

Ride Height Adjustment, Vehicle with a Barksdale Valve

NOTICE

Failure to adjust the suspension ride height could adversely affect driveline angles. Also, if the air springs are set too high, the driver may have difficulty (or be prevented from) backing the vehicle under a trailer. If the air springs are set too low, rapid wear of suspension parts will result.

IMPORTANT: Before checking the suspension height, make sure there is no load on the chassis. For tractors, unhitch the trailer. Trucks must be empty.

1. Park the vehicle on a level surface, using a light application of the brakes. Do not apply the parking brakes. Put the transmission in neutral. Build the secondary air pressure to at least 100 psi (690 kPa). Shut down the engine.
2. Mark the location of the front and rear tires on the floor, then chock the tires on one axle only.

NOTE: The stud bolt that fastens the horizontal control lever to the vertical is oriented correctly when the linkage rod is vertical as viewed from the side of the vehicle; see Fig. 1.

3. Measure between the top of the U-bolt pad and the bottom of the axle stop. See *Suspension Ride Height Measurement*, Table 1, Table 2, Table 3, and Table 4 for an acceptable range of heights for each suspension.
4. If the distance is within the acceptable range, the ride height is adjusted correctly. Apply the parking brakes.

If the measurement is not within the acceptable range, go to the next step.

NOTICE

When loosening a Barksdale height-control valve from a mounting bracket, always hold the valve-side mounting studs in place with an Allen wrench while loosening or tightening the nuts that attach the valve to the bracket. Because the mounting studs are threaded into the valve body, loosening the nuts without holding the studs can

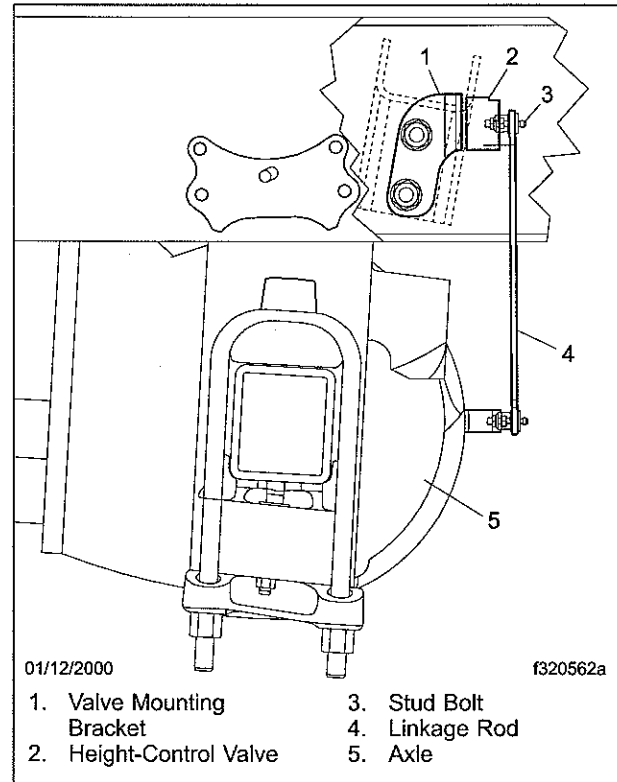


Fig. 1, Barksdale Height-Control Valve Installation (side view)

tighten the studs, which can crush the valve body and damage the valve. Conversely, tightening the nuts without holding the studs can back the studs out, causing a separation of the two halves of the valve body, and possibly a leak.

5. While holding the height-control valve mounting studs in place with an Allen wrench, loosen the nuts that attach the valve to the mounting bracket.
6. Adjust the position of the valve body, until the distance from the bottom of the left axle stop to the top of the U-bolt pad is the target measurement from the applicable *Suspension Ride Height Measurement* table.
7. Center the horizontal control lever on the valve by inserting a 5/32-inch (4-mm) pin or drill bit into the neutral-position hole in the height-control valve and the horizontal control lever.

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8. While holding the height-control valve mounting studs in place with an Allen wrench, tighten the nuts 95 lbf·in (1100 N·cm). Do not overtighten.
9. Remove the pin or drill bit previously inserted in the height-control valve.
10. Drive the vehicle unloaded for about 1/4 mile (1/2 km), then stop the vehicle in the exact location (as previously marked) of the original measurement.

Park the vehicle using a light brake application. Chock the tires on one axle only, and put the transmission in neutral. Do not apply the parking brakes.

11. Check the distance between the bottom of the left axle stop and the top of the axle U-bolt pad.
12. If the distance is within the acceptable range, ride height is adjusted correctly. Apply the parking brakes.

If the distance is not within the acceptable range, repeat the adjustment procedure.

