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AIRCRAFT CARBURETOR SERVICE MANUAL-2

MODEL HA

PRECISION
AIRMOTIVE CORPORATION

FSM-OH4
July 15, 1994

3220 100th ST SW Bldg E
Everett, Washington 98204



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WARNING

WARRANTY AND LIABILITY INFORMATION: The use of parts NOT AUTHORIZED by Precision in Precision Airmotive aviation carburetors constitutes an alteration or modification of the carburetor and voids all warranties. Precision Airmotive will accept no warranty or responsibility/liability for carburetors containing UNAUTHORIZED parts. Any operator and/or overhaul facility responsible for installation of UNAUTHORIZED parts may have the sole and full liability for property damage or injury, including death, arising from any malfunction of the carburetor in which such parts are installed. This manual is not applicable and should not be used for the installation of parts NOT AUTHORIZED by Precision Airmotive.*

*Reference Precision Airmotive Service Bulletin MSA-5 and Service Information Letter 10-21-92.



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SPECIAL TOOLS



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REF. NO.	PART NO.	NOMENCLATURE
1	M-94	Air metering pin gage
2	M-95	Throttle shaft bushing reamer
3	M-100	Throttle valve bolt peening arbor
4	M-103	Float valve seat remover
5	M-105	Throttle shaft packing tool
6	M-107	Throttle valve bolt peening tool
7	M-122	Throttle shaft bushing remover
8	M-516	Throttle shaft bushing installer
9	M-517	Venturi removal/installation tool
10	M-519	Economizer/pump rod packing tool
11	M-522	Economizer/pump rod insert guide tool



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STANDARD HA 6 DISASSEMBLY PROCEDURE

NOTE: Some models do not use Economizer and/or accelerator pump systems. Refer to appropriate parts list section for your particular configuration.

Refer to exploded view, pages 8 and 9 for Complete Parts Reference Numbers

- 1) Remove fuel inlet fittings (56), washers (18), and screen (70) in order to remove one of the cover screws.
- 2) Bend safety tabs open on safety washers (59) and remove cover screws (11).
- 3) Separate cover assembly from throttle body and bowl assembly (1).

NOTE: If cover sticks in place tap with soft hammer. Do not drive a tool between carburetor body and cover as this may damage sealing surfaces.

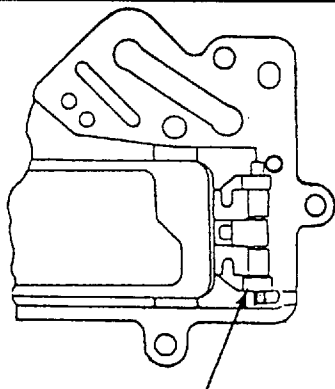
Cover

- 4) Remove float shaft (31). If shaft is the pressed-in type support casting as shown in Figure 1 to prevent damage to casting.
- 5) Remove float assembly (30).
- 6) Remove float valve retracting clip (29) if used.
- 7) Remove float valve seat and gasket assembly (91) using tool M-103 or large screw driver.
- 8) Remove cover gasket (19).

Throttle Body and Bowl

To Remove Throttle Shaft Assembly

- 9) Remove pump lever clamp screw (12) when used.
- 10) Remove safety wire (55) and screw (6) from pump lever.
- 11) Remove hex nuts (66) from pump linkage.



CAUTION: TO PREVENT DAMAGE TO CASTING — SUPPORT THIS SIDE WHILE PRESSING SHAFT OUT.

FIGURE 1

- 12) Remove pump linkage assembly from throttle shaft when used or cam/lever (88), and plates (87) and (85) when used.
- 13) Remove throttle opening spring (27) from shaft when used.
- 14) Remove throttle stop screw (5) and spring (26).
- 15) Remove throttle stop pin (53) and push nut (67) when used.
- 16) Note position of throttle lever (92) before removing cotter pin (61), retaining nut (13), and throttle lever (2).
- 17) Remove throttle valve screws (8) and throttle valve (4).
- 18) Remove throttle shaft assembly (3).
- 19) Remove throttle shaft "O" ring retainers (46) using a sharp pointed tool.
- 20) Remove throttle shaft "O" rings (36). Pry out with sharp pointed tool and discard. Not reusable.
- 21) Remove throttle shaft bushings (49). Use tool M-122 or a standard bushing extractor in the approved manner.

To Remove Accelerator Pump Assembly (When Used)

- 22) Remove Tru-Arc washer (60).
- 23) Remove pump rod (75).
- 24) Remove pump rod guide (69). Pry out with screw driver and discard. Not reusable.
- 25) Remove accelerator pump assembly (84).
- 26) Remove pump inlet check valve (32).

To Remove Economizer Pin and Jet (When Used)

- 27) Remove plug (65) and washer (17).
- 28) Remove air metering jet (43), spring (25), and pin (83).

To Remove Remaining Small Parts

- 29) Remove power jet (45) and gasket (15).
- 30) Remove idle tube (86).
- 31) Remove main nozzle (42) and nozzle gasket (21).
- 32) Remove secondary nozzle (41) and nozzle gasket (22).
- 33) Remove idle adjusting needle (34) and spring (24).
- 34) Remove bowl drain plug (71).



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To Remove Accelerator Pump Discharge

Check Valve (When Used)

- 35) Remove check valve plug (72).
- 36) Remove pump discharge check valve (33).
- 37) Remove pump discharge check valve gasket (20) which may remain in the cavity.

To Remove Venturi

- 38) NOTE: Casting can be cleaned with venturi in place. Venturi seldom needs replacing unless damaged.
- 39) Remove pitot tube (79). Only if venturi needs replacement.
- 40) Insert 5/16 rod in bowl vent hole on bowl cover surface to drive out pitot tube.
- 41) Pitot tubes seldom requires service unless damaged.
- 42) Remove expansion plug and pump discharge jet (44).
- 43) Remove venturi (40) with tool M-517.

