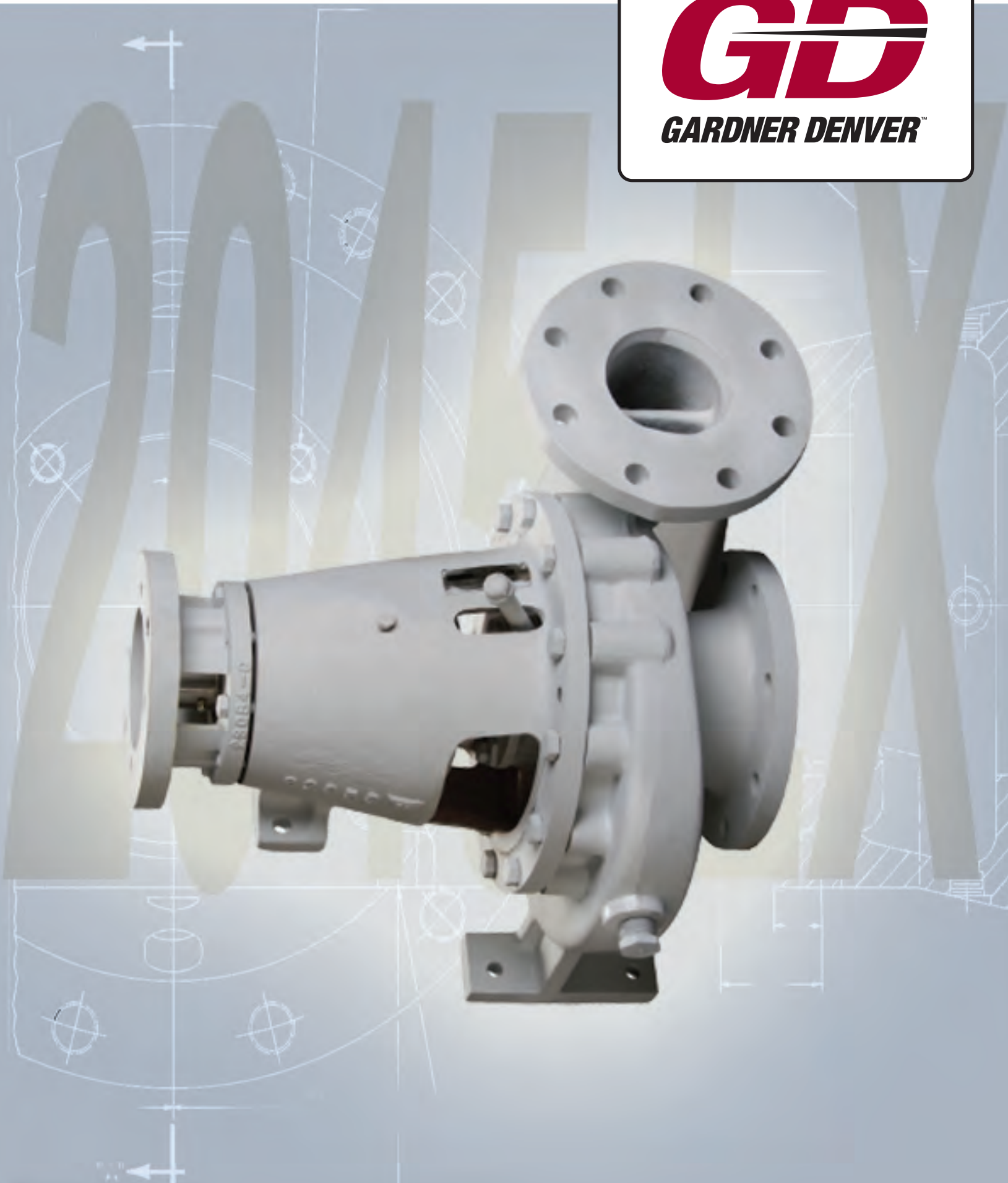


2045 LX Centrifugal Pump



2045 LX Centrifugal Pump



LX PUMP ASSEMBLY

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



To disassemble pump, first remove nuts (12) where indicated around entire perimeter of pump housing.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



After (12) nuts are removed, entire rotating assembly may be pulled out of volute as shown above, using the push bolt holes as necessary.

Note: Due to cement build up between Volute and pump housing it is sometimes difficult to remove rotating assembly.

2045 LX Centrifugal Pump

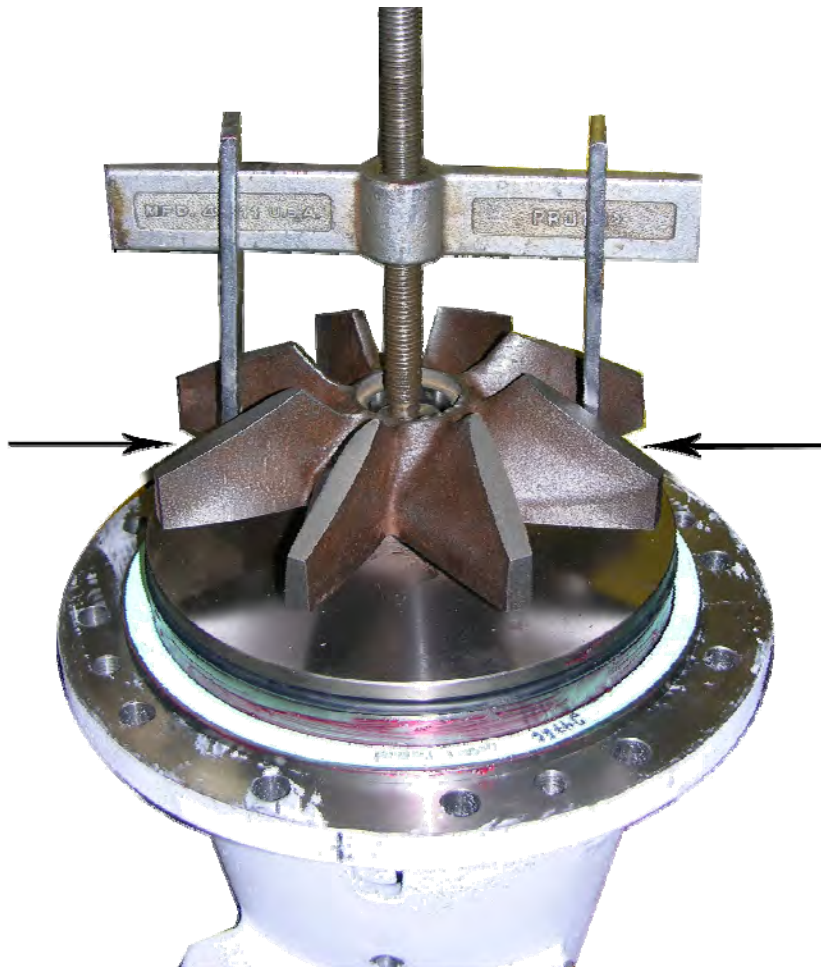
DISASSEMBLY OF LX PUMP



Remove Impeller retaining bolt.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



Use puller to remove impeller from shaft.

2045 LX Centrifugal Pump

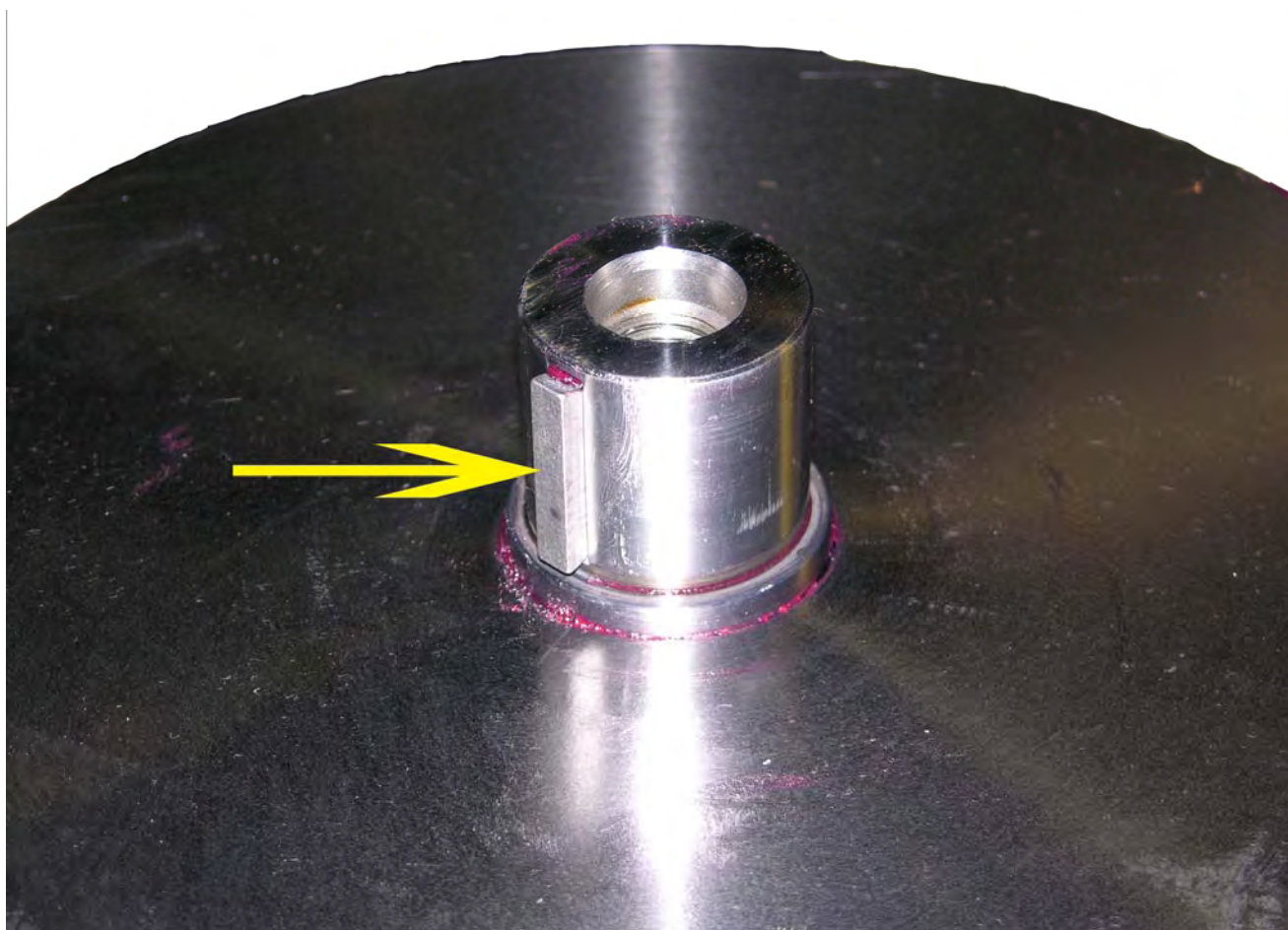
DISASSEMBLY OF LX PUMP



Remove pipe nipple from stuffing box.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP

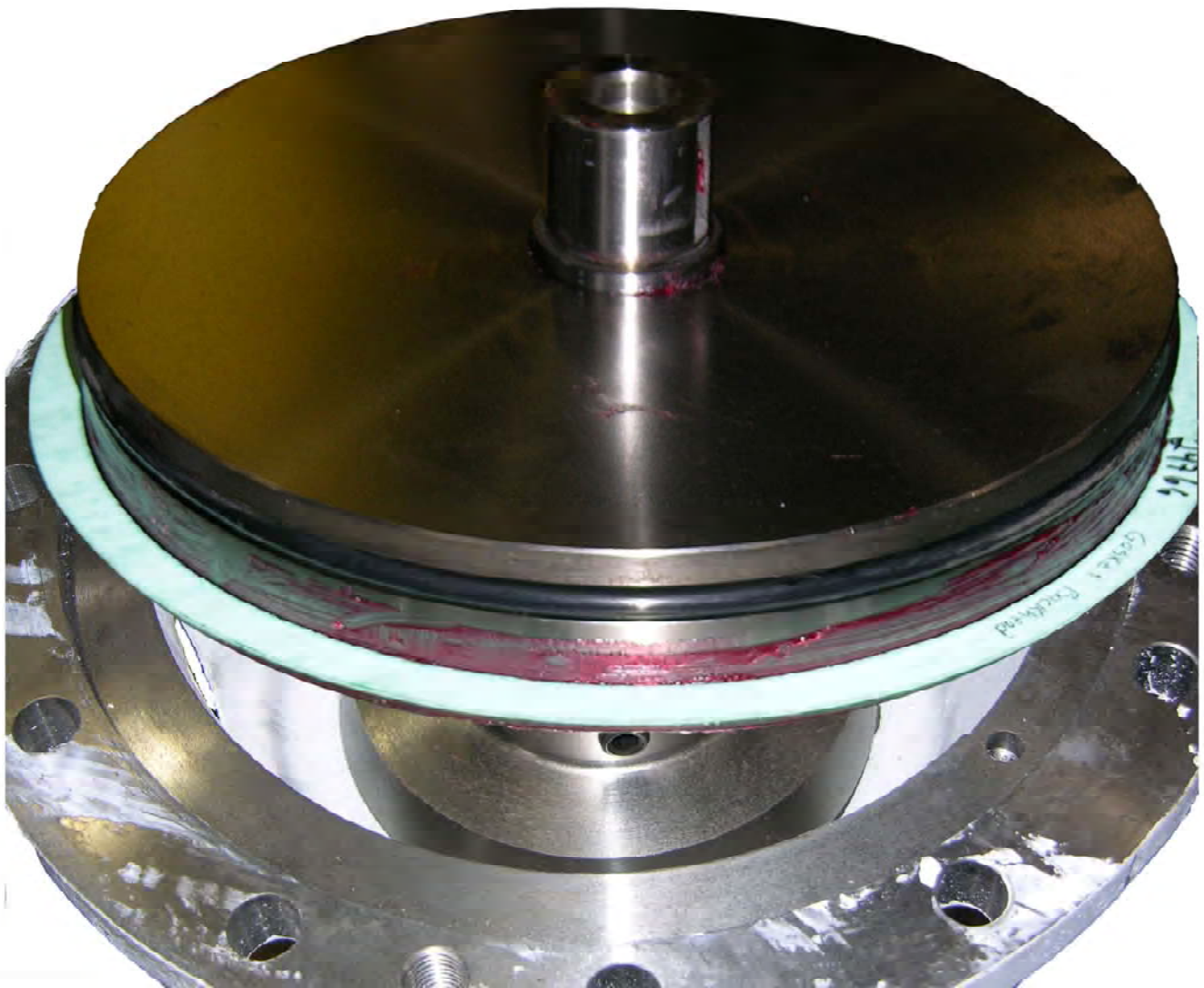


After Impeller and pipe nipple are removed, remove Impeller key from shaft with proper tool being careful not to damage shaft.

