



LADYJEEPERS.COM

# LADIES JEEPING IN A WEEKEND

## Getting Started 101



# In This Manual

I cover the education, tips, questions to ask, and hands on that will get you headed down the trail successfully.

## **Why do we want to Trail Ride our Jeep?**

To find Adventures, get out and live life to the fullest.

A place to just be you and find that you that needs to shine through!

## **General 101**

Tips and Knowledge you need to know for your adventures with your Jeep.

## **Safety**

There are a lot of safety aspects and equipment for you and your Jeep.

At the end of this workshop, you will feel confident to head out on the trail knowing you are set up for success!

*Lady Deepers.com*

# **GENERAL 101**



# 5 Things You Need in Your Jeep

These are the 5 most important things to get right away to have in your vehicle. Safety is always the number one focus. Especially as you grow into attending rides and events.

## 01 - First Aid Kit

You need to invest in a GOOD QUALITY First Aid Kit to have stored inside your vehicle at all times! A first aid kit is important if you are at events, a trail ride or just at a kids event. It is so important to have a first aid kit in your vehicle.

## 02 - Fire Extinguisher

The most common Fire Extinguisher to see mounted is 1.5 pound. A larger one is not a bad idea for safety. Make sure you have A,B,C compound to cover all three types of fires. I recommend the FireAde Extinguishers.

Always know the date on your fire extinguisher and when to replace it. If you are going to an event or a ride this is a mandatory safety item that you must have in your vehicle

### 03 - Recovery Kit

You can buy a Recovery Kit that is already put together and in a bag for you. In your kit/bag you need gloves, snatch block, D-rings or soft shackles, tree saver and a recovery strap. Don't forget a pair of medium pliers that fit the D-Ring bolt end if needed. Get a Medium Duty or 20,000+ lbs. rating. Go to Rhino Usa and use code ladyjeepers at checkout to save!

### 04 - HandHeld Radio

Get a good handheld radio that you keep charged and in your Jeep. Communication and being able to stay in contact with others in your group is important. Safety first. Pick which model you like the most. I recommend Midland USA radios and use code ladyjeepers10 at checkout for a savings.

### 05 - Small Toolkits & Zipties

A Small tool kit is essential to have in your vehicle. You don't need everything in there but you need a good starter kit. A basic screw driver set, plyers and wrenches. Also.....zipties can come in handy for so many different functions and quick fixes in a pinch. You want to be able to safely make it off the trail.



# Terminology Time

You may hear different phrases or terminology when you are out at an event or on a ride. We wanted to share with you the most common terminology you are going to hear and also what it means. This will allow you a greater understanding and you will know exactly what everyone is talking about. Being educated and informed is the most important piece to building confidence. No, “what in the world are they talking about” moments here!! We are taking the confusion out and replacing it with confidence.

## 01 - Are You Running The High Side or Low Side?

This means someone is asking you if you were driving or doing a particular obstacle in 4 Low or 4 High. Think of 4 wheel drive high as your go to for your trail riding or “cruise” speed. Anything over 15 MPH you want to be in 4 wheel drive high but stay below 55 in 4 wheel drive. 4 Wheel Low is for going slower as well as for obstacles or harder terrain sections of the trail.

## 02 - Are You Locked?

Do you have locking axels? This something that you will have to know your vehicle. A stock Jk/Jku/JL Rubicon comes factory stock with lockers. The button is located inside your jeep to use to engage and un-engage your lockers. There is also aftermarket lockers that can be added to a vehicle as well. If you do have lockers make sure you do not run your lockers on the entire trail ride. (See the section below on power steering for more information on that.)

## 03 - I'm Running Hot

This means that the temperature of the vehicle has gone above the normal range or is climbing up to the red. Always keep an eye on your temperature gauge when you are out on a ride. The most common reasons that someone is running hot is thermostat issue, coolant issue or radiator issue. Belts coming off the fan and the fan having issues can also be a common problem.

## 04 - Threw A Tire

this means that the person has a lost the tire off the rim. The tire has actually come off the rim or wheel it is not just flat.

## 05 - I Need To Lock In

You will hear someone say this usually at the beginning of a ride. It means that they have manual locking hubs and need to stop and get out to turn the hub to lock into 4 wheel drive. You can tell if a vehicle has a manual locking hub by looking at the hub assembly which is located in the center cap of the rim/wheel. If there is a hub that has a piece in the middle that you twist to lock and unlock then that vehicle has manual locking hubs.

## 06. Are You Disconnected?

Have you disconnected your sway bar? Anytime you are taking your vehicle off road you are going to want to disconnect your sway bar. Depending on what jeep you have will depend on if you have manual or auto disconnects. The Rubicon comes with auto disconnects which again means you have a button in your jeep that you push that says sway bar disconnect on it. You can also look under the front of your jeep and see if you have a box mounted about dead center right behind your front bumper that the sway bar runs into. If you do not have auto disconnects then you will manually need to disconnect your sway bar. (Full training course is in the members area. Not a member? Look for the training tips on our Facebook Page.)



Quick Tip: If you have the auto disconnect you need to watch the sway bar light on your dash while on your ride. If you go above 10 miles an hour it may reconnect on you as you are driving. The sway bar is meant to be disconnected while trail riding at slower speeds but needs to be connected for safety when running a higher speed on the road.

## 07 - Is Your Traction Control Off?

If you have a newer jeep you have an actual traction control button. It looks like a jeep with squiggly lines under it. That is the Traction Control button to turn on and off your traction control on your jeep. If you do not have that button then do not worry about this piece. If you do have this button, you always want to make sure that you have hit the button and turned off your traction control before you begin a ride.

## 08 - Do You Have Air?

Do you have onboard air? This means that you have an air compressor mounted in your jeep. Or the newest thing is the up/down air so you have onboard air that you can use for tires. There is also the tank that you can carry. It is a small and portable co2 or Nitrogen tank that can be used to air tires up and is more portable. If someone asks you they want to know if you have any of those options available and usually it is to air a tire or tires up.

## 09 -Do You Have A High lift? DSFS

The high lift jack is an aftermarket jack that is designed for the lifted jeeps. The stock jack that comes with a vehicle will not work on a vehicle with a lift and/or larger tire upgrade. If you are stock, your stock jack will work for your vehicle but not all other vehicles. If you are not stock, you need to get a high lift jack as your stock jack will not work. It is always good to have the right equipment for your vehicle so you are always prepared incase something were to happen.

## 10. Drop Her Down.

This can be “Drop Her Down” or “Drop Her Down A Gear.” Either way they both mean the same thing. It means that someone is suggesting that you downshift. If you have a manual transmission this would mean to downshift down one gear. If you have the automatic transmission in one of the newer jeeps and can bump your shifter over to the right one it will allow you to shift up and down just as you would in a manual transmission.

I always recommend once you are on the trail if you have the ability to run your automatic transmission over where you are in control of the shifting of your vehicle. If you have this ability, then you would drop down to one gear lower just as in a manual transmission. For example, if you were in second gear you would drop down to first gear.

## 11 - Pull Cable

This means that you needed to or need to use your winch for recovery. When you are in a situation where you are stuck or risk a roll over you need to use your winch to get yourself out safely. The term was born because you have to pull the cable out of the front of the winch to hook your winch up for recovery so thus Pull Cable was born. There is never anything wrong with using your winch. If you are in a situation that using your winch is necessary or is going to prevent any more damage or issue.....then always use your winch. It is always better to be safe.

## 12 - Power Steering Is Screaming

I hope you don't experience this yourself, but what this means is that the power steering is too hot. Either the power steering gear box is overheating and under too much stress.

Or the power steering fluid has gotten too hot due to stress and over use. You usually will hear a whine when you are turning the wheel and the steering itself will get hard and you feel like it is heavier to turn the wheel.

**Quick Tip One:** Don't mistake the steering change of turning your lockers on with that of steering issue. When you turn your lockers on it is going to be harder to turn and feel like it is heavier and not wanting to turn right away. This is normal without any upgraded steering on factory steering while lockers are turned on.

**Quick Tip Two:** Because of the stress it does put on your steering components only use your locker when you really need it on an obstacle and then turn it back off or unlock the axel lock for the majority of the ride. This will make your vehicle turn better and easier to drive as well as keep stress off the steering components. **Quick Tip Three:** With hydraulic assist and full hydraulic steering it makes turning while locked much easier. You won't feel like you are battling the steering wheel and the vehicle will turn much quicker and smoother.

We will continue to add more Terminology for you in the course as we continue to come across more terminology and ideas. If you have any terms or phrases you would like to see added to this lesson, please email us at [ladyjeepers@gmail.com](mailto:ladyjeepers@gmail.com) we love hearing from you!



# 4 Biggest mistakes people make and How to avoid them

I know it can seem overwhelming and difficult when you are first getting started. I had to share with you the mistakes that I see people make over and over. I don't want you to make these same mistakes, so I put together the answers for you to keep you from making these mistakes.

Knowledge and understanding are the key to feeling confident and independent. The more you know, the more confident you feel, the easier it is to put yourself out there. I want to help you with that!

