WINDSHIELD WIPER - ADJUSTMENT/TEST

EFFECTIVITY: AIRCRAFT WITH WINDSHIELD WIPER SYSTEM

1. General

A. This section gives the procedures to adjust the wiper-arm assembly pressure.

B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	*DESCRIPTION*	*EFFECTIVITY*
30-41-03-700-801-A	WINDSHIELD WIPER-ARM ASSEMBLY PRESSURE - ADJUSTMENT	AIRCRAFT WITH WINDSHIELD WIPER SYSTEM

TASK 30-41-03-700-801-A
EFFECTIVITY: AIRCRAFT WITH WINDSHIELD WIPER SYSTEM

2. WINDSHIELD WIPER-ARM ASSEMBLY PRESSURE - ADJUSTMENT

A. General

(1) The windshield wiper control panel is installed on the overhead panel.

(2) The adjustment procedure is the same for the two wiper arm assemblies.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 30-41-00-700-801-A/500	WINDSHIELD WIPER SYSTEM - OPERATIONAL TEST

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Dynamometer - 30 lb. (14 kg)		

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Windshield

I. Preparation

SUBTASK 841-003-A

(1) Energize the aircraft with the External DC-Power Supply (AMM TASK 20-40-01-860-801-A/200).

J. Adjustment

SUBTASK 820-003-A

CAUTION: BEFORE YOU OPERATE THE WINDSHIELD WIPER, MAKE THE WINDSHIELD SURFACE WET WITH WATER, AND KEEP IT WET DURING ALL THE ADJUSTMENT.
DO NOT LET THE BLADE TOUCH THE SEAL OF THE WINDSHIELD.
DO NOT LET THE WIPER END TOUCH THE GLASS WINDSHIELD SURFACE.
MAKE SURE THAT THE PRESSURE VALUES ARE NOT MORE THAN THE MAXIMUM VALUE AND ARE NOT TOO LOW TO PREVENT UNBONDING OF THE RAMP SEAL OR WIPER BLADE JUMPING, RESPECTIVELY.

(1) Make sure that the wiper was installed in the external position and the wiper arm touches the stop block.

(2) With a speed tape, do a temporary line at 15° and 25° from the inboard edges of the ramp seal, as an aid to mark the wiper position (Figure 501).

(3) Do a check of the force of the wiper arm against the park position just when the arm moves a little. Do as follows:

(a) Put the dynamometer in the mounting pin.

(b) Measure the park force of the wiper arm against the park position with dynamometer in parallel to the windshield surface, until the wiper arm starts moving from the stop block (Figure 502).

NOTE: The park force must be between 19 to 20 lb. (8.6 to 9.1 kg) and the blade must be parked and out of the windshield glass surface.

(4) If the measured force value is out of this range, it is necessary to adjust the wiper arm. Turn the wiper arm, in relation to the splined bushing towards the stop block.

NOTE: Each notch of the splined bushing will cause a blade movement of 3 in. (75 mm), approximately, on the windshield surface.
The rotation of 90° of the splined bushing from the initial position will cause a blade movement of 0.7 in.(20 mm), approximately, on the windshield surface.
The rotation of 180° of the splined bushing from the initial position will cause a blade movement of 1.4 in.(40 mm), approximately, on the windshield surface.

(5) Before you operate the windshield wiper, make sure that the wiper arm end does not touch the windshield glass surface.

(6) Make sure that the wiper end does not touch the ramp seal outline.

(7) After you adjusted the wiper arm force against the stop block, set switch 1 or 2 of the windshield-wiper control panel to LOW.

(8) Use the W/S WIPER 1 or W/S WIPER 2 circuit breakers as switches to stop the windshield wiper arm at 15° (on the temporary line). Put a Do-Not-Close tag on the circuit breaker.

(9) Put the dynamometer in the mounting pin and pull the dynamometer perpendicularly to the windshield surface part of the wiper blade that starts moving from the windshield (Figure 503).

NOTE: It is recommended that the dynamometer be of a model which keeps the value read-out. Thus, the reading will be still available after the force is no longer applied.
Read the dynamometer indication. In this condition, the force must be 12 ± 1 lb. (5 ± 0.9 kg).

(10) If the force value is out of this range, tighten or loosen the pressure adjustment screw which adjusts the pressure of the wiper arm against the windshield surface until you have a value in this range (Figure 503).

NOTE: The difference between the left and right values of the force at 15°must not be more than 2.2 lb. (1 kg).

(11) After you adjusted the pressure at 15°, set switch 1 or 2 of the windshield-wiper control panel to LOW.

