

Operation & Service Manual

WARNING!

If used incorrectly, this equipment can cause **severe injury**. Those who use and maintain this equipment should be trained in its proper use and warned of its dangers.

THIS ENTIRE MANUAL SHOULD BE READ BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST OR SERVICE THE EQUIPMENT.

MAKE COPIES FOR ALL DRIVERS, MECHANICS AND OPERATORS.

THIS MANUAL SHOULD BE INCLUDED WITH THE EQUIPMENT IF IT IS EVER SOLD, LEASED OR OTHERWISE CHANGES OWNERSHIP.

BENLEE, Inc.

**COMPLETE ROLL-OFF SYSTEMS ❖ TRAILERS ❖ CONTAINERS
HOOK LIFTS ❖ DUMP TRAILERS ❖ ROLL-OFF TRUCKS
DUMP TRUCKS ❖ FRAME STRAIGHTENING ❖ REPAIRS & PARTS**

30383 Ecorse Road
Romulus, Michigan 48174
Phone: (734) 722-8100 Fax: (734) 721-8806
Website: www.benlee.com

DANGER!

If spring brakes are caged, deactivated or removed, this vehicle will have *no emergency and parking brakes*. It must not be driven or parked without blocking wheels.

To service, the spring brake chamber must be caged or deactivated. Failure to cage could cause an explosion of parts.

Failure to follow these warnings can cause injury or death.

DANGER!

Electrocution Hazard

To avoid death or serious injury, keep all parts of this machine, including Upper Frame, Tarp System and Container at **LEAST 25 FEET** Away from all electrical power lines and equipment.

Do not raise Upper Frame if unit is **Under Power Lines!**

Follow instructions in Operator's and Safety Handbook!

Death or serious injury can result from contact with this equipment or vehicle if it should be electrically charged.

Failure to follow these warnings can cause injury or death.

CAUTION!

Units without the stinger tail option are equipped with a hydraulic extending and retracting ICC Bumper.

The bumper must be retracted before picking up, dropping or dumping a container.

It must be extended during travel.

Failure to retract before picking up, dropping or dumping will result in severe damage to the mechanism. It is the operators responsibility to follow this procedure.

ATTENTION

Important Information ***Please read carefully***

All Benlee trailers currently produced are in full compliance with FMVSS Regulation No. 224 (Rear Impact Protection), effective January 26, 1998. The new regulation requires that the guard be 88" wide, no more than 22" off the ground with the trailer unladen and no more than 12" forward of the rear most extremity of the trailer. The regulation also requires static load tests at specific points on the guard of 25,000 lbs. And 12,000 lbs. respectively. The Benlee guard complies with all the aforementioned requirements.

Exercise great care in following the correct operational sequence, or *severe damage may result.*

When backing up and pulling forward, take extra care not to hit or hook nearby objects or damage may result, rendering the guard inoperable.

ABS BRAKES

All of the new BENLEE trailers manufactured after 3-1-98 are equipped with an anti-lock braking system to meet the minimum requirements of F.M.V.S.S. 121. This is a 2S/IM System (2 sensor/1 modulator), which consists of the following parts:

1. FF-ABS Valve with Electronic Control Unit (ECU)
2. Exciter Ring Mounted to the Wheel Hub
3. Sensor Block Fixed to the Axle
4. Wiring Harness

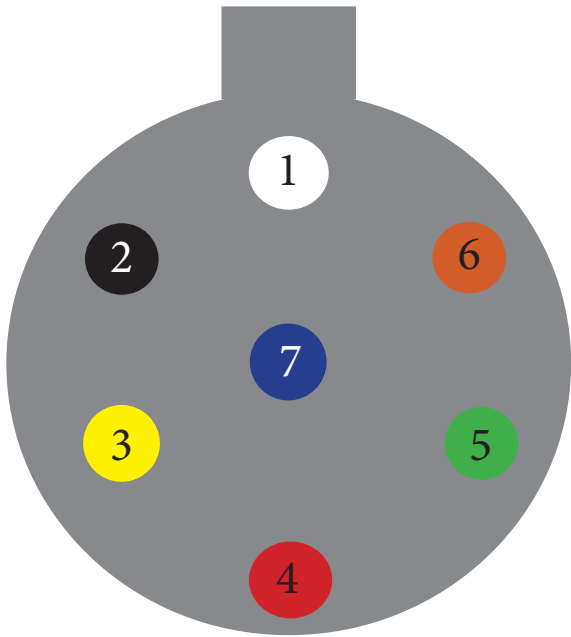
There may be a need for some modifications to the wiring system of the tractor that is going to be pulling your new BENLEE trailer. The tractor ignition switch on the system requires constant power to the blue wire of the wiring pigtail. If your new BENLEE trailer is equipped with any electrical options (i.e. work lights, lift axles, back up alarms, back up lights, etc.), your trailer will include a second 7-way electrical system to power any options. Your tractor must also include this second 7-way plug to run the options. The second 7-way receptacle installed on your trailer will be in accordance with the I.S.O. 3731 recommendation (reverse ground pin connection). Your salesperson can supply you with any necessary wiring schematics for the second 7-way receptacle. A Digital Display Unit (DDU) can be purchased to read any fault codes that may occur during the life of your BENLEE trailer.

The BENLEE parts department can supply you with all required parts to make the necessary modifications to your tractor.

Air System Filtration

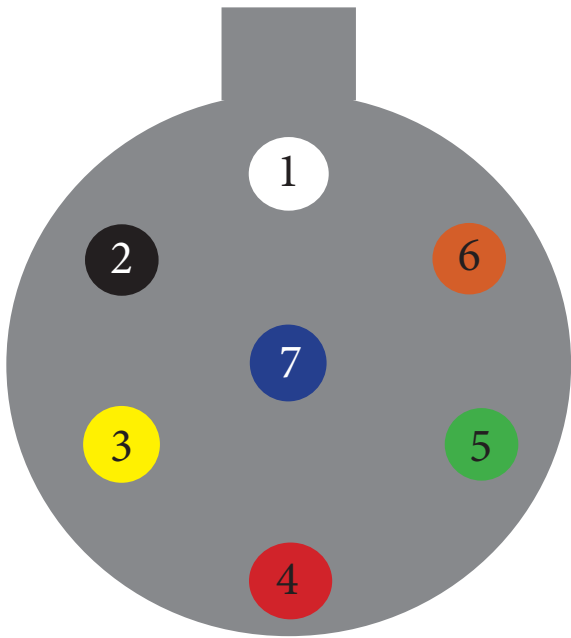
Please note that all Benlee trailers manufactured *after 3/1/98* are equipped with screen-type filters located in the glad hands. Trailers manufactured *after 10/18/99* have SealCo Model 2550 in-line filters on the service and emergency lines. These filters should be inspected and cleaned at normal service intervals or a minimum of twice a year. *Failure to service and inspect may affect brake performance.*

ISO 3731 7-WAY CONNECTOR WIRING CIRCUITS



Conductor No.	Color	Lamp and Signal Circuits
1	White	ABS Shared Ground return to towing vehicle
2	Black	Unspecified - Could be used for extra current carrying capacity for mark lights
3	Yellow	ABS Malfunction Signal
4	Red	Unspecified - Could be Ignition Switch
5	Green	Unspecified - Could be used for SAE J1708 +
6	Brown	Unspecified - Could be used for SAE J1708 -
7	Blue	ABS Continuous Shared Power

SAE J560 7-WAY CONNECTOR WIRING CIRCUITS



Conductor No.	Color	Lamp and Signal Circuits
1	White	Ground Return to Towing Vehicle
2	Black	Side Marker and Identification Lamps
3	Yellow	Left-Hand Turn Signal and Hazard Signal
4	Red	Stop Lamps and ABS (When Installed)
5	Green	Right-Hand Turn Signal and Hazard Signal
6	Brown	Tail, Rear Clearance, and License Plate Lamps
7	Blue	ABS Continuous Shared Power

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The major change to the tractor / trailer electrical system to accommodate ABS is that tractor will have the auxiliary (blue) circuit constantly powered when the ignition switch is “ON”, and trailers will have an electrical system providing ABS constant power through the auxiliary (blue) wire.

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Determining Intermediate Stop Location

1. If possible, get a loaded container and access to a scale.
2. If scales are not available, the location shown on detail "A" generally works for most applications.
3. Move the container approximately to the center of the trailer. Take an axle reading. If the drive axles and trailer axles are within acceptable limits, mark the location of the container pick-up rollers. If not, move the container forward or rearward and recheck. Repeat this process until acceptable axle weights are achieved.

Refer to detail "A". Center the angle shown on the mark you arrived at in step 3. Cut slots 7/8" wide x 4" long in top rail between beam web and formed angle.

GENERAL OPERATING INFORMATION

SAFETY & GOOD Judgment

This section contains guidelines for safely operating your BENLEE roll-off trailer and prolonging equipment life. The impossibility to cover every potential problem situation in this manual does not eliminate the necessity of practicing “good judgment” and “common sense”.

Obvious and/or intentional disregard of these guidelines may result in serious injury, death, government fines and/or forfeiture of any and all warranties and/or liabilities by/of Benlee, Inc.

Modifications to BENLEE equipment that are not made at our facility or with written approval from our engineering or service managers, will result in nullification of warranty and liability.

1. *All drivers, operators and mechanics should read this manual thoroughly before operating.*
2. Roll-off equipment has numerous pinch points: the tip frame, the reeving system, extendable tails and extending ICC bumpers. Clear all areas of personnel when operating the trailer.
3. *Always check overhead for any obstructions, such as power lines.*
4. The loading and unloading area should be as solid and level as possible. Do not attempt to load an extremely unbalanced, one-sided load. Heavy one-sided loads pose a safety hazard and may cause damage to the tilt frame and container.
5. Always back trailer *squarely* to the container. Pulling up a container at an angle is a safety hazard and may bend or twist the tilt frame.
6. The cable, cable hook and container should be inspected daily. Broken strand(s) on the cable signal it is time to replace the entire cable.
7. Use moderation in engine speeds when operating the P.T.O. **Warning:** Do NOT drive the truck/tractor with the Power Take-Off (P.T.O.) engaged. You can damage the pump or the P.T.O.
8. **The truck/tractor should never be driven while the hoist is in the raised position.** Pulling ahead *a few feet* to help eject the load during the dumping sequence is the exception.
9. Observe and obey all trailer and container warning labels. Never attempt to pick up a container that is damaged or in need of repairs.
10. Never allow anyone to work on tilt frame while in raised position without safety prop engaged and properly placing a minimum 6" x 6" hardwood block at both rear hinges to prevent tilt frame from dropping
11. Observe caution in load balance. Try to distribute load evenly in the container.
12. Load center must be ahead of rear hinge point before lowering hoist frame or damage to tilt frame will occur – *see Operating Sequence.*
13. Always power up and power down. Lift cylinder(s) are double acting. Use hydraulic power in all phases of the truck and trailer container operation. Especially important is the lowering of the hoist frame when loaded. This must be done under power to prevent loss of control of the load.
14. When loading container, release truck brakes (if possible). This permits the truck to be pulled under the container skids, increasing the life of both truck and container.
15. *Do not dilute oil in cold weather.* In extreme weather changes, replace with the recommended viscosity for operating temperatures. Always allow pump to *operate* in cold weather for a period of time *with the P.T.O. engaged.* This will warm up the hydraulic oil.

