



Geezer Engineering 1996-2008 Triple Trees for Performance Baggers Inverted fork legs Instruction Manual

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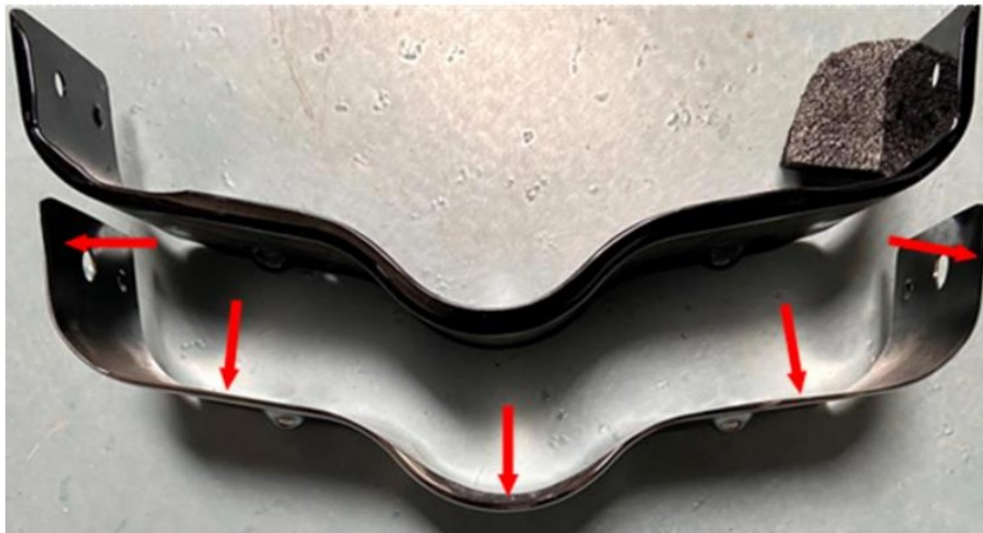
Thank you for purchasing a GeezerEngineering triple tree conversion kit!

A lot of development time and testing went into this product. Our goal was to make it a complete kit and to make it fit like an OEM product – and upgrade your motorcycle to today's level of motorcycle performance and beyond. Top quality is another important goal, so we used highest quality materials only. The triple trees are made of 6061-T6 aluminum and neck stem and lock nut are made from high grade CrMo steel. Three lower clamp bolts and two upper clamp bolts keep your fork legs securely in place without flexing or play in the mounting points. This contributes to eliminating tracking and handling issues in a big way. We are confident you will be able to feel it on your first rides!

Your GeezerEngineering triple tree conversion kit retains rake as set on models 2013 and earlier with slightly reduced offset resulting in approximately 5.7" assuming the bike is level, at stock ride height and is equipped with

OEM or fully compatible aftermarket wheels between 16" and 19" and overall tire diameter of about 25.3". When used on 2014 and later models the original trail of 6.8" on those models is reduced to approximately 5.7" trail. This allows for better cornering with a stock or fully compatible setup as described for the 2013 and earlier models.

Warning: The installation of this product requires the skills of qualified motorcycle technicians and should only be performed by qualified, professional workshops equipped with access to all OEM service manuals and all required tools. Minor modifications to the fork lock tab on 2013-earlier models are necessary to provide for sufficient clearance. The fender skirt on "bat wing" models before 2014 may need some clearancing to fit the new lower triple tree and cow bells. The lower 'lip' that bends in towards the frame neck needs to be removed:



2014-later "bat wing" models require modifications to the fairing mount rails for clearance – edges pointing to the inside need to be cut back 1/8" on both sides where the top tree will be located. All 4 mounting holes of the mounts need to be increased in size by approximately 3/16" to 1/4".

We recommend adding extra clearance to the fairing mount rails on 2013-earlier FLTR models with ABS brakes as described on page 13. Please always refer to the correct OEM service manual for the motorcycle model and year being worked on to ensure correct procedures are used for disassembly and reassembly.

