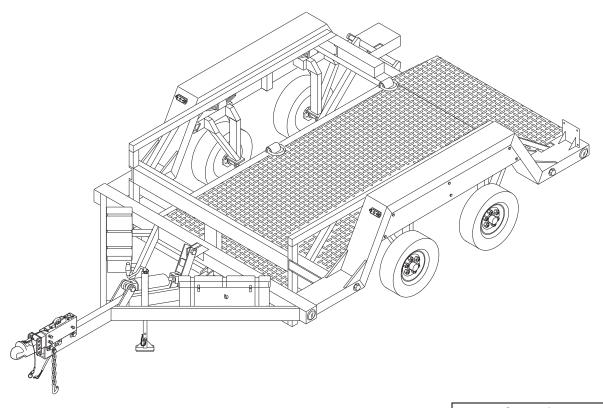


ESCALATE® Model ET 7000 **TRAILER** Operation and Service Manual



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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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.

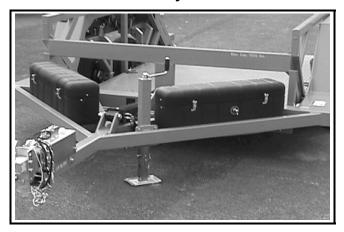




SPECIAL FEATURES

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

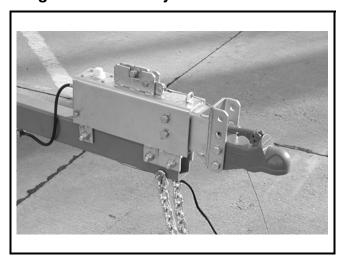
Escalator Deck and Hydraulic Lift



Heavy Duty Tie-Down Brackets



Surge Brake and Adjustable Hitch



Optional Enclosure



ESCALATE® TRAILER

Model Number ET 7000 Serial Number _____

Manufactured by: Bil-Jax, Inc.

125 Taylor Parkway Archbold, Ohio 43502

800-537-0540

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; | Standard – Hydraulic Surge; |
| | Optional – Electric | 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.

Bil-Jax, Inc. 125 Taylor Parkway Archbold, Ohio 43502

Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Bil-Jax, Inc.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in any individual problems between you, your dealer, or Bil-Jax, Inc.

To contact NHTSA you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (366-0123 in Washington, DC area) or write to:

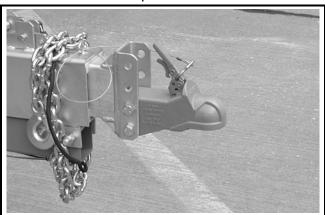
NHTSA U.S. DEPARTMENT of TRANSPORTATION 400 7th Street SW, (NSA-11) Washington, DC 20590

You can also obtain other information about motor vehicle safety from the Hotline.

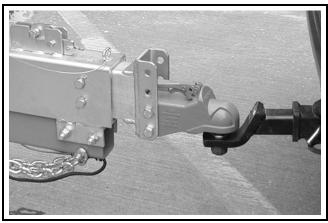
TRAILER HITCHING

Hook Up the Trailer

1. Raise trailer and open ball latch.

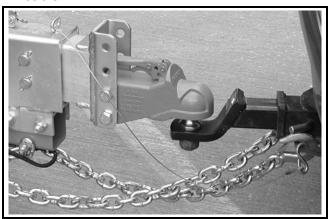


3. Lower hitch onto ball and close ball latch.



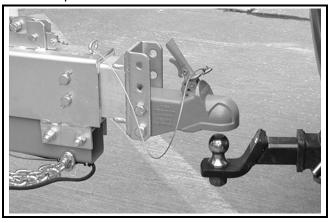
NOTE: Trailer frame should be level when hitch is on ball. See page 10 to adjust hitch height.

5. Hook safety chains and attach breakaway cable.



(L) CAUTION

Always cross safety chains below tongue. Safety chains must hold tongue up if hitch fails. 2. Line up ball with hitch.



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

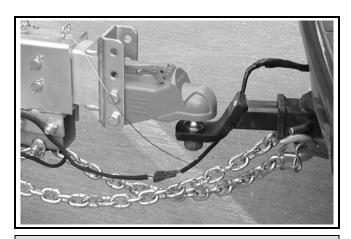
4. Raise the jack.



A CAUTION

Always raise the jack before towing.

