1974-79 FUEL SYSTEMS
Solex (Mikuni) DIDTA 2-Barrel Carburetors

Arrow, Arrow Pickup, Challenger, Champ, Colt, D-50 Pickup, Sapporo

CARBURETOR IDENTIFICATION

1976 ARROW & COLT CARBURETOR NUMBERS

Application	Man. Trans.	Auto. Trans.
1600 cc		
Federal	28/32 DIDTA-54	28/32 DIDTA-55
Calif.	28/32 DIDTA-50	28/32 DIDTA-52
2000 cc		
Federal	30/32 DIDTA-54	30/32 DIDTA-55
Calif.	30/32 DIDTA-50	30/32 DIDTA-52

1977 ARROW & COLT CARBURETOR NUMBERS

Application	Man. Trans.	Auto. Trans.
1600 cc		
Federal	28/32 DIDTA-64	28/32 DIDTA-65
Calif.	28/32 DIDTA-60	28/32 DIDTA-60
High Alt.	28/32 DIDTA-66	
2000 cc		
Federal	30/32 DIDTA-64	30/32 DIDTA-65
Calif.	30/32 DIDTA-60	30/32 DIDTA-62

1978 ARROW & COLT CARBURETOR NUMBERS

Application	Man. Trans.	Auto. Trans.
1600 cc		
Federal	28/32 DIDTA-74	28/32 DIDTA-75
Calif.		
Station Wagon	28/32 DIDTA-170	28/32 DIDTA-172
All Others	28/32 DIDTA-70	28/32 DIDTA-72
High Alt.		
Station Wagon	28/32 DIDTA-176	
All Others	28/32 DIDTA-76	
2000 cc		
Federal	30/32 DIDTA-74	30/32 DIDTA-75
Calif.	30/32 DIDTA-70	30/32 DIDTA-72
2600 cc		
Federal	30/32 DIDTA-174	30/32 DIDTA-175
Calif.	30/32 DIDTA-170	30/32 DIDTA-172

1978 CHALLENGER & SAPPORO CARBURETOR NUMBERS

Application	Man. Trans.	Auto. Trans.
1600 cc		
Federal	28/32 DIDTA-70	28/32 DIDTA-76
Calif.	28/32 DIDTA-170	28/32 DIDTA-172
High Alt.	28/32 DIDTA-176	
2600 cc		
Federal	30/32 DIDTA-174	30/32 DIDTA-175
Calif.	30/32 DIDTA-170	30/32 DIDTA-172
High Alt.	30/32 DIDTA-176	

1979 ARROW & COLT CARBURETOR NUMBERS

Application	Man. Trans.	Auto. Trans.
1600 cc		
Federal	28/32 DIDTA-83	28/32 DIDTA-82
Calif.	28/32 DIDTA-80	28/32 DIDTA-82
2600 cc		
Federal	30/32 DIDTA-182	30/32 DIDTA-181
Calif.	30/32 DIDTA-180	30/32 DIDTA-181

1979 ARROW & D-50 PICKUP CARBURETOR NUMBERS

Application	Man. Trans.	Auto. Trans.
2000 cc		
Federal	30/32 DIDTA-85	30/32 DIDTA-86
Calif.	30/32 DIDTA-83	30/32 DIDTA-84
2600 cc		
Federal	30/32 DIDTA-185	30/32 DIDTA-186
Calif.	30/32 DIDTA-183	30/32 DIDTA-184

1979 CHAMP & COLT (FWD) CARBURETOR NUMBERS

Application	Man. Trans.	Auto. Trans.
1400 cc		
Federal	28/32 DIDTA-181	
Calif.	28/32 DIDTA-180	
1600 cc		
Federal	28/32 DIDTA-183	
Calif.	28/32 DIDTA-182	

1979 CHALLENGER & SAPPORO CARBURETOR NUMBERS

Application	Man. Trans.	Auto. Trans.
1600 cc		
Federal	28/32 DIDTA-80	
Calif.	28/32 DIDTA-80	
2600 cc		
Federal	30/32 DIDTA-182	30/32 DIDTA-181
Calif.	30/32 DIDTA-180	30/32 DIDTA-181

DESCRIPTION

The Solex (Mikuni) 28/32 DIDTA carburetor is used on all 1400 cc and 1600 cc models, and the 30/32 DIDTA on all 2000 cc and 2600 cc models. These 2-barrel, 2-stage carburetors utilize primary and secondary circuits.

