

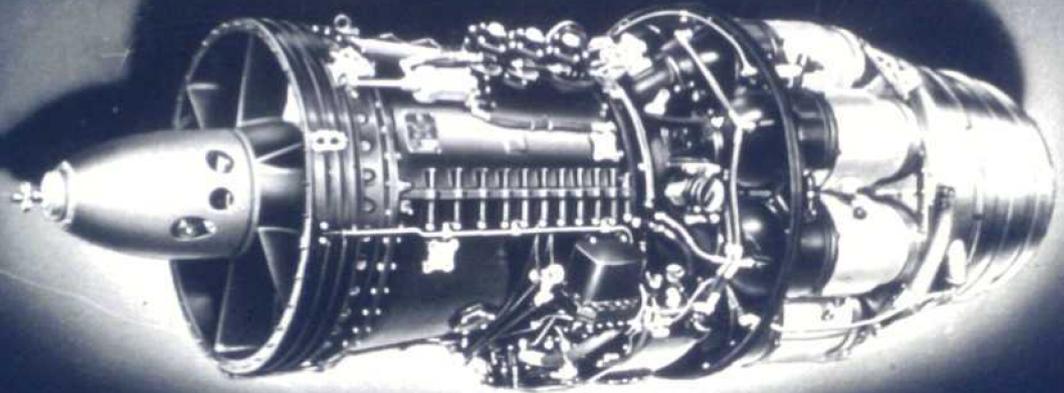


A
ROLLS - ROYCE

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.

Oil System Servicing

A1G

M-J-250

Draining the System.

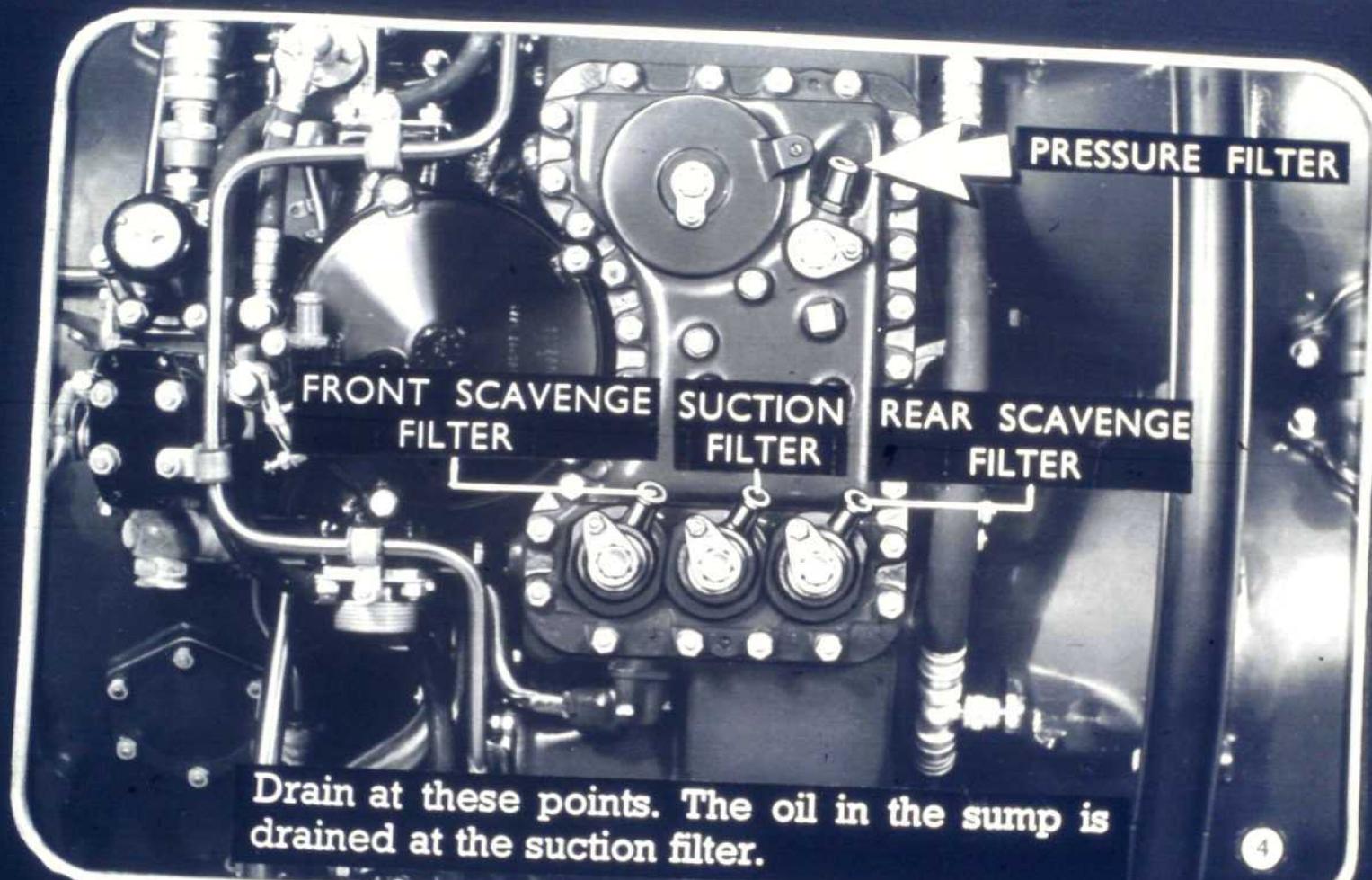
Filter Inspection.

Low Oil Pressure Investigation.

High Oil Consumption Investigation.

DRAINING THE SYSTEM

This is only necessary at period inspection or if the oil has been contaminated, e.g. by fuel leakage from the fuel pump drive gland.



