

Group:	48-Suspension
Bulletin No.:	SB-15-022
Issue Date:	03-17-2015

TECHNICAL SERVICE BULLETIN

23K HD (Heavy Duty) Comfort Ride Conversion

CONDITION:

In the rare event that a subject vehicle equipped with the 23k Comfort Ride air suspension experiences a premature main leaf failure, a 23k HD Comfort Ride air suspension may be installed with **PRIOR APPROVAL** from **HMM QA**.

<Premature Failure Criteria>

Mileage: less than 60,000.

Time in service: less than 2 years.

History of failure within the fleet will be considered.

<Prior Approval Process>

- 1) If the failure is determined to be within criteria contact HMM QA PRIOR to ordering parts.
- 2) HMM QA will evaluate the failure with the supplier and determine action.
- 3) HMM QA and the supplier may want to go and see the failure prior to deciding repair direction.
- 4) Decision regarding approval will be provided within 48 hours.

NOTE: This procedure is provided as technical information and is not an authorization for a warranty repair.

SUBJECT VEHICLES:

2008 through 2013 model year conventional model trucks built with a 23k Comfort Ride air suspension.

BEFORE YOU BEGIN:

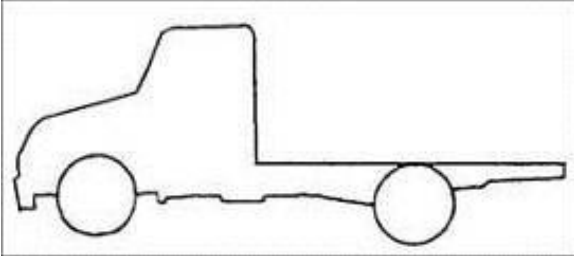
- Read and understand all instructions and procedures before you begin work
- Read and follow all WARNINGS and NOTICES set forth in this publication. These alerts help to avoid damage to components, serious personal injury or both.
- Park the vehicle on a flat, level and solid surface.
- Place the gear shift lever in "Neutral" or "Park".
- Apply the parking brake firmly and confirm parking brake activation.
- Turn off the engine and remove the key from the ignition switch.
- Always wear safety glasses or goggles to protect your eyes.
- Place wheel chocks in front of and behind the front wheels to prevent the vehicle from moving.

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VEHICLE PREPARATION:

1. Park the vehicle on level ground.



2. Confirm the engine is stopped, the ignition switch in the off (LOCK) position and the key is removed.



3. Apply the parking brake.



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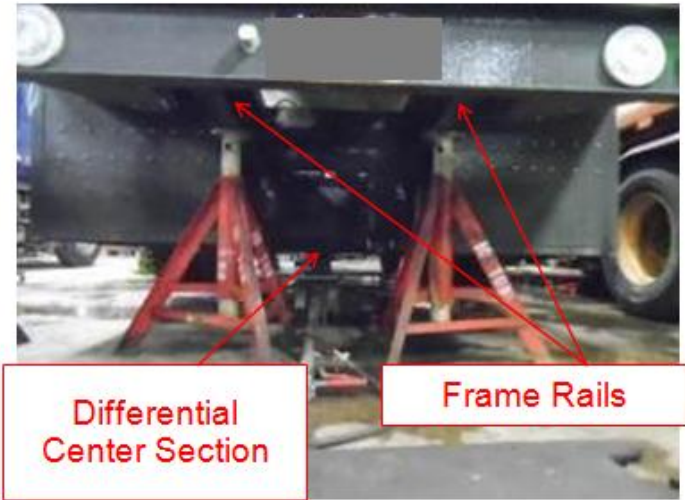
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4. Chock the front wheels.



REPAIR PROCEDURE:

1. Raise the vehicle and support the rear frame rails with jack stands.



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2. Support the rear differential center section. Also place another jack stand under the pinion bearing area of the differential.

WARNING: Do not remove jack stand or jack from under differential until this repair procedure is completed.



3. Remove the rear fenders on both right and left sides of vehicle if equipped.

NOTE: Depending on the particular vehicle the rear fenders may have to be removed to allow you to remove the rear wheels and access to the rear suspension components and frame hangers.



4. Remove both sets of the right and left rear wheels.



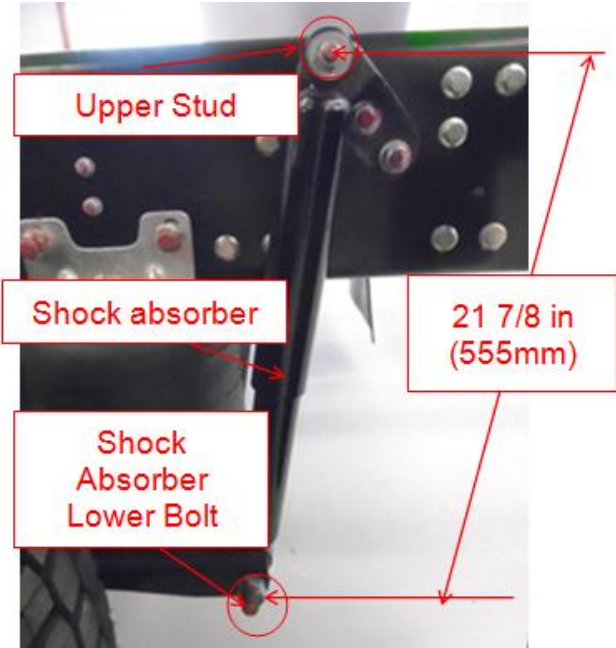
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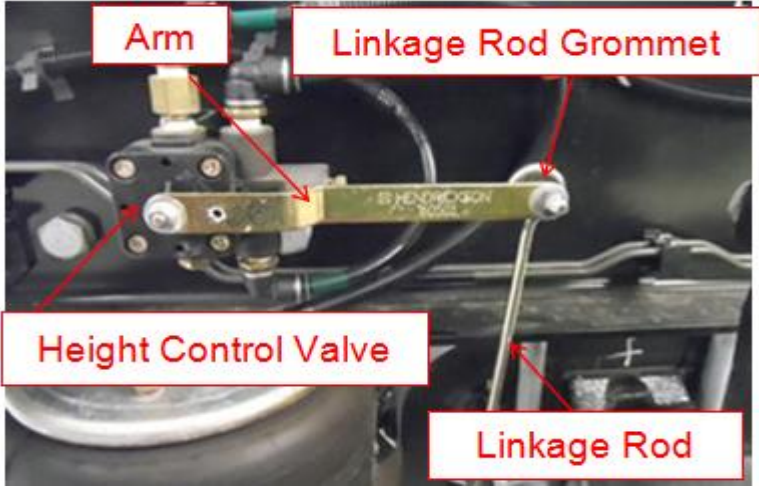
5. Measure the ride height from the center of the left side shock absorber upper stud and the center of the lower bolt. The height should be at the specified ride height.

HINO SPECIFICATION: 21 7/8 in (555mm)

NOTE: If the ride height is not at the specified height it will be necessary to adjust the ride height after steps 6 through 8 are completed.

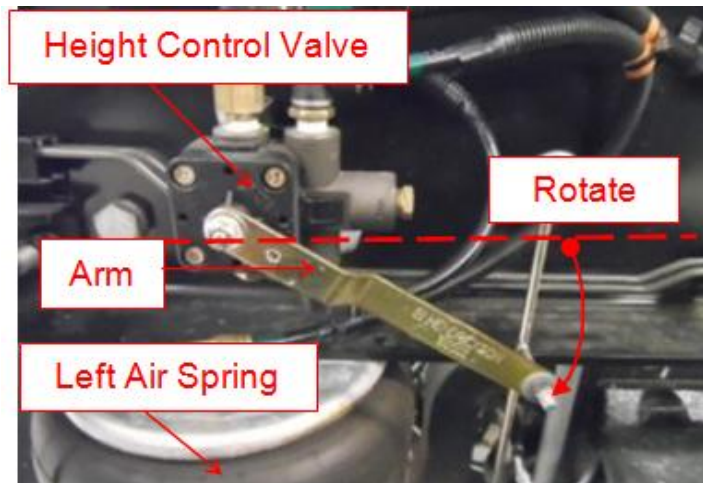


6. Disconnect the height control valve arm by removing the linkage rod grommet from the height control valve arm.



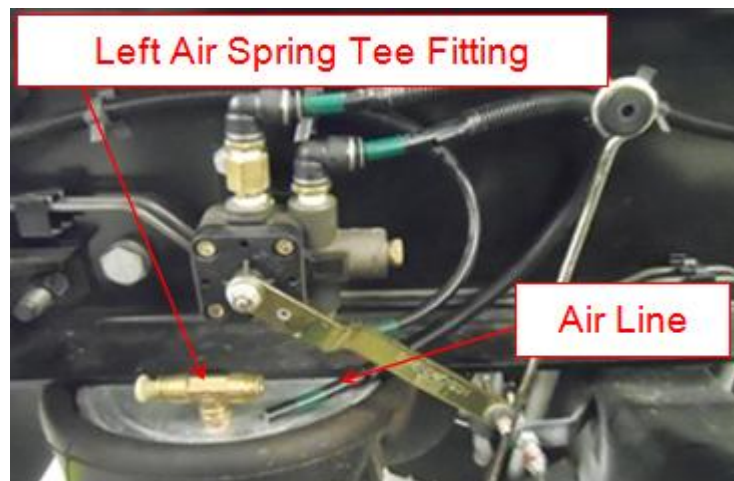
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7. Rotate the arm on the height control valve downward. This will exhaust the air from the right and left air springs.



8. Disconnect the air line from both the right air spring tee fitting and the left air spring tee fitting.

NOTE: The left air spring is shown in the photo as a reference.



NOTE: If the ride height is out of specification, adjust the ride height to specification using a jack under the differential center section. It will also be necessary to adjust the jack stand under pinion bearing area of the differential if the differential is raised or lowered to adjust the ride height.

HINO Specification: 21 7/8 in (555mm)

WARNING: Do not continue to step 9 unless the air line is disconnected from both the right air spring and left air spring.

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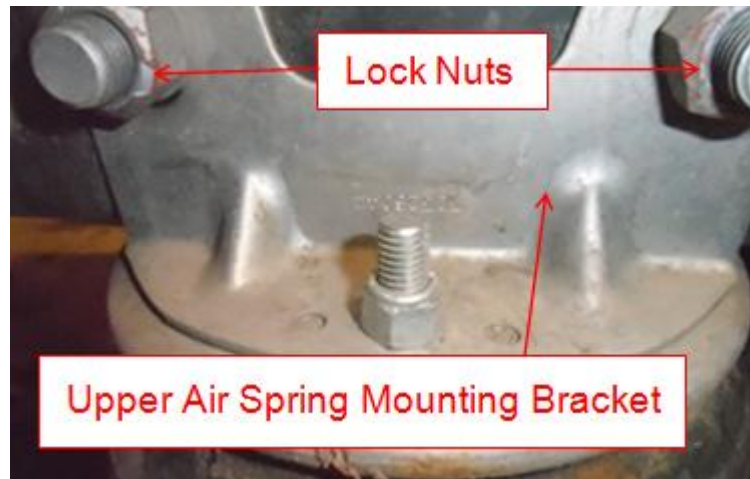
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9. Remove the right and left side lower shock absorber nuts, washers and bolts and set them aside.

NOTE: The left shock absorber is shown in the photo as a reference.

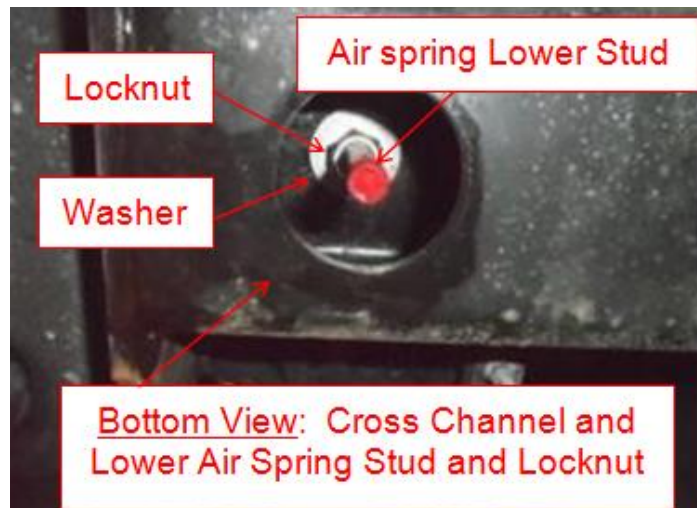


10. Remove the 2 lock nuts, 2 bolts and 2 washers from the left air spring upper mounting bracket. Discard the bolts, washers and nuts.



11. Spray some penetrant on the left air spring locknut and lower stud. After penetrant is sprayed, remove the left air spring stud lock nut and washer. Discard the lock nut.

NOTE: Care should be taken not to break the air spring lower stud.



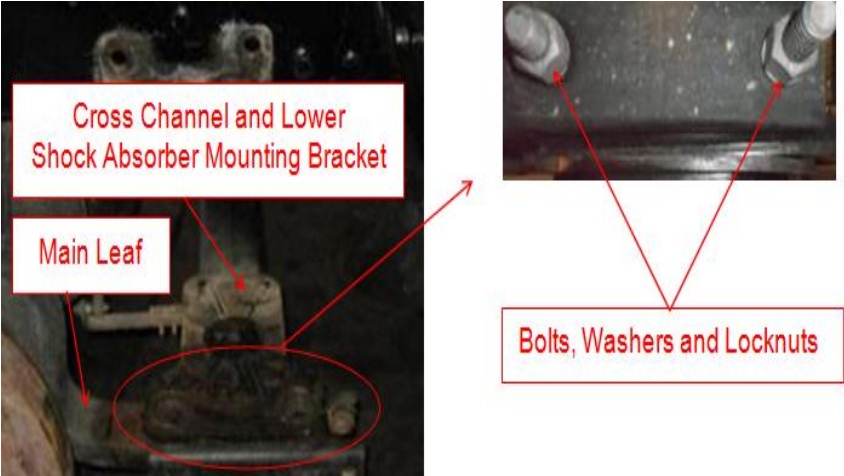
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12. Remove the left air spring from the vehicle.



13. Remove the 2 bolts, 2 washers and 2 locknuts that connect the cross channel and left lower shock absorber mounting bracket with the main leaf. Discard the bolts, washers and nuts.



