



## AIRCRAFT MAINTENANCE MANUAL

### ROD ASSEMBLY - MAINTENANCE PRACTICES

EFFECTIVITY: ALL

#### 1. General

- A. This section gives a typical procedure to disassemble and assemble rods on the aircraft.
- B. This section shows the procedure for one end of the rod. The procedure for the other end is equivalent.

## ROD ASSEMBLY - MAINTENANCE PRACTICES

EFFECTIVITY: ALL

2. Auxiliary Items

- A. Clean Lint-Free Cloth - Commercially available - To clean the components
- B. Safety Goggles - Commercially available - To protect the operator

3. Consumable Materials

- A. MEK - Methyl-Ethyl-Ketone - ASTM-D-740
- B. Corrosion-Inhibiting Compound (COR-BAN 27L) - MEP 09-075

4. Disassembly of Rods

- A. Mark the position of the fork rod end (1) and spherical bearing rod end (6) on the rod body (5) and the length of the rod with the rod ends to make the final adjustment easier.
- B. Remove the lockwire from the jam nut (2) and (7) if applicable.
- C. Loosen the jam nuts (2) and (7).
- D. Remove the fork rod end (1) and spherical bearing rod end (6) from the rod body (5).

**NOTE:** Mark the position of the jam nuts (2) and (7), grounding straps (3) and (8), and washers (4) and (9) to know how to install them back correctly.

5. Assembly of Rods

**WARNING: BE CAREFUL WHEN YOU USE THE METHYL-ETHYL-KETONE (MEK). PUT ON SAFETY GOGGLES, PROTECTIVE GLOVES AND CLOTHING. DO NOT BREATHE THE GAS. DO THE WORK IN AN AREA WHICH HAS A GOOD FLOW OF AIR. THE METHYL-ETHYL-KETONE (MEK) IS POISONOUS AND HIGHLY FLAMMABLE.**

- A. Clean the affected components with a clean cloth wet with solvent MEK (Methyl-Ethyl-Ketone - Spec. ASTM-D-740), or similar.
- B. Apply COR-BAN 27L (MEP 09-075) to the threads of the fork rod end (1) and spherical bearing rod end (6).
- C. Put the jam nuts (2) and (7), grounding straps (3) and (8), and washers (4) and (9) on the fork rod end (1) and spherical bearing rod end (6).

**CAUTION: MAKE SURE THAT TAB LOCK WASHER IS CORRECTLY POSITIONED IN ROD BODY SLOT.**

- D. Put the fork rod end (1) and spherical bearing rod end (6) on the rod body (5) and turn until it comes to the length and the position marked in the first step of the disassembly procedure.
- E. Put a pin with a diameter of 1.27 mm (0.05 in) into the rod inspection hole. The pin must hit the rod end and not go through. Refer to ([Figure 201](#)).

- F. Apply torque to the jam nuts (2) and (7) of the fork rod end (1) and spherical bearing rod end (6). Refer to [Table 201](#) and [Table 202](#). Make sure that tab lock washer is in the correct position in the rod body slot and that the locking tab is not damaged ([Figure 202](#)).
- G. Safety the jam nuts (2) and (7) if applicable.

Table 201 - TORQUES FOR ROD ENDS IN STEEL OR STAINLESS STEEL AND ROD BODY IN ALUMINUM ALLOY

THREAD	TORQUE (N.m)		TORQUE (lbf.in)	
	Minimum	Maximum	Minimum	Maximum
1/4 - 28	4.31	6.18	38.0	55.0
5/16 - 24	6.96	10.10	62.0	89.0
3/8 - 24	10.30	14.71	91.0	131.0
7/16 - 20	14.71	21.02	131.0	186.0
1/2 - 20	20.20	28.81	179.0	255.0
9/16 - 18	26.09	37.26	231.0	330.0
5/8 - 18	32.56	46.58	288.0	412.0
3/4 - 16	58.35	83.26	516.0	736.0
7/8 - 14	85.02	121.41	752.0	1074.0
1 - 12	107.97	154.26	956.0	1365.0

Table 202 - TORQUES FOR ROD ENDS IN ALUMINUM ALLOY AND ROD BODY IN ALUMINUM ALLOY

THREAD	TORQUE (N.m)		TORQUE (lbf.in)	
	Minimum	Maximum	Minimum	Maximum
1/4 - 28	1.96	2.75	18.0	25.0
5/16 - 24	3.92	5.59	34.0	49.0
3/8 - 24	6.77	9.71	60.0	86.0
7/16 - 20	7.35	10.59	65.0	94.0
1/2 - 20	11.47	16.38	102.0	145.0
9/16 - 18	15.98	22.85	142.0	203.0
5/8 - 18	22.46	32.07	199.0	284.0
3/4 - 16	28.44	38.83	251.0	359.0
7/8 - 14	38.83	55.41	343.0	490.0
1 - 12	49.33	70.41	436.0	623.0

NOTE: If the rod end thread is different from those tabulated above, contact EMBRAER Technical Support Department.

