

CHAPTER EIGHT

FUEL SYSTEM—914/6

A single Hardi electric fuel pump delivers fuel from the fuel tank to 2 triple-throat Weber carburetors. See **Figure 1**. This system is nearly identical to that used on the late 1966-1969 Porsche 911's.

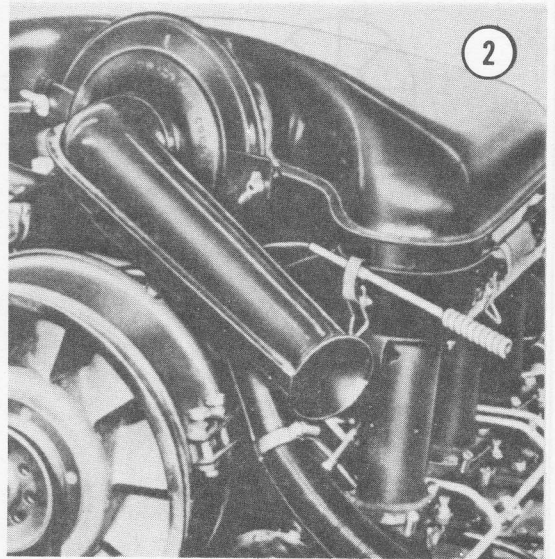
AIR CLEANER

All 914/6 models use a disposable type paper cartridge. Replacement is described in Chapter Two.

Removal/Installation

This procedure describes removal/installation of the entire air cleaner housing.

