CARTER YFA SINGLE BARREL

CARBURETOR APPLICATION

FORD MOTOR CO.

Application	Man. Trans.	Auto Trans
	Ford Carb. No.	
300" E-100 & E-150		
Federal		
Without A/C	E0UE-KA	E0TE-AHA
With A/C	E0UE-LA	E0TE-AHA
California	E0TE-AKA	E0TE-AHA
300" E-250		
Federal	E0TE-ABA	E0UE-GA
California		E0UE-GA
300" E-100 & E-150		
Federal		
Without A/C	E0TE-ATA	E0TE-AFA
With A/C	E0TE-AEA	E0TE-AFA
California	E0TE-CA	E0TE-ALA
300" F-250		
Federal		
Without A/C	E0TE-ARA	E0TE-AHA
With A/C	E0TE-ACA	E0TE-AHA
California		E0TE-AHA
300" E & F 350		E0TE-FA
300" F-150, 250 & U-150 4-WD		
Federal		
Without A/C	E0E-ACA	
With A/C	E0TE-ARA	

CARBURETOR IDENTIFICATION

A carburetor identification tag is attached to carburetor. The tag contains part number prefix and suffix. Basic part number for all carburetors is 9510. A design change code (if any) is also stamped on the tag. An assembly date code (year, month and day) is also stamped on the tag.

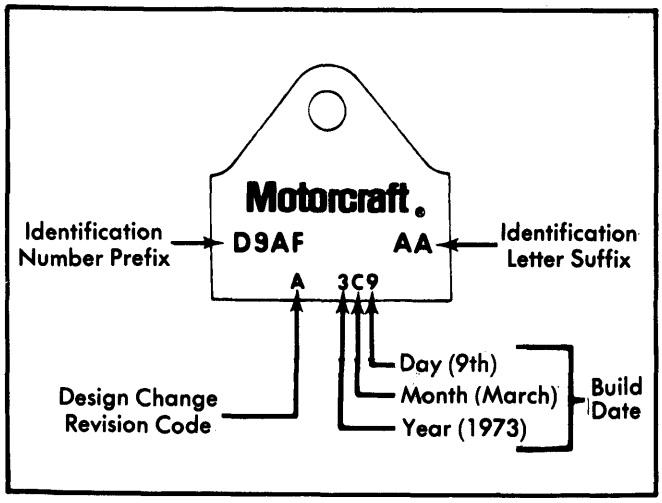

Fig. 1 Ford Motor Co. Carburetor Identification Tag

DESCRIPTION

The Carter YFA carburetor is made up of 3 main assemblies: **air horn, main body** and throttle body. All models are equipped with an automatic choke. Vehicles under 8500 lbs. GVW are equipped with an electric assist type choke. Vehicles over 8500 lbs. GVW utilize a hot air type automatic choke. All vehicles over 8500 lbs. GVW will be equipped with a vacuum throttle kicker. All vehicles under 8500 lbs. GVW will be equipped with a solenoid/dashpot assembly.

ADJUSTMENT

HOT (SLOW) IDLE RPM

See appropriate article in TUNE-UP SERVICE PROCEDURES.

VACUUM THROTTLE KICKER (DECEL 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.

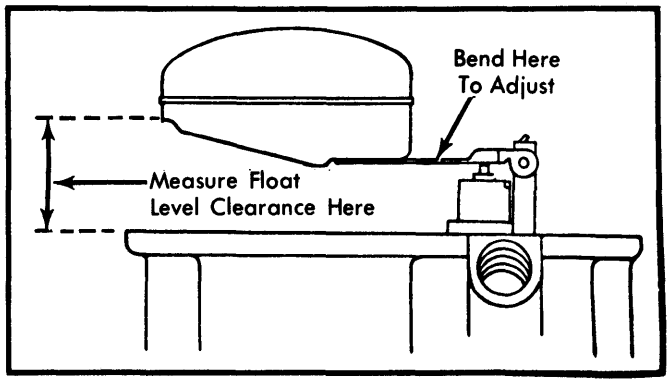

Fig. 2 Float Level Clearance Adjustment

CARTER YFA 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.