To Remove Fuel Cut-off Valve

- 44) Remove cotter pin (61) and nut (13).
- 45) NOTE the position of mixture control lever before removal. Remove mixture control lever (14).
- 46) Remove safety wire (55), retainer screw (6) and washer (67) when used.
- 47) Remove retainer clip (62) when used or two retainer screws (52) and safety washer (57).
- 48) Remove retainer flange (10), washer (39) and gasket (68) when used.
- 49) Remove mixture control valve (28), washer (50) when used, and remove and discard "O"-ring seal (38).
- 50) When used, remove retainer bushing (47) from top two counterbores of the pump rod-Economizer guide channels along with "O" ring (37). None of these parts are reusable.
- 51) When used, remove retainer bushing (47) and V Block packing (35) from counterbore or bottom side of pump and economizer rod guide channels. None of these parts are reusable.
- 52) Remove plugs (7) and (9). Because of thread locking compounds heating general area may ease removal. **DO NOT EXCEED 300°F.**



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CLEANING AND INSPECTION

Cleaning Process

- 53) Use a recommended carburetor cleaner and the cleaner manufacturer's procedure to soak, rinse, and blow out to assure complete cleaning. Only metal parts are to be placed in carburetor cleaner. Do not expose non metal parts to carburetor cleaner.
- 54) Carburetors have by design requirements very small passages, channels, and orifices. These are quite difficult to inspect using the naked eye. Using equipment such as an Oscope or other magnifying devise will enable you to see these difficult places.

IMPORTANT: Do not clean passages in castings or other calibrated parts (nozzle, idle tube, etc.) with wire or small drills. Compressed air, carburetor cleaner, and a small, soft bristle brush work quite well.

**WEAR LIMITS FOR
HA-6 CARBURETORS**

INDEX NO.	DESCRIPTION	PERMISSIBLE WORN DIM.	PERMISSIBLE WORN CLEARANCE
48	Float shaft bosses	.130	.008
31	Float shaft	.122	.009
31	Float shaft	.122	.009
30	Float	.131	.009
Body	Throttle shaft bushing holes	.4995	.002
49	Throttle shaft bushing O.D.	.4975	.005
49	Throttle shaft bushing I.D.	.3765	.005
3	Throttle shaft	.3715	.005
69	Accelerator pump guide	.240	.028
77	Accelerator pump shaft	.212	.014
77	Accelerator pump shaft (top)	.090	.014
75	Actuating rod	.104	.008
74	Pin - pump link	.123	.008
82	Link - pump operating	.131	.003
28	Fuel cut off valve	.3095	.003
Body	Fuel cut off sleeve	.3125	-
Body	Accelerator pump bore	.755	-
30	Float adjustment tab	wear spot = .100 dia.	-
Body	Throttle stop pad on T-body	wear spot = .010 deep	-

TABLE I

Inspection

- 55) The following parts should always be replaced during carburetor overhaul:

- All gaskets
- Seals and packing
- Throttle shaft bushings
- Retainers
- Float valve and seat assembly
- Accelerator pump
- Float shaft

NOTE: Fuel inlet strainer assembly should be replaced if the strainer screen is broken at any place or cannot be satisfactorily cleaned.

- 56) Use a #30 drill blank as a gage to check the wear limit of the float shaft holes in the cover (48).
- 57) If the #30 drill blank will enter either hole a new cover is required as the worn float shaft hole will not accept the knurled float shaft press fit.
- 58) Normal aircraft quality inspection techniques can determine reusability of carburetor components. Abnormal wear, cracks, warping, or damage are, of course, just cause for rejection. Wear beyond the limits shown in TABLE I is also cause for rejection.

NOTE: Late model aircraft are all equipped with soft engine mounts. This has created a more severe vibration environment, causing different wear characteristics in different aircraft. **Careful inspection is required.**





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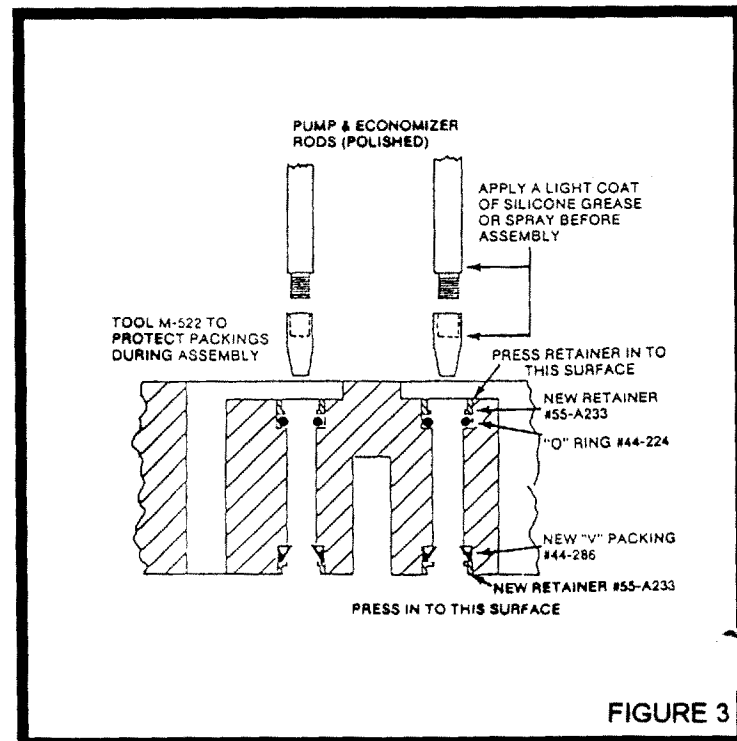
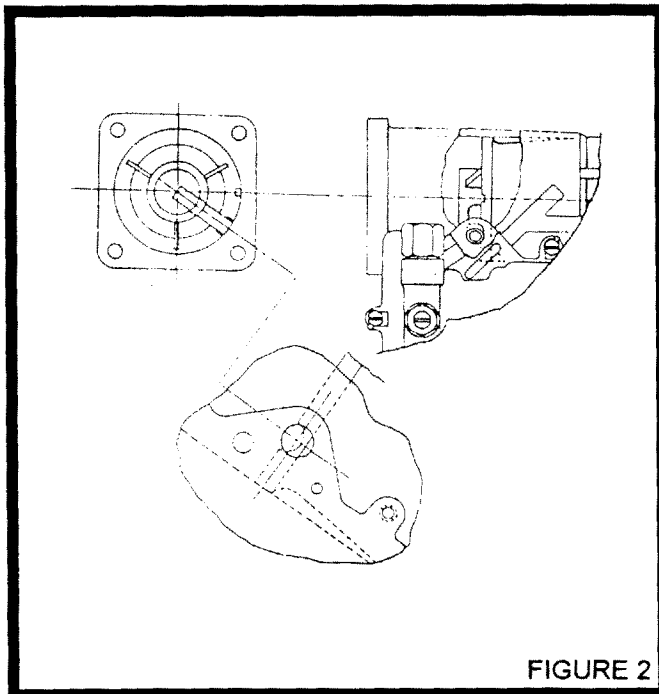
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ASSEMBLY PROCEDURE

