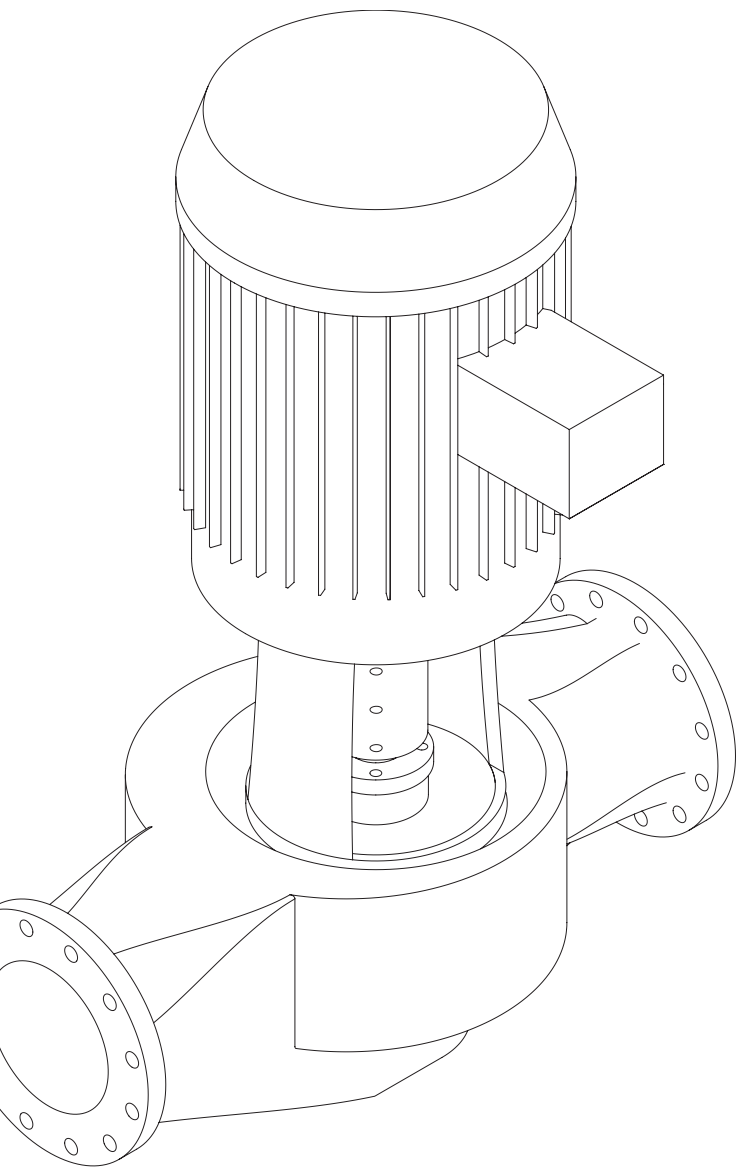
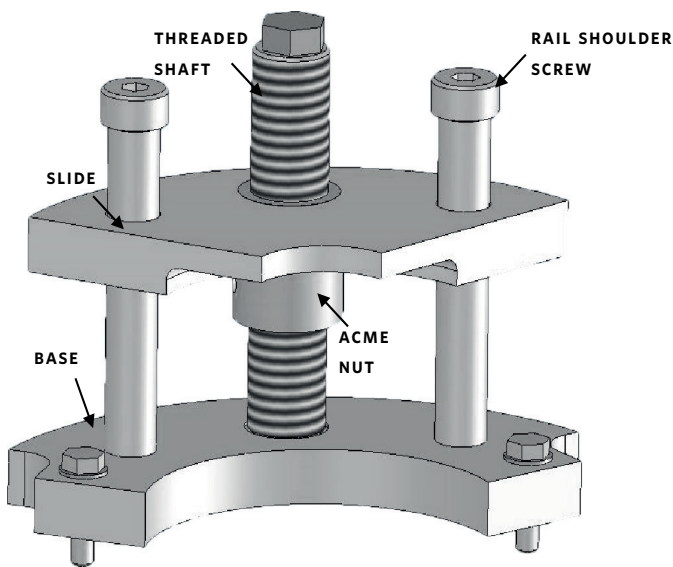


Operation Instructions for Lifting Mechanism

Installation and operating instructions

File No: 43.803
Date: SEPTEMBER 29, 2016
Supersedes: 43.803
Date: JANUARY 09, 2009





This lifting mechanism is designed to be used when servicing a Series 4300, size 20×20×19 VIL pumping unit. It is designed to lower and lift the pump rotating assembly (Shaft and impeller assembly) and to facilitate the connection of pump and motor shafts by the shaft rigid coupling.

LIFTING MECHANISM ASSEMBLY:

See table below for bolt torque requirements.

