State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-133-10A
Relating to Exemptions under Section 27156
of the Vehicle Code

REDLINE, INC., A SUBSIDIARY OF IMPAC
REDLINE CARBURETOR CONVERSION KIT NOS. K8624,
K8661, K8740 AND K8742

Pursuant to the authority vested in the Air Resources Board by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-5;

IT IS ORDERED AND RESOLVED: That the installation of the Redline Carburetor Conversion Kit Nos. K8624, K8661, K8740 and K8742 manufactured by Redline, Inc. has been found not to reduce the effectiveness of required motor vehicle pollution control devices and, therefore, is exempt from the prohibitions of Section 27156 of the Vehicle Code for the vehicles listed below:

Year(s)	Make	Vehicle Model or Engine Type	Redline Kit No.	Weber Carb. Model No.
1975-1978	Datsun	B210 models	K8624	32/36 DGAV 33B1
1974(1) & earlier	Toyota	2TC engines	K8661	32/34 DFT 9A/11A
1974(2)-1979	Toyota	2TC engines	K8740	32/34 DFT 9A/11A
1970-1974	Toyota	8RC & 18RC engines	K8742	32/34 DFT 9A/11A

(1) production models until June 1974.
(2) production models from July 1974.

The following modifications to the exhaust emission control system are permitted:

(1) The Fuel Shut-Off Vacuum Switch, on vehicles so equipped, may be disconnected and removed.

(2) The Throttle Positioner or Dashpot, on vehicles so equipped, may be disconnected and removed.

(3) The Throttle Valve Switch, on vehicles so equipped, may be disconnected and removed.

(4) The Throttle Opener Control System (TOCS), on vehicles so equipped, may be disconnected and removed.

(5) The Altitude Compensator, on vehicles so equipped, may be disconnected and removed.

(6) The Mixture Ratio Control Valve, on vehicles so equipped, may be disconnected and removed.

(7) The Auxiliary Accelerator Pump, on vehicles so equipped, may be disconnected and removed.

(8) The Choke Breaker, on vehicles so equipped, may be disconnected and removed.

(9) The Secondary Fuel Cut Solenoid, on vehicles so equipped, may be disconnected and removed.

(10) The Vacuum Hose Routing may be changed as specified in the kit installation instructions.

All other original equipment emission control devices must be retained. The vehicles must be tuned to the vehicle manufacturer's specifications.

Changes made to the design or operating conditions of the conversion kits, as exempted by the Air Resources Board, that adversely affect the performance of a vehicle's pollution control system shall invalidate this Executive Order.

Marketing of these conversion kits using an identification other than that shown in this Executive Order or marketing of this device for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of a conversion kit shall not be construed as an exemption to sell, offer for sale, or advertise any component of a conversion kit as an individual device.

This Executive Order does not constitute any opinion as to the effect that the use of these conversion kits may have on any warranty either expressed or implied by the vehicle manufacturer.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF THE REDLINE, INC. CARBURETOR CONVERSION KIT NOS. K8624, K8661, K8740 AND K8742.

No claim of any kind, such as "Approved by Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communication.

Section 17500 of the Business and Professions Code makes untrue or misleading advertising unlawful, and Section 17534 makes violation punishable as a misdemeanor.

Section 43644 of the Health and Safety Code provides as follows:

> "43644. (a) No person shall install, sell, offer for sale, or advertise, or, except in an application to the state board for certification of a device, represent, any device as a motor vehicle pollution control device for use on any used motor vehicle unless that device has been certified by the state board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as a certified device which, in fact, is not a certified device. Any violation of this subdivision is a misdemeanor."

Any apparent violation of the conditions of this Executive Order will be submitted to the Attorney General of California for such action as he deems advisable.

Executive Order No. D-133-10, dated May 30, 1986, is superseded and of no further force and effect.

Executed at El Monte, California, this 14th day of July, 1986.

K. D. Drachand, Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

EVALUATION OF THE REDLINE CARBURETOR CONVERSION KITS NO. K8624, K8661, K8740 AND K8742 FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13 OF THE CALIFORNIA ADMINISTRATIVE CODE

JULY, 1986

EVALUATION OF THE REDLINE CARBURETOR CONVERSION KITS NO. K8624, K8661, K8740 AND K8742 FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13 OF THE CALIFORNIA ADMINISTRATIVE CODE

by

Mobile Source Division
State of California
AIR RESOURCES BOARD
9528 Telstar Avenue
El Monte, CA 91731

SUMMARY

Redline, Inc., a distributor of Italian made Weber carburetors, has applied for exemption from the prohibitions of Vehicle Code Section 27156 for the Redline Carburetor Conversion Kit No. K8624 using one (1) Weber model 32/36 DGAV 33B1 carburetor and kits No. K8661, K8740 and K8742 using one (1) Weber model 32/34 DFT 9A or 32/34 DFT 11A carburetor.

These Redline Carburetor Conversion Kits are designed to replace the Aisan or Hitachi carburetors found on 1970-1982 Toyota or Datsun vehicles.

Comparative exhaust emission test data and other information submitted demonstrate that the aftermarket Redline Carburetor Conversion Kits No. K8624, K8661, K8740 and K8742 do not adversely affect emissions of the applicable vehicles. Based on ARB's test data which confirms the above fact and the evaluation of the Redline Carburetor Conversion Kits, the staff recommends that the exemption be granted as requested for the following vehicle applications:

Year(s)	Make	Vehicle Model or Engine Type	Redline Kit No.	Weber Carb. Model No.
1975-1978	Datsun	B210 models	K8624	32/36 DGAV 33B1
1974[1] & earlier	Toyota	2TC engines	K8661	32/34 DFT 9A/11A
1974[2]-1979	Toyota	2TC engines	K8740	32/34 DFT 9A/11A
1970-1974	Toyota	8RC & 18RC engines	K8742	32/34 DFT 9A/11A

(1) production models until June 1974.
(2) production models from July 1974.

CONTENTS

EVALUATION OF THE REDLINE CARBURETOR CONVERSION KITS NO. K8624, K8661, K8740 AND K8742 FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13 OF THE CALIFORNIA ADMINISTRATIVE CODE

I. INTRODUCTION

Redline, Inc., of Compton, California, a subsidiary of Imported Parts and Accessories Corporation (IMPAC), is a distributor of Italian made Weber carburetors. The company has applied for exemption from the prohibitions of Vehicle Code Section 27156 for four Carburetor Conversion Kits designated as Redline Kits No. K8624, K8661, K8740 and K8742 using Weber carburetors to replace the original equipment manufacturer (OEM) Aisan or Hitachi two-barrel carburetors found on the following vehicles:

Year(s)	Make	Vehicle Model or Engine Type	Redline Kit No.	Weber Carb. Model No.
1975-1978	Datsun	B210 models	K8624	32/36 DGAV 33B1
1974[1] & earlier	Toyota	2TC engines	K8661	32/34 DFT 9A/11A
1974[2]-1979	Toyota	2TC engines	K8740	32/34 DFT 9A/11A
1970-1974	Toyota	8RC & 18RC engines	K8742	32/34 DFT 9A/11A

(1) production models until June 1974.
(2) production models from July 1974.

This report describes the evaluation of the Redline Carburetor Conversion Kits and the findings.

II. CONCLUSION

Comparative exhaust emission data and other information submitted by the applicant demonstrated that the Redline Kits No. K8624, K8661, K8740 and K8742 using Weber carburetors meet the Air Resources Board (ARB) requirements for exemption from the prohibitions of Vehicle Code Section 27156.

III. RECOMMENDATION

Based on the submitted information and the emissions test data on the Redline Carburetor Conversion Kits, the staff recommends that Redline, Inc. be granted exemption from the prohibitions of Vehicle Code Section 27156 for the Redline Carburetor Conversion Kits No. K8624, K8661, K8740 and K8742 for use on the vehicles described above and that Executive Order No. D-133-10A be issued.

IV. DEVICE DESCRIPTION

The Redline Carburetor Conversion Kit No. K8624 uses one (1) model 32/36 DGAV 33B1 Weber carburetor as an economical replacement for the OEM carburetors found on the 1975-1978 Datsun vehicles described previously.

These Datsun vehicles are equipped with a Hitachi carburetor. These Hitachi carburetors are of the progressive two-barrel design (See Appendix 1).

The Redline Carburetor Conversion Kits No. K8661, K8740 and K8742, are similar in design. Each kit uses one (1) model 32/34 DFT 9A or 32/34 DFT 11A Weber carburetor as an economical replacement for the OEM carburetors found on the 1970-1979 Toyota vehicles.

These Toyota vehicles are equipped with an Aisan carburetor. These Aisan carburetors are of the progressive two-barrel design (See Appendix 2).

The Weber 32/34 DFT and 32/36 DGAV 33B1 are progressive two-barrel carburetors which are similar in basic design to the OEM carburetors (See Appendix 3 and 4). They have provisions for vacuum operated emission control systems, including distributor vacuum advance/retard units, EGR and air injection control systems.

A variety of emission control devices are used on these vehicles. Some are integral to the OEM carburetor and others are external devices which

either control specific functions of the OEM carburetor or are activated by movement of the throttle. The installation of the Weber carburetor retains most of these devices or duplicates the functions of the devices in a different manner, however, some devices cannot be retained.

1) The Fuel Shut-off Vacuum Switch, on vehicles so equipped, is disconnected and removed

2) The Throttle Positioner or Dashpot, on vehicles so equipped, is disconnected and removed.

3) The Throttle Valve Switch, on vehicles so equipped, is disconnected and removed.

4) The Throttle Opener Control System (TOCS), on vehicles so equipped, is disconnected and removed.

5) The Altitude Compensator, on vehicles so equipped, is disconnected and removed.

6) The Mixture Ratio Control Valve, on vehicles so equipped, is disconnected and removed.

7) The Auxiliary Accelerator Pump, on vehicles so equipped, is disconnected and removed.

8) The Choke Breaker, on vehicles so equipped, is disconnected and removed.

9) The Secondary Fuel Cut Solenoid, on vehicles so equipped, is disconnected and removed.

For details of which devices must be disconnected depending on the model-year of the vehicle in question see Appendix 5.

The Redline Kits come complete with a Weber carburetor, an air cleaner adaptor, all the hoses, gaskets and hardware necessary to install the Weber carburetor on the Datsun or Toyota vehicles. Installation instructions, which are included in every kit, show the kit installer how to properly install the Weber carburetor. Vacuum hose routing diagrams, contained in the instructions, show the proper vacuum hose connections to the Weber carburetor

(see Appendix 6). An underhood label, included in the kit, is to be affixed to the vehicle near the OEM vacuum hose routing diagram which states that the vehicle is equipped with a Redline Kit and that appropriate vacuum hose routing diagrams may be found in the applicable Redline Kit installation instructions. For persons who may have technical questions or need a copy of a vacuum hose routing diagram, the Redline technical information phone numbers (Tech Lines) are included on this label (see Appendix 7).

V. DEVICE EVALUATION

A carburetor is a critical emissions-related component of a vehicle. Any carburetor conversion, especially one which requires the disconnection of auxiliary emission control components must be evaluated and tested. Comparative exhaust emissions tests have been accepted as a means of determining if the carburetor conversion and the disconnections associated with it will not have an adverse emissions impact.

Several pre-1980 model-year vehicles manufactured by Datsun and Toyota included in the exemption application were originally equipped with altitude compensators which are not compatible with the Weber carburetors and must be disconnected. These devices were installed by the manufacturers to correct driveability problems which might occur at high-altitude locations. Altitude compensation is achieved by various design approaches. The type used on Toyotas is automatic and adjusts the air-fuel ratio throughout the range of altitudes. The type used on Datsuns is manual and has two settings; high and low. The operator of the vehicle must move a lever located in the air cleaner in order for altitude compensation to be achieved. Because these vehicles were not required to meet California high-altitude emissions regulations implemented in 1980, the driveability and emission effects of their Redline carburetor conversions at altitude are difficult to assess. Therefore, the

Redline kits for 1979 and older vehicles with the required disconnection of auxiliary emission control components were evaluated based on comparative exhaust emission tests.

To demonstrate compliance with the requirements for an exemption the applicant performed comparative cold-start CVS-75 exhaust emission tests at Import Certification Laboratories (ICL) in Anaheim, California. A 1977 Toyota Corolla with a 1.6 liter engine and an automatic transmission was used as a representative test vehicle for all the Toyota vehicles. The 1977 model-year vehicle was used for testing because the 1977 model-year Toyota vehicles utilized the most complex emission control system. When the Weber carburetor was installed on the test vehicle the throttle positioner, auxiliary accelerator pump, manual choke breaker and altitude compensator were disconnected. The Weber carburetor has an automatic choke, eliminating the need for a manual choke breaker. All other OEM emission control devices were retained. It would be expected that the other model-year Toyota vehicles would have the same degree of performance/emissions impact as the vehicle tested when using the Redline Kits with similar devices disconnected or replaced.

The results of the submitted data are shown in Table 1.

Table 1

Condition	Exhaust Emissions gm/mi Test Procedure CVS-75 HC	CO	NOx	Fuel Economy City mi/gal
Baseline	0.15	3.53	1.44	25.7
Redline Kit	0.11	1.78	1.12	27.6

Confirmatory testing was not performed on this Toyota test vehicle because the second test vehicle (1981 Datsun 210) was selected to fulfill the confirmatory testing requirement for both the Toyotas and the Datsuns.

A 1981 Datsun 210 with a 1.5 liter engine and a 5-speed manual transmission was used as a representative test vehicle for all the Datsun vehicles. The 1981 model-year Datsun was used as the test vehicle because Redline was able to procure it easily and its emission control requirements are more stringent than the previous model-years (1975-1978). When the Weber carburetor was installed on the test vehicle the throttle opener control system, fuel shut-off vacuum switch, mixture ratio control valve and altitude compensator were disconnected. It would be expected that vehicles of previous model-years would have the same degree of performance/emissions impact as the vehicle tested when using the Redline kits with similar devices disconnected.

The data submitted by Redline are shown in Table 2.

Table 2

	Exhaust Emissions gm/mi Test Procedure CVS-75			Fuel Economy
Condition	HC	CO	NOx	City mi/gal
Baseline	0.53	13.25	0.57	24.4
Redline Kit	0.48	8.98	0.55	21.5

These results show no increase in emissions, however, when confirmatory testing was performed at the Haagen-Smit Laboratory, significant increases in both HC and CO were recorded. These results are shown in Table 3.

Table 3

	Exhaust Emissions gm/mi Test Procedure CVS-75			Fuel Economy
Condition	HC	CO	NOx	City mi/gal
Baseline	0.400	14.770	0.520	25.3
	0.448	15.274	0.518	25.0
Average	0.424	15.022	0.519	25.2

Table 3 (continued)

Condition	Exhaust Emissions gm/mi Test Procedure CVS-75 HC	CO	NOx	Fuel Economy City mi/gal
Redline Kit	0.586	37.122	0.458	23.5
	0.638	38.560	0.430	23.4
Average	0.612	37.841	0.444	23.4

Therefore, the vehicle was returned to Redline with notice of the failure. Redline determined that the vacuum hose routing was improper when the vehicle was tested at the Haagen-Smit Laboratory. They corrected the problem and tested the vehicle at ICL again. The results of this test are shown in Table 4.

Table 4

Condition	Exhaust Emissions gm/mi Test Procedure CVS-75 HC	CO	NOx	Fuel Economy City mi/gal
Redline Kit	0.322	2.891	0.42	26.354

These results show no increase over the baseline values established by the confirmatory tests at the Haagen-Smit Laboratory. Redline was granted a retest of the Weber carburetor at the Haagen-Smit Laboratory and the results of these tests are shown in Table 5. The baseline values are also shown in this table for comparison.

Table 5

Condition	Exhaust Emissions gm/mi Test Procedure CVS-75 HC	CO	NOx	Fuel Economy City mi/gal
Baseline	0.424	15.022	0.519	25.2
Redline Kit	0.394	7.870	0.650	23.1
	0.398	8.740	0.490	23.5
	0.368	10.042	0.466	22.2
	0.400	10.380	0.600	23.2
Average	0.390	9.258	0.55	23.0

VI. DISCUSSION

The results of the tests performed on the Toyota test vehicle (See Table 1) show no increase in emissions. This demonstrates that while the installation of the Weber DFT carburetor on these vehicles does not maintain all of the original equipment emission control components no adverse emissions impact occurs.

The results of the final tests performed on the Datsun test vehicle show no increase in HC or CO and only a slight increase in NOx which is considered to be within the limits of test variability as determined by the Haagen-Smit Laboratory. This demonstrates that while the installation of the Weber DGAV carburetor requires the disconnection of several emission control components no adverse emissions impact occurs.

A limited number of Toyota and Datsun vehicles on this application must have their original altitude compensators disconnected in order to install the Weber carburetor. Altitude compensators were installed by OEM manufacturers on these vehicles for correcting driveability problems. How serious the problem is and how often the manual adjustment is activated by the driver is difficult to estimate. However, the staff believes that the number of vehicles which might have a Redline kit installed and be used at high altitude the majority of the time that might have driveability problems is not great enough to cause a significant emissions impact.

Redline has fulfilled the requirements for this exemption, therefore, the staff recommends that Executive Order D-133-10A be issued.

HITACHI DCG 306, DCH 306 & DCJ 306 2-BARREL (Cont.)

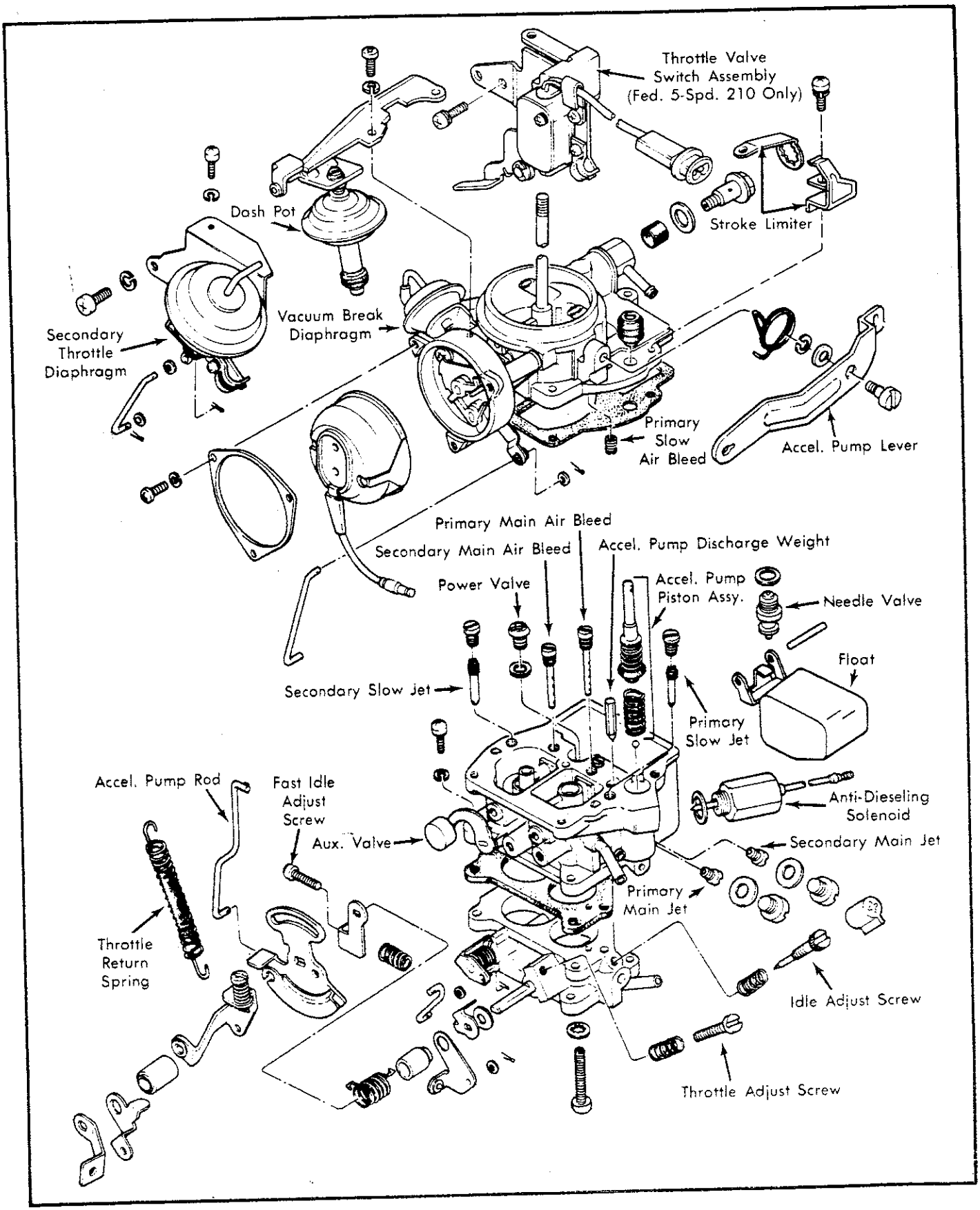


Fig. 7 Exploded View of 1979 Datsun 210 and 310 Hitachi Carburetor

AISAN 2-BARREL – TOYOTA 2T-C ENGINE (Cont.)

