

# HAGON AIR SHOCKS

Air suspension has been with us for a long time and is widely accepted in Moto Cross and many other fields.

We now offer you 'Hagon air suspension' for grass and long track machines, giving a smoother and more positive ride than with conventional spring units. Easier to adjust for the varying track conditions. Just increase or reduce the air pressure using an ordinary tyre pump.

Hagon air suspension also offers a great weight saving, weighing only 1.6 Kgs compared with 2.9 Kgs for conventional girling units. This is largely due to the magnesium main body which also dissipates heat quickly. Hagon air suspension stays cool on the roughest tracks. Two way damping effectively controls both inward and return strokes.

**EXTENDED LENGTHS** BETWEEN FIXING

CENTRES **OVERALL** TRAVEL

345 mm.

435 mm.

95 mm.

### OPERATING INSTRUCTIONS FOR HAGON AIR FORKS & SHOCKS

Hagon air forks can be fitted to all Hagon frames. A 12mm, head spindle & bolt is used on all forks from 1978 on. They can also be fitted to all frames with a 6" headstock.

2. When fitting the wheel the hub should be a good fit between the legs so that they are not forced apart when fitting the wheel or pulled in when tightening the spindle.

# **PRESSURISING**

3. Hagon air forks are pressurised with compressed air on assembly they are set at 45 lbs/in² which is a good average they can be adjusted up or down within limits to suit individual riders. They should not be used below 30 lbs/in² as the forks may bottom out. The forks should not be used above 65 lbs/in² as topping out may occur. This will also happen if there is not enough oil in the forks.

If you wish to use your forks above the recommended pressures a heavier damping oil must be used.

Allow oil in forks or units to settle before checking pressure. Pressurising your forks may take some practise as the forks only contain a small volume of air, pressure may be lost when releasing the pump or air line. The best method is to over pressurise then release air until the required pressure is achieved. When using a gauge it must be taken into account the air loss to the gauge i.e. when using a pen type gauge 5/10 lbs/in<sup>2</sup> will be lost when releasing the gauge. It is important to fit the dust caps supplied with the forks as these are air tight.

#### CHANGING THE OIL

The oil should be changed about every 6 months if you are racing every week. The oil should always be changed whenever the forks are stripped down. This is easier to do with the forks removed from the bike.

- 1. Release the air pressure.
- 2. Remove the Gaiters.
- 3. Remove alloy top caps.
- 4. Remove 8mm locknuts on top of fork legs.
- 5. Turn upside down over a container to catch the oil, by pumping the legs the pistons and the oil should be released.
- 6. Withdraw the legs from the 'H' piece. There is no need to remove the circlips and valve assemblies. At this stage all components should be inspected for excessive wear or damage.

Special attention should be paid to the chrome finish on the legs especially in the area that passes through the seals. Any stone chips or deep scratches will lead to early seal failure. Any marks should be cleaned lightly with an oil stone or wet & dry to remove any sharp edges. If there is excessive damage the leg must be replaced.

If the oil seals are removed they should be replaced ensuring that the seal grooves are perfectly clean, lightly oil the seal before fitting.

The wiper seals cannot be removed intact.

If they need replacing the old ones must be carefully levered out. Remove any burrs and carefully tap new ones into housing with a flat tool.

## **ASSEMBLY**

- 1. Assemble each side separately.
- 2. Make sure all components are clean.
- 3. Lightly oil the seals.
- 4. Enter fork leg about 1" into the 'H' piece, add 60cc of S.A.E. 10 grade oil i.e. Shell Tellus 27.
- 5. Fully compress leg and pump gently to release any air trapped under valve assembly.
- 6. With leg fully compressed fit piston and locknut. NOTE: If nylon pistons are fitted they must not be overtightened. When the piston is tightened the oil should just cover the locknuts, adjust oil level to achieve this.
- 7. Fit top cap and seal do not overtighten.
- 8. Pressurise.
- 9. Fit gaiter, lightly oil inside of gaiter for smooth operation.
- 10. Repeat for other side.

## CHECK EACH SIDE FOR SMOOTH OPERATION.

If the forks become bent or twisted during a crash great care must be taken in ensuring that the legs operate freely after straightening. If they are badly bent it will be necessary to remove the valve assemblies to enable proper straightening, we would advise that they are returned to the factory for this.

It is important to keep the fork gaiters in good condition to protect the chrome finish from stone damage which will cause oil seal failure, resulting in a loss of pressure.

# MAGNESIUM AIR SHOCKS

The air shocks are constructed the same as the air forks so all procedures for dismantling and assembly are the same with these exceptions.

Fit air shocks with air valves facing towards the rear of the bike. The quantity of oil required for each shock is 45cc SAE 10 grade i.e. Shell Tellus 27, ensuring that it just covers the piston locknut when compressed. The air shocks run with a much higher air pressure than the air forks on assembly they are set to 95 lbs/in<sup>2</sup>. We recommend an upper limit of 110 lbs/in<sup>2</sup> and a lower limit of 80 lbs/in<sup>2</sup>. If used at lower pressures the units will bottom out which should be avoided.

The return damping can be varied by changing the grade of oil used.