6. Connect and check trailer lights.



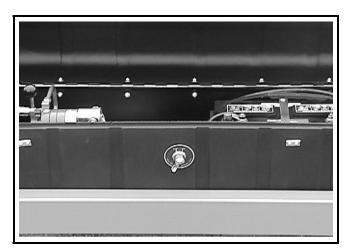
! CAUTION

Always check the tail lights and brake lights before towing.

Lower the Deck

NOTE: Trailer must be hitched to vehicle according to page 5 before lowering or raising the deck.

1. Turn power switch to ON position.



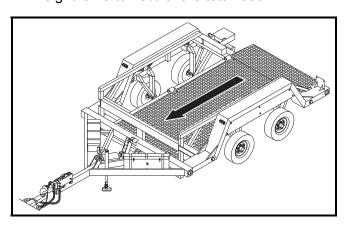
NOTE: The trailer frame should be on a level surface when lowering the deck.

2. Hold control lever in the direction shown until the deck reaches ground level, then release.



Load the Equipment

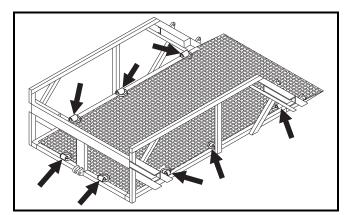
1. Load equipment so that the resulting tongue weight is 15 to 20% of the total load.



WARNING

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

2. Install tie-down straps to keep the load from shifting. Use 8 tie-down anchors shown.



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.

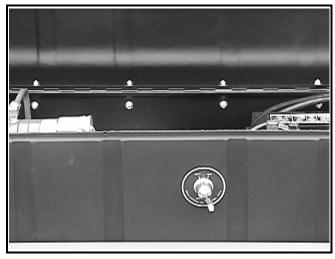
CAUTION

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

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.

(L) CAUTION

Low or uneven tire pressures will not properly support a loaded trailer and could lead to premature tire wear.

WARNING

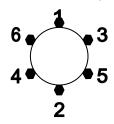
When replacing tires, it is important to use a tire of appropriate size and load rating (75D-15).



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.

Lubrication (every 6 months)

Lubricate the following parts with clean motor oil where shown.

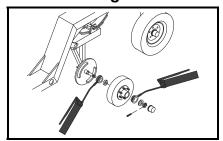
or wheel bearing grease



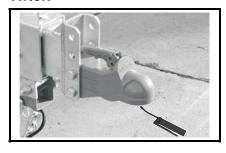
For additional brake operating and service instructions, refer to the Surge Brake Actuator Manual provided with the trailer.

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

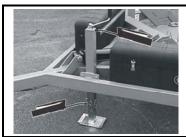
Wheel Bearings



Hitch



Jack

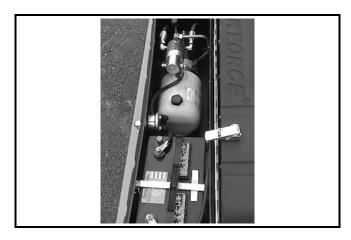


Lift Bearings

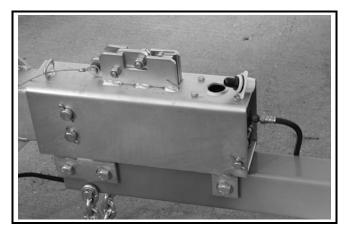


Hydraulic Fluid Levels

 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.



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.



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.

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.

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

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

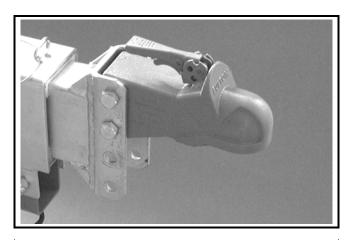
Adjusting the Hitch Height

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.



2. Install hitch in new position.



CAUTION

Adjust hitch height when trailer is <u>empty</u>. Use jack to aid in hitch adjustment.

