



**Electro-Hydraulic / Motorcycle Lift Bench
with Retractable Ramp**

M-2200IEH-XR

Capacity 2,200lbs



**Installation, Operation & Maintenance
Manual**

Oct. 2018

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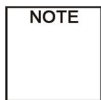
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1. Safety Information

1.1 Note, Caution and Warning

This document uses the following conventions- **Note, Caution and Warning** . to alert you to special instructions, tips, or hazards for a given procedure. Please familiarize yourself with the conventions described below.



Indicates important information that requires special attention, such as a procedure for a specific vehicle, or tips on operating the equipment.



Indicates the potential for damage to equipment, accessories, or the vehicle unless you follow the instructions or procedure exactly.



Indicates the potential for property damage, personal injury, or death due to hazards associated with the equipment, vehicle, or environment. Do not perform any procedure until you have read and understood the warning instructions.

1.2 Important Information

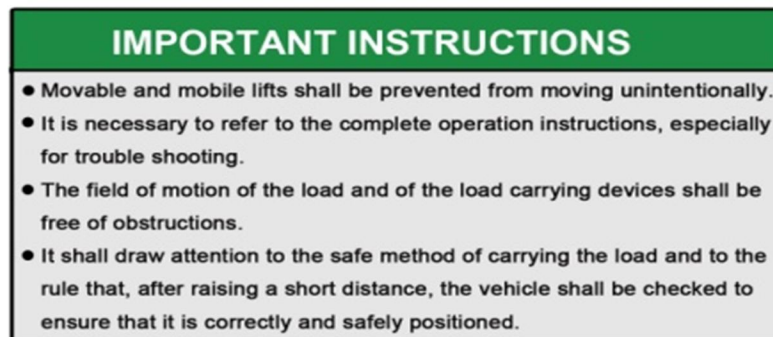
1. Carefully read this manual thoroughly before installing, operating, or maintaining this lift.
2. This lift is designed for indoor use only, and should not be installed in a pit or depression.
3. The lifts have specific electrical requirements as described in the Installation Instructions section of this manual.
4. Failure by the owner to provide the **recommended shelter, mounting surface, electrical supply, and ceiling height** could result in unsatisfactory lift performance, property damage, or personal injury.
5. The operation of the lift is permitted by authorized person only.
6. Keep this guide as well as all the supplied technical literature in a safe place close to the lift so that operators are able to read it whenever necessary.
7. If any confusion, please contact the service provider or your distributor.

1.3 Safety Instructions

1. **Do not** raise a vehicle on the lift until the initialization is completed as described in this manual.
2. Technicians should be trained to use and care for the lift by familiarizing themselves with the publications listed above. The lift should **never be operated by an untrained person**.
3. **Do not overload the lift**. The capacity of the lift is shown on cover of this document and on the lift's serial number tag.
4. Positioning the vehicle is very important. Only trained technicians should position the vehicle on the lift. **Never allow anyone to stand in the path of the vehicle as it is being positioned and never raise vehicle with passengers on vehicles.**

5. Keep everyone clear of the lift when the lift is moving, the locking mechanism is disengaged, or the vehicle is in danger of falling.
6. Unauthorized personnel should never be in the shop area when the lift is in use.
7. Inspect the lift daily. **The lift should never be operated if it has damaged components, or is malfunctioning.** Only qualified technicians should service the lift. **Replace damaged components with manufacturer's parts, or equivalent.**
8. **Keep the area around the lift clear of obstacles.**
9. **Never override the self-returning lift controls.**
10. Avoid excessive rocking of the vehicle when it is on the lift.
11. To reduce the risk of personal injury, keep hair, loose clothing, fingers, and all body parts away from moving parts.
12. To reduce the risk of electric shock, **do not** use the lift when wet, do not expose the lift to rain.
13. To reduce the risk of fire, **do not** operate equipment in the vicinity of open containers of flammable liquids (gasoline).
14. Use the lift only as described in this manual, **use only manufacturer's recommended attachments.**
15. The maintenance procedures described in this manual can be done by the lift's owner/employer. Any other procedure should only be performed by trained lift service personnel. **These restricted procedures include, but are not limited to, the following: cylinder replacement, platform& safety latch replacement, motor replacement, oil replacement& refilling and lubrication.**
16. Anyone who will be in the vicinity of the lift when it is in use should familiarize themselves with following Caution, Warning, and Safety related decals supplied with this lift, and replace them if they are illegible or missing.
17. Never move the lift when the vehicle is loaded.
18. Only use on a level concrete surface with a recommended minimum thickness of 4+. DO NOT install on an asphalt surface.
19. Only remove the vehicle when the lift platform is at the lowest position.
20. Never lift the vehicle with person's riding on it.

1.4 Caution and Warning Labels



2. Technical Specification

2.1 Product Description

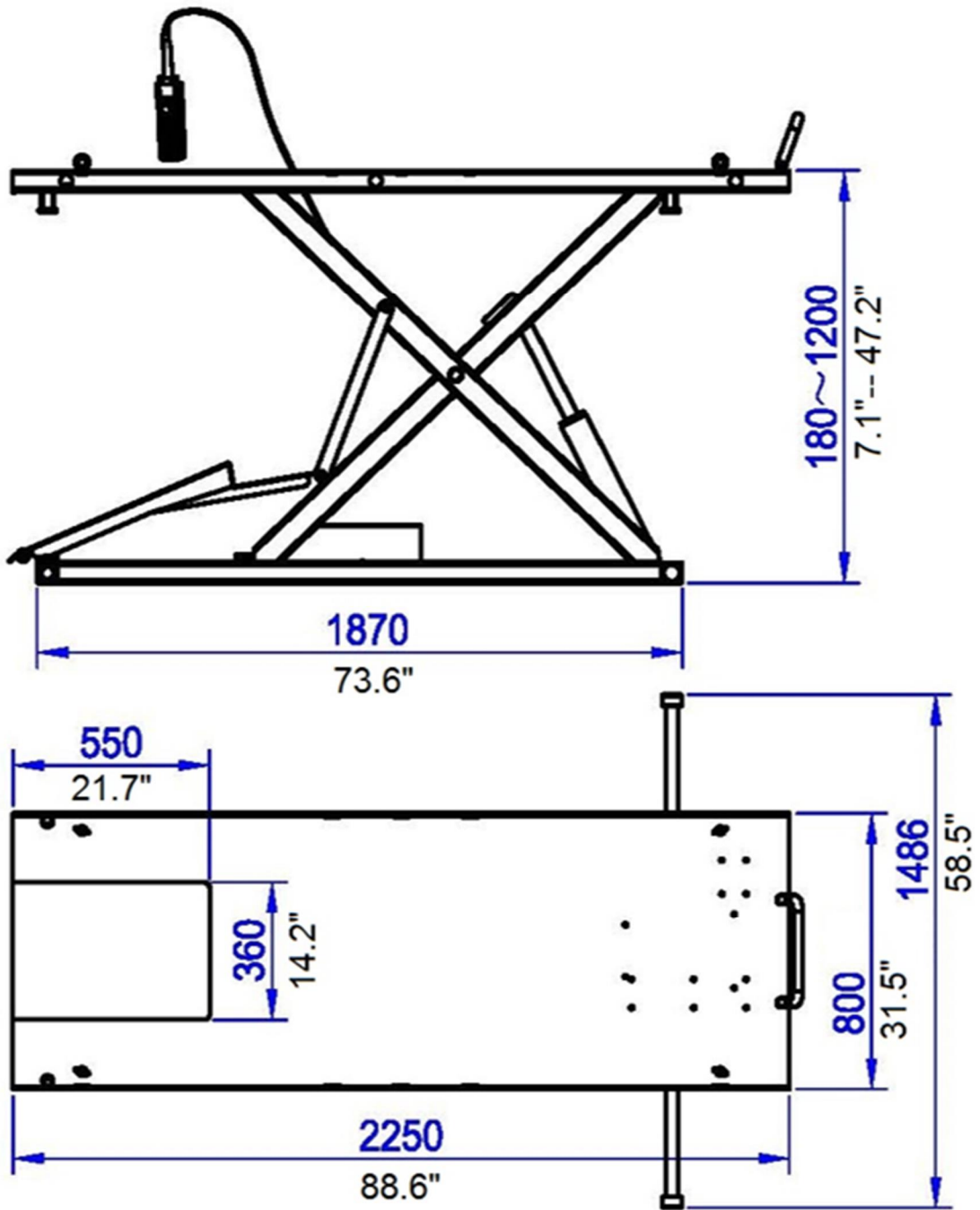
The M-2200IEH-XR Motorcycle lift bench is used for repairing and maintaining motorcycles by 110VAC-60Hz, 1Ph power source incorporating the latest safety technologies. The M-2200IEH-XR is designed and manufactured for a max lifting capacity of 2,200 lbs. (1,000kg), and is fully capable for lifting most all motorcycles, while safely holding them in an elevated, locked height position.

