Lady Jeepers.com

DESIGN YOUR JEEP BUILD

Everything you need to design and complete your build

Welcome To The 'Design Your Jeep Build' Course

Welcome to Lady Jeepers.com full 'Design Your Jeep Build' Training Course.

My goal is to help take the overwhelm and confusion out of understanding all the pieces of a Jeep build. There are different opinions, many options, and many aspects to consider. I have outlined everything you need to know and understand when it comes to your Jeep and your build, in a way that is easy to understand and follows a step by step approach. By breaking down all the information into details and seven different sections I made it easier to follow and understand while covering all the important information.

I want to save you money, frustration and help build your confidence through gaining knowledge.

Lady Jeepers.com was developed by a woman for women. This is one of the many Training & Educational pieces offered from Lady Jeepers.com. This program is an entire Jeep Life and Personal Empowerment Program just for Ladies! I believe it is time to Take The Wheel & Drive Our Lives.

Thank you for joining me on this journey!

Kristin DeLibero
Lady Jeepers.com Founder

Design Your Jeep Build

Workbook

LEGAL DISCLAIMER AND TERMS OF USE

This course and manual are a guide for you to help break down and simplify the build process. The information services and resources provided in this course are based upon the current industry environment, standards, part availability and current mechanical research. Because the industry, parts and products are constantly changing, the teaching and education in this course may also expand within time. We hope that the skills and knowledge acquired from this course will provide you with the ability to save money in the long run and lessen the stress and overwhelm of the build process. However, we cannot be held responsible for changes that may affect the applicability of these techniques and product information.

There is an inherent risk in anything related to driving or working on a motorized vehicle. We give you all the safety advice we can within this training, but we are not liable for any accidents, personal injury or vehicle damage that occurs based on how you apply this information. You assume any and all risks when driving or working on your vehicle.

While all attempts have been made to verify information provided, the author and Lady Jeepers.com, assumes no responsibility for errors, omissions, or contrary interpretation on the subject matter herein. The purchaser or reader of this publication and materials assumes responsibility for the use of these materials and information.

INTRODUCTION

Welcome to your Design Your Jeep Build Training Course Manual. This manual is designed to go hand in hand with the video and live training components in the Lady Jeepers.com full Design Your Jeep Build Course in the Membership training area.

Login – www.ladyjeepers.world

Once you are logged into your Membership account you are directed to the Members Home Page and will find the 'Design Your Jeep Build' Full Course listed in the middle of the page on the right side under BONUS MODULES heading. You can also navigate to the Foundation Modules Dashboard and go to the IT IS TIME TO BUILD module to work through this course as well.

To get the most out of this training and education I suggest you go slow. Do one section at a time. This helps you to retain the information that you learned and not go into brain overload. The great thing is you can come back to specific pieces at anytime.

Section One

Get to know your specific Jeep and your Jeep's specs before you begin the build process. This section focuses on the important parts and specs that are imperative for you to know about your Jeep. Knowing where you are right now makes it easier to make the decisions on where you what your end build design will entail.

BONUS Section One

*The stock specs overview by year and make of Jeep as a guide for you to use as you get started.

Section Two

Learn how the Tires, Axles and Gears all work together to determine your platform and foundation of your build.

BONUS Section Two

* Chart as an overview based on the tire, axle and gear formula

* Build overview based on tire size chart

Section Three

We dive into the after market Bumper and Fender options, as well as what the functionality of each option are designed to do.

Section Four

Wheels and Tires are like bread and butter. They just go together. The difference is understanding how to best blend these two together for maximum functionality. I go into technical teaching on the back spacing and off-set wheel spacing to allow the correct wheel choice.

BONUS Section Four

* Focused training booklet devoted entirely to the Beadlock wheel.

Section Five

Understand what lifts actually do for your vehicle as well as what height lift you want based on your personal build.

Section Six

There are stock parts that will need to be upgraded as part of your long term build. I want you to know every part and piece you need to have on your upgrade list for your build. No surprises down the road!

Section Seven

The fun part! What upgrades you can make to put your personality into your Jeep build. I work with you on your Jeep Build Design Sheet to map out your specific build.

Worksheets

- My Jeep Specs Worksheet
- Design Your Jeep Build Worksheet

Section One; Know Your Jeep Specs

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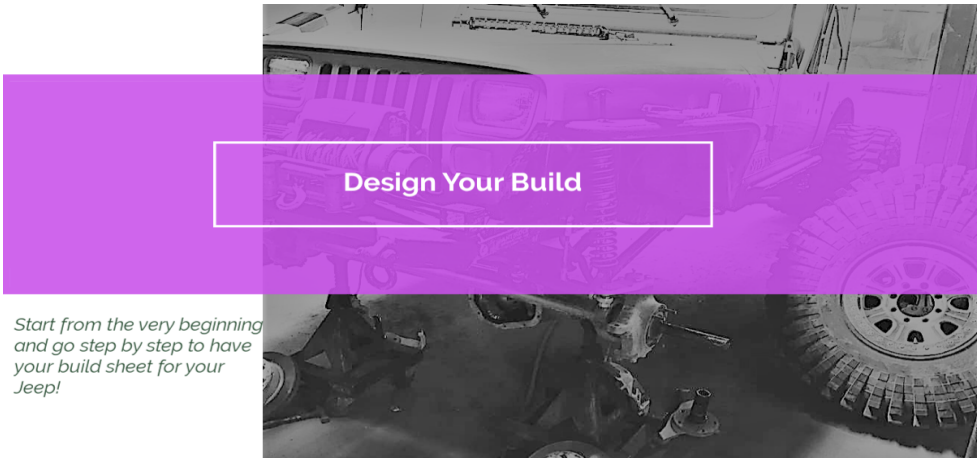

When we start talking builds, there's so much about a build to understand;
your current Jeep Specs,
where you want your build to end up when finished,
laying your build out,
and then all the pieces that go along with the build itself.

There are so many different pieces out there. Then there are so many different thoughts and ideas and opinions. So sometimes that can make it hard to know what direction to go, how to go and how to lay out your build. Then there is reasoning behind why people go different directions based on their build and what their opinions are. What we are going to do is start at the very, very beginning as we are talking about your Jeep Build.

We are going to go step by step through this process to help lay this out together.

I want to start with the first and the VERY MOST IMPORTANT aspect of your Jeep build. Not knowing what your end goal is going to be for your Jeep build. That can be so hard, especially at the beginning if you just got a jeep and you might think,

"oh, I really don't want to do a lot of off-road driving or trail riding. I'm going to spend most of my time having it as my daily driver."

Which is great. But sometimes all of a sudden you go on a trail ride, get into it, and you get the bug. Then you run out and not rush, but kind of run out to go ahead and start a build. Usually, that means lift/ tires and you just kind of jump all the way in. The biggest mistake that I see is people think, okay, well I'm going to go ahead and do a 33 or 35 inch tire build because I am never going to want anything bigger.

Then a little while down the road you're like,

"oh, well now I want to go to 37's or maybe I want something bigger."

The hard truth is that it can be hard at the very beginning to figure out EXACTLY what your ultimate goal is going to be. **I want to share my best advice, as we are start this and talk builds**.

If you think that you could possibly want to go bigger, think through that. Right now maybe you're thinking "I would never want to do a build and having a 37 inch tire, I'm always going to stay at a 35."

Just know as you are thinking through this, take the time to think about what you want your ultimate build to be and if there are any chances you think that you might ever want to go bigger. You are better to go ahead and lay out your build and design it so that you have the ability to go to a 37 even if you're going to build on a 35 thinking that there is a possibility you are really enjoying driving it off road. The changes in the upgrades that you make are just adjusting to go with a little different part that you will already be replacing on a 35" build platform.

Do not worry we get into all the breakdown of what you have to upgrade and change based on your tire size platform in detail in this Design Your Jeep Build Program so you have a solid understanding of what each build looks like.

This is going to be a pretty long training series just because there is so much information and so many different aspects and pieces. So, for that reason this first part is your very basic start and beginning overview on starting a build. As we go through this entire Design Your Jeep Build Program you will understand when you need to make decisions as you start the details of your Jeep build.

I am going to start by sharing this worksheet with you.

The "My Jeep Spec's" Worksheet is a one page overview and it's the very first piece in designing your jeep build.
First you need to get clear on where your jeep is today.
That is the very first piece and step as your foundation for designing your Jeep build.
It is where you are right now.

My Jeep

Design Your Jeep Build

First you need to get clear on where your jeep is today.

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:

Spend the time in the beginning to decide what your long term goals for your jeep will be. Your ultimate goal is to spend the time upfront and take your time to build your jeep once.

My Focus and Use for my Jeep Short Term: _____

_____

_____

My Focus and Use for my Jeep Long Term: _____

_____

_____

Are Financial's and Budget A Major Part of 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.

Jeep Spec's

These are going to be the important things that you need to know. I recommend taking the time to fill our your worksheet. That way you have all of your current information written out in one place. If you need to talk to a shop or company about parts you have all the specs already together. No more, "I am not sure" we are alleviating that right now.

What is this worksheet going to do to help?

It is going to be your starting piece number one as we are talking about your build.

You need to understand and know your jeeps current specs and details right now. This is important as you start to go ahead so you know what parts you need to upgrade, modify and what you do not. This is especially important with axle, gears and differentials in the decisions on your build.

Lets take a minute and fill this My Jeep Spec's Worksheet out together.

Starting at the top of the worksheet you are going to start by filling in the year, make and model .
This next one is an important part that plays a big part in your build, what front axle do you have?
What rear axle do you have?

The next thing to think about as you are filling out this Worksheet is if your Jeep already has any modifications or upgrades done to it.
Did you buy it new or from a dealership or a second party?
That will also be a factor into knowing your spec's if they are factory or upgraded right now. If you have a brand new jeep that you ordered or you bought from a dealer, what you can do is you can go to jeep.com and put in your vin number. The factory or stock build sheet on your Jeep will be available to you there. It will have all the specifications for these questions.

If you bought your jeep from somebody else and there are some after market things done to it, then this is going to take a little more homework from you. Hopefully you were told upfront when you bought your Jeep, what had been modified and what it had been modified too.

Another option is to take your Jeep to a "Jeep shop" that specializes in Jeeps and have a mechanic look at it to let you know some of these answers.

The next axle question is are your axles trussed? (We get into this in the program in our training details as well)

Trussing an axle is an after market upgrade to add strength and stability to your axle. If you look at your axle you would see what looks like extra material (a truss) on the top of the axle.
Mark on your worksheet, are your axles trussed Yes or No?
Since trussed axles are an after market add on if you have a new Jeep that you just got as completely stock, then your answer's going to be no. But you do want to look up on your build sheet so that you know what front axle and rear axle you have in your jeep and what kinds of differential you have.

Knowing your current GEARS THAT YOU HAVE ARE A CRUCIAL PIECE IN ALL AND EVERY JEEP BUILD!
Gears are a HUGE piece that we will go into in depth.

The next questions are about your differential themselves.
Does your Jeep have lockers or a limited slip Differential?
Again, this would be on your build sheet if you just got your Jeep and it is not modified.
A good way to know if you have lockers is to look inside the interior of your Jeep. Do you have a button that says lock or axle lock?
Depending on the age of your Jeep will determine the location and look of the button.

Jeep Spec's

2012- 2017

2018 JL

This is your homework. It is the first step in really starting to design your jeep build. You need to know where your Jeep is right now currently before you start the build.
Do you have stock bumpers or an after market bumper?
Do you have a full bumper or do you have a stubby bumper?
Then as far as Fenders go. Are you running your stock Fenders right now?
Do you have aftermarket fenders? If so, what kind?
Is there any type of lift on your jeep right now and what kind of suspension do you have?

Some of the older Jeeps are going to be leaf springs.
This is where knowing your Jeep is going to be really important.

Lastly, do you have any current mods and add ons already done to your Jeep?

Take a moment to get clear. You need to really sit and think on this. Spend the time right now, in the beginning, to think about what your long term goals for your Jeep will be. This can change over time and this can change as you are doing more and you are out there more with your jeep. But take a minute to really think about what is your ultimate goal as we start talking about doing your build.
Right now, what is your short term goal for the focus of your jeep? For me, my short term goal is my jeep is my daily driver right now.

I want functionality.
I want it to handle and perform good on the road.
I want to be comfortable getting out in and out, going to places.

Then, what is your long term focus and goal for the use of your Jeep?
It could be that you want to be able to go and do some trails.
You want to be able to go and drive it off road, but it will significantly still be your daily driver.
It might be that you want to build it so it is really capable off road, but you can still daily drive it.
Or, your focus can be long term that you want to make it extremely capable on the trail and the road handling ability is not as important.

Those are the things that you need to take a little bit of time to think through as you are thinking about your goals. The answers to these questions are going to directly affect your build.

And then there is the last question, but an important one.
What is your financials and budget?
This is a major part of the overall build plan. For a lot of people they answer yes and money is a focus on staying on a conservative budget. That is OKAY because you don't have to sacrifice a big build because of a budget.
It is just going to be slower. As you lay it out, you are going to do it a little bit slower.
You are going to go piece by piece and it might take you a little bit longer, but you can still get to your dream build and you don't have to sacrifice it.
It just means that you are going to do your build in a little different way.

You will have a solid designed plan and you will build a little bit smarter as far as what pieces you are going to do when.

If you know you are going to draw your build out over a long period of time , you do the important things that you need to do upfront so that you don't break.

That is a big piece too! You know you want to make sure you are putting the right pieces on at the right times so that the parts that you have on there are going to last as long as possible.

Also, making sure that you are not putting anything in a bind.
We are going to go over piece by piece, all of the different things that go into that. As well as build your understanding that if you change this piece, then you are going to have to change this piece too.
If you do this mod, then you are going to have to adjust by doing this. We are going to be getting into all the technical pieces over the next sections together.
But for this first section, I wanted to start at the very beginning.

A reminder again.....you need to know your jeep and your vehicle right now and how it is today before we start your build together.

Jeep Specs By Year

Know your Jeep By The Year and Model This is the FACTORY SPEC'S and OPTIONS that were or are available from the Factory. If you have a Jeep that was not a brand new purchase or has a build already on it these Spec's will not help you. Inside these overview spec's you will need to look at your Jeep as aftermarket packages and upgrades were available direct from the factory as well. 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 them;

The CJ - 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 Yj 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

The LJ was the longer version of the TJ. They had the same spec's as the TJ.

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. 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. Also came with 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 equivalate to the Dana 30 Front and the Dana 35 rear roughly. That gives you an idea as you are working through your build sheet. They have a different “name” being 3rd generation straight axle but that is the comparison.

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 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. This is an upgrade from the technology of the vacuum disconnect that they had on the early YJ generation. With this in mind if you are going to upgrade your axles, or add lockers it is worth thinking through changing the axle or the axle shaft to do away with this feature. That is for off-road builds and removable of one more mechanical moving part especially in your axle for off-road driving. As a daily driver and minimal off-road driving this is not a concern.

The Sport and Sahara as well as the New 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 in the process of parts and option releases so be patient if you have the JL as more and more options and upgrades will become available as time goes by. Your gearing ratio, and tire size platform build will be the same, the axle carrier and spec's will however be different. At this time if you want to upgrade to lockers you will need to replace the axle itself and upgrade to an aftermarket or Rubicon Dana 44 to allow for lockers at this time.

Also remember when ordering gears you need to tell them it is JL 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 except the Rubicon that continues to have 4.10 gears in the New Generation Rubicon Wide Dana 44 axle.

Section Two: Tires, Axles and Gears

How they all work together in creating your Jeep Build.
Tire size dictates your entire build!
The tire size is your Design platform.

LadyJeepers.com

Time to jump into Part Two of your Design Your Jeep Build.

In part two of this training we are working on understanding axles and gears for your build. As well as how your tire size is your build platform and will dictate what upgrades and modifications you will need to make.

In part one, we did a very basic where to start to get to know your Jeep. I hope you took the time to work through your My Jeep Spec's Worksheet. There are so many pieces to it, so many parts and it can get so overwhelming.

What I have done is gone absolutely all the way back to basics. We have broken this up step by step. We are going really slow and in depth into each piece together. By the end you are going to have a really good understanding of what your dream build is going to be and so that you don't make the mistake of having to go back and rebuild your jeep multiple times.

That is a big mistake I see a lot of people make and what we are trying to do is go slow, go all the way back, step by step, slow through this process so that you have a really good understanding of what it means, and what you are going to upgrade. You are going to be really prepared and really take the time and build your jeep once so that you don't have to go back and build it again and again and again. (If you have to go back and rebuild or change anything you have already done that is ok, and it does happen. I do not want you to feel bad about that at all! I just want you to feel good and have a plan about those changes you are going to make.)

Ok, let's jump right into **Part Two of the Design Your Jeep Build: Tires, Axles & Gears!**

Some of you ladies might be asking "why are we not just jumping into lifts and tires?" I know a lot of people want to start with lifts and tires. Remember this a process and we have a methodical method to this approach and program.

Tire size is the most important part to deciding on your build. It is going to dictate what other parts and modifications you are going to have to make.

It is also going to dictate what stock pieces and parts you are going to need to upgrade.

So Yes, the tire size is going to be really the biggest component. It is kind of the key to your entire build. you build everything around that.

Why?

You will build everything around that tire size that you decide on for your platform of your build. We are starting at the bottom and working our way up. When deciding on your build, your tire size is going to determine not just a lot, but it's going to determine basically everything. This is where knowing and understanding where your Jeep is right now and what you will have to change based on what your current specs are, all comes into play in the design.

This is the build process.

Know where your jeep is now, how you can build it now, and then making the choices based on what platform you are going to build too.

As well as take these other considerations into account. Such as build choices for your budget as well as your projected build time.

Once you have all the information then you are able to decide on what you want to upgrade and what it will take to get to where you want to be.

There are three things I want you to remember as we are working through this Design Your Jeep Build process together.
(You are going to hear me say them a lot in every part of this training because they are that important!)

1. **Your Jeep Build is for YOU! No one else! You have to LOVE it and it is ultimately YOUR decision on your build!**
2. **There is no rush to do a build! The slower the process and the longer you wait to design and think through your build the better idea and plan you are going to have. There is NEVER a rush or Deadline!**

3. **You don't have to do the entire build and all modifications all at one. A build is a process and you can do pieces and parts as you go to break it out over time. This helps to be able to financially save to put the money into the parts that are worth putting the extra money into when you are ready to upgrade them.**

So why is it important to understand this piece right now?

Well we need to determine what you actually have right now. What gears are you able to run or what gears are you going to be limited to.

Know what gears you have right now in your axle so that way you can understand what tire size you can run right now with this specs that you have without needing to make any changes. And then you are also going to know what gear you will need to move to in order to run a bigger tire size or whatever your desired tire size is going to be for your build.

This enables to be able to make the most educated decision on designing your build that you can with the understanding of the upgrades and modifications you will need to make.

Know your axles. I shared with you in part one how to find out what axles you have by putting in your Vin number. I did a quick overview chart to help as a reminder as we jump into this important part together.

What you have learned about your jeep when you did your, My Jeep Specs is that you either have a Dana 30, a Dana 35 or a Dana 44. The Dana 60 or 14 bolt rear end is going to be an upgrade for a one ton upgrade to your jeep. That means it is upgraded to aftermarket one ton axles. Understanding what front axle and what rear axle you currently have in your jeep is going to be really important as we dive into axles and gears.

This is the FACTORY SPEC'S and OPTIONS that were or are available from the Factory. If you have a Jeep that was not a brand new purchase or has a build already on it these Spec's will not help you. Inside these overview specs you will need to look at your particular Jeep as to what after market packages and upgrades were available direct from the factory as well. This is just an overview to help highlight the options that you could have.

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The JK/JKU - 2007-2018 continued...

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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

The JL/JLU has a video dedicated just to the particulars on this new generation Jeep. (Look for JL/JLU Platform Sheet after Part One in the course book for full details.)

They have their own 3rd generation straight axles under them. The Rubicon has a 3rd generation Dana 44 axle with selectable lockers. The Sport and Sahara as well as the New Moab addition have the auto all time 4 wheel drive option so it increases the handling on the road.

The build process for the JL generation is still in the process of parts and option releases so be patient if you have the JL as more and more options and upgrades will become available. Your gearing ratio, and tire size platform build will be the same, the axle carrier and spec's will however be different. Also, remember when ordering gears you need to tell them it is JL 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 except the Rubicon that continues to have 4.10 gears in the New Generation Rubicon Dana 44 axle.

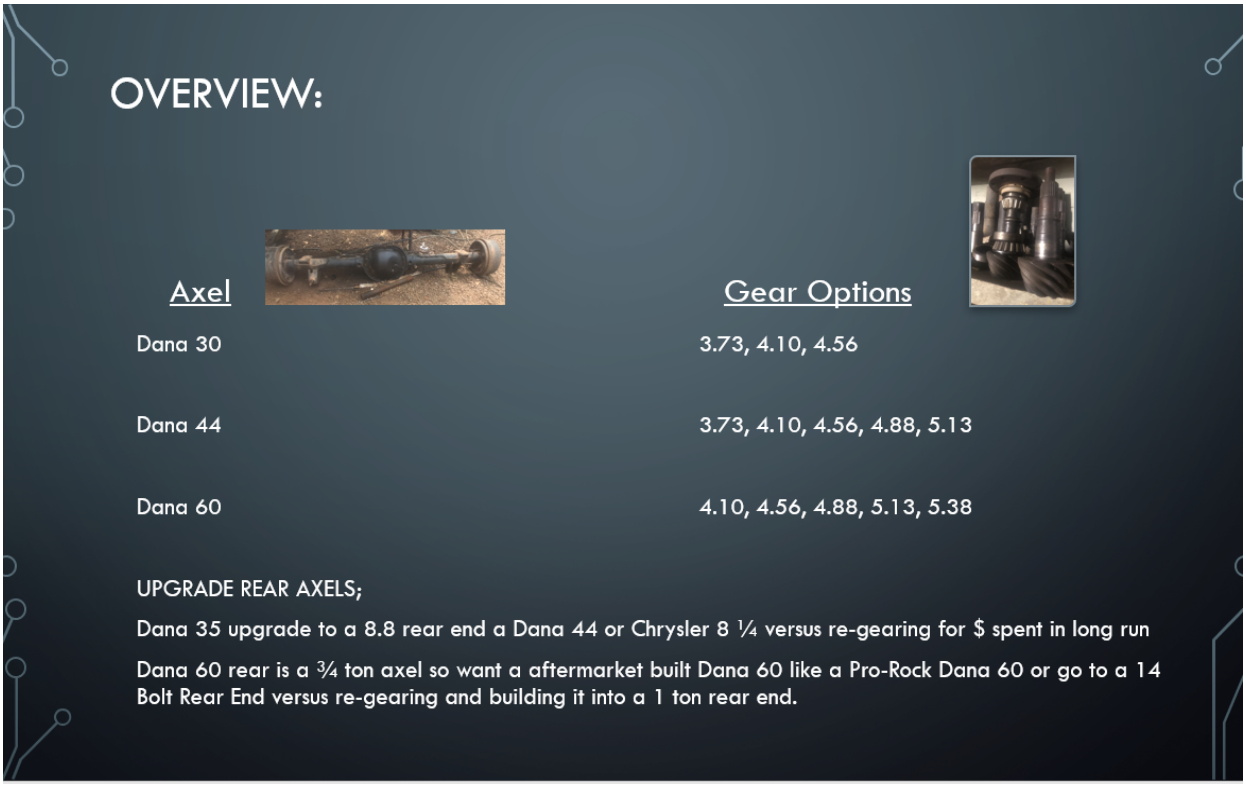
When using the guide below your 3rd Generation straight axle will be comparison to the Dana 30 specs and the 3rd Generation Dana 44 will be comparable to the Dana 44.

How they all go together.

When we talk about going to lifts and tires, you need to know your gears. Tires, Gears and axles go hand in hand.

I want to go over the axle and gear relationship first. Then we will go into knowing your tire to axle to gear you currently have as well as understanding what upgrades you are going to have to make if you want to go larger.

This can be the most confusing piece.



(In this chart we setting you up on the conservative side. Why? We only want to help you build a quality, long term longevity and best build possible. This chart is the long term set up for long term strength and stability you need to think about. Don't worry we go through all of this below.)

That is also the piece where you are going to have the most opinions.
What we are going to do is to lay this out in a way that is going to make the most sense for you. So there are lots of different options, lots of different opinions on what you can and can't do based on your axles in your gears. Some people are going to be actually a little more conservative over the top then what I am sharing with you tonight. And then some people are going to be a little less concerned about your axle gear options and ratios. Everyone has their own opinion.

I want to explain this first. The information that I am sharing with you ladies is going to give you the best information to have the best quality build so that you are going to be the happiest with your jeep long term.

I want you to be prepared to know eventually what you are going to have to put in where and to know how to prevent possible failure or breakage as much possible. I don't want you to have issues, or to have to go back and rebuild things over and over again.

