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SERVICE BULLETIN MAINTENANCE OF WAY EQUIPMENT

DATE: 11-2011

BULLETIN NO: 11-010

TITLE: Spring Cell Assembly Replacement

RATING:

<input checked="" type="checkbox"/>	DIRECTIVE (Action Is Required)	<input type="checkbox"/>	ALERT (Potential Problem)
<input type="checkbox"/>	INFORMATION (Action Is Optional)	<input type="checkbox"/>	PRODUCT IMPROVEMENT (Enhance Product)

PRODUCT SERIES / MODEL: HR4000 Series V1 HY-RAIL® Guide Wheel Units

SERIAL NO: 60288 Through 61098

SUMMARY: It has come to the attention of HarSCO Rail that the end cap on the spring cell base may not have been properly welded. If the weld that secures the end cap to the spring cell base breaks, the axle assembly will separate from the spring cell assembly. If this happens while the guide wheel unit is raised in the highway position, the end of the axle assembly may fall to the ground. If this happens while the guide wheel unit is lowered and the vehicle is on rail, the vehicle most likely will derail. To correct this problem, HarSCO Rail has identifying the HR4000 Series V1 HY-RAIL® guide wheel units that were shipped from the factory with incorrect welds on the spring cell base. The affected vehicles must be removed from service immediately and taken to the nearest approved HY-RAIL® guide wheel equipment repair facility. If it is desirable to keep the vehicle in service, without using the vehicle on rail, chains, straps, etc. must be put in place to secure the guide wheel unit axle to the upper structure. HarSCO Rail is providing Spring Cell Service Group #5012396 which will include fully assembled left and right spring cell assemblies.

OPERATIONAL IMPACT: If the weld that secures the end cap to the spring cell base breaks, the axle assembly will separate from the spring cell assembly. If this happens while the guide wheel unit is raised in the highway position, the end of the axle assembly may fall to the ground. If this happens while the guide wheel unit is lowered and the vehicle is on rail, the vehicle most likely will derail.

ACTION: Check the serial number on your HR4000 Series V1 guide wheel unit. If the serial number is included in the group listed above, the vehicle must be removed from service immediately and taken to the nearest approved HY-RAIL® guide wheel equipment repair facility. If it is desirable to keep the vehicle in service, without using the vehicle on rail, chains, straps, etc. must be put in place to secure the guide wheel unit axle to the upper structure. The existing spring cells must be removed and replaced by the new spring cells included in Spring Cell Service Group #5012396.

Spring Cell Service Group #5012396 is being provided at no charge. Order one Spring Cell Service Group #5012396 for each HR4000 Series V1 guide wheel unit. The approved HY-RAIL® guide wheel equipment repair facility and / or equipment applicator will be reimbursed at the standard labor rate for removing the existing spring cells and replacing them with the new spring cells. Follow the instructions in this Service Bulletin to replace the spring cells.

CONTACT: Parts Sales: (507) 235-7143
Service: (507) 235-7212 or (507) 235-7137

Safety Information



- **FOLLOW APPLICABLE RAILROAD LOCKOUT - TAGOUT PROCEDURES TO DISABLE ENERGY SOURCES WHEN PERFORMING MAINTENANCE, MAKING ADJUSTMENTS OR REPAIRS TO THE VEHICLE OR EQUIPMENT. FAILURE TO HEED THIS WARNING COULD RESULT IN SEVERE BODILY INJURY.**

