

#### INTRODUCTION

Winter, the season of snowflakes and frosty mornings, is a time of year that brings its own unique set of challenges, especially for Jeep owners.

Winter is not the time to ignore your tires...or put off getting new tires if you need them.

Keeping your Jeep's tires in prime condition is crucial for safe and enjoyable winter driving. Regular checks and maintenance can help identify potential issues early and ensure your vehicle is ready for whatever weather winter brings.

Remember, tire maintenance is an ongoing responsibility. Routinely checking your tire pressure, monitoring tread depth and condition, and ensuring the integrity of the valve stem and cap will not only prepare your Jeep for winter but also contribute to its overall performance and longevity.



# WINTER WEATHER & YOUR TIRES



TOPIC

01

WINTER TIRE MAINTENANCE

# 01 / WINTER TIRE MAINTENANCE

#### TIRE TREAD

Your tires tread is going to be important for safety and drivability in winter weather. Why is tread depth important in winter weather driving conditions?

Bald tires, tires with no tread depth or very minimal tread depth left are going to be at a higher risk of slipping and spinning in winter weather. This also means in winter road conditions it can be harder to get or keep traction as you are driving on moving on the winter road surface. Keep in mind winter tires and studded snow tires offer the highest level of traction and performance in winter road conditions.

However, they are not necessary in areas that do not get much snow or ice.



NO ONE LIKES TO BUY NEW TIRES UNLESS IT IS REALLY TIME. TAKE A COUPLE MINUTES AND CHECK THE TREAD DEPTH ON ALL FOUR OF YOUR TIRES...AND YOUR SPARE. WINTER IS NOT THE TIME TO BE DRIVING AROUND ON BALD TIRES.

Tire treads play an essential role in providing traction, especially in slippery winter conditions. The depth of the treads impacts how well your tires grip the road and disperse snow and slush.

A simple way to check tread depth is the penny test. Insert a penny into the tread with Lincoln's head pointing down. If the top of Lincoln's head is visible, your tread depth is less than 2/32 of an inch, and it's time to replace your tires.

Pay close attention to the overall condition of your tires. Look for signs of wear and tear, such as cracks, cuts, or punctures. Check for uneven wear, which could indicate alignment or suspension issues. Address any concerns before winter arrives to ensure your tires are in top shape for the season ahead.

### 01/WINTER TIRE MAINTENANCE

#### EXAMINING THE VALVE STEM AND CAP

The valve stem and cap are small but vital components of your tire. They keep air inside the tire and prevent dust, dirt, and moisture from entering. In freezing temperatures, these parts can become vulnerable.

Before winter sets in, inspect the valve stem for cracks or damage. A compromised valve stem can lead to air leakage. Ensure that the valve cap is intact and screws on tightly. It serves as the final seal against air leakage and protects the valve stem from debris and moisture, which can freeze and cause the valve to stick.

If the valve stem or cap shows signs of wear or damage, consider replacing it. This is a relatively inexpensive maintenance task that can prevent more significant issues down the line.



# 01/winter tire maintenance

#### TIRE PRESSURE

Changes in temperature can significantly impact tire pressure. As a rule of thumb, for every 10-degree Fahrenheit drop in temperature, your tires lose about 1 psi of air pressure. Therefore, as temperatures plummet in winter, maintaining correct tire pressure becomes critical.

Underinflated tires can reduce traction, impair steering and braking, increase tire wear, and even lead to tire failure. Overinflation, on the other hand, can make tires more susceptible to damage from potholes or debris on the road.

Before winter arrives, check your tire pressure and adjust it according to the manufacturer's recommendations, which can typically be found in the vehicle's owner



manual or on a sticker inside the driver's door. Regularly recheck the pressure throughout the winter to maintain optimal performance.

Use a tire gauge to check your .psi in all 5 of your tires. DO NOT rely on the tire pressure reading on your dash.

# 01/WINTER TIRE MAINTENANCE

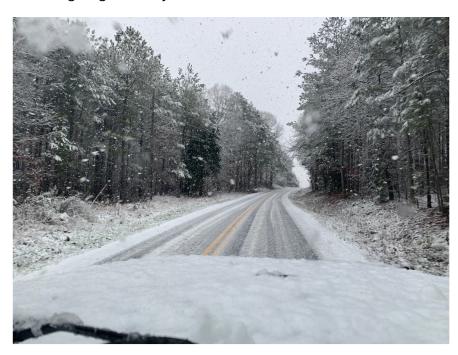
#### ROUGH RIDE

You may notice a rougher or harder ride at first in the colder weather.

Based on what tire you have on your Jeep, you may notice as you start your drive in the morning that the first 5 miles seem rougher. It might feel like your tire feels "harder" as it starts out cold so it is a bouncier ride for the first couple miles.

