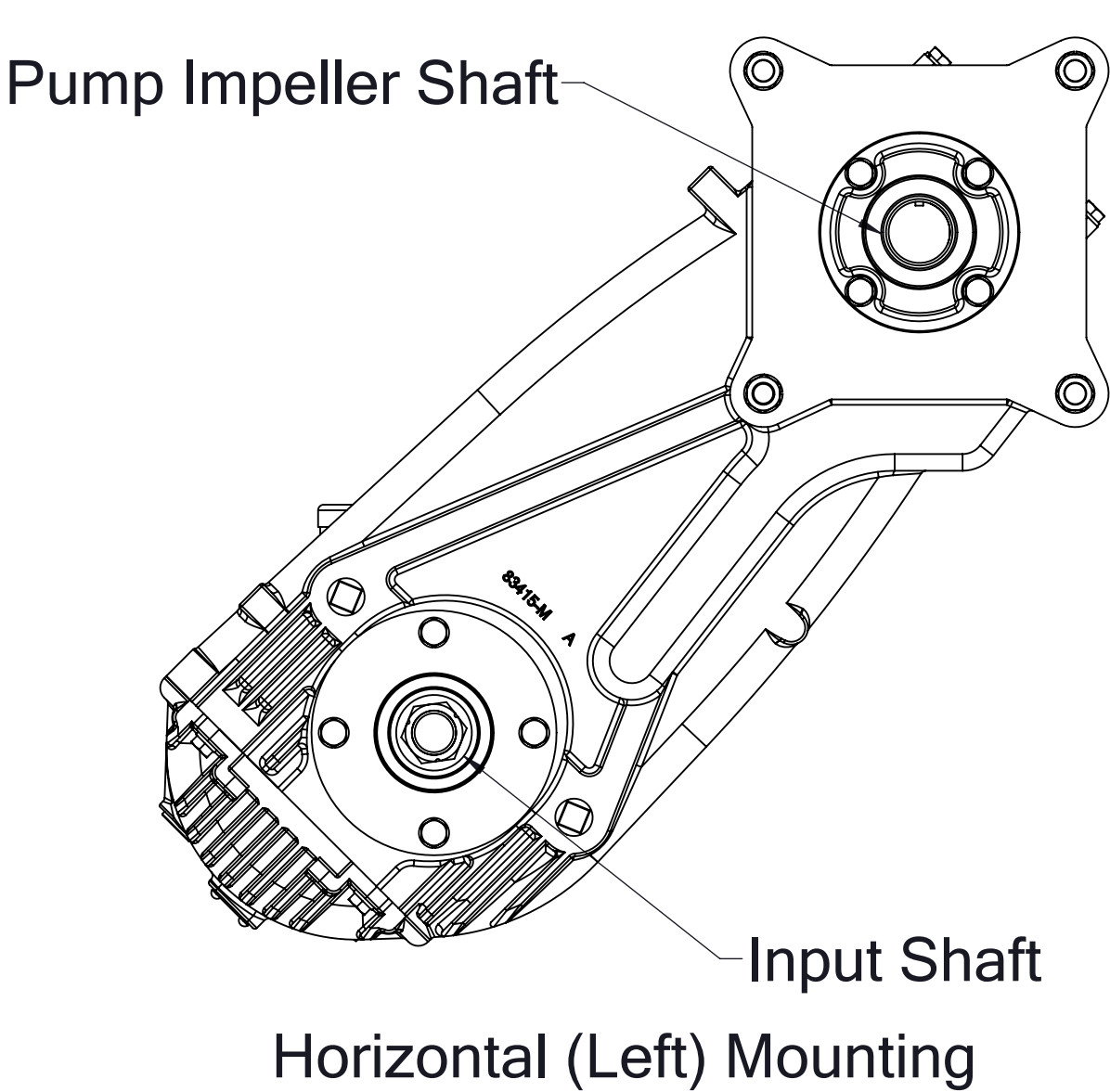
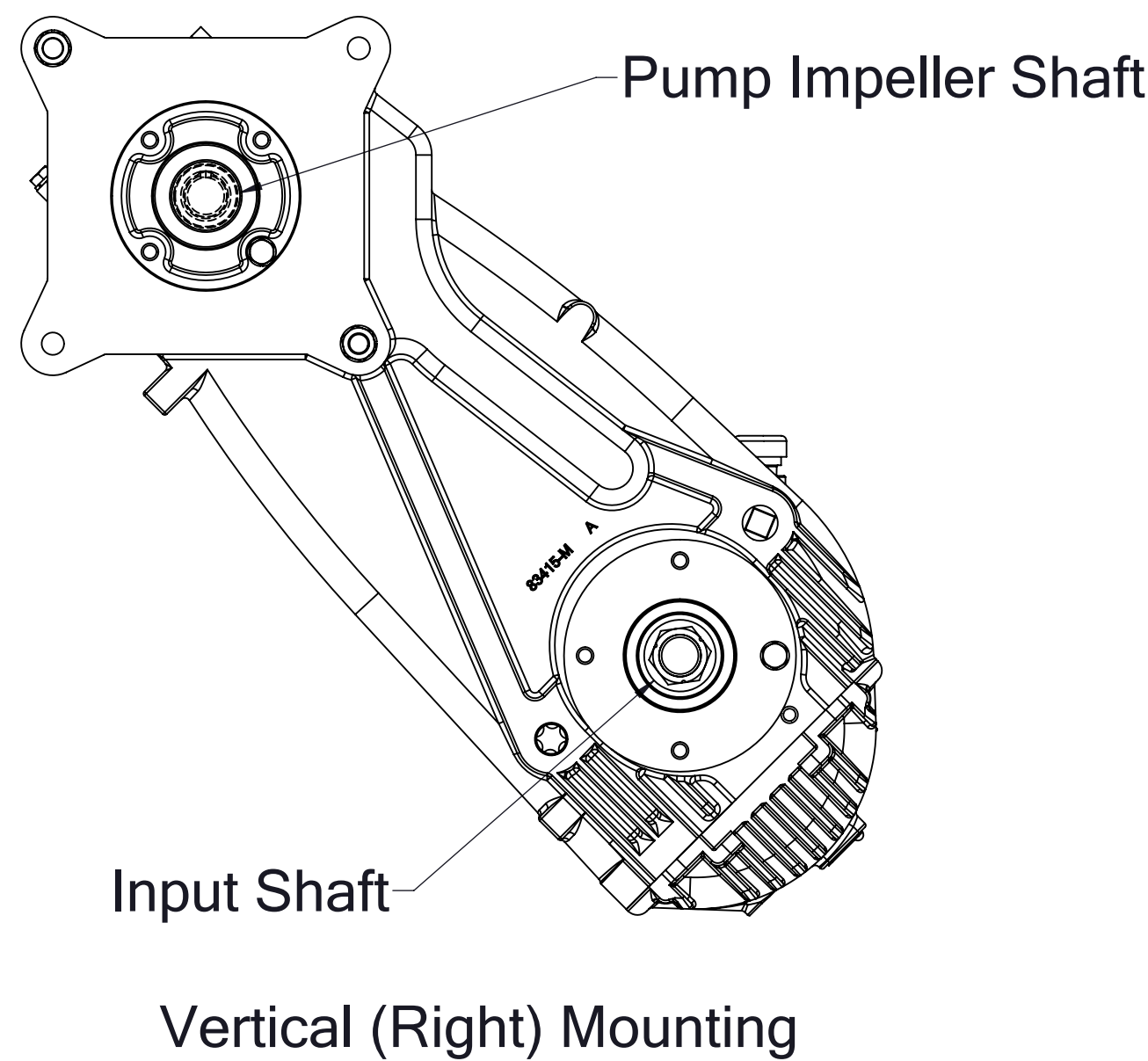


PA Transmission Service Parts List
Index:

