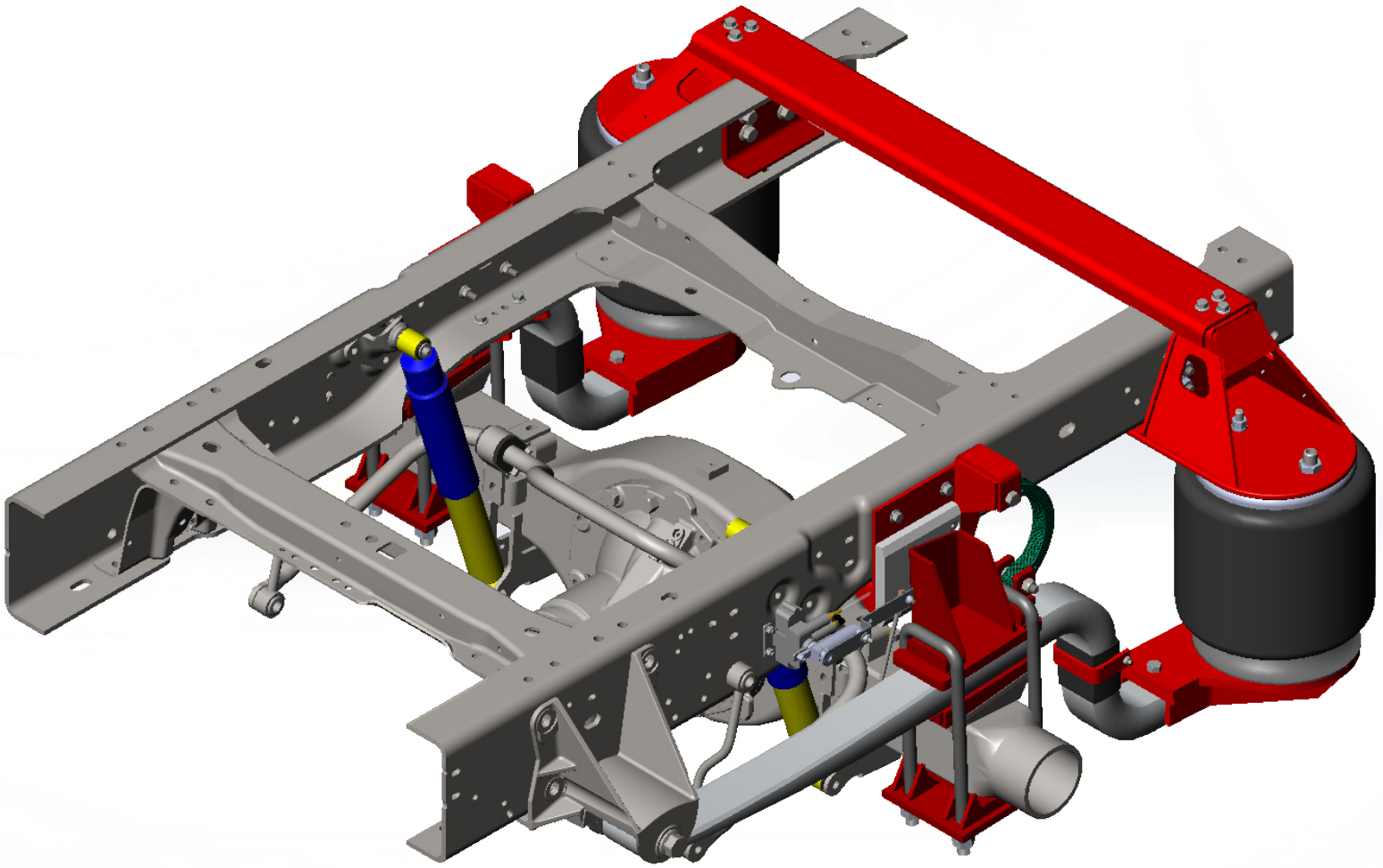
Reyco Granning SUSPENSIONS

Medium-Duty Truck Suspensions **Owner's Manual**

RD1370F8 | Ford F-550 Chassis Cab (2008 - Present)

Maintenance Instructions
Service Parts



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REV	ECR #	DATE	CHANGE DESCRIPTION	BY
B	17415	07-25-14	Updated manual. Removed Install Checklist, Installation Instructions, & Air Kit Info. Added U-Bolt Note	CRG
C	18719	06-23-15	Updated Item Numbers. Added K709948 info.	CRG

INTRODUCTION

Company Profile

Reyco Granning Suspensions was formed by the merger and acquisition of two well known names in the heavy duty vehicle suspension industry Reyco and Granning.

Reyco grew out of the Reynolds Mfg. Co and was first known as a major supplier of brake drums for heavy duty vehicles and later developed a full line of air and steel spring suspensions for trucks, buses, trailers and motorhomes.

Granning Air Suspensions was founded in 1949 in Detroit, Michigan as a manufacturer of auxiliary lift axle suspensions. Granning later became an innovator of independent front air suspensions for the motorhome industry.

Reyco Granning LLC was formed in early 2011 through a partnering of senior managers and MAT Capital, a private investment group headquartered in Long Grove, Illinois.

Congratulations on your purchase of a ReycoGranning ***AIRGLIDE*** drive axle air suspension system. Founded in 1948 by one of the pioneers of air suspensions, ReycoGranning Suspensions supplies drive and tag axle air suspension systems to a variety of original equipment manufactures as well as to the aftermarket industry. The R Series, trade named ***AIRGLIDE***®, are utilized by OEM customers in applications such as recreational vehicles, shuttle bus, trailer, chassis builders, Type I and III ambulances and class 3 through 8 truck applications. This product line now exceeds 25 models that cover all major chassis utilized in the above applications.

Suspension Description

A ReycoGranning® ***AIRGLIDE***® drive axle air suspension system is a replacement rear suspensions system that consists of an air control system, air springs, trailing arm beams, brackets, and mounting hardware. In general, the air suspension works by maintaining a constant ride height by adjusting the amount air pressure in the air springs. This allows the vehicle to remain level, regardless of loading. By varying the amount of air pressure in the springs, a comfortable ride is maintained whether lightly or heavily loaded. This is the major difference between an air suspension and a conventional steel spring suspension. The steel spring suspension is usually designed for heavily loaded condition and thus yields a harsh ride in lightly loaded conditions. In addition, the steel spring suspension does not maintain a constant ride height under varying load conditions.
By maintaining a constant ride height, the horizontal center of gravity, steering geometry, and even the headlights remain level. The benefits of an air ride are:

1. Driver/passenger comfort,
2. Protection of cargo, chassis and body components,
3. Reduced stress fatigue to chassis frame rails.
4. Greater stability and control.

INTRODUCTION

A unique feature to the ReycoGranning® *AIRGLIDE*® drive axle air suspension system is the wear towers and wear blocks. These time proven components prevent unwanted side to side lateral motion without the use of costly and complex track rods.

Air Control System

A primary subsystem of a ReycoGranning® *AIRGLIDE*® drive axle air suspension system is the air control system. Depending on the actual system used, the air control system will provide the abil to automatically control the amount of air pressure in the air springs, thus automatically controlling suspension ride height.

The major components of an automatic air control system consist of an air compressor, reservoir tank, height control valve, and air spring. The operation of the system is simple. The compressor supplies air to the tank, which maintains the air pressure between 105-125 psi. Air from the tank is supplied to the height control valve. The height control valve supplies air to or depletes air from the air spring via a mechanical linkage based on axle loadings. This corrects changes in the air spring but the height remains the same, thereby giving the optimum ride regardless of load.

