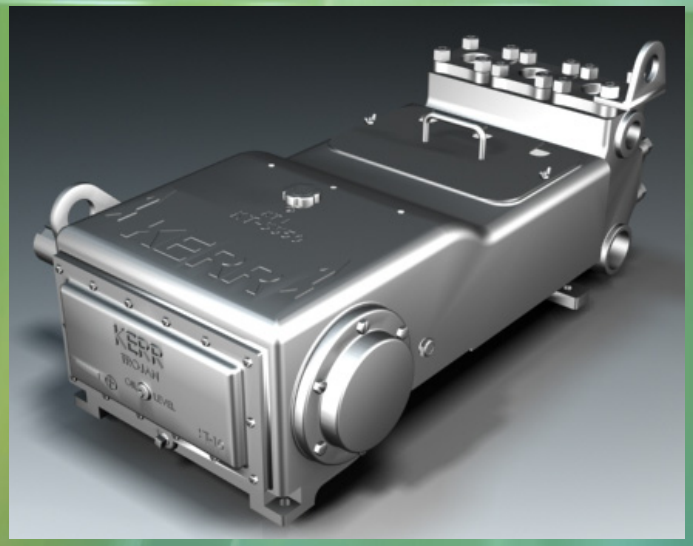
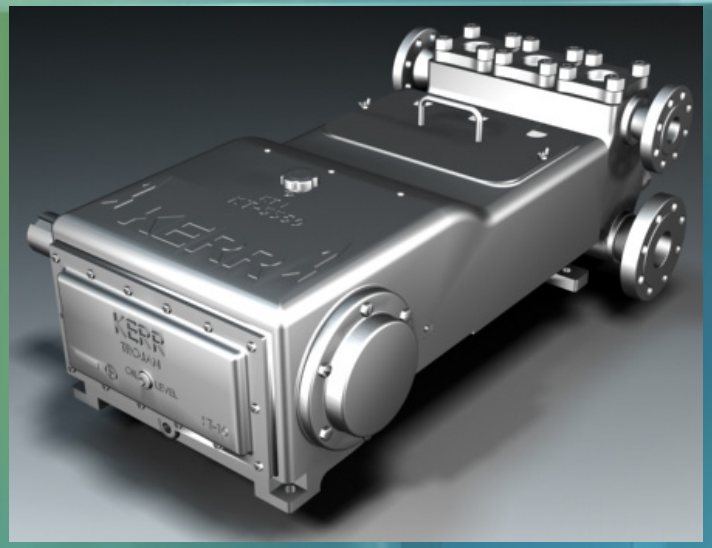
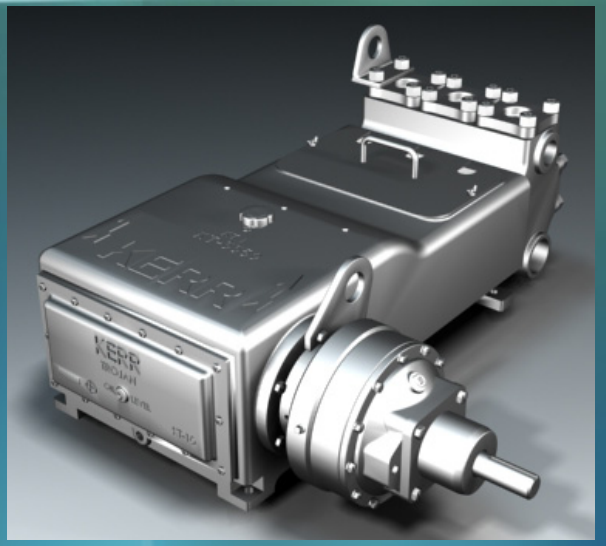
Parts & Service Manual

Kerr KT-3350/KT-3400 Plunger Pump

Kerr Pump Corporation

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NEW PUMP WARRANTY

1) KERR MACHINE COMPANY (Kerr Pumps) warrants its new pumps to be free from defective materials and/or workmanship for a period of one year from the date of sale by the Distributor, provided that the new pump is registered in accordance with Paragraph No. 2 hereof, properly installed and operated in accordance with the Company's Service Manual, and all other terms of this warranty agreement are complied with by the purchaser. As hereinafter provided, this warranty includes the replacement of parts and labor to correct any deficiency. All defective parts must be returned to the Company's Home Office for examination before this warranty is effective. This warranty applies to parts, which have been replaced under this warranty only so long as the original pump warranty is effective. This warranty is for the exclusive benefit of the purchaser and is not transferable.

2) Each Distributor of a new **KERR PUMP**, will provide the customer with a registration blank furnished to him by the Company which must state the date of sale, be signed by the purchaser and the Distributor, and delivered to the Home Office of the Company within fifteen (15) days of the date of sale.

3) In the event of a claim under this warranty, made within the one-year warranty period, the purchaser must notify the Distributor, and the Distributor shall contact **KERR PUMPS** before any repairs or service calls are made.

4) All warranty claims must be sent to **Kerr Pumps Home Office** on the authorized warranty claim form provided by **Kerr Pumps**, and available from the Distributor before any warranty claim will be considered. It is understood that **Kerr Pumps** will deteriorate due to ordinary wear, therefore, the following credits shall apply to all replacement parts, labor, surface freight, travel time and mileage allowance furnished under this warranty.

    A. For the first ninety (90) days from the date of sale by the Distributor, 100% credit will be allowed on a current list price basis.
    B. From 91 to 180 days from the date of sale by the Distributor, 75% credit will be allowed on a current list price basis.
    C. From 181 days to 270 days by the Distributor, 50% credit will be allowed on a current list price basis.
    D. From 271 days to one year after the date of sale by the Distributor, 25% credit will be allowed on a current list price basis.

The credit given to the Distributor for replacement parts or pumps under this warranty is based upon the Distributor's net cost paid Kerr Pumps for such replacement parts or pumps.

5) In the event of a warranty claim under this warranty made within ninety (90) days of the date of sale by the Distributor, **KERR PUMPS**, before any repairs are made, shall be contacted by the Distributor and given the option of having the Distributor either repair or replace the pump.
6) Upon any claim under this warranty, other than a claim wherein KERR PUMPS at its option replaced the pump as provided in Paragraph No. 5 hereof, the Distributor will make the necessary repairs an/or replacement, and KERR PUMPS shall allow the cost of labor on warranty claims. The labor cost may include travel time not to exceed (8) hours of actual travel time. KERR PUMPS will pay surface freight on warranty shipments. After making the necessary repairs and/or replacements, the Distributor will bill the customer for the full amount due for the repair. Thereafter, the Distributor will submit the warranty claim form provided by **KERR PUMPS** to the **KERR PUMPS** Home Office for consideration. In the event the warranty claim is honored by **KERR PUMPS** a Credit Memorandum will be issued to the Distributor in the amount determined by the table in Paragraph No. 4 hereof. Thereafter, the customer's invoice will be credited by the Distributor in the same percentage allowed the Distributor by **KERR PUMPS**.

   If requested by **KERR PUMPS** the purchaser or the Distributor shall return the alleged defective product to **KERR PUMPS** factory, freight prepaid, for examination and testing. If **KERR PUMPS** determines the product is defective **KERR PUMPS** will either repair or replace such product with a like of **KERR PUMPS** manufacture, f.o.b. to the Distributor or allow the Distributor credit to an amount equal to the invoiced value of the defective product. The responsibility of **KERR PUMPS** is limited to the repairing or replacing defective material manufactured by it, provided **KERR PUMPS** examination discloses to its satisfaction that such material has not been altered or repaired, other than by **KERR PUMPS** approved procedures, subject to misuse, improper maintenance, negligence or accident. **KERR PUMPS** will not be responsible for loss of liquid or for damage of any kind, or from any cause, to any person or property of any person, or for loss of revenue of profit, or for any other special incidental or consequential damages.

7) The warranty applies only to new **KERR PUMPS**. The Company specifically excludes from this warranty the following.
   A. All plungers, valves, plunger packing, valve springs, seals gaskets, and corrosion and/or erosion damage caused by the fluid handled by the Company's pump.
   B. In addition, after the expiration of the pump warranty all replacement parts are no longer in warranty.

8) In extreme cases where in the opinion of **KERR PUMPS**, if a pump has been misused or is being misused, **KERR PUMPS** reserves the option to offer to redeem the pump from the purchaser. Should the purchaser refuse to allow the pump to be redeemed and chooses to continue improper operation, the warranty will be void.

9) Any parts or equipment which **KERR PUMPS** supplies and does not manufacture shall be subject only to the warranties of **KERR PUMPS** vendors to the extent **KERR PUMPS** can enforce such warranties.

10) Any repairs to, alterations of, or work done on alleged defective products without **KERR PUMPS** specific written authorization shall void **KERR PUMPS** warranty applicable thereto.

11) Any action for breach of warranty or other action under this agreement must be commenced within (1) year after such cause of action arises.

This limited warranty is in lieu of all other warranties, expressed or implied, including any implied warranty or merchantability or fitness.

KERR TROUBLE SHOOTER GUIDE

	REASON OR SERVICE NEEDED
Unusual pounding, knocking broken valve spring	Insufficient fluid at high speed. Check to see if the suction line is the proper size and is not constricted, trash in line, valve partly opened, etc. There is also a possibility of gas in the fluid causing the roughness.
Loss of pressure or volume	Also above. Foreign matter may be holding valves open. Worn valves. Broken springs.
Consistent, rhythmic knock	Improper bearing adjustment. Worn bearings or connecting rods. NOTE: Valve noise is common and normal in high-speed pumps. It should not cause concern unless it becomes erratic.
Packing failure (Excessive)	Improper installation. Improper type lubrication. Incorrect type packing for particular installation. (Contact **Kerr Pumps** if in doubt) Excessively worn plungers.
Abnormal wear of fluid end parts	Abrasive or corrosive fluid.
Abnormal wear of power end parts	Lack of oil, overload on pump, foreign matter in oil.
Heat in power end	A new pump will run hot for a short period (2 or 3 days). Check above for persistent heating. Pump will operate near 140˚ F. under average conditions. Check for air in pump by bleeding at cover caps. Too much spring tension Reciprocating pumps have very limited pick up, check installation section.

INSTALLATION INSTRUCTIONS (SEE ILLUSTRATION)

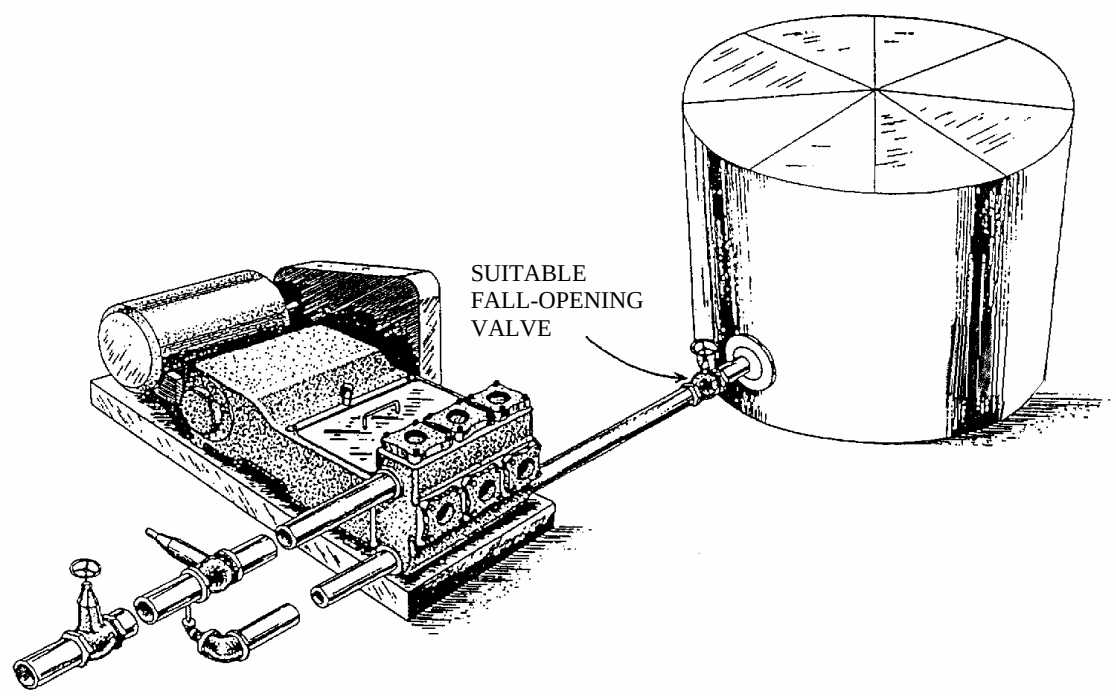
The importance of proper installation cannot be overstressed. As the reciprocating pump is almost unable to lift fluid, proper suction flooding is a must. This is the First step toward satisfactory operation.

The **Kerr Pumps** Engineering Service will be happy to advise you in your installation problems. As almost every installation varies, you cannot exercise too much care in making certain your installation is proper.

Before Starting The Pump, read carefully the maintenance section in the following pages.

To start the pump, open the suction line valve and permit the intake chamber to fill on the pump. Air may be bled off by opening the valve covers slightly until there is a constant fluid flow. After bleeding, open the discharge line valve and start the pump. Roughness may occur from cavitation (air in line) or from starvation (lack of fluid). Eliminate these troubles before permitting continuous operation.

