

Belt Reloader

Operation Manual

PNEG-2186

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All information, illustrations, photos, and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

Contents

Chapter 1 Introduction	4
General Information	4
General Safety Statements	4
Replacement Parts	4
Chapter 2 Safety	5
Safety Guidelines	5
Cautionary Symbols Definitions	6
Safety Cautions	7
Safety Sign-Off Sheet	10
Chapter 3 Specifications	11
Gear Reducers	11
Motor	11
Chain	11
Chapter 4 Operation	12
Pre-Startup Procedure	12
Start-Up	13
Chapter 5 Maintenance	14
General Maintenance	14
Periodic Inspection	14
Lubrication	14
Chapter 6 Parts List	15
Reloader Assembly 30 SB	15
Chapter 7 Spare Parts List	16
Chapter 8 Warranty	17

1. Introduction

General Information

InterSystems reserves the right to improve its product whenever possible and practical to do so. We reserve the right to change, improve and modify products at any time without obligation to make changes, improvements and modifications on equipment sold previously.

This manual covers the operation for the Belt Reloader. This manual provides guidelines for installing the product. You must retain a qualified contractor to provide on-site expertise. INTERSYSTEMS IS NOT RESPONSIBLE FOR THE INSTALLATION OF THIS PRODUCT.

General Safety Statements

1. The Belt Reloader is designed and manufactured with operator safety in mind. However, residual hazards remain due to the nature of material handling and specific material hazards. Use extreme caution at all times.
2. Modifications to equipment may cause extremely dangerous situations that could result in damage to the equipment as well as serious injury or death. Never modify the equipment.
3. InterSystems recommends that you contact the local power company to have a representative survey the installation to ensure wiring is compatible with their system and adequate power is supplied to the unit.

Replacement Parts

The InterSystems, Inc. Belt Reloader is a quality built piece of machinery. As with any machine, parts do wear out and fail. It is InterSystems' recommendation that a small supply of spare parts be kept on hand to cover any minor breakdowns.

Replacements for any other components, including structural members can be supplied upon request.

For direct parts orders or requests for technical assistance to your sales representative or to:

InterSystems

9575 No. 109TH AVE

Omaha, NE. 68142

Phone: 800-228-1483

FAX: (402) 330-3350

Please have available the MODEL NUMBER, SERIAL NUMBER and CUSTOMER ORDER NUMBER of the equipment in question as well as the location where the conveyor is INSTALLED.

Safety Guidelines

Safety guidelines are general-to-specific safety rules that must be followed at all times. This manual is written to help you understand safe operating procedures and problems that can be encountered by the operator and other personnel when using this equipment. Save these safety guidelines for future reference.

As owner or operator, you are responsible for understanding the requirements, hazards, and precautions that exist and to inform others as required. Unqualified persons must stay out of the work area at all times.

Alterations must not be made to the equipment. Alterations can produce dangerous situations resulting in **SERIOUS INJURY** or **DEATH**.

This equipment must be installed in accordance with the current installation codes and applicable regulations, which must be carefully followed in all cases. Authorities having jurisdiction must be consulted before installations are made.

When necessary, you must consider the installation location relative to electrical, fuel and water utilities.

Personnel operating or working around equipment must read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

ST-0001-3

Cautionary Symbols Definitions

Cautionary symbols appear in this manual and on product decals. The symbols alert the user of potential safety hazards, prohibited activities and mandatory actions. To help you recognize this information, we use the symbols that are defined below.



This symbol indicates an imminently hazardous situation which, if not avoided, **will result in serious injury or death.**



This symbol indicates a potentially hazardous situation which, if not avoided, **can result in serious injury or death.**



This symbol indicates a potentially hazardous situation which, if not avoided, **can result in minor or moderate injury.**



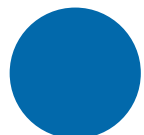
This symbol is used to address practices not related to personal injury.



This symbol indicates a general hazard.



This symbol indicates a prohibited activity.



This symbol indicates a mandatory action.

