

TR & TQ DUMP TRAILER SERIES



Towing Checklist

1. Use proper sized ball coupler.
2. Ensure coupler is secure. Lock coupler in place.
3. Attach safety chains, crossing them under tongue.
4. Attach breakaway switch cable, to tow vehicle frame.
5. Plug trailer's electrical connector, into tow vehicle.
6. Check lights: brake, running, turn signals.
7. Verify that brake control is operating and calibrated.
8. Check tire pressure, lug nuts on wheels.
9. Load trailer with proper weight distribution.



Owner's Information:	
Owner's Name : _____	Dealer : _____
Purchase Date : / / _____	Phone : () - _____
Trailer Part # : _____	Weight # empty : _____
Serial # _____	Rated capacity : _____
Other: _____	Payload : _____

OWNER'S MANUAL 2015

Contact your local dealer or distributor for replacement parts and technical support or visit

www.downeastermfg.com

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Introduction

Thank you for purchasing a DownEaster Dump Trailer. This Owners Manual provides easy to follow instructions for operating and servicing the unit. Read the entire manual carefully to learn the proper procedures for each operation. Follow all of the instructions described to keep the dumper in top condition and it will provide years of trouble-free performance. In the event that a problem should arise or if you have any questions about the trailer, please contact your DownEaster dealer.

All information, illustrations and specifications in this manual are based on the latest DownEaster Dump Insert and Trailer information, available at the time of publication. The manufacturer reserves the right to make changes and improvements without notice.

***** NOTE: Read this manual and fully understand the information presented before starting or operating the equipment.**

BATTERY NOTICE

The battery in your DownEaster Dump Trailer must be kept charged in order to work properly. This is accomplished by connecting the battery to a battery charger, that is suitable for this purpose. For your safety, please follow all instructions that accompany the charger.

If you do not plan to use your DownEaster Dump Trailer for an extended period of time, remove the cables from the battery. During periods of storage, the battery must be kept charged to avoid the possibility of damage from freezing.

DO NOT REMOVE THE BREAKAWAY BRAKE SWITCH WHILE YOUR TRAILER IS PARKED. THIS WILL ENERGIZE THE BRAKES AND DRAIN THE BATTERY. ONCE THE BATTERY HAS LOST ITS CHARGE, THE BRAKES WILL RELEASE WHICH MAY ALLOW THE TRAILER TO ROLL.

MATERIAL CHART

AGGREGATE TYPE	WEIGHT IN LBS.	2 YARDS	3 YARDS	4 YARDS	5 YARDS
Asphalt	2,700	5400	8100	10800	13500
Concrete (gravel or stone mix)	4,050	8100	12150	16200	20250
Concrete (average wet mix)	3,730	7460	11190	14920	18650
Clay (dry)	2,300	4600	6900	9200	11500
Clay (wet)	2,970	5940	8910	11880	14850
Crushed Stone	2,700	5400	8100	10800	13500
Topsoil (loose)	2,050	4100	6150	8200	10250
Topsoil (packed)	2,565	5130	7695	10260	12825
Topsoil (wet)	3,375	6750	10125	13500	16875
Gravel (dry) 3/4	2,565	5130	7695	10260	12825
Gravel (wet) 3/4	3,375	6750	10125	13500	16875
Limestone (solid)	4,480	8960	13440	17920	22400
Limestone (crushed)	2,565	5130	7695	10260	12825
Pebbles (3/8 pea)	2,700	5400	8100	10800	13500
Rock (2-6")	3,200	6400	9600	12800	16000
Rip Rap (1-4")	4,000	8000	12000	16000	20000
Sand (dry)	2,750	5500	8250	11000	13750
Sand (wet)	3,300	6600	9900	13200	16500
Salt (bulk)	2,160	4320	6480	8640	10800
Salt/Sand Mix	2,320	4640	6960	9280	11600
Snow (packed)	1,350	2700	4050	5400	6750
Stone (crushed - average)	2,700	5400	8100	10800	13500
Water	1,700	3400	5100	6800	8500

All posted weights were gathered from the EPA & NTEA.

SAFETY



THIS SIGN SHOULD ALERT YOU:

The Society of Automotive Engineers has adopted this SAFETY ALERT SYMBOL to pinpoint characteristics that, if NOT carefully followed, can create a safety hazard. When you see this symbol in this manual or on the machine itself, BE ALERT! Your personal safety and the safety of others is involved.

The purpose of safety symbols is to draw attention to possible dangers. The safety symbols and explanations with them deserve your careful attention. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention procedures.



DANGER

Identifies the most serious hazards.



WARNING

Failure to obey a safety warning can result in injury to yourself and others.



CAUTION

Indicate[s] a hazardous situation which, if not avoided, could result in minor or moderate injury.

* NOTE - Advises of general information or instructions important to the operation or maintenance

Carefully read this manual. Learn how to safely operate the DownEaster Trailer and how to use the controls properly. Do not allow anyone to operate the DownEaster Trailer without proper training and instruction. Unauthorized modification to the DownEaster Trailer may impair the function and/or safety of the machine.

Follow safety instructions

Read all safety messages in the manual and on the DownEaster Trailer safety labels. Follow recommended precautions and safe operating practice. Maintain all safety labels on the DownEaster Trailer in good condition. Replace missing or damaged safety labels, with new labels, available through your DownEaster dealer.

Pre Operation

Thoroughly inspect the DownEaster Trailer, for loose or damaged parts, before each use. Do not use until adjustments or repairs are made.

Keep all bystanders, especially children and pets, well away from the area, where the machine will be operated.

Keep all bystanders, a minimum of 20 feet away when unit is operational.

Operation

Wear safety glasses or goggles at all times, when operating the Trailer. Keep hands, face and feet away from all moving parts. Do not attempt to stop the machinery, when it is moving or rotating. Do not wear loose fitting articles of clothing, such as scarves, strings, chains, ties, etc.; because they could get drawn into moving machinery, associated with this equipment. Long hair should be tied back or protected from entanglement.

Always remain alert. To prevent serious injury to yourself and to others do not operate this equipment, if you are fatigued.

SAFETY

Tow Ball Size

Use the correct ball size, to match the coupler on the trailer. Failure to do so may result in the trailer tongue lifting off the ball, on the tow vehicle. This can result in loss of control of the trailer, which can lead to property damage, personal injury, and/or death.

Safety Chains

Your trailer is equipped with safety chains or cables, which must be securely attached to the towing vehicle, before pulling the trailer. Cross them under the trailer tongue, before connecting them to the towing vehicle, so that they will cradle the trailer coupler and tongue in the event of separation of the coupling or ball. There should be enough slack for the trailer to turn freely, but not so much that the chains or cables drag on the ground. Failure to comply can result in property damage, personal injury, and/or death.

Tire Inflation

Inflate tires according to the manufacturer's specifications. Inspect tires before each use for cuts, excessive wear, etc. Failure to comply can result in property damage, personal injury, and/or death.

Trailer Brakes

Your trailer is equipped with electric brake axles. They require a brake controller and proper wiring in your towing vehicle to function properly. Make sure the brakes are synchronized with the towing vehicle. See brake/axle manufacturer's instructions for more information. Failure to comply can result in instability of the trailer during braking which could cause property damage, personal injury, and/or death.

Lights

Check the operation of all lights before each use. Failure to comply could result in an accident due to other drivers not seeing the trailer and could cause property damage , personal injury, and/or death.

Coupling Trailer to Tow Vehicle

Make sure the coupler and hitch are securely attached, to avoid collision with another vehicle caused by instability or separation of trailer from towing vehicle. Lock the coupler clamp in place, using a pin or padlock. Check that the trailer is towing in a level position and adjust the hitch.

Uncoupling Trailer from Tow Vehicle

Block the trailer wheels before disconnecting trailer, from the tow vehicle, to prevent rolling. Do not unhook the trailer coupler from the tow vehicle with the dump bed in the raised position, as the tongue may jerk up rapidly. Failure to comply could result in property damage, personal injury, and/or death.

Hydraulic Cylinder

Grease the cylinder pivot points as needed, at the grease fittings or pins. Check for leaks or corroded & loose fittings.

Hydraulic Pump

Check the reservoir for proper fluid level. The fluid should be approximately 1 to 2" from the top of the tank, when the dump unit is down. If fluid must be added, use new automatic transmission fluid, Dextron III or equivalent. Do not operate the unit when the fluid level is low.

