# **GUIDE FOR THE**



GET TO KNOW YOUR JEEP, UTILIZE YOUR CAPABILITIES, UNDERSTAND YOUR UPGRADES, AND SAFELY HEAD OUT ON THE TRAILS FOR YOUR JEEP ADVENTURES.

LADYJEEPERS.COM

Welcome to the New Jeep Owner Guide

### THE BEST PLACE TO START GETTING TO KNOW YOUR JEEP.

### Congratulations!

If you're a new Jeep owner, congratulations! You've made a great choice in vehicles and now it's time to learn a little bit more about your new Jeep.

Your new Jeep is an adventure waiting to happen. But before you hit the open road, it's important to get to know your Jeep. This is especially true before you start to modify or make upgrades to your new Jeep.

This book has the information to get you started with a plan.

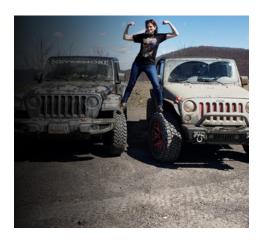
Your Jeep can take you on adventures, give you the feeling of freedom and so much more.

It can also add stress and frustration if you don't have a solid understanding of your Jeep.

This Guide will help get you on the right track.

Disclaimer: Taking your vehicle off-road and trail riding has inherent risks. LadyJeepers.com follows industry standards in education, etiquette, and driving while off-road. LadyJeepers.com cannot guarantee there is no risk including damage to your Jeep, breakage of parts, mechanical failures, fire, or personal or bodily harm. You acknowledge and assume all risks.





### WHY DID YOU BUY A JEEP?

- ✓ You bought a Jeep to find adventures, get out and live life to the fullest.
- To give yourself the opportunity to turn off your phone & get away!
- No longer be a spouse, mother, boss, employee, caretaker, fixer, responsible, the answer keeper, a rock or perfect.
- A place to be YOU and find that YOU that needs to shine through!

Jeep adventures can be tons of fun!





The fear of damaging a HUGE financial investment, figuring out how to get to work if your daily driver is down....

or Worse...

The cost to fix your Jeep or you getting hurt can stop you in your tracks before you even get to head out on an adventure.

These are all REAL and VALID fears!

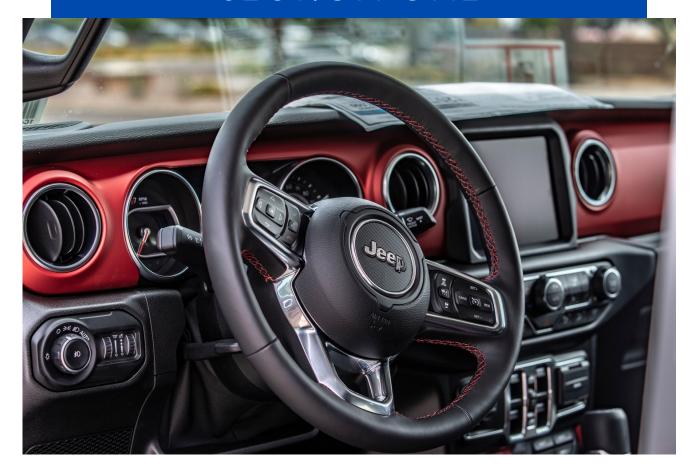
I believe the freedom, adventure, memories and the ability to truly live a life you love is crucially important.

You do that with the confidence and knowledge to keep yourself and your Jeep safe.

Part of the entire Jeep adventure is about chasing dreams and creating memories.

Adventure awaits....Let's get started together.

### SECTION ONE



A Clear Understanding of your Jeep.



### Know your Jeep By The Year and Model

Going through your Factory Build Sheet specific to your Jeep is the most accurate way to get information.

I want you to understand what the factory specs available for different generations included.

These are FACTORY specs and OPTIONS that were or are available from the Factory.

Remember you will need to look at your Jeep as aftermarket packages and upgrades were available direct from the factory.

This is just an overview to help highlight the options that you could have.

These Jeeps are harder to find still in stock form with no modifications made to them.

#### TheCJ-1954-1986

The CJ came stock with a Dana 30 front and an AMC 20 Rear when they were produced. They came stock with a 3.54 or 4.09 gear in them.

#### The YJ -1986- 1995

The Yi came with a Dana 30 Front and Dana 35 Rear. The most common gear is the 3.54 but it did come in a 3.73 or a 4.10 but the 3.54 was the most common.

#### The TJ 1997-2006

The TJ came with a Dana 30 Front and Dana 35C Rear.

The TJ RUBICON came with Dana 44 Front and Dana 44 Rear and 4.10 Gears equipped with selectable Lockers.

**The LJ 2004 - 2006** was the longer version of the TJ. They came with a Dana 30 Front and a Dana 44 rear.

The LJ Rubicon came with the Dana 44 Front and Rear. The Rubicon came with 4.10 gears.

#### The JK/JKU - 2007-2018

The JK/JKU came with different options based on what model you got as well as if you upgraded your order from Jeep.

Make sure you know your particular Jeeps Spec's and Factory Build Sheet.

Most of the JK/JKU came with a Dana 30 Front and Dana 44 Rear. (Check your factory sheet as the stock specs differ from Jeep to Jeep in the JK/JKU generations. You could upgrade some of the models if you ordered one.

Most came factory with the 3.21 gears but you could upgrade to the 3.73 and if you got the added tow package you got the 3.73. The Rubicon came stock with the Dana 44 Front and the Dana 44 Rear. The Rubicon came with a selectable locker front and rear as well as 4.10 gears and 4:1 transfer case.

If you order gears for your JK/JKU make sure to tell them you have a JK Generation to get the correct gears.

#### The JL/JLU - 2018 - current

**AXLES-**

They have their own 3rd generation straight axles under them. They are not exactly comparable to the earlier Dana 30 or Dana 44. They are their own axle with different specs.

The Rubicon has a 3rd generation Dana 44 wide axle with selectable lockers. This gives you an almost full-width axle and 1.5" wider than the other JL axles and 2.5" wider than the JK axles.

ALL JL models (the 392 being an exception) have the Front Axle Disconnect on them. It is automatic, so when you are in 2-wheel drive the front axle disconnects and when you are in 4-wheel drive it connects.

#### The JL/JLU - 2018 - current continued

This is an upgrade from the technology of the vacuum disconnect that they had on the early YJ generation.

The Sport and Sahara as well as the Moab addition have the automatic 4-wheel drive option so it increases the handling on the road.

The build process for the JL generation is still very similar to the JK/JKU generation though there are some differences. Such as the lift height required for bigger tires is less. The width is different on the JL/JLU as well as the transmission is significantly different in the JL/JLU.

If you order any aftermarket parts or upgrades you need to make sure they are for your year and generation Jeep. This is crucial when ordering aftermarket differential covers!

Remember when ordering gears you need to tell them it is JL/JLU gears. As we cover the axle-to-gear ratio even though you have a new generation axle your spec's will still be very close to what we have put together below.

Gears - the sport, Sahara and Moab came factory with 3.45 gears. The Rubicon came with 4.10's but the Xtreme Package changes the gears to a 4.56 option as of early 2022.



I always want to share everything that I can with you. This section is about bringing the facts forward and understanding YOUR Jeep for YOU.

You need to be clear on what you have and understand how your Jeep is right now.

Especially important before making modifications or building your Jeep.

#### **PLUS**

It gives you the confidence in knowing YOUR Jeep for all applications if you ever need it.

I want to help break through misinformation and confusion.

Welcome to the Jeep, JL/JLU information you can trust class. This specific class is going to be geared towards questions that have come up regarding the JL/JLU. Don't worry if you do not own a JL or JLU, this is important information that I want you to have. It is time to stop searching for information for a minute.

I want to help you get the most out of your vehicle. I want to help you explore your world and see everything that's out there waiting for you. The correct information is key. It's hard to know whom to trust when it comes to getting information about your Jeep.

There is so much misinformation. Yep. Even on Google that it's hard to know what's true and what's not true. We are going to get specific. We will break through, and share the most important, and correct information.



Why am I doing this section?

I want to help break through misinformation and confusion because there is a lot of confusion out there online. Especially if you Google search. Some of the first information that pops up is incorrect.