With that said what I am doing is falling in the middle. Being conservative on what I layout and feel like is a real quality build. If you take the time, put the money in, and make the decision to build it once to these specs, it's going to last. **You are going to have longevity of your parts of your Jeep.**

The Dana 30 and Gears

My quality goal is that you are going to enjoy the drive and the daily driver as well as offer more capabilities in your Jeep. You are not going to have to go back and continuously redo something and rebuild the same thing over and over again. (Which in turn makes a build cost a lot more money in the long run! I want to save you money!)

When you did your spec sheet on your Jeep, if you have a Dana 30, the gear options that you are going to have in your Dana 30 when you go to re-gear (conservative for long term longevity!) is you can re-gear to a 3.73, a 4.10 or 4.56 gear. The Dana 30, if you have a JK or JKU came stock with either the 3.73 or the 3.21. It's all going to depend on what model and what make as well as what year, as to what gear you currently have. Also, did you upgrade when you ordered? First thing is being clear on what you have. Next step is knowing what you can re-gear too, given your current axle for longevity. The carrier and differential housing is different based on the axle itself so that is why we recommend different gears based on different axles.

With the Dana 30 the max that you really should re-gear is the 4.56. Again, there is a lot of opinions on this ladies. Some people are going to say, no, no, no. You know, you could run a 4.88 with a Dana 30. You know, you probably could. But for how long is going to be your question.

When we are talking about re-gearing options, you really don't want to re-gear a Dana 30 to anything more than a 4.56.

Understanding how the gears and re-gearing works is crucial. (We go in depth on differentials and how gears themselves work in this series.) In the gear ratio number, as the numbers get larger, the gear itself gets smaller. It is the same thing on any axle size. The difference is as the Axle Number gets larger the actual size of the gear gets bigger.

So what does that mean?

It means that the gear size itself starts out bigger the larger the axle number. The gears in the Dana 30 are therefore already smaller than in a Dana 44 which are smaller than the Dana 60.

As you go up on the Gear, for example if you have a 3.21 gear in your Dana 30 right now, if you re-gear to the 4.10 the gears themselves have now gotten smaller. With smaller size comes weakness and a greater chance of failure. That is why the recommendations for the Axle to Gear size are laid out as they are.

So just for an example here, the 4.10 gear in the Dana 30, Dana 44 and Dana 60 are the same gear ratio. The difference is the actual size of the gear itself based on the axle. The 4.10 gear in the Dana 30 is smaller than the 4.10 gear in the Dana 44 and the Dana 60 would have the largest gear size itself.

How does that convert to understanding your build?

If you were to re-gear your Dana 30 to a 4.10 it has a higher chance of mechanical failure due to the actual smaller size of the gear itself versus the 4.10 in the Dana 44. The bigger the tire the more stress you are putting on the axle and the gears. The axle tubing size also gets larger as you go up in the size of the axle. Therefore the axle strength in the Dana 44 is stronger than the Dana 30 but weaker than the Dana 60.

When is this important?

This is important when you take your Jeep off-road or trail riding.

If you are not doing much trail riding, or easy to moderate trails this is not going to be a big concern.

However, I want you to be aware and understand this because we are trying to save money and make sure to not upgrade something and then have to re-build or upgrade that same piece/part again. If there is a chance you are going to want to do more moderate/challenging trails in your future make sure to design your build NOW, UPFRONT to be set up to function and last long term.

You can re-gear and upgrade your Dana 30 now and then if you decide to upgrade and go with a new Dana 44 axle swap you can sell your upgraded Dana 30 geared and upgraded. BUT keep in mind you will have to find someone who is wanting to stay on the Dana 30 platform and you will not get back all the money you spent putting into it. This is NOT meant to be discouraging in

any way ladies!! I need to make sure I am honest, upfront and at times brutally honest so you have the facts and are informed in your decisions.

Again, if this is primarily your daily driver and you do trail riding you will just fine building on the Dana 30 platform. (We go into tire size based on axles below in depth)

Dana 44

If you have a Dana 44, your gear options in running the Dana 44 are going to be a 3.73, 4.10 (most JK and JL era Rubicon came with these), 4.56, 4.88, 5.13.

Again, as in the Dana 30 there are limitations to keep in mind for longevity and long term function. You start to kind of push that that higher end of the gears on the Dana 44.

Can you have a Dana 44 and run a 5.13 gear in it?

Yes, but as you talk that gear you are getting to the smaller gear size again for this axle. You are also at that tire size platform max for you axle as well. (We talk in depth below about tire size role.)

Those are the things you really need to think about.

For example, when I did my jeep sheet, I have a JKU Rubicon. It has the Dana 44 front and rear and it was custom ordered with the 4.10 gears. That is what I currently have in my JKU, which means when I re-gear it, I could do a 4.56,or a 4.88. You can re-gear up to a 5.13 in a Dana 44.

Dana 60

This would be an aftermarket upgrade axle. You see the Dana 60 when you are talking about upgrading to "tons" or one ton axle set up. Keep in mind on the Dana 60 rear axle you will need an aftermarket axle. Such as a pro rock Dana 60 or upgraded aftermarket Dana 60 rear to achieve a one ton axle. You will also see a 14 bolt rear end in a one ton set up as well.

Most of the time you do not see a Dana 60 set up in a Jeep unless you are going to be running 40 inch tires or larger.

In the Dana 60 you can run a 4.10, 4.56, 4.88, 5.13 and 5.38.

Dana 35 Rear (YJ, TJ and LJ Generation Jeeps.)

If you start talking about upgrading your rear axle, you might have a Dana 35 rear end. This was the stock rear axle in the YJ, TJ and LJ.

When you start talking about doing any work on the Dana 35 rear axle, there are lots of opinions on this.

Some people say they'll run forever. Some people, majority are going to tell you they have had issues when they are trying to build on a Dana 35. Some people love them and swear by them.

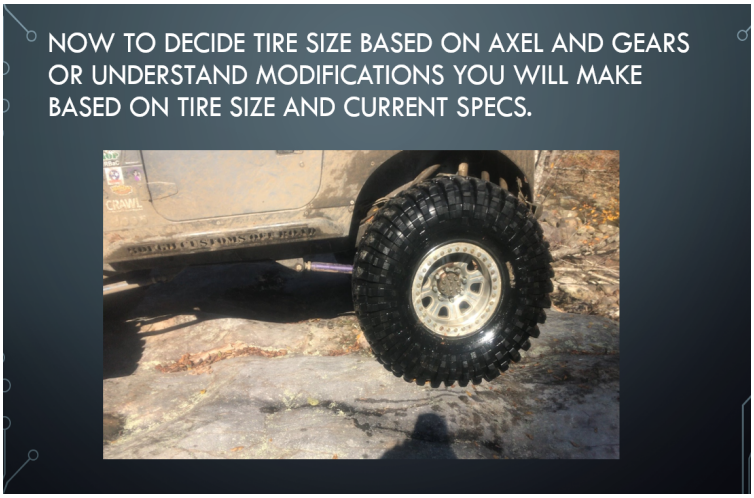
This is our suggestion for you if you have a Dana 35.

If you are going to try to do any upgrades on it, instead of putting the money in to trus your Dana 35 and do all these upgrades. In the long run it is going to be lesser expensive to go ahead and upgrade to an 8.8 rear end or a Dana 44 or Chrysler eight and a quarter rear. The money that you are going to spend in the long run would be better spent to upgrade the axle upfront. Because depending on what tire size you are going to go with, a probability is at some point down the road and longevity wise, you are going to have to upgrade your Dana 35 anyway.

This is where I am trying to just help you in the long run. As well as the financial side when we are talking about a budget. Because that is something that is important to me.

Those are the important aspects to me for what I am looking at, and what I am sharing with you. I am not telling you to go out and do a $50,000 build, and that you need to run this. The budget and the time is important to me.

So I am laying it out and sharing with you the way that I would do things and opinions of what my experiences have been. What I have seen work and not work. I am going to do my JKU piece by piece and a slow build. I am not going to go out and put all the money out to do everything at once. I have to pick my pieces so that I don't have to go out and try to just drop my Jeep off and get an entire build done all at once.



In this picture, these are 42 inch sticky tires. I think it's kind of funny that in the pictures they never look as big as they are in person.

Follow the chart to set yourself up for the best quality build and to be happy long term with your Jeep.

Again, I am stressing here long term ladies! You know there are a lots of opinions again on tire size, axle and gear ratios. You can do things, run things short term and run them for a little while. But when we start talking about this long term, at some point you are going to have to make the decision to axle swap or to re-gear based on the build that you are going to decide on.

What I am trying to do is set you up so that you are not going to do a build and then a year or two from now have to go back and completely get rid of the axle or the gear that you have already paid for once. Goal is that you are only going to do it once.

We have talked a lot about a tire size and how that is going to dictate your build. The very first part of your build that you need to pick when you sit down to do your build sheet is your tires size. That way your final build and end result is the tire size you are going to build on.

Now here is where it gets a little tricky.

Sometimes you are going to hear people say, oh well I'm going to go 35's now and then I am going to upgrade and get 37's. When you are going to upgrade to 37's, you don't want to re-gear your jeep more than once if at all possible. As we are laying this out for you from start to finish, we are giving you a plan to try to lay out your build so that it's going to long term be the best build for you and you are only going to have to do at once.

If you are going to pick a 35 you want to do your build on a 35.

Right here, right now on this piece, this is where it is really crucial and important that we talk about this. When you lay out your build, if you think there is ever a possibility that you are going to want to go to a bigger tire, you need to try to think ahead right now. You are not going to want to have to re-gear your Jeep for 35's and then drive it and a year or year and a half later decide to change.

If you are set up on a platform for 35's then you are going to have to do a complete rebuild for a second time on your jeep. People do it. I am not saying that it's not right or is wrong or anything like that.

What I am doing is if you have not started your build yet, let's go ahead and address this right now so that you are going to set yourself up for success for the long term.

I will share with you a little bit on my build. It is my daily driver and that is 90% of my primary use. Is it going to go out on the trails? It will a little bit, but it is not going to be my trail rig. I want it to be capable so that if I take it out, I want to have good performance off-road, but I really want to make sure I have good performance on the road as well.

Originally, because I'm really short, I'm five foot and it's my daily driver. I wanted to go with a 35 because I have to run to the grocery store and I am going zipping here and there and I'm in and out and in and out. With how short am I said I am going to be at a 35. That is what I am going to do. And that is where it is going to stay. A couple months later, I kind of went, you know, maybe I would want a 37 instead.

And I went back and forth on the 35 versus the 37 for quite a while. So what I decided to do is I am going to go ahead and build the platform for my JKU on a 37 inch tire platform.

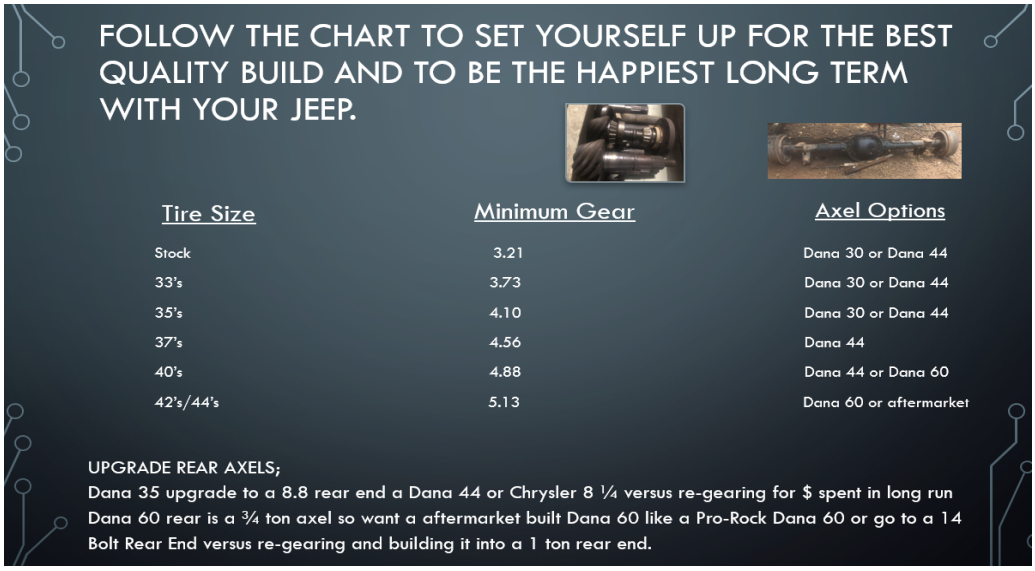
That means I could run any size tire underneath. If it is smaller than I wanted to that is going to be fine. It is going to run great. It will be a great daily driver

I can keep it on a 35 but what will happen is if I decided to go buy a set at 37's I can put them on. I am not going to have to go back and change or Redo anything that I did initially in my build. I know that there is probably a 90% chance that I am going to end up on a 37 and that might not be the first tire size that goes on it. But that is probably where I am going to end up. That is my long term build goal for my jeep. As I am building it, I only want to do it once. I only want to spend the money once, so I am going to make sure that I go ahead and put the platform on it for

a 37 and then I can always just run a 35 to start with.

That way I know down the road if I decide to, I can put the 37 on, and everything is going to be where it needs to be. No issues. I won't have to go back, or rebuild anything. I will be good.

Let's talk a little bit. I am giving you minimum gears here. When we are talking gears, just like we showed on the other page you have gear options. As we are talking about re-gearing here, this is the minimum gear that you are going to need when you re-gear in your axle to run this tire size. You can see, there is a ratio here that as the tire size gets bigger, the actual gear sizes not getting bigger, but the gear number is getting bigger as you can see.



This chart helps to show the idea of how it works on the tire size platform design. If you build your jeep for a 35 and you have it on a 35 tire platform and then you want to jump to a 37 if you have not built for the 37 platform, you are going to have to re-gear.

Same thing if you start with a 37 and then you say you want to jump to a 40. Really be thinking ahead. If this is going to be long term, your trail rig that you are going to build out, then go ahead and keep that in mind and start by spending the money once and build it out that direction.

If this is going to be primarily or just your daily driver all the time, then you want to build it out from that platform as well. But keep in mind the decisions that you make will affect down the road your long term.

If you try to change your build down the road. If there is a chance at all, that you think you want to run a 33 on a daily driver, but you could possibly want to go to a 35 or 37.....

You need to really take the time to sit and think through that now and then decide. You only want to spend the money once to re-gear.

Minimum Gear for Tire Size

These are the minimum gears that you need to run with these these size tires.

Stock you want to a minimum of a 3.21 which is the smaller of the stock gears. This was actually the stock gear for the JK/JKU on particular models. Others are going to have the 3.73 so you know you are okay for the minimum gear to run a stock tire. The Rubicons came with a 4.10 but not in all JK/JKU years. You are fine to run a stock size tire on the Rubicon as well.

On a stock jeep to run stock tires, you can run a Dana 30 or a Danna 44 with this stock size tire and you are going to have no problems whatsoever.

Now if you want to jump up to a 33" tire, you want to make sure that you have the 3.73 gear minimum. If you have the 3.21, then you are going to want to re-gear and jump up a little bit bigger. You can do this at some point down the road but just don't plan to run that set up forever without having to do some upgrades. Either a Dana 30 or a Dana 44 will have no problems as an axle.

When you jumped to a 35" tire, you want a minimum of the 4.10 gear and you could run that again on Dana 30 or a Dana 44.

When you jumped to 37" tire things are going to start to change a little bit. Think of 37's and above as your change in your bracket as functionality of daily driver versus kind of making it a trail rig.

Things are going to start to change a little bit when you hit that 37 tire mark or bigger. When you hit and decide you want to be on 37's you need to have at least the 4.56 gear and be on a Dana 44.

I am not saying everybody does this and I am not saying that people aren't going to disagree with this, but what I am saying is long term, somebody who is going to run a 37 as a daily driver who is driving around every single day and take it off-road eventually is going to re-gear if they are going to keep that Jeep long term.

Just keep that in mind.

If you hear somebody say,
"oh no, you can run 4.10 and a Dana 30 on 37's"
you can, but for how long?
That is the big question.

At what point are you going to have to go back and change that anyway. If you are talking about spending the money to re-gear and to do your build, really think ahead and plan long term. This is so you don't have to go back and change anything.

The last thing I want to see you ladies do is decided to build to a 35 inch tire and a Dana 30 platform. Go from a 3.21 gear and pay to re-gear to a 4.10 in your Dana 30 and get a year down the road. You are loving your Jeep, you are having so much fun, you are going off-roading all the time. You start having some issues.

You decide you are going to have to axle swap, go to a Dana 44 re-geared to a 4.56, to accommodate those 37's and all of a sudden you are going to have to pay to do it again.

That is what we are talking about and realistically planning for. That is what I am trying to help you avoid.

I am not saying this is the only way, but I am saying that long term this is going to be some of your best choices. I am just saying this is the minimum gear you need to be running.

When you get to 40" tires you need a 4.88 or bigger and it is going to need to be a Dana 44 or a Dana 60. Most people when they start running 40's and bigger are going to go ahead and ton their Jeep out, which is the Dana 60 front and either Pro-Rock aftermarket type Dana 60 rear or 14 bolt rear end.

Normally anytime you hit the 40" mark or bigger, your build is really going to start to change. This is putting a big stress and large tires, on parts that were never meant to have to handle something that big. Most of the time you are doing a more in depth build at that point and will have almost all the stock parts to upgrade out.

I am not saying you couldn't run a Jeep on 40's on the road. I see people do it all the time. But to me, ladies, let's be honest, when we start talking about that kind of build, it is really going to

start changing as we get a little farther down the line. What aftermarket upgrades you are going to have to make and the number of aftermarket upgrades you are going to have to make. That is the other thing just to think about.

I get the question all the time. How many things do I have to upgrade on the rest of the Jeep for my build?

(we go in depth in that in this course)

Easiest rule of thumb is the bigger the tire size the more you will be upgrading other parts and mechanics of the Jeep as well.

Leaving the Jeep stock or doing 33's there's nothing that you have to upgrade as you do that build unless you want to. (If gears are correct to start with.)

For each tire size up you add, you are going to start adding in the amount of modifications and upgrades you are going to have to make when you do this build. You need to replace stock parts because you really are starting to change the whole stock structure of theJjeep itself. So as the tire size goes up, we are talking about a lot more components that are going to start going with that as well.

When you are designing and planning your build out that is another something to think about.

In this Part Two section of Design Your Jeep build we covered your minimum gear to go with your tire size and your axle options. Understanding based on what you have right now how that is going to also dictate your options as far as gears and tire size.

Our goal is to lay this out for the long term.

I am breaking everything down into little pieces. I am doing shorter sections so that I am trying not to overwhelm you with too much information at once because there are so many different pieces that go into your full build.

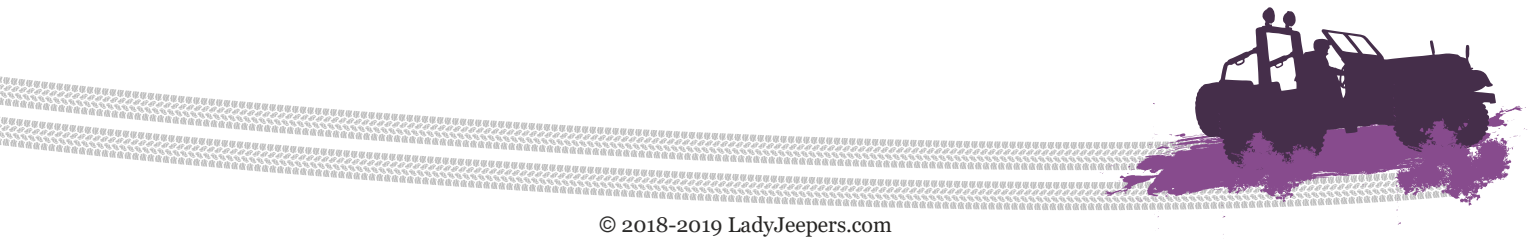
The next section we are going to be working on is, design your build section number three. Stock fenders versus aftermarket fenders and bumper options.

My homework for you is to take the time and think hard, go back and forth, ask yourself the questions. I did it for quite a while, back and forth, back and forth. I ask you to do this same thing and really try to get clear on what tire size you really want to design your build around so that it is decided on as we start working through each of these sections.

Jeep Build Overview Notes

Jeep Build Overview Notes

There is so much to consider.....this sheet is to help take notes along the way in this Course As you think about planning your build.



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.

Jeep Build Overview

Axle and Gear

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

Design Your Jeep Build

Overview 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

	Wheels/Tires	Axle	Truss Axle	Gears - Minimum	Lift & suspension upgrade	Knuckles & Ball Joints	Track Bar & Control Arms	Upgrade Steering	Upgrade Bigger Brakes	Drive Shafts upgrade	Sway bar linkage or upgrade To anti-rock
33's	Tires	——-	——-	3.73	Leveling Kit and/or high clearance Fenders	——-	——-	——-	——-	——-	——-
35's	Tires & recommend wheels	——-	Recommended for long term	4.1	YES- exact set up and height will vary bases on build	Recommended	Recommended	——-	——-	——-	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	YES	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

Section Three; Bumper and Fender Upgrades

Lady Jeepers.com

Bumpers & Fenders

It is time for your Design Your Jeep Build Part Three.
In this section we are focusing on upgrading your fenders and bumpers because those go together.

When we are talking about aftermarket bumpers and fenders, I want you to remember that **this is your build and it is unique to you.**

There is not one way or one answer on what to get. You need to make sure that it is your taste and the look that you love. That is the most important thing!

Ladies, there are so many different brands out there, so many different designs. Lots of different opinions. Just remember that this is your build. Your Jeep is going to be unique just like you. There are so many different options and ways that you can do your build. It really is important that it is something that you really love the look of and that you are drawn to. This is all about you. Remember that, especially as we are going through our training in this section.

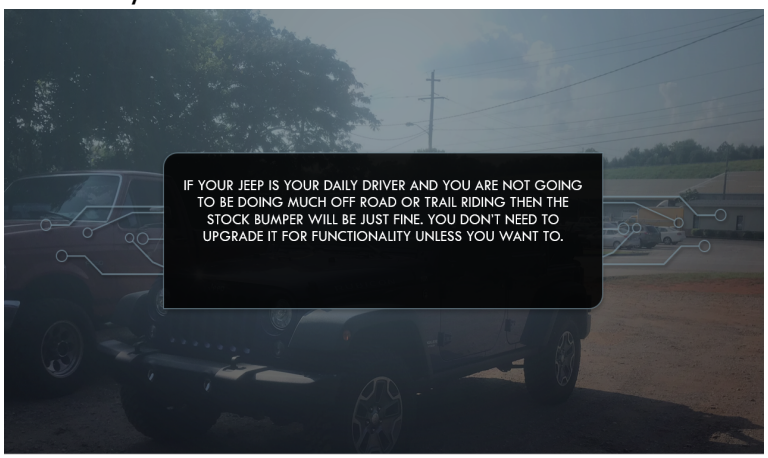
This is one of those times where you need to make the choice of what you really love for you and so that you can enjoy your build.

Do you have to upgrade from your stock fenders and bumpers?

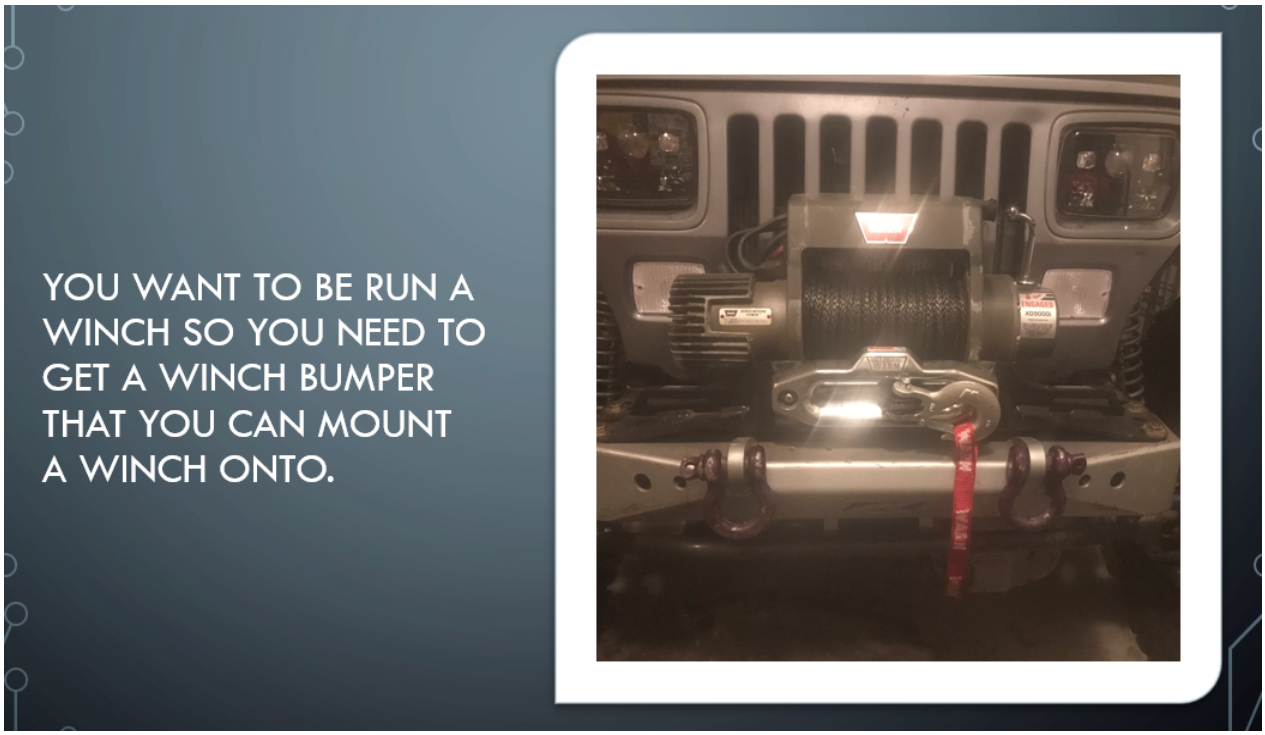
You know the answer is no, you don't have to upgrade.

