

# Lubrication

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## Select Hub Bearings - Greasing Procedure

1. Refer to page Operations-8 for removing the fixed and select blades from the machine.
2. Refer to the Lubrication Section of the manual for the grease requirements.
3. Remove the blades from the select saw hubs.
4. Clean the hubs and remove all the oil and dirt.
5. Remove the plug from the grease access hole and install the grease fitting. (Refer to Figure 1, below, and Figure 2, on the following page.)

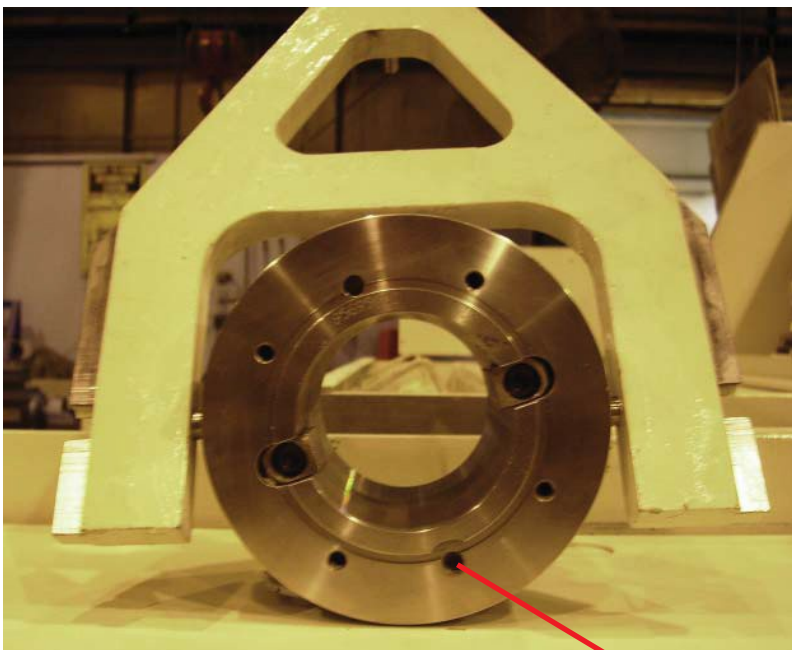
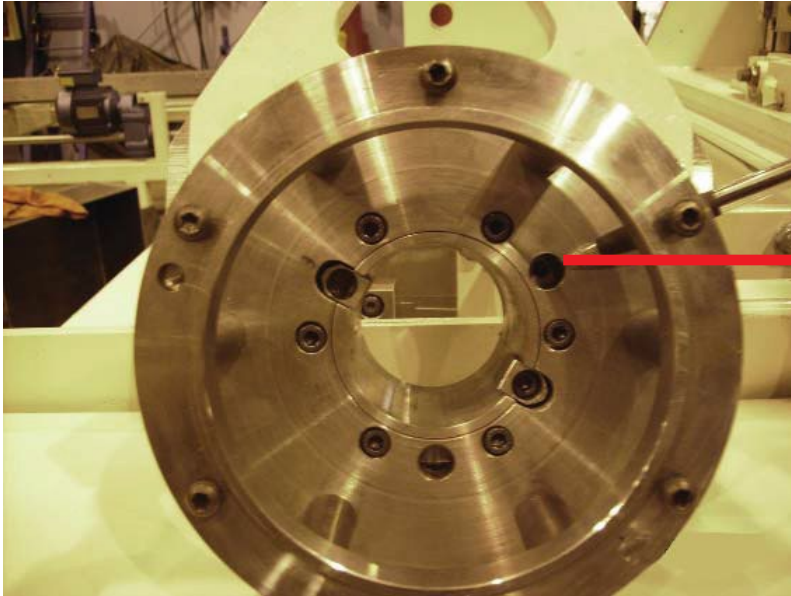


Figure 1- Outboard

Grease  
Access  
Hole

## Lubrication (Con't.)

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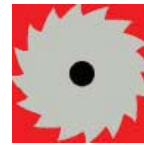
Grease Access Hole

Figure 2 - Inboard

6. Give the bearing one shot of grease every 400 hours of operation, using a standard automotive grease gun.

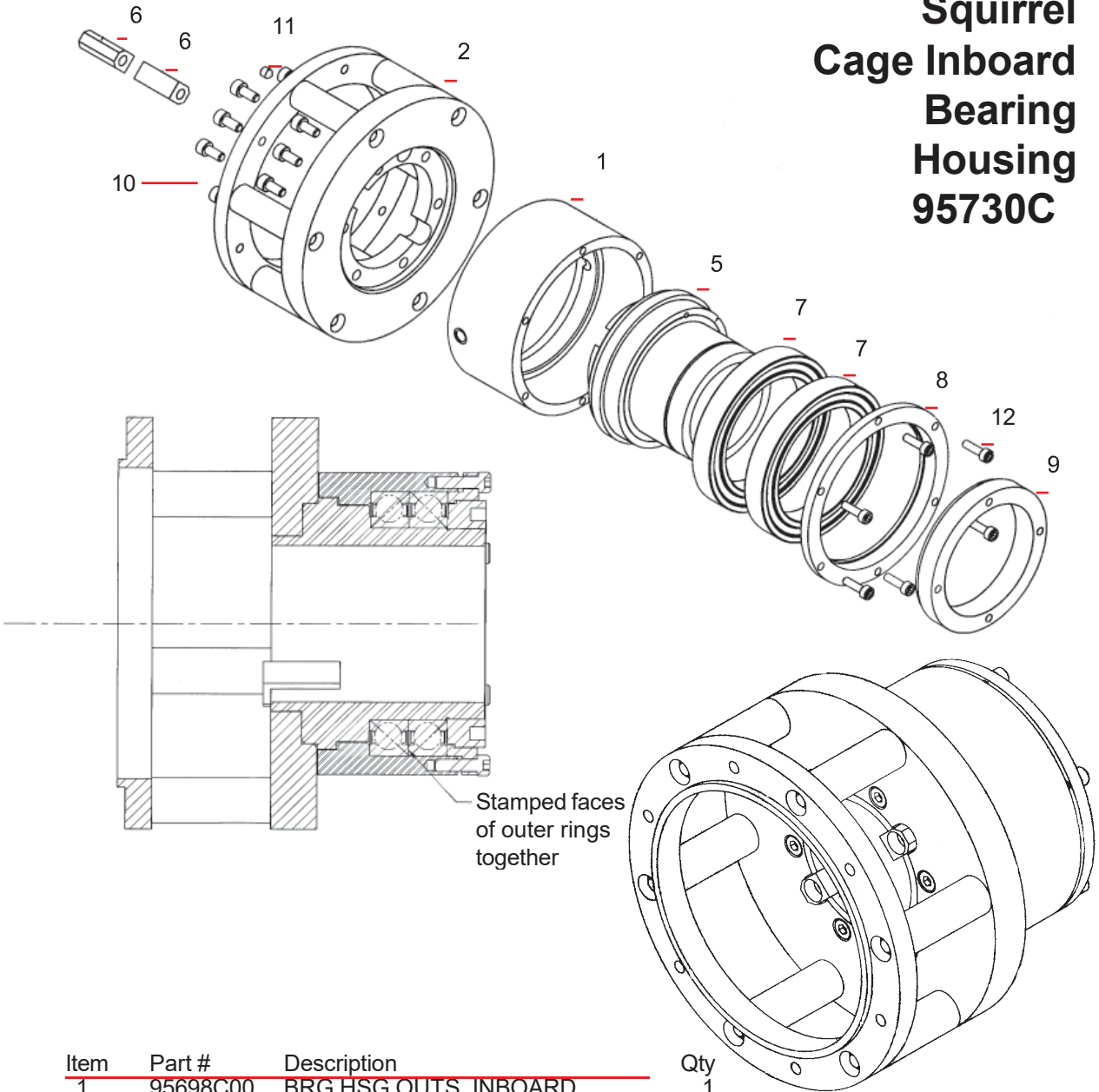
Use only a premium high speed EP rated grease.