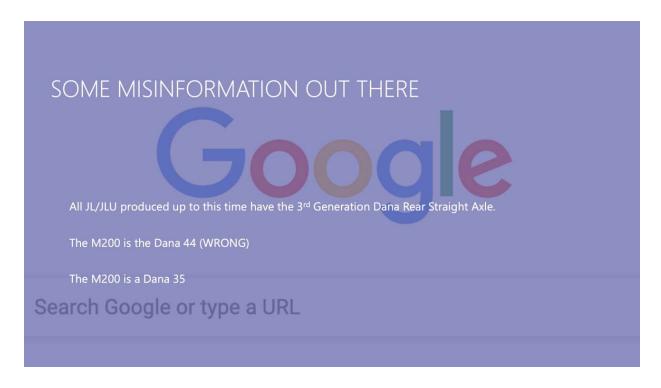
When I was looking up different information, I was shocked when you Google search that the first thing that pops up is misinformation. You need to be clear on what you have and understand how your Jeep is right now. This is especially important before making modifications or building your Jeep. Plus, it gives you the confidence in knowing your Jeep for all applications if you ever need it. As we get started today, I want you to remember that we are here to educate, get to the bottom, and understand the JL/JLU together.

My intention is not to say anything negative about any Jeep, any generation, or Jeep itself. There's no good or bad. This is strictly about information. Keep that in mind as we go through this information. I want to make sure that you have the best information possible.



I'm not saying I know everything. I am always honest with you. That is important to me. I will tell you if there is something that I don't know. I will do everything that I can to find the answers for you. I'm bringing forward to you that which I do know. The goal is this section with help you learn a lot more.

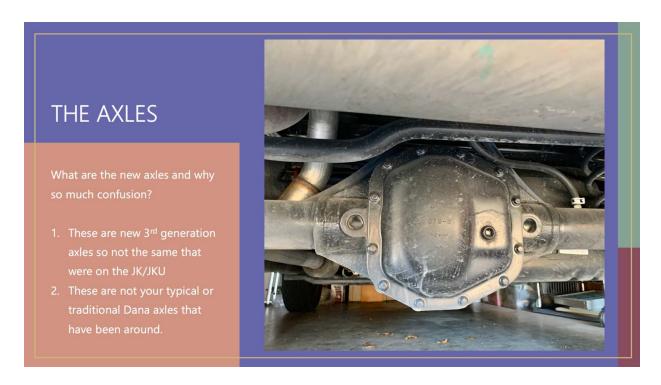
Knowledge is important. The more you know about multiple and different types of Jeeps, the more educated you are. This is great information to have in your arsenal. Especially since there are so many questions, so much confusion, and so much misinformation as we were talking about the JL/JLU.



There is some misinformation out there. I did a Google search. Here are some of the things that came up on Google. These are wrong. That's part of this section. We are going in-depth into the axles because this is a huge misconception. When I put in "what is the M 200 axle" this popped right up. The M200 axle is the Dana 44. That is wrong. Why am I sharing the wrong information? Because I want you to understand there's a vast amount of it out there. The M200 is a Dana 35 equivalent. (Sort of) That is misinformation.

The axle is the largest place of confusion and misinformation out there. What are the new axles and why is there so much confusion around these? One, these are new. The JL/JLU axles are third-generation axles. They are not the same as what was on the JK/JKU. They're not the same as any other axles that have been produced by Jeep. That's why they are the third generation.

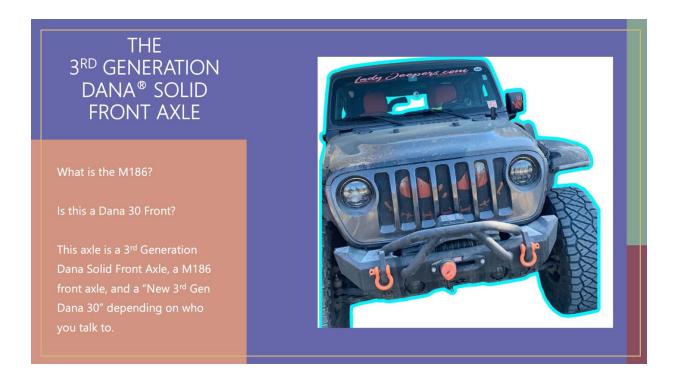
These are not your typical or traditional Dana axles that have been around for years. There are differences. Some things have changed. We are going to look at these as new axles. We are not going to look at these as the old-school, traditional axles. We're going to look at these as something different.



We can start with the third generation, Dana solid front axle. All JL/JLU front axles have the new electronic axle disconnect. Why are they doing this? Honestly for fuel economy purposes. They had to come up with ways to change fuel economy and emissions. That is why the front axle has the electronic axle disconnect. It is not the vacuum. They used to have the vacuum disconnect back in the YJ.

What the axle disconnect is? It automatically disconnects the front axle in 2 Wheel drive. If you look at your front axle, it's a solid front axle, but it looks like there's a little box. That box takes the two axle shafts and connects them in 4 Wheel Drive and then disconnects them back into two separate pieces in 2 Wheel Drive.

That is new. It does it on its own. When you put it in 2 Wheel drive, it is going to electronically disconnect. In 2 Wheel Drive, it's no longer one solid axle shaft. What that does is that keeps the ring and pinion gear from spinning. If we look at the JK/JKU axle, it's a solid front axle. This means that even though there's no power being sent to those front wheels, there is still rotating mass, and everything in the front axle housing and differential are still moving. That's a lot of drag and extra weight that is being put on the Jeep.



What is the M186 axle?

If you have a JL/JLU or have looked at one, you're probably asked about the M186 axle.

Why are you seeing different names for the same axle?

The 3rd Generation Dana solid front axle, the M186 or the "new generation Dana 30".

The 3rd Generation Dana solid front axle is what comes on all models except for the Rubicon's and some of the special additions and upgrades that change the front axles in the other models.

For lack of confusion, we are going to say, the M186 or 3<sup>rd</sup> Generation Dana Straight Axle, comes standard on all the models, except for Rubicon's. You have a different axle if you have the Rubicon, the 392, or the Rubicon Recon package. We are going to talk about that next.

You are looking to re-gear your JL/JLU or get an upgraded differential cover. You go online to order, and you have a 3<sup>rd</sup> Generation Dana Solid Front Axle. The options are for an M186 on the website.

Wait, what?

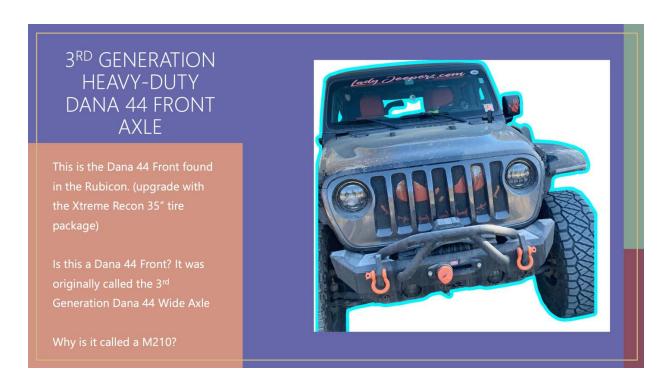
No, it's printed right here on my sheet. I have the 3<sup>rd</sup> Generation Dana Solid Front Axle.

What is the M186? It is referencing the ringer size. The M186 is the ring gear size in terms of millimeters. The new generation has gone metric instead of inches. That is another change that you're seeing with these 3<sup>rd</sup> Generation Dana axles.

Is this a Dana 30 front?

This is a hot topic right now! It is not the Dana 30 of the traditional Dana 30. This is its own new breed axle. A traditional Dana 30, that we've seen before in other vehicles, has a ring gear that measures 7.25 inches. The new 3<sup>rd</sup> Generation Dana solid front ale, or M186, ring gear measures 7.32 inches. They are very similar.

If you're comparing the M186 axles to what we had previously, the closest comparison is a Dana 30. But technically this is an M186 or a 3rd generation Dana solid front axle. This is where it gets confusing, depending on whom you talk to.



The 3rd Generation Heavy Duty Dana 44 Front Axle -

Now let's look at the 3rd Generation heavy-duty Dana 44 front axle. Again, this is the 3rd Generation axle, and yes, it is a Dana 44, but it is still the new 3rd Generation Dana 44. It is not the same as the traditional Dana 44. There are differences.

It is wider than the JK/JKU Rubicon. The new 3rd Generation Dana 44 started as a Dana 44 wide axle. Now you are just seeing it from Jeep as a 3<sup>rd</sup> Generation heavy-duty axle. It is like the Dana 44 axle in the JK/JKU, except it is 68 inches wide. That is two and a half inches wider than the JK/JKU Dana 44 axles.