Components include a conventional accelerator pump, a vacuum-actuated secondary throttle diaphragm, a sub-EGR valve system, fully automatic choke, vacuum kick (choke breaker), and an air switching valve.

Some 2600 cc models feature a fuel cut-off solenoid. Some A/C equipped 1400 cc, 1600 cc and 2000 cc models, feature a throttle opener or a mixture control valve.

Mixture control valve is used to decrease HC emissions during deceleration. Air is supplied into the intake manifold to decrease intake manifold vacuum. During constant speed operation, an orifice in the mixture control valve maintains a balanced vacuum in the spring chamber and reservoir.

The mixture control valve is closed by spring force. When throttle valve is closed suddenly, high vacuum from intake manifold in spring chamber forces diaphragm to open the valve, causing air flow to the intake manifold. The valve then slowly closes again, as pressure equalized between spring chamber and reservoir through the orifice.

ADJUSTMENTS

IDLE SPEED & MIXTURE

See appropriate TUNE-UP PROCEDURES article.

COLD (FAST) IDLE RPM

See appropriate TUNE-UP PROCEDURES article for on vehicle adjustment. Bench adjustment on 1974-75 models may be accomplished as follows: remove and invert carburetor. Close choke valve and ensure that fast idle screw is on highest step of fast idle cam. Measure clearance between throttle valve and bore. If clearance is not .063-.071" (1.6-1.8 mm), turn fast idle adjusting screw.

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FUEL LEVEL

1) Bring engine to normal operating temperature. Fuel level should be even with dot on sight glass. *See Fig. 2.* If not, adjust by adding or subtracting shims at needle valve assembly.
2) Adding shims lowers fuel level, removing shims raises level. Each shim changes float height by .09" (2.5 mm). Always make sure there is at least one shim present to serve as a gasket in preventing leaks.

