

## CARTER YFA & YFA FEEDBACK SINGLE BARREL

### CARBURETOR APPLICATION

#### FORD MOTOR CO.

Application	Ford Carburetor Number	
	Man. Trans.	Auto. Trans.
4.9L (300") 6 Cyl.		
Bronco		
With A/C .....	E1TE-AD .....	.....
Without A/C .....	E1TE-ANA .....	.....
E100/150		
Federal .....	E1TE-ARA .....	E1TE-AUA
	E1TE-UA	
Calif. ....	E1TE-GA .....	E1TE-AZA
E250		
Federal .....	E1TE-ANA .....	E1TE-AUA
Calif. ....	.....	E1TE-AZA
E350		
Federal .....	EOTE-AMA .....	EOTE-FA
Calif. ....	D9TE-CA .....	.....
F100		
Federal .....	E1TE-ANA, E1TE-DA, .....	E1TE-VA
	E1TE-EA, E1TE-TA	
Calif. ....	E1TE-GA .....	E1TE-AZA
F150/250		
Federal .....	E1TE-ANA .....	E1TE-VA
	E1TE-AD	
Calif. ....	E1TE-GA .....	E1TE-AZA
F350		
Federal .....	EOTE-AMA .....	EOTE-FA
Calif. ....	D9TE-CA .....	.....

### CARBURETOR IDENTIFICATION

A carburetor identification tag is attached to carburetor. The tag contains part number prefix and suffix. A design change code (if any) is also stamped into tag. An assembly date code (year, month, and day) is also stamped into tag. To obtain replacement parts, it is necessary to know identification number prefix and suffix, and in some instances, the design change code.

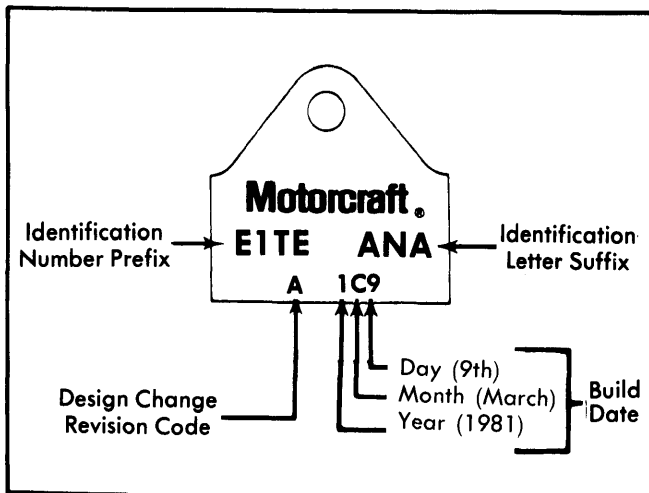


Fig. 1 Ford Motor Co. Carburetor Identification Tag

#### DESCRIPTION

Carter YFA and YFA Feedback carburetors are made up of three main assemblies: air horn, main body, and throttle body. YFA model carburetors have an adjustment limiting vacuum

diaphragm type automatic choke with an electric assist choke cap. The main body contains a temperature compensated accelerator pump which has a thermostatic disc designed to open and close within a specified range.

The YFA Feedback carburetor differs from the YFA in its addition of a feedback solenoid. This solenoid is used to meter air into both the idle and main circuits for improved engine performance. A Microprocessor Control Unit (MCU) senses various engine needs and supplies feedback fuel as required by forcing air into fuel bowl, and in turn more fuel into carburetor air stream.

### ADJUSTMENT

#### HOT (SLOW) IDLE RPM

See appropriate article in TUNE-UP SERVICE PROCEDURES.

#### VACUUM THROTTLE KICKER (DECCEL THROTTLE DIAPHRAGM)

See appropriate article in TUNE-UP SERVICE PROCEDURES.

#### IDLE MIXTURE

See appropriate article in TUNE-UP SERVICE PROCEDURES.

#### COLD (FAST) IDLE RPM

See appropriate article in TUNE-UP SERVICE PROCEDURES.

