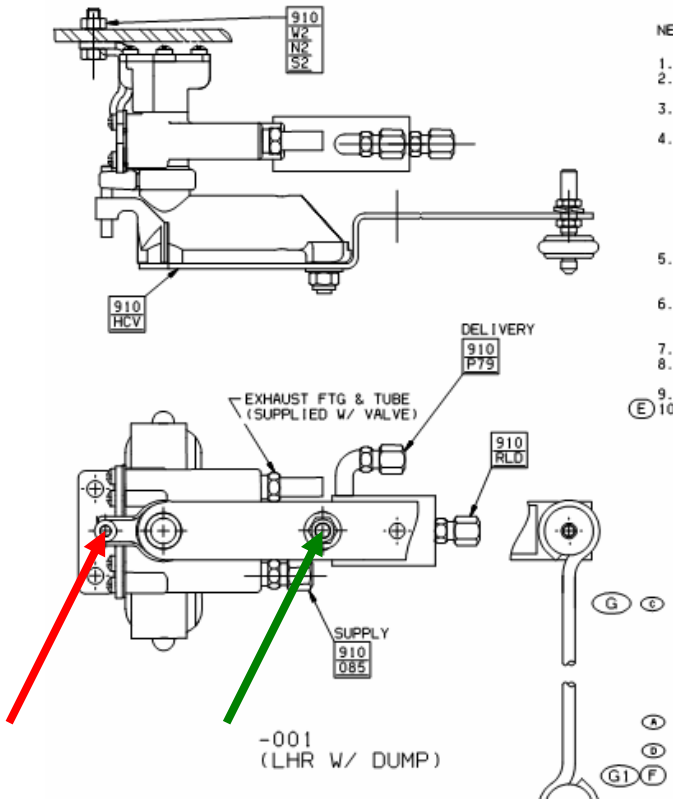
Freightliner Ride Height Control Valve Adjusting

<< A Crusingator Document >>

I have recently been asked to explain the procedure for adjusting the ride height on a Freightliner chassis. I will use my chassis as an example it is a 2007 XC chassis with a 40 foot Phaeton coach. My chassis has three height control valves, one on the front driver's side of the axle and two on the rear axle one on each side. The front height control valve is used to adjust the ride height on the front axle both left and right sides. The two control valves on the rear axle are adjusted simultaneously. Adjusted one side of the rear axle will affect the height of the opposite side of the rear axle. So it takes a little tweaking back and forth to get good results.



