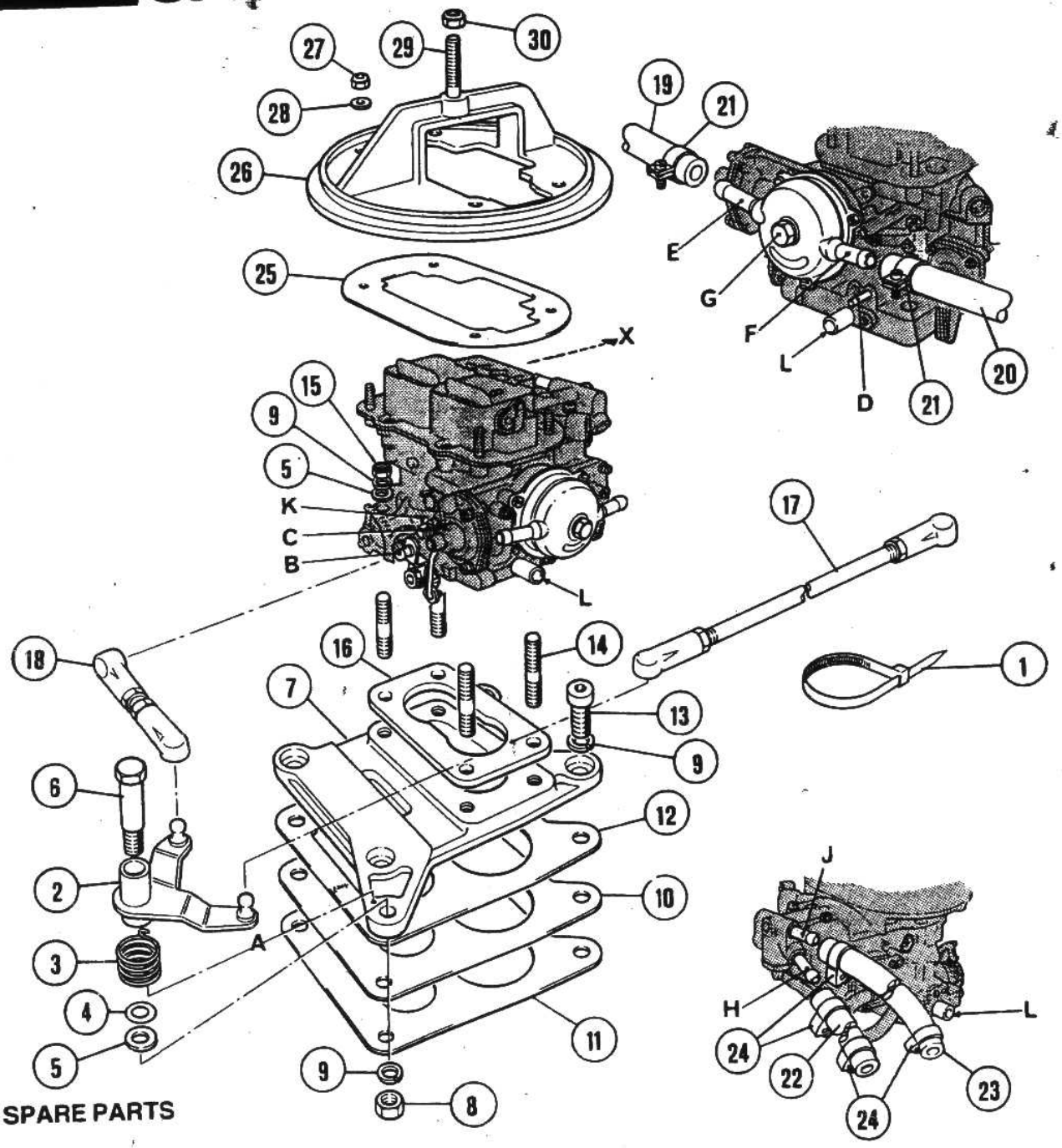
WEBER CARBURETTORS

BMW 320/520

Engine type M60 (6 cylinder)
Automatic choke. Kit No. 18930920
Replaces Solex 4A1



