

# NEWMAR CORPORATION WARRANTY DEPARTMENT

## TECHNICAL SERVICE BULLETIN

DATE ISSUED	MODEL YEAR(S) AFFECTED		MODEL(S) AFFECTED		TSB #
05/01/2012	2010-2012		Diesel Pushers		393
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 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					
<p>Certain Spartan Motor Chassis Inc., K2 Motor home chassis' with a 52k GVWR assembled by Spartan Motors Chassis Inc., between vehicle dates of manufacturing from 09/30/2010 through 11/22/11, may have undersized brake chambers installed for the park brake application on these affected vehicle configurations.</p>					
RECOMMENDED SOLUTION					
<ul style="list-style-type: none"> <li>Replace the brake chambers on affected units. (<u>Please see attached population list</u>).</li> </ul>					
<p>NHTSA#11V-587</p> <p><b>GENERAL INSTRUCTIONS:</b>          Please thoroughly review entire work procedure before starting work. If there are questions and/or concerns with steps defined in this procedure, Contact Spartan Motors Chassis, Inc. Customer Support Group.          All applicable industry safety standards must be followed when performing work identified in this procedure.</p>					



# Spartan Motors Chassis, Inc.

## SERVICE BULLETIN

RSB11-320-003

NHTSA Id: 11V-587

3/6/2012

**SUBJECT:** Spartan Motors Chassis, Inc. has determined a noncompliance to Federal Motor Vehicle Safety Standard (FMVSS 121) - Air Brake Systems may exist in certain incomplete, motorhome chassis.

**CONDITION:** Brake chambers may be undersized for the park brake application for the affected vehicle configuration.

**APPLIES TO:** This bulletin applies to certain K2 Motorhome chassis with a 52k GVWR assembled by Spartan Motors Chassis, Inc. between vehicle dates of manufacturing of 9-30-2010 and 11-22-2011.

**CORRECTION:** Replace brake chambers.

**LABOR ALLOCATION:** 1.0 Hour

**PARTS NEEDED:**

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	S-2348-001	Kit – Brake Chamber
As needed	81801 (or equivalent)	Sealer – Pipe Thread with Teflon

**Kit # S-2348-001 Contains:**

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
2	0684-MM1-001	Brake Chamber
2	2257-D-1174	Clevis Pin Retainer - Large
2	2257-C-1173	Clevis Pin Retainer - Small
1	RSB11-320-003	Document Instruction

**GENERAL INSTRUCTIONS:**

Please thoroughly review entire work procedure before starting work. If there are questions and/or concerns with steps defined in this procedure, Contact Spartan Motors Chassis, Inc. Customer Support Group.

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.



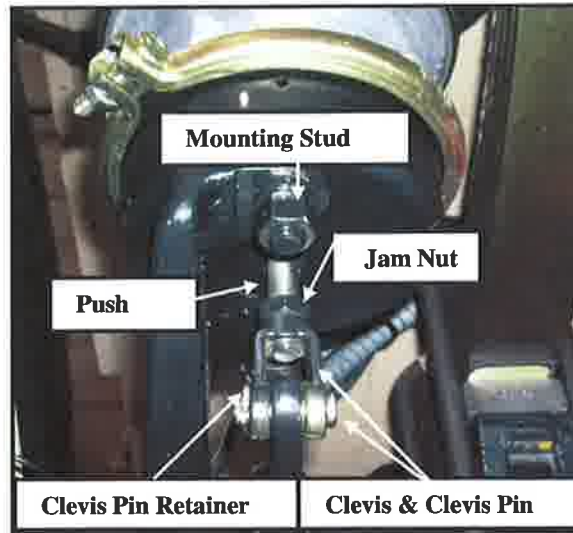
**STEP-BY-STEP INSTRUCTIONS:**

1. Observe all industry safety standards and secure vehicle for replacement of brake chambers.
2. Chock wheels to prevent vehicle movement.
3. Set the park brake (spring brake not pressurized).
4. Remove weather seal plug from the release tool access hole in the center of the spring brake.
5. Locate release tool (normally located in side pocket of chamber adapter base).
6. Insert the release tool bolt thru the access hole so the formed end of the tool bolt will engage the pressure plate inside the chamber. Continue to insert the bolt until it bottoms out. Turn the release bolt 1/4 turn clockwise and pull the bolt out to lock in place. If the bolt does not lock into position in less than 1/2" outward movement, repeat the procedure above until certain the bolt locks.
7. Holding the bolt locked into the pressure plate, install the flat washer and the release nut on release bolt finger tight only.
8. To cage the compression spring, tighten the release bolt nut with a hand wrench. **Do not use an impact wrench.** Make certain the service push rod is retracting while tightening the release tool nut.
9. When the service push rod stops moving and/or the release bolt torque reaches 35 lbs. ft., or the release tool extends beyond the nut more then 3.25", stop torqueing the release bolt. The brake is considered caged.
10. Refer to FIG. 3-1. Separate the slack adjuster from the clevis by removing the large and small clevis pin and retainer back the slack adjuster away from the clevis.



**Do not disconnect an airline until all air pressure from both air systems has been exhausted. Use drain valves on both primary and secondary air tanks to exhaust air.**

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**Brake Chamber Mounting**

**FIG. 3-1**



**Brake Chamber Shown Caged**

**FIG. 3-2**

11. Refer to FIG. 3-2. Remove the air lines from the brake chambers. Make note of which brake hose is in the service port and which is in the emergency port and label hose.

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**NOTE: The service port will always be closest to the clevis end of the chamber.**

12. Remove fittings from brake chamber. Retain fittings for reuse.
13. Remove mounting stud nuts, washers, and brake chamber.
14. Remove clevis from push rod.

