

# Replacement Instructions

## ADZ Series Suspension

### Crossmember End Plate

#### Introduction

These instructions provide the information necessary to properly replace the Neway<sup>®</sup> ADZ series suspension end plate component parts. The replacement parts referenced in these instructions are compatible with all variations of Neway<sup>®</sup> ADZ crossmembers. Axle positions, driveline pinion angle, crossmember fastener type used, and crossmember width all affect the original part number marked on the existing assembly. The replacement end plates are compatible with the existing assembly on the crossmembers in place on the vehicle provided that the instructions are followed correctly.

A properly equipped and trained service professional should be able to perform the replacement procedures in 4 hours per axle. Additional time may be required for Huck<sup>™</sup> fasteners removal and, if necessary for access, the removal of the fifth wheel assembly.

Read these instructions before servicing this product and keep it in a safe location for future reference. Updates to these instructions, which are published as necessary, are available on the internet at [www.safholland.us](http://www.safholland.us).

When replacement parts are required, SAF-HOLLAND<sup>®</sup> highly recommends the use of only SAF-HOLLAND<sup>®</sup> Original Parts. A list of technical support locations that supply SAF-HOLLAND<sup>®</sup> Original Parts and an Aftermarket Parts Catalog are available on the internet at [www.safholland.us](http://www.safholland.us) or contact Customer Service at 888-396-6501.

#### Notes, Cautions, and Warnings

Before starting any work on the unit, read and understand all the safety procedures presented in this manual. This manual contains the terms "NOTE", "IMPORTANT", "CAUTION", and "WARNING" followed by important product information. These terms are defined as follows:

**NOTE:** Includes additional information to enable accurate and easy performance of procedures.

**IMPORTANT:** Includes additional information that if NOT followed could lead to hindered product performance.

#### CAUTION

Used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, could result in property damage.

#### ⚠ CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

#### ⚠ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

#### General Safety Instructions

- Read and observe all Warning and Caution hazard alert messages. The alerts provide information that can help prevent serious personal injury, damage to components, or both.

#### ⚠ WARNING

Failure to follow the instructions and safety precautions in this manual could result in improper servicing or operation leading to component failure which, if not avoided, could result in death or serious injury.

- All maintenance should be performed by a properly trained technician using proper/special tools, and safe procedures.

**NOTE:** In the United States, workshop safety requirements are defined by federal and/or state Occupational Safety and Health Act (OSHA). Equivalent laws may exist in other countries. This manual is written based on the assumption that OSHA or other applicable employee safety regulations are followed by the location where work is performed.

- Properly support and secure the vehicle from unexpected movement when servicing the unit.

#### ⚠ WARNING

Failure to properly support and secure the vehicle and axles prior to commencing work could create a crush hazard which, if not avoided, could result in serious injury or death.

## 1. Crossmember End Plate Replacement (Figure 1)

Part Number: 48100543

SRK-677

ITEM	DESCRIPTION	PART NUMBER	QTY.
1	End Plate, Reinforced, Left-Hand	90549359	2
2	End Plate, Reinforced, Right-Hand	90549361	2
3	Bolt, Hex, M20 x 2.5" x 60, Class 10.9	M3900010	12
5	Nut, Hex, Nylon Locking, M20 x 2.5", Class 10	M3900011	12
6	Backer Plate	90034740	2

## 2. Replacement Procedures

**IMPORTANT:** SAF-HOLLAND® recommends replacement of ALL end plates even if ONLY one (1) end plate is found to be cracked during visual inspection.

**NOTE:** Prior to replacement, determine and obtain OEM hardware for fastening through the frame rail. When ordering parts, use OEM hardware and allow for an increase in joint thickness of .188" (4.8 mm). Frame attaching hardware should provide a minimum of 30,000 lbs. clamp load for SAE Grade 8 3/4"-10 and 34,100 lbs. clamp load for 20-2.5 Class 10.9 metric.

**NOTE:** Removal of the fifth wheel assembly may be necessary to access the crossmember mounting hardware (Figure 2). If removal is necessary, contact the vehicle OEM for removal procedures and replacement hardware prior to performing end plate replacement.