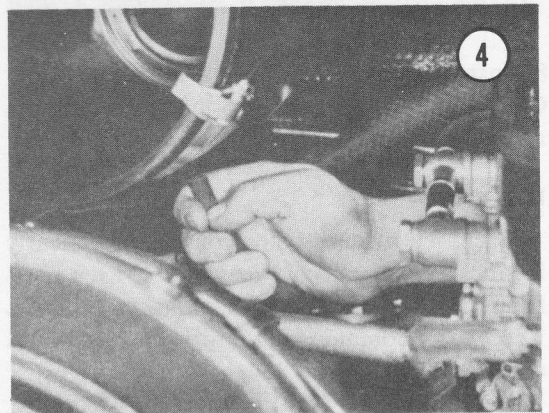
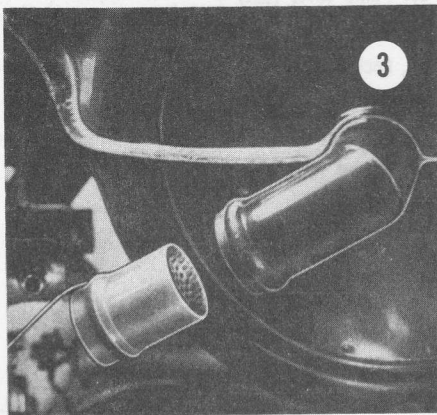
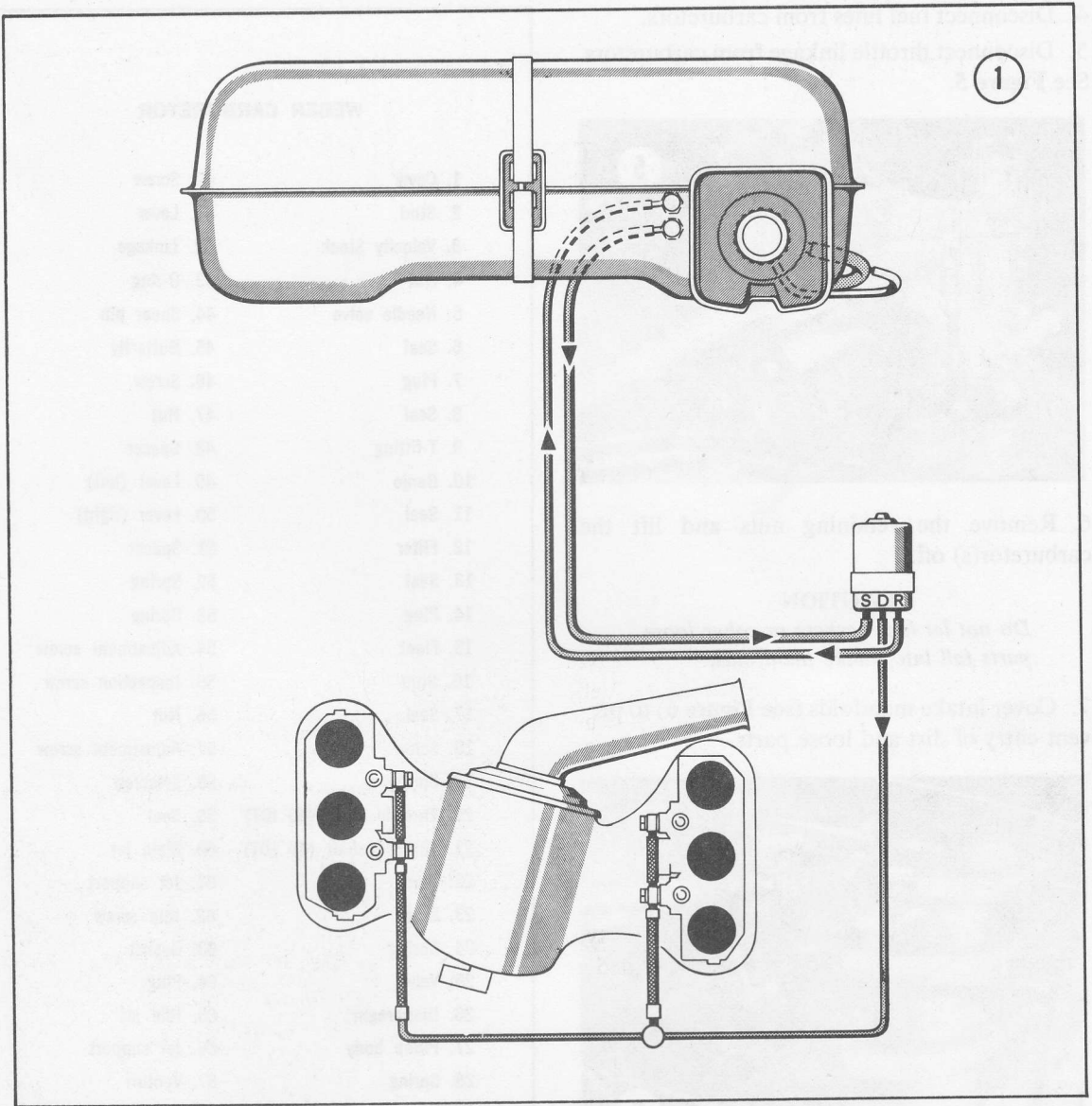
1. Disconnect preheater hose from air cleaner. See **Figure 2**.
2. Disconnect crankcase breather hose from back of air cleaner. See **Figure 3**. Clean flame arrestor as described in Chapter Two.
3. Unsnap 4 clips at each carburetor and lift air cleaner off.
4. Remove nuts securing air cleaner bases to carburetors. Lift bases off.
5. Installation is the reverse of these steps. Ensure that gaskets are in good condition.



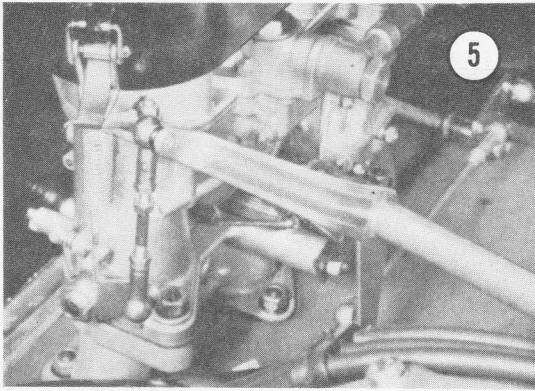
WEBER CARBURETORS

Removal/Installation

1. Disconnect condensation hose from air cleaner. See **Figure 4**.
2. Unsnap air cleaner cover and remove air cleaner element.
3. Unsnap air cleaner ducts from top of carburetors.



