hing to reduce the choke size. from brass, the spray bar is of d has a fine threaded needle ıss. This caused slight trouble ine is set up to run on a pacifier ıure system and I could not to close sufficiently to lean ıre without some slight

initially while I got to grips fuel needle, pacifier and what a faulty glow plug. Eventually I got the hang of things – a Cox head, 25% nitro fuel, 5.7 x 3 APC prop, and some attention to the fuel needle and it was working. Once sorted out, starting is easy, third or fourth flick every time. Like all front induction engines, the fuel needle is close to the propeller arc and I found it necessary to use a box spanner to make adjustments whilst running. Right away the engine felt free, but I ran it rich in short bursts for 20 minutes. At the end of this it felt fine, so I leaned out the mixture and away it went, with no signs of tightening up.

Performance

On a cold, windy day, I obtained the figures shown in the chart, firstly on fuel containing 25% nitro with one head gasket. On the larger propellers, needle valve setting is quite critical whilst on the smaller ones it is much easier and steadier. Putting the standard head and a Taylor Competition glow plug on the engine was a bit of a disappointment – only 18,900rpm on 25% fuel with the 5.7 x 3 propeller. Next step was fuel containing 40% nitromethane and another shim under the Cox head. This was something of a revelation, getting on for another 2000rpm on most propellers, easier to start and set. It really needs warmer weather and more time to experiment to get even more from it. Unfortunately it's RPM range is outside our test propellers so we are unable to estimate the BHP, so I leave you to guess.

Conclusion

A nice strong engine, easy to operate when you have acquired the knack. Ideal for combat or small pylon racers. There is plenty of scope for increased power output. This engine is currently available from Modusa and Co, at a very reasonable £29.00.

MISTRAL

Klaus Hammerschmidt tries out the latest CO2 motor to come onto the market

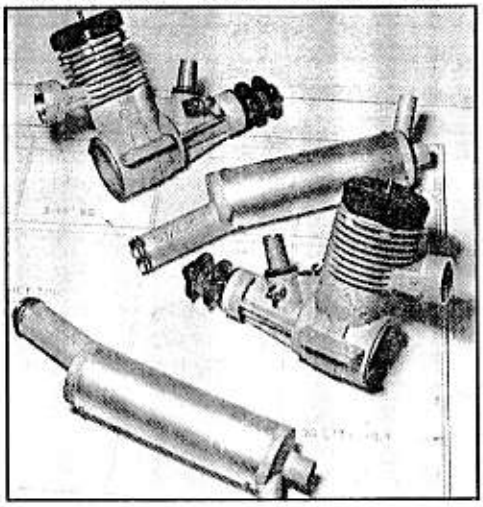
This motor is not really new. You may remember the Gnat, Humbrol and Shark and notice some similarity. In the mid seventies several thousand motors under these names were sold and the Mistral is it's latest and improved guise. It is the result of the motor being taken over by Overlander Ltd and making some small but important modifications. Using all old Shark parts a few motors were made up and first seen earlier this year but the test motor is the modified version now being supplied to the shops.

Packed in a blister box, the Mistral weighs 17 gms complete with the standard prop and tank. A suitable charger, C02 capsules and alternative props are available separately. The most obvious change to the motor is a new aluminium head and fins with a nut for the pipework to replace the plastic fins and soldered joint of the old standard Shark. The information sheet is good but does not include ways of getting gas, liquid and super charge. Overlander are looking into producing a supplementary sheet to include this sort of information although they have found that many customers do not read comprehensive instructions!

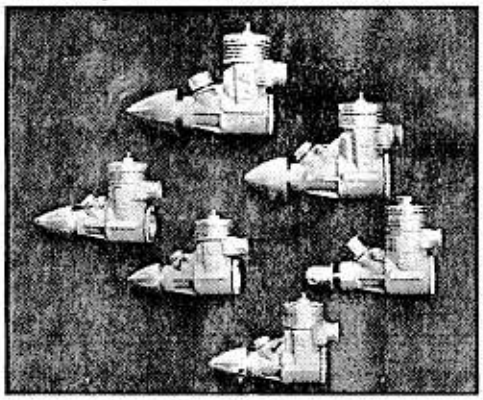
The tests

The propeller supplied with the motor is 135mm dia and the smallest of those offered and recommended by Overlander. On the graph the motor exhibits typical CO2 motor speed/duration characteristics. With a full charge of 2.8 grms it settles down to a good steady run of 310secs when initially set at 2,900rpm. Out of interest I tried a high speed run of 3,800rpm with 2.8 grms and obtained a very useful 80secs. Clearly this

Left: From F2A Supplies you can now get an R/C carb and a silencer for the CS Tiger for £15 and £6 respectively. The Stalker ABC Stunt glow motors from the Ukraine (below) are now being stocked in small numbers by Modusa. Slightly confusingly known as the ST60 and ST40, they are shown here with their silencers.



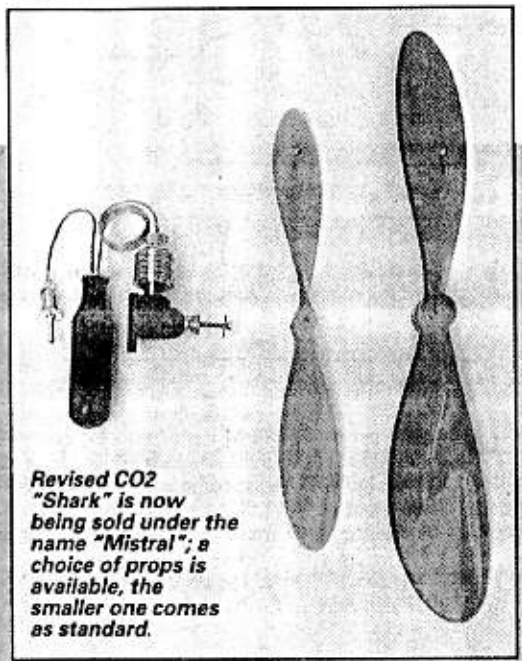
one will be the most suitable for rapid take-offs and windy flying conditions. At the other end of the scale I then tried the largest prop offered which is marked 175 x 160. (Overlander suggest up to 200mm dia can be tried). I must say that I much preferred the steady sound of the slower running engine and I am sure that this combination will give longer duration flights when set up in suitable models.



Ian Mander (F2A Supplies) won the engine display award at the London Swapmeet with his CS range. Here are the CS competition motors in sizes 049, 061, 09, 09D, 11, 15 and 21, available piped or normal except the 09 Diesel.

Conclusions

At £16.99 the Mistral is very competitively priced and suitable for duration and lighter scale models. (Pricewise its only competitor here is the Modela which is a larger motor weighing nearly twice as much). It is recommended for models up to 70 gms and between 38 and 88mm span. It's nice to see CO2 motors being made in Britain again. They tell us they are determined to keep up this excellent quality and have already started work on developing an additional motor. Watch this space for the test.



Revised CO2 "Shark" is now being sold under the name "Mistral"; a choice of props is available, the smaller one comes as standard.