Note: This key is specific finish tolerances. Check for burrs, wear, nonconformance to shaft keyway. Replace if needed.

2045 LX Centrifugal Pump

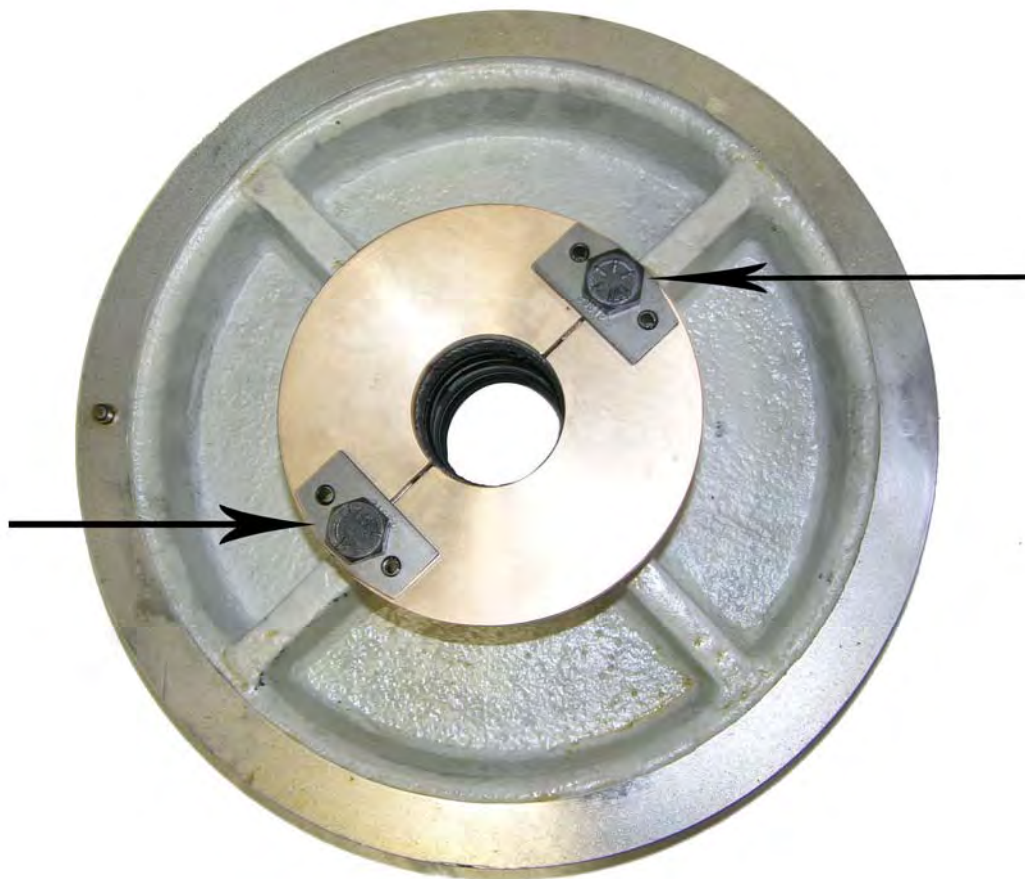
DISASSEMBLY OF LX PUMP



Remove back head.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



Remove two bolts from Packing Gland.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP

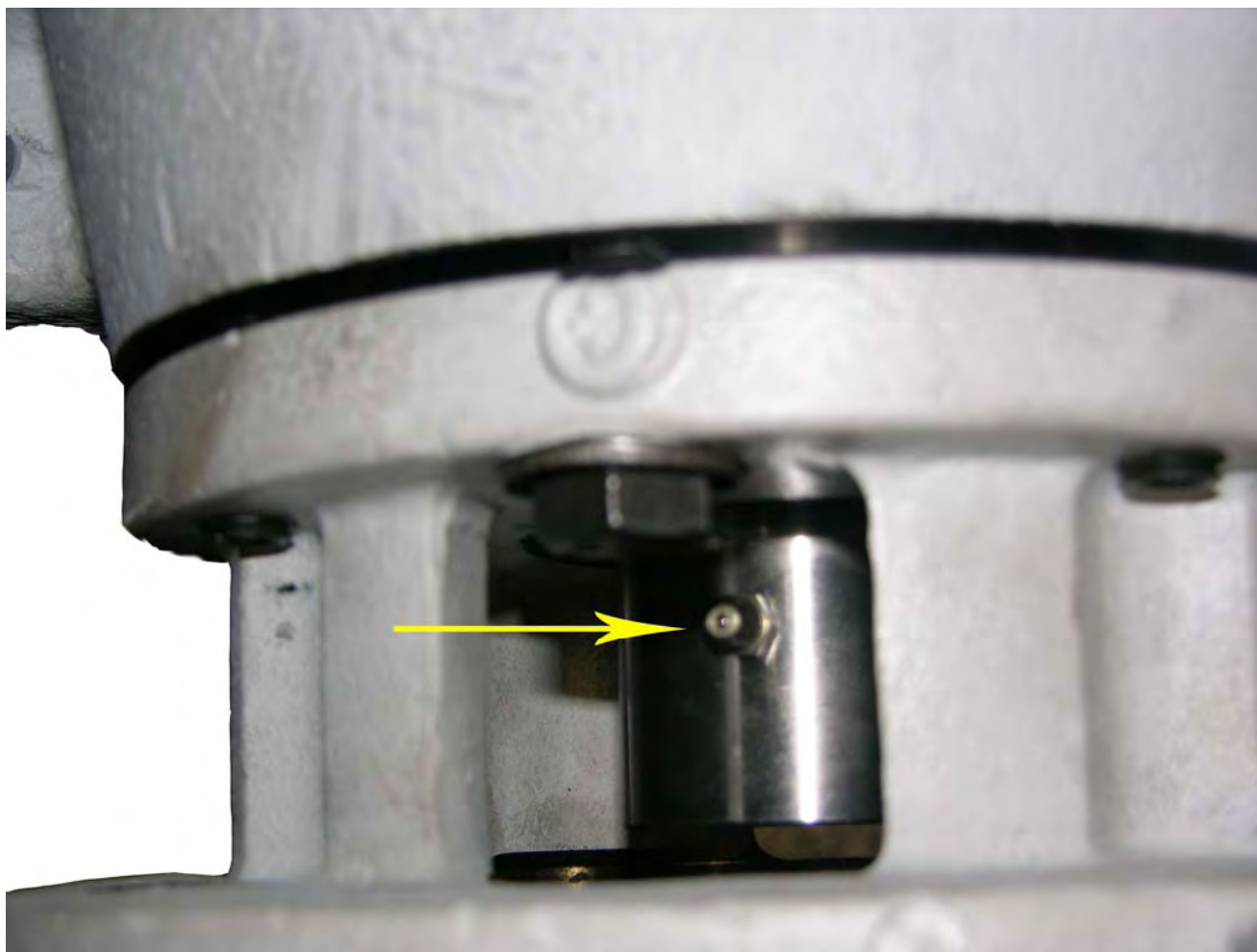


Remove packing gland (follower). This will give access to seals and lantern gland which may be removed from stuffing box at this time.
Check all parts for wear.

Caution: Take care when removing seals to prevent damage to seals and lantern gland.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



Before proceeding further with disassembly,
remove this grease fitting.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



Remove Slinger locking screw.

2045 LX Centrifugal Pump

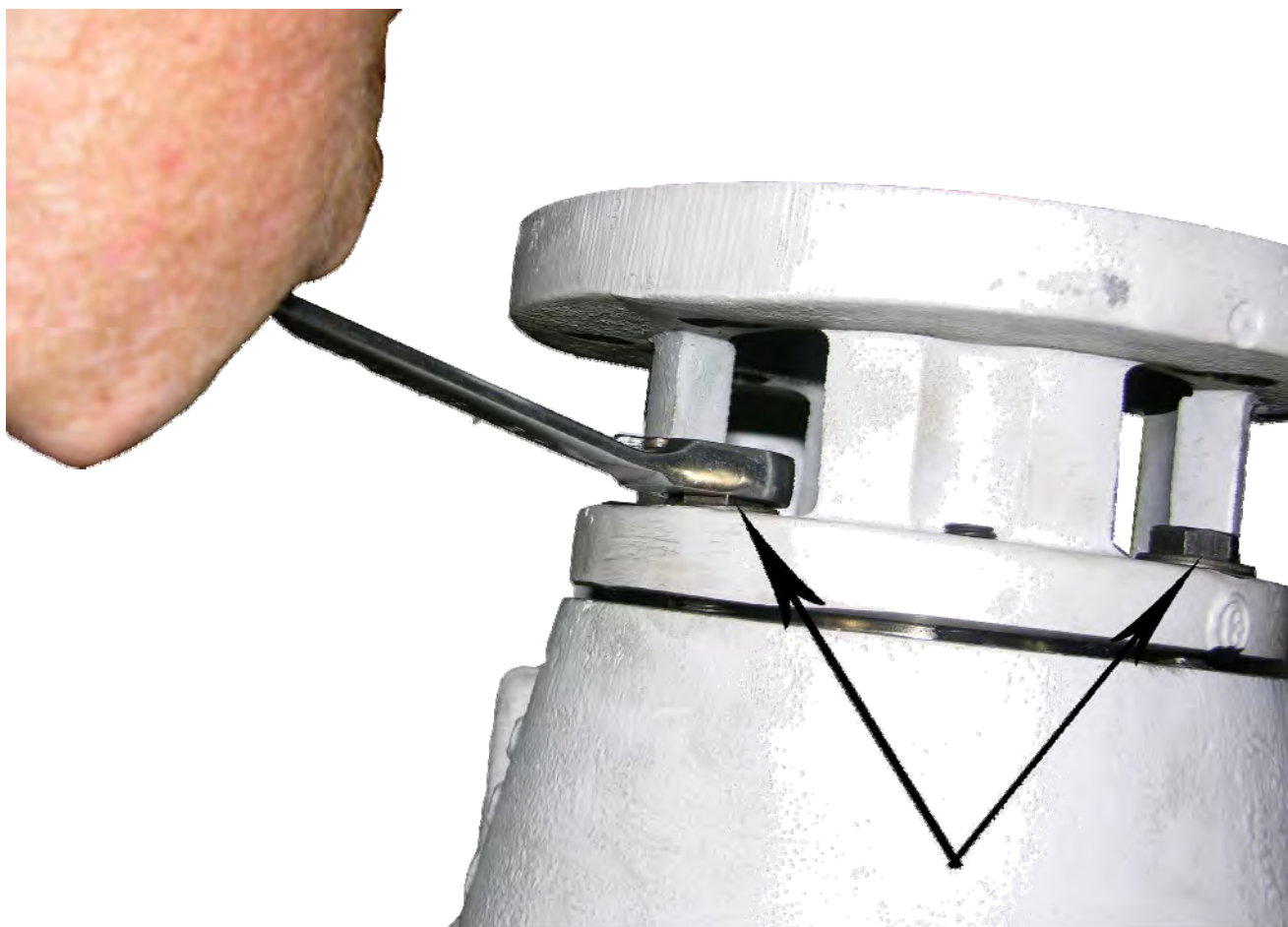
DISASSEMBLY OF LX PUMP



Remove slinger.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



Remove these bolts (4).
Pick pump up and bump Impeller end of shaft
against a heavy block of wood. This will
remove shaft, bearings, and rear bearing
retainer as an assembly.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



Rear bearing retainer, shaft and both bearings should slip out of the pump housing as an assembly. If the front bearing becomes disengaged from shaft and remains in the housing, it may be removed with the proper tooling.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



Remove internal snap ring from rear bearing retainer.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



Remove shaft and bearing(s) from rear bearing retainer.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



**Check this area
thoroughly.
Shaft should be
replaced if worn
more than .010
where seals have
contacted shaft
or if any nicks or
roughness are
found.**



Remove nut and lock from rear of shaft.
Bearing may be pressed off at this time.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



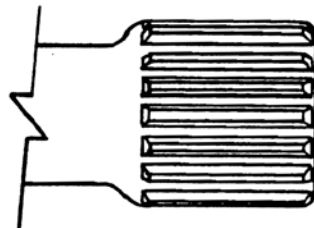
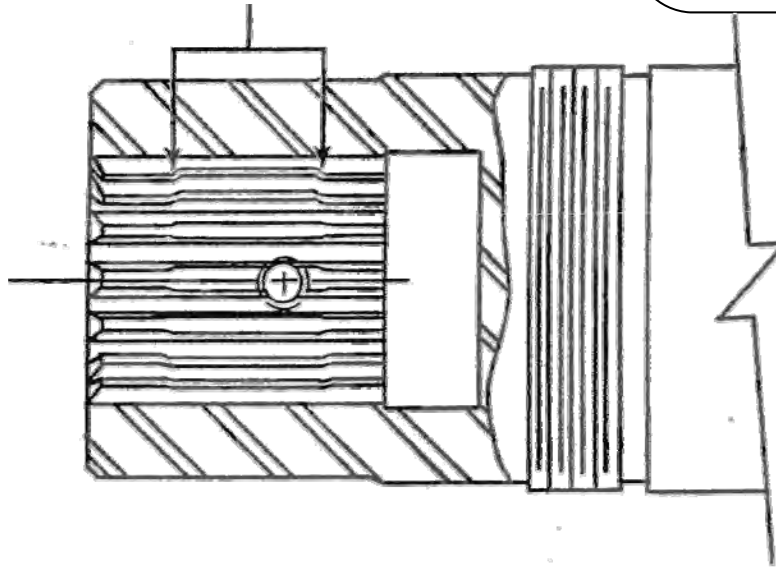
Remove rear seal.

