

CA-01: Adjust Vertical Brake (Sundstrand)

SAFETY FIRST

- Follow all Caterpillar facility safety standards when performing this task.
- The brake is located on top of the Sundstrand. Observe all safety precautions regarding appropriate ladder use.
- The spindle head is blocked to prevent injury or damage resulting from the release of the brake.
- A greasy surface, wires, cables, and hoses on and around the Sundstrand contribute to an existing tripping hazard.

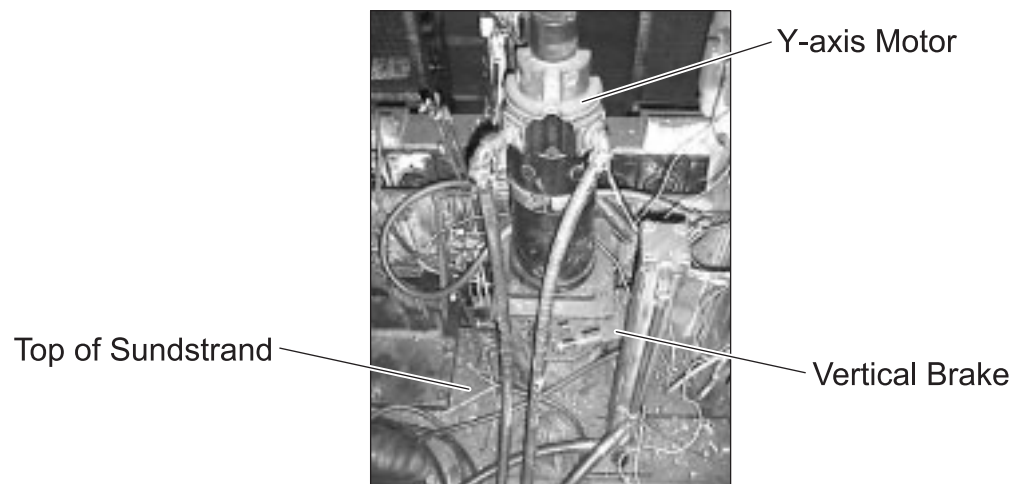
EQUIPMENT

- Air hose or assistant to operate the air brake
- .030 inch shim stock

RESOURCES

- Sundstrand Maintenance Mechanic Manual (Section 4: Linear Axis Feed Drive – Brake Adjustment Procedure)