The electro-hydraulic motorcycle lift consists of a fixed structural scissor lift, hand held remote controller and exclusive retractable ramp.

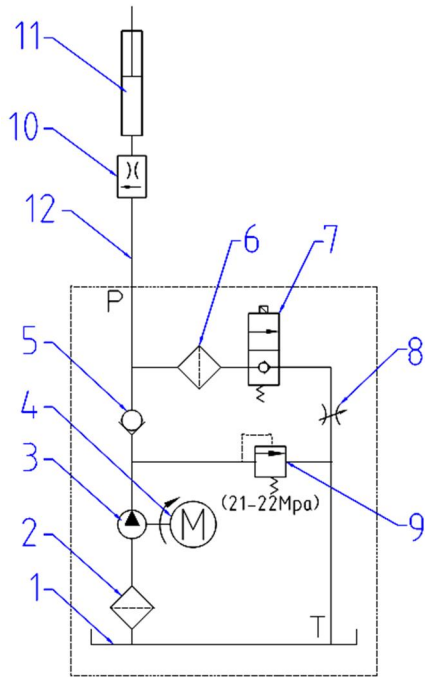
2.2 Product Specifications - M-2200IEH-XR

Capacity:	2,200 lbs.(1,000 kg)
Lifting Height, Max:	47.2+(1,200 mm)
Height, Min:	7+(180 mm)
Width Overall:	58.5+(1486 mm)
Length Overall:	116.5+(2959 mm) - Fully Lowered
Platform Length:	88.6+(2,250 mm)
Platform Width:	31.5+(800 mm)
Power Supply:	110V, 60Hz, 1 Phase,18A
Lifting Time:	30 S
Lowering Time:	30 S
Gross Weight:	790 lbs.

M-2200IEH-XR Dimension Drawings

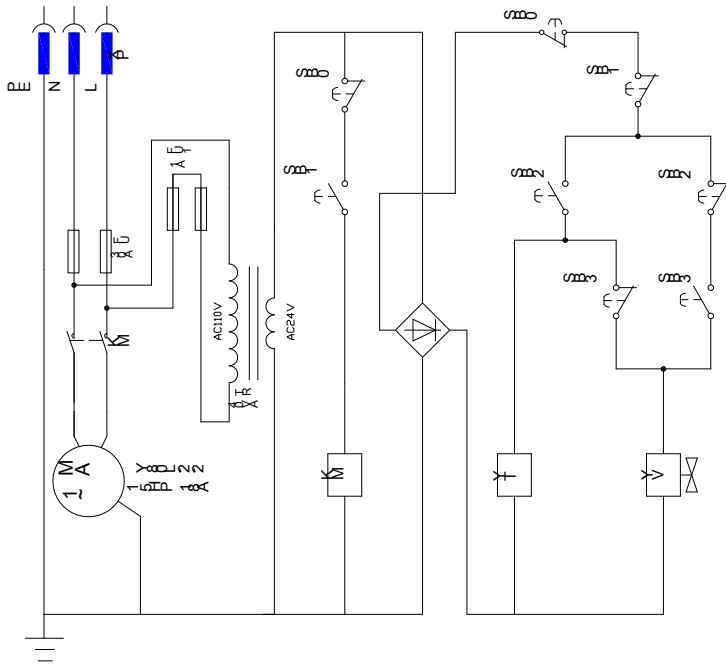


2.3 Hydraulic Schematic



1. OIL TANK	2. MESH
3. GEAR PUMP	4. MOTOR
5. ONE-WAY VALVE	6. MESH
7. SOLENOID VALVE	8. RESTRICTOR VALVE
9. RELIEF VALVE	10. RESTRICTOR VALVE
11. CYLINDER	12. PIPE

2.4 Circuit Diagram



XP	Power Cord w/ Plug	16A	
SB1	Up Switch	Green Button	1
SB2	Down Switch	Blue Button	1
SB3	Park Switch	Black Button	1
KM	AC Contactor	24VAC	1
TR	Transformer	110VAC / 24VAC	1
FU	Fuses	φ6×30 delay, 30A	2
FU1	Fuses	φ5×20 delay, 1A	2
MA	AC Motor	110VAC-1Ph, 60Hz, 1.5HP	1
YT	Electromagnet	24VDC, 520mA	1
YV	Solenoid Valve	24VDC, 1A	1

3. Preparing and Installation

3.1 Site Selection

The hydraulic motorcycle lift is designed only for indoor use. Application in a room with explosion hazard is not permitted. Setting in a wet place, a car wash bay for instance, is also not recommended. Make sure to check the desired location for possible obstructions such as a low ceiling, overhead lines, adequate working area, access ways, exits, etc.

3.2 Surface Condition

The lift should be installed on level ground with a concrete surface free from as many defects as possible to prevent unit from tipping or rocking. Only use on a level concrete surface with a recommended minimum thickness of 4+. DO NOT install on an asphalt type surface.



Failure in accomplish the foundation requirement may cause the lift instability or personal injury. Installing on asphalt, soft clay floor or near the expansion gap is prohibited.

3.3 Necessary Tools

Scissors, Screw Driver, Rubber Hammer, Adjustable Spanner Wrench, (Ext.) Snap Ring Pliers and Hex Key Set. Forklift & Soft Sling Straps also recommended.

3.4 Personal Protective Equipment

Always wear proper protective equipment like proper clothing, shoes, gloves & safety glasses, etc.

3.5 Set-Up & Installation

1. Unpacking

- a. Carefully open crate and remove any loose parts from top of lift structure.
- b. Using a forklift (recommended) carefully remove lift from crate and place in the desired location (Fig.1).



Ensure to check product and packing list to make certain all required parts are included and in good condition.



Fig.1

2. Power Connection



Before power connection is made, check your power supply outlet to ensure it's in accordance with the requirements of the lift.