Refer to Pages 8 and 9 for Complete Parts and Reference Numbers

- 59) Assemble screw plugs (7) and (9) in body (1) with a limited amount of Loctite #222 on plug threads. Special precaution should be taken to see that no sealant is on end of plug that could work its way into fuel channel. Torque to 10-15 inch pounds (7) and 12-16 inch pounds (9).
- 60) Assemble pump discharge check valve gasket (20) and check valve (33) and plug (72) in body (1). Apply a limited amount of thread lube to plug (72) before assembly. Do not apply sealant to end face of plug.
- 61) ASSEMBLE VENTURI (40) IN BODY (1) IN THE FOLLOWING MANNER:
- 62) Place venturi on tool M-517 locating the venturi legs in the tool slots. Insert venturi in body (1) and rotate until nozzle relief in venturi shoulder is in alignment with nozzle bore in body. Press venturi to bottom or to a depth to allow assembly of nozzle (41) in body (1). (Shown in Figure 2).
- 63) Assemble accelerator discharge tube (44) into body (1) by threading discharge tube into body until it bottoms out and torque to 25-30 inch pounds. Assemble expansion plug with 1/4" diameter flat ended punch. Stake around expansion plug.

- 64) When used, place retainer bushing (47) first and "O" ring (37) second on assembly tool M-519 and assemble into drilling for pump rod (75) at bowl gasket surface in body (1). Press retainer to depth shown in Figure 3.
- 65) Using the same procedure assemble retainer bushing (47) and "O" ring (37) into drilling for air metering valve rod (76) at bowl gasket surface in body (1) when used.
- 66) Place retainer bushing (47) first and "V" packing (35) on assembly tool M-519 and assemble to depth in opposite end of these two rod drillings as shown in Figure 3. Be certain the "V" packings are installed as shown in Figure 3.





67) Assemble throttle shaft bushing (49) with installation and alignment tool M-516 as shown in Figure 4 in the following method:

- a. Lightly coat the O.D. of the bushing with Loctite RC-680 per Loctite's recommended instructions.
- b. Install first bushing to 1/3 depth for locating purpose.
- c. Install second bushing to counterbore depth.
- d. Install first bushing to counterbore depth.
- e. Line ream with bushing reamer tool M-95, if necessary, after Loctite is cured to assure free rotation of throttle shaft.

68) **NOTE: REPEATED REBUSHING MAY ENLARGE THE COUNTERBORE TO THE POINT WHERE THE BUSHING WILL BE LOOSE IN THE COUNTERBORE. LOCTITE RC-680 WILL SECURE THE BUSHING EVEN WHEN THE CLEARANCE IS .002", IN THIS CASE ALLOW THE LOCTITE TO CURE WITH THE TOOL IN PLACE FOR LOCATING PURPOSES.**

69) Install shaft packings (36) and retainers (46) using throttle shaft packing assembly tool M-105. Install throttle shaft (3), being careful not to damage throttle shaft packings. Install throttle valve (4) and throttle valve screws (8). Run screws in lightly in place, rotate the shaft to closed position and tap the valve lightly with the screw driver blade to seat the valve in throttle bore. Hold the throttle valve closed and tighten the screws. Torque screw to 10-15 inch pounds.

