



Installation Instructions



Utility Vehicle

Front Mounting Hitch

39A-115-100

IMPORTANT: READ SAFETY RULES AND INSTRUCTIONS CAREFULLY

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SECTION 1: INTRODUCTION

The 39A-115-100 Front Mounting Hitch is designed for use on Cub Cadet *Big Country* utility vehicles.

This front hitch should be used only with front mounted equipment designed specifically for attachment to this hitch. **DO NOT** attempt to adapt other equipment — SAFE and proper operation cannot be assured. Carefully read the instructions and safety precautions found in this manual.

NOTE: References to *LEFT* and *RIGHT* indicate the left and right sides of the vehicle when facing forward in the operator's position, unless directed to reference from a different position in the instructions.

IMPORTANT: Read and observe all WARNING statements. They are included to provide for the protection of the equipment installer and user.

Remove the front hitch assembly and hardware pack from the shipping container. Lay out the contents of the hardware pack on a flat surface. Refer to Figure 1 to confirm that all parts are present and to acquaint yourself with part descriptions. Throughout the installation instructions the parts shown in Figure 1 will be identified by their description, followed by their reference number in parenthesis, to aid in installation.

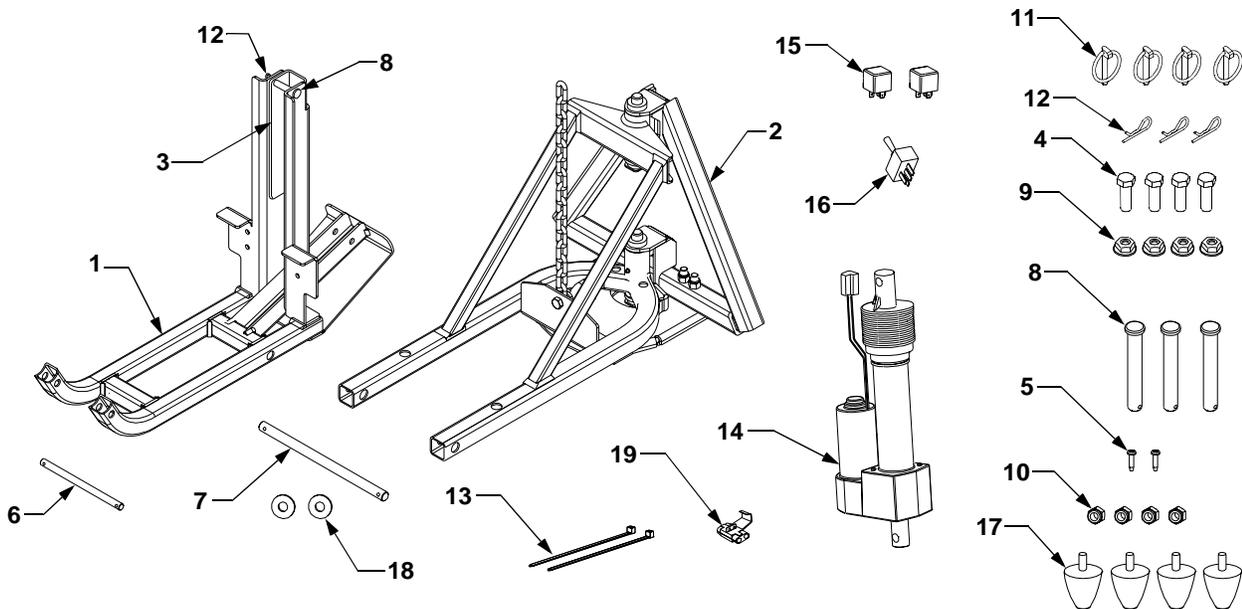


Figure 1

REF. PART NO.	PART NUMBER	DESCRIPTION	QTY.	REF. PART NO.	PART NUMBER	DESCRIPTION	QTY.
1	603-04061	Mounting Frame	1	11	714-0143	Klik Pin	4
2	†	Hitch Assembly	1	12	714-04003	Internal Cotter Pin	4
3	707-04116	Lift Bracket	1	13	725-0157	Cable Tie	2
4	710-0514	Hex Cap Screw, 3/8-16 x 1.0 GR5	4	14	725-04020	Electric Lift Cylinder	1
5	710-3009	Self Tapping Screw	2	15	725-1718	Relay, 12V	2
6	711-04096	Mounting Rod, .625 x 8.625	1	16	725-1053	Toggle Switch	1
7	711-04097	Rod, .75 x 12.75	1	17	735-04024	Rubber Bumper	4
8	711-04006	Clevis Pin, .5 Dia x 3.0	4	18	736-0316	Flat Washer	2
9	712-3005	Hex Flange Lock Nut, 3/8-16	4	19	1721038	Splice Connector	1
10	712-04006	Hex Nylon Lock Nut, M10 x 1.25	4	††	725-04051	Wire Harness	1

† Assembly made of multiple parts

†† Not Shown

