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# NEWMAR CORPORATION WARRANTY DEPARTMENT

TECHNICAL SERVICE BULLETIN							
DATE ISSUED	MODEL YEAR(S) AFFECTED		MODEL(S) AFFECTED		TSB #		
11/02/2012	2004-2012		Diesel Pushers		396		
BRAND						TYPE	
All	<input type="checkbox"/>	American Star	<input type="checkbox"/>	Mountain Aire	<input checked="" type="checkbox"/>	All	<input type="checkbox"/> TT <input type="checkbox"/>
Cypress	<input type="checkbox"/>	Dutch Star	<input type="checkbox"/>	Kountry Aire	<input type="checkbox"/>	FW	<input type="checkbox"/> CA <input type="checkbox"/>
Northern Star	<input type="checkbox"/>	Kountry Star	<input type="checkbox"/>	Essex	<input checked="" type="checkbox"/>	DP	<input checked="" type="checkbox"/> DB <input checked="" type="checkbox"/>
Scottsdale	<input type="checkbox"/>	King Aire	<input checked="" type="checkbox"/>	London Aire	<input type="checkbox"/>		
All Star ME	<input type="checkbox"/>	Ventana	<input type="checkbox"/>	Bay Star	<input type="checkbox"/>		
<input type="checkbox"/> Air Conditioning & Heating <input type="checkbox"/> Appliances & Accessories <input type="checkbox"/> Cabinets & Furniture <input checked="" type="checkbox"/> Chassis Components <input type="checkbox"/> Construction Components				<input type="checkbox"/> Electrical Components <input type="checkbox"/> Exterior Components <input type="checkbox"/> Interior Components <input type="checkbox"/> Plumbing & Bath Components <input type="checkbox"/> Windows, Awnings, Vents, & Doors			
DESCRIPTION OF PROBLEM							
Spartan Motors Chassis, Inc. has determined a potential defect may exist in certain vehicles, where air may be escaping around the ratio valve control port diaphragms.							
RECOMMENDED SOLUTION							
The bulletin applies to vehicles assembled by Spartan Motors Chassis, Inc. as motor home chassis between the dates of manufacturing September 30, 2004 until June 5, 2012.							
<b>CORRECTION:</b> Removal of ratio and associated valves & add second dump valve.							
Labor Time : 2.5 hours Part # S-2365-001B - Tag Dump Kit							
<p style="text-align: center;"><u>Read this bulletin in its entirety prior to beginning any diagnosis or repairs.</u></p>							



# Spartan Motors Chassis, Inc.

SERVICE BULLETIN

CSB12-350-001

8/30/2012

**SUBJECT:** Spartan Motors Chassis, Inc. has determined a defect relating to ratio valve may exist in certain vehicles.

**CONDITION:** Air may be escaping around the seal of the ratio valve control port diaphragm.

**APPLIES TO:** This bulletin applies to vehicles assembled by Spartan Motors Chassis, Inc. as motorhome chassis between vehicle dates of manufacturing of 9-30-2004 and 6-5-2012.

**CORRECTION:** Removal of ratio and associated valves. Add second tag dump valve.

**LABOR ALLOCATION:** 2.5 hrs.

**PARTS NEEDED:**

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	S-2365-001B	Kit - Tag Dump

**Kit # S-2365-001B Contains:**

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
6 FT	2517-MM5-001	Tube 1/4" air Blue
6 FT	2517-MM5-002	Nylon Tube 1/4" Black
1	0716-MM5-H02	FTG Brass Hex Nipple - 4
2	369PTC-4-4	FTG - 369PTC 4-4 90°
1	2229-MM5-001	Valve, Dump Tag 12V
1	2352-MM5-001	Valve, Relief Adjustable
4	05FWSAEZ	Washer - 5/16 Flat SAE Zinc
2	05180125H5Z	Bolt 5/16-18 X 1.25LG Hex GR5 Zinc
2	0518LNZ	Nut - 5/16-18 Lock Zinc
1	0716-MM5-K02	Fit Plug Brass Sq Head - 4
1	0716-MM5-MM02	Fitting-Brass Coupling - 4
1	0716-MM5-A05	Conn Brass M 6-4
12 FT	A130129	Loom 1/4" Use 8125BF
1	CSB12-350-001	Document Instruction

**GENERAL INSTRUCTIONS:**

Review entire work procedure before starting work. If there are questions or concerns with steps defined in this procedure, contact Spartan Motors Chassis, Inc. Customer Product Support.

All applicable industry safety standards must be followed when performing work identified in this procedure.

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.



## Spartan Motors Chassis, Inc.

SERVICE BULLETIN

CSB12-350-001

8/30/2012

### STEP-BY-STEP INSTRUCTIONS:

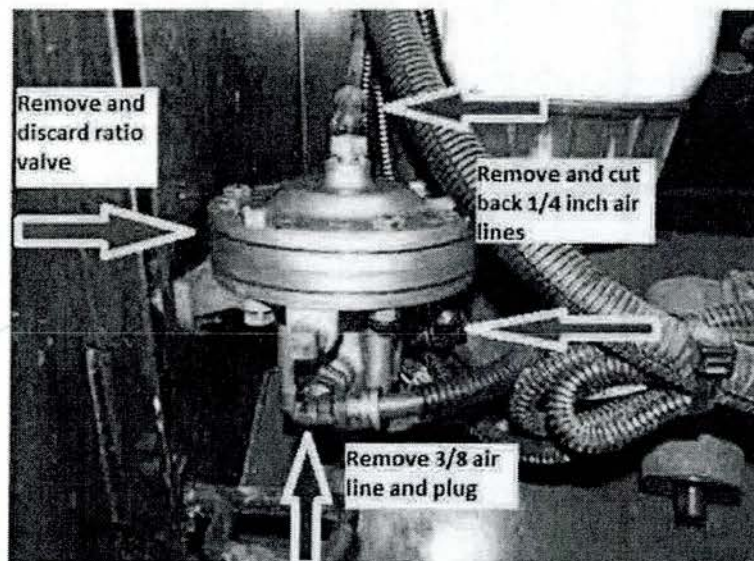
1. Drain the air out of the suspension using jack system or touch pad. Drain the wet, primary and secondary air tanks. Lower rear house jacks until there is adequate room to work under the motorhome, once desire height is reached set jack stands under the frame rail.



**WARNING**

Ensure that all personnel and equipment are clear from under/around the vehicle, failure to do so can cause serious personal injury, death, or property damage.

2. Locate ratio valve (normally located in the coach service center passenger side rear and perform the following (refer to FIG. 2-1):
  - Disconnect air lines to valve
  - Remove and discard the ratio valve
  - Cut back the two 1/4" lines (they will not be used).
  - Using provided plug (0716-MM5-K02), coupling (0716-MM-MM02) and brass connector (0716-MM5-A05) plug the 3/8" feed line that went to the ratio valve. Secure all air lines to bulk harness at the back of the service center.



**RATIO VALVE REMOVAL**

**FIG. 2-1**

3. Locate the rearward drive axle air springs; remove and discard the following (refer to FIG. 3-1):
  - Airlines that go from the air spring to double check valve
  - Double check valve
  - 1/4" air line that goes from double check to the ratio valve

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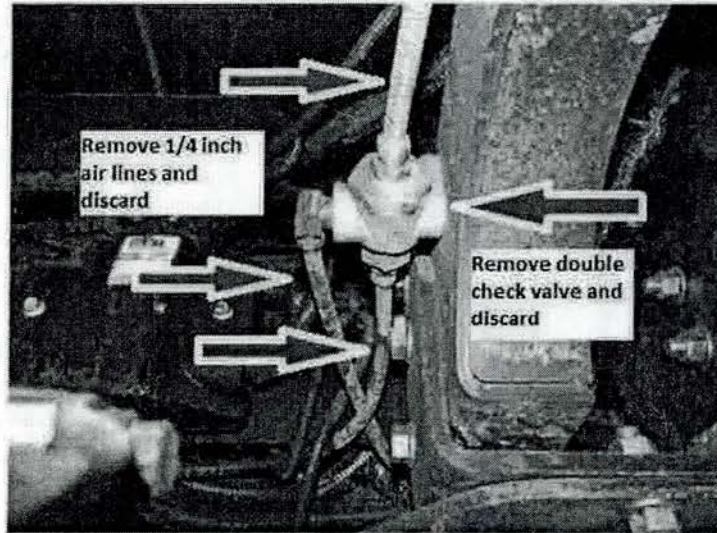


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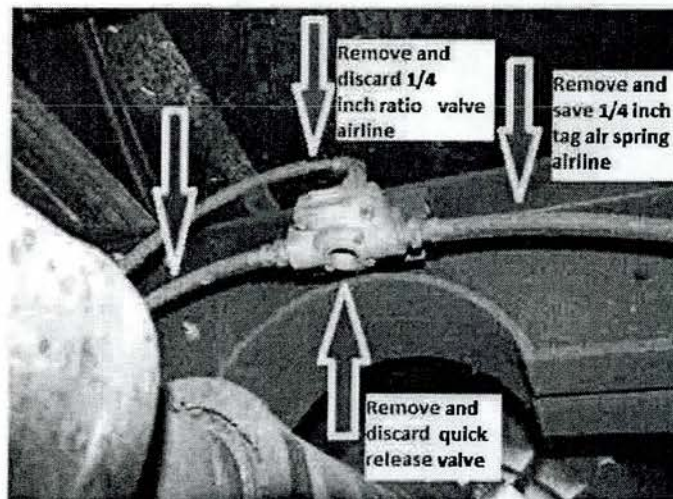
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**DOUBLE CHECK VALVE REMOVAL**

**FIG. 3-1**

4. Locate the tag axle air springs, follow and remove  $\frac{1}{4}$ " airlines that goes from the tag axle air springs to the quick release valve (retain airline for reuse). After removing the airline perform the following (refer to FIG. 3-2):
  - Remove and discard the quick release valve
  - Remove and discard  $\frac{1}{4}$ " line that goes from the quick release valve to tag dump valve
  - Remove and discard  $\frac{1}{4}$ " airline that goes from the tag dump valve to ratio valve.



**QUICK RELEASE VALVE REMOVAL**

**FIG. 3-2**

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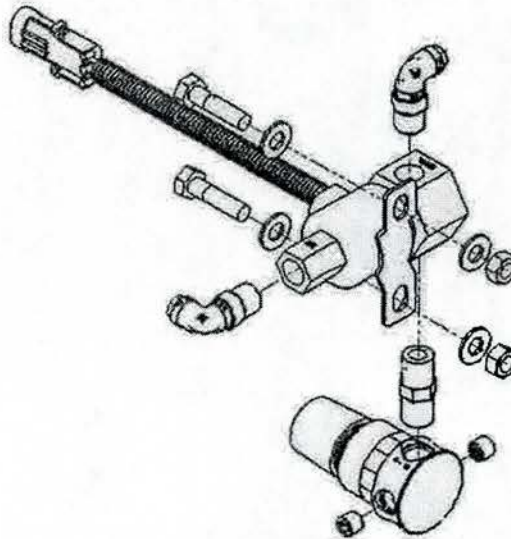
## Spartan Motors Chassis, Inc.

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5. For assembly of tag dump valve refer to FIG. 4-1 Valve Assembly.



**VALVE ASSEMBLY**

**FIG. 4-1**

6. Mount provided tag dump valve and hardware to the same cross member the other tag dump valve is located. There are mounting holes provided in cross member for bolt up (refer to FIG. 5-1 and 5-2). Locate bulk wiring harness mounted on the passenger side frame rail between the cross members where the double check valve and quick release valve were previously removed. In the bulk wiring harness there is a two pin weather pack male connector and the end plugged (one wire is pink SP360 and the other is black SP006). Remove plug and connect to the harness to the new tag dump valve, secure harness to cross member.

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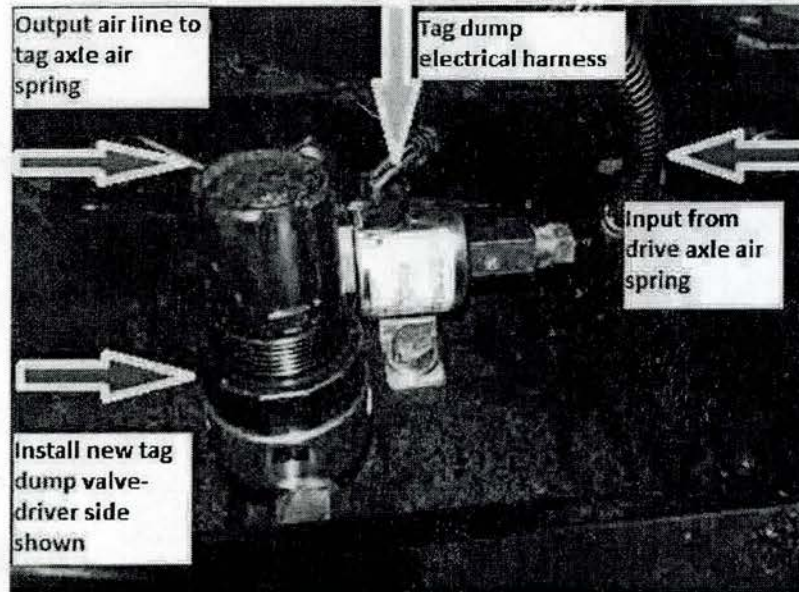