RECOMMENDED INSTALLATION OF KERR PUMPS FOR BEST RESULTS	
(A)	PRESSURE RELIEF VALVE (OPTIONAL)
(B)	BY-PASSED FLUID SHOULD BE PIPED BACK IN SUCTION SUPPLY TANK WHEN POSSIBLE
(C)	USE FLEXIBLE HOSE IN DISCHARGE LINE WHEN POSSIBLE
(D)	DISCHARGE SHUT-OFF VALVE (OPTIONAL-USED FOR TOTAL SHUT-DOWN OR SERVICE ONLY)
(E)	DISCHARGE AND SUCTION ON EITHER SIDE OF FLUID END ON ALL MODELS.
(F)	PULSATION "DAMPENERS" MAY BE USED IN EITHER THE SUCTION OR DISCHARGE PIPING OR BOTH. DISCHARGE DAMPENERS SHOULD BE CAPABLE OF HANDLING PUMP DISCHARGE MAXIMUM PRESSURE



AS A GENERAL RULE, FLUID LEVEL MUST BE HIGHER THAN THE PUMP FLUID END AS PLUNGER PUMPS CANNOT "LIFT" FLUID. ABOUT 10 FEET OF HEAD IS A GOOD "RULE OF THUMB".

INSTALL PUMP AS CLOSE TO TANK AS POSSIBLE

CAUTION SHOULD BE TAKEN TO KEEP FITTINGS OUT OF THE SUCTION AND DISCHARGE PIPING AS THESE WILL RESULT IN POOR PERFORMANCE. EACH 90-DEGREE TURN IN THESE LINES RESULTS IN GREAT LOSS OF PUMPING EFFICIENCY.

PREVENTIVE MAINTENANCE

DAILY

1. Check and Maintain Lubricant Levels.

Standard Lubricant:

AGMA Grade (ASTM D 2422): 4 EP

ISO Viscosity Grade: 150

Viscosity in SSU @ 100 degree F: 625-765

Synthetic Lubricant:

SAE Viscosity Grade (J306-8): 75W-90

PUMP CAPACITIES (APPROXIMATE)

KD-1250	2 qts.	KT-3350	16 qts.
KJ-2250	3 qts.	KT-3400	16 qts.
KM-3250	4 qts.	KB-3500	20 qts.
KM-3300	4 qts.	KA-3500	36 qts.
KP-3300	12 qts.	KSB-6400	36 qts.
R335/R340	16 qts.	KSB-6500	36 qts.
Q5450	22.5 gal.	KCP-6300	24 qts.
KZ-3150	2 qts. **Use SAE 30 weight non-detergent motor oil**		

PLANETARY GEAR REDUCERS

#6 AUBURN	17 ozs.
#8 & #9 AUBURN	42 ozs.

2. If pump has lubricating facilities for stuffing boxes, check level of lubricant.
3. Maintain packing gland tension on packing (Do not over-tighten)
4. Visually inspect pump for apparent trouble.
5. Keep the pump clean.

MONTHLY

1. Drain and refill crankcase. It is recommended that oil be changed after the first week of operation.
2. Wash oil filler cap in kerosene.
3. Check valves for excessive wear, broken or bent springs, etc.
4. Check crankshaft bearings for endplay. (See section on crankshaft)
5. Keep all nuts, studs, etc. tight.
6. Check valve covers for leaks.
7. Check all seals and gaskets for leaks

GENERAL

Replace any work part before its eventual failure. Use the following instructions for removal and replacement of parts. Don't hesitate to call on **Kerr Pumps** for help if necessary.

SERVICE PROCEDURES (ALL MODELS)

1. VALVES (Wing-guided type):

   A. Discharge Valves: The discharge valve and seat can be exposed by first removing the discharge valve cover cap. Once the discharge cover cap has been removed you may lift out the discharge valve spring and the discharge valve. The valve seat will be held in place by a taper fit and must be "pulled" with an appropriate valve-pulling tool (available from the **Kerr Pumps** Dealers). Once the valve and seat have been removed they should be resurfaced or replaced if badly worn. To replace the discharge valve, first clean and inspect the seat bore for washout defects and then drop the seat into the bore. Replace the valve into the seat and strike the top of the valve a couple of good blows utilizing a brass bar and hammer to seat the valve seat in the fluid end valve bore. Replace the valve spring and cover cap after inspecting the spring and the seal of the cover cap.

   B. Suction Valves: The suction valves are located in the chamber directly behind the suction or end valve cover caps. The suction valves are serviced in the identical manner as the discharge valves. Note: Discharge valves must be removed prior to any removal of the suction valves.

Service Procedure for KZ-3150 Valves

   C. DISCHARGE VALVE: The discharge valve and seat can be exposed by first removing the discharge valve cover plate. Once the discharge cover cap has been removed you may lift out the discharge valve spring, discharge valve and valve seat. Once the valve and seat have been removed they should be replaced if badly worn. To replace discharge valve, first clean and inspect the seat bore for wash out defects and then drop the seat into the bore. Replace valve in seat then valve spring and cover cap, always-inspecting o'ring seals between seats and cover caps.

   D. SUCTION VALVE: The suction valves are located in the chamber directly below the discharge valve seat. The suction valves are serviced in the identical manner as the discharge valves.

2. VALVES (Disc-type): All disc-type valves are exposed for removal in a similar manner as the wing-guided valves. Instead of removing the valve body; the upper portion of the valve is removed by removal of the valve capscrew, spring retainer, valve spring, and valve spacer sleeve. The valve seat is then "pulled" from the fluid-end utilizing an authorized Kerr Valve Puller. Note: In all **Kerr Pumps** with disc-type valves the discharge and suction valves are identical.

3. VALVES (Ball & Seat): In **Kerr Pumps** with block/billet type fluid-ends the valves are ball and seat design. These are exposed for removal/inspection by removal of the appropriate valve cover. The flat seats are kept in place by a screw-in valve retainer that can be best removed with a Kerr Valve Wrench made for the appropriate pump. Springs are normally incorporated with the discharge valves while the suction valves operate with a "free ball". A copper washer/gasket is used under all valve seats for a seal. When installing or removing a flat type valve seat a good "rap" on top of the valve wrench will "seat/unseat" the seat and copper gasket prior final tightening or removal. Failure to "seat" the valve seat in this manner can result in the "washing out" of the fluid-end. For *pressurized suction*, valves will need to be spring loaded. Call **Kerr Pumps** for this change.

4. PLUNGERS: Following the removal of the suction valve, the plunger may be removed by breaking the union between the plunger and pony rod and forcing the plunger out the back of the fluid-end. Loosening the packing nut/gland will facilitate the removal of the plunger. The reverse of this procedure is used to install a plunger. Lubrication and some slight force may be used to pass plunger through the packing. Always retighten the plunger and pony rod union periodically following the removal of the plunger to insure it is securely made up and will not vibrate loose.

5. PLUNGER PACKING: This manual includes illustrations of the packing sets for each model pump. Generally, once the plunger has been removed from the pump, the packing can be exposed for removal by completely removing whatever device is used to tighten the packing (i.e. the packing or stuffing box nut or gland). There will be various amounts of metal rings and packing components depending upon the type of packing and the model of pump (refer to appropriate illustration or chart). After the removal of all rings and equipment from the stuffing box; thoroughly clean it and inspect for damage, which might keep the new packing from working properly. If the stuffing box is in satisfactory condition, install the new packing as per the appropriate illustration. It is a good idea to lubricate new packing with a light oil prior to installation. Most of the standard packing used in **Kerr Pumps** should be tightened with the original equipment-packing wrench while the pump is running under normal operating pressure. After a two or three hour run-in, check the packing for tightness and re-adjust as necessary. Packing should be checked for tightness on a periodic basis, but it is not a good idea to attempt to periodically tighten the packing as part of routine maintenance. This tends to "wear out" the packing prematurely. When the packing leaks in an excessive amount it should be replaced. There is no value in constantly "re-tightening" leaking packing.

   If your pump is equipped with optional "spring loaded" packing, there is no adjustment in this equipment during its operational life. The stuffing box nut is initially tightened as much as possible and there is no further adjustment. Note: In all cases the spring goes in the stuffing box before the packing rings.

When using the optional Kevlar or Teflon packing, be sure to rotate the "splits" so that none are "aligned" to insure that the packing holds properly. Normally, this packing is not lubricated and requires less tension on the stuffing box nut during operation.

CAUTION: An "airtight" seal is not desirable with this plunger packing. Some slight dripage is desirable during operation. Attempts to tighten packing until it completely "seals off" will result in premature failure from too much friction. The Kevlar & Teflon packing must be allowed to drip a small amount to assure normal life.

6. PONY ROD and PONY ROD PACKING: Kerr Pumps use two pony rod sealing arrangements, models KD-1250, KJ-2250, KM-3250 and KCP-6300 use a screw in seal gland, all other models use a bolt in seal gland, these glands use press in oil seals with snap ring retainers. Some Bolt in gland use adjustable packing arrangements with bolt in or screw in followers to adjust packing. By unscrewing plunger from pony rod a gap may be facilitated to allow the removal of the various sealing arrangements. A special wrench will be needed to remove and replace pony rod to crosshead. (This wrench is available from **Kerr Dealers**) All pony rods have a jam nut to align tighten pony rod to crosshead, care must be exercised in installing new seal on pony rod not to damage it.

7. DISASSEMBLY OF POWER END. (CAUTION: Prior to disassembly of any power end, the plunger, pony rod, and pony rod seal housing must be removed.) Expose the crankshaft and connecting rods by removing the pan cover. Connecting rod caps may now be removed and the connecting rod and crosshead should be shoved all the way to the rear (toward the fluid end) to facilitate crankshaft removal out either side as convenient. The connecting rods and crossheads may now be taken out the front cavity exposed by removing the crankshaft. Connecting rods may be removed from the crosshead by loosening the setscrew and driving out the wrist pin from the crosshead. A bronze bushing is used in the rod it may be driven out of the rod and replaced with a new bushing. Reassembly is the reverse of the above outlined sequence with the following considerations for "fits" or tolerance:

    A. General: All Kerr components are machined on modern production machine tools and are of the same specifications and close tolerances you would expect in a modern automobile engine. It must be pointed out that at top speed (350 to 400 RPM) your pump will not even be approaching idle speed for a gasoline engine so "field fits" are possible and practical when making repairs and replacements away from the factory. All procedures outlined below are possible with only hand tools and absolutely no instruments, special tools, or gauges are needed.

    B. Connecting rod and wrist pin: Proper fit will find the wrist pin turning freely in its bore in the connecting rod, but it should have no "wobble" that is discernable up and down the main axis of the connecting rod. This looseness in the

wrist pin fit is the most probable cause of “knocking” which is traceable to the power end of most all pumps. The only solution for loose fitting wrist pins is to discard the connecting rod wrist pin bushing and replace with a new one. If any wear is visible on the wrist pin it should always be replaced.

C. Crankshaft End Play and Lateral adjustments: Adjustment of the Taper Roller bearings used in all Kerr Pumps is accomplished by removing or adding shims under the bearing housing. Shims are taken out or added until the crankshaft (without connecting rods) will turn freely, but with no endplay felt when attempting to pull or push the jackshaft end of the crankshaft along its long axis. Some lateral adjustment is possible by removing shims from one side of the crankshaft and adding them to the opposite side. (Note: Lateral adjustment is the “centering” of the crankshaft in the power frame housing.)

D. Connecting Rod to Crankshaft fitting: Factory bored connecting rods will normally fit the standard crankshaft journal just by bolting the cap on the rod with the standard rod shims being used. If the caps do require adjustment this is accomplished by removing or adding various thicknesses of rod shims. The standard connecting rod shim used on all Kerr Pumps is 1/32” thick and is comprised of .002” laminates, which can be “pealed “ off separately. Proper fit of the connecting rod will allow the pump crankshaft to be rotated while not allowing in-and-out slack in the connecting rod along its long or main axis. A well-fitted rod will have none of the in-and-out slack, but should be free enough to be moved from side to side on the rod journal. This insures the rod not being too tight. A point of caution when installing the connecting rod assembly in the pump is to make certain the oil holes in the rod are “UP” and not toward the bottom of the pump. This will result in lubrication failure in these parts and the pump will fail in a short period of time. An additionally important step is to make sure that the rod cap is bolted back on the rod as it came off. The rod and cap carry a “mark” or “number” which allows you to match them back properly. Failure to do this will cause the rod not to fit the journal for which it was made.

8. Power End/Fluid End Connection: A common misconception is that there is some form of fluid seal between the power end and the fluid end. This is false. The fluid end is merely bolted to the power frame. It can be removed by breaking the plunger connection, backing off the packing nut or gland, removing the various fluid end bolts, and sliding the entire fluid end off the power frame. Corrosion may tend to seize the two components together making their separation difficult in some isolated cases. On models KP-3300, KT-3350/KT-3400 and R335/R340 the bolted in stuffing box assemblies must be removed prior to removal of the entire fluid end. They are held in place by four studs each. On all other units the stuffing boxes can be left intact. On the remaining pumps (with the exception KD-1250B, KJ-2250B, KM-3250B, and KCP-6300) the stuffing boxes are held in place in the fluid end by a friction or “press” fit. They should be removed with a hydraulic press if possible. These press-in type stuffing boxes carry a gasket and/or an o-ring to insure a good seal. The boxes on the KD-1250B, KJ-2250B, KM-3250B, and KCP-6300 are screw-in type and carry only a copper gasket.

