



*Scott's Weld-On
COILOVER IFS Kit
Installation Instructions*



Installation Manual for Scott's Hotrods Standard Front Steer IFS

READ THIS FIRST

Check the parts list thoroughly to be sure you have all the correct parts required for installation. If any items appear to be missing immediately call our tech department. Remember, you must call within 30-days of receipt or you may be responsible for missing parts. Do NOT begin installation until all parts are received. This will make it much easier to complete the installation. These instructions serve merely as a guideline. Scott's Hotrods can only assume this installation will be done at a qualified installation shop or by a qualified installer. These instructions will guide you step-by-step through the basics; however Scott's Hotrods cannot accept any liability for differences in this instruction manual and your particular vehicle. Scott's Hotrods recommends that all items to be welded be done so by a certified welder. We also recommend TIG welding all items.

Review our warranty online at www.scottshotrods.com

RECOMMENDED TOOLS

- Complete Standard socket set
- Adjustable Wrench
- Safety Glasses
- Ear protection
- Welding Gloves
- Soap Stone or other marking utensil
- Complete Standard Allen Wrench set
- Level
- Tape Measure
- Wire Brush
- Welder
- A Fire Extinguisher is also a good item to keep handy!!

SAFETY PRECAUTIONS

- Wear ear protection and safety glasses at ALL times
- Do NOT work in a messy environment. A clean work place is a safe work place.
- If your vehicle has a battery in it, disconnect it.
- Use SOLID jack stands. Do NOT work under a vehicle with a jack only. Doing so could result in serious injury or death.
- Always use a hood and gloves when welding. Flash burn can not only cause irritation, but permanent eye damage.
- Be Safe and Enjoy!

Airbag Front Steer IFS Parts List

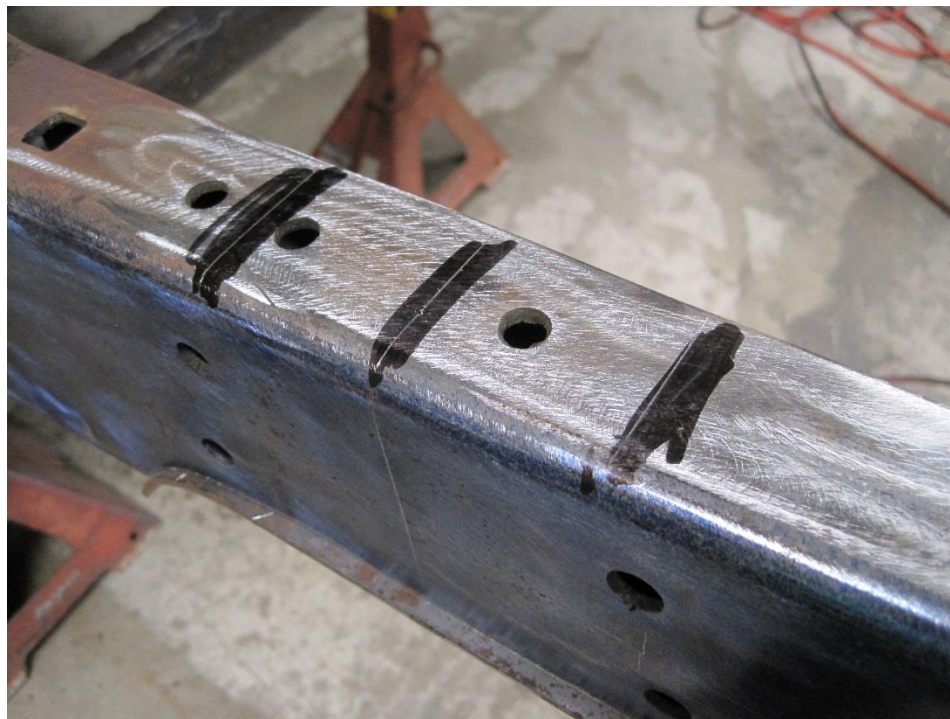
- (1) 1-piece Crossmember
- (2) Upper A-Arms
- (2) Lower A-Arms
- (2) Spindles (standard or 2" drop)
- (2) Coilovers (Aldan or RideTech)
- (1) Standard 11" Brake Kit (GM Calipers or Wilwood 4-piston)
- (4) Stainless Steel Clevises
- (4) Stainless Steel Rod Ends
- (1) Steering Rack (Manual or Power)
- (2) Tie Rod Ends
- (8) Bushing & Sleeve Sets

