



UET Mixers Inc.
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**XCEL Series of
 Turbine Mixers**

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Recommended Bolting Torques

1. Tightening Torques

Use the values specified in the following table for fastening motors, units, and accessories to their mounting surfaces with SAE Grade 5 non-lubricated fasteners. If the tightening torque exceeds the capacity of the torque wrench, use a torque multiplier.

Thread Dia-UNC (in)	Painted Metal to Painted Metal (lb-in)	Painted Metal to Concrete (lb-in)
.250-20	90	70
.314-18	185	145
.375-16	330	255
.500-13	825	640
.625-11	1,640	1,280
.750-10	2,940	2,290
.875-9	4,560	3,750
1.000-8	6,800	5,600
1.125-7	8,900	7,000
1.250-7	12,600	10,000
1.375-6	16,500	13,000
1.500-6	22,100	17,500



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Installation of Mixer Drive Size 15 to 22

Inspection

Carefully uncrate and remove wrappings from your UET EXCEL-FLO mixer. Inspect all surfaces for damage. If any such damage is noted, report immediately to your shipper service and to UET.

Mixer is shipped with shaft and turbine detached to maintain shaft tolerance levels. Check for all parts- shipment is usually packed in two or more crates. Foreign shipments may be coated with rust inhibitor which is removable with kerosene, carbon tetrachloride or other solvent compound.

For long term storage, re-pack the XCEL mixer after inspecting. If stored for more than one year, all lubricated parts must be inspected and the proper lubricant applied before operating the mixer. See manual section on "Lubrication".

Installation

DO NOT attach shaft to gearbox before mounting without reading the directions on this page.

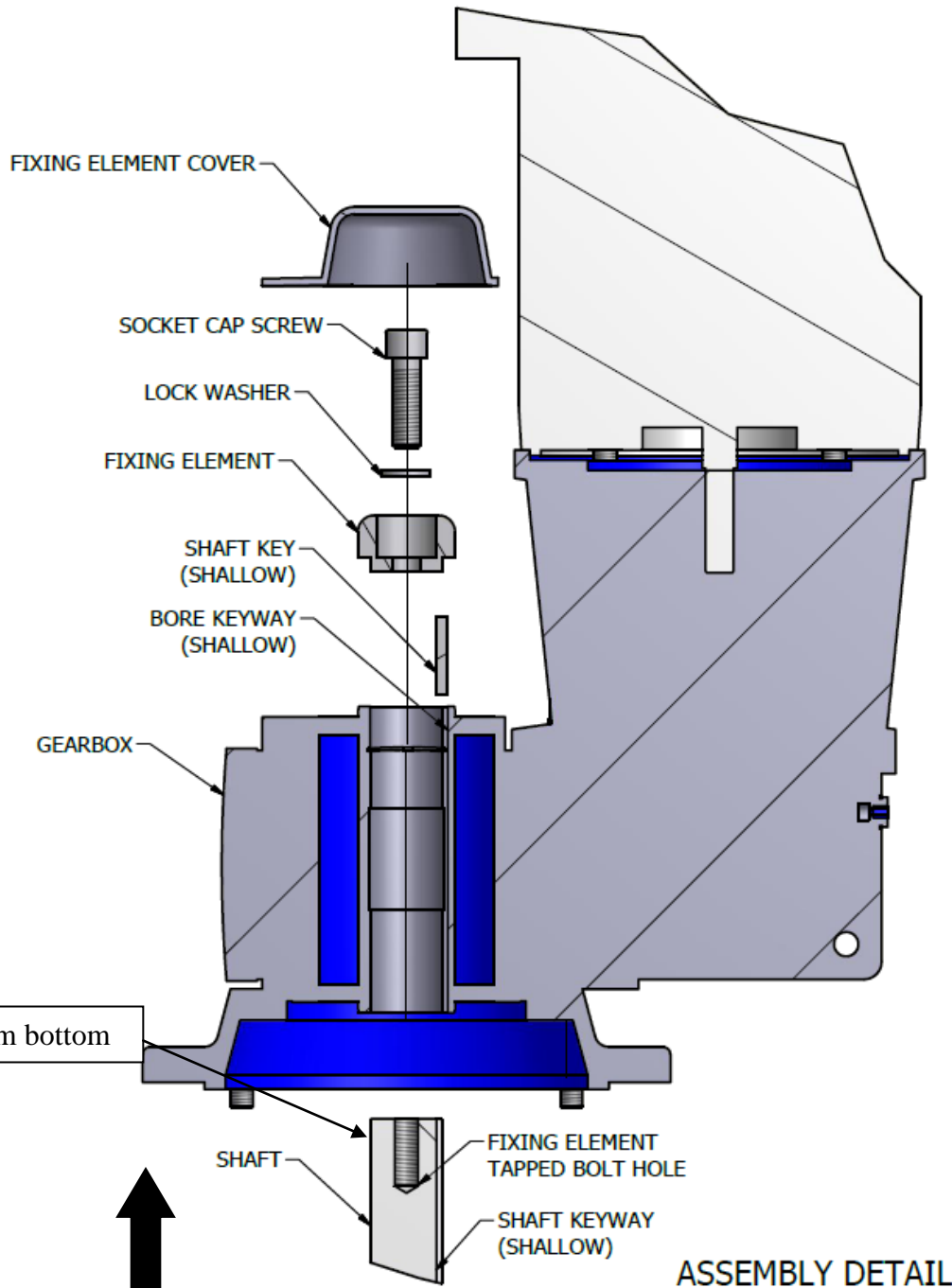
Step 1: Carefully lift XCEL **gearbox** from its crate and remove packing.

