Proudly built in the USA

Owner’s Manual TC-410 with Drop Sides

Hoist, Sub-Frame, and Dump Body
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The TruckCraft hoists are designed for use with TruckCraft’s 9’ and 11’ aluminum dump bodies.
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 the TruckCraft TC-410, TC-420, and TC-430 Hoist, Sub-Frame and Dump Body. 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. If you cannot locate a dealer near you, contact TruckCraft Corporation. When ordering parts the dumper assembly serial number, pump serial number and description or part number of parts needed are required. The dumper serial number is located on the drivers side of the front face (behind truck cab) of the dumper body. The pump serial number is located on the top of the valve block.

Dumper 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 dump body: 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 body 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 body 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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</thead>
<tbody>
<tr>
<td>Size</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1/4-20</td>
</tr>
<tr>
<td>1/4-28</td>
</tr>
<tr>
<td>5/16-18</td>
</tr>
<tr>
<td>3/8-16</td>
</tr>
<tr>
<td>1/2-13</td>
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<tr>
<td>5/8-11</td>
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<tr>
<td>3/4-10</td>
</tr>
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</table>
Certifying and Labeling Chassis-Cabs after mounting TruckCraft dump body

New chassis-cabs are supplied by the manufacturer with incomplete vehicle documentation (IVD). According to the National Highway Traffic Administration, "NHTSA”, regulations a “manufacturer” is a person who performs a manufacturing operation on a new incomplete vehicle. A Final Stage Manufacturer is a person who performs such manufacturing operations on an incomplete vehicle that it becomes a complete vehicle. It is the responsibility of this Final Manufacturer to affix an approved label to the vehicle certifying that the vehicle meets all applicable Federal Motor Vehicle Safety Standards. Regulations also require certification in many instances when mounting a dump body on a used chassis-cab.

It is strongly recommended that anyone contemplating mounting a TruckCraft dump body and not familiar with the regulations obtain a copy of the National Truck Equipment Association’s, “NTEA’s”, “Vehicle Certification Guide”. Thoroughly read and understanding all sections of this guide before attempting to certify a completed vehicle. The “Guide”, free to NTEA members, costs $149 and can be purchased on the NTEA website, www.NTEA.com.

Below are answers/recommendations to key certification questions:

1) If the end-user purchases a new cab-chassis and mounts the dump body, does the completed vehicle need to be certified?

Per the NTEA “Guide” page 9B, “When the ultimate customer purchases an incomplete vehicle and installs additional equipment, he becomes, in effect, a manufacturer and thus is subject to the certification and registration requirements of the Act.”

2) What must an end-user/manufacturer do in order to be able to certify a completed vehicle?

Per the NTEA “Guide” pages 1C and 2C, Chapter 1, all manufacturers need to register with the NHTSA on form (49 CFR 566) - a copy of which is included in the book.

3) Will the chassis-cab safely handle the weight of the dump body and payload?

The Incomplete Vehicle Manual usually contains information on calculating maximum completed vehicle weights and acceptable horizontal and vertical combined centers of gravity for compliance to the Federal Motor Vehicle Safety Standards. If not supplied with the chassis-cab, this information should be obtained from the truck dealer and calculations need to be performed to make sure limits are not exceeded. Based on the maximum axle weight limitations, calculations should also be run to determine the maximum payload capacity of the dump body.
4) What are the steps to certifying and labeling the completed vehicle?

Chapter 5, pages 1F through 4F, of the NTEA “Guide” outline this procedure when certification is within the guidelines of the Incomplete Vehicle Manual. Certification labels, item #2159, can be purchased from the NTEA in quantities of 100 labels per order.

5) What are the Tire and Loading label requirements?

Vehicles with a gross vehicle weight rating (GVWR) of 10,000# or less are required to have a Tire and Loading label. Chapter 7, 1H through 4H, of the NTEA “Guide” outlines the procedure for calculating the data on this label. This label, item #1220, can also be purchased in quantities of 60 from the NTEA.
**Mounting Instructions**

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

The hoist, sub-frame and dump body 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. The solid connection is accomplished by installing steel spacers supplied with the kit between the truck frame and the sub-frame—see Detail A.

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 exceeds 52”.

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 8 holes (12 on TC430) 17/32” diameter for 1/2” 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 90 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 body. Do not reach under or place any body parts under the dump body. Raise the body 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 dump body.

