

LONGLEAF SPRING KITS

available from

HOLBROOK SPECIALTIES

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Thank you for your interest and or purchase of the “Long Leaf Spring Kit” The springs should give you a moderate 3” lift, a softer more for-giving ride and at the same time add to the overall travel capabilities and articulation of the suspension. We think you will be more than pleased as we were after the installation onto our own personal CJs. However, as any “Real Jeoper” knows, **NO TWO JEEPS ARE ALIKE!** With this in mind, please read the following carefully before beginning the installation paying close attention to the **cautions** listed on the last page!

The measurements given for the relocation of the solid mount spring hangers, toward the center of the vehicles frame, is a close approximation! The body of your Jeep may be mounted forward or rearward on the frame and the factory spring hangers might be located in slightly different positions also. It seems that the factory’s Jeep assembly was far from “Rocket Science”! During these initial steps we suggest that you do not torque down any bolts, just make them snug, as repositioning might be required.

INSTALLATION INSTRUCTIONS

1976 thru 1986 CJ-7 CJ-8

Do **ONE** end at a time and **ONE** spring at a time.

Install the front springs first

Welding is required to properly install this kit. After you are satisfied with the position of the new solid mount frame hangers and have bolted them to the frame, we recommend that you have a **certified welder**, weld them to the frame.

STEP 1 Disconnect the shocks and raise the Jeep high enough so that when the suspension hangs, the tires will clear the ground, then place stands under the bumpers and lower the Jeep onto the stands. Leave your floor jack under the axle at this time.

STEP 2 Remove tires, u-bolts and u-bolt plates and jack up the axle housing away from the old spring and remove one spring from the vehicle.

STEP 3 Measure from the center of the shackle hanger bolt the distance indicated in the drawing and mark the frame as shown. This is only a close approximation. The final position must be determined by **you** the installer! Bolt the spring to the shackle & the new hanger to the other end of the spring.

NOTE: The *front* hanger tabs go to the *inside* of the frame and the *rear*

hanger tabs go to the *outside* of the frame! Swing the spring hanger up into contact with the frame. Slide the hanger along the frame until it lines up with your mark. The shackle should have an angle like the white one in the drawing. If not, slide the hanger forward or rearward until it does! Mark the position of the hanger on the frame. **NOTE:** Some trimming of the crossmember might be required and the brake line at the left front hanger will need to be pulled away from the frame.

CAUTION!! Make sure there are no wires, brake lines, fuel lines or fuel leaks in the area before trimming crossmember or proceeding with step 4.

STEP 4 Spot-weld the hangers to the frame. This will temporarily hold the hangers to the frame. Repositioning **might** be necessary after the full weight test.

STEP 5 Bolt the axle assembly to the leaf springs using your u-bolt plates and new u-bolts. Do not hook up the shocks at this time. (U-bolts are **not** supplied with the kit due to the vast number of transplanted axle assemblies and the different tube diameters of those assemblies.)

Repeat steps 2, 3, 4 & 5 on the other side of the Jeep.

Installation of the **rear** springs

Repeat steps 2, 3, 4 & 5 Two steel tapered wedges are supplied for the **rear only** and should be placed between the spring and axle perches with the **thick** end forward. These wedges bring the rear driveline into a close proximity of parallel u-joint angle. This angle may need to be adjusted by lowering the crossmember away from the frame or increasing the degree of wedge. Only “ballpark” adjustments should be made. The final settings should be done after the springs have “taken a set” following your first off road excursion. Due to the vast number of combinations of engine, transmission, transfercase and axles used in Jeeps the driveshaft lengths and angle of slope will vary from rig to rig and therefore will require some **thought of your own** as to how best to align the rear drive-shaft. Remember what we said, **NO TWO JEEPS ARE ALIKE!** Remember that u-joints should run parallel with each other for maximum strength and longevity as well as minimizing vibrations!

Repeat steps 2, 3, 4 & 5 on the other side of the Jeep. Rotate the rear drive shaft and check to see that the yokes do not come into contact with the driveshaft.

STEP 6 Install tires and lower the Jeep to the ground. The shackles should be leaning slightly toward the new spring. This angle will change to approximately vertical when the springs have “taken a set” after your first offroad excursion. The rear tire should be forward in the fender opening not

centered. This will minimize tire rubbing as the spring deflects and the tire moves up **and** rearward in the fender opening.

STEP 7 If you are satisfied with the position of the shackles, cut a hole or “window” on the inside of the frame to allow access for a wrench or socket. See **CAUTION** on last page. This is required to allow you to tighten the hanger bolts provided which will temporarily hold the new solid mount hangers to the frame prior to final welding. You can drill one hole in the frame and install one bolt to each hanger. You will have to move the springs out of the way to drill and install the second bolt.

STEP 8 Center the steering wheel with a drag link adjustment and re-set the toe-in if needed.

STEP 9 Have someone turn the steering all the way to the right and then to the left while you watch for tie rod clearance.

