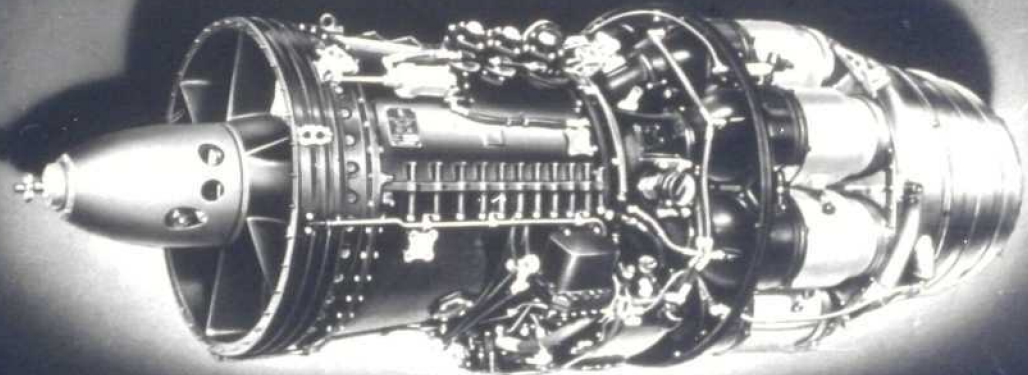




A
ROLLS - ROYCE
Instructional Strip-Film



MAINTENANCE OF THE
AVON 1
TURBO JET AERO-ENGINE



PREPARED UNDER THE TECHNICAL DIRECTION OF THE ROLLS-ROYCE AERO-ENGINE SCHOOL, DERBY, ENGLAND.

Turbo-starter Maintenance

A1J

14-J-253

**Care must be taken at all times during
servicing to prevent ingress of foreign
matter into the compressor.**

Starter loading and unloading.

Changing the safety disc.

External examination.

Removing the starter.

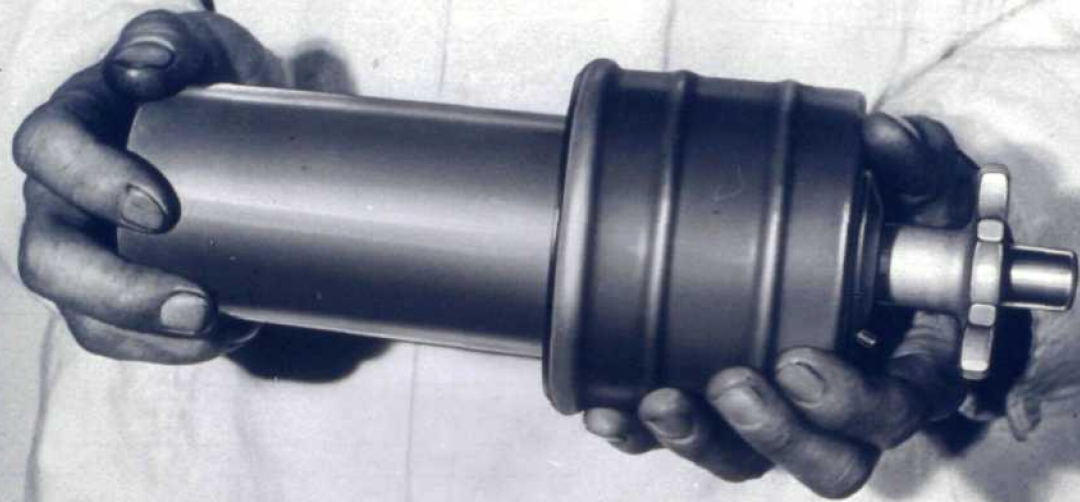
Replacing the starter.

STARTER LOADING AND UNLOADING.



Ensure that the Master Switch is OFF.





Fit the cartridge into breech cap. Two retaining claws will grip the flange and hold it in position.



Load the cartridge into the starter barrel—



FINGER TIGHT

ONLY

—and tighten breech cap finger tight only.

7

Unloading



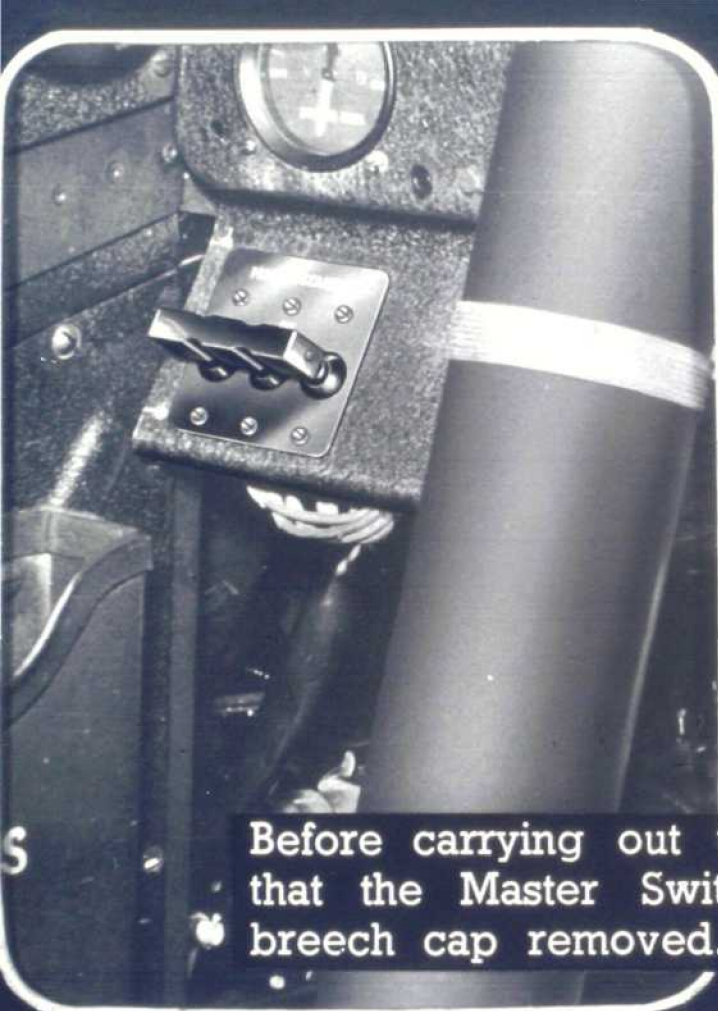
Press the centre plunger to release the ratchet, and unscrew the breech cap.



