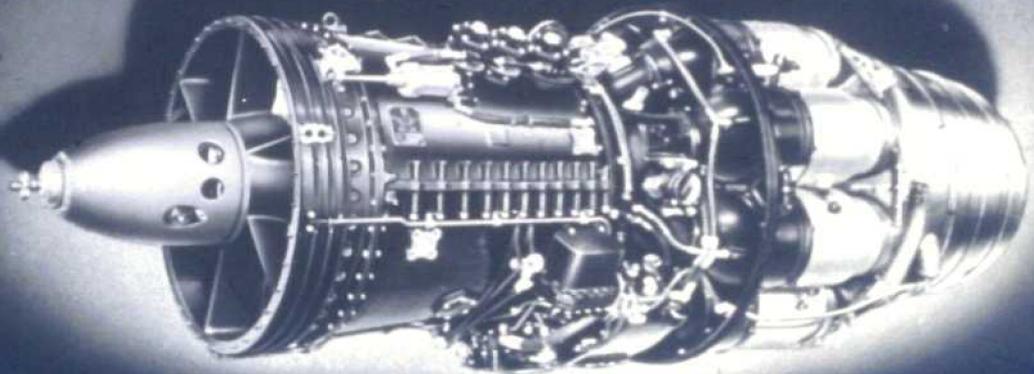




A
ROLLS - ROYCE
Instructional Strip-Film



MAINTENANCE OF THE
AVON 1
TURBO JET AERO-ENGINE



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

*Inhibiting
Fuel System and Engine*

A1A

14-J-244

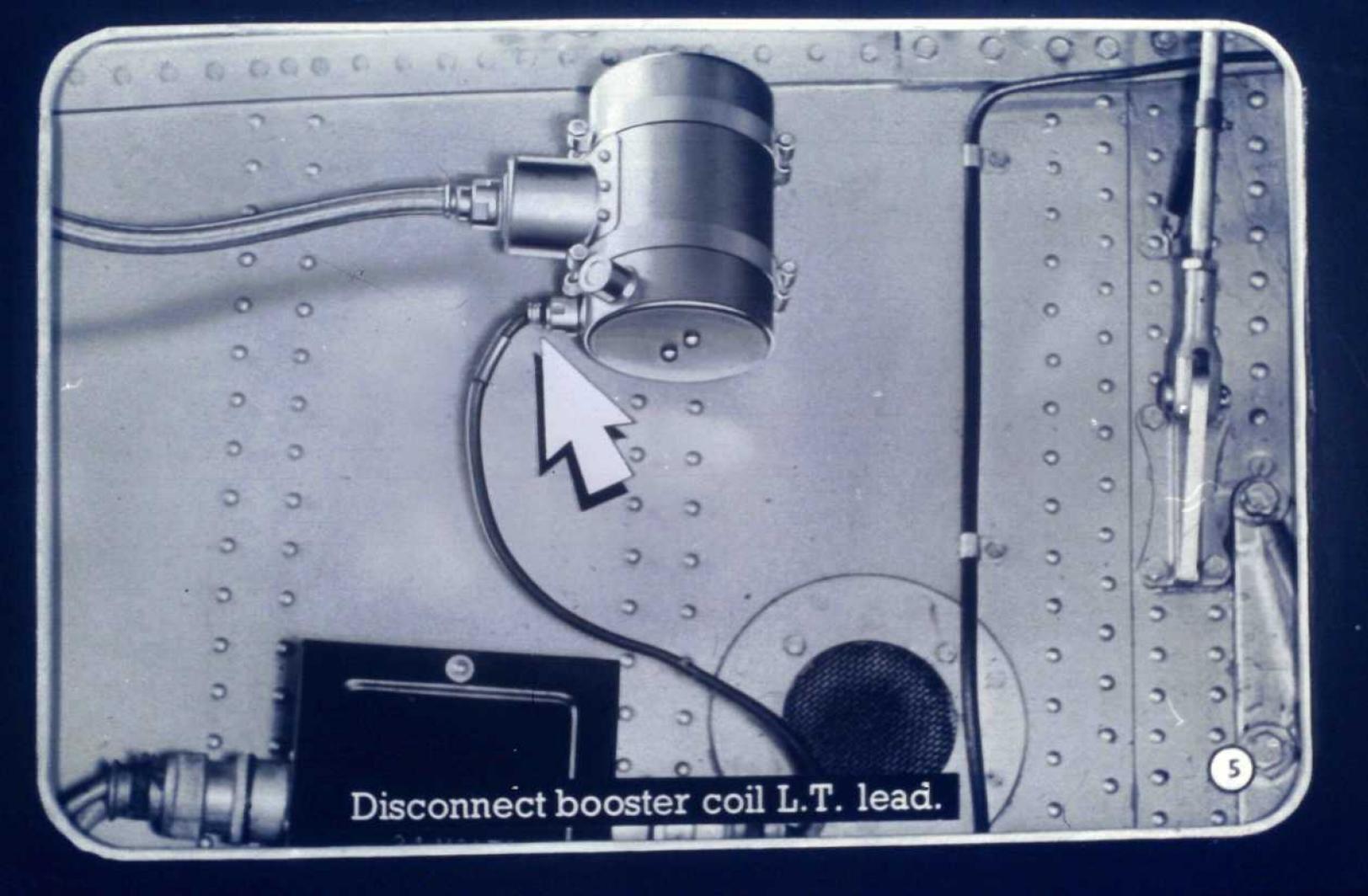
INSTALLED ENGINE

PERIOD	ACTION
1 week	Fit intake and exhaust covers.
Up to 1 month	Top up oil level in sump. Remove blanking covers. Ground run or full inhibition. (For ground run, 9 minutes at idling conditions and one minute at cruising) Refit blanking covers.
Up to 12 months	Full inhibiting; i.e. priming of fuel system, greasing of controls and spraying of V.P.I. powder.

This procedure to be repeated every 12 months.