## ■ 1. People Don't Admit or Speak Up That They Are New.

I see this mistake a lot. Someone doesn't want to admit and tell a group of people that they are new and not as knowledgeable and experienced. YET!

I always suggest that you use the word YET...especially on rides or at an event. It gives the power to feel inside yourself that this is just a step and you will not be there forever.

It is important to tell people that you are new and learning for a couple reasons.

- First off people are going to help you and teach you if they know you are learning.
- Second, and this maybe the most important aspect of why you need to tell people you are new and learning.... Is so they understand where you are at in your journey and knowledge. This way they do not put you in a situation where they think you know more than you do. This keeps people who you are riding with from getting frustrated because they thought you were more capable or had more experience than you do so they put you in a tough situation.

It is important that you set your groundwork with people before you go out on a ride. This way people do not have expectations that you know more or are more capable and put YOU in a bad situation for yourself. It is important not just for yourself but for those around you as well.

Keeping yourself in situations you are comfortable with to build your confidence and ability are crucial as you are starting to learn. It is true you must push yourself as you learn to gain more experience and confidence....but with that said it should also be a comfortable situation and everyone involved having the same understanding.

## 2. People Don't Ask For Help, Or The Right Help

Ask Questions, Ask Question and Ask More Questions!

Asking questions is really important.

Ask why.

Why does it work that way? Why do you do it that way?

Try to learn as much as you can. Be careful where you get your information and who you get it from.

Who are you talking to, how much practical application experience do they have with what you are asking about. Make sure you are getting quality advice from people who truly have a knowledgeable understanding of what they are telling you.

Everyone has their own opinions, and there are lots of different ways to do something, not just one way.

You want to ask lots of questions and get different ideas and ways to do something as you are learning. The more explanation someone can give you the better the information you are receiving.

### 3. Don't Understand The Full Extent Of A Build

You need to take the time to plan out your build, write it out, design it, know exactly what you are going to do and how you are going to do it.

Take the time to do it right and only do it once. Don't rush into anything. You can change your mind as you are designing the build and that is OK. Take the time to research and understand every piece and part of the build.

You need to know options based on your goals and go back to get the right information and help from the right people.

We don't want to see you make the mistake of building your rig multiple times.

Another mistake I see is people want to save money on their build, and I understand that. Builds can be expensive, trust me I get it. But the parts that you buy fall back to that old saying of "you get what you pay for." It is better to pay for something once instead of opting for a lesser expensive part and have to replace it. Best advice I ever got was spend the money once, build it once.

It is going to hurt either way finically. Either up front or in the long run. Your build is individual. It should be you.



## 4. Allow Others To Make You Feel Bad

I see people allow others to make them feel bad or stupid in this community.

When you are learning you are putting in the work and effort to get better, know more and gain knowledge. As long as you are trying to educate yourself...you are doing the right things.

PERIOD!

This community is supposed to be about building us up, make us feel empowered and strong. Don't allow anyone to be negative, bring you down or take you out of that wonderful place you've created. I don't want you to allow anyone to beat you down or take your power. This is about YOU! This is about you bringing YOU forward. Your motivation, confidence and self-worth in your vehicle.

I want you to be happy and joyous.

# Pre-Ride Checklist

Before you head out down the trail there are a couple of things you need to check over and do so that you are prepared for your Trail Ride to ensure it is the most fun and successful that you make it.

## Prior to heading down the trail;

### ■ Air Down Your Tires

#### General PSI Guide

- Non-beadlock or stock wheels - around 16 psi
- Beadlock Wheels - between 8-12 psi

### ■ Disconnect your sway bar

### ■ Make sure your gas tank is full

### ■ Have CB or Handheld Radio on the correct channel

- Know Who you are riding with. Ask questions. What trails they want to do, level of driving, etc.
- Have a General Idea of direction. Where you are entering trail, direction headed and way back out.
- Have your fire extinguisher in your Jeep and mounted.
- Make sure your recovery gear is easy to access if you need it.
- All contents inside your Jeep is secured and cannot move around.

Take Your Time to be prepared before you head off to and event or down the trail. Having a great time, staying safe and having the least amount of mechanical problems is the ultimate goal.



# AIR DOWN YOUR TIRES

## Your Quick Air Down Your Tires Overview

You want to air down your tires before you head out on a trail ride. By airing down you;

- Have more traction with more tire surface to the ground.
- Lessen the chance of cutting a sidewall on your tire.
- Do less damage to the terrain and trail you are riding on.

Follow these Tips for airing down;

### **Tip 1 - Know How You Will Air Back-Up**

Do not air down until you know how you will air back up. You can drive to a gas station, use air available at a park, or beach up air up station. You can purchase onboard air for your Jeep to have your own air supply. Just know how you are going to air back up before you air your tires down.

### **Tip 2 - Know Your Wheels and Tires**

Different wheels and tires will dictate what .psi you can air down to. I put together a basic overview on combinations.

## General Air Down Rules;

Traditional Wheels;

Keep .psi between 15 – 18psi



## General Air Down Rules;

Traditional Wheels;

Wheels 20's and larger need to  
air down less.  
About 25 .psi



## General Air Down Rules;

Beadlock Wheels;

Keep .psi between 8 – 12 .psi



I did not touch on double beadlocks or internal bladder beadlocks. If you are looking for more in-depth beadlock information make sure to check out [www.ladyjeepers.com](http://www.ladyjeepers.com) for our Beadlock Specific Class.

### **Tip 3 - Make Sure Your Tool Works or Kit Is Set**

The Instructional Page for How To Air Down Your Tires will show you step-by-step how to use your deflator tool. Make sure your tool works, even if it is brand new before you head out for a trail ride.

### **Tip 4 - Take Your Time**

Do not rush or allow anyone to rush you while you are airing down. Arrive early to a trail ride to allow enough time to go slow.

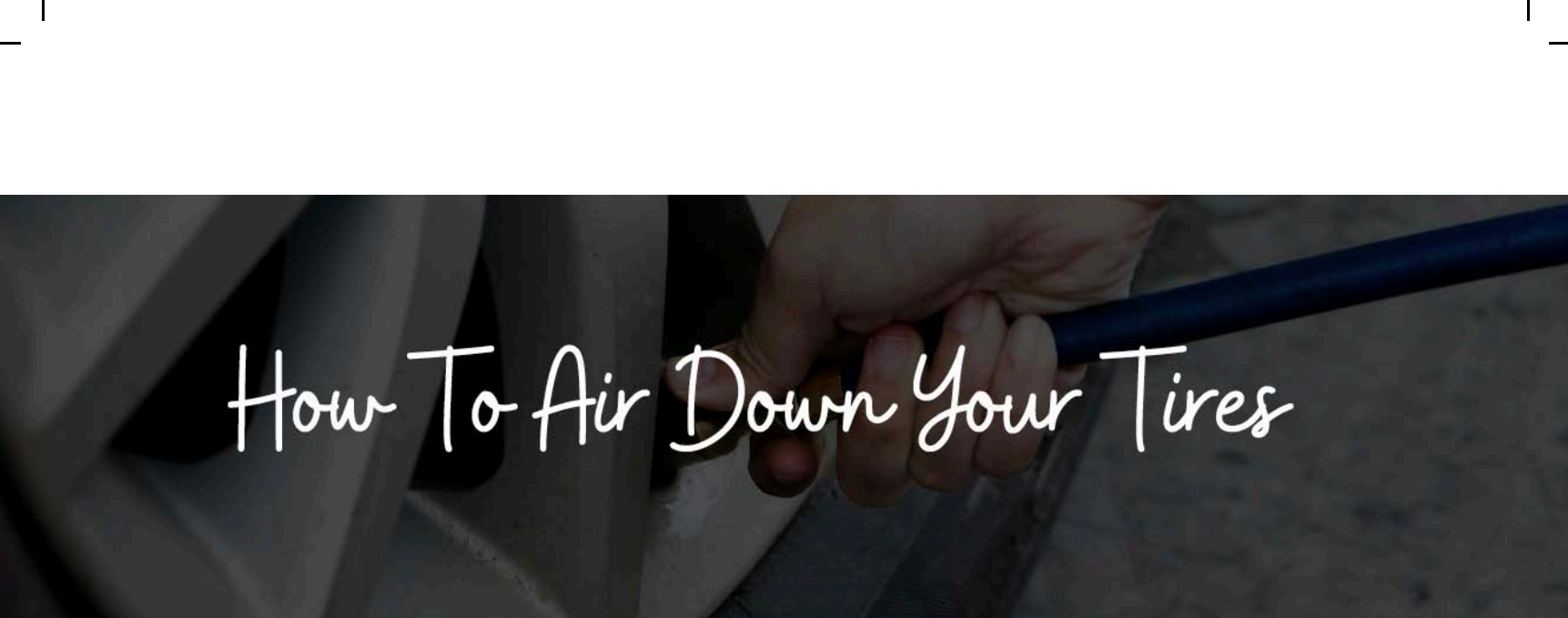
### **Tip 5 - Take Corners and Turns Slow while you are aired down**

Once you are aired down make sure to take corners slowly. This is true if you are driving back on a road to get to a gas station for air. Do not make extremely tight turns, even at slow speeds, once you are aired down.