Step 2: (If mixer overhead clearance is under 20", Step 4 may be required before mounting gearbox.) Lift mixer to mounting surface, position and bolt in place. All bolts should be tightened an extra ½ turn to insure placement (see Bulletin 01-050 for recommended bolt torque).

Step 3: **Using extreme care**, uncrate and remove **shaft** from packing. **DO NOT** jar or bend shaft. Incautious handling may result in mixer vibration during operation.

Step 4: Insert shaft with shorter keyway and polished end from bottom of gearbox directly into the reducer quill until shaft is in contact with snap ring located in gearbox bore.

Step 5: Insert shaft key and fasten fixing element to recommended torque (see Bulletin 01-050). This will bring the shaft up close towards the snap ring in the bore (Fully encasing shaft). See page 3 for illustration.



Step 6: (See Bulletin 02-200 for illustration) Remove turbine/turbine hub from packing and slide hub over shaft end until above keyway. Insert key and lower hub into position. Tighten hub set screws into key and shaft.

Step 7: Firmly bolt blades in place on hub. Torque bolts to recommended value per Bulletin 01-050.

Step 8: The gearbox breather is plugged for shipment. Remove the plastic wick from the breather and proceed to Bulletin 03-100, Mixer Operation.

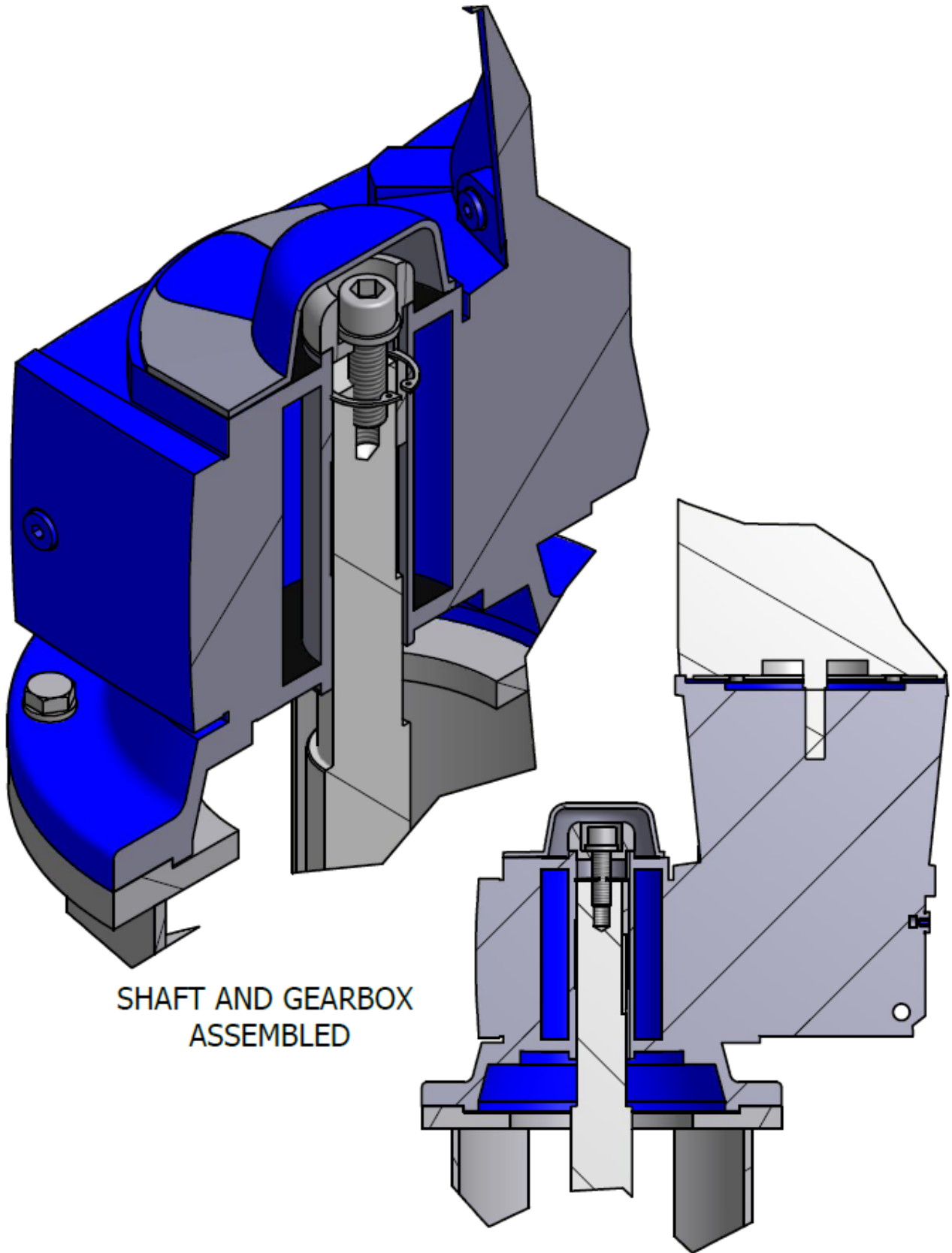


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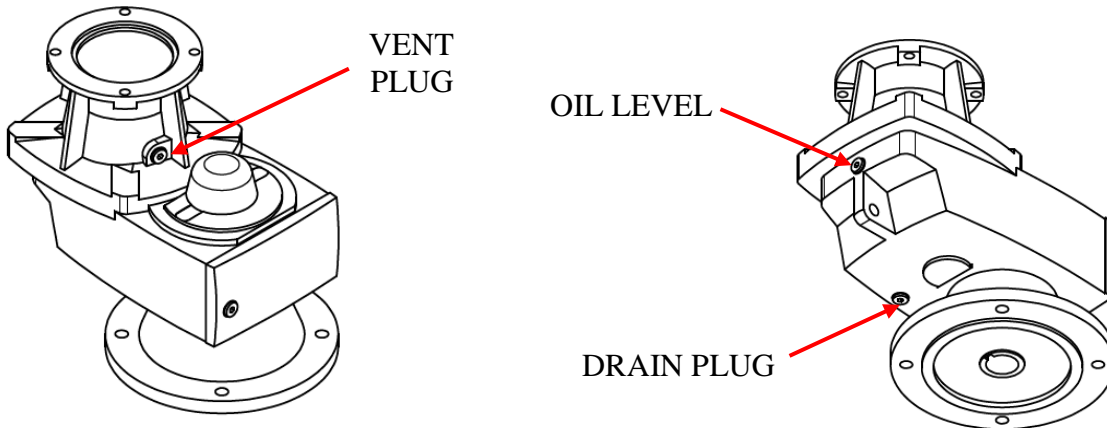
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Maintenance of Mixer Drive Size 15 to 22