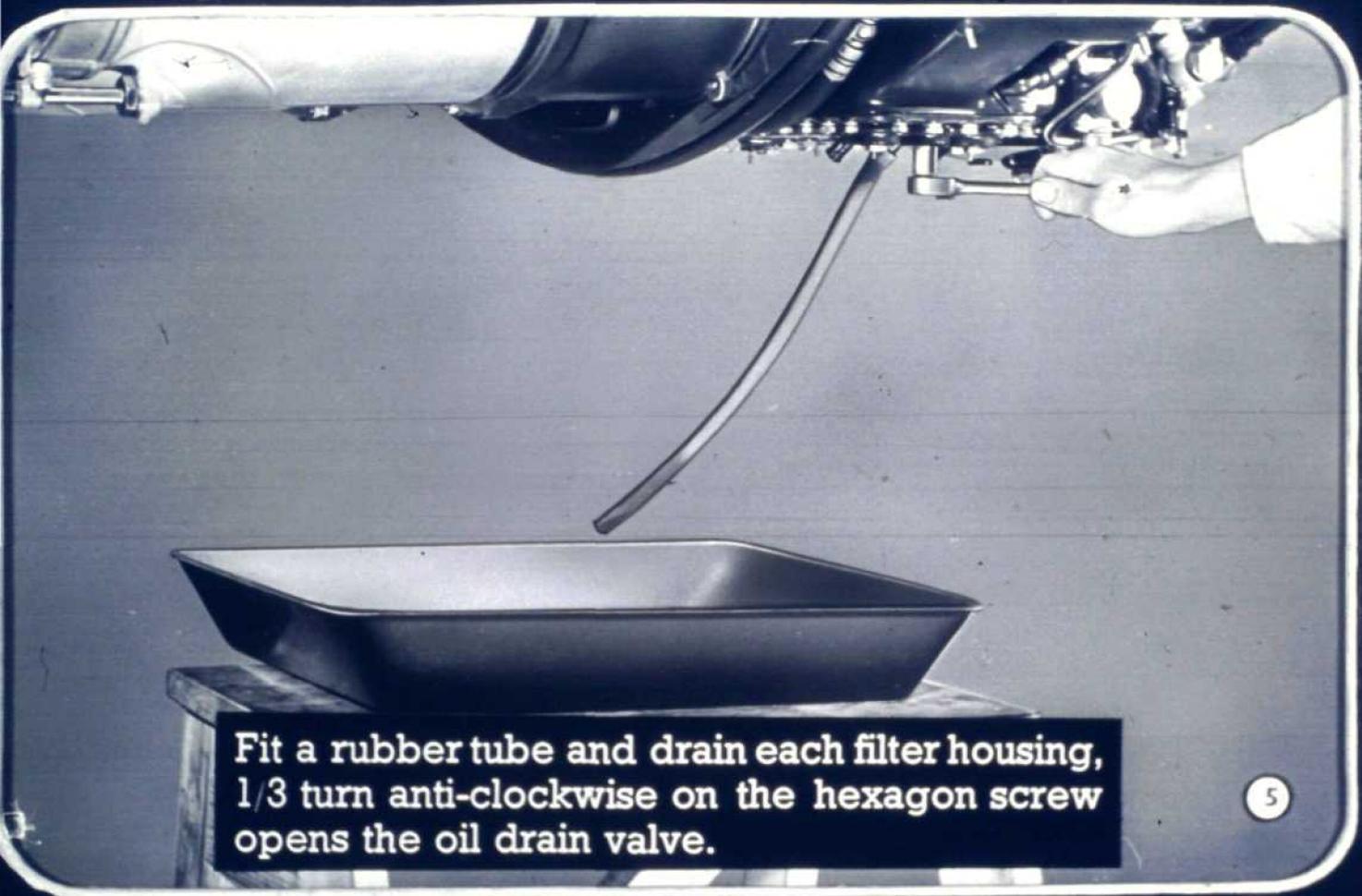
PRESSURE FILTER

**FRONT SCAVENGE
FILTER**

**SUCTION
FILTER**

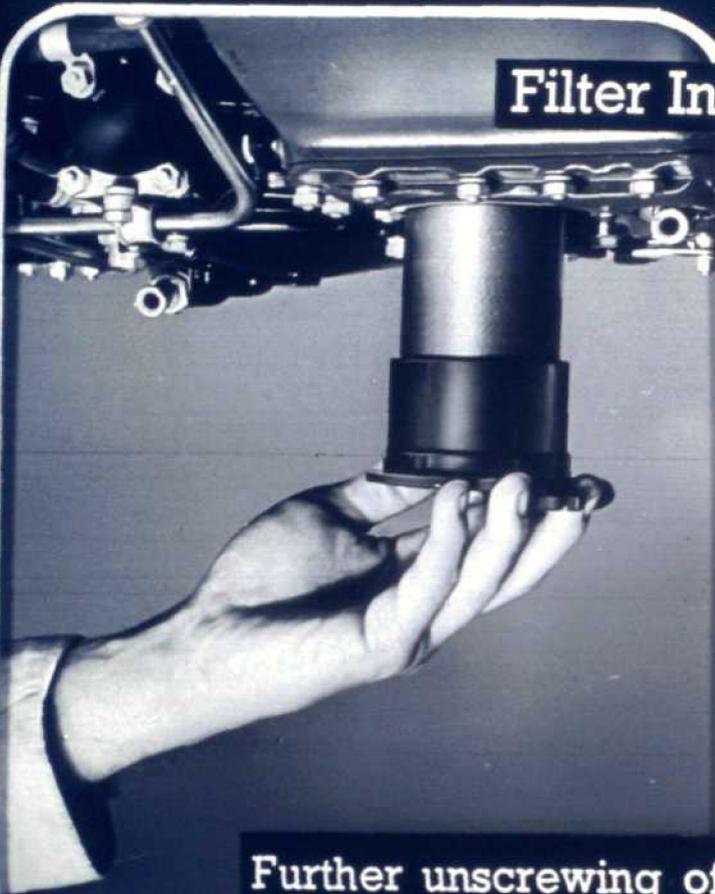
**REAR SCAVENGE
FILTER**

Drain at these points. The oil in the sump is drained at the suction filter.



Fit a rubber tube and drain each filter housing, 1/3 turn anti-clockwise on the hexagon screw opens the oil drain valve.

