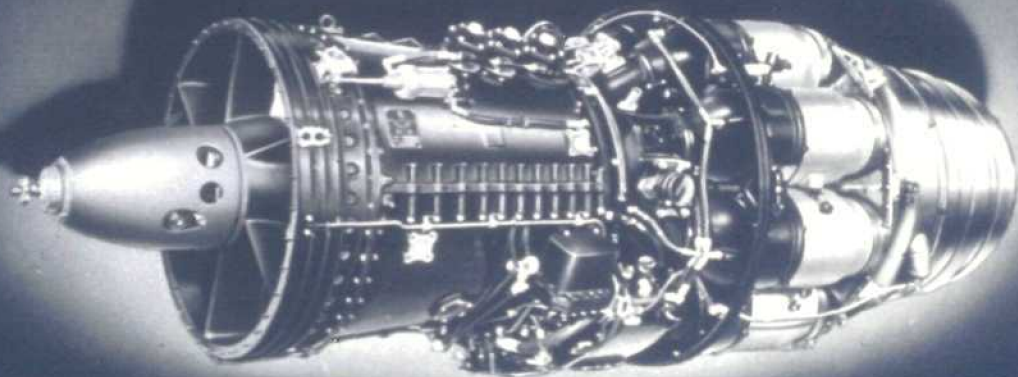




A
ROLLS - ROYCE
Instructional Strip-Film



MAINTENANCE OF THE
AVON 1
TURBO JET AERO-ENGINE



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

Throttle Synchronising

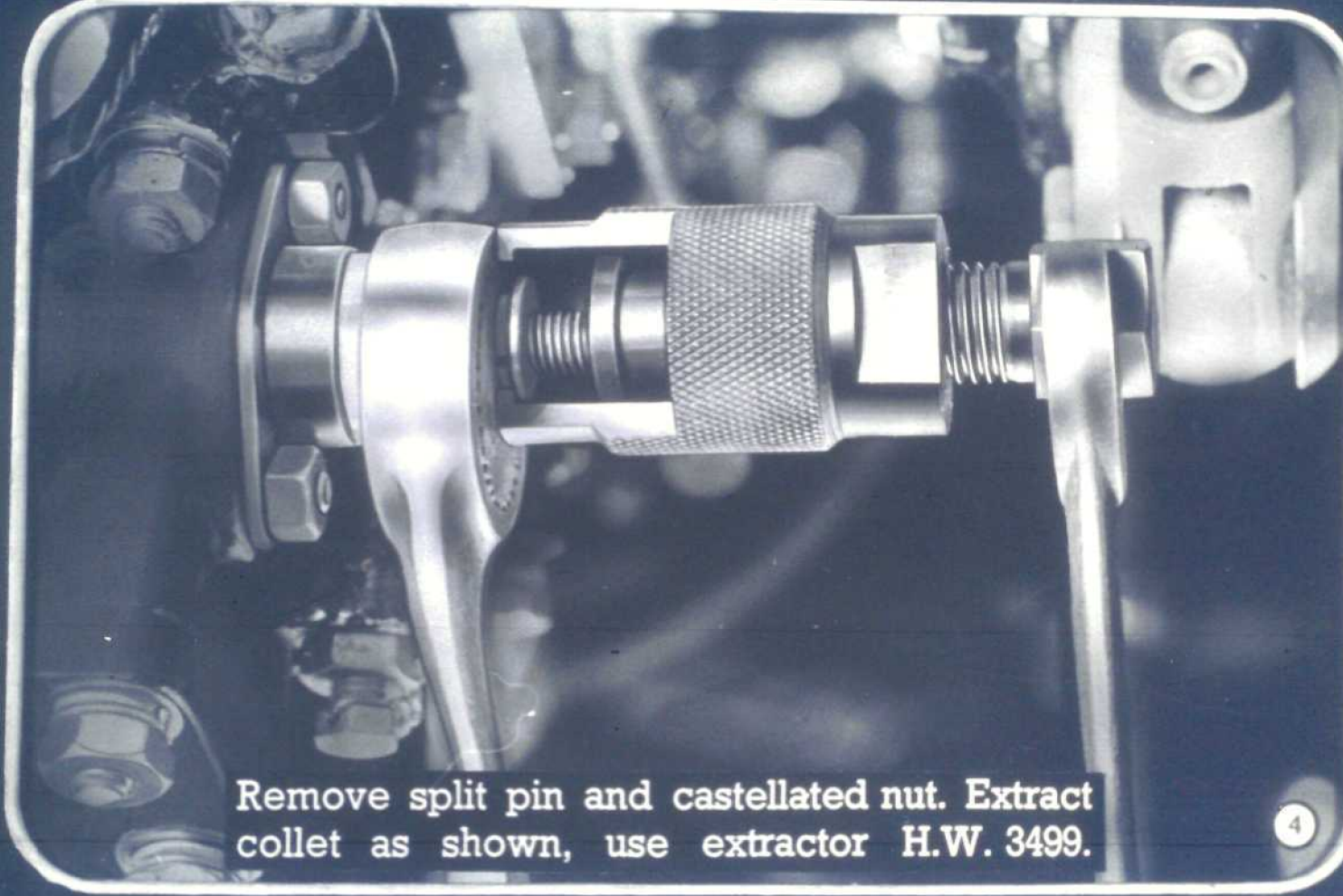
Canberra Aircraft.

