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HAXL-TEC-13

WATER CONTAMINATION DUE TO FLOODING CONDITIONS

SERVICE/TECHNICAL

DATE: September 13, 2017

TO: All Dana Heavy Axle Customers

HD AXLE INFO

Issue Description:

The purpose of this bulletin is to raise awareness of the increased potential for water contamination to drive axles, steer axles, and driveshafts due to any unusual flooding or high water conditions. Water contamination to grease and oil can cause premature wear and/or catastrophic failure of bearings, gearing and sealing systems. Proper inspections of the lubricant and axle components can reduce the potential for failures.

Drive Axle Inspection:

1. Place a CLEAN catch pan under the drive axle to be inspected. If the lube is not contaminated, it can be reused.
2. Remove the drain plug or bolt to drain lube from housing.
3. Visually inspect the lube for a milky appearance. See example below. If the appearance of the lube is questionable a “crackle test” can be perform to identify the presence of water.

Water Contaminated Lube – Milky

Water Contaminated Lube – Milky

Note: A crackle test can be performed by applying a couple drops of suspect lube on to a heated surface such as a hot plate. The surface should be greater than 400 degrees. If the lubricant pops and/or crackles on the heated surface, there is water in the lube. If the lube just smokes, no water is present.

Hot Plate

4. If water is indicated, the carrier assembly must be completely disassembled and a visual inspection of all bearings and machined surfaces should be performed. Components showing contamination damage including rust and/or pitting should be replaced, never repaired.
5. Pinion, input, and output seals should be replaced. Do not reuse.

Always refer to the appropriate Dana Service Manual for specific model being worked on for proper disassembly and reassembly procedures.

Steer Axle Inspection:

1. A visual inspection of all steer axle components is required for steer axles submerged in floodwaters.
2. King pin joints must be disassembled and inspected for contamination damage including rust and/or pitting of component surfaces. Damaged components should be replaced, never repaired.
3. Tie rod ends should be replaced due to inspection not being possible.
4. King pin seals should be replaced. Do not reuse.

Refer to Dana Service Manual AXSM0038 for proper disassembly and reassembly procedures

Wheel End Inspection:

1. Wheel ends should be disassembled and inspected for contamination damage including rust and/or pitting of component surfaces. Damaged components should be replaced, never repaired.
2. Wheel seals should not be reused.

Refer to Dana Service Manual WESM0060 for proper disassembly and reassembly procedures

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Driveshaft Inspection:

1. Driveshaft U-joints should be replaced due to the difficulty of inspection of the needle bearings.
2. Driveshaft slip joints should be disassembled and inspected for contamination damage including rust and/or pitting of component surfaces. Damaged components should be replaced, never repaired.

Refer to Dana Service Manual for proper disassembly and reassembly procedures

Note: This process is intended to reduce the risk of major failure to Dana driveshaft, wheel ends, drive and/or steer axles being partially or totally submerged during high water conditions or where vehicles are operated through a flooded area. Neither this process nor the use of it carries any expressed or implied warranty by Dana. This process does not completely eliminate the possibility of a failure that is a result of the axles being partially or totally submerged during flood conditions.

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Thank you for your support of genuine Spicer® products.