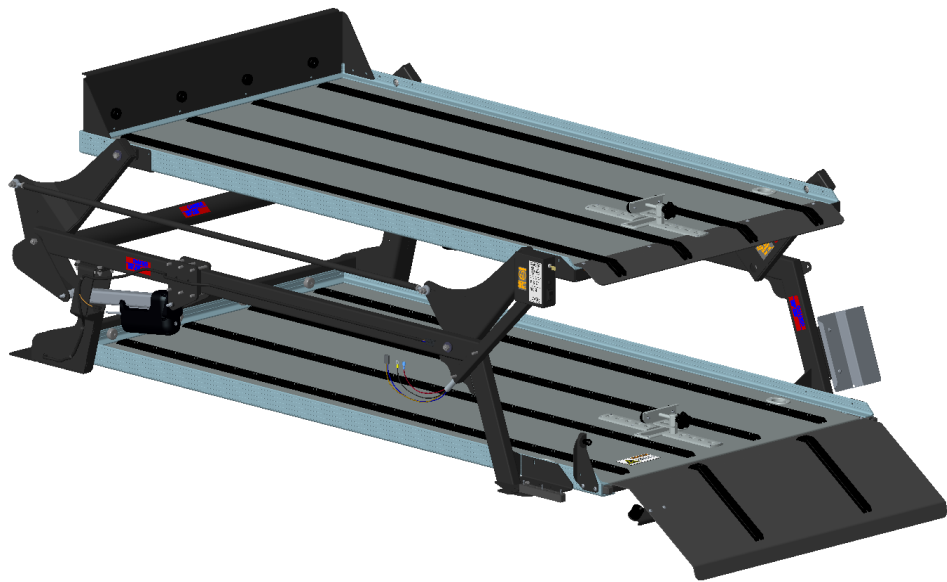




# OPERATION & MAINTENANCE MANUAL

**DD2000 (7224E000 / 7224F000)**



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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 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 operation. 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. Contact Link CMP at (800) 248-3057 for information on recent changes to products.

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

## 2. SAFETY SYMBOLS, TORQUE SYMBOL, and NOTES

**IMPORTANT:** IT IS IMPORTANT THAT THE ENTIRE OPERATION INSTRUCTIONS BE READ THOROUGHLY BEFORE USING THIS SYSTEM.

	<p>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.</p>
	<p><b>WARNING</b> indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</p>
	<p><b>CAUTION</b> indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.</p>
	<p>The torque symbol alerts you to tighten fasteners to a specified torque value.</p>

## 3. SAFE WORKING PRACTICES:

### 3.1

#### CAUTION

- The operation of the DD2000 Double Deck transport system involves moving parts.
- During the course of travel pinch points may exist between components.
- Keep hands and fingers clear of moving components during operation.

### 3.2

#### CAUTION

- Practice safe lifting procedures.
- The deck weldments are heavy, and can cause injury if lifted improperly or dropped. Consider size, shape, and weight of objects being moved.
- Obtain help or the assistance of a crane when

## 4. OPERATION GUIDELINES

- 4.1 In order for this deck to operate properly, it must operate in the parameters specified by Link.
- 4.2 No alterations of any Link deck component is permitted without proper authorization from qualified Link personnel.

## 5. OPERATION

### **⚠ WARNING**

- Make certain the vehicle is in park and the parking brake is engaged before loading / unloading the vehicle.
- Vehicle movement during loading / unloading could cause operator injury or death.

### **⚠ WARNING**

- The capacity of the top deck is **600 pounds maximum**, evenly distributed.
- Loading beyond the capacity may result in equipment damage or failure that may result in injury or death.

### 5.1 Top Deck Controls & Operation

Immediately inside the rear doors against one of the side walls is the top deck control box.

There are three items on the control box:

- System Lock On/Off switch (with key)
- Top Deck Raise / Lower Rocker Switch
- Circuit Breaker Reset Button

#### Operation:

- To operate the deck, turn the power key to the "ON" position.
- Push the rocker switch to "RAISE" to raise the deck.
- To lower the top deck, push the rocker switch to "LOWER".
- Turn the power switch to the "OFF" position and remove the key when you are finished operating the deck.