Filter Inspection

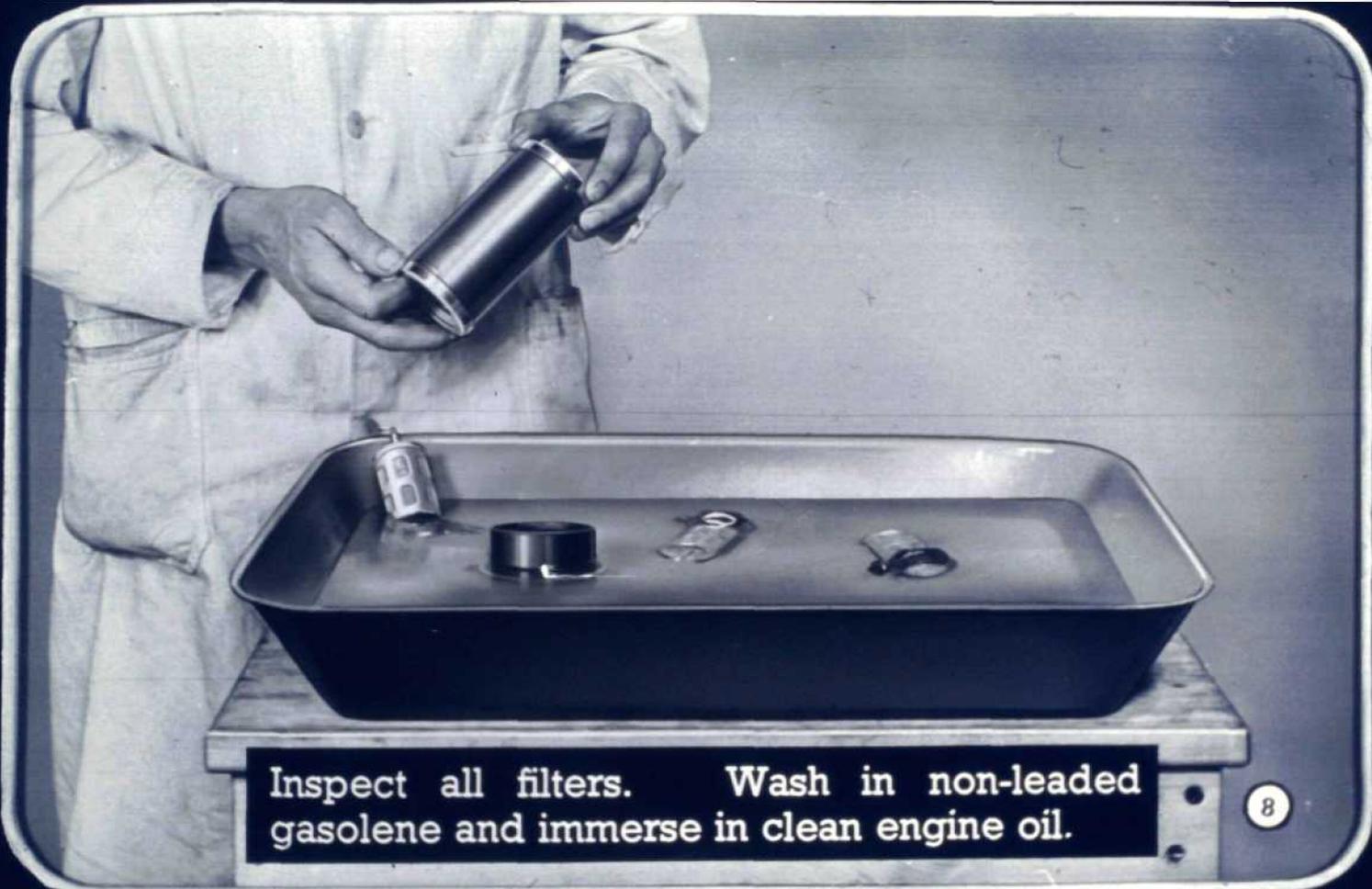


Further unscrewing of the hexagons extracts the filters and caps. Remove all filters.



Extract the pressure filter from the filter cap.

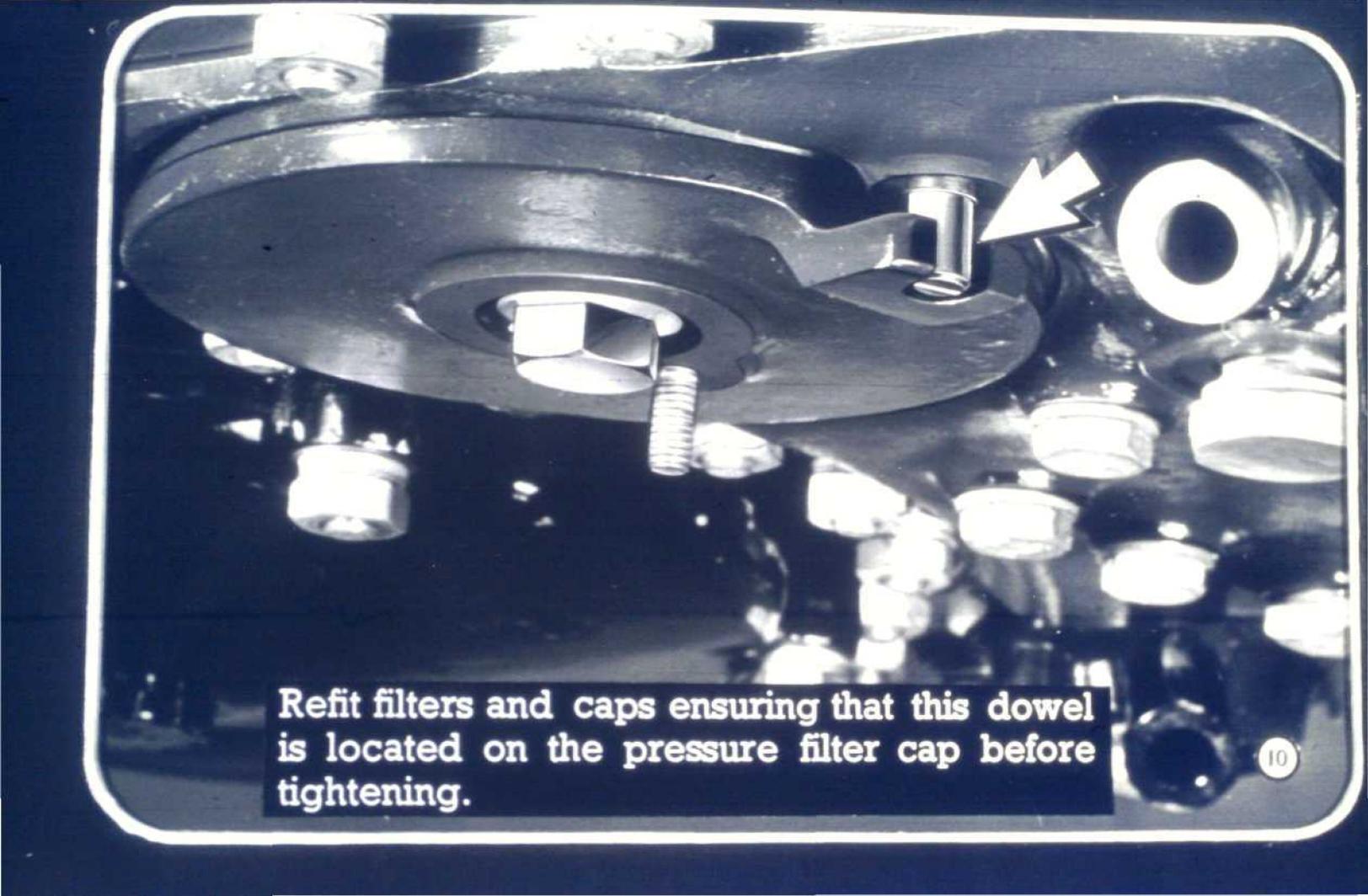
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Inspect all filters. Wash in non-leaded gasoline and immerse in clean engine oil.



