

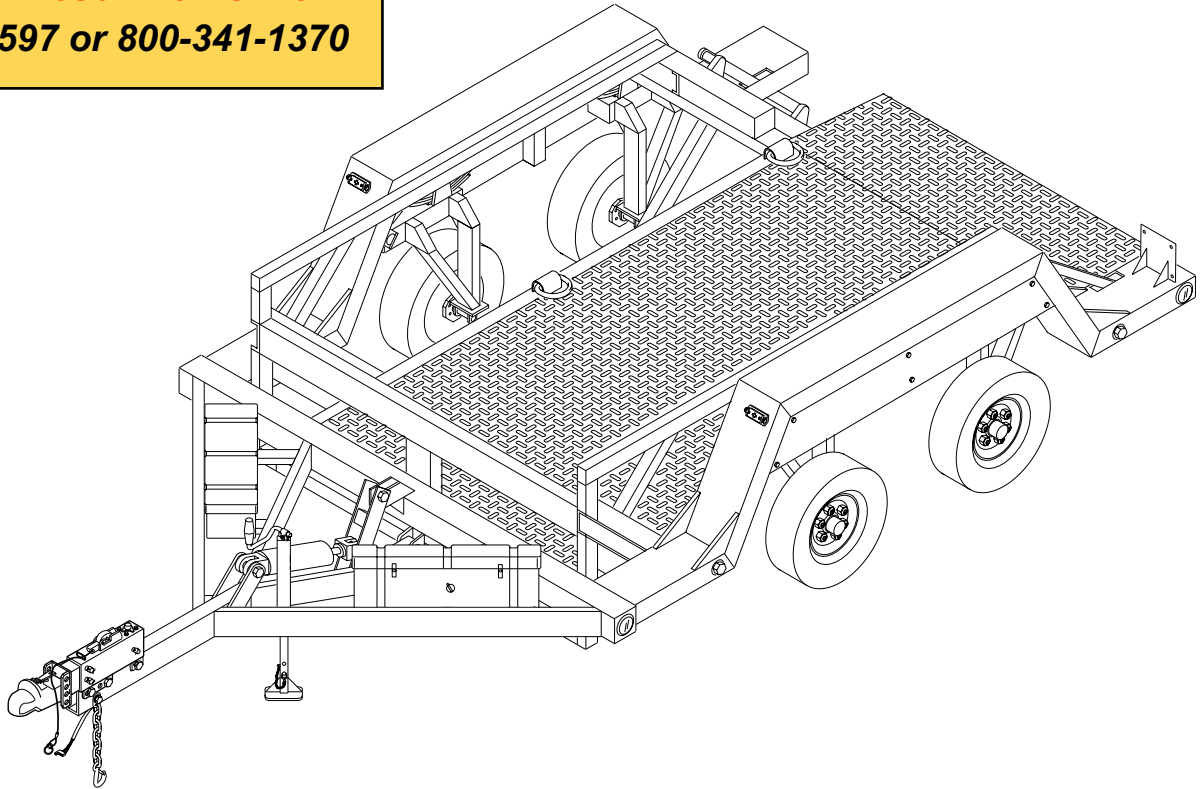
ESCALATE[®] TRAILER

Model ET 7000 Operation and Service Manual

Brought to you by:

Robert's Diesel Works Inc.

407-246-1597 or 800-341-1370



Load Capacity: 7000 lbs

The ET 7000 **ESCALATE[®] TRAILER** offers ground level roll-on loading and roll-off unloading of equipment with *non-tilting* lowering deck. The hydraulic lift deck allows one person to load and unload equipment.

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EQUIPMENT LOADING

Warnings and Cautions

Observe all warning labels on the trailer. The trailer warning labels are shown here as a reminder. Other warnings and cautions are included in this manual.

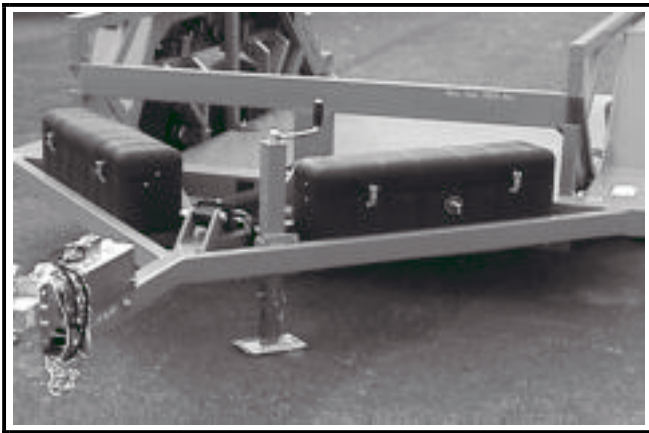
Failure to observe all warnings may result in serious injury or death. Failure to observe all cautions may result in equipment damage.



SPECIAL FEATURES

The Bil-Jax **ESCALATE**[®] **TRAILER** includes all the features of a heavy duty trailer, plus:

