WELCOME TO OUR SPRING 2014 NEWSLETTER

CHROME OR CRASH?

The other day I came across at a feature I wrote in an *XK Gazette* about ten years ago. In this I had responded to a number of enquiries followed the report of a 150 that suffered brake failure. Most of these were related to upgrading brakes but what made me take notice of that old article was that I had commented, "We still sell more chrome than life saving equipment". In other words, sales of 'cosmetic' components outsold essential parts; in particular brake, suspension or steering components.

Here we are ten years later and little has changed. To bolt on a set of new chrome bumpers may seem to some owners a better investment than renovating or upgrading the brakes or suspension. "Why touch the brakes? They are fine. I just keep an eye on the fluid and the back brakes sometimes need a bit of adjustment." "The steering and suspension? It passed its last MOT with flying colours so there's no need." Those are typical comments but let's just put a little perspective on those statements.

The first XK was built in 1948 and last year of production for the 150 was 1960. That means that all surviving cars are between 54 and 66 years old. It is not just mileage and wear but also age that causes components to lose their performance characteristics or even to fail, particularly on brakes. Another factor we must not lose sight of is that, even by modern standards, all XKs are still performance cars capable of high speeds. However many have no seat belts to protect the occupants and tyre treads that are narrower than those on modern motorcycles. This does put the risk into perspective. We must also factor in that all but some late 150s no longer require MOT tests, which I am sure will result in a few owners not worrying about an annual safety check - "It only does a few hundred miles a year and I keep it in good nick so why worry?"

The point I am trying to make is that any XK owner should and must put safety first. Not only that but if you are to upgrade any part of the car you must look at the wider picture. For example, fitting front disc brakes in place of drums on early cars is a popular upgrade and a sensible one too. However, many who fit them don't ensure that the suspension and steering components are up to scratch. Once fitted those brakes will put stresses on other components that they never endured before. Also the proportion of braking the rear brakes provide may not be as it should be and braking imbalance can affect the way the car handles.

CHECKING YOUR BRAKES

If your car has not undergone a major upgrade or restoration in recent years please take a serious look at it this winter. Let's go through the brake components and what to look for.

Early cars had metal brake fluid reservoirs (later ones were plastic) and these connect to the master cylinder via hoses and metal pipes. The master cylinder comprises a precision ground bore and a piston that moves in it with 'rubber' seals - tandem cylinders have additional components. The master cylinder connects to the wheel cylinders and/or calipers via metal pipes and flexible hoses. Finally the wheel cylinders and calipers, like the master cylinder, have precision bores and pistons with seals. The one crucial component not yet mentioned, which must not be overlooked, is the brake fluid.

In most cases brake fluid is hygroscopic. This means it absorbs moisture from the atmosphere and it also oxidises with contact with air. This reduces the boiling point of the fluid and causes corrosion. Trust me: if your brake fluid boils you have no brakes until it cools down and that is usually after the accident! Corrosion rusts brake pipes and damages pistons and bores in the cylinders and calipers. Original brake pipes were made of steel and can rust-through causing brake failure. Modern replacement brake pipes are made of material that does not corrode but if you don't have such pipes on your car I suggest changing to the better material. Some parts of the pipes are hidden from view and this is where failure can occur unseen. Brake hoses are easier to check. These can be bent over to see if there is any cracking in the outer covering. Any cracks or the slightest bulge means they must be replaced. An alternative to the rubber type hoses are stainless covered ones. These have a metal braid covering a Teflon hose, which gives greater protection to the hose inside and also reduces the amount of expansion in the hose giving a slightly 'harder pedal' feel.

Brake fluid should be changed every two years. There are several types of brake fluid on the market and it is essential you use one that is compatible with the seals. Generally DOT 3 or DOT 4 are fine, with DOT 4 having a higher boiling point. DOT 5 is better in some respects as in addition to a high boiling point it does not damage paintwork and is not hygroscopic. However any water that does get into it will stay in droplets. Brake fluid will deteriorate in the bottle as well if it is unsealed, so the two year life equally applies once you have opened the top. Changing the brake fluid is simply a matter of bleeding the brakes until the clean fluid starts coming though. You must of course bleed all four wheels to get every drop of the old fluid out. Dispose of your old fluid via your local recycling centre - don't pour it down the drain!

If you have disc brakes, the calipers require little maintenance apart from checking that the rubber

piston dirt excluder boots are not split, the visible parts of the pistons are kept clean and the pistons move freely. It is always advisable to smear a little Copaslip grease on the back of the pads as this stops them sticking and can prevent brake squeal.

Wheel cylinders are notorious for sticking and seizing. Cars that do little mileage are particularly prone to this. For this reason, particularly on full drum brake cars, it is advisable to take the drums off once a year and check that the pistons move freely. What often happens is that corrosion starts between the pistons, which are steel, and the cast aluminium cylinder bodies. If this is not prevented or removed in time, the piston can become seized and/or the surface of the cylinder can become pitted and the seal lost, causing brake fluid to escape. A stuck piston will cause the brakes to 'pull' severely. They can also become stuck on or drag.

As mentioned earlier, the state of the suspension and steering should also be checked regularly and in particular if brakes are to be upgraded all must be in good order. This includes the shock absorbers that are easily overlooked.

Brake upgrades

Fitting disc brakes to a drum braked XK or upgrading brake calipers is very straightforward. The kit we supply for all models comprises everything you need; the discs, calipers, pads, hoses and mounting plates. They simply bolt on without the need for any machining or welding. For 120s and 140s, XK 150 front hubs are further required. This conversion gives 100% better braking than the original disc-braked 150 offered. A further step is to fit a rear disc brake conversion kit. This will only fit on Salisbury axles and provides 60% greater pad area than the original Dunlop brakes. On 120s and 140s, two hand brake cable brackets, which come with the kit, require welding to the axle.

Other parts we offer to give your brakes optimum performance include a remote servo that can be fitted in-line, a replacement modern tandem servo for 120s, uprated brake shoes and pads, and stainless covered Teflon brake hoses. For competition use we have further disc brake kits depending on how serious you are!