



Number: FS-2014-03

Date: November 25, 2014

Model: **All CNG or BAE Equipped Buses**

Approved:

**Robert L. Birdwell, Executive Director
Quality Control & Field Service**

Subject: Bolt Replacement On Front Air Bags

We have found that CNG buses and BAE Hybrid buses with drum brakes will need to have the bottom center bolt replaced on the front air bags.

The bolt installed on each of the four front air bags is a ½" - 13 X 3-3/4" Grade 8 bolt. The proper bolt is ½" - 13 X 4" Grade 8 bolt.

We will be sending you the correct bolts for each of your affected buses.

After replacing the bolt, please torque the bolt to 25-30 ft/lbs.

If you require front air bags, please contact Johnny in Field Service with the VIN and mileage of the bus(es) needing air bags.

Installation Diagram 10-67889-000 is attached.

Make sure you follow proper safety procedures when replacing suspension bolts and air bags.

RLB:rlb

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BB@Gillig.com

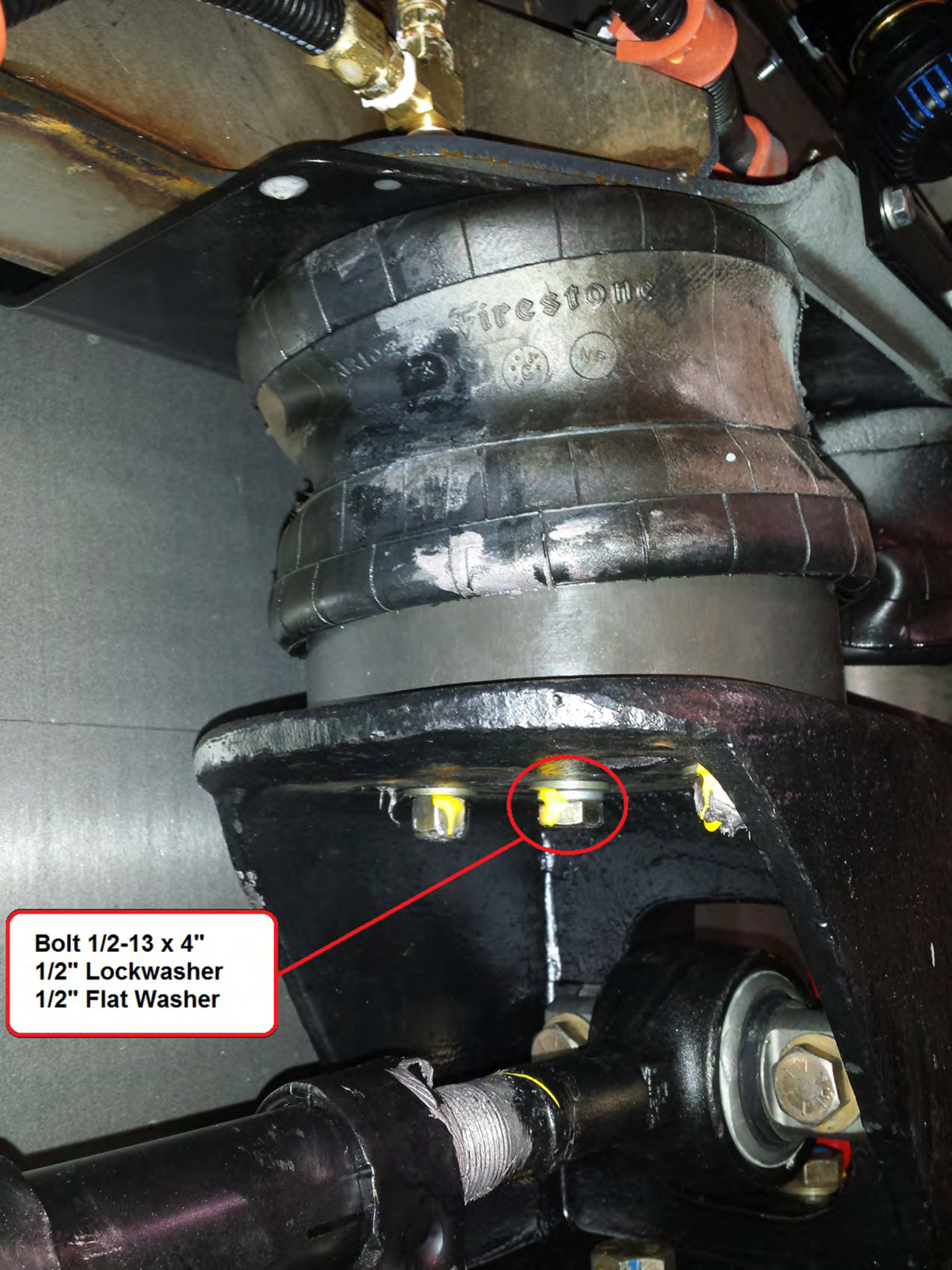
Air Bag Replacement Procedure

1. To provide access to the air bag bolts, place bus on lift or over pit.
2. Fully kneel front suspension so all air pressure in the front air bags is exhausted.
3. Drain accessory air tank, leave drain valve open.
4. Turn off main run control, verify air bags remain deflated.
5. One air bag at a time, remove the 1/2-13 bolt holding on the air bag. Remove the bolt, flat washer and lock washer.
