MAIN LANDING GEAR ACTUATOR - INSPECTION/CHECK

EFFECTIVITY: ALL

1. General

A. This section gives the procedures to do an inspection of the threads of the rod end, piston rod, nut and rod-end lock of the main landing-gear maneuvering actuator for 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*
32-33-08-200-801-A ♦	MAIN LANDING-GEAR MANEUVERING ACTUATOR - INSPECTION FOR CORROSION	ALL

TASK 32-33-08-200-801-A
EFFECTIVITY: ALL

2. MAIN LANDING-GEAR MANEUVERING ACTUATOR - INSPECTION FOR CORROSION

A. General

(1) This task gives the procedures to do an inspection of the main landing-gear actuator for corrosion on the threads of the rod end and piston rod.

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 32-33-08-300-801-A/800	MAIN LANDING-GEAR ACTUATOR - REPAIR
AMM TASK 32-34-00-600-801-A/300	MLG AND NLG - LUBRICATION
For the applicable P/N, refer to CMM/IPL 32- 33-08	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Snap-on SCO42	Wrench, Crowfoot, Open-End, 1 5/16"	Disconnection of rod end nut	

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Rubber Gloves resistant to Phosphate-Ester Base fluid	Protection for the hands	1
Commercially available	Lint free cloth	For cleaning	AR

F. Consumable Materials

SPECIFICATION (BRAND)	*DESCRIPTION*	*QTY*
MEP 09-075	Corrosion Inhibiting Compound COR-BAN 27L	AR
SAE AMS 3277, Type I, Class B2	Sealant PR1826B2ALO	AR
MEP 13-073	RHODIASOLVE E-23	AR

G. Expendable Parts

ITEM	*IPC REFERENCE (VENDOR REFERENCE)*	*QTY*
Safety Wire	For the applicable P/N, refer to CMM/IPL 32-33-08	AR
Cotter Pin	For the applicable P/N, refer to CMM/IPL 32-33-08	AR

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	LH and RH MLG wheelwells
1	Helps the other technician	LH and RH MLG wheelwells

I. Preparation

SUBTASK 840-002-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) Move the ailerons up and down, or the rudder left and right, until the EICAS shows zero-PSI pressure of the hydraulic system.

(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 pre-charge.

J. Inspection of the Threads of the Rod End, Piston Rod, Nut and Rod-End Lock for Corrosion (Figure 601) (Figure 602) (Figure 603) (Figure 604)

SUBTASK 020-003-A

(1) Remove the sealant, cut the safety wire and remove it from the nut (1). Refer to Figure 601.

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

(2) Use Snap-on tool SCO42 to move the nut (1) from the installation torque condition (unseating torque). Refer to Figure 601.

(3) Remove the sealant, cotter pin (4), nut (3), and washer (2). Refer to Figure 602.

(4) Remove the pivot (1) and bushing (5). Refer to Figure 602.

NOTE: If it is necessary, move the spring cartridge down to have a better access to the pivot.

(5) Move the actuator to a position in which you can have free access to the rod end. Refer to Figure 603.

(6) Remove the rod end (3) from the piston rod (1). Refer to Figure 603.

(7) Remove the nut (2) and the rod-end lock (4) from the rod end (3). Refer to Figure 603.

(8) Clean the threads of the piston rod (1), rod end (3), nut (2) and rod-end lock (4) with Rhodiasolve solvent. Refer to Figure 604.

(9) Do an inspection on the threads of the rod end, piston rod, nut and rod-end lock for corrosion.

(10) If you find corrosion, remove it. Refer to AMM TASK 32-33-08-300-801-A/800. If you do not find corrosion, do these steps:

(11) Apply COR-BAN 27L corrosion inhibiting compound to the threads of the rod end, piston rod, nut and rod-end lock.

(12) Install the nut and rod-end lock back to the rod end.

(13) Connect the rod end back to the piston rod. It is necessary to turn the rod end down until you can see it through the inspection hole. Refer to Figure 604.

(14) Remove all residual corrosion inhibiting compound from the pivot (1), bushing (5) and from the lugs where the bushing will be installed with a clean cloth wet with solvent Rhodiasolve E23 (spec. MEP 13-073), or similar.

(15) Apply COR-BAN 27L (MEP 09-075) to the pivot (1) and bushing (5).

(16) Install the rod end to the aircraft with the bushing (5) and pivot (1). Refer to Figure 602.

