

# **Fatman Fabrications**

## **1949-1964 Studebaker PU**

### **Chassis Builders Guide**



**Talbert Goldman's 2013 Goodguys Truck of the Year  
that is riding on our chassis**

Thank you for your interest in a Fatman Fabrications chassis for your 1949-1964 Studebaker 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 pickup 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 pickups 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 truck. You might be using an old steel body, which is great, but Studebaker was not very exact in the manufacturing process over 60 years ago and there are minor variations in all old pickup trucks.

If a fiberglass body is your choice, then there are some excellent quality glass bodies, but each has its own variations and tradeoffs. Some are not made or designed to fit on a 1949-1964 Studebaker pickup chassis. 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.

Our chassis for the 49-64 Studebaker pickups are constructed of strong 2"x 5" x .188" main rails with 2" x 4" x .188 front and rear sections and the rear axle kick up is mandrel bent. We are known for building the strongest chassis on the market. Each one is made to follow the original shape, form, and to fit with the factory body mounts along with fitting to the original cab and bed mounts.

Fatman Fabrications chassis include core support/radiator mounting holes, bumper mount holes, drilled and tapped the topside body mount and gas tank holes. In addition, we include front and rear cab mount outriggers and rear bed mount holes.

Another item we have found is that 60-year-old and repro fenders seldom fit together well without some tweaking. We suggest you fit them, then drill and tap 5/16" fine thread bolt holes into the proper mounting locations. By doing this, the bolt holes will be where you need them, rather than having to stretch a hole in a fender to match a predrilled hole.

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 if you are using a fiberglass body or parts. We also use a 1/4" wall front crossmember and .120" wall X-bracing to make these the strongest chassis available!

## **Front Suspension**

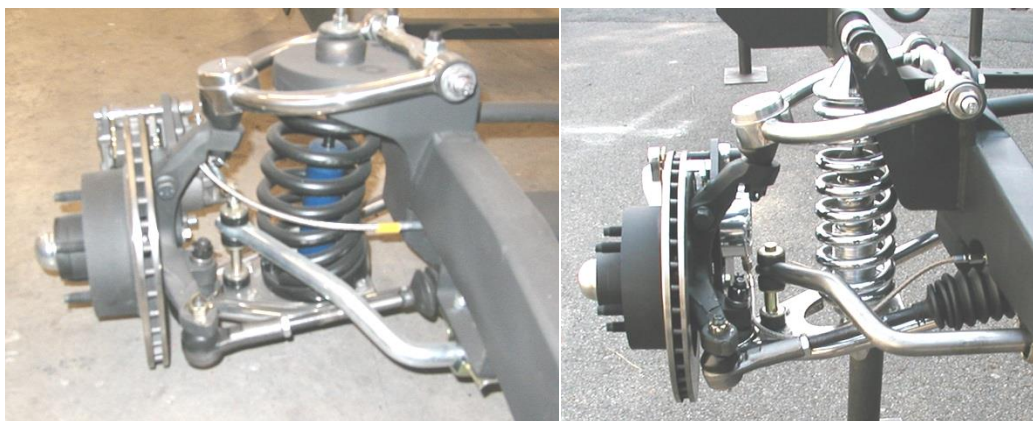
Fatman Fabrications chassis come standard with Stage 2 suspension, which uses coil springs and premium single adjustable MII based shocks. The ride height is approximately 4" lower than stock height with standard spindles. You can choose a 2" drop spindle for a lower ride height or our exclusive 1 ½" raised spindle for a more conservative ride height.

Please keep in mind that these chassis will NOT maintain stock ride height no matter which option you choose. Track width comes 58 ½ "which is slightly narrower than original width. Tire to fender is adequate on these trucks, but attention should be paid to your wheel/tire sizes and spacing. 7" wheels work the best on these frontends.

Stage 3 coilovers are the most popular option for the frontend because of slight height adjustment, excellent shock, and good looks that match the heavy duty .188 wall mild steel tubular control arms that are standard on all frames. Premium single adjustable coilovers are included when choosing the Stage 3 upgrade.