That's a big difference. These new axles also have the same front axle disconnect on ALL the new 3<sup>rd</sup> Generation Axles, except for the Rubicon 392. (That has its own specs and a different setup.)

You may hear this axle referred to as an M210. The M210 is referring to the size of the ring and pinion gear in millimeters. If you call about re-gearing your Jeep, they might say you have the M210. Same new axle just with two different names.

#### THE REAR AXLE

- \* 3rd generation rear straight axle (M200)
- 3rd generation Dana HD rear 44 (M220)
- 3<sup>rd</sup> generation Dana 44 Heavy Duty Wide Rear Axle (not this name anymore on the Rubicon)



The rear axle is a 3rd Generation brand new axle and is different from the previous Jeep axles. The 3rd Generation rear Dana straight axle, the 3rd Generation Dana HD rear 44 axles, and the 3<sup>rd</sup> Generation Dana 44 heavy duty wide rear axle are the three rear axle types. There's a multitude of names for the same axles.

Let's start talking about the rear axles themselves. Just like we talked about in the front axles, in the rear axle you will hear different names for these. The 3rd Generation rear Dana straight axle is also referred to as the M200. The reason is that is referencing the size of the actual ring and pinion gear.

Then you have the 3<sup>rd</sup> Generation Dana HD, which is a heavy-duty rear 44 axle. This rear axle is also referred to as the M220. When the JL/JLU came out the Dana 44 was called the Dana 44 heavy-duty wide axle in the Rubicon.

What rear axle comes in what model and how do you know?

Here comes the confusion. Different optional packages would change what axle came from the factory in the Jeep.

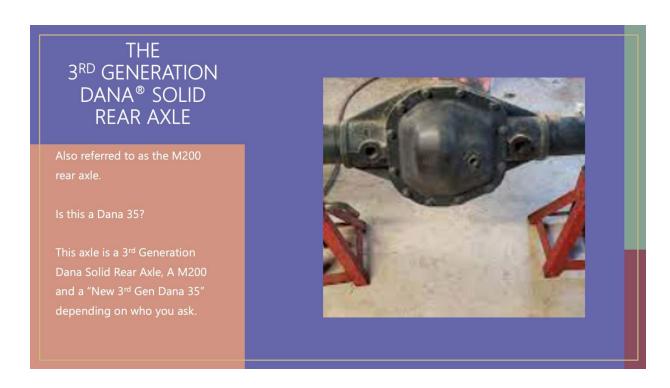
Because the optional packages would change the axles, we go in-depth in the Factory Build Sheet Section into this question. There we go step by step and determine what you have.

For this section, we are going to stay focused on what the different axles are, the names, and what the names mean. Jump to the Factory Build Sheet section to go in-depth into what axle your Jeep has.

The misinformation.....

ALL JL/JLU's produced came with the 3<sup>rd</sup> Generation Dana Solid Rear Axle. This is INCORRECT! Not every Jeep came with that rear axle! Optional packages changed what axle came in your Jeep.

Rubicon's all came with the 3<sup>rd</sup> Generation Heaty-Duty (HD) Rear 44 axle. TRUTH



A Look At The 3rd Generation Dana Solid Rear Axle –

If you got the manual sport or the optional upgraded limited slip, you should not have this axle.

\*\* Reference the Factory Build Sheet Section to go in depth. \*\*

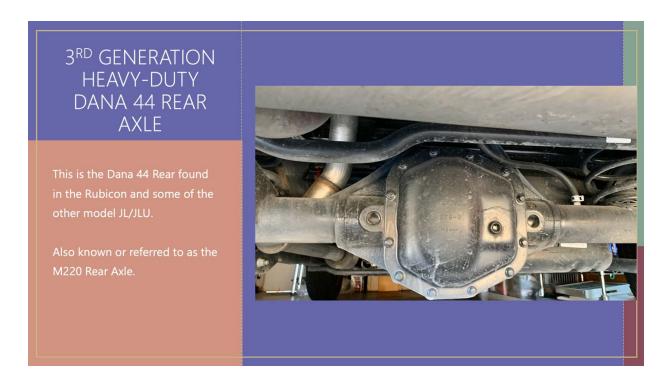
The next question is this a Dana 35?

You're going to hear that a lot. This is where confusion and misinformation come in as well. You may hear people call this the "3<sup>rd</sup> Gen Dana 35", but this is not the original Dana 35. It is its own 3<sup>rd</sup> Generation axle. It is important to understand because there are differences that play a big part in the two axles.

When you look at this 3<sup>rd</sup> Generation Dana solid rear axle, it comes with a ring gear that measures 7.87 inches. A traditional Dana 35 has ring gear measurements of 7.62 inches. There is a difference in the actual size of your ring gear in this 3rd Generation axle.

This is not a Dana of 35. Other upgrades have been made. It's lighter. It's stronger. It does not have C clips anymore.

The 3<sup>rd</sup> Generation Dana Solid Rear Axle is also referred to as the M200 rear axle because of the actual millimeter size and reference of the ring and pinion gear.



The 3rd Generation Heavy-Duty Dana 44 Rear Axle –

Different names for the same axle depending on when you purchased your Jeep. It might be called the 3<sup>rd</sup> Generation Heavy-Duty Dana 44 Rear, the M220, or the 3<sup>rd</sup> Generation Dana 44 Wide Rear Axle (if you bought a Rubicon) in 2018 or 2019. It also is the 3<sup>rd</sup> Generation HD Dana 44.

The Rubicon and some of the other models, depending on the optional equipment, have the 3<sup>rd</sup> Generation Dana 44 Rear or M220.

This axle is wider than the JL/JLU Dana 44 axle. The housing is thicker as well.

The most asked question is "How do I know what is in my Jeep."

\*\* The Factory Build Sheet Section Goes In Depth \*\*

# WHAT OPTIONS PLAYED A PART IN WHAT REAR END YOU HAVE?

- **Manual Transmission** = 3<sup>rd</sup> Generation Dana Front Straight Axle (M186)/ 3<sup>rd</sup> Generation Dana HD 44 Rear Axle (M220)
- Auto Transmission = 3<sup>rd</sup> Generation Dana Front Straight Axle (M186) / 3<sup>rd</sup> Generation Dana Rear Straight Axle(M200)
- Auto Transmission with Anti-Spin Differential = 3<sup>rd</sup> Generation Dana Front Straight Axle (M186)/ 3<sup>rd</sup> Generation Dana HD 44 Rear Axle (M220)



A super quick overview of the common axles based on the packages on the Jeep.

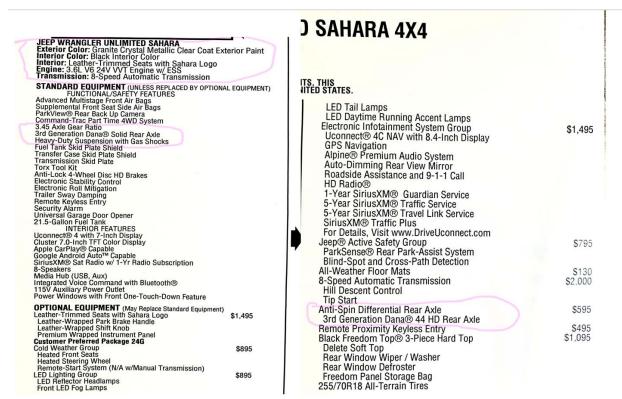
If you have a manual transmission, you have the 3rd Generation Dana front straight axle. Or the M 186. In the rear, you have the third generation Dana HD 44 rear axle. Or the M220.

Different option packages that you got, or the dealer got are what determine the reasons one Jeep got one axle and one Jeep got another axle.

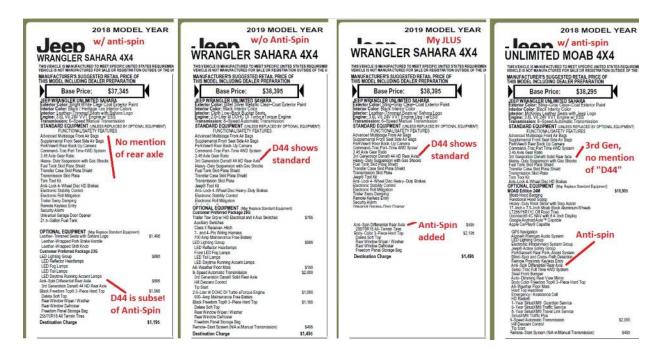
We're going to talk about that for a minute. I notice confusion as the manual transmission is a standard option. An automatic transmission is an upgrade or an add-on option. If you got the manual transmission, you should have gotten the 3<sup>rd</sup> Generation Dana HD 44 rear or M220. If you got an automatic transmission, you have the 3rd Generation Dana front straight axle or the M186 and then the M200 rear.

