

# Operator Manual



## CHARIOT®

ASL-700

02-03-2022

P/N 700-O



[www.bruno.com](http://www.bruno.com)

# PRODUCT REGISTRATION FORM

Please register your Bruno lift in one of two ways:

- Fill it out online at [www.bruno.com/forms/product-registration](http://www.bruno.com/forms/product-registration)
- Complete the enclosed Product Registration card and return via mail

## Serial Number:

Please note a serial number is found on your Bruno lift. The serial and model number will be needed for your dealer to file a warranty claim, request parts or service the unit.

## Authorized Bruno Dealer:

Bruno products must be installed and maintained by an authorized Bruno dealer, or the warranty will be null and void.

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### **FOR YOUR SAFETY**

- ***Check the torque of the wheel nuts and bolts prior to the first road use.***
- Never exceed the load capacity of the lift.
- Never use the ASL-700 to lift or transport people.
- Do not allow children to play on or under the lift platform.
- Regularly examine the ASL-700 for loose hardware and attachments. Tighten as necessary.
- Load and unload from/to as level an area as possible.
- Maintain a safe distance from moving lift parts.  
*Keep hands and fingers away from moving lift parts during up/down movement of the lift.*
- Avoid unloading into vehicular traffic.
- Turn OFF the power source of the mobility device being lifted before attaching it to the lift.
- Do not overload or abuse the lift.
- Do not operate the ASL-700 while seated on the mobility device.
- Operate the ASL-700 from the side of the unit, not the front.
- Keep feet and legs at a safe distance from the lift platform.
- Never allow legs or feet to be underneath the platform with a mobility device on board.
- Check for obstructions under the platform prior to lowering the platform.
- Adjust your driving to address the handling limitations imposed on the vehicle by the additional weight of the ASL-700 plus the mobility device.



### **WARNING**

***Observe all safety precautions***

Failure to do so could result in damage to your vehicle or property as well as personal injury.

***WARNING: Read vehicle manufacturers (OEM) instructions about the vehicle's electrical system BEFORE working on the vehicle. Vehicle OEMs have model specific requirements about battery disconnection when performing work on a vehicle. Disconnecting batteries incorrectly or working on a vehicle with batteries improperly in the circuit MAY cause loss of vehicle data, damage vehicle wiring system or even cause airbags to deploy. This information can be found in the VEHICLE OWNER'S MANUAL or the VEHICLE REPAIR GUIDE.***

### **FOR YOUR SAFETY (CONTINUED)**

- Reduce your speed until you become familiar with your vehicle's turning and braking performance with the lift installed.
- Avoid sudden maneuvers.
- Make frequent checks of the tire condition and pressure. Adding weight to the rear of the vehicle may accelerate tire wear and affect the handling characteristics of the vehicle.
- Anticipate turns, stops and lane changes.
- Be aware that the addition of the ASL-700 and a mobility device may cause your vehicle to be more susceptible to crosswinds.
- Exercise caution when driving a lift-equipped vehicle on slippery road surfaces (snow, ice, loose gravel).
- Reduce your speed when travelling on bumpy roads, over railroad crossings, street gutters and other road surface irregularities.
- Be aware that the ASL-700 adds length to your vehicle. Back up carefully.
- Remove any loose items from the mobility device before transporting it. Be sure batteries are securely strapped or clamped in place.
- Remove the ASL-700 before taking the vehicle in for service. ***If the ASL-700 cannot be removed, do not lift the vehicle + ASL-700 without supporting the ASL-700.***
- Maximum speed: 65 mph (105 km/h).
- In the event that the vehicle with the ASL-700 installed must be towed, tow using a flat-bed truck only.
- ***Take the ASL-700 ONLY through a TOUCHLESS car wash.***
  - ◇ ***Drive up to the car wash exit.***
  - ◇ ***Remove the mobility device from the ASL-700 and leave it at the exit.***
  - ◇ ***Fold the platform to the upright and stowed position.***
  - ◇ ***Drive the vehicle through the TOUCHLESS car wash.***
  - ◇ ***Retrieve the mobility device at the car wash exit.***

# MAXIMUM WEIGHT RATING and VIN/SERIAL NO. LOCATION

## LIFT MODEL

ASL-700  
Patent Pending

## MAXIMUM LOAD RATING

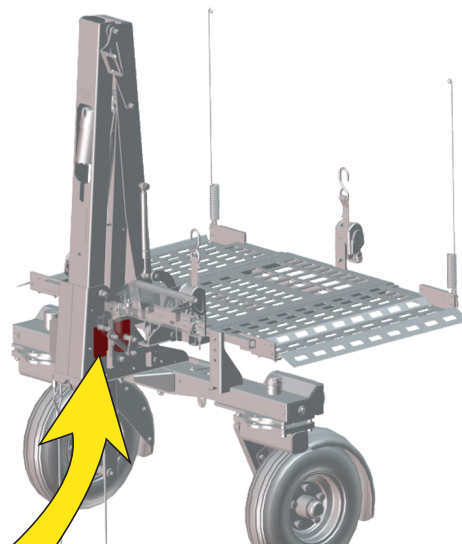
350 lb (159 kg)