2045 LX Centrifugal Pump

DISASSEMBLY OF LX PUMP



Check this area inside shaft for wear.



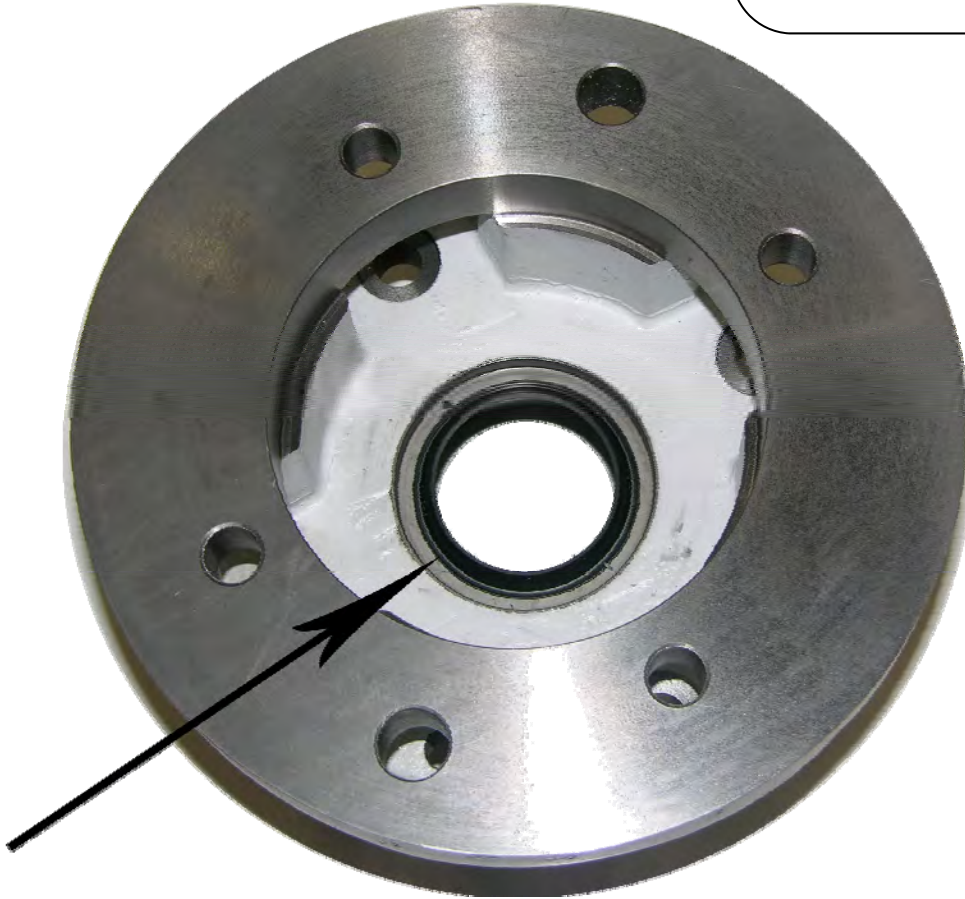
Hydraulic Motor Shaft

Severe wear may occur to pump shaft at a point where splines of hydraulic motor contact shaft splines. Since it may not be possible to see this wear from the outside of shaft, the internal splines in shaft should be cleaned thoroughly with solvent and then inspected under a strong light. If the wear in this area exceeds .030, shaft should be discarded and no attempt to reuse or repair should be made.

When splines become worn beyond the .030 limit, it becomes difficult and sometimes impossible to disengage hydraulic motor from pump shaft. If this occurs, the only solution is to cut motor shaft or splined end of pump shaft off with a torch.

2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP

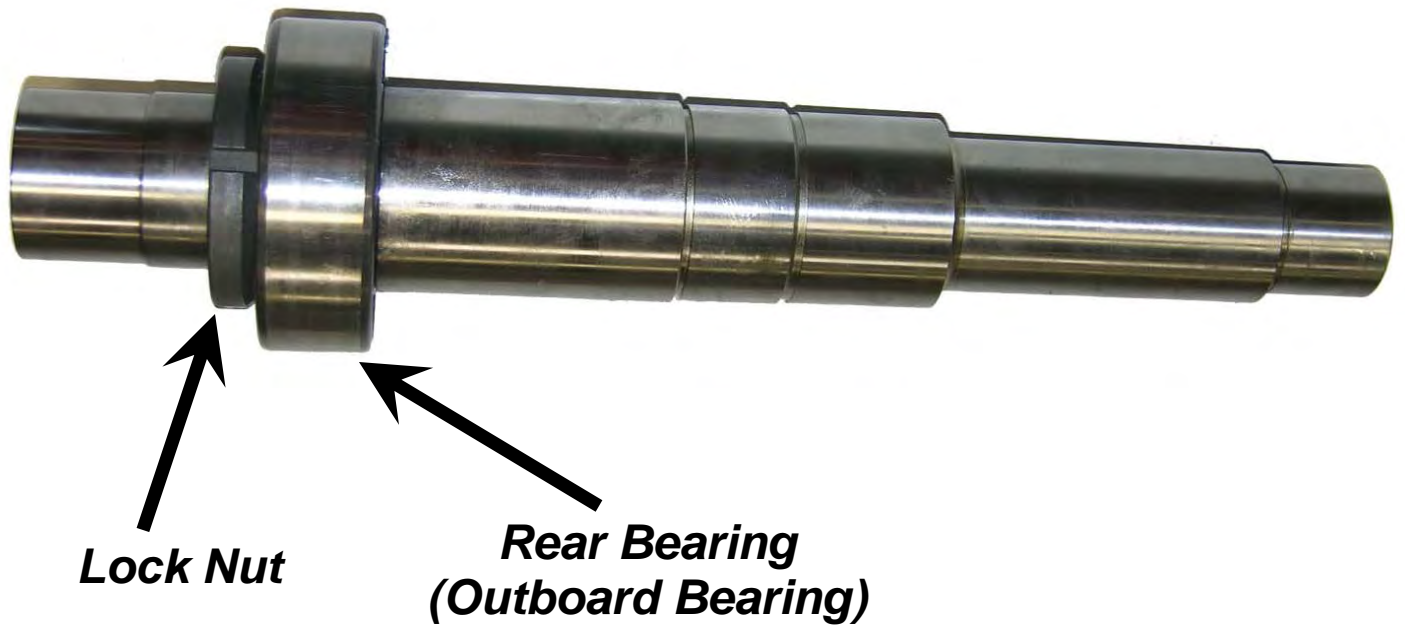


Reassembly of pump should begin with the replacement of seal in rear bearing cover. Seal lip should face to the rear of housing away from rear bearing. This prevents any foreign material from entering rear bearing assembly.



2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



Install rear bearing
and lock nut.



2045 LX Centrifugal Pump

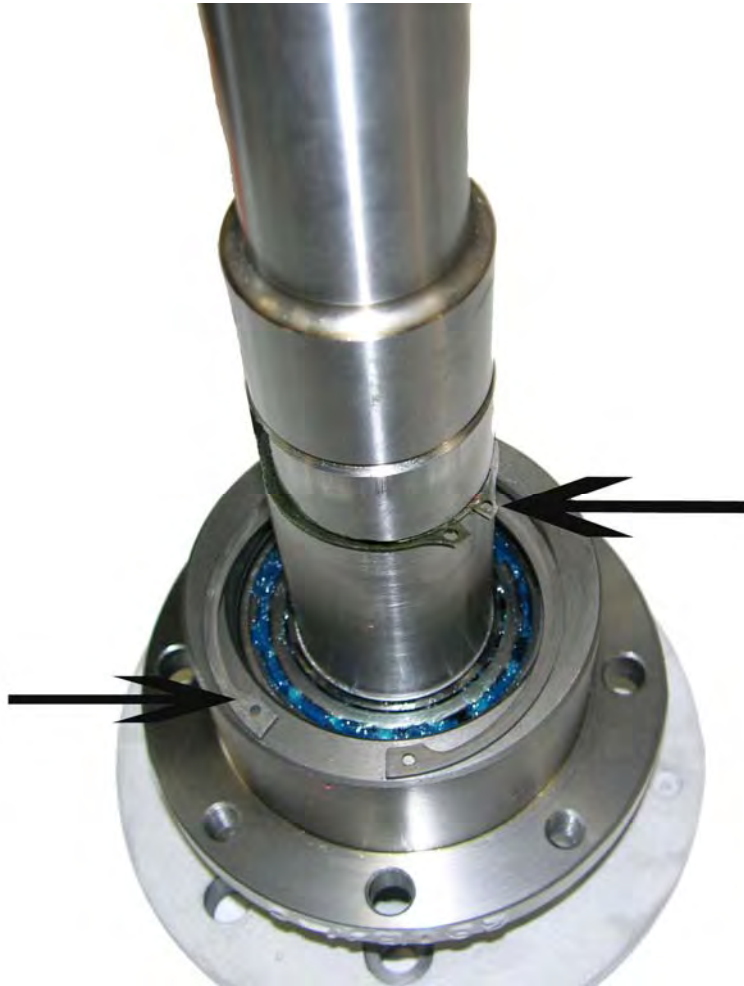
ASSEMBLY OF LX PUMP



Insert the shaft and rear bearing into bearing cover.

2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



Install front
(inboard) bearing
snap ring.
Install rear
(outboard)
bearing retaining
ring.



P/N 26035
Retaining Ring, Outboard



P/N 52481
Retaining Ring, Inboard

2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



Install front
(inboard) bearing.



P/N TUL52480
Inboard bearing

2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



When shaft, bearings and rear bearing cover have been assembled, stand this assembly upright and install pump housing.

P/N TUL 62960
Frame



2045 LX Centrifugal Pump

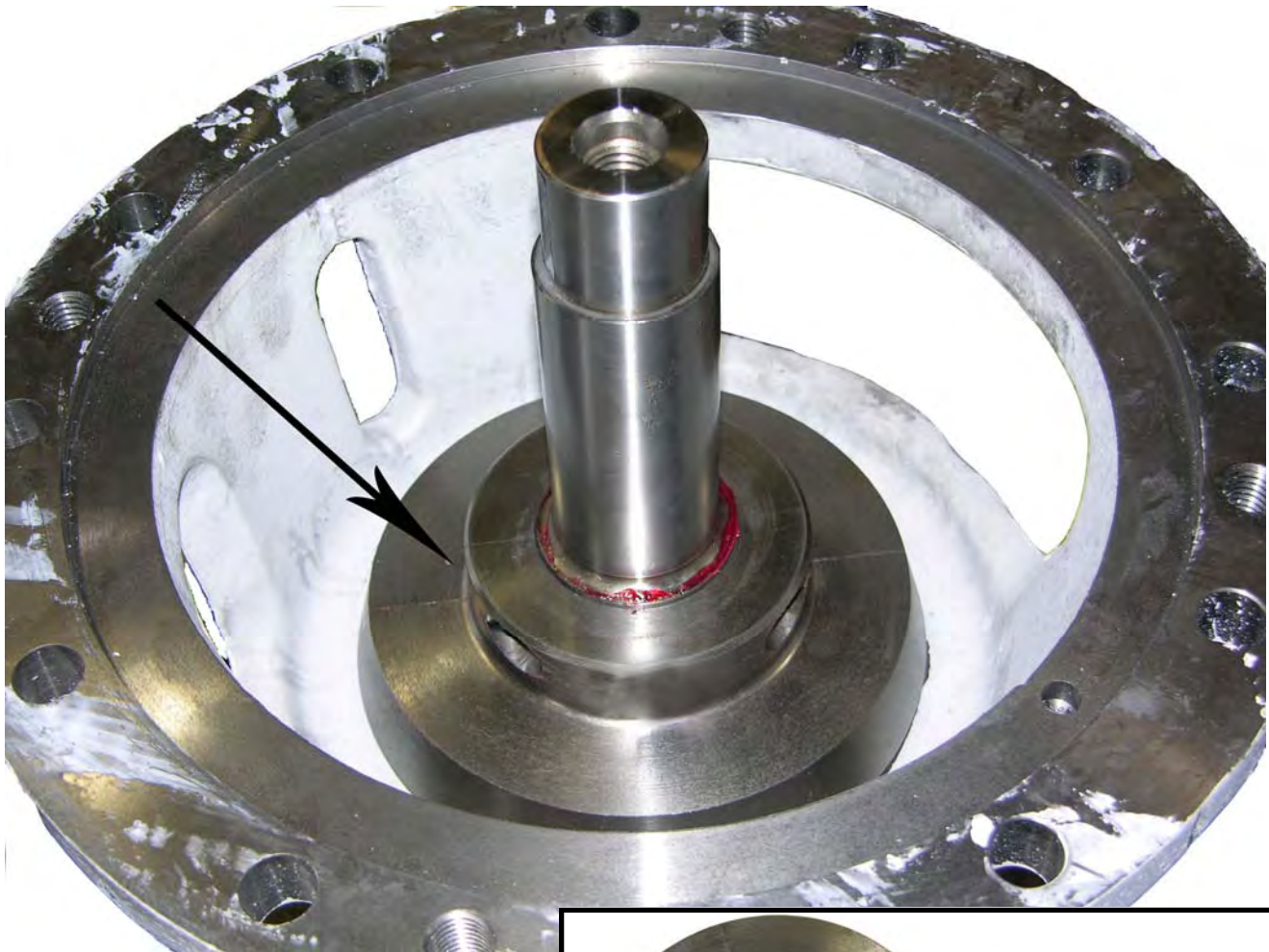
ASSEMBLY OF LX PUMP



Bolt rear bearing cover to pump housing, but do not tighten bolts (qty. 4, P/N 17519) at this time.