Once the tires warm up, it should feels like the ride gets softer and returns to your Jeeps "normal ride". This can happen based on the brand and/or type of tire (ie. Mud tire, all terrain, etc.) that you have on your Jeep. A cold tire can be a harder tire with less give and flex in the rubber. As the tire warms up from driving and the rubber heats up it gets softer and more pliable. Thus, changing the ride feeling based on cold or warm tires.

Quick Note: If you have a rough ride or vibration through the steering wheel that does not get better after about 5 miles, or does not go away at all on a drive, that is a sign of something different going on and you need to address that issue.



TOPIC

# 02

WINTER MAINTENANCE TIP

# 02/WINTER MAINTENANCE TIP

#### DEALING WITH A STUCK VALVE CAP

Winter weather can present some unexpected challenges for vehicle owners. One such issue is a valve cap that has frozen onto the valve stem, making it difficult to remove and check tire pressure. This seemingly minor inconvenience can have a significant impact on your Jeep's performance if not addressed promptly. This chapter provides a detailed, step-by-step guide on how to safely remove a stuck valve cap in freezing temperatures.

#### **Step 1: Visual Inspection**

Before attempting to remove the valve cap, visually inspect it and the surrounding area. Look for visible signs of ice or debris that may be causing the cap to stick. If you see any ice, carefully remove it using a plastic ice scraper or similar tool. Avoid using metal tools, as they can damage the valve stem or cap.



Step 2: Apply Heat

Heat is an effective way to loosen a stuck valve cap. You can use a hairdryer set on low heat to gently warm the valve cap. Aim the heat evenly around the cap, keeping the hairdryer at a safe distance to avoid damaging the tire or wheel.

Remember, tires are sensitive to excessive heat. So, ensure you're warming the cap just enough to melt any ice but not so much that it could harm the tire.

# 02/WINTER MAINTENANCE TIP

#### DEALING WITH A STUCK VALVE CAP

#### Step 3: Use a Lubricant

If applying heat doesn't work, try using a lubricant. Silicone-based lubricants are typically safe to use on valve stems and caps. Spray a small amount onto the valve cap, then wait a few minutes to allow the lubricant to penetrate and loosen the seal.

#### Step 4: Gentle Twisting

After applying heat or lubricant, try to twist the valve cap off gently using your fingers. A pair of rubber gloves can give you a better grip. Turn the cap counterclockwise, applying steady pressure.

If the cap is still stuck, try using a pair of pliers with adjustable jaws. Wrap the jaws with tape to avoid damaging the valve cap and gently twist it off. Remember, the goal is to remove the cap without damaging the valve stem.

#### Step 5: Preventive Measures

To prevent the valve cap from getting stuck again, clean the valve stem thoroughly before replacing the cap. Use a soft cloth to remove any dirt or moisture. Apply a small amount of silicone-based lubricant on the threads of the valve stem before screwing the cap back on.

Remember, dealing with a stuck valve cap can be frustrating, but patience is key. Avoid using excessive force that could damage the valve stem or cap. If you're unable to remove the cap despite following these steps, consider seeking professional help.

As we continue our journey through "Winter Preparedness For You and Your Jeep," remember that understanding how to deal with minor issues can make a significant difference in ensuring your vehicle performs optimally during the winter months.



The age-old debate among Jeep enthusiasts and off-road drivers alike: which tire is better suited for the snow? The all-terrain or the mud-terrain? This chapter aims to delve into the strengths and weaknesses of each tire type, highlighting their performance under different snow conditions and depths.



#### All-Terrain Tires: The Jack-of-all-Trades

All-terrain tires are the Swiss Army knives of the tire world, designed to handle a variety of terrains including pavement, gravel, dirt, and yes, snow. They are marked by their versatility, offering a balance between off-road traction and on-road comfort.

The tread design of all-terrain tires features wider spacing than highway tires, allowing them to provide better traction in off-road conditions. However, they also have tighter spacing than mud-terrain tires, which helps reduce noise and increase comfort on paved roads.

When it comes to snow, particularly slushy roads and low amounts of snow accumulation, all-terrain tires often outperform their mud-terrain counterparts. The reason lies in their unique tread design. The smaller, more tightly packed tread blocks of all-terrain tires are effective at biting into and gaining traction on harder surfaces, such as compacted snow or ice.

Moreover, many all-terrain tires come with siping - thin slits cut across the tire surface. These sipes act like tiny biting edges that grip onto slick surfaces, providing enhanced traction on icy or wet roads. This makes all-terrain tires particularly adept at handling slushy conditions. The All-Terrain design allows for less snow or slush to accumulate and build up in the treads of the tires.

However, while all-terrain tires are impressive multi-taskers, they do have their limitations. In deep snow or snow with a soft base underneath, all-terrain tires may struggle. That's where mud-terrain tires come in.



