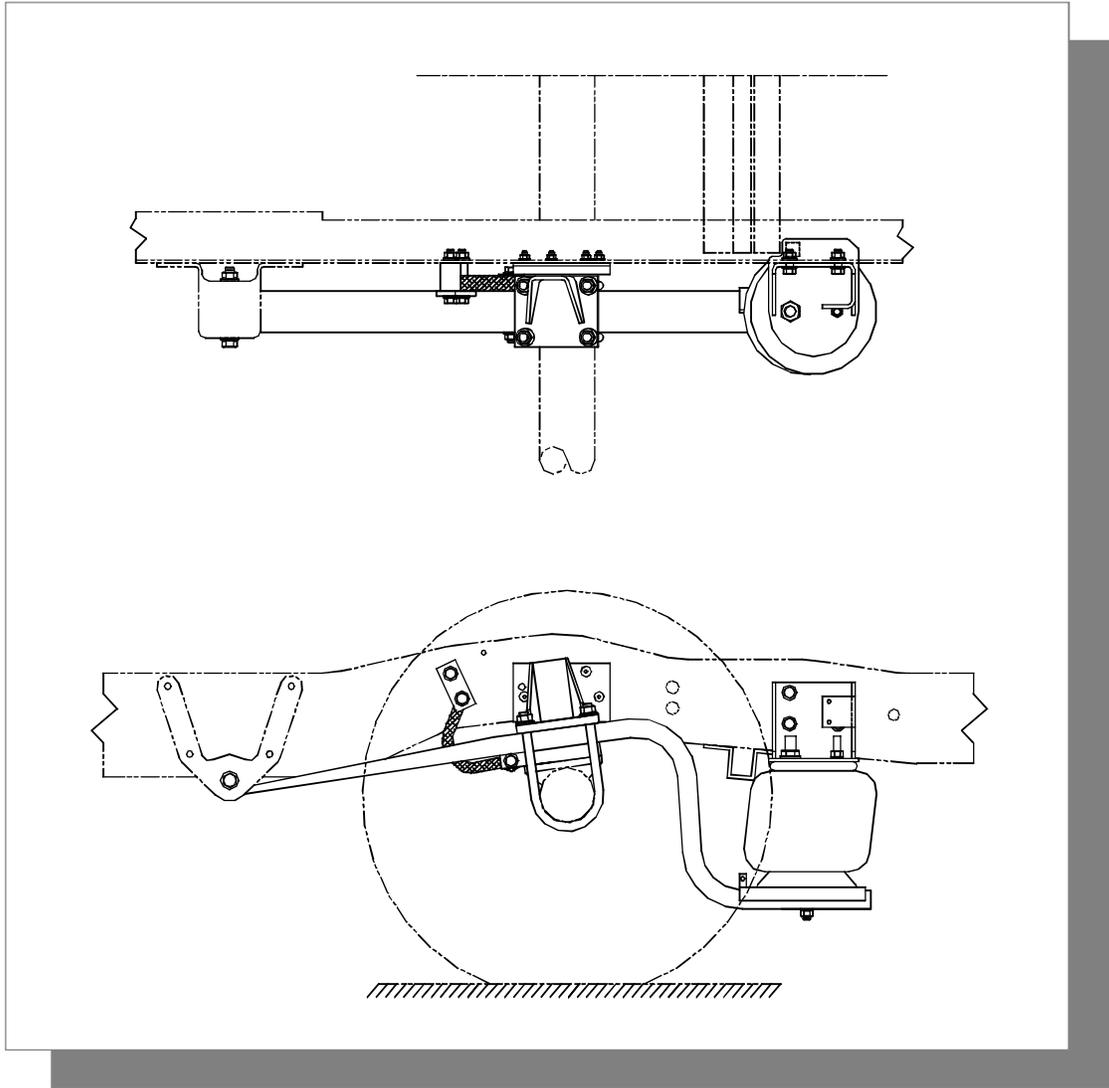


# **REYCOGRANNING® SUSPENSIONS**

## **AIRGLIDE® DRIVE AXLE AIR SUSPENSION**



## **RD950F OWNERS MANUAL**

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## Introduction

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Congratulations on your purchase of a ReycoGranning® Suspensions *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® Suspensions *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.

A unique feature to the ReycoGranning® Suspensions *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® Suspensions *AIRGLIDE*® drive axle air suspension system is the air control system. Depending on the actual system used, the air control system will provide the ability to automatically control the amount of air pressure in the air springs, thus automatically control the 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 100 - 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 loading. The pressure 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.

### **Haldex Brake Activated Spitter Valve**

Located on the bottom of the air tank assembly, is a heated moisture ejector valve. This valve automatically releases accumulated water whenever the brake pedal is depressed.

The valve can be manually drained by pressing on the red button on the bottom of the valve.

## Introduction

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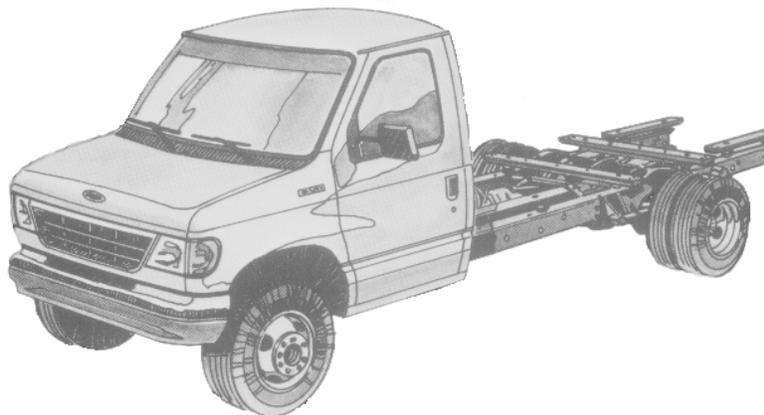
Optional "kneeler" or exhaust valve(s) may be plumbed between the air springs and the height control valve(s). When power is applied to these valves, they shut off air supply from the height control valve to the air springs and exhaust air from the air springs. As long as power is supplied to the "kneeler" 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® Suspensions 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® Suspensions 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® Suspensions 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 100 and 125 psi, as described above. Any air gauge that is plumbed directly to the air spring will show fluctuations depending on axle loading and vehicle operation



## Controls

Descriptions of the typical controls are found below. Note: some original equipment manufactures (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 components of 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 an Exhaust/Inflate switch. Moving the switch to "Exhaust" position exhausts all air from the air springs.

### Specific Control Panels

While the switch is in the "Exhaust" position, the air springs will remain deflated.