### **Tip 6 - Use An Air Gauge**

While airing down or airing back up ALWAYS USE AN AIR GAUGE! Do not use the air pressure sensor reading on your dash!! These sensors can take full rotations of the tire to reset and read accurately.

Follow these tips and remember it is important to air down for any off-pavement trail system. This helps with ride quality for you, traction for your tires but most importantly it helps to lessen the footprint or damage the tires do to the trail you are on. We all have to do our part together to keep the trails open for everyone.

A close-up photograph of a hand holding a blue deflator tool against a tire. The tool is a long, thin rod with a handle. The hand is positioned to use the tool on the tire's valve stem. The background is dark and out of focus.

# How To Air Down Your Tires

Time to move into using a deflator tool to air down your tires.

There are different tools available as a tire deflator tool.

In this section we are going to go over how to use the ARB or equivalent deflator tool correctly.

Even within different brands of tools, most deflator tools function about the same.

I put together a step by step instructional page for you. These directions make it easy to follow step by step as you use your tool.



Attach the tool to the valve stem. Hold forward on the air release (the big round piece) line up the threads and screw the center piece of the tool to the right until snug.



Tighten the plunger - Push the plunger piece in and twisting to the left until it no longer wants to twist and the plunger starts to push out against you. Then pull the plunger out. This slides the long plunger out from the end you were twisting.



Release Air - Pull down on the air release (the large round piece at the top) to let air out. Push up on the air release to stop the air from coming out and check your PSI. Repeat until you reach your desired PSI. You must stop the air release to get your PSI reading.



Replace the valve stem - Push plunger all the way in (large air release valve will stay forward now) twist the plunger to the right while pushing forward/in on the plunger. Turn until it will no longer turn to the right.

Before you head down the trail on a ride you want to Air Down Your Tires. Here is the quick overview of How To Air Down Your Tires to get you ready and on your way for your ride.



Detach the tool - unscrew the center piece to the left until the tool is no longer attached and is off the tire.



Replace your valve cap to the valve stem.

Repeat these steps for all 4 tires. Then you are ready to hit the trail and have a great time!

Why do you want to air down?

You are going to get a better, smoother ride for you as a driver and your passengers. You will also get more wrap around the rock or obstacle with your tire as your tire will be able to mold around the obstacle better.





# Trail Etiquette

Everyone wants to have a great time out on the trail. These are the Trail Etiquette Principles that you need to know. This helps to ensure both you and the people you are riding with have a great time.

## Have A Positive Attitude

- You want to be helpful but not tell people what to do.
- Wait for someone to ask for your help or your opinion. This goes both ways!
- You can politely decline help from someone.
- If the trail gets difficult and is a challenge, or you break remember how you handle these situations (what attitude you have) is crucial for your experience and those around you.
- **NO MATTER WHAT HAPPENS KEEP A POSITIVE ATTITUDE!**
- Be supportive and compassionate to others.
- Everyone makes mistakes so let go of judgement and remember you are doing this for YOU and to have fun!

## Always Perform Your Pre-Ride Checklist

- This ensures that your Jeep is prepared and ready to go.

## You Are Ultimately Responsible For Your Jeep

- You are responsible to make the decision to accept help or not.
- If something were to break it is ultimately your decision on how you want to fix it.
- Determining recovery, hooking up your vehicle and running your remote for your winch.
- We want to learn, and ask for help along the way. But remember you always have the ultimate say, can ask questions and you make the final decisions.
- When you make a turn off of the main trail. Make the turn and then stop so the vehicle behind you can see the turn before you proceed forward.
- You do not want anyone to get lost or left from the group! Even if you have a CB or Handheld Radio make sure you are still practicing these principles.

## Pull Off The Trail If You Stop For Any Reason

- You are probably not the only group out on the trail. You do not want to block a trail if at all possible.
- If you break, try and pull up and off the trail as much as possible before you start working on it.
- Stopping to talk, stretch, etc. is common practice on a ride. Try to stop somewhere with enough room that you can all be off the trail.

## Negotiating Trail Traffic

- Negotiating Two Way Traffic can be a little un-nerving at times.
  - Try to pull over to the right on the trail as much as possible. Whichever side has the most room needs to pull off and over to allow the traffic to flow and pass.
- General Rule – The ones traveling up hill have the right away.

## Time For A Spot

- Everyone needs an extra set of eyes on the ground sometimes. Know your comfort zone and don't hesitate to ask for a spot. That is how we learn.
- You can accept or decline a spot based on what feels right to you. You must trust your spotter and feel confident that they can help you and know what they are doing.
- There should only be one main spotter who is talking to the driver at a time.
- If you have a question or don't feel comfortable with the line, stop and ask questions before you continue on
- Don't get flustered and make sure you take your time.

## Handheld Radio and CB Use

- Set up and tune to what station or channel your group will use for the trail ride.
- Keep the line open for people to communicate obstacles ahead, problems or turns.
- Be respectful of multiple people on the same the channel with you. If it is just a couple people out on a ride that is one thing. In a large group try and keep the chatter to a minimum while riding.

## Never Leave Anyone Behind

- This is an important concept to understand before heading out on a trail.
- You come in together and you leave together. You would not want to be stranded on a trail nor would you want to do the same to someone else.

## Do Not Ride Alone

- It is always safer to ride with someone else. Especially as you are learning and growing your experiences.
- If you happen to break or have an accident it is always safer to have someone else out there with you for help and so you are not alone.

You now have the basic Trail Etiquette Principles you need to know. It is time to get out there and have some fun!



## Follow TREAD Lightly Principles

- T**- Travel Responsibly
- R**- Respect the Rights of others
- E** - Educate Yourself
- A**- Avoid Sensitive Areas
- D**- Do your Part



*When you first get to a new park or ride*

## Prior to an event or long trail ride

Make sure your maintenance is done and you are ready and prepared ahead of time.

- Make Sure All Fluid Service has been done.
- Oil Change and Filter are current
- Axle Service and Differential Service/Fluid are up to date
- Bearings and Joints have been greased

## Check over Jeep for any Leaks or Damage

- Examine the under carriage
- No Fluids on axle, differential, anywhere under jeep.
- No cracks, broken bolts or missing bolts anywhere. Look at belly skid if you have one.. Check suspension/springs
- Double Check your Recovery Equipment is all in good working order





# When You First Pull Into A New Park or Event

- Stop at the Office if there is an office at the park entrance.
- Get a Map of the Park and Trails
- Ask and understand the ratings and markers inside this park
- Are there any restrictions? Such as no motor vehicles, requirements for specific level trails?
- What are the current trail conditions like? Has it been wet? Are any trails washed out, etc.
- What are the park hours?
- Do they have an air station and/or wash facility available to you for after your ride?



# Know Who You Are Riding With

If you are meeting up for a trail ride with others, you need to know who you are riding with and what the expectations are.

- Do you know the people you are riding with personally?
- What level of trails are they planning on riding on?
- What is their expectation if they get off track on a trail that is more difficult, and people are not comfortable?
- What tempo or speed do they want to be driving at?
- How long is the expectation for the trail ride?
- Who is the trail leader and tail gunner? Are they equipped with recovery and emergency equipment?
- What are their rules on conduct for the trail ride?  
(Drinking, behavior, spotting, etc.)

You need to feel comfortable before you head out on the trail with a group to trail ride with.



# Winch & Recovery

Be familiar with winch as well as other people you are riding with. A winch is a tool and not a toy so take safety precautions. Knowing how to safely recover your vehicle or someone else's is an important skill to have. Be confident in your ability to recover a vehicle with this overview.

## Safety you need to know

1. Always Check Your Equipment Before You Use It
  - DO NOT use torn or frayed straps or lines.
  - If you are using or have used wire cable line for your winch line make sure to check your snatch block for any sharp metal pieces or fragments. If you go from a cable line to a synthetic line replace your snatch block. (Keep this in mind if you are giving your snatch block to someone else to use as well.) Any fragments from the wire line cutting into the snatch block can cut a synthetic line when used.
  - Be familiar with all your equipment and be comfortable using it before you head out on a trail

2. Watch Your Hands. Always use leather Winch Gloves that are loose fitting. You want the glove to be pulled off not your fingers if need be. Do not put your hands, fingers or extremities into or around the moving parts or motor of your Winch while it is on. Do not touch the line close to the fairlead (plate on the Jeep and front of the Winch where the line/cable runs into the winch) while the winch is on. Keep hands and fingers clear as the hook and line spool back into the fairlead.