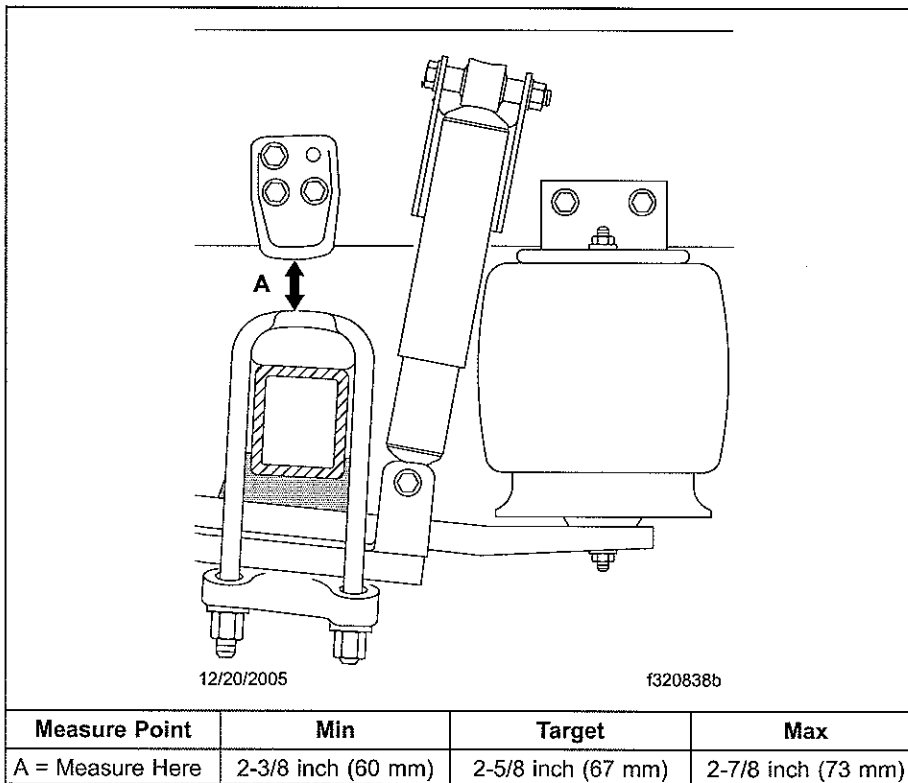
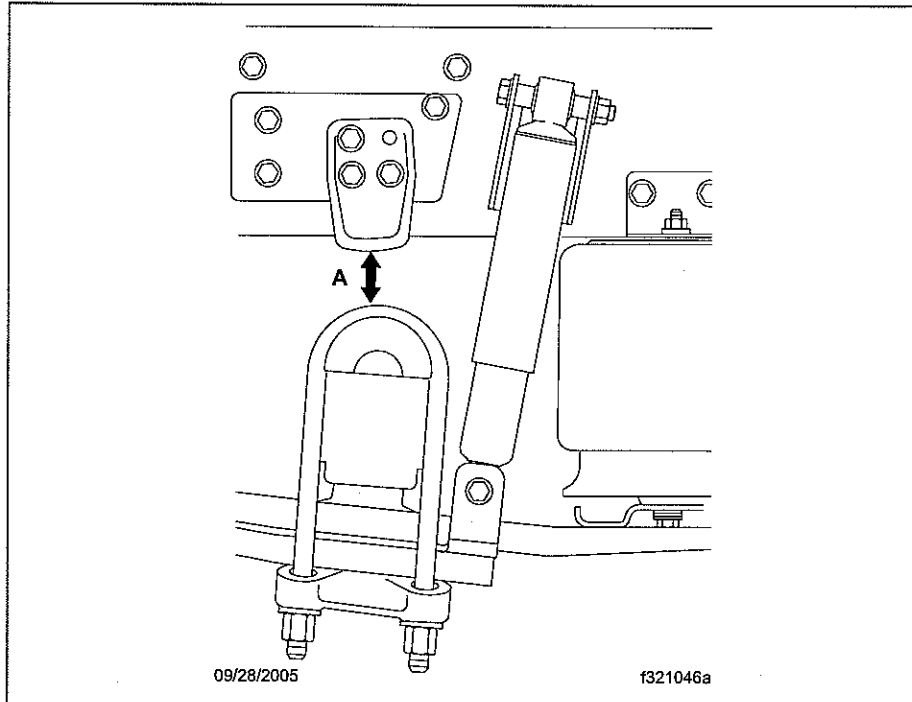


Table 1, Suspension Ride Height Measurement, Dual-Leaf Spring, 20k/40k High Ride

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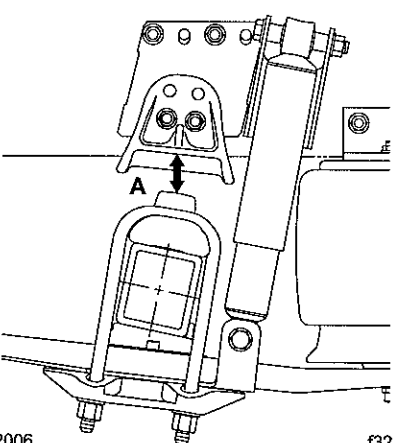
Measure Point	Min	Target	Max
A = Measure Here	2-3/4 inch (70 mm)	3 inch (76 mm)	3-1/4 inch (83 mm)

Table 2, Suspension Ride Height Measurement, Dual-Leaf Spring, 23k/46k/69k High Ride

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Rear Suspension, Freightliner AirLiner

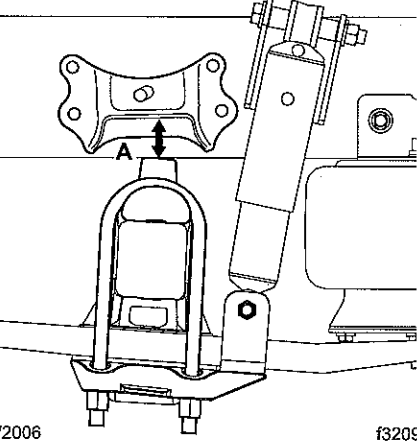
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Measure Point	Min	Target	Max
A	2-3/8 inch (60 mm)	2-5/8 inch (67 mm)	2-7/8 inch (73 mm)

Table 3, Suspension Ride Height Measurement, Single-Leaf Spring, 20k/40k High Ride



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Measure Point	Min	Target	Max
A	2-3/8 inch (60 mm)	2-1/2 inch (64 mm)	2-7/8 inch (73 mm)

Table 4, Suspension Ride Height Measurement, Single-Leaf Spring, 10k/12k/15k/18k Mid Ride and 40k Low and Mid Ride