Figure 1

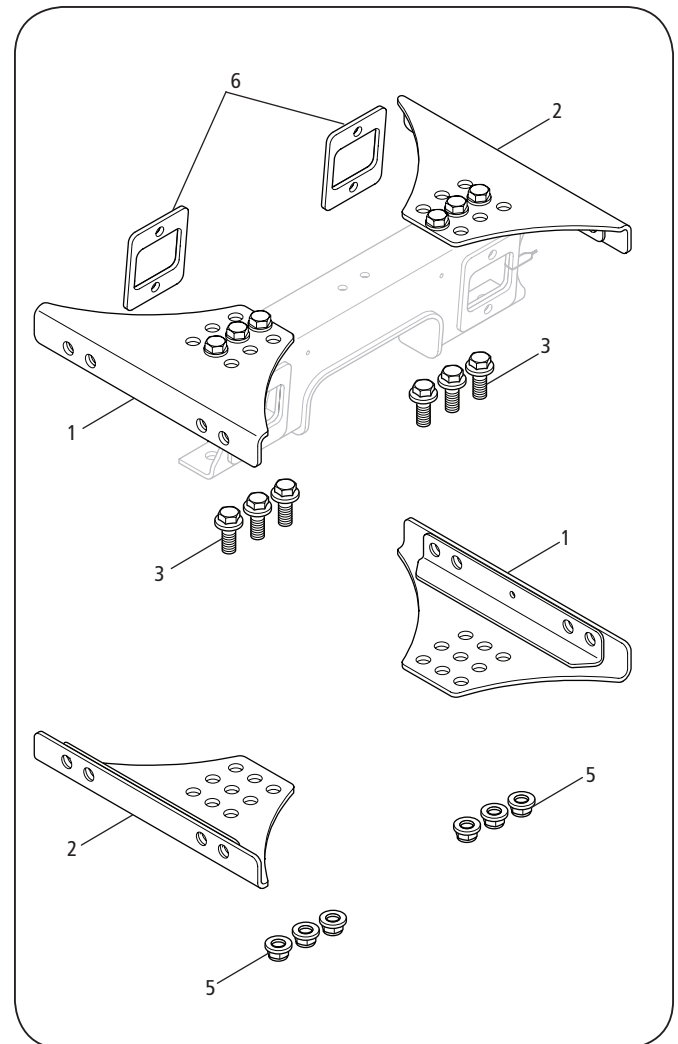
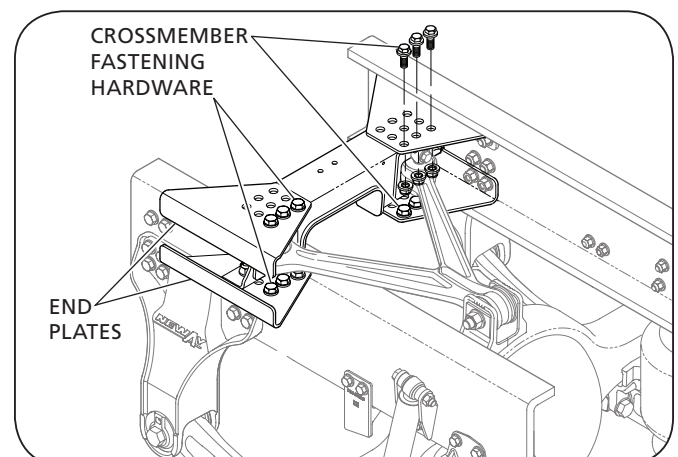