CAUTION: DO STEP 17 WITH THE ROD END INSTALLED TO THE MAIN LANDING GEAR LEG TO MAKE THE APPLICATION OF THE TORQUE EASIER AND SAFER. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE CAN OCCUR TO THE STRUCTURE OF THE MAIN LANDING GEAR AND HYDRAULIC HOSES.

(17) Use the SCO42 Snap-on tool to torque the nut to the piston rod. Refer to Figure 601.

(18) Install the safety wire to the nut (1). Refer to Figure 601.

(19) Apply sealant PR1826B2ALO to the nut (1). Refer to Figure 601.

NOTE: Sealant P/S 870B-2 or sealant AC-665 B-2 can be used as alternatives to sealant PR1826B2ALO. But, 24 hours after the application of these alternative sealants, apply a layer of varnish 683-3-2/X-310A to them.

(20) Install the washer (2), nut (3), and cotter pin (4). Refer to Figure 602.

(21) Apply sealant PR1826B2ALO to the pivot (1) and nut (3). Refer to Figure 602.

NOTE: Sealant P/S 870B-2 or sealant AC-665 B-2 can be used as alternatives to sealant PR1826B2ALO. But, 24 hours after the application of these alternative sealants, apply a layer of varnish 683-3-2/X-310A to them.

K. Follow-on

SUBTASK 840-003-A

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

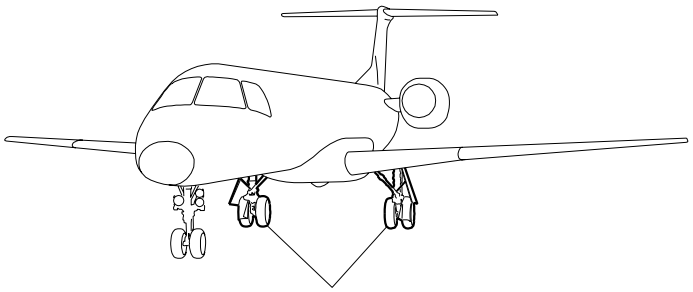
(2) On the circuit breaker panel, remove the DO-NOT-CLOSE tags from the ELEC PUMP 1, ELEC PUMP 2, and CMD circuit breakers and close them.

(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 - Inspection/Check
Figure 601



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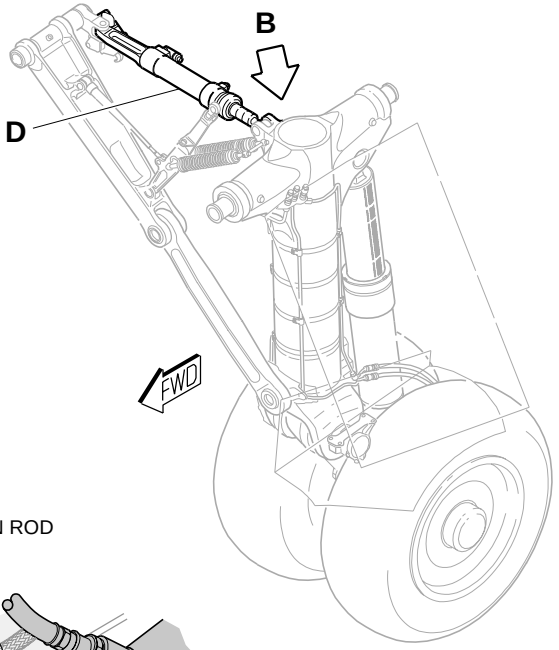
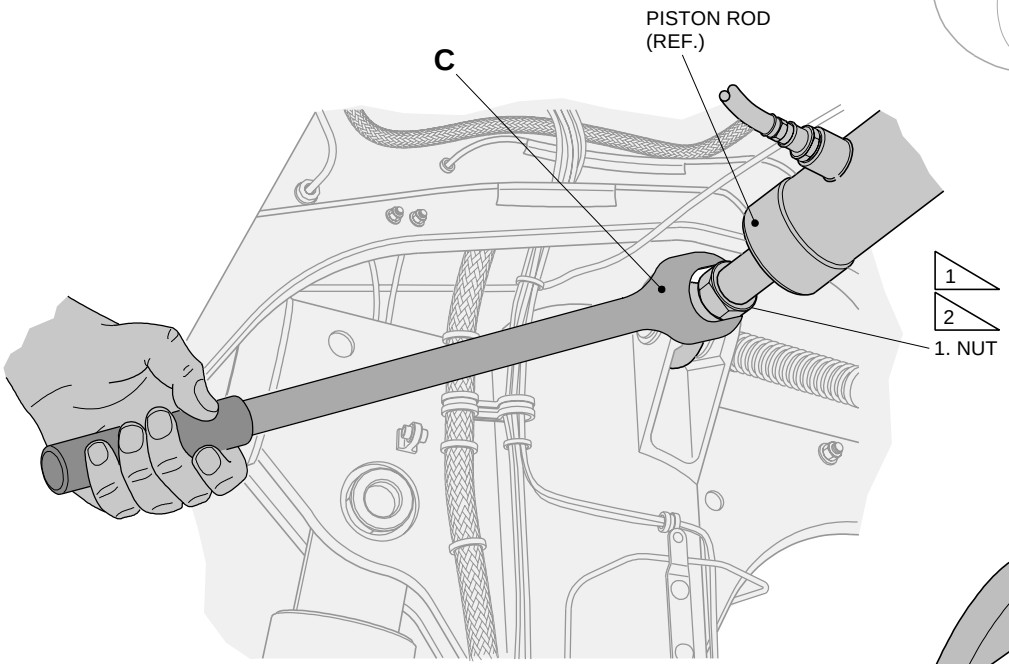
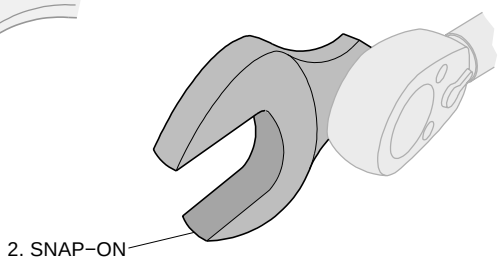