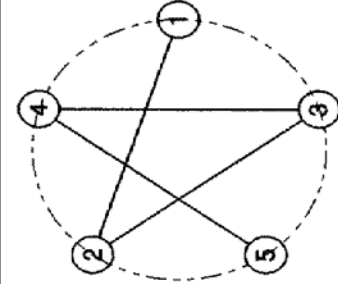
SPECIFICATIONS

Model#	TR508L5	TR610D5	TQ610D5	TQ610D3	TQ610L3	TQ610L5	TQ612L5	TRC612L6
GVWR: #	5,000 lbs.	9,990 lbs.	9,990 lbs.	7,000 lbs.	7,000 lbs.	9,990 lbs.	9,990 lbs.	12,000 lbs.
Curb weight: (standard gate)	1,380 lbs.	2,000 lbs.	1,950 lbs.	1,880 lbs.	2,040 lbs.	2,110 lbs.	2,340 lbs.	2,975 lbs.
Payload capacity:	3,620 lbs	7,990 lbs.	8,040 lbs.	5,120 lbs	4,960 lbs.	7,880 lbs.	7,650 lbs.	8,980 lbs.
Volume: (level)	2.4 cubic yards	3.9 cubic yards	3.9 cubic yards	3.05 cubic yards (3.9 w/ boards)	3.05 cubic yards (3.9 w/ boards)	3.66 cubic yards (4.5 w/ boards)	3.66 cubic yards (4.5 w/ boards)	(10 yards) 288 cubic ft.
Bed size width x length:	59.7" x 95.5"	72" x 119.5"	72" x 119.5"	72" x 119.5"	72" x 119.5"	72" x 119.5"	72" x 143.5"	72" x 143.5"
Bed plate Gauge:			12 Gauge					
Deck height:	25"	31"	30.5"	26.5"	27"			28"
Side height:	21"		16.5"					48"
Side plate Gauge:			14 Gauge			12 Gauge		14 Gauge
Axle capacity:		6000 lbs.		3500 lbs.		6000 lbs.		
Tire size:		225/75/15D		205/75/15D		225/75/15D		235/80R16 E (radial)
Cylinder bore x length:	3" x 24"		3" x 30"			3.5" x 34"		
* Equipment load capacity:		N/A		* 4,780 lbs.		* 6,000 lbs.		N/A

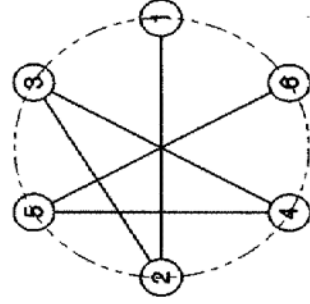
* Equipment load capacity of loading ramps is 1500 lbs. each (3000 lbs. per equipment axle)

Model#	TR6812L6	TR6814L7
GVWR: #	12,000 lbs.	14,000 lbs.
Curb weight:	3,445 lbs.	3,625 lbs.
Payload capacity:	8,555 lbs. (w/ ramps)	10,065 lbs. (w/ ramps)
Volume: (level)	5.16 cubic yards	6.03 cubic yards
Bed size width x length:	80" x 143.5"	80" x 167.5"
Bed plate Gauge:	10 Gauge	
Deck height:	25"	
Side height:	21"	
Side plate Gauge:	10 Gauge	
Axle capacity:	6000 lbs.	7000 lbs.
Tire size:	235/80R16 E 6H	235/80R16 E 8H
Cylinder bore x length:	5" x 20" Scissor Hoist (HT514)	

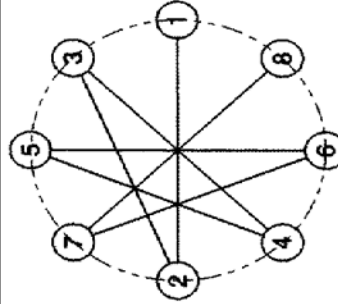
Torque sequence for lug nuts



5 LUG BOLT PATTERN



6 LUG BOLT PATTERN



8 LUG BOLT PATTERN

WARNINGS



Before attempting any procedure in this book, these safety instructions must be read and understood by all workers, who have any part in the preparation or use of this equipment.



For your safety, warning and information decals have been placed on this product, to remind the operator of safety precautions. If anything happens to mark or destroy the decals, please request new ones from DownEaster.



Trailer coupler must be pinned and locked down into position before operating.



Never exceed the Gross Vehicle Weight Rating of your vehicle. Failure to do so may limit handling characteristics.



Never attempt to dump a load without being coupled, to tow vehicle.



Always dump a load on even, level ground, firm enough to support the weight of vehicle and loaded trailer.



Always inspect trailer, for defects such as broken, worn or bent parts and weakened areas



Always disconnect power source before attempting to service trailer unit. Be sure vehicle/power source is properly braked or chocked.



Always keep hands, feet and clothing away from power-driven parts. Remember, it is the owner's responsibility to communicate information, on safe usage and proper maintenance, of all equipment.



Always make sure personnel are clear of areas of danger, when using equipment. Maintain safe distance from all bystanders, when operating the trailer.



Inspect the unit periodically for defects. Parts that are broken, missing, or worn out must be replaced immediately. The unit, or any part of it can not be altered without prior written permission from the manufacturer.



Always inspect straps, chains, pins and/or latches, whenever attaching or detaching trailer and before traveling.



Never leave material in hopper for long periods of time. Be aware that some materials are hygroscopic and will attract atmospheric moisture and harden up.



Remember, most accidents are preventable and caused by human error. Exercising of care and precautions must be observed, to prevent the possibility of injury to operator or others!



Never operate equipment when under the influence of alcohol, drugs or medication that might alter your judgment and /or reaction time.



Before working under the trailer, secure all safety prop(s).

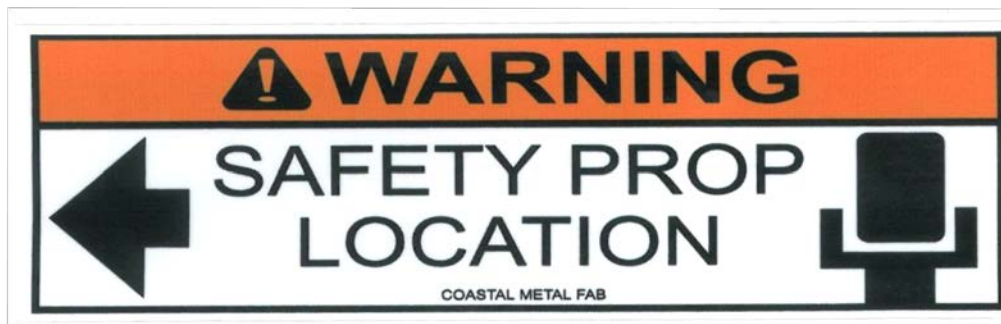
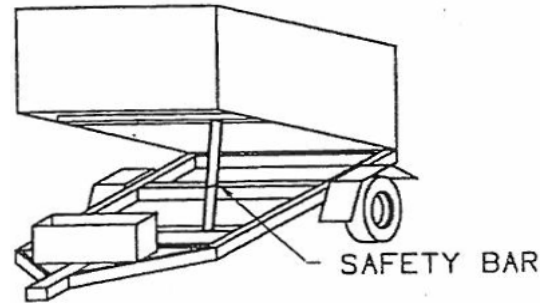


Always wear safety glasses with side shields, when servicing spreader. Failure to do so could result in serious injury, to the eyes.

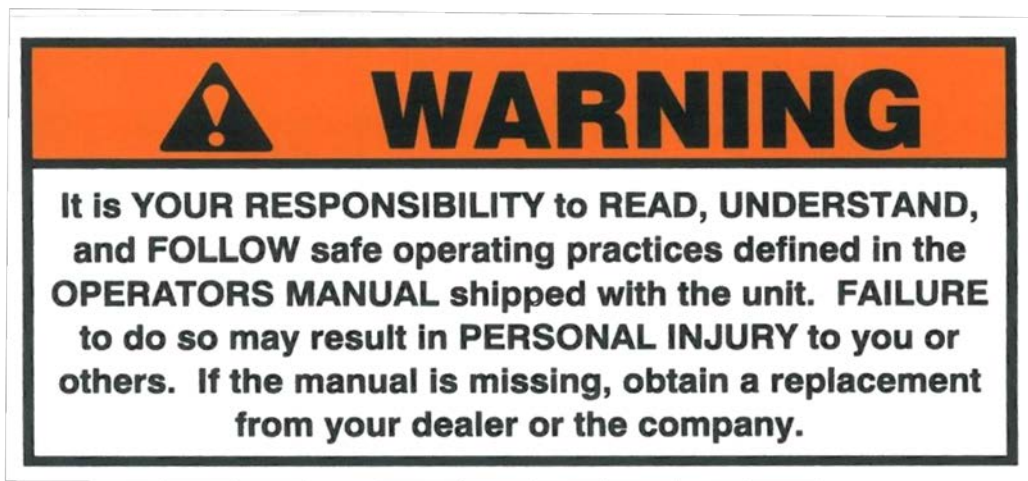


*Never climb under the trailer, while the hydraulics are operating or capable of being operated. **SERIOUS INJURY or DEATH MIGHT OCCUR.***

WARNING LABELS & SAFETY



- 1 Safety Prop:** Your dump trailer is equipped with a safety prop, to ensure that the raised dump bed does not fall inadvertently while being serviced. Prior to servicing the unit, make sure the safety prop is secured. NEVER place any part of your body under the dump bed, without the safety prop secured. Do not block up the dump bed while loaded. When operating the dump bed, keep hands and body clear of the frame and bed. Failure to comply could result in severe personal injury or death.