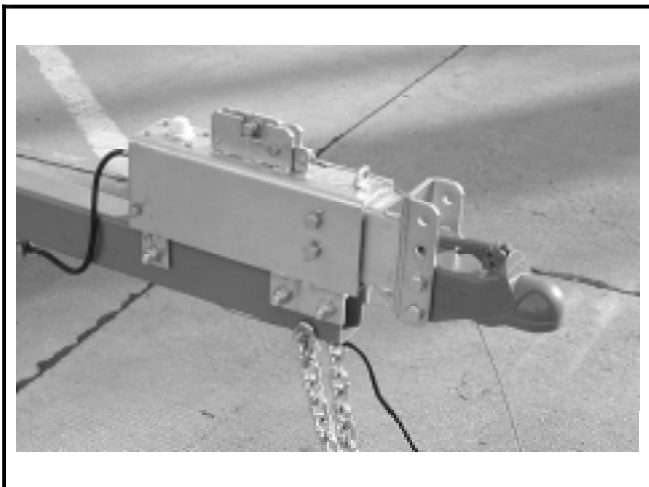
Escalator Deck and Hydraulic Lift



Heavy Duty Tie-Down Brackets



Surge Brake and Adjustable Hitch



Optional Enclosure



ESCALATE® TRAILER

Model Number ET 7000

Serial Number _____

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Specifications

With Optional Enclosure

Rated Capacity	7000 lbs. (3175 kg) max.	6000 lbs. (2722 kg) max.
Weight (Empty)	3000 lbs. (1361 kg)	3960 lbs. (1796 kg)
Overall Width	102 in. (259.1 cm)	102 in. (259.1 cm)
Overall Length	235 in. (596.9 cm)	235 in. (596.9 cm)
Overall Height (Bed Raised)	47 in. (119.4 cm)	111 in. (281.9 cm)
Bed Height (Raised)	14 in. (35.6 cm)	14 in. (35.6 cm)
Bed Size (Flat Surface)	75 in. wide x 120 in. long (190.5 cm wide x 304.8 cm long)	73 1/2 in. wide x 118 3/4 in. long x 90 1/2 in. high inside (186.7 cm wide x 301.6 cm long x 229.9 cm high inside)
Overall Bed Size (Including Ramp)	75 in. wide x 144 in. long (190.5 cm wide x 365.8 cm long)	73 1/2 in. wide x 137 1/2 in. long x 90 1/2 in. high (186.7 cm wide x 349.2 cm long x 229.9 cm high) 68 in. wide x 85" high (172.7 cm wide x 215.9 cm high) door opening
Ramp Grade	6 degrees	6 degrees
Hitch Size	2-5/16 in. (5.87 cm) ball	2-5/16 in. (5.87 cm) ball
Suspension	Tandem Axle Leaf Spring	Tandem Axle Leaf Spring
Brakes	Standard – Hydraulic Surge; Optional – Electric	Standard – Hydraulic Surge; Optional – Electric

WARRANTY

Bil-Jax warrants its trailers for one year from the date of delivery against all defects of material and workmanship, provided the unit is operated and maintained in compliance with Bil-Jax's operating and maintenance instructions; structural components are also warranted for one year. Bil-Jax will, at its option, repair or replace any unit or component part which fails to function properly in normal use.

This warranty does not apply if the trailer and/or its component parts have been altered, changed, or repaired without the consent of Bil-Jax or by anyone other than Bil-Jax or its factory trained personnel, nor if the trailer and/or its components have been subjected to misuse, negligence, accident or any conditions deemed other than those considered as occurring during normal use.

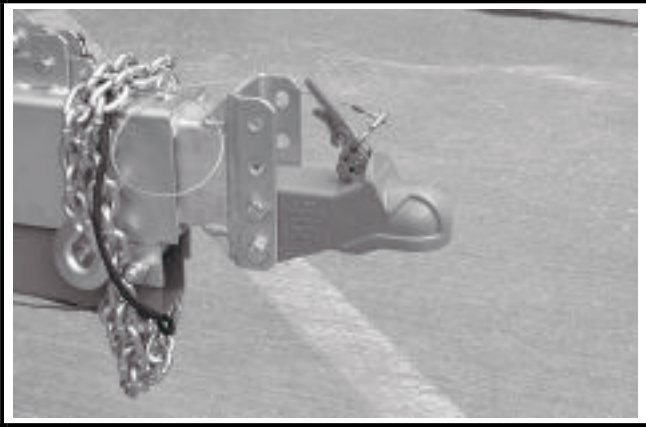
Components not manufactured by Bil-Jax are covered by their respective manufacturers warranties. A list of those components and their warranties is available upon written request to Bil-Jax.

Bil-Jax shall not in any event be liable for the cost of any special, indirect or consequential damages to anyone, product, or thing. This warranty is in lieu of all other warranties expressed or implied. We neither assume nor authorize any representative, or other person, to assume for us any other liability in connection with the sale, rental, or use of this product.

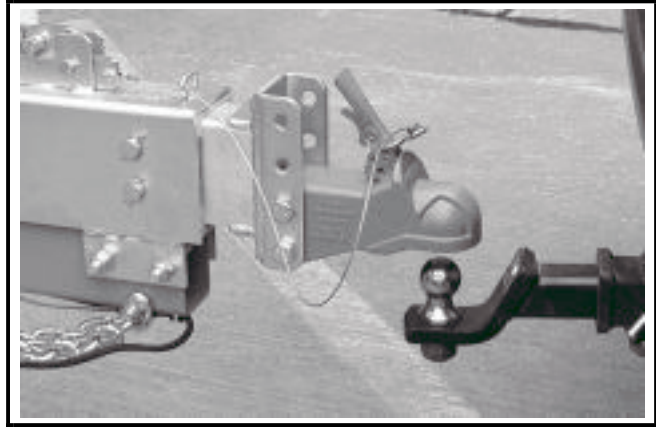
TRAILER HITCHING

Hook Up the Trailer

1. Raise trailer and open ball latch.

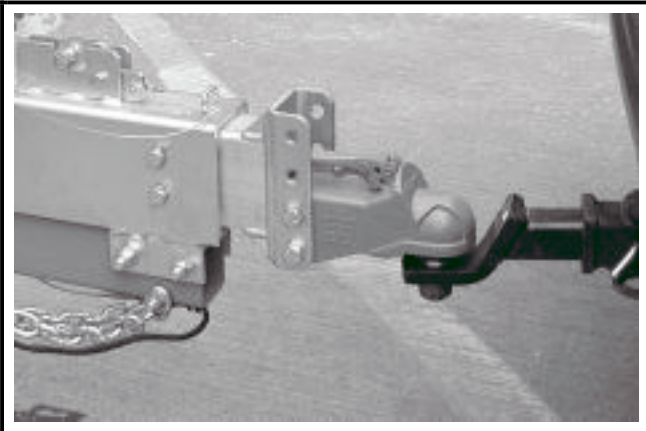


2. Line up ball with hitch.



NOTE: The trailer hitch uses a 2-5/16 inch ball.

3. Lower hitch onto ball and close ball latch.



NOTE: Trailer frame should be level when hitch is on ball. See page 9 to adjust hitch height.

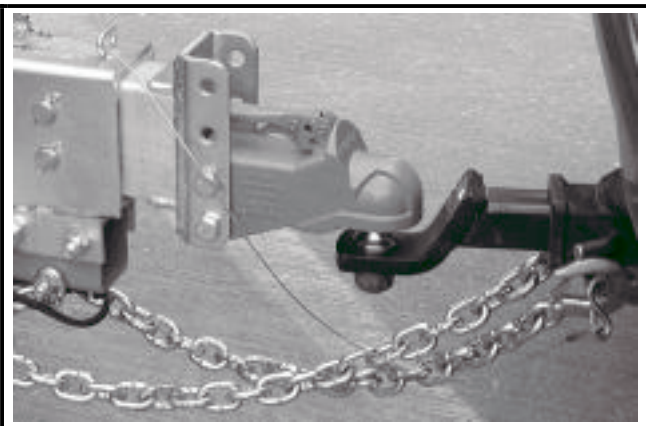
4. Raise the jack.



CAUTION

Always raise the jack before towing.

5. Hook safety chains and attach breakaway cable.



CAUTION

Always cross safety chains below tongue. Safety chains must hold tongue up if hitch fails.



