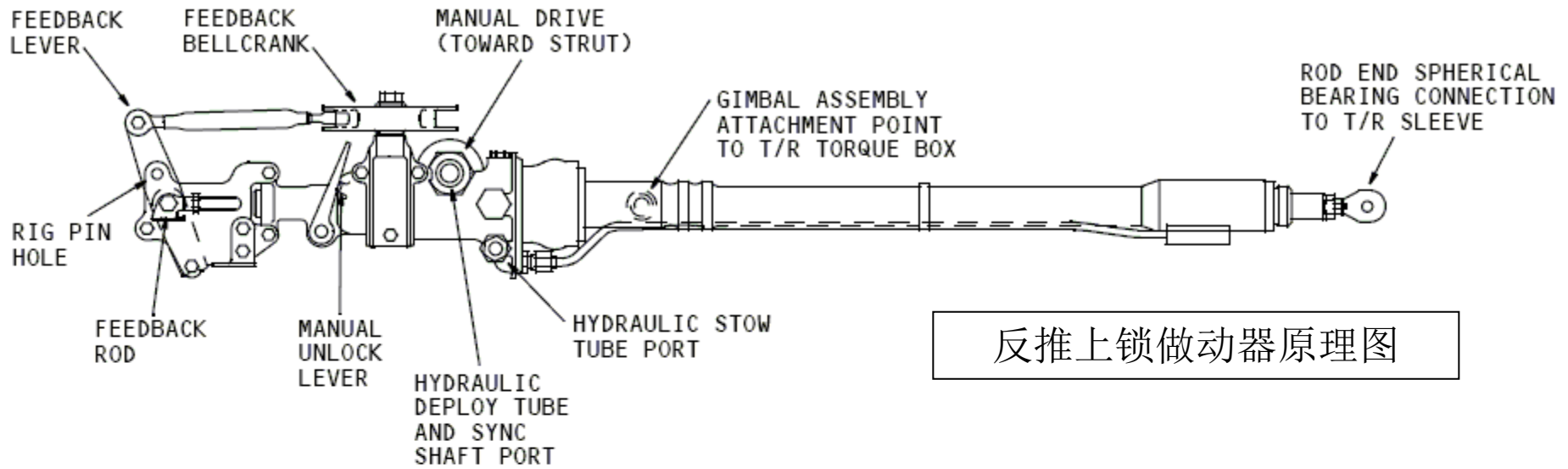
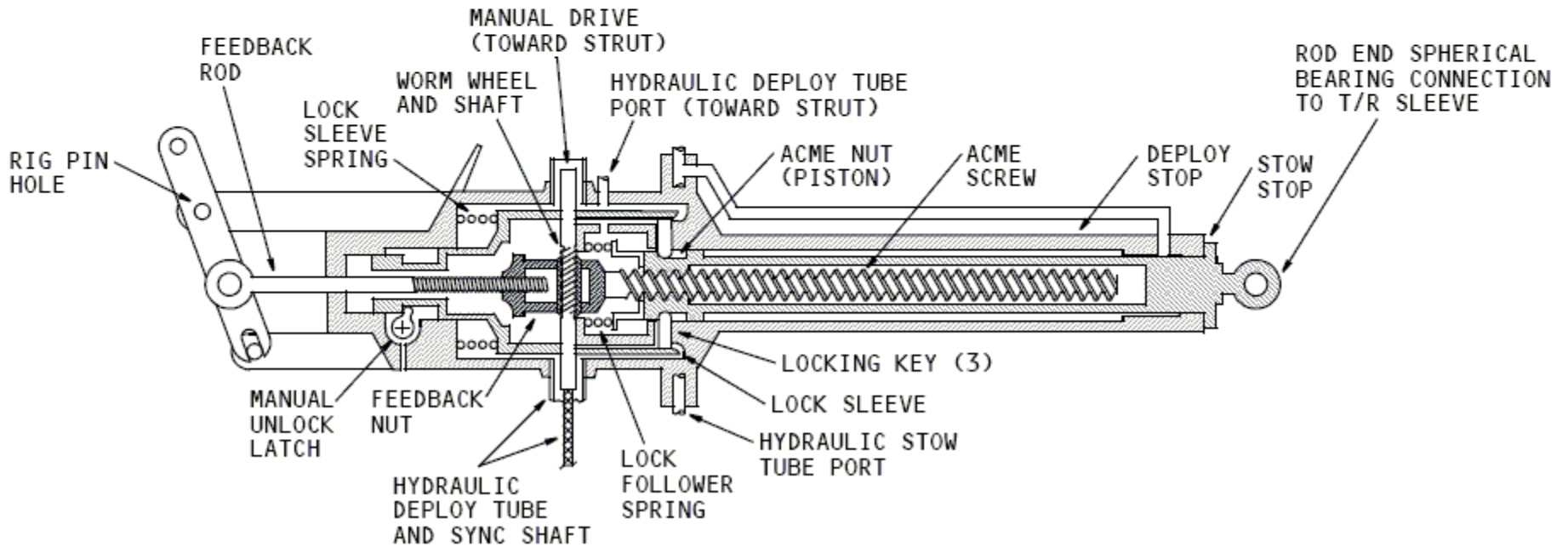


反推液压做动器维护教材

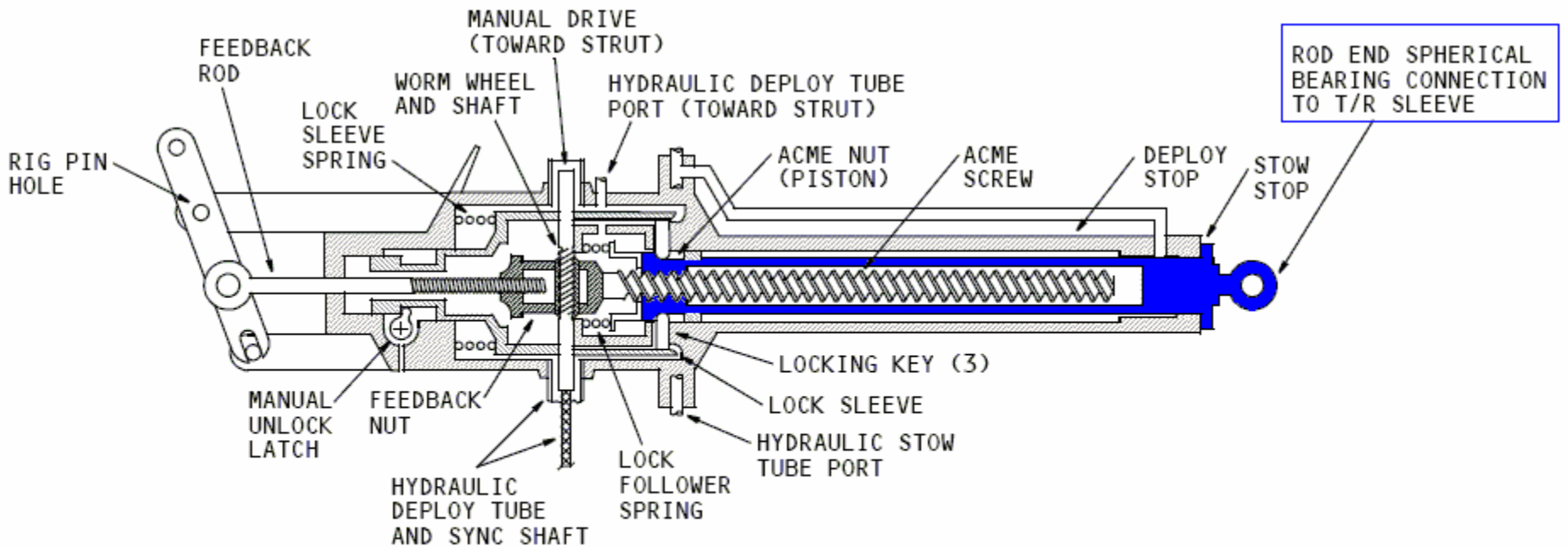
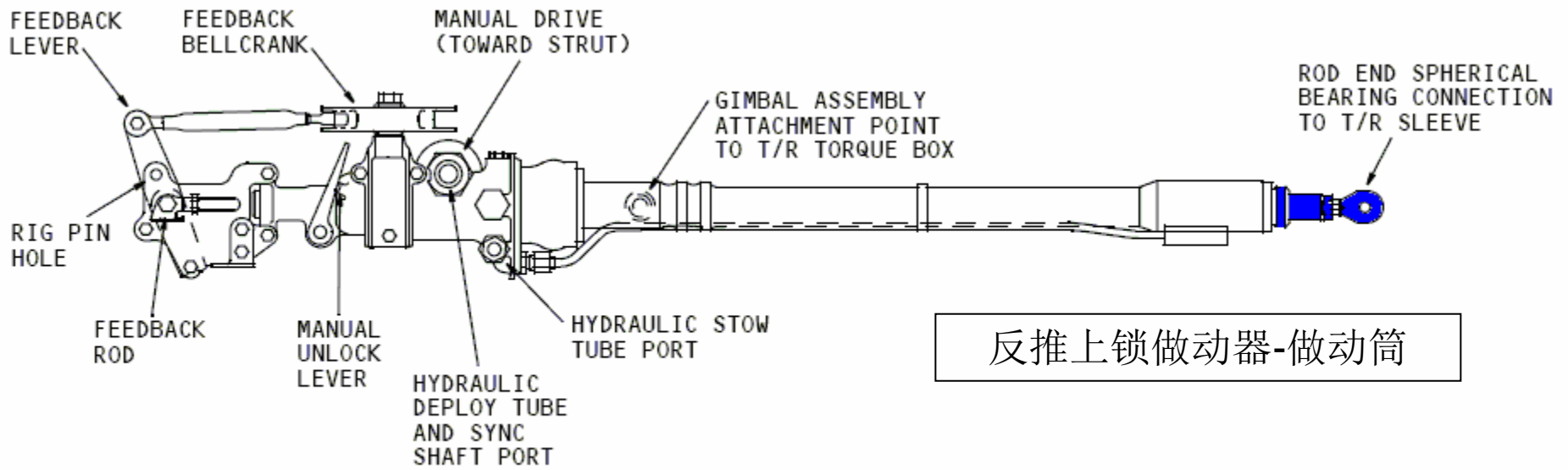
反推液压做动器功能介绍