### **⚠ CAUTION**

- The System Lock On/Off key switch should be turned to off and the key removed if the unit is left unattended to prevent unauthorized use.

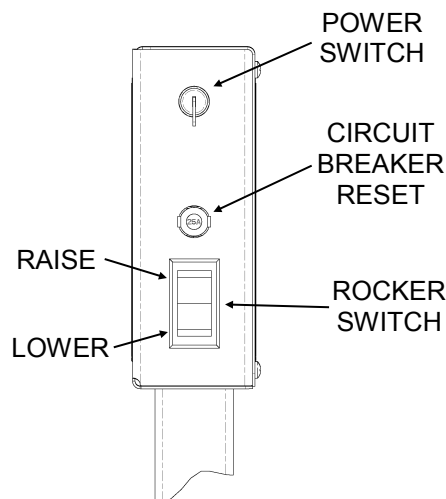
### 5.2 Loading / Unloading Procedure

1. With the vehicle in park and the parking brake secured, open the rear door of the vehicle.
2. Fold down the rear ramp.
3. If the top deck is to be used and is in the up position, lower the top deck by following the procedures outlined in **Step 5.1** of this manual.
4. Slide the items to be transported on to the top deck, taking care to evenly distribute the load as best as possible. Secure items with the bier pins (if caskets) or by placing the legs in the cups (hospital cots).

### **⚠ CAUTION**

- Make certain that the load is properly secured by properly tightening the bier pin(s).
- Caskets placed on both the top and bottom deck are prevented from lateral movement by the friction of the front bumpers combined with the clamping force of the bier pin.

5. Raise the top deck and place items to be transported on the bottom deck, taking care to properly secure the load.
6. Turn the System Lock On/Off Switch to "OFF" and remove the key.
7. Raise the rear ramp.
8. Close the rear doors.
9. Reverse the procedure for unloading.



## 6. MAINTENANCE

### CAUTION

- Park the vehicle in a level, flat area, and apply the parking brake before performing any maintenance.
- Turn the “**System Lock**” key switch to the “Off” position and remove the key before performing any maintenance.
- Perform maintenance work from outside the deck, whenever possible.

The DD2000 is designed to last for many years without any major maintenance. Periodically, check the following items:

#### Each Time the System is Used:

- Listen for unusual noises and watch to ensure proper movement of the system. If there is a problem, correct it before continuing to use the system.

#### Annually:

- Check tightness of all fasteners. (Refer to Torque Table below)
- Visually inspect for cracks or damage at all pivots on the framework and torsion bar and replace pivot bushings or pins if necessary.
- Check for cracks in the framework and decks and repair or replace if necessary.
- Verify that the electrical control system functions as intended.

### CAUTION

- Perform these checks with the Upper Deck lowered.

TORQUE TABLE	
FASTENER	TORQUE
3/8-UNC NUTS	30-40 FT-LBS
7/16-UNC NUTS	50-60 FT -LBS
1/2-UNC NUTS	80-100 FT-LBS

## 7. SERVICE

### Procedure for replacing an inoperative actuator:

#### CAUTION

- Park the vehicle in a level, flat area, and apply the parking brake before performing any maintenance.
- Turn the “**System Lock**” key switch to the “Off” position and remove the key before performing any maintenance.
- Perform maintenance work from outside the deck, whenever possible.

1. If the deck is lowered, or can be lowered, skip to step 6. If the deck is raised and stuck, complete steps 2 through 5 before proceeding.
2. If the deck is loaded, remove the load if possible.
3. Place jack stands or blocks under the top deck to support it in the raised position while preparing it to be lowered.
4. If necessary, use a jack or forklift to lift the top deck slightly, to free the actuators and actuator pivot bolts.

#### WARNING

- The top deck will be free to move if both actuators are disconnected from the torsion arm, and **Will Fall if Unsupported**.
- Do NOT force out the actuator pivot bolts. If the pivot bolts are difficult to remove they may still be supporting the top deck. When the load is removed from the actuators the pivot bolts will be easy to remove.