1. Your UET XCEL mixer, has and air breather port which is either which is either topped by a plug or sealed.
2. If plugged, remove the temporary pipe plug and install the air breather that is loosely fastened to the unit.
3. If sealed, Air breather is attached at factory and is sealed with a plastic pin in the breather top. Remove completely to allow unit to breath.
4. Refer to figure 1 below. This shows recommended fill level for lubricant. Remove plug and check oil level.
5. For proper maintenance of new units, drain oil while warm after 50 hours of operation. Add new oil to the recommended level.

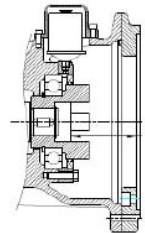
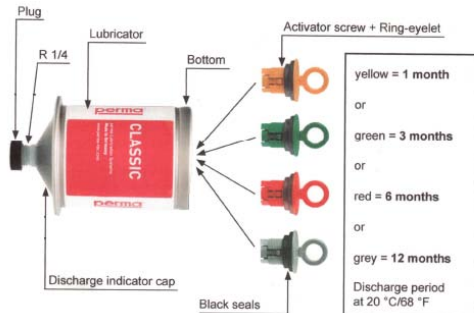
RECOMMENDED OIL LEVELS AND CHANGES: Oil should be changed every 5,000 hours of operation, at the very least, with more frequent changes in operating in harsh environment, moisture condensation is detected in the oil or a sludge build-up is noted inside the housing.

Plugs, Vents, & Drain Locations:



NOTE: For NEMA 250TC and larger standard Perma CLASSIC lubrication system will exist. Please change system according to plug in end of lubricator.

See chart below for activator screw schedule



****lubrication system is activated at the factory before shipping**



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Lubrication of Mixer Drive Sizes 15 to 22

1. Unit Lubrication

Read and carry out all instructions on lubrication plate and heed all warning tags. Determine the minimum and maximum temperatures in which the drive will operate. Find the lubricant number from the following charts.

Standard Oil - ISO VG220

Ambient Temperature	Formulation	Manufacturer	Type
20 to 104°F	Mineral	Shell	Omala EP 220

Mixer Size Double Reduction	Quantity in Quarts
15	2.11
16	4.33
17	5.71
18	9.30
19	18.50
20	28.5
21	43.3
22	76.1

Other Optional Lubricants:

Ambient Temperature , °F	Formulation	Manufacturer	Type
14 to 176	Synthetic	Texaco	Pinacle EP680
14 to 176	Synthetic	Shell	Omala HD680
-13 to 140	Synthetic	Castrol	Isolube EP220
-13 to 140	Synthetic	Shell	Omala HD220
-40 to 50	Synthetic	Texaco	Pinnacle 32
-40 to 50	Synthetic	Shell	Omala HD32
20 to 104	Food Grade	Chevron	FM ISO 220
20 to 104	Synthetic Food Grade	OilJax	Magnaplate 85W140-FG
5 to 125	Fluid Grease	Mobil	Mobilux EP023
-30 to 140	Synthetic Fluid Grease	Mobil	Mobilith SHC 007
-30 to 140	Synthetic Fluid Grease	Shell	Tivela Compund A



Lubrication of Mixer Drive Sizes 15 to 22

Be aware that the speed reducer housing temperature will range between 130° to 180°F during normal operation using the oils listed above. If your reducer surpasses 180°F, there may be cause for concern.

