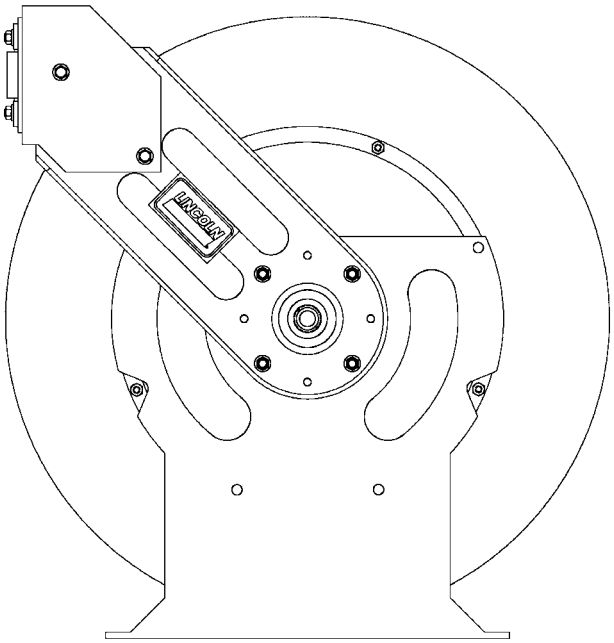
Models 94100DS, 94300DS, Model 94500DS Series "A" BARE REEL

OWNER/OPERATOR MANUAL



NOTE 1: Operating maximum working pressure should not exceed the pressure rating of the installed hose.

NOTE 2: Bare reel hose model 94100DS is designed to be corrosion resistant when used in applications using water, antifreeze solutions (ethylene Glycol or Polypropylene Glycol) and windshield wash solutions (Typically methyl alcohol diluted with water).

DESCRIPTION

The 94000DS Series Reel is designed for hose storage wherever longer length delivery hose is required. The reel can be installed as a single unit or in multiple configurations.

Reel features include a reel latch that automatically locks at desired positions as the hose is extended and releases with a short pull on the hose

OWNER/OPERATOR RESPONSIBILITY

It is the owner/operator responsibility to properly use and maintain this equipment.

The instructions and warnings contained in this manual shall be read and understood by the owner/operator prior to operating this equipment.

If an owner/operator does not understand English, the contents of this manual shall be explained in the owner/operator native language to assure the owner/operator comprehends.

© Indicates change

SPECIFICATIONS

Maximum working pressure	
Model 94100DS (Bare Reel)	1000 PSI
Model 94300DS (Bare Reel)	4000 PSI
Models 94500DS (Bare Reel)	8000 PSI
Fluid type	
Models 94300DS	Oil
Models 94500DS	Grease
Models 94100DS	Air & Water
Fluid Inlet	
Models 94300DS & 94100DS	1/2" NPT (Female)
Models 94500DS	3/8" NPT (Female)
Fluid outlet	
Models 94300DS & 94100DS	1/2" NPT (Female)
Models 94500DS	3/8" NPT (Female)
Sheave width	4-1/2"
Sheave diameter	19-1/2"
Drum diameter	12-5/8"
Overall width	6-5/8"
Overall height	23-3/4"
Overall depth	19-3/4"

Maximum hose capacities (Including hang down):

1/4" ID. Air/water/grease hose	60 ft.
3/8" ID. Air/water/grease hose	60 ft.
1/2" ID. Oil hose	50 ft.

RECOMMENDED REPLACEMENT HOSE SPECIFICATIONS

- Air/water low pressure hose with 250 psi working pressure and 1/2" NPT pipe thread for attachment to reel.
- Oil hose medium pressure hose with 1500 psi working pressure and 1/2" NPT pipe thread for attachment to reel.
- Grease high pressure hose 1/4" I.D. with 5000 psi working pressure and 3/8" NPT pipe thread for attachement to reel.
- Grease high pressure hose 3/8" I.D. with 4000 psi working pressure and 3/8" NPT pipe thread for attachement to reel.

NOTE: Exceeding these capacities voids warranty. Refer to DELIVERY HOSE INSTALLATION for proper hose to reel assembly.

It is the owner/operator responsibility to maintain the legibility of all warning and instruction labels.

The owner/operator shall retain this manual for future reference to important warnings, operating and maintenance instructions.

© **⚠ WARNING**

Systems which will be dispensing fluids under pressure may need to be protected by using a thermal relief kit, which will safely limit the pressures caused by thermal expansion. Please contact your local Lincoln distributor and refer to Service Page Section K5, Page 31 for more details. Failure to include thermal relief protection may cause damage not covered under Lincoln's warranty policy.