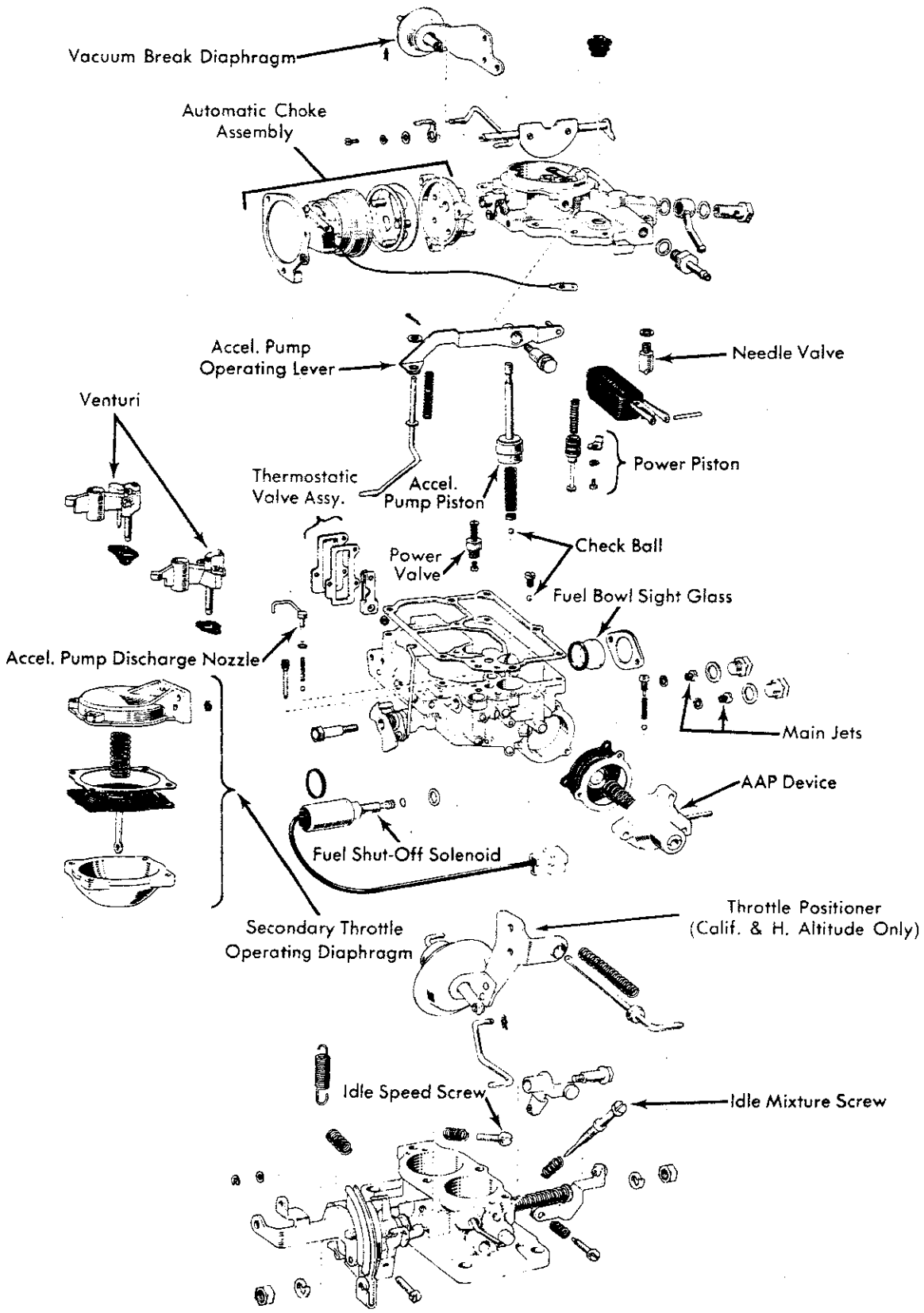


Fig. 11 Carburetor Assembly for Toyota 2T-C Engine

A-3

32 / 34 DFT

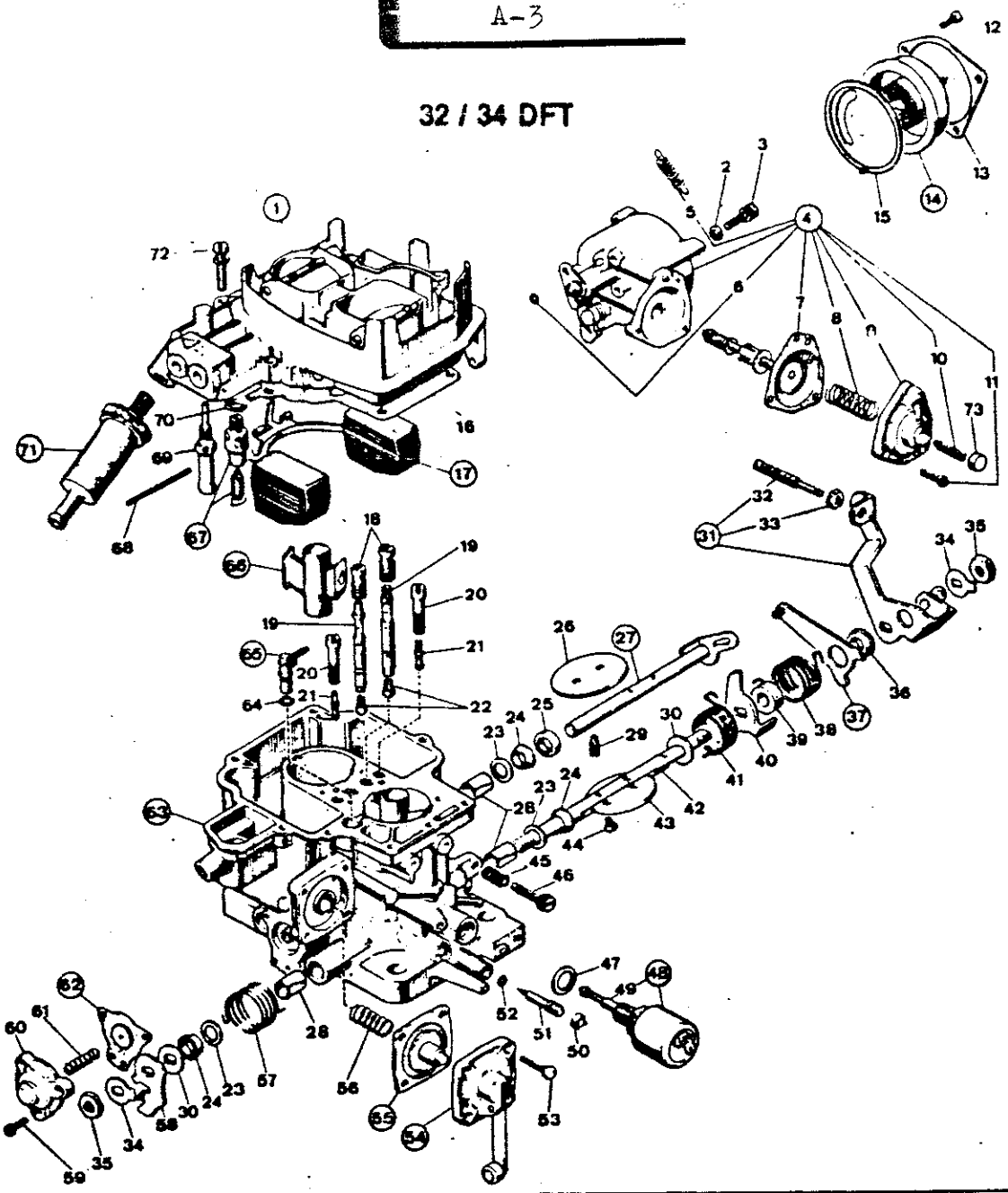


Fig.	Q.tà	Denominazione	Matricola
1	1	Coperchio carburatore	31716.751
2	3	Rosetta	55510.107
3	3	Vite fissaggio dispositivo avviamento	64700.004
4	1	Dispositivo avviamento completo di:	57804.400
5	1	— Molla avviamento	47605.042
6	1	— Guarnizione	41565.008
7	1	— Membrana	47407.158
8	1	— Molla per membrana	47600.141
9	1	— Coperchio per membrana	32364.041
10	1	— Vite registro membrana	64595.022
11	3	— Vite fissaggio coperchio membrana	64560.004
12	3	Vite fissaggio piastrina	64615.004
13	1	Piastrina bloccaggio scatola termostatica	52135.029
14	1	Scatola con spirale termostatica	57804.426
15	1	Guarnizione tenuta calore	41840.056
16	1	Guarnizione coperchio carburatore	41705.057
17	1	Galleggiante	41030.012
18	1	Getto aria di freno primario	77501.160*
18	1	Getto aria di freno secondario	77501.150*
19	1	Tubetto emulsionatore primario	61450.229*
19	1	Tubetto emulsionatore secondario	61450.229*

Fig.	Q.tà	Denominazione	Matricola
20	2	Portagetto del minimo	52570.004
21	1	Getto minimo primario	74403.050*
21	1	Getto minimo secondario	74403.060*
22	1	Getto principale primario	73405.112*
22	1	Getto principale secondario	73405.125*
23	3	Rosetta di fermo piastrina teflon	55510.087
24	3	Guarnizione tenuta alberini	41575.010
25	1	Boccola di ritegno guarnizione alberino	12750.085
26	1	Valvola a farfalla secondaria	64005.018
27	1	Alberino principale secondario	10015.311
28	3	Piastrina supporto alberino	52130.010
29	1	Vite registro farfalla secondaria	64595.013
30	2	Rosetta rasamento alberino primario	55565.018
31	1	Leva comando valvola a farfalla completa di:	45041.185
32	1	— Vite registro minimo veloce	64595.025
33	1	— Dado	34715.018
34	2	Rosetta di sicurezza	55520.002
35	2	Dado fissaggio alberino primario	34715.014
36	1	Boccola per leva allentata	12775.063
37	1	Leva allentata	45069.015
38	1	Molla richiamo leva allentata	47610.092

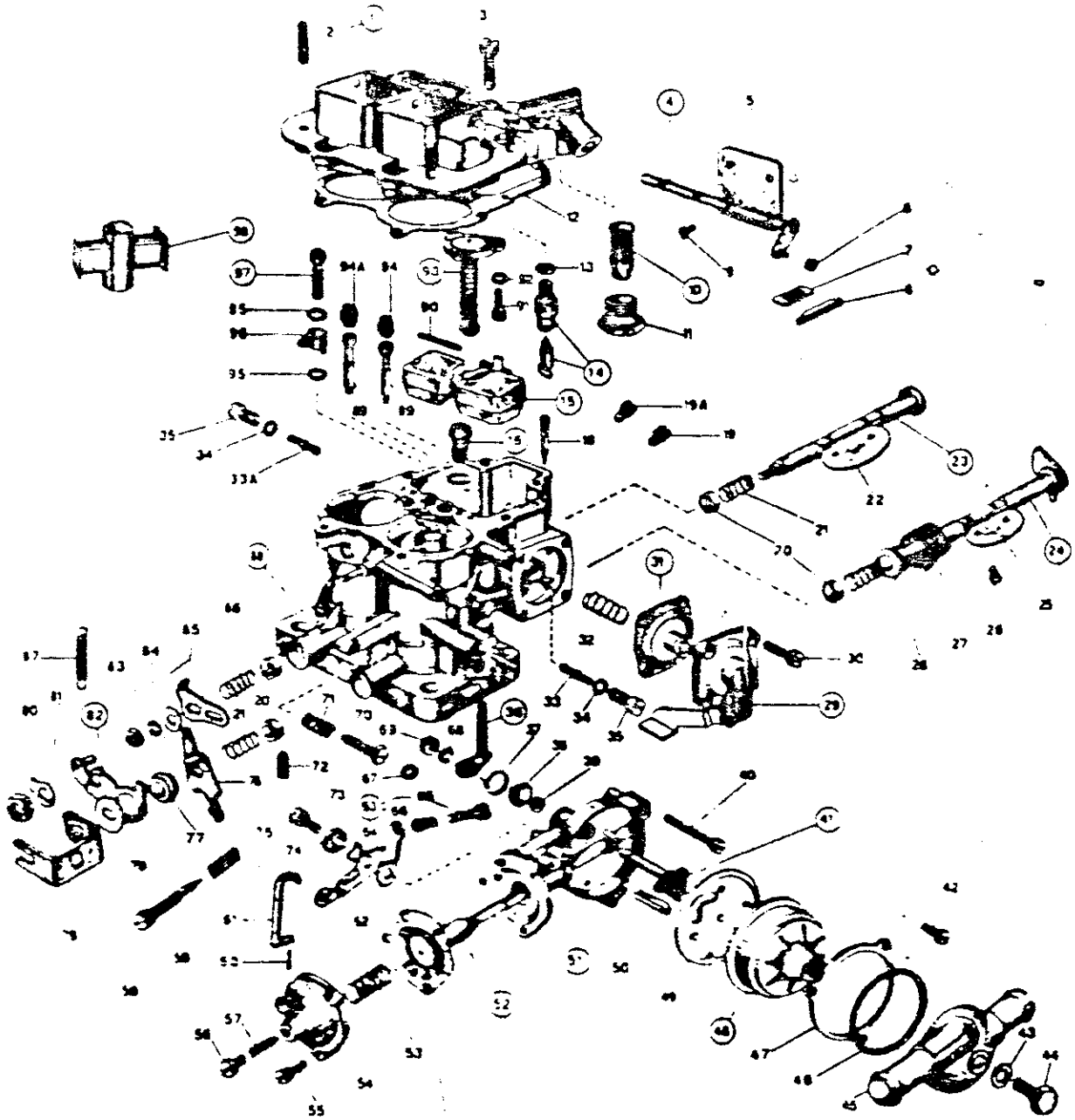
Pubblicazione
Matr. 96.0747.00

Weber Carburatori
Assistenza Tecnica
Pubblicazioni Tecniche

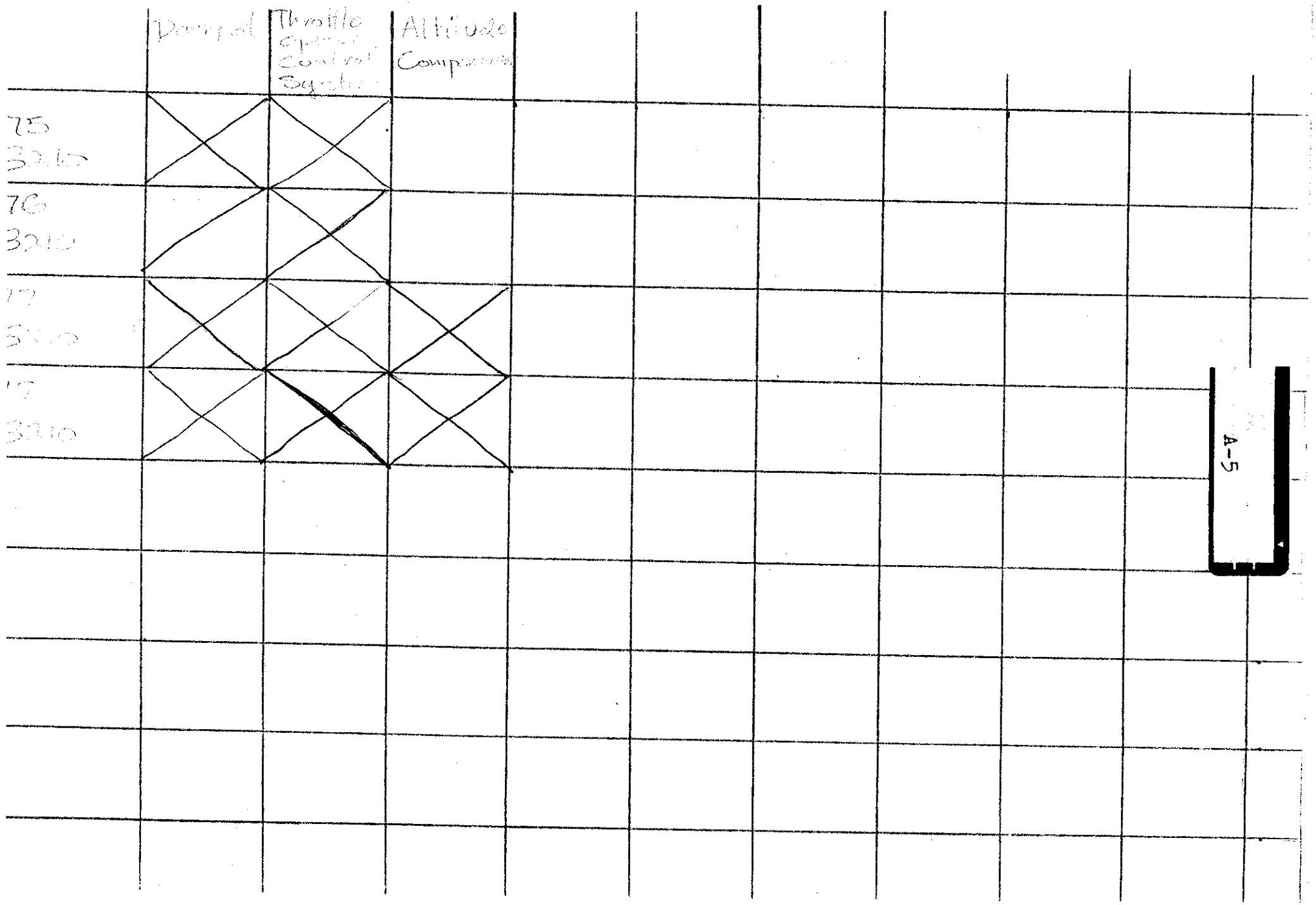
40134 Bologna - Via Timavo, 33
Telefoni: 051 / 417995-434205-437403
Telex: 510119 WEB BO-I