Hardware

- (4) Ball Joint Castle Nuts
- (8) 5/8"-18 x 3-1/2" Grade 8 A-Arm Bolts
- (32) 5/8" SAE Washers
- (4) 5/8" Large Steering Rack Washers
- (2) 5/8"-18 x 3-1/2" Grade 8 Steering Rack Bolts
- (4) 5/8"-18 x 3" Grade 8 Coilover Bolts
- (4) 5/8" Nyloc Nuts
- (2) Tie Rod End Castle Nuts (shipped on Tie Rod Ends)
- (2) Tie Rod End Jam Nuts (shipped on Tie Rod Ends)
- (4) 3/4"-16 Rod End Jam Nuts
- (4) 1/2" Shoulder Bolts
- (8) 1/2" AN Washers
- (4) 3/8" Nyloc Nuts
- (8) Set Screws
- (2) 3/8" Ball Joint Spacers
- (2) 3/16" Ball Joint Spacers

Final Installation Notes

It is assumed that prior to installation you have already removed your existing front end and marked your wheel centerline. This is critical as the Scott's Hotrods crossmember fits at your existing wheel centerline. If this has not already been done you can simply lay a straight edge across the top of your frame and line it up with your existing wheel centerline. Mark that line on the top of your frame permanently either by scoring the frame or permanent marker.



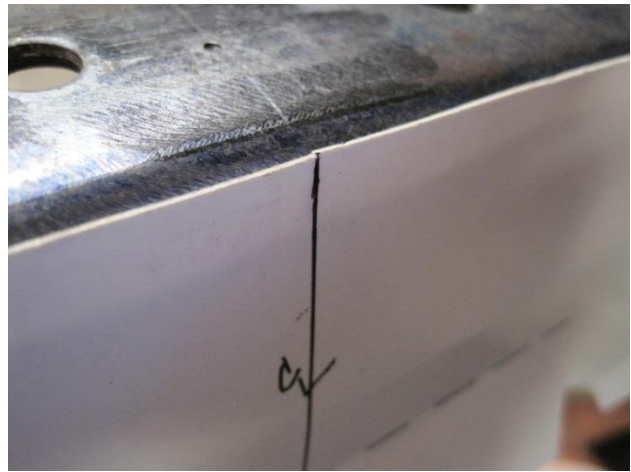
It is also assumed that your frame will be boxed and ready for the Scott's crossmember. If this step has not been done, call Scott's Hotrods Tech Department at 805-485-0382 and ask about your specific application. Different frames require different frame boxing procedures.

*****ALL TORQUE SPECS ARE LISTED AT THE END OF THE INSTRUCTIONS*****

FRAME BOXING

STEP 1

If your frame is not fully boxed, we recommend that you box it in by adding a plate to strengthen the front part of your frame. Use some poster board and trace the outside contour of the frame and mark the Center Line. You will use this template to cut some sheet metal to box the inside of the frame.



STEP 2

Fit the boxing plate into the frame and tack it in place



STEP 3

Confirm that the Crossmember fits and proceed to weld in the boxing plates.



CROSSMEMBER INSTALLATION

STEP 1

Place the vehicle or chassis on solid jack stands. Be sure to verify that your chassis is level from side-to-side and at the ride stance from front-to-back. Leveling the chassis prior to installation is EXTREMELY important because that will determine how your vehicle sits once the installation is complete.



STEP 2

Find the centerline on top of the frame and you marked before starting installation. Measure 2" in front of the centerline and mark the frame again. This will be the front of the Scott's Crossmember. If for any reason it is easier to mark 2" behind the centerline, go ahead and do that instead. Just remember which direction you measured.