DET. A



VIEW B



DET. C

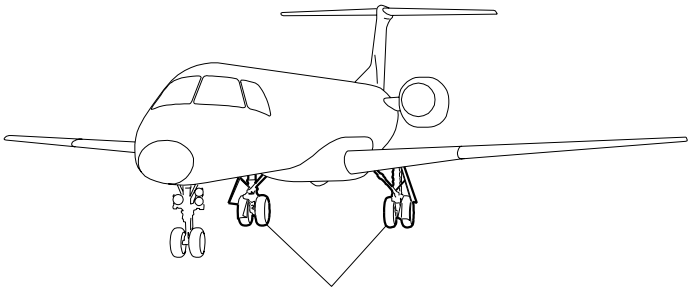
1 TORQUE: 210 − 240 N.m (1859 − 2124 lb.in).

2 APPLY SEALANT PR1826B2ALO.

EM145AMM320463B.DGN

EFFECTIVITY: ALL

Main Landing-Gear Actuator - Inspection/Check
Figure 602



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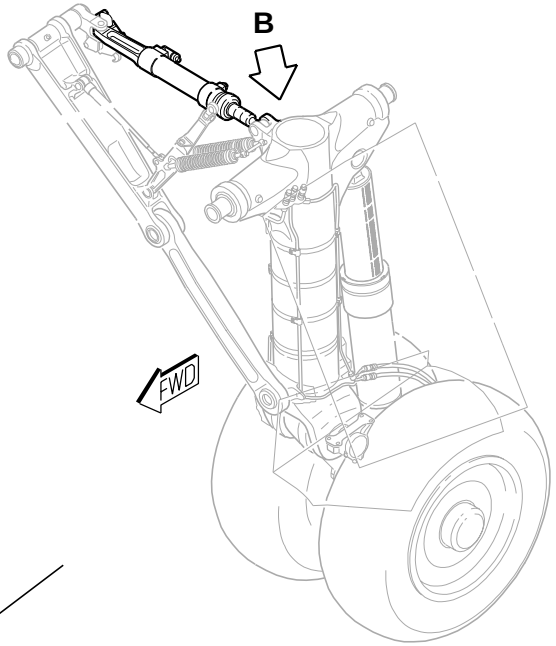