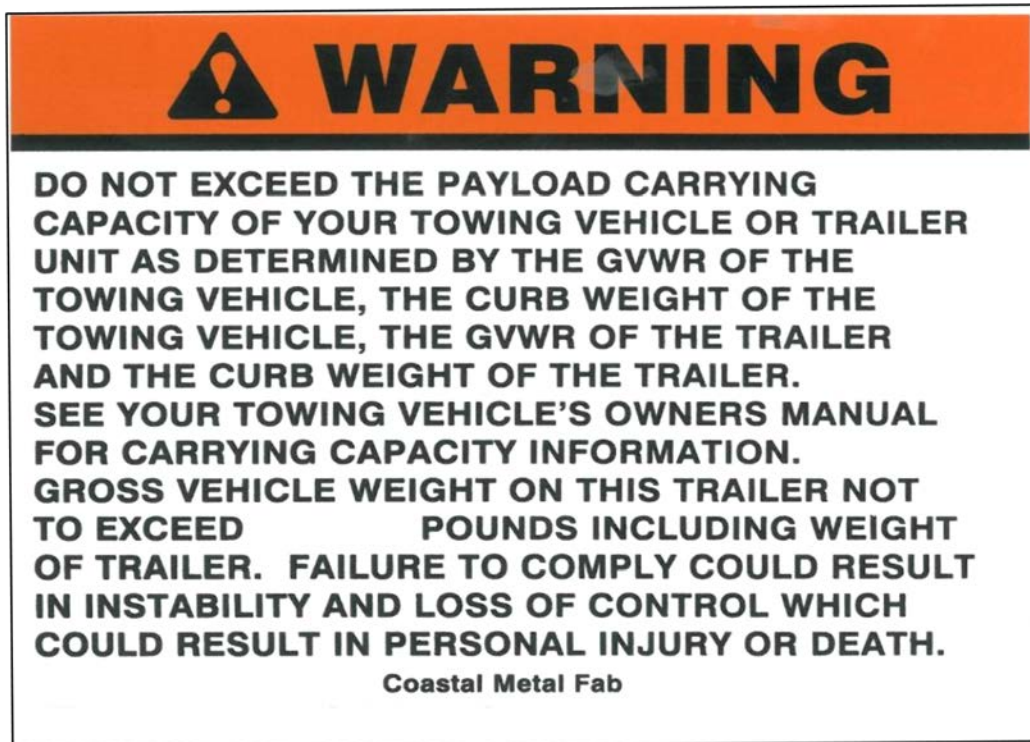


- 2 Carefully read this manual.** Learn how to safely operate the DownEaster Trailer and how to use the controls properly. Do not allow anyone to operate the DownEaster Trailer, without proper training and instruction. Unauthorized modification to the DownEaster Trailer may impair the function and/or safety of the machine.

WARNING LABELS



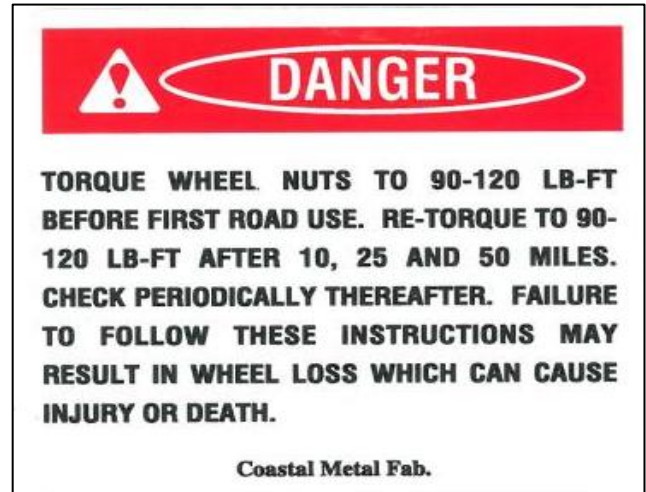
- 3 Breakaway Switch:** Your trailer is equipped with a breakaway switch to activate the trailer brakes if the trailer accidentally comes apart from the towing vehicle. Attach the breakaway switch cable to the tow vehicle frame making sure no strain is placed on the cable. Do not hook the cable to the safety chain loop or to the hitch ball. Do not let the cable drag on the ground. Check the condition of the battery frequently.



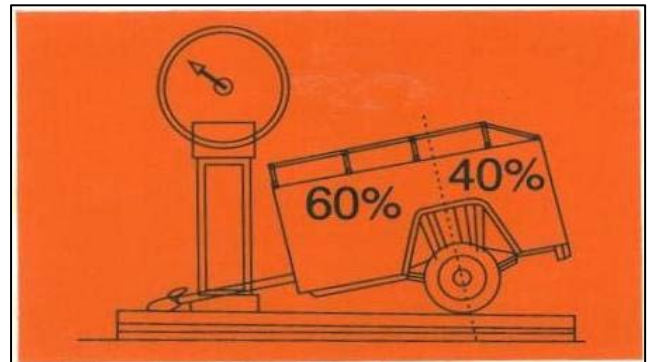
- 4 Capacity Ratings:** Do not exceed the payload carrying capacity of the trailer unit or your towing vehicle as determined by the GVWR and curb weight of the trailer and the GVWR and curb weight of the towing vehicle. See your towing vehicle's oners manual for carrying capacity information. Gross vehicle weight on this trailer, including the weight of the trailer itself, should not exceed the rating listed on the trailer VIN sticker, affixed to the trailer. Failure to comply could result in instability and loss of control, which could result in personal injury or death.

WARNING LABELS

- 5 **Wheel Nuts:** Torque wheel nuts to 90-120 lb-ft before first road use. Re-torque to 90-120 lb-ft after 10, 25 , and 50 miles. Check periodically thereafter. Failure to follow these instructions may result in wheel loss, which can cause injury or DEATH



- 6 **Load Distribution:** Load your trailer so that approximately 10% of the trailer's total weight is on the hitch. For light trailers, this should be increased to 15%. This can be accomplished by ensuring that at least 60% of the load is between the trailer tongue and the balance point of the axle(s)




- 7 **Tailgate/Side Mechanisms:** Make sure the handle and closure mechanisms are properly engaged, to secure the tailgate and if applicable, to sides of the trailer.



- 8 All covers and/or lids must be closed, during operation.



WARNING LABELS



TIRE AND LOADING INFORMATION

The weight of cargo should never exceed XXX kg. or XXX lbs.

TIRE	SIZE	COLD TIRE PRESSURE
FRONT	20.5x8.0-10(E)	621KPA, 90PSI
REAR		
SPARE	NONE	

SEE OWNER'S
MANUAL FOR
ADDITIONAL
INFORMATION

- 9 The trailer's placard refers to the Tire Information Placard, attached adjacent to or near the trailer's VIN (Certification) label, at the left front of the trailer

Your unit may or may not have the following labels below

 **WARNING**

AVOID SERIOUS INJURY OR DEATH!
DO NOT ALLOW OTHERS TO STAND NEAR LOADING AREA.

Trailer must be on level ground, wheels chocked and coupled to tow vehicle.
 Ramps must be aligned properly and securely connected to trailer.
 Do not exceed **1500** lbs. per ramp or the trailer GVW.

DownEaster Mfg. LBL145

 **CAUTION**

SECURE SAFETY PIN/CABLE DURING TRAVEL:

Spring pin must be properly engaged and closed when ramp is in stored position at all times. Attach looped ends of cable together via spring clip or padlock when ramp is not in use. Failure to do so may result in loss of ramp and/or injury to others.

DownEaster Mfg. LBL146

NOTICE

BATTERY DOES NOT CHARGE FROM VEHICLE :