### ***Tire Specifications***

Tire Size: 4.80/4.00-8  
Load Range: C  
Ply Rating: 6

### ***Rim Specifications***

Rim Dimensions: 8" diameter  
Bolt Pattern: 5 on 4-1/2"



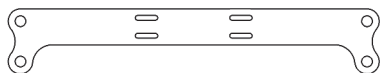
VIN and serial no.  
found here

#### **ASL-700 CHARIOT™**

MANUFACTURED BY: BRUNO INDEPENDENT LIVING AIDS, INC.®  
FABRIQUÉ PAR: OCONOMOWOC, WI 53066 USA / É-U  
TYPE: TRA / REM DATE OF MANUFACTURE / FABRICATION:  
PNVB: 306 KG PNBE: 153 KG  
GVWR: 674 LB GAWR: 337 LB  
VIN / NIV:  
BRUNO S/N:  
USE: WHEELCHAIR / SCOOTER "LIFT ON WHEELS"  
PLATEFORME ÉLEVATRICE À DEUX ROUES POUR FAUTEUILS ROULANTS,  
TRIPOREURS ET QUADRIPOREURS  
NOT RATED FOR HUMAN TRANSPORTATION  
TRANSPORT DE PERSONNES INTERDIT  
TIRE / PNEU: 4.80 / 4.00 RIM / JANTE: T8X3.75  
COLD INFL. PRESS. / PRESS. DE GONFL. À FROID: 241 kPa / 35 PSI  
MAX. SPEED RATING / VITESSE NOMINALE MAX.: 105 KH/65 MPH

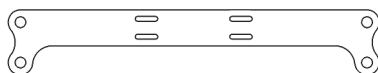
THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER  
BOTH THE AMERICAN AND CANADIAN MOTOR VEHICLE SAFETY REGULATIONS  
IN EFFECT ON THE DATE OF MANUFACTURE. / CE VÉHICULE EST CONFORME À  
TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU RÈGLEMENT SUR  
LA SÉCURITÉ DES VÉHICULES AUTOMOBILES DU CANADA AINSI QUE DES ÉTATS-UNIS  
EN VIGUEUR À LA DATE DE SA FABRICATION.

DEC-00441



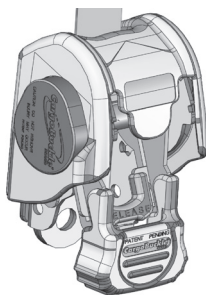
Retractable belt hooks attach to this docking plate.

- Have an authorized Bruno dealer remove the mobility device seat, mount the docking plate (see above) between the seat and the swivel plate of the mobility device and place the seat assembly back on the mobility device.



Retractable belt hooks attach to this docking plate.

- Have an authorized Bruno dealer remove the mobility device seat, mount the docking plate (see above) between the seat and the swivel plate of the mobility device and place the seat assembly back on the mobility device.



### ***Lowering the platform***

1. Open the keyswitch cover.
2. Insert the key and turn it to ON position.
3. Press and hold the DOWN switch to lower the platform.
4. Release the switch when the platform reaches the ground.
5. Position the mobility device on the platform.

### ***Raising the platform (Loading)***

- Open the keyswitch cover.
- Insert the key and turn it to the ON position.
- Make sure an authorized Bruno dealer has installed the docking plate shown earlier in this manual.
- Press and hold the UP switch to raise the platform/mobility device.
- Release the switch when the platform reaches the uppermost position.
- Secure the mobility device to the platform using the (3) ratcheting belts. ***See the next page for belt operation.***
- Turn the key to the OFF position.
- Remove the key from the key switch.
- Close the key switch cover.





Fig. 1



Fig. 2



Fig. 3



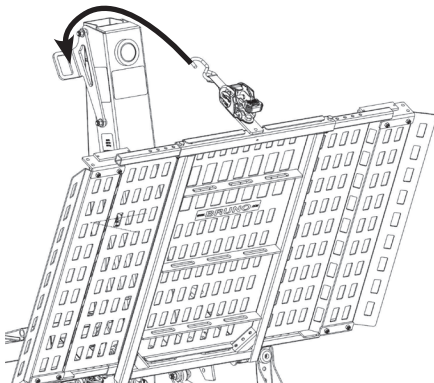
Fig. 4

### Platform belts

- Press inner release tab down (Fig. 2).
- Push large orange tab UP (Figs. 3 and 4).
- Pull strap up and hook to mobility device docking plate ("dog bone").
- Press inner release tab and hold while pressing large orange tab down to home position (Fig. 1).

*NOTE: You will hear the tab click into its home position. The strap will "auto ratchet" to secure the mobility device on the ASL-700.*

### securing folded platform



- Use **outermost** belt to hook onto belt keeper.
- Remove slack in belt.

*See note to right.*

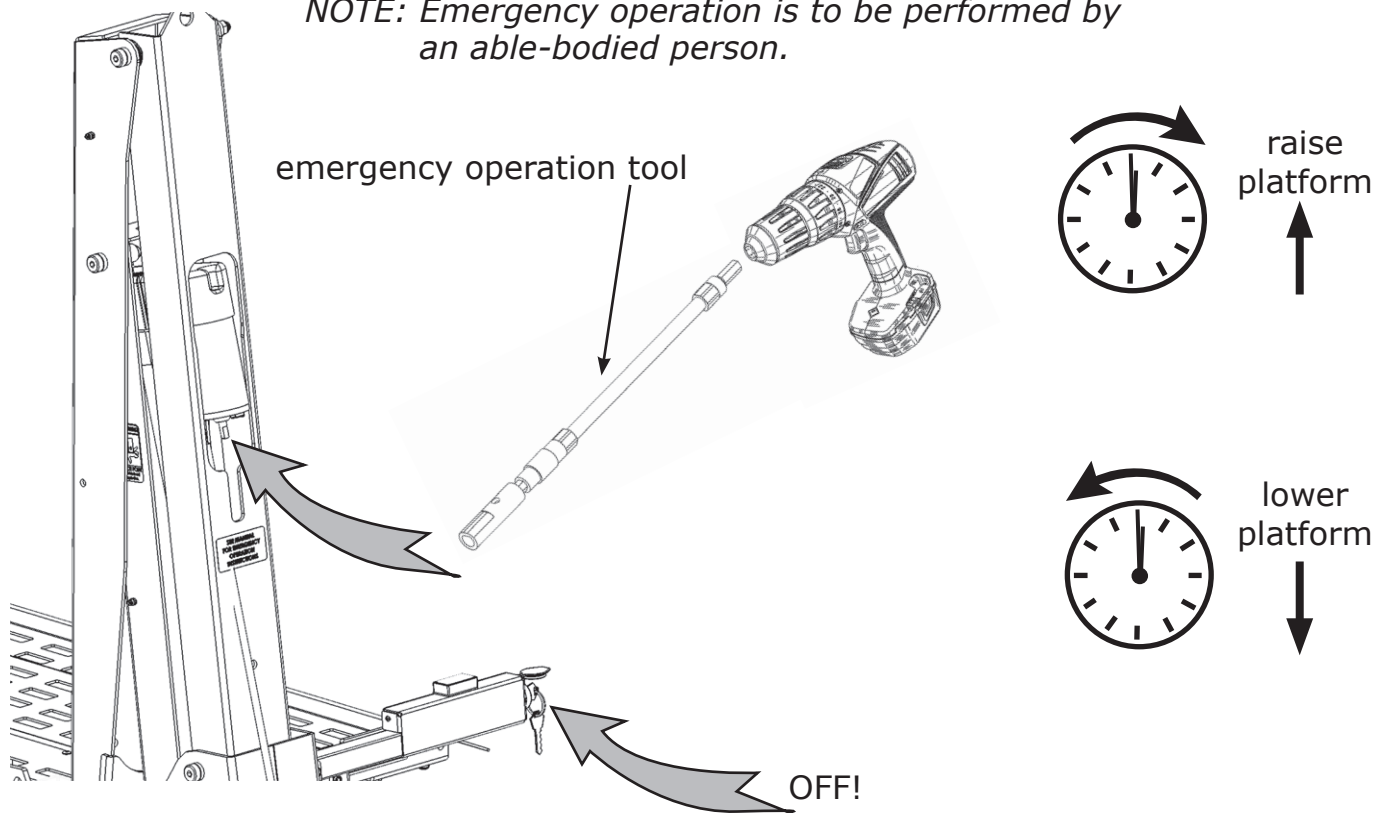
### Unloading

- Open the keyswitch cover.
- Insert the key and turn it to the ON position.
- Press and hold the DOWN switch to lower the platform/mobility device.
- Release switch when the platform reaches the ground.
- Loosen the belts pressing the inner release tab (see Fig. 2 on previous page).
- Unhook the (3) retractable belts from the plate secured to the bottom of the mobility device seat.
- Press and hold the UP switch to raise the platform. Keep the platform in the down position (parallel with the ground) until it makes contact with the rubber bumpers.
- Fold platform.
- Turn the key to the OFF position.
- Close the keyswitch cover.

*NOTE: When travelling with no mobility device on the platform, Bruno recommends folding up the platform and securing it using the outermost retractable belt to prevent damage from bouncing (see left). However, for increased fuel efficiency during highway driving, you may travel with the platform folded down.*

## EMERGENCY OPERATION

*NOTE: Emergency operation is to be performed by an able-bodied person.*





Bruno recommends having a qualified Bruno dealer clean, inspect and perform any necessary repairs and adjustments at least every twelve (12) months.

