

AC-02a

MAINTENANCE MECHANIC TRAINING

SKILL CHECK GUIDE

Duty AC: Rotary Actuators
AC-02a: Rebuild Rotary Actuator

Issued 01/01/99

Rationale

This Skill Development Guide provides the knowledge a Learner needs to rebuild a rotary actuator. The Learner must be able to disassemble, clean and inspect the actuators components, and reassemble the rotary actuator.

Skill Check Set-Up

Designate a rotary actuator that needs to be rebuilt. Check to ensure that the parts required for rebuilding the rotary actuator are in stock.

Observe as the Learner reassembles the actuator. Check to ensure that all defective parts are replaced. Loctite 242 is applied to the threads of the end cap screws and the nuts are torqued to 4550 inch-pounds. The Teflon abutment seal must be cut diagonally on a 45-degree angle. The bushing in both ends must be machined to match the wingshaft diameter, with a clearance of 0.001 to 0.003 inch. All safe practices must be demonstrated.

Provide the tools, materials, and resources needed to demonstrate the task.

What The Learner Will Need

This section contains the safety information, tools, and resources you will need before rebuilding a rotary actuator.



- Follow all Caterpillar facility safety standards when performing this task.
- Wear heavy industrial gloves for protection against the hazards associated with the cleaning solvents.
- An explosion hazard exists with cleaning solvents. Smoking is not permitted in the cleaning area.
- Know the location of the MSDS for the cleaning solutions.
- Solvents must be disposed of according to the HAZMAT regulations.



- hammer and punch
- torque wrench (4550 inch-pounds)
- Maintenance Mechanic hand tools
- Loctite 242



- Hyd-ro-ac Overhaul Instructions & Parts List for Standard Models



Skill Check

Upon determining a need to rebuild a rotary actuator, rebuild a rotary actuator.

Needs
Mastered Practice

Safe Work Practices

- | | | |
|-------|-------|---|
| _____ | _____ | 1. Follow all Caterpillar facility safety standards when performing this task. |
| _____ | _____ | 2. Wear heavy industrial gloves for protection against the hazards associated with the cleaning solvents. |
| _____ | _____ | 3. An explosion hazard exists with cleaning solvents. Smoking is not permitted in the cleaning area. |
| _____ | _____ | 4. Know the location of the MSDS for the cleaning solutions. |
| _____ | _____ | 5. Solvents must be disposed of according to the HAZMAT regulations. |

Task Standards

- | | | |
|-------|-------|--|
| _____ | _____ | 1. The rotary actuator must be rebuilt using specified rebuilt kit. |
| _____ | _____ | 2. All end cap screws must have Loctite 242 applied. |
| _____ | _____ | 3. All hex nuts must be torqued to 4550 inch-pounds. |
| _____ | _____ | 4. The Teflon abutment seal must be cut diagonally on a 45-degree angle. |
| _____ | _____ | 5. The bushing in both ends must be machined to match the wingshaft diameter, with a clearance of 0.001 to 0.003 inch. |
| _____ | _____ | 6. All safe practices must be demonstrated. |



Evaluator's Sign-Off

The Learner has demonstrated safe work practices and competent performance of the task.

Evaluator: _____ Date: _____

Learner: _____ Clock No: _____