If you got an automatic transmission with the limited slip or the anti-spin differential, you have the 3<sup>rd</sup> Generation Dana HD 44 rear axle.

The photo outlines the Standard Equipment and shows the 3<sup>rd</sup> Generation Dana Solid Rear Axle. In the Optional Equipment, it shows the Anti-Spin Differential Rear Axle added that changes that axle to the 3<sup>rd</sup> Generation Dana 44 HD Rear Axle.



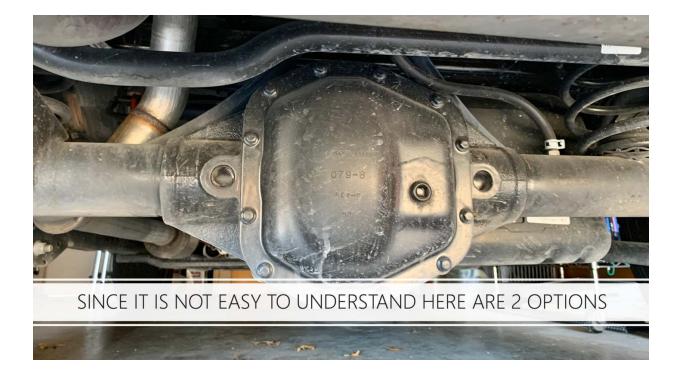
Below is an example of window stickers in different years and models with the axles highlighted for you.



You can also see how confusing the window sticker can be. On the Moab model for example it does not show the axle upgrade with the Anti-Spin upgrade as it does on the window sticker for the Sport.

Don't worry we dive into how to know EXACTLY what is on the Jeep in our next Section together.

How in the world do I know what axle I have?



There are two options to understand what axle you have in your JL/JLU.

Option 1: The Drain Plug Locations

THE DRAIN
PLUG FOR THE
DIFFERENTIAL
ITSELF.



You will need to look for the differential drain plug on the differential housing. Locate the drain plug and you can determine the axle.

In the 3rd Generation Dana straight axle rear or the M200, the drain plug is in the center at the bottom of the housing and facing down to the ground.

In the 3rd Generation Dana HD 44 (M220), the drain plug is on the side. It's still on the bottom, but instead of the direct center, it's on the side and it's pointing out.

ON THE M200, THE DRAIN PLUG IS CENTER AT THE BOTTOM OF THE HOUSING FACING STRAIGHT DOWN.



ON THE D44, THE DRAIN PLUG IS ON THE SIDE OF THE BOTTOM FACING TO THE SIDE.



A quick gear overview for the JL/JLU.

A non-Rubicon and non-special edition has the standard 3.45 gear ratio.

The Rubicon came standard with the 4.10, but there is a downgrade option to the 3.73 gear set based on motor choice. There's also an upgrade to 4.56 with the Rubicon Recon upgrade package.

We can't say every Rubicon has 4.10 gears in the JL/JLU generation Jeeps.

### **GEARS**

### Non - Rubicon & Non "Special Editions" • Standard 3.45 • Upgrade Option of 3.73

#### Rubicon

- Standard 4.10
  Downgrade option of 3.73 (based on motor choice)
  Upgraded 4.56 with the Recon Upgrade Package



The JL/JLU Jeeps have different options, packages, models, editions, and more based on the specific year.

Do your homework to know your Jeep. This is a starting point in understanding the JL/JLU.



# You know that the factory Build Sheet is your best friend.

It's packed with information about your Jeep, and it can help you determine what kind of parts are compatible with your Jeep.

If this sounds like gibberish to you, don't worry! We are going to work through this right now.

# Get your Build Sheet <a href="https://ladyjeepers.live/build-sheet">https://ladyjeepers.live/build-sheet</a>

This will give you the exact platform and way your Jeep Started out from the factory.

How can you use the factory build sheet now?

You know your Jeeps platform if no changes were made.

Such as...

If the axles are stock and have not been upgraded with different axle shafts, trusses, or a complete aftermarket axle.

You know what gears your Jeep came with and if your Jeep was not re-geared what gears would be in it.

# The starting point is the most important piece in putting together a successful build plan for your Jeep.

Throwing parts and modifications at your Jeep without a plan can lead to a lot of frustration and money in the long run.

This is **one of the most important places to start** before you even determine your overall build for your Jeep.

#### Today I want you to focus on;

- The axles in your Jeep
- The gears in your Jeep

#### I know there is A LOT in your Factory Build Sheet!

Specs, interior, exterior and more.

Don't worry I will give you some options at the end of this class on how to get all those questions answered if you still have more questions. Today we are focusing on the pieces we need for our My Jeep Spec Sheet which is the first piece in starting a plan on your Jeep build.

Use the My Jeep Spec's Worksheet and fill it out with your Factory Build Sheet.

\*\* The My Jeep Spec's Worksheet is at the back of this guide under the Worksheet Section. \*\*

Take your Factory Build Sheet and get started. It starts at the top with "standard equipment"

#### STANDARD EQUIPMENT

Look down through your standard equipment list and look for the following to fill in your My Jeep Spec Page.

#### Your Jeep Spec Page

- What Front Axle is in your Jeep?
- What Rear Axle is in your Jeep?

Start by looking at the Standard Equipment List.

Look down until you find the axles and circle, highlight or write them down.

#### Example from a Factory Build Sheet;

- Illuminated Cupholders
- Continental TPM Sensor
- 2.72:1 Selec-Trac Full Time 4WD Sys
- Dana M210 Wide Front Axle
- Dana M220 Wide Rear Axle
- \* Tru-Lok Front & Rear Axles
- \* Tinted Windshield Glass
- Front Door Tinted Glass

This is an example that shows this Jeep has a Dana M210 Wide Front Axle and a Dana M220 Wide Rear Axle.

It highlights looking in the Standard Equipment Section to see what you have inside your Factory Build Sheet.

Once You Identify Your Axles look and find your GEAR RATIO.

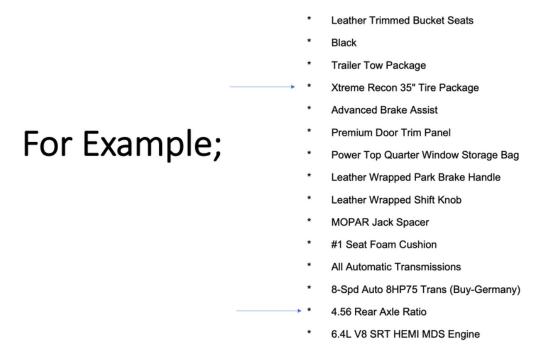
Start by going through the STANDARD EQUIPMENT SECTION and transfer the information onto your Jeep Spec's Worksheet.

Once you complete your Standard Equipment Section it is time to move to the OPTIONAL EQUIPMENT SECTION.

OPTIONAL EQUIPMENT is listed below the STANDARD EQUIPMENT

#### **OPTIONAL EQUIPMENT**

Look for axles listed, and differential listed in this section. This will show if anything changed in the Optional to change your axles and gear axle ratio.



Notice if the axle or gear ratio is different in the OPTIONAL EQUIPMENT. This will be the exact equipment you have.

The Optional Equipment basically overrides the Standard Equipment.

Different package options will also dictate changes from the Standard Equipment to the Optional Equipment. Some packages directly change your options in your Jeep.

#### FOR EXAMPLE;

The Xtreme Recon 35" tire package will change the gear ratio. This particular option has the 4.56 Gear Option.

This also changes the wheel and tire size with this package

You will notice on this Factory Build Sheet it says 4.56 Rear Axle Ratio. The differential gears have to match. You will have the same gear in the front and in the rear differential.

# Notice in the OPTIONAL EQUIPMENT if your Axles, Differential, or Gears changed.

Write down the Optional Equipment and know this is what is going on your My Jeep Spec Worksheet.

This is the equipment and specs on your Jeep.

## Why did I show you STANDARD EQUIPMENT & OPTIONAL EQUIPMENT?

- You understand how to read the factory build sheet.
- You know exactly what you have on your Jeep

Start looking up all the features and what you have on your Jeep. You can never too much about your Jeep.

Yours might say conventional Differential or Anti-Spin Differential.