- a. Connect lift's electrical plug to a 110V-60Hz, 1Ph, 20A power supply outlet. Protection against power surges shall be provided by the user.

3. Starting Up (No Load on Lift)

- a. Using the Remote Pendant Control, raise the platform to full height by pressing the **(GREEN) UP** ↑ button. (Fig. 2)
- b. Lower the lift to floor by pressing the **(BLUE) DOWN** ↓ button.
- c. With no load on lift, cycle up and down several times to get the air out of the hydraulic system. (Wait 2 minutes between cycles)
- d. After cycling lift, raise and secure at almost full height by pressing the **(BLACK) PARKING** button to secure lift in the locking position, as the electronic latches will automatically engage. (Securing lift at full to mid height is best for Assembly.)



Fig. 2

4. Assembly

- a. Attach or insert the front Wheel Stop Bar(s), Tie-Down Eyelets, Retractable Ramp & Stabilizer / Balance Bars - (Figs 3, 4 & 5)



Fig. 3



Fig 4



Fig. 5

5. Change the Tank Plug

- a. Remove black shipping Plug from reservoir tank and replace with the brass ventilating Plug - (Figs 6 & 7)



Fig. 6

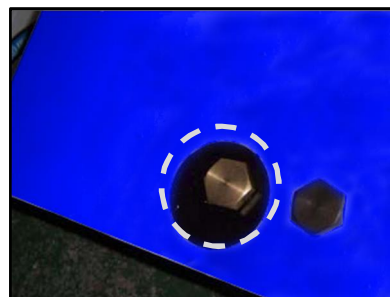


Fig. 7

The Lift is now ready for Operation

4. Operation

Be sure to read and familiarize yourself with the Safety Instructions at the beginning of this manual. Be sure to wear gloves, protection glasses and all necessary personal protective equipment. Failure to follow Safety Instructions may result in property damage, personal injury or death.

4.1 Operating Instructions



Be sure to read and familiarize yourself with the Safety Instructions at the beginning of this manual. Failure to follow Safety Instructions may result in property damage or personal injury.



To avoid personal injury and/or property damage, permit only trained personnel to operate lift.



ALWAYS use tie downs to secure vehicle to lift while in operation.

1. Lift Preparation:

- Lift must be fully lowered and area clear of all personnel before vehicles are placed on lift.

2. Loading Lift:

- Carefully push the vehicle on the fully lowered lift platform while keeping the vehicle centered and aligning the center of gravity of the equipment with the center of the lift platform. (For motorcycles, push forward until the front wheel touches the Wheel Stop or engages into the optional mounted Vise or Chock).



Securing Motorcycle - Secure motorcycle to lift using tie-down straps. Straps MUST be used to properly secure motorcycle to lift platform.



Before attempting to lift any vehicles, be sure that vehicle is stable and properly secured on lift.

3. To Raise Lift & Lock

- a. Push **(GREEN) UP** ↑ button on the remote hand held pendant controller.
- b. Raise vehicle to the desired height, then release the **(GREEN) UP** ↑ button.
- c. Push the **(BLACK) PARKING** button to lower the vehicle onto the locking position, as the locking latches will automatically engage.

4. (Emergency Button)

- The lift can be switched off immediately by pressing down the **(RED) Emergency** button on Remote Pendant Control.



When any emergency situation comes, press down the emergency stop button immediately to stop the lift. When emergencies are resolved, 'twist & pull' the red knob to release the emergency button to disengage the emergency stop mode.

5. To Lower Lift



Check all danger points of the lift and be sure that there are no tools, objects or people in the working area (danger area) around the lift or under the lift before lowering.

- a. If the lift is already in the locked position (latches are engaged), press the **(GREEN) UP** ↑ button to raise the lift a short distance to disengage the latch mechanisms.
- b. Then press **(BLUE) DOWN** ↓ button on remote controller to lower lift to the floor, while observing the complete lowering process to check for any unexpected movement.
- c. Carefully remove the vehicle off of the lift platform, after lift is fully lowered to floor.



Remain clear of lift when lowering vehicle. Observe pinch point warning decals.

If lift is not operating properly, DO NOT use until adjustment or repairs are made by qualified lift service personnel.



DO NOT use the (BLACK) PARKING button instead of the (BLUE) DOWN button to lower.



NEVER press the UP or DOWN button for a long time while the lift is not moving, or the control system will be damaged. Release button if you find the lift is not properly responding.



Once finished with lift operation, engage the emergency button and unplug the lift is recommended.



If any unsafe movement of the lift occurs, do not to operate the lift and call the local distributor for assistance.

5. Maintenance Instructions

Contact your service provider for instructions before starting up if you are not completely familiar with lift maintenance procedures. Only qualified personnel can perform maintenance on this equipment. Any failure in operation may cause personal injury and/or damage to lift.

Daily:

- ✓ Wear necessary protective equipment before use, includes, but not limited, gloves and protection glasses, working suits and shoes.
- ✓ Always keep bolts tight. Check periodically.
- ✓ Always keep lift components clean.
- ✓ If oil leakage is observed, contact your service provider.
- ✓ Check safety latches for free movement and full engagement with lift are properly working
- ✓ Check hoses connections for leakage.

Every Month:

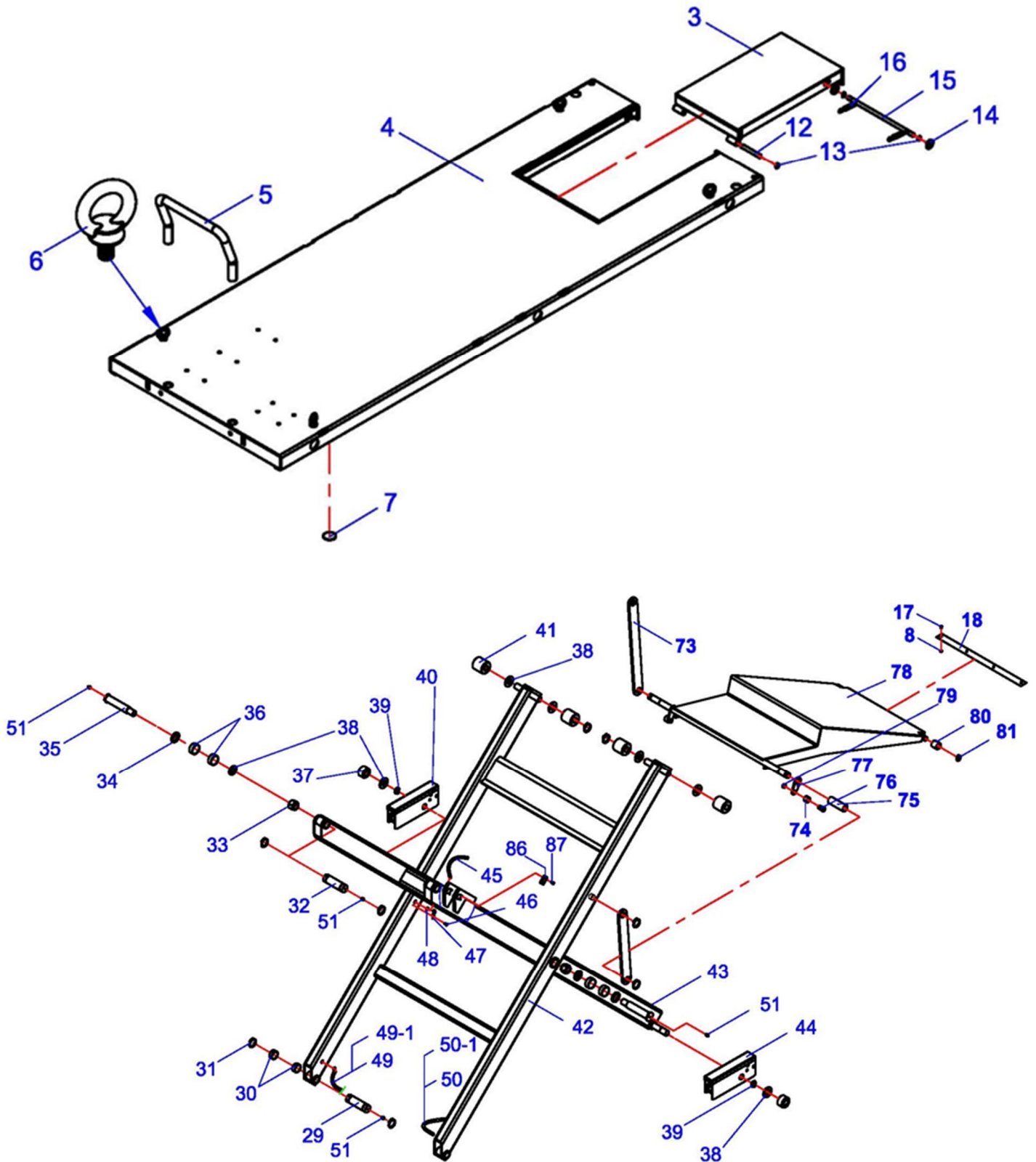
- ✓ Lubricate locking latch shafts. Push latch handle several times for oil to penetrate joints.
- ✓ Lubricate the sliding pieces with heavy duty bearing grease.
- ✓ With lift lowered check the hydraulic fluid level. If necessary add oil as described in the Installation Instruction section of this manual
- ✓ Check platform latch synching: Latches should click at the same time.
- ✓ Check tightness of all bolts.
- ✓ Check the nuts for tightness every week for the first month, and every month afterwards.

Every 6 Months:

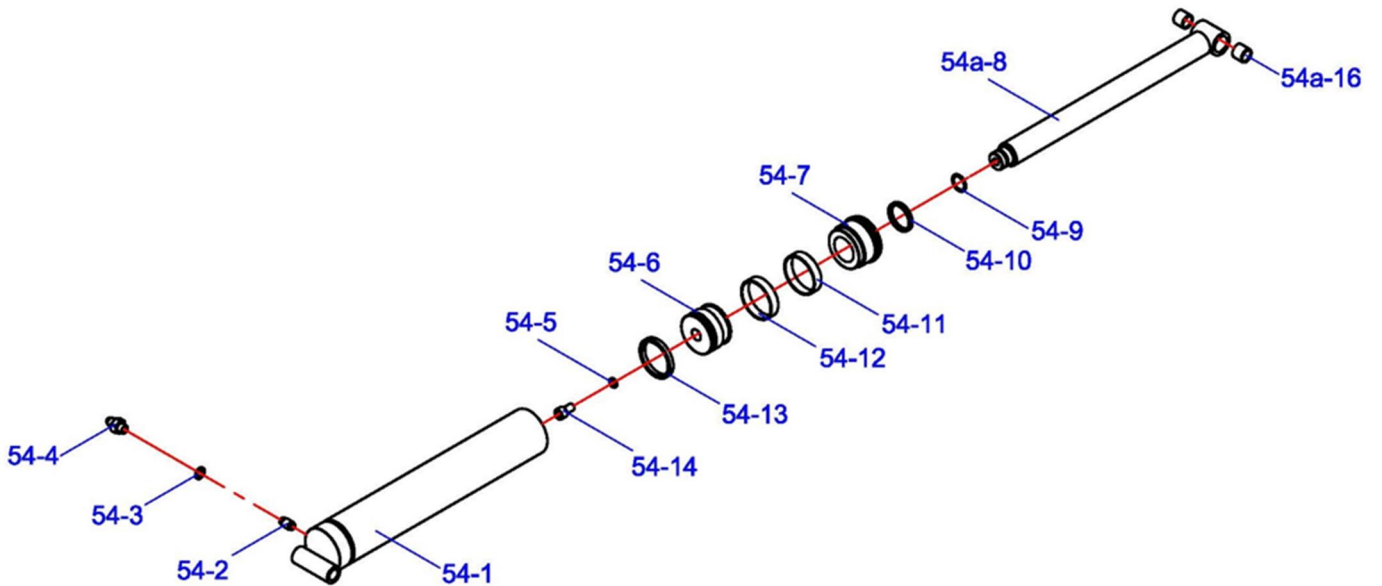
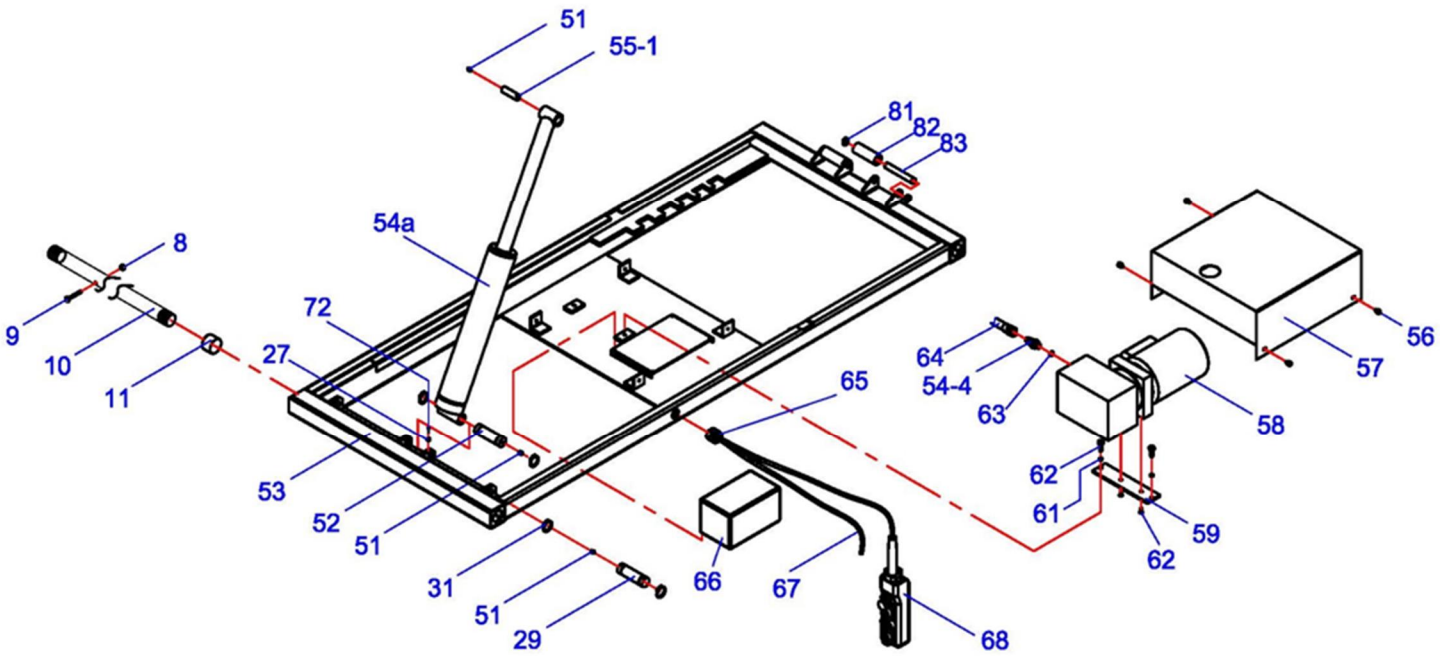
- ✓ Check and clean the oil filter, if applies.
- ✓ Check the hydraulic oil for proper level with lift in down position. Refill reservoir tank with hydraulic oil if necessary with AW 32 or AW46 Non-Detergent Non-Foaming Anti-Wear Hydraulic Oil.
- ✓ If Lift stops short of full rise or chatters, contact your service provider.
- ✓ Replace all caution, warning or safety related decals on the lift if unable to read or missing. Reorder labels from service provider.
- ✓ Check all components for wear.