CAUTION

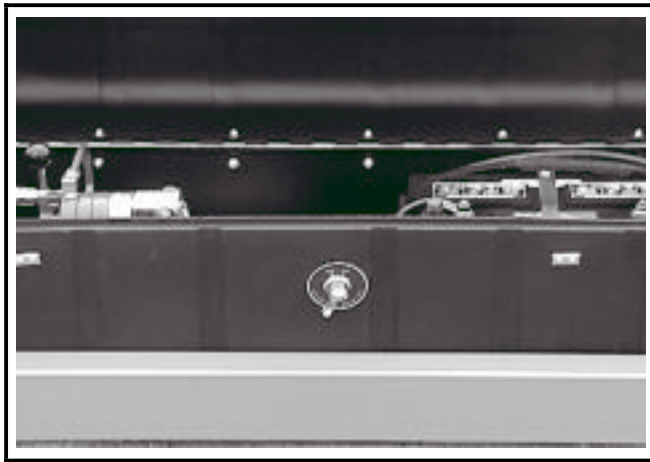
Always check the tail lights and brake lights before towing.

EQUIPMENT LOADING

Lower the Deck

NOTE: Trailer must be hitched to vehicle according to page 4 before lowering or raising the deck.

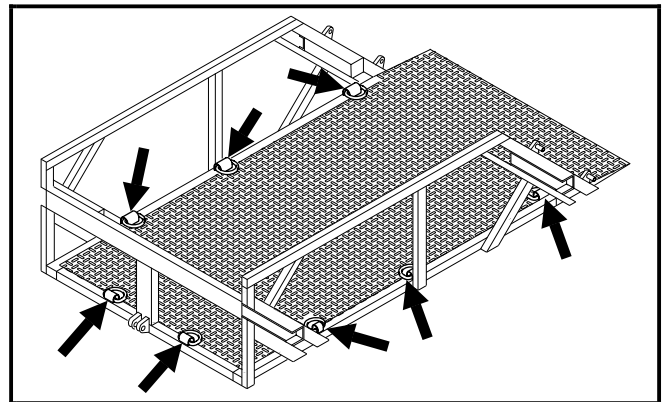
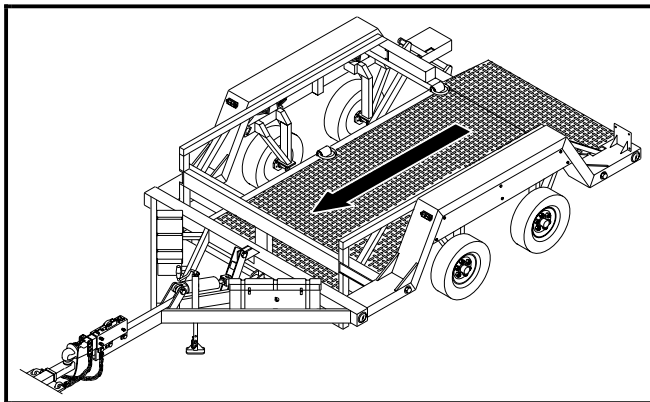
1. Turn power switch to ON position.
2. Hold control lever in the direction shown until the deck reaches ground level, then release.



NOTE: The trailer frame should be on a level surface when lowering the deck.

Load the Equipment

1. Load equipment so that the resulting tongue weight is 15 to 20% of the total load.
2. Install tie-down straps to keep the load from shifting. Use 8 tie-down anchors shown.



⚠ WARNING

Maximum capacity = 7000 lbs. (enclosed trailer is 6000 lbs.) Do not exceed.

⚠ WARNING

Always secure the load with tie-down straps before towing. Failure to properly secure the load may result in injury, death, or equipment damage.

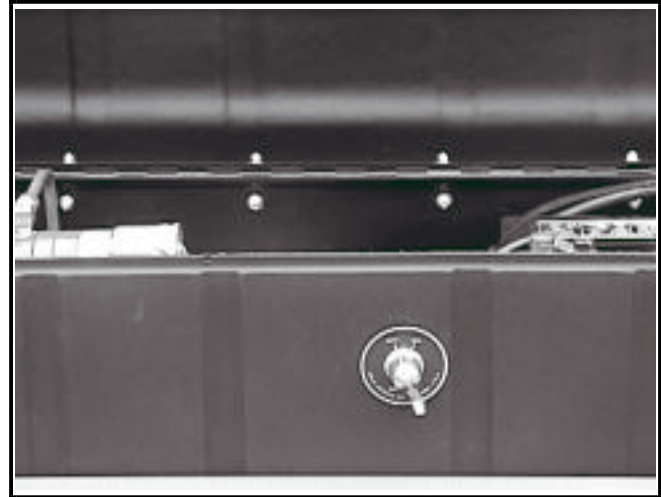
⚠ CAUTION

Do not hook tie-down straps on the roller guides.

EQUIPMENT LOADING

Raise the Deck (trailer must be hitched to vehicle)

1. Turn power switch to ON position. Hold control lever in the direction shown. Release control lever when deck is in fully raised position.
2. Turn power switch to OFF position.






WARNING

Make sure people are away from the trailer before raising the deck. Keep hands and feet away from deck and rails. Hands and feet can get crushed between the deck and frame.

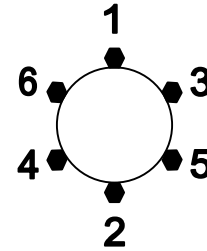
Tire Maintenance

At least once each week, use an accurate tire pressure gage to check the air pressure in all four trailer tires. Inflate to the pressure recommended by the tire manufacturer (located on the tire).

 CAUTION
Low or uneven tire pressures will not properly support a loaded trailer and could lead to premature tire wear.
 WARNING
When replacing tires, it is important to use a tire of appropriate size and load rating (75D-15).
 WARNING
Failure to maintain proper torque on the lug nuts may result in the wheel shearing off of the trailer, possibly causing an accident and seriously damaging the equipment.

Wheel Torque Requirements

It is extremely important to apply and maintain proper wheel mounting torque on your axle. Wheel nuts should be retorqued after 50 miles and 100 miles and periodically there after.



The tightening of the lug nuts should be torqued in the sequence above.

Lug nuts should be torqued in stages:

Stage 1	Stage 2	Stage 3
25 Ft-Lbs	60 Ft-Lbs	100 Ft-Lbs

This procedure should be followed after each time the tire is removed.