### 3. Safety

- Always have the remote in sight of the person helping or yourself. Set the remote down or hold it out and away from you with no fingers near any of the buttons or controls while someone is touching the winch. If you are helping someone else, ask them to hold the remote up at your sight safely while you are touching the winch.
- If more than one person is helping with the recovery made sure you have established a solid communication and it is understood between those helping with the recovery.
- NEVER step over or straddle a winch cable. Once there is tension on the cable the line is considered in tension and you are to stay back in a safe place. NEVER touch a winch line once it is under load or tension.

- Make sure everyone is clear of the winch, line/cable and area before starting to winch your vehicle.
- Always use a Damper for your line no matter if it is cable or synthetic line it can still break and go “live”
- While you are winching keep an eye on your anchor point to notice any weakening.
- Do not ever let all of your line out! You must keep at least 5 tight wraps around the winch drum at all times. Any less and you could pull off the drum and unspool your entire winch line.
- Do not overload your winch. Know what weight capacity you have, remember for full weight strength you need to have as much line let out as possible. This depends on your rope/cable length as well as your winch and its capacity as to how much strength you lose per line of wrap on your winch. Just remember full strength is the most line out (always keeping your initial 5 tight wraps on the drum)
- Do not hook your winch line around any object except through your snatch block. Other than the snatch block your line should not be run through anything, around anything or hooked to anything but a D-ring and/or soft shackle. Never run your cable or line around an object (such as a tree) and then hook it back to itself.

- Be aware and careful of the winch line position at all times. This includes before, during and after recovery. As you start to get unstuck or gain traction make sure you are not on the gas to lurch forward and run over or tangle your winch line.
- Your care of your cable/line - Always neatly spool your winch line back in after a use. You want even and neat lines across the front of the winch. Be careful to have it evenly across your winch so it does not end up with more rope/cable on one side than the other. Check it for any damage, frays or weakened points as you spool it back in.
- Notice if your winch starts to struggle or is unable to move the vehicle. STOP and do not burn up your winch. You can come up with a new plan, add a snatch block, etc. but do not continue running your winch if it is unable to handle the weight or situation
- Do not rush when doing recovery or using your winch.

## What Recovery Equipment you need:

- Tow Strap
- Tree Saver Strap
- Snatch Block
- D-Ring or Soft Shackle
- Winch Gloves
- Line Damper or towel

We recommend getting a full recovery gear kit. Warn has a great Recovery Gear Kit with Bag you can buy.

## Using Your Winch In A Recovery Overview:

When talking about recovery there are many different scenarios as well as ways to use your Recovery Equipment. We are going to focus on the most common practice/used way to use your winch in a recovery.

## A Couple Things To Keep In Mind

- You are ultimately responsible for how you decide to do your recovery for your vehicle! If it is your winch and equipment you are using to get yourself out or someone else to you....you have the final ultimate say in how your Jeep is hooked up. Remember that even if you are in a high stress situation you need to feel comfortable and always check your own equipment/attachments.
- Make sure your vehicle is in park or turned off in gear and that your emergency break is on. Chalk a tire to keep your Jeep from moving for added safety if you need to. You want to be safe as you do your recovery.

## Using Your Winch In A Recovery Overview:

When talking about recovery there are many different scenarios as well as ways to use your Recovery Equipment. We are going to focus on the most common practice/used way to use your winch in a recovery.

### Straight Line Recovery

- This first recovery is going to be used with a Tree as your anchor in a straight line recovery. So you will be attaching your winch cable from your jeep and have a straight shot to a tree.



- Hook Up your winch remote. You will either plug the cable directly into the winch or activate your wireless remote
- Spool out your winch cable. You can free spool your winch and pull the cable while you walk, or you can use the remote and let out while someone walks the cable to your tree.
- Put your tree saver around the trunk low of the tree. Open your D-ring or Soft Shackle.
- Run your D-ring or soft shackle through both straps of your tree saver. Depending on what type of hook you have on the front of your winch will determine which way you run this last step. We highly recommend upgrading your winch hook to a Factor 55 hook for added safety.
- Put your vehicle in Neutral and allow the winch to do the work if possible. Slowly spool in your cable to move yourself and get you unstuck. This is not a race, there is no hurry think slow and steady.
- Once you are freed you stop and let a little slack out of the cable/rope. Put your vehicle in park or turn off in gear. Now do everything backwards to unhook the winch hook and line.

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## Doing a straight line recovery to another Vehicle as anchor instead of tree

Your Steps are very similar to what we discussed for your overview. The change will be that you will not need a tree saver strap. You will run your winch hook directly to the front or back of the vehicle that is the anchor and to the D-ring directly attached to them.

### Safety Notes:

Do not hook to a factory/plastic bumper when winching.

Do not use a ball of a trailer hitch. You can use the receiver with a pin for the D-Ring or your winch hook but do not wrap around a ball on a hitch

You do not want to have to pull in reverse if possible. You want a forward gear if you need to get more resistance and traction. Or add another anchor Jeep to the Jeep Anchor so they do not have to pull in reverse and have traction.

## Using A Snatch Block

This is where Physics comes into play. By adding a Snatch Block you are adding a ratio of weight distribution with a pulley system to require less weight of pull or force from the pulling object. Every time you add a snatch block you are changing the ratio of pull and force. We recommend for all recoveries, even a straight recovery that you always use a snatch block. This is going to put less strain on your winch and it can do a harder job with a snatch block. You can add and use snatch blocks together if you have a very stuck vehicle, say in mud or a heavy vehicle to ensure success.

### **You are going to follow the same steps as we covered and add a snatch block in**

Once your D-ring is through your strap you will now feed your winch cable through the snatch block. Open the snatch block by twisting it to the side and run your cable through the pulley side

Close your snatch block by twisting back and run the open end of the snatch block through the pin of the D-ring to secure it to the tree strap and anchor.

■ Pull your cable and hook back to your vehicle and secure to the front D-ring hook of your Jeep.

## Recovery Options

■ If you need to do a recovery and there is not a straight line you need to use the snatch block to create the angle for your recovery

■ NOTE: You can use another Vehicle or a Tree for the anchor point on the recovery. So you would run the Winch Hook to the D-ring on the front or back of another vehicle or to another tree saver strap with a D-ring on your anchor tree

■ The ratios of using multiple snatch blocks as outlined on the previous page. You can replace trees with another vehicle as well and use multiple positions if you have a heavy vehicle or are very stuck to ease the load on the winch or take pressure off the anchor vehicle as well

One of the most important things to remember is that there is **NO RUSH** or **PRESSURE** when you are doing a recovery!! Take your time and make sure you are comfortable with the way you are doing the recovery.

## Straight Line Recovery:



Hook Up your winch remote. You will either plug the cable directly into the winch or activate your wireless remote.



Spool out your winch cable. You can free spool your winch and pull the cable while you walk, or you can use the remote and let out while someone walks the cable to your tree.



Put your tree saver around the trunk low of the tree.

Open your D-ring or Soft Shackle.



Run your D-ring or soft shackle through both straps of your tree saver.

Depending on what type of hook you have on the front of your winch will determine which way you run this last step. We highly recommend upgrading your winch hook to a Factor 55 hook for added safety.

The photo on the left shows how you will turn the D-ring to allow the hook to attach to the front of the D-ring. The photo on the right shows the pin going through the Factor 55 hook to attach the Winch. Close your D-Ring and then turn it back 1/4-1/2 turn so it does not get stuck closed.



Put your vehicle in Neutral and allow the winch to do the work if possible. Slowly spool in your cable to move yourself and get you unstuck. This is not a race, there is no hurry think slow and steady.



Once you are freed you stop and let a little slack out of the cable/rope. Put your vehicle in park or turn off in gear. Now do everything backwards to unhook the winch hook and line.



Winch line in keeping tension on the rope or cable (use your gloves) and think about keeping a tight and uniform spool as you bring the cable or rope back in.

Also always slow down and go very slow at the end and keep your fingers away from the hook and Fairlead so you don't get a finger or your hand.

Doing a straight line recovery to another Vehicle as anchor instead of tree.



Your Steps are very similar to what we discussed for your overview. The change will be that you will not need a tree-saver strap. You will run your winch hook directly to the front or back of the vehicle that is the anchor and to the D-ring directly attached to them.

### Safety Notes:

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- Do not use a ball of a trailer hitch. You can use the receiver with a pin for the D-Ring or your winch hook but do not wrap around a ball on a hitch.
- You do not want to have to pull in reverse if possible. You want a forward gear if you need to get more resistance and traction. Or add another anchor Jeep to the Jeep Anchor so they do not have to pull in reverse and have traction.

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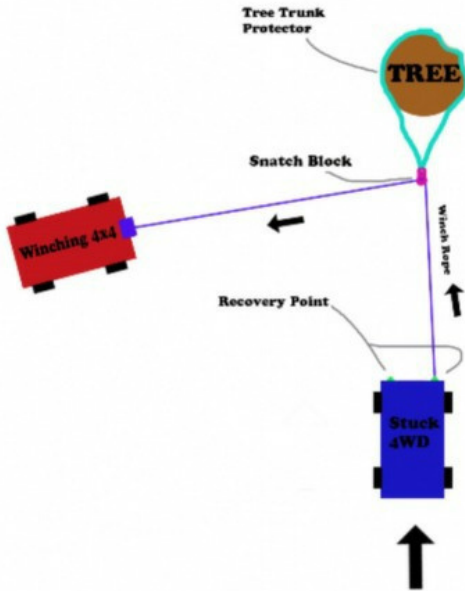
Continue recovery as outlined in straight line recovery. Once you are out then do all these steps backwards to unhook your winch and snatch block.



