SOLEX (MIKUNI) DIDTA 2-BARREL

Arrow
Arrow Pickup
Challenger
Champ
Colt
D50 Pickup
Sapporo

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 and coasting air valve. The 2600 cc models (also the 1600 cc engine used in Champ and Colt front wheel drive vehicles with automatic transmissions) feature a fuel cut-off solenoid. The 1400 cc and 1600 cc engines used in the front wheel drive models have a throttle opener. Other models with air conditioning may also have a throttle opener as part of an add-on kit.

CARBURETOR IDENTIFICATION

Champ and Colt Carburetor No. (Front Wheel Drive)

Application	Man. Trans.	Auto. Trans.
1400 cc		
Federal	28-32 DIDTA-191	.....
Calif.	28-32 DIDTA-190	.....
1600 cc		
Federal	28-32 DIDTA-195	28-32 DIDTA-196
Calif.	28-32 DIDTA-193	28-32 DIDTA-294

Arrow, Challenger Colt & Sapporo Carburetor No.

Application	Man. Trans.	Auto. Trans.
1600 cc		
Federal	28-32 DIDTA-92	28-32 DIDTA-93
Calif.	28-32 DIDTA-90	28-32 DIDTA-91
2600 cc		
Federal	30-32 DIDTA-192	30-32 DIDTA-197
Calif.	30-32 DIDTA-190	30-32 DIDTA-191

D50 & Arrow Pickup Carburetor No.

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

ADJUSTMENTS

HOT (SLOW) IDLE RPM

See appropriate Tune-Up article in TUNE-UP section.

IDLE MIXTURE

See appropriate Tune-Up article in TUNE-UP section.

COLD (FAST) IDLE RPM

See appropriate Tune-Up article in TUNE-UP section.

FACTORY ADJUSTMENTS ONLY

The automatic choke, choke breaker (vacuum kick), fast idle, secondary throttle opener, accelerator pump and sub-EGR valve have all been factory-calibrated and should not be changed for any reason, according to manufacturer.

FUEL LEVEL ADJUSTMENT

Bring engine to normal operating temperature while operating at idle speed, in "Neutral", and with all accessories off. Fuel level should be .15" (4 mm) above or below dot on sight glass. *See Fig. 1.* If not within this range, adjust by adding or subtracting packing shims at the needle valve assembly. Adding shims lowers fuel level, removing shim 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.

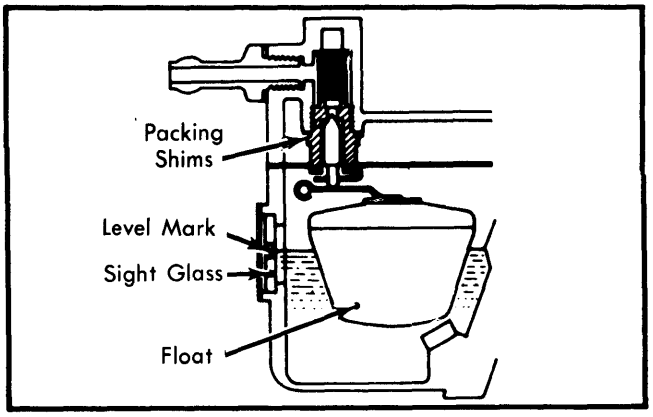

Fig. 1 Adjusting Fuel Level

THROTTLE VALVE INITIAL OPENING ANGLE ADJUSTMENT

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. 2.*

Throttle Valve Initial Opening Angle (Degrees)

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

SOLEX (MIKUNI) DIDTA 2-BARREL (Cont.)

