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Operating Guide

PLCS 2"-6" COIL PIPE TRAILER

Model/Part# 73-314020-03

**Integrated Pipe Re-Rounder and Straightener
Lays 2"-6" coils of PE pipe, conduit, and duct.**










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Introduction and Item Check List

Congratulations on the purchase of your trailer. We believe you will be happy and completely satisfied with your purchase. Our goal is to provide a valued customer a quality trailer at a reasonable price.

The PLCS Coiled Pipe Trailer transports and installs 2" through 6" PE (polyethylene) coil pipe. The mechanical integrated Re-Rounder straightener system re-rounds and straightens the pipe as it dispenses through the specialty shaped series of rollers. The following equipment is supplied with each trailer:

Check Box	Photo	Qty.	Part#	Description
		1	73-323013	Pipe Anchor Clamp
		1	73-31444	Trailer Hex wrench
		2	73-323014	Ratchet Strap
		1	73-BVPU319	Hydraulic Power Pack Kit (Includes Motor, Pump, Tank & Switch)
		1	73-324010	Solar Panel
		8	73-31443	Aluminum Cross Bar
		8	73-31000	T-Screw for Cross Bar - make sure all attached to Cross Bar
		8	73-31442	Cap Head Screws for Cross Bar – make sure all attached to Cross Bar.
		1	71-107003	22 mm Re-Rounder Ratchet Wrench
		1	N/A	Set of laminated quick start instructions. Fasten underneath toolbox lid.
		1	N/A	2 3/4" x 5 1/2" PLCS Label Plate. Affix to drawbar.
		6	73-323017	Velcro Locking Strap – must be fastened to spider wheel to prevent movement during transport.
		2	73-325017	Rubber Wheel Chocks
		1	73-314220	Re-Rounder (4) Rollers fasten near drawbar. Curvature Unit (2) Rollers fasten to rear. Make sure hold down bars are secured with cotter pins.
		1	N/A	Operating Manual
		1	73-325040	Breakaway Chain

Information contained within this manual does not cover all maintenance, operating, or repair instructions pertinent to all possible situations. Please be aware that everything covered in this manual pertains to your specific trailer model.

This manual is not binding. PLCS, LLC reserves the right to change, at any time, any or all the items, components, and parts deemed necessary for product improvement or Commercial/production purposes. This right is kept with no requirement or obligation for immediate mandatory updating of this manual.

If more information is required or technical assistance is needed, or if you feel that any part of this manual is unclear or incorrect, please contact PLCS by phone at 856-722-1333 or email at plcsusa.com.

For your safety, read and understand this manual before operating your trailer. If there are any questions about information in this manual, please consult your dealer or PLCS.

Safety Statements

WARNING

This Owner's Manual contains safety information and instructions for your trailer.

You must read this manual before loading or towing your trailer.

You must follow all safety precautions and instructions.

MAJOR HAZARDS

Loss of control of the trailer or trailer/tow vehicle combination can result in death or serious injury. The most common causes for loss of control of the trailer are:

- Improper sizing the trailer for the tow vehicle, or vice versa.
- Excessive Speed: Driving too fast for the conditions.
- Improper braking and steering under sway conditions
- Overloading and/or improper weight distribution.
- Not keeping lug nuts tight.
- Failure to adjust driving behavior when towing a trailer.
- Not maintaining proper tire pressure
- Improper or mis-coupling of the trailer to the hitch.

IMPROPER SIZING OF TRAILER TO TOW VEHICLE

Trailers that weigh too much for the tow vehicle can cause stability problems, which can lead to death or serious injury. The additional strain put on the engine and drivetrain may lead to serious tow vehicle maintenance problems. Do not exceed the maximum towing capacity of your tow vehicle. The towing capacity of your tow vehicle, in terms of maximum Gross Trailer Weight (GTW) and maximum Gross Combined Weight Rating (GCWR) can be found at the end of this guide.

DANGER

Use of an under-rated hitch, ball or tow vehicle can result in loss of control leading to death or serious injury. Make certain your hitch and tow vehicle are rated for your trailer.

DRIVING TOO FAST

With ideal road conditions, the maximum recommended speed for safely towing a trailer is 55 mph. Driving too fast can cause the trailer to sway, thus increasing the possibility for loss of control. Also, your tires may overheat, increasing the possibility of a blowout.

ADJUST DRIVING WHEN TOWING TRAILER

When towing a trailer, you will have decreased acceleration, increased stopping distance, and increased turning radius. The trailer will change the handling characteristics of the tow vehicle, making it more sensitive to steering inputs and more likely to be pushed around in windy conditions or when being passed by large vehicles. In addition, you will need a longer distance to pass, due to slower acceleration and increased length. With this in mind:

When encountering trailer sway, take your foot off the accelerator, and steer as little as possible to stay on the road. Use small “trim-like” steering adjustments. Do not attempt to steer out of the sway; you’ll only make it worse. Also do not apply the tow vehicle brakes to correct trailer swaying. On the other hand, application of the trailer brakes alone will tend to straighten out the combination, especially when going downhill.

- Check rearview mirrors frequently to observe trailer and traffic.
- Be aware of trailer height, especially when approaching bridges, roofed areas, and trees.
- Be alert for slippery conditions. You are more likely to be affected by slippery road surfaces when driving a tow vehicle with a trailer, than driving a tow vehicle without a trailer.
- Anticipate the trailer “swaying.” Swaying can be caused by excessive steering, wind gusts, roadway edges, or by the trailer reaction to the pressure wave created by passing trucks and busses.
- Use lower gear when driving down steep or long grades. Use the engine and transmission as a brake. Do not ride the brakes, as they can overheat and become ineffective.

HITCH

It is critical that the trailer be securely coupled to the hitch, and that the safety chains and emergency breakaway brake lanyard are correctly attached. Uncoupling may result in death or serious injury to you and to others.

SAFE TRAILER TOWING GUIDELINES

Before towing, check coupling, safety chain, brakes, tires, wheels, and lights. Check the lug nuts or bolts for tightness. Recheck the load tie downs to make sure the load will not shift during towing. Check coupler tightness after towing 50 miles. Adjust the brake controller to engage the trailer brakes before the tow vehicle brakes. Follow the brake controller manufacturer’s literature. Use your mirrors to verify that you have room to change lanes or pull into traffic. Use your turn signals well in advance. Allow plenty of stopping space for your trailer and tow vehicle. Use lower gears for climbing and descending grades. Do not ride the brakes while descending grades; they may get so hot that they stop working. Then you will potentially have a runaway tow vehicle and trailer. Do not apply the tow vehicle brakes to correct extreme trailer swaying. Instead, lightly apply the trailer brakes with the hand controller. Make regular stops, about once each hour.

Confirm that:

- The coupler is secure to the hitch and is locked.
- Electrical connectors are made.
- There is appropriate slack in safety chains.
- There is appropriate slack in breakaway lanyard.
- The tires are not visibly low on pressure.
- The cargo is secure and in good condition.

Slow down for bumps in the road. Do not brake while in a curve unless necessary. Instead, slow down before you enter the curve. Do not drive so fast that the trailer begins to sway due to speed. Generally, never drive faster than 55 m.p.h. Allow plenty of room for passing. A rule of thumb is that the passing distance with a trailer is 4 times the passing distance without a trailer.

ALWAYS FOLLOW HITCH AND COUPLER SAFETY

<p>⚠ WARNING</p> <p>Uncoupling will cause trailer to come loose from tow vehicle.</p> <ol style="list-style-type: none">1. CHECK that pintle LOAD RATING is same or greater than ring LOAD RATING.2. LOCK the clamp in place using a pin or lock. <p>© 2002 NATM</p>	<p>Open clamp</p> <p>Pin removed</p> <p>Pin in place</p> <p>Closed clamp</p> <p>UT0029</p>	<p>⚠ WARNING</p> <p>ALWAYS use safety chains. Chains hold trailer if connection fails. You must:</p> <ol style="list-style-type: none">1. CROSS chains underneath coupler.2. ALLOW slack for trailer to turn.3. ATTACH chain hooks securely to tow vehicle frame. <p>© 2002 NATM</p>	<p>ATTACH TO TOW VEHICLE FRAME</p> <p>CROSS CHAINS</p> <p>ENOUGH SLACK FOR TURNS</p> <p>UT0034</p>
<p>⚠ WARNING</p> <p>Trailer can roll if it comes loose. Electric safety brake applies when cable pulls pin out of switch box:</p> <ol style="list-style-type: none">1. PULL hard to get pin out of switch box.2. CHECK brake by PULLING TRAILER with tow vehicle.3. ATTACH pin CABLE to tow vehicle so pin will be pulled out if trailer separates.4. Promptly REPLACE pin in switch box. <p>© 2002 NATM</p>	<p>PIN PULLED OUT, ONLY TO TEST BRAKES</p> <p>PIN</p> <p>SWITCH BOX</p> <p>PIN IN SWITCH BOX FOR TOWING AND STORAGE</p> <p>ATTACH CABLE TO TOW VEHICLE</p> <p>UT0035</p>	<p>⚠ WARNING</p> <p>Lights can prevent trailer from being hit by other vehicles. You must:</p> <ol style="list-style-type: none">1. CONNECT trailer and tow vehicle electrical connectors.2. CHECK all lights: tail lights, turn signal, and brake lights.3. DO NOT TOW if lights are not working. <p>© 2002 NATM</p>	<p>DISCONNECTED</p> <p>CONNECTED</p> <p>UT0026</p>
<p>⚠ WARNING</p> <p>Trailer can roll if it comes loose. Electric safety brake applies when cable pulls pin out of switch box.</p> <ol style="list-style-type: none">1. PULL hard to get pin out of switch box.2. CHECK brake by PULLING TRAILER with tow vehicle.3. ATTACH pin CABLE to tow vehicle so pin will be pulled out if trailer separates.4. Promptly REPLACE pin in switch box. <p>© 2002 NATM</p>	<p>PIN PULLED OUT, ONLY TO TEST BRAKES</p> <p>PIN</p> <p>SWITCH BOX</p> <p>PIN IN SWITCH BOX FOR TOWING AND STORAGE</p> <p>ATTACH CABLE TO TOW VEHICLE</p> <p>UT0014</p>	<p>⚠ WARNING</p> <p>Improper loading can cause trailer sway and sudden loss of control. You must:</p> <ul style="list-style-type: none">• Make certain weight of load plus trailer weight does not exceed trailer's capacity (GVWR - Gross Vehicle Weight Rating).• Load heavier items in front of wheels.• Load evenly side to side.• SECURE load to trailer. <p>© 2002 NATM</p>	<p>Secure load to trailer</p> <p>Balance load side to side</p> <p>Less load in rear</p> <p>More load in front of wheels</p> <p>UT0017</p>
<p>⚠ WARNING</p> <p>Tire, wheel or lugnut failure can cause loss of control. Before towing, you must CHECK:</p> <ol style="list-style-type: none">1. Tire pressure and tread.2. Tires and wheels for damage.3. Lug nuts for tightness. <p>For new and remounted wheels, re-tighten lug nuts at the first 10, 25 and 50 miles of driving.</p> <p>© 2002 NATM</p>	<p>Lug Nuts TIGHT?</p> <p>Tires and Wheels OK?</p> <p>UT0019</p>	<p>⚠ WARNING</p> <p>OVERLOAD HAZARD</p> <p>RISK OF DEATH DUE TO LOSS OF CONTROL. NEVER EXCEED GROSS VEHICLE WEIGHT RATING (GVWR)</p> <p>● BEFORE LOADING THE TRAILER FOR THE FIRST TIME, YOU MUST VERIFY ITS CARGO CAPACITY:</p> <ol style="list-style-type: none">1. You MUST WEIGH the EMPTY TRAILER.2. Subtract the weight of the EMPTY TRAILER from the MAXIMUM LOADED TRAILER WEIGHT (GVWR) (see VIN / SERIAL NO. tag).3. DO NOT LOAD TRAILER BEYOND VERIFIED CARGO CAPACITY.	<p>MAXIMUM LOADED TRAILER WEIGHT (GVWR) = EQUALS</p> <p>MAXIMUM CARGO WEIGHT + PLUS WEIGHT OF EMPTY TRAILER</p> <p>291758</p>

Pre-Operation Inspection

Before operating the equipment, make sure all regular maintenance has been performed. Each day, inspect the trailer for all the following:

- ✓ Coil Lift mechanism for wear and cracking.
- ✓ Hydraulic hoses and tubing for evidence of damage such as blistering, crushing, or abrasion.
- ✓ All safety covers for proper installation.
- ✓ Equipment for missing, illegible, or defaced operating decals and safety signs.
- ✓ Structural weldments for bends, cracks, or breaks
- ✓ All pins and keepers for proper installation
- ✓ Presence of this owner's manual
- ✓ All pins, bushings, shafts, and gears for wear, cracks, or distortion to include all pivot points, and bushings
- ✓ Replace/repair as necessary prior to operation.

Job Site Set-Up

Thoroughly plan the lift by understanding the work site area and your loads before positioning the trailer. Consider the following:

DANGER

Always maintain safe clearance from high voltage power lines. Death or serious injury will result from inadequate clearance if trailer or load becomes electrically charged.

