

Bulletin  
Number 5030

Issue 1

Date 1.12.48

Sheet 1 of 5 Sheets

MODELS AFFECTED

1948-49 "60" and "75"  
1948 Land-Rover

UNIT AFFECTED

**BRAKES, FRONT**

COMPLAINT

- A. OIL OR GREASE ON FRONT BRAKES.
- B. BRAKES "PULL".
- C. BRAKES POOR.
- D. OIL LEAKS FROM FRONT AXLE.

SUBJECT

Any one or all of the complaints A, B, C and D may be present on the vehicle in question. Whichever complaint is received, proceed as follows:—

1. Check for oil leaks and determine their source; it will be one of the following:—
  - (a) From the brake wheel cylinder; in this case it would be brake fluid leaking and the brake linings would be affected.
  - (b) From the front hub bearings; in which case it would be grease ("60" and "75") or axle oil and/or grease (Land-Rover) and would affect the brake linings.
  - (c) From the swivel pin ("60" and "75" only); from the swivel pin housing seal (Land-Rover only); from the joint face between the swivel pin housing and the stub axle (Land-Rover only). In all these cases it is unlikely that the brakes will be affected.

Having located the oil leak, deal with it as detailed below:—

Remedy (a). Renew the brake wheel cylinder piston cups as necessary. (See OPERATION A, Sheet 2). If the brake linings are badly affected, re-line the shoes; if there is only slight damage, de-grease the linings.

Remedy (b). Check the hub oil seal; it may have been pressed too far into the hub and therefore fails to register on the shoulder of the stub axle when the hub is in position.

The correct position for the seal is as follows:—

"60" and "75"  $\frac{3}{32}$  in. (2.40 mm.) proud of the rear face of the hub.  
LAND-ROVER. Flush with the rear face of the hub.

In either case, if the seal is incorrectly positioned, it must be removed, carefully inspected for damage and replaced to the correct dimension. A damaged seal must be renewed. (OPERATION B, Sheets 2-3).

LAND-ROVER ONLY.

Before replacing the hub, remove the steel ring on which the oil seal registers from the stub axle; check it for the following defects:—

- (i) Poor machine finish on the outside diameter. The effects of this will have been discovered when examining the seal.
- (ii) Excessive clearance between the steel ring and the stub axle, thus allowing oil to pass between the two parts. The ring should be a push fit on the stub axle.

If either of the two defects is present, the ring must be renewed.

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Sheet 2 of 5 Sheets

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Remedy (c). All defects under this heading can be corrected as detailed under OPERATION C, Sheets 4-5.

2. Having cleared up all possible causes of complaints (a), (b) and (c) as far as oil leaks are concerned, there remains one more possible source of trouble at the brake units (Land-Rover only).

Where the vehicle is operating in very wet and/or muddy conditions, a complaint of "BRAKES PULL" may be reported as a result of mud on the brake linings or corrosion and consequent seizure of the brake wheel cylinder.

Remedy. Remove and thoroughly clean the affected parts (OPERATION A).

**INSTRUCTIONS FOR RECTIFYING DEFECTS DETAILED ABOVE.**

**OPERATION A.** To remove and replace front brake components.

1. Jack up the front of the vehicle.
2. Remove the road wheel.
3. Remove the brake drum.
4. Slacken the bleed screw on the back of the anchor plate and drain off the fluid into a suitable receptacle. Push the foot pedal right down and wedge it in that position to prevent losing fluid from the supply tank.
5. Disconnect the flexible feed pipe to the wheel cylinder.
6. "60" and "75" only.—Remove the two shoe pivot bosses at the bottom of the anchor plate.
7. Disconnect the bias reducing and/or shoe pull-off springs and remove the brake shoes.
8. Remove the wheel cylinder complete and remove the two rubber dust covers, pistons, cups and spring from the cylinder.
9. Inspect and rectify or renew components as required. Should it be necessary to renew the brake linings it should be noted that the Land-Rover leading shoe lining is split. Replacement linings are supplied in one piece and must be cut through just below the spring-loaded plunger, after riveting to the brake shoe.
10. Assemble the brake unit by reversing the sequence of operations 1-8. Bleed the brake system at all four wheels.

**OPERATION B.** To remove and replace the front hub oil seal.

- (i) "60" and "75".
1. Jack up the front of the car.
  2. Remove the road wheel.

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Sheet 3 of 5 Sheets

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3. Remove the brake drum.
4. Remove the hub cap.
5. Prise up the locking tab and remove the outer hub nut. This has a left-hand thread on the left-hand hub and a right-hand thread on the right-hand hub.
6. Remove the key washer and peg and the inner hub nut. (Left-hand thread on the left-hand hub and right-hand thread on the right-hand hub).
7. Remove the front hub, together with the inner and outer roller bearings and the hub oil seal.
8. Renew the oil seal if necessary; the new seal should be fitted  $3/32$  in. (2,40 mm.) proud of the rear face of the hub.
9. Assemble the hub by reversing the sequence of operations 6-7. Fill the hub with grease (see Service Bulletin 5004).
10. Adjust the inner nut so that the hub has .003 in.-.004 in. (0,08 mm.-0,10 mm.) end-float. (See Service Bulletin 5019 for the use of a dial test indicator to obtain this setting.)
11. Complete the assembly, taking care that tightening the outer nut does not destroy the end-float. The tab washer must be renewed.