7. Remove the fitting and replace the plug.
8. Reinstall the blades



## Lubrication (Con't.)

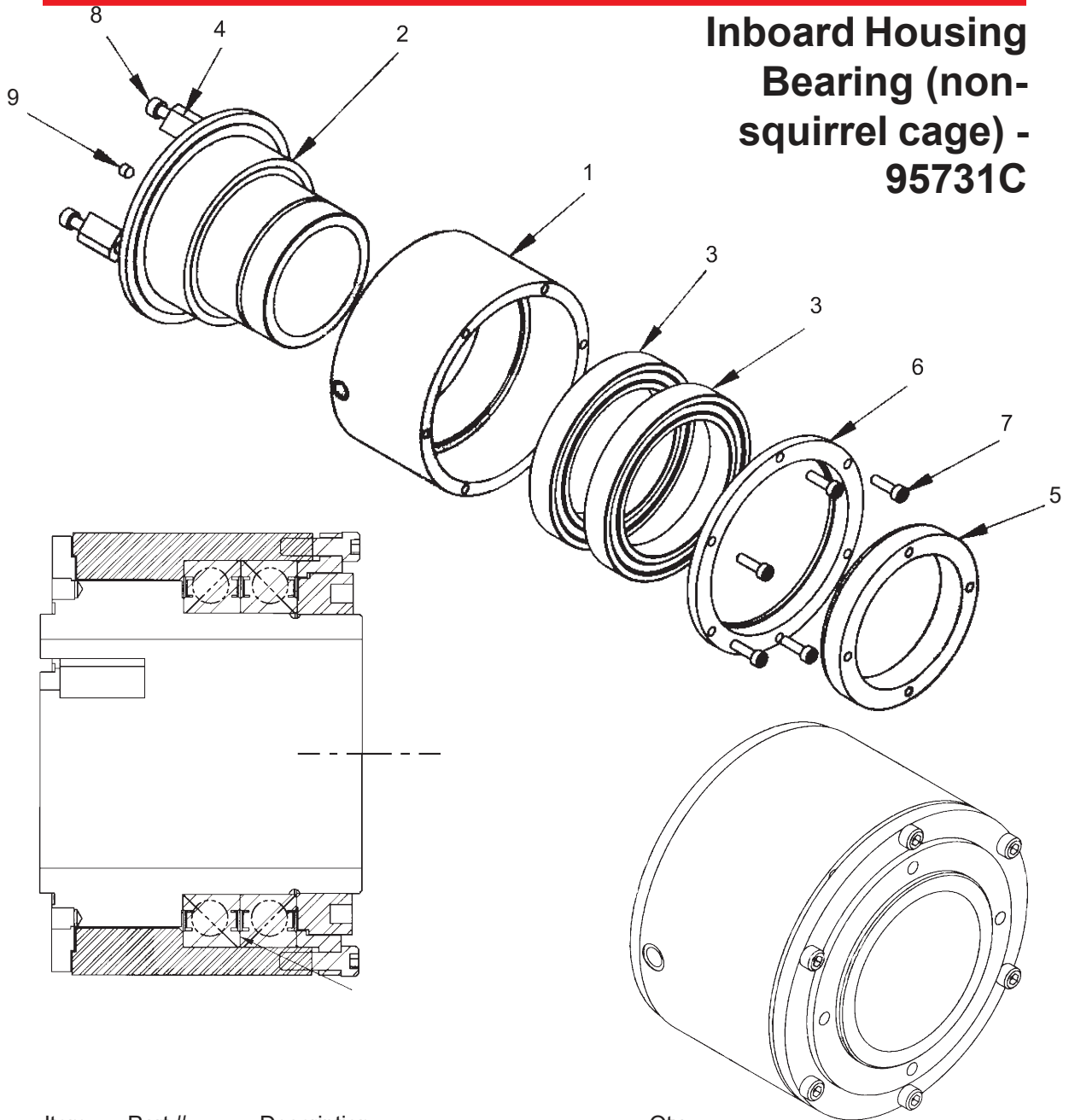
### Squirrel Cage Inboard Bearing Housing 95730C



Item	Part #	Description	Qty
1	95698C00	BRG HSG OUTS, INBOARD	1
2	95707D00	SAW HUB, SQUIRREL CAGE	1
3	95696C00	SLEEVE BRG, LH THD, OUTS	1
4	95727A00	KEY	2
5	95700B00	CLAMP CAP	1
6	95699B00	LH CLAMP NUT, 3-1/8", LH THD	1
7	621829	BRG, ANG CON, TIMKEN	1
8		SOCKET HEAD CAP SCREW	8
9		PLUG	1
10		SOCKET HEAD CAP SCREW	6
11		PLUG, 1/4-28 SET SCREW - GREASING ACCESS	1