ST-0005-2

Safety Cautions

Use Personal Protective Equipment

- Use appropriate personal protective equipment:

Eye Protection



Respiratory Protection



Foot Protection



Hearing Protection



Head Protection



Fall Protection



Hand Protection



- Wear clothing appropriate to the job.
- Remove all jewelry.
- Tie long hair up and back.

ST-0004-1

Follow Safety Instructions

- Carefully read all safety messages in this manual and safety signs on your machine. Keep signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer.
- Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.
- If you do not understand any part of this manual or need assistance, contact your dealer.



ST-0002-1

Maintain Equipment and Work Area

- Understand service procedures before doing work. Keep area clean and dry.
- Never service equipment while it is operating. Keep hands, feet, and clothing away from moving parts.
- Keep your equipment in proper working condition. Replace worn or broken parts immediately.



ST-0003-1

2. Safety

Install and Operate Electrical Equipment Properly

- Electrical controls must be installed by a qualified electrician and must meet the standards set by applicable local codes (National Electrical Code for the US, Canadian Electric Code, or EN60204 along with applicable European Directives for Europe).
- Lock-out power source before making adjustments, cleaning, or maintaining equipment.
- Make sure all equipment is properly grounded.



ST-0027-4

Stay Clear of Hoisted Equipment

- Always use proper lifting or hoisting equipment when assembling or disassembling equipment.
- Do not walk or stand under hoisted equipment.
- Always use sturdy and stable supports when needed for installation. Not following these safety precautions creates the risk of falling equipment, which can crush personnel and cause serious injury or death.



ST-0047-1

Operate Motor Properly

- All electrical connections must be made in accordance with applicable local codes (National Electrical Code for the US, Canadian Electric Code, or EN60204 along with applicable European Directives for Europe). Make sure equipment and bins are properly grounded.
- Lock-out power before resetting motor overloads.
- Do not repetitively stop and start the drive in order to free a plugged condition. Jogging the drive in this manner can damage the equipment and drive components.



ST-0009-3

Sharp Edge Hazard

- This product has sharp edges, which can cause serious injury.
- To avoid injury, handle sharp edges with caution and always use proper protective clothing and equipment.



ST-0036-2

Toxic Fume and Dust Hazard

- Do all work outside or in a well-ventilated area. Dispose of paint and solvent properly.
- Remove paint before welding or heating:
 - Avoid potentially toxic fumes and dust. Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.
 - If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
 - If you use solvent or paint-stripper, remove stripper with soap and water before welding.
 - Remove solvent or stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.



ST-0043-2

Fall Hazard

- Ladders, stairways and platforms are for use by competent and trained personnel only. Do not allow children or other unauthorized persons to have access to the equipment.
- Access to the equipment must be restricted by the use of security fencing and lockable gates.
- Lower sections of ladders must be fitted with a lockable safety gate to prevent unauthorized access.
- Make sure that hot surfaces have had adequate time to cool before working on or in the equipment.
- Lock-out and tag out power supplies and fuel supplies to all equipment.
- Do not attach lifting equipment to ladders or platforms.
- Do not go outside of the safety rails provided on elevated platforms.
- Do not work at heights during high winds, rain, snow, or ice storms.

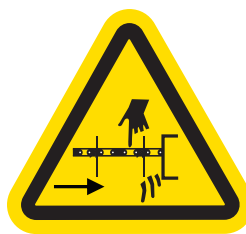


ST-0056-1

2. Safety

Stay Clear of Moving Parts

- Entanglement in rotating sprocket or moving chain will cause serious injury or death.
- Keep all guards and covers in place at all times.
- Lock-out power source before making adjustments, cleaning, or maintaining equipment.



ST-0017-1

Safety Sign-Off Sheet

Below is a sign-off sheet that can be used to verify that all personnel have read and understood the safety instructions. This sign-off sheet is provided for your convenience and personal record keeping.

[illegible]

ST-0007

Gear Reducers

The reducer manufacturer and model is listed below:

1. SEW Eurodrive
2. SA57TAM56 1:184 ratio

NOTE: For more details, refer to <http://www.seweurodrive.com>

Motor

Marathon motors are the manufacturer and model is 5K42HN4034.