Look for your Transfer Case and 4 Wheel drive system.

This one has the 2.72:1 Selc-Trac Full Time 4WD System.

(This means you can use 2 Wheel Drive, 4 High, 4 low, or an auto 4-wheel drive setting that at a basic level is like all-wheel drive)

The Part-Time 4WD System is the "traditional" with 2 Wheel Drive, 4 High and 4 Low.

# Spend the time to look through your factory build sheet and get to know your Jeep!

Some of this is fun to see what your Jeep has, what was added, or even the amount of gas that was added to your Jeep.

Spend the time to fill out your My Jeep Spec's Worksheet from LadyJeepers.com.

#### That will give you one sheet that has your starting point on it!

You have to know where you are starting first.

Having a specific plan to follow with a starting point and ending point is the only way to ensure success.

Imagine putting in a destination in your GPS but you don't have the starting place. You would not get a great turn by turn navigation.

### SECTION TWO



Advice On Modifications To Make



#### The Three Questions Every Jeep Owner Has Asked and The Real Answers.

I feel like Jeep owners are constantly faced with unanswered questions or worse, bad answers and bad information. It can be tough to find the right information when you're starting a Jeep build. Part of that reason is that there's so much information out there and sometimes it seems like everyone has an opinion on what you should do with your Jeep.

What are we going to talk about in this section?

I am here to help with a real answer breakdown and an approach to the three questions every Jeep owner has asked. I'm answering these most frequently asked questions about your Jeep build with clear, concise information. That is the most important thing to me as we are going through this. I want to make sure you're getting real answers, but they're clear. They're easy to understand and break those questions down for you.

The three questions that we are going to focus on are-

Question one. What size tire can I put on my Jeep?

Question two. What lift height should I get?

Question three. Do I have to re-gear my Jeep?

Before we jump in and get started, I want to start with a quick reminder.

Disclaimer - Some upgrades, modifications, changes, additions, repairs, and maintenance on your vehicle can void your warranty and vehicle insurance. Ladyjeepers.com does not advise anyone to make any modifications, or changes, or do their own work on their vehicle. Ladyjeepers.com advises all work, modifications, maintenance, repairs, and anything about your Jeep be done by a professional mechanic. LadyJeepers.com is not responsible nor liable for any changes, modifications, work, or repairs that you make to your Jeep. Ladyjeepers.com is not liable for any voided warranty on your Jeep, loss of insurance coverage on your Jeep, damage to your Jeep, complete loss of Jeep, and/or personal injury. Ladyjeepers.com advises you only to use a professional mechanic, and research your warranty and insurance yourself before any modifications or changes are made to your Jeep.

The key to getting the real answers to all three of these questions is having a place to start. This is the most important piece. I cannot give you real answers to these three questions until I ask you some questions so that we can all get clear. Then I can give you the right information for you. No Jeep build is the same. They're all different. They're all unique, just like we are as individuals. That's what's so exciting about building your Jeep If you have asked one of these three questions, I can't give you a real answer with the correct information until we have a good foundation. We're going to start with the end in mind.



What is your end goal for your Jeep?

Believe it or not, this must be answered before anyone can give you a real answer to those three most frequently asked questions.

This can change the longer that you have your Jeep and the more you do with your Jeep.

You might buy your Jeep and say, "this is only my daily driver and I have no intention of trail riding this jeep". That is a normal thought process. The longer you have your Jeep the more things can change. Your goal is not set in stone, but you need a good idea of your end goal for your Jeep before you ever make modifications to it.



- 1. Is this my daily driver?
- 2. How much on-road vs. off-road do you see yourself doing with your Jeep?

This can change the longer you have your Jeep, but you need an idea of what direction you are leaning with your Jeep.

I like to put together a percentage. An example: 80% daily driver and 20% trail riding. You need to come up with your percentage for your Jeep.

The reason to get clear on your percentage is that will dictate what direction you go with your modifications. If this is more on-road and daily driver you want to make sure all your modifications maintain the on-road manners and driveability. Or vice versa. You want more off-road performance, and the on-road driveability is not as important to you.

The great news is that you CAN have a daily driver and trail riding Jeep! A Jeep can be a double purpose and allow you to enjoy both aspects of owning a Jeep.

NO SURPRISES and the correct understanding of how to achieve that balance is the goal as we continue forward in breaking down these three questions.



### Question One - What Size Tires Can I Put On My Jeep?

This is the number one question that is asked the most. I see this question asked in groups, sent in emails, and asked all over social media.

Here's a basic rule, the larger the tire, the more changes, modifications, and upgrades you're going to have to make.



The bigger the tire gets, the more help you are going to have to give your stock parts and pieces. You need to help the mechanics underneath your Jeep.

For every tire size, you go up from stock on your Jeep, you're going to be adding more modifications.

Bigger tires = more changes.

Be prepared that as the tire size increases the list of changes also increases.

In your Jeep build, you are trying to create and maintain balance. You need the geometry and the mechanical balance to have the long-term longevity of your build. This is about creating a build that is going to have longevity, it is going to hold up, and it is going to last.

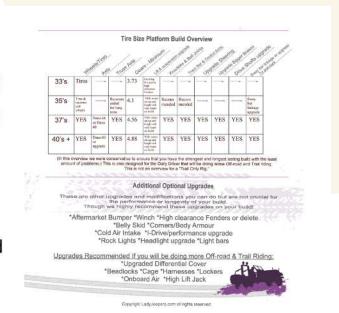
Everything that I share with you is about creating a long-term longevity plan for your Jeep. We want our Jeep to hold up and last as long as possible. My goal is that you don't end up spending money on the same parts and pieces more than once. There is nothing more frustrating than that.

Take a moment and think about a stock Jeep. It was built to the stock platform in assembly. That stock platform has parts and pieces that are going to function and mechanically work for that stock platform. The design is based geometrically on angles, and measurements, and everything is set up perfectly for your stock tire size. Straight out of the gate, from the dealership, you drive it off the lot, they are capable machines. Once we start to make changes that the initial geometry that was set up when that Jeep was stock is changing. When we start to make a change, with lifts, different tires, we're changing that geometry. We are changing how everything is going to work together. That means when we make a change, we need to look at it geometrically, and mechanically. How does that one change alter other things in our Jeep? What change will I have to then accommodate to make sure the Jeep keeps the same geometrical measurement angle, no matter the changes?

Some factors go into the changes required based on tire size choice. Let's start with this basic tire size platform overview. I want you to understand the changes that go with different requirements based on your tire size choice.

# Start with a Basic Tire Size Platform overview.

Understand the changes and difference requirements based on your tire size choice.



Looking at the chart it is easy to see that the changes required increase as the tire size increases.

For example, if you go to a 33" tire, you don't have to make many changes on your Jeep. If you go to a 35" tire you have more changes.



What size tire can I put on my Jeep?

Ultimately, the answer is not as simple as deciding on tire size and just putting it on your Jeep. You need to have room for the new tire size, but you also need to understand what goes with that choice long-term and ultimately.



### Question Two: What Lift Height Should I Get?

There's not a one size fits all answer to this question. Different upgrades and options as well as tire size determine the height that will be needed.

Fenders play a huge part in what lift height you are going to need to accommodate and make enough room for your new tire size.

If you off-road or want to drive on more trails upgrading the plastic fenders is a great idea. It gives you something more durable, especially if you go to an aluminum or a steel fender.

An aftermarket, high clearance fender, will allow for more room inside the wheel well for a larger tire. It adds that room in comparison to a stock fender. Most of that is due to the size of the fender itself. A high clearance fender does not extend down as low as a stock.

What does that all mean? You need less lift height based on the clearance the fender gives you.

Keep in mind that some states have different on-the-road laws for fenders. Look into your state laws before getting new fenders.

Another factor that directly determines the lift you will need is based on the generation Jeep you have. Every generation of Jeep is going to require a different lift based on the tire size you want to go with. Here is a basic overview guide based on the generations to get you started.

### **The CJ Generation**;

Stock height = 28", 29", 30" tires.

With fender trimming/aftermarket = 31" tires

2" lift = 32" tires

4" Lift = 34" tires

### The YJ Generation;

Stock height – 28", 29" tires

With fender trimming/aftermarket = 30" tire

2" lift = 30's or 31's with fender upgrades

4" Lift = 32's or 34's with fender upgrades

6" lift = 34's or a 35's with fender upgrades

The CJ and the YJ have leaf spring suspension vs. the coil spring starting in the TJ and newer.