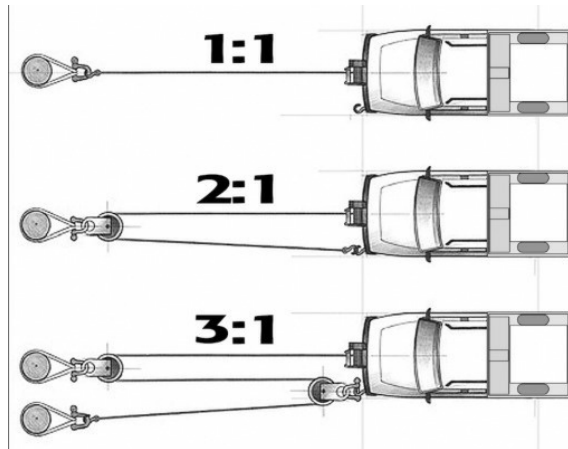
## Recovery Options

If you need to do a recovery and there is not a straight line you need to use the snatch block to create the angle for your recovery.

### Directional Pull: Recovering another 4x4



NOTE: You can use another Vehicle or a Tree for the anchor point on the recovery. So you would run the Winch Hook to the D-ring on the front or back of another vehicle or to another tree saver strap with a D-ring on your anchor tree.



The ratios of using multiple snatch blocks as outlined on the previous page. You can replace trees with another vehicle as well and use multiple positions if you have a heavy vehicle or are very stuck to ease the load on the winch or take pressure off the anchor vehicle as well.

One of the most important things to remember is that there is **NO RUSH** or **PRESSURE** when you are doing a recovery!!

Take your time and make sure you are comfortable with the way you are doing the recovery.



# Trail Riding 101

The more seat time and experience you have the greater your confidence and understanding of the terrain and obstacles. As well as getting to know your Jeep better. I believe they all have their own feel to them. For 101 I want to do a brief overview of Basic Trail Riding and Off-Road Driving.

## ■ Safety

- Never go trail riding alone! You want another vehicle and another person with you for safety reasons.
- Always wear a seat belt when the Jeep is in motion or moving. It does not matter how slow of speed you are going. Off-road you can come across an obstacle, rough patch or slip and slide without notice. It is never worth the risk of getting hurt or ejected from your Jeep.
- Keep all body parts and limbs inside the Jeep while you are driving, moving or in motion on a trail. If you need to look out your driver window to spot your front driver tire you need to make sure you are clear from upcoming brush, trees, etc. and then glance and bring your head and body back inside the Jeep. (Trail riding with your doors off makes it easier to see your tires. Though it offers no protection for you against trees, brush or bugs.)

- Do not attempt hard terrain and trails without the proper safety precautions and modifications. A harness system, after market seats and a full aftermarket roll cage need to be upgraded prior to attempting the hardest level trails. Do not get under a vehicle to work on it or change a tire without taking proper precautions. Jeep is in park, or in gear, with parking brake on and wheel chocked. Added stability is used to reinforce under the Jeep so it can not fall on top of you. A large tree branch, rocks, etc. work but make sure they are not rotten.
- Make your passengers follow the rules of your Jeep!

## Safety

The spotter's role was outlined in Trail Etiquette and remember that you have the right and option to choose who will be your spotter! You also have the right to decline or ask for a different spotter.

If you are not comfortable, even with a spotter, you need to let your trail leader know. You have a right to voice your concerns at any point in a trail ride.

## A Quick Overview

- The spotter should be in your view if at possible in a safe location.
- Use hand signals that are very clear to discern
- Driver and Passenger for direction so no confusion with Left and Right and whose Left and Right

## Sliding in Wet or Slick Conditions

- An Understeer –
  - This is where the front wheels skid. This can happen when you turn the wheel to sharp and to quick in bad conditions or hit the breaks suddenly or hard.
  - An understeer basically means that you can not turn the wheels and have control to turn and steer the front end.
  - To regain control you need to softly use your brake and straighten the wheel slightly to regain control.
- Fish tailing –
  - When the terrain is slick and you lose traction in a forward gear and the rear tires spin and slide causes the rear of the Jeep to abruptly go to one side or the other. This is common in muddy, clay or snowy/icy conditions.
  - Steering into the rear end and softly using the gas to “drive yourself out of it” or “steering with your gas pedal.” So you are controlling the direction your rear end is sliding out.
- If you get stuck –
  - Option one is to turn the steering from side to side as you apply gas to try and allow for your tires to get traction or “catch” to regain your traction and get yourself out.

- Option two is to go from reverse to drive to reverse to drive and try to create momentum and traction to get you out as well.
- Either option....do not overdo the gas and the length of time you try to get traction and get out. Sometimes you will actually dig yourself deeper so be aware of what is happening to your bottom or terrain as you try to get yourself unstuck.

## “Mud Holes”

- Always stop and evaluate how deep the mud hole is with a stick as well as what the bottom feels like. Some mud holes can be deep and soft and resemble quick sand that the tire will continue to sink down and not hit a solid bottom.
- Use a forward gear with moment but not a lot of speed. The goal would be that you go as far as you can but have the ability to back out to get out of the mud hole if necessary. (It does not always work that way.) Momentum and forward movement is your friend but full throttle with tires spinning to dig down deeper and throw mud into Jeep parts and components is not ideal.

## Water Crossings

- Like above you never want to drive into a water crossing without an idea of the depth. If it is not possible to get the depth make sure to drive slowly! That way you can stop and back out if the water begins to get too deep.
- You do not want to submerge or throw water up over your hood into your engine compartment or air intake if at all possible. Depending on the area of the country people will add aftermarket snorkels to change where the Jeep will breathe.

## Hill Climbs and Down Hill

- It is important to know your Jeep and the feel of your Jeep to know what gear you need to be in for both uphill and down hill.
- Down hill you do not want to be using your breaks going down the hill. The goal is to be in 4 Wheel Low with low enough gear ratio and be in first gear on your shifter. (Both manual and automatic shifter in 1st) to crawl down the hill without using your breaks. If you have a newer generation Jeep you may have Hill assist.
- The button on the right that looks like a Jeep driving down an incline is your hill assist button. It works for both drive going forward down a hill and reverse going backwards down a hill.

- The button allows your Jeep to maintain a slow and controlled speed by utilizing the breaking system on its own to break each individual wheel separately so that all breaks are not applied at the same down while going down a hill.
- Side Note – Hill decent will only work in 4 Wheel Drive Low and will not work while driving in 2 Wheel Drive.
- Also, if it is wet or slick conditions the Hill assist may not work as well. If the vehicle starts a slide downhill it can kick off the hill assist completely so keep yourself prepared to take back over.
- You as the driver can turn this system off by apply the break manually yourself as well to take back over.

This is just the basic awareness for trail riding 101. Continue to grow and increase your education and seat time by getting out there and putting in the time behind the wheel. With experience comes confidence in yourself you know how to handle a situation when it comes up.

# Beadlock Wheels

As we are talking about specific build modifications you can do to your Jeep, one of the frequently asked questions is about the Beadlock Wheel or Rim.

This brings up a great "terminology" aspect to start with first.

I have found depending on what part of the country you are in, or what area of the automotive world you are around there are different ideas of "terminology." I want to take a moment to start with that first terminology aspect so when you go into a shop, talk to someone at an event, or call a company to ask questions you are informed.

I know people call the Beadlock or non-beadlock a Wheel or a Rim. In the 4x4 and off-road world you are going to call your tire a tire not wheel, and your Wheel is a Beadlock or non-beadlock that your tire mounts too.



In this training article when you see Wheel that is referring to the Beadlock or Non-beadlock Wheel not a tire.

This can be a confusing distinction but it is important terminology to know and understand.

I have been asked,  
"What is a Beadlock Wheel?  
What is the difference between the Beadlock Wheel and  
traditional non-beadlock Wheel?  
When do I need to get a Beadlock Wheel?"

I talked about the Beadlock in one of our classes and there were some questions, so that prompted doing this entire Focus on the Beadlock Wheel as a specified piece of our Design Your Jeep Build Training.

The very first thing I want to cover is also a very important thing!

Make sure that the Beadlock Wheel that you are looking at is DOT approved.

# Make sure that the beadlock you are looking at is DOT approved and "Street Legal"

Being street legal and understanding what that means can be a misconception.

Start by understanding that the Beadlock wheels were not "street legal" for a very long time. Now there are more available that are DOT approved.

If you do look into getting Beadlock wheels, you need to look up and make sure that they are DOT approved. They need to be "street legal" and look into your state and make sure that they are going to be legal.

Not every Beadlock really is going to be "street legal" and some states have different requirements.