(ii) Land-Rover

1. Jack up the front of the vehicle.
2. Remove the road wheel.
3. Remove the brake drum.
4. Remove the hub cap.
5. Remove the split pin, nut and plain washer from the driving shaft.
6. Remove the driving member squarely from the driving shaft and hub.
7. Prise up the tab washer; remove the lock nut, tab washer and adjusting nut.
8. Remove the thrust washer from the stub axle.
9. Remove the outer roller bearing from the hub.
10. Remove the hub, together with inner roller bearing and oil seal.
11. Renew the oil seal if necessary; the new seal should be fitted flush with the rear face of the hub.
12. Assemble the hub by reversing the sequence of operations, renewing the tab washer and split pin.  
The hub nut must be adjusted so that the hub has .003 in.-.004 in. (0,08 mm.-0,10 mm.)

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end-float. (See Service Bulletin 5019 for the use of a dial test indicator to obtain this setting.) If not originally fitted, insert joint washer Part No. 231505 between the hub and driving member.

- 13. Check the oil level in the Tracta joint housing and replenish as necessary (see Service Bulletin 5013).

**OPERATION C.**

- (i) "60" and "75". To remove and replace the swivel pin oil seals.

1. Strip the front hub as detailed in OPERATION B (i), Sheets 2-3.
2. Remove the brake anchor plate complete with brake gear, at the same time releasing the oil thrower ring, joint washer and steering arm.
3. Remove the top cap and joint washer from the stub axle.
4. Remove the nut, distance collar, shims and thrust bearing. The shims should be preserved.
5. Remove the bottom cap and joint washer from the stub axle.
6. Remove the cotter and tap out the swivel pin towards the bottom. The pin is a light drive fit.
7. If necessary renew the two oil seals in the stub axle. They should be positioned with the edges of the seals away from the swivel column boss. It will be found advantageous to insert the lower thrust washer into the upper oil seal, afterwards pushing them together into the stub axle.
8. Remove all sharp edges from the swivel pin and assemble the stub axle to the swivel column, driving in the swivel pin from the bottom until the shoulder on the pin abuts the swivel column boss. (See Service Bulletin 5019 for the use of a special collar to ensure that the swivel pin is drawn well home.)
9. Fit the cotter; replace the thrust bearing shims, distance collar and nut. Adjust the number of shims so that the stub axle is free to rotate with the minimum of end-float, which must not exceed .004 in. (0.10 mm.).
10. Replace the top and bottom caps with their joint washers. Unscrew the filler plug in the top cap and POUR in oil of the correct grade (Service Bulletin 5004). Replace the plug.
11. Complete the assembly as detailed in OPERATION B (i), Sheets 2-3.

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Sheet 5 of 5 Sheets

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**SUBJECT**

(ii) **Land-Rover.** To remove and replace the swivel pin housing oil seal.

1. Jack up the front of the vehicle.
2. Remove the road wheel.
3. Disconnect the flexible brake pipe from the wheel cylinder.
4. Disconnect the track rod and drag link (if applicable) ball-joints from the steering lever.
5. Remove the bolts securing the swivel pin bearing housing to the front axle casing.
6. Remove the complete stub axle and half shaft assembly from the axle casing, taking care not to damage the seal in the end of the casing.
7. Remove the five bolts and the lock stop bolt securing the swivel pin housing oil seal retainer and remove the retainer.
8. Renew the oil seal if necessary.
9. Re-assemble by reversing the sequence of operations.
10. Set the lock stop bolt as instructed in Service Bulletin 5027.
11. Bleed the brakes at all four wheels.

(iii) **Land-Rover.** To rectify an oil leak at the jointing face between the stub axle and the swivel pin housing.

1. Dismantle the front hub as detailed in OPERATION B (ii), Sheet 3.
2. Remove the bolts and lock plates or shakeproof washers securing the brake anchor plate to the stub axle. If lock plates were originally fitted, they should now be discarded.
3. Swing the anchor plate back to rest on the road spring, thus obviating bleeding the brakes on re-assembly.
4. Remove the stub axle, complete with the driving shaft and Tracta joint.
5. Clean the joint faces of the stub axle, brake anchor plate and swivel pin housing.
6. Replace the stub axle and brake anchor plate, securing them with set bolts and shakeproof washers. (Part No. 70823.)
7. Complete the assembly by reversing the sequence of the stripping operations.

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