

NEWMAR CORPORATION WARRANTY DEPARTMENT

TECHNICAL SERVICE BULLETIN							
DATE ISSUED		MODEL YEAR(S) AFFECTED		MODEL(S) AFFECTED		TSB #	
10/2/08		2009		EXDP		356	
BRAND						TYPE	
All	<input type="checkbox"/>	American Star	<input type="checkbox"/>	Mountain Aire	<input type="checkbox"/>	All	<input type="checkbox"/>
Cypress	<input type="checkbox"/>	Dutch Star	<input type="checkbox"/>	Kountry Aire	<input type="checkbox"/>	T T	<input type="checkbox"/>
Northern Star	<input type="checkbox"/>	Kountry Star	<input type="checkbox"/>	Essex	<input checked="" type="checkbox"/>	F W	<input type="checkbox"/>
Scottsdale	<input type="checkbox"/>	King Aire	<input type="checkbox"/>	London Aire	<input type="checkbox"/>	C A	<input type="checkbox"/>
All Star ME	<input type="checkbox"/>	Ventana	<input type="checkbox"/>	Bay Star	<input type="checkbox"/>	D P	<input checked="" type="checkbox"/>
<input type="checkbox"/> Air Conditioning & Heating		<input type="checkbox"/> Electrical Components					
<input type="checkbox"/> Appliances & Accessories		<input type="checkbox"/> Exterior Components					
<input type="checkbox"/> Cabinets & Furniture		<input type="checkbox"/> Interior Components					
<input checked="" type="checkbox"/> Chassis Components		<input type="checkbox"/> Plumbing & Bath Components					
<input type="checkbox"/> Construction Components		<input type="checkbox"/> Windows, Awnings, Vents, & Doors					
DESCRIPTION OF PROBLEM							
<p>A condition may exist where the double check valve between the drive axle suspension and tag axle suspension is interfering with the automatic load sharing between the drive and tag axles.</p>							
RECOMMENDED SOLUTION							
<p>Spartan Motors has issued CSB08-350-004 campaign to address the load sharing concern. Read the attached manufacturers literature completely before beginning any diagnosis or repairs.</p> <p>Any questions should be directed to Spartan Motors directly.</p>							



SPARTAN CHASSIS, INC.

CSB08-350-004

September, 2008

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CAMPAIGN SERVICE BULLETIN

SUBJECT: Rear Suspension-Tag Axle

APPLIES TO: Certain Spartan K-2 Chassis equipped with a Hendrickson HTB™ 210 Suspension and Hadley® SLS (Self Leveling System). Having a VDM (Vehicle Date of Manufacture) of September 21, 2006 through July 15, 2008.

CONDITION: Double check valve between drive axle suspension and tag axle suspension is interfering with automatic load sharing between drive and tag axles.

CORRECTION: Eliminate double check valve between drive axle suspension and tag axle suspension.

PLEASE READ THE ENTIRE BULLETIN BEFORE PROCEEDING WITH ANY WORK. CONTACT SPARTAN CHASSIS IF THERE ARE ANY CONCERNS WITH THE PROCEDURES CONTAINED IN THIS DOCUMENT

PART / SERVICE INFORMATION:

Labor Time: 1.0 Hrs.

<u>QTY.</u>	<u>Part Number</u>	<u>Description</u>
1	S-1998-001A	Kit-Dump Valve

Kit # S-1998-001A Contains:

<u>QTY.</u>	<u>Part Number</u>	<u>Description</u>
1	2229-MM5-002	Dump Valve
1	2352-MM5-001	Relief Valve
1	0716-MM5-H02	Nipple-4
2	369PTC-4-4	90° Push to Connect-4-4
1	379PTC-4-4	45° Push to Connect-4-4
2	04200100H5Z	Hex Bolt 1/4"-20 UNC 1.00 Lg. Grad 5 Zinc
2	04LWZ	Lock Washer-1/4" Zinc
2	04FWSAEZ	Flat Washer-1/4"SAE Zinc
6	T-120RO	Cable Tie 15"
1	CSB08-350-004	Document Instructions

Technical Service Bulletins are intended for use by Professional Technicians only. They are written to guide Professional Technicians in performing service to vehicles of product specific nature in conjunction with industry standards. Professional Technicians are appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