Remove the cartridge by pressing the two small plungers. These release the retaining claws

CHANGING THE SAFETY DISC.

The safety disc is designed to safeguard the starter in the event of excessive breech pressure, after continued use it may fail from fatigue. Should replacement discs fail on the two following attempts, the starter must be replaced.



Before carrying out this operation ensure that the Master Switch is OFF and the breech cap removed.

**Wait until starter cools before attempting
to change safety disc, otherwise damage
to disc holder and adaptor will occur.**

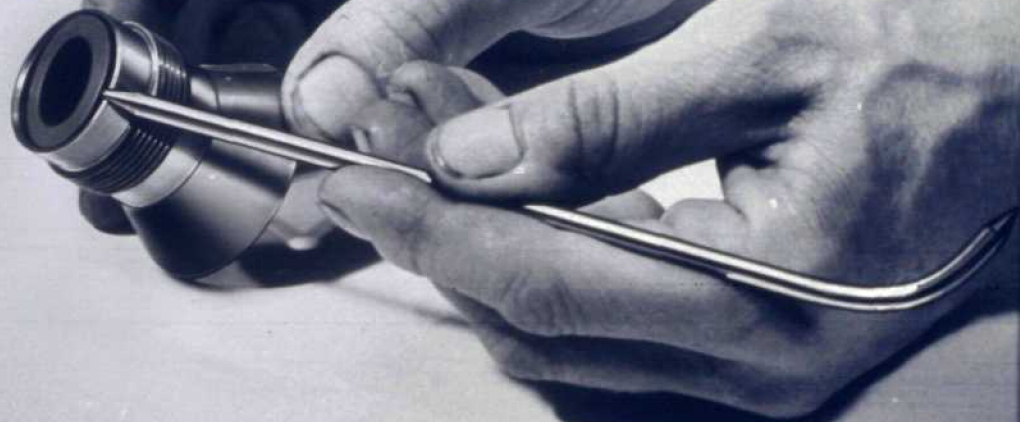


Remove the lockwire between the holder and adapter.

13



Using the correct spanner, remove the holder.



Remove the centre button of the spent disc and the remaining outer ring. A slot is provided for levering the outer ring.



Smear the holder threads and disc corrugation with graphite grease. Press the new disc into the holder.

Replace holder and tighten with correct spanner. (If torque spanner is available tighten to 65.lbsft.).

Re-wirelock the holder.



EXTERNAL EXAMINATION




S

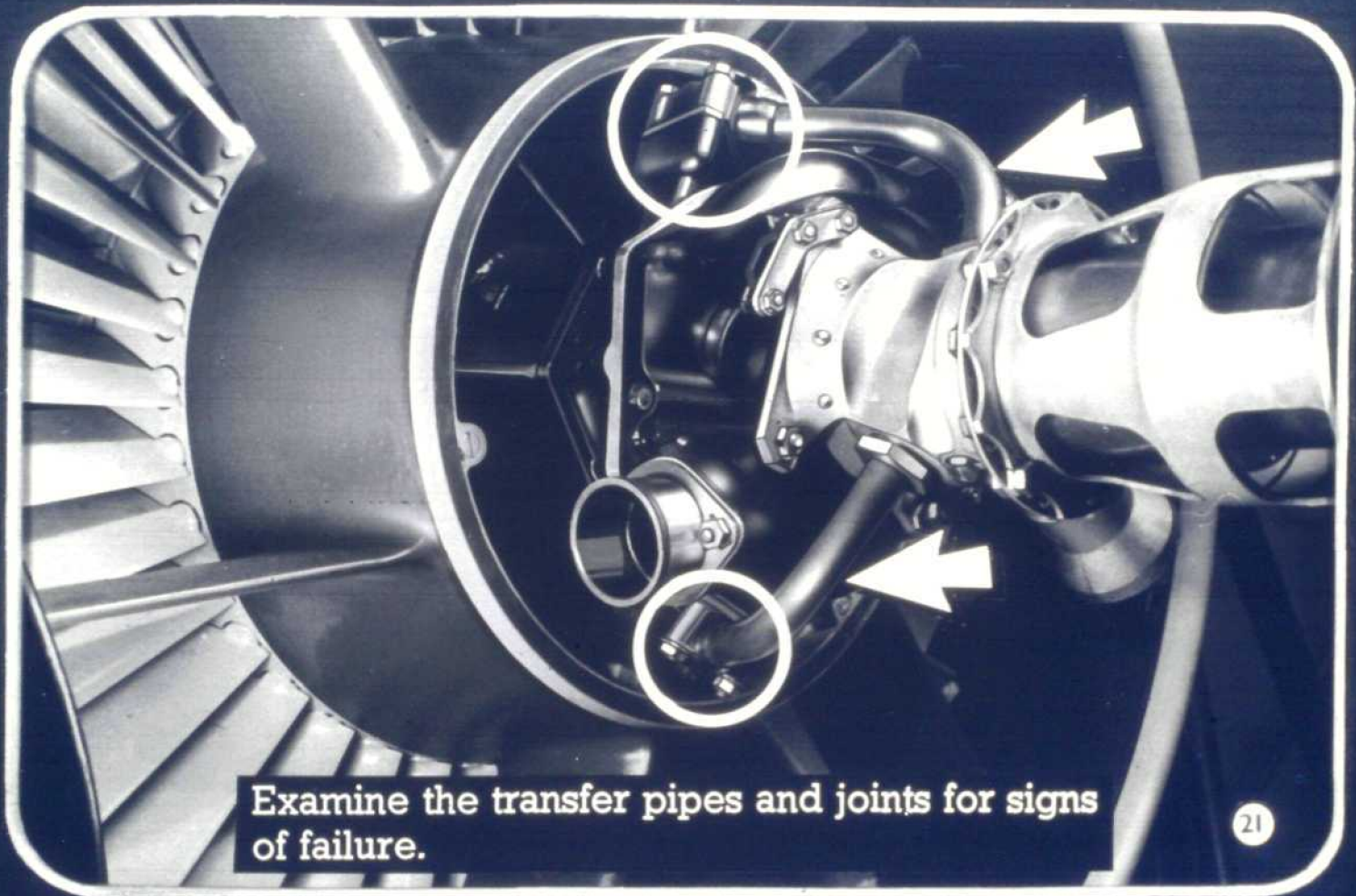
• Ensure that Master Switch is OFF and the breech cap removed.