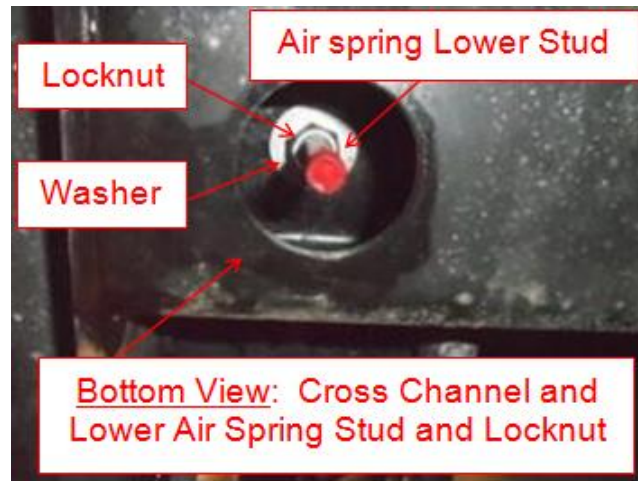
14. Remove the 2 lock nuts, 2 bolts and 2 washers from the right air spring upper mounting bracket. Discard the bolts, washers and lock nuts.



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15. Spray some penetrant on the right air spring locknut and lower stud. After penetrant is sprayed, remove the right air spring stud lock nut and washer. Discard the lock nut.

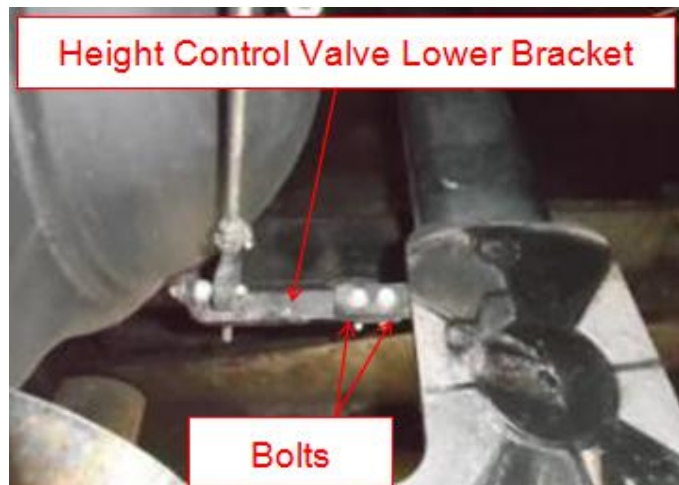
NOTE: Care should be taken not to break the air spring lower stud.



16. Remove the right air spring from the vehicle.



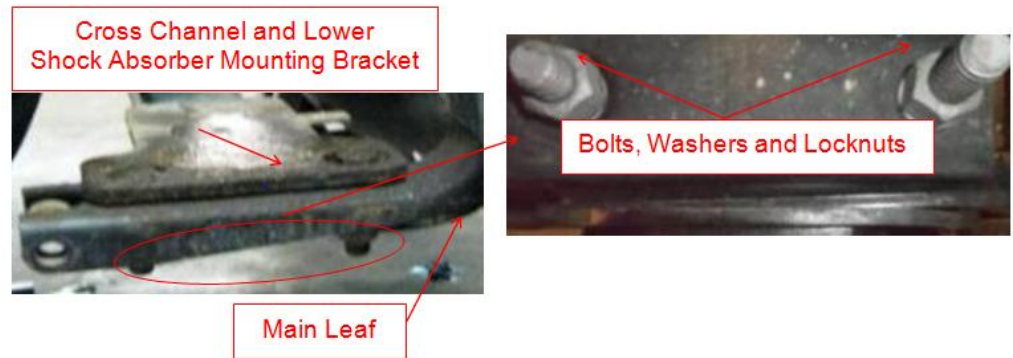
17. Remove the 2 bolts, 4 washers, 2 locknuts and then remove the height control valve from the cross channel. Discard the 2 bolts, 4 washers and 2 locknuts.



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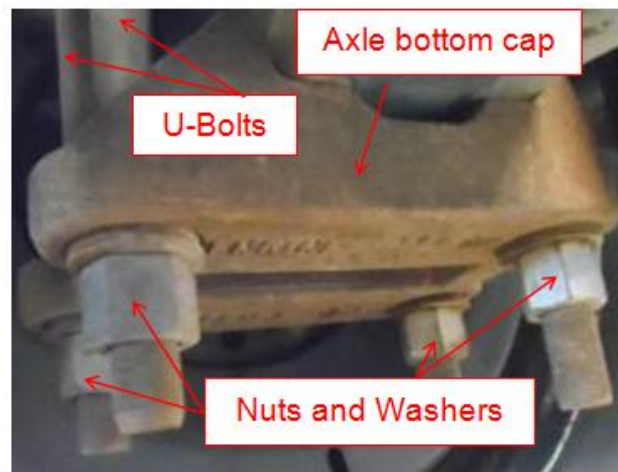
18. Remove the 2 bolts, 2 washers and 2 locknuts that connect the cross channel and right side lower shock absorber mounting bracket with the main leaf. Discard the bolts, washers and nuts.



19. Remove the cross channel and both the left and right lower shock absorber mounting brackets. Discard the cross channel.



20. Remove the 4 nuts, 4 washers and 2 U-bolts from the left axle bottom cap. Discard the U-bolts, nuts and washers.



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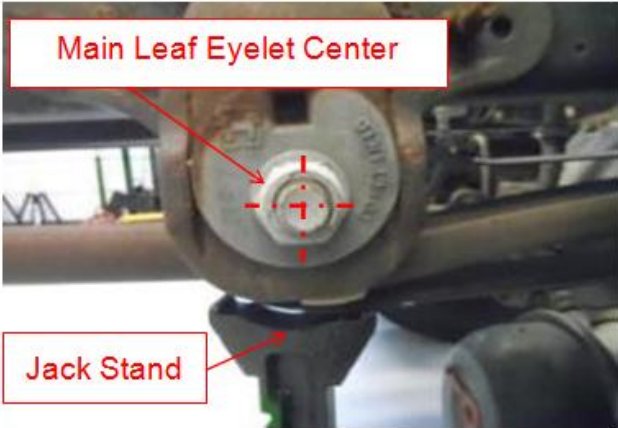
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21. Remove the left top spring pad.

NOTE: The U-bolts have been removed in the photo.

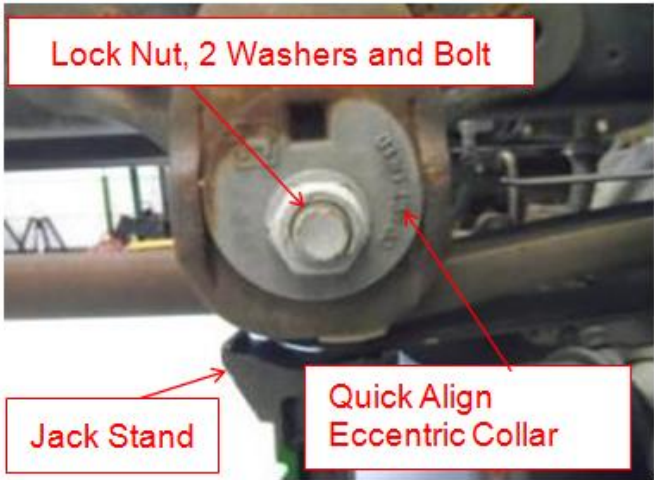


22. Position another jack stand under the center of the left side main leaf eyelet.



23. Remove the lock nut, 2 washers, bolt, Quick Align Eccentric Collar and Quick Align Concentric Collar. Discard all of these components.

NOTE: Quick Align Concentric Collar is not visible in photo.



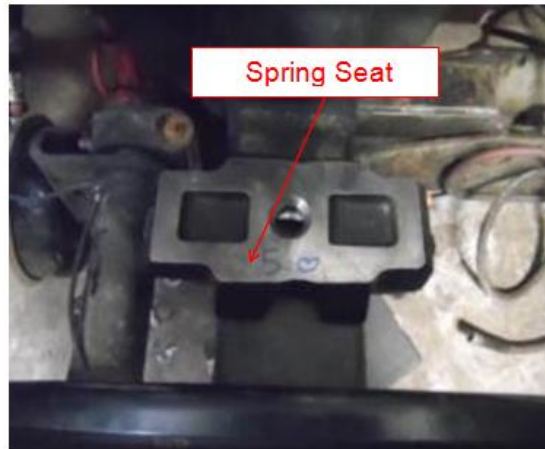
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24. Remove the left main leaf and discard.

NOTE: The jack stand under the main leaf eyelet has been removed in the photo

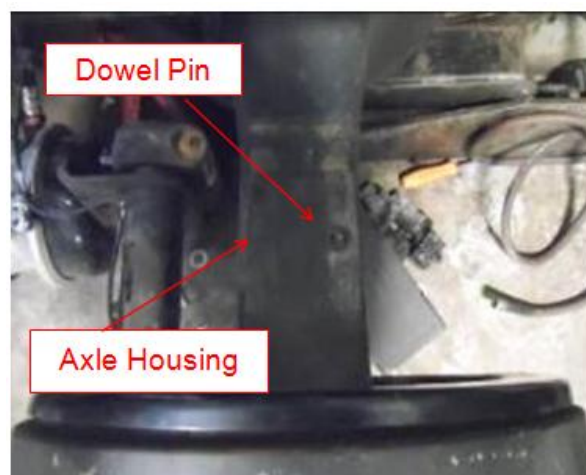


25. Remove the left spring seat from the axle housing.



26. Visually inspect the axle housing and the dowel pin on the left side to confirm no signs of damage.

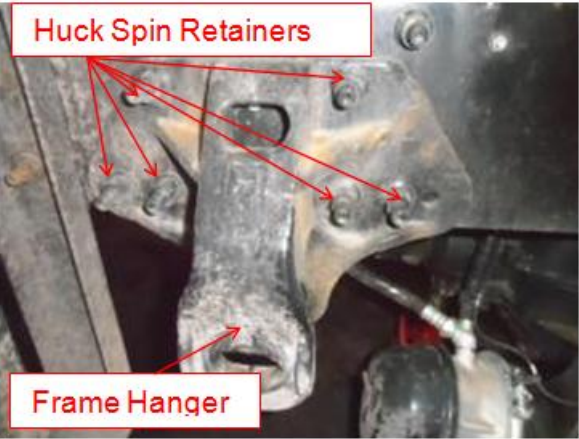
NOTE: Repair or replace as necessary.



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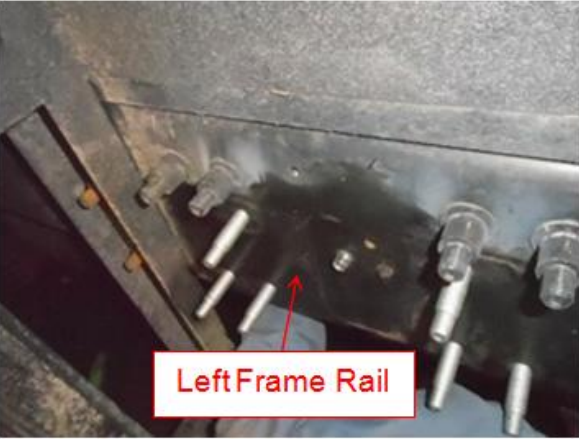
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27. Remove the 6 huck spin retainers from the left frame hanger and discard them.



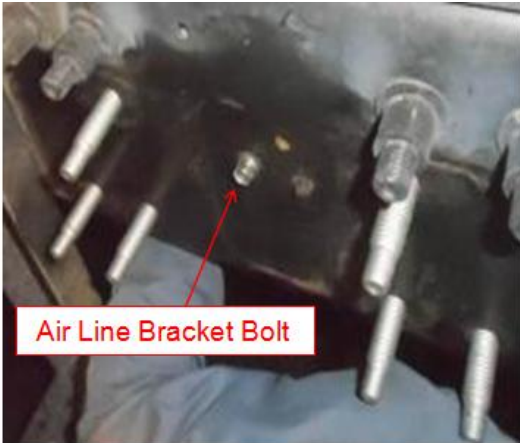
28. Remove the left frame hanger from the frame rail and discard it.

NOTE: The photo shows the left frame rail with the frame hanger removed.



29. Remove the left side air line bracket bolt.

NOTE: The bolt which is shown in the photo, secures an air line bracket located on the inner edge of the frame rail.

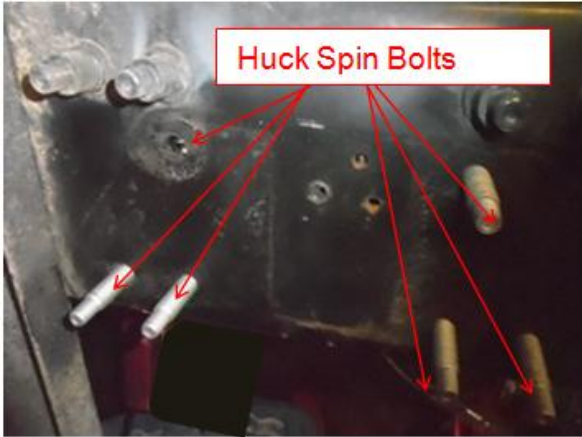


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30. Remove the 6 huck spin bolts from the left frame rail and discard them.

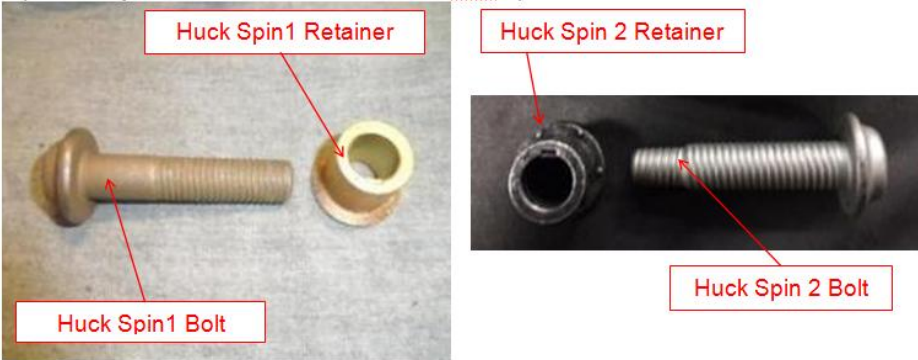
NOTE: Do not bend or damage the air line bracket during removal of the huck spin bolts. The photo shows 5 new huck spin bolts in the frame rail for reference only.



31. Clean off the left side of the frame rail, which includes inside the 6 holes where the frame hanger is mounted, using compressed air.



NOTE: There are 2 available huck spin bolt and retainer types available for use with this kit, "huck spin 1" or "huck spin 2". Depending upon the tools available at your approved repair facility, make certain that the correct huck spin bolts and retainers are used.