STEP 3

Take your Scott's crossmember and prepare it for installation. You will want to clean off any oils using acetone and then wire brush the points of contact where the crossmember will be welded to the chassis. This will help insure a solid installation.

STEP 4

The crossmember will either sit on the inside or the outside of the frame rails depending on your application. Determine which application you have and mock up the crossmember in place. If your crossmember sits on the outside of the frame rails, the easiest way to support it is with a jack. Do some final trimming and grinding to assure a perfect fit.



STEP 5

LEVELING YOUR CROSSMEMBER

Take the time to get it right. Failure to follow this step correctly can result in poor handling, poor alignment and unsafe driving characteristics. Begin by setting your level on the crossmember sitting Left-to-Right. Adjust the crossmember until it is level. This may require a little trimming to fit properly.



STEP 6

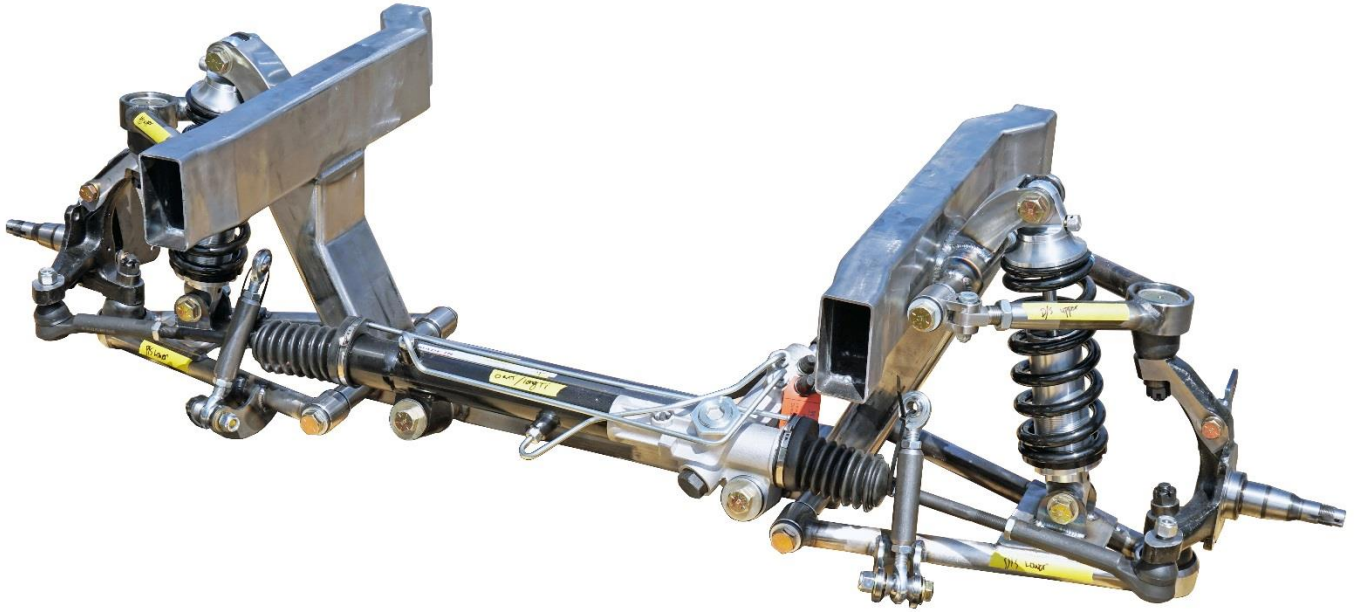
LEVELING CONT.

Place the level on the crossmember pointing front-to-back. As mention before, you will determine your ride stance. Whatever that ride stance may be, it is critical that the chassis is at that point now. Level the crossmember Front-to-Rear. This may require a little trimming to fit properly.

STEP 7

WELDING

Tack the crossmember in place and double check your level. When you are satisfied with the fit and level, weld the crossmember into place.