## Lubrication (Con't.)

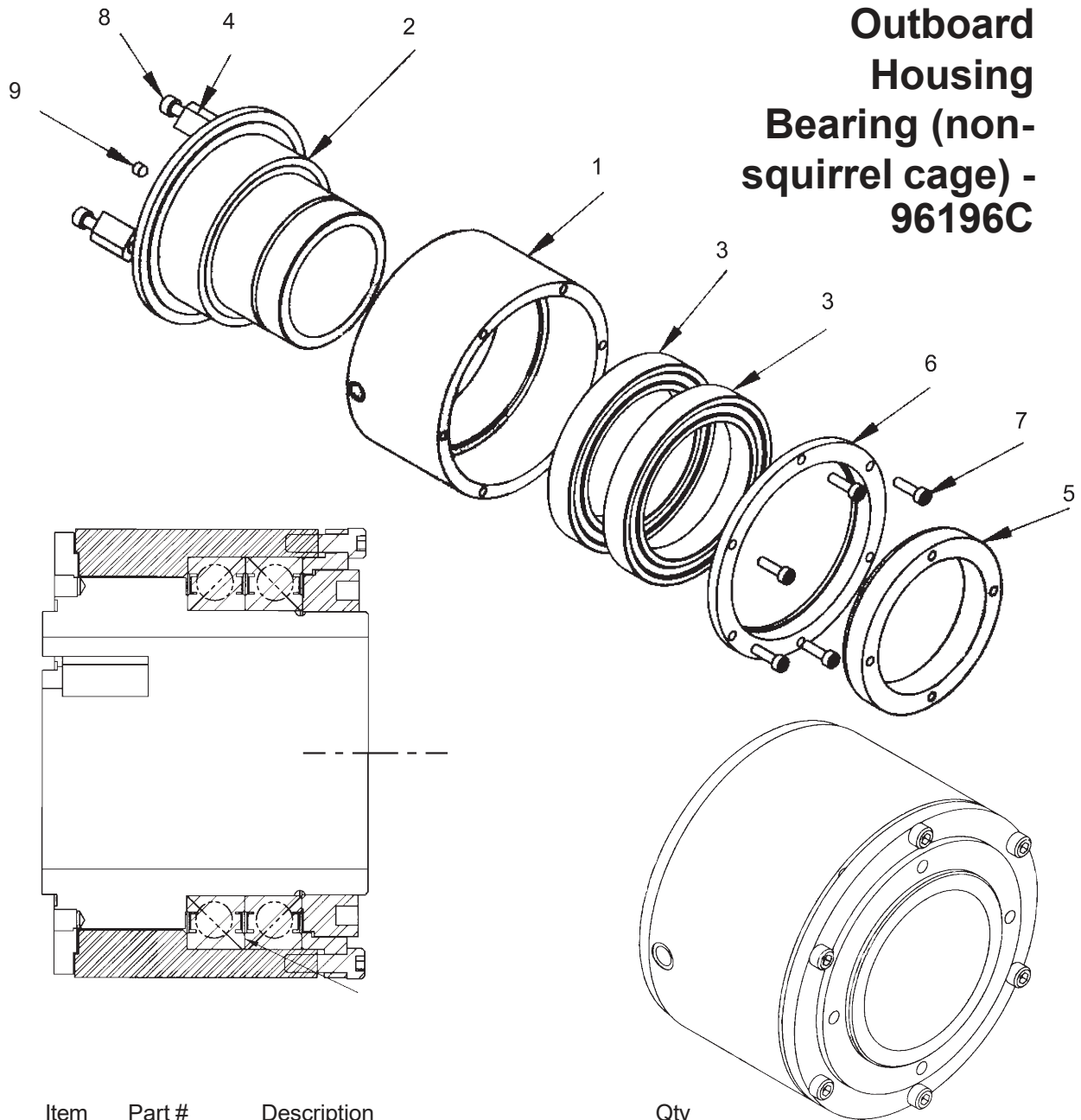
### Inboard Housing Bearing (non- squirrel cage) - 95731C



Item	Part #	Description	Qty
1	95697C00	BEARING INSIDE HOUSING	1
2	95695C00	BEARING SLEEVE,INS LH THD	1
3	621829	BRG, ANG CON, TIMKEN	1
4	95727A00	KEY	2
5	95699B00	LH CLAMP NUT, 3-1/8", LH THD	1
6	95700B00	LH CLAMP CAP	1
7		SOCKET HEAD CAP SCREW	6
8		SOCKET HEAD CAP SCREW	2
9		PLUGPLUG, 1/4-28 SET SCREW - GREASING ACCESS	1

## Lubrication (Con't.)

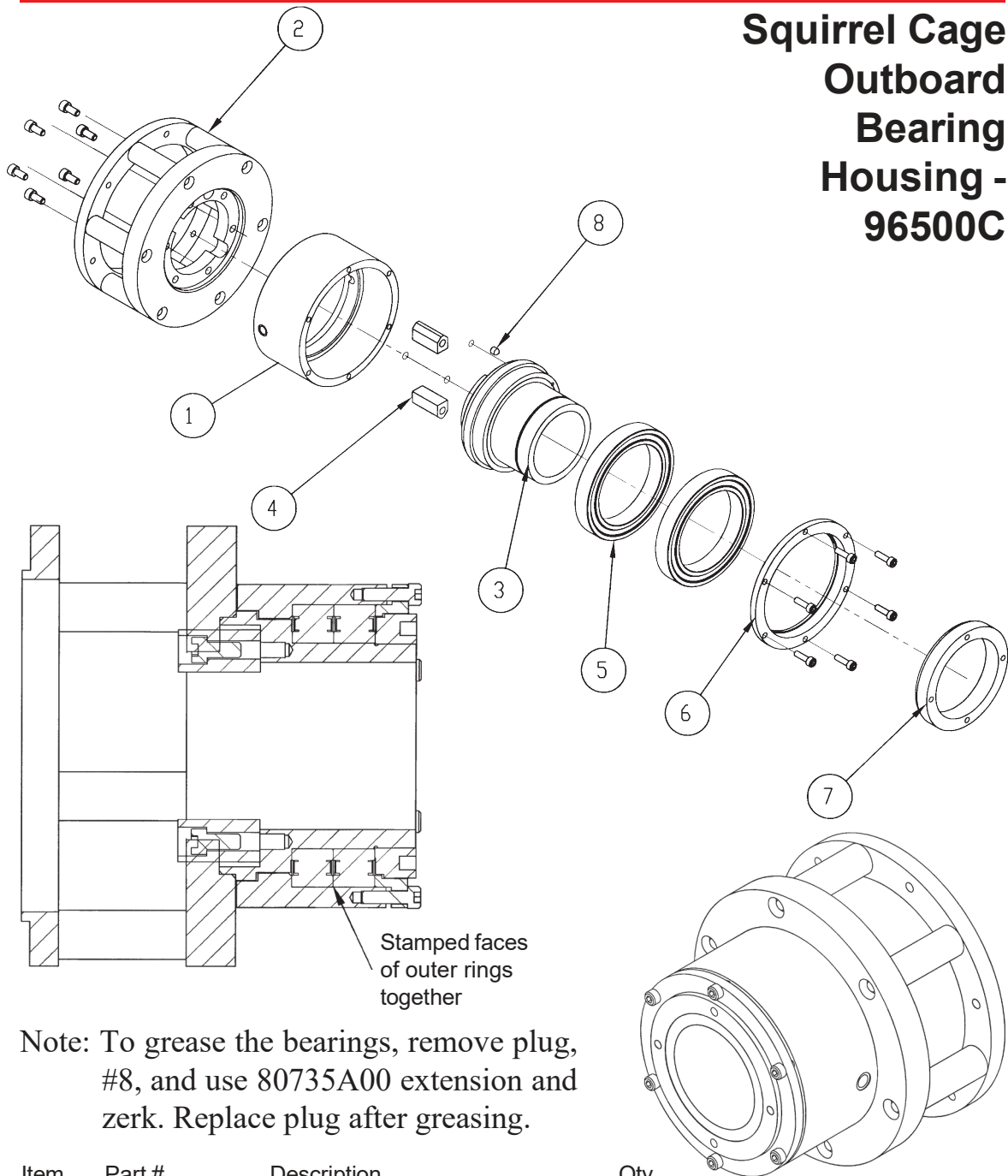
### Outboard Housing Bearing (non- squirrel cage) - 96196C



