

INSTALLATION INSTRUCTIONS

CHRYSLER/MITSUBISHI

DGEV SERIES KIT NO. K610/K611

For vehicles with cable operating linkage only!
(i.e. Dodge D50, Arrow Truck)

Kit will not work on any automatic transmission vehicle

1. Remove Battery Ground.
2. Remove original air cleaner assembly and all of the attaching hardware and hoses. (Use a matching number system to identify the vacuum sources for future reinstallation.)
3. Remove the vacuum lines, fuel lines and accelerator cable from the original carburetor. The vacuum lines to the original carburetor will not be used with the exception of the vacuum advance line and power brake take off. When disconnecting the various vacuum and electrical control devices we recommend that the component to which the vacuum or electric source is attached be removed as a unit and the vacuum or electric source remain intact (see photo A). The carburetor has a fuel return connected to it via the fuel pump. The fuel return system will remain intact by using the original hose from the source below the intake manifold and connecting it to the return fitting on the fuel pump (unmarked fitting). The Evaporative Emission lines from the air cleaner and carburetor will be disconnected at the charcoal canister at the right front fenderwell. The EGR valve (photo B) and the thermal switch next to it will be disconnected and left inoperative. Plug the water choke hose on the rear tee of the intake manifold with the 8mm barb supplied (photo C). Remove the two exhaust tubes from the exhaust manifold and use the two 1¼" plugs supplied to plug the holes. Make **ABSOLUTELY SURE** that no intake manifold vacuum source is left open and **NOT** connected to the EGR valve or any other vacuum operated device except power brakes.

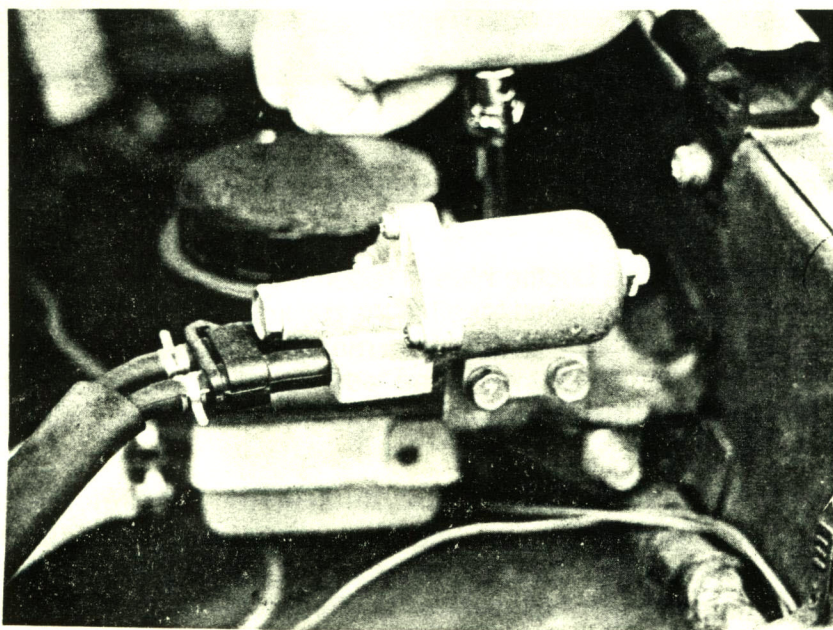


Photo A

Remove control devices in their entirety leaving vacuum lines intact. This will help reinstallation should it be necessary.