NOTE: For more details, refer to <https://www.regalbeloit.com>

Chain

1. Chain manufacturer - Webster
2. Chain type - WDH110

NOTE: For more details, refer to <http://www.websterchain.com>

Pre-Startup Procedure

Do this before power is applied to the reloader.

1. Make sure all guards and warning labels are in place and legible. Warning signs are an important part of any safety program, replace any missing signs IMMEDIATELY.
2. Make certain all electrical connection box covers are in place and securely fastened. Check for exposed wiring and damaged conduit.
3. Inspect the inside of the reloader for tools or anything else that could cause damage on start-up.



All power to the conveyor must be shut off and locked out before performing any pre-startup procedure. Death or serious injury can result if the reloader starts while any service is being performed.

Initial Lubrication

Reducer

The reducer was filled with lubricant from the manufacturer and does not require relubrication at this time.

Mounted Bearings

The mounted bearings were filled with lubricant from the manufacturer and do not require relubrication at this time.

Conveyor Chain

DO NOT lubricate the conveyor chain. It is designed to run dry. Any lubricant will cause dirt and residue from the conveyed material to accumulate on the chain, causing rapid, premature wear.

Shaft Alignment

Verify that the shaft is truly perpendicular to the reloader housing and that the sprocket is centered on the shaft. A misaligned shaft or incorrectly positioned sprocket will cause rapid chain and sprocket wear.

Initial Take-Up Adjustment

1. Remove the top cover from the reloader.
2. Turn the inner nuts to apply tension evenly to both take-up screws. There should not be any visible slack in the chain. Chain should not lift off early from the “AR” on the top assembly

NOTE: *Too much chain tension imposes excessive load on bearings, shafts and chain, resulting in increased wear.*

3. Re-tighten the take-up screw locking nuts. Replace any removed lids.
4. After the conveyor has operated for approximately 100 hours, the chain may “stretch” or (wear), taking an initial set and requiring readjustment.

Start-Up

1. For the initial start-up, the conveyor should be empty.
2. Listen for any unusual sound indicating that foreign material was left in the conveyor and is dragging, scraping or jamming the equipment. Listen carefully at each conveyor joint to make sure the flights are not catching or snagging any of the liner seams.
3. Re-check chain tension as detailed in initial take-up adjustment [on Page 12](#).
4. After correcting any problems detected during initial conveyor operation, replacing any guards or covers removed and observing all safety precaution, proceed to test the conveyor with the product or material to be conveyed in normal operation. Since InterSystems, Inc. is not responsible for system integration or controls, a system test procedure is beyond the scope of this manual.

Run Time

Run the reloader anytime the belt conveyor is running. This will prevent excess material from building up in the bottom of the reloader.



Before any maintenance is performed on the conveyor, power must be shut OFF and locked out to prevent accidental start-up.

Failure to observe all safety rules, written, implied and those suggested by obvious common sense, can result in death, serious injury and/or equipment damage.

General Maintenance

A good maintenance program involves thorough general housekeeping, adequate periodic relubrication and timely adjustment of take-ups to maintain proper chain tension.

Periodic Inspection

At regularly scheduled intervals, while observing all safety precautions, observe the conveyor as it operates. Inspect for:

1. Loose or missing hardware, in particular: check and tighten sprocket set screws
2. Noisy bearings, motor or reducer.
3. Overheated bearings, motor or reducer.
4. Structural damage.
5. Rust or corrosion.
6. Damaged wiring, including exposed conductors and connections.
7. Make sure that all guards are in place and that all warning labels are in place and legible. Safety section explains the purpose and intended location of the warning signs and also lists the part numbers of the signs. Warning signs are an important part of any safety program, replace any missing signs IMMEDIATELY.
8. Chain can be inspected by removing the inspection doors on either side of the top of the reloader. If more access to the chain is required, the outside cover on any portion of the reloader may be removed.

Lubrication

Reducer

Refer to manufacturer recommendation. The user must interpret the data therein in light of the severity of duty in each application. If there is any doubt, contact the manufacturer or a local supplier of the reducer for specific recommendations.

