

Fatman Fabrications

Ford Pickup Truck Chassis Builders Guide



Thank you for your interest in a Fatman Fabrications chassis for your Ford pickup. Before you begin there are a few things we would like to point out.

First, **Plan Out Your Project!** Knowing how you want it to look when it is finished is just as important as when you start. Do you intend for the build to be hi-tech or old style? Billet wheels or painted steelies? Pro street? Pro touring? Ground scraping as low as you can go? Who is going to drive the pickup and where will it be driven to? Is it going to be a low mileage show car or a freeway flyer for cross-country cruising?

Establish parameters based on reality and not just wishful thinking. Blown big block motors rarely make good long-distance cruisers. Big inch wheels look awesome on some cars but tradeoff ride comfort for looks by requiring short sidewalls that do not absorb road shock. Remember, there is a tradeoff to everything, so save yourself time, money, and aggravation by planning your project from start to finish.

Also, keep in mind you are building a pickup. You might be using an old steel body, which is great, but Henry Ford was not very exact in the manufacturing process over 60 years ago and there are minor variations in all old pickup trucks.

Not everything is exact, and some minor modifications are likely every step of the way, so plan for that and **test fit everything** before you paint or powdercoat anything.

Take comfort in knowing that after building a thousand plus chassis, we have them dialed in and know all the ins and outs.

All our chassis for the Ford trucks are constructed of 2"x 6"x.188" main rails with the rear axle kickup being mandrel bent. They are made to follow the original shape and form, and to fit with original cab and bed mounts.

We include front cab mount outrigger, rear cab mount holes, radiator mount holes, bumper mount holes, running board holes, and bed mount holes.

We have heard it all including being accused of building our chassis "too heavy duty", but we pride ourselves on a strong, rigid product which you will find is an extra big benefit.

Front Suspension

Fatman Fabrications chassis come standard with Stage 2 suspension, which uses coil springs and single adjustable Mustang II-based shocks. The ride height is approximately 4" lower than stock height with a standard spindle. You can choose a 2" drop spindle for a lower ride height or our exclusive 1 1/2" raised spindle for a more conservative ride height.

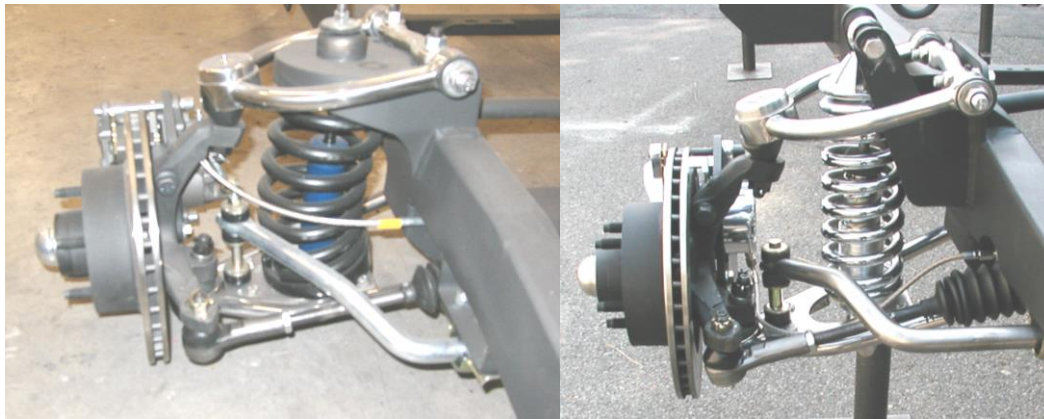
Take note that these chassis will NOT maintain stock ride height no matter which option you choose. Track width comes 58 ½" on 48-52 trucks and 60 ½" on 53-56 trucks which is slightly narrower than the original width. Tire to fender space is adequate for these trucks, but attention should be paid to your wheel/tire sizes and spacing. 7" wheels work the best on these front ends.

On 53-56 F100 we offer a few custom options. Our chassis will move the axle centerline forward 1" from stock to help center the wheel in the front fender, this is standard on these chassis. We also offer the option of moving the axle centerline up 5" from stock. This allows you to modify the front fender opening to center it.

