

# **Fatman Fabrications**

## **55-57 Ford Thunderbird Chassis Builders Guide**



Thank you for your interest in a Fatman Fabrication frame for your 55-57 Ford Thunderbird. Before you begin there are a few things we would like to discuss and point out.

First, **PLAN YOUR PROJECT!!!** Know how you want it to look when it's finished. This will be repeated many times because it can't be said enough. Do you intend for it to be hi-tech or old style? Billet wheels or painted steelies? Pro street? Pro touring? Ground scraping low? Who's going to drive the car and where? 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 don't absorb road shock. Remember, there is a tradeoff to everything, so save yourself time, money, and aggravation by planning your project.

Second, keep in mind **you are building a car**. You may be using an old steel body, but factories were not as exact in the manufacturing process 50+ years ago and there are minor variations in all these old cars. Not everything is exact, and some minor modifications are likely on **every** step of the car, so plan for that and **test fit everything** before you paint or powder coat anything. Having built hundreds of frames we have them dialed in pretty good.

All of our frames for the 55-57 Ford Thunderbirds are constructed of 3"x4"x.188" main and 3" x 3" x .188 wall rectangle tubing rear kick up rails. They are made to follow the original shape and form, and to fit with original body and core support mounts.

Expect a 2"-3" drop from stock with our standard chassis and standard spindles. Airride, and 2" dropped spindles are options to put the car radically low.

For paramount strength and rigidity so necessary for Pro Touring performance, the frame is constructed using 3 x 4 x .188 main rails with a massive X member and driveshaft tunnel. We designed our central tunnel to a fully completed box for stress acceptance without the flex inherent in the open top tunnels seen in competitor's designs. Simply put, a box is stronger than a "U". Clearance for 3" exhaust is provided while maintaining full strength and good ground clearance.

We use 5" travel rear coilovers for optimal ride quality. This will require some modification to the trunk floor, shown below.

### **Trunk Modification**

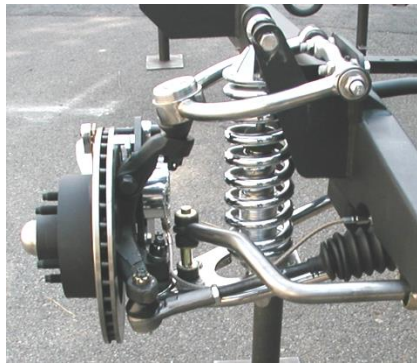


## **Front suspension**

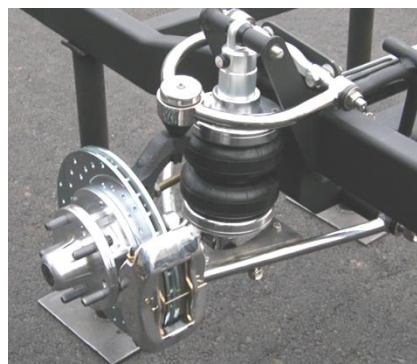
Fatman Ford Thunderbird frames come standard with Stage 3 Custom IFS which features electroless nickel plated steel control arms and stainless fasteners, Delrin bushings, and Ridetech coilover springs. The ride height is approximately 2"-3" lower than stock height. Track width comes at 57", which is very close to the stock IFS. Shockwaves by Ridetech are optional and will fit the same crossmember and shock towers. A simple swap to the correct shockwaves, modification to the sway bar mounts, and the air system are all that is required. Power steering and a front sway bar are standard. Alignment is accomplished with a shim system allowing easy adjustment without disassembly, while maintaining proper axial alignment of the pivot bushings.

Stage 3 coilovers are used for the front end to provide slight height adjustment, excellent shocks, and good looks to match the nickel-plated steel tubular control arms that are standard on all frames. Ridetech HQ series adjustable coilovers are standard on all Fatman Ford Thunderbird frames.

Air ride comes in Shockwave (Stage 5). Shockwaves are similar to how a coilover looks and mounts with the shock inside the air spring. A compressor system is needed with this option. If you want to run extra low, you can use 2" drop spindles. The drop spindles will reduce ground clearance 2" as well.



**Stage 3**



**Stage 5**

Shocks are probably the biggest factor in ride comfort and handling of a car. Shocks are the 'brains' of the front suspension because they control the velocity of the suspension. NASCAR teams take dozens of shocks to the track but only a couple pair of springs. Stage 3 and Stage 5 have the adjustable shocks standard.

## **Brakes**

Something to keep in mind as we discuss brakes is that some people use bigger brakes to "fill" their new big billet wheels or as a "dress up", without thinking about the safety aspect. That is why all Fatman frames come standard with disc kits that use early GM "big" piston calipers and provide 65% more braking capacity than those that use the small piston GM calipers. These 11" disc brakes use OEM parts that are easily serviceable units using parts that are available at your local auto parts store, should you need to make emergency repairs. 5 lug 4 1/2 "(Ford pattern) is standard. 5 lug 4 3/4 "(Chevy Pattern, w/ 12mm x 1.5mm metric studs) is also available but use the above-



mentioned small piston GM calipers. Talk to the Fatman rep. about the options that are available for bigger brakes if using Chevy pattern.

