

# INSTALLATION INSTRUCTIONS



READ & UNDERSTAND ALL STEPS OF THESE INSTRUCTIONS BEFORE BEGINNING THIS INSTALLATION

## DATSUN 280Z - 280ZX 1975 TO 1982

Redline Kit No. TB280  
Using "Big Throat" Throttle Body

### TOOLS AND EQUIPMENT NEEDED

Box or Open-End Wrench Set (metric)  
Screwdrivers (regular and Phillips)  
Pliers  
Gasket Scraper  
Wiping Rags  
Cleaning Solvent  
Knife  
Ohmmeter or Self-Powered Continuity Tester  
6mm Allen Wrench

### PARTS SUPPLIED WITH INSTALLATION KIT:

1 - Throttle Body  
1 - Boot-To-Throttle Body Adaptor  
1 - Hardware Kit  
1 - Manifold-To-Throttle Body Gasket  
1 - Throttle Body Adaptor Hose

For optimum performance of a vehicle after the Redline Kit No. TB280 is installed, it is necessary for the vehicle to be in proper tune before the kit is installed.

The ignition system should be checked for proper functioning and valve adjustment should be checked according to manufacturer's specifications.

Date of vehicle manufacture is shown on the rear driver's side door jamb.

Refer to page 7 for illustration and identification of various components referred to in these instructions.

Legal in California ONLY for racing vehicles which may NEVER be used upon a highway

## PREPARATION FOR KIT INSTALLATION.

Before installing Redline Kit No. TB280, the vehicle must be prepared as follows:

1. On vehicles manufactured in 7/79 and later, drain approximately one quart of coolant from the cooling system.

**CAUTION:** Hot coolant may be present.

2. Mark the throttle body switch with a scribe line to indicate the original switch position. The scribe line will aid in reinstallation should it become necessary to put the vehicle back to stock configuration.

3. Remove the throttle body switch. Save any spacers present for installation of switch on the Weber throttle body.

4. Disconnect the throttle rod link from the throttle valve.

**NOTE:** On 7/79 and later vehicles, the large hose connecting the throttle body to the air flow meter has two fittings. One fitting is for the valve cover breather; the other for the auxiliary air valve. Both fittings will remain operative when the Weber throttle body is installed.

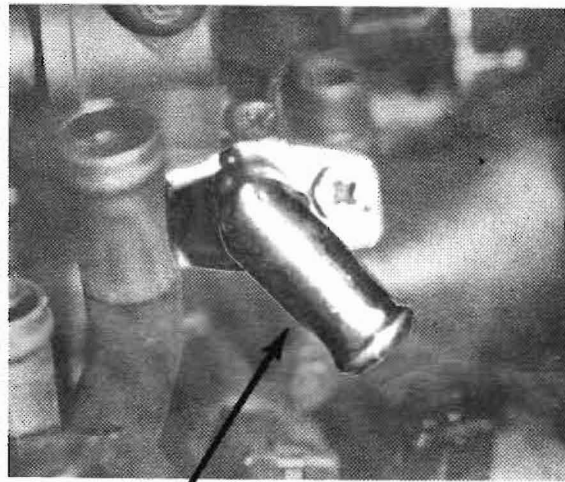
On vehicles built before 7/79, the large hose connecting the throttle body to the air flow meter has the valve cover breather hose connected to it. The auxiliary air valve hose is connected to the original throttle body. After kit installation the auxiliary air hose will be used by installing the 5/8" plastic Tee supplied, and picking up its air source from the breather hose.

5. Disconnect the valve cover breather hose and, if applicable, the auxiliary air valve hose from the large hose that connects the throttle body and air flow meter.

6. Remove the large hose connecting the throttle body to the air flow meter. On 7/79 and later vehicles, remove the water hose from the throttle body.

7. Identify and remove the spark advance, EGR, and charcoal canister purge lines.

8. Disconnect the small steel auxiliary air valve elbow from the original throttle body. See figure 1.



AUXILIARY AIR VALVE ELBOW

Figure 1

**NOTE:** On 7/79 and later vehicles the aluminum BCDD fitting (Fig. 2) is used. If the vehicle is earlier than 7/79 the BCDD fitting is not used and must be plugged with the Allen plug supplied in the kit.