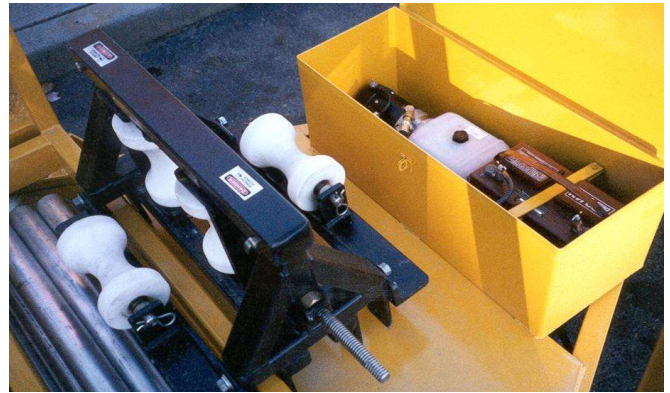
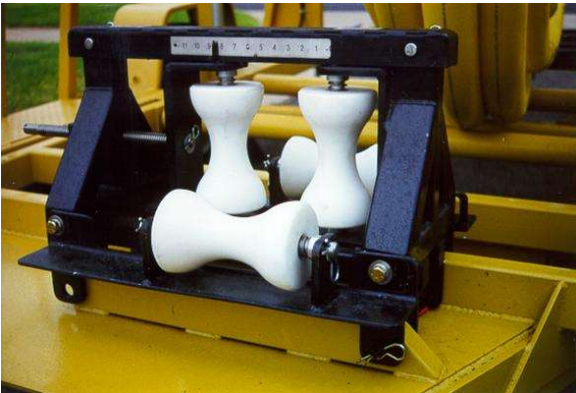
- Coils of large diameter pipe can weigh up to 1 ½ tons.
- The stored energy in a coil is very high and coils should be handled with extreme caution.
- Coils should only be lifted by equipment with an adequate load rating and reach.
- Crew leaders must inspect all slings used for coil lifting before each use.
- Coil banding must also be inspected, and any slack or missing bands replaced before lifting the coil.
- The coil should be raised the minimum height necessary for the loading process.
- Never stand underneath a raised coil.
- Survey the loading area and make sure there are no possible overhead obstructions, particularly electrical lines in the vicinity.
- Never reach into the coil area or the Re-Rounder unit during any stage of the coil loading or dispensing operation unless the trailer is stationary, and the spider wheels are locked with Velcro straps. All personnel must be made aware of the requirement to enter this area at the time.
- Know the weight of your load to avoid overloading the equipment. Deduct the weight of the coil from the maximum load rating to determine how much weight can be lifted.
- Trailer must be attached to the tow vehicle prior to operation.
- **WARNING:** Do not overload the trailer. Never exceed manufacturer's load ratings. These ratings are based on the machine's hydraulic, mechanical, and structural design rather than stability. Know the trailer components and their capabilities and limitations. Overloading the trailer may result in serious damage of self, others, equipment, or the surroundings.
- **WARNING:** Do not allow unauthorized personnel or equipment to enter within 10 feet of trailer operating area. The trailer should be positioned in an area free from bystanders and overhead obstructions. Use a signal person if necessary.
- Make certain that the trailer is parked on stable, flat ground as close to the job as possible. The surface under the trailer must be able to support its own weight and its load. Take care when operating in areas supported by trailer tires, because of the cushioning effect of springs and tires.

Installing the Re-Rounder Straightener system

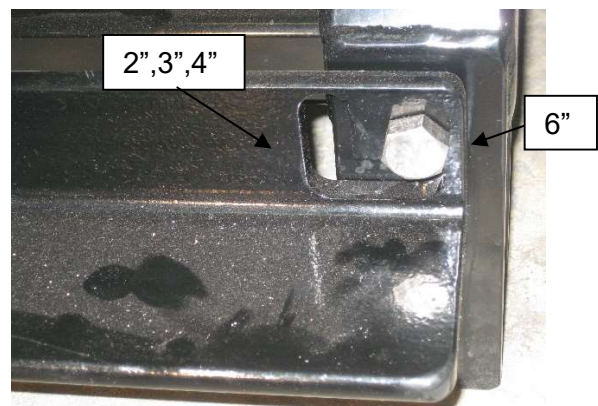
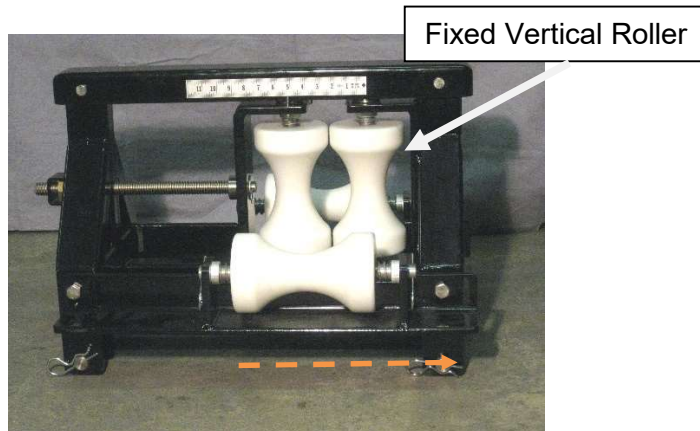
1. The smaller Angle Unit is placed on the innermost pair of rear rails and anchored in place with stainless steel bars and pins. Only remove the top roller assembly if it is difficult to thread the coil end through the rollers.



2. The main frame of the Re-Rounder is stored across the front of the trailer for traveling, when the trailer empties, to improve weight distribution and trailer handling. Remove the stainless-steel holding pins and move the unit to the rearmost two rails of the trailer.



3. Adjust the inbound and outbound horizontal rollers on the Re-Rounder unit to suit the pipe size being use. Each roller is mounted on an angle iron that is bolted to the Re-Rounder frame with two bolts. Each bolt sits in a slot in the angle iron and there are four slots in each angle iron.
4. For up to 4-inch pipe the rollers must be set in the slots that position them closest to the fixed vertical roller. For more than 4-inch pipe the rollers must be set in the slots that position them furthest away from the fixed vertical roller. To move position, simply slacken the bolts a few turns, lift the angle iron until its slots clear the bolts and move to the second position.



WARNING

When traveling always secure the Re-Rounder and Straightener Angle Unit to one side of the trailer with the Velcro straps to prevent them from sliding during traveling to site.

Lifting Equipment and Loading the Coil

1. Lift the coil using a sling attached to a backhoe, crane or long reach forklift that is capable of safely raising the coil so that its lowest point is a minimum of 36" from the ground to clear the Re-Rounder unit. This height could be as low as 18" if you maneuver around the Re-Rounder.
2. Ensure that all the spider wheel crossbars are stored in the bin across the front of the trailer.
3. Lower the spider wheels to their lowest position by using the **hydraulic power system**. This consists of a 12-volt battery powering a hydraulic pump that sends fluid on demand to two rams mounted under each spider wheel bearing. The battery is kept fully charged by a solar panel charger. The hydraulic ram height is changed either by operating a lever in the pump housing or by using the remote push-button pendant. The remote pendant enables the operator to position himself where he can observe the movement of the spider wheels perfectly.



4. Lift the coil making sure the pipe end extends under the coil and points to the rear of the trailer.
5. Open the trailer rear gate by removing the locking pin on the upper rail and pulling on the drop-down handle. Reverse the trailer under the coil until it lines up with the center of the Spider Wheels. Lower the coil gently onto the two bottom rollers. Make sure the pipe end is protruding from the rear underside of the coil. Move the backhoe bucket to the rear of the coil, lower it to slacken the sling and remove the sling from the coil without the need to stand on the trailer. Close and lock the rear gate with the locking pin and safety clip to ensure it stays closed.



