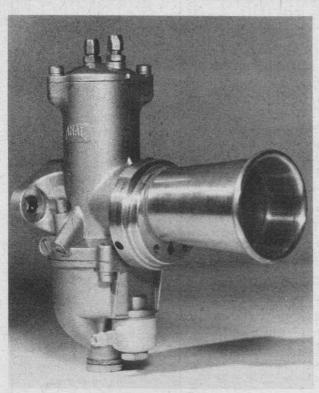
Amal Concentric Technical Manual



IF YOU TOOK the time to read the last section on the retired Monobloc carb, then you know that the newer Concentric (though basically a superior design) had its share of problems. Designed in bugs, as it were. Most of the hassle was caused by a lack of available information from abroad. The few tuners who knew what they were doing sure didn't go out of their way to let anyone else know.

The Concentric was a lighter, slimmer carb than the 'Bloc and featured a float bowl directly under the main jet. This feature allowed the bike to be leaned at severe angles without affecting the flow of fuel to the main jet. However, the Concentric dealt the four stroke riders a serious jolt by removing the normal pilot jet that the Monobloc had. In its place was an insidious little pressed in bushing that defied tuning. Two stroke riders didn't have this problem, as all the two-stroke carbs came with a removable pilot jet. However, they had their own problems with frothing and slide breakage. Later models of the Concentric cured many of these problems, but the four stroke carbs are still coming through as of this writing with a non-adjustable pilot cir-

New magnesium Amal Concentric carb is now on the market. It looks just like the old one, but only weighs 15 ounces—about half the weight of the standard model. The velocity stack adds to performance, bringing the effective venturi size up a few steps higher than indicated.

cuit. The Mark II promises to change all that.

One advantage that the Concentric did offer, though, was that it could pull more horsepower on the top end out of a given motor than other comparative carbs. Dyno tests have repeatedly backed this up. The bore of the Concentric is less interrupted than any other carb on the market as of this writing. Simply put, a 36mm Amal will flow more than a 36mm anything else. What it does to the low end response of the bike, is still open to hot debate, however.

Concentric carbs come in three series: The 600 Series goes 22mm, 24mm and 26mm. The 900 Series has 28mm, 30mm and 32mm and is probably the most common Amal in use today. The 1000 Series is generally found on racing machines and comes in 34mm, 36mm and 38mm.

A wide range of jets is available: Pilot jets 15 to 70 in steps of 5. Needle jets 105 to 110 in one

point jumps; special jets go to 135 in 5 point jumps.

Main jets 60 thru 500 in 5 point jumps and 500 thru 1000 in 40 point jumps. Alcohol jets go from 1000 to 1900 in 100 point jumps.

Like other Amals, all the jets are interchangeable from carb to carb. Even the new Mark II can use the same jets that were good decades ago.

The only big changes in jetting is in the four stroke to two stroke. Pilot jets and main jets are identical in both, but needle jets and spray tubes vary. And the jet holders are different. Here is where most tuners make their mistakes. Needle jets part number for four strokes is 622/122, while the two stroke number is 622/079. A four stroke spray tube is called by its proper Christian part number of 622/074 and the two stroker is 622/075. Look at the photos for a comparison. The four stroke needle jet has a hole drilled through it and meters

through the bottom hole, while the two stroke needle jet is solid on the sides and is metered through the top hole. You can easily convert one carb from the other, with the alarming exception of taking the cruddy fixed pilot circuit out of the four stroke carb. It can be done, but Jerry Burak assured us that it was most assuredly not worth the trouble.

Why should he know? Simply because he knows more about Amal carbs than anyone in the country. We got much information from Jerry and his partner Norm at their place of business, **BURAK BYE-PRODUCTS** 15170 Raymer St. Van Nuys, Calif. 91405 (213) 780-1768

If this sounds like a plug, it is. But a highly recommended one. Jerry sells all Amal parts and welcomes tough problems. Give him a call if you have any question regarding Amals. But not collect, OK?

One of Jerry's favorite tuning tricks is take the two stroke carb (with the

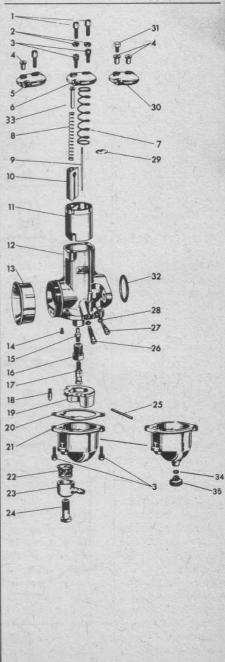
adjustable idle circuit) and convert it to four stroke parts and surprise people with the resultant performance gains.

He claims that most of the hassle that has been experienced with Concentrics is because people have never known how to tune them and set them up properly in the first place. Additionally, he recommends that a VITON tipped float needle be installed in any Amal and most of the loading up problems will go away. Apparently, the standard float needle allows gas to dribble in the motor at the oddest times. He sells this needle for a buck and a half and it fits

Parts List for Amal Concentric Carburetors

Key to illustration	Component	Carburetor Series 600	Carburetor Series 900	Carburetor Series 1000
1	Cable adjuster	1 4/035	4/035	4/035
2	Cable-adjuster locknut	5/077	5/077	5/077
3	Securing screw for float-bowl and mixing-chamber top	622/086	622/086	622/086
4	Cable ferrule for use with mid-cable adjuster	6/132A	6/132A	-
5	Mixing-chamber top for adjuster and ferrule	622/097	928/097	
6	Mixing-chamber top for adjuster and retrore	622/064	928/064	1034/064
7	Throttle-slide spring	622/131	622/131	1034/061
8		622/129		1034/001
	Choke-valve spring		622/129	1001/000
9	Throttle needle (paired with needle jet 622/079)	622/063	928/063	1034/063
9	Throttle needle (paired with needle jet 622/122)	622/124	622/124	622/124
9	Throttle needle (for alcohol only)	622/099	928/099	1034/099
10	Choke valve	622/062	928/062	
11	Throttle slide (specify cutaway)	622/060	928/060	1034/080
12	Carburetor body and tickler assembly	Samurate	· Day of the same	
13	Velocity stack – standard	376/066	928/066	-
13	Velocity stack – 21 in. (70 mm) long	376/143	928/069	1034/070
13	Velocity stack – 2 in (59 mm) long	-	928/070	
14	Pilot jet	124/026	124/026	124/026
15	Needle jet (prefered for 2-cycle engines)	622/079	622/079	622/079
15	Needle jet (prefered for 4-cycle engines)	622/122	622/122	622/122
1.5	Needle jet (for alcohol only)	622/100	622/100	622/100
16	Jet holder	622/128	622/128	622/128
17	Main jet (specify size)	376/100	376/100	376/100
18	Float needle	622/068	622/068	622/068
18	Float needle (for alcohol only, Use with 622/054 float bowl)		622/149	622/149
19	Float	622/069	622/069	622/069
20	Float-bowl washer	622/073	622/073	622/073
21	Float bowl – 0.10 in. (2.5 mm) seating	622/050	622/050	622/050
21	Float bowl – 0.10 in, seating with drain plug	622/055	622/055	622/055
21	Float bowl – 0.062 in. (1.6 mm) seating	622/052	622/052	622/052
21	Float bowl – 0.062 in seating with drain plug	622/057	622/057	622/057
21	Float bowl – 0.125 in. (3.2 mm) seating	622/051	622/051	622/051
21	Float bowl - 0.125 in, seating with drain plug	622/056	622/056	622/056
21	Float bowl - 0.156 in. (4.0 mm) seating (for alcohol only.			
	Use with 622/149 float needle)	622/054	622/054	622/054
22	Filter	376/093	376/093	376/093
22	Filter (for alcohol only)	376/093B	376/093B	376/0938
23	Banjo, single, push-on (4 in. inside diameter tubing)	376/097	376/097	376/097
23	Banjo, single, threaded in. BSP (in. tubing)	376/090	376/090	376/090
23	Banjo, single, push-on (% in, tubing)	376/130	376/130	376/130
23	Banjo, double, 90°, push-on (15 in, tubing)	376/135	376/135	376/135
23	Banjo, double, 150 , push-on (15 in. tubing)	376/139	376/139	376/139
23	Banjo, double, 55 , push-on (% in, tubing)	376/410	376/410	376/410
23	Banjo, double, 180 , push-on (in tubing)	376/419	376/419	376/419
Not shown	Banjo washer (for alcohol only)	14/175	14/175	14/175
24	Banjo bolt	622/078	622/078	622/078
Not shown	Banjo bolt washer (for diecast banjos only)	13/163	13/163	13/163
25	Float spindle	622/071	622/071	622/071
26	Throttle stop adjusting screw	622/077	622/077	622/077
27	Pilot air adjusting screw	622/076	622/076	622/076
28	'O' rings	622/082	622/082	622/082
29	Needle clip	622/067	622/067	1034/065
30	Mixing-chamber top for two ferrules	622/098	928/098	BOTTO
31	Plug for mixing-chamber top	4/137A	4/137A	-
32	'O' ring for flange sealing	622/101	622/101	
33	Choke valve guide	622/134	928/103	
Not shown	Jet key and 'Pozidriv' screwdriver	622/104	622/104	622/104
34	Float-bowl drain-plug washer	622/151	622/151	622/151
35	Float-bowl drain plug	622/147	622/147	622/147
Not shown	Tickler stem	622/089	622/089	1034/063
Not shown	Tickler head	622/081	622/081	1034/068
Not shown	Tickler spring	14/032	14/032	1034/073
Not shown	Tickler body			1034/074
Not shown	Main-jet filter	928/071	928/071	928/071
Not shown	Cable sheath		-	316/083
Not shown	Air-intake adapter	-	-	1034/075

SPARE PARTS LIST FOR **SERIES 600, 900 &** 1000 CARBURETTERS



all Amals, son, the oldest to the newest. And it will be standard equipment on the new Mark II carb.

Burak used to do all the tuning for J. N. Roberts. You may have heard of him. One of the tricks he use to do on J. N.'s Husky, was to use the smallest capacity float (there are two available) and the biggest banjo fitting available. The 5/16" I.D. fitting flows like a ruined kidney. This gave less area in the float chamber and made J.N.'s bike far less susceptible to changes in altitude. But don't try this unless you get a lot of gas flowing in the float chamber.

Slides in Concentric Series carbs are few, but apparently sufficient for tuning. Needle selection is limited. The 600 Series goes from 2.0 cutaway to 4.0 in .5 jumps. The 900 Series from 2.0 to 5.0 in the same jumps, and the 1000 Series from 2.0 to 3.5 likewise. The newer Mark II will go from 2.0 to 4.0.

Jerry feels that whatever shortcomings the Concentric may have, the pernew Mark II is supposed to have all the benefits and none of the hassles.