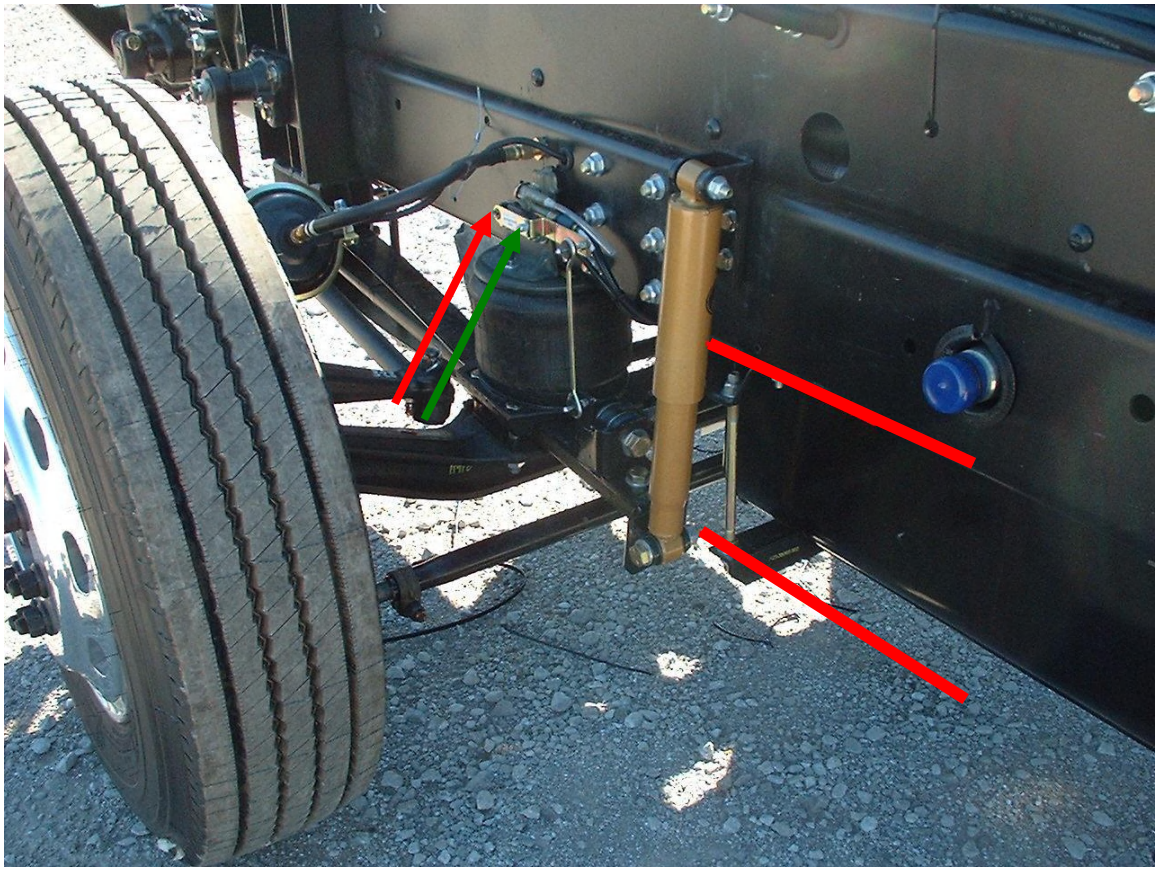
NEWAY HEIGHT CONTROL VALVE ADJUSTMENT

1. PARK VEHICLE ON A LEVEL SURFACE.
2. DISCONNECT THE LINKAGE FROM THE HEIGHT CONTROL VALVE. IT WILL PULL OFF THE BOLT STUD.
3. ROTATE CONTROL ARM TO A 30 DEG DOWN POSITION FOR 10-15 SECONDS TO ALLOW ALL AIR TO EXHAUST FROM AIRBAG.
4. MOVE VALVE CONTROL ARMS TO A 30 DEG UP POSITION. WHILE AIR BAGS ARE INFLATING SET RIDE HEIGHT TO PROPER POSITION (FOLLOW RIDE HEIGHT SETTINGS IN LOWER TABLE). RETURNING TO THE CENTER POSITION WILL STOP AIR FROM DEFLATING. ABOVE SPECIFIED RIDE HT, REPEAT STEPS 3&4 TO ENSURE PROPER VALVE SETTING. RIDE HEIGHT SHOULD ALWAYS BE SET AS BAG IS INFLATING, NEVER AS BAG IS DEFLATING.
5. INSERT WOOD LOCATING PINS INTO THE ADJUSTING BLOCK AND BRACKET ON THE HEIGHT CONTROL VALVES AT THE CENTER POSITION.
6. LOOSEN THE 1/4" ADJUSTING LOCK NUT LOCATED ON THE ADJUSTING BLOCK. THIS WILL ALLOW THE CONTROL ARM TO PIVOT APPROXIMATELY +/- 1" (25.4).
7. RECONNECT LINKAGE TO BOLT STUD.
8. RETIGHTEN THE 1/4" ADJUSTING LOCK NUT AT THE ADJUSTING BLOCK 24-48 INCH LBS.
9. REMOVE THE WOOD LOCATING PINS.
(E) 10. CHASSIS WITH DUAL REAR LEVELING VALVES MUST HAVE VALVES ADJUSTED SIMULTANEOUSLY.