9. Install the auxiliary air valve elbow on the Weber throttle body (Fig. 2).

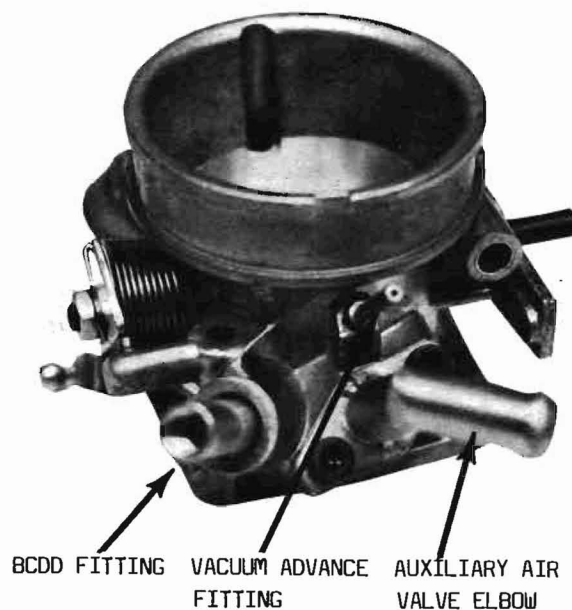


Figure 2

10. Remove the original throttle body.
11. Remove the four original throttle body mounting studs from the intake manifold.
12. Clean the intake manifold surface.

**KIT INSTALLATION.** Proceed with kit installation as follows:

13. One long and three short 8mm studs are supplied in the kit. Install the long stud in the threaded hole on the bottom of the manifold nearest the engine. See figure 3.

14. Install the other three studs in the remaining threaded holes.

15. Install the new gasket supplied in the kit, over the four studs.

16. On 7/79 and later vehicles, use the length of 13mm hose supplied in the kit to bypass the water outlet on the original throttle body. After the bypass hose is installed, fill the cooling system with coolant to replace that which was removed in step 1.

17. Install the Weber throttle body with the bypass screw facing toward the hood of the vehicle.

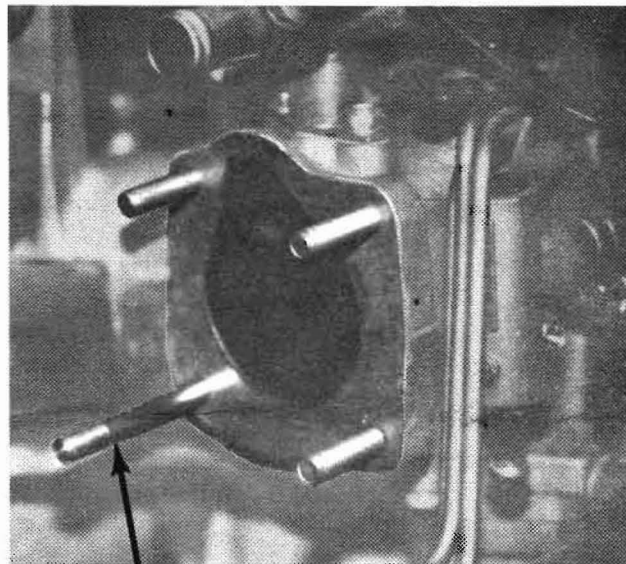
18. Connect the throttle link and check for free operation.

19. Install throttle body switch on the Weber throttle body. It may be necessary to cut back some of the switch harness insulation to install the switch.

**CAUTION:** To prevent damage to the throttle body switch during installation, replace any spacers that were removed with the switch in step 3.

*stopped*  
NOTE: Tighten throttle body switch mounting screws enough to hold switch in place but still allow it to move for adjustment.

20. Connect the vacuum advance hose to the brass fitting in the bottom of the Weber throttle body. The charcoal canister purge line must be teed into the vacuum advance line.



LONG 8mm STUD

Figure 3

21. Remove the line previously connected to the EGR and cap with the rubber cap supplied in the kit.

22. If the vehicle is 7/79 or later, the Boost Controlled-Deceleration-Device (BCDD) is connected to the 1/2" aluminum fitting on the throttle body.

23. The auxiliary air valve hose that was connected to the upstream side of the throttle body is now connected to the tee supplied in the kit.

