The Elan Factory - Information Sheet

Adjusting and balancing pairs of Dellorto carburettors

Tools needed: A long screwdriver and a length of plastic hose.

1. Where carburettors have had considerable use it is recommended the following initial checks be carried out. First, remove the carburettor top cover and make any necessary adjustments to the individual float levels. Next, remove each idle-mixture adjustment screw **(85)** clean and polish it before reinstallation. This will make each one more sensitive when responding to slight adjustments. Take care not to misplace the O-rings and washers under the screw retaining springs.

2. Warm up the engine by running at 1200 – 1500 rpm for about five minutes with the carburettors fitted but unadjusted except for the idle speed that utilises screw **(86)**. In subsequent readjustments, the engine would be better to be fully warm, as after a good run, but do bear in mind that in winter, the engine does not get nearly so hot as during the summer, so readjustment to coincide with seasonal changes will usually be worthwhile.

3. Switch off the engine and, with a finger, try to close the right carburettor throttles completely by pressing the right balance-leaver assembly **(60)** firmly against its stop. This may not be fully possible because of the position of the adjusting-screw **(56)** and the main-lever tongue, but usually the left carburettor throttles will no be slightly open. Now read just the carburettor balance by screwing or unscrewing the balance-adjusting screw **(56)** until the left main-throttle lever **(81)** can be seen to just close the left carburettor throttle-butterflies completely; check they are fully closed by pulling upwards on the extension on the main-lever which usually touches the idle-speed screw **(86)**.

4. This should be the desired synchronised position but, as it is difficult to be sure both carburettors' throttles are fully closed at this pointy, continue slowly screwing the balance-screw **(56)** in and you should now see the right lever opening while the left one is pressed shut. By then screwing back again, it is possible to judge more accurately the point where the left lever has stopped closing and the right lever has not yet started to open. Alternately, listen through the tubing inside each carburettor choke in turn with the engine idling slowly, adjusting screw **(56)** until each cylinder sounds as similar as possible, should produce effectively virtually the same result.

5. Now screw the idle-speed screw **(86)** back into contact with the lever **(81)** and then in two to three more complete turns.

6. Disconnect the front two spark plug leads and restart the engine so as to operate on the rear two cylinders only. The idle speed should be steady and as far below 1000 rpm as possible without risk of stalling. Now adjust the idle-mixture screws **(85)** on the rear carburettor to obtain the fastest even running. This adjustment is very sensitive, as the two firing cylinders have to overcome the drag of the other two. If the idle-mixture of one of these two working cylinder is adjusted much away from its optimum setting the engine will respond by noticeably slowing down, vibrating badly or stalling. Do try, however, not to wast time here to reduce the risk of the non-working spark plugs fouling or wetting.

7. Stop the engine and repeat the procedure with the rear plugs disconnected. Different final positions of each pair of mixture screws often indicate incorrect float-levels of one or both carburettors; check if in any doubt and carefully readjust.

8. Now connect all four plugs, set the idle to normal speed and, using the fingers, blip the throttle quickly several times. If the engine doe not pick up cleanly but vibrates, hesitates or shakes, readjust the balance-screw slightly while blipping the throttle until the best position is found. In this position, both pairs of carburettor throttle-butterflies should be opening together from the same slightly open idle position. If a wildish camshaft, over large carburettor chokes, unsuitable jets, spark-plugs or ignition timing, etc, are used, this optimum setting may not be perfect or even acceptable, but at least the throttles are properly synchronised with the best idle-mixture and idle-speed settings attainable.

9. This is all that you should need adjusting to set up the carburettor assembly but some further overall improvement can often be made by adjusting the ignition-timing slightly afterwards and perhaps then readjusting the mixture screws. Also, with a new pair of carburettors, or even with just new jets, it does take a few hours of running before the petrol properly wets the machined surfaces. Until then, surface tension makes most of the calibrated sizes much smaller in practise; so, for optimum performance, the whole procedure should really be repeated later on, say after five hours' running. Don't jump to wrong conclusions about jetting too soon! Dellorto carburettors have finely-calibrated jets, and internal parts, needle-like idle-

