

T-02a

ELECTRICIAN TRAINING

TRAINER'S GUIDE

Duty T: Drives (AC, DC, VFD, and Hydraulic)

T-02a: Set Up/Adjust Drive (ACVS-A/B)

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Instructions To The Trainer

1. The Learner will contact you when ready to practice setting up and adjusting a drive.
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

Given an AC Servo drive that has been replaced, set up and adjust the drive.

Task Standards

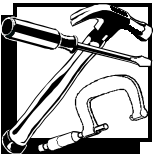
1. The new drive logic board must be configured identically to the drive that was removed.
2. The BAL potentiometer (pot) on the logic board must be adjusted for no motion.
3. The BAL pot on the Servo Interface Card must be adjusted for 0 volts.
4. The Gain pot on the Servo Interface Card must be adjusted for $1.33 \pm .01$ volts at 50 ± 1 IN/MIN.
5. The following error must be ± 50 counts from 0.000.

What The Learner Will Need

This section contains the safety information, tools, and resources you will need before setting up and adjusting an AC Servo drive.



- Follow all Caterpillar facility safety standards when performing this task.
- There is 440VAC inside the control cabinet. Use lock and tag to avoid electrical hazard.



- 1391 Allen Bradley Axis Drive
- DVM
- Electrician's hand tools



- 1391 Allen Bradley Axis Drive Electrical Service Manual or 1391 Allen Bradley Axis Drive Instruction Manual
- electrical prints



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

Designate a drive for the practice activity. Set up the drive by misadjusting one or more of the following:

- Balance on the Servo Interface Card

- Gain on the Servo Interface Card

- Jumper settings

- Offset balance

- Drive following error

Ask the Learner to practice setting up and adjusting the AC servo drive and to demonstrate safe work practices while performing this task.

Practice Objective

The drive should be set up according to the manufacturer's manual.

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.

