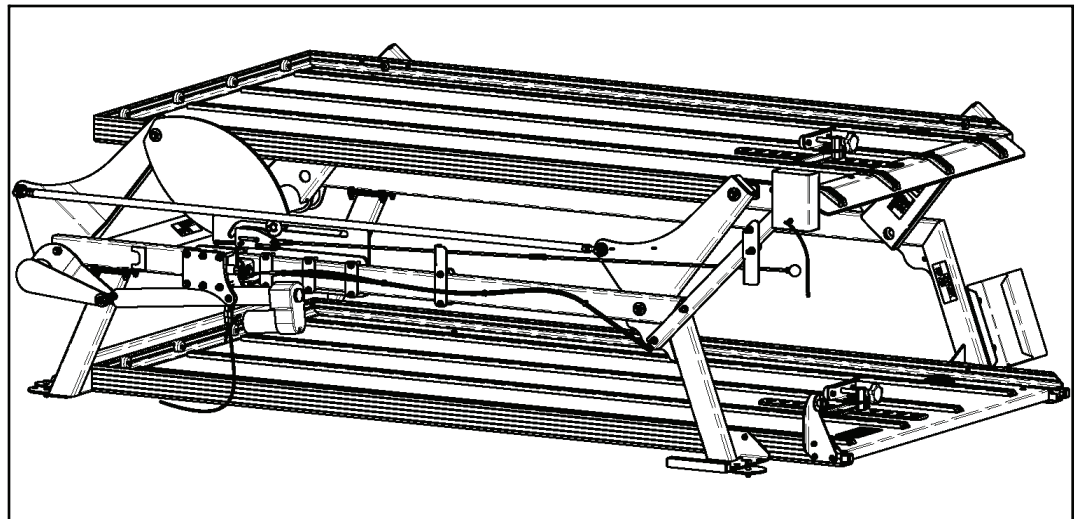




INSTALLATION INSTRUCTIONS

DD2000 (7224A000 / 7224B000)



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The Link DD2000 fits most full-size cargo vans.

1. INTRODUCTION




Thank you for choosing a Link Cargo Management Products (CMP) DD2000 Double Deck transportation system. We want to help you to get the best results from the deck and to operate it safely. This manual contains information to introduce you to the Link CMP DD2000 and to assist you with its installation. The manual is intended solely for use with this product.



All information in this manual is based on the latest information available at the time of printing. Link Manufacturing reserves the right to change its products or manuals at any time without notice. Updated instruction are available at www.linkcmp.com or by contacting Link CMP at (800) 248-3057.

Defective or damaged components should be returned to Link with a pre-arranged Returned Goods Authorization (RGA) number through the Customer Service Department. The damaged or defective component may then be replaced if in compliance with warranty conditions.

IMPORTANT: IT IS IMPORTANT THAT THE ENTIRE INSTALLATION INSTRUCTIONS BE READ THOROUGHLY BEFORE PROCEEDING WITH DECK INSTALLATION.

2. SAFETY SYMBOLS, TORQUE SYMBOL, and NOTES

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
 WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.
CAUTION	CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

	The torque symbol alerts you to tighten fasteners to a specified torque value. Refer to the torque table on page 7.
NOTE:	A Note provides information or suggestions that help you correctly perform a task.
	The electrical symbol indicates the presence of electric shock hazards which, if not avoided, may result in injury to personnel or damage to equipment.

3. SAFE WORKING PRACTICES:

3.1 CAUTION

When handling parts, wear appropriate gloves, eyeglasses, ear protection, and other safety equipment.

3.2 CAUTION

Practice safe lifting procedures. Consider size, shape, and weight of assemblies. Obtain help or the assistance of a crane when lifting heavy assemblies. Make certain the path of travel is clear.

4. INSTALLATION GUIDELINES

4.1. In order for this deck to operate properly, it must operate in the parameters specified by Link.

4.2. The installer must verify the vehicle is configured properly for the deck being added.

4.3. No alterations of any Link deck component is permitted without proper authorization from qualified Link personnel.

4.4. No welding of any deck component is permitted except when specified by Link.

4.5. CAUTION

The vehicle manufacturer should be consulted before any modifications are made to the frame of the vehicle. Cutting or altering the frame in certain areas may affect the manufacturer's warranty.

4.6. WARNING

Proper tightening of fasteners is important to the performance and safety of the deck.

5. PRE-INSTALLATION CHECKLIST

- ❑ Make certain the vehicle is placed on a level flat surface and that the parking brake is engaged.
- ❑ Refer to the vehicle owner's manual to locate the power supply where the deck power wire will attach. This may be located under the driver's seat or under hood in the engine compartment.

6. INSTALLATION PROCEDURE

WARNING

Whenever you are performing service on system wiring, follow the vehicle manufacturer recommendations located in the owner's manual pertaining to accidental air bag deployment. If in doubt, contact the vehicle manufacturer.

- 6.1. Begin by cleaning out the area where the DD2000 is to be installed and removing any floor mats. On GM cargo vans the plastic molding at the rear of the van floor must also be removed.
- 6.2. Inside the vehicle, assemble the left and right frame weldments to the crossmember using (8) 3/8 X 1 UNC bolts and (8) 3/8 serrated flange nuts as shown in **FIG.1**. Finger tighten all attachment bolts. Final tightening will be completed following installation and adjustment of the torsion arm and tie- rods.
- 6.3 Attach the control box ground wire to the vehicle ground (usually on the rear drivers side pillar). Attach the power wire from the control box to the vehicle's positive terminal. (See **FIG.2 ON NEXT PAGE**)

WARNING

Use caution when maneuvering the frame assembly into the vehicle. The width of the unit has been designed to maximize the amount of usable space and, as such, will come in close proximity to door jambs and internal features. Potential pinch points exist during installation.