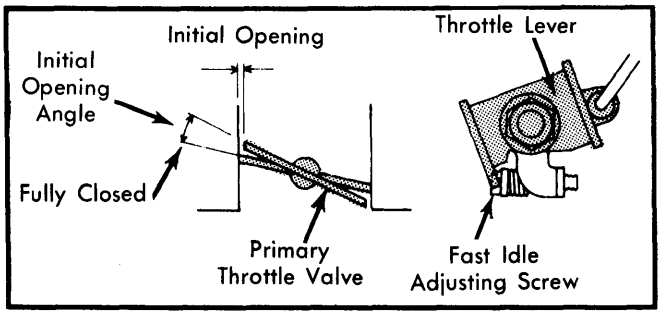

Fig. 2 Adjusting Throttle Valve Initial Opening Angle

ACCELERATOR PEDAL & CABLE ADJUSTMENT

Colt, Arrow, Challenger and 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. 3*.

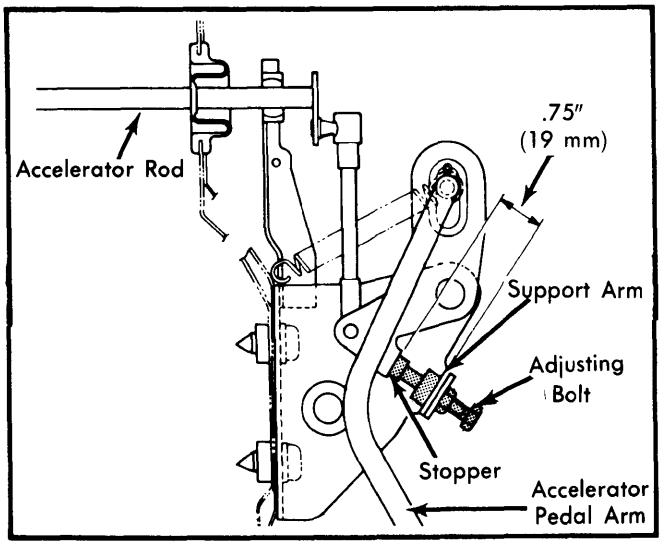

Fig. 3 Adjusting Accelerator Pedal Clearance (Arrow, Challenger, Colt & Sapporo)

Champ and Colt Front Wheel Drive – 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. 4*

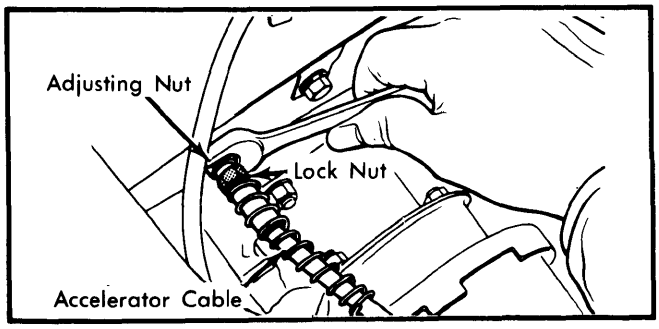

Fig. 4 Adjusting Accelerator Cable Free Play (Champ & Colt)

D50 and Arrow 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. 5*.

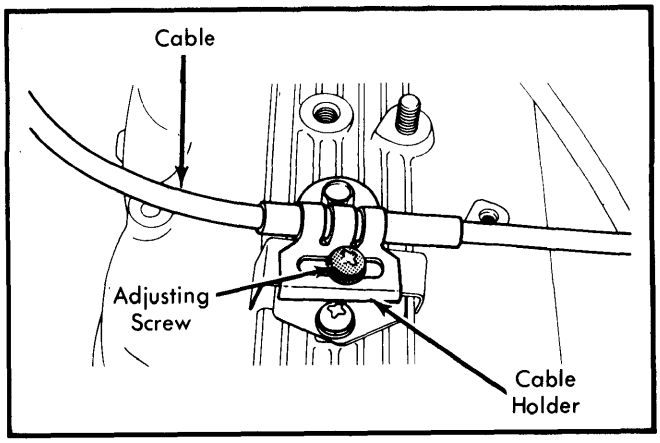

Fig. 5 Adjusting Accelerator Cable Free Play (D50 & Arrow Pickup)

OVERHAUL

DISASSEMBLY

1) Remove carburetor and disconnect water hose from choke body. Remove throttle return spring and damper srping. Remove throttle adjusting lever spring and secondary return spring. Remove choke unloader link, vacuum hose, diaphragm chamber link and chamber. On Champ and Colt front wheel drive models, remove throttle opener. Remove air switching valve. See *Fig. 6*.