5. Disconnect the inoperative actuator(s) from the control wiring harness. Unfasten the inoperative actuator(s) from the torsion arm weldment and the actuator mount.
6. Check that no persons or objects are on the lower deck, or in the cargo area, then remove the supports and carefully lower the top deck. If one actuator is still functioning and connected, lower the top deck using the normal operating procedure. **NOTE:** One actuator is sufficient to safely lower the top deck, but does not have the capacity to raise the top deck while loaded.
  - If both actuators were non-functioning and disconnected, use a jack or forklift to carefully lower the top deck onto wood blocks placed on top of the lower deck. The top deck should be held 1-2 in. above the lower deck.
7. Extend the replacement actuator(s) with an auxiliary 12 volt source, and fit the new actuator(s) to the actuator mount and torsion arm.
8. Connect the new actuator(s) to the control wiring harness. Ensure that all persons are clear of the cargo area, and test the operation of the deck through several cycles.



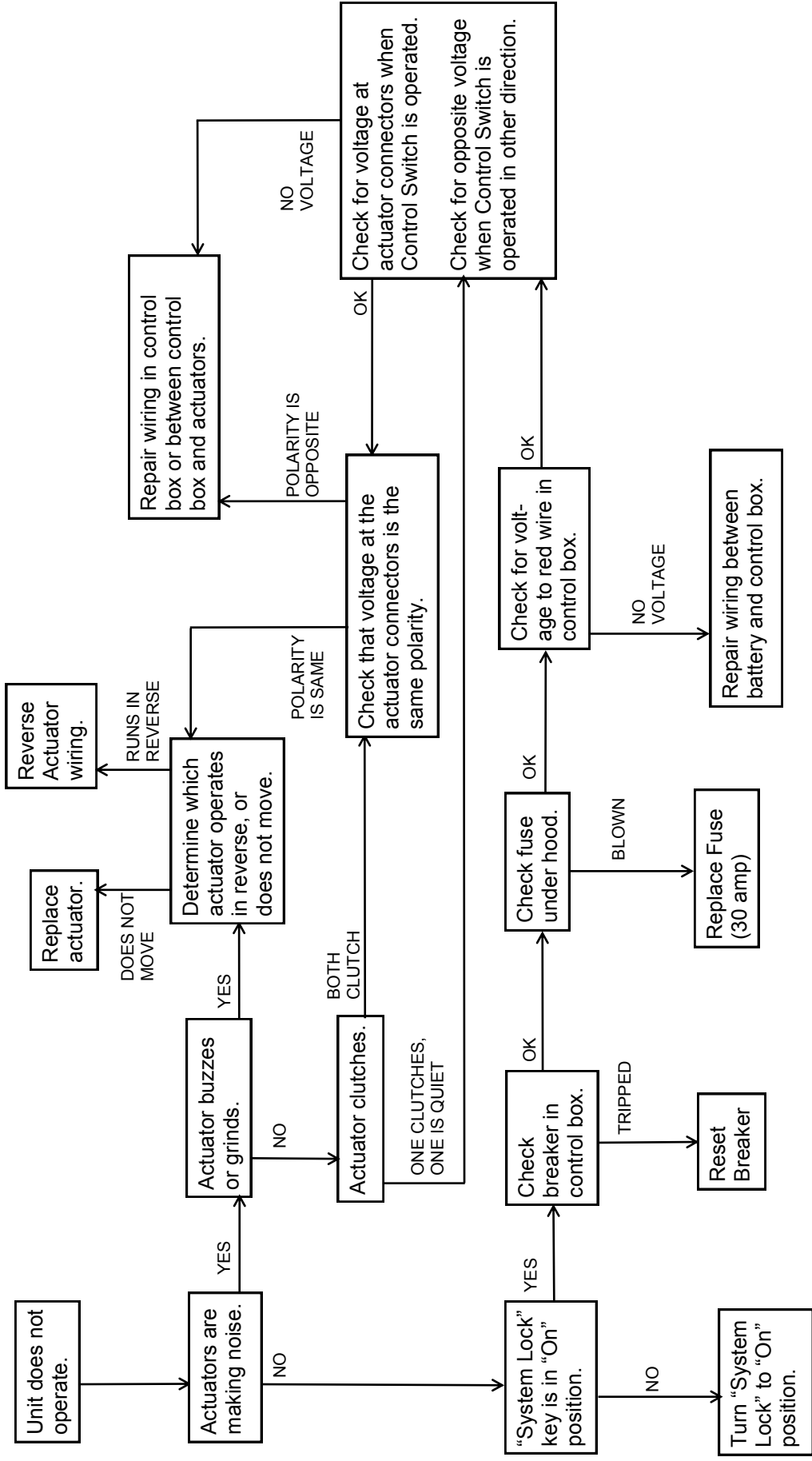
### Procedure for clearing blockages in the DD-2000:

1. If the deck is loaded, remove the loads, and lower the top deck, if possible.

#### CAUTION

- Park the vehicle in a level, flat area, and apply the parking brake before performing any maintenance.
- Turn the “**System Lock**” key switch to the “Off” position and remove the key before performing any maintenance.
- Perform maintenance work from outside the deck, whenever possible.

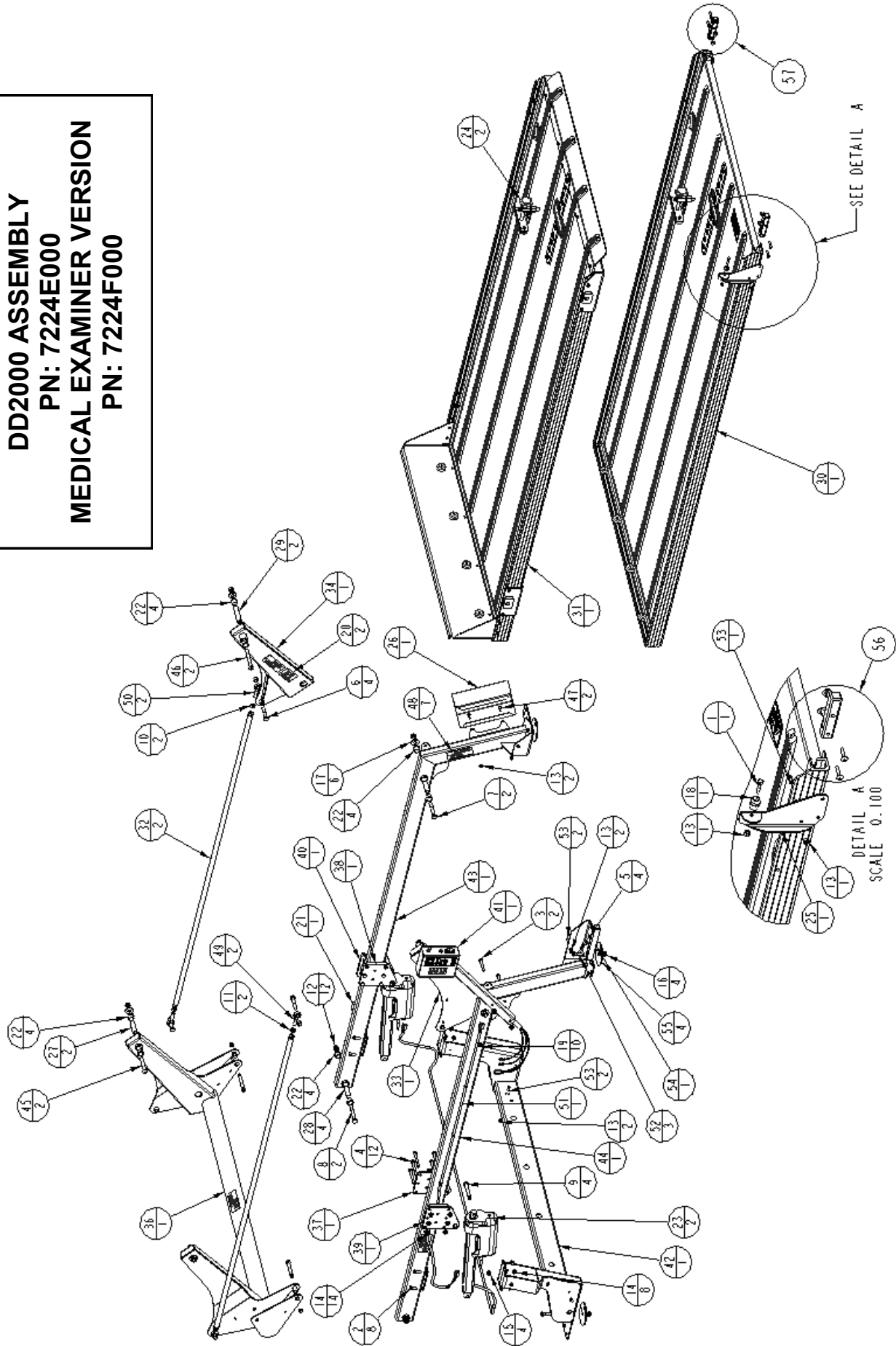
2. If the top deck is in the raised position, place jack stands under the top deck for support.
3. Remove the blockage, working from above the upper deck or from the side door, if possible.
4. Inspect the decks, frame, and mechanism for damage.
5. Ensure that all persons are clear of the cargo area, and remove the jack stands.
6. Test the operation of the deck through several cycles.