#### FLOAT LEVEL

**All Models** - 1) Remove air cleaner assembly. Remove air horn and gasket from top of carburetor.

2) Turn air horn assembly upside-down. Measure distance between top of float (at free end) and gasket surface of air horn.

**NOTE** - Float arm should be resting gently on needle. Do not apply pressure against needle to prevent damage to tip.

3) Bend float arm as necessary to obtain correct clearance. DO NOT bend tab at end of float arm as this would stop the float travel to bottom of fuel bowl when empty.

4) When adjustment is completed, reinstall air horn and gasket. Start engine and check for fuel leaks. Install air cleaner.

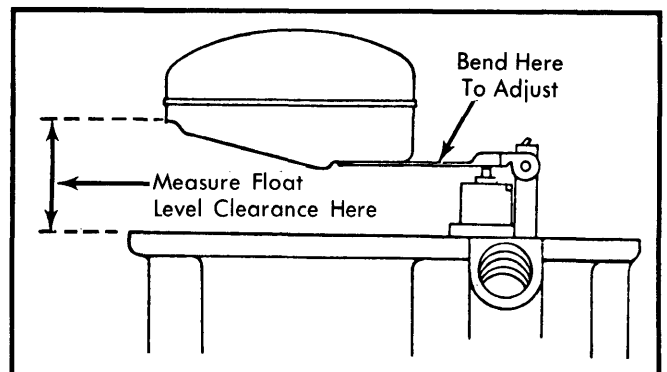


Fig. 2 Float Level Clearance Adjustment

## CARTER YFA &amp; YFA FEEDBACK SINGLE BARREL (Cont.)

## FLOAT DROP

**All Models** – 1) Remove air cleaner, carburetor air horn and gasket from top of carburetor.

2) Hold air horn in upright position. Allow float to hang free. Measure minimum clearance from tip of float to bottom of air horn casting with a suitable gauge. See Fig. 3.

3) Bend tab at end of float arm to adjust. After completing adjustment, install gasket and air horn on carburetor. Start engine and check for fuel leaks. Install air cleaner.

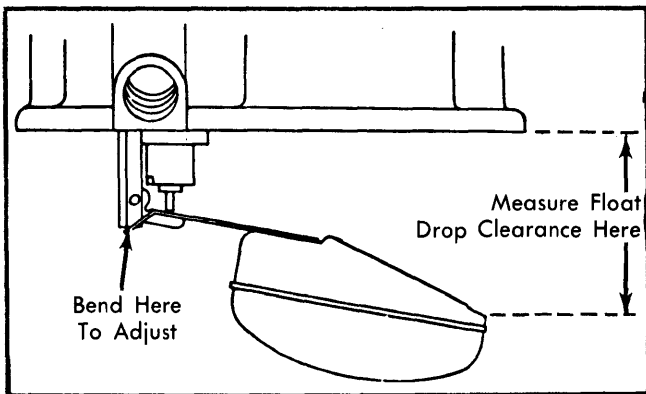


Fig. 3 Float Drop Clearance Measurement

## METERING ROD

**All Models** – 1) Remove air cleaner, air horn and gasket from carburetor.

2) Back out idle speed adjusting screw until throttle plate is tightly closed in throttle bore.

3) Press down on end of pump diaphragm shaft until assembly bottoms. While holding diaphragm assembly in this position, turn rod adjustment screw counterclockwise until metering rod gently bottoms in body casting. See Fig. 4.

4) Now turn metering rod adjustment screw clockwise (IN) ONE turn for final adjustment.