6. Install new flat washer, lock washer and new 1/2-13 4.0" long bolt. Start bolt by hand and ensure bolt threads are properly engaged with threads in the air bag.
7. Torque 1/2-13 bolt to 25–30 ft-lbs.
8. If the air bag or bolt threads strip out or the bolt cannot be torqued to 25–30 ft-lbs, the threads in the air bag are damaged and the air bag must be replaced. Replace the air bag and re install the 1/2-13 bolt at 25–30 ft-lbs.
9. Continue to-replace the 1/2-13 bolts on all four front air bags.
10. Once all the air bags bolts are replaced, close the accessory tank drain valve and start the engine to rebuild the air pressure. Let the front suspension bags inflate, and check for any air bag rubbing. Correct if found.
11. Bus can be returned to service.

If you require front air bags, please contact Johnny in Field Service with the VIN and mileage of the bus(es) needing air bags.

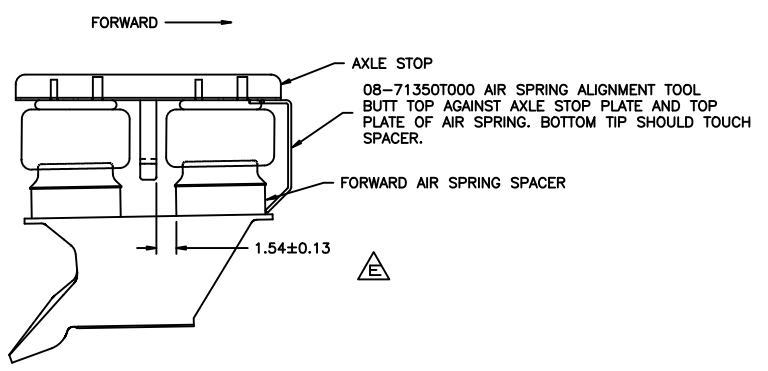
Parts Required

<u>Qty/Bus</u>	<u>Part Number</u>	<u>Description</u>
4	54-11325-015	Bolt 1/2-13 4.0" Long Grade 8
4	54-12602-013	1/2" Lock washer
4	54-12601-010	1/2" Flat washer

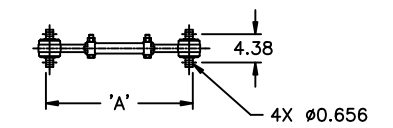


Bolt 1/2-13 x 4"
1/2" Lockwasher
1/2" Flat Washer

REVISIONS				
SYM	DATE	DESCRIPTION	REL	DATE
A	HFT	RELEASED FOR PRODUCTION	81251	11/12/10
B	HFT	1) REM 35 WAS 54-11325-007 2) ADDED ITEM 30	REB2841	03/01/11
C	DPH	VAR ADDED 88-107 W/ NEVER SEEZ	REB1967	04/22/11
D	DPH	VAR WAS 1) 3) 2) 20.20 3) 22.88 4) 23.13 5) 3.35	REB4023	05/18/11
E	DPH	VAR ADDED AXLE STOP CENTERING DIMENSION	REB3883	01/03/13
F	DPH	A-2 WAS 54-11355-011	REI05613	12/06/14