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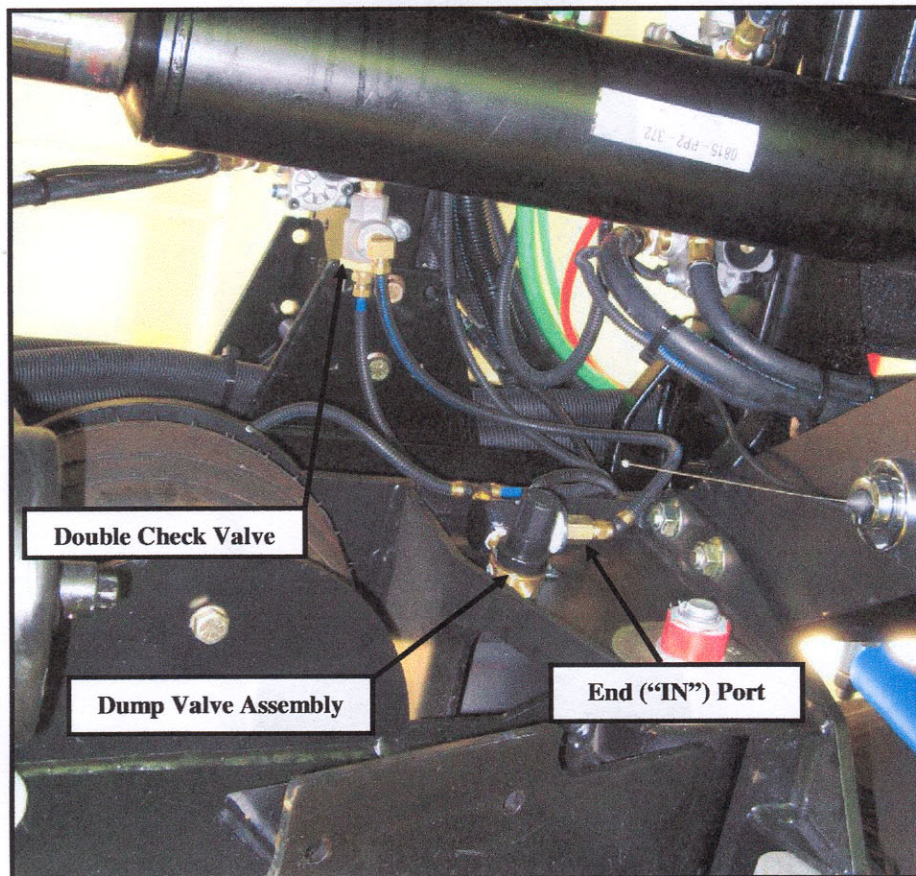
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STEP-BY-STEP INSTRUCTIONS:

1. Observe all industry safety standards, disconnect any necessary power source and secure vehicle for removing of double check valve and adding an additional dump valve assembly.



**PLUMBING OF DOUBLE CHECK VALVE SHOWN
FIG. 2-1**

2. Deflate suspension.
3. Refer to FIG. 2-1. Locate tag axle dump valve assembly located on inboard side of driver side rear suspension hanger. Disconnect air line connected to end ("IN") port.

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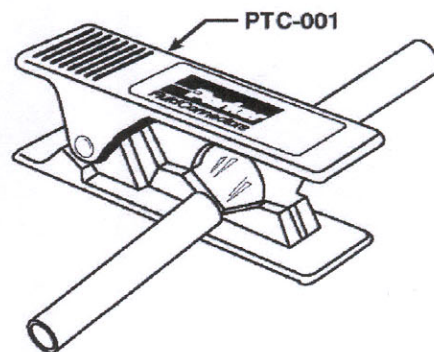
CAMPAIGN SERVICE BULLETIN

4. Refer to FIG. 2-1. Locate double check valve beneath cross member above rear suspension hanger. Refer to FIG. 7-1. Disconnect air line connected to end port pointed toward driver side frame rail and connect it to, now, open end ("IN") port in dump valve located in step # 3. (Refer to FIG. 3-1. Air line will need to be cut to appropriate length.)

Assembly Instructions

1. Cut tubing squarely—maximum of 15° angle allowable.
 - Use of Parker tube cutter PTC-001 is recommended.
2. Check that port or mating part is clean and free of debris.
3. Insert tubing into fitting until it bottoms.
 - Push twice to verify that tubing is inserted past collet and O-Ring.
4. Pull on tubing to verify it is fully inserted.
5. To disassemble, simply press release button, hold against body, and pull tubing out of fitting.

