

**Link**® **UltraRide**®  
Chassis Air Suspension

**FORD F450/550**  
**SUPER DUTY CHASSIS CABS**  
**2005-NEWER MODELS**  
(13.6K) REAR AXLE  
Link Part No. 8M000097

80002163  
AUG 16, 2011

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**Please read this manual before operating you UltraRide® suspension and keep it for future reference.**



223 15th Street N.E.  
Sioux Center, Iowa 51250

For questions with your UltraRide suspension, please contact us toll free at (800) 222-6283

Visit [www.LinkMfg.com](http://www.LinkMfg.com)

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## Congratulations on your new UltraRide!

Thank you for choosing the Link UltraRide chassis air suspension for your vehicle. When properly installed, UltraRide will substantially improve ride and handling in your medium duty vehicle. With no lubrication required and only periodic maintenance as indicated in this manual, your new UltraRide suspension will provide you with many miles of reliable, trouble free service.

In the unlikely event of a suspension malfunction between regular vehicle maintenance intervals, immediate corrective action should be taken to prevent further suspension damage. Our website, [www.linkmfg.com/ultraride/urdealers.html](http://www.linkmfg.com/ultraride/urdealers.html) will help you locate a Link dealer near you.

### SAFETY

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#### **Warning symbols in this guide**

Instructions that when not followed can result in injury to yourself or others or damage to the vehicle are highlighted by the warning triangle symbol. These comments should be read and observed.

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## OPERATION

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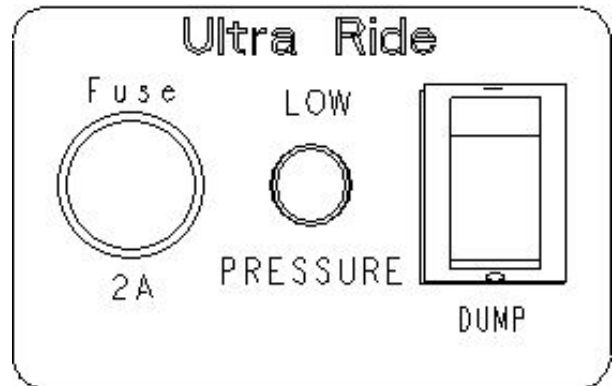
Your Link UltraRide chassis air suspension is fully automated and requires no manual intervention during normal vehicle operation. Ride height is controlled by the air control kit with the air compressor activated as necessary whenever the ignition key is in the ON position and system air pressure is below a present minimum.

## CONTROL PANEL

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The dashboard mounted control panel includes three components that perform the following functions:

- The 2 ampere fuse on the left side of the control panel protects the electrical circuits on the UltraRide air kit. If your compressor does not start when the vehicle ignition is in the ON position and the reservoir pressure is low, check this fuse.



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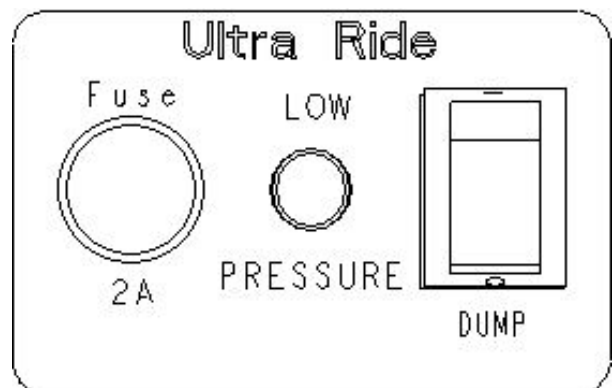
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- ❑ The Low Pressure Warning Light located in the center of the control panel indicates a severe loss of reservoir air pressure (below 60 psi) when the light is energized. The Low Pressure Warning Light may be on at vehicle start-up or briefly after the DUMP feature has been used; however, should it remain on for more than 5-7 minutes or should it come on while the vehicle is in motion, immediate action should be taken to determine and correct the source of air loss. Failure to take immediate corrective action may cause severe damage to suspension components.
- ❑ The DUMP switch located on the right hand side of the control panel causes air to be exhausted from the air springs when in the on position. This function may be used to load or unload your vehicle for hitching or unhitching a towed vehicle. The normal position for this switch is OFF.

### CAUTION

NEVER operate your vehicle with the DUMP switch in the ON position and/or the air springs deflated. Severe damage to the air springs and suspension components may result.

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## MAINTENANCE

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Under normal driving conditions, your UltraRide requires very little maintenance. However, a few simple preventative actions will extend suspension life and reliability. To reduce down time, most of these actions may be performed at normal vehicle service intervals. **Failure to perform scheduled maintenance may result in loss of warranty coverage.**

If your vehicle requires professional service, your authorized dealer can provide the necessary parts and service. Refer to your installer or the nearest dealer (located by either contacting Link Customer Service at (800) 222-6283 or online at [www.linkmfg.com](http://www.linkmfg.com)).

### CAUTION

Before any maintenance or service is performed on an UltraRide chassis suspension, system air pressure must be relieved by pulling the air reservoir drain valve cable. Failure to do so may result in serious injury.

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**CHECK AT EVERY VEHICLE SERVICE INTERVAL:**

- Check Design Height (8.00 ±1/4")
- Check for air leaks around fittings.
- Check tire pressures.
- Visually check for loose, worn, or damaged components.

**CHECK AFTER THE FIRST 1000 MILES:**

- Recheck & tighten any loose fasteners.
- Check for any loose or worn components.