Installing this conversion kit requires replacement of OEM brake lines on 2013 and earlier touring models. The brake system therefore needs to be bled according to the instructions of the manufacturer of your motorcycle. NEVER ride a motorcycle without bleeding the brakes according to those instructions – serious damage, personal injuries and even death may result.

Please disconnect your motorcycle's battery.

These instructions are intended to be used in conjunction with OEM service manuals for your model year motorcycle.

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Assembly of the lower triple tree

NOTE: It is very important to use high strength / permanent thread locker to ensure a permanent connection of the parts is achieved. After neck stem and set screw have been set with thread locker and torqued to specifications the assembly needs to cure a minimum of 24 hours to gain full strength. Do not install before the thread locker has cured. Once assembled do not disassemble as serious damage to the threaded parts may occur. Serious damage, personal injuries and even death may result. Service front end regularly according to your service manual and check all components.

a. GeezerEngineering triple trees have 5 degrees of rake built in, so the neck stem needs to get screwed into the lower triple tree at an angle. Apply permanent thread locker to the neck stem threads (be generous!) and screw the neck stem into the lower triple tree until seated.



b. Secure the triple tree and torque the neck stem to 120ft/lbs torque using a 12mm socket and torque wrench. A 21mm Allen head socket is needed to torque down the neck stem used on our triple trees for 2014-up models.



c. Apply thread locker to set screw and screw into the lower triple tree until seated properly in the retaining groove

on the neck stem.



Torque the set screw down securely. Finish it off by applying some epoxy or permanent thread locker on top of the set screw"



d. Install the brake line mount using medium strength thread locker.

e. Install lower dust shield and neck bearing. Generously pack the bearing with grease.

f. Now is a good time to install the (2014-up) cow bells too! Check these out:

<https://geezerengineering.com/products/harley-cow-bells-with-integrated-led-auxiliary-lights-led-amber-turn-signals>

g. Drill out the threads of the cow bells and install screws from the inside of the cowbells into the mounts on the lower triple tree. Use Allen head bolts size 10- 24 UNC in the correct length for the type of cowbells you use. Use medium strength thread locker.

h. Let the assembly cure for no less than 24 hours.

Note: Non-ABS conversion kits do not include the upper part of the required brake line. This is due to the virtually unlimited choices of handlebar heights, width and pullback. We recommend measuring the upper part of your OEM brake line from the master cylinder to the connecting point of the flexible line to the hard T-line.

Based on these measurements order the correct banjo fitting and universal brake line that's closest in length factoring in banjo and lower fitting. On many stock OEM handlebars, a 22" universal brake line with AN3 fittings on both ends may fit.

This makes it easy to set up brake lines for any handlebar. It also makes it easier to replace your handlebars should you ever want to do that.

Disassembly of motorcycle front end

Disassemble the OEM front forks according to your service manual.

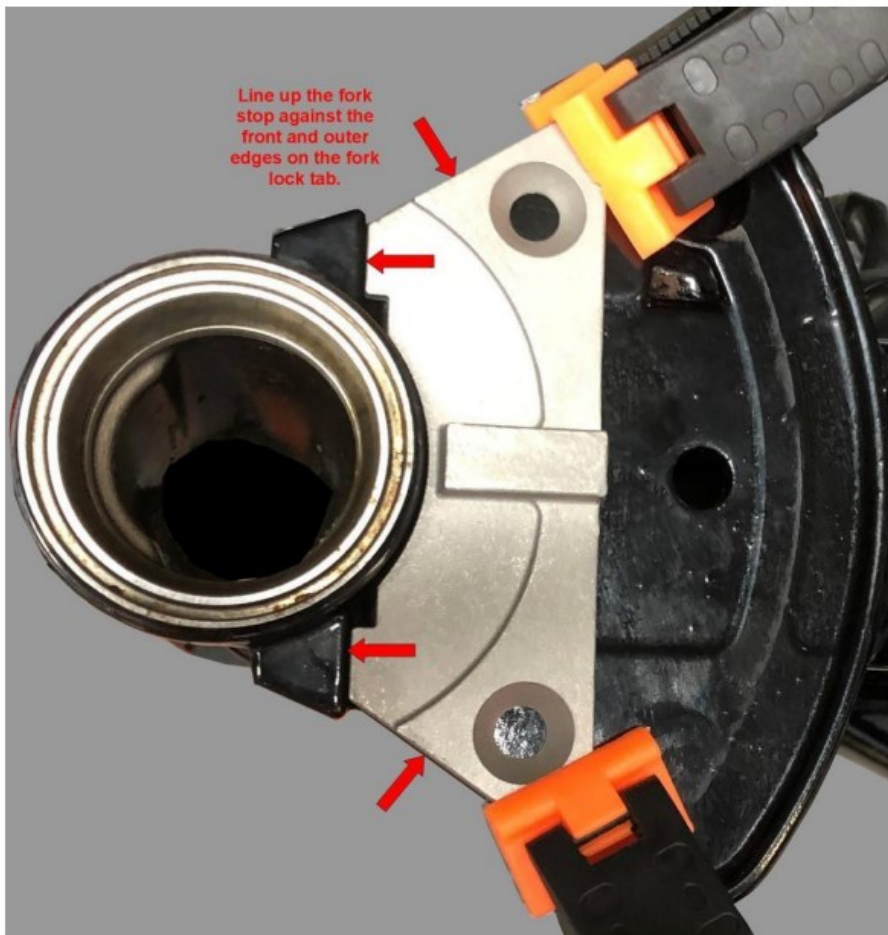
2013-earlier touring models:

For lock tab preparation

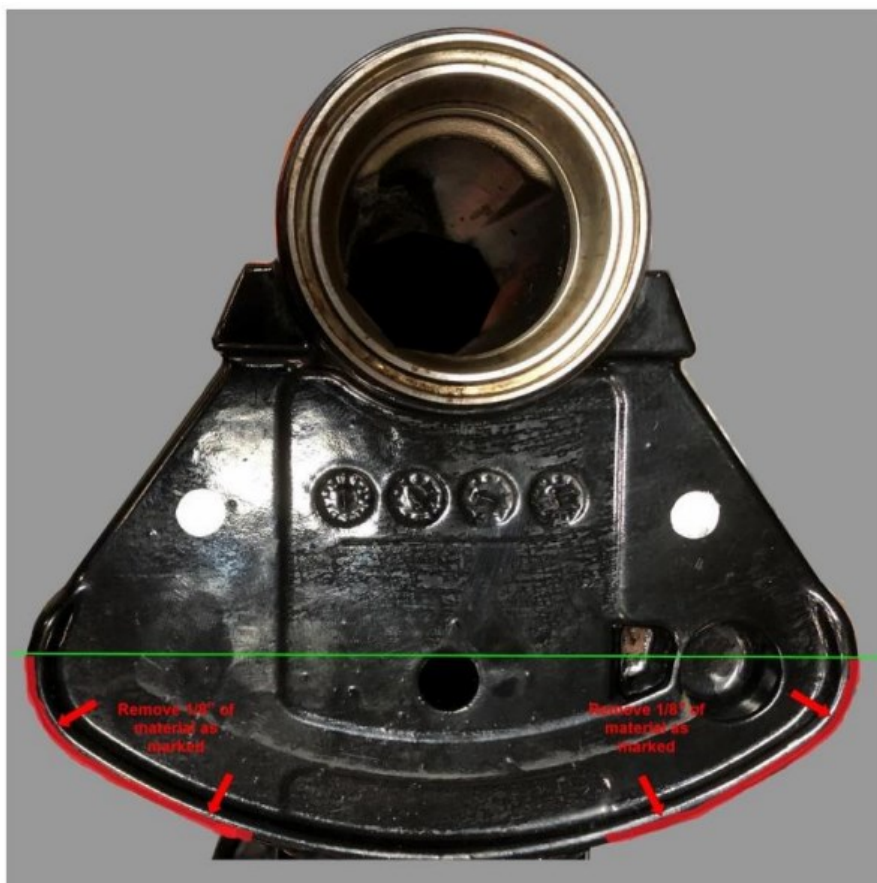
- Clean and remove any bumps on the fork lock tab on the frame. The surface needs to be as level and smooth as possible to ensure proper installation and clearance is maintained.
- 2013 and earlier model years require minor modifications of the fork lock tab to gain sufficient clearance for the 49mm fork tubes and to install the fork stop.