(12) Use the W/S WIPER 1 or W/S WIPER 2 circuit breakers as switches to stop the windshield wiper arm at 25° (on the temporary line). Put a Do-Not-Close tag on the circuit breaker (Figure 504).

(13) Make sure that the distance of the wiper arm end from the windshield surface at 25° is not less than ¼" (6 mm). If the distance is less than this value after all adjustment, replace the windshield wiper.

(14) After the adjustment is correct, do the Windshield-Wiper System Operational Test (AMM TASK 30-41-00-700-801-A/500).

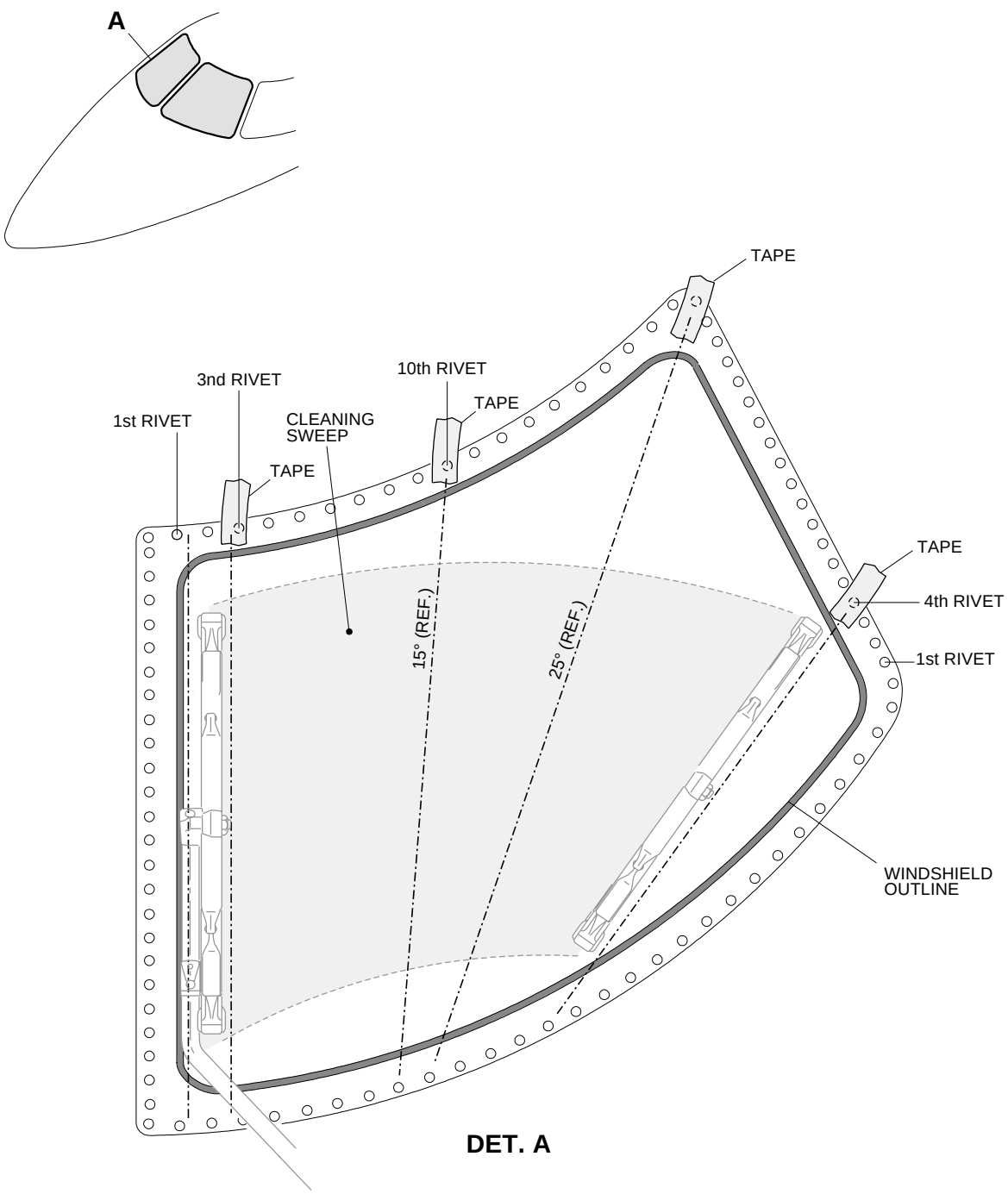
K. Follow-on

SUBTASK 842-003-A

(1) Remove the Do-Not-Close tag from the W/S WIPER 1 or W/S WIPER 2 circuit breaker.