Series 600 and 900 Carburetors

GENERAL INFORMATION

These carburetors are supplied right hand as standard with the tickler, throttle stop and pilot air adjustment positioned on the right hand side as viewed from the air intake end, Left hand formance gains are worth it. But, the instruments are available with tickler,

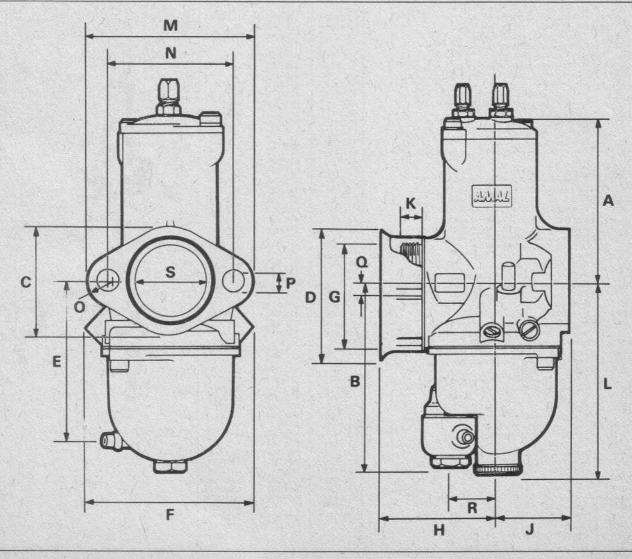
Amal Concentric Carburetor **Dimensions**

		A	В	С	D	E	F	G	н	J
Series 600	inches	2.41	2.90	1.63	1.94	2.43	2,56	1.63	1.84	1.30
	mm	6#.2	73.6	41.3	49.2	61.7	65.0	41.2	46.4	33.0
Series	inches	2.74	3.02	4.69	2.13	2.55	2.75	1.81	1.84	1,30
900	mm	69.6	76.6	42.9	53.9	64.7	69.8	46.0	46,4	33.0
Series	inches	3.00	3.13	2.05	2.76	2.66	3.00	2.06	3.93	1.38
1000	mm	76.2	79.6	52.0	70.0	67.7	76.2	52.4	98.8	35.0

		K .	r.	M	N	0†	P.*	a	R	S
Series	inches	0.30	3.13	2.63	2.00	0.38	0.34	0.19	0.78	Bore 22, 24 or 26
600	mm	7.6	79.6	66.7	50.8	9.5	8.7	4.7	19.8	
Series	inches	0.30	3.23	2.63	2.00	0.38	0.34	0.19	0.78	Bore
900	mm	7.6	82.1	66.7	50.8	9.5	8.7	4.7	19.8	28, 30 or 32
Series	- inches	0.32	3.35	3,35	2.56	0.52	0.34	0.18	0.78	Bore
1000	mm	8.0	85.1	85.0	65.0	13.2	8.7	4.5	19.8	34, 36 or 38

This dimension only applies to carburetors fitted with drain plug (optional extra).

[#] Hole diameter



throttle stop and pilot air adjustment on the opposite side.

Carburetors are normally supplied with an air valve which is cable operated from the handlebar position, if requested this valve can be omitted and the mixing chamber top sealed with a plug screw.

The standard range of float chamber connections available are as follows:

Banjo part No. 375/068 Single feed for 3/16" bore pipe.

Banjo Part No. 376/090 Single feed screwed 1/4" BSP complete with nut and nipple for copper pipe.

Banjo part No. 376/097 Single feed for 1/4" bore flexible pipe.

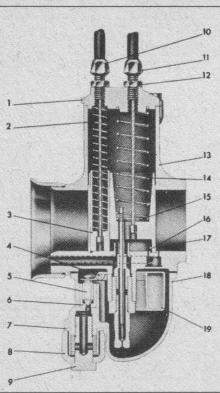
Banjo part No. 376/098 Double feed for 1/4" bore flexible pipe.

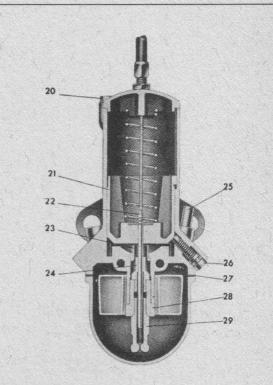
Banjo part No. 376/108 Double feed screwed 1/4" BSP complete with nuts and nipples for copper pipes.

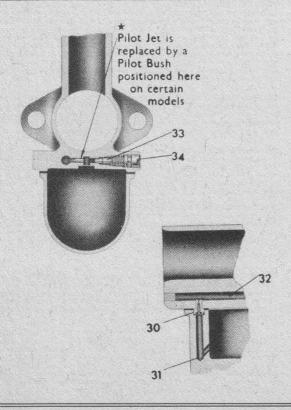
Important

When incorporating the latest metering system the following three items must be fitted as a set: Throttle Needle 622/124, Needle Jet 622/122 and Jet Holder 622/128

It is permissible to fit the latest Jet Holder 622/128 with the original Throttle Needle and Needle Jet, but not possible to fit the new Needle and Needle Jet with the original Jet Holder, obviously the Needle and Needle Jet must be paired.







- 1 MIXING CHAMBER TOP.
- 2 AIR VALVE SPRING
- 3 AIR VALVE.
- 4 . FLOAT SPINDLE.
- 5 FLOAT NEEDLE. 6 - NEEDLE SEATING.
- 7 . FILTER GAUZE.
- 9 BANJO BOLT.

- 10 CABLE ADJUSTER (AIR).
- 27- FLOAT CHAMBER WASHER. 11 - CABLE ADJUSTER (THROTTLE). 28- JET HOLDER.
- 12 CABLE ADJUSTER LOCKNUTS.
- 13 CARBURETTER BODY.
- * 30. PILOT JET.
- 14 THROTTLE VALVE SPRING.
- 31- PILOT JET FEED PASSAGE.

18 - FLOAT CHAMBER BODY.

21 - THROTTLE VALVE.

22. JET NEEDLE.

23- CHOKE TUBE.

24. NEEDLE JET. 25. TICKLER.

20- MIXING CHAMBER TOP SCREWS.

26- THROTTLE ADJUSTING SCREW.

19- FLOAT.

- 15. JET NEEDLE CLIP.
- 32- FEED PASSAGE FROM PILOT JET. 33- PILOT AIR FEED PASSAGES.
- 16. PILOT BY-PASS. 17. PILOT OUTLET.
- 34. PILOT AIR ADJUSTING SCREW.

Carburetor Settings List 1969, 1970

MACHINE	1969	1970	MACHINE		1969	1970
A.J.5. 230 Scrambler V4 880 Scrambler V5	R932/17	R932/17 R1034/3	GILERA (ARGENTINA)		R622/2 -	R622/2
LSA			GREEVES 236cr		R932/3	R932/5
73 Banram 125 33 Bushman 175 47 Starfire 1825 41 Shooting Star B48S 41 Victor Special B44US 99 Royal Star A36 58 Firebird, Scrambler A65SS A65FS 58 Firebird, Scrambler A65SS A65FS	R626/17 R626/17 R928/8 R930/58 R930/58 R626/19 / R930/34 L1930/35	R626/17 R626/17 R928/8 M936/38 R936/38 R626/19 R936/34 1.936/35 R936/34	MONTESSA Goa TT		L627;+11	1.627,41
54 Lightning Afril. 54 Thunderbolt A63T 40 Rocket 3 A75R	L930/35 R928/6 (R626/14/16 L626/15	1,930/35 R928/6	NORTON VILLIERS Commando		₹R930/30 ₹L930/31	R930/46 1.930/47
SULTACO			SANGLAS S.A.		R930/415	H930%
Bill TAGO Lishin Mil. 3 Lishin Mil. 4 Lishin		R622-405 L622-406 L625-406 L625-407 R625-1406 L625-407 R625-409 L625-410 R627-425 R930-409 L932-415 L932-416 R932-416	TRIUMPH Tige: T100 100c 100T & 100R TR6, TR6R, TR6C, T120, T120R T150 Trident		R626/B F L626/9 R626/19 R626/19 R930/2 L930/10 R626/14-16 L626/15 R928/20	R626/2 R626/2 L626/2 R930/2 R930/9 L930/1 R625/14 L626/1 R928/2
IS 350		R 1038/5 L1038/6	VELOCE Thruxton Venom		R930/15	R1036/4 R930/25
		Y I				

Carburetor Settings List 1971 and 1972

MACHI	NE.			Carbure 1971	1972	Nt.	MCHT:	NE.		1971	1972
L.J.S. 50 Scrambler 3.4				R932-17		GILERA (ARGEN	TINA	0		R622.2	R622 2
180 Scrambler, NS				R1034/3	R1034/3	GREEVES 250				R92 3	R932,3
1.5.A 47 Starfire H25				R928/20	R928720	HUSQVARNA					R1034 s
54 Firebird A6388 A6 54 Lightning		4		R930/72 1,930/73 R930/70 1,930/71	R930/70 1.930/71	125				1.932 23	10(82)21
54 Thunderbolt A65-T 40 Rocket 3 A75-R				R928/17 R626/61/63 L626/62	R928/17 R626/61/63 L626/62	175				R030-75	R930(75
						MAICO				R1036-2	K3036.2
BULTACO ashim 175 Mk. 4 ursang 175 ursang 175 herpa S sherpa S sherpa S 159 125 Mk. 3 herpa S 759 K125 Mk.				8,930/403 R930/404 1,930/405 R930/411 1,930/412 R930/413	L930/403 R930/404 L930/405 R930/406 L930/407 R930/411 L930/412 R930/413	MONTESSA Gata 247 Corta 247 Captra 125 MN Corta 247 King Scorping Corta TT				R627:403- 1.627:407 1.627:410 1.627:413 1.627:411	R627/40 1.627/40 1.627/41 1.627/41 1.627/41
umang 125 Mk, 3 umang 250 Mk, 5 andido andido andido umang 250 umang 250 umang 250 Mk, 3 umang 250 Mk, 3				1.930(4)1 R932/403 1.932/404 R932/405 1.932/406 R932/408	L930/414 L930/416 R932/403 L932/404 R932/405 L932/406 R932/406	MOTO GUZZI 750 Twin	Į.				{ 1.930/80 { 1.930/80
ursang 250 Mk 3 I Montadero I Montadero ursang Mk 4 ursang Mk 5 ursang Mk 5 ursang 250 Mk 4 USA ursang 250 Mk 4 USA		211111		1.932/409 R932/411 1.932/412 R932/419 L932/420 R932/420	L932/409 R932/411 L932/412 R932/419 L932/420 R932/424 L932/425	Commando	ENO			(R930.68 (1.930.69	R930/68 1.936/69 { R932/19 { L932/20
Matador Sandido 360 USA Mk. 2 Matador SD Mk. 4				1.932/426 1.932/427 1.932/428 1.932/431	1.932/426 1.932/427 1.932/428 R932/430 1.930/431	OSSA Trials				1,627/416	1.627-41
tursang /atro			II.		L1038/7 L627/412	TRIUMPH 100C 100T 100R TR6R TR6C			14	R626/32 / R626/53 1 L626/54 R930/60	R626/5 R626/5 L626/5 R930/6
DALESMAN Puch 125				R626/55		T120R		H-F		(R930.66 \ 1.930.67 \ (R626.47-	R930/60 1,930/60 R626/6 1,626/60
				15020133		TR25W	.1	44		R928/20	R626/6: R928/20
DUCATI			**	{ R930/76 1,930/77	R930/76 L930/77	WASSELL. Trials 125					R622/7

HOW THE CARBURETTER WORKS

The carburetter proportions and atomises the right amount of petrol with the air that is drawn in by the engine because of the correct proportions of jet sizes and the main choke bore. The float chamber maintains a constant level of fuel at the jets and cuts off the supply when the engine stops.