So why should you upgrade your stock fenders and bumpers?

We are going to start with bumpers. Let's dive in with bumpers. If your Jeep is your daily driver and you are not going to be doing a ton of off-road and trail riding this is a personal choice in upgrades. In your daily driver, a stock bumper, will be just fine. You don't have to upgrade it for functionality unless you want to. This is a stock bumper on a JKU from the factory.

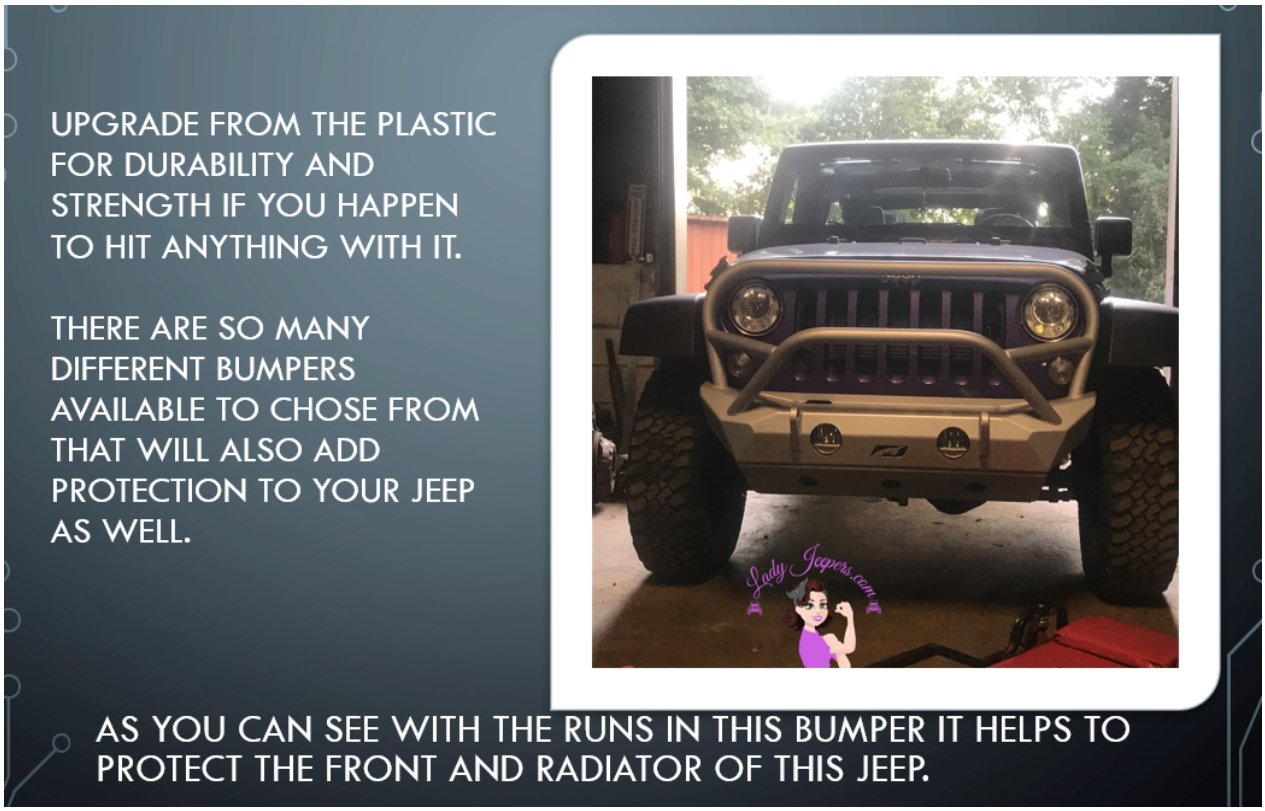


If you are going to be driving off-road and going on trails, then you do you want to consider a bumper upgrade. Why? You want to be able to run a winch. You are going to need to get a winch bumper that you can mount a winch on. Most of the aftermarket bumpers have specific winch plates that you mount to your winch to. They have come out with some really neat recessed winch bumpers where the winch actually will sit down in the bumper.



You also want to have upgraded strength and support to be able to mount and use your D-rings or soft shackles to on the bumper for recovery.

In the photo, the bumper is an aftermarket Motobilt bumper on my YJ. You can see the D-rings and the way that they are mounted on this aftermarket bumper so that you are going to have more strength. They are sturdy if you need to use those for a recovery on this bumper. Another reason to do an upgrade is to upgrade from the plastic bumper to a steel or aluminum bumper. That is for durability and strength. If you happen to hit anything with it, the plastic bumpers are going to crack and break a little bit easier. If you are going to be doing any off-road driving, or a little more trail riding, you want to try to upgrade from the plastic bumpers and go ahead and move onto something that is going to have a little more strength.



There are so many different bumpers available to choose from that are also going to add protection to your Jeep as well.

With the runs in this bumper, this is again is a Motobilt bumper on my JKU, you can see that it is going to help to protect the front of the Jeep. The way that the line runs, it is also going to help to protect my radiator. I have a lesser chance of getting sticks or limbs or anything that is going to puncture my radiator through the front of my Jeep. The top run is also protecting the very top of my hood as well on my Jeep. I want you to notice the difference in the length of this aftermarket bumper versus the stock bumper. These are still stock fenders on this Jeep in the picture. With this bumper you can see how narrow the bumper is comparative to the stock bumper that was on it. The stock bumper was a full width bumper. This new bumper is a "stubby" bumper.

The stubby bumper gives my tire the ability to mount an obstacles such as a rock without interferes of the bumper. My bumper is not going to be the first part that is going to make contact with the obstacle or the rock anymore. It is now going to be my tire. There is not going to be interference from any of my pieces on my Jeep. With a full width bumper when I would go to mount something that bumper would hit before the tire. The tire now has nothing in front of it. You can see the amount of room the tire now has to make first point of contact. This is especially helpful if you trail ride somewhere that has a lot of rocks.

I don't have to worry about hitting the bumper anymore as I pull up to the obstacle.

Why is this important?

If the bumper hits first, that blocks the tire from actually getting to the obstacle, like the rock, to make contact. You might get stuck or have a much harder time mounting the obstacle. The stubby or narrow bumper allows for the off-road and trail riding capability of having the tire mount an obstacle first. This is going to make drive ability out on the trail a little bit easier.

The term drive ability is really a two-word term rooted in the words "drive" and "able." Reverse these words for a clearer understanding—able to drive.

I also want you to notice part of the reason I did a difference in length for this after market bumper versus a stock bumper is because of my design plan. I will be running aftermarket high clearance fenders. That way the lines of the fender and the bumper are going to follow a little bit better. That is another reason why I went with the design cut of this bumper in particular.

So which bumper is right for you?

As you can see, these are three different examples, but there are hundreds of different designs of after market bumpers.

They make bumpers in steel as well as in aluminum. There are absolutely custom fabricated like in the center picture on our CJ five.

There is also a choice of what type of hoop you like. (the JKU on the right has a Stinger added onto the bumper.) The stinger is going to help if you were to make contact with a tree or go through a wooded area where there is a lot of limbs that are hanging down. The goal of the hoop or stinger is to try to help protect the Jeep itself. Especially anything from puncturing in through the front of the Jeep where you are going to get your radiator or anything that is going to be functionally important.

The second function of the stinger or hoop is to protect the hood and radiator area if you were to have a roll over accident. The goal is that less damage would occur with the hoop or stinger helping to keep the impact and weight off of the hood and front of the Jeep to keep it from collapsing in on the Jeep.

There are hundreds of different designs that you can choose from.

This is where taking the time to design your build first, know what direction you are going to go and then start to add your modifications and your upgrades and your pieces is going to be important.

The bumper and hoop or stinger are your personal preference as to what you like the look of. Start by deciding if you want steel or if you want aluminum.

Next, decide if you want a full stinger or if you don't want a stinger. If you want a hoop or no hoop.

This is all your personal preference. There is no right or wrong answer on this. This is all going to be what you personally like the most.

Bumpers & Fenders

In the photo above, you see the Jeep on the very bottom, the CJ 5. This bumper is a completely custom fabricated bumper that we have in the front. The options of what you decide to do on your own build are really limitless. On this bumper there is a horseshoe, we were horse people, but you can see again that this is a much narrower bumper.The hoop and protection has not been added on this bumper yet so it sits with just the bumper and the winch in comparison to the other Jeeps bumpers in the photo.

My suggestion is that you know your fender options, and if you are going to run a winch before you start to decide on a bumper. If you are going to drive off-road, you really want to think about a stubby bumper or the more narrow bumper. The narrow bumper is going to have more options for mounting your obstacles without your bumper being in the way.

Along those lines, if you want to drive on the trails, a winch is recommended for safety and recovery. You need an after market bumper upgrade (unless you have a steel JL bumper) to be able to mount your winch and anchor correctly. You are also going to have less chance of damage during winch or recovery. Plastic is not the ideal choice if you are going to be in any awkward situation where you are either going to have to get winched or recovery by somebody else. Those front plastic bumpers, this sock ones just, don't have the durability and strength that you see in the aluminum and the steel bumpers.

Side note: JL Rubicon and Moab have steel bumpers so look to see what you have.

Now it is time to talk about fenders.

Fenders go hand in hand with the bumper concept and that is why we are talking about them together in this section. The way that the lines are and how they are going to look together depending on the cut of the bumper and the cut of the fender really go together. Moving in to now talk about fenders it is the same ideas we just talked about in the bumper section.

If your Jeep is your daily driver and you are not going to be driving off-road or trail riding this upgrade is not something you have to make for functionality. It could be something if you want to make the upgrade for the look.

Honestly, when we start talking about functionality in a fender it is for driving it off-road and trail riding. With that said, if you do want to be driving off-road more and going trail riding then this is an upgrade that you are going to want to make. The biggest aspect is upgrading the plastic fenders. Upgrading from plastic to a steel or aluminum is a really smart idea. The change in material is going to give you more durability when you go to an aluminum or steel fender versus a plastic.

Just like we talked about with a plastic bumper, a plastic fender can crumble, crack or tear when put into a situation off-road where the fender makes contact with trees, brush or rocks.

The worst thing that can happen is accidentally sliding into a tree due to terrain and the plastic fender breaks and the quarter panel of the body takes damage. A steel or aluminum fender is going to help protect the quarter panel of your Jeep body should that occur. It is not a guarantee that you will not get body damage, but it is another way to help protect your Jeep as much as possible. That is just one of the many many reasons to think about upgrading your fenders for trail riding.

The type of options, as well as the number of options and companies who offer fender upgrades is amazing. There are a lot of options out there available to you. This is where you are making your decisions for what you like the most. You go on what material, look and functionality you like the most for YOU.

Common Types of Fenders

The photo above shows one common type of fender upgrade. This is the full fender delete. The pictured fender delete is from ace engineering.

The full fender delete actually removes the fender so there is no fender whatsoever left on the Jeep. It is obvious the difference in the look. This particular fender upgrade gives you more travel room for your tire. That means that you are going to have more clearance with less lift with these after market fender. You can see the clearance and lack of interference difference here, in this picture really clearly. The tire has a lot of room to come up and not have a fender to "get the tire into" or scrub or hit. You see this particular upgraded fender delete

in the rock crawling builds. The fender delete is going to be the most clearance that you are going to get when talking about aftermarket fenders because there is nothing that is going to impede or interfere with the tire.

Why do you want flex and travel on your Jeep?

When you are driving an obstacle, so say you are going up on a rock or a tree or uneven terrain, flex allows the tire and the suspension to work by traveling upwards. That is how you can mount and drive up and over larger rocks. Flex allows you to be more off camber (lean) and have more travel room before you would put a tire in the air and risk a flop or roll over. The fender actually plays a role and helps to give you clearance for more flex and travel to enable your off-road capabilities.

Fenders also give you clearance based on what fender you go with. A high clearance fender means you have more room in the fender well for a larger size tire. Depending on what after market fender you go with will depend on how much additional clearance you gain just from upgrading the fender.

In this photo I have a high profile fender upfront and fender delete in rear, to allow room for this 42" tire. The bigger the tire the more lift you need or the more room in the wheel well you have to create to give the tire room to move. This of course is just one piece in the larger overview build scale.

Bumpers & Fenders

Just like any other piece in your build overview, you want to take the time to look, think through and decide on the overall build and how each piece will go together first. Keep your build overview in mind as you are making a decision on fenders. You are putting everything together based on your end build goal, functionality and how you want it all to look together.

I wanted everything to match. I wanted everything to be in unison. I decided for my build design that with the purple JKU my accent color was silver. I went ahead and decided to do everything accent in silver or aluminum.

In this photo I went with the Motobilt aluminum front bumper painted silver and the poison spider aluminum high clearance outer fender and the black mesh inner fender from poison spider. (Ok. the inner fenders may or may not end up with silver on it too.) Another piece I considered when putting the JKU build together was the lines and symmetry I wanted. I did my research to find the functionality with the look I wanted to accomplish so that way the line of the fender and the line of the bumper come together.

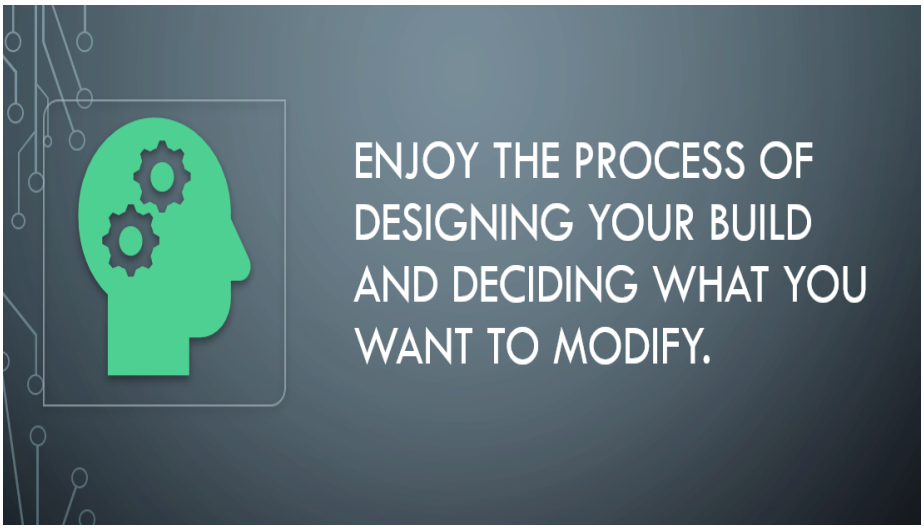
What I looked at is the side of this bumper and the way that it is cut and how it angles in. That matches the angle in the front part of this fender. I was going for a specific look and roundness.

A quick re-cap. There are fender deletes, like this white JKU, second from the left. This gives you the most clearance room. Then there is steel which is normally black, on the far left white JKU. You can also get a complete custom fender like the CJ5 second from right. You also have the choice of aluminum, far right.

Everything can be painted or powder coated and that gives you different color choices you can go with to make it your own. This is the fun stuff to plan out and think about.

There are so many fender choices, just like bumper choices so keep in mind that this is your build.
You need to go with what you love!
YOU need to love the look and lines.

Enjoy the process of designing your build and deciding what you want to modify.



When it comes to the fender and bumper upgrades take your time. Look online, do your research, and see what looks and lines you really like.

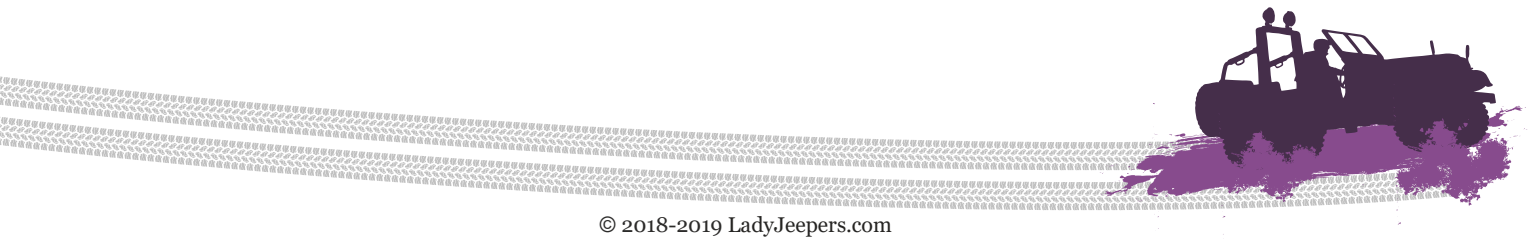
If you see a Jeep somewhere that you like the fender or you like the bumper, ask them what they are running. Find out where they got it, who the maker is, and kind of start to get your wheels turning.

The next section we are going to move into is Section Four and that is wheels and tires. After all those goes together.....well like a tire on a wheel.

Jeep Build Overview Notes

Jeep Build Overview Notes

There is so much to consider.....this sheet is to help take notes along the way in this Course As you think about planning your build.



Section Four; Wheels & Tires

Lady Jeepers.com

Wheels & Tires

Welcome to wheel and tires in our Design Your Jeep Build section number four.

I want to start by reminding you about the absolute most important thing about your build.....

This is your build and it is unique to you! There is not one way or one answer on what to get. You need to make sure that this is your taste and the look that you love. It is your hard earned money, your time, your passion, and it's your Jeep. It's a piece of you. You need to make sure that whatever you are doing for your build through all these pieces, it is what you want to put on for you.

Make sure you love the wheels, make sure that you really liked the tires and go with what you like the look of and it is not anyone else's build but yours.

To start this section four off with, we are going to talk tires to start with.

I know we talked about this in section number two. Your tire is going to be your platform or your foundation for this design. You pick your tire size and then you are going to design your build around that so you do not have to go back and rebuild or redo things.

I want to make sure you have gotten really clear, like we talked about in part number two. You have done your worksheet to set your goals, get clear and make your decision on what tire is going to be your platform for your build. Especially as we start talking about tires.

I want to begin by pointing out that there are different types of tires. Also understand that each manufacturer tire is going to be a little different.

There are so many tire combinations that what I did for this section is I picked out the most popular and trusted types of tires for you to hear about it.

All Terrain Tire

There is the all terrain tire and typically this is what comes standard, as a factory tire on your sock wrangler. The all terrain tires are designed to be able to be your daily driver, do great on paved roads, but they are still going to be able to do light off road. They capable, but these tires are going to give you a little bit better fuel mileage compared to some of the other tire types. They are not going to be as noisy of a tire as some of the other choices. There are different manufacturers that make all terrain tires.

For my JKU, the BF Goodrich is the all terrain tire that came stock from the factory. But there are other tire manufacturer companies out there who are making a little more aggressive all terrain tire. It does sacrifice a little bit of the benefits for the road performance. With the more aggressive all terrain tire you are getting a little bit more noise, and you are not getting as good of fuel economy. Let's be honest ladies, I would not call anything on the Jeep good fuel economy. Or enough to worry about a slight change in fuel mileage. It just gets bad and worse gas mileage. To me, you are looking at a very slight difference in fuel mileage. These companies are making a little more aggressive all terrain tire so that the tire is going to do a little bit better off road. You are still going to have better on road capability as well compared to some of the other tires that are available.

Mud Terrain Tire

Next, we have the mud terrain or mud tires. I do not want to age myself, but it used to be if you did any off-road driving or four wheel driving, you had mud tires. In talking about the mud terrain or mud tires, they have changed a lot over the last 10 years. The mud tires or the mud terrain, are generally a big chunky tread so that they will have more bite. That is especially important in the mud or in wet surfaces. The chunky tread helps to give you a little bit more grip. They have the big large gaps in the tire treat which also allows for the mud to clear out quickly. That way if you have been out on a wet trail or where there is a lot of mud the mud will not stick inside the tire for as long. That gives you the ability to "clear the tire out" before you come to another obstacle. That means it is suppose to help keep the tires from building up with mud and then become slick for the rest of the trail ride.

These mud terrain tires are going to be beneficial because once they do fill with mud, as you go to drive, they are going to clear out quickly so that you're not just going to have the mud caked in the lugs and the grooves of your tire. The mud terrain is going to give you a little bit more off-road capability especially if you are somewhere that has a lot of muddy terrain. Some of the manufacturers make more aggressive tires then others. So the deeper the groove, the chunkier the tire, the more aggressive they are. The mud terrain sacrifice your on road performance just a little bit. The biggest thing is going to be the amount of noise they make. On the road it soinds like a lot of tire and road noise from those tires as you are driving. The solution is to just blast your music louder and you just get used to the "Wah Wah Wah Wah Wah Wah" sound of a your mud terrain tire going down the road.

Rock Crawler

The mud terrain is one example of a tire that is going to perform a little bit better off-road than it is for your daily driving. As we start to talk about off-road capabilities, there is the rock crawler tires and these have different names based on the manufacturer.

But if you really are focused on your off-road capabilities and you are not as concerned or focused on your on road capabilities these are a tire to look at. If your Jeep is not your daily driver, then you can start looking towards these more specialized types of tires. The rock crawling tires are really good if you are going to be tackling boulders, rocks and you want the tires to have that large side lug and good flex on them.

These are also the type of tire you want for the optimal air down performance. The rock crawler tires are going to be the tires that you are going to see on, I call them "rigs". The Jeeps that are built as trail rigs, but you are not going to see them driving down the road as often. The ride down the road is not going to feel as smooth, you will feel the vibration of the larger lug patterns and grooves as well as have more road noise from the tire themselves. The off-road capabilities are going to be the greatest bonus on the rock crawler designed tire.

They have also come out with a rock crawler designed tire with a compound material. These tires are called the rock crawler "stickies". Again, these tires are in the rock crawling tire category, just in a sticky compound tire that is specifically designed for rock crawling and it is for off-road use. You do not want to use those on your daily driver. They need to be on trails and on rocks and out off-roading. The benefit is the sticky compound helps to stick and grab at the slick rock surfaces for more traction. You will see these tires on rock crawling buggies and race buggies, as well as specifically build "trail rigs" who are out crawling the rocks. You can drive them down the road, just know these are expensive tires and the pavement and asphalt will wear them down significantly faster. I lean towards calling these tires trail tires only for that reason, though you can drive them on the road if you decide too. Just know you won't get as much life out of this tire due to the sticky compound design of the tire itself.

I will share, I do have stickies on my Yj, which is one of the things that keeps me from driving it down the road. But the trade off is that the off road capabilities are amazing.

Tire Choice and Ratings

I looked up a couple different surveys that had been done, with different ratings, to get the top rated tires and I did it based on price. We are going to go the least expensive to the most expensive. These were the top rated tires.

I pulled the ones that were all the way across the board and these had the best ratings out of all the tires.

The Falken WildPeak A/T Jeep tires.
These tires have a 70,000 tread warranty on them. They come with a great warranty as well.

The Dick Cepek, Extreme Country tire for the Jeep wrangler. These tires have a 45,000 tread warranty on them as well. They are not quite as popular. What I do like about these two tires and these brands in particular, is that they have a really good tread warranty on both of them.

Of course there was the BF Goodrich all terrain. Both the BF Goodrich T/A KO2 and the KM3 were the most popular out of all these tires on the lists and across the board. If you are thinking about upgrading, getting new tires, I will say they had the best ratings across the board from everybody. Now, they did not show a mile warranty on these. That is something I would definitely look into if you are thinking about getting these tires so that you know, up front. But again, these were the most popular across the board.

Those first three tires were the lower price point tires. Now we are jumping to the next price point. This is the secondary price point.

The Toyo Open Country Jeep Wrangler Tires were one of the top picks on that price point and they have a 65,000 mile warranty as well.

For me personally, I really like having a mileage warranty on my tires for my daily driver. If I was going to have an off-road only vehicle, that wouldn't be a concern for me. But I know for me, having that warranty on those tires where it is my daily driver is really important to me.