SPRING POCKET IFS SUPPLEMENT

If you do not have a spring pocket ifs, continue on to the A-Arm & Spindle Assembly section.

As stated in the standard instructions, you will need to level your car up on jack stands. Add additional jack stands in front of and behind the stock spring pockets if you haven't done so already. Clean the frame of all the old suspension components.

STEP 1

Mark the wheel centerline of the wheel on the fender and on the garage floor.

STEP 2

Cut your frame directly in front of and behind the stock spring pocket, removing the stock crossmember. You can use a Sawzall®, cut off wheel or any other cutting tool.





STEP 3

Mock Up the crossmember in position. You will have to graph your stock frame rails to the frame rail sections that we have welded to the IFS crossmember.

NOTE: The higher you mount the crossmember, the lower the front end of your vehicle will sit. The lower you mount the crossmember, the higher the front end will sit.

We recommend that you install the A-Arms on the driver's side so you can mock up your wheel & tire to determine proper crossmember placement. The Lower A-Arm should be level with the crossmember at Ride Height. A-Arm installation instructions are explained later in the instructions.

A-ARM & SPINDLE ASSEMBLY

Congratulations, the hard part is over. Now you will begin bolting all of the components together. Take the time to lay your parts out and get familiar with them.

REMEMBER, IF ANY ITEMS APPEAR TO BE MISSING, IMMEDIATELY CALL OUR TECH DEPARTMENT

STEP 1

ROD ENDS

Apply ANTI-SEIZE to the A-Arms threads and then thread the Rod Ends into the Upper A-Arms.



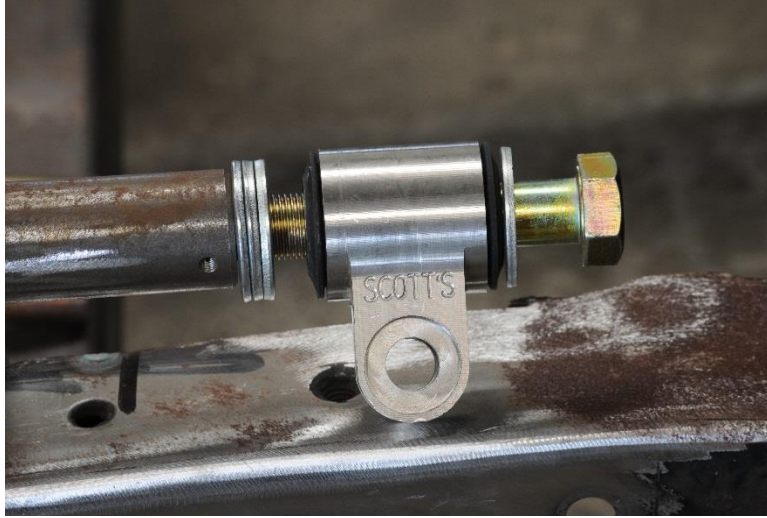
It is of utmost importance that the Clevises be free of debris and the A-Arms are clear of any obstructions. Because of the tight tolerances necessary to achieve a precision fit, any amount of interference in the threads will cause the rod end and A-Arm to bind, possibly resulting in irreparable damage to both pieces. To start you will need (4) Rod Ends and (4) $\frac{3}{4}$ "-16 Jam Nuts. Fully Thread the Jam Nuts onto all (4) Rod Ends. Next, insert the Clevises into the A-Arms. Thread the Rod End all the way until it bottoms out. Next, back the Rod End out a total of 5-turns. It is critical for alignment purposes that the rod ends be threaded into the arms the same amount. Tighten the jam Nuts (hand tight) to secure the Rod Ends in place. Repeat this step for all (4).



STEP 2

CLEVISES

Assemble all (4) Clevises and bolt them to the crossmember. You will need (4) Clevises with "SCOTT'S" machined on top, (4) bushing and sleeve sets, (16) 5/8" SAE Washers and (4) 5/8"-18 x 3-1/2" Grade 8 bolts. Insert (1) sleeve and (2) bushings halves into each Clevis. Each Clevis will also use 4 washers and 1-bolt.