WEBER CARBURETOR

Type **32 36 DGAV**

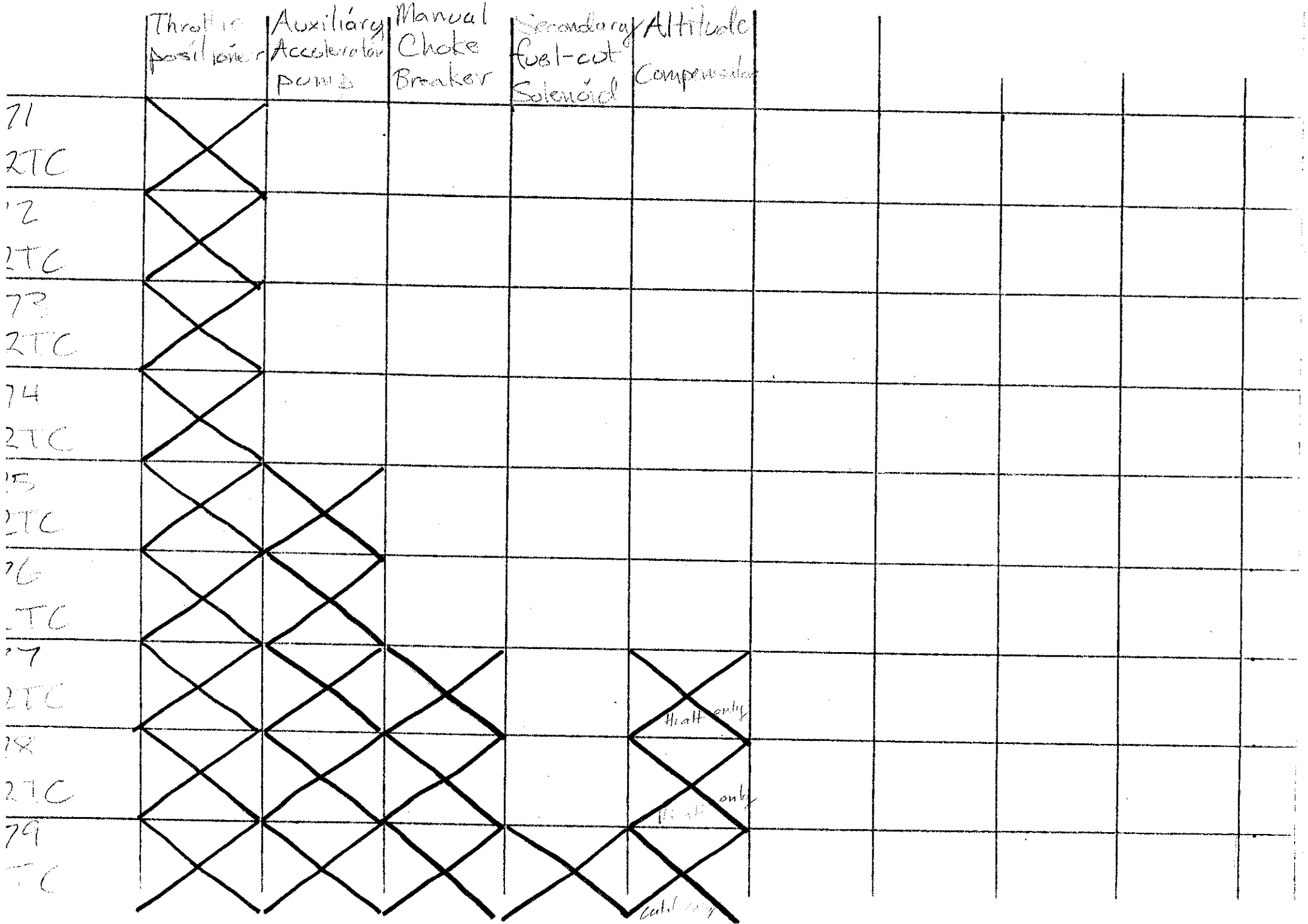


DATSUN 810 75-78 KA24

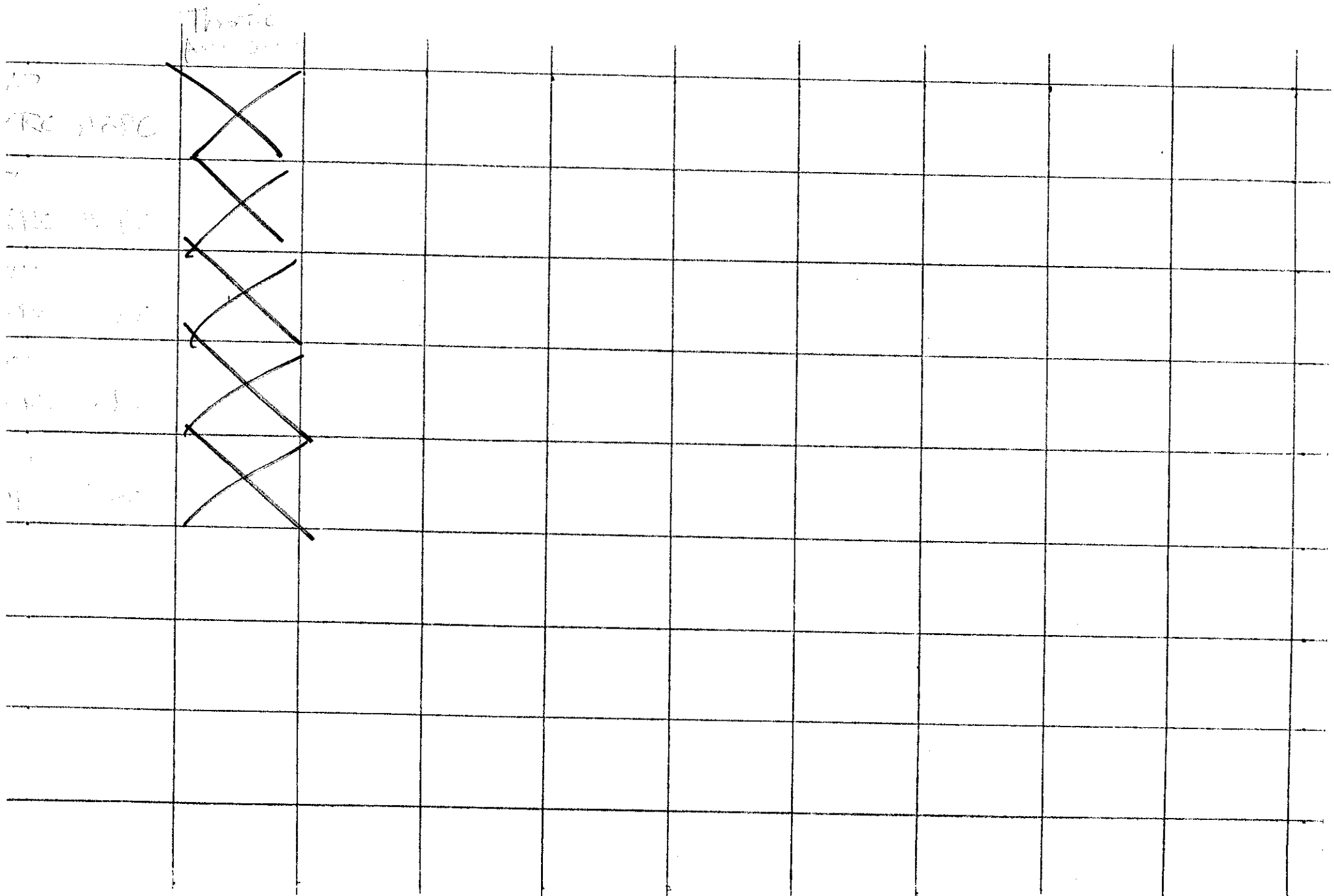


A-5

TOYOTA, 2TC, K8661, K8740



TOYOTA



A-6

INSTALLATION INSTRUCTIONS

WEBER CARBURETORS

READ & UNDERSTAND ALL STEPS OF THESE INSTRUCTIONS BEFORE BEGINNING THIS INSTALLATION. After unpacking, examine the carburet r and ther components for shipping damage. If any damage is found, notify shipper/supplier immediately.

WEBER TECH-LINE

800-WEBER CA (932-3722) Inside California

800-WEBER US (932-3787) Outside California

DATSUN

B210, ~~310~~ (~~1974~~-1982)

1975

75-78 79-82

For Kit Nos. K8624, K8625, 52-50502 and 52-50503

Using Weber 32/36 DGEV 33B

TOOLS AND EQUIPMENT NEEDED:

Combination, box or open end wrenches (metric)
Socket set with 12 mm socket
Screwdriver (regular and Phillips)
Pliers
Gasket Scraper
Rags
Cleaning Solvent
Knife

PARTS SUPPLIED WITH INSTALLATION KIT

33B I

1 - 32/36 DGAV 33B Weber Carburetor
1 - Air Filter Adapter & Gasket
1 - Hardware Kit, Fuel Line & Vacuum Line
1 - Carburetor Adapter

NOTE: It is recommended to obtain a new fuel filter and install it when installing this kit.

TUNE-UP SPECIFICATIONS

All tune-up specifications for the Weber Carburetor remain the same as those specified by the Factory for the original unit. Emissions tune-up should be carried out by a suitably qualified Dealer or Independent garage, using infrared gas analyzing equipment.

NOTE: Late model vehicles fitted with Emission Control Systems have many vacuum lines and electrical connections in their fuel systems. It is essential when dismantling, that disconnected lines be identified with a corresponding number tag or label system. To establish function, locate and identify the source of each line.

1. Remove the vehicle's gas cap.
2. Disconnect the battery.
3. Remove factory air filter assembly and attached components. Tag hoses for proper identification during reassembly. Disconnect the stock fuel line and plug off to prevent dirt from entering the fuel system.
4. Disconnect all electrical connections to carburetor and tag them for proper identification during reassembly.
5. Disconnect throttle cable at bracket and lever. Remove clip and pin from idle kick-up lever (if applicable).
6. Using either the map inside the vehicle's engine compartment, or a factory service manual for your year/model Datsun; tag each vacuum line attached to the original carburetor for proper identification during reassembly. Disconnect all carburetor vacuum hoses once they are identified. NOTE: 1980–82 vehicles only. Disconnect and remove the altitude compensator from the fender well. It will not be used with the Weber carburetor.
7. Remove the four (4) nuts that secure the carburetor to the intake manifold. Remove the carburetor and heat spacer. Insert a clean rag in the intake ports to prevent dirt and gasket material from entering the engine.
8. Remove the stock 6mm carburetor mounting studs from the intake manifold using either a stud tool or the "double-nut" method if the proper tool is not available. (Install two nuts approx. 1/3 the way on the stud and lock them together. Then using a suitable wrench on the lower nut, loosen the stud and remove.)

9. Once the studs have been removed, use a gasket scraper to thoroughly clean the carburetor mounting surface.

10. Remove the B.C.D.D. (Boost Control Decel Device) located on top of the #1 cylinder runner. Plug-off the manifold vacuum source with one of the rubber caps supplied in the kit. (Fig. A)

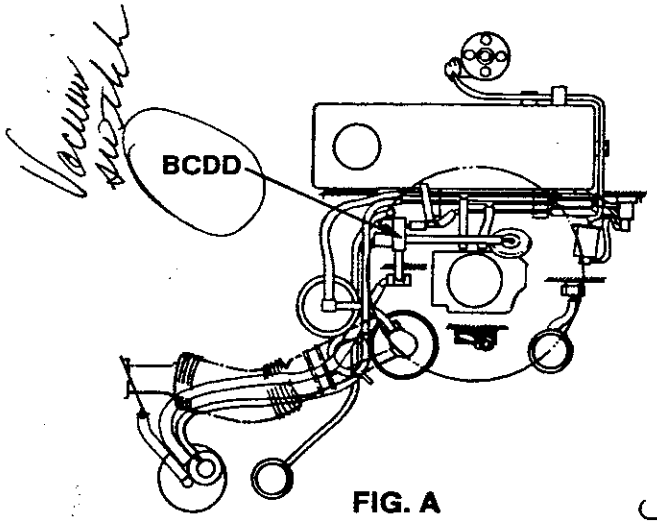


FIG. A

11. Remove the EGR Valve from the intake manifold and insert a clean rag in the EGR ports. Clean the EGR valve and the manifold surfaces thoroughly, using a gasket scraper.

12. Remove the rag and install one of the EGR Valve gaskets supplied in the kit. (NOTE: A light coat of gasket sealer should be used to ensure against exhaust gas leaks under the adapter.) Place the EGR Valve adapter (elbow) on the intake manifold. (Fig. B) Use the original EGR Valve washers and nuts to secure the adapter to the intake manifold.

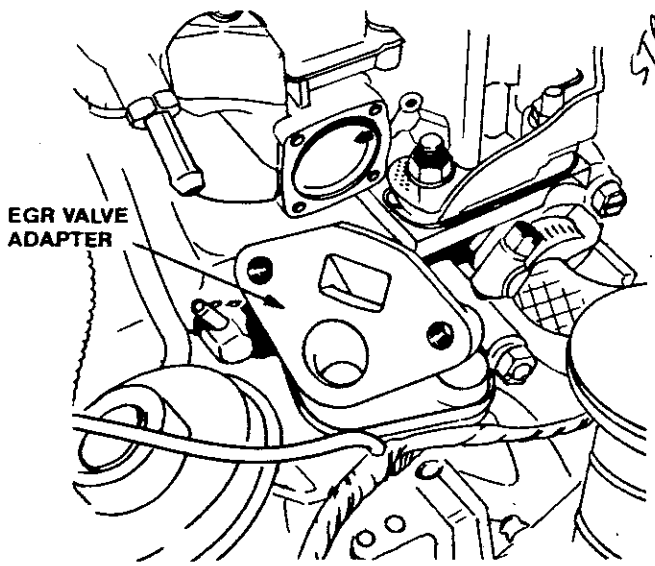


FIG. B

13. Install the second EGR Valve gasket and EGR Valve assembly using the two (2) 8mm bolts and lock washers supplied in the kit. (NOTE: Do not use gasket sealer on this flange gasket.)

14. Remove the rag from the intake ports and install the gasket and adapter components from the kit as shown in Fig. C. (NOTE: When installing the 8mm carb. studs into the adapter, use either the correct tool or the "double-nut" method.)

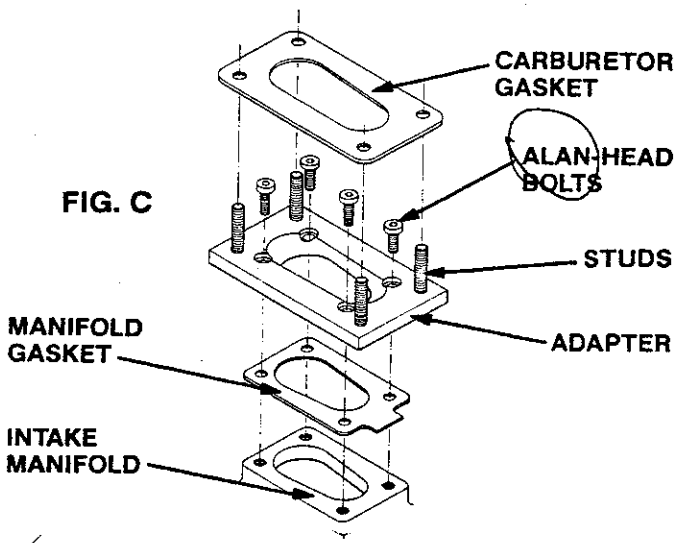


FIG. C

15. Mount the Weber carburetor with the throttle linkage facing toward the vehicle's firewall. Install the throttle cable bracket over the two (2) studs on the driver's side of the carburetor. (Fig. D) Use the four (4) nuts and lockwashers supplied in the kit to secure the carburetor and bracket. (NOTE: Do not tighten the nuts completely at this time.)

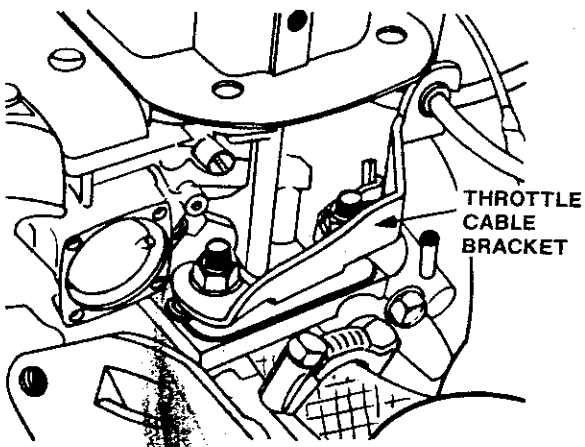


FIG. D

16. Remove the two screws on the throttle cable jacket at the firewall and turn the jacket over (rotate 180°). Reinstall the jacket in the throttle cable bracket and retighten the screws.

17. Reconnect the throttle cable to the throttle lever. Check linkage for proper operation and correct as necessary.
When all functions are ensured correct, tighten carburetor-securing nuts to 12 ft/lbs in small increments to prevent damage to carburetor base. Check tightness and operation of all other linkage mountings and connections.

18. Use the piece of wire supplied in the kit to reconnect the choke and the I.C.S. (Idle Cut-Off Solenoid) to the original choke wire.

19. Remove the plug from the stock fuel line and install the new hose supplied in the kit. Install a new fuel filter at this time.

20. Connect the distributor vacuum advance line to the vacuum port on the choke-side of the carburetor, nearest the FRONT of the vehicle.

21. Connect the EGR vacuum line to the port on the choke-side of the carburetor, nearest the FIREWALL.

22. A. 1979-82 Vehicles Only: Remove the plug from the vacuum line on the V.V.T. (Venturi Vacuum Transducer) and connect it to the port on the Linkage Side of the carburetor. (Facing firewall.)

B. 1980-82 Vehicles: Connect the 3/8" hose from the charcoal canister to the barbed fitting on the top of the carburetor.

If vehicle is 1979, remove the 3/8" barbed fitting from the carburetor top and install the 1/8" NPT Allen Plug supplied in kit.

23. Install the air filter adapter with the gasket and allen bolts supplied.

24. Install the 6mm x 90mm air filter stud in the air filter adapter, using the jam nut supplied.

25. Install the air filter assembly, using the two (2) oval air filter spacers, bolts, and washers supplied. **See Fig. E**

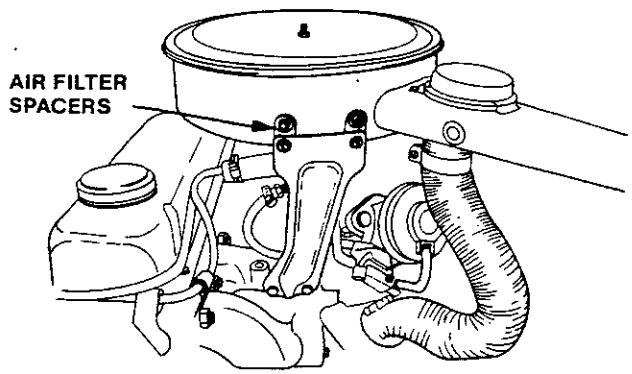


FIG. E

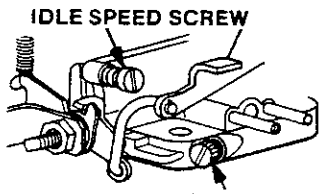
26. Reconnect battery and replace gas cap.

27. Crank-over the engine until the carburetor fills with fuel, then depress the throttle pedal once to initiate choke unit.

28. **START ENGINE**
A. Check for leaks around the carburetor mounting base and the fuel line connection. Correct as necessary.
B. Set idle speed and mixture to Factory specifications.

29. CHECK FOR ADEQUATE HOOD CLEARANCE BEFORE CLOSING THE HOOD.

MODEL DGV/DGAV LEAN BEST IDLE SETTING PROCEDURE



NOTE: *Before* adjusting carburetor, be sure engine is at operating temperature, (choke is fully off) air cleaner is removed and vacuum lines are plugged off.

(1) The Weber DGV/DGAV idle speed screw should be adjusted to its "preliminary" set-point before adjusting the idle mixture. To set the idle speed screw follow these steps:
(2) Back "out" the idle speed screw until the tip of the screw no longer touches the throttle lever. Then slowly turn the screw in until it just comes in contact with the throttle lever.
(3) From the "contact" position, turn the idle speed screw "in" one (1) full turn.
(4) If a tachometer is available, install it prior to starting the engine. If a tachometer is not available set idle mixture "by ear."
(5) Start engine, be sure choke is not engaged, and proceed to adjust the idle mixture.
(6) Turn the idle mixture screw "in" (clockwise) until the engine RPM begins to fluctuate on the tachometer. (If adjusting by ear, until a noticeable drop in speed is heard.)
(7) Back "out" (counterclockwise) the idle mixture screw slowly, until the engine idle becomes steady. Try to obtain the leannest setting without affecting the idle speed. If necessary, repeat steps 6 and 7 until the best setting is achieved.
(8) Once the idle mixture is set, fine tune the engine's idle speed; if necessary, by readjusting the idle speed screw **(Note: Turning "in" (clockwise) the idle speed screw will increase engine speed. Turning "out" (counterclockwise) the idle speed screw will decrease the engine speed.)**
(9) If idle speed is reset, go back and repeat steps 6 and 7.

If after following these instructions, you require further assistance, please call the Weber Tech. Service Dept.

'81 210

K8625 Instructional Changes

Step (6) Add at end of note! Plug the fitting on the air filter assembly that lead to the altitude compensator using the larger vacuum cap supplied in the Kit. Also, plug both fittings on the mixture ratio control solenoid (mounted on the front air cleaner bracket) to prevent dirt from entering the solenoid, and plug the air cleaner fitting that lead to the solenoid. (If so equipped ↑)

Step (11) Add a "caution" telling customer to disconnect water temp. switch to avoid damage to switch while removing and re-installing EGR Valve. (See Jim for location of switch [get pictures and details.)

Fig. C. "Alan" should be "Allen"

Steps (12, 13, 14, 15, 16) Kit is much easier to install in this order — EGR adapter, Weber Carburetor, EGR Valve
ie: steps 12, 14, 15, 13, 16

Step (18) All — Choke (Red Wire) to Choke (Black) → C.E. plug-in boiler correctors
74-79 — ICU (Long Blue Wire) to ICU
80-82 — Solid Blue Wire of BCDD (Vacuum Switch) to ICU
↑ wire to be cut and stripped and female spade connector crimped to it.
Short Blue Wire in kit to ICU from this connec

K8625 Installation Instructions

Step (14) (rage) should be (rag)

Both the allen-head bolts and the carb mounting studs will be installed using loc-tite. ~~The studs thread into open bottom holes and will require correct height placement to allow just enough length for carb and nut.~~ Also, the double-nut method should not be necessary.

height measurement method: ie studs closer to 6 and we inserted to achieve height of .970" and studs closer to valve cover also

Step (17) Sliding the throttle cable into ~~onto~~ the cable bracket is not mentioned. Also, the cable adjustment via an allen set-screw should be addressed at this time. ~~A reminder note will be req'd~~ Allen set screw note refers to Not overtightening set screw.

Step (32) Where plug in the vacuum line? Remove the brass screw in the VV elec. on the carb and connect the VVT hose to it. (Is that what is meant? ? yes

Fig. (X) Show ports on Weber and reference to this figure in the appropriate steps ie: use ~~dwg~~ DGW drawing

Step (18) (Addition to earlier change) Shrink tubing is to be used at all (4) terminal locations

8624, 8625 Overall Changes

"Note!" in "Tune-Up Specifications" should be separate.

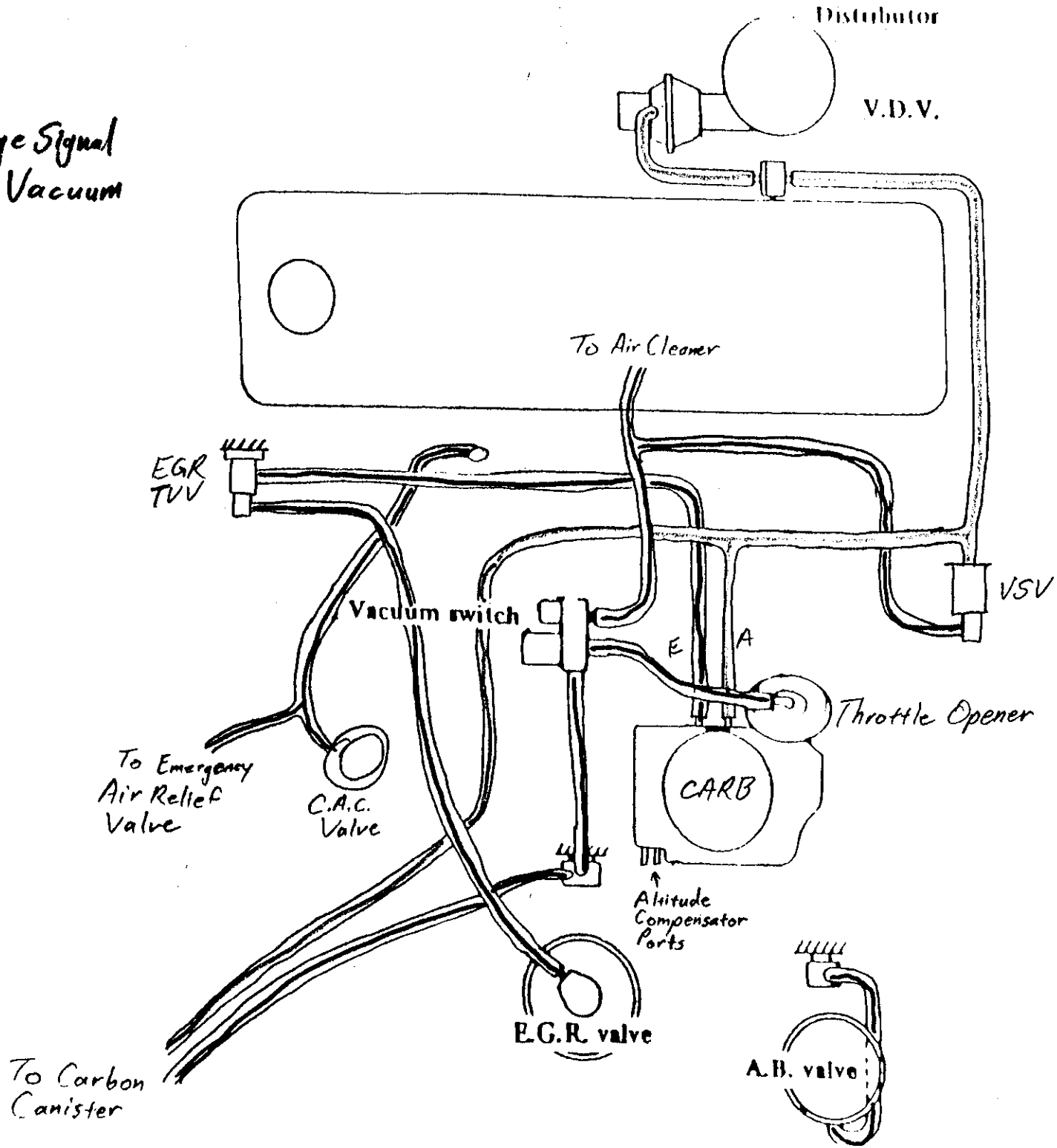
EGR and Advance hoses are to be teed into the Advance port on the Weber. The EGR port is not to be used.