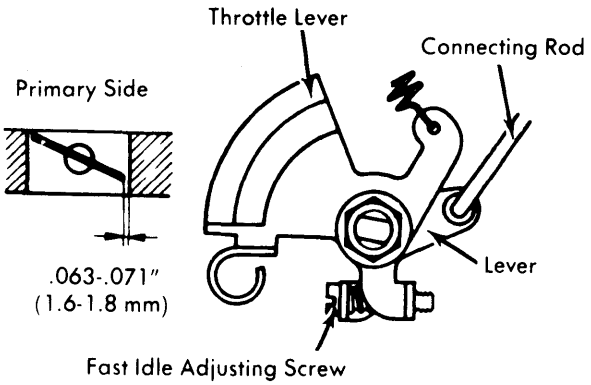

Fig. 1: Fast Idle (Bench) Adjustment

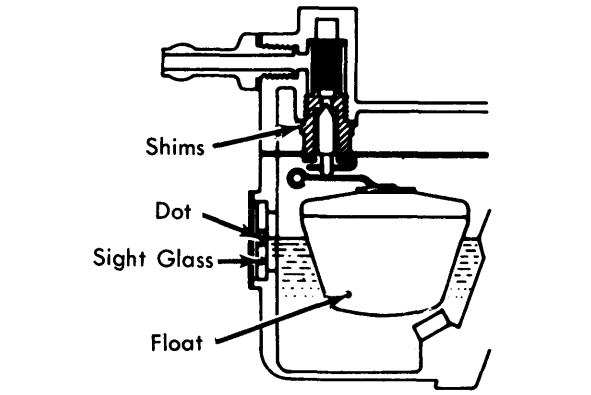

Fig. 2: Fuel Level Adjustment

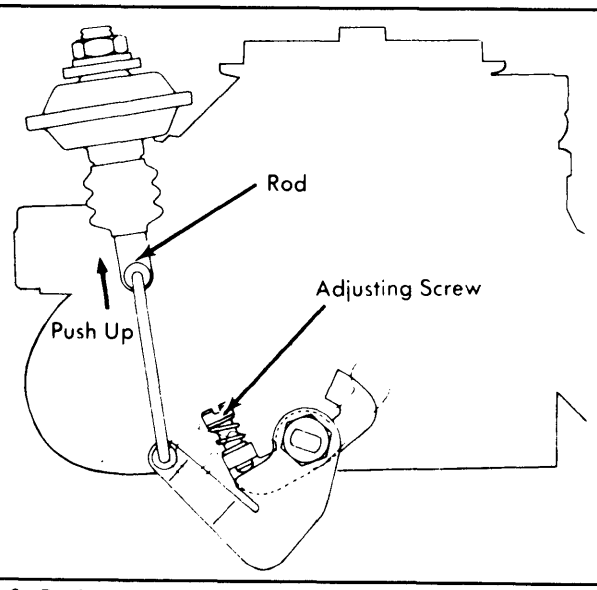

Fig. 3: Dashpot Adjustment

AUTOMATIC CHOKE

1977-78 Models - Loosen screws holding metal ring around choke housing. This allows housing to be rotated. Align Yellow punch mark on case with center projection on carburetor choke case. Tighten screws around holding ring and check automatic choke set temperature. See AUTOMATIC CHOKE SET TEMPERATURES table.

AUTOMATIC CHOKE SET TEMPERATURES

Application	Temperature °F (°C)
1600 cc	
Station Wagon	71.2 (21.5)
All Others	73.8 (23.5)
2000 & 2600 cc	
Federal	73.8 (23.5)
Calif.	71.2 (21.5)

DASHPOT

1974-77 Models - Warm engine to normal operating temperature and ensure engine idle RPM is correctly set. Gently push dashpot connecting rod up until it stops. Engine speed should increase to specifications. See DASHPOT ADJUSTMENT SPECIFICATIONS table.
2) Quickly release dashpot when correct idle up RPM is obtained. Idle speed should decrease to idle drop RPM within 3-6 seconds. If not, turn dashpot adjusting screw. *See Fig. 3.*

DASHPOT ADJUSTMENT SPECIFICATIONS

Application	Idle Up RPM	Idle Drop RPM
1974-76		
All Models	1500-2000	900-1000
1977		
1600 cc		
Federal	1900-2100	900
Calif.	1800-2000	900-1000
High Alt.	1800-2000	900-1000
2000 cc		
Federal	1900-2100	900-1000
Calif.	1400-1600	1000

THROTTLE OPENER

NOTE: Some early models were equipped with dashpots at the same location as throttle openers. Do not confuse the two as their appearances are similar. Throttle openers have an external vacuum fitting and hose; dashpots do not.

1979 Models - 1) Run engine at idle with transmission in Neutral and all accessories off. Remove connector from throttle opener solenoid. There should be no voltage at idle speed.
2) Turn on A/C temperature control or heater fan (as equipped). Voltage should be present at solenoid connector. Speed up engine to about 2000 RPM. Voltage should drop, indicating engine speed sensor is okay.
3) Turn on A/C or heater switch. Run jumper wires from bottom terminal of solenoid to ground and from top terminal to positive post of battery.
4) Throttle opener should be actuated, causing engine to run at no-load specification. See THROTTLE OPENER SPECIFICATIONS table.
5) If not, turn throttle opener adjusting screw until engine speed is within specifications. *See Fig. 4.* Remove jumper wires and reattach connector to solenoid.