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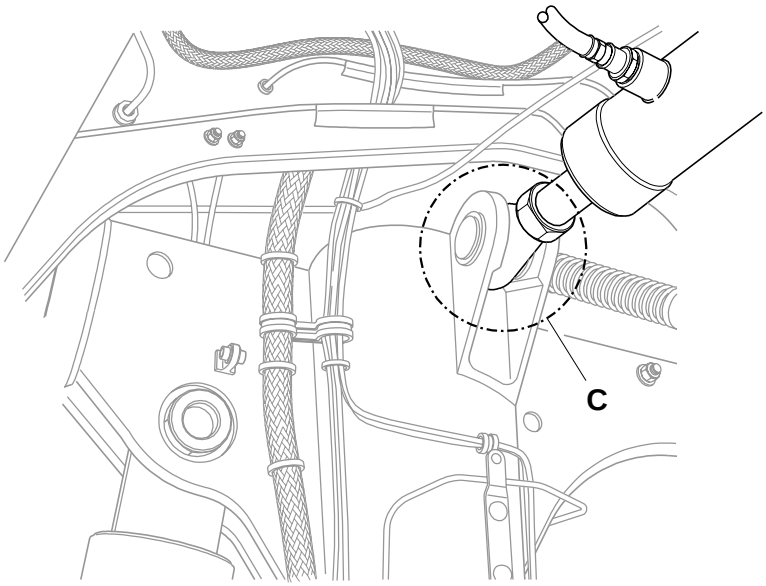
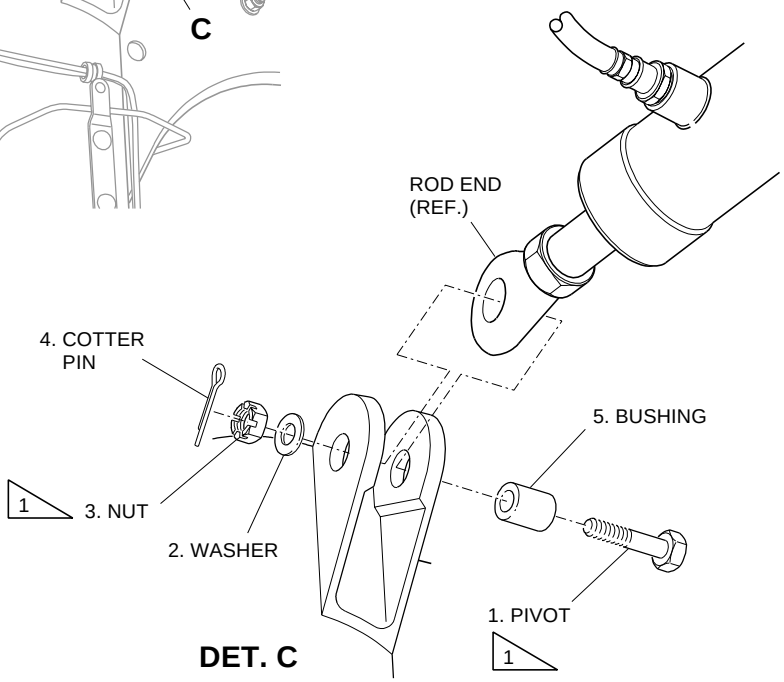


VIEW B



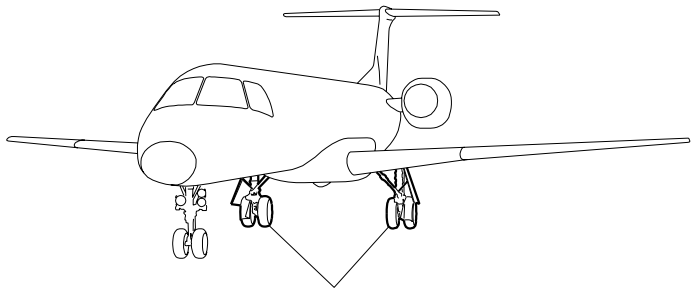
DET. C

1 APPLY SEALANT PR1826B2ALO.

EM145AMM320485C.DGN

EFFECTIVITY: ALL

Main Landing-Gear Actuator - Inspection/Check
Figure 603



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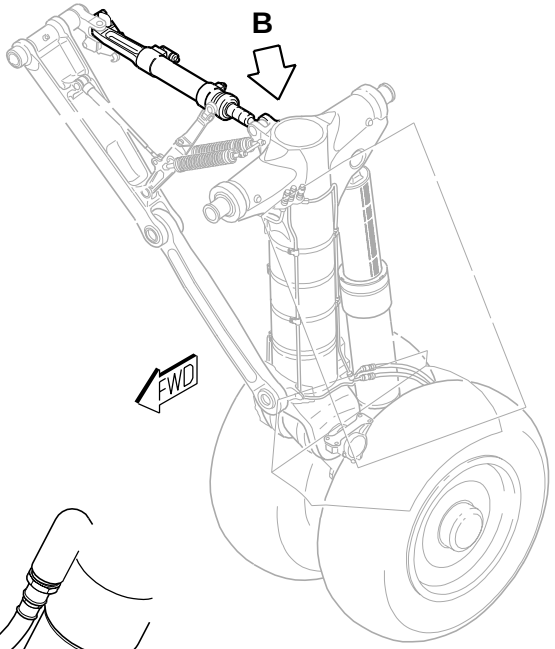