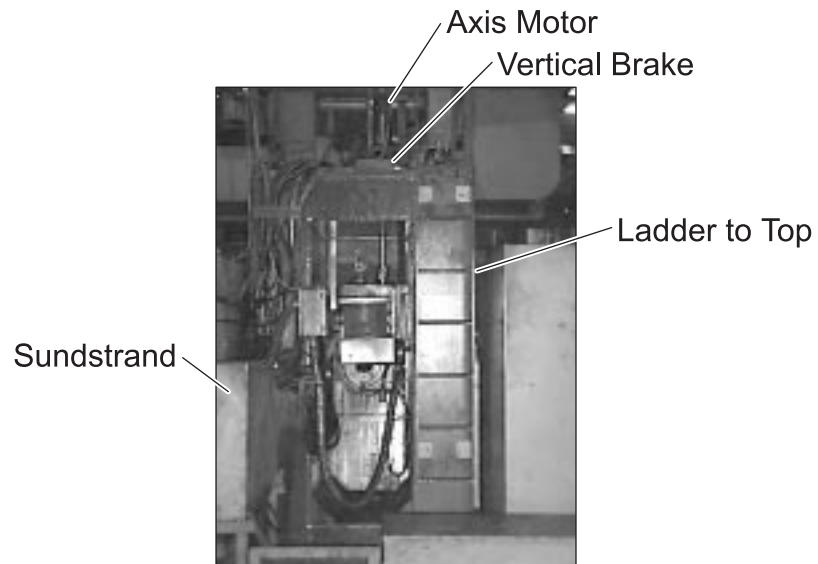
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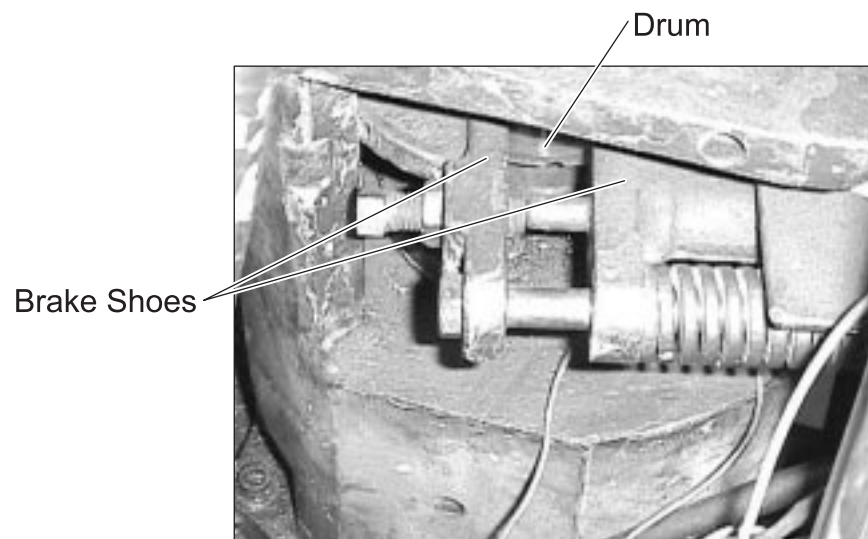
1. Block the head.

- Manually lower the head and release the load onto a block of wood.

2. **Perform a lockout/tagout on the machine.**
 - Make sure the machine meets the ZMS standards.
3. **Obtain your hand tools and climb on top of the Sundstrand.**



4. **Position .030 shim stock between the drum and brake shoes.**



5. **Rotate the eccentric pin in the reaction arm to a neutral position.**



Eccentric Pin
(located below
motor plate)

- Lock the eccentric pin in place to center the brake assembly with the drum.

6. **Remove the shims and release the set screw.**



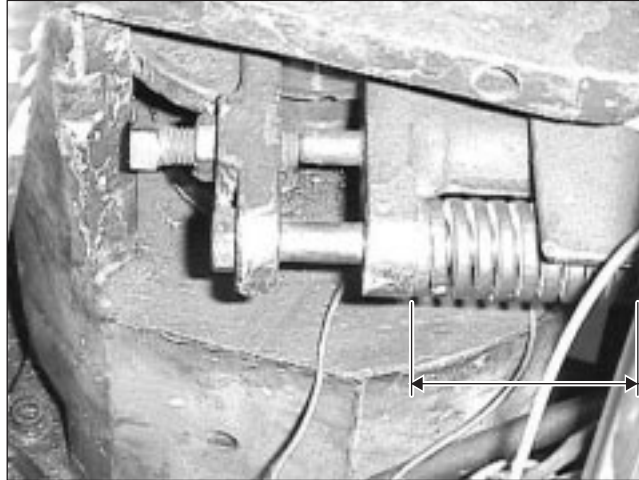
Y-axis Motor

Centering Set Screw

Vertical Brake
Assembly

7. **Ask an assistant to energize the air cylinder until the piston bottoms with the cylinder.**
8. **Advance the set screw two more turns and lock in place.**

9. **Tighten the spring tension until 2 1/2 inches is measured from the machined surface on the brake assembly to the spring side of the retainer washer.**



2 1/2" Tension

10. **Verify that the shaft turns freely.**
11. **Release the air pressure and check the braking action.**
12. **Adjust the set screw on the side of the mounting bracket to center the shoe with the drum.**
13. **Remove lockout/tagout and restore power.**
14. **Verify machine operation.**