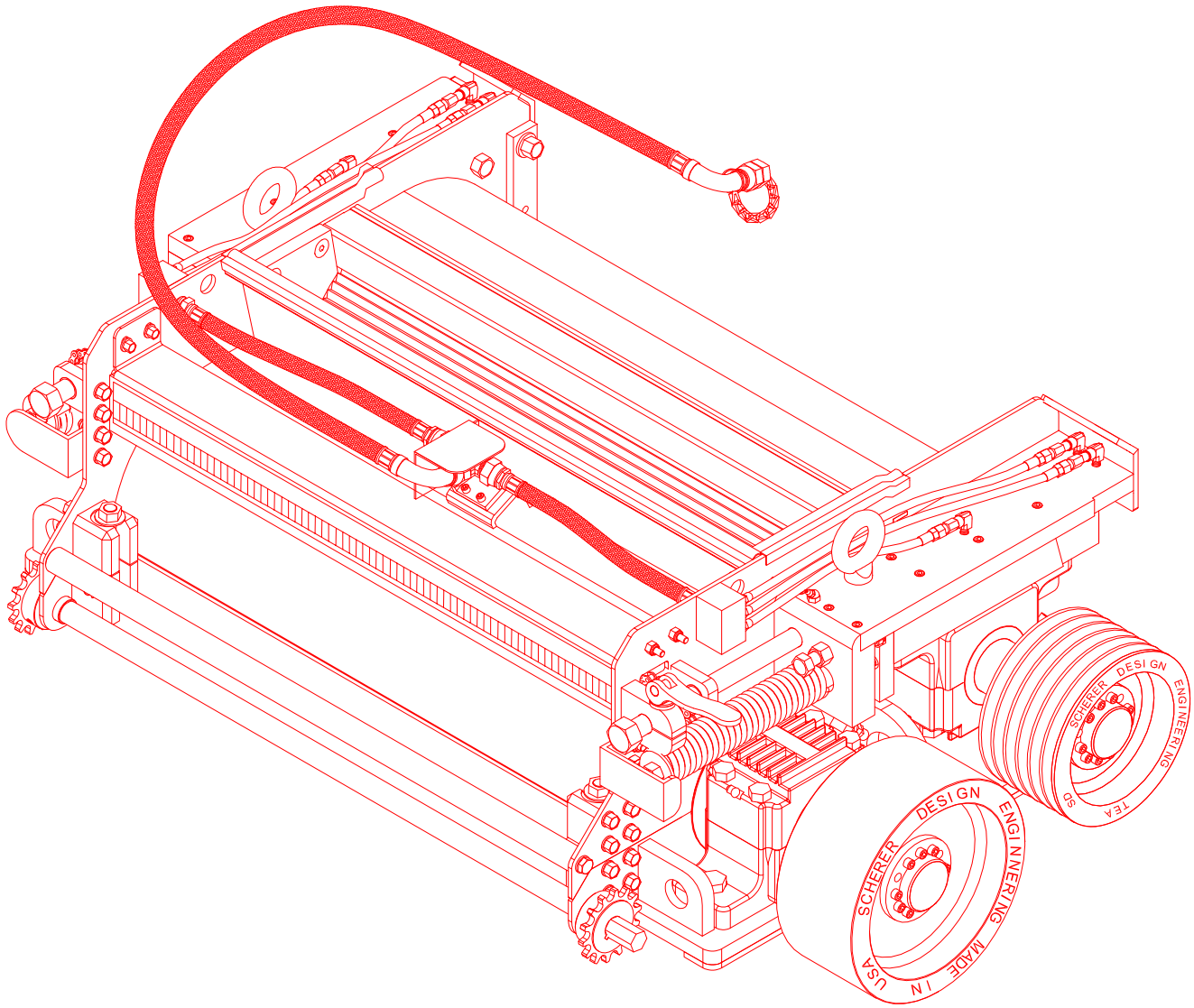
SCHERER H.P. PROCESSOR

U.S. Patent No. 7,681,384



MODEL # 2012

Scherer
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SCHERER
H.P. PROCESSOR

U.S. Patent No. 7,681,384

OPERATOR'S
AND PARTS MANUAL

SCHERER DESIGN
ENGINEERING, INC.

1-800-883-9790

FOREIGN PATENTS APPLIED FOR

Index

Introduction

We would like to take this opportunity to thank you and welcome you to the fine group of Scherer Processor owners. You have selected one of the many high quality and precision built processors that Scherer Design Engineering has to offer. Due to the success of the Scherer H.D. Processor, customers have asked us to develop and manufacture the Scherer H.P. Processor. Therefore, after years of designing and in-field success, Scherer Design Engineering is proud to offer the 2012 Scherer H.P. Processor.

This instruction manual contains specific operating, maintenance, and parts information to help you obtain the most satisfactory performance from your processor. This manual describes how to operate, maintain, and repair your processor.

Proper long-term performance of this equipment is possible only with the cooperation and attention of adequately trained operators and well informed maintenance personnel.

The factory carefully assembled, inspected and tested your processor. Before putting the processor into operation, please read the instruction manual carefully and study the correct operating procedures and become familiar with the total operating process and related machinery.

We are always trying to improve our product as much as possible. If you have any suggestions or concerns about how to make this processor better, feel free to give us a call at any time, your feedback is always welcomed.

The Scherer Design Engineering Team

Safety

Warning: Read and understand all of the following safety messages. Be familiar with general operating and maintenance instructions. Be sure to lock out the power supply before performing any maintenance and adjustments. The person performing the maintenance should be the only one with the ignition key for the cutter.

General Safety Practices,

Always observe safe operating practices around machinery. Most accidents are the result of carelessness or negligence. All rotating machinery is potentially dangerous. Guard and operate rotating machinery as required by applicable laws, regulations and good standard safety practices.

Before doing any maintenance on engine driven machinery, turn off ignition. Remember, the person doing the maintenance or adjustment should be the only one with the ignition key.

Use the proper tools for each maintenance task. Keep hoisting equipment in good condition and **DO NOT** stand under objects being hoisted. Keep a clean work area to ensure workers have good footing.

Inlet/Discharge Opening Hazard

The processor has an inlet and discharge opening. Injury will result if persons or objects fall into the inlet or discharge. A serious hazard exists if a person places their arm or any object into the inlet or discharge area of the processor. **DO NOT** remove protective guards.

Belt Drive Hazard

Be sure that the belt guards are in place before ever operating the processor.

Rotating Rolls Hazard

The rotating rolls are a severe hazard. The rolls turn at high speeds and operate with a grinding action that will pull objects between the rolls. Keep all body parts and all objects out of this area. **DO NOT** insert any part of your body or any tool into the roller area.

Eye Protection
Wear approved safety glasses when working around all equipment. Moving machinery can throw objects unexpectedly.

Head Protection
Wear an approved hard hat while installing the processor into and out of the machine. Falling objects or low overhead can cause serious injury.

Hearing Protection
Under normal operating conditions, this machine does not produce hazardous noise. However, the cutter itself is very noisy when operated at full throttle. Wear approved hearing protection as needed when working around equipment.

Installation

Before lifting the processor into place in the cutter, ensure that the latch blocks are snug, and hinge bolts are tight. Always use the certified lifting chains provided with the processor to lift the processor in and out of the cutter. Never stand under the processor when it is lifted overhead.

You can install the processor from the side or from the top. For ease of installation, remove the cross bar support that is bolted to the floor and to the discharge chute. Place processor in the cutter. If you have removed the cross bar support, please install it back into place at this time.

Slide the processor in the operating position, using the same clamping system that is in place for the original processor. Ensure the latch blocks on the processor are tight.

With the processor ahead and secured into the operating position, you now need to check proper pulley alignment. Do this by laying a straight edge along the main drive pulley and along the processor pulleys. If any adjustment needs to be done, please refer to keyless locking hub torque specifications in the back of this manual.

The roll gap was set at 4 mm and the scale has been marked at the 4 mm setting. Unless the gap has been changed, the roll adjustment should not have to be changed until some product has been run through it.

Install the provided oil mist system that came with your Scherer H.P. Processor. Connect all oil mister wiring. Finally, connect the oil mister to the processor, ensuring that the coupler is tight.

Roll Gap Adjustment

Once the processor is installed in the cutter and some product has been run through it, you may need to adjust the roll gap. To do this, you will need a 1 1/8" or 30mm socket and ratchet or breaker bar. Loosen the adjustment clamp lever on right side adjustment bolt. With the socket over the roll gap adjustment bolt, rotate the bolt clockwise to open the gap, and counter-clockwise to close the gap. You will not be able to adjust the rolls closer than .25mm (.010) because of the factory setting of the roll stops (prevents the rolls from hitting). **The processor is not intended to be run with the slide blocks against the roll stops.** When adjusting, watch pointer move across scale, each mark equals .25mm. When the adjustment is complete, make sure that the adjustment clamp lever is hand tightened. After you have a number of hours on your processor you may need to adjust your rolls together to compensate for wear. After a number of adjustments, and the pointer moves onto or near the red marks on scale, the adjustment bolts may become free from tension. If you still need to close your roll gap further you may have to clean behind the bearing slide plates and adjust roll stop bolts to allow for more movement.

LubriMist Maintenance

- Make sure to maintain an air pressure of 35psi at the LubriMist regulator.
- Oil fill is the plug located on the front of the LubriMist reservoir.
- Fill with oil until the oil level matches the full mark on the sight glass. **DO NOT OVERFILL!! LUBRIMIST WILL NOT FUNCTION PROPERLY IF IT IS FILLED ABOVE THE FULL MARK!!**
- We use Chevron ISO 32 100% synthetic oil (equivalent to SAE 10 weight). This is called turbine oil by some manufacturers. It is available from Scherer Design in gallon quantities.
- In very wet corn conditions, we recommend changing the oil in the bearings every two weeks and at the end of the season. To change the oil, remove the most convenient plug and drain. Refill the bearing housing with 3 oz. of fresh oil.
- **At the end of season, remove all water from regulator and air lines to prevent damage from freezing.**
- When removing the kernel processor, disconnect the braided steel hose from the LubriMist exhaust port and plug the end of the hose to keep dirt out. Also cap off the LubriMist exhaust port and turn off the air supply to the LubriMist.
- **THE LUBRIMIST SYSTEM SHOULD NOT BE PRESSURIZED IF THE EXHAUST PORT IS CAPPED OFF.**

LIMITED WARRANTY FOR SCHERER H.P. KERNEL PROCESSOR

IT IS EXPRESSLY AGREED THAT THE FOLLOWING WARRANTY IS GIVEN BY SCHERER DESIGN ENGINEERING, INC. IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, **INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE**, AND OF ANY OTHER OBLIGATION OR LIABILITY ON OUR PART OF ANY KIND OR NATURE WHATSOEVER.

No representative of ours has any authority to waive, alter, vary or add to the terms hereof without prior approval in writing, to our customer, signed by an officer of our company. It is expressly agreed that the entire warranty given to the customer is embodied in this writing; that this writing constitutes the final expression of the parties' agreement with respect to warranties; and that it is a complete and exclusive statement of the terms of the warranty.