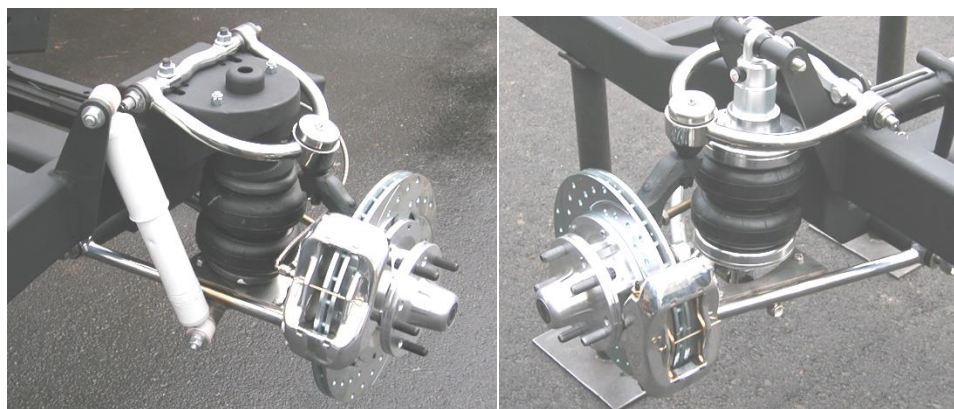
Air ride comes in either Cool Ride Stage 4 or Shockwave Stage 5. Cool Ride has the air spring in place of the coil spring and the shock mounted behind the control arms. Shockwaves are similar to how a coilover looks and mounts with the shock inside the air spring. A compressor system is needed with both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

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



**Stage 2**

**Stage 3**

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

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 car. 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. 49-64 Studebaker pickup generally weigh about the same as a stock Ford Mustang II, 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 1/2" Ford pattern is standard. 5 lug 4 3/4" Chevy Pattern, 12mm x 1.5mm metric studs are also available but use the above-mentioned small piston GM calipers. 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.



**OE 11" standard**

**Wilwood drilled and polished 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 we recommend them with disc/disc applications. To make it easier to service the master cylinder, remote filling kits are available as are a better-looking aluminum reservoir kit. Chromed and polished booster/master cylinder kits are also available.

Please note that our pedal assemblies are not designed to fit through the original hole in the floor. Most vehicles built back then had the driver positioned more centered to make room for the large steering wheel required to steer these vehicles. The idea is to place the pedal where it is most comfortable for the driver. The pedals can then be bent to fit.

Fatman Fabrications use standard automotive steel brake lines for brake plumbing. They 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 the master cylinder and discs, and 10 psi residual pressure valves are used with drums.

### **Rear Suspension**

Fatman Fabrications uses a 4 bar with premium single adjustable coilovers that are standard on the Studebaker truck chassis and provide excellent ride quality, looks, and serviceability for a street rod type truck.

If the truck will be used to carry a load in the back or maybe pulling a trailer, then we often recommend 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, not heavy enough in truck loaded with extra weight. The air ride can be set for a comfortable ride and proper ride height at the push of a button, regardless of the load.

Keep in mind that a compressor fill kit is required with an air ride suspension so there is an extra cost. Because the truck chassis are quite narrower than a car frame, putting air ride in the back does reduce exhaust routing area, so some planning is required.



**Example 49-64 Studebaker Pickup Chassis w/rear end set up**

### **Sway Bars**

Rear sway bars come standard on all pickup truck chassis to help control body lean. We seldom use a front sway bar because of the nearly 50/50 weight distribution and good roll center on Mustang II based suspensions.

If using a big block engine, then a front sway bar is recommended. Also, if you want a pickup that has excellent cornering qualities, then choose this option. Please note that some ride quality suffers to make it handle better. Again, this all goes back to what kind of pickup you are building.

If using rear disc brakes with coilovers or air ride suspension with either disc or drum, a prostreet style rear sway is required.

## **Rearends**

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

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

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

8" wide wheels, regardless of the diameter, will fit under the rear fenders with the proper backspacing. 10" or wider wheels will require the bed to be tubbed and rear chassis rails to be narrowed. We will have a 9" rearend built to your exact measurements of the 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**

We can set up the chassis for Chevy or the more popular Ford engines. The small block Chevy with a short snout water pump fits the best and is easily customized. We do recommend a front sway bar with big blocks especially due to the extra weight.

Any engines other than a Chevrolet or popular Ford engines will require us to have it in hand for placement. LS and Modular/Coyote engines may require aftermarket accessory drive/front runner systems, depending on the width of the factory accessory drive system.

As a note regarding the new Ford Coyote and GM LT-4 engines, these are not equipped with hydraulic power steering and will require the fitment of an aftermarket power steering pump/pulley system. The Ford Modular and Coyote engine will require a recessed firewall and a conversion oil pan part #20575 by Moroso.

The GM 700R4, 4L60E and Ford overdrive transmissions are popular due to the stoplight friendly first gear and overdrive for highway driving. With the 700R4 we will need to know if it is case mount or tail shaft mount. In addition, we also need measurements from the front face of transmission to the transmission mount on the Chevy 4L60E and Ford overdrives as they do vary in size.

With a manual shift transmission, 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 then set up the transmission with whatever 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

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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](mailto:tim@fatmanfab.com)



## 49-64 Studebaker Pickup Chassis Example



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