2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP

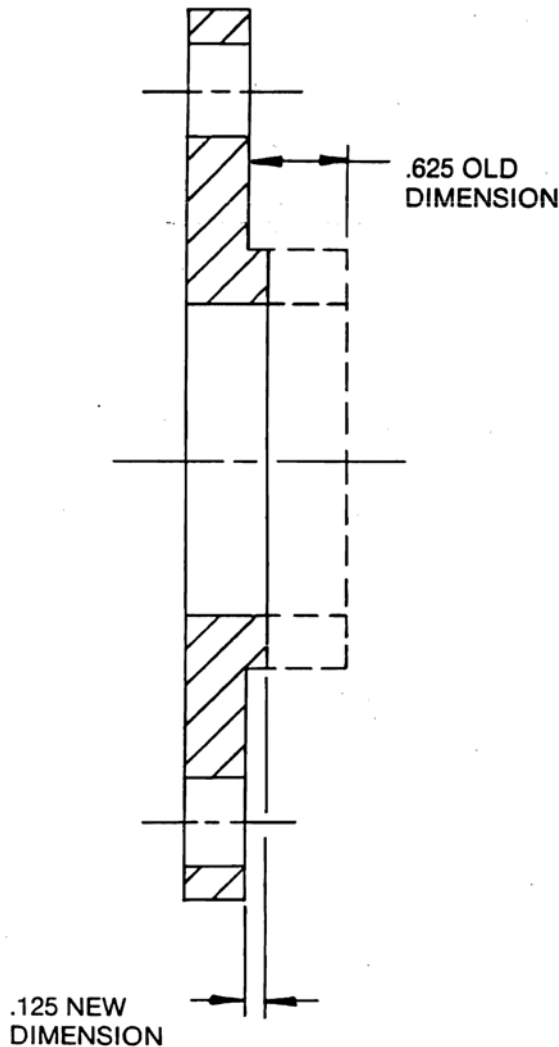


Install slinger but do not tighten lock screw at this time.

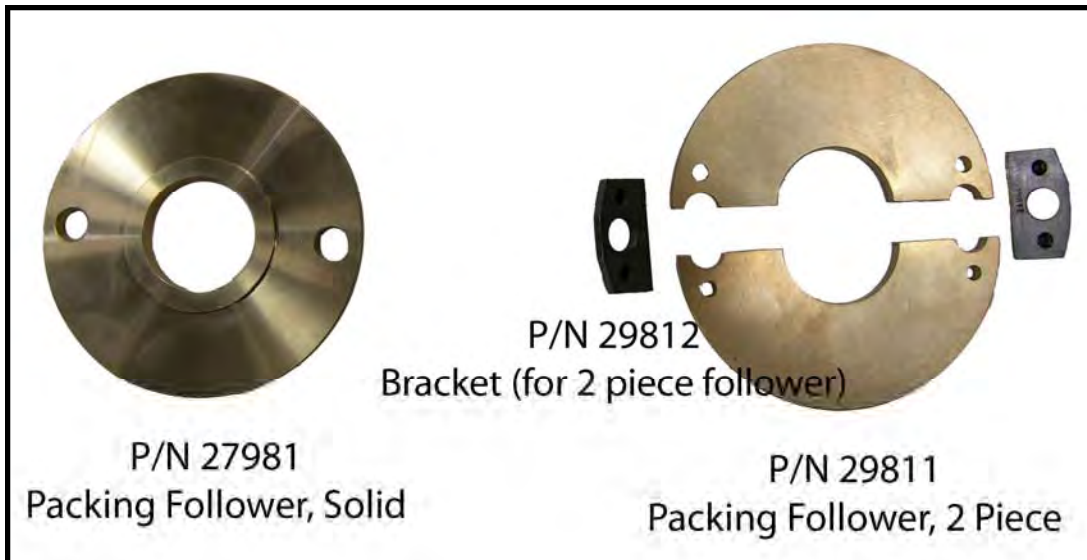


2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP

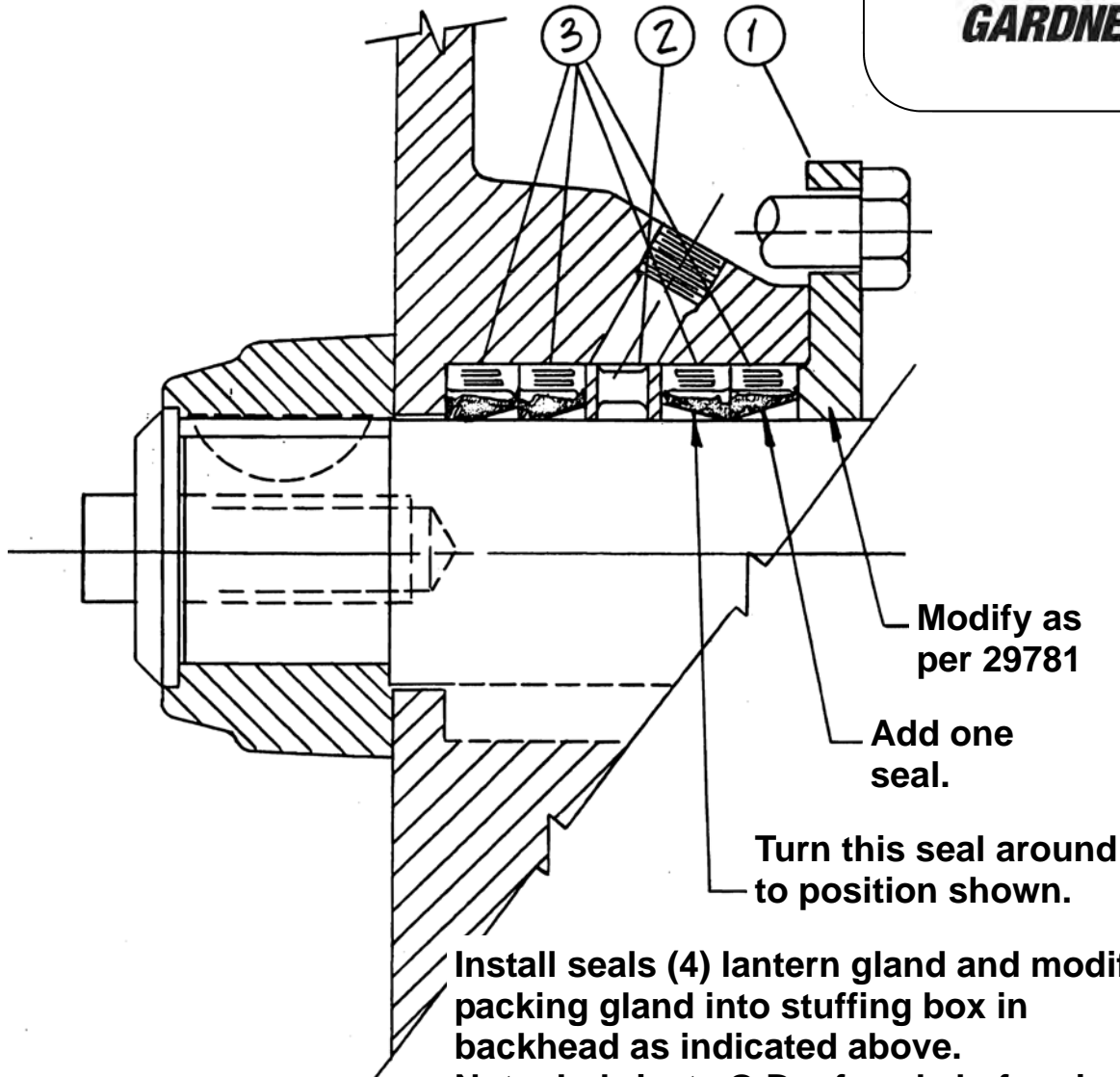


ANY PUMP THAT IS PACKED WITH THREE SEALS AND HAS THE PACKING GLAND (follower) WITH THE .625 DIMENSIONS INDICATED BY DOTTED LINES (LEFT) SHOULD BE MODIFIED TO THE .125 DIMENSION AND A 4TH SEAL ADDED AS SHOWN ON PAGE 30.



2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



Modify as
per 29781

Add one
seal.

Turn this seal around
to position shown.

Install seals (4) lantern gland and modified packing gland into stuffing box in backhead as indicated above.

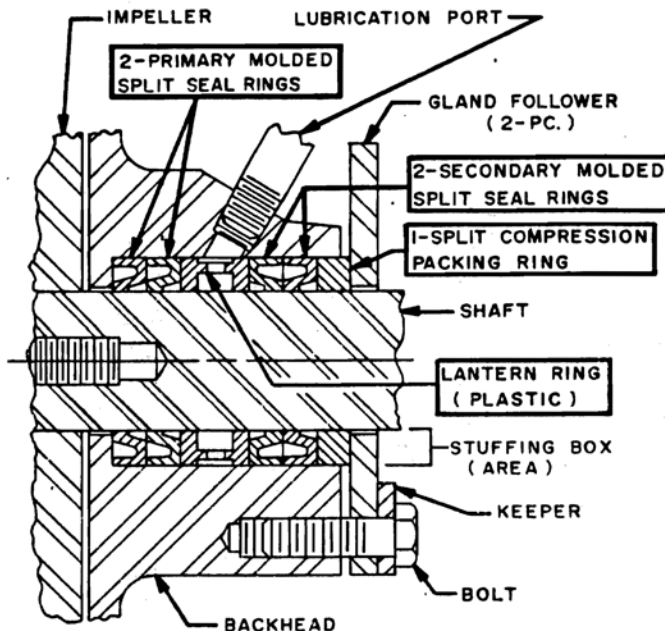
Note: Lubricate O.D. of seals before installation and observe placement of number (3) seal as the lip on this seal must face rear of pump.

Item	Req'd	Part. No.	Description
1	1	29781	Gland, Packing Modified
2	1	29782	Gland, Lantern
3	4	5826	Oil Seal, Solid Packing

2045 LX Centrifugal Pump



TYPICAL INSTALLATION OF CENTRIFUGAL PUMP PACKING



2045LX REPLACEMENT PACKING SET

PART NO.	SET OR COMPONENTS	
TUL 29909	1-COMPLETE SET	
29795	2-PRIMARY MOLDED / SPLIT SEAL RINGS	
29797	1-2 PIECE PLASTIC LANTERN RING	
29795	2-SECONDARY MOLDED / SPLIT SEAL RINGS	
29796	1-SPLIT COMPRESSION PACKING RING	
THE FOLLOWING ITEMS ARE NOT A PART OF THIS REPLACEMENT SET AND THEREFORE MUST BE PURCHASED SEPARATELY.		
SHAFT	BACKHEAD	GLAND FOLLOWER (2-PC.)
KEEPER	BOLT	IMPELLER
LUBRICATION PORT		