The throttle control from the handlebar controls the volume of mixture and therefore the power, and at all positions of the throttle the mixture is automatically correct. The opening of the throttle brings first into action the mixture supply from the pilot jet system for idling, then as it progressively opens, via the pilot by-pass the mixture is augmented from the main jet, the earlier stages of which action is controlled by the needle in the needle jet. The pilot jet system is supplied by the pilot jet (30) which is detachable on removal of the float chamber. On certain other models no pilot jet is fitted but a pilot bush is inserted in the continuation of the pilot air adjusting screw passage. The main jet does not spray directly into the mixing chamber, but discharges through the needle jet into the primary air chamber, and goes from there as a rich petrol-air mixture through the primary air choke into the main air choke.

The carburetters usually have a separately operated mixture control called an air valve, for use when starting from cold, and until the engine is warm; this control partially blocks the passage of air through the main

HINTS AND TIPS

STARTING from cold. Turn on fuel supply, set ignition (if manually operated) for best slow running, depress tickler to flood float chamber, close air valve, open throttle slightly and start engine. When engine starts open air valve and close the throttle; if engine begins to falter, partally close the air valve until engine is warm, then set in fully open position.

STARTING, engine hot. Open throttle slightly and start engine. It should not normally be necessary to flood the float chamber or close the air valve when starting a warm engine.

STARTING, general. Experience will show when it is necessary to flood the carburetter or use the air valve and also the best setting of the throttle valve. If the carburetter has been over-flooded or strangled, which would result in a wet engine and over-rich starting mixture—fully open the throttle valve and air valve, give the engine several turns to clear the richness, then start again with the air valve fully open and the throttle valve slightly open. valve slightly open

STARTING, SINGLE LEVER CARBURETTERS. OPEN THE THROTTLE VERY SLIGHTLY FROM THE IDLING POSITION AND FLOOD THE CARBURETTER MORE OR LESS ACCORDING TO THE ENGINE BEING COLD OR HOT RESPECTIVELY.

CABLE CONTROLS. See that there is a minimum of backlash when the controls are set back and that any movement of the handlebar does not cause the throttle to open; this is done by the adjusters on top of the carburetter, after releasing the adjuster locknuts. See that the throttle valve shuts down freely, then reset locknuts.

PETROL FEED. A filter gauze is fitted at the inlet to the float chamber, to remove this gauze unscrew the banjo bolt (9) the banjo and filter gauze can then be removed. Before replacement ensure that the filter gauze is both clean and undamaged and check fuel supply by momentarily turning on fuel tap. Vertical loops in petrol pipes must be avoided to prevent air locks. Float chamber flooding may be due to a worn float needle but nearly all flooding and blockage of the filter gauze with new machines is due to impurities from the tank. Periodically clean out filter gauze and float chamber until the trouble ceases or alternatively the tank may be drained and swilled out, etc.

FIXING CARBURETTER AND AIR LEAKS. Erratic slow running is often caused by air leaks, so verify there are none at the point of attachment to the cylinder or inlet pipe. A sealing ring is fitted into the attachment flange of the carburetter. Also in old machines look out for air leaks caused by a worn throttle or worn inlet valve guide.

BANGING IN EXHAUST may be caused by too weak a pilot mixture when the throttle is closed or nearly closed—also it may be caused by too rich a pilot mixture and an air leak in the exhaust system; The reason in either case is that the mixture has not fired in the cylinder and has fired in the hot silencer. If the banging happens when the throttle is fairly wide open the trouble will be ignition—not carburation.

BAD PETROL CONSUMPTION of a new machine may be due to flooding, caused by impurities from the petrol tank lodging on the float needle seat and so prevent its valve from closing. Flooding may be caused by a worn float needle valve. Also bad petrol consumption will be apparent if the needle jet (24) has worn; it may be remedied or improved by lowering the needle in the throttle, but if it cannot be—then the only remedy is to get a new needle jet.

AIR FILTERS. These may affect the jet setting, so if one is fitted afterwards to the carburetter the main jet may have to be smaller. If a carburetter is set with an air filter and the engine is run without it, take care not to overheat the engine due to too weak a mixture; testing with the air valve (page 5), will indicate if a larger main jet and higher needle position are required.

EFFECT OF ALTITUDE ON CARBURETTER. Increased altitude tends to produce a rich mixture. The greater the altitude, the smaller the main jet required. Carburetters ex-works are set suitable for altitudes up to 3,000 feet approximately. Carburetters used constantly at altitudes 3,000 to 6,000 feet should have a reduction in main jet size of 5 per cent. and thereafter for every 3,000 feet in excess of 6,000 feet altitude further reductions of 4 per cent., should be made.

RE-ASSEMBLING

When replacing the valve assembly see that the jet needle goes into the holes in the choke tube, needle jet and main jet and that both the throttle and air valve spring locate correctly in the mixing chamber top.

When refitting the float, engage the float needle recess in the horseshoe section of the float and fit in float chamber. Check that the needle jet (24) jet holder (28) and main jet (29) are fully tightened together before screwing assembly into the body.

HOW TO TRACE FAULTS

There are only two possible faults in carburation, either richness or weakness of mixture.

INDICATIONS OF :-

RICHNESS.

Black smoke in exhaust, Petrol spraying out of carburetter, Four strokes, eight-stroking. Two strokes, four-stroking. Heavy, lumpy running. Sparking plug sooty.

WEAKNESS

Spitting back in carburetter. Erratic slow running. Overheating.
Acceleration poor.
Engine goes better if:
Throttle is not wide open or
Air Valve is partially closed.

If richness or weakness is present, check if caused by :-

(1) Petrol feed.

Check that jets and passages are clear, that filter gauze in float chamber banjo connection is not choked with foreign matter, and that there is ample flow of fuel. Check there is no flooding.

(2) Air leaks.

At the connection to the engine or due to leaky inlet valve stems.

(3) Defective or worn parts.

As a loose fitting throttle valve, worn needle jet, loose jets.

(4) Air cleaner being choked up

(5) An air cleaner having been removed

Removing the silencer or running with a straight through pipe requires a richer setting.

Having verified the correctness of fuel feed and that there are no air leaks, check over ignition, valve operation and timing. Now at throttle position shown on page 7, fig. 5, test to see if mixtures are rich or weak. This is done by partially closing the air valve, and if engine runs better weakness is indicated, but if engine runs worse richness is indicated.

To remedy, proceed as follows :-

To cure richness, Position I. Fit smaller main jet.

To cure weakness. Fit larger main jet.

Position 2. Screw out pilot air adjusting screw.

Screw pilot air adjusting screw in.

Position 3. Fit a throttle with larger cutaway (page 6).

Fit a throttle with smaller cutaway (page 6).

Position 4. Lower needle one or two grooves (page 6).

Raise needle one or two greoves (page 6).

NOTE. It is not correct to cure a rich mixture at half throttle by fitting a smaller main jet because the main jet may be correct for power at full throttle: the proper thing to do is to lower the needle.

PARTS TO TUNE UP WITH

THROTTLE ADJUSTING SCREW (26). Set this screw to hold the throttle open sufficiently to keep the engine running when the twist grip is off. An "O" ring is fitted to the screw to hold this adjustment by friction.



MAIN JET (29). The main jet controls the petrol supply when the throttle is more than three-quarters open, but at smaller throttle openings although the supply of fuel goes through the main jet, the amount is diminished by the metering effect of the needle in the needle jet. Each jet is calibrated and numbered so that its exact discharge is known and two jets of the same number are alike. NEVER REAMER A JET OUT, GET ANOTHER OF THE RIGHT SIZE. The bigger the number the bigger the jet.

To remove the main jet, remove the float chamber, the exposed main jet can then be unscrewed from the jet holder (28).

Carburetor Settings List

MACHINE	Carburetter No. 1973	MACHINE	Carburetter No
A.J.S.		BULTACO (continued)	
380 Serambler VS	R1034/3 R1034/3	Pursang 250 Pursang 250 Pursang 250 Mk. 3 Pursang 250 Mk. 3 Pursang 250 Mk. 3 Montadero 360 Montadero 360	R932/405 L932/406 R932/408 L932/409 R932/411 L932/412
B.S.A. 200 T20 (French Army)	R622/10 7 R626/66	Matador Mk. 3 Metralia Mk. 2 Metralia Mk. 2	1.932/413 1.932/414 R932/415 1.932/416 R932/417
740 Rocket 3 A75-R	L626/67 R626/68 / R626/69	Bandido 350 and 360 Euro Mk. 2 Montadero 360 USA	1.932/418 R932/417 L932/418
740 T150 Hurricane	L626/70 R626/71		R932/419 1.932/420
Moso-Cross 500	R932/28	Pursang Mk. + Europa Pursang 250 Mk. + USA Pursang 250 Mk. + USA Pursang 250 Mk. + USA Kit Metralia Mk. 2	R932/424 1.932/425 1.932/426
		Matador Mk. 4 USA	1.932/427 1.932/427
		Matador SD Mk. 4	1.932/428 R.932/430 1.932/431
BOUDET	1,1036)9	Bandida Mk. 2 Europa	1.932/431 1.932/432
		Pursang 125 and 200 MW 5	1.932/433 1.932/434 1.932/435
BULTACO		Matador SD Mk. 5	R932/437 L932/438
Lubito 100 Mk 3	R622/406	Pursang 350 Mk. 5 and Mk. 6	£1036/5 £1036/8
Lobitu 125 Sherpa S100 Sherpa S100	L625/405 R625/406	Pursang Astro	L1038/6 L1038/7
Competa 123 Mik. 2	L625;407 R625;408 L625;409	Astro 350	L1038)8
Lobito 125 Mk, 4 and Mk, 5	L625/410 L625/414		
Shorps 173 Alpina 173 Lobito 173 Mk. 6	L625/415 L625/415	DUCATI	
Sherpa T Alpina 250 and 350	1.627/412 1.627/412	250	R627/408 / R930/76
Pursang 125 Mk 6	1.627/420 1.930/403	750 GT	1.990/77 R930/417
Pursang 175	R930/404 L930/405		ASSESSED 1711
Sherpa S175 and 200 Sherpa S175 and 200	R930/406 L930/407		
	R990/408 R930/409		
Pursang 175 Mk. 3 and Mk. 4	1.930/410 R930/411		
Sherpa S125 and 125 Mk, 2 Sherpa S125 and 125 Mk, 2	L930/412 R930/413		
Seeple S125 and 123 Mix 2 Pursang 125 Mix 3 Pursang 125 Mix 3 Pursang 125 Mix 5 Bandido 350 and 360	1,930/414		
Bandido 350 and 360	L930/416 R932/403		1000
Bandidu 350 and 360	1.932/404		
	The same of the sa		3 10 10 10 10 10 10 10 10 10 10 10 10 10
	1		THE STATE OF
	1		100
		A STATE OF THE STA	
	SCHOOL ST.		DATE OF STREET
		SECTION AND RESIDENCE	100000000000000000000000000000000000000