Figure 2



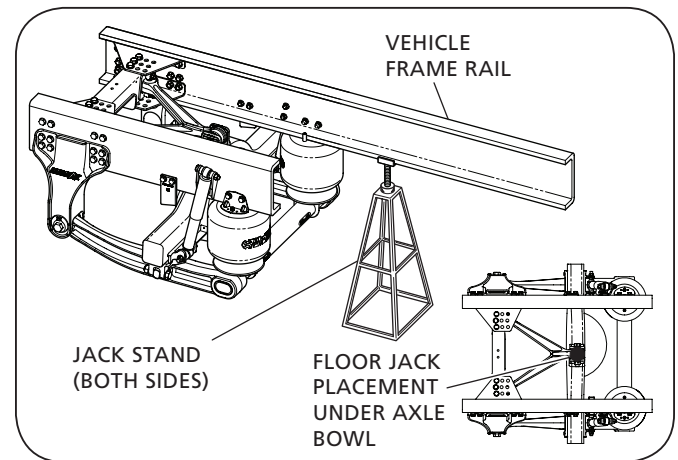
1. With the vehicle unloaded and trailer disconnected on a level surface, chock the front tires to prevent the vehicle from rolling forward or backward.
2. Support the frame with the jack stands (**Figure 3**).

**⚠ WARNING** Failure to properly support the vehicle prior to commencing work could create a crush hazard which, if not avoided, could result in death or serious injury.

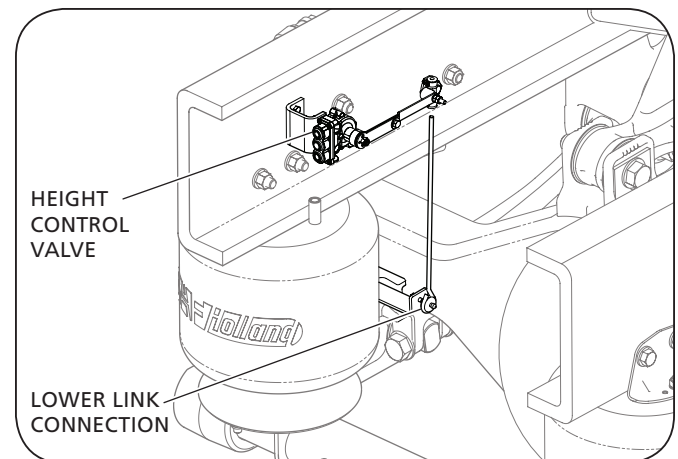
3. Using a floor jack support the axle at the axle bowl (**Figure 3**) and block the axle to prevent it from rotating when the bolts are removed from the crossmember assembly.
4. Exhaust all air from the suspension system by disconnecting the link from the lower connection of the height control valve and pulling down on the link (**Figure 4**). Refer to the height control valve manufacturer's instructions for further information.

**IMPORTANT:** Determine if any hoses and/or electrical lines are routed through the area where replacement will be being performed. Take precaution to ensure that the hoses and/or electrical lines will NOT be damaged.

**Figure 3**



**Figure 4**

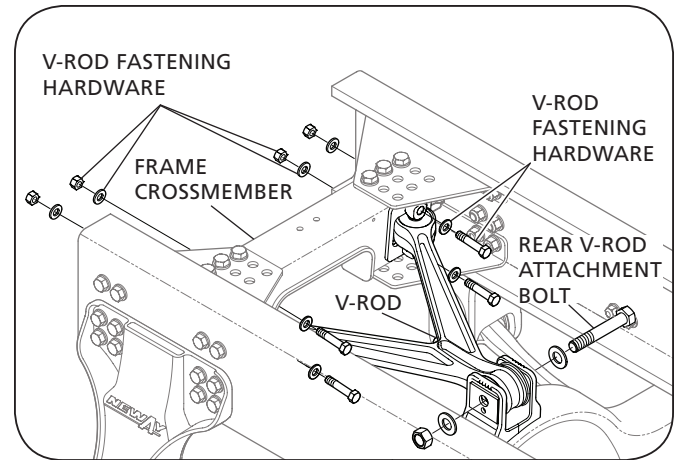


5. Clean exposed fastener threads of dirt and/or paint before loosening. Loosen the V-Rod fastening hardware attached to the crossmember center channel to reduce binding during the end plate removal and installation (**Figure 5**). DO NOT remove V-Rod hardware.
6. Note the orientation (bolt head up) and position of the crossmember fastening hardware that attaches the lower end plates to the center channel. Remove and discard the crossmember fastening hardware (**Figure 6**).