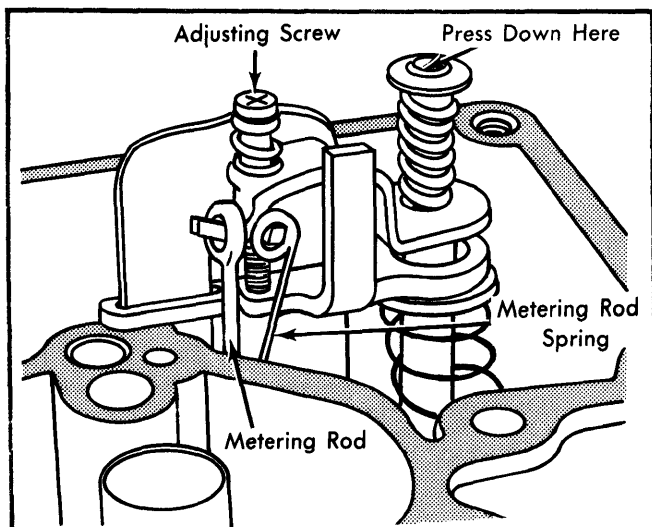


Fig. 4 Metering Rod Adjustment

5) Install air horn and gasket on carburetor. Start engine and check for fuel leaks. Install air cleaner.

## CHOKE UNLOADER (DECHOKE)

**All Models** – 1) Remove air cleaner. Hold throttle valve in fully open position without forcing it. Press choke valve toward closed position.

2) Measure clearance between lower edge of choke valve and air horn wall.

3) Adjust by bending unloader tang which contacts the fast idle cam. See Fig. 5.

4) Bend tang (arm) upward to increase clearance; bend downward (away from fast idle cam) to decrease clearance.

5) Operate throttle to check for binding or clearance interference. Install air cleaner.

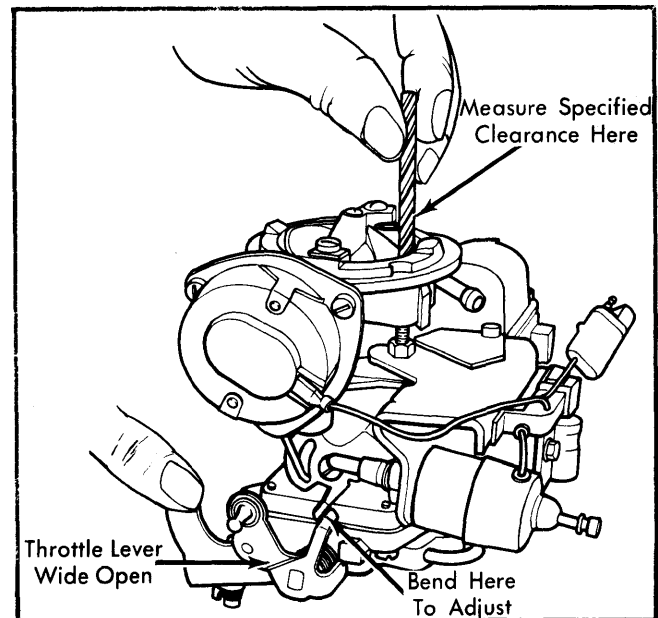


Fig. 5 Choke Unloader (Dechoke) Adjustment

## CHOKE VALVE PULL-DOWN CLEARANCE (YFA MODEL)

1) Remove air cleaner. Remove choke thermostatic spring housing and heat baffle from carburetor.

2) Bend a .026" diameter wire gauge at a 90° angle approximately 1/8" from one end. Insert the bent end of the wire gauge between choke piston slot and right hand slot in the choke housing. See Fig. 6.

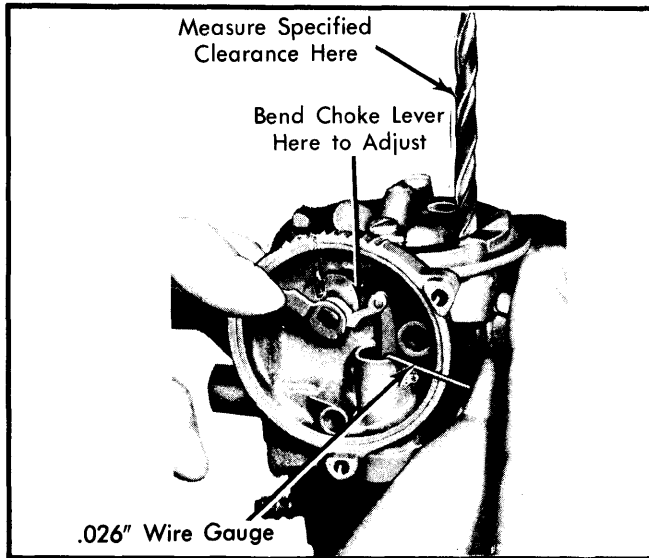
3) Rotate choke piston counterclockwise until gauge is snug in slot. Hold pressure against lever to keep gauge in place.

