

1970 "V8" CHRYSLER - C CHALLENGER-J & BARRACUDA - B, DODGE-D, W, PLYMOUTH-P, R

AVS FOUR-BORE DOWN-DRAFT CLIMATIC CONTROL CARBURETORS Nos. 4737S - 4738S - 4739S
- 4740S - 4741S

MODEL	ENGINE DISPL.	ORIGINAL CARB. NO.	SERVICE CARB. NO.	ZIP KIT NO.
B, J, R, W S/T	440	4737S	4737S	
B, C, D, J, P, R, W W/O A.C. A/T	440	4738S	4738S	902-286
B, C, D, J, P, R, W W/A.C. A/T	440	4741S	4741S	902-286
B, J, R, W (CALIF. E.C.S.) S/T	440	4739S	4739S	902-282
B, C, D, J, P, R, W (CALIF. E.C.S.) A/T	440	4740S	4740S	902-286
				902-286

CARBURETOR SPECIFICATIONS AND

ADJUSTMENT DATA

SEE BACK PAGE FOR PROCEDURE

CARB. NO.	THROTTLE BORE	C.F.M.	VACUUM SPARK PORT	CHOKE SETTING	FLOAT LEVEL	FLOAT DROP	PUMP	FAST IDLE LINKAGE	FAST IDLE R.P.M.	UN- LOADER	BOWL VAPOR VENT	SEC. THRO. LEVER	CHOKE DIAPH. LINKAGE
4737S	1-11/16	425	ABOVE VALVE	2 RICH	7/32	23/32	7/16	1/16	2000	1/4	1/16	23/64	5/32
4738S	1-11/16	430	ABOVE VALVE	2 RICH	7/32	23/32	7/16	1/16	1800	1/4	9/64	23/64	5/32
4739S	1-11/16	430	ABOVE VALVE	2 RICH	7/32	23/32	7/16	1/16	2000	1/4	3/4	23/64	5/32
4740S	1-11/16	430	ABOVE VALVE	2 RICH	7/32	23/32	7/16	1/16	1800	1/4	3/4	23/64	5/32
4741S	1-11/16	430	ABOVE VALVE	2 RICH	7/32	23/32	7/16	1/16	1800	1/4	9/64	23/64	5/32

Carter
Carburetor
Division



St. Louis, Missouri 63107 U.S.A.

PARTS LIST (Cont'd.)

Part No.	PART NAME	Part No.	PART NAME
58-1277S	Primary venturi assembly (pump side) (4737, 39)	111-76	Pump arm
61-291	Idle speed screw spring	113-90S	Choke shaft & lever assembly
61-585	Step-up rod retaining spring (2)	114-146	Primary throttle shaft arm (outer)
61-604	Vacuum piston spring (2)	114-181	Primary throttle shaft arm (inner)
61-649	Throttle lever spring	114-189S	Solenoid lever assembly
61-798	Air valve spring	115-308	Throttle operating rod
61-816	Pump spring (lower)	115-372	Throttle connector rod
61-829	Bowl vent arm spring (4737, 38, 41)	115-438	Choke diaphragm connector rod
61-841	Secondary throttle return spring	115-452	Fast idle connector rod
61-873	Fast idle & idle mixture screw spring (3)	115-460	Bowl vent connector rod (4739, 40)
61-883	Bowl vent arm spring (4739, 40)	117-190	Pump connector link
63-336	Connector rod retainer (6)	117-208	Choke valve link
64-391S	Pump plunger assembly	120-395	Secondary metering jet (.095") Std. (2)
65-59	Step-up piston cover plate (opposite pump)	120-501	Primary metering jet (.101") Std. (2)
65-60	Step-up piston cover plate (pump side)	121-302	Primary venturi cluster gasket (2)
76-134S	Solenoid lead wire	121-314	Thermostatic valve gasket (4739, 40, 41)
86-67	Solenoid lock washer	121-680	Air horn gasket
96-36	Idle mixture screw limiter cap (2)	121-619	Pump jet housing gasket
101-65	Choke shaft lever screw	122-119S	Pump intake ball check assembly
101-74	Throttle shaft lever screw (2)	136-47	Choke diaphragm connector rod washer
101-184S	Pump jet screw assembly (2)	136-160	Secondary throttle shaft washer
101-323	Fast idle cam screw	136-174	Idle speed screw washer
101-337	Countershaft lever screw	136-219	Choke lever retainer washer
101-362S	Air horn screw assembly (8)	136-300	Throttle shaft spring washer
101-419	Secondary throttle valve screw (4)	145-304	Choke diaphragm hose
101-420	Primary throttle valve screw (4)	150A-14	Pin spring (4739, 40)
101-421	Pump arm screw (4739, 40)	150A-21	Choke diaphragm connector rod pin spring
101-428	Choke diaphragm bracket screw (2)	160-207	Step-up piston (4740, 41) (2)
101-442S	Venturi screw assembly (4)	160-223S	Step-up piston assembly (4737, 38, 39) (2)
101-452	Idle speed screw	163-113	Venturi vent seal (2)
101-453S	Thermostatic valve screw assy. (4739, 40, 41) (2)	164-24	Grommet seal
101-558	Choke & air valve screw (4)	169-48S	Thermostatic valve assembly (4741)
101-560	Step-up piston cover plate & air valve retainer screw (3)	169-152S	Thermostatic valve assembly (4739, 40)
101-584	Pump arm screw (4737, 38, 41)	170BP-224S	Thermostatic coil housing & rod assembly
101-604	Solenoid clamp screw	180-203	Solenoid bracket
101-621	Fast idle speed screw	181-422S	Fast idle cam assembly
101-628	Solenoid bracket screw	186-70	Fuel bowl baffle plate (2)
103-14	Lead shot	202-338S	Choke diaphragm & bracket assy. (4737, 39)
103-16	Lead shot	202-404S	Choke diaphragm & bracket assy. (4738, 40, 41)
105A-56	Solenoid clamp nut	210-27	Air valve shaft bearing (for adjusting spring tension)
		213-45S	Idle solenoid assembly

NOTE: Figures in parentheses indicate number of pieces used in one carburetor. Where no figure is shown, only one is used.