⚠ WARNING

FAILURE TO HEED THE FOLLOWING WARNINGS INCLUDING MISUSE, OVER PRESSURIZING, MODIFYING PARTS, USING IMCOMPATIBLE CHEMICALS AND FLUIDS, OR USING WORN OR DAMAGED PARTS, MAY RESULT IN EQUIPMENT DAMAGE AND/OR SERIOUS PERSONAL INJURY, FIRE, EXPLOSION, OR PROPERTY DAMAGE.

- Do not exceed the stated maximum working pressure of the reel or of the lowest rated component in your system.
- Do not alter or modify any part of this equipment.
- Do not operate this equipment with combustible gas.
- Do not attempt to repair or disassemble the equipment while the system is pressurized.
- Make sure all fluid connections are securely tightened belore using this equipment.
- Always read and follow the fluid manufacturer's recommendations regarding fluid compatibility, and the use of protective clothing and equipment.
- Check all equipment regularly and repair or replace worn or damaged parts immediately.
- Never point the dispensing valve at any part of the body or at another person.
- Never try to stop or deflect material from dispensing valve or leading connection or component with your hand or body.
- Always check equipment for proper operation before each use, making sure safety devices are in place and operating properly.
- Always follow the pressure relief procedure after shutting off the pump, when checking or servicing any part of the system, and when installing, cleaning or changing any part of the system.

PROPER INSTALLATION

When installing reel, ridgid or solid pipe inlet hookup will void warranty. Be sure to use flexible inlet to swivel.

⚠ WARNING

Always wear heavy gloves when adjusting the spring tension to protect hands from being cut on the hose reel.

⚠ WARNING

Never allow the reel to spin freely. The hose could spin out of control and cause serious injury if you are hit by it.

⚠ CAUTION

To prevent damaging hose connections and/or components when pulling hose from reel, pull on the hose itself and not on the control valve swivel. Do not pull or jerk on the hose when fully withdrawn from the reel.

IMPORTANT INSTRUCTIONS

Perform the following instructions as stated to correctly set the power spring for maximum tension.

⚠ CAUTION

To avoid damaging reel components, always make sure hose clamp is properly installed.

INSTALLATION

DELIVERY HOSE INSTALLATION (MAXIMUM SPRING TENSION)

HOSE INSTALLATION

For smoother operation during retraction and to increase hose life, "detalc" hose by wiping entire hose length with a light lubricating oil before installing on reel. Use teflon tape in threads to prevent leaks. See Figure (1). Insert hose end with outlet adapter through roller outlet and secure to swivel adapter.

Remove support base and support arm.

From open side of reel, loop entire length of hose onto reel in a clockwise direction. Pull hose out through roller outlet to wind power spring. When hose is completely extended, latch reel to prevent it from unwinding.

Continue to add loops of hose and pull out hose until power spring winds tight.

Allow reel to retract two full revolutions and latch reel. Carefully unloop remaining hose from reel.

Reinstall support base and support arm.

Position hose clamp so that approximately 1/2 loop of hose remains on reel and latching does not occur when hose is fully extended.

While holding hose, allow reel to retract hose until desired height from floor is obtained. Then latch reel.

Slide ball stop over free end of hose and position slightly below roller outlet. Tighten screws to secure ball stop to hose.

Power spring is not set to maximum tension.

ASSEMBLED REEL TENSION

The hose reel has a deceivingly smooth, but powerful retraction rate. Hose tension is factory set, and unless a gross decline in tension is noticed, no further adjustments are necessary. Over tensioning can cause spring damage, and voiding of the warranty. Always maintain hand control of the hose upon retrieval, allowing hose to recoil unabated at a high rate of speed can cause personal, vehicle or reel damage.

⚠ CAUTION

To prevent damage to connecting hose when installing hose to reel, sufficient clearance must be provided from outside edge of sheave.

ATTACHING CONNECTING HOSES

Connect one end of connecting hose to material supply line source or connection.

Assemble connecting hose to reel inlet and secure. NOTE: A 90 degree swivel adapter or street elbow may be required in multiple reel bank installations.

REEL INSTALLATION AND ADJUSTMENT

See Figure (2). The guide arm may be positioned in 45 degree increments as shown. For ease of operation and increased hose life, the guide arm should be positioned to minimize hose strain as the delivery hose is pulled through the roller outlet.

Four studs must be used to securely attach the guide arm.

SAFETY INFORMATION

Read and understand all warnings, cautions and instructions before operating this equipment. Extreme caution should be used when operating this equipment as personal injury and/or property damage can result from equipment misuse. Adequate personal protection is recommended to prevent splashing of material on the skin or in the eyes. ALWAYS disconnect air coupler from pump when the pump is not being used.