16. In transporting containers, it is recommended by the manufacturer, and required in some states, that the container(s) be secured at all four (4) corners by a suitable device. We suggest ratchet binders, chain binders or container hold down straps (the later are standard equipment on all BENLEE trailers manufactured after 1995).

FMCSA (Federal Motor Carrier Safety Administration) Regulation States the following:

49 FR 393.134

§ 393.134 What are the rules for securing roll-on/roll-off or hook lift containers?

(a) *Applicability.* The rules in this section apply to the transportation of roll-on/roll-off or hook lift containers.

(b) *Securement of a roll-on/roll-off and hook lift container.* Each roll-on/roll-off and hook lift container carried on a vehicle which is not equipped with an [integral securement system](#) must be:

(1) [Blocked](#) against forward movement by the lifting device, stops, a combination of both or other suitable restraint mechanism;

(2) Secured to the front of the vehicle by the lifting device or other suitable restraint against lateral and vertical movement;

(3) Secured to the rear of the vehicle with at least one of the following mechanisms:

(i) One [tiedown](#) attached to both the vehicle [chassis](#) and the container [chassis](#);

(ii) Two [tiedowns](#) installed lengthwise, each securing one side of the container to one of the vehicle's side rails; or

(iii) Two hooks, or an equivalent mechanism, securing both sides of the container to the vehicle [chassis](#) at least as effectively as the [tiedowns](#) in the two previous items.

(4) The mechanisms used to secure the rear end of a roll-on/roll off or hook lift container must be installed no more than two meters (6 ft 7 in) from the rear of the container.

(5) In the event that one or more of the front stops or lifting devices are missing, damaged or not compatible, additional manually installed [tiedowns](#) must be used to secure the container to the vehicle, providing the same level of securement as the missing, damaged or incompatible components.

17. *Make copies of this manual for all drivers, operators & mechanics.*

GENERAL OPERATING INFORMATION

OPERATING PRINCIPLE

BENLEE systems are designed for use in loading, transporting and unloading complete containers that are in good operating condition. **Any other use is not recommended by BENLEE, INC.**

Essentially, this operation is accomplished by tilting the hoist to a 45-50° angle with the rear end at grade level in front of a properly equipped roll-off container. The unit is drawn up the inclined frame on rollers and, as the operation progresses, the hoist frame is lowered accordingly until the unit is completely loaded and automatically locked in place. Transportation is then accomplished the same as with any conventional truck. Unloading the container or body is simply a reverse of the loading procedure.

Variations in design configuration may be employed, ranging from conventional truck chassis equipped with hoist frames, to semi-trailer units with self-contained power units. Because of the basic operation component parts, and service similarity, this manual applies to all roll-off systems manufactured for BENLEE, INC.

GENERAL OPERATING INFORMATION

CONTROLS

1. Power Supply

Power is required to drive a hydraulic pump which serves the system's cylinder(s) and winch(es). (Most trailers have a reeving cylinder(s) in place of a winch.) On trucks, the pump is driven from a power take-off. If the truck is used as a tractor, hydraulic power supply can be coupled to the trailer by quick disconnects—see *wet kit schematic in General Service Information*. Also, an auxiliary engine can be provided on the trailer. Each is described separately below. (Some applications require an electric motor instead of an industrial engine.)

- A. Power Take-Off (P.T.O.): This control is located inside the truck. Disengage clutch by depressing clutch pedal. Pull out P.T.O. knob slowly. Engage clutch.
- B. Industrial Auxiliary Engine: Refer to engine owner's manual for starting and operating instructions. The P.T.O. is mounted on an adapter directly to the engine. The pump is directly driven by the P.T.O. by a different shaft. Therefore, when the engine is operating, so is the pump, and hydraulic pressure is being generated.

2. Hydraulic Controls

Hydraulic control valve assemblies with pressure relief valve included are used to direct hydraulic pressure to and from each controlled area. Normally, a three bank (three plunger) unit is used. The first handle operates the tilt frame; the second handle operates either the reeving cable or the winch cable. A third handle operates the stinger tail if the unit is so equipped, or the hydraulic extending and contracting ICC bumper. Each plunger has a three-position level with the center as neutral, a built in safety feature. The relief section is set at the factory at 2,000 psi. Changing this setting to a higher pressure may void your warranty. Please consult factory before making adjustments.

- A. Tilt Frame: Pull the lever to extend or raise the tilt frame. Move the lever in the opposite direction to lower the frame. The lever must be held manually to operate. When released, the lever will return to neutral. Always power up and power down.
- B. Cable: Pull the lever to let out cable slack. Move the lever in the opposite direction to take in cable and pull up container. The lever must be held manually to operate. When released, the lever will return to neutral.
- C. ICC Folding Bumper: Pull the lever to extend to the travel position. Push the lever to retract to the work position
- D. Stinger Tail: Pull the lever to extend the tail. Move the lever in the opposite direction to retract the stinger tail. **Warning:** Never use the stinger tail as a lifting device or pry bar.
- E. Winch & Stinger Combination: The stinger tail control lever can be used in combination with the cable control lever to help keep the cable from unspooling around the drum winch, and from crossing over itself

3. Air Control Flipper Switches:

- A. Trailer Brake Lock: All trailers are equipped with a flipper brake lever on the operating panel. The operator may lock or unlock the trailer brakes, depending on the operating sequence.
- B. Air Bag Dump Switch: Trailers equipped with air ride suspensions have a flipper lever on the operating control panel for releasing the air from the air bags. Before loading, unloading or

dumping container, we recommend operator always release air from air bags to enhance stability. Be sure to air up prior to driving away. Flip switch the opposite direction.

4. Latch Control:

A. Locking Device: The forward end of the tilt frame has a latch control assembly which receives the container front rollers and locks it in place by throwing the locking arm when the unit is completely loaded. *Release the latch before raising the hoist frame.* Most BENLEE units built after 6/92 are equipped with a spring loaded automatic safety latch which disengages when the tilt frame is raised and latches when the tilt frame is in the horizontal position. *These AUTOMATIC LATCHES may be purchased through BENLEE parts department to update other trailers.*

GENERAL OPERATING INFORMATION

OPERATING SEQUENCE

1. Loading Containers:

- A. Container and truck or trailer with roll-off frame **must be on level site for precaution against tipping**. Raise air lift axle(s), if so equipped. Back up to container. Do not jack knife trailer.
- B. Set tractor/truck brakes and leave in neutral. Exit cab and lock the trailer brakes. Enter cab, engage P.T.O. and unlock tractor/truck brakes. Exit cab.
- C. On trailers equipped with retractable ICC bumpers, fully retract bumper. It may be necessary to walk back and visually check the bumper for full retraction. Failure to fully retract bumper could result in severe damage to the mechanism.
- D. Trailers equipped with air ride suspension, dump air bags. Raise hoist frame to maximum, or until frame end barely clears ground, and back up squarely to front rollers of container. If equipped with stinger tail, extend out enough tail so that when tail barely touches ground, the tilt frame is at an approximately 45-50 ° angle. On standard dead-lift units, the tail will not touch the ground.
- E. Slack off cable slightly as required, connect to container tow hook and finish raising tilt frame to completely touch the ground.
- F. Use 1600-1900 RPM engine speed and operate slowly to draw container *squarely* up tilt frame.
- G. Lower frame once container has started well and the *load center of the container has passed the hinge point* of the trailer. **Caution:** Keep container rear rollers on the ground as long as possible while loading.
- H. Lower hoist frame and draw container forward at the same time. Lower hoist frame *completely*. Continue to draw container forward until it meets the tilt frame stops at the end of the tilt frame. The automatic style safety latch will pop up behind the container pickup rollers when the tilt frame is lowered into the horizontal position. Additional hold downs (standard on all BENLEE roll-off trailers manufactured after 1995) are recommended, and may be required by law in your state.
- I. When picking up the container, the tractor brakes should, if possible, be released to pull the trailer or truck under the container. On trailers, use flipper brake lever next to hydraulic levers on trailer operating panel.
- J. Trailers equipped with air ride, inflate air bags. Disengage P.T.O. or stop auxiliary engine. Lower air lift axle(s).
- K. Connect hydraulic hoses (if applicable), which serve hydraulically operated doors, packing blade, etc.

2. Unloading Containers

- A. Container and truck or trailer with roll-off frame must unload on a level site for precaution against tipping. Raise airlift axle(s), if so equipped. Back up unit to desired area. Do not jack knife tractor.
- B. Set tractor/truck brakes and leave in neutral. Exit cab and lock the trailer brakes. Enter cab, engage P.T.O. and unlock tractor/truck brakes. Exit cab.
- C. Trailers equipped with air ride suspension, dump air bags. The automatic style safety latch will release when tilt frame is raised.
- D. Raise frame until gravity allows container to roll down rails as you let out cable. Continue to raise frame. The tilt frame, or stinger tail if so equipped, must be touching the ground before the front wheels of the container. On standard dead-lift units, the tail will not touch the ground.

- E. When unloading the container, the tractor brakes should, if possible, be released to push (walk) the trailer/truck away from the container. On trailers, use flipper brake lever next to hydraulic levers on trailer operating panel.
- F. Lock trailer brakes with flipper switch. Unhook cable from container and secure to trailer. Lower tilt frame. Trailers equipped with air ride should air up bags. Retract stinger, if so equipped, or extend ICC bumper to the travel position. Disengage P.T.O. or stop auxiliary engine.

3. Dumping Loads

- A. Container and truck or trailer with roll-off frame must dump on level site for precaution against tipping. Raise airlift axle(s) if so equipped. Back up unit squarely to desired dumping area.
Caution: Do not jack knife while dumping.
- B. Set tractor/truck brakes, leave in neutral. Engage P.T.O. and exit cab.
- C. Lock trailer brakes on operating panel. If trailer is equipped with air ride suspension, dump air bags. Manually release the locking device. The automatic safety latch will release when tilt frame is raised if so equipped. Retract ICC bumper, if so equipped.
- D. Raise frame until gravity allows container to roll down rails as you pay out cable. *Use extra caution on windy days.* Continue to slide container to the end of tilt frame. If equipped with stinger tail, do not extend stinger for this procedure.
- E. Lower tilt frame to the horizontal position leaving container at the end of the frame. Release ratchet binders, etc. and open and secure door.
- F. Raise tilt frame until load in container is dumped. *If load has not completely dumped, drive truck/tractor slowly and cautiously ahead until load empties.* A stuck load must never be broken loose by backing up and suddenly hitting the brakes or by lowering the upper frame part way then rapidly reversing the valve handle in the up and down position. This results in displacing the area of the largest diameter cylinder. If the load is heavy enough, it may bulge or split the tube at the weakest point, which is in the largest stage/bottom stage. **Caution:** *We do not recommend moving tractor/trailer ahead without driver in cab.*
- G. Lower tilt frame, close and secure container door. Pull container forward to stops. Extend the ICC bumper, if so equipped. Trailers equipped with air ride should air up bags at this time. Disengage P.T.O. or stop auxiliary engine.