Motor

Many motors have sealed and permanently lubricated bearings, with these, no relubrication is possible or desirable. If bearings of this type becomes noisy or overheat, they must be replaced.

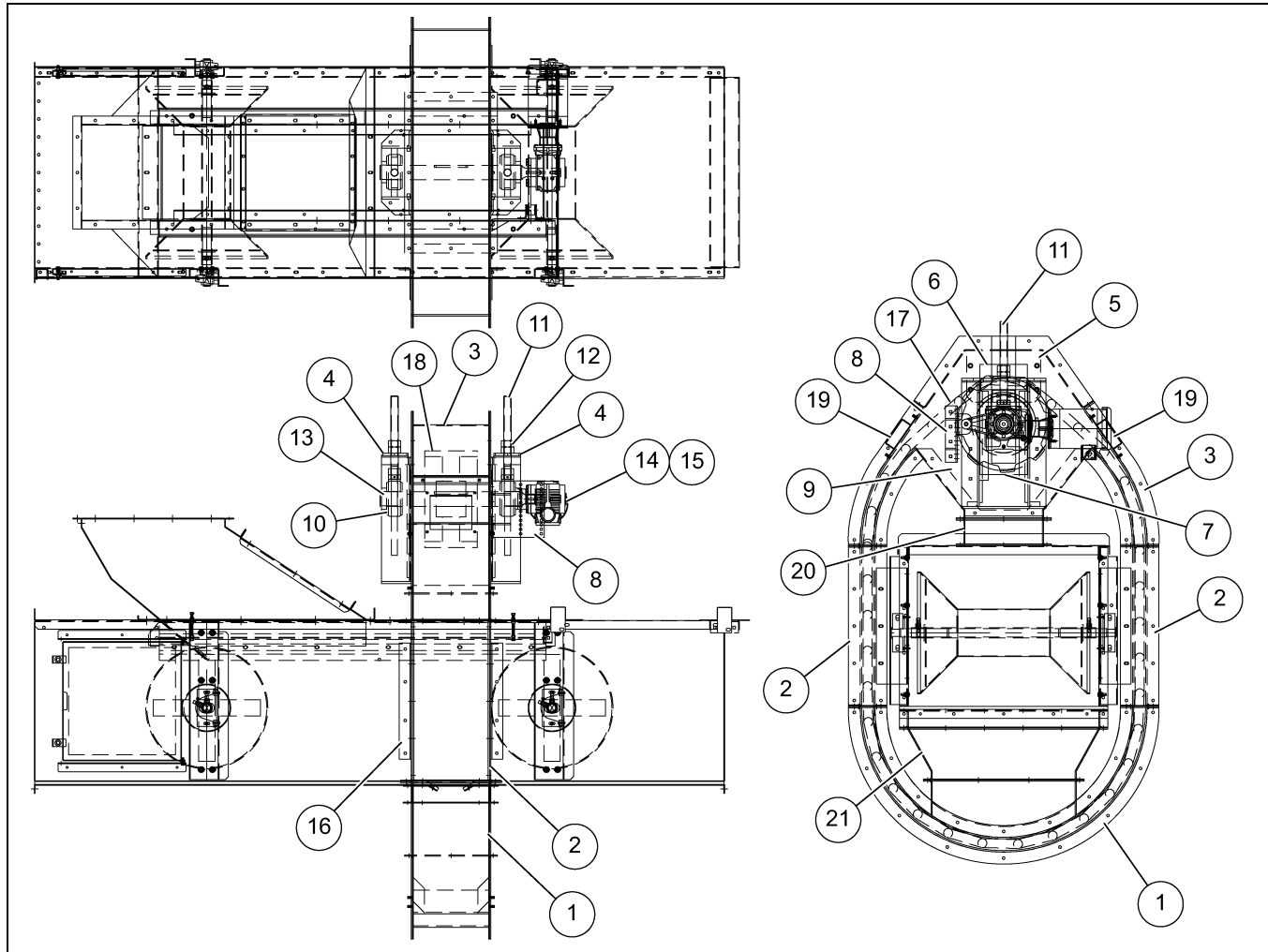
Motors having bearings which can be re-lubricated are usually larger integral horsepower sizes. Special pressure lubricating equipment may be required. Refer to the documentation furnished with the motor.