2) Remove float chamber cover from main body, using a plastic hammer or handle of screwdriver to tap it free. Do not pry on cover when removing. Remove gasket.

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 coasting air valve, 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, using a screwdriver blade that matches the groove of jets. See *Fig. 7*. Do not tamper with factory pre-set bypass screw or adjusting screw, both of which have white paint on their heads.

5) Remove enrichment assembly, disconnect pump rod from throttle shaft lever, and remove accelerator pump assembly. Remove sub-EGR valve link clip and the washer and spring. Disconnect link. Do not touch EGR adjusting screw (factory preset). Do not distort sub-EGR valve link when removing it.

6) Remove main body from throttle body. Remove gasket and idle speed adjusting screw, spring and washer.

SOLEX (MIKUNI) DIDTA 2-BARREL (Cont.)

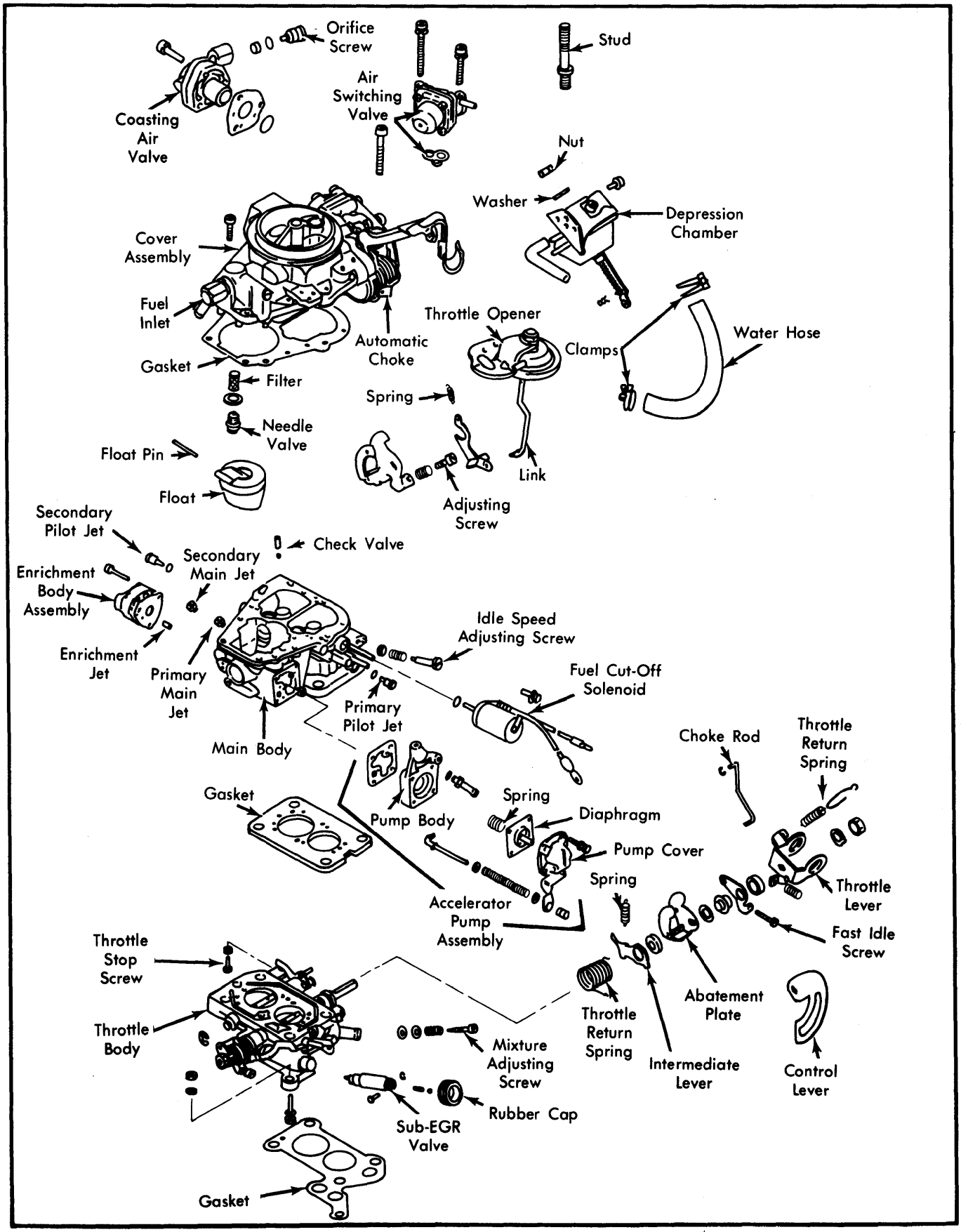

Fig. 6 Exploded View of Solex (Mikuni) DIDTA 2-Barrel Carburetor

SOLEX (MIKUNI) DIDTA 2-BARREL (Cont.)

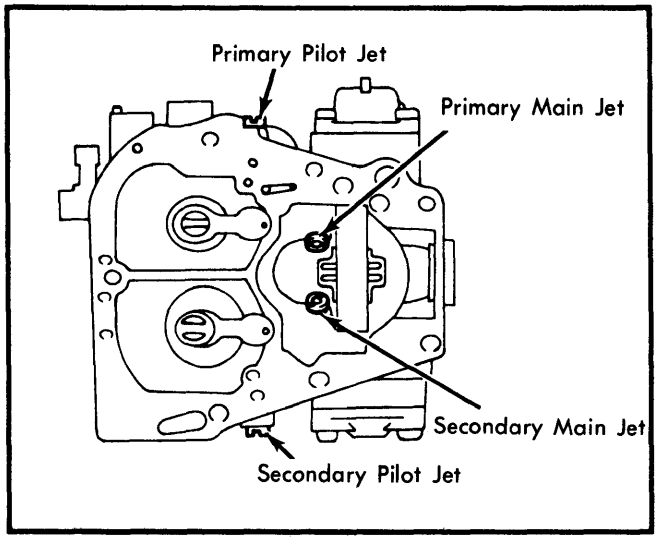

Fig. 7 Location of Primary and Secondary Jets

INSPECTION

Clean all parts removed, using care not to damage diaphragms with solvent. Check throttle valve and choke valve shafts for operation. Check jets for damage or clogging using compressed air, never use wire. Check idle mixture adjusting screw for grooves, ridges or other damage. Check needle valve assembly, strainer screen and vacuum