4. Intermittent (California) Stops

- A. Longer *conventional* trailers (generally 35' and longer) hauling short, heavy containers may, at times, overload the drive axles of the tractor. BENLEE offers intermittent (California) stops to prevent the container from riding all the way forward. This is not applicable to most drop decks.
- B. California stops may be purchased through BENLEE parts and easily installed on your trailer.
- C. We recommend test scaling a typical loaded container on your trailer. Move the container back from the front stops and check at several locations to determine where individual axle weights are best. Mark the rails.

Note: *Trailers manufactured after 1997 are built with intermittent (California) stops that fit over the side rollers.*

GENERAL SERVICE INFORMATION

INSPECTION AND MAINTENANCE

Your BENLEE trailer has been prepped at the factory. We ask that you pay close attention to the following items to insure your first experience with your new trailer is safe and positive.

1. Important Checks Before First Operation

- A. Hook up tractor to trailer for proper fifth wheel height and fit. Industry standard height is 48"-50". Unloaded, the trailer should be level, plus or minus 1" end to end. This is required for axles to equalize properly.
- B. Hook up air lines and check brakes.
- C. Hook up electrical and check lights.
- D. **Be absolutely certain the pressure line of wet kit is hooked to the pressure line of the trailer.**
Caution: Hooking up hydraulic lines backwards will bulge the cylinder(s).
- E. Pressurize hydraulic lines and check for leaks.
- F. Check wheel lubrication.
- G. Check proper tire inflation.
- H. *Re-torque all wheel nuts & lugs*

1. Wheel torque values:

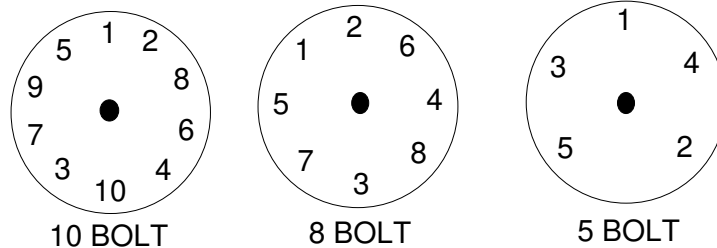
Torque on Dayton nuts 5-spoke wheel:
200-250 Ft. Lbs.

Torque on 10-bolt Bud style ball nut system (stud piloted):
Steel Disc 450-500 Ft. Lbs.
Aluminum Disc 450-500 Ft. Lbs.

Torque on 10-bolt Bud style unimount system (hub piloted):
Steel Disc 450-500 Ft. Lbs.
Aluminum Disc 450-500 Ft. Lbs.

Torque on 8-bolt Motor Wheel style:
Steel Disc 450-500 Ft. Lbs.
Aluminum Disc 450-500 Ft. Lbs.

Tightening Sequence



Note: Trailers that are delivered via transport company and are equipped with air lift axles, have them locked before leaving the factory. You must unlock the axles in order for them to work.

2. Important Checks After the First Week

A. Re-torque all axle U-bolts and all suspension bolts.

4. Standard BENLEE spring suspension torque values:

U-Bolts	360 ft. lbs.
Radius Rods	360 ft. lbs.
Equalizer Nuts	360 ft. lbs.
Radius Rod Clamp Nuts	110 ft. lbs.

B. BENLEE recommends that after one week of operation, the hydraulic system be visually inspected.

1. Check cylinder glands for leakage. If leakage is apparent, the gland nuts may be tightened up to one ½ turn. If the glands continue to weep or leak, contact BENLEE.
2. Check all hoses for leakage and chafing. Adjust lines and tighten fittings as needed.
3. Check all fittings and connections for leakage. Tighten fittings and connections as necessary.

3. Recommended Periodic Maintenance

A. Daily Driver Inspection:

1. Inspect for proper level of oil and water in auxiliary engine, if so equipped.
2. Inspect light equipment for proper operation.
3. Inspect cable for broken strands and flat spots. Replace if defective or worn.
4. Inspect for proper tire inflation.
5. Inspect for possible hydraulic leaks.
6. Inspect hub cap oil level.
7. Inspect trailer control valve for proper function.

B. Weekly Mechanic's Inspection and Maintenance

1. Inspect hydraulic oil tank for proper level.
2. Inspect hydraulic hoses and pipe fittings
3. Inspect cable for broken stands and flat spots. Replace if defective or worn.
4. *Grease trailer zerk fittings, including the following pints:*

Rollers
Sheaves
Rear Hinge
Lift Cylinder Lower and Upper Bushing
Slack Adjusters
Winch (if so equipped)

Grease other areas of trailer, including:

Safety Latch Spring
Slide Plate Bearings (if so equipped)
Slide Plate Track (if so equipped)

C. Monthly Mechanic's Inspection and Maintenance

1. Remove trainer from hydraulic reservoir, clean with solvent and blow out with air.
2. Inspect all air lines. They must be properly secured and not chaffing on anything.

D. Four Month Mechanic's Inspection and Maintenance

1. Inspect pump, P.T.O and valve for loose connections and leakage.
2. Re-torque all axle U-bolts and all suspension bolts.
3. Inspect brakes for wear and proper operation. Readjust if necessary.
4. Inspect seals for oil leaks.
5. Inspect hub caps for leaks.

TROUBLE SHOOTING GUIDE

Problem: Trailer is running slow or not picking up enough weight.

Possible Cause	Solution
Debris in hydraulic system or not enough pressure	Check pressure on supplied gauge on valve by retracting the reeve cylinder completely and holding. Pressure should read 2200psi. If not 2200 check wet kit system for problems. If does read 2200psi remove PRV valve and clean with brake cleaner. Install better filtration system on tractor.

Problem: Roll-Rite Tarp is not working

Possible Cause	Solution
System not getting power	Check sticker at control station for operation procedures. Make sure running lights are on and 7 way plug is connected. Hold buttons 1&2 on panel or key fob to power up system. If not successful call BENLEE service department.

Problem: Sheaves or rollers squeling or squeaking

Possible Cause	Solution
Rollers and sheaves need grease	Check and grease all grease points, if continues remove and inspect bushings and replace as needed. Trailers need to be greased 2 times a week.

Problem: Container not coming all the way to the front

Possible Cause	Solution
Cable too long or container front not standard	Check cable adjustment and adjust if needed, call BENLEE for adjustment procedures

Problem: Stinger tail cylinder leaking or not operating properly.

Possible Cause	Solution
Cylinder bent or damaged.	Inspect cylinder and tail to insure proper use. Stinger tail is not intended to be used as a pry bar. Containers need to be on main frame of trailer before the hoist comes down.

Problem: ICC bumper drifting up

Possible Cause	Solution
Cylinder or bumper damaged	Check for external damage, remove and repair cylinder. Check to see if bumper has been damaged from hitting something or not raising up prior to loading container.

Problem: Rear lights not working

Possible Cause	Solution
Electrical connection or junction problem	Check connections at light in bumper and connection in junction box, reconnect wires, if trouble continues call BENLEE service department

Problem: Hydraulic fluid leaking from tank

Possible Cause	Solution
Too much hydraulic fluid in system	Wet kit hydraulic tank should be full when roll off trailer is empty and hoist is down. If trailer has container on it there is fluid in the reeve cylinder/cylinders and when the container is unloaded this fluid will go back to tank. It is best to make sure trailer is unloaded when disconnected from tractor.

Problem: Trailer not sitting level

Possible Cause	Solution
Suspension is out of adjustment	If trailer has spring ride suspension check springs and bushings for damage or wear. If trailer has air ride suspension check leveling valve and air bags.

Problem: Main control handles loose or sloppy.

Possible Cause	Solution
Main control handles loose or sloppy.	Control linkage, pins, or handles damaged inspect pins and linkage to hydraulic valve and replace damaged parts.



DAILY DRIVER VEHICLE INSPECTION REPORT

Date: _____

EQUIPMENT NUMBER: _____	YEAR: _____	VIN NUMBER: _____	DESCRIPTION: _____
EQUIPMENT MAKE: _____	DRIVER NAME: _____	EMPLOYEE # _____	

LEGEND: OK -- READY TO USE
 SR -- SERVICE REQUIRED
 RN -- REPAIR/REPLACE NEEDED

LEGEND: ROH - 1500 Roll Off Hoist
 ROHT - 1600 Roll Off Hoist Trailer
 PT - 1700 Pup Trailer
 REL - R90
 CCR - Container Carrier Rotator
 HL - Hook Lift

FOR COMPLETE DETAILS & DIAGRAM'S REFER TO OWNER'S MANUAL

	OK	SR	RN	Init.
UNIT CONDITION REPORT				
1.- Hydraulic Components				
a. Valves				
b. Oil tank (s)				
c. Pump (s) noisy				
2.- Hydraulic hoses for signs of:				
a. Abrasion				
b. Blisters				
c. Nicks, cracks or cuts				
3.- Leaks on Hydraulic Components				
a. Pump				
b. Fittings & Connections				
c. PTO				
d. Cylinders				
e. Hydraulic Controls				
4.- Hydraulic oil level QUA. _____ LTR/QTS _____				
5.- Hoses routing				
a. Rubbing against metal				
b. Twisting or kinking				
6.- Sheaves				
a. Excessive wear or damage				
b. Wire rope to run straight off the sheave				
c. Cable in drum is rolling evenly				
7.- Lights & Reflectors				
a. Headlights				
b. Stop & Tail Lights				
c. Turn Signals				
d. Reflectors				
8.- Body Inspection				
a. Hoist Cable				
b. Rollers				
c. Sheaves				
d. Rear Hinge				
e. Lift Cylinders				
f. Tarper arm pivot points (if equipped)				
g. Tarper telescopic extensions (if equipped)				
h. Packer carriage (REL)				
i. Sweep Panel (REL)				
j. Tailgate lift cylinders (REL)				
k. Tailgate hinge pin (REL)				
l. Ejector cylinders (REL)				
m. Cart tippers cylinders (if equipped) (REL)				
n. Lift cylinders (CCR)				
p. Rotator cylinders (CCR)				
q. Rotator bearings (CCR)				
r. Tilt cylinders (CCR)				
s. Boom pivots (CCR)				
t. Lifting hook on jib (HL)				
u. Jib slide - top, bottom & side guides (HL)				
v. Rear pivot pins (HL)				
w. Roller mount assembly (HL)				
x. Check hopper, pack & sweep blade ejection (REL)				
y. Check tailgate clear (if equipped) (REL)				
z. Check bumpers				