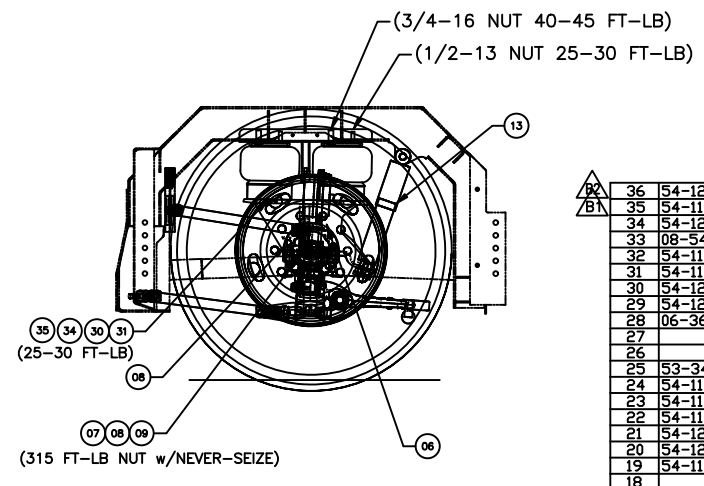
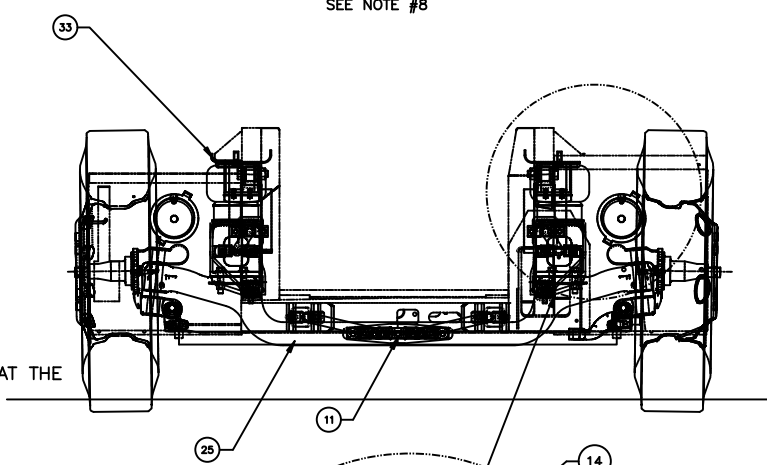
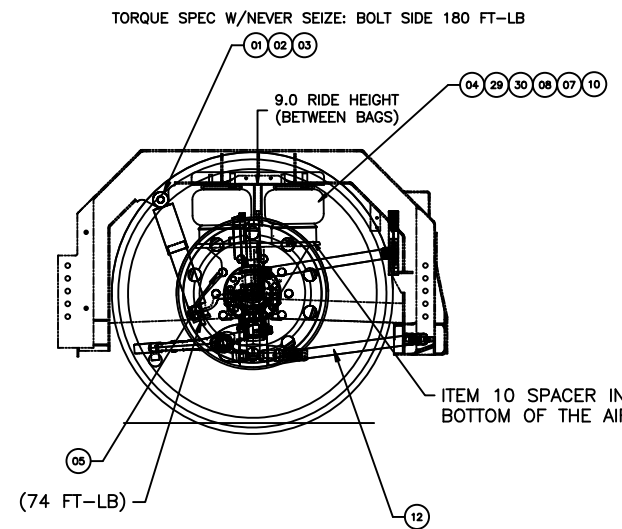
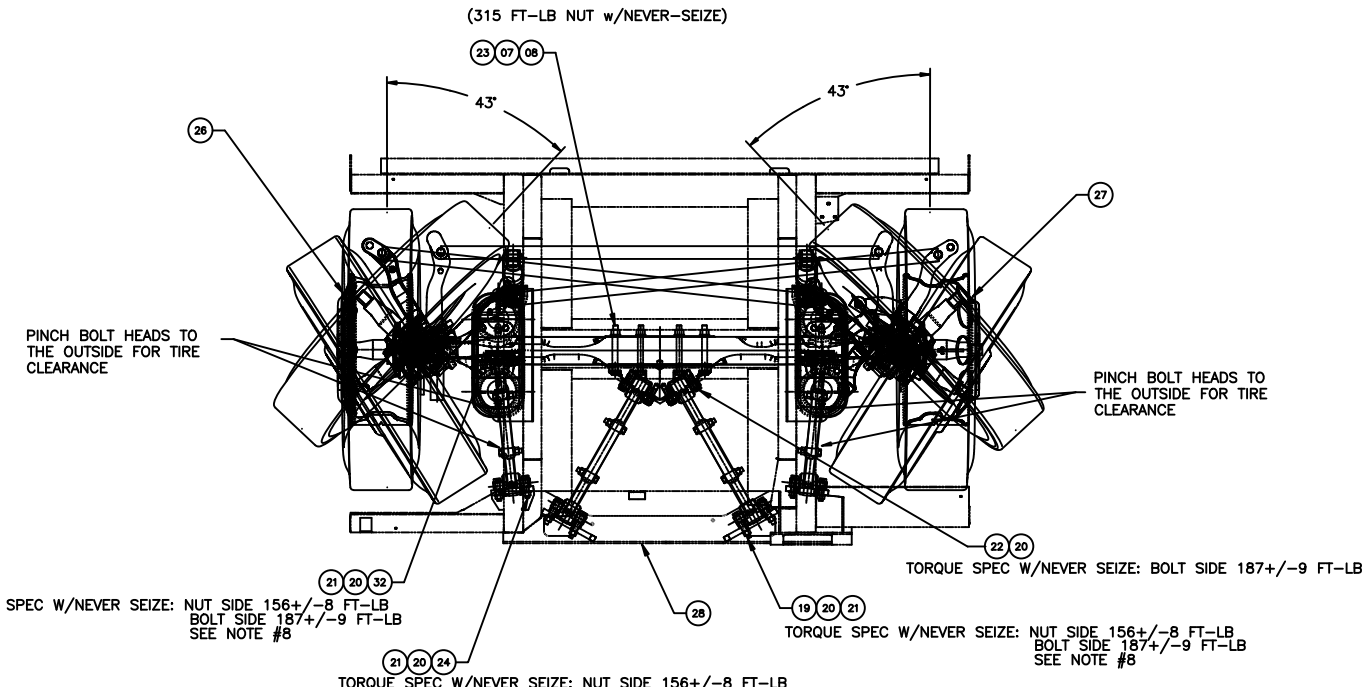