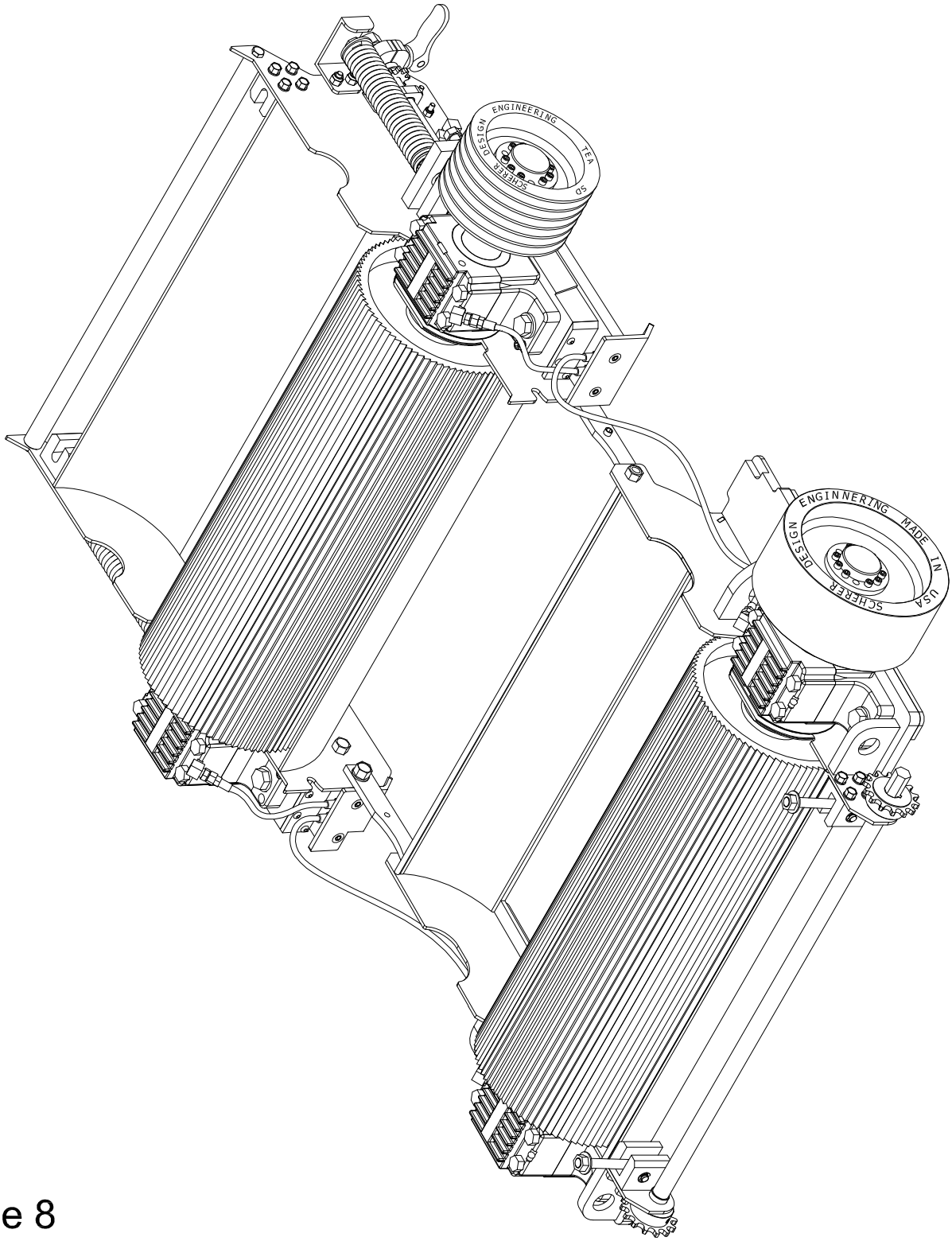
We warrant to our customers that all products manufactured by us will be free from any manufacturing defects at the time of shipment to our customer for a period of one (1) year from the date of shipment. All warranty claims must be submitted to us within ten days of discovery of defects within the warranty period, or shall be deemed waived. As to our products that are proven to have been defective at the time of shipment, and that were not damaged in shipment, the sole and exclusive remedy shall be repair or replacement of the defective parts or repayment of the proportionate purchase price for such products or parts, at our option. Replacement parts shall be shipped free of charge f.o.b. from our factory. This constitutes a full and complete statement of the warranty provided and the product is otherwise deemed to have been accepted AS IS and with all faults.

This warranty shall not apply to any product which has been subject to operator misuse; misapplication, neglect (including but not limited to improper maintenance and storage); accident; improper installation, modification (including but not limited to use of unauthorized parts or attachments), adjustment, repair or lubrication. Misuse also includes, without implied limitation, deterioration in the product or part caused by chemical action, wear caused by the presence of abrasive materials, improper lubrication, and failure to clean the processor area daily and to follow the lubrication instructions which are provided. Identifiable items manufactured by others but installed in or affixed to our product are not warranted by us but, bear only those warranties, express or implied, given by the manufacturer of that item, if any.

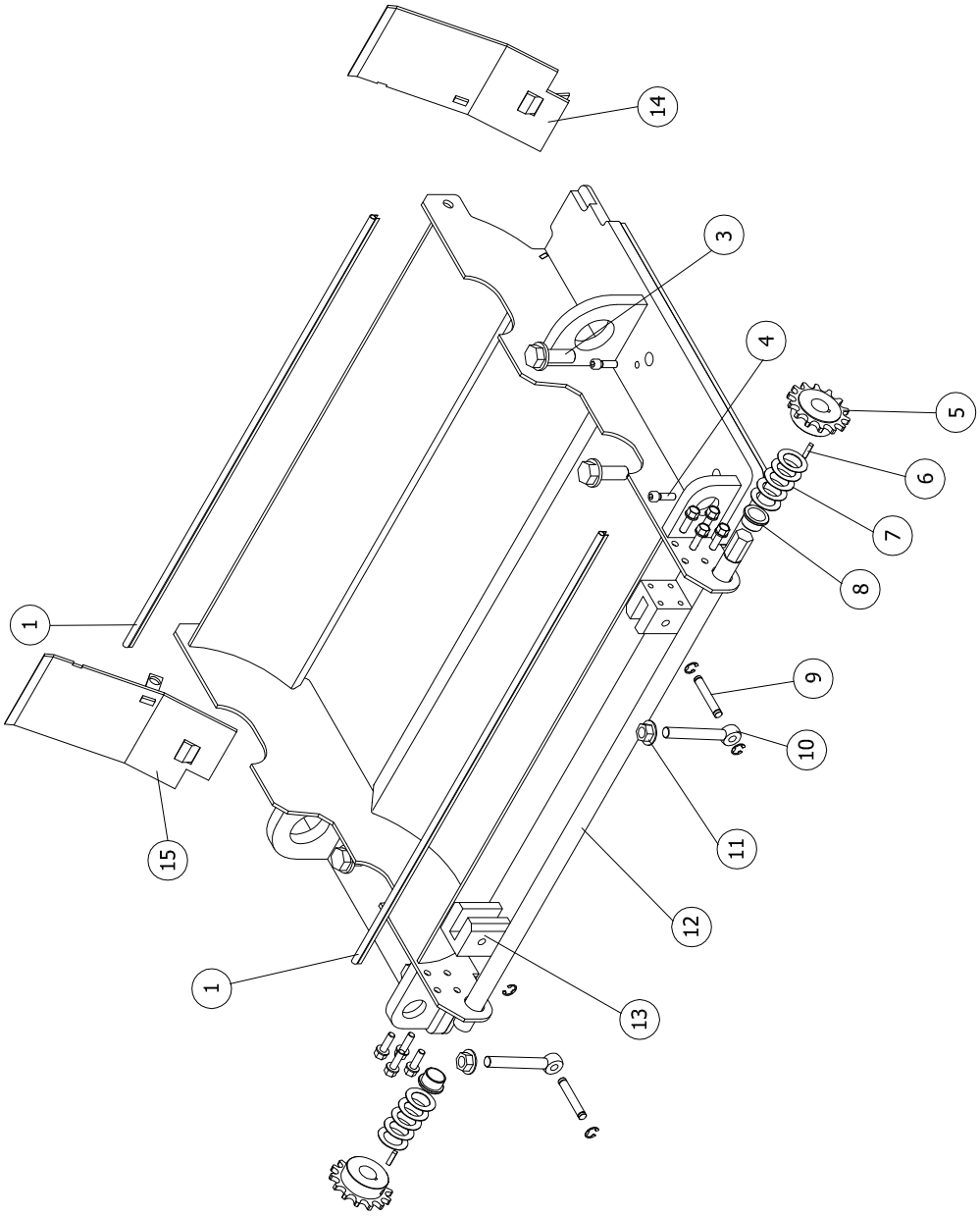
Responsibility for proper use, installation, and application of the Scherer H.P. Kernel Processor rests solely with customer and it is expressly agreed between the parties that our liability for any damages arising out of or related to this transaction, or the use of our product, whether in contract, tort, or based upon any state or federal claim whatsoever, is exclusively limited to the repair or replacement of the product, or the parts thereof by us, or to a refund of the proportionate purchase price. We will not be liable for any other injury, loss, damage or expense, whether direct or consequential, including but not limited to loss of use, income, profit, production, or increased costs of operation, or spoilage of or damage to material, arising in connection with the sale, installation, use of, inability to use, or the replacement of, or late delivery of, our product.

It is also expressly agreed that any cause of action for breach of any warranty must be brought within one year from the date of the breach. Nothing contained herein shall be deemed to abrogate any legal rights or defenses the Producer may have relative to this product.

Scherer H.P. Processor
Open View



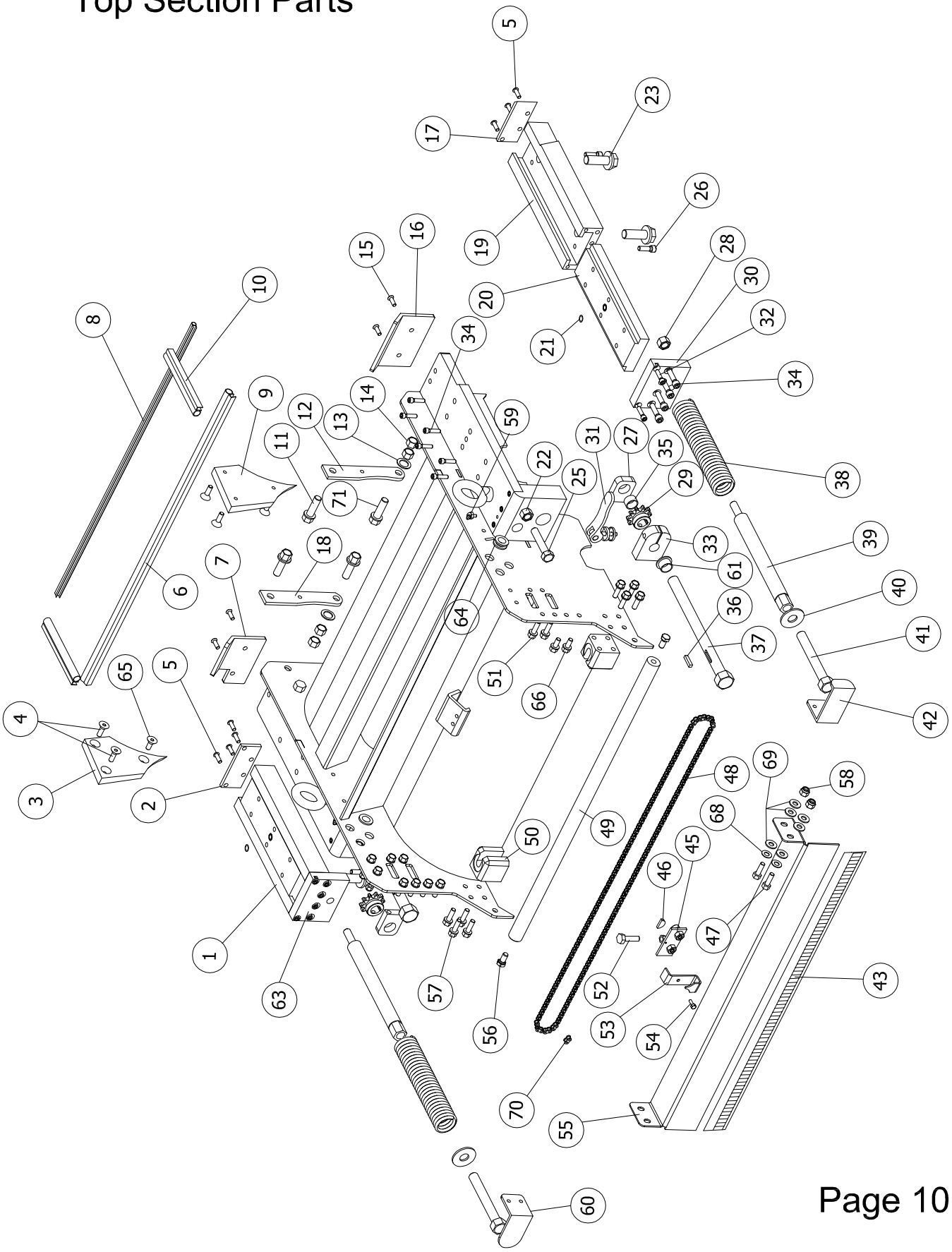
Scherer H.P. Processor
Bottom Section Parts



SCHERER H.P. PROCESSOR BOTTOM SECTION PARTS LIST

PRINT #	PART #	QTY. REQUIRED (PER PROCESSOR)	DESCRIPTION
1	TB1043	3	Front & Rear Shroud Seal
3	HPTB1010	8	.625 x 1.5 Bearing Housing Bolt
4	TB1008	8	.312 x 1 Bearing Housing Bolt
5	B1027	2	Position Drive Sprocket
6	B1016	4	Key
7	B1029	10	Sprocket Rod Washer
8	B1030	2	Position Rod Bushing
9	B1036	2	Latch Block Pin with Clips
10	B1037	2	Latch Block Eye Bolt
11	B1038	2	Latch Block Eye Bolt Nut
12	B1039	1	Position Drive Sprocket Rod
13	B1035	2	Lower Latch Block
14	HPT1075R	1	Right Temp. Sensor Guard
15	HPT1075L	1	Left Temp. Sensor Guard