MACHINE	Carburetter No.	MACHINE	Carburetter No.
GELERA (ARGENTINA)	R622/2	OSSA Trials Enduro	L627/422 L932/436
GREEVES 150 180 Q.U.S. Gulffen	R932/5 R1034/4	RICKMANN 125 Enduro	R627
IUBQYARNA 25	1.932/21	SANGLAS Sanglas 40	R930/415 R930/418
.T.Ms. 5	R930/75	MOTOTRANS Deluse 350 Talia 250	R627/417 R627/419
IAICO	R1036-2	Road 256 24 Horas 250 SUNBEAM (Stewart Engineering)	R627/421 R627/424
fONTESSA coa 75 and 123 coa 247 coa 247 coa 247 coa 247 coa 247 coa 77 coa 77 coa 77	L625 413 R637 406 L627 407 L627 410 L627 411 L627 413 L627 414	S7	R624/4 R622/407
IOTO GUZZI Ø Twin	R930(80 1.930(81	TRIUMPH T100 SS	R626/64 L626/65 R626/66 L626/67 R626/68
ORTON VILLERS Commando Combat Consister Contestato	R\$30/82 1,950/85 1,950/85 1,952/25 1,952/27 1,952/30 1,952/30 1,952/31 1,952/32	740 T150 Hurricans P51 500 T120R TRER, TREC TR1.	R626/69 L626/70 R626/71 R928/21 R930/84 L930/85 R930/86 R930/89 R930/92 L930/93
		WASSFIL Trials 125	R622/7 or R622/8

Carburetor Settings List 1969, 1970, 1971 and 1972

Parts normally fitted to all Amal concentric carburetters unless atherwise stated under Special Details are as follows: TWO STROKE SETTING: Spray tube 622/075, Needle jet 622/079, Pilot jet 124/026, Needle 622/053, 928/063 or 1034/063. FOUR STROKE SETTING: Spray tube 622/074, Needle jet 622/102, Pilot jet 622/107, Needle 622/114.



EXPLANATION OF CARBURETTER TYPE No.

Type No.	Jet. Main	Pilot	Throttle	Needle Pasition	Seedle Jet 105	SPECIAL DETAILS
Carbureter Type No. (622 7 (622 7 (622 405 622 406 623 406 623 407 (623 407 (623 407	100 110 120	20 25 25	3	1	105	Peart Chamber 52/300. Peart Divided: Adaptive 52/300. Barto Divided: Adaptive 52/310.
629,406	120	25 30	21	2 2	106	Penio 376/09 Air Tube 522/162 . no 376/09 Air Tube 622/162
623 406 623 407	170	30	24	2 5	106 106	Ranso 376/097, Air Tube 622/163 Banso 376/097, Air Tube 622/163
E25 409	150	30	24	2 2	106 106	Banjo 376-097 Banjo 376-097
.625/410	150 170 750	30	1	1	106	Banjo 376,097 Air Usbe 622/162 Ganjo 376,097 Air Tube 622/162
8626 B	180		-	2	106 106 106	
626 10 626 11	160 160 150		3	2	100	
826/15 (876/16 (876/16 (876/17 (876/17 (876/17) (876/17) (876/17) (876/17) (876/17) (876/17) (876/17) (876/17) (876/17) (876/17) (876/17) (876/17) (876/17) (876/17)	150		3	9	38.88	Spray Tube 022/123. Lew Th: Valve Renurs Springs. Ferrule 6/137A.
(626/17 (626/19	180	3000	34	2	105	Spras Tube #22075 ion Haf Ferrule. Too Haf Ferrule.
(626/25 1626/25	170	3135	4	1	106 106	Top Hat Ferrule
676/27 1676 33	50		3		306	Top Hat Ferrule.
626 33	176		31		106 106	Top Hat Ferrules
626:47 626:48	200000000000000000000000000000000000000		3	9	106 106 106 106	Top Hat Ferrules; Les Air Valve Springs Spray Tube 622/128 Les Air Valve Springs Spray Tube 622/123 Less Air Valve Springs Spray Tube 622/123
1626 49	170	1000	1	2	106 106	Less Air Valve Springs. Spray Tube 622/123.
1626 52 1626 53 800 51	150 150		1		106	
626 56 8626 55 8626 61	150	20	31	2	105	Air Cables 330:22, 530/4. Junction Box 244/2080. Lockmit 622/138.
.626.62	150	2323	3)	0	106	Speay Tube 622/123. Air Gables 550/22, 530/4. Junction Box 244/2000. Lackmit 622/130.
(626.63	150	200	31	2	106	Spray Tube 622/123. Air Caber 530/22, 530/4. Junction Box 244/2080. Lockmin 622/138.
1627,406	160	40	24	*	106	Spray Tube 692/123 Banja 376/692
627/607 8627/408	160	40	2	2	106	Banja 376,092 Banja 376,092 Nerdje Jet 692/192 Nerdje Jet 692/192 Banja 376,092
627:416 627:411	170	40	7	2	106	Section 37 (302). Heavier 376,3091. Pleast Chamber 622,055. Baraje 376,097. Throatle Needle 622,063.
827/411 827/412	175	40	1	2	106	Banio 376.007
625(413)	150	40	21	1	106	Bania 326.097
627;414 627;436	150 -	90. 20	24 34	2	106	Runjo 326,097. G-braten Pilor Chutter. Banjo 376,097.
1928,6. 1928,6. 1928,12.	250	25	9	2	106	Top Hat Ferrules, Barge No. 376,092. Threttle Cable 530/12. Air Cable 530/13.
1928-20 1928-20	200		1	100	106	
930/10	190		3	2	106	6/132A Ferrules
1930.15	270 250	30	4	3	107	6/13/2A Pertinda Air Tube 928,006. 36001 Twist Grip Control and Ciables. Fermins 6/13/2A.
930,23	2.70		3	1	106	Air Tube 928,006. 366;1 Twist Geip.
#30/31	220 220		3	2	106 106 106	Througe Cable 530/1. Air Cable 530/2.
900.34 900.35	180		1	1	106	6/33/24 Ferrules, Len Air Valve.
930/46	240		3	2	106	10) XA FETTUSA, 12th Air Valve.
.930/47 1930/60	180 230		34	2	106 106	
930,66	160		3		106	
1.930,68 1.930,89	220 220		3	2	106 106 106 T	Hanjo 376/097. Threstle Cable 530/16. Air Cable 530/15. Hanjo 376/097. Throstle Cable 530/16. Air Cable 530/13. Throstle Cable 530/19. Air Cable 530/20.2 of each.
R930/70 L930/71	200 200		3		100	Throttle Cable 330/19. Air Cable 530/20, 2 off each. Air Cable 530/17, 1 off. Throttle and Air Cables 530/19 and 20. Air Cable 330/17, 1 off.
1.930/73	220 220	25	3		106	
1930/75 1930/76	250 190	12	3		106	Banja 397/097. Air Tube No. 928/056. Float Chamber 622/050. Banja 376/097. Banja 376/097. Theorie Cable 530/32. Air Gable 530/33. Flange Adaptm Required. 692/104. Banja 376/410. Thouris Noedle 928/073.
L930/77 R.930/70	200		3		106	Banjo 376(410. Throttle Cable 530(32. Air Cable 530(33. Plange Adapto
L930/403	200 260	30	3	2	106A-1	Float Chamber 622/184. Banjo 376/419. Thruttle Needle 928/075.
R930/404	240 240	40	34	2	106 106	East Lamber 02/1109. Major 3/16/19/. Februar Needle 2020/05. Elisa Chamber 02/100. Engle 20:009. Art 100:000/07/. Elisa Chamber 02/100. Engle 20:009. Art 100:000/07/. Elisa Chamber 02/100. Engle 3/16/09. Art 100:000/07/. Elisa Chamber 02/100. Engle 3/16/09. Art 100:000/. Elisa Chamber 02/100. Engle 3/16/09. Elisa Chamber 02/100. Elisa Chamber 02/100. Elisa Chamber 02/100. Elisa Chamber 02/10
930/405 8930/406	250 250	40	34 24 24	2	106	Float Chamber 622,036. Banis 376,039. Air Filter 393,900C. Float Chamber 622,056. Banis 376,039. Air Filter 393,900C.
.930/407 1930/409 1930/410	240 240	40 40 40	3	2	106	Float Chamber 522:056. Banjo 376:419. Air Tube 928:073. Float Chamber 622:056. Banjo 376:419. Air Tube 928:073.
R930,411 R930,411	230 230	40	3	2	106	Float Chamber 627/056. Banjo 376/099. Air Filter 395/900C
L930:412 R930:413 L930:414		40 40	3	7	106	Float Chamber 622/036. Banjo 376/099. Air Fister 395/900C. Float Chamber 622/056. Danio 376/419. Air Tube 928/073.
L930/414 R930/415	230 210 380	40 23	31	2	106	Float Chamber 622:059. Burjo 376:419. An Tube 928:073. Barjo 376:099. Air Filter 395-E.
R930:415 L930:416		23	21	2	105	Float Chamber 622/174 Banjo 376/419. Throttle Needle 622/176. Arr T 928/072. Mr. Body 1.950/014. Jes Holder 622/175. Needle Jes 622/177.
912/17	318 270	25	3	1	105	Banjo 376/097. Air Tube 928/066. Less Air Valve. Main Jet Filter Banjo 376/097. Less Air Valve. Main Jet Filter 928/071.
912/1 912/17 1912/19 1912/20 1912/20	270 220 220		1		107 706 196 105	Banjo 376 997. Throttle Cable 530, 16. Air Cable 530, 15. Banjo 376 997. Throttle Cable 530, 16. Air Cable 530, 15.
932 21	220	20	71	7	NO GOOD ATTEMENT	Past Chamber 202009. Baspa 376:114 Art 1 july 202013. Past Chamber 202009. Baspa 376:114 Art 1 july 202013. Past Chamber 202009. Baspa 376:114 Art 1 july 202013. Past Chamber 202009. Baspa 376:116 Art 1 july 202009. Past Chamber 202009. Baspa 376:109 Art 1 july 202009. Past Chamber 202009. Baspa 376:119 Art 1 july 202009. Past Chamber 202009. Baspa 376:119 Art 1 july 202009. Past Chamber 202009. Baspa 376:119 Art 1 july 202009. Past 1 july 202009. Baspa 376:119 Art 1 july 202009. Past 2 july 202009. Baspa 376:119 Art 1 july 202009. Past 2 july 202009. Past 202009. Les Art Valve. Man Jet Files Baspa 376:097. Past 2 july 202009. Les Art Valve. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009. Past 2 july 202009.
R902, 403 932, 404 1932, 405 932, 406 1942, 408 932, 409 1932, 411	240 240 260 260 260 260	#0 #0	3	2	107 107 106	Float Chamber 622/056. Banjo 376/419. Air Tube 928/071. Float Chamber 622/056. Banjo 376/419. Air Tube 928/073.
1932/405 1932/406	260 260	40	3	2 2	106	Float Chamber 622:056. Banjo 376:097. Air Tube 928:073. Float Chamber 622:056. Banjo 376:097. Air Tube 928:073.
932/408	250	40	3	2	106	Flora Chamber 627,056. Harjo 376,419. Air Tube 928,073. Flora Chamber 627,056. Harjo 376,419. Air Tube 928,073.
932 411	210 210 240	40	3	2	106	Float Chamber 672/036. Hanjo 376/097. Air Tube 928/073. Float Chamber 672/056. Hanjo 376/097. Air Tube 928/073.
1932/413	3000000	40	3	2	106	Float Chamber 622/056: Hanjo 376/097. Throttle Needle 928/075. Air Tube 928/072.
332,414	240	40	3	2	106	Float Chamber 622/056. Banjo 376/097. Throute Needle 928/075. Air Tube 928/072.
932/415	230 230	30 30 40	3	1	106	Moat Chamber 622/056. Banio 376/419. Air Filter 395/900 C. Lloat Chamber 622/056. Banio 326/419. Air Filter 395/900 C.
932/416 1932/417	240	10000	3	2	107	Float Chamber 622/056. Banjo 376/419. Needle Jet 622/185. Air Tube 928/074.
.932/418	240	40	3	2	107	
R932, 419	260	30.	3	-2	107-C	Float Chamber 622/036. Banjo 376/419. Air Tube 928/073. Needle Jrs 622/185.
.932/420	260	30	3	2	107-C	622/185. Fluar Chamber 622/036. Banjo 376/419. Air Tube 928/073. Needle Jes 622/185.
R932)424	280	30	3	- 2	107-C	622/185. Phat Chamber 622/056. Sanjo 376/419. Air Tube 928/073. Needle Jos 622/185.
1932/425	280	30	3.	2	107-C	Float Calmer 627-656. Supp. 376-149. Art 1409-280-01. See 187-186. Supp. 376-149. Art 1409-280-01. Supp. 376-149. Art 1409-280-01. Supp. 376-149. Art 1409-280-01. Supp. 376-149. Supp. 376-149. Supp. 376-149. Art 1409-280-01. Supp. 376-149. Supp.
932/426	260 220	40 30	3 3	2	106 107	Float Chamber 622/050. Banjo 376/419. Air Tube 928/079. Float Chamber 622/056: Banjo 376/097. Air Tube 928/072.
992/427 992/428 #845/428	240 240	40 30	3	2	106	Float Chamber 627/056. Banio 376/419. Air Filter 395/900.
R9321630 L932/431	246	30	3	2	107	BEZ-118. Float Chamber 672 (976) Sanjo 376-419 Air Tube 2880/93. Float Chamber 672 (976) Sanjo 376-419 Air Tube 2880/93. Float Chamber 672 (976) Sanjo 376-93 Air Tube 3880/93. Float Chamber 672 (976) Sanjo 376-93 Air Tube 3880/93. Float Chamber 672 (976) Sanjo 376-93 Air Tube 378-93 Air Tube 378
R 1034/3 R 1034/4	30.	25 30	2	3	107	
R1034/5	290 460	25 20	1	1	107	Banjo 376/097. Main Jer Filter 928/071. Banjo 376/130. Clause Adaptor Required.
R1034/5 R1036/2 R1036/4 R1038/5	3.0	300 40	13	1	106	Banjo 376,097. Maio Jet Filter 928,071. Banjo 756,139. Flang Adaptor Required. Float Chief 130. Flang Adaptor Required. Float Chamber 627,056. Air Fulb 1034,070. Main Jet Föter 928,071. Float Chamber 627,056. Banjo 376,419. Theorie Needle 1034,089.
L1038/6	440	40	3	2	107	Float Chamber 622/1006. hatpo 370/419. Throatic Needle 1034/088. Air Tube 1034/097. Banjo 370/419. Throatic Needle 1034/088. Air Tube 1034/087. Float Chamber 622/174.
		917	3	4	107	Print Communication and and and the Printer Access 1034/086.