WITH BUS SET TO RIDE HEIGHT, LOOSEN UPPER AIR SPRING MOUNTING NUTS AND SLIDE AXLE STOP TO DIMENSION SHOWN.
AXLE STOP CENTERING BETWEEN AIR SPRINGS



ROD	LENGTH DIM 'A'
UPPER RODS	A=20.29"
LOWER RODS 40', 35'	A=22.11"
LOWER RODS 29'	A=22.24"

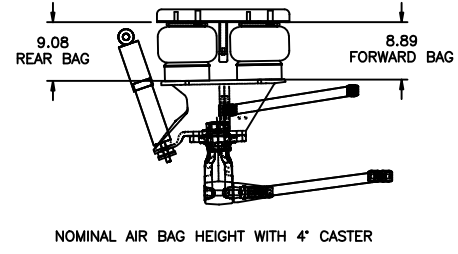
	Lemforder Spherical Ball	Lemforder Rubber Bushed	Tenneco Rubber Bushed
Upper Rods 40', 35', 29'	08-37170-000N	08-45050-000	08-56201-000
Lower Rods 40', 35'	08-37170-000N	08-45050-001	08-56201-001
Lower Rods 29'	08-37170-000N	08-45050-002	08-56201-002
Torque on clamp nuts ft-lbs	45 - 60	85 - 100	135 - 165 W/O NEVER SEEZ 88-107 W/ NEVER SEEZ
Orientation	per this print	per torque rod drawing	part labeled



