## MAIN LANDING GEAR ACTUATOR - REPAIR

*EFFECTIVITY: ALL*

1. General

A. This section gives the procedures to repair the main landing-gear actuator threads of the rod end, piston rod, nut and rod-end lock if you find corrosion.

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* |
|---|---|---|
| 32-33-08-300-801-A | MAIN LANDING-GEAR ACTUATOR - REPAIR | ALL |

TASK 32-33-08-300-801-A
*EFFECTIVITY: ALL*

## 2. MAIN LANDING-GEAR ACTUATOR - REPAIR

### A. General

(1) This task gives the procedures to remove corrosion from the threads of the rod end, piston rod, nut and rod-end lock of the main landing-gear actuator.

### B. References

| *REFERENCE* | *DESIGNATION* |
|---|---|
| AMM MPP 06-41-01/100 | - |
| AMM TASK 29-10-00-860-802-A/200 | HYDRAULIC SYSTEM - PRESSURIZATION WITH EMDP |
| AMM TASK 32-00-01-910-801-A/200 | LG SAFETY PIN - INSTALLATION AND REMOVAL |
| AMM TASK 32-30-00-700-801-A/500 | EXTENSION AND RETRACTION SYSTEM - OPERATIONAL CHECK |
| AMM TASK 32-33-08-200-801-A/600 | MAIN LANDING-GEAR MANEUVERING ACTUATOR - INSPECTION FOR CORROSION |
| AMM TASK 32-34-00-600-801-A/300 | MLG AND NLG - LUBRICATION |

### C. Zones and Accesses

Not Applicable

### D. Tools and Equipment

| *ITEM* | *DESCRIPTION* | *PURPOSE* | *QTY* |
|---|---|---|---|
| Commercially available | Stainless-steel wire brush | To remove the corrosion | |
| Commercially available | Dial Comparator | To measure clearance of the rod end | |

### E. Auxiliary Items

| *ITEM* | *DESCRIPTION* | *PURPOSE* | *QTY* |
|---|---|---|---|
| Commercially available | Rubber Gloves, Phosphate Ester-Base, Fluid-Resistant | Protection for the hands | 1 |
| Commercially available | Rubber Goggles, Phosphate Ester-Base, Fluid-Resistant | Protection for the eyes | 1 |

### F. Consumable Materials

| *SPECIFICATION (BRAND)* | *DESCRIPTION* | *QTY* |
|---|---|---|
| MEP 13-073 | RHODIASOLVE E-23 | AR |
| AMS 1533 | ARDROX 6085 | AR |
| MIL-L-23398D | SANDSTROM 238 | AR |

G. Expandable Parts

Not Applicable

H. Persons Recommended

| *QTY* | *FUNCTION* | *PLACE* |
|---|---|---|
| 1 | Does the task | LH and RH MLG wheelwells |

I. Preparation

*SUBTASK 841-002-A*

(1) Make sure that the safety pins of the landing gears are installed ( AMM TASK 32-00-01-910-801-A/200).

(2) On the circuit breaker panel, open the ELEC PUMP 1, ELEC PUMP 2, and CMD circuit breakers, and attach DO-NOT-CLOSE tags to them.

(3) Make sure that the pressure in hydraulic system No. 1 is fully released ( AMM TASK 29-10-00-860-802-A/200).

(4) Control the ailerons up and down, or the rudder left and right, until the EICAS shows zero-PSI pressure of hydraulic system No. 1.

(5) Open access door 114CR of the nose hydraulic compartment (AMM MPP 06-41-01/100).

(6) Release the pressure from the pax door/landing gear accumulator, installed in the nose hydraulic compartment. For this, open the discharge valve and monitor the pressure gage until it shows the nitrogen precharge.

CAUTION: BE CAREFUL NOT TO FORCE THE ACTUATOR DOWN. THIS ACTION CAN CAUSE DAMAGE TO THE HYDRAULIC HOSES.

(7) Remove the rod end from the piston rod of the MLG actuator and move the actuator to a position that gives you free access to the piston rod. Refer to Figure 802.

