Fault Finding – OR Coupling & Mechanical Drum Brakes

One service problem that has emerged in recent years is the phenomenon of the brake linings sticking fast to the inner surface of the drum. In extreme circumstances if towing the trailer is attempted, the affected hub will not turn and the tyre may be dragged along the ground.

Much investigation has been undertaken by the brake suppliers, but without any concrete conclusions. Although it is believed that the changes in the composition of the lining material in 1989, i.e. The removal of the asbestos content and its replacement with cintered metal, have an influence. Unfortunately it has proved very difficult to exactly reproduce the problems consistently under test conditions, but it is thought that under a combination of some or all conditions, the linings literally bond themselves to the drum, the cintered metal in many cases forming a rust bond. A summary of the conditions and possible remedies is as follows:

A. Leaving the handbrake on when the trailer is parked for extended periods, particularly in damp conditions e.g. Parked up when damp, parked on long grass. It is essential that when a trailer is to be parked under these circumstances, that the handbrake is left off and the wheels adequately choked.

B. Trailers that are infrequently used often suffer most. This could not only be due to the handbrake as above, but also to the fact that the brakes never really are used and properly bedded in. It is vital that such trailers are regularly serviced on a time interval basis - see c) above.

C. Boat trailers - immersion of the brakes in water, particularly salt water can have serious detrimental effects on the brakes and cause severe bonding problems. Additional servicing is essential - see Boat Trailers - Additional Operating Advice

D. In the event of one or more brakes sticking on in this fashion, the only remedy is to strip down, clean and reassemble the hub/brake. It may be possible to break the bond by tapping the drum with a hammer after backing off the adjuster. This will enable the trailer to be moved, if stuck in an inconvenient place, but it is essential that the brakes be stripped down as soon as is practicable afterwards.

E. If all else fails or you experience repeated problems with a particular trailer, consult the Service Department of either the axle or brake manufacturer.

Fault Finding Table

<table>
<thead>
<tr>
<th>Fault</th>
<th>Possible Cause</th>
<th>Remedy</th>
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</thead>
<tbody>
<tr>
<td>Brakes overheat</td>
<td>Wheel brakes over adjusted</td>
<td>Adjust correctly</td>
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<tr>
<td></td>
<td>Wheel brake dirty/rusty</td>
<td>Clean and re-set</td>
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<tr>
<td></td>
<td>Handbrake not releasing or left on</td>
<td>Check mechanism and adjust</td>
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<tr>
<td></td>
<td>Bowden cable(s) kinked</td>
<td>Check and replace</td>
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<tr>
<td></td>
<td>Drawtube dirty and/or bent</td>
<td>Clean or replace</td>
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<tr>
<td></td>
<td>Overrun lever/brake lever</td>
<td>Grease or replace</td>
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<tr>
<td></td>
<td>Sticking and/or bent</td>
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<tr>
<td>Braking effort weak</td>
<td>Wheel brakes not adjusted</td>
<td>Adjust correctly</td>
</tr>
<tr>
<td></td>
<td>Brake linings glazed or contaminated</td>
<td>Clean or replace and re-set</td>
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<tr>
<td></td>
<td>Incorrect clearances in system</td>
<td>Check and re-set</td>
</tr>
<tr>
<td></td>
<td>Drawtube dirty and/or bent</td>
<td>Clean or replace</td>
</tr>
<tr>
<td>Reversing difficult</td>
<td>Braking system set too tight</td>
<td>Check and re-set</td>
</tr>
<tr>
<td>Handbrake weak</td>
<td>Braking system set incorrectly</td>
<td>Check and re-set to eliminate excessive travel</td>
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<tr>
<td>Uneven or jerky braking</td>
<td>Too much play in braking system</td>
<td>Check and re-set</td>
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<tr>
<td></td>
<td>Worn damper in overrun</td>
<td>Replace</td>
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<tr>
<td>Issue</td>
<td>Action</td>
<td></td>
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<tr>
<td>------------------------------------------------</td>
<td>---------------------------------------------</td>
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<tr>
<td>Faulty components in wheel brake</td>
<td>Check and replace</td>
<td></td>
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<tr>
<td>Ovality in drum</td>
<td>Check and have skimmed, or replace</td>
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<tr>
<td>Wheel brakes unevenly adjusted</td>
<td>Check and re-set</td>
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<tr>
<td>Bowden cable kinked</td>
<td>Check and replace</td>
<td></td>
</tr>
<tr>
<td>Brake linings contaminated</td>
<td>Check and replace</td>
<td></td>
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<tr>
<td>Excessive nose weight</td>
<td>Check and adjust load</td>
<td></td>
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<tr>
<td>Banging from overrun when braking</td>
<td>Damper resistance completely gone</td>
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<td></td>
<td>Replace. Then adjust brakes.</td>
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<tr>
<td>Difficulty coupling and uncoupling</td>
<td>Coupling head mechanism dirty or damaged</td>
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<tr>
<td></td>
<td>Check and clean or replace</td>
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<tr>
<td></td>
<td>Towball dirty</td>
<td></td>
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<tr>
<td></td>
<td>Clean and, if necessary, grease</td>
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<tr>
<td></td>
<td>Towball damaged</td>
<td></td>
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<tr>
<td></td>
<td>Check and replace</td>
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<tr>
<td>Excessive play between coupling head and towball</td>
<td>Coupling head worn</td>
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<tr>
<td></td>
<td>Replace</td>
<td></td>
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<tr>
<td></td>
<td>Towball worn</td>
<td></td>
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<tr>
<td></td>
<td>Replace</td>
<td></td>
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<tr>
<td>Wear in back of eye and rear of pin</td>
<td>Jaw too wide</td>
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<tr>
<td></td>
<td>Check and replace eye</td>
<td></td>
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<tr>
<td>Wear on inside and outside of front of eye</td>
<td>Jaw too tight</td>
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<td></td>
<td>Replace with wider jaw</td>
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<tr>
<td>Pin seized in jaw</td>
<td>Jaw crimped by excessive noseweight</td>
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<td></td>
<td>Replace jaw and reduce noseweight</td>
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<tr>
<td>Stress fractures on couplings or trailer drawbar</td>
<td>Incorrect eye/jaw combination</td>
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<tr>
<td></td>
<td>Check and replace with compatible components</td>
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<tr>
<td></td>
<td>Excessive overhang on towing vehicle</td>
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<td></td>
<td>Check and discuss with operator. Possibly fit</td>
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<td></td>
<td>Shocklink</td>
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<tr>
<td></td>
<td>Mis-match of towing heights</td>
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<tr>
<td></td>
<td>Modify towball or trailer coupling position</td>
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<tr>
<td></td>
<td>or fit height adjustable equipment</td>
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**N.B.** after any instance of the brakes overheating it is **ESSENTIAL** that the wheel bearings and grease are thoroughly checked over and replaced if necessary.