A system with a single height control valve supplies both air springs simultaneously while a dual height control valve system supplies each air spring separately. The dual system increases the sensitivity of side-to-side distributions of axle loading. A schematic of each system can be found in the Air Control System Parts List section. See Air Control System Control Panels and Operation sections.

Located on the bottom of the air tank assembly, is a heated moisture ejector valve. (The valve is heated to eliminate ice build up.) This valve automatically releases accumulated water from the air tank every time the driving brake is used. Each time the driver presses the brake pedal, the ejection valve releases a bit more water, insuring a well drained system.

There is a small round button in the center of the underbelly of this valve. Press this button with your finger to manually drain accumulated water from the tank when the vehicle is turned “off”.

Optional "kneeler" or exhaust valve(s) may be plumbed between the air springs and the height control valve(s). When power is applied to these valves, they shut off air supply from the height control valve to the air springs and exhaust air from the air springs. As long as power is supplied to the "kneeler" valve, usually through the "exhaust" position of the "inflate/exhaust" switch, the air springs will remain deflated. With the air springs deflated, the rear end of the vehicle will remain lowered, or "kneeled", with the chassis resting on positive jounce stops. Removing power to the "kneeler" valve allows air to flow from the height control valve to the air springs and shuts off exhaust from the air spring, thus inflating the air springs. The rear end of the vehicle is automatically raised to the proper ride height. Systems with dual height control valves require two "kneeler" valves, one between each air spring and height control valve, if the exhaust option is equipped.

To further improve the ride of an air suspension, ReycoGranning® offers a dual ping tank kit. One ping tank is added to each side between the air spring and the height control valve, or "kneeler"

dump valve if installed. These 200 cubic inch ping tanks effectively increase the volume of the air spring, without having to utilize a larger air spring. The spring rate of a system is directly proportional to the volume of the air spring. The larger the air spring volume, the lower the spring rate; thus the better the ride. However, the amount of air flowing between the air spring and ping tank can limit the effective air volume of the system. Therefore, adding larger and larger ping tanks may not result in significant changes in the suspension spring rate. ReycoGranning® ping tank kits have been designed to provide the ideal increase in volume and proper airflow.

A side effect in adding ping tanks is possible increase in air spring inflation times. With a ping tank system installed, the larger volume of air, which improves the spring rate, must be refilled each time the system is "kneeled". ReycoGranning® ping tank kits have been designed to minimize this effect, while improving the ride.

Finally, optional warning light sensors or air pressure gauges may be plumbed to either the air reservoir tank or to the air springs. These warning devices will indicate possible problems with the air suspension system prior to operation. Gauges that are plumbed to the reservoir tank will read between 95 and 125 psi, as described above. Any air gauge that is plumbed directly to the air springs will show fluctuations depending on axle loading and vehicle operation.

INTRODUCTION

About This Manual

This publication is intended to aid and assist maintenance personnel in the maintenance, service, repair and rebuild of the Reyco Granning® RD1370F8 Rear Suspension. It is important to read and understand the entire Technical Procedure publication prior to performing any maintenance, service, repair, or rebuild of this product.

Reyco Granning® Air Suspensions reserves the right to modify the suspension and/or procedures and to change specifications at any time without notice and without incurring obligation. Contact customer service at 800-753-1060 for information on the latest version of this manual.

You must follow your company safety procedures when you service or repair the suspension. Be sure you read and understand all the procedures and instructions before you begin work on the suspension.

Reyco Granning® uses the following types of notes to give warning of possible safety problems and to give information that will prevent damage to equipment.

WARNING

A warning indicates procedures that must be followed exactly. Serious personal injury can occur if the procedure is not followed.

CAUTION

A caution indicates procedures that must be followed exactly. Damage to equipment or suspension components and personal injury can occur if the procedure is not followed.

NOTE

A note indicates an operation, procedure or instruction that is important for correct service.

Some procedures require the use of special tools for safe and correct service. Failure to use these special tools when required can cause personal injury or damage to suspension components.

The latest revision of this publication is available online at http://www.Reyco Granning.com/
Reyco Granning® Air Suspensions has developed this service manual to aid in the maintenance of Reyco Granning®'s rear suspensions.

Range of Motion and Capacity

The following table lists the various models and their respective capacities.

Model	Capacity	Axle Capacity
RD1370F8	13,700 lbs	13,700 lbs

Overloading the suspension may result in reduced ride and handling characteristics.

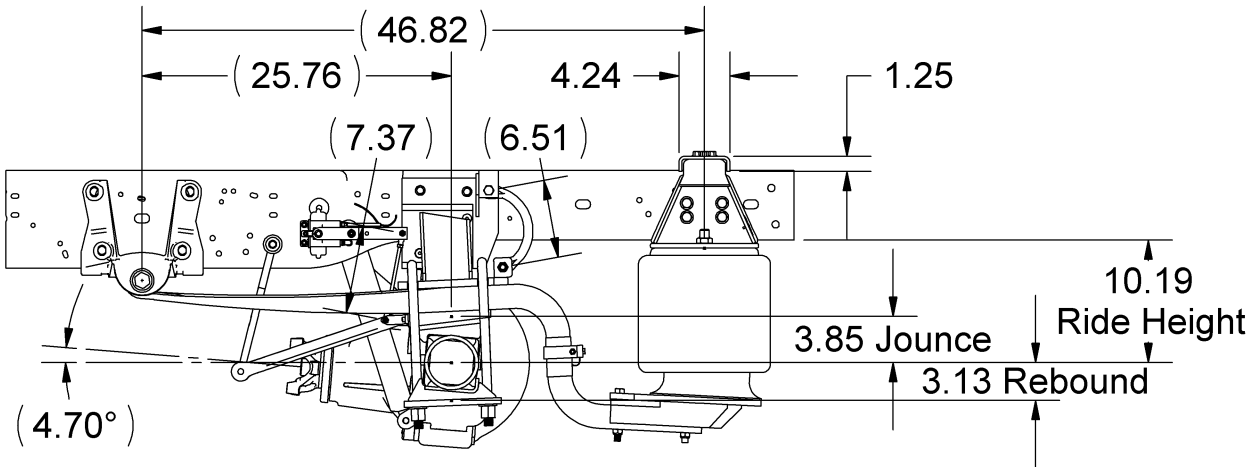


Figure 1: Suspension range of motion

Note: The ride height is for the completed vehicle with body and components. See table below for correct vehicle dimensions.

Chassis	Reyco Granning® Suspension Model	Ride Height *	Jounce Travel	Rebound Travel
Ford F550 SuperDuty Cab Chassis	RD1370F8	10.19"	3.85"	3.13"

*Ride height is measured from the axle center (flat and level) to the bottom of the vehicle frame as close to directly above the axle as possible.

Identification

The suspension model and serial number are stamped on an aluminum tag that is riveted to the upper Air Spring Pad Assembly (See View "G"). The serial number is used by Reyco Granning® for control purposes and should be referred to when ordering parts or inquiring about the suspension (See Figure 2).