4) Measure choke valve pull-down specified clearance between lower edge of choke valve and air horn wall.

5) To adjust, bend choke lever. Bend lever toward piston to decrease clearance; bend lever away from piston to increase clearance.

**NOTE** – Do not distort piston link while adjusting or erratic choke operation will result.

## CARTER YFA & YFA FEEDBACK SINGLE BARREL (Cont.)



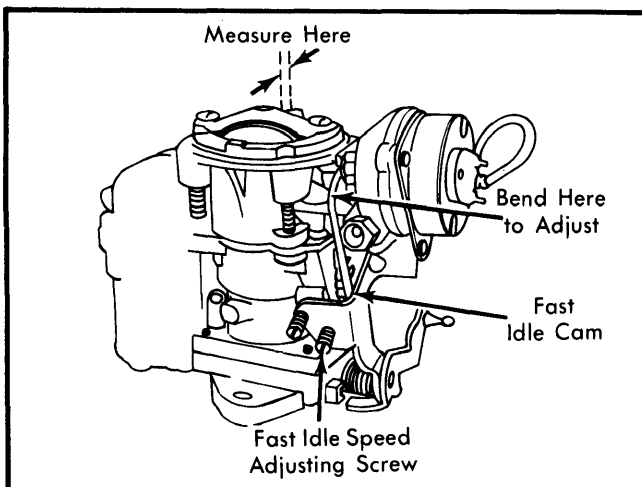
**Fig. 6 Choke Valve Pull-Down Clearance Adjustment**

### CHOKE VALVE PULL-DOWN CLEARANCE (YFA FEEDBACK MODEL)

- 1) Remove air cleaner. Remove choke thermostatic spring housing and heat baffle from carburetor.
- 2) Temporarily rotate choke housing to rich setting to lightly close choke plate, then increase an additional 90°.
- 3) Activate pulldown motor by applying an external vacuum source. Check clearance between lower edge of choke valve and air horn wall.
- 4) To adjust, bend choke diaphragm link as required. Reinstall choke thermostat housing using 2 No. 6-32 screws in place of rivets. Replace air cleaner.

### FAST IDLE CAM INDEX

- 1) Place fast idle speed screw on kickdown step of fast idle cam, against shoulder of highest step. See Fig. 7.



**Fig. 7 Fast Idle Cam Index Adjustment**

- 2) Measure specified clearance between lower edge of choke valve and air horn wall.

- 3) If clearance is not to specification, adjust by bending fast idle cam link.

### AUTOMATIC CHOKE

**NOTE** — Although automatic choke is of tamper-proof design, these steps are used if automatic choke is damaged or when carburetor is rebuilt.

- 1) Loosen choke thermostat cover retaining screws.
- 2) Rotate cover assembly in "Rich" or "Lean" direction to align reference mark on cover with specified scale graduation on housing. Tighten cover screws.

## OVERHAUL

### DISASSEMBLY

**NOTE** — Use new gaskets and seals. Make sure that new gaskets fit correctly and that all holes and slots are punched through and correctly located.

**All Models** — 1) Remove carburetor from engine. Remove thermostatic spring housing assembly, spring housing gasket, baffle plate, and fast idle link. Remove EGR WOT dump valve and bracket. If equipped, remove air conditioning throttle solenoid.

2) Remove air horn assembly screws and dashpot. If YFA Feedback model, remove feedback solenoid and bracket assembly. Lift air horn away from main body and remove gasket. Turn air horn upside down and remove float pin, float, and lever assembly.

3) Turn air horn right side up and catch needle pin, spring and needle as they fall out. Remove needle seat and gasket.

4) Remove air cleaner bracket. If necessary, file staked (burred) ends of choke plate attaching screws and remove. Be sure to use new screws when assembling. Remove choke plate from air horn. Remove choke link lever and attaching screw.