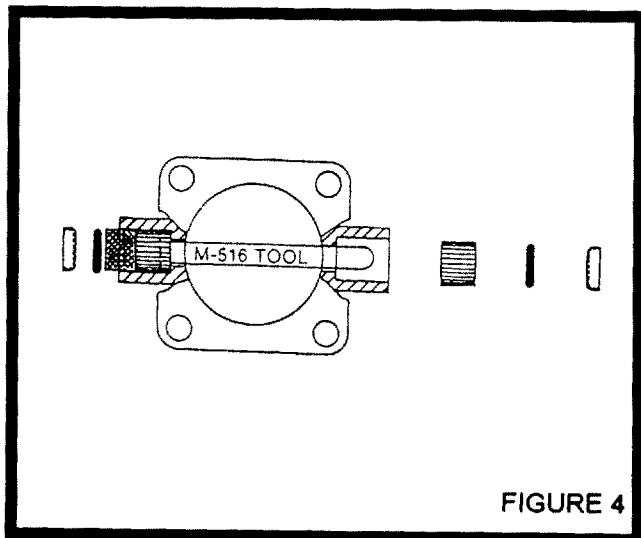


FIGURE 4

- 70) Safety stake the screws (8) using tools M-100 arbor and tool M-107 staking punch. Three or four punch marks around edge of screw threads should suffice. Do not over peen.
- 71) Install throttle opening spring (27) when used. Place throttle operating lever (2) in proper angle location on throttle shaft and secure with retaining nut (13), torque to 25-60 inch pounds. Install cotter pin (61) and safety.
- 72) Install throttle stop-pin (53) and push nut (67) as shown when used.
- 73) Pump and Economize linkage when used, should be pre-assembled. Assemble lever (80), link (82), pins (74), Tru-Arc rings (64), pump link bolt (73), plate (85), and center nut (66) in the manner shown in the exploded view. Torque nut to 10-15 inch pounds.
- 74) Attach lever with assembly where used, to the throttle shaft using locating screw (6), secure the locating screw (6) in place and then clamp the lever (80) in place with screw (12), torque to 20-28 inch pounds. Bend tap washer (59) to safety clamp screw. Torque to 10-12 inch pounds, and safety wire the locating screw (6) through the clamping slot in lever (80).
- 75) Referring to Figure 4, insert the economizer rod (76) using insert guide tool M-522 on threaded end to preclude seal damage. Push rod thru. Secure rod to plate (85) with nut (66). Torque to 10-15 inch pounds.
- 76) Install pump inlet check valve (32), torque to 10-15 inch pounds and insert pump plunger (84) into pump well in body (1).
- 77) Install pump guide (69) locating the guide legs to clear the pump rod slot in body (1).
- 78) Referring to Figure 4, insert pump rod (75) with insert guide tool M-522 on threaded end and push thru. Connect to pump unit with tru-arc ring (60).
- 79) Connect rod (75) to plate (85) with nut (66). Torque to 10-15 inch pounds.



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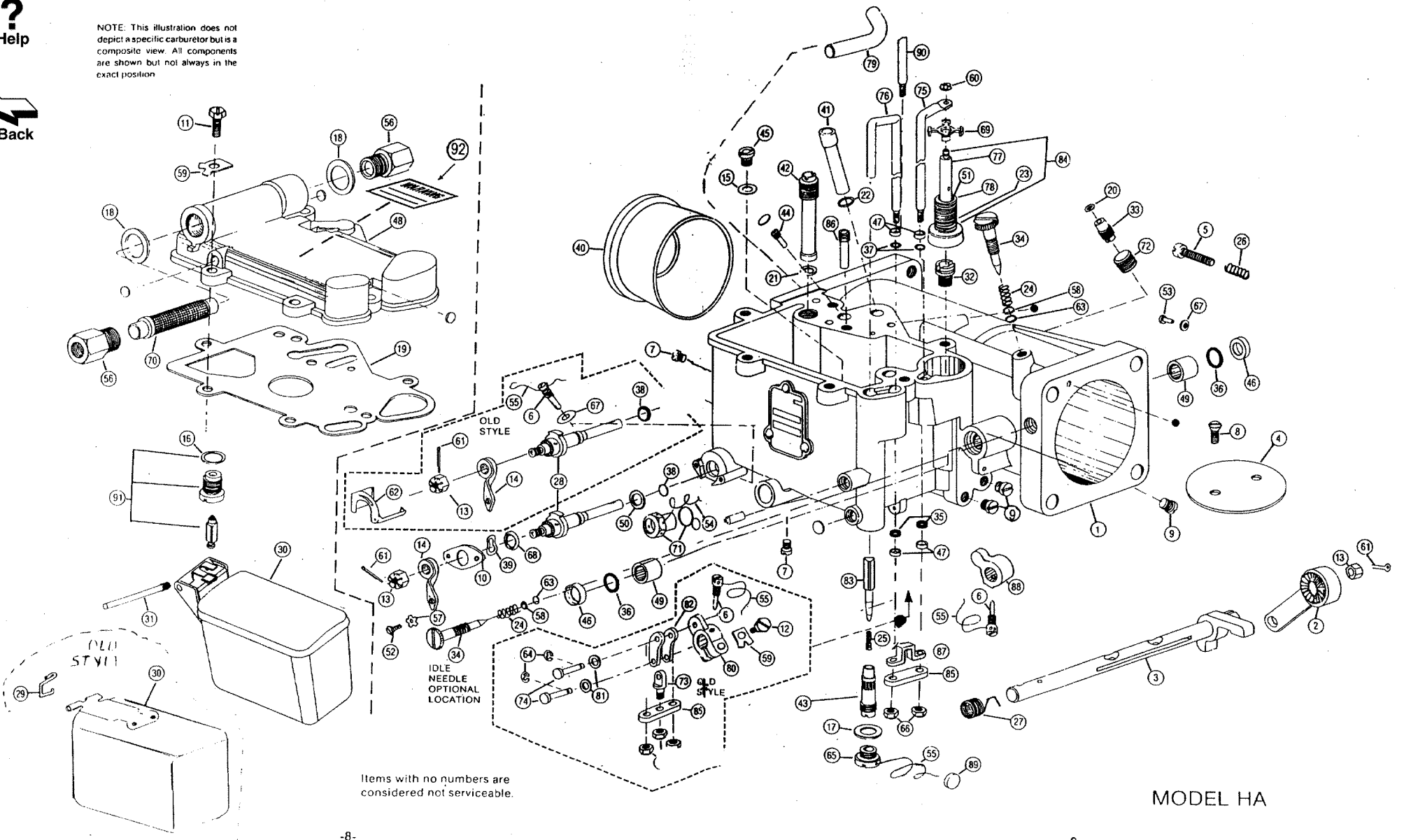


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NOTE: This illustration does not depict a specific carburetor but is a composite view. All components are shown but not always in the exact position.



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Items with no numbers are considered not serviceable.