	OK	SR	RN	Init.
8. Body Inspection (Continue)				
aa. Check fenders & mud flaps				
ab. Check trailer hitch				
ac. Check bolts, nuts & springs on tie downs				
ad. Check trailer air line / electrical connections (if equipped)				
ae. Check trailer hyd. oil connections (if equipped)				
af. PTO (noisy)				
9.- Safety Devices				
a. Hoist raised alarm (if equipped)				
b. Tailgate ajar				
e. Safety prop				
10.- Accessories				
a. Side doors safety kill switch (REL)				
b. Hook raised alarm (HL)				
c. Camera (if equipped)				
d. Strobe Light				
e. Backup Alarm				
11.- Inspect & retighten as req.				
a. Nuts & bolts				
b. Shafts				
c. Cotter pins				
d. Buzzer (if equipped)				
12.- Cylinders (clear of debris)				
13.- Check and clean tailgate locking pins (REL)				
14.- Pintle Hook (if equipped)				
a.- Clean & check for worn, damage or missing parts				
b. Inspect the coupling contact area				
c. Lubricate latch pivot with light oil lubricant				
d. Check mounting fasteners for proper torque				
e. Check plunger adjustment				

Unit released to continue service? Yes No

Comments: _____

Technician's Signature: _____
 Date: _____

Driver's Signature: _____
 Date: _____

SERVICE CHECKLIST

Date: _____ Unit # _____ Mechanic: _____ RO # _____

✓ = OK M= Repair or Adjust N/A = Not Applicable X = Placed on Attached Repair Order

TOTAL UNIT INSPECTION

- | | | |
|-----|--------------------------|---|
| 1. | <input type="checkbox"/> | Check All Operation of Axles Lift & Tag |
| 2 | <input type="checkbox"/> | Inspect Trailer Exterior for Damage Note any Damage _____ |
| 3. | <input type="checkbox"/> | Check Landing Gear Assembly, Legs, Pads, Braces, Gear Box (High/Low and Lubricate) |
| 4. | <input type="checkbox"/> | Check Tailgate Latches, Hinges, Wingnuts, and Air Cylinders, Lube as Necessary (Dump) |
| 5. | <input type="checkbox"/> | Check Bumper, Push Block and Pull Hook Condition (Dump) |
| 6. | <input type="checkbox"/> | Check Safety Chains, Tie Downs and Load Binder Condition |
| 7. | <input type="checkbox"/> | Check Operation of Tarping System, Check Tarp and Pulleys Condition |
| 8. | <input type="checkbox"/> | Check Mud Flaps and Mount Brackets |
| 9. | <input type="checkbox"/> | Check Tailgate Seal for Damage (Dump) |
| 10. | <input type="checkbox"/> | Inspect Hydraulic Connections and Hose |
| 11. | <input type="checkbox"/> | Check License Plate Light, Decals, Registrations, Registration Holder and Placards |
| 12. | <input type="checkbox"/> | Check Safety Stickers and DOT Reflective Tape |
| 13. | <input type="checkbox"/> | Check Body Uplight |
| 14. | <input type="checkbox"/> | Check Tail, Stop, Turn and Marker Lights |
| 15. | <input type="checkbox"/> | Crossmembers, Frame & Subframes |
| 16. | <input type="checkbox"/> | Check Air Systems for Damage/Leaks and Routing |
| 17. | <input type="checkbox"/> | Check Condition Lines/Hoses, Glad Hand Seals and Valves |
| 18. | <input type="checkbox"/> | Drain Tanks and Check Mountings, Air Drain Cable's |
| 19. | <input type="checkbox"/> | Inspect Spring Hangers |
| 20. | <input type="checkbox"/> | Check for Broken Springs/Spring Saddle, Center Bolts |
| 21. | <input type="checkbox"/> | Check for Loose U-Bolts |
| 22. | <input type="checkbox"/> | Inspect Radius Rods and Equalizers and Equalizer Bushings |
| 23. | <input type="checkbox"/> | Inspect Air Bag and Piston |
| 24. | <input type="checkbox"/> | Inspect Brakes, Drum, Slack Adjusters, Cams and Adjust Brakes as Necessary |
| 25. | <input type="checkbox"/> | Check for Air Leaks (Brakes) |
| 26. | <input type="checkbox"/> | Grease All Bushings and Slacks |
| 27. | <input type="checkbox"/> | Check all Cable Sheaves in Upper |
| 28. | <input type="checkbox"/> | Grease All Sheaves & Chassis |
| 29. | <input type="checkbox"/> | Check for Air Leaks at Brake Chamber/Diaphragm |
| 30. | <input type="checkbox"/> | Check Coupler and King Pin, Inspect Fish Mouth and Eye |
| 31. | <input type="checkbox"/> | Check Dolly Turntable Contition of Bolts |
| 32. | <input type="checkbox"/> | Check Cable for Damage |
| 33. | <input type="checkbox"/> | Check All Axle Wheel Seals |
| 34. | <input type="checkbox"/> | ICC Bar and Safety Chains |
| 35. | <input type="checkbox"/> | Rear Suspension, Spring Pins and Shackles |
| 36. | <input type="checkbox"/> | Rear Susp. Torque Arms and Control Arms |
| 37. | <input type="checkbox"/> | Rear Suspension Bushings and Beams |
| 38. | <input type="checkbox"/> | Hydraulic Tank and Hoses |
| 39. | <input type="checkbox"/> | Valves and Switching Valves |
| 40. | <input type="checkbox"/> | Hydraulic Cylinders, Mounts Pins and Controls |
| 41. | <input type="checkbox"/> | Check Relay Valve Emergency Operation |
| 42. | <input type="checkbox"/> | Other: _____ |
| 43. | <input type="checkbox"/> | Other: _____ |

TIRES AND WHEELS INSPECTION

- 1 Inspect Wheel Assembly for Cracks, Lugs for Damand and Retighten
- 2 Check for Leaking Wheel Seals & Proper Oil Level in Hubs
- 3 Check Dual Mating of Tires (Not to Esceed 1/4 of an inch)

RECORD PRESSURE AND REMAINING TREAD

		1	2	3	4	5	6	7	8
Tire Pressure	PSI	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>
	IN.	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>
Treads 32nds	105	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>
	3/32	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>

Brake Lining and Condition

L	R

Comments or Additional Repairs Required

THIS INSPECTION HAS BEEN COMPLETED AND UNIT IS READY

Performed By: _____ Signature: _____ Date: _____

GENERAL SERVICE INFORMATION

HYDRAULIC SYSTEM

The hydraulic oil is in constant contact with precision machined surfaces and the oil should be kept as clean as possible to prevent unnecessary wear. Pump failure may create a suspicion of dirt particles in the hydraulic oil. In such instances, the entire hydraulic system must be drained, flushed clean, and any filter screen thoroughly cleaned. New oil should be put into the entire system. The hydraulic oil level should be maintained at approximately 4"-6" from the top of the reservoir when all cylinders are in the collapsed position.

Caution: *Dirty hydraulic oil will lead to expensive repairs!*

The recommended hydraulic oil for use in this system should be equal to the following specifications:

Gravity	31	Pour max. Fahrenheit	35
Flash Fahrenheit min.	360 °	Color max.	2
Viscosity 100 °	21C	SAE	10
Fire Fahrenheit min.	415 °	% Carbon Residue max.	0.05
Viscosity 210 °	48	Neutral #	0.05
V I min.	95	Sulfur	0.02

Oil operating temperatures should not exceed 180 ° F. The oil should have anti-foam and anti-oxidation additives. DO NOT use oils with low viscosity, naphtha base, aircraft hydraulic oil or hydraulic brake fluid. Oil with a low pour point should be used for low temperature operation.

If an auxiliary industrial engine is supplied, refer to the manufacturer's maintenance manual for recommended service information. The hydraulic tank should have clean-out facilities, plus a baffle inside of the tank. The filter should be checked and cleaned whenever possible.

WARNING: Filter is on the suction side of the hydraulic system and can cause severe shortage of oil to the pump is not maintained.

RECOMMENDED HYDRAULIC TANK SIZES FOR BENLEE TRAILERS:

<u>Trailer</u>	<u>Winch/Reeving</u>	<u>Recommended Tank Size</u>
Drop deck	Winch	60 gallons
Drop deck	Double reeving	80 gallons
Drop deck	Single reeving	65 gallons
Conventional	Double reeving	80 gallons*
Conventional	Single reeving	80 gallons
Mini-trailer	Single reeving	50 gallons
Two-box	Winch/reeving	65 gallons

**Michigan 6 or 7 axles may require 100 gallon tanks. Consult manufacturer.*

Recommended operating conditions for BENLEE TRAILERS **UP TO 6 AXLES** are 2,200 PSI oil operating pressure, 25-30 GPM oil flow rate and 1600-1900 tractor R.P.M. with the P.T.O. engaged. The pressure relief valve on the trailer is factory set at 2,200 PSI. *Do not change this setting without factory approval or you may void your warranty.*

For **7 and 8 Axle** BENLEE TRAILERS, the recommended operating conditions are lower, at 2,000 PSI oil operating pressure.

Do not change this setting without factory approval or you may void your warranty.