5) Turn choke shaft and piston assembly counterclockwise until choke piston comes out of choke piston cylinder. Remove assembly from air horn. Remove piston pin and piston from choke piston lever and shaft assembly.

6) Remove spring retainer from mechanical fuel bowl vent flapper valve. Remove vent shaft rod and spring, and flapper valve. Note position of spring on rod for reassembly.

7) Turn main body upside-down and catch accelerator pump check ball and weight. Remove bowl vent lever screw in end of throttle shaft. Remove spring washer, actuating lever, operating lever and clip. Loosen throttle shaft arm screw. Remove arm and accelerator pump connector link. Remove fast idle cam and screw. Remove throttle kicker (if equipped).

8) Remove accelerator pump diaphragm housing screws, lift out pump diaphragm assembly, pump lifter link and metering rod as a unit.

9) Disengage metering rod arm spring from metering rod. Remove metering rod from rod arm assembly. Be sure to note

## 1981 Carter Carburetors

## CARTER YFA &amp; YFA FEEDBACK SINGLE BARREL (Cont.)

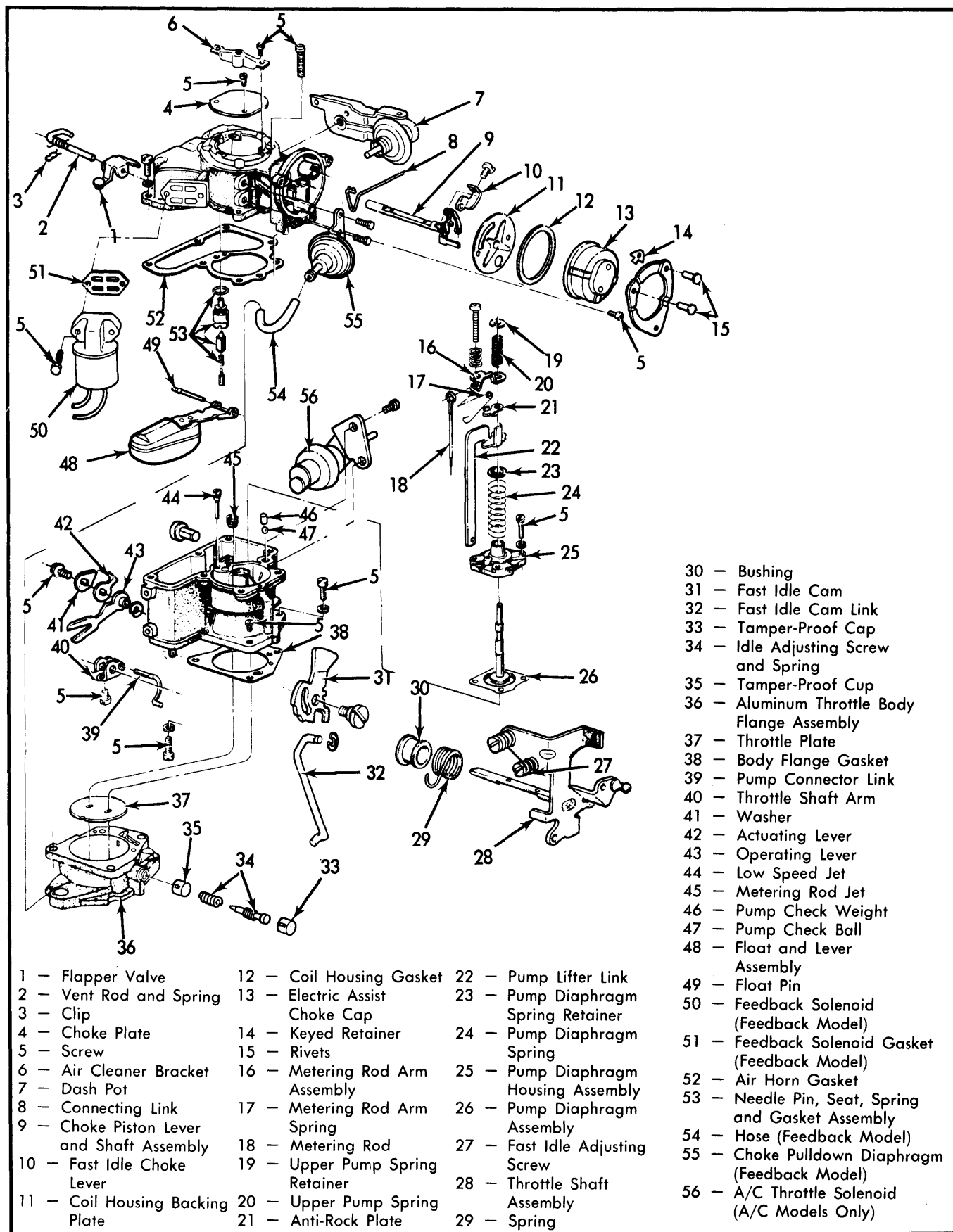


Fig. 8 Exploded View of Carter Model YFA 1-Barrel Carburetor (YFA Feedback Model Illustrated, YFA Similar)

## CARTER YFA & YFA FEEDBACK SINGLE BARREL (Cont.)

location of any washers that were used for shimming either spring (for reassembly). Compress upper pump spring and remove spring retainer.

10) Remove upper spring, metering rod arm assembly, anti-rock plate (if equipped), and pump lifter link from pump diaphragm shaft.

11) Compress pump diaphragm spring, remove pump diaphragm spring retainer, spring and pump diaphragm assembly from pump diaphragm housing.

12) Using proper size jet tool or screwdriver, remove metering rod jet and low speed jet. Remove screws and separate throttle body flange assembly from main body casting. Remove gasket.

13) Remove throttle plate retaining screws. File staked (burred) ends if necessary, and use new screws at reassembly. Slide throttle shaft and lever assembly out of throttle body.