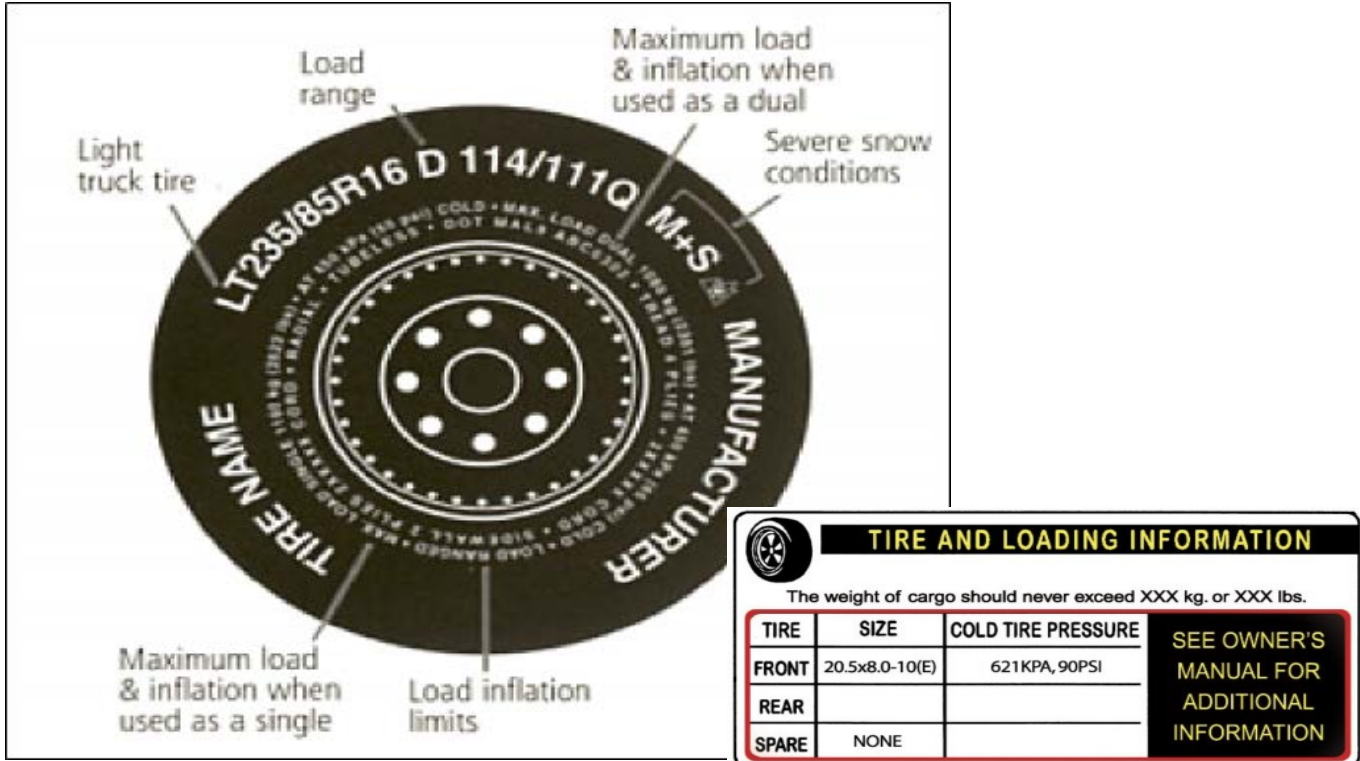
The power wire, with the 30 amp inline fuse, is to maintain a minimum current draw, for the emergency break away switch only! It WILL NOT maintain a charge for operation. If fuse fails, battery is drained and drawing amperage from vehicle. Maintain battery with charger designed for your battery amps.

Truck side charging kit available from your DownEaster dealer. Kit # TKA300

DownEaster Mfg. LBL150

TIRE SAFETY & INFORMATION

This portion of the User's Manual contains tire safety information as required by 49 CFR 575 .6



Locate the statement, "The weight of cargo should never exceed XXX kg or XXX lbs.," on your vehicle's placard.

DETERMINING CORRECT LOAD LIMIT - TRAILER

Determining the load limits of a trailer includes more than understanding the load limits of the tires, alone. On all trailers there is a Federal certification/VIN label, that is located on the forward half of the left (road) side of the unit. This certification/VIN label will indicate the trailer's Gross Vehicle Weight Rating (GVWR). This is the most weight the fully loaded trailer can weigh. It will also provide the Gross Axle Weight Rating (GAWR). This is the most a particular axle can weigh. If there are multiple axles, the GAWR of each axle will be provided.

If your trailer has a GVWR of 10,000 pounds or less, there is a vehicle placard located in the same location as the certification label, described above. This placard provides tire and loading information. In addition, this placard will show a statement regarding maximum cargo capacity. Cargo can be added to the trailer, up to the maximum weight specified, on the placard. The combined weight of the cargo is provided as a single number. In any case, remember: the total weight of a fully loaded trailer cannot exceed the stated GVWR.

When loading your cargo, be sure it is distributed evenly, to prevent overloading, front to back and side to side. Heavy items should be placed low and as close to the axle positions, as reasonable. Too many items on one side may overload a tire. The best way to know the actual weight of the vehicle is to weigh it at a public scale. Talk to your dealer to discuss the weighing methods, needed to capture the various weights related to the trailer. This would include the weight empty or unloaded, weights per axle, wheel, hitch or king-pin and total weight.

Excessive loads and/or underinflation cause tire overloading and as a result abnormal tire flexing occurs. This situation can generate an excessive amount of heat, within the tire. Excessive heat may lead to tire failure. It is the air pressure that enables a tire to support the load, so proper inflation is critical. The proper air pressure may be found on the certification/VIN label and/or on the Tire placard. This value should never exceed the maximum cold inflation pressure, stamped on the tire.

TIRE SAFETY & INFORMATION

TIRE PRESSURE AND LOAD LIMITS

Tire inflation pressure is the level of air in the tire, that provides it with load-carrying capacity and affects the overall performance of the vehicle. The tire inflation pressure is a number that indicates the amount of air pressure - measured in pounds per square inch (psi) - a tire requires to be properly inflated. (You will also find this number on the vehicle information placard expressed in kilopascals (kpa), (which is the metric measure used internationally.)

Manufacturers of passenger vehicles and light trucks determine this number, based on the vehicle's design load limit, that is, the greatest amount of weight a vehicle can safely carry and the vehicle's tire size. The proper tire pressure for your vehicle is referred to as the "recommended cold inflation pressure." (As you will read below, it is difficult to obtain the recommended tire pressure if your tires are not cold.) Because tires are designed to be used on more than one type of vehicle, tire manufacturers list the "maximum permissible inflation pressure" on the tire sidewall. This number is the greatest amount of air pressure, that should ever be put in the tire, under normal driving conditions.

CHECKING TIRE PRESSURES

It is important to check your vehicle's tire pressure at least once a month for the following reasons:

- Most tires may naturally lose air over time.
- Tires can lose air suddenly if you drive over a pothole or other object or if you strike the curb when parking.
- With radial tires, it is usually not possible to determine underinflation by visual inspection.

For convenience, purchase a tire pressure gauge to keep in your vehicle. Gauges can be purchased at tire dealerships, auto supply stores and other retail outlets.

The recommended tire inflation pressure that vehicle manufacturers provide reflects the proper psi when a tire is cold. The term cold does not relate to the outside temperature. Rather, a cold tire is one that has not been driven on for at least three hours. When you drive, your tires get warmer, causing the air pressure within them to increase. Therefore, to get an accurate tire pressure reading, you must measure tire pressure when the tires are cold or compensate for the extra pressure, in warm tires.

If you have been driving your vehicle and think that a tire is underinflated, fill it to the recommended cold inflation pressure indicated on your vehicle's tire information placard or certification label. While your tire may still be slightly underinflated due to the extra pounds of pressure in the warm tire, it is safer to drive with air pressure that is slightly lower than the vehicle manufacturer's recommended cold inflation pressure than to drive with a significantly underinflated tire. Since this is a temporary fix, don't forget to recheck and adjust the tire's pressure when you can obtain a cold reading

Tire Ply Composition and Materials Used

The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester and others.

Tire Safety Checklist

- * Check tire pressure regularly (at least once a month), including the spare.
- * Inspect tires for uneven wear patterns on the tread, cracks, foreign objects or other signs of wear
- * Remove bits of glass and foreign objects wedged in the tread.
- * Make sure your tire valves have valve caps.
- * Check tire pressure before going on a long trip.
- * Do not overload your vehicle. Check the Tire Information and Loading Placard for the maximum recommended load.

PRE CHECKS & OPERATIONS

Lubrication

1. Use Multi purpose wheel bearing & chassis grease, to lubricate grease fittings, at the Hoist (7), the rear pivot hinges (2) and wheel bearings. Consult the maintenance guide for other fluid checks, dependent on your model.

Prior to Operation



WARNING

Before actuating the system, please keep these things in mind:

- 1 To optimize dump trailer operation, park trailer on solid and level ground. Parking locations should be clear of obstructions, that may cause damage when the dump trailer is operated
- 2 Be sure battery is fully charged.
- 3 Be sure to keep all people and objects at least 20 feet away from dump trailer, during operation.
- 4 Keep hands and other body parts away from dump trailer and hydraulic scissor lift mechanisms, during operation. Severe injury or death may result.
- 5 Check fluid level prior to operation. With dump bed in down position, reservoir should be filled to within 1 to 2" of the top, for proper operation.

Operation

ALWAYS MAKE SURE THAT THE DUMP TRAILER BED PATH IS CLEAR OF PEOPLE AND OBJECTS BEFORE AND DURING OPERATION. PEOPLE AND OBJECTS MUST BE AT LEAST 20 FEET AWAY FROM DUMP TRAILER DURING OPERATION. ALWAYS KEEP AWAY FROM THE SCISSOR, WHEN THE DUMP TRAILER IS BEING OPERATED. THE SCISSOR ASSEMBLY MAY PINCH OR CATCH ON LOOSE CLOTHING OR BODY PARTS CAUSING SERIOUS PERSONAL INJURY OR DEATH.