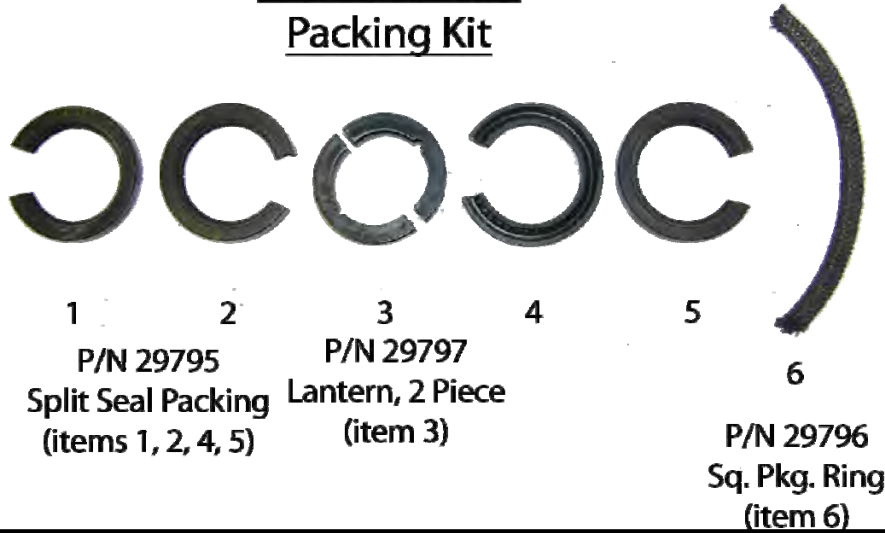
1. REMOVE ALL WORN PACKING RINGS FROM THE STUFFING BOX AND CLEAN SAME THOROUGHLY.
2. CHECK ALL BEARINGS PER THE MANUFACTURERS SPECIFICATIONS AND REPLACE SAME IF NECESSARY. CHECK THE SHAFT AND REPLACE IF NECESSARY.
3. LUBRICATE THE 2 PRIMARY SEAL RINGS. INSTALL AND SEAT EACH SEAL RING SEPARATELY, WITH ALL SEAL LIPS FACING TOWARD THE IMPELLER / STAGGERING THE SPLITS AT THE 12 O'CLOCK AND THE 3 O'CLOCK POSITIONS SO THAT THERE IS NO DIRECT LEAKAGE PATH ESTABLISHED.
4. LUBRICATE AND INSTALL THE 2 PIECE PLASTIC LANTERN RING.
5. LUBRICATE THE 2 SECONDARY SEAL RINGS. INSTALL AND SEAT EACH SEAL RING SEPARATELY AND AGAIN STAGGERING THE SPLITS AS FOLLOWS:
 - (a) THE 1ST SECONDARY SEAL RING OF THIS SERIES MUST BE INSTALLED WITH THE LIPS FACING AWAY FROM THE IMPELLER WITH SPLITS AT THE 6 O'CLOCK POSITION. THE REVERSE POSITION OF THIS SEAL WILL PREVENT AIR FROM BEING DRAWN THRU THE GLAND, AND THUS CAUSING THE LOSS OF PRIME.
 - (b) THE 2ND SECONDARY SEAL RING OF THIS SERIES MUST BE INSTALLED WITH THE SEAL LIPS FACING THE IMPELLER, AND WITH THE SPLIT AT THE 9 O'CLOCK POSITION.
7. LUBRICATE, INSTALL AND SEAT THE SPLIT COMPRESSION PACKING RING WITH THE SPLIT AT THE 12 O'CLOCK POSITION.
8. TO PROPERLY PRELOAD THIS COMBINATION SET, BOTTOM OUT THE FLAT SIDE OF THE GLAND AGAINST THE FACE OF THE STUFFING BOX.

2045 LX Centrifugal Pump

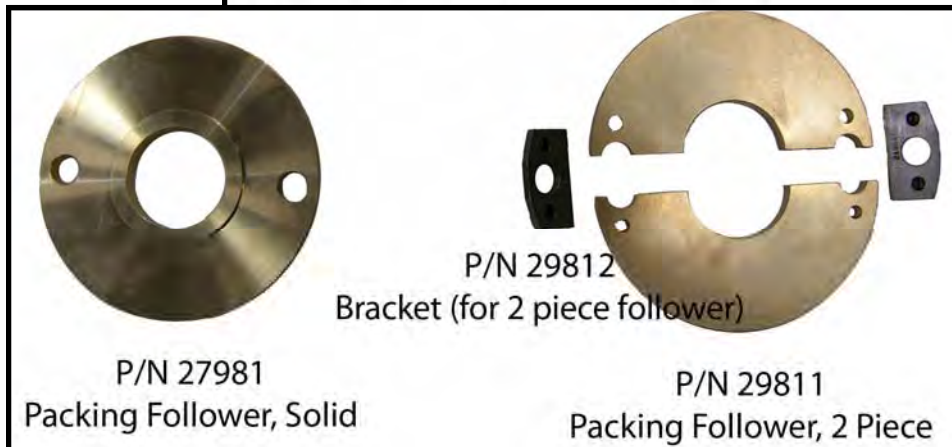
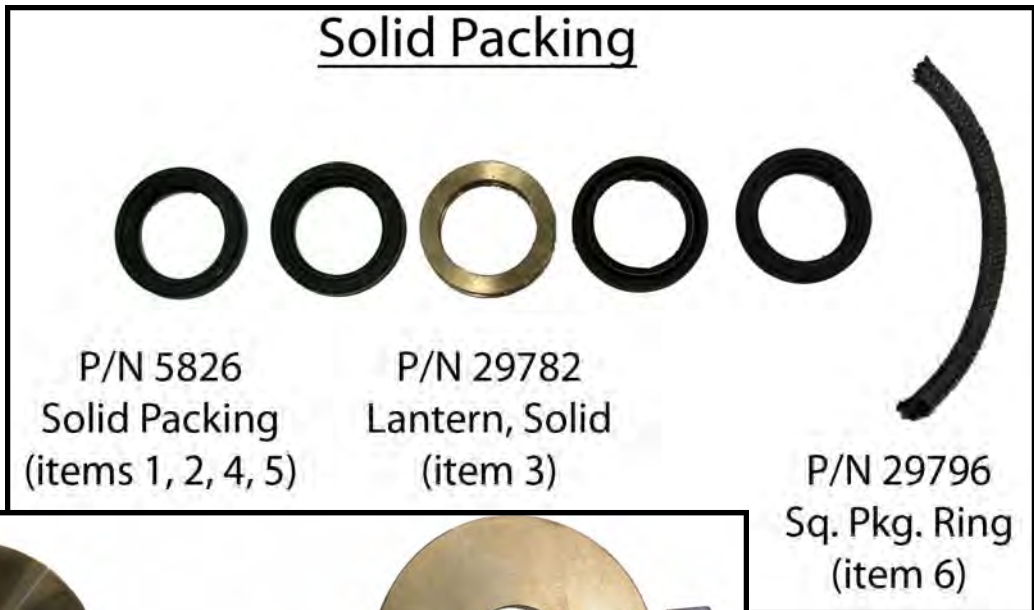
ASSEMBLY OF LX PUMP



P/N TUL29909 Packing Kit



Solid Packing



2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



Packing Kit

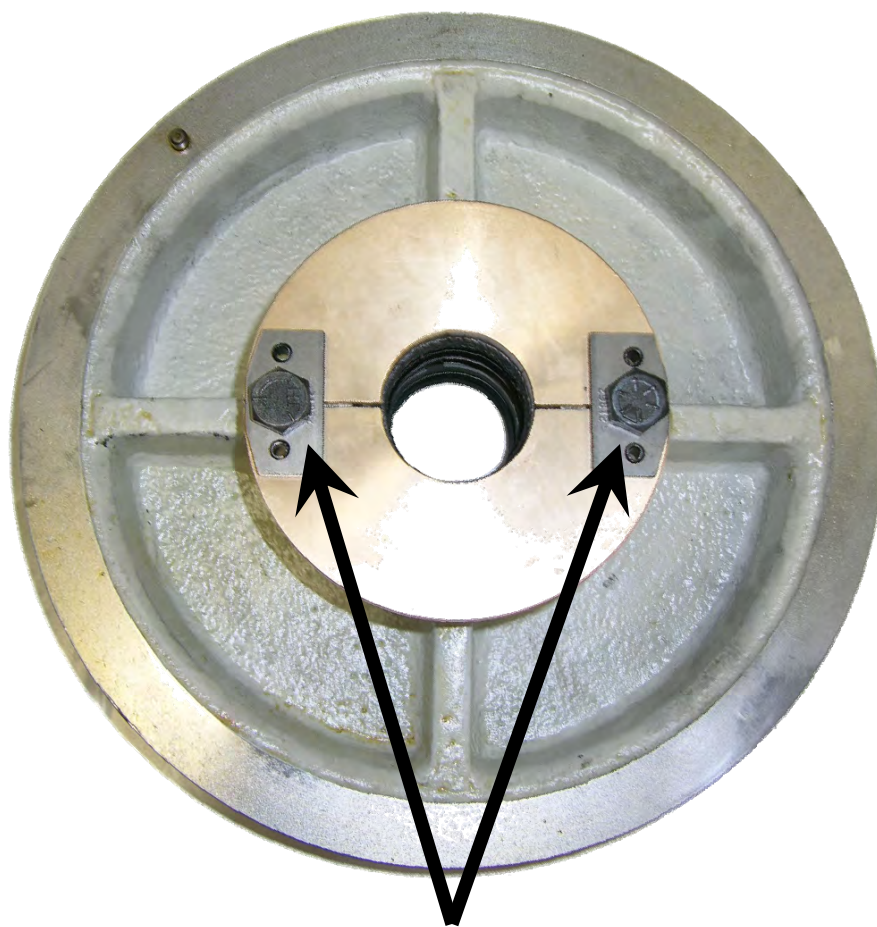


P/N 26081
Backhead

Install Packing in stuffing box area of backhead as directed on page 31.

2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



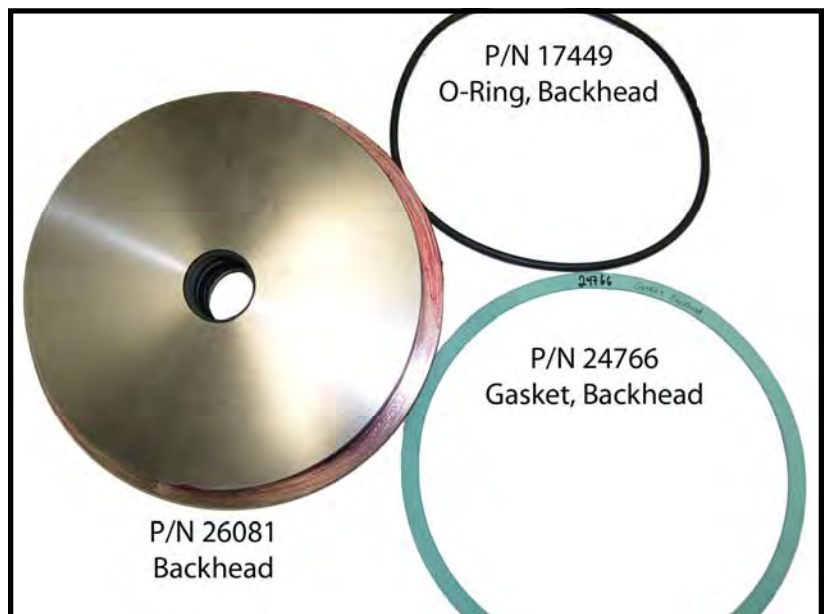
Install Packing Gland (Follower).
Install Packing gland bolts and
tighten to $60 \text{ Nm} \pm 10$
A light coating of chassis lube
should be applied to the I.D. of
seal assembly at this time.

2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



Cover the seal area of the shaft with a light coating of chassis lube and install backhead gasket and O-ring.



2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP

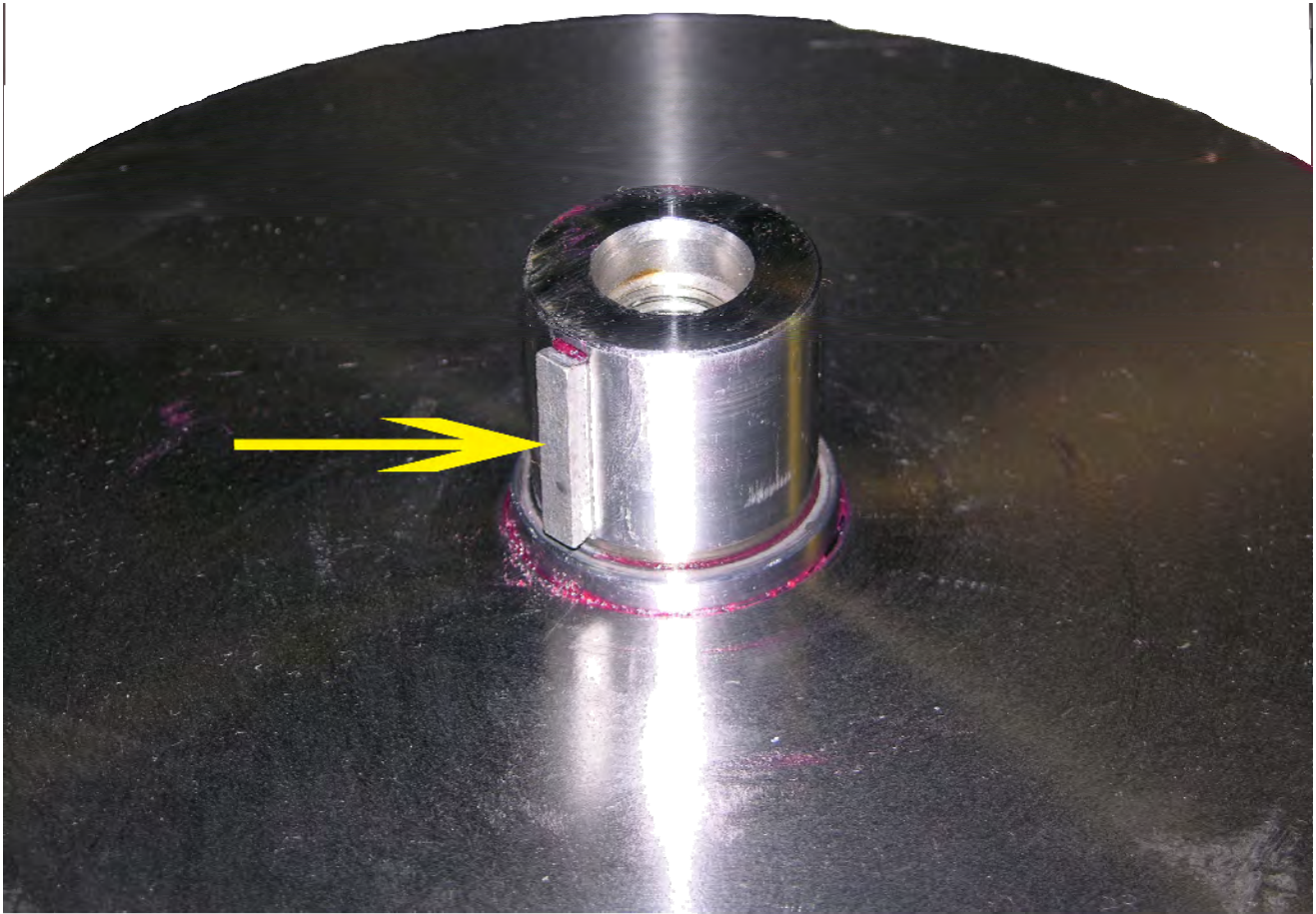


Install backhead assembly as shown above using guide pin for proper alignment.