### The TJ/LJ Generation;

Stock height = 28", 29", 30"

With fender trimming/aftermarket = 31" tires

2" lift = 31's or 32's with fender upgrades

4" Lift = 32's or 34's with fender upgrades

6" lift = 34's or a 35's with fender upgrades

### The JK/JKU Generation;

Stock height = 30" tire

With fender trimming/aftermarket = 33's (or 1" or 1.5" leveling kit.)

2" – 2.5" lift = 33's or 35's with fender upgrades

3" – 3.5" Lift = 35's or 37's with fender upgrades and wheel offsets

4"- 4.5" Lift = 37's or 39's with fender upgrades and wheel upgrades and correct offsets

6" lift = 39's or a 40's with fender upgrades and wheel upgrades.

### **The JL/JLU Generation:**

Stock height = 33's

1-2" lift = 35's (The JL/JLU Rubicon comes factory with a lift)

You can get the Xtreme Recon Package directly from Jeep. You get a 35" tire, gears, and lift directly from the factory.

Can you stick a bigger tire on your Jeep? You can. You will have interference when turning sharp or while off-road.



Question Three: Do I Have To Re-Gear My Jeep?

What does re-gearing do in a nutshell? Re-gearing in a nutshell takes the stress off the transmission and engine. It's going to change what RPMs you must be at, to move the Jeep. The gear and RPM you need to be in for acceleration, when going up a hill, or when you're going off the line, is what re-gearing changed.

Takes stress off of the transmission and engine.

Changes at what RPM you have to be at to move the Jeep, accelerate or gear and RPM you are in going up a hill.

Without Re-Gearing when recommended\* Slower off the line
\* "bogs" down going up hill and downshifts
\* More stress on the transmission

Without re-gearing when it's recommended, you're going to notice that you are slower off the line. If you're at a complete stop at a red light, you're going to notice it takes longer to get the Jeep going. You're going to notice it bogs down going up a hill. It feels like it's losing power. It doesn't have enough power to make it up the hill, and you might notice it downshifts and upshifts, and downshifts and upshifts because it can't find where it needs to be. Without regearing, you are putting more stress on the transmission of your Jeep to move the mass and the weight of the bigger tire.

What do the gear ratio numbers mean?

The deeper the gear ratio, the more Tlower end you are getting. The more "go" off the line, the more crawl in 4-the line, the Wheel Low.

3.73

4.10 4.56 5.13

The deeper the gear ratio, the bigger the number, and the more low-end you are getting. The more "low end" you have the faster you are off the line, or the more acceleration you have in 2 Wheel Drive. In 4-wheel drive, you have more "crawl" or lower crawl. You will notice that your top speed is going to decrease the deeper the gear gets.

Re-gearing to the correct gear ratio is going to help both on-road and off-road with your Jeep.

You want to help your transmission and motor as much as possible. Having the correct gear set for the tire size is one big way to do so!



The tire size and gearing go hand in hand. This is a minimum requirement. If you are going to spend the money to re-gear do not re-gear to the minimum requirement! Go one gear ratio deeper (or larger number). This chart shows the absolute minimum gear to have in your Jeep when you go to the new tire size. If you have stock 3.73 gears in your Jeep, you can put a 33" tire on without regearing. If you have a stock 4.10 gear, you can put a 35" tire on without re-gearing.

With that said, if you plan to have 35" tires, pay to re-gear to a 4.56. If you are going to have 37" tires, pay to re-gear to a 4.88.

You want your Jeep to be happy and maintain long-term with the tire and gear set.



The breakdown of The 3 Questions Every Jeep Owner Has Asked, is a place to get you started. There is a lot that goes into breaking down your Jeep build.

This section is a place to get you started, thinking, and understanding how to move forward in the best way possible with your Jeep build.

Take your time, put together each step, and plan your perfect build plan for you and your Jeep!



You want to upgrade and build your Jeep now, but you want to do it right and make the right choices.

You may have asked the question, what upgrade or modifications should I make or add to my Jeep?

Chances are, if you watched 20 videos online from 20 different people, all 20 would give you a different answer.

And how do you know which one is correct?

f you asked those 20 different people, they're probably bringing forward the right answers......just for different people.

They're bringing their experiences forward to you. They're giving you what is probably the right answer, which can be pretty confusing, right?

No worries. I got you. Inside this section, you get the truth on which upgrades you could make first. With an understanding of which is going to be the best for you.

I have a simple system that includes the most important questions to ask yourself. From there you get your individualized direction to start with so that you find the right answers for you. That is the most important thing.

That is why we are going through all of this. I want to make sure that you're getting the right answer for yourself, not for someone else. Not what is right for one of the 20 other people, but what is right for you.

There are way too many opinions on what the best Jeep upgrade is.

Some people say that tires are the best upgrade. Other people might say you need to do the lift kit and suspension first. Someone else might say skids and protection. Ultimately there are lots of different ideas out there.

Super overwhelming. I totally get it. Trust me.

I understand it can feel like a lot and here is the biggest key I want you to take away from this.

It is not the same for everyone.

Keep in mind that we are all in different places with our Jeeps. We have different Jeeps, different models, and different goals. We're gonna be doing different things with our Jeep.

There is no one answer that fits all.

The Jeep itself is so unique. We get to make it our own, put our own personality on it, and make it an extension of us.

Your best Jeep upgrade to do first is dependent on you and your Jeep.

That's why it is important to ask yourself a few questions first.

Question One- Is your Jeep, your daily driver?

This is the bottom line, the most important question.



Before you make any modifications or changes to your Jeep, you need to ask yourself, is this my daily driver?

Are you driving this every day? Are you reliant on this to get you to and from work, on vacations, pick kids up from school, or drop them off at sporting events?

**Question Two** - How much on-road versus trail riding or off-road driving are you going to do?

That is important to think about before you ever decide what changes to start making on your Jeep. Knowing that balance between daily driver, onroad, and trail riding will help dictate the type of modifications or upgrades you want to make. While ensuring you keep the desired result you want for your Jeep.

Are you going to be doing 50-50? You want it to perform 50% off-road, and 50% on road. Very great balance.

Maybe you want 60-40. That can be 60% off-road, and 40% on-road, or vice versa.

What is that balance? That balance will dictate what modifications, upgrades, and in particular, which parts, which manufacturer, and where to put the money?

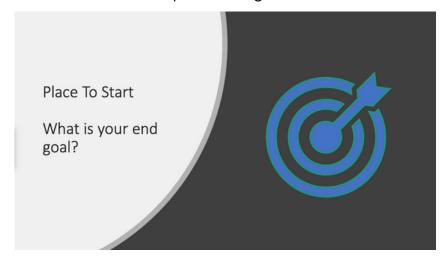
**Question Three** - What level and types of trails do you want to do with your Jeep?

You want to do stock, beginner-friendly, easy trails.

Or are you going to want to do intermediate trails and you want to push and see what your Jeep can do?

Are you going to be on sand, mud, rocks, or mountains? Is it flat? Is it dunes? Will it be in the forest?

What terrain are you going to be driving most likely or the most often with your Jeep? You need to know your end goal.



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When you start looking at different terrain types, how you build your Jeep is going to be different.

How you would build your Jeep for the porous rocks in Utah is not going to be the same way you would build your Jeep for the slick river rocks. As you decide on your goal you can start to get super-specific. If you're building your Jeep for rocks versus beach sand versus mud, there are differences there.

This plays a part in what upgrades you're going to make first, or that you want to make first.







# You can start with protection modifications or changes

You could start with protection, clearance, new tires, winch, bumpers, etc.

How do you decide which one is the right one for you?

Once you answered the three questions you need to look at what you need that you do not already have to safely work towards your goal.

I recommend starting with safety upgrades and modifications first.

Those can include;

- Bumpers
- Winch
- Aftermarket Differential Covers
- Skid Plates
- Body Armor
- Rock Sliders
- Corners
- Limb Risers
- and more

These protection upgrades are not going to change how your Jeep drives on the road and handles as a daily driver.

It does allow more protection and the safety ability to recover and take care of yourself should you ever need that.

Most people lean directly towards lift, wheels, and tires as the first upgrade.

Keep in mind a couple of tips before jumping in.

- This can change the on-road driveability and road manners of your Jeep.
- You need to have an understanding of what changing a tire size dictates to upgrade with it. The bigger the tire, the more changes and upgrades that need to be made.
- Have a build plan before you start making changes to tire size and stock components.