## Why look at a Beadlock Rim/Wheel?

Why would you look at a Beadlock wheel?

Really this is going to be for your Off-Road capabilities. The biggest thing is so that you can air down the PSI or the air pressure in the tire lower due to the Beadlock wheel because of how it works.

That is the biggest thing really when you start talking about Beadlocks. Doing the upgrade to a Beadlock is because you want the off-road capabilities.

The Beadlock has nothing to do with on road capabilities for your daily driver.

This really is when you start talking about offering capabilities and the biggest thing is by far the ability to air down your tire, and run a much lower PSI then you can on a non-beadlock wheel.

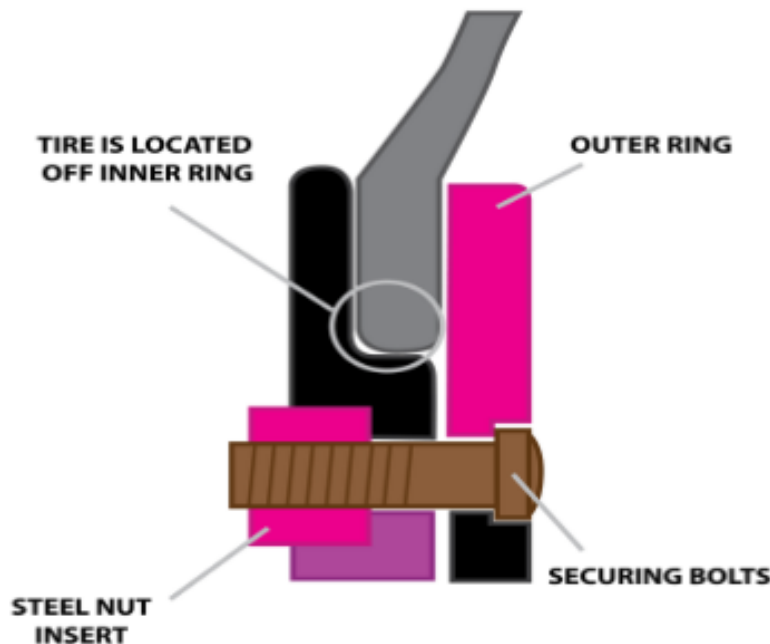
This allows for a better ride quality as well. It is going to allow the tire to have more give and kind of melt around the rock or the object on the trail.

You gain more tire surface on the ground so that in turn also gives you more traction as well. That can make a big difference when you are negotiating terrain Off-Road!

You can see that in the picture example below. You can see in this picture, I wanted to find one that captured the tire aired down at work. In the picture this is my stock, JKU with non-beadlocks.

# How does a Beadlock work?

I know that is the biggest question I hear and get in regards to understanding Beadlock Wheels. What makes it so different from a non-beadlock and how does it actually work? So the picture above is a Beadlock wheel.



I had this graphic created for us to help illustrate how the Beadlock wheel works. To me, this is a great way of showing what the actual Beadlock concept is. What the Beadlock does and how it functions is illustrated for us.

You are going to have an inner ring and then you are going to have the bead of your tire, and then you have the outer ring. This is going to kind of squish against it.

Then you are going to have the bolts that are going to go in to actually secure that front ring to the back ring. It is going to kind of, for lack of a better words, sandwich or smush the actual rubber of your tire and hold it.

That is going to be a little different than a stock or non-beadlock wheel.

The Beadlock concept is that the tire is actually being held with the plates and with the bolts instead of holding the tire to the wheel with air pressure.

## Outer ring and securing bolts



In the picture, this is a Beadlock wheel. This is a wheel that is on my Yj.

As you can see, this is going to be the outer ring that we are talking about. And these are the securing bolts and this is what it looks like on the back side. When you are looking at this tire, it is actually in between the inner ring and this outer ring. The bolts are then holding the actual rubber tire to the wheel. It was kind of pinched or sandwich or squished, whatever words you want to use to hold that tire right there with the wheel itself.

It is a completely different designed wheel in functionality and application. It is not dependent on air and the seal to the wheel to be held by the air pressure.

Let's jump into that below in more depth!

## Difference between a Stock wheel and Beadlock



When mounting the non-beadlock on the right, it actually mounted so that the rubber of the tire is put underneath the lip of this wheel and then they go ahead and in ate it with air all the way.

What is holding this together and creating the seal is the actual air pressure.

Now when you look at the Beadlock, (wheel on the left) the way that a Beadlock is put together, when you mount it, you do go ahead and mount the surface of the tire. But the difference is there is an inner surface, and what you are able to see is the outer ring.

You can not see the actual inner piece once it is mounted in this picture. But the inner piece goes under the tire and the outer piece goes over the rubber tire and then all these bolts go in to hold it together. The actual rubber tire is in between the inner and outer plate right here.

So what happens when you go to mount it? If you think about it, it is really the bead, kind of securing that tire so that you can inflate it. What happens if the air is not what is keeping the tire on the wheel anymore. (The Beadlock example) You can deflate this tire, run a much lower psi and you have less of a risk of it actually coming off the wheel/bead or losing the tire mount. (Laments terms)

Whereas, on a traditional, or non-beadlock wheel, if you were to air down and you were to hit an obstacle or a rock, sometimes the tires actually going to lose the bead or mount/seal and then all of a sudden your tire is no longer on the wheel.

On the Beadlock that is less likely to happen because this is what is securing the tire instead of the air itself or air pressure (PSI) securing the seal and holding on the tire to the wheel.



## ■ Quick Overview

That is why when we are talking about the Beadlock, we are talking about it for Off-Road capabilities.

The biggest difference is the traditional wheel (non-beadlock) uses the air pressure in the tire to keep the tire on the wheel. You know, that is why when they mount them, they in ate them to get the seal and sometimes you will hear the pop of the tire sealing to the wheel with the pressure of the air.

Whereas, the Beadlock uses the ring and then the outer ring to sandwich them and lock the bead of the tire. So it does not have to rely on air pressure to keep the seal anymore. That is why you are able to air down more and you can run a much lower PSI on a Beadlock then on a traditional wheel.

## ■ Understanding PSI

I want to give you an example of what I am talking about as a guide when I am talking about PSI. On a Beadlock wheel, you can air down to about 5-6 PSI so that you are running six pounds of pressure in that tire.

On a traditional, or non-beadlock wheel, you can air down to about 16 -19 PSI air down range safely. This guide is conservative so that you are not having to worry about the seal or the tire coming off of the wheel itself and losing that seal.

Think about that, you are talking about a difference of 10 PSI. So 10 pounds of air difference between your Beadlock and your non-beadlock wheel. When you are out on a trail, especially if you know you are doing rocks and different obstacles, that is going to make a big difference as to how much tire surface that you are going to have to be able to kind of mold around the obstacle, the Rock, whatever it may be that you are driving on.

If you are going to be going to the events, really want to take the Off-Road ability of your vehicle to its maximum that you can then think about upgrading to the Beadlock wheel. That then brings up the next question.....do you have to drive Off-Road to have Beadlocks and can you put them on your daily driver?

I am going to share some Brutal Honesty here ladies.....  
I am going to throw this out here and hit a little bit of Hard Honesty.

# Who really needs a Beadlock wheel? and Why do you really need a Beadlock wheel?

Like we talked about at the beginning, the Beadlock really hasQ been developed for Off-Road capabilities. This is for the jeepQ that you are going to be taking on the trail. You are going toQ be taking to events, parks and rides. You want moreQ capabilities so you want to be able to air the tires down orQ run a much lower PSI.

## Brutally Honest

When do you really need a Beadlock?

Do you have to drive off-road to have Beadlock? Can you put them on your daily driver?

Here is where there is a little brutal honesty.

You know, you see a lot of people who are running Beadlocks. It is becoming more and more common and some people do use them on their daily drivers for looks.

Ask yourself, is your vehicle going to be your daily driver, you are not going to be taking it Off-Road, or if you do, it is going to be more moderate, a little bit easier trail riding? If Yes, you do not need to be thinking about Beadlocks.

Again, this really is meant for your Off-Road capabilities. You do not need it on your daily driver. A lot of people are doing it nowadays for looks. That is one. They are more expensive. And again, you have to make sure that they are street legal and they are DOT approved. If you are just going for the look, they make fake Beadlocks that are really a non-Beadlock wheel, but they look like they have the plate and it looks like they have the screws so that they are Beadlocks, but they really are not.

You are seeing more and more of that when you are talking about the looks of the vehicle and not necessarily about the function and use of the Beadlock itself. This is a personal preference. If you are going to be Off-roading, you want to go ahead and step it up. The Beadlock is a great way to go. It is going to improve the quality of the ride that you have, by increasing the capabilities of Off-Road.

If you want it just for looks, remember it is going to be a little more expensive.

You have to make sure that it is legal. This again is a personal preference and if you are putting them on your daily driver that is going to just be going down the road, there is nothing wrong with that. (and do not let anyone else make you feel differently! Your choice and your money.)