Examine the filter sealing washers and renew if damaged.



Refit filters and caps ensuring that this dowel is located on the pressure filter cap before tightening.

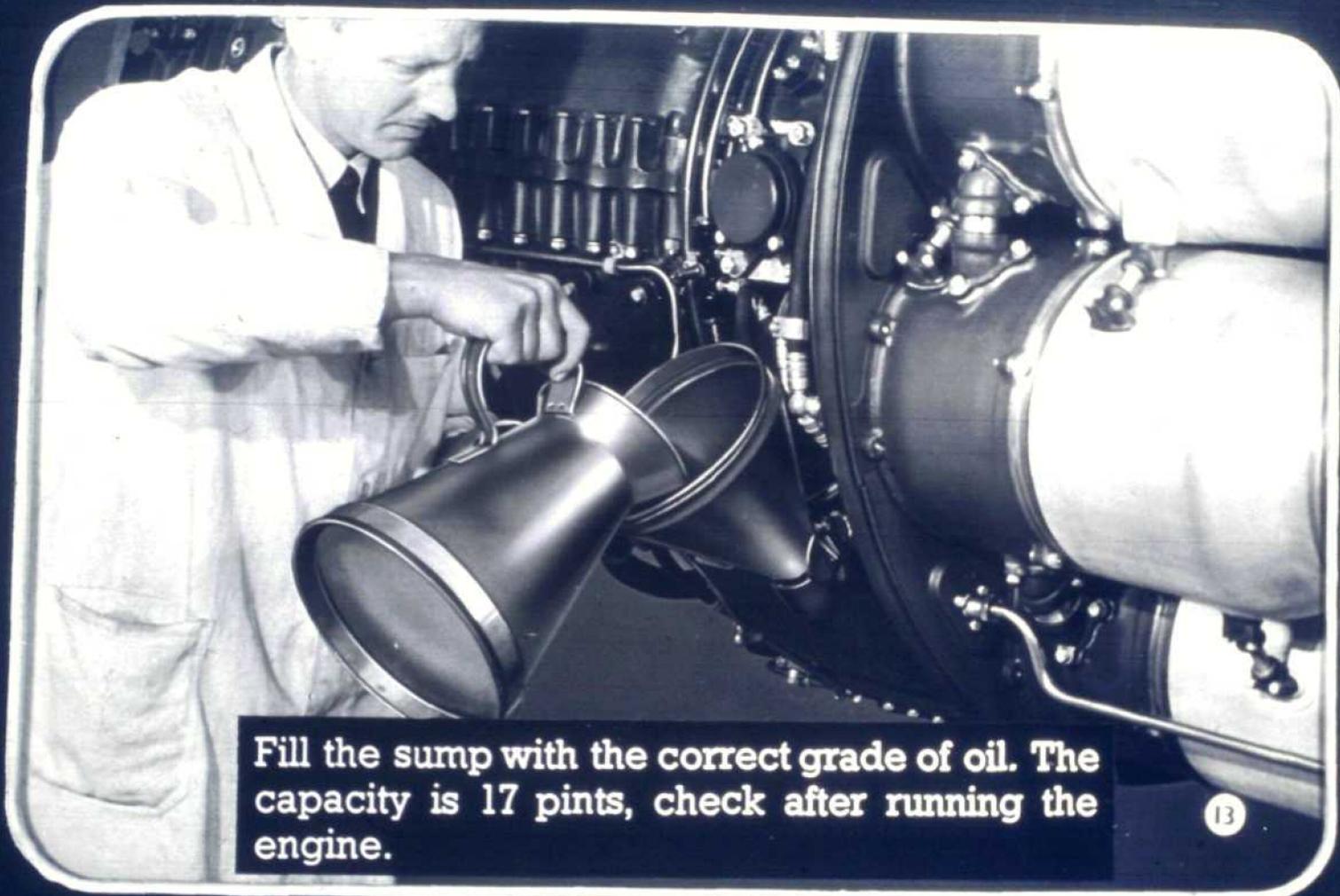


Do not overtighten.

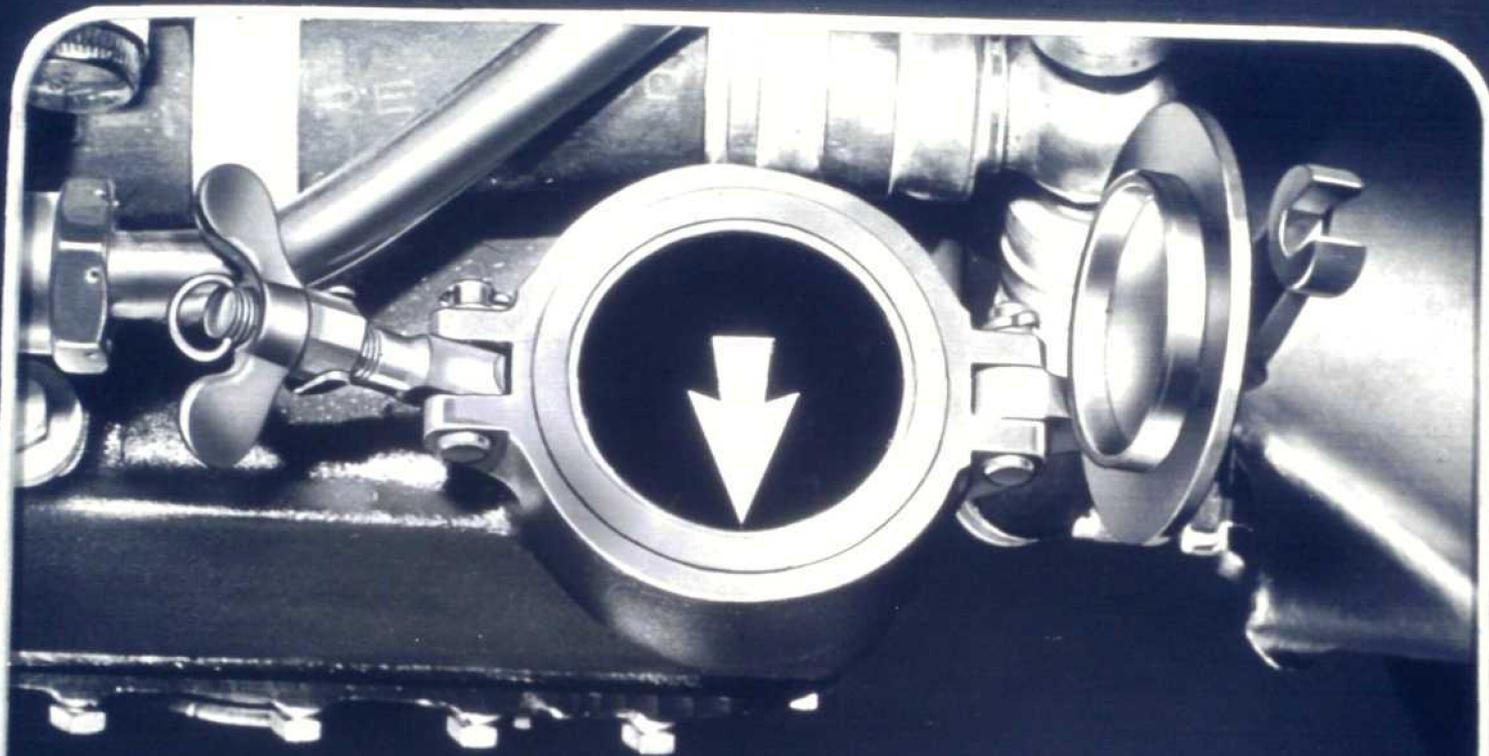
Fit lockplates to the cap nuts and drain plug.
The pressure filter and drain plug lockplates
have distance pieces.