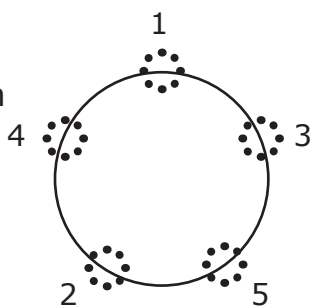
Maintenance is recommended more often if the lift is used (a) many times per day and/or (b) in harsh environments. **Failure to follow the recommended maintenance schedule will void the warranty.**

### **General Information**

**Torque** (tightening): Proper tightening of nuts and bolts is essential to optimal performance of your ASL-700. **Failure to apply and maintain the correct torque could lead to loose wheels, broken studs and potential (and dangerous) separation of the wheel from the axle.**

#### **Tightening procedure:**

1. Start all nuts/bolts by hand.
2. Using a torque wrench, tighten in the following sequence:



#### **Tightening procedure:**

3. Tighten all (5) bolts, in sequence, to to 75-88 lbf-ft (102-119Nm).

**CAUTION!** Be sure to use the correct wheel hardware. Use of incorrect hardware and/or improper tightening could cause the wheel to become loose and even come off, leading to equipment damage and/or personal injury.

## RECOMMENDED MAINTENANCE

### set-up and initial use

- **at the first 10, 25 and 50 miles, after each wheel removal, then periodically:**

- ◆ check the wheel nut torque  
75-88 lbf-ft (102-119Nm) per 6B4065.302 exploded hub view
- ◆ check the tire pressure (35 psi/241 kPa)

### weekly

- ◆ check the tire pressure (35 psi/241 kPa)
- ◆ visually inspect electrical connections and condition of mechanical components; remove corrosion and replace bent, cracked or damaged components
- ◆ check that hitch pin is fully engaged and untouched by any part of the hitch, and that the clevis pin is fully seated

### 3000 miles or 3 months

- ◆ torque wheel nuts per instructions specified later in this manual
- ◆ inspect tires for wear







### 6000 miles or 6 months

- ◆ check suspension parts for wear
- ◆ torque wheel nuts per instructions specified later in this manual
- ◆ inspect tires for wear

### 9,000 miles or 12 months

- ◆ verify torque of all fasteners
  - linkage bar bolts  
*double nut: inner 15 ft lb (20 Nm)  
outer 30 ft lb (41 Nm)*
  - chassis-to-cross member bolts:  
35 to 40 ft lb (47-54 Nm)
  - swivel plates-to-cross member bolts:  
35 to 40 ft lb (47-54 Nm)
  - double nuts (require special process: see Hitch Clamp)

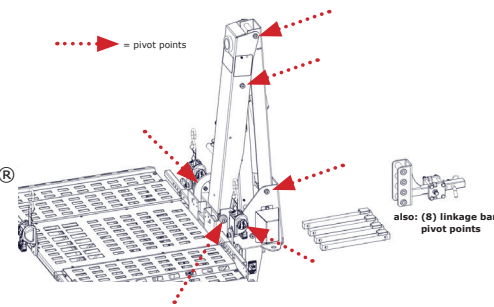
**Trailer Tire Wear Diagnostic Chart**

| Wear Pattern  |             | Cause                         | Action   |
|---|-------------|-------------------------------|--|
|   | Center Wear | Over Inflation                | Adjust pressure to particular load per tire catalog                |
|  | Edge Wear   | Under Inflation               | Adjust pressure to particular load per tire catalog                |
|  | Side Wear   | Loss of camber or overloading | Make sure load doesn't exceed axle rating. Align at alignment shop |
|  | Toe Wear    | Incorrect toe in              | Align at alignment shop.   |
|  | Cupping     | Out of balance                | Balance tires.   |
|  | Flat Spots  | Wheel lockup & tire skidding  | Avoid sudden stops when possible and adjust brakes.                |

### RECOMMENDED MAINTENANCE (continued)

#### 9,000 miles or 12 months

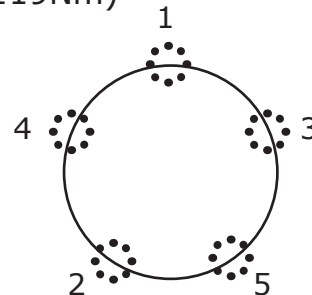
- ◆ check for free-swiveling action of swivel mechanisms; clean and re-grease as necessary
- ◆ check the hub for wear
- ◆ verify operation of turn indicators and brake lights (2-person verification recommended)
- ◆ verify operation of key switch and rocker switch (remove cover for visibility); re-grease with dielectric grease
- ◆ verify fender bolt torque; visually inspect for cracks
- ◆ examine all electrical connections; remove corrosion; apply dielectric grease
- ◆ check retractable belts for fraying and other signs of wear
- ◆ examine all electrical connections; remove corrosion; apply dielectric grease
- ◆ check connections at battery; clean battery terminals
- ◆ visually examine lift and hitch; look for signs of structural damage (bending, cracking); make necessary repairs/replacement
- ◆ grease and re-torque swivel assembly
- ◆ inspect tires for wear; replace if the tread depth is at wear bars
- ◆ check suspension parts for wear
- ◆ apply silicone- or Teflon®-based lubricant (Magnalube®) to pivot points and (2) platform bolts (see right)
- ◆ grease (8) grease fittings on linkage bars
- ◆ torque wheel nuts per instructions shown below
- ◆ apply silicone- or Teflon®-based lubricant (Magnalube®) to draw bar



