1982 Carter Carburetors

CARTER YFA & YFA FEEDBACK SINGLE BARREL

CARBURETOR APPLICATION

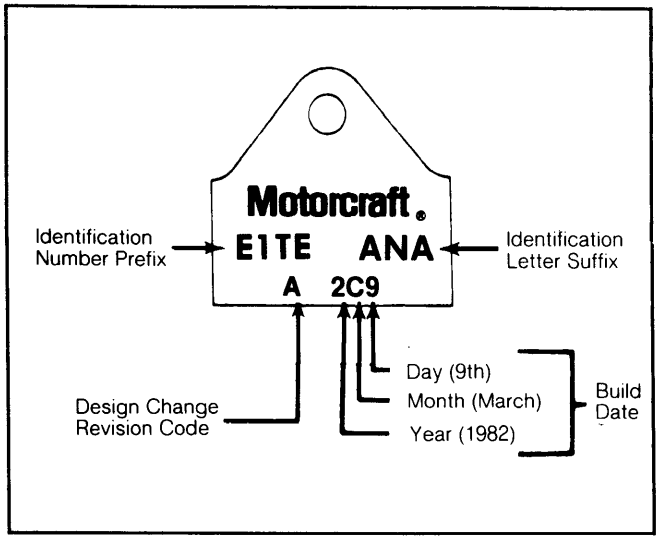
FORD MOTOR CO. CARBURETOR NO.

Application	Man. Trans.	Auto. Trans.
4.9L 6-Cyl.		
Bronco		
With A/C	E2TE-BZA	
Without A/C	E2TE-BVA	
	E2TE-YA	
E100/150		
Federal	E2UE-EA	E2TE-ANA
	E2TE-AMA	
Calif.	E2TE-JA	E2UE-DA
Hi. Alt.	2ETE-AAA	
E250		
Federal	E2TE-AMA	
Calif.		E2UE-DA
Hi. Alt.		E2TE-AAA
F100		
Federal	E2TZ-BVA	E2TE-MA
	E2TZ-BZA	
	E2TE-CEA	
Calif.	E2TE-JA	E2TE-KA
Hi. Alt.	E2TE-YA	
F150/250		
Federal	E2TE-BVA	E2TE-MA
	E2TE-BZA	
Calif.	E2TE-JA	E2TE-KA
Hi. Alt.	E2TE-YA	

CARBURETOR IDENTIFICATION

A carburetor identification tag is attached to carburetor. Tag contains part number prefix and suffix, design change code, if any, and assembly date code, including year, month and day. 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



Identification tag information is illustrated.

DESCRIPTION

Carter YFA and YFA Feedback carburetors are made up of three main assemblies: Air horn, main body and throttle body. YFA carburetors have an adjustment limiting vacuum diaphragm type automatic choke with an electric assist choke cap. The electric choke adds a high mileage economy application to the carburetor. 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 attached to the air horn assembly. 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

NOTE: For all on-vehicle adjustments, see TUNE-UP SERVICE PROCEDURES.

FLOAT LEVEL

All Models

1) Remove air cleaner assembly. Remove air horn and gasket from top of carburetor.

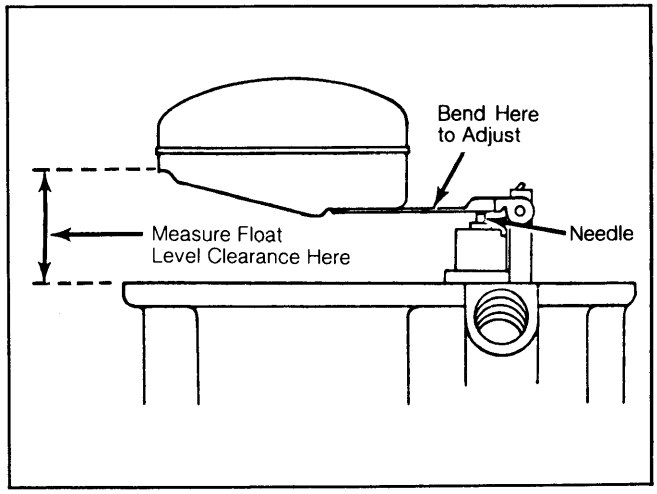
2) Turn air horn assembly upside-down. Measure distance between top of float at free end and gasket surface of air horn.

