

A-09b

MAINTENANCE MECHANIC TRAINING

SKILL CHECK GUIDE

Duty A: Pumps (Not Hydraulic)
A-09b: Rebuild Pump (Aro Diaphragm)

Issued 06/01/98

Rationale

This Skill Development Guide provides the knowledge a Learner needs to rebuild a 1/2” Aro diaphragm pump. The Learner must be able to select a repair kit, clean the pump, disassemble and reassemble the pump.

Skill Check Set-Up

Designate a pump that needs to be rebuilt. Check to ensure that the kit required for the pump is in stock. Arrange the availability of a cleaning area for use when pump parts need to be cleaned. Observe as the Learner disassembles and reassembles the pump. Check to ensure that all defective parts are replaced.

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 1/2" Aro diaphragm pump.

SAFETY FIRST

DON'T TAKE
CHANCES

- Follow all Caterpillar facility safety standards when performing this task.
- When working in the paint area, wear heavy industrial gloves and a respirator fitted with charcoal filter for protection against the hazards associated with the cleaning solvents.
- An explosive hazard exists with cleaning solvents. Smoking is not permitted in the paint or cleaning areas.
- Know the location of the MSDS for the cleaning solutions.
- Cleaning solution disposal must comply with HAZMAT regulations.



- 1/2" Aro diaphragm pump repair kit
- 1/2" Aro diaphragm pump
- Amojel assembly lubricant
- tank of solvent and solvent tray for cleaning parts
- tray with putty knife
- wire brush
- external snap ring pliers
- 1/2" wrench
- 7/16" wrench
- 7/8" wrench



□ 1/2" Aro Diaphragm Pump Service Manual



Skill Check

Given a request to rebuild a 1/2" Aro diaphragm pump, rebuild the pump.

Needs
Mastered Practice

Safe Work Practices

- | | | |
|-------|-------|--|
| _____ | _____ | 1. Follow all Caterpillar facility safety standards when performing this task |
| _____ | _____ | 2. When working in the paint area, wear heavy industrial gloves and a respirator fitted with charcoal filter for protection against the hazards associated with the cleaning solvents. |
| _____ | _____ | 3. An explosive hazard exists with cleaning solvents. Smoking is not permitted in the paint or cleaning areas. |
| _____ | _____ | 4. Know the location of the MSDS for the cleaning solutions. |
| _____ | _____ | 5. Cleaning solution disposal must comply with HAZMAT regulations. |

Task Standards

- | | | |
|-------|-------|---|
| _____ | _____ | 1. Pump must be rebuilt using a repair kit specified by the Aro Diaphragm Pump Service Manual. |
| _____ | _____ | 2. U-cup packing seals, pilot valve assembly, pilot rod, and o-rings must be lubricated with Amojel assembly lubricant. |
| _____ | _____ | 3. The polished side of the valve plate must mate with the dished side of the valve insert. |
| _____ | _____ | 4. Fasteners must be tightened wrench-tight. |
| _____ | _____ | 5. Valve block holes must align with the motor body. |
| _____ | _____ | 6. The pump must operate per specifications. |
| _____ | _____ | 7. Cleaning solution disposal must comply with HAZMAT regulations. |



Evaluator's Sign-Off

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

Evaluator:

Date:

Learner:

Clock No: