

## REAR SUSPENSION AUXILIARY BUMPERS

TSB171

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### Models affected:

All 2017 model year gasoline powered standard cab LandStar and CrossRoad vehicles, (i.e. LS350, LS450, LS550, LS670, CR350, CR550) manufactured prior to November 9, 2016.

### Description of problem:

Rear suspension auxiliary bumpers may be out of position.

### Solution:

Measure position and adjust if needed.

### Tools required for checking:

Measuring device

### Procedure:

#### 1 MEASURE

With the vehicle parked and unloaded, measure the distance from the bottom of BOTH auxiliary bumpers mounted to the main chassis to the top of the reaction pad on the swing arm. You may use feeler gauges (recommended), pieces steel strip of different thickness, etc... (see figures 1a & 1b).

#### 2 CALCULATE

Add those values together and divide by two to find the average. If the average is between .125" to .25" like shown in Example 1, the auxiliaries are positioned correctly and no further action is needed. Stop here. If the average is higher than .25", use the chart below to select a shim or combination of shims that when subtracted from the average will give you a result between .125" to .25" as shown in Example 2, then proceed to Step 3.

Measurement Chart	Part Number		
	16751	16752	16753
Required Stack Height			
1/16" (0.062)	1		
1/8" (0.125)		1	
3/16" (.1875)	1	1	
1/4" (.25)			1
5/16" (.3125)	1		1
3/8" (.375)		1	1
7/16" (.4375)	1	1	1

#### EXAMPLE 1

Left side gap measurement: .25"  
Right Side gap measurement: .125"  
 $(.25 + .125) / 2 = .1875$   
.1875" is between .125" and .25"  
so **NO ACTION IS NEEDED. STOP HERE.**

#### EXAMPLE 2

Left side gap measurement: .5"  
Right Side gap measurement: .375"  
 $(.5 + .375) / 2 = .4375$   
.4375" is not between .125" and .25" so a shim pack will be required.  
From the chart above, the thickness .25" will give the desired result  $(.4375 - .25 = .1875)$  so one of part number 16753 will be used.



### NOTE

- There may be more than one shim pack thickness that can be selected.
- Some shims may be round and others square in shape depending on manufacturer.

### 3 SHIM PACK INSTALLATION

#### Tools required for installation:

1-1/16" wrench	1-1/8" socket	(2) 3/4" sockets
Floor Jack	Jack Stands	

Contact American LandMaster Customer Service and request kit part number 16761. It will be sent free of charge and will contain the following.

- 16751: SPACER, .531" ID 2.0" OD .062" THICK - Quantity 2
- 16752: SPACER, .531" ID 2.0" OD .125" THICK - Quantity 2
- 16753: SPACER, .531" ID 2.0" OD .250" THICK - Quantity 2
- 16754: BOLT, 1/2-13 X 2.0 HHCS FT GRADE 5 - Quantity 2

Remove the seat and underseat storage tray (if equipped). Set the main chassis on jack stands and place a jack under the engine on the swing-arm, just in contact with it. Remove the bolt from the center joint and lower the jack to bring the swing-arm free of the main chassis. (1-1/16" wrench and 1-1/8" socket) See figure 2.



### CAUTION

Be careful when lowering the swing arm not to go too far and put excess tension on the wiring harness, brake lines, and other items.

Using the 3/4" sockets, remove the bolt that secures one of the auxiliary bumpers in place (see figures 3a & 3b). Discard the bolt but retain the washer and nut. Pass the new bolt supplied in the kit through the washer, the auxiliary bumper, the shim pack selected in Step 2 (round shims first directly against the bumper and then square spacers), and the bracket on the main chassis. Install the nut and tighten (see figure 4). Repeat this process on the other auxiliary bumper.



### NOTE

The same thickness shim pack **MUST** be installed with each auxiliary even if the original measurements were different between the two.

Use the jack to raise the swing arm back into position. Reinstall and tighten the cross bolt. Lower and remove the jack. Remove the unit from the jack stands. Repeat step 1 to confirm that the auxiliary position is now correct.

