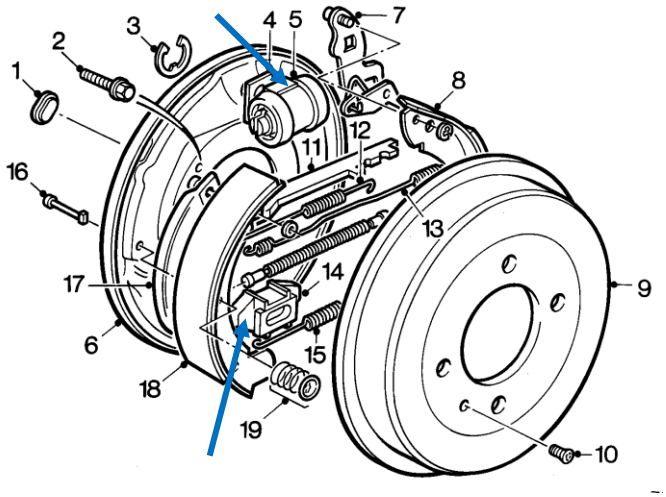
Rear brake wheel cylinder assembly with seals at each end

Faulty piston on a rear wheel brake cylinder

During a recent annual service of an MGBGTV8 and a brake fluid change, one of the pistons on a rear brake wheel cylinder assembly was found to be faulty with a small brake fluid leak. As the rubber seal (or boot) on the cylinder is a tight fit the leak was only found when the mechanic lifted the edge of each rubber seal and could see inside each seal. He spotted one seal had the brake fluid leak which had mixed with corrosion muck (see below). It had not been visible from outside with the rubber seal in place because if the tight fit of the seal.

MGRV8 rear brake cylinder & abutment

The arrangement of the rear brake drum components on the MGRV8 is different to that on an MGBGTV8. The main difference is the rear wheel cylinder assembly (**5**) is at the top rather than at the bottom of the drum. At the lower point is a fixed abutment (**14**).



The primary leading and secondary trailing shoe arrangement gives the advantage of braking action whether the car is travelling forwards or backwards.

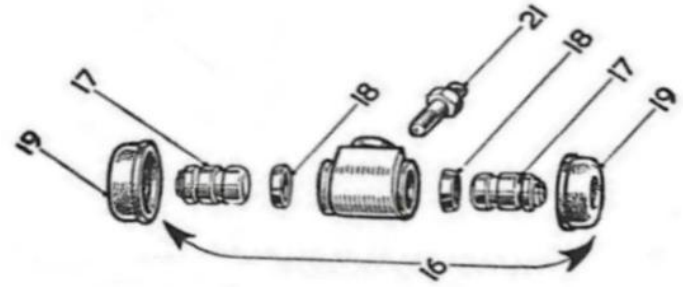
MGRV8 rear brake components

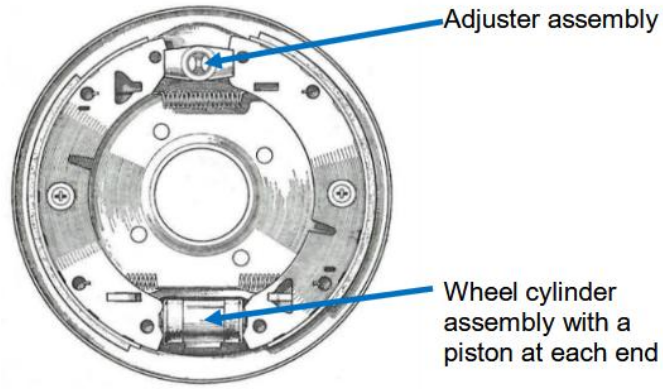
1. Access grommet
2. Backplate mounting bolt.
3. Wheel cylinder circlip.
4. Wheel cylinder gasket.
5. Wheel cylinder.
6. Backplate.
7. Auotomatic adjusting mechanism.
8. Secondary trailing brake shoe.
9. Brake drum.
10. Screw, drum to hub.
11. Cross lever.
12. Cross lever spring.
13. Pull off spring.
14. Fixed abutment.
15. Tension spring.
16. Shoe retainer pin.
17. Handbrake lever.
18. Primary leading brake shoe.
19. Shoe retainer spring and washer.

Fortunately with the MGRV8 the wheel cylinder is located at the top of the drum, unlike the MGBGTV8 where the cylinder is located lower down in the drum. So on the MGRV8 a cyinder is less susceptible to water penetration when the car is wading through deep water. See RV8 rear brake drum components above.

MGBGTV8 rear brake cylinder & adjuster

It has two pistons (**17**) each moving to operate on either the leading or trailing brake shoe and rubber seals (boots) (**19**). The rear brakes on the MGBGT & V8 are of the leading and trailing shoe type, giving the advantage of equal braking action whether the car is travelling forwards or backwards.





Rear wheel cylinder assembly

The rubber seals (19) and the pistons (18).

There are **two pistons in each rear brake wheel cylinder** assembly – one operating the leading brake shoe and the other operating the trailing shoe. During the fluid change the mechanic made a careful inspection of each rear brake wheel cylinder assembly and carefully lifted the rubber seals at each end. When the seal was lifted on one cylinder assembly a brake fluid leak was spotted mixed with corrosion muck. It had not been visible from outside the seal and reduced braking was not detected during a recent MOT test because a reduced braking effect would not have been recorded as significant if at all when the car was on the resistance rollers in the MOT test bay.

Both MGBGTV8 rear wheel brake cylinders were replaced and the brake fluid change was completed.

What was found during the brake fluid change?

Part of the annual service of the MGBGTV8 was changing the brake fluid, an essential maintenance task typically needed every 24–36 months (or 24,000–30,000 miles) to prevent corrosion and maintain braking performance. The process involves flushing old, moisture-contaminated brake fluid from the lines—usually in the order of furthest to closest wheel from the master cylinder and then replacing it with fresh brake fluid.

Seals or Dust Shields

Catalogues and manuals often refer to a rubber seal as a "dust shield". It is recommended that to avoid future corrosion issues the void behind the dust shield is packed with red rubber grease or silicone grease to avoid water ingress and corrosion. Fortunately with the MGRV8 the wheel cylinder is located at the top of the drum so is less susceptible to water penetration when the car is wading through deep water.

What to do if you see a brake fluid leakage?

If a brake fluid leakage is apparent the brake shoes should be checked for contamination and replaced if necessary. The rear brakes are an important safety feature of the car and their condition is often overlooked.

Victor Smith