

# AC-02a

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## MAINTENANCE MECHANIC TRAINING

### TRAINER'S GUIDE

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

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## Instructions To The Trainer

1. The Learner will contact you when ready to practice rebuilding a rotary actuator.
2. Be prepared to demonstrate the steps for this task.
3. Ask the Learner to contact the Evaluator when ready for the Skill Check.



## Skill Objective

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

### Task Standards

1. The rotary actuator must be rebuilt using the specified rebuild kit.
2. All endcap 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.

## 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



## Practice Set-Up

The Learner may perform the following practice to help prepare for the Skill Check. Set up the practice for the Learner. Assist the Learner during the practice, if necessary; answer any questions concerning the task; and be prepared to demonstrate the task to the Learner. Make sure the Learner follows safe work practices while practicing the task.

### Practice 1

Designate a rotary actuator for the rebuilding activity. Make sure that the Learner selects the required repair kit. During this practice the Learner will:

- disassemble the rotary actuator
- clean and inspect the actuator components
- reassemble the rotary actuator

Observe as the Learner reassemble the rotary actuator to ensure that the rotary actuator is assembled properly. The Learner is required to follow all the recommended safe practices associated with handling cleaning solvents. All cleaning solutions must be disposed of per HAZMAT regulations.

### Practice Objective 1

The rotary actuator must be rebuilt using the specified rebuild kit. All endcap screws must have Loctite 242 applied. All hex nuts must be 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.

## Next Step

Allow the Learner to continue practicing and developing skills needed to demonstrate the task. The Learner should ask the Evaluator to schedule a Skill Check when ready to demonstrate the task unaided and meet all the task standards and safe work practices.