THROTTLE OPENER SPECIFICATIONS

Application	Operating Speed
Champ & Colt Hatchback	
With A/C	1050-1150 RPM
Without A/C	800-900 RPM
All Other Models	[1]

[1] - Information not available at time of publication.

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THROTTLE VALVE INITIAL OPENING ANGLE

1978-79 Models - Check initial opening angle or clearance between throttle bore and valve with fast idle screw on high (1st) step of fast idle cam. If not to specifications, turn fast idle adjusting screw in clockwise direction to increase opening, counterclockwise to decrease opening. *See Fig. 5.*

1978 THROTTLE VALVE INITIAL OPENING CLEARANCE

Application	Inches (mm)
1600 cc	.047 (1.2)
2000 cc	.051 (1.3)
2600 cc	.051 (1.3)

1979 THROTTLE VALVE INITIAL OPENING ANGLE (DEGREES)

Application	Man. Trans.	Auto. Trans.
1600 cc	12	13
2000 cc	14	15
2600 cc	13	14

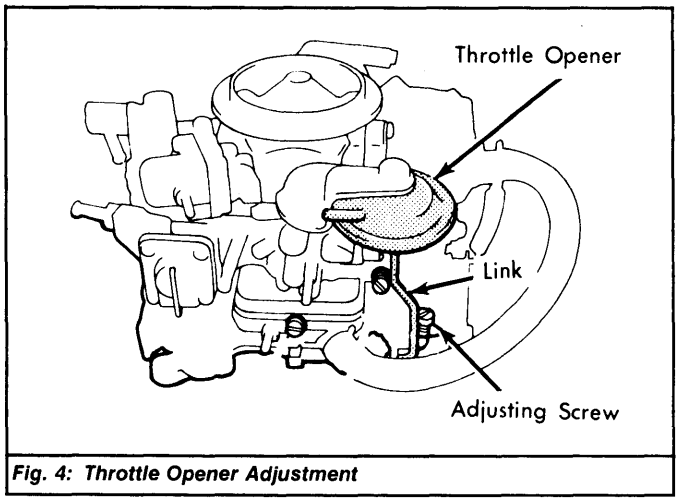

Fig. 4: Throttle Opener Adjustment

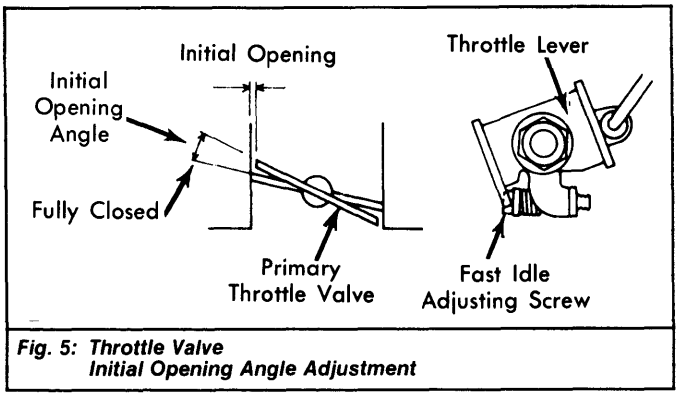

Fig. 5: Throttle Valve Initial Opening Angle Adjustment

ACCELERATOR PEDAL & CABLE

1979 Colt, Arrow, Challenger & Sapporo - To provide proper pedal-to-floor clearance, adjust stopper bolt so .75" (19 mm) extends through support arm and rests against stopper. *See Fig. 6.*

1979 Champ & Colt (FWD) - With engine at normal operating temperature, turn adjusting screw to adjust accelerator cable free play to .04" (1 mm). Tighten lock nut. Operate accelerator pedal to be sure throttle valves open and close smoothly and fully. *See Fig. 7.*