STEP 3

CLEVISES CONT.

Install the Upper A-Arm Clevises to the Upper Cross Tube on the Crossmember using a 5/8"-18 x 3-1/2" Grade 8 bolt with 3 washers inside and 1 washer outside. Torque to 50-55ft/lbs. Next, install the Set Screw in the Cross Tube to keep the bolt from backing out.

NOTE: Inform the technician who aligns your car of these Set Screws as to avoid damaging the bolts if alignment changes need to be made.

STEP 4

LOWER A-ARMS

Install (4) bushing sets into the Lower A-Arms. Install the Lower A-Arms to the Lower Cross Tube on the crossmember using a 5/8"-18 x 3-1/2" Grade 8 bolt with 1 washer inside and 1 washer outside. Torque to 50-55ft/lbs. Next, install the Set Screw in the Cross Tube to keep the bolt from backing out.



STEP 5

UPPER A-ARMS

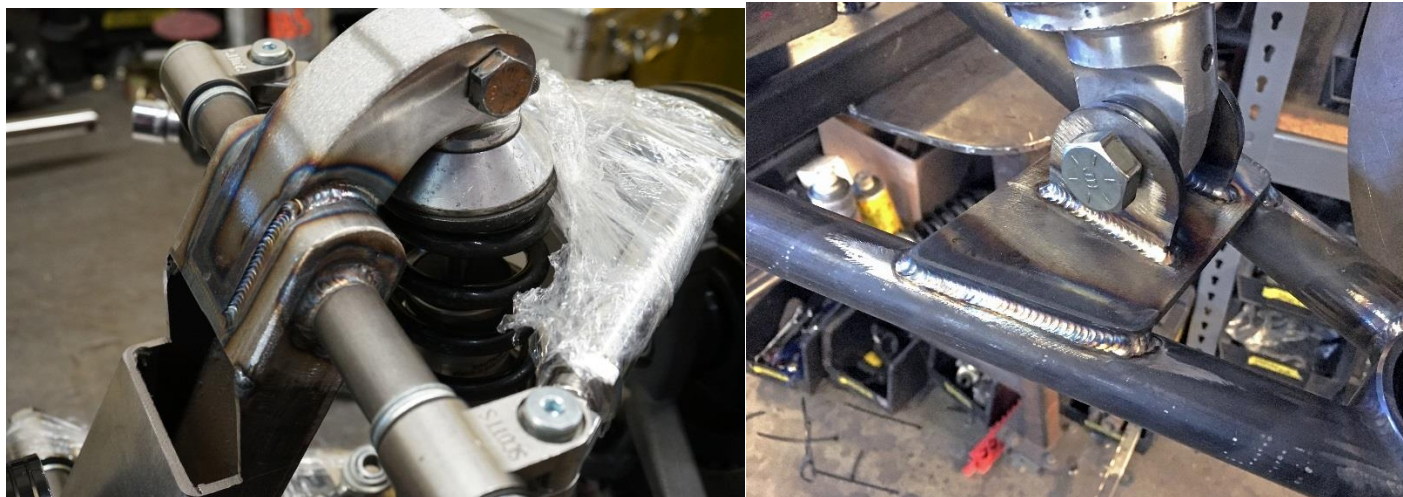
Next, you will need (4) 1/2" Shoulder Bolts, (12) 1/2" AN washers, (4) 3/8" Nyloc Nuts. Each joint will use (3) 1/2" AN washers, (1) Shoulder Bolt and (1) Nyloc Nut. Start with the Driver's Side Upper A-Arm. Hold it in place with the Rod Ends in the Clevises. It should line up, but if it does not you will need to thread the Rod End in or out of the A-Arm until it does.

NOTE: However many turns one side gets, so does the other. KEEP IT SYMMETRICAL. Once satisfied with the alignment of the Rod Ends and Clevises place the 1/2" Shoulder Bolt in with (2) AN washers on the top side and (1) AN washer on the bottom side followed by the Nyloc Nut. Do NOT tighten completely at this point. Repeat this step for the Passenger Side Upper A-Arm.