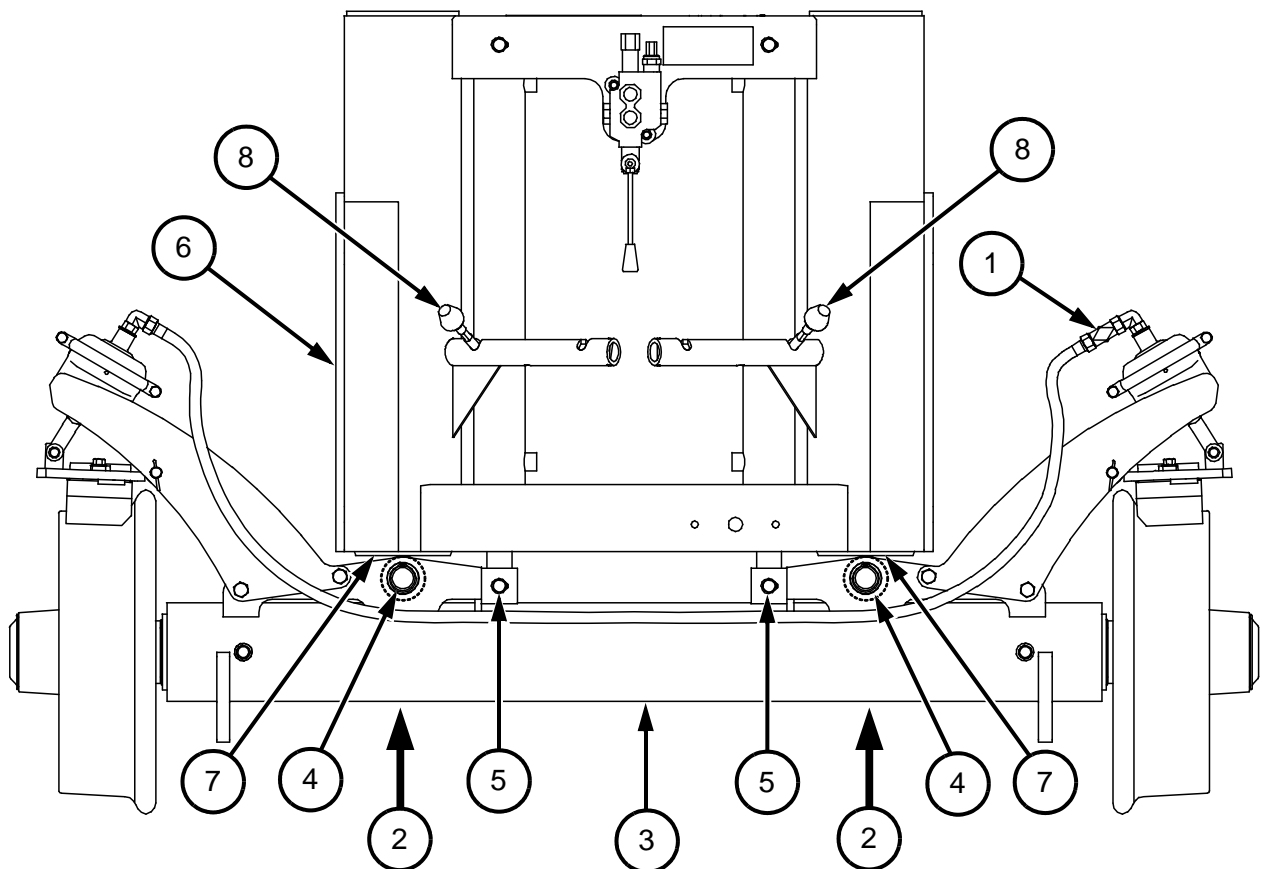
Removing Spring Cells From Guide Wheel Unit - See Figure 1

1. Spring cell replacement must be performed at an approved HY-RAIL® guide wheel equipment repair facility. Go to www.harscorail.com. Open the HY-RAIL® tab and view the Trained Repair Shop List to find a facility.
2. Locate the vehicle on level surface. Make sure the guide wheel unit is raised and locked in the highway position. Apply the parking brakes. Stop the vehicle engine. Chock the vehicle wheels on the rear axle.
3. Remove the vehicle air brake hose from Tee (1) in the air brake line. Cap / plug the air brake hose and Tee connections.
4. Although it is possible to use one floor jack under the center of the guide wheel unit axle assembly, it is recommended to use two floor jacks, each one located under the axle assembly, centered below the spring cells. See point (2) on Figure 1.
5. Jack the axle assembly (3) up slightly to remove the pressure from the spring cell pins (4) and hydraulic cylinder pins (5).
6. Remove the snap rings from one end of the spring cell pins (4) and hydraulic cylinder pins (5). Remove the four pins and set aside. The pins and snap rings will be reused.
7. Using the jacks, slowly lower both ends of the axle assembly. Remove the axle assembly from under the guide wheel unit.