MOTOR TUNE-UP — BE ACCURATE!

Spark Plug Gap .035"	Breaker Point Setting .014"-.019"	Ignition Timing See Decal in Engine Compartment	Idle Mixture Screw Limiter Cap Type	Idle R.P.M. See Decal in Engine Compartment
----------------------------	---	--	--	--

CARBURETOR ADJUSTMENTS

(SEE FRONT PAGE FOR SPECIFIC SETTINGS)

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: Specified clearance, between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: Specified clearance between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: Specified distance from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm with throttle valves tightly closed. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE: With fast idle screw on second step and against shoulder of first step of cam, adjust choke connector rod to give specified clearance between top edge of choke valve and inner wall of air horn. (Open and close throttle so fast idle cam is free to operate.)

FAST IDLE ON CAR: With fast idle screw on second step and against shoulder of first step of cam, adjust screw to specified R.P.M.

UNLOADER: Specified clearance between upper edge of choke valve and inner wall of air horn, with throttle wide open. To adjust, bend tang on fast idle cam.

BOWL VAPOR VENT (NON CALIF. E.C.S.): Distance between the heel (low side of seal) of the rubber grommet and its seat on the bowl cover should be as specified with throttle valves set at curb idle. To adjust, bend tang on vapor vent arm. If the pump has been changed from standard setting, readjust the bowl vapor vent.

BOWL VAPOR VENT (CALIF. E.C.S.): With throttle valves set at curb idle, remove plug from air horn and insert a narrow ruler in hole. Rest ruler lightly on top of valve. The dimension from top of valve to top of casting should be as specified. To adjust, bend operating lever.

SECONDARY THROTTLE LEVER: 1. Block choke valve wide open. 2. With specified clearance between lower edge of primary valve and bore (opposite idle port) secondary valves

should just start to open. To adjust, bend throttle operating rod. **Note:** At wide open throttle, primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever. **Note:** If necessary, bend stop lug on secondary lever to prevent secondary valves from going past wide open.

SECONDARY THROTTLE LOCK-OUT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

CHOKE DIAPHRAGM LINKAGE: With vacuum diaphragm plate (not stem) bottomed, close choke valve as far as possible without forcing. Adjust connector rod to give specified clearance between top edge of choke valve and inner wall of air horn. Remove connector rod to adjust, to prevent damage to rod and diaphragm.

SECONDARY AIR VALVE: Loosen lock screw and allow air valve to position itself wide open. Check to see that air valve and shaft are operating freely. To adjust, turn the shaft bearing counter-clockwise until the spring just contacts air valve, then turn the shaft bearing two additional turns.

IDLE SOLENOID: Set solenoid screw to R.P.M. shown on decal in engine compartment. Adjust mixture screws to obtain smoothest idle. Turn in idle speed screws until it just touches lever, then back out one turn.

CHOKE ADJUSTMENT (CROSS OVER TYPE): 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carburetor specification page. Hold in this position with screw driver and tighten lock nut. **Note:** Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carburetor is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

PARTS LIST

Part No.	PART NAME	Part No.	PART NAME
1A-318	Flange gasket (4741)	16-617	Step-up rod (.070" x .0655" x .0555") Std. (4737, 39) (2)
1A-330	Flange gasket (4737, 38, 39, 40)	17-51	Pump discharge check needle
2-281	Secondary throttle valve (2)	20-127	Fuel inlet strainer gasket (2)
2-291	Primary throttle valve (2)	20-204	Needle seat gasket (2)
3-1618S	Secondary throttle shaft & dog assembly	21-245S	Float lever assembly (2)
3-1734S	Primary throttle shaft, lever & dog assembly	24-29	Float lever pin (2)
4A-203	Throttle shaft dog (4737, 38, 41)	25-1032S	Needle & seat assembly (2)
4A-204	Throttle shaft dog (4739, 40)	30-78	Fuel inlet strainer (2)
7-293S	Choke valve assembly	30A-200	Idle mixture screw
7-294	Air valve (2)	48-339S	Pump jet assembly
11B-79	Rivet plug (4)	53A-481	Bowl vent arm (4737, 38, 41)
11B-390	Passage plug (2)	53A-482	Secondary throttle operating lever
11B-481	Idle port rivet plug	53A-489	Lockout dog
13-244	Air valve shaft	53A-497	Bowl vent arm (4739, 40)
13-262	Choke shaft	58-1272S	Primary venturi assembly (opposite pump side) (4738, 40, 41)
14-555	Choke shaft lever	58-1273S	Primary venturi assembly (pump side) (4738, 40, 41)
14-559	Countershaft lever to choke valve	58-1276S	Primary venturi assembly (opposite pump side) (4737, 39)
14-893	Choke lever		
15-58S	Fuel inlet fitting assembly		
16-575	Step-up rod (.065" x .062" x .053") Std. (4738, 40, 41) (2)		