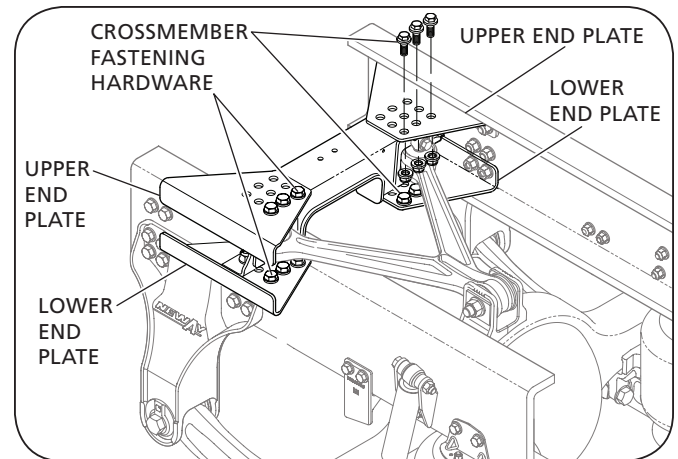
**NOTE:** The position of the hardware in the row on the end plate is important to suspension function (**Figure 7**).

7. Make sure faces of mating surfaces are clean to ensure proper clamp load.

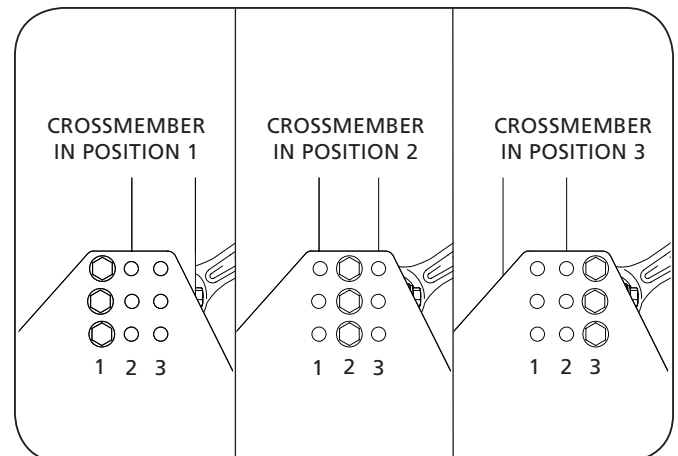
**Figure 5**



**Figure 6**



**Figure 7**



- Note the orientation of the frame fastening hardware that attaches the lower end plates to the frame rail. Remove and discard the frame fastening hardware (**Figure 8**).

**NOTE:** Some bolts may be reverse orientation to allow clearance of center channel.

- Remove the lower end plates from the mating surfaces (**Figure 6**). Use caution not to damage the surrounding lines and/or wires.

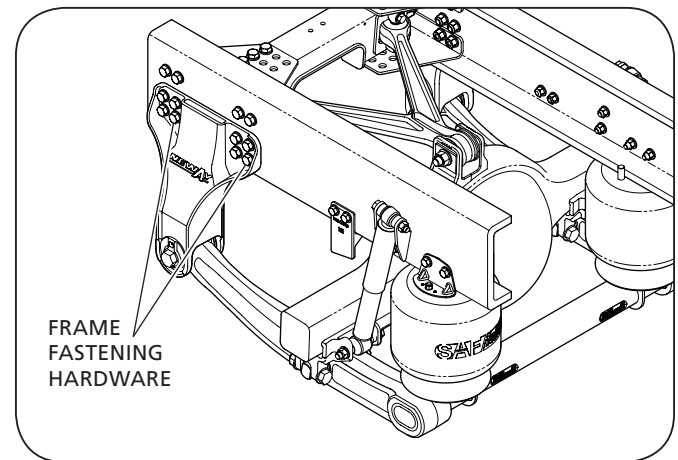
**NOTE:** Make sure to protect hoses and/or electrical lines. If damage to hoses and/or electrical lines occurs, replacement may be required which will add time to replacement procedures.