Just for an added opinion the Nitto Trail Grappler Jeep tires were very popular and I actually know some people that are running these two types of tires and absolutely love them. They love them for their on road as well as their offered capabilities. But remember again there was no warranties listed for these tires. All three were very popular tires and had great reviews.

Of course there is the Pro Comp A/T Sport Jeep wrangler tires. They had really good ratings. These were the most expensive of the three. The Mickey Thompson, Baja Mtz three had great reviews. These were a top contender in the list as well. Most people know the name Mickey Thompson so that helps bring some credibility to the tire.

Moving up to the next price point. These would be the highest prices tires out of the group.

You know you cannot talk off-road tires without seeing Interco. They had a couple different tires available that made the cut. The most popular of them all is the Super Swamper, TSL, LTB Tires for Jeeps. They had really good write ups. I know the Interco Company were the original super swamper that I was kinda talking about back in the day when I was joking about mud tires and everyone had super swampers. This Interco tire that they are making, the TSL LTB tire, had really good reviews and really good write ups.

Next on the list there is the Maxxis tires. They make multiple different tire types. The all terrain, the rock tires, and the rock crawlers. They make a high end tire across this spectrum for multiple different genres out of those different categories. They make a really good quality tire. They had great reviews. That also makes them the most expensive out of all the ones on the list. As a company they had great reviews, the longevity and then the replacement and warranty of the company had really good rankings as well. They are known for their Sticky compound rock crawler tire as their star.

There are so many different types of tires out there. And then of course everyone has their likes and their dislikes and their own opinions on tires. Take your time and do some research.

I recommend watch the performance yourself when you are out at rides. When you see a tire that can really perform well, or you notice a difference between one Jeep and another Jeep, just notice what tire they are running. Ask them questions about that, how they like it. It helps if you can get honest feedback, sometimes you might learn things about what people don't like about the tires that can help be beneficial as well. Then decide which tire you want for you. This is where you get into personal preference.

Wheel Talk

On a stock wrangler, your wheel size is usually going to range from about 15 inches to 18 inches, depending on what model Jeep you got and what options that you opted for.

I want to start by going over some of the basic choices and understanding for what wheels you want to get.

The first big question is going to be steel or alloy.

Steel is usually the choice you are going to see somebody make if they do a lot off-road driving or trail riding. A lot of times they are going to opt for the steel. They are heavier, but that does make them more durable and they are lesser price.

Another thing that makes them a little higher on the priority for an off-road trail rig is they are easier to repair if they are damaged because they are steel. So depending on what is damaged or how they are damaged, sometimes you can actually repair them yourselves because they are steel. The material is different than the alloy.

Alloy is usually several pounds lighter then the steel. This is going to be a better option if you are looking for your daily driver. The lighter weight is going to be easier to start and stop with the alloy wheels. That is going to help with the fuel economy and it's going to help with your handling. Another thing about alloy that I'm not sure everybody knows, is it can actually help to reduce the heat from your brake pads and from your brake parts as well. Alloy though is usually a little more expensive.

Yet again, this is a personal preference.

What do you like the look of?

Do you like this steel wheel?

Do you like the alloy wheel?

What is your focus going to be?

Are you doing more off-road driving?

Is it going to be more of a daily driver?

Moving to the Beadlock Wheels.

This can be a little bit of a controversy to have Beadlocks or non-Beadlocks.

Beadlocks have become very popular. It used to be, you didn't see them on daily drivers or on Jeeps driving down the road very often. That has changes a lot! Now you are seeing a lot more Beadlocks running down the road. This is because more of the off-road build has carried over into our daily driver. The same Jeep is the daily driver and also taken trail riding.

The Beadlock has become more popular and you are seeing them on more and more Jeeps.

But I want to talk about Beadlocks themselves for a minute. The Beadlock is used on trail rigs and Jeeps that we see off-road driving. What it really does is it allows for you to air down your tire pressure to a lower PSI and not risk the tire coming off the wheel or bead because of how the tires are mounted. The tire kind of sandwiched on your wheel, for lack of a better kind of visual. The true design behind the Beadlock was for trail rigs and off-road vehicles to gain traction and more ground surface by airing the tires down to the lowest PSI they could run in them. It was developed to enhance the off-road capabilities of your trail rig. (The entire Beadlock section is next and it goes in depth on the Beadlock and how they work in detail.)

That raises the question, do you need a Beadlock on your daily driver?
You don't need a Beadlock if you are not going to be going off-road or doing any trail riding.
Does that mean you shouldn't or can't run a Beadlock wheel?
Of course not! This is your build so you can do whatever you feel you like.

Keep in mind though, you need to look into what the laws are in your particular area because in fact some Beadlocks are not street legal. It used to be the Beadlocks were illegal. There are more and more now that are street legal. If you are thinking you would like to run a Beadlock you need to look into your laws and find out which ones are and are not street legal in your area so you know for sure.

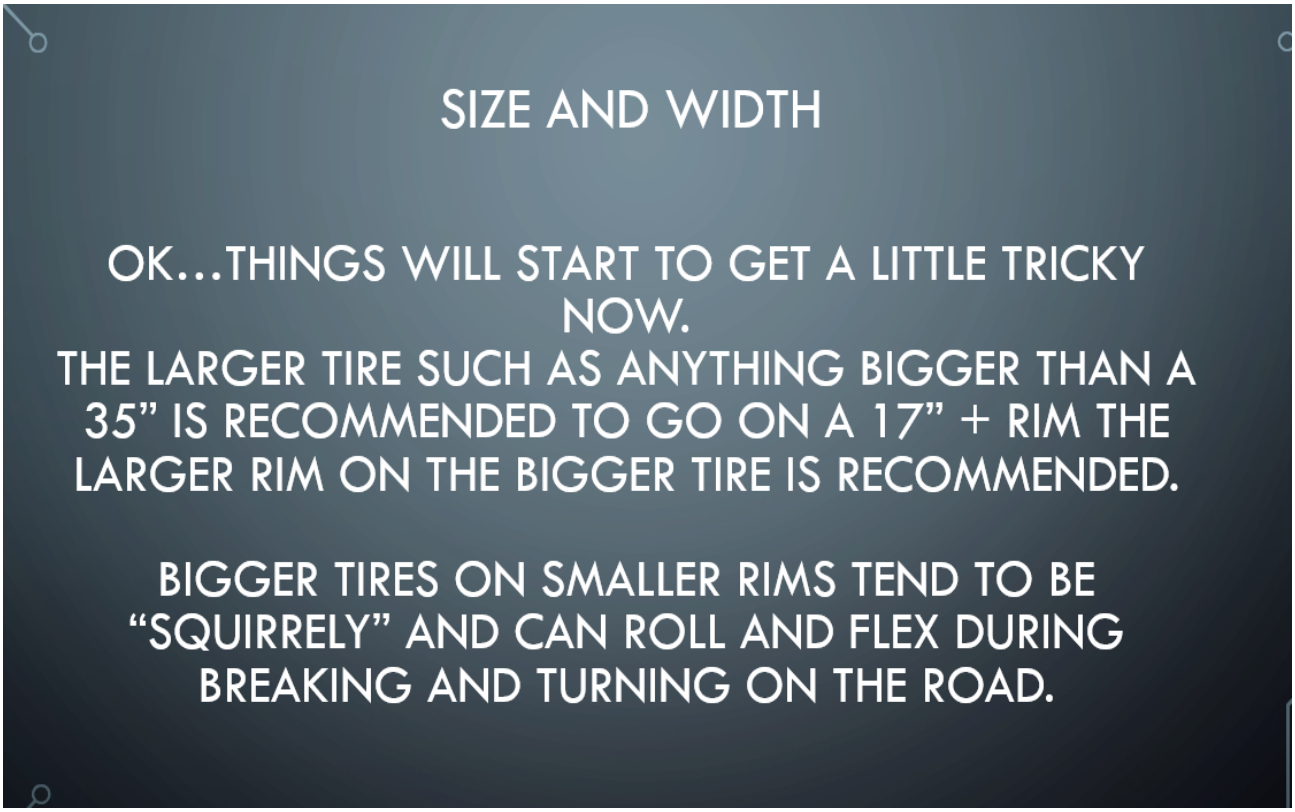
Really evaluate what you are building your jeep to do. What is the purpose and make your decision from there. Also keep in mind that the Beadlock is going to be much more expensive than your non-Beadlock wheel. That is just another thing you want to take into consideration as you are picking out your wheels.

Make sure you get the correct bolt pattern as well. That means you need to know your bolt pattern for your particular vehicle as well. Most of the wranglers are usually 5 x 4 1/2 or 5x5. When you are looking to upgrade and get new wheels, you do need to make sure that they are going to match your bolt pattern and be able to work on your vehicle. For example our CJ is 5 x 5 1/2 bolt pattern.

For the Cherokees, so the Xj, Zj and Wj, you will have to look at your current wheels or look up the specs of your vehicle to see what your bolt pattern is going to be. I wish I could say there was a little more similarity, but they definitely vary considerably.

This is something you will want to look up or know. That way whatever wheel that you buy will match your bolt pattern on your vehicle.

Here is where things seem to start getting a little trickier.



Moving into putting the tire and wheel together it is about the size and width. The larger tire, such as any tire that is going to be a 35 inch or bigger is recommended to go on a 17 inch wheel or larger.

If you are going to run a 35, 37, 40 or 42, you need to be on a 17 to 20 inch wheel. The larger tire, needs the bigger wheel.

If you are going to run a 37, it is recommend that you be on an 18 inch wheel. (I will be really honest that it is easier to find after market nice wheels in the 17 inch.)

An example is a 35 inch tire on a 15 inch wheel. The bigger tire on the smaller wheel can lead to a Jeep that is going to be more "squirrely". The tire can actually roll and flex during breaking and turning when you are on the road. By staying on a smaller wheel with a bigger tire you are losing some of the stability and drive ability. This will also feel like your Jeep is not handling as well.

That is another part of this to think about. When you start thinking about what size tire with what size wheel and what kind of stress is that going to put on all the other components.

If you are going to do a 35 inch tire, you need to have a 17 inch rim.

Be thinking about that when we talk about picking your tire size and that is the foundation for your build.

If you are going to do at 35 inch tire, you are going to want to upgrade to a bigger wheel and it is going to be safer for you as well.

All right ladies head spinning time.

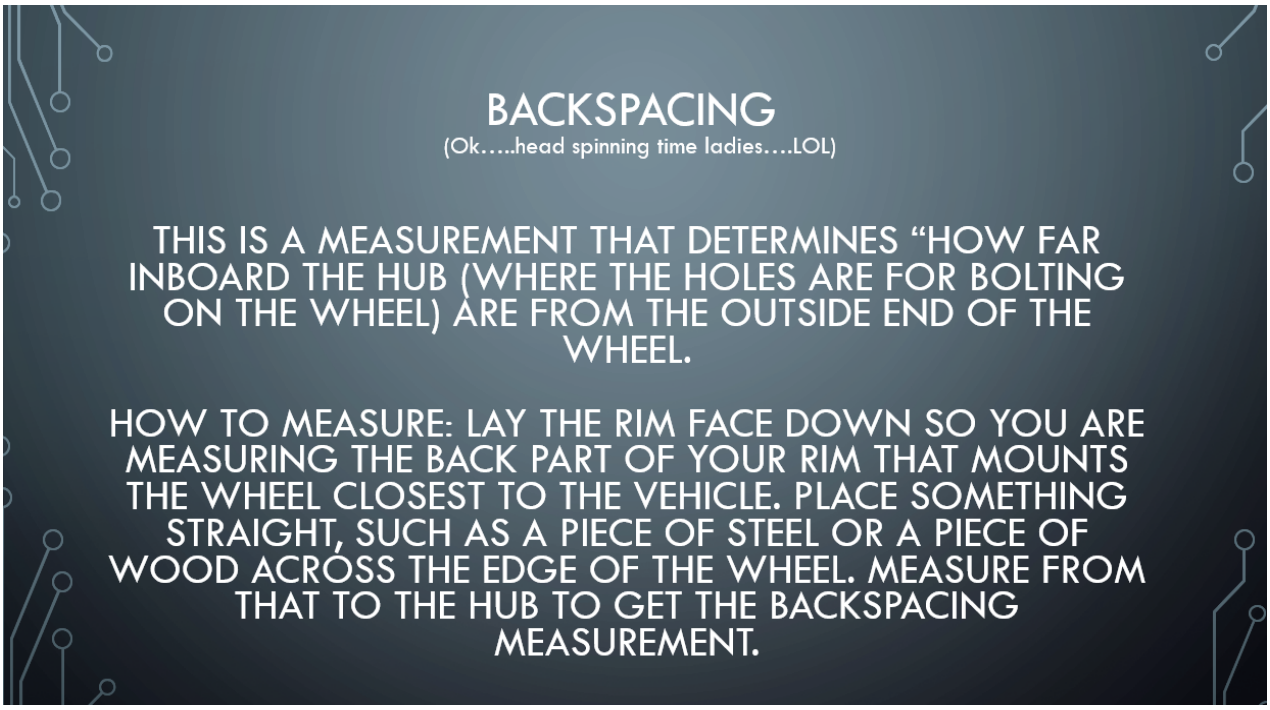
Maybe not for you, but I will say for me some of this was head spinning time for sure as I was learning. I am still working on wrapping my head around what we are about to get into. If you have any questions on any of this information as we are moving forward or as it comes up, please post a comment in the Private Facebook Group or shoot us an email @ ladyjeepers@gmail.com and I will help you.

Below you will see an example diagram of the three measurements we are going to be talking about. It shows you great examples based on where the hub is located on the wheel as to what the measurements and offset are.

We are going to start with backspacing.

Backspacing truly is just a measurement. If you hear someone talking about backspacing that is what they mean. Backspacing is actually the measurement that is going to determine how far inboard the hub, the holes are that you are going to bolt on the wheel. The measurement tells you how far those holes are from the outside of the wheel.

How to measure backspacing? Measuring the backspacing can get a little bit confusing.



Time to measure for backspacing.

** You need a wheel that is not mounted on a tire for this.*

** Take the wheel, and lay it face down so that you are measuring the back part of your wheel. (That is going to be the part that mounts the wheel that is closest to your vehicle when you are putting it on.)*

** Put something straight across the top of the wheel, a piece of steel or wood, anything that you can lay across.*

** Measure from that edge of material that is flat across you wheel to the hub to get the backspacing measurement.*

So why do you need to know this measurement?

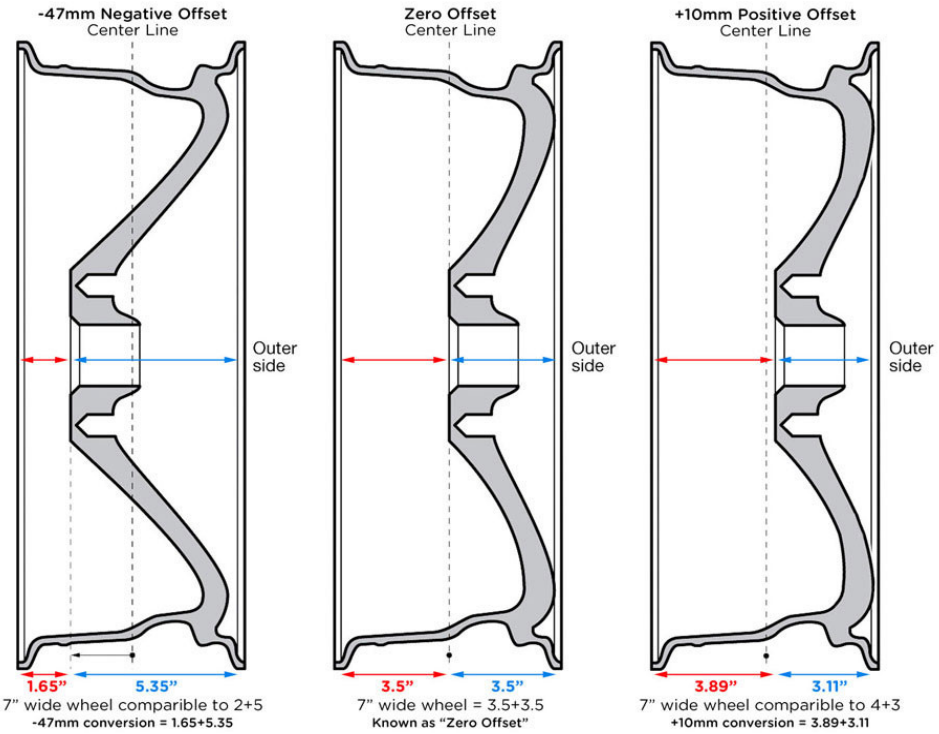
We are talking about wheels, tires, and tire width. When you want to run a little bit wider and bigger tire, that is when backspacing becomes crucial.

We need to know this measurement because you need to know the mounting surface and measurement to get the right distance to clear all your parts with your tire.

The tire, once mounted on the wheel needs to be at a distance from your axle.

Why?

What you do not want to happen is to get a new wheel and a new tire and have it put on your jeep to have the edge of your tire hit or rub up against any suspension or any of the parts. You don't want it to interfere with your brakes. So that is why backspacing is so important.



By changing that measurement on the wheel, you can actually use that to bring the tire in closer to the jeep or out farther away from the Jeep just based on what that measurement is and the amount of backspacing that you have on the wheel. Because where that wheel mounts to the Jeep is going to determine where the tire is going to ride and how much clearance you are going to have.

I am hopeful that I am helping to start explain some of the confusing stuff. Moving into the next measurement for the wheels is the offsets.

There are three different types of offsets that we are talking about when it comes to our wheels and tires. (They are in the graphic above)

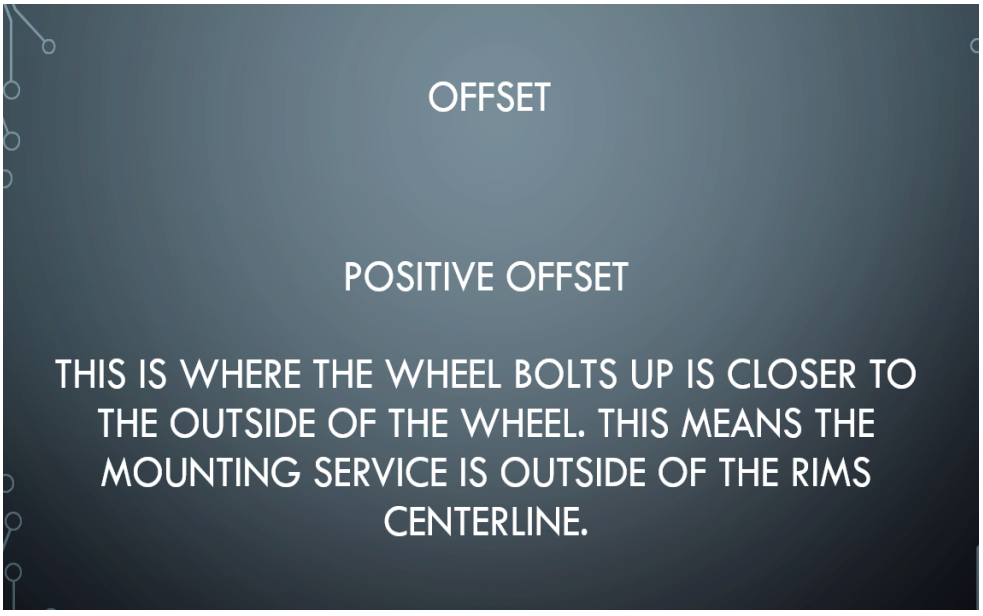
There is the negative offset.

That is where the back of the wheel where it will bolt up closest to the inside. Negative offset means that the mounting surface is inside of the wheel. Take your wheel and with nothing on it set it on the ground and look at it from the side. The wheel bolt is closer to the inside. What that means is instead of having the holes dead center in that wheel, they are going to actually be inside of the wheel, so they would be farther away from you if you were at the face side.

This makes the wheel closer to the mounting surface. When you put the tire on that wheel, and mount it on the Jeep there is going to be less room between the Jeep and that mounting service where the bolts go in. That means that the actual holes, so that mounting surface is going to be closer to the back of the wheel, which means it is going to be closer to the vehicle when you go to mount it and you are going to have more wheel from the vehicle out to the outer surface of that wheel.

Most of the time when you upgrade to a wider and/or larger tire you will hear that you need a negative offset wheel. That way it keeps more tire outside of the wheel well and fender of the Jeep. It has less tire on the inside so that the majority of the tire "sticks out" instead of "sucking it up inside."

That is what a negative offset measurement and design is.

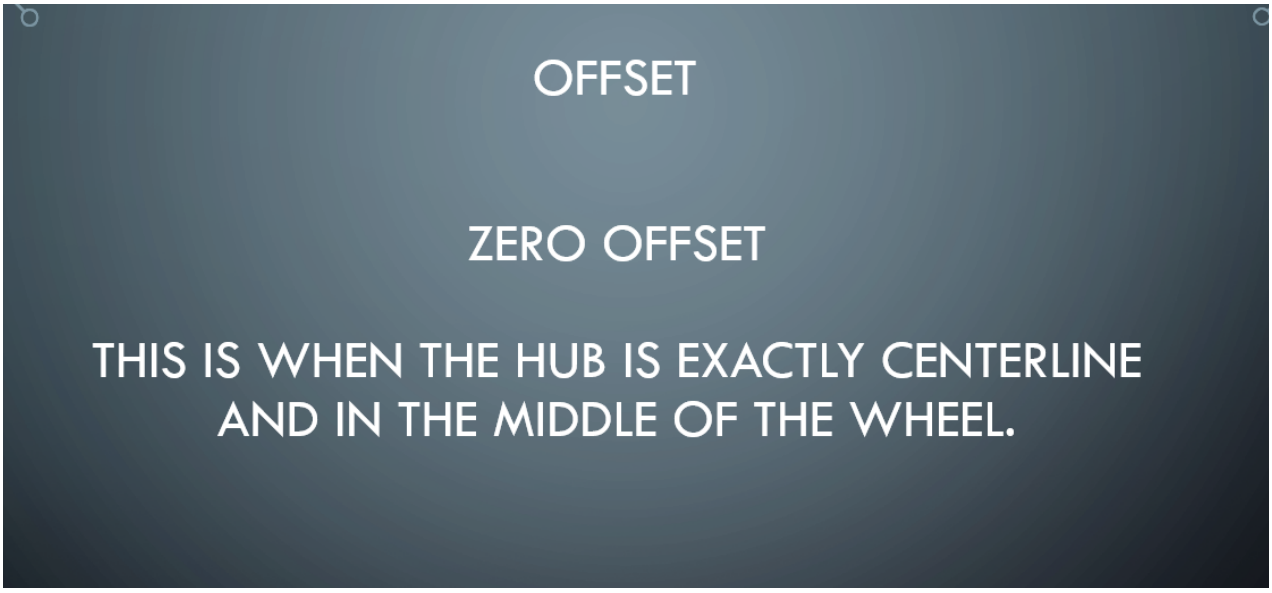


The second offset is the positive offset.

The positive offset is where the wheel is going to bolt closer to the outside of your wheel.

That means the mounting surface, were your holes for screws are actually going to meet and mount to hold your wheel to your vehicle, is going to be on the outside of the wheels center line.

When you are looking at the wheel with no tire or anything on it, you are going to notice that the mounting surface is going to be closer to the outside. A positive offset brings more tire inside the wheel well. Usually you will not use a positive offset unless you are going to a narrower tire and want to bring it inside the Jeep more.



Then there is a zero offset.

It sounds like what it is.....

The hub on the wheel is exactly on the center line. That means that it is exactly in the middle of the wheel.

Most of your stock or "regular wheels" as some people call them are always a zero offset.

What this means is if you are going to do a zero offset, when you mount your tire and wheel to your Jeep, you are going to have the same amount of tire inside and out. The same distance and measurement of tire towards your vehicle and the same amount of tire coming outside of your vehicle.