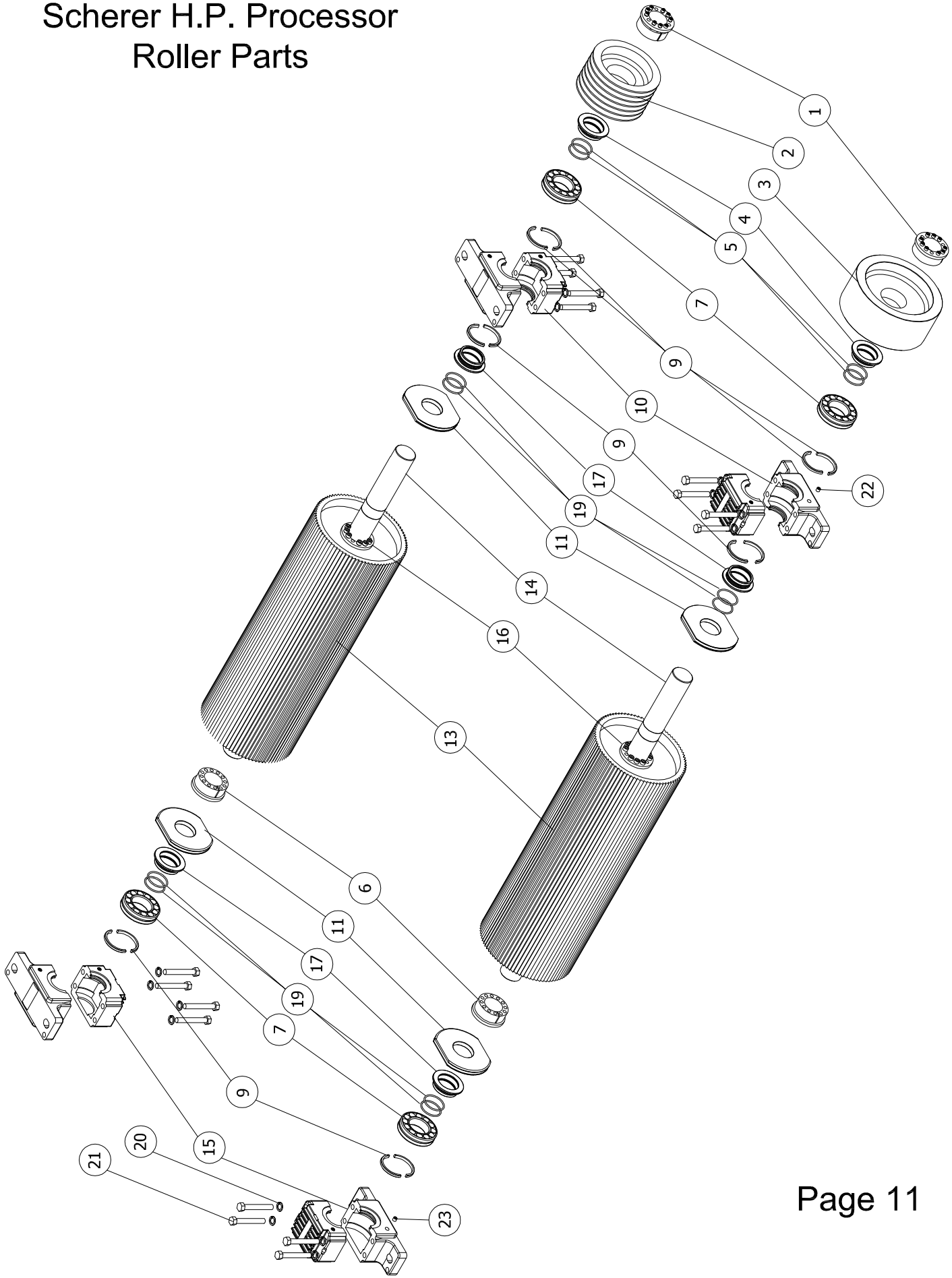
Scherer H.P. Processor
Top Section Parts



SCHERER H.P. PROCESSOR TOP SECTION PARTS LIST

PRINT #	PART #	QTY. REQUIRED (PER PROCESSOR)	DESCRIPTION
1	HPT1100	1	H.P. Left Outer Slide
	HPT1101	1	H.P. Complete Left Slide Assembly
2	HPT1002	1	H.P. Left Bearing Slide Front Cap
3	HPT1003	1	H.P. Left Cheek Plate
4	HPT1004	4	H.P. 3/4" Cheek Plate Bolt
5	HPT1005	7	Front Slide Cap Bolt
6	T1054	1	.625 90° Bulb Seal
7	HPT1007	1	Left Roll Over Protection Bracket
8	TB1043	3	Front & Rear Shroud Seal
9	HPT1009	1	H.P. Right Cheek Plate
10	HPT1010	2	H.P. 90° Side Bulb Seal
11	HPT1011-1	2	1/2 x 1 1/4" Hinge Bolt
12	HPT1012R	1	H.P. Right Hinge
13	HPT1013	2	H.P. Hinge Washer
14	HPT1014	4	H.P. Hinge Nut
15	HPT1015	4	Roll Over Protection Bracket Bolt
16	HPT1016	1	Right Roll Over Protection Bracket
17	HPT1017	1	H.P. Right Bearing Slide Front Cap
18	HPT1012L	1	H.P. Left Hinge
19	HPT1102	1	H.P. Right Outer Slide
	HPT1103	1	H.P. Complete Right Slide Assembly
20	HPT1104	2	H.P. Inner Slide
21	HPMT1105	2	Inner Slide O-Ring
22	HPT1025.1	1	Roll Stop Nut
23	HPTB1010	8	5/8 x 1 1/2" Bearing Housing Bolt
25	HPT1025	2	H.P. Roll Stop Bolt
26	TB1008	8	5/16 x 1" Bearing Housing Bolt
27	HPT1027	3	Adjustment Bolt Guide
28	B1009	2	Spring Rod Lock Nut
29	B1067	2	Plated Sprocket
30	HPT1030	1	H.P. Bearing Slide Right Rear Cap
31	HPT1031	1	Adjustment Clamp Lever
32	B1024	4	5/16 x 1" SHCS
33	HPT1033	1	Adjustment Clamp
34	B1023	20	3/8 x 1 1/4" SHCS
35	HPT1035	3	H.P. Adjustment Bolt Bushing
36	B1016	4	Key
37	HPT1037	2	H.P. Adjustment Bolt
38	HPT1038	2	H.P. Spring
39	B1003	2	Spring Rod
40	B1002	2	Spring Bolt Washer
41	B1001	2	Spring Bolt
42	HPT1042	1	Right Spring Guard
43	B1056	1	Roll Adjustment Reference Sticker
45	B1061	1	Chain Tensioner Bracket
46	B1060	1	Chain Tensioner Key
47	HPT1067	4	5/16 x 1" SS Bolt
48	HPT1048	1	H.P. Adjustment Chain
49	HPT1049	1	H.P. Lifting Rod
50	T1057	2	Top Latch Block
51	HPT1051	12	5/16 x 3/4" Bolt
52	B1064	1	7/16 x 1 1/4" Bolt
53	B1053	1	Roll Adjustment Pointer
54	B1065	1	1/4 x 3/8" Pointer Bolt
55	HPT1055	1	H.P. Chain Guard
56	T1058	2	Lifting Rod Bolt
57	TB1034	16	Latch Block Bolt
58	HPT1058	4	5/16" SS Nylok Nut
59	HPT1059	2	Grease Zerk
60	HPT1060	1	Left Spring Guard
61	HPT1061	1	H.P. Adjustment Bolt Bushing with Flange
63	HPT1063	1	H.P. Bearing Slide Left Rear Cap
64	HPT1106	2	Rubber Grommet
65	HPT1065	2	H.P. 5/8" Cheek Plate Bolt
66	HPT1066	4	5/16 x 1/2" Serrated Flange Bolt
68	HPT1068	4	SS Washer
69	HPT1069	12	Rubber Washer
70	B1076	1	Chain Connector Link
71	HPT1011-2	1	1/2 x 1 3/4" Hinge Bolt
*	HPT1039RL	1	Cheek Plate Kit
*	HPTB1075	1	Bulb Seal Kit

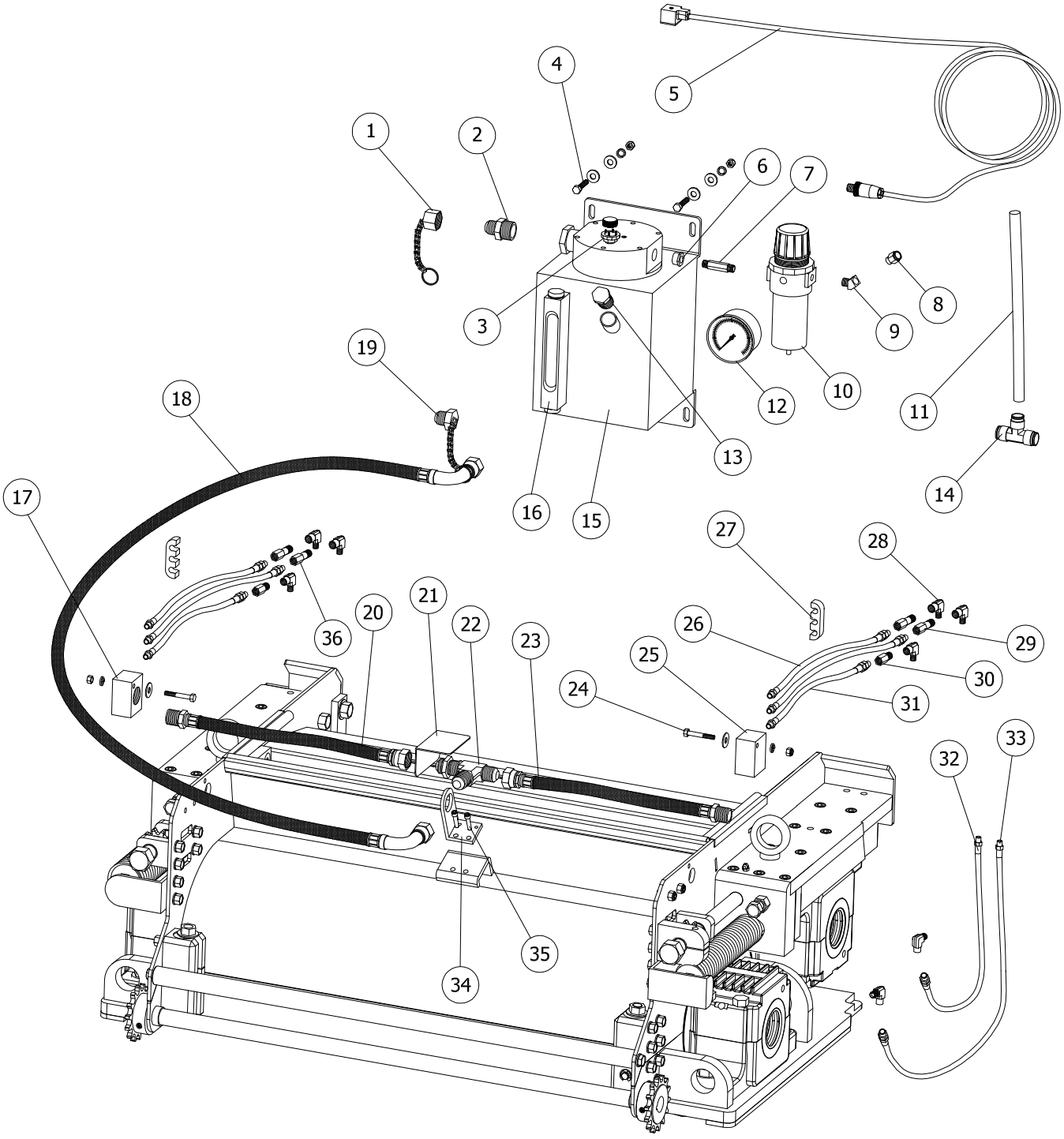
Scherer H.P. Processor
Roller Parts



SCHERER H.P. PROCESSOR ROLL PARTS LIST

PRINT #	PART #	QTY. REQUIRED (Per Processor)	DESCRIPTION
1	HPR1001	2	H.P. Pulley Locking Hub
2	HPR1002	1	H.P. Grooved Pulley
	HPR1002-7	1	H.P. Grooved Pulley (For 7 Groove Belt)
3	HPR1003	1	H.P. Smooth Pulley
	HPR1003-7	1	H.P. Smooth Pulley (For 7 Groove Belt)
4	HPR1004-54	2	H.P. Outside Housing Seal
5	HPR1005-54	4	H.P. Outside Housing Seal O-Rings
6	HPR1016	2	Idle Side Locking Hub
7	HPR1007	4	H.P. Roller Bearing Insert
9	HPR1009	12	H.P. Fiber Oil Seal
10	HPR1010	2	H.P. Drive Side Housing
11	HPR1011	4	H.P. Spool Seal
13	HPR1013	2	H.P. Roll with Shaft
14	HPR1014	2	H.P. Roll Shaft
15	HPR1015	2	H.P. Idler Side Housing
16	HPR1017	2	Drive Side Locking Hub
17	HPR1004-187	4	H.P. Inside Housing Seal
19	HPR1005-187	8	H.P. Inside Housing Seal O-Rings
20	R1231	16	Bearing Housing Lock Washer
21	R1230	16	Bearing Housing Bolt
22	R1236	8	Magnetic Drain Plug
23	R1235	16	Drain Plug
	HPR1000-110-C	1	H.P. Processor 110 Tooth Roll with Seals, Bearings & Housings
	HPR1000-145-C	1	H.P. Processor 145 Tooth Roll with Seals, Bearings & Housings
	HPR1000-110-C-NH	1	H.P. Processor 110 Tooth Roll with Seals, Bearings. *No Housings.
	HPR1000-145-C-NH	1	H.P. Processor 145 Tooth Roll with Seals, Bearings. *No Housings.
**	A0010	1	H.P. Bearing Puller