**NOTE: It may be necessary to transfer the jam nut from the original brake chamber to the new one.**

15. Properly dispose of brake chambers.
16. Ensure new brake chamber is fully caged.
17. Install clevis on push rod of new brake chamber and adjust to 2.75" from mounting surface to center of clevis pin hole. **Note: Do not tighten jam nut at this time.**
18. Install new brake chamber onto mounting bracket, ensuring ports are realigned. Pre-tighten both nuts to approximately 25 lbs. ft. **Do not** install washers, between chamber and bracket. Torque mounting nuts to 135 - 155 lbs. ft.

**NOTE: Fitting installations require application of #81801 pipe thread sealer with Teflon (or equivalent) to the pipe threads.**

19. Reinstall fittings into brake chambers. Torque to 25-30 lbs. ft.
20. Refer to FIG. 3-2. Reinstall the brake hoses to the correct service and emergency brake ports and tighten. **Note: Service port marked #11 & spring port marked #12.**
21. Connect brake chamber clevis assembly to slack adjuster by installing large & small clevis pins & retainers supplied in kit. Torque jam nut to 50 lbs. ft.
22. Un-cage power spring and tighten release bolt to running position, use 50-60 lbs. ft. of torque.

**NOTE: DO NOT use power tools when caging and un-caging of unit.**

23. Check and set-up brakes as necessary.
  - a. Refer to Fig. 5-1. For set up measurements instructions.
  - b. The slack adjuster should be set up with a free stroke measurement approximately .25" greater than the specified allowable range.
  - c. The air system pressure should be built up to and maintained greater than 100 psi (either using shop air or running the engine).
  - d. The service brake pedal should be fully depressed and fully released several times (5-10).

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3/6/2012

- e. The free stroke measurement should be taken again – the measured value should be within specification.
  - i. If the measured value is less than the allowable range, the slack adjuster is not set up correctly.
  - ii. If the measured value is still greater than the allowable range, continue to pump the brakes until the measured value is within the allowable range. If the slack adjuster does not adjust itself into the proper range, the slack adjuster may not be set up right or it may be defective.



**FIG. 5-1**

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PSR	SALES ORDER	FPN	BDYBLD	VDM DTE	MOD ENG
1002	73428	K224360-060	NEWMAR (CHASSIS ONLY	9/30/2010	ISX 11.9L
1002	74461	K224360-060	NEWMAR (CHASSIS ONLY	3/7/2011	
1002	74510	K224360-060	NEWMAR (CHASSIS ONLY	3/14/2011	ISX
1002	74522	K224360-060	NEWMAR (CHASSIS ONLY	3/24/2011	ISX
1002	74570	K224360-060	NEWMAR (CHASSIS ONLY	4/4/2011	ISX
1002	74624	K224360-060	NEWMAR (CHASSIS ONLY	4/11/2011	ISX
1002	74663	K224360-060	NEWMAR (CHASSIS ONLY	4/11/2011	ISX
1002	74676	K224360-060	NEWMAR (CHASSIS ONLY	4/26/2011	ISX
1002	74681	K224360-060	NEWMAR (CHASSIS ONLY	4/27/2011	ISX
1002	74724	K224360-060	NEWMAR (CHASSIS ONLY	5/3/2011	ISX
1002	74742	K224360-060	NEWMAR (CHASSIS ONLY	5/18/2011	ISX
1002	74744	K224360-060	NEWMAR (CHASSIS ONLY	5/23/2011	ISX
1002	74767	K224360-060	NEWMAR (CHASSIS ONLY	5/24/2011	ISX
1002	74785	K224360-060	NEWMAR (CHASSIS ONLY	6/1/2011	ISX
1002	74786	K224360-060	NEWMAR (CHASSIS ONLY	6/1/2011	ISX
1002	74789	K224360-060	NEWMAR (CHASSIS ONLY	6/6/2011	ISX
1002	74790	K224360-060	NEWMAR (CHASSIS ONLY	6/8/2011	ISX
1002	74792	K224360-060	NEWMAR (CHASSIS ONLY	6/14/2011	ISX
1002	74793	K224360-060	NEWMAR (CHASSIS ONLY	6/14/2011	ISX
1002	74813	K224360-060	NEWMAR (CHASSIS ONLY	6/23/2011	ISX
1002	74814	K224360-060	NEWMAR (CHASSIS ONLY	6/23/2011	ISX
1002	74824	K224360-060	NEWMAR (CHASSIS ONLY	7/20/2011	ISX
1002	74825	K224360-060	NEWMAR (CHASSIS ONLY	7/27/2011	ISX
1002	74976	K224360-060	NEWMAR (CHASSIS ONLY	7/28/2011	ISX
1002	74989	K224360-060	NEWMAR (CHASSIS ONLY	8/3/2011	ISX
1002	75109	K224360-060	NEWMAR (CHASSIS ONLY	8/30/2011	ISX
1002	75252	K224360-060	NEWMAR (CHASSIS ONLY	9/29/2011	ISX
1002	75296	K224360-060	NEWMAR (CHASSIS ONLY	10/13/2011	ISX
1002	75313	K224360-060	NEWMAR (CHASSIS ONLY	10/20/2011	ISX
1002	75314	K224360-060	NEWMAR (CHASSIS ONLY	10/24/2011	ISX
1002	75316	K224360-060	NEWMAR (CHASSIS ONLY	10/27/2011	ISX
1002	75319	K224360-060	NEWMAR (CHASSIS ONLY	11/21/2011	ISX
1002	75320	K224360-060	NEWMAR (CHASSIS ONLY	11/21/2011	ISX
1002	75325	K224360-060	NEWMAR (CHASSIS ONLY	11/22/2011	ISX