1. SCOPE

This procedure applies to Kerr Pumps ONLY. Storage procedures for any other unit components or accessories (gear reducers, engines, etc.) are to be prepared to the specific manufacture's recommendations.

1.1 Short-term storage is defined as storage and/or transient time not exceeding six (6) months in an environment defined in Paragraph 2. If storage for longer than six months is expected, the procedure given in Long-Term Pump Storage Preparation Procedure should be followed.

1.2 Kerr Pumps will only prepared for short-term storage if so specified in the purchaser or customer order control document.

2. STORAGE ENVIRONMENT

A minimal environmental condition, to be met by the customer or purchaser, is a closed shelter to eliminate effects of sun, wind, sand or other debris. Large temperature and humidity changes should be avoided to prevent coating deterioration or contamination by moisture.

3. PRESERVATIVE PRODUCT

3.1 The specified rust preservative will protect the internal power end parts from corrosion due to atmospheric moisture, and may be left in the pump when filled with appropriate lubricant and placed into service. The elevated temperature of service will cause rapid depletion of the preventative protection.

3.2 The following rust preservative product, or its equivalent, is recommended for use in Kerr Pumps, and is available in 5 gallon, 55 gallon and bulk:

Product Trade Name:	SRPO #20 Rust Preventative
Product Vendor:	Industrial Oils Unlimited, Inc. P.O. Box 3066 Tulsa, OK 74101

4. PROCEDURE

4.1 Preparation from; factory testing, inventory, or a distributor rebuild facility.

4.1.1 Drain any oil that may be in the power end, and then fill the complete power end cavity with the specified rust preventative. After 15 to 20 minutes, drain the rust preventative back into its storage drum for future use.

4.1.2 Remove and clean oil level gages, pressure gages and breather caps. Replace with pipe plugs in threaded openings.

4.1.3 All breathers shall be replaced with airtight seals, plugs or gasketed plates. No venting is recommended as it may allow moist air.

4.1.4 Clean the pump outer surfaces prior to painting.

4.1.5 Mask crank and lubricator shaft surfaces and keyways, as well as oil seal lips and exposed portions of plungers and pony rods to prevent coating if painting is required. If painting does not apply, go to Para. 4.1.8

4.1.6 Paint as specified by the customer order or as required.

4.1.7 Apply a thin layer of grease to the exposed oil seal lips.

4.1.8 Apply a thin layer of heavy rust preventative to the exposed crank and lubricator shaft surfaces and keyways.

4.1.9 Wrap the exposed crank and lubricator shafts with waxed tape.

4.1.10 Carefully wrap the following parts prior to placing them into polyurethane bags. Oil level gages, lube pressure gages, and breather caps.

4.1.11 Finish box, crate and mark the parts from Para. 4.1.10 after final inspection (see Para. 4.2.2).

4.2 Shipping/Receiving (New Pumps Only)

4.2.1 All pumps and accessories (as applicable) will be final inspected by Kerr Pump personnel prior to shipping. Any witnessed or third party inspection will be signed-off by the purchaser or customer representative prior to final crating and shipment.

4.2.2 Export crating will be performed by either an approved Kerr Pump source or as specified by the purchaser or customer. Any third party inspection will be coordinated with the source.

4.2.3 Upon receipt of the shipment, the purchaser or customer is responsible for inspection and repair of damaged coatings at the expense of the shipper.

5. WARRANTY/START-UP

5.1 Pumps prepared per the above procedure qualify for the “Standard Terms & Conditions” in force on the date of shipment.

5.2 If the short-term pump storage period extends more than 6 months, follow the Long-Term Pump Preparation Procedure.

5.3 Prior to start-up:

5.3.1 Inspect power end shaft oil seals, wiper box seals and o-rings, and replace if cracked, split or damaged.

5.3.2 Install crankcase drain plug, lubrication level site glass and breather cap.

5.3.3 Install, if applicable, any oil pressure and/or temperature gage.

5.3.4 Check the connection of the plunger and pony rod to the crosshead prior to, and after, initial run-in of the pump.

5.3.5 Fill the crankcase to the proper level with the specified lubricant.

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4.1.2 Remove all plungers, pony rods (if applicable), baffle discs, packing and junk rings.

4.1.3 Remove and clean oil level gages, pressure gages and breather caps. Replace with pipe plugs in threaded openings.

4.1.4 All breathers shall be replaced with airtight seals, plugs or gasketed plates. No venting is recommended as it may allow moist air.

4.1.5 Remove the wiper box seals and cap/plug the seal opening.

4.1.6 Clean the pump outer surfaces prior to painting.

4.1.7 Mask crank and lubricator shaft surfaces and keyways if painting is required. If painting does not apply, go to Para. 4.1.9.

4.1.8 Paint as specified by the customer order or as required.

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4.1.13 Finish box, crate and mark the parts from Para. 4.1.10 after final inspection (see Para. 4.2.2).

4.2 Shipping/Receiving (New Pumps Only)

4.2.1 All pumps and accessories (as applicable) will be final inspected by Kerr Pump personnel prior to shipping. Any witnessed or third party inspection will be signed-off by the purchaser or customer representative prior to final crating and shipment.

4.2.2 Export crating will be performed by either an approved Kerr Pump source or as specified by the purchaser or customer. Any third party inspection will be coordinated with the source.

4.2.3 Upon receipt of the shipment, the purchaser or customer is responsible for inspection and repair of damaged coatings at the expense of the shipper.

5. WARRANTY/START-UP

5.1 Pumps prepared per the above procedure qualify for the “Standard Terms & Conditions” in force on the date of shipment.

5.2 If the pump storage period is less than 6 months, follow the Short-Term Pump Preparation Procedure.

5.3 Prior to start-up:

5.3.1 Remove all storage caps, plugs, and covers.

5.3.2 Install the packing, junk rings, plungers, pony rods (if applicable), baffle discs, and wiper box seals. Replace any damaged or cracked O-rings or gaskets.

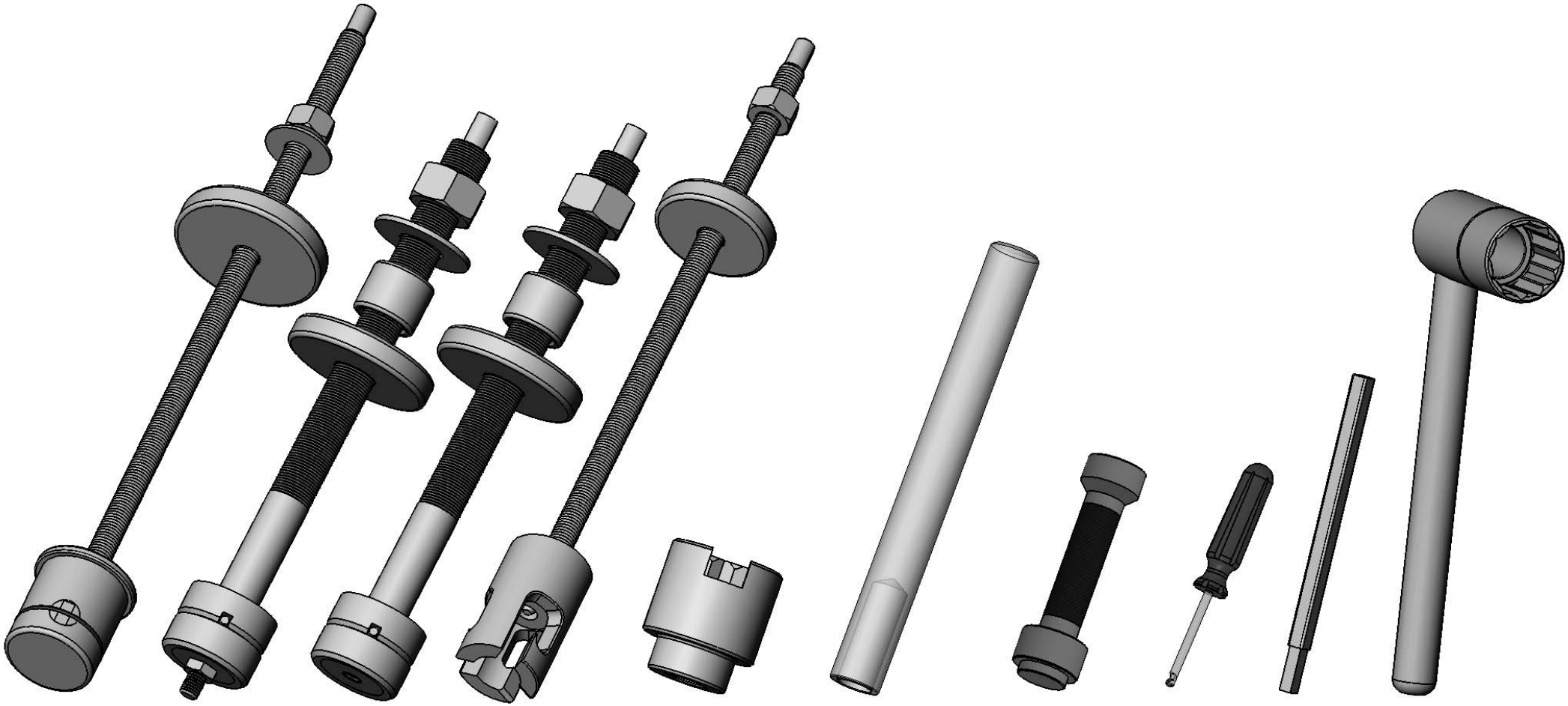
5.3.3 Inspect power end shaft oil seals and replace if cracked, split or damaged.

5.3.2 Install crankcase drain plug, lubrication level site glass and breather cap.

5.3.3 Install, if applicable, any oil pressure and/or temperature gage.

5.3.4 Check the connection of the plunger and pony rod to the crosshead prior to, and after, initial run-in of the pump.

5.3.5 Fill the crankcase to the proper level with the specified lubricant.



KA-68M WING-GUIDED SEAT TRI-PIN TYPE PULLER ASS'Y

KA-68 DISC SEAT THREADED STEM TYPE PULLER ASS'Y

KA-67 WING-GUIDED SEAT ECCENTRIC TYPE PULLER ASS'Y

KA-555 DISC SEAT "J" TYPE PULLER ASS'Y

KA-550 CAGE WRENCH

KA-306 VALVE SEAT SEATING TOOL

KA-276 PONY ROD SEAL TOOL

AP-77T VALVE INSERT TOOL

AP-425 STUFFING BOX NUT WRENCH

KA-277 PONY ROD WRENCH

SPECIAL TOOLS
FOR KA-3500, KT-3350, & KT-3400

How To Put Inserts In Valves
Using Kerr Valve Insert Tool

1) Push Valve Insert over valve legs. Hint: (Insert will be more pliable if heated first-- warm to the touch not hot).

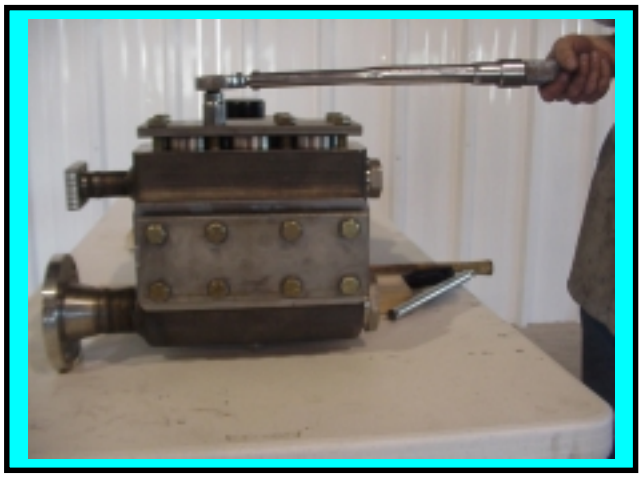
2) Put Tool between valve and valve insert with groove against valve.

3) Holding Valve insert down with thumb.

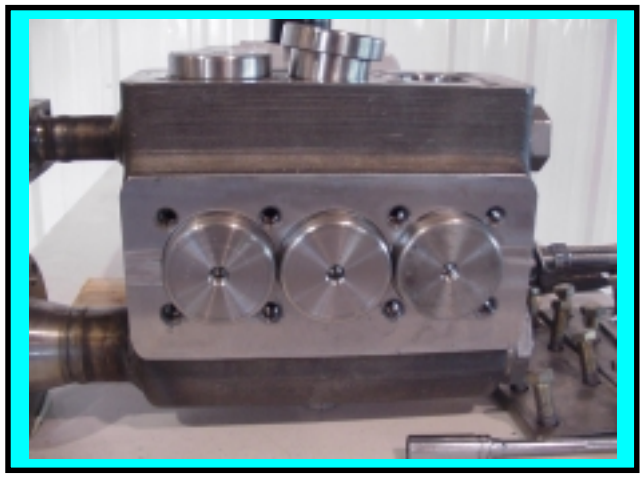
4) While holding valve down with thumb, rotate around valve with tool. (Similar to mounting a tire on a rim).

5) Continue rotating around valve with tool until insert is completely in groove.