The downstream side of the auxiliary air valve hose is connected to the elbow that was attached to the throttle body in step 8.

24. Reinstall the original air boot, using the boot-to-throttle body adaptor supplied. All hose connections that were used in stock configuration are retained.

### THROTTLE SWITCH ADJUSTMENT.

Improper throttle switch adjustment causes or aggravates rough idle, poor idle-to-cruise transition, stumble or sluggish acceleration, poor fuel economy, surging, bucking on deceleration, and foul odors from vehicles equipped with catalytic converters.

Since throttle switch operation affects nearly all areas of engine performance, switch adjustment should be performed very carefully. In addition to the basic (Idle Throttle Switch) test and adjustment of the throttle body switch, the operation of the full throttle contacts should be checked.

25. Idle Throttle Switch Test (Figure 4). Before starting the engine, perform the following Idle Switch Test.

**CAUTION:** To avoid possible damage to the ohmmeter or continuity tester, disconnect the vehicle battery before proceeding with this test.

26. Disconnect the harness connector from the control unit (located in left side kick panel). Connect an ohmmeter or continuity tester to pins of the harness connector as described below:

27. For 12/74 to 6/78 vehicles - pins 2 and 18. Ohmmeter should indicate:

Throttle Released - Continuity  
Throttle Depressed - No Continuity

28. For 7/78 & later vehicles - pins 29 and 30. Ohmmeter should indicate:

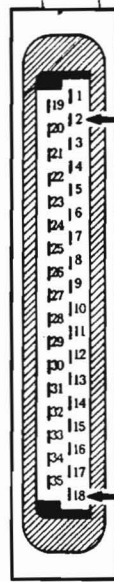
Throttle Released - Continuity  
Throttle Depressed - No Continuity

29. It may be necessary to rotate the throttle body switch to achieve the conditions described in steps 27 and 28. After switch is correctly positioned, tighten the mounting screws slightly to prevent unintentional movement.

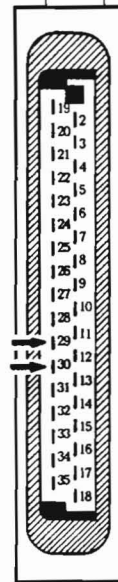
30. Ensure that engine valve adjustment (cold) is correct and that there are no air leaks. (Even the oil filler cap gasket must be sealed).

31. Reconnect the control unit harness connector (located in left kick panel).

32. Reconnect vehicle battery and start the engine. Check that the ignition system is functioning properly and that fuel pressure is correct.

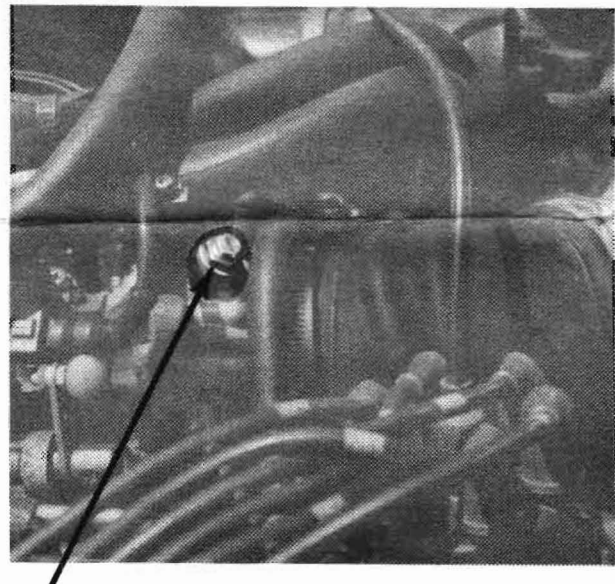


12/74 - 6/78



7/78 & LATER

Figure 4



IDLE SPEED SCREW

Figure 5

33. Allow engine to reach normal operating temperature. Use the Idle Speed Screw and set the idle speed to specification. See figure 5.

**NOTE:** The idle speed screw is secured with a lock nut that must be slightly loosened while setting the idle speed. Re-tighten the lock nut after adjusting idle speed.



34. Disconnect the throttle switch harness connector from the throttle switch body.

35. Connect an ohmmeter to the right and middle terminals (2 & 18 for 12/74 to 6/78 - 29 & 30 for 7/78 and later) of the throttle switch. See figure 6.