**Torque (tightening):** Proper tightening of nuts and bolts is essential to optimal performance of your ASL-700. **Failure to apply and maintain the correct torque could lead to loose wheels, broken studs and potential (and dangerous) separation of the wheel from the axle.**

#### Wheel fasteners

1. Start all nuts/bolts by hand.
2. Using a torque wrench, tighten in the sequence shown to the right:
3. Tighten all (5) nuts, in sequence, to 75-88 lbf-ft (102-119Nm) per 6B4065.302 exploded hub view.



**CAUTION!** Be sure to use the correct wheel hardware. Use of incorrect hardware and/or improper tightening could cause the wheel to become loose and even come off, leading to equipment damage and/or personal injury.

## TROUBLESHOOTING

| <b>PROBLEM</b>   | <b>PROBABLE CAUSE</b>  | <b>REMEDY</b>  |
|--|--|--|
| <b>Lift does not operate in either direction</b>                                 | <ul style="list-style-type: none"> <li>• keyswitch not turned to ON position</li> </ul>  | <ul style="list-style-type: none"> <li>• Turn keyswitch to ON position.</li> </ul>   |
| <b>Lift operates slowly, lacks power or stalls</b>                               | <ul style="list-style-type: none"> <li>• weak vehicle battery</li> </ul>   | <ul style="list-style-type: none"> <li>• Have battery charged or run engine at fast idle for several minutes before attempting to operate lift.</li> </ul>                         |
| <b>Lift experiencing rough ride when travelling</b>                              | <ul style="list-style-type: none"> <li>• over-inflated lift tires</li> </ul>   | <ul style="list-style-type: none"> <li>• Set tire pressure to 35 psi (241 kPa).</li> </ul>   |
| <b>Platform is folded up and actuator “ratchets/clicks” in either direction.</b> | <ul style="list-style-type: none"> <li>• actuator has pulled platform too far “in”</li> <li>• keep platform in the down position (i.e., “flat”) so that it touches the rubber stops. Failure to do this allows the platform to pull in too far.</li> </ul> | <ul style="list-style-type: none"> <li>• Use the emergency back-up tool to turn the motor’s tail shaft counter-clockwise to lower the platform and unbind the actuator.</li> </ul> |

# NHTSA TIRE INFORMATION

The following information is a reproduction of document DOT HS 809 361 October 2001 from the U.S. Department of Transportation National Highway Traffic Safety Administration. For a copy of their brochure, please visit **[www.nhtsa.dot.gov](http://www.nhtsa.dot.gov)**.

## **TIRE SAFETY** **Everything Rides On It**

Studies of tire safety show that maintaining proper tire pressure, observing tire and vehicle load limits (not carrying more weight in your vehicle than your tires or vehicle can safely handle), avoiding road hazards, and inspecting tires for cuts, slashes, and other irregularities are the most important things you can do to avoid tire failure, such as tread separation or blowout and flat tires. These actions, along with other care and maintenance activities, can also:

- Improve vehicle handling
- Help protect you and others from avoidable breakdowns and accidents
- Improve fuel economy
- Increase the life of your tires.

This booklet presents a comprehensive overview of tire safety, including information on the following topics:

- Basic tire maintenance
- Uniform Tire Quality Grading System
- Fundamental characteristics of tires
- Tire safety tips.

Use this information to make tire safety a regular part of your vehicle maintenance routine. Recognize that the time you spend is minimal compared with the inconvenience and safety consequences of a flat tire or other tire failure.

### **Safety First—Basic Tire Maintenance**

Properly maintained tires improve the steering, stopping, traction, and load-carrying capability of your vehicle. Underinflated tires and overloaded vehicles are a major cause of tire failure. Therefore, as mentioned above, to avoid flat tires and other types of tire failure, you should maintain proper tire pressure, observe tire and vehicle load limits, avoid road hazards, and regularly inspect your tires.

### **Finding Your Vehicle's Recommended Tire Pressure and Load Limits**

Tire information placards and vehicle certification labels contain information on tires and load limits. These labels indicate the vehicle manufacturer's information including:

- Recommended tire size
- Recommended tire inflation pressure
- Vehicle capacity weight (VCW—the maximum occupant and cargo weight a vehicle is designed to carry)
- Front and rear gross axle weight ratings (GAWR—the maximum weight the axle systems are designed to carry).