### Mud-Terrain Tires: The Heavy-Duty Off-Roaders

Mud-terrain tires are the beasts of the tire world, designed for extreme off-road conditions. They feature aggressive, large tread blocks with wide spacing in between, which helps in digging into soft, loose surfaces and ejecting mud or snow from the tire.

In deep snow or snow with a soft base underneath, mud-terrain tires shine. Their aggressive tread design acts like a paddle, digging into the snow and finding traction where all-terrain tires might just skim the surface. This makes them especially useful for those who frequently encounter deep, fresh snowfall or soft, powdery snow conditions.

However, mud-terrain tires do have their drawbacks. Their aggressive tread design, while excellent for off-road conditions, can create a louder, rougher ride on paved roads. The larger tread blocks also have fewer biting edges and often lack siping, making them less effective at gripping onto hard, slick surfaces like ice or compacted snow.

The larger treads can fill with snow and compact between the lugs. This causes a snowball type problem as snow can build up around the tire causing less traction.

Another factor to consider is the rubber compound. Mud-terrain tires often use a softer rubber compound for better grip on off-road surfaces. However, these softer compounds can harden in low temperatures.

#### The Verdict: It Depends

So, which tire is better in the snow?

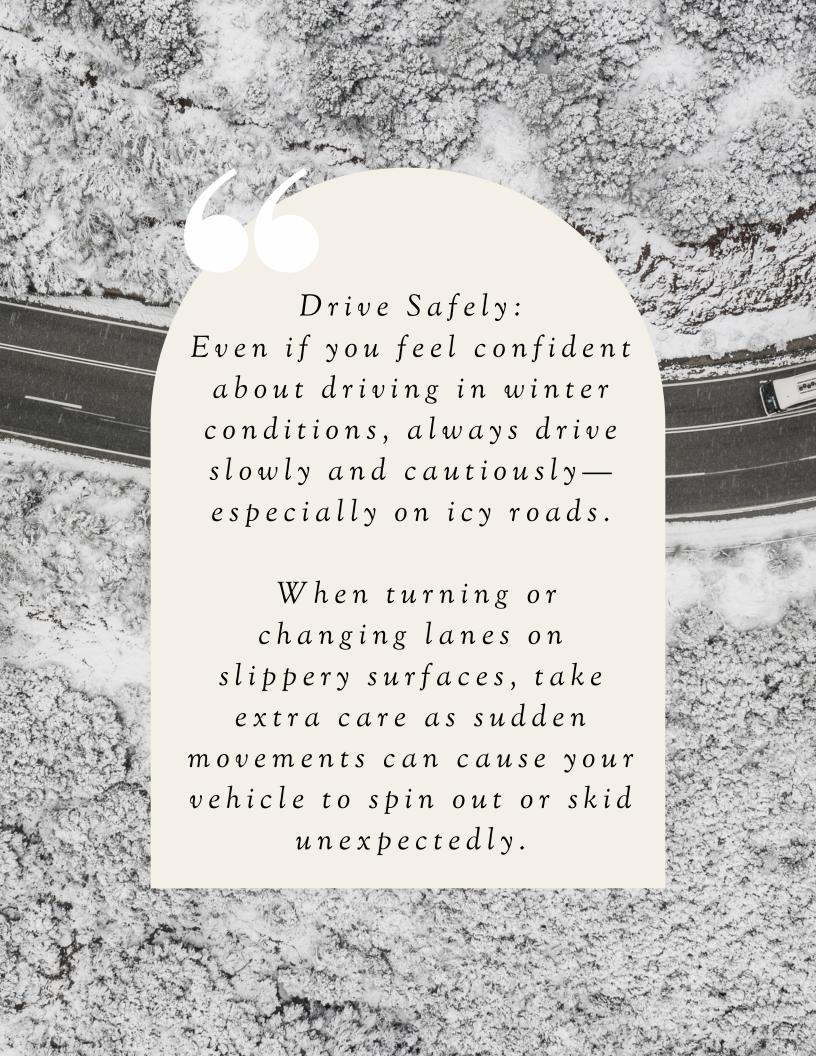
The answer, as is often the case with such questions, depends on your specific circumstances. If you're frequently driving on slushy roads or dealing with low amounts of snow accumulation, an all-terrain tire would likely serve you best. On the other hand, if you often find yourself tackling deep snow or snow with a soft base underneath, mud-terrain tires might be the way to go.





In the end, the choice between all-terrain and mud-terrain tires comes down to understanding your driving needs and conditions. Both types have their strengths and weaknesses, and the key is to choose the one that aligns best with your winter driving scenarios.

As you continue on this journey through "Winter Preparedness For You and Your Jeep", remember that being prepared isn't just about having the right equipment, it's about understanding how to use that equipment effectively. And that includes knowing which type of tire is best suited for your winter adventures.



### CONTACT US



#### LADYJEEPERS.COM

custserv@ladyjeepers.com

LADYJEEPERS.COM