SECTION 2: UTILITY VEHICLE PREPARATION

Changing the Front Axle Bumpers

WARNING: Do not work under the vehicle supported only by a jack. Position jack stands to support the vehicle.

Replace the original equipment front axle bumpers with the larger bumpers provided in this package.

To replace the bumpers, proceed as follow:

- Engage the parking brake and block the rear tires.
- Using a jack, raise the front of the vehicle high enough to provide ample separation between the front axles and the frame to allow removal and installation of the bumpers.
- Position jack stands to support the vehicle.
- Remove the hex nuts securing the four original bumpers to the frame.
- Insert the studs of the new rubber bumpers (17) through the bottom of the frame holes. Secure the bumpers with the hex nylon lock nuts (10). Torque lock nuts to 23 ft. lbs. See Figure 3.
- Remove the jack stands and lower the vehicle to the ground.

Installing the Toggle Switch

The toggle switch must be installed in the dash panel of the vehicle, and will require drilling a hole in the dash.

To install the toggle switch (16), proceed as follows:

- Remove the screw at the rear of each side of the front hood, just forward of the dash panel. Pivot the hood forward to open.

- Select an open spot on the right side of the dash panel operator's console. Make certain the area is also clear on the back side of the dash panel.
- After making sure no electrical wires or vehicle components are behind the area to be drilled, drill a 1/2 inch hole in the dash panel.
- Remove the nut from the toggle switch (16).
- Note the flat surface on the mounting pilot of the toggle switch. With the flat surface toward the *left*, insert the pilot of the switch through the backside of the dash panel. See Figure 2.

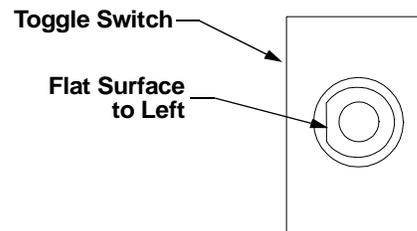


Figure 2

- Holding the switch in this position, secure the switch with the previously removed switch nut.

Installing the Wire Harness

The wire harness must be installed prior to installing the hitch mounting frame. The hood will not open fully open after installation of the mounting frame.

The dash end of the wire harness has three wire leads with female spade terminals and one blank blue wire. See Figure 3.