We have several options from Wilwood. Complete Wilwood big brake kits are available that use aluminum hubs, 4 piston aluminum calipers with 11-inch, 12-inch, or 13-inch rotors. 13-inch kits use 6 piston calipers. Drilled rotors and polished or red calipers are options on these kits. Wilwood also has an aluminum caliper option which replaces the standard GM caliper, it uses standard GM replacement pads.



**11" standard**

**Wilwood drilled and polished brakes**

Keep in mind that larger brake kits require larger wheel/tire combinations. Talk to the Fatman rep about what will fit. **Remember** bigger brake options are cheaper than a new fender or grill that you will have to buy because a new Honda that you rear ended has better brakes than you! Above all, think safety first.

We use standard automotive steel brake lines for brake plumbing. Since you must retain a firewall mounted master cylinder, we will "stub" the line at a point for you to finish the connections. These are D.O.T. approved, Tin plated steel lines, show quality looking and will last a lifetime. When you see the bent lines, you'll swear a machine did it. A simple scrub with a 3M pad and a coat of clear lacquer will preserve their fresh appearance without the safety issued related to stainless steel hard lines. We do use DOT approved braided stainless flex hoses from the frame to the calipers.

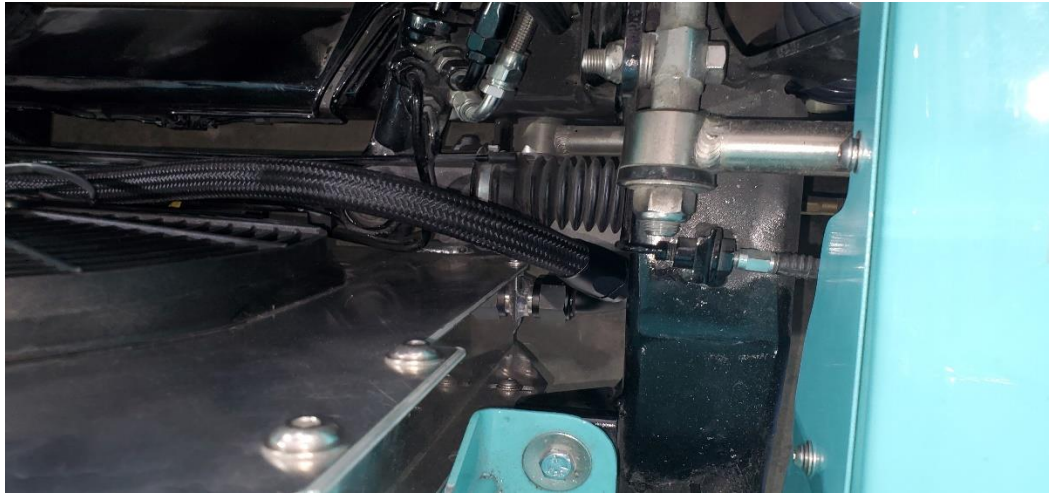
### **Rear Suspension**

A new 9"- 28 spline rear axle assembly provides the foundation of the rear suspension. A fresh 3.70 Posi gearset is installed along with 4 ½" bolt Ford pattern OE style rear disc brakes featuring a functional emergency brake system. A triangulated rear 4 bar, rear sway bar and Ridetech adjustable coilovers control the motion of this rugged and responsive design. The stock rear wheel wells are 11" wide. Rear wheels with the proper spacing, up to 8" wide, will clear the stock wheel tubs. The frame is narrow enough for more tire if the tubs are enlarged and the frame rails are modified, but measure before you buy. Be aware, lowering the car and fitting modern wheel and tires will require disconnecting the rear coilovers for rear tire changes.

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 as well. 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.

## **Engine/Transmissions**

Mounts for 289/302/5.0 engines and AOD transmissions are installed. The front steer power rack gets the steering out of the way for best oil pan and exhaust clearances. A dual sump Fox body 5.0 oil pan will be required. The new Coyote engines add their own issues. The oil pan is different than the early modular engines and require the use of a Moroso oil pan #20575 as well as recessing of the firewall on some 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 replacing the transmission tunnel for the larger overdrive transmissions that come with the Coyote engines. We can provide assistance with selection of those proper fitting components. Other engine/transmission combinations can be installed upon discussion with one of our frame specialists. An aftermarket custom radiator will be required. The location for the lower hose on a factory or aftermarket replacement gets in the way of the new power rack. The fitting will need to be relocated to the side of the tank with a 90-degree elbow installed. It will also help to install a pair of spacers between the factory core support and the new radiator to set that radiator in a more vertical position. We can provide assistance with selection of those proper fitting components.



## Finish of frames

All frames come completely assembled (except air ride compressor systems and fuel tanks) and coated with a rust inhibitor. As an option *Reflections Paint and Body Shop, Inc.* (located in the same complex) has a frame priming service that includes the following steps:

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 on **every** step of the car, so plan for that and **test fit everything** before you paint anything.