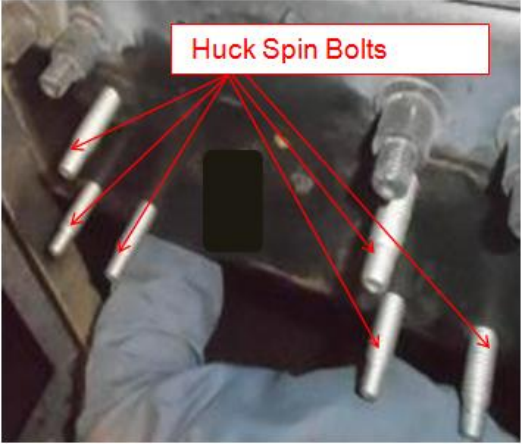


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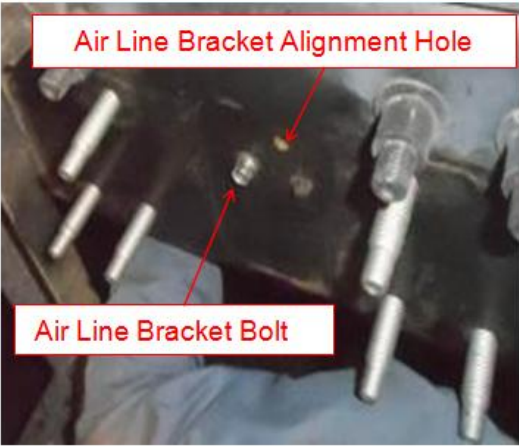
32. Install the 6 huck spin bolts onto the frame rail.

NOTE: Do not bend or damage the air line bracket during installation of the huck spin bolts.



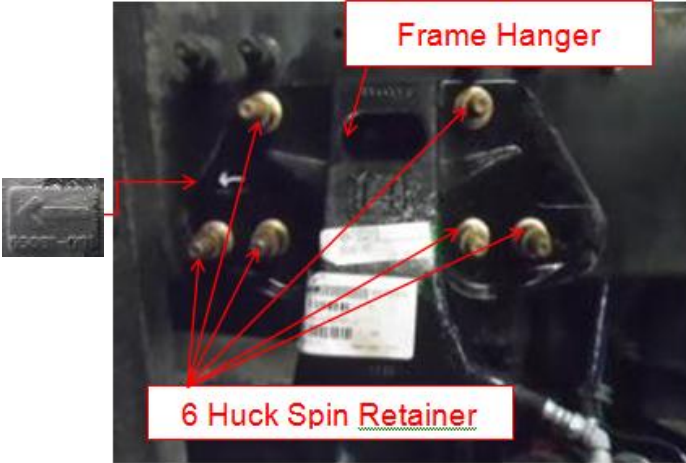
33. Install the left side air line bracket bolt. Make certain the bracket alignment tab is indexed with the alignment hole in the frame rail. Tighten to the specified torque.

Specified Torque: 10lb-ft (13Nm)



34. Install the new left frame hanger onto the left frame rail. Install the 6 huck spin retainers and finger tighten them until the frame hanger seats against the frame rail.

NOTE: Make certain that the arrow on the new frame hanger is facing toward the front of the vehicle.

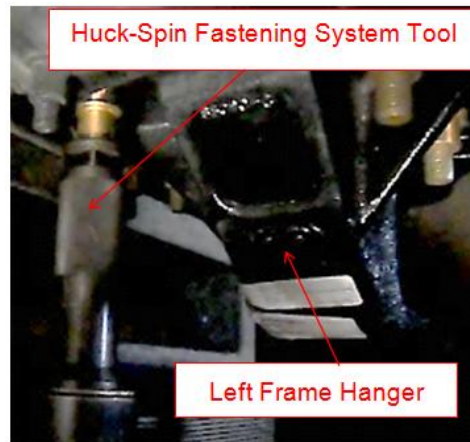


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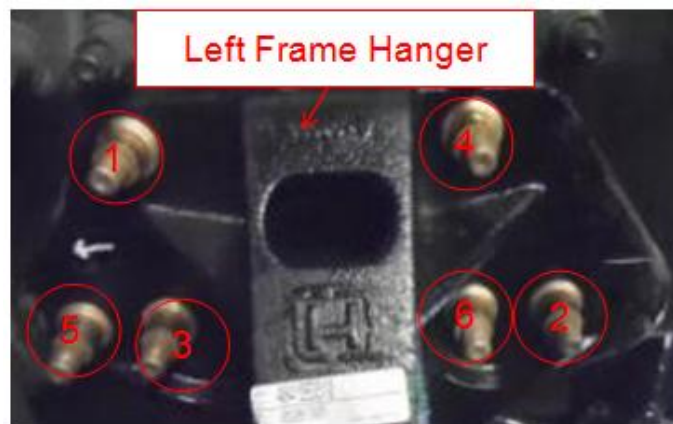
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35. Using the Huck-Spin Fastening System, complete the swaging of the 6 huck spin retainers to the 6 huck spin bolts.

NOTE: Follow the instructions for use provided with the Huck-Spin Fastening System tool.

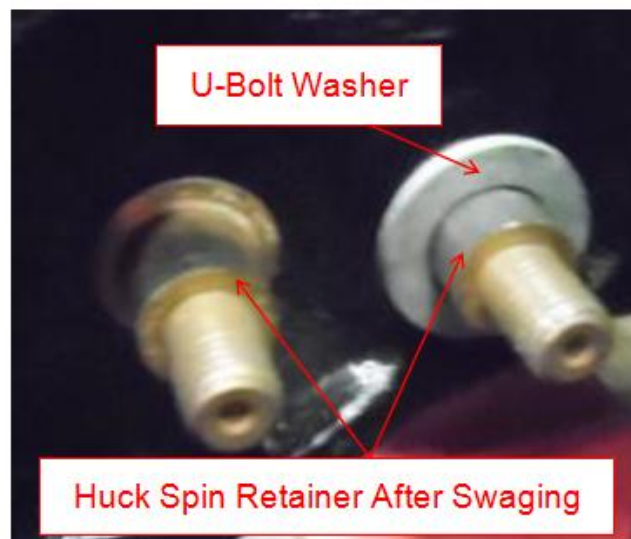


36. Use the numerical tightening sequence shown in the photo and complete the tightening process with the Huck-Spin Fastening System tool.



37. After completing the tightening process, using a U-bolt washer, test each of the 6 huck spin retainers. This will check for correct swaging. If the washer will slip over the huck spin retainer, the huck spin bolt and retainer is tightened correctly.

NOTE: If the U-bolt washer will not slip over the huck spin retainer and it has already been swaged, it will need to be replaced.

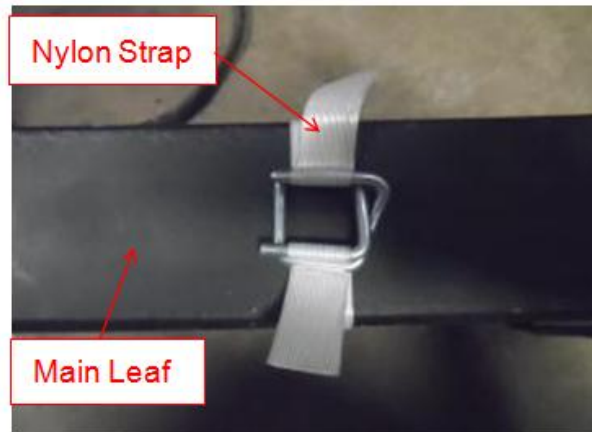


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38. Inspect and verify that the spring eye clip is present in the new main leaf.

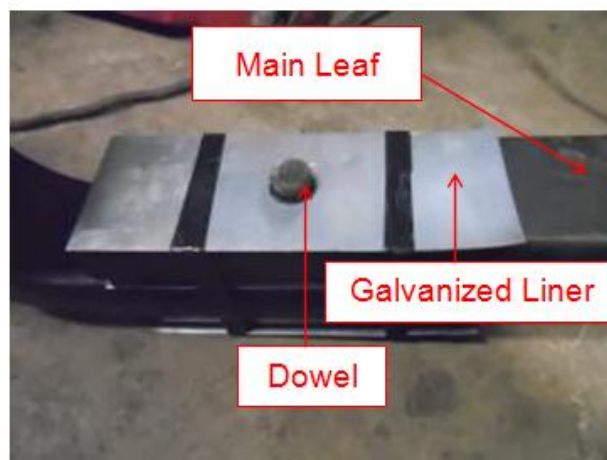


39. Inspect and verify that the nylon strap is installed on the new main leaf. This nylon strap is necessary for installation.



40. Inspect and make certain that the dowel and the galvanized liner are positioned on the bottom of the new main leaf.

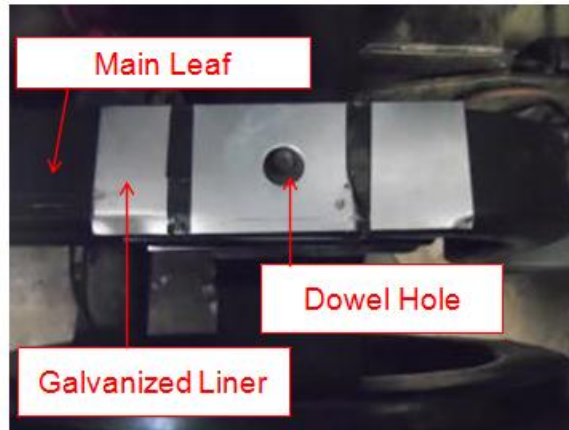
NOTE: The photo is the bottom view.



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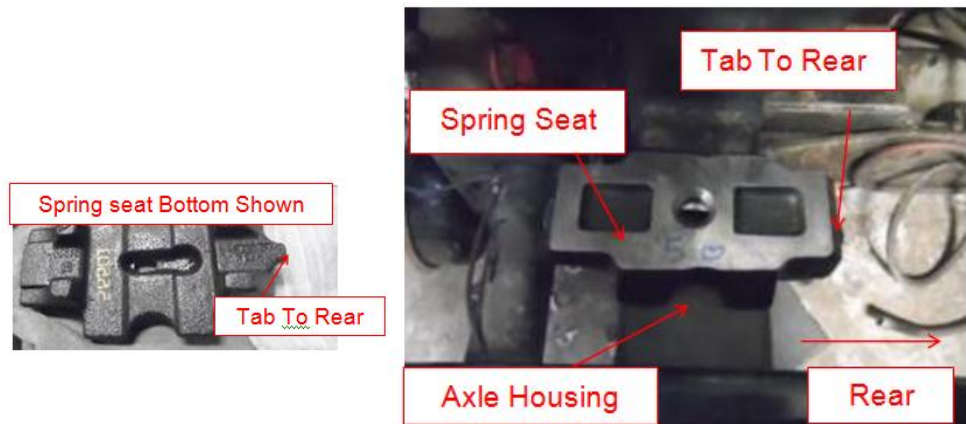
41. Also Inspect and make certain that the dowel hole and the galvanized liner are positioned on the top of the new main leaf.

NOTE: The photo is the top view.



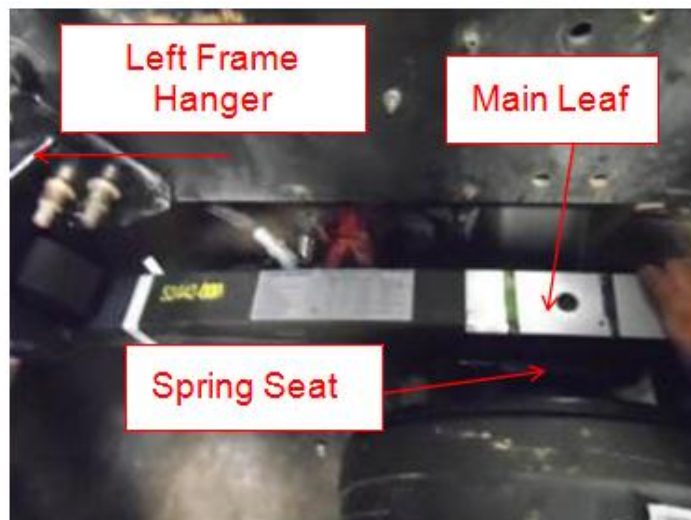
42. Place the spring seat onto the left side axle housing, engaging in the alignment hole of the spring seat and the dowel on the axle tube.

NOTE: Make certain the direction of the spring seat tab is to the rear of the vehicle



43. Install the new main leaf into the left frame hanger. Position the rear of the main leaf over the spring seat into the alignment hole on top of the spring seat. Use the quick align concentric collar to hold the main leaf in position in the frame hanger.

NOTE: Replace the jack stand previously removed during the main leaf removal under the center of the left side main leaf eyelet; in the photo the jack stand is not visible.



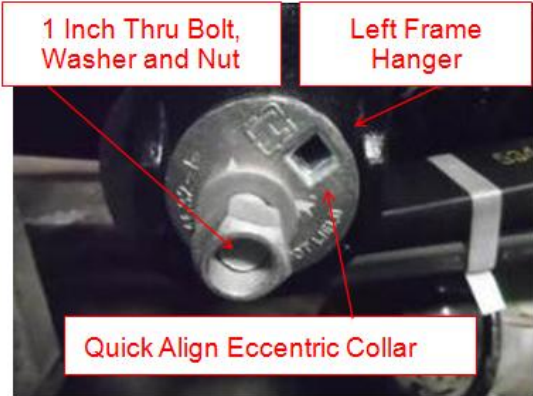
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44: Install the 1 inch quick align eccentric collar (outside) and concentric collar (inside) and the 1 inch thru bolt and washers and locknut and verify that the quick align collars are in the correct positions. Tighten the quick align bolt to the specified torque.

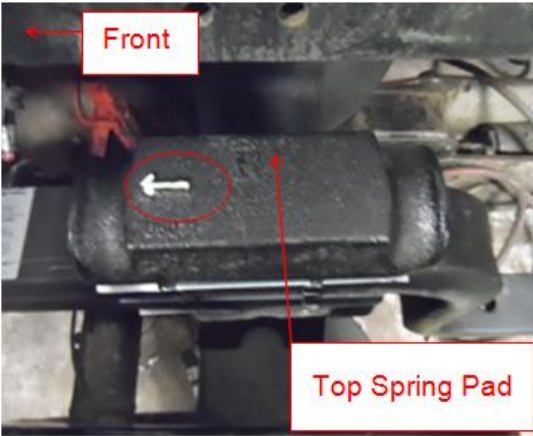
Specified Torque: 100lb-ft (136Nm)

NOTE: The new quick align assembly is 1 inch: The old quick align assembly was 7/8 inch. Discard the old quick align assembly. Do not reuse.