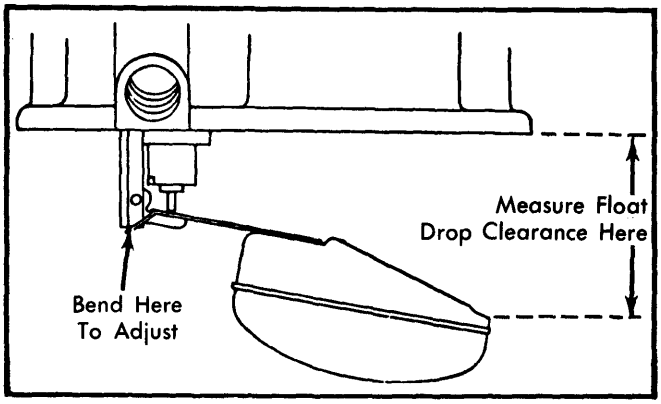

Fig. 3 Float Drop Clearance Measurement

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.

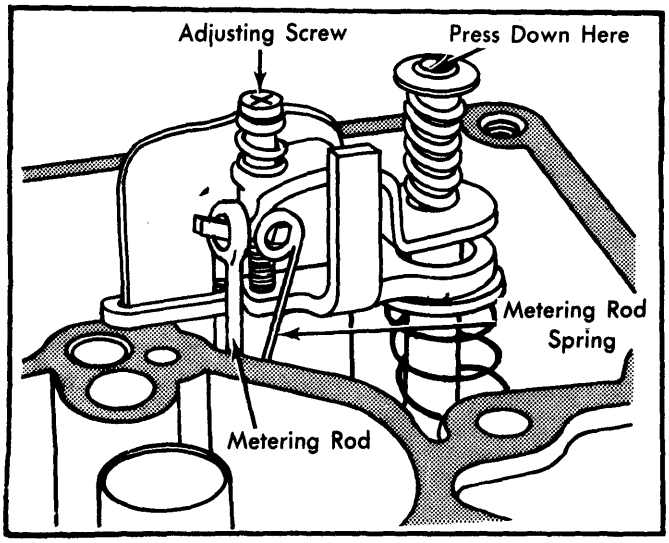

Fig. 4 Metering Rod Adjustment

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.

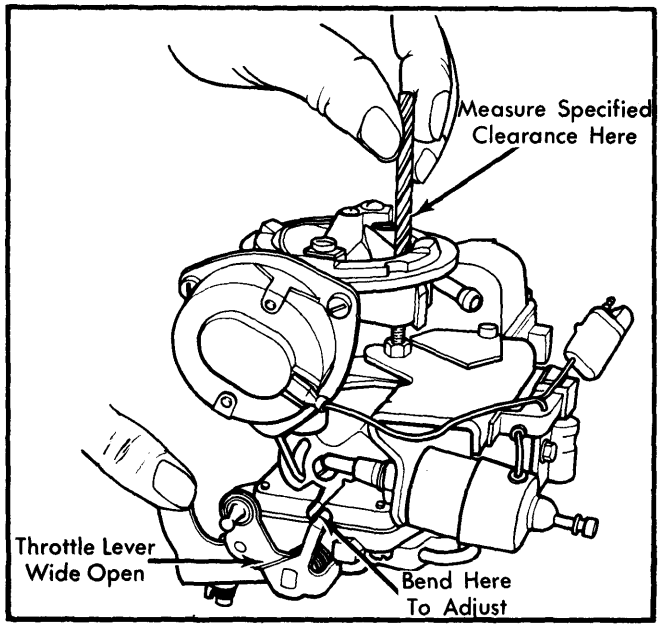

Fig. 5 Choke Unloader (Dechoke) Adjustment

CHOKE VALVE PULL-DOWN CLEARANCE

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 SINGLE BARREL (Cont.)