# DD-2000 Electrical Troubleshooting Diagram

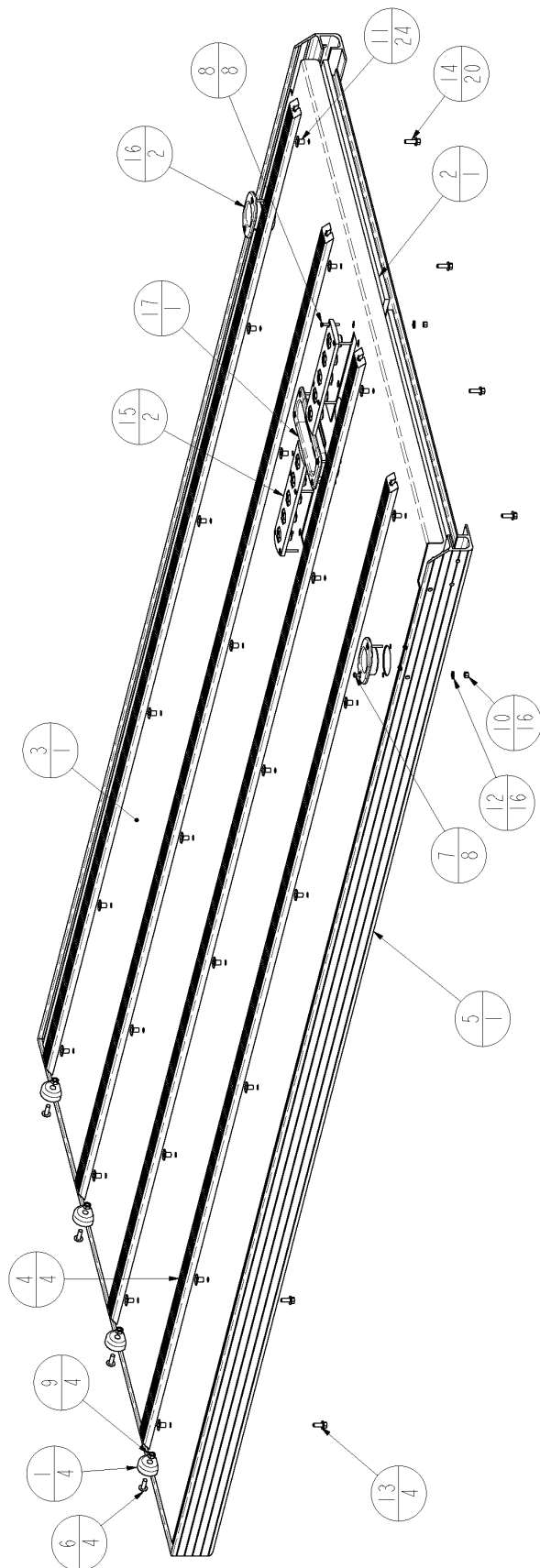
\*\*Replacement fuses are standard blade type fuses and can be found at your local automotive parts store.

