

NEWMAR CORPORATION WARRANTY DEPARTMENT

TECHNICAL SERVICE BULLETIN																			
DATE ISSUED		MODEL YEAR(S) AFFECTED		MODEL(S) AFFECTED		TSB #													
4/18/08		2007-2008		DSDP, MADP, EXDP		340													
BRAND						TYPE													
All	<input type="checkbox"/>	American Star	<input type="checkbox"/>	Mountain Aire	<input checked="" type="checkbox"/>	All	<input type="checkbox"/>	T T	<input type="checkbox"/>										
Cypress	<input type="checkbox"/>	Dutch Star	<input checked="" type="checkbox"/>	Kountry Aire	<input type="checkbox"/>	F W	<input type="checkbox"/>	C A	<input type="checkbox"/>										
Northern Star	<input type="checkbox"/>	Kountry Star	<input type="checkbox"/>	Essex	<input checked="" type="checkbox"/>	D P	<input checked="" type="checkbox"/>	D B	<input type="checkbox"/>										
Scottsdale	<input type="checkbox"/>	King Aire	<input type="checkbox"/>	London Aire	<input type="checkbox"/>														
All Star ME	<input type="checkbox"/>	Ventana	<input type="checkbox"/>																
<table border="0"><tr><td><input type="checkbox"/> Air Conditioning & Heating</td><td><input type="checkbox"/> Electrical Components</td></tr><tr><td><input type="checkbox"/> Appliances & Accessories</td><td><input type="checkbox"/> Exterior Components</td></tr><tr><td><input type="checkbox"/> Cabinets & Furniture</td><td><input type="checkbox"/> Interior Components</td></tr><tr><td><input checked="" type="checkbox"/> Chassis Components</td><td><input type="checkbox"/> Plumbing & Bath Components</td></tr><tr><td><input type="checkbox"/> Construction Components</td><td><input type="checkbox"/> Windows, Awnings, Vents, & Doors</td></tr></table>										<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
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DESCRIPTION OF PROBLEM																			
<p>“Popping” or “Grinding” noises in the front end when IFS suspension is articulating.</p>																			
RECOMMENDED SOLUTION																			
<p>Spartan has issued their TSB08-250-001 to address this concern. Review the attached manufacturers repair procedure prior to performing any diagnostic or repair work. Any questions regarding this TSB should be directed to Wayne Ridge at Spartan Motors at: (517)-543-6400.</p>																			

If you have any questions regarding this T.S.B., please contact a Warranty Service Representative at Newmar Corporation.



SPARTAN CHASSIS, INC.

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March, 2008

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TECHNICAL SERVICE BULLETIN

SUBJECT: Front Suspension –Independent Front Suspension (IFS)

APPLIES TO: Certain Spartan Motorhomes equipped with a Tuthill 1460 or 1660 IFS and having IFS Serial numbers ranging from **979911** through **983168**. The VDM (Vehicle Date of Manufacture) is November 14, 2006 through December 20, 2007.

CONDITION: Popping/Grinding noise in front end during suspension articulation.

SPECIAL EQUIPMENT: Feeler Gauge

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:

Inspection report must be filled out and returned to Spartan Chassis, Inc. before payment will be authorized. Contact Spartan Chassis, Inc. for additional labor times.

Labor Time: Validating Proper Torque Specifications **1.0 Hrs.**
Replacement of two (2) A-arm pivot bolts per side **1.5 Hrs.**
Replacement of four (4) A-arm pivot bolts both sides **3.0Hrs.**

<u>QTY.</u>	<u>Part Number</u>	<u>Description</u>
1	S-1939-001	Kit- IFS Pivot Bolts
1	S-1939-002	Kit- Upper Control Arm (A-arm) & Pivot Bolts
As required	N/A	Adhesive Loctite® 242® Threadlocker

Kit # S-1939-001 Contains:

<u>QTY.</u>	<u>Part Number</u>	<u>Description</u>
1	K708319	Kit- IFS Pivot Bolts
1	TSB08-250-001	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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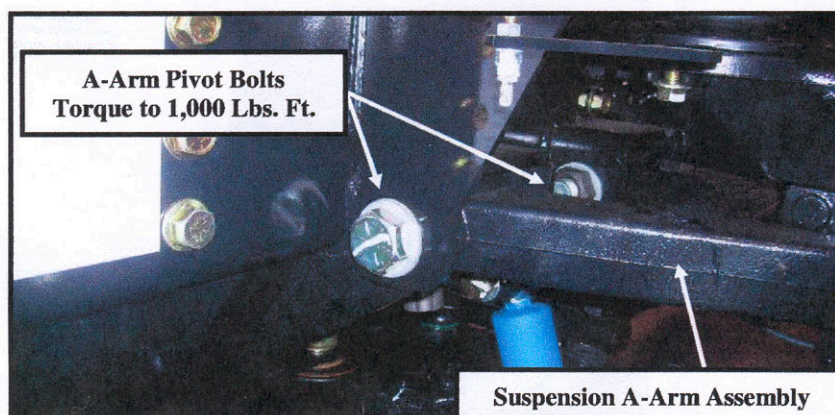
TECHNICAL SERVICE BULLETIN

Kit # S-1939-002 Contains:

<u>QTY.</u>	<u>Part Number</u>	<u>Description</u>
1	K708319	Kit- Pivot Bolts
1	703182-01	Upper Control Arm (A-arm)
1	TSB08-250-001	Document Instructions

STEP-BY-STEP INSTRUCTIONS:

1. Observe all industry safety standards, disconnect any necessary power source and secure vehicle for inspection/ replacement of upper A-arm pivot bolts.
2. Remove front wheel dressing and retain for reuse.
3. Jack up vehicle using the proper safety devices to support the vehicle.
4. Refer to FIG. 2-1. Remove front wheel assembly to gain access to the upper A-arm pivot bolts. Retain all hardware and wheel assembly for reuse.
5. Refer to FIG. 2-1. Using a torque wrench set to 1,000 lbs. ft. inspect to ensure both upper A-arm pivot bolts are at the proper torque value. If either (2) of the A-arm pivot bolts are found to be below the 1,000 lbs. ft. retorque bolts.



DRIVER SIDE A-ARM ASSEMBLY SHOWN

FIG. 2-1

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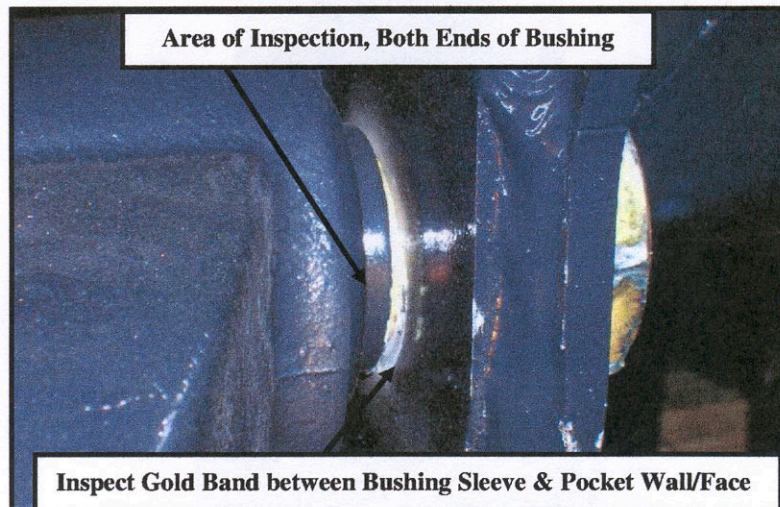
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6. Reinstall wheel assembly and torque (star pattern) to 450-500 lbs. ft.
7. Reinstall front wheel dressing and secure as needed.
8. Drive vehicle in straight forward manor if the vehicle is exhibiting a clunking sound, popping sound, or a grinding noise there is a possibility that a gap exists in the upper A-arm mount, between the bushing sleeve and pocket face. If the original noise is no longer audible no further work is required. If the original noise is still audible proceed with the following steps.
9. Remove front wheel dressing and retain for reuse.
10. Jack up vehicle using the proper safety devices to support the vehicle.
11. Remove front wheel assembly to gain access to the upper A-arm pivot bolts. Retain all hardware and wheel assembly for reuse.



INSPECT BUSHING

FIG. 3-1

12. Refer to FIG. 3-1. Inspect forward bushing and rearward bushing.
13. Check for gold band in between bushing sleeve and pocket wall on both sides of bushing in question.

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14. Continue inspection in absence of a gold band with feeler gauge (.002").
 - 14a. Slide the feeler gauge into all accessible areas around each end of the bushing sleeve and the pocket wall. If the gauge penetrates this area, there is a gap.
15. If any gap is found to go more than ½ way around, further inspection is required to determine possible wear to pocket wall/face.
16. Refer to FIG. 4-1. Disconnect height control linkage, at lower end of link. Take care not to exert stress to arm of valve as this may cause damage. With link off, and valve arm hanging down be sure the air exhausts from air spring.

