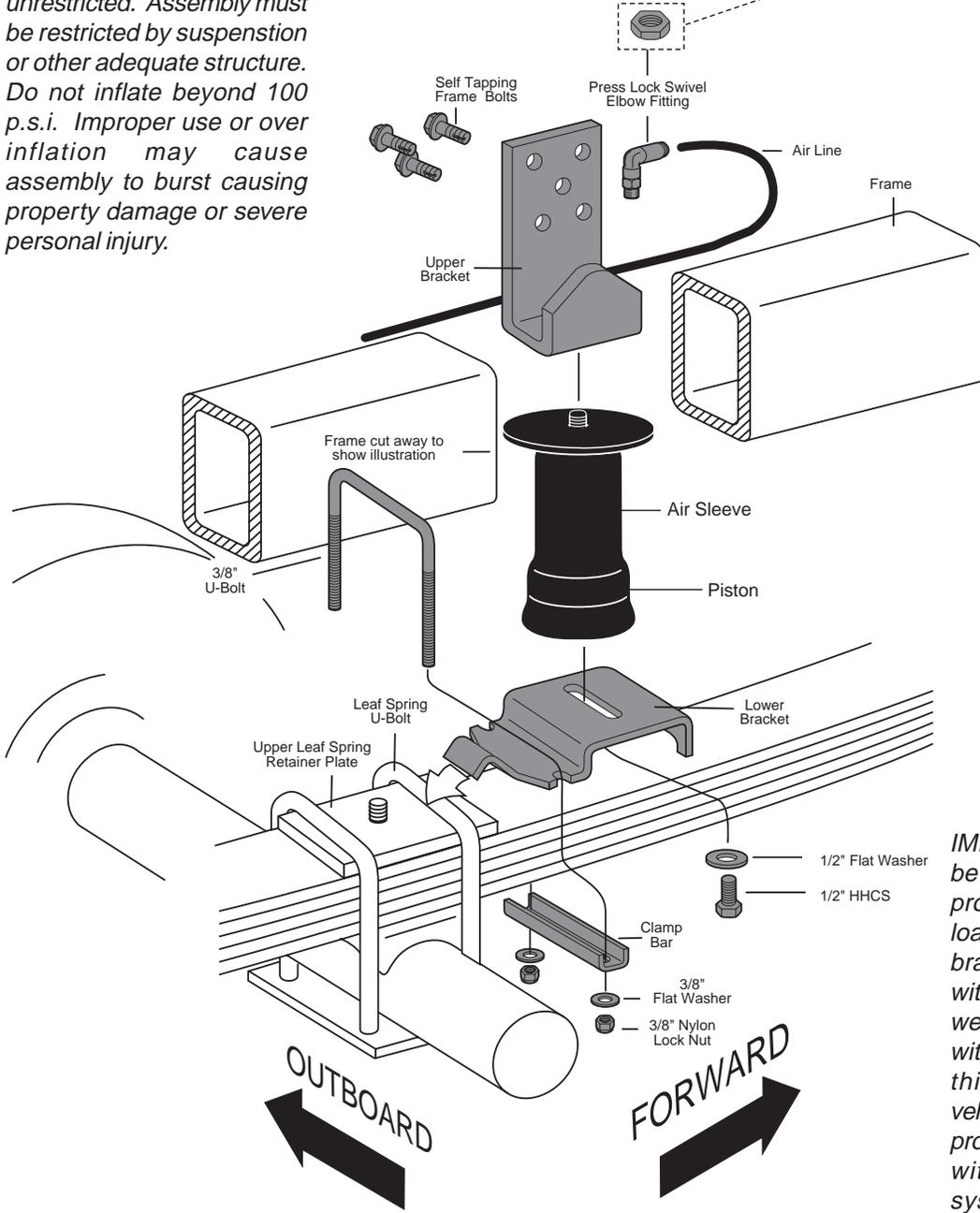


Please read these instructions completely before proceeding with the installation.

CAUTION: Failure to maintain correct minimum pressure (or pressure proportional to the load), bottoming out, over-extension, or rubbing against another component will void the warranty. Normal ride height, regardless of load, must always be maintained.