Dumping Trailer Contents

- 1 Verify the battery is fully charged and hooked up to the electrical system
- 2 Follow Tailgate Procedures:
For standard 2 way tailgates, either pull the lower 1/2" pins, to allow gate to swing outwards in a spreader style position.
Make sure spreader chains allow enough opening for material flow
For Combination Barn door gates, follow the same procedure as the standard gate above, for spreading; or rotate latch handle and allow barn door to open, past 180 degrees and latch into open position, with spring loaded pins, on the ends of each side.



Be sure tailgate is clear of trailer and dumping area to prevent damage to tailgate.

- 3 Press and hold the UP/DOWN switch in the UP position, until the dump bed is fully extended and stops moving.
- 4 Release the switch, when contents of trailer have completely dumped or when hydraulic pump unit deadheads, whichever comes first.
- 5 Press and hold the up/down switch in the down position, until the dump bed is fully retracted and stops moving.

OPERATION

Ramp Procedure (for TQ series, fender mounted ramps)

- 1 Perform Combo barn door gate tailgate opening procedure.

NOTE: Prior to loading dump trailer, be sure to chock wheels or have the parking brake set on the tow vehicle. Tow vehicle MUST be coupled for ramp loading!

- 2 Release snap hook or padlock (not supplied), from the cable eyelet attached to lynch retaining pin. Remove lynch pin from center stabilizer pin. (see side pic)
- 3 Lift ramp outwards and up out of resting position.



WARNING Ramps weigh 42 lbs. each

- 4 Place angle hanger end of ramp on top of flat bar hanger on the gate frame, in the groove at the back of the dump bed.
- 5 Set distance of ramps, ensuring center line of equipment tires are centered on the ramp.
Ramps must be parallel to each other, on solid based, level ground



WARNING

NEVER LOAD EQUIPMENT WITH TIRE ON THE OUTSIDE OR INSIDE OF



WARNING

NEVER TRAVEL WITH TRAILER, WITHOUT HAVING RAMPS IN STORED POSITION AND LOCKED INTO PLACE!

Safety prop operation

- 1 Raise dump bed by pushing "UP" button on controls to height that will allow prop arm to swing clear of support bracket.
- 2 Grasp prop at arms length and rotate prop upwards towards, prop resting position, indicated by label. (see pic below)
- 3 Use controls to lower the dump bed by pushing "DOWN" button until the prop contacts the support bracket. Release "DOWN" button.
- 4 To lower prop for operation of dump bed, raise dump bed by pushing "UP" button until prop clears support bracket. Release "UP" button.
- 5 Reverse procedure to lower prop and bed.
- 6 Keep safety prop properly stowed, when not in use.
Your model may or may not have a grab handle.



TARP INSTALLATION

DownEaster

ITEM LIST

Part Number	Part
11661	Fold-away Crank Handle for Cab Level
11201	Spool Shaft 5" Length
11139	3/4" Axle Bearing, 2 pcs
12382	Plastic Tarp Axle Cap, 2 pcs
13467	Aluminum Rear Pull Bar - 103" Length
14666	Tarp Axle Extension, 24" Length
14861	Tarp Axle, 51" Length
14860	Tarp Axle, 31" Length
14988	Pull Rope, 25 feet
15263	Welded Ring, 2 pcs
12282	J-Hooks, 4 pcs
13771	Plastic Pull Bar Handles, 2 pcs



Tools required: 2 - 1/2" wrenches

Drill w/ 5/16" nut driver socket

Hack saw (or equivalent)

5/8" wrench

Tape measure

Marker

Small half round file

STEP #1 - MOUNTING THE TARP AXLE

1) Insert the 31" Tarp Axle, with the Crank Handle, into the mounting hole on the Driver's side. Loosely mount the Axle Bearing with the supplied hardware. Bearing will be on the outside of the bracket.



2) Depending on the width of the trailer / dump body being mounted to, the passenger side 51" tarp axle may have to be cut to length. A standard hacksaw or other cutting tool will be sufficient. Carefully, deburr any sharp edges from the aluminum axle tube.

Tarp Axle Cut Guide:

IP series truck insert = 12 1/2"

TR508 dump = 21"

TQ610/12 dump = 9"

TR6-8X12/14 dump = 0"

88" wide dump body = 2"

96" wide dump body = 0"

*Thread 5/16" bolts into the square nuts, lock side out. Slide all 5 into the axle channel **BEFORE** next step.*

3) Insert the Tarp Axle, without the Crank Handle, into the mounting hole on the Passenger's side and mate it with the Tarp Axle on the Driver's side. Loosely, mount the Axle Bearing with the supplied hardware.



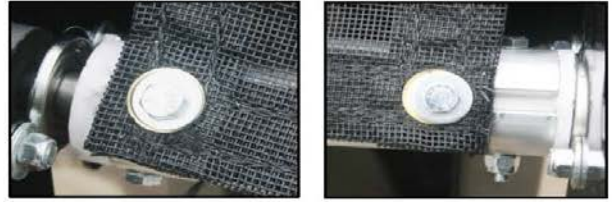
4) Fully tighten the hardware for both Axle Bearings, verifying that the tarp axle rotates freely.



TARP INSTALLATION

STEP # 2 - INSTALLING THE TARP

Unfold the Tarp and mount the front of the Tarp, to the Tarp Axle, centered in the trailer tub, through the 5 grommets; securing the grommets to the square bolts, using the supplied 5/ 16" bolts with washers. Hand tighten until all 5 are in place. Tighten accordingly.



STEP # 3 - INSTALLING THE REAR PULL BAR

1) The Rear Pull Bar, depending on model of trailer, truck, or dump insert, may have to be cut to length. Approximately 4" should be protruding from each side of the end of the tarp splint. The end of the tarp has a round cord, which slides into the extrusion of the pull bar.



2) Slide the Rear Pull Bar onto the Splint: on the rear of the tarp.



3) Slide a Plastic Pull Bar Handles onto each end and secure with the 2" Fender Washer and the M 10 Bolts

STEP # 4 - INSTALLING PULL ROPE

1) Attach the free end of the Pull Rope to the center of the Rear Pull Bar, through the grommet, with cut end facing upwards. Cut rope to desired length, and tie a knot.



2) Mount two *J-hooks*, with the supplied self-tapping bolts, opposing each other near the rear of the dump, (typically on the gate) to secure the Pull Rope in the covered position.

3) Mount two *I-hooks* with the supplied self-tapping bolts opposing each other near the front of the dump to secure the Pull Rope in the uncovered position.



OPERATION GLOSSARY

Adjustable Ball Mount - An adjustable ball mount allows the ball to be raised, lowered and tilted in small increments to allow fine tuning of the spring bar setup and to compensate for tow vehicle "squat," which occurs after the trailer coupler is lowered onto the ball.

Ball height - Measurement from the ground to the center of the hitch ball or hitch ball coupling (trailer) when parked on a flat surface and parallel to the ground. Used to determine the amount of drop or rise needed in the ball mount to make the trailer ride parallel to the ground when being towed. The maximum recommended hitch ball height for trailers is 25" from the ground measured to the center of the hitch ball.

Ball Mount - The part of the hitch system that supports the hitch ball and connects it to the trailer coupler. Ball mounts are available in load-carrying and weight-distributing configurations.

Brake Controller - A control unit mounted inside the vehicle that allows electric trailer brakes to become activated in harmony with the braking of the tow vehicle. This device can be used to adjust trailer brake intensity, or to manually activate the trailer brakes.

Breakaway Switch - A safety device that activates the trailer brakes in the event the trailer becomes accidentally disconnected from the hitch while traveling.

Coupler - The part of a trailer A-frame that attaches to the hitch ball.

Equalizing Hitch - A hitch that utilizes spring bars that are placed under tension to distribute a portion of the trailer's hitch weight to the tow vehicle's front axle and the trailer's axles. The hitch is also known as a weight-distributing hitch.

GAWR (Gross Axle Weight Rating) - The manufacturer's rating for the maximum allowable weight that an axle is designed to carry. Gawr applies to tow vehicle, trailer, fifth-wheel and motor home axles.

GCWR (Gross Combination Weight Rating) - The maximum allowable weight of the combination of tow vehicle and trailer/ fifth-wheel, or motor home and dinghy. It includes the weight of the vehicle, trailer/fifth-wheel

GTWR (Gross Trailer Weight Rating) - Maximum allowable weight of a trailer, fully loaded with cargo and fluids.

Hitch Weight or Tongue Weight - The amount of weight imposed on the hitch when the trailer/fifth-wheel is coupled. Sometimes referred to as conventional trailer "tongue weight." Hitch weight for a travel trailer can be 10-15 percent of overall weight; fifth-wheel hitch weight is usually 18 to 20 percent of the overall weight.

Jack knife - when a trailer makes an extreme turn inward, towards the tow vehicle. If the trailer body swings into contact with the tow vehicle it can damage / endanger the cargo, vehicle, driver, passenger or others on the road.