SETTINGS SUGGESTED AS A BASIS FOR TUNING WHEN NO SETTING IS LISTED ABOVE

NEEDLE AND NEEDLE JET (22 and 24). The needle being taper either allows more or less petrol to pass through the needle jet as the throttle is opened or closed throughout the range except when idling or nearly full throttle. The taper needle position in relation to the throttle valve can be set according to the mixture required by repositioning the jet needle clip in any of three positions thus raising or lowering it. Raising the needle richens the mixture and lowering it weakens the mixture at throttle openings from one quarter to three-quarters open (see fig. 5, page 7). The throttle needles are marked with a single groove around the top diameter for use on the 600 series carburetter, the 900 series carburetter needles are identified by three grooves around the top of the needle, throttle needles indentified by two grooves are used on certain models for both series 600 and 900 carburetters.

THROTTLE VALVE CUT-AWAY. The atmospheric side of the throttle is cut away to influence the depression on the main fuel supply and thus gives a means of tuning between the pilot and needle jet range of throttle opening. The amount of cut-away is recorded by a number marked on the throttle valve, viz., 622/3 means throttle valve type 622 with No. 3 cut-away; larger cut-aways, say 4 and 5, give weaker mixtures and 2 a richer mixture.

AIR VALVE (3) is used only for starting and running when cold, and for experimenting with, otherwise run with it wide open.

TICKLER (25), a small plunger spring loaded, fixed in the carburetter body. When pressed down on the float, the needle valve is allowed to open and so "flooding " is achieved. Flooding temporarily enriches the mixture until the level of the petrol subsides to normal.

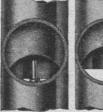
ALCOHOL FUELS. When using alcohol fuels the following new components are necessary. A metallic banjo preferably double feed if not already fitted, float chamber 622/051, banjo bolt washer 13/163, needle jet 622/190, jet needle 622/099 according to type of carburetter, filter gauze 376/093B and banjo w.s. or 14/175. The main jet must be increased for straight alcohol by approximately 150%. The final setting must be a question of trial and error according to the nature of fuel used.

When using alcohol fuels it is advisable to err on the rich side to avoid engine overheating.

HOW TO TUNE UP

PHASES OF AMAL NEEDLE JET CARBURETTER THROTTLE OPENINGS

Up to a open from to a open to a open to full open PILOT JET THROTTLE NEEDLE- MAIN JET CUT-AWAY POSITION SIZE









IST

2ND & 5TH

3RD

4TH

SEQUENCE OF TUNING FIG. 5.

TUNE UP IN THE FOLLOWING ORDER.

NOTE. The carburetter is automatic throughout the throttle range—the air valve should always be wide open except when used for starting or until the engine has warmed up. We assume normal petrols are used.

READ REMARKS ON PAGES 6 AND 7 for each tuning device and get the motor going perfectly on a quiet road with a slight up gradient so that on test the engine is pulling.

Ist. MAIN JET with throttle in position I (fig. 5). If at full throttle the engine runs "heavily" the main jet is too large. If at full throttle by slightly closing the throttle or air valve the engine seems to have better power, the main jet is too small.

FOUR STROKE SETTINGS TWO STOKE SETTIN

With a correct sized main jet the engine at full throttle should run evenly

With a correct sized main jet the engine at full throttle should run evenly and regularly with maximum power.

If testing for speed work ensure that the main jet size is sufficient for the mixture to be rich enough to keep the engine cool, and to verify this examine the sparking plug after taking a fast run, declutching and stopping-the engine quickly. If the plug body at its end has a cool appearance the mixture is correct: if sooty, the mixture is rich: if however there are signs of intense heat, the mixture is too weak and a larger main jet is necessary.

necessary.

2nd. PILOT JET (fig. 5) with throttle in positions 2 and 5.

With engine idling too fast with the twist grip shut off and the throttle shut down on to the throttle adjusting screw, and ignition set for best slow running: (1) Screw out throttle adjusting screw until the engine runs slower and begins to falter, then screw pilot air adjusting screw in or out, to make engine run regularly and faster. (2) Now gently lower the throttle adjusting screw until the engine runs slower and just begins to falter, adjust the pilot air adjusting screw to get best slow running: if this 2nd adjustment make engine run too fast, go over the job again a third time. Both the throttle adjusting screw and pilot air screw have an "O" Ring fitted to hold the adjustment by friction.

3rd. THROTTLE CUT-AWAY with throttle in position 3 (fig. 5).

3rd. THROTTLE CUT-AWAY with throttle in position 3 (fig. 5) If, as you take off from the idling position, there is objectionable spitting from the carburetter, slightly richen the pilot mixture by screwing in the air screw sufficiently, but if this is not effective, screw it back again, and fit a throttle with a smaller cut-away. If the engine jerks under load at this throttle position and there is no spitting, either the jet needle is much too high or a larger throttle cut-away is required to cure richness.

4th. NEEDLE with throttle in position 4 (fig. 5).

The needle controls a wide range of throttle opening and also the acceleration. Try the needle in the lower position, viz., with the clip in the groove at the top; if acceleration is poor and with air valve partially closed the results are better, raise the needle by two grooves; if very much better try lowering needle by one groove and leave it where it is best. If mixture is still too rich with clip in groove No. I nearest the top—the needle jet probably wants replacement because of wear. If the needle itself has had several years' use replace it also.

Sth. FINALLY go over the idling again for final touches.

TUNING TWIN ENGINES CARBURETTERS

where each cylinder has its own Carburetter.

First of all, slacken the Throttle stop screws and put the Twist Grip into the shut off position to allow the Throttles to shut off; there should be a slight backlash in the cables which backlash can be obtained, if necessary, by screwing in the cable adjusting screws on the top of the Carburetter after releasing lock nuts. Then, with the Handlebars in the normal position, and with the Throttles closed, adjust the cable adjusting screws so that on the slightest opening of the Twist Grip, both Throttles begin to open simultaneously, then reset lock nuts.

To set the Carburetters, follow the procedure as given on page 7, and bear in mind these "Hints," which may be useful:—Main Jet sizes are of course selected by checking the effect of the Mixture on the Sparking Plugs after taking a run at full throttle over a straight piece of road; the smallest pair of jets that give the best maximum speed are usually correct provided that the Plugs do not show any signs of excessive heat. It might be that for really critical tuning, one Carburetter might require a slightly different Jet size from the other.

For slow running, set the Twist Grip to make the Engine run slowly but just faster than a "tick-over"; then gently screw in the Throttle stops to just hold the Throttles in that position, and return the Twist Grip into the shut position, leaving the Engine running on the Throttle Stops.

The next thing to do is to set each Carburetter according to paragraph[2, on page 7, to obtain the idling by screwing down the Throttle Stop Screwa and adjusting the Pilot Air Screws accordingly.

Regarding the setting of the Pilot, a fairly satisfactory method is to detach one Sparking Plug lead, and set the Pilot Air Adjusting Screw on the other Cylinder as a single unit, and then reversing the process to the other Cylinder. It may be found that when both leads are connected to the Sparking Plugs, the Engine runs slightly quicker than desirable, in which case, a slight readjustment of the Throttle Stop Screws will put this right, it is essential that the speed of idling on both Cylinders is approximately the same, as this will either make or mar the smoothness of the get-away on the initial opening of the Throttle.

It is essential with Twin Carburetters that the Throttle Slides are a good fit in the bodies, and also that there is no suspicion of air leaks at either of the flange attachments to the Cylinder.

Regarding the lower end of the Throttle range, which is always the more difficult to set, one can only take excessive pains to make quite sure that the Control Cables are perfectly adjusted, without any excessive back lash or difference in the amount of back lash between one Carburetter and another; otherwise one Throttle slide will be out of phase with the other, and so resulting in lumpy running.

To check the opening of the Throttle simultaneously, shut the Twist Grip back so that the Throttles are resting on the Throttle Stop Screws in their final position of adjustment; then insert the fingers into the air intakes and press them on the Throttles and with the other hand, gently open by the Twist Grip and feel that the Throttles lift off their stops at the same time.