45. Place the left top spring pad on the main leaf with the arrow to the front of vehicle.

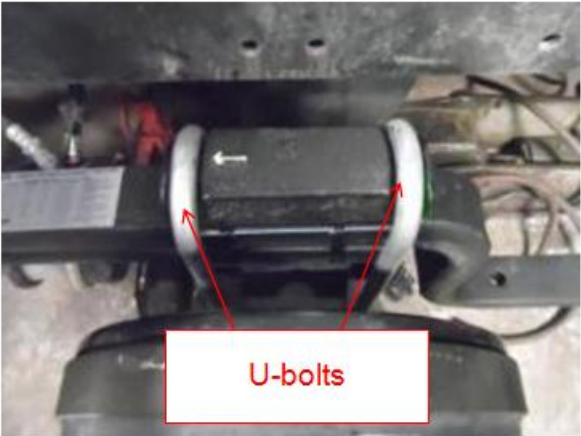
NOTE: The arrow on the left top spring pad will not be painted as it is in the photo.



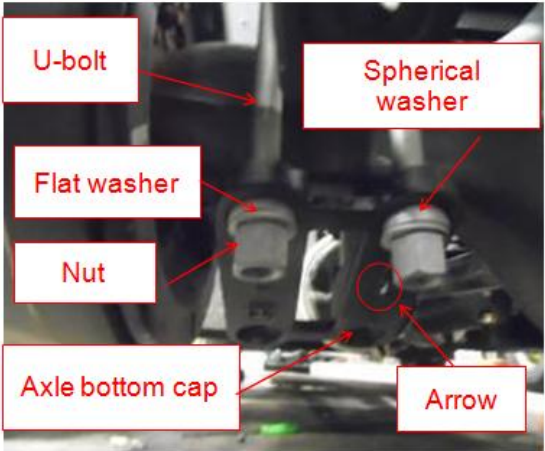
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46. Place the U-bolts over the left top spring pad.

NOTE: No lubricant is to be used on the U-bolts or the nuts. The 23k HD Comfort Ride kit U-bolts are longer than the 23k Comfort Ride U-bolts. Do not interchange them.



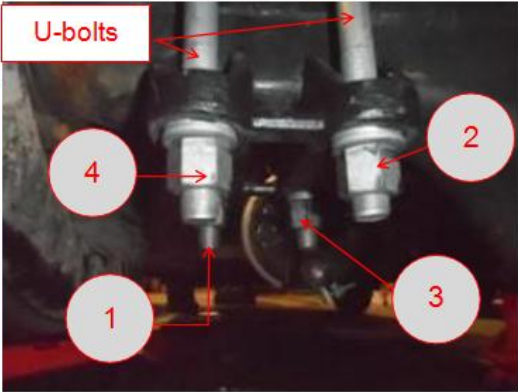
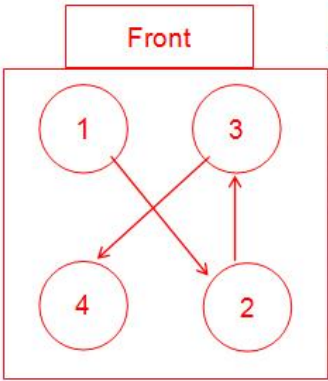
47. Install the axle bottom cap (arrow to the front of the truck), in this order: first the spherical washer, second the flat washer and third the nut on each U-bolt and evenly tighten them with your fingers.



48. Evenly tighten the U-bolt nuts in a crisscross pattern as shown to the specified torque.

NOTE: The photo next to the crisscross pattern shows a rear view of the U-bolt nuts. The first nut to be tightened, the circled 1, both in the pattern and the photo, is in the front.

Specified Torque: 100lb-ft (136Nm)



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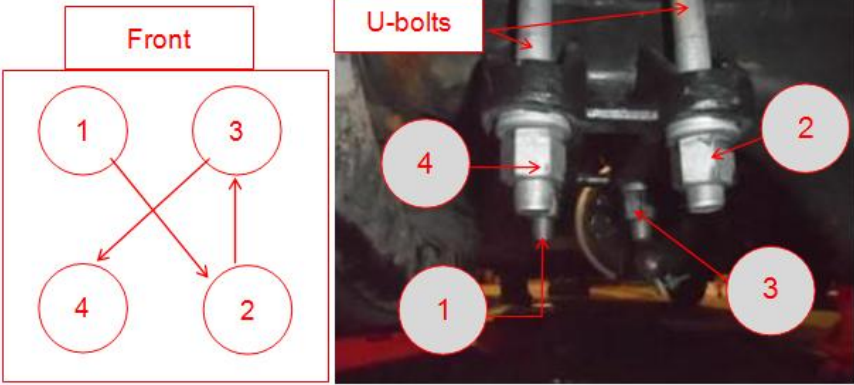
49. Using a dead blow hammer, rap one time on the top of each U-bolt to seat the U-bolt and top spring pad before final torque.



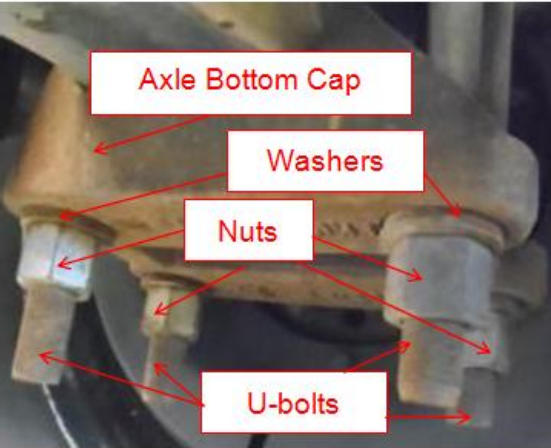
50. Evenly tighten the U-bolt nuts in a crisscross pattern as shown below to the specified torque.

NOTE: The photo next to the crisscross pattern shows a rear view of the U-bolt nuts. The first nut to be tightened, the circled 1, both in the pattern and the photo, is in the front.

Specified Torque: 400lb-ft (543Nm)



51. Remove the 4 nuts, 4 washers and 2 U-bolts from the right axle bottom cap. Discard the U-bolts, nuts and washers.



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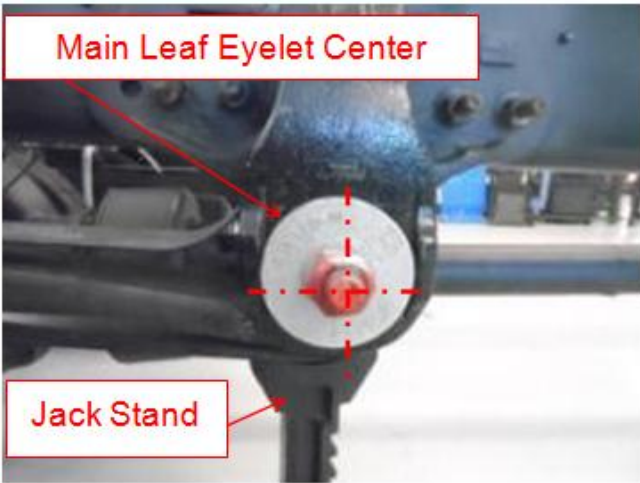
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52. Remove the right top spring pad.

NOTE: The U-bolts have been removed in the photo.

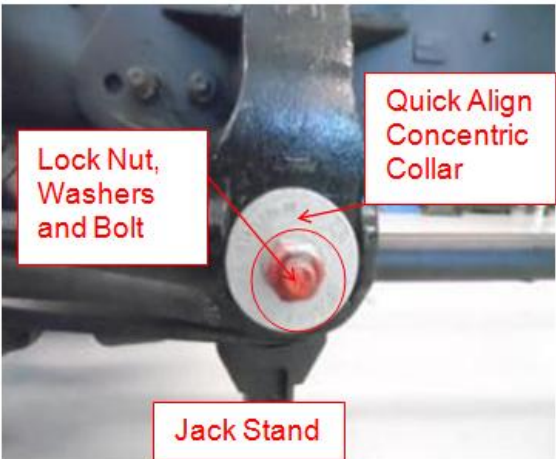


53. Position another jack stand under the center of the right side main leaf eyelet.



54. Remove the lock nut, 2 washers, bolt, and the 2 Quick Align Concentric Collars. Discard all of these components.

NOTE: Only one of the 2 Quick Align Concentric Collars is visible in this photo.



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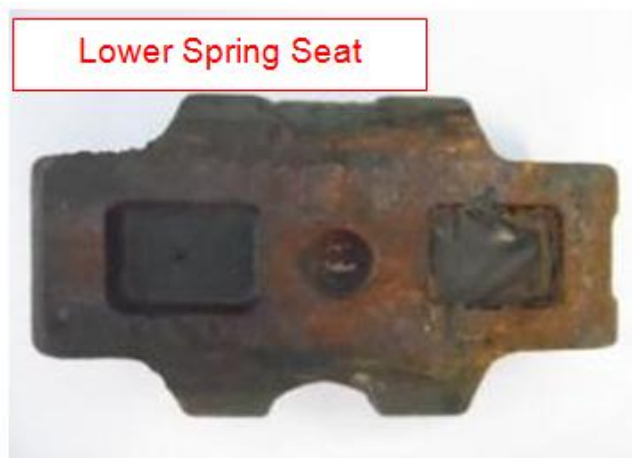
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55. Remove the right main leaf and discard.

NOTE: The jack stand under the main leaf eyelet has been removed in the photo.

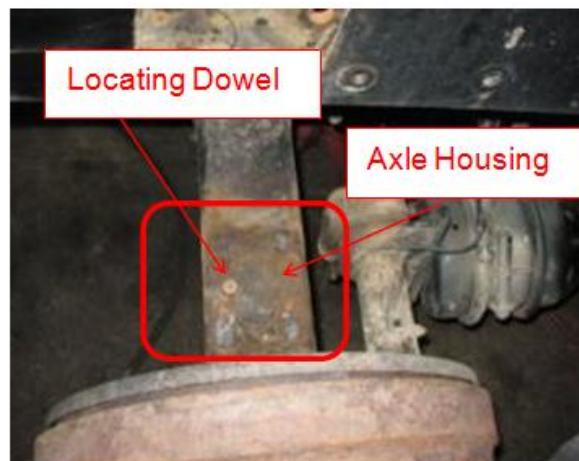


56. Remove the right lower spring seat and set aside.



57. Visually inspect the axle housing and the dowel pin on the right side to confirm no signs of damage.

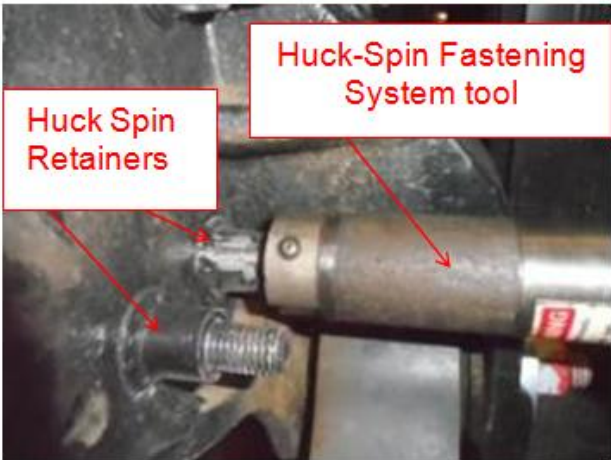
NOTE: Repair or replace as necessary.



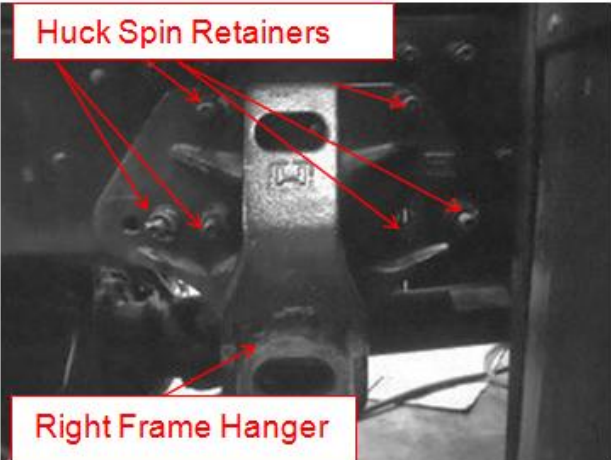
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58. Remove the 6 huck spin retainers from the right frame hanger and discard them.

NOTE: Huck-Spin Fastening System tool shown in the photo is using the cutting attachment.

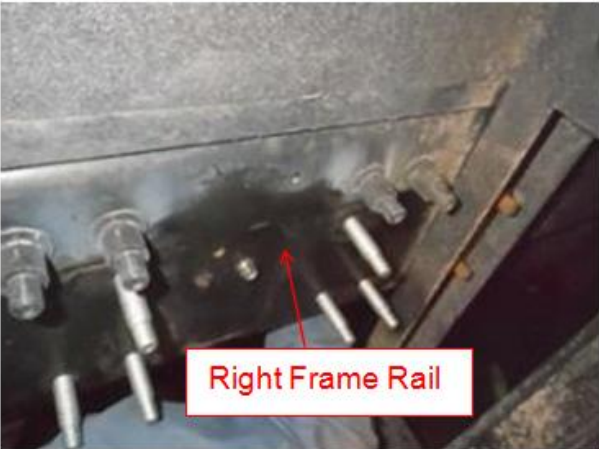


59. Remove the 6 huck spin retainers from the right frame hanger and discard them.



60. Remove the right frame hanger from the right frame rail and discard it.

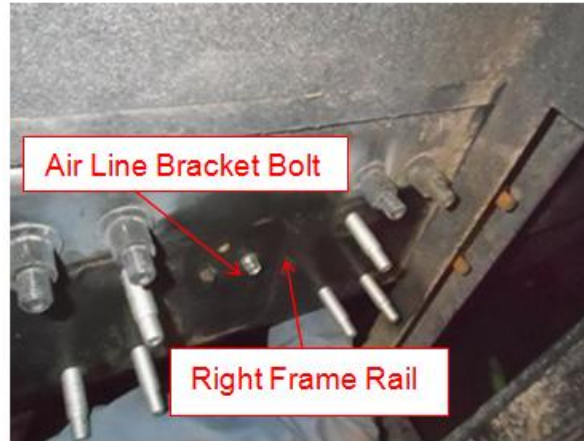
NOTE: The photo shows the right side frame rail with the frame hanger removed.



TECHNICAL SERVICE BULLETIN

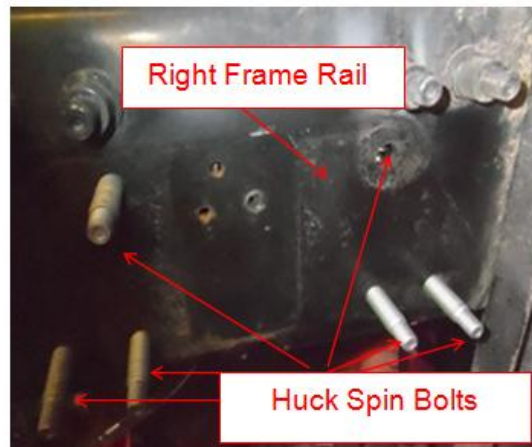
61. Remove the right side air line bracket bolt.