Item	Part #	Description	Qty
1	95697C00	BEARING INSIDE HOUSING	1
2	96208C00	BEARING SLEEVE,INS RH THD	1
3	621829	BRG, ANG CON, TIMKEN	1
4	95727A00	KEY	2
5	96207B00	RH CLAMP NUT, 3-1/8", RH THD	1
6	95700B00	LH CLAMP CAP	1
7		SOCKET HEAD CAP SCREW	6
8		SOCKET HEAD CAP SCREW	2
9		PLUG, 1/4-28 SET SCREW - GREASING ACCESS	1

## Lubrication (Con't.)

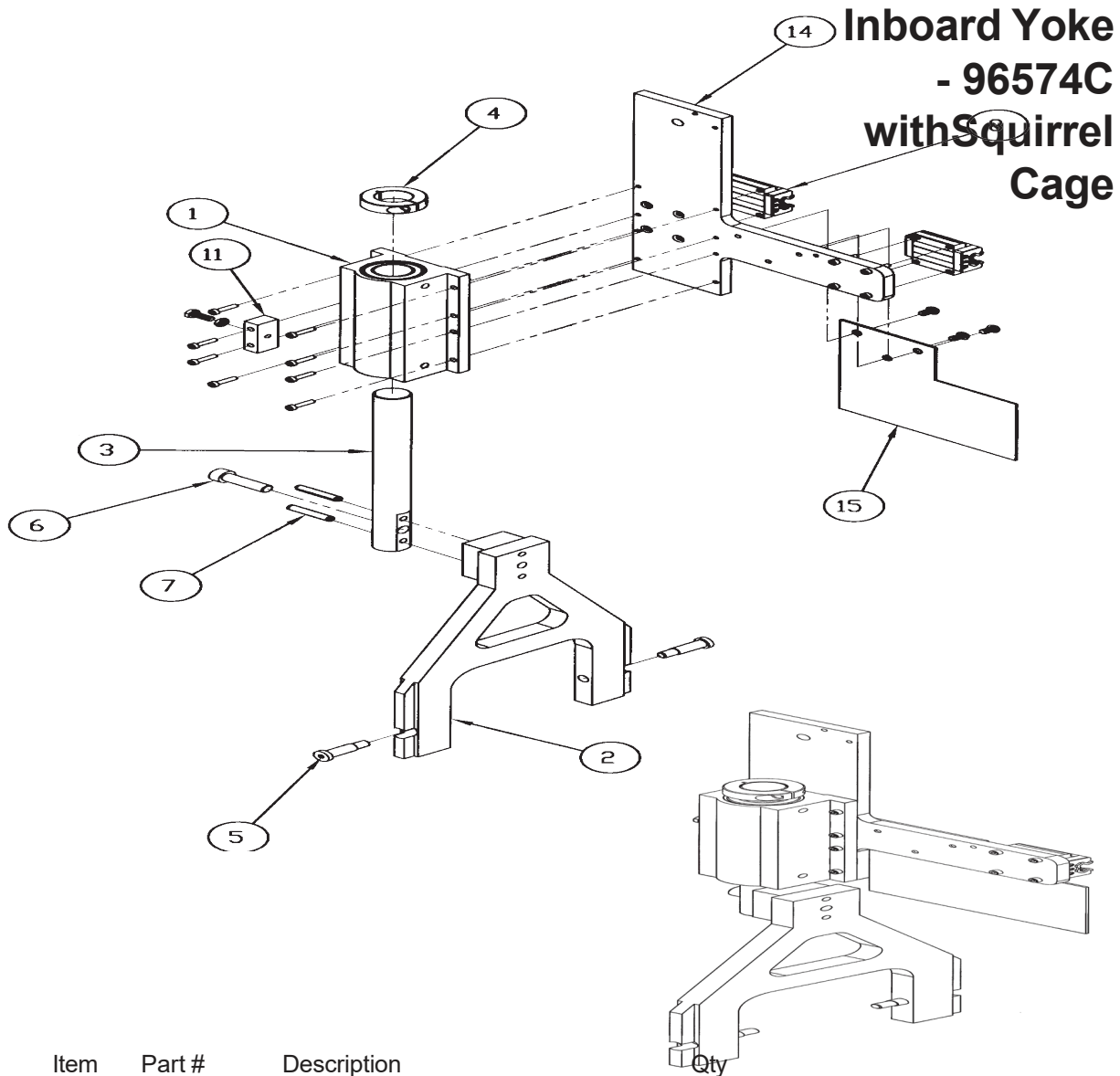
### Squirrel Cage Outboard Bearing Housing - 96500C



Note: To grease the bearings, remove plug, #8, and use 80735A00 extension and zerk. Replace plug after greasing.

Item	Part #	Description	Qty
1	95698C00	BEARING HOUSING, OUTS, INBD	1
2	95707D00	SAW HUB, SQUIRREL CAGE	1
3	96501C00	RH OUTBOARD SLEEVE	1
4	95727A00	KEY	2
5	621829	ANGULAR CONTACT BEARING	2
6	95700B00	CLAMP CAP	1
7	96207B00	RH CLAMP NUT	1
8	SET SCREW	PLUG, 1/4-28	1