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Fill the sump with the correct grade of oil. The capacity is 17 pints, check after running the engine.

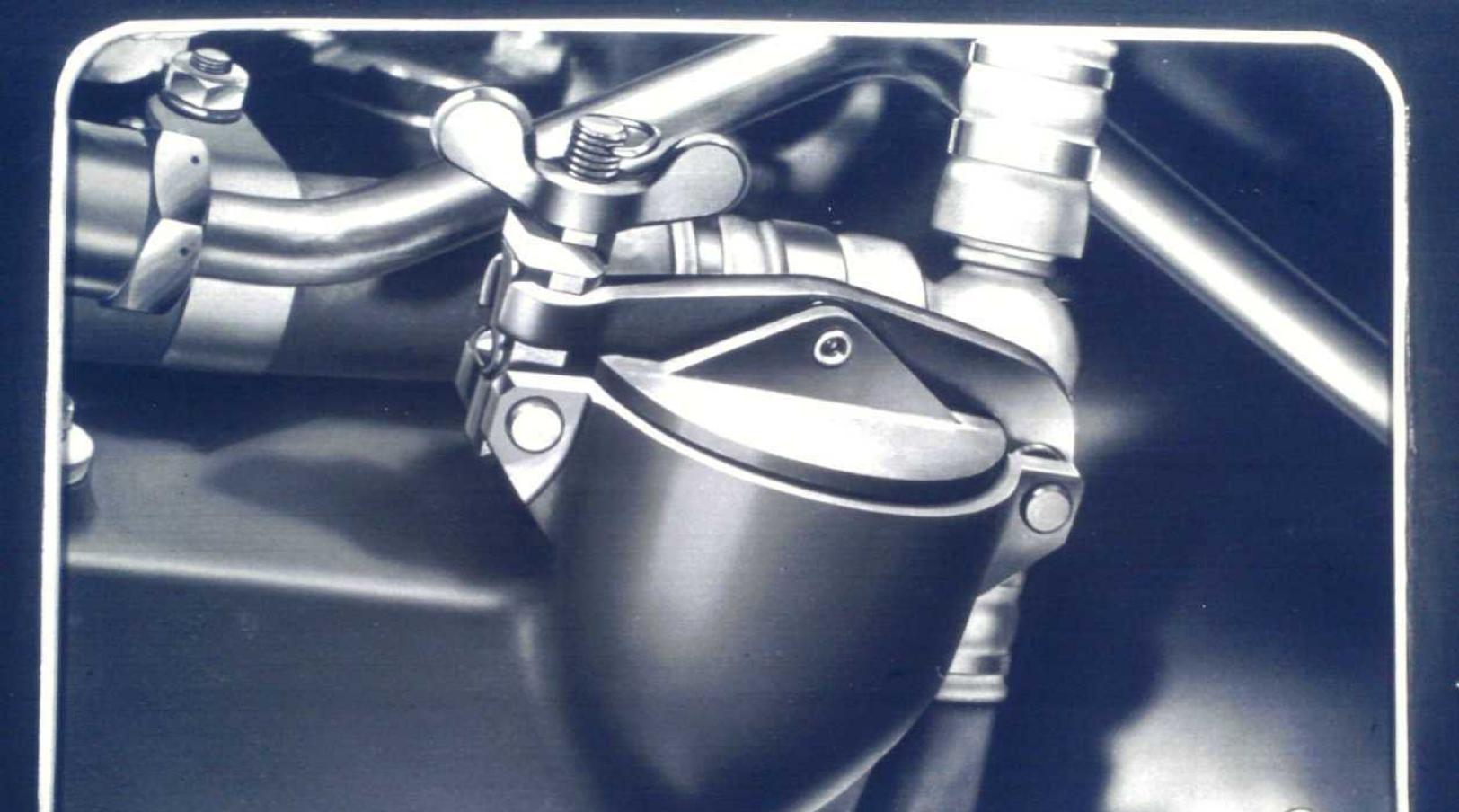


The correct level with the engine cold is up to the filler cap seat.

A black and white photograph showing a person's hand inspecting a circular filler cap seal on a piece of machinery. The hand is positioned to the left, with the thumb and index finger holding the edge of the cap. The cap is attached to a metal component with a threaded neck. In the background, there are various mechanical parts, including a cylindrical component with a label that partially reads "MAYTAG'S MEDICAL".

Inspect filler cap seal and replace if damaged.

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A close-up photograph of a metal assembly, likely a motorcycle handlebar or control lever. The central focus is a self-locking wing nut, which is a hexagonal nut with two curved wings. The nut is being tightened onto a bolt. The surrounding components include various metal tubes, bolts, and a cylindrical part with a textured surface. The lighting is dramatic, highlighting the metallic surfaces and the texture of the components.

Hand tighten the self locking wing nut.