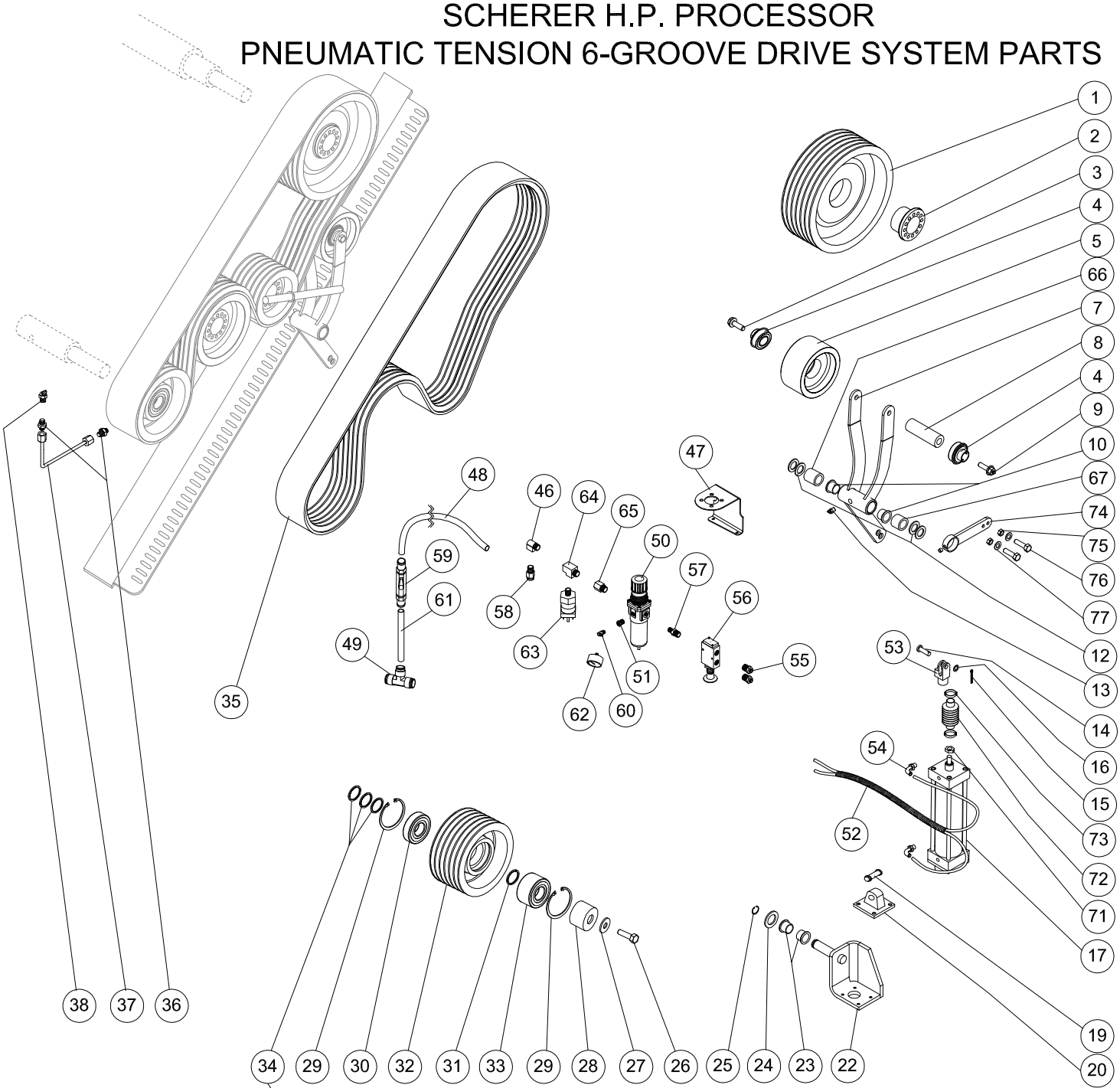
SCHERER H.P. PROCESSOR
LUBRICATION SYSTEM PARTS



SCHERER H.P. PROCESSOR LUBRICATION SYSTEM PARTS LIST

PRINT#	PART#	QTY. REQUIRED (Per Processor)	DESCRIPTION
1	OM-1006	1	Flared Cap
2	OM-1008	1	Reducing Bushing
3	OM-1010	1	Low Oil Switch
4	HPT1092	1	Oil Mister Mounting Hardware
5	OM-1013	1	Oil Switch Cable
6	OM-1018	1	Reducing Fitting
7	OM-1019	1	Regulator Fitting
8	OM-1004	1	12mm Push-Loc x 1/4" male
9	OM-1017	1	45˚ Fitting
10	OM-1011	1	Air Regulator
11	OM-1014	1	Air Supply Line
12	OM-1015	1	Regulator Gauge
13	OM-1016	1	Oil Fill Plug
14	HPD1349	1	12mm Push-Loc Tee
15	OM-1000	1	Oil Mist Generator
16	OM-1012	1	Sight Glass
17	HPT1080	1	Left Oil Mist Manifold
18	HPG1122	1	Main Oil Mist Hose
19	OM-1005	1	Flared Plug
20	HPG1121	1	Left Oil Mist Hose
21	HPT1087	1	Stainless Bulkhead Guard
22	HPT1082	1	Bulkhead Tee
23	HPG1120	1	Right Oil Mist Hose
24	HPT1091	1	Manifold Mounting Hardware
25	HPT1081	1	Right Oil Mist Manifold
26	HPG1117	4	16 3/8" Lubrication Line
27	G1111	2	Lubrication Line Clip
28	HPT1085	10	1/4" Street Elbow
29	OM-1001R	2	Right Misting Reclassifier
30	OM-1002	2	Condensing Reclassifier
31	HPG1119	2	10 1/8" Lubrication Line
32	HPG1110	2	16 3/4" Lubrication Line
33	HPG1102	2	21 3/4" Lubrication Line
34	HPT1090	1	Tee Bulkhead Mounting Bracket
35	HPT1093	2	Tee Bracket Mounting Bolt
36	OM-1001L	2	Left Misting Reclassifier

SCHERER H.P. PROCESSOR
PNEUMATIC TENSION 6-GROOVE DRIVE SYSTEM PARTS

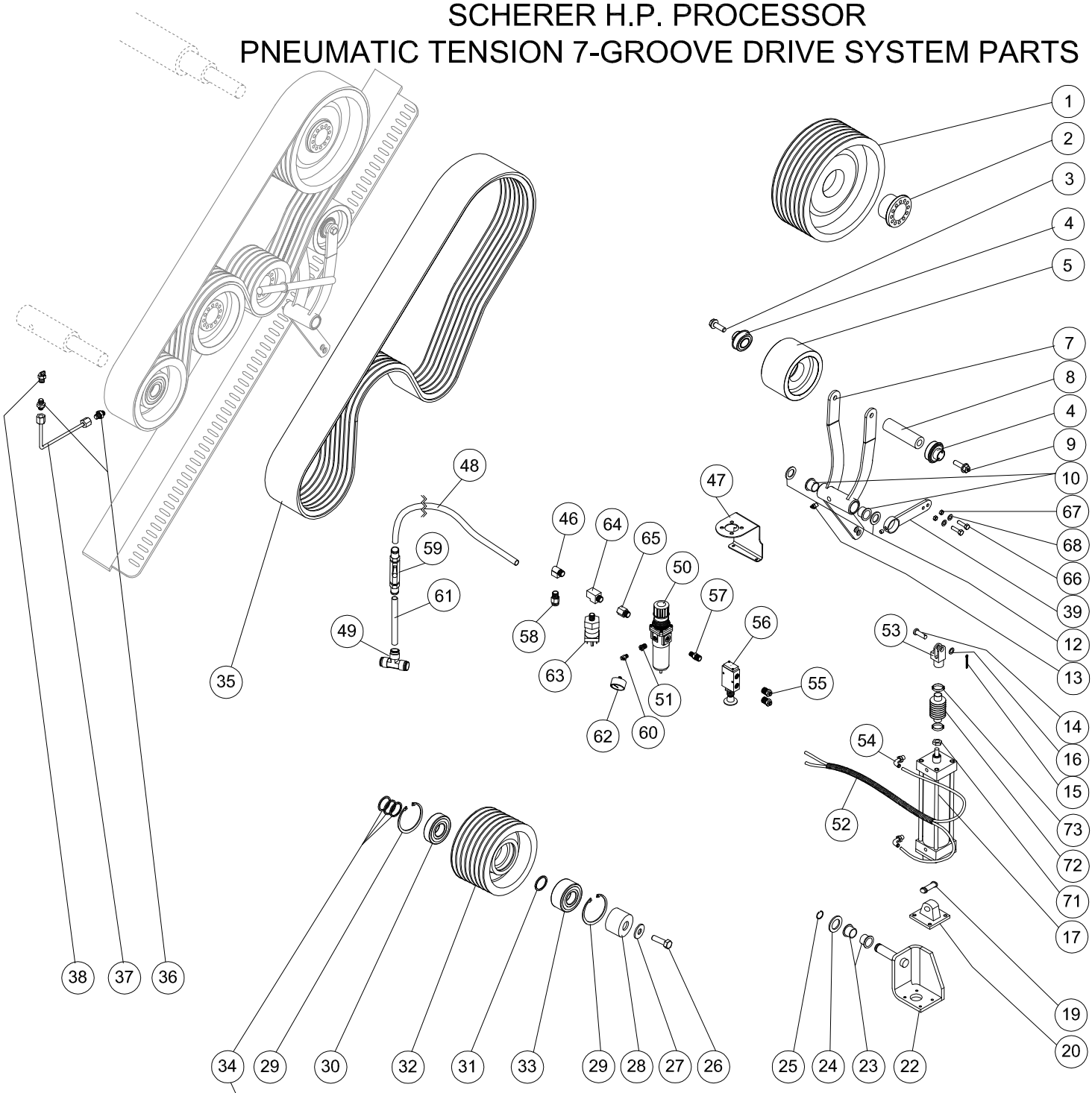


*Use spacer rings as needed.