1979 Arrow & D-50 Pickups - Adjust cable holder to limit free play of accelerator pedal to .04" (1 mm). Operate pedal to be sure throttle valves open and close smoothly and fully. *See Fig. 8.*

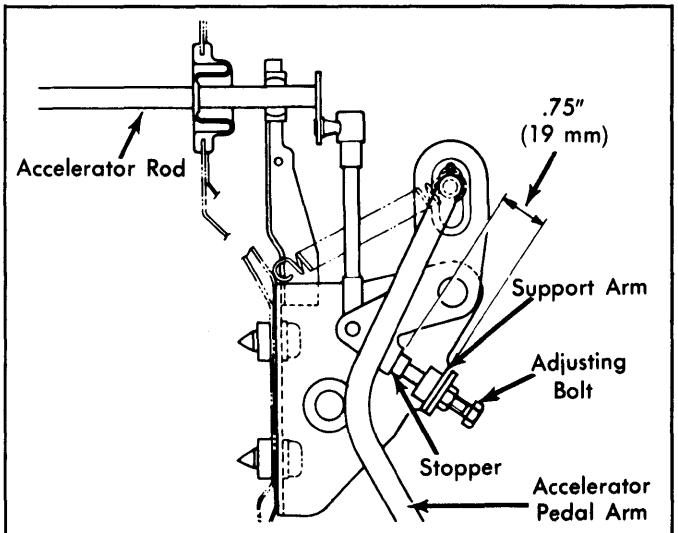

Fig. 6: Accelerator Pedal Clearance (Arrow, Colt, Challenger & Sapporo)

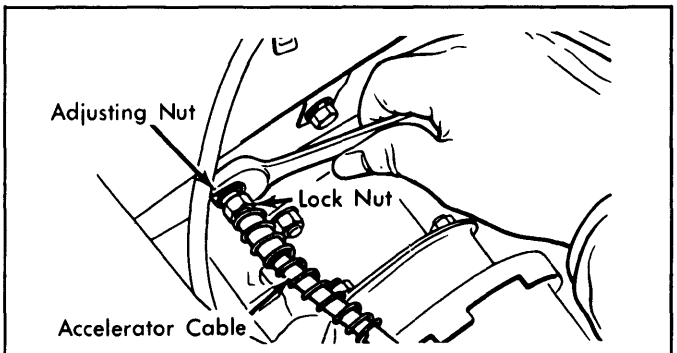

Fig. 7: Accelerator Cable Free Play (Champ & FWD Colt)

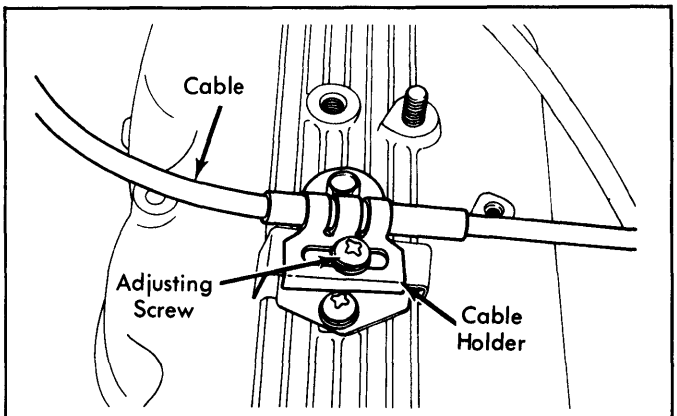

Fig. 8: Accelerator Cable Free Play (D-50 & Arrow Pickup)

TESTING

AIR SWITCHING VALVE

1979 Models - **1)** Disconnect solenoid connector with engine idling. Engine should lose speed sharply or stall, indicating valve and solenoid are operative.

2) If engine speed doesn't drop, check voltage at connector. Voltage should be present with engine running or key in on position. No voltage means faulty wiring or defective speed sensor.

