The "Kegger" Crane from Texas Truck Racks is rated at 500# maximum load/lift capacity.

The crane and all parts manufactured by Texas Truck Racks are warranted to be free of defects in material and workmanship for one (1) year from the date of sale to the original purchaser.

The included winch is warranted by the winch manufacturer for one (1) year from the date of sale to the original purchaser.

Installation of the crane and the winch is the sole responsibility of the installer and is not warranted by Texas Truck Racks.

Texas Truck Racks strongly <u>recommends</u> professional installation by qualified upfitters and/or truck equipment specialists. The installation is not difficult but not "plug and play".

What's Included:

The crane: The welded mast, boom, and brace.

Winch. 2500# load rating.

Mounting components.

1- Floor mount bracket. 5"x5"x3/16" metal plate with 1" schedule 40 pipe 4" in length, centered and welded to the plate.

- Upper mounting bracket. 2.75"x5"x3/16" metal plate with two pipe mounting ears centered and welded with 1 ½" space between them.
- 8- 5/16" blind fasteners-"plus nuts"
- 1- "Plus nut" installation tool consisting of 1-5/16"x2" hex head bolt and 1-3/8" flange nut with serrated surface.

For Ram ProMaster Cranes High Roof and Low Roof Rear Door Upper Mount Brackets.

- 1- 3/16" x 6 ½" x 3 ½" Oval Plate with welded 3/8" nuts on one side.
- 1- 3/16" x 6 1/2" x 3 1/2" Oval Plate with welded attachment ears.

For KUV Cranes only: Matching 2.75"x 5"x3/16" metal plate for roof mount.

1-1" schedule 40 pipe section 8" in length with 7/16" drilled hole in one end.

2- 3" diameter, 800# rated sheaves.

4- ¾" step spacers that support the sheaves in the boom.

Hardware.

8-5/16"x1 ½" hex head bolts.

8-5/16" nylock hex nuts.

16- 5/16" flat washers.

3- ½"x 2" shoulder bolts, 2 for mounting the sheaves and 1 for attaching the 8" pipe stub to the upper mounting bracket.

3- 3/8" nylock nuts for the shoulder bolts.

3-3/8" flat washers. For threaded end of each shoulder bolt

For Ram ProMaster Upper Bracket Only

4-3/8" x 1" SS hex bolts for mating the 2 oval upper mounting plates

4-3/8" SS flat washers

4-3/8" SS nylock nuts

4-5/16"x1 ½" hex head bolts for mounting floor plate

4-5/16x1" SS hex bolts for mounting upper bracket(Not ProMaster)

8-5/16" nylock hex nuts.

16- 5/16" flat washers.

#### Electrical

1-150A resettable breaker

1-6' section of red primary wire for extending hand held controller

1-butt connector

1-ring terminal

8' 3/8" split wire loom for inside mast if running power leads on floor

Hardware to attach the winch to the crane.

2- 5/16"x1" Grade 8 hex head bolts.

2-5/16" nylock hex nuts.

4-5/16" flat washer

KUV only: 4-5/16" bonded washers

Attach the 8" pipe stub to the upper mount bracket with a  $\frac{1}{2}$ " x 2" shoulder bolt. Leave loose.

Slide the pipe stub and upper bracket into the upper mast.

Slide the lower mast over the pipe stub on the lower mount bracket.

Place the crane in your preferred position in the van making sure it clears shelving units or other equipment. The mast should be vertical, and the boom must clear the door.

KUV only: The upper mounting bracket mounts to the ceiling and the matching plate mounts on top of the roof with the 5/16" bonded washers. The rubber side of the bonded washer is placed against the roof of the body to eliminate moisture intrusion. Use the same 5/16" bolts, washers, and lock nuts as noted in the next paragraph.

ProMaster only: Use the 2 oval brackets for the upper mount.

Mark the holes in both top and bottom brackets. Verify there are no obstructions, wires, brake lines, etc. before drilling the holes. Use the included 5/16" x 1 ½" hex bolts, flat washers, and nylock hex nuts to complete the floor plate installation and 5/16"x1" SS hex bolts, nuts, and washers for upper bracket (not ProMaster). If the bottom brackets is not directly on top of a rib, you will need steel spacers to level the plate to the floor.

The preferred installation of both floor and upper brackets is with the included 5/16" bolts, flat washers, and nylock nuts. This is not always possible because of the location of the bracket and difficulty of using bolts and nuts.

The blind fasteners included can be used when preferred through bolting is not feasible.

When using plus nuts, mark the location of the holes to be drilled. Drill a 1/8" pilot hole and then a 7/16" hole. You want the hole to be as small as possible and still be able to insert the pre bulbed plus nut. The simple way to insert the plus nut is to place the 3/8" flange bolt on the 5/16"x2" hex bolt and then thread the bolt into the plus nut. The serrated edge of the 3/8" nut should be flat against the flat site of the plus nut. Insert the plus nut into the hole. Use a wrench to hold the 3/8" nut flat against the plus nut and the mounting surface. Using a second wrench, tighten the bolt to cause the plus nut to expand until it is flat against the back side of the 7/16" hole. As the plus nut begins to collapse it will become easier to turn the wrench. Make absolutely sure you collapse the plus nut completely and that it is set in place. Failure to do so can result in the plus nut pulling through the hole during use.

The floor bracket should be mounted directly to the floor. If your preferred location causes a mounting hole to be located at the bottom of a floor rib you will need to insert spacers to level the mounting surface with the top of the ribs. Spacers prevent undue stress on the floor sheet metal that could result in the bolt or plus nut pulling through under load.

The winch can be installed before or after mounting the crane in the van. We include 2 Grade 8- 5/16" x 1" hex bolts to mount the winch to the crane. The winch manufacturer includes bolts but are not grade 8.

With the winch installed it's now time to install the sheaves in the boom. Free spool about 5' of wire off the spool. Remove the hook. Thread the wire through the slots in the bottom of the boom. Insert the  $\frac{3}{4}$ " bushings in the boom, slide the sheave up into the boom making sure the wire is in the sheave groove. Push 1 of the  $\frac{1}{2}$ " x 2 shoulder bolts through the spacer, then the sheave, then through the opposing spacer. Place a  $\frac{3}{8}$ " flat washer and  $\frac{3}{8}$ " nylock nut onto the bolt.

Repeat the operation for the front sheave. Reattach the hook.

Install the solenoid following the instructions with the winch in a position that minimizes the chance of impact from tools, etc. The red 6' power wire, butt connector, and eye terminal, are included to add to the length of the wire that goes to the solenoid from the handheld controller. The 3/8" wire loom is used to run from the motor leads to the solenoid and a section for the hand operated winch control.

The wires needed to connect the motor lead to the battery is not included. The length of the run determines the correct wire gauge needed. Again, this is up to the installer to determine. Undersized wire can cause overheating and damage the winch and cause other problems.

Install the 150-amp resettable breaker as close to the battery as possible.

Check for loose bolts or electrical connections each time you use your crane.