Proudly built in the USA

Owner’s Manual

TC-510, TC-520, TC-530 & TC-540
with Tarp & Hitch Plate Options

TruckCraft Corporation
Chambersburg, PA
1-800-755-3867
www.TruckCraft.com
The hoist is designed to be used in conjunction with a TruckCraft flat-bed with lengths from 110” to 170”.
Preface
Read and understand all sections of this manual prior to installing or operating the TruckCraft hoist. This manual contains information for the installation, operation, and maintenance of a TC-540 Hoist, Subframe, Deck and Drop Sides. Proper care and operation of the unit will assure years of dependable service. Your local TruckCraft Dealer will instruct you in its general operation. TruckCraft Corporation will be glad to answer any questions that may arise regarding the operation of your unit.

Ordering Repair Parts
When service is necessary, your local TruckCraft dealer can provide assistance. Always obtain original TruckCraft replacement parts from your dealer. Substitute items could affect the performance and warranty of the unit. Dealers in your area can be found on the web at www.TruckCraft.com. When ordering parts the hoist assembly serial number, pump serial number and description or part number of parts needed are required. The hoist assembly serial number is located on the front rub rail-drivers side-of the deck. On units without a deck, the serial number will be on the drivers side subframe long sill near the decal. The pump serial number is located on the top of the valve block.

Hoist Serial Number: ________________________

Pump Serial Number: ________________________

Date of Purchase: __________________________

Purchased From: ____________________________

TruckCraft Telephone #800.375.3867 or 717.375.2900
TruckCraft Fax #717.375.2975

Method of shipping parts to be specified such as customer pickup, UPS, Common Carrier, Parcel Post or Air Freight. All orders to be confirmed in writing, or faxed, to insure proper understanding of request.

Having preventative maintenance parts on hand could save valuable time.

Improvements and Changes
Because TruckCraft strives to continually improve our products, we reserve the right to make changes and improvements wherever practical, without obligation to make those same changes or improvements to the equipment already sold. Photographs used in this manual may not be up-to-date with current design changes.
Safety Information

Observe the following safety procedures during the use of the hoist and deck:
Before operating read and understand all information furnished with your hoist and in this manual.

- Keep hands, feet and clothing away from moving parts.
- Keep hinge pins and bushings well greased-inspect regularly for proper operation during rotation.
- Never exceed the rating of the hoist, truck, axles, or tires. Make certain the load is evenly distributed.
- Never work under a raised body unless the body is supported by blocking or propped in the raised position. Always unload the body prior to using the prop.
- Operate the hoist only when the truck is on a firm, level surface.
- Always inspect the area around the truck for safe dumping prior to operating the hoist.
- Do not move the truck with the deck in a raised position.
- Always release the tailgate pins prior to raising the dump body when it is loaded. The tailgate pins should not be released with a load against the tailgate.
- Store the remote control in a location that assures that no object can come in contact with the raise button unintentionally.
- Before raising the dumper, check for adequate overhead clearance. Be alert for overhead electrical wires.
- Always ensure that the red warning light is off, indicating that the deck is all the way down, before operating the truck.
- Regularly check and tighten all fasteners to the recommended torque values in the Torque Chart shown below.
- Maximum hydraulic pressure is factory set at 3200 PSI. Tampering with this setting can damage hydraulic components and result in system failure.
- Use automatic transmission fluid in the hydraulic reservoir. Check regularly and keep clean.

<table>
<thead>
<tr>
<th>Torque Chart - Steel Fasteners</th>
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<tbody>
<tr>
<td>Size</td>
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<td>5/8-11</td>
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<td>3/4-10</td>
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Mounting Instructions

CAUTION: Verify lifting and support devices can support the hoist, sub frame, and flatbed combined weight before picking up the assembly.