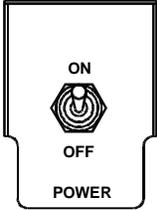
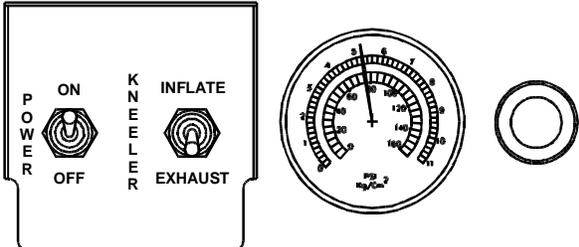
Exhausting air from the air springs may be required to: assist in maintenance and lower the rear of the vehicle to assist in loading.

**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.

### Gauges, Lights, Buzzers

As an option, the Air Pressure Warning Light/Buzzer kit may be installed. The gage will indicate air 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.

	<p>The 5016 Control Panel Assembly, with Power ON/OFF only. Included with the 9932 Air Control Kit.</p>
	<p>The 4982 Control Panel Assembly, with Power ON/OFF and "Kneeler" Dump Valve Switches. Also shown is the 1069 Air Pressure Gauge (0-160 psi) and the 5401 Alarm Light/Buzzer.</p> <p>The 4982 Control Panel Assembly is included with the 9930 Air Control Kit. The 1069 Gauge and 5401 Light/Buzzer are included in the optional 5703 Warning Kit.</p>

## Operation

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Operation of the ReycoGranning® Suspensions *AIRGLIDE*® drive axle suspension utilizing an automatic height control system is reached through various control panels. Depending upon options included with 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 is 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 the "Exhaust" position.
- When exhausted, switch the power to "OFF" (if desired).

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

## Maintenance Schedule

General Maintenance	Service to be Performed	Mileage in Thousands								
		3	12	24	36	48	60	72	84	96
Spring Beam Pivot Connection	Check nut torque	X								
	Inspect for worn bushings		X	X	X	X	X	X	X	X <sup>1</sup>
	Inspect for signs of looseness due to worn parts		X	X	X	X	X	X	X	X <sup>1</sup>
Axle Connection	Check "U"-bolt nut torque	X	X	X	X	X	X	X	X	X <sup>1</sup>
Shock Absorbers <sup>2</sup>	Inspect for signs of fluid leak, broken eye ends, loose fasteners, or worn bushings	X	X	X	X	X	X	X	X	X <sup>1</sup>
Air Springs	Inspect for proper clearance (1" minimum all around).	X								
	Check mount nut torque	X								
	Inspect for signs of chafing or wear	X	X	X	X	X	X	X	X	X <sup>1</sup>
	Check for air line fitting torque	X								
	Inspect for air leaks using soapy water solution	X								
Height Control Valve Linkage	Inspect for signs of bending, binding, or slippage	X	X	X	X	X	X	X	X	X <sup>1</sup>
Air Fittings and Air Lines	Inspect for air leaks using soapy water solution	X								
	Inspect for signs of chafing, cracking, or wear	X	X	X	X	X	X	X	X	X <sup>1</sup>
Wheels <sup>3</sup>	Check lugnut torques <sup>4</sup>	X	X	X	X	X	X	X	X	X <sup>1</sup>
Rebound Straps	Check nut torque	X	X	X	X	X	X	X	X	X <sup>1</sup>
	Inspect for signs of chafing or wear.	X	X	X	X	X	X	X	X	X <sup>1</sup>
	Inspect for signs of possible interference	X								
Wear Block	Inspect for foreign material between the wear block and wear tower causing premature wear.	X	X	X	X	X	X	X	X	X <sup>1</sup>
Air Compressor	Check air compressor compartment or enclosure for proper air flow and venting.	X	X	X	X	X	X	X	X	X <sup>1</sup>
Compressor Air Filter	Check filter for dirt and debris. Clean and replace if necessary. Determine check interval at this time.		X	X	X	X	X	X	X	X <sup>1</sup>
Spitter Valve	With air system turned on, press red button on bottom of valve and you should hear a hissing sound.	X	X	X	X	X	X	X	X	X <sup>1</sup>
	With air system turned on, press brake pedal. You should hear a hissing sound.	X	X	X	X	X	X	X	X	X <sup>1</sup>

<sup>1</sup> Continue to perform specified maintenance every 12,000 miles.

<sup>2</sup> Shock absorbers are not a component part of the ReycoGranning® Suspensions system. Please see your vehicle's owners manual for instructions on the maintenance of shock absorber items.

<sup>3</sup> See your vehicle's owners manual for instructions regarding the maintenance of wheels and tires.

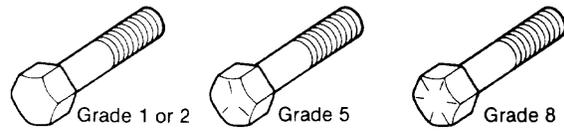
<sup>4</sup> Wheel lug nuts must be retightened to proper torque specifications as per the vehicle or chassis manufacturer's Owner Guide.



# 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.

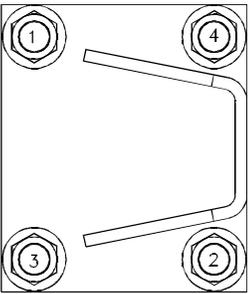
Most original equipment fasteners are identified with markings or numbers indicating the strength of the fastener. These markings are described in Figures 5 and 6. Attention to these markings is important in assuring that the proper replacement fasteners are used.



**Figure 1: Grade Markings on Bolts**

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

**Figure 2: Grade Markings on Lock Nuts**

Applications	Nut Size	*Torque Specification (Cleaned and Lubricated)	Torque Sequence (if required)
Spring Beam Pivot Connection	OEM	240 - 290 ft.-lb.	N/A
Rebound Strap Upper Mount	1/2-13 Grade G	80 ft.-lb.	N/A
Rebound Strap Lower Mount	1/2-13 Grade C	60 ft.-lb.	N/A
Upper Air Spring Pad Mount (to Frame)	1/2-13 Grade G	80 ft.-lb.	N/A
Air Spring Upper Mount	3/4-16 Grade 5 1/2-13 Grade 5	35 ft.-lb. 35 ft.-lb.	N/A
Air Spring Lower Mount	1/2-13 Grade C	35 ft.-lb.	N/A
"U"-Bolt Nuts	5/8-18 Grade G	Step torque to:  50 ft.-lb. 100 ft.-lb. 150 ft.-lb. 180 ft.-lb.  follow sequence for each step.	

\* All torques are ±10% unless otherwise specified.