36. Raise engine speed to 1400 rpm for 12/74 to 6/78 vehicles; 900 rpm for 7/78 and later vehicles by manually opening the throttle.

NOTE: Do not use the idle speed screw.

37. Rotate the throttle switch clockwise until the ohmmeter indicates a closed circuit.

38. Rotate the throttle switch slowly, counterclockwise until the ohmmeter indicates an open circuit. At the exact point at which an open circuit is indicated, tighten the throttle switch mounting screws.

39. Release the throttle, reconnect the harness connector, and reset the idle speed if necessary.

40. Shut off the engine.

41. Full Throttle Contacts Check. The full throttle contacts must enrich the mixture smoothly and quickly as the throttle is applied.

If the full throttle points close too soon, the engine will constantly run rich, emissions will be high, and fuel economy will be poor.

If the points close too late or not at all, there will be a lag in acceleration and high speed power will be poor.

When the throttle switch is functioning properly, the cycle from idle points open to full throttle points closed requires about 30 degrees of throttle rotation.

42. Full Throttle Switch Test. See figure 7. With engine off, battery disconnected and harness connector disconnected from the control unit, connect an ohmmeter or continuity tester to pins of the harness connector as follows:

43. For 12/74 to 6/78 vehicles - pins 3

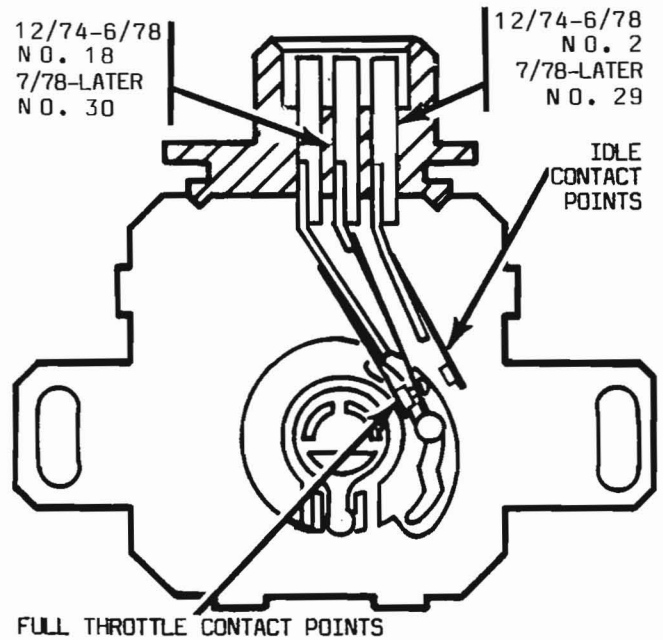
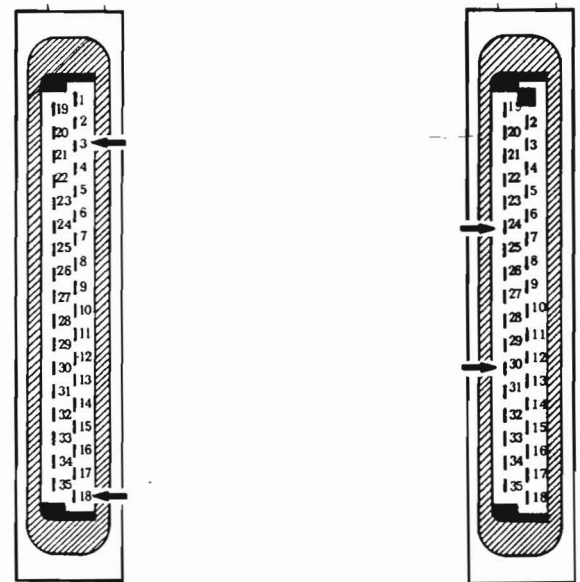


Figure 6



12/74 - 6/78

7/78 & LATER

Figure 7

and 18. Ohmmeter should indicate:

Throttle Released	-	No Continuity
Full Throttle	-	Continuity

44. For 7/78 & later vehicles - pins 24 and 30. Ohmmeter should indicate:

Throttle Released	-	No Continuity
Full Throttle	-	Continuity

**NOTE:** As an extra added precaution you may wish to perform the following optional visual inspection. If visual inspection is not to be performed at this time proceed to step 50.

