THE ROVER CO. LTD.,
SOLIHULL, BIRMINGHAM, ENGLAND.

SERVICE BULLETIN
2/V1

Issue 1 | Date 23.1.52 | Sheet 1 of 2 Sheets

MODELS AFFECTED
1934-51 Cars.
1948-52 LAND-ROVER

UNIT AFFECTED
ENGINE FLYWHEEL

FLYWHEEL RECLAMATION SCHEME

An engine flywheel usually becomes unserviceable for two reasons :—

A. Wear and scoring on the pressure face with consequent ill-effect on clutch operation.

B. Worn, damaged or broken gear teeth, resulting in noisy or ineffective starter pinion engagement.

As an alternative to fitting a new part, the original flywheel can be reconditioned as detailed below by following Sections A or B or both.

A. Flywheel worn on pressure face.

1. Remove the clutch securing bolts and dowels from the flywheel.
2. Machine the whole pressure face until score marks are removed.

   NOTE : It is not permissible to merely machine inside the ring of bolts and dowels, so forming a step on the pressure face, as loss of clutch driven plate life will result.

   A maximum of .030 in. (0,75 mm.) may be removed and if the face will not clean up at this figure i.e. 1.063 in. (27 mm.) overall thickness, the flywheel must be scrapped and a new part fitted.

   The run-out at the outer edge of the pressure face must not exceed .005 in. (0,13 mm.).
3. Replace the bolts and dowels.
4. Renew the primary pinion spigot bearing or bush as necessary.

B. Flywheel worn or damaged on gear teeth.

1. Remove the clutch securing bolts and dowels and the primary pinion spigot bearing or bush.

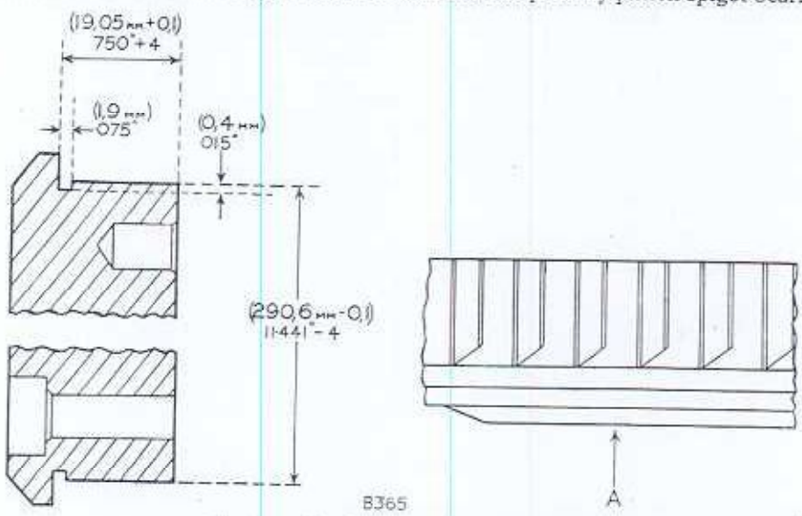

Fig. 1. A—Direction of pinion engagement.

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2. Mount the flywheel in a lathe chuck, locating it on the crankshaft spigot. Machine the teeth off flush and turn the gear ring spigot to the dimensions shown at Fig. 1. The spigot diameter is .020 in. (0,5 mm.) greater than the bore of the new ring gear ; the gear cannot be used as a gauge, as it may not be a true circle before fitting, so that if the volume of work demands, it will be advantageous to make a fixed gauge, rather than use a micrometer.

3. Heat the new ring gear (Part No. 232404) slowly to 260°C. to 300°C., allowing about 15 minutes to achieve uniform heating. To estimate the temperature accurately, polish a portion of the gear before heating and remove from the muffle when the brown coloration begins to change to purple. (Heating colours are : brown—260°C. ; light purple—276°C. ; full blue—293°C.). The gear must not be raised to red heat or cooled with water.

   The type of muffle used is immaterial and may be obtained locally.

4. Place the ring gear in position on the flywheel, with the chamfer on the gear teeth to the engine side and tap it well home against the shoulder, using a soft-faced hammer. If the temperature is correct, there should be 1/16 in. (1,6 mm.) to $\frac{1}{8}$ in. (3,2 mm.) clearance between the flywheel spigot and the gear bore.

   Allow to cool gradually in air ; do not hasten cooling with water or an air jet, as the uneven stresses so caused will crack the ring.

5. Replace the bolts and dowels.

6. Replace the primary pinion spigot bearing or bush.

7. If it becomes necessary to remove a ring gear, it should be split with a chisel between the teeth.

NOTE APPLICABLE TO HOME MARKET ONLY.

Alternatively, flywheels may be returned to our Spares Department for attention under our normal reconditioning procedure ; further information on this point will be circulated at a later date.