NOTE: Do not apply pressure against needle when adjusting float.

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

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

Fig. 2: Adjustment of Float Level Clearance



Float arm should rest gently on needle.

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FLOAT DROP

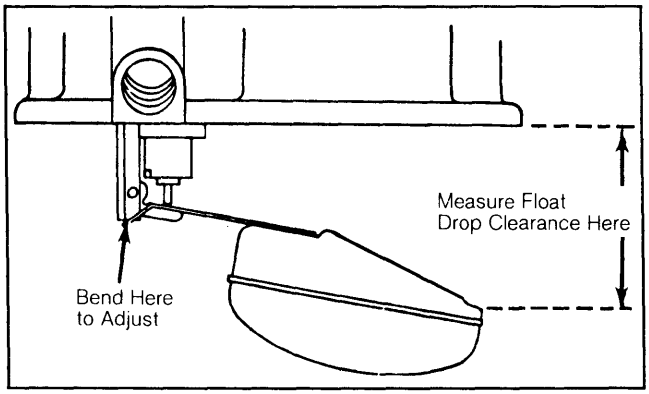
All Models

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 air horn and a new gasket on carburetor. Start engine and check for fuel leaks. Install air cleaner.

Fig. 3: Float Drop Clearance Adjustment



Bend tab at end of float arm.

METERING ROD

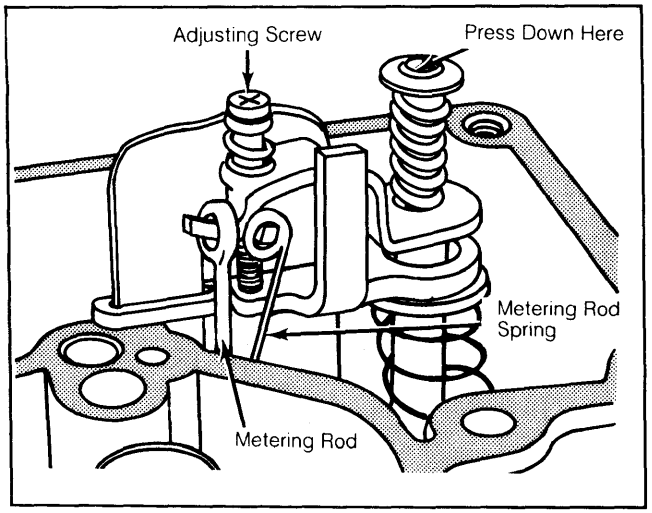
All Models

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.*

Fig. 4: Metering Rod Adjustment



Before adjusting, press down on pump diaphragm shaft.

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

5) Install air horn and new 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 and press choke valve toward closed position.

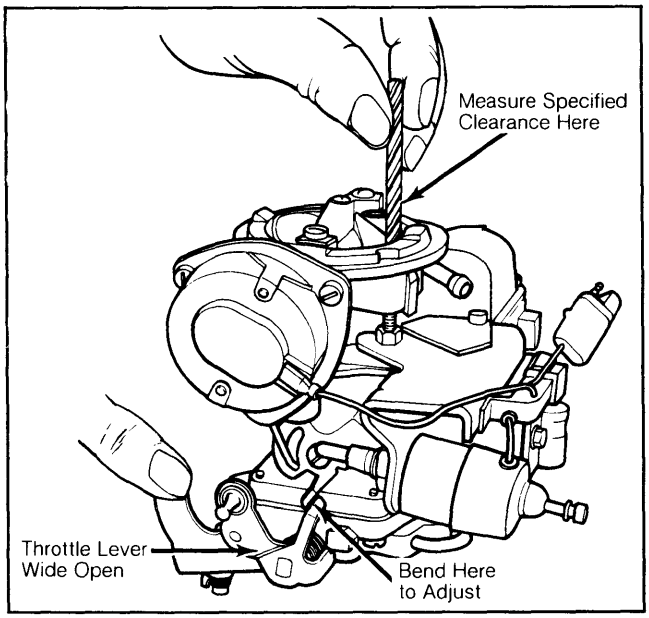
2) Measure clearance between lower edge of choke valve and air horn wall.

3) Adjust by bending arm on choke lever of throttle lever. *See Fig. 5.*

4) Bend 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



Adjust by bending choke lever arm of throttle lever.