CAUTION: Do not inflate assembly when it is unrestricted. Assembly must be restricted by suspension or other adequate structure. Do not inflate beyond 100 p.s.i. Improper use or over inflation may cause assembly to burst causing property damage or severe personal injury.

IMPORTANT: Nylon nut must be threaded on the thread post with the curved edge toward the sleeve.



IMPORTANT: Your vehicle may be equipped with a rear brake proportioning valve. Any type of load assist product could affect brake performance. If equipped with a brake proportioning valve, we recommend that you check with your dealer before installing this type of product. If your vehicle does not have a rear brake proportioning valve or is equipped with an anti-lock type brake system, installation of a load assist product will have no effect on brake system performance.

Figure 1

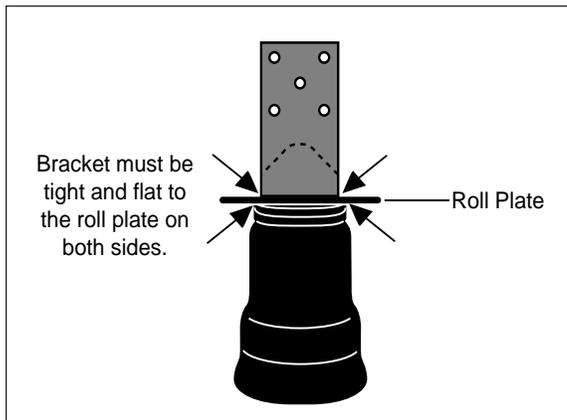


Figure 2

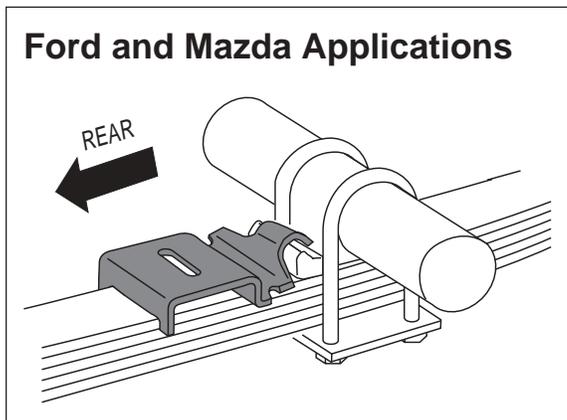


Figure 3

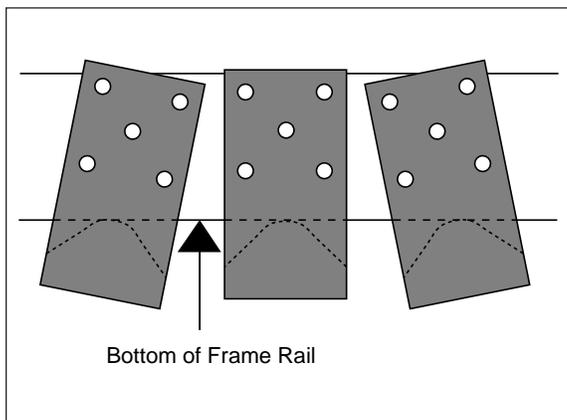


Figure 4

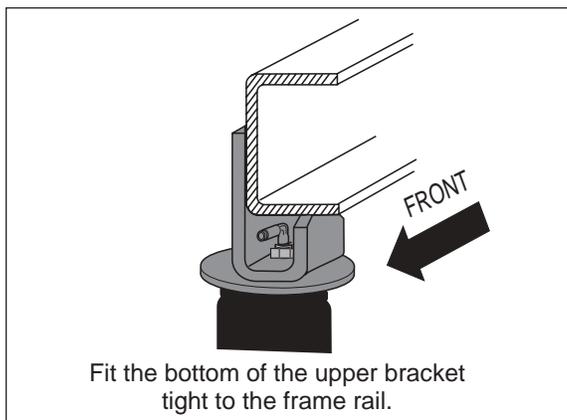


Figure 5

IMPORTANT: Please read these instructions completely before proceeding with the installation. Figure 1 represents a **TYPICAL 4WD NISSAN** installation. **See page 2 for Toyota and Ford/Mazda** instructions. Your vehicle may look slightly different because it is a different make, model or year.