J. Removal of Corrosion from the Threads of the Rod End, Piston Rod, Nut and Rod-End Lock (Figure 801) (Figure 802)

*SUBTASK 020-002-A*

(1) Use a stainless-steel wire brush to remove the corrosion from the threads of the rod end (2), piston rod (1), nut (3) and rod-end lock (4). Refer to Figure 801.

NOTE: Connect the brush to an electric or pneumatic (drilling machine or a turbine) gun to make the job easier.

(2) Clean the threads of the rod end, actuator rod, nut and rod-end lock with Rhodiasolve solvent to complete the removal of the residues.

NOTE: Remaining pittings are permitted after you do this procedure, if:

- the corrosion is correctly neutralized as given in step (3) of this subtask; and

- the radial backlash is in the approved limits. Refer to steps (7) to (11) of this subtask for more instructions.

(3) Apply ARDROX 6085 to the area where you found pitting points.

NOTE: For the correct preparation of surface, mixing process and application, refer to the manufacturer's technical datasheet.

(4) Apply SANDSTROM 238 to protect the affected area.

NOTE: For the correct preparation of surface and application, refer to the manufacturer's technical datasheet.

(5) Connect the rod-end lock and the nut back to the rod end.

(6) Connect the rod end back to the piston rod. It is necessary to thread the rod end down until it can be seen through the inspection hole (Figure 802, DET. C).

CAUTION: BE CAREFUL NOT TO FORCE THE ACTUATOR DOWN. THIS ACTION CAN CAUSE DAMAGE TO THE HYDRAULIC HOSES.

(7) Install a dial comparator with its base on the actuator or on the piston rod (Figure 802).

NOTE: The position where you must install the dial comparator changes with your equipment configuration. Make sure that the dial comparator base is tightly attached.

(8) Adjust the dial comparator to measure the radial movement of the rod end (Figure 802).

(9) Move the actuator up and down in the radial direction and write down the dial comparator value (Figure 802, DET. C).

(10) If the value that you found in the last step is more than 1.8 mm (0.0709 in), send the MLG actuator to an authorized repair shop.

(11) If the value found in step 7 is less than 1.8 mm (0.0709 in), do the AMM TASK 32-33-08-200-801-A/600. Start from letter J, step 11.

K. Follow-on

*SUBTASK 842-002-A*

(1) Pressurize hydraulic system 1 to pressurize the door/landing gear accumulator ( AMM TASK 29-10-00-860-802-A/200).

