



MOUNTAIN OFF ROAD ENTERPRISES LLC.
P O BOX 690, DELTA, COLORADO 81416
877-533-7229 888-698-5337 fax
E-mail: info@mountainoffroad.com
www.mountainoffroad.com

INSTALLATION INSTRUCTIONS FOR M.O.R.E.™ SHACKLE REVERSAL SYSTEM (S.R.S.™)

PART # 7686-6

THIS SYSTEM FITS 1976-1986 Jeep® CJ-5, CJ-7, CJ-8 VEHICLES.

Please read all instructions carefully (including terms-policies) before work is started on your vehicle. Familiarize your self with all components in this system. These instructions will refer to all items by letter not description. In addition to basic hand tools, the following specialty tools are needed to perform this installation: Power drill with 1/2" chuck, angle head drill with 1/4" chuck (electric or air), Oxy/Acetylene cutting torch, grinder, 3/4" diameter drill bit, 1/2" diameter drill bit, 21/64 drill bit, 3/8-24 tap, floor jack, jack stands (4), torque wrench, 15/16" wrench & socket.

NOTES: SRS may not be compatible on Jeeps with Nerf Bars or any type of side bars that attach to the frame at the point in which the shackles will be hung from.

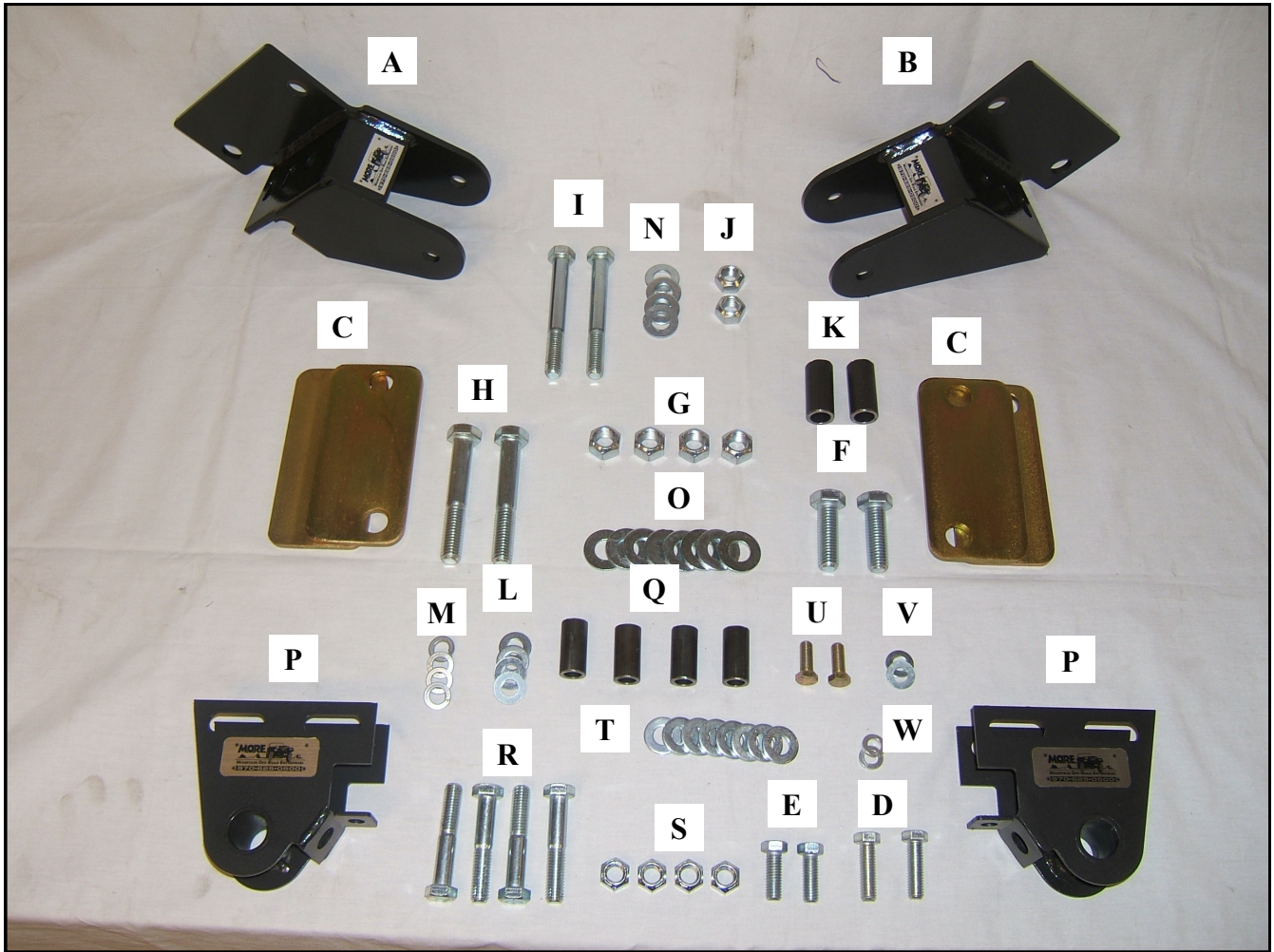
Some aftermarket headers may cause interference with the SRS.