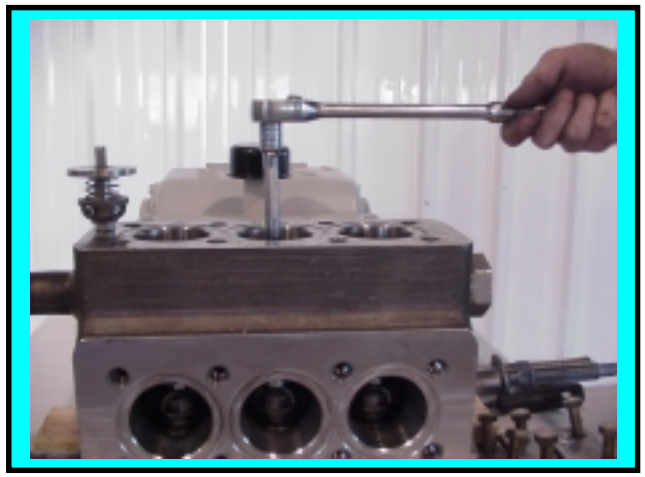
INSTRUCTIONS FOR CHANGING DISC VALVES (Revision B)



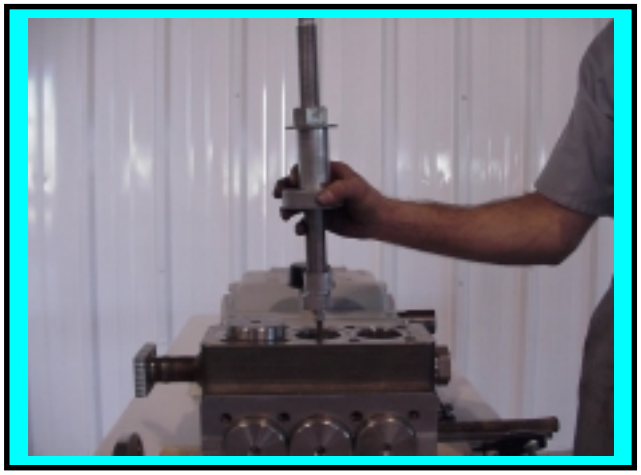
1. Remove Capscrews from Top and End Cover Plates



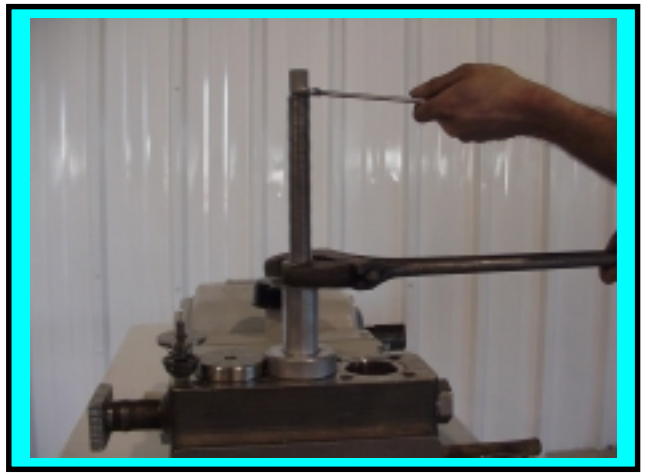
2. Remove Round Cover Caps; inspect o'rings for damage;



3. Unscrew Valve Capscrew; Remove Capscrew, Spring Retainer, Spring, Spacer, and Disc



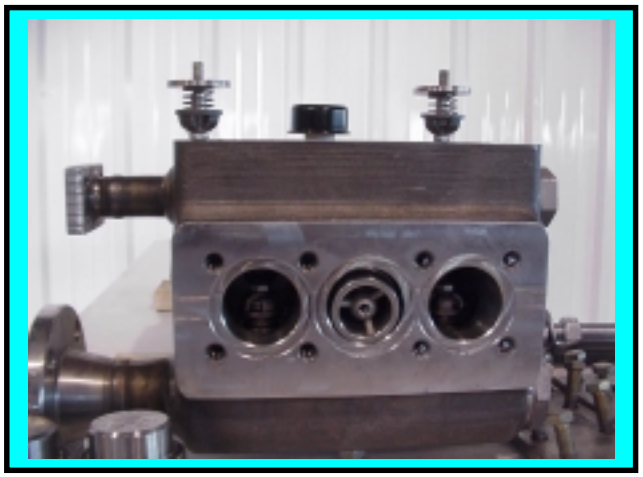
4. Screw Kerr Pump Valve Puller into seat approximately ¾"



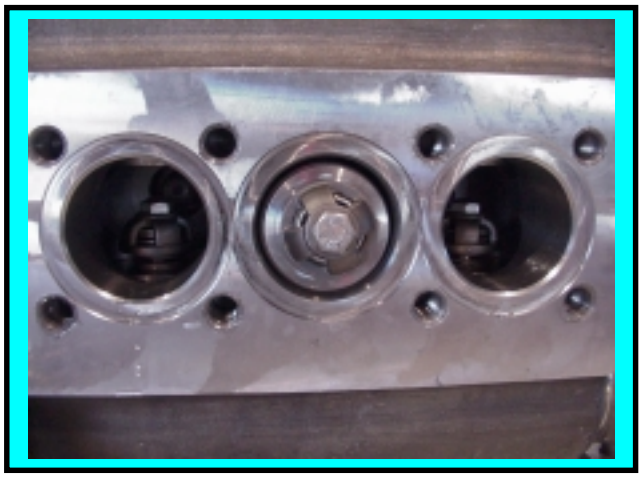
5. Hold Puller Stem from turning; Rotate large nut until seat releases

6. Remove Valve Seat from Puller; Remove remaining valves

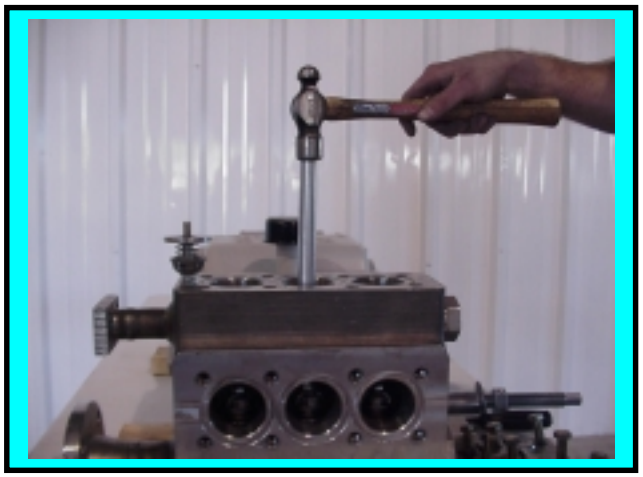
INSTRUCTIONS FOR CHANGING DISC VALVES (Revision B) (cont.)



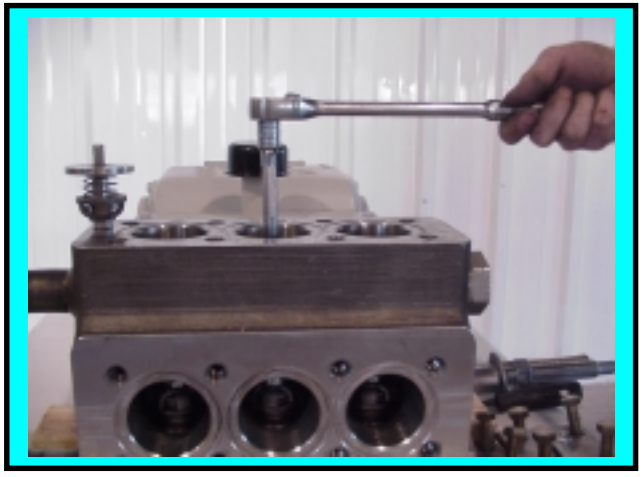
7. Remove Suction Valve Seat Through End Port



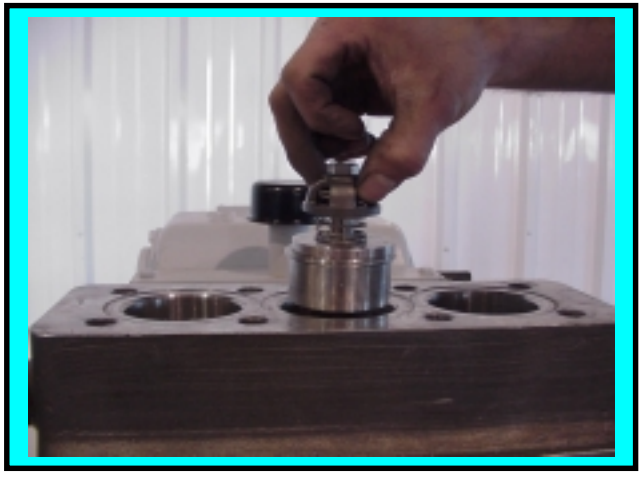
8. To Install Valve Assembly; Insert through End Port



9. Use a 1” wooden dowel rod to drive valve seat assembly into seating area using several firm but, not heavy blows with a hammer; CAUTION: heavy blows will damage valve



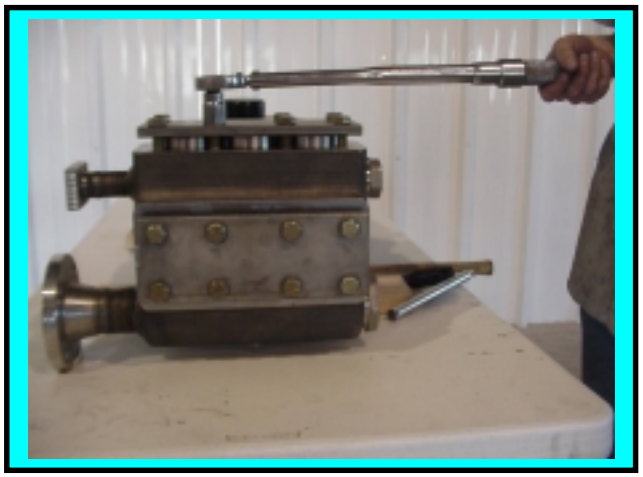
10. Torque valve capscrew to Kerr Pump specs



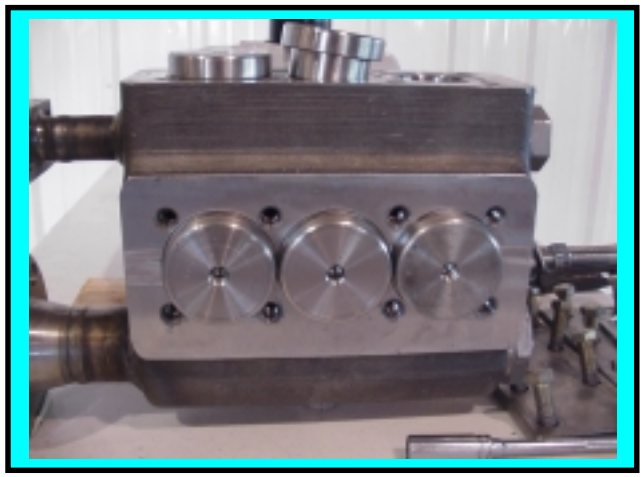
11. Install Discharge Valve, following procedure 9.

12. Install Cover Caps and torque Cover Plate capscrews to Kerr Pump Specs

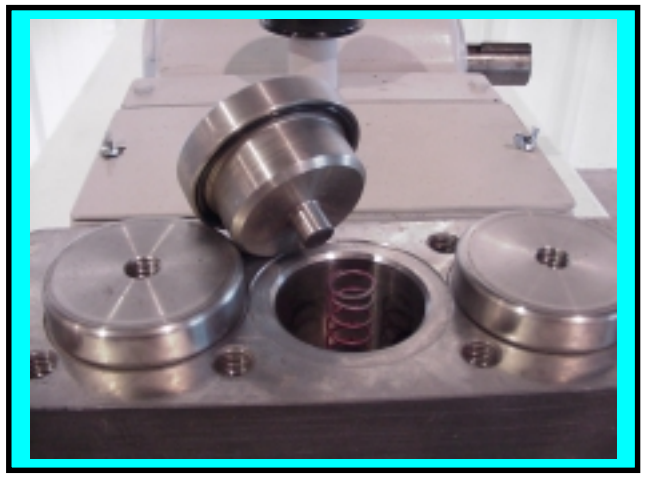
INSTRUCTIONS FOR CHANGING WING/GUIDED VALVES



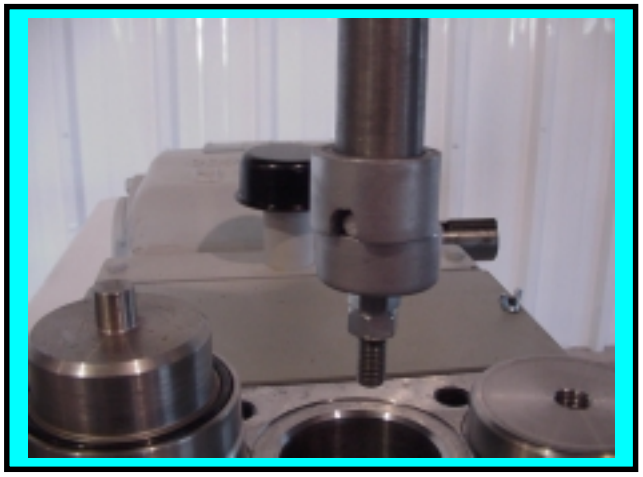
1. Remove Capscrews from Top and End Cover Plates