Detach the exhaust pipes, and move them clear of the starter fairing.



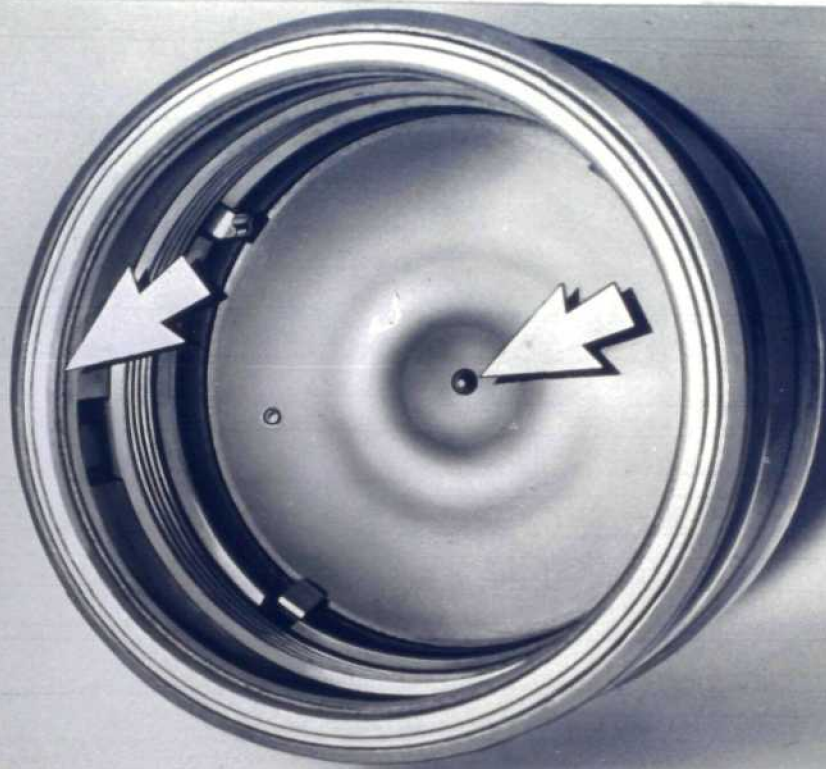
Bend back the locking tab, unscrew the slotted nut with special C spanner and remove the fairing.



Examine the transfer pipes and joints for signs of failure.



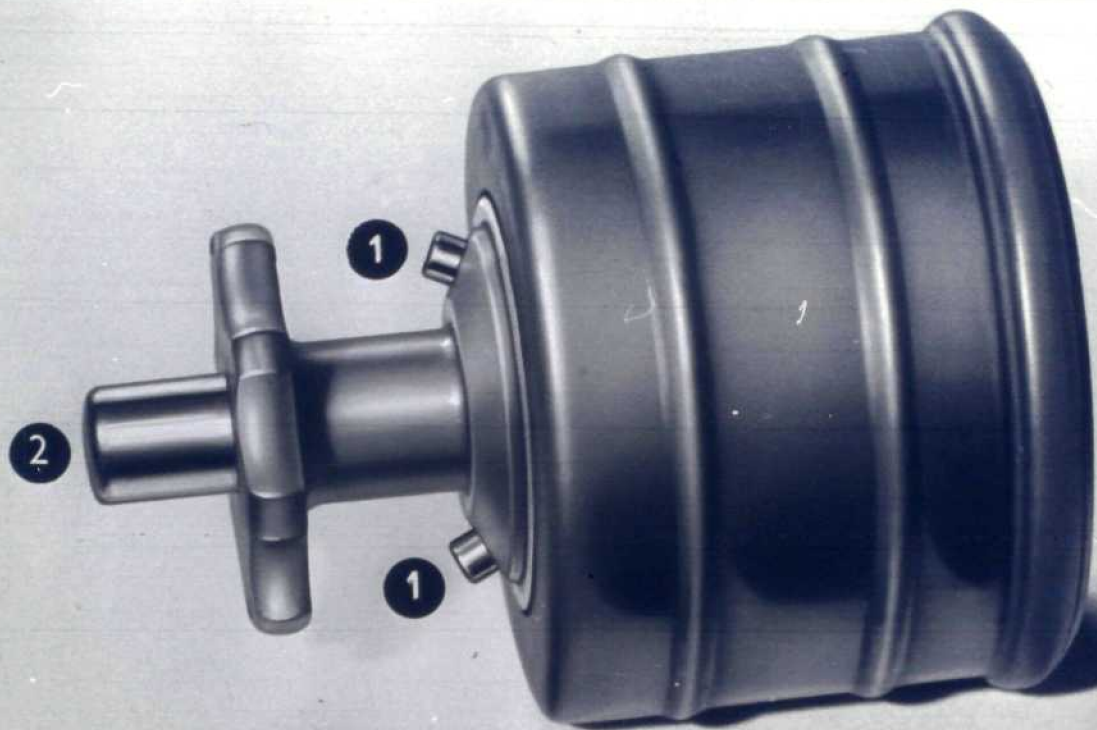
If present a replacement starter must be fitted.



Check the cleanliness of the slip ring in the breech cap, and the spring loaded contact pin.