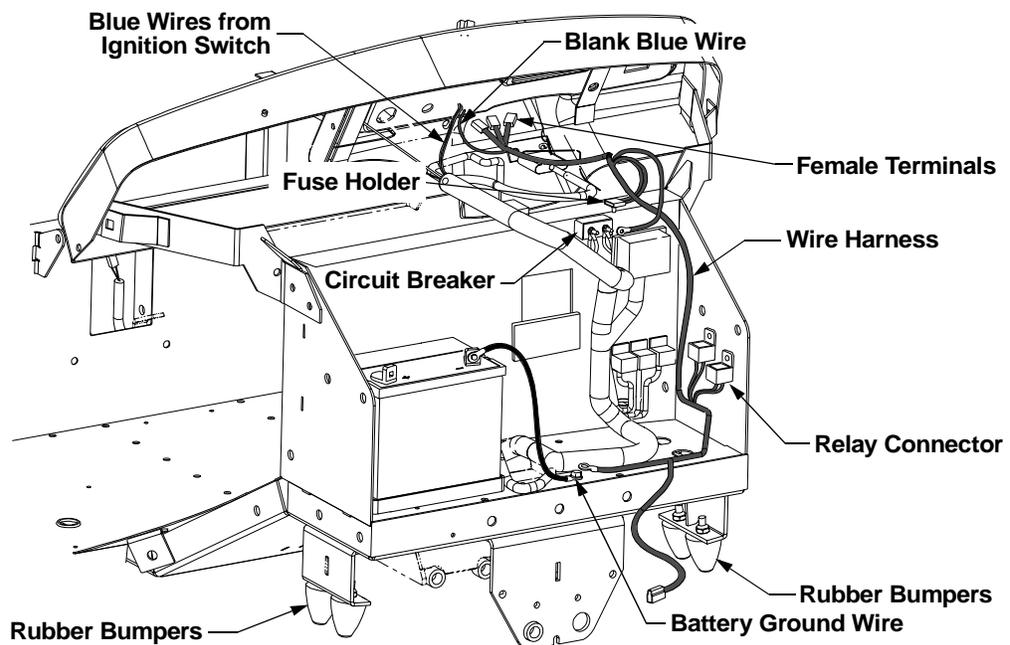


Figure 3

Install the wire harness as follows:

- Connect the three female terminals at the dash end of the wire harness to male terminals on the back of the toggles switch as shown in Figure 4.

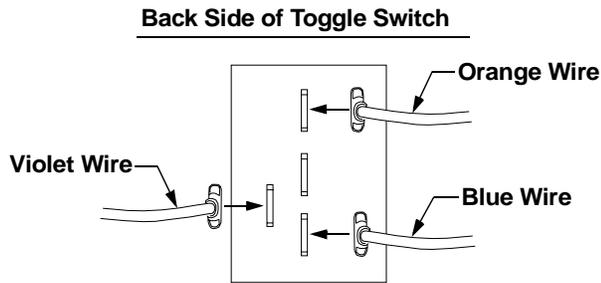


Figure 4

- Locate the two blue wires coming from the ignition switch connector of the vehicle wire harness.
- Using the splice connector (19) provided with this kit, splice the blank blue wire of the hitch harness to one of the blue wires of the vehicle harness. Refer to Figure 3.
- Route the wire harness along the top of the bulkhead toward the left side of the vehicle.
- Locate the fuse holder in the hitch harness and note its position along the top of the bulkhead. Refer to Figure 3.
- To secure the fuse holder, drill an 0.25 inch hole into the top of the bulkhead and push the barb of the holder into the hole.
- Locate the red wire lead in the harness (near the fuse wires) having an eyelet terminal. Locate the vehicle circuit breaker (two screw terminals) on the upper *left* of the bulkhead. Refer to Figure 3.

IMPORTANT: One screw terminal of the circuit breaker is silver colored, the other is copper or brass colored.

- Working from the front of the vehicle, locate (usually on the left) the copper/brass colored terminal of the circuit breaker. While making certain not to lose any wires currently connected to the terminal, remove the nut from the copper/brass colored terminal. Slide the eyelet of the red harness lead onto the terminal and secure by reinstalling the nut.
- Route the harness down along the *left* side of the bulkhead. Refer to Figure 3.
- Position the two relay connectors of the harness against the *left* side of the bulkhead with their mounting tabs facing upward. Refer to Figure 3.
- Mark the bulkhead through the holes in the mounting tabs of the relay connectors; then drill two 5/32 inch holes through the bulkhead.
- Reposition the relay connectors and secure them to the bulkhead using the two self tapping screws (5).
- Locate the green wire of the hitch harness having an eyelet terminal. Locate the ground screw

securing the battery ground wire (from — terminal (NEG) of battery) to the bottom of the bulkhead.