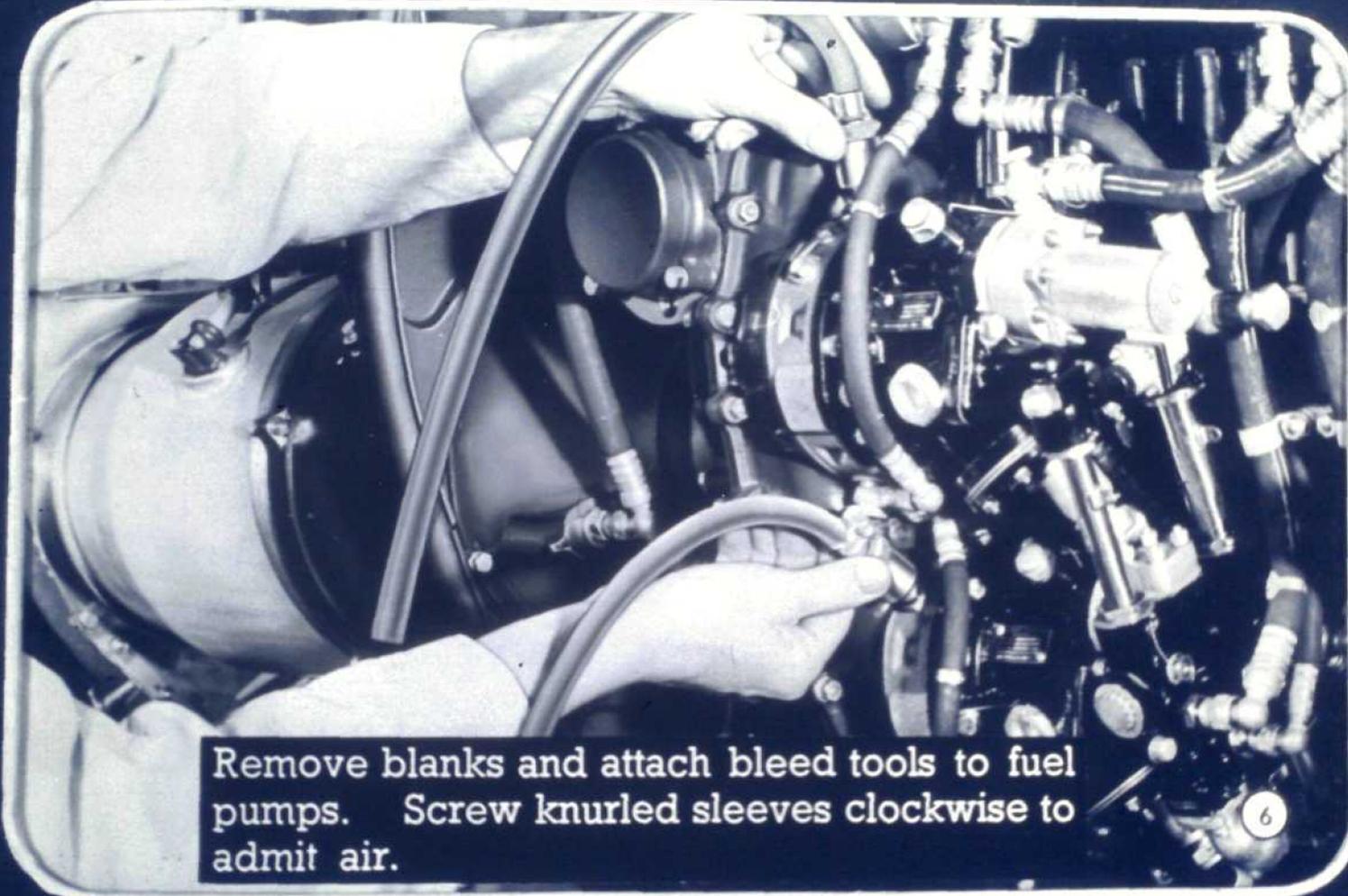
FUEL SYSTEM INHIBITING

**This consists of draining all fuel from
the system and filling with DTD 44D oil
to prevent corrosion.**

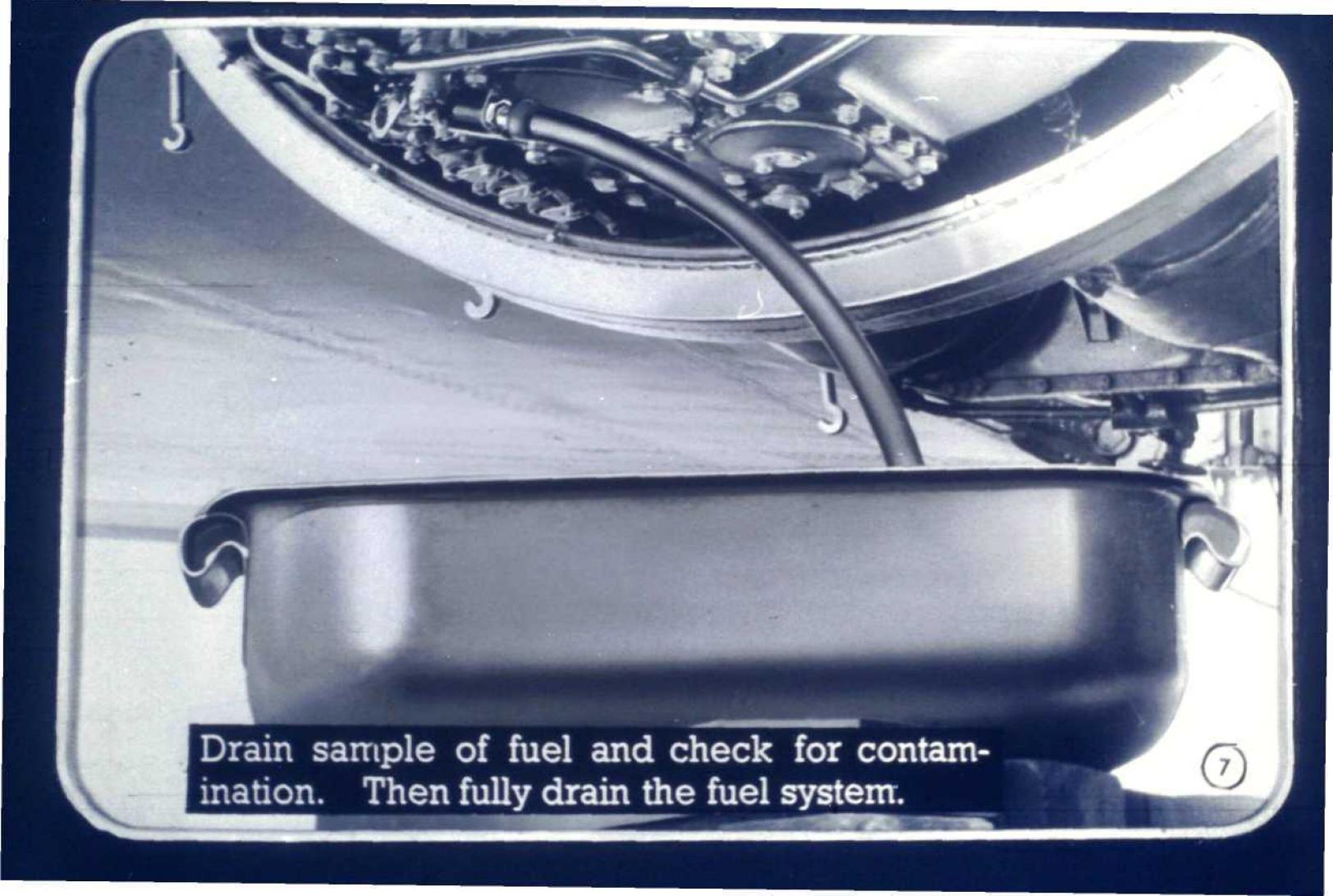


Disconnect booster coil L.T. lead.

5

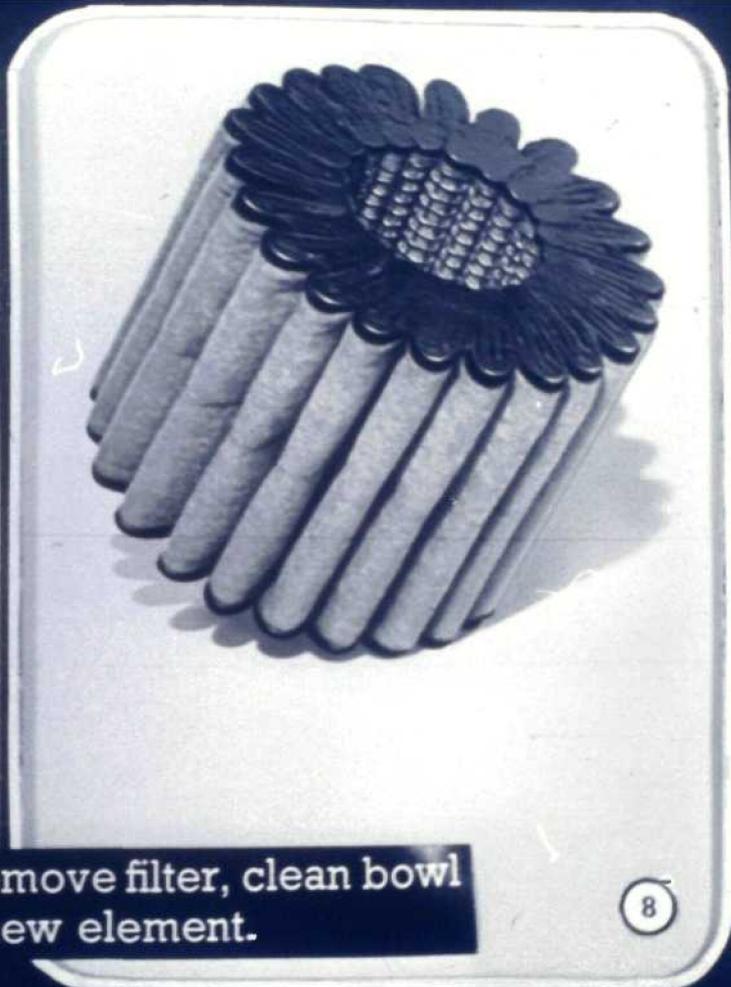
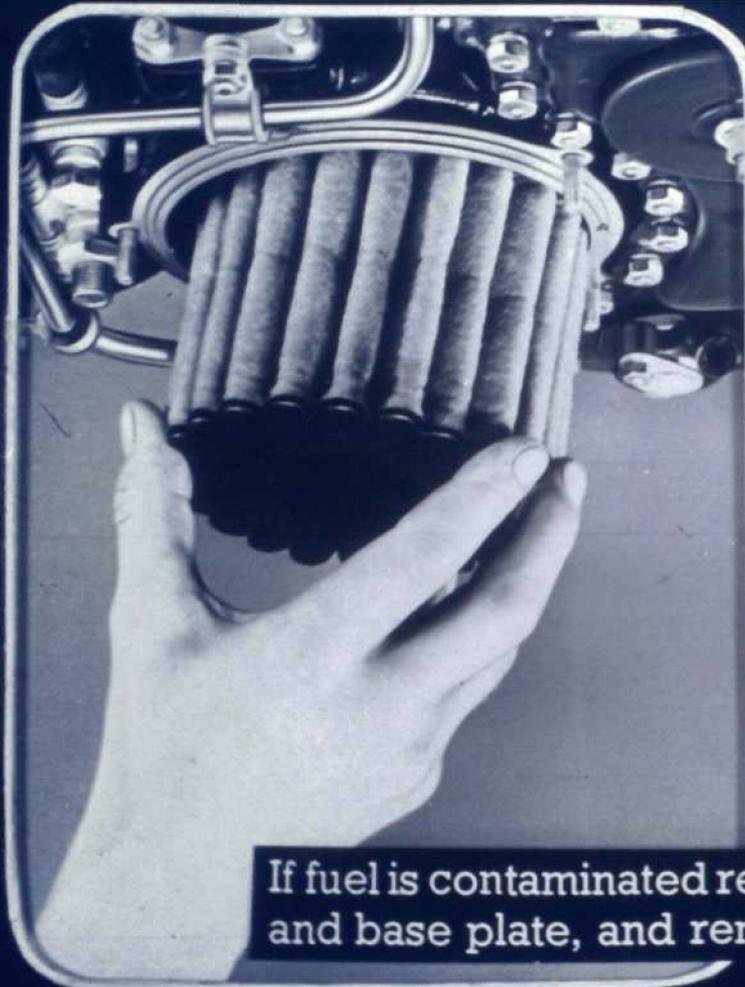


Remove blanks and attach bleed tools to fuel pumps. Screw knurled sleeves clockwise to admit air.