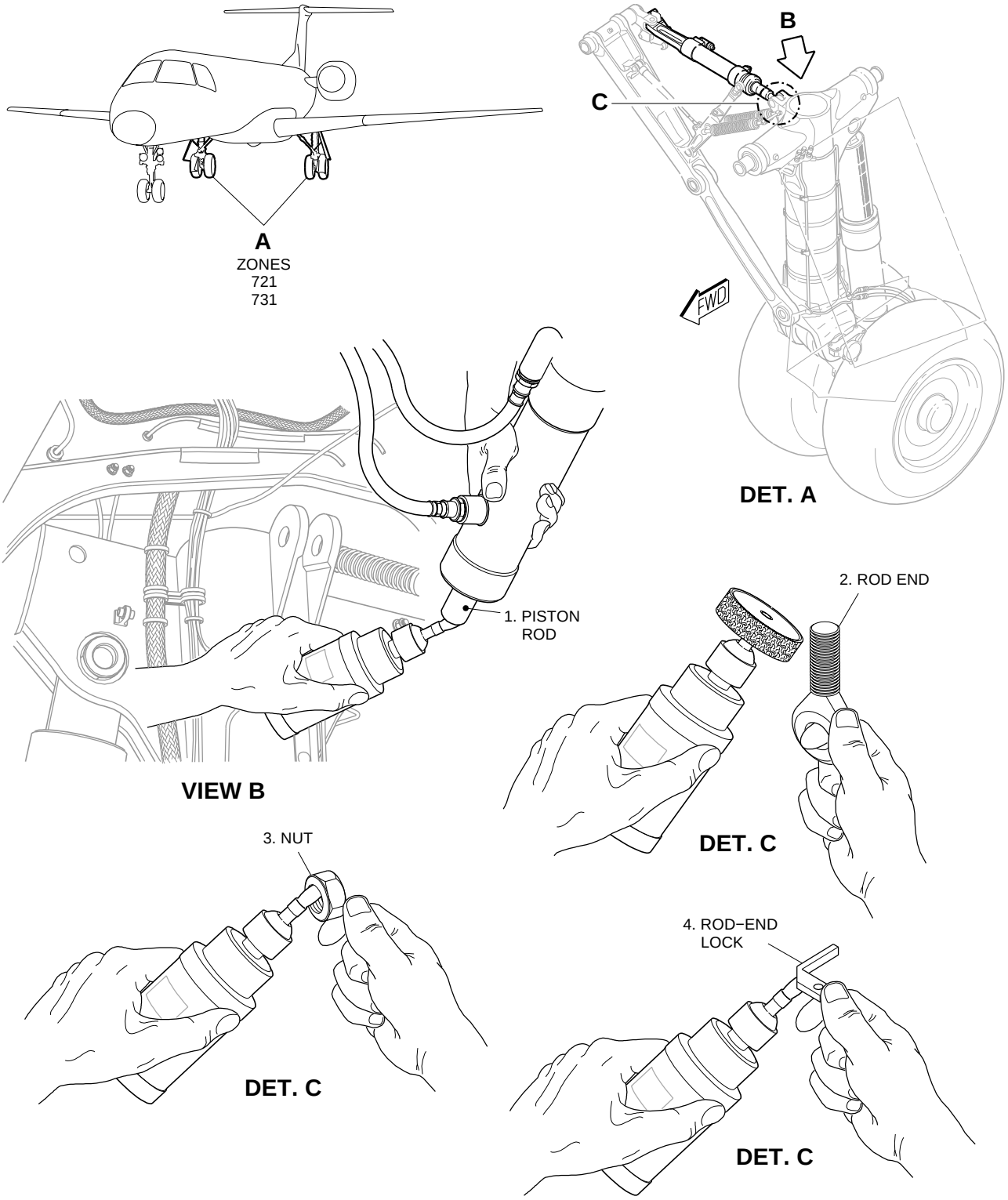
(2) On the circuit breaker panel, remove the DO-NOT-CLOSE tags from the ELEC PUMP 1, ELEC PUMP 2, and CMD circuit breakers and close them.

(3) Lubricate the rod ends of the actuator with grease ( AMM TASK 32-34-00-600-801-A/300).

(4) Do an operational check of the MLG ( AMM TASK 32-30-00-700-801-A/500).