Lunette eye (pintle ring) - A round metal ring used in place of a ball coupler on a trailer. It attaches to a pintle hook on the towing vehicle

Payload Capacity - The maximum allowable weight that can be placed in or on a vehicle, including cargo, passengers, fluids and fifth-wheel or conventional hitch loads.

Pintle hitch - A common heavy-duty coupling device which utilizes a pintle hook attached to a tow vehicle to pull a trailer having a lunette eye. Pintle hitches are commonly used on military, construction, and agricultural equipment

Plug - The connector used to connect trailer wiring to the tow vehicle; plug refers to the trailer end of the connection, socket refers to the car end.

Receiver - The portion of a hitch that permits a hitch bar or shank to be inserted. The receiver may be either 1 1/2-, 1 5/8- or 2-inch square; the smallest being termed a mini-hitch.

Safety Chains - A set of chains that are attached to the trailer A-frame and must be connected to the tow vehicle while towing. Safety chains are intended to keep the trailer attached to the tow vehicle in the event of hitch failure, preventing the trailer from complete separation. They should be installed using an X-pattern, so the coupler is held off the road in the event of a separation.

Shank - Also called a hitch bar or stinger, the shank is a removable portion of the hitch system that carries the ball or adjustable ball mount, and slides into the receiver.

Socket - Wiring connector used on the CAR end of a trailer wiring connection. The plug is the end used on the trailer

Sway - Fishtailing action of the trailer caused by external forces that set the trailer's mass into a lateral (side-to-side) motion. The trailer's wheels serve as the axis or pivot point. Also known as "yaw."

Sway Control - Devices designed to damp the swaying action of a trailer, either through a friction system or a "cam action" system that slows and absorbs the pivotal articulating action between tow vehicle and trailer.

Trailer Brakes - Brakes that are built into the trailer axle systems and are activated either by electric impulse or by a surge mechanism. The overwhelming majority of RVs utilize electric trailer brakes that are actuated when the tow vehicle's brakes are operated, or when a brake controller is manually activated. Surge brakes utilize a mechanism that is positioned at the coupler, that detects when the tow vehicle is

VIN - vehicle identification number

MAINTENANCE SCHEDULE, DOWNEASTER TRAILERS

<u>MAINTENANCE TASK TO BE COMPLETED</u>	<i>Daily</i>	<i>10 Hours or Weekly</i>	<i>40 Hours or Monthly</i>	<i>Post- Season</i>	<i>As Needed</i>
Inspect trailer for loose, missing, or damaged parts or hardware	X			X	
Verify all parts are securely attached.	X		X		
Inspect electrical/battery connections and apply dielectric grease			X	X	
Charge battery		X			X
Inspect coupler, locks, safety chains and tires	X			X	
Grease wheel bearings			X	X	
Oil or paint rusty surfaces, such as screens, and shafts.				X	X
Check Hydraulic Fluid Level	X				
Flush and refill hydraulic reservoir					X
Pressure wash hopper.		X		X	
Spray painted, cast, or bare surfaces and chains with rust inhibitor such as "Fluid Film"				X	X

Maintenance & Storage

1. Wash trailer. Make sure no material or residue is left in and outside the tub.
2. Lubricate bearings using marine grease.
3. Lubricate pivot points, hinges and locks entirely, with rust inhibitor or other type of moisture prevention oil.
4. Inspect wire harness, connectors for broken insulation, missing components. Replace if necessary.
5. Apply dielectric grease on all electrical connectors & protect them with caps before storage.
6. Clean and repaint any rusty surfaces.
7. Remove the battery, (if equipped) and check electrolyte level and store in a cool dry place.

Please keep in mind when servicing this unit that the most common cause of system failure is dirt. Keep the service area clean. If a malfunction of the power unit should occur, inspect all hydraulic lines and electrical connections and check for a good ground. Many malfunctions are caused by loose connections. If the unit does not operate at all, malfunction may be due to the switch, solenoid, motor, dead battery, corroded terminals, or bad connections. If the unit operates slowly and/or with low pressure, malfunction is probably due to a leaking relief valve, clogged filter, worn pump, corroded or bad battery terminals, or fluid that is too heavy. If the unit is unable to hold pressure, malfunction is likely due to a leaking relief valve.

TROUBLE SHOOTING

If malfunction of the power unit should occur, inspect all hydraulic lines and electrical connections, and check for a good ground. Many malfunctions are caused by loose connections. Check the reservoir for proper fluid level (approximately 1/2" from top of tank when dumper is down). If fluid must be added, use clean Dextron III. Please keep in mind when servicing this unit that the most common cause of system failure is dirt!!! Keep service area clean. In most cases a leaking relief valve is caused by dirt. Unscrewing relief valve and cleaning thoroughly can often correct this.

1. If unit does not operate at all: Malfunction is due to switch, solenoid, motor, dead battery, corroded terminals, or bad connections at the pump motor package.
2. If unit operates slowly and/or with low pressure: Malfunction is due to a leaking relief valve, clogged filter, worn pump, corroded or bad battery terminals, or hydraulic fluid that is too heavy.
3. If unit is unable to hold pressure: Malfunction is due to a leaking relief valve.

Unit does not lift but pump runs.

1. Fluid low
2. System is hydra locked and needs be bled.
3. Pump pressure is set too low.

Unit does not go down.

1. Down coil is bad and needs replaced.
2. Down valve cartridge needs to be replaced.
3. Connection to the down coil is bad.

Pump motor does not run.

1. Motor solenoid is bad.
2. Connections from the battery are loose or dirty.
3. Ground connection is loose or not grounded properly.
4. Battery needs to be charged.

Troubleshooting Power Unit

Before attempting to troubleshoot the Power Unit, make sure an adequate power source is available. The unit battery should be fully charged. Do not attempt to troubleshoot the Power Unit without assuring a full 12V DC charge. The following tests require only a DC voltmeter (or DC test light) and a jumper lead.

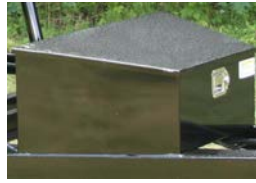
- Step 1** Attach voltmeter (or test light) leads to the negative and positive switch terminals on the solenoid. Does the meter indicate 12VDC? *If YES, see Step 2; if NO see Step 3.*
- Step 2** If YES, at the motor, check the incoming leads to 12V DC. Does meter indicate 12V DC? If YES, Power Unit needs to be replaced. The motor is not field serviceable. **DO NOT ATTEMPT TO REPAIR** . If NO, Inspect all wires and connections, between the pendant and the motor. Repair connections as necessary. Recheck as in Step 1.
- Step 3** if NO, Inspect all connections between battery and pendant switch. Inspect 30A fuse. Recheck as above in Step 1.

Since there are no field serviceable parts in the motor of the Power Unit, electrical troubleshooting and service is limited to replacing only those components as previously outlined. Thorough inspection of wiring and connections is the only other electrical service that can be performed.

WIRING BASICS APPENDIX



DUMP TRAILER HYDRAULIC PUMPS AND CYLINDERS



TA200P	Tongue box, 2.5 cubic ft., painted black, lockable.
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TPH107	Hydraulic Pump, Power up - Gravity down (1-1/2 gal tank), includes controller (3 wire)
TPH108	Hydraulic Pump, Power up - Power down 1 1/2 gal tank includes controller (4 wire)



DEDP206B	Hydraulic Tank, for SPX & Fenner Pumps 1 1/2 gallon
.226	Hydraulic Pump Tank, 2.5 gallon
.232	Replacement cap, for trailer & dump hydraulic tanks



.581	SPX Fluid power distribution horizontal plumbing kit for HC D5
TPH157	Dist flow control kit (1/2 gal/minute) (KFC2)
TPH158	Dist flow control kit (1 gal/minute) (KFC4)



IP series Hoses	
TPH193	Hydraulic hose, 1/4", 43" length, IP110
TPH194	Hydraulic hose, 1/4", 56" length, IP110 DUAL ACTION
TPH195	Hydraulic hose, 1/4", 60" length, IP100
TPH196	Hydraulic hose, 1/4", 72" length, IP100 DUAL ACTION



Pendants	
TPE153	Remote control (pendant), power up/ gravity down) (10'cord) (3 wires) SPX / Bucher
TPE169	Remote control (pendant), power up/ power down) (10'cord) (4 wires) SPX / Bucher
.693	Magnet, for SPX control pendant



TPE177	Solenoid, for Trailer Hydraulic Pumps
.928	Motor, for SPX / Stone hydraulic pump (slotted shaft)
.929	KMDI Motor, for Fenner hydraulic pumps, single or double acting, (splined shaft)



TPH131	Magnetic Valve, 10v coil, for hydraulic pump with power down or gravity down
TPH132	Valve Cartridge - Gravity Down
TPH133	Valve Cartridge - Power Down



.228	O Ring, for Hydraulic Pump
.782	Controller Quick disconnect, gravity down single action



TPH120	Breather cylinder, 1/2" NPT port
TPH120A	Breather cylinder, 1/4" NPT
TPH160	Oring breather vent - 8 SAE