SPARE PARTS

PART NO.	DESCRIPTION	QTY	DRAWING NO.
99900057	Nylon Tie Wrap	2	1
99900739	Pivot lever	1	2
47610077	Return Spring	1	3
55530010	Wavy Washer	1	4
99900060	Washer plain	5	5
99900693	Pivot pin	1	6
99900734	Base Adaptor	1	7
99900599	Nut M8 (11mm)	1	8
99004506	Washer spring	9	9
99900738	Baffle plate	1	10
99900736	Lower base gasket	1	11
99900737	Upper base gasket	1	12
99900394	Allen screw M8X20	4	13
99900746	Stud M8X40	4	14
99900097	8mm nut	4	15
99900624	Insulator block gasket	1	16
99900740	Throttle connecting rod 215mm	1	17
99900741	Throttle connecting rod 60mm	1	18
99900019/3	Heater pipe (green line) 18" long	1	19
	Heater pipe (green line) 11" long	1	20
99900081	16mm hose clip	4	21
99900019/4	Fuel line braided 18" long	1	22
	Fuel line braided 26" long	1	23
99900292	Clip herbie 12-13mm Size D	4	24
99900315	Air filter adaptor gasket	1	25
99900735	Adaptor air filter	1	26
34725003	Nut nyloc M5	4	27
99900290	Washer plain 5mm	4	28
64955108	Stud M6X40	1	29
99900064	Nut nyloc M6	1	30