- While making certain not to lose any terminals currently connected by the ground screw, unthread the screw from the bulkhead. Slide the eyelet terminal of the green wire onto the ground screw; then reinstall the screw. Refer to Figure 3.
- Route the hitch harness lift cylinder lead to, and along, the top *left* side of the vehicle bumper so that the connector is toward the middle of the bumper.
- Insert a cable tie (13) through the hole on the top left of the bumper. Leaving some slack in the harness lead, secure the harness lead to the bumper with the cable tie.
- Gather any excess blue wire against the hitch harness and secure to the upper end of the vehicle harness by installing the second cable tie around the blue wire and both harnesses.
- Install the two relays (15) in the relay connectors.
- Install the 30 amp fuse in the fuse holder.
- Close the hood and secure with the two previously removed screws.

Drilling Holes for Mounting Frame— Utility Vehicles Produced Before Mfg. Date A063 ONLY.

Early production utility vehicles have neither the four holes in the front bumper, nor the two holes in the axle bracket, needed to install the hitch mounting frame (1). If installing the hitch on one of these vehicles, it will be necessary to drill the holes.

Drilling Holes in Front Bumper

Viewing the bumper from the front of the vehicle.

- Place the template provided with this kit along the front of the *left* side of the bumper.
- Align the holes in the template with the existing holes in the left side of the bumper. Mark the center point for the new holes near the center of the bumper, then remove the template.
- Lift the mounting frame onto the bumper and align the center of its *left* mounting holes with the marks made on the vehicle bumper. Hold the mounting frame in this position.
- While holding the mounting frame tightly against the bumper, mark the four mounting hole positions on the vehicle bumper. Lower the frame from the bumper.
- Using a 13/32" drill bit, drill four .406" holes in the vehicle bumper at the marked positions.

Drilling Holes in Frame of Utility Vehicle

The holes needed to secure the rear of the mounting frame (1) must be drilled in the vehicle frame.

To locate and drill the holes proceed as follows:

- Lift the mounting frame (1) onto the vehicle's front bumper and align the mounting holes.

- Insert the four hex cap screws (4) through the front of the mounting frame and bumper, and fasten with the four hex flange lock nuts (9). Tighten the lock nuts until mounting frame is held snugly against the bumper.
- From beneath the vehicle, move to the rear of the mounting frame. The mounting frame should

straddle the axle bracket on the underside of the vehicle frame.

- Through the hole in each side of the mounting frame, mark the hole location on each side of the vehicle axle bracket.
- Remove the mounting frame from the vehicle.
- Using a 5/8" drill bit, drill a hole at the marked position on each side of the frame axle bracket.

SECTION 3: INSTALLING AND REMOVING THE FRONT HITCH

Installing the Front Hitch

Install the front hitch on the utility vehicle as follows:

- Lift and hold the mounting frame (1) in position on the front bumper and the frame axle bracket.
- Insert the four hex cap screws (4) through the mounting frame and vehicle bumper and fasten with the four hex flange lock nuts (9). Do not fully tighten the fasteners now. See Figure 5.
- Lift the locking ring on one klik pin (11) and insert through the hole on one end of the mounting rod (6). Flip the locking ring downward to lock.
- From beneath the vehicle, align the holes in the mounting frame with those in the vehicles's axle bracket, then insert the mounting rod fully through the mounting frame and axle bracket. Secure the mounting rod with a klik pin (11). See Figure 5
- Fully tighten the fasteners on the front of the mounting frame. Torque to 38 ft. lbs.
- Insert a klik pin (11) into the hole at one end of the pivot rod (7) and lock.
- Insert the other end of the pivot rod just through one of the rear holes of the hitch assembly (2), then slide a flat washer (18) onto the rod. Refer to Figure 5.