S.R.S.™ # 7686-6 contains the following items:

<u>ITEM:</u>	<u>DESCRIPTION:</u>	<u>SIZE:</u>	<u>QTY:</u>	<u>PART #</u>
A	BRACKET-PIVOT DS		1	7686-DS
B	BRACKET-PIVOT PS		1	7686-PS
C	FRAME SPACER PLATE	3"X6-1/4"2 HOLES	4	7686-FS
D	BOLT-BRACKET DS	7/16-14X1-1/2	2	15159
E	BOLT-BRACKET PS	7/16-14X1-1/4	2	15157
F	BOLT-BRACKET	5/8-11X2	2	15311
G	NUT-BRACKET BOLT	5/8-11	4	37036
H	BOLT-BRACKET	5/8-11X4	2	13319
I	BOLT-SPRING	9/16-12X4-1/2	2	13271
J	NUT-SPRING BOLT	9/16-12	2	37270
K	TUBE-SPACER FRAME	7/8X1-7/8X.120	2	S107686
L	WASHER-FLAT	7/16 SAE	4	33084
M	WASHER-LOCK	7/16 SPLIT	4	33624
N	WASHER-FLAT	9/16 SAE	4	33088
O	WASHER-FLAT	5/8 SAE	8	33090
P	BRACKET-BOLT ON SHACKLE HANGER		2	SR106
Q	SLEEVE-BRACKET	3/4X1-9/16X.120	4	S101599
R	BOLT-BRACKET	1/2-13X2-3/4	4	13214
S	NUT-MISC.	1/2-13	4	13268
T	WASHER-FLAT	1/2 SAE	8	33086
U	BOLT-BRACKET	3/8-24x1	2	18834
V	WASHER-FLAT	3/8 SAE	2	33028
W	WASHER-LOCK	3/8 SPLIT	2	33622
-	INSTRUCTION SHEET		1	7686-6IS



7686- 6 S.R.S.™ Contents



Notes:

7686-6 S.R.S.™ - GENERAL INFORMATION:

This system will fit Jeep® CJ vehicles with any engine. This system will lift the front of the Jeep® (1"-1.5") over where it sits now. Before starting this installation, check the frame to make sure it is in good condition, is straight and has no excessive rust. Only install it on vehicles in good sound condition. This system will work with stock and most aftermarket bumpers, with or without a winch. No welding is required for installation. There will be some cutting, drilling and grinding, however.

FITTING CONCERNS: Interference with nerf bars & headers may become an issue. Please check on these issues before continuing.

LEAF SPRINGS: This system has been designed to work with 2.5" YJ stock and aftermarket leaf springs. It has been tested with several different manufactures springs up to 4.5" lift and works fine. It will work with springs that have been placed on top of the CJ's axle housings (spring over axle).

PITMAN ARM: You may need to use a stock pitman arm. If a "dropped" arm is used there is a possibility that the tie rod could contact the drag link upon suspension compression. This will depend on the amount of lift, be sure and check for any interference!

DRIVE SHAFT: The front drive shaft will need to be modified. A longer travel slip-yoke needs to be installed. Due to the suspension movement the stock slip-yoke will not have enough travel and the fact that this system will push the axle forward approx. one inch, the stock shaft length will not be enough. M.O.R.E.™ recommends calling Tom Wood's Custom Drive Shafts at: 877-497-4238.

BRAKE HOSES: The stock brake hoses will work if you are using stock leaf springs, under the axle. If you have any lift in your springs, or a spring over axle conversion, the stock hoses will have to be replaced with longer ones. M.O.R.E.™ has Extended Stainless Braided Brake Lines available if needed.

TERMS-POLICIES:

DAMAGE CLAIMS: All orders are carefully packed, however, mishandling by the carrier can result in damage. The carrier has the responsibility for the shipment from the time it leaves our warehouse until it is delivered to you. All claims for lost or damaged goods should be reported to the carrier, not to **M.O.R.E.™ LLC**.