EQUIPMENT LOADING

Lubrication (every 6 months)

Lubricate the following parts with clean motor oil

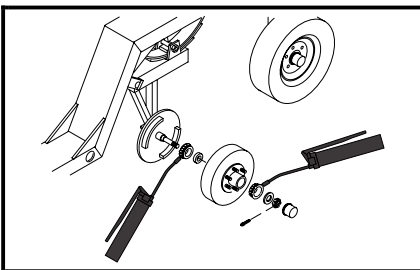
or wheel

bearing grease
where shown.

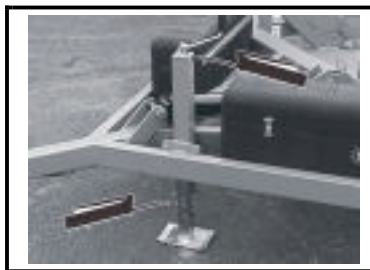
For additional brake operating and service instructions, refer to the Surge Brake Actuator Manual provided with the trailer.

NOTE: Be sure that no grease is applied to brake pad.

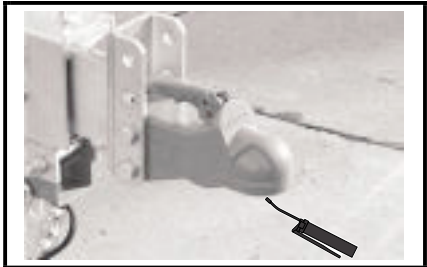
Wheel Bearings



Jack



Hitch

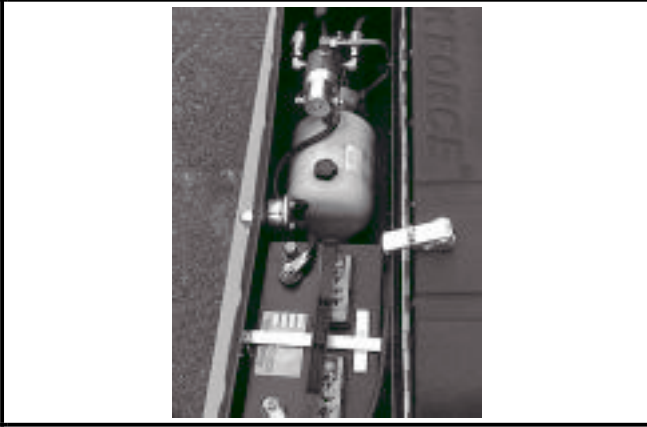


Lift Bearings

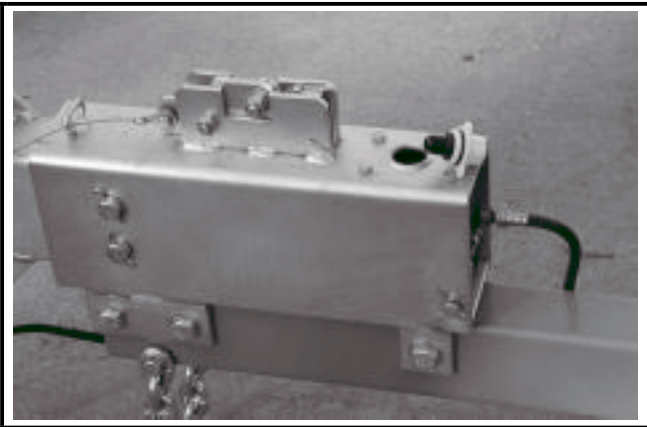


Hydraulic Fluid Levels

1. Open cover enclosing hydraulic pump. Check fluid level in hydraulic reservoir. When trailer deck is fully raised, hydraulic fluid level should be approximately 1 inch above 1/2 of reservoir volume.
2. If reservoir volume is below 1/2 when trailer deck is fully raised, add enough BP type HLP-46 or 10W hydraulic oil to bring fluid level in reservoir to approximately 1 inch above 1/2 full.



3. Remove fill cap from surge brake reservoir. Add DOT 3 brake fluid as needed to bring fluid level to 1/2-inch below fill port.



Battery

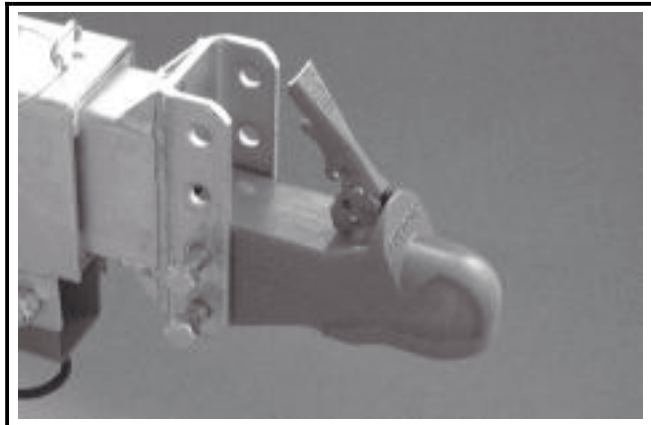
1. Use hydrometer to check battery charge daily or weekly, depending on frequency of use. If the battery charge drops below 25% of full charge (S.G. below 1.155 as corrected to 80°F) the battery must be recharged. Refer to step 2 before charging battery.
2. Check the electrolyte level weekly. If battery charge is low, add water to bring electrolyte level just above plates.
3. Charge battery at one of the following charge rates. The slow charge rate is preferred.
 - 22 hours @ 5 amps
 - 5 hours @ 20 amps
 - 2 hours @ 50 amps

If battery is fully charged, add water to raise electrolyte to full mark in each cell.

Adjusting the Hitch Height

The trailer frame and deck should be level for equipment loading and unloading. If the trailer hitch is too high or too low when hitched to the towing vehicle, readjust the hitch height.

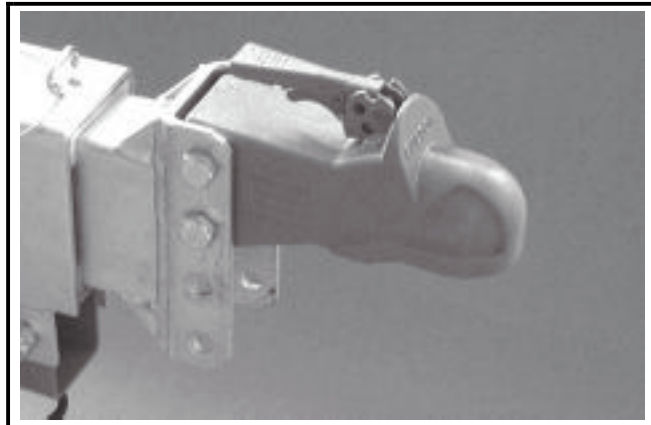
- 1.** Unhitch trailer. Remove hitch mounting bolts and nuts.



 **CAUTION**

Adjust hitch height when trailer is empty. Use jack to aid in hitch adjustment.