FEB'93/FL0051

FITTING INSTRUCTIONS

Disconnect the battery earth terminal.
Remove the air filter by undoing the securing nut in the centre of the top cover. Lift the air filter assembly clear, disconnecting the engine breather pipe from the air filter adjacent to the cam cover and the small emission pipe from the front of the carburettor. Remove the air filter 'O' ring seal from the carburettor and retain as it will be required with the new Weber carburettor installation.
CAUTION: It is recommended that the vehicle engine is allowed to cool before carrying out the following operation.
Carefully release the pressure from the cooling system by removing the pressure cap from the radiator expansion bottle. Disconnect from the carburettor the two water pipe connections leading to the union on the engine thermostat housing located above No. 1 inlet manifold tract, and the union on the cylinder block located above the starter motor. This may be done by either clamping the two heater pipes, to avoid loss of engine coolant, or by draining the cooling system.
To drain the cooling system remove the engine block drain plug located below the exhaust manifold.
Disconnect the three fuel line connections from the fuel return regulator mounted by bracket to the side of the carburettor.
Disconnect the five electrical connections from the carburettor. The wiring should be routed neatly along the main wiring harness and secured with two of the nylon tie wraps **(1)** provided. The wiring may be isolated by removing from the fuse box the corresponding 16 amp. fuse marked, 'El. fuel pump, autom chocke'.
Disconnect the distributor vacuum advance and retard small black and white pipes from the rear of the carburettor base flange.
Disconnect the carburettor throttle connecting rod from the actuating linkage lever mounted on the inlet manifold (Push Fit).
Remove the four carburettor securing nuts from the upper face of the carburettor. Remove the fuel regulator and bracket assembly, then remove the carburettor and insulator block.
Remove the four carburettor securing studs by locking together two of the original securing nuts. Clean any remaining gasket material from the inlet manifold face.
Assemble the new throttle linkage, by placing the throttle pivot lever **(2)**, return spring **(3)**, wavy washer **(4)** and plain washer **(5)**, on to the pivot pin **(6)**, as shown in the diagram. (Lubricate the pivot pin and lever with light grease before assembly.)
Fit the throttle linkage assembly to the carburettor base adaptor **(7)**. Care should be taken to insert the return spring **(3)**, into the locating hole **'A'** in the base adaptor. Also make sure the wavy washer **(4)** is centrally positioned on the pivot pin **(6)**, and not trapped. Moderately tighten the throttle linkage pivot pin **(6)**, then lock in position using the 11mm nut **(8)**, and lock washer **(9)** provided.
Place the carburettor adaptor baffle plate **(10)** supplied, on to the inlet manifold with the corresponding gaskets **(11)** and **(12)** supplied, either side of the baffle plate **(10)**. Fit the new carburettor base adaptor **(7)** on to the inlet manifold and secure the adaptor and baffle plate assembly in position using the four new allen screws **(13)**, and lock washers **(9)** provided.
Fit the four new carburettor mounting studs **(14)** supplied, to the carburettor base adaptor **(7)**, by locking together two of the new nuts **(15)** provided. Place the new carburettor insulator block gasket **(16)** on to the base adaptor mounting studs.
Fit the new Weber carburettor with the float chamber positioned towards the front of the vehicle, indicated by the arrow **'X'**. Secure the carburettor using the four nuts **(15)**, plain washers **(5)**, and lockwashers **(9)** provided.
Fit the longer of the two new connecting rods **(17)** supplied, to the original accelerator actuating lever on the inlet manifold. Tension the pivot lever **(2)** approximately ½ a turn, and connect the longer of the pivot levers **(2)** to the connecting rod **(17)**.
NOTE. The throttle linkage return spring **(3)** will only locate on the pivot lever **(2)** in one position.
Connect the shorter connecting rod **(18)** supplied, to the remaining pivot lever and to the throttle lever **'B'**.
Check for full throttle operation, and that the throttle returns fully to the idle stop screw **'C'**. To do this it is necessary to hold the choke flaps open, whilst slightly opening and closing the throttle to allow the throttle to return completely to the throttle stop screw **'C'**.
Make any minor adjustment necessary to the longer connecting rod **(17)** to allow a small amount of free play between the original accelerator linkage cable cam actuating pin, and the actuating lever to which the connecting rod **(17)** is attached.
If full throttle cannot be achieved the accelerator cable requires adjustment, then the idle position free play readjusting, as before.
Reconnect the small black vacuum advance pipe to the spark port tube **'D'**, adjacent to the cam cover. The pipe should be routed through the small hole in the inlet manifold directly above the starter motor.
Remove the red blanking cap from the small tube on the side inlet manifold and reconnect the distributor small white vacuum retard pipe to this point.
Connect the longer of the two new automatic choke heater pipes **(19)** supplied, from the water housing connection **'E'** on the carburettor to the union on the engine block above the starter motor. Secure using two of the new metal hose clips **(21)** provided. Connect the remaining heater pipe **(20)** supplied, from the water housing connection **'F'** on the carburettor to the engine thermostat housing, using the remaining two hose clips **(21)** provided.
IMPORTANT. Ensure clearance of approximately one centimetre exists between the heater pipe and the throttle linkage. If necessary reposition the water housing by loosening the central fixing screw **(G)**. DO NOT attempt to reposition by loosening the three smaller preset bi-metal screws.
If previously removed refit and secure the cooling system engine block drain plug. Refill the cooling system, check for leaks and top up as necessary.
Connect the fuel supply from the fuel pump to the fuel inlet pipe **'H'** on the Weber carburettor using either the original fuel line, or the shorter of the two new braided fuel lines **(22)** supplied and secure with two of the blue herbie clips **(24)** provided.
Connect the longer braided fuel return line **(23)** provided, from the fuel return pipe **'J'** on the Weber carburettor to the metal return pipe mounted on the chassis leg above the engine cross member using the remaining two blue herbie clips **(24)** supplied.
Place the air filter adaptor gasket **(25)** supplied on to the Weber carburettor upper mounting face, then fit the new air filter adaptor **(26)** supplied using the four nyloc nuts **(27)** and plain washers **(28)** provided. Fit the original air filter 'O' ring seal to the new air filter adaptor. Fit the air filter mounting stud **(29)** supplied, to the air filter adaptor.
Refit the air filter assembly, by first connecting the hot and cold air ducting hoses and the small emission pipe to the emission tube **'K'** on the Weber carburettor. Secure the air filter in position using the nyloc nut **(30)** provided. Reconnect the engine breather pipe from the cam cover to the air filter.
Reconnect the battery earth terminal.
Start and run the engine until normal operating temperature is reached. Set the throttle stop screw **'C'** to obtain approximately 1000 RPM. Adjust both idle mixture screws **'L'** by equal amounts to obtain the highest RPM. Reset the throttle stop screw **'C'** to 1000 RPM again, then make final mixture adjustment by again finding the highest RPM, then turning the mixture screws **'L'**, approximately half a turn clockwise to weaken the mixture and so obtain the exhaust emission value of CO 1.0-1.5% Vol. The engine speed should now stablize at 850-950 RPM.

NOTE: In order to achieve the maximum benefit from your new carburettor, we recommend that the condition of the engine should be checked, and that all serviceable items are correctly adjusted and renewed as necessary. (i.e. spark plugs, contact breaker points and air filter element). Due to engine variations some individual calibration changes may be necessary, in this event contact your nearest Weber dealer.
As our policy is for continual improvement we reserve the right to alter specifications without prior notice.

BMW 320/520 (6 cyl.) CARBURETTOR 38DGAS (AUTOMATIC CHOKE)

CALIBRATION

Main jet	73801145	145
Air corrector	77201175	175
Emulsion tube	61440216	F50
Idle jet	74403055	55
Pump Jet	76212060	60
Pump bleed		45
Float height (without gasket)		40 mm
Float Travel		52 mm