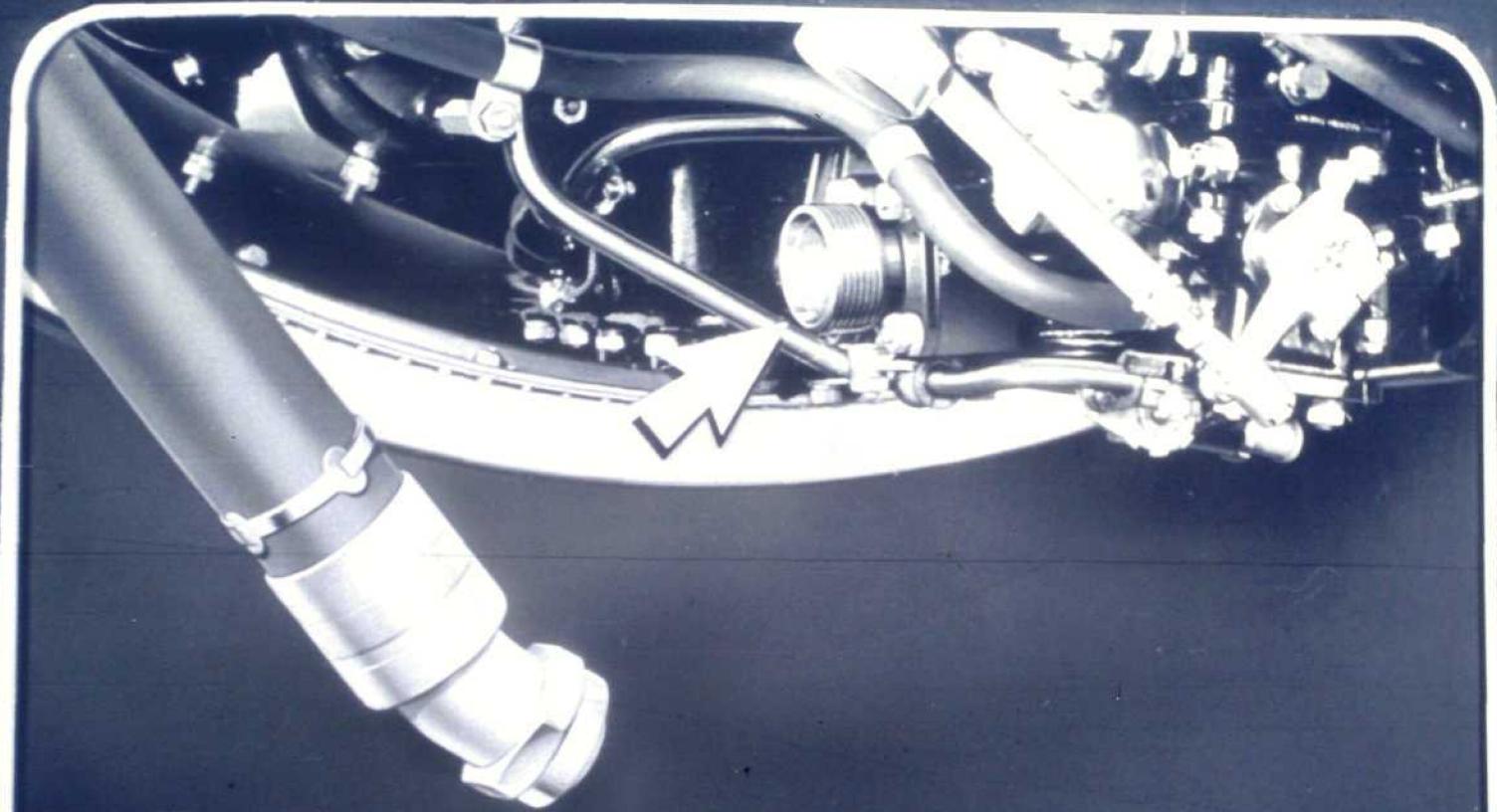


Drain sample of fuel and check for contamination. Then fully drain the fuel system.

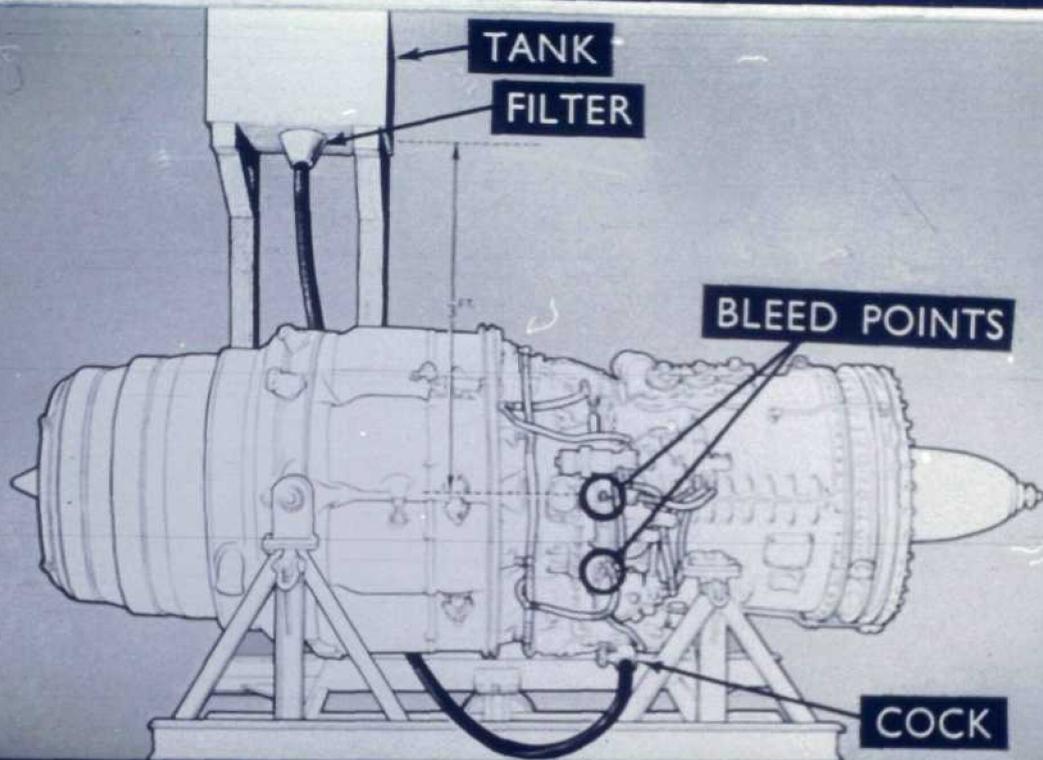
7



If fuel is contaminated remove filter, clean bowl and base plate, and renew element.