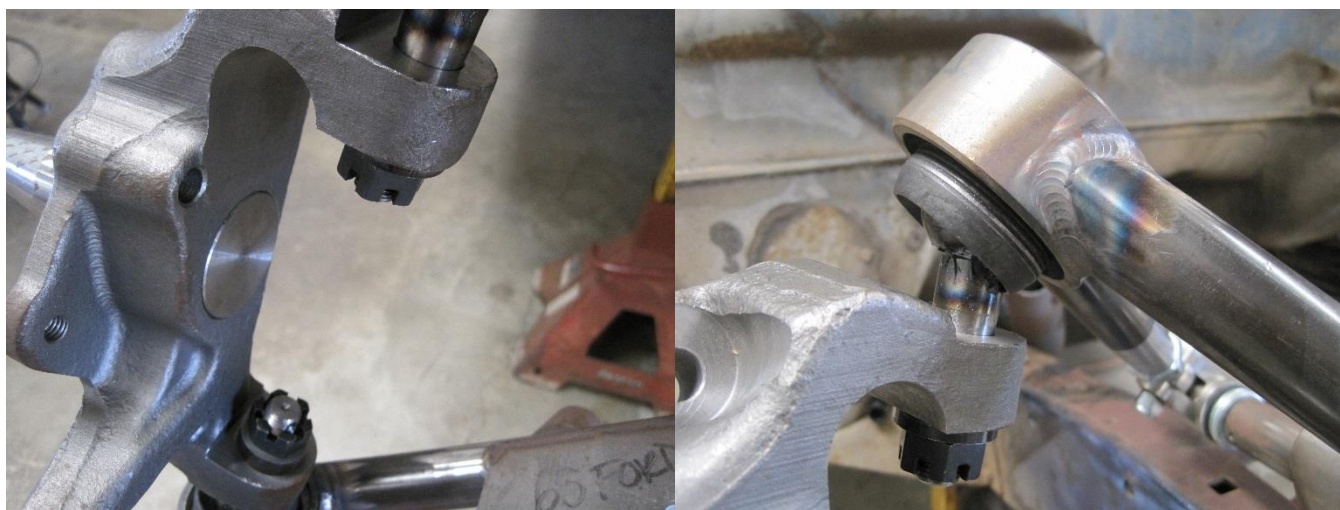
STEP 6 COILOVERS

Starting with the Driver's side, install the Coilover to the Upper Coilover Shock mount using (1) 5/8" bolt, (2) 5/8" washers and (1) 5/8" Nyloc nut. Repeat with the Lower Coilover Shock mount



STEP 7 SPINDLES

You will need (2) Spindles, one Driver's Side, one Passenger Side, (4) Ball Joint Castle Nuts, (2) 3/16" Ball Joint Spacers and (2) 3/8" Ball Joint Spacers. Start with the Installing the Driver's Side Spindle to the Lower A-Arm. Place the Spindle onto the Lower Ball Joint and then set on the 3/8" Ball Joint Spacer on top and then install the Castle Nut and tighten. The Upper A-Arm is installed then same way only you will use the 3/16" spacer. REPEAT process on the Passenger Side.



RACK ASSEMBLY

Rack assembly will be the same whether your kit came with a Power or Manual Rack. These instructions picture a Power Rack.

RACK COMPONENTS:

- (1) MANUAL OR POWER RACK(2)RACK BUSHINGS AND SLEEVES
- (2) 5/8"-18 X 3-1/2" Grade 8 BOLTS
- (2) 5/8" SS FLAT WASHERS
- (2) 5/8" NUTS
- (2) OUTER TIE ROD ENDS
- (2) RACK EXTENSIONS (NOT FOR ALL APPLICATIONS) *Check Packing Slip*

STEP 1

Insert the Rack bushings and Sleeves into the Rack. Thread the Outer Tie Rod Ends to the Inner Tie Rods.

