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READERS' CONTRIBUTIONS

“Hydrolastic Fluid - where do you get it?”

An article by Tony Cripps

Given that BMC closed its doors in Australia some 35 years ago, one would be forgiven in thinking that obtaining a quantity of official hydrolastic fluid in 2011 may be somewhat difficult. Surprisingly, there are quite a few sources and a wide range of prices to tempt today's discerning Austin owner.

As is well known, the official formula for the fluid is mainly 49% alcohol and 49% water with some additives for corrosion prevention and viscosity. The 1800 service sheets (C63/65) provide a little more detail in this regard where it is described that a lubricity additive in varying proportions was added to this fluid to counteract a squeak in the displacers. HYL2936 was the original formula and is coloured blue, with no lubricant. Another blue fluid, this time with a lubricant added, was later used in the initial fill but not made available to service outlets. HYL 3478 (green) is described as “Heavy Duty Hydrolastic Fluid” with a higher concentration of lubricant while HYL 3460 is described as a competition fluid used for a short time in Cooper S models. Part No HYL3478 is recommended for Austin 1800. According to Norm Prescott's service sheet, the higher concentration of lubricant (such as in HYL3478) results in a firmer ride, especially in cold conditions.

Here is a summary of what is presently available commercially:

1. Mini Sport (<http://www.minisport.com.au/prod1706.htm>) \$44 / 4L = \$11/litre



2. Classic Motoring \$33 / 4L = \$8.25/Litre
(http://classicmotoring.net.au/cmoss/index.php?main_page=product_info&products_id=322)



[larger image](#)

- Part Nbr: HYL3478

Hydrolastic Fluid - 4 Litres

\$33.00

4 litre tin of Hydrolastic fluid for Minis a

[\(prev\)](#) [\(list\)](#)

3. MG Spare Parts \$39.49 / 4L HYL:3478 = \$9.87/Litre

(http://www.mgspareparts.com.au/index.php?page=shop.product_details&flypage=flypage.tpl&product_id=11452&category_id=98&option=com_virtuemart&Itemid=26)

4. Minis Plus \$34.95 /4L = \$8.37

(http://www.minis.com.au/minis/catalog/product_info.php?products_id=205&osCsid=27a25caa45fccf7b4ecef538ca04e8ea)

Hydrolastic Fluid 4L hyl3478

[HYL3478]

4 Litre Tin of Mini Hydrolastic Fluid. Ideal for anyone who has the ability to pump up their own mini!
Legal to post Australia post

\$34.95



[Click to enlarge](#)

5. New York Motors \$115 /5L = \$23/Litre

(<http://www.ebay.com.au/itm/MGF-HYDRAGAS-BMC-HYDROLASTIC-SUSPENSION-FLUID-5-LITRE-/300552309184>)



MGF HYDRAGAS BMC HYDROLASTIC SUSPENSION F LITRE

Item condition: **Brand New**

Quantity: 3 available

Price: **AU \$115.00**

[Buy It Now](#)

[Add to Watch list](#)

Postage: Read item description or contact seller for details.

[See all details](#)

Delivery: Varies

6. Parts and Panels \$27.58 /4L, \$165.50 /24L = \$6.89/Litre in each case

(http://www.partsandpanels.com.au/MINI/mini_suspension.htm)

HYDROLASTIC FLUID (24 LITRE TIN)	HYL3478# 	\$165.50
HYDROLASTIC FLUID (4 LITRE TIN)	HYL3478 	\$ 27.58

7. Vanguard Wholesalers \$54.90 /4L = \$13.75/Litre



AUSTIN MORRIS MINI HYDROLASTIC SUSPENSION FLUID - 4Ltrs

Item condition: **Brand New**

Price: **AU \$54.90**

[Buy It Now](#)

[Add to Watch list](#)

Postage: **AU \$18.00** Standard Postage | [See all details](#)

Delivery: **Varies**

Delivers within 1-6 days after seller posts item

Payments: **PayPal**, Money order/Bank cheque, Other - See seller's payment instructions | [See payment information](#)

Pay with PayPal and you may be protected up to \$20,000. Conditions apply

8. Anglomoil \$109 /20L = \$5.45/Litre

HYDROELASTIC Suspension, an effective form of active suspension, was developed in the 1960s by British Leyland. Anglomoil manufactured and supplied Hydroelastic Suspension Fluid for OEMs during their Australian manufacturing years. Anglomoil's Hydroelastic Suspension Fluid is available from [Anglo Design Pty Ltd](#).