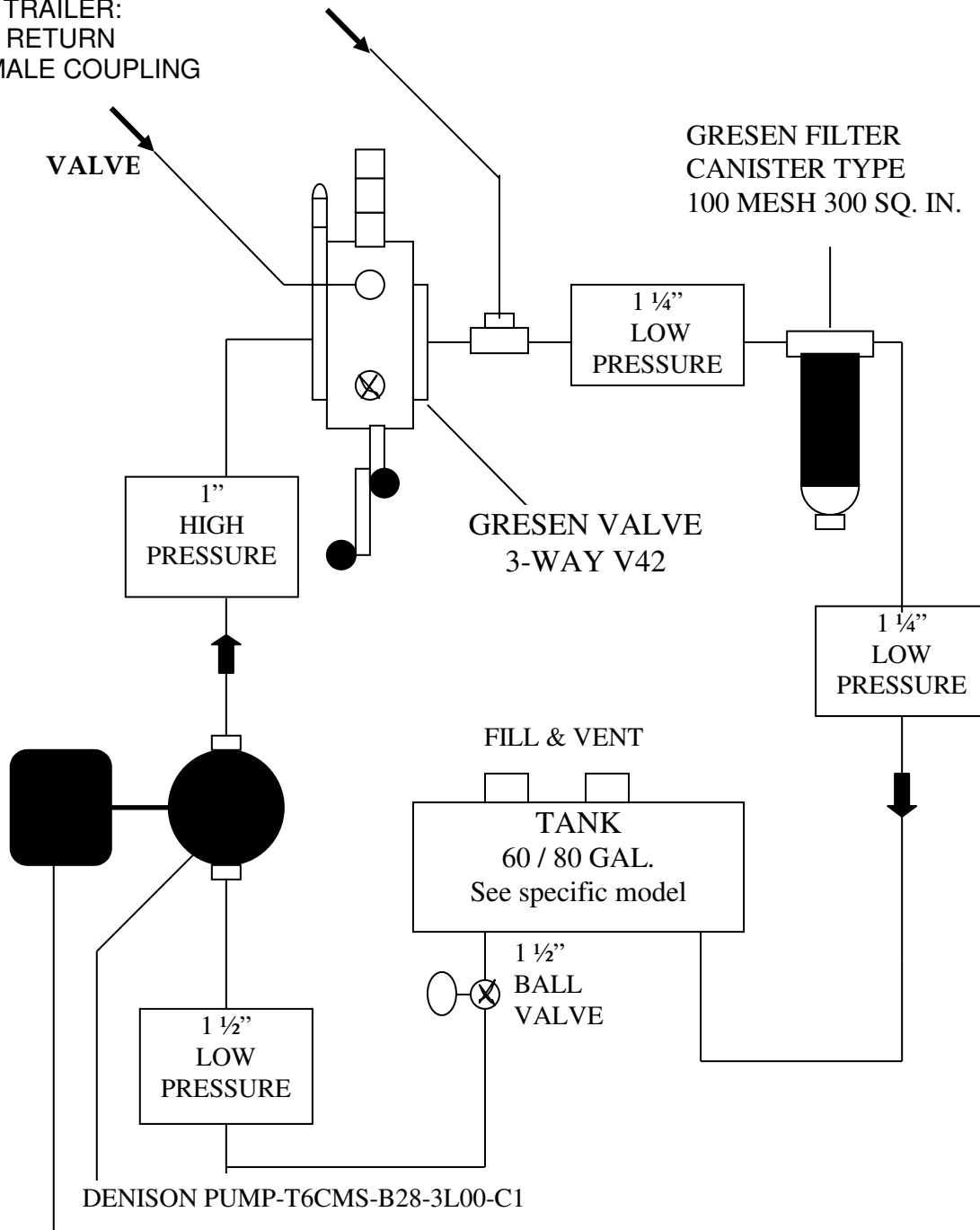
Wet Kit Schematic

Typical wet kit to operate BENLEE roll-off trailer

FROM TRAILER:
1" X 8" RETURN
LINE MALE COUPLING

VALVE

GRESEN FILTER
CANISTER TYPE
100 MESH 300 SQ. IN.



(CHELSEA PTO) BENLEE RECOMMENDS PTO
TO RUN 100% OF ENGINE SPEED

GENERAL SERVICE INFORMATION

HYDRAULIC WINCH

1. Type:

Tulsa Model H-75
Grooved Drum
Hydraulic Driven
70,000 Capacity
Tow Speed with Cable Packer #4073

Caution: When cable is at its furthest extension for picking up containers, a minimum of five (5) wraps of cable should remain on the winch drum. Operator should take care that when winding cable in (loaded or unloaded), that it wraps evenly and tightly. If allowed to bunch up, damage may result to cable and/or cable packer. See winch & stinger combination under "Hydraulic Controls".

2. Motor:

Charlynn Model 119-2023 (Tulsa #40425)
Two stage
Gerotor Type

3. Service Requirements:

S.A.E. 140 wt. gear lube in gear case
Check for proper operating level every 25 hours or monthly
Grease fittings monthly
Inspect cable daily

4. Two-Speed Button:

The two-speed winch electrical hook up is pre-wired on the trailer. The hook up is to the brown, 7-way wire (marker lights). To make it function, the operator must turn on the trailer marker lights before leaving the cab. Push the button on the trailer control panel *while operating in low speed* to activate high speed operation. Under heavy loads, the high speed will automatically kick down to low speed.

GENERAL SERVICE INFORMATION

ORDERING PARTS

4. General Information

We try to provide quality parts at the lowest possible prices. We ask if, for any reason, our service, quality or pricing does not meet your standard, please call and inform Greg Brown or Brian Lucas at BENLEE. We will appreciate hearing from you. We can also be reached via E-mail at greg.brown@benlee.com or brian.lucas@benlee.com.

Upon ordering parts, part assemblies and accessories, *provide the BENLEE model and serial number of the trailer*. This information can be found on the metal V.I.N. plate. The V.I.N. is near the nose of the trailer located on curb side. You will also find this data on the first page of this manual. To insure safety, maintain quality and to adhere to factory specifications, always order parts through the BENLEE parts department. Please contact Brian Lucas on this number (734) 722-8100 ext. 116, or at parts@benlee.com.

4. Recommended Spare Parts

Normally, most trailer parts can be shipped from BENLEE the same day. However, we are listing general service parts you may want to keep on the shelf. Please call Brian Lucas at BENLEE parts, fax us at: 734-721-8806 or by e-mail at parts@benlee.com.

Hydraulic

Assorted Hydraulic Fittings
Gresen Valve Handle
Gresen Valve Bracket
Gresen Valve Clevis
Gresen Valve Kits
Reeving Cylinder Packing Kit
Lift Cylinder Packing Kit
Spare Cylinders

Mechanical

4" Rollers #84
Roller Pin #86
2" Shaft Collar
Roll Pin
Sheaves
Cables
Gresen Cable
(control cable)

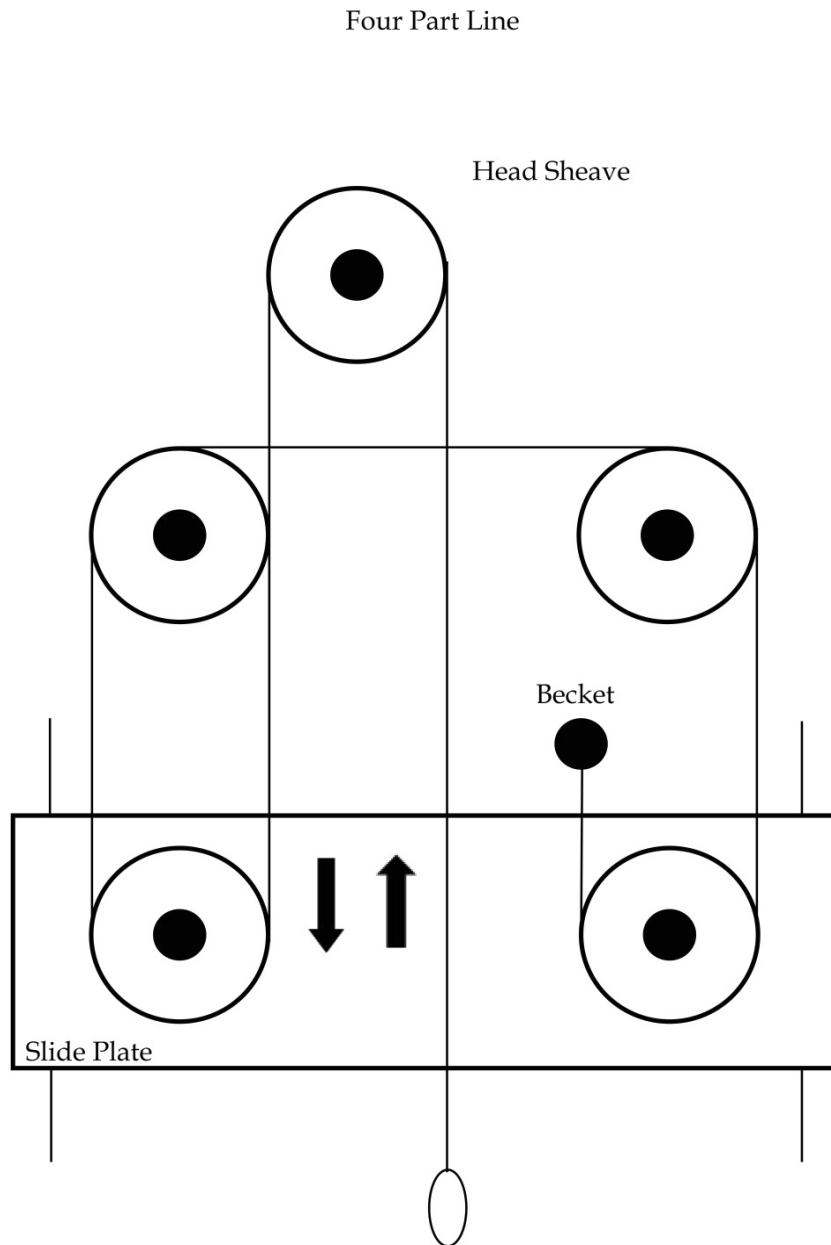
Suspension

U-Bolts
Bearing & Race for Axle
Equalizer Bushing Kit
Radius Rod
Leaf Springs
Air Bags
BENLEE Equalizer
Regulator for Axle
Airlift Axle Kit
(for *Neway* 10' 2"
spread)

4. Type of Replacement Cables

A. Reeving Four-Part Lines & Winch :
(Standard Cable)

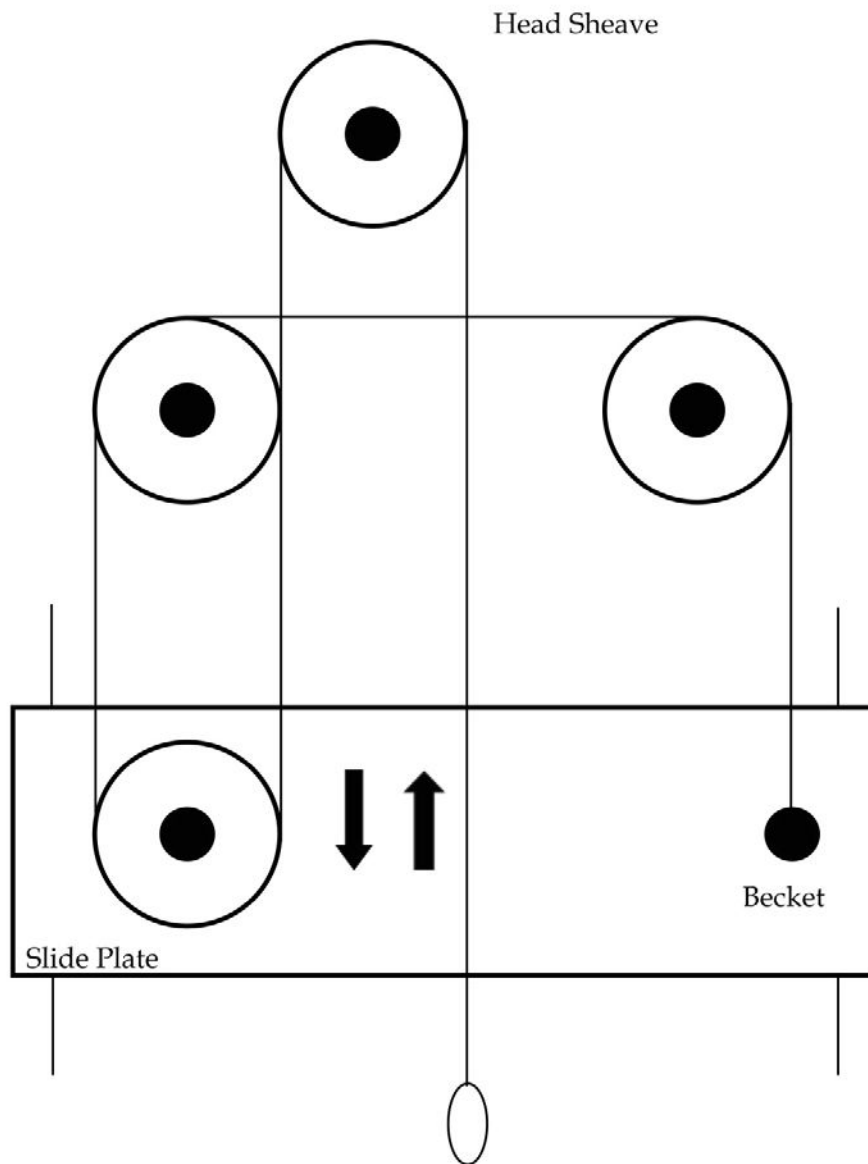
7/8" Diameter
6 x 25
Improved Plow Steel
Right Hand Regular Lay
Wire Rope Pre-formed