## Lubrication (Con't.)

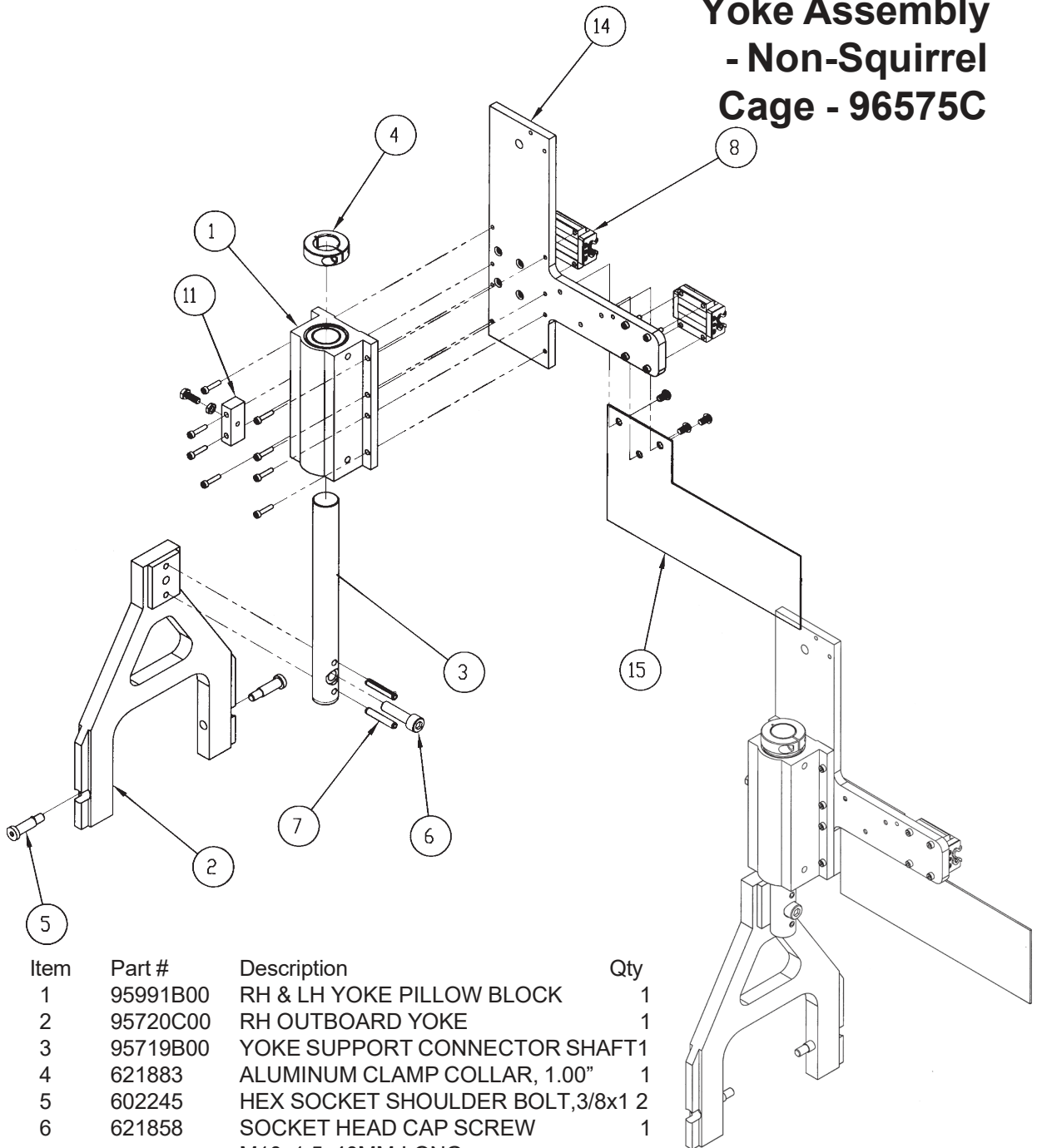


Item	Part #	Description	Qty
1	95806C00	RH INBOARD YOKE	1
2	602245	HEX HEAD SHOULDER BOLT, 3/8"x1"	2
3	614365	BEARING, BLOCK, LINEAR	2
4	96684B00	INFD ACTUATOR SLIDE PLATE	1
5	95719B00	YOKE SUPPORT CONNECTOR SHAFT	1
6	95991B00	RH & LH YOKE PILLOW BLOCK	1
7	621883	ALUMINUM CLAMP COLLAR, 1"	1
8	619765	DOWEL PIN, 1/4" DIA x 1.5" LG	2
9	621858	SOCKET HEAD CAP SCREW M10x1.5x40MM LONG	1
10		SOCKET HEAD CAP SCREW M4x0.7x16MM LONG	1
12	96924C00	DUST COVER BRACKET	1
13	96553C00	CARRIER SLIDE PLATE	1



## Lubrication (Con't.)

### RH Inboard Yoke Assembly - Non-Squirrel Cage - 96575C

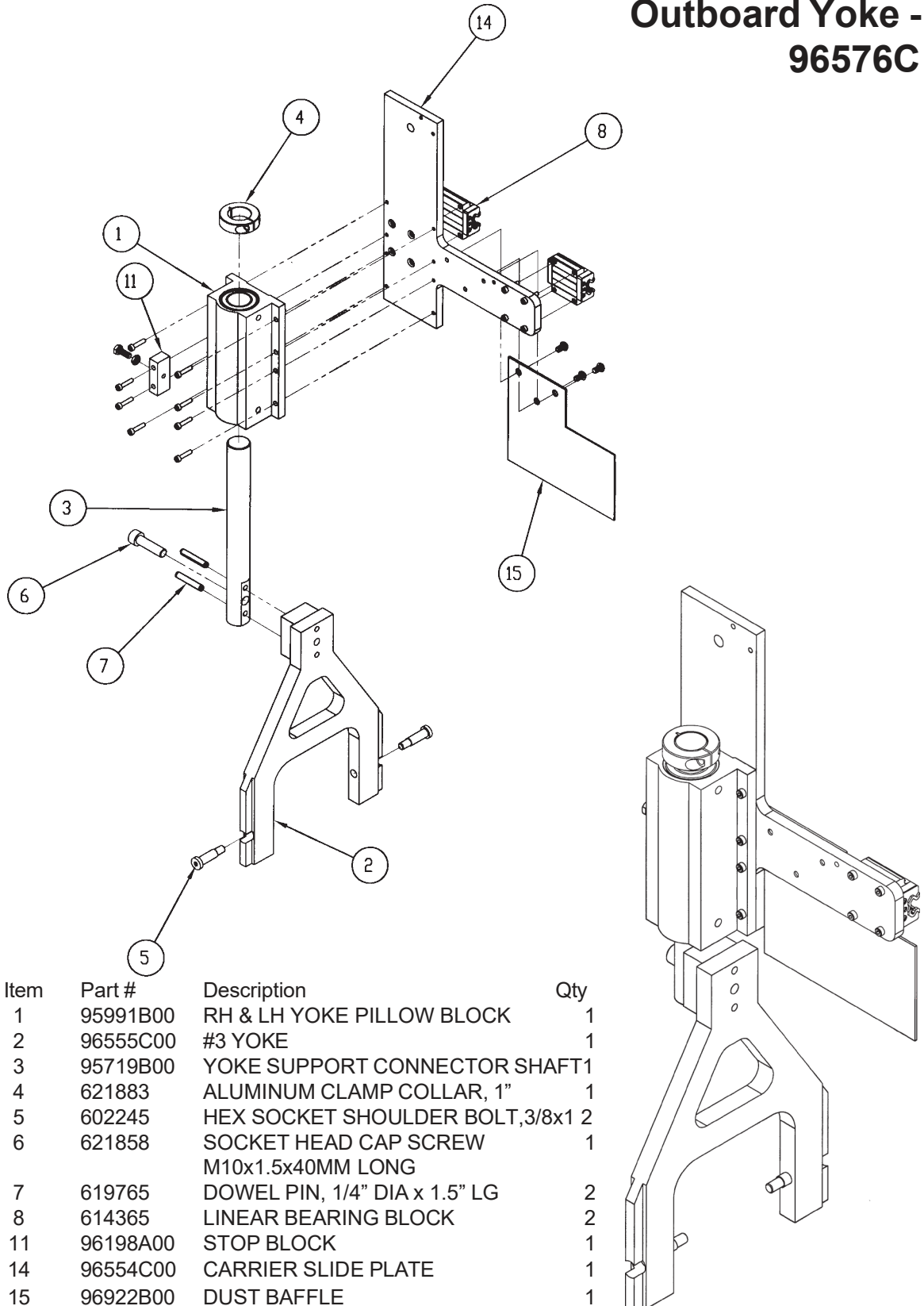


Item	Part #	Description	Qty
1	95991B00	RH & LH YOKE PILLOW BLOCK	1
2	95720C00	RH OUTBOARD YOKE	1
3	95719B00	YOKE SUPPORT CONNECTOR SHAFT1	1
4	621883	ALUMINUM CLAMP COLLAR, 1.00"	1
5	602245	HEX SOCKET SHOULDER BOLT, 3/8x1	2
6	621858	SOCKET HEAD CAP SCREW M10x1.5x40MM LONG	1
7	619765	DOWEL PIN, 1/4" DIA. x 1.5" LONG	2
8	614365	BEARING BLOCK, BLOCK ONLY	1
11	96198A00	STOP BLOCK	1
14	96554C00	CARRIER SLIDE PLATE	1
15	96923B00	DUST BAFFLE	1