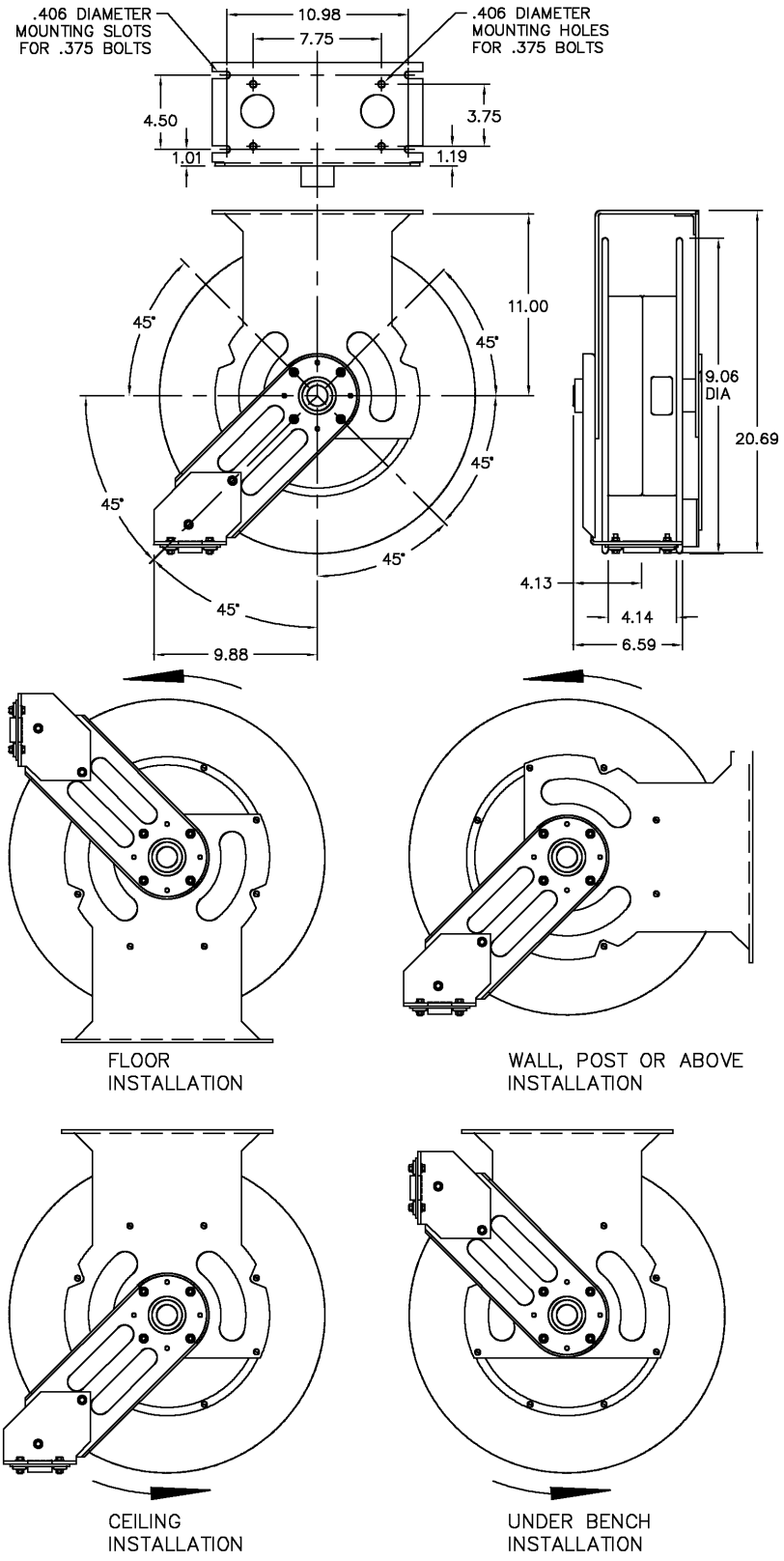
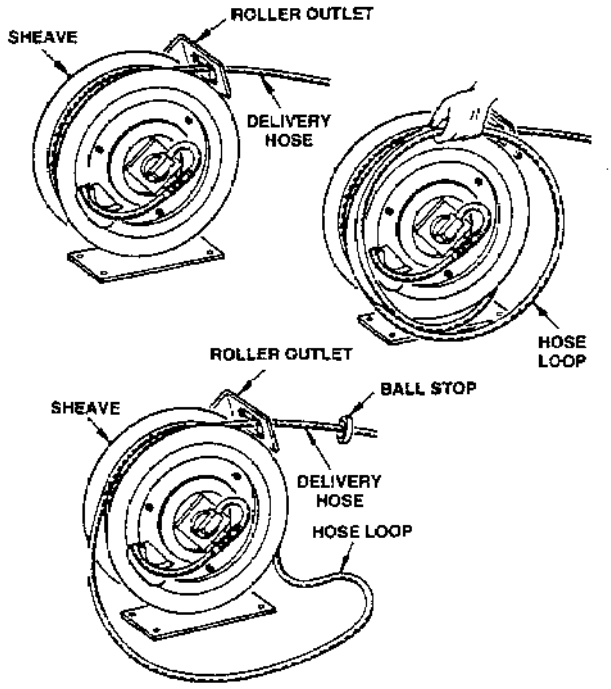