**DD2000 ASSEMBLY  
 PN: 7224E000  
 MEDICAL EXAMINER VERSION  
 PN: 7224F000**



ITEM	PART #	DESCRIPTION	QTY	ITEM	PART #	DESCRIPTION	QTY
1	14010810	1/4 X 1 1/4 UNC HEX CAP SCR (GR 5)	1	30	72241002	DECK-BOTTOM	1
2	14011208	3/8 X 1 UNC HEX CAP SCR (GR 5)	8	31	72241003	DECK-TOP	1
3	14011220	3/8 X 2 1/2 UNC HEX CAP SCR (GR 5)	2	32	72241010	TIE ROD WELDMENT	2
4	14011226	3/8 X 3 1/4 UNC HEX CAP SCR (GR 5)	12	33	72241011	ARM-SWING, REAR	1
5	14011412	7/16 X 1 1/2 UNC HEX CAP SCR (GR 5)	4	34	72241012	ARM-SWING, REAR	1
6	14011620	1/2 X 2 1/2 UNC HEX CAP SCR (GR 5)	4	35	72241022	KIT-ELECTRICAL, DD2000	1
7	14011626	1/2 X 3 1/4 UNC HEX CAP SCR (GR 5)	2	36	72242104	WELDMENT-BAR, TORSION	1
8	14011628	1/2 X 3 1/2 UNC HEX CAP SCR (GR 5)	2	37	72242105	BRACKET-MOUNT, ACTUATOR INSIDE DRIVER	1
9	14301624	1/2 X 3 SHOULDER BOLT	4	38	72242106	BRACKET-MOUNT, ACTUATOR INSIDE PASS.	1
10	14751600	1/2 UNF HEX JAM NUT	2	39	72242107	BRACKET-MOUNT, ACTUATOR OUTSIDE DRIVER	1
11	14751601	1/2 UNF HEX JAM NUT LH THREADS	2	40	72242108	BRACKET-MOUNT, ACTUATOR OUTSIDE PASS.	1
12	14761600	1/2 UNC HEX CTR LOCK NUT (GR B)	12	41	72242109	ASSEMBLY-CONTROL BOX, DD2000	1
13	14780800	1/4 UNC HEX NYLOCK NUT (GR B)	8	42	72242121	WELDMENT-CROSSMEMBER	1
14	14801200	3/8 UNC SERRATED FLANGE NUT	22	43	72242122	WELDMENT-FRAME, RIGHT	1
15	14801201	3/8 UNC TOP LOCK FL NUT (GR F)	4	44	72242123	WELDMENT-FRAME, LEFT	1
16	14801400	7/16 UNC SERRATED FLANGE NUT	4	45	142C1626	1/2 X 3 1/4 UNC SOCKET BUTTON HD CAP SCR	2
17	14871600	1/2 TYPE A PLAIN WASHER	6	46	142C1634	1/2 X 4 1/4 UNC SOCKET BUTTON HD CAP SCR	2
18	15000006	RAMP HOLDER, MALE END	1	47	144C0804	1/4 X 1/2 UNC TRUSS HD PH MACH SCR, SS	2
19	15000302	CLIP-LATCHING	10	48	1500-1311	DECAL-PINCH POINT	7
20	15001338	DECAL-LOAD CAPACITY 600 LBS.	2	49	1504-0100	ROD END-SPHERICAL, LEFT HAND	2
21	15001380	LABEL-ID	1	50	1504-0101	ROD END-SPHERICAL, RIGHT HAND	2
22	15040095	BUSHING-PIVOT, NYLON	16	51	15051986	HARNES-ACTUATOR	1
23	15040314	ACTUATOR, 12V, 300MM STROKE, 6800N	2	52	1506-0006	#6 X 1 DRYWALL SCREW W/ DRILL POINT	3
24	15070275	PIN-BIER, ADJUSTABLE	2	53	1506-0033	1/4-20 X 3/4 SOCKET BUTTON HD SS CAP SCREW	5
25	72240010	BRACKET-STOP, RAMP	1	54	1507-0294	BIER PIN HOLDER	1
26	72240070	HOLDER-GLOVE BOX	1	55	7000-0031	WASHER-FLOOR SUPPORT	4
27	72240072	BUSHING-PIVOT	2	56	70002003	KIT-TUBE MOUNT, RAMP-LEFT	1
28	72240073	BUSHING-PIVOT	4	57	70002004	KIT-TUBE MOUNT, RAMP-RIGHT	1
29	72240074	BUSHING-PIVOT	2				