Step. 10 - Fig. A - change "BCDD" to "Vacuum Switch".

Step 6 - Do not restrict Altitude Compensator to just '80-'82 vehicles (it was optional on many others) Also, some years used Altitude Compensators mounted inside the air cleaner. These should not be removed, but the fittings should be capped.

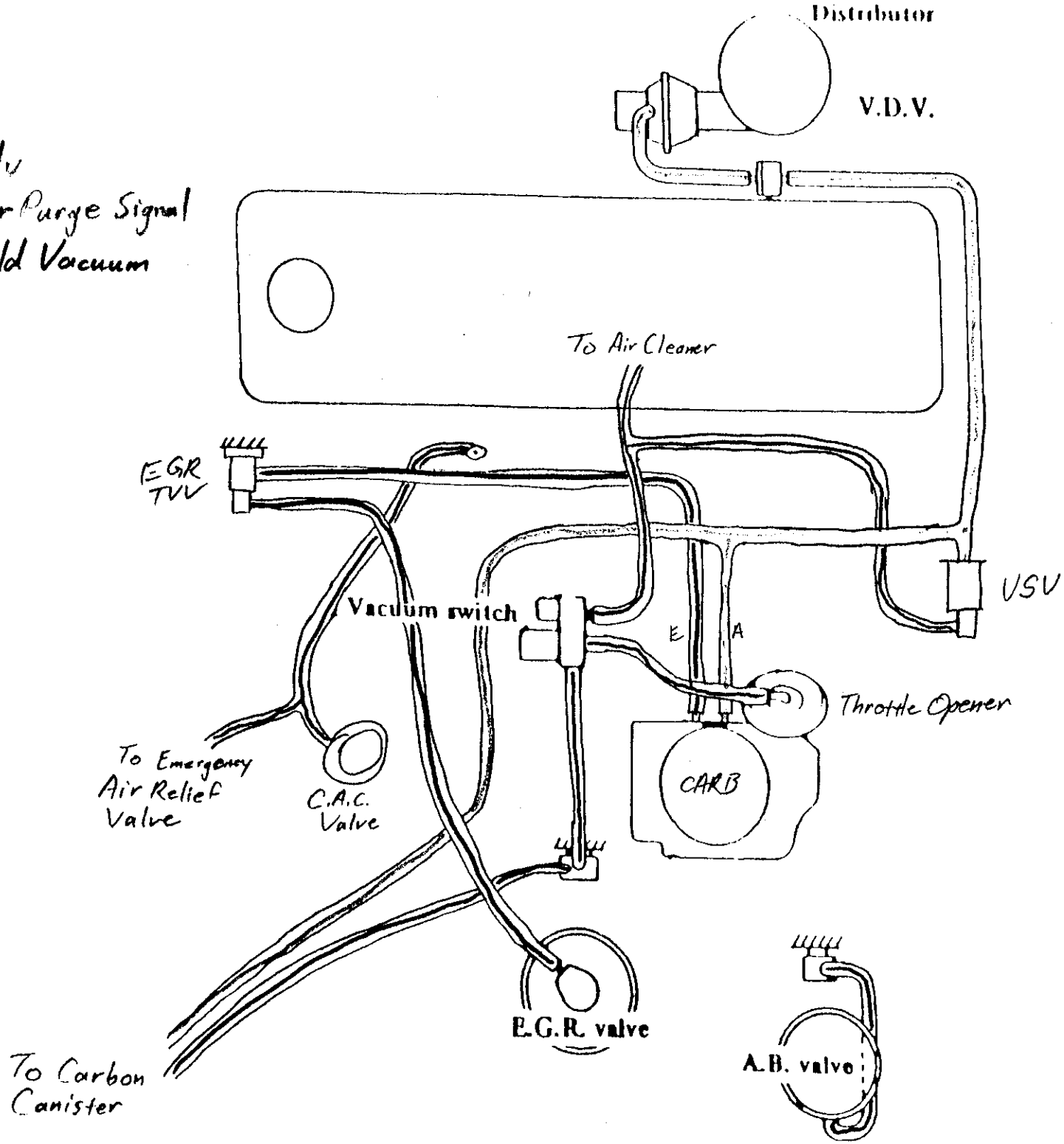
EGR
Vac. Adv.
Canister Purge Signal
Manifold Vacuum
Bleed

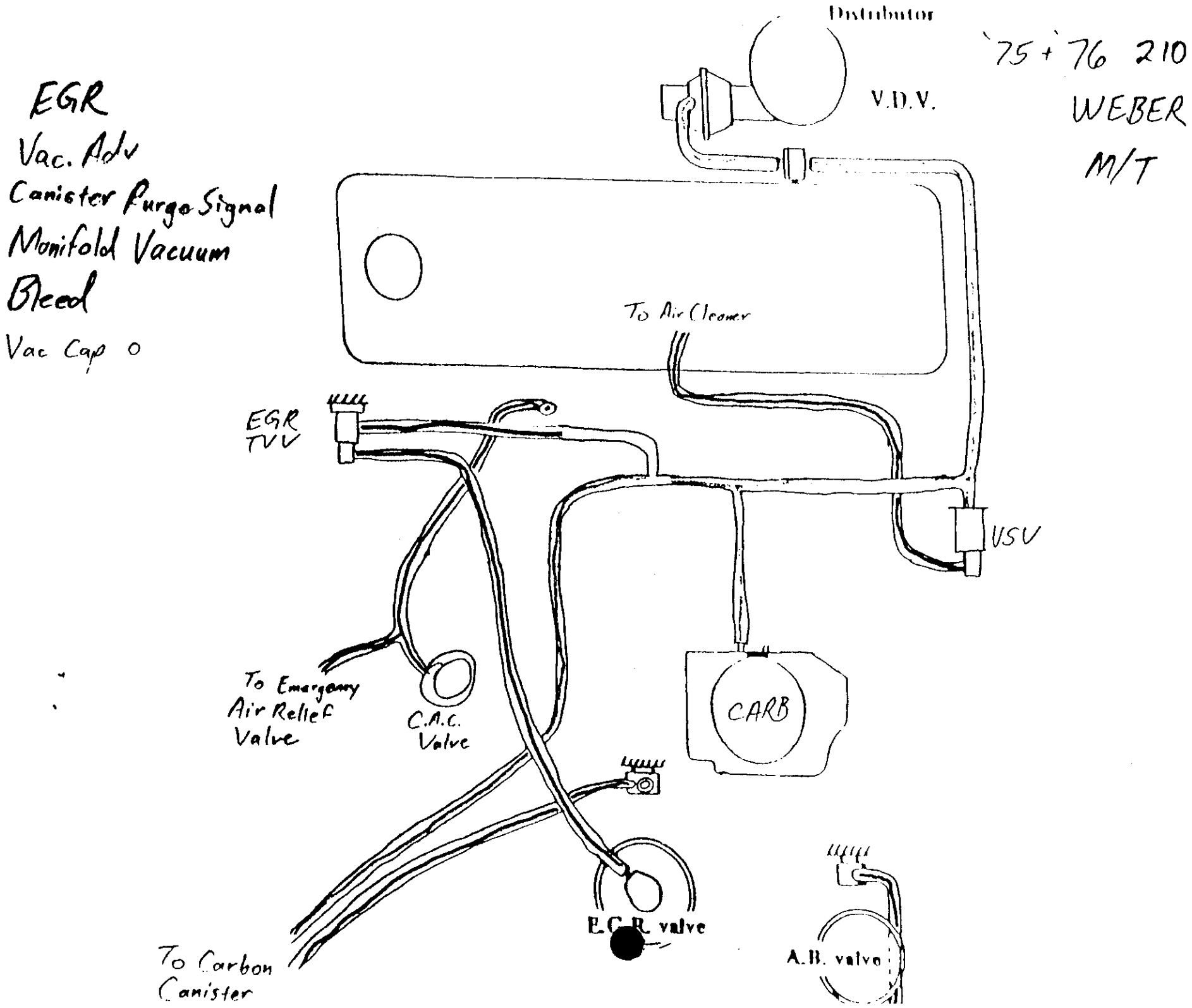
'75 210
STOCK
M/T



EGR
Vac. Adv
Canister Purge Signal
Manifold Vacuum
Bleed

76 210
STOCK
M/T




EGR
Vac. Adv
Canister Purge Signal
Manifold Vacuum
Bleed
Vac Cap o
'75 + '76 210
WEBER
M/T
Distributor
V.D.V.
To Air Cleaner
EGR TVV
VSV
To Emergency Air Relief Valve
C.A.C. Valve
CARB
E.G.R. valve
A.B. valve
To Carbon Canister

EGR

Vac. Adv.

Canister Purge Signal

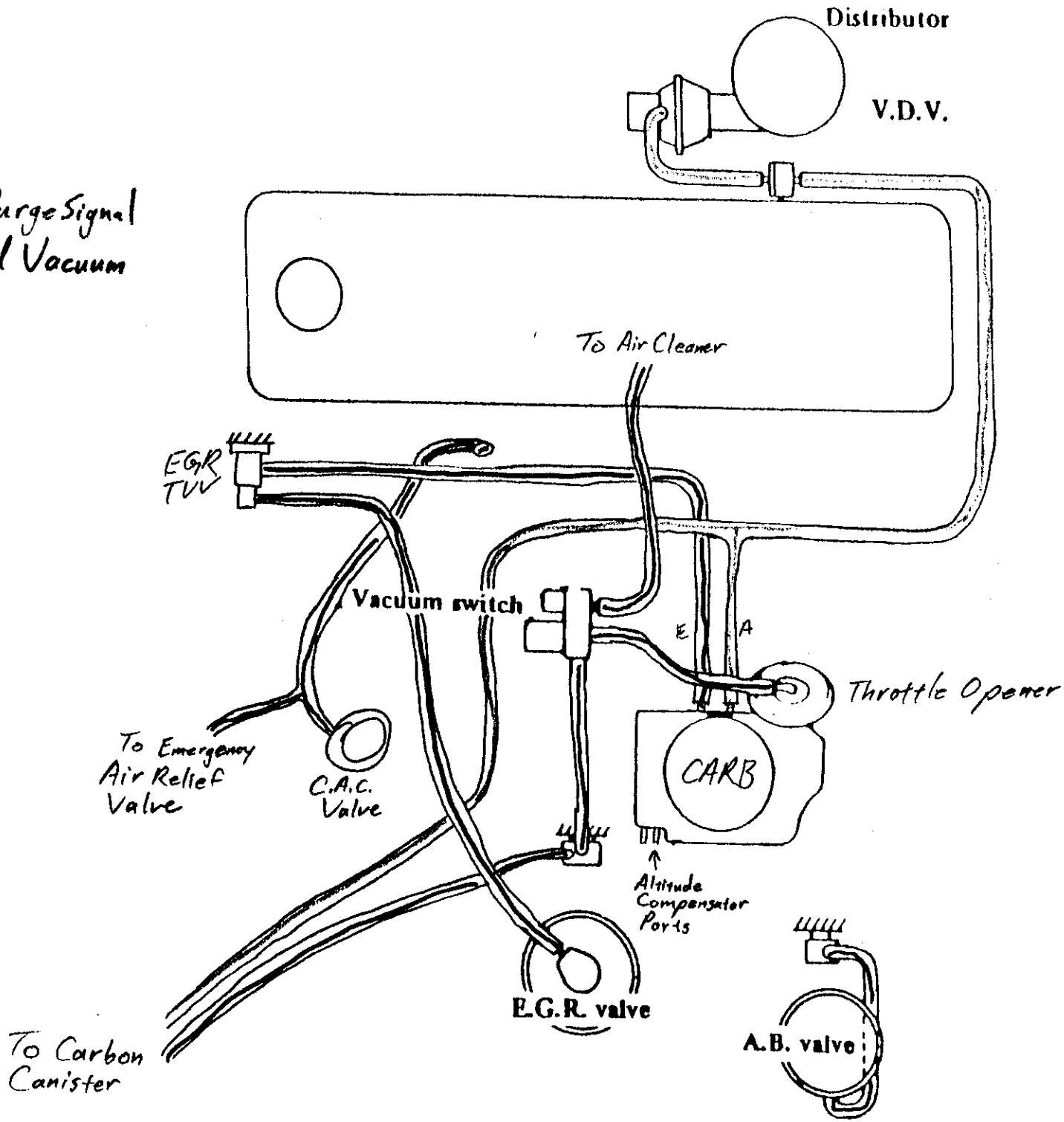
Manifold Vacuum

Bleed

'75 210

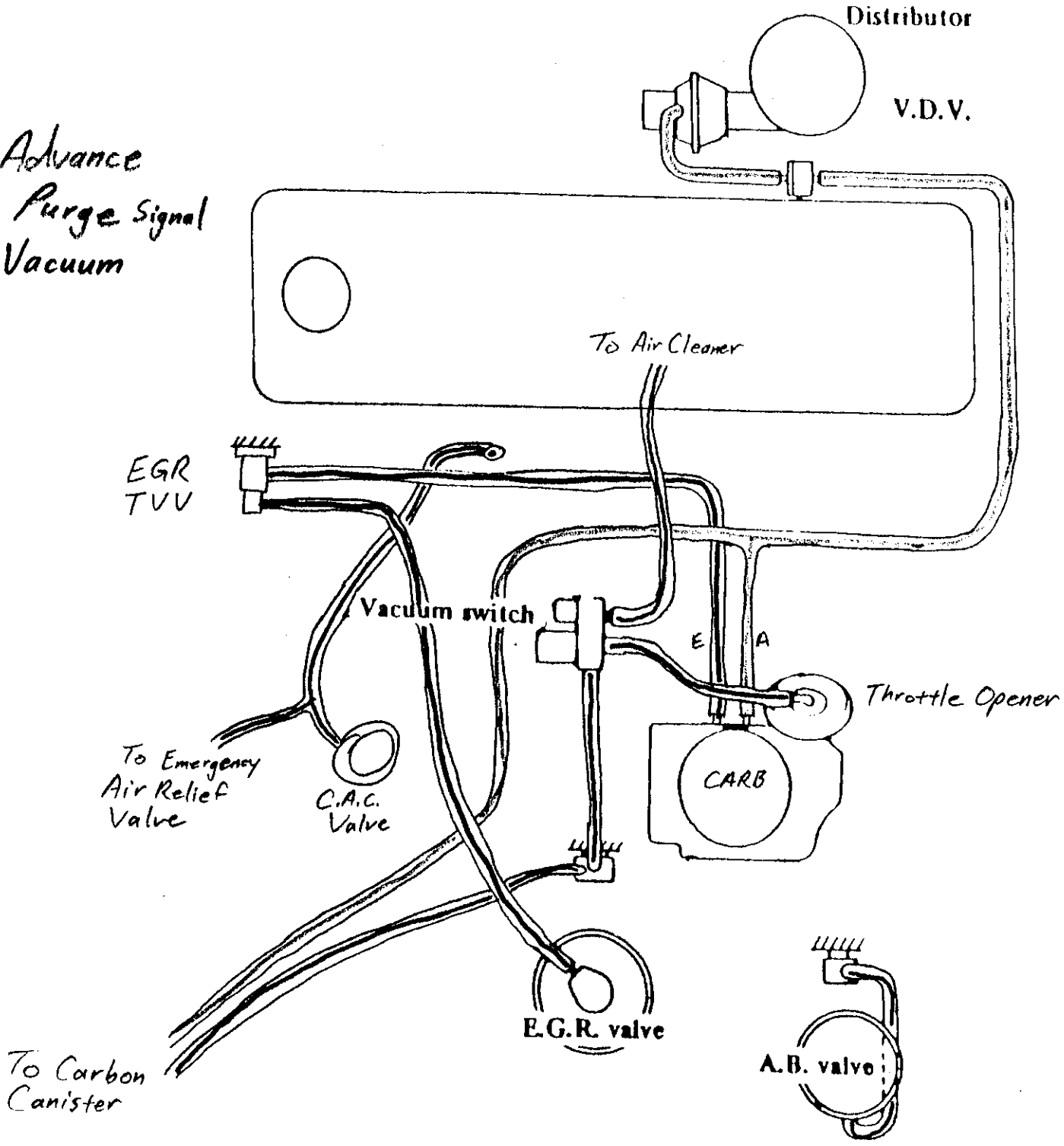
STOCK

A/T



EGR
Vacuum Advance
Canister Purge Signal
Manifold Vacuum
Bleed

76 210
STOCK
A/T



EGR

Vac. Adv.

Canister Purge Signal

Manifold Vacuum

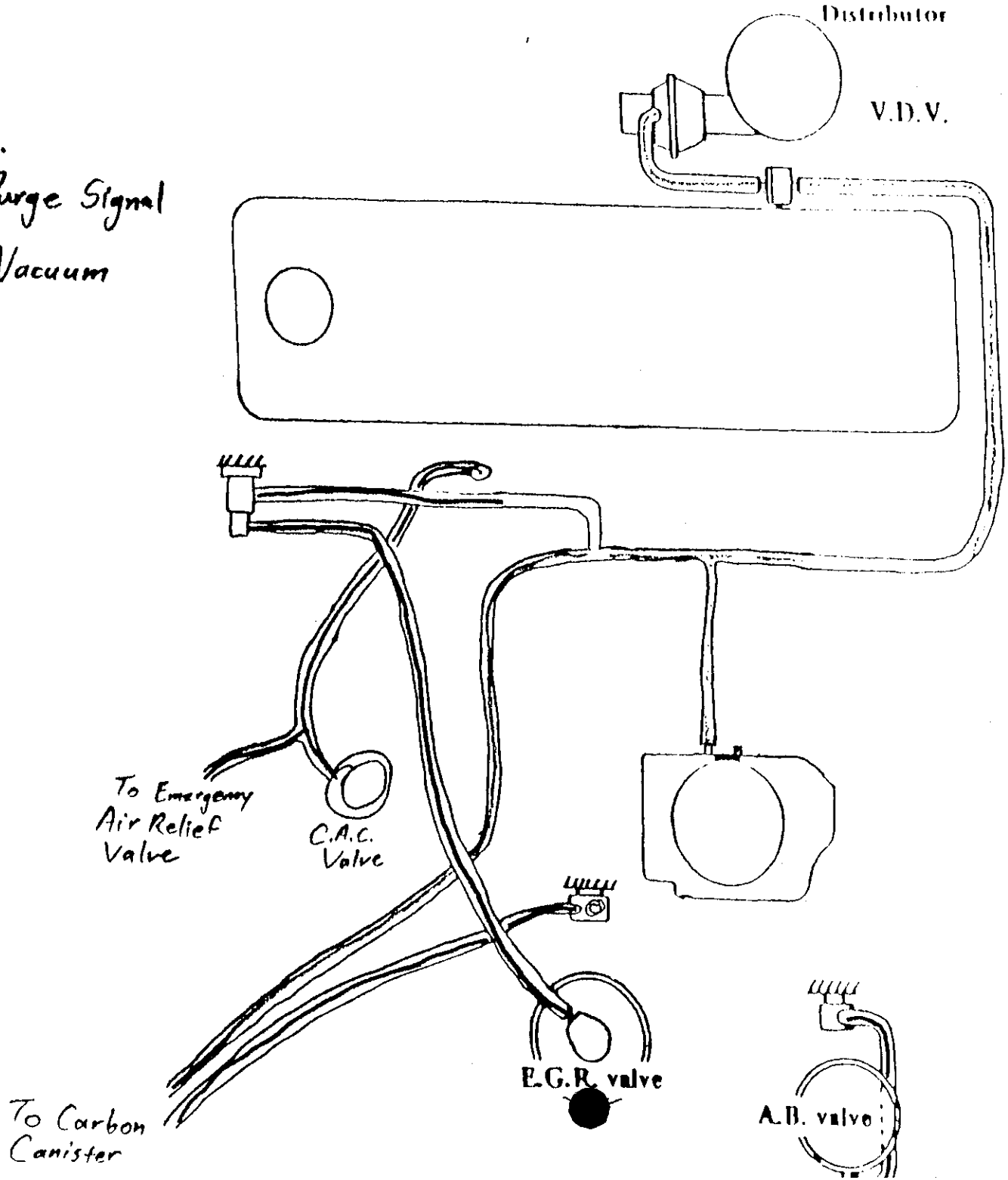
[redacted]