CHOKE VALVE PULL-DOWN CLEARANCE (YFA MODEL)

Piston Type Choke

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 ⅛" from one end. Insert the bent end of the wire gauge between choke piston slot and right hand slot in the choke housing.

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.

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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.

CHOKE PLATE PULL-DOWN CLEARANCE (YFA FEEDBACK MODEL)

Diaphragm Type Choke

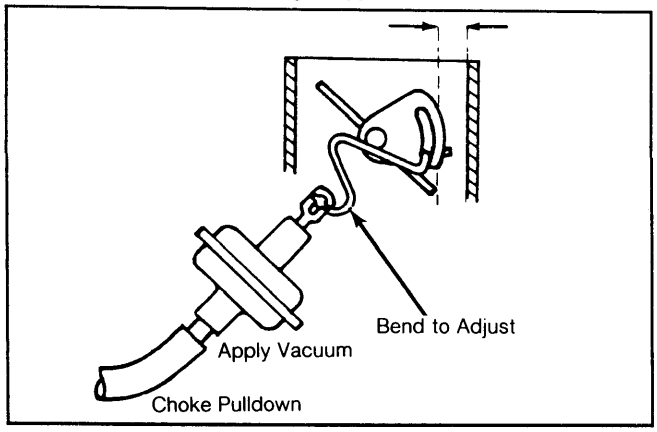
1) Remove air cleaner. Remove choke thermostatic spring housing and heat baffle from carburetor.

2) Temporarily rotate choke housing to rich setting to lightly close choke plate, then increase an additional 90°.

3) Activate pull-down 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 two No. 6-32 screws in place of rivets. Replace air cleaner.

Fig. 6: Adjusting Diaphragm Type Choke Plate Pull-Down

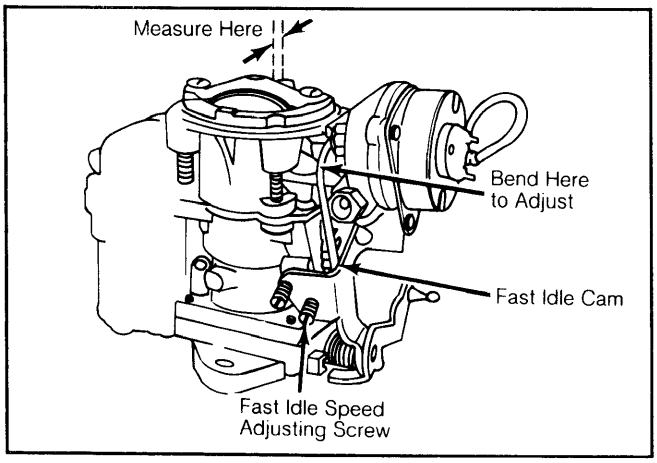


To adjust, bend choke diaphragm link.

FAST IDLE CAM POSITION

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 Position



Measure clearance between choke valve and air horn wall.

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.

Loosen choke thermostat cover, 2 rivets and retaining screw. Rotate cover assembly in "Rich" or "Lean" direction to align reference mark on cover with specified scale graduation on housing. Install new rivets and screw and tighten.

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, choke over center spring, if equipped and fast idle link. Remove EGR WOT dump valve and bracket. If equipped, remove front mounted solenoid and bracket.

2) On Feedback carburetor, remove pull-down diaphragm adjustment limiting shield. Remove 2 retaining screws; disconnect choke pull-down link and remove pull-down motor assembly. Disengage link from choke shaft lever.

3) Remove air horn assembly screws and dashpot. On 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.

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

5) 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.

6) 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.

7) 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.