NOTE: The bolt, which is shown in the photo, secures an air line bracket located on the inner edge of the frame rail.



62. Remove the 6 huck spin bolts from the right frame rail and discard them.

NOTE: Do not bend or damage the air line bracket during removal of the huck spin bolts. The photo shows 5 new huck spin bolts in the frame rail for reference only.



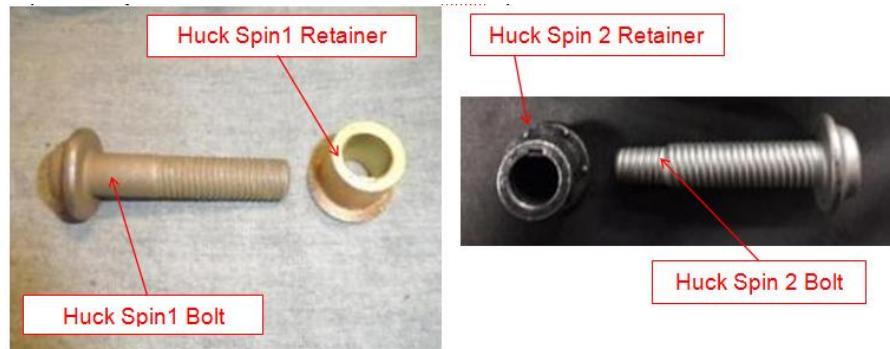
63. Clean off the right side of the frame rail, including inside the 6 holes where the frame hanger is mounted, using compressed air.



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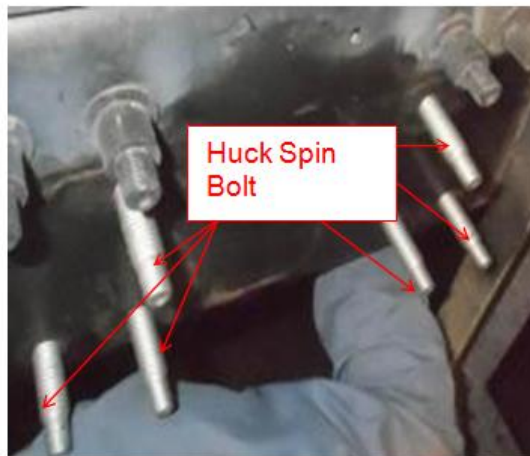
TECHNICAL SERVICE BULLETIN

NOTE: There are 2 available huck spin bolt and retainer types available for use with this kit, "huck spin 1" or "huck spin 2". Depending upon the tools available at your approved repair facility, make certain that the correct huck spin bolts and retainers are used.



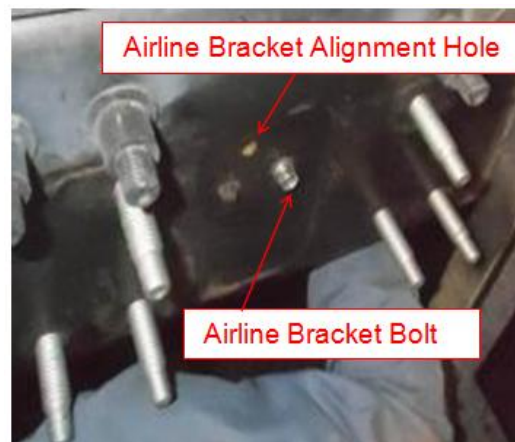
64. Install the 6 huck spin bolts onto the right frame rail.

NOTE: Do not bend or damage the air line bracket during installation of the huck spin bolts.



65. Install the right side air line bracket bolt. Make certain the bracket alignment tab is indexed with the alignment hole in the frame rail. Tighten to the specified torque.

Specified Torque: 10lb-ft (13Nm)

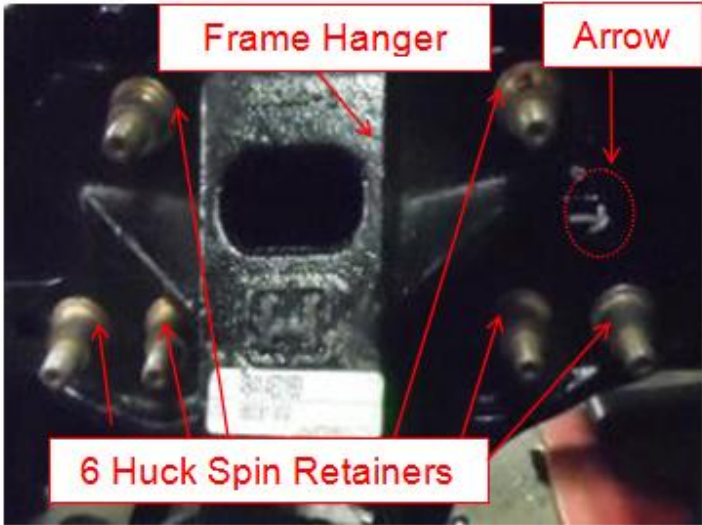


TECHNICAL SERVICE BULLETIN

66. Install the new right hanger onto the right frame rail. Install the 6 huck spin retainers and finger tighten them until the frame hanger seats against the frame rail.

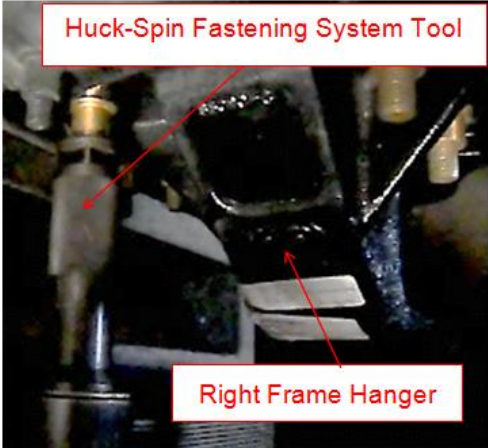


NOTE: Make certain that the arrow on the new frame hanger is facing toward the front of the vehicle.

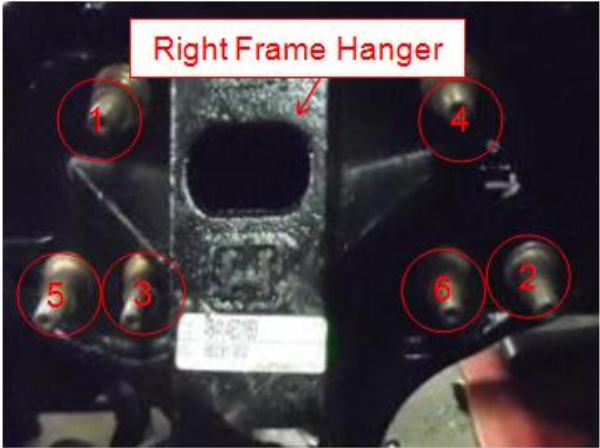


67. Using the Huck-Spin Fastening System, complete the swaging of the 6 huck spin retainers to the 6 huck spin bolts.

NOTE: Follow the instructions for use provided with the Huck-Spin Fastening System tool.



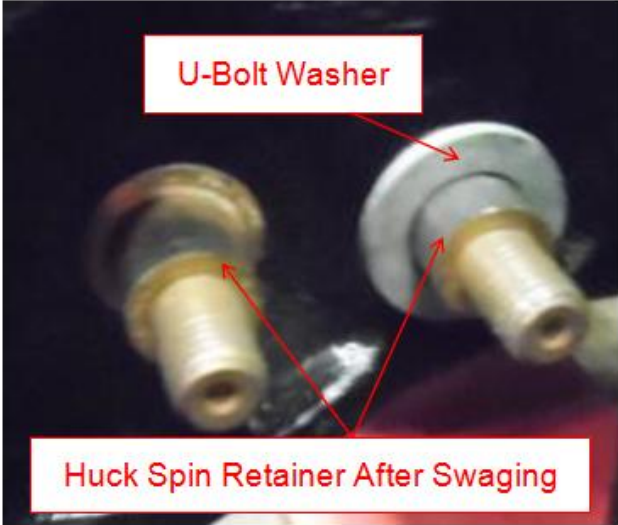
68. Use the numerical tightening sequence shown in the photo and complete the tightening process with the Huck-Spin Fastening tool.



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69. After completing the tightening process, using a U-bolt washer, test each of the 6 huck spin retainers. This will check for correct swaging. If the washer will slip over the huck spin retainer, the huck spin bolt and retainer is tightened correctly.

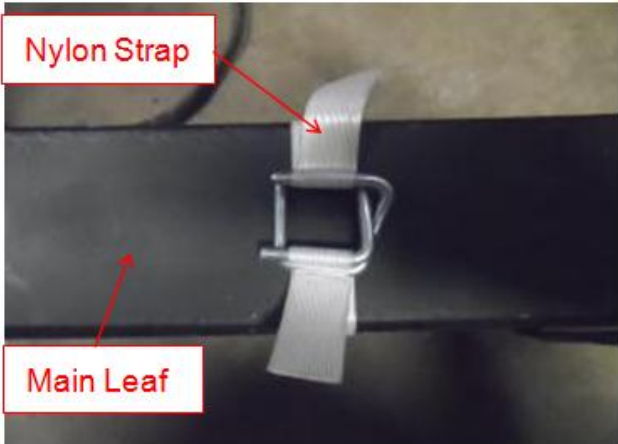
NOTE: If the U-bolt washer will not slip over the huck spin retainer and it has been swaged it will need to be replaced.



70. Inspect and verify that the spring eye clip is present in the new main leaf.

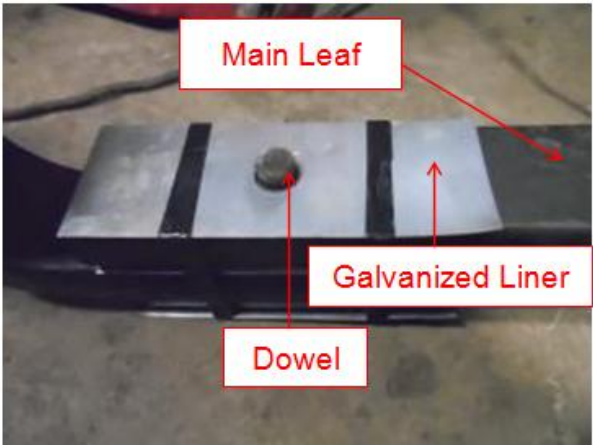


71. Inspect and verify that the nylon strap is installed on the new main leaf. This nylon strap is necessary for installation.

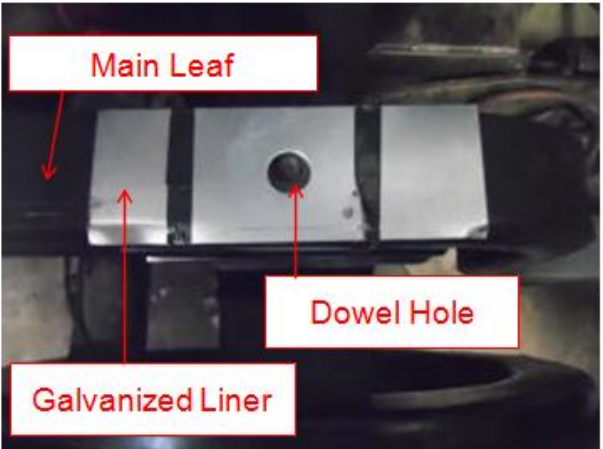


TECHNICAL SERVICE BULLETIN

72. Inspect and make certain that the dowel and the galvanized liner are positioned on the bottom of the new main leaf.



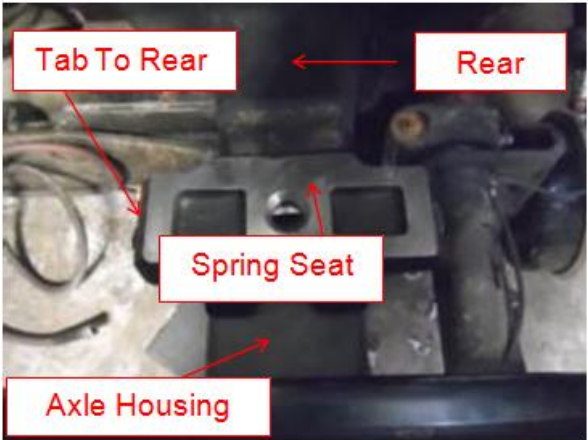
73. Also inspect and make certain that the dowel hole and the galvanized liner are positioned on the top of the new main leaf.



74. Place the right spring seat onto the axle housing, engaging in the alignment hole of the spring seat and the dowel on the axle tube.



NOTE: Make certain the direction of the spring seat tab is to the rear of the vehicle.



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75. Install the new main leaf into the right frame hanger. Position the rear of the main leaf over the spring seat into the alignment hole on top of the spring seat. Use the quick align concentric collar to hold the main leaf in position in the frame hanger



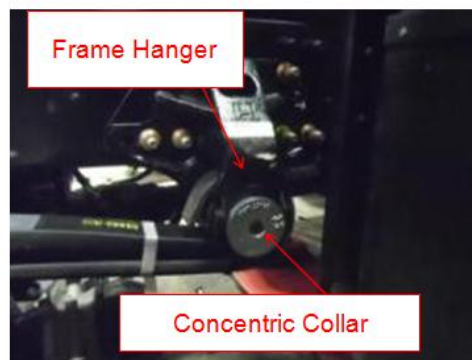
NOTE: Replace the jack stand previously removed during the main leaf removal under the center of the left side main leaf eyelet; in the photo the jack stand is not visible.

76. Install the 1 inch quick align concentric collar (outside) and concentric collar (inside) through the bolt and washers and locknut and verify that the quick align collars are in the correct positions and in the right frame hanger slots. Tighten the quick align nut to specified torque.

Specified Torque: 525lb-ft (712Nm)

NOTE: The right quick align collars are concentric inside and outside. There is no square adjuster hole in the right quick align concentric collars.

The new quick align assembly is 1 inch: The old quick align assembly was 7/8 inch. Discard the old quick align assembly. Do not reuse.