A K 1

14-J-254

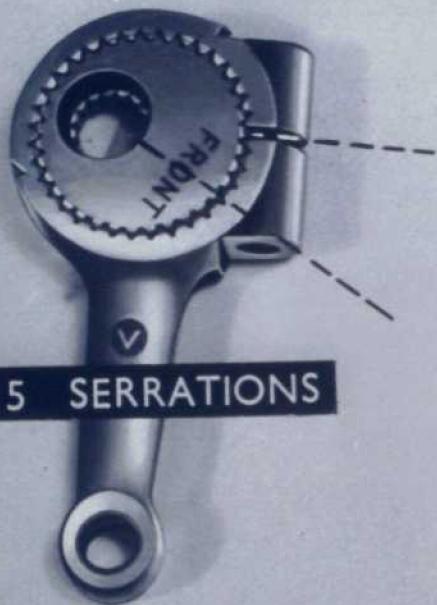
**This procedure is only carried out
when replacement engines have been
installed, or when the fuel control unit
has been changed.**

**Prior to any adjustments set the throttle
valve levers in their basic position as
follows.**



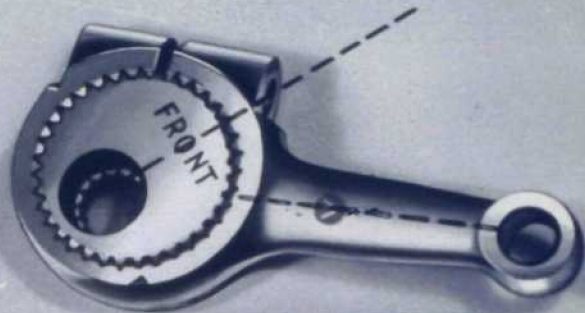
Remove split pin and castellated nut. Extract
collet as shown, use extractor H.W. 3499.

PORT



5 SERRATIONS

STARBOARD



5 SERRATIONS

Position throttle valve levers as shown.

5



PORT

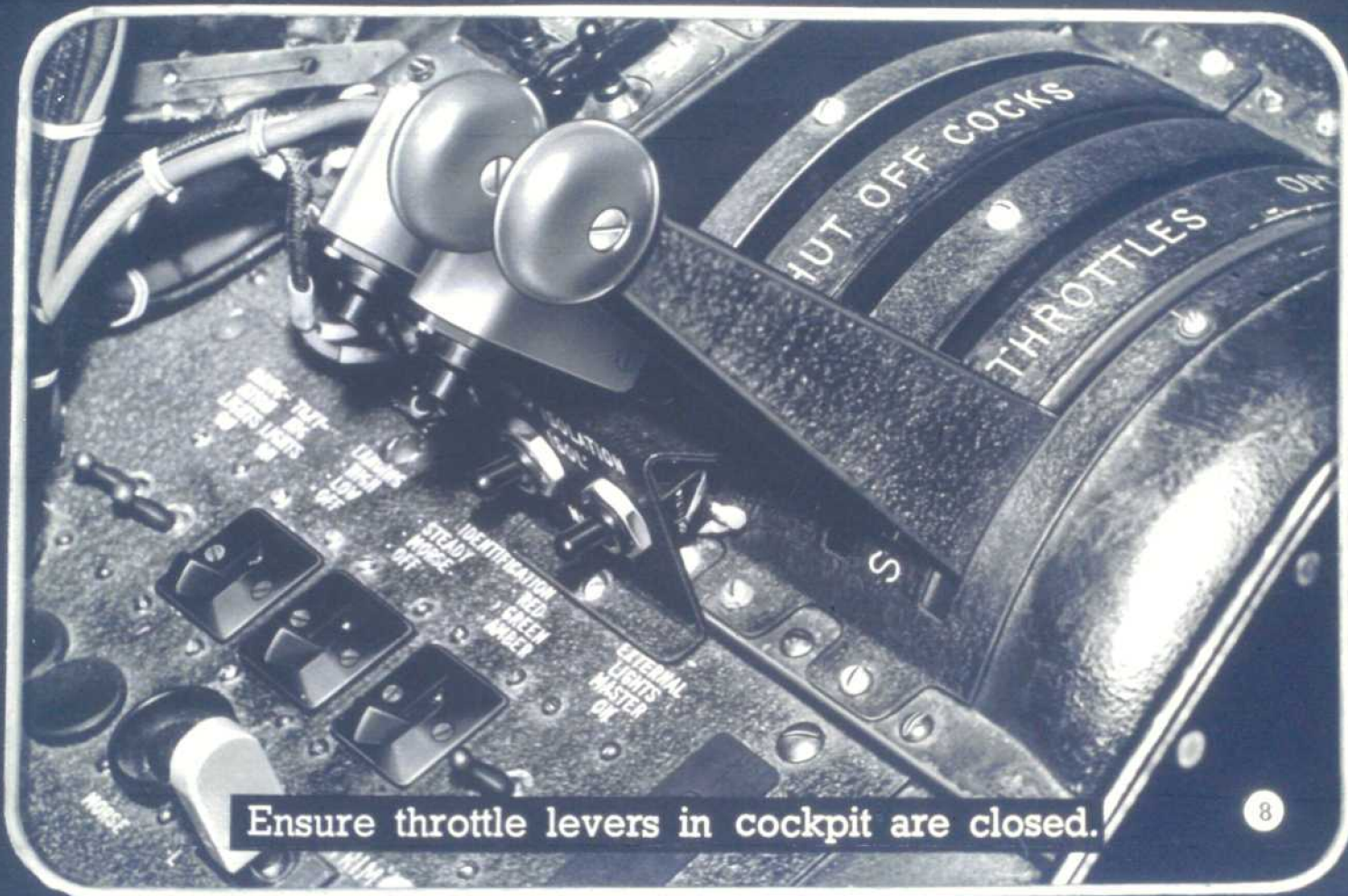
2°

Refit lever onto throttle valve spindle 2° approx.
from the vertical when on slow running stop.