RETURNS: No returns will be accepted without prior permission from **M.O.R.E.™ LLC**. After you receive a Return Goods Authorization (RGA) number, merchandise must be returned prepaid and insured. A claim must be made with in 30 days from receipt of merchandise. The original invoice or a copy with the RGA number written on must accompany all returns. A 20% restocking fee will be charged on all parts returned for credit or refund unless merchandise is proven to be defective or was shipped wrong by **M.O.R.E.™ LLC**. No merchandise will be issued credit or refund if it has been installed, modified, used in any way or is in unsalable condition.

WARRANTY: All merchandise is warranted to be free from defects in materials and workmanship prior to installation. Any alteration or improper use will void this warranty. Because all parts we sell are intended for use in heavy-duty applications it is not possible to warrantee or guarantee the performance of any items. **M.O.R.E.™ LLC** products and the products manufactured by others, which we sell may be subject to an infinite variety of conditions due to the manner in which they are used, serviced and/or installed. Purchasers and users of such products rely upon their own judgment as to the suitable use selection, service and installation of such products.

PRODUCT DISCLAIMER: Modification of your vehicle to enhance performance with parts sold by **M.O.R.E.™ LLC** may create a dangerous condition which could cause serious bodily injury, and the buyer hereby expressly assumes all risks associated with any such modifications. All parts sold by **M.O.R.E.™ LLC** and for racing or off road use only. Mountain Off Road Enterprises LLC. will not accept responsibility for personal injury or property damage arising from the failure of any parts manufactured or sold by **M.O.R.E.™ LLC**.

Specifications are subject to change without notice.

Jeep®, AMC®, CJ®, YJ®, Wrangler®, are registered trademarks of the Chrysler Corporation.

M.O.R.E.™, BombProof™, S.R.S.™, SlipLoc™, DoubleJointed™, RockProof™, are trademarks used by Mountain Off Road Enterprises, LLC. The M.O.R.E.™ logo is copyright©, 1999-2008.

STEP 1: If your Jeep® is equipped with a winch, remove it's mounting plate from the side plates. Remove the side plates from the frame. Remove the front bumper. Loosen but do not remove the two top bolts in the front frame crossmember that attach the steering box mounts to the crossmember. See figure 1 & 2.

STEP 2: Raise and support the Jeep® with jack stands under each side of the frame behind the front springs. With the front suspension un-loaded (wheels off the ground about 3") remove the tires/wheels. Remove the front shocks. Remove the front drive shaft. Place two more jack stands under the axle housing outside the springs. Remove the front leaf springs. Remove the stock front shackle brackets from under the frame just behind the front bumper. See figure 3.

STEP 3: Remove the rear spring brackets from the frame. The best way is to heat the rivet head with a torch and use a air hammer and chisel bit to knock the head off. If a torch is not available, a grinder can be used. Grind the one weld on the outside of the frame and use a hammer to knock the bracket off the frame. It may be necessary to heat the remaining rivets in the brackets to red hot in order to get the bracket to break loose. Clean-up the excess slag with a grinder (Underneath and on the side of the frame). Be careful, do not scar the frame rail. See figures 4a & b.

STEP 4: At the front of the frame, insert item "K" into the hole In the boxed frame. See figure 5. This keeps the frame rails from collapsing when tightening the bolts. Bolt item "A" on the drivers side frame using items "D", "M" & "L". Thread the bolts into the same holes that the stock shackle bracket was removed from. Do not tighten at this time. Bolt item "B" to the passenger side frame rail using items "E", "M" & "L". Do not tighten at this time. See figure 6.

STEP 5: If your Jeep® is equipped with a winch, take it's side mount plates and insert them between the frame and the new spring brackets (items A&B). Insert items "C" (one each side) between the winch side plate and brackets (items A&B). If a winch is not being installed, use two of item "C" on each side between the brackets and frame. See figure 7. If you have our Frame Plates and a winch, none of item "C" are used. Install item "H" through the rear holes. Install item "F" in the front holes. Install items "G" on items "F" & "H". Do not tighten at this time. Tighten Items "D" & "E" installed in step 1 to 50 lb. Ft. torque. Tighten the two top bolts (steering box mounts) you loosened in step 1 to 50 lb. Ft. torque. Install the front bumper and tighten its hardware using hand wrenches. Install the winch mount plate to the side plates and torque the nuts to 50 lb. Ft. torque. Now, torque items "F" & "H" to 110 lb. Ft. torque. See figure 8.