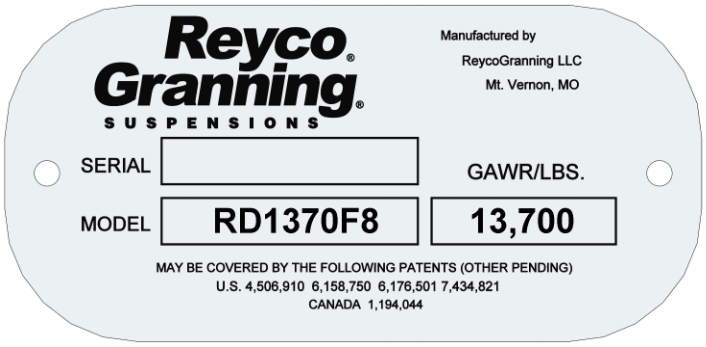


Figure 2: Suspension Identification

CONTROLS

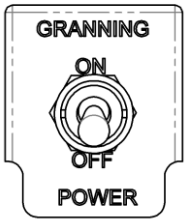
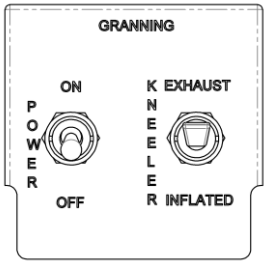
Descriptions of the typical controls are found below. Note: some original equipment manufactur
(OEM) will use controls integrated into the instrument panel. While the appearance may differ, the
operation and description are consistent with below.

Power ON/OFF Switch

This master switch turns the power off and on to the compressor and other electrical component
the drive axle suspension. To activate the compressor and other electrical components, move the
switch to "ON".
The vehicle ignition switch may need to be turned on to activate this switch.

Exhaust/Inflate Switch

If the system is equipped with an optional "kneeler" exhaust valve(s), the control panel will have a
Exhaust/Inflate switch. Moving the switch to "Exhaust" position exhausts air from the air
springs.While the switch is in the "Exhaust" position, the air springs will remain deflated.
Exhausting air from the air springs may be required to assist in maintenance and lower the rear of
the vehicle to assist in loading.
Caution: Only operate the exhaust feature while the vehicle is parked. Never exhaust the system
while the vehicle is in motion.
To inflate the air springs, place the switch in the "INFLATE" position.

 Figure 3	The 5016 Control Panel Assembly, with Power ON/ only. Included with the 9932 Air Control Kit.
 Figure 4	The 5008 Control Panel Assembly, with Power ON/ and “Kneeler” Dump Valve Switches. The 5008 Cor Panel Assembly is included with the 9930 Air Control Kit.

CONTROLS

Gauges, Lights, Buzzers

As an option, the Air Pressure Warning Light/Buzzer kit may be installed. The gage will indicate ai
tank pressure. If air pressure falls below 20 psi, a warning light and buzzer will activate.

Do NOT operate the vehicle in this condition. The buzzer/light will go off once 40 psi air pressure
is reached.

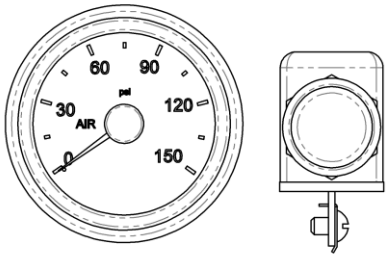


Figure 5

The 1069 Gauge and 5401 Light/Buzzer are included
the optional 5703 Warning Kit. Air pressure sensing
alsobe performed by and OEM installed interface (co
panel).

Operation

Operation of the Reyco Granning® *AGRGLIDE*® drive axle suspension utilizing an automatic height control system is reached through various control panels. Depending upon options within the suspension system, the control panel should be operated as follows:

Before operating the vehicle:

Switch the power to "ON", if "OFF".

Make sure the Exhaust/Inflate switch is in the "Inflate" position, if the suspension is so equipped.

If equipped, check:

That the Low Pressure Warning Light and Buzzer are off

The vehicle is ready for operation.

To exhaust the system, if the suspension is equipped with an exhaust option:

Make sure the vehicle is parked.

Move the Exhaust/Inflate switch to "Exhaust" position.

CAUTION – Vehicle will return to Ride Height, if power is turned Off.

Although the air suspension master power switch can be left "ON", Reyco Granning® recommends turning the system off while the vehicle is parked for an extended period of time and the suspension system is not switched through the vehicle ignition switch. This will avoid running down the battery.

PARTS L IST

RD1370F8

ITEM #	QTY	PART NUMBER	DESCRIPTION	ITEM #	QTY	PART NUMBER	DESCRIPTION
1	1	702150-01	Asy, Backing Plate LH	36	2	6573	Spacer, Rebound Strap
2	1	702150-02	Asy, Backing Plate RH	37	2	8274318	HHB 1/2-20 x 5, GR.8
3	14	302	FHB 3/8-16 x 1.25 GR 8 ZN	38	2	118	FW 1/2 .531x1.062x.095, ZP
4	14	702605-01	LFN 3/8-16, Gr. G, ZN	39	2	7132	Sleeve, Rebound Strap
5	1	702149-01	Wear Pad, LH	40	2	8455030	HHB 1/2-20 x 2.75, Gr. 8
6	1	702149-02	Wear Pad, RH	*41	1	K710132	HCV KIT 07.40 LONG 90 COM
7	4	702145-01	SHIM-WEAR BLK	41.1	2	5608	Height Control Valve
8	4	298	SFHCS 3/8-24 X 2 GR8 PH	41.2	2	709953-04	HCV LINK NON-ADJ 7.40"
9	4	4356	SFHCS 3/8-24 X 1 1/2 GR8 PH	41.3	4	8454750	LN 1/4-28 GR 5
10	8	304	LFN 3/8-24, Gr. F, ZINC	41.4	4	702016-02	ELBOW SWIVEL 1/4Tx1/8MPT
11	2	709872-01	Mount, Air Spring, Upper	*41.5	2	4458	HEIGHT CNTRL FSTNR KIT
12	2	703095-01	Backing Plate	41.5.1	2	8180020	HHB 1/4-20 x 3/4, Gr. 5, ZN
13	8	276	FHB 1/2-13 x 1.75 GR 8 ZN	41.5.2	2	8120380	SLW 1/4 .263 X .489 X .072 ZP
14	8	308	LFN 1/2-13, GR. G ZN	41.5.3	2	8120375	Nut 1/4-20, Gr. 5, ZP
15	1	702140-01	Crossmember	41.6	2	710360-01	HCV Hose Restrictor
16	2	707611-01	Asy, Spring Beam	*41.7	1	D710132	Drawing HCV KIT (Not Shown)
17	1	709971-01	ASY, AXLE WEDGE, LH	42	1	8876	Brkt. Parking Brake Cable
18	1	709971-02	ASY, AXLE WEDGE, RH	43	1	314	HHB 1/4-20x4.00 Gr.8 ZN
19	1	8877	Asy, Wear Tower, LH	44	3	100703-P1	LN 1/4-20 STOVER, GR. 8, ZN
20	1	8878	Asy, Wear Tower, RH	45	2	8628	Clip, Tube/Wire .75, .281 Hole
21	2	8886	Asy, Axle Saddle	46	1	8180022	HHB 1/4-20 x 1, Gr. 5, ZN
22	4	701740-01	U-Bolt 3/4-16x13.25	47	1	101563-P1	HHB 1/4-20x.75 Gr.5 ZN
23	8	103003	HFW 3/4 .812 x 1.475 x .150	48	2	710075-01	SHOCK ABSORBER
24	8	6868	HN 3/4-16 Highnut Gr.C	*49	1	711358-01	Installation: Serial Tag
25	1	700107-01	Asy, Lower Air Spring Pad LH	49.1	1	2617	Serial Tag
26	1	700107-02	Asy, Lower Air Spr. Pad RH	49.2	2	188	Pop Rivet 1/8" dia. x .525" long
27	2	127	HHB 1/2-20x3.50 Gr.8 ZN	50	1	708580-01	Heat Shield, Flexible
28	2	100048-P1	HHB 1/2-13x1.00 Gr.8 ZN	*51	1	D707870	Kit, Drawing/Document RD1370
29	2	8896	Air Spring	*51.1	1	6219	Label, AirGlide
30	2	8455034	HHB 1/2-20 X 4, GR.8, ZN	*51.2	1	D5602	Sheet, Caution, Comp fittings
31	8	89422302	LN 1/2-20, Gr. C	*51.3	1	D707612	Drawing, Installation RD1370F8
32	2	8120384	SLW 1/2 .523x.873x.135, ZN	*51.4	1	D707871	Document, Installation Instructi RD1370F8
33	2	8120378	N 1/2-13, Gr. 5, ZP	*51.5	1	D713329	Document, Installation Checklist RD1370F8
34	2	8219758	JN 3/4-16, Gr. 5, ZP	*51.6	1	D710243	Document, Owners Manual RD1370F8
35	2	5449	Rebound Strap 8.75x1.00	**52	1	K709948	Kit, Heavy Duty Front Hanger