Mounted Bearings

Mounted bearings require periodic relubrication at appropriate intervals. The amount and frequency depends in large extent upon the severity of the operating environment and the duty cycle.

Inject each mounted bearing with an NLGI #2 grease, Lubri-Plate "Multi-Lube A" for example. Inject only enough lubricant so that a slight bead can be seen to form around the seal. The appearance of the bead indicates that the bearing has been filled adequately and helps purge and exclude contaminants from the bearing cavity.

Reloader Assembly 30 SB



Reloader Assembly 30 SB Parts List

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	XU8370	Reloader Bottom Assembly 30 SB	1	12	N/I	Hex Nut 1-1/4-7 304 SS	4
2	XU8371	Reloader Side Assembly 30 SB	2	13	XU8380	Shaft 207 CP SEW SA57 Reloaders EBC	1
3	XU8372	Reloader Top Assembly 30 SB	1	14	557803	Reducer SEW Eurodrive SA57T 0.5 HP with Torque Arm	1
4	XU8373	Take-Up Frame Weldment 2-7 CP Reloaders 30 SB	2	15	35563	Motor 1/2 HP 3 PH TEFC 56C	1
5	XU8374	Side Cover CP Reloaders SB	2	16	XU8381	Mounting Side Bracket Reloaders SB	4
6	XU8375	Slide PL 2-7 CP Reloaders SB	2	17	560018	Chain WDH110	17
7	XU8376	Seal 2-7 Shaft CP Reloaders SB	2	18	560019	Sprocket Split 8 207 WDH110	1
8	XU8377	Frame Reducer Mount Reloaders SB	1	19	XU8898	Inspection Door Weldment 9 SQ SS	2
9	XU8378	Bracket Reducer Mount Reloaders SB	2	20	XU8880	Transition Top Reloaders 30 SB	1
10	XR3406	Take-Up Bearing 207 ZT Cap	2	21	XU8881	Transition Bottom Reloaders 30 SB	1
11	XU8379	Threaded Rod 1-1/4" x 14" Long SS	2				

7. Spare Parts List

The following table contains the spare parts for Belt Reloader.

Part #	Description	Qty	Vendor	Lead Time
XR3406	Take-Up Bearing 207 ZT CAP	2	Motion Industries	21 Days
560018	Chain WDH110	17	Webster Industries	21 Days

InterSystems, Inc. reserves the right to make changes in design or in construction of equipment and components without obligation to incorporate such changes in equipment and components previously ordered.

WARRANTY, LIMITATION OF LIABILITY, DISCLAIMER OF IMPLIED WARRANTIES: InterSystems, Inc. manufactured equipment and components are guaranteed against defects in workmanship or materials for one year from date of shipment. The obligation of InterSystems, Inc. with respect to any goods is limited to replacement or repair of defective parts and equipment provided those parts are returned, shipping costs prepaid, to InterSystems' factory and provided the product has not been subject to misuse, negligence, or accident, or repaired or altered outside of our factory, or other than by an Authorized Service Representative. This warranty does not cover the replacement of parts inoperative because of wear occasioned by use, the cost of replacing parts by a person other than an InterSystems employee or an Authorized Service Representative, or the adjustment of a product where the product was improperly adjusted by the purchaser. In addition, this warranty does not cover components manufactured by others such as motors, drives, clutches, cylinders, valves, blowers, and the like. On those components the standard Manufacturers' warranty applies. In any event, liability is limited to the purchase price paid, and InterSystems, Inc. will, under no circumstances, be responsible for special or consequential damages, or for incidental damages.

INTERSYSTEMS, INC. NEITHER MAKES NOR AUTHORIZES ANY WARRANTY OTHER THAN AS HEREIN CONTAINED. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

This equipment shall be installed in accordance with the current installation codes and applicable regulations, which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.



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