The hoist, sub-frame and flatbed are normally shipped assembled and ready to install on a truck frame—see Figure 4. Truck manufacturers recommend that the sub-frame does not contact the top of the frame. A gap can be established by attaching 1/4” thick wooden strips on top of the frame or installing a spacer layer of adhesive backed, high strength neoprene rubber on top of the frame. However, solid connections between the truck frame and the sub-frame are required at the location where the hoist pins to the sub-frame and at the rear of the frame. When mounting with a 1/4” gap, the steel spacers supplied with the kit need to be installed between the truck frame and the sub-frame at the hoist mount location—see Detail A. This spacer can be eliminated if the sub-frame is mounted directly on top of the truck frame with no space between the two.

1. Set the assembly on top of the frame or spacer and position it a minimum of 3.5” from the cab as shown above in Figure 4. The after-frame will need to be cut off if it hits the tailboard when the deck is raised. If the rear pivot centerline extends beyond the rear of the frame, an angle iron brace or similar structure can be welded across the back of the frame to support the pivot.

2. Position the sub-frame mounting brackets along the sides of the frame in an area where the brackets do not interfere with existing frame bolts or hardware—see Figure 5. Flipping the brackets or moving to alternate holes drilled in the sub-frame usually eliminates interference. However, additional holes can be drilled in the sub-frame as required. Use shims supplied to fill any gaps between the mounting brackets and the frame or sub-frame. Mark the location for mounting holes in the frame and drill 12 holes (8 on 115” deck assembly) 21/32” diameter for 5/8” grade 8 bolts supplied.
Caution: Be careful of wiring, brake lines, etc. inside frame when drilling. Install bolts, nuts and 2 washers per hole and torque to 180 FT-LBS.

3. Route control cable into cab and install remote control box in an area where the up button will not be unintentionally bumped.

4. Route power supply cable to battery and hook up leads to battery.

5. Make sure all blocking and tie-downs used for shipping are removed. Activated the remote control up button and carefully raise the bed. Do not reach under or place any body parts under the bed.

CAUTION:

 ✓ The TruckCraft assembly is designed to bolt to the truck frame. No welding is required. **Do not weld any part of this assembly to the truck frame.**

 ✓ If holes are required in the sub-frame, the holes must be a maximum of 2.5” in diameter and centered in the web. Never cut the top or bottom flanges of the sub-frame.

Raise the bed up about half way to about 30 degrees from horizontal. Rotate the safety prop counterclockwise until it rests on the angle stop on the hoist—see figure 6. Carefully lower the hoist until the cross shaft of the hoist rests on the prop. **Do not power down the hoist after the shaft rests on the prop.** With the prop in this position it is now safe to work under the deck.

6. With the safety prop supporting the deck and the truck level, check the depth of the oil in the hydraulic reservoir. The depth of the fluid in the tank at this position should be 3”. Use automatic transmission fluid only to fill the reservoir to this level.
7. Apply grease at nine grease zerks:
- One on rod end of cylinder
- One on barrel end of cylinder
- Two on the cross shaft at the deck
- Two on the hoist cross shaft at the sub-frame mount
- One on each deck pivot hinge at rear of sub-frame

**Warning:**
*Never use the safety prop to support a loaded deck. Never position yourself under a loaded deck.*

- One on the hoist link arm cross shaft

8. Install the light, mount bracket and decal shown in figure 7 on the dash inside the cab of the truck. Using the fuse holder, wire the light to the dump switch mounted on the front of the sub-frame across from the hydraulic reservoir. Use the schematic shown in figure 8 to connect the wiring. **Note:** Wire not supplied by TruckCraft.

9. Place the two decals A4-04684 and A4-04685 inside the cab on the dash in an easy to read location.

10. Connect the marker light wiring harness to the truck wiring.

11. Push the remote control up button. Raise the hoist high enough to drop the safety prop back into its storage position. Cycle the hoist through the complete stroke of the telescope cylinder a couple times to make sure everything works properly.
Maintenance

1. Depending on frequency of use, check hydraulic reservoir level and add oil. Periodically drain system and replace with clean oil. Use automatic transmission fluid only.

2. Depending on frequency of use, apply grease to all rotating parts at nine grease zerks.

3. Check to make sure that the bed up warning light illuminates when the bed begins to raise. Adjust switch or replace bulb as required.