- Lift the rear of the hitch assembly upward so that it straddles the mounting frame.
- With the flat washer between the hitch assembly and the mounting frame, align the holes in the hitch assembly with those in the mounting frame and push the pivot rod (7) fully through the mounting frame only. Refer to Figure 5.
- Slide the second flat washer (18) between the other side of the mounting frame and the hitch assembly, and push the pivot rod through the washer and hitch assembly. Secure the pivot rod with the last klik pin (11).
- Place the bottom of the electric lift cylinder (14) onto the channel at the front of the mounting frame.
- Align the hole in the bottom mounting shaft of the lift cylinder with the hole in the mounting frame channel and insert a clevis pin (8) through the channel and cylinder mounting shaft. Secure with and internal cotter pin (12). See Figure 5.
- Flip the lift bracket (3) up and forward in the mounting frame. See Figure 5.
- Align the hole in the upper shaft of the lift cylinder with the inward holes in the sides of the lift bracket.

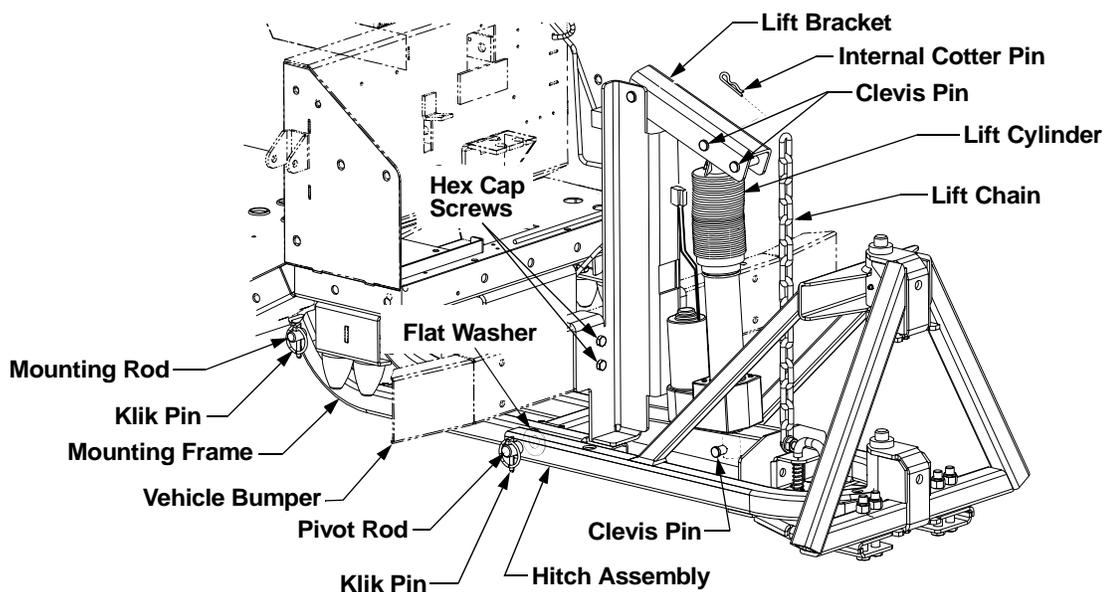


Figure 5

- Insert a clevis pin (8) through the lift bracket and upper cylinder shaft and secure with an internal cotter pin (12). Refer to Figure 5.
- Lift the chain on the hitch assembly and align one of its upper links with the outer holes in the lift bracket.
- Insert the last clevis pin (8) through the lift bracket and chain, and secure with the last internal cotter pin (12). Refer to Figure 5. **NOTE:** *Adjust the chain length as necessary following the instructions in the specific equipment Operator's Manual.*
- Plug the wire harness connector into the electrical connector of the lift cylinder.

Removing the Front Hitch

The front hitch may be removed either as a complete assembly, or by disassembling. Refer to Figure 5 and proceed as follows:

- Use the toggle switch to lower the lift cylinder to its lowest position.
- Unplug the wire harness connector from the lift cylinder. Gather the harness and secure to the vehicle to prevent damage to the harness.

To Remove the front hitch as a complete assembly:

- Block the complete hitch assembly to prevent it from suddenly dropping.
- Remove the klik pin from one end of the mounting rod and withdraw the rod from the mounting frame and the vehicle axle brackets.
- Remove the four hex cap screws and flange lock nuts securing the mounting frame to the vehicle bumper.
- Support the complete hitch assembly as you remove the blocks, and lower the assembly to the ground. Slide the assembly from under the vehicle.
- Reinstall the mounting rod, klik pin, and hex fasteners into the mounting frame for storage.