- 2.** Install hitch in new position.



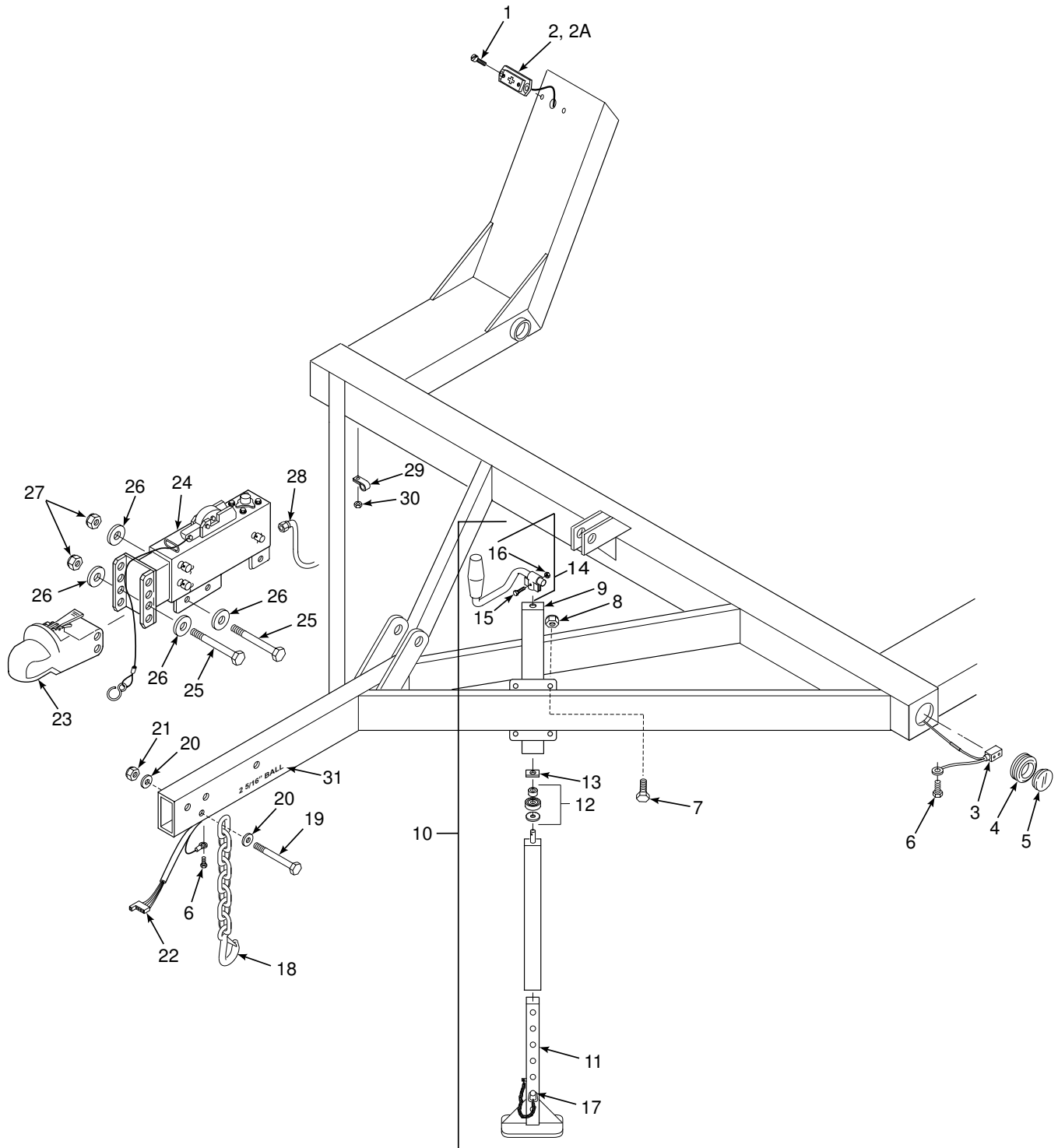
 **CAUTION**

Failure to install and tighten all hitch mounting screws may cause serious equipment damage.

PARTS LIST

Model ET 7000 ESCALATE[®] TRAILER, Hitch Section

Item No.	Part No.	Description	Qty
1	0090-0346	Screw, Self-tapping, #10-24 x 3/4	8
2	B01-10-0179	Side Marker, Amber, Ear Mount – Front	2
2A	B01-10-0241	Side Marker, Red, Ear Mount – Rear	2
3	B01-10-0153	Plug Assembly, Marker Lights	2
4	B01-10-0152	Grommet, 2-1/2 inch	2
5	B01-10-0151	Side Light, Amber, 2-1/2 inch	2
6	0090-0344	Screw, Self-tapping, #10-24 x 1/2	3
7	0090-0042	Screw, Cap, 3/8-16 x 1	4
8	0090-0188	Nut, Lock, 3/8-16	4
9	B12-00-0115	Outer Tube Weldment, Jack	1
10	B23-02-0062	Tongue Jack Assembly (includes items 11 through 17)	1
11	B23-02-0066	Drop Leg, Quick Adjust	1
12	B25-00-0068	Kit, Bearing	1
13	B04-06-0030	Washer, 2.18 inch Square	1
14	B46-00-0028	Kit, Handle Replacement (includes items 15 & 16)	1
15	0090-0007	Screw, Cap, 1/4-20 x 1-1/4	1
16	0090-0183	Nut, Lock, 1/4-20	1
17	B36-00-0039	Pin	1
18	B03-00-0017	Safety Chain Assembly	2
19	0090-0081	Bolt, 1/2-13 x 5 inch	1
20	0090-0574	Washer, Flat, 1/2 inch	2
21	0090-0192	Nut, Lock, 1/2-13	1
22	B01-01-0134	Wiring Harness	1
23	B12-00-0068	Coupler, 2-5/16 inch	1
24	B12-00-0080	Hitch, Brake Surge Type	1
25	0090-0878	Bolt, 5/8-11 x 4-3/4 inch	5
26	0090-0425	Washer, Flat, 5/8 inch	10
27	0090-0194	Nut, Lock, 5/8 inch	5
28	B21-00-0023	Kit, Brake Line	1
29	B04-07-0032	Clamp, Hose	18
30	0090-0183	Nut, Lock, 1/4-20	18
31	B06-00-0357	Transfer, 2-5/16 Ball Hitch	1