FIGURE (2) REEL INSTALLATION AND ADJUSTMENT



ADJUSTING SPRING TENSION

Should less spring tension be desired, pull hose out from roller outlet to provide slack and latch reel.

Remove ball stop and material dispensing tool from end of hose.

Unwind one loop of hose from reel by feeding end of hose through roller outlet, back around reel and back through roller outlet reassembly ball stop and materal dispensing tool to end of hose.

Unlatch reel to retract hose check tension and repeat above procedure until desired tension is obtained.

⚠ CAUTION

To prevent premature power spring failure, spring tension should be adjusted so that it requires at least two full turns of the reel sheave before the spring is wound tight.

IMPORTANT

WHEN SETTING UP THE HOSE REEL, ADJUST THE PUMP WORKING PRESSURE TO THE MINIMUM REQUIRED. THIS WILL INCREASE THE HOSE REEL LIFE AND MAKE THE REEL EASIER TO USE.

⚠ CAUTION

Unlatch spool and release spring tension before attempting any major service work or disassembly

PRESSURE RELIEF PROCEDURE

Perform the following procedure:

A. Disconnect the air supply to the pump.
B. Point the dispensing valve away from yourself and others.
C. Open the dispensing valve into an appropriate container until the pressure is relieved.

If the above procedure does not relieve the pressure, the dispensing valve or hose may be restricted. To relieve the pressure, very slowly loosen the hose end coupling. Then loosen completely and clear the dispensing valve and/or hose.

INSPECTION

Prior to operation or maintenance a visual inspection shall be made. Check reel system for leaks, worn or missing parts.

Any reel that appears to be damaged in any way, is badly worn or operates abnormally shall be removed from use until repairs are made. Contact factory authorized service center for repairs.

If over-pressurizing of the equipment is believed to have occurred, contact a factory authorized service center for inspection of the reel.

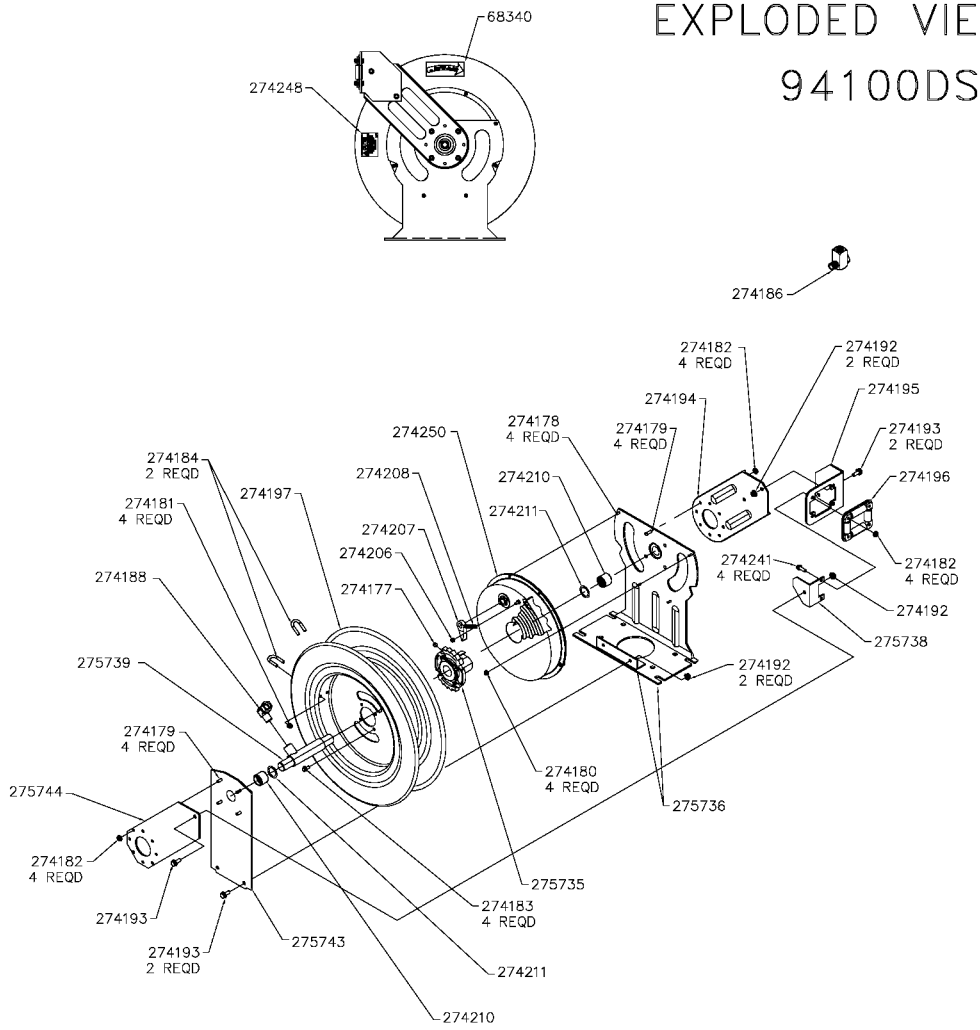
Annual inspection by a factory authorized service center is recommended.