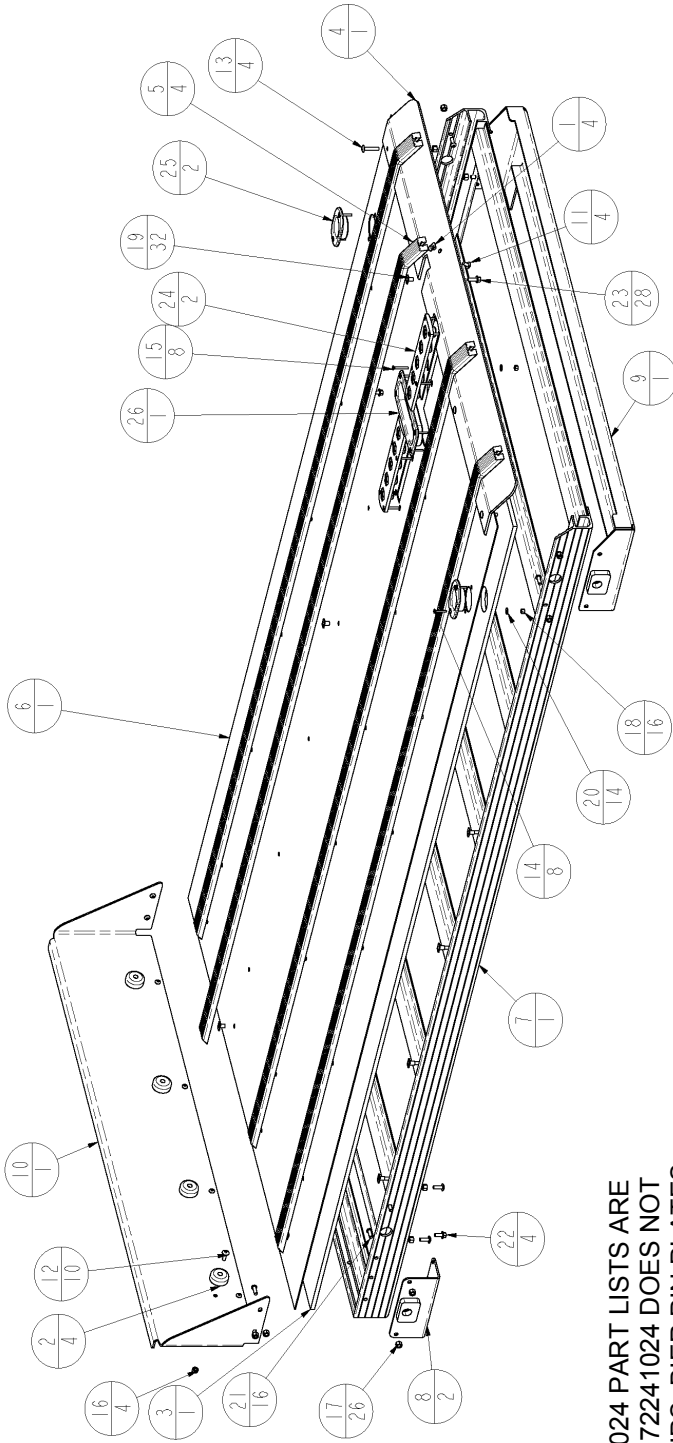


72241002 AND 72241023 PART LISTS ARE NEARLY IDENTICAL, 72241023 DOES NOT INCLUDE GLIDE STRIPS, BIER PIN PLATES, AND ASSOCIATED FASTENERS.