STEP 6: Install both leaf springs (large eye) end into the **M.O.R.E.**™ items "A" & "B" brackets (you must turn the leaf springs around). Use items "I" , "J" & "N" provided. Do not tighten at this time. See figure 9. On the drivers side frame rail behind the motor mount is the brake proportioning valve. The brake hard steel lines may be in the way to install item "P". Gently pull the lines in toward the engine to gain clearance. Do not over do it! You are just trying to gain a bit of clearance

STEP 7: Find items "P" and install bushings and sleeves (YJ 1-1/4") . SEE FIGURE 10. With a mallet, tap items "P" on to the frame where you just removed the stock spring pivot hangers. The tab on the under side (for the locking bolt item "U") faces to the back. On both sides of the frame, have a friend hold the dumb end of a tape measure up to the center of item "I" that goes through items "A & B" M.O.R.E.™ pivot brackets. Now measure back approximately **44-7/8"** inches, until the center of the bushing and the **44-7/8"** inch measurement on the tape line up. Tap item "P" forward or back until this measurement is achieved. Make sure that the locking tab is contacting the bottom of the frame and then clamp the bracket "P" tight to the frame and mark the holes onto the frame (both inside and outside). **Do not drill at this time!**

STEP 8: Depending on your springs you may be able to now set the shackle angle at 60 degrees with the springs hanging (No Weight) and everything will be fine, See Figure 11 . We suggest that you do this as a starting point but once the hanger has been clamped to the frame at the 60 degree angle you then apply weight to the springs. The shackle angle should be straight up and down 90 degrees with the weight on the springs, see figure 12 , If it is not 90 degrees than move the bracket “P” forward or back until the correct angle is achieved.

STEP 9: Find the exact center of the slotted holes, and punch a mark. SEE FIGURE 13 & 14. This must be done as accurately as possible, in the inside and outside of the frame rails, drivers and passenger side. Center punch the lower “lock mounting bolt” hole at this time as well. SEE FIGURE 15. Remove items “P” from the frame. With a 1/8” drill bit in a angle head drill, bore a pilot hole through the center punched marks, all locations. SEE FIGURES 16 . Now, with a 1/2” bit in a power drill, enlarge the pilot holes **ON THE SIDES OF THE FRAME ONLY** to 1/2”. Do not drill the underside lock mounting bolt holes at this time!!! Drill from the outside toward the inside using the inside pilot hole to keep the bit lined up. Enlarge the **OUTSIDE HOLES ONLY** to 3/4”. SEE FIGURE 17. Chamfer any burrs that maybe present.

STEP 10: Now, enlarge the underside “lock mounting bolt” holes to 21/64”. Tap these drilled holes with a 3/8” x 24 (fine thread) tap. Use cutting oil and tap slowly and carefully. Make sure the tap is straight and true when going up through the hole. SEE FIGURE 18.

STEP 11: Insert items “Q” into the 3/4” holes you just drilled. SEE FIGURE 19. Be care full not to drop them into the boxed frame!

STEP 12: Re-install items “P” on the frame over items “Q”. Grab all four items “R” and install one item “T” over each, and install “R” through item “P” and “Q”. Then in the inside of the frame install another item “T” over the threads of item “R” and one item “S” on each. Re-check the **angle**, and if correct, tighten items “R” & “S” to 55 Lb. Ft. torque SEE FIGURE 20.

STEP 13: Install items “W & V” over items “U” and thread items into the tapped holes. Tighten them to 10 Lb. Ft. torque. Install your shackles to your springs and to items “P”. SEE FIGURE 21. Use thread locking compound on the threads or, new locking nuts on your bolts. Do not tighten at this time. Install the U-bolts and plates and torque them to factory specs. Install the wheels and tighten the lug nuts to factory specs. Remove the jack stands. Jump up and down several times on the front bumper to “seat” the springs. Tighten items “I” & “J” to 30 lb. ft. torque. Tighten your stock shackle bolts to 10 Lb. Ft. torque.

STEP 14: Test drive the Jeep® . Chances are the steering wheel may not be centered. You can adjust the drag link to center it. Installing this shackle reversal system will not affect the alignment (camber or toe-in), so having the Jeep® aligned is not necessary. The caster will increase slightly, however it is a non-tire wearing angle. Go back and check all of your work and make sure everything is done properly. Check the brake lines and make sure that they are not being stretched to far.

STEP 15: Your drive shaft will need to have a long travel slip yoke installed to work properly with this system. Call Tom Wood’s Custom Drive Shafts at: 877-497-4238. **DO NOT TRY TO SHORT CUT THIS STEP OR DAMAGE COULD OCCUR TO YOUR DRIVE TRAIN!!!**

You are finished! Be sure to re-check all hardware for tightness after 100 miles. If you have any questions, please call. Thank you for purchasing this product from M.O.R.E.™ Keep on Jeepin’.

