



OPERATOR MANUAL



1. Revision History

Revision	Issue Date	Author	Comments
1	12 Aug 2015	J. Leighton	Initial Release
2	12 Dec 2018	M. Cornelius	General updates

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3. Important Information

This manual applies to the fourth generation ABT™ Failsafe. The manual details how to operate the ABT™ Failsafe system correctly to ensure optimum safety and performance. All information contained in this manual is based on the latest ABT™ Failsafe product information available at the time of publication.

While every effort has been made to address all aspects of operation, please advise Advanced Braking of any omissions or suggestions on how this manual may be improved.

Advanced Braking Pty Ltd reserves the right to change the manual at any time without prior notice.

The most up to date version of the manual can be obtained by contacting the ABT Customer Service Manager.

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4. Terminology

ABS	Anti-lock braking system
ATF	Automatic transmission fluid
DPS	Door proximity system
Emergency Brake	Brakes automatically applied in an emergency
EMMA™	Electronically Modulated Mechanically Applied
HSI	Highway speed isolation
OEM	Original equipment manufacturer
Park Brake	Brakes applied independently of the service brake
PWI	Pad wear indicator
Service Brake	Brakes applied when driving via the foot pedal
ABT™ Failsafe	Wheel end mounted fully sealed brake with SAHR
ABT™ “Blend 20”	Specially formulated cooling fluid for use in ABT™ Failsafe and Failsafe Emergency brakes

5. ABT™ Failsafe Controller



1. E-stop button
 - a. The ABT™ Failsafe Park and Emergency Brake is engaged and released via the red E-stop button.
 - b. To engage the brakes, push the red E-stop button.
 - c. To release the brakes, twist the red E-stop button clockwise, approximately 15° and allow it to spring outwards (the ignition must be on, doors closed, seatbelt connected and engine running). The hydraulic pump will then activate and release the park brake.
2. Brake status LED
 - a. When the brake status LED is solid red the brakes are applied.
 - b. When the brake status LED is flashing red the brakes are in the process of applying or releasing. A pulsing audible alert accompanies the flashing LED to indicate the brakes are in transition.
 - c. When the brake status LED is solid green the brakes are released.
3. Manual override button
 - a. The manual override button enables the operator to override any interlocks preventing the brake from releasing.
 - b. To operate, press and hold the manual override button. While the manual override button is depressed the brake can be released using the E-stop.
 - c. A constant alarm tone will indicate the manual override button is overriding one of the interlocks. In this instance, as soon as the button is released, the brakes will apply.
4. Fault code LED
 - a. The fault code LED only illuminates if a fault is detected in the system. Please refer to the troubleshooting section in the workshop manual for further details.

5. Highway speed isolation LED
 - a. The highway speed isolation system (HSI) is designed to prevent unintended brake application at high speeds.
 - b. When the vehicle is travelling above a pre-determined speed the HSI system will become active – this is indicated by the illumination of the green HSI LED.
 - c. While the HSI system is active, any interlocks attempting to apply the brake will be overridden – this will be indicated by a constant alarm tone.
 - d. The HSI system does not override the ignition interlock or E-stop button.
6. ATF LED
 - a. The amber ATF LED will illuminate if the fluid level in the ABT™ Failsafe pump reservoir drops below minimum.
7. Door interlock LED
 - a. The red door ajar LED will illuminate when the ignition is on and a vehicle door is open.
 - b. While this LED is illuminated the brake will be applied (unless manual override or HSI is active).
8. Seat belt interlock LED
 - a. The red seatbelt LED will illuminate when the ignition is on and the driver's seatbelt is disconnected.
 - b. While this LED is illuminated the brake will be applied (unless manual override or HSI is active).
9. Stall interlock LED
 - a. The red low engine oil pressure LED will illuminate when the ignition is on and the vehicle engine is not running.
 - b. While this LED is illuminated the brake will be applied (unless manual override or HSI is active).

6. Pre-Start Check

1. Check brake master cylinder reservoir level. If low, top up with DOT3 brake fluid and check system for leaks.
2. Check ABT™ Failsafe pump reservoir level. If low, top up with ATF Dexron III and check system for leaks.

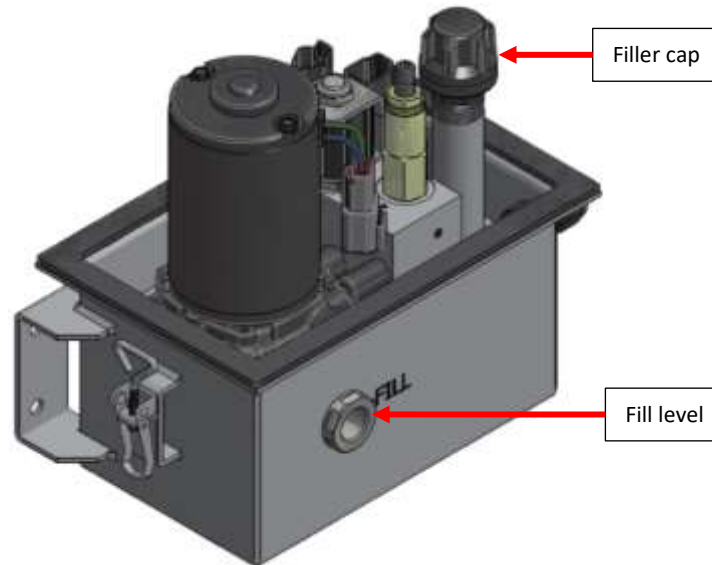


Figure 1: ABT™ Failsafe pump enclosure with lid removed.

3. With the doors closed, engine running and driver's seat belt connected, press the E-stop button:
 - a. The brake status light on the ABT™ Failsafe control unit should be solid red.
 - b. The park brake should be applied.
4. Twist and release the E-stop button:
 - a. The brake status light should flash red momentarily and then change to solid green.
 - b. The park brake should now be released.
5. Check the park/emergency brake applies when:
 - a. The E-stop is pressed.
 - b. The ignition is switched to the 'ACC' position.
 - c. The door is opened (door ajar warning light should display on control unit).
 - d. The driver seatbelt is released (seatbelt warning light should display on control unit).
 - e. The engine is stalled (low oil pressure warning light should display on control unit).
6. Check the service brake (foot brake) firmly applies the brake.
7. Drive the vehicle at 10 km/h. Press the E-stop button. The vehicle must stop within 5 metres or within 3 seconds.