6. Exploded Views & Parts Lists

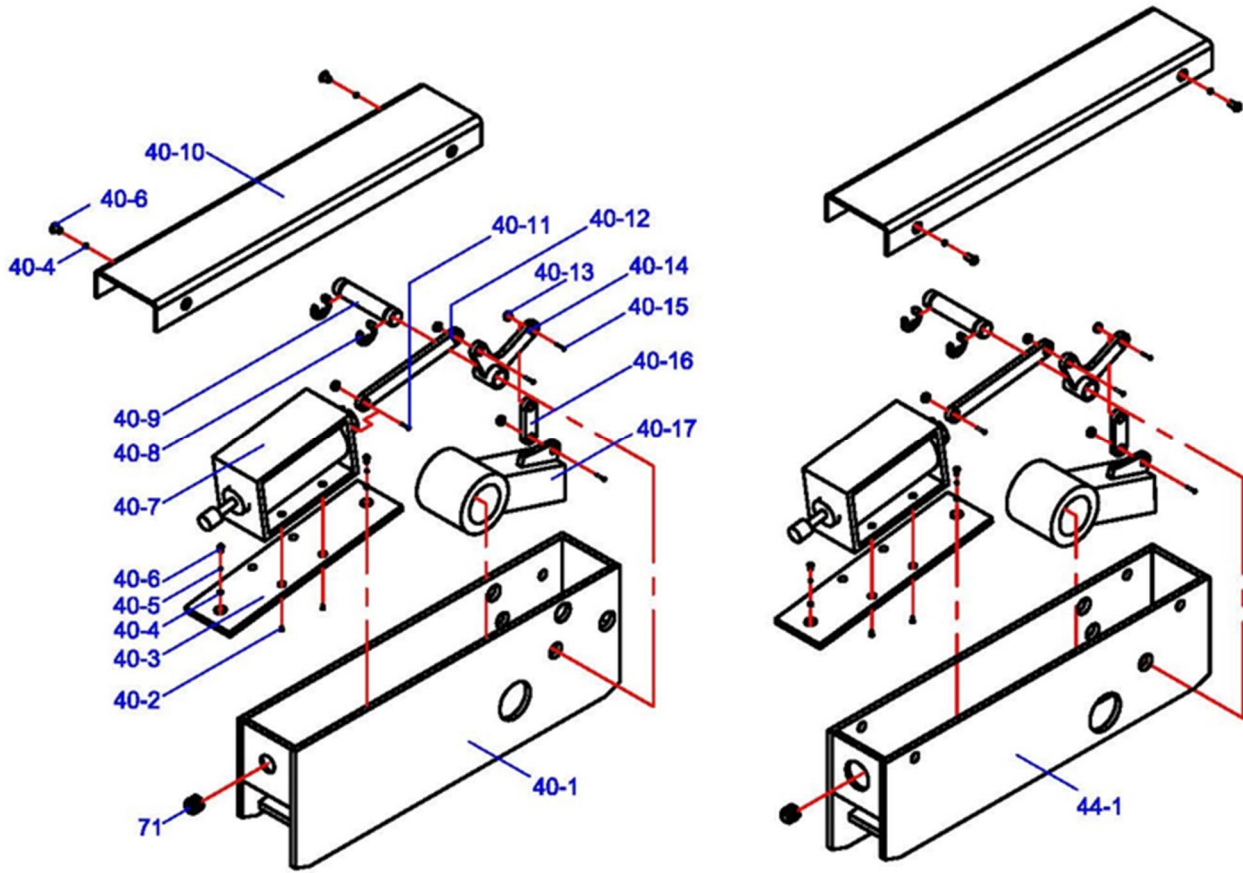
Exploded Views – (Lift Structure)



Exploded Views – (Lift Structure)



Exploded Views – (Lift Structure)



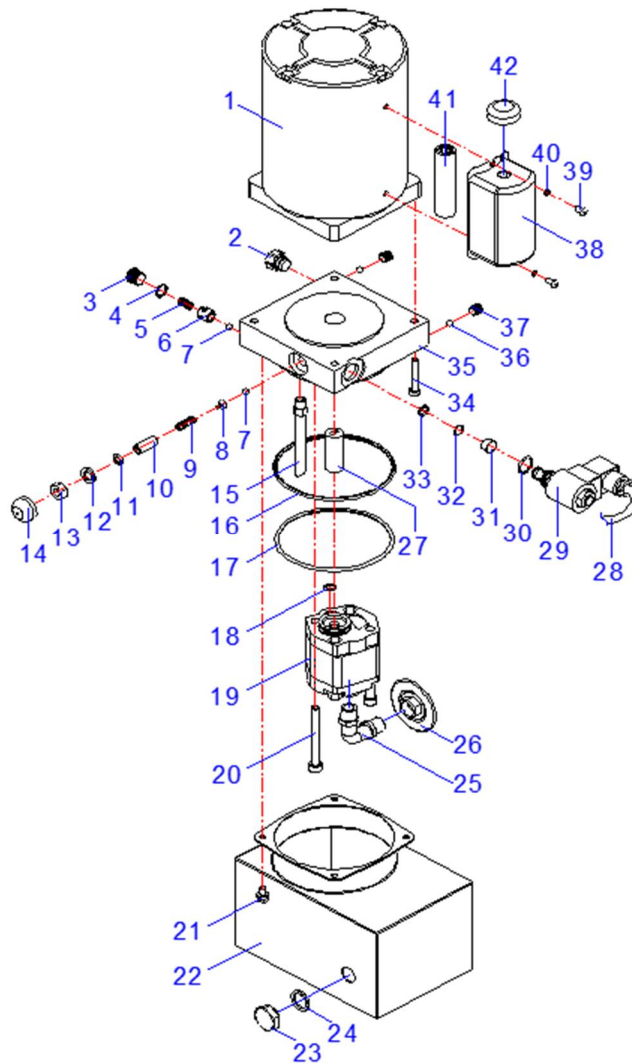
Parts List – (Lift Structure)