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Solex (Mikuni) DIDTA 2-Barrel Carburetors (Cont.)

3) If voltage is present at connector, increase engine speed to 1500 RPM. Voltage should remain. If voltage drops, replace speed sensor. Increase engine speed to 2500 RPM. If voltage does not drop now, replace speed sensor.

OVERHAUL

NOTE: Disassembly and reassembly procedures will vary slightly between carburetors. Some carburetors may not have all parts mentioned in the following procedures.

DISASSEMBLY

1) Remove throttle return spring and damper spring. Remove choke unloader link, vacuum hose, diaphragm chamber link and chamber. Remove air switching valve.
2) Remove float cover assembly from main body, using a plastic hammer or handle of screwdriver to tap it free. Do not pry on cover when removing. Remove gasket. *See Figs. 10 and 11.*

NOTE: Do not turn carburetor over with cover removed, as discharge check ball and weight may be lost from accelerator pump.

3) Remove float lever pin, float and related parts. Remove needle valve assembly, gasket and filter. Remove mixture control valve assembly, leaving orifice in place. Do not remove automatic choke system. Turn main body upside down and remove pump discharge check ball and weight.
4) Remove fuel cut-off solenoid, main jets, and pilot jets. *See Fig. 9.* DO NOT tamper with factory preset by-pass screw or adjusting screw. Remove enrichment assembly, disconnect pump rod from throttle shaft lever, and remove accelerator pump assembly.
5) Carefully remove sub-EGR valve link clip, washer, spring, and disconnect link. DO NOT tamper with EGR adjusting screw (factory preset). Remove main body from throttle body. Remove gasket and idle speed adjusting screw, spring and washer.

CLEANING & INSPECTION

Wash parts in carburetor cleaner (solvent). DO NOT soak any components containing rubber, leather, or plastic. Soak components long enough to thoroughly clean all surfaces and passages of foreign matter. Remove any residue after cleaning components in solvent. Blow out all fuel passages dry with compressed air. Inspect all parts for wear or damage and replace as necessary.

REASSEMBLY

1) To reassemble, reverse disassembly procedure. Reassemble throttle body and all related parts, making sure that all parts move smoothly. Set throttle stop screw with throttle in full closed position and give adjustment screw additional 1/4 turn. Be sure to secure it with lock nut.
2) Reassemble main body and related parts, making sure that pilot jet "O" ring fits well into groove. Install enrichment valve, accelerator pump, and pump cover. Reassemble main body to throttle body. Install depression chamber to float cover and automatic choke assembly to body.

