Disc Brakes have been around for many years. They don’t make you go faster, look cooler or sound better, but few things are less enjoyable than pulling a trailer with inadequate brakes. Not only can it be stressful and unnecessary hard work, but it can also be dangerous. Good brakes improve your towing experience by allowing much better control of the trailer at all times.

Cruisemaster™ offer a premium 12” electrically activated hydraulic disc brake with floating caliper and ventilated rotor.

There are a number of reasons why quality disc brakes are superior to drums:

- Better cooling - less likely to overheat and fade
- Less susceptible to contamination from mud and water
- Fewer moving parts
- Less maintenance
- Lighter than drum brakes
- More pad-to-rotor contact area

### FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>✔️</th>
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</thead>
<tbody>
<tr>
<td>12” Ventilated disc rotor</td>
<td>✔️</td>
</tr>
<tr>
<td>CRUISEMASTER® AIR or COIL</td>
<td>✔️</td>
</tr>
<tr>
<td>VT bearing</td>
<td>✔️</td>
</tr>
<tr>
<td>Tested to SAEJ2681</td>
<td>✔️</td>
</tr>
<tr>
<td>MAXX coated floating caliper</td>
<td>✔️</td>
</tr>
<tr>
<td>Larger piston diameter</td>
<td>✔️</td>
</tr>
<tr>
<td>Increased brake torque</td>
<td>✔️</td>
</tr>
<tr>
<td>Reverse mount, slip-over rotor</td>
<td>✔️</td>
</tr>
<tr>
<td>SA5 plated hubs</td>
<td>✔️</td>
</tr>
<tr>
<td>1600 psi actuator (SGL=2.5T, TDM=4.5T)</td>
<td>✔️</td>
</tr>
<tr>
<td>1200 psi actuator (SGL=2.1T, TDM=4.2T)</td>
<td>✔️</td>
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<tr>
<td>Min. Chassis to Face = 180mm</td>
<td>✔️</td>
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</table>
Brakes are available to suit a number of wheel stud patterns as well as popular centre boss (wheel spigot) sizes. Contact our sales department for further details.

1 INSTALLATION

The brake caliper and disc/hub assembly is pre-fitted as an option on Cruisemaster™ Independent Air and Coil suspensions. A flexible stainless steel braided hydraulic hose kit including T-piece and P-clips is supplied to run from the caliper via the suspension A-Frame onto the vehicle chassis. Optional hoses are available to connect from the T-piece to the hydraulic power unit.

Installers should note the following:

- The caliper clearance diameter is approximately 365mm. Ensure that the nominated wheel has sufficient inner clearance not to foul on the caliper.
- Air suspension handbrake incorporates a forward-pull lever, while the coil suspension lever is of the cross-pull type, as pictured below. Cables should be suitably routed and secured to ensure efficient handbrake operation.
- Fit handbrake cable with coil spring end towards caliper.
- Adjust handbrake cable until excess movement in handbrake lever has been taken up. Ensure that the wheel is free to rotate in all positions of suspension travel.
- All flexible hydraulic brake hoses must be fitted to the vehicle in a way that will prevent chafing, kinking or other mechanical damage under normal motion of the parts to which they are attached. (VSB1 Rev 5, par 15.2)

When using the cross pull lever on the Cruisemaster™ coil it may be necessary to slightly modify the direction of the brass fitting so to avoid interference between the lever and brake line. As standard, the brass fitting will be facing directly perpendicular to the rotor surface. It is possible to adjust this slightly in either direction to ensure appropriate clearance of the cross pull lever. The fitting should be angle toward the direction of the arm for brake cable routing. The image below displays the standard fitting direction as the solid line and the recommended adjustment angles as a dashed line.
2 MAINTENANCE

- Check condition of brake lines & hoses and check for signs of leaks on calipers and connection points.
- Check tightness of brake mounting bolts.
- Check condition of brake pads and replace if necessary.
- If replacing brake pads, clean mounting bolt threads, apply high strength Loctite on threads prior to reassembly and torque to 75Nm.
- Check condition of disc rotor surfaces. If machining of the disc rotor is required, machine equal amounts off either side. The minimum disc rotor thickness is 20.7mm (pictured).
- If caliper was fitted with lock wire, insert new wire through holes in bolt heads and twist. Ensure wire wraps clockwise around bolts to resist movement in the loosening direction, as pictured below.

See Cruisemaster™ CIS 12 – General Maintenance for service intervals, general maintenance requirements and torque settings.
## 3 TROUBLE SHOOTING

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
</tr>
</thead>
</table>
| Excessive Surge Actuator movement or slow response (delay) from Electric/Hydraulic Actuator | Air in hydraulic system  
Hose swelling / Deteriorated flex hoses  
Fluid boil  
Badly worn pads  
Uneven pad wear  
Old or contaminated brake fluid  
Faulty master cylinder  
Master Cylinder mounting loose  
Clogged reservoir cap vent hole  
Soft or swollen caliper seals |
| Front or Rear Axle brakes locking prematurely  
Front or Rear Axle brakes locking prematurely | Too much front or rear brake bias  
Failure in opposite system  
Excessive wear in opposite system  
Worn tires  
Tire pressure too high  
Defective master cylinder  
Defective caliper |
| One brake locking / trailer pulls to one side | Caliper piston seizing  
Defective, damaged, or oil-contaminated brake pad on one side  
Defective caliper  
Scored or out-of-round rotor  
Bad caliper O-ring  
Loose caliper mount  
Mismatched rotors and pads  
Incorrect tire pressures  
Bad axle-end alignment  
Mismatched tires / load  
Damaged or crimped brake line/hose  
Loose suspension parts  
Loose caliper mounting bolts  
Incorrect wheel bearing adjustment |
| Vibrating Trailer while stopping | Excessive rotor run out or thickness variation  
Wheel bearing damaged, worn, or out of adjustment  
Cracked rotor  
Bent axle  
Caliper not sliding properly |
| No BRAKES! | Air in hydraulic system  
Leak in hydraulic system  
Tapered pad wear  
Lack of fluid in reservoir |
| Brakes grab | Contaminated pad linings  
Brakes wet  
Contaminated pad linings |
<table>
<thead>
<tr>
<th>Brakes not releasing / Brake drag</th>
<th>Brakes wet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brakes squeal</td>
<td></td>
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<tr>
<td>Worn pads</td>
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<tr>
<td>Brakes wet</td>
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<tr>
<td>Glazed or contaminated pads</td>
<td></td>
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<tr>
<td>Dirty or scored rotor</td>
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<tr>
<td>Bent caliper bracket</td>
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<tr>
<td>Taper wear on pads</td>
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<tr>
<td>Rapid pad wear</td>
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<tr>
<td>Brakes not releasing</td>
<td></td>
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<tr>
<td>Bad surface finish on rotor</td>
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<tr>
<td>Pads too soft</td>
<td></td>
</tr>
<tr>
<td>Pad fade (inadequate cooling)</td>
<td></td>
</tr>
<tr>
<td>Cracked/damaged/contaminated rotor</td>
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