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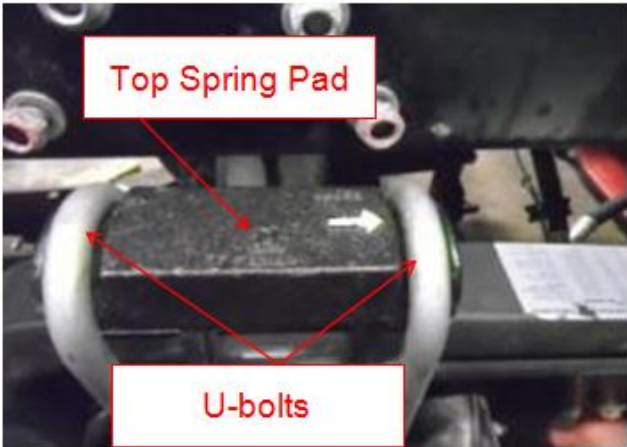
77. Place the right top spring pad on the main leaf with the arrow to the front of vehicle.

NOTE: The arrow on the right top spring pad will not be painted as it is in the photo.



78. Place U-bolts over the right top spring pad.

Note: No lubricant is to be used on U-bolts or nuts. The 23k HD kit U-bolts are longer than 23k comfort air U-bolts. Do not interchange them.

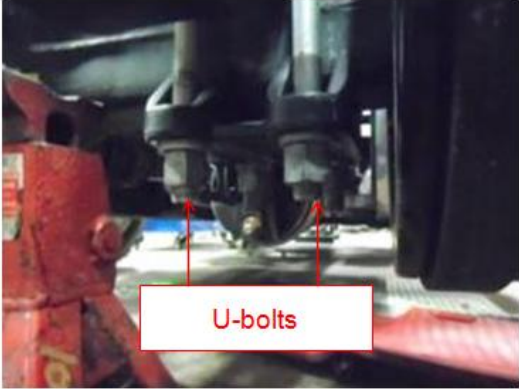
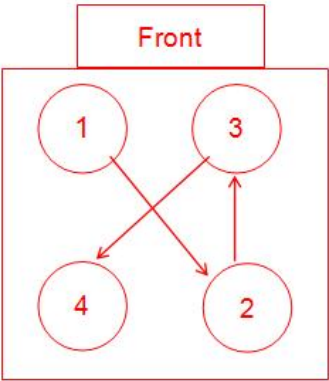


79. Install the axle bottom cap (arrow to the front of truck) in this order: first the spherical washer, second the flat washer and third the nut on each U-bolt and evenly tighten them with your fingers.

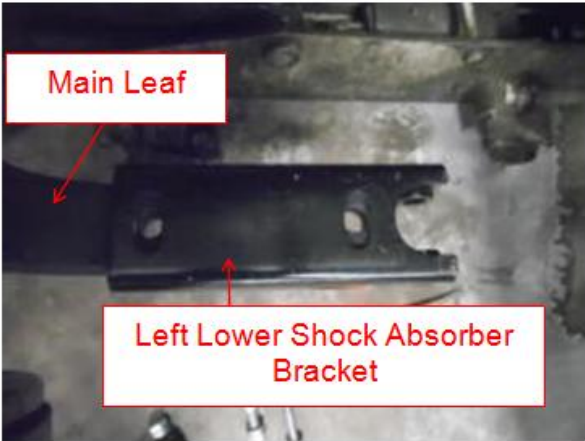


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80. Snug the U-bolt nuts in a crisscross pattern as shown below.



81. Install the left lower shock absorber bracket on top of the left main leaf.

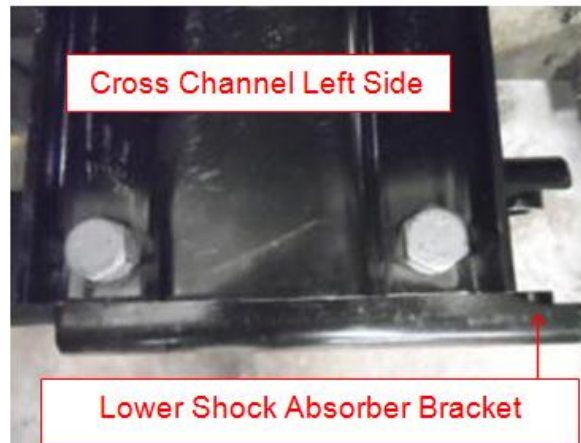


82. Install the right lower shock absorber bracket on top of the right main leaf.



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83. Install cross channel on top of the left lower and right shock absorber brackets. Install 2 new bolts, each with a new washer from the top side on the left side. Install a new locknut and new washer on the bottom side for both of these bolts.

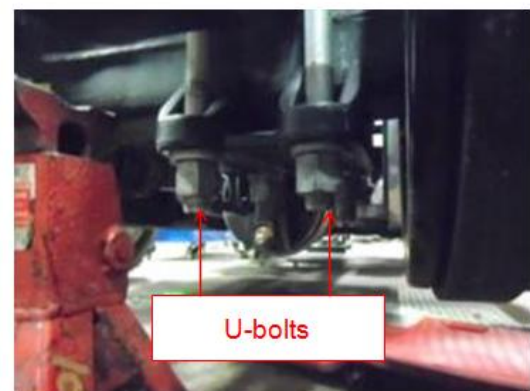
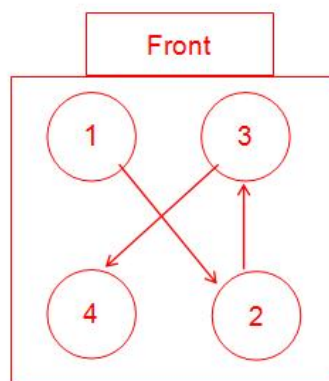


84. Install 2 new bolts, each with a new washer from the top side on right the side. Install a new locknut and new washer on the bottom side for both of these bolts.



NOTICE: It may be necessary to align the holes in the right main leaf by loosening the right side U-bolt nuts. This will allow the main leaf to move slightly.

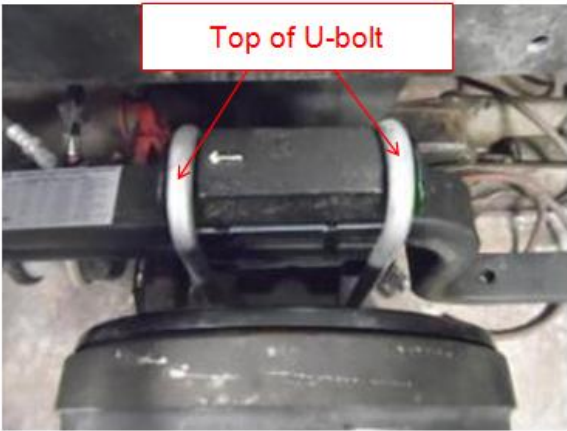
85. Snug the U-bolt nuts in a crisscross pattern, as shown below, if it was necessary to loosen the right side U-bolt nuts in Step 84, above. Otherwise tighten to the specified torque using the crisscross pattern below.



Specified Torque: 100lb-ft (136Nm)

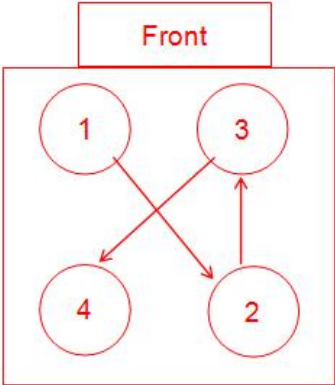
TECHNICAL SERVICE BULLETIN

86. Using a dead blow hammer, rap one time on the top of each U-bolt to seat the U-bolt and top spring pad before final torque.



87. Evenly tighten the U-bolt nuts in a crisscross pattern as shown below to the specified torque.

Specified Torque: 400lb-ft (543Nm)



88. Tighten the right side and left side cross channel locknuts to the specified torque. There will be a total of 4 locknuts that will need to be torqued.

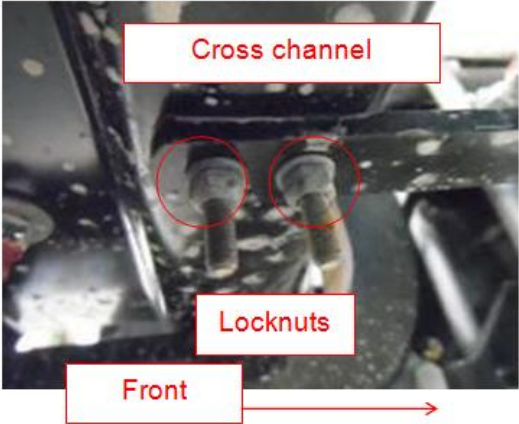
Specified Torque: 290lb-ft (390Nm)



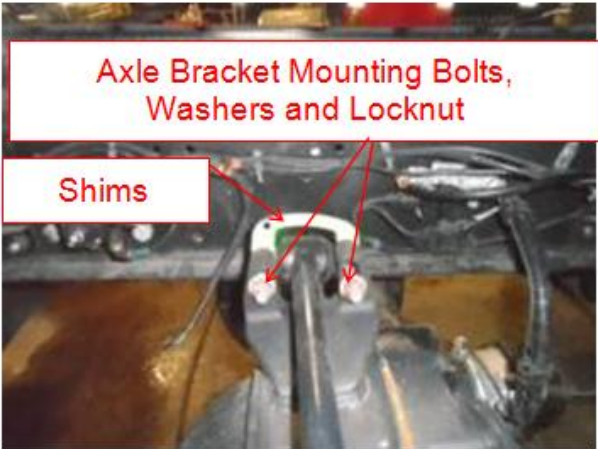
TECHNICAL SERVICE BULLETIN

89. Install the height control valve lower bracket to the cross channel using 2 new bolts, 4 washers and 2 locknuts. Tighten the locknuts to the specified torque.

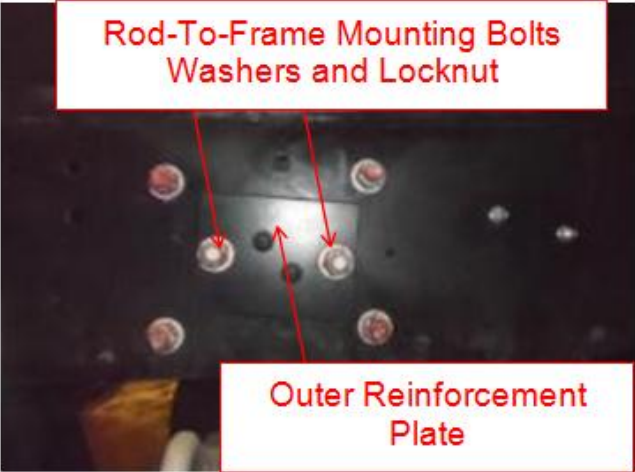
Specified Torque: 10lb-ft (13 Nm)



90. Remove the 2 torque rod-to-axle bracket mounting bolts, 4 washers and locknut and discard them. Remove the shims and put them aside. These shims will be reused.



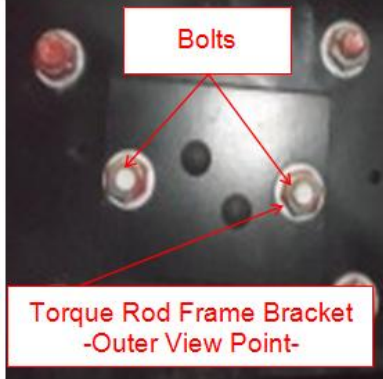
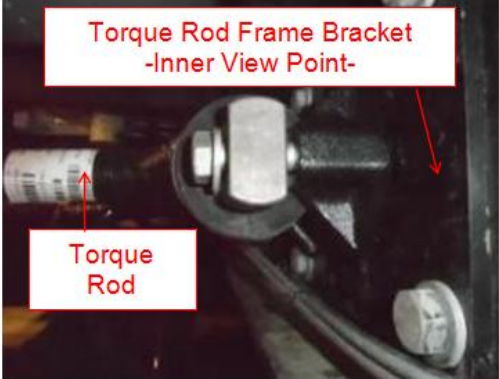
91. Remove the 2 torque rod-to-frame mounting bolts, 4 washers and 2 nuts and discard them. Then remove the torque rod and discard it.



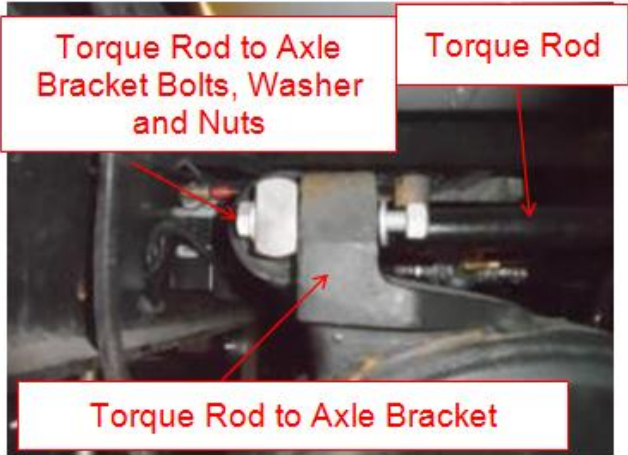
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92. Install the new torque rod and the 2 new torque rod-to-frame bracket mounting bolts, 4 washers, 2 locknuts. Loosely tighten but do not apply the final tightening torque.

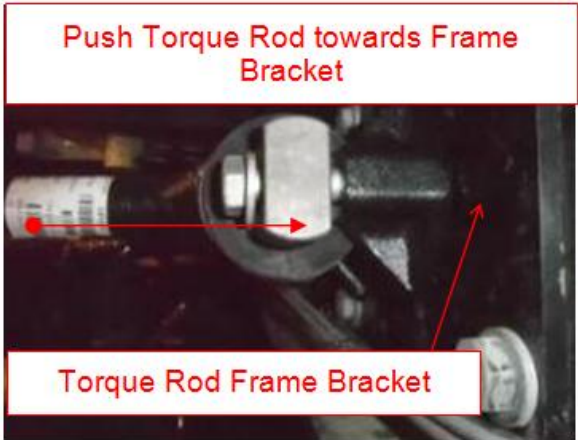


93. Install the two torque rod-to-axle bracket mounting bolts, 4 washers and 2 nuts. Loosely tighten but do not apply the final tightening torque.



94. Hold torque rod and apply pressure toward the rod-to-frame bracket. Is there a gap between the frame bracket and the torque rod or a gap between the axle bracket and the torque rod?

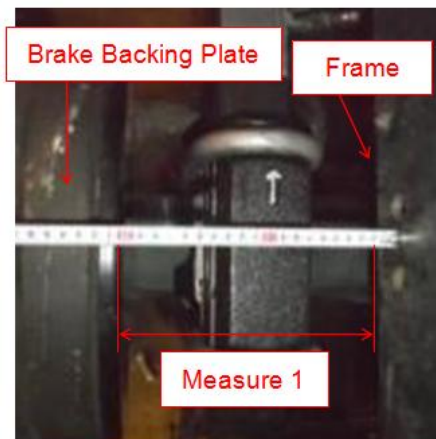
Yes - go to step 95
No - go to step 99



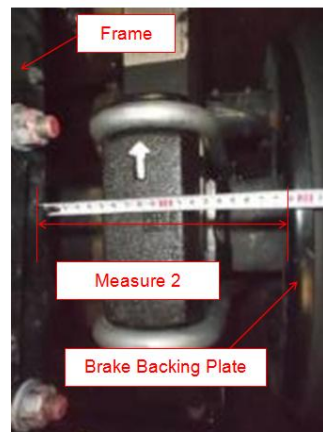
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95. Measure between the left frame rail and the left side brake backing plate. Record this value as “measurement 1”.