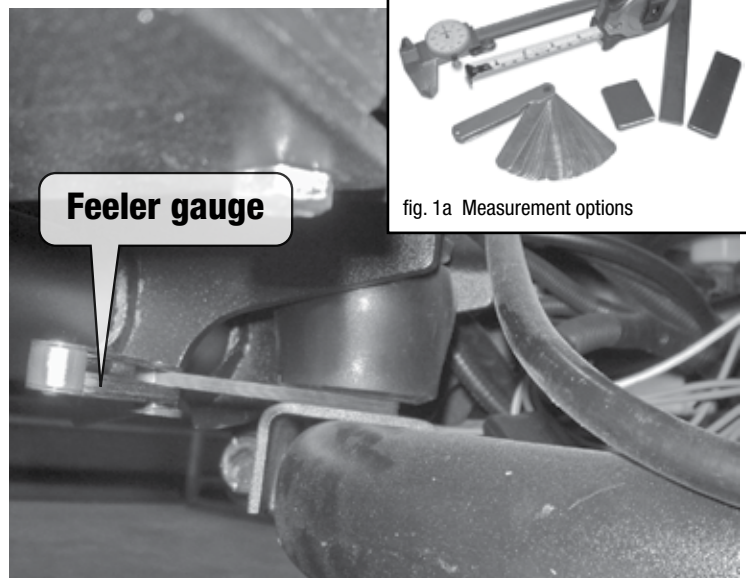
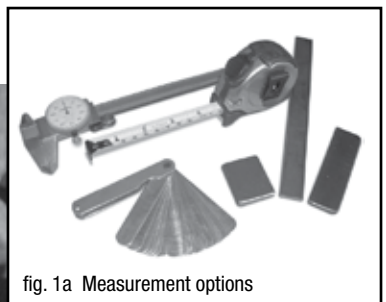


fig. 1b Measurement options

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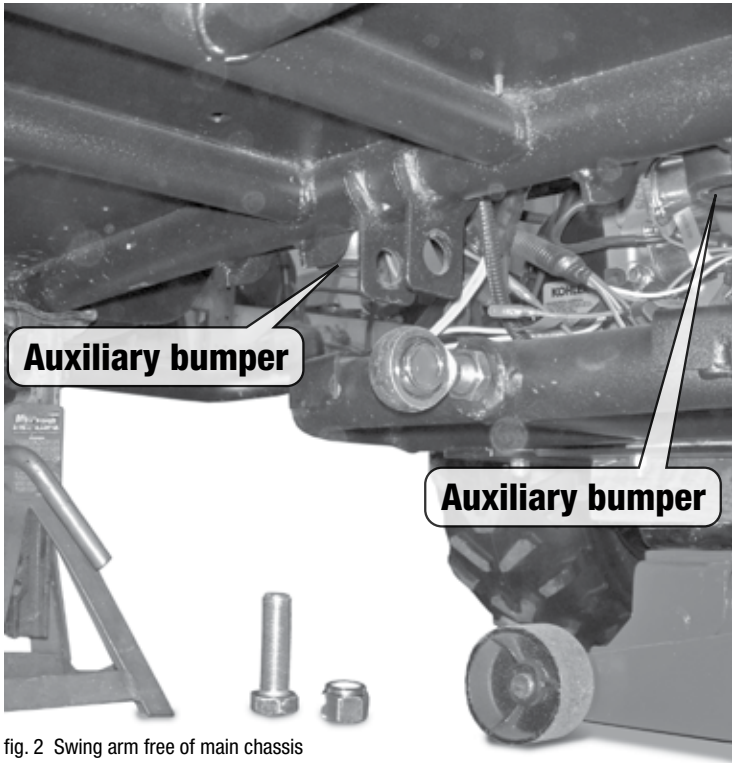