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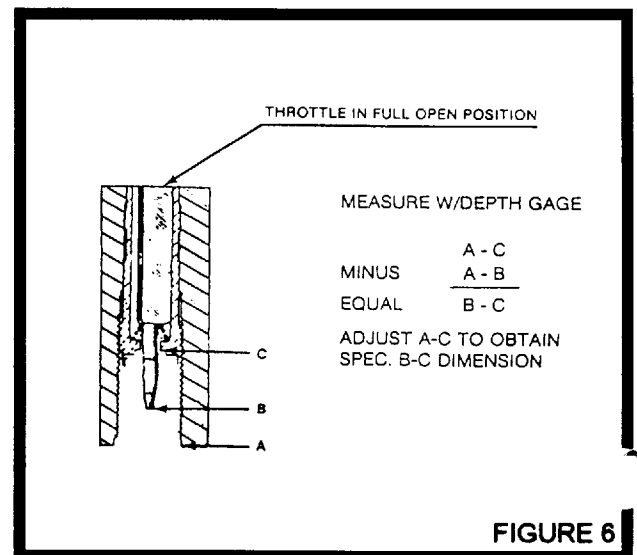
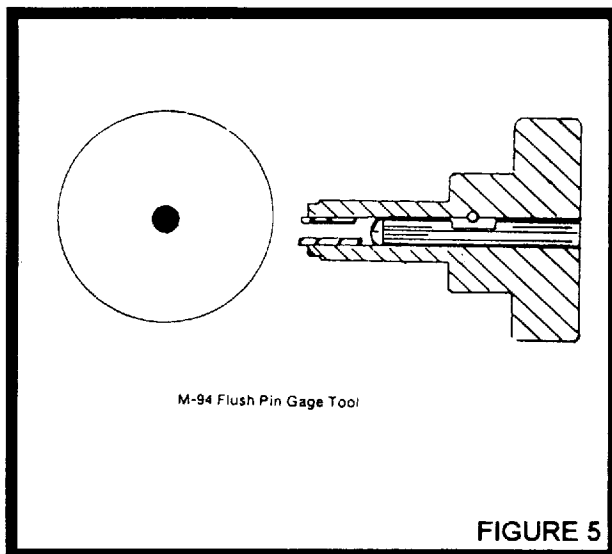
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- 80) A new economizer/pump operating system adapted in 1982 may be retro-fitted to replace the older linkage assembly by using the new shortened pump rod (75) and economizer rods (76) and (90), bracket (87), plate (85), seals (35), (37), retainers (47) and nuts (66) when used and installed as follows.
- 81) Install lever (88) with screw access hole down and insert the special retaining screw into lever and shaft location hole. Torque to 10-15 inch pounds and safety wire. Rotate throttle to full open position, install bracket (87) and plate (85) on rods (75), (76) or (90). Install and torque nuts (66) to 10-15 inch pounds. Be certain to maintain proper alignment of both the economizer rod (76) and pump rod (75) to assure free motion without binding. The lever, bracket and plate may be lubricated with a dry film lubricant.
- 82) Assemble economizer pin (83) spring (25) (small end of spring (25) goes over the small end of economizer pin (83)) into economizer jet (43) and install into its channel with M-94 tool (See Figure 5) to the setting specified in the parts list. The throttle must be full open when making these settings. An alternate procedure to set the economizer can be achieved by using a depth micrometer as follows and refer to Figure 6.

1. Assemble air metering pin jet assembly in the casting to an approximate setting of 1/2" from the face of casting A to face C of air metering pin jet (at the edge of the hole).
 2. Open throttle valve to wide open position.
 3. Measure distance from the face of casting A to top of air metering pin B using a suitable depth gage.
 4. Return the throttle valve to fully closed position.
 5. Measure the distance from face A of the casting to face C of the air metering jet. Adjust the air metering jet clockwise or counterclockwise until distance A to C equals the sum of the distance A to B plus the dimension B to C selected from the Economizer Gage Dimension Table.
- 83) Install economizer channel plug (65) over washer (17) and torque to 5-10 inch pounds and safety to casting through hole provided with wire (55). Crimp over wire ends a lead seal (89).
- 84) Assemble "O" ring (38) into its groove on cut-off valve (28). Install washer (50) on valve, lightly lubricate the "O" ring (38) and install the assembly into its cavity in body. Place washers (68) and (39) over the cut-off valve (28) and install valve retainer (10) with two screws (52) and safety washers (57). Valve should operate freely. Torque to 10-12 inch pounds. Bend lock tabs.





ECONOMIZER GAGE DIMENSION TABLE

M-94 economizer gage settings are referenced on individual carburetor service parts list. When using depth gage to set economizer jet refer to table below for the specific M-94 gage setting and its measured plus or minus equivalent dimension.

M-94 GAGE	PLUS DEPTH MIC. B-C/INCHES	MINUS DEPTH MIC. B-C /INCHES
FLUSH	0.376	0.376
1/16 TURN	0.379	0.373
1/8 TURN	0.381	0.371
3/16 TURN	0.384	0.368
1/4 TURN	0.386	0.366
5/16 TURN	0.389	0.363
3/8 TURN	0.392	0.360
7/16 TURN	0.394	0.358
1/2 TURN	0.397	0.355
9/16 TURN	0.399	0.353
5/8 TURN	0.402	0.350
11/16 TURN	0.405	0.347
3/4 TURN	0.407	0.345
13/16 TURN	0.410	0.342
7/8 TURN	0.412	0.340
15/16 TURN	0.415	0.337
1 TURN	0.418	0.334
1-1/16 TURN	0.420	0.332
1-1/8 TURN	0.423	0.329
1/16 TURN	0.426	0.327
-1/4 TURN	0.428	0.324
1-5/16 TURN	0.431	0.321
1-3/8 TURN	0.433	0.319
1-7/16 TURN	0.436	0.316
1-1/2 TURN	0.439	0.314
1-9/16 TURN	0.441	0.311
1-5/8 TURN	0.444	0.308
1-11/16 TURN	0.446	0.306
1-3/4 TURN	0.449	0.303
1-13/16 TURN	0.452	0.301
1-7/8 TURN	0.454	0.298
1-15/16 TURN	0.457	0.295
2 TURN	0.459	0.293
2-1/16 TURN	0.462	0.290
2-1/8 TURN	0.465	0.288
2-3/16 TURN	0.467	0.285
2-1/4 TURN	0.470	0.282
2-5/16 TURN	0.472	
2-3/8 TURN	0.475	
2-7/16 TURN	0.478	
2-1/2 TURN	0.480	

TABLE II

NOTE: 1/4 turn on the M-94 gage is approximately 0.010 inch.