Removal of fairing or nacelle and fuel tank is required. Mask and cover all areas outside the fork lock tab! The fork lock tab uses 2 existing holes. 1993 – 2008 models. 2009 – 2013 also need two mounting holes drilled. Align and secure the fork stop as shown:



- Mark hole locations through bolt holes of the fork stop.
- Determine center and drill in steps to 5/16"
- Mark the fork lock tab as shown:



- The widest part of the fork lock tab serves as a mark for clearancing (green line).

- Wearing eye protective glasses, remove about half or 1/8" of the ledge on the perimeter starting at the center point towards the frame's backbone. It is not necessary to cut the ledge all the way to the backbone. We like to let it taper off and blend it because it looks better.
- Sand off any sharp edges and smoothen the edges.
- Temporarily install fork stop and lower triple tree with fork tubes to check clearance. Remove additional material if necessary and check clearance again.
- Use primer and paint to reseal the fork lock tab and let dry completely.



- Install fork stop bolts and torque to 10ft/lbs.
- Remove bearing races and replace with new bearing races.

Note: some aftermarket bushings cause clearance issues. We recommend using low profile riser bolts and bushings such as our stainless or titanium products:

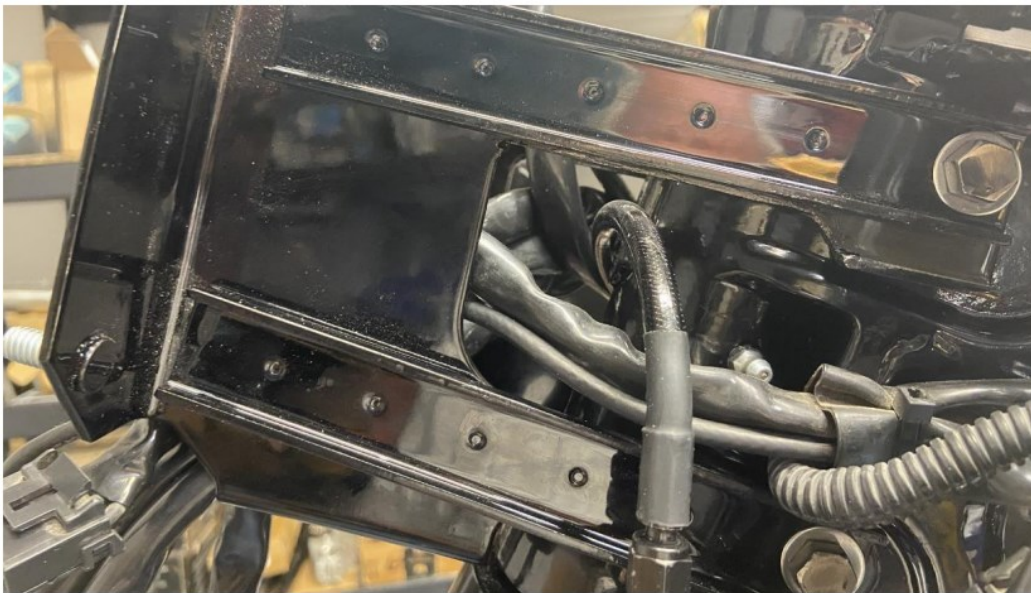
<https://geezerengineering.com/collections/front-end-accessories>