(2) Deenergize the aircraft (AMM TASK 20-40-01-860-801-A/200).

EFFECTIVITY: AIRCRAFT WITH WINDSHIELD WIPER SYSTEM
15°, 25° Lines and Wiper Sweep
Figure 501



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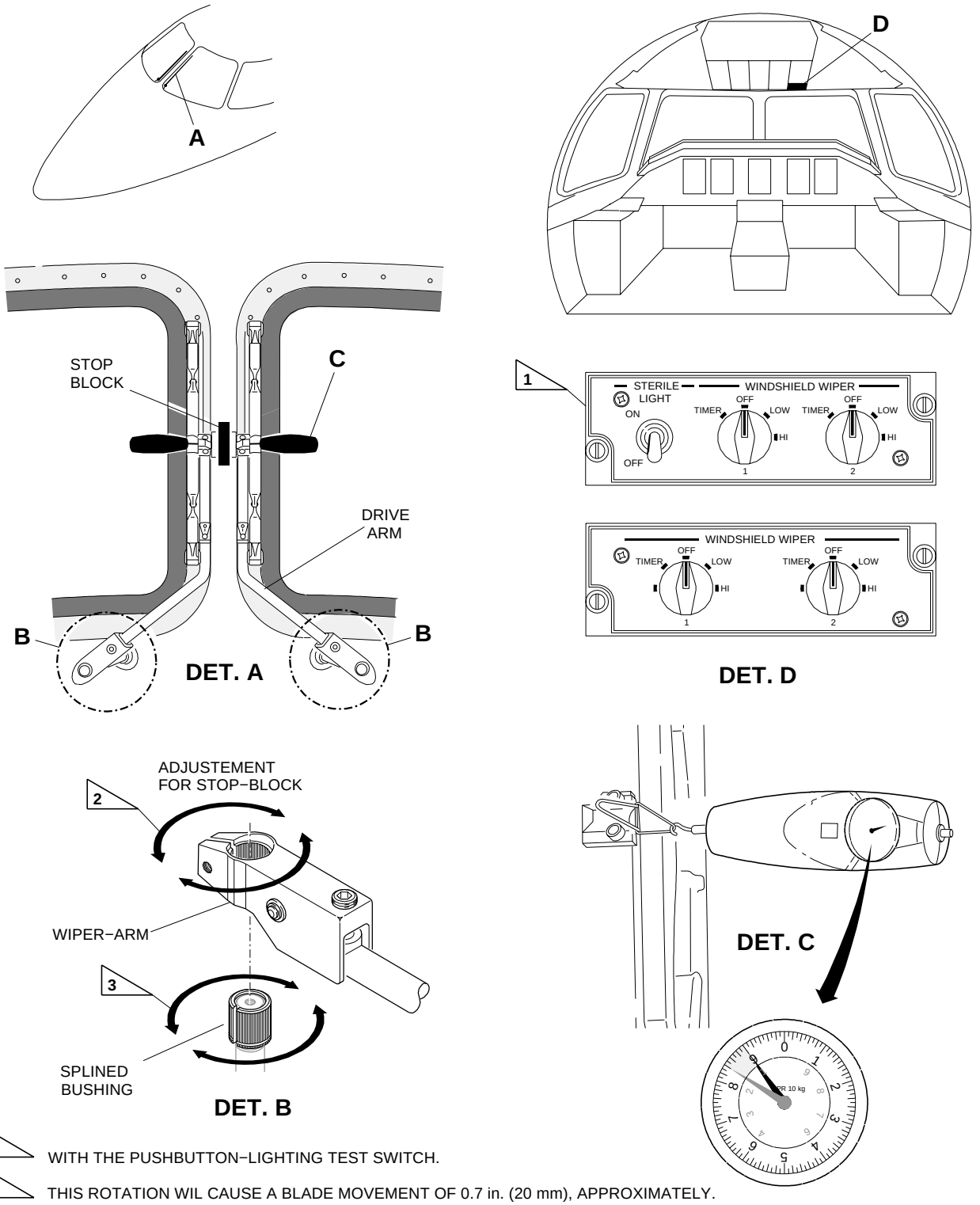
EFFECTIVITY: AIRCRAFT WITH WINDSHIELD WIPER SYSTEM
Stop-Block Pressure Adjustment
Figure 502