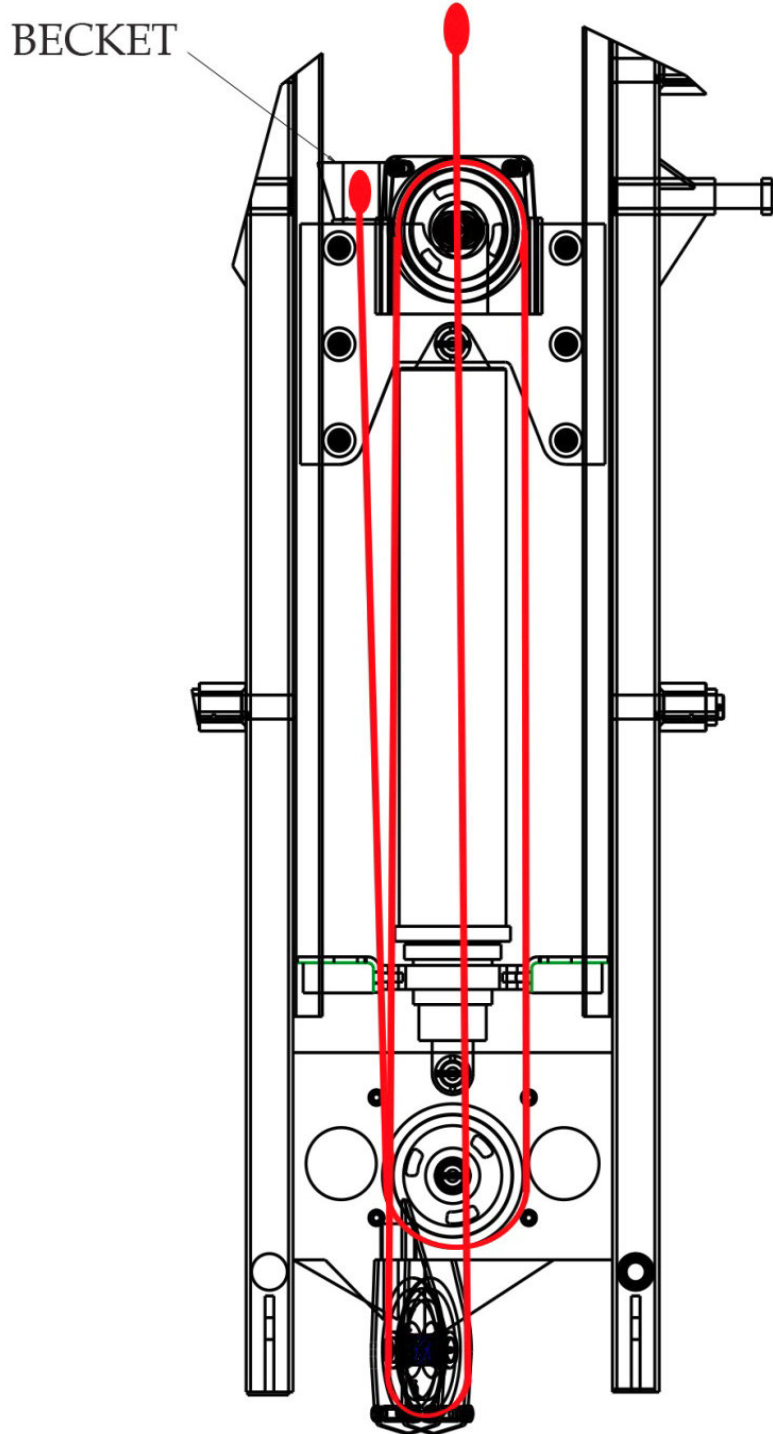
B. Reeving Three Part Line:
(Special ordered on a few BENLEE trailers
Pulls 33% more weight)

1" Diameter
Flat Wound

Three Part Line (dual reeving)



C. Single Reeving Three Part Line
(Standard Cable)
7/8' Diameter
6 x 25
Improved Plow Steel
Right Hand Regular Lay
Wire Rope Pre-formed



The tables for replacement cables and cylinders are to be used as a guide. Some BENLEE trailers have been ordered and assembled using special cables, cylinders, and other parts which may not be included in these tables. If in doubt contact BENLEE parts : Phone 734-722-8100 or parts@benlee.com

4. Replacement Cables

A. Conventional Trailers

Length	Tail	Model Numbers			Cylinders - Cable Routing	Cable Length
		Tandem Axle	Tri-Axle	4 Axle		
29'	Stinger	TA60TC29	TRA60TC29	N/A	Dual Reeving - 4 Part Line	7/8" x 95'
29'	Stinger	TACVDD29S	TRCVDD29S	N/A	Dual Reeving - 4 Part Line	7/8" x 95'
32'	Stinger	TA60TC32	TRA60TC32	N/A	Dual Reeving - 4 Part Line	7/8" x 95'
32'	Stinger	TACVDD32S	TRCVDD32S	N/A	Dual Reeving - 4 Part Line	7/8" x 95'
34'	Fixed	TA60TC34	TRA60TC34	N/A	Dual Reeving - 4 Part Line	7/8" x 95'
34'	Fixed	TACVDD34F	TRCVDD34F	N/A	Dual Reeving - 4 Part Line	7/8" x 95'
35'	Stinger	TA60TC35S	TRA60TC35S	4A60TC35S	Dual Reeving - 4 Part Line	7/8" x 115'
35'	Stinger	TACVDD35S	TRCVDD35S	4ACVDD35S	Dual Reeving - 4 Part Line	7/8" x 115'
37'	Fixed	TA60TC37	TRA60TC37	N/A	Dual Reeving - 4 Part Line	7/8" x 105'
37'	Fixed	TACVDD37F	TRCVDD37F	N/A	Dual Reeving - 4 Part Line	7/8" x 105'
37'	Stinger	TA60TC37S	TR60TC37S	4A60TC37S	Dual Reeving - 4 Part Line	7/8" x 115'
37'	Stinger	TACVDD37S	TRCVDD37F	4ACVDD37S	Dual Reeving - 4 Part Line	7/8" x 115'
39'	Stinger	TA60TC39	TRA60TC39	N/A	Dual Reeving - 4 Part Line	7/8" x 125'
39'	Stinger	TACVDD39S	TRCVDD39S	N/A	Dual Reeving - 4 Part Line	7/8" x 125'
40'	Fixed	TA60TC40	TRA60TC40	4A60TC40	Dual Reeving - 4 Part Line	7/8" x 115'
40'	Fixed	TACVDD40F	TRCVDD40F	4ACVDD40F	Dual Reeving - 4 Part Line	7/8" x 115'
42'	Fixed	TA60TC42	TRA60TC42	4A60TC42	Dual Reeving - 4 Part Line	7/8" x 115'
42'	Fixed	TACVDD42F	TRCVDD42F	4ACVDD42F	Dual Reeving - 4 Part Line	7/8" x 115'
44'	Fixed	TA60TC44	TRA60TC44	N/A	Dual Reeving - 4 Part Line	7/8" x 125'
44'	Fixed	TACVDD44F	TRCVDD44F	N/A	Dual Reeving - 4 Part Line	7/8" x 125'

B. Multi Axle Conventional Trailers

Length	Tail	Model Numbers			Cylinders - Cable Routing	Cable Length
		6 Axle	7 Axle	8 Axle		
43'	Fixed	6A60TC43	N/A	N/A	Dual Reeving - 4 Part Line	7/8" x 115'
43'	Fixed	6ACVDD43F	N/A	N/A	Dual Reeving - 4 Part Line	7/8" x 115'
47'	Fixed	6A60TC47	7A60TC47	N/A	Dual Reeving - 4 Part Line	7/8" x 125'
47'	Fixed	6ACVDD47F	7ACVDD47F	N/A	Dual Reeving - 4 Part Line	7/8" x 125'
48'	Stinger	N/A	N/A	8ABFT48	Dual Reeving - 4 Part Line	7/8" x 135'
48'	Stinger	N/A	N/A	8ACVDD48S	Dual Reeving - 4 Part Line	7/8" x 135'

C. Super Mini - Super Mini Long Trailers

Model Numbers

Length	Tail	Tandem Axle	Tri Axle	Cylinders - Cable Routing	Cable Length
26'	Stinger	TASM26S	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
26'	Stinger	TASMDS26S	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
26'	Stinger	TASMDD26S	N/A	Dual Reeving - 4 Part Line	7/8" x 90'
26'	Stinger	TASMRS26S	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
26'	Stinger	TASMSS26S	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
26'	Fixed	TASM26F	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
26'	Fixed	TASMDS26F	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
26'	Fixed	TASMDD26F	N/A	Dual Reeving - 4 Part Line	7/8" x 90'
26'	Fixed	TASMRS26F	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
26'	Fixed	TASMSS26F	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
28'	Stinger	TASM28S	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
28'	Stinger	TASMDS28S	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
28'	Stinger	TASMDD28S	N/A	Dual Reeving - 4 Part Line	7/8" x 90'
28'	Stinger	TASMRS28S	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
28'	Stinger	TASMSS28S	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
33'	Fixed	TASML33	TRASML33	Single Reeving - 3 Part Lin	7/8" x 77'
33'	Fixed	TASLDS33F	TRSLDS33F	Single Reeving - 3 Part Lin	7/8" x 77'
33'	Fixed	TASLRS33F	TRSLRS33F	Single Reeving - 3 Part Lin	7/8" x 77'