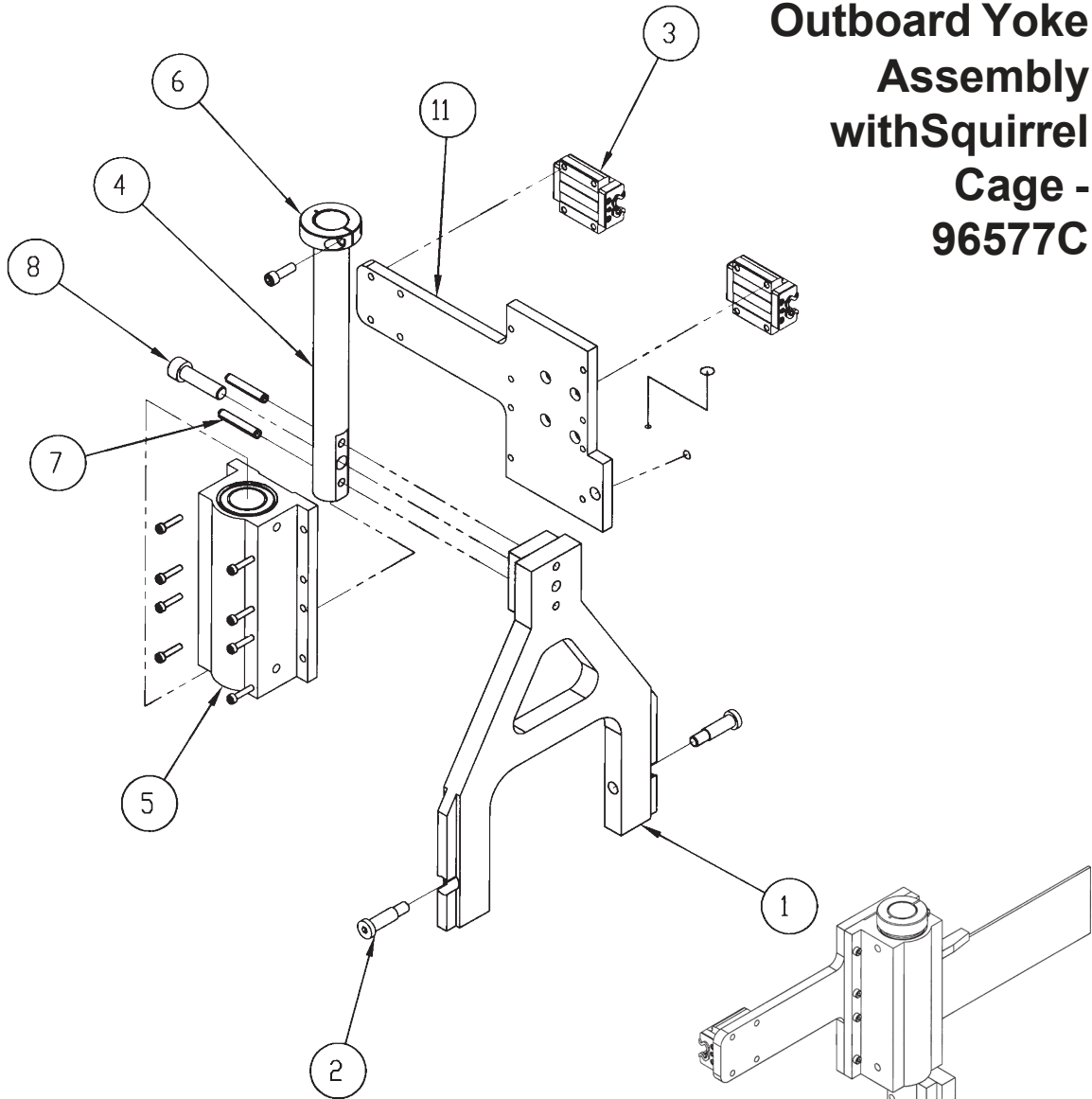
## Lubrication (Con't.)

### Outboard Yoke - 96576C



Item	Part #	Description	Qty
1	95991B00	RH & LH YOKE PILLOW BLOCK	1
2	96555C00	#3 YOKE	1
3	95719B00	YOKE SUPPORT CONNECTOR SHAFT1	1
4	621883	ALUMINUM CLAMP COLLAR, 1"	1
5	602245	HEX SOCKET SHOULDER BOLT, 3/8x1 2	2
6	621858	SOCKET HEAD CAP SCREW M10x1.5x40MM LONG	1
7	619765	DOWEL PIN, 1/4" DIA x 1.5" LG	2
8	614365	LINEAR BEARING BLOCK	2
11	96198A00	STOP BLOCK	1
14	96554C00	CARRIER SLIDE PLATE	1
15	96922B00	DUST BAFFLE	1

**Outboard Yoke  
Assembly  
with Squirrel  
Cage -  
96577C**



Item	Part #	Description	Qty
1	95806C00	RH Inboard Yoke	1
2	602245	Hex Socket Shoulder Bolt, 3/8"	2
3	614365	Linear Bearing Block, Block only	2
4	95719B00	Yoke Support Connector Shaft	1
5	95991B00	RH & LH Yoke Pillow Block	1
6	621883	Aluminum Clamp Collar, 1.00"	1
7	619765	Dowel Pin	2
8	621858	Socket Hd Cap Screw, M10x1.5x40MM	1
11	96553C00	Carrier Slide Plate	1

1. Start out by oiling the entire machine. The machine has been properly greased before leaving the Mereen-Johnson assembly floor. Do not regrease the motor bearings and machine until the recommended greasing interval.
2. Set up a lubrication schedule. See example at the end of the section
3. See the machine placard for specific location of oil cups and grease fittings.

### Preventative Maintenance

### Oil Daily

1. Check and fill all drip type and in-line air oilers.
2. Fill all oil cups.

Grease every 400 hours of running time. *Do not over grease.* Excessive greasing will cause the bearings to run *hot*.



Each rear motor and outboard bearing requires approximately one (1) ounce of grease by volume, not weight, each greasing interval. Check your grease gun to see what is required for the grease gun to deliver this amount of grease.

### Calibrate your grease gun

Use only a premium grade Hi-Speed Extreme Pressure (EP) ball bearing grease. Refer to the following pages for recommendations.

1. Grease all arbor motor bearings.
2. Grease any arbor slip-off bearings.

3. Grease feed shaft and idle sheave bearings.
4. Grease all other grease fittings shown on the placard.

Wipe off all grease fittings before and after greasing.

Refer to the placard that is located on the machine for specification locations of oil cups and grease fittings.



It is recommended that these greases or their equivalents be used on the Mereen-Johnson Machine Company Equipment.