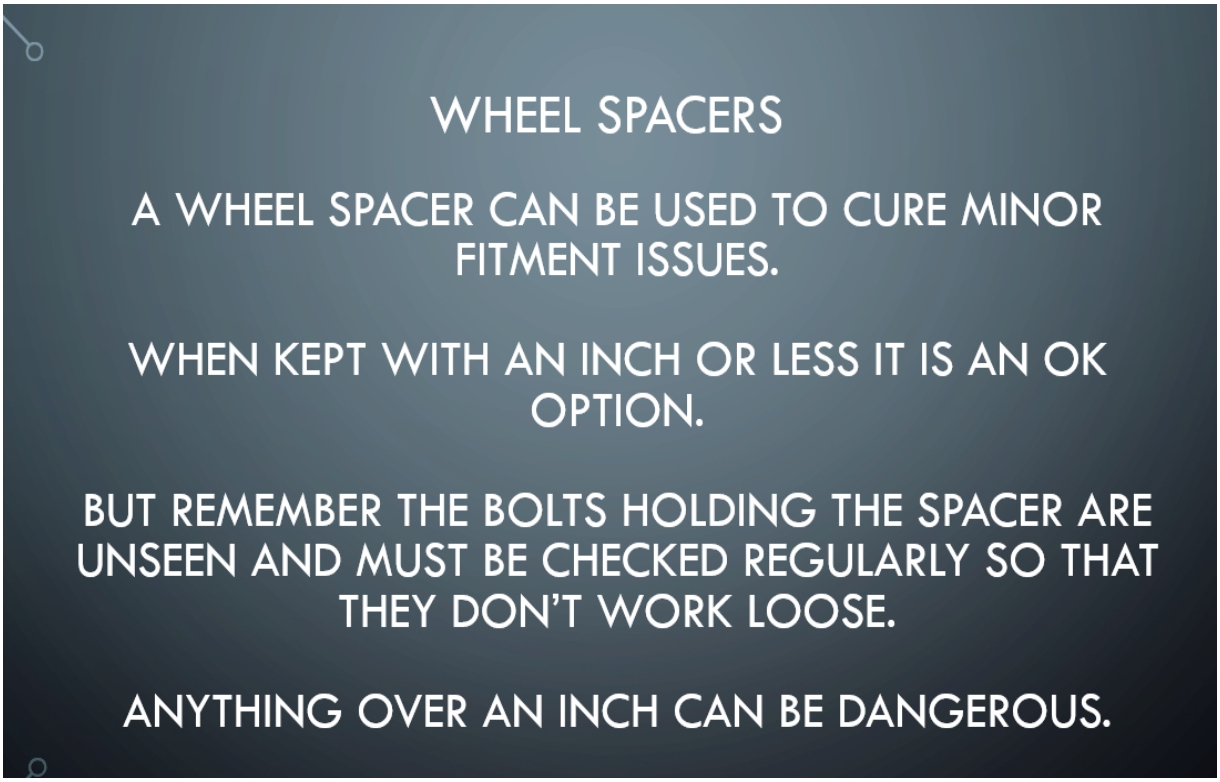
Know Your Backspacing.

If or when you decide to run a wider or bigger tire on your vehicle, you need to know your back spacing. That means you need to know how much room is needed for enough travel room for the tire. That means you need to measure how much room you need from the tire to the vehicle where it is not going to interfere with any components. That is how you are going to know what offset you want to go with.

Now you know if you have a wider tire, you need to bring that tire out away from the vehicle and have more tire on the outside and out of the wheel well. By changing the offset, you can actually change the amount of room that you have between the tire and your vehicle. By doing it in the wheel, you are able to adjust and allow for that tire to move over to give you more room inside or outside of the the Jeep wheel well.

The most important part of all of this information is to set up your new wheels and tires together so that nothing rubs and you have the correct amount of room.

Remember, this is going to depend on if you are going to run a narrow tire or a wider tire.



The wheel spacers.

If you are looking at getting new wheels and tires you are going to hear people talk about wheel spacers. Especially when you talk about bigger tires or wider tires. The wheel spacer allows for you to get your correct offset with the wheels you have or if you do not adjust your offset by the wheel itself. You are going to use a wheel spacer if the offset just was not enough and there is a slight or minor fitment issue.

There is nothing wrong with using wheel spacers. Especially at the beginning of your build if you have not gotten the correct offset wheel yet.

Wheel spacers are great depending on what the fit issue is, and what the adjustment issue is.

I know some people will think that wheel spacers are the answer to fixing that. So, instead of going with an offset wheel they are going to go to a wheel spacer. Keep in mind an inch or less is an okay option. If there is a fitment or clearance issue that is wider than an inch, you need to re-adjust and look at some different options on how to fix that issue with a new wheel with the correct offset for you. Without running wheel spacers or multiple wheel spacers that are going to be thicker than an inch because it can be dangerous.

If you are running a wheel spacer, you need to remember the bolts that are holding this wheel spacer are unseen because of where they are located. The bolts for the wheel spacer need to be checked regularly because this is going to be for safety issues. You do not want them to work loose.

Safety with the Wheel Spacers.

If you are going to add a wheel spacer to cure fitment issues that you have keep these things in mind.

One, you need to make sure that that wheel spacer is installed correctly from the very beginning.

Two, those bolts are torqued down and tight when they are installed.

Three, they are going to have to be checked.

That does mean a little bit more work on your end for safety. Because you really do not ever want to let those bolts loosen and chance them working their way out of your wheel spacer. That can make them very dangerous, especially if this is your daily driver that you are driving at high speeds like on the interstate or the highway.

I am a safety patrol ladies, you are going to get to know that about me a little more.

Those who have been with us for a little bit longer probably already know I am. I am a little bit of safety patrol, and really cautious. We have to love our Jeep, we have to love our build, but we need to make the decisions in the right places so that we are safe because there is never, ever a reason to put ourselves in danger or jeopardy.

If it means you know there is a fitment issue then you might have to wait to get the bigger tires on or just put a wheel spacer on short term so that then you can do a long term fix. It is just fine to have a wheel spacer, but if you are going to be doing a lot of off-road driving you want the wheel spacer to just be a short term solution.

If you are going to daily drive your Jeep and you don't do much off-road driving, and the off-road driving you do is very mild, then you can run a wheel spacer no problem. Just keep in mind the three safety aspects above. Have the wheel spacers checked when you do regular maintenance and if you do go off-road have them checked after a long or hard ride.

Please remember, safety has to be more important than the build.

If you have an inch or less wheel spacer, that is totally fine. Make sure you are checking your bolts or take it in and have a shop check your bolts if you do not want to do it.

Safety, safety, safety, especially when we are talking about a daily driver that will do excessive speeds going down an interstate.

Putting our tires and our wheels together.

I know that was a lot of information all at once, when we started talking about backspacing. Especially when we start talking about different offsets, wheel spacers, going into a wider tire, a bigger wheel,and that is a lot to think about and I know that can get confusing and a little overwhelming.

That is why I wanted to start with the tires first though. Think of your tires as your foundation for your entire build platform.

When things like this come up and get a little overwhelming especially when there are so many different directions you can go, try and make decisions based on the ultimate tire platform as your basic guide.

There are things that you will have to choose based on what you like, what you love, and the look you want to have.

A few of those questions will be do you want to go with alloy or steel wheels?

Do you want or need to get Beadlock wheels?

Keep in mind, once you have picked your tire size and your tire manufacturer, what brand, what kind of tire, the tire manufacturers are going to give you specs and they are going to give you recommendations for their specific tires. That helps to then decide which wheel to go with for that tire as well.

When you go to look up a tire, that manufacturer has specs for you for that tire. It is going to be what size wheel they recommend. They are going to give you the width of the tire and they are going to have recommendations on what wheels are going together best with their specific tires. If you choose the tire first, you can then choose from what specs the tire manufacturer has given you for some of your wheel choices.

I am not saying you have to go with what brand they recommend. But what it is going to do is it is going to help give you a little bit better idea when you start looking at exact specifications. Like we talked about for the correct offset, you are going to have more of the specs that you are going to need to make the right decisions, the right choices, and know what your options are to choose from.

That then makes it easier to go forward. That way you are not trying to do all the research and figure everything out yourself.

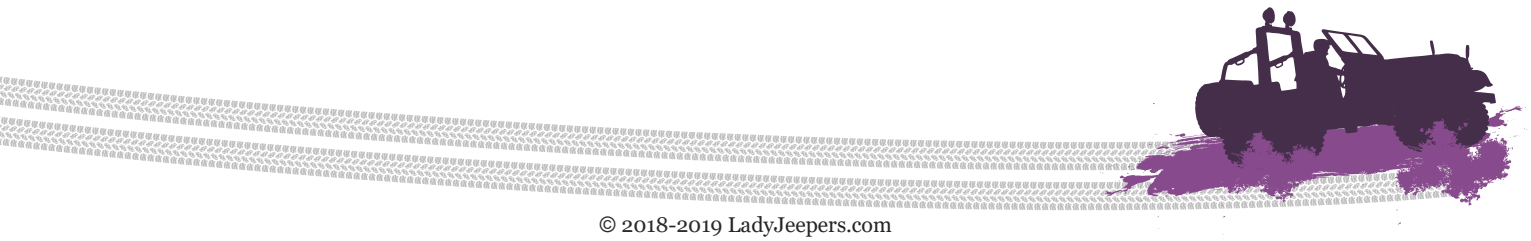
When I first started talking about offsets and measurements, my brain kind of goes, Whoa, I'm not even gonna listen to any of that. I know sometimes it can be a little overwhelming but there are different places and people that you can reach out to to help as you are designing your build. You can always reach out to us at Lady Jeepers and we will help in any way we can.

The biggest thing I want is for you to enjoy the process of designing your build and deciding what you want to modify. This is for YOU and you have to love it.

Jeep Build Overview Notes

Jeep Build Overview Notes

There is so much to consider.....this sheet is to help take notes along the way in this Course As you think about planning your build.



Beadlock Wheels

It is time to talk shoes...

LadyJeepers.com

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.

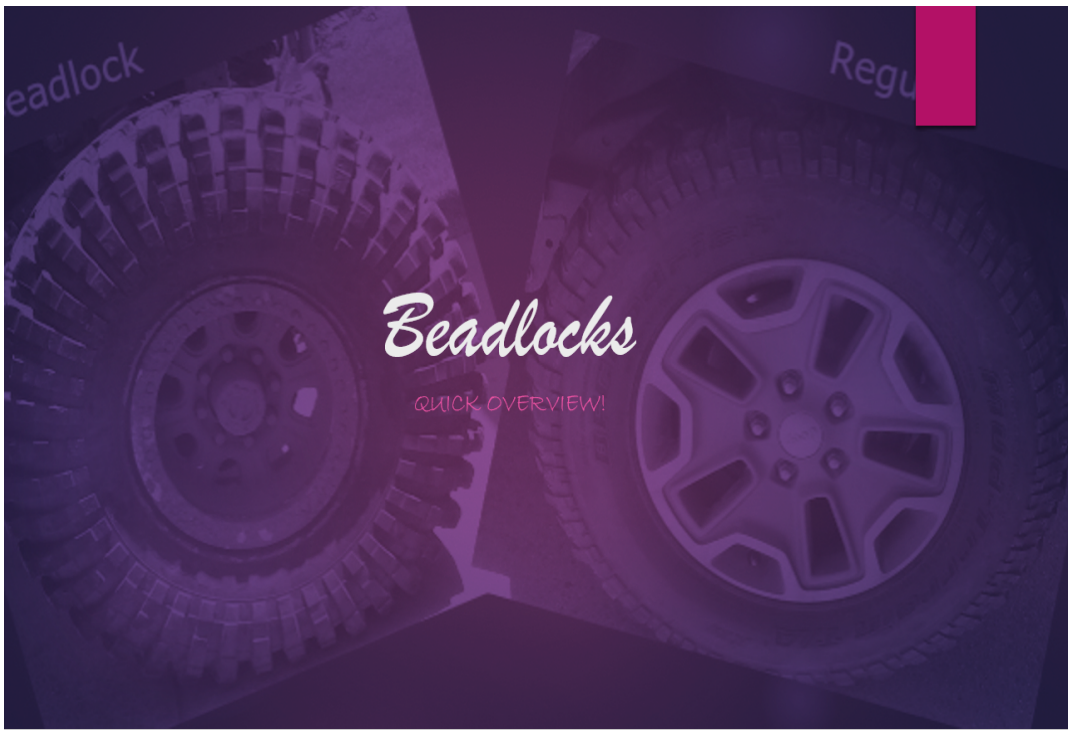
This brings up a great "terminology" aspect to start with first.

I have found depending on what part of the country you are in, or what area of the automotive world you 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.



Beadlock Wheels

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 was talking 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.

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 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 is 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.

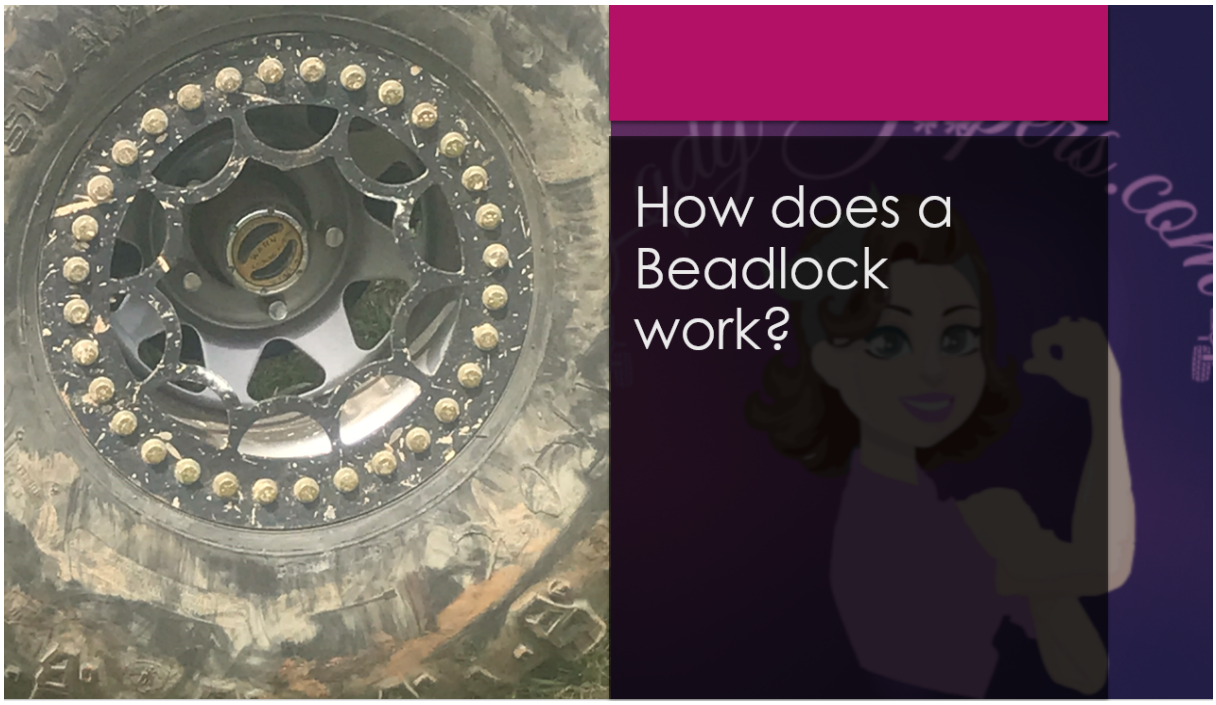
It is going to allow the tire to have more give and kind of melt around the rock or the object on the trail. You gain more tire surface on the ground so that in turn also gives you more traction as well. That can make a big difference when you are negotiating terrain Off-Road!

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

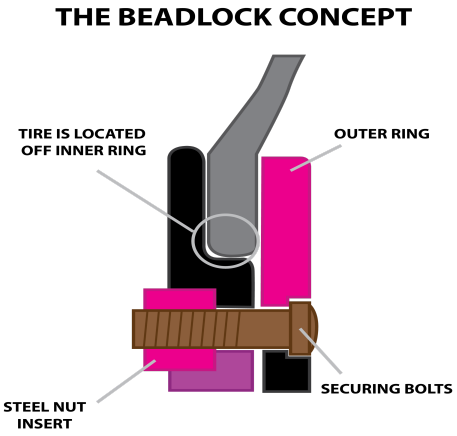
In this picture, the tire is only aired down to 18 PSI due to it being a non-beadlock. In fact, this is actually my factory stock wheel that came on my JKU.

As you can see because it is aired down, you can see how the tire is forming around the obstacle right here. That is the actual example of when we start talking about off road capabilities. This shows why being able to air down the tire even more with the Beadlock wheels can be so important.

So the next question that this leads into that I hear all the time is,
"How does a Beadlock wheel 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.

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!

The difference between a stock wheel (non-beadlock) and a Beadlock.

Here is an example of the two different wheel types next to each other.

As you can see over here on the right, this is my stock, JKU. These are the stock wheels that come on it, so non-beadlocks. Just to clarify quickly as well, I am running my stock wheels and tires in this example photo. (And yes it is aired down and on a trail.😊)

Then over here, on the left, you have the bead lock.

When you are looking at what the actual difference in these two are..... The one on the right (non-beadlock) shows the wheel is mounted with the tire. The tire meets the outside of the wheel to have the "mounting" surface, when it seals, it seals to the outside of the wheel and sits on the outside of the wheel due to the air pressure creating that tight seal of the tire to the wheel.

On the Beadlock tire on the left, you can see you have the lip of the wheel and the tire is actually under that lip. That means your wheel is on the outside of the tire. That also means that what is holding this together is not the air pressure.

Beadlock Wheels

I don't know if you have ever seen a "traditional" wheel and tire like this stock one mounted. When they go to do it, this tire is not actually sealed to the wheel until the air inflates the tire to almost "pop it" onto the wheel to create the mounting seal.

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 inflate 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 inflate 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.

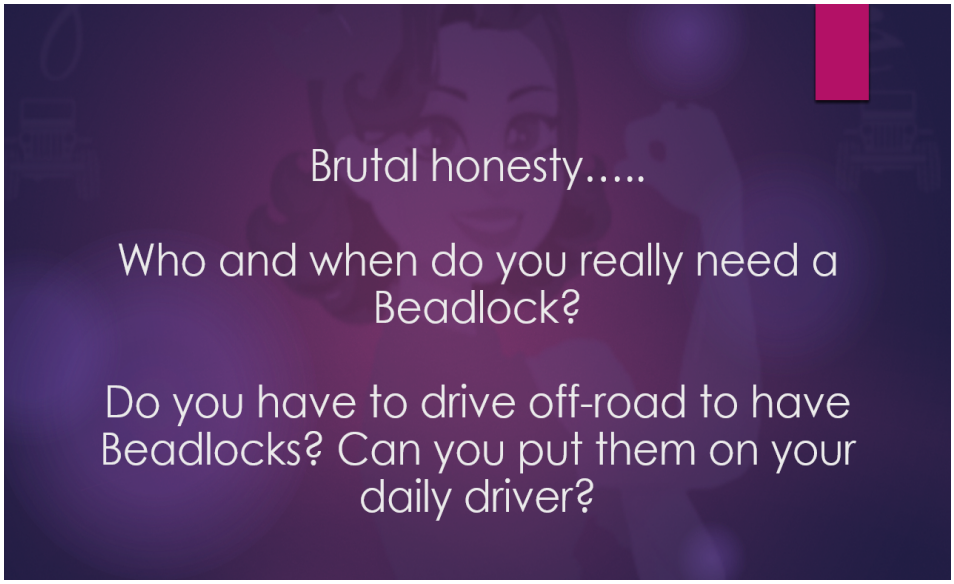
Think about that, you are talking about a difference of 10 PSI. So 10 pounds of air difference between your Beadlock and your non-beadlock wheel. When you are out on a trail, especially if you know you are doing rocks and different obstacles, that is going to make a big difference as to how much tire 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 has been developed for Off-Road capabilities. This is for the jeep that you are going to be taking on the trail. You are going to be taking to events, parks and rides. You want more capabilities so you want to be able to air the tires down or run a much lower PSI.



Beadlock Wheels

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 fine. They are more expensive. And again, you have to make sure that they are street legal and they are DOT approved. You know, 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 the 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 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 understand 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.

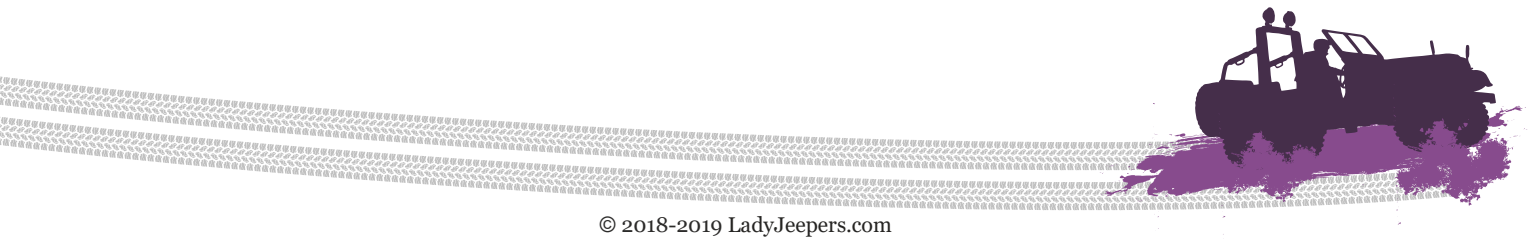
Keep in mind as we are closing this training.....you do not have to get what is popular or what is new.

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 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!)

Jeep Build Overview Notes

Jeep Build Overview Notes

There is so much to consider.....this sheet is to help take notes along the way in this Course As you think about planning your build.



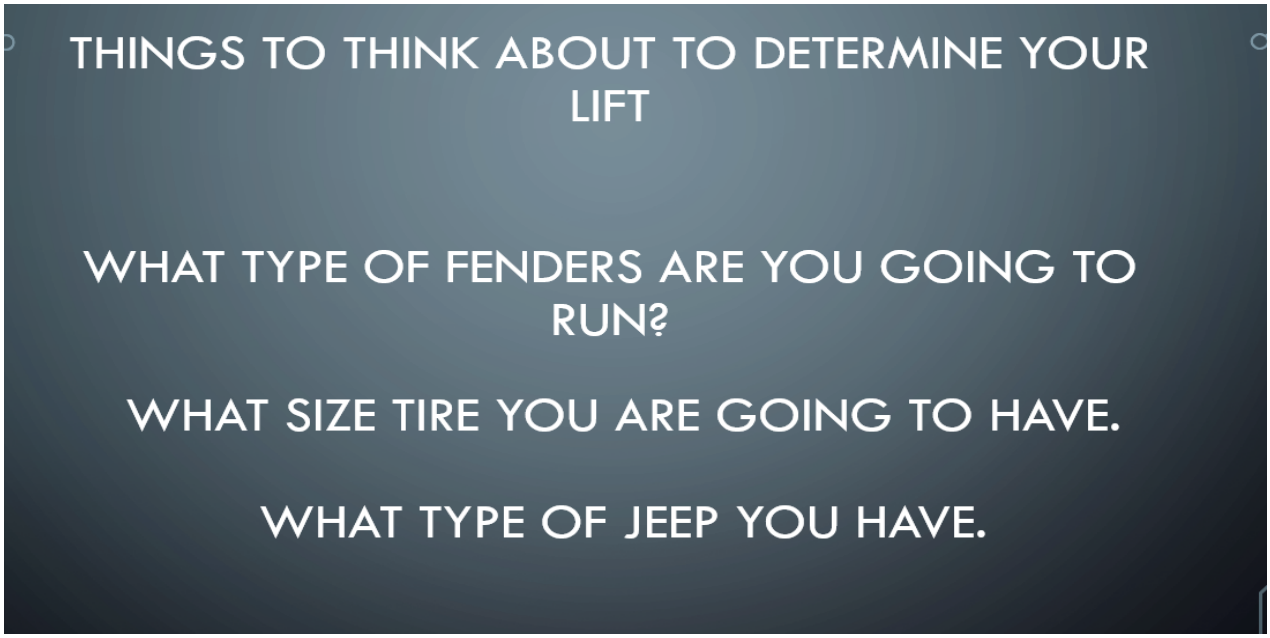
Section Five; Lifts

Welcome to Lifts in your Design Your Jeep Build section number five.

I want you to remember that this is your build. This is so important to remember that it is your build and it isC unique to you. There is no one way or one answer on what you need to get. This needs to be your personalC preference as well. Your taste in something that you like the look of and love.

I am going to be talking about lifts. There are all sorts of different sizes and types of lifts. I am going to go aheadCand go over a couple of different generations of jeeps and some specs when it comes to lifts.