I. Getting Started

1. Determine the Ride Height. This is defined as the distance between the bottom edge of the fenderwell to the center point of the wheel with the vehicle at the desired height (without a load). Measurements should be taken before beginning the installation. The distance from the bottom edge of the fenderwell to the center point of the wheel should be recorded. All of our kits are designed to be installed and operate at normal ride height.
2. Measure the ride height distance. Enter the measurement below:

Ride Height: _____ inches
3. After measuring and recording the ride height, jack up rear of vehicle or raise on hoist. Raise axle or lower frame until the leaf spring is at ride height (unloaded condition).

II. Installing the Lower Bracket

NOTE: Given proper side-to-side and height clearance, this kit will function in front of or behind the axle. It is permissible to "stagger" the air springs if necessary for fit. Nissan and Toyota applications will mount forward of the axle and Ford and Mazda applications mount behind the axle.

1. Assemble the kit. Install the air fitting finger tight plus two turns. This fitting is precoated with thread sealant. Use an open end wrench being careful to tighten on the metal hex nut only. **DO NOT OVERTIGHTEN.**
2. Thread the attached air fitting through the bottom of the J-bracket. Position the elbow towards the front or rear of vehicle depending on which direction will allow easier access for the air line (Figures 1 and 2). Slide the provided nylon nut over the air fitting and onto the threaded post. Tighten the nylon nut hand tight to secure the bracket (Figure 5).

NOTE: The nylon nut must be threaded on the thread post with the curved edge facing toward the sleeve.

3. **LOOSELY** attach the lower brackets to the bottom of the sleeve using the provided 1/2" flat washer and the 1/2" bolt as shown in Figure 1.
4. Raise the axle or lower the frame until the leaf spring is at normal ride height (no load). Now install the lower bracket as shown in Figures 1 and 3. The bracket will locate over the U-bolt for **Nissan and Toyota (Figure 1)** or over the edge of the upper spring retainer plate for **Ford and Mazda (Figure 3)**. Tighten nuts to 20 ft.lbs.

CAUTION: Do not drill holes into the frame until any hydraulic lines, gas lines and electrical wires have been moved aside on both sides of the frame rail.

- To install the upper bracket, lower the axle or raise the frame until the upper bracket is in line with the lower and on the same angle as the leaf spring. The upper bracket must be parallel and perpendicular to the lower bracket. The upper bracket is designed so that it can be “tilted” for the proper angle (Figure 4). The bottom of the upper bracket must fit tight to the bottom of the frame rail (Figure 5). It is necessary to use at least three of the five pre-drilled mounting holes in the upper bracket. Any combination of three is permissible. Using the bracket as a template, center punch and drill three 5/16” holes. The holes must be no larger than 5/16”. Attach the upper bracket using the Self-Tapping Frame Bolts and tighten securely to 15 ft.lbs. (Figure 1). **DO NOT OVERTIGHTEN.**

IMPORTANT: Your air springs will live much longer if they are not the suspension limiter in either compression or extension. The air spring compresses to 2.2” and extends to 7.1”. Keeping the minimum required pressure or a pressure proportional to the load will prevent bottoming out. The shock absorber is usually the limiter on extension. If this is not the case, you should consider the use of limiting straps, especially if the vehicle is used off-road. The maximum inflated diameter of your air-spring is 4.6”. You must check to see that nothing is rubbing against the air spring within this diameter.

- Select a location for the inflation valves in the rear bumper area or rocker panel flange ensuring that each valve will be protected and accessible with an air hose (Figure 7).
- Use a standard tube cutter or razor blade to cut the air line into two equal lengths. A clean square cut will ensure against leaks. Drill a 5/16” hole for the inflation valve and mount as illustrated. The outer rubber washer is used as a weather seal.
- Route air line along frame from inflation valve location to the air fitting (Figures 1 and 7). Attach air line to chassis with the provided plastic straps.
- Install the air line into the fitting. Push and slightly turn the cut end of the air line into the fitting as far as it will go (approximately 9/16”). A definite “click” can be heard and/or felt when the air line is seated. The air line is now installed.
- Repeat steps 1-8 for the other side of the vehicle.