Carburetor Settings 1973

Garburetter Type No. R622/2	Main 100	Pilot	Throttle Valve	Needle Position	Needle Jet	SPECIAL DETAILS
R622/7 R622/8	110	20 20	3	i	105 105 105	Finat chamber 522/059. Sanio 376/097. Adaptor 622/164. Throttle table 530/09. Air cable 530/11 Fast grap 321/3. Aur control 12/068. Throttle cable 530/5. Air cable 530/1 Special finance adaptor to suit 33 mm stup. Throttle cable 530/97. Banio 376/097. Air tube 622/162. Banio 376/097. Air tube 622/162. Air sube 622/162. Main jet filter
R622/10 L622/406 R622/407	120 120 120	25 25	34 24 3	2 2 2	105 106 106	Throttle cable 530/97, Banjo 376/097, Air tube 522/162 Deer Charles 527/053 Banjo 336/097 Air tube 572/162
R624/4			012424	2	105	Float chamber 562/1052. Stanje 370/097. Air tabb 662/162. Main jet filter 2200/0306. Air cable 530/08 Thruttle cable 530/56. Air cable 530/68 Sanje 57/60/72. Air tabb 622/163. Sanje 57/60/72. Air tabb 622/163. Sanje 57/60/72. Air tabb 622/163. Sanje 57/60/72. Sanje 57/60/72. Sanje 57/60/72. Air tabb 622/163.
R625/405 R625/405 R625/405 (Ac5/408 (Ac5/408 (Ac5/408 (Ac5/408 (Ac5/408 (Ac5/408 (Ac5/408 (Ac5/408) (Ac5/408) (Ac5/408) (Ac5/408) (Ac5/408) (Ac5/408) (Ac5/408) (Ac5/408)	146 150 170 170	30 30 30	21	600	105 106 106	92(007) Banjo 376(097) Air control 12/608 Thruttle cable 530/50. Air cable 530/64 Banjo 376(097) Air tube 622/163 Banjo 376(097) Air tube 622/163 Banjo 376(097) Air tube 622/163
L625/408 L625/410	150 150 170	30 30	21 21 24	Ž.	106 106 106	Banya 276,092. Banya 376,097. Air tube 522 /152.
	150 150	30 20 30	2 3 2	7/2	106 106 106	Banja 376,097. Banja 376,097. Air tube 522/162. Banja 376,097. Float chamber 622,050. Main jer filrez \$28,074. Banja 376,047. Air tube 622/162. Banja 376,077. Air tube 622/162.
R626/64 L626/63 R626/66	150 150 150 150 150 150		1	1	106 1 106 1	
826/67	150 150 150		3 2 1	2 2	106 106	Air cables 530/22, 530/4. Junction box 244/2080. Locknus 622/138. Spr tube 622/123.
R626,69 ,826,70 ,8626,71 ,8627,1 ,8627,406 ,627,406 ,627,408	150	- 46	31 31	9	106	Air cables 530/22, 530/4. Junction box 244/2080. Lockmit 622/138. Spetube 622/123. Carburetter finish—silver grey stoving.
R627/406 L627/407	160 160	20 40 40	24 24	2	105 106 106	Air iet d.in. Spray tube 928/107. Banio 3/6/097 Banio 3/6/097
.627/410 .627/411	200 170 175	40	2	2 2 2	105 106 106	Air Jet., 4; in. Sprax tube 232; 107. Banja 736;079. Banja 736;097. Banja 736;097. Banja 736;097. Banja 736;097. Banja 736;097. Banja 736;097. Throttle needle 622;182. Primary, air hole 4.75 mm dia. Banja 736;097. Air tube 1922;183. Banja 736;097. Banja 736;097. Banja 736;097.
.627/412 .627/413 .627/414	150 160	40 40	24 3	3.3	106 106 106	Barjo 376/097. Air tube 622/162. Barjo 376/097. Barjo 376/097.
1627/414 1627/417 1627/419	190	15 25	3 24	2 2	105	Banja 376/419 Fluar chamber 622/199. Air tube 376/056. Main jet filter 926/071. Banja 376/419 Fluar chamber 622/199. Air tube 522/212. Main jet filter 926/071.
J627/420 L627/421	240 200	30 20	2	2 2	106	928(97). Banjo 37h;419. Banjo 37h;419. Banjo 37h;419. Float chamber 622(199. Air tube 622,089. Mam jet filter
827/422 8627/424	120	30 15	3 3	2	106	97(0)(2). 97(0)(2). 97(0)(2). 97(0)(2). 97(0)(3). 97(0)(4).
R928/21	210	13 Sept.	3	2	106	
R928/21 R936/75 R936/75 L936/76 L936/77 R930/80 L936/81 R936/82	250 190 190 200	25	34 34 3		106 106 106 }	Bargo 376/097. Air tube 928/066. Flant chamber 622/050. Bargo 376/097.
.930/80 .930/81 k930/82	220		3		106 106 106 106	Banjo 376/410. Thruttle cable 530/32. Air cable 530/33. Throttle cable 530/16. Air cable 530/15.
1930/84	220 180 100		3 3	2	106 106 106	Futurine Calum 240/10. Our caous 920/13.
1930/85 1930/86 1930/89 1930/92 1930/93 1930/403	289 260		34	2	106 106 106 T	
.930/93 .930/403	190 260	30	3	2	106 A-4	Vinut chamber 622/184. Hunjo 376/419. Throttle needle 928/075. Jet holder
930/404 930/405 930/406 930/407	240 240 250 250	40	34	1	106	Finat chamber 622/184. Jianjo 376/143. Throttle accide 328/075. Jet holder 622/183. Needle jet 822/173. Air tube 328/072. Jet holder 622/183. Needle jet 822/173. Air tube 328/072. Plast chamber 62/205. Banjo 376/099. Air tube 328/073. Plast chamber 62/205. Banjo 376/099. Air tube 328/073. Plant chamber 62/205. Banjo 376/099. Air tube 328/095. Plant chamber 62/205. Banjo 376/099. Air hijer 335/306C. Banjo 376/099. Air hijer 335/306C.
930/407 930/408 930/409	250 270 240	40 40 40	1	1	206 106	Flour chamber 022/056. Banjo 376/059. Air filter 395/900C. Banjo 376/057.
930/470	240	40 40 40	31	2	106 106 106	Banja 376/997. Fioar chamber 622/056. Banjo 376/419. Air tube 928/073. Fioar chamber 622/056. Banjo 370/419. Air tube 928/073. Fioar chamber 622/056. Banjo 370/059. Air filter 955/000G. Foor chamber 622/956. Banjo 370/059. Air filter 955/000G. Foor chamber 622/956. Banjo 370/059. Air filter 395/000G.
936/411 930/412 1930/413 930/414	230 230 230 230 210 380	40 40 40	3 3	2 2 2	106 106 106	Float chamber 622/056 Banjo 376/099 Air filter 393/9900C. Float chamber 622/056 Banjo 376/419 Air tube 928/073. Float chamber 622/056 Banjo 376/419 Air tube 928/073.
930/416		25	34 24	2	106	Banja 246,997. Pinas Lambert 622,096. Banjo 276,419. Air tube 928,073. Pinas Chambert 622,096. Banjo 276,419. Air tube 928,073. Pinas Chamber 622,096. Banjo 276,419. Air tube 928,073. Pinas Chambert 622,096. Banjo 276,994. Air files 729,595 C. Pinas Chambert 622,096. Banjo 276,994. Air files 729,595 C. Pinas Chambert 622,096. Banjo 276,994. Air files 928,073. Pinas Chambert 622,096. Banjo 276,919. Air tube 928,073. Banjo 276,995. Air files 282,075. Recelle jes 622,176. Air tube 928,073. Pinas Direction of the 928,075. Recelle jes 622,177. Banjo 276,475. Air tube 928,075. Main jes files 928,071. Banjo 276,975. Air files 928,075. Main jes files 928,071. Banjo 276,975. Air files 928,075. Main jes files 928,071. Banjo 276,975. Air files 928,075. Main jes files 928,071. Banjo 276,975. Air files 928,075. Main jes files 928,071. Chamber 622,076. Banjo 276,075. Cable 259,676. Les air wake. Pinas chamber 622,076.
1930/417 1930/418 1932/3	220 220 310 220	38 25 25 25 20	5± 3± 5	2 2	106 106 106	Barrio 176/419. Air tube 928/072. Main jet filter 928/071. Barrio 176/097. Air filter 395/376. Main jet filter 928/071. Barrio 176/097. Air tube 928/096. Les air value. Main jet filter 928/071.
932/21		20	28	2	106 105 106 \	
932/27 1932/28 1952/29	230 230 180		3	1	106 J 106 106 \	Bango 376/097. Throttle cable 530/16. Air cable 530/15. Throttle cable 530/92.
.932/30	260 260 250		34	2	106 7	Banjo 376/097. Throate cable 530/16. Air cable 530/15. Banjo 376/097. Throate cable 530/16. Air cable 530/15.
932/31 932/32 932/403 932/404 932/405	250 230 240 240	40	3	2 2	106 3 107 107	Float chamber 622/056. Banjo 376/419. Air tube 928/073. Float chamber 622/056. Banjo 376/419. Air tube 928/073.
932/403 932/406 931/406	260 260 260 260	40 40 40 40	3 3	2 2	106 106 106	Data chamber 62,2006. Banto 75,6219. Air tabe 278,073.
932,406 932,408 932,409 932,411	260 210 210	40		1	106 106	Float chamber \$22,056 Bailo 376/4 9 Air take \$22073 Float chamber \$22,056 Bailo 376/4 9 Air take \$22073 Float chamber \$22,055 Bailo 376/4 9 Air take \$22073 Float chamber \$22,055 Bailo 376/4 9 Air take \$22072
932/412 932/413	240	40	3	2	106	Float chamber 522,056 Bunjo 376,057 Air tubs 928,073 Float chamber 522,056 Bunjo 376,057 Air tubs 928,073 Float chamber 622,056 Bunjo 376,057 Throttle needle 928,075 Air tubs 928,073
932/414 932/415	240	40 30	3	2	106	Air robe 028/029 nanyo 3/0/09/. I arottle needle 9/28/0/3.
932/415 932/416 932/417	240	40	3	2	106	Float chamber 622/056. Hanjo 376/419. Needle jet 622/185. Air tube 928/074.
932/418 932/419	240 260	40 30	3	2 2	107 107C	Flort chamber 622/056. Basin 376/419. Air tube 928/073.
932/420	260	30	3	2	107C	Needle jet 622/185.
932/424 932/425	280	30	3	2	107C	Needle jet 622165. Float chamber 622766. Banja 376/419. Air tube 928/073. Needle jet 622165. Float chamber 6227056. Banja 376/419. Air tube 928/073.
932/426 932/427		40	1	1	106 107	Float chamber 822/036. Banju 376/419. Air tube 920/073. Needle jet 622/1036. Banju 376/419. Air tube 920/079.
932/427 932/428 932/430 932/431 932/432	260 220 240 240	30 40 30	3 3	7 7	106	Final Chamber 527,006 Barno 276,419 Air tube 920,0079 Final Chamber 527,006 Barno 776,007 Air tube 920,0079 Final Chamber 527,006 Barno 570,419 Air finer 390,906 Final Chamber 527,006 Barno 570,419 Air finer 390,906 Final Chamber 527,009 Barno 570,919 Air time 320,0074
932/431 932/432 932/433	240	90 90 40	9 3 21	1	107	Float chamber 027005
932/433 932/434 932/435 932/436	310 380 330 310	40 40 40	21 21 21 21	1	107 107 107 108	Float chamber 622/198. Banjo 376/419. Air tube 828/050. Float chamber 622/198. Banjo 376/419. Main jet filtes 928/071. Float chamber 622/198. Banjo 376/419. Air tube 978/089.
932/437	280	40	2	2	106	Float shamber E99 100 Banks 376 310 Ale take 000 0070
932/433	230	90	3	2	106	Main jet bilet #230/71. Finit chimber 627/207. Banjo 376/097. Air filter 395/900C. Majo jet filter 928/071.
1034/3 1034/4 1034/5 1036/2	300 320 290	25 39 25	24. 3 34	3	107 107 107	Float chamber 622,056. Air tube 1034,070. Main jet filter 928,071. Banjo 376,097. Main jet filter 928,071.
1030/3	290 400 430 490	20 40 35	2 2	2 2	108 107 108	Banjo 376/997. Main jet filter 928/071. Banjo 376/193. Air tube 1024/089. Main jet filter 928/071. Banjo 376/193. Air tube 1024/089. Main jet filter 928/071. Banjo 376/193. Dalin jet filter 928/071. Banjo 376/193. Dalin jet filter 928/071. Banjo 376/193. Dalin jet filter 928/071. Banjo 376/193. Throatie needle 1034/063. Filter banjo 376/193. Throatie needle 1034/063. Filter banjo 376/193. Throatie needle 1034/063.
1036/9	430 440	33 40	24	2	108	Banjo 376/419. Main jet filter 928/071. Float chamber 822/207. Banjo 376/419. Throttle needle 1034/063.
1038/7 1038/8	460	35 35	2	2	108	Air tube 1034/0/4. Float chamber 622/174. Float chamber 622/179. Banjo 376/419. Main jet filter 928/071.