STEP 10 Install shocks that will allow full and proper travel of the new suspension system. With the proper length shocks installed, tighten **all** bolts and nuts involved in the installation. A common mistake is to over tighten the shackle bolts which forces the plates to rub on the frame and springs. This will inhibit the shackles ability to move freely as the springs flex. Self-locking nuts should be used on the shackle bolts to cure this problem. Factory shackles have a shoulder to prevent over tightening. Be sure to **tighten the u-bolts** to the **proper torque!** See torque settings on last page.

STEP 11 Have a certified welder, weld **all** the new hangers to the frame!
NOTE: The inner part of the frame is manufactured with a thinner gauge metal than the outer so care must be taken when welding to the inner part of the frame.

NOTE: Re-check **all** the bolts and nuts after your first few miles of use, **and periodically** to be sure that nothing is coming loose.

ENJOY THE RIDE!!

SEE CAUTIONS LISTED ON NEXT PAGE!!

CAUTION!! These springs are not designed for use with a front shackle reversal system (solid spring mount at the front bumper) as used on all M38-A1 Jeeps and they are not designed for a "spring over" system.

CAUTION!! The installation of **any lift kit** will raise the center of gravity of the vehicle it is installed upon. This fact, coupled with the short wheelbase and narrow track of most CJs **might increase** the possibility of a rollover under certain circumstances. The softer springs allow for a very forgiving ride and can allow you to drive at an increased speed over rough terrain, **increasing your risk** of accident. **DRIVE RESPONSIBLY!**

CAUTION!! Do **not** attempt to do this installation on any sloping or uneven surface! Failure to heed this warning can result in an unsatisfactory installation, **injury or death!**

CAUTION!! Use **extreme** care when jacking up your vehicle and always use approved axle stands positioned properly to support the weight of your Jeep. Failure to heed this warning can result in **injury or death!**

CAUTION!! Make sure there are **no** fuel leaks, fuel lines, brake lines or electrical wires in the vicinity of the frame **before** drilling or welding! Failure to heed this warning can result in **injury or death!**

CAUTION!! Make sure your brake hoses will allow for the full travel of the new suspension. Repositioning of the frame end of the hoses **may** provide adequate travel otherwise new, longer hoses **will** be required!

CAUTION!! New u-bolts **will** stretch after their first use. Be sure to re-torque them to proper specifications for the diameter of the bolt stock being used.

7/16" x 20 grade 5 u-bolt stock torque = 44 - 58 ft. lbs

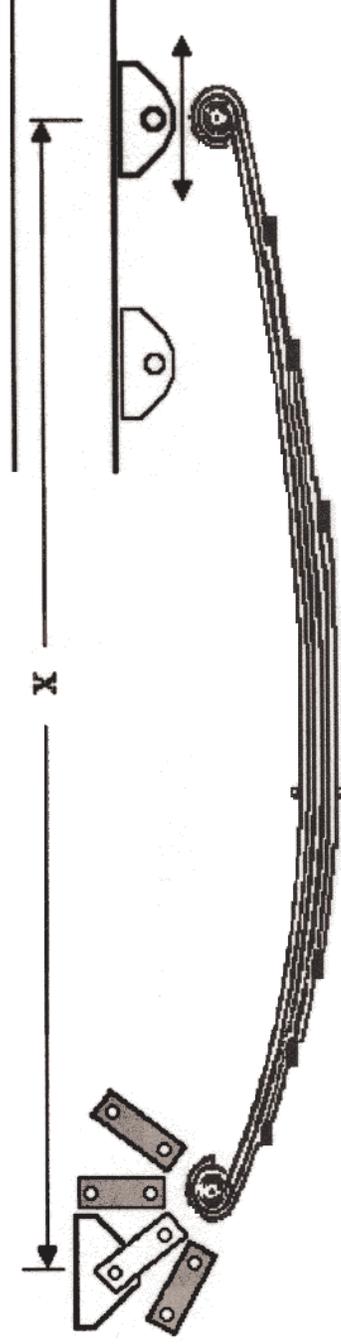
1/2" x 20 grade 5 u-bolt stock torque = 66 - 84 ft. lbs

CAUTION!! Leaf spring assemblies are designed to work as a unit. Failure to keep the u-bolts **tight at all times** will result in spring center bolt distortion and/or failure which will stress each leaf individually! This will destroy the spring and also its ability to maintain its arch!

No components of this kit are manufactured by Holbrook Specialties and the packaging of these components into a kit is not intended, in any way, to infringe upon the patents and/or rights of the manufacturers of those individual components.

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X = 52 1/2" on front springs for '76 thru '86 CJ5, CJ7 & CJ8
X = 53 1/2" on rear springs for '76 thru '86 CJ5, CJ7 & CJ8

Measure from the center of the shackle hanger bolt the distance indicated for your Jeep, and mark the frame. This is only a close approximation. The final position must be determined by you, the installer. Bolt the spring to the shackle and the new hanger to the other end of the spring. Swing the spring hanger up into contact with the frame. Slide the hanger rearward until it lines up with your mark on the frame. The shackle should have an angle like the white one in the drawing. If not, slide the hanger forward or rearward until it does!

NOTE: Measurements are close approximations as NO TWO JEEPS ARE ALIKE!