

O-03: Time Brake

SAFETY FIRST

- Follow all Caterpillar facility safety standards when performing this task.
- Manlift requires using a safety harness.

EQUIPMENT

- manlift (if the position feedback is lost)
- safety harness
- Allen Bradley PLC-5 program panel or IBM PC with Allen Bradley 6200 software

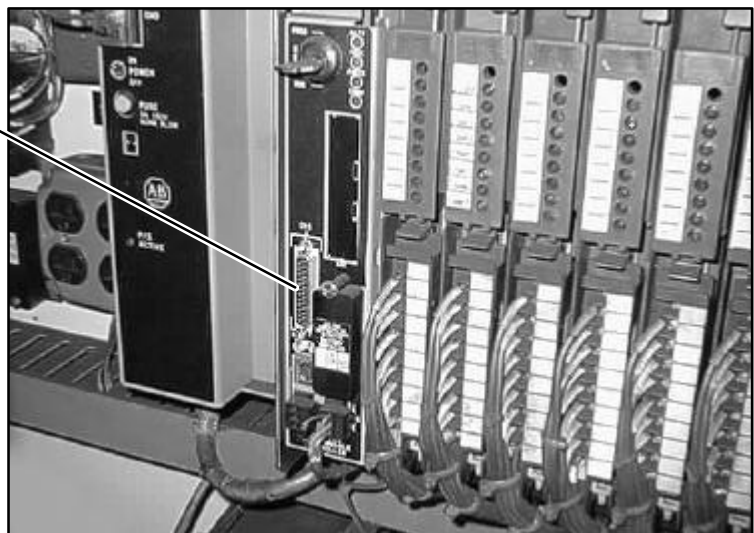
RESOURCES

- Mechanical Technician, Machine Repairman/Maintenance Mechanic, Machine Operator

Time Brake

1. Using the ladder logic printouts, locate the main control panel and rack for the Press Control brake requiring timing.
2. Transport and connect interface to control panel.
 - Connect the communication cable to the Allen Bradley PLC-5 processor. Connection location will vary.

Computer
Connection



Computer-to-PLC Processor Connection



3. Select “6200” by pressing [F5].
4. Select “WHO” by pressing [F5].
5. Select “WHO ACTIVE” by pressing [F5].
6. Select the machine number by pressing the arrow keys until your machine number is highlighted.
 - This is the number of the machine you are working on. It should be displayed on the side of the control panel you are working from.
7. Select “On-line Program” by pressing [F1].
8. Select “Monitor File” by pressing [F8].
9. Identify the “logic” for the brake in the ladder logic listing for the machine.
 - The listing should be located in the bottom of the control panel.
 - Locate the address for the brake from the listing.
10. Identify the limit test range.
 - This is the lower and upper ranges, in degrees, in which the brake is set to operate.
 - Move the red cursor by using the arrow keys to the LIM (limit) instruction.
 - The upper and lower values are displayed in this box, along with the addresses for modifying the values.
11. Determine the required adjustment for the brake value.
 - Communicate with the machine repairman and the operator to determine what adjustment is required.
12. Adjust the data value of the lower limit range.
 - Select “Data Monitor” by pressing [F8].
 - Using the arrow keys, extend the ram further to adjust this value. Raise the data value 5°.
 - Using the arrow keys, extend the ram less to adjust this value. Lower the data value by 5°.

Note: Adjust the value by five degrees or a similar small increment to avoid unwanted changes.

- Check the clutch window for degrees to make sure the brake adjustment is not overlapping the clutch degree.

13. Continue to monitor the brake timing with the Operator, Machine Repairman, and/or an Electrical Engineer until you are satisfied that the timing is accurate.

