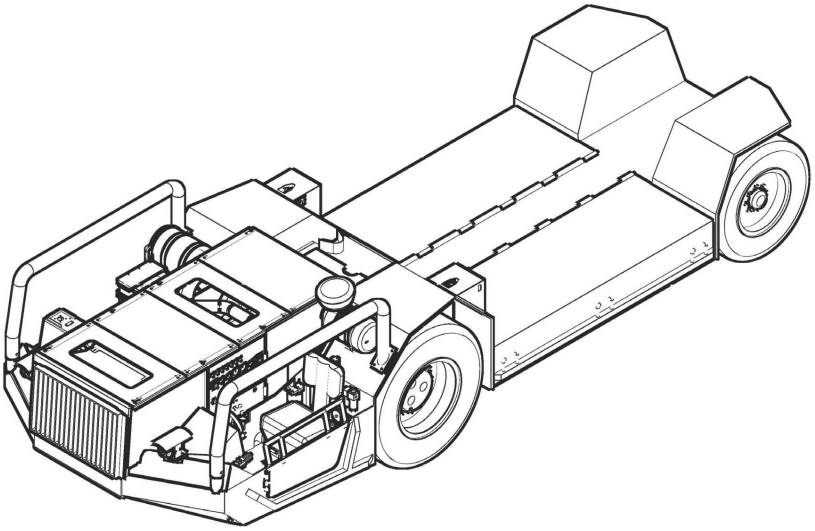
AUSTRALIAN MINING EQUIPMENT

PRODUCT BULLETIN 35989

Personnel and Equipment Transporter (PET)

Park /Emergency brake adjustment



Date:	04-11-2019
Prepared for:	Personnel and Equipment Transporter owners and end users
Prepared by:	Australian Mining Equipment
Revision:	A

Communication: PET Park Emergency Brake adjustment: MDR 081630 TBS

Recently, a Personnel and Equipment Transporter (PET) was involved in an incident whereby it rolled with the Park Emergency brake applied approximately 15m underground into the rib.

After performing an investigation into the brake failure, it was determined the main contributor to the brake failure was incorrect adjustment of Spring applied, hydraulically released Park / emergency brake units, located in the front axle assembly.

Given the serious nature of the incident the PET was involved in, AME seek to clarify the brake adjustment procedure and recommend reducing the period between brake adjustment. Further recommendations are also provided to assist with improving the reliability of braking system functions.

Axle safety brake adjustment procedure

When re-entering service or replacing key components of the braking system, a full system brake test should be performed, followed by adjustment and retest. Brake adjustments should be carried out in accordance with the DANA manual "M0143-144-176-244-276 Hurth Axle Service Manual" Page 12, Safety brake adjustment. Further representation of this procedure is included in the PET operation and maintenance manual 7-240102-700.

Note that this adjustment must be checked on both brake units prior to putting into service and is recommended to be inspected at a time period of **80** operating hrs after an initial adjustment at **8** operating hrs.

Note: if adjusting the SAHR prior to installation into the machine, it is imperative the brake be hydraulically released in the correct pressure range (25-35 bar) when the adjustment is performed. Failure to fully release the brake may result in an incorrect applied adjustment and reduced SAHR brake torque.

Additionally, although the brakes should wear evenly, consideration should be given to independent testing of ODS and DS brake units on an annual basis by performing pull tests with alternate sides de-activated. The purpose of these tests would be to confirm there is not significant variation in brake torque between the two sides. These tests would need to be performed via a controlled pull test on a flat concreted area as other methods of test are not suitable.

Brake system maintenance Plan and component replacement

To improve the reliability of safety functions, it is recommended that the following points are added into the maintenance plan for the PET if not already in place;

- Service brake interlock test recommended to be done monthly.
    - With the park brake released and machine constrained from moving, drain the service brake air receiver.
      The park brake should apply when air pressure is at a minimum of 250 kpa.
      If not, tag the machine and follow the mines defect management plan.
- Brake disc inspections as detailed in "M0143-144-176-244-276 Hurth Axle Service Manual" should be performed on a monthly basis
- Brake adjustments should be performed on a basis of 80 hours following initial adjustment and re-test at 8 hrs.
- The park Brake valve HY00433 should be replaced or overhauled at 2000 operating hour intervals
- The Master cylinder DOM 10043-9 (DOM 10871-5) should be replaced at 4000 operating hour intervals
- The pedal assembly AR00380M should be replaced at 4000 operating hour intervals

- Interlock valves in the pneumatic part of the brake circuit should be replaced at a maximum of 4000 operating hr intervals. These include AR00764, AR00062, DE03035, AR00199, AR0058.

Immediate action to be undertaken:

Consideration should also be given to recommendations provided in the communication for implementation into the in-service brake test procedures and safety management system for the vehicle.

These recommendations should be assessed in consideration of the duty cycle and severity of the operating environment of the vehicle. Severe conditions may warrant reduced intervals for the specified maintenance activity.

1 Appendix A – Machine listing

The listing below details the inspection status for correct brake system operation and adjustment as well as for Tare Mass check, as identified in communications '35982 Communication PET tare mass MDR 081630 TBS' and '35976B PET 029 Emergency Brake Failure investigation'.
The scope of this inspection includes updating tare mass and payload parameters on a permanent label affixed to the machine to reflect the actual tare mass and de-rated payload as not to exceed the registration gross vehicle mass parameters.

S.N.	Plant number	location	Status
125/3519	PT 302	CLARENCE COLLIERY	Inspected and label fitted
137/8445	PTS23	SPRINGVALE	Inspection scheduled
140/1914	PTS10	SPRINGVALE	Inspection in progress
127/393	PT301	CLARENCE COLLIERY	Inspection scheduled
150/8605	PTS29	SPRINGVALE	Inspected and label fitted
154/1144	PTS28	SPRINGVALE	Inspected and label fitted
135/6019	PTS01	SPRINGVALE	TBS inspection conducted – requires Tare mass verification

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Please distribute this bulletin to all relevant personnel

Australian Mining Equipment Contacts in respect to this bulletin:

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References :

1. M0143-144-176-244-276 Hurth Axle Service Manual
2. PET operation and maintenance manual 7-240102-700.
3. '35976B PET 029 Emergency Brake Failure investigation'.
4. '35982 Communication PET tare mass MDR 081630 TBS'