

Ride Height Adjustment



Prepared By: Kalman Takacs
Field Service Engineer
Phone (256) 241-1243
Fax (256) 832-0930

Nic Rucker
Field Service Technical Rep
Phone (256) 499-5433

Approved By: Dan Allen
Chief Engineer

Property Name: All LFW, BRT, and 45' compo

Top Bus Number: All LFW, BRT, and 45' compo

Issue: Air bag ride height inspection.

Reason / cause: Periodic inspection is required to maintain the proper ride height.

Solution: Inspect and if required adjust the ride height per this work instruction.

Number of Affected Buses: As required

Estimate Repair Time: 30 min / bus if no adjustment is required. 1 hour if adjustment is required.

Necessary parts: torque seal, WD-40

Necessary Tools: Usual hand tools (wrenches, sockets, screwdrivers, etc.); wire brush, torque wrench capable for 10-70 lb.-ft.

Templates for measuring the front and rear airbag height:

- Front Suspension – T-3136 (Orange, 10.00 inch Height Gauge)
- Rear Suspension – T-3137 (Green, 10.25 inch Height Gauge)
- Front Suspension – T-3279 (Yellow, 10.43 inch Height Gauge)

Ride Height Adjustment



SAFETY PRECAUTIONS MUST BE FOLLOWED ACCORDING TO ACCEPTED INDUSTRY STANDARDS AND LOCAL/PROPERTY REQUIREMENTS.

1. Park the bus on a leveled surface above a service pit.
2. (The ride height adjustment procedure can also be performed by using wheel lifts. If wheel lifts are used, the lifting brackets underneath the wheels need to be leveled at all four locations.)
3. Place wheel chocks in front of and behind the rear wheels.
4. Release the parking brake.
5. Connect shop air to the bus air system. Check the air gauges at the dash: the air system pressure should be at least 100 psi.
6. Check the airbag height differences at the **rear axle** according to the followings:
 - Use the NABI airbag template (use the chart on last page to determine color of template) and measure the rear airbag of the curbside C-frame: place the sharp end of template underneath the top mounting plate as pictures show below. If the top surface of the bottom of the template goes underneath the airbag and it is even with the upper edge of the nylon spacer. *Right now just note the difference between the airbag and the template and don't worry about the exact heights.*

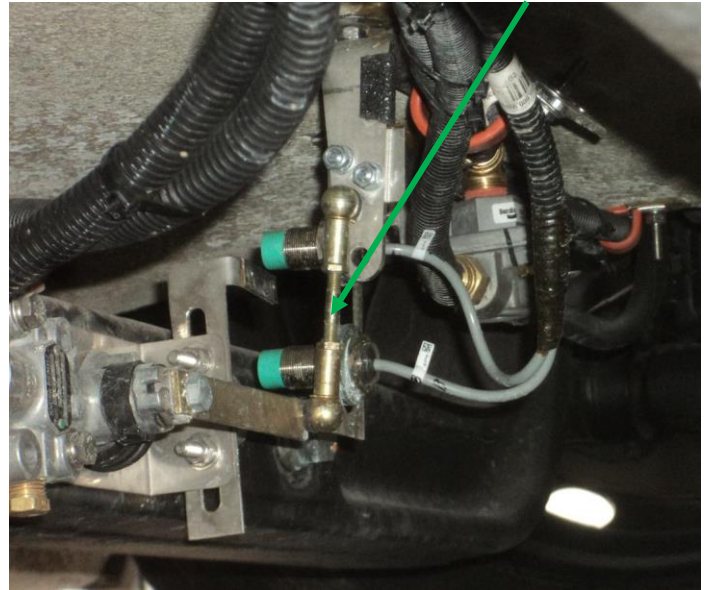


- Measure the front airbag of the curbside C-frame as described above.
- The maximum allowed differences between the fore and aft airbag of the curbside C-frame is $\frac{1}{4}$ ".
- Check the airbags of the street side as described above. Note the differences between the fore and aft airbags of the street side C-frame.

Ride Height Adjustment



7. Measure the **front axle airbags** by using the chart at the last page per bus type. Adjust the heights of the front airbags as required by turning the front leveling valve rod up or down.



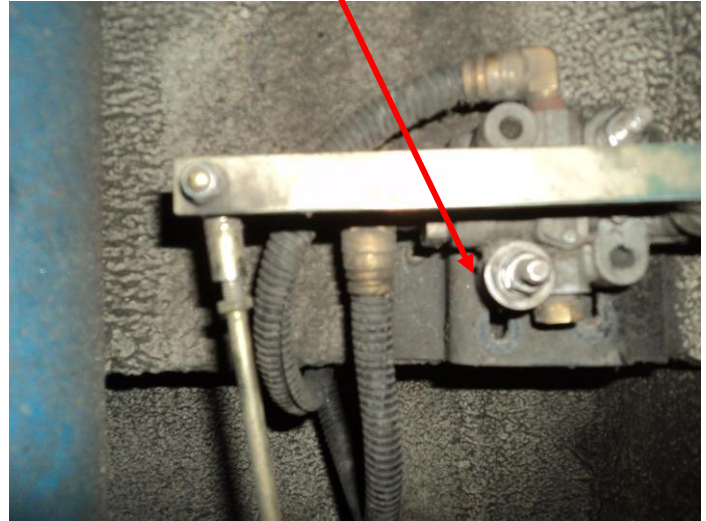
Re-check the air bag height difference at the rear again. It may have changed after the front leveling valve adjustment.

8. Go back to the rear axle. If the airbag height difference is still greater than $\frac{1}{4}$ " then the upper radius rods must to be adjusted according to the followings:
 - Loosen the clamps on both ends of the upper radius rods.
 - Remove dust from the threads of the radius rod heads by using a wire brush and apply WD-40 thread penetrate spray or similar.
 - If the aft airbags were shorter than the fore airbags, the upper radius rods lengths need to be lengthened, and vice-versa. Turn the same amount of revolution and to the same directions on both upper radius rods.
 - Check the airbag heights by using the chart on the last page per bus type. If the fore and aft airbags are within the $\frac{1}{4}$ " tolerances then tighten the upper radius rod clamps and torque them to 57-63 lb.-ft. Apply torque seal to the bolts and nuts.

Ride Height Adjustment



9. Now adjust the rear curbside and street side airbag heights to required measurement by turning the curbside and street side leveling valve rods. If required move the lower end of the rod up or down in the mounting bracket or move the entire valve body up or down in the slots of the mounting bracket.



Re-check the front air bag height

10. For a 60' BRT bus, adjust the middle axle just like the rear axle with the appropriate template

Note: There is only one leveling valve at the center axle

11. Check for completeness of work.
12. Record Bus Number, Date of inspection and Mileage.

BUS TYPE	FRT BAG HEIGHT	TEMPLATE	MIDDLE BAG HEIGHT	TEMPLATE	REAR BAG HEIGHT	TEMPLATE
45' COMPO	10.03 IN	ORANGE	N/A	N/A	10.25 IN	GREEN
42' BRT	10.03 IN	ORANGE	N/A	N/A	10.03 IN	ORANGE
40' LFW	10.43 IN	YELLOW	N/A	N/A	10.03 IN	ORANGE
60' BRT	10.03 IN	ORANGE	10.03 IN	ORANGE	10.03 IN	ORANGE
31' LFW	10.43 IN	YELLOW	N/A	N/A	10.03 IN	ORANGE