This isn't a crucial upgrade and money to spend unless you know that you are going to be going Off-Road. So again, it's a personal choice.

This Beadlock Training was the beginning of understanding as a modification and upgrade in your build. Without getting into a lot more detail they also now make a double Beadlock wheel as well for those who want it for Off-road capabilities. I just got my wheels and I got the double Beadlocks, so they are going to be different in some ways from what we talked about in this training. However, the Beadlock themselves works the same regardless. The double Beadlock just gives you a Beadlock on the inside and outside of the wheel instead of just the outside on the traditional Beadlock wheel. This is definitely an upgrade and modification you only need to make if you are planning to build your Jeep for a lot of Off-road use. We will be sharing more about the double Beadlock Wheel coming up in our new training.

Keep in mind as we are closing this training.....you do not have to get what is popular or new.

This is your build, your Jeep, and your money! You need to get what it is you want regardless of the reasoning behind it. Let's be honest! You do not need any reasoning if you want to go in that direction for your build. (As long as it is a planned and appropriate modification, which after this Design Your Jeep Build you will never have to worry about again!)



# Driving Off-Road

## 4 Wheel Drive

4 Wheel Drive is a large part of driving off-road and on the trails. To conserve the trails and terrain if it is wet, slick, deep or a risk you will spin your tires you want to start out in 4 wheel drive. This is to lessen the risk of damage to the trail but also the wear and tear on your vehicle if it has loss of traction.

### How to Put Your Jeep In 4 Wheel Drive

Technology changes from years (generations of Jeeps) and models. Get to know your own Jeep but this is an overall guide to using your 4 wheel drive. Depending on the Jeep you may have “4 wheel drive on the fly” which means your tires can be moving when you shift your Jeep into 4 Wheel Drive High. If you are not sure you can always error on the side of caution and stop moving when you shift your Jeep into 4 Wheel Drive.

Put your Jeep into Neutral and make sure you are not in Drive or Reverse with an automatic and in complete center neutral in a manual. Then reach down and grab your 4 Wheel Drive Shifter.

Normally to the Left side of your gear shifter. Shift into 4 Wheel drive by pulling down on your shifter (or down and over to the right in a newer generation Jeep.)



Though as you can see, the shifters in different Jeeps can vary you will notice that all the shifters have a 2H setting, a 4H setting, a Neutral and a 4 Low. On majority of shifters your 2H or 2 Wheel Drive setting will at the very top left setting. The 4H or 4 Wheel Drive High will be shifting straight down. Exception: The newer generations have a 4H all time and 4H part time setting. You will want to shift down and over to the right to shift into the 4 Wheel Drive Part time setting.

To shift into 4 Wheel Drive Low you want to make sure you are at a stop as you are engaging the full gear reduction in your transfer case by shifting into 4 Wheel Drive Low.

Come to a stop and put your gear shifter into Neutral. Reach down to your 4 Wheel Drive Shifter and Shift over to the right and all the way down to engage 4 Wheel Drive Low.



Tips if your shifter is tough. Push in the brake and let it off, push in the break and let it off. Allowing your Jeep to roll slightly and trying to unload weight sitting on your break pedal. If you still have a tough shifter try reverse, neutral and roll and then drive, neutral and roll and then re-apply the brake. There is a feel to your 4 Wheel Drive shifter as well. It is finding the “sweet spot.”

### **When to use 4 High and 4 Low**

Think of 4 Wheel Drive High as your higher speed or cruise gear for while you are off-road. You do not want to run faster than 55 or 60 in 4 wheel drive high, but on a trail that is not a concern.

4 Wheel Drive Low is your low speed gear or your “crawl” gear. This is what you will use if you are negotiating an obstacle or have terrain you are driving slower on and need control.

### **How to shift out of 4 Wheel Drive and Back into 2 Wheel Drive**

You will go back through the steps above to shift into 4 wheel drive, just backwards. If you are in 4 Wheel Drive Low, you will shift back up to neutral and then over to the left and up through 4 Wheel High and to the very top into 2 Wheel Drive.

If you are in 4 Wheel Drive you will shift straight up into 2 Wheel Drive or in a newer generation it will be to the left and then all the way up. Make sure you are in neutral on your gear shifter when you shift back into 2 Wheel Drive as well.

## Know Your Differential and Ground Clearance

Knowing your Jeep is a crucial part to learn when you are driving off-road. The biggest mistake I see people make when they are just starting and learning is getting their differential hung on rocks or obstacles. Even with a lift and bigger tires your lowest contact point is going to be your differential on the front end (since that is the approach to obstacles or rocks most of the time).

That means you need to know what side of your Jeep your differential is on. Also, how much room is there from your differential cover to your inside of tire and outside of tire? Start to be aware. That way you know where your differential is while you are driving in comparison to the rocks or obstacles. As well as knowing where to mount your tire on a rock or obstacle to try and keep your differential cover from making contact.

Judge the ground clearance you have on your differential as well. How much room between the ground and your differential cover do you have?

This is the size of rock or obstacle you can drive over before you scrape or make contact with the differential cover. Now you know and look ahead on the trail to maneuver to avoid putting your differential cover on those obstacles.

Avoidance is not always an option, it will happen since it is the lowest contact point so remember to go slow and ease and not to gas it if you feel your differential cover make contact with an obstacle or rock. They make after-market differential covers for added protection. If you are going to be doing a lot of driving on trails and off-road this is an upgrade for strength and durability I recommend. Even with bigger tires that is still your lowest point of impact.



# Winter Weather tips for your jeep

This is a great overview to be prepared for the Winter Weather and cold temperatures.

Depending on where you are in the country and your temperatures, that will determine how diligent you need to be for Winter Weather Preparedness.

This is a great place to start to begin your Winter Weather Jeep Prep.

## 1. Your Jeeps Tires

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

**Your tires tread is going to be important for safety and drivability in winter weather.**

I get it, trust me!

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.

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.

Continuing with tires...

**Your Air Pressure in the tires on your Jeep is something to check in cold temperatures.**

Temperatures directly relate the change in your .psi and air pressure in your tires. The colder the temperatures the chance of lower air pressure in your tire.

If you have just started your winter temperatures or have a prolonged cold spell moving in you want you to check the air pressure in your tires. You need to adjust for the colder air once it has moved in. A couple .psi fluctuation is normal throughout a day with changes in outside temperature. However, after a couple cold days and nights you need to check your air pressure and adjust accordingly.

One last tire tip to remember in winter weather...

**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 drive your drive in the morning the first 5 miles seem rougher. I feel like my 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 feels like the ride gets softer and returns to your Jeeps “normal ride” feeling. 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. If you need to that would be a trip to the Jeep mechanic to rectify this problem.

## 2. Your Jeeps Battery

There is nothing worse than a Jeep that will not start in the cold! How do you know if your battery is at risk as winter weather begins to roll in? The best way to know for sure is to have your battery tested.

You do this, or have a shop do this, with a voltage tester. If you do use a voltage tester, have your vehicle and all electronics or “draw” to the battery OFF

Touch the positive end to the positive end and then the negative end to the negative end.

A standard battery charge rate (not an upgraded or after-market battery) should read 12.6 volts. Anything less than 11.7 volts when you are testing it means you have the potential for a problem or that it is time to replace your battery.

You can test the battery as you crank/start your Jeep. The voltage should maintain a reading of 10.5 volts as you start your Jeep.

Going to an upgraded battery with a higher cold cranking amp is always a great idea. The Optima red top battery is one recommendation for cold cranking batteries.

### 3. Your Jeeps Fluids

This winter weather tip for your Jeep is not going to apply to everyone across the country. Different parts of the country get different amounts of snow, ice and low temperatures. However, your fluids in your Jeep are an important part to remember at all times of the year. If you are going to be in sustained and/or extreme cold temperatures, you want to think about services your fluids for your Jeep.

- Oil Change
  - You want to make sure you are up to date on your oil change.
  - You can use a winter specific oil as well. It allows for better engine operation in the cold winter temperatures.



- Flush your Cooling system and make sure you use the CORRECT Coolant and/or mixture of specific coolant for your Jeep. This is not an off the shelf coolant and pour it in for the newer Jeeps!!!! That is very important to know!!!
- Having the correct levels of coolant as well as new fluid in your Jeep helps to prevent freezing of these fluids which can lead to break downs and yes...even over heating in the winter! Coolant is not just a summer issue.
- Your Gas Tank
- Yup.....believe it or not you need to keep an eye on that gas tank level for the winter. Make sure to keep your gas tank FULL over night in the lowest temperatures for the winter. Gas can freeze, and a low tank can also lead to condensation forming on the wall of the gas tank inside and dripping into your gas.
- You can also use an additive for extreme winter cold temperatures such as Heet that will help to prevent any water or condensation in your gas from freezing during extreme low temperatures.

#### 4. Your Jeeps Wiper Blades

Being able to see is important all the time. During the winter weather, your wiper blades will have additional work and importance with snow, ice, and water build-up on your windshield. Not to mention the storm that could roll in while you are driving around.