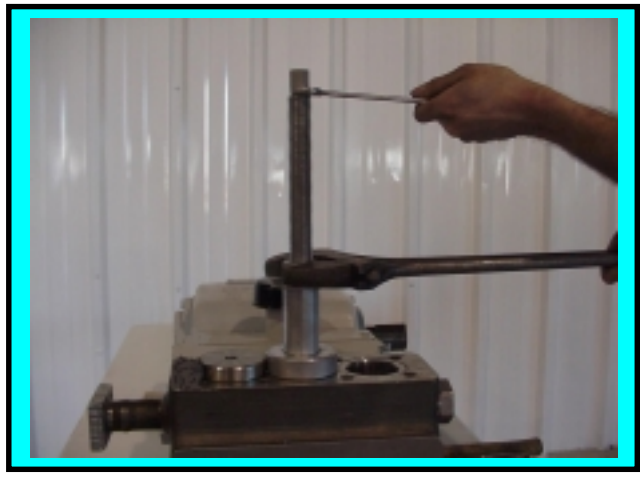
2. Remove Round Cover Caps; inspect o'rings for damage;



3. Remove Discharge Spring and Discharge Valve



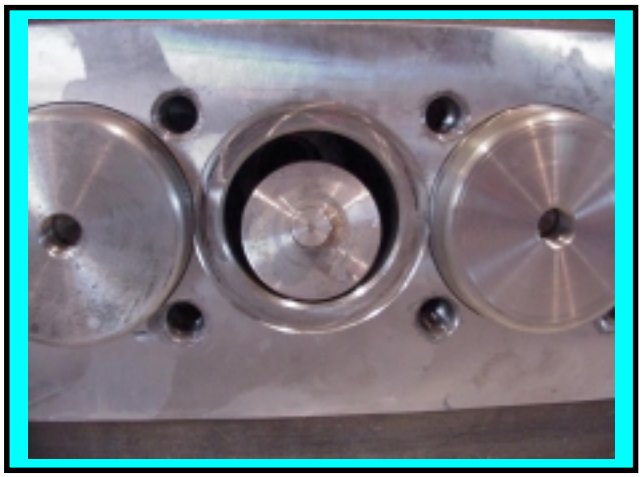
4. Insert Kerr Valve Seat Puller through valve seat with eccentric offset to engage valve seat. NOTE: Puller stud may be removed when pulling wing/guided valve seats.



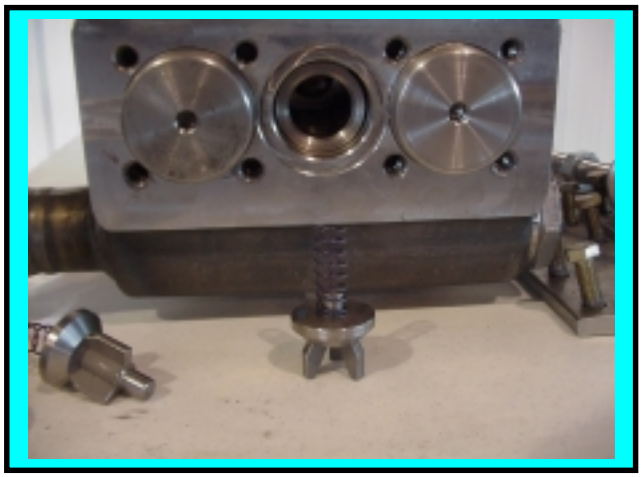
5. Hold Puller Stem from turning; Rotate large nut until seat releases

6. Remove Valve Seat from Puller; Spacer on Puller may need to be removed when pulling Suction Valve Seats; Remove remaining valves

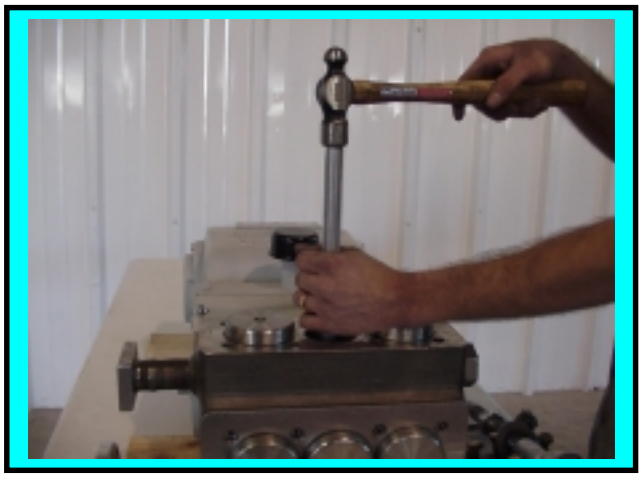
INSTRUCTIONS FOR CHANGING WING/GUIDED VALVES (cont.)



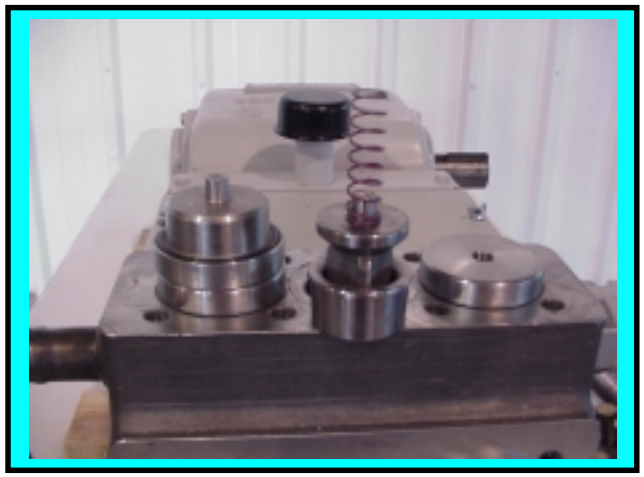
7. Remove Suction Valves, springs, and seats through End Port



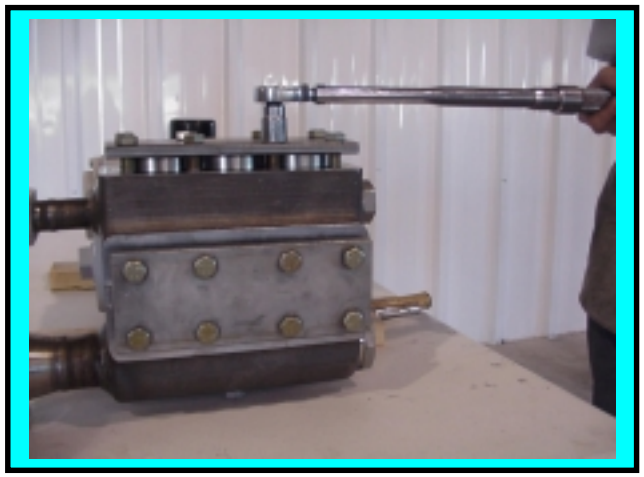
8. To Install Suction Valve & Seat, insert Valve Seat and Valve Body through End Port



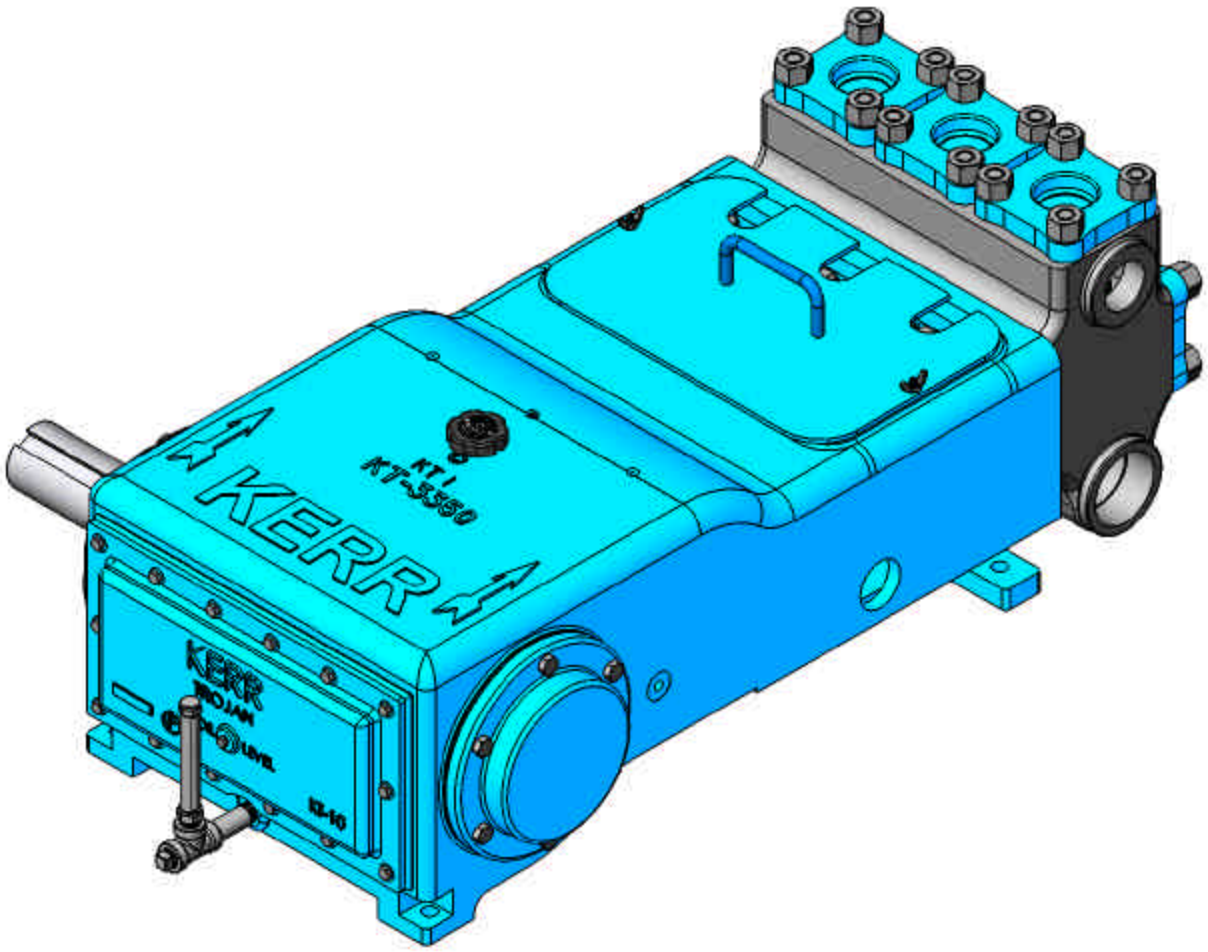
9. Use metal rod to drive valve seat assembly into seating area using several firm but, not heavy blows with a hammer



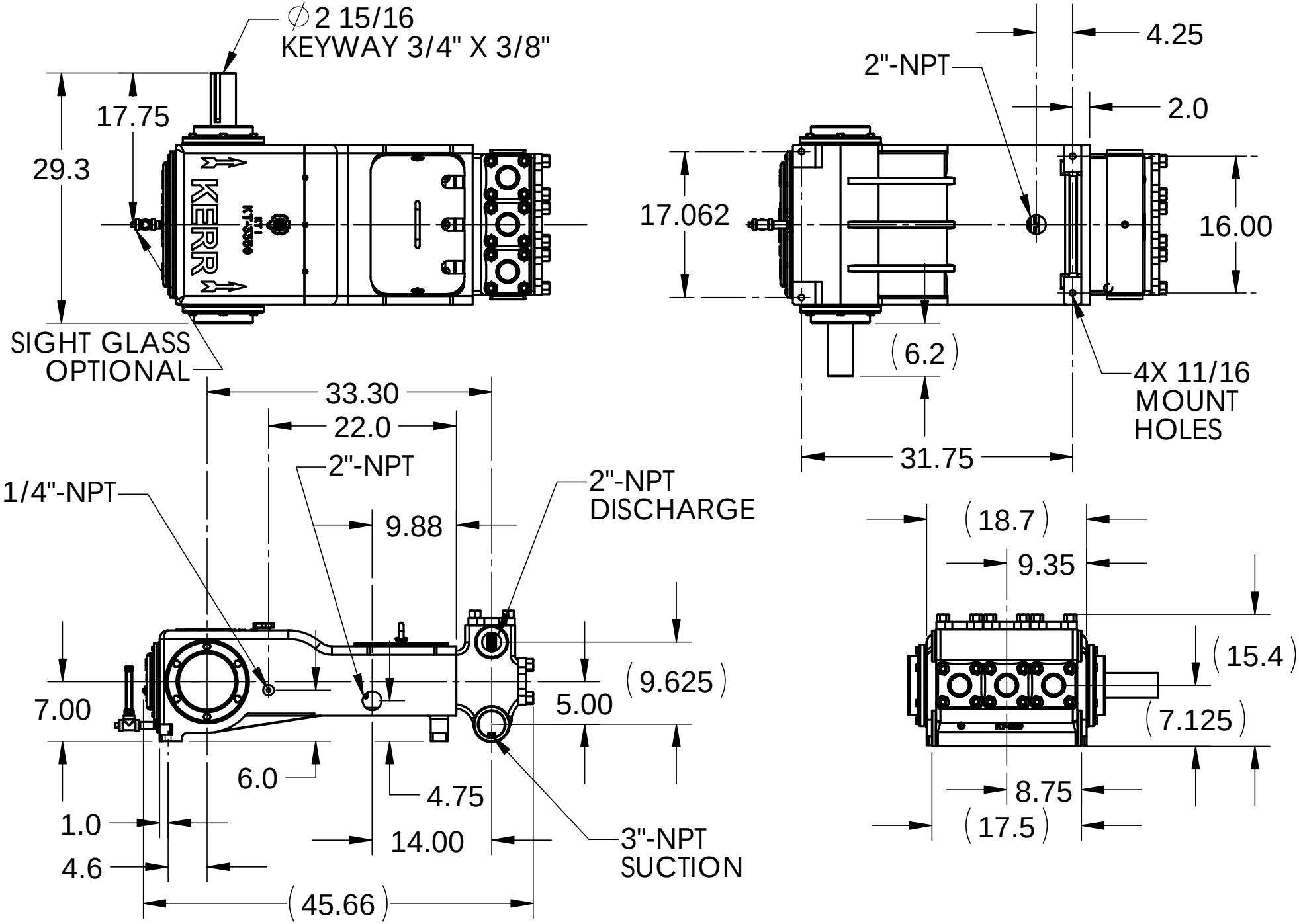
10. Install Discharge Valves after Suction Valves have been installed, always be sure short springs are on Suction Valve and Long Spring on Discharge Valves