Note: in order to pass hot pull requirements of SAE J1131 a stainless steel tube support must be present in the end of the fitting before final fitting assembly.



Tubing Nomenclature

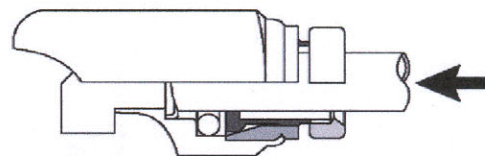
*P F T - 4 A - G R N - 1 0 0 0

HOSE OR
TUBING SIZE
4A 6B 8B 10B

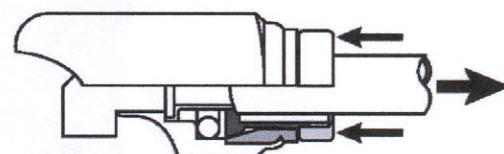
COLOR
GRN
BLU
BLK
YEL
ORG
RED
ETC.

LENGTH
(FEET)

*Order from Parker Parflex Division



Insert tubing until it bottoms



Depress button to remove tubing

PUSH TO CONNECT INSTRUCTIONS

FIG. 3-1

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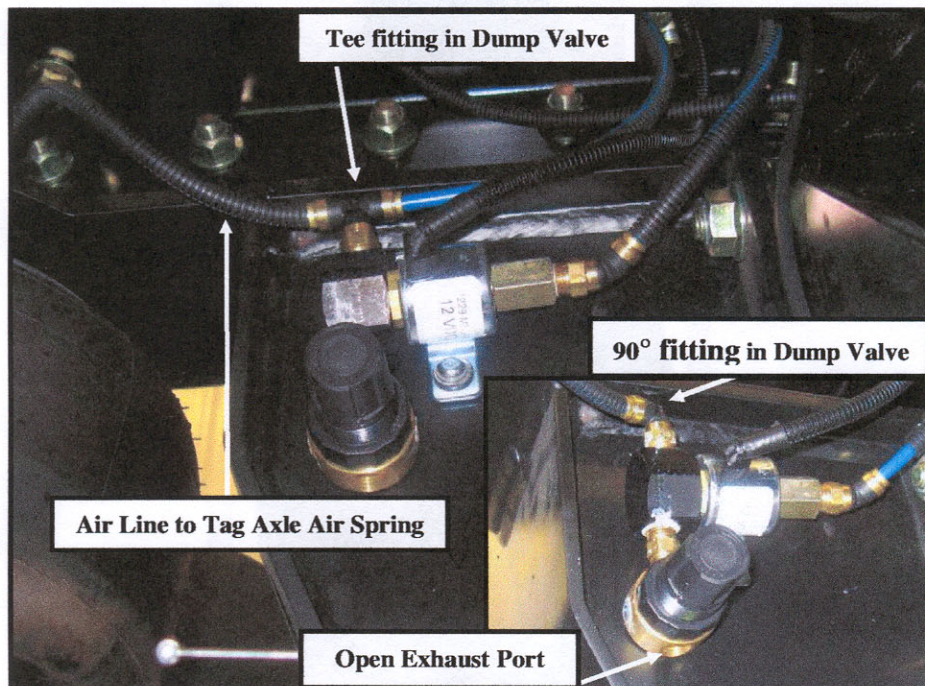
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NOTE: All fitting installations into the dump valve assembly require application of 81801 Pipe Sealant w/Teflon (or equivalent) to fitting threads only.

5. Refer to FIG. 4-1. Locate tag axle dump valve and perform the following steps:
 - a. Disconnect both air lines from tee on top of valve.
 - b. Remove tee and properly discard.
 - c. Install 90° fitting from kit in place of tee and point rearward.
 - d. Refer to FIG. 7-1. Of the two air lines removed from tee, locate the one leading to driver side tag axle air spring and connect it to the new 90° fitting. The remaining air line that was connected to tee will be rerouted and reconnected elsewhere in a later step.