chamber. Check fuel cut-off solenoid operation, using battery. Solenoid needle should move in when attached to battery, out when disconnected. Thoroughly inspect carburetor main body, throttle body and float chamber cover for cracks or other damage.

REASSEMBLY

1) Install the idle mixture adjusting screw, spring, washer and packing in throttle body. Turn screw lightly against its seat with fingers (do not use screwdriver). Turn idle mixture screw 1½ turns counterclockwise on 1400 cc and 1600 cc engines as a starting point; ¾ turn counterclockwise on 2000 cc and 2600 cc engines.

2) Using a new gasket, install throttle body to main body and tighten screws. Connect sub-EGR valve link to lever and install spring, washer and retaining clip. Connect accelerator pump rod to throttle shaft lever.

3) Install main jets and pilot jets. Install fuel cut-off solenoid. Using a new gasket, install enrichment valve assembly to main body. Install accelerator pump assembly, pump discharge check ball and weight.

4) Install steel ball to bottom of float chamber. Be sure brass blade is facing downward. Install filter and gasket and then needle valve assembly. Install float assembly to float chamber cover.

5) Place a new gasket on main body, install float chamber cover assembly and tighten screws. Install new gasket on float chamber cover and install coasting air valve. Using new gasket, install air switching valve on float chamber cover.

6) Install return springs and connect water hose.