



TECHNICAL SERVICE BULLETIN

GIRLING *Technical advice and information*

LANDROVER BRAKES

Difficulties in obtaining a satisfactory firm brake pedal often result from work being carried out on the vehicle. This usually means that 'A' new brake shoes have been fitted, or 'B' the hydraulic system has been disturbed by the fitting of new cylinders or seals.

To help eliminate this problem, the following service procedures are recommended.

Series II 88" W/B Landrovers

'A' New Brake Shoes fitted,
Hydraulic System undisturbed

- 1) Early Types
 - a) When new shoes are fitted adjustable type steady posts must always be correctly reset. If there is still a poor or long recentralising on the backplate (Fig. 1).
 - b) Proceed to each wheel in turn and loosen the anchor pin locknut one full turn. Pump the brake pedal until a firm resistance is felt, and whilst holding the brake pedal down, tighten the locknut. Although the movement of the anchor pin is barely visible the pedal should improve and will improve still further when the new shoes are correctly bedded in.

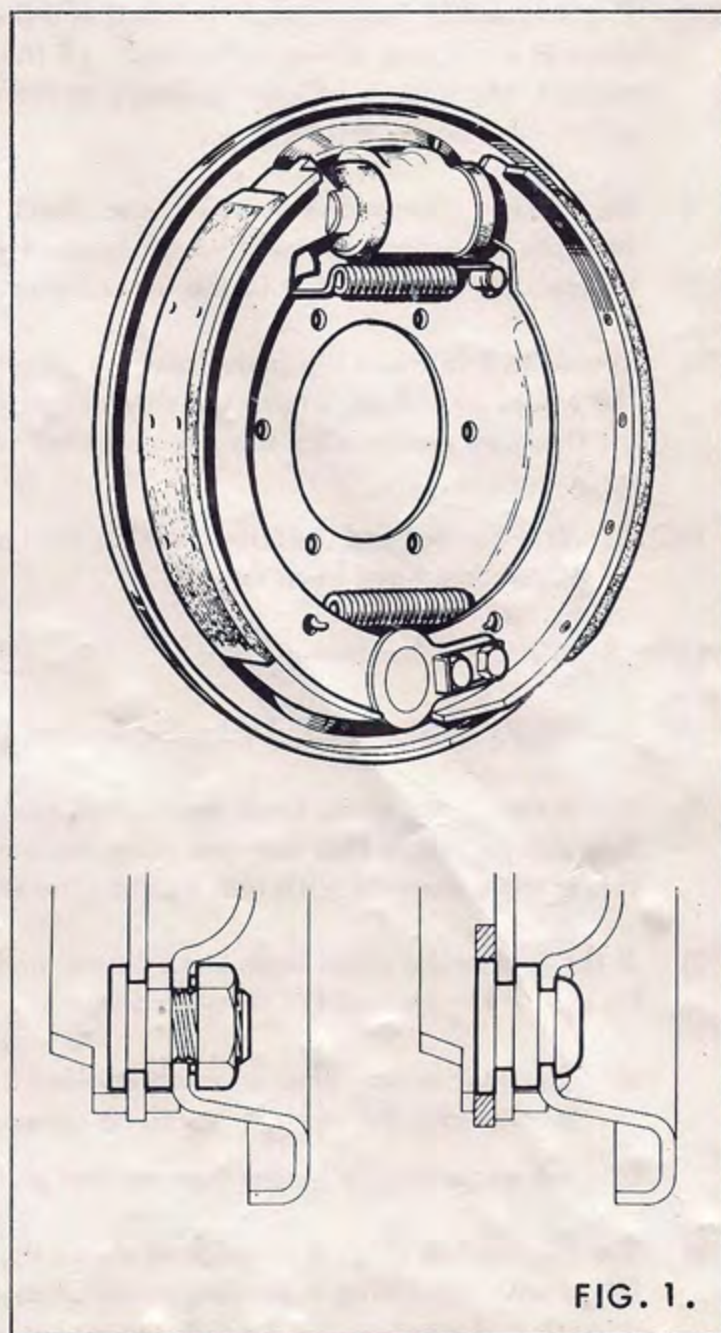


FIG. 1.

REFERENCE

U.K.	EXPORT
TS 22	TS 20

DATE DEC 1975

SUBJECT

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2) Later Types

- a) It should be noted that not all the above Landrovers have adjustable steady posts or anchor pins and therefore the pedal on such vehicles will only improve when the new shoes have correctly bedded in.

3) All Types

The use of genuine Girling brake shoes is strongly recommended as they are crown ground and the bedding in period is considerably reduced.

'B' Hydraulic System disturbed

- 1) Spongy pedal sometimes results from the replacement or servicing of the hydraulic cylinders.
- 2) Clamp off all brake hoses with Girling Hose Clamps and recheck the pedal. If a noticeable improvement is found and the pedal is no longer spongy there is air in one of the cylinders. (If the pedal remains spongy this suggests the master cylinder is faulty or there is air in the master cylinder, which must be dispelled).
- 3) Remove the clamps one at a time and check the pedal, this will usually indicate the wheel cylinder which is causing the trouble. Once located the cylinder can be bled in the normal way.
- 4) Should this fail and the pedal remains spongy it will be necessary to remove the wheel and drum, clamp the shoes together with the adjuster wound right off (thereby compressing the pistons in the wheel cylinder) and bleed the system again.

NOTE: The correct pedal action must be used as both CB and CV Master Cylinders have been fitted.

109" & 110" W/B Landrovers

'A' New Brake Shoes fitted, Hydraulic System undisturbed

- 1) When new brake shoes have been fitted and a poor or long pedal results, this usually means that the new shoes have not been fitted correctly and this is more common with rear brakes than with front brakes.
- 2) If the rear brake shoes have been fitted incorrectly this is usually indicated by one of the following two symptoms:-
 - a) The rear brakes bind on when applied in the forward direction of motion and the vehicle has to be reversed in order to release them
 - b) An occasionally longer than normal pedal on first application only.
- 3) The illustration (Fig. 2 on page 4) shows the rear brake shoes correctly fitted with the lining appearing to be dispelled on the shoes in the forward direction of rotation. The differences between the shoes on the brake are the position of the lining on the shoe web and the position of the shoe pin which abuts the snail cam adjuster.

- 4) Providing therefore the shoes are fitted correctly as shown on the illustration and the adjustable steady posts are adjusted correctly, the pedal should be satisfactory after the linings have bedded in.
- 5) Worn adjusters can also be a contributory factor towards a poor or long pedal; the serrations on the cam may be worn, or the stem may be loose and under stress from the pull of the shoe return springs, worn adjusters cannot always keep the brake shoes in adjustment. It is a simple job to fit new ones and the part number is GA 11.
- 6) The illustration (Fig. 3 overleaf) shows the correct method of fitting the shoes to the front brakes.
- 7) Not all brakes have adjustable steady posts.
- 8) The use of genuine Girling Brake Shoes is strongly recommended as they are crown ground and the bedding in period is considerably reduced.

'B' Hydraulic System disturbed

Refer to the information given for 88" W/B Landrovers.

ALL MODELS

Listed below is a list of satisfactory pedal travel figures for the various Landrovers. IT CANNOT BE OVER-EMPHASIZED THAT THE BEST RESULTS CAN ONLY BE OBTAINED WHEN THE CORRECT SPARES ARE USED AND THE SHOES ARE PROPERLY FITTED AND BEDDED IN.

Test conducted with engine switched off.

MODEL	PEDAL EFFORT		PEDAL TRAVEL	
	lb. f		in.	mm
88" W/B	50		$2\frac{3}{8}$	60
	100		$3\frac{1}{4}$	82
109" W/B 2.25 Litres	50		$2\frac{1}{8}$	53
	100		$2\frac{3}{8}$	60
109" W/B 2.6 Litres	50		$1\frac{7}{8}$	48
	100		$2\frac{3}{8}$	60
101" W/B Forward Control	50		$2\frac{1}{4}$	57
	100		$2\frac{3}{4}$	70

An increase in pedal travel of $\frac{1}{4}$ " (6mm) can be expected with models fitted with servos when the engine is running.