**TEE (ORIGINAL) & 90° (REWORKED) SHOWN IN DUMP VALVE ASSEMBLY
FIG. 4-1**

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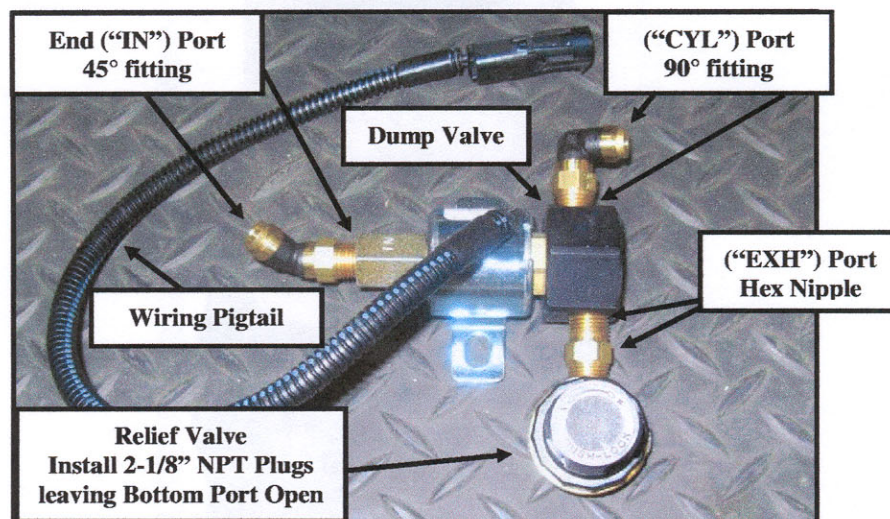
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SUB-ASSEMBLE DUMP VALVE

6. Refer to FIG. 5-1. Build dump valve assembly for passenger side.

NOTE: All fitting installations into the dump valve assembly require application of 81801 Pipe Sealant w/Teflon (or equivalent) to fitting threads only.

- a. Install 45° fitting into end ("IN") port of dump valve.
- b. Install 90° fitting into ("CYL") port of dump valve.
- c. Install hex nipple into ("EXH") port of dump valve.
- d. Screw relief valve onto nipple using 1/4" NPT ("IN") port of dump valve.
- e. Plug two 1/8" NPT ports in relief valve using plugs provided with relief valve. Leaving bottom port open for exhaust.



DUMP VALVE SUB ASSEMBLY PASSENGER SIDE

FIG. 5-1

7. Refer to FIG. 6-1. Attach passenger side dump valve assembly to two tapped holes on inboard side of passenger side suspension hanger using bolts and washers (flat & lock) from kit.

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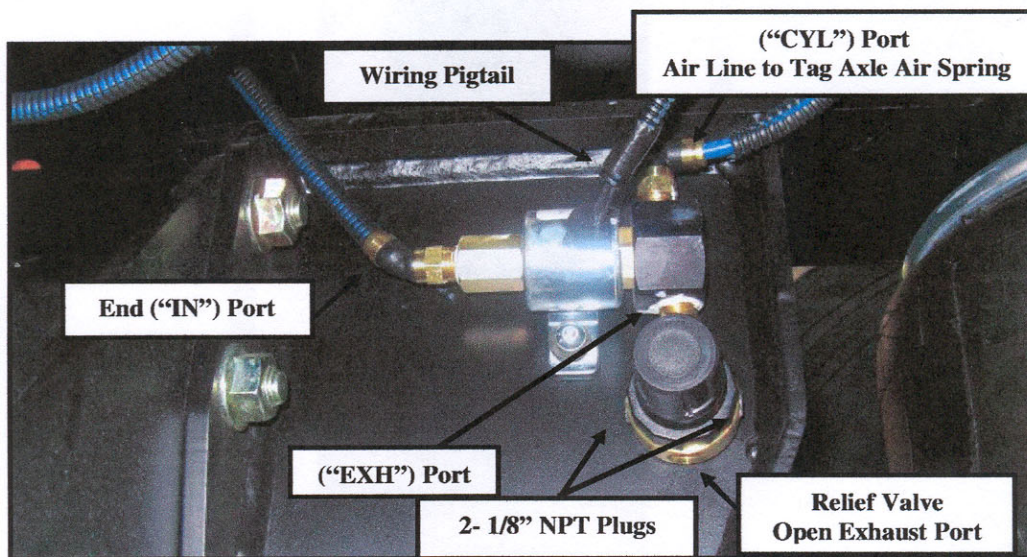
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8. Refer to FIG. 2-1. Locate double check valve. Disconnect air line connected to end port pointed towards passenger side frame rail, route air line to passenger side dump valve and connect it to end ("IN") port. (Refer to FIG. 3-1. Air line will need to be cut to appropriate length.)