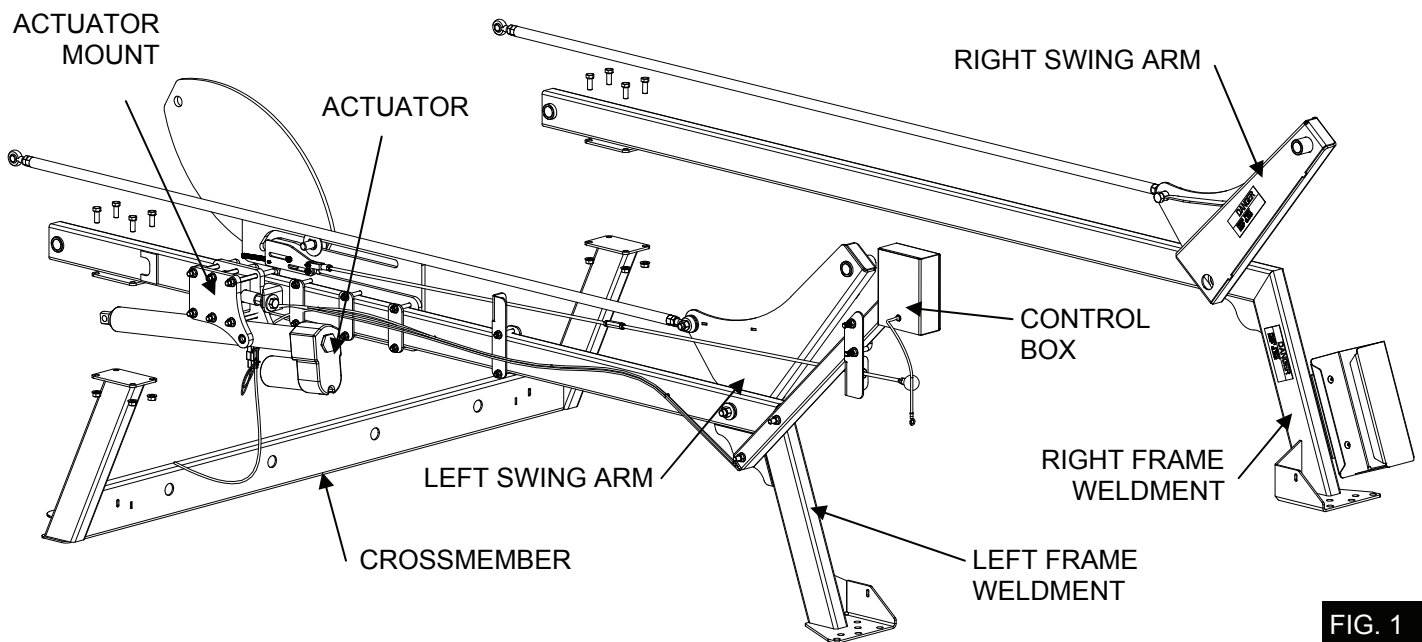



FIG. 1

 **WARNING** Do not "piggy back" or tap into either side of any fuse in the vehicle's fuse box.

NOTE: **Sprinter** and **GM** cargo vans have a positive stud terminal located under the driver's seat. **Ford** vans connect to the positive side of the starter motor relay. Refer to the vehicle owner's manual for specifics. An inline fuse is provided, and should be placed no further than 12 in. from the positive battery connection

- a. If an engine compartment location is used, run the power wire through the floor of the vehicle, along the frame rail, and into the engine compartment. Being sure to avoid all heat and rubbing hazards,
- b. Use rubber grommets and wire loom on all through-floor connections to prevent damage to the wire caused by rubbing.
- c. Do not route or attach wire to fuel or brake lines, steering linkages, or exhaust/heat shields. Secure the power wire using the provided wire clamps to prevent movement.

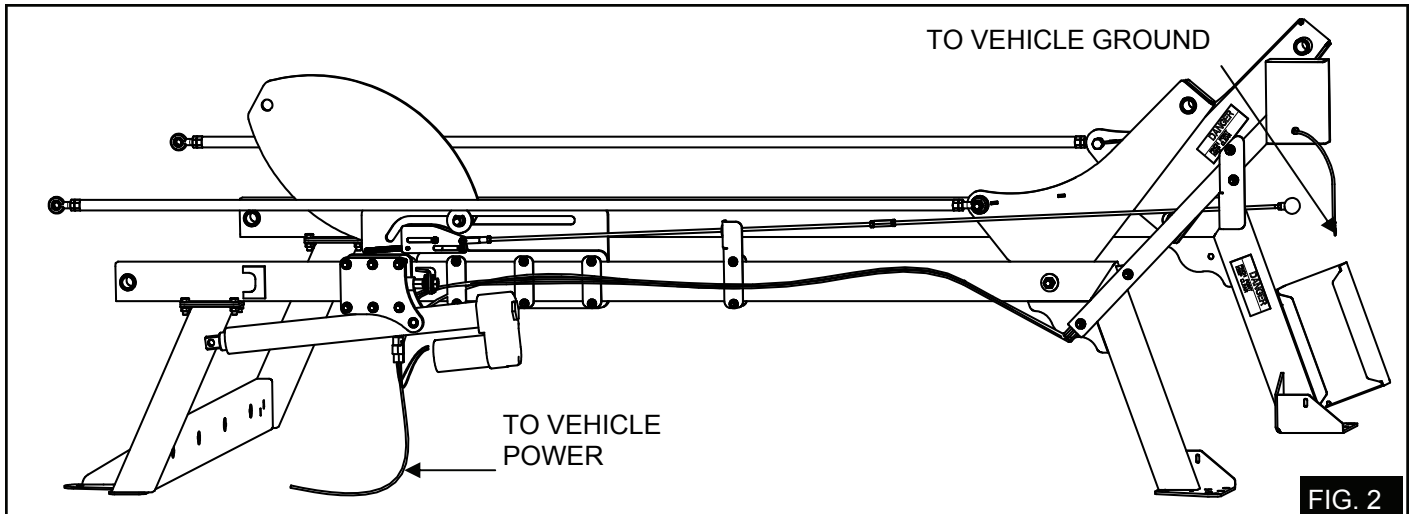


FIG. 2

6.4 Insert the steel and nylon, pivot bushings into the deck frame (See FIG. 3).



6.5 Install the torsion bar weldment using the (2) 1/2 X 3-1/2 bolts, , and lock nuts. Attach the rod end of the actuator 1/2 x 2 3/4 shoulder bolt and 3/8 serrated flange nut. (see FIG.3)

NOTE: Mounting locations may need to be reamed out to Ø.885 for bushings to fit properly.