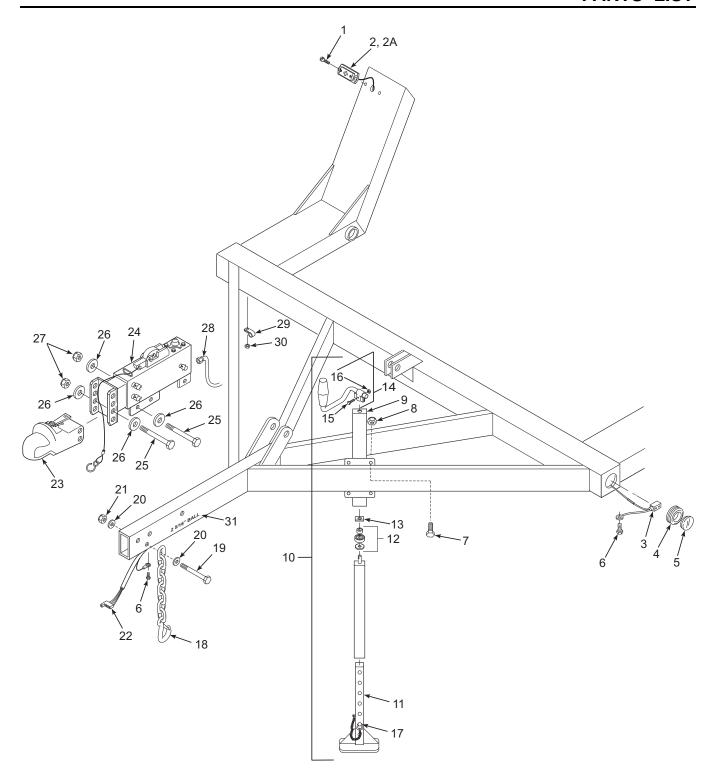
A CAUTION

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

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Model ET 7000 ESCALATE® TRAILER, Hitch Section

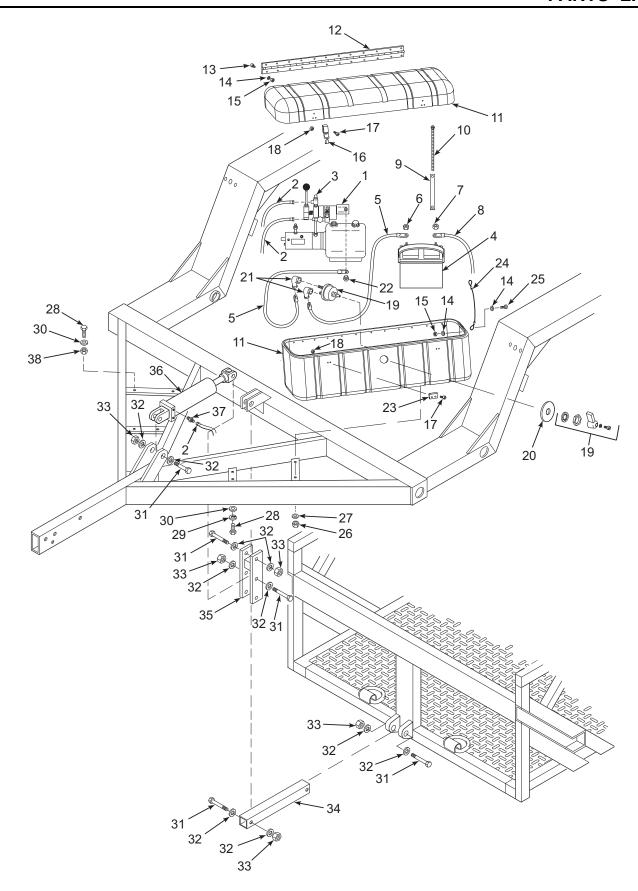
| Item No. | Part No. | Description | Qty |
|----------|-------------|---|-----|
| 1 | 0090-0346 | Screw, Self-tapping, #10-24 x 3/4 | 8 |
| 2 | B01-10-0179 | Side Marker, Amber, Ear Mount – Front | 2 |
| 2A | B01-10-0241 | Side Marker, Red, Ear Mount – Rear | 2 |
| 3 | B01-10-0153 | Plug Assembly, Marker 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