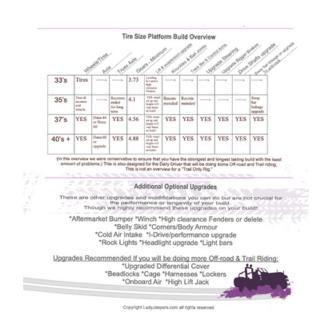


It is not as simple as deciding on a tire size and just putting it on your Jeep.

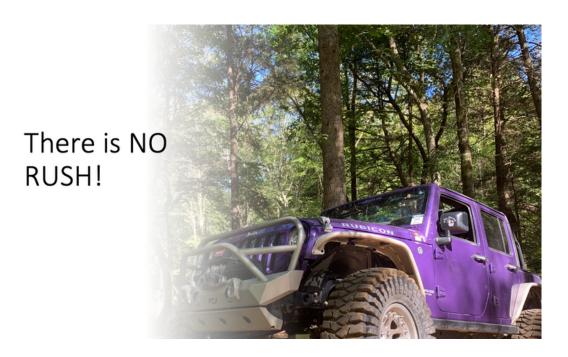
Have a solid understanding of how changing the tire size will change your Jeep.

From handling, off-road driving and modification list.

You want to understand completely what you will need to modify for each tire size before you jump in.



The key is the bigger the tire the more that has to change & upgrade to handle that new tire size.



There is no rush to make any changes to your Jeep!

In fact, the longer you drive your Jeep stock the better your long-term idea of what you want for your Jeep will be.

You get to make the choice of what to change first for you.

I recommend the following;

- Ask yourself the questions and be honest.
- Have a solid goal and direction for your Jeep. (It can change over time that is ok. This is a base starting point)
- Upgrade what will be the greatest benefit to start with. (Safety or protection for your Jeep. Winch and recovery to take care of you.)
- Go SLOW and don't rush into any decisions or changes.

You will be happy in the long run.



It is time to lay out your plan for your Jeep Build.

If you are not there yet or ready to design your plan, no worries! You can come back to this when you feel confident and ready.

Turn to the Worksheet Section in the back of this book and go to the "Tire Size Platform Build Overview" chart. This has a layout for you to follow.

Understand that each tire size dictates what modifications and upgrades you need to include on your Build Plan Worksheet.

Turn to the "Your Build Plan" worksheet and fill out this worksheet for your build goal.

Since you have your My Jeep Spec worksheet you know what changes you will need to make based on what you currently have on your Jeep.

Happy Planning!!

# SECTION THREE



Safely Be Prepeared To Head Out On The Trail

# 4 Biggest mistake 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 to 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.

### Prior to heading out down the trail;

- Air Down Your Tires
  - General PSI Guide
    - Non-beadlock or stock rims 16 psi
    - Beadlock rims between 7-10 psi
- Disconnect Your Sway Bar
- Make sure your gas tank is full
- Have CB or Handheld Radio on the correct channel
- Disconnect Your Sway Bar
- 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.

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.

# 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 Extinguiser

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.

# 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;

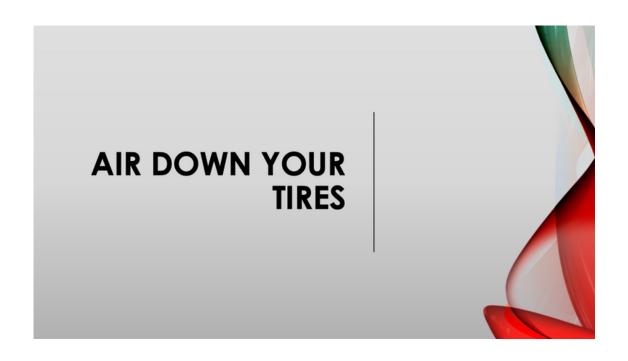
Air Down Your Tires

### 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.



### 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 change 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 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 stepby-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.

# How To Air Down Your Tires

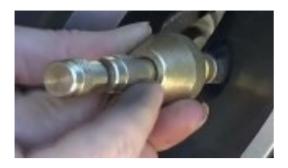
Time to move into using a deflator tool to air down your tires.

There are different tools available as a tire deflator tool.

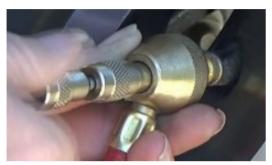
In this section we are going to go over how to use the ARB or equivalent deflator tool correctly.

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.





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 of 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?

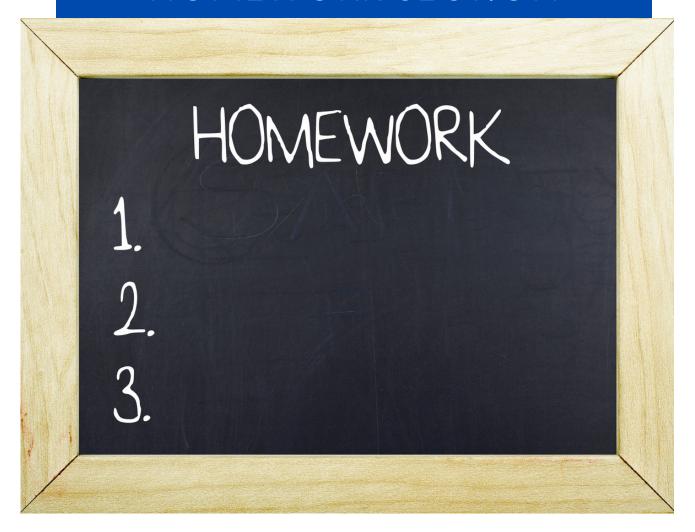
# Know Who You Are Riding With

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.

#### HOMEWORK SECTION



Your Homework

#### Now it is homework time!

- 1. Go to https://ladyjeepers.live/build-sheet and put in your Jeep Vin # to get your factory build sheet, specifically for your Jeep.
- 2. Open your Worksheet Booklet to the "My Jeep Spec" Worksheet. Use the information on your Factory Build Sheet and fill in your My Spec Worksheet.
- 3. Open up the My Jeep Build Sheet in your Booklet. Now it is time to work on your long-term plan for your Jeep. I know this can change over time but work on getting your thoughts into a worksheet.

(Need additional help or want this part done for you? Shoot an email at custserv@ladyjeepers.com and we can jump in to help answer any questions or have a "done for you" option.)

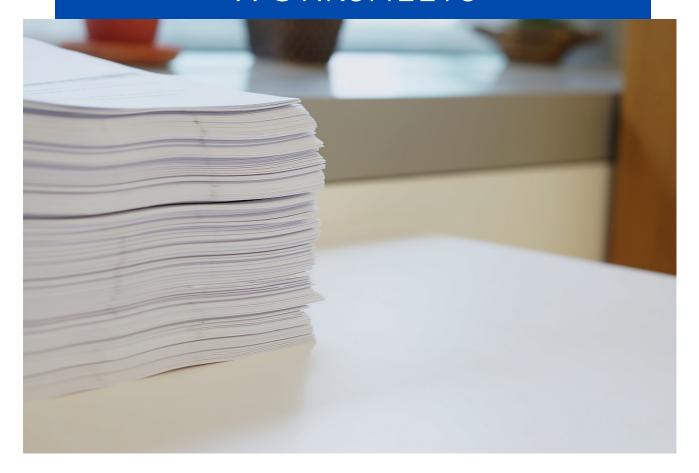
4. Once you have completed these Homework Steps, let us know in an email what your results and worksheets look like!

Email; custserv@ladyjeepers.com and you can even set up a quick 20 Minute Call with Kristin and go over this together. You can set up your quick homework call at https://ladyjeepers.live/schedule

Once you complete your homework you will have your plan. A starting point for your Jeep, and your end plan and build detail sheet.

Now you just need to fill in where you are and where you want to get to with this build plan. You have the steps and outline all ready for you.

#### WORKSHEETS



Your Worksheet Section



Year:	Make/Model:
Current Jeep Specs:	
Front Axle:	Rear Axle:
Trussed: Yes No	Trussed: Yes No
Differential:	Gears:
Wheel/Rim Size:	Tire Size:
Bumpers:	— Fenders: ———
Lift and/or type of suspension:	
Current Mods/Add on's:	
Get Clear:	
	cide what your long term goals for your jeep will be. e upfront and take your time to build your jeep once.
My Focus and Use for my Jeep Short Term	n:
My Focus and Use for my Jeep Long Term:	:
Are Financial's and Budget A Major Part of	f this Overall Build?