SETTINGS SUGGESTED AS A BASIS FOR TUNING WHEN NO SETTING IS LISTED ABOVE

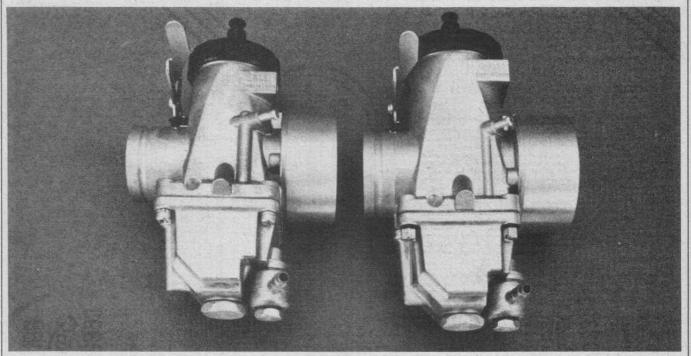
TWO-STROKE SETTINGS

Carburetter Type No.	Jet :	Pilat	Throttle Valve	Needle Position	Needle Jet	
R622/902 L622/302 L622/302 L624/303 R626/302 L624/303 R626/303 R526/303 R926/303 R930/303 R930/302 L930/303 R932/302 L930/303 R932/302 L930/303 R932/303 L930/303 L930/303 L930/303 L1036/303	110 110 110 140 170 170 200 200 250 250 250 260 360 360 380	25 25 25 25 25 25 25 25 25 25 25 25 25 2	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	222222222222222222222222222222222222222	106 106 106 106 106 106 106 106 106 106	

FOUR-STROKE SETTINGS

Curburetter Type No.	Jet: Main	Size Pilor	Throttle Valve	Needle Position	Needle Jet
		8.000	A serve.	E-onitron	
R622/300	120	0.000	-3	2	106
L622/301	120		3	2	106
R624/300	140		3	2	106
1.624/301	140		3	2 -	106
R626/300	160		5	2	106
L626/301	160		3	2	106
R928/300	180		3	2	106
L928/301	180		3	2	106
R930/300	200		3	2	106
L930/301	200		3	2	106
R932/300	220		3	2	106
L932/301	220		3	2	105
R1034/300	340		3	2	108
L1034/301	340		3	2	108
R.1036/300	360		3	2	108
L1036/301	360		3	2	198
R1038/300	380		3	2	108

Amal Mark II **Technical Manual**



New Mark II carb. Right side, 38mm. Left, 30mm.

EVEN THOUGH THE Mark II is a breakthrough, it still has to be tuned the same way as the Concentric, or even the stately Monobloc. Refer to these sections for tuning procedures and jetting specifications. The same jets are used throughout, so you don't have to throw away your box of old jets. The only new jets you'll need, will be the new high speed air bleeds, and there are only three of these.

Series numbers in the new Mark II will be similar to the Concentric numbering system. All they've done is add a "2" in front of the basic numbers. The 2600 Series Mark II will come in 22, 24 and 26mm bore. The 2900 Series in 28, 30, 32 and 34mm, while the 2000 Series will be 36, 38 and 40 millimeters across the throat. This 40 should be a highly sought after number.

Probably the single biggest change to the Mark II (other than spiffy looks) is the first ever "two pilot" system. Now the tuner has a choice of not only what pilot jet to use, but where he can put it. It can be located near the front or the back of the carb, depending on the need of the motor. Two stroke motors (with poor pressure drops at very low rpm) will benefit from a location closest to the venturi. The pilot hole that isn't being used is simply blocked off. Naturally, standard pilot jets are used.

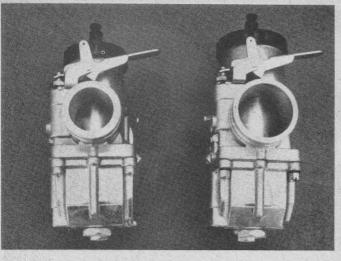
Other features of the Mark II include the following, in no particular order:

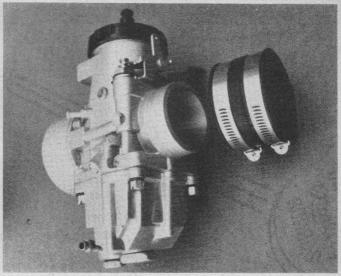
- 1. Plastic cap, so you don't have to fart around with screws.
- 2. 5 position needle, for finer tuning without changing the needle.
- 3. Thicker slide. That should eliminate the breakage problem of the past.
- 4. Cold start jet for choke. Uses a standard pilot jet. (larger)
- 5. A high flow bell that increases
 - 6. Removable high speed air bleed

jets for finer tuning.

- 7. Choice of floats. (But, you've had this all along and didn't know it)
- 8. A stabilizer bar and mounting holes for multi-cylinder bikes. Keeps the carbs locked in line.
- 9. Two float tubes vented high up for cleaner carbs. If there is any leakage, it won't dribble all over the motor like in days of old.
- 10. Lighter weight. The new carb is aluminum and weighs 134 pounds, while the Concentric weighed 21/4 pounds.

Other than the above reasons, the whole carb looks like it was made much more carefully than Amals of old. We're going to be trying some of them soon and checking results on the dyno and on the track. We'll keep you posted. Oh ves, they'll be coming as standard equipment on several bikes, including Bultaco and Montesa.

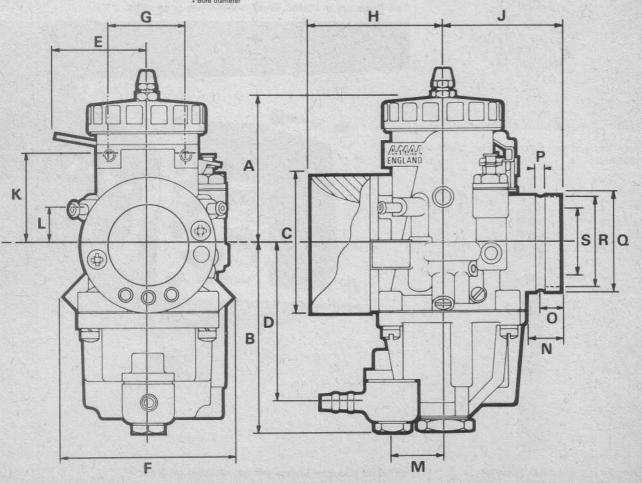




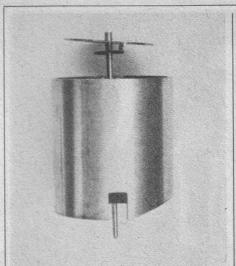
All Mark II carbs will be rubber mounted for protection against frothing from vibration.

Dimensions

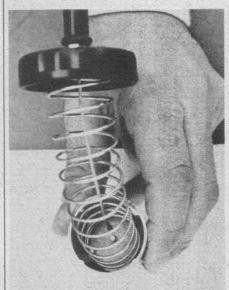
		Α	В	C.	D	E	F	Gt	. н	J
Series 2600	mm	60	75	52	62	40	66	27	53-5	49.5
Series 2900	mm	62	79-5	58	66-5	40	72-5	32	56	49.5
Series 2000	mm	72	82	62	69	40	75-5	38	58-5	49.5
		K	L	М	N	0	Р	0*	R*	St .
Series 2600	mm	33	19-5	22-5	15	10	4	35	33	22, 24 or 26
Series 2900	mm	38	15	22-5	15	8	4	40	38	28, 30, 32 or 34
Series 2000	mm	48	15	22-5	15	8	4	45	43	36, 38 or 40



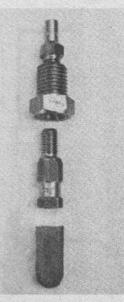
^{*} Diameter † Two holes, tapped M6-6H (Series 2600: M5-6H) ‡ Bore diameter



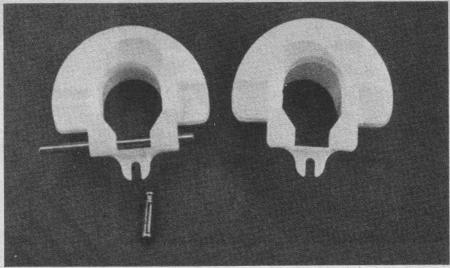
Needle, clip and slide from 36mm carb.

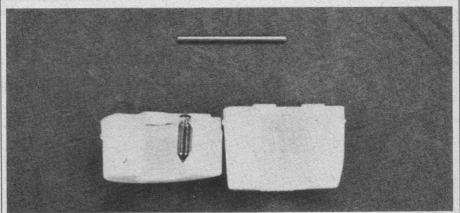


New cap and spring/clip combo look very Mikuni-ish.

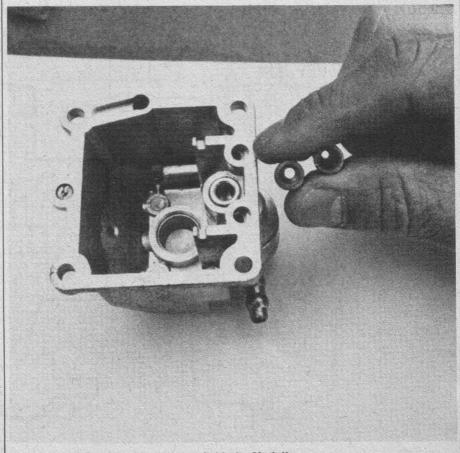


Needle jet, jet holder, main jet and screen—in order.