SCHERER H.P. PROCESSOR PNEUMATIC TENSION 6-GROOVE DRIVE SYSTEM PARTS LIST

PRINT #	PART #	QTY. REQUIRED	DESCRIPTION
	HPD1300	1	Complete H.P. Drive Kit
1	D1301	1	Grooved Main Drive Pulley (For 6 Groove Belt)
2	D1302	1	45mm Locking Hub with Bolts
3	D1303	1	1/2 x 1" Bolt
4	D1304	2	ER16 Bearing
5	D1305	1	Tensioner Pulley (For 6 Groove Belt)
7	HPD1307	1	Tensioner Arm
8	D1308	1	Tensioner Pulley Shaft
9	D1309	1	1/2UNC x 1" Bolt with Grease Fitting
10	D1310	2	Tensioner Arm Bushings
12	D1312	4	Tensioner Arm Washers
13	D1313	1	Tensioner Arm Grease Zerk
14	HPD1314	1	7/16 x 1 1/4" Clevis Pin
	HPD1314-1	1	3/8 x 1 1/4" Clevis Pin (For OEM Fork)
15	D1315	1	Clevis Pin Cotter Key
16	D1316	1	Clevis Pin Washer
17	HPD1341	1	Pneumatic Tension Cylinder
*	HPD1398	1	Complete 4" Pneumatic Cylinder (Includes #'s: 17, 71, 72, 73, 53, 54)
19	HPD1343	1	Pneumatic Cylinder Pin
20	HPD1344	1	Pneumatic Cylinder Male Clevis
22	HPD1346-7	1	Pneumatic Tensioner Arm Bracket
23	D1323	2	Bracket Bushings
24	D1324	1	Bracket Shaft Washer
25	D1325-7	1	Bracket Shaft Snap Ring
26	D1326	1	16 x 45mm Bolt
27	D1327	1	16mm Washer
28	D1328	1	Idler Shaft Cap
29	D1329	2	Idler Pulley Snap Ring
30	D1330	1	6307 Sealed Bearing
31	D1331	1	Notched Spacing Washer
32	D1332	1	Idler Pulley (For 6 Groove Belt)
*	HPD1410		Complete 6 Groove Idler Pulley (Includes #'s: 29, 30, 31, 32, 33)
33	D1333	1	5307 Double Row Sealed Ball Bearing
34	D1334	3	Hardened Spacer Rings
35	HPD1335	1	H.P. Six Groove Banded Drive Belt
36	D1336	2	Grease Tube Male Adapter
37	D1337	1	Grease Tube
38	D1338	1	Grease Fitting
46	HPD1402	1	90˚ Fitting
47	HPD1403	1	Air Regulator Bracket
48	HPD1348	1	H.P. Long 12mm Air Hose
49	HPD1349	1	12mm "T" Fitting
50	HPD1404	1	Pressure Regulator
*	HPD1385	1	Complete H.P. Air Regulator and Actuator Assembly (Includes #'s: 46, 50, 51, 55, 56, 57, 58, 60, 62, 63, 64, 65)
51	HPD1405	1	Reducing Fitting
52	HPD1352	2	H.P. 1/4" Air Hose Assembly
53	HPD1353	1	Pneumatic Cylinder Fork
54	HPD1354	2	3/8" Swivel Fitting
55	HPD1406	2	3/8 to 1/4" Push-Loc Fitting
56	HPD1407	1	Air Actuator
57	HPD1408	1	3/8" Fitting
58	HPD1358	1	1/4" - 12mm Fitting
59	HPD1359	1	12mm Valve Assembly
60	G1109	1	135° Elbow
61	HPD1361	1	Short 12mm Hose
62	HPD1362	1	Air Pressure Gauge
63	HPD1370	1	Air Pressure Sensor
64	HPD1371	1	Air Pressure Sensor Tee
65	HPD1409	1	3/8" Fitting
66	HPD1387	1	Long Tensioner Spacer
67	HPD1386	1	Short Tensioner Spacer
71	HPD1391	1	1/2-20 Jam Nut
72	HPD1396	1	Bellow
73	HPD1399	2	Bellow Clips
74	HPD1373	1	Pivot Tube Brace
75	HPD1375	2	M10 Nut
76	HPD1374	2	M10 x 30 Bolt
77	HPD1376	2	10mm Washer

SCHERER H.P. PROCESSOR
PNEUMATIC TENSION 7-GROOVE DRIVE SYSTEM PARTS

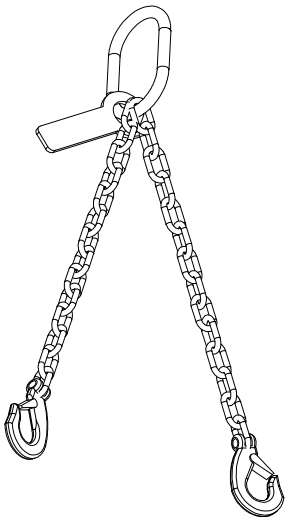


*Use spacer rings as needed.

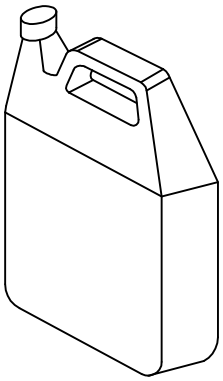
SCHERER H.P. PROCESSOR PNEUMATIC TENSION 7-GROOVE DRIVE SYSTEM PARTS LIST

PRINT #	PART #	QTY. REQUIRED	DESCRIPTION
	HPD1300-7	1	Complete H.P. Drive Kit (7 Groove Drive System)
1	D1301-7	1	Grooved Main Drive Pulley (For 7 Groove Belt)
2	D1302-7	1	55mm Locking Hub with Bolts
3	D1303	1	1/2 x 1" Bolt
4	D1304	2	ER16 Bearing
5	D1305-7	1	Tensioner Pulley (For 7 Groove Belt)
7	HPD1307-7	1	Tensioner Arm for 7 Groove
8	D1308-7	1	Tensioner Pulley Shaft for 7 Groove
9	D1309	1	1/2 x 1" Bolt with Grease Fitting
10	D1310	2	Tensioner Arm Bushings
12	D1312	2	Tensioner Arm Washers
13	D1313	1	Tensioner Arm Grease Zerk
14	HPD1314-7	1	5/8 x 1 3/4" Clevis Pin
15	D1315	1	Clevis Pin Cotter Key
16	D1316-7	1	Clevis Pin Washer
17	HPD1341	1	4" Pneumatic Tension Cylinder
*	HPD1398-7	1	Complete 4" Pneumatic Cylinder for 7-Groove System (includes #'s: 17, 71, 72, 73, 53, 54)
19	HPD1343	1	Pneumatic Cylinder Pin with Snap Rings
20	HPD1344	1	Pneumatic Cylinder Male Clevis
22	HPD1346-7	1	Pneumatic Tensioner Arm Bracket
23	D1323	2	Bracket Bushings
24	D1324	1	Bracket Shaft Washer
25	D1325-7	1	Bracket Shaft Snap Ring
26	D1326	1	16 x 45mm Bolt
27	D1327	1	16mm Washer
28	D1338-7	1	Idler Shaft Cap for 7 Groove
29	D1329-7	2	Idler Pulley Snap Ring
30	D1330-7	1	6308 Sealed Bearing
31	D1331-7	1	Notched Spacing Washer for 7 Groove
32	D1332-7	1	Idler Pulley (For 7 Groove Belt)
*	HPD1410-7	1	Complete 7 Groove Idler Pulley (includes #'s: 29, 30, 31, 32, 33)
33	D1333-7	1	5308 Double Sealed Bearing
34	D1334-7	3	Hardened Spacer Rings
35	HPD1335-7	1	H.P. 7 Groove Banded Drive Belt
36	D1336	2	Grease Tube Male Adapter
37	D1337	1	Grease Tube
38	D1338	1	Grease Fitting
39	HPD1373	1	Pivot Tube Brace
46	HPD1402	1	90˚ Fitting
47	HPD1403	1	Air Regulator Bracket
48	HPD1348	1	H.P. Long 12mm Air Hose
49	HPD1349	1	12mm "T" Fitting
50	HPD1404	1	Pressure Regulator
*	HPD1385	1	Complete H.P. Pressure Regulator and Actuator Assembly (includes #'s: 46, 50, 51, 55, 56, 57, 58, 60, 62, 63, 64, 65)
51	HPD1405	1	Reducing Fitting
52	HPD1352	2	H.P. 1/4" Air Hose
53	HPD1353-7	1	Pneumatic Cylinder Fork for 7 Groove
54	HPD1354	2	3/8" Swivel Fitting
55	HPD1406	2	3/8 to 1/4" Push-Loc Fitting
56	HPD1407	1	Air Actuator
57	HPD1408	1	3/8" Fitting
58	HPD1358	1	1/4" - 12mm Fitting
59	HPD1359	1	12mm Valve Assembly
60	G1109	1	135° Elbow
61	HPD1361	1	Short 12mm Hose
62	HPD1362	1	Air Pressure Gauge
63	HPD1370	1	Air Pressure Sensor
64	HPD1371	1	Air Pressure Sensor Tee
65	HPD1409	1	3/8" Fitting
66	HPD1374	2	M10 x 30 Bolt
67	HPD1375	2	M10 Nut
68	HPD1376	2	10mm Washer
71	HPD1391	1	1/2-20 Jam Nut
72	HPD1396	1	Bellow
73	HPD1399	2	Bellow Clips

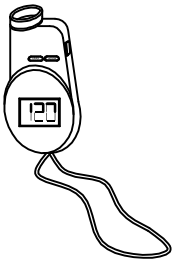
SCHERER H.P. PROCESSOR
ACCESSORY PARTS



LIFT CHAIN
A0003



1 GAL. SYNTHETIC OIL
A0006



LASER TEMP GUN
A0008

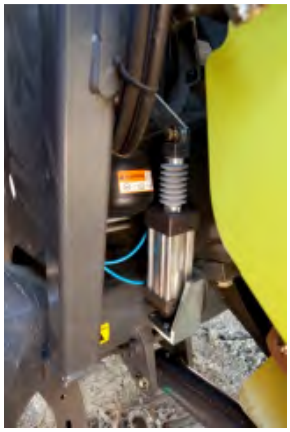
NOT PICTURED:

A0010: H.P. BEARING PULLER

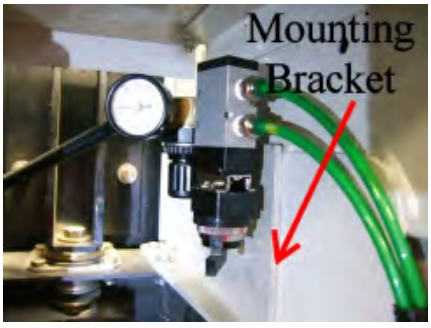
A0011: LASER ALIGNMENT TOOL

Pneumatic System Install

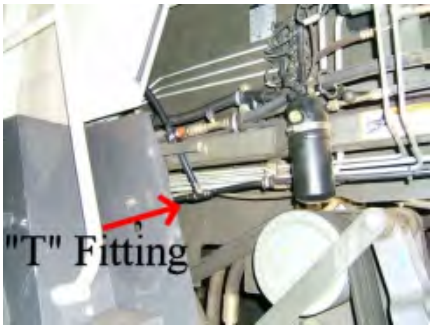
1. Install pneumatic cylinder with provided hardware as shown.



2. Install regulator mounting bracket as shown on adjacent wall to right of chute. Route air hoses down to pneumatic cylinder. The actuator switch has a spring set position that it wants to hold to. Make sure this position puts the belt in tension. The ¼ inch hoses can be switched in order to get the desired position. Set pressure to 80-85 psi for 6-Groove Drives, 90-95 psi for 7-Groove.



3. Connect supply hose to the CLAAS air hose as shown, using provided “T” fitting. You will have to cut ¾” out of the CLAAS hose in order to install “T” fitting. Route supply hose up and between cab and chute using provided wire-ties in order to connect to the provided air pressure regulator.



H.P. 6-groove Drive Kit Install

1. Remove right front tire from the forage harvester.

2. Remove shield from wheel well.

3. Install grease tube (D1337) with the grease tube male adapters (D1336) to the base of the idler shaft on the forage harvester. Then install the grease fitting (D1338). The grease tube will need to be bent and formed by hand to fit correctly. Fill the grease tube with grease using a grease gun till the grease comes out of the hole on the shaft.

4. Install main drive idle pulley (D1332). The idle shaft will have to be cleaned and you may need to use emery cloth and a degreaser to ensure a smooth surface for the bearing to slide on. 3 spacers (D1334) are provided to be placed on the shaft prior to installing the idler pulley. The use of these spacers may depend on the alignment of the belt and pulley system. Spacers can be added or taken away as needed.

5. Install idler shaft cap (D1328) with a 16mm washer (D1327) and a 16 x 45mm bolt (D1326) and torque to 80 ft/lbs. After the pulley is installed, give the grease zerk 2 pumps. The idler pulley comes pre-greased from the factory.

6. Install grooved main drive pulley (D1301) with a 45mm locking hub (D1302) on the accelerator shaft of the forage harvester. Again the shaft will need to be cleaned with a degreaser and emery cloth may need to be used to get a clean and smooth surface to ensure a secure lock to the pulley. While installing the main drive pulley, insert the locking hub completely into the center of the main drive pulley making sure that the shoulder of the locking hub is in contact with the center disc of the pulley. Place the main drive pulley onto the accelerator shaft with the locking hub still in place and align the main drive pulley to the lower idler pulley since the idler pulley is fixed. If proper alignment is not obtained, spacers (D1334) will need to be added or taken away to facilitate the proper alignment of the system. It is critical to obtain alignment ±1/16 in. After the pulleys have been properly aligned, the 45mm locking hub (D1302) will need to be tightened. Tighten bolts with the shoulder of the locking hub firmly pressed into the center disc of the pulley. Torque bolts to 35 ft/lbs. Torque bolts in a clockwise rotation and go around the locking hub 3 times to ensure proper torque. Alignment can also be made easier by using a laser alignment tool (A1010) available through our shop.

7. Install the tension arm (HPD 1307). The shaft may need to be cleaned with a degreaser and you may need to use emery cloth to ensure that the shaft is clean and smooth. The tension arm can be slid on to the shaft and washers (D1312) are provided for alignment as needed.

8. Mount the tension arm bracket (HPD 1346-7) in place of the spring tension bracket on the forage harvester. Bushings (D1323), a washer (D1324), and a snap ring (D1325-7) are provided if needed.

9. Install the pneumatic tension cylinder (HPD 1341). The base of the cylinder should be connected to the tension arm bracket (HPD 1346-7) and the other end should be connected to the tension arm (HPD 1307). Make sure that the swivel fittings (HPD 1354) are facing the rear of the forage harvester when the pneumatic cylinder is installed. This allows for access to the cylinder and fittings from inside the forage harvester.