INSTALL AXLE STOP OFFSET INBOARD TOWARD CENTER OF CHASSIS

- NOTES:
- FASTENER TORQUE VALUES PER GILLIG MFG STD 410.001
 - SUSPENSION TRAVEL:
UP - 3.35"
DOWN - 3"
 - RATED CAPACITY - 14,600lbs
 - NOMINAL CASTER - 4°
 - AIR SPRING SPECIFICATIONS:
FIRESTONE P/N 1T14CB-2.5
8.93" MAX OD
9.00" DESIGN HEIGHT
1.90" PISTON HEIGHT
NO INTERNAL BUMP STOP
 - K=13 FOR BOSTICK NEVER SEIZE REGULAR GRADE
 - SECURE OTHER END OF FASTENER WHILE SETTING TORQUE TO SPEC
 - ITEM 13 SHOCK IS NOT ADJUSTABLE

ITEM NO	DESCRIPTION	QTY
36	54-12551-009 1/2"-20UNF GR8 LOCKNUT	8
35	54-11349-008 1/2"-20UNF X 2.25" LG GR B HEX BOLT	8
34	54-12602-013 WASHER, 1/2" LOCK	20
33	08-54448-000R STOP, AXLE	1
32	54-11353-013 5/8"-18UNF X 3-1/2" LG - GR8 HX CAPSCREW	4
31	54-11325-015 1/2"-13UNC X 4" LG GR8 HEX BOLT	4
30	54-12601-015 1/2" HARDENED FLATWASHER	24
29	54-12541-009 1/2"-13UNC GR8 LOCKNUT	4
28	06-36845-000 FRAME ASM - CHASSIS	1
27	RIM - ACCURIDE STEEL	A/R
26	RIM - ALCOA ALUMINUM	A/R
25	53-34995-000 AXLE, FRONT - ROCKWELL FH946	1
24	54-11353-011 5/8"-18UNF X 3" LG - GR8 HEX CAPSCREW	4
23	54-11355-021 3/4"-16UNF X 7" LG GR8 HEX BOLT	4
22	54-11353-008 5/8"-18UNF X 2.25" LG - GR8 HEX CAPSCREW	4
21	54-12551-011 5/8"-18UNF GR8 LOCKNUT	12
20	54-12601-012 5/8" HARDENED FLATWASHER	28
19	54-11353-015 5/8"-18UNF X 4" LG - GR8 HEX CAPSCREW	4
18		
17	54-12551-007 3/8"-24UNF GR8 LOCKNUT	4
16		
15	08-36629-000 BUMPER, RUBBER - AXLE STOP	2
14	08-54448-000L STOP, AXLE	1
13	08-67835-000 ABSORBER, SHOCK - KONI 10 TON	2
12	ROD, TORQUE - PER B/M	
11	08-53705M001 BRKT MTG - TORQUE ROD	1
10	08-67785-000 SPACER, AIR SPRING	4
09	54-11355-012 3/4"-16UNF X 3.25" LG - GR8 HEX BOLT	8
08	54-12601-013 3/4" HARDENED FLATWASHER	28
07	54-12551-012 3/4"-16UNF GR8 LOCKNUT	12
06	08-40992M002L TOWER, AIR SPRING MTG - LH	1
05	08-40992M002R TOWER, AIR SPRING MTG - RH	1
04	08-66892-000 SPRING, AIR - FIRESTONE	4
03	54-11359-016 1"-14UNF X 4.5" LG - GR 8 HEX BOLT	2
02	54-12601-015 1" HARDENED FLATWASHER	4
01	54-12551-014 1"-14UNF GR 8 LOCKNUT	2



AXLE STOP INSTALLATION DETAIL

PROPERTY OF GILLIG LLC
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GILLIG GILLIG LLC
HAYWARD, CA

WELD PER GILLIG-10680 CLASS
CLEAN/PRIME PER GIL MFG STD NONE
MARK PART V/PIN PER GIL-STD
LH SHOWN, RH OPPOSITE
NONE

TITLE: **INSTL-FRONT SUSPENSION LF, CNG**

DATE: 11/12/10
DRAWN: HFT
CHECKED: [Signature]
DATE: [Date]
APPROVED: [Signature]
DATE: [Date]
ORIG REL: 81251
SIZE: DOCUMENT NO
CAD SCALE: 1/15 = 1.0
D 10-67889-000

REWORK ALL BURS, BREAK SHARP EDGES
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE IN INCHES
ANGULAR ± .5°
THIRD ANGLE
ST 92262 ALTOONA

SHEET 1 OF 1