STEP 2

Skip this step if you do NOT have Rack Extensions. (Rack Extensions might already be installed). Remove the metal band clamp at the base of the Rubber Boot. Do NOT cut the boot. Slide the boot up out of the way. Unthread the Inner Tie Rod End and apply thread lock onto the rack threads. Thread the Rack Extension onto the Rack. Apply thread lock to the rack extension threads and reinstall the Inner Tie Rod End. Slide the rubber boot back down and secure it to its original position with heavy duty zip ties or band clamps.

STEP 3

Hold the Rack in place with the steering shaft pointing up towards the Drivers Side firewall. Put a 5/8" washer on either side of the rack bushing and a 5/8" bolt through the Rack Busing Sleeve. Thread the 5/8" bolt onto the Crossmember Bungs. Tighten until snug on the bushing sleeve. The Rack Bushing will "crush" a little and that is okay.



STEP 4

Start by holding the Spindles as close to straight as possible. Thread the Outer tie Rod End IN or OUT until it lines up with the Spindle Steering Arm. Do not tighten yet as this will need to come back off for alignment. Adjust both Driver's and Passenger's Outer Tie Rod Ends evenly.



NOTE: When your Scott's IFS installation is complete and you have installed your Engine, Trans, Steering components, etc., and the vehicle is ready to hit the road, you MUST bleed your Power Rack & Pinion properly. Failure to do so WILL result in Rack Failure and void any warranty of the Power Rack. Follow the instructions below to ensure proper bleeding of your Power Rack & Pinion:

How to Properly Bleed Your New Power Rack & Pinion

- 1) Fill your power steering reservoir with power steering fluid
- 2) Jack the front of the car high enough so the tires are off the ground
- 3) Turn the steering wheel back and forth from Lock to Lock at a slow steady pace about 25-50 times
- 4) Check fluid level and top off as needed
- 5) Start the engine and repeat steps 3 & 4 until all of the air is out of the system

TORQUE SPECS

A-Arm Bolts 50-55 ft/lbs
Ball Joint Castle Nuts 55-60 ft/lbs
Cross Tube Set Screw – Hand Tighten
Rod End Clevises 45-50 ft/lbs
Coilover Shock Bolts 50-55 ft/lbs
Rack Bushings 40-45 ft/lbs
Rack Extensions 40-45 ft/lbs

SWAY BAR INSTALLATION INSTRUCTIONS



STEP 1

Level the lower A-Arms so they are parallel with the ground and your crossmember. This is your ride height. This is the starting point of your suspension and will be the starting point of your sway bar. If this is not the case in your application, call our tech-line.

STEP 2

Bolt the heim ends to the sway bar bungs that are welded to your Lower A-Arms; this location will vary. You will have 4 tapered spacers/washers that go under the head of the bolt. Next, bolt the other end of the heim to the sway bar. In most applications the sway bar is located in front of the IFS crossmember, not behind. See the image below for orientation of the spacers and hardware.