Removing Spring Cells From Guide Wheel Unit - See Figure 1

8. Using a jack that is rated to lift the weight of the front of the vehicle, jack the front of the vehicle up. The spring cell assembly is approximately 32-1/2 inches (826 mm) long. The vehicle must be jacked up enough to allow space for the spring cell assembly to be removed plus the height of the jack that will be used to remove and reinstall the spring cell assembly. As a guide, the distance from the bottom of the upper structure (6) to the floor should be at least the length of the spring cell assembly plus the height of the floor jack.
Important: Place jack stands or blocks under the vehicle frame to support the vehicle while removing / installing the spring cell assemblies.
9. Place a floor jack under one spring cell assembly (7). Jack the spring cell assembly (7) up slightly to remove the pressure from the lock pin (8). Rotate the lock pin handle (8) up, pull it out and rotate it down to secure it in the disengaged position.
10. Using the jack, slowly lower the spring cell assembly (7) out of the upper structure (6).
11. Repeat Steps 9 and 10 to remove the other spring cell assembly (7) from the upper structure (6).
12. Do not disassemble the spring cell assemblies. Set both spring cell assemblies aside, they will need to be returned to Harsco Rail. Contact Harsco Rail, HY-RAIL® Parts Sales for instructions on returning the spring cell assemblies to the factory.

FIGURE 1
REMOVING SPRING CELLS FROM GUIDE WHEEL UNIT



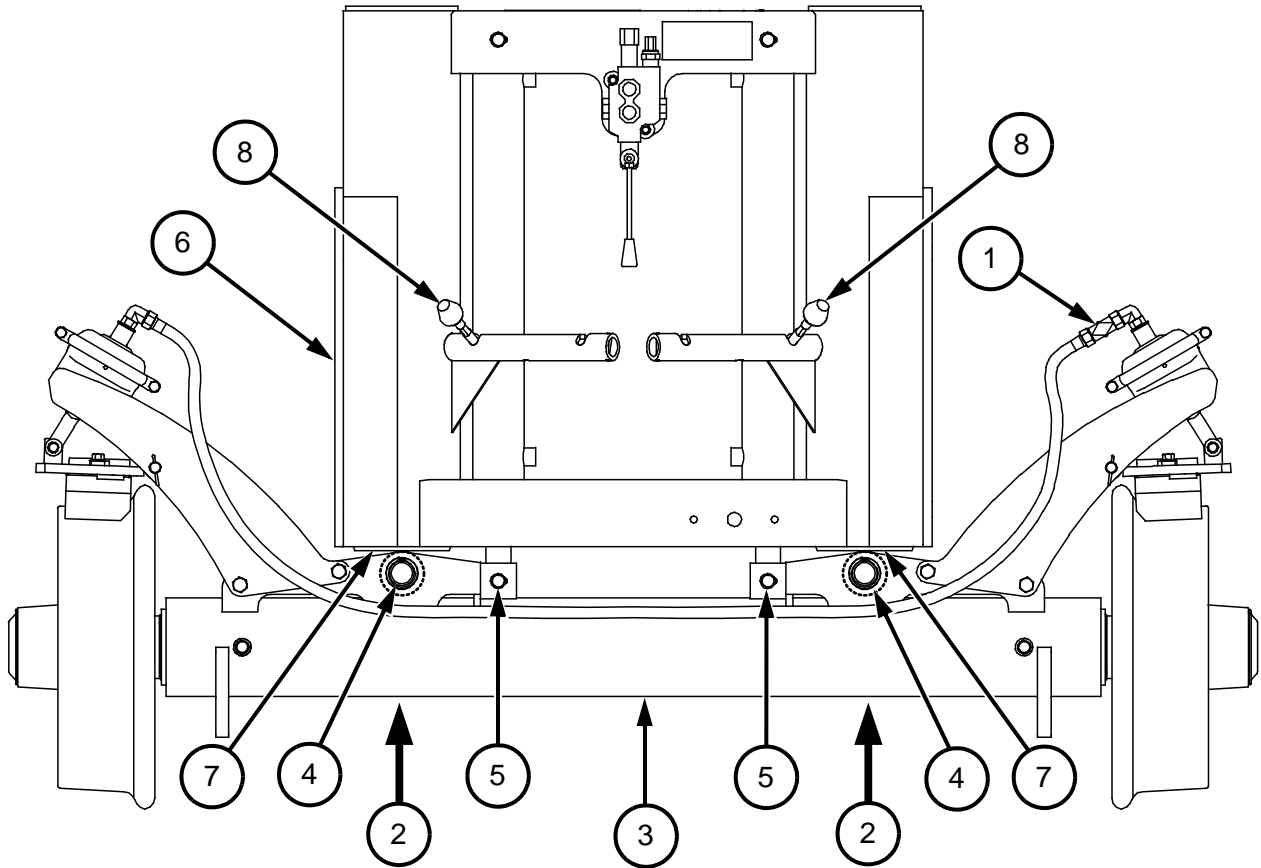
Installing New Spring Cells In Guide Wheel Unit - See Figure 2