LOW OIL PRESSURE INVESTIGATION

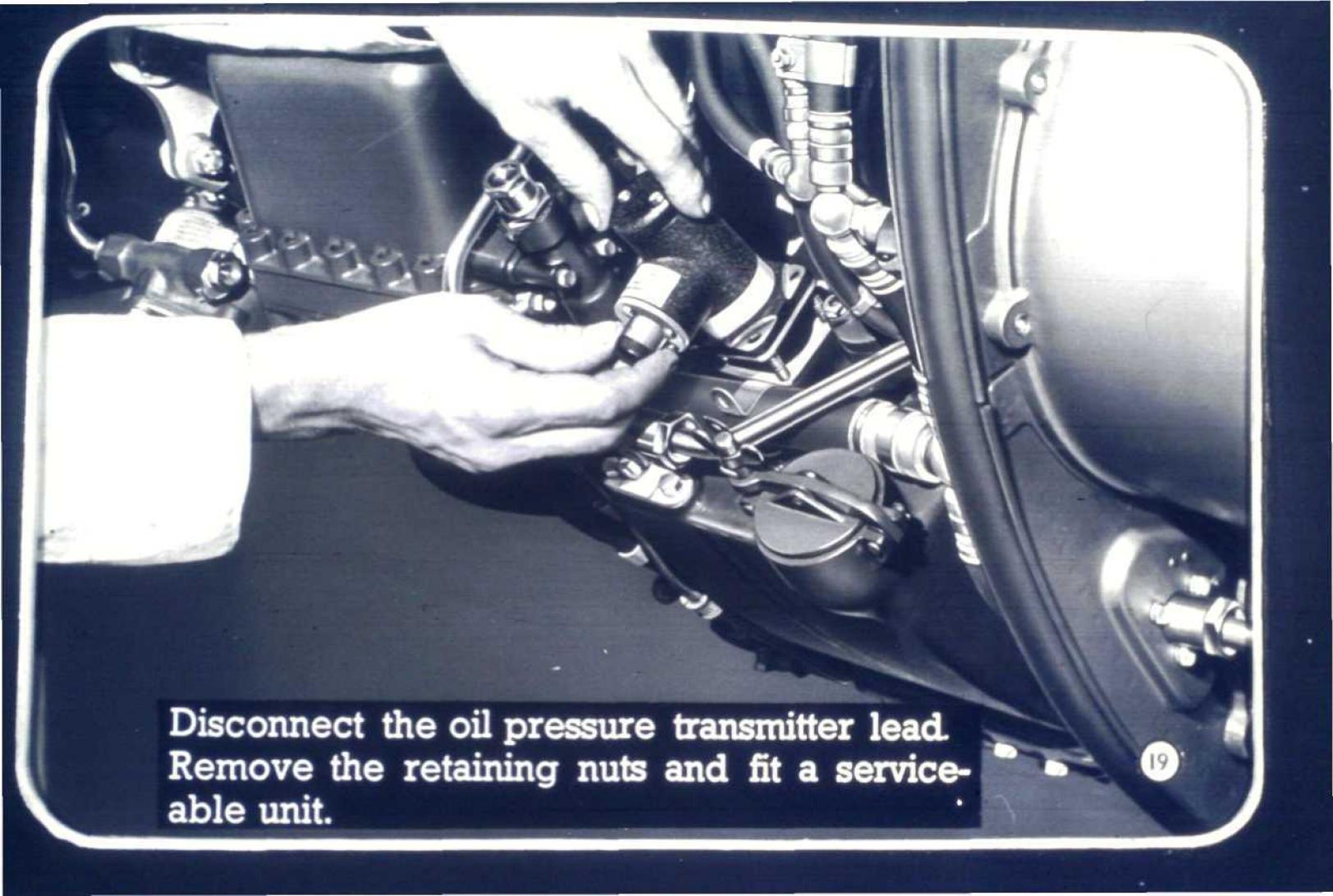
Possible causes ;

Faulty transmitter system

Main oil relief valve

**Cooler bye-pass valve causing
high oil temperature**

Check electrical circuit to transmitter.

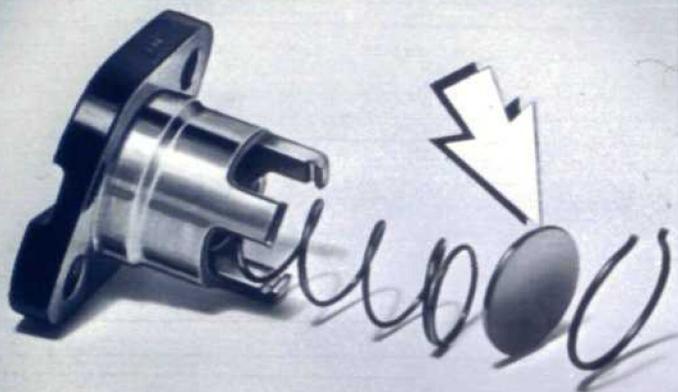


**Disconnect the oil pressure transmitter lead.
Remove the retaining nuts and fit a service-
able unit.**

If the oil pressure is still incorrect
check the relief valve and seating.



Remove two 1/4 B.S.F. nuts. Lift out valve.

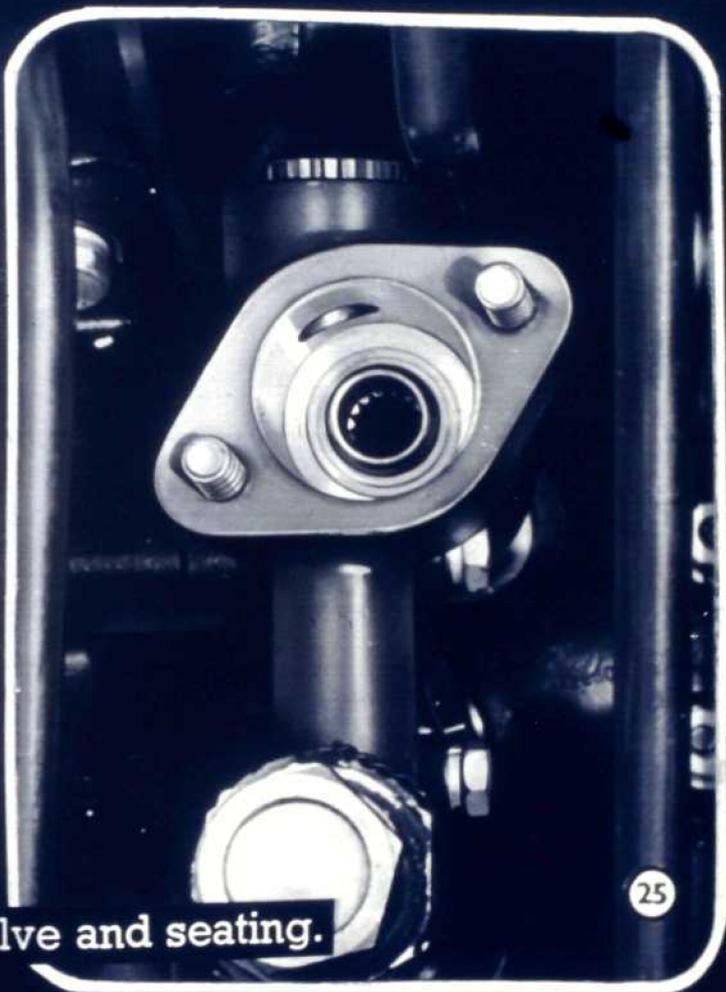
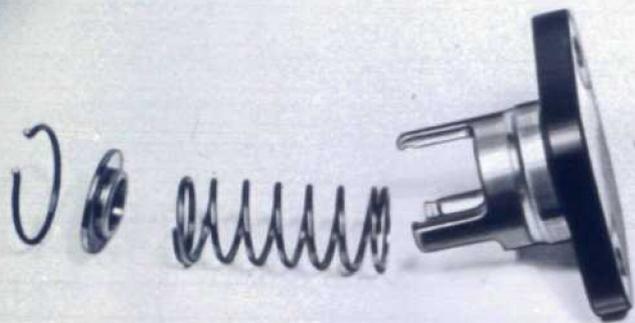