You can still have an end result Big Build on a Budget. It is how you get there and layout the build that then changes some. You don't need to sacrifice your dream build it just means you will need to build smart.

# Overview

#### Jeep Build Overview

There is so much to consider.....this is an overview of the beginning to decide your build based on tire size and upgrades you will need to make.

#### Axle And Gear

Axle	<u>Gears You Can Run</u>
Туре	3.21, 3.73, 4.10, 4.56
Dana 30	3.73, 4.10, 4.56, 4.88,
Dana 44	5.13 4.10, 4.56, 4.88,
Dana 60	5.13, 5.38

#### Keep In Mind:

A Rear Dana 35 you are better to upgrade to a different axle long term for cost and longevity. A Dana 60 Rear is not a ton rear end unless you get an upgraded like a Pro-Rock Dana 60

#### Tire Size & Axle/Gears

Tire	Minimum Gear You Should	Axle Type
Size	Run 3.21	Dana 30, Dana
Stock	3.73	Dana 30, Dana
33	4.10	44 Dana 30,
35	4.56	Dana 44 Dana
37	4.88	
40	5.13	30, Dana 44
42/44		Dana 44, Dana
		60 Dana 60 +
		Dana 60 +

#### Keep In Mind:

We are helping put together a long-term build design. The goal is that you will only build or modify/upgrade a specific part or gear one time. In the long run for a long term build this is the direction that you want to go.

# verview By Tire Size Platform?

Breakdown Guide for a Finished or Long Term Build Based on Longevity & Performance.

This quick reference guide gives you an overview of what upgrades you need to plan for your long term build. Based on Tire Size Platform. We believe in doing your build for longevity of parts and overall longevity of your build its self so you are not having to fix issues or parts due to breakage or not planning ahead. If you know and have on your plan all the long term upgrades then nothing is a surprise it is already on your Build Design Plan.

#### Tire Size Platform Build Overview

	Mee	ETITES AND	TUS	SE AXIE GE	ats Minitul	n Ysuspension	Trac	Joints Upp	id Ams	ade higher P	shakes lipgial	ak inkage or intirody
33's	Tires			3.73	Leveling Kit and/or high clearance Fenders							
35's	Tires & recomm end wheels		Recommended for long term	4.1	YES- exact set up and height will vary bases on build	recomm	ended				Sway bar linkage upgrade	
37's	YES	Dana 44 or Dana 60	YES	4.56	YES- exact set up and height will vary bases on build	YES	YES	YES	YES	YES	YES	
40's +	YES	Dana 60 or upgrade	ILS	4.88	YES- exact set up and height will vary bases on build	YES	YES	YES	YES	YES	YES	

(In this overview we were conservative to ensure that you have the strongest and longest lasting build with the least amount of problems.) This is also designed for the Daily Driver that will be doing some Off-road and Trail riding. This is not an overview for a "Trail Only Rig.

#### Additional Optional Upgrades

These are other upgrades and modifications you can do but are not crucial for the performance or longevity of your build. Though we highly recommend these upgrades on your build!

\*Aftermarket Bumper \*Winch \*High clearance Fenders or delete \*Belly Skid \*Corners/Body Armour \*Cold Air Intake \*I-Drive/performance upgrade \*Rock Lights \*Headlight upgrade \*Light bars

<u>Upgrades Recommended If you will be doing more Off-road & Trail Riding;</u>

\*Upgraded Differential Cover \*Beadlocks \*Cage \*Harnesses \*Lockers \*Onboard Air \*High Lift Jack

### My

#### Design Your Jeep

## Jeep Build

Now is the time to layout and design your Jeep Build. All the information that you need is in the 'Design Your Jeep Build' course and lessons. Everything is dependent on the different choices, platform and upgrades you make.

(If you get stuck anywhere jump back over to the lessons the course for explanations and design education.)

Platform Design	Order In Build	Finished/Completed
1. Tire Size Platform Design a. Tires b. Wheels 2. Axles Truss ? 3. Gears 4. Light Height a. Brand		
Modification/Upgrades for Build	Order In Build	Finished/Completed
1. Fender Type  a. Manufacturer  2. Bumper Design  a. Manufacturer  3. Winch rating & Type  4. Armor Type  5. Rock Sliders  6. Corners  7. Spare Tire Carrier  8. MISC  9. MISC		

## Design Your Jeep My Jeep Build Sheet continued

Remember this build is YOURS so make it your own! Take the time to design your overall build and what order you will go in. There is no rush in your build!

Performance Upgrades		
1. Steering Flatform		
a. Manufacturer		
2. Tie Rod		
3. Tie Rod Ends		
4. Knuckles		
5. Drag Link		
6. Steering Box		
7. Drakes Opgrade		
8. Performance Enhancement		
a.Type		
9. Misc		
	Ordor In Ruild	Finished/Completed
Modification/Upgrades for Build	Order In Build	Finished/Completed
Modification/Upgrades for Build  1. Tops	Order In Build	Finished/Completed
Modification/Upgrades for Build  1. Tops 2. Grab Handles		Finished/Completed
Modification/Upgrades for Build  1. Tops 2. Grab Handles 3. Seat Covers/upgrade		Finished/Completed
Modification/Upgrades for Build  1. Tops 2. Grab Handles 3. Seat Covers/upgrade 4. Harnesses		Finished/Completed
Modification/Upgrades for Build  1. Tops 2. Grab Handles 3. Seat Covers/upgrade 4. Harnesses 5. Roll Cage		Finished/Completed
Modification/Upgrades for Build  1. Tops 2. Grab Handles 3. Seat Covers/upgrade 4. Harnesses 5. Roll Cage 6. Head/tail lights		Finished/Completed
Modification/Upgrades for Build  1. Tops 2. Grab Handles 3. Seat Covers/upgrade 4. Harnesses 5. Roll Cage 6. Head/tail lights 7. Rock Lights 8. Light Bar		Finished/Completed
Modification/Upgrades for Build  1. Tops 2. Grab Handles 3. Seat Covers/upgrade 4. Harnesses 5. Roll Cage 6. Head/tail lights 7. Rock Lights 8. Light Bar 9. MISC		Finished/Completed
Modification/Upgrades for Build  1. Tops 2. Grab Handles 3. Seat Covers/upgrade 4. Harnesses 5. Roll Cage 6. Head/tail lights 7. Rock Lights 8. Light Bar 9. MISC 10. MISC.		Finished/Completed
Modification/Upgrades for Build  1. Tops 2. Grab Handles 3. Seat Covers/upgrade 4. Harnesses 5. Roll Cage 6. Head/tail lights 7. Rock Lights 8. Light Bar 9. MISC 10. MISC. 11. MISC.		Finished/Completed
Modification/Upgrades for Build  1. Tops 2. Grab Handles 3. Seat Covers/upgrade 4. Harnesses 5. Roll Cage 6. Head/tail lights 7. Rock Lights 8. Light Bar 9. MISC		Finished/Completed

## Your Next Step

#### LADYJEEPERS.COM

Are you ready to drive into even more education and knowledge?

The Confident Trail™ Educational Programs from LadyJeepers.com is your next step to growing your skills and being prepared for all aspects of your Jeep Life!

From getting started to building your Jeep there is a program waiting for you at www.ladyjeepers.com.



#### JUMP ON A WORKSHOP



Go through this in person!

<u>ladyjeepers.live/workshop</u>



MAKE SURE TO CONNECT

Join the Community with Other LadyJeepers www.facebook.com/groups/ladyjeeperscom

Check Out our Classes & More www.ladyjeepers.com

Send Us An Email custserv@ladyjeepers.com

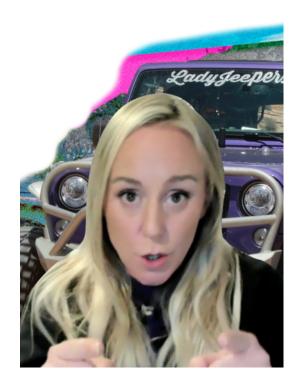
# Hi. I'm Kristin!

#### YOUR JEEP CONSULTANT & COACH

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<sup>™</sup>, classes, in-person events and private consultant/concierge services.





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#### WHAT YOU CAN EXPECT

The highest level of education and breakdowns of information available anywhere. All in a SAFE and SUPPORTIVE environment. A community of women coming together to encourage each other.



custserv@ladyjeepers.com www.ladyjeepers.com

facebook.com/ladyjeeperscom Instagram - lady.jeepers

#### GET IN TOUCH

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