

SILICONE BRAKE FLUID AND OVERHAULING BRAKING SYSTEM MORRIS 8 CARS 1934 to 1938

In 1998 whilst rebuilding my Series II saloon, I decided that a full brake rebuild was the best option for long term reliability. It was so much easier on a restored chassis before the body was fitted!

Items Required

I purchased the following new parts:-

- 1) A master cylinder from Wyvern, together with a connecting rod and ball joint assembly.
- 2) A master cylinder repair kit and four wheel cylinder repair kits from Wyvern.
- 3) Flexible hoses and brake linings/rivets from Philip Daintree.
- 4) Automec Silicone Fluid, copper pipes, unions/connectors, washers from Stevson Motors.
- 5) Handbrake cables from Harry Edwards.
- 6) A selection of rubber grommets.

I refurbished/repainted the following parts:-

- 1) Backplates, shoes and adjusters.
- 2) Drums including skimming.
- 3) Pull off springs.
- 4) Handbrake, cross shaft and fittings.

I cleaned and checked all brackets, brass unions, clips etc.

Dismantling

I made notes and sketches so that everything went back in exactly the right place, and so that pipe runs and positions did not change. For those of you who are interested, this means that you can look at any of the installation on my car for 'the original layout'. All rubber grommets were renewed and fitted in the original positions.

Assembly

With the saloon body removed, and the chassis fully restored and enamelled, all items were cleaned, flushed through with silicone brake fluid as appropriate and fitted in place.

- 1) Correct unions were fitted to the copper pipes, they were bent to match the existing pipes, cut to length and the ends flared.
- 2) Unions and flexibles were fitted, and the mastercylinder re-rubbered lubricating with silicone fluid (I did not know how long it had been dry on the shelf).
- 3) I 'honed' one wheel cylinder with 'wet and dry' paper and my index finger; all other cylinders and pistons were useable without work. These were re-rubbered lubricating with silicone fluid.
- 4) Brake shoes were re-lined and fitted using new washers and split pins, but refurbishing the brake shoe pivot 'U' clips.
- 5) Handbrake assembly was installed, and the cables attached.
- 6) Always carefully clean and check that both the small supply hole and the smaller compensating orifice in the master cylinder bore are clear, otherwise the brakes may bind or remain on after the pedal has been released.
- 7) On cars up to Ch No 198628 (but excluding 198391-198500) it is important to bolt the Handbrake Cable rear chassis guides onto the chassis before fitting the body.
- 8) I transferred the original 'small hexagon' cap to the new master cylinder.

The general assembly methods (except inclusion of dished washer to Master Cylinder see Important Notes later) are well documented in the Series E Manual available for Morris Register members to download; it effectively covers the 1934-38 cars too. Therefore I have not described these methods here.

Important Notes.

Dished washer to Master Cylinder.

Most Master Cylinder repair kits include a dished copper or stainless steel washer that was not included as original equipment and is not shown on Morris 8 Master Cylinder diagrams. These washers were added in later years to prevent braking problems. It was advised that the dished washer should be fitted between piston head and main cup to ensure that transfer holes in the piston remain clear, and it should be fitted with it's concave side against the main cup, and it's convex side against the piston head.

Silicone Fluid.

In my opinion, silicone brake fluid is the right material to use on the Morris 8, but I would only use it if I was renewing all components whose inner faces cannot be cleaned directly. All rubber parts must be renewed, as should the copper pipes otherwise old fluid may remain inside.

As I understand it, the usual reason for not recommending silicone brake fluid is if high braking temperatures are likely to be reached, for instance with disc brakes and competition work; and most anti-lock braking systems cannot use it I believe. But since neither of these instances occur with our brakes, and the chances are that our cars will be lightly used with long periods of disuse in between, then the non-hygroscopic nature of silicone will prevent seizure and corrosion. It is also likely that brake fluid changes will not be required.

I did this job in 1998 using silicone brake fluid, and it has been completely leak free and trouble free for 12000 miles so far.

A 500ml can of brake fluid was sufficient to fill and bleed the system, leaving a small amount for future topping-up.

(See also 'Brake Faults', 'Lockheed Hydraulic Braking System' and 'Brake Guide' articles).

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