96. Measure between the right frame rail and the right side brake backing plate. Record this value as “measurement 2”.



97. The maximum allowable offset for the centerline of the rear axle in relation to the centerline of the frame is no more than 1/8inch (3mm). Is the difference between “measurement 1” and “measurement 2” less than 1/8inch (3mm)?

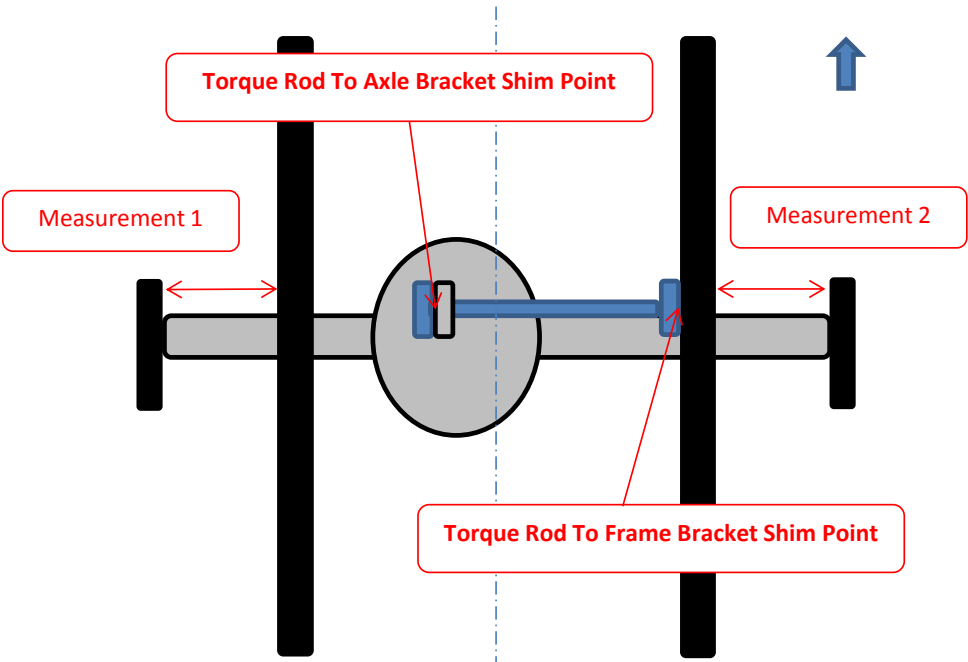
Yes – No shims are needed, go to step 99

No – Shims will be required at the torque rod to axle bracket or torque rod to frame bracket, go to step 98.

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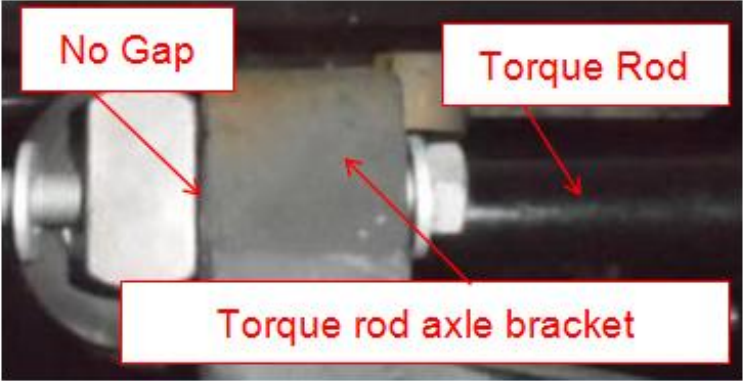
98. The difference between measurement 1 and measurement 2 should be no greater than 1/8inch (3mm). Each shim provided in the kit is 1/8inch (3mm) in thickness. Add a shim at either the torque rod to axle bracket or the torque rod to frame bracket, with a maximum of 3 shims allowable.

WARNING: Shims should only be installed at the torque rod to axle bracket or the torque rod to frame bracket, NOT both.



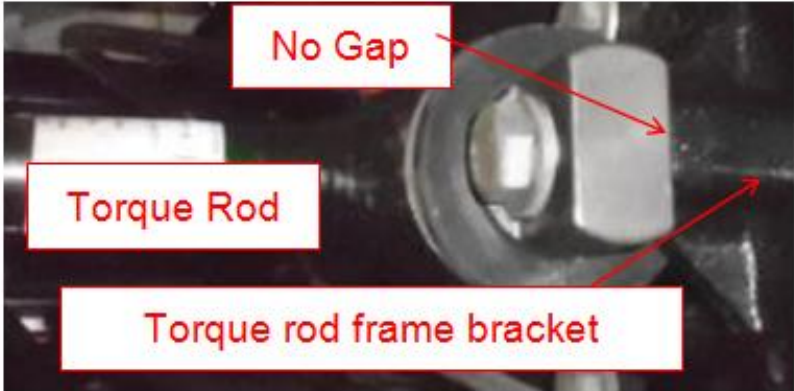
99. Torque the rod-to-axle bracket fasteners to the specified torque.

Specified Torque: 165lb-ft (224Nm)



100. Torque the rod-to-frame bracket fasteners to the specified torque.

Specified Torque: 165lb-ft (224Nm)



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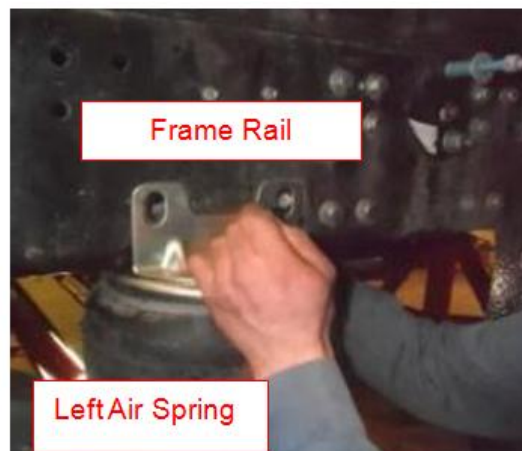
101. Recheck the difference between measurement 1 and measurement 2 to confirm they are within 1/8inch (3mm) of each other. If not, additional shims may need to be removed or additional shims may need to be added.

102. Tighten the left side quick align bolt and lock nut to the specified torque.

Specified Torque: 525lb-ft (712Nm)



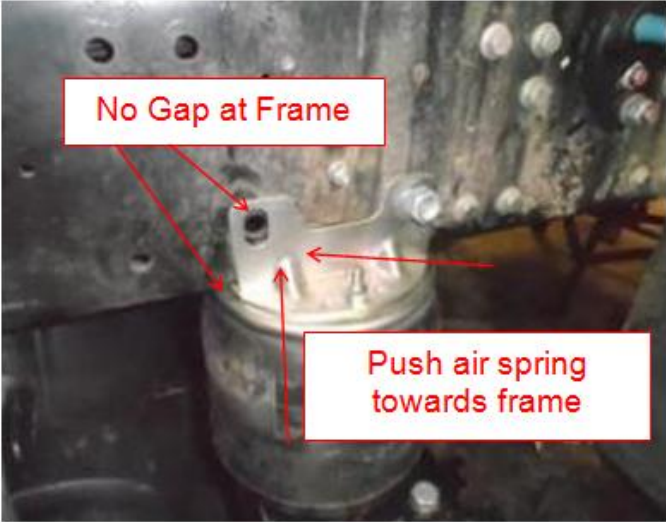
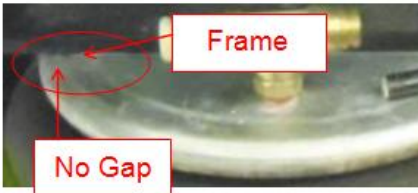
103. Install the left air spring and bracket to frame rail and install 2 new bolts, 4 new washers and 2 new locknuts.



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104. Push the top of the air spring bracket to contact the frame. While holding the air spring bracket bolts, tighten the locknuts to the specified torque.

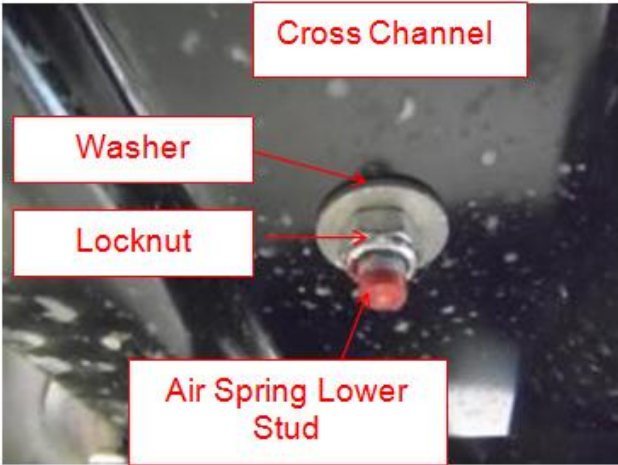
Specified Torque: 170lb-ft (230Nm)



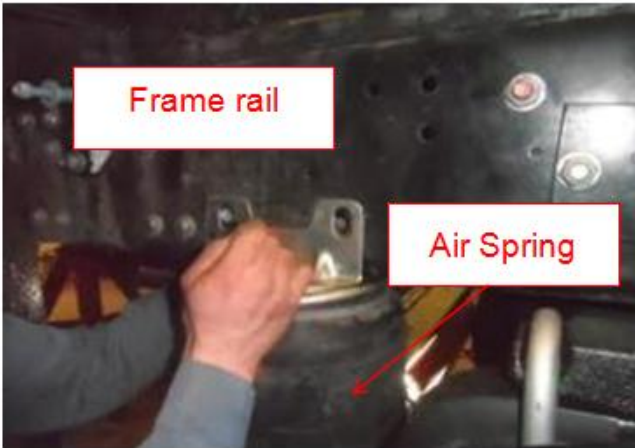
105. Install the locknut and washer on the left lower air spring stud. Tighten the locknut to the specified torque.

Specified Torque: 25lb-ft (34Nm)

NOTE: Do not exceed the specified torque or use a power tool as damage to the air spring may result.



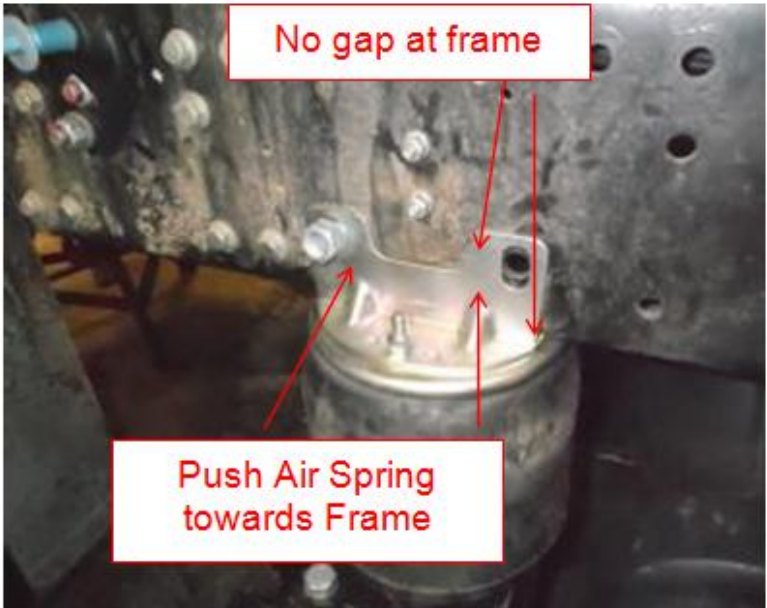
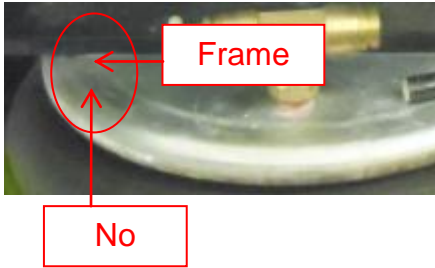
106. Install the right air spring and bracket to the frame rail and install 2 new bolts, 4 new washers and 2 new locknuts.



TECHNICAL SERVICE BULLETIN

107. Push the top of the right air spring bracket to contact the frame. While holding the air spring bracket bolts, tighten the locknuts to the specified torque.

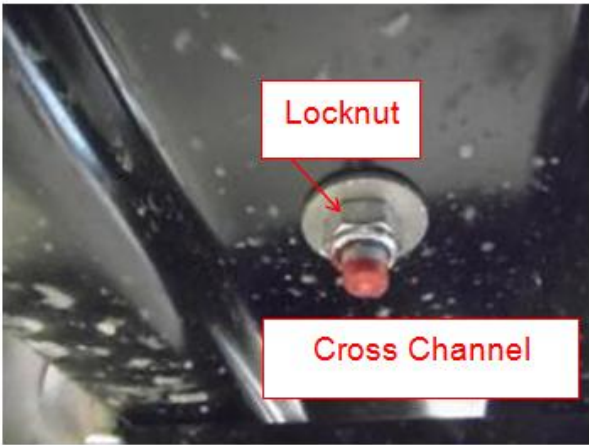
Specified Torque: 170lb-ft (230Nm)



108. Install the locknut and washer on the right lower air spring stud. Tighten the locknut to the specified torque.

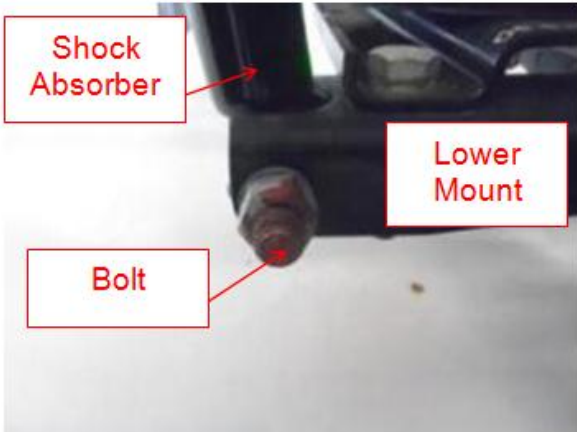
Specified Torque: 25lb-ft (34Nm)

NOTE: Do not exceed the specified torque or use a power tool as damage to the air spring may result.