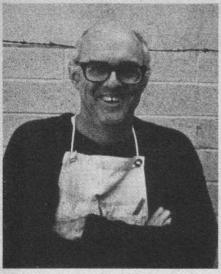




Two floats are available. Small volume one is on right.



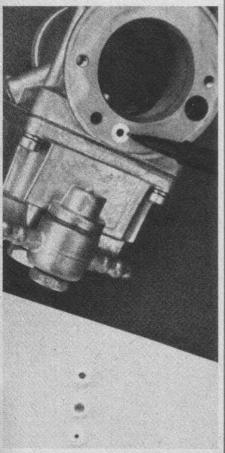
Different size flow fittings will be available for Mark II.



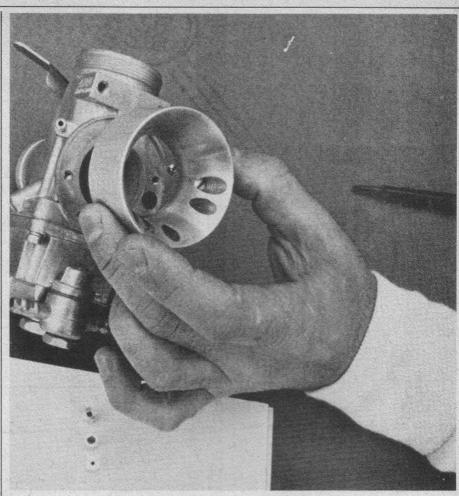
Norm.



Jerry.



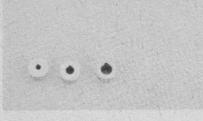
Removable high speed air bleeds.



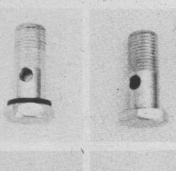
New bell holds the high speed air bleeds in place.



Burak-Bye offers this racing bell as an accessory for the Mark II as well as the Concentric.



High speed air bleeds. Richest on the left, leanest on the right.



Old style small flow banjo fittings are on the left. High flow one is at right.





Two stroke main jet holder on left; four stroke on right.









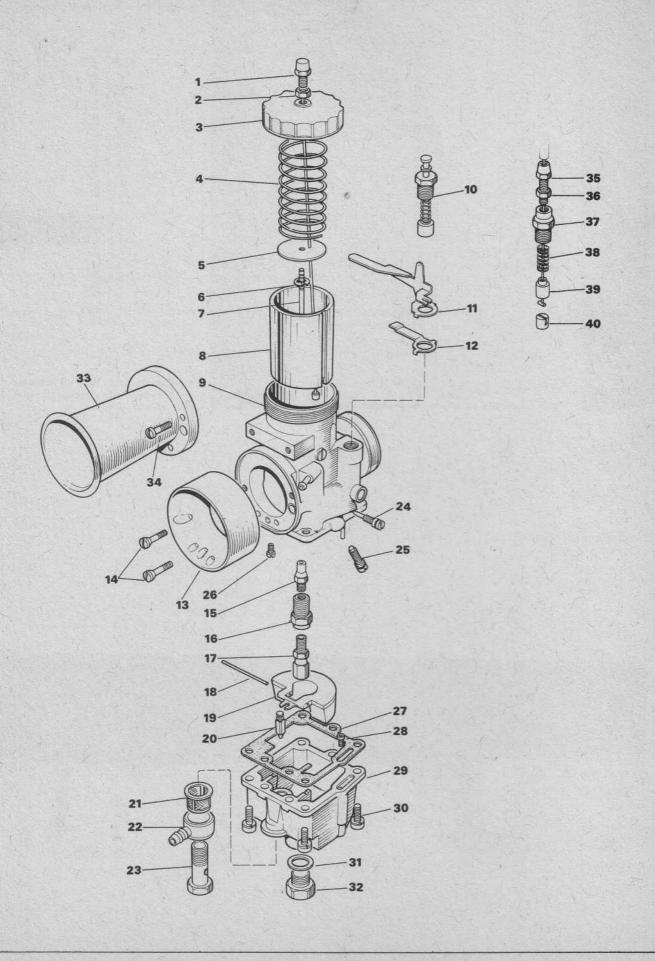
Two stroke needle jet on left; four strokes on right.

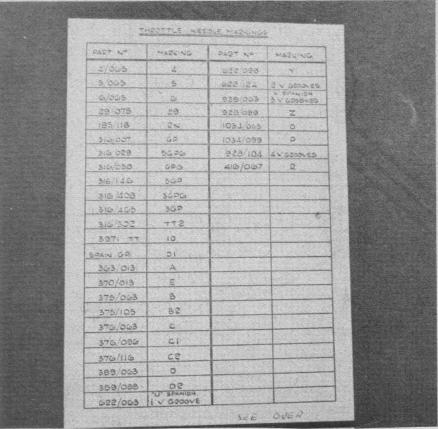
55			PLUS	AND	MINUS	3/400
		150		F .	(a mark)	13/4 CC
160		600	. 4	- 1		3 cc
620		1000	4	*		5 c.c
1100		1500	а		7/10/04/03/03	7/200
1600		2000	a .	I	100	7 /2 C.C
	55	- 50 - 150	IN	5	CC. INCR	
		- 600	IN	10	CC.	1 4 5 5 5
	160	000			AND THE RESERVE OF THE PERSON NAMED IN COURSE	
		- 1000	-in	100000	AND THE RESERVE OF THE PERSON NAMED IN COURSE	B. Carlo
	620		-in	100000	C.C.	100

New line of jets is bench flowed for markings.

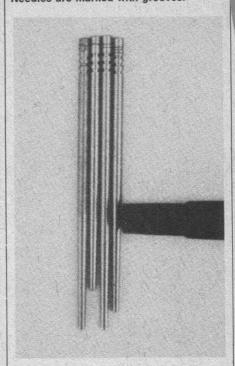
Service Parts for Mark 2 Amal Concentric Carburetors

Key to Component Illustration		Carburetor Series 2600	Carburetor Series 2900	Carburetor Series 2000
1	Cable adjuster	4/035	4/035	4/035
2	Cable-adjuster locknut	5/077	5/077	5/077
3	Mixing-chamber top (standard)	2622/064	2928/064	2036/064
Not shown	Cable ferrule for use with mid-cable adjuster	6/132A	6/132A	6/132A
Not shown	Mixing-chamber top for ferrule	2622/120	2928/120	2036/120
4	Throttle-slide spring	2622/061	2928/061	2036/061
5	Needle retaining disc	2622/071	2928/071	2036/071
6	Needle clip	2622/067	2622/067	2622/067
7	Throttle needle (paired with 2-cycle needle jet below)	2622/063	2928/063	2036/063
7	Throttle needle (paired with 4-cycle needle jet below)	2622/124	2622/124	2622/124
7	Throttle needle (for alcohol only)	2622/125	2928/125	2036/125
8	Throttle slide (specify cutaway)	2622/060	2928/060	2036/060
9	Carburetor body assembly			
10	Cold start plunger assembly (lever operated)	2622/079	2622/079	2622/079
11	Cold start lever and bracket assembly	2622/075	2622/075	2622/075
12	Cold start click spring	2622/087	2622/087	2622/087
13	Air intake adaptor	2622/062	2928/062	2036/062
14	Air intake adaptor securing screws	2622/073	2622/073	2622/073
15	Needle jet (prefered for 2-cycle engines)	622/079	2928/079	622/079
15	Needle jet (prefered for 4-cycle engines)	622/122	2928/122	622/122
15	Needle jet (for alcohol only)	622/100	2928/100	622/100
16	Jet Holder	622/128	622/128	622/128
17	Main jet (specify size)	376/100	376/100	376/100
18	Float spindle	2622/069	2622/069	2622/069
19	Float (standard)	622/069	622/069	622/069
19	Float (standard)	622/196	622/196	622/196
20	Float needle	622/149	622/149	622/149
20	Filter	376/093	376/093	376/093
21	Filter (for alcohol only)	376/093B	376/093B	376/093E
21	Banjo, single, push-on (½ in, inside diameter tubing)	376/0938	376/0938	376/0936
22	Banjo, single, push-on ($\frac{1}{4}$ in. inside diameter tubing) Banjo, single, threaded $\frac{1}{4}$ in. BSP ($\frac{1}{16}$ in. tubing)	376/090	376/097	376/097
22	Banjo, single, threaded $\frac{1}{4}$ in. BSP ($\frac{1}{16}$ in. tubing) Banjo, single, push-on ($\frac{1}{16}$ in. tubing)	376/090	376/090	376/090
22		376/130	376/130	376/130
	Banjo, double, 90°, push-on ($\frac{1}{16}$ in, tubing) Banjo, double, 150°, push-on ($\frac{5}{16}$ in, tubing)	376/135	376/135	376/135
22		376/139	376/139	376/410
22	Banjo, double, 55°, push-on (\$\frac{1}{16}\$ in, tubing) Banjo, double, 180°, push-on (\$\frac{1}{16}\$ in, tubing)	376/410	376/410	376/410
Not shown	Banjo, double, 180°, push-on (¼ in. tubing)			14/175
Not shown	Banjo washer (for alcohol only)	14/175 622/078	14/175 622/078	622/078
23	Banjo bolt	622/078	2622/128	2622/128
24	Pilot-air adjusting-screw assembly	2622/128 2622/129	2622/128	1222/129
25	Throttle-stop adjusting-screw assembly	124/026	124/026	1222/129
26	Pilot jet Floet how! washer			2622/070
27	Float bowl washer	2622/070	2622/070 124/026	124/026
28	Cold start jet Float bowl = 0.10 in seating (2.5 mm)	124/026 2622/055	2622/055	2622/055
29	Float bowl - 0.10 in, seating (2.5 mm)	THE RESIDENCE ASSESSMENT	2622/055	2622/056
29	Float bowl - 0.062 in, seating (1.6 mm)	2622/056		THE PERSON NAMED IN
29	Float bowl - 0.125 in, seating (3-2 mm)	2622/057	2622/057	2622/057 2622/058
29	Float bowl - 0.156 in. seating (4.0 mm)	2622/058	2622/058	
30	Float-bowl securing screws	622/086	622/086	622/086
31	Float-bowl drain-plug washer	2622/066	2622/066	2622/065
32	Float-bowl drain-plug	2622/065	2622/065	2622/065
33	Velocity stack	2622/126	2928/126	2036/126
34	Velocity stack securing screws	2036/073	2036/073	2036/073
35	Adjuster	4/035	4/035	4/035
36	Adjuster locknut Alternative	5/077	5/077	5/077
37	Screw cable-operated	2622/091	2622/091	2622/091
38	Spring cold start	2622/084	2622/084	2622/084
39	Plunger cap	2622/092	2622/092	2622/092
40	Plunger assembly	2622/094	2622/094	2622/094





Needle markings chart. Needles are marked with grooves.



Four stroke spray tube on left, part no. 622/074. Two stroker on right, part no. 622/075.