4. Disconnect fuel lines from carburetors.
5. Disconnect throttle linkage from carburetors. See **Figure 5**.

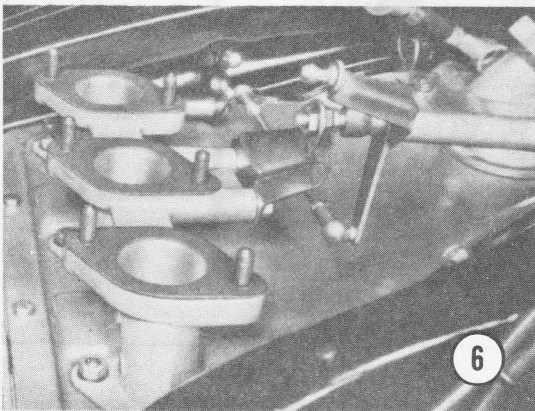


6. Remove the retaining nuts and lift the carburetor(s) off.

CAUTION

Do not let lockwashers or other loose parts fall into intake manifolds.

7. Cover intake manifolds (see **Figure 6**) to prevent entry of dirt and loose parts.



8. Installation is the reverse of these steps. Clean carburetor base and manifold surfaces and use new gaskets. Adjust idle speed.

Disassembly

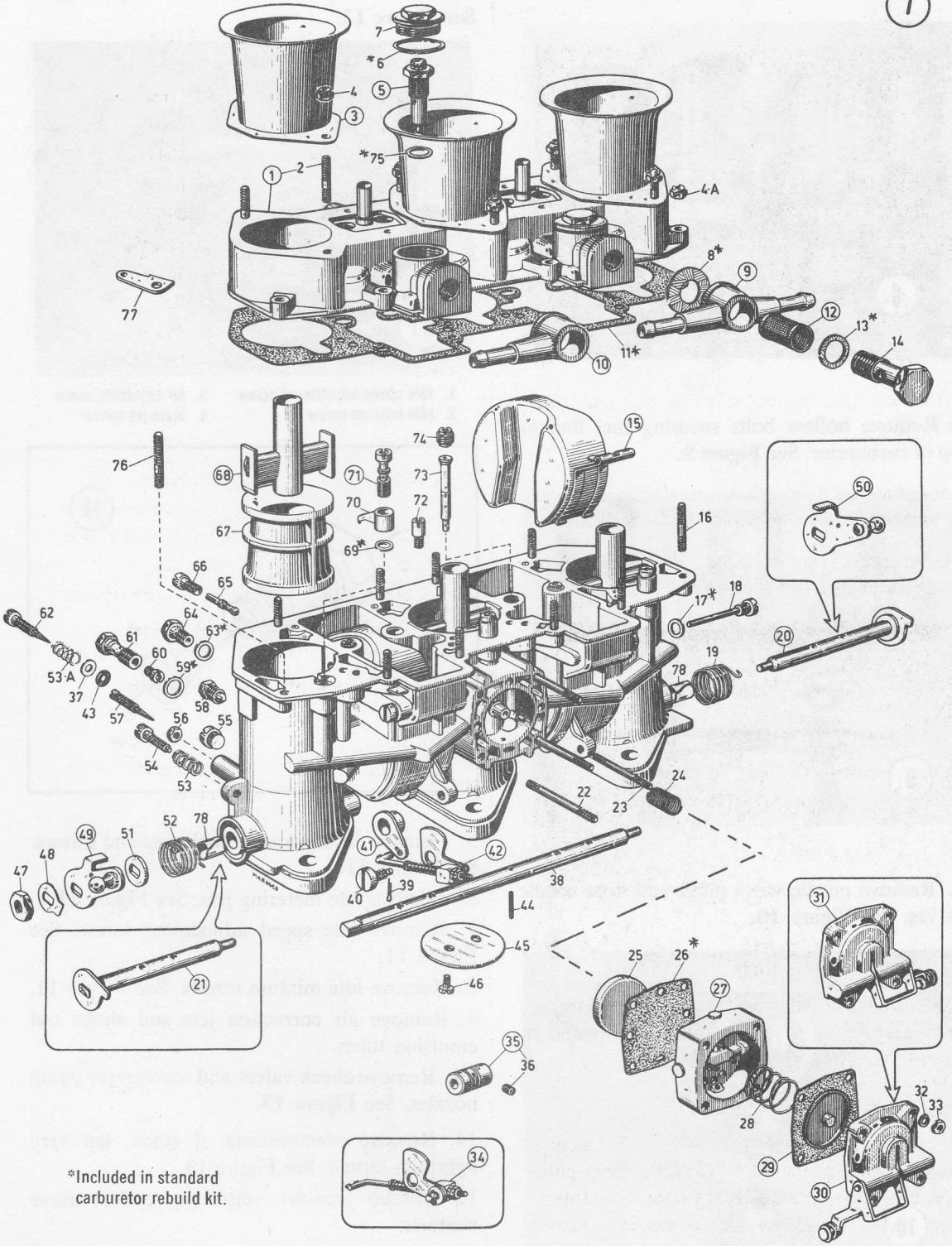
Each Weber carburetor consists of 3 nearly identical throats. To aid reassembly, keep parts from the 3 throats in 3 separate containers. Keep parts common to all throats in a fourth container.