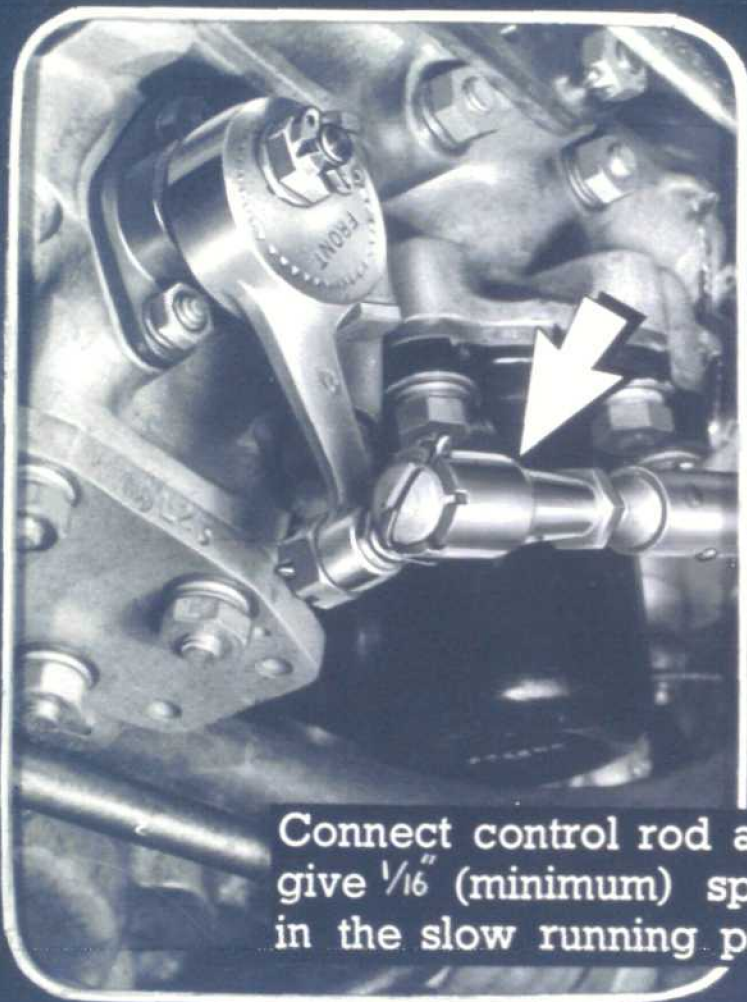
STARBOARD



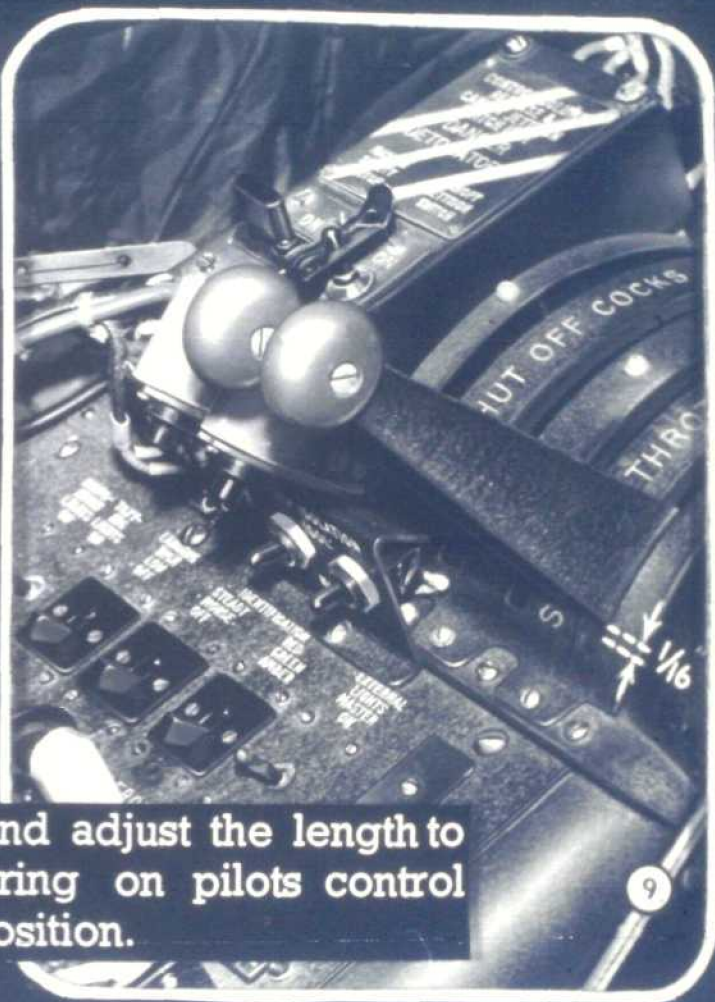
8° approx. from horizontal when on slow
running stop.

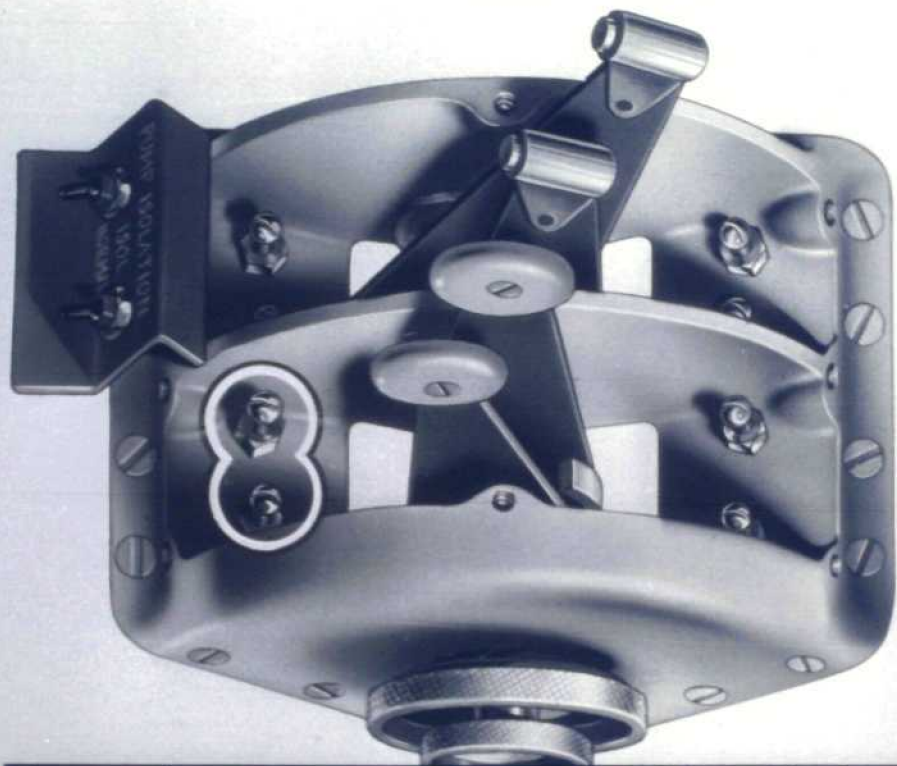


Ensure throttle levers in cockpit are closed.

