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**What's covered** – The Ride-Rite kits, components, and accessories are warranted against defects in workmanship and materials\*.

**What's not covered** – This warranty does not cover service or labor charges, freight or customs charges, neglect, abuse, misuse, misapplications, improper installation, overloading, and alterations to the product\*.

**What's the period of coverage\* –**

- Ride-Rite air springs – Lifetime Limited
- Sport-Rite air springs – Lifetime Limited
- Coil-Rite air springs – Lifetime Limited
- Level-Rite air springs – Lifetime Limited
- Work-Rite load assists – 2 Years Limited
- Air-Rite accessories – 2 Years Limited
- Brackets, hardware, fittings, air line, and other components – 2 Years Limited

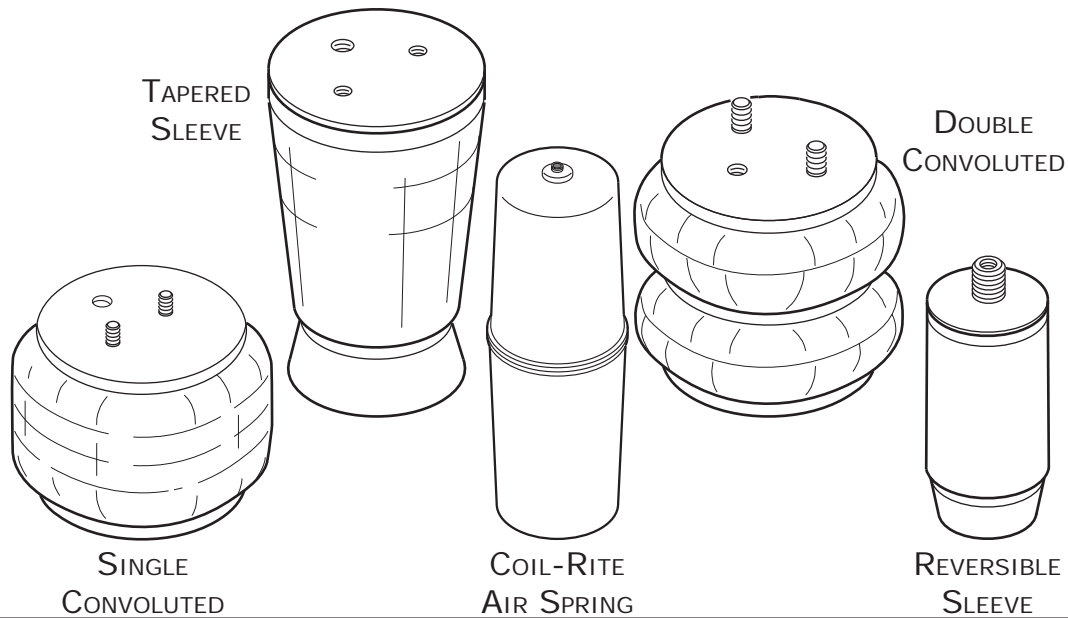
## ***Ride Rite Warranty Evaluation Guide***

Firestone air springs are designed to provide years and thousands of miles of trouble free service. The durability of Firestone air springs is such that they will often outlast other maintenance items on your suspension, such as bushings, shocks, and other components. Ride Rite air springs are warranted to be free of material defects and/or workmanship for as long as the original purchaser owns the vehicle on which it was originally installed. The hardware and brackets which accompany the air spring are warranted for a period of twenty-four (24) months or 24,000 miles whichever occurs first. This warranty begins on the original retail delivery date. Replacement parts determined by Firestone to be warrantable may be provided by Firestone. All labor and incidental costs associated with replacing the defective air spring are the responsibility of the consumer.

Firestone Industrial Products Company offers a complete line of air springs, with products available for a variety of applications. Since each individual air spring is closely examined and pressure tested at the factory, the vast majority of premature failures and consequent warranty returns are found not to be defective, but fail because of abuse caused by other problems associated with the suspension.

The information on the following pages was developed to illustrate the types of failures that may occur, and to assist you in determining the cause and corrective action required.

\* Please refer to the "Firestone Limited Lifetime Air Spring Warranty" form for details, terms, and conditions.



Firestone air springs are designed and built to the highest of standards, and will provide years and thousands of miles of trouble-free service. Most failures are caused by improper application, installation, misuse, and abuse. The following examples are common failures that are **NOT** covered under warranty.

## BENT BRACKETS



### Appearance or Condition

- Distorted shape
- Possible cracking or "tearing"

### Possible Causes

- Not enough pressure in the system for the load
- Overloading the vehicle/air springs

## BROKEN PISTON



Bottom of tapered sleeve shown. Typical Sport-Rite application.

### Appearance or Condition

- Cracked or broken piston

### Possible Causes

- Road debris
- Not enough pressure in the system for the load
- Overloading the vehicle/air springs

## BOTTOMING OUT

Tapered sleeve shown.