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**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.**
- Openings have been provided in the side of the sub-frame for fuel tank fill spouts. If additional 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.

6. With the safety prop supporting the dump body 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
✓ One on the hoist link arm cross shaft

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

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.
1. Attach 50" hose to this end of cylinder and to "C2" hoist lower port on pump.
2. Attach 36" hose to this end of cylinder and to "C1" hoist raise port on pump.
3. Adjust lock nuts to open switch contacts when deck begins to rise off subframe.

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**Wiring Diagram**

- Fuse
- Pilot Lamp
- Hot Wire from Truck Electrical System
- Connecting wiring by installer.
- Dump Bed Raised Lamp

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**Adjusting the Switch Contacts**

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

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**Connecting Wiring**

- Connect the wiring by the installer.

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**Sections**

- Section A-A
- Section B
- Section C-C
- Section D
- Section E-E
- Section F-F

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**Notes**

- Deck not shown on this view for clarity.
- Weight: 1448.606 lbm

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**Dimensions**

- 5751 Molly Pitcher Highway
- Chambersburg, PA 17201
- 717-375-2900
- FAX 717-375-2975
<table>
<thead>
<tr>
<th>Part #</th>
<th>Part Description</th>
<th>Material</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-03-04632A</td>
<td>1 Fold Down Side Weld - R.H.</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>3.93 lbs</td>
</tr>
<tr>
<td>3-04-04641</td>
<td>2 Align Pin - Locking</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>3.97 lbs</td>
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<tr>
<td>3-03-04640</td>
<td>6 Side Hinge Weldment</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>7.63 lbs</td>
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<tr>
<td>3-04-04642</td>
<td>4 Align Pin</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>3.73 lbs</td>
</tr>
<tr>
<td>3-03-04633A</td>
<td>1 Flange Nut w/Lock w/Lock</td>
<td>4.4 lbm</td>
<td></td>
</tr>
<tr>
<td>3-04-04609</td>
<td>1 Tailgate Weldment</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>4.92 lbs</td>
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<tr>
<td>3-04-04615</td>
<td>40 Hex Head Cap Screw</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>2.24 lbs</td>
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<tr>
<td>3-04-04647</td>
<td>4 Connecting Link</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>1.36 lbs</td>
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<tr>
<td>3-04-04648</td>
<td>4 Bolting Bar</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
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<td>3-04-04670</td>
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<td>304 SS - .75 Dia x 3.34 Lg</td>
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<td>3-04-04671</td>
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<tr>
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<td>1 Bolt, Threaded Ends</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>3.36 lbs</td>
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<tr>
<td>3-04-04681</td>
<td>2 Grows Pin</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>0.36 lbs</td>
</tr>
<tr>
<td>3-04-04682</td>
<td>5 Grows Pin</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>1.46 lbs</td>
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<tr>
<td>3-04-04663</td>
<td>5 Pin, Lock Pin</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>0.36 lbs</td>
</tr>
<tr>
<td>3-04-04697</td>
<td>1 Link Arm</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>0.35 lbs</td>
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<tr>
<td>3-04-04686</td>
<td>2 Dowel Pin w/Stringers</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>0.26 lbs</td>
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<tr>
<td>3-04-04684</td>
<td>1 Wax Pin, Lever Weld</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>0.26 lbs</td>
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<tr>
<td>3-04-04685</td>
<td>2 Wax Pin, Lever Weld</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>0.26 lbs</td>
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<tr>
<td>3-04-04674</td>
<td>1 Wax Pin, Lever Weld</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>0.26 lbs</td>
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<tr>
<td>3-04-04683</td>
<td>2 Wax Pin, Lever Weld</td>
<td>304 SS - .75 Dia x 3.34 Lg</td>
<td>0.26 lbs</td>
</tr>
</tbody>
</table>

**Center & Back Hinges - (4x)**

**Front Two Hinges**

**Back Two Hinges**

**Detail D**

**Detail C**

**TC-410 Dump Body Assy - 9**
Use shims as required to align tailgate and tailgate pivot weldments.

Punch ends of bushing to prevent bearing working its way out of bushing. Typ. 6 plcs.
TRUCKCRAFT CORPORATION WARRANTS EACH _Zeus_ 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.