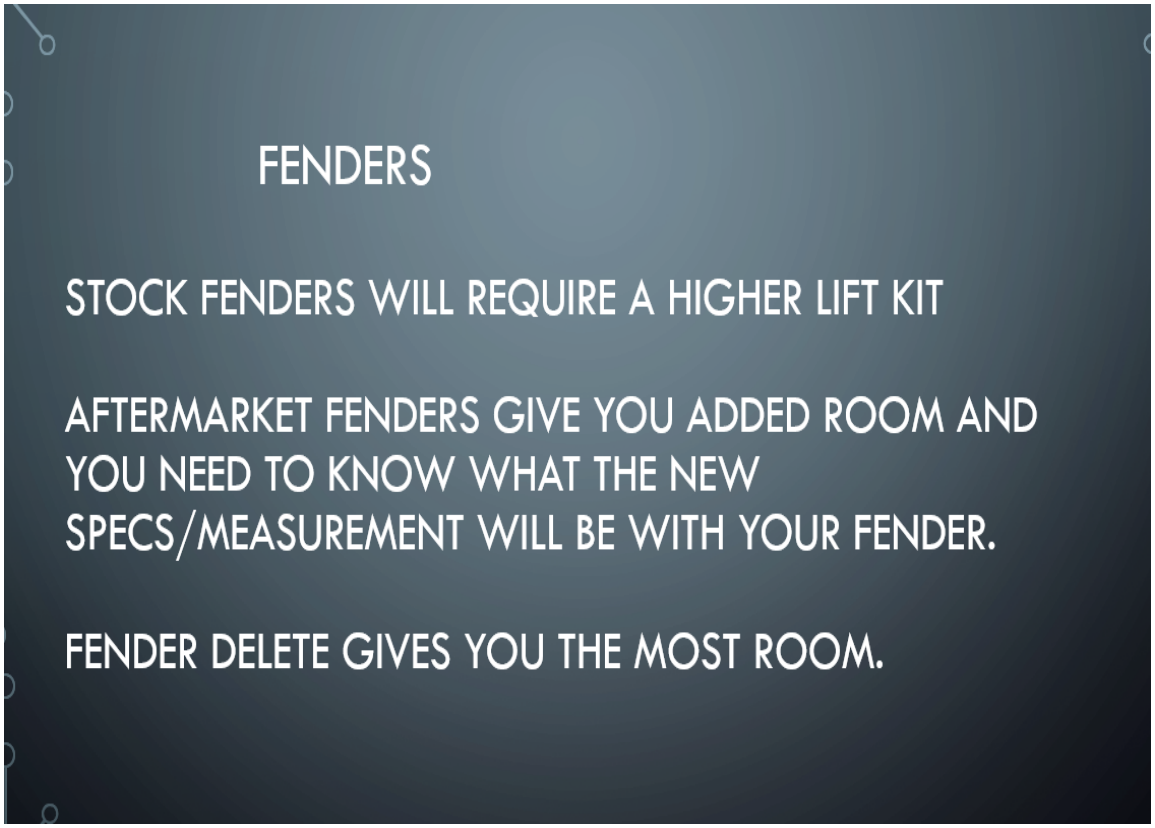
Like I have talked about previously, you need to know what size tire build you are going to do. Starting with the tire size is going to be crucially important because that is going to be your platform. That really is what you are designing your entire build around is your tire size.



One thing to think about when determining your lift is fenders. As you are working through these classes, you are designing your build for your jeep as you go. In this Section you are thinking about what type of fenders you are going to run.

- Are you going to stay with stock fenders?
- Are you going to go with an after market fenders or a high profile fender?
- Are you going to be going with a fender delete?

I really went in depth on fenders and how fenders are directly related to our builds and the decisions that you are going to make in our section number three. If you missed that then go ahead and jump over there. It goes in depth and talks about the different fenders and your different choices. So stock fenders versus after market and fender delete are going to determine the room that you are going to have for your tire before it interferes with your fender. This really is going to determine how much travel you are going to have or how much flex you are going to have in the suspension before the tire interferes. However, do not forget what type of Jeep you have also factors in.



Then of course the most important thing is what size tire you are going to have.

A lot of times the first thing that the tire is going to hit is the fender. However, that is not always true. I previously went into that a little bit when I started talking about offsets and backspacing on wheels to keep it out of the way of other parts of our vehicle.

What you want to think about is the fender that you are going to run is directly going to affect how much travel you are going to have. You do not want to limit the travel because then you will you have a clearance issue. This is where you need to know what fender you are going to have first, what size tire you are going to run, and then that is going to help you to determine your lift. A stock fender is going to require a little bit taller lift kit. The after market fenders are going to give you added room that you need, but make sure that you are going to know the new specs and measurements that you are going to have with your fender. You want to make sure that you are going to have enough room for tire clearance and travel between your tire and your fender.

Then of course, out of all of the choices, fender delete is going to give you the most room and the least interference because you will not even have a fender to run into.

Let's jump into our quick guide.

Everyone has their own opinions. This is just kind of your conservative middle of the road, if you will. It is not super conservative, but it is also not pushing the envelope. You can put a bigger tire on, but then that means you might end up with clearance issues. You might have to change more parts, you might have to do more fender trimming or things like that. This is the middle where you are safe. This is your guide that you are going to go by for landing right in the middle of options and opinions on height and lifts.

This guide is your overview to help you. There are multiple ways you can design your build that will change the amount of lift you will need. The fender choice is one way to go about making more room in the wheel well to allow for a larger size tire without relying entirely on the lift height. (We already covered that in depth in section three if you want more information on that aspect.) Some people also opt to shave or cut the stock fenders versus buying after market to achieve the same result. That is up to you and your build, but is also a way to allow for less lift and larger tires.

CJ Models

We are going to start with the CJ generation first.

On a stock height CJ, you can run a 28 or a 29 inch tire making no changes to the Jeep. If you wanted to cut your fender or do some trimming to the fender that is on there or go with an after market fender you can put on a 30 inch tire without a lift.

If you do a two inch lift you can run a 32/33 inch tire. A four-inch lift will allow you to run a 34/35, though you may need to do some fender trimming depending on what stock fenders and how much articulation you want to achieve. The CJ is one of the smaller sitting stock Jeeps and it is also one of the smaller wheelbase Jeeps so the taller you go with a lift the more you need to think about doing a stretch to allow for the balance and stability of the Jeep. A rule of thumb with these Jeeps is the taller you go the longer (add stretch to move the tires to balance out the up you created) you need to go as well. This is not an exact science and everyone has different opinions but when you think about a four inch lift height on this Jeep you should also be thinking about a four inch stretch to even this Jeep out. Especially if you have a CJ5 that is the shortest length in the CJ generation. This is our opinion for safety and drive ability.

The CJ5 in the photo above has an estimated total lift of four and a half inches and 36" tires on it with a stretch of ten inches.

YJ Models

Every Jeep as we start talking about the different generations and the different Jeeps themselves, are going to be running different size tires just based on how they come stock and manufactured from Jeep.

The YJ generation has a larger stance and length then the CJ generation but is still significantly shorter and more narrow track then the JK/JL generations.

If you are going to go with the stock height, you can run a 28 or 29 inch tire. If you do some fender trimming and cut your stock fenders to allow for more room and more travel OR you add an aftermarket fender you can run a 30 inch tire with no lift.

If you do a two-inch lift on your YJ, you can run a 30 inch tire. With that two inch lift if you do fender upgrades or trim your stock fender, you can run a 32 inch tire.

A four inch lift will allow you to run a 32 or if you do fender upgrades, you can run a 34 inch tire but remember this may involve cutting the fender area out in your YJ to allow for the room.

The six inch lift allows for a 34 or a 36 with upgraded fenders and some fender modifications to the wheel well to allow for this tire size.

Just as we talked about with the lift height on a CJ generation Jeep, in the YJ generation with wheel base length you will need to keep in mind how to maintain your balance and center of gravity for safety and stability.

As you go up you need to be thinking about stretching the length and balance on the YJ as well. The taller or higher they get the more unstable and top heavy they become. A rule of thumb to keep in mind is four inches of lift and more you need to think about adding the length in stretch.

The YJ in the photo above is a major and long build. She is on a 7" lift, 42" tires, with one ton axles to add the width and a front and rear stretch that equals out to a total of eight inches of stretch as well. That keeps the center of gravity and balance for the stability in the Jeep. Jeep builds are math and science in essence. You factor in height, length and width to allow for the changes you make to be made across the board to keep the same balance and center of gravity. You need to think about that for anything four inches or higher on the YJ platform build.

TJ or LJ Models

The next generation is the TJ/LJ generation. The LJ is the longer version of the TJ.

A stock height, TJ or LJ, can run a 28 a 29 or 30 inch tire completely stock with no lift. If you do fender trimming or modifications you run a 31 inch tire with no lift.

With your two inch lift you can run a 31 inch tire and if you do fender upgrades, you can run a 33 inch tire depending on the amount of fender trimming and wheel well clearance you want.

A four inch lift, you can run a 33 inch tire with stock fenders. If you do fender upgrades and trimming you can do a 35 inch tire.

In a six inch lift you can run a 35 inch tire and with fender upgrades you can run a 37 inch tire. But keep in mind that will require more trimming and clearance in the wheel well.

The TJ generation Jeeps do benefit from a stretch when you do a six inch or more lift on them. This is not as crucial in a 35 inch tire build but do keep in mind the idea of when you go up you need to add length to balance. The TJ generation allows for a little higher lift before you need to add that stability with a stretch in length.

JK Models

The JK generation introduced the JKU. That is the unlimited 4 door version so it is longer with a longer wheel base.

In stock height you can run a 30 inch tire with stock fenders. If you do trimming to the stock fender or you add after market fenders, you can run a 33 inch tire.

A one inch or one and a half inch leveling kit with your stock fenders will allow you to run a 33.

A two or two and a half inch lift will allow you to run a 33 inch tire with stock fenders. Or, you can fit a 35 inch tire with high clearance fender upgrade and or trimming of the fenders.

A three inch to three and a half inch lift allows you to run a 35 inch tire, or a with fender upgrades and trimming of the wheel well and the correct offsets you can run a 37 inch tire.

A four inch or four and half inch lift allows you to run 37 inch tires with no fender alterations. With fender upgrades and wheel well trimming you can run a 39 inch tire.

A six inch lift allows you to run a 39 inch tire as well as your 40 inch tire plus sizes with after market fenders.

You see the different tire sizes on different lifts, especially on the JK. This is going to be a little bit of a personal preference. You need to know is your jeep going to be more of your daily driver or is this going to be something that you are building to be able to do a lot of off-road driving. You need more clearance for suspension up and down travel with a Jeep you plan to drive off-road and trail ride more than your daily driver. You want to make sure you do the correct clearance adjustments to not have any rubbing or interference with your Tires.

JL Models

The JL Generation is the newest Jeep Generation. You can get a 2 Door JL in the Sport and Rubicon and the Sahara and Moab are only available in Unlimited, 4 door, as of 2019.

At stock height, the JL can run a 33 inch tire with no upgrades. You can fit a 35 inch tire on stock but you will have some clearance issues and rubs so you would need to modify the fenders and the offset.

If you are going to be driving off-road you would need to make more clearance allowance. With a two and a half inch lift you can run 35 inch tire with no upgrades to fenders or a 37 inch tire with fender and wheel well clearance allowance by upgrading and trimming.

A three and a half inch lift will allow you to run 37 inch tires with no fender upgrades or a 39 inch tire with clearance allowances made and fender upgrades.

A four and a half inch lifts allows you to run a 39 inch tire or up to a 41 inch tire with some clearance room allowances such as fender upgrades. The JL comes stock with a little bit more clearance and you can run a little bit bigger tire. This also means that the lifts that you need are going to be a little bit different.

Short Arm Lift Kit vs. Long Arm Lift Kit

There are different types of lift kits. I want to start by talking about the short arm lift kit. The short arm lift kit area is something you will get a lot of different opinions about. Especially the debate between the short arm versus the long arm lift kits.

In the CJ, YJ and TJ generation you will need to look into what height of lift for clearance you are going to need based on your tire size. There is a difference in length that then transfers over to the lift based on a short or long arm kit. The long arm kit in these Jeeps is going to make for a much better ride. It also will feel like you have more stability especially when you are driving on the road. A lift over two inches in these generations you will notice a difference in the handling and ride off-road driving as well as on road driving. We suggest in these generations going ahead and going with a long arm kit from the beginning.

For the JK Generation, a short arm lift kit is the most economical lift. For anything that is going to be under four and a half inches, a short arm lift kit is a great way to go. However, anything that is going to be over four and a half inches, you are going to feel the difference of the ride and stability on the road. Again, this is where it is crucial in knowing what size tire, then what size lift you are going to need. Then determine if you are going to go with the short arm or the long arm lift. A lot of people go with the short arm lift kit because it is the most economical, but it also is not a traditional short arm on the JK generation like it is in the older generations.

The JKU has a little bit longer arm to begin with stock. It is more like a mid arm so you are not getting a big difference between the technical short arm kit and a long arm kit on a JK or JKU. If you are looking at the economical side and depending on how big you are going to go and what size tire you are going to run, the short arm kit is a good way to go.

The long arm kit uses longer control arms. What they do is they move the mounts back farther to try to keep it at the same angles that you have with the stock parts. For that reason, welding will be involved and you will need new brackets. Then there also can be some exhaust that you are going to have to move around and reconfigure as well. The long arm kit is going to have a little more to it when you actually go in to install the lift itself. The ride quality and the higher lift is going to be better in the long arm lift kit. Even though these are the most expensive options, it is recommended for anything that is going to be four and a half inches and higher of a lift so that you are going to have a much better ride and more stability. That does equal a safer drive and a safer feeling driving. You will not really feel a difference off-road either in the long arm versus short arm in this generation until you go with a bigger lift.

In the JL generation there are more options coming out so this may change as new options come out. As of right now the lift kits for the JL come with long travel shocks. Remember the length and height stock is different in these Jeeps as well. But due to the component changes stock drive shafts will have to be upgraded as part of the Lift as well. Keep that in mind when getting a lift for JL and look into what options have become

available to see if changes have been made to the specifications on these lifts. Look into the need to upgradeC from the stock drive shaft to get the correct angles so that there is not interference with the parts from the lift.

The right lift for you

Remember that this is a guide and everyone will have their own opinions. My best advice, if you are kind of on the fence trying to decide what direction you are going to go, what lift you want to go with, is to talk to people who have different lifts. Go to some of the rides and some of the events and watch the different jeeps. See the performance for yourself. See what you like and decide after you do some research.

Maybe for economical reasons, you go with the least expensive lift kit, then you decide you want to do some more off road driving, some more trail riding and you decide you need something a little bit different. Take your time on every piece of this build. Remember, you only want to build it once, so sometimes you are better to save up, take a little bit longer and go ahead and purchase a little bit more expensive of a lift just because then you know, you won't ever have to go back and Redo it.

There are things that you get more for your money in quality and longevity, that means the product is going to hold up for you and you will not need to replace those parts. The level of use you are going to expect out of your Jeep also plays a part in what you expect from your parts. A Jeep that will be driven a lot needs high quality parts to hold up to the expectation of use. There are a lot of different options available with a lift kit, as well as different price points. I understand, trust me, that the economical side plays a big part in your build as well. Just remember saving up to buy the right lift once still saves you money in the long run if you have to go back and buy replacement parts for a lesser expensive lift. That is your choice and again, no judgement, just understand fully before you start your build.

Our top choices for Lift Options;

* Metalcloak Lifts
*Rock Crawler Concepts
*AEV
*Rusty's

Section Six; Stock Parts to Upgrade

It is time for your Design Your Jeep Build Part Six.

In this section I am going to be talking about performance upgrades for your jeep. When I say performance upgrades, it is going to be directly related and go hand in hand with how your Jeep is running and driving. This is going to play a part in drive ability, as well as, the longevity of your jeep. We want it to run as well as it can for as long as it can. I also put in some off-road related upgrades to think about for your trail riding aspects.

It is important to remember that this is your build and it is unique to you. So there is not one way or one answer on what to get. You need to make sure that this build is unique like you.

There are so many different builds on so many different platforms. This is where you need to go with what is unique to you, what builds you like, what stance you like, what you want your ultimate build to be for you and allow your personality to come out in your build.

Like we talked about in our previous sections, you need to know what size tire build you are going to do. We talked about using your tire size as your platform and then you are going to design that build around your platform.

Depending on what size tire platform you design your build around, that is going to dictate what other upgrades you are going to have to make.

As you change your stock parts to aftermarket parts or upgrades or you completely take some stock parts off, redesigning, putting things on.....

You need to look at what stock pieces now have added stress on them. You have left stock parts and pieces on your jeep as you have done your build up to this point. There are still stock running gear and parts and pieces in your jeep that we need to talk about. The bigger the tire on the build platform, the more upgrades you are going to have to do because you are having to compensate for this stress that is now being put on those stock parts.

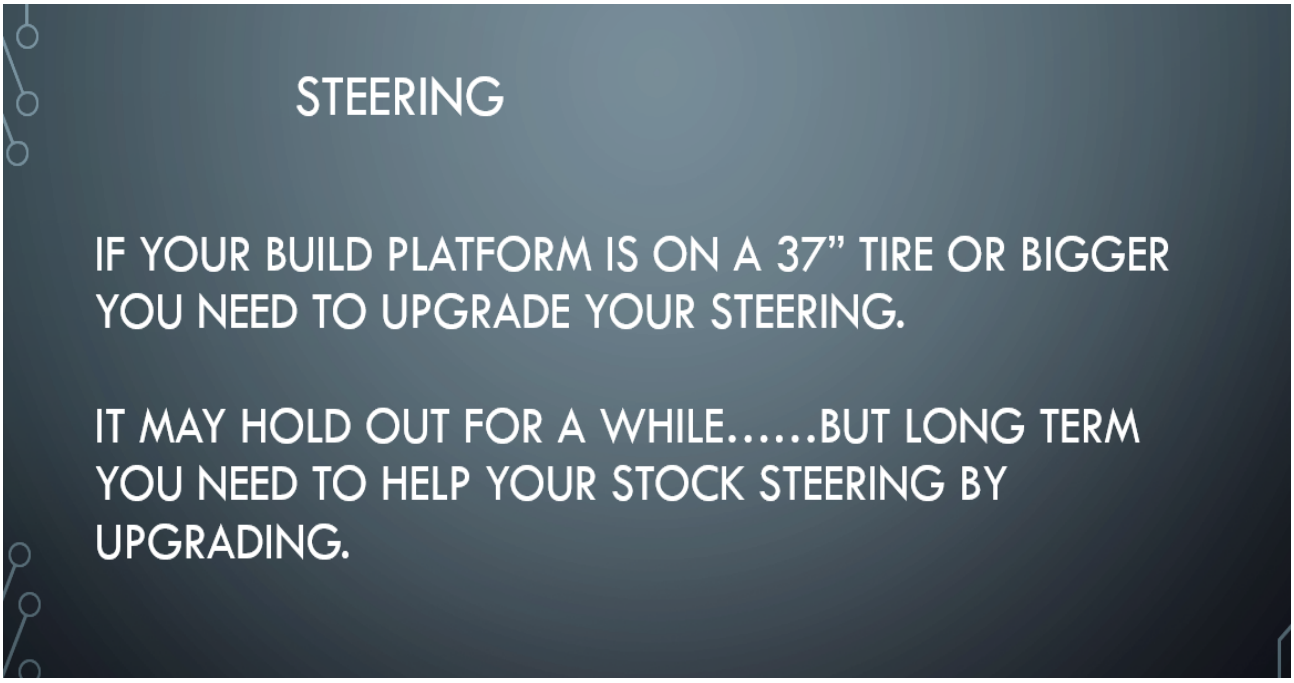
Upgrades

I want to jump in and talk about upgrades.
Most of these are upgrades that you are probably going to have to make at some point in your build as you are going all the way through to complete your build.

Steering

The first thing that I want to talk about is steering. The reason I want to talk about steering as the first part is because if you added a bigger tire, now all of a sudden your stock steering box and components are going to have more stress added to them. You have added bigger tires, which in turn has added more weight, more resistant, and you are adding that against your stock parts and pieces.

Remember this: stock is designed to turn a stock tire. Now you are going to have to address the stock parts that are left once you have upgraded and put bigger tires and a lift on your Jeep. (I know I sound like a broken record with this concept and idea but I want to make sure I say it enough so there are NO surprises.)



If your build platform is on a 35 inch tire we recommend replacing some of the steering components to upgrade to stronger parts. But you do not have to go all the way to steering box and assistance on the 35" tire.

If you are doing a 37" tire or bigger, you need to upgrade your steering. That is something that you need to take a note of, and go ahead and put this down on your overall build sheet. It may hold for a little while, but long term you are going to need to help your stock steering by upgrading.

That is something you do not want to start having issues with. Fortunately, you have a couple different options.

If you are planning on running a 35 inch tire or bigger as your platform, you can look into upgrading some of the following things.

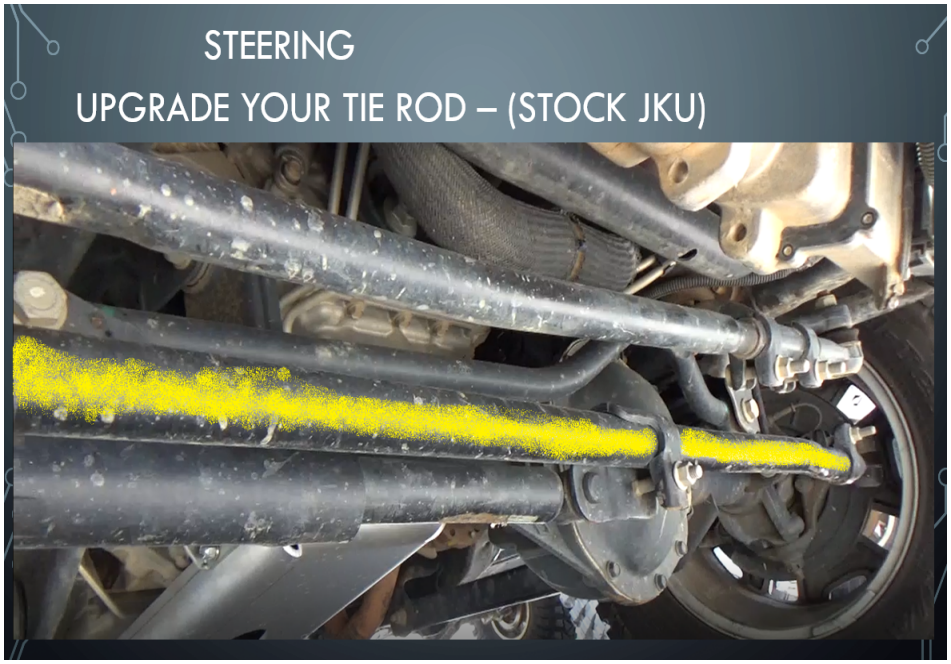
First thing would be possibly adding a **STEERING STABILIZER**.

What this is going to do, is help with steering and handling. The steering stabilizer helps to eliminate the front end shake or some of that movement in the front end with larger tires. Fabtech makes a steering stabilizer kit, as do many other companies.

The next thing you need to think about as I am talking about steering is to upgrade your **TIE ROD.**

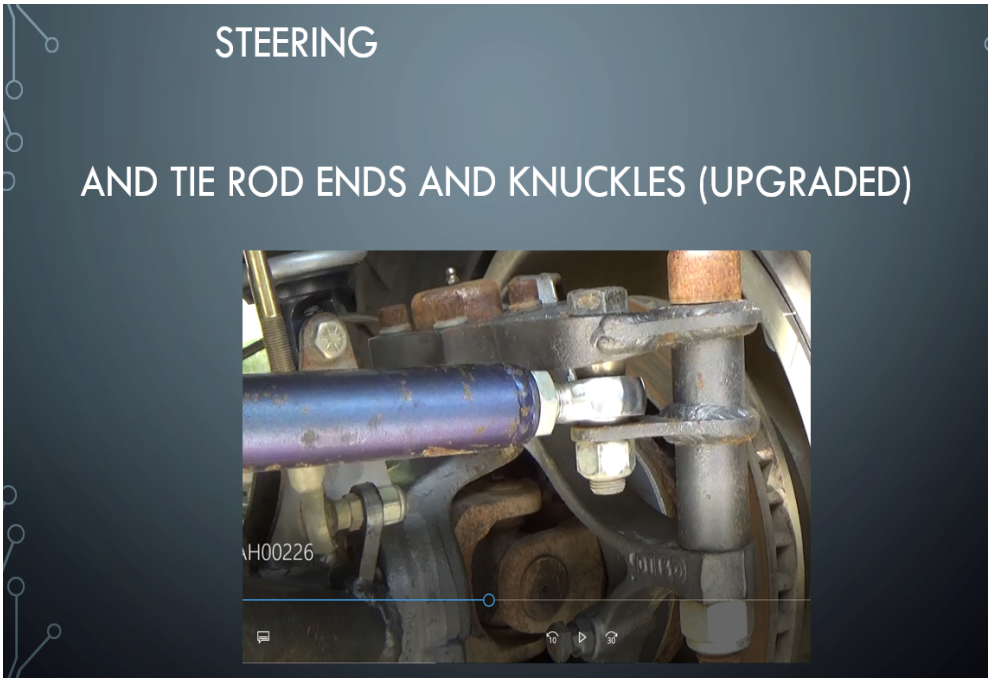
In the photo below, this is my stock tie rod on my JKU. This is the front of my JKU and you see highlighted in yellow is your tie rod.

This is definitely something that you want to upgrade once you have added lift and bigger tires. For compensation and strength with durability you need to go to a stronger and heavier duty Tie Rod.



As you are upgrading your tie rod, you need to upgrade your **TIE ROD ENDS** and there are actually some great kits out there. A lot of different manufacturers offer upgrades for your tie rod ends as you upgrade your tie rod as well. These are two things you want to do together at the same time.

I know when people talk about wheel vibration and death wobble the Tie Rod and Tie Rod Ends are brought up in that equation to replace. These are ALL steering component upgrades that in the long run are going to help with the stability and drive ability of your Jeep.