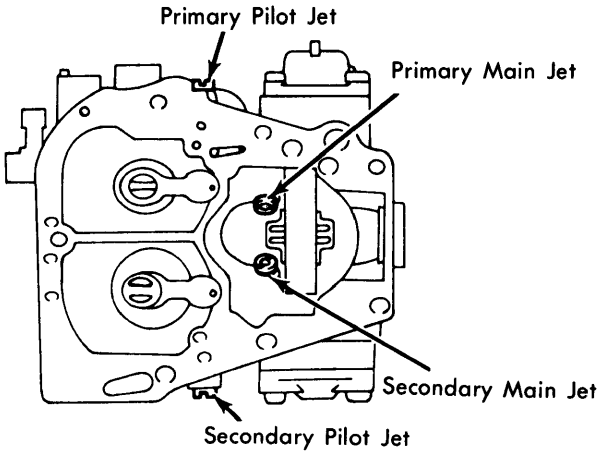

Fig. 9: Primary & Secondary Jet Locations

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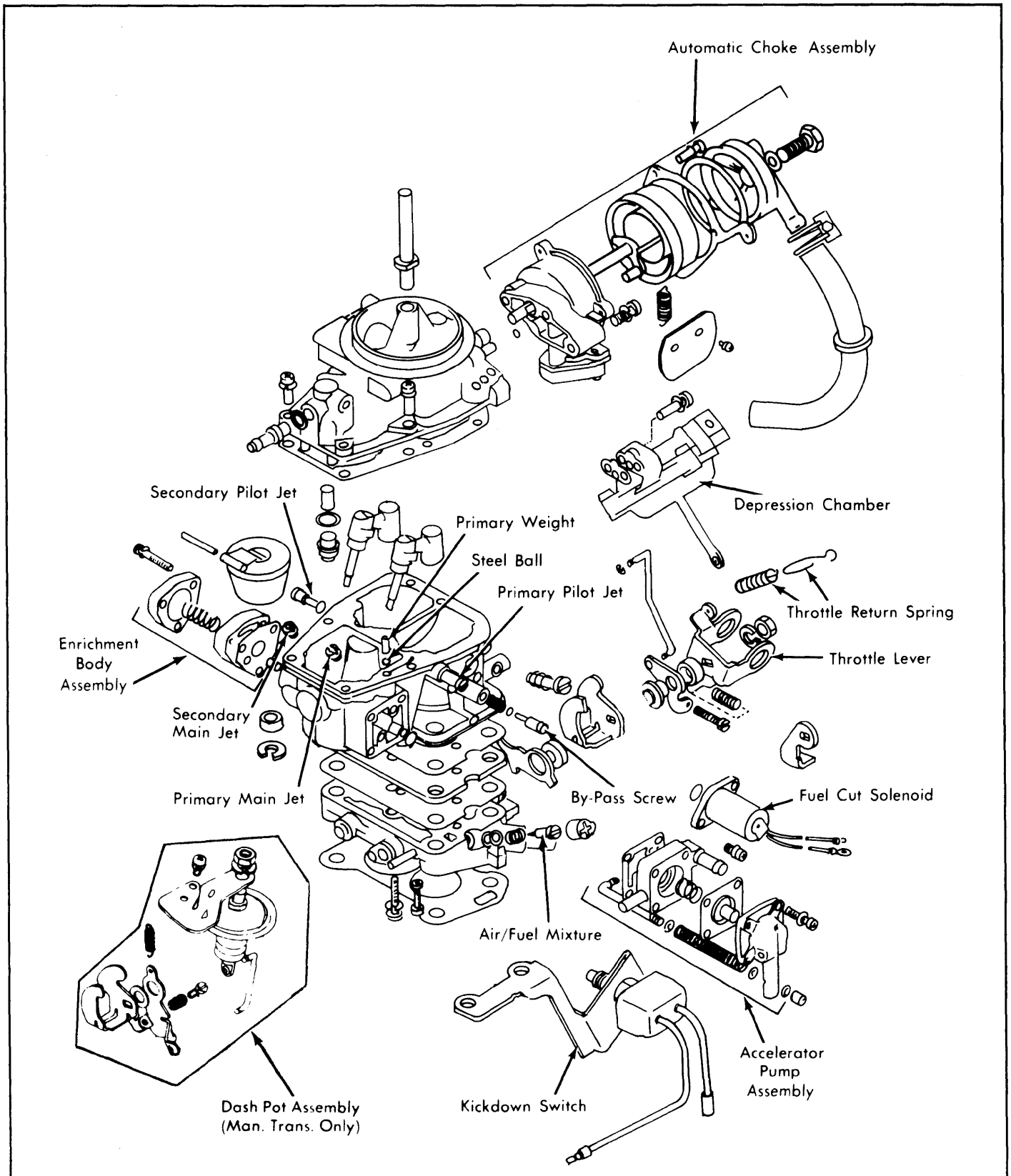

Fig. 10: Exploded View of 1974-76 Solex (Mikuni) DIDTA 2-Barrel Carburetor

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Solex (Mikuni) DIDTA 2-Barrel Carburetors (Cont.)