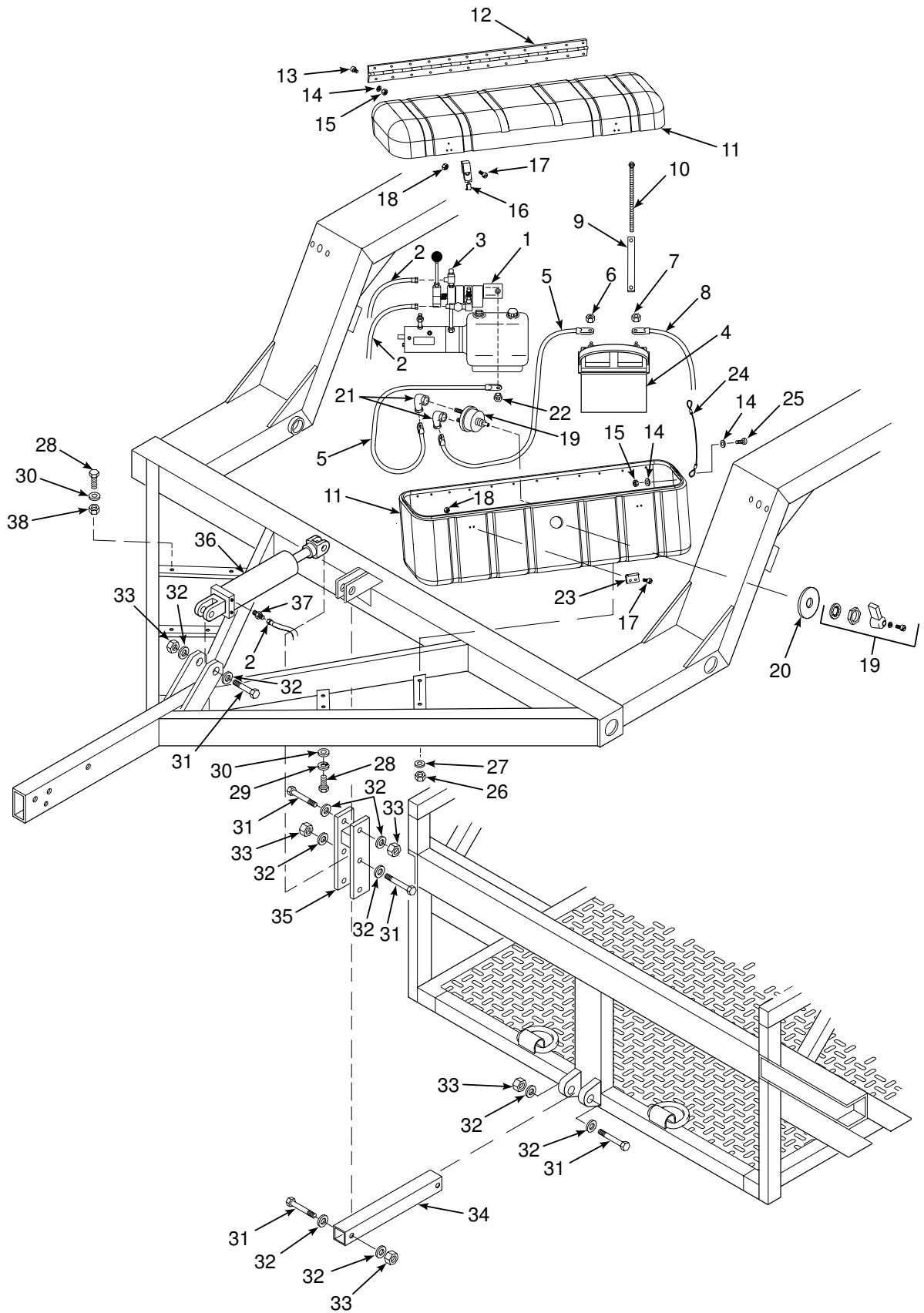


Model ET 7000 ESCALATE[®] TRAILER, Hitch Section

PARTS LIST

Model ET 7000 ESCALATE[®] TRAILER, Lift Section

Item No.	Part No.	Description	Qty
1	B02-05-0028	Pump Unit, Hydraulic, Manual Valve	1
2	B02-01-0147	Hose, Hydraulic	2
3	B02-02-0012	Fitting, Hydraulic	2
4	B01-04-0002	Battery, 12 V, 27 DCM	1
5	B01-01-0010	Battery Cable, 13 inch	1
6	0090-0162	Nut, Hex, 3/8-16	1
7	0090-0160	Nut, Hex, 5/16-18	1
8	B01-01-0013	Battery Cable, 30 inch	1
9	B07-06-5119	Strap, Battery Hold Down	1
10	B04-07-0003	Rod, Battery Hold Down, 1/4-20 x 10	2
11	B18-00-0147	Box w/Lid, Battery-Pump-Tool	2
12	B42-01-1014	Hinge, Continuous	2
13	0090-0231	Screw, Machine, #10-24 x 1/2	24
14	0090-0415	Washer, Flat, #10	40
15	0090-0182	Nut, Lock, #10-24	32
16	B42-00-0018	Latch, Draw	4
17	0090-0225	Screw, Machine, #8-32 x 1/2	20
18	0090-0181	Nut, Lock, #8-32	20
19	B01-02-0060	Switch, Master Power	1
20	B00-00-0112	Face Plate, Power Switch	1
21	B01-09-0018	Boot, Terminal	2
22	0090-0816	Nut, Hex, 5/16-24	1
23	B42-00-0019	Keeper, Draw Latch	4
24	B40-00-0029	Cable, Lid	4
25	0090-0232	Screw, Machine, #10-24 x 5/8	8
26	0090-0183	Nut, Lock, 1/4-20	2
27	0090-0419	Washer, Flat, 1/4	2
28	0090-0042	Screw, Cap, 3/8-16 x 1	6
29	0090-0210	Washer, Lock, 3/8	2
30	0090-0422	Washer, Flat, 3/8	6
31	0090-0900	Screw, Cap, 1-8 x 5 1/2	5
32	0090-0429	Washer, Flat, 1	10
33	0090-0689	Nut, Lock, 1-8	5
34	B12-00-0114	Linkage	1
35	B12-00-0106	Linkage Plate Weldment	1
36	B02-03-0023	Hydraulic Cylinder	1
37	B02-02-0084	Fitting, Hydraulic	2
38	0090-0188	Nut, Lock, 3/8-16	4