ITEM	Tux P/N	M-Ref P/N	DESCRIPTION	QTY
3	M-2200IEH-XR-003	JP23-08000-E00	Rear Pivot Panel	1
4	M-2200IEH-XR-004	JP23-01000-E00	Platform	1
5	M-2200IEH-XR-005	JP17-00011-000	MC / UTV Wheel Stop	1
6	M-2200IEH-XR-006	JP02-00009-000	Eye Bolt, M10	4
7	M-2200IEH-XR-007	JP23-00003-E00	Rubber Pad	4
8	M-2200IEH-XR-008	5202-00006-000	Lock Nut	6
9	M-2200IEH-XR-009	5103-06050-000	Bolt, M6 x 50	2
10	M-2200IEH-XR-010	JP23-00001-000	Balance / Stabilizer Bar	1
11	M-2200IEH-XR-011	JP17-00010-000	Sleeve	2
12	M-2200IEH-XR-012	JP24-00025-000	Hinge Pin	2
13	M-2200IEH-XR-013	5304-00012-000	Circlip, D12	6
14	M-2200IEH-XR-014	5302-00012-000	Flat Washer, D12	2
15	M-2200IEH-XR-015	JP23-00001-E00	Pin, Pivot Panel	1
16	M-2200IEH-XR-016	JP27-00013-000	Spring	2
17	M-2200IEH-XR-017	5115-06012-000	Screw, M6 x 12mm	4
18	M-2200IEH-XR-018	JP23-00002E00	Yellow Safety Strip, Ramp	1
27	M-2200IEH-XR-027	5206-00005-000	Lock Nut, M5	1
29	M-2200IEH-XR-029	JP24-00001-000	Pin #1	2
30	M-2200IEH-XR-030	5603-20025-000	Bearing, D20 x D23 x 25mm	8
31	M-2200IEH-XR-031	5304-00020-000	Circlip, D20	14
32	M-2200IEH-XR-032	JP24-00002-000	Pin #2	2
33	M-2200IEH-XR-033	5206-00020-000	Lock Nut, M20	2
34	M-2200IEH-XR-034	5302-00025-000	Flat Washer, D25	2
35	M-2200IEH-XR-035	JP24-00003-000	Pivot Bolt	2
36	M-2200IEH-XR-036	5603-25025-000	Bearing, D25 x D28 x 25mm	8
37	M-2200IEH-XR-037	JP24-00005-000	Down Roller	2
38	M-2200IEH-XR-038	5302-00020-000	Flat Washer, D20	8
39	M-2200IEH-XR-039	5304-00025-000	Circlip, D25	2
40	M-2200IEH-XR-040	JP24-14000-000	Safety Latch (LH)	1
40-1	M-2200IEH-XR-040.1	JP24-14100-000	Latch Frame (LH)	1
40-2	M-2200IEH-XR-040.2	5107-03008-000	Screw, M3 x 8mm	8
40-3	M-2200IEH-XR-040.3	JP24-13004-000	Mount Plate	2
40-4	M-2200IEH-XR-040.4	5302-00005-000	Flat Washer, D5	8
40-5	M-2200IEH-XR-040.5	5303-00005-000	Lock Washer, D5	4
40-6	M-2200IEH-XR-040.6	5110-05012-000	Screw, M5 x 12mm	8
40-7	M-2200IEH-XR-040.7	MK01-00300-000	Electromagnet	2
40-8	M-2200IEH-XR-040.8	5305-00006-000	Circlip, D6	4
40-9	M-2200IEH-XR-040.9	JP24-13003-000	Latch Pin	3
40-10	M-2200IEH-XR-040.10	JP24-00016-000	Latch Cover	2
40-11	M-2200IEH-XR-040.11	5110-04020-000	Screw, M4 x 20mm	2
40-12	M-2200IEH-XR-040.12	JP24-13001-000	Linkage Arm - Long	2
40-13	M-2200IEH-XR-040.13	5206-00004-000	Lock Nut, M4	8
40-14	M-2200IEH-XR-040.14	JP24-13200-000	Rocker Arm	2
40-15	M-2200IEH-XR-040.15	5110-04012-000	Screw, M4 x 12mm	6
40-16	M-2200IEH-XR-040.16	JP24-13002-000	Linkage Arm - Short	2

40-17	M-2200IEH-XR-040.17	JP24-13300-000	Latch	2
41	M-2200IEH-XR-041	JP24-00004-000	Upper Roller	4
42	M-2200IEH-XR-042	JP24-03000-000	Outer Scissor Frame	1
43	M-2200IEH-XR-043	JP24-02000-000	Inner Scissor Frame	1
44	M-2200IEH-XR-044	JP24-13000-000	Safety Latch (RH)	1
44-1	M-2200IEH-XR-044.1	JP24-13100-000	Safety Latch Frame (RH)	1
45	M-2200IEH-XR-045	JP24-00010-000	Cable Spring Cover #1	4
46	M-2200IEH-XR-046	5110-04006-000	Screw, M6 x 6mm	10
47	M-2200IEH-XR-047	JP24-00009-000	Cable Bracket	10
48	M-2200IEH-XR-048	MK01-00003-000	Rubber Grommet	8
49	M-2200IEH-XR-049	JP24-00012-000	Cable Spring Cover #3	1
49-1	M-2200IEH-XR-049.1	MK01-00301-000	Latch Cable #1	1
50	M-2200IEH-XR-050	JP24-00011-000	Cable Spring Cover #2	1
50-1	M-2200IEH-XR-050.1	MK01-00401-000	Latch Cable #2	1
51	M-2200IEH-XR-051	JP02-00007-000	Grease Zerk, M6	8
52	M-2200IEH-XR-052	JP24-00024-000	Cylinder Pin - Long	1
53	M-2200IEH-XR-053	JP23-05000-E00	Base Frame	1
54A	M-2200IEH-XR-054A	JP23-04000-000	Cylinder (2200IEH-XR)	1
54-1	M-2200IEH-XR-054.1	JP23-04100-000	Cylinder Body	1
54-2	M-2200IEH-XR-054.2	BZ20-04026-000	Compensate Valve	1
54-3	M-2200IEH-XR-054.3	5903-00014-000	Combined Washer, D14	1
54-4	M-2200IEH-XR-054.4	JP24-04006-000	Fitting Connector	2
54-5	M-2200IEH-XR-054.5	5303-00012-000	Lock Washer, D12	1
54-6	M-2200IEH-XR-054.6	JP23-04002-000	Piston	1
54-7	M-2200IEH-XR-054.7	JP23-04004-000	Guide Ring	1
54A-8	M-2200IEH-XR-054A.8	JP24-04007-000	Piston Bar	1
54-9	M-2200IEH-XR-054.9	5901-00244-000	O-Ring, D24.4 x D3.1mm	1
54-10	M-2200IEH-XR-054.10	5906-00040-000	Dust Ring, D40	1
54-11	M-2200IEH-XR-054.11	JP24-04008-000	Guide Ring, D40 x D45 x 15mm	1
54-12	M-2200IEH-XR-054.12	JP24-04001-000	Guide Ring, D75 x D80 x 15mm	1
54-13	M-2200IEH-XR-054.13	5905-00070-000	Main Seal	1
54-14	M-2200IEH-XR-054.14	5105-12020-000	Screw, M12 x 20mm	1
54A-16	M-2200IEH-XR-054A.16	5603-25020-000	Bearing, D25 x 20mm	2
55-1	M-2200IEH-XR-055.1	JP24-00023-000	Cylinder Pin - Short	1
56	M-2200IEH-XR-056	5117-06008-000	Screw, M6 x 8mm	4
57	M-2200IEH-XR-057	JP24-00006-000	Power Unit Cover	1
58	M-2200IEH-XR-058	DBZ14S-00	Power Unit - 110V-1PH, 60Hz	1
59	M-2200IEH-XR-059	JP24-00026-000	Power Unit Mount Plate	1
61	M-2200IEH-XR-061	5303-00008-000	Lock Washer, D8	2
62	M-2200IEH-XR-062	5103-08014-000	Bolt, M8 x 14mm	4
63	M-2200IEH-XR-063	5901-10002-000	O-Ring, D10 x 2mm	1
64	M-2200IEH-XR-064	JP24-00007-000	Hydraulic Hose	1
65	M-2200IEH-XR-065	DJ02-00009-000	Cable Nut, M25	1
66	M-2200IEH-XR-066	MK010S-00	Control Box	1
67	M-2200IEH-XR-067	MK01-00002-000	Power Cord w/ Ground, 110V	1
68	M-2200IEH-XR-068	MK01-00200-000	Remote Pendant Control	1
71	M-2200IEH-XR-071	JP24-00027-000	Cable Clamp, 5P-4	2
72	M-2200IEH-XR-072	5109-05014-000	Screw, M5 x 14mm	1