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

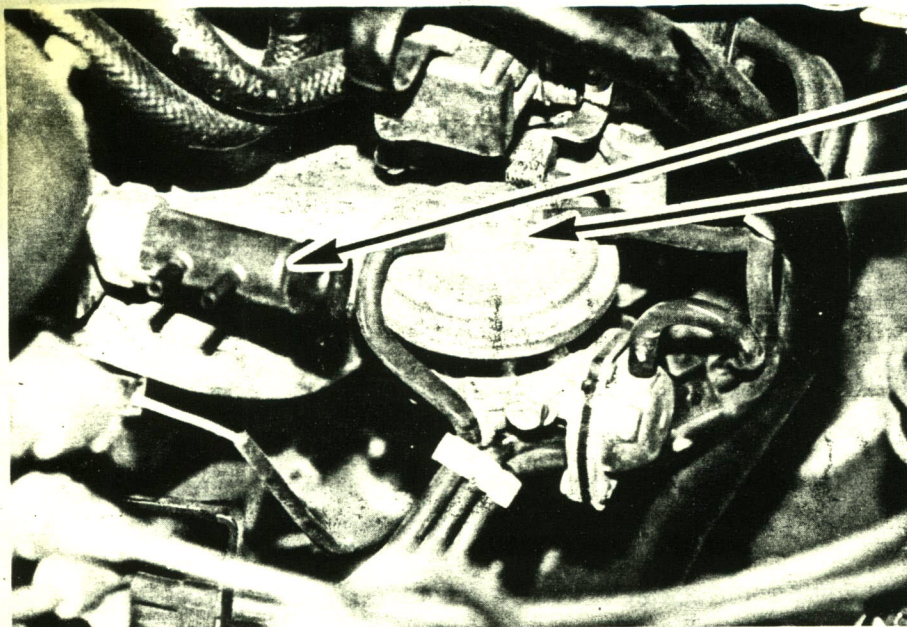


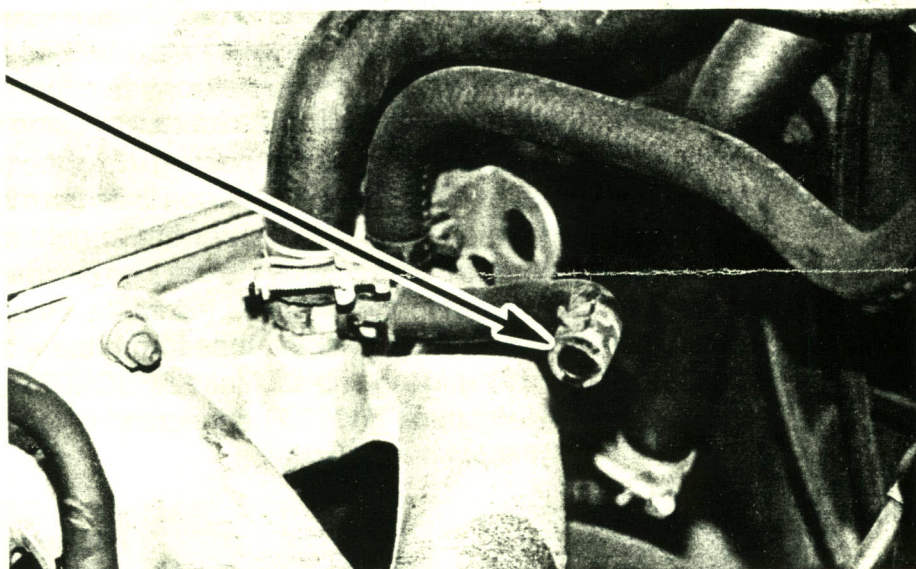
Photo B

B1 Temperature Controlled Thermal Switch

B2 EGR (Exhaust Gas Recirculating) Valve

Photo C

Original Water Choke Inlet Hose



4. Remove the MIKUNI Carburetor by unscrewing the four 12mm bolts on top of the carburetor and the 10mm nut on the flange on the base of the carburetor (See photos D & E).
5. A good thread locking compound such as Loctite blue is recommended for all adaptor bolts and studs. A gasket sealer is recommended for all of the gasket surfaces EXCEPT the carburetor base gasket. Clean the carburetor to intake manifold surface and install the Redline adaptor following the instructions with the adaptor. DO NOT OVERTORQUE the 6mm allen cap / screws and install the four carburetor studs AFTER the top plate is bolted securely into place.
6. Install the three position throttle lever with the holes toward the top of the carburetor (See photo F). DO NOT over-torque the throttle shaft nut. Install the cable trunion and check for free movement. If the throttle moves erratically, check for clearance problems and correct. Lubricate the accelerator pump cam and lever on the primary throttle shaft with a heavy grease.
7. Install the Weber carburetor to the adaptor with the linkage toward the front of the car. Tighten the carburetor nuts to 12 ft. lbs. torque. (See photo F).