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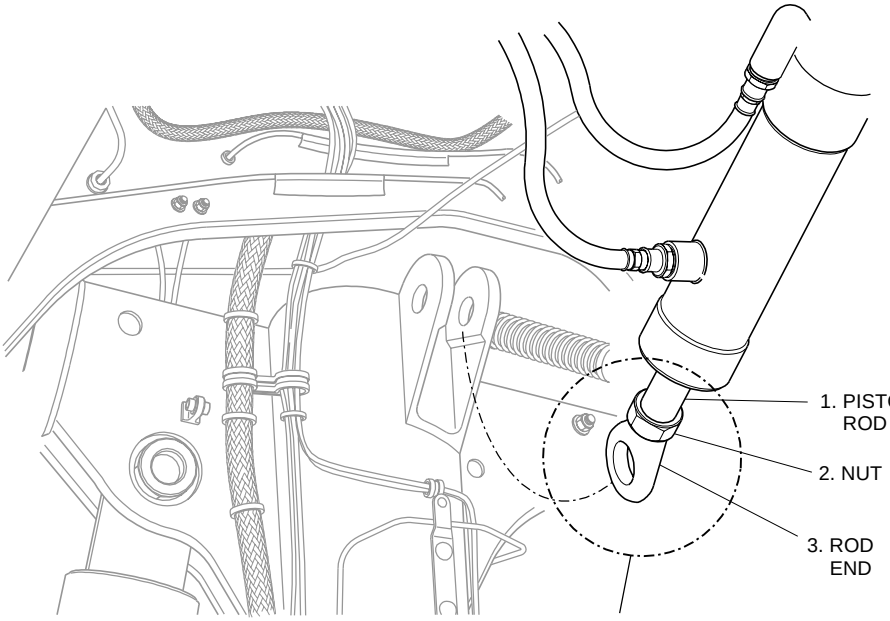

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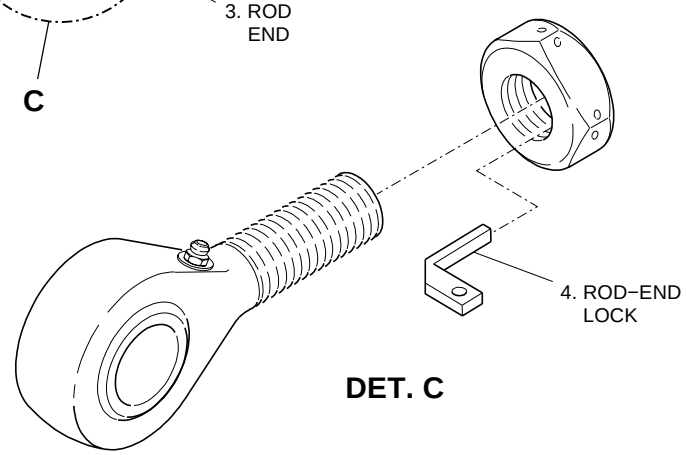

DET. C

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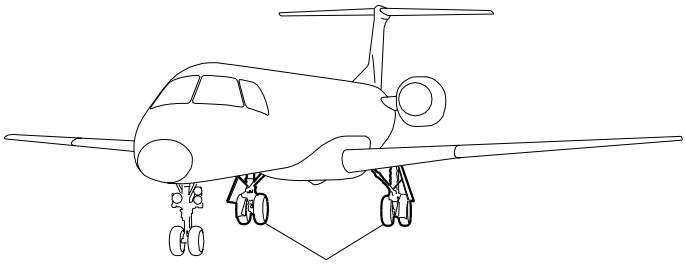
EFFECTIVITY: ALL