fig. 2 Swing arm free of main chassis

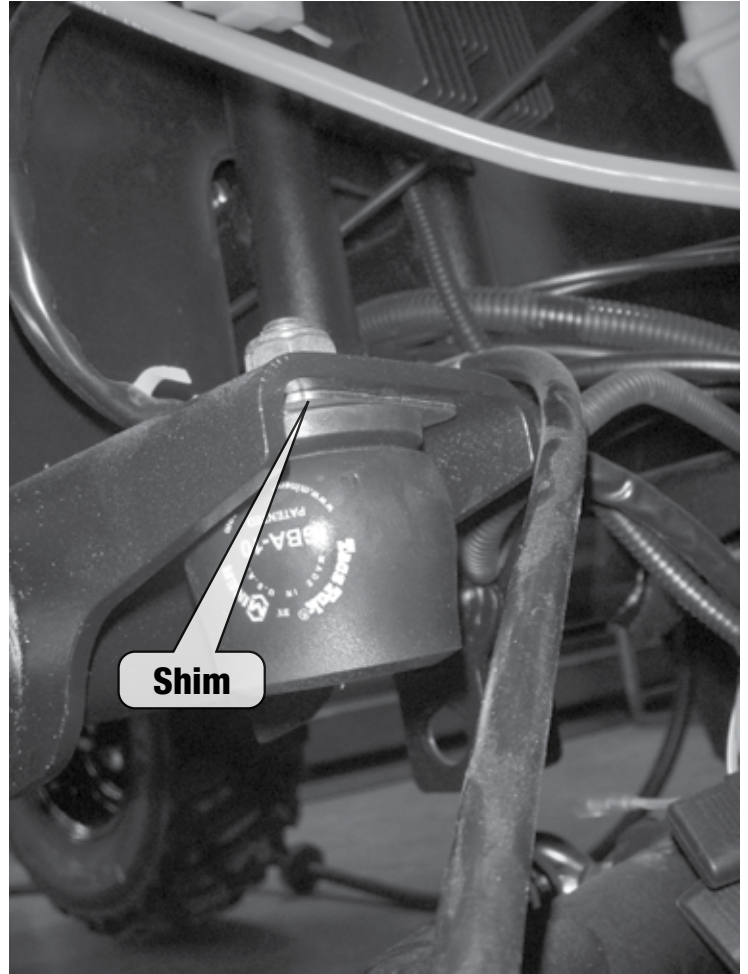


fig. 4 Shim placement

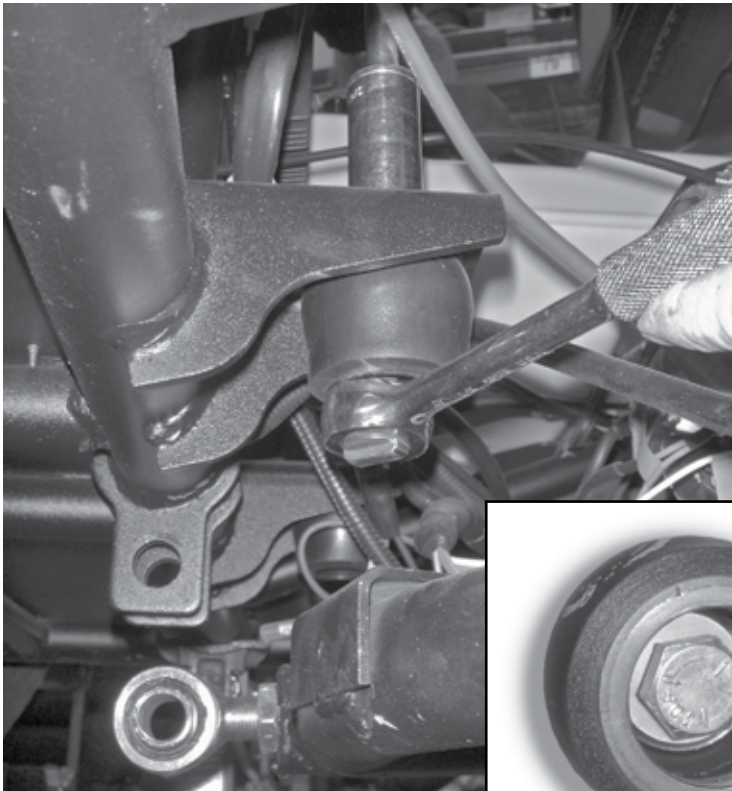


fig. 3a Auxiliary bumper bolt removal

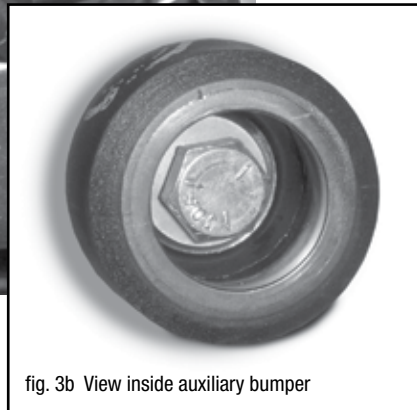


fig. 3b View inside auxiliary bumper