8. Locate a 12V ignition activated electrical power source and connect the idle cutoff valve and electric choke.

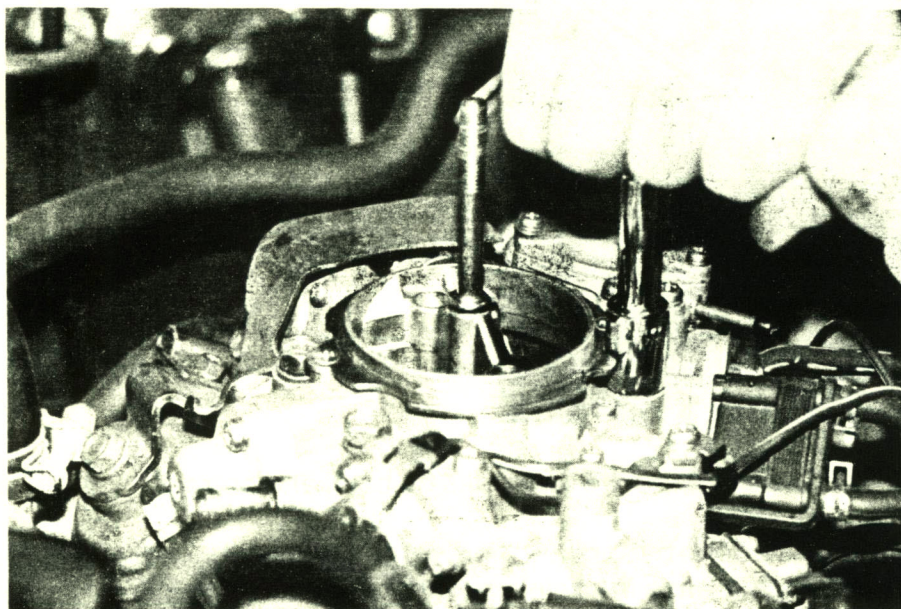


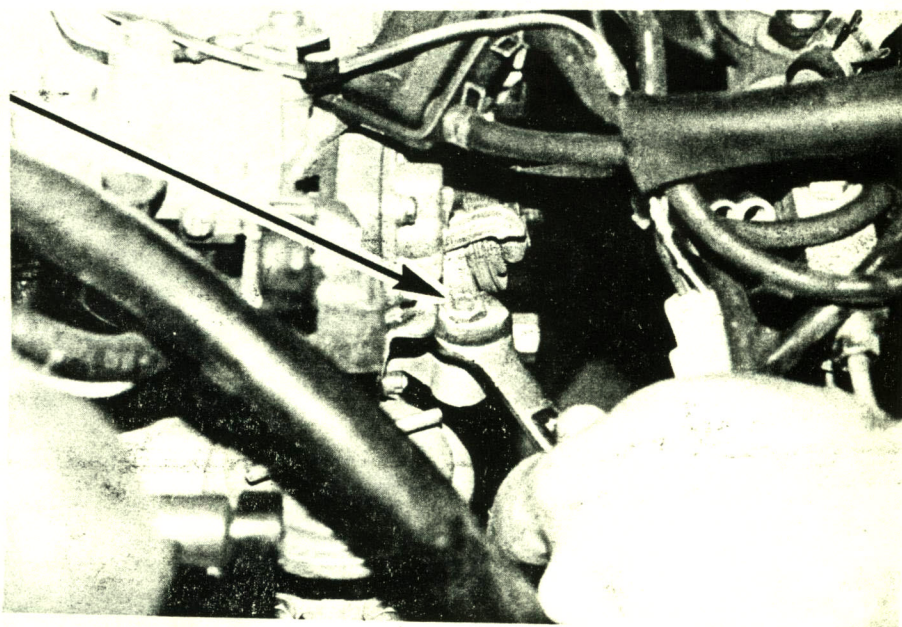
Photo D

Remove the four 12mm carburetor bolts.

