



Harsco Track Technologies

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SERVICE BULLETIN

MAINTENANCE OF WAY EQUIPMENT

DATE: 12 - 2003

BULLETIN NO: 03-031

TITLE: BRAKE SYSTEM INSPECTION

RATING:

ALERT
(Potential Problem)

INFORMATION
(Action Is Optional)

DIRECTIVE
(Action Is Required)

PRODUCT IMPROVEMENT
(Enhance Product)

PRODUCT SERIES / MODEL: RGH10 Series C1-26 / C1-27, RGH10 Series C1-28 / C1-29, RGH10 Series C1-30 / C1-31 and RGH10 Series C1-33 / C1-34 Rail Grinders.

SERIAL NO: Not Applicable

SUMMARY: This Service Bulletin provides inspection, maintenance and adjustment procedures for the brake system and brake components on the above listed Rail Grinders

OPERATIONAL IMPACT: The Rail Grinder's brake system and components must be properly inspected, maintained and adjusted to ensure safe operation of the Rail Grinder.

ACTION: Use this information to inspect, maintain and adjust the brake system and brake components on the Rail Grinder.

CONTACT: If you have any questions or if we can be of any service, please contact the Contract Rail Grinding Services at the Fairmont, MN facility, (507) 235-7161.

Safety Information



■ **FOLLOW APPLICABLE RAILROAD LOCKOUT - TAGOUT PROCEDURE TO DISABLE ENERGY SOURCES WHEN PERFORMING MAINTENANCE, MAKING ADJUSTMENTS OR REPAIRS TO THE RAIL GRINDER. FAILURE TO HEED THIS WARNING COULD RESULT IN SEVERE BODILY INJURY.**

Brake System Inspection

Daily:

1. Chock the rail grinder's wheels to ensure the rail grinder cannot move.
2. Check the mechanical brake system for missing, worn or damaged components.
 - a. Check the brake actuator for damage or missing components. Repair or replace as needed.
 - b. Check the brake linkage for wear, damage or missing components. Repair or replace as needed.
 - c. Check the brake shoes. If any brake shoe pad is worn to 3/8" or less, the brake shoe must be replaced.
3. If any mechanical brake components are missing, worn or damaged and cannot be replaced or repaired, the rail grinder cannot be placed in service until deficiencies are corrected.
4. Start the rail grinder's engine. Allow several minutes for the main air system to fully charge. Check the main system air pressure gauge. The recommended main system air pressure is 95 - 105 PSI. If the main air system pressure is not at the recommended pressure, determine the cause and take the necessary action to correct the problem.
5. Inspect the air hoses, valves and brake actuators for leakage. Listen for any sounds that may indicate air leakage.
6. Release the parking brakes and apply the service brakes. Again, inspect the air hoses, valves and brake actuators for leakage. Listen for any sounds that may indicate air leakage.
7. See Figures 1 and 2. The front service brake air system pressure gauge (1) and regulator (2) are located on the right side of the machine below the first removable floor panel, behind the main cab. The rear service brake air system pressure gauge (3) and regulator (4) are located on the right side of the machine below the last removable floor panel, before the storage compartment.
8. Check the regulator valves for air leakage and / or damage. Repair or replace as needed.
9. Check the air pressure indicated on the regulator gauges (1) and (3). The recommended front service brake air system pressure is 20 PSI. The recommended rear service brake air system pressure is 30 PSI.
10. If the pressures indicated are not at the recommended pressure, the front and / or rear service brake air system pressures will have to be adjusted. Go to Step 12.
11. If the pressures indicated are at the recommended pressure, the front and rear service brake air system pressures are set correctly.

