

# Installation Guide for the 4.0L Heavy Duty Engine Oil Pan Skid Plate - Fits all Models with 4.0L Engine Part Number 004667100

WARNING: Neither the seller nor the manufacturer will be liable for any loss, damage, or injury directly or indirectly arising from the use of or inability to determine the use of this product. Before using, the user shall determine the suitability of the products for its intended use, and the user shall assume all responsibility and risk in connection therewith.



## Component description:

- . Skid plate
- 1 Rear bell housing bracket
- 2 M10-1.50 x 25 mm bolts
- 2 5/16-18 x 1-1/4 bolts
- 4 5/16 flat washers
- 1 M12-1.25 x 20 mm bolt
- 5 7/16 flat washers
- 2 3/8-16 x 1 bolt
- 2 3/8-16 x 1 1/4 bolt
- 10 3/8 flat washers
- 6 3/8 split lock washers
- 2 3/8-16 flange nuts
- 2 M12-1.75 x 55 mm bolts

**Note:** Some of the photos in this installation guide show the optional mount for the HD transmission skid, sold separately.

Tera Manufacturing, Inc. 5251 South Commerce Dr. Murray, Utah 84107 Phone/801.288.2585 Fax/801.713.2313 www.teraflex.biz The M12-1.25 bolt is used on the driver side of the block on some 4.0L engines 1991-1999. Newer engines use the  $3/8-16 \times 1$  bolts on both sides of the block.

## **General Information**

This HD Engine Oil Pan Skid kit fits a variety of applications. Depending on the year and transmission model you may have leftover parts. Read the entire installation guide before working on your vehicle.

# **Installation:**

1. The front upper arms on the engine skid bolt into existing holes on the engine block. Hold the skid up in place to identify the holes and then clean the rust and mud out of the holes. Most TJs will be 3/8-16 threads on both





Older than 2003, Automatic



2003-2006 with extra bracket





sides but some engine blocks from 1991-1999 will have a metric thread M12-1.25 on the driver side of the block. If your engine has a knock sensor in the 12 mm bolt hole, remove the sensor and reinstall it through the arm on the HD skid plate. Be careful to select the correct bolt for your Jeep. If the bolt bottoms out before it is tight on the skid arm bracket, put an additional flat washer under the head of the bolt.

**Note:** The automatic transmission cooler lines will have to be temporarily moved to allow access to the engine block bolt on the left side. Just remove the clip or bolt from the hanger and then put them back in place once the engine skid is installed.

2. Install both engine side bolts first leaving them loose until the bell housing bolts are installed, then move the back of the skid up near the bell housing. Using the bolt holes on the skid, remove the corresponding factory bolts and move the skid up into place.

**Note:** Manual transmission models may have a small bolt in the bottom center of the bell housing holding on the inspection cover. Remove this bolt.

- 3. On Jeeps built prior to 2003, you will either have two 5/16 bolts or two 12 mm bolts and nuts that will be replaced with new hardware from the hardware bag included with the HD skid. Choose the correct size flat washer and put one or two flat washers between the bracket on the back of the engine skid and the bell housing inspection plate. Do not remove the inspection plate. The washers will keep the new engine skid from bending the inspection plate against the flywheels. Put in the 5/16-18 x 1-1/4 bolts for automatic transmissions or the M12-1.75 x 55 mm bolt with the original nut for manual transmissions.
- 4. On 2003 and newer Jeeps the addition bell housing bracket is used. Hold the bell housing bracket up to the bell housing to see which bolts need to be removed. Remove the 2 factory M10 bolts, install the bracket to the bell housing just finger tight using the supplied M10-1.50 x 25 bolts with flat washers. Put one flat washer between the new bracket and the bell housing to space the bracket away from the thin inspection cover.
- 5. Lift the skid plate up into place and bolt it to the bell housing bracket using the  $3/8-16 \times 1 \cdot 1/4$  bolts with flat washers, split locks and nuts. Just finger tight at this time.
- 6. Tighten the side engine bolts to 35 ft. lbs, then tighten the M10 bell housing bolts to 25-30 ft. lbs, then finally tighten the skid plate to bell housing bolts to 35 ft. lbs.

Installation is complete.



On a TJ Wrangler the engine oil skid along with the HD transmission skid and Belly Up skid plate provide protection to all vital components when operating in rocky terrain.

#### **MAINTENANCE INFORMATION:**

It is the buyer's responsibility to have all suspension, drivetrain, steering, and other components checked for proper tightness and torque after the first 100 miles and every 3000 miles after that.

## NOTICE TO INSTALLER:

The enclosed "Warning to Driver" sticker must be installed in the vehicle in driver's view. This sticker is to act as a constant safety reminder when operating the vehicle. It is your responsibility as the equipment installer to install the provided sticker and to forward these instructions to the vehicle's owner for review, and product information. IF a "Warning to Driver" sticker was not included in this kit, FREE replacement stickers are available by request. It is the installer's duty to ensure a safe and controllable vehicle after the modifications have been performed.

## WARNING:

Neither the seller nor the manufacturer will be liable for any loss, damage, or injury directly or indirectly arising from the use of or inability to determine the use of these products. Before using, the user shall determine the suitability of the products for its intended use, and the user shall assume all responsibility and risk in connection therewith.

#### TERAFLEX WARRANTY:

Tera Manufacturing warrants TeraFlex products to the original retail purchaser to be free of defects in material and workmanship for as long as the original purchaser owns the vehicle on which products were originally installed.

Failure to complete regular maintenance (grease every 3,00 miles) on TeraFlex FlexArms will void this warranty. All other conditions of the standard Tera Mfg. product warranty apply.

All TeraLow products are covered by Tera's two-year warranty to be free of defects in material and workmanship for two year's from date purchased.

Tera axles are covered by a 12-month warranty to be free of defects in materials and workmanship.

This warranty does not cover or include product finish, improperly installed or applied products, improperly maintained products, used for racing or competition or damage due to abuse or neglect.

All returns must be accompanied by an original invoice. It is the customer's responsibility to remove the product from the vehicle. Shipping charges are the responsibility of the customer. Tera Manufacturing will pay the return freight.