IMPORTANT: NISSAN FRONTIER 4WD: The emergency brake line must be secured to prevent it from rubbing the air spring. Use one of the provided tie straps and LOOSELY secure to the the leaf spring U-bolt (Figure 6).

- VERY IMPORTANT:** With the bottom still loose, inflate the sleeve to approximately 10 p.s.i. By using the slotted adjustment, center the sleeve so that it is in line with the upper and lower brackets and that there is a symmetrical cushion of air around the lower piston of the sleeve to prevent side load wear (Figure 9). Sleeve diameter grows to 4.6” at maximum inflation. Check to be sure there is sufficient clearance around the sleeve when it is inflated. Tighten the lower sleeve mounting bolt to 10 ft.lbs. **DO NOT OVERTIGHTEN.**
- Inflate to 30 p.s.i. Check all fittings and valve core for leaks with a soapy water solution. Recheck air pressure after 24 hours. A 2–4 p.s.i. loss after initial installation is normal. If pressure has dropped more than 5 lbs retest for leaks with soapy water solution. Please read and follow the Maintenance and Operations sections. (Make sure the sleeve rolls down over the piston.)

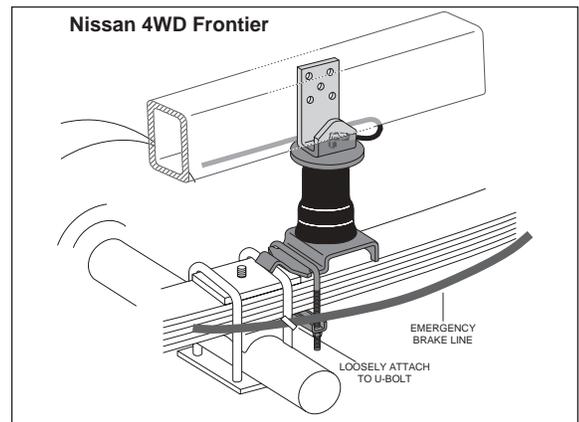


Figure 6

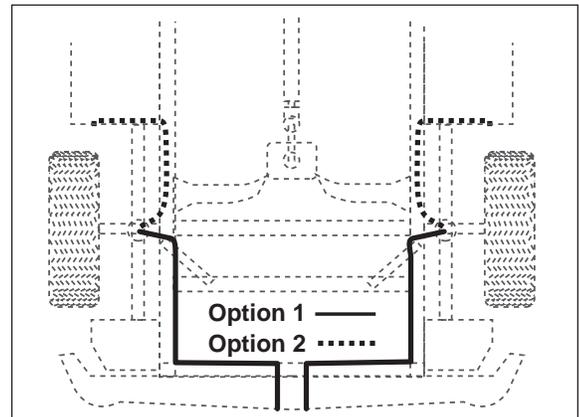


Figure 7

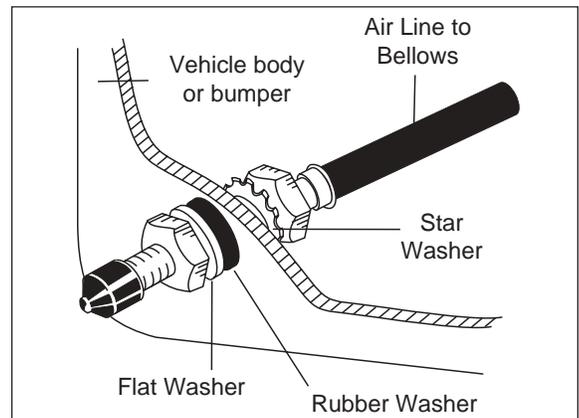


Figure 8

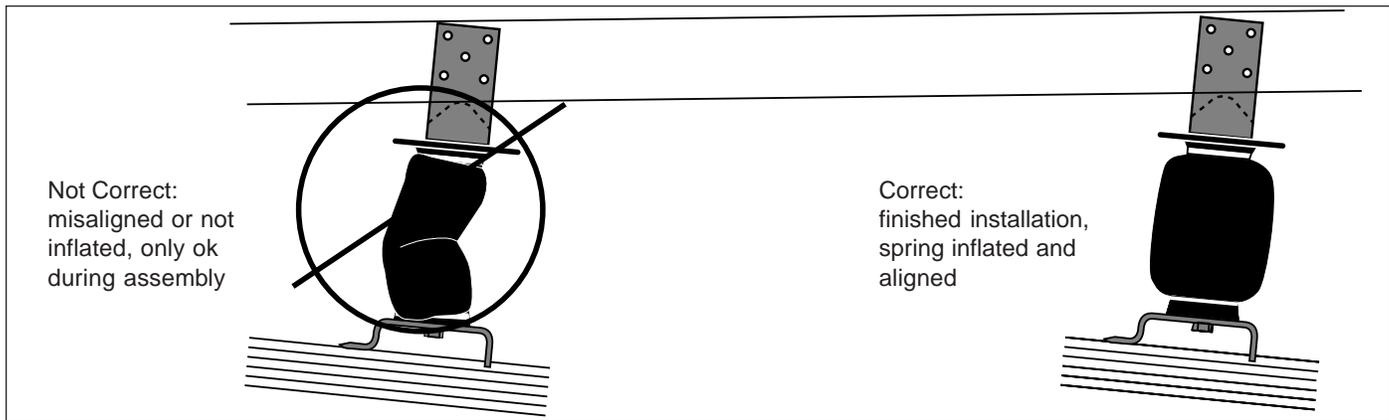


Figure 9

MINIMUM AIR PRESSURE	MAXIMUM AIR PRESSURE
5 p.s.i.	100 p.s.i.
<p><i>Failure to maintain correct minimum pressure (or pressure proportional to load), bottoming out, over-extension, or rubbing against another component will void the warranty.</i></p> <p><i>Regardless of load, the air pressure must always be adjusted so that the normal ride height is maintained at all times.</i></p>	

Maintenance of the System

1. Check pressure weekly.
2. Always maintain at least 5 p.s.i. air pressure.
3. If you develop an air leak in the system, use a soapy water solution to check all air line connections and the inflation valve core before removing sleeve.

Operation of the System

1. Inflate your air springs to 60 p.s.i. before adding the payload. After vehicle is loaded, adjust your air pressure to level the vehicle.