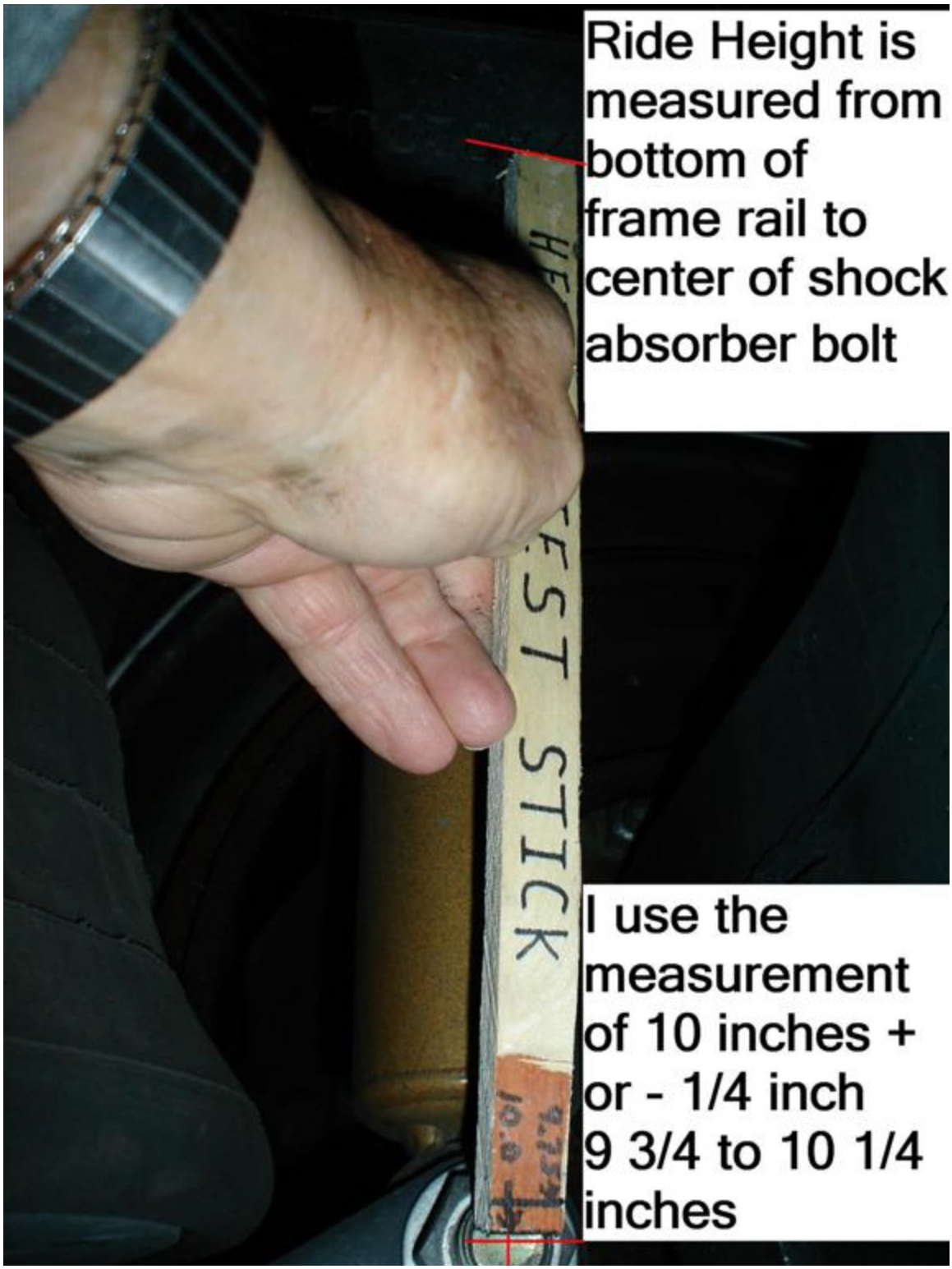
SUSPENSION	VEHICLE MODEL	BTM OF FRAME TO ℄ LOWER SHOCK BOLT	℄ UPR SHOCK BOLT TO ℄ LWR SHOCK BOLT
AS120(FRONT)	XC, XB	10"(254 mm)	N/A
AS140(FRONT)	VCL	11"(279 mm)	N/A
IFS114(FRONT)	XC, VCL	N/A	17.5"(444 mm)
ADL (NON-TAG)	XC, XB	10.38"(264mm)	N/A
AD200-RS17/19	XC, XB	9.75"(248MM)	N/A
AD200-RS15	XC, XB	9.38"(238MM)	N/A
ADTB280(REAR)	VCL	N/A	17.3"(438 mm)
15K AIRLINER	XCS	8.8"(224 mm)	N/A
AD123	VCL	N/A	18"(458 mm)
ADL (TAG)	XC, XB	11"(279 mm)	N/A

(G) (C)
(A)
(D)
(G1) (F)

Make sure to follow the above instructions, the last two sentences of # 4 are very important. Always adjust the height control valves while **INFLATING** the air bags never adjust while **DEFLATING** the air bags.
My coach has the AS120 front axle which means the proper height is 10 inches, measured from the bottom of the frame rail to the center of the shock absorber bolt. The rear axle is the AD200-RS17/19 its ride height is 9 3/4 inches again measured from the bottom of the frame rail to the center of the shock absorber bolt.
The wood locating pin referred to in # 5 and # 9 is actually a wooden golf tee, it is denoted by the red arrow and its location when installed.
The 1/4 inch adjusted lock nut is denoted by the green arrow.



The distance between the two red lines by design is 10 inches on my XC-R chassis. I have taken a small piece of plywood and made me a ride height test stick. Its simple to make I made it 10 inches long and marked 9 3/4 inches on it. I place one end of the stick against the bottom of the frame rail and adjust the height control valve until the opposite end of the stick is centered on the shock absorber bolt.



That is all there is to adjusting your ride height control valves. It gets easier after a few times. I just adjust both front and rear control valves to 10 inches or as close as I can get them adjusted to 10 inches.