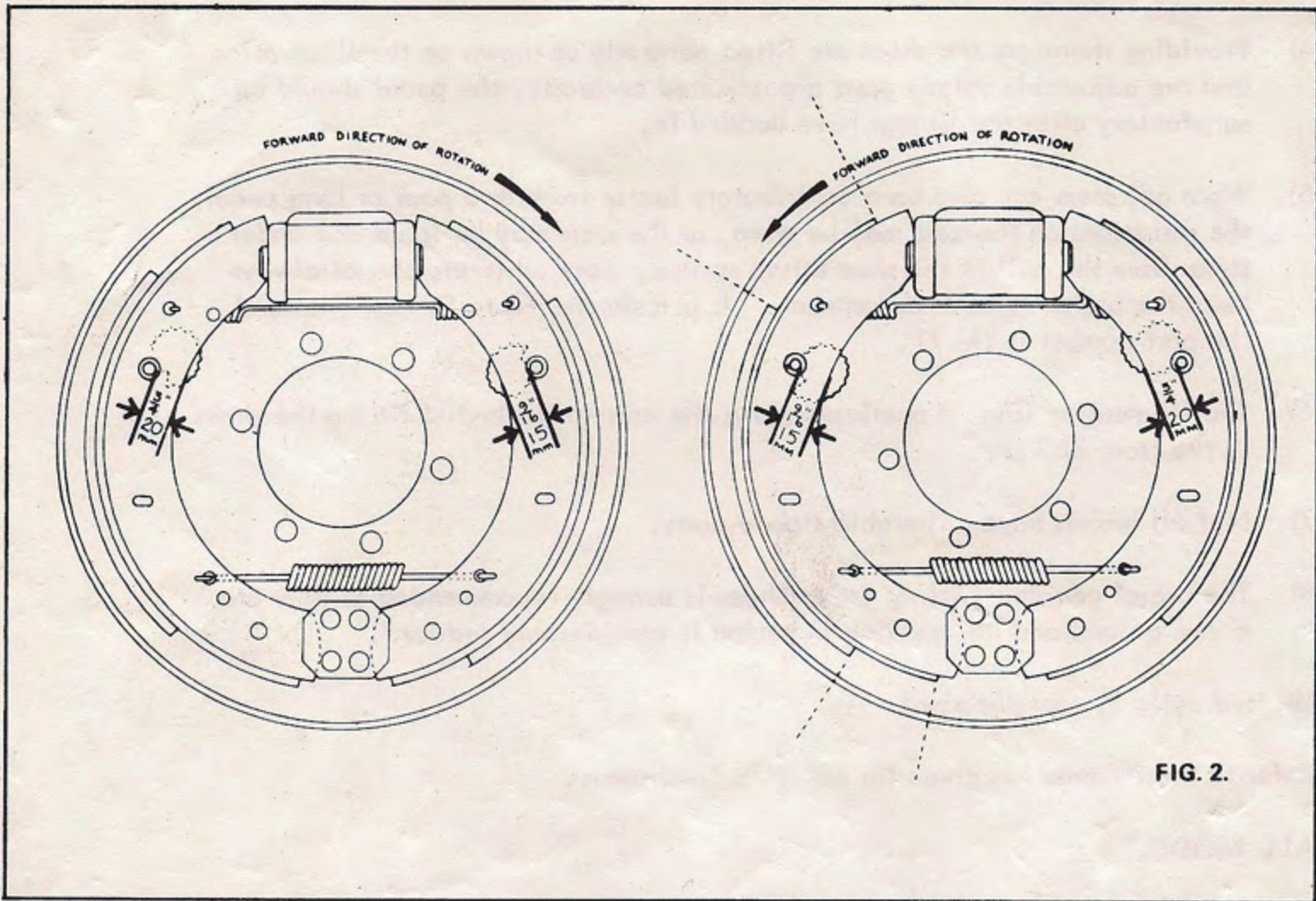


FIG. 2.