6.6 Attach the tie rod links to the torsion bar using (2) 1/2 X 2-1/2 bolt, (3) flat washers (driver's side only) and (2) lock nuts. Torque to the value specified in the Torque Table. Do not adjust the tie rods at this point.

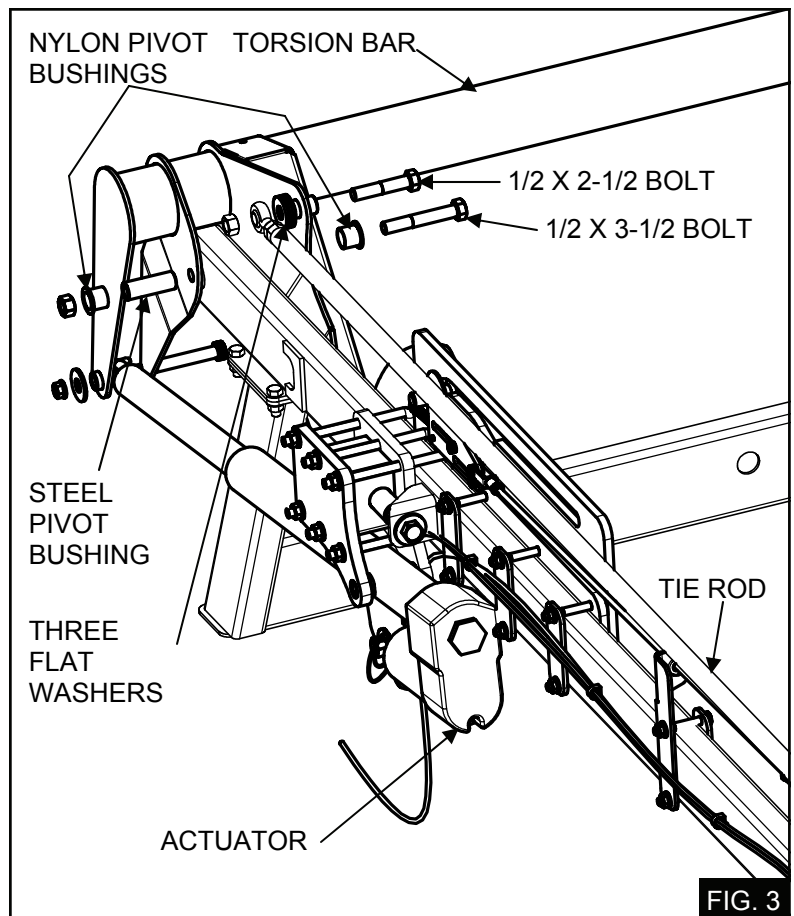




FIG. 3

 6.7 Place the bottom deck in the vehicle (**FIG.4**) and secure it with the front 1/4 X 3/4 socket button head screws and lock nuts, and finish with the same size fasteners in the rear. Install and tighten all fasteners between the bottom deck and the frames and cross member. Place 2x4s on top of the bottom deck for the top deck to rest on during installation.

 6.8 Place the top deck in the vehicle on top of the 2x4s. (**FIG.5**) Attach the top deck and deck latch bar to the torsion tube pivots in front with (1) 1/2 X 3-1/4 (passenger side) and (1) 1/2 X 3 3/4 (drivers side) socket button head screws, and locks nuts. Attach the top deck to the rear swing arms using (2) 1/2 X 4-1/4 socket button head screws, bushings, and lock nuts. Once the top deck is installed, raise deck slightly and remove the 2x4s.

▲ WARNING

During the path of movement, the distances between components may produce pinch points. Make certain all personnel are aware of movement before it occurs and that all appendages are clear of movement areas to prevent personal injury.

6.9 Raise the top deck so that the tie rods are horizontal and in line with the top deck. Adjust the tie rods so that there is no play. Raise and lower the top deck to check for binding. If no binding occurs, tighten the jam nuts on the front and rear of the tie rods. Re-check that no binding or bowing of the tie-rods occurs by raising and lowering the top deck.