73	M-2200IEH-XR-073	JP24-00001-E00	Pull Bar	2
74	M-2200IEH-XR-074	JP25-00006-000	Limit Roller	2
75	M-2200IEH-XR-075	JP25-00002-000	Sleeve	2
76	M-2200IEH-XR-076	JP25-00005-000	Roller Pin	2
77	M-2200IEH-XR-077	JP25-00003-000	Roller Plate	2
78	M-2200IEH-XR-078	JP23-04000-E00	Retractable Ramp	1
79	M-2200IEH-XR-079	5206-00012-000	Lock Nut, M12	2
80	M-2200IEH-XR-080	JP25-00004-000	Nylon Ramp Wheel	2
81	M-2200IEH-XR-081	5304-00016-000	Circlip, D16	6
82	M-2200IEH-XR-082	JP24-00002-E00	Ramp Roller	2
83	M-2200IEH-XR-083	JP24-00003-E00	Roller Pivot Pin	2
86	M-2200IEH-XR-086	JP24-00032-000	Lock Plate	1
87	M-2200IEH-XR-087	5105-06014-000	Screw, M6 x 14mm	2

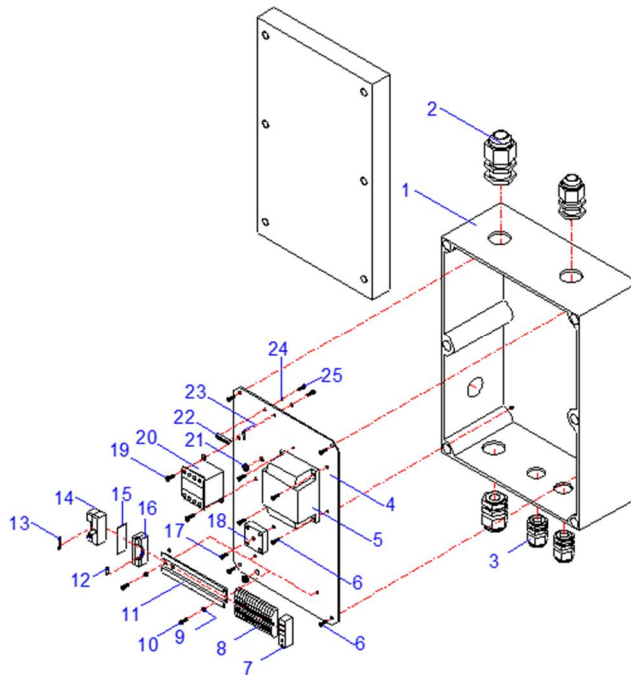
Exploded View – (Power Unit)



Parts List – (Power Unit)

ITEM	Tux P/N	M-Ref P/N	DESCRIPTION	QTY
1	M-2200IEH-PU-001	BZ14-05001-B00	Motor 110VAC-1Ph 60Hz	1
2	M-2200IEH-PU-002	BZ01-04010-000	Cap Nut-A	1
3	M-2200IEH-PU-003	BZ01-04008-000	Cap Nut-B	1
4	M-2200IEH-PU-004	5901-00118-000	O-Ring	2
5	M-2200IEH-PU-005	BZ01-04009-000	Spring	1
6	M-2200IEH-PU-006	BZ01-04007-000	Ball Seat	1
7	M-2200IEH-PU-007	5601-00635-000	Ball	2
8	M-2200IEH-PU-008	BZ01-04005-000	Ball Seat	1
9	M-2200IEH-PU-009	BZ01-04002-000	Spring	1
10	M-2200IEH-PU-010	BZ01-04003-000	Threaded Pin	1
11	M-2200IEH-PU-011	5901-00072-000	O-Ring	1
12	M-2200IEH-PU-012	BZ01-04016-000	Special Washer	1
13	M-2200IEH-PU-013	BZ01-04004-000	Lock Nut	1
14	M-2200IEH-PU-014	BZ01-04-12-000	Protective Cap	1
15	M-2200IEH-PU-015	BZ14-00001-000	Return Pipe	1
16	M-2200IEH-PU-016	5901-01150-000	O-Ring	1
17	M-2200IEH-PU-017	5901-01120-000	O-Ring	1
18	M-2200IEH-PU-018	5901-00008-000	O-Ring	1
19	M-2200IEH-PU-019	BZ13-03000-B00	Gear Pump	1
20	M-2200IEH-PU-020	5105-08075-000	Bolt	2
21	M-2200IEH-PU-021	5117-06008-000	Self-Lock Nut	4
22	M-2200IEH-PU-022	BZ14-02100-000	Tank	1
23	M-2200IEH-PU-023	QY02-03001-001	Vent Cover	1
24	M-2200IEH-PU-024	QY02-03002-000	Combined Washer	1
25	M-2200IEH-PU-025	BZ14-01001-000	Pick-Up Tube	1
26	M-2200IEH-PU-026	BZ01-01002-000	Strainer	1
27	M-2200IEH-PU-027	BZ14-00003-000	Joint	1
28	M-2200IEH-PU-028	BZ14-04200-000	Valve Cable	1
29	M-2200IEH-PU-029	BZ20-04100-000	Electromagnetic Valve	1
30	M-2200IEH-PU-030	5901-00160-000	O-Ring	1
31	M-2200IEH-PU-031	BZ01-04011-000	Filter Screen	1
32	M-2200IEH-PU-032	5901-00095-000	O-Ring	1
33	M-2200IEH-PU-033	5901-00125-000	Circlip	1
34	M-2200IEH-PU-034	5105-06040-000	Screw	4
35	M-2200IEH-PU-035	BZ30-04001-000	Valve Block	1
36	M-2200IEH-PU-036	5601-00800-000	Ball	2
37	M-2200IEH-PU-037	BZ01-00002-000	Threaded Pin	2
38	M-2200IEH-PU-038	BZ14-05003-000	Capacitor Cover	1
39	M-2200IEH-PU-039	5110-04010-000	Screw	2
40	M-2200IEH-PU-040	5302-00004-000	Flat Washer	2
41	M-2200IEH-PU-041	BZ14-05002-B00	Start Capacitor	1
42	M-2200IEH-PU-042	BZ14-05004-000	Cable Nut	1