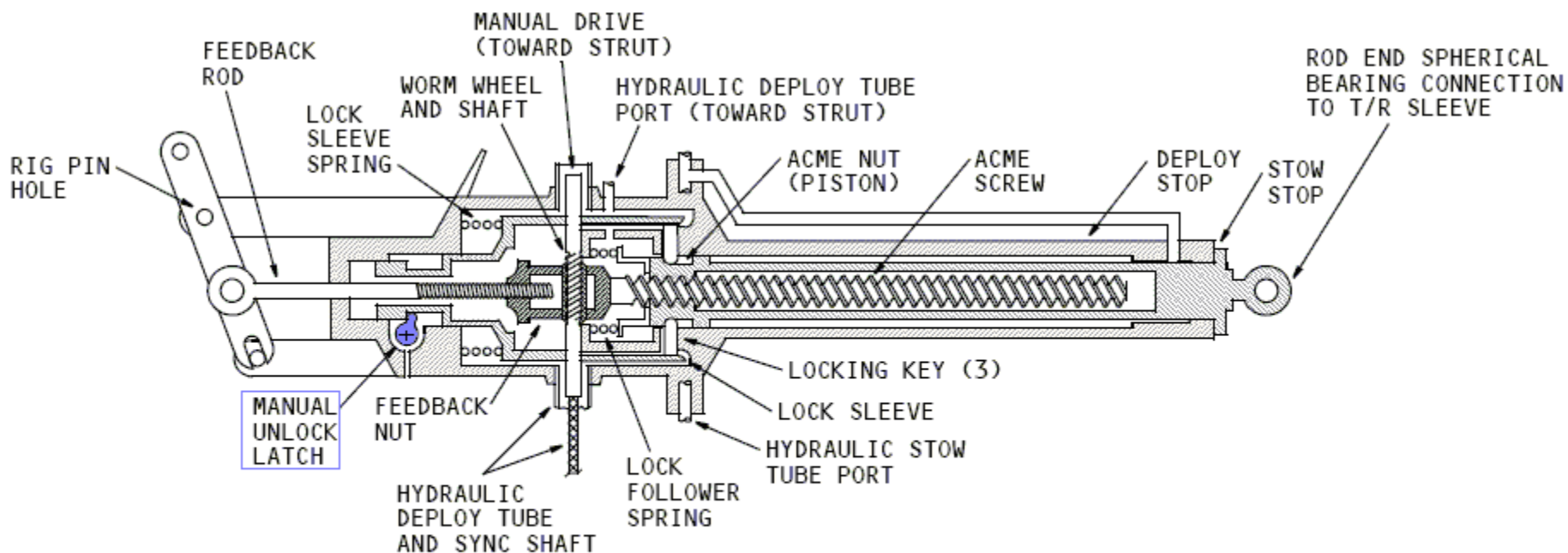
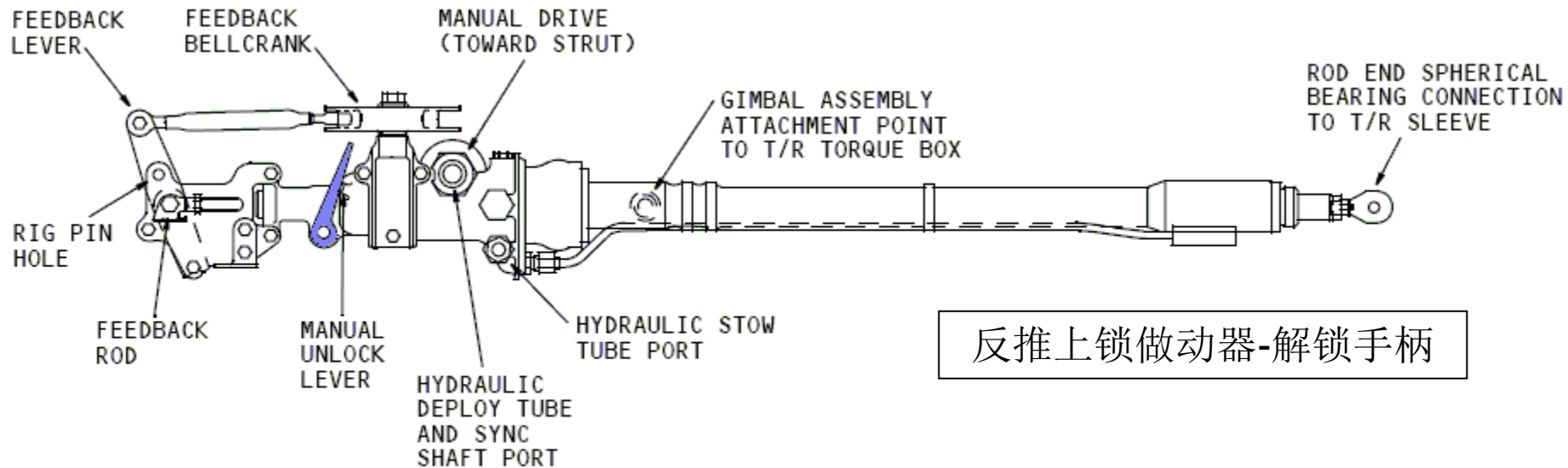
反推上锁做动器原理图



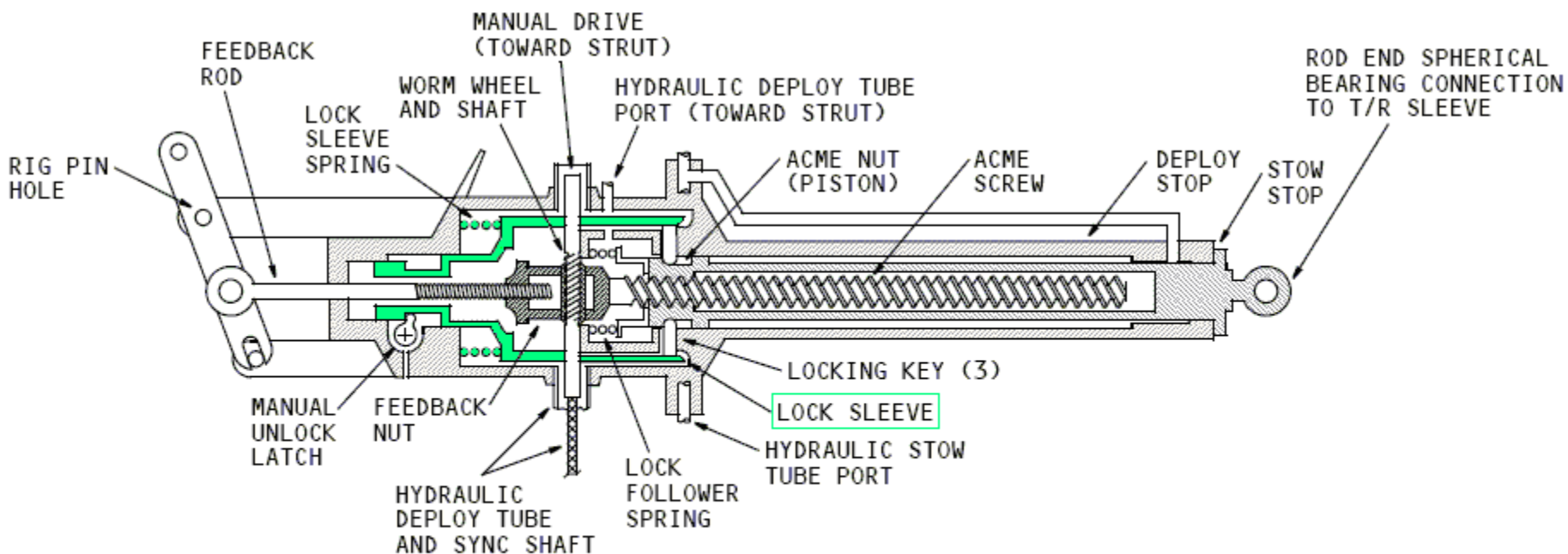
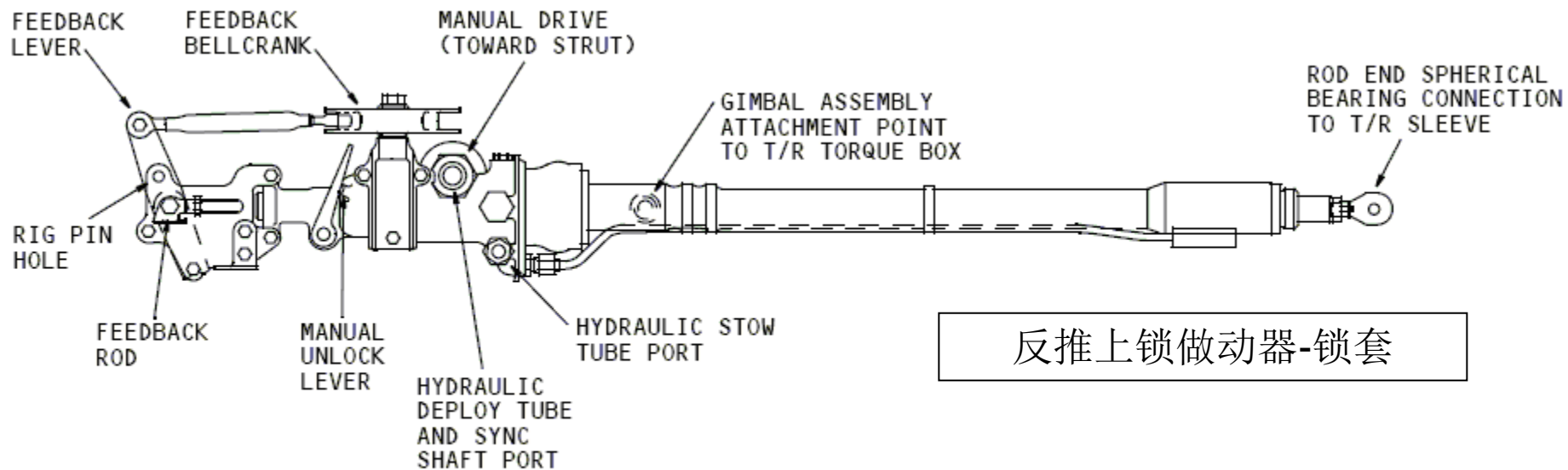
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



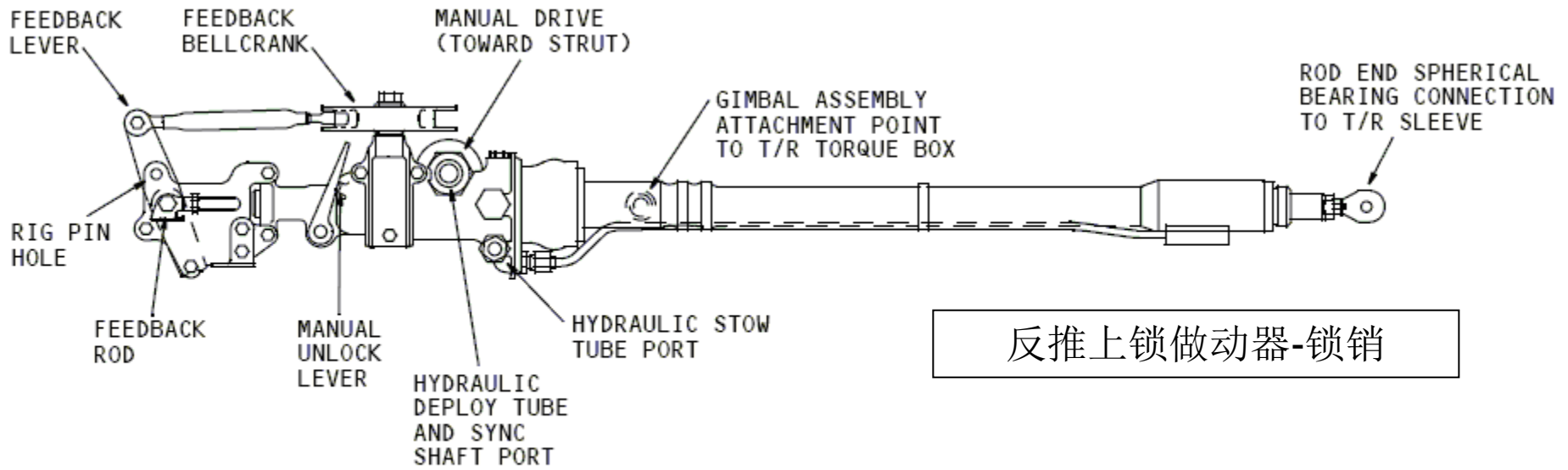
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