- Using new hardware, attach the new reinforced lower end plate to the center channel in the same orientation and position noted in Step 6 (bolt head up). Use caution not to damage the surrounding lines and/or wires.

**NOTE:** DO NOT tighten fasteners until all fasteners are installed.

- Install new frame fastening hardware in the same orientation as noted in Step 8.
- Once all the fastening hardware is installed, make sure that all the mating parts are flat and square. Using a torque wrench, tighten the center channel bolts to 260-340 ft.-lbs. (353-461 N•m).
- Tighten frame rail fastening hardware according to OEM torque specifications.

**Figure 8**



14. Note the orientation (bolt head up) and position of the crossmember fastening hardware that attaches the upper end plates to the center channel. Remove and discard the crossmember fastening hardware (**Figure 9 and 10**).
15. Note the orientation of the frame fastening hardware that attaches the upper end plates to the frame rail. Remove and discard the frame fastening hardware (**Figure 11**).
16. Remove the upper end plates from the mating surfaces (**Figure 9**). Use caution not to damage surrounding lines and/or wires.

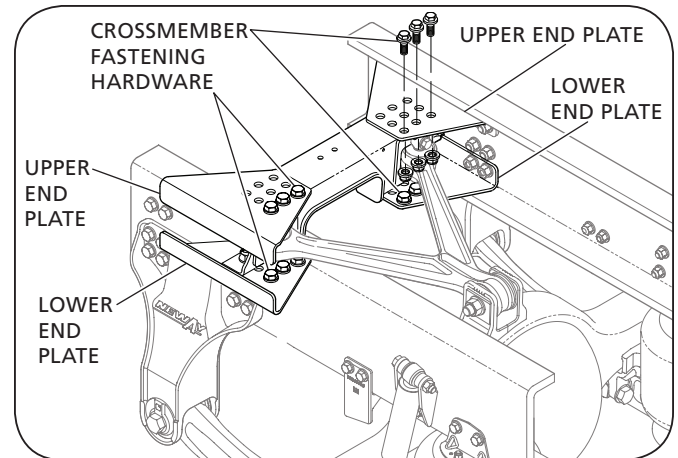
**NOTE:** Make sure to protect hoses and/or electrical lines. If damage to hoses and/or electrical lines occurs, replacement may be required which will add time to the replacement procedures.

17. Using the new hardware, attach the new reinforced upper end plate to the center channel in the same orientation and position noted in Step 13 (bolt head up). Use caution not to damage surrounding lines and/or wires.

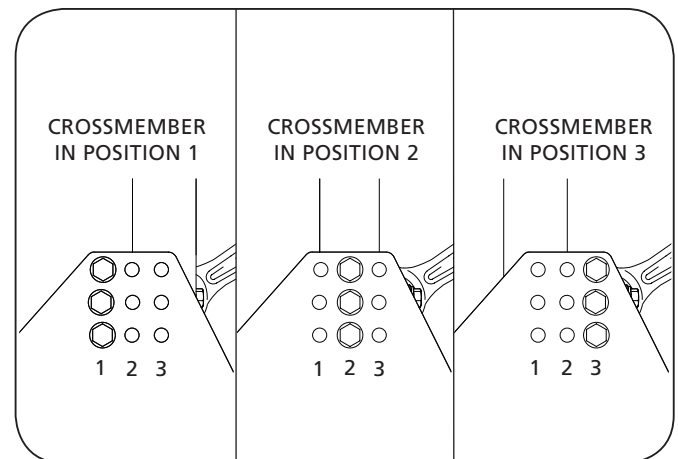
**NOTE:** DO NOT torque fasteners until all fasteners are installed.

18. Install the new frame fastening hardware in the same orientation as noted in Step 14.
19. Once all the fastening hardware is installed, make sure that all mating parts are flat and square. Using a torque wrench, tighten the center channel bolts to 260-340 ft.-lbs. (353-461 N•m).
20. Tighten frame rail fastening hardware according to OEM torque specifications.