## General recommendations

### Greases

Gopher Oil Company .....Molylub 126-EP, #1 or #2  
Continental Oil Company .....Conoco Superlub NLGI #2  
Shell Oil Company ..... Cyprina #3  
Socony Vacuum Oil Company ..... Mobilux #2  
Standard Oil of California .....Calol  
The Texas Company..... Unitemp  
The Texas Company..... Hitetemp  
The Texas Company.....Regal Starfak AFB #2  
Sunoco..... Sunaplex 992 EP

Use SAE #10 or #20 Non-Detergent high quality automotive oil for the oil cups. For the Spin Rev<sup>®</sup> Systems use only Mobil Mist Lube #24.

### Oil Mist System

Air mist lubricators require SAE #10 non-detergent high quality automotive oil. Machines that are operated in a cold climate (below 23°F), or in an unheated building, will require a lower temperature mist oil. Mereen-Johnson Machine Company has available Low Temperature Mist Oil “MJ-100.” “MJ-100” is not recommended for the Bijur Spin Rev<sup>®</sup> lubricators that lubricate the front motor bearings. For Bijur Spin Rev<sup>®</sup> equipped machine we recommend Mobil Mist Lub 24, MJ #616810.

The ball screw should be kept coated with a thin film of oil or light grease to provide satisfactory service under normal conditions. Most ball screw applications may use a light oil. Applications that have low or intermittent duty cycles may be greased once for life. Each application should be individually analyzed for lubrication selection. Standard Oil Waytax #95 and Mobil-Vactra #4 are common lubricants that have been used successfully in some applications.

### Oil Recommendations:

Ambient Air Temperature +5°F to +77°F.

Gulf Oil Company .....	Gulf EP S60
Chevron Oil Company ..Non-Leaded Gear Compound	150
American Oil Company .....	Spartan EP 150
Mobil Oil Company .....	Mobilgear 629
Shell Oil Company .....	Omala Oil 100
Texaco Oil Company.....	Meropa 150

## Air Mist Lubricators

## Ball bearing screws & preload assemblies (if so equipped)

## Feed motor service information

Ambient Air Temperature +32°F to +104°F.

Gulf Oil Company..... Gulf EP S100

Chevron Oil Company .. Non-Leaded Gear Compound 220

American Oil Company ..... Spartan EP 220

Mobil Oil Company .....Mobilgear 630

Shell Oil Company..... Omala Oil 220

Texaco Oil Company .....Meropa 220

### A MULTI-USE EP GREASE

Molylube 126 EP Grease is a new superior fibrous aluminum complex grease. This grease has been formulated with molybdenum disulfide and molbuamin to obtain the optimum in anti-wear and extreme pressure qualities.

## **Molylube 126EP Grease**

When heavy bearing loads are encountered by Molylube 126 EP Grease and boundary lubrication occurs, molbuamin and molybdenum disulfide are activated to form a continuous monomolecular film. This film on metal surfaces resists metal to metal contact and reduces wear in “contact lubrication.”

Molylube 126 EP Grease will also lubricate better under hydrodynamic lubrication conditions because of the exceptional excellent mechanical stability of this grease. Its excellent water resistance and high drop points make a far superior multi-use grease.

## Lubrication (Con't.)

Grade Number	0	1	2	<b>Typical specifications</b>
Worked Penetration at 77°F, 60 Strokes	355 - 385	310 - 340	265 - 295	
Penetration after 100,000 Strokes, Max.	390	340	295	
Soap Type	Aluminum Complex	Aluminum Complex	Aluminum Complex	
Drop Point °F	490	500+	500+	
Water %	0	0	0	
<u>Oxidation Stability</u> ASTM (D-942-50) Lbs. Pressure Drop, Max.	2	2	2	
<u>Water Washout Test</u> ASTM (D-1264-53T) @100°F, % Loss	-	Nil	Nil	
Corrosion Test, ASTM D-174-607	Pass	Pass	Pass	
Encor Corrosion Test	Pass	Pass	Pass	
Timken O.K. Load, lbs., Min.	55	55	55	
Color	Gray	Gray	Gray	



### *Mobil Mist Lube Series*

## **Mobil Product Data Sheet Description**

Mobil Mist Lube Series oils are made from the finest oil having excellent oxidation stability. Additives improve the extreme pressure (EP) rating and surface wetting capabilities. In addition, these products are compounded to reclassify (or agglomerate) readily from a mist to a liquid when the mist is subjected to extreme turbulence or is impinged onto a surface at high velocity. This allows a lubrication film to form on bearings and gears and prevents stray mist from escaping through narrow apertures into the atmosphere.

An oil mist system lubricates by (1) dispersing very small droplets of oil in smoothly flowing air; (2) distributing this mist to the points of application and (3) mechanically condensing the mist, causing the oil to impinge on and wet the surfaces to be lubricated.

The Mobil Mist Lube Series oils are mist lubricants for gears, bearings, screws, and any other application, which requires lubrication through oil-fog or oil-mist methods. Mobil Mist Lube 24 carries USDA H2 approval.

The four viscosity grades in the Mobil Mist Lube Series allow the machine designer to choose the product most suitable for proper lubrication of machine elements. The heavier grades are used on ways, gears, and slow-speed, heavily loaded bearings, while the lower viscosity grades are used in high-speed bearings.

## **Application**

### **Typical Characteristics**

Physical characteristics listed in the table are typical.

### **Advantages**

Mobil Mist Lube Series oils provide these advantages and benefits:

- Reduce excess leakage
- Prevent harmful stray mist
- Provide excellent lubrication
- Provide even distribution of oil film
- Reduce lubricant costs

Based on available toxicological information, it has been determined that these products pose no significant health risk when used and handled properly. Information on use and handling, as well as health and safety information can be found in the Material Safety Data Sheets which can be obtained from your local distributor.