If the unit is operated in an area where the temperatures vary with the season, change the oil viscosity to suit the season. For cold weather operation, use a light oil that will circulate freely at all times. The pour point of the oil should at least be 9°F less than the minimum external temperature encountered. During hot weather, use a high viscosity oil that will not thin out and lose its lubricating qualities.

2. Grease Lubricated Bearings

For bearings not lubricated in oil bath use a lithium base bearing grease, NLGI # 2EP.

NOTE: Some units equipped with expansion unit. Please follow instructions to properly install unit prior to operating!

1. Locate the expansion unit provided with Mixer. (pictured in figure 1.)
2. After fitting the Mixer in the final operating position, remove Vent-plug out of the drive.
(See Bulletin 04-135 for vent plug location)
3. Now assemble the expansion unit
(see figure 2. for suggested mounting location).
4. Observing the length of the hose the expansion unit should be fitted as high as possible
5. You can now assemble the Vent-Hose with the fittings and seals Supplied
6. For the final step, fit the vent plug M12 x 1.5 with the seal include in kit

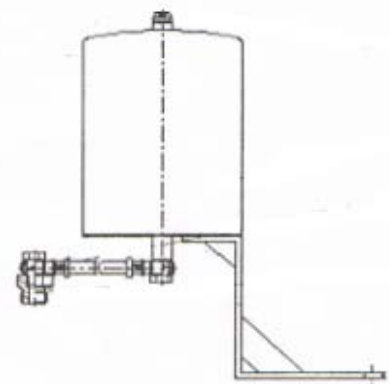


Figure 1

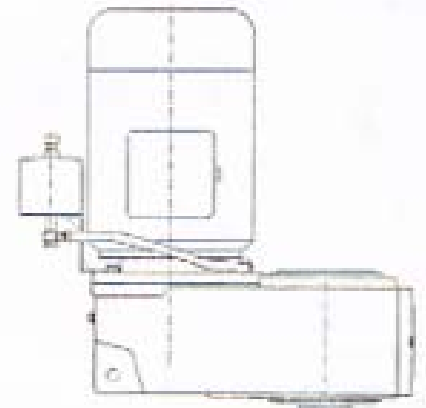


Figure 2



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Mixer Drive Parts Guide for Size 15 to 22

1. Double Reduction Units.

Ref. No.	Part Description
7	Hollow Shaft
8	Key
9	Oil Seal
11	Bearing
12	Retaining Ring
14	Socket Head Screw
16	Output Flange
17	Distance Piece
19	Key-Hardened
20	Breather Plug/ Vent Valve
22	Gearcase
25	Bearing
29	Anaerobic Sealant
30	Bearing
31	Key
32	Distance Piece
37	Bearing
39	Retaining Ring
59	Drain Plug

Ref. No.	Part Description
81	O-Ring
88	Retaining Ring
91	Retaining Ring
92	Disc
93	Lockwasher
94	Hex head Screw
95	Closing Cap
100	Inspection Cover
101	Hex Head Screw
102	Anaerobic Sealant
131	Closing Cap
161	Closing Cap
168	Closing Cap
183	Oil Seal
506	Shim
507	Shim
508	Shim
521	Shim
522	Shim
523	Shim

*For parts pricing and availability please contact UET's customer service department at the number listed above.