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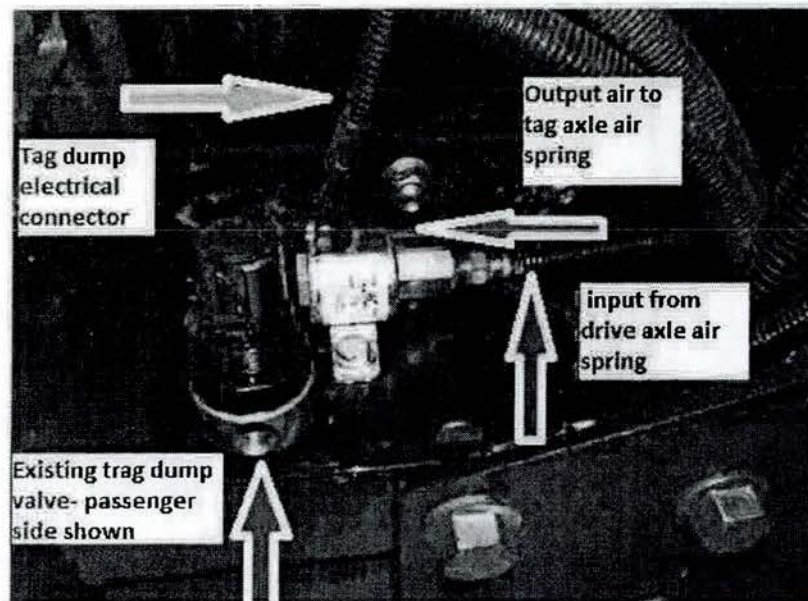
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ADDING TAG DUMP VALVE TO DRIVER SIDE

FIG. 5-1



EXISTING TAG DUMP PASSENGER SIDE

FIG. 5-2

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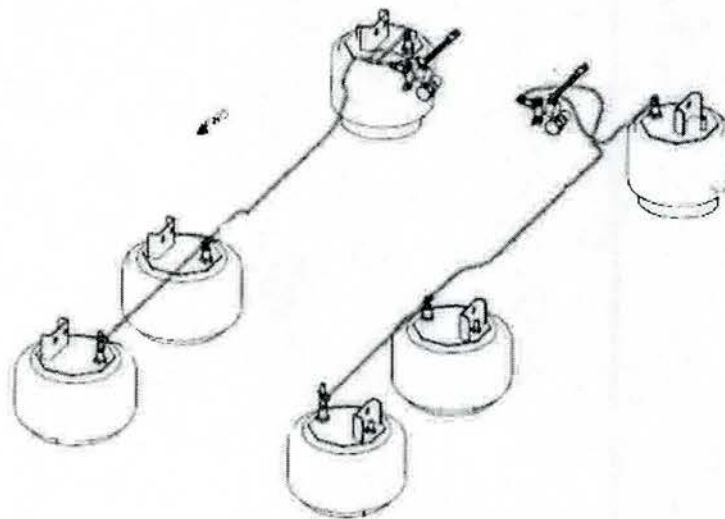
8/30/2012

7. Referencing the provided plumbing diagram (FIG. 6-1) perform the following:

- Using provided blue ¼" airline run a new line from the rearward drive air springs tag dump valve input.
- Using loom provided in parts kit wrap ¼" air lines.
- Using previously removed tag axle ¼" air lines connect the tag dump valve output to tag axle air springs.

**Note:** There is a tag dump for each side of the rear suspension. Each side of the rear suspension will flow via:

- Forward drive axle air spring
- Rearward drive axle air spring
- Tag dump valve
- Tag axle air spring



**SUSPENSION PLUMBING INSTALLATION**

**FIG. 6-1**

8. Verify coach operation and there are no leaks present at any of the fittings or valves added. Verify the tag dump feature is working.

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