"DOCUMENT UNCONTROLLED IF PRINTED"						
DOC #	**PROCESS NAME**	**PAGE**	**REVISION**	**STATION**	**BY**	**DATE**
AR867	**Air Brake Hose Replacement**	**1 of 2**	**-**	**SER-E**	**C.Ward**	**4/23/2019**

Read process before beginning. If you do not understand any part please contact: Chris Ward, VP of Parts and Warranty at 1-866-953-5555 or by E-mail @ cward@ARBOCsv.com.
Good Mechanics safety practice must be followed on any repairs.
Safety practices should include but not be limited to properly supporting the chassis, axles, blocking tires, and a work area free of clutter.

Complaint: Flexible Brake hose damage
Cause: Hose between front air chambers and front brake valve making contact with axle on sharp turns
Correction: Complete visual inspection and change fittings to adjust angles

Vehicles Affected: 2018 Spirit of Equess (3121, 3423, 3424, 3429, 3427, 3434, 3435, 3436, 3466, 3467)
Labor Operation Code: 0121302
Labor Time Allowance: 1 hour per unit
Parts Returned: No

Tools Required

5/16" Wrench or Socket
Screw Gun

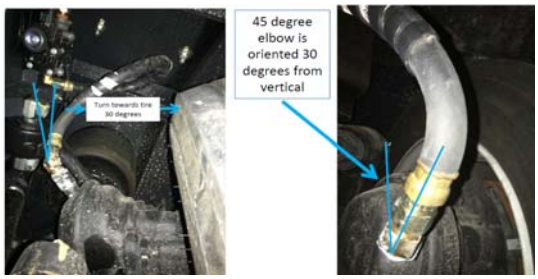
Parts Required

2	2007413	FTG, 45 DEG FLARE MALE 45 DEG ELBOW 1/2 TUBE X 1/2 MNPT
2	2004780	WASHER, METAL SEALING COPPER M16 SCREW
2	2006857	HOSE ASSY, AIR BRAKE 1/2" X 24" W/45 DEG FLARE FEMALE SWIVEL

Repair Procedure:

Step 1: Support or block the bus to prevent movement. Either on a lift, or with the wheel turned out, remove the flexible front brake hose from the brass elbow fittings.
Step 2: Remove the silver fitting adapter and brass elbow from the air brake chamber. On a bench, remove the brass elbow from the silver fitting, and clean the threads of the silver
Step 3: Clean the mating threads on the brake chamber

Step 4: The male end of the silver fitting uses a face seal with a copper crush washer 2004780 to seal to the brake chamber. No sealant should be used on these threads.
Step 5: The 90 degree elbow should be removed from the female end of the silver fitting. A 45 degree elbow, part number 2007413, is installed in the silver fitting. These are tapered pipe threads, and teflon sealant should be used.
Step 6: Replace the copper crush washer on the male end of the silver fitting, clean fitting and brake chamber, and reinstall fitting to brake chamber.
Step 7: After tightening the silver fitting hand tight, continue to rotate the fitting, crushing the copper gasket, until the 45 degree angled elbow is oriented At 1 o'clock (30 degrees from vertical) towards the tire (11 o'clock on the curb side).



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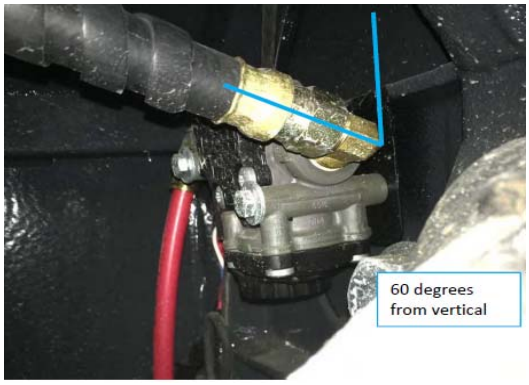
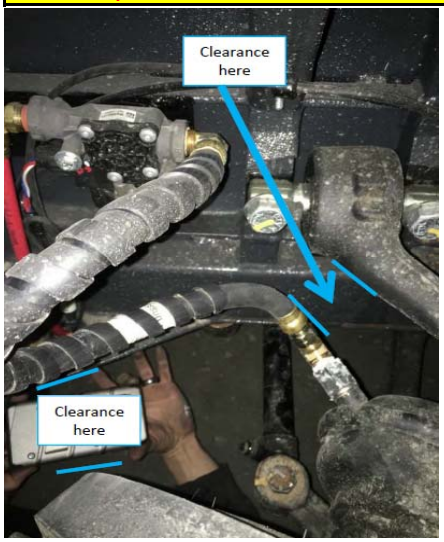


Step 8: The 90 degree elbow in the brake valve remains, but is rotated downward further to improve movement of the hose.
Step 9: 90 degree elbow should be rotate to 60 degrees below vertical (10 o'clock in streetside wheel well and 2 o'clock in curbside wheel well).
Step 10: Install new air brake hose to each fitting and tighten.
Step 11: Perform repairs to opposite side.

Rotation Inspection:



Step 1: If possible, the following check should be made with the air suspension completely deflated.
Step 2: Turn in – with someone in operator seat, turn the wheel fully inward and hold in full lock position.
Step 3: Have a second person inspect the clearance of the air hose at the brake chamber to the upper A-arm. There should be no contact between hose and A-arm.
Step 4: Inspect the wrap of the hose to confirm that hose has sufficient clearance from tire in turned-in state.
Step 5: If clearance is not sufficient, adjust angle of elbow at brake chamber away from A-arm.
Step 6: Perform similar check on opposite side.

Step 7: The following check can be made at normal ride height.
Step 8: Turn out - with someone in operator seat, turn the wheel fully outward and hold in full lock position.
Step 9: Have a second person inspect the extension of the air hose between the brake chamber and the brake valve. The hose should not be in tight tension.
Step 10: Inspect the bend near the brake chamber to confirm the hose is not pinched off.
Step 11: If flexibility is not sufficient, rotate the brake valve elbow further down to increase slack.
Step 12: Perform similar check on opposite side.