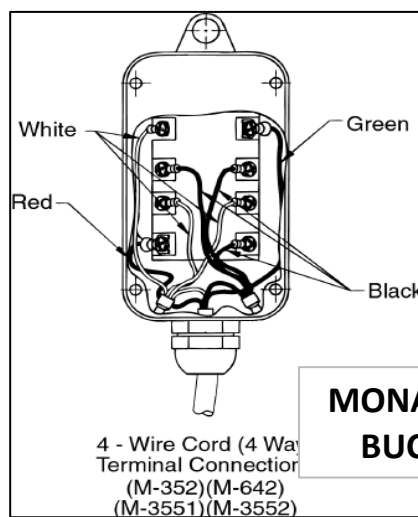
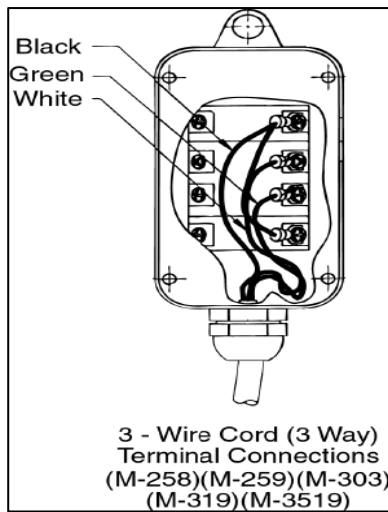
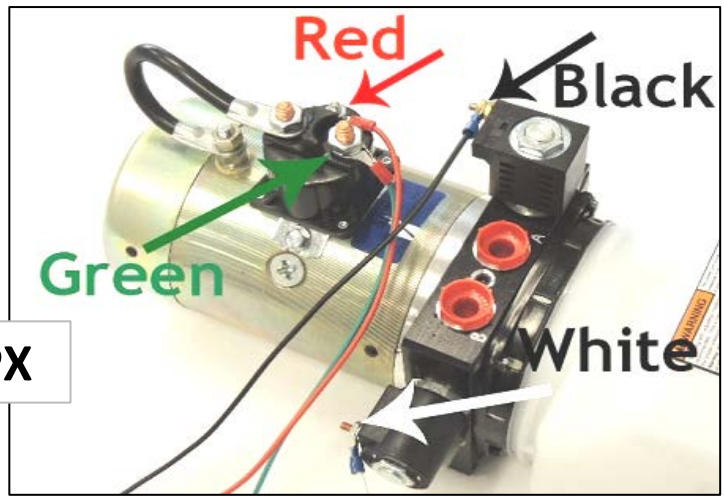
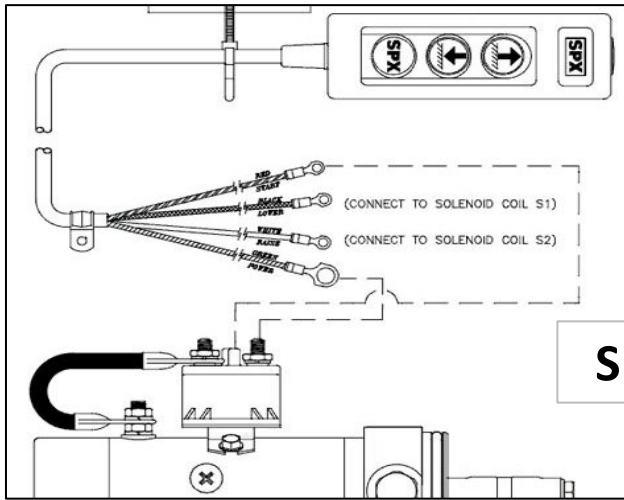
Dump Trailer series hoses	
TPH188	Hydraulic hose assembly 3/8" hose 52" TR508 / TQ&TR610D5 / TO610LP gravity down
TPH189	Hydraulic hose, 3/8", 81", TR508 TQ&TR610D5 / TQ610LP / TQ&TRC 612 power down only
TPH220	Hydraulic hose, 3/8", 111" TR68-12 & 14 (after 2014)



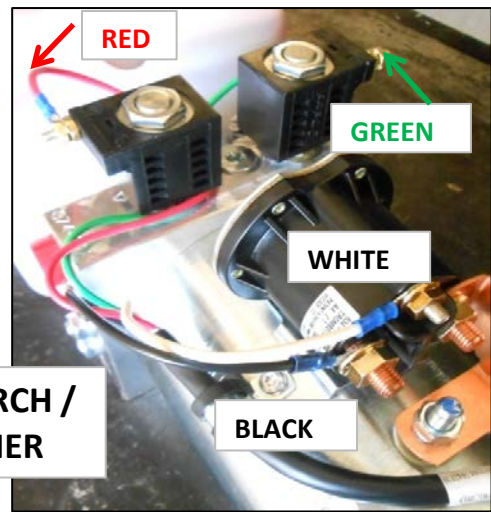
HYDRAULIC CYLINDERS	
TPH109	Cylinder, Hydraulic , 3" bore x 30 stroke, TQ/TR 610
TPH114	Cylinder, Hydraulic, 3" bore x 24" stroke Chief tie rod cylinder, TR508
TPH162	Cylinder, Hydraulic, 3.5" X 34" X 1.75" rod cylinder, 612TQ & TRC
TPH113	Cylinder, Hydraulic, 5 x 20, power up & down, TR6812, 6814 HT-514 criscoe hoist
TPH138	Cylinder, Hydraulic, 3.5 x 9.5 x 1.75 rod dia. 1/4" ports NPT Power up & Power down.
0.704	Seal rebuild kit, for TPH138 cylinder

To order: Call 207-729-5101 Fax 207-729-8782 email: parts@downeasternmfg.com

DUMP TRAILER HYDRAULIC PUMP REFERENCES



**MONARCH /
BUCHER**



DUMP TRAILER , TR & TQ SERIES TAILGATES



TA187	Tailgate assembly, TR508 .
TA193C	Tailgate assembly, TR & TQ 6 SERIES . 74 5/16" x 23 9/16"



6' wide series

TGR621	Combination Gate, TQ & TR6 series DO & LP (AFTER 2015) 2 way acting barn door replacement gate.
TPA218	Left door, 6' TGR combo & TRC gate only, after 2015
TPA220	Right door, 6' TGR combo & TRC gate only, after 2015
TSA195	Barn door pipe latch assembly, TR series, welded, includes handle, cam lugs, bushings w/ zerks, upper/lower cups & hasp.



6'-8" wide series



TSA202	2 way Barn door combo assembly, TR6 - 8 series
TPA214	Left door, 6'-8" TR series combo gate only,
TPA216	Right door, 6'-8" TR series combo gate only,
TPL162	Strap hinge, 60 deg bend, weld on for 6' combo gates



TA226	Barn doors assembly, TRC 6 series , upper bolt on.
TPA218	Left door, 6' TGR combo & TRC gate only, after 2015
TPA220	Right door, 6' TGR combo & TRC gate only, after 2015



TPU114	COMPLETE CAM LOCK ASSY & Barn door Hardware (incls hasp, keepers, lugs, & handles)
Special order	Top & Bottom cup kit, for cam lug (set only)
	Bottom cup, for cam lug 08-506
	Hasp assembly 08-503
	Handle grip cover, vinyl 08-504-G



HWF616	Pin, for Bottom Tailgate, 1/2" x 2-3/4" w/ hair pin.
TA188	3/4" Yoke pin w/ welded ring, zinc.
HWF633	Pin, Hitch Clip, 21-05

DUMP TRAILER COUPLERS, HARDWARE & LIGHTS



.180	Coupler, 2-5/16 adjustable ball coupler , 14k
.329	Pintle Ring, for adjustable coupler 7 ton



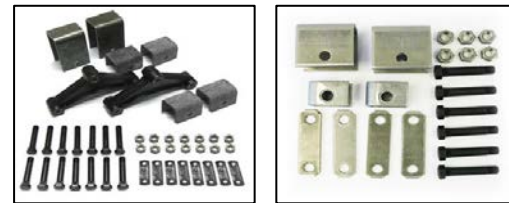
TPL122	Safety Chain, 3/8" Diameter, 36" length, 16K capacity (each)
TPL123	Safety chain, 5/16", 7000# EA., w/latch hook.



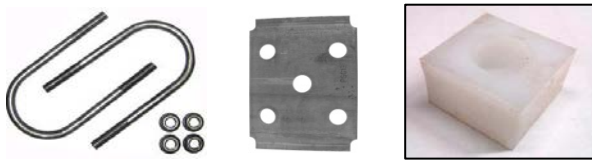
TPL112	Post Jack , top wind, 5000# for A-frame couplers
TPL114	Jack Foot w/pin , for post jacks.
TA220	Jack assembly, 8K drop leg, includes plate weldment, and hardware. 5.2" x 3.125 bolt pattern. For TR 6-8 series, TRC series,
TA221	Jack assembly, 8K drop leg, top wind, BOLT on, <u>side mount only</u> , for 3" 4" or 5" tongue channel or tube. For: TQ DO & LP series, TR DO series, TR/TQ 508, TL/TC 6 & 7
TPL113	8k jack only
TA222	Jack assembly, 12000# drop leg, includes plate weldment, and hardware
TPL115	12K jack only.