Both placards and certification labels are permanently attached to the vehicle door edge, door post, glove-box door, or inside of the trunk lid. You can also find the recommended tire pressure and load limit for your vehicle in the vehicle owner's manual.

### **Understanding Tire Pressure and Load Limits**

Tire inflation pressure is the level of air in the tire that provides it with load-carrying capacity and affects the overall performance of the vehicle. The tire inflation pressure is a number that indicates the amount of air pressure—measured in pounds per square inch (psi)—a tire requires to be properly inflated. (You will also find this number on the vehicle information placard expressed in kilopascals (kPa), which is the metric measure used internationally.)

Manufacturers of passenger vehicles and light trucks determine this number based on the vehicle's design load limit, that is, the greatest amount of weight a vehicle can safely carry and the vehicle's tire size. The proper tire pressure for your vehicle is referred to as the "recommended cold inflation pressure." (As you will read below, it is difficult to obtain the recommended tire pressure if your tires are not cold.)

Because tires are designed to be used on more than one type of vehicle, tire manufacturers list the "maximum permissible inflation pressure" on the tire sidewall. This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

### **Checking Tire Pressure**

It is important to check your vehicle's tire pressure at least once a month for the following reasons:

- Most tires may naturally lose air over time.
- Tires can lose air suddenly if you drive over a pothole or other object or if you strike the curb when parking.
- With radial tires, it is usually not possible to determine underinflation by visual inspection.

For convenience, purchase a tire pressure gauge to keep in your vehicle. Gauges can be purchased at tire dealerships, auto supply stores, and other retail outlets.

## NHTSA TIRE INFORMATION (continued)

The recommended tire inflation pressure that vehicle manufacturers provide reflects the proper psi when a tire is cold. The term cold does not relate to the outside temperature. Rather, a cold tire is one that has not been driven on for at least three hours. When you drive, your tires get warmer, causing the air pressure within them to increase. Therefore, to get an accurate tire pressure reading, you must measure tire pressure when the tires are cold or compensate for the extra pressure in warm tires.

### Steps for Maintaining Proper Tire Pressure

- Step 1: Locate the recommended tire pressure on the vehicle's tire information placard, certification label, or in the owner's manual.
- Step 2: Record the tire pressure of all tires.
- Step 3: If the tire pressure is too high in any of the tires, slowly release air by gently pressing on the tire valve stem with the edge of your tire gauge until you get to the correct pressure.
- Step 4: If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure. These "missing" pounds of pressure are what you will need to add.
- Step 5: At a service station, add the missing pounds of air pressure to each tire that is underinflated.
- Step 6: Check all the tires to make sure they have the same air pressure (except in cases in which the front and rear tires are supposed to have different amounts of pressure).

If you have been driving your vehicle and think that a tire is underinflated, fill it to the recommended cold inflation pressure indicated on your vehicle's tire information placard or certification label. While your tire may still be slightly underinflated due to the extra pounds of pressure in the warm tire, it is safer to drive with air pressure that is slightly lower than the vehicle manufacturer's recommended cold inflation pressure than to drive with a significantly underinflated tire. Since this is a temporary fix, don't forget to recheck and adjust the tire's pressure when you can obtain a cold reading.

### Tire Size

To maintain tire safety, purchase new tires that are the same size as the vehicle's original tires or another size recommended by the manufacturer. Look at the tire information placard, the owner's manual, or the sidewall of the tire you are replacing to find this information. If you have any doubt about the correct size to choose, consult with the tire dealer.

### Tire Tread

The tire tread provides the gripping action and traction that prevent your vehicle from slipping or sliding, especially when the road is wet or icy. In general, tires are not safe and should be replaced when the tread is worn down to 1/16 of an inch. Tires have built-in treadwear indicators that let you know when it is time to replace your tires. These indicators are raised sections spaced intermittently in the bottom of the tread grooves. When they appear "even" with the outside of the tread, it is time to replace your tires. Another method for checking tread depth is to place a penny in the tread with Lincoln's head upside down and facing you. If you can see the top of Lincoln's head, you are ready for new tires.

### Tire Balance and Wheel Alignment

To avoid vibration or shaking of the vehicle when a tire rotates, the tire must be properly balanced. This balance is achieved by positioning weights on the wheel to counterbalance heavy spots on the wheel-and-tire assembly. A wheel alignment adjusts the angles of the wheels so that they are positioned correctly relative to the vehicle's frame. This adjustment maximizes the life of your tires and prevents your car from veering to the right or left when driving on a straight, level road. These adjustments require special equipment and should be performed by a qualified technician.

### Tire Rotation

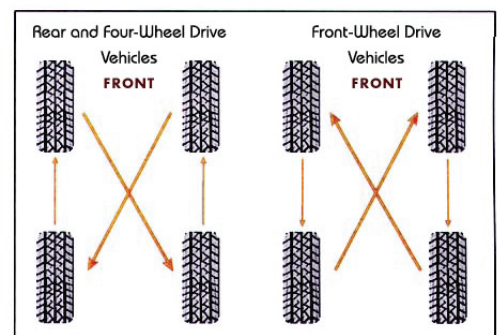
Rotating tires from front to back and from side to side can reduce irregular wear (for vehicles that have tires that are all the same size). Look in your owner's manual for information on how frequently the tires on your vehicle should be rotated and the best pattern for rotation.