Table 203 - TORQUES FOR TERMINALS IN STEEL OR STAINLESS STEEL AND ROD BODY IN ALUMINUM ALLOY - TYPE 1

THREAD	TORQUE (N.m)		TORQUE (lbf.in)	
	Minimum	Maximum	Minimum	Maximum
1/4 - 28	4.3	6.2	38.0	55.0
5/16 - 24	7.0	10.1	62.0	89.0

**Table 203 - TORQUES FOR TERMINALS IN STEEL OR STAINLESS STEEL AND ROD BODY  
IN ALUMINUM ALLOY - TYPE 1 (Continued)**

<b>THREAD</b>	<b>TORQUE (N.m)</b>		<b>TORQUE (lbf.in)</b>	
	<b>Minimum</b>	<b>Maximum</b>	<b>Minimum</b>	<b>Maximum</b>
3/8 -24	10.3	14.8	91.0	131.0
7/16 - 20	14.8	21.1	161.0	187.0
1/2 - 20	20.2	28.9	179.0	256.0
9/16 - 18	26.1	37.3	231.0	330.0
5/8 - 18	32.6	46.6	288.0	412.0
3/4 - 16	58.3	83.2	516.0	736.0
7/8 - 14	85.0	121.4	752.0	1074.0
1 - 12	108.0	154.2	956.0	1365.0

**NOTE:** If the rod end thread is different from those tabulated above, contact EMBRAER Technical Support Department.

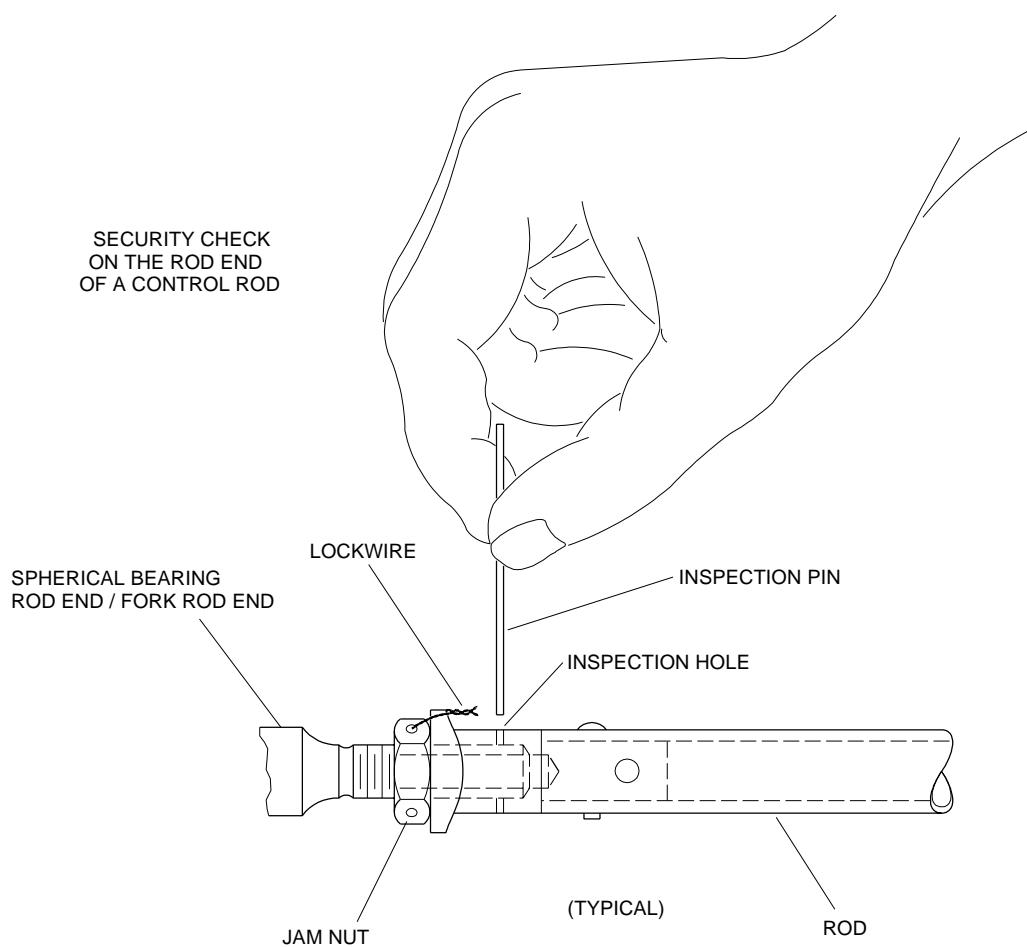
**Table 204 - TORQUES FOR TERMINALS AND ROD BODY IN STEEL OR STAINLESS STEEL ALLOYS - TYPE 2**

<b>THREAD</b>	<b>TORQUE (N.m)</b>		<b>TORQUE (lbf.in)</b>	
	<b>Minimum</b>	<b>Maximum</b>	<b>Minimum</b>	<b>Maximum</b>
1/4 - 28	4.3	6.2	38.0	55.0
5/16 - 24	7.0	10.1	62.0	89.0
3/8 - 24	10.3	14.8	91.0	131.0
7/16 - 20	30.5	33.9	270	300
1/2 - 20	32.8	46.3	290	410
9/16 - 18	54.2	67.8	480	600
5/8 - 18	74.6	88.1	660	780
3/4 - 16	146.9	169.5	1300	1500
7/8 - 14	169.5	203.4	1500	1800
1 - 12	248.6	372.8	2200	3300
1-8	248.6	339	2200	3000

**NOTE:**

- Values for tightening torque of rod assemblies with thread sizes above 1 inch shall be called out on the installation drawings
- If the rod end thread is different from those tabulated above, contact EMBRAER Technical Support Department.