REPAIR

Repair is limited to replacement of listed service parts. Special procedures and tools are required. Contact Lincoln Customer Service, One Lincoln Way, St. Louis, MO 63120-1578, (314) 679-4200 for your nearest authorized service center.

When ordering replacement parts, list: part number, description, model number and series letter.

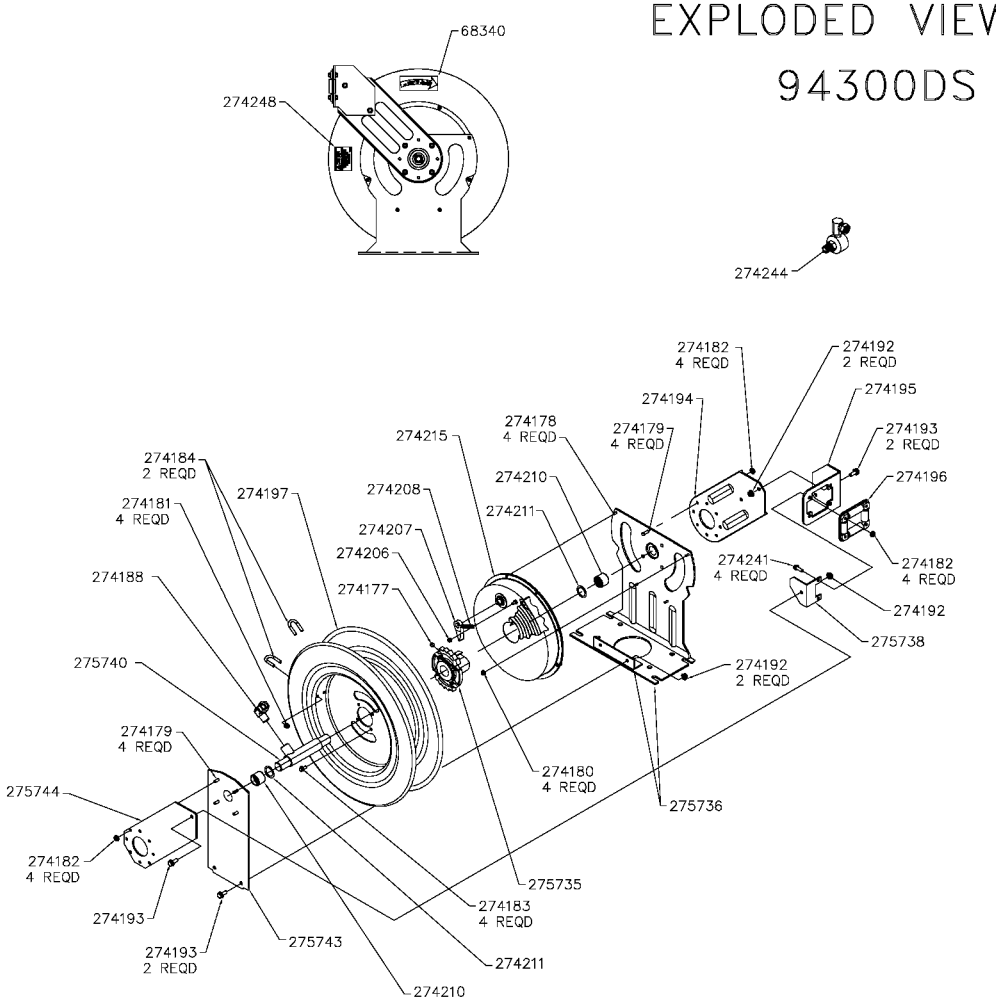
EXPLODED VIEW
94100DS



94100DS

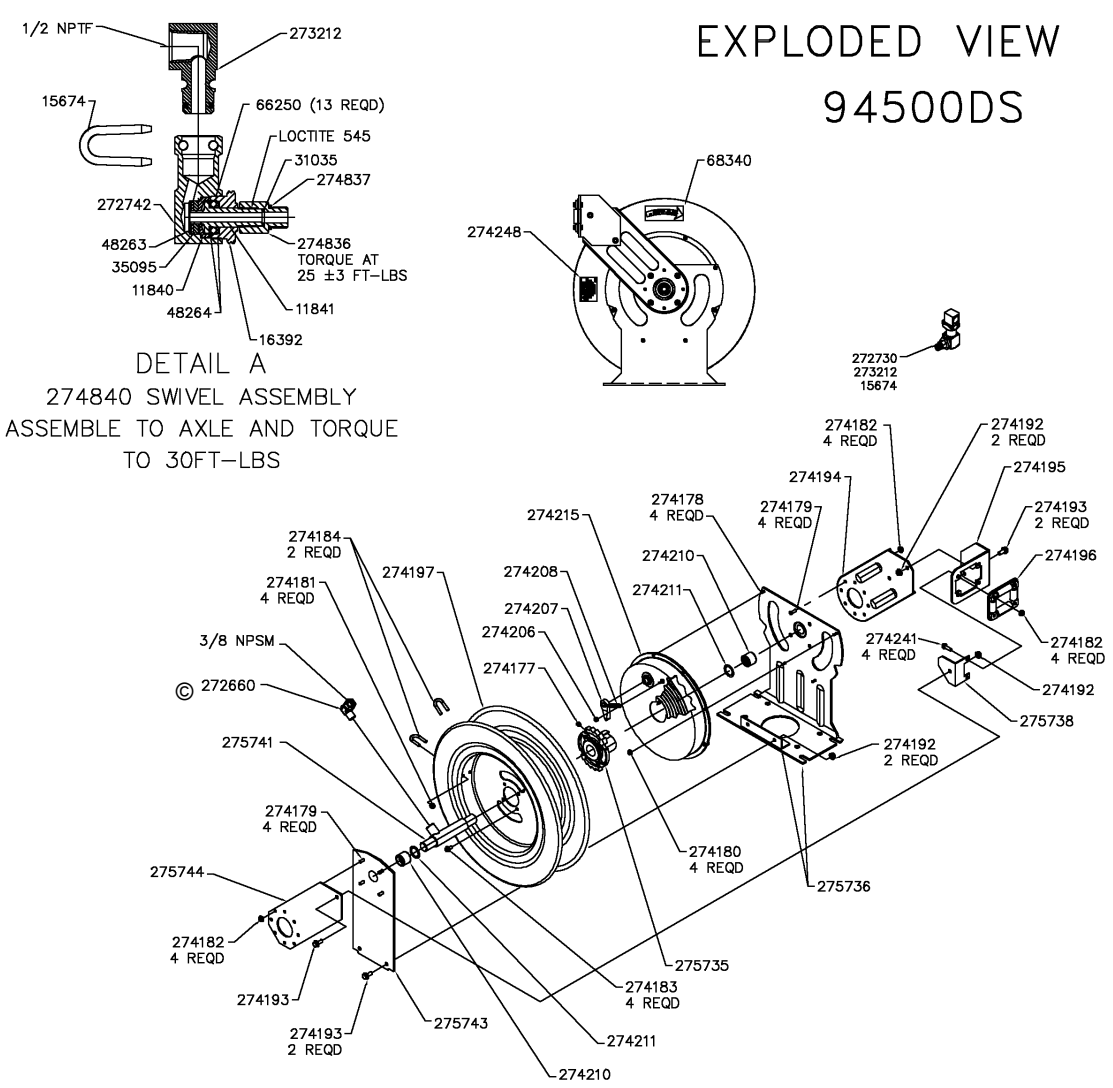
PARTS	DESCRIPTION	QTY	PARTS	DESCRIPTION	QTY	PARTS	DESCRIPTION	QTY
68340	INSTRUCTION DECAL	1	274192	FLANGE LOCKING NUT 5/16-18	5	274211	EXTERNAL THRUST WASHER	2
274177	SET SCREW 3/8-16 X 3/8	1	274193	HEX HEAD BOLT 5/16-18 X 3/4 GR5	5	274241	HX HD FLANGE BOLT 1/4-20 x 3/4	4
274178	PRESS SCREW 10-32 X 5/8	4	274194	GUIDE ARM	1	274248	CAUTION LABEL	1
274179	PRESS SCREW 1/4-20 X 3/4	8	274195	GUIDE ARM HEAD	1	274250	DRIVE SPRING	1
274180	SELF LOCKING NUT 10-32	4	274196	GUIDE ROLLER ASSEM	1	275735	LATCH ARBOR	1
274181	NYLON LOCK NUT 1/4-20	4	274197	SPOOL ASSEM	1	275736	BASE ASSEM	1
274182	SELF LOCKING NUT1/4-20	12	274206	NYLON LOCK NUT 10-32	1	275738	SUPPORT BRACKET	1
274183	HEX HEAD BOLT 1/4-20 X1/2	4	274207	LATCH PAWL	1	275739	INLET SHAFT	1
274184	U-BOLT	2	274208	LATCH SPRING	1	275743	SUPPORT BASE	1
274186	SWIVEL ASSEM LOW PRESSURE	1	274210	NEEDLE BEARINGS	2	275744	SUPPORT GUIDE ARM	1
274188	1/2 NPT-1/2 NPSM 90 DEG UNION	1						

