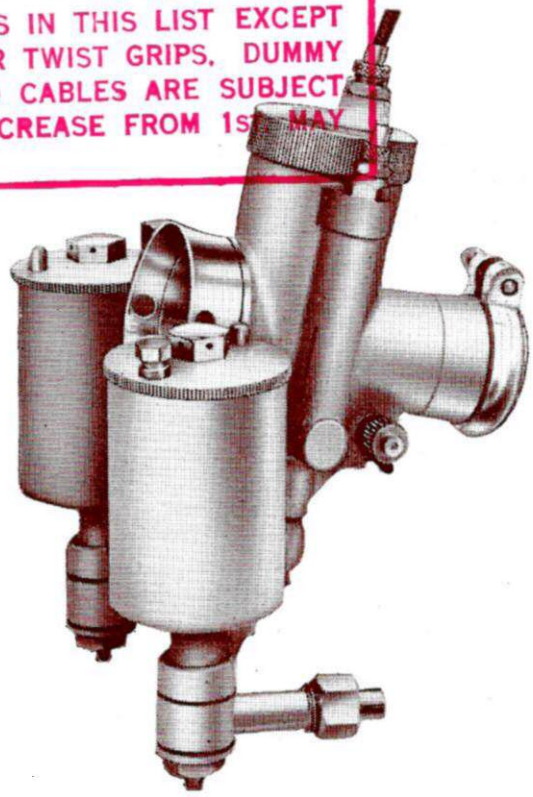
ALL PRICES IN THIS LIST EXCEPT THOSE FOR TWIST GRIPS, DUMMY GRIPS AND CABLES ARE SUBJECT TO 10% INCREASE FROM 1st MAY 1955.



AMAL

TRACK RACING CARBURETTER

TYPE 27.

This Carburetter has been designed primarily to meet the conditions imposed by Track Racing and the use of Alcohol fuels; it is fitted as standard with double Float Chambers to maintain a fuel level in the Jet when cornering in either direction. The through way is unobstructed and designed to allow the highest possible volumetric efficiency. It is of the plain jet pattern without needle control above the main jet.

The fuel supplied by the main jet is primarily mixed with air before it enters the choke block, the primary air being taken from outside through an orifice in the boss on the side of the mixing chamber body. This primary air may be alternatively fixed so making the Carburetter single control, or may be hand operated so providing a mixture control, thus making the Carburetter one with double control.

A pilot jet and by-pass are incorporated in the design to ensure easy starting and slow running. The actual fuel orifice of the pilot jet is fixed and a screw at the side of the Carburetter is provided to regulate the mixture by controlling the air.

The Carburetter is frequently used without the mixture control at the side of the Carburetter, so once the correct setting is arrived at for the fuel and the conditions the engine is to run, the Carburetter is single controlled.

The AMAL Track Racing Carburetter.

IS MADE IN TWO MODELS ONLY WITHOUT NEEDLE JET CONTROL FOR USE EXCLUSIVELY WITH ALCOHOL FUELS.

Supplied with :—

Double Float Chambers, fitted with Single Banjo Swivelling Petrol Pipe Connections.

Three Gauze Air Intake Funnel.

Type 27/002	$1\frac{1}{16}$" cross bore, $1\frac{1}{4}$" clip fitting	**PRICE each 198s. 0d.** without controls
Type 27/013	$1\frac{1}{8}$" cross bore, $1\frac{3}{8}$" clip fitting	

WHEN ORDERING specify :—

1.—WHICH MODEL YOU REQUIRE and if inclined, state the angle.
2.—Single control to the throttle or double control for throttle and mixture.
3.—If twist grip, lever or cables are required, state particulars.
4.—Name and details of engine.
5.—Name of fuel to be used.
6.—Are extra spare jets and throttles wanted.

EXTRAS.

Control cable up to 4 ft.	each	2s. 6d.
Midway adjuster	each	1s. 6d.
Twist grip for throttle ..	each	11s. 0d.
Single lever for mixture control	each	9s. 0d.

SPARES EXTRAS.
Interchangeable in both models.

Throttles with various cutaways Maximum cutaway No. 14.	each	9s. 4d.
Jets, any size up to 1800 c.c.	each	2s. 9d.