#### A Tire Rotation Example

For maximum mileage, rotate your tires every 5,000 miles. Follow correct rotation patterns.

### Tire Repair

The proper repair of a punctured tire requires a plug for the hole and a patch for the area inside the tire that surrounds the puncture hole. Punctures through the tread can be repaired if they are not too large, but punctures to the sidewall should not be repaired. Tires must be removed from the rim to be properly inspected before being plugged and patched.





## NHTSA TIRE INFORMATION (continued)

### Uniform Tire Quality Grading System (UTQGS)

To help consumers compare a passenger car tire's treadwear rate, traction performance, and temperature resistance, the federal government requires tire manufacturers to grade tires in these three areas. This grading system, known as the Uniform Tire Quality Grading System, provides guidelines for making relative comparisons when purchasing new tires. You also can use this information to inquire about the quality of tires placed on new vehicles.

Although this rating system is very helpful when buying new tires, it is not a safety rating or guarantee of how well a tire will perform or how long it will last. Other factors such as personal driving style, type of car, quality of the roads, and tire maintenance habits have a significant influence on your tire's performance and longevity.

Treadwear grades are an indication of a tire's relative wear rate. The higher the treadwear number is, the longer it should take for the tread to wear down. For example, a tire grade of 400 should wear twice as long as a tire grade of 200.

Traction grades are an indication of a tire's ability to stop on wet pavement. A higher graded tire should allow you to stop your car on wet roads in a shorter distance than a tire with a lower grade. Traction is graded from highest to lowest as "AA", "A", "B", and "C".

Temperature grades are an indication of a tire's resistance to heat. Sustained high temperature (for example, driving long distances in hot weather), can cause a tire to deteriorate, leading to blowouts and tread separation. From highest to lowest, a tire's resistance to heat is graded as "A", "B", or "C".

### Tire Fundamentals

Federal law requires tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a tire identification number for safety standard certification and in case of a recall.

### Information on Passenger Vehicle Tires

P

The "P" indicates the tire is for passenger vehicles.

Next number

This three-digit number gives the width in millimeters of the tire from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

Next number

This two-digit number, known as the aspect ratio, gives the tire's ratio of height to width. Numbers of 70 or lower indicate a short sidewall for improved steering response and better overall handling on dry pavement.

R

The "R" stands for radial. Radial ply construction of tires has been the industry standard for the past 20 years.

Next number

This two-digit number is the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

Next number

This two- or three-digit number is the tire's load index. It is a measurement of how much weight each tire can support. You may find this information in your owner's manual. If not, contact a local tire dealer. Note: You may not find this information on all tires because it is not required by law.

M+S

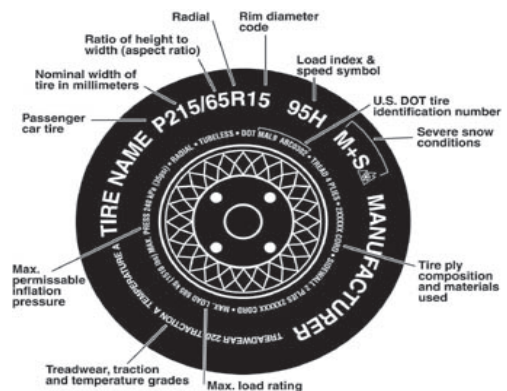
The "M+S" or "M/S" indicates that the tire has some mud and snow capability. Most radial tires have these markings; hence, they have some mud and snow capability.

### Speed Rating

The speed rating denotes the speed at which a tire is designed to be driven for extended periods of time. The ratings range from 99 miles per hour (mph) to 186 mph. These ratings are listed below. Note: You may not find this information on all tires because it is not required by law.

Letter Rating Speed Rating

|           |           |            |
|-----------|-----------|------------|
| Q 99 mph  | T 118 mph | V 149 mph  |
| R 106 mph | U 124 mph | W 168* mph |
| S 112 mph | H 130 mph | Y 186* mph |



## NHTSA TIRE INFORMATION (continued)

### U.S. DOT Tire Identification Number

This begins with the letters "DOT" and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was built. For example, the numbers 3197 means the 31st week of 1997. The other numbers are marketing codes used at the manufacturer's discretion. This information is used to contact consumers if a tire defect requires a recall.

### Tire Ply Composition and Materials Used

The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others.

### Maximum Load Rating

This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

### Maximum Permissible Inflation Pressure

This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

## UTQGS Information

### Treadwear Number

This number indicates the tire's wear rate. The higher the treadwear number is, the longer it should take for the tread to wear down. For example, a tire graded 400 should last twice as long as a tire graded 200.