Installing the Spider Wheel Crossbars

1. Position both spider wheels with their crossbar holes in line. Lock them loosely in position by wrapping a Velcro strap around the trailer frame upright, then through the strap loop and pull tight. Thread it through the wheel rim, back to the upright and press it to the Velcro surface.
2. Slide the cap screw end of a crossbar through the outermost spider wheel hole, that corresponds with the inside diameter of the coil, and across the trailer bay. Take its weight on the other side of the hole and place it in the recess of the plate on the opposite spider wheel.
3. When its bayonet ears have passed through the slots in the launching hole, rotate the crossbar
4. $\frac{1}{4}$ turn so that it cannot back out of the hole. Repeat this with as many crossbars as possible that align with the inner diameter of the coil making sure that at least one is on the opposite side of the wheel so the whole forms a reel.
5. If necessary, raise the spider wheels with the hydraulic rams to align the center of the reel with the center of the coil so you can install the rest of the crossbars.

Note - The spider wheels will move independently if you try to move them prior to being linked.



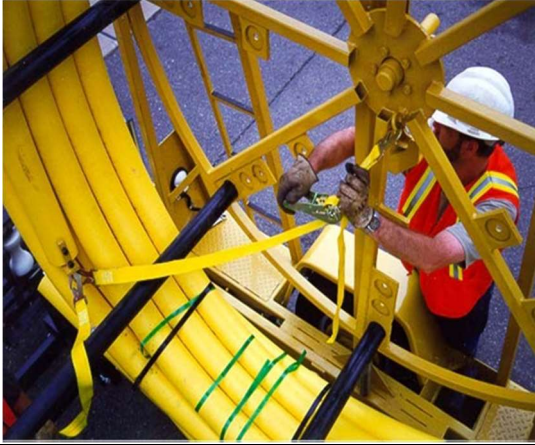
Preparation for Dispensing Pipe



6. Remove the Velcro straps from the straightener and Re-Rounder units and position them on the correct side of the trailer to match the free end of the coil.

7. Attach the coil end clamp to the inside end of the PE pipe coil and firmly tighten hex bolts.

8. Connect the coil end clamp to a coil anchor ratchet strap and connect the other end of the strap to the eye on the inside center of the spider wheel closest to the outer coil end.



9. Use the ratchet to tighten the strap, which will pull the coil over to the center of the reel.

10. Attach the second coil anchor ratchet strap to the coil end clamp and the other end to the eye on the inside center of the other spider wheel.

11. Use the ratchet to tighten the strap, which will pull the pipe end tight to the crossbars.

12. It may now be necessary to retighten the first coil anchor ratchet strap.

WARNING

NOTE: For safety reasons it is important to always use both coil anchor ratchet straps.

13. Keeping these straps tight controls the inner end of the coil and makes sure it cannot come out of the trailer reel. Maintaining tension on the straps also ensures that the pipe remains upright in the trailer bay, which provides optimum performance of the Re-Rounder straightener system, especially towards the end of the coil. Halfway through the pipe dispensing operation re-check for tightness of these straps.

14. Insert the correct size PLCS pipe puller into the outer end of the coil. Hold the nose cone with one hand and turn the eye clockwise until hand tight. Then tighten 1 1/2 turns (or until you see the pipe end bulge) using a short bar or wrench handle. Do not over-tighten.

It may be necessary to remove the first few inches of pipe, which are often crushed during shipping, to insert the pipe puller.



15. Cut the minimum number of pipe strapping bands to allow the pipe to be threaded in stages through the angle roller and re-rounding system.

It may be necessary to rotate the coil to extend the free end of the coil sufficiently.

16. Once the pipe is through the inner angle rollers, tighten down the top roller with the ratchet wrench until the pipe puller is in line with the center of the vertical guide rollers of the re-rounder.



WARNING

IMPORTANT - Move the vertical rollers to the fully open position to prevent them being damaged by the pipe puller passing through.

17. Thread a rope or sling through the gap and connect to the pipe puller eye.
18. Use the backhoe to pull the rope until the pipe is just through the vertical rollers.
19. Close the vertical Re-Rounder rollers until they are squeezing the pipe sufficient to prevent rotation of the coil during transportation to site. (Skip this step if the coil is being loaded on site)

Dispensing Pipe

Set the vertical Re-Rounder rollers to the correct setting for the pipe size.

- 2" pipe -- Re-Rounder not required
- 4" pipe – ruler setting 6" to 6 1/4"
- 5" pipe – ruler setting 7" to 7 1/4"
- 6" pipe – ruler setting 8" to 8 1/4"



1. Use the hydraulic rams to raise the spider reel into the correct position for dispensing. Stop with the side plates a couple of inches above the target holes.
2. For coils up to 96" diameter or less, use the lowest hole position. For coils of 97" to 122" diameter, use the middle hole position.
3. The highest holes are for 1400 ft. coils of 4" pipe, which are not currently produced. These holes are blanked off so that other size coils cannot be loaded at this height.
4. Insert the two locking pins into the correct holes (do not forget their safety pins) and lower the spider wheels onto the pins.
5. Attach the pipe puller rope to the backhoe bucket and pull 6 to 8 feet of pipe out of the re-rounder. Push this pipe down to the ground and leave in this position for at least 5 minutes. This will greatly help in taking the bend out of the start of the pipe and make it easier to fuse this pipe end to another pipe end.
6. Now cut and remove only the bands holding the outer layer of the coil.
7. **Pay close attention to this.** Pipe coils are banded layer by layer. Only one layer of pipe should be free at any time during pipe laying.
8. NEVER just drive away and expect the pipe to break the bands as it uncoils. Apart from the danger of flying bands some bands may be made of steel, which would damage the pipe and may injure a person.
9. Slowly drive the trailer away from the backhoe at a slow walking pace.
10. Check the ovality of the pipe with calipers and adjust the Re-Rounder setting in small increments to suit. The actual setting will vary each time according to pipe density, SDR rating, ambient temperature, and pull-off speed.

11. When required, bring the trailer to a complete halt to cut the coil bands and free the next layer of pipe.
12. It is not necessary to reduce the squeeze when dispensing is halted for a short period.
13. If stopped for more than 15 minutes, note the Re-Rounder setting and back-off the squeeze. When restarting, apply the squeeze gradually as the pipe begins to move.
14. **Note** - If the layout of the site safely permits it, the trailer may be positioned to straddle the trench. Drive slowly forwards to payout the pipe directly into the trench.
15. **Or** - The trailer may be held stationary, and the backhoe pulls the pipe through the Re-Rounder.
16. **For directional boring or insertion** - The trailer may straddle the trench and the boring machine or a winch may pull the pipe from the trailer to keep the excavation length short.