10. Set the processor pulleys to align with the drive system. Once the Scherer Processor is in place and properly aligned; the grooved processor pulley (HPR1002) should be loosened and aligned with the main drive grooved pulley (D1301) and the idler pulley (D1332). This alignment is very critical and should be within ±1/16 in. After the grooved processor pulley (HPR 1002) is in place, the smooth processor pulley (HPR 1003) can be aligned to the rest of the drive system. The locking hubs on the processor should be tightened the same way as the main drive pulley locking hub making sure that the shoulder of the locking hub is pressed firmly against the center disc of the pulley. Torque the locking hubs to 35 ft/lbs. Torque in a clockwise motion and go around tightening every bolt 3 times. This will ensure all bolts are at the appropriate torque.

H.P. 7-groove Drive Kit Install

1. Remove right front tire from the forage harvester.

2. Remove shield from wheel well.

3. Install grease tube (D1337) with the grease tube male adapters (D1336) to the base of the idler shaft on the forage harvester. Then install the grease fitting (D1338). The grease tube will need to be bent and formed by hand in order to fit correctly. Fill the grease tube with grease using a grease gun till the grease comes out of the hole on the shaft.

4. Install main drive idle pulley (D1332-7). The idle shaft will have to be cleaned and you may need to use emery cloth and a degreaser to ensure a smooth surface for the bearing to slide on. 3 spacers (D1334-7) are provided to be placed on the shaft prior to installing the idler pulley. The use of these spacers may depend on the alignment of the belt and pulley system. Spacers can be added or taken away as needed.

5. Install idler shaft cap (D1338-7) with a 16mm washer (D1327) and a 16 x 45mm bolt (D1326) and torque to 80 ft/lbs. After the pulley installed, give the grease zerk 2 pumps. The idler pulley comes pre-greased from the factory.

6. Install grooved main drive pulley (D1301-7) with a 55mm locking hub (D1302-7) on the accelerator shaft of the forage harvester. Again the shaft will need to be cleaned with a degreaser and emery cloth may need to be used to get a clean and smooth surface to ensure a secure lock to the pulley. While installing the main drive pulley, insert the locking hub completely into the center of the main drive pulley making sure that the shoulder of the locking hub is in contact with the center disc of the pulley. Place the main drive pulley onto the accelerator shaft with the locking hub still in place and align the main drive pulley to the lower idler pulley since the idler pulley is fixed. If proper alignment is not obtained, spacers (D1334-7) will need to be added or taken away to facilitate the proper alignment of the system. It is critical to obtain alignment ±1/16 in. After the pulleys have been properly aligned, the 55mm locking hub (D1302-7) will need to be tightened. Tighten bolts with the shoulder of the locking hub firmly pressed into the center disc of the pulley. Torque bolts to 35 ft/lbs. Torque bolts in a clockwise rotation and go around the locking hub 3 times to ensure proper torque. Alignment can also be made easier by using a laser alignment tool (A1010) available through our shop.

7. Install the tension arm (HPD 1307-7). The shaft may need to be cleaned and you may need to use emery cloth and a degreaser to ensure that the shaft is clean and smooth. The tension arm can be slid on to the shaft and washers (D1312) are provided for alignment as needed.

8. Install the pivot tube brace (HPD 1373).

9. Mount the tension arm bracket (HPD 1346-7) in place of the spring tension bracket on the forage harvester. Bushings (D1323), a washer (D1324), and a snap ring (D1325-7) are provided if needed.

10. Install the pneumatic tension cylinder (HPD 1341). The base of the cylinder should be connected to the tension arm bracket (HPD 1346-7) and the other end should be connected to the tension arm (HPD 1307-7). Make sure that the swivel fittings (HPD 1354) are facing the rear of the forage harvester when the pneumatic cylinder is installed. This allows for access to the cylinder and fittings from inside the forage harvester.

11. Set the processor pulleys to align with the drive system. Once the Scherer Processor is in place and properly aligned; the grooved processor pulley (HPR1002-7) should be loosened and aligned with the main drive grooved pulley (D1301-7) and the idler pulley (D1332-7). This alignment is very critical and should be within ±1/16 in. After the grooved processor pulley (HPR 1002-7) is in place, the smooth processor pulley (HPR 1003-7) can be aligned to the rest of the drive system. The locking hubs on the processor should be tightened the same way as the main drive pulley locking hub making sure that the shoulder of the locking hub is pressed firmly against the center disc of the pulley. Torque the locking hubs to 35 ft/lbs. Torque in a clockwise motion and go around tightening every bolt 3 times. This will ensure all bolts are at the appropriate torque.

H. P. Roll Change Instructions

1. Remove processor from the forage harvester. A quick power wash will also help keep things clean and free from debris.

2. Take a measurement from the frame to the pulley on the roll to be replaced so you know where to place the pulley on the new roll since pulley alignment is critical.

3. Clean the bolt heads of the locking hub and remove the pulley from the roll that needs to be replaced.

4. Loosen the two latch block eye bolts (B1037).

5. Loosen the four hinge bolts (HPT1011).

6. Open processor so the rolls are exposed.

7. Disconnect and remove the temp. senders and the oil line fittings from the bearing castings of the roll to be replaced. If you have problems getting the oil fittings loose, the female end of a ½" ratchet extension can be slid over the oil fitting and may be used to loosen the oil fitting.

8. Remove bearing housing bolts (TB1008) and (HPTB1010).

9. Remove old roll and clean the bearing casting surface on the frame of the processor from debris.

10. Install new roll and use bearing housing bolts (TB1008) to align the bearing castings and torque to 18 ft/lbs. The drive side bearing casting will be locked in place so align the drive side bearing casting first. The idle side bearing casting will slide in the casting so the idle side bearing casting will be able to be slid into place and align with the bolt holes after the drive side is in place.

11. Install bearing housing bolts (HPTB1010) and torque to 170 ft/lbs.

12. Install oil fittings and oil lines as well at the temp. senders.

13. Close the processor and watch oil lines and wires so they don't get pinched between the two halves of the frame.

14. Tighten 1/2" hinge bolts (HPT1011) and torque to 70 ft/lbs.

15. Tighten latch block eye bolts (B1037) and torque to 65 ft/lbs.

Instructions for H.P. Bearing Removal and Installation

Bearing Removal

1. To disassemble housing, in order to remove bearing, remove the 4 bolts on housing as seen in Fig. 1A. Tap on feet of housing with a soft mallet to separate the two halves. *****Note: Keep the 2 halves of housing together as they are machined in pairs and are numbered accordingly.**

Fig. 1A

2. To remove bearing, place the bearing removal tool(A1009) over bearing and shaft and remove bearing as shown in Fig. 2A **(If there is a snap ring present, be sure to remove it prior to pulling bearing)**

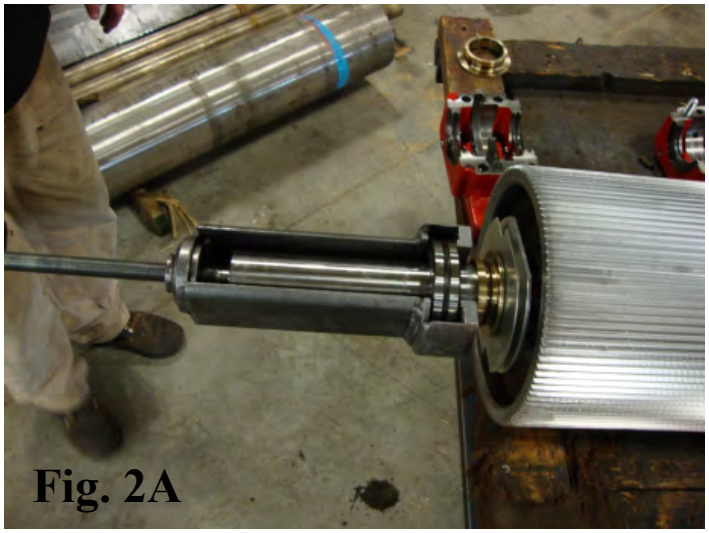


Fig. 2A

Bearing Installation

Please follow these instructions and SKF Bearing instructions to get the optimum performance from your bearings.

3. Slide on spool seal, hub side in. You can use a small amount of grease on shaft and be sure your spool seal is in good condition (See Fig. 1A).

4. Slide on 2 3/16" bearing housing seal, using grease and making sure 2 "O" rings are in place. (See Fig. 2A).

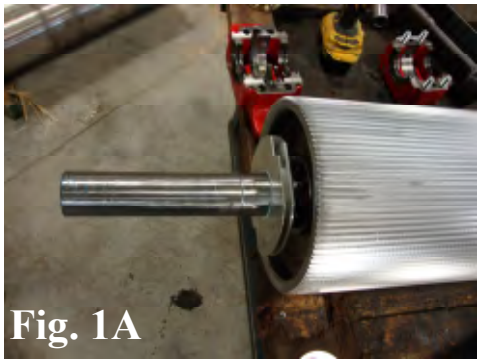


Fig. 1A

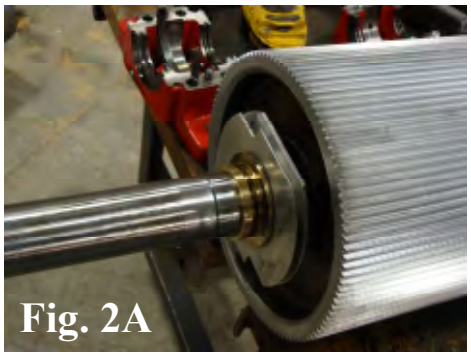


Fig. 2A

5. Heat bearing to 230 degrees F. (See Fig. 3A)

6. Slide bearing onto shaft all the way to the relief groove. If the bearing gets jammed, pull the bearing off again with the removal tool and re-heat the bearing. (See Fig. 4A)


Fig. 3A

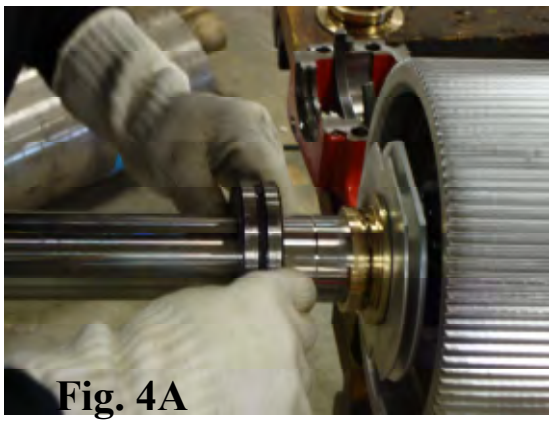
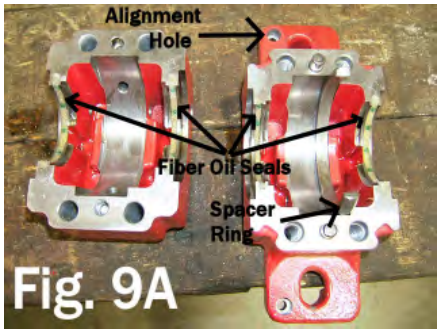


Fig. 4A

Bearing Installation

7. Slide on 54 mm bearing housing seal. (Fig. 5A)

8. On short end you will not use an outside seal, as the housing end is closed as seen in 9B.



9. The housings are next. In Drive End Housing, place spacer ring in groove opposite of small alignment hole (See Fig. 9A). In Short End Housing, no spacer ring is required (See Fig. 9B). Install fiber oil seals as shown in Fig. 9A and Fig. 9B. Install with marked side facing toward roll shaft. Trim off any excess fiber material with utility knife.

Bearing Installation

10. Bearing housings are machined as matched and numbered pairs. **THE TOP AND BOTTOM OF HOUSING MUST HAVE THE SAME NUMBER.**

11. Install lower housing. Install cap on lower housing by tapping in place with a soft mallet. (See Fig. 11A, 11B & 11E for drive end installation. See Fig. 11C, 11D & 11E for short end install.)