Caution: Be extremely careful when the #3 seal contacts shaft as the lip on this seal points in the opposite direction of the other three (3) seals. and serious damage can result to seal lip or compression spring may become disengaged.

2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



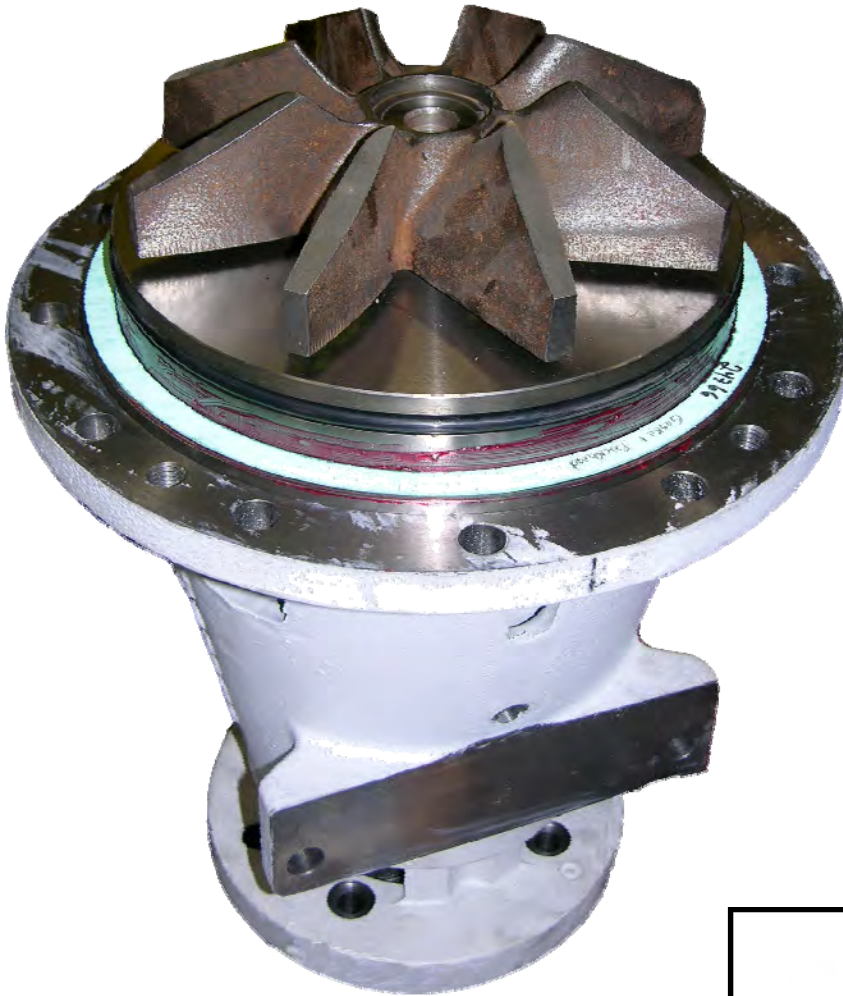
Install Impeller Key at this time.
Caution: This Key is special and a standard Woodruff Key will not fit.



P/N 26083
Impeller Key

2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



Install Impeller over shaft and key, being very careful that key does not become disengaged from shaft.



2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



Install impeller lock and bolt as shown above and torque bolt to:
 200 ± 15 lb. ft./ 280 ± 20 Nm
Install set screw as shown above.

P/N 28775
Set Screw, Impeller Bolt



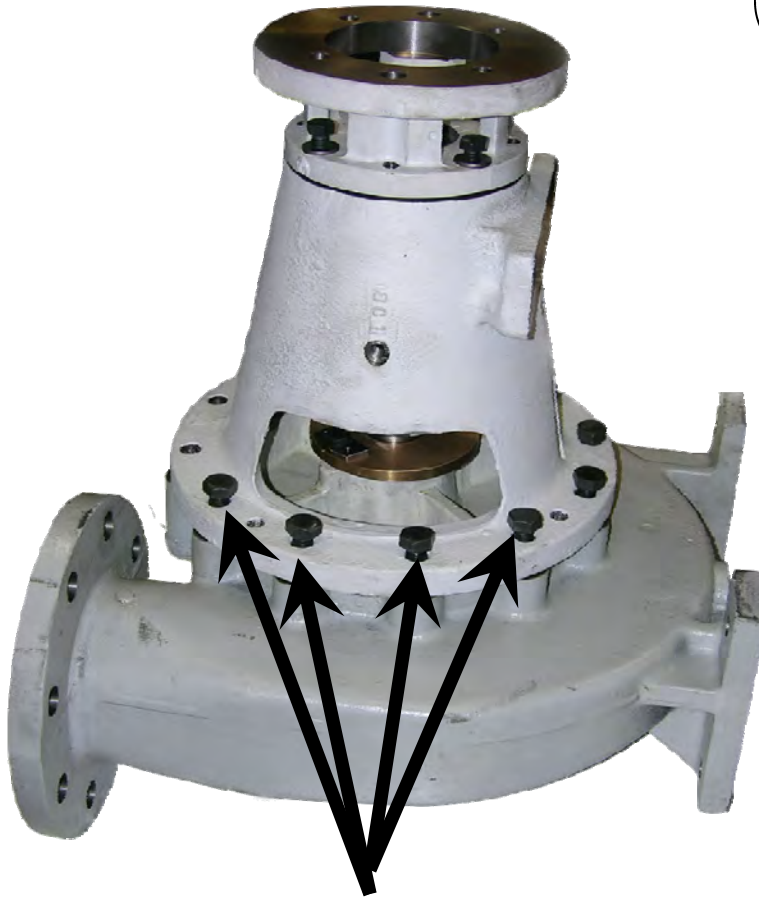
P/N 56103
Lock, Impeller



P/N 56102
Bolt, Impeller

2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



Entire rotating assembly may now be inserted into volute. Use mounting pedestals for proper alignment. Install housing nuts and torque to 150 ± 20 lb. *ft.* / 200 ± 25 Nm.



2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP

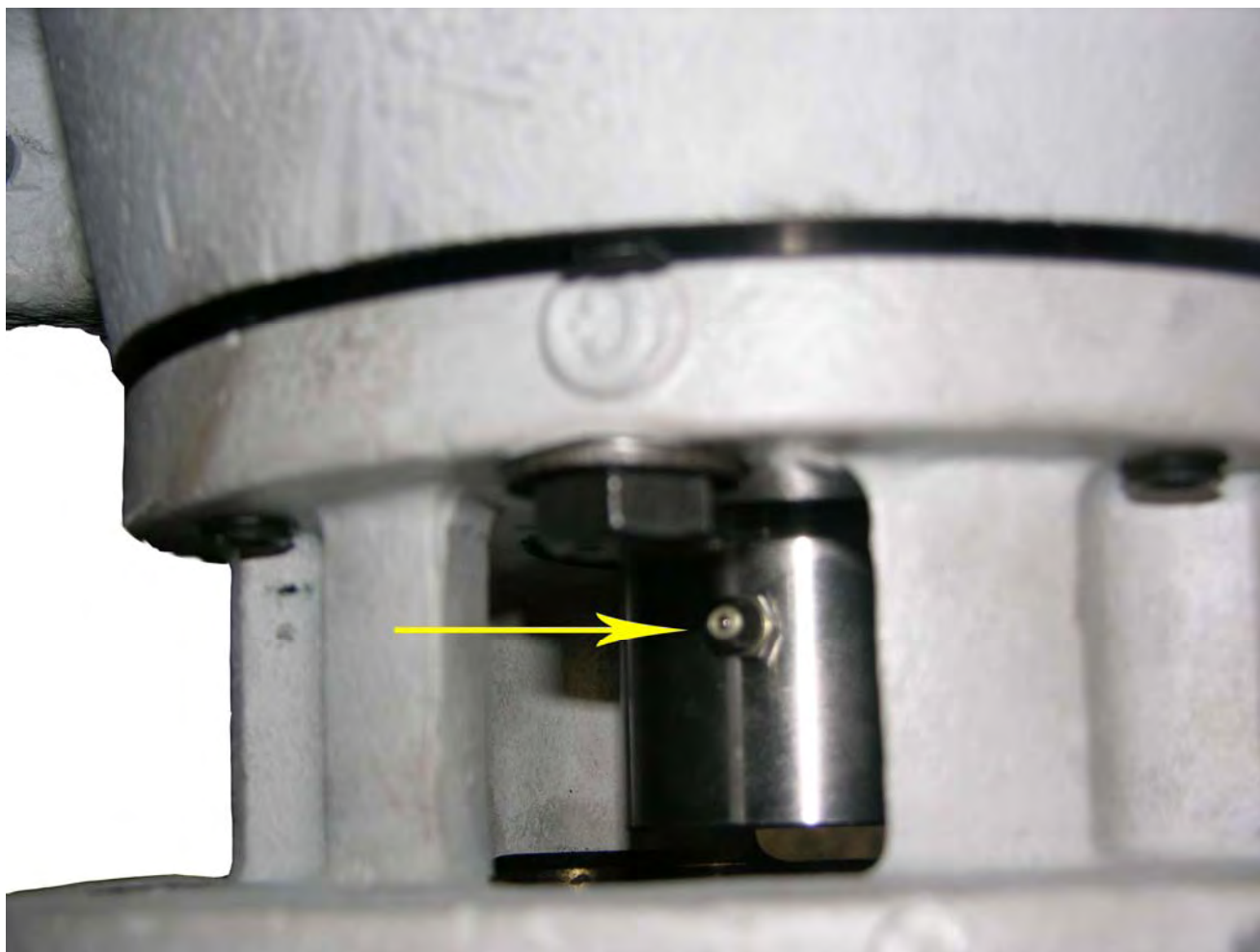


Screw Lube pipe with cap into backhead.



2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



Install grease zerck (P/N 17516).

2045 LX Centrifugal Pump



IMPORTANT!!!
**THIS PROCEDURE MUST BE
DONE FOR PUMP TO OPERATE
TO DESIGN.**

For proper pump performance and long life, it is extremely important that these adjustments be made with care as this will assure the proper .030 clearance between the Impeller and Volute.

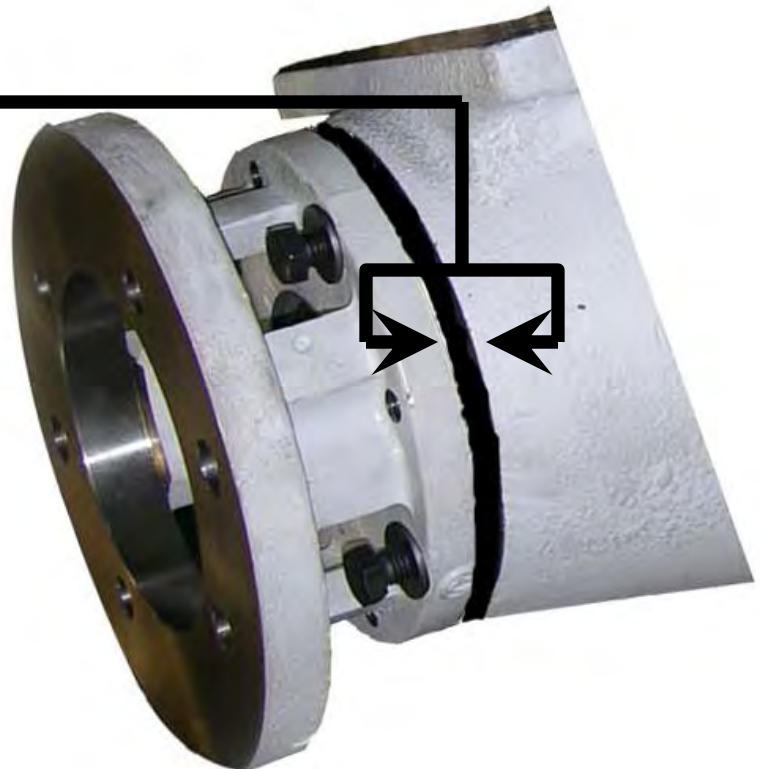
Measure this distance

Turn all adjusting screws counter clockwise until they are flush with front face of rear bearing retainer housing. Drive bearing retainer forward until Impeller contacts Volute. Turn adjusting screws clockwise until they contact pump housing. Turn each adjusting screw 1/4 turn. Continue in this manner until the initial distance plus .030 is reached. Torque retainer bolts to:

75 ± 10 lb. ft. / 100 ± 15 Nm

Re-measure distance between pump housing and rear bearing retainer as it sometimes will change when retainer bolts are torqued.

Some early pumps will have two (2) adjusting screws and two (2) retainer bolts while later models may have four (4) adjusting screws and four (4) retainer bolts. This does not affect adjusting procedure.