109. Install the right shock absorber into the lower mount and install the bolt, 2 washers and locknut. While holding the bolt, tighten the lock nut to the specified torque.

Specified Torque: 170lb-ft (230Nm)



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110. Install the left shock absorber into the lower mount and install the bolt, 2 washers and locknut. While holding the bolt, tighten the locknut to the specified torque.

Specified Torque: 170lb-ft (230Nm)



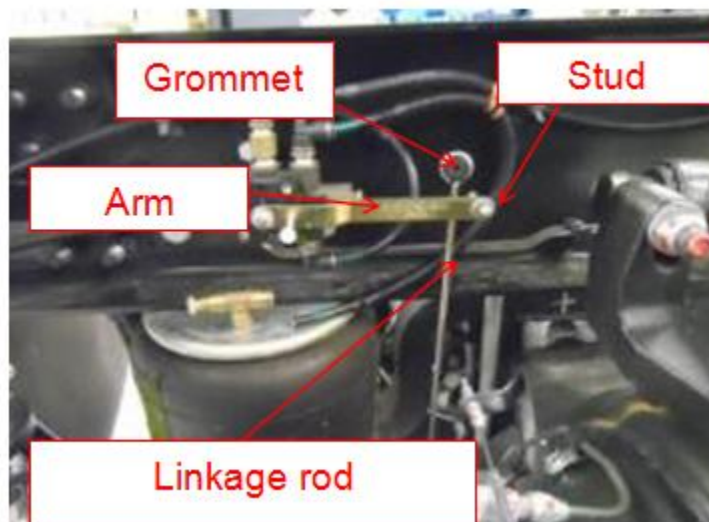
111. Position the arm on the height control valve to the neutral position as shown and insert a golf tee into the arm.

NOTE: Use a wooden golf tee or wooden dowel only. Do not use a metal object as damage can occur.



112. Connect the height control valve arm by inserting the grommet located in the top of the linkage rod onto the stud on the arm.

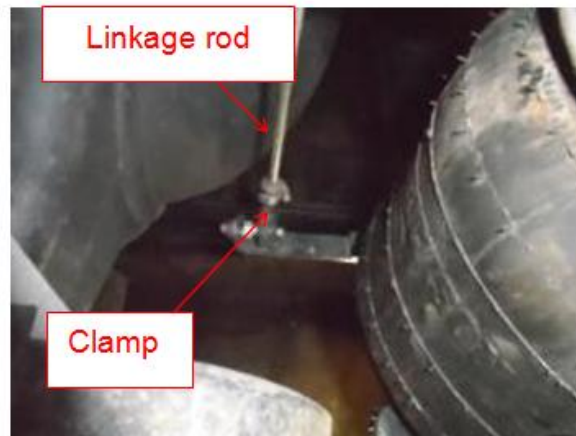
NOTE: The vehicle suspension should be at the correct ride height. The vehicle frame is still supported with jack stands. The rear axle is still supported by the jack. The jack stand is still in position under the pinion area of the rear axle.



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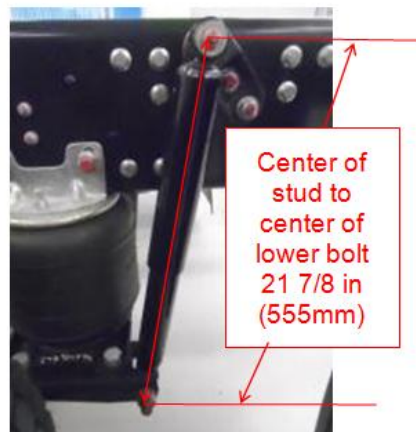
113. If it is necessary to adjust the linkage rod, loosen the clamp and slide the rod up or down to adjust the length. Tighten the clamp to the specified torque.

Specified Torque: 3.3lb-ft
(4.5Nm)



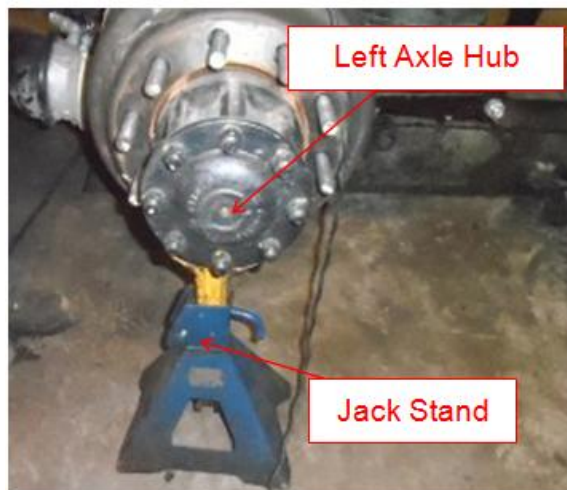
114. Verify that the vehicle is at the specified ride height. Measure from the center of the shock upper bolt to the center of the lower bolt left side shock absorber.

Specified Ride Height: 21 7/8 in (555mm)



WARNING: Before inflating the air spring, place additional jack stands under both the right and left axle hubs as shown on the photo.

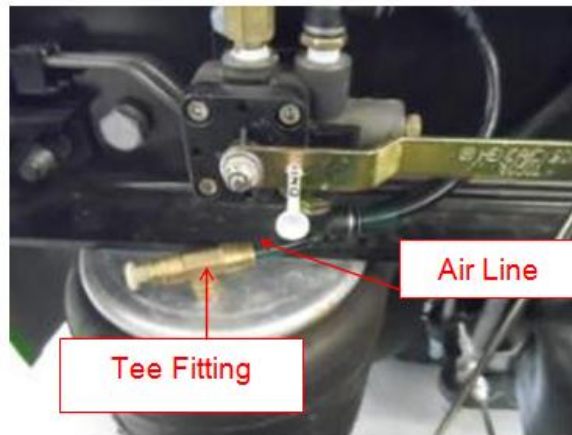
NOTE: The photo shows a jack stand only under the left axle hub.



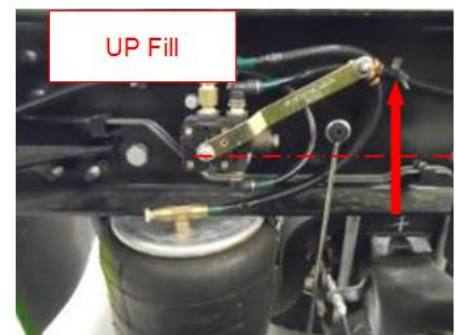
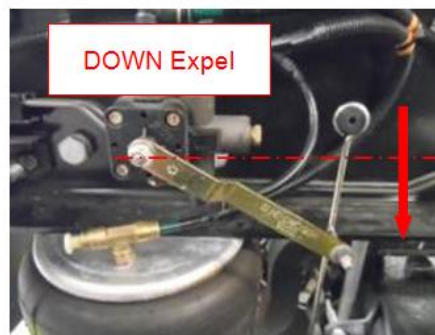
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115. Install the air line for the right and left air springs at the tee fitting.

NOTE: Left air line is shown.



116. Start the engine to check the system air pressure, and run the engine until the system air pressure builds up. Remove the height control valve arm from the grommet located in the top of the linkage rod onto the stud on the arm. Remove the golf tee and move the height arm while the air system is pressurized. Rotate the height control valve upward as this is the position where the valve will supply pressure to the air bags. Once the air springs inflate, position the height control valve in the neutral position and install the linkage rod onto the ball stud. If the height changes and the rod will not install onto the ball stud rotate the height control valve as necessary to the down position to expel air from the air springs.

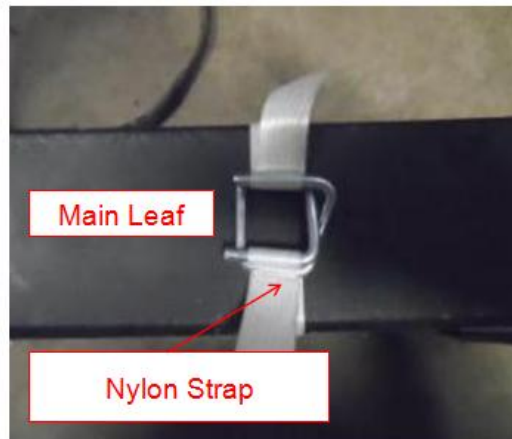


TECHNICAL SERVICE BULLETIN

117. Use soapy water to check for any leaks from the air lines. Inspect all the air lines from the height control valve to the air springs and repair as necessary if any leaks are found.



118. Remove the right and left nylon straps from the right and left main leafs and discard.



119. Install the right and left rear wheels. Install the rear wheel lug nuts and tighten to the specified torque.

Specified Torque: 475lb-ft
(644Nm)



Group:	48-Suspension
Bulletin No.:	SB-15-022
Issue Date:	03-17-2015

TECHNICAL SERVICE BULLETIN

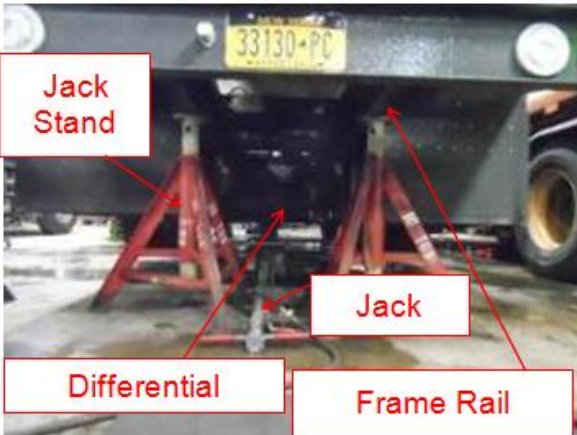
120. Install the right and the left fenders.



121. Paint the huck spin bolts and retainers to prevent premature rust.



122. Raise the vehicle by the rear differential.



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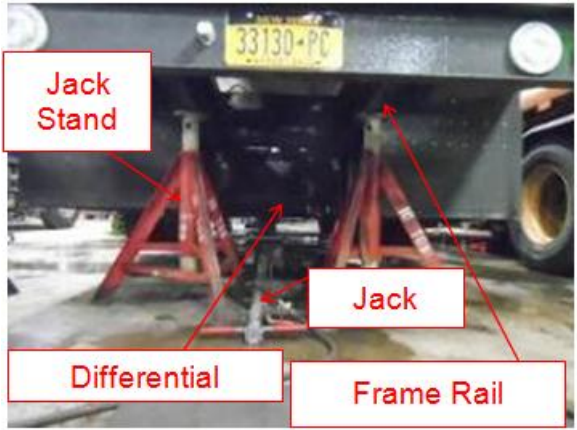
TECHNICAL SERVICE BULLETIN

123. Continue to raise vehicle until you can remove the jack stand from under the pinion bearing area of the differential.

WARNING: STOP raising the vehicle if there is any unexpected vehicle movement.



124. Continue to raise the vehicle until you can remove the jack stands from under the frame rails. Lower the vehicle to the ground and remove the jack.



125. Perform an alignment to set the rear axle thrust angle.

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FINAL INSPECTION PROCEDURE

1. To complete this technical service bulletin procedure, review the bulletin and confirm the following:

- All bolts and nuts have been torqued to their specifications.
- No air leaks are found in the air lines.
- Ride height is within HINO specification.
- Rear axle alignment is within HINO specification.
- Test drive the vehicle to verify the proper operation of the repair.
- Advise the truck owner that the after vehicle is driven 1,000 miles all fasteners must be re-torqued to make certain that they are at the specified torque.

Claim Application:

** Reimbursable in accordance within the terms and policies of the Hino Truck limited warranties.*

- a) Labor Charge: 9.0 hr
- b) Warranty Code: 54519
- c) Trouble Code: 99
- d) Operation Code: 52150 AOT
- e) Part Number: HN001234033

TECHNICAL SERVICE BULLETIN

Parts List for 23K HD Conversion						
Part Number	Part	Quantity	Illustration	Description	Size	
1	SZ109-25001-A	BOLT	2			1" -14 UNF x 8"
2	SZ179-25001-A	NUT	2		Quick Align	1" -14 UNF
3	SZ201-25005-A	WASHER, PLATE	4			1"
4	SZ940-85462-A	SPACER, LEAF SPG	3		Concentric	
5	SZ940-85463-A	SPACER, LEAF SPG	1		Eccentric	Left Outer Only
6	48211-E0370-A	LEAF, RR SPRING, NO.1	2		Main leaf	
7	48414-E0160-A	BRACKET, SPRING, NO.3 RH	1		Right	
8	48415-E0010-A	BRACKET, SPRING, NO.3 LH	1		Left	
9	S40J8-E0020-A	ROD SUB-ASSY, LATERAL	1		Torque Rod	
13	SZ940-84662-A	U-BOLT, LEAF SPG	4		U-Bolt	M22 X 1.5 U-BOLT 400mm
14	SZ170-12048	NUT, HEXAGON	2		Lower Air Spring	M12 x 1.25 Locknut with nylon insert
15	SZ201-12039	WASHER, PLAIN	2		Lower Air Spring washer	M12 Hardened
16	SZ101-20042	BOLT, HEXAGON	4			M20 x 2.5-6G 50mm
17	SZ170-20012	NUT	4		Cross Channel	M20 x 2.5-6H Locknut
18	SZ201-20013	WASHER, PLAIN	8			M20 Hardened
19	S4893-11770-A	BEAM,AIR SPG SUPT	1		Cross Channel	
20	SZ101-16083	BOLT	4			M16 x2-6G 140mm
21	SZ170-16015	NUT	4		Torque Rod	M16 x 2-6H Locknut
22	SZ201-16023	WASHER, PLAIN	8			M16 Hardened
23	SZ170-22005	NUT	8		U-Bolt Nut	M22 x 1.5 High Nut
24	SZ201-22012	WASHER, PLAIN	8		U-Bolt Washer	M12 Hardened
25	SZ208-22001	WASHER, PLAIN	8		U-Bolt Spherical Washer	
26	SZ201-06034	WASHER, PLAIN	4			M6 Hardened
27	SZ101-06029-A	BOLT, HEXAGON	2		Height Control Valve lower bracket	M6 x 1-6G 35mm
28	SZ170-06019	NUT	2			M6 x 1-6H Locknut
29	SZ940-85384	SPACER	X		Shim	1.5mm 1/8inch
30	SZ109-15011	BOLT	12		Huckspin 2	Huckspin 2 used only with Huckspin 2 tool
31	SZ179-16019	NUT, FLANGE	12		Huckspin 2 retainer	ALCOA PART No. HS2P-DT16-NP MBTC-R16BL
32	SZ109-15008	BOLT	12		Huckspin	Huckspin 1 only used with Huckspin 1 tool
33	SZ179-15002	NUT, FLANGE	12		Huckspin	ALCOA PART No. HSP8-DT20-20-U HSCF-R20U