

Replacing Tram Brake Caliper Assembly (Excludes JHF# 53777)

Function

Remove and replace tram brake caliper assembly. The brake calipers are of the spring-set, pressure to release type.

During normal operation, the brakes are released by the pressure developed during operation of the tram system - thereby, automatically setting whenever the tram is not operated (tram handles in neutral position).

This machine is equipped with a "towing package" which, when actuated, will apply pressure to the brake calipers, thereby releasing the brakes. This feature is used in adjusting the brake caliper clearance after the replacement brake caliper has been installed.

 DANGER


Replacing and or adjusting the brake calipers requires disabling the braking system. In this condition, the machine is free to move in either direction.

Serious injury or death can occur as the result of this machine moving in an uncontrolled (braking system released) state.

Before releasing braking system:

1. Securely block all four wheels in both directions
2. Remove the power to the machine at the power center by locking out and tagging out the machine power cable.

Tools Needed

- Machine Service Manual
- Combination Wrenches (SAE and Metric)
- Allen Wrenches (SAE and Metric)
- 0.012" or 0.3048mm Feeler Gauge
- Hand Operated Grease Gun with SHELL GADUS S3 V220C or Equivalent Grease
- Select and Use  Before Starting Job

Parts Needed

PART #	DESCRIPTION	QTY
-	Disc Brake Caliper Assembly	1
-	1/4" Hose End Plug	1

Machine Setup

1. Locate machine in a safe working area, under permanent roof support and outby the working face.
2. Securely block all four wheels in both directions.
3. Remove power from the machine at the power center by locking out and tagging out the machine power cable.

Removal Procedure

1. Loosen the locking nut on the brake caliper clearance adjusting screw and turn the brake caliper clearance adjusting screw all the way outward.
2. Disconnect the brake release pressure hose from the brake release

pressure port on the brake caliper assembly. Plug the hose to prevent system contamination.

3. Remove the hydraulic fitting(s) from the brake release pressure port in the brake caliper and install the replacement brake caliper in the same location and with the same orientation.
4. Remove the four brake caliper assembly mounting bolts.
5. Remove the brake caliper assembly from the brake disc.

Installation Procedure

1. On the replacement caliper assembly, loosen the locking nut on the brake caliper clearance adjusting screw and turn the brake caliper clearance adjusting screw all the way outward.
2. Slide the replacement caliper assembly onto the brake disc and into position for the mounting.
3. Install and tighten down the four brake caliper assembly mounting bolts.
4. Connect the brake release pressure hose to the brake release pressure port on the brake caliper assembly.

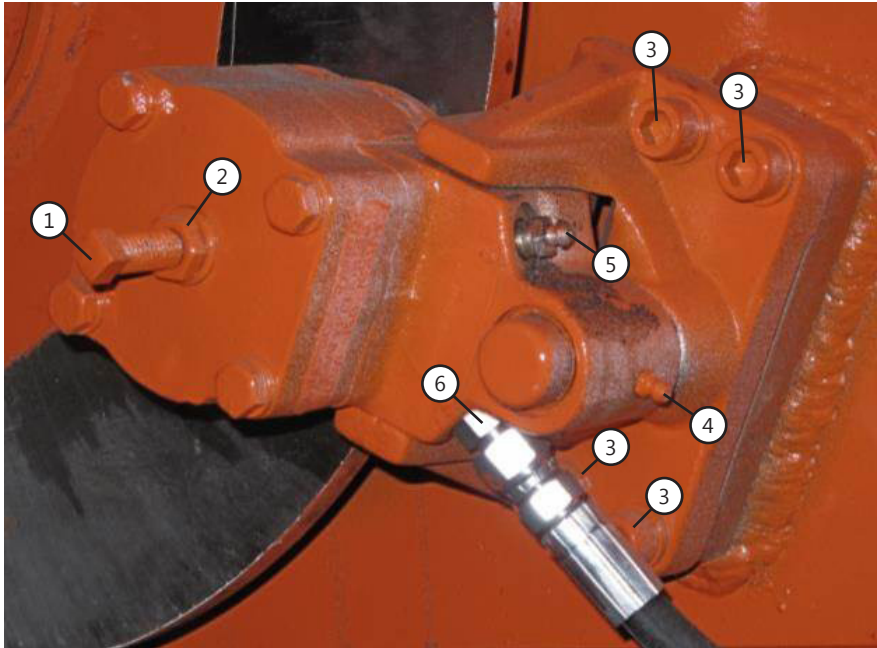
10. Place a 0.012" (0.3048mm) feeler gauge between the brake pad and the brake disc.
11. Make sure the locking nut on the pad clearance adjusting screw is loosened.
12. Turn the pad clearance adjusting screw inward (clockwise) until the feeler gauge just fits between the brake disc and brake pad.
13. Tighten down the locking nut on the pad clearance adjusting screw.
14. Open the valve on the brake release pressure pump to disable the machine towing feature. **MAKE SURE THE BRAKE RELEASE PRESSURE SHOWS ZERO AND THAT THE BRAKE CALIPER IS FIRMLY CLAMPED AGAINST THE BRAKE DISC.** (See machine Service Manual.)
15. Restore power back to the machine.
16. Remove blocking from wheels.
17. Test for proper operation.

NOTICE

The following steps will require use of the machine towing brake release feature. Consult the machine Service Manual for details concerning the use of this feature.

5. Open (turn counter-clockwise) the air bleed valve on the brake caliper assembly.
6. While observing the air bleed valve on the brake caliper assembly, slowly pump the brake release pump until all air has been purged.
7. Close (turn clockwise) the air bleed valve.
8. Using a hand operated grease pump, apply grease (SHELL GADUS S3 V220C or equivalent) to the brake caliper assembly grease fitting.
9. Pump the brake release pump until the brake pressure gauge reads 1,500 PSI.

Figure 1



Component Parts (Fig. 1)

ITEM	PART #	DESCRIPTION	QTY
1	-	Pad Clearance Adjustment Screw	1
2	-	Locking Nut	1
3	-	Mounting Bolt	4
4	-	Grease Fitting	1
5	-	Air Bleed Valve	1
6	-	Brake Release Pressure Port	1