



Crossover Hy-Steer Instructions

Important notices:

These instructions are intended only as a general guide for installing All-Pro products. For some items, specialized mechanical skills, metal fabrication and/or welding skills may be needed for proper installation. If you have any doubts or questions about installing these or other parts please call us at the shop 951-658-7077 or contact a competent mechanic, fabricator, welder or other appropriate professional.

Aftermarket accessories are intended to modify and/or prepare a vehicle for uses that exceed conditions anticipated by the vehicle manufacturer. These uses may include high performance demands and negotiation of rough terrain. These conditions have extreme variance and cannot be controlled by the vehicle manufacturer or aftermarket accessory manufacturer. Therefore, the safe control of your vehicle is entirely your responsibility. Do not purchase parts from All-Pro Off-Road unless you are willing to accept this responsibility. Do not install any All-Pro part that you do not feel competent at installing without causing present or future injury to yourself or others; consult a professional installer.

All parts sold by All-Pro Off-Road are for off road racing use only and are not intended for use on the street. Modification of your vehicle to enhance performance with the parts sold by All-Pro Off-Road can result in dangerous situations that may result in bodily harm. The buyer hereby assumes all risks associated with any such modifications. All-Pro Off-Road will not accept responsibility for personal injury or property damage arising from the failure of any parts manufactured or sold by All-Pro Off-Road.

In an effort to provide both durability and safety, All-Pro Off-Road recommends you carefully read the entire installation procedure before beginning, then rigidly follow these instructions during installation. Also, it is extremely important that you abide by proper safety procedures including the use of jack stands, setting the parking brake, wearing eye protection, etc.

IFS Box Installation Notes:

- IFS Box Required: All-Pro's Hy-Steer™ kit can be used on any Toyota Pickup or 4Runner from 1979-1995. Hy-Steer™ will also fit spring over FJ-40 and FJ-60's. When crossover steering is installed on 1979-1985 trucks the original push pull steering box will need to be replaced with an IFS style steering box. IFS steering box swings left and right allowing the crossover steering to function. Used IFS steering boxes can be purchased from All-Pro or from a junkyard. Any IFS steering box used on 4WD Toyota Pickup's and 4Runners from 1986 - 1995 can be used. There is an early and late model of these boxes, however both will work and both have identical mounting hardware these two styles are interchangeable. When you purchase crossover steering for use with a 79-85 Pickup or 4Runner you will need to purchase an IFS steering box-mounting kit.



- IFS Box Mounting: If you have a 1986 - 1995 truck skip this section on IFS box mounting as you already have the proper steering box on your truck.
- To mount the IFS steering box onto the frame of a 1979 - 1985 Truck or 4Runner it is first necessary to remove the original steering box, torque arm and bracket. The torque arm is not used with crossover steering and can be discarded. It will be

AP-305514

necessary to use a torch and grinder to remove the original steering box bracket. Once the bracket has been removed from the frame you can begin the installation of the IFS box mount.

- The 1979-1983 frames are one inch shorter at the firewall than are 1984 and 1985 trucks. This difference does not affect the placement of the steering box. There are three bolts that hold the IFS box onto the frame, two bolts go through the frame and the third goes through a bracket welded above the frame. Proper placement of the IFS box is important - too high and the pitman arm will hit the frame, too low and the leaf spring will hit the pitman arm, too far back and the tie rod will hit the drag link.
- Install the pitman arm onto the steering box and snug down the sector shaft nut. Place the steering box on the frame rail and move it forward until it touches the body mount. Rotate the steering box back so that the steering shaft going to the steering wheel is nearly straight. Check the pitman arm to insure that there is no contact with the frame as it turns left and right.

- Place the upper steering box mount onto the frame. Using the steering box as a template, mark the two lower mount holes. Drill a hole through the frame and insert the provided frame sleeve. The sleeves should be welded in place so that they are flush with the out side of the frame. When completed all three box mounting points should be from a flat plane for the box to mount to. Only a small weld will be possible on the outside of the sleeve. The remainders of the two sleeves stick out on the inside of the frame. Here you can get a good weld, but don't turn the welder up too high as the back side of the frame is a little thinner than the rest of it. Next take the bracket that welds on top of the frame put in position for the top mount.



- Some grinding may be necessary to this bracket to allow the bolt to slide through. With the box in place on the other two bolts, position and modify the upper bracket as needed until all three box mount bolts can be easily installed. Once in place the upper bracket can be welded up. Bolt the IFS box onto the frame using the 3 provided 1/2" bolts and locking nuts. Connect the trucks steering shaft to the new box. To extend the steering shaft you will need to drill out the 2 plastic plugs on the shaft, and then it will extend to meet the box. Attach the factory power steering lines from the truck to the new IFS steering box.
- All-Pro recommends installing a plate to reinforce the inside on the frame rail. This plate should extend forward and behind the two steering box mount holes that go through the frame. All Pro has reinforcement plates available, sold separately.

Installing Hy-Steer™ Crossover Steering:

1. Remove both left and right steering arms from on top of the steering knuckles. As an option you can also remove the 4 studs from each of the knuckles. Each of these studs should be cleaned and inspected. Reuse studs only if in good condition. New studs can be purchased from your local Toyota Dealer. Reinstall the studs using Lock tight to prevent them from coming loose.
2. Reinstall the new steering arms using the same shims as the original arms. The arm with two holes goes on the right side and the arm with one hole goes on the left (driver) side. With the new arms attached there should be some resistance in the knuckle and should not have any play in it. Torque knuckle studs to 80 foot/lbs. If there is noticeable play the knuckle bearing may need to be replaced and/or re-shimmed. Any play in the knuckle will result in steering vibrations when driven.

3. Take the tie rod & drag link and attach the 2 tie rod ends and jam nuts to them. Thread the ends into the tube until they bottom out, and then back it out one-two full turns. Each rod has one left handed thread and one right-handed thread. When installed on the truck the right hand threaded ends of each link should be on the right side of the truck. Left threaded ends should be used on the left side of the truck. The longer rod is the tie rod and the shorter rod is the drag link. Take the Tie rod and install it in the one hole of the left steering arm. Then take the other end and install it in the rear hole of the arm on the right side of the truck. Install the right side of the drag link in the forward hole of the right side steering arm.
4. If the stock pitman arm is still attached use a pitman arm puller to remove it. Attach the left side of the drag link to the pitman arm. Now set the truck down on the ground and set the wheels so they point straight ahead. Turn the wheel all the way to the right until the steering box stops, and then turn it back to the left 2 1/4 turns. Both the box and tires are now "centered". Carefully lift the pitman arm up and slide it onto the sector shaft of the steering box and install the sector shaft nut. Torque Sector shaft nut to 95 foot/lbs. Tighten the 4 castle nuts on the links and install the cotter pins. You can create you own mount to reuse your existing steering stabilizer or purchase a new steering stabilizer kit from All Pro. This kit contains a new stabilizer shock and mounting hardware.
5. Your crossover steering is now complete. Recheck all hardware after 100 miles of driving and again at each oil change.