Vac Cap o

'75 + '76 210

WEBER

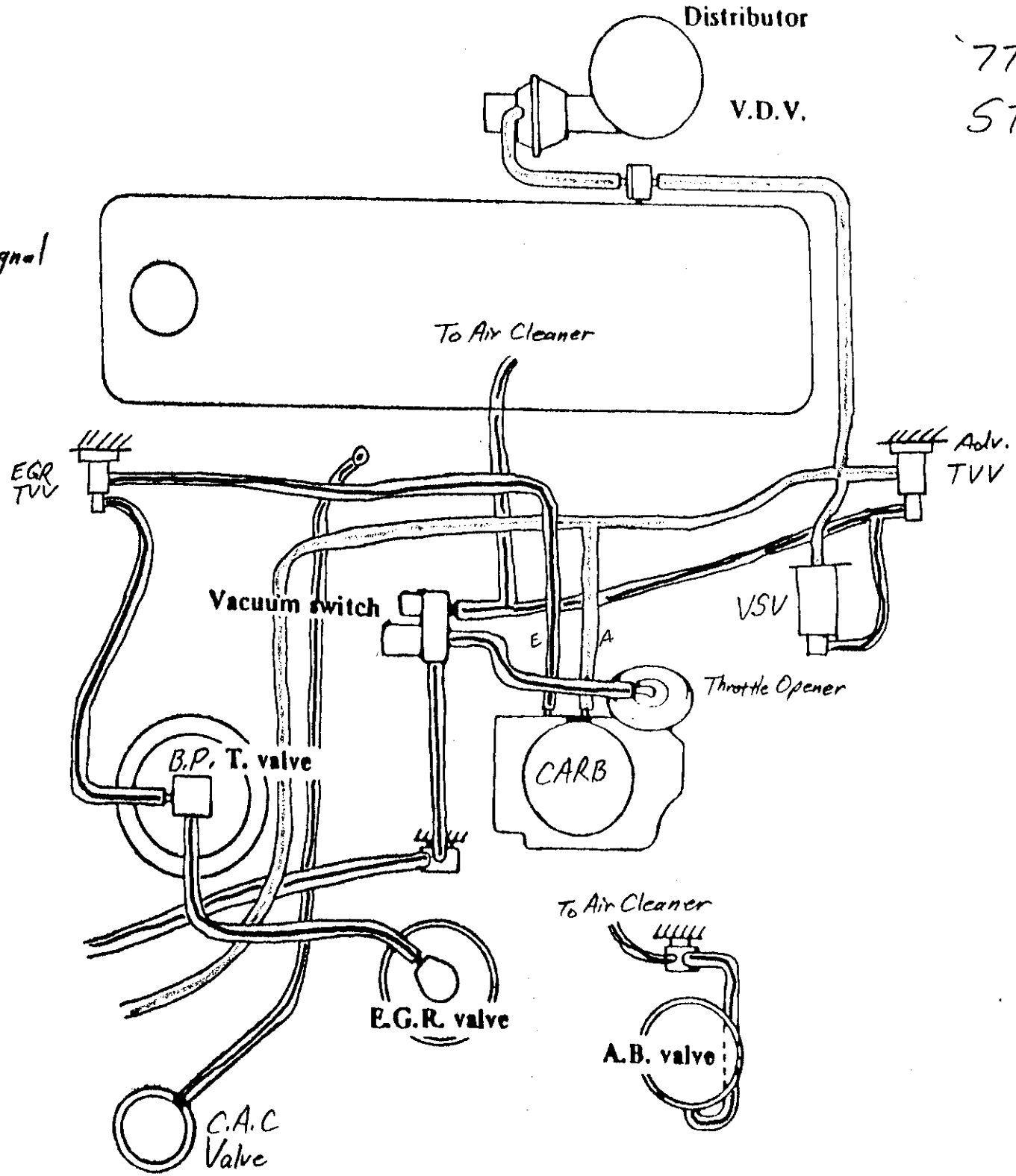
A/T



EGR

Vacuum Advance
Canister Purge Signal
Manifold Vacuum
Signal Bleed

`77 210
STOCK

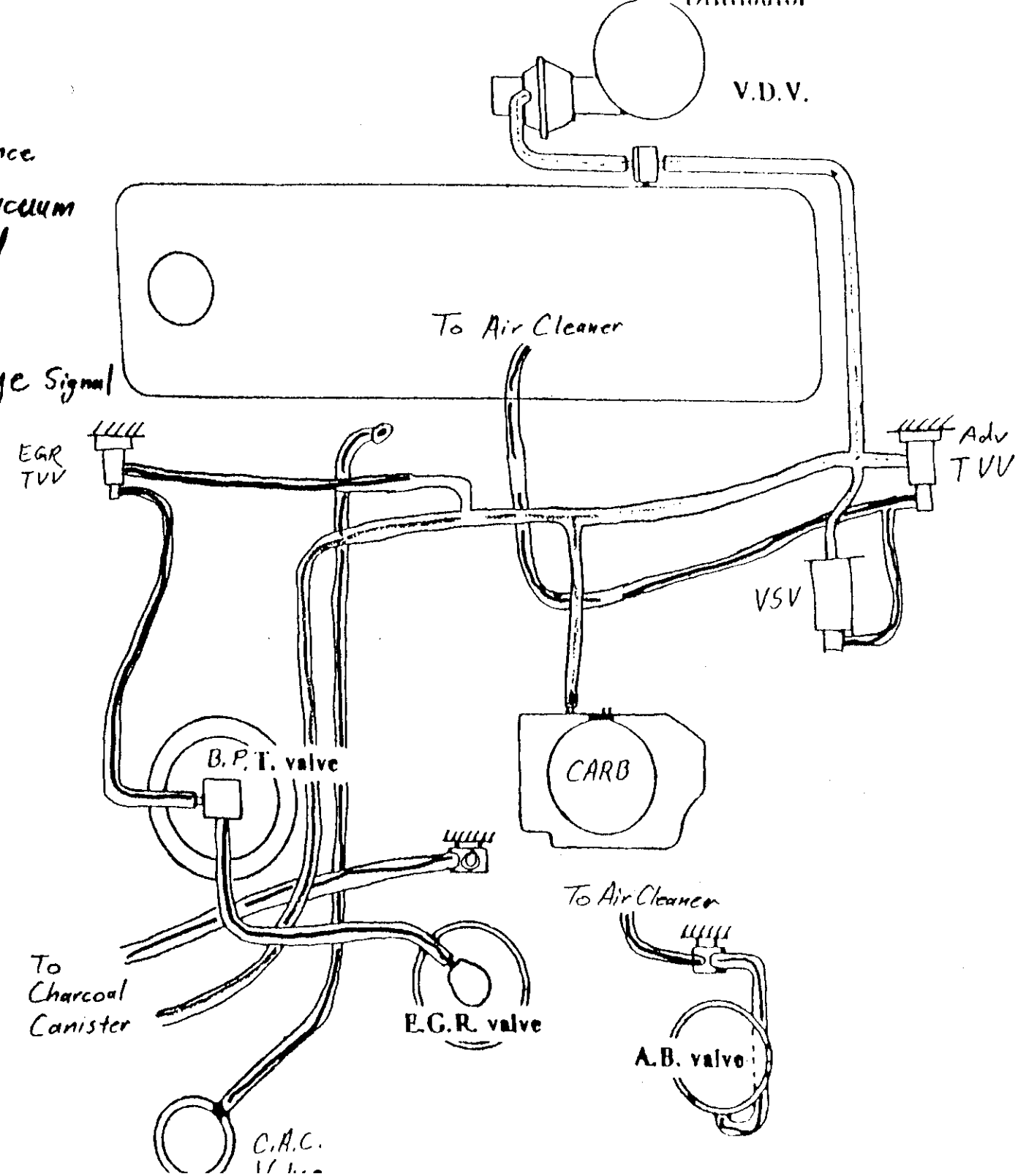


EGR

Vacuum Advance
Manifold Vacuum
Signal Bleed

Vacuum Cap o
Canister Purge Signal

'77 210
Weber



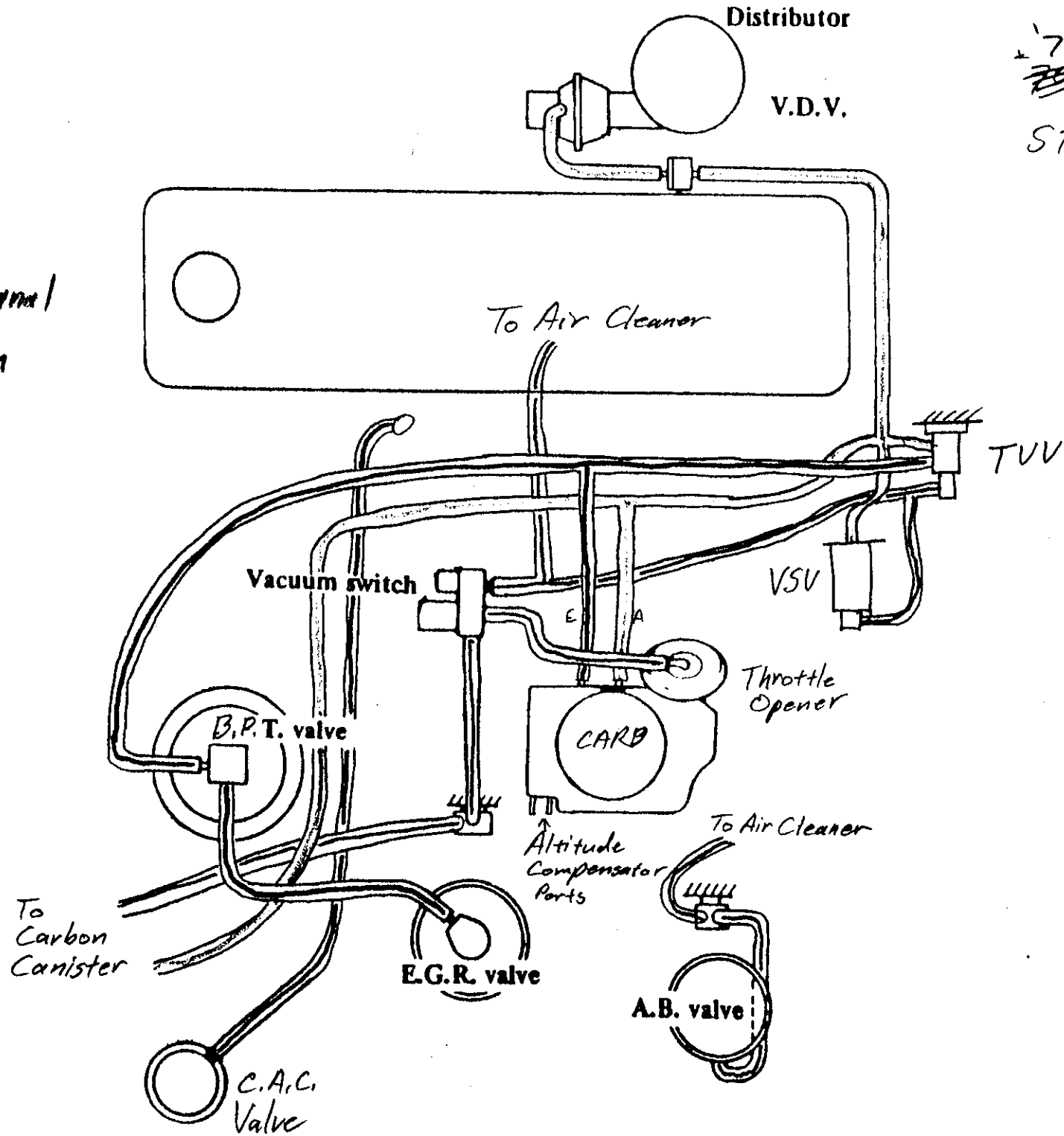
EGR

Vacuum Advance

Canister Purge Signal

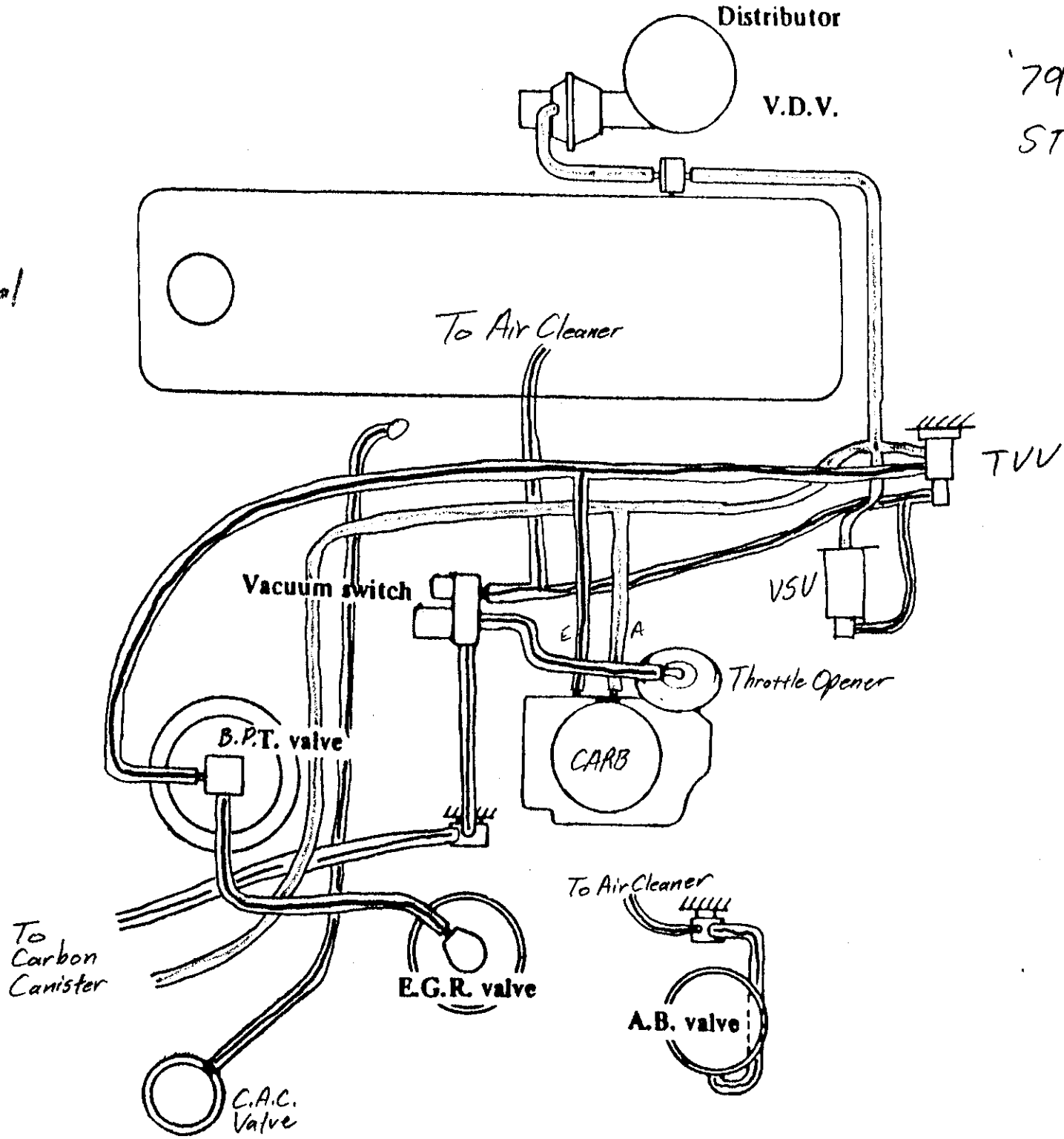
Manifold Vacuum Signal Bleed

'78 ~~280~~ 210 STOCK



'79 210
STOCK

EGR
Vacuum Advance
Canister Purge Signal
Manifold Vacuum
Signal Bleed



EGR

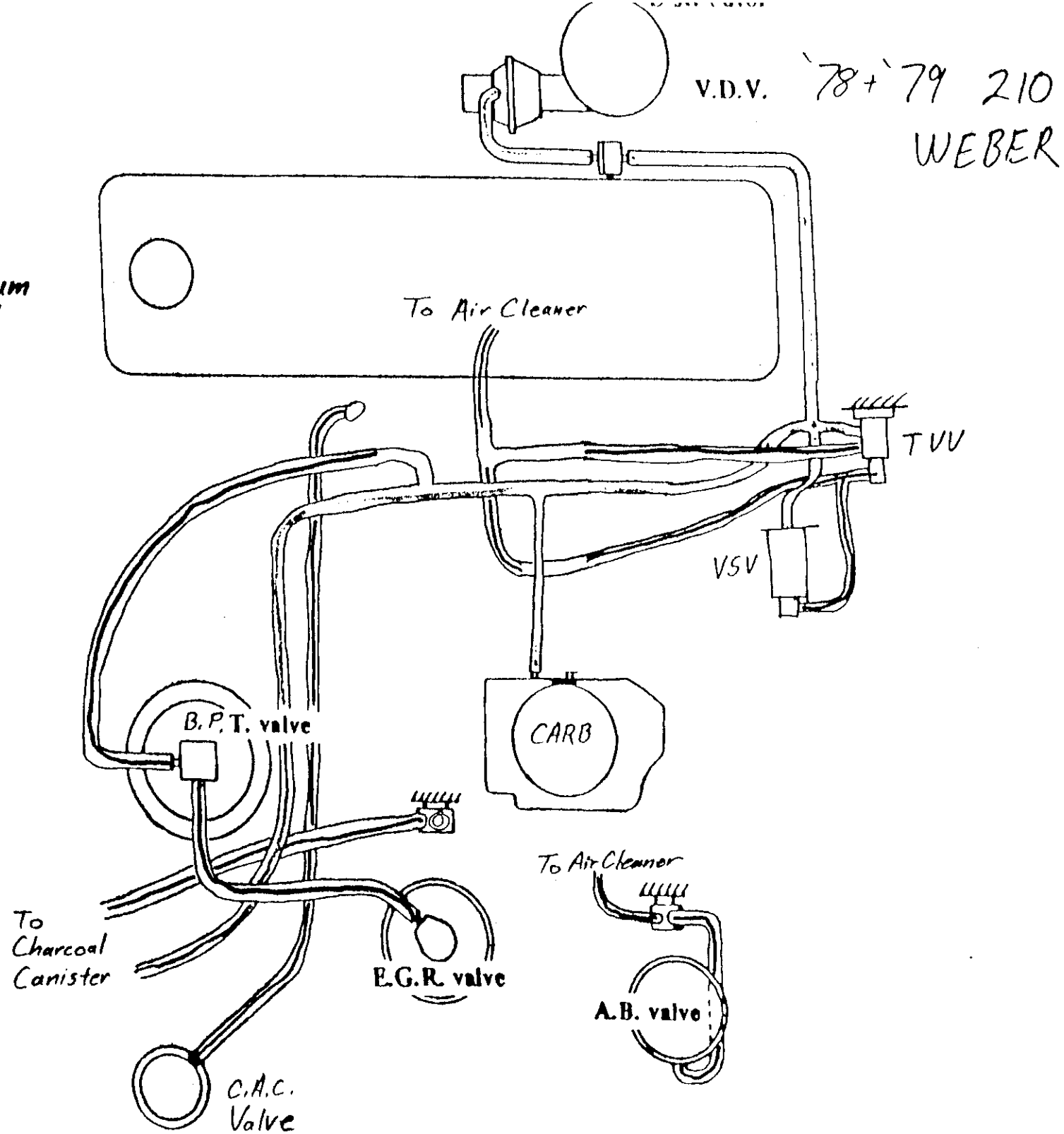
Vac. Adv

Canister Purge

Manifold Vacuum

Signal Bleed

Vac. Cap# o



EGR

Vac. Adv.

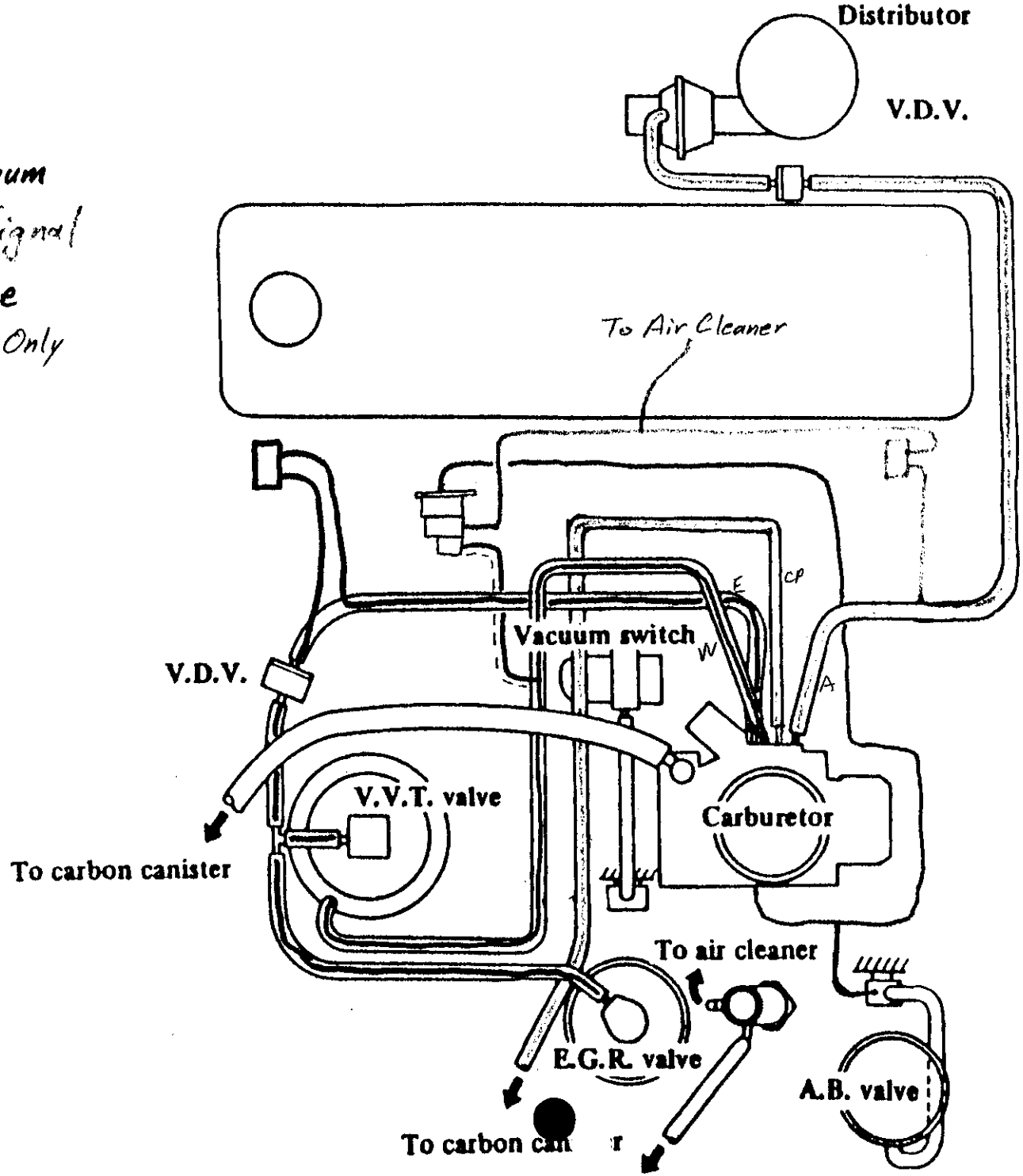
Venturi Vacuum

Canister Signal

Power Valve

--- M/T Only

'80 210
STOCK



EGR

Vac. Adv.