NOTE: Some vehicles may not exhaust air from air springs if vehicle is supported by the leveling jack system. Air springs must be exhausted before proceeding. In this situation contact Spartan Customer Service.



HEIGHT CONTROL LINKAGE SHOWN
FIG. 4-1

17. Refer to FIG. 5-1. Support wheel end with floor jack with hubs steered straight ahead. Using impact with 1-11/16" socket and 1-11/16" wrench, loosen and remove (2) pivot bolts, being careful not to let A-arm fall down. **Do not** reuse pivot bolts.

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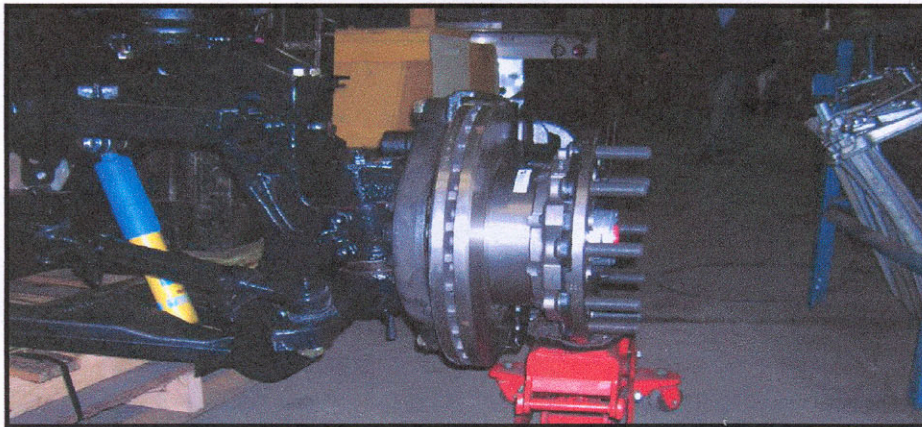
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WHEEL END SHOWN SUPPORTED

FIG. 5-1

18. Let bushing end of A-arm rest on shock mount.
19. Refer to FIG. 5-1 & 6-1. To gain access for inspection and possible resurfacing, remove the two bolts connecting bottom of air spring, support A-arm and slowly lower the wheel end. Then gently let A-arm down.
20. Refer to FIG. 6-1. Raise or lower A-arm to move the A-arm out of cradle pockets for inspection.
21. Refer to FIG. 6-2. Inspect the surface of the bushing mating area and inside of bushing pocket for wear. Wear deeper than 1/16" will require contacting Spartan Chassis Customer Service.

NOTE: For the following instruction apply Loctite® 242® Threadlocker to the bolts on the first five threads from the end of bolt.

22. Refer to FIG. 6-2. Inspect bushing for wear. Min. length is 4.874", Max. ID, measured horizontally is 1.189". Wear beyond these dimensions will require replacement of A-arm assembly. If A-arm replacement is necessary remove the two bolts attaching A-arm to steering knuckle carrier and remove A-arm. Retain bolts for reuse. When installing new A-arm (kit S-1939-002) attach the arm to the steering knuckle carrier with the original bolts. Torque to 365-385 lbs. ft.

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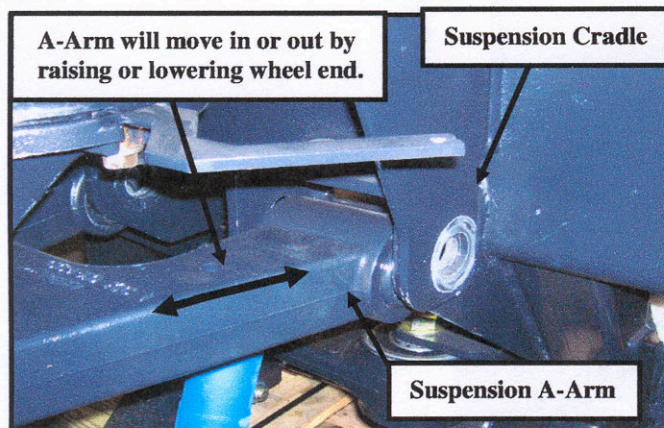
NOTE: When ordering kit(s) if upper control arm assembly is not needed order S-1939-001.

If upper control arm assembly is needed order kit S-1939-002 which includes the pivot bolts.