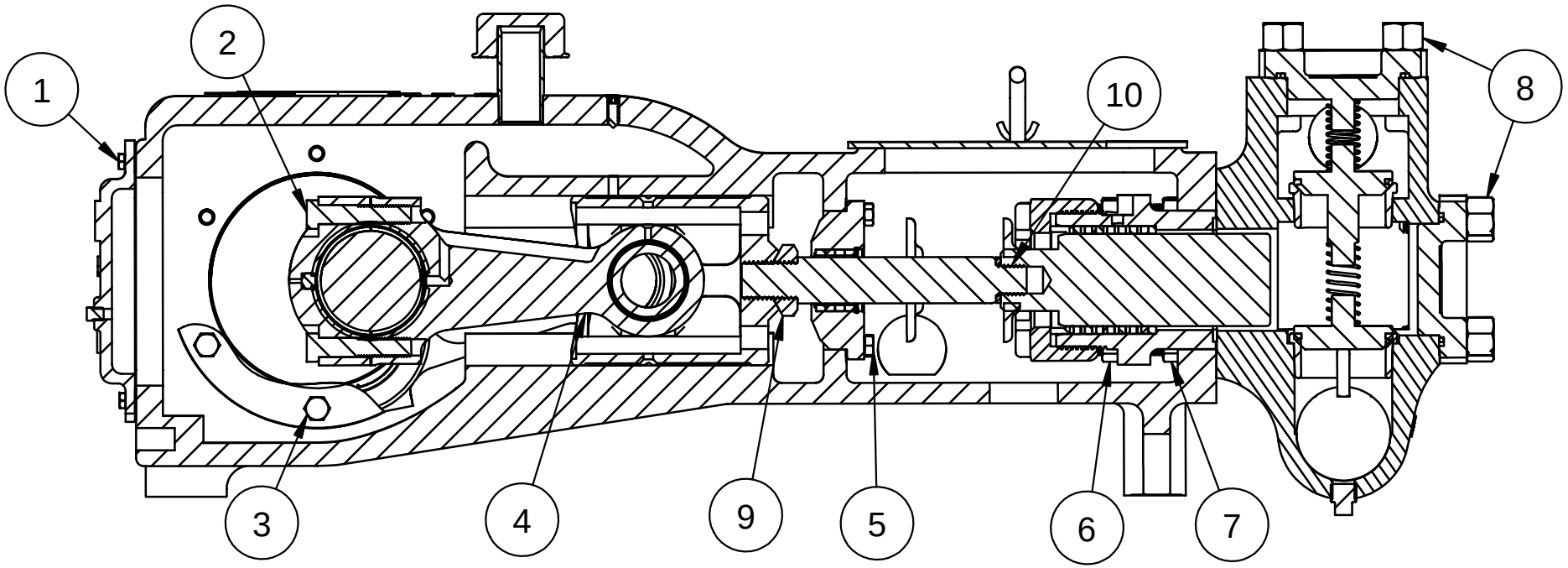
11. Install Cover Caps and torque Cover Plate capscrews to Kerr Pump Specs

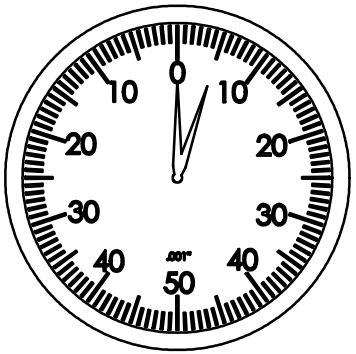


KT-3350/KT-3400



GENERAL DIMENSIONS FOR KT-3350/KT-3400





.000" - .005"
SHAFT END PLAY

WHEN ADJUSTING THE ENDPLAY OF THE TAPERED ROLLER BEARINGS USED ON THE CRANKSHAFT, DIAL INDICATORS AND SHIMS MUST BE PROPERLY USED. INCORRECT BEARING ADJUSTMENT MAY RESULT IN EXCESSIVE NOISE, TEMPERATURE, AND REDUCED BEARING LIFE. Kerr Pumps RECOMMENDS BETWEEN .000" - .005" OF INTERNAL AXIAL CLEARANCE (END PLAY) WHEN ASSEMBLED. FINAL ADJUSTMENT MUST BE MADE USING A DIAL INDICATOR.

INSURE THE CONNECTING RODS ARE DISCONNECTED TO ALLOW FREE CRANKSHAFT MOTION.

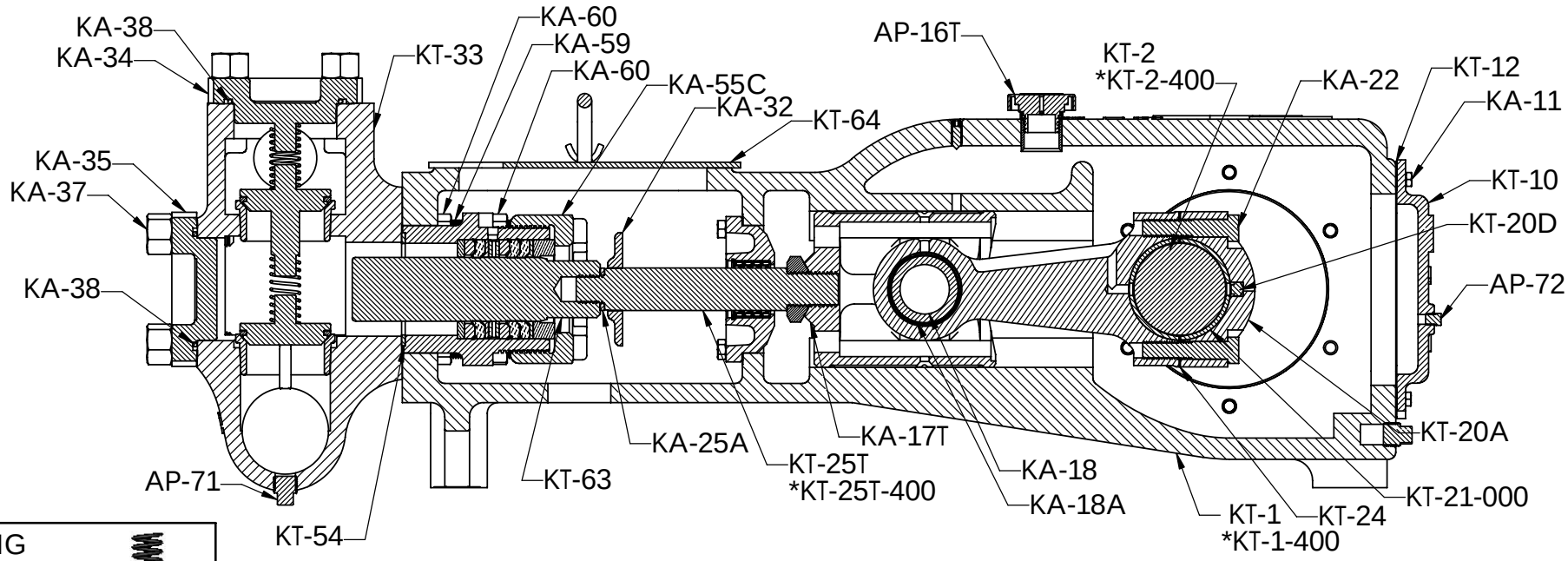
KT-3350/KT-3400 SPECIFICATIONS

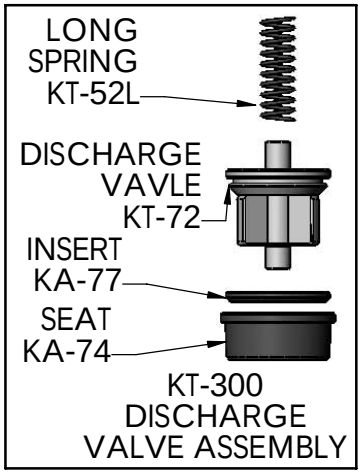
TORQUE SPECIFICATIONS

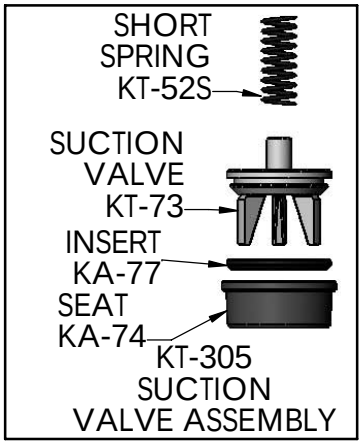
REFERENCE	DESCRIPTION	TORQUE
1	PAN COVER CAPSCREW	21 ft-lb (28 Nm)
2	CONNECTING ROD CAPSCREW	160 ft-lb (217 Nm)
3	BEARING HOUSING CAPSCREW	75 ft-lb (102 Nm)
4	WRIST PIN SET SCREW AND JAM NUT	30 ft-lb (41 Nm)
5	PONY ROD PACKING GLAND CAPSCREW	50 ft-lb (68 Nm)
6	STUFFING BOX STUD NUT	100 ft-lb (136 Nm)
7	FLUID END STUD NUT	120 ft-lb (163 Nm)
8	COVER CAP STUD NUT	200 ft-lb (271 Nm)
9	PONY ROD	1000 ft-lb (1356 Nm)
10	PLUNGER TO PONY ROD	500 ft-lb (678 Nm)

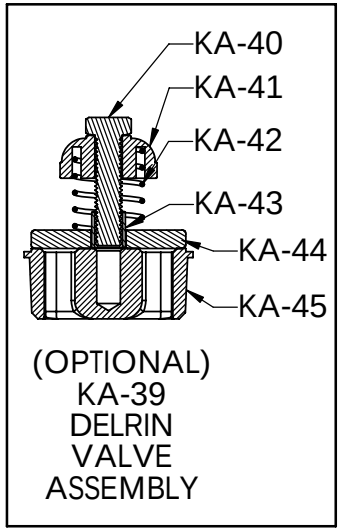
NOTE: WHEN USING LUBRICANTS, REDUCE TORQUE AS FOLLOWS;

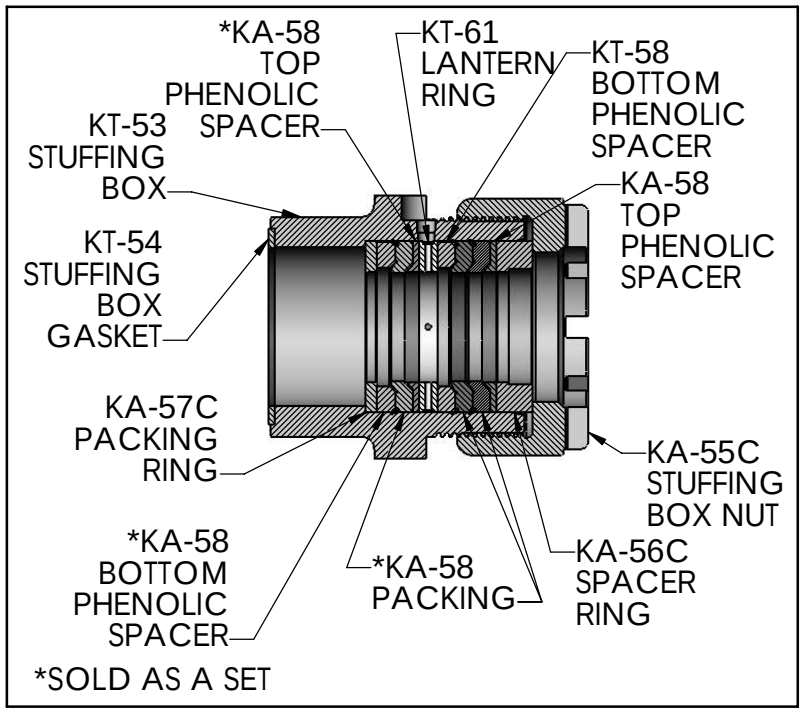
LUBRICANT	PERCENTAGE OF TORQUE REDUCTION REQUIRED
WHITE LEAD	REDUCE TORQUE 25%
GRAPHITE	REDUCE TORQUE 30%
OIL	REDUCE TORQUE 40%
GREASE	REDUCE TORQUE 40%
ANTI - SEIZE COMPOUND	REDUCE TORQUE 45%