Venturi Vac.

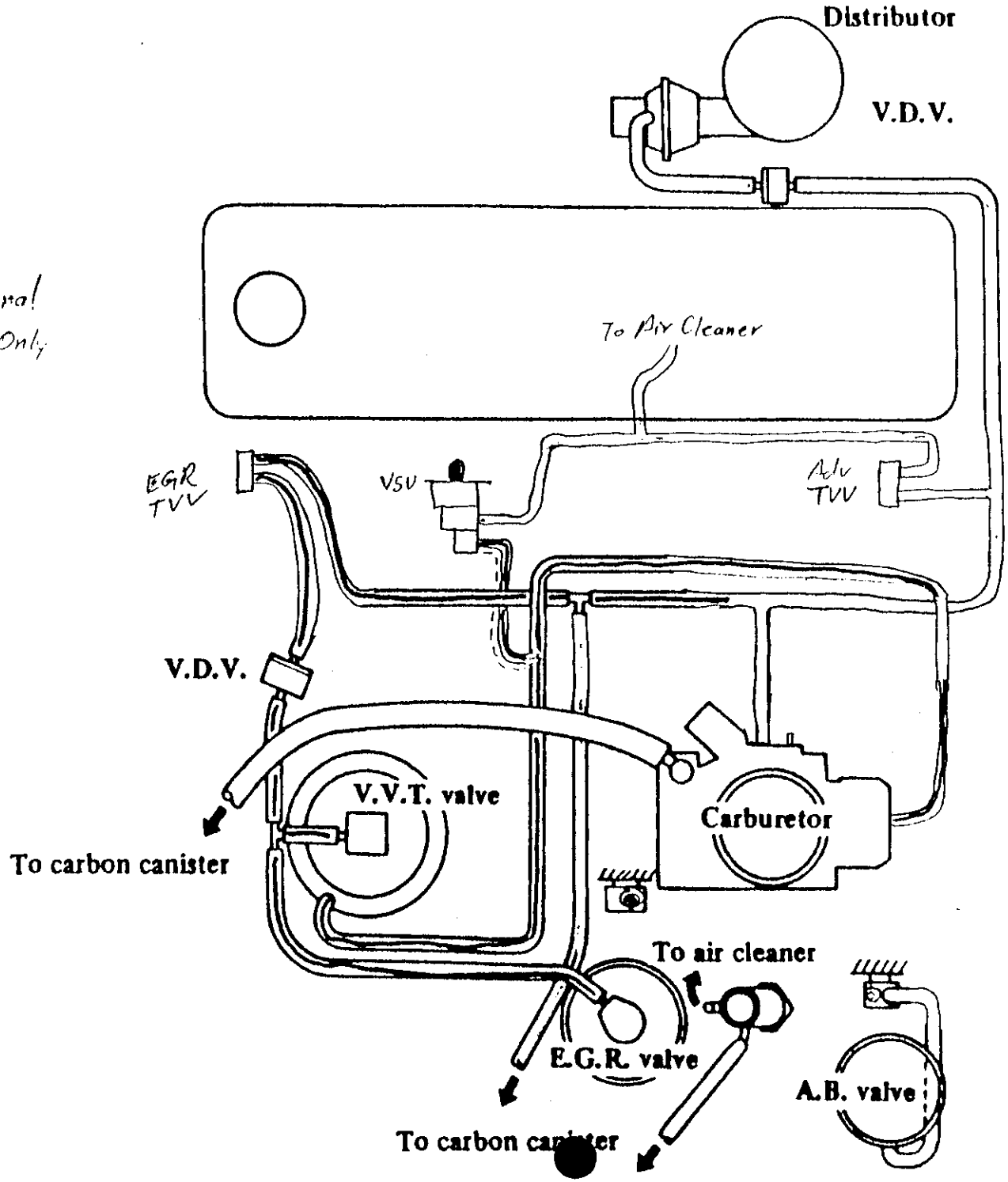
Vacuum Caps

Canister Signal

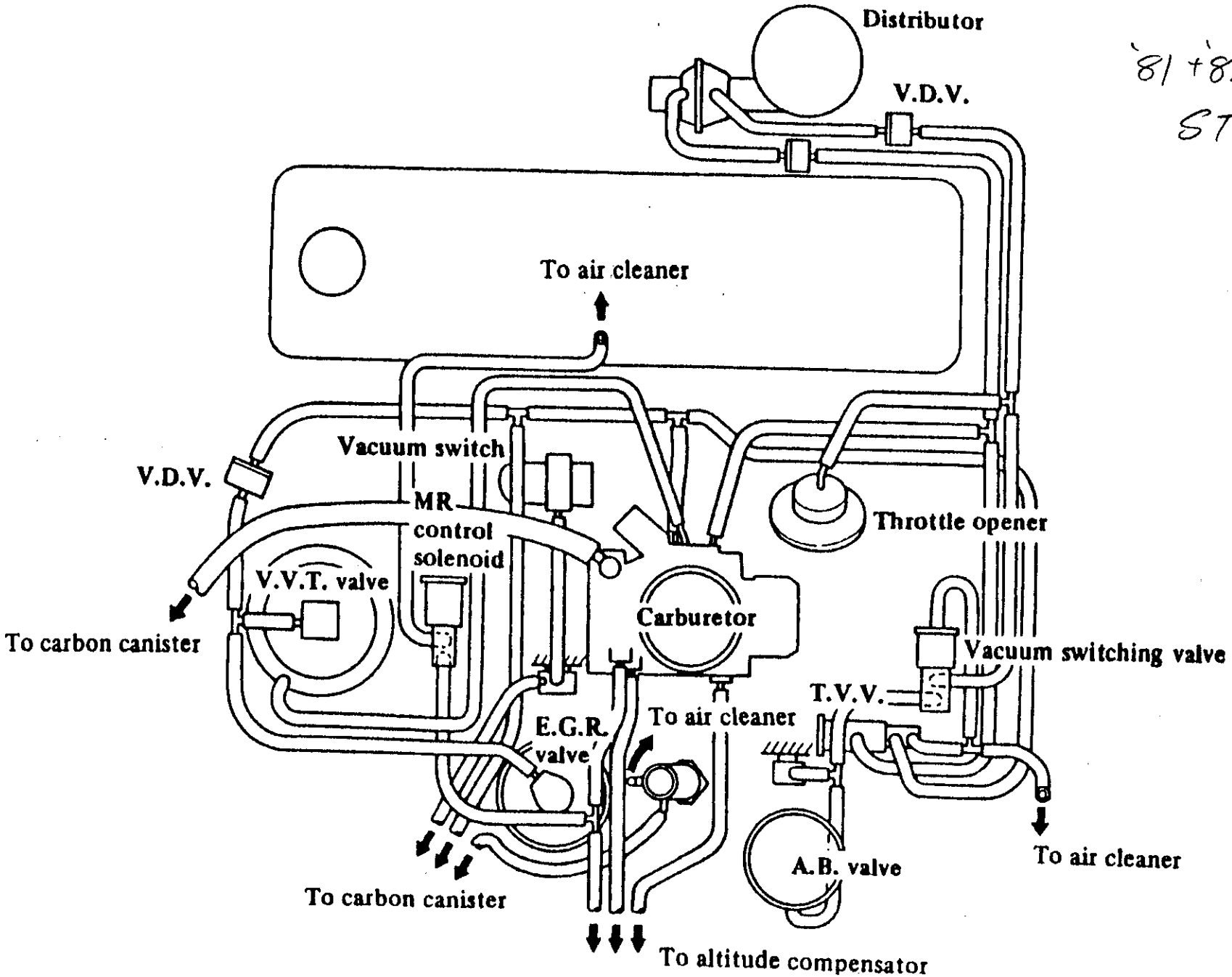
---- M/T Only

'80 210

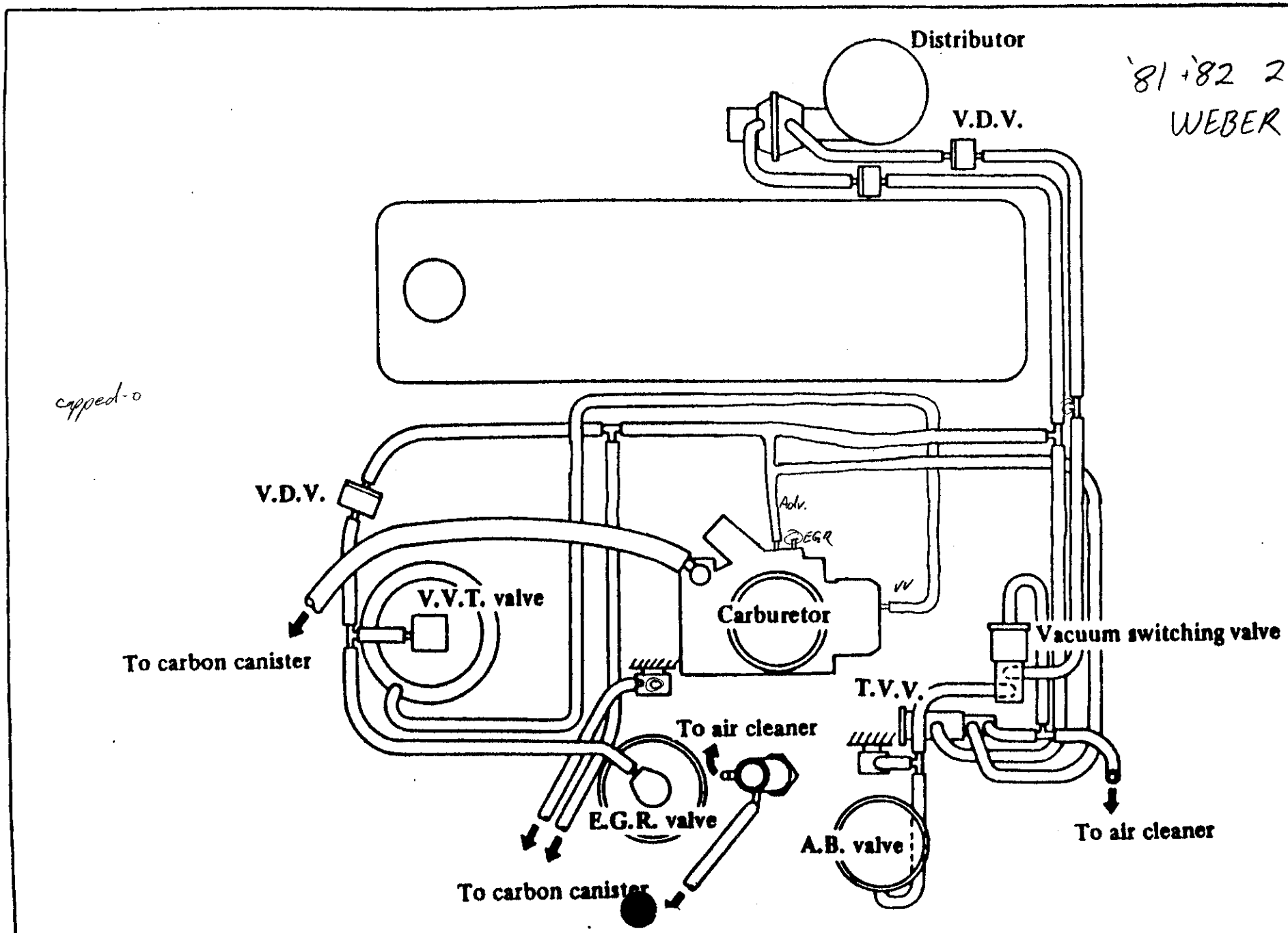
Weber



'81 + '82 210
STOCK



SEC49


Distributor
V.D.V.
'81 + '82 210
WEBER
capped-o
V.D.V.
Adv.
EGR
V.V.T. valve
Carburetor
To carbon canister
Vacuum switching valve
T.V.V.
To air cleaner
E.G.R. valve
A.B. valve
To air cleaner
To carbon canister

Toyota 2TC K8661 and K8740

DISASSEMBLY

1. Remove the vehicle's gas cap.
2. Disconnect the battery.
3. Remove the air filter assembly and attached components. Use the under-hood emissions diagram or the factory service manual to identify hoses for correct reassembly.
4. Remove all vacuum hoses attached to the carburetor. Use the under-hood emissions diagram or the factory service manual for reference when identifying and tagging hoses.
5. Disconnect the fuel line from the stock carburetor. Plug the end of the fuel line to prevent leakage.
6. **'71-'74 VEHICLES ONLY:** Disconnect the choke heat riser tube from the stock carburetor. Use the plug provided in the kit to plug-off the tube. (It will not be used with the Weber carburetor.)
7. Disconnect any electrical wires from the carburetor. Identify and tag each wire for correct reassembly.
8. Disconnect the stock throttle linkage. **NOTE:** Vehicles with automatic transmissions must also remove the pin that activates the transmission kickdown cable. Retain the pin for use later.
9. Remove the carburetor mounting nuts and carefully lift the carburetor and attached components off the intake manifold. Remove the gaskets and heat spacer. Insert a clean rag in the intake manifold parts.
10. Remove the stock carburetor mounting studs from the intake manifold. **NOTE:** For correct stud removal or installation, use a stud removal/installation tool; or the "double-nut" method. **DOUBLE-NUT METHOD:**
    Install two nuts approximently 1/4 way down the stud. Lock the nuts together. Using the correct size wrench turn the lower nut for removal and the upper nut for installation.
11. Clean the carburetor mounting surface of the intake manifold.

INSTALLATION

12. **'71-'74 VEHICLES:** Install the new carburetor mounting studs, supplied in the kit, into the intake manifold. **(USE THE THREAD LOCKING COMPOUND SUPPLIED IN THE KIT TO INSTALL THE STUDS.)** Remove the rags from the intake ports and install the flange gaskets and heat spacer as shown in **FIG. A.**

FIG. A

13. **'75-'79 VEHICLES:** Install the two long studs (50 mm), provided in the kit, into the intake manifold locations on the "valve cover" side of the manifold. Install two of the 40 mm studs into the remaining intake manifold locations. Install the remaining two studs into the threaded holes of the adapter (SUPPLIED IN THE KIT.) **(FIG. B) USE THE THREAD LOCKING COMPOUND SUPPLIED IN THE KIT TO INSTALL THE STUDS.**

FIG. B

14. **'75-'79 VEHICLES:** Remove the rags from the intake manifold ports and install the two flange gaskets (SUPPLIED IN KIT) on the intake manifold. Install the carburetor adapter and remaining flange gasket as shown in **FIG. B.**
15. Install the Weber carburetor with the choke assembly facing the **FRONT** of the vehicle.
16. **'71-'74 VEHICLES:** Install the lockwashers and carburetor mounting nuts and hand tighten in place. Tighten down the mounting nuts in a diagonal pattern, using a suitable wrench.

    '75-'79 VEHICLES: Install the lockwashers and carburetor mounting nuts and hand tighten in place. Tighten down the mounting nuts as shown in **FIG. C,** using a suitable wrench.
    CAUTION: DO NOT OVER-TIGHTEN CARBURETOR MOUNTING NUTS. MAX. TORQUE SHOULD NOT EXCEED 7 FT. LBS.

FIG. C

17. Reconnect the throttle linkage to the Weber carburetor. Install the automatic transmission kickdown pin (if equipped), and reconnect the kickdown cable to the Weber carburetor. **CHECK THROTTLE OPERATION FOR FREE MOVEMENT. IF THERE IS ANY INDICATION OF STICKING OR BINDING, CORRECT AS NECESSARY BEFORE PROCEEDING.**

18. Install the wire and heat shrink tubing, supplied in the kit, on the choke and idle cutoff solenoid terminals. Connect the remaining end of wire to the "hot" terminal of the original idle cut-off solenoid connector. Once the wires are all connected, slide the heat shrink tubing over the terminals. Using a **NON-FLAMABLE** heat source, ~~heat source~~ heat the tubing until a good seal has been made.

19. Install the new fuel hose (SUPPLIED IN KIT) from the stock fuel filter to the fuel inlet fitting of the Weber carburetor. Use the clamps provided to secure the hose in place. **NOTE:** A new fuel filter is recommended to be installed at this time. If your car is not equipped with a filter, one should be installed between the fuel pump and carburetor. **(CAUTION: FUEL FILTER SHOULD BE LOCATED IN A PLACE WHERE LINKAGE AND HEAT WILL NOT AFFECT IT.)**

20. **VEHICLES WITH FUEL RETURN LINE ONLY:** Remove the threaded plug located directly under the fuel inlet fitting of the Weber carburetor. **(FIG. D)** Install the barbed fitting, supplied in the kit, where the plug was located. Connect the stock fuel return line to the barbed fitting, using the hose and clamps provided in the kit. (FUEL RETURN LINE CAN BE FOUND ON THE RIGHT SIDE OF THE VEHICLE.)

FIG. D

21. **'78-'79 VEHICLES WITH CHARCOAL CANISTER VENT HOSES ONLY:** Remove the plug from the 90 degree elbow fitting on the front of the carburetor. Install the 3/8" barbed fitting into the elbow and tighten in place. **(FIG. D)** Connect the stock hose to the fitting and secure in place using a clamp from the kit.

'78-'79 VEHICLES WITH CHARCOAL CANISTER VENT HOSES ONLY: Remove the plug from the 90 degree elbow fitting on the front od the carburetor. Install the 3/8 barbed fitting into the elbow and tighten in place. **(FIG. D)**

22. Refer to the following vacuum diagrams for hose routing information pertaining to your specific vehicle.

FIG. E = '71-'72 VEHICLES
FIG. F = '73 VEHICLES
FIG. G = '74 VEHICLES
FIG. H = '75-'76 VEHICLES
FIG. I = '77 VEHICLES
FIG. J = '78 VEHICLES
FIG. K = '79 VEHICLES

23. Install the air filter adapter gasket on the Weber carburetor. Using the allen bolts provided, install the air filter adapter and secure it in place.

24. Remove the air filter mounting stud from the original carburetor and install it in the adapter.

25. **'71-'74 VEHICLES;** Install the stock air filter assembly using **TWO** nylon spacers, from the kit, under both of the valve cover mounts. Secure in place using bolts from the kit.

26. **'75-'79 VEHICLES:** Install the stock air filter assembly using **ONE** nylon spacer under the **FRONT** valve cover mount. Secure in place using the bolts from the kit.

27. Reconnect the air filter hoses disconnected in step #3.

28. Reconnect the battery and reinstall the gas cap.

29. Start the engine and check for fuel and vacuum leaks. Correct as nessary <u>BEFORE</u> proceeding.

30. Adjust the idle speed, fast idle speed and idle mixture to factory specifications. **NOTE:** IDLE SPEED AND IDLE MIXTURE INSTRUCTIONS ARE ATTACHED TO THE CARBURETOR. FAST IDLE ADJUSTMENT IS LOCATED AT THE END OF THESE INSTRUCTIONS.