Bebops Fiberglass Works made a set of fiberglass front fenders with the opening already moved forward to accommodate this modification. We also offer the option of a 2" widened coilover front end for the 53-56. This will allow the use of a wider front wheel/tire combo. Note that you may have to modify the inner fenders for clearance.

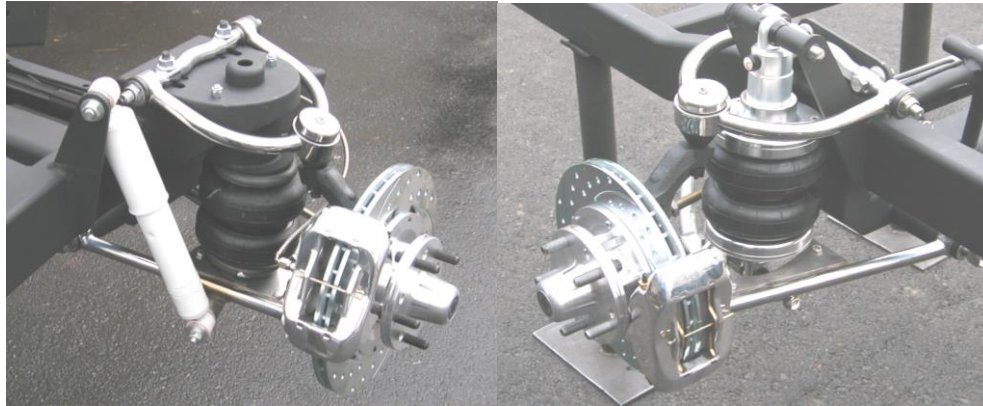
Stage 3 coilovers is our most popular option for the frontend because of the slight height adjustment, excellent shock, and good looks that match the heavy duty .188 wall steel tubular control arms that are standard on all chassis, regardless of stage ordered.

Air ride comes in either Cool Ride Stage 4 or Shockwave Stage 5. Cool Ride has the air spring in place of the coil spring and the shock mounted behind the control arms. Shockwaves are similar to how a coilover looks and mounts with the shock inside the air spring. A compressor system is needed with both options.



Stage 2

Stage 3

**Stage 4****Stage 5**

Manual rack and pinion steering is standard on roller chassis, but power steering is available as an option and is generally recommended.

Shocks are probably the biggest factor in ride comfort and handling. Shocks are the brains of the front suspension because it controls the velocity of the suspension.

As an example of this, NASCAR teams take dozens of shocks to the track but only a couple pair of springs. Single adjustable shocks are standard on Stage 2 and Stage 4 which will allow you to fine tune your ride comfort and handling of your pickup. Stage 3 and Stage 5 have single adjustable shocks that are also standard.

Brakes

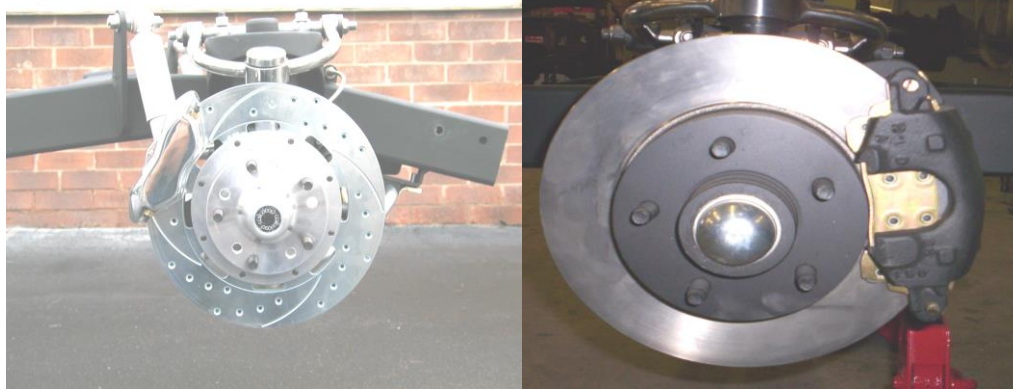
Something to keep in mind as we go over brakes is that sometimes people use bigger brakes to fill the space behind big billet wheels or just for dress up, without thinking about the safety aspect. Ford pickup trucks generally weigh about the same as a stock Ford Mustang II, so we have never used the tiny 9" Mustang brakes but keep in mind that bigger brakes are better brakes.