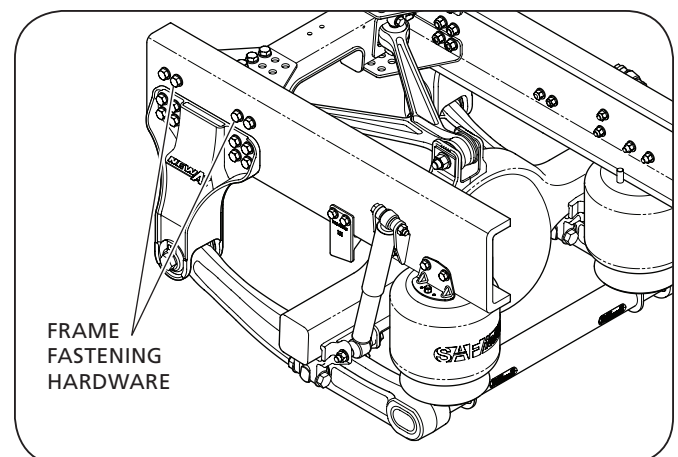
**Figure 9**



**Figure 10**



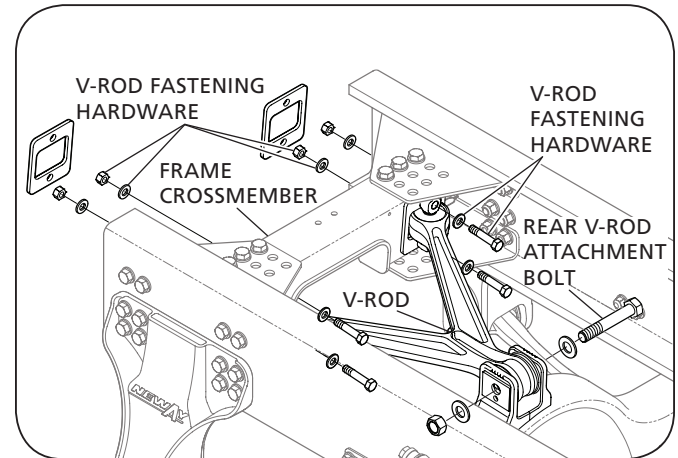
**Figure 11**





21. When reassembling the V-Rod at the crossmember, install one (1) additional Item 6 (Backer Plate) against the forward crossmember center channel face. The plate thickness is approximately .31" (8mm). Account for this in the replacement hardware length specification.
22. Using a torque wrench, tighten the V-Rod crossmember fastening hardware to OEM specifications (**Figure 12**).
23. Reposition any hoses and/or electrical wires that were displaced or repositioned during the removal and replacement procedures.
24. Touch up any paint or undercoating of metal that may have been exposed or damaged during the replacement process.
25. Re-connect the height control valve system and re-adjust ride height following vehicle OEM or height control valve OEM procedures.
26. Remove the floor jack supporting the axle bowl.
27. Raise the rear of the vehicle using the vehicle's lift points and remove the jack stands from under the vehicle frame. Refer to procedures provided by the vehicle OEM.
28. Increase the suspension air system reservoir pressure above 70 psig (4.83 bars) and check for leaks. All air springs should inflate and raise the suspension to the proper ride height.
29. Check the ride height and make sure it is within  $\pm .25"$  (6 mm) of design specification and adjust as necessary. Refer to the ride height adjustment instructions described in the ADZ Series Suspension Maintenance and Parts Manual XL-PS10452MM-en-US.
30. Check the alignment of the suspension per vehicle OEM instructions. If re-alignment is necessary, refer to the alignment procedures described in the ADZ Series Suspension Maintenance and Parts Manual, XL-PS10452MM-en-US.

**Figure 12**





From fifth wheel rebuild kits to suspension bushing repair kits, SAF-HOLLAND Original Parts are the same quality components used in the original component assembly.

SAF-HOLLAND Original Parts are tested and designed to provide maximum performance and durability. Will-fits, look-alikes or, worse yet, counterfeit parts will only limit the performance potential and could possibly void SAF-HOLLAND's warranty. Always be sure to spec SAF-HOLLAND Original Parts when servicing your SAF-HOLLAND product.

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