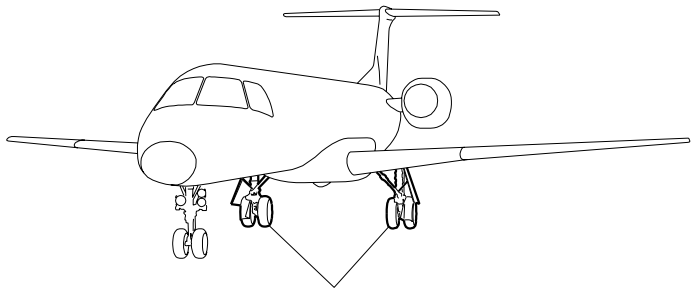
*EFFECTIVITY: ALL*

Main Landing-Gear Actuator - Repair
Figure 801

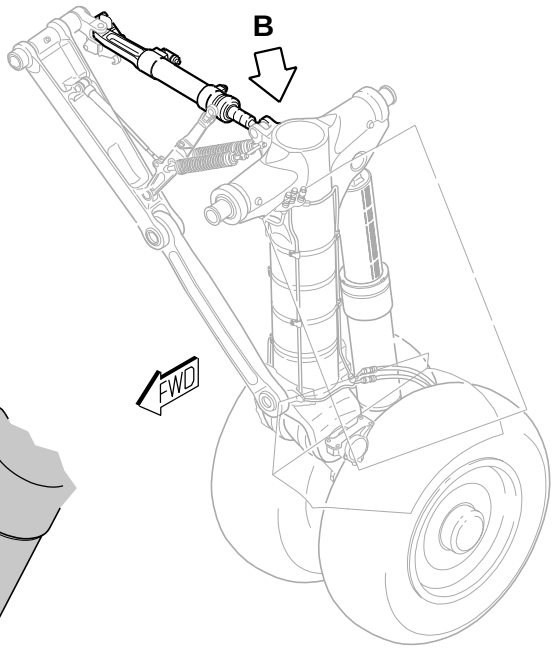


*EFFECTIVITY: ALL*

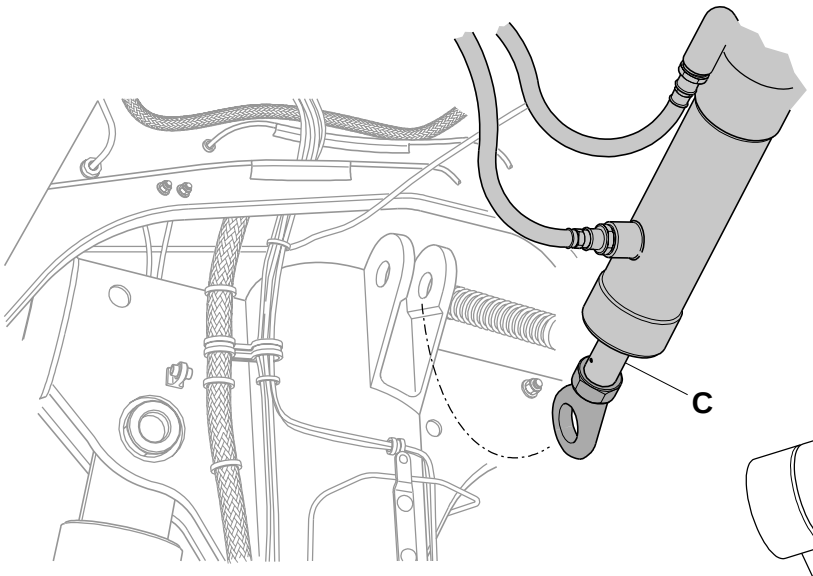
Main Landing-Gear Actuator - Repair
Figure 802



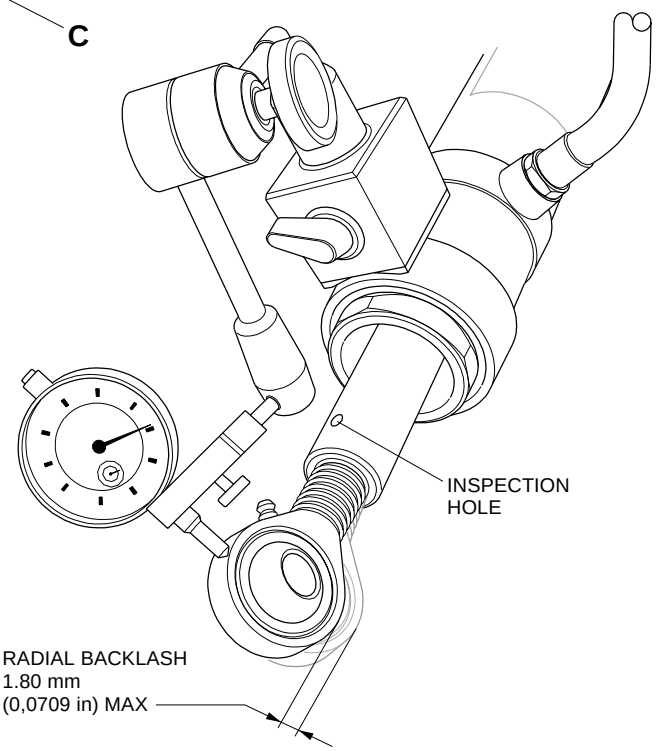
**A**
ZONES
721
731




**DET. A**




**VIEW B**




**DET. C**

EM145AMM320525B.DGN