To remove the front hitch by disassembling:

- Remove the internal cotter pin and clevis pin to disconnect the chain from the lift bracket. Reinstall clevis pin and internal cotter pin in lift bracket.
- Remove the klik pin from one end of the pivot rod.
- Support the hitch assembly (2, 'A' frame) and withdraw the pivot rod. Make certain to collect the two flat washers when removing the pivot rod.
- Separate the hitch assembly from the mounting frame, and reinstall the pivot rod (with washers) and klik pin in the hitch assembly for storage.
- Remove the klik pin from one end of the mounting rod and withdraw the rod from the mounting frame and the vehicle axle brackets.
- Remove the four hex cap screws and flange lock nuts securing the mounting frame to the vehicle bumper.
- Reinstall the mounting rod, klik pin, and hex fasteners into the mounting frame for storage.

Adjusting the Hitch Angle

The hitch angle can be adjusted into five positions. To adjust the blade angle, proceed as follows (See Figure 6):

- Grasp the handle of the support pin and pull upward to disengage the pin from the index plate.
- Pivot the hitch slightly in the desired direction and release the support pin while continuing to pivot the hitch. The support pin will snap into the first index hole in the direction it is being pivoted.
- Repeat the previous two steps to adjust the hitch into any other angle position.

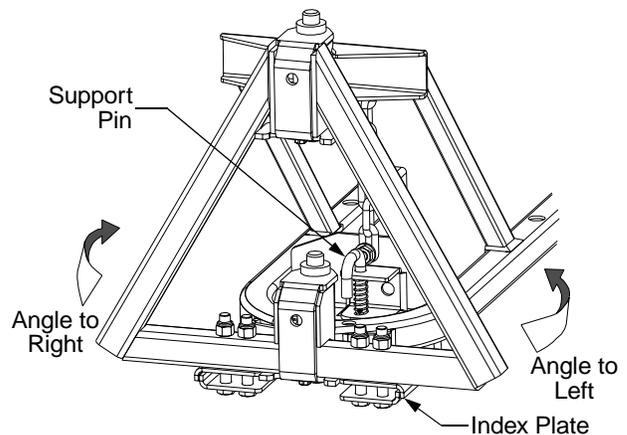


Figure 6

Adjusting Hitch Height

If installed correctly, the toggle switch will adjust the hitch height as follows (Refer to Figure 7):

- Lift and hold the switch to raise the hitch. Release switch immediately when you hear the cylinder reach its maximum height.
- Release the switch — it will return to the center position and the hitch will remain at the set height.
- Press and hold the switch downward to lower the hitch. Release switch immediately when you hear the cylinder reach its minimum height.