**EFFECTIVITY: ALL**  
 Rods - Disassembly/Assembly  
 Figure 201

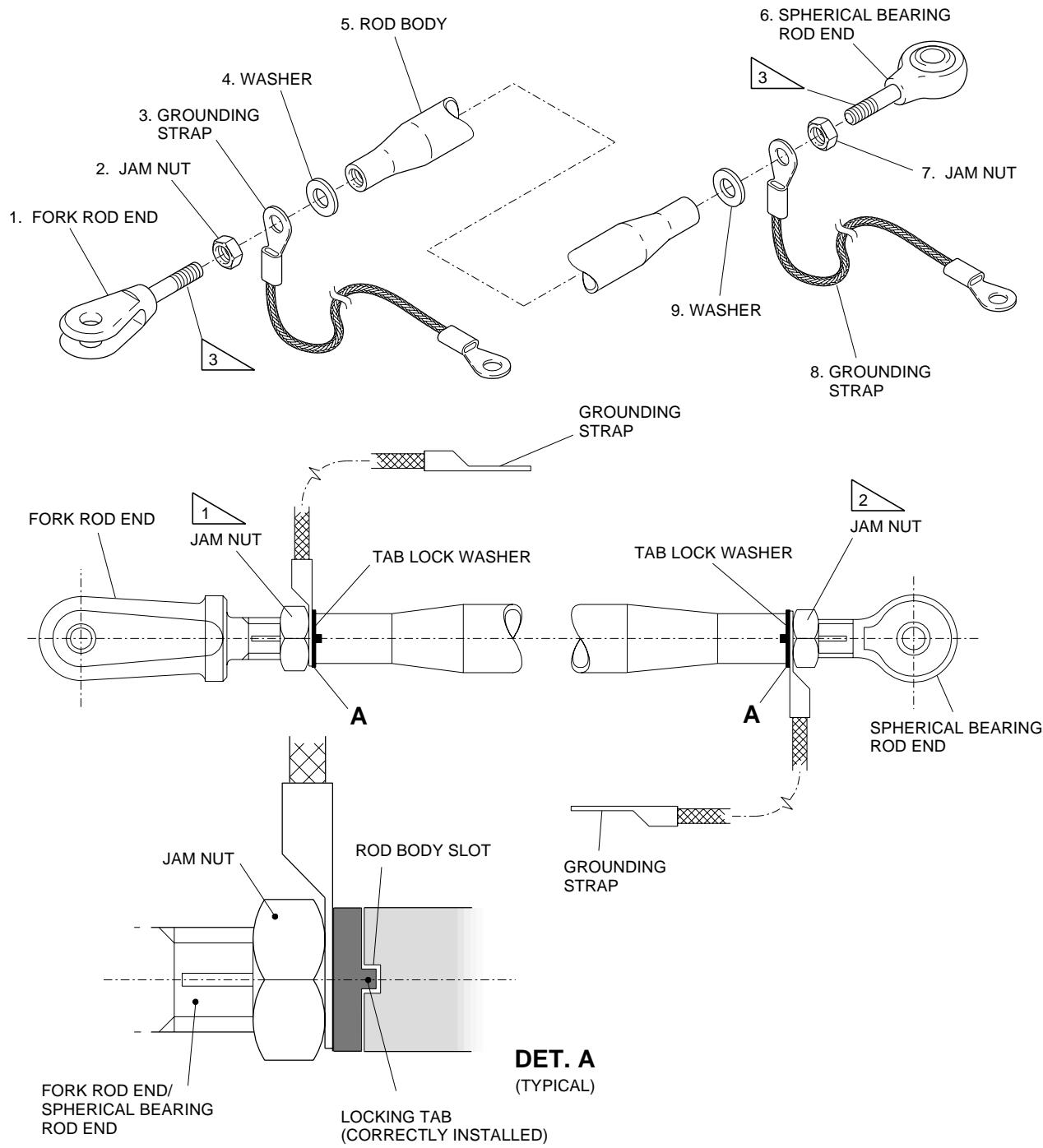


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**EFFECTIVITY: ALL**

Rods - Disassembly/Assembly

Figure 202



**1** REFER TO TABLES 201 AND 202 FOR TORQUE VALUES

**2** REFER TO TABLES 201 AND 202 FOR TORQUE VALUES

**3** APPLY COR-BAN 27L TO SPHERICAL BEARING ROD END AND FORK ROD END BEFORE INSTALLATION

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