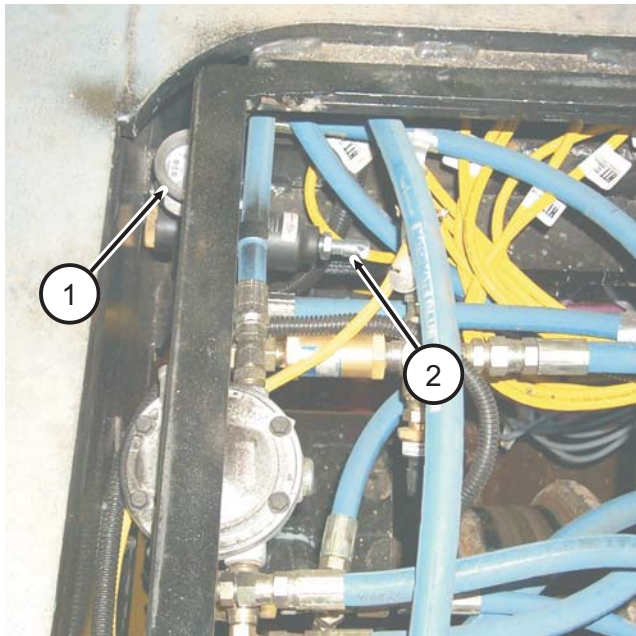
Brake System Inspection

- Loosen the locknut on the regulator adjusting screw (2 or 4). Turn the regulator adjusting screw (2 or 4) clockwise to increase the air pressure setting or counter-clockwise to decrease the air pressure setting.

Front: Stop when the pressure indicated is 20 PSI. Re-tighten the locknut on the regulator adjusting screw (2).

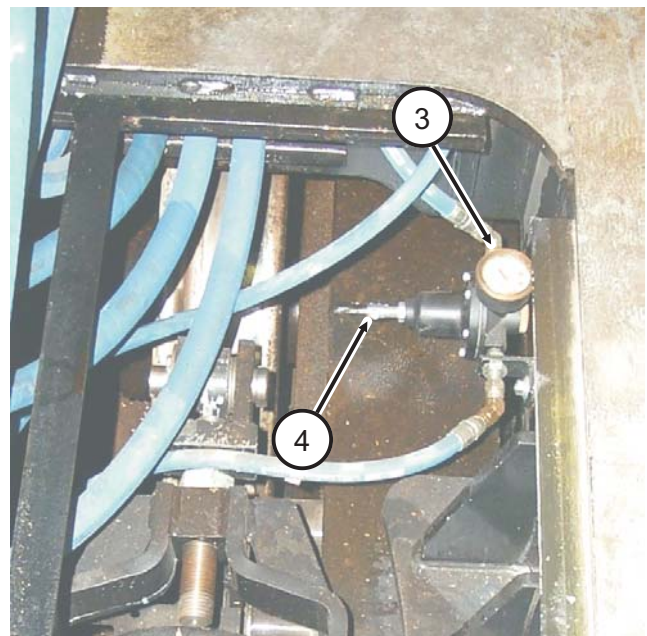
Rear: Stop when the pressure indicated is 30 PSI. Re-tighten the locknut on the regulator adjusting screw (4).

FIGURE 1
FRONT SERVICE BRAKE AIR
PRESSURE GAUGE AND REGULATOR



01-315

FIGURE 2
REAR SERVICE BRAKE AIR
PRESSURE GAUGE AND REGULATOR



01-316

- Make sure the service brakes are applied and the rail grinder's wheels are chocked.
- Visually inspect each brake shoe (four on each bogie). Make sure all of the brake shoes are applied tightly against the wheel treads. If not, go to Brake Shoe Adjustment.
- Release the brakes and push one brake shoe tight against the wheel tread. Check the clearance between the other brake shoe and the wheel tread. The clearance should not exceed 1/4 inch. If the clearance exceeds 1/4 inch, go to Brake Shoe Adjustment.
- If the brake shoes are applied tightly against the wheel treads and the clearance is 1/4 inch or less when the brakes are released, the rail grinder's brake system is adjusted and operating properly.

Brake Shoe Adjustment



- **BE AWARE OF ALL PINCH POINTS AND KEEP ALL PARTS OF BODY AWAY FROM PINCH POINTS. FAILURE TO COMPLY COULD RESULT IN SEVERE BODILY INJURY.**

Before Checking Brake Shoe Clearance

1. Apply the parking brakes.
2. Install wheel chocks on the rail grinder's wheels.
3. Turn the Master Key on.
4. Place the propel control in the neutral position.
5. Start the engine. Leave the engine speed at idle RPM.
6. Turn the computer on.
7. Verify neutral position on the computer monitor.
8. Main Air system pressure must be at the recommended operating pressure (95 - 105 PSI).
9. Release the service brakes. Release the parking brakes.