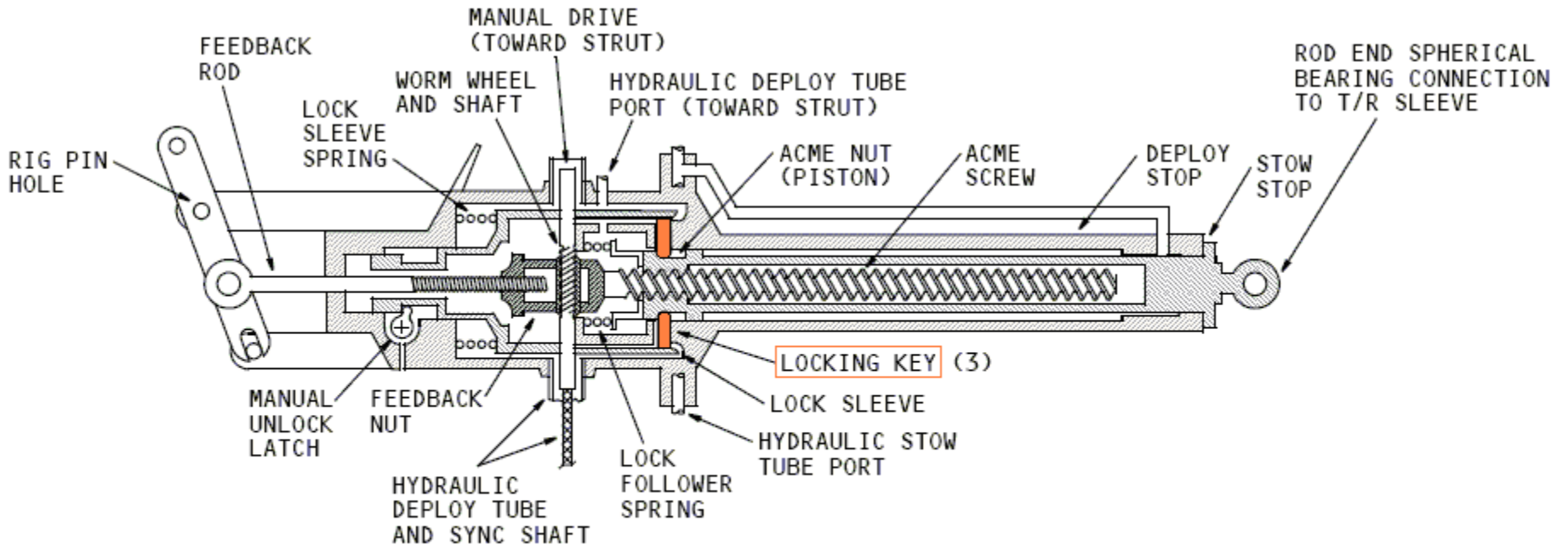
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



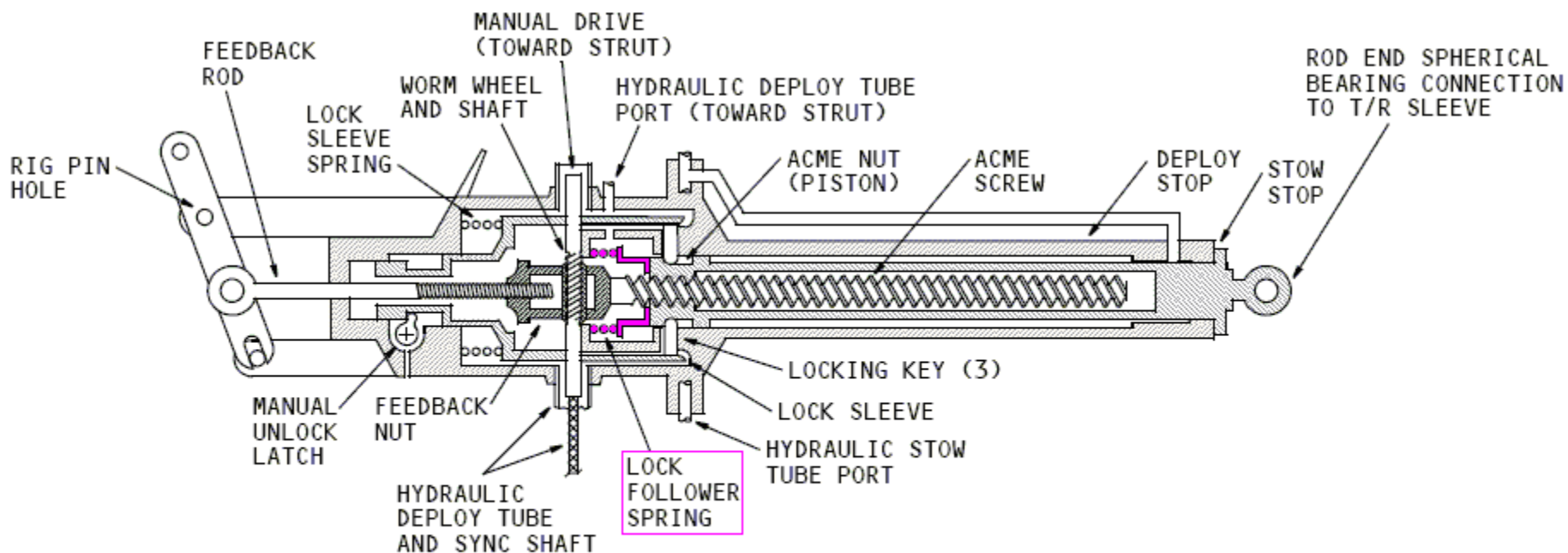
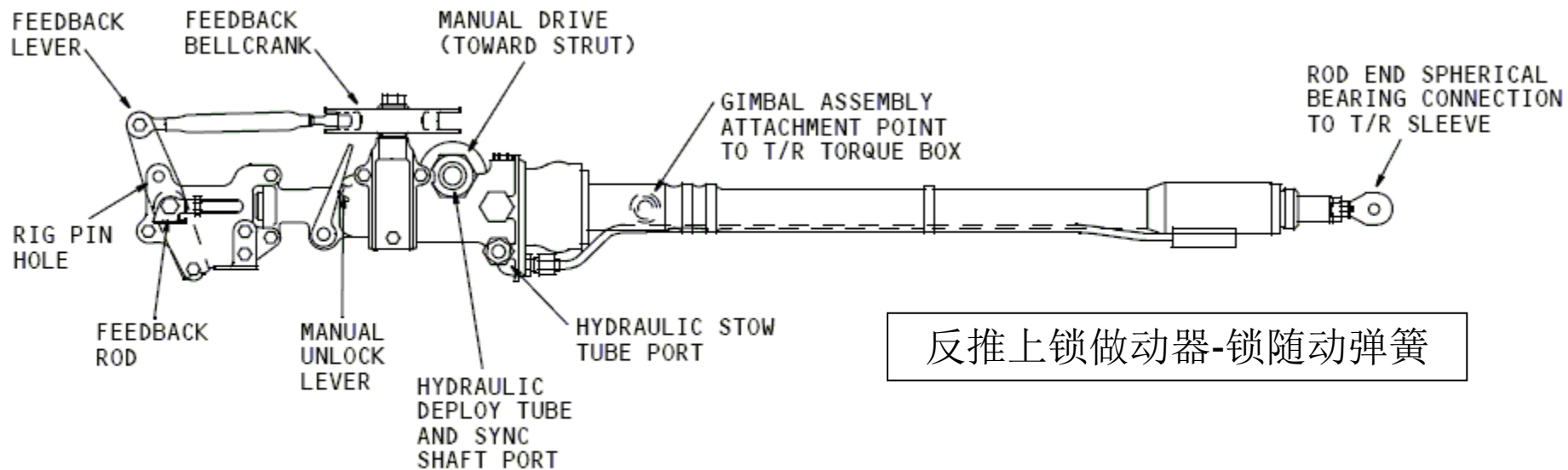
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