DUMP VALVE PASSENGER SIDE
FIG. 6-1

9. Refer to FIG. 6-1 & 7-1. Locate the remaining air line that was connected to tee on top of driver side dump valve assembly and connect it to top ("CYL") port. (Refer to FIG. 3-1. Air line will need to be cut to appropriate length.)
10. Locate wiring harness drop out 2 cavity connector (Pink Wire SP360B & Black Wire SP006B) for passenger side dump valve assembly and connect it to pig tail on dump valve. (Drop out should break out of wiring harness above passenger side tag axle air spring.)
11. Using cable ties provided in kit, secure all wiring and air lines as needed.
12. Refer to FIG. 2-1. Remove double check valve and attached air line from chassis. Properly discard double check valve and air line.
13. Re-inflate suspension and check for any air leaks.

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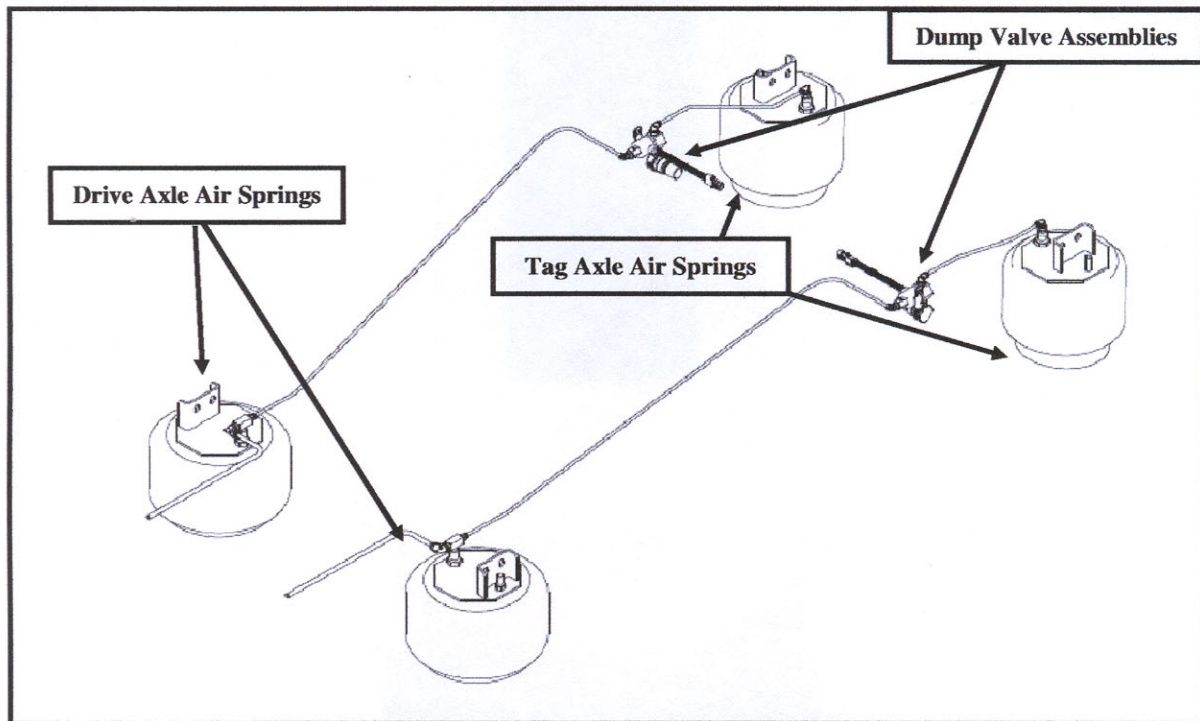
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14. Dump tag axle to verify it is functioning correctly and re-inflate.
15. Verify rear suspension ride height is correct.
16. Reconnect any power source previously disconnected.



AIR LINE PLUMBING FOR DUMP VALVE ASSEMBLY

FIG. 7-1

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