Refer to **Figure 7** for the following procedure.

WEBER CARBURETOR

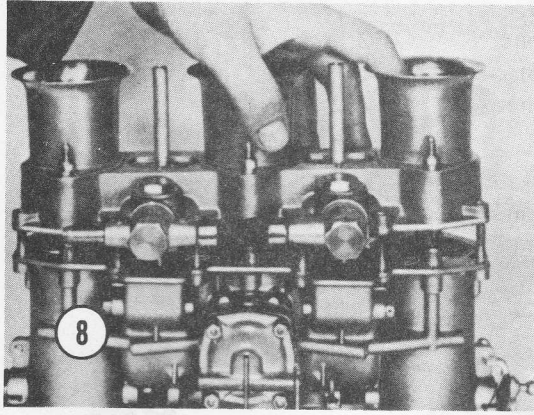
- | | |
|-----------------------------|------------------------|
| 1. Cover | 40. Screw |
| 2. Stud | 41. Lever |
| 3. Velocity Stock | 42. Linkage |
| 4. Nut | 43. O-ring |
| 5. Needle valve | 44. Shear pin |
| 6. Seal | 45. Butterfly |
| 7. Plug | 46. Screw |
| 8. Seal | 47. Nut |
| 9. T-fitting | 48. Spacer |
| 10. Banjo | 49. Lever (left) |
| 11. Seal | 50. Lever (right) |
| 12. Filter | 51. Spacer |
| 13. Seal | 52. Spring |
| 14. Plug | 53. Spring |
| 15. Float | 54. Adjustment screw |
| 16. Stud | 55. Inspection screw |
| 17. Seal | 56. Nut |
| 18. Screw | 57. Adjustment screw |
| 19. Spring | 58. Setscrew |
| 20. Throttle shaft (40 IDT) | 59. Seal |
| 21. Throttle shaft (40 IDT) | 60. Main jet |
| 22. Stud | 61. Jet support |
| 23. Stud | 62. Idle screw |
| 24. Spring | 63. Gasket |
| 25. Valve | 64. Plug |
| 26. Diaphragm | 65. Idle jet |
| 27. Pump body | 66. Jet support |
| 28. Spring | 67. Venturi |
| 29. Diaphragm | 68. Pre-atomizer |
| 30. Pump cover (left) | 69. Gasket |
| 31. Pump cover (right) | 70. Pump jet |
| 32. Lockwasher | 71. Pressure valve |
| 33. Nut | 72. Suction valve |
| 34. Linkage | 73. Emulsion tube |
| 35. U-joint | 74. Air correction jet |
| 36. Screw | 75. Gasket |
| 37. Spacer | 76. Stud |
| 38. Shaft | 77. Bracket |
| 39. Cotter pin | 78. Bushing |

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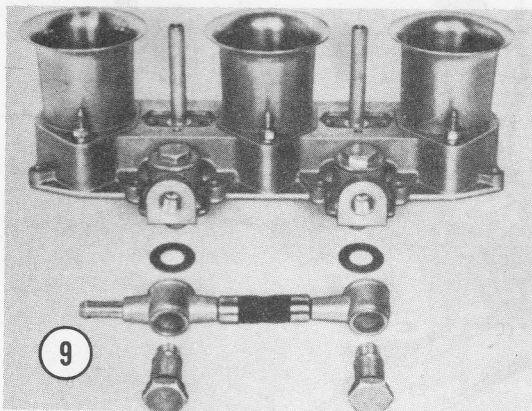


*Included in standard carburetor rebuild kit.