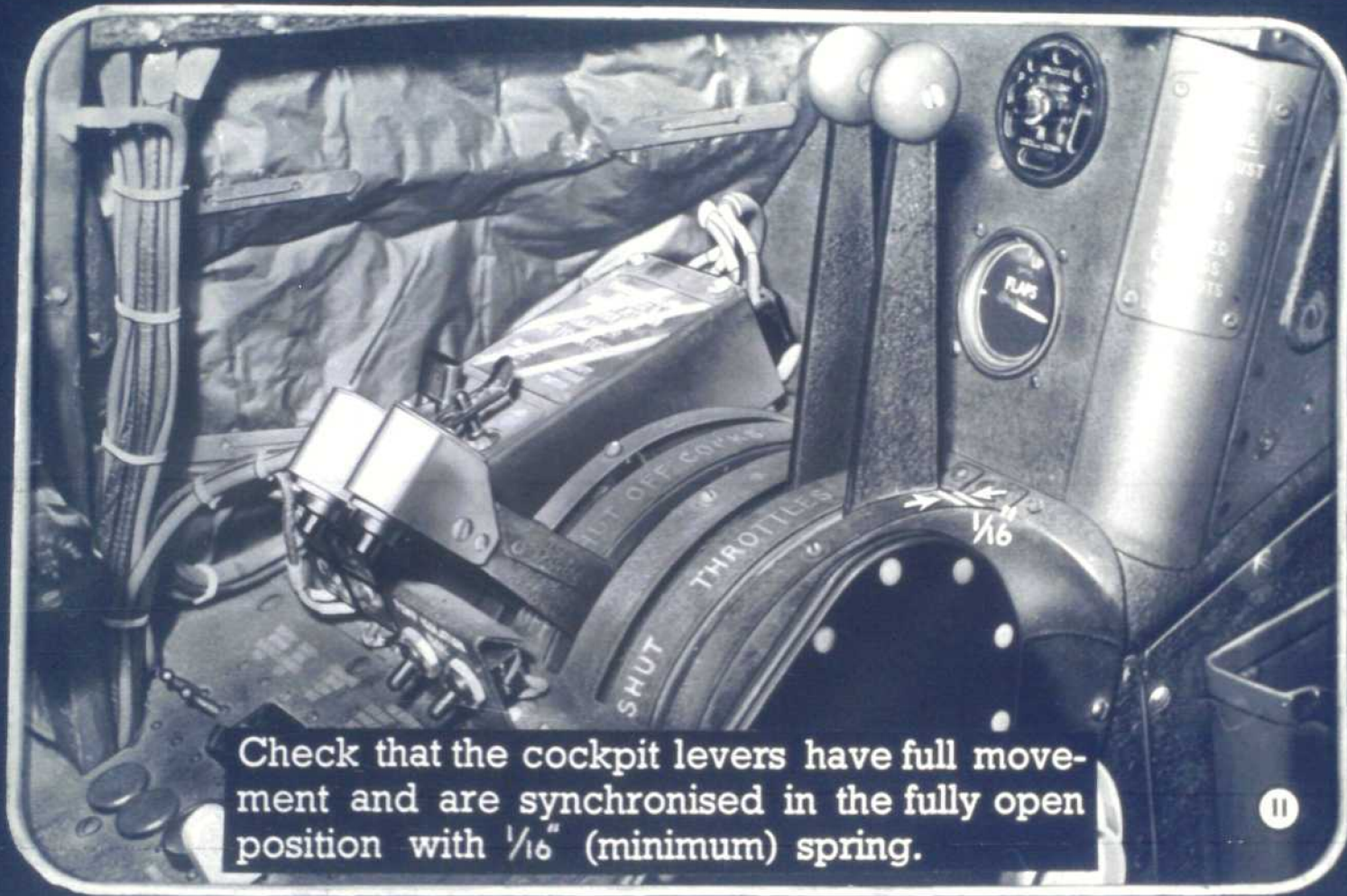


Connect control rod and adjust the length to give $\frac{1}{16}$ " (minimum) spring on pilots control in the slow running position.