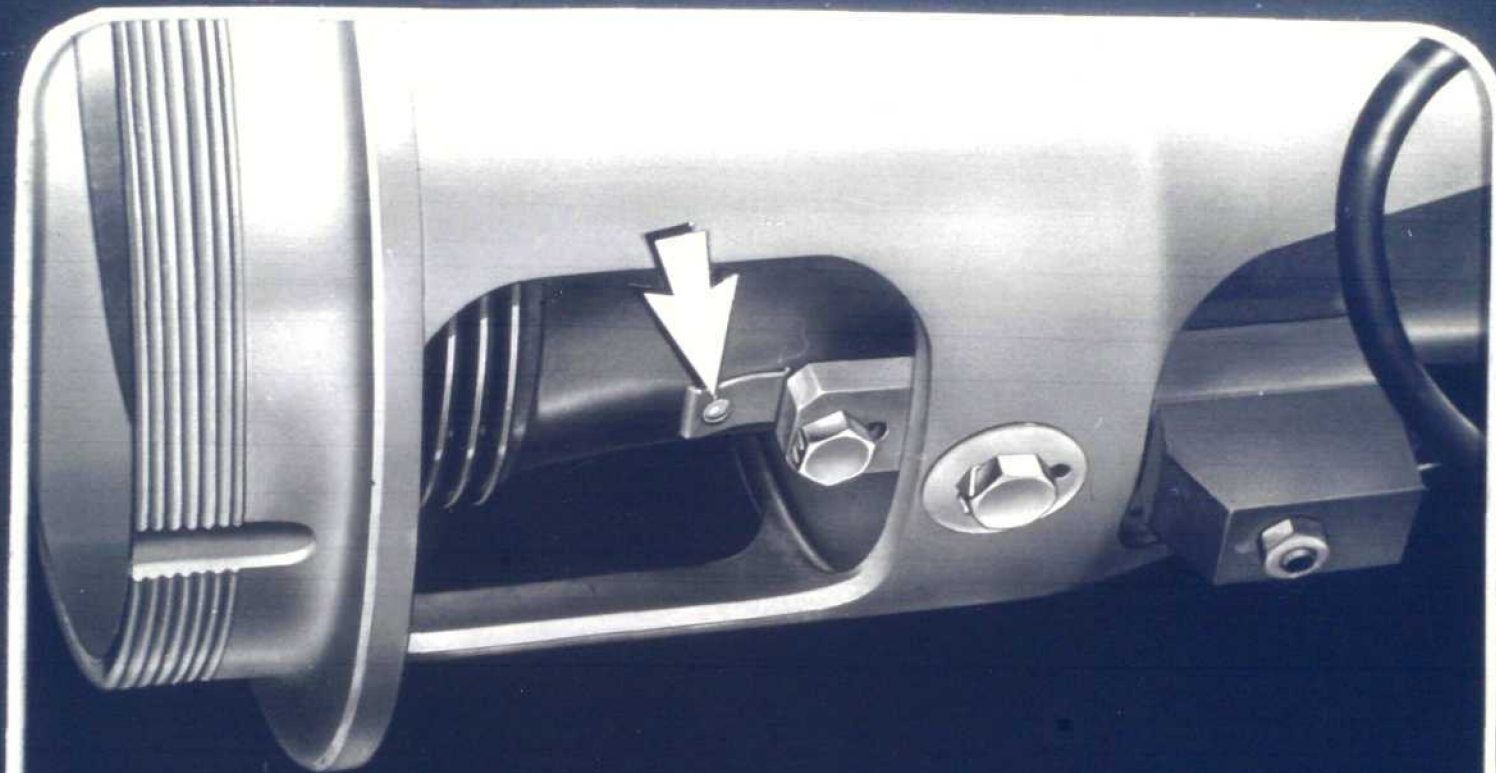
Check the operation of cartridge retaining claws (1) breech cap locking pawls (2)—



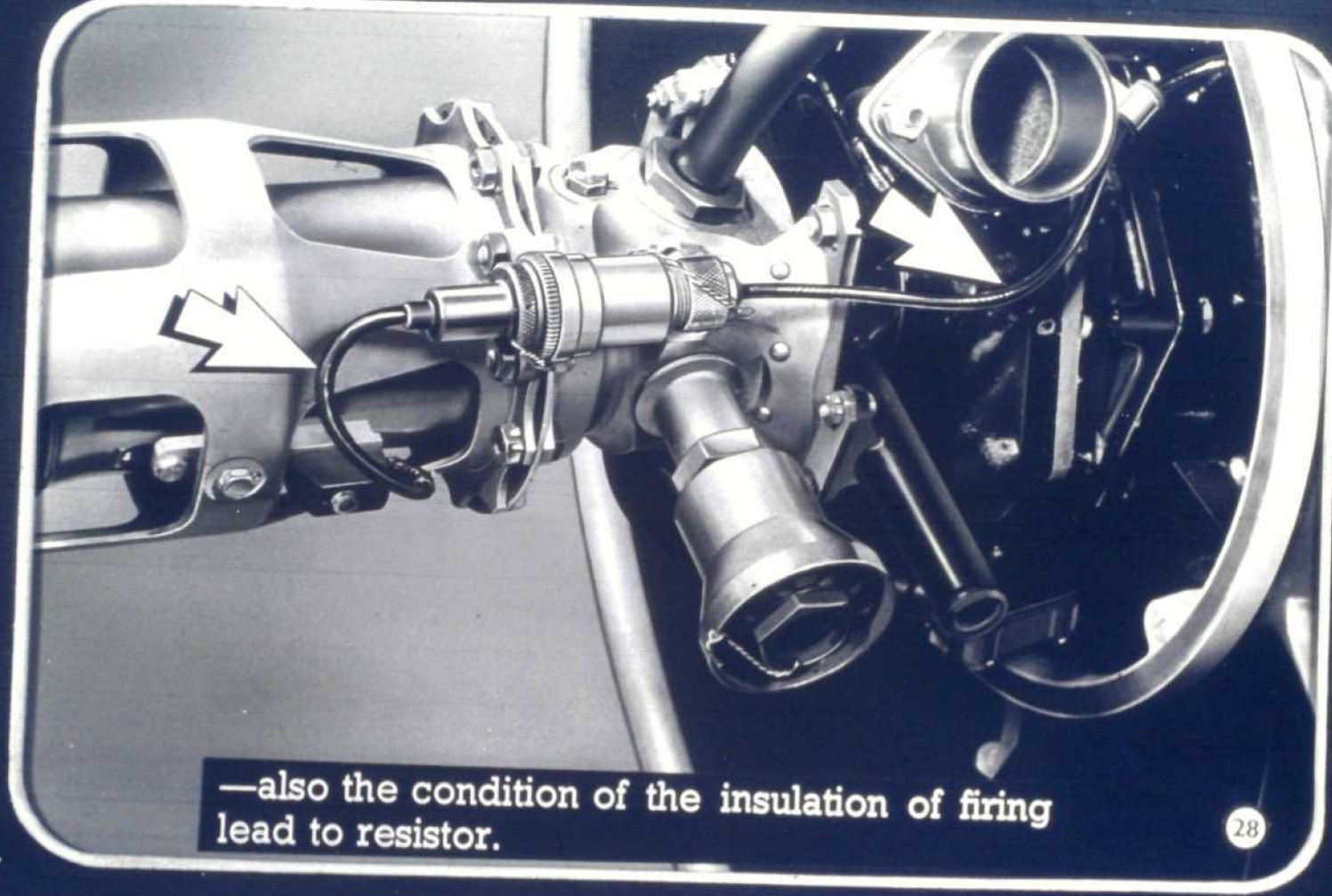
—by pressing the two small plungers (1) and the large plunger (2). Free if necessary.