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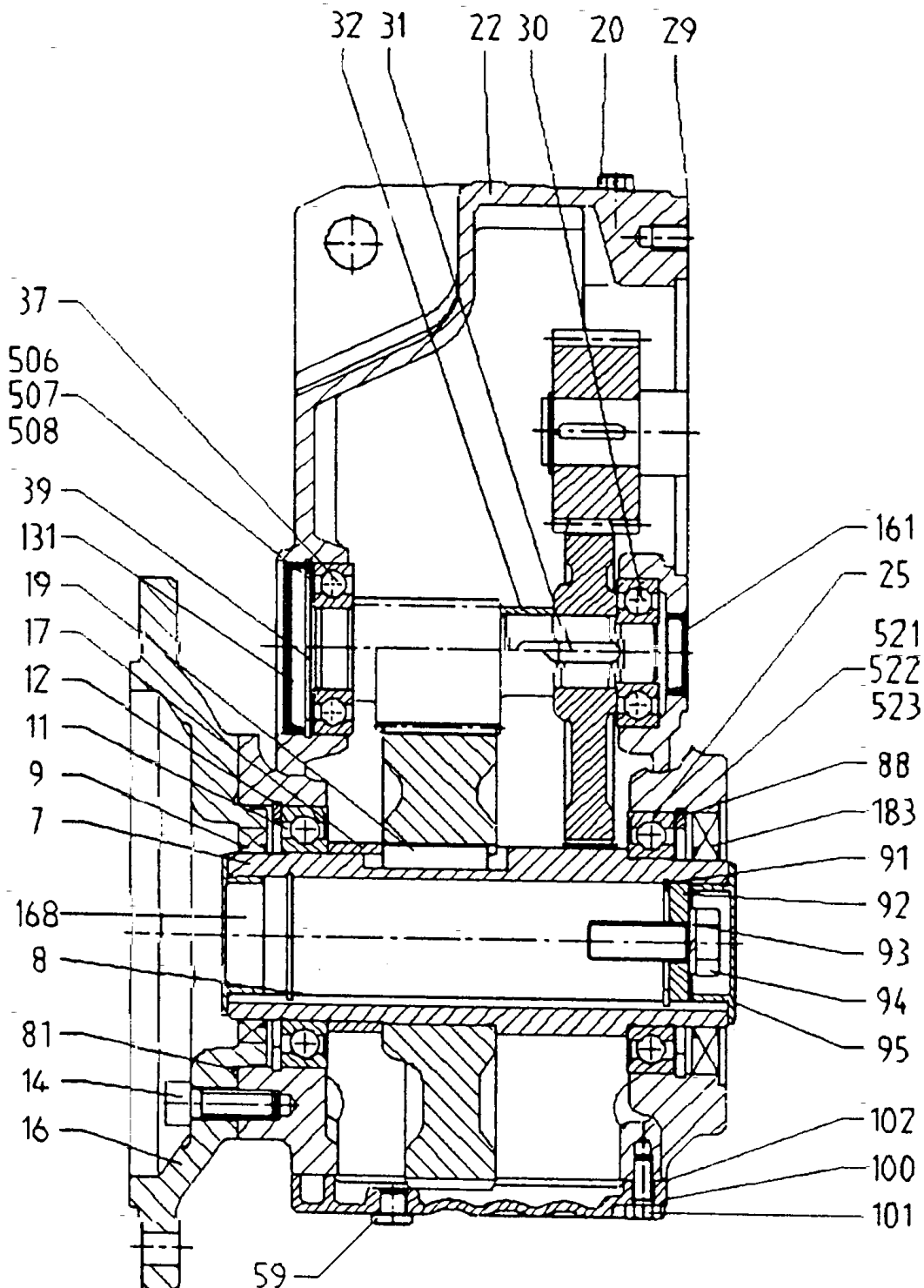
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Mixer Drive Parts Guide for Size 15 to 22

