

Disc Brake Check list

Both Brakes drag and over heat

If both disc brakes are over heating, it is usually an indication of line pressure.

Possibilities:

1. Drum brake actuator being used. These actuators have check valves that hold pressure in the lines for faster response time on drum brakes. With disc brakes, this pressure translates into dragging overheating brakes. Test is to pull trailer, activate brakes several times. Stop trailer, jack up trailer and rotate tire with that has brakes. Release the bleeder valve or disconnect brake line to see if pressure is released and the wheel turns freely.
Correction: Replace actuator with disc brake model or remove check valve from actuator master cylinder.
2. Reverse solenoid malfunction. This generally is in the “stop flow” models not the return flow. Solenoid has ceased to function properly or the possibility of trash in the fluid blocking the ports in the valve, making the solenoid act like a check valve. Test is to run the brake line straight to the actuator and test brakes again.
Correction is to replace check valve.
3. Brake lines kinked or blocked. Check lines to make sure they are not bent or kinked that will restrict flow. Visual test. Correction is to straighten or replace damaged brake line.
4. Steel brake lines connected to calipers. Disc brake calipers are “floating” parts and need to move freely to work properly. Many trailer manufacturers run steel lines to the axles and add flexible line extensions to the calipers. Other manufacturers coil the steel line just before the caliper to provide flex. The preferred method is to use a flexible brake line attached to the caliper at least 18” in length. If steel lines are connected to the calipers, first check to see if there is a “coil” of brake line before the caliper. If not, add flex line extensions. If the coil does exist, make sure the line has flex and that the caliper moves freely. Check the brake line to make sure that it has not been bent or pushed aside that will create a pull on the caliper, which in turn will create drag and excessive heat.
5. Emergency stop cable activated. The actuator has an “E” stop cable that compresses the master cylinder should the trailer come loose from the tow vehicle. If this cable is pulled when the trailer is disconnected from the tow vehicle it will activate the brakes. Test is to review owner’s manual of your actuator to see if there is an indicator that the cable (or chain) has been pulled. Follow manufacturers directions to release the E-stop cable.
6. Use of any brake fluid other than DOT 3. Brake fluids are defined by the base used. Petroleum, Silicone, Synthetic, etc. Each fluid is used with a particular system that uses rubber or silicone based seals and stops. An example is Honda. The brake fluid reservoir clearly states to use only HONDAS or Silicone braked fluid. Use of DOT 3 fluid in this system can cause seal swelling over time. Conversely, the use of Silicone based brake fluid in any Trailer brake system can cause the seals to expand and/or leak. Fancy brake fluids can cause the solenoid parts to swell, making it act like a check valve. The misconception is that the "HITEMP" fluids are better. NOT SO!
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If only one disc brake is overheating or dragging:

1. See # 3 & 4 above
2. Inspect the brake for loose bolts and nuts, specifically the slider pins that the caliper rides on. These must be secured with a Loc-Tite thread locker if retightened, removed or replaced. Check the bolts that attach the mounting brake to the axle. All must be tight.
3. Caliper is malfunctioning. If the piston is sticking this will create drag. Attempt to push the piston back into the caliper. Replace caliper if the piston continues to stick
4. Check for trash or any material creating binding in caliper mounting bracket area.
5. Check brake pads to see if they are in need of replacement.