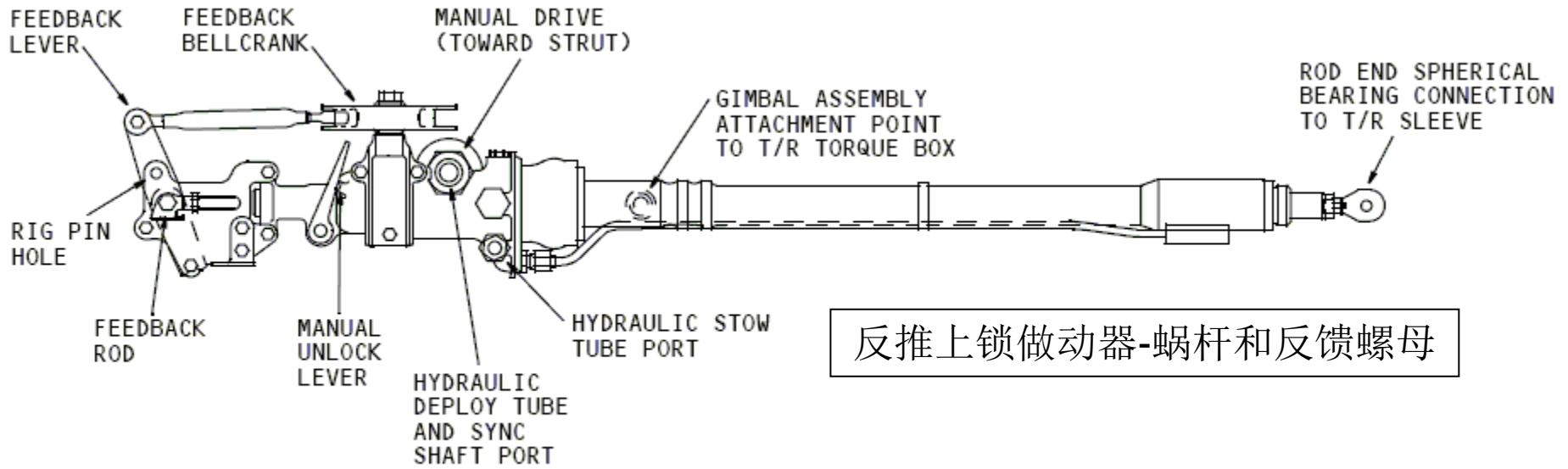
反推上锁做动器-锁销



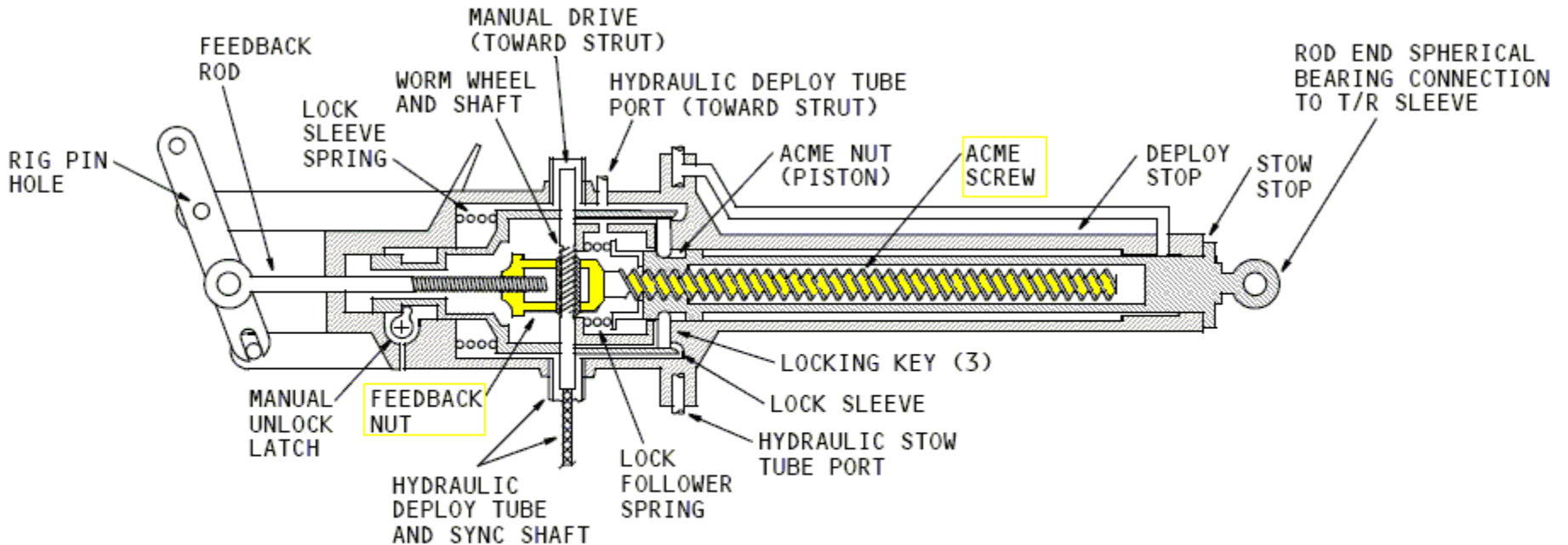
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



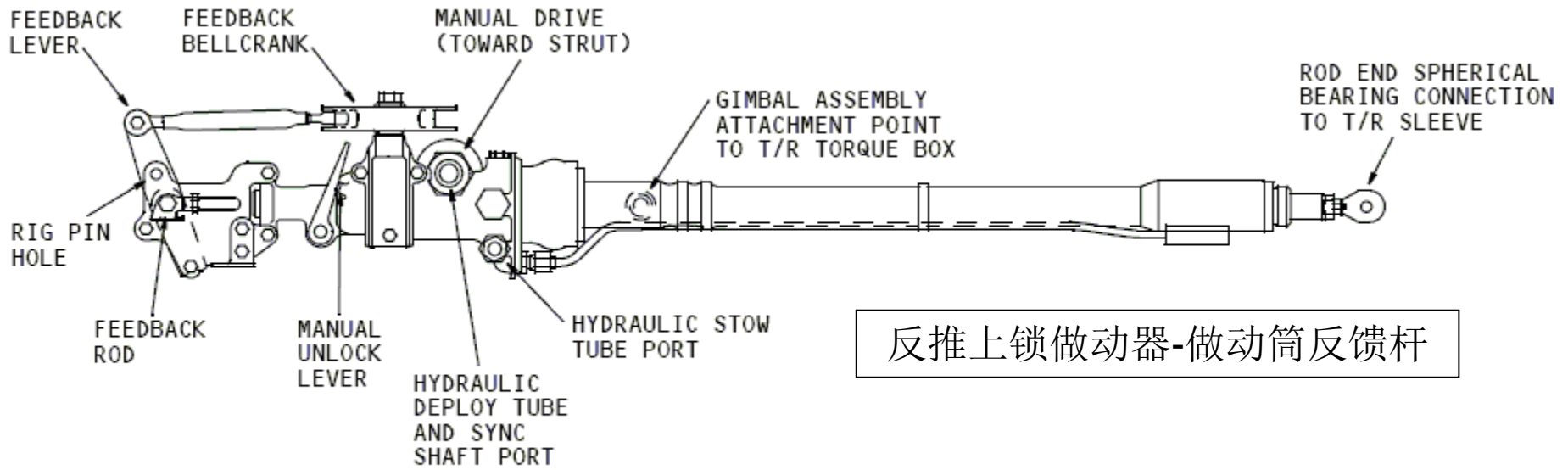
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



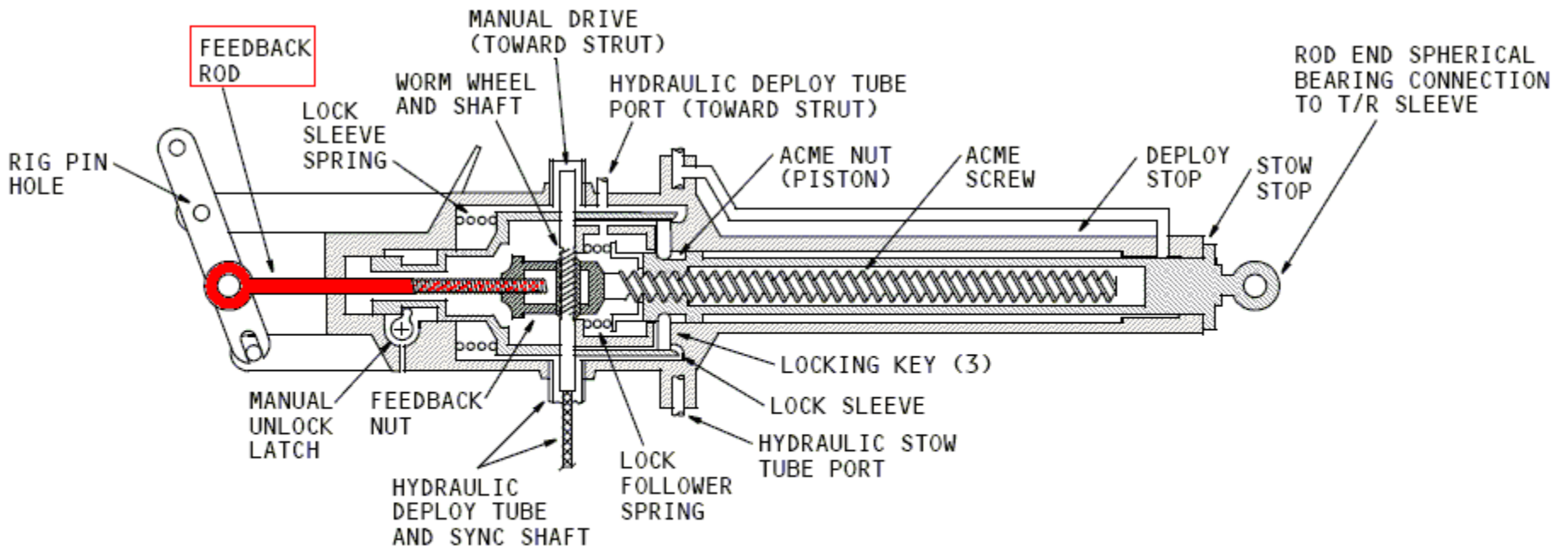
反推上锁做动器-蜗杆和反馈螺母



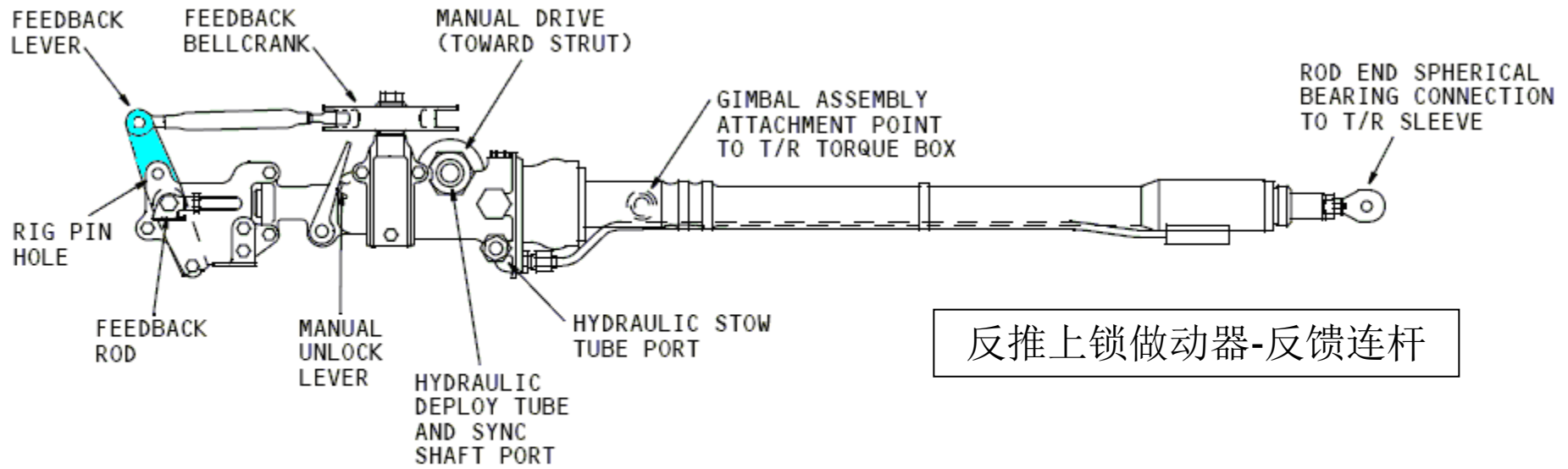
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