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 |



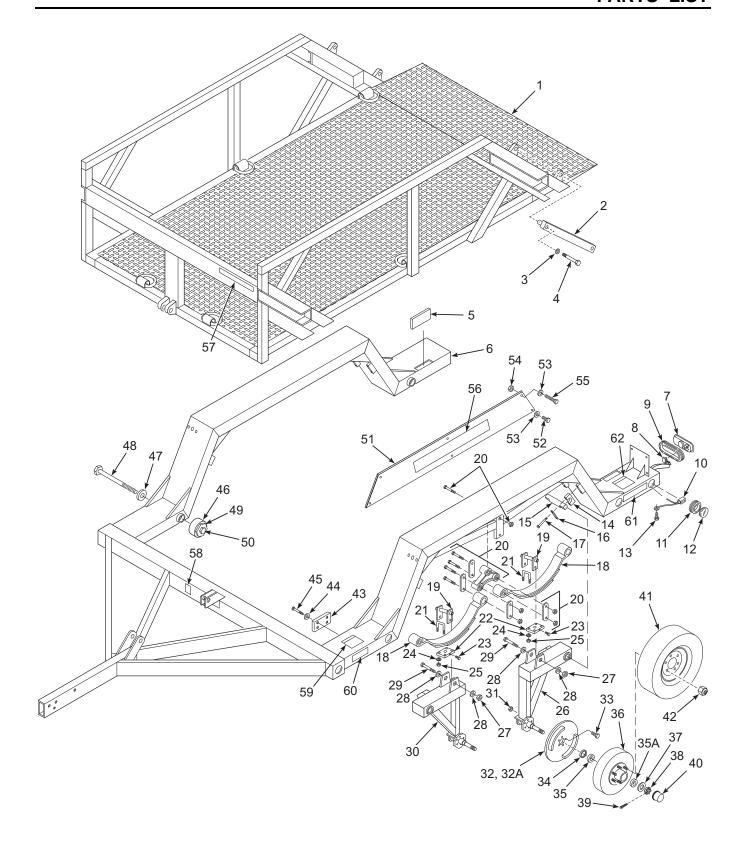
Model ET 7000 ESCALATE® TRAILER, Lift Section

Model ET 7000 ESCALATE® TRAILER, Deck and Frame Section

| Item No. | Part No. | Description | Qty |
|----------|-------------|---|-----|
| 1 | B12-00-0105 | Deck Weldment | 1 |
| 2 | B12-00-0116 | Bar, Guide | 2 |
| 3 | 0090-0428 | Washer, Flat, 3/4 | 8 |
| 4 | 0090-0103 | Screw, Cap, 3/4-10 x 2- 1/2 | 4 |
| 5 | B31-00-0034 | Plate, Wear | 2 |
| 6 | B12-00-0102 | Frame Weldment | 1 |
| 7 | B01-10-0235 | Tail Light, Oval | 2 |
| 8 | B01-10-0237 | Plug, 3 Way, Oval | 2 |
| 9 | B01-10-0236 | Grommet, Oval | 2 |
| 10 | B01-10-0153 | Plug Assembly, Marker Lights | 2 |
| 11 | B01-10-0239 | Grommet, 2 inch | 2 |
| 12 | B01-10-0238 | Side Light, Red, 2 inch | 2 |
| 13 | 0090-0344 | Screw, #10-24 x 1/2 | 2 |
| 14 | B07-07-5029 | Block, Suspension Pin | 8 |
| 15 | B07-07-1023 | Suspension Pin | 4 |
| 16 | B07-06-5697 | Suspension Pin Plate | 8 |
| 17 | 0090-0958 | Screw, Cap, 5/8-11 x 3- 1/2 | 16 |
| 18 | B39-00-0042 | Leaf Spring, Double Eye | 4 |
| 19 | B12-00-0127 | Hanger, Leaf Spring | 4 |
| 20 | B39-00-0035 | Hanger Kit, Tandem Spring | 2 |
| 21 | 0090-0970 | U-Bolt, Leaf Spring | 8 |
| 22 | B07-07-5030 | Block, Leaf Spring Clamp | 4 |
| 23 | 0090-0067 | Screw, Cap, 1/2-13 x 1- 1/2 | 8 |
| 24 | 0090-0422 | Washer, Flat, 3/8 | 16 |
| 25 | 0090-0188 | Nut, Lock, 3/8-16 | 16 |
| 26 | B12-00-0109 | Suspension Arm, Left Rear, Right Front | 2 |
| 27 | 0090-0192 | Nut, Lock, 1/2-13 | 2 |
| 28 | 0090-0574 | Washer, Flat, 1/2 | 4 |
| 29 | 0090-0078 | Screw, Cap, 1/2-13 x 3- 3/4 | 4 |
| 30 | B12-00-0110 | Suspension Arm, Left Front, Right Rear | 2 |
| 31 | 0090-0896 | Nut, Lock, 3/8-16 | 20 |
| 32 | B10-00-0033 | Brake Assembly, Left Hand | 2 |
| 32A | B10-00-0032 | Brake Assembly, Right Hand | 2 |