Fatman Fabrications chassis all come standard with OE style kits that use early GM big piston calipers and provide 65% more braking capacity than the stock Mustang II, and twice as much as other kits that use the small piston GM calipers. The 11" disc brakes use OEM parts that are easily serviceable using parts that are available at your local auto parts store in case you need to make an emergency repair.

5 lug 4 ½" Ford pattern is standard and 5 lug 4 ¾" Chevy pattern is also available but use the above-mentioned small piston GM calipers. 5 on 5" and 5 on 5 ½" patterns are another option. Give us a call to talk about the options that are available for bigger brakes if using the Chevy pattern.

We have several options from Master Power, CPP and Wilwood. CPP front kits use a Corvette style sealed hub which means no bearings to pack and 13" Corvette drilled/slotted rotors with matching calipers.

Master Power brakes all include drilled/slotted hub style 1-piece rotors and have either late model OE calipers or their billet 4-piston calipers. Complete Wilwood big brake kits are available that use aluminum hubs, 4 or 6 piston aluminum calipers with 11" to 14" rotors. Drilled rotors and polished calipers are options on these kits.



Wilwood drilled and polished brakes

Standard brakes

Keep in mind that larger brake kits require larger wheel/tire combinations. Make sure to let us know what you plan on using. Always think safety first!

Master Cylinder and Power Brake Options

Manual brakes come standard and work well with common disc/drum combination brakes. They also leave extra room for exhaust routing. Power assist brakes are a great option and are recommended with disc/disc applications.

To make it easier to service the master cylinder, remote filling kits from ECI are available as is a "cooler" looking aluminum reservoir kit. Chromed and polished booster/master cylinder kits are also available.

Fatman Fabrications use standard automotive steel brake lines for brake plumbing. These are D.O.T. approved, show quality looking and will last a lifetime. We also use braided stainless flex hoses from the chassis to the calipers.

Metering valves are used with disc/drum applications. 2 psi residual pressure valves are used between master cylinder and discs, and 10 psi residual pressure valves are used with drums.

Rear Suspension

A 4-bar with premium single adjustable coilovers is standard on the Ford truck chassis and provides excellent ride quality, looks, and serviceability. If the truck will be used to carry a load in the back or maybe pulling a trailer, then we often recommend the air ride on the rear due to the flexibility afforded with the variable pressure. Coilovers do not accommodate changes in load well as they have a given spring rate that may be comfortable in an empty truck, but not heavy enough in a truck loaded with extra stuff.

The air ride can be set for a comfortable ride and proper ride height at the push of a button, regardless of the load. Don't forget a compressor fill kit is required with an air ride suspension so there is an extra cost.

Keep in mind that truck chassis are quite narrower than car chassis putting air ride in the back does reduce exhaust routing area, so some planning is required.



Rear Suspension Examples

Sway bars

We recommend a front sway bar on truck chassis since they tend to be nose heavy. If using a big block engine, then one is most definitely recommended.

Also, if you want a "G" machine that has excellent cornering qualities, then choose this option. Some ride quality may suffer to make it handle better. Again, this all goes back to what kind of truck you are building.

Rearends

Fatman Fabrications standard roller chassis include a new 9" Ford rear housing and 31 spline axles now supplied by Moser Engineering.

You can get brand new gear sets also supplied by Moser Engineering. Available in Trac-Loc, Tru-Trac or Wave-Trac configuration. All new gearsets feature their lightweight nodular case that is good up to 600HP, aluminum bearing support and new non-billet 1350 series yoke.

New drum brakes or disc brake conversions are available. We generally use rear disc brake kits that use O.E.M. parts. Kits from Master Power, CPP and Wilwood are also available to match front brake assemblies and for better chassis clearance issues.