Examine the valve and seating.

If the oil pressure is still incorrect,
check oil cooler bye-pass valve,
forward of transmitter.



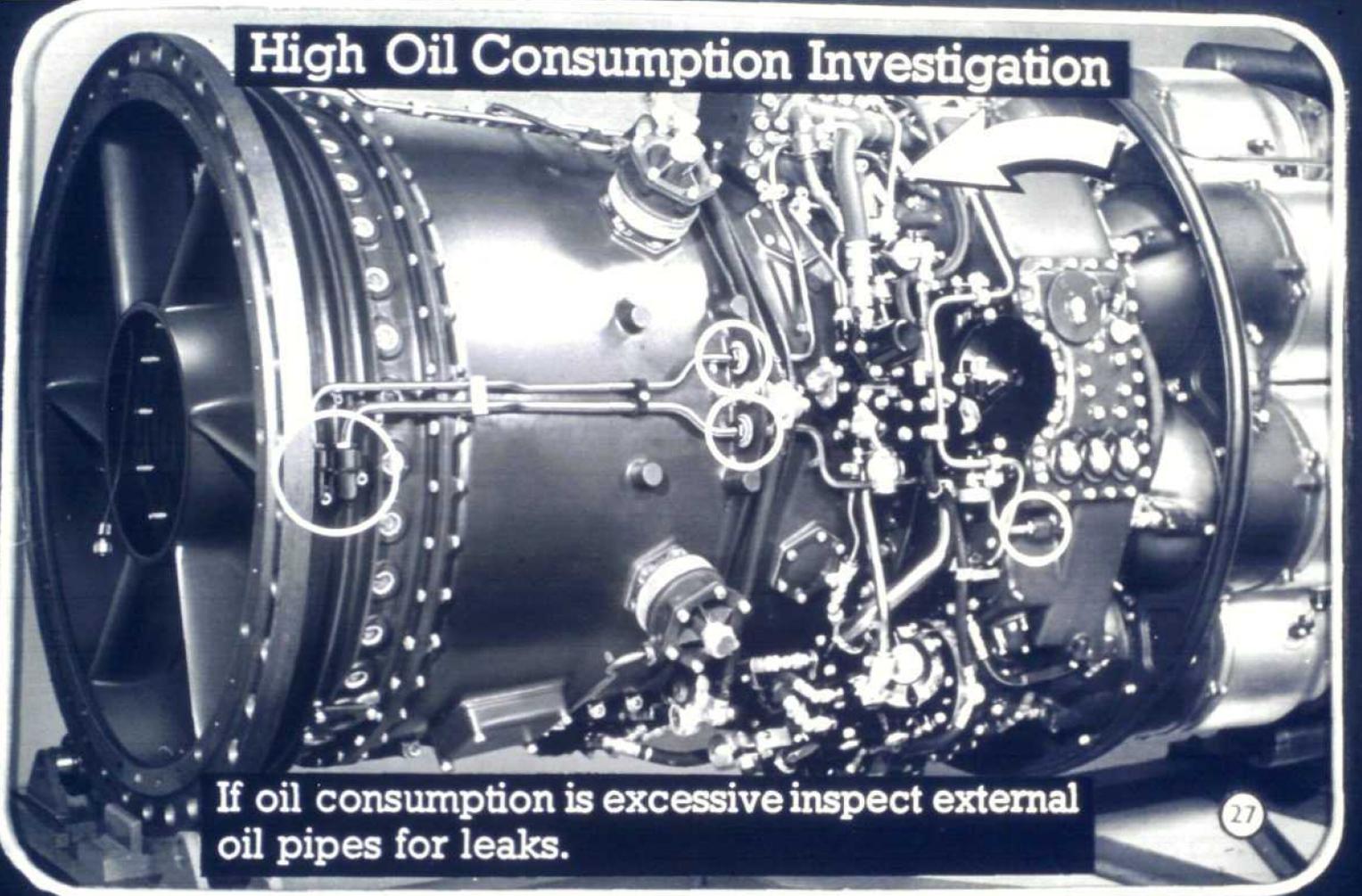
Remove two 1/4 B.S.F. nuts.