9. Connect the throttle cable bracket to the valve cover in the position shown in photo G and bolt on the original cable retainer also shown in photo G. Connect the throttle cable as shown in photo F. Check for full throttle position and free throttle movement. If there is ANY throttle bind, do not operate vehicle until problem is rectified. Connect the fuel line from the pump to the Weber carburetor with the hose supplied. Connect the vacuum advance line to the distributor with the vacuum line supplied.

Photo E

Remove special "Dog Leg" Nut before attempting to remove carburetor.



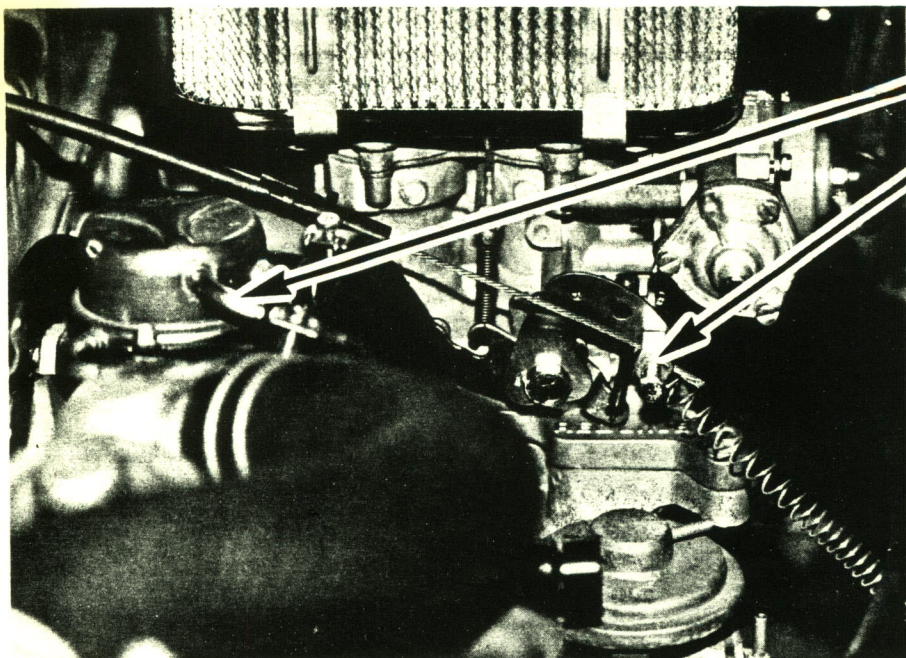


Photo F

F1 Fuel Return Hose

F2 Throttle Cable Hook Up

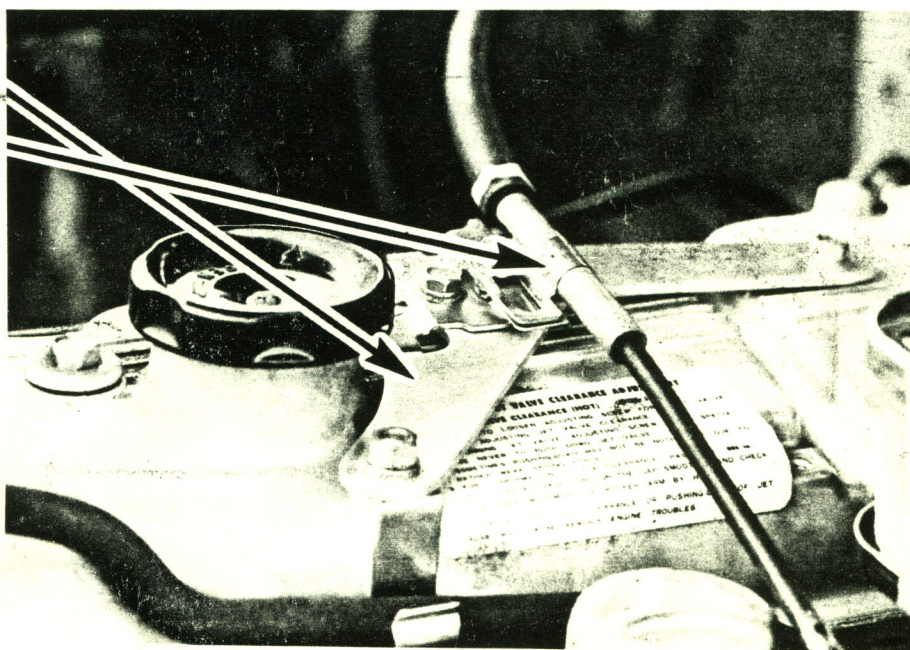


10. Start vehicle and check for fuel leaks. If there are any leaks go back and correct.
11. Check for vacuum leaks. This can be done by spraying aerosol carburetor cleaner (such as Gumout) near suspected areas. A change in engine rpm will indicate the presence of a leak.
12. After the vehicle has warmed up to operating temperature adjust idle mixture and speed. Check for full choke off position of the choke valves. If choke is not all "off" after eight minutes running, adjust element by loosening the three choke ring retaining screws and turning element in the appropriate direction. Retighten the choke ring screws.
13. After the choke is set and the mixture adjusted install the air cleaner and connect a breather hose to the valve cover and air cleaner. **CHECK FOR HOOD CLEARANCE** and then close the hood.

Photo G

G1 Throttle Cable Bracket

**G2 Original Throttle Cable Holder
w/Clamp**





WEBER CARBURETOR TROUBLESHOOTING GUIDE

This guide is intended for diagnostic purposes only. Specific procedures and adjustments should be obtained from factory service manuals or carburetor specifications sheet.

Every Weber carburetor is thoroughly tested at the factory and meets high quality and performance standards.

Since other engine component problems affect the performance of the carburetor, it is strongly recommended to perform the General Engine Checks section of this guide **BEFORE** making any carburetor adjustments.