| Item No. | Part No. | Description | Qty |
|----------|--------------------|-----------------------------------|-----|
| 33 | 0090-0042 | Screw, Cap, 3/8-16 x 1 | 20 |
| 34 | B32-00-0014 | Seal, Bearing | 4 |
| 35 | B25-00-0060 | Bearing, Wheel, Inner | 4 |
| 35A | B25-00-0061 | Bearing, Wheel, Outer | 4 |
| 36* | B12-00-0071 | Wheel Assembly, 6 Lug | 4 |
| 37 | 0090-0882 | Washer, Wheel | 4 |
| 38 | 0090-0880 | Nut, Castle | 4 |
| 39 | 0090-0881 | Pin, Cotter | 4 |
| 40 | B32-00-0013 | Cap, Hub | 4 |
| 41 | B08-02-0003 | Tire, 75D-15 | 4 |
| 42 | 0090-0624 | Nut, Wheel Lug | 24 |
| 43 | B30-00-0051 | Plate, Wear | 2 |
| 44 | 0090-0422 | Washer, Flat, 3/8 | 8 |
| 45 | 0090-0042 | Screw, Cap, 3/8-16 x 1 | 8 |
| 46 | B12-00-0121 | Roller, Lift | 4 |
| 47 | 0090-0429 | Washer, Flat, 1 | 4 |
| 48 | 0090-0954 | Bolt | 4 |
| 49 | B04-07-0117 | Shaft, Cam Follower | 4 |
| 50 | 0090-0949 | Screw, Nylon, 1-8 x 1/2 | 4 |
| 51 | B07-05-0109 | Fender | 2 |
| 52 | 0090-0005 | Screw, Cap, 1/4-20 x 3/4 | 4 |
| 53 | 0090-0419 | Washer, Flat, 1/4 | 24 |
| 54 | 0090-0183 | Nut, Lock, 1/4-20 | 12 |
| 55 | 0090-0013 | Screw, Cap, 1/4-20 x 2- 1/4 | 8 |
| 56 | B06-00-0161Y | Transfer, Bil-Jax | 2 |
| 57 | B06-00-0437 | Transfer, 7000# Max. | 1 |
| 58 | Not Replaceable | Plate, Serial # | 1 |
| 59 | B06-00-0312 | Decal, "Moving Deck" | 2 |
| 60 | B06-00-0436 | Transfer, "ET 7000" | 2 |
| 61 | B06-00-0317 | Decal, Escalate Trailer Logo | 2 |
| 62 | B06-00-0313 | Decal, "Stand Clear" | 2 |
| Ref. | B01-10-0240 | Bracket, License Plate, with Lamp | |

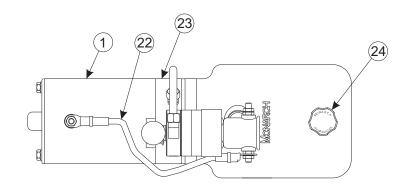
^{*} Wheel assembly includes items 34, 35, 40, and 42.

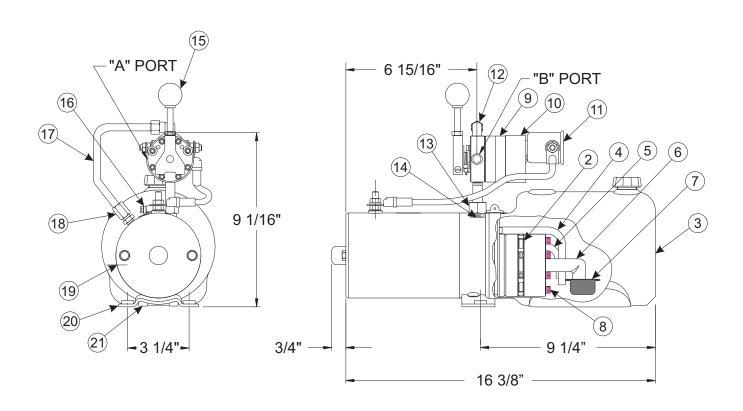


Model ET 7000 ESCALATE[®] TRAILER, Deck and Frame Section

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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