8" wide wheels, regardless of the diameter, will fit under the rear fenders with the proper backspacing. 10" or wider wheels may require the bed to be tubbed. We will have a 9" rearend made per your exact measurements of your mounted tire and wheel combination.

One thing to keep in mind, we are not going to go by what the tire manufacturer says the inflated tire size should be as they are not always correct.

Engine/Transmissions

Rear sump engines like Chevy's fit great, with no problems. Ford small and big blocks will require a change from the normal front sump pans. The 289/302 needs a 79-93 Mustang dual sump pan, sold as a complete kit under part # M-6675-C302.

The 351W rear sump pan is part # M-6675-A58. Ford sells a rear sump pan for 429/460 engines, but it does not have enough clearance. Canton Products and Moroso make a true rear sump pan listed as a Fox 5.0 Mustang conversion. Canton's oil pan part # 15-700 and # 15-771 for the screen and bolt, along with part # 20-850 for the dipstick kit that fits best and does not require a recessed firewall. Canton Products also has similar oil pans for the FE series engines.

The Moroso pan is longer in the rear sump and will require a recessed firewall. The 4.6 and 5.4 modular engines are a tight fit because they are so wide, but we can mount those engines if that is what you want to run.

GM LS series engines and the early Ford modular engines require an adapter plate that we can supply. They also may require the use of an aftermarket accessory/front drive system.

The new Coyote engines have their own issues. The oil pan is different than the early modular engines and requires the use of a Moroso oil pan part # 20575 as well as recessing of the firewall on most applications. Many Coyote engines have no provision for a power steering pump, requiring an aftermarket pulley system or an add-on power steering pump kit.

Plan of having to heavily modify or replace the transmission tunnel for the larger overdrive transmissions that come with the Coyote engines.

All other engines will require us to have the engine in hand for placement.

Fatman Fabrications Inc., 8621-C Fairview Road, Mint Hill, NC 28027
Office: (704) 545-0369 Website: www.fatmanfab.com Email: sales@fatmanfab.com

Overdrive transmissions are popular due to the stoplight friendly first gear and the overdrive for the highway. With the Chevy 700R4 we do need to know if it is case mount or tailshaft mount. We also will need the measurement from front face of transmission to the transmission mount on the Chevy 4L60E and new Ford overdrives as they do vary.

The Ford AOD does not require any measurements. Older 3 speed automatic transmissions are simpler to install but do not offer the flexibility of the overdrive units.

With manual shift transmissions we will need the measurement from bellhousing to transmission mount and the width at the widest point. We set up the clutch pedal assembly using a Wilwood hydraulic clutch master cylinder. You will set up the transmission with whichever style of hydraulic clutch slave cylinder you desire.

Finish of Chassis

All chassis come assembled and coated with a rust inhibitor. As an option, Reflections Paint and Body Shop of Mint Hill, NC has a chassis priming service that includes the following steps, and we will take the chassis to & from the body shop for you:

1. Alcohol wash
2. Orbital sanding
3. Phosphoric acid wash
4. Etch priming
5. Epoxy priming

Epoxy primer is packaged in a variety of different colors. The black epoxy is the most popular of all the colors but will fade in the sun and eventually absorb water, so it should receive at least a coat of semi-gloss clear to seal it.

When catalyzed and sprayed, the black epoxy gives the same satin appearance as any new sheet metal parts right out of the factory. This primer can be left as is but will hold up best if scuff sanded and topcoat painted. This paint system is recommended by the paint manufacturer and is the best undercoat system available on the market today.

Remember, not everything is exact, and some minor modifications are likely every step of the car build, so plan for that and **test fit everything** before you paint anything.

Notes

See our Builders Price Guide and Order Form for additional information and pricing.

When you are ready, give us a call to talk with our chassis shop specialist. They will assist you in verifying and dialing in the final version of your chassis, then they will send you a detailed written proposal for your approval.

Call us at (704) 545-0369 or email tim@fatmanfab.com

Ford Pickup Truck Chassis Example



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