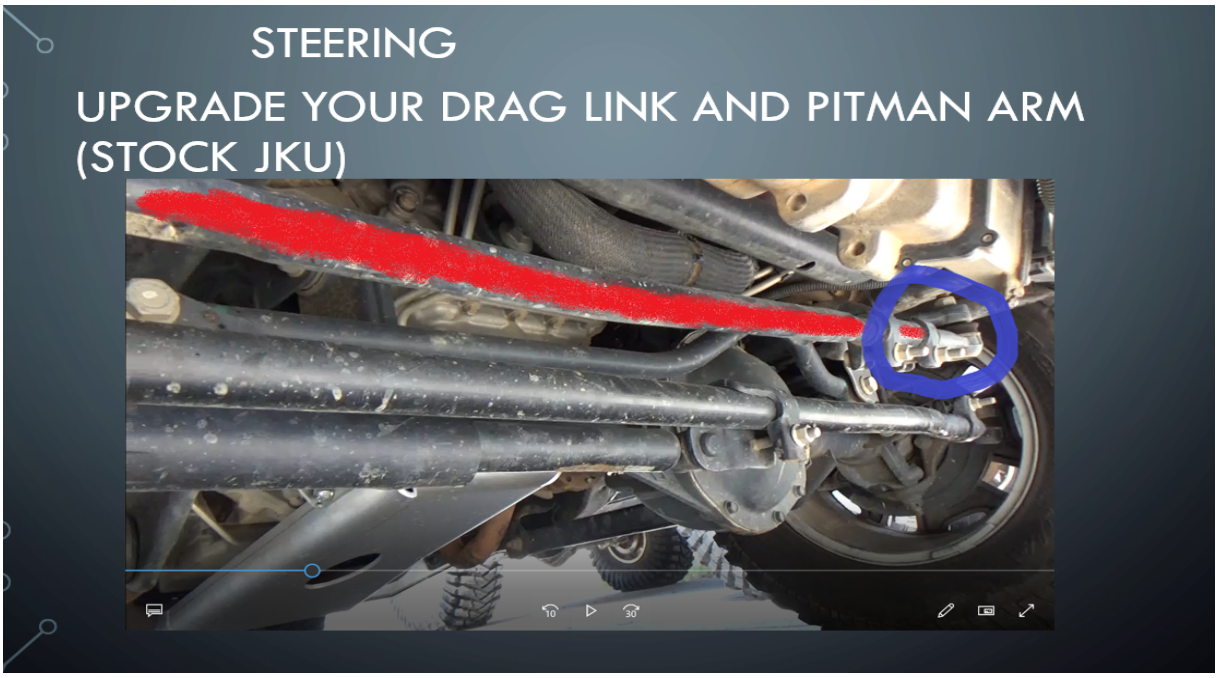


Going along with upgrading your Tie Rod and Tie Rod ends you want to think about upgrading your **KNUCKLES.**

In the JL these knuckles are now made out of aluminum but I recommend updating to an after market knuckle for strength and durability. If the aluminum is soft material compound and has give to it, that can cause other problems in your front end for you. If you are going to lift and put bigger tires on your JL my biggest suggestion is to upgrade those aluminum knuckles even if you opt not to upgrade the rest of these parts.

For the other generation Jeeps you still want to think about upgrading your knuckles as well. I would say consider this upgrade at 35 inch tires but anything 37 inch tires and above needs to have this as a must do on your build list.

Continuing with the front end. You will want to upgrade your **DRAG LINK.** The drag link in the photo below is outlined in red. The drag link sits above your tie rod and the drag link is part of your steering set up and upgrade. When you upgrade your steering components this is part of the upgrade kit, but make sure you get a kit that upgrades ALL of your steering components that we have outlined so far. You can change these steering components out a couple parts at a time.



We also are going to have to replace the **PITMAN ARM**. In this photo, you are looking at the front end of my stock JKU. The part that is circled in blue is where the Pitman arm is. As you are thinking about designing your build and your lift and tires, which are big components. You need to be thinking about what else you need to upgrade. Steering needs to be the next piece you are thinking about. When you replace the Drag Link go ahead and replace the Pitman arm at the same time all at once together. These are two parts that go together so you will want to replace them both together and not just opt to do one without the other.

Upgraded Steering Support or Assist

In the previous section, I outlined what parts you need to upgrade as part of your build. You are replacing the stock parts and stock steering parts with after market for added strength.

I want to jump to the next piece which is actually assisting and upgrading the steering itself. This is to help your stock steering box that is only designed to turn a stock tire honestly.

Again, everyone has their own opinions and they have things that they like and they dislike.

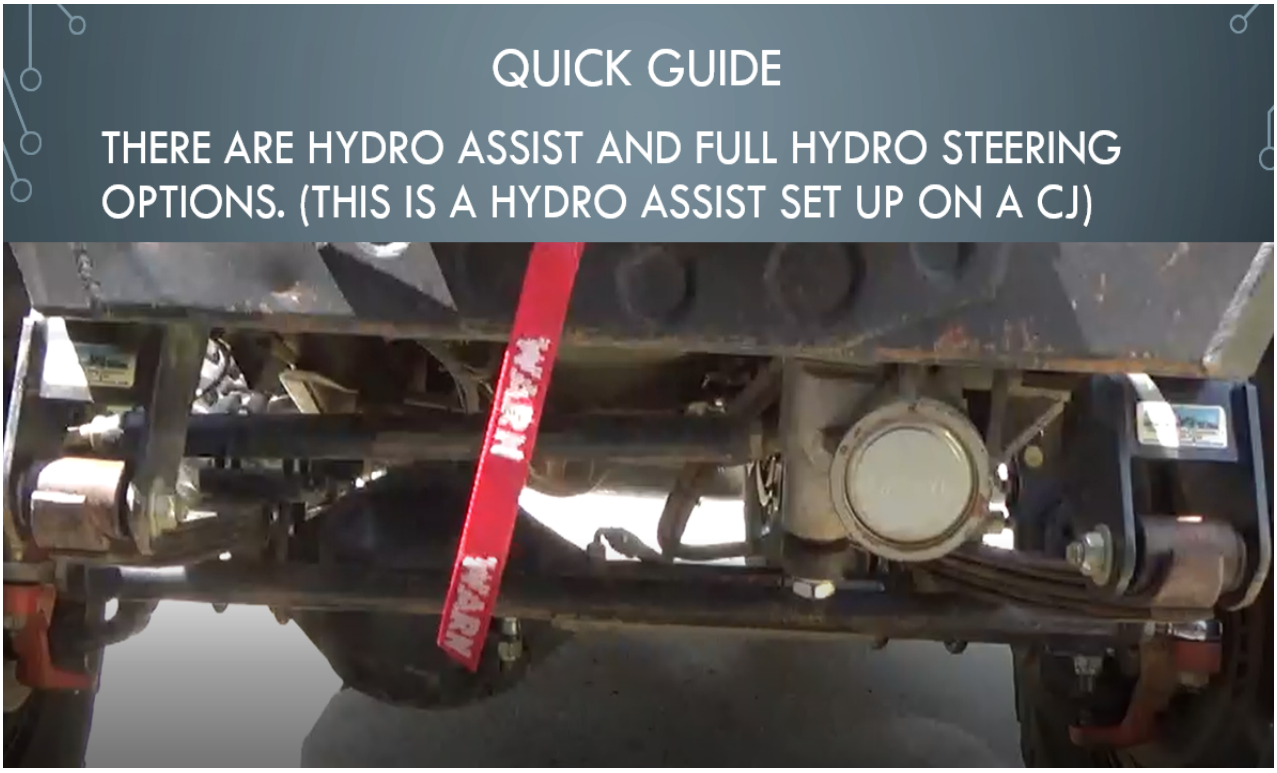
Our advice, is if you are going to run a 37 inch or bigger tire, you need to upgrade the steering box itself as well. That is where the assist comes into play. This is just something that we recommend that we use, and it is a hydraulic assist set up system. PSC makes a great system. What this does is it helps to take the stress off of your stock steering box and helps so you do not overheat your steering which in turn means you could lose your steering while you are driving.

There are different upgrades you can make to help your stock steering box and components. I am going to talk about hydraulic steering. There are two different types of hydraulic steering set ups. One is hydraulic or hydro assist, and the second is full hydraulic steering. You have two different ways you can set it up.

In the photo below, you see a hydraulic or (hydro for short) assist set up. This means you have the hydraulic assistance added to your stock steering box and still have a mechanical steering linkage along with the hydraulic lines that aid in the steering and take some of the load off of the steering box.

This set up also makes it easier to steer when you are driving off-road on the trail and have your front lockers on. You will notice an increased ability to steer even with the lockers engaged and you will not be "fighting" the steering.

This set up is street legal and you can use this on your daily driver.



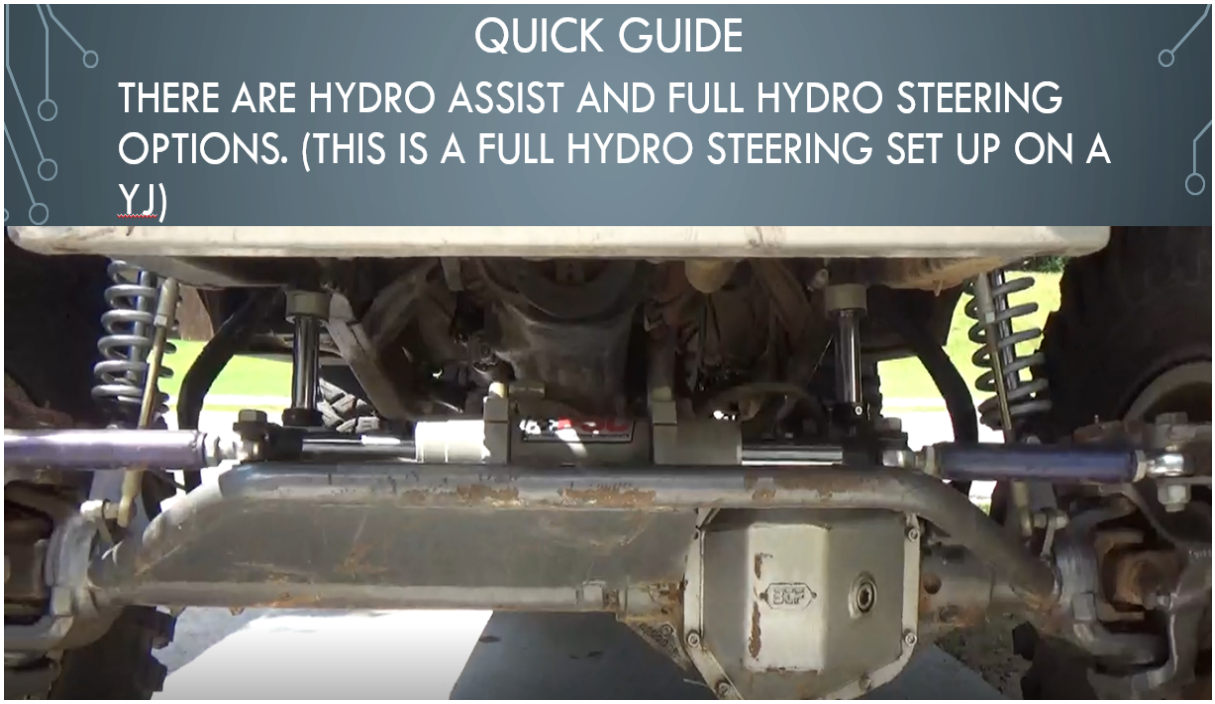
Most of you are going to be looking at the hydro assist option. That way you can still legally drive your jeep on the road. It is legal, it is going to help, it is going to handle better. It will alleviate running into steering issues.

I know I keep saying this over and over, but again this is where knowing your build that you are designing for you is important.

If you are building a jeep that is going to be spending majority of its time in the woods, off-roading, trails or are going to events then that is where you would add this full hydraulic steering setup.

I want to make sure that everyone understands full hydraulic steering. (In the photo below)

If you do a full hydraulic steering setup it is **not** street legal. I want to say that again. This is a full hydraulic (hydro) steering set up. And this is **not** street legal.



One thing you are going to notice right away with this full hydraulic steering set up is that you no longer have a drag link or pitman arm to upgrade or replace. It has been done away with by adding this full hydraulic steering set up. You will also no longer have a gear box for your steering. You now have hydraulic lines and hoses that run by a ram that controls the now two small tie rods on each side of your PSC set up.

This is what makes the Jeep or the Full Hydraulic Steering set up no longer street legal. You do not have a cable or any mechanical device that is controlling your steering. If you had an issue with a hydraulic line or pressure you would no longer have steering and they are outlawed on street driving vehicles. If your Jeep is going to be a daily driver on the street, then you do not want to go with the full hydraulic steering set up like this one.

As you can see from the photo, everything is upgraded to a much stronger and bigger material. It is going to hold up and last longer and be able to turn the bigger tire. You will also feel no resistance, drag or force in the steering wheel when the locker is engaged. It will steer with ease when it is locked in the front.

For this full hydraulic setup, I just wanted to show it to you as we are talking about options. That way you understand and can see the full hydraulic set up. Knowing and understanding all aspects of build options is important.

Truss Your Axles

The next thing I want to talk about upgrading is your axle strength. I talked about axles and gears and understanding that in one of our other sections. So this is the next step now that you have decided on what axle you are going to have long term.

What does trussing your axle do?

It gives you strength and more longevity and durability as well. Instead of just having the axle strength based on the size of your axles and the axles tubes. By trussing your axle, you are upgrading your axles strength especially for when you are out on trails and put more stress on the axles.

The after market truss in the photo above is the Artec truss. That is what I have on my Jeeps. Most of the brands out there are pretty similar because what they are trying to achieve is all the same thing. Some of the different axle truss may look a little bit different, but basically they are all the same thing. Just make sure that the material the truss is build out of is a high quality and high strength material. Remember even if you have an upgraded axle, by doing a truss you are adding stability and strength to that axle as well. When you start to take your Jeep on more off-road adventures or are driving on some not so great roads around town with large tires, you know you have extra support for that axle.

The truss is designed to hold the center of the axle and keep the axle from being able to twist and break as easily. The axle truss upgrade follows the same principles for upgrades as most of the other components. If you are going to do a 35 inch tire build you should think about doing this upgrade for your axles. If you are doing a 37 inch or bigger tire size platform build then you need to put this on your upgrade build list.

The amount you will be driving your Jeep off-road does factor into this decision. If you are going to build on a 37 inch platform but daily drive and only do very easy and light trails you do not have to truss your axle right away. However, as soon as you start to push your Jeep a little harder and want to do more out on the trails with it then you need to add a truss to your axle.

Our goal is for you to have longevity and durability so that you are not having to go back and rebuild again. I call this list for your Jeep Build Design, your performance build. These are the things that are going to directly relate to the drive ability and the performance and handling of your vehicle.

These upgrades in this section have nothing to do with putting the special touches on your Jeeps. These upgrades are 100% about the drive ability of your vehicle. We want that longevity and durability there so that once you go through this checklist and you have done all these things, you don't need to go back and Redo anything.

Upgrades for Performance

A **Tuner, Super Chip or I-Drive system** for your Jeep. When you think performance you do not usually think about a Jeep. They are not made to be fast vehicles, but there are some upgrades you can make that will help the drive ability and throttle control. Either of these three systems are going to help you get a better throttle (gas pedal) response from your Jeep. It will increase power and the ability off the line as well. Do not expect your Jeep to drive like a sports car, because it is not, but this will help with some of that "lag" in the gas pedal. The new vehicles no longer use a throttle cable but a wire throttle. This means that it uses a sensor that sends information to the engines computer. Any of these upgrades change the sensor response to the computer so that you have more control over the acceleration response. It helps to eliminate that delay or lag by changing the communication to the computer. You have multiple driving option choices based on how you want your Jeep to respond when you apply the gas.

The **COLD AIR INTAKE** system is a great upgrade for performance as well as changing the intake position. The cold air intake system actually brings your air filter up out of the engine compartment. By doing this it allows more air to be sucked into the engine. This in turn means more power. It also means that the air filter is up higher for water crossings when you are driving off-road. This does not protect your Jeep from high water but it gives you more clearance before your engine would start sucking in water compared to the stock placement position.

Upgrades for Protection

This next section is all about the upgrades to make for the protection of your Jeep, let's go.

This does not go with direct performance of your Jeep, but I felt like it was important to cover in this section. I wanted to add this in here, and I am now going to tell you a little bit about myself. I have a purple JKU Rubicon and she is my baby. At the time I ordered her, you could not get a purple Rubicon JKU. I custom ordered her directly from Jeep, and I absolutely love my jeep. One of the many things that I love about my Jeep is the color.

I will be totally honest here, one of my biggest concerns, and I am getting better about it, when trail riding I do not want anything to happen to the body or paint. I want to protect that. It does not change the Jeep's performance capability, but it changes my driving capability and what I am willing to do in the Jeep because of protection. I am not as fearful that I am going to hurt her.

I wanted to talk about the protection because to me that mentally change you as a driver, which then is going to change the performance aspect of your jeep of what you are asking it to do. There are a couple of different things that you can do to help add protection and peace of mind to your Jeep build.

The first piece of protection I want to talk about is the **BODY ARMOR**. This is going to go on the outside of your jeep. They make different body armor panels that you can add for protection. There is also a magnetic version as well that you can use for trail rides to keep your body panels from getting scratched up and remove after the ride.

There are **SKID PLATES** which are going to go underneath your jeep. Yes, your Jeep comes with stock skid plates to protect the important aspects of your Jeep. The after market skid plates are made with a little tougher material and will add more protection to the under side of your Jeep. This is especially important if you go on trails with rocky terrain where your under carriage is going to make contact with rocks. The full belly skid was one of the first things that I added. We ride in very rocky terrain so I got this right away for peace of mind and protection to know that the underneath of my jeep has added strength.

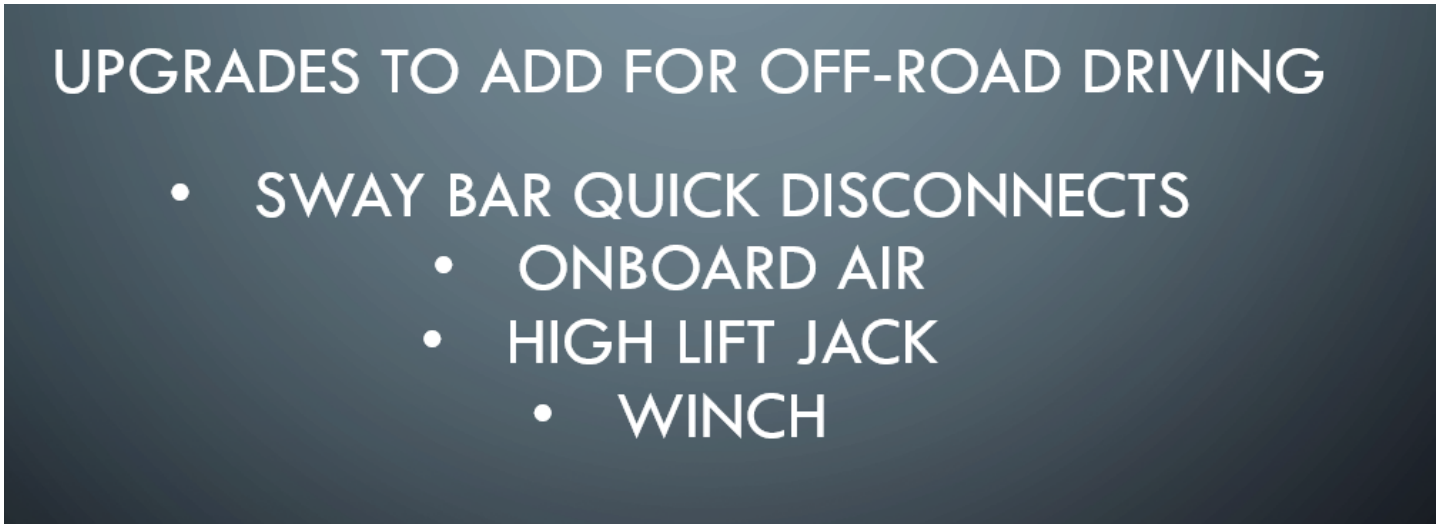
Another upgrade to consider adding is the **ROCK SLIDER.** The rock slider is designed to help protect the side of your jeep at the door frames. Your Jeep comes stock with a rock slider type protection on it but an upgraded rock slider is made of a heavier duty material. This allows for more impact to the rock slider with less damage. There many different designs of the rock slider. There are flush rock sliders that do not stick out but are flush against your body. There are rock sliders that also act as steps. Then there are angled rock sliders that stick out slightly from the body to help protect the side of the jeep from impact of a rock or tree or whatever you may come up against as well. The design and look are something you can pick out for yourself. The only thing you need to pay attention too is the material strength the rock slider is made out of. Make sure it is a good quality steel or aluminum so it will hold up to the abuse if it is used for the purpose it was designed for.

If you do not go with body armor panels a good choice for protection are **CORNERS**. The corner goes on the back corners of your Jeep. They start at the tail gate hinge or tail gate opening on the off side. They then wrap around the corner and come up to the door opening. They protect the back section, corner and rear side panel of your Jeep. You can get them in black steel or silver aluminum and have them painted or powder coated to match the color of your Jeep. People do run them black as a two tone against the full color Jeep as well and it looks really sharp. That again is a personal choice you can make based on the look that you want for your Jeep. The purpose of the corner is if you were to slide or accidentally rub something (a tree or rock) the corner is giving you added protection between that element and your Jeeps body.

LIMB RISERS are something you do not see as often on the Jeeps. They are not as popular but they give you protection to the hood and windshield frame of your Jeep. They look like a line/string coming down, one on each side of the front of the Jeep. They mount to the top of the windshield frame and mount down to the front of the Jeep on either side of the hood. The purpose of the limb riser is to give brush or low lying branches a path to take to go up and over the jeep without impact to the hood and windshield frame.

There is no one way or right way or anything like that when we are talking about this protection aspect. There are many different ways you can start adding that protection to your Jeep. This really is about your personal likes and looks.

Upgrades for Ease of Off-Road



These upgrades are not performance and handling but since we are talking about build upgrades I wanted to make sure and put these in here as well. These upgrades are going to help with the ease of your Off-road experience.

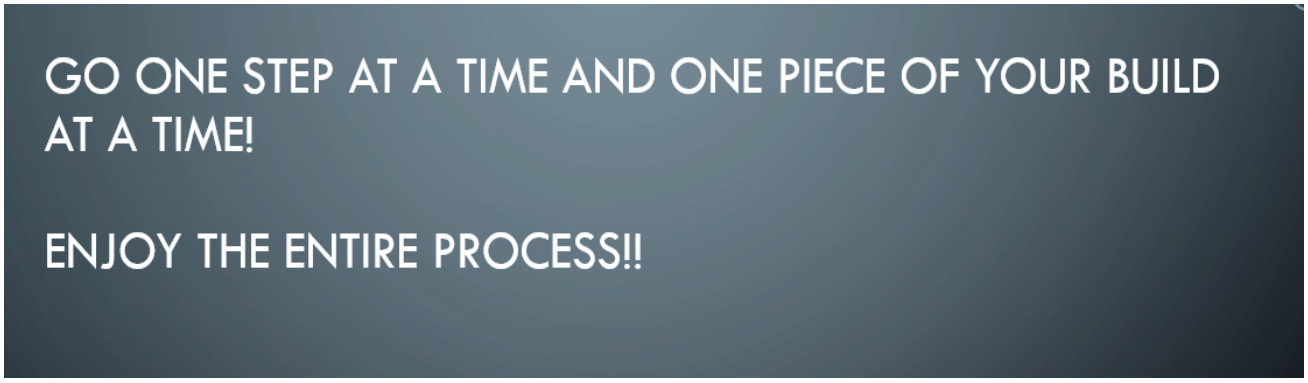
The first thing you want to upgrade (do not have to in Rubicon with sway bar disconnect) is to upgrade to the

sway bar quick disconnect ends. This will save a lot of time and hassle when you need to disconnect your front sway bar for your trail ride. This does play a role in the handling and performance of your Jeep off-road. The sway bar needs to be disconnected to give your Jeep a smoother ride and also allow the suspension system to utilize travel. You want the suspension to be able to have full travel ability upward and downward for negotiating obstacles and terrain while you are out on the trail.

Something else that is great to have, especially for trail riding is **on-board air**. On-board air gives you the ability to air your tires back up after a great ride. Most parks have air available but it is nice to always know you will be able to air up no matter where you are. On-board air is also nice to have if you get a low or flat tire on your Jeep. It gives you the ability to be able to air up right where you are in any situation.

If you have upgraded to a larger tire size than your stock tires you will need to get and carry a **High Lift Jack** with you in your Jeep. The stock jack will not be able to go up high enough with a larger tire to allow for you to change a flat tire. The high lift jack is heavy so I recommend a side or rear mount for your high lift jack. That way it is easier to get it down if you need it. Make sure you have training on how to safely and properly use the high lift jack as it can be a tougher piece of equipment to use. (We have training in the members area on using the high lift jack for you.)