2045 LX Centrifugal Pump

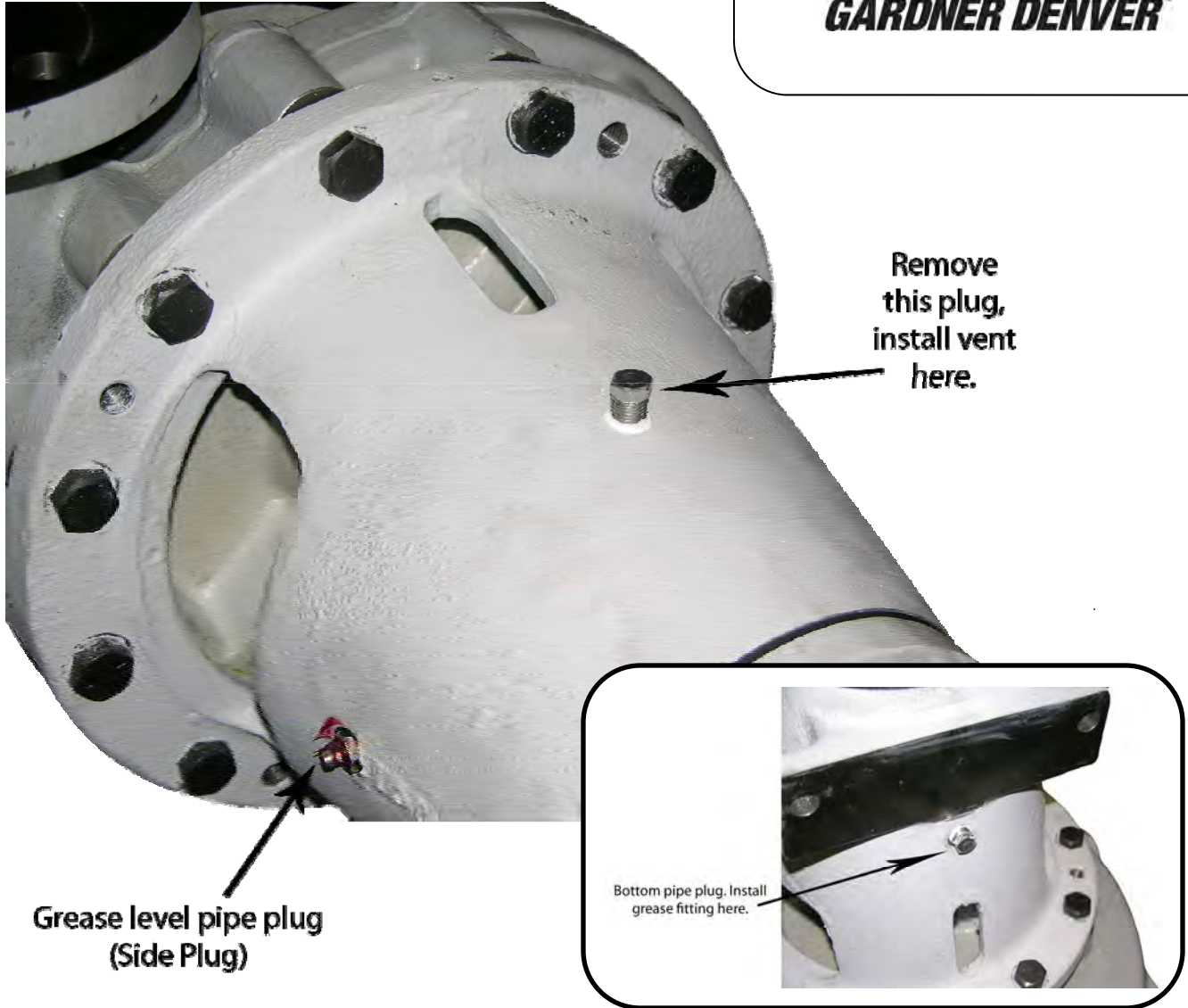
ASSEMBLY OF LX PUMP



After pump has been installed and adjusted, adjust slinger toward rear of pump until it contacts front bearing and tighten lock screw.

2045 LX Centrifugal Pump

ASSEMBLY OF LX PUMP



After pump has been overhauled remove pipe plug in bottom of pump housing and install grease fitting. Remove pipe plug on side of housing. Pump NGL-1 or NGL-2 chassis lube into housing until it starts to come out of hole in side of housing where pipe plug was removed. While grease is being pumped into housing, pump should be turning as this will distribute lube to bearing and prevent over filling.

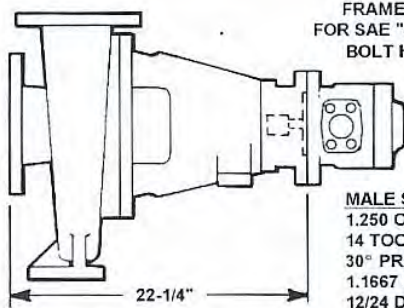
2045 LX Centrifugal Pump

GARDNER DENVER DESIGN FEATURES GIVE LONG LIFE & EASY MAINTENANCE.

- The 2045 LX features two flow dividers resulting in three throats positioned 120 degrees apart which allows for a balance of thrust and forces and low radial loads, shortened flow path, development of full pressure at 1/3 revolution of impeller, distribution of wear at three points, prevention of air entrapment and vapor lock, reduction of shear and improvement of viscosity handling characteristics.
- The GD 2045 LX drive system has a mounting adapter bracket predrilled to accept a direct drive SAE "C" two, or four bolt hydraulic motor, and in conjunction with our internal splined shaft eliminates down time due to misalignment.
- Simplistic construction requires less assembly time and less spare parts inventory.
- The impeller design is fully open and ideally suited for handling fluids containing suspended solids. Impeller is available in an 8-vane pattern with a clockwise rotation.
- The frame is available in two versions, economical cast iron and steel fabricated.
- The GD 2045 LX offers two packing choices. Solid lip seals provide efficient service with a minimum amount of attention. Split compression type packing is available for more severe service conditions and can easily be replaced without dismantling the pump.
- Bearings provide maximum radial and thrust load capacity and are protected by a water slinger.



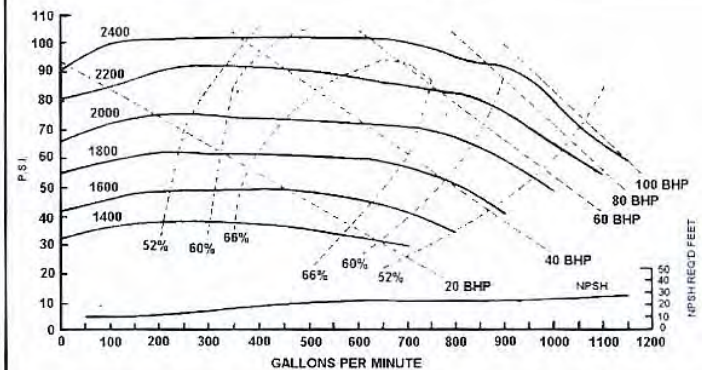
HYDRAULIC MOTOR MOUNTING SPECIFICATIONS



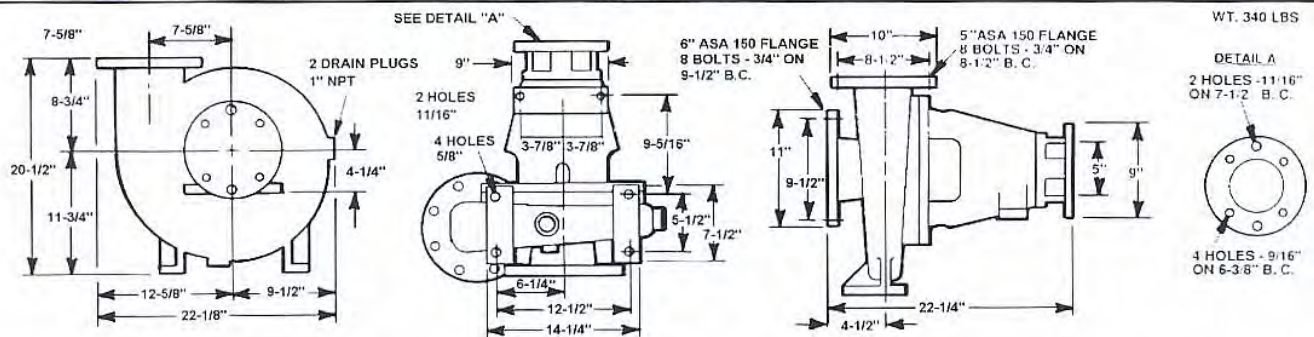
FRAME AND SPLINE DATA FOR SAE "C" TWO (2) OR FOUR (4) BOLT HYDRAULIC MOTOR

MALE SPLINE INFORMATION
 1.250 O.D.
 14 TOOTH FLAT ROOT SIDE FIT
 30° PRESSURE ANGLE
 1.1667 PITCH DIA.
 12/24 DIA. PITCH

PERFORMANCE CURVES

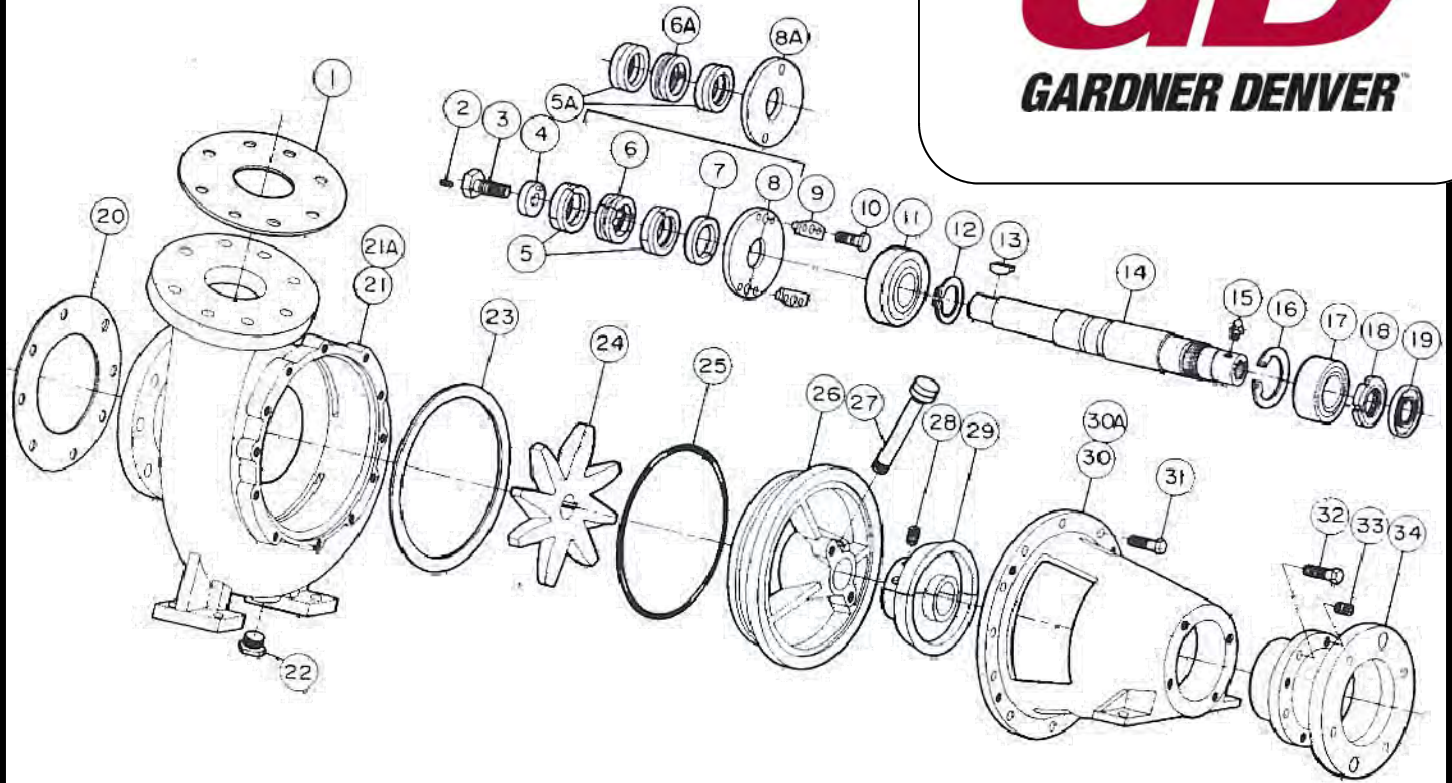


INSTALLATION DIMENSIONS



2045 LX Centrifugal Pump

2045 LX Parts List



Ref No.	Name of Part	Qty.	Part No.	Ref No.	Name of Part	Qty.	Part No.
1	GASKET DISCHARGE	1	35193	18	BEARING LOCK NUT	1	61117
2	SET SCREW	1	28775	19	OIL SEAL, OUTBOARD	1	62961
3	IMPELLER BOLT (Hex Design)	1	56102	20	GASKET SUCTION	1	35264
4	IMPELLER LOCK WITH ROLL PIN	1	56103	21	VOLUTE	1	5620LR
5	SPLIT LIP SEAL PACKING RING	4	29795	21A*	MODIFIED VOLUTE/NO PESTALS WITH EX DRAIN	1	5620LR-SP
5A	OIL SEAL SOLID PACKING	3 or 4	5826	22	1" PIPE PLUG	2	17520
6	LANTERN GLAND, 2 PIECE	1	29797	*	1/2" PIPE PLUG	1	16125
6A	LANTERN GLAND, SOLID	1	29782	23	GASKET, BACKHEAD	1	24766
7	SQUARE COMPRESSION PKG. RING	1	29796	24	IMPELLER, 8 VANE	1	74814
8	PACKING FOLLOWER, 2 PIECE	1	TUL29811	25	O-RING BACKHEAD	1	17449
8A	PACKING FOLLOWER, SOLID	1	29781	26	BACKHEAD	1	26081
9	KEEPER	2	29812	27	LUBE PIPE WITH CAP	1	14724
10	HEX BOLT (Pkg. Follower/Backhead)	2	103284	28	RETAINING SCREW, SLINGER/SHAFT	1	17522
11	BEARING, INBOARD SINGLE ROW	1	TUL52480	29	SLINGER, 2 PIECE	1	29810
12	RETAINING RING, INBOARD	1	52481	30	FRAME, CAST	1	TUL62960
13	IMPELLER KEY	1	26083	31	HEX BOLT, FRAME/VOLUTE	12	17515
14	SHAFT, INTERNAL SPLINED DRIVE	1	61088	32	HEX BOLT, BEARING COVER/FRAME	4	17519
15	GREASE ZERK	1	17516	33	THRUST AJUSTMENT SCREW	4	26029
16	RETAINING RING, OUTBOARD	1	26035	34	BEARING COVER & MOTOR BRACKET	1	26084
17	BEARING, OUTBOARD Double row	1	61116				

* These items not shown on this assembly drawing.