2013 – earlier FLTR models with ABS brakes

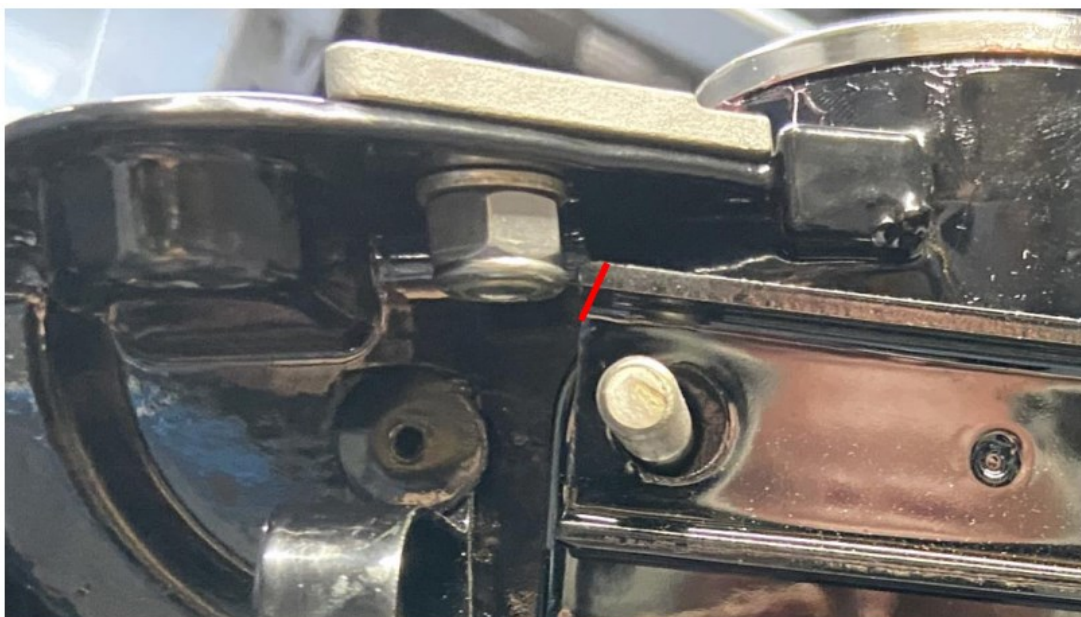
A modification of the fairing bracket is required to add extra clearance for the brake line. We cut back the top rails on both sides along the red line in the picture below:



This makes sure the brake line cannot get stuck in the front but move freely with steering input.



On 2009-2013 Road Glide models both sides of the upper part of the fairing mount also need to be slightly shortened for clearance.



2014-2020 touring models

Fork lock tabs on these models have an integrated fork stop. No modifications are necessary. Remove bearings and bearing races and replace with new OEM bearings and bearing races (not included).

Installation

a. Triple trees and fork legs

- Install lower triple tree with dust shields and bearings, hand tight.
- Install the large top nut and tighten to set bearing play to an approximately correct value. This will need to be checked again and set once all parts have been installed.
- Mark fairing mounts for modification (2014-later “bat wing” and 2013-earlier FLTR models).
- Loosely install top triple tree and slide fork legs into position.
- Set fork leg top position and tighten lower triple tree clamp bolts just enough to keep the fork legs in place.
- Now remove only one bolt at a time from the lower triple tree to keep fork legs securely in place and replace using medium strength thread locker.
- Torque lower triple tree clamp bolts initially to 2-3 ft/lbs starting with center bolt (1) followed by (2) and (3) to ensure the clamp is seated evenly and to avoid distortion of the clamp.
- Increase in small increments not exceeding ¼ turns each time using the same sequence (1-2-3) until 14ft/lbs is reached on all bolts. Do not overtighten as it may damage triple trees and fork tubes!



- Install front wheel, brake calipers, front/lower part of your brake line and fender.
- Set neck bearing play according to instructions in your OEM service manual.
- Apply medium thread locker to the 4 upper clamp bolts. Torque each bolt alternating in small increments until you reach 14ft/lbs.
- Remove and replace the 3/8" clamp bolt in the upper triple tree using medium strength thread locker.
- Torque to 18 – 20 ft/lbs.

b. Brake line installation:

2014 and later models

1. Reinstall OEM brake line mount and brake line according to the OEM service manual.
2. Finish reassembly according to your OEM service manual.