- 85) On carburetors using the spring clip mixture control valve retainer, install and lockwire as shown in Figure 7.
- 86) Install mixture control lever (14) to the required angle position and secure with retainer nut (13) torqued to 25-60 inch pounds. Insert cotter pin (61) and safety.
- 87) Install Power Jet (45) and gasket (15). Torque to 25-30 inches pound.
- 88) Install idle needle (34) and spring (24) to preliminary setting 1 to 1 1/8 turns from seated.
- 89) Install throttle adjusting screw (5) and spring (26). Preliminary setting is approximately two turns from fully closed valve.
- 90) Install idle tube (86) carefully, seat firmly. Torque to 5-8 inch pounds.
- 91) Install main nozzle (42) and gasket (21) when used. Torque to 50-70 inch pounds.

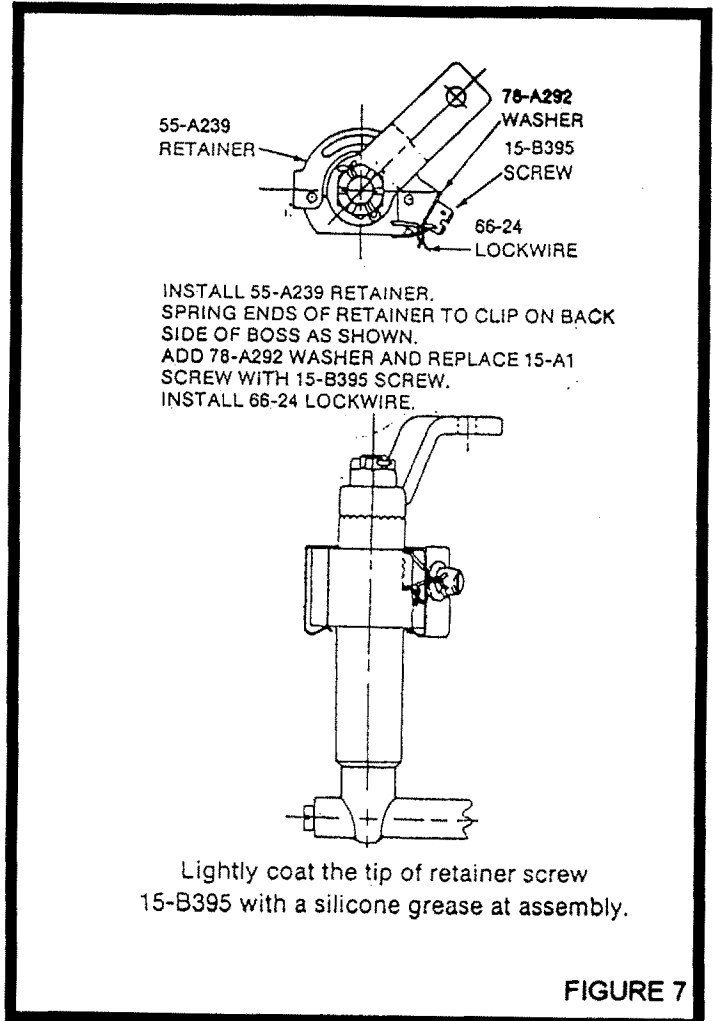


FIGURE 7



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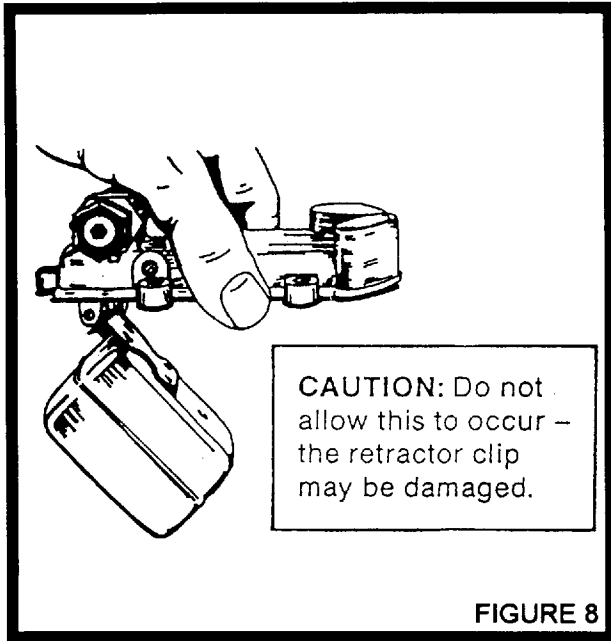