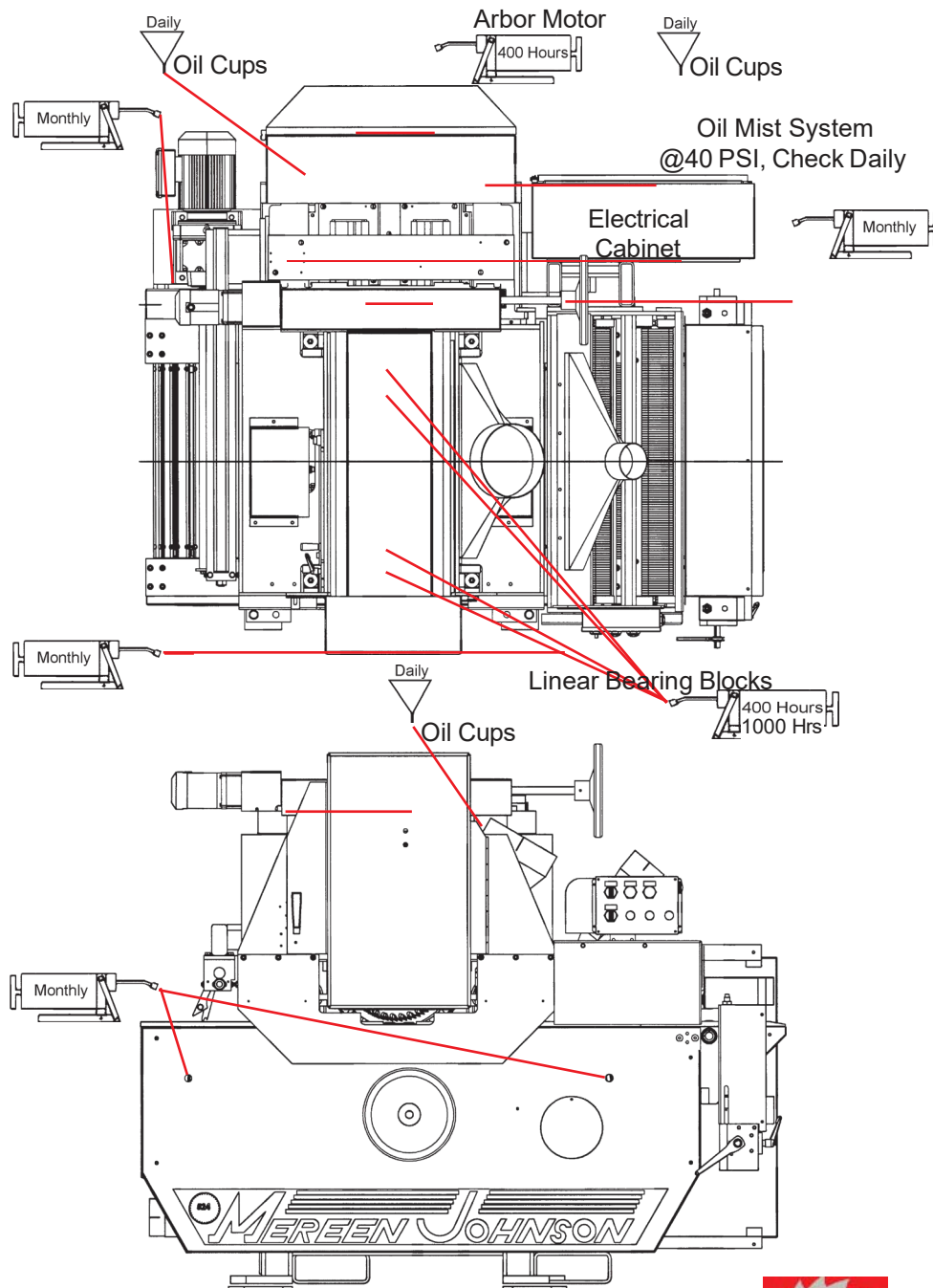
## Health & Safety

For additional technical information or to identify the nearest U.S. Mobil supply source, call 1.800.662.4525.

### Mobil Mist Lube #24

Product Number .....	60715-0
Gravity, API, ASTM D 287 .....	31.2
Pour Point, °C (°F), Max .....	-12 (+10)
Flash Point, °C (°F), Min, ASTM D92.....	176 (349)
Viscosity	
cSt at 40°C.....	29
cSt at 100°C .....	6
SUS at 100°F.....	137
SUS at 210°F.....	46
Viscosity Index.....	120
ISO VG.....	32
Timken OK Load, lb, ASTM D 2782.....	50
DIN 51354 FZG, Fail Stage .....	12
Norgen Mist Test (10 psi, 3 Hrs)	
Misting Rate, grms/hr.....	8
Alemite Mist Test.....	N.A.
Rust Test, ASTM D 665B	
Syn Sea Water .....	Pass
4 Ball Wear Scar, D 4172	
(1800 RPM, 20 kg, 1 hr, 54°C) mm.....	0.50

# Lubrication Chart



Note: Clean off machine before each set-up and at the end of each shift.



Grease: Molylube 126EP #Z aluminum complex grease or equivalent.

Oil: 10 SAE or equivalent

<b>Description/Location</b>	<b>Frequency</b>	<b>Suggested Lube Type</b>	<b>Amount</b>	<b>Special Instructions</b>
1. Feed shaft bearing	Monthly	Sunaplex - 992-EP	1/2 oz	1 zerk per bearing
2. Idle shaft bearing	Monthly	Sunaplex - 992-EP	1/2 oz	1 zerk per bearing
3. Slip-off bearing	400 Hours	Molylube - EP-1261	oz per brg	1/2 oz per grease zerk (2 zerks)
4. Press roll adjust bearing	Monthly	Sunaplex - 992-EP	1/2 oz	1 zerk per bearing
5. Press roll clamp rails	Daily	SAE#10 Non-Detergent	Fill cup	3 cups per press roll assembly
6. Press roll adjust boss	Monthly	Sunaplex - 992-EP	1/2 oz	1 zerk per boss (2 bosses)
Press roll adjust gears	Monthly	Sunaplex - 992-EP	Fill front of gear tooth	Blow out before applying new grease
Press roll adjust shafts	Monthly	Sunaplex - 992-EP	1/2 oz	2 zerks per gearbox
7. Saw hub rail bearings	Bi-weekly	Sunaplex - 992-EP	1/2 oz	4 zerks per saw hub assembly (6 saw hub assemblies) Fill as needed
8. Bijur Spin Rev® oiler	Automatic	Mobil Mist #241	gal reservoir	Fill as needed
9. Bijur oiler	Automatic	SAE#10 Non-Detergent	1 gal reservoir	1 zerk per actuator
10. Arbor actuator	12 months	Sunaplex - 992-EP	1/2 oz	Fill as needed
11. Watts lubricator	Automatic	Bellows Aire Tool Oil	1/2 pint reservoir	8 cups per motor
12. Arbor slides	Daily	SAE#10 Non-Detergent	Fill cup	1 zerk only
13. Arbor rear motor brg	400 hours	Molylube - EP-12	1 oz	Drain and fill to side plug level
14. Feed drive	12 months	Gulf EP-S60, EPS 100	Approx 1 gal	Wipe on with rag and leave residue.
15. Arbor shaft	Daily	Mixture of 1/2 SAE 10WAs	needed & 1/2 Kerosene	

## Lubrication Schedule

Week Number	1	2	3	4	Etc.
<b>Oil Mist Lubrication Generator</b> Approximate oil usage is 6 ounces per 8 hours.	Sunday				
	Monday				
	Tuesday				
	Wednesday				
	Thursday				
	Friday				
	Saturday				
<b>Oil Cups</b>	Sunday				
	Monday				
	Tuesday				
	Wednesday				
	Thursday				
	Friday				
	Saturday				
Arbor Motor Bearings (2) (Grease every 400 running hours)					
Arbor Slip-off Bearings (2) (Grease every 400 running hours)					
Feed Bed Bearings (Grease every 400 running hours)					
Press Roll Adjusting Gears (Grease every 400 running hours)					
Arbor Elevating Actuators (Grease every 400 running hours)					

Note: Wipe off all grease fittings before and after greasing.

1. Check spray nozzle position weekly to make sure that the nozzles are spraying the oil on the chain vees and pins.
2. Slip-off bearing and motor bearings require approximately 1 ounce of grease (by volume) per greasing interval.