8) 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

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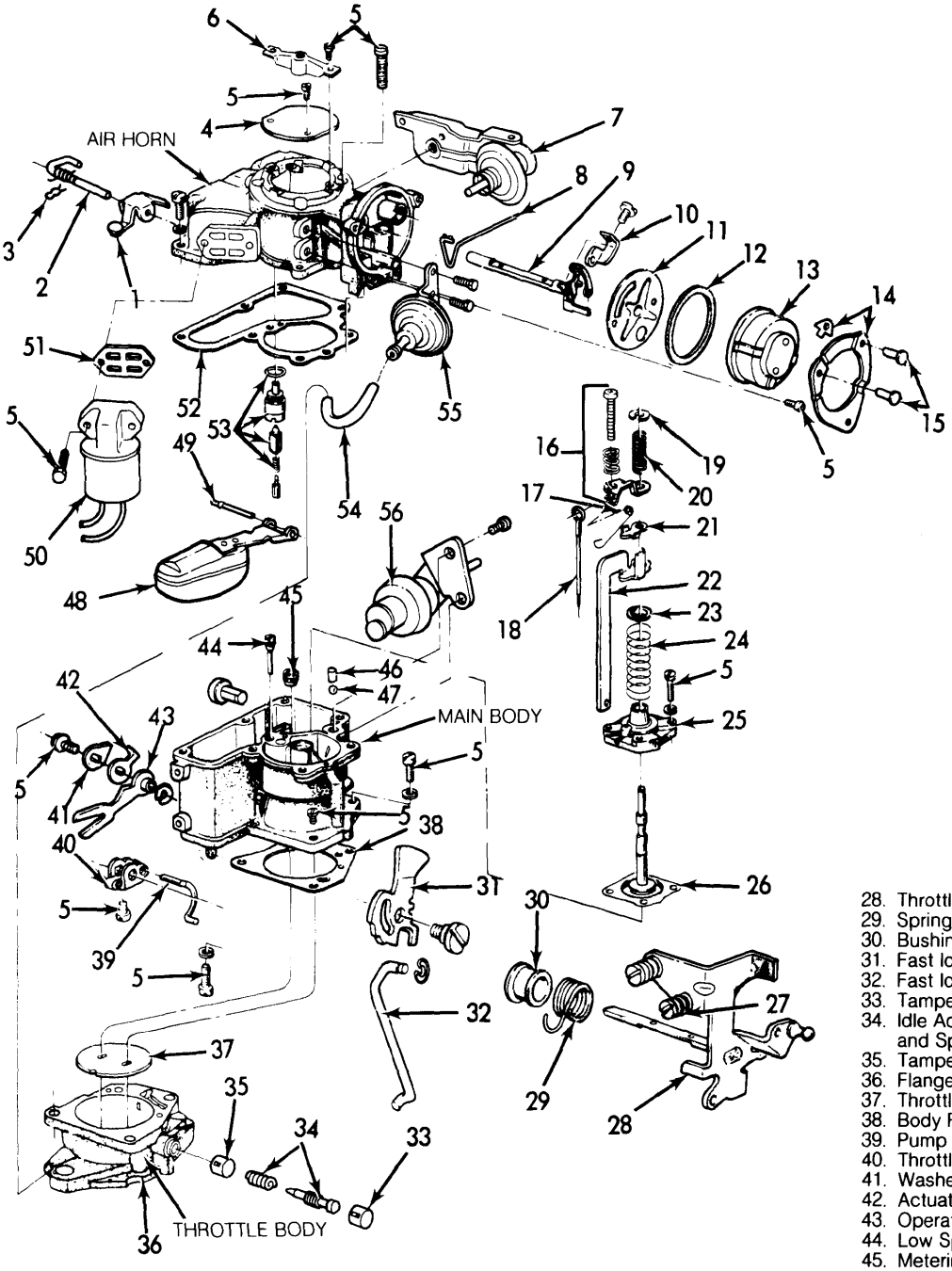
Fig. 8: Exploded View of Carter Model YFA 1-Barrel Feedback Carburetor (YFA Similar)