2045 LX Centrifugal Pump

GARDNER DENVER PRODUCT WARRANTY

GENERAL PROVISIONS AND LIMITATIONS

Gardner Denver (the "Company") warrants to each original retail purchaser ("Purchaser") of its new products, assemblies or parts from the Company or its authorized distributors that such products are, at the time of delivery to the Purchaser, made with good material and workmanship. No warranty is made with respect to:

1. Any product which has been repaired or altered in such a way, in the Company's judgment, as to affect the product adversely.
2. Any product which has, in the Company's judgment, been subject to negligence, accident, or improper storage, improper installation, operation or application. (Examples: over-pressure, sand-outs, cavitation, corrosion, erosion or degradation).
3. Any product which has not been operated or maintained in accordance with the recommendations of the Company.
4. Components or accessories manufactured, warranted and serviced by others.
Any reconditioned or prior owned product.

Claims for items described in (4) above should be submitted directly to the manufacturer.

WARRANTY PERIOD

The Company's obligation under this warranty is limited to repairing or, at its option, replacing, during normal business hours at an authorized service facility of the Company, any part or assembly which in the Company's judgment proved to have unsatisfactory material or workmanship within the applicable Warranty Period as follows.

Except for the products or components listed below, and subject to the limitations and restrictions set forth in the "Disclaimer" section set forth below, the Warranty Period for all products is 1,250 hours of operation or three (3) months after start-up, not to exceed 120 days after delivery to Purchaser, whichever occurs first. The exceptions are as follows:

1. Power end is warranted for twelve (12) months from date of start-up or eighteen (18) months from date of delivery to the Purchaser, whichever occurs first.
2. Forged steel fluid cylinders are warranted for materials and workmanship for 6 months from



the date of installation or 18 months from the date of delivery to the purchaser, whichever ever occurs first.

3. Repairs are warranted for 90 days from the date of delivery, for the workmanship and materials of the new parts installed.
4. Weld repaired fluid ends and weld repaired components are not warranted.
5. Expendable fluid end parts, including, but not limited to, valves, valve parts, packing, liners and pistons, are not covered by this warranty due to variable abrasive nature of material pumped.

PRESERVATION ASSEMBLIES DESTINED FOR STORAGE

In order for warranty acceptance any pump assembly not immediately installed or destined to be in storage or in transit for extended periods of time must be prepared for storage as defined in the Company's Long Term Storage Procedure. This includes but is not limited to:

- Drain and thoroughly clean inside power end crankcase.
- Spray rust inhibiting oil on all bearing, machined and inside surfaces of the power end.
- Induce clean gear oil into any circulating pump, filter, heat exchanger and piping.
- Remove valves, seats and plungers from the fluid end.
Thoroughly clean and dry these parts and all internal surfaces. Coat all cylinder bores, valve covers and reusable expendable parts with rust preventative.
- Flush all water, and contaminants from pump, tanks, hoses and spray nozzles. Spray all components with a rust inhibiting oil.
- Rotate pump every 30 days to insure bearings are oiled.
- At the expense of the Purchaser, any product properly preserved must be inspected by an authorized agent of the Company, prior to the Company, granting any extended warranty beyond that stated in this warranty.

LABOR TRANSPORTATION AND INSPECTION

The Company will provide labor, by Company representative or authorized service personnel, for repair or replacement of any product or part thereof which in the Company's judgment is proved not to be as warranted.
Labor shall be limited to the amount specified in the Company's labor rate schedule. Labor costs in excess

2045 LX Centrifugal Pump

GARDNER DENVER PRODUCT WARRANTY

of the Company rate schedules caused by, but not limited to, location or inaccessibility of the equipment, or labor provided by unauthorized service personnel is not provided for by this warranty.

All costs of transportation of product or parts claimed not to be as warranted and, of repaired or replacement parts to or from such service facility shall be borne by the Purchaser. The Company may require the return of any part claimed not to be as warranted to one of its facilities as designated by the Company, transportation prepaid by the Purchaser, to establish a claim under this warranty.

Replacement parts provided under the terms of this warranty are warranted for the remainder of the Warranty Period of the product upon which installed to the same extent as if such parts were original components.

The Company may request a root cause analysis be performed in-order to identify if a request for warranty claim meets the requirements of this warranty.

DISCLAIMER

Except as to title, the foregoing warranty is the sole and exclusive warranty of the Company. The Company hereby extends other manufactures' warranty or guaranties, if any given to Company by such manufacturer, but only to the extent the Company is able to enforce such warranty or guaranties. The Company has not authorized any party to make any representation or warranty other than as expressly set forth herein. **SELLER HEREBY DISCLAIMS AND EXCLUDES ANY OTHER EXPRESS, IMPLIED OR STATUTORY WARRANTIES, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. COMPANY MAKES NO WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER (EXPRESS, IMPLIED OR STATUTORY), OF LAW OR OTHERWISE, ON ANY EQUIPMENT, COMPONENT PARTS OR ACCESSORIES SOLD HEREUNDER WHICH, ARE NOT MANUFACTURED BY COMPANY.**

NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, THE FOREGOING WARRANTY SHALL BE THE SOLE AND EXCLUSIVE REMEDY AVAILABLE TO THE PURCHASER. UNDER NO CIRCUMSTANCES, WHETHER IN CONTRACT, TORT OR OTHERWISE, SHALL THE COMPANY'S TOTAL LIABILITY ARISING IN



CONNECTION WITH ANY PURCHASE ORDER EXCEED THE AMOUNT OF ANY SALES OR OTHER PROCEEDS RECEIVED PURSUANT THERETO. IN ADDITION, UNDER NO CIRCUMSTANCES, WHETHER IN CONTRACT, TORT OR OTHERWISE, SHALL THE COMPANY BE LIABLE FOR LIQUIDATED, SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES, EXPENSES OR COSTS, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR FACILITY DOWNTIME, HOWEVER CAUSED AND EVEN IF THE POTENTIAL OF SUCH DAMAGES WAS DISCLOSED AND/OR KNOWN.

No statement, representation, agreement, or understanding, oral or written, made by any agent, distributor, representative, or employee of the Company which is not contained in this Warranty will be binding upon the Company unless made in writing and executed by an officer of the Company.

This warranty shall not be effective as to any claim which is not presented within 30 days after the date upon which the product is claimed not to have been as warranted. Any action for breach of this warranty must be commenced within one year after the date upon which the cause of action occurred.

Any adjustment made pursuant to this warranty shall not be construed as an admission by the Company that any product was not as warranted.

WARRANTY REQUESTS

Products to be returned for warranty analysis shall be approved for return in writing by the Company prior to shipment. All requests for product return shall be submitted by email. Facsimile or letter to:

Warranty Department c/o
Gardner Denver Petroleum Pumps
4747 South 83rd East Avenue
Tulsa, Oklahoma 74145

Email: CCR.QAR@gardnerdenver.com
Facsimile: (918) 664-6225

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GARDNER DENVER CENTRIFUGAL PUMP APPLICATIONS

OILFIELD:

BLENDERS
MIXERS
CIRCULATION
SUPERCHARGING
DESANDING
TRANSFER
WATER FLOOD
DISPOSAL WELLS
WASHDOWN

INDUSTRIAL:

SLURRY
DESANDING
MIXING
TRANSFER
FOOD PROCESSING
CHEMICAL PROCESSING
IRRIGATION
MINING

OTHER GARDNER DENVER SERVICES

OVERHAUL AND/OR REWORK OF:

Damaged or worn out frac power frames, fluid ends, crossheads, or pressure headers, mudpumps, centrifugal and slurry pumps and 5- to 8- stage centrifugal pumps, heat exchanger tube bundle welding & refacing, etc. Our specialty – Turn around work.

MISCELLANEOUS MACHINING

MILLING & BORING

TURNING (TO 42" DIA.)

FABRICATION

WELDING

COMPLETE FIXTURE & TOOLING

DEPARTMENT

HYDROSTATIC & DESTRUCTIVE TEST

FACILITY

SHOT PEENING & STRESS RELIEVING

75,000 P.S.I. AUTOFRETTAGE FACILITY

OTHER GARDNER DENVER PRODUCTS

HIGH PRESSURE TRIPLEX PUMPS FOR ACIDIZING & FRACTURING

FEATURES:

- STEEL FABRICATED POWER FRAME
- SOLID ONE-PIECE CONNECTING ROD
- PRECISION GROUND CROSSHEADS
- FORGED ALLOW STEEL CRANKSHAFT
- HIGH-GRADE ALLOY STEEL GEARS
- FOUR MAIN ROLLER BEARINGS
- ORIFICED LUBRICATION SYSTEM
- LIGHTWEIGHT ALUMINUM COVERS
- INTERCHANGEABLE PARTS/STOCK

HIGH PRESSURE FLUID ENDS FROM SOLID STEEL FORGINGS

FEATURES:

- UNIFORMITY OF ALL INTERNAL SURFACES
- ALL CORNERS CENEROUSLY REDIUSED
- ALL BORES HAND POLISHED
- SHOT PEENED
- AUTORETTAGE CAPABILITY
- CUSTOM DESIGNS MADE ON CONTRACT, BASED UPON RECEIPT OF SPECIFICATIONS AND DRAWINGS
- STANDARD REPLACEMENT CAN BE PROVIDED FOR MOST PUMPS ON THE MARKET
- SPECIAL MATERIALS AND/OR SPECIFIC MODIFICATIONS MAY BE INCORPORATED INTO MOST STANDARD DESIGNS.

2045 LX Centrifugal Pump

MAINTAIN PUMP RELIABILITY AND PERFORMANCE WITH GENUINE GARDNER DENVER PARTS AND SUPPORT SERVICES



For the location of your local authorized Gardner Denver distributor, refer to the yellow pages of your phone directory or contact:

Factory (Tulsa):

**Gardner Denver Well
Servicing Pumps
4747 South 83rd East Ave.
Tulsa, Oklahoma 74145**

**Phone: (918) 664-1151
(800) 637-8099**

Fax: (918) 664-6225

Service Center (Odessa):

**Chaparral
2121 West 44th Street
Odessa, TX 79768**

**Phone: (432) 366-5433
(800) 368-1134**

Fax: (432) 363-9940

Service Center (Ft. Worth):

**Geoquip
7533 Kathy Lane
Ft. Worth, Texas
76126**

**Phone: (817) 249-6400
(800) 824-0271**

Fax: (817) 249-6383

Gardner Denver[®] genuine pump parts are manufactured to design tolerances and are developed for optimum dependability. Design and material innovations are the result of years of experience with hundreds of different pump applications. Reliability in materials and quality assurance is incorporated in our genuine replacement parts.

Gardner Denver supports your needs with these services:

- Large inventory of genuine parts in stock and ready to ship.
- Trained parts specialists to assist you in selecting the correct replacement parts.
- Repair and maintenance kits designed with the necessary parts to simplify servicing your pump.
- Authorized service technicians are factory trained and skilled in pump maintenance and repair. They are ready to respond and assist you by providing fast, expert maintenance and repair services.

INSTRUCTIONS FOR ORDERING REPAIR PARTS

- When ordering parts, specify Pump MODEL and SERIAL NUMBER (see nameplate on unit).
- All orders for Parts should be placed with the Tulsa or Ft. Worth facility.
- Specify exactly the number of parts required.



GARDNER DENVER™



Drilling & Production Pumps
Gardner Denver Pump Division
1800 Gardner Expressway
Quincy, IL 62301
Phone: 217-222-5400
Fax: 217-223-1581

Drilling & Production After-Market
Gardner Denver Pump Division
2200 South Prospect
Oklahoma City, OK 73129
Phone: 405-677-5736
Fax: 405-677-5807

Well Service Pumps
Gardner Denver Pump Division
4747 South 83rd East Avenue
Tulsa, OK 74145
Phone: 918-664-1151
Fax: 918-447-6487

GEOQUIP SERVICE CENTER
After-Market & Repair Facility
Gardner Denver Pump Division
7533 Kathy lane
Fort Worth, TX 76126
Phone: 817-249-6400
Fax: 817-249-6383

CHAPARRAL SERVICE CENTER
After-Market & Repair Facility
Gardner Denver Pump Division
2121 West 44th Street
Odessa, TX 79764
Phone: 432-366-5433
Fax: 432-363-9940