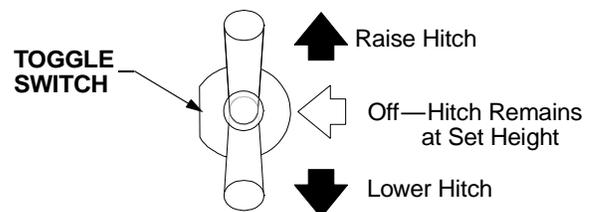


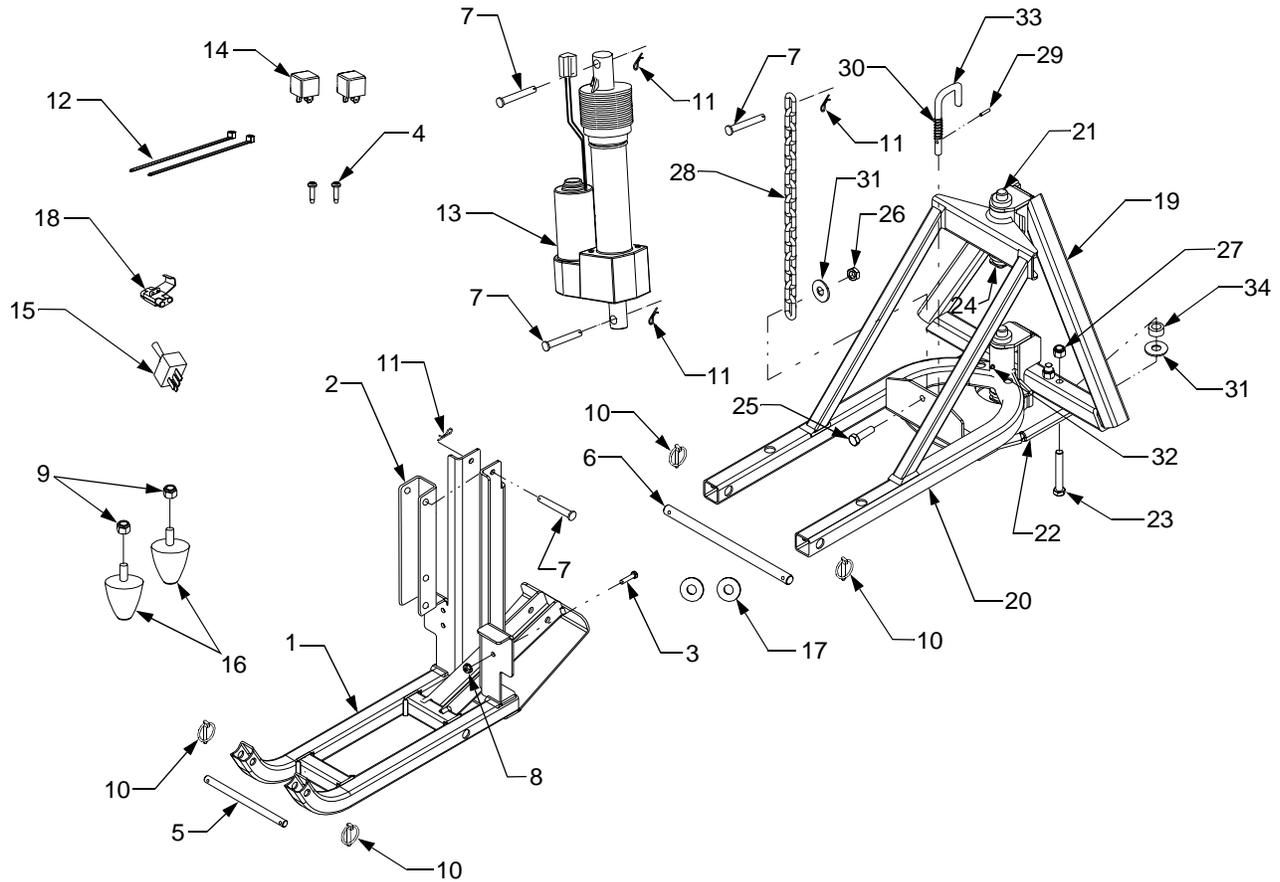
Figure 7

Lubrication

Periodically apply Cub Cadet HEP 251 grease to the two lube fittings for the pivot pins of the hitch 'A' frame angle feature.

Periodically lubricate all other pivot points with a light oil to help prevent corrosion and wear.