EXPLODED VIEW
94300DS



94300DS

PARTS	DESCRIPTION	QTY	PARTS	DESCRIPTION	QTY	PARTS	DESCRIPTION	QTY
68340	INSTRUCTION DECAL	1	274193	HEX HEAD BOLT 5/16-18 X 3/4 GR5	5	274241	HX HD FLANGE BOLT 1/4-20 x 3/4	4
274177	SET SCREW 3/8-16 X 3/8	1	274194	GUIDE ARM	1	274244	SWIVEL ASSEM MED PRESSURE	1
274178	PRESS SCREW 10-32 X 5/8	4	274195	GUIDE ARM HEAD	1	274248	CAUTION LABEL	1
274179	PRESS SCREW 1/4-20 X 3/4	8	274196	GUIDE ROLLER ASSEM	1	275735	LATCH ARBOR	1
274180	SELF LOCKING NUT 10-32	4	274197	SPOOL ASSEM	1	275736	BASE ASSEM	1
274181	NYLON LOCK NUT 1/4-20	4	274206	NYLON LOCK NUT 10-32	1	275738	SUPPORT BRACKET	1
274182	SELF LOCKING NUT1/4-20	12	274207	LATCH PAWL	1	275740	INLET SHAFT	1
274183	HEX HEAD BOLT 1/4-20 X1/2	4	274208	LATCH SPRING	1	275743	SUPPORT BASE	1
274184	U-BOLT	2	274210	NEEDLE BEARINGS	2	275744	SUPPORT GUIDE ARM	1
274188	1/2 NPT-1/2 NPSM 90 DEG UNION	1	274211	EXTERNAL THRUST WASHER	2			
274192	FLANGE LOCKING NUT 5/16-18	5	274215	DRIVE SPRING ASSY	1			



94500DS

PARTS	DESCRIPTION	QTY	PARTS	DESCRIPTION	QTY	PARTS	DESCRIPTION	QTY
11840	RETAINER, PACKING	1	274178	PRESS SCREW 10-32 X 5/8	4	274208	LATCH SPRING	1
11841	STUD, SWIVEL	1	274179	PRESS SCREW 1/4-20 X 3/4	4	274210	NEEDLE BEARINGS	2
15674	KEEPER	1	274180	SELF LOCKING NUT 10-32	4	274211	EXTERNAL THRUST WASHER	2
16392	NUT, SWIVEL 1-1/8-2	1	274181	NYLON LOCK NUT 1/4-20	12	274215	DRIVE SPRING ASSY	1
31035	GASKET 7/16 OD X .2	1	274182	SELF LOCKING NUT1/4-20	4	274241	HX HD FLANGE BOLT 1/4-20 x 3/4	4
35095	PKG .891 OD X .135T	1	274183	HEX HEAD BOLT 1/4-20 X1/2	2	274248	CAUTION LABEL	1
48263	WASHER	1	274184	U-BOLT	5	274836	SWIVEL ADAPTER	1
48264	WASHER, THRUST .835	2	274192	FLANGE LOCKING NUT 5/16-18	5	274837	O-RING	1
66250	BALL 5/32 GR100 CAR	13	274193	HEX HEAD BOLT 5/16-18 X 3/4 GR5	1	275735	LATCH ARBOR	1
68340	INSTRUCTION DECAL	1	274194	GUIDE ARM	1	275736	BASE ASSEM	1
272660	3/8 NPT-3/8 NPSM 90° UNION		274195	GUIDE ARM HEAD	1	275738	SUPPORT BRACKET	1
272730	SWIVEL ASSEM HIGH PRESSURE	1	274196	GUIDE ROLLER ASSEM	1	275741	INLET SHAFT	1
272742	BODY, SWIVEL	1	274197	SPOOL ASSEM	1	275743	SUPPORT BASE	1
273212	ADAPTER ASSY	1	274206	NYLON LOCK NUT 10-32	1	275744	SUPPORT GUIDE ARM	1
274177	SET SCREW 3/8-16 X 3/8	1	274207	LATCH PAWL	1			