# Trouble Shooting

## ***Drive Axle Suspension System--General***

Symptoms	Possible Causes	Remedies
Excessive vehicle roll or lateral movement (side to side movement).	Loose or worn spring beam pivot connection(s). Worn out spring beam pivot bushing(s). Axle "U"-bolts loose. Worn or failed wear blocks.	Tighten (see previous torque chart) or replace as required. Replace as required. Tighten (see previous torque chart) or replace. Adjust gap or replace.
Hard ride or axle bottoming out.	Air suspension not turned on. Incorrect ride height. Vehicle overloaded. Defective height control valve(s). Height control linkage disconnected or damaged. Improper rebound strap/rebound strap location.	Turn on air suspension. Adjust to current ride height. Reduce drive axle load.. Replace height control valves as required. Reattach or replace as required.  Replace with correct rebound strap. Note: Do not relocate rebound strap without prior authorization from ReycoGranning® Suspensions.
Tire hop or poor handling	Loose or worn shock absorbers.  Driveline retarder (if equipped) oversized or improperly set.	Shock absorbers are not a component part of the ReycoGranning® Suspensions system. See your vehicle's owners manual for instructions regarding the maintenance of the shock absorbers.  Check driveline retarder documentation or with the vehicle manufacturer for proper sizing or setting of the retarder. ReycoGranning® Suspensions does not supply a driveline retarder.
Prematurely worn front tires	Incorrect ride height.	Adjust to current ride height.

# Trouble Shooting

## Air Control System

Symptoms	Possible Causes	Remedies
Air compressor runs excessively	<p>Air leak.</p> <p>Internal air leak in height control valve.</p> <p>Moisture ejector valve stuck open.</p> <p>Check valve installed incorrectly.</p> <p>Dump valve(s), or “kneeler(s)”, leaking.</p> <p>Height Control Valve stuck in the exhaust position.</p>	<p>Inspect all air lines, fittings, and air springs with a soapy water solution. Repair, retighten, or replace as required. Note: Plastic air lines must be cut square. See Air Control System Parts List (General Notes) for additional notes.</p> <p>Insert exhaust tube into a cup of water and examine for bubbles. This will show evidence of both inlet and exhaust valve leaks. Replace components.</p> <p>Check and replace if necessary.</p> <p>Arrow should point away from the air compressor head. Correct if necessary.</p> <p>Check and replace if necessary.</p> <p>Locate obstruction and remove or relocate interference.</p>
Air compressor will not start	<p>Inline fuse burnt or circuit breaker tripped.</p> <p>Air compressor motor burnt out.</p> <p>Disconnected or broken wire.</p> <p>Ignition switch and/or suspension power switch not on.</p>	<p>Replace or reset.</p> <p>Inspect and replace as required.</p> <p>Inspect and correct or replace if necessary.</p> <p>Turn on ignition switch and/or suspension switch.</p>

## Part Lists

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### Part Lists

#### General Notes

1. Air line tubing should be 1/4" D.O.T. plastic air line tubing.
2. The tubing ends must be cut straight and insert the full depth into the fittings otherwise leaks will result. Check all connections for air leaks.
3. Protective air line loom is recommended.
4. All air line fittings to be brass air brake compatible--Parker NTA® or equivalent.
5. Fastener/Fitting Abbreviations:

#### Bolts/Screws

FHB	(Hex) Flange Head Bolt
HHB	Hex Head Bolt
SFCS	Socket Flat Countersunk Head Cap Screw
SHCS	Socket Head Cap Screw

#### Washers

FW	(Unhardened) Flat Washer
HFW	Hardened Flat Washer
SLW	Spring Lock Washer

#### Nuts

FN	(Hex) Flange Nut
JN	(Hex) Jam Nut
LFN	(Hex) Locking Flange Nut
LN	(Hex) Lock Nut
N	(Hex) Nut

#### Plating

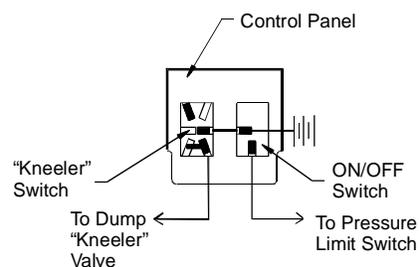
PH	Phosphorous and Oil
PL	Plain
ZN	Zinc (or ZP)

#### Fittings

T	Tubing, Air Line (O.D.)
MPT	Male Pipe Thread
FPT	Female Pipe Thread

### Typical Electrical Diagrams

See Air Control Kit for complete electrical wiring diagrams.