Exploded View – (Control Box)



Parts List – (Control Box)

ITEM	Tux P/N	M-Ref P/N	DESCRIPTION	QTY
1	M-2200IEH-CB-001	MK01-00001-000	Control Box Shell	1
2	M-2200IEH-CB-002	JK01-00004-000	Cable Nut	2
3	M-2200IEH-CB-003	DJ02-00007-000	Cable Nut	3
4	M-2200IEH-CB-004	MK01-00101-000	Mount Plate	1
5	M-2200IEH-CB-005	MK01-10006-B00	Transformer	1
6	M-2200IEH-CB-006	JK01-10030-000	Self-Tapping Screw	6
7	M-2200IEH-CB-007	DK20-10018-000	Fixing Board	2
8	M-2200IEH-CB-008	DK20-10019-000	Wiring Terminal	10
9	M-2200IEH-CB-009	5301-00005-000	Flat Washer	4
10	M-2200IEH-CB-010	JK01-10029-000	Self-Tapping Screw	8
11	M-2200IEH-CB-011	MK01-00105-000	Connection Rail	1
12	M-2200IEH-CB-012	JK01-10010-100	Fuse, 1A	2
13	M-2200IEH-CB-013	MK01-10008-B00	Fuse, 30A	2
14	M-2200IEH-CB-014	DK09-10007-000	Fuse Seat	1
15	M-2200IEH-CB-015	JK01-10009-001	Fuse Seat Board	1
16	M-2200IEH-CB-016	JK01-10009-000	Fuse Seat	2
17	M-2200IEH-CB-017	5110-04004-000	Tapping Screw	2
18	M-2200IEH-CB-018	MK01-00102-000	Bridge Rectifier	1
19	M-2200IEH-CB-019	JK01-10031-000	Self-Tapping Screw	2
20	M-2200IEH-CB-020	JK01-10005-000	Contactor	1
21	M-2200IEH-CB-021	JK01-10020-000	Cable Ring	2
22	M-2200IEH-CB-022	JK01-10014-000	Ground End	1
23	M-2200IEH-CB-023	JK01-JD000-000	Ground Decal	1
24	M-2200IEH-CB-024	5301-00004-000	Flat Washer	2
25	M-2200IEH-CB-025	5110-04004-000	Self-Tapping Screw	2

7. Troubleshooting Guide

A.	Problem	Motor does not run.
	Possible cause:	Solution:
	<ol style="list-style-type: none"> 1. Blown fuse or circuit breaker. 2. Incorrect voltage to motor. 3. Bad wiring connections. 4. Motor up switch burned out. 5. Overhead limit switch burned out. 6. Motor windings burned out. 	<ol style="list-style-type: none"> 1. Replace fuse or reset circuit breaker. 2. Supply correct voltage to motor. 3. Repair and insulate all connections. 4. Replace switch. 5. Replace switch. 6. Replace motor.
B.	Problem	Motor runs but lift will not raise.
	Possible cause:	Solution:
	<ol style="list-style-type: none"> 1. Open lowering valve. 2. Pump sucking air. 3. Suction stub off pump. 4. Low oil level. 	<ol style="list-style-type: none"> 1. Repair or replace lowering valve. 2. Tighten all suction line fittings. 3. Replace suction stub. 4. Fill tank with SAE-10, AW 32 or equivalent.
C.	Problem	Lift will raise up only without load.
	Possible cause:	Solution:
	<ol style="list-style-type: none"> 1. Motor running on low voltage. 2. Debris in lowering valve. 3. Improper relief valve adjustment. 4. Overloading. 	<ol style="list-style-type: none"> 1. Supply correct voltage to motor. 2. Clean lowering valve. 3. Replace relief valve cartridge. 4. Check or balance the vehicle weight on lift.
D.	Problem	Lift slowly settles down.
	Possible cause:	Solution:
	<ol style="list-style-type: none"> 1. Debris in check valve seat. 2. Debris in lowering valve seat. 3. External oil leaks. 	<ol style="list-style-type: none"> 1. Clean check valve. 2. Clean lowering valve. 3. Repair external leaks.
E.	Problem	Slow lifting speed or oil blowing out breather cap
	Possible cause:	Solution:
	<ol style="list-style-type: none"> 1. Air mixed with oil. 2. Air mixed with oil suction. 3. Oil over filled. 4. Debris in check valve seat. 5. Debris in lowering valve seat. 	<ol style="list-style-type: none"> 1. Change oil to non-foaming SAE-10, AW 32 or equivalent. 2. Tighten all suction line fittings. 3. Only fill or add oil to tank when lift is fully lowered. 4. Clean check valve. 5. Clean lowering valve.
H.	Problem	Locking latches do not engage.
	Possible cause:	Solution:
	<ol style="list-style-type: none"> 1. Latches and/or shafts rusted. 2. Release the lock without lifting. 3. Latch cable broken or bad connection. 	<ol style="list-style-type: none"> 1. Remove covers, oil latch mechanism. (Depress latch release handle several times to allow oil to coat shaft.) 2. Raise lift a short distance first. 3. Check cable connection or replace.

LIMITED WARRANTY

Structural Warranty:

The following parts and structural components carry a five year warranty:

Columns	Arms	Uprights	Swivel Pins Legs	Carriages	Overhead Beam
Tracks	Cross Rails	Top Rail Beam			

Limited One-Year Warranty:

Tuxedo Distributors, LLC (iDEAL) offers a limited one-year warranty to the original purchaser of Lifts and Wheel Service equipment in the United States and Canada. Tuxedo will replace, without charge, any part found defective in materials or workmanship under normal use, for a period of one year after purchase. The purchaser is responsible for all shipping charges. This warranty does not apply to equipment that has been improperly installed or altered or that has not been operated or maintained according to specifications.

Other Limitations:

This warranty does not cover:

1. Parts needed for normal maintenance
2. Wear parts, including but not limited to cables, slider blocks, chains, rubber pads and pulleys
3. Replacement of lift and tire changer cylinders after the first 30 days. A seal kit and installation instructions will be sent for repairs thereafter.
4. On-site labor

Upon receipt, the customer must visually inspect the equipment for any potential freight damage before signing clear on the shipping receipt. Freight damage is not considered a warranty issue and therefore must be noted for any potential recovery with the shipping company.

The customer is required to notify Tuxedo of any missing parts within 72 hours. Timely notification must be received to be covered under warranty.

Tuxedo will replace any defective part under warranty at no charge as soon as such parts become available from the manufacturer. No guarantee is given as to the immediate availability of replacement parts.

Tuxedo reserves the right to make improvements and/or design changes to its lifts without any obligation to previously sold, assembled or fabricated equipment.

There is no other express warranty on the Tuxedo lifts and this warranty is exclusive of and in lieu of all other warranties, expressed or implied, including all warranties of merchantability and fitness for a particular purpose. To the fullest extent allowed by law, Tuxedo shall not be liable for loss of use, cost of cover, lost profits, inconvenience, lost time, commercial loss or other incidental or consequential damages.

This Limited Warranty is granted to the original purchaser only and is not transferable or assignable.

Some states do not allow exclusion or limitation of consequential damages or how long an implied warranty lasts, so the above limitations and exclusions may not apply. This warranty gives you specific legal rights and you may have other rights, which may vary from state to state.

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