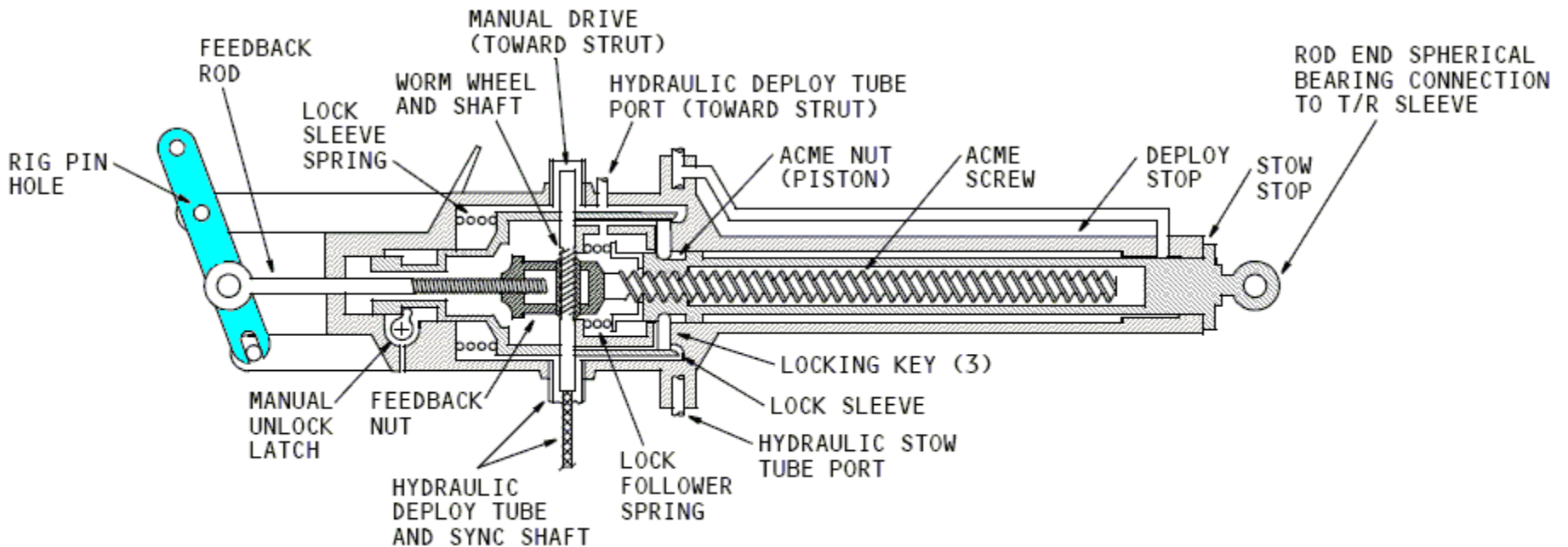
反推上锁做动器-做动筒反馈杆



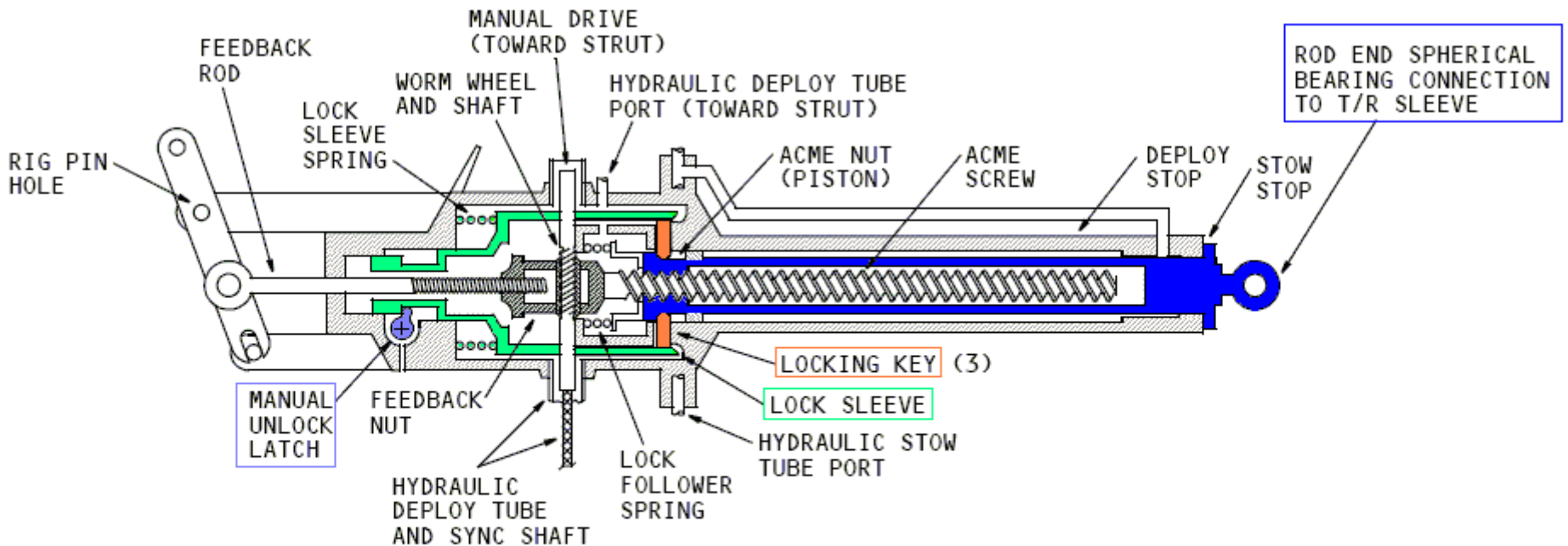
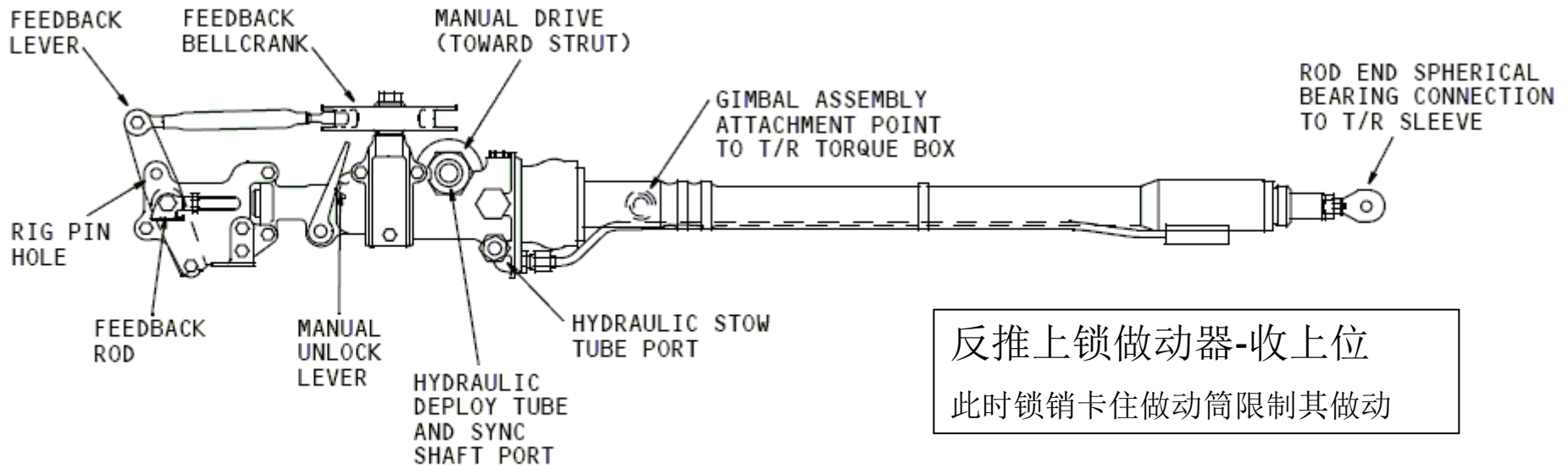
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



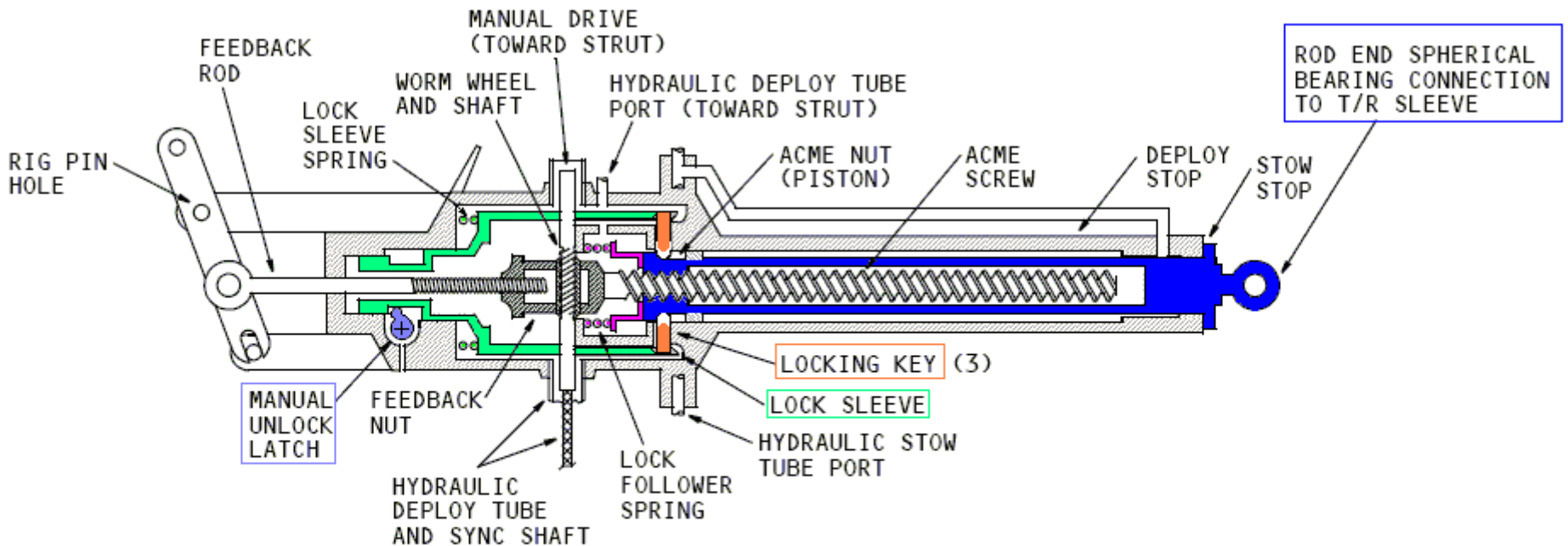
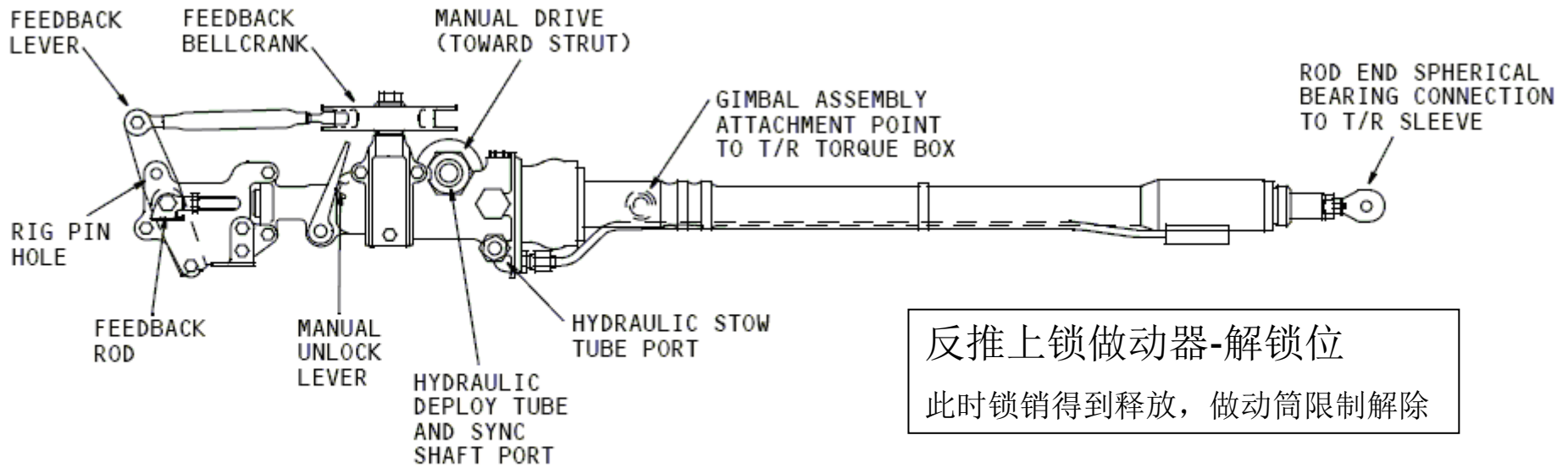
反推上锁做动器-反馈连杆