Lightly grease the breech cap threads with graphite grease.



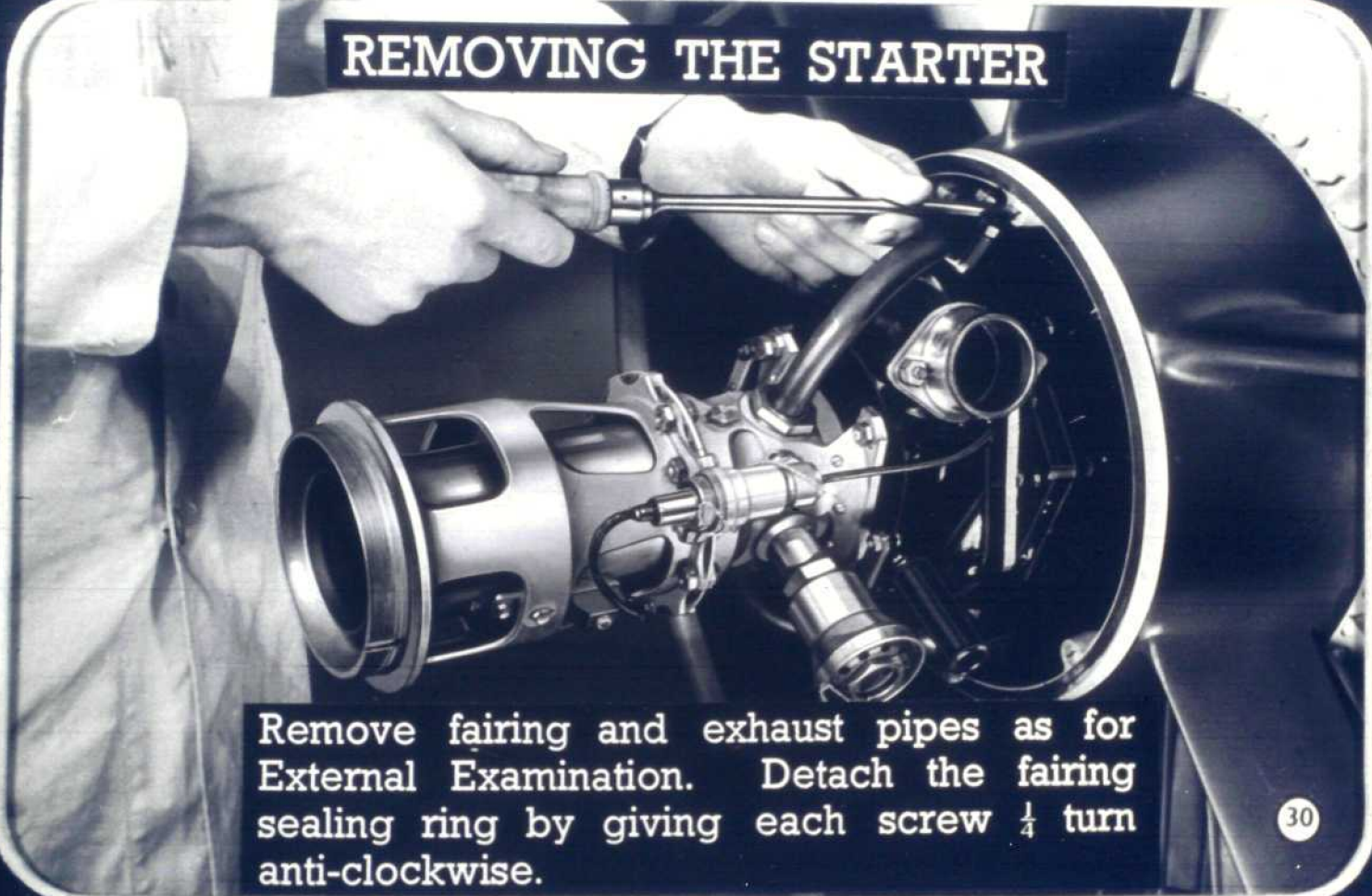
Check the cleanliness of the leaf-spring
contact pip—