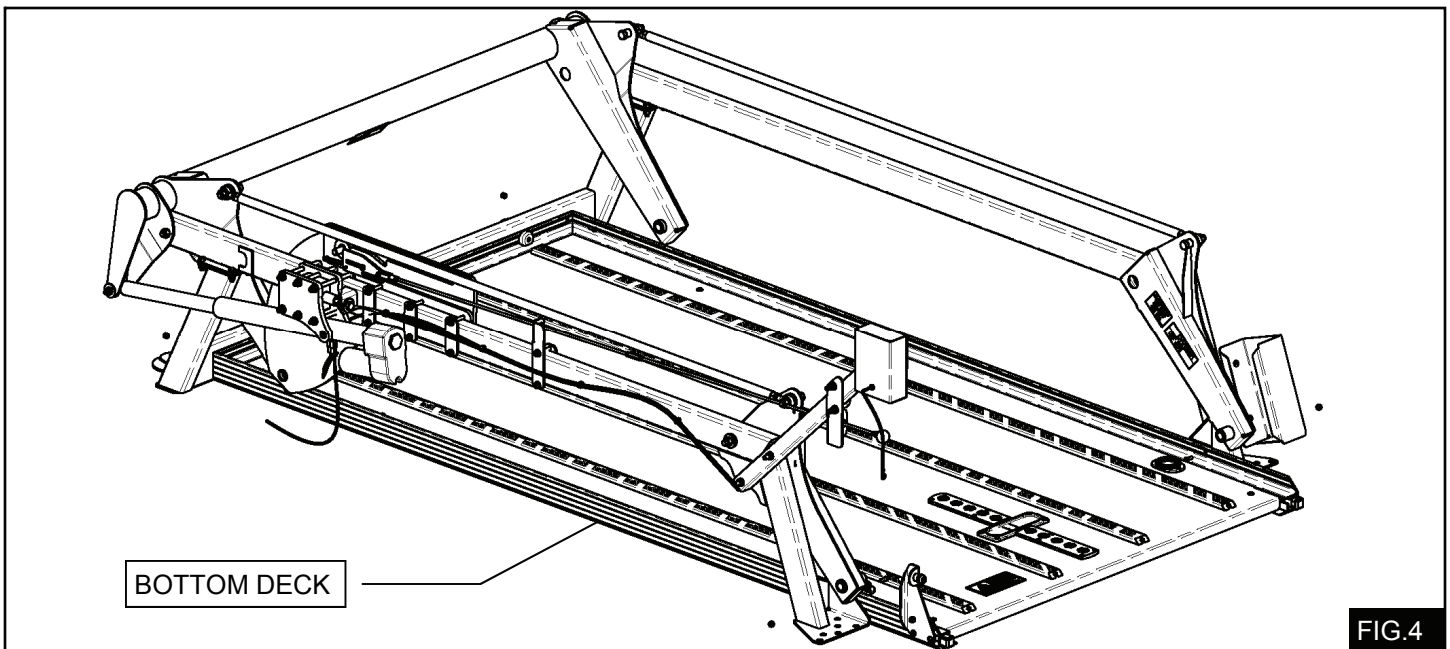


FIG.4

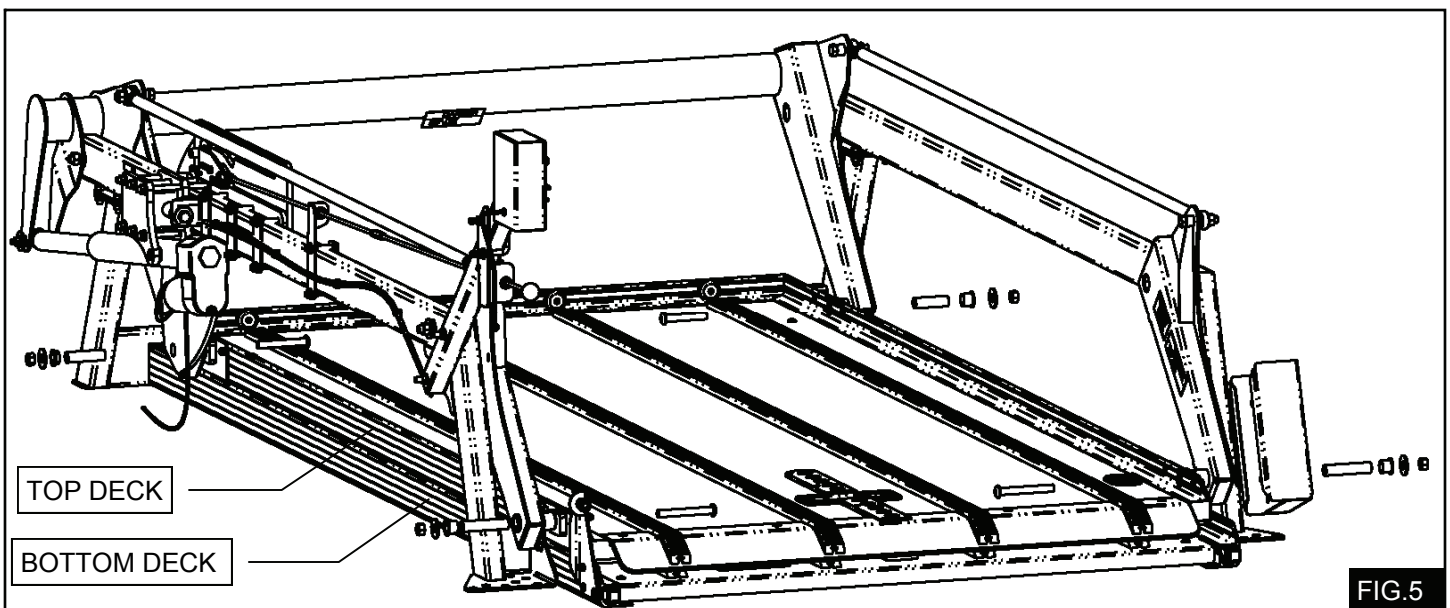


FIG.5

6.10 Install the bottom ramp by sliding the pin on the driver's side of the ramp into the mount on the bottom deck, then pressing down on the passenger's side pin so it snaps into place.

6.11 Positioning the DD2000 assembly:

Front-to-rear positioning:

Move the sub-assembly so that the inside of the bottom ramp rests horizontally. This is typically when the lowest bend on the ramp is on the edge of the bumper.

NOTE: Pay close attention to the control box so that it does not get damaged or damage any connections during positioning.

Side-to-side positioning:

Position the sub-assembly left and right so that the assembly is centered on the door opening.

Align the sub-assembly both by measuring and by visual aligning with the grooves in the floor.

Note that side panels may be curved when performing measurements.