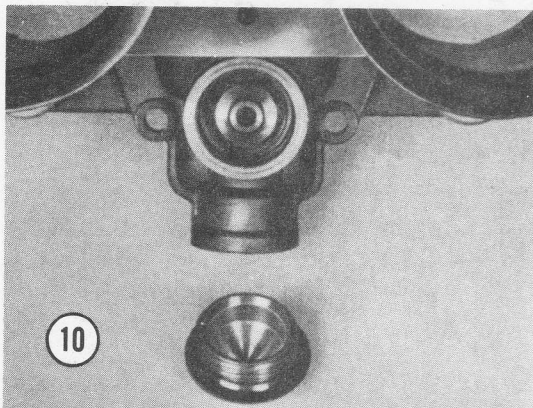
1. Remove 10 nuts securing top of carburetor and lift top off. See **Figure 8**.



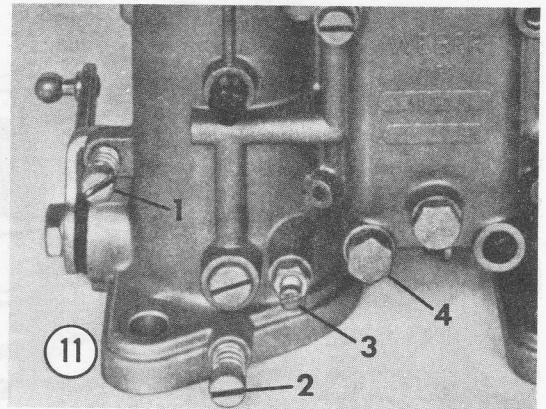
2. Remove hollow bolts securing fuel line to top of carburetor. See **Figure 9**.



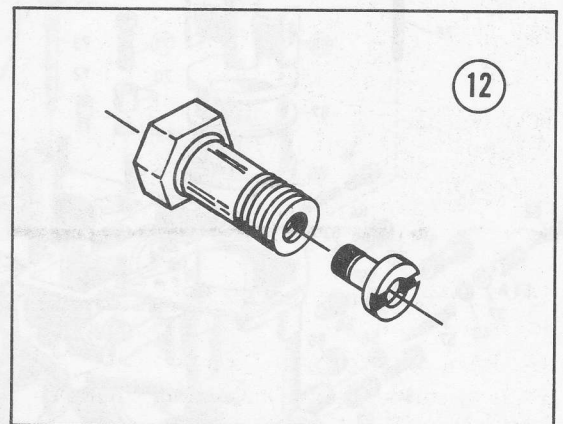
3. Remove needle valve plugs and float needle valves. See **Figure 10**.



4. Remove main jet carrier. See **Figure 11**. Unscrew main jet from back of each jet carrier. See **Figure 12**.



- 1. Idle speed adjustment screw
- 2. Idle mixture screw
- 3. Air adjusting screw
- 4. Main jet carrier



5. Remove air adjustment lock nuts and screws. See **Figure 11**.

6. Remove idle metering jets. See **Figure 11**.

7. Remove idle speed adjustment screw. See **Figure 11**.

8. Remove idle mixture screws. See **Figure 11**.

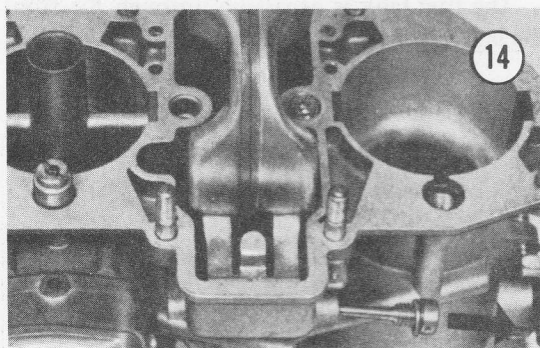
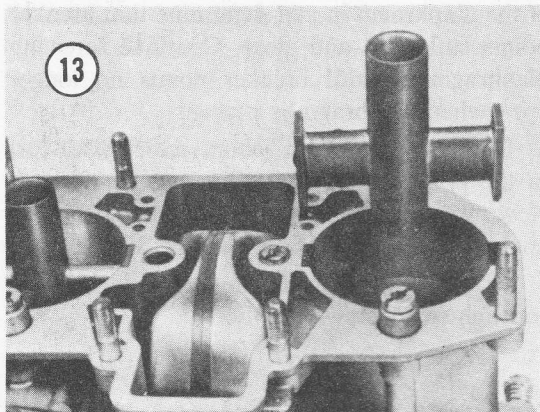
9. Remove air correction jets and shake out emulsion tubes.