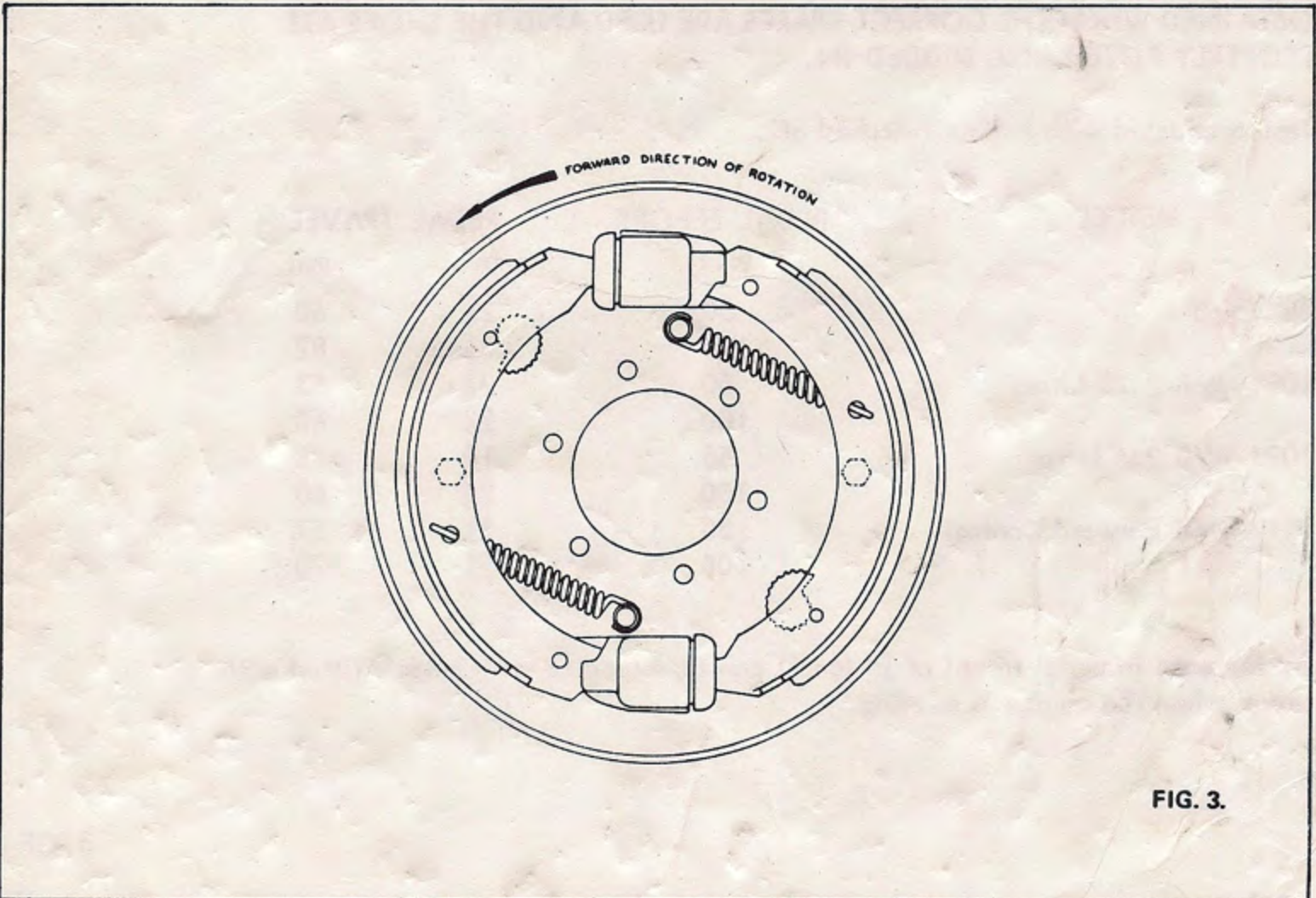


FIG. 3.