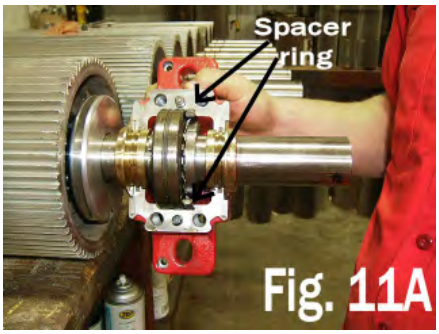


Fig. 11A

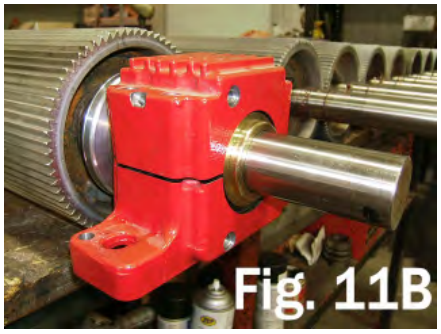


Fig. 11B

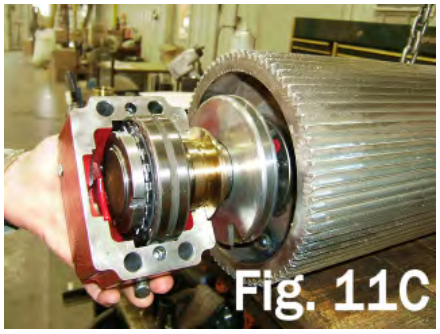


Fig. 11C

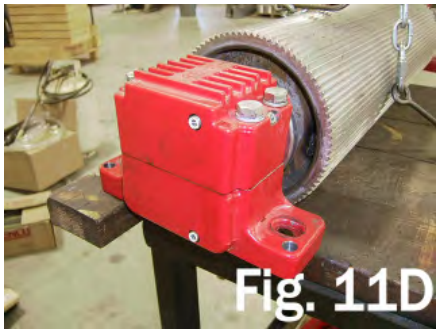


Fig. 11D

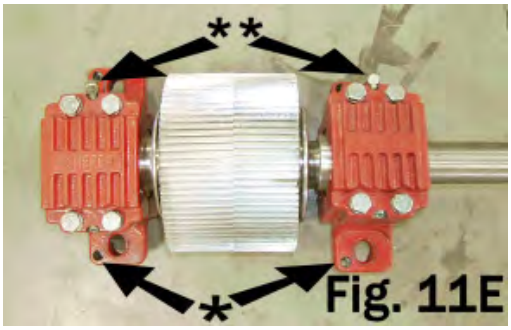


Fig. 11E

*** With Drive End of shaft on right side, be sure alignment hole location corresponds with the location shown in Fig. 11E. Holes are in this position for both rolls.**

12. Tighten bolts and check for free movement of bearing within the housing. After bolts are tight, on short shaft end, you should be able to slide the entire bearing housing in and out 3/8 of an inch by hand. **THIS MOVEMENT IS IMPORTANT.**

13. Fill bearing housing with 3 oz. of oil by using a squirt bottle, small funnel, 15 pumps with manual oiler, or whatever method you find suitable. Repeat this with all housings

Common H.P. Torque Specs

Bearing Housing Bolt (HPTB1010)	170 ft/lbs
Bearing Housing Bolt (TB1008)	18 ft/lbs
Bearing Housing Bolt (R1230)	75 ft/lbs
Spring Rod (B1003)	220 ft/lbs
Spring Bolt (B1001)	210 ft/lbs
Latch Block Eye Bolt Nut (B1038)	65 ft/lbs
Hinge Bolt (HPT1011)	70 ft/lbs
Idler Pulley Bolt (D1326)	80 ft/lbs

Common H.D. Torque Specs

Bearing Housing Bolt (TB1010)	170 ft/lbs
Bearing Housing Bolt (TB1008)	18 ft/lbs
Bearing Housing Bolt (R1230)	75 ft/lbs
Spring Rod (B1003)	220 ft/lbs
Spring Bolt (B1001)	210 ft/lbs
Latch Block Eye Bolt Nut (B1038)	65 ft/lbs
Hinge Bolt (B1048)	50 ft/lbs
Idler Pulley Bolt (D1326)	80 ft/lbs

Maintenance Intervals

1. After your Scherer Processor is installed

-Set your roll gap (See roll gap adjustment on page 5)

-Pass product through the machine, at least 5 loads under full power.

- Adjust rolls to your processing needs; however, The Scherer Processor is not intended to be run against the roll stops so adjust accordingly.

-Check adjustments 5 to 10 hours later to ensure adjustments are holding at desired position. Check pulley alignment and make sure locking hubs are firmly in place.

-Check air tension on drive belt and set air pressure according to specific model.

6-groove drive: 80 to 85psi

7-groove drive: 90 to 95psi

2. 50 Hours

-Grease adjustment bolt zerks on processor (2 pumps)

-Grease lower idler bearings on drive system (D1338) and tensioner pulley (D1309) 2 pumps each.

-Visually inspect for damage to springs, bolts, shafts, pulleys, wiring, oil lines, etc.

3. 250 Hours

-Visually inspect for damage to springs, bolts, shafts, pulleys, wiring, oil lines, etc.

-Roll back processor and visually inspect rolls, roll gap, and the overall condition of the processor.

-If roll gap is wider at one end, this could be an indication of a bearing failure or the rolls just need to be brought back to parallel.

4. End of Season **(VERY IMPORTANT)**

-End of season maintenance will help reduce bearing failures and greatly reduce down time while harvesting.

-Power wash the processor and get it as clean as possible.

-Immediately after drying processor, open processor to expose bearing castings and rolls.

-Remove the tops of the bearing castings with a soft mallet and inspect the condition of the oil and bearing. Be very careful with the mating surfaces of the castings since they are machined surfaces and keep the top half with the bottom half since they are machined as a mating pair and are numbered accordingly.

-If there is no contamination, simply remove the old oil and replace the felt seals (HPR1009).

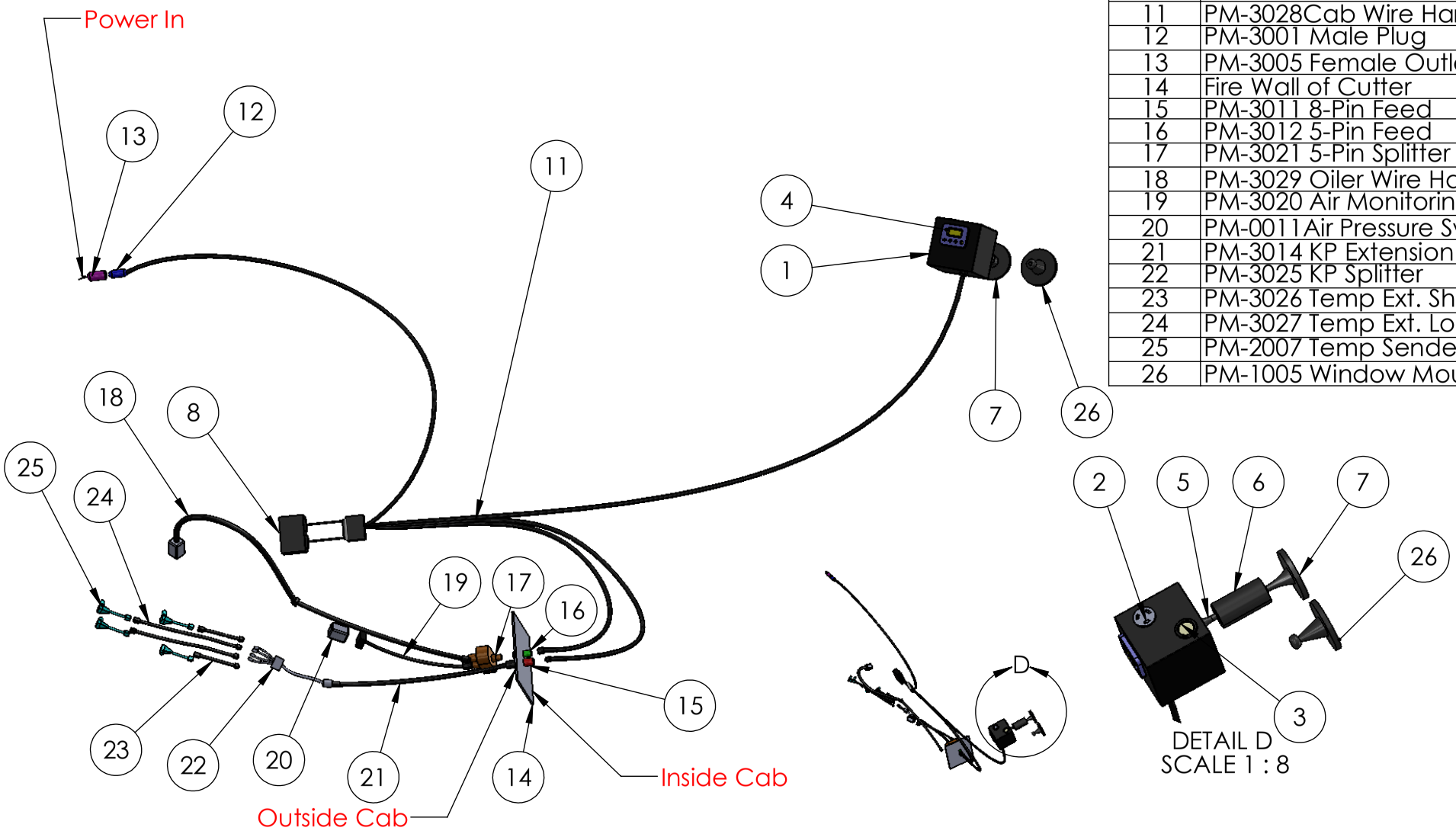
-If contamination is present, the bearing casting needs to be removed and cleaned thoroughly. The oil line and the temp sender should be removed in order to clean the casting. New felt can then be installed. The bearing may also need to be replaced if there is a substantial amount of contamination in the bearing casting. An inspection of the bearing rollers may also help determine if the bearing needs to be replaced.

-Make sure all bearings get 3 oz. of fresh ISO 32 oil after they have been inspected or changed.

-Inspect spool seal (R1210) for wear.

Scherer Sentry System
PM-3000

Location of Parts	
1	PM-3024 Alarm Enclosure
2	PM-3003Audible Alarm
3	PM-3002 Mute Button
4	PM-2002 Display
5	PM-1008 Enclosure Mount
6	PM-1006 Mount Arm
7	PM-1007 Fixed Post Mount
8	PM-2003 Control Box
11	PM-3028Cab Wire Harness
12	PM-3001 Male Plug
13	PM-3005 Female Outlet
14	Fire Wall of Cutter
15	PM-3011 8-Pin Feed
16	PM-3012 5-Pin Feed
17	PM-3021 5-Pin Splitter
18	PM-3029 Oiler Wire Harness
19	PM-3020 Air Monitoring Wire
20	PM-0011Air Pressure Switch
21	PM-3014 KP Extension Wire
22	PM-3025 KP Splitter
23	PM-3026 Temp Ext. Short
24	PM-3027 Temp Ext. Long
25	PM-2007 Temp Sender Asbly.
26	PM-1005 Window Mount



Scherer Sentry Operational Guidelines

1) The Sentry is set up to have 2 levels of alarm: warning and shutdown.
2) Warnings will only provide an amber light on the left corner of the display and an alarm screen with a description of the alarm.

   Warnings - bearing temps > 180° but < 200°F, oil alarm < 10 minutes.
3) Shutdown alarms will provide an alarm screen with a description of the alarm, a red light at the top right corner of the display, and an audible alarm.

   Shutdown - bearing temps > 200°F, oil alarm > 10 minutes, system air pressure < 90 PSI.
4) To silence the audible alarm depress the lit button next to the horn on top of the display. The audible alarm will be silenced for 5 minutes. If another alarm comes in during the 5 minutes you **will not** receive another audible alarm.
5) To clear the alarm screen so you can resume monitoring bearing temps press the 'Enter' button on the display.
6) Normal operating range (after break-in) is 120°-175°F.

NOTE – The sentry will display a description screen for every warning or alarm received even if the issue has been resolved. If neither the amber nor red light on top of the Sentry is illuminated there is **no longer** an alarm situation. It makes you acknowledge the alarm screen so you know at one time there was an issue.

Scherer Design Engineering, Tea SD 1-800-883-9790

After hours Bob 605-201-1926 Jim 605-940-6356 Jason 605-941-3458

The initial start-up screen for the Scherer Sentry lists an after hour.

TROUBLESHOOTING THE SCHERER SENTRY™

Issue	Cause	Solution
Displays "Oiler alarm" screen	Oil mist reservoir is low	Fill oil mist generator with 100% synthetic ISO 32 oil. DO NOT FILL OIL RESERVOIR ABOVE FULL LINE!!
Some bearing temps are reading NO DATA	Wire harness has a loose connection	Make sure all threaded connections (inside firewall, outside firewall, at the processor, and after the splitter) are finger tight.
Low air pressure alarm will not turn off	Too high of setting on air sensor or low system air pressure	Check system air pressure. With the actuator cylinder **RETRACTED** adjust the belt tensioning pressure up to 120 psi. If there is 120 PSI available the sensor needs adjustment, contact Scherer Design. A temporary fix is to unplug the sensor.
Running a new processor and the bearing temps are above normal operating temp	Bearings are breaking in	New processor bearings need to "break-in". Normal break-in temps may be up to 200°F. Within 30-40 hours bearing temps should return to normal operating range (120°-175°F).
Bearing temp is reading 325° at ambient temperature	Temp sender is faulty	Replace temp sender.
Display reads "CAN BUS FAILURE"	Bad harness connection between display and XM 500 control module	The XM 500 is mounted in the cabinet under the arm rest. Make sure both plugs are firmly seated in the module. Next, access the back of the display and ensure the plug in firmly seated. If not resolved contact Scherer Design.
Display reads "0.00 H"	Display is set up as "1-up" display	Press 'Menu', scroll to highlight 'GO TO 4-UP DISPLAY', press 'Enter'
Display reads in Degrees F	Menu is set to English units	Press 'Menu', scroll down to highlight 'SELECT UNITS', press 'Enter', scroll to highlight your unit of measure, press 'Enter', press 'Menu' twice to return to 4-up display.