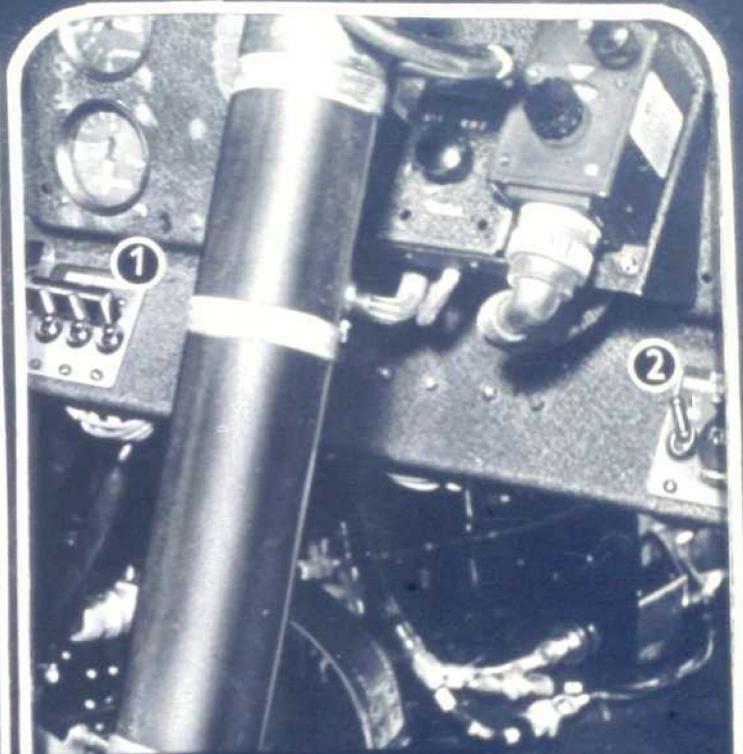


**Disconnect L.P. fuel inlet pipe and blank off.
Connect the inhibiting rig to this point.**



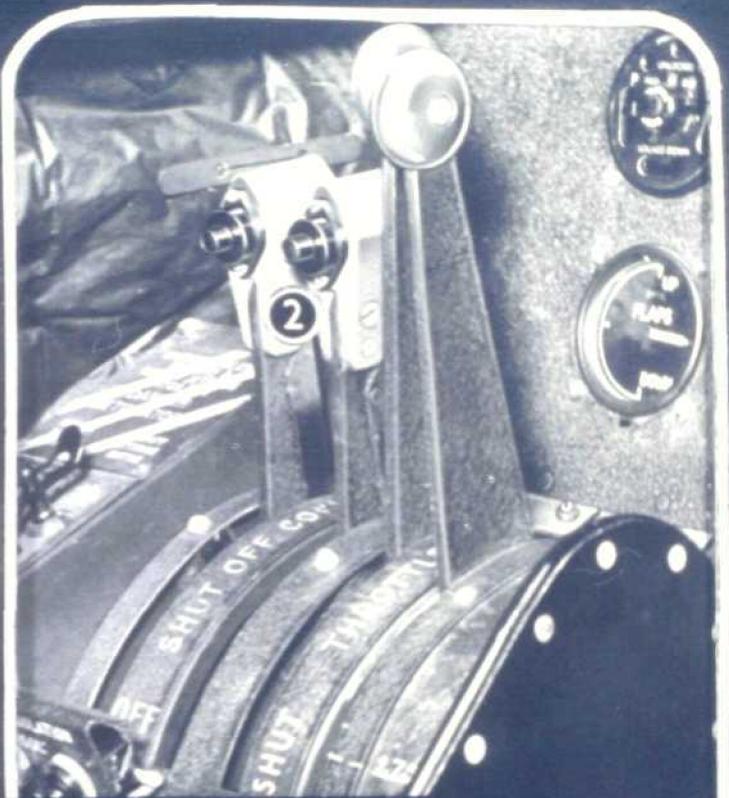
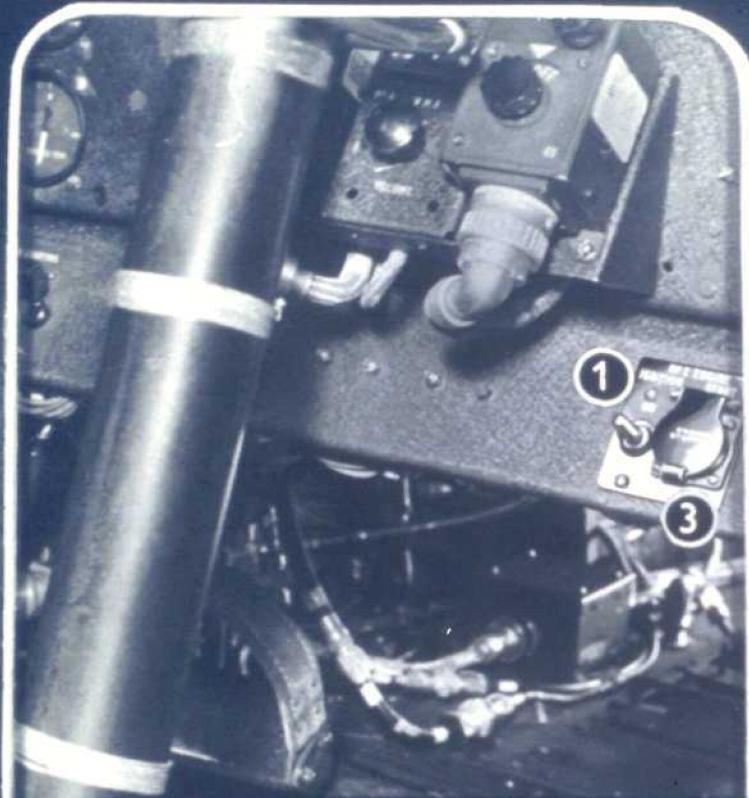
The inhibiting oil tank capacity must exceed five gallons with a three feet head above upper fuel pump bleed point. Alternatively a pressure rig delivering at 12 p.s.i. max. may be used.

Open cock on priming rig and leave bleed points open until air free flow is obtained. Free flow of oil through bleeds can be assisted by relight button if necessary.

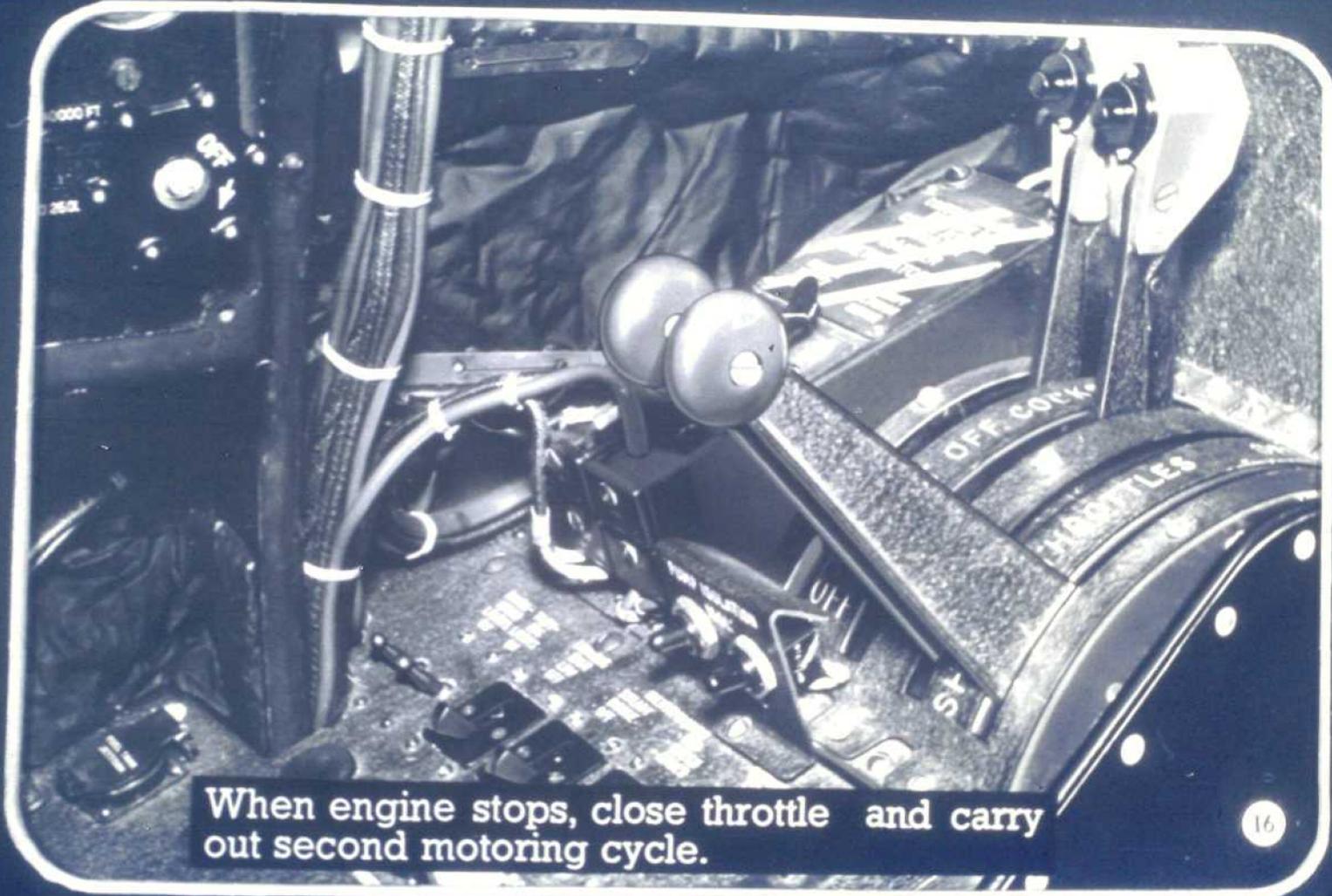


Switch "ON" master switch ①
Switch "ON" ignition switch ②
Press relight button for 10 seconds ③ to inhibit
torch igniter system.

**Leave pump bleeds open for a period
to ensure free flow of oil. Then close
bleeds when free flow is obtained.**



Switch "OFF" ignition ① Open H.P. cock and throttle ② Press starter button ③ to carry out one motoring cycle.