Lincoln Industrial Standard Warranty

LIMITED WARRANTY
Lincoln warrants the equipment manufactured and supplied by Lincoln to be free from defects in material and workmanship for a period of one (1) year following the date of purchase, excluding therefrom any special, extended, or limited warranty published by Lincoln. If equipment is determined to be defective during this warranty period, it will be repaired or replaced, within Lincoln's sole discretion, without charge.

This warranty is conditioned upon the determination of a Lincoln authorized representative that the equipment is defective. To obtain repair or replacement, you must ship the equipment, transportation charges prepaid, with proof of purchase to a Lincoln Authorized Warranty and Service Center within the warranty period.

This warranty is extended to the original retail purchaser only. This warranty does not apply to equipment damaged from accident, overload, abuse, misuse, negligence, faulty installation or abrasive or corrosive material, equipment that has been altered, or equipment repaired by anyone not authorized by Lincoln. This warranty applies only to equipment installed, operated and maintained in strict accordance with the written specifications and recommendations provided by Lincoln or its authorized field personnel.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE WARRANTY OF MERCHANTIBILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

In no event shall Lincoln be liable for incidental or consequential damages. Lincoln's liability for any claim for loss or damages arising out of the sale, resale or use of any Lincoln equipment shall in no event exceed the purchase price. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, therefore the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights. You may also have other rights that vary by jurisdiction.

Customers not located in the Western Hemisphere or East Asia: Please contact Lincoln GmbH & Co. KG, Walldorf, Germany, for your warranty rights.

Lincoln Industrial Special Limited Warranties

SPECIAL LIMITED 2 YEAR WARRANTY-
SL-V Series, Single Injectors-85772, 85782, and Replacement Injectors-85771, 85781
Lincoln warrants the SL-V Injector series to be free from defects in material and workmanship for two (2) years following the date of purchase. If an injector model (single or replacement) is determined to be defective by Lincoln, in its sole discretion, during this warranty period, it will be repaired or replaced, at Lincoln's discretion, without charge.

SPECIAL LIMITED 5 YEAR WARRANTY-
Series 20, 25, 40 Bare Pumps, PMV Bare Pumps, Heavy Duty and 94000 Series Bare Reels
Lincoln warrants series 20, 25, 40 bare pumps, PMV bare pumps, Heavy Duty (82206), Mini Bench (81133, 81323), and 94000 LFR series (94100, 94300, 94500) bare reels to be free from defects in material and workmanship for five (5) years following the date of purchase. If equipment is determined by Lincoln, in its sole discretion, to be defective during the first year of the warranty period, it will be repaired or replaced at Lincoln's discretion, without charge. In years two (2) and three (3), the warranty on this equipment is limited to repair with Lincoln paying parts and labor only. In years four (4) and five (5), the warranty on this equipment is limited to repair with Lincoln paying for parts only.

SPECIAL LIMITED 5 YEAR WARRANTY-
LFM Series Oil Meters (Lincoln Fluid Meter), LFV (Lincoln Fluid Valves), AOD (Air-Operated Diaphragm Pumps)-
Lincoln warrants the LFM meter series (908/912 series), the Lincoln Fluid valve (708/712 series), our Universal Inline Digital Meters (812/813 series), and our AOD Pump offering to be free from defects in material and workmanship for five (5) years following the date of purchase. If either is determined to be defective by Lincoln, in its sole discretion, during the warranty period, they will be repaired or replaced, at Lincoln's discretion, without charge.

Lincoln Industrial Contact Information

To find Lincoln Industrial's Nearest Service Center
Call one of the following numbers, you may also use our Website

Customer Service **314-679-4200**
Website **lincolnindustrial.com**

Americas:
One Lincoln Way
St. Louis, MO 63120-1578
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