**NOTE** — Location of torsion spring ends on throttle shaft is important to know for reassembly.

14) When removing idle mixture limiter cap, be sure to note the position of the tab. After removing limiter cap, count number of turns to lightly seat needle. When assembling, install screw in same location.

### CLEANING & INSPECTION

- Use a regular carburetor cleaning solution. Soak components long enough to thoroughly clean all surfaces and passages of foreign matter.
- Do not soak any components containing rubber or leather.
- Remove any residue after cleaning by rinsing components in a suitable solvent.
- Blow out all passages with dry compressed air.

### REASSEMBLY

**NOTE** — Use new gaskets. Make sure that new gaskets fit correctly and that all holes and slots are punched through and correctly located.

To reassemble carburetor, reverse disassembly procedures and note the following:

- 1) If throttle valve was removed, make sure notch in throttle valve is aligned with idle port in body flange. Make sure throttle plate does not bind or stick. Restake or peen throttle plate screws.
- 2) Make sure vacuum passage in accelerator pump housing is aligned with vacuum passage in main body.
- 3) Make sure bowl vent rod engages forked actuating lever when air horn is installed.

### CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Float Level Setting	Choke Unloader Setting	Choke Pull-Down Setting	Fast Idle Cam Setting	Auto. Choke Setting
D9TE - CA	.69"	.280"	.290"	.140"	Index
EOTE - AMA	.69"	.280"	.290"	.140"	Index
EOTE - FA	.69"	.280"	.290"	.140"	Index
EITE - EA	.78"	.280"	.300"	.140"	Index
EITE - DA	.78"	.280"	.300"	.140"	Index
EITE - ANA	.78"	.280"	.300"	.140"	Index
EITE - UA	.78"	.280"	.230"	.140"	Index
EITE - ARA	.78"	.280"	.230"	.140"	Index
EITE - TA	.78"	.280"	.300"	.140"	Index
EITE - GA	.78"	.330"	.320"	.140"	2 Rich
EITE - AZA	.78"	.330"	.320"	.140"	2 Rich
EITE - VA	.78"	.280"	.300"	.140"	2 Rich
EITE - AUA	.78"	.280"	.300"	.140"	2 Rich