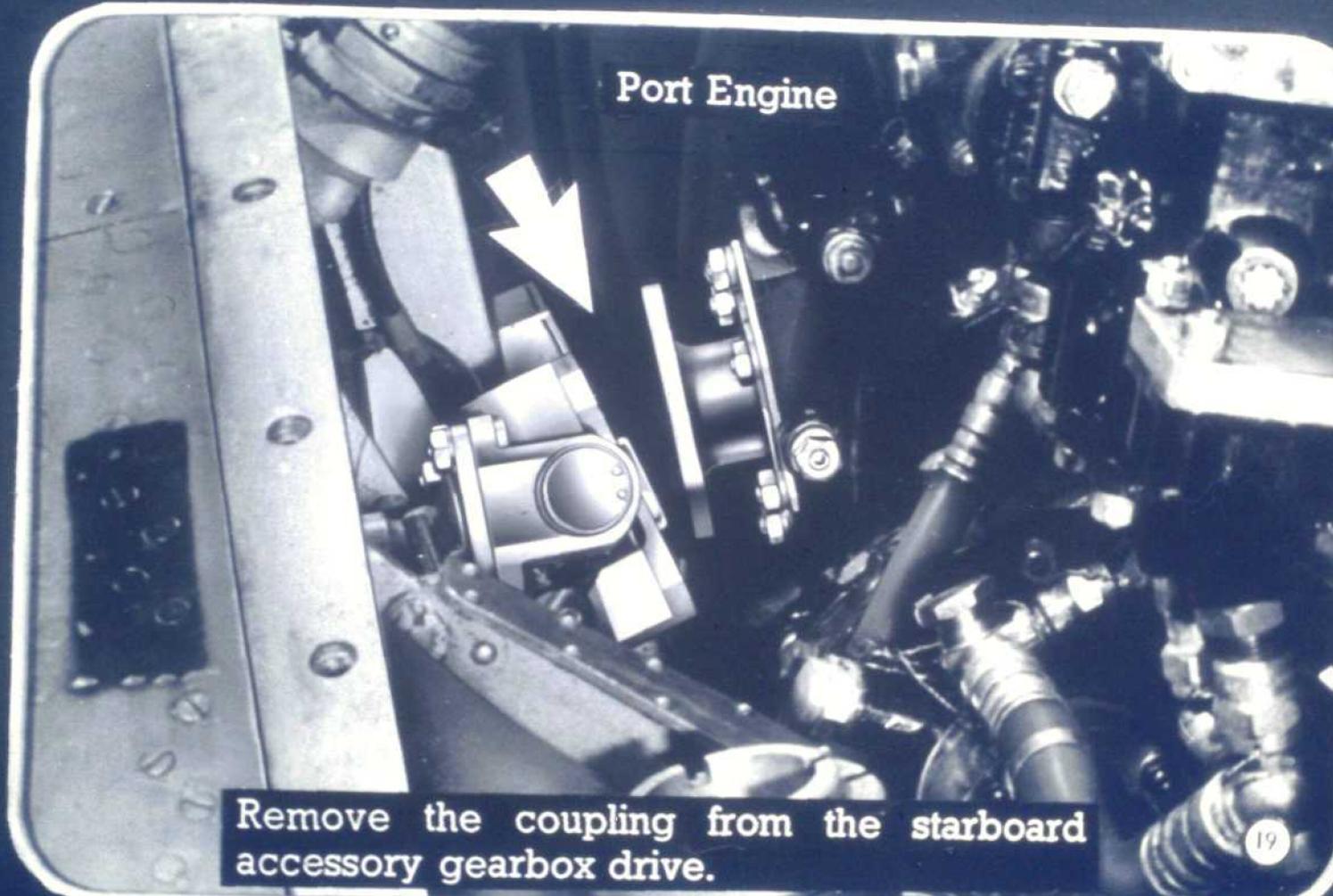


When engine stops, close throttle and carry out second motoring cycle.

**Finally when engine has stopped
close H.P. cock. Disconnect inhibiting
rig and immediately blank off engine
fuel inlet. Reconnect booster coil L.T.
leads. Remove bleed tools.**

If power turning is impracticable,
retain the bleed tools, on the pumps
and use the hand turning tool

H.W. 12073.



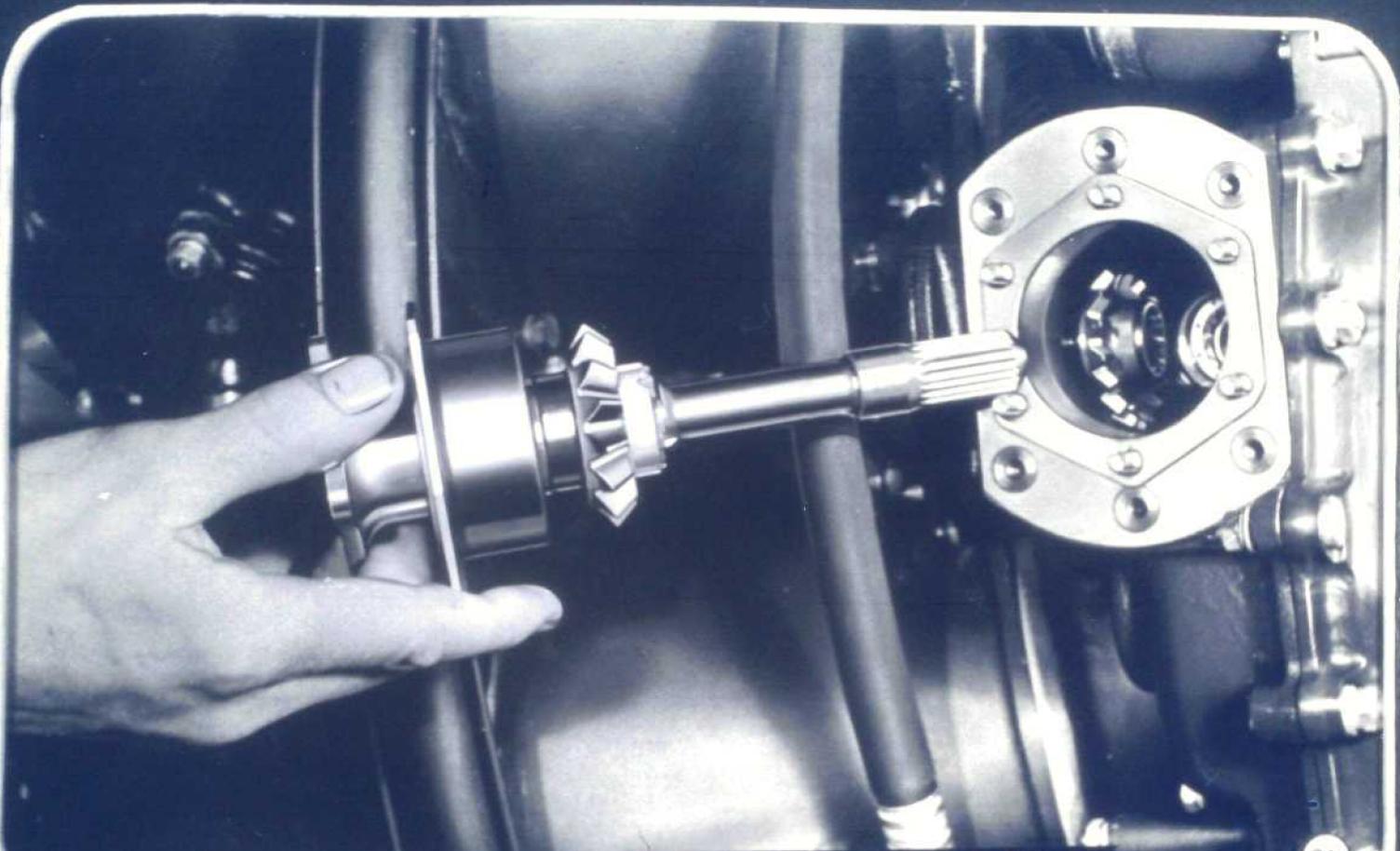
Port Engine

Remove the coupling from the starboard
accessory gearbox drive.