If trail riding is on the books, you will want to upgrade to a **WINCH**. A 9,000 pound capacity or higher is our recommendation to you. You want a bigger capacity Winch then what you will hopefully need. A stuck Jeep can weigh more and take more weight capacity to recovery, especially if you are stuck down in the mud. You do not want to worry if you are going to burn your winch motor up during recovery. You will need a winch bumper with this upgrade. There are many after market winch bumper upgrades, or if you have a JL Rubicon or upgraded JL you will have a steel winch bumper stock on your Jeep. (Jump into the Winch Training Class in the Members Area)

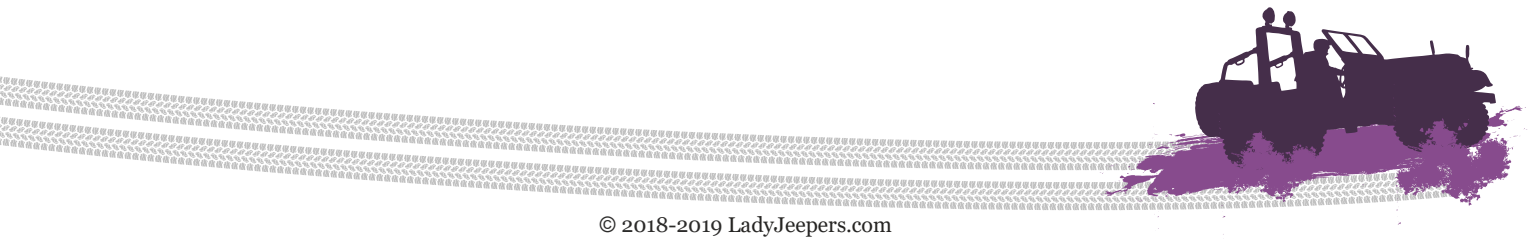


Think about going one step at a time, one piece at a time for your build. You do not have to go out and do everything at once. Make sure to enjoy the entire process. You can go piece by piece, step by step, but just know all the pieces that you are going to add for that build before you get started. Just make sure it is all outlined on your list so that nothing is a surprise and you have all the details laid out and outlined upfront.

Jeep Build Overview Notes

Jeep Build Overview Notes

There is so much to consider.....this sheet is to help take notes along the way in this Course As you think about planning your build.



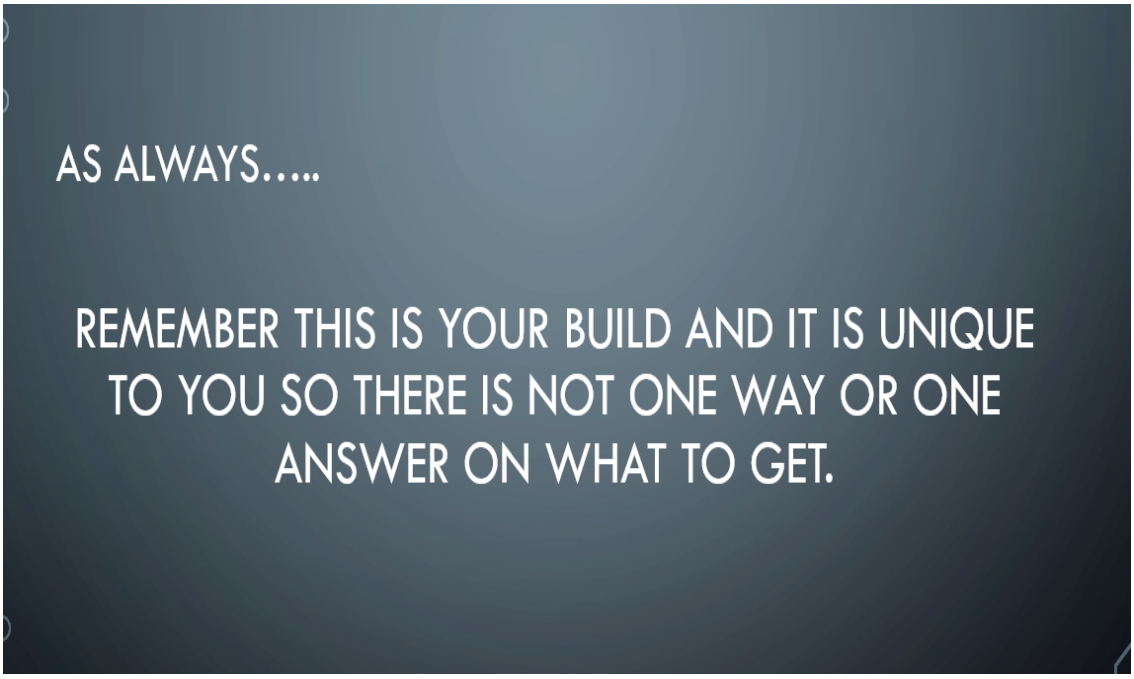
Section Seven; Final Build Sheets & Overview

It is time for your Design Your Jeep Build Part Seven.

Welcome to section number seven of design your jeep build. We are talking about upgrades and the overview of your build. We are also going to go through the last worksheet, which is going to be 'My Build Sheet' together as well.

The upgrades that we talked about in the last section were all about performance parts upgrades. Those were ones that directly went hand in hand with your vehicle running, performing and drive ability. Now we are going to be talking about additional upgrades you can make on your vehicle. However, they do not go directly with performance or drive ability. This is about you being able to make your jeep your very own and add your personality to it.

I want to start with this reminder in the beginning of the new section.



There is not one way or one answer on what to get and how to do your build.

You have to love what you are doing because this is about YOU. You want your jeep to reflect who you are.

You want to love every single piece and upgrade that you put on your Jeep for you. There are so many additional mods and upgrades you can make to your Jeep. I mean so many! The list could be endless. You know in honesty, I think every day I see something new, I'm like, oh my gosh, I want to add that to my jeep. This can be a never ending kind of feeling as you start putting in upgrades and modifications because you can always keep changing or adding something.

This is really where you get to add your own personal touch. This is how you start to make it unique. Your very own Jeep. Make it different than the other Jeeps out there.

Here are just some of the ideas of upgrades and mods that you can add. Again, remember there are so many, these are just some ideas.

You can add

*rock lights
* light bars
* change out your headlights
* add Halos,
* different kind of grab handles
* custom graphics, banners and lettering
* accent colors to your jeep
* change out your seat covers
* half doors or tube doors
* change out your tops so that you have a bikini top, a soft top, the hard top, rain gear

There are so many different aspects when you start talking about the look of your jeep and the different pieces that you can be changing out and adding and making your own.

This is an aspect that you can take your time so there is no rush and make sure that you do some research. Make sure that what you are getting is what you absolutely love. You can always get an idea by looking at other Jeeps. That is always a great way to look and see like, "oh, I really liked those rock lights or I really liked those handles." Look and see what you start to like so that you can create your own unique style and build.

For me, I personally like to save photos on my phone. If I am on my computer I will take a screen shot of anything that I see that I like so that way I don't forget and I know where it is. I can go back and look so that way I can compare the different styles and looks. By doing that it lets me compare and then make the decision of what I really want to get and then go ahead and purchase to put on my Jeep.

Final Build Sheet & Overview

We have covered **a lot** of information in this series. We have gone really deep into each different piece of the build and understanding the different aspects, what affects each other, what decisions you make, how that effects what other upgrades and modifications that you are going to need to make for the longevity of your Jeep and your build. If you have missed any of the other sections or still have questions on them, you can jump back and work on those before you do your last piece of your build. That is where we are going to jump into the build sheet.

You have the 'MY BUILD SHEET' in the back section of this course book under worksheets. You can also download and print the 'MY BUILD SHEET' from the Downloads section in the 'Design Your Jeep Build' main course home page on the Training Site at www.ladyjeepers.world.

This is going to go hand in hand with section number one. The very first sheet that we did, which was the 'MY JEEP SPECS' worksheet. You have your sheet, and this shows where your jeep currently is right now. You know what axle it has, what gears it has. You know all those different pieces so you know where your jeep is right now. As we move to the 'MY JEEP BUILD SHEET' that is going to help to then dictate what upgrades you are going to need to make based on where your Jeep is now and your ultimate build that you want to do for your Jeep.

Start with part one. Part one is the design platform.

Just like we talked about in every single class that we have done, you really need to start with your tire size as your platform design. Even if you don't have 100% of all of these answers as you are working through this sheet and designing your build, answer as many of the questions that you can.

Start by deciding on your tire size platform, because remember what tire size you are going to do is going to dictate some of these answers in this jeep build sheet. The tire size determines different upgrades you are going to have to make. You will start with your tire size design if you know what tires you are going to run. Fill this part in if you know who the manufacturer is and what the specs are. Repeat the same thing with your wheels.

I want you to leave the part where it says "order" in the build for the very end.

Where you have your boxes, that is going to be for once you have completed that part of your build. You get to give yourself a little check mark. You get to say, "yes, I'm done with that piece."

Move down to the next piece. There you can answer and fill out the next section.

Are you going to upgrade your axles from where you are now?
If so, what are you upgrading and are you going to truss your axles?
If you are, what manufacturer are you going to go with to get your trusses from?

Then gears, are you going to re-gear and if so, what gear are you going to go with?

What lift height are you going to get?

Then what brand lift are you going to use?

Moving down to the next section. In part two, this is the modification and upgrades for the build.

Part two is the modification and upgrades for the build.

Starting with fender type, we talked about there are the fender delete and different kinds of after market fenders available.
What fender type are you going to run on your jeep for your build and what manufacturer?

If you are going to keep your Jeep mostly stock and it is your daily driver, you may only make some small changes or additions and modifications. If you are going to run your stock fenders you could put stock on the sheet or you can leave it blank.

For the bumper design, are you going to go with the stubby bumper and are you going to have a hoop?
What kind of bumper design do you want to go with and what manufacturer?

Then are you going to add a winch?
If so, what winch rating?
What is your winch pay load capacity and who is going to make it?

Are you going to be adding any body armor?
If you are going to run corners, are you going to upgrade your spare tire carrier?

Then there is room here for miscellaneous because this is your build. If there are other things that you want to add, there is always a space and room for you to do that.

Now we are going to move to part three.

This is all about the performance upgrade.

We just talked about performance upgrades in section number six.

Depending on what tire size platform you are running, you are going to need to do an upgrade for your steering platform. There are different choices you can decide to go with. Again, depending on what tire size you are running it is going to dictate what kind of steering upgrade you are going to need to make.

Are you just going to upgrade your stock steering or are you going to upgrade to hydro assist?
What are you going to go with for your steering platform and then what manufacturer are you going to use.

Remember you are going to need to upgrade your tie rod or tie rod ends (knuckles).

Something else to really think about is that you are going to need to do a brake upgrade because your stock breaks are not intended to stop that big of a tire and with that added weight. You will want to go with an larger, upgraded brake set up.

Then performance enhancement.

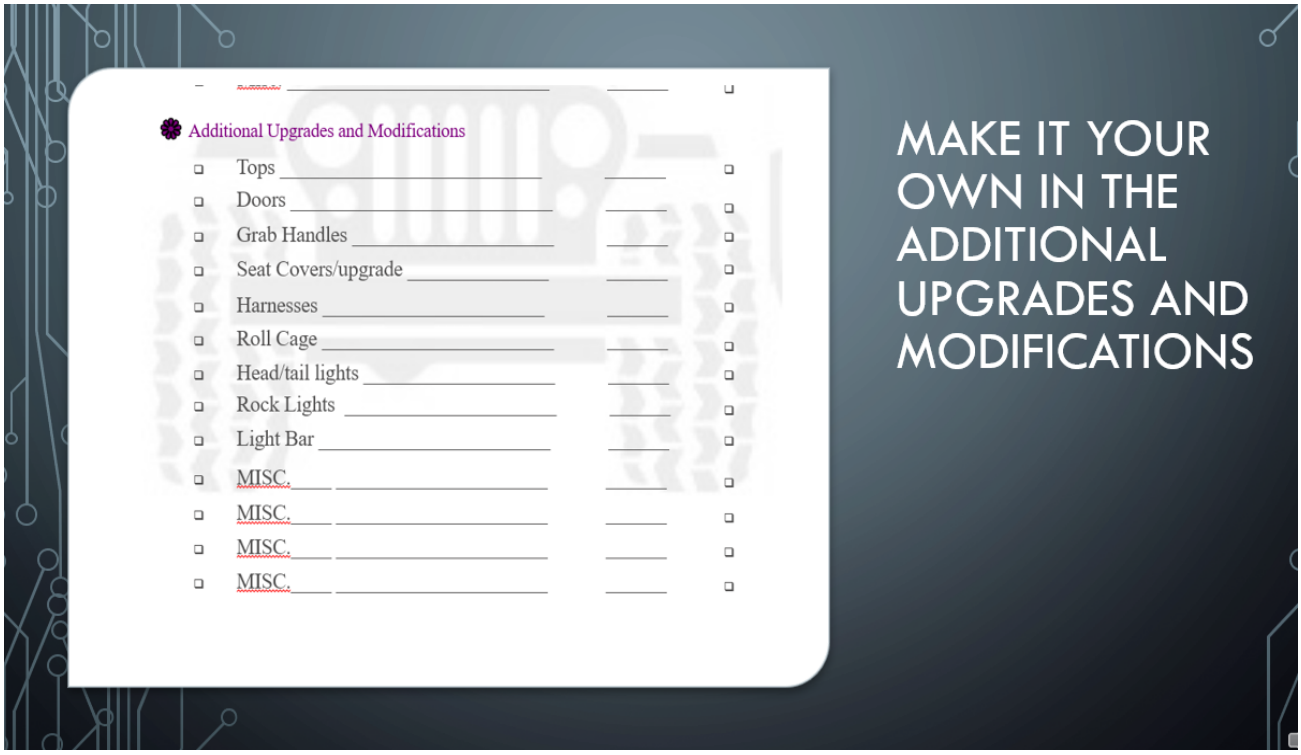
I shared with you, I got the iDrive and I absolutely love it. The performance, the gas pedal, and everything has changed so much in my JKU since I added the iDrive. However, there are different options out there. You don't have to go with the iDrive. There are other different modifications that you can make that are going to enhance the performance of your Jeep.

If you are going to go with a booster or upgrade, what type are you going to go with and who makes that?

Of course there are more miscellaneous spaces on the paper in this section as well for you.

Now onto part four.

This is where you are really going to make it your own with these additional upgrades and modifications.



Final Build Sheet & Overview

If you are like me and every time you see something, you are like, "oh my gosh, I have to add that to my list".... There are plenty of spaces here for you. If you need more room, you might have to grab an extra piece of paper.

Are you going to change out your tops?
What type of tops are you going to get?

Are you going to change out your doors?
What type of doors do you plan to add or put on your Jeep?

Are you going to add grab handles, seat covers, or are you going to upgrade your seats?

If you really are building your jeep and get to a point where you are going to kind of push it to its limits, you need to think safety upgrades. That means you are going to be putting it on harder obstacles. That is where this safety upgrade needs to be made. That is the full harnesses and an after market roll cage.

However, if this is your daily driver and you are doing moderate to easy trails, then that is not a safety upgrade that is necessary right now. It will only be necessary when you get to the point that you are pushing your Jeep to the limits. At that point you have the risk with the obstacles that you are driving on that you could end up rolling over in your Jeep.

Then you can change out headlights and tail lights, rock lights, light bar, and then all your miscellaneous items.

If you are like me, you will just have pages everywhere.

Create Your Build Order

Once you have all your details filled in, then you are going to go back through and put them in a priority list of what you are going to do first. This is where you are going to design the order of your build.

There are blanks that you will fill in with the order number.

I recommend filling in the order of the build in pencil.

This is going to allow you to map out the build order, decide what higher price items you will save for and add over time. You DO NOT need to sacrifice your dream build because you need to go slower. This becomes your build overview so that you get to reach your dream build, know what you are doing when, and can go slower to add higher price items at specific times and spread it out!

For me, if I get a little extra in my jeep build fund, I might grab a smaller priced item on the build list, even if it is out of order. BUT It is on the plan already.

This is not going to interfere with the actual performance, functionality, drive ability of the Jeep. If I jump to something different, then I can erase it and change the order on my build sheet. Adding in little pieces you need helps shrink the list.

Just remember there are a couple pieces that have to be done in order. That is re-gear and then tire size. You can do your lift and run a smaller tire size platform as you save up for the higher ticket items. Then re-gear next and then last put on the new larger size tires. That is a great design to follow to make it to your end dream build but not break the bank all at once to get there.

Remember, it's okay to go slow.

That is something that is really important!

Just because you have this big huge master build sheet that has so much on it. Remember it is okay to go slow and piece by piece. You do not have to be overwhelmed.

You may be like "oh my gosh, there is so much I have to buy and so much I have to build and this is such a big build." Just do one piece at a time and go slow.

Remember that we are here to help along the way. If you get to a point where you have any questions and you are trying to figure out a part of the build or anything comes up;

* post in the Lady Jeepers private Facebook group with any questions and we will help you out.
* send us a private message directly from our Facebook page - facebook.com/ladyjeeperscom

or

* email us at ladyjeepers@gmail.com.

Make sure to keep an eye on our website for more training and education.

We continue to add new pieces, information and aspects to the Design Your Jeep Build, as well as all the other areas of Jeep ownership and driving.

www.ladyjeepers.com

There is also always helpful information inside the Ladies Training and Educational program!!

Design Your Jeep Build NOTES;

Remember as you are doing this your Jeep build is for you.

YOU have to love it, not anybody else.

It is okay to go slow and take your time in a build. This is supposed to be **fun**. You need to enjoy this process. Be excited when you add a modification, no matter how big or how small, and celebrate along the way so that you enjoy every piece of this.

Thank you for going through this entire 'Design Your Jeep Build' Training Course with us. I can not wait to see what your personal Jeep build sheet is going to look like!

If you have not already worked through the entire training course for this section in the Members Area Training Program make sure to jump over and watch all the videos and go step by step through all this training material with me. Not a Lady Jeepers.com Member? That is okay! Jump over to www.ladyjeepers.com and get inside access to jump in and go through the training videos that accompany this entire course. Plus so much more!!

I leave you with the inspiration and confidence to understand your build. Know what you want to do and why on your Jeep, and the knowledge to know you are doing it right.

Your #1 Fan,

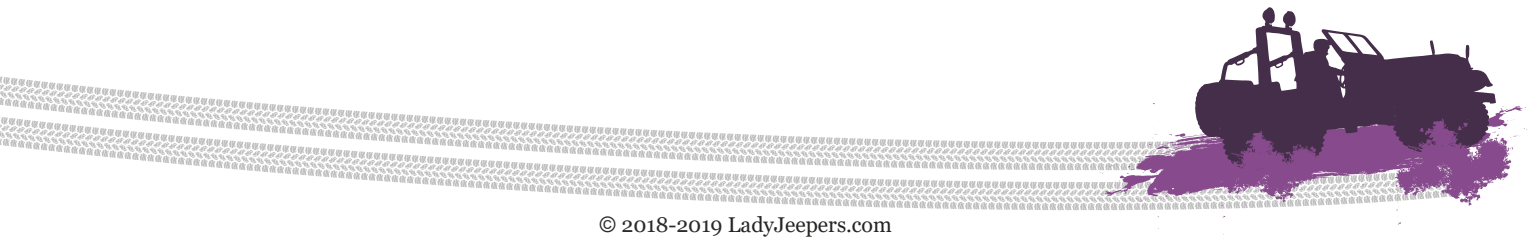
Kristin DeLibero

LadyJeepers.com

Jeep Build Overview Notes

Jeep Build Overview Notes

There is so much to consider.....this sheet is to help take notes along the way in this Course As you think about planning your build.



Worksheets

Jeep Build Overview Notes

Jeep Build Overview Notes

There is so much to consider.....this sheet is to help take notes along the way in this Course As you think about planning your build.

1. Know Your Jeep - current spec's

2. Know Your Ultimate Goal Before You Start, Will this be a daily driver or more of your off-road toy?

Circle your tire size platform design

33's 35's 37's 40's up

Design Notes/things to know/parts/manufacturers/misc. to consider;

My Jeep

Design Your Jeep Build

First you need to get clear on where your jeep is today.

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:

Spend the time in the beginning to decide what your long term goals for your jeep will be. Your ultimate goal is to spend the time upfront and take your time to build your jeep once.

My Focus and Use for my Jeep Short Term: _____

_____

_____

My Focus and Use for my Jeep Long Term: _____

_____

_____

Are Financial's and Budget A Major Part of 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.

Jeep Build Overview Notes

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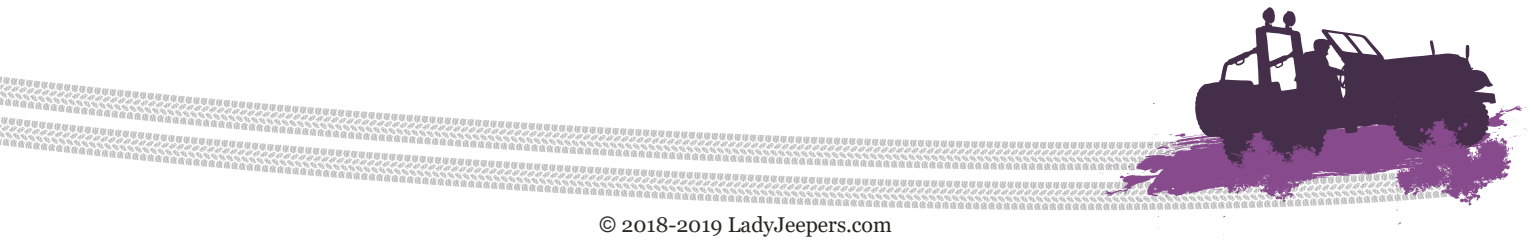

My Jeep Build Sheet

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
❑ Tire Size Platform Design _____	_____	❑
❑ Tires _____	_____	❑
❑ Wheels _____	_____	❑
❑ Axles _____ Truss? _____	_____	❑
❑ Gears _____	_____	❑
❑ Lift Height _____	_____	❑
❑ Brand _____	_____	❑

Modifications/Upgrades for Build

❑ Fender Type _____	_____	❑
❑ Manufacturer _____	_____	❑
❑ Bumper Design _____	_____	❑
❑ Manufacturer _____	_____	❑
❑ Winch rating & Type _____	_____	❑
❑ Armor Type _____	_____	❑
❑ Rock Sliders _____	_____	❑
❑ Corners _____	_____	❑
❑ Spare Tire Carrier _____	_____	❑
❑ MISC._____ _____	_____	❑
❑ MISC._____ _____	_____	❑

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

		Order in Build	Finished/Completed
❑	Steering Platform _____	_____	❑
❑	Manufacturer_____	_____	❑
❑	Tie Rod _____	_____	❑
❑	Tie Rod Ends _____	_____	❑
❑	Knuckles _____	_____	❑
❑	Drag Link _____	_____	❑
❑	Steering Box _____	_____	❑
❑	Brakes Upgrade _____	_____	❑
❑	Performance enhancement _____	_____	❑
❑	Type _____	_____	❑
❑	Misc. _____	_____	❑

Additional Upgrades and Modifications

❑	Tops _____	_____	❑
❑	Doors _____	_____	❑
❑	Grab Handles _____	_____	❑
❑	Seat Covers/upgrade _____	_____	❑
❑	Harnesses _____	_____	❑
❑	Roll Cage _____	_____	❑
❑	Head/tail lights _____	_____	❑
❑	Rock Lights _____	_____	❑
❑	Light Bar _____	_____	❑
❑	MISC._____ _____	_____	❑
❑	MISC._____ _____	_____	❑
❑	MISC._____ _____	_____	❑
❑	MISC._____ _____	_____	❑

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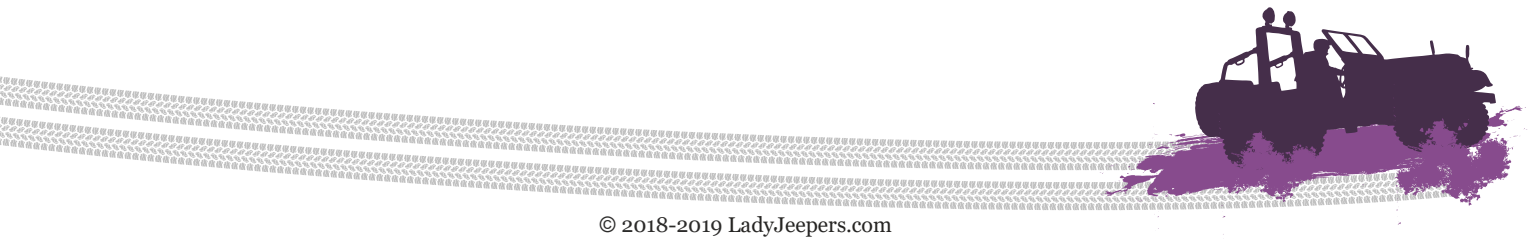

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