D. Bridgemaster

Model Numbers

Length	Tail	Tandem Axle	Tri Axle	Cylinders - Cable Routing	Cable Length
40'	Stinger	TABM40	TRABM40	Single Reeving - 3 Part Lin	7/8" x 105'
40'	Stinger	TABMSS40S	TRBMSS40S	Single Reeving - 3 Part Lin	7/8" x 105'
41'	Fixed	N/A	TRABM41	Single Reeving - 3 Part Lin	7/8" x 105'
41'	Fixed	N/A	TRBMSS41F	Single Reeving - 3 Part Lin	7/8" x 105'
44'	Fixed	TABM44	TRABM44	Single Reeving - 3 Part Lin	7/8" x 105'
44'	Fixed	TABMSS44F	TRBMSS44F	Single Reeving - 3 Part Lin	7/8" x 105'

E. Mini Trailer

Model Numbers

Length	Tail	Tandem Axle	Tri Axle	Cylinders - Cable Routing	Cable Length
32'	Fixed	TADDM32	N/A	Single Reeving - 3 Part Lin	7/8" x 75'

F. Two Box Trailers

Model Numbers

Length	Tail	Tandem Axle	Tri Axle	Cylinders - Cable Routing	Cable Length
48'	Fixed	TATFB48	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
48'	Fixed	TATBSS48F	N/A	Single Reeving - 3 Part Lin	7/8" x 65'

48'	Fixed	TATBRS48F	N/A	Single Reeving - 3 Part Lin	7/8" x 65'
48'	Stinger	TATBS48	TRATBS48	Single Reeving - 3 Part Lin	7/8" x 65'
48'	Stinger	TATBSS48S	TRTBSS48S	Single Reeving - 3 Part Lin	7/8" x 65'
				Winch Transfer - Cables	1/2" x 50'
				Reeve Transfer Cable 1	5/8" x 40
				Reeve Transfer Cable 2	5/8" x 75'
				Pull Back Cable	3/8" x 40'

G. Drop Deck Trailers

Length	Tail	Model Numbers		Cylinders - Cable Routing	Cable Length
		Tandem Axle	Tri Axle		
38'	Stinger	N/A	TRA60DD38	Single Reeving - 3 Part Lin	7/8" x 72'
38'	Stinger	N/A	TRDDSS38S	Single Reeving - 3 Part Lin	7/8" x 72'
38'	Stinger	N/A	TRA60DD38	Dual Reeving - 4 Part Line	7/8" x 105'
38'	Stinger	N/A	TRDDSD38S	Dual Reeving - 4 Part Line	7/8" x 105'
38'	Stinger	N/A	TRA60DD38	Winch	7/8" x 65'
38'	Stinger	N/A	TRDDSW38S	Winch	7/8" x 65'
41'	Fixed	TA60DD41	TRA60DD41	Single Reeving - 3 Part Lin	7/8" x 77'
41'	Fixed	TADDSS41F	TRDDSS41F	Single Reeving - 3 Part Lin	7/8" x 77'
41'	Fixed	TA60DD41	TRA60DD41	Dual Reeving - 4 Part Line	7/8" x 110'
41'	Fixed	TADDSD41F	TRDDSD41F	Dual Reeving - 4 Part Line	7/8" x 110'
41'	Fixed	TA60DD41	TRA60DD41	Winch	7/8" x 65'
41'	Fixed	TADDSW41F	TRDDSW41F	Winch	7/8" x 65'
43'	Stinger	TADDSS43S	TRDDSS43S	Single Reeving - 3 Part Lin	7/8" x 77'
43'	Stinger	TA60DD43	TRA60DD43	Dual Reeving - 4 Part Line	7/8" x 110'
43'	Stinger	TADDSD43S	TRDDSD43S	Dual Reeving - 4 Part Line	7/8" x 110'
43'	Stinger	TA60DD43	TRA60DD43	Winch	7/8" x 65'
43'	Stinger	TADDSW43S	TRDDSW43S	Winch	7/8" x 65'
45'	Fixed	TA60DD45	TRA60DD45	Single Reeving - 3 Part Lin	7/8" x 85'
45'	Fixed	TADDSS45F	TRDDSS45F	Single Reeving - 3 Part Lin	7/8" x 85'
45'	Fixed	TA60DD45	TRA60DD45	Dual Reeving - 4 Part Line	7/8" x 115'
45'	Fixed	TADDSD45F	TRDDSD45F	Dual Reeving - 4 Part Line	7/8" x 115'
45'	Fixed	TA60DD45	TRA60DD45	Winch	7/8" x70'
45'	Fixed	TADDSW45F	TRDDSW45F	Winch	7/8" x70'
45'	Stinger	TA60DD45S	TRA60DD45S	Single Reeving - 3 Part Lin	7/8" x 85'
45'	Stinger	TADDSS45S	TRDDSS45FS	Single Reeving - 3 Part Lin	7/8" x 85'
45'	Stinger	TA60DD45S	TRA60DD45S	Dual Reeving - 4 Part Line	7/8" x 115'
45'	Stinger	TADDSD45S	TRDDSD45S	Dual Reeving - 4 Part Line	7/8" x 115'
45'	Stinger	TA60DD45S	TRA60DD45S	Winch	7/8" x70'
45'	Stinger	TADDSW45S	TRDDSW45S	Winch	7/8" x70'

5. Replacement Hydraulic Cylinders

A. Conventional Trailers

Length	Tail	Model Numbers			Lift Cylinders	Reeve Cylinders
		Tandem Axle	Tri-Axle	4 Axle		
29'	Stinger	TA60TC29	TRA60TC29	N/A	(2) 63 x 120	(2) 7 x 108
29'	Stinger	TACVDD29S	TRCVDD29S	N/A	(2) 63 x 120	(2) 7 x 108
32'	Stinger	TA60TC32	TRA60TC32	N/A	(2) 74 x 144	(2) 7 x 108
32'	Stinger	TACVDD32S	TRCVDD32S	N/A	(2) 74 x 144	(2) 7 x 108
34'	Fixed	TA60TC34	TRA60TC34	N/A	(2) 63 x 120	(2) 7 x 108
34'	Fixed	TACVDD34F	TRCVDD34F	N/A	(2) 63 x 120	(2) 7 x 108
35'	Stinger	TA60TC35S	TRA60TC35S	4A60TC35S	(2) 74 x 144	(2) 7 x 131
35'	Stinger	TACVDD35S	TRCVDD35S	4ACVDD35S	(2) 74 x 144	(2) 7 x 131
37'	Fixed	TA60TC37	TRA60TC37	N/A	(2) 74 x 144	(2) 7 x 108
37'	Fixed	TACVDD37F	TRCVDD37F	N/A	(2) 74 x 144	(2) 7 x 108
37'	Stinger	TA60TC37S	TR60TC37S	4A60TC37S	(2) 74 x 144	(2) 7 x 131
37'	Stinger	TACVDD37S	TRCVDD37F	4ACVDD37S	(2) 74 x 144	(2) 7 x 131
39'	Stinger	TA60TC39	TRA60TC39	N/A	(2) 74 x 198	(2) 7 x 152
39'	Stinger	TACVDD39S	TRCVDD39S	N/A	(2) 74 x 198	(2) 7 x 152
40'	Fixed	TA60TC40	TRA60TC40	4A60TC40	(2) 74 x 144	(2) 7 x 131
40'	Fixed	TACVDD40F	TRCVDD40F	4ACVDD40F	(2) 74 x 144	(2) 7 x 131
42'	Fixed	TA60TC42	TRA60TC42	4A60TC42	(2) 74 x 144	(2) 7 x 131
42'	Fixed	TACVDD42F	TRCVDD42F	4ACVDD42F	(2) 74 x 144	(2) 7 x 131
44'	Fixed	TA60TC44	TRA60TC44	N/A	(2) 74 x 198	(2) 7 x 152
44'	Fixed	TACVDD44F	TRCVDD44F	N/A	(2) 74 x 198	(2) 7 x 152

B. Multi Axle Conventional Trailers

Length	Tail	Model Numbers			Lift Cylinders	Reeve Cylinders
		6 Axle	7 Axle	8 Axle		
43'	Fixed	6A60TC43	N/A	N/A	(2) 85 x 220	(2) 7 x 131
43'	Fixed	6A60TC43	N/A	N/A	(2) 74 x 198	(2) 7 x 131
43'	Fixed	6ACVDD43F	N/A	N/A	(2) 74 x 198	(2) 7 x 131
47	Fixed	6A60TC47	7A60TC47	N/A	(2) 85 x 220	(2) 7 x 152
47	Fixed	6ACVDD47F	7ACVDD47F	N/A	(2) 85 x 220	(2) 7 x 152
48'	Stinger	N/A	N/A	8ABFT48	(2) 85 x 220	(2) 7 x 165
48'	Stinger	N/A	N/A	8ACVDD48S	(2) 85 x 220	(2) 7 x 165

C. Super Mini - Super Mini Long Trailers

Length	Tail	Model Numbers		Lift Cylinders	Reeve Cylinders
		Tandem Axle	Tri Axle		
26'	Stinger	TASM26S	N/A	(1) 84 x 87	(1) 83 x 120
26'	Stinger	TASM26S	N/A	(2) 63 x 120	(1) 83 x 120
26'	Stinger	TASMD526S	N/A	(2) 63 x 120	(1) 83 x 120

26'	Stinger	TASMDD26S	N/A	(2) 63 x 120	(2) 7 x 92
26'	Stinger	TASMRS26S	N/A	(2) 6 x 66	83 x 120
26'	Stinger	TASMSS26S	N/A	(1) 84 x 87	(1) 83 x 120
26'	Fixed	TASM26F	N/A	(1) 84 x 87	(1) 83 x 120
26'	Fixed	TASMDS26F	N/A	(2) 63 x 120	(1) 83 x 120
26'	Fixed	TASMDD26F	N/A	(2) 63 x 120	(2) 7 x 92
26'	Fixed	TASMRS26F	N/A	(2) 6 x 66	(1) 83 x 120
26'	Fixed	TASMSS26F	N/A	(1) 84 x 87	(1) 83 x 120
28'	Stinger	TASM28S	N/A	(1) 84 x 87	(1) 83 x 120
28'	Stinger	TASMDS28S	N/A	(2) 63 x 120	(1) 83 x 120
28'	Stinger	TASMDD28S	N/A	(2) 63 x 120	(2) 7 x 92
28'	Stinger	TASMRS28S	N/A	(2) 6 x 66	(1) 83 x 120
28'	Stinger	TASMSS28S	N/A	(1) 84 x 87	(1) 83 x 120
33'	Fixed	TASML33	TRASML33	(2) 63 x 120	(1) 83 x 165
33'	Fixed	TASLDS33F	TRSLDS33F	(2) 63 x 120	(1) 83 x 165
33'	Fixed	TASLRS33F	TRSLRS33F	(2) 6 x 66	(1) 83 x 165