TPM119	Spring Latch, 5/8" with plain tube
TPM127	Spring latch 1/2" w/o keeper, ZINC PLATED
DEDP204	Handle, round yellow, TL spring latch .437"x3.5"



TPAL124	Hanger kit, tandem axle, for slipper springs (axle space 33.5").
TPAL131	Hanger kit, tandem axle, eye to eye springs (axle space 33.5").
TPAL125	Hanger kit, single axle, for eye to eye spring.
TPAL150	Equilizer, square nose, for tandem axle slipper springs, 11", for 33.5" axle spacing.



.544	U-bolts 2 3/8" x 5.50 rd w/hdw (2)
.545	U-bolts 3" x 7"rd w/hdw (2)
.541	3.5K U-bolt plates 2 3/8" 1 3/4" wide spring (2)
.542	5.2-7K U-bolt plates 3" slipper spring, 2" wide spring (2)
TPL172	Poly bumper, 1-1/2" square, for dump trailers



.574	spring 25', 5 Leaf, Slipper spring, 3500#
.401	spring 25" 4 leaf, eye to eye, 1750# (7k TL series)



TPE151	Breakaway kit, w/ enclosure, battery, mounting bracket,
TPE149	Breakaway switch, with actuator cable and pin
TPE150	Actuator cable & pin, for breakaway.
TPE133	7-way plug with 6' molded cable.
TPE189	Battery cable set, for dump trailers.
TPE173B	Pigtail ONLY, for Oval Taillight
TPE107B	Pigtail, for marker lights



TPE104	LED Tail light, 6" oval s/t/t grommet mount
TPE173A	Grommet, for Oval Taillight
TPE111	LED 2" Amber clearance light
TPE112	LED 2" Red clearance light
TPE161	Grommet, for 2" Marker Lights
TPE114	License Plate light, Brass, Chrome Plated, 1-1/2" dia,
TPE184	3-Bar Light, LED, w/pigtail
TPE105	Reflector, 3 1/4"x 1 3/16 with adhesive tape, red.
TPE106	Reflector, 3 1/4"x 1 3/16 with adhesive tape, amber.



To order: Call 207-729-5101 Fax 207-729-8782 email: parts@downeasternmfg.com

TRAILER BRAKES AND BEARING KITS



.146	Left Hand, complete electric brake assembly, for 3500# axles 10" drum x 2 1/4" wide
.149	Right Hand, complete electric brake assembly, for 3500# axles 10" drum x 2 1/4" wide
.147	Left Hand, complete electric brake assembly, for 6000# axles 12" drum x 2" wide
.148	Right Hand, complete electric brake assembly, for 6000# axles 12" drum x 2" wide
.556	Left Hand, complete electric brake assembly, for 7000# axles 12" drum x 2" wide
.557	Right Hand, complete electric brake assembly, for 7000# axles 12" drum x 2" wide
.504	magnet kit, 10" 3.5K
.505	magnet kit, 12" 6K
.506	magnet kit, 12" 7K
.507	3.5-7K electric brake adjuster & spring kit



.223	3500# Brake Axle Hub, 5 on 4-1/2 bolt pattern
.224	3500# Idler Axle Hub, 5 on 4-1/2 bolt pattern
.225	6000# Brake Axle Hub, 6 on 5-1/2 bolt pattern
.873	7000# Brake Axle Hub, 8 on 6-1/2 bolt pattern

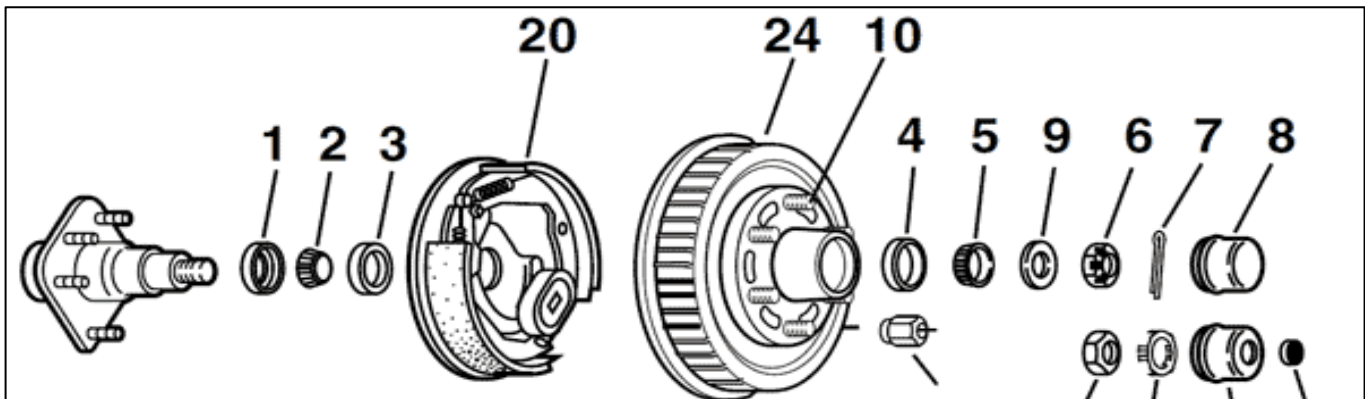


.135	Bearing Kit, 3.5K Axle, 1 1/16" inner, 1 3/8" outer
.136	Bearing Kit, 6K Axle, 1 1/4" inner, 1 3/4" outer
.137	Bearing Kit, 7K Axle, 1 1/4" inner, 1 3/4" outer
.519	Grease seals, (2) 2.56" od x 1.72" id 3.5K
.520	Grease seals, (2) 3.38" od x 2.25" id 6K
TPT109	Grease Cap, for 5 Lug Wheel
TPT110	Grease Cap, for 6 Lug Wheel
TPT111	Grease Cap, for 8 Lug Wheel
TPT112	Rubber Plug, for Grease Caps



.526	Two Spindle Nuts, Washers & Pins, 1" Outer Diameter, Round Washer for 2-7k Axles
.527	Two Spindle Nuts, D-Washers, Tang Locking Washers & Pins, 1" Outer Diameter, for 2-7k Axles ("D" Washer)
.528	Two Spindle Nuts, D-Washers, Retaining Cages, 1" Outer Diameter, for 2-7k Axles

6 K Axle Components, reference only



- | | | | |
|------------------|-------------------|---------------------|--------------------|
| (1) Grease seal | (5) Outer bearing | (9) Spindle washer | (24)(25) Hub, drum |
| (2) Inner race | (6) Spindle nut | (10) stud, press in | |
| (3) Bearing race | (7) Cotter pin | (12)(13) Lug nut | |
| (4) Outer race | (8) Grease cap | (20) brake assembly | |

To order: Call 207-729-5101 Fax 207-729-8782 email: parts@downeastermfg.com

General Provisions: Coastal Metal Fab, Inc. warrants its products to be free from manufacturing defects under normal use and service conditions and will repair or replace, at its option, any products or components thereof that are proven to be defective during the warranty period as specified below. This warranty extends to the original retail purchaser only and commences on the date of original purchase. Coastal Metal Fab's maximum liability under this warranty is limited to the cost of the repair or replacement of any defective products or components, and excludes any incidental or consequential damages. The warranty period is as follows:

DownEaster brand Dump Trailers and Dump Inserts -- 2 years from date of purchase

DownEaster brand Salt and Sand spreaders -- 1 year from date of purchase

DownEaster brand Dump Bodies -- 2 year from date of purchase or 24,000 miles

Items Warranted Separately: This warranty does not apply to certain components that are warranted separately by the original equipment manufacturers including, but not limited to, electric or gasoline motors, hydraulic pumps, hydraulic cylinders, tires, wheels, and axles.

Items not Covered: Coastal Metal Fab, Inc. is not responsible for the following:

- Premiums charged for overtime labor requested by the purchaser.
- Transportation to and from the dealership or service calls made by the dealer.
- Products purchased used.
- Products that have been altered or modified in ways not approved by Coastal Metal Fab.
- Depreciation or damage caused by normal wear and tear, lack of reasonable and proper maintenance, failure to follow operating or installation instructions, misuse, lack of proper protection during storage or accidents.
- Normal maintenance costs.

Parts Replaced under Warranty: If Coastal Metal Fab, Inc. elects to repair a defective product or component thereof, Coastal metal Fab will, at its discretion, utilize either new or remanufactured parts or components. If any such part or component proves to be defective within 12 months of installation or before expiration of this warranty, whichever is later, Coastal Metal Fab, Inc. will repair or replace, as it elects, such defective part or component.

Securing Warranty Services: To obtain service under this warranty, the original retail purchaser must request warranty service during the applicable period of warranty from a dealer authorized to sell the product being serviced. When making such a request, the purchaser must present evidence of the product's original purchase date, and make the product available for service at the dealer's place of business.

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