**CHECK EVERY 30,000 MILES:**

- Check lower control arm, sway bar, and lateral control rod (panhard bar) bushings for wear. Replace is necessary.
- Check and re-torque all fasteners (refer to Torque Table)

**CHECK ANNUALLY:**

- Check shock absorbers for oil leaks and function

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**MAINTENANCE**

TORQUE TABLE		
LOCATION	FASTENER	TORQUE
FRAME HANGER	9/16 UNF NUTS	134 FT-LBS
FRAME HANGER	5/8 UNC NUTS	200 FT-LBS
DRIVER SIDE AXLE BRACKET AT OE D-BUSHING LOCATION	10 mm OE BOLTS	72 N-m
AXLE BRACKET (LONG BOLTS)	1/2 UNC NUTS	106 FT-LBS
AIR SPRING ADAPTER PLATES	3/8 UNC NUTS	31 FT-LBS
CROSSMEMBER	1/2 UNC NUTS	100 FT-LBS
STABILIZER BAR D-BUSHING MOUNTS	5/8 UNC NUTS	200 FT-LBS
LOWER CONTROL ARM AT AXLE BRACKET	5/8 UNC NUTS	200 FT-LBS
STABILIZER BAR BUSHINGS AND CONTROL ARM AT FRAME HANGER	M22 X 2.5 NUTS	830 N-m
LATERAL CONTROL ROD (PASS.)	M22 X 2.5 NUTS	830 N-m
LATERAL CONTROL ROD (DRIVER)	5/8 UNC NUTS	200 FT-LBS
MAGNET MOUNTING PLATE	1/4 UNC NYLOC NUTS	8-10 FT-LBS

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# *UltraRide* – TROUBLE SHOOTING GUIDE

COMPONENT	POSSIBLE PROBLEM	CORRECTIVE ACTION
Airlines	Air leaks	Replace airline
Fittings	Air leaks	Remove fitting and apply fresh joint compound. Reinstall fitting, but <b>Do Not Over tighten. Do not use Teflon tape.</b>
Air Springs	A. Improper height B. Air leakage	A. Adjust valve linkage to maintain proper air spring height. B. Replace air spring.
Height Control Valve	Air spring(s) will not inflate when weight is added to the chassis.  OR  Air spring(s) will not deflate when weight is removed from the chassis.	A. Inspect valve/s to ensure it is oriented correctly. Check that the airlines and fittings are assembled to their correct ports. B. Replace valve.
Shock Absorber	Insufficient damping effect	Replace shocks
Lateral Control Rod	A. Loose nuts on lateral control rod bolts B. Worn bushings	A. Tighten securely. B. Replace lateral control rod.

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## WARRANTY

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Link UltraRide warrants their suspension's fabricated structural components against failure under normal use for period of three (3) years or 75,000 miles\*, whichever occurs first. This warranty period begins with the date of installation to the original owner. Under this warranty Link UltraRide will replace or repair any part that by its inspection is determined to be defective. In addition, for a period not to exceed twelve (12) months \*\* Link UltraRide will provide a labor allowance, which it determines to be adequate to properly replace or repair defective structural parts and or components.

All parts or components thought to be defective must be returned with company authorization, freight prepaid, to Link UltraRide. A complete written explanation of claimed defects and circumstances of failure, the serial number, and date of installation must accompany these returns. Link UltraRide must authorize labor allowance prior to initiation of repairs.

\*Purchased components and/or accessories other than the fabricated structure are warranted for one (1) year or 36,000 miles, whichever occurs first. This warranty period begins with the date of installation to the original owner.

\*\*Purchased components and/or accessories other than the fabricated structure are eligible for a warranted labor allowance for twelve (12) months or 18,000 miles from installation date.

### \*\*\*Special Stipulations: For Ambulance Applications

**IF THESE STIPULATIONS ARE NOT ADHERED TO, ONLY STANDARD WARRANTY WILL APPLY.**

All must be equipped with an Electronic or Commercial Duty Air Kit, and Air Dryer.

**Warranty:** Air kits and Related - See Separate Component Policies

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**Limitations**

Link UltraRide accepts no warranty responsibility for:

- Incidental or consequential damages or loss of time or profits resulting from product failure.
- Damage resulting from owner or operator abuse, misuse or neglect.
- Failure due to improper installation.
- Component parts manufactured by others for Link UltraRide, beyond those companies' implied or expressed warranty.
- Compressor components under severe service applications – ask for details.

Suspension and axle must be operated within the range specified by axle and suspension manufactures. Please check vehicle specifications and intended usage to insure axle will be within Gross Axle Weight Rating (GAWR). NO alteration of any suspension component is permitted. Use of vehicle in any situation or condition in excess of GAWR will void warranty.

This warranty is in lieu of any other warranty, obligation, or liability on the part of Link UltraRide and no other person is authorized to make any representation or warranties beyond those expressed herein. All implied warranties of fitness and merchantability for any particular purpose are hereby excluded. There are no other warranties of fitness which extend beyond the description on the face hereof.

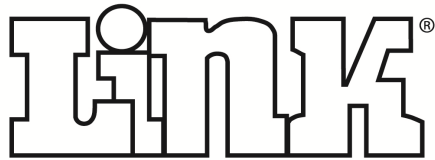
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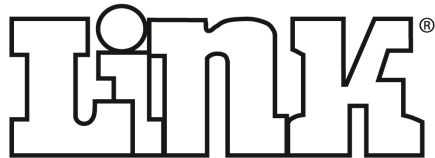
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Questions? Contact this Professional Installer :

Company : \_\_\_\_\_  
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Phone : \_\_\_\_\_

Installer : \_\_\_\_\_ Date : \_\_\_\_\_



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