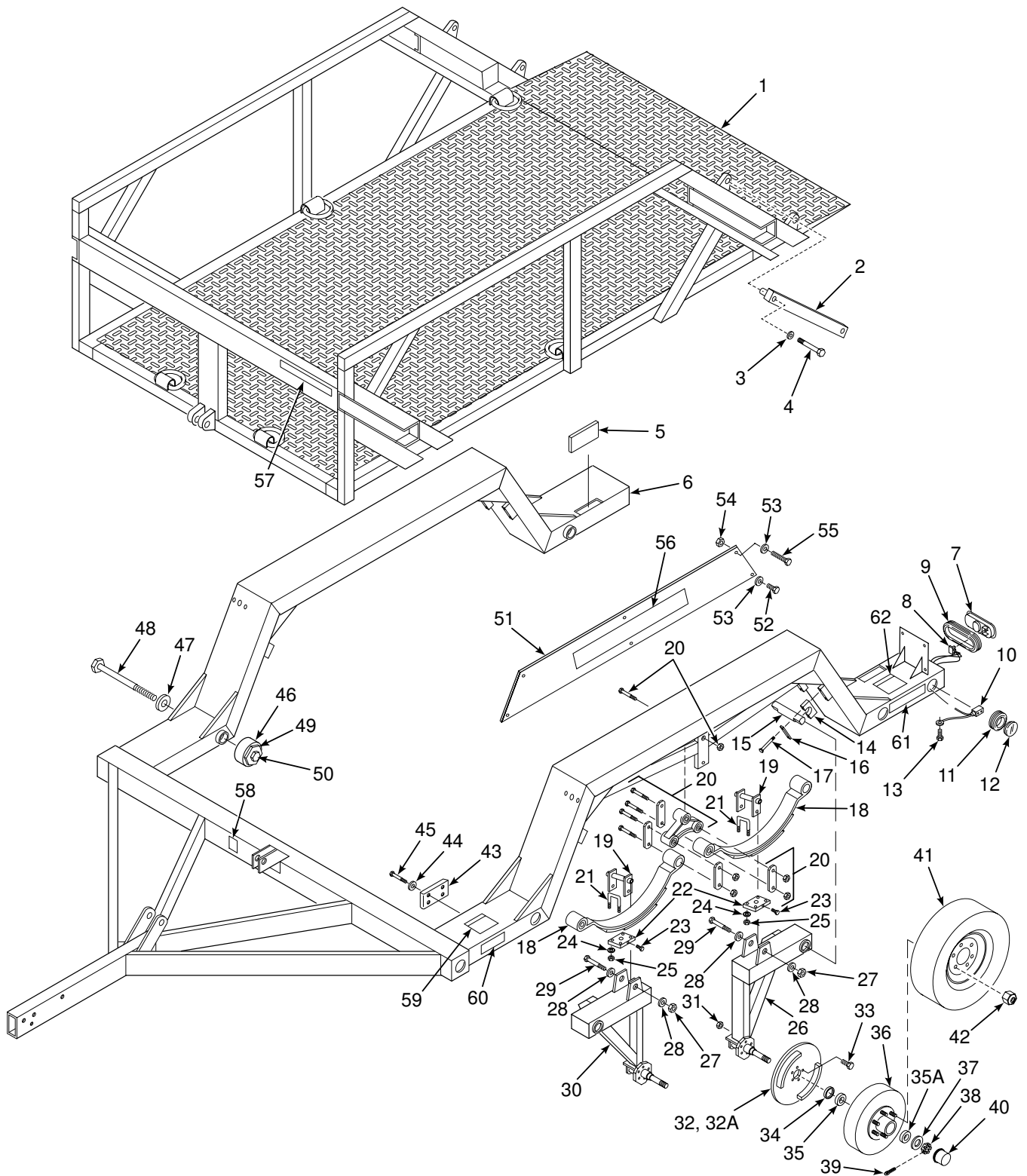
Model ET 7000 ESCALATE® TRAILER, Lift Section

PARTS LIST

Model ET 7000 ESCALATE® TRAILER, Deck and Frame Section

Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1	B12-00-0105	Deck Weldment	1	33	0090-0042	Screw, Cap, 3/8-16 x 1	20
2	B12-00-0116	Bar, Guide	2	34	B32-00-0014	Seal, Bearing	4
3	0090-0428	Washer, Flat, 3/4	8	35	B25-00-0060	Bearing, Wheel, Inner	4
4	0090-0103	Screw, Cap, 3/4-10 x 2-1/2	4	35A	B25-00-0061	Bearing, Wheel, Outer	4
5	B31-00-0034	Plate, Wear	2	36*	B12-00-0071	Wheel Assembly, 6 Lug	4
6	B12-00-0102	Frame Weldment	1	37	0090-0882	Washer, Wheel	4
7	B01-10-0235	Tail Light, Oval	2	38	0090-0880	Nut, Castle	4
8	B01-10-0237	Plug, 3 Way, Oval	2	39	0090-0881	Pin, Cotter	4
9	B01-10-0236	Grommet, Oval	2	40	B32-00-0013	Cap, Hub	4
10	B01-10-0153	Plug Assembly, Marker Lights	2	41	B08-02-0003	Tire, 75D-15	4
11	B01-10-0239	Grommet, 2 inch	2	42	0090-0624	Nut, Wheel Lug	24
12	B01-10-0238	Side Light, Red, 2 inch	2	43	B30-00-0051	Plate, Wear	2
13	0090-0344	Screw, #10-24 x 1/2	2	44	0090-0422	Washer, Flat, 3/8	8
14	B07-07-5029	Block, Suspension Pin	8	45	0090-0042	Screw, Cap, 3/8-16 x 1	8
15	B07-07-1023	Suspension Pin	4	46	B12-00-0121	Roller, Lift	4
16	B07-06-5697	Suspension Pin Plate	8	47	0090-0429	Washer, Flat, 1	4
17	0090-0958	Screw, Cap, 5/8-11 x 3-1/2	16	48	0090-0954	Bolt	4
18	B39-00-0042	Leaf Spring, Double Eye	4	49	B04-07-0117	Shaft, Cam Follower	4
19	B12-00-0127	Hanger, Leaf Spring	4	50	0090-0949	Screw, Nylon, 1-8 x 1/2	4
20	B39-00-0035	Hanger Kit, Tandem Spring	2	51	B07-05-0109	Fender	2
21	0090-0970	U-Bolt, Leaf Spring	8	52	0090-0005	Screw, Cap, 1/4-20 x 3/4	4
22	B07-07-5030	Block, Leaf Spring Clamp	4	53	0090-0419	Washer, Flat, 1/4	24
23	0090-0067	Screw, Cap, 1/2-13 x 1-1/2	8	54	0090-0183	Nut, Lock, 1/4-20	12
24	0090-0422	Washer, Flat, 3/8	16	55	0090-0013	Screw, Cap, 1/4-20 x 2-1/4	8
25	0090-0188	Nut, Lock, 3/8-16	16	56	B06-00-0161Y	Transfer, Bil-Jax	2
26	B12-00-0109	Suspension Arm, Left Rear, Right Front	2	57	B06-00-0437	Transfer, 7000# Max.	1
27	0090-0192	Nut, Lock, 1/2-13	2	58	Not Replaceable	Plate, Serial #	1
28	0090-0574	Washer, Flat, 1/2	4	59	B06-00-0312	Decal, "Moving Deck..."	2
29	0090-0078	Screw, Cap, 1/2-13 x 3-3/4	4	60	B06-00-0436	Transfer, "ET 7000"	2
30	B12-00-0110	Suspension Arm, Left Front, Right Rear	2	61	B06-00-0317	Decal, Escalate Trailer Logo	2
31	0090-0896	Nut, Lock, 3/8-16	20	62	B06-00-0313	Decal, "Stand Clear..."	2
32	B10-00-0033	Brake Assembly, Left Hand	2	Ref.	B01-10-0240	Bracket, License Plate, with Lamp	
32A	B10-00-0032	Brake Assembly, Right Hand	2				

