



SERVICE ADVISORY

Date: April 27, 2012

P.O. Box 500 - 1100 Milwaukee Avenue
South Milwaukee, Wisconsin, 53172-0500, USA
414.768.4000 / Fax: 414.768.4570

Advisory No.: T12027

Revision No.: 0

INFORMATIONAL

Compliance with this advisory is left to the discretion of the customer.

SUBJECT: Brake Drag Test Procedures

Models Affected: MT3300, MT3700, MT4400, MT5500, MT6300

Issue: Brake drag components can deteriorate with age, so it is important to do periodical checks on the system at 1,000 Hr. intervals, or more frequently if required.

Action: Follow the procedures below to confirm proper system functionality

NOTE: IT IS ESSENTIAL THAT:

(a) ALL APPROPRIATE SAFETY MEASURES SUCH AS THOSE SET FORTH IN THE APPLICABLE MACHINE MAINTENANCE MANUAL ARE FOLLOWED DURING THE PERFORMANCE OF THIS WORK; AND,

(b) THE PERSON OR PERSONS UNDERTAKING THE WORK MUST BE IN POSSESSION OF THE RELEVANT TRADE QUALIFICATION, SKILLS AND EXPERIENCE TO PERFORM THE WORK COVERED BY THIS SERVICE ADVISORY.

Procedure:

- 1) Press the self test switch and confirm that the brake drag warning lights and buzzer are functioning
See Fig.1
- 2) Run the Truck and confirm the speed relay energizes at 3MPH (5KPH) and 24 Volts are present at TB11R.
See Fig. 2

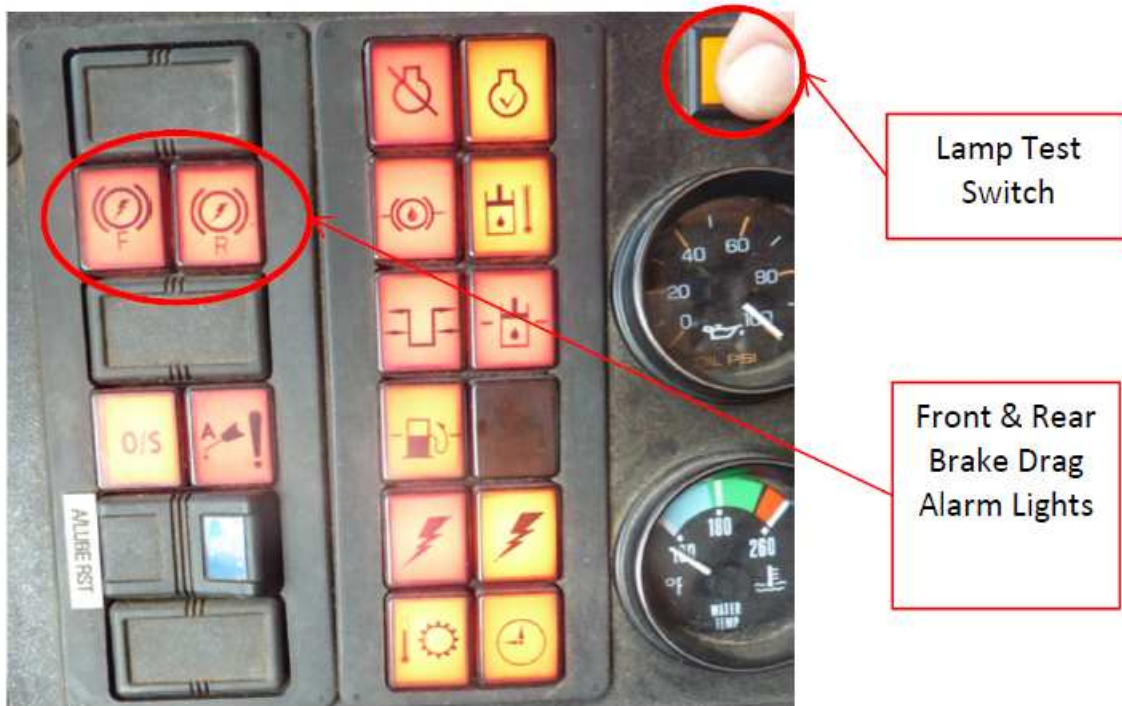


Fig.1 Lamp and buzzer test.