10. Remove check valves and accelerator pump nozzles. See **Figure 13**.

11. Remove preatomizers; if stuck, tap very lightly to loosen. See **Figure 13**.

12. Loosen venturi setscrews and remove venturis.

13. Unscrew float pins (see **Figure 14**) and lift out floats.



14. Remove nuts securing accelerator pump cover and remove cover.

15. Remove accelerator pump, outer diaphragm, spring, pump body, inner diaphragm, valve, and spring.

Cleaning

1. Clean all parts in solvent.
2. Clean jets and drillings in the carburetor body with compressed air. Do not clean them with pins or pieces of wire; you might enlarge the holes.

Inspection/Reassembly

Refer to Figure 7 for the following procedure.

NOTE: Use all new parts included in a standard Porsche rebuild kit; asterisks identify these parts on Figure 7.

1. Check throttle shaft for wear.
2. Hold carburetor up to light and close throttle. No light should be visible around any of the throttle valves.

3. Install accelerator pump parts in order shown in Figure 7.

4. Immerse float in hot water. If it is leaking, bubbles will appear and the float must be replaced. Do not attempt to solder the hole. This increases float weight and causes high fuel level.

5. Install floats and secure with float pins.

6. Install venturis and secure with setscrews. Safety-wire the setscrews.

7. Install preatomizers.

8. Install check valves and accelerator pump nozzles.

9. Install emulsion tubes and air correction jets.

10. Install idle mixture screws. Make sure they are not bent or scored; replace if necessary.

11. Install idle speed adjustment screw.

12. Install idle metering jets.

13. Install air adjustment lock nuts and screws.

14. Install main jets in jet carriers. Install carriers in carburetor.

15. Install top of carburetor on body.

16. Install float needle valves and plugs.

17. Check float needle valve and seat for wear. To do this, install it in top cover, hold the valve in lightly with your finger and blow in the fuel inlet. If it leaks, install a new needle valve.

18. Install fuel lines with hollow bolts and fuel screens.

INTAKE MANIFOLD

Removal/Installation

1. Remove air cleaner assembly.
2. Disconnect throttle linkage.
3. Disconnect fuel lines from carburetors.
4. Remove intake manifold retaining nuts. Lift intake manifold off complete with carburetors.

CAUTION

Keep intake parts covered to prevent entry of dirt and other foreign material.

5. Remove carburetor from intake manifold.
6. Installation is the reverse of these steps. Use new gaskets.

ELECTRIC FUEL PUMP

Removal

1. Disconnect battery ground cable.
2. Disconnect fuel lines at pump. Clamp them to prevent fuel leakage.
3. Remove bolts securing pump and disconnect ground cable.
4. Disconnect positive lead from pump terminal.
5. Installation is the reverse of these steps. Use new seals at banjo fittings and replace mounting grommets if deteriorated.

Diaphragm Replacement

Refer to **Figure 15** for the following procedure.

1. Remove 6 screws securing valve housing to magnetic housing.
2. Unscrew diaphragm assembly from magnetic housing.
3. Install tapered spring over pressure rod on diaphragm assembly. Small end goes toward diaphragm. Do not change spring length.
4. Screw diaphragm assembly (clockwise) into magnetic housing. Occasionally press the center

of the diaphragm in and determine that breaker points still open and close. Continue screwing diaphragm in until breaker points no longer open when diaphragm is pressed.

5. Unscrew diaphragm (counterclockwise) just to the point where the points can be opened. Now turn the diaphragm an additional 300° (5 screws on the pump body mark off 300°).