Checking Brake Shoe Clearance - See Figure 3

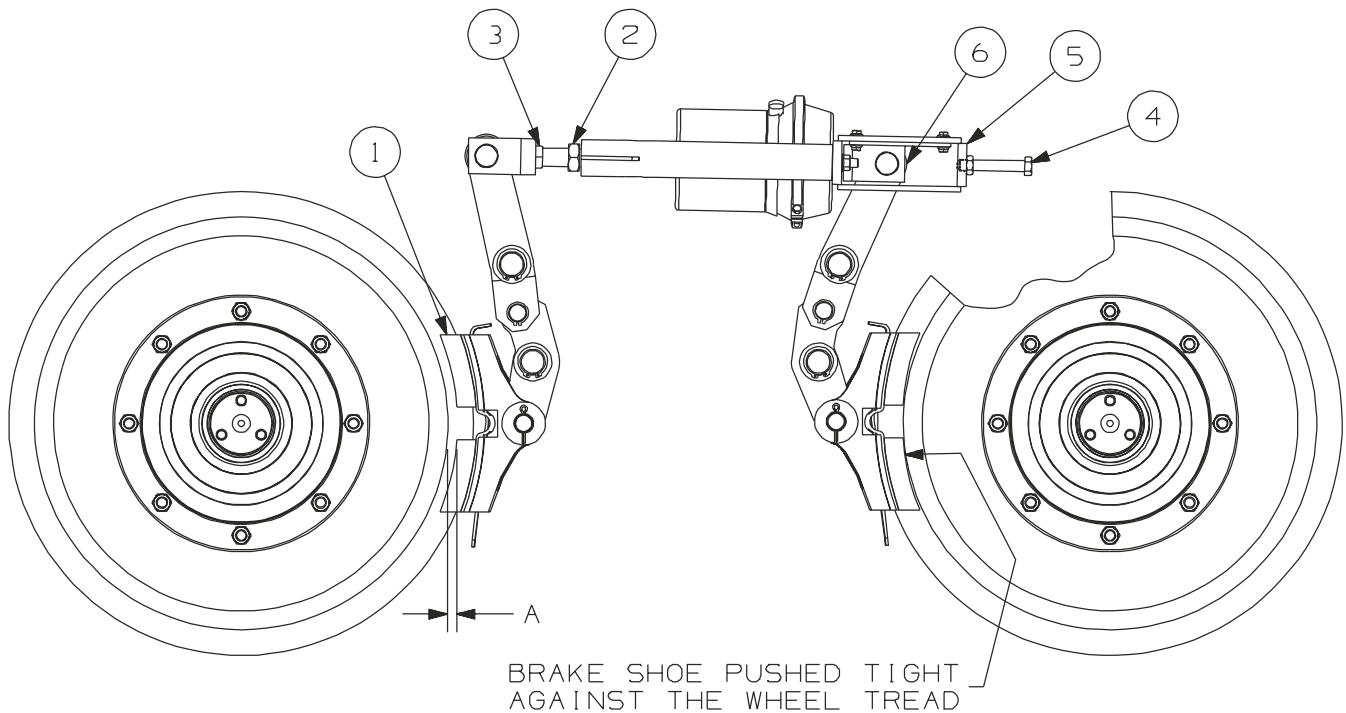
1. Make sure that the brake release bolt (4) is backed out so that the threaded end is flush with the inside of plate (5). Make sure the jam nut on the brake release bolt (4) is tightened securely.
2. To check the brake shoe clearance, push one brake shoe tight against the wheel tread. Measure the clearance between the other brake shoe and wheel tread.
3. The clearance (A) should be 1/8 - 1/4 inch.
4. If the clearance (A) is less than 1/8 inch or greater than 1/4 inch, the brake shoes will have to be adjusted. Go to Adjusting Brake Shoe Clearance.
5. If the clearance (A) is 1/8 - 1/4 inch, the brake shoes are adjusted properly.

Brake Shoe Adjustment

Adjusting Brake Shoe Clearance - See Figure 3

1. Loosen the jam nut (2). Hold one brake shoe (1) tight against the wheel tread. Turn the adjusting bolt (3) to move the other brake shoe (1) in or out. Adjust so the other brake shoe (1) is $1/8$ - $1/4$ inch away from the wheel tread (clearance A). Re-tighten the jam nut (2) securely.

FIGURE 3
BRAKE MECHANISM



After Checking and Adjusting Brake Shoe Clearance

1. Apply the service brakes. Apply the parking brakes.
2. Remove the wheel chocks from the rail grinder's wheels.

Weekly:

1. Follow the instructions on the Weekly Brake Test Check List. Record the test results on the Weekly Brake Test Check List.

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