2. **IMPORTANT:** For your safety and to prevent possible damage to your vehicle, do not exceed maximum load recommended by the vehicle manufacturer. Although your air springs are rated at maximum inflation pressure of 100 p.s.i., the air pressure actually needed is dependant on the load and Gross Vehicle Weight Rating (GVWR), which may be less than 100 p.s.i. Check your vehicle owner's manual and do not exceed maximum loads listed for your vehicle.
3. When inflating your Air Lift sleeves, add pressure in small quantities, check the pressure frequently during inflation. The sleeves require much less air volume than a tire and therefore inflate much faster.
4. Should it become necessary to raise the vehicle by the frame, make sure the system is at minimum pressure (5 p.s.i.) to reduce the tension on suspension/brake components. Check to see that the air spring rolls back down over the bottom piston after the vehicle is lowered (Figure 9). If sleeve fails to roll back down over the piston, add air pressure until sleeve "pops" back over piston (do not exceed 100 p.s.i.).



Thank you for purchasing Air Lift Products

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Product Use Information

Frequently asked questions

Q. Will installing air springs increase the weight ratings of a vehicle?

No. Adding air springs will not change the weight ratings (GAWR, GCWR and/or GVWR) of a vehicle. Exceeding the GVWR is dangerous and voids the Air Lift warranty.

Q. Is it necessary to keep air in the air springs at all time and how much pressure will they need?

The minimum air pressure should be maintained at all times. The minimum air pressure keeps the air spring in shape, ensuring that it will move throughout its travel without rubbing or wearing on itself.

Q. Is it necessary to add a compressor system to the air springs?

No. Air pressure can be adjusted with any type of compressor as long as it can produce sufficient pressure to service the springs. Even a bicycle tire pump can be used, but it's a lot of work.

Q. How long should air springs last?

If the air springs are properly installed and maintained they can last indefinitely.

Q. Will raising the vehicle on a hoist for service work damage the air springs?

No. The vehicle can be lifted on a hoist for short-term service work such as tire rotation or oil changes. However, if the vehicle will be on the hoist for a prolonged period of time, support the axle with jack stands in order to take the tension off of the air springs.