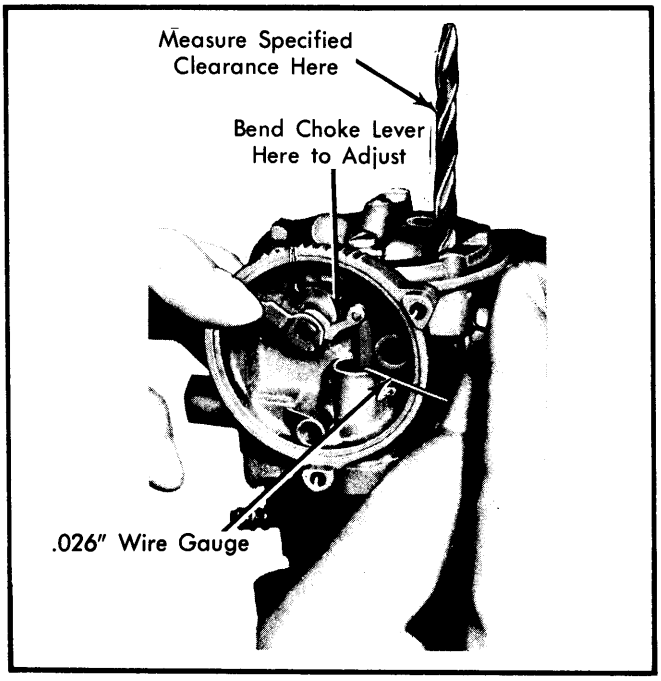

Fig. 6 Choke Valve Pull-Down Clearance Adjustment

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*.

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.

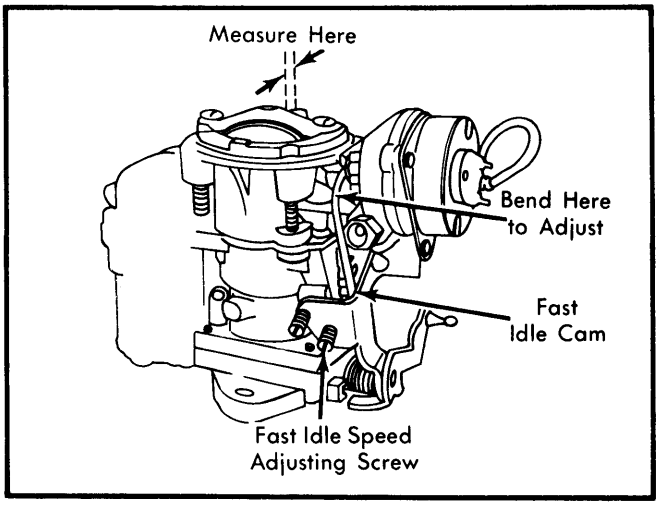

Fig. 7 Fast Idle Cam Index Adjustment

AUTOMATIC CHOKE

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.

2) Remove air horn assembly screws, dashpot or solenoid 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 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.

CARTER YFA SINGLE BARREL (Cont.)