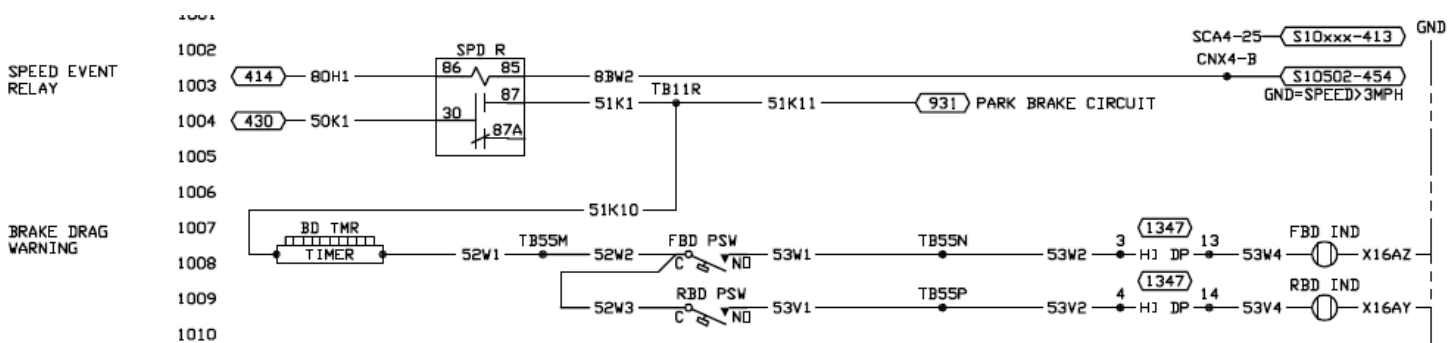


Fig.2 Typical brake drag circuit.

This test can continue with the Engine running or stopped. Ensure batteries and brake accumulators are fully charged and Venturi is set at 1 +/- 0.5PSI (6.9 +/- 3.4 KPa)

Park Brake must be applied and all wheels chocked. Hand, service and load brakes must be released.

Refer to Fig. 2 above

- 3) Remove the speed relay and jumper connections 30 and 87 on the relay base
- 4) Turn on all switches on the brake drag timer to eliminate the time delay.
- 5) Slowly apply the hand brake or service brake. Front and rear brake drag warning lights and the warning buzzer should all activate. Release the hand brake or service brake and the warning lights and buzzer should turn off.

NOTE: Two different pressure switches are available, so it is important to confirm each system.

The square switch P/N 53402 is pre-set to 35PSI (240KPa) [fixed] and the time delay is set for 6 seconds by turning off (opening) switches 2 and 3. All other switches should be on (closed).

The round switch P/N 57584 is pre-set to 15PSI (103KPa) [adjustable] and the time delay is set for 24 seconds by turning off (opening) switches 4 and 5. All other switches should be on (closed).

- 6) Switch calibration can be confirmed by substituting low pressure gauges < 100PSI (< 700KPa) for the front and rear gauges and very gradually applying pressure through the hand brake or service brake and noting the activating pressures.

NOTE: Since the pressures at this point can exceed 100PSI (690KPa) it is important to use hydraulic equipment with adequate capacity and use extra care to prevent over pressurization and to the gauges while installed.

Prior to loosening any hydraulic connections, it is imperative to ensure there is no hydraulic pressure at such connections.

- 7) If the square pressure switch P/N 53402 is out of it's operating range of 32-38 PSI (220-260KPa), the switch should be replaced.
- 8) If the round pressure switch P/N 57584 is out of it's operating range of 14-16 PSI (95-110KPa), the switch should be re-calibrated accordingly.
See Fig. 3

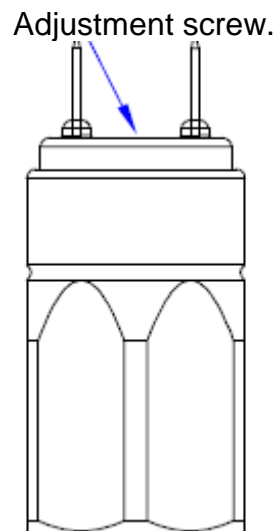


Fig. 3. P/N 57584

- 9) Turning the adjusting screw clockwise increases the trip point, turning the adjusting screw anti-clockwise decreases the trip point.
- 10) With the switches set at their correct pressure, restore the original pressure gauges. Ensure all connections are properly torqued and sealed.
- 11) Remove the jumper from the speed relay base and re-install the relay.
- 12) Re-set the required time delays as follows.
 - For 6 seconds time delay, switches 2 and 3 should be off. All others should be on.
 - For 24 seconds time delay, switches 4 and 5 should be off. All others should be on.
- 13) Start the Truck and let all accumulators fully charge.
- 14) Fully apply and release the various brake systems and ensure pressures are per Truck specifications.

End of test.

If you have any questions on the above, please contact:

Unit Rig – Product Health
Caterpillar Global Mining
1100 Milwaukee Avenue
South Milwaukee, WI 53172
414.768.4000
Truck.IR@bucyrus.com