1. Double Reduction Units.





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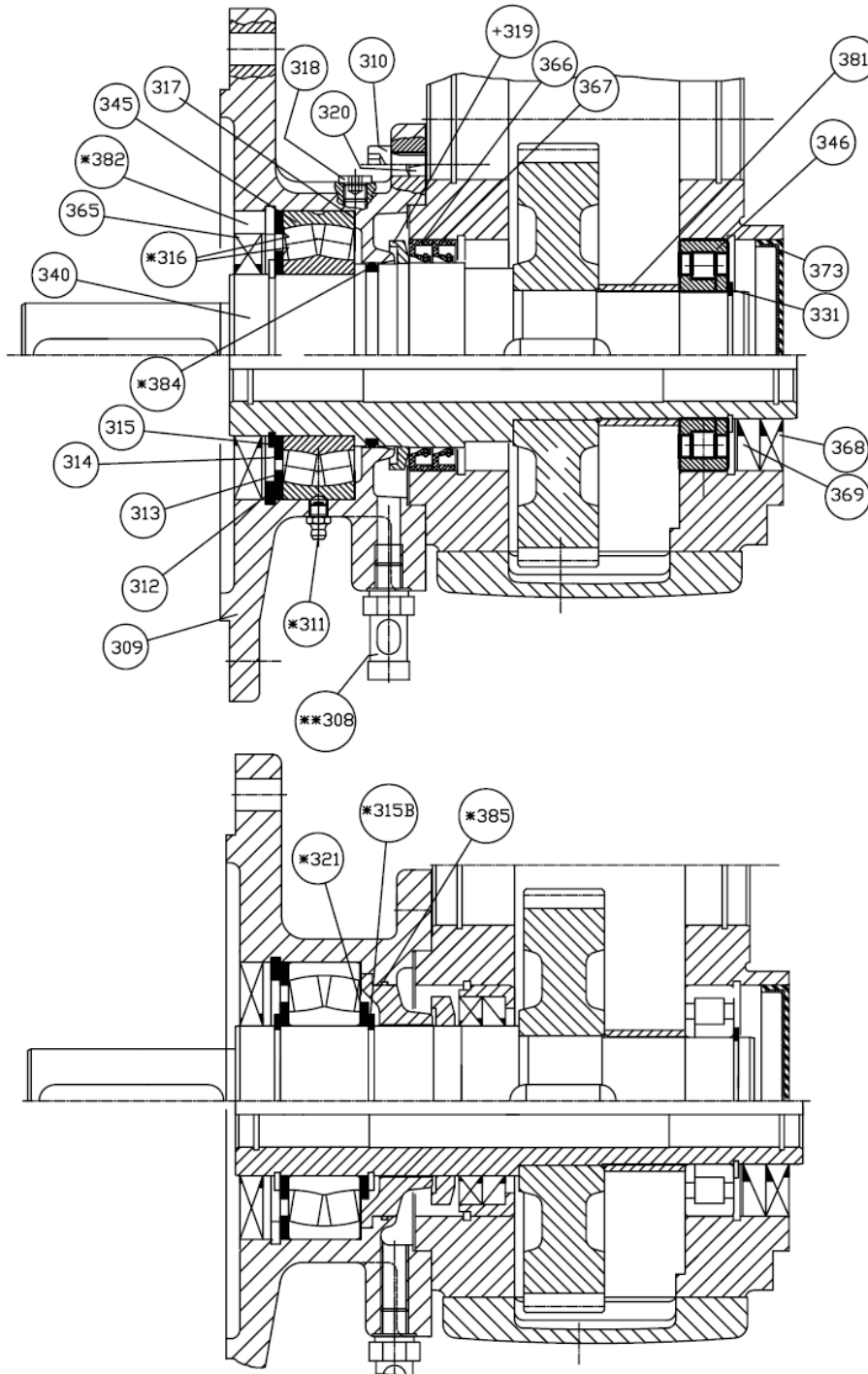
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Mixer Drive Parts Guide for Size 15 to 22

VLII End Parts



Item	Part Name
308	**Oil Indicator
309	VLII Flange
310	Socket Head Bolt
311	*Grease Nipple
312	Snap Ring
313	Spacer
314	Spacer
315	Snap Ring
315B	*Snap Ring
316	*Shim(s)
317	Shim
318	*Drain Plug
319	Oil Slinger
320	Groove Pin
321	*Spacer
331	Snap Ring
340	O/P Shaft
345	Sph. Roller Bearing
346	Cyl. Roller Bearing
365	Oil Seal
366	Oil Seal
367	Oil Seal
368	Oil Seal
369	Oil Seal
373	Seal Plug
381	Spacer
382	*Seal Sleeve
384	*O-ring
385	* O-ring

Note:

*Parts vary by unit and may not be present.

**Oil indicator not on VLII design