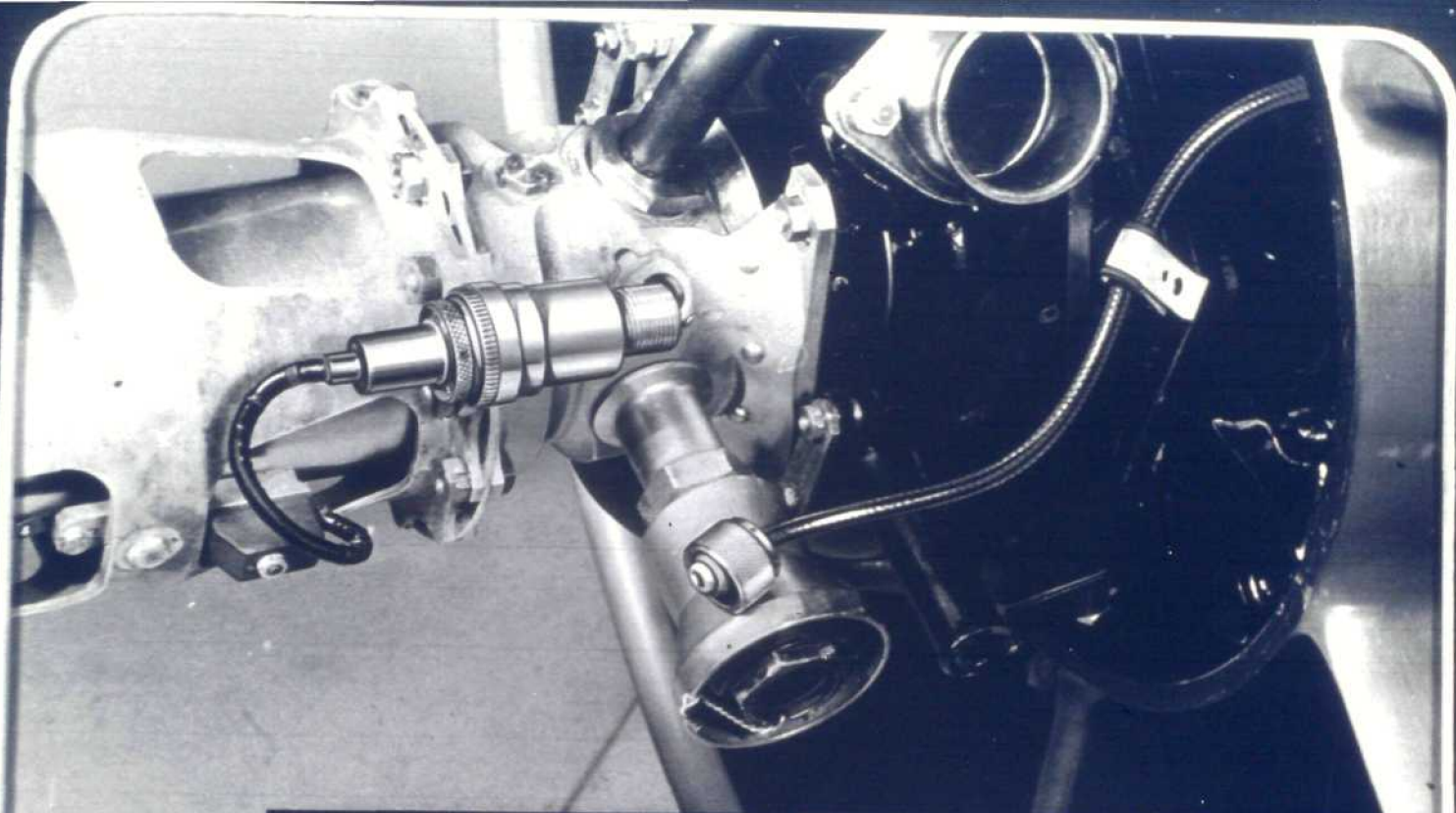
—also the condition of the insulation of firing lead to resistor.

**Replace fairing, retaining nut, and
exhaust pipes.**

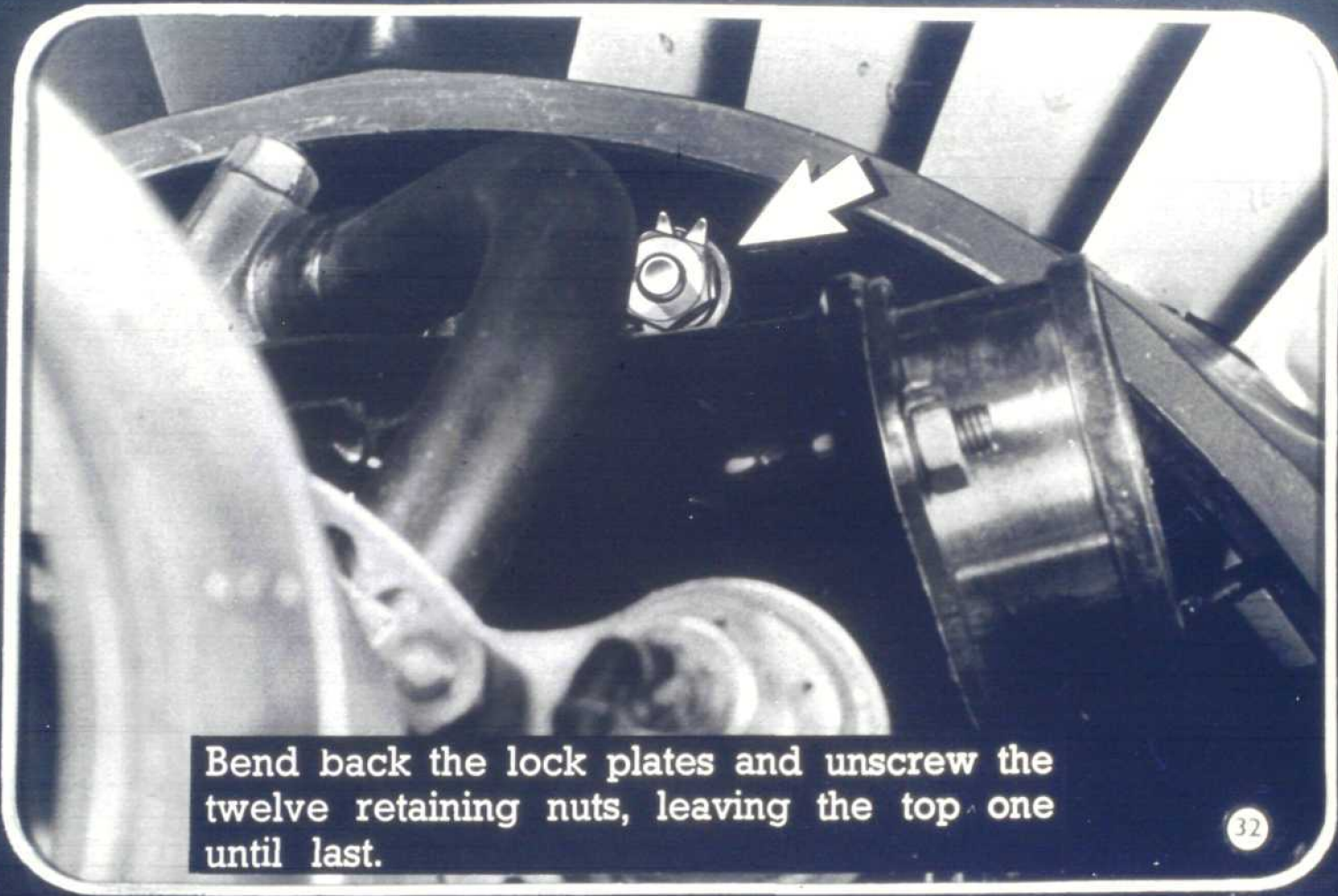
REMOVING THE STARTER




Remove fairing and exhaust pipes as for External Examination. Detach the fairing sealing ring by giving each screw $\frac{1}{4}$ turn anti-clockwise.