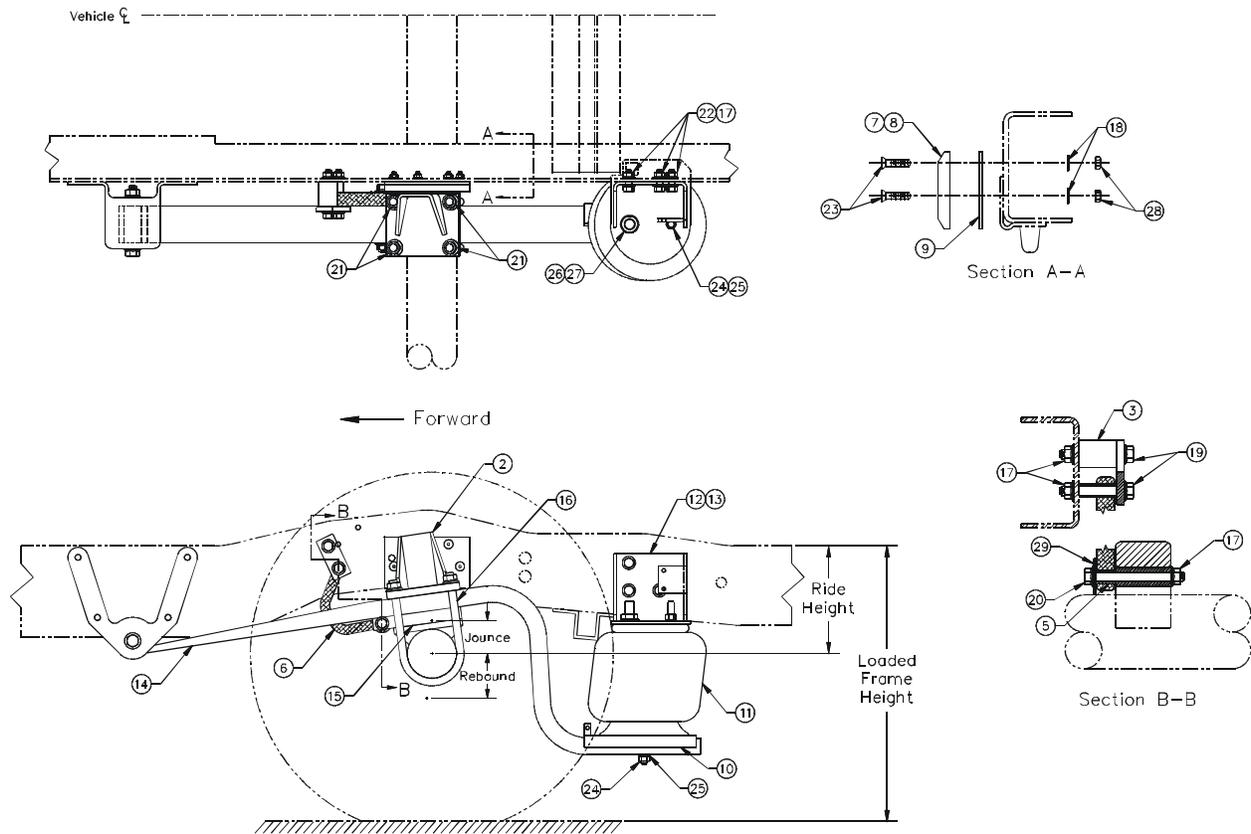
Typical Control Panel Wiring Diagram

(4982 Control Panel Shown)

# Part Lists

## Suspension (RD950F)

Item	Part No.	Description	Item	Part No.	Description
1	2617	Serial Tag (Not Shown)	16	7762	U-Bolt, 5/8"-18 x 8.375"
2	7750	Clip Plate Assembly	17	308	1/2"-13, Gr. G, Locking Flange Nut
3	7753	Rebound Strap Bracket Assembly	18	109	3/8" Flat Washer
4	5763	Sleeve, Rebound Strap (2.06")	19	702638-01	1/2"-13 x 3 1/2", Gr. 8, PH, Flange Bolt
5	4368	Sleeve, Rebound Strap (1.00")	20	219	1/2"-13 x 5", Gr. 8, Flange Bolt
6	7755	Rebound Strap (7.00")	21	4599	5/8"-18, Gr. G, Locking Flange Nut
7	4638	Wear Block L.H.	22	309	1/2"-13 x 1 1/4", Gr. 8, Flange Bolt
8	4639	Wear Block R.H.	23	4356	3/8"-24 x 1 1/2", Countersunk Bolt
9	5764	Backing Plate (Shim)	24	8120378	1/2"-13, Gr. B, Nut
10	5367	H.C.V. Bracket (Lower)	25	8103323	1/2" Spring Lock Washer
11	7765	Air Spring	26	8219758	3/4"-16, Gr. B, Jam Nut
12	7759	Air Spring Pad L.H.	27	8131017	3/4" Flat Washer
13	7760	Air Spring Pad R.H.	28	89422298	3/8"-24, Gr. C, Lock Nut
14	7747	Spring Beam Assembly	29	225	1/2" Flat Washer, (.531" ID x 2.00" OD x .125")
15	7761	Spacer, U-Bolt (1.00")			



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

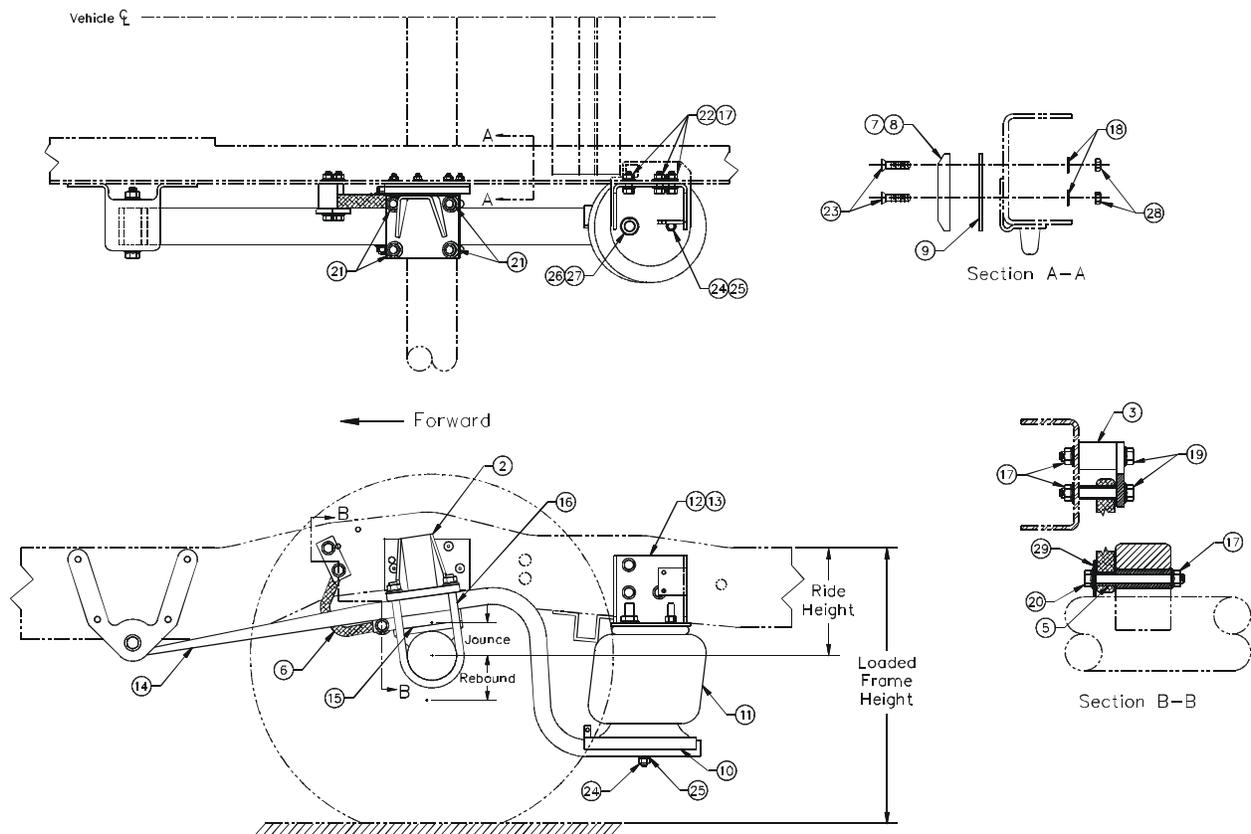
Chassis	ReycoGranning® Suspensions Model	Loaded Frame Height*	Ride Height	Jounce Travel	Rebound Travel
Ford E-SuperDuty Cab Cutaway Chassis	RD950F	22.5"	8.80"	2.69"	3.64"

\* Loaded frame height is measured from the ground (flat and level) to the top of the vehicle frame at the rear of vehicle, behind the axle as shown (unstretched frame).