Pipe End Control

1. The PLCS Re-Rounder Straightener removes most of the energy stored in a coiled length of pipe. It is still important to carefully follow the remaining steps to ensure gradual, controlled release of any residual stored energy as the end of the coil is run out.
2. Re-tension the coil anchor straps when the coil gets down to the beginning of the final layer. This will assist in keeping the coil upright, so it runs through the Re-Rounder at the correct angle.
3. When there is about 10 ft. of pipe remaining in the trailer, slowly release both coil anchor straps until there is about 6 ft. of pipe left.
4. Remove both coil anchor straps and the coil end clamp and place them in the steel toolbox on the side of the trailer.
5. Stop dispensing pipe at this point and **leave the pipe in this position for 10 minutes**. This keeps the pipe back-bent and takes most of the curvature out of the end of the pipe making it easier to fuse to the next coil.
6. While the pipe is held in this position attach the Velcro locking straps to both spider wheels to prevent rotation.
7. Remove all 8 crossbars and return them to their storage bin at the front of the trailer.
8. Hitch tie a length of rope to the end of the pipe leaving two equal lengths of rope either side. Some pipe has a punched hole near the pipe end. Tie the rope through this hole.
9. Position an operator on either side of the trailer rear with each holding one end of this rope.
10. After the relaxing time is up, slowly pull the pipe through the Re-Rounder and pay out the rope as it also goes through the Re-Rounder.
11. As the end of the pipe exits the Re-Rounder gradually relax tension on the rope until the pipe slowly drops to the ground. Remove the rope and return it to the toolbox for reuse.

Fusing The Straightened Pipe to The Next Coil

1. Repeat all the above instructions with the next pipe coil until you get to the point where you begin to dispense pipe.
2. As before, attach the pipe puller rope to the backhoe bucket and pull 6 to 8 feet of pipe out of the Re-Rounder. Push this pipe down to the ground with the backhoe and leave in this position for at least 5 min. This will greatly help in taking the bend out of the start of the pipe and make it easier to fuse this pipe end to another pipe end.
3. Now run off about 30 feet of straightened pipe and stop. Leave to relax if possible so that the bends at the ends of both pipes can be aligned for fusion. Place them in a butt fusion machine and fuse in the normal way.
4. Be sure to leave the joint to cool fully before resuming to pull pipe off the trailer or you may pull the newly fused joint apart. (Follow the pipe manufacturer's recommendations)

The following measures may be necessary in some cases:

- Lay the two pipes down in an S shape so that the ends can be aligned.
- Cut off the first few feet of each pipe and discard.
- Fuse a length of straight pipe onto the end of each coil. Then join the straight pipes together.

Cold Weather Operations (Refer to Pipe Manufacturer's Recommendations)

Where possible, do not install large diameter coiled pipe in freezing or colder temperatures. The pipe is much less flexible and may easily be damaged. If operations cannot be halted, feed pipe through the straightening/re-rounding rollers at less than half the normal speed.

Directional Boring

The PLCS Coiled Pipe Trailer is the only trailer pipe straightener combination that can be used successfully during directional boring.

Position the trailer close to the pullback excavation. Leave the truck connected to the trailer with the emergency brake applied and the transmission in park.

Place a wooden block under each rear support leg to prevent them from sinking into the ground. Drop the legs onto the blocks and tighten the holding clamps. This prevents the trailer from squatting at the rear during the pullback operation.

Connect the pipe puller to the pullback reamer swivel, set the Re-Rounder squeeze level as usual and commence the pullback. Check the pipe ovality and adjust the squeeze appropriately. Continue to pull following all the standard instructions in Dispensing Pipe (page 11).

This operation is much more difficult with a separate hydraulic pipe straightener because:

- The straightener would need to be further away from the excavation.
- The trailer and straightener combination are much longer and could create a traffic hazard.
- The pullback would tend to tip up the straightener or pull it into the ground.

PLCS 2"-6" COIL PIPE TRAILER SPECIFICATIONS Model / Part #: 73-314020-03	
GVWR	8,700 lbs.
Overall Length	approx. 16 ft.
Overall Width	96 in.
Coil Capacity	10 ft.
Empty Weight	3,950 lbs.
Tongue Weight w/o straightener:	390 lbs.
Height with spider wheels at the lowest position:	9' 3"
PE Pipe Capacity:	2", 3", 4" & 6" MDPE, HDPE, DIPS from all major manufacturers.
Maximum Coil O.D.:	128"
Minimum Coil I.D. :	42"
Coil Bay Width:	55"
Maximum Coil Width:	54"
RUNNING GEAR	
Axle	5,200 lbs.
Brakes	Electric -free backing arrangement for good maneuverability.
Tires	Four—ST225/75R15 Load Range (E)
Wheels	Four trailer duty ST255-75R15C
Suspension	Tandem Dexter Torsion Axles
FRAME	
Main Frame	2 x 4 in. Rectangular Tube
A-Frame	6" Channel
Cross Members	2 x 4 in. Rectangular Tube
Formed Fenders	1/8" Deck Plate
Overall Construction	A-Frame: welded standard duty 6" C-Channel. Main Frame/Space Frame: welded mainly 2" x 4" x 3/16" Steel Tube Twin central uprights and sliding block assemblies allow the coil support spider wheels to be easily moved into the desired position.
	3" I.D. Lunette Eye with bracket (12,000 lb. Rating) for use with Pintle Hook, c/w 3/8" safety chains and 1-ton hooks. Hitch height is adjustable for level towing. Trailer breakaway unit automatically applies brakes when activated.
	Crank type jack with flat footpad mounted on the trailer tongue.
	Two support legs are mounted on the rear of the frame. These are used to prevent the trailer rear from squatting during directional boring operations.
	The Pipe Re-rounder / Straightener System sits on the trailer rear platform rails to move laterally during pipe dispensing.
	A fully opening rear gate allows the coil to be kept low to the ground during loading.
	12 Ga. diamond pattern slip-resistant steel decking.

	An access ladder with non-skid taped steps is mounted on the driver's side of the trailer.
	A steel equipment box on the front trailer deck holds the safety trailer breakaway unit, the hydraulic power lift system, and the 12V battery. A separate 24" x 12" x 12" Toolbox is provided to hold the operating wrench, cargo straps, support roller bolts, instructions manuals, and various other tools, etc.
ELECTRICAL	
Plug	7 RV Molded Plug
Wiring	Enclosed in conduit w/ junction boxes connections soldered & shrink wrapped
Lights	Standard LED package
SAFETY	
Chains	Rated to match
Breakaway	Engager System
Decals	Warning decals & reflective tape
ACCESSORIES	
Coupler	3" Pintle
Stabilizer Jacks	5K Drop leg side wind
FINISH	
PPG Paint	Industrial Urethane - Yellow
HYDRAULICS	
Motor	2 HP Electric Over Hydraulic Pump
Fluid	Dexron III / Mercon A.T.F.
Cylinders	(2) 2" Diameter x 30" Long Hydraulic Cylinders
Charging System	Solar Panel -Solar-powered trickle charger automatically maintains the charge on the 12-volt battery. Direct sunlight is not required to produce enough power to run the trailer spider wheel hydraulics with push-button pendant.

Limited 1 Year Warranty

The in-service date will be derived from the trailer ship date. PLCS warrants that the 2"-6" PLCS Coiled Pipe Trailer is manufactured entirely from new components and is free from defects in materials and workmanship.