- 1 The ACME nut is to be mounted to the underside of the Slide by using a standard (1¹⁵/₁₆") or adjustable wrench. If the slide is threaded already, skip item 1.
- 2 Place the two rail shoulder screws through the slide and secure them into the base, using a ½" Allen wrench
- 3 Screw the threaded shaft into the ACME nut / threaded slide all the way to the base
- 4 Position [2] teflon washers between the base and threaded shaft, to reduce friction
- 5 Confirm that all parts are properly tightened.
- 6 The lifting mechanism can now be installed on the pump.
- 7 Mounting of the lifting mechanism onto the pump - pre-service

Remove the pump coupling guard, loosen all of the set screws around the mechanical seal

Rotate the shaft and note the pump shaft key position below the coupling. Continue rotating the shaft until the pump coupling half containing the shaft key faces away from you. (The shaft coupling half without a key showing is facing you)

Remove the [8] coupling setscrews and remove the coupling half facing you. (Without shaft keys)

NOTE: Be careful to leave the other coupling half in place

Slide the lifting mechanism into the motor bracket and adjust until the front face of the slide almost touching the shaft underneath the pump shaft split-collar. Bolt the lifting mechanism base bolts into the tapped holes provided. All moving parts of the lifting mechanism and sliding surfaces are to be lubricated.

- A Gradually rotate the threaded shaft [clockwise] sufficiently for the slide to make contact with the pump shaft split-collar. Turn the threaded shaft another ½-turn, or so, until the second coupling half can be easily removed. Remove the second coupling half. Find and retain the shaft drive keys in a safe place for re-assembly
 - B Gradually rotate the threaded shaft [counter-clockwise] lowering the pump shaft, until the impeller rests on the bottom of the pump casing and the slide loses contact with the pump shaft split-ring.
- 8 Lifting mechanism is now ready to be removed as the pump is ready for service
 - 9 Mounting of the lifting mechanism onto the pump - after service

Fit the split-collar in the groove on the pump shaft

Insert the Lifting Mechanism through the appropriate motor bracket window and locate on the ribs on the volute cover

The pump and motor shafts are rotated so that the keyways are positioned facing away from the lifting mechanism

Slide the lifting mechanism into the motor bracket and adjust until the front face of the slide almost touching the shaft underneath the pump shaft split-collar. Bolt the lifting mechanism base bolts into the tapped holes on the volute cover ribs. All moving parts of the lifting mechanism and sliding surfaces are to be lubricated.

Gradually rotate the threaded shaft [clockwise], which lifts the pump shaft, until the pump and motor shaft split-rings coincide with the coupling keyways (see item 6.6). The entire movement (from bottom to top position) will not exceed ¼ ins (6mm)

When the desired point is reached, install the shaft drive keys and the coupling half containing the keyways (see **file no: 43.806**)

- 10 Lifting mechanism is now ready to be removed as the pump and motor shafts are now connected by one half of the coupling

- 11 Unbolt the lifting mechanism and slide back, out of the pump / motor bracket. Assemble the second half of the coupling to the half already connecting the shafts.
(See **file no:** 43.806)

NOTES:

- 1 Proper bearing lubrication must be provided to achieve designed service. Recommended grease: AMSOIL synthetic GL series multi-purpose EP grease; AMSOIL synthetic water resistant lithium complex grease; shell cassida EPS 2 or similar synthetic grease.
- 2 The lifting mechanism can be used on any series 4300, size 20X20X19 VIL pumping unit.
- 3 Store the lifting equipment in a dry place, entirely lubricated. Clean if necessary with WD-40 type fluid and re-lubricate.
- 4 Teflon washers will need replacing after extensive use. Please replace with Armstrong original parts only.
(Armstrong part # 927115-100)

BOLT TIGHTENING FORCE REQUIREMENTS:

WHERE USED	BOLT TYPE	QTY	SIZE	FORCE [FT LB]
Seal gland plate	Capscrew	4	5/8" - 11NC x 2 3/4"	90
Bearing housing	Capscrew	4	3/8" - 16NC x 1"	20
Coupling	Setscrew	8	1/2" - 13NC x 6"	50
Lifting mechanism	Capscrews	2	7/16" - 14NC x 1 3/4"	30

TORONTO

23 BERTRAND AVENUE
TORONTO, ONTARIO
CANADA
M1L 2P3
+1 416 755 2291

BUFFALO

93 EAST AVENUE
NORTH TONAWANDA, NEW YORK
U.S.A.
14120-6594
+1 716 693 8813

BIRMINGHAM

HEYWOOD WHARF, MUCKLOW HILL
HALESOWEN, WEST MIDLANDS
UNITED KINGDOM
B62 8DJ
+44 (0) 8444 145 145

MANCHESTER

WOLVERTON STREET
MANCHESTER
UNITED KINGDOM
M11 2ET
+44 (0) 8444 145 145

BANGALORE

#59, FIRST FLOOR, 3RD MAIN
MARGOSA ROAD, MALLESWARAM
BANGALORE, INDIA
560 003
+91 (0) 80 4906 3555

SHANGHAI

NO. 1619 HU HANG ROAD, XI DU TOWNSHIP
FENG XIAN DISTRICT, SHANGHAI
P.R.C.
201401
+86 21 3756 6696

SÃO PAULO

RUA JOSÉ SEMIÃO RODRIGUES AGOSTINHO,
1370 GALPÃO 6
EMBU DAS ARTES
SAO PAULO, BRAZIL
+55 11 4781 5500

ARMSTRONG FLUID TECHNOLOGY
ESTABLISHED 1934

ARMSTRONGFLUIDTECHNOLOGY.COM

**MAKING
ENERGY
MAKE
SENSE™**