Main Landing-Gear Actuator - Inspection/Check
Figure 604



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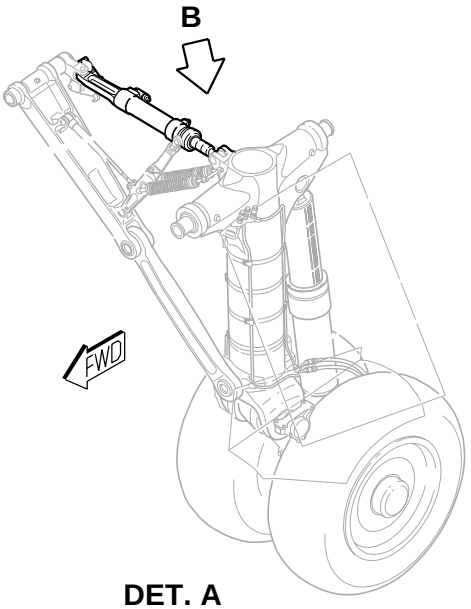

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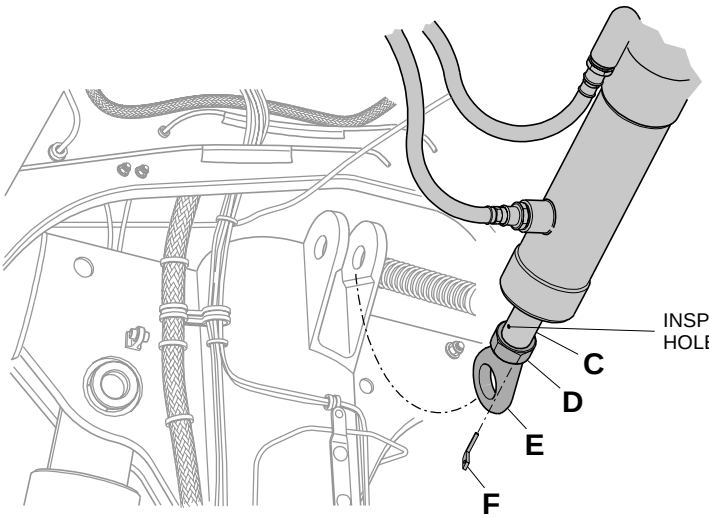
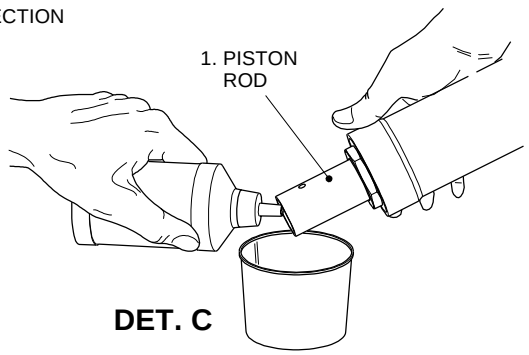
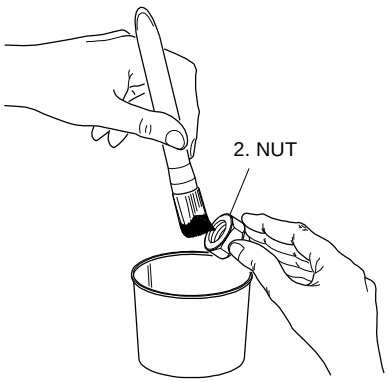


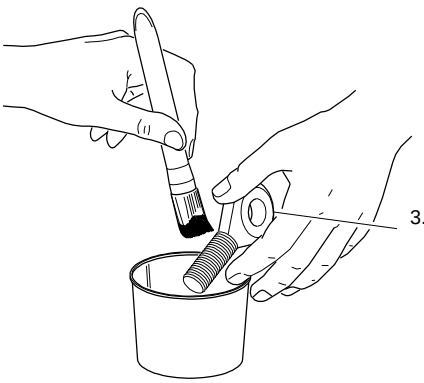
VIEW B



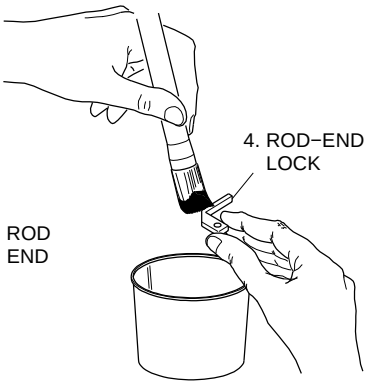
DET. C



DET. D



DET. E



DET. F

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