# Part Lists

## Suspension (RD950F-CMC)

Item	Part No.	Description	Item	Part No.	Description
1	2617	Serial Tag (Not Shown)	16	7805	U-Bolt, 5/8"-18 x 10.375"
2	7750	Clip Plate Assembly	17	308	1/2"-13, Gr. G, Locking Flange Nut
3	7753	Rebound Strap Bracket Assembly	18	109	3/8" Flat Washer
4	5763	Sleeve, Rebound Strap (2.06")	19	702638-01	1/2"-13 x 3 1/2", Gr. 8, PH, Flange Bolt
5	4368	Sleeve, Rebound Strap (1.00")	20	219	1/2"-13 x 5", Gr. 8, Flange Bolt
6	7755	Rebound Strap (7.00")	21	4599	5/8"-18, Gr. G, Locking Flange Nut
7	4638	Wear Block L.H.	22	309	1/2"-13 x 1 1/4", Gr. 8, Flange Bolt
8	4639	Wear Block R.H.	23	4356	3/8"-24 x 1 1/2", Countersunk Bolt
9	5764	Backing Plate (Shim)	24	8120378	1/2"-13, Gr. B, Nut
10	5367	H.C.V. Bracket (Lower)	25	8103323	1/2" Spring Lock Washer
11	7765	Air Spring	26	8219758	3/4"-16, Gr. B, Jam Nut
12	7759	Air Spring Pad L.H.	27	8131017	3/4" Flat Washer
13	7760	Air Spring Pad R.H.	28	89422298	3/8"-24, Gr. C, Lock Nut
14	7747	Spring Beam Assembly	29	225	1/2" Flat Washer, (.531" ID x 2.00" OD x .125")
15	7806	Spacer, U-Bolt (3.00")			



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

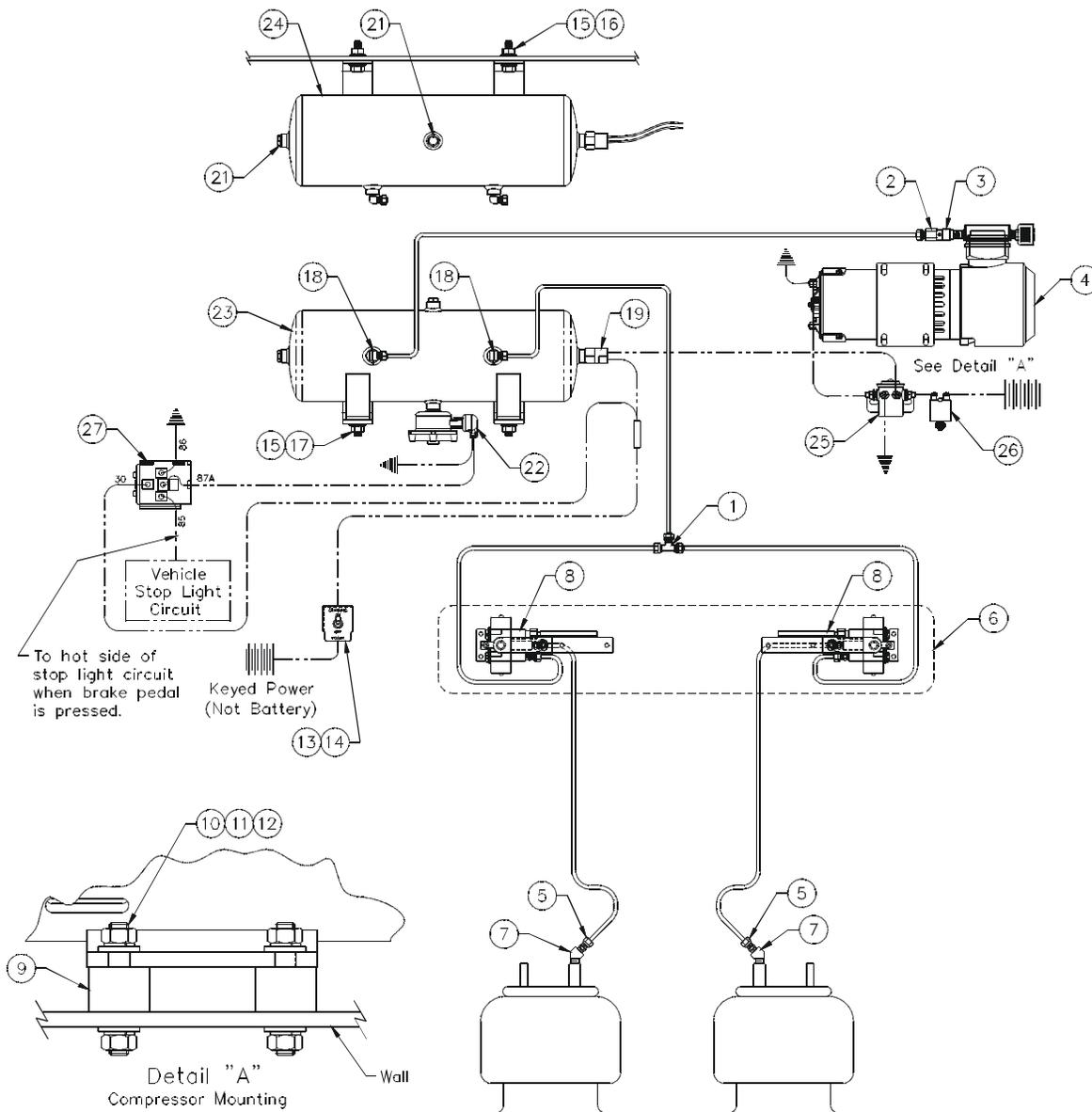
Chassis	ReycoGranning® Suspensions Model	Loaded Frame Height*	Ride Height	Jounce Travel	Rebound Travel
Ford E-SuperDuty Cab Cutaway Chassis	RD950F-CMC	24.5"	10.82"	2.69"	3.64"

\* Loaded frame height is measured from the ground (flat and level) to the top of the vehicle frame at the rear of vehicle, behind the axle as shown (unstretched frame).