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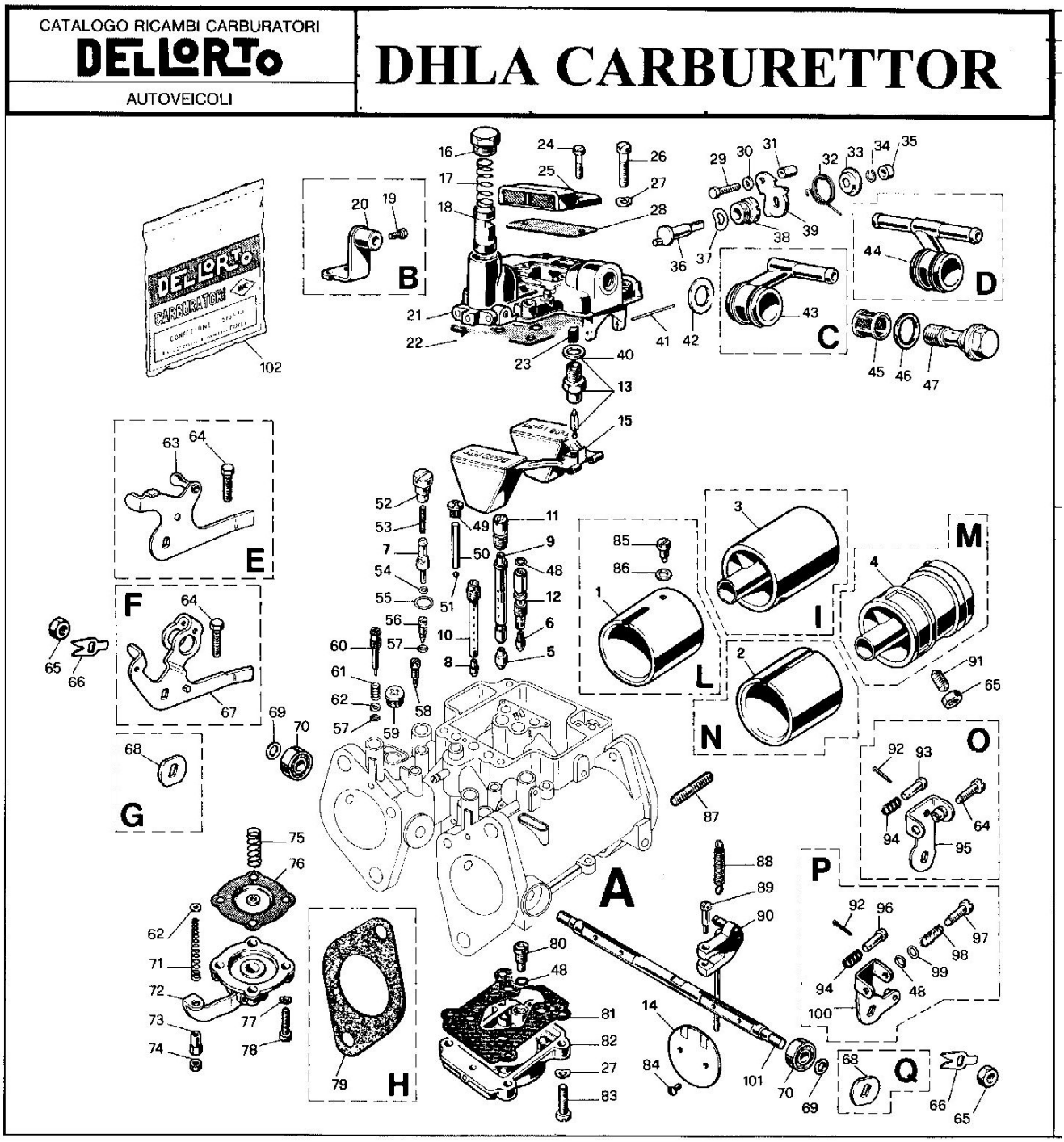
screws and a remote idle-speed screw so what might seem a long adjustment procedure should be amply repaid be excellent running and everything in tune for longer than normal service intervals. Performance with economy and reliability too!



For further information regarding carburettor kits and pump jet delivery calibration services, please phone The Elan Factory on (613) 9761-1903 or fax on (613) 9739-8944. Alternatively you can write to The Elan Factory at 5 Marong Court, Boronia Heights 3155, Melbourne, Australia or e-mail at elanfactory@optusnet.com.au