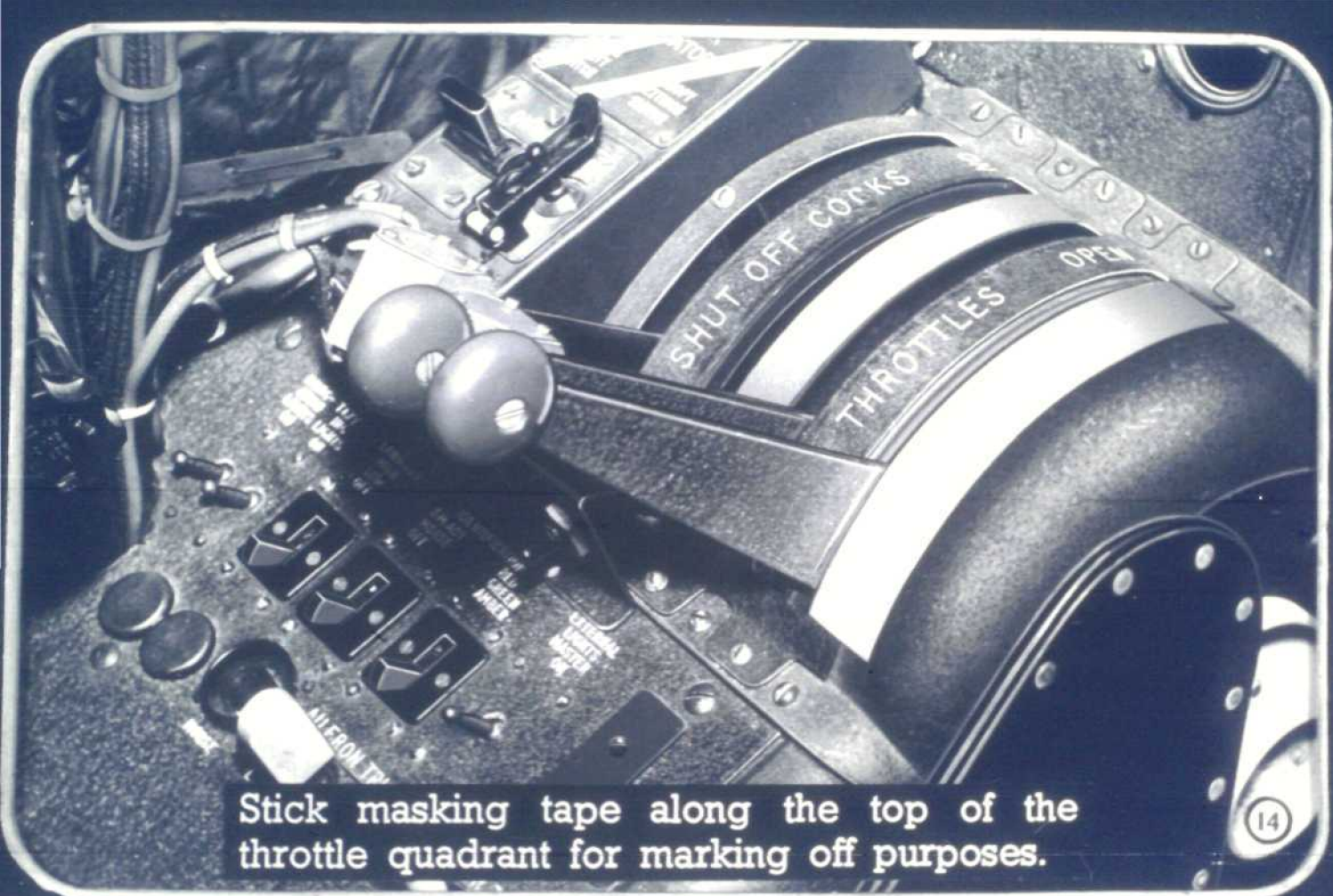
It may be necessary to make this adjustment in conjunction with stops in throttle box quadrant.



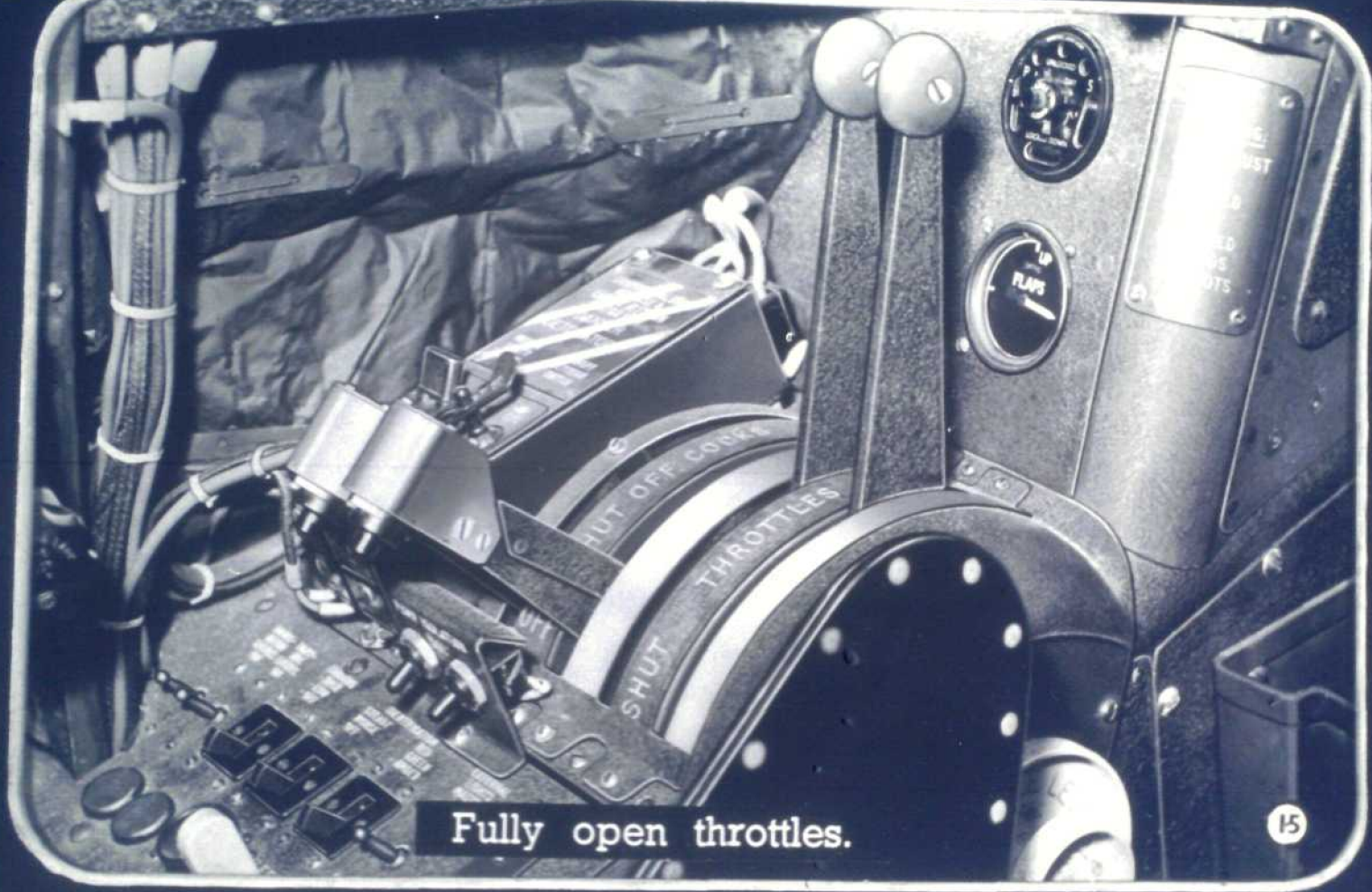
Check that the cockpit levers have full movement and are synchronised in the fully open position with $\frac{1}{16}$ " (minimum) spring.

