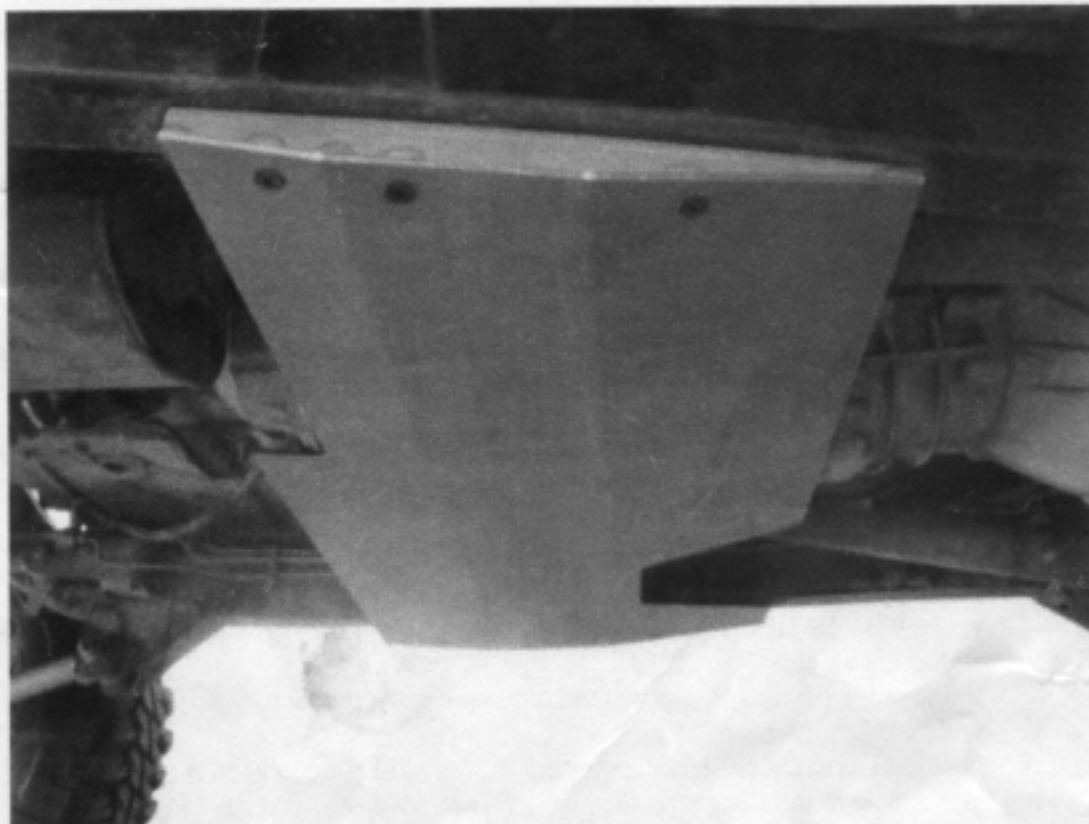


High Clearance Transfer Case Skid Plate Installation Instructions



33-1500

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THINGS YOU'LL NEED

The installation of a 1" Body Lift is highly recommended prior to the start of the installation of the skid plate. Additional items such as a Slip Yoke Eliminator Kit, CV Drive shaft, and Upper Adjustable Control arms may be necessary depending on your current setup. This skid plate will effectively add 2" of lift to your drivetrain. Below is a list of tools that you will need to complete the install.

- Socket Wrench
- 19mm or 3/4" Socket
- 13mm or 1/2" Socket
- 5.5mm or 7/32" allen wrench
- Hydraulic Jack
- Jack Stands

DISCLAIMER

This product is intended for use off road only. Its use can lead to a potentially dangerous situation. By installing this product you are assuming full responsibility and liability associated with its use, and any event caused by its use.

INSTALLATION

1. Remove the six countersunk bolts that hold the two pieces of the skid plate together.
2. Support your transmission with the hydraulic jack just in front of the factory skid plate. Make sure to find a secure place on the transmission to support it. If your hydraulic jack is not tall enough, use a 2x4 or other suitable extension for additional reach.
3. Remove the (4) nuts that fasten the transfer case to the factory skid plate. These will be a 1/2" or 13mm.
4. Position the two jack stands under the factory skid plate to keep it from falling all the way to the floor after the last bolt is removed. If you have (2) hydraulic jacks, then this would make a good alternative. Position the spare jack centered under the skid plate. I have used the two jack stands in its place mainly because most people don't have two hydraulic jacks.
5. Remove the six bolts that hold the factory skid plate up. I recommend removing all but the center two, then loosening these so you can use minimal effort to remove the last bolt. This gives you the ability to control the skid plate better as it comes down from the jeep. If you don't mind the noise or you don't like your neighbors, feel free to just let the skid fall.
6. Now that the factory skid plate is off, you're going to install the frame for the 33 Engineering skid plate. I recommend first bolting it to the transfer case loosely with a few nuts. This minimizes the time that you have to hold it up while fiddling with alignment. **The jeep's frame is narrower at the front, so note that the orientation of the skid plate frame will be with the flat side up, and the narrow part to the front.**

7. With the skid plate held up by the transfer case nuts, and the transmission held up with the jack, you can extend the jack to raise the frame into place.
8. Once you have the frame lined up, use the 6 supplied $\frac{1}{2}$ " bolts to bolt the skid plate frame to the jeep frame. This should be the last time that you have to install these bolts for a long time. I recommend red locktite on these bolts to make sure that they don't go anywhere. You can torque these bolts to 50 foot-pounds.
9. Now that the skid plate frame is in place, put some locktite on the threads above the nuts going to the transfer case and torque them down to 30 foot-pounds. You can now remove the jack and relax a little; the hard part is now done. All that's left to do is install the skid plate. This is the beauty of the two piece setup. If at any time you would like the skid plate to be out of your way, it will only take you a few minutes to drop the whole skid plate and have complete access to your transfer case, and anything else normally hidden by the skid.
10. Install the skid plate. This is as simple as orienting the skid correctly and pushing it up flush to the frame. I recommend starting a countersunk bolt on one side and then one on the other side. This enables you to use both hands to install the rest of the bolts. After installing all six countersunk bolts you're done!

Other Modification and Notes

NOTE #1: A Slip Yoke Eliminator kit is required to run this setup. The 33 Engineering skid plate raises your transfer case by about 2", so even if you have an SYE already installed you may have to adjust your pinion angle again to compensate for the change. Remember that your CV drive shaft requires that the pinion angle be approximately parallel to the drive shaft, but about 2 to 3 degrees lower.

NOTE #2: There have been a few customers that have required exhaust modifications once the skid plate is installed. On our company prototype vehicle, a 2000 TJ, no exhaust modifications were necessary, even with our Kilby Enterprises gas tank skid plate, but every jeep is slightly different, and some adjustments may be necessary.

NOTE #3: A body lift is required for the installation of this skid plate. It has been designed to fit all of the possible combinations of years and transmissions. Because of this, a full 1" body lift may not be required for all installations. If you are not sure that you like the full inch, then feel free to experiment with different combinations. On our 2000 TJ with a manual transmission, we were able to successfully run a $\frac{1}{2}$ " body lift with no complications.

NOTE #4: Several customers have commented on how easy the skid plate is to remove and reinstall, and because of this feature, they opt to drive around town with the skid plate off, and install it only when they go out on a trip. This can save about 30 lbs of weight that is not necessary for driving around town.