D. Bridgemaster

Model Numbers

Length	Tail	Tandem Axle	Tri Axle	Lift Cylinders	Reeve Cylinders
40'	Stinger	TABM40	TRABM40	(1) 95 x 220	(1) 83 x 192
40'	Stinger	TABMSS40S	TRBMSS40S	(1) 95 x 220	(1) 83 x 192
41'	Fixed	N/A	TRABM41	(1) 95 x 174	(1) 83 x 192
41'	Fixed	N/A	TRBMSS41F	(1) 95 x 174	(1) 83 x 192
44'	Fixed	TABM44	TRABM44	(1) 95 x 220	(1) 83 x 192
44'	Fixed	TABMSS44F	TRBMSS44F	(1) 95 x 220	(1) 83 x 192

E. Mini Trailer

Model Numbers

Length	Tail	Tandem Axle	Tri Axle	Lift Cylinders	Reeve Cylinders
32'	Fixed	TADDM32	N/A	(1) 84 x 168	(1) 83 x 120

F. Two Box Trailers

Model Numbers

Length	Tail	Tandem Axle	Tri Axle	Lift Cylinders	Reeve Cylinders
48'	Fixed	TATFB48	N/A	(1) 84 x 87	(1) 83 x 120
48'	Fixed	TATFB48	N/A	(2) 63 x 120	(1) 83 x 120
48'	Fixed	TATFB48	N/A	(2) 6 x 66	(1) 83 x 120
48'	Fixed	TATBSS48F	N/A	(1) 84 x 87	(1) 83 x 120
48'	Fixed	TATBDS48F	N/A	(2) 63 x 120	(1) 83 x 120
48'	Fixed	TATBRS48F	N/A	(2) 6 x 66	(1) 83 x 120
48'	Stinger	TATBS48	TRATBS48	(1) 84 x 168	(1) 83 x 120
48'	Stinger	TATBSS48S	TRTBSS48S	(1) 84 x 168	(1) 83 x 120

48'	Stinger	TATBDS48S	TRTBDS48S	(2) 63 x 120 Winch Transfer Reeve Transfer Cylinder	(1) 83 x 120 H-12 7 x 4 x 108
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G. Drop Deck Trailers

Length	Tail	Model Numbers		Lift Cylinders	Reeve Cylinders
		Tandem Axle	Tri Axle		
38'	Stinger	N/A	TRA60DD38	(1) 95 x 174	(1) 83 x 165
38'	Stinger	N/A	TRDDSS38S	(1) 95 x 174	(1) 83 x 165
38'	Stinger	N/A	TRA60DD38	(1) 95 x 174	(2) 7 x 108
38'	Stinger	N/A	TRDDSD38S	(1) 95 x 174	(2) 7 x 108
38'	Stinger	N/A	TRA60DD38	(1) 95 x 174	H-75
38'	Stinger	N/A	TRDDSW38S	(1) 95 x 174	H-75
41'	Fixed	TA60DD41	TRA60DD41	(1) 95 x 220	(1) 83 x 165
41'	Fixed	TADDSS41F	TRDDSS41F	(1) 95 x 220	(1) 83 x 165
41'	Fixed	TA60DD41	TRA60DD41	(1) 95 x 220	(2) 7 x 108
41'	Fixed	TADDSD41F	TRDDSD41F	(1) 95 x 220	(2) 7 x 108
41'	Fixed	TA60DD41	TRA60DD41	(1) 95 x 220	H-75
41'	Fixed	TADDSSW41F	TRDDSSW41F	(1) 95 x 220	H-75
43'	Stinger	TA60DD43	TRA60DD43	(1) 95 x 220	(1) 83 x 165
43'	Stinger	TADDSS43S	TRDDSS43S	(1) 95 x 220	(1) 83 x 165
43'	Stinger	TA60DD43	TRA60DD43	(1) 95 x 220	(2) 7 x 108
43'	Stinger	TADDSD43S	TRDDSD43S	(1) 95 x 220	(2) 7 x 108
43'	Stinger	TA60DD43	TRA60DD43	(1) 95 x 220	H-75
43'	Stinger	TADDSSW43S	TRDDSSW43S	(1) 95 x 220	H-75
45'	Fixed	TA60DD45	TRA60DD45	(1) 95 x 220	(1) 83 x 165
45'	Fixed	TADDSS45F	TRDDSS45F	(1) 95 x 220	(1) 83 x 165
45'	Fixed	TA60DD45	TRA60DD45	(1) 95 x 220	(2) 7 x 108
45'	Fixed	TADDSD45F	TRDDSD45F	(1) 95 x 220	(2) 7 x 108
45'	Fixed	TA60DD45	TRA60DD45	(1) 95 x 220	H-75
45'	Fixed	TADDSSW45F	TRDDSSW45F	(1) 95 x 220	H-75
45'	Stinger	TA60DD45S	TRA60DD45S	(1) 95 x 220	(1) 83 x 165
45'	Stinger	TADDSS45S	TRDDSS45FS	(1) 95 x 220	(1) 83 x 165
45'	Stinger	TA60DD45S	TRA60DD45S	(1) 95 x 220	(2) 7 x 108
45'	Stinger	TADDSD45S	TRDDSD45S	(1) 95 x 220	(2) 7 x 108
45'	Stinger	TA60DD45S	TRA60DD45S	(1) 95 x 220	H-75
45'	Stinger	TADDSSW45S	TRDDSSW45S	(1) 95 x 220	H-75

BENLEE STANDARD TERMS OF SALE

Trailers & Parts

4. Acceptance

All orders are subject to acceptance by BENLEE, INC. in Romulus, Michigan, and shall not be considered binding unless confirmed or acknowledged in writing. Orders for special or non-catalog items accepted by BENLEE, Inc are not subject to cancellation. All purchase orders must be in writing. BENLEE, Inc. will accept verbal purchase orders, but must have a written confirmation. If written confirmation is not received within seven (7) days of the verbal purchase order, the order will be canceled.

4. Acknowledgment of Order

Confirmation from Benlee, Inc. will reflect either the request shipment date or the projected shipment date, whichever is later. Any specification change to an existing order must be made no later than thirty (30) days prior to the projected delivery date. On change orders made within thirty (30) days of the scheduled shipment, BENLEE, Inc. reserves the right to either reschedule shipment, or assess a monetary penalty to leave the order as scheduled.

4. Prices

All prices and shipments are F.O.B. Romulus, Michigan.

4. Taxes

Prices do not include City, County or State Taxes. Applicable taxes shall be paid by the buyer, unless a proper exemption certificate is furnished with the order.

5. Routing

All shipments are F.O.B. the factory of manufacturer unless specifically indicated otherwise. Routing instructions detailed in the order will be followed whenever practical, otherwise routing is our choice. BENLEE, Inc. cannot guarantee freight charges in advance of shipment. Freight charges at time of shipment will prevail.

6. Shipping Dates

Shipping dates are estimated contingent upon receipt of a formal purchase order with complete instructions and credit approval. BENLEE, Inc. assumes no responsibility or liability for delays in shipment. All purchase orders should reflect a requested delivery date. When an order is built and ready for shipment, based either on requested delivery date or the ability of BENLEE, Inc. to fill the order, whichever is later, BENLEE, Inc. will contact the customer to arrange for receipt of shipment. If the customer refuses to accept the shipment, BENLEE, Inc. reserves the right to cancel the order and return the purchase order to the customer. On any non-standard orders, Benlee, Inc. reserves the right to assess monetary penalties on the customer. If, at a later date, the customer wishes to re-submit the order, current pricing will prevail.

7. Claims

Claims for merchandise lost or damaged during transit must be made against the carrier by the consignee. Claims for shortages will not be considered unless they are submitted in writing within ten (10) days after receipt of the merchandise. Such claims should be submitted to:

BENLEE, INC.
30383 Ecorse Road
Romulus, MI 48174

8. Returns

Written permission must be obtained from BENLEE, Inc. before merchandise may be returned for credit. All transportation charges for returned merchandise must be prepaid by the shipper. Returned sellable merchandise accepted by BENLEE, Inc. for credit is subject up to a 30% restocking charge.

9. Terms

Invoice is considered delinquent if not paid within terms.

10. Warranty

All BENLEE equipment is guaranteed in accordance with its standard warranty. **All warranty work and claims must be authorized by BENLEE, INC.** Call and ask for Brian Lucas.

All pricing and specifications are subject to change without prior notice. The right is reserved by the Company to substitute material and modify specifications without prior notification.

BENLEE, INC.

“WARRANTY”

BENLEE warrants each new Roll-off & Lugger Hoist and/or Trailer to be free from defects in material and workmanship, under normal use and service, to the original purchaser only, for a period of 12-72 months for various components and frame, subject to conditions outlined below. Our obligation under this warranty is limited to repair, or replacement (with similar genuine part) of any part of the product that we manufactured which is returned to us within fifteen (15) days after discovery of the defect, properly identified with transportation charges prepaid, and not more than 12-72 months after purchase by the original user, provided that, in our judgment, the part is defective.

BENLEE will furnish without charge, F.O.B. our plant, a similar genuine part to replace any part of a product of our manufacture, which proves to be defective in normal use and service during this period.

Recommended operating conditions for BENLEE DUNRIGHT TRAILERS UP TO 6 AXLES are 2,200 PSI oil operating pressure, 25-30 GPM oil flow rate and 1600-1900 tractor R.P.M. with the P.T.O. engaged. The pressure relief valve on the trailer is factory set at 2,200 PSI. **Do not change this setting without factory approval or you may void your warranty.**

For 7 and 8 Axle BENLEE DUNRIGHT TRAILERS, the recommended operating conditions are lower, at 2,000 PSI oil operating pressure. **Do not change this setting without factory approval or you may void your warranty.**

Trailer hydraulic system components that are damaged or contaminated with debris due to a lack of filtration system on customer's power unit will not be warranted.

The manufacturer's warranty or obligation in connection with the sale of this equipment:

Shall be expressly limited to repair or replacement of defective parts, as stated above, and covers only those labor charges specifically authorized by the manufacturer. All other damages and claims, statutory or otherwise, being hereby expressly waived by the purchaser.

BENLEE will warrant each new piece of equipment manufactured by us to be free from defects in material and/or workmanship under normal use and service and with loads not exceeding the trailers rated capacity. The frames shall carry a six (6) year warranty.

Does not cover products of other manufacturer's components beyond such warranty as is made by such manufacturer.

No claim under this warranty shall be valid unless such claim is submitted within fifteen (15) days after the discovery of the defect and or up to the covered date, whichever comes first.

BENLEE does not assume liability for loss of product, time or any other consequential damages. Purchased by BENLEE parts are covered by this Warranty, up to, but not surpassing the Warranty given by the Manufacturer, of the Cylinder, hose, valve, etc

***FACTORY AUTHORIZATION MUST BE OBTAINED BEFORE
MAKING WARRANTY REPAIRS OR REPLACEMENTS***