6. Install valve housing on magnetic housing and tighten 6 screws evenly.

FUEL TANK

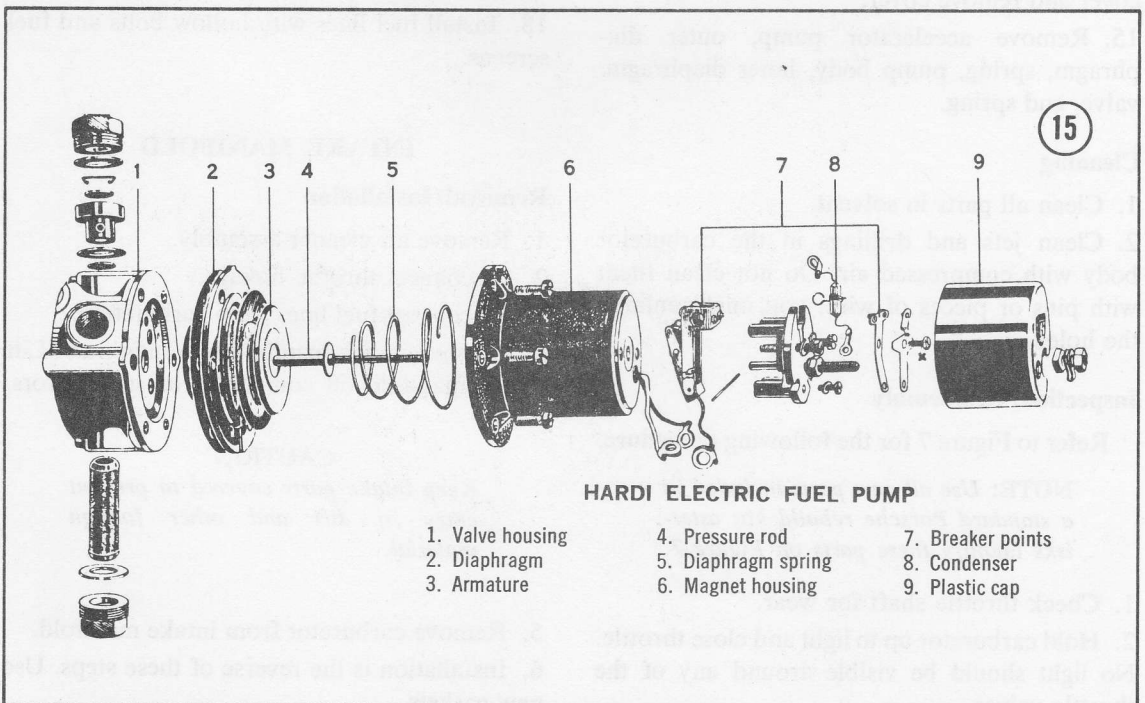
The fuel tank is accessible through the front luggage compartment.

Removal

WARNING

Always disconnect battery before starting tank removal. Tank can brush against electrical connections during removal. If power is connected, sparks can cause a gasoline fire. It has happened more than once.

1. Set a fire extinguisher nearby.
2. Disconnect battery ground cable.



3. Warn others nearby not to smoke or use any open flames while you are working.
4. Remove drain plug and drain fuel into container.

NOTE: If there is a lot of fuel in the tank, take the car to a service station. Let them drain the fuel, then refill with just enough to get home (1 or 2 gallons). They have facilities for disposing of fuel. You probably have no safe way of disposing of or storing more than a gallon or so.

5. Disconnect both fuel lines from tank.
6. Open front luggage compartment. Remove compartment padding, spare tire, and spare tire pad.
7. Disconnect vent hose.
8. Disconnect fuel gauge wire from sender.
9. Disconnect mounting strap securing tank.

10. Lift fuel tank out through the luggage compartment.
11. Installation is the reverse of these steps. Replace the rubber tank supports if damaged.

Table 1 SPECIFICATIONS

Carburetor	
Type	(2) Weber triple throat
Venturi	30
Main jet	125
Air correction jet	180
Idle metering jet	52
Idle air bleed	110
Accelerator pump jet	50
Emulsion tube	F26
Float needle valve	1.75
Float weights (grams)	25.5
Fuel Pump	
Type	Hardi electric
Delivery pressure	3.6-4.3 psi (0.25-0.30 atm)
Delivery capacity	30 oz. (900cc)/minute