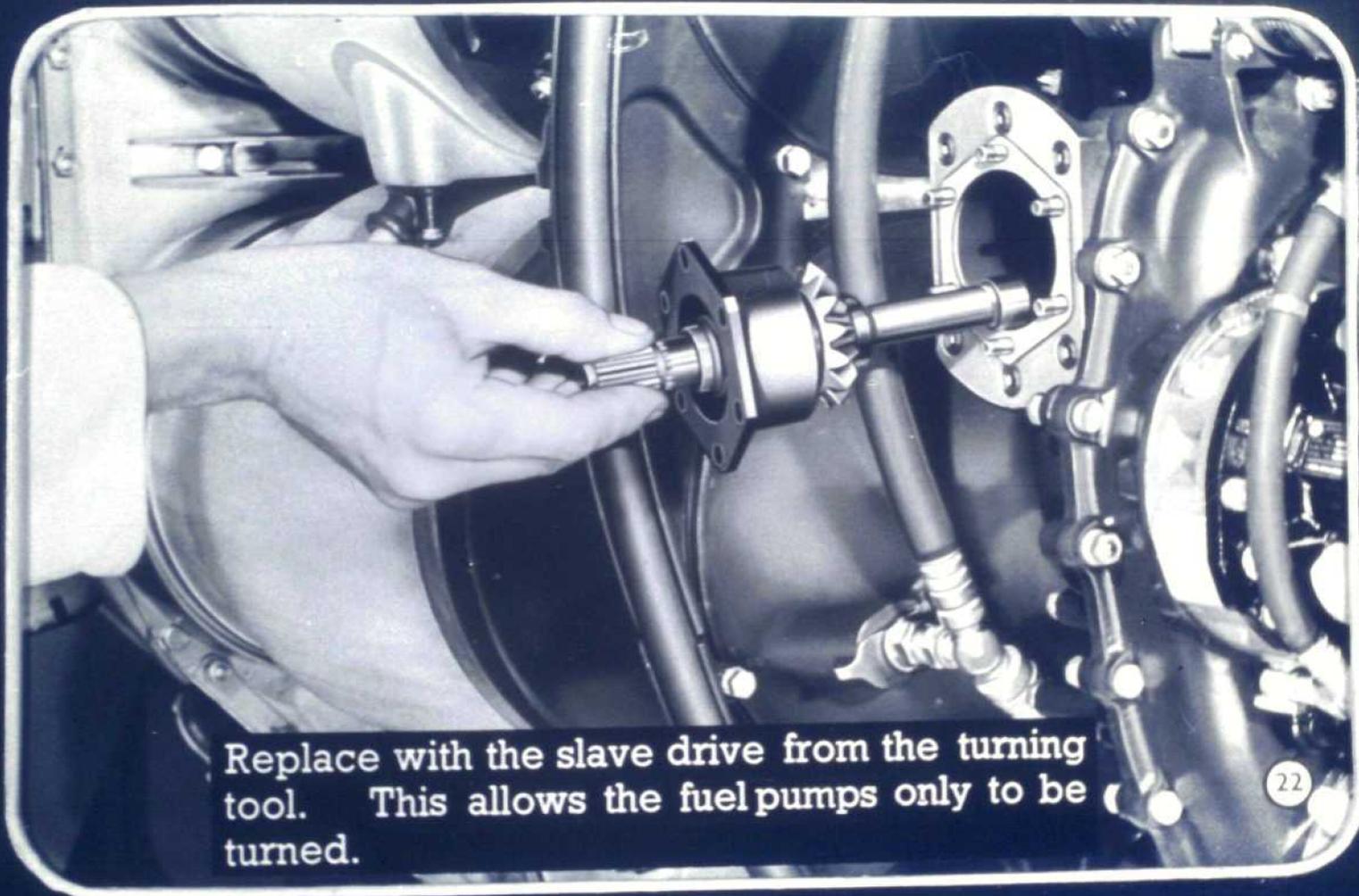
A black and white photograph showing a person's hand holding a black plastic blank. The blank is a cylindrical component with a central hole and a smaller hole on the side. It is being held in front of a complex metal drive assembly, which is part of a starboard engine. The assembly includes a large metal flange with several bolts and a central circular opening. The background is dark and shows some mechanical parts of the engine.

Starboard Engine

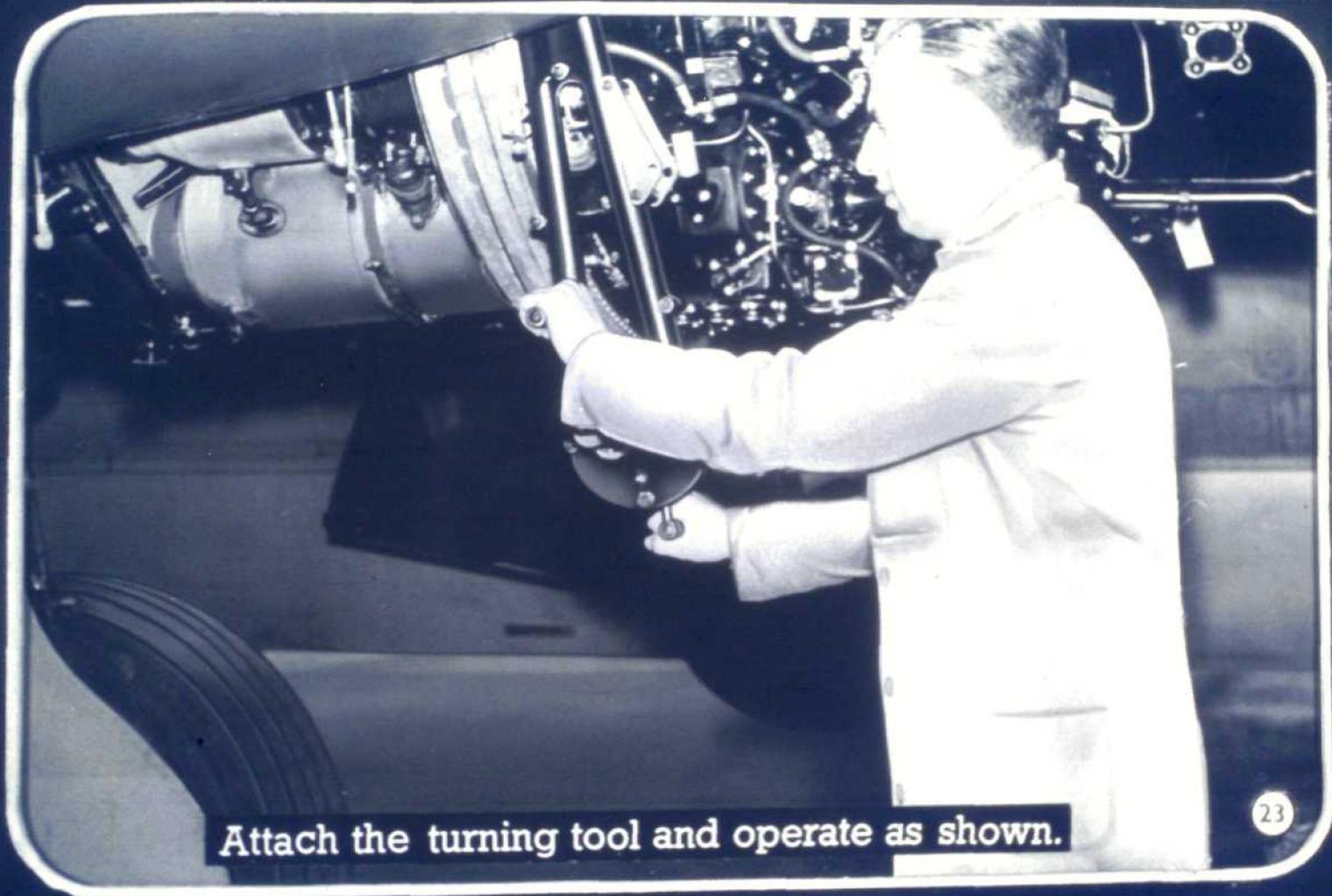
Remove this blank from starboard drive



Remove the six nuts and withdraw the drive.



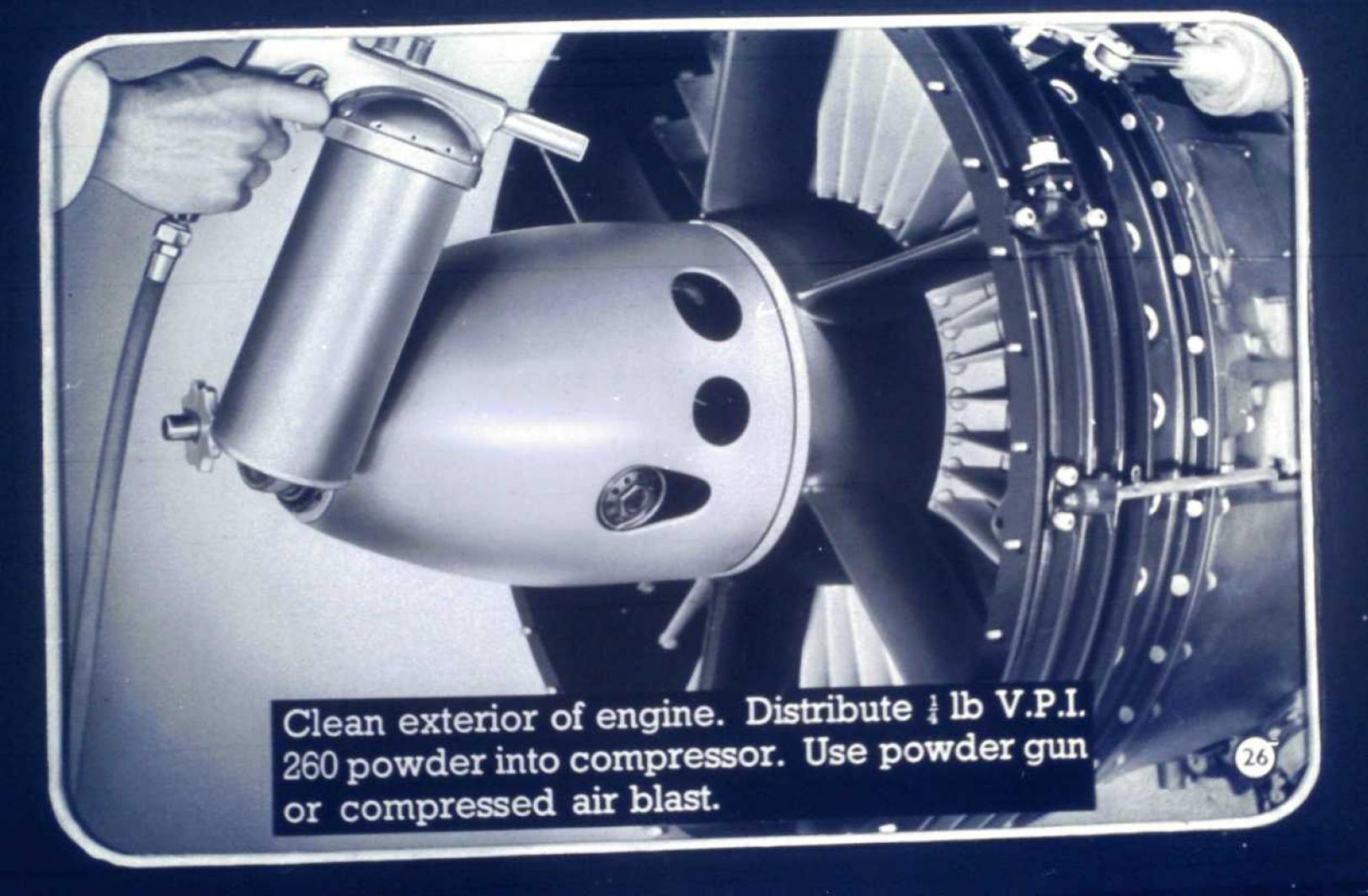
Replace with the slave drive from the turning tool. This allows the fuel pumps only to be turned.