1. Flapper Valve
2. Vent Rod and Spring
3. Clip
4. Choke Plate
5. Screw
6. Air Cleaner Bracket
7. Dash Pot
8. Connecting Link
9. Choke Piston Lever and Shaft Assembly
10. Fast Idle Choke Lever
11. Coil Housing Backing Plate
12. Coil Housing Gasket
13. Electric Assist Choke Cap
14. Retainer and Key
15. Rivets
16. Metering Rod Arm Assembly
17. Metering Rod Arm Spring
18. Metering Rod
19. Upper Pump Spring Retainer
20. Upper Pump Spring
21. Anti-Rock Plate
22. Pump Lifter Link
23. Pump Diaphragm Spring Retainer
24. Pump Diaphragm Spring
25. Pump Diaphragm Housing Assembly
26. Pump Diaphragm Assembly
27. Fast Idle Adjusting Screw
28. Throttle Shaft Assembly
29. Spring
30. Bushing
31. Fast Idle Cam
32. Fast Idle Cam Link
33. Tamper-Proof Cap
34. Idle Adjusting Screw and Spring
35. Tamper-Proof Cup
36. Flange Assembly
37. Throttle Plate
38. Body Flange Gasket
39. Pump Connector Link
40. Throttle Shaft Arm
41. Washer
42. Actuating Lever
43. Operating Lever
44. Low Speed Jet
45. Metering Rod Jet
46. Pump Check Weight
47. Pump Check Ball
48. Float and Lever Assembly
49. Float Pin
50. Feedback Solenoid (Feedback Model)
51. Feedback Solenoid Gasket (Feedback Model)
52. Air Horn Gasket
53. Needle Pin, Seat, Spring and Gasket Assembly
54. Hose (Feedback Model)
55. Choke Pull-Down Diaphragm (Feedback Model)
56. A/C Throttle Solenoid (A/C Models Only)

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pump connector link. Remove fast idle cam and screw. Remove throttle kicker, if equipped.

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

10) Disengage metering rod arm spring from metering rod. Remove metering rod from rod arm assembly. For reassembly, be sure to note location of any washers that were used for shimming either spring. Compress upper pump spring and remove spring retainer.

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

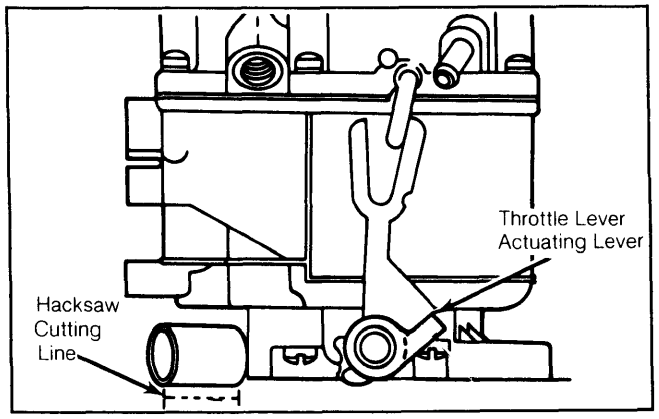
12) Compress pump diaphragm spring, remove pump diaphragm spring retainer, spring and pump diaphragm assembly from pump diaphragm housing.

13) On Feedback carburetor, using a sharp punch or awl, remove temperature compensated accelerator pump bleed valve plug from outside main body casting. Loosen bleed valve screw and remove valve.

14) 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.

15) 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.

Fig. 9: Removal of Idle Mixture Screw Limiter Cap



Saw a slot through thickness of cup.

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

16) When removing idle mixture limiter cap, be sure to note the position of the tab.

17) Remove idle mixture screw adjustment limiting cap and cup as follows: Invert carburetor assembly and tape all vacuum and fuel connection openings. Using a hacksaw, saw a slot lengthwise through thickness of cup. *See Fig. 9.* Be careful not to touch throttle body with saw blade. Insert screw driver in new slot, spreading outer cup enough to remove inner cap.

18) After removing limiter cap, count number of turns to lightly seat needle. This information should be used for reassembly.

CLEANING & INSPECTION

- Do not immerse air horn in any solvent. Damage to vent shaft seal could result.
- 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 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 assemble 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	Choke Unloader	Choke Pull-Down	Fast Idle	Auto. Choke
E2TE-JA	.780"	.330"	.320"	.140"	2 Rich
E2TE-KA	.780"	.330"	.320"	.140"	2 Rich
E2TE-MA	.780"	.280"	.300"	.140"	2 Rich
E2TE-YA	.780"	.280"	.300"	.140"	Index
E2TE-AAA	.780"	.280"	.300"	.140"	Index
E2TE-AMA	.780"	.280"	.230"	.140"	Index
E2TE-ANA	.780"	.280"	.300"	.140"	2 Rich
E2TE-BVA	.780"	.280"	.270"	.140"	Index
E2TE-BZA	.780"	.280"	.270"	.140"	Index
E2TE-CEA	.780"	.330"	.320"	.140"	2 Rich
E2UE-DA	.780"	.330"	.320"	.140"	2 Rich
E2UE-EA	.780"	.280"	.230"	.140"	Index