CAUTION: Verify all potential mounting locations prior to drilling. Make certain that drilling will not interfere with components or structures under the floor, particularly fuel, exhaust, or electrical systems.

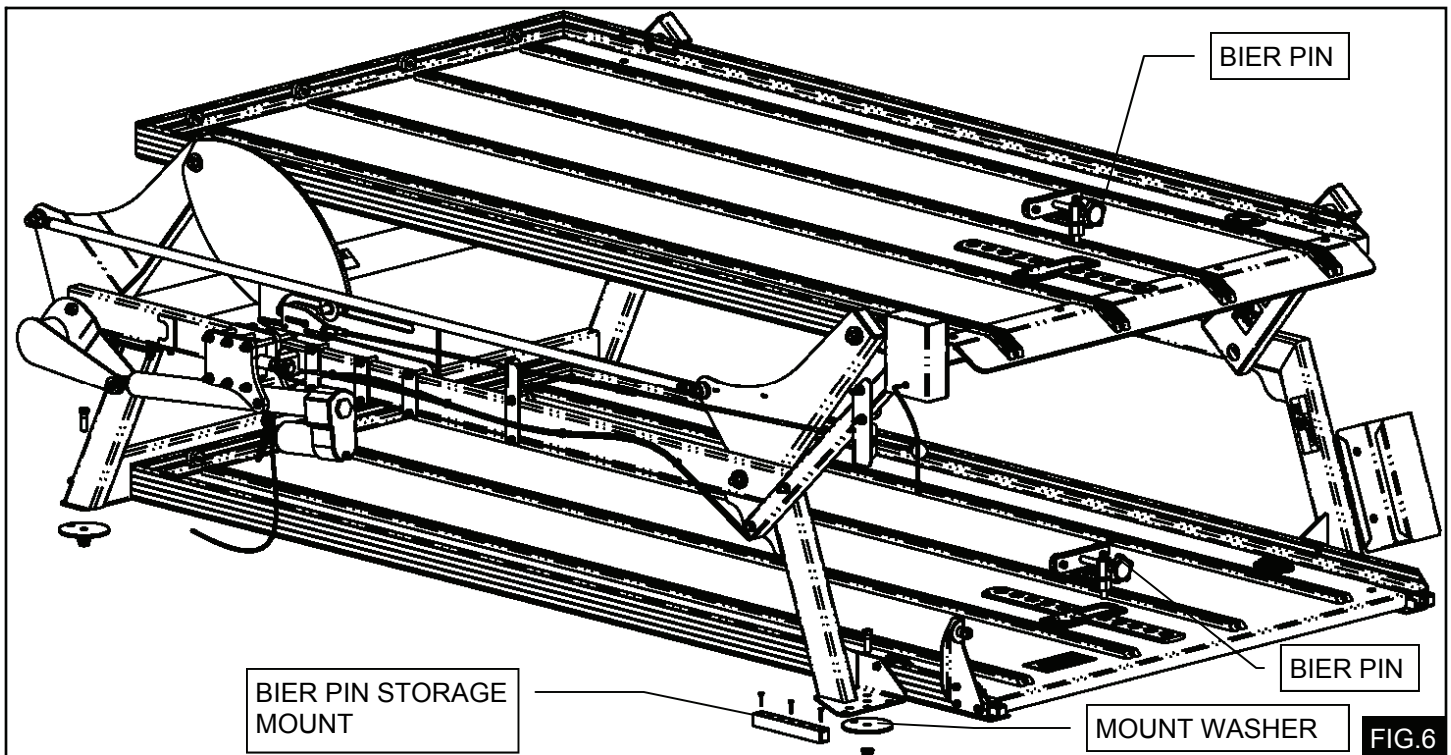
6.12 Mark and drill the 4 holes for the 7/16" mounting bolts.

- a. The rear mounts offer multiple holes for the bolt to pass through. Select one location per side that will not interfere with components or structures underneath.
- b. The front mounts offer a single location. Verify that the mount will not interfere with the fuel or exhaust system and is not positioned over the middle of a frame crossmember of the vehicle.
- c. Notes:



- 1) Secure with (4) 7/16 X 1-1/2 bolts, mounting washers, and serrated flange nuts.
- 2) All mounting bolts should drop in from the top.
- 3) The mounting washers offer two holes for securing the DD2000: a center location and an offset location. Use the hole location that works for the particular install.
- 4) Seal all drilled holes with Sandox etching adhesion primer to prevent corrosion and tighten all bolts.

6.13 Mount the Bier pin storage mount in a location that does not interfere with the operation of the DD2000. Secure the mount using the (3) #6 screws. (FIG.6)



6.14 Blow out all debris, particularly from any moving interfaces.

6.15 Verify that the top deck raises and lowers properly, that all doors close, electrical connections are properly secured, and all fasteners are properly torque to the values specified in the Torque Table. If adjustments are necessary, refer to section 8.



TORQUE TABLE	
FASTENER	TORQUE
5/16-UNC NUTS	220-305 IN-LBS
3/8-UNC NUTS	35-40 FT-LBS
7/16-UNC NUTS	55-70 FT -LBS
1/2-UNC NUTS	80-105 FT-LBS

7. INSTALLING THE RAMP MOUNTS AND RAMP

The deck is shipped with the two ramp mounts and ramp stop bracket uninstalled. These must be installed before the deck can be used. See **FIG. 7**

- Slide the two Ramp Mount tubes in to the Lower Deck being sure that the cutout is facing up and placed on the right hand side.
- Place two of the Philips Pan Head Screws through the right side of the Lower Deck and tighten.
- Place two of the Philips Pan Head Screws through the ramp mount bracket and left side of the Lower Deck side and tighten.
- Place the Button Head Screw facing to the out side of Lower Deck install Flat Washer and Nylock nut and tighten.
- Place the ramp into the left side Mount Tube. Using gentle pressure snap the ramp into the right side Mount Tube.