Attach the turning tool and operate as shown.

Two cycles are necessary, one with pump bleeds open, H.P. cock and throttle open. 50 R.P.M. for three minutes. The second cycle with pump bleeds closed, H.P. cock open and throttle closed. Repeat turning at 120 R.P.M. for half a minute.

**Allow the engine to come to rest.
Close H.P. cock. Turn off oil supply.
Disconnect inhibiting rig. Immediately
blank off fuel inlet connection on L.P.
filter. Remove turning tool and bleeds.
Refit standard engine parts.**

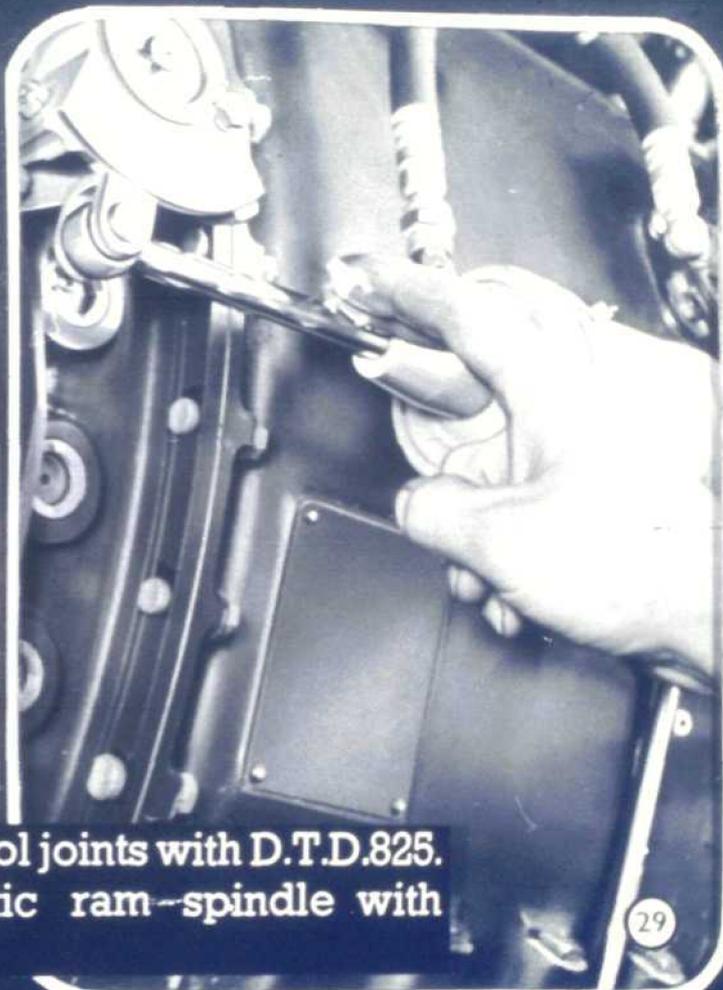
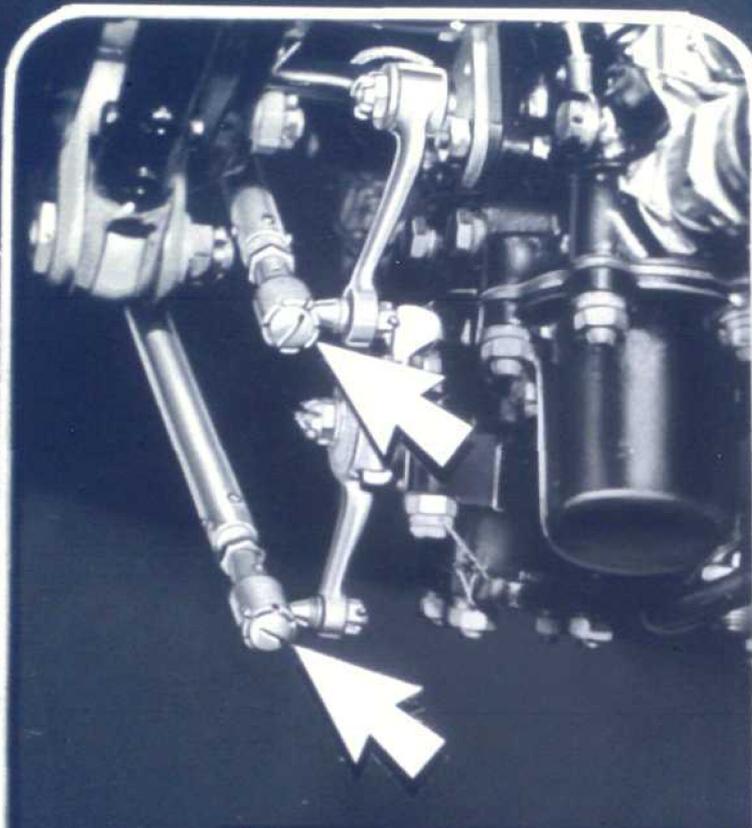


Clean exterior of engine. Distribute $\frac{1}{4}$ lb V.P.I. 260 powder into compressor. Use powder gun or compressed air blast.

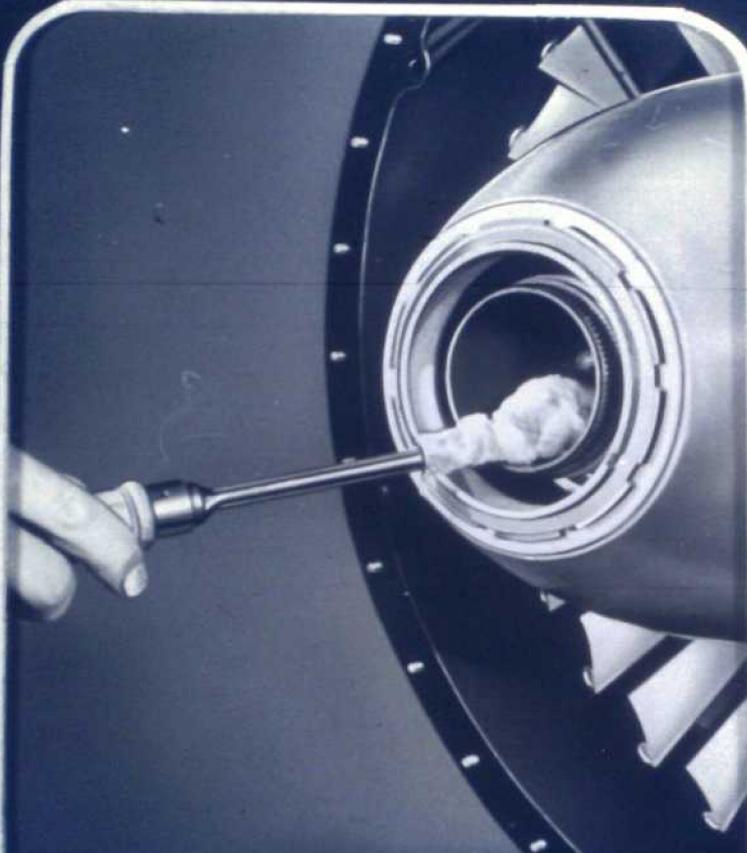
**Blank off air intake, jet pipe, and all
remaining apertures with approved
blanks.**

A black and white photograph showing the engine compartment of a vehicle. The focus is on the fire extinguishing system, which consists of a network of pipes and valves. The pipes are covered with a material, likely grease-resistant paper, which is held in place by adhesive tape. A person's hand is visible at the top right, appearing to be working on the system. The engine block and other mechanical components are visible in the background.