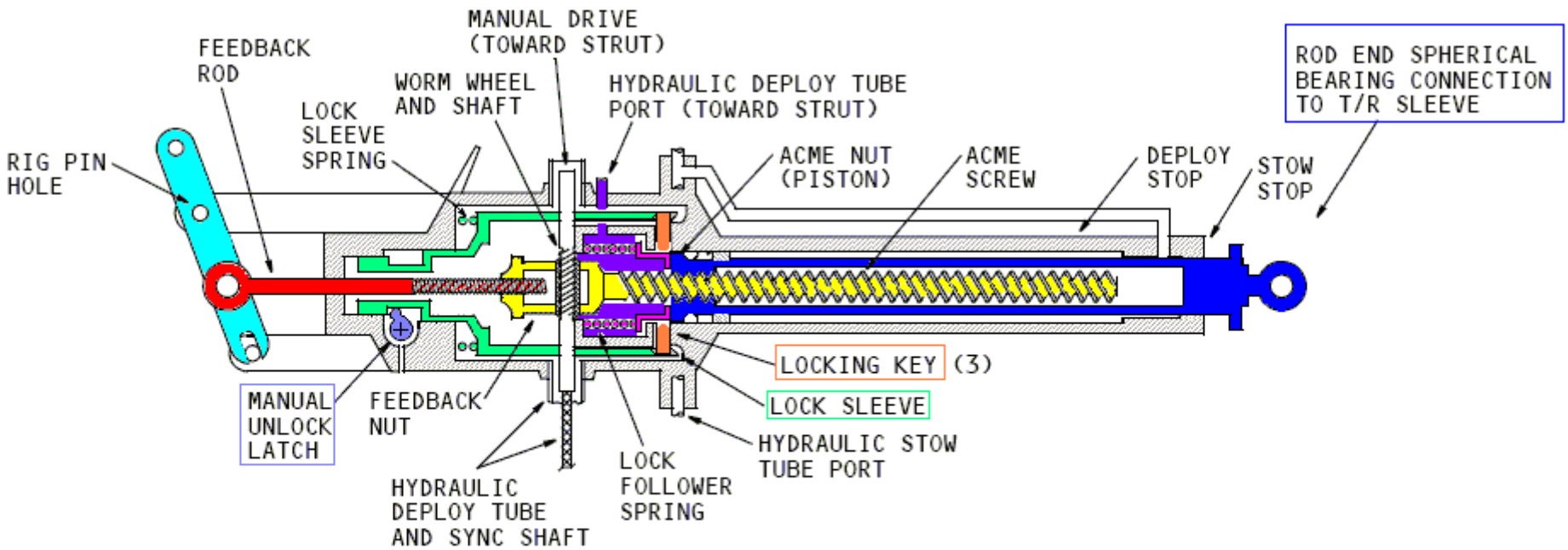
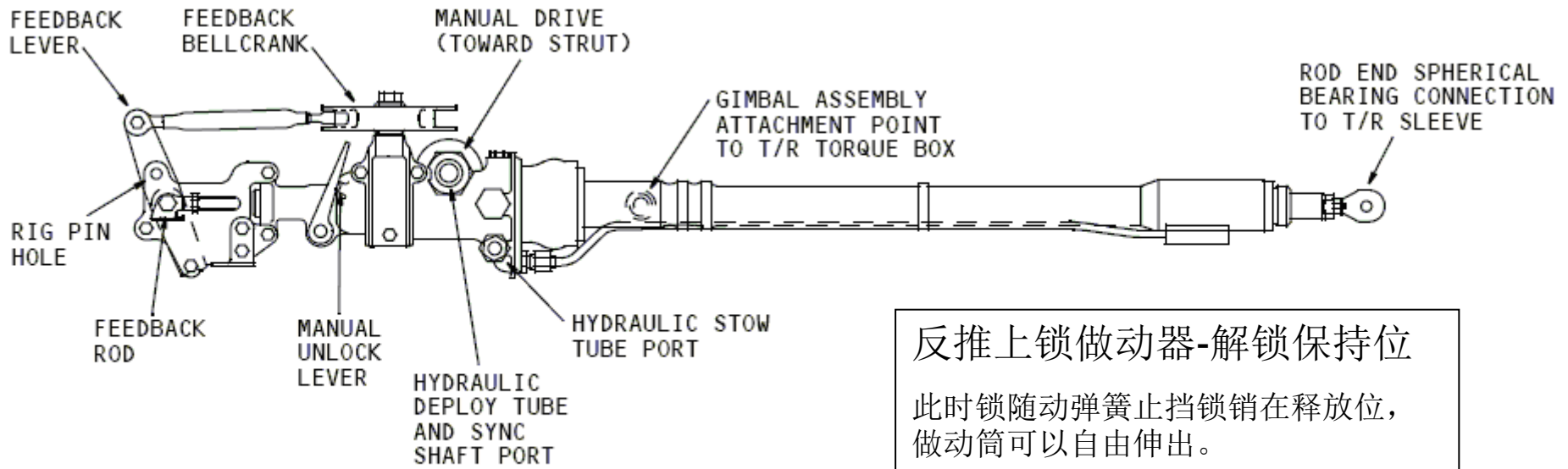
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



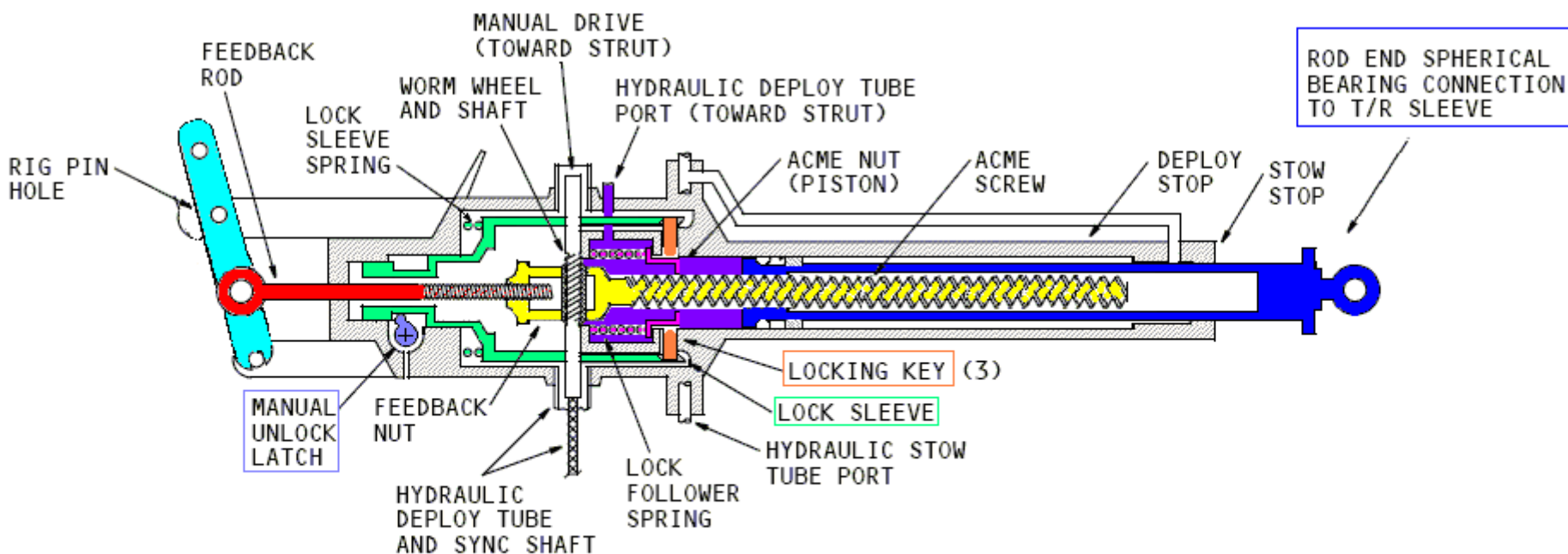
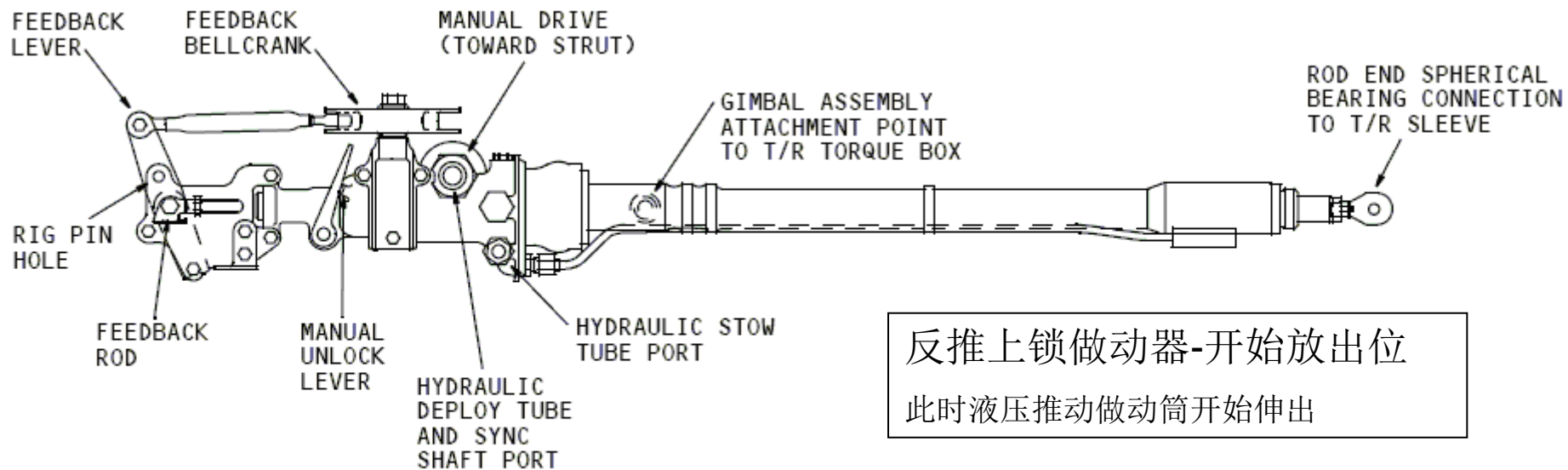
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



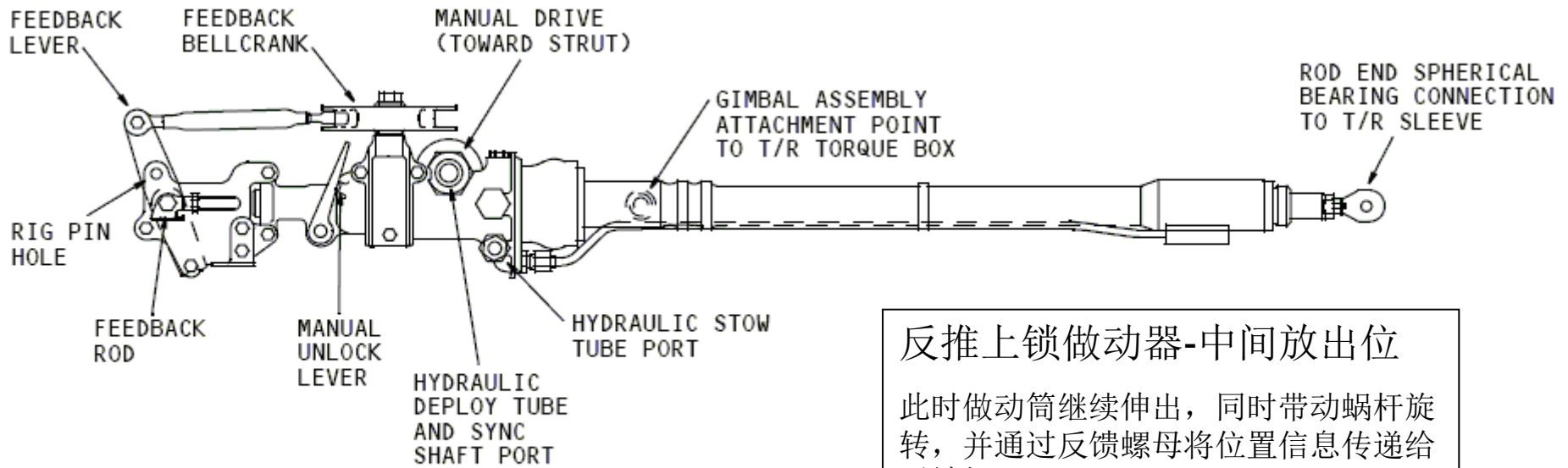
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