GUARANTEE.—The Company take all possible reasonable care in the manufacture and the quality of their products. Purchasers are informed that, any part proved to be defective in manufacture or quality, and returned to the works within six months of its purchase new, will be replaced. The Company must respectfully point out however, that its responsibility and that of its agents, stockists and dealers, is limited to this Guarantee, and that they cannot, under any circumstances, be held responsible for any loss or for any contingent or resulting liability arising through any defect. These conditions of sale and use also apply when the Company's products form part of the original equipment of machines purchased new.

(THIS LIST IS PRINTED IN ENGLAND, AND IS ISSUED SUBJECT TO PRICES RULING AT THE DATE OF DELIVERY).

AMAL LTD., Holdford Road, Witton, BIRMINGHAM, 6
ENGLAND.
TELEPHONE: BIRMINGHAM, BIRCHFIELDS 4571 (P.B.X. 6 lines). TELEGRAMS: AMALCARB (PHONE), BIRMINGHAM.

1,000/12/54. W.

Tuning the Amal Track Racing Type Carburetter.

THE TUNING of the Track Racing Carburetter is carried out in three stages of throttle opening :—

1.—The Main Jet (three-quarter to full throttle). *Spare jets required for tuning.*
2.—The Pilot Screw (closed to one-eighth throttle).
3.—Throttle Valve Cut-away (one-eighth to three-quarter throttle). *Spare throttles with different cut-aways may be required for tuning.*

The tuning should be carried out in the order mentioned.

The condition of the sparking plug should be carefully observed each time a trial is made, this being used as an indication of the full throttle mixture strength, or, in other words, whether the main jet is weak, or rich : A dry baked appearance being an indication of weak mixture, and, of course, a sooty appearance denoting rich mixture or too large a main jet, but attention would be drawn especially to the fact that the condition of the sparking plug can only be used to indicate the mixture strength at full throttle, and it should not be assumed that the main jet is too big if, after normal running, the sparking plug is found to be sooty, as this may quite easily have accumulated from too rich a slow-running mixture.

1. TO OBTAIN MAIN JET SIZE :—

Select a size of jet which gives maximum power and speed, bearing in mind that a powerful mixture may be the cause of overheating if it is too weak to keep the engine cool. A larger jet may be necessary than the minimum size for power, for this purpose of cooling and if the sparking plug should look dry and burnt a larger jet must be used which will not of necessity reduce the power.

If the primary mixture control is operated by hand control it should be set three quarters open during tests.

2. PILOT ADJUSTMENT.

To weaken slow-running mixture, screw pilot air adjuster anti-clockwise.

To richen slow-running mixture, screw pilot air adjuster clockwise.

TO START, slightly flood float chamber by gently depressing the tickler until fuel can be observed overflowing from the mixing chamber.

Set magneto half-advance ; throttle slightly open ; close air lever and start up the engine. After having warmed up the engine, the pilot can now be adjusted. It will be found that as the pilot air screw is screwed out, or weakened, the engine revs. will increase, necessitating the throttle being closed slightly, and it is a combination of throttle position and air adjustment which will give the desired idling or tick-over.

It is sometimes necessary to fully retard the magneto before good idling is obtained, this being usually the case when excessive valve overlap or an early ignition timing is employed. Failure to secure good idling will probably be traced to one of the following causes :—

Air leaks at junction of carburetter and engine, or due to worn inlet valve stem or guide.
Faulty inlet or exhaust valve seatings.
Oily sparking plug.
Too much ignition advance.
Magneto contact breaker points dirty or too closely adjusted.
Short on high tension cable.
Sparking plug points too closely set.

3. THROTTLE VALVE CUT-AWAY.

After having set the slow running as explained above, slowly open the throttle valve, when, if the engine responds regularly, the valve cut-away is correct.

A weak mixture is indicated by spitting back through the air intake, and as a second check on this weak flat spot it will be found that if the air lever is closed the flatness will disappear, this pointing to the fact that a throttle valve with less cut-away is required.

A rich mixture, which is shown by black smoke from the exhaust, coupled with erratic running or eight-stroking, and which again is accentuated when the air valve is closed, points to the fact that a throttle valve with more cut-away is required. The number of cut-away is stamped on the top of the throttle valve, the higher the number the greater the cut-away.

The standard valve for single cylinder engines is a No. 12.

Having obtained correct " idling," Throttle Valve Number and Main Jet Size, the setting should be now in order.