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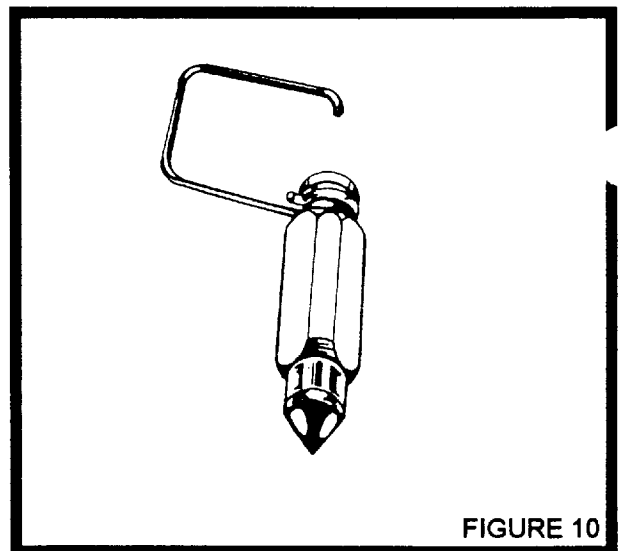
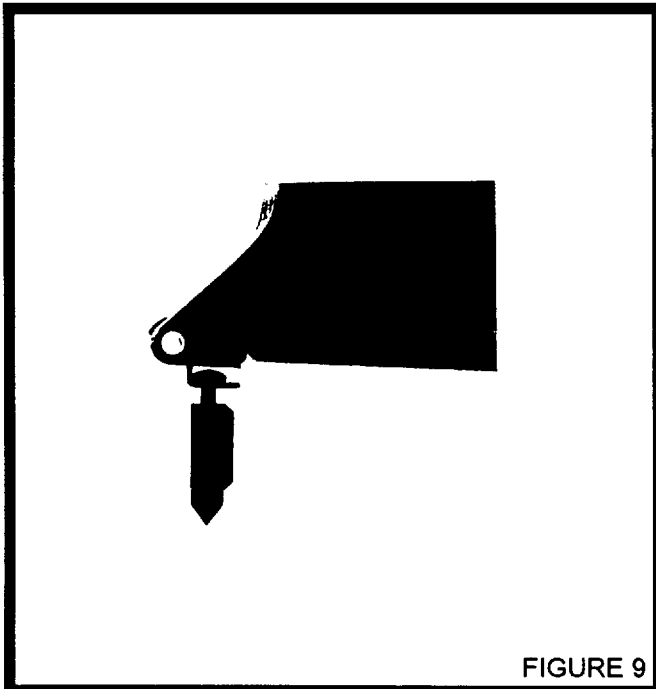


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- 92) Install secondary nozzle (41) and gasket (22) with nozzle face flat with casting surface.
- 93) The pitot tube (79) is secured in place with Loctite RC-680 per Loctite's recommended instructions and carefully located symmetrical in bore.

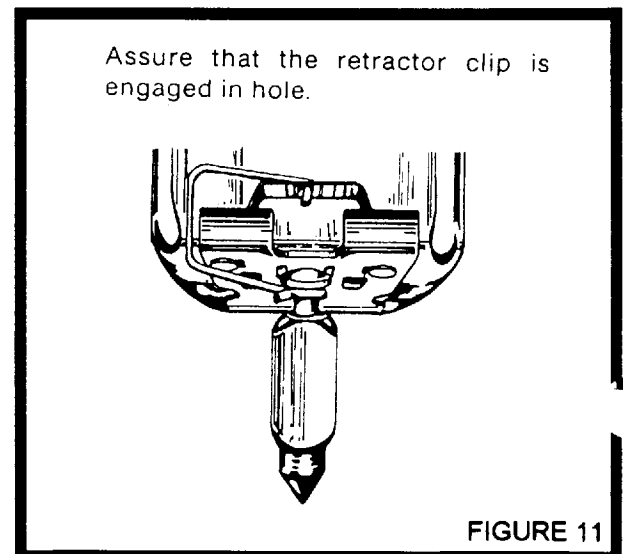


- 95) **CAUTION:** Exercise care if using brass float, during the following operations to prevent damage to the float (30) and the float valve retractor clip (29). See Figure 8.
- 96) Place the gasket (19) on the cover (48).
- 97) Place the float valve into the forked retractor clip on the float as shown in Figure 9. When using the brass float, place the float valve retractor clip (29) on the float valve as illustrated in Figure 10. Place the float valve and retractor clip on the float as illustrated in Figure 11.
- 98) When using the brass float make sure the float valve is centered on the adjustment tab on the float. The float valve retractor clip should not hold the float valve tight against the float lever but have approximately .005" when viewed as in Figure 11.
- 99) Place the float, valve, and clip assembly into the float bracket with the valve in the float valve seat.



COVER ASSEMBLY

- 94) Install float valve seat and gasket assembly into cover (48) using tool M-103 to secure the seat. When using brass float, install seat with both gasket/washers. When using the new Precision float, install seat with only the thinner gasket/washer (P/N 78-A40).





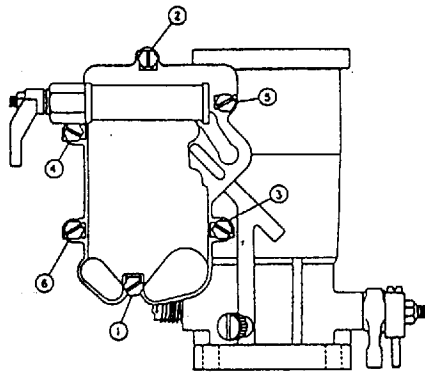
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TIGHTENING TORQUE ON COVER SCREWS
 1. SNUG ALL SCREWS DOWN AGAINST COVER.
 2. TORQUE SCREWS TO 10 IN. LBS. IN SEQUENCE AS SHOWN.
 3. RETORQUE IN SEQUENCE TO 25-35 IN. LBS. POSITIONING THE FLATS ON SCREW IN RELATION TO TABS ON SAFETY WASHER.

FIGURE 15

- 110) Install fuel inlet fitting (56) and gasket (18). Torque to 10-12 foot pound.
- 111) Install screen (70) into cavity of installed fitting then install second fitting (56) and gasket (18), torque to 10-12 foot pound.
- 112) Safety cover screws by bending up tabs on washers.

INSTALLATION OF WARNING LABEL

- 113) Clean the top of the bowl cover using acetone or equivalent degreasing solvent. Allow the surface to dry completely. Remove the peel-off backing from the warning label (92) and attach the label to the bowl cover.