31. Install the Weber vacuum diagram notification label next to the stock vacuum diagra, label found under the hood.

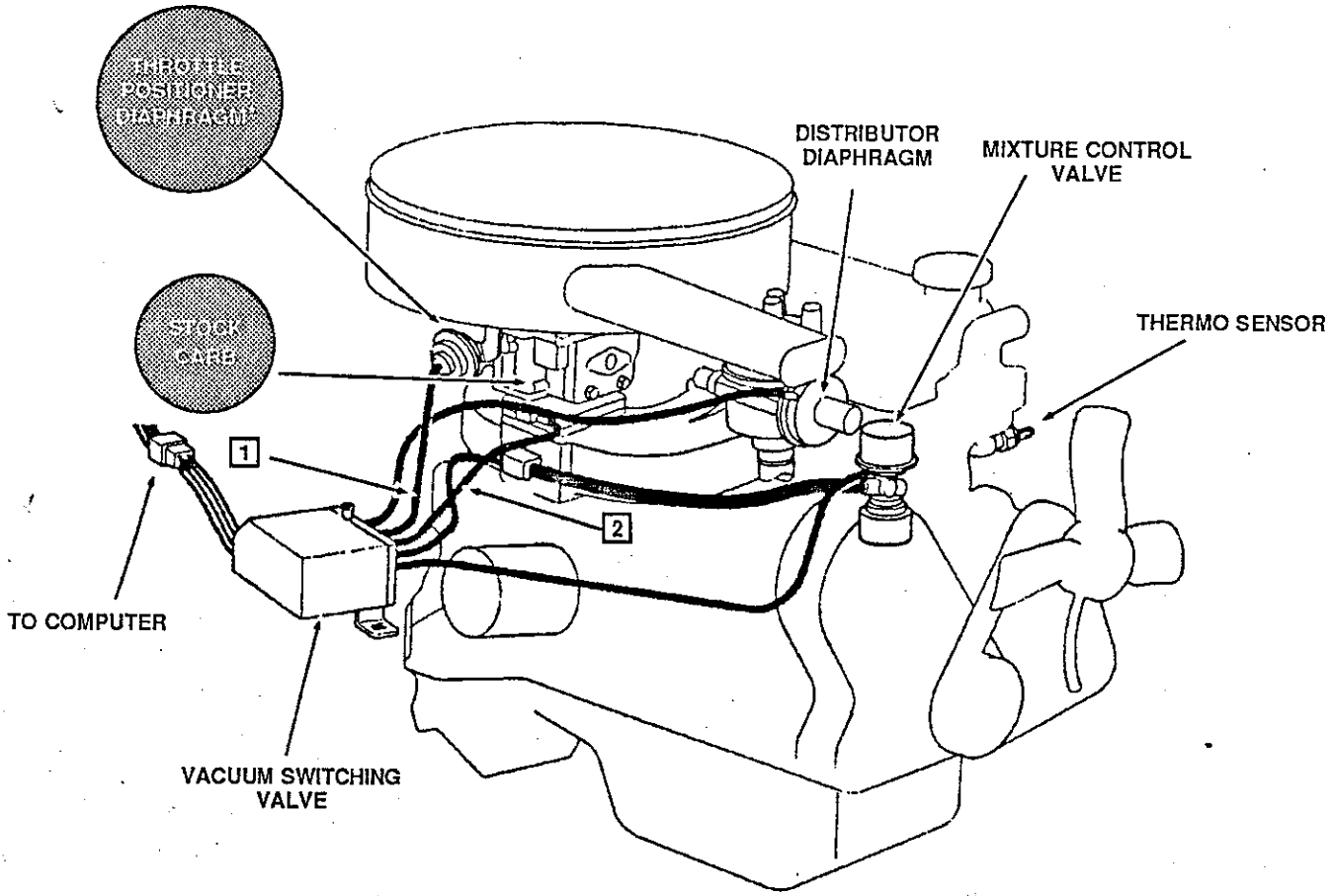
32. **CHECK FOR ADEQUATE HOOD CLEARANCE <u>BEFORE</u> CLOSING THE HOOD.**

FAST IDLE

TOLL FREE #

'71 - '72 TOYOTA
2TC ENG. (50 STATES)

FIG. E
K8661,52-51503



* DEVICE MAY BE REMOVED WITH CARBURETOR

ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED.
NUMBERED ☐'S ON THE ILLUSTRATION CORRESPOND TO THE APPROPRIATE STEPS LISTED BELOW.

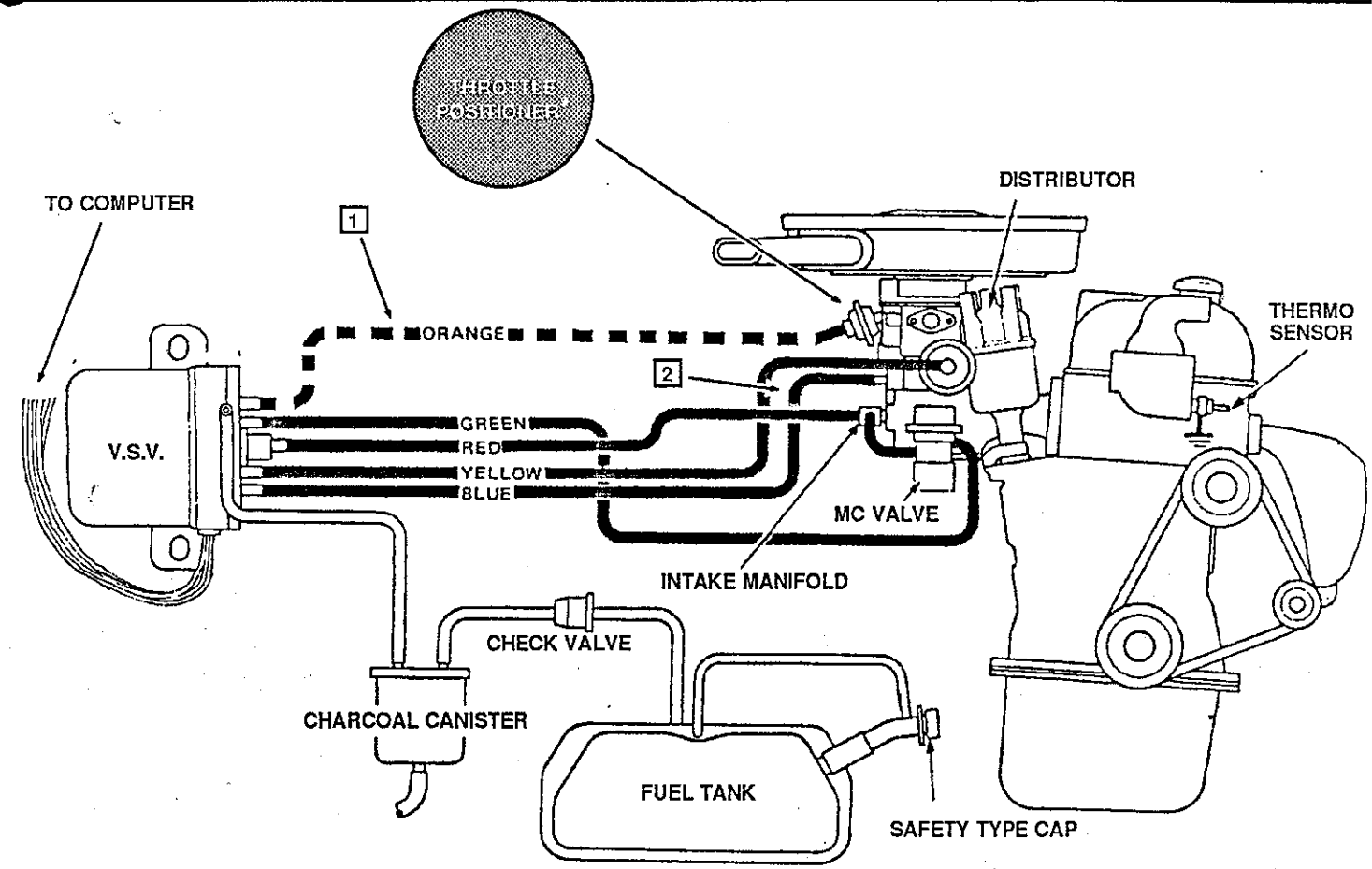
1 Remove the hose originally connected to the throttle positioner diaphragm. Plug off the vacuum switching valve port using the rubber cap plug from the kit.

2 Connect the hose originally attached to the base of the stock carburetor to the Weber vacuum advance port. (See Fig. D for port location)

AFTER COMPLETEING THESE STEPS, RETURN TO STEP #22 OF THE KIT INSTRUCTIONS

'73 TOYOTA
2TC ENG. (CAL)

FIG. F
K8661,52-51503



* DEVICE MAY BE REMOVED WITH CARBURETOR

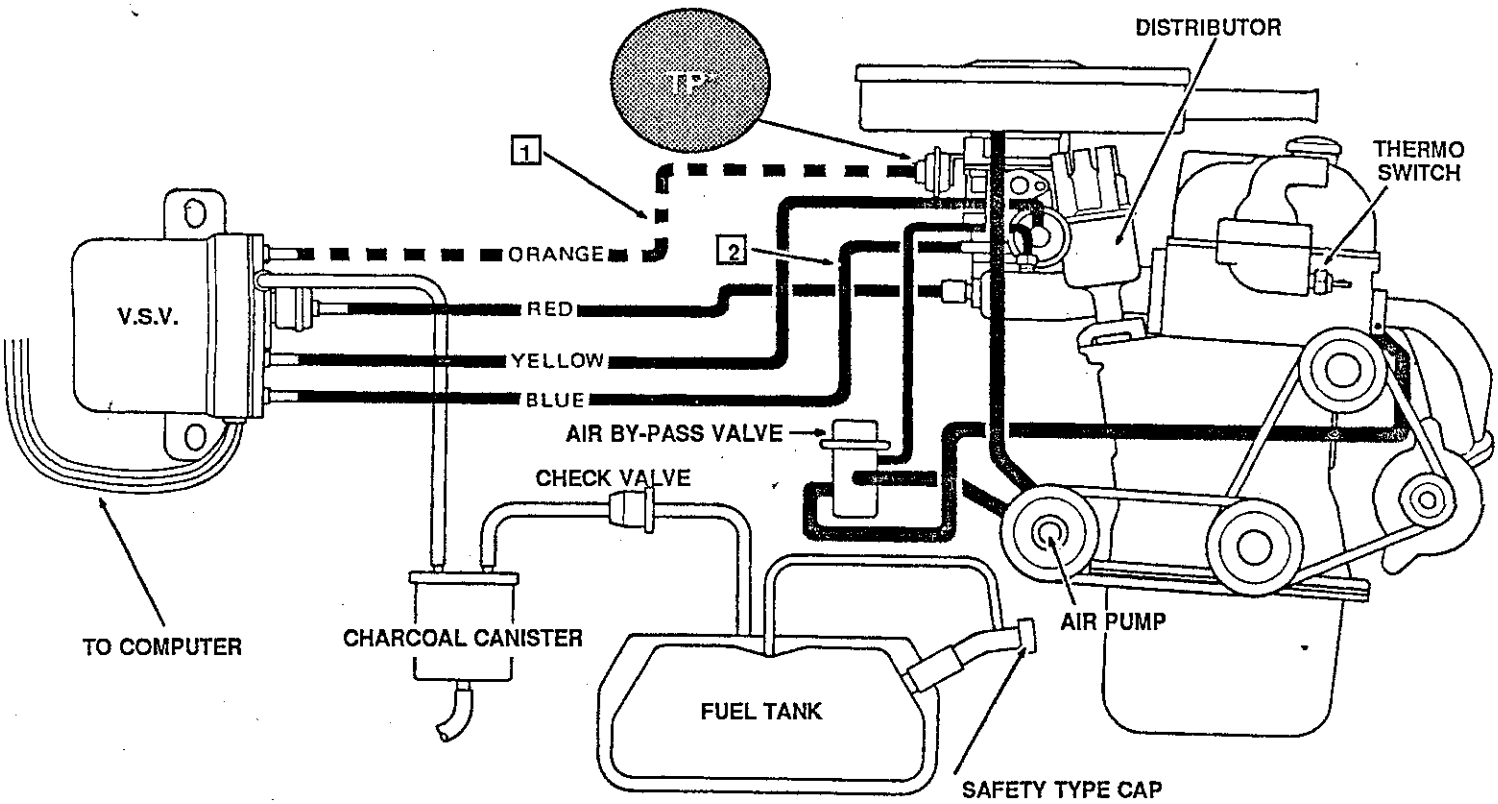
ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED.
NUMBERED ☐ 'S ON THE ILLUSTRATION CORRESPOND TO THE APPROPRIATE STEPS LISTED BELOW.

1 Remove the hose originally connected to the throttle positioner diaphragm. Plug off the vacuum switching valve port using the rubber cap plug from the kit.

2 Connect the blue hose from the vacuum switching valve to the Weber vacuum advance port. **(See FIG. D for port location)**

AFTER COMPLETEING THESE STEPS, RETURN TO STEP #22 OF THE KIT INSTRUCTIONS

'74 TOYOTA 2TC ENG. (CAL)	FIG. G K8661,52-51503



* DEVICE MAY BE REMOVED WITH CARBURETOR

ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED.
NUMBERED ☐ 'S ON THE ILLUSTRATION CORRESPOND TO THE APPROPRIATE STEPS LISTED BELOW.

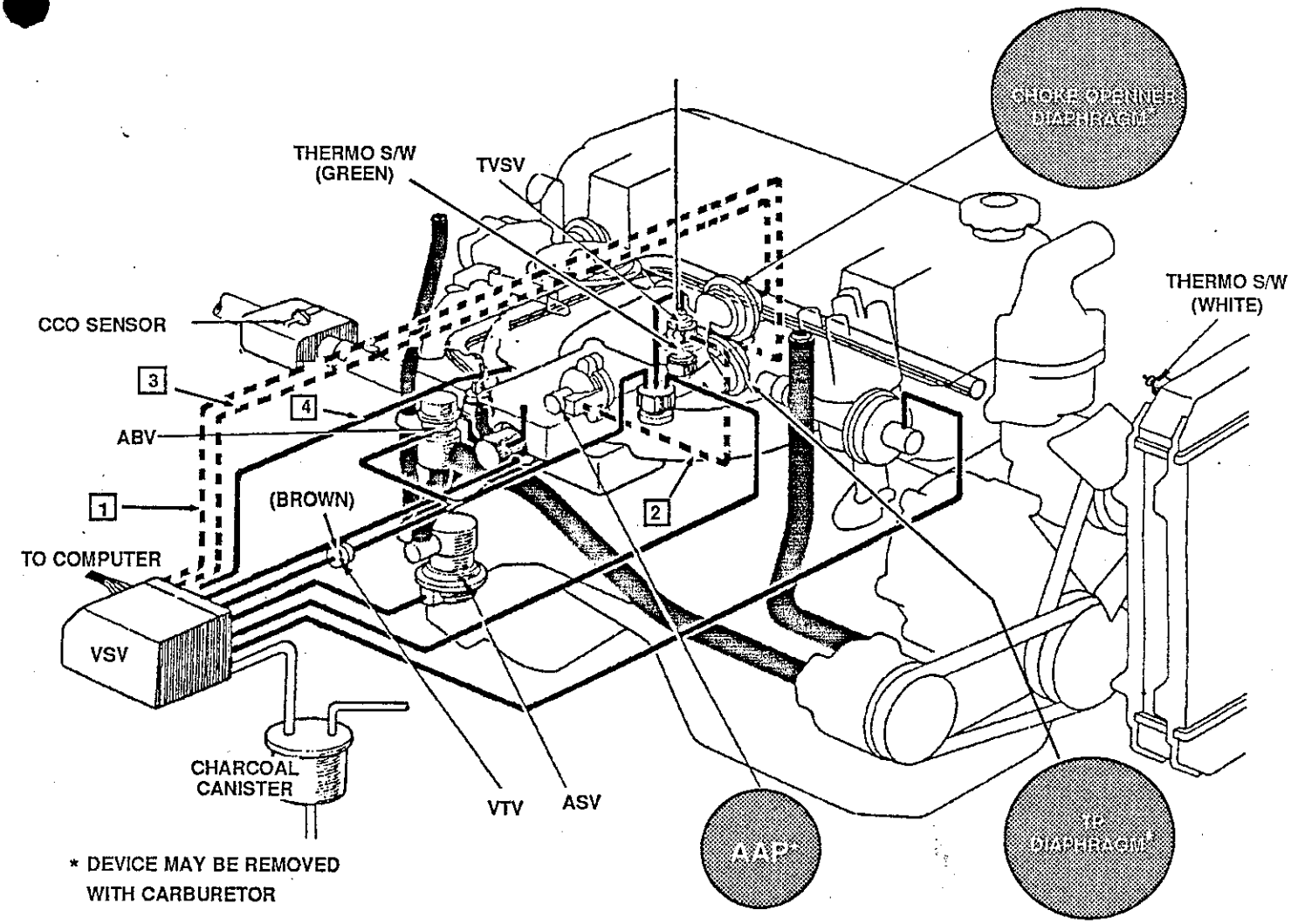
1 Remove the hose originally connected to the throttle positioner diaphragm. Plug off the vacuum switching valve port using the rubber cap plug from the kit.

2 Connect the blue hose from the VSV to the Weber vacuum advance port. **(See FIG. D for port location)**

AFTER COMPLETEING THESE STEPS, RETURN TO STEP #22 OF THE KIT INSTRUCTIONS

'75 - '76 TOYOTA 2TC ENG. (CAL)

FIG. H
K8740,52-51504



ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED.
NUMBERED ☐'S ON THE ILLUSTRATION CORRESPOND TO THE APPROPRIATE STEPS LISTED BELOW.

1. Remove the hose originally connected to the throttle positioner diaphragm. Plug off the vacuum switching valve port using the rubber cap plug from the kit.

2. Remove the hose originally connected to the AAP from the TVSV. Plug off the TVSV port using a rubber plug from the kit.

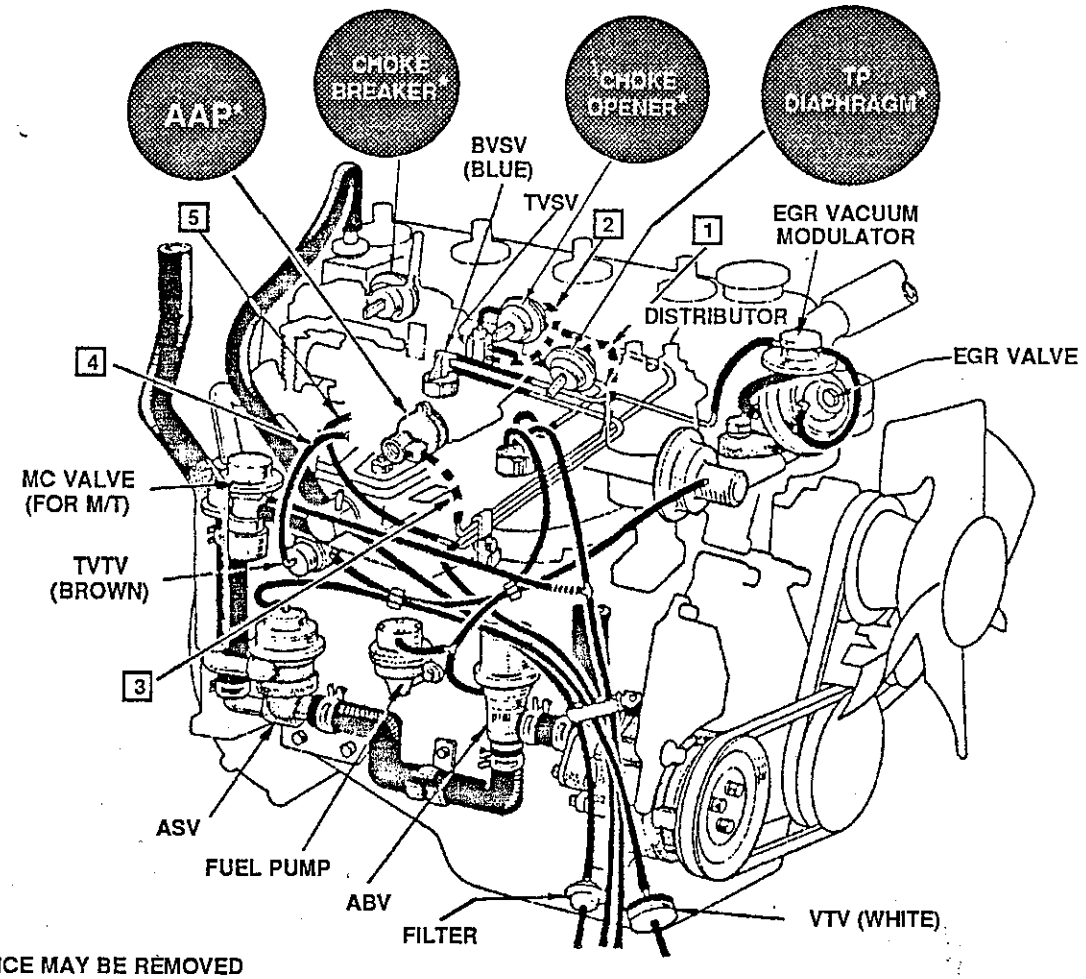
3. Remove the hose originally connected to the choke opener diaphragm from the VSV. Plug off the VSV port using a rubber plug from the kit.

4. Connect the hose originally attached to the "advancer port" on the stock carburetor to the Weber "vacuum advance port". **(See Fig. D for port location)**

AFTER COMPLETEING THESE STEPS, RETURN TO STEP #22 OF THE KIT INSTRUCTIONS

'77 TOYOTA
2TC ENG. (CAL)

FIG. I
K8740,52-51504



* DEVICE MAY BE REMOVED WITH CARBURETOR

ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED.
NUMBERED ☐ 'S ON THE ILLUSTRATION CORRESPOND TO THE APPROPRIATE STEPS LISTED BELOW.

1 Remove the hose originally connected to the throttle positioner diaphragm. Plug off the vacuum switching valve port using the rubber cap plug from the kit.

2 Remove the hose originally connected to the choke opener from the lower port of the TVSV. Plug off the TVSV port using a rubber cap plug from the kit.

3 Remove the hose originally connected to the AAP from the metal line. Plug off the metal line using a rubber cap from the kit.