### Appearance or Condition

- Bent brackets or beadplates
- Broken girdle hoop (convoluted parts), caps, or pistons (sleeve parts)
- Cuts near the bead plates, caps, or pistons
- Leaking around blind nuts

### Possible Causes

- Installation height is too low
- Not maintaining the minimum air pressure
- Not enough air pressure for the load
- Overloading the vehicle/air springs

## CIRCUMFERENTIAL CUTS



### Appearance or Condition

- Bellows cut or separated around the perimeter of bead plate or piston

### Possible Causes

- High pressure, over extended for long periods of time
- Bottoming out

## CRACKED/HARD BELLOWS



### Appearance or Condition

- Cracking in bellows around bead plates and caps, or where the sleeve rolls over the piston
- Hard to the touch, no longer flexible

### Possible Causes

- Exposed to high temperature for long periods of time
- Old air spring



## PUNCTURE



### Appearance or Condition

- Irregular shaped cut in the bellows

### Possible Causes

- Debris punctured the bellows
- Mounted too close to a sharp object

## BENT ALIGNMENT PIN



### Appearance or Condition

- One side of alignment pin is pushed down toward the bead plate
- Marring or semicircular gouge in the top of the alignment pin

### Possible Causes

- Alignment pin was not installed into the alignment pin hole in the bracket

## ABRASION



### Appearance or Condition

- Hole rubbed into side of bellows or in area that rolls over piston (sleeve style)

### Possible Causes

- Contacting a vehicle or other suspension component
- No air pressure
- Road debris
- Oversized tire contact
- Snow chain contact

## HIGH TEMPERATURE/ OVER INFLATION (COIL-RITE)



### Appearance or Condition

- Tear in the side of the part, material seems thin or "stretched".

### Possible Causes

- Exposed to high temperature for long periods of time (too close to exhaust)
- Over inflation (see manual for max operating pressure)

## PREVENTIVE MAINTENANCE

Prior to installation, check to ensure that all minimum clearance requirements are met.

During installation, make sure that the air spring is installed at the correct mounting height, or ride height.

After installation, check the tightness of all mounting hardware. Torque specifications can be found in the Operating and Troubleshooting guide included with each kit.

After installation, inflate the air springs to 10psi and maximum pressure (see installation manual) to ensure that there is at least a 1/2 inch of clearance around the air spring (non-Coil-Rite applications). A good way to check the clearance is to move your hand around the air spring. If it touches anything, the air spring will most likely touch it as well. If nothing touches your hand, the air spring has enough clearance.

After installation, inflate the system to 10psi and, using a soapy water mixture, check for air leaks. Recheck for leaks at maximum pressure (see installation manual). If a leak is detected, correct the problem before using the vehicle.

Once you have ensured that there are no leaks in the system, **check pressure monthly** to maintain the minimum pressure. **DO NOT** drive a vehicle without pressure in the air springs.

Measure the distance between the air springs and the closest heat source. If the measurement is 3" or less, a heat shield will be required.

Prior to loading the vehicle, measure the distance between the fender opening and the ground. After the vehicle is loaded, inflate the air springs until the vehicle is back to the unloaded height using the measurement taken while the vehicle was unloaded. **DO NOT** exceed the maximum operating pressure outlined in the installation manual.

Periodically check for rocks, gravel, sand, or other abrasive debris between the convolutions, around bead plates, and around pistons. Remove the debris to help prevent abrasive punctures.

## CLEANING

Although it is not necessary to clean the air springs, it is acceptable to do so if desired. The following are approved and non-approved means of cleaning an air spring.

**Approved** – Soap and water, methyl alcohol, ethyl alcohol, isopropyl alcohol, or any product approved for cleaning tires.

**Non-Approved** – Organic solvents, open flames, abrasives, and direct pressurized steam.

## **FIRESTONE LIMITED LIFETIME AIR SPRING WARRANTY**

Firestone Industrial Products Company LLC ("Firestone") warrants that its Ride Rite Air Spring Assembly will perform according to the manufacturer's specifications for as long as the vehicle on which the system was originally installed is owned by the original retail purchaser. This limited warranty does not include installation or other service charges for replacement.

### Warranty Period

The Air Spring is warranted for as long as the original purchaser owns the vehicle on which it was originally installed. The fasteners and upper and lower brackets which accompany the air spring are warranted for a period of twenty-four (24) months or 24,000 miles whichever occurs first. This warranty begins on the original retail delivery date.

### What is Covered

Any implied warranties are limited in duration to the coverage period of this warranty (some states do not allow limitation on how long an implied warranty lasts so the above limitation may not apply to you). This Warranty runs in favor of the original retail purchaser when the Ride Rite Air Spring Assembly is used under normal operating conditions according to Firestone's specifications and installed on the appropriate application. This warranty does not apply to Ride Rite Air Spring Assemblies that have been improperly applied, improperly installed, used in racing or off road applications or used for commercial purposes. In addition, the warranty will not apply to products which have not been maintained and serviced according to the instructions that accompany the air spring assembly. The consumer will be responsible for any costs incurred in removing the product from the vehicle and the cost to return the air spring assembly to the dealer or installer from which it was purchased. If it is determined that the Ride Rite Air Spring Assembly failed as a result of a manufacturing defect, Firestone will repair or replace, at its option, any product or components subject to this warranty. You should retain a copy of your contract with your installer and your receipt as proof of the date of installation. This warranty is non-transferable and is not assignable in any way.

**Firestone specifically excludes any obligation for consequential damages or incidental expenses including claims for loss of use of the product, loss of time, inconvenience, or commercial loss. This warranty gives you specific legal rights. You may also have other rights that may vary from state-to-state. Some states do not allow limitations on how long an implied warranty lasts or allow the exclusion or limitation of incidental or consequential damages. The above limitation or exclusion may not apply to you. There are no warranties, express or implied, including implied warranty of merchantability and fitness which extend beyond this warranty.**



# **Firestone**

**World's Number 1  
Air Spring.**

FIRESTONE INDUSTRIAL PRODUCTS COMPANY