TEST PROCEDURE

General

- 114) After the carburetor has been overhauled and the checks performed as specified throughout the overhaul procedures, the carburetor should be equal to a new unit. Final adjustment should be made at the time the carburetor is installed on the engine.

Float Valve and Seat Test

(See Figure 16)

- 115) Connect the inlet fitting of the carburetor to a fuel pressure supply of 0.4 psi.
- 116) Remove the bowl drain plug and connect a transparent tube to the carburetor drain connection. The tubing should be positioned vertically beside the carburetor.
- 117) Allow the fuel pressure to remain at 0.4 psi for a period of at least 15 minutes and then raise the fuel pressure to 6.0 psi. (There will be a slight rise in the fuel level as the pressure is increased.) Allow the 6.0 psi pressure to remain for at least five minutes after the fuel level has stabilized.
- 118) If the fuel rises to the level of the parting surface of the castings or runs out of the nozzle, the bowl and throttle body must be separated and the float valve and seat cleaned or replaced.
- 119) CAUTION: Under no circumstances change the float level from the established setting to correct flooding or to change the fuel level.

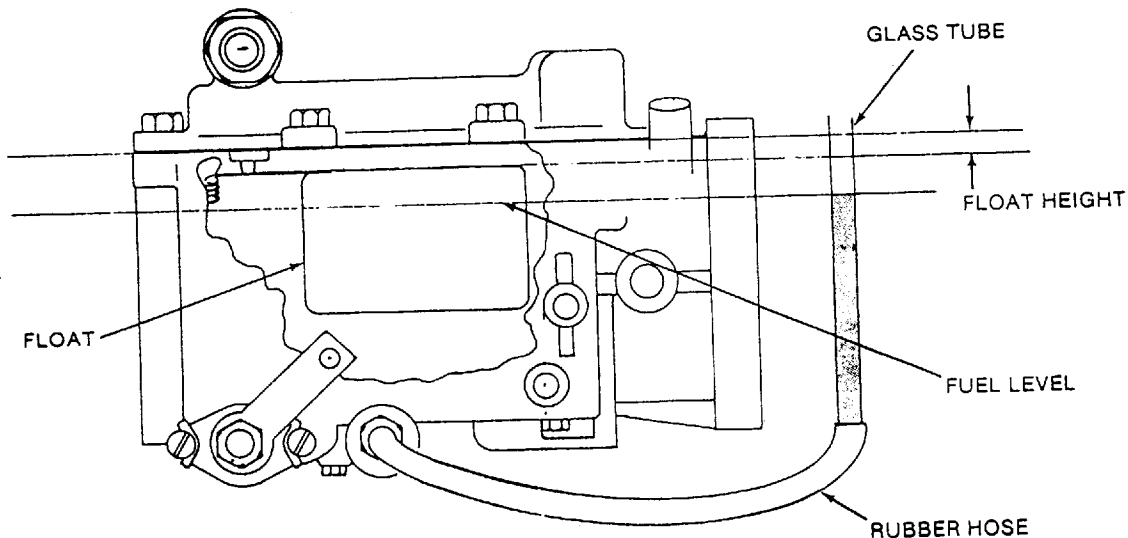


FIGURE 16



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- 120) With fuel supplied to the carburetor as shown in Figure 16 operate the throttle lever for several strokes to fill the accelerating pump and passages. Then close the throttle, open it fully again, and hold it for a few seconds. If the accelerating pump is operating correctly, a solid stream of fuel will be discharged from the accelerating pump discharge tube or jet and will gradually die away after the spring of the pump plunger reaches its limit.
- 121) **WARNING: BE CAREFUL NOT TO SPLASH TEST FLUID IN YOUR FACE. RECOMMEND TESTING CARBURETOR IN A LARGE FLAT PAN TO CONTAIN TEST FLUID.**
- 122) If the fuel discharge from the discharge tube or jet is weak, or if air is dispelled, it is an indication that the pump plunger, pump discharge or inlet check valve are not functioning properly. Disassemble the carburetor and make necessary repairs.
- 123) Remove the tubing fixture to allow the fuel to drain out. Operate the pump to clear the fuel out of the pump cylinder and passages. Reinstall drain plug and safety.

PRESERVATIVE TREATMENT

- 124) If the carburetor is to be placed in storage after overhaul, the bowl drain plug should be removed and the carburetor flushed internally with soluble corrosion preventive oil, Military Specification MIL-C-4339.
- 125) After draining the surplus oil from the carburetor, enough will cling to the parts to provide internal protection during storage. Replace the bowl drain plug and safety.

TORQUE SETTINGS FOR HA-6 CARBURETORS

Screw - Throttle valve	10 - 15 in-lbs
Screw - Drill Plug	12 - 16 in-lbs
Screw - Bowl Cover	25 - 35 in-lbs
Screw - Pump Lever Lock	10 - 12 in-lbs
Screw - Pump Lever Clamp	20 - 28 in-lbs
Screw - Channel Drill Plug	10 - 15 in-lbs
Screw - Cut Off Valve Lock	10 - 12 in-lbs
Nut - Throttle Lever Clamp	25 - 60 in-lbs
Nut - Mixture Lever Clamp	25 - 60 in-lbs
Nut - Pump Linkage	10 - 15 in-lbs
Valve - Pump Discharge Check	10 - 15 in-lbs
Valve - Pump Inlet Check	10 - 15 in-lbs
Jet - Pump Discharge	25 - 30 in-lbs
Jet - Power	25 - 30 in-lbs
Nozzle - Main	50 - 70 in-lbs
Fitting - Fuel Inlet	10 - 12 ft-lbs
Plug - Air Metering Pin Jet	5 - 10 in-lbs
Plug - Bowl Drain	90 - 100 in-lbs
Plug - Pump Discharge Check Valve	25 - 30 in-lbs
Float Valve Seat	10 - 12 ft-lbs
Idle Tube Assembly	5 - 8 in-lbs

TABLE III