GENERAL ENGINE CHECKS

IGNITION SYSTEM:

1. Cracked, broken wires
2. Incorrect ignition wire location (firing order)
3. Timing improperly adjusted
4. Distributor cap cracked, arcing
5. Low coil output
6. Corroded plug terminals
7. Incorrect vacuum advance hose connection
8. Points corroded, wrong gap
9. Incorrect spark plug gap

EMISSION SYSTEM:

1. Cracked, loose vacuum hoses
2. Improper vacuum hose connections
3. Faulty EGR valve operation
4. Air pump diverter valve, anti-backfire valve faulty
5. Faulty PCV valve operation
6. Dirty breather filters
 - Charcoal canister
 - Valve cover breather
 - PCV filter (inside air filter assembly)
7. Faulty feedback system operation
8. Vacuum delay valves (switches) faulty

FUEL SUPPLY SYSTEM

1. Dirty fuel filter
2. Incorrect fuel pump pressure (1.5-3.5 psi)
3. Restricted, kinked fuel lines
4. Fuel lines in contact with hot surface
5. Contaminated fuel

SPARK PLUG ANALYSIS

Normal spark plug condition is a sandy brown deposit on the insulator surface with no signs of electrode damage. The following information will help you analyze your plugs' condition.

OIL DEPOSITS — WET FOULING

1. Worn piston rings, bearings, seals
1. Excessive cylinder wear
2. Leaking — damaged head gasket

BLACK CARBON BUILD-UP, DRY FOULING

1. Fuel mixture too rich
2. Dirty air filter
3. Engine over heating
4. Defective ignition wires
5. Sticking valves, worn seals
6. High carburetor float level
7. Damaged, sticking needle and seat assembly
8. Incorrect fuel pump pressure (1.5-3.5 psi)
9. Spark plug heat range too cold

BLISTERED, BURNED ELECTRODES

1. Spark plug heat range too hot
2. Timing improperly adjusted
3. Engine over heating
4. Incorrect spark plug gap
5. Burned engine valves
6. Wrong type of fuel

INSULATORS CHIPPED

1. Incorrect spark plug gap
2. Improper spark plug installation
3. Severe detonation

PLUG GAP BRIDGED

1. Lead deposits fused to electrodes
2. Engine over-heating
3. Spark plug heat range too hot

GASOLINE FOULING

1. Distributor cap cracked, arcing
2. Loose, broken ignition wires
3. Low ignition coil output

ONCE THE ABOVE CHECKS HAVE BEEN PERFORMED, THE FOLLOWING SPECIFIC PROBLEMS CAN BE ANALYZED.