The warranty covers use of the vehicle, when properly maintained and when used under normal conditions and within its stated design capabilities, which means when loading, unloading, and transporting coiled PE pipe that is packaged in coil sizes that are consistent with the specifications of the vehicle.

The sole and exclusive remedy of the purchaser under this warranty shall be the repair or replacement, at the option of PLCS, of any part, which was furnished and installed and has failed because of a defect in materials or workmanship.

Purchaser agrees by accepting delivery of the Coiled Pipe Trailer that PLCS, LLC. has no liability for any loss of usage or consequential or incidental damaged alleged to have been caused by any defect in the trailer.

PLCS's obligation under this warranty is limited to, and the sole remedy for any such defect shall be, the repair and/or replacement (at PLCS's option) of the unaltered part and/or component in question.

PLCS after sales service personnel must be notified by telephone, fax, or letter of any warranty applicable damage within fourteen (14) days of its occurrence. If possible, PLCS will ship the replacement part within 24-hours of notification by the most economical, yet expedient, means possible. Expedited freight delivery will be at the expense of the owner.

Warranty claims must be submitted and shall be processed in accordance with PLCS's established warranty claim procedure. PLCS after-sales service personnel must be contacted prior to any warranty claim. A return materials authorization (RMA) account number must be issued to the claiming party prior to the return of any warranty parts. Parts returned without prior authorization will not be recognized for warranty consideration. All damaged parts must be returned to PLCS freight prepaid; freight collect returns will be refused. Freight reimbursement of returned parts will be considered as part of the warranty claim.

Warranty service will be performed by any PLCS new equipment distributor, or by any PLCS- recognized service center authorized to service the type of product involved, or by the PLCS factory in the event of a direct sale. At the time of requesting warranty service, the owner must present evidence of date of delivery of the product. The owner shall be obligated to pay for any overtime labor requested of the servicing company by the owner, any field service call charges, and any towing and/or transportation charges associated with moving the equipment to the designated repair/service provider.

All obligations of PLCS and its authorized dealers and service providers shall be voided if someone other than an authorized PLCS dealer provides other than routine maintenance service without prior written approval from PLCS. In the case repair work is performed on a PLCS-manufactured product, original PLCS parts must be used to keep the warranty in force. The warranty may also be voided if the product is modified or altered in any way not approved, in writing, by PLCS.

The owner/operator is responsible for furnishing proof of the date of original purchase of the PLCS product in question. If the owner is not sure of original purchase date, he/she is encouraged to contact PLCS at the address below to confirm registration of the product in question. This warranty covers only defective material and workmanship. It does not cover depreciation or damage caused by normal wear and tear, accident, mishap, untrained operators, or improper or unintended use. The owner has the obligation of performing routine care and maintenance duties as stated in PLCS's written instructions, recommendations, and

specifications. Any damage resulting from owner/operator failure to perform such duties shall void the coverage of this warranty. The owner will pay the cost of labor and supplies associated with routine maintenance.

The only remedies the owner has in connection with the breach or performance of any warranty on the PLCS product specified are those set above. In no event will PLCS, the PLCS distributor/dealer, or any company affiliated with PLCS be liable for business interruptions, costs of delay, or for any special, indirect, incidental, or consequential costs or damages. Such costs may include, but are not limited to, loss of time, loss of revenue, loss of use, wages, salaries, commissions, lodging, meals, towing, hydraulic fluid, or any other incidental cost.

All products purchased by PLCS from outside vendors shall be covered by the warranty offered by that respective manufacturer only. PLCS does not participate in, or obligate itself to, any such warranty.

PLCS reserves the right to make changes in design or improvement upon its products without imposing upon itself the same upon its products theretofore manufactured.

This warranty will apply to all 2"-6" Coil Pipe Trailers #73-314020-03 shipped from PLCS's factory after January 1st, 2021. The warranty is for the use of the original owner only and is not transferable without prior written permission from PLCS.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISION OF MATERIAL AND SERVICES, AS SPECIFIED HEREIN. PLCS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Terms

Exclusions:

The warranty does not apply to:

1. Tires
2. Parts and accessories or other items manufactured by others except for what- ever warranty is supplied by the manufacturer of those parts and accessories, which will be passed on to the purchaser by PLCS LLC.
3. Items which, while not defective, are subject to fair wear and tear.

The manufacturer reserves the right to amend these specifications at any time. PLCS products are sold subject to the terms of sale of PLCS, LLC. No employee of PLCS is authorized to make any change in the conditions of sale of any Company product. Any questions regarding the suitability of these products for a particular purpose should be addressed to PLCS LLC., 102 Gaither Drive, Unit 1, Mt Laurel, NJ 08054 phone 856-722-1333.

Except as provided by law, no liability is accepted for any loss, damage or consequential loss arising directly or indirectly from the use of the Company's products, or from information given in its publications. No warranty is given or implied that the use of any information or any product of the Company does not infringe the proprietary rights of a third party. Prospective users shall be solely responsible for any use made of the products and/or information and should therefore satisfy themselves by appropriate trials, that the product to be used is suitable for the intended purpose and that such use will not infringe any proprietary right of a third party.

PLCS 2"-6" Coil Pipe Trailer Common Parts

73-BVPU319
Hydraulic Power Pack Kit



Solar Panel
#73-324010 (Qty. 1)



73-323166
38 1/2" Top Rail Steel Roller



Ratchet Strap
#73-323014 (Qty. 2)



Pipe Anchor Clamp
#73-323013 (Qty. 1)



3/4" Coil Height Adjustment Pins
#73-323025 (Qty. 2)



Front Jackscrew
Complete
#73-32523
(Qty. 1)

Safety Chains
#73-32540
(Qty. 2)

30" Hydraulic Ram
#73-323016 (Qty. 2)



Complete Upper Rear Gate c/w Pins & Connectors (Qty. 1)
#73-325034

Upper Top Rail—LED Lights
#73-325010

Upper Rear Gate
Connector Pin
#73-325033 (Qty. 1)

Upper Rear Gate Pin
#73-325028 (Qty. 1)

Upper Rear Gate
Control Handle
#73-325031 (Qty. 1)



#73-31443
Aluminum Cross Bar (Qty. 8)



38 1/2" Top Rail Steel Roller
#73-323166 (Qty. 4)



T-Screw for Cross Bar
#73-31000 (Qty. 8)

Cap Head Screws for Cross Bar
#73-31442 (Qty. 8)



60" Bottom Roller
#73-323160 (Qty. 2)

59" Long, Dia. 2.25", Hex
end 5/8"