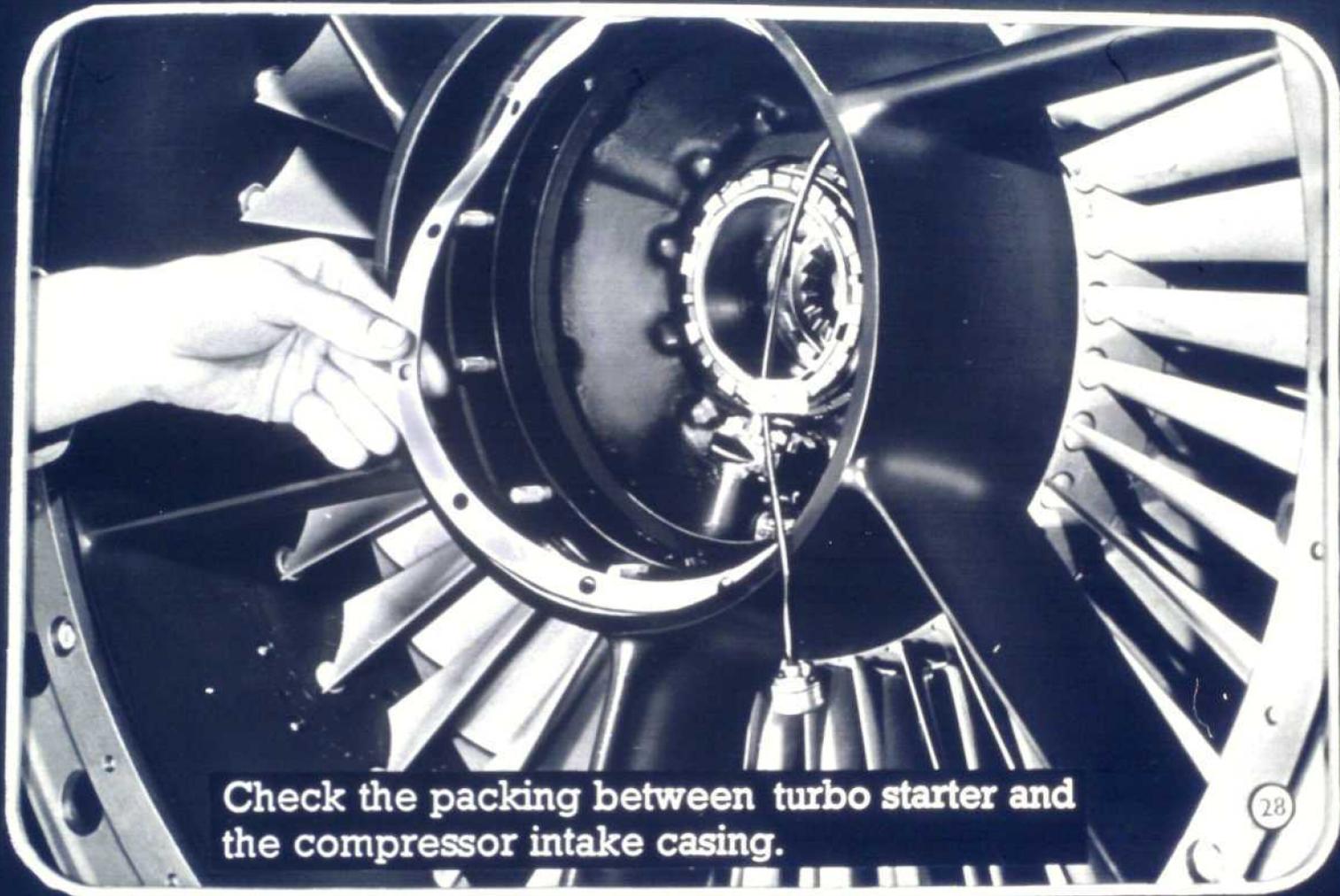
Examine the valve and seating.

Low oil pressure can also be caused by failure of the tachometer drive bearing, or the oil pump drive shaft bearing. Metal deposit will be found on the filters, in which case reject the engine.

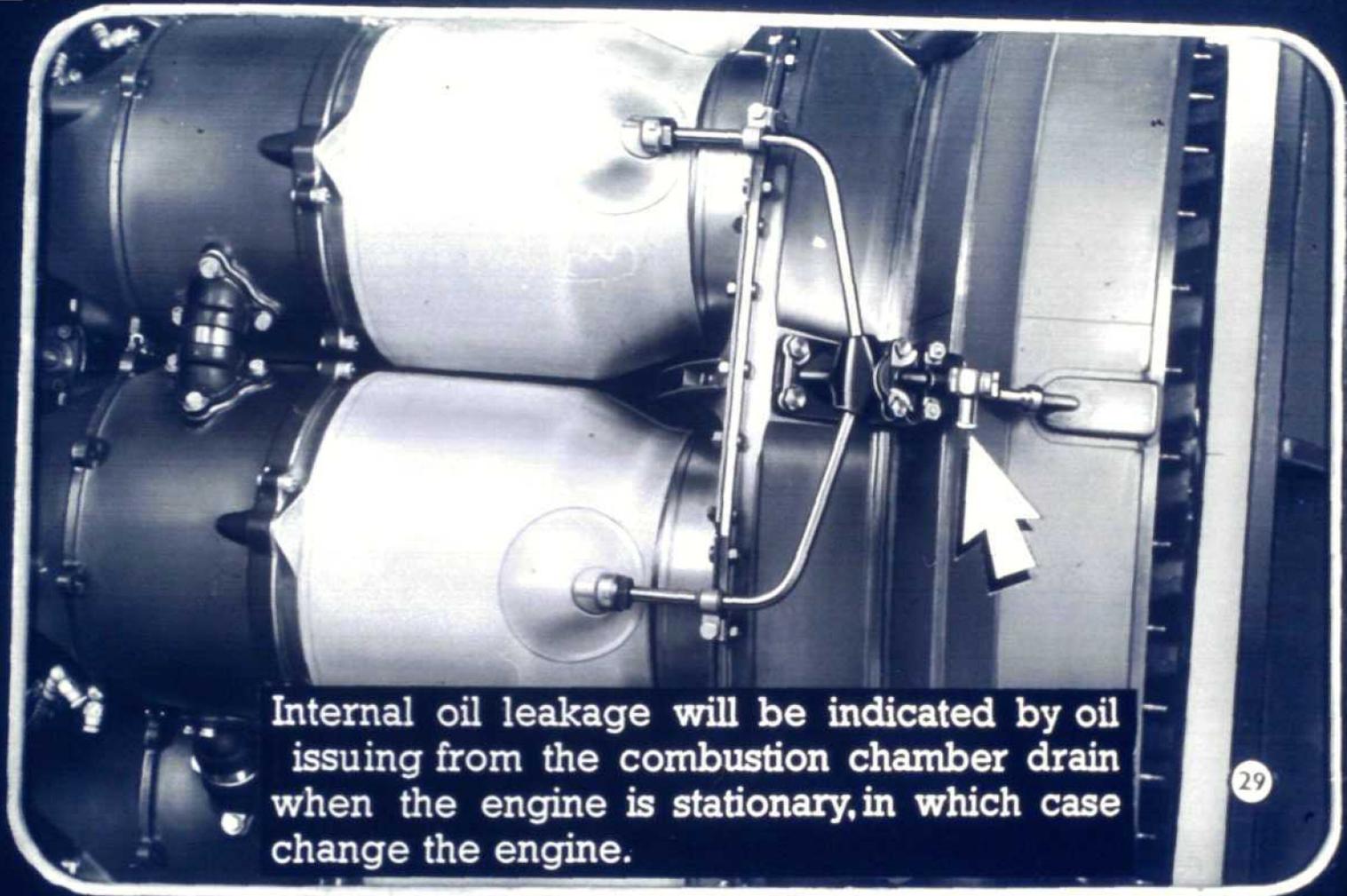
High Oil Consumption Investigation



If oil consumption is excessive inspect external oil pipes for leaks.



Check the packing between turbo starter and the compressor intake casing.



Internal oil leakage will be indicated by oil issuing from the combustion chamber drain when the engine is stationary, in which case change the engine.

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