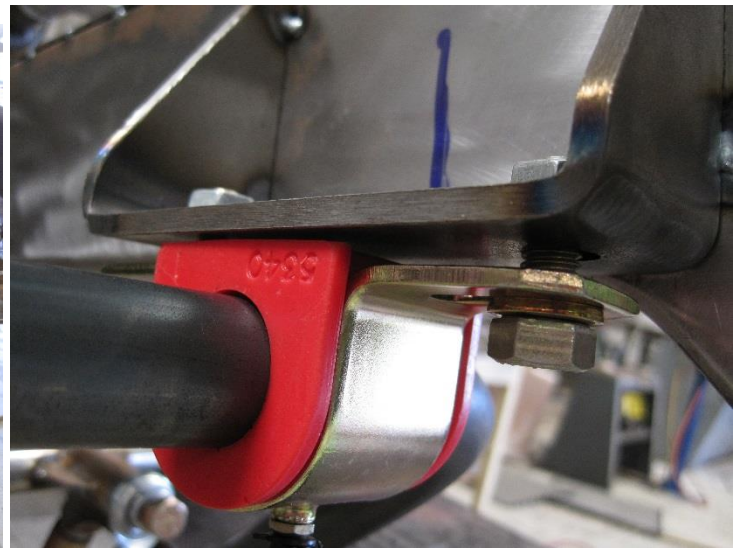
STEP 3

Mount the Sway Bar Bushing/Bracket to the Sway Bar. Hold the Sway Bar up to the underside of your frame rails. The Heim link should be straight up & down while the Sway Bar is level with the Lower A-Arm. Some applications will allow you to mount the Bushing/Bracket directly to the underside of the Frame Rail. Other applications will need to utilize the supplied Sway Bar Bracket.



STEP 4

You may need to make some boxing plates in order to weld the Sway Bar Bracket in place. Mark Centerline to line up with the center of the Sway Bar. Weld the Sway Bar Bracket and then you can bolt up your Sway Bar.



STEP 5

Adjust the heim to get the Sway Bar level with the Lower A-Arm at Ride Height.

SCOTT'S STANDARD 11" BRAKE KIT INSTALLATION

Now that your Scott's IFS kit is installed you can proceed to installing the standard 11" 1-piece brake kit.

Gather all of the brake components and double-check that they are all there. If you are missing a part, immediately call Scott's Tech Line at 805-485-0382 before proceeding. You do not want to get halfway through only to find you are missing an essential part.

Brake Parts List

- (2) 11" Rotors (5x4.5", 5x4.75", 5x5", 5x5.5", 6-lug bolt patterns)
- (2) GM or Wilwood Calipers
- (2) Inner bearing seals
- (2) Inner bearings (large)
- (2) Outer bearings (small)
- (2) Spindle Washers
- (2) Spindle Nuts
- (2) Cage Nuts
- (2) Cotter Pins
- (2) Dust Caps
- (2) Caliper Brackets
- (1) GM or Wilwood Brake Pad Set
- (1) GM Caliper Bracket Grade 8 Bolt kit
 - (2) 7/16" - 14 x 1-1/2"
 - (2) 7/16" - 14 x 2"
 - (4) 7/16" Lock Washers
- (1) Wilwood Bolt Kit*
- (1) Wilwood Caliper Bracket Grade 8 Bolt kit*
 - (2) 7/16" - 14 x 1"
 - (2) 7/16" - 14 x 2"
 - (4) 7/16" Lock Washers

BRAKE INSTALLATION INSTRUCTIONS

STEP 1

PREP

Clean spindle. Mount the correct bracket to the spindle using the bolts supplied.

STEP 2

CALIPER BRACKETS

Install the Caliper Brackets with provided Hardware. NOTE: Calipers brackets are labeled for Driver's or Passenger side.

STEP 3

ROTORS

Starting with the Driver's Side, grease the inner bearing (large) and place in the backside of the Rotor hub. Next, install the Hub Bearing Seal. NOTE: Place these seals in your freezer before installing them for a smoother installation. Install rotor onto the spindle. Grease Outer Bearing (small) and install onto spindle, sliding it into the Rotor Hub. Install the Spindle Washer and Spindle Nut. Torque to Hand Snug. Spin the Rotor Clockwise a few times to help seat the bearings on the spindle snout. Check the Spindle Nut and tighten if needed and repeat. Tighten with a Ratchet to snug then back off the spindle nut the tiniest amount.

STEP 4

CALIPERS

Install the calipers with pads using the supplied hardware (GM or Wilwood). NOTE: The caliper bracket fits between the caliper and the mounting ears. (Bleeder screws up.) Once installed, turn the rotor to be sure everything spins smoothly. Install your wheel and check for adequate wheel clearance on the caliper before you turn the wheel. If everything checks out move onto the Passenger Side and REPEAT!

STEP 5

BRAKE LINES

Install the DOT approved Steel Braided Brake Flex Lines (if purchased) to the calipers and then attach the other end to your hard lines going to the master cylinder. Bleed your brakes properly, triple checking for any leaks at the fittings and for any air in the system.