# Part Lists

## 9932 Dual Height Control Valve System

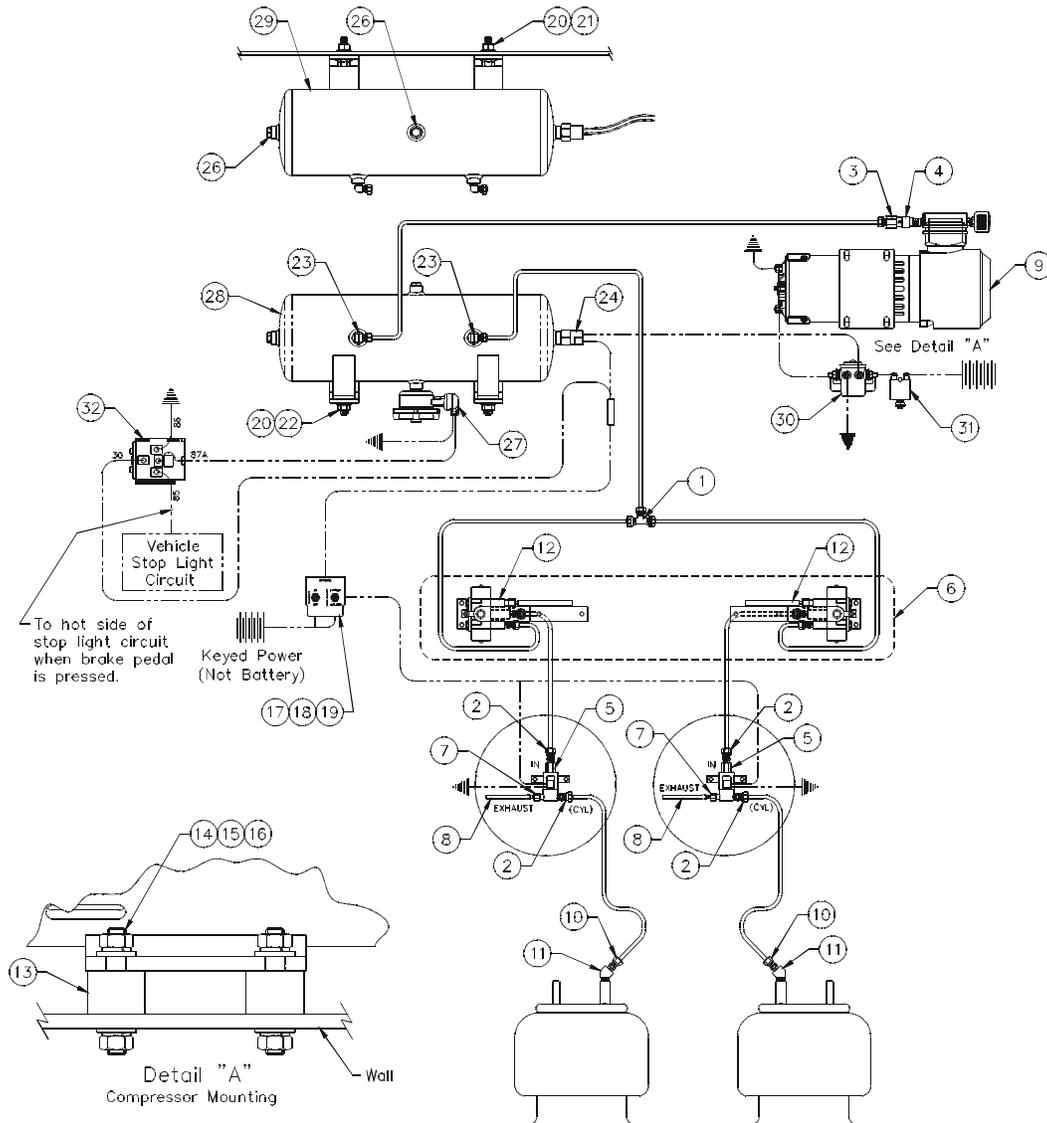
Item	Part No.	Description	Item	Part No.	Description
1	702603-01	Tee, Union, 1/4T X 1/4T X 1/4T	13	4981	Switch
2	0599	Connector, Female 1/4T X 1/4 FPT	14	4910	Panel
3	4017	Check Valve	15	308	LFN 1/2-13 Gr G ZN
4	5188	Compressor, 1/3 HP 12 VDC	16	307	FHB 1/2-13 X 1 1/2 Gr 8 ZN
5	0428	Straight Connector 1/4 T X 1/4 MPT	17	309	FHB 1/2-13 X 1 1/4 Gr 8 ZN
6	8610	Kit, HCV for RD11KF and RD975F	18	702600-01	Elbow 90 1/4T X 1/4 MPT
	8897	Kit, HCV for RD1350F	19	8892	Switch, Pressure Control
	7764	Kit, HCV for RD950F	20	5372	Loom, Braided Nonmetallic (Not Shown)
	4459	Kit, HCV for RD800F	21	0141	Pipe Plug
7	0437	45 Degree 1/4 MPT X 1/4 FPT	22	704916-01	Drain Valve, Heated 12VDC
8	8722	3/16 ID X 1/4 OD X 12 CV Tubing	23	8614	Tank, Air Reservoir
9	5392	Isolator, Vibration	24	8625	Bracket, Air Tank Mount
10	8120214	SLW 5/16 .328 X .586 X .088 ZP	25	8706	Solenoid S.P.S.T.
11	8120393	FW 5/16 .344 X .688 X .065 ZP	26	8721	Circuit Breaker 20A Cycling
12	89429048	N 5/16-18 GR 8 ZP	27	703683-01	Wiring Harness With Relay