**DD2000 LOWER DECK**  
**PN: 72241002**  
**MEDICAL EXAMINER**  
**LOWERDECK**  
**PN: 72241023**

ITEM	PART NUMBER	DESCRIPTION	QTY
1	15070408	BUMPER-RUBBER, NOTCHED	4
2	72240007	BOARD-DECK	1
3	72240008	SHEET-DECK	1
4	72240009	GLIDE STRIP	4
5	72241001	FRAME-DECK, BOTTOM	1
6	144C-0806	1/4 X 3/4 UNC TRUSS HD PH MACH SCR, SS	4
7	144G0C08	8-32 X 1 OVAL HD MACH SCR-SS	8
8	144G0C10	8-32 X 1.1/4 OVAL HD MACH SCR-SS	8
9	1470-0800	1/4 UNC HEX NUT (GR B)	4
10	1478-0C00	8-32 UNC HEX NYLOCK NUT, GR B, ZINC PLT	16
11	1484-0808	1/4-20 X 7/16 SLAB BASE WELD NUT	24
12	14880B00	#10 SAE PLAIN WASHER	16
13	1506-0420	1/4 X 5/8 FLANGE HEAD BOLT	4
14	1506-0421	1/4 X 3/4 FLANGE HEAD BOLT	20
15	1507-0295	BIER PIN PLATE (5 HOLE)	2
16	7800-0011	RECESSED COT CUP	2
17	7800-0016	SUPER SIZED RECESSED COT CUP	1

DD2000 UPPER DECK PN: 72241003  
 MEDICAL EXAMINER UPPER DECKPN: 72241024



72241003 AND 72241024 PART LISTS ARE NEARLY IDENTICAL: 72241024 DOES NOT INCLUDE GLIDE STRIPS, BIER PIN PLATES, AND ASSOCIATED FASTENERS.

ITEM	PART NUMBER	DESCRIPTION	QTY	ITEM	PART NUMBER	DESCRIPTION	QTY
1	15060054	1/4-20 X 1/4 SLAB BASE WELD NUT	4	14	144GOC08	8-32 X 1 OVAL HD MACH SCR-SS	8
2	15070407	BUMPER-RECESSED, 1.50 O.D. X .63 H	4	15	144GOC10	8-32 X 1 1/4 OVAL HD MACH SCR-SS	8
3	72240011	BOARD-DECK	1	16	1470-0800	1/4 UNC HEX NUT (GR B)	4
4	72240012	GUARD-ANGLE, REAR	1	17	1478-0800	1/4 UNC HEX NYLOCK NUT (GR B)	26
5	72240013	GLIDE STRIP	4	18	1478-0C00	8-32 UNC HEX NYLOCK NUT, GR B, ZINC PLT	16
6	72240014	SHEET-DECK	1	19	1484-0808	1/4-20 X 7/16 SLAB BASE WELD NUT	32
7	72241004	FRAME-DECK, TOP	1	20	14880800	#10 SAE PLAIN WASHER	14
8	72241005	BRACKET-PIVOT, TOP	2	21	1506-0033	1/4-20 X 3/4 SOCKET BUTTON HD SS CAP SCREW	16
9	72241006	BRACKET-PIVOT, TOP	1	22	1506-0420	1/4 X 5/8 FLANGE HEAD BOLT	4
10	72242025	BRACKET-IMPACT, FRONT	1	23	1506-0421	1/4 X 3/4 FLANGE HEAD BOLT	28
11	144C-0804	1/4 X 1/2 UNC TRUSS HD PH MACH SCR, SS	4	24	1507-0295	BIER PIN PLATE (5 HOLE)	2
12	144C-0806	1/4 X 3/4 UNC TRUSS HD PH MACH SCR, SS	10	25	7800-0011	RECESSED COT CUP	2
13	144C-0810	1/4 X 1 1/4 UNC TRUSS HD PH MACH SCR, SS	4	26	7800-0016	SUPER SIZED RECESSED COT CUP	1



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