## Other options

The power steering hose kit is a must have if going with power steering. This kit supplies 4 different fittings to connect to nearly any power steering pump with integral reservoir. The braided stainless hose can be cut to length for a custom fit.

The 3 U-joint steering hookup kit supplies Borgeson U-joints, ¾” steel rod, and heim joint. Use ¾” wood dowels or plastic pipe in place of the steel rod to mockup with.

Date\_\_\_\_\_

Name\_\_\_\_\_

Street\_\_\_\_\_

City\_\_\_\_\_

Phone\_\_\_\_\_

Email\_\_\_\_\_

Car type\_\_\_\_\_

Engine/trans\_\_\_\_\_

Bolt pattern\_\_\_\_\_

notes\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Total options \$ \_\_\_\_\_  
 Roller frame +\$18,500  
 Total price \$ \_\_\_\_\_

### Options

#### Front upgrades:

___ coilovers (Stg 3)	N/C	triple adjustable add \$1,170.00 to option
___ shockwave (Stg 5)	add \$1,200	triple adjustable add \$1,200.00 to option
___ 2" drop spindles	N/C option	
___ 1 1/2" raised spindles	add \$275	
___ Chevy bolt patt.	N/C option	82-92 Camaro rotor and caliper
___ Zero offset brake kit	add \$450	hub style, large caliper, avail Ford or GM pattern, 11" rotor
___ Zero offset-13 kit	add \$550	" " " " " " " " " " 13" rotor
___ Wilwood caliper	add \$365	black or red powdercoat, includes pins
___ Wilwood 11" kit	add \$640	4 piston, alum. hub, fits 15" or larger wheels
___ Wilwood 12" kit	add \$695	4 piston, alum. hub, fits 17" or larger wheels, some 16's
___ Wilwood 13" kit	add \$1,130	6 piston, alum. hub " " " " "
___ above Wilwood kits drilled rotors	add \$100	
___ above Wilwood kits red calipers	N/C	
___ above Wilwood kits polished calipers	add \$115	4 piston, 6 piston N/A

#### Engine upgrades:

___ 289/302/5.0 Ford	no charge	
___ any other motor	add \$500	including Ford Coyote engine
___ Chevy LS1/Ford Mod	add \$75	includes motor mount adaptor

#### Rear Suspension upgrades:

___ 4 bar w/ coilovers	N/C	triple adjustable add \$1,170.00 to option
___ 4 bar w/ shockwaves	add \$1,025	triple adjustable add \$1,200.00 to option
___ Stainless steel 4 link bars	add \$750	add on to above 4 link systems
___ Pro street rear rails	add \$1,950	
___ pro street sway bar	add \$495	required with pro street rear rails

#### Rearend upgrades:

___ 31 spline axles - new	add \$390	
___ Tru-trac upgrade from Trac-loc	add \$450	Requires 31 spline axles
___ New HD 9" housing w 35 spline axles		add \$675
___ New HD Nodular case -35 spline Tru-trac	gearset w 1350 yoke	add \$750
___ OE style rear disc	N/C	11" Trans-Am rotors, Cadillac calipers w/ parking brake
___ Wilwood 11" rear disc	add \$280	11" rotors, 4 piston w parking brake-will fit most 15" rims
___ Wilwood 12" rear disc	add \$285	12" rotors, 4 piston with internal shoe parking brake
___ Wilwood 13" rear disc	add \$1,000	13" rotors, billet 4 piston w/ internal parking brake
___ above Wilwood kit drilled rotors		add \$100
___ above Wilwood kit red calipers		N/C
___ above Wilwood kit polished calipers		add \$115- N/A with 13" kit

#### Other options:

___ brake lines	add \$895	D.O.T app. steel hard lines and s/s hoses to F/W
___ epoxy primer	add \$1,850	
___ Borgeson 3 joint steering hookup	add \$355	
___ Power steering hose kit	add \$155	
___ 2 way Air ride comp. kit w tank	add \$900	
___ 4 way Air ride analog system-3 gal.	add \$1,225	manual operation, dial gauges
___ 4 way Air ride digital system- 3 gal.	add \$2,225	Ridepro E5
___ 4 way Airpod comp kit-3 gal. w/ cover	add \$2,680	Ridepro E5

Other Air Ride systems are available- call for \$

1/3 deposit required with order. Personal check ok for deposit. 1/3 payment required once your frame goes into our frame jig. Balance due prior to shipment in cashier's check. Shipping cost will be added to final balance once a shipping quote is received from one of our freight carriers. No credit cards on frame orders. Shipped frames require a \$330.00 pallet fee. Shipped frames may require applicable sales tax charges for their respective states. No refunds on completed frames. Frames picked up are subject to North Carolina sales tax currently 7.25%

Once our sales team has worked with you on a basic plan, we will connect you with our frame shop specialist. He will assist you in verifying and dialing in the final version, then we'll send a written proposal for your approval. A signed copy must be returned to us before the frame is ready to be built and will assure that both parties clearly understand the chassis specifications, the way you want it!

(704)545-0369 phone

(704)573-0401 fax