45. Remove the throttle switch cover. Be extremely careful not to bend the point arms.

46. Remove the throttle switch harness connector and connect an ohmmeter or continuity tester to the left and center terminals of the throttle switch body. (Terminals 3 & 18 for 12/74-6/78 vehicles; 29 & 30 for 7/78-7/82 vehicles). See figure 8.

47. Push down on the throttle linkage until the back of the slot on the switch rotor aligns with the corner of the connector platform. See figure 9. The idle contact points should be just about to open.

Test steps continue on page 7

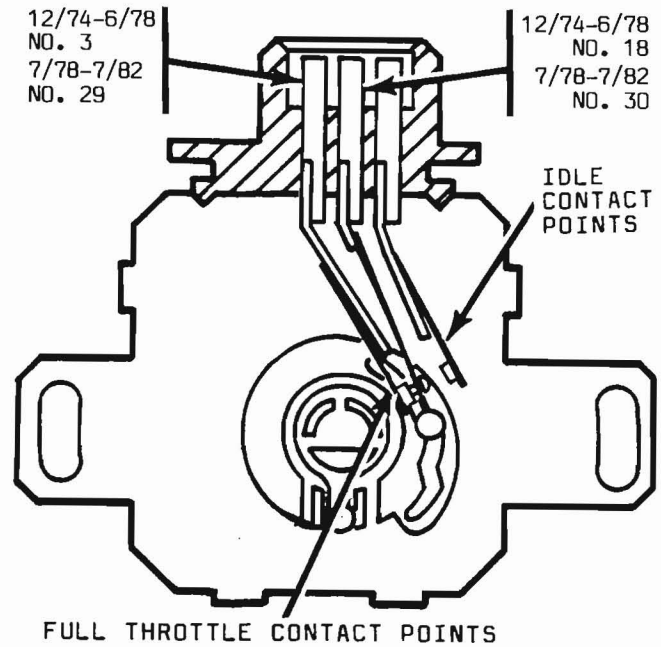


Figure 8

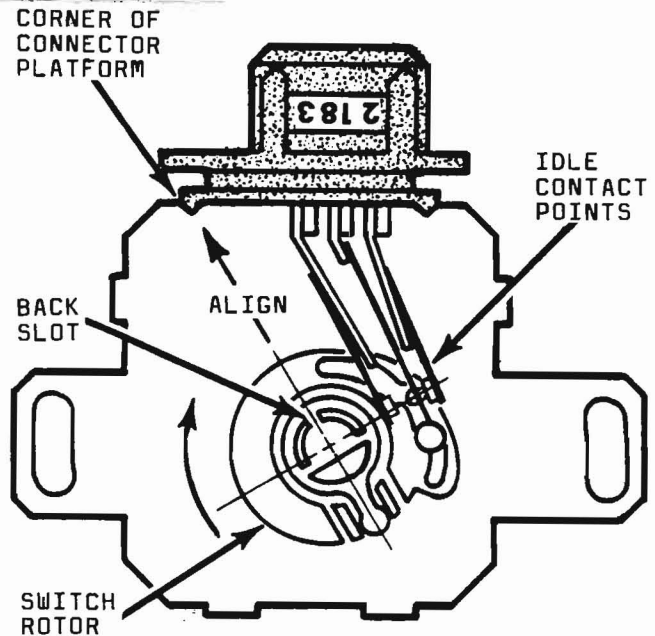


Figure 9

48. Push the throttle down farther until the rotor back slot aligns with the number "8" of the "18" on the connector body. The ohmmeter should indicate continuity (full throttle points are closed). See figure 10.

49. If the ohmmeter indicates that the full throttle points have not closed, OR that they have closed long before the rotor back slot lined up with the corner of connector raised portion, the switch assembly is defective and must be replaced.

**CAUTION:** Do not, under any circumstances, bend either of the point arms.

50. When steps 1 through 49 have been completed, secure the throttle body switch cover and harness connector, control unit harness connector, and the vehicle battery. Kit installation is now complete.