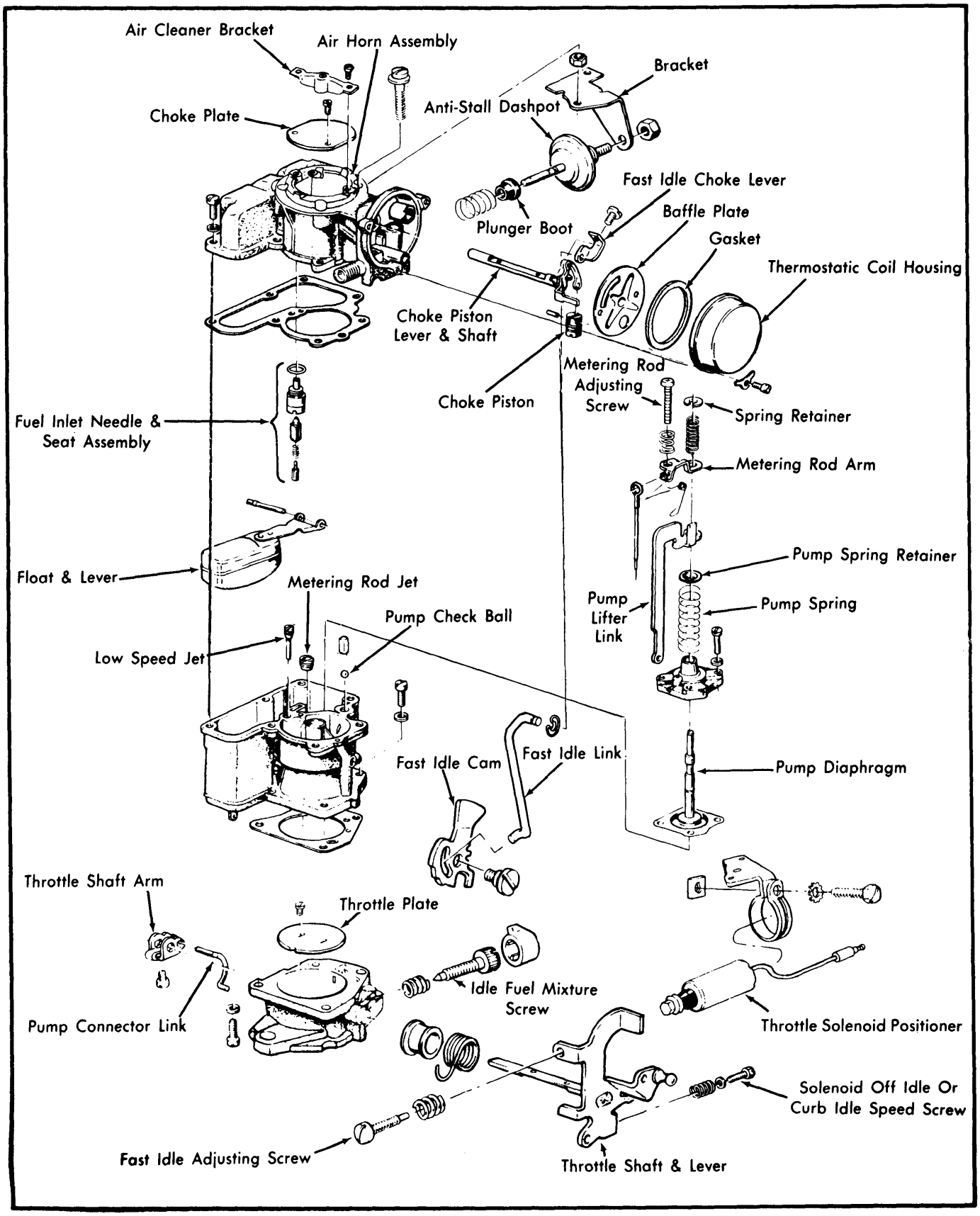

Fig. 8 Exploded View of Carter Model YFA 1-Barrel Carburetor

CARTER YFA SINGLE BARREL (Cont.)

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. Mske sure throttle valve does not bind or stick. Restake or peen throttle valve 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
E0TE-ABA	11/16"	.280"	.290"	.140"	2 Rich
E0TE-ACA	11/16"	.280"	.320"	.140"	Index
E0TE-ARA	11/16"	.280"	.320"	.140"	Index
E0TE-AEA	11/16"	.280"	.230"	.140"	2 Rich
E0TE-AFA	11/16"	.280"	.230"	.140"	2 Rich
E0TE-AHA	11/16"	.280"	.230"	.140"	2 Rich
E0TE-AKA	11/16"	.280"	.230"	.140"	Index
E0TE-ALA	11/16"	.280"	.230"	.140"	Index
E0TE-ATA	11/16"	.280"	.320"	.140"	2 Rich
E0TE-CA	11/16"	.280"	.230"	.140"	Index
E0UE-GA	11/16"	.280"	.230"	.140"	2 Rich
E0UE-LA	11/16"	.280"	.230"	.140"	Index
E0UE-KA	11/16"	.280"	.230"	.140"	Index
E0TE-FA	11/16"	.280"	.290"	.140"	Index