1 WITH THE PUSHBUTTON−LIGHTING TEST SWITCH.

2 THIS ROTATION WIL CAUSE A BLADE MOVEMENT OF 0.7 in. (20 mm), APPROXIMATELY.

3 THIS ROTATION WIL CAUSE A BLADE MOVEMENT OF 1.4 in. (40 mm), APPROXIMATELY.

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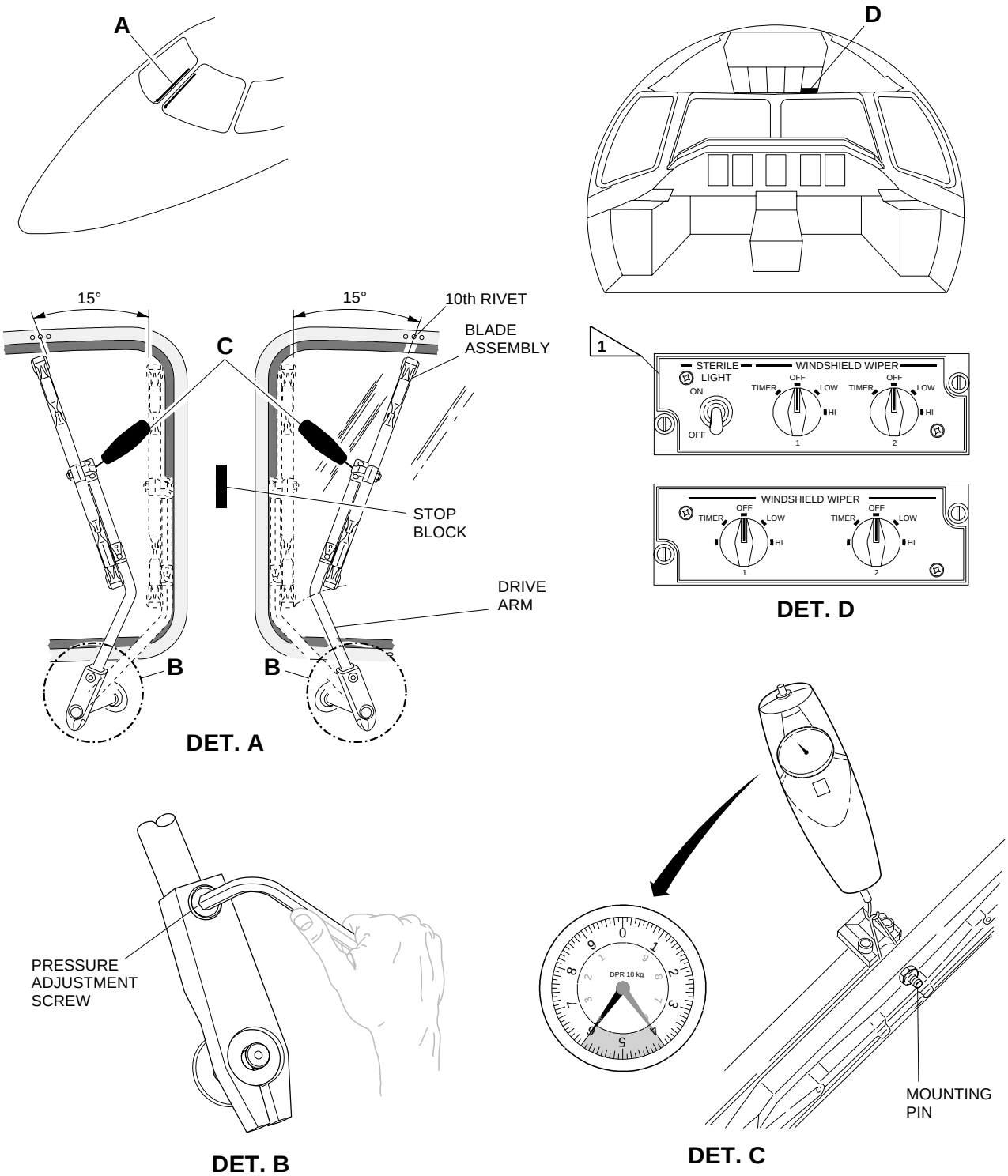
EFFECTIVITY: AIRCRAFT WITH WINDSHIELD WIPER SYSTEM
Windshield Wiper-Arm Assembly Pressure Adjustment
Figure 503



1 WITH THE PUSHBUTTON−LIGHTING TEST SWITCH.

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EFFECTIVITY: AIRCRAFT WITH WINDSHIELD WIPER SYSTEM
Windshield Wiper-Arm Distance Adjustment
Figure 504