*Not Shown/Called Out

**See page 16 for kit details

Main Exploded View

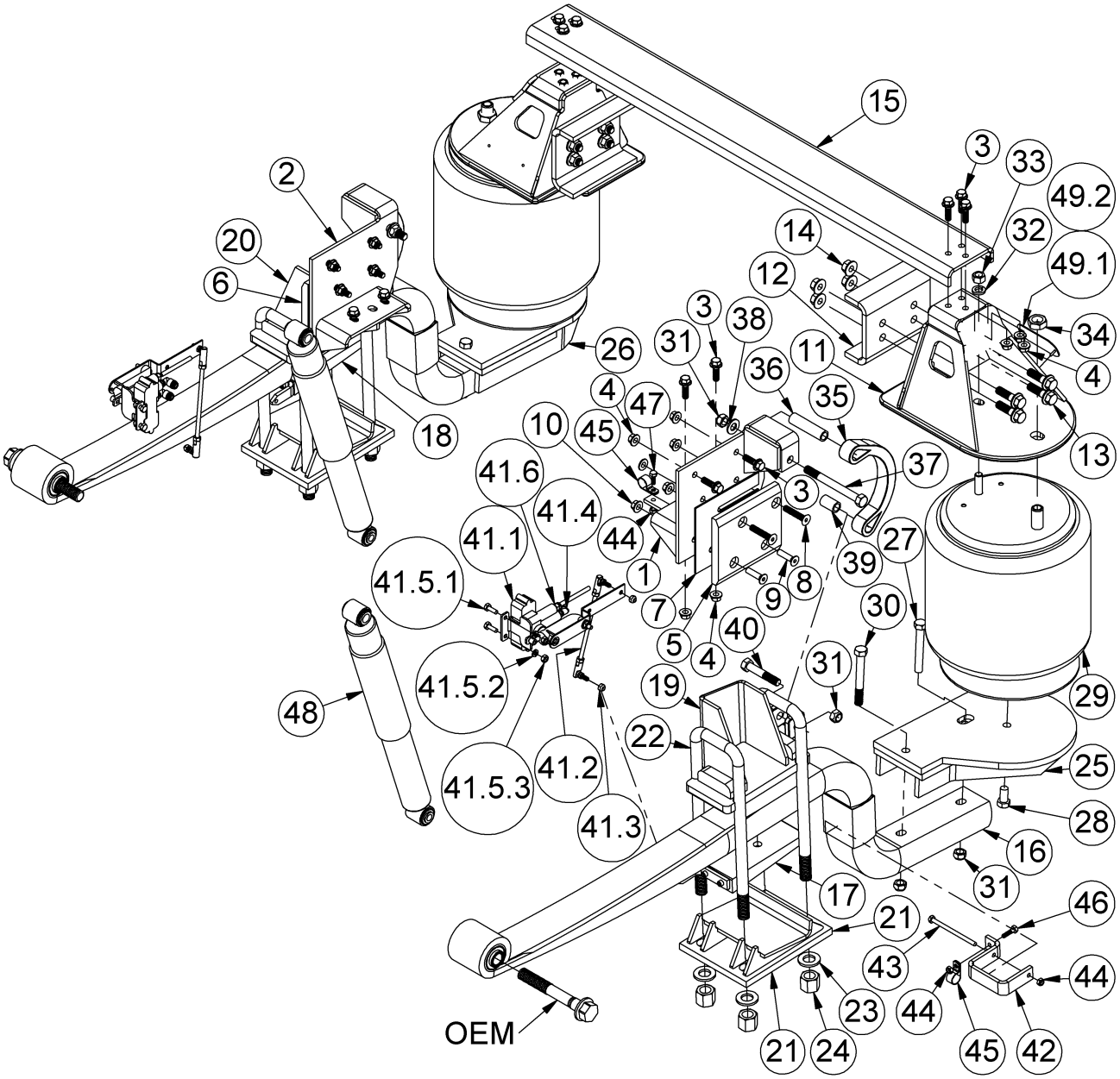


Figure 6: Main exploded view

Detailed Exploded Views

Installation Notes:

1.) Install Hex Head Bolt 127 into lower air spring pad assemblies before mounting air springs.

2.) Insure that piston & lower retainer of air spring are flush with lower air spring pad assembly mounting surface before tightening mounting bolt. (Inflate air spring with a small amount of air to seat the piston)

3.) If the parking brake cable is attached to the axle, then it will not need to be attached to the Spring Beam. Parking brake cable may not be routed the same way as shown in view D. View C has a bracket, which is not needed with all applications, and may not come with all RD1370F8 Units.

4.) The rebound strap has a natural curve (it bends one direction easier than the other). It has more stitching on the outside of the bend. Install with the natural curve in the position shown.

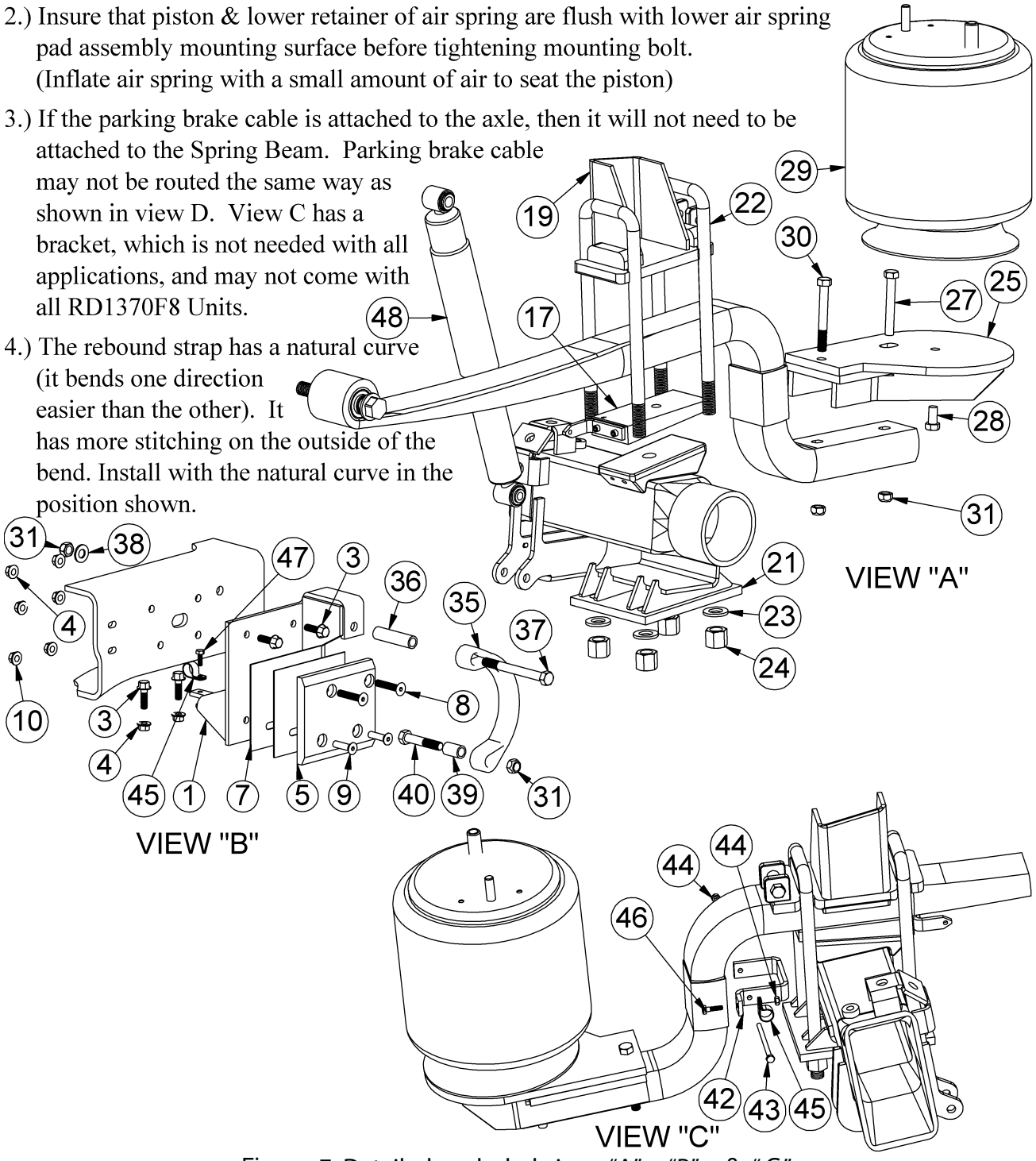


Figure 7: Detailed exploded views “A” , “B”, & “C”

Detailed Exploded Views

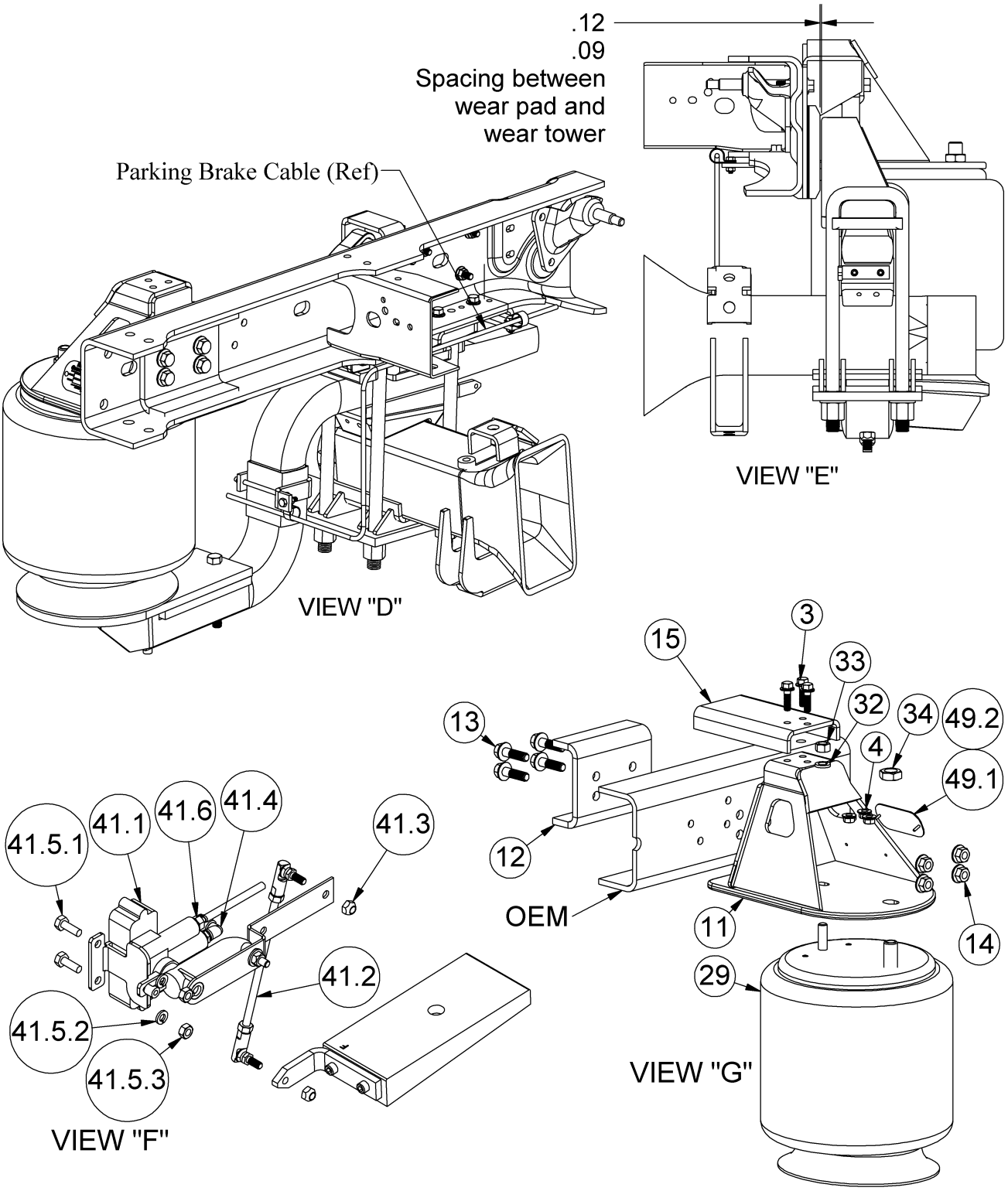
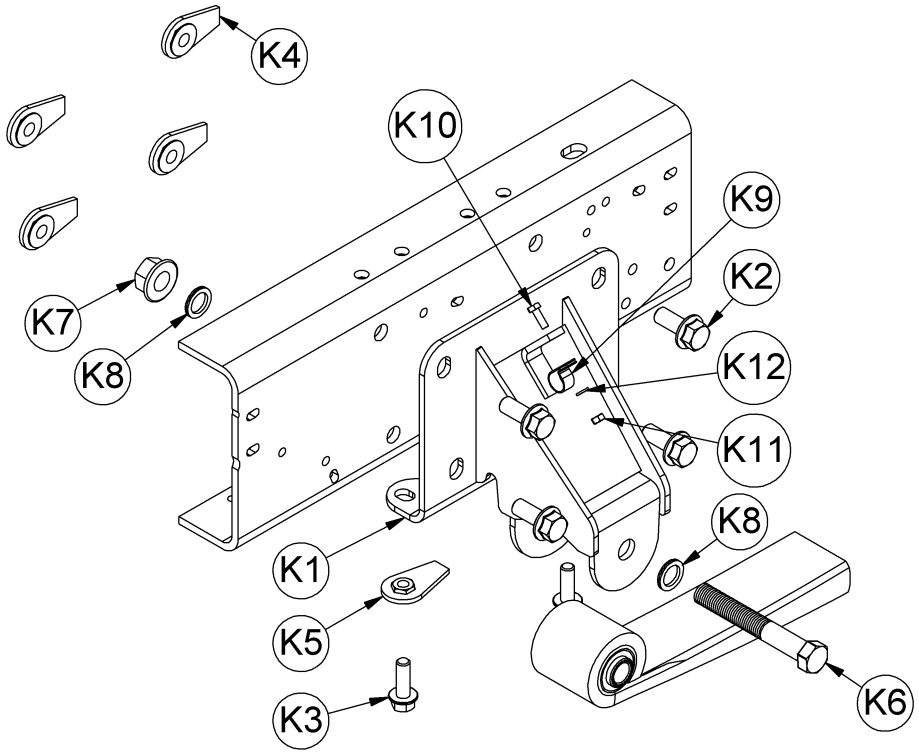


Figure 8: Detailed exploded views “D”, “E ”, “F”, & “ G”

K709948 Heavy Duty Hanger Kit

(Required on bus and ambulance applications)

ITEM#	QTY	PART NUMBER	DESCRIPTION
K1	2	709880-01	Front Hanger Assembly
K2	8	708185-01	FHB 5/8-11 x 1.50, Gr. 8, ZN
K3	4	307	FHB 1/2-13 x 1.50, Gr. 8, Zinc
K4	8	709968-01	5/8-11 J NUT ASY
K5	4	710122-01	1/2-13 J NUT ASY
K6	2	709877-01	HHB M20 X 2.5 - 140 GR 10.9 ZN
K7	2	709878-01	FLN M20 X 2.5 GR10.9 ZN
K8	4	709879-01	M20-NORD-LOCK
K9	1	8628	Clip, Tube/Wire .75, .281 Hole
K10	1	8180020	HHB 1/4-20 x 3/4, Gr. 5, ZN
K11	1	8120375	Nut 1/4-20, Gr. 5, ZP
K12	1	8120380	SLW 1/4 .263 X .489 X .072 ZP
K13	1	D709948	Install Drawing (Not Shown)



INSPECTION & MAINTENANCE

Perform a thorough visual inspection of the suspension to ensure proper assembly and to identify broken parts and loose fasteners each time the vehicle suspension is serviced. Do the following during an inspection.

- Fasteners - Using a calibrated torque wrench check that all the fasteners are tightened to the proper torque.
- Wear and Damage Inspect components of the suspension for wear and damage. Look for bent or broken components. Replace all worn or damaged components.
- Operation - Check that all components move freely through the complete turning arc.

> CAUTION: Reyco Granning® recommends replacing any damaged or out-of-specification components. Reconditioning or field repairs of major rear suspension components is not allowed.

Note: Refer to Section 1 for identification of components.

> NOTE: Reyco Granning® recommends the use of a maintenance pit or full vehicle lift during the inspection of components.
>
> WARNING: Never work under a vehicle supported by only a jack. Jacks can slip or fall over and cause serious personal injury. Always use safety stands.

HCV Adjustment

Height Control Valve Inspection and Adjusting Suspension Ride Height

The height control valve (HCV) and linkage should be checked regularly for proper clearance, operation and adjustment. The ride height of the rear suspension is the distance from the bottom of the chassis frame rail to the center of the axle. Properly adjusted ride height results in correct suspension travel and alignment. The ride height should not be adjusted to correct chassis pitch angle.

To check ride height

1. Park the vehicle on a level surface.
2. If the suspension is equipped with kneelers lower the suspension.
3. Re-inflate the air suspension. Allow the Suspension to settle.
4. Set the parking brake and block the drive wheels to prevent vehicle movement.
5. make sure nothing is interfering with the travel of the height control valve arms,
6. Measure the distance from bottom of chassis to center of axle on each side. The ride height should be 10.19 inches.

To adjust ride height

1. Loosen nut on side of HCV arm,
2. Slide short arm up or down as needed,
3. Torque nut to 30 to 45 in-lbs,
4. Repeat steps 1 thru 3 on other side,
5. Recheck ride height as stated in previous section.

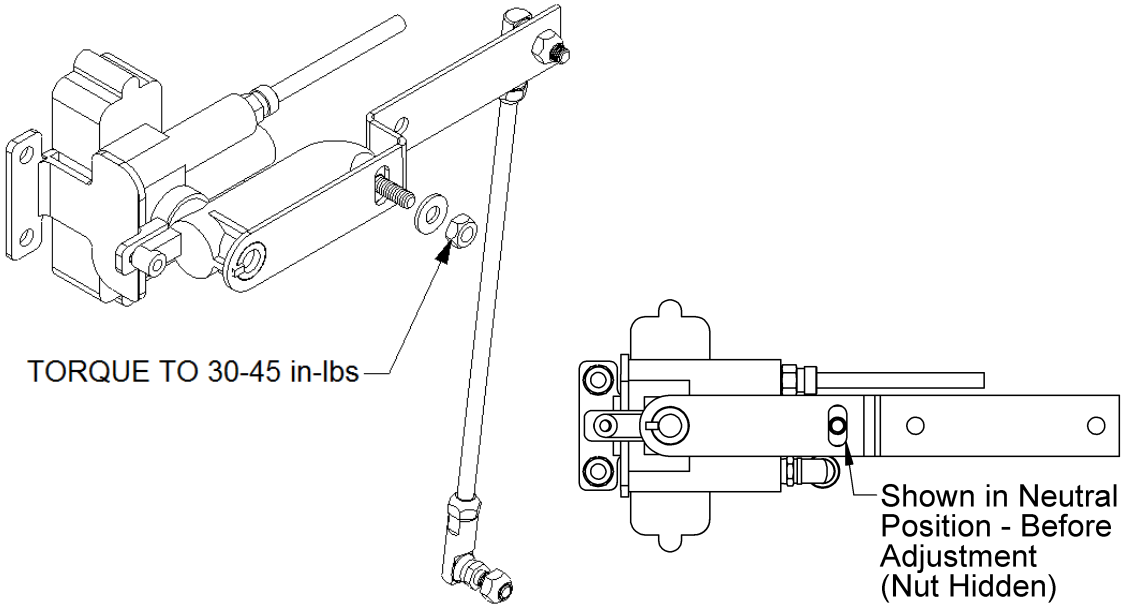


Figure 9: Height Control Valve

Torque Specifications

Most threaded fasteners are covered by specifications that define required mechanical properties, such as tensile strength, yield strength, proof load, and hardness. These specifications are carefully considered in initial selection of fasteners for a given application. To assure continued satisfactory vehicle performance, replacement fasteners used should be of the correct strength, as well as the correct nominal diameter, thread pitch, length, and finish.

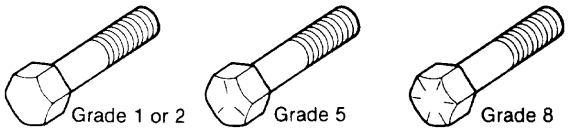


Figure 10: Grade Markings on Bolts

Grade	Lock Nut Grade B, F	Lock Nut: Grade C, G
Identification	 3 Dots	 6 Dots

Figure 11: Grade Markings on Lock Nuts

Reyco Granning Recommended Torque Specifications			
Item	Assembly	Fastener	Torque
1	Spring Beam Pivot Connection	OEM (HEX FLANGE H EAD, M20X1.50X167.00)	380ft-lbs
2	Upper Air Spring Pad & Backing Plate (to Fra	FHB 1/2-13 x 1.75, Gr. 8 ZN (LFN 1/2-13, Gr. G ZN)	80 ft-lbs
3	Crossmember (to Upper Air Spring Pad	FHB 3/8-16 x 1.25, Gr. 8 ZN (LFN 3/8-16, Gr. G ZN)	35 ft-lbs
4	LowerAir Spring Pad Asy (to Beam)	HHB 1/2-20 x 3.5 & 4.0, Gr. 8 ZN (LN 1/2-20, Gr. C)	90 ft-lbs
5	Air Spring (to Lower Air Spring Pad Asy)	HHB 1/2-13 x 1.0, Gr. 8 ZN	35 ft-lbs
6	Stud Nut / Air Port Nut (Air Spring)	N 1/2-13, Gr. 5 ZN / JN 3/4-16, Gr. 5 ZN	35 ft-lbs
7	Wear PadBacking Plate Asy (to Chassis)	FHB 3/8-16 x 1.25, Gr. 8 ZN (LFN 3/8-16, Gr. G ZN)	35 ft-lbs
8	Wear Pad (to Backing Plate Asy)	SFCS 3/8-24 x 1.5 & 2.0, Gr. 8 (LFN 3/8-24, Gr. F ZN)	100in-lbs
9	Rebound Strap Upper & Lower Mount	1/2-20 x 2.75 & 3.0, Gr. 8 (LN 1/2-20, Gr. C)	90 ft-lbs
10	HCV (to Frame)	HHB 1/4-20 x.75, Gr. 5 ZN (N 1/4-20, Gr. 5 ZN)	8 ft-lbs
11	HCV Linkage (to HCV & Axle Wedge Asy)	(N 1/4-28, Gr. 5 ZN)	10 ft-lbs
12	Parking Brake Cable Bracket (to Spring Bea	HHB 1/4-20 x 4.0, Gr. 8 ZN (LN 1/4-20, Gr. 8 ZN)	9 ft-lbs
13	U-Bolts(See Figure A)	U-BOLT 3/4-16 x 13.25 (HN 3/4-16 Gr. C)	250 ft-lbs
14	*Shock Bolts (See Vehicle Owners)	*OEM	**
15	*Wheels (See Vehicle Owners)	*See Vehicle Owners Manual	**

* Not Shown
**Follow procedures and torques listed in Vehicle Maintenance/Owner's Manual
Note: Torque values listed above apply only if Reyco Granning supplied fasteners are used. For information regarding component replacement or technical service call 800-753-1060

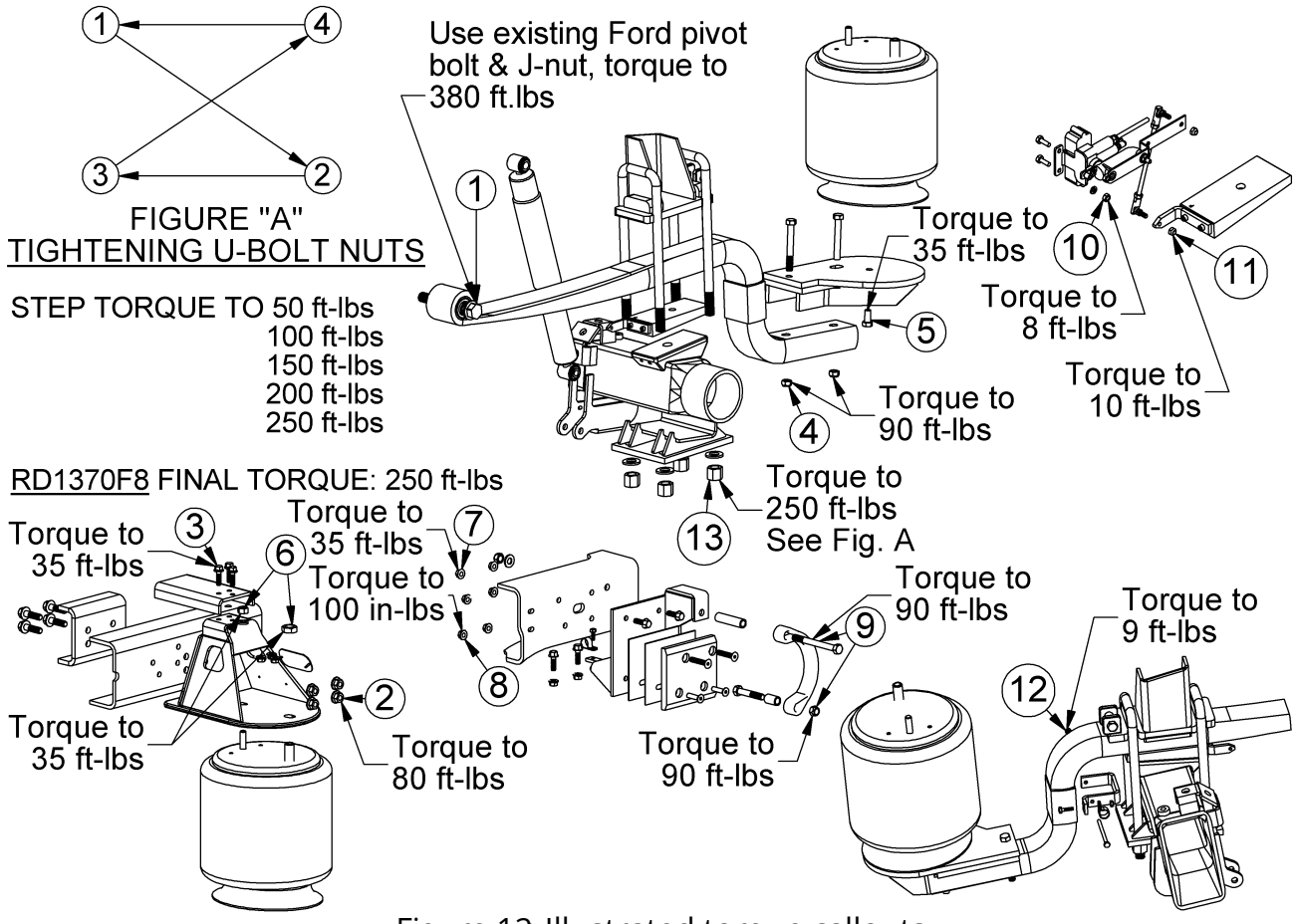


Figure 12 Illustrated torque callouts

Maintenance Schedule

GENERAL MAINTENANCE	SERVICE TO BE PERFOR MED	MILEAGE IN THOUSANDS							
		12	24	36	48	60	72	84	96
Spring Beam Pivot Connection	Check bolt torque.	X			X				X[1]
	Inspect for contact between Spring Beam and Hanger	X	X	X	X	X	X	X	X[1]
	Inspect for bushing wear.	X	X	X	X	X	X	X	X[1]
Air Springs	Inspect for proper clearance (1" minimum all around).	X							
	Check upper mount nut and lower mount bolt torque.	X							
	Inspect for signs of chafing or wear	X	X	X	X	X	X	X	X[1]
	Check for air line fitting torque.	X							
	Inspect for air leaks using soapy wa solution.	X							
Height Control Valve Linkage	Inspect for signs of bending, bindin slippage.	X	X	X	X	X	X	X	X[1]
Air Fittings and Air Lines	Inspect for air lea using soapy wate solution	X							
	Inspect for signs of chafing, crackin or wear	X	X	X	X	X	X	X	X
Shock Absorbers	Check stud mount and lock nut tor	X							
	Inspect shocks for signs of fluid lea broken eye ends, loose fasteners, c worn bushings.	X	X	X	X	X	X	X	X[1]
Axle Connection/U-Bolts[4]	Check "U"-bolt nut torque[4] and gap between wear pad and wear tower	X	X	X	X	X	X	X	X
Wheels[2]	Check lug nut torque[3]	X	X	X	X	X	X	X	X
Air Compressor	Check air compressor compartmer enclosure for proper airflow and venting.	X	X	X	X	X	X	X	X
Rear Alignment	Inspect (after first 1000-3000 miles)		X		X		X		X[1]
Air Fittings and Air Lines	Inspect for air leaks using soapy wa solution.	X							
	Inspect for signs of chafing, crackin or wear.	X	X	X	X	X	X	X	X[1]

[1] Continue to perform specified maintenance every 12,000 miles.

[2] See your vehicle's owner's manual for instructions regarding the maintenance of wheels and tires.

[3] Wheel lug nuts must be retightened to proper torque specifications as per the vehicle manufacturer's Owner Guide.

[4] U-boltsrequire an initial re-torque at 1000 miles, then follow regular maintenance schedule in the above.

Maintenance Record *

Name of Owner		Address of Owner	
Date of Purchase	Name and Address of Dealer		
Model of Vehicle	Vehicle Identification Number		
Suspension Model Number: RD1370F8	Suspension Serial Number:		
Inspection and Maintenance It	Date	Mileage	Service Performed

*In order to take advantage of warranty, Maintenance Record should be filled out and attached to warranty claims when submitted.

TROUBLE SHOOTING

SYMPTOMS	POSSIBLE CAUSES	REMEDIES
Tires wear out quickly or have uneven tire tread wear. Note: Wear pattern will indicate possible cause(s). Consult tire manufacturer fo guidance.	1) Tires have incorrect pressu 2) Tires out of balance. 3) Incorrect ride height. 4) Incorrect rear axle alignme 5) Improper (mismatched) tir and wheels.	1) Put specified air pressure in tires. 2) Balance or replace tires. 3) Adjust ride height to specifi setting. 4) Align rear axle to specified thrust angle. 5) Install correct tire and whee combination.
Vehicle rolls side to side excessively.	1) Shock absorbers worn. 2) Shock eye bushings worn. 3) Axle U-bolts are loose 4) Loose or worn Spring Bear Pivot connection(s). 5) Loose or worn Spring Bear Pivot bushing(s). 6) Check for air leak includin the height control valve.	1) Replace shock absorbers as needed. 2) Check and replace as neede 3) Tighten (see previous torqu chart) or replace as required 4) Tighten (see previous torqu chart) or replace as required 5) Replace as required 6) Check height control valve replace as required.
Vehicle ride is too harsh and suspension contacts stops excessively.	1) Shock absorbers worn. 2) Incorrect ride height. 3) Vehicle overloaded. 4) Air spring supply lines leaking or obstructed. 5) Vehicle system air pressur below specification. 6) Jounce bumper in air sprin worn or broken. 7) Air Suspension not turned 8) Defective Height Control Valve(s) 9) Height Control Linkage disconnected or damaged	1) Replace shock absorbers as needed. 2) Adjust ride height to specified setting. 3) Check wheel loads and corr as needed. 4) Check air line connections a remove obstructions. 5) Check air pressure and corr as needed. 6) Check and replace air sprin required. 7) Turn on air suspension. 8) Replace height control valve as required. 9) Reattach or replace as requ
Vehicle ride is too soft.	1) Shock absorbers worn. 2) Incorrect ride height.	1) Replace shock absorbers as needed. 2) Adjust ride height to specifi setting.

TROUBLE SHOOTING

SYMPTOMS	POSSIBLE CAUSES	REMEDIES
Suspension does not mainta ride height.	1) Air leak. 2) Internal leak in height con valve. 3) Height control valve linkag loose. 4) Air spring chafed or worn.	1) Check connections with soa water solution and repair or replace as needed. 2) Check height control valve a replace as required. 3) Check and tighten linkage a needed. 4) Check air spring and replac needed.
Air compressor runs excessiv	1) Air leak. 2) Internal air leak in height control valve. 3) Moisture ejector valve stuc open. 4) Check valve installed incorrectly. 5) Dump valve(s), or “kneeler(s)”, leaking. 6) Height Control Valve stuck the exhaust position.	1) Inspect all air lines, fittings, and air springs with a soapy w solution. Repair, retighten, or replace as required. Note: Plasti air lines must be cut square. S Air Control System Parts List (General Notes) for additional notes. 2) Insert exhaust tube into a c of water and examine for bub This will show evidence of bot inlet and exhaust valve leaks. 3) Replace components. 4) Check and replace if necess Arrow should point away from the air compressor head. Cor if necessary. 5) Check and replace if necess 6) Locate obstruction and rem or relocate interference.
Air compressor will not sta	1) Inline fuse burnt or circuit breaker tripped. 2) Air compressor motor bur out. 3) Disconnected or broken w 4) Ignition switch and/or suspension power switch no	1) Replace or reset. 2) Inspect and replace as requ 3) Inspect and correct or replace if necessary. 4) Turn on ignition switch and suspension switch.

REPLACEMENT INSTRUCTIONS & WARRANTY

R-SERIES

Replacement Instructions

NOTE: Due to the nature of service to be performed it is recommended that a qualified mechanic do the work.

Limited Warranty

ReycoGranning® warrants its R-Series suspensions to be free from defects in material and workmanship under normal use and service in the U.S. and Canada.

Main Structural Components -- 24 months or 50,000 miles, whichever occurs first. Defined as: hangers, beams, clip plates and axle saddles.

Other Air Suspension Components -- 12 months or 24,000 miles, whichever occurs first. valves, fasteners, bushings, and other components not stated specifically (when provided by ReycoGranning®), and other fabricated metal components. ReycoGranning® provides no warranties on components such as axles, air springs, controls, air compressors, brakes, shock absorbers, and hub and drum assemblies, except to the extent of any warranty provided to ReycoGranning® Suspensions by the manufacturer of such components.

Labor -- 6 months or 12,000 miles whichever comes first. Labor will be allowed on ReycoGranning® Suspensions estimated time to make repairs at a maximum rate of $50.00 per hour. As used herein, the term "normal use and service" means that the suspension will be installed, operated, inspected and maintained in accordance with the applicable ReycoGranning® Suspensions owner's manual, and any applicable vehicle owner's manual or instructions.

Adjustments

The starting date for the above warranty period is the date of purchase of the suspension by the first end user. Proof of such date is the responsibility of the first end user. If the purchase date is not established to ReycoGranning® Suspensions satisfaction, the date of manufacture determined from the suspension system's serial number shall be used as the effective starting date. When adjustment is sought under this warranty, a claim should be made by contacting the distributor or manufacturer who installed the suspension, who will coordinate the fix, documentation, parts shipment, etc. directly with ReycoGranning® Suspensions.

NOTE ReycoGranning® Suspensions must be notified in writing using a warranty claim form promptly upon claimed defect.

INSTALLER AND END USER RESPONSIBILITIES

The Distributor/Installer is responsible for installing the product according to ReycoGranning® Suspensions approved procedures, the installer is also responsible (either directly or through its agent/dealer) for providing a copy of ReycoGranning® Suspensions warranty and owner's manual to the end user, and for advising the end user of proper use, service and maintenance required for the product. The end user is responsible for operating, inspecting and maintaining the suspension according to the instructions in the ReycoGranning® Suspensions owner's manual and any applicable vehicle owner's manual, and for properly instructing all operators and maintenance personnel.

NOTE Warranty may be denied for improper installation.

LIMITATIONS AND EXCLUSIONS

No warranty applies in the event of: use of components, parts and/or accessories not obtained from or approved by ReycoGranning® Suspensions or which do not meet ReycoGranning® Suspensions quality and performance specifications; improper installation, maintenance or repair; misuse or abuse including but not limited to overloading; or unauthorized alterations or modifications.

THE ABOVE WARRANTIES ARE SUBJECT TO THE "WARRANTY LIMITATIONS" AND "REMEDIES" SECTIONS OR REYCOGRANNING® SUSPENSIONS INVOICE TERMS AND CONDITIONS.

This policy supersedes any previous warranty statements. 03/2005

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SUSPENSIONS

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