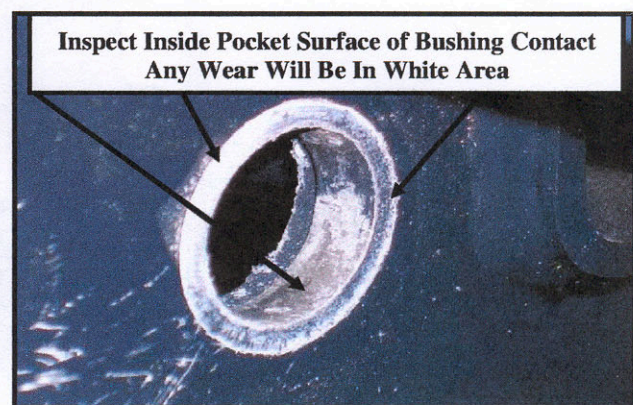
23. The diameter of the bolt hole in the cradle will also need to be measured horizontally at mating side. Max. Allowable diameter is 1.231". If wear is beyond this dimension contact Spartan Chassis Customer Service. Wear is not expected to affect the top to bottom of hole.
24. After approving, repairing surface, or replacing A-arm reassemble A-arm connection to cradle with new pivot bolts, nuts and washers supplied in kit (S-1939-001). **Do not** use loctite on pivot bolts. Do not tighten pivot bolts at this time.

NOTE: For the following instruction apply Loctite® 242® Threadlocker to the bolts on the first five threads from the end of bolt.

25. Reinstall (2) bolts back in bottom of air spring connection and torque to 35 lbs. ft.



**A-ARM WITH PIVOT
BOLTS REMOVED
FIG. 6-1**



**INSPECT CRADLE FOR WEAR
AS SHOWN
FIG. 6-2**

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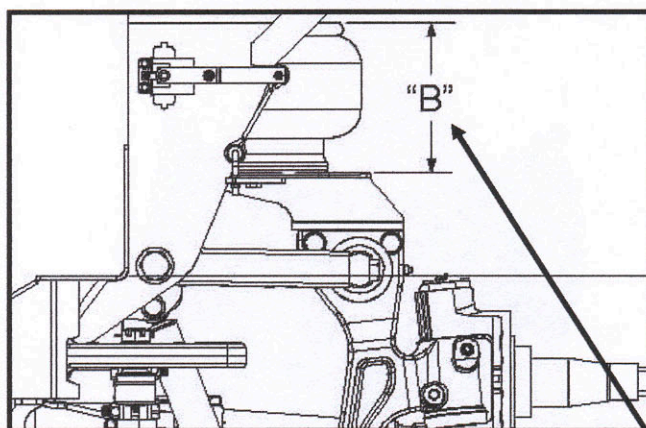
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26. Refer to FIG. 7-1. With new fasteners installed, use jack under wheel end to bring air spring height to **9" for 1460 IFS model or 9-1/4" for 1660 IFS model.**

NOTE: It is important to have suspension at designed ride height when pivot bolts are tightened.

27. With wheel end at correct height, use 1/2" impact to snug up pivot bolts. Then use multiplier and/or torque wrench for a final torque of 1,000 lbs. ft.
28. Remove floor jack supporting wheel end. Reconnect height control linkage.
29. Reinstall wheel assembly, remove safety supports and set coach down.
30. Torque lug nuts (star pattern) to 450-500 lbs. ft.
31. Reinstall wheel dressing and secure.
32. If needed repeat this procedure on opposite side.
33. Reconnect any power source previously disconnected.



**Measure from Bottom of Air Spring Base to Top of Air Spring
1460 IFS Ride Height Set to 9.00" 1660 IFS Ride Height Set to 9-1/4"**

MEASURING RIDE HEIGHT

FIG. 7-1

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Inspection report

Customer Name: _____ VIN # _____
Date of Inspection: _____
Inspected By: _____
Service Facility: _____
Service Facility Address: _____
Invoice Number: _____
IFS Serial Number: _____
Mileage: _____

The vehicle indicated above was inspected/repared in our service facility according to instructions provided to us in the Spartan Chassis Technical Bulletin TSB08-250-001.

Please Write the Number of Fasteners Replaced in the Appropriate Box Below

☐

Right Side of Vehicle Number of Fasteners (Pivot Bolt) Replaced

☐

Left Side of Vehicle Number of Fasteners (Pivot Bolt) Replaced

We have validated and / or repaired all defective materials required as indicated above.

Signature: _____ Date: _____

This form must be completed and returned to Spartan Chassis, Inc. before payment will be authorized.

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