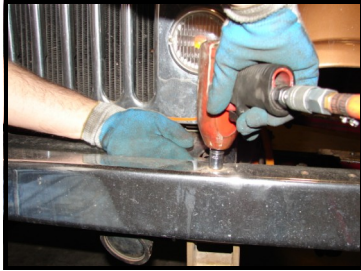


FIGURE 1



FIGURE 2

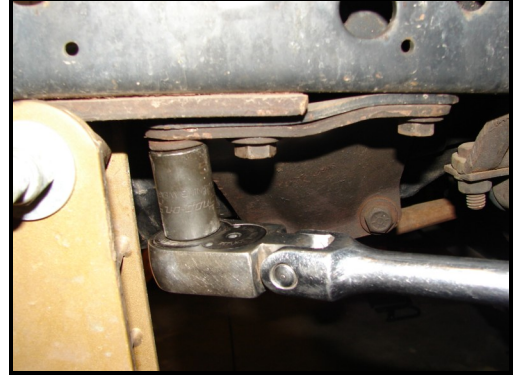


FIGURE 3



FIGURE 4a



FIGURE 4b

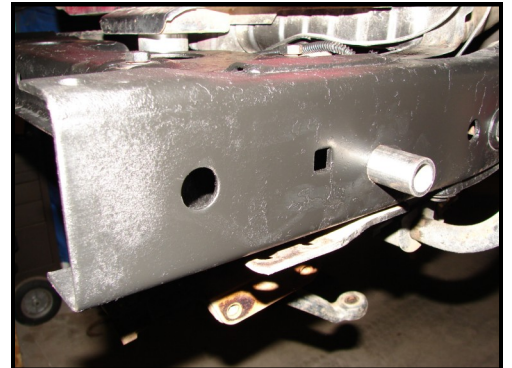


FIGURE 5



FIGURE 7



FIGURE 6



FIGURE 8





Figure 9

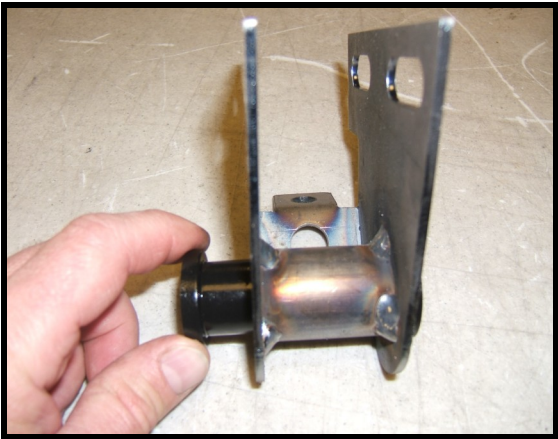


Figure 10



Figure 11



Figure 12



Figure 13



Figure 14

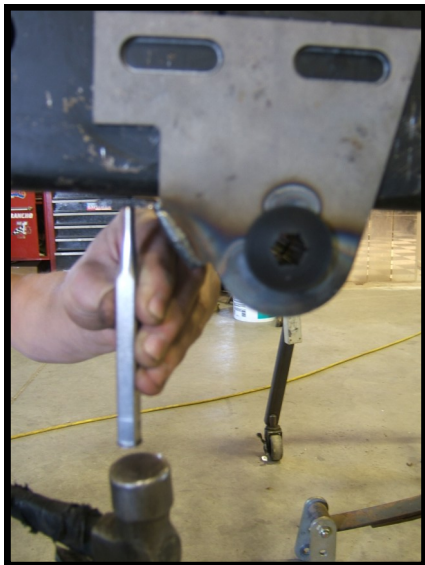


Figure 15



Figure 16



Figure 17



Figure 18



Figure 19

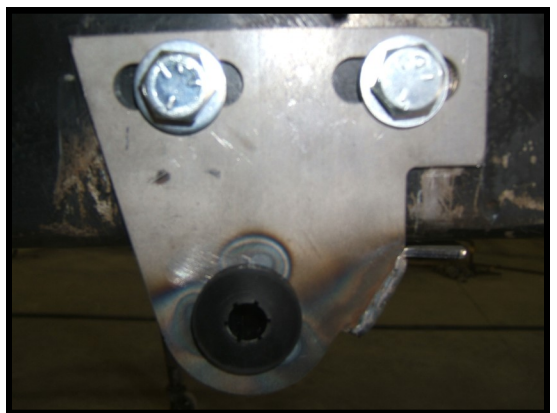


Figure 20



Figure 21