### Traction Letter

This letter indicates a tire's ability to stop on wet pavement. A higher graded tire should allow you to stop your car on wet roads in a shorter distance than a tire with a lower grade. Traction is graded from highest to lowest as "AA", "A", "B", and "C".

### Temperature Letter

This letter indicates a tire's resistance to heat. The temperature grade is for a tire that is inflated properly and not overloaded. Excessive speed, underinflation or excessive loading, either separately or in combination, can cause heat build-up and possible tire failure. From highest to lowest, a tire's resistance to heat is graded as "A", "B", or "C".

Additional Information on Light Truck Tires

Please refer to diagram to right.

Tires for light trucks have other markings besides those found on the sidewalls of passenger tires.

LT

The "LT" indicates the tire is for light trucks.

### Max. Load Dual kg(lbs) at kPa(psi) Cold

This information indicates the maximum load and tire pressure when the tire is used as a dual, that is, when four tires are put on each rear axle (a total of six or more tires on the vehicle).

### Max. Load Single kg(lbs) at kPa(psi) Cold

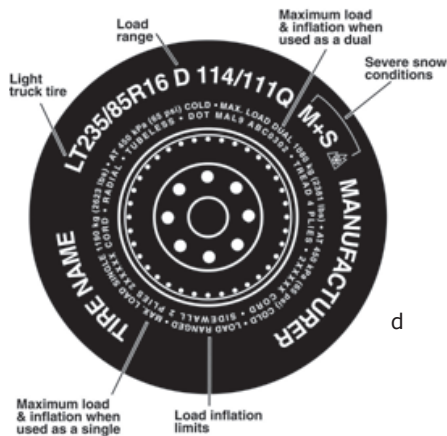
This information indicates the maximum load and tire pressure when the tire is used as a single.

### Load Range

This information identifies the tire's load-carrying capabilities and its inflation limits.

### Snow Tires

In some heavy snow areas, local governments may require true snow tires, those with very deeply cut tread. These tires should only be used in pairs or placed on all four wheels. Make sure you purchase snow tires that are the same size and construction type as the other tires on your vehicle.



## REPORTING SAFETY DEFECTS

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If you believe that your vehicle has a defect that could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Bruno Independent Living Aids, Inc. at 1-800-656-0552 and/or [Parts.orders@bruno.com](mailto:Parts.orders@bruno.com)

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Bruno Independent Living Aids, Inc.

To contact NHTSA, you may either call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153), go to <http://www.safercar.gov>; or write to:

Administrator  
NHTSA  
1200 New Jersey Avenue S.E.  
Washington, DC 20590

You may also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

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## **BRUNO GOLD LIMITED WARRANTY FOR VEHICLE LIFT**

### **3 Years**

Bruno Independent Living Aids, Inc.© (Bruno) is so confident in our USA designed and built units that we provide every original buyer with the following "Industry Leading" warranty for your peace of mind.

The quality of parts we use and the care our employees take allow Bruno to provide the original buyer of its Bruno Vehicle Lift with a **3-year warranty** that all parts are free of defects in material and workmanship.

Bruno's warranty periods begin with **the date of the installation** of the Bruno Vehicle Lift.

Bruno Authorized Dealers are trained to evaluate your unique situation and then install the best Bruno product to meet your needs. The trained installation and service technicians employed by Bruno Authorized Dealers have the appropriate equipment and resources needed to correctly install and maintain your new vehicle lift and are the first contact for any warranty or service needs.

#### **SPECIFICS OF THE WARRANTY COVERAGE:**

- ◇ All Parts are free of defects in material and workmanship for a period of three years after the date of installation.
- ◇ All labor to address any product defect by a Bruno Authorized Dealer is covered for the first 30 days after installation.

#### **WHAT IS NOT WARRANTY COVERAGE:**

- ◇ Damage to units caused by misuse, abuse, accidents, neglect or modifications NOT made by a Bruno Authorized Dealer.
- ◇ Consumable items.
- ◇ All labor by a Bruno Authorized Dealer after the first 30 days since installation.
- ◇ Reasonable wear and tear.

#### **ADDITIONAL NOTES:**

All Service and Warranty issues are handled through the Bruno Authorized Dealer that installed the unit.

- ◇ In no event shall Bruno be responsible for indirect, incidental or consequential damages, whether such damages arise based on claims based on contract, warranty, tort (including negligence, strict liability or product liability).
- ◇ Bruno reserves the right to replace, repair or, if not commercially practical and/or feasible, to elect to refund the purchase price at its sole discretion.
- ◇ This warranty gives the original buyer specific legal rights, and you may also have other rights which vary from state to state. Bruno specifically does not authorize any person to extend the time or scope of this warranty.

For more detailed information regarding this limited warranty, please contact Bruno by writing:

Bruno Independent Living Aids, Inc.  
Attn: Service Department  
1780 Executive Drive  
Oconomowoc, WI 53066 USA