Sentry Installation Instructions

1) Installing Feed-thru Plugs

Exterior View

Interior View

Feed Thru's installed

1) The first step is to remove the 2 medium sized plugs from the cable feed-thru port on the back of the cab. Once the 2 plugs are removed the plates can be put back into place and tightened down.
2) Inside the cab you will need to lift the control arm to locate the electric cabinet below it. Remove the lid to the electric cabinet. The cable feed-thru port is located in the rear of the cabinet.
3) Locate the 2 feed-thru plugs provided in the kit. It will take two people to install the feed-thru (10 minute process). The yellow 5-pin feed -thru needs to be run from the exterior into the cab. And the black 8-pin feed-thru needs to run from the cab out to the exterior.
4) Carefully tighten the feed-thru's.
5) Attach the splitter to the yellow 5-pin.
6) Secure the protective caps provided for the exterior connections.

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2) Installing XM 500 Module

1) Locate and clean the location for the XM 500 (module) next to the fuse box (pictured below). The plugs on the module need to face the rear of the chopper.
2) You may plug the harness in prior to mounting in place.
3) Mount module with supplied velcro.

Module mounted in cabinet

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3) Installing display and wire harness

Pillar mount option

Suction Mount

5 pin cable attached to feed-thru

1) Decide if you would like to mount the display on the window with the suction mount or fixed onto the pillar.
2) For suction mount please refer to instructions provided with the mount for proper attachment. Attach the display to the suction base using the mounting arm. Alcohol wipes are included to clean the window prior to attaching.
3) For pillar mount first attach the 4 hole mounting base to the display with the mounting arm and choose the best location for your operation. Use the 4 hole mounting base as a template to mark out the location and attach the base with the provided screws. No pre-drilling is necessary.
4) Depending on mounting location choose the best routing to run the cable back to the power accessory ports. Adhesive backed cable clamps are provided to secure the cable along the pillar. Use alcohol wipes to clean surface before applying clamps.
5) Route the harness by running both the grey and black 12 pin connectors through the electric cabinet down to the XM 500 module.
6) Attach black and grey 12 pin connectors to their respective ports on the module. They are keyed to only install one way.
7) Attach the grey 5 pin and 8 pin cords to their respective feed-thru plugs.
8) Plug the power cord into the **switched** port on the back pillar of the cab.
9) Run the display cable up the back pillar along with the power cord and replace the lid to the electrical cabinet.

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4) Attach cords to sensors (exterior)

1) The Air monitoring cable (single plug) will attach to the 5-pin splitter (either port) on the firewall and terminate at the air pressure sensor on the Pneumatic belt tension system control. Be sure to secure the plug to the sensor with the screw to ensure connectivity.
2) The Oiler cable will attach to the other port on the 5-pin splitter and attach to the processor oiler. Be sure to secure the plug using the screws.
3) The Processor extension cable will attach to the 8-pin feed-thru on the firewall with the right-angled end terminating at the processor. Preferred routing of the cord may up to the oiler and then down along the oil line to the processor.
4) While the cord is attached to the processor mate the 2 protective caps together to reduce contamination.
5) Should you receive a reading of 1 degree for any bearing the system is not connected. Be sure all electrical connections are hand tight.

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Operation Notes

1) When powered up the Sentry will automatically display the 4 temps from the processor bearings. If the display has been switched to another mode simply enter the menu by pressing the left button on the display and scroll to select "4-up display" and select using the right button.
2) The Sentry is set up to have 2 levels of alarm: warning and shutdown.
3) Warnings will only provide an amber light on the left corner of the display and an alarm screen with a description of the alarm. Warnings include: bearing temps > 180 but < 200 degrees F, oil alarm < 10 minutes. (to switch to degrees Celsius enter the menu screen by pressing the left button, scroll down to „Select Units", press the right button, scroll down to „Metric BAR□. Press the right button to select, then press the left button twice to exit.)
4) Shutdown alarms will provide an alarm screen with a description of the alarm, a red light at the top right corner of the display, and an audible alarm. Shutdown alarms include: bearing temps > 200 degrees F, oil alarm > 10 minutes, system air pressure < 90 PSI.
5) To silence the audible alarm depress the lit button next to the horn on top of the display. The audible alarm will be silenced for 5 minutes. If another alarm comes in during that 5 minutes you will not receive another audible alarm.
6) To clear the alarm screen so you can resume monitoring bearing temps press the right button on the display.

Scherer Design Engineering, Tea SD 1-800-883-9790

After hours Bob 605-201-1926 Jim 605-940-6356 Jason 605-941-3458

The initial start-up screen for the Scherer Sentry lists an after hour.

LUBRIMIST INSTALL

- Place LubriMist oiler on the left side of the kernel processor compartment towards the front of the machine as shown.
    - Be sure to place the oiler far enough forward so it is out of the way so the large guard over the feed roll drive can still be removed.
    - This position of the oiler also allows for quick removal of the kernel processor through the top of the chopper.
- Drill four holes to mount the LubriMist to the wall. **BE CAREFUL AND CONSCIOUS OF STEEL HYDRAULIC LINES BEHIND THIS WALL.**

- Splice into the air line that feeds the air cylinder for the kernel processor drive belt. Use the "T" and air line provided.
- Connect oil hose on the kernel processor to the LubriMist.
- Remove plug from the front of the LubriMist reservoir and fill with oil.
- **DO NOT OVERFILL!!!!!**
- Overfilling will restrict the mist head and the system will not work properly.
- Start the forage harvester engine and allow the air system to charge.
- **If the system is working properly, you will see what appears to be smoke or fog coming from the bearing housings and the bearing slides.**
- Set the LubriMist regulator to 35 psi.

The regulator also has a water separator. This automatically drains itself periodically. The regulator will freeze and break if it is not drained at the end of season.

INSTALLATION AND REMOVAL INSTRUCTIONS FOR *B-LOC*™ LOCKING ASSEMBLY SERIES B106 & B103

Thank you for purchasing a ***B-LOC***™ Keyless Frictional Locking Device. ***B-LOC***™ keyless connectors provide a high capacity, zero-backlash shaft/hub or coupling connection by means of a mechanical interference fit. Please follow these INSTALLATION AND REMOVAL INSTRUCTIONS carefully to ensure proper performance of this ***B-LOC***™ unit.

ⓘ WARNING ⓘ

When installing or removing ***B-LOC***™ products, always adhere to the following safety standards:

1. Be sure that all power switches are locked out before installing or removing ***B-LOC***™ products.
2. Eye protection is required when installing or removing ***B-LOC***™ products - please wear safety glasses and protective clothing.

INSTALLATION

(Refer to Figure 1)

B-LOC™ Series B103 and B106 Locking Assemblies are supplied lightly oiled and ready for installation. They are self-centering and fit straight-thru hub bores. Note that Series B103 units permit axial hub movement during installation. In contrast, the extended flange on Series B106 units results in an axially fixed hub position during assembly. When reinstalling a used unit, make sure that all slits are aligned. The frictional torque capacity of these devices is based on a coefficient of friction of 0.12 for lightly oiled screw, taper, shaft and bore contact areas.

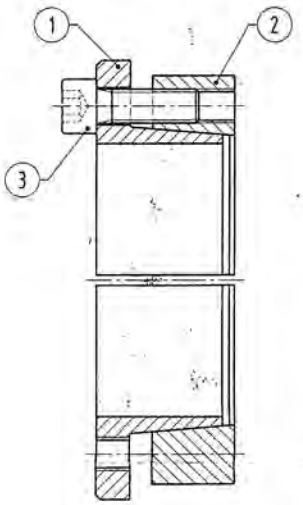

Figure 1

Therefore, it is important <u>not</u> to use Molybdenum Disulfide (e.g., Molykote, Never-Seeze or similar lubricants) in any Locking Assembly installation.

1. Make sure that locking screw, taper, shaft and bore contact areas are clean and lightly oiled and that all collar slits are aligned.
2. Loosen all locking screws by a minimum of four (4) turns and transfer at least three (3) screws into push-off threads in order to keep Parts 1 and 2 separated during assembly (see Figure 2).
3. After inserting Locking Assembly into hub bore, relocate locking screws used for separating Parts 1 and 2.
4. Hand tighten locking screws and confirm that collar Item 1 is parallel and in full contact with face of part to be attached to shaft.
5. Use torque wrench and set it approximately 5% higher than specified tightening torque M_A. Tighten locking screws in either a clockwise or counter clockwise sequence (it is not necessary to tighten in a diametrically opposite pattern), using only 1/4 (i.e., 90°) turns for several passes until 1/4 turns can no longer be achieved.
6. Continue to apply overtorque for 1 to 2 more passes. This is required to compensate for a system-related relaxation of locking screws since tightening of a given screw will always relax adjacent screws. Without overtorquing, an infinite number of passes would be needed to reach specified tightening torque.
7. Reset torque wrench to specified torque (M_A) and check all locking screws. No screw should turn at this point, otherwise repeat Step 6 for 1 or 2 more passes. It is not necessary to re-check tightening torque after equipment has been in operation.

NOTE: The torque capacity of these units can be increased by approximately 25% by thoroughly cleaning the shaft and Locking Assembly bore of any lubricant. In applications subject to extreme corrosion, the slits in all collars should be sealed with a suitable caulking compund or equivalent. Likewise, push-off threads should be protected from corrosion.

INSTALLATION OF *B-LOC*™ LOCKING ASSEMBLIES OVER SHAFT KEYWAYS

The Locking Assembly should be positioned so that slits in Locking Assembly collars that contact the shaft are located approximately opposite the keyway. In addition, a locking screw should be centered directly over the keyway.

When tightening locking screws, it is important to follow the installation procedure outlined above, which specifies equal 1/4 turns of each locking screw. Failure to follow these instructions could result in excessive tightening of the screw over the keyway, possibly causing permanent deformation of the Locking Assembly collars. Even after 1/4 turns can no longer be achieved, it is important to continue to use equal turning angles for every screw until the specified tightening torque is reached.

REMOVAL

(Refer to Figure 2)

Prior to initiating the following removal procedure, check to ensure that no torque or thrust loads are acting on the Locking Assembly, shaft or any mounted components.

IMPORTANT! Make sure ends of locking screws used for removal are ground flat and are slightly chamfered to prevent damage to screw and collar threads during push-off.

1. Check to ensure that axial movement of collars - necessary for release of connection - is not restricted. Likewise, ensure that push-off threads are in good condition.
2. Relax all locking screws by approx. four (4) complete turns and transfer screws to all push-off threads located in flange of collar Item 1.
3. Release connection by evenly tightening all push-off screws (not exceeding 1/4 turns) in a diametrically opposite sequence.

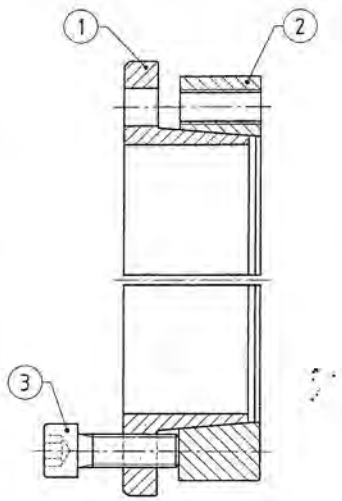

Figure 2

LOCKING SCREW SIZES AND SPECIFIED TIGHTENING TORQUE M_A

Metric Series	Inch Series	Tightening Torque M_A (ft-lbs)		Screw Size	Hex Key Size (mm)
		B106	B103		
20 x 47 to 40 x 65	3/4 to 1-1/2	12	10	M 6	5
45 x 75 to 65 x 95	1-5/8 to 2-9/16	30	25	M 8	6
70 x 110 to 95 x 135	2-11/16 to 3-3/4	60	50	M10	8
100 x 145 to 120 x 165	3-15/16 to 4-3/4	105	90	M12	10
130 x 180 to 200 x 260	4-15/16 to 8	166	135	M14	12
220 x 285 to 260 x 325		257	219	M16	14
280 x 355 to 300 x 375		350	290	M18	14
320 x 405 to 340 x 425		500	420	M20	17
360 x 455 to 400 x 495		675	560	M22	17

For technical assistance, please call 1-800-865-7756

B-LOC Corporation 26 Gilbert Street Monroe, NY 10950