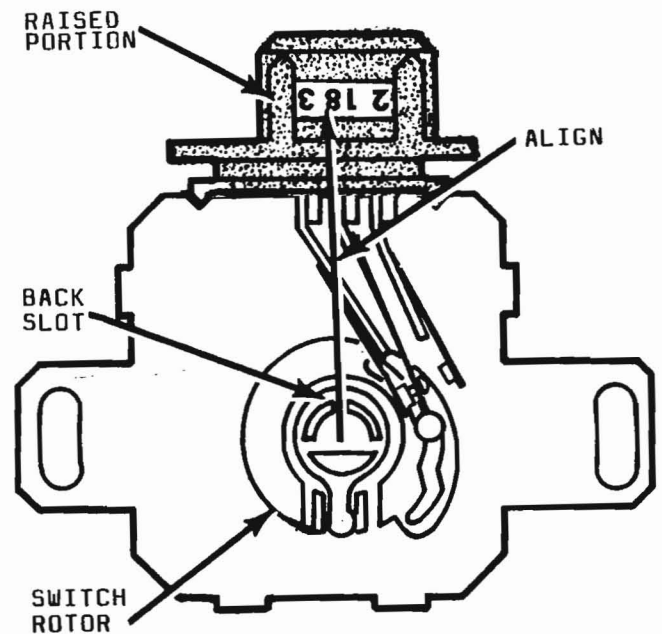


Figure 10

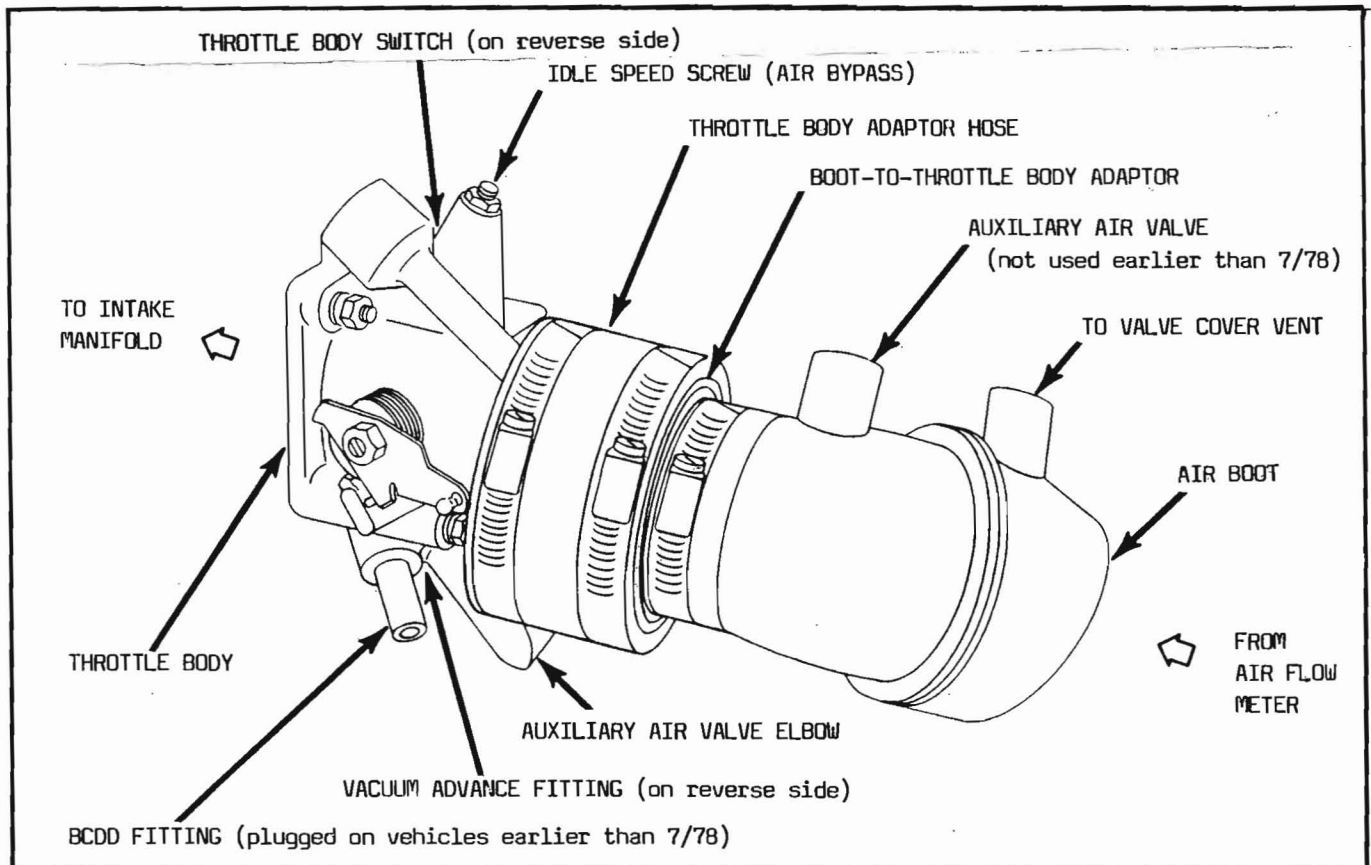


Figure 11

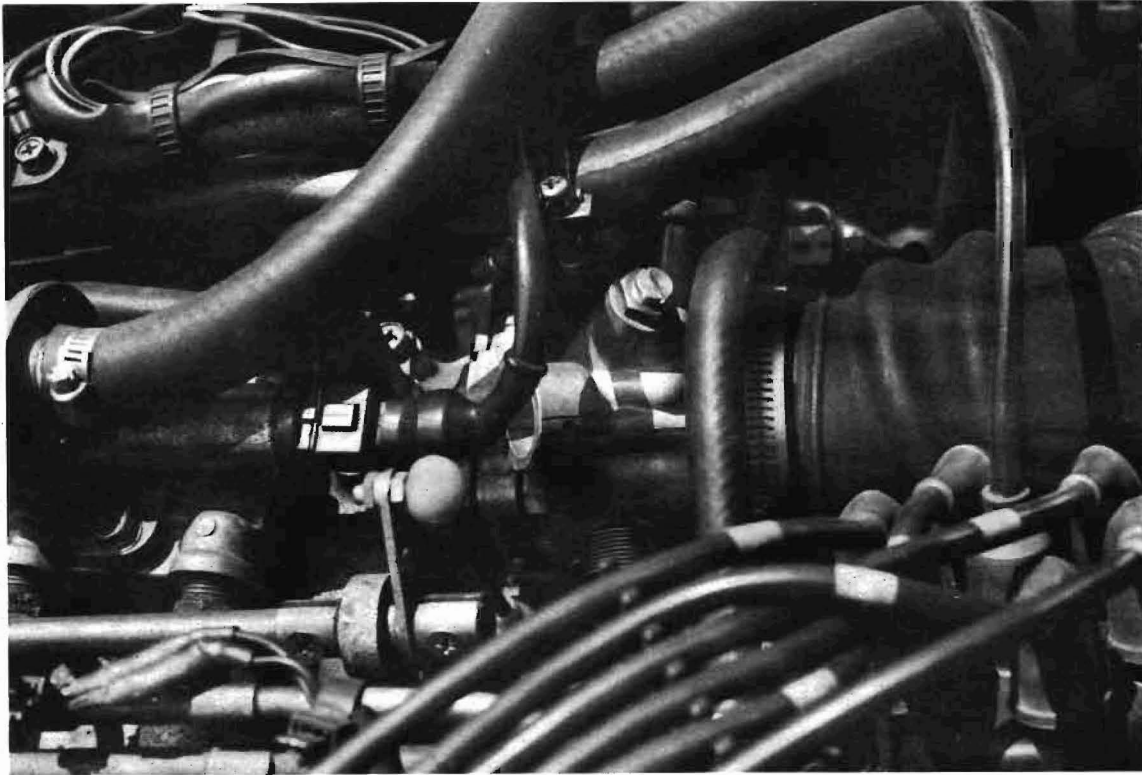


Figure 12. Typical TB280 Kit Installation

#### IMPORTANT

- Legal in California only for racing vehicles which may never be used upon a highway.
- As such, these parts are offered with no warranty, whatsoever, expressed or implied.
- Redline will always make every possible effort to provide needed assistance, if any difficulties arise. Our first agent in that assistance is your distributor. •
- Experience shows that the most common problems encountered are:
  - a. Incorrect installation of vacuum and/or return lines.
  - b. Incorrect throttle adjustment
- Should further assistance be required, you can contact our technical liaison through your distributor.

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