WEBER CARBURETOR TROUBLESHOOTING GUIDE

ENGINE WILL NOT START

Over 90% of Engine Failure To Start Conditions are Ignition System Related

1. Open circuit between starter and solenoid, or between ignition switch and solenoid
2. Starter motor faulty
3. Battery charge too low
4. Low ignition coil output

ENGINE HARD TO START WHEN COLD — STARTS & STALLS

1. Incorrect choke operation (worn coil, electrical connection faulty)
2. Fast idle speed too low
3. Improper choke pull-off operation
4. Low carburetor float level
5. Timing improperly adjusted
6. Damaged, sticking needle and seat
7. Engine flooded

ROUGH IDLE, SURGING, MISSING, STALLING

1. Incorrect idle speed and idle mixture adjustment
2. Timing improperly adjusted
3. Vacuum leak
4. Incorrect vacuum advance hose connection
5. Faulty EGR valve operation
6. Faulty PCV valve operation
7. Incorrect choke operation (coil setting)
8. Improper choke pull-off diaphragm operation
9. Improper vacuum hose connections
10. Low carburetor float level
11. Restricted, kinked fuel lines
12. Restricted fuel filter
13. Distributor cap cracked, arcing
14. Loose, corroded, or broken ignition wires
15. Damaged idle mixture adjusting screw
16. Distributor shaft worn (loose)
17. Faulty idle solenoid operation
18. Restricted carburetor jets or airbleeds
19. Restricted air, breather filters
20. Worn valves and seals
21. Incorrect spark plug gap

ENGINE KNOCKS, PINGING

1. Timing improperly adjusted
2. Incorrect vacuum hose connections
3. Distributor malfunction
4. Carburetor jets too lean, restricted
5. Low carburetor float level
6. Poor quality fuel

ENGINE KNOCKS, PINGING (Cont.)

7. Faulty EGR valve operation
8. Faulty feedback system operation
9. PCV system malfunction
10. Loose fan belts
11. Faulty vacuum delay valve (switch) faulty

DIESELING, ENGINE RUN-ON

1. Faulty idle solenoid operation
2. Carburetor linkage binding
3. Incorrect idle speed and idle mixture adjustment
4. Timing improperly adjusted

HESITATION, POOR ACCELERATION FLAT SPOT

1. Vacuum leaks
2. Improper vacuum hose connections
3. Timing improperly adjusted
4. Low carburetor float level
5. Loose, corroded or broken ignition wires
6. Low ignition coil output
7. Fouled, damaged spark plugs
8. Incorrect accelerator pump operation
9. Incorrect fuel pump pressure (1.5-3.5 psi)
10. Restricted, kinked fuel lines
11. Restricted fuel filter
12. Carburetor power enrichment system malfunction

POOR LOW SPEED OPERATION

1. Indirect idle speed and idle mixture adjustment
2. Dirty air filter
3. Timing improperly adjusted
4. Loose, corroded, or broken ignition wires
5. Distributor cap cracked, arcing
6. Restricted idle jets, air bleeds
7. Incorrect carburetor float level

POOR HIGH SPEED OPERATION

1. Incorrect vacuum advance hose connection
2. Incorrect distributor centrifugal advance
3. Incorrect spark plug gap
4. Incorrect carburetor main jets, air correctors
5. Incorrect vacuum hose connections
6. Dirty air and, or breather filters
7. Incorrect fuel pump pressure (1.5-3.5 psi)
8. Worn distributor shaft
9. Worn distributor shaft
10. Incorrect carburetor float level
11. Restricted, kinked fuel lines
12. Restricted fuel filter