SECTION 4: PARTS LIST



REF. PART NO.	PART NUMBER	DESCRIPTION	QTY.	REF. PART NO.	PART NUMBER	DESCRIPTION	QTY.
1	603-04061	Mounting Frame	1	19	603-04055	Hitch 'A' Frame	1
2	707-04116	Lift Bracket	1	20	603-04057	Hitch Frame	1
3	710-0514	Hex Cap Screw, 3/8-16 x 1.0 GR5	4	21	603-0806	Front Hitch Pin	2
4	710-3009	Self Tapping Screw	2	22	607-04030	Angle Index Plate	1
5	711-04096	Mounting Rod, .625 x 8.625	1	23	710-0515	Hex Cap Screw, 1/2-20 x 3.5 GR5	4
6	711-04097	Rod, .75 x 12.75	1	24	710-1260A	Hex Wash. Hd. Tapp Screw, 5/16-18 x .75	2
7	711-04006	Clevis Pin, .5 Dia x 3.0	4	25	710-3126	Hex Cap Screw, 1/2-13 x 1.0 GR5	1
8	712-3005	Hex Flange Lock Nut, 3/8-16	4	26	712-3048	Hex Jam Nut, 1/2-13	1
9	712-04006	Hex Nylon Lock Nut, M10 x 1.25	4	27	712-3058	Hex Nylon Lock Nut, 1/2-20	4
10	714-0143	Klik Pin	4	28	713-04004	Chain	1
11	714-04003	Internal Cotter Pin	4	29	715-3003	Spirol Pin	1
12	725-0157	Cable Tie	2	30	732-3127	Compression Spring, .66 OD x 1.8	1
13	725-04020	Electric Lift Cylinder	1	31	736-0326	Flat Washer, .51 x 1.0 x .125	5
14	725-1718	Relay, 12V	2	32	737-3000	Lube Fitting, 3/16 Drive	2
15	725-1053	Toggle Switch	1	33	747-3188	Support Pin	1
16	735-04024	Rubber Bumper	4	34	750-0547	Spacer, .628 x .875 x .5	4
17	736-0316	Flat Washer	2	†	725-04051	Wire Harness	1
18	1721038	Splice Connector	1				

† Not Shown

MANUFACTURER'S LIMITED WARRANTY FOR:



The limited warranty set forth below is given by Cub Cadet LLC with respect to new merchandise purchased and used in the United States, its possessions and territories.

Cub Cadet LLC warrants this product against defects for a period of two (2) years commencing on the date of original purchase and will, at its option, repair or replace, free of charge, any part found to be defective in materials or workmanship. This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water, or damage because of other peril or natural disaster. Damage resulting from the installation or use of any accessory or attachment not approved by Cub Cadet LLC for use with the product(s) covered by this manual will void your warranty as to any resulting damage.

Normal wear parts or components thereof are subject to separate terms as follows: All normal wear parts or component failures will be covered on the product for a period of 90 days regardless of cause. After 90 days, but within the two year period, normal wear part failures will be covered ONLY IF caused by defects in materials or workmanship of OTHER component parts. Normal wear parts and components include, but are not limited to: batteries, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, shave plates, auger spiral rubber, and tires.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE, through your local authorized service dealer. To locate the dealer in your area, check your Yellow Pages, or contact Cub Cadet LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, or call 1-877-282-8684, or log on to our Web site at www.cubcadet.com.

This limited warranty does not provide coverage in the following cases:

- a. The engine or component parts thereof. These items carry a separate manufacturer's warranty. Refer to applicable manufacturer's warranty for terms and conditions.
- b. Routine maintenance items such as lubricants, filters, blade sharpening, tune-ups, brake adjustments, clutch adjustments, deck adjustments, and normal deterioration of the exterior finish due to use or exposure.
- c. Cub Cadet LLC does not extend any warranty for products sold or exported outside of the United States,

its possessions and territories, except those sold through Cub Cadet LLC's authorized channels of export distribution.

- d. Parts that are not genuine Cub Cadet parts are not covered by this warranty.
- e. Service completed by someone other than an authorized service dealer is not covered by this warranty.
- f. Transportation charges and service calls are not covered.

No implied warranty, including any implied warranty of merchantability of fitness for a particular purpose, applies after the applicable period of express written warranty above as to the parts as identified. No other express warranty, whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product, shall bind Cub Cadet LLC. During the period of the warranty, the exclusive remedy is repair or replacement of the product as set forth above.

The provisions as set forth in this warranty provide the sole and exclusive remedy arising from the sale. Cub Cadet LLC shall not be liable for incidental or consequential loss or damage including, without limitation, expenses incurred for substitute or replacement lawn care services or for rental expenses to temporarily replace a warranted product.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. **Alteration of safety features of the product shall void this warranty.** You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser or to the person for whom it was purchased as a gift.

HOW STATE LAW RELATES TO THIS WARRANTY: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Cub Cadet LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019; Phone: 1-877-282-8684