The $\frac{1}{16}$ " spring can be adjusted on the quadrant stops at max. open position.

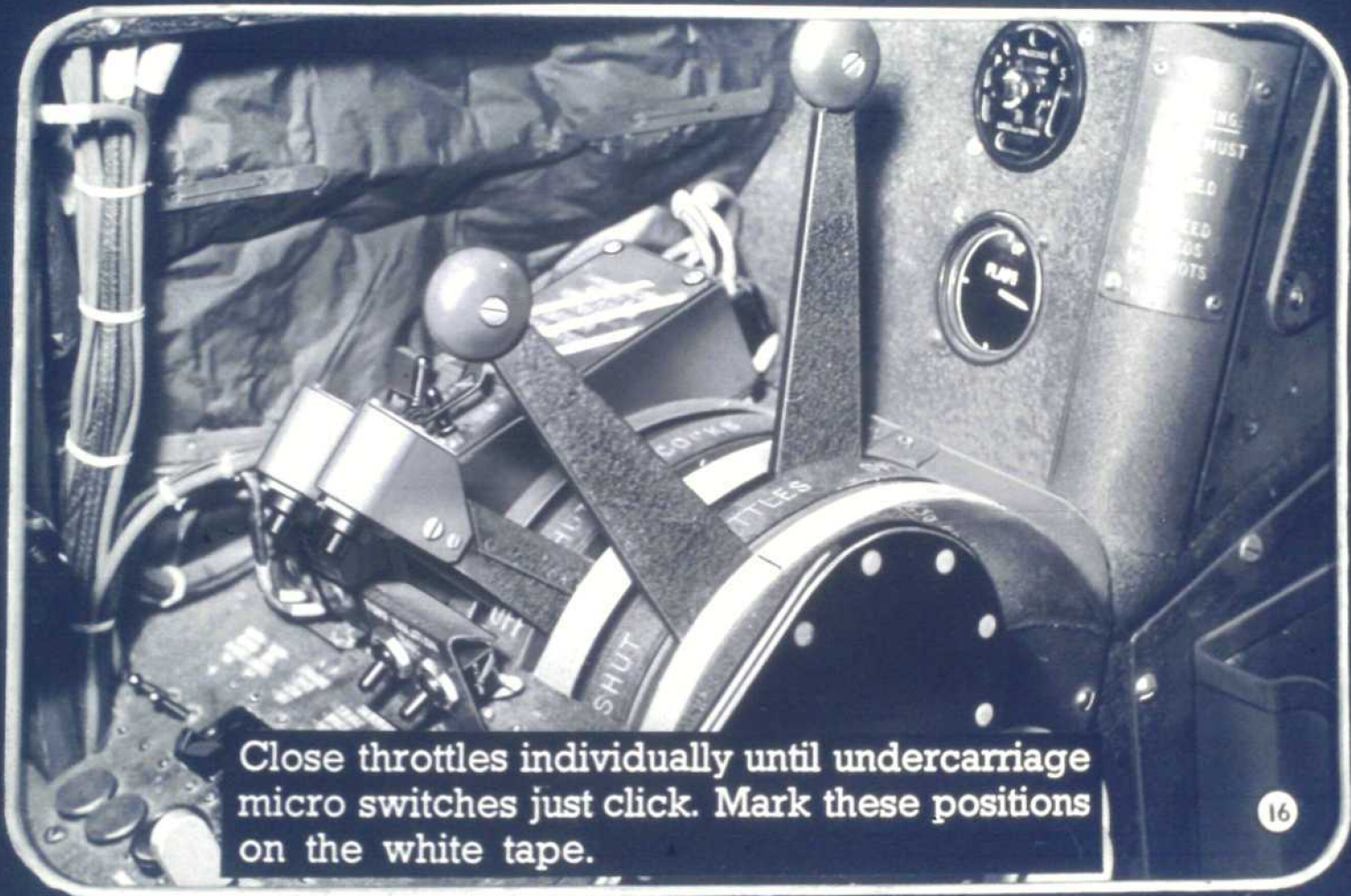
**Now check and adjust lever synchronisation
throughout the range as follows :-**



Stick masking tape along the top of the throttle quadrant for marking off purposes.



Fully open throttles.