4. Depending on frequency of use, check all bolts for proper tightness and torque.
Changed cyl. mount bolts from .50 to .56 Dia. 11/14/2011

REMOVE ALL BURRS, CHAMFER, OR RADIUS CORNERS.

TOLERANCES UNLESS OTHERWISE SHOWN:

DECIMALS

TWO PLACES .00   ±.030
THREE PLACES .000 ±.005

ANGLES ±1°

DO NOT SCALE DRAWING.

115" Deck Shown in assembly.
1. None

2. Hoist & Subframe Ass'y - 9' TC-510 888.853 lbs

3. 3/28/2008

4. Changed cyl. mount bolts from .50 to .56 Dia. 11/14/2011

- DO NOT SCALE DRAWING.
- REMOVE ALL BURRS, CHAMFER, OR RADIUS CORNERS.

- TOLERANCES UNLESS OTHERWISE SHOWN:
  - DECIMALS
    - TWO PLACES: ±.030
    - THREE PLACES: ±.005
- Angles ±1°

- Wiring Diagram:
  - Dash Pilot Lamp
  - Dump Bed Raised Lamp
  - Hot Wire From Truck Electrical System
  - Ground
  - Connecting wiring by installer.

- Section E-E
- Section A-A
- Section C-C

- Detail B
- Detail C
- Detail D

- Deck not shown on this view for clarity

- Attach 50" hose to this end of cylinder and to "C2" hoist lower port on pump.
- Attach 36" hose to this end of cylinder and to "C1" hoist raise port on pump.

- Adjust lock nuts to open switch contacts when deck begins to rise off subframe.

- Section I-I
Remove all burrs, chamfer, or radius corners. Tolerances unless otherwise shown:

- Decimal two places: ±0.00
- Decimal three places: ±0.005

Angles ±1°

Do not scale drawing.

1. None
2. Hoist & Subframe 620.77 lbm 2/15/2008
3. Weight

View F-F

Installer to mount items shown in Detail H inside cab of truck.

SECTION I-I

Ship switch loose. Installer to mount to deck.

Mount decals shipped loose in truck cab.

Detail H

Installer to hook item #9 to battery.

Detail G

See view F-F for attachment location of hoses on cylinder.

DETAIL H


View J-J

Attach 50" hose to this end of cylinder and to "C2" hoist lower port on pump.

Attach 36" hose to this end of cylinder and to "C1" hoist raise port on pump.

Dash Pilot Lamp

Connecting wiring by installer.

Wiring Diagram

Dump Bed Raised Lamp

"C2" hoist lower port

"C1" hoist raise port

Fuse

Pilot

Hot Wire From Truck Electrical System

Dash

From Truck Electrical System

Ground

Mount decals shipped loose in truck cab.

Connect wiring by installer.

Shipment Switch Loose.

Installer to mount on deck.

Attach 36" hose to this end of cylinder and to "C1" hoist raise port on pump.

Attach 50" hose to this end of cylinder and to "C2" hoist lower port on pump.


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Hoist Ass'y P/N | Item # | "A" | Item # | "B"
---|---|---|---|---
D1-04828 | 19 | D3-04448 | 21 | D3-04549
D1-04829 | 19 | D3-04448 | 21 | D3-04549
D1-06517 | 19 | D3-04792 | 21 | D3-06558
1. Mount decals shipped loose in truck cab.

2. 140" Deck Shown in assembly.

Mount decals M4-04698 & B4-04077 called out on BM D1-04828 & D1-04829 approx. in the area shown on both sides of deck.

Model | P/N | CA | Item | P/N "A" | Bed Lengths | Item | P/N "B"
--- | --- | --- | --- | --- | --- | --- | ---
TC-520 | D1-04683 | 60 | 1 | D3-04559 | 110 & 115 | 3 | D1-04828
TC-530 | D1-04561 | - | 1 | D3-04559 | 135, 140 & 145 | 3 | D1-04829
TC-540 | D1-04791 | N.A. | 1 | D3-05534 | 170 | 3 | D1-06517

Deck Mount Plates Changed/Charted Bls.