Cover fire extinguishing pipes with grease
resisting paper retained by adhesive tape.



Thoroughly grease control joints with D.T.D.825.
Lightly grease pneumatic ram-spindle with
D.C.4.



Coat breech bore and cap thread with
D.T.D. 698.

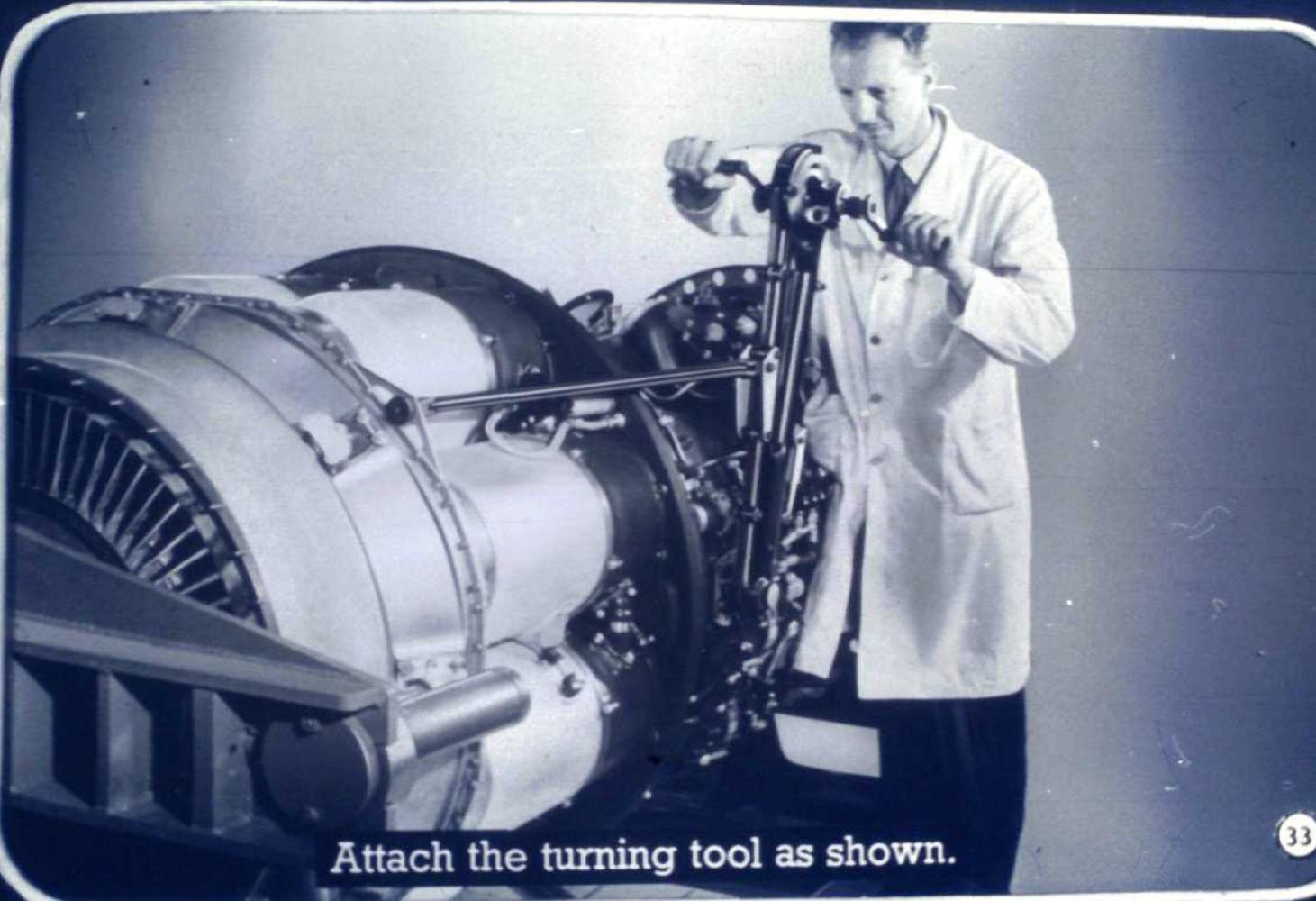


Lightly spray the engine externally, forward of the expansion chambers to air casing joint, with D.T.D. 121D. When dry remove masking from fire extinguishing pipes.

NON-INSTALLED ENGINE

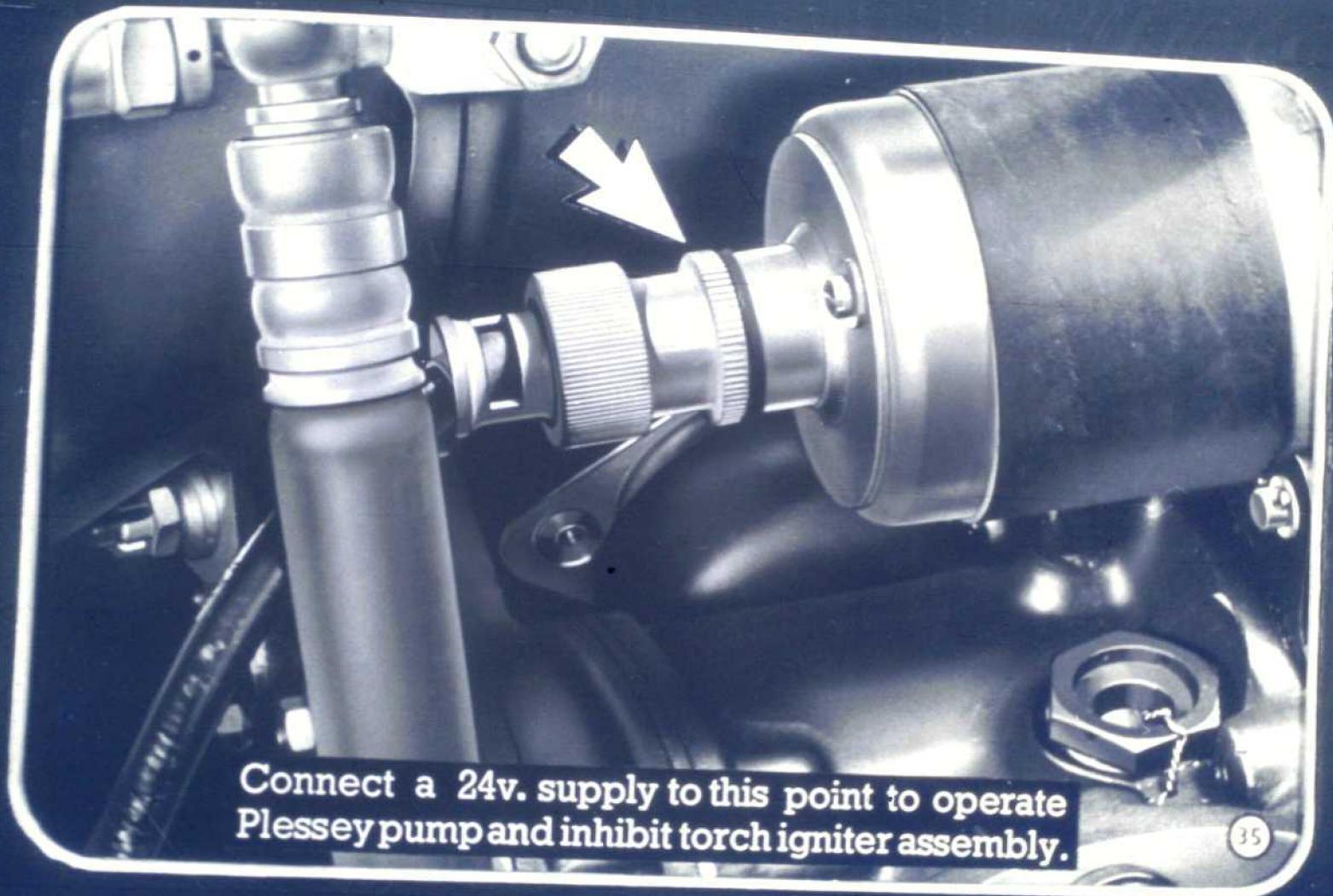
PERIOD	ACTION
1 week	Fit engine covers.
From 1 month to 12 months	Inhibit fuel system. Grease control joints, accessory gearbox drive flange, turbo-starter bore and threads. Distribute V.P.I. powder. Blank off all apertures.

This procedure to be repeated every 12 months.



Attach the turning tool as shown.

**The procedure is the same as for
hand turned installed engines but—**



Connect a 24v. supply to this point to operate Plessey pump and inhibit torch igniter assembly.

**Enter details in engine log, and label
engine, inhibition procedure carried
out and date.**

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