Tuning the air pressure

Pressure determination comes down to three things — level vehicle, ride comfort, and stability.

1. Level vehicle

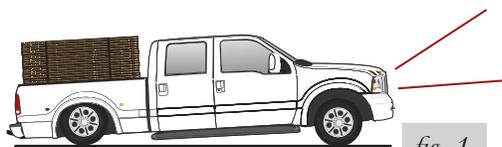
If the vehicle's headlights are shining into the trees or the vehicle is leaning to one side, then it is not level (fig. 1). Raise the air pressure to correct either of these problems and level the vehicle.

2. Ride comfort

If the vehicle has a rough and harsh ride it may be due to either too much pressure or not enough (fig. 2). Try different pressures to determine the best ride comfort.

3. Stability

Stability translates into safety and should be the priority, meaning the driver may need to sacrifice a perfectly level and comfortable ride. Stability issues include roll control, bounce, dive during braking and sponginess (fig. 3). Tuning out these problems usually requires an increase in pressure.



Bad headlight aim

fig. 1



Sway and body roll

fig. 2

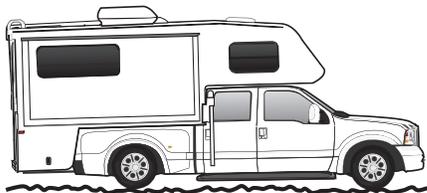


Rough ride

fig. 3

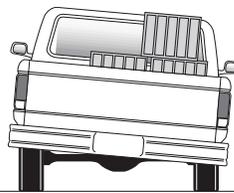
Guidelines for adding air:

1. Start with the vehicle level or slightly above.
2. When in doubt, always add air.
3. For motorhomes, start with 50-100 PSI in the rear because it can be safely assumed that it is heavily loaded.
4. If the front of the vehicle dives while braking, increase the pressure in the front air bags, if equipped.
5. If it is ever suspected that the air bags have bottomed out, increase the pressure (fig. 4).
6. Adjust the pressure up and down to find the best ride.
7. If the vehicle rocks and rolls, adjust the air pressure to reduce movement.
8. It may be necessary to maintain different pressures on each side of the vehicle. Loads such as water, fuel, and appliances will cause the vehicle to be heavier on one side (fig. 5). As much as a 50 PSI difference is not uncommon.

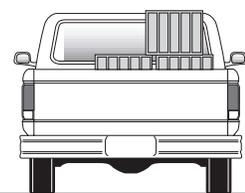


Bottoming out

fig. 4



Unlevel



Level

fig. 5

Warranty and Returns Policy

Air Lift Company warrants its products, for the time periods listed below, to the original retail purchaser against manufacturing defects when used on catalog-listed applications on cars, vans, light trucks and motorhomes under normal operating conditions for as long as Air Lift manufactures the product. The warranty does not apply to products that have been improperly applied, improperly installed, used in racing or off-road applications, used for commercial purposes, or which have not been maintained in accordance with installation instructions furnished with all products. The consumer will be responsible for removing (labor charges) the defective product from the vehicle and returning it, transportation costs prepaid, to the dealer from which it was purchased or to Air Lift Company for verification.

Air Lift will repair or replace, at its option, defective products or components. A minimum \$10.00 shipping and handling charge will apply to all warranty claims. Before returning any defective product, you must call Air Lift at (800) 248-0892 in the U.S. and Canada (elsewhere, (517) 322-2144) for a Returned Materials Authorization (RMA) number. Returns to Air Lift can be sent to: Air Lift Company • 2727 Snow Road • Lansing, MI • 48917.

Product failures resulting from abnormal use or misuse are excluded from this warranty. The loss of use of the product, loss of time, inconvenience, commercial loss or consequential damages is not covered. The consumer is responsible for installation/reinstallation (labor charges) of the product. Air Lift Company reserves the right to change the design of any product without assuming any obligation to modify any product previously manufactured.

This warranty gives you specific legal rights and you may also have other rights that 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, expressed or implied including any implied warranties of merchantability and fitness, which extend beyond this warranty period. There are no warranties that extend beyond the description on the face hereof. Seller disclaims the implied warranty of merchantability. (Dated proof of purchase required.)

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