

## INSPECTION AND REPLACEMENT OF HALDEX BRAKE AND SUSPENSION PRODUCTS SUBJECTED TO FLOOD AND/OR STORM SURGE

### Background:

Air brake valves, actuators and suspension valves have exhaust and or vent openings that can allow contamination to enter if these components have been submerged. While most flooding involves water, storm surges and hurricane caused floods carry large amounts of dirt, mud and other contaminants with the water. This water and contaminants can get into and seriously damage air brake valves, actuators and suspension products as well as wheel end components such as brake adjusters, brake linings/pads and bushings.

### CAUTION

While handling components that have been submerged in flood waters, caution should be taken to protect the technicians and environment. With vehicles or components that have been exposed to flood waters and unknown contaminants, Haldex recommends:

- Technicians wear personal protective equipment (face masks, gloves, protective body wear, etc) while exposed to contaminated vehicles or components.
- Consultation with local EPA officials regarding the proper handling and disposal of material associated with flood and unknown contamination. All hazardous waste and contamination from submerged vehicles and components should be disposed of in accordance with local EPA requirements.

### Inspection:

Inspect the vehicle for signs of water levels that have risen above the axle centerline of the vehicle. This includes indications that the water level has risen above the glad hands on trailers and dollies.

If there is any indication that the brake and/or suspension systems have been submerged or inundated by water or other debris or if there is a possibility that the systems have been submerged, the airbrake valves and actuators, Abs system components, electrical wiring harnesses and connectors, wheelend components and the suspension control valves should be replaced.

Indications of submersion include a mud, oil, water or debris line on the tires, frame or cab of the vehicle or mud or debris on the axle or brake system components.

No attempt should be made to clean or repair any of the air brake, ABS, wheelend, electrical or suspension system components. This caution on cleaning includes power

### Commercial Vehicle Systems

[www.haldex.com](http://www.haldex.com)

**Haldex Brake Products Corporation**  
10707 N.W. Airworld Drive  
Kansas City, MO 64153-1215  
USA

Phone: (816) 891-2470  
Fax: (816) 880-9766

washing or any high pressure water wash that may force water or cleaning solution into the valves or electrical devices.

### Wheel End Parts:

Wheel end brake hardware should also be inspected for contamination or damage and replaced. This includes inspection of camshafts and bushings and the replacement of brake adjusters, brake shoes and lining (or brake pads), ABS sensors and other wheelend brake hardware.

### ABS / Electrical System:

If the vehicle has been subjected to flood or submersion, mud, oils and other debris can seep into the electrical connections and damage the system components. All electrical and ABS system components should be replaced. This includes ABS ECUs, wire harnesses, speed sensors, sensor cables, the electrical harnesses and 7 way connectors

### Submerged Products or Systems:

Systems that show signs of having been submerged should have the entire system disassembled and replaced.

This includes the removal of all air brake lines (both plastic and rubber hose lines) from valves, reservoirs and actuators to assure that the lines are clean and not restricted, cut or damaged by the flood or debris.

All valves should be replaced to eliminate the possibility that contamination may have entered the valves or actuators and will prevent proper operation.

Valves and components that are on vehicles in floods and are above the water level need to be inspected for possible water in the lines leading to and from the valves. All lines should be removed and cleaned and inspected before being reinstalled.

Once all components have been inspected, cleaned or replaced, the system should be tested for leakage and operation before the vehicle is returned to service. Testing procedures are available from the Technology & Maintenance Council of American Trucking Association, the Truck Trailers Manufacturers Association,

For additional information regarding specific Haldex components, please contact Haldex Tech Services desk at 1-800-643-2374 (prompt 3).

### Commercial Vehicle Systems

[www.haldex.com](http://www.haldex.com)

**Haldex Brake Products Corporation**  
10707 N.W. Airworld Drive  
Kansas City, MO 64153-1215  
USA

Phone: (816) 891-2470  
Fax: (816) 880-9766