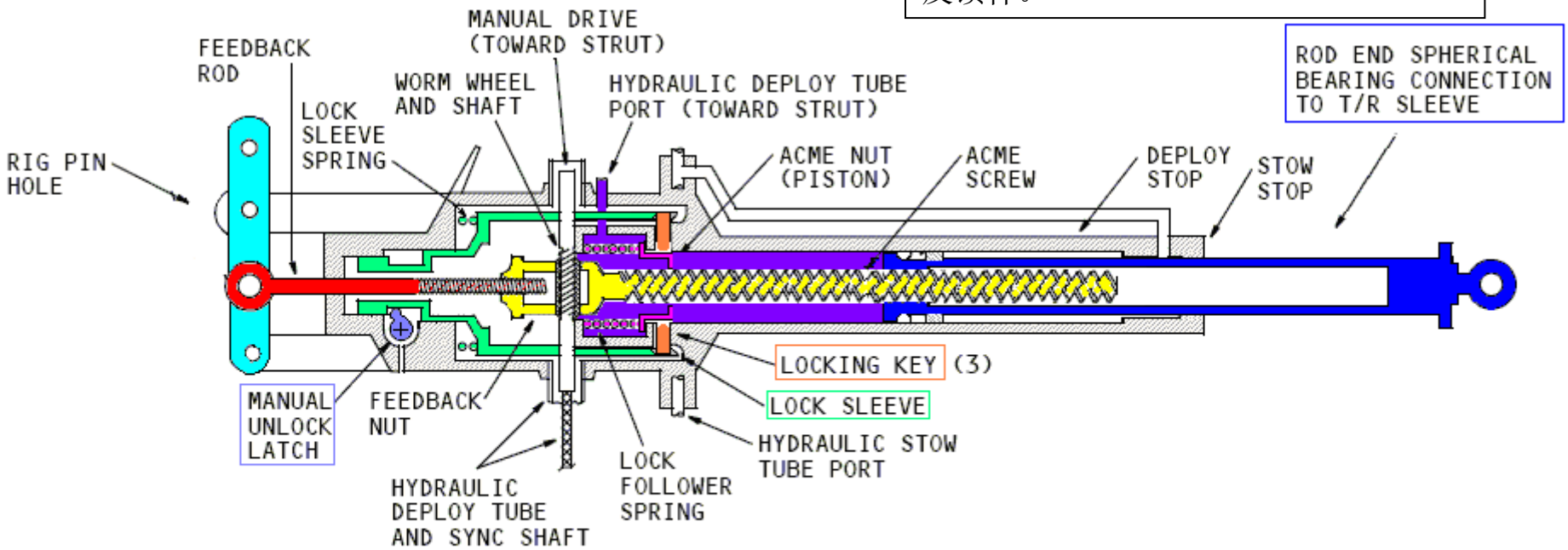
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



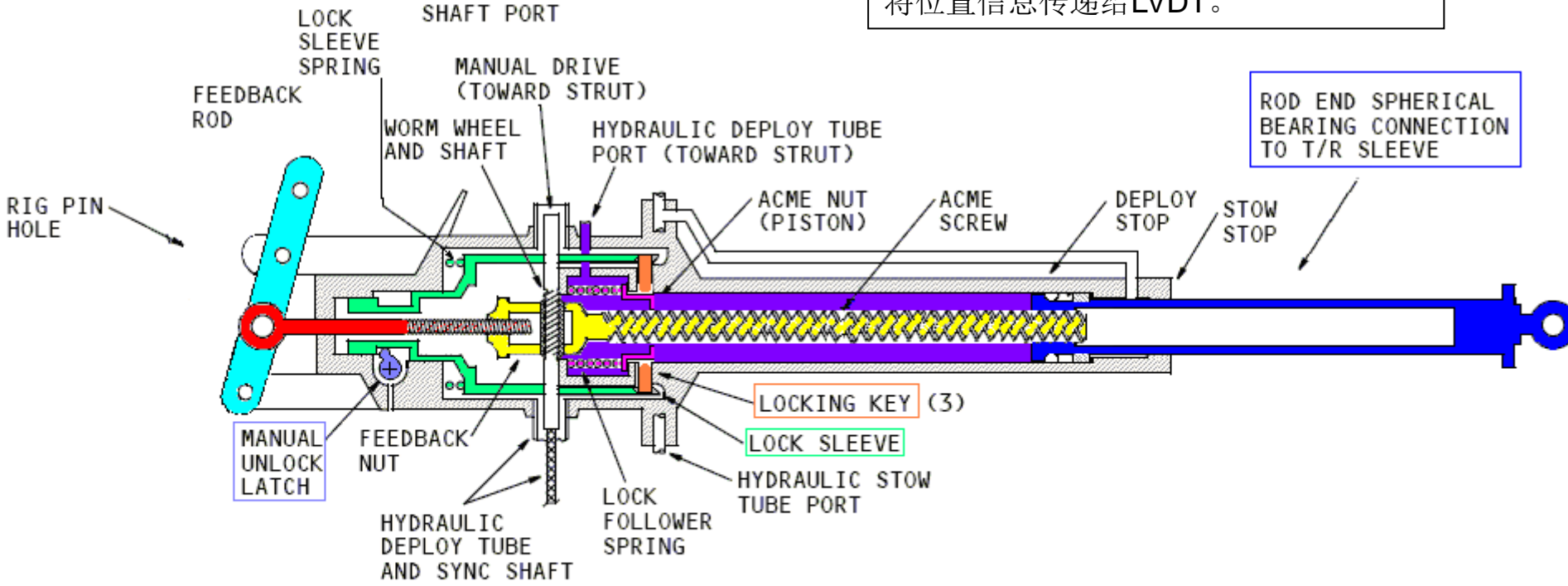
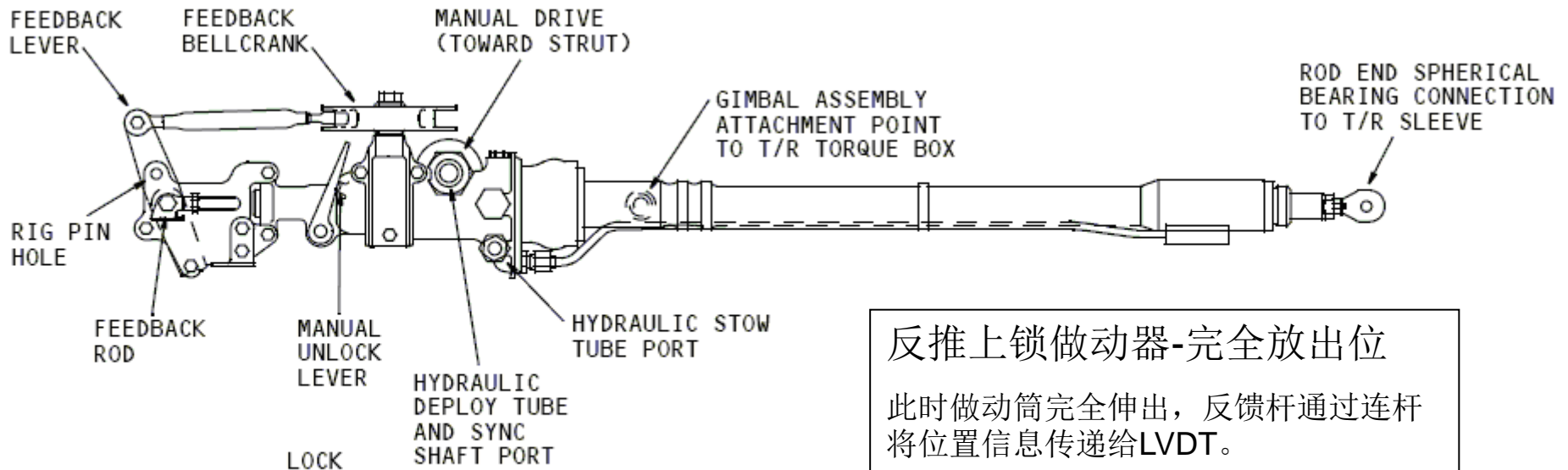
THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



反推上锁做动器-中间放出位
 此时做动筒继续伸出，同时带动蜗杆旋转，并通过反馈螺母将位置信息传递给反馈杆。



THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR

反推液压做动器安装注意事项

5. Upper Locking Hydraulic Actuator Installation(Figure 401)

I. Install the Upper Locking Actuator

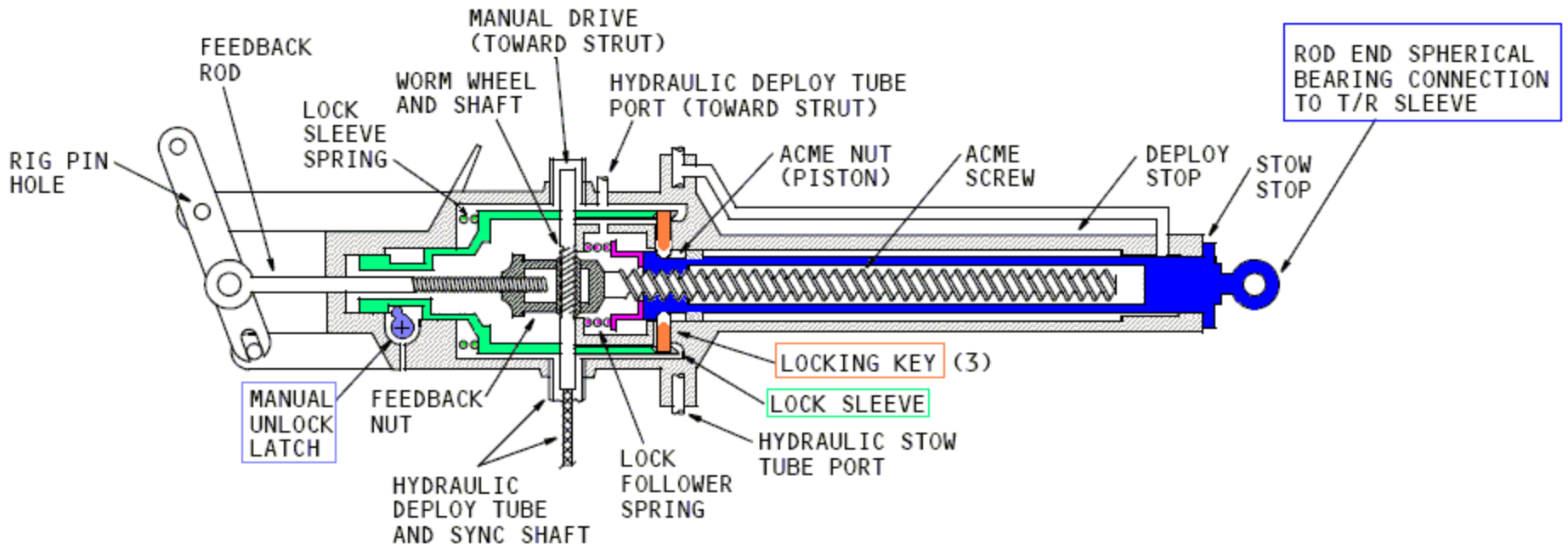
CAUTION: DO NOT LET THE ROD END OF THE UPPER LOCKING ACTUATOR TURN AFTER YOU RELEASE THE ACTUATOR LOCK. IF THE ROD END TURNS, IT CAN AFFECT THE RIGGING OF THE HYDRAULIC ACTUATOR.