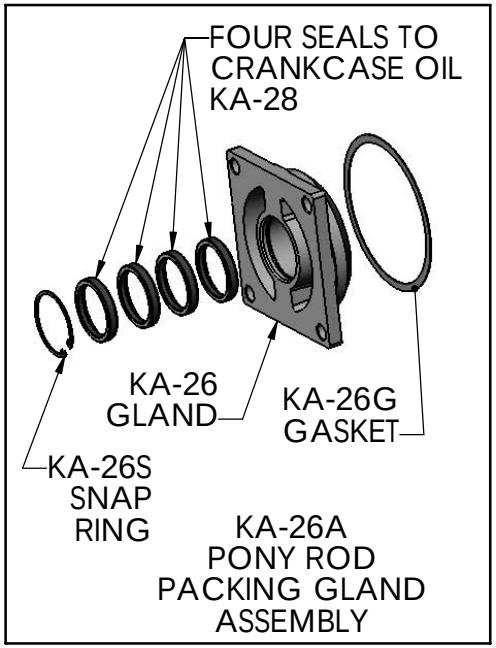








*KT-3400 PARTS



KT-3350/KT-3400

Kerr KT-3350/KT-3400 Plunger Type Pump

Part Number	No. Required	Description
KT-1	1	Pump Case
KT-1P	1	Pump Case 3/4" NPT Holes for Oil Level Sight Plugs
*KT-1-400	1	Pump Case
*KT-1-400P	1	Pump Case 3/4" NPT Holes for Oil Level Sight Plugs
KT-2	1	Crankshaft-Heat Treated
KT-2S	1	Crankshaft-Heat Treated (Steel)
*KT-2-400	1	Crankshaft-Heat Treated (for KT-3400)
*KT-2S-400	1	Crankshaft-Heat Treated (for KT-3400) (Steel)
KT-3	1	Crankshaft Oil Seal
KT-4	1	Bearing Housing (Blind Side)
*KT-4-400	1	Bearing Housing (Blind Side)
KT-5	1	Bearing Housing (Shaft Side)
*KT-5-400	1	Bearing Housing (Shaft Side)
KA-6	10	Bearing Housing Capscrews
KA-6B	2	Bearing Housing Capscrews 2"
KT-7	2	Bearing Housing Gaskets
*KT-7-400	2	Bearing Housing Gaskets
KT-8-005		Main Bearing Adjusting Shims .005
*KT-8-005-400		Main Bearing Adjusting Shims .005
KT-8-010		Main Bearing Adjusting Shims .010
*KT-8-010-400		Main Bearing Adjusting Shims .010
KT-8-015		Main Bearing Adjusting Shims .015
*KT-8-015-400		Main Bearing Adjusting Shims .015
KT-9	2	Main Bearings
KT-10	1	Pan Cover
KA-11	14	Pan Cover Capscrews
KT-12	1	Pan Cover Gasket
AP-16	1	Breather Cap (Oil Filler)
AP-16T	1	Breather Cap (Oil Filler) Threaded Style
KA-17	3	Crosshead
KA-17T	3	Crosshead (Tapered)
KA-18	3	Wrist Pin
KA-18A	3	Wrist Pin Bushing
KA-19	3	Wrist Pin Set Screws & Nut
KT-20	3	Connecting Rod Only (No Inserts - Requires inserts both ends)
KT-20A	3	Connecting Rod (Inserted Both Ends)
KT-21-000	3	Connecting Rod Insert Bushing (Std)
KT-21-015	3	Connecting Rod Insert Bushing (.015)
KT-21-030	3	Connecting Rod Insert Bushing (.030)

Kerr KT-3350/KT-3400 Plunger Type Pump

Part Number	No. Required	Description
KT-21-045	3	Connecting Rod Insert Bushing (.045)
KT-21-060	3	Connecting Rod Insert Bushing (.060)
KT-21-HRL	3	Connecting Rod Insert Bushing (HRL)
KA-22	6	Connecting Rod Capscrew
KT-24	6	Connecting Rod Shims (Laminated)
KT-25	3	Pony Rod with Jam Nut
KT-25T	3	Pony Rod with Jam Nut (Tapered)
*KT-25T-400	3	Pony Rod with Jam Nut (Tapered)
KA-25A	3	Pony Rod Washer
KA-26	3	Pony Rod Gland Snap Ring Type
KA-26A	3	Pony Rod Gland Assembly (Pony Rod Gland, Snap Ring, Seals)
KA-26F	3	Pony Rod Packing Gland Follower Type
KA-26G	3	Pony Rod Gland Gasket
KA-26S	3	Pony Rod Gland Snap Ring
KA-27	3	Pony Rod Packing Gland Follower "Screw Type"
KA-28	3 sets	Pony Rod Seal (4 Seals per Set)
KA-28F	3	Pony Rod Packing Set
KA-30SS	12	Pony Rod Gland Capscrews (Stainless Steel)
KA-32	3	Pony Rod Splash Guard
KT-33	1	Fluid End Vessel Only (ALBZ)
KT-33CS	1	Fluid End Vessel Only (Cast Steel)
KT-33CSS	1	Fluid End Vessel Only (Cast Stainless Steel)
KT-33D	1	Fluid End Vessel Only (Ductile)
KT-33DX	1	Fluid End Vessel Only (Duplex Stainless)
KT-33FS	1	Fluid End Vessel Only (Forged Steel)
KT-33FSS	1	Fluid End Vessel Only (Forged Stainless Steel)
KA-34	3	Top Cover Cap (ALBZ)
KA-34D	3	Top Cover Cap (Ductile)
KA-34DX	3	Top Cover Cap (Duplex Stainless)
KA-34S	3	Top Cover Cap (Steel)
KA-34SS	3	Top Cover Cap (Stainless Steel)
KA-35	3	End Cover Cap (ALBZ)
KA-35D	3	End Cover Cap (Ductile)
KA-35DX	3	End Cover Cap (Duplex Stainless)
KA-35S	3	End Cover Cap (Steel)
KA-35SS	3	End Cover Cap (Stainless Steel)
KA-36SS	24	Cover Cap Stud (Stainless Steel)
KA-36BSS	2	Cover Cap Bracket Stud (Stainless Steel)
KA-37	24	Cover Cap Stud Nut

Kerr KT-3350/KT-3400 Plunger Type Pump

Part Number	No. Required	Description
KA-37SS	24	Cover Cap Stud Nut
KA-38A	6	Cover Cap O' Ring (Aflax)
KA-38N	6	Cover Cap O' Ring (Nitrile)
KA-39	6	Delrin Disc Type Valve Complete with ALBZ Seat
KA-39M	6	Delrin Disc Type Valve Complete with Monel Seat
KA-39SS	6	Delrin Disc Type Valve Complete with SS Seat
KA-39SSM	6	SS Disc Valve Complete with Monel Seat
KA-39SS-SS	6	SS Disc Valve Complete with Stainless Steel Seat
KA-39DX-2	6	Stainless Disc Complete with Duplex Stainless Seat
KA-39SS-2	6	Delrin Disc Type Valve Complete with SS Seat
KA-39TDX-2	6	Titanium Disc Complete with Duplex Stainless Seat
KA-39TM	6	Titanium Disc Valve Complete with Monel Seat
KA-40SS	1 Per Valve	Capscrew Disc Valve (Stainless Steel)
KA-41	1 Per Valve	Spring Retainer Disc Valve
KA-41-2	1 Per Valve	Retainer Dual Spring Disc Valve
KA-42	1 Per Valve	Spring Disc Valve
KA-42-2	1 Per Valve	Spring Disc Valve (Outer)
KA-42-3	1 Per Valve	Spring Disc Valve (Inner)
KA-43	1 Per Valve	Sleeve Disc Valve
KA-44	1 Per Valve	Delrin Valve Disc
KA-44SS	1 Per Valve	Stainless Steel Valve Disc
KA-44T	1 Per Valve	Titanium Valve Disc
KA-45	1 Per Valve	Valve Seat ALBZ Disc Type
KA-45DX	1 Per Valve	Valve Seat Duplex Stainless Disc Type
KA-45M	1 Per Valve	Valve Seat Monel Disc Type
KA-45SS	1 Per Valve	Valve Seat Stainless Steel Disc Type
KT-46	3	Discharge Valve (ALBZ,Wing-Guided)
KT-47	3	Suction Valve (ALBZ,Wing-Guided)
KT-48	6	Valve Seat (ALBZ, Wing-Guided)
KT-49	3	Discharge Valve (Monel,Wing-Guided)
KT-49SS	3	Discharge Valve (Stainless Steel,Wing-Guided)
KT-50	3	Suction Valve (Monel,Wing-Guided)
KT-50SS	3	Suction Valve (Stainless Steel,Wing-Guided)
KT-51	3	Valve Seat (Monel, Wing-Guided)
KT-51SS	3	Valve Seat (Stainless Steel, Wing-Guided)
KT-52L	3	Valve Spring (Discharge) (Long)
KT-52S	3	Valve Spring (Suction) (Short)
KT-53AB	3	Stuffing Box (ALBZ)
KT-53DX	3	Stuffing Box (Duplex Stainless)
KT-53S	3	Stuffing Box (Steel)

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Part Number	No. Required	Description
KT-53SS	3	Stuffing Box (Stainless Steel)
KT-53OSAB	3	Stuffing Box (ALBZ)
KT-53OSS	3	Stuffing Box (Steel)
KT-53OSSS	3	Stuffing Box (Stainless Steel)
KA-54	3	Stuffing Box O-Ring
KT-54	3	Stuffing Box Gaskets
KP-54AB	3	Stuffing Box Nut (ALBZ) Use With KT-86-300 SB
KP-54S	3	Stuffing Box Nut (Steel) With KT-86-300 SB
KP-54SS	3	Stuffing Box Nut (Stainless Steel) With KT-86-300 SB
KA-55CAB	3	Stuffing Box Nut (ALBZ)
KA-55CDX	3	Stuffing Box Nut (Duplex Stainless)
KA-55CS	3	Stuffing Box Nut (Steel)
KA-55CSS	3	Stuffing Box Nut (Stainless Steel)
KA-55CL	2	Packing Nut Lock
KA-56C-200AB	3	Stuffing Box Spacer Ring (ALBZ) "C" Box 2"
KA-56C-225AB	3	Stuffing Box Spacer Ring (ALBZ) "C" Box 2.25"
KA-56C-250AB	3	Stuffing Box Spacer Ring (ALBZ)"C" Box 2.50"
KA-56C-275AB	3	Stuffing Box Spacer Ring (ALBZ)"C" Box 2.75"
KA-56C-300AB	3	Stuffing Box Spacer Ring (ALBZ)"C" Box 3"
KA-56C-200DX	3	Stuffing Box Spacer Ring (Duplex Stainless) "C" Box 2"
KA-56C-225DX	3	Stuffing Box Spacer Ring (Duplex Stainless) "C" Box 2-1/4"
KA-56C-250DX	3	Stuffing Box Spacer Ring (Duplex Stainless) "C" Box 2-1/2"
KA-56C-275DX	3	Stuffing Box Spacer Ring (Duplex Stainless) "C" Box 2-3/4"
KA-56C-300DX	3	Stuffing Box Spacer Ring (Duplex Stainless) "C" Box 3"
KA-56CS-200	3	Stuffing Box Spacer Ring (Steel)"C" Box 2"
KA-56CS-225	3	Stuffing Box Spacer Ring (Steel) "C" Box 2.25"
KA-56CS-250	3	Stuffing Box Spacer Ring (Steel)"C" Box 2.50"
KA-56CS-275	3	Stuffing Box Spacer Ring (Steel)"C" Box 2.75"
KA-56CS-300	3	Stuffing Box Spacer Ring (Steel)"C" Box 3"
KA-56CSS-200	3	Stuffing Box Spacer Ring (Stainless Steel)"C" Box 2"
KA-56CSS-225	3	Stuffing Box Spacer Ring (Stainless Steel)"C" Box 2.25"
KA-56CSS-250	3	Stuffing Box Spacer Ring (Stainless Steel)"C" Box 2.50"
KA-56CSS-275	3	Stuffing Box Spacer Ring (Stainless Steel)"C" Box 2.75"
KA-56CSS-300	3	Stuffing Box Spacer Ring (Stainless Steel)"C" Box 3"
KA-57C-200	3	Stuffing Box Packing Ring (ALBZ)"C" Box 2"
KA-57C-225	3	Stuffing Box Packing Ring (ALBZ)"C" Box 2.25"
KA-57C-250	3	Stuffing Box Packing Ring (ALBZ)"C" Box 2.50"
KA-57C-275	3	Stuffing Box Packing Ring (ALBZ)"C" Box 2.75"
KA-57C-300	3	Stuffing Box Packing Ring (ALBZ)"C" Box 3"
KA-57C-200DX	3	Stuffing Box Packing Ring (Duplex Stainless)"C" Box 2"