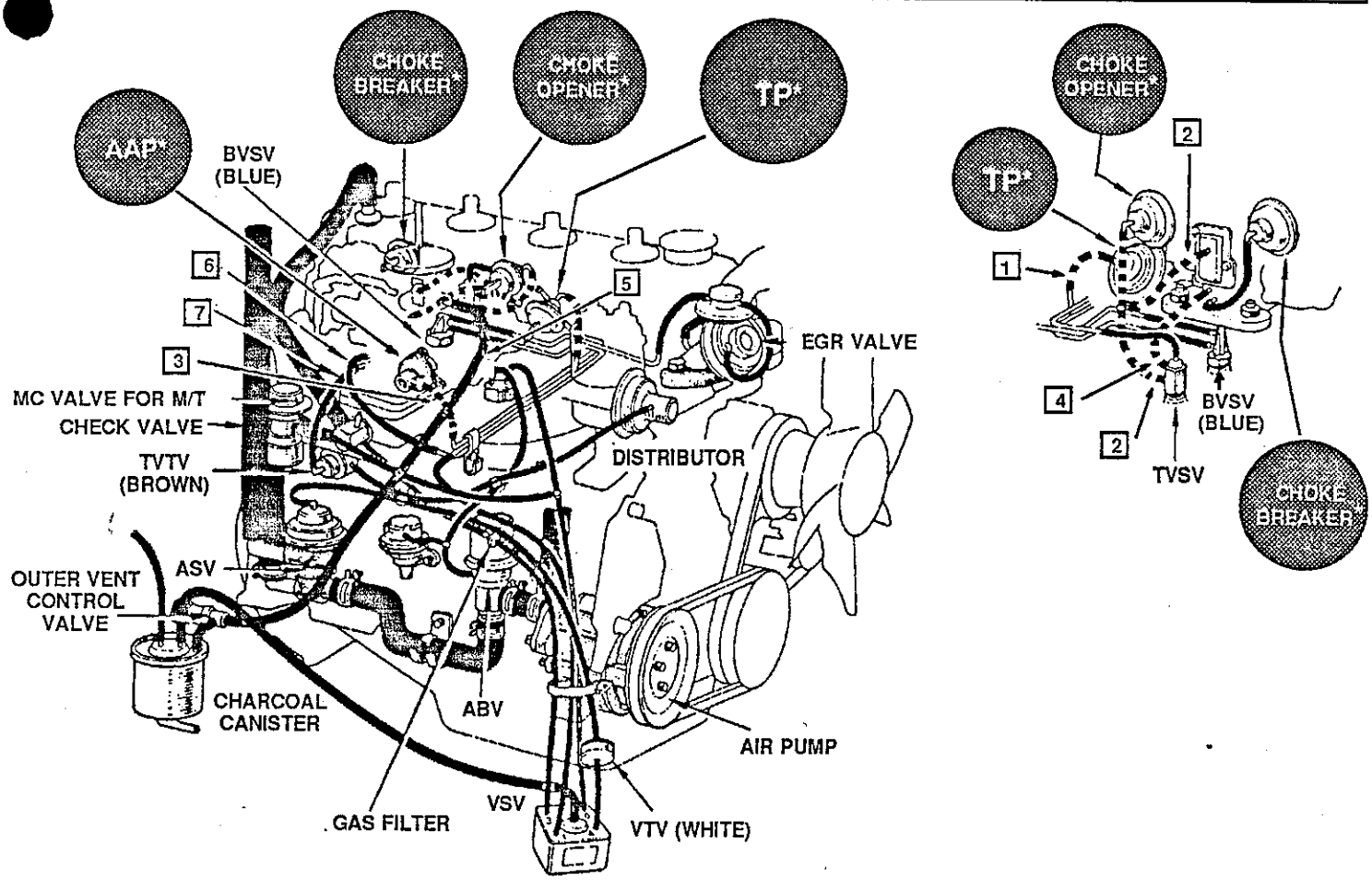
4 Connect the hose originally attached to the "advancer port" on the stock carburetor to the Weber "vacuum advance port". **(See Fig. D for port location)**

Connect the hose originally attached to the "EGR port" on the stock carburetor to the Weber "EGR port". **(See Fig. D for port location)**

AFTER COMPLETION OF THESE STEPS, RETURN TO STEP #22 OF THE KIT INSTRUCTIONS.

'78 TOYOTA
2TC ENG. (CAL)

FIG. J
K8740,52-51504



* DEVICE MAY BE REMOVED WITH CARBURETOR

ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED.
NUMBERED ☐ 'S ON THE ILLUSTRATION CORRESPOND TO THE APPROPRIATE STEPS LISTED BELOW.

1. Remove the hose originally connected to the diaphragm from the metal line. Plug off the metal line using a rubber cap plug from the kit.

2. Remove the hose originally connected to the choke opener from the carburetor and lower port of the TVSV. Plug off the TVSV port using a rubber cap from the kit.

3. Remove the hose originally connected to the AAP from the metal line. Plug off the metal line with a rubber cap plug from the kit.

4. Remove the hose originally connected to the middle port of the TVSV from the carburetor. Plug off the TVSV using a rubber cap plug from the kit.

5. Connect the charcoal canister hose to the Weber bowl vent fitting. **(See Fig. D for fitting location)**

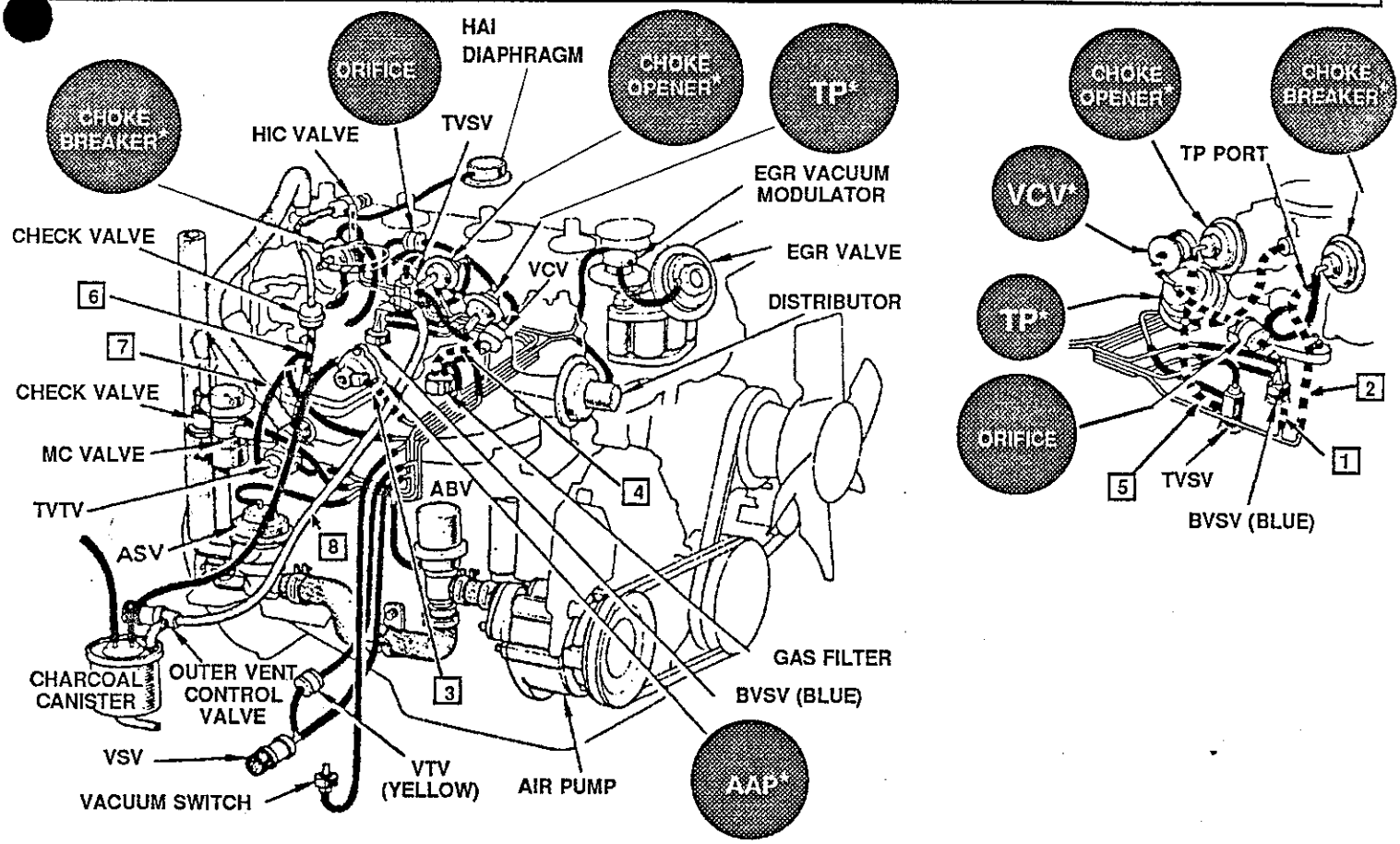
6. Connect the hose originally attached to the "EGR port" on the stock carburetor to the "EGR port" on the Weber carburetor. **(See fig. D for port location)**

7. Connect the hose originally attached to the "advance port" on the stock carburetor to the "vacuum advance port" on the Weber carburetor. **(See Fig. D for port location)**

AFTER COMPLETEING THESE STEPS, RETURN TO STEP #22 OF THE KIT INSTRUCTIONS

'79 TOYOTA
2TC ENG. (CAL)

FIG. K
K8740,52-51504



* DEVICE MAY BE REMOVED WITH CARBURETOR

ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED.
NUMBERED ☐ 'S ON THE ILLUSTRATION CORRESPOND TO THE APPROPRIATE STEPS LISTED BELOW.

1 Remove the hose and orifice (check valve) originally connected to the TP diaphragm from the metal line. Plug off the metal line using a rubber cap plug from the kit.

2 Remove the vacuum line originally connected to the TP port of the carburetor from the metal line. Plug off the metal line using a rubber cap plug from the kit.

3 Remove the hose originally connected to the AAP from the metal line. Plug off the metal line using a rubber cap plug from the kit.

4 Remove the hose originally connected to the VCV from the filter. Plug off the port on the filter using a rubber cap plug from the kit.

5 Remove the hose originally connected to the choke opener tee from the lower port of the TVSV. Plug off the TVSV port using a rubber cap plug from the kit.

Connect the hose originally attached to the "EGR port" on the stock carburetor to the EGR port on the Weber carburetor. **(See Fig. D for port location)**

7 Connect the hose originally attached to the "advancer port" on the stock carburetor to the vacuum advance port on the Weber carburetor. **(See Fig. D for port location)**

8 Connect the charcoal canister hose to the Weber bowl vent fitting. **(See Fig. D for port location)**

AFTER COMPLETEING THESE STEPS, RETURN TO STEP #22 OF THE KIT INSTRUCTIONS

INSTALLATION INSTRUCTIONS

WEBER CARBURETORS

READ & UNDERSTAND ALL STEPS OF THESE INSTRUCTIONS BEFORE BEGINNING THIS INSTALLATION. AFTER UNPACKING, EXAMINE THE CARBURETOR AND OTHER COMPONENTS FOR SHIPPING DAMAGE.

THESE INSTRUCTIONS SHOULD BE RETAINED WITH VEHICLE RECORDS AFTER INSTALLATION OF THIS KIT FOR SMOG INSPECTION PURPOSES.

TOYOTA

8 RC Engines (1970-1971)
18 RC Engines (1972-1974)

For Kit Nos. K8742 and 52-51501
Using Weber 32/34 DFT

TOOLS AND EQUIPMENT NEEDED

Combination, box or open-end wrenches (metric)
Socket Set (metric)
Screwdrivers (regular and Phillips)
Pliers — Gasket Scraper
Wiping Rags — Cleaning Solvent
Knife — Gasket Sealer
Hi-Temp. Silicone or Permatex Form-a-Gasket #2

PARTS SUPPLIED WITH INSTALLATION KIT:

1 - 32/34 DFT Weber Carb.
1 - AIR FILTER ADAPTER
1 - HARDWARE KIT

NOTE: A NEW FUEL FILTER SHOULD BE INSTALLED WITH THIS KIT

TUNE-UP SPECIFICATIONS

All tune-up specifications for the Weber Carburetor remain the same as those specified by the Factory for the original unit. Emissions tune-up should be carried out by a suitably qualified Dealer or independent garage, using infrared gas and analyzing equipment.

NOTE: Late model vehicles fitted with Emission Control Systems have many vacuum lines and electrical connections in the fuel systems. It is essential when dismantling, that disconnected lines should be identified with a corresponding number tag or label system. To establish function, locate and identify the source of each line. Use the under hood emissions diagram or the factory service manual for reference when identifying hoses.

K8742 Instructions

1. Remove the vehicle's gas cap.

2. Disconnect the battery.

3. Remove the air filter assembly and attached components. Use the under hood emissions diagram or a factory service manual for proper identification of hoses.

4. Disconnect all vacuum hoses attached to the carburetor. Use the under hood emissions diagram or a factory service manual for proper identification of hoses.

5. Disconnect the fuel line from the stock carburetor. Plug the end of the fuel line to prevent leakage.

6. Disconnect the throttle linkage and (if equipped) the automatic transmission kickdown linkage from the stock carburetor.

7. Disconnect the EGR tube by sliding the red silicone hose toward the EGR valve.

8. Remove the carburetor mounting nuts and carefully remove the carburetor,heat spacer and gaskets from the intake manifold. Insert a clean rag in the intake manifold ports.

9. Remove the four carburetor mounting studs from the intake manifold. **NOTE:** For correct stud removal or installation, use a stud removal/installation tool;or the "double-nut" method. DOUBLE-NUT METHOD: Install two nuts approximately 1/4 way down the stud. Lock the nuts together. Using the correct size wrench,turn the lower nut for removal and the upper nut for installation.

INSTALLATION

10. After the four studs are removed,thoroughly clean the carburetor mounting surface.

11. Remove the two choke heater pipes from the intake manifold and plug the holes with the two 8mm bolts supplied in the kit.(FIG.A)

12. Use the correct size open end wrench to turn the PCV fitting on the intake manifold to the 10 o'clock position. (FIG. A)

13. Cut the EGR tube 3 1/2" from the fitting. (FIG. B)

14. Remove the throttle linkage rod from the brackets on the valve cover. Drill out the 7mm throttle ball from the linkage end. Using the bolt and nyloc nut, supplied in the kit, install the throttle linkage rod end. Reinstall the linkage rod in the stock brackets on the valve cover.

15. Cut the stock fuel line 2" from the fitting. (FIG. C)

16. Install the new carburetor mounting studs from the kit into the intake manifold locations using the locking compound supplied. After the studs are installed, remove the rags from the intake manifold ports. **Note:** Refer to step #9 for proper stud installation.

17. Install the smaller of the two gaskets from the kit on the intake manifold flange. (FIG. D)

18. Install the heat spacer and remaining gasket as shown in FIG. D. **NOTE:** The heat spacer has tapered holes which must match the intake manifold on the bottom and the carburetor on the top.

19. Remove the EGR adapter tube from the kit. Scribe a line around the tube 1/2" up from the end that inserts into the carburetor heat spacer.(the end with the shorter straight section.)

20. Apply sealant around the tube from the end to the scribed line.(1/2")

21. Insert the tube into the heat spacer until the scribed lined is flush with the side of the heat spacer. Rotate the tube to align with the original EGR tube. (FIG E)

22. Connect the two EGR tubes together with the original red silicone hose and clamps.

23. Install the Weber carburetor with the choke assembly facing towards the firewall.

24. Secure the carburetor in place using the lockwashers and mounting nuts supplied in the kit. Tighten the nuts in a criss-cross pattern to prevent warpage. **CAUTION: DO NOT OVER TIGHTEN THE NUTS. MAX. TORQUE SHOULD NOT EXCEED 7 FT. LBS.**

25. Reconnect the throttle linkage to the carburetor. Adjust the linkage rod by loosening the jam nuts and rotating the rod into both rod ends at the same time. **NOTE:** One rod end is right hand threads and one is left hand threads. (FIG. F)

26. Once the throttle rod has been properly adjusted to allow for full throttle operation, lock the two jam nuts in place. **CAUTION: CHECK THROTTLE OPERATION FOR FREE MOVEMENT. IF THERE IS ANY INDICATION OF STICKING OR BINDING, CORRECT AS NECESSARY BEFORE PROCEEDING.**

27. Install the automatic transmission kickdown linkage on the ball end of the carburetor throttle lever.

28. Connect the wire loom from the kit to the choke element and idle cutoff solenoid of the Weber carburetor. Connect the remaining end of the wire loom to the original idle cutoff solenoid wire.

29. Install the fuel hose supplied in the kit to the stock fuel line and Weber carburetor fuel inlet, using the clamps provided.

30. Cut the vacuum hose connected to the EGR valve from the Emissions Control Box approximately 1/2 way between the two devices. Install the black and gold delay valve from the kit in the hose with the **GOLD** side facing towards the EGR valve.

30. Connect the EGR vacuum hose from the Emissions Control Box to the EGR port on the Weber carburetor.(FIG.G)

31. Connect the Vacuum Advance hose from the Emissions Control Box to the Vacuum Advance port on the Weber carburetor.(FIG. G)

32. Install the 3/8" hose supplied in the kit to the PCV valve and PCV fitting on the manifold. Secure the hose in place using the clamps provided.

33. Install the air filter adapter and gasket on the Weber carburetor using the allen bolts provided to secure it in place. Remove the stock air filter stud from the original carburetor and install it in the adapter.

34. Reinstall the stock air filter assembly on the Weber carburetor using the stock wing nut to secure it in place. Reconnect the air filter hoses.

35. Reconnect the battery and reinstall the gas cap.

36. Start the engine and check for fuel and vacuum leaks. Correct as necessary **BEFORE** proceeding.

37. Adjust idle speed, fast idle speed and idle mixture to factory specifications. Idle speed and mixture instructions are attached to the carburetor. (Fast idle adjustment is listed below.)

38. CHECK FOR ADEQUATE HOOD CLEARANCE BEFORE CLOSING THE HOOD.

F.I.A.

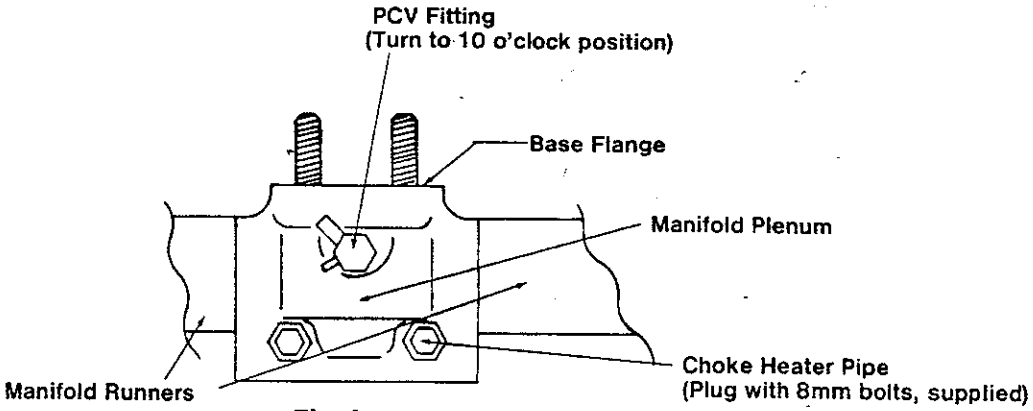


Fig. A

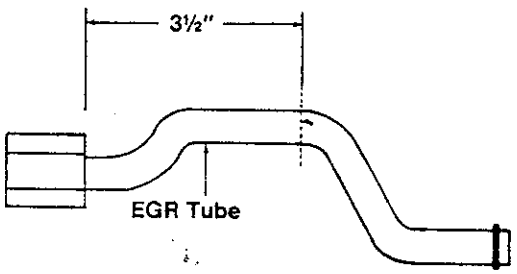


Fig. B

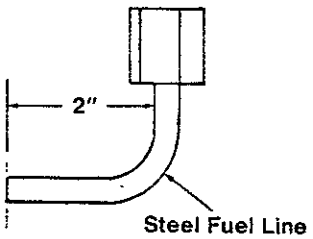


Fig. C

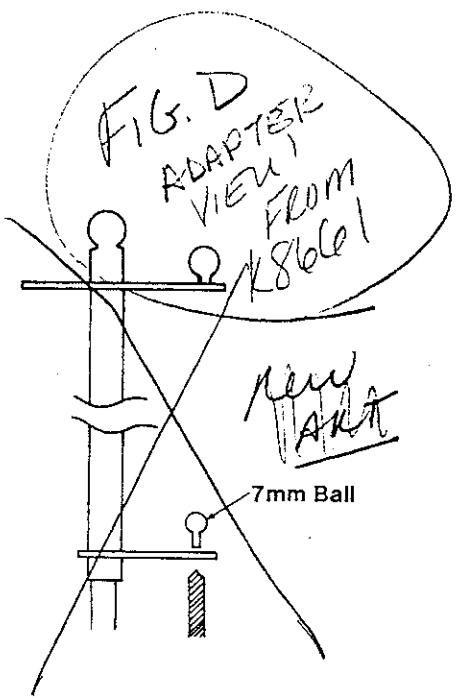


Fig. D

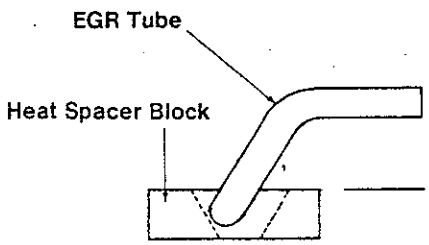


Fig. E

FIG F
ROD ADJUSTMENT

FIG. G.
universal
DFT

WEBER DISTRIBUTION

445.8742-1IN

5/13/86

THIS VEHICLE IS EQUIPPED WITH A REDLINE/WEBER CARBURETOR CONVERSION KIT. (See carburetor identification tag for kit number) PLEASE REFER TO THE APPROPRIATE VACUUM DIAGRAM SUPPLIED WITH THE KIT FOR PROPER VACUUM HOSE ROUTING. IF NEEDED, COPIES OF THE APPLICABLE VACUUM MAP ARE AVAILABLE THROUGH REDLINE, INC.

TECH LINES

California 1-800 932-3722
U.S. 1-800 932-3787