NOTE: Do not let the rod end turn when you extend it manually. Make sure that you hold the rod end when you extend the actuator manually. Do not use hydraulic power to extend the rod end.

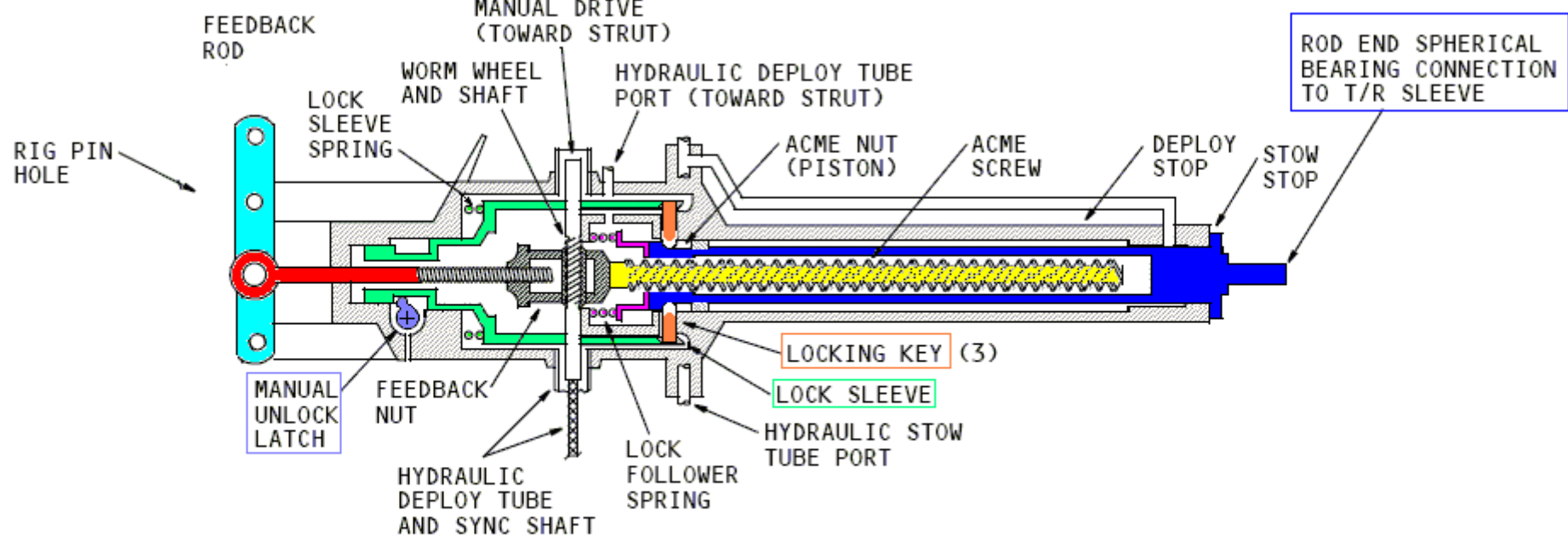
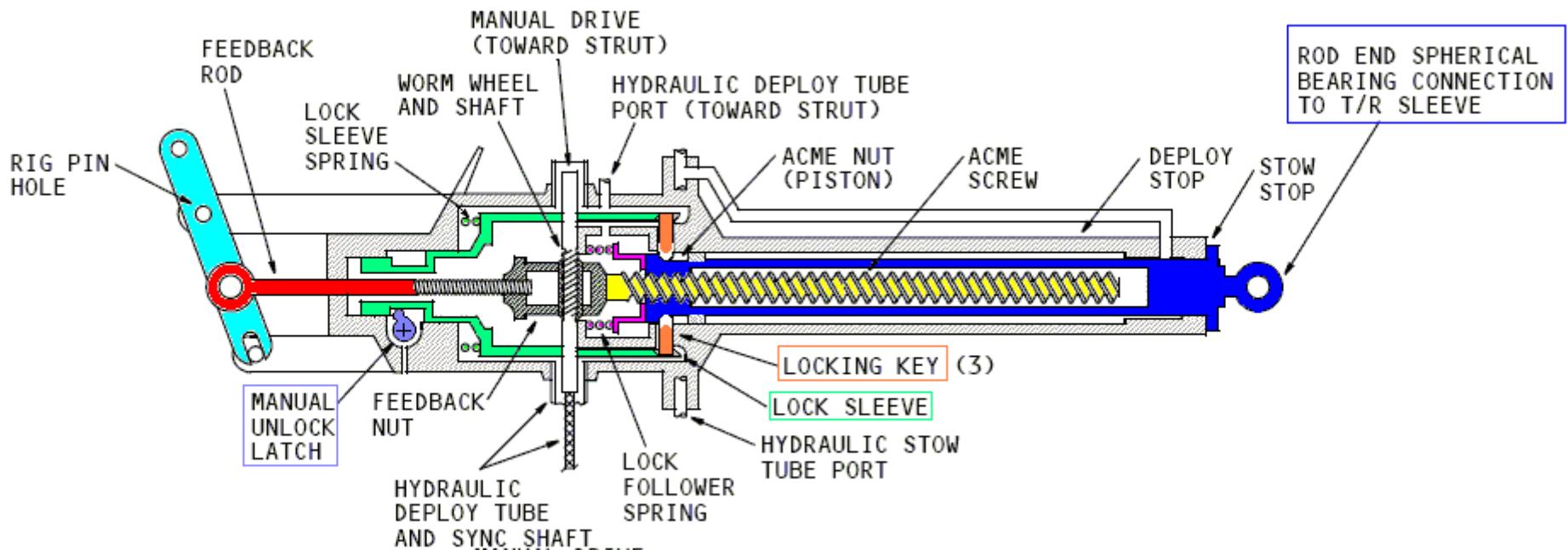
依据AMM进行安装时，手册第一步就列有**CAUTION**说明：

在人工解锁后禁止转动杆端，一旦杆端发生转动会影响做动器装配。

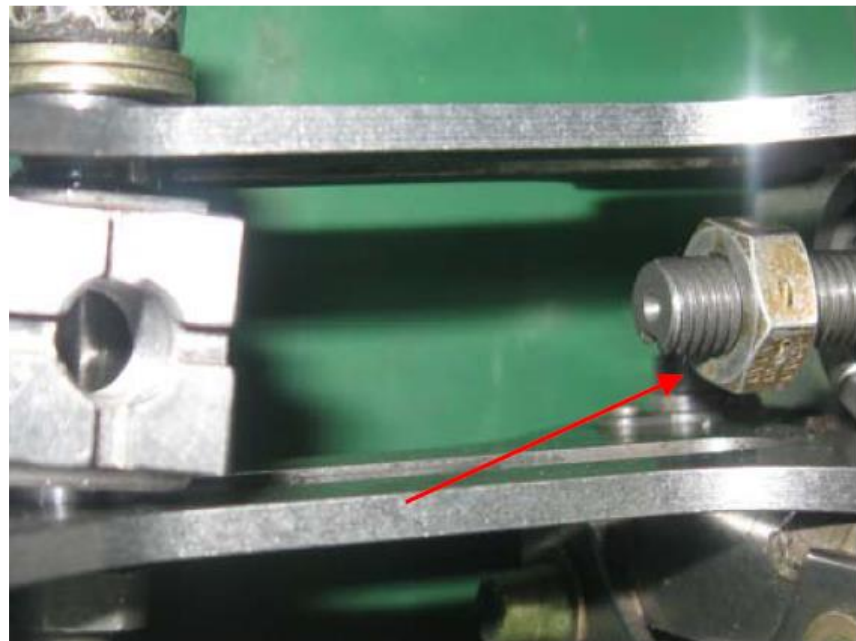
转动杆端会影响做动器装配的原因在于，做动筒的转动带动了蜗杆转动，蜗杆带动反馈螺母转动，反馈螺母的转动使反馈杆的位移，最终导致LVDT信号超出正常范围。



THRUST REVERSER - HYDRAULIC ACTUATORS - FUNCTIONAL DESCRIPTION - LOCKING ACTUATOR



反推液压做动器因非正常安装和使用造成的损坏



(11) To correctly rig the upper sync shaft between the upper locking actuator and the middle actuator, do this step:

- (a) Do the referenced tasks to remove and re-install the upper sync shaft that you temporarily installed.
 - 1) Do this task: Sync Shaft Removal, TASK 78-31-04-000-801-F00.
 - 2) Do this task: Sync Shaft Installation, TASK 78-31-04-400-801-F00.

(14) Do this task: Thrust Reverser Normal Operation Test, TASK 78-31-00-700-801-F00.

- (a) Operate the thrust reverser through the deploy and stow cycles until the sleeves move smoothly.
- (b) Examine the thrust reverser area for hydraulic fluid leaks.
 - 1) If you find leaks, do this task: Hydraulic System External Leakage Check, TASK 29-00-00-790-801.

(15) Do this task: EEC TEST, TASK 73-21-00-700-804-F00.

NOTE: This check will make sure that the electrical connections for the LVDT's are correct.

- (a) Make sure that no LVDT maintenance messages show.
 - 1) If a maintenance message shows, do the applicable fault isolation task in the Fault Isolation Manual for that maintenance message.
 - 2) If no maintenance messages show, the electrical connections for the LVDT are correct.

依据手册执行做动器安装后还要进行：

1.同步锁校装工作

该工作需要将同步轴进行重新拆装。

2.反推正常收放操作

该工作检查反推是否工作顺畅有无油液泄漏

3.EEC测试

该工作主要是检查LVDT信号范围是否正常

这3项工作在反推做动器安装完成后非常重要尤其是EEC测试工作，通过LVDT的反馈信息可以对做动器工作情况进行有效的监控，便于及时发现问题。

反推液压做动器维护总结

反推上锁做动器有其自身设计特点，通过对其工作原理的了解，需要我们在施工中注意警示信息，避免安装中的不规范行为，给做动器正常工作带来影响。

工作前：

对施工步骤充分了解；准备好航材工具；

工作中：

严格按照手册进行施工；注意拆装警示事项；注意测试工作

工作后：

监控拆装后临近航班运行情况，关注反推故障，发现问题及时排除。