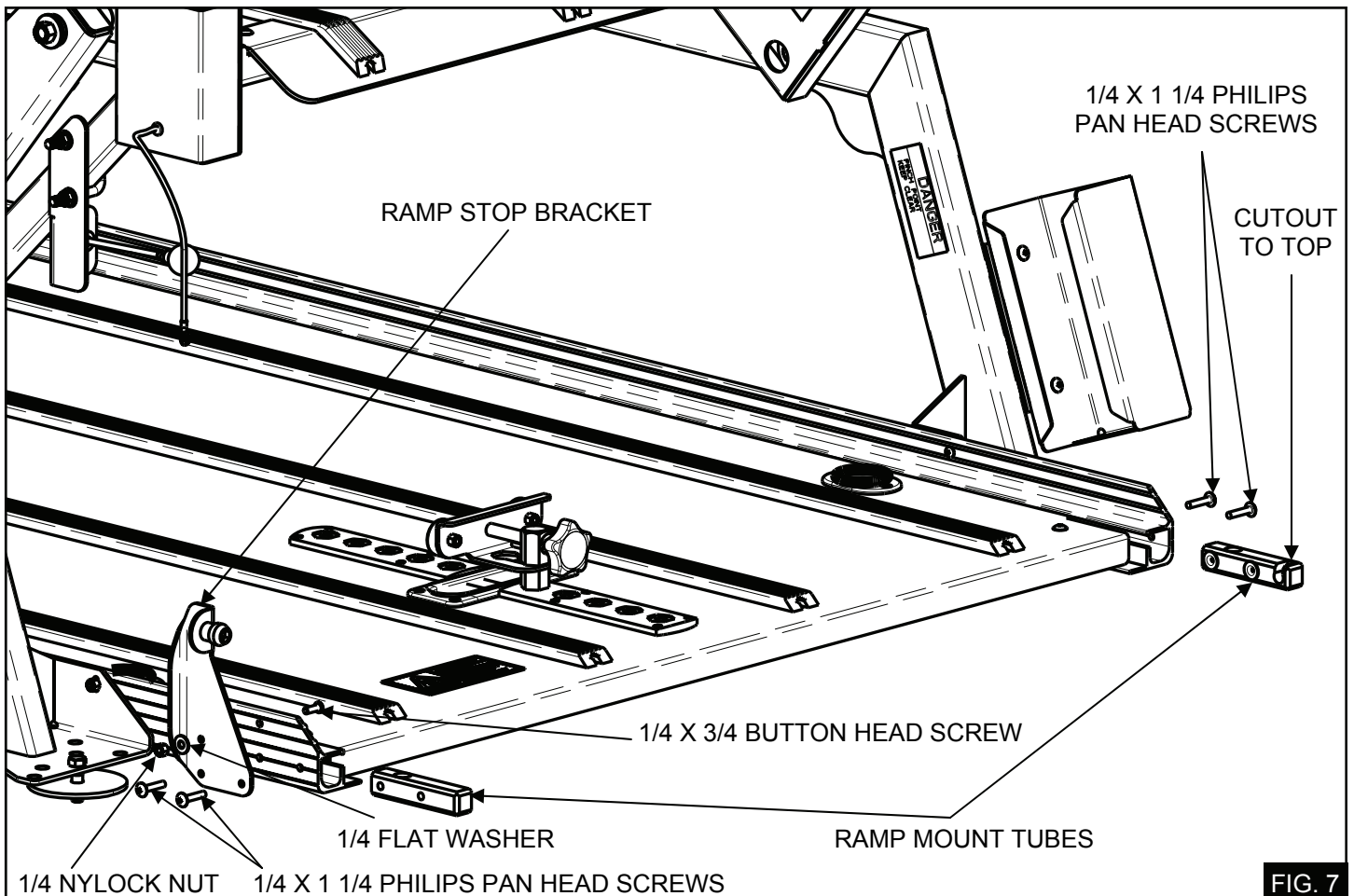


FIG. 7

8. ADJUSTING THE DD2000

There are 2 adjustment systems used by the DD2000: the tie-rods control the levelness of the deck while the location of the actuator controls the height of the top deck.

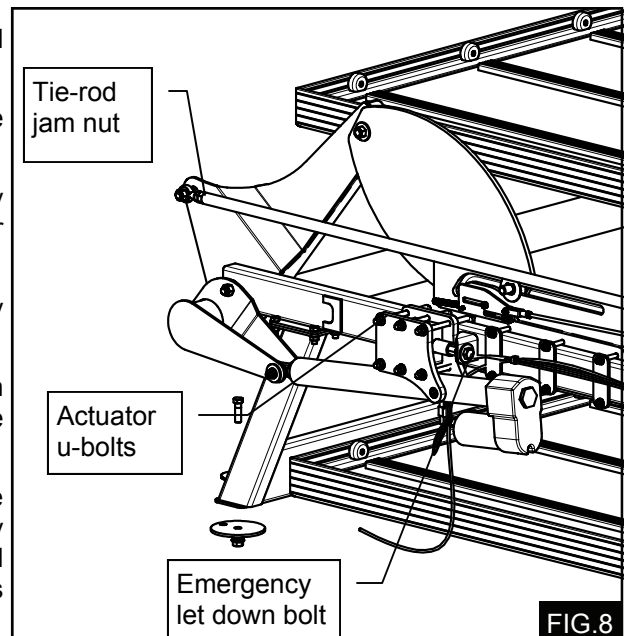
To adjust the levelness of the deck using the tie rods:

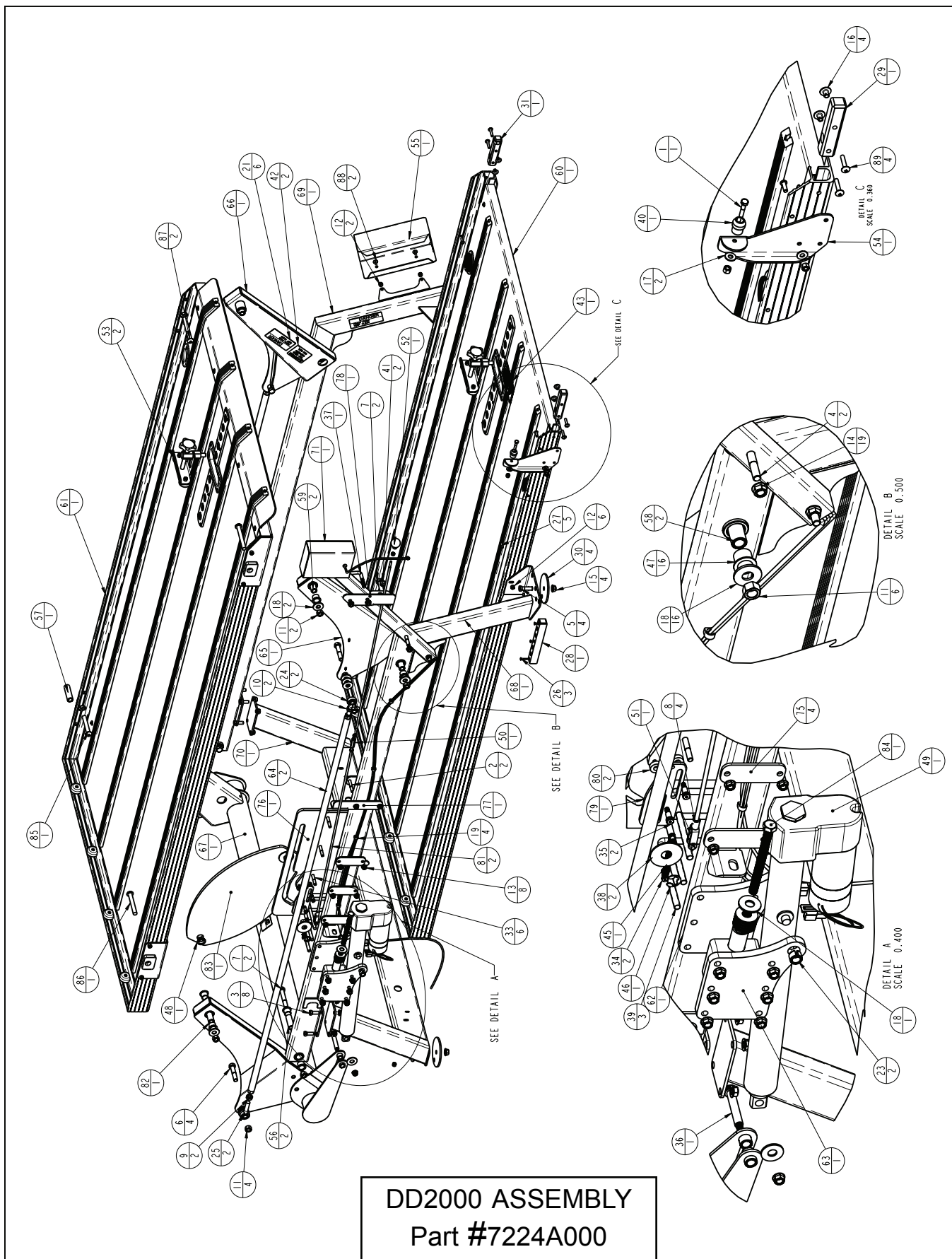
- Raise the top deck to a neutral working position so that it is even with the side frames.
- Loosen the jam nuts located on both ends of the two tie-rods. (see **FIG.8**)
- With a level placed front-to-rear on the top deck, rotate the body of the tie-rod until the top deck is level, keeping track of how many revolutions are completed. It is best to go in small adjustments (1-2 revolutions), repeating the process until the deck is level.
- Adjust the tie-rod on the opposite side of the deck the same number of revolutions.
- Raise and lower the deck to verify that no binding occurs.
- Tighten the jam nuts on both tie-rods.



To adjust the height of the deck using the actuator:

- Loosen the six nuts securing the three U-bolts that hold the actuator in position. **Do not fully remove the nuts.**
- Adjust the emergency let-down bolt to obtain the desired height:
 - To raise the deck, bring the actuator rearward by turning the emergency let down bolt counter clockwise.
 - To lower the deck, adjust the actuator forward by turning the emergency let down bolt clockwise.
- Once the top deck reaches the desired height, tighten the nuts on the U-bolts to the values specified in the Torque Table.
- Raise and lower the deck to verify that no interference occurs. Verify that the upper deck latch operates freely engaging when the deck is in the raised position and does not reach the bottom of the slot before the deck is completely lowered.





