	T109-104	1 Lean
4020S	850 Ⓢ	5/8"	2 3/8"	.033"	7/16"	T109-104	Index
4141S, SA	850 Ⓢ	5/8"	2 3/8"	.033"	7/16"	T109-104	1 Lean

Ⓢ - With Auto. Trans. in "N".

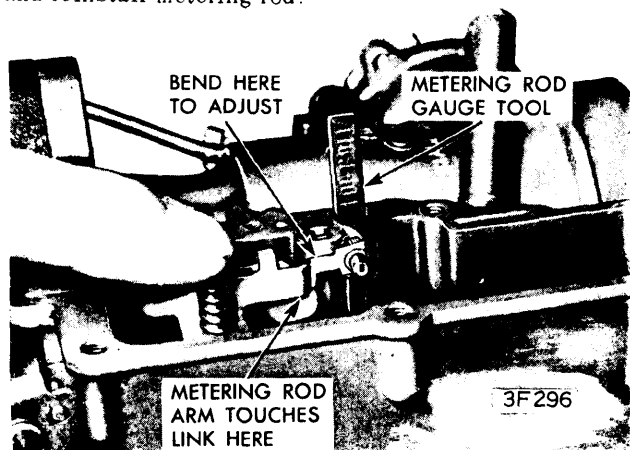
CARTER YH SINGLE BARREL (Continued)

Unloader

With fast idle properly adjusted, open throttle to wide open position while holding tension on choke valve. Distance between edge of choke valve on side opposite vent tube rod should be as indicated in "Specification Table". To adjust, bend unloader tang on fast idle cam.

Metering Rod

With throttle valve held tightly closed, remove metering rod and install correct metering rod gauge (see "Specification Table") in metering jet. Push down on pump diaphragm rod until metering rod arm just touches lifter link. At this point metering rod arm pin should just contact top gauging surface of tool. To adjust, bend metering rod arm at undercut portion. Remove gauge and reinstall metering rod.



METERING ROD ADJUSTMENT

OVERHAUL

Disassembly

Remove inlet screen, then remove bowl cover. Remove float and float needle and seat. Remove bowl cover gasket, invert carburetor and remove pump discharge needle valve. Loosen pump lever screw from throttle shaft and slide lever off shaft and link. Depress small spring on pump with a screwdriver and remove spring seat and spring, then lift metering rod arm and rod from pump rod and metering jet. Raise pump arm enough to remove link, and remove pump arm. Remove diaphragm pump assembly, splash deflector plate and metering jet. Remove choke link clip and choke link, then remove choke housing cover, gasket and baffle plate, and slide choke lever out of housing. Remove throttle body flange assembly from carburetor main body, then remove idle speed screw and spring from throttle body. **NOTE - Do not remove choke valve, choke piston, or throttle valve unless shaft and piston are binding or if parts must be replaced.** File staked ends of throttle plate and choke plate screws level with shaft, then remove screws and plates. Remove throttle shaft by sliding out of throttle body. Rotate choke shaft until piston comes out of bore, then slide shaft assembly from main body. Remove choke housing and discard vacuum passage "0" ring.

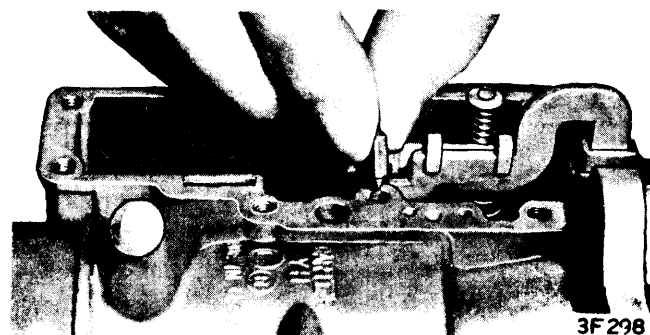
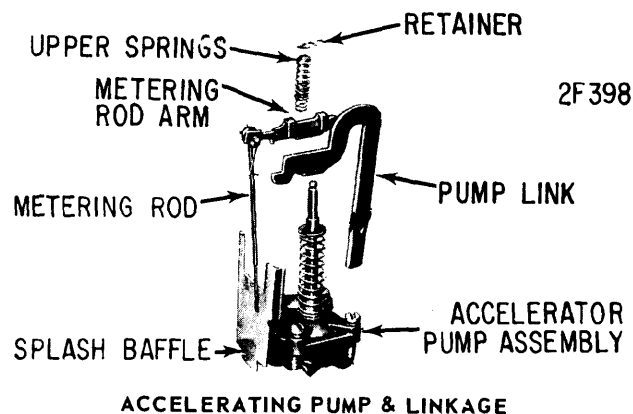
Inspection

Wash all parts except choke coil housing assembly in cleaning solution. Remove all carbon from throttle body bore and blow out all passages with air. If choke

piston is not free in housing bore, remove welch plug from housing and clean cylinder bore with fine sandpaper if necessary. Install a new welch plug so it is air tight. Inspect all parts for wear or damage and replace if necessary.

Reassembly

If throttle shaft assembly was removed, slide shaft into throttle body and position throttle plate on flat of shaft with numbered side to shaft, then install screws loosely. Center throttle plate on shaft and in throttle bore, then tighten screws andpeen securely. If choke shaft was removed, install a new "0" ring seal and position choke housing on air horn. Tighten attaching screws just snug. Slide choke shaft into air horn part way, then install piston to shaft and position shaft by rotating while installing piston into cylinder bore. Tighten choke housing screws securely. Position choke plate on flat of shaft so identification numbers are on air cleaner side, then complete installation in same manner as for throttle plate. Install throttle body on main body and tighten attaching screws securely (use a new gasket). Install diaphragm assembly in diaphragm housing, then install lower spring and retainer. Install metering jet (no gasket), then install diaphragm housing screws and thread them in two or three turns to hold diaphragm in alignment and install diaphragm assembly in carburetor bowl. Tighten attaching screws securely. Install splash shield between metering rod jet and pump housing, then install metering rod onto rod arm, hook spring, and install clip. Place pump lifter link in guide opening and insert throttle lever connector link onto pump lifter link (connector must be installed before lifter link assembly is completely in position) then place lifter arm down over pump rod. Place metering rod in jet with arm over pump rod and lifter arm, then place upper springs over pump rod. Compress springs with a screwdriver and



PUMP DISCHARGE NEEDLE INSTALLATION

CARTER YH SINGLE BARREL (Continued)

install retainer. Install throttle shaft pump lever over throttle shaft and pump link, then tighten retaining screw. Adjust metering rod (see above). Install float needle seat, needle valve, and float assembly in bowl cover (float hinge pin shoulder to outboard side of bowl), and adjust float level and drop. Install pump discharge needle, then install bowl cover (and a new gasket) and tighten cover screws. Install fast idle link

into choke housing and hook unloader projection over tang on fast idle cam assembly. Install choke link connector link to throttle lever keyed hole, then to choke link with a clip. Adjust fast idle (see above), then adjust unloader. Install choke baffle plate, gasket, choke coil housing, retainer clips and screws. Adjust automatic choke (see above).