02/08/12

5751 Molly Pitcher Highway
Chambersburg, PA 17201
717-375-2900
FAX 717-375-2975
Installer to mount items shown in Detail H inside cab of truck.

Mount decals on both sides of deck or dump body approx. in this area.

See view F-F for attachment location of hoses on cylinder.

Installer to hook power supply cable to battery.

Mount decals shipped loose in truck cab.

Installer to mount items shown in Detail H inside cab of truck.

Mount decals on both sides of deck or dump body approx. in this area.

See view F-F for attachment location of hoses on cylinder.

Installer to hook power supply cable to battery.

Mount decals shipped loose in truck cab.
1. Unfold tarp and stretch narrow width across crankshaft, lining up grommets along shaft.
2. Use radiator screw clamps, open them up and wrap them around the crankshaft threading them through the tarp, one per grommet, to attach the tarp to the shaft. Keep tarp taught from side to side.
3. Slide batten board through the looped end of the tarp until the board is centered in the tarp. In the center of the board, in the narrow side left the very end of the tarp; drill a 3/16" dia. x 3/8" deep hole. Start the eye screw into the hole and turn until tight
4. Attach tape to eye screw and wind tarp onto crankshaft.

Using bearing mounts as a guide, locate mounts per dimensions shown and drill 4-41 Dia holes in cab guard for mounting tarp roller.
D1-05564
180” Long
Tarp Kit (Option)

INSTALLATION INSTRUCTIONS

1. Bolt Bearing Mount Plates on cab guard per drawing D1-05564.

2. Slide one nylon bearing onto tarp crank, with the bearing flange facing away from the crank handle.

3. Insert tarp roller shaft end through the passenger side hole in the Bearing Mount Plate.

4. Slide 2nd bearing on to protruding tarp roller shaft end with flange against passenger side Bearing Mount Plate.

5. Drive roll pin through holes in tarp roller and crank shaft to secure shaft to tarp roller.

Drive Roll Pin through this hole on driver’s side of tarp roller.
6. Unfold tarp and stretch narrow width across tarp roller shaft, lining up grommets along shaft.

7. Use radiator clamps, opening them up and wrapping them around roller shaft and threading them through the tarp, one per grommet, to attach the tarp to the shaft. Keep tarp taught from side to side.

8. Slide batten board through looped end of tarp until board is centered in tarp. In center of the board, in the narrow side, (at the very end of tarp), drill a 3/16” hole into the edge of the board about 3/8” deep. Using the supplied eye screw, start it in the drilled hole and turn until tight.

9. Attach supplied rope to eye bolt and wind tarp onto crank shaft.
Drill .78 Dia (25/32) holes in frame to align with holes in hitch plate for 3/4 GR 8 Bolts. Shim to eliminate any gap between hitch plate and frame. Torque bolts to 315-330 Lb-Ft torque.
WARRANTY

TRUCKCRAFT CORPORATION WARRANTS EACH STARLIFTER TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF TWO YEARS FROM THE DATE OF INITIAL SALE, LEASE, RENTAL, OR OTHER DISPOSITION OF SUCH PRODUCT, AND AGREES ONLY TO REPAIR OR REPLACE AT ITS OWN EXPENSE, F.O.B. THE PLACE OR PLACES OF MANUFACTURE, AT MANUFACTURER’S OPTION, ANY PART OR PARTS OF THE PRODUCT FOUND TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP, PROVIDED MANUFACTURER IS NOTIFIED OF SUCH DEFECT OR DEFECTS WITHIN THE TWO YEAR WARRANTY PERIOD AND GIVEN A REASONABLE TIME TO CORRECT THE DEFECT. DEFECTS FOLLOWING OPERATION BEYOND RATED CAPACITY OR THE IMPROPER USE OR APPLICATION OF ANY PRODUCTS SHALL NOT BE CONSIDERED DEFECTS WITHIN THE SCOPE OF THE FOREGOING WARRANTY. NO CLAIMS FOR LABOR SHALL BE CONSIDERED UNLESS AUTHORIZED BY THE MANUFACTURER.