# Part Lists

## 9930 Dual Height Control Valve System (With Dump Valves)

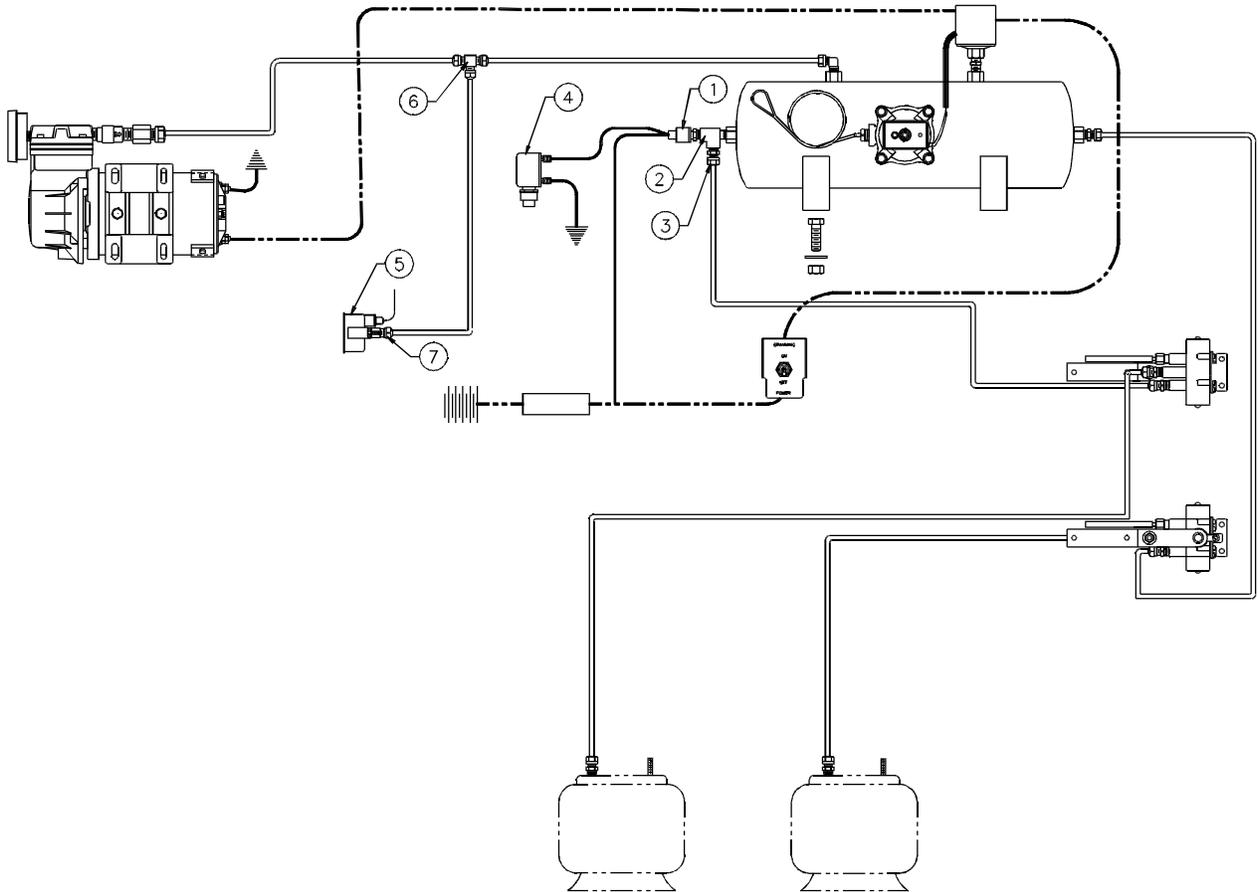
Item	Part No.	Description	Item	Part No.	Description
1	702603-01	Tee, Union, 1/4T X 1/4T X 1/4T	16	89429048	N 5/16-18 Gr 8 ZP
2	0416	Connector, 1/4T X 1/8 MPT	17	4981	Switch
3	0599	Connector, Female 1/4T X 1/4 FPT	18	5157	Switch - Toggle, Red
4	4017	Check Valve	19	5008	Panel
5	5103	Valve, Dump, 12 VDC 3 Way No.	20	308	LFN 1/2-13 Gr G ZN
6	8610	Kit, HCV for RD11KF and RD975F	21	307	FHB 1/2-13 X 1 1/2 Gr 8 ZN
	8897	Kit, HCV for RD1350F	22	309	FHB 1/2-13 X 1 1/4 Gr 8 ZN
	7764	Kit, HCV for RD950F	23	702600-01	Elbow 90 1/4T X 1/4 MPT
	4459	Kit, HCV for RD800F	24	8892	Switch, Pressure Control
7	6115	Connector, 3/16 HB X 1/8 MPT Plastic	25	5372	Loom, Braided Nonmetallic (Not Shown)
8	701799-01	Tubing, 3/16 ID X 1/4 OD X 3 CV	26	0141	Pipe Plug
9	5188	Compressor, 1/3 HP 12 VDC	27	704916-01	Drain Valve, Heated 12VDC
10	0428	Straight Connector 1/4 T X 1/4 MPT	28	8614	Tank, Air Reservoir
11	0437	45 Degree 1/4 MPT X 1/4 FPT	29	8625	Bracket, Air Tank Mount
12	8722	3/16 ID X 1/4 OD X 12 CV Tubing	30	8706	Solenoid S.P.S.T.
13	5392	Isolator, Vibration	31	8721	Circuit Breaker 20A Cycling
14	8120214	SLW 5/16 .328 X .586 X .088 ZP	32	703683-01	Wiring Harness With Relay
15	8120393	FW 5/16 .344 X .688 X .065 ZP			



# Part Lists

## 5703 Warning Light/Buzzer Kit

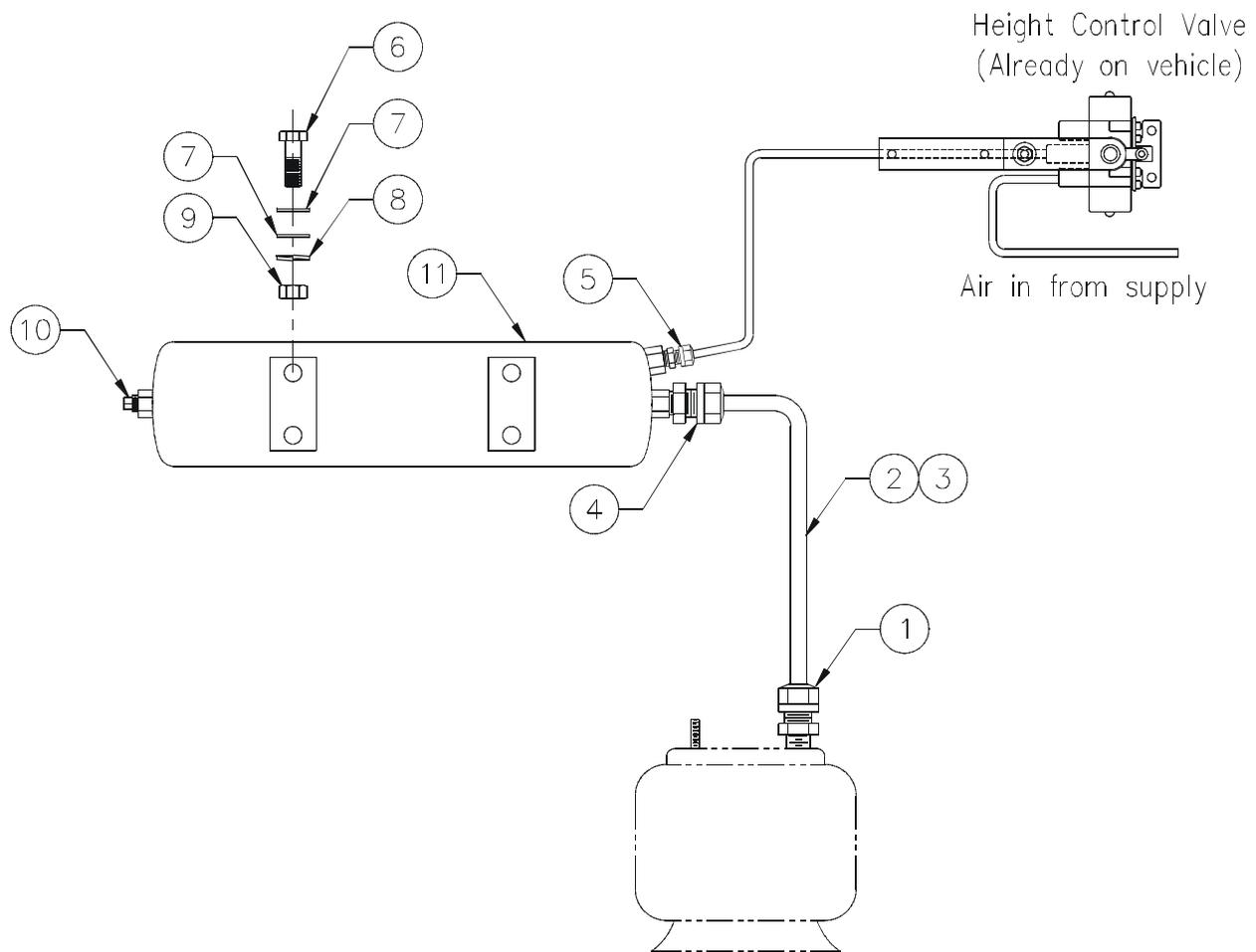
Item	Part No.	Description	Item	Part No.	Description
1	5402	Pressure Sensor, 25/40 psi	5	1069	Gage, Air Pressure 0-160 psi, Lighted
2	0441	Tee, 1/4 FPT x 1/4 MPT	6	702603-01	Union Tee, 1/4 T x 1/4 T x 1/4 T
3	0428	Connector, 1/4 T x 1/4 MPT	7	0131	Connector, 1/4 T x 1/8 FPT
4	5401	Alarm, Dual (Light and Buzzer)			