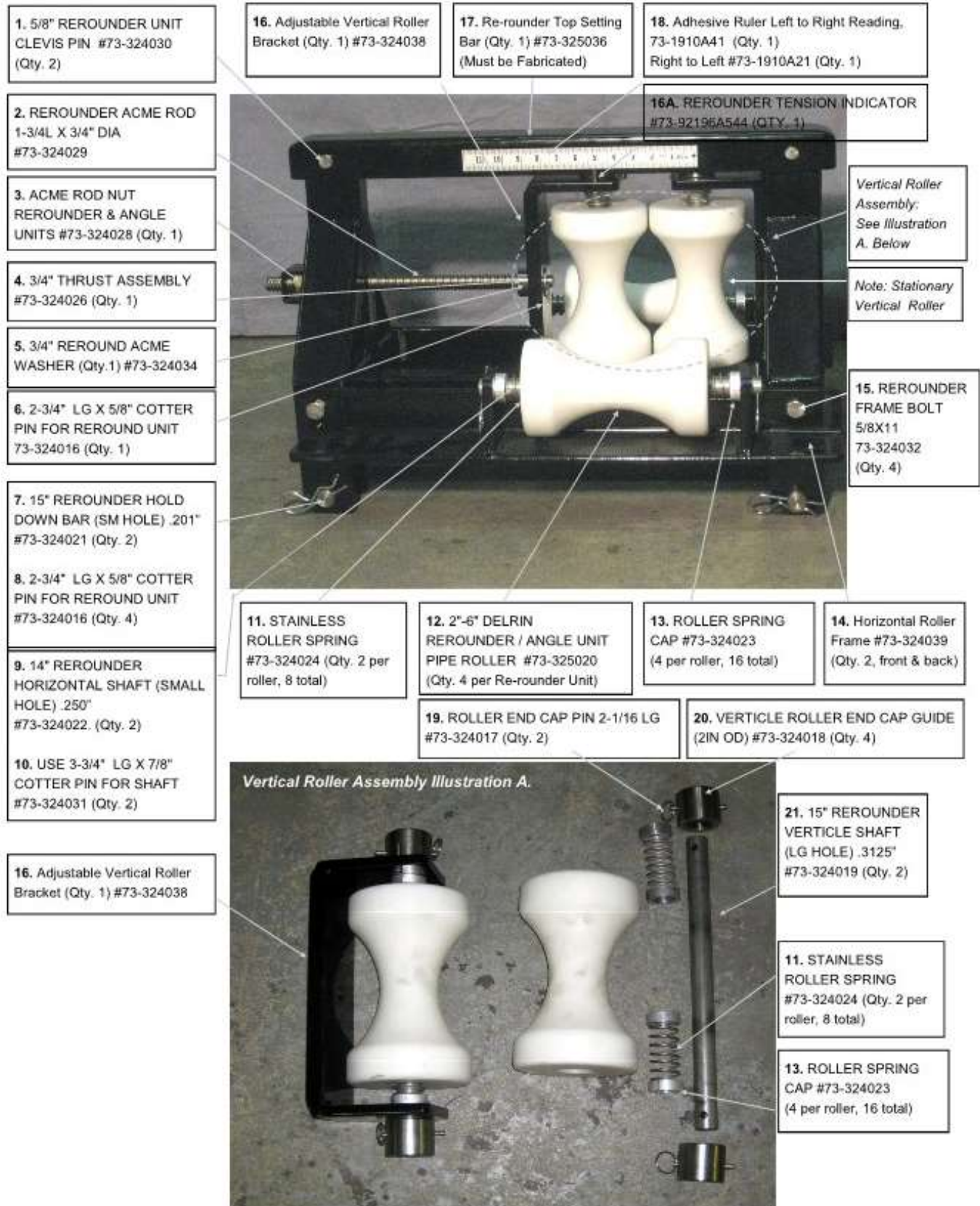
Rear Prop Stand / Jack
#73-323162 (Qty. 2)

#73-323173 Rear Prop
Stand Clamp (Qty. 2)

32" Vertical Steel Roller
#73-323160 (Qty. 2)

Common Trailer Parts		
Line	Part#	Description
1	73-AXLEDEX	Dexter 5K Torsion Axle-Elec. Brake
2	73-325051	Tire With Rim.
3	73-325051O	Tire Only
4	73-325040	Safety Chains (Each)
5	73-7967T13	"Keep Hands Clear" Sticker 5Pk
6	73-324010	Solar Panel
7	73-325023	Front Jackscrew (Complete) - V
8	73-325017	Wheel Chock
9	73-325016	Title Box
10	73-323162	Prop Stand (rear jacks)
11	73-323016	30" Hydraulic Ram
12	73-BVPU319	Hydraulic Power Unit
13	73-323015	Trailer Toolbox
14	73-325014	Breakaway Switch
15	73-325012	Rear Taillight-Led Each
16	73-325013	Rear Taillight Non-Led
17	73-325010	Upper Top Rail-Led Lights
18	73-323159	32" Vertical Steel Roller
19	73-323166	38 1/2" Top Rail Steel Roller
20	73-323160	60" Bottom Roller
21	73-31443-1	Aluminum Cross Bar (1)
22	73-KNOB	Iron Knob 5/8 - 11 Through Hole (1 Per)
23	73-325031	Upper Rear Gate Control Handle
24	73-314230	Trailer Pin (Includes Cotter)
25	73-323025	Coil Height Adjustment Pin
26	73-MATM32	Spider Wheel Plastic Guides
27	73-31000	T-Screws for Cross Bar
28	73-31442	Trailer Crossbar Cap Screw
29	73-323014	Ratchet-Strap
30	73-323017	Velcro Locking Strap (Each)

PLCS 2"-6" Coil Pipe Re-rounder Unit Parts List



PLCS 2"-6" Coil Pipe Angle (Straightener) Unit Parts List



22. 22 mm Re-Rounder Ratchet Wrench #71-107003
(Qty. 1)

23. 1/2" ANGLE UNIT CLEVIS PIN #73-324032
(Qty. 2)

6. USE 2" LG X 1/2" COTTER PIN FOR ANGLE UNIT #73-324016A (Qty. 2)

12. 2"-6" DELRIN REROUNDER / ANGLE UNIT PIPE ROLLER #73-325020
(Qty. 4 per Re-rounder Unit)

NOTE: All white Delrin pipe rollers are identical for the Re-Rounder and Angle Unit.

13. ROLLER SPRING CAP #73-324023
(4 per roller, 8 total)

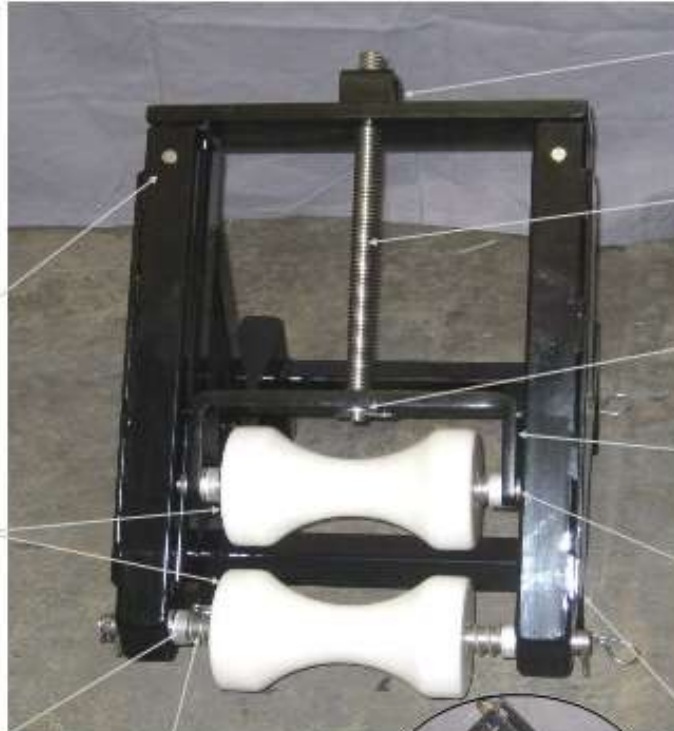
29. 18" ANGLE ROLLER UNIT HOLD DOWN BAR (SM HOLE) .201" #73-325046 (Qty. 2)