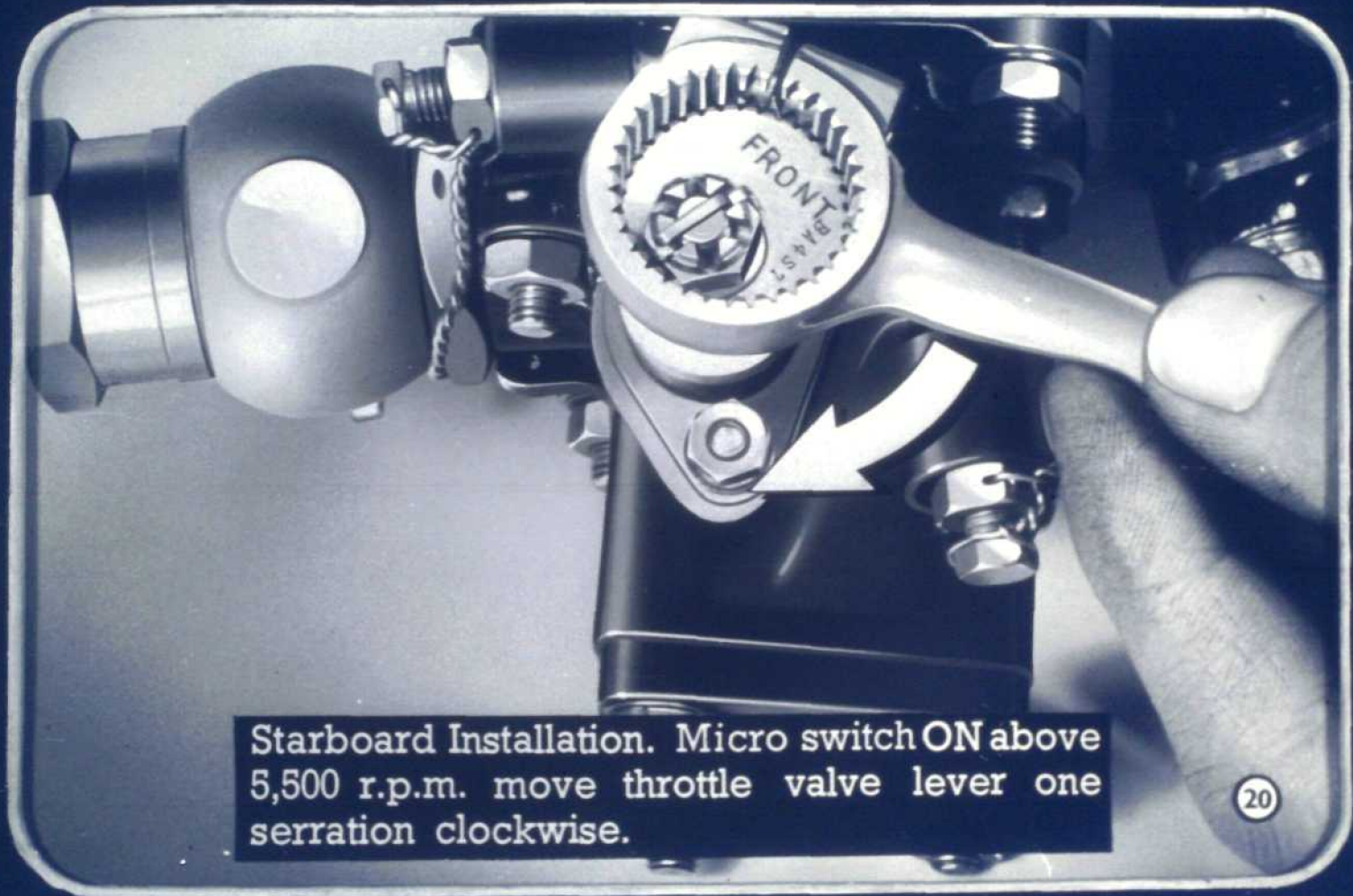
Close throttles individually until undercarriage micro switches just click. Mark these positions on the white tape.

Start and run the engine to check that the bleed valve control unit and governor speed settings are correct. Adjust if necessary.

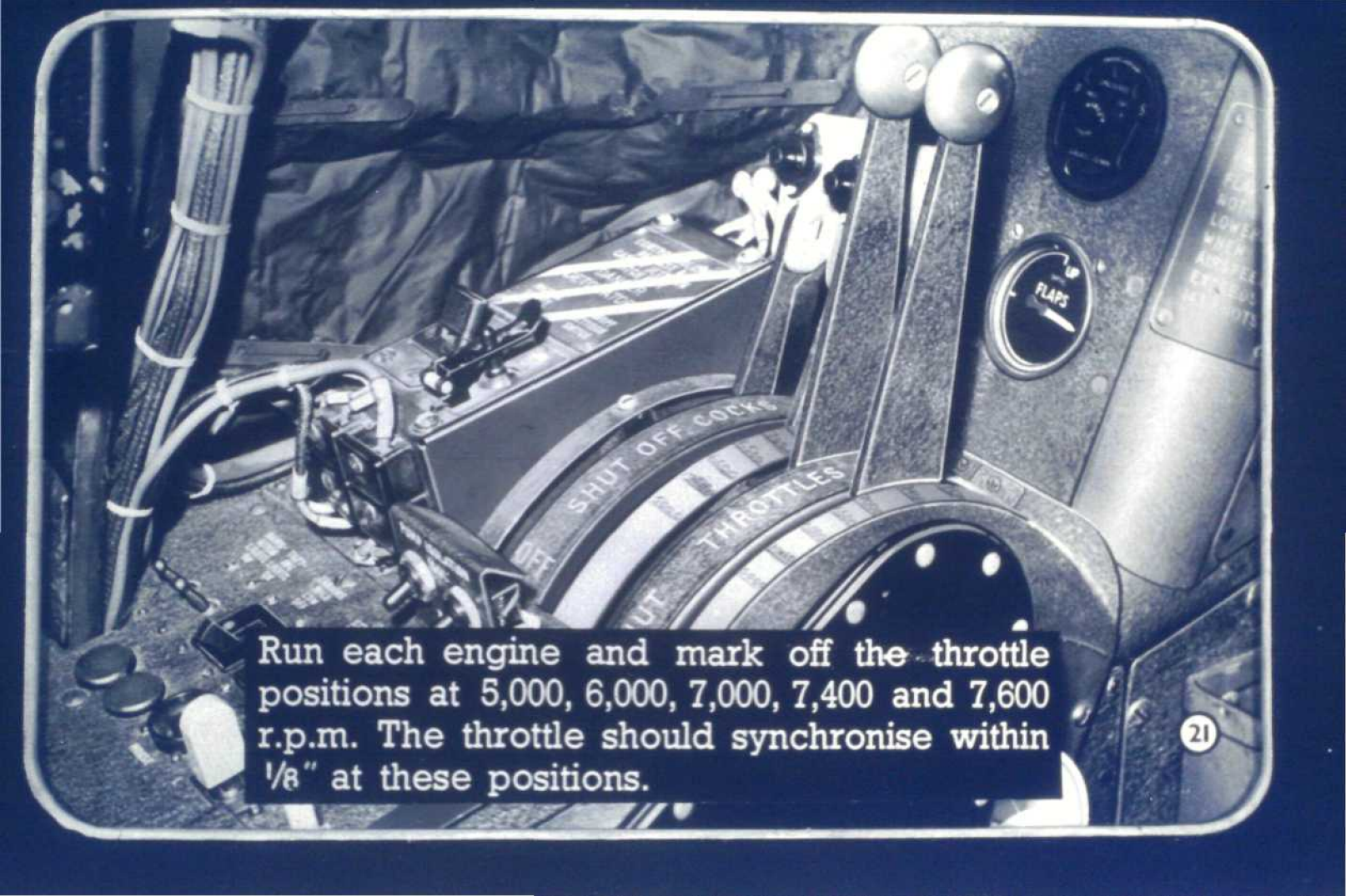
On deceleration check that the undercarriage micro switches operate between 5,000, 5,500 r.p.m. by noting throttle position as marked on the masking tape. If incorrect adjust as follows .