Note: The left and right spring cell assemblies are different. Make sure to install the left spring cell assembly #5012393 on the left side of the vehicle (passenger side) and the right spring cell assembly #5012395 on the right side of the vehicle (driver's side).

1. Place the spring cell assembly (7) on the floor jack. Jack the spring cell assembly fully up into the upper structure (6) until lock pin (8) can be inserted in the lock pin hole in the spring cell assembly. Rotate the lock pin handle (8) up, push it in to engage the lock pin and then rotate it down to secure it in the engaged position.
2. Lower the floor jack. Repeat Step 1 to install the other spring cell assembly in the upper structure.
3. Remove the jack stands or blocks from under the vehicle frame. Lower the front of the vehicle down to the floor. Move the jack away from the vehicle.
4. Position the axle assembly (3) under the spring cell assemblies (7). Using two floor jacks, jack the axle assembly (3) up until the spring cell pins (4) and hydraulic cylinder pins (5) can be inserted. Secure the spring cell pins (4) and hydraulic cylinder pins (5) with the snap rings. Remove the floor jacks from under the axle assembly.
5. Reconnect the vehicle air brake hose to Tee (1) in the air brake line.
6. Start the vehicle engine. Remove the chocks from the vehicle wheels on the rear axle.
7. Engage the rail wheel brake control valve, if so equipped. Observe the front guide wheel brake shoes while the vehicle brake pedal is pressed and released. Make sure the guide wheel brakes are operating properly.
8. Harsco Rail recommends that the vehicle be track tested. Follow the instructions in the HR4000 Series V1 Operator's Service and Parts Manual for placing the vehicle on track and track testing the vehicle.
9. If the vehicle tracks on the rail properly, no further action is required. If the vehicle does not track properly, perform the Guide Wheel Alignment Procedure found in the Operator's Service and Parts Manual.

Installing New Spring Cells In Guide Wheel Unit - See Figure 2

**FIGURE 2
INSTALLING NEW SPRING CELLS IN GUIDE WHEEL UNIT**



5012396 - Spring Cell Service Group

Note: Order one Spring Cell Service Group for each HR4000 Series V1 Guide Wheel Unit.

PART NO	DESCRIPTION	QTY
5012396	SPRING CELL SERVICE GROUP.....	1
5012393	Spring Cell Assembly, Left.....	1
5012395	Spring Cell Assembly, Right.....	1

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