

LONDON TRANSPORT
OFFICE OF THE ENGINEERING SUPERINTENDENT (ROAD SERVICES)

G.S.I. 209 - ROUTEMASTER INSTRUCTION 96, SECTION 2.

RM GEARBOX - CURING THRUST PAD FOUL

This Instruction applies to all RM type gearboxes, unit codes GB.32 and GB.39.

If second or third speed on any RM gearboxes found to be slipping on engagement and on removing the gearbox lid, it is found that the speed is engaging slowly and jerkily, then a fouling thrust pad must be suspected.

First check:-

1. With the gear in engaged there are no bubbles of air escaping through the gearbox oil, indicating leaking gearbox seals.
2. Check that the pipe from the EP valve to the restrictor jet and the restrictor jet itself are both clear.

Then remove the restrictor jet and operate the speed again, if it still engages slowly and jerkily the thrust pad should be checked. To do this first unscrew and remove the automatic adjuster nut and table of the speed concerned. The illustration shows the general arrangement of the operating linkage, it will be seen that the now-discontinued wrap-round-spring adjuster-nut is shown. Then, holding the pull-rod towards the gearbox bands, work free the thrust pad and remove it from the box. Care should be taken not to drop any of these parts into the gearbox as they will be awkward or impossible to remove again.

Examine the thrust pad flanks and if there is any sign of rubbing against the shoulders of the pivoted link then relieve the flanks of the thrust pad by grinding 45° chamfers to reduce or prevent the foul.

Re-assemble in the opposite order to removal. The table can be put on in two ways, but only in one way will it align with the other tables. Remember to "pump down" the adjuster nut to restore correct adjustment and to replace the restrictor jet.

If excessive friction in the linkage persists, it may be due to a foul between the head of the piston rod and the recess in the piston. This occurred on some early gearboxes due to a clash of limits.

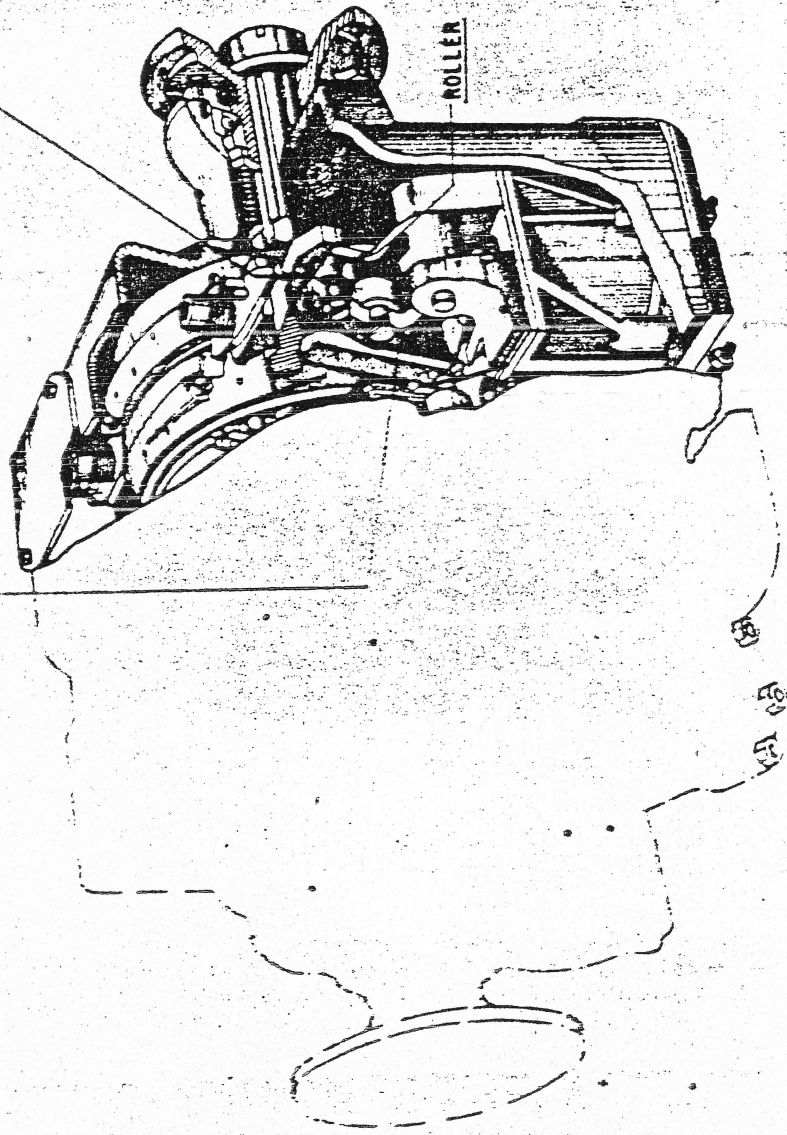
It also happens sometimes, that when new pistons seals are fitted they are tight at first and slow down the gearchange, but no action should be taken as the seals will free off later.

N.B. Excessive end float of the gearbox bands in the base plate is felt to be largely responsible for the fouling of the thrust pad; when gearboxes are overhauled at Chiswick shimming of the band anchorages is carried out to prevent this excessive end float.

Ref: C.15/CK-S
13th April, 1966.

PIVOTED LINK

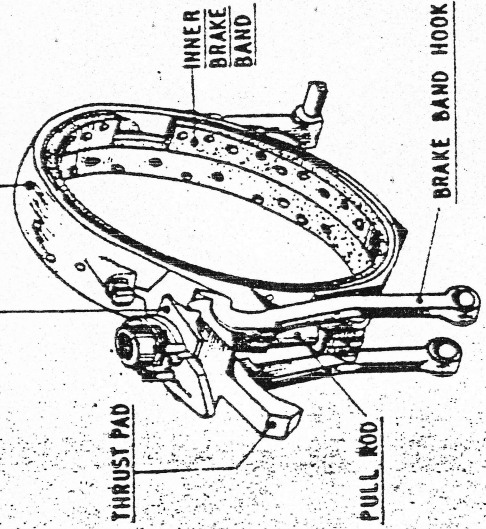
AREA OF FOUL
BETWEEN TAILPIECE OF
THRUST PAD & PIVOT LINK



PART GEARBOX SECTION

OUTER BRAKE BAND

ADJUSTER TABLE



THRUST PAD

INNER
BRAKE
BAND

PULL ROD

BRAKE BAND HOOK

BRAKE BAND ASSEMBLY

FOULING OF THRUST PAD 2ND AND 3RD SPEED

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