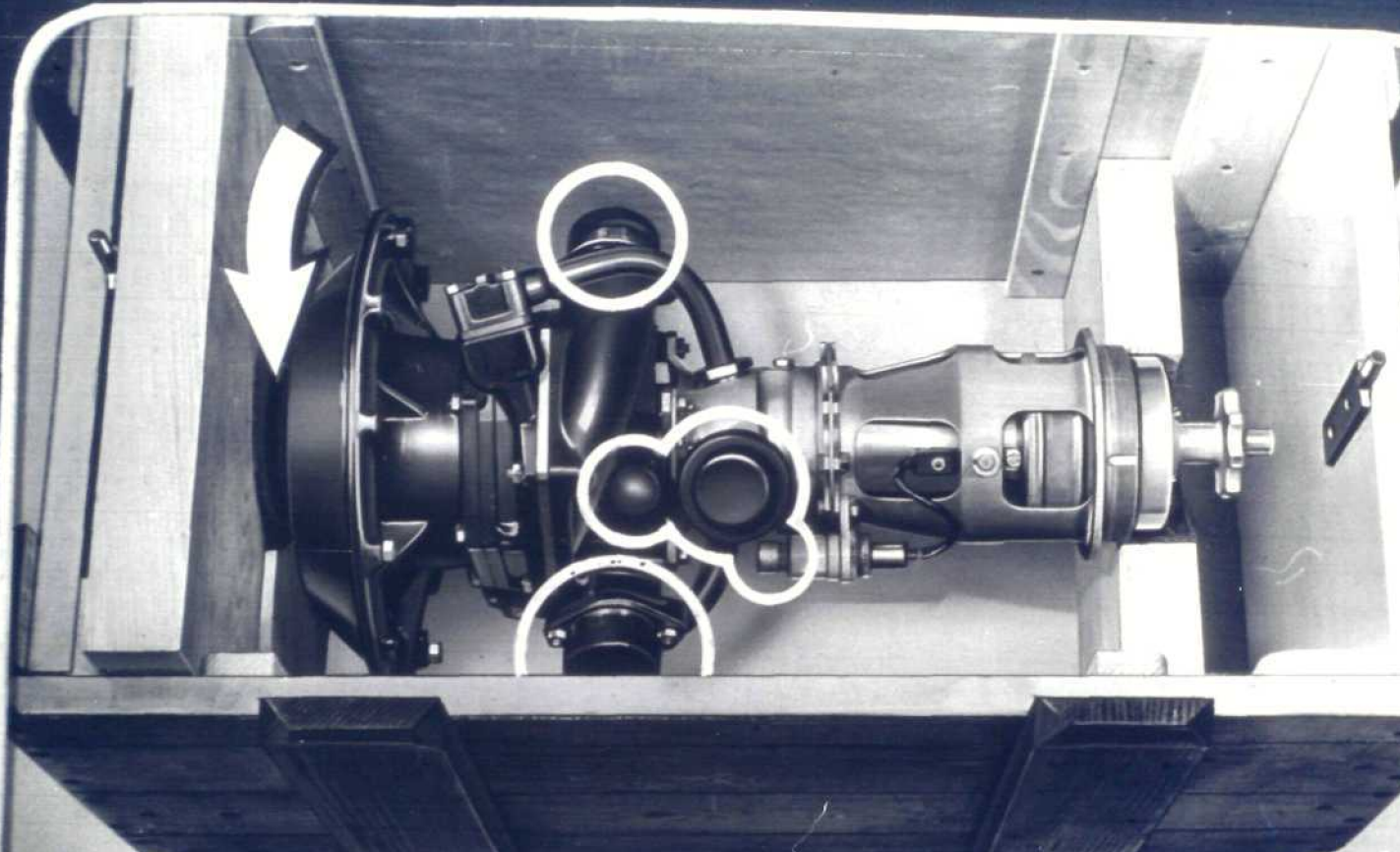
Remove lockwire and disconnect electrical cable from resistor unit. Release the clip holding cable to starter casing.



Bend back the lock plates and unscrew the twelve retaining nuts, leaving the top one until last.




Care must be taken that damage to the electrical firing lead does not occur when the starter is removed.