With British Leyland's system, structural oscillations are regulated by controlling the Hydroelastic Suspension Fluid in the suspension circuit and the fluid provides the interconnection between the front and rear suspension units. Various Hydroelastic Suspension Fluids were tried by Leyland. These included water rejected when it's at a comparatively high freezing point, which was found to be troublesome.

Finally, a suitable semi-synthetic Hydroelastic Suspension Fluid was developed, which met the requirements of low-foam, compatibility with rubber seal material and high stability over a range of temperatures.

Anglomoil's Hydroelastic Suspension Fluid is a semi-synthetic heavy-duty blend designed originally for the BMC 'floats on fluid' suspension.

Features include:

- * Ideal viscosity, viscosity index and pour point
- * Ideal film strength for reducing friction and minimising wear
- * Oxidative stability and protection against rust and corrosion
- * Synthetic enhanced lubricity and performance over a wide temperature range
- * Excellent low-temperature properties
- * Resistance to thermal degradation and to the formation of sludge and varnish.

Anglomoil is the Sydney based manufacturer of a range of lubricants covering [automotive](#), industrial and marine applications.

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 [1300 445 922](tel:1300445922)

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According to the engineer at Anglomoil, their fluid does not contain alcohol (ethanol) as such (although it does contain ethylene glycol, which is an alcohol but not the drinking kind). He also advises that it contains another ingredient to impart the desired viscosity to the mixture.

As can be seen, prices vary. Whether or not all these products are the exact same thing is another question.

Now, once you have your hydrolastic fluid, you need to of course introduce it into the suspension. The best thing to use is a genuine hydrolastic pump, which occasionally become available on Ebay or private sale. When evacuating, you attach the vacuum line and then close the yellow valve and then pump until you get a steady vacuum. The vacuum has to hold and not leak away once you stop pumping. If the needle on the vacuum gauge starts dropping down to zero, then you have a leak that must be found and repaired. Don't worry, most leaks are in the hydrolastic suspension service unit – usually the fitting that goes on to the Schrader valve on the car. If your hydrolastic service unit has seen a lot of service, you may have leaks inside the vacuum pump. These can be difficult to repair, but not impossible. Inside this vacuum pump is a piston and cylinder. The piston is a brass assembly with a large reinforced rubber O ring seal. If the seal is worn, then it can be made to work again by facing off some of the brass assembly in a lathe so that when the clamp nut is tightened, it spreads the seal out a little bit. A few minutes work will restore a nice seal inside the cylinder. As well, there are two valves in the bottom of the vacuum unit, so if you remove the fittings, be careful not to lose the small Bakelite discs that will fall out un-noticed. Once you have fixed up all your leaks you can continue with the service procedure. It is important that the vacuum be high, and sustained. You cannot proceed until leaks have been repaired.

Now, once you have a steady vacuum, you then open the yellow valve. The vacuum gauge will drop to zero. Don't worry, it is supposed to do this. What is happening, and what the workshop manual does not tell you, is that in this step, fluid is being sucked into the system from the reservoir. Once the vacuum gauge reads zero, it is best to leave things to settle for about 5 mins so that as much fluid as possible is drawn into the system. This means that when you have finished the evacuation procedure, you end up with a fluid filled system at atmospheric pressure. You can then remove the vacuum hose and then at your leisure, proceed to the pressurizing step – which is usually fairly straight forward.

If you find that you cannot achieve the correct ride height for a reasonable pressure, this usually means you have air in the system and you will have to depressurize and evacuate again. Opinions vary as to what pressure one should set these cars to. There are of course the recommendations in the workshop manual, while more experienced personnel than I have advised a lowering of the pressure for greater reliability. The working pressure for normal driving is usually about 250 psi and should never be increased beyond 300 psi in an attempt to raise the ride height - although one advertisement I saw featured an Austin 1800 with "lowered" suspension as some kind of sports option.