2013 and earlier Non-ABS models

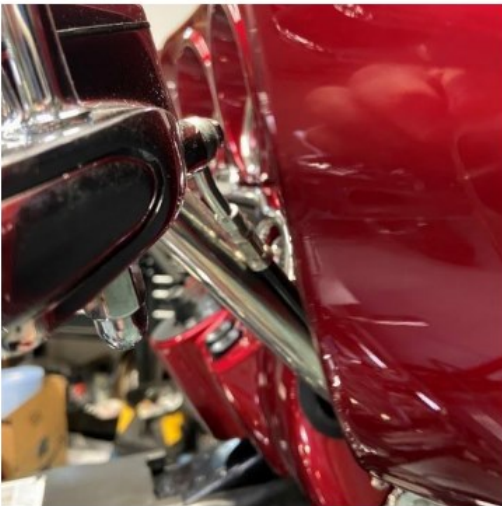
1. Install the lower portion of the brake line in the brake line mount and the brake calipers.
2. Install the upper portion (not included in the conversion kit) of the brake line.

Due to the almost infinite number of handlebar and touring model combinations it is not possible for us to include the upper part of the brake line. However, here are some suggestions on how to pick the right banjos

and brake line:



Universal brake lines are available in many lengths. The type of banjo you choose has an impact on required length of the brake line so make that decision first. As a starting point: On an FLHX with stock handlebars a 35 degree banjo in combination with a 22" universal line should work with enough extra length to route it safely with some slack.



However, every situation is different so after deciding on the banjo please take precise measurements and add a little extra length to provide for necessary slack in the brake line. Make sure to route the brake line properly to avoid it getting pinched or stretched etc. This is very important!

We used a 90 degree banjo for our 2009 FLHR test bike to let the brake line run straight out and then routed them down through the nacelle. On our 2015 FLHR we went with a 35 degree banjo. Both bikes are set up with 14" medium ape hanger handlebars.

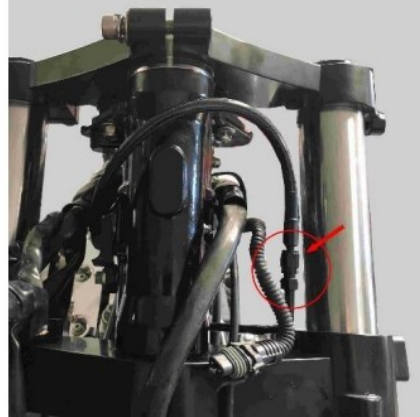
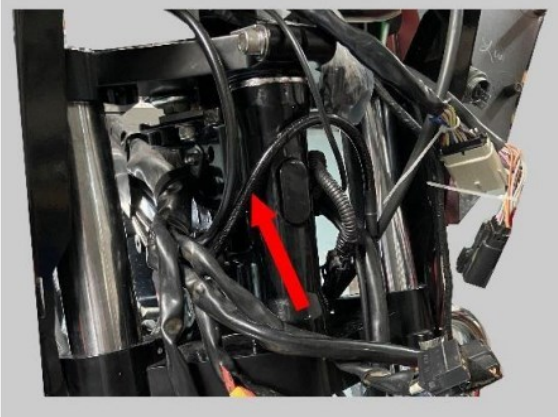


We carry banjos and universal brake lines in various lengths. Please contact us for more information.

3. Bleed the brake system according to your service manual.
4. Continue reassembly according to your service manual.

2013 and earlier ABS models

1. Install the rear part of the brake line on the ABS module of your bike.
2. Route and secure the brake line to the front according to your service manual.



3. Connect the rear brake line to the front part and tighten securely.
4. Make sure the brake line is routed properly and that there are no parts obstructing it.
5. Bleed the brake system according to your OEM service manual.
6. Continue reassembly according to your OEM service manual.

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Documents / Resources

 Installation Manual Inverted Engineering Triple Trees 1996-2008 Harley-Davidson Inverted Engineering LLC Inverted Engineering LLC Inverted Engineering LLC	Geezer Engineering 1996-2008 Triple Trees for Performance Baggers Inverted fork legs [pdf] Instruction Manual 1996-2008 Triple Trees for Performance Baggers Inverted fork legs, 1996-2008, Triple Trees for Performance Baggers Inverted fork legs, Performance Baggers Inverted fork legs, Baggers Inverted fork legs, Inverted fork legs
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References

-  [High Performance Parts for your Harley](#)
-  [High Performance Parts for your Harley](#)
-  [GeezerEngineering Front End Accessories](#)