* Wheel assembly includes items 34, 35, 40, and 42.

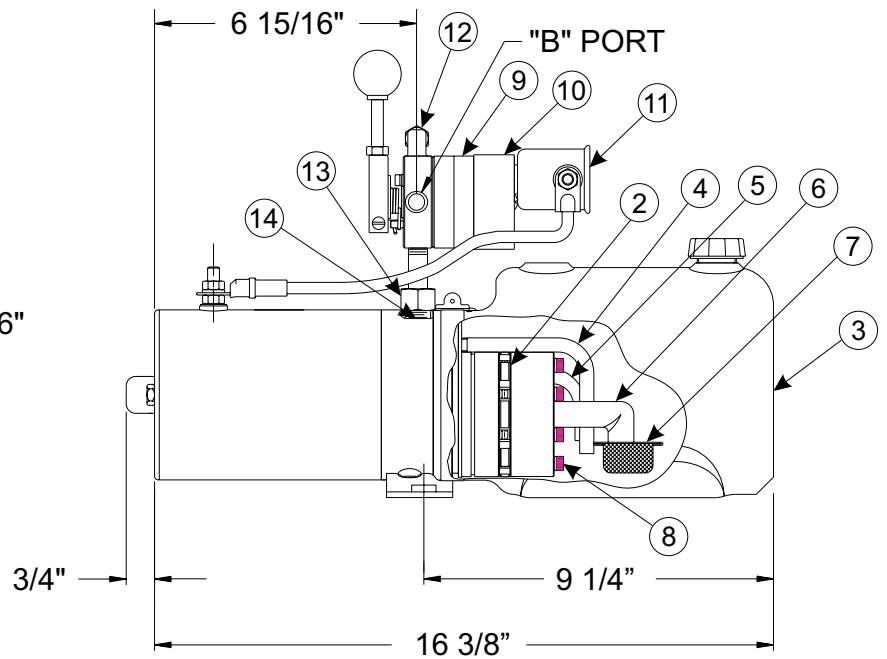
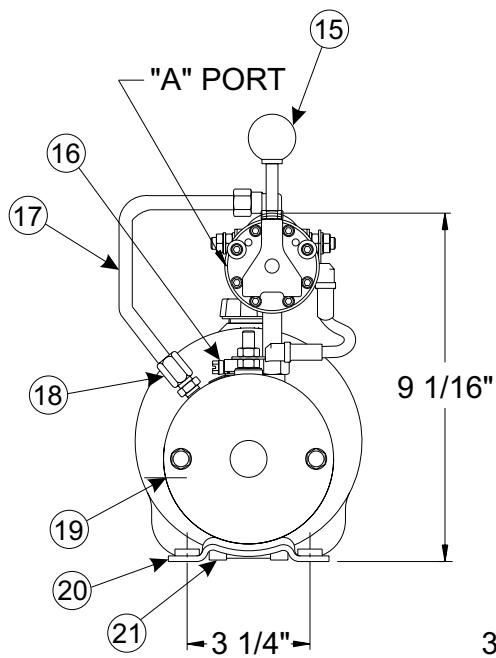
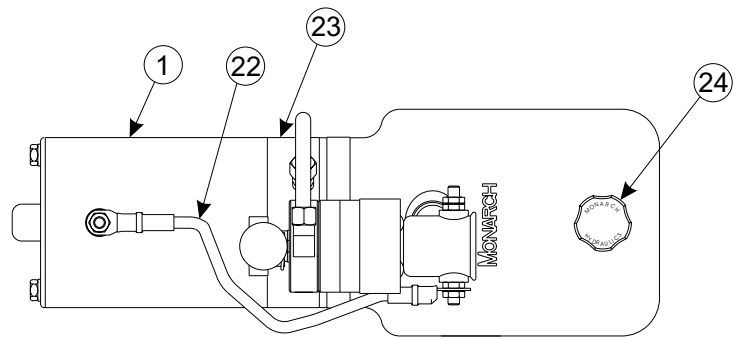


Model ET 7000 ESCALATE[®] TRAILER, Deck and Frame Section

PARTS LIST

B02-05-0028 Hydraulic Pump Assembly

Item No.	Part No.	Description	Qty
1	B02-15-0398	Motor, DC - 12V	1
2	B02-15-0399	Pump Assembly	1
3	B02-15-0400	Tank, Plastic	1
4	B02-15-0401	Tube, Interior Return	1
5	B02-15-0402	Tube, Relief Valve Return	1
6	B02-15-0403	Tube, Suction	1
7	B02-15-0404	Filter, Suction	1
8	0090-0975	Bolt, Socket Head, 1/4-20 x 3	4
9	B02-15-0405	Valve Assembly (includes items 10 & 11)	1
10	B02-15-0406	Switch Assembly Cam (includes item 11)	1
11	B02-15-0407	Contact, Start Switch	1
12	B02-15-0408	Elbow, 90 Degree, 3/8 Tube x 1/4 NPT	1
13	B02-15-0409	Adapter, Pump/Valve, 2-1/2 Long	1
14	B02-15-0410	Valve, Check	1
15	B02-15-0411	Handle Assembly	1
16	B02-15-0412	Clamp	1
17	B02-15-0413	Tube, Exterior Return	1
18	B02-15-0414	Connector Assembly	1
19	B02-15-0415	Valve, Relief	1
20	B02-15-0416	Bracket, Plate Mount, 3-1/4 Hole Spacing	1
21	0090-0976	Bolt, Socket Head, 3/8-16 x 1	2
22	B01-01-0010	Cable, 2GA x 13, Eyelet Ends	1
23	B02-15-0417	Base Assembly	1
24	B02-15-0418	Cap, Fill	1



B02-05-0028 Hydraulic Pump Assembly

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