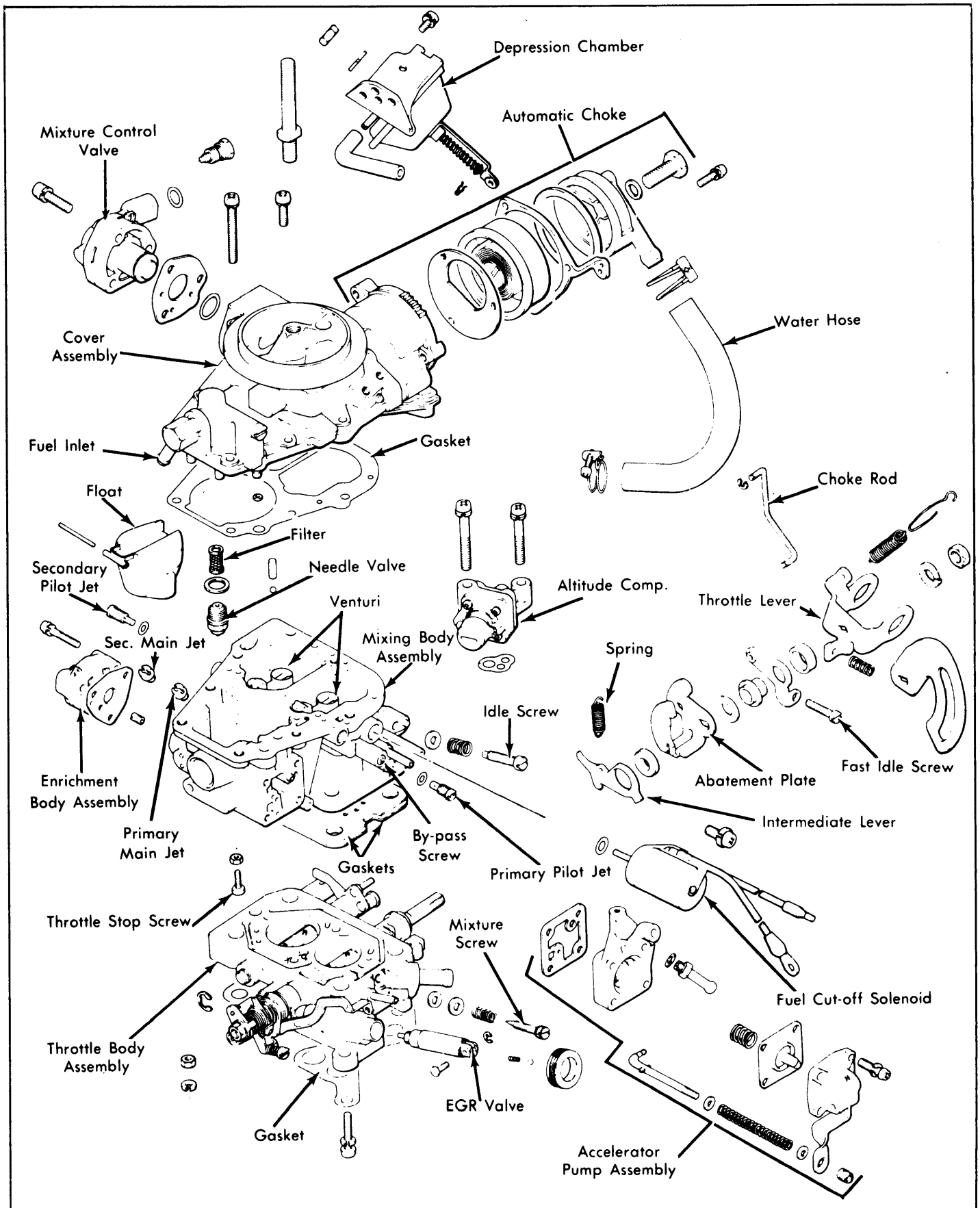

Fig. 11: Exploded View of 1977-79 Solex (Mikuni) DIDTA 2-Barrel Carburetor