Port Installation. Undercarriage micro switch ON above 5,500 r.p.m. move throttle valve lever one serration anti-clockwise.

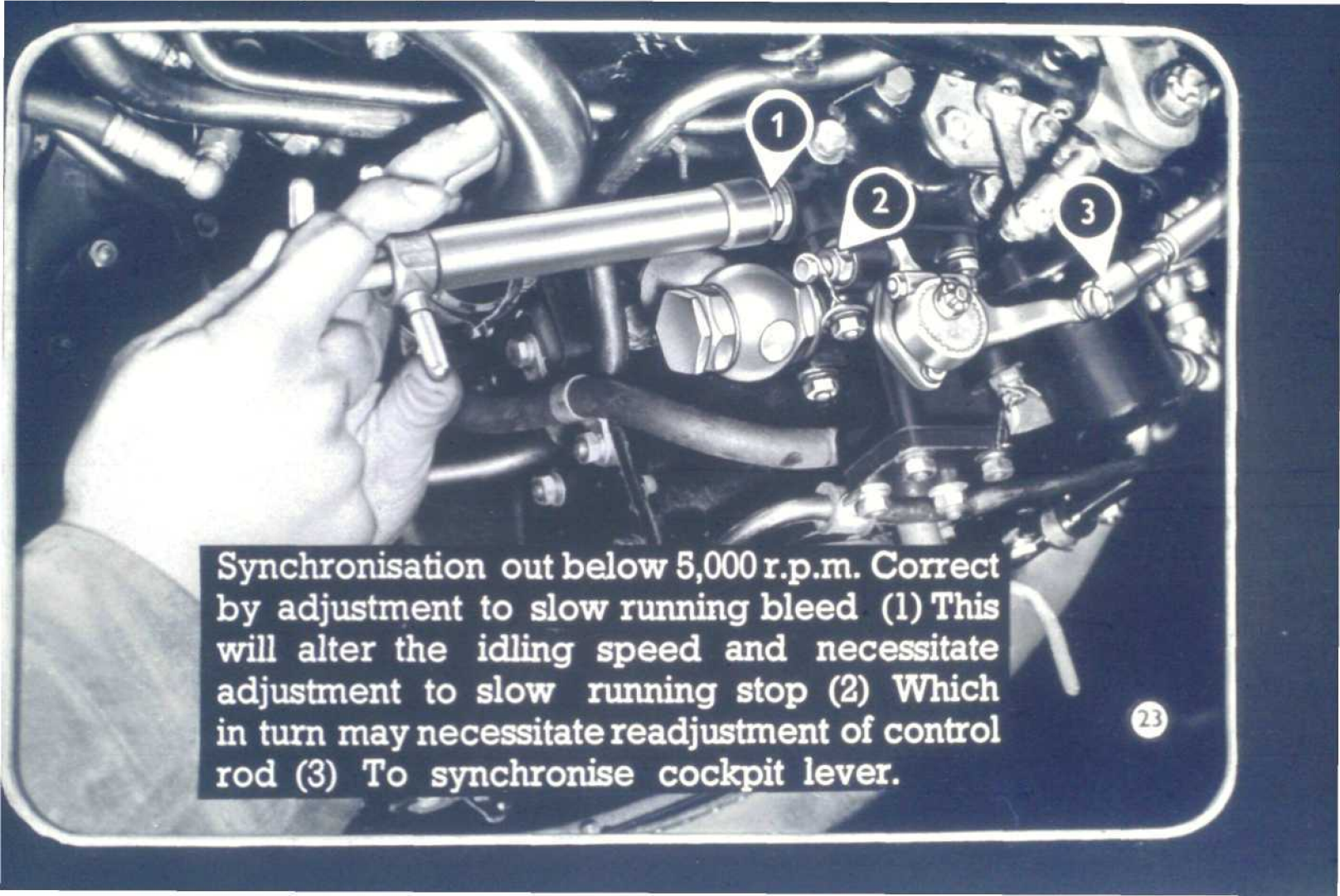


Starboard Installation. Micro switch ON above 5,500 r.p.m. move throttle valve lever one serration clockwise.



Run each engine and mark off the throttle positions at 5,000, 6,000, 7,000, 7,400 and 7,600 r.p.m. The throttle should synchronise within $\frac{1}{8}$ " at these positions.

If the throttle stagger does not exceed $\frac{1}{8}$ " the synchronisation is acceptable. Should one throttle lead by $\frac{1}{8}$ " or more throughout the range, synchronise as follows.



Synchronisation out below 5,000 r.p.m. Correct by adjustment to slow running bleed (1) This will alter the idling speed and necessitate adjustment to slow running stop (2) Which in turn may necessitate readjustment of control rod (3) To synchronise cockpit lever.

Synchronisation out above 5,000 r.p.m.

Example :- Port throttle lever leads
starboard by $\frac{1}{4}''$



PORT




STARBOARD

Move port throttle valve lever two serrations clockwise on eccentric hub. Move starboard throttle valve lever one serration clockwise on hub.

The adjustment to the port vernier is to synchronise the throttles. The adjustment to starboard vernier is to retain the synchronisation of the undercarriage warning light.

**This again may necessitate readjustment
of control rod to synchronise cockpit levers.**



Finally if slow running is found to be incorrect rectify on the slow running stop.

**Split pin and rewirelock all disturbed
components. Remove masking tape
from throttle quadrant.**

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