A general Carburetter setting cannot be given for any particular machine because of the variety of alcohol mixtures and conditions under which they are used. Each Carburetter can be tuned according to the foregoing instructions for the actual conditions under which the machine is to be used. As an indication, for example, of starting to tune up J.A.P. Track Racing Engines on J.A.P. Racing Fuel, the following settings may be taken as a guide but not necessarily final :—

350 O.H.V. Single Control, type 27/002.
Throttle valve cut-away, 12.
Main jet No. 700 c.c.

500 O.H.V. Single Control, type 27/013.
Throttle valve cut-away, 12.
Main jet No. 860 c.c.

The Float Chamber provides ample feed under all conditions, therefore, see that there is no restriction in the flow from the tank to float chamber. We recommend that fuel pipes should not be less than $\frac{1}{4}$" inside diameter and fuel cocks should have large bores.

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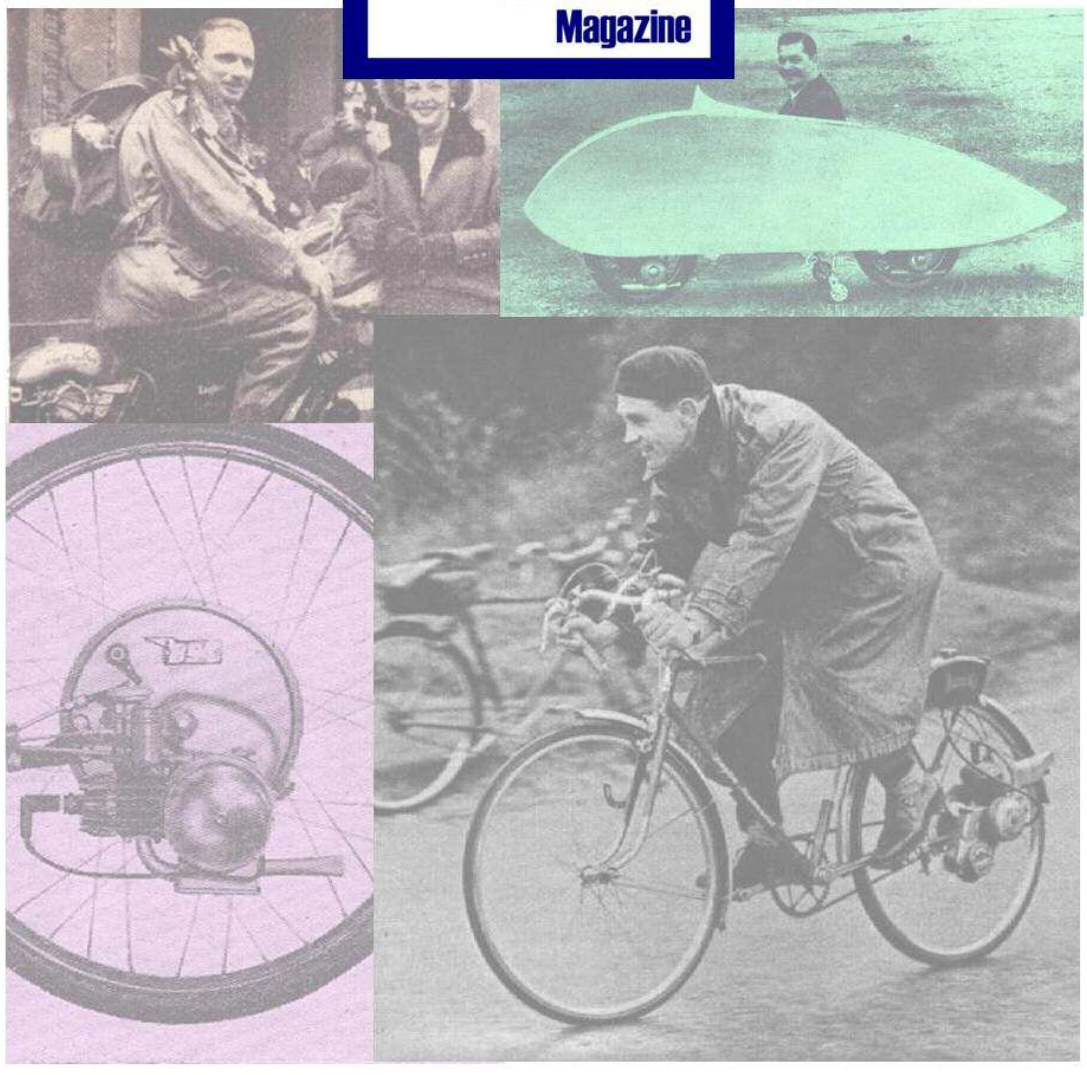

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