Kerr KT-3350/KT-3400 Plunger Type Pump

Part Number	No. Required	Description
KA-57C-225DX	3	Stuffing Box Packing Ring (Duplex Stainless)"C" Box 2-1/4"
KA-57C-250DX	3	Stuffing Box Packing Ring (Duplex Stainless)"C" Box 2-1/2"
KA-57C-275DX	3	Stuffing Box Packing Ring (Duplex Stainless)"C" Box 2-3/4"
KA-57C-300DX	3	Stuffing Box Packing Ring (Duplex Stainless)"C" Box 3"
KA-57CS-200	3	Stuffing Box Packing Ring (Steel)"C" Box 2"
KA-57CS-225	3	Stuffing Box Packing Ring (Steel)"C" Box 2.25"
KA-57CS-250	3	Stuffing Box Packing Ring (Steel)"C" Box 2.50"
KA-57CS-275	3	Stuffing Box Packing Ring (Steel)"C" Box 2.75"
KA-57CS-300	3	Stuffing Box Packing Ring (Steel)"C" Box 3"
KA-57CSS-200	3	Stuffing Box Packing Ring (Stainless Steel)"C" Box 2"
KA-57CSS-225	3	Stuffing Box Packing Ring (Stainless Steel)"C" Box 2.25"
KA-57CSS-250	3	Stuffing Box Packing Ring (Stainless Steel)"C" Box 2.50"
KA-57CSS-275	3	Stuffing Box Packing Ring (Stainless Steel)"C" Box 2.75"
KA-57CSS-300	3	Stuffing Box Packing Ring (Stainless Steel)"C" Box 3"
KA-58C-200	3 sets	838 Plunger Packing (Non-Adjustable) 2" "C" Box
KA-58C-225	3 sets	838 Plunger Packing (Non-Adjustable) 2.25" "C" Box
KA-58C-250	3 sets	838 Plunger Packing (Non-Adjustable) 2.50" "C" Box
KA-58C-275	3 sets	838 Plunger Packing (Non-Adjustable) 2.75" "C" Box
KA-58C-300	3 sets	838 Plunger Packing (Non-Adjustable) 3" "C" Box
KA-58G-200	3 sets	858 Plunger Packing (Non-Adjustable) 2" "C" Box
KA-58G-225	3 sets	858 Plunger Packing (Non-Adjustable) 2.25" "C" Box
KA-58G-250	3 sets	858 Plunger Packing (Non-Adjustable) 2.50" "C" Box
KA-58G-275	3 sets	858 Plunger Packing (Non-Adjustable) 2.75" "C" Box
KA-58G-300	3 sets	858 Plunger Packing (Non-Adjustable) 3" "C" Box
KA-58CK-200	3 sets	Kevlar Packing 2" "C" Box
KA-58CK-225	3 sets	Kevlar Packing 2.25" "C" Box
KA-58CK-250	3 sets	Kevlar Packing 2.50" "C" Box
KA-58CK-275	3 sets	Kevlar Packing 2.75" "C" Box
KA-58CK-300	3 sets	Kevlar Packing 3" "C" Box
KA-58CT-200	3 sets	Teflon Packing C-Box 2"
KA-58CT-225	3 sets	Teflon Packing C-Box 2.25"
KA-58CT-250	3 sets	Teflon Packing C-Box 2.50"
KA-58CT-275	3 sets	Teflon Packing C-Box 2.75"
KA-58CT-300	3 sets	Teflon Packing C-Box 3"
KA-59SS	12	Stud (Stainless Steel)
KA-60	24	Stud Nut
KA-60SS	24	Stud Nut (Stainless Steel)
KA-61C-200AB	3	Lantern Ring ALBZ "C" Box 2"
KA-61C-225AB	3	Lantern Ring ALBZ "C" Box 2.25"

Kerr KT-3350/KT-3400 Plunger Type Pump

Part Number	No. Required	Description
KA-61C-250AB	3	Lantern Ring ALBZ "C" Box 2.50"
KA-61C-275AB	3	Lantern Ring ALBZ "C" Box 2.75"
KA-61C-300AB	3	Lantern Ring ALBZ "C" Box 3"
KA-61C-200DX	3	Lantern Ring Duplex Stainless "C" Box 2"
KA-61C-225DX	3	Lantern Ring Duplex Stainless "C" Box 2-1/4"
KA-61C-250DX	3	Lantern Ring Duplex Stainless "C" Box 2-1/2"
KA-61C-275DX	3	Lantern Ring Duplex Stainless "C" Box 2-3/4"
KA-61C-300DX	3	Lantern Ring Duplex Stainless "C" Box 3"
KA-61C-200S	3	Lantern Ring Steel "C" Box 2"
KA-61C-225S	3	Lantern Ring Steel "C" Box 2.25"
KA-61C-250S	3	Lantern Ring Steel "C" Box 2.50"
KA-61C-275S	3	Lantern Ring Steel "C" Box 2.75"
KA-61C-300S	3	Lantern Ring Steel "C" Box 3"
KA-61C-200SS	3	Lantern Ring Stainless Steel "C" Box 2"
KA-61C-225SS	3	Lantern Ring Stainless Steel "C" Box 2.25"
KA-61C-250SS	3	Lantern Ring Stainless Steel "C" Box 2.50"
KA-61C-275SS	3	Lantern Ring Stainless Steel "C" Box 2.75"
KA-61C-300SS	3	Lantern Ring Stainless Steel "C" Box 3"
KT-64	1	Plunger Chamber Cover
KA-67	1	Wing-Guided Seat Eccentric Type Puller Ass'y
KA-68	1	Disc Seat Threaded Stem Type Puller Ass'y
KA-68M	1	Wing-Guided Seat Tri-Pin Type Puller Ass'y
KA-68M-1	1	Rod, Puller
KA-68M-2	3	Pin Set, Puller
KA-68M-3	1	Head, Puller
KA-68M-4	1	Spacer Washer, Puller
KA-68M-5	1	Nut,Puller
KA-68M-5	1	O-Ring, Puller
AP-71	1	Drain Plug
AP-72	3	Oil Level Plug
AP-73	3	1/8" NPT Stuffing Box Hex Plug
KT-72HT	3	Discharge Valve, "Heat Treated" A/R with Insert
KT-73HT	3	Suction Valve,"Heat Treated" A/R with Insert
KA-74HT	6	Valve Seat,"Heat Treated" A/R
KA-77	6	Abrasive Resistant Valve Insert
AP-77T	1	Valve Insert Tool
KT-86SL-225AB	3	Stuffing Box Spring Loaded 2 1/4" ID (ALBZ)
KT-86SL-225S	3	Stuffing Box Spring Loaded 2 1/4" ID (Steel)
KT-86SL-225SS	3	Stuffing Box Spring Loaded 2 1/4" ID (Stainless Steel)

Kerr KT-3350/KT-3400 Plunger Type Pump

Part Number	No. Required	Description
KT-86SL-300AB	3	Stuffing Box Spring Loaded 3" ID (ALBZ)
KT-86SL-300S	3	Stuffing Box Spring Loaded 3" ID (Steel)
KT-86SL-300SS	3	Stuffing Box Spring Loaded 3" ID (Stainless Steel)
KT-87	3	O-Ring, Stuffing Box
KP-88V-225G	3 sets	758 Packing Rings Per Set SF Style 2 1/4"
KP-93SL-225AB	3	Packing Adapters Spring Loaded 2 1/4" ID
KP-95W-300	3	Wave Spring 3" OD Use In "A" Box
KA-95CW-350	3	Wave Spring 3-1/2" OD Use In KA "C" Box
KT-113	1	KT-3350 Rebuild Gasket Kit Complete Includes the Following Parts:(1) KT-3 , (2) KT-7, (1) KT-12, (3) KA-26G , (3 Sets) KA-28, (3) KA-32, (6) KA-38, (3) KT-54
*KT-113-400	1	KT-3400 Rebuild Gasket Kit Complete Includes the Following Parts:(1) KT-3, (2) KT-7-400, (1) KT-12, (3) KA-26G, (3 Sets) KA-28, (3) KA-32, (6) KA-38, (3) KT-54
KT-114	1	Lubrication System Complete
KT-115	1	Lubrication System Less Lubricator
AP-115	3	Check Valve Stainless Steel 1/8" Pipe
KT-115H	1	Lubricator Hose Kit Complete
AP-116	3	55 Single Pump for Forced Feed Lubricator
KT-117	1	Crankshaft Lubrication Sheave
AP-117L	1	Lubricator Sheave
KT-118	1	Lubrication Belt
KT-119	1	Lubricator Bracket
KT-120-8	1	Crankshaft, Splined Hydraulic Drive 21 Tooth Spline
*KT-120-8-400PT	1	Crankshaft, Splined Hydraulic Drive 21 Tooth Spline
KT-125-8	1	Bearing Housing, Hydraulic Drive # 8
*KT-125-8-400PT	1	Bearing Housing, Hydraulic Drive # 8
KT-126BH	1	Bearing Cap Lifting Eye
KA-126FE	1	Fluid End Lifting Eye
AP-127	1	#8 Auburn Housing Gasket
KT-130	1	Bearing Housing, Extension Shaft Side
AP-135	1	Oil Seal, Bearing Housing Extension Shaft
KA-276	1	Installation Tool for Pony Rod Seal
KA-277	1	Pony Rod Installation Wrench
KT-300	3	A. R. Discharge Valve Complete (KT-72HT,KA-74HT & KT-52L)
KT-305	3	A. R. Suction Valve Complete (KT-73HT, KA-74HT & KT-52S)
KT-300AB	3	ALBZ Discharge Valve Complete (KT-46, KA-48 & KT-52L)
KT-305AB	3	ALBZ Suction Valve Complete (KT-47, KA-48 & KT-52S)
KT-300M	3	Monel Discharge Valve Complete (KT-49,KA-48 & KT-52L)
KT-305M	3	Monel Suction Valve Complete (KT-50, KA-48 & KT-52S)

Kerr KT-3350/KT-3400 Plunger Type Pump

Part Number	No. Required	Description
KT-300SS	3	SS Discharge Valve Complete (KT-72SS, KA-74SS & KT-52L)
KT-305SS	3	SS Suction Valve Complete (KT-73SS, KA-74SS & KT-52S)
KA-306	1	Valve Seat Seating Tool
KA-324	1	# 8 Planetary Gear Assembly
AP-330	1	SAE "C" 4 Bolt Drive Assembly 1-1/2" Male Input Shaft
AP-330H	1	Housing, SAE "C" 4 Bolt Drive Assembly 1-1/2" Male Input Shaft
AP-330S	1	Input Shaft, SAE "C" 4 Bolt Drive Assembly 1-1/2" Male Input Shaft
AP-330B	2	Bearings, SAE "C" 4 Bolt Drive Assembly 1-1/2" Male Input Shaft
AP-330-1	1	Oil Seal, SAE "C" 4 Bolt Drive Assembly 1-1/2" Male Input Shaft
AP-330-2	1	Snap Ring, SAE "C" 4 Bolt Drive Assembly 1-1/2" Male Input Shaft
AP-331	1	O'Ring, #8 Auburn Input Drive Assembly
AP-351	1	Oil Level Sight Glass 1/2" NPT
AP-352	1	Oil Level Sight Plug 3/4" NPT
AP-425	1	Stuffing Box Nut Wrench
AP-450	1	Sunstrand Hyd Mtr 90 Series
KA-500HT	3	Valve Ass'y, Complete A/R Caged (KA-501HT, KA-502HT, KA-504, KA-506, KP-85 & KA-42-3)
KA-501HT	5	Seat, Valve, Heat Treated
KA-502HT	5	Valve w/Insert, Heat Treated
KA-504HT	5	Cage, Valve
KA-506	6	Valve Seat O'Ring
KA-550	1	Cage Wrench
KA-555	1	Disc Seat "J" Type Puller Ass'y
KA-555-1	1	Disc Seat "J" Type Puller (Head Only)
KT-735	1	Lubricator Guard
		PLUNGERS
KT-62-200	3	316 Stainless Steel Plungers 2"
KT-62-225	3	316 Stainless Steel Plungers 2.25"
KT-62-250	3	316 Stainless Steel Plungers 2.50"
KT-62-275	3	316 Stainless Steel Plungers 2.75"
KT-62-300	3	316 Stainless Steel Plungers 3"
KT-63-200	3	Colmonoy 730 Plungers 2"
KT-63-225	3	Colmonoy 730 Plungers 2.25"
KT-63-250	3	Colmonoy 730 Plungers 2.50"
KT-63-275	3	Colmonoy 730 Plungers 2.75"
KT-63-300	3	Colmonoy 730 Plungers 3"
KTC-200	3	Ceramic Plungers 2"
KTC-225	3	Ceramic Plungers 2.25"
KTC-250	3	Ceramic Plungers 2.50"
KTC-275	3	Ceramic Plungers 2.75"

Kerr KT-3350/KT-3400 Plunger Type Pump

Part Number	No. Required	Description
KTC-300	3	Ceramic Plungers 3"
KT-800-200	3	Plunger Kerramic 2"
KT-800-225	3	Plunger Kerramic 2-1/4"
KT-800-250	3	Plunger Kerramic 2-1/2"
KT-800-275	3	Plunger Kerramic 2-3/4"
KT-800-300	3	Plunger Kerramic 3"

All Prices & Part Numbers Subject to Change Without Prior Notice

Not all Parts are Illustrated

****KT-3400 and R340 Parts Only***