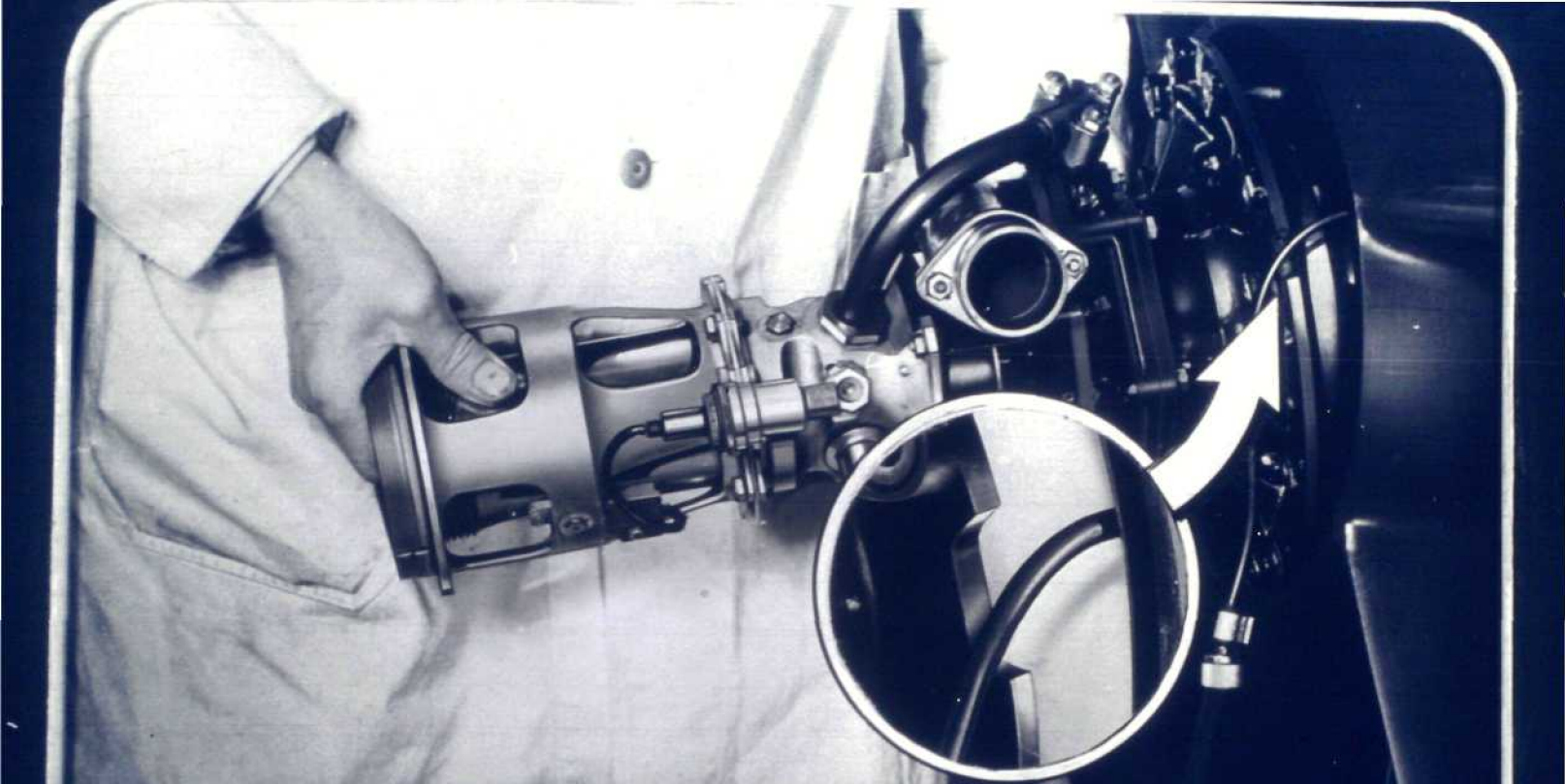


Fit blanks to all apertures and place in transportation crate.

REPLACING THE STARTER



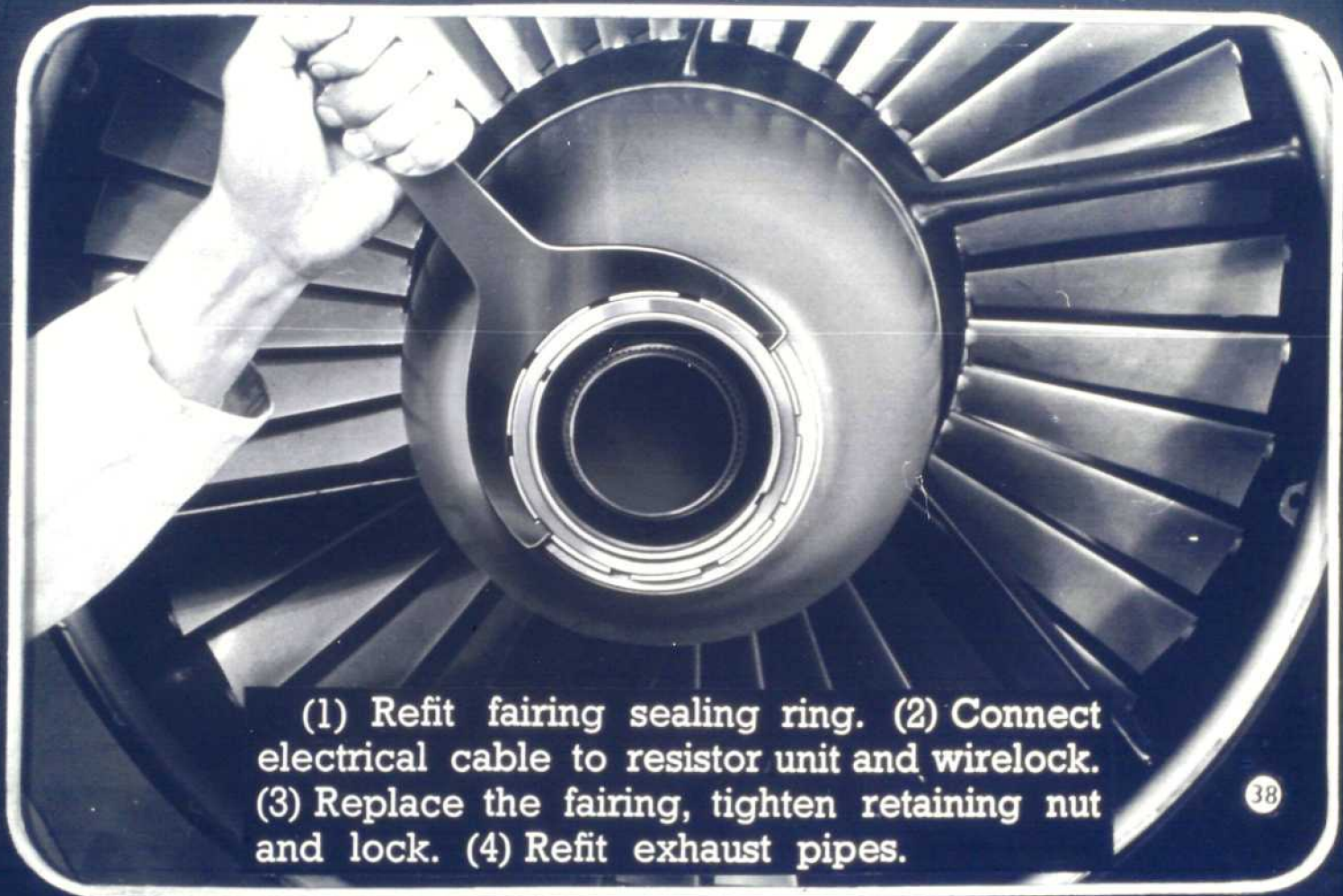
Fit new flange joint before fitting replacement starter.



Offer up the starter in such a position that the electrical cable lies in the relieved portion of the starter flange.



Fit new lockplates, tighten nuts and lock.



(1) Refit fairing sealing ring. (2) Connect electrical cable to resistor unit and wirelock. (3) Replace the fairing, tighten retaining nut and lock. (4) Refit exhaust pipes.

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