ITEM	DESCRIPTION	PART #	QTY	ITEM	DESCRIPTION	PART #	QTY
1	1/4 X 1 1/4 UNC HEX CAP SCR (GR 5)	1401-0810	1	46	RETAINING RING-E-STYLE,5/8"	15032016	1
2	5/16 X 2 1/4 UNC HEX CAP SCR (GR 5)	1401-1018	2	47	BUSHING-PIVOT, NYLON	15040095	16
3	3/8 X 1 UNC HEX CAP SCR (GR 5)	1401-1208	8	48	BUSHING-PIVOT, NYLON, 3/8	15040098	1
4	3/8 X 2 1/2 UNC HEX CAP SCR (GR 5)	1401-1220	2	49	ELEC. BRAKE-ACTUATOR, WARNER	15040325	1
5	7/16 X 1 1/2 UNC HEX CAP SCR (GR 5)	1401-1412	4	50	1/4-20 UNC X 1.5 COUPLING NUT GR 2	15060301	1
6	1/2 X 2 1/2 UNC HEX CAP SCR (GR 5)	1401-1620	4	51	END-ROD,CLEVIS	15060459	1
7	1/2 X 3 1/4 UNC HEX CAP SCR (GR 5)	1401-1626	4	52	KNOB-HANDLE, ROUND	15070206	1
8	1/4 UNC HEX NUT (GR B)	1470-0800	4	53	PIN-BIER, ADJUSTABLE	15070275	2
9	1/2 UNF HEX JAM NUT	1475-1600	2	54	BRACKET-STOP, RAMP	72240010	1
10	1/2 UNF HEX JAM NUT LH THREADS	1475-1601	2	55	HOLDER-GLOVE BOX	72240070	1
11	1/2 UNC HEX CTR LOCK NUT (GR B)	1476-1600	12	56	BUSHING-PIVOT	72240071	2
12	1/4 UNC HEX NYLOCK NUT (GR B)	1478-0800	8	57	BUSHING-PIVOT	72240072	1
13	5/16 UNC SERRATED FLANGE NUT	1480-1000	8	58	BUSHING-PIVOT	72240073	2
14	3/8 UNC SERRATED FLANGE NUT	1480-1200	19	59	BUSHING-PIVOT	72240074	2
15	7/16 UNC SERRATED FLANGE NUT	1480-1400	4	60	DECK-BOTTOM	72241002_1023	1
16	NUT 1/4-20 X 7/16 HT PROPELLER TEE	1484-0801	4	61	DECK-TOP	72241003_1024	1
17	1/4 TYPE A PLAIN WASHER	1487-0800	2	62	BRACKET-MOUNT, ACTUATOR	72241008	1
18	1/2 TYPE A PLAIN WASHER	1487-1600	19	63	BRACKET-ADJUSTMENT, ACTUATOR	72241009	1
19	CUP-LATCHING	1500-0302	4	64	TIE ROD WELDMENT	72241010	2
20	BOX (11.13 X 8.63 X 6.00)	1500-1249	1	65	ARM-SWING, REAR	72241011	1
21	DECAL-PINCH POINT	1500-1311	6	66	ARM-SWING, REAR	72241012	1
22	BAG-RECLOSABLE, 6.00 X 9.00	1500-1705	5	67	WELDMENT-BAR, TORSION	72241013	1
23	TENSION BUSHING	1504-0091	2	68	WELDMENT-FRAME, LEFT	72241014	1
24	ROD END-SPHERICAL, LEFT HAND	1504-0100	2	69	WELDMENT-FRAME, RIGHT	72241015	1
25	ROD END-SPHERICAL, RIGHT HAND	1504-0101	2	70	WELDMENT-CROSSMEMBER	72241016	1
26	#6 X 1 DRYWALL SCREW W/ DRILL POINT	1506-0006	3	71	BOX-CONTROL	72241018	1
27	1/4-20 X 3/4 SOCKET BUTTON HD SS CAP SCREW	1506-0033	5	72	KIT-ELECTRICAL, DD2000	72241022	1
28	BIER PIN HOLDER	1507-0294	1	73	RAMP ASSEMBLY (FORD/SPRINTER)	72241026	1
29	TUBE-MOUNT, RAMP	7000-0027	1	74	RAMP ASSEMBLY (GM) STRAIGHT EDGE	72241036	1
30	WASHER-FLOOR SUPPORT	7000-0031	4	75	PLATE-ROD HOLDER, MIDDLE	72241051	4
31	TUBE-MOUNT, RAMP	7000-0061	1	76	CATCH WELDMENT	72241065	1
32	EMERGENCY LET DOWN KIT	7221-0300	1	77	HOLDER-ROD,MIDDLE	72241066	1
33	5/16 X 2 1/2 UNC HEX CAP SCR (GR 5)	14011020	6	78	HOLDER-ROD, REAR	72241067	1
34	1/4 X 1/4 SHOULDER BOLT	14300802	2	79	LIFT-LEVER,	72241068	1
35	5/16 X 1/2 SHOULDER BOLT	14301004	2	80	SPACER-RELEASE, DELRIN	72241069	2
36	1/2 X 2 3/4 SHOULDER BOLT	14301622	1	81	ROD-RELEASE, CATCH	72241070	2
37	3/8 X 2 X 2.625 U-BOLT (SQUARE)	14650041	1	82	BUSHING-PIVOT, 2.938	72241071	1
38	WASHER-FLAT FENDER, 5/8 X 2	14916407	2	83	STOP BAR WELDMENT	72241072	1
39	U-BOLT, 3/8 UNC, 3.00 X 5.50 (SQUARE)	14950004	3	84	1/2 X 5.5 UNC HEX FULLY THREADED CAP SCR	141C1544	1
40	RAMP HOLDER, MALE END	15000006	1	85	1/2 X 3 1/4 UNC SOCKET BUTTON HD CAP SCR	142C1626	1
41	GROMMET-RUBBER, 3/8	15000324	2	86	1/2 X 3 3/4 UNC SOCKET BUTTON HD CAP SCR	142C1630	1
42	DECAL-LOAD CAPACITY 600 LBS.	15001338	2	87	1/2 X 4 1/4 UNC SOCKET BUTTON HD CAP SCR	142C1634	2
43	LABEL-WARNING, DOUBLE DECK	15001375	1	88	1/4 X 1/2 UNC TRUSS HD PH MACH SCR, SS	144C-0804	2
44	BAG-RECLOSABLE, 5.00 X 5.00	15001706	5	89	1/4 X 1 1/4 UNC TRUSS HD PH MACH SCR, SS	144C-0810	4
45	SPRING-EXT., 11/32 X 2 3/4 X .035 WIRE	15010002	1				



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