6. USE 2-3/4" LG X 5/8" COTTER PIN FOR REROUND UNIT

23. 1/2" ANGLE UNIT CLEVIS PIN #73-324032
(Qty. 2)

6. USE 2" LG X 1/2" COTTER PIN FOR ANGLE UNIT #73-324016A (Qty. 2)

13. ROLLER SPRING CAP #73-324023
(4 per roller, 8 total)



11. STAINLESS ROLLER SPRING #73-324024
(Qty. 2 per roller, 4 total)

3. ACME ROD NUT REROUNDER & ANGLE UNITS #73-324028 (Qty. 1)

24. ANGLE ROLLER ACME ROD 1-1/4" L X 5/8" DIA #73-325049 (Qty. 1)

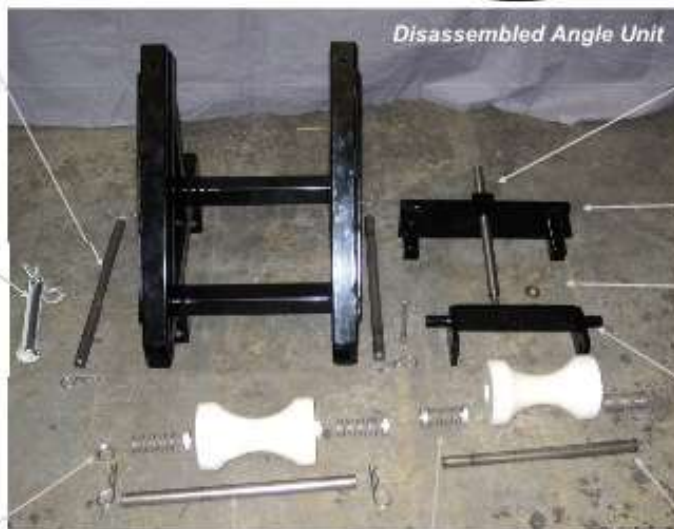
25. 5/8" ANGLE ACME ROD WASHER #73-324027
(Qty. 2 top & bottom)

26. Adjustable Angle Roller Bracket #73-325048 (Qty. 1)

28. 16 1/4" ANGLE ROLLER SLIDE SHAFT (NO HOLES) # 73-325047 (Qty. 1)

27. 18" ANGLE ROLLER UNIT HOLD DOWN BAR (SM HOLE) .201" #73-325046 (Qty. 2)

6. USE 2-3/4" LG X 5/8" COTTER PIN FOR REROUND UNIT



28. 18" ANGLE ROLLER UNIT HOLD DOWN BAR (SM HOLE) .201" #73-325046 (Qty. 2)

6. USE 2-3/4" LG X 5/8" COTTER PIN FOR REROUND UNIT # 73-324016 (Qty. 1)

11. STAINLESS ROLLER SPRING #73-324024
(Qty. 2 per roller, 4 total)

25. ANGLE ROLLER ACME ROD 1-1/4" L X 5/8" DIA #73-325049 (Qty. 1)

29. Stationary Angle Roller Bracket #73-325048S (Qty. 1)

6. USE 2-3/4" LG X 5/8" COTTER PIN FOR REROUND UNIT

26. Adjustable Angle Roller Bracket #73-325048 (Qty. 1)

28. 16 1/4" ANGLE ROLLER SLIDE SHAFT (NO HOLES) # 73-325047 (Qty. 1)

Line	Photo	Rerounder and Angle Unit Small Parts	PLCS Part#
1.		5/8" REROUND UNIT CLEVIS PIN	73-324030
2.		REROUNDER ACME ROD 1-3/4" X 3/4" DIA	73-324029
3.		ACME ROD NUT REROUNDER & ANGLE UNITS	73-324028
4.		3/4" THRUST BEARING ONLY	73-324025
4.		3/4" THRUST BEARING HOUSING ONLY	73-324025A
4.		3/4" THRUST ASSEMBLY	73-324026
5.		3/4" REROUND ACME WASHER	73-324034
6		2" LG X 1/2" COTTER PIN FOR ANGLE UNIT	73-324016A
7.		15" REROUNDER HOLD DOWN BAR (SM HOLE) .201"	73-324021
8		2-3/4" LG X 5/8" COTTER PIN FOR REROUND UNIT	73-324016
9.		14" REROUNDER HORIZONTAL SHAFT (SM HOLE) .250"	73-324022
10.		3-3/4" LG X 7/8" COTTER PIN FOR REROUND UNIT	73-324031
11.		STAINLESS ROLLER SPRING	73-324024
12.		2"-6" DELRIN REROUNDER / ANGLE UNIT ROLLER	73-325020
13.		ROLLER SPRING CAP	73-324023
14.		Horizontal Roller Frame (Qty. 2, front & back)	73-324039
15.		REROUNDER FRAME BOLT 5/8X11	73-324032
16		Adjustable Vertical Roller Bracket (Qty. 1)	73-324038
16A		REROUNDER INDICATOR-POINTED	73-92196A544
17.		Re-rounder Top Setting Bar (Qty. 1) (Must be Fabricated)	73-325036
18.		Adhesive Ruler Left to Right Reading, 1' Long, 16ths Graduations, 1-1/4" Wide	73-1910A41
18.		Adhesive Ruler Right to Left Reading, 1' Long, 16ths Graduations, 1-1/4" Wide	73-1910A21
19.		ROLLER END CAP PIN 2-1/16 LG	73-324017

Line	Photo	Re-Rounder and Angle Unit Small Parts	PLCS Part#
20.		VERTICLE ROLLER END CAP GUIDE (2IN OD)	73-324018
21.		15" REROUNDER VERTICLE SHAFT (LG HOLE) .3125"	73-324019
22.		Adjustable Vertical Roller Bracket (Qty. 1)	73-324038
23.		1/2" ANGLE UNIT CLEVIS PIN	73-324032
24.		ANGLE ROLLER ACME ROD 1-1/4" L X 5/8" DIA	73-325049
25.		5/8" ANGLE ACME ROD WASHER	73-324027
26.		Adjustable Angle Roller Bracket	73-325048
27.		18" ANGLE ROLLER UNIT BAR (SM HOLE) .201"	73-325046
28.		16 1/4" ANGLE ROLLER SLIDE SHAFT (NO HOLES)	73-325047
29.		Stationary Angle Roller Bracket	73-325048S