For that reason, winter is the perfect time to replace your Windshield Wiper Blades in your Jeep. Just as you have your spring checklist, winter you need to have your pre-winter checklist. This is the time to replace parts and pieces that will be crucial in this winter weather.

## ■ 5. Your Jeeps Lights

Of course, you always need your lights working properly and to be able to see. In winter weather you can have fog, blizzards, snow or decreased visibility situations that will make your lights crucial. This not just for your safety but for the safety of those on the road with you as well. Taillights need to be bright and break lights need to be working correctly. This allows the drivers behind you to see you clearly. They make aftermarket LED Taillight upgrades that are brighter than the factory lights. If you were considering any light upgrades, the winter is a perfect time to change out those factory lights.

Break lights and hazards are not the only important light aspect for winter weather. You need to make sure you have clean and clear headlights. You need to have the best visibility as possible. An LED upgrade can help with that, as can fog lights. Remember Light Bars are not permitted on the highway or roads in most states. Do not rely on a light bar for that reason for your visibility or added sight.

## 6. Protecting Your Jeeps Body & Top

If you live in an area that receives snow or ice you know that the trucks run out to salt the roads. That salt that they put down as a preventative for safety actually is more damaging to your Jeep than the ice or snow is.

That salt causes premature rust and problems for the under carriage of your Jeep as well as any steel body parts or components.

Unfortunately, there is no preventative as the salt is going to be used to keep everyone safe. What can you do? Wash your Jeep more often. I know the cold weather can make that almost impossible with freezing temperatures. Do a good wash prior to the winter weather and apply wax. Make sure your frame and any steel parts are powder coated or painted to help seal the surface. Any chance you get.....wash your Jeep with a good cleaning agent such as the Chemical Guys Off-Roader Soap.

For both the Body of your Jeep and your Top. Ideally if your Jeep could live inside the garage or a carport that is the best situation. That will keep snow and ice from accumulating on your Jeep and top. If your Jeep is parked outside for the winter it will mean a little extra effort. You need to try and keep your Jeep and top cleared of accumulating snow and ice.

This especially important for overnight when the temperatures will drop and cause freezing. Once there is frozen ice on the top, windows and doors of your Jeep you risk damaging the paint and surfaces that the ice is frozen on.

Remember first off that vehicles manage through all sorts of weather....plus this is a tough Jeep right?! But as a preventative you can buy a RainGear cover for your Jeep. This will allow the top, windows and body to be covered and protected if your Jeep is living outside. You can then scrape and pull the cover off without worrying about damaging your Jeep as you scrape the snow or ice off the exterior.

During the Winter you do not want to open, remove or put on your top in freezing temperatures. Try to put on your "winter top" prior to freezing temperatures or winter weather and leave it closed and on in freezing and below freezing temperatures as well as any winter precipitation. Prior to winter do a cleaning and protectant of your soft top if you have a soft top. They make soft top specific cleaners and conditioners you can get for your Jeep Soft Top. Make sure to keep your top as clean as you do your body and under carriage during the winter months especially if you have salt on the roads. Then at the end of winter make sure to do a good thorough clean again of your top.

## 7. Emergency Winter Road Kit to Have In Your Jeep

We talk about our Emergency Recovery Kit all the time for going on Jeep adventures. Your winter emergency kit is going to have some additional items that are winter-specific.

You do not want to be stranded out in the winter weather and temperatures without your emergency road kit. You never know when something could happen! Plan ahead so you have it and hopefully do not need it.

Just because you have a new Jeep does not mean something could not happen that would cause you to be stuck on the side of a road or on a wintry back road with a dead Jeep. (That means no power and NO HEAT) This is when preparedness makes a crucial difference! Below is a list of must have items in your Winter Road Kit, but you can add more items as well.

I suggest getting a nice quality duffel or large bag with a zipper for some items to keep it in the back all together. For the Jeep specific Items, I recommend storing it in your bottom hatch in the back or in a separate bag. That way fluids and such do not accidentally end up on other items.

## 8. A Winter Add On for Your Jeep

Did you know that you can add on a Block Heater plug to your Jeep? Just like the Diesel Trucks, you can plug your Jeep into a regular power outlet once you add the Block Heater plug.

Why would you want to do this? The low amount of heat that the plug creates allows your block to stay warm so that you do not have a cold start. It will also help keep your fluids from freezing as another added bonus. You can get this addition from your local dealership.

No matter where in the country you live, everyone can get lower winter temperatures. Winter it is a time to spend a little extra time preparing and taking care of your Jeep. Preventive Maintenance is the KEY to a happy and healthy Jeep all year long!

The next step to Jeep Education is waiting for you at [www.ladyjeepers.com](http://www.ladyjeepers.com) Join me on this Trail to Education together. Take the wheel and drive your knowledge with me.

# • PostRide •

## Checklist

When you get back from your Trail Ride or an Event Weekend it is just as important to perform your Post Ride checklist as it is your Pre-Ride Checklist before you head out down the trail.

### **Always wash your vehicle**

That means dirt, dust, mud, sand from the under carriage and the parts of your Jeep. Leaving "left overs" from your Trail Ride on your Jeep can cause quicker wear down and damage to your crucial parts and pieces.

### **Check for any damage**

Exterior body of your Jeep, panels and look at your under carriage very carefully! This also includes your suspension parts, steering and getting under your Jeep to inspect it.

### **Inspect Your Recovery Gear**

Look over straps, tree savers, D-Rings and all your recovery equipment. Make sure it is clean and in good shape.

### **Flush Your Differential**

If you rode in water and mud this is something to put on your list after you get home from your ride. Especially if you had mutliple water crossings or a lot of mud holes.

### **Make sure your interior of your Jeep is cleaned out**

Nothing worse than trail snacks finding there way under a seat.....

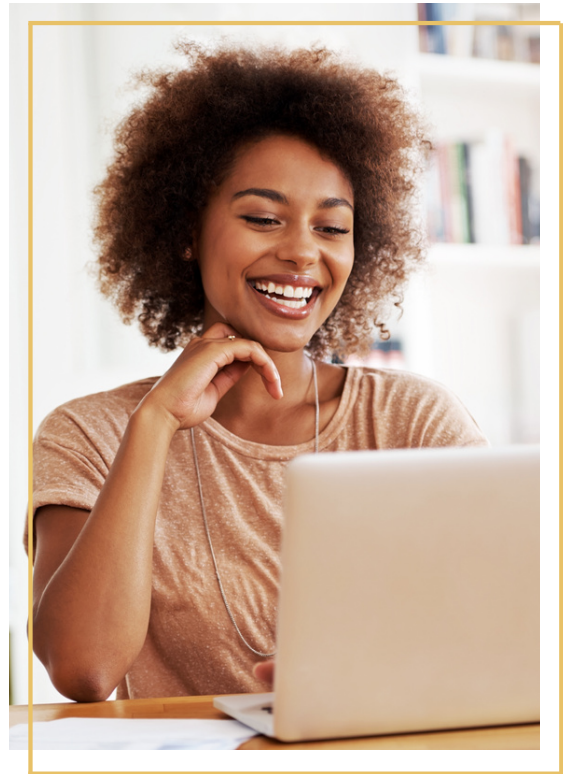
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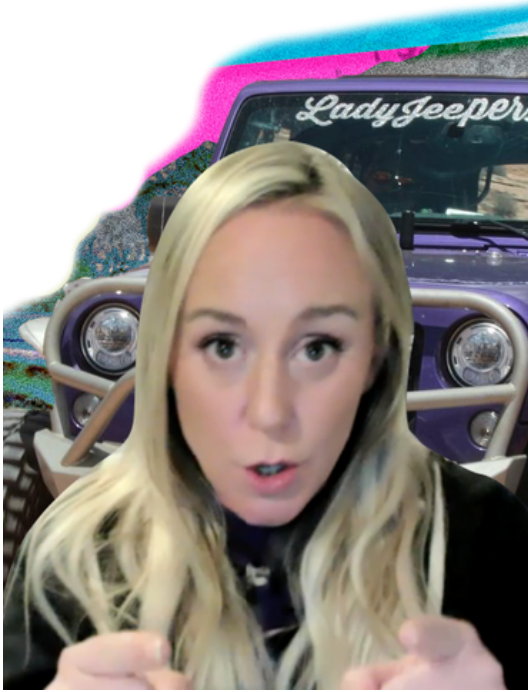
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I help Lady Jeepers (women who own Jeeps) to safely enjoy their Jeeps on the trail and customize/design their Jeeps so that they confidently create a life of adventure without fear.

We do this using our Confident Trail University™, LadyJeepers Camp, Adventurers Club, classes, in-person events and private consultant/concierge services.



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The New Jeep Owner looking to get out on adventures while keeping their Jeep safe.

All the way up through experienced Jeep owners looking to create an intermediate or advanced trail rig.

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I would love to talk with you and help put together your personal educational path. From online courses, Live Classroom, Private coaching, concierge done for you and exclusive private event weekends...we have something for you!

*Kristin*