## Part Lists

### Ping Tank Kit (p/n 9593)

Item	Part No.	Description	Item	Part No.	Description
1	0627	Connector, 1/2 T x 1/4 MPT	7	89415543	1/2" Flat Washer
2	6247	Tubing, 1/2" D.O.T.	8	8120384	1/2" Spring Lock Washer
3	6248	Loom, 5/8"	9	8120371	1/2"-20, Gr. 5, Hex Nut
4	0635	Connector, 1/2 T x 1/2 MPT	10	0141	Plug, 1/4" Square Head
5	0428	Connector, 1/4 T x 1/4 MPT	11	6214	Ping Tank, 200 cu. in., 4" dia.
6	8455028	1/2"-20 x 1 1/2", Gr. 8, Hex Head Bolt			



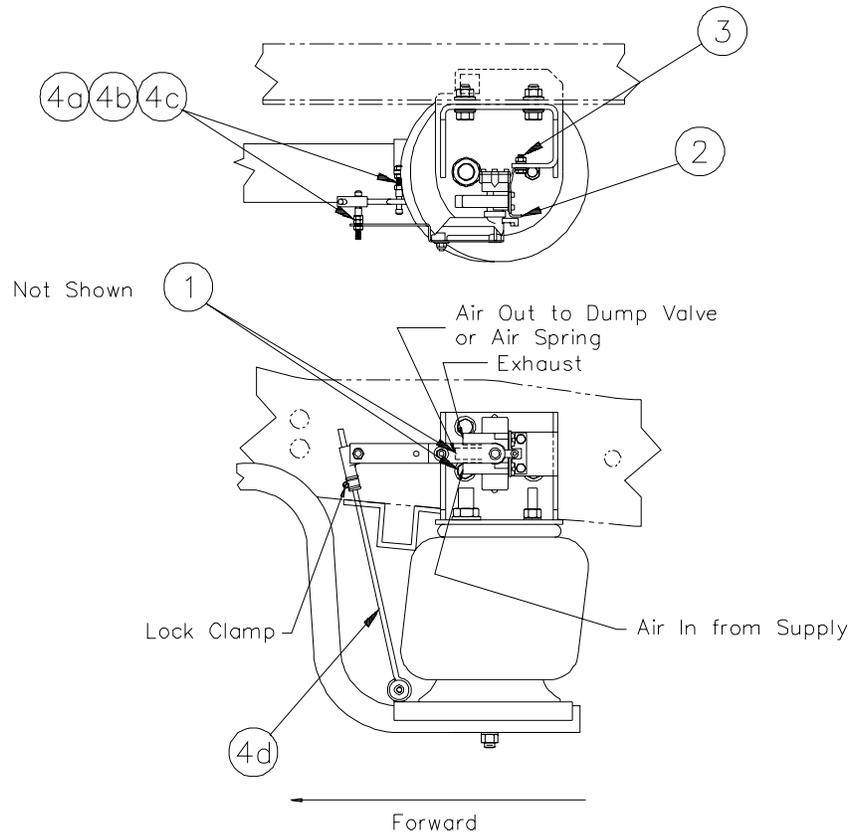
#### Notes:

1. For best results, the ping tank should be mounted as close to the air spring as possible.
2. If the air system contains "kneeler" dump valves, the above tank system must be inserted between the "kneeler" valve and the air spring.

## Part Lists

### 7764 Height Control Valve Kit

Item	Part No.	Description	Item	Part No.	Description
1	0416	Connector, 1/4 T x 1/8 MPT	4	6018	Linkage Rod Kit
2	5608	Height Control Valve	4a	---	Nut
3	4458	Height Control Valve Fastener Kit	4b	---	Lock Washer
3a	8120375	N 1/4-20	4c	---	Stud
3b	8120380	SLW 1/4	4d	---	Linkage Rod, 7.67" Long
3c	8180020	HHB 1/4-20 x .75 Gr. 5			



If height control valve adjustment is required, please follow the listed steps:

1. Secure the vehicle by blocking all wheels.
2. Determine the correct ride height of the suspension. See Suspension Parts List section for a listing of correct ride heights. Note: The ride height is measured at the center of the axle to the bottom of the frame behind the axle (see Suspension Part List drawing for exact location).
3. Loosen the lock clamp on the upper end of the linkage rod. (Nominal Rod Length: 12.25" from stud center to stud center).
4. Slide the connector up or down the linkage rod to achieve the correct ride height. The height control valve arm must be in a horizontal orientation after the system has stabilized and the correct ride height is achieved.
5. Retighten the lock clamp.

# Replacement Instructions and Warranty

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## Replacement Instructions

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

For service parts, contact an authorized ReycoGranning® Suspensions dealer.

## Warranty

ReycoGranning® Suspensions 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 for 12 months or 24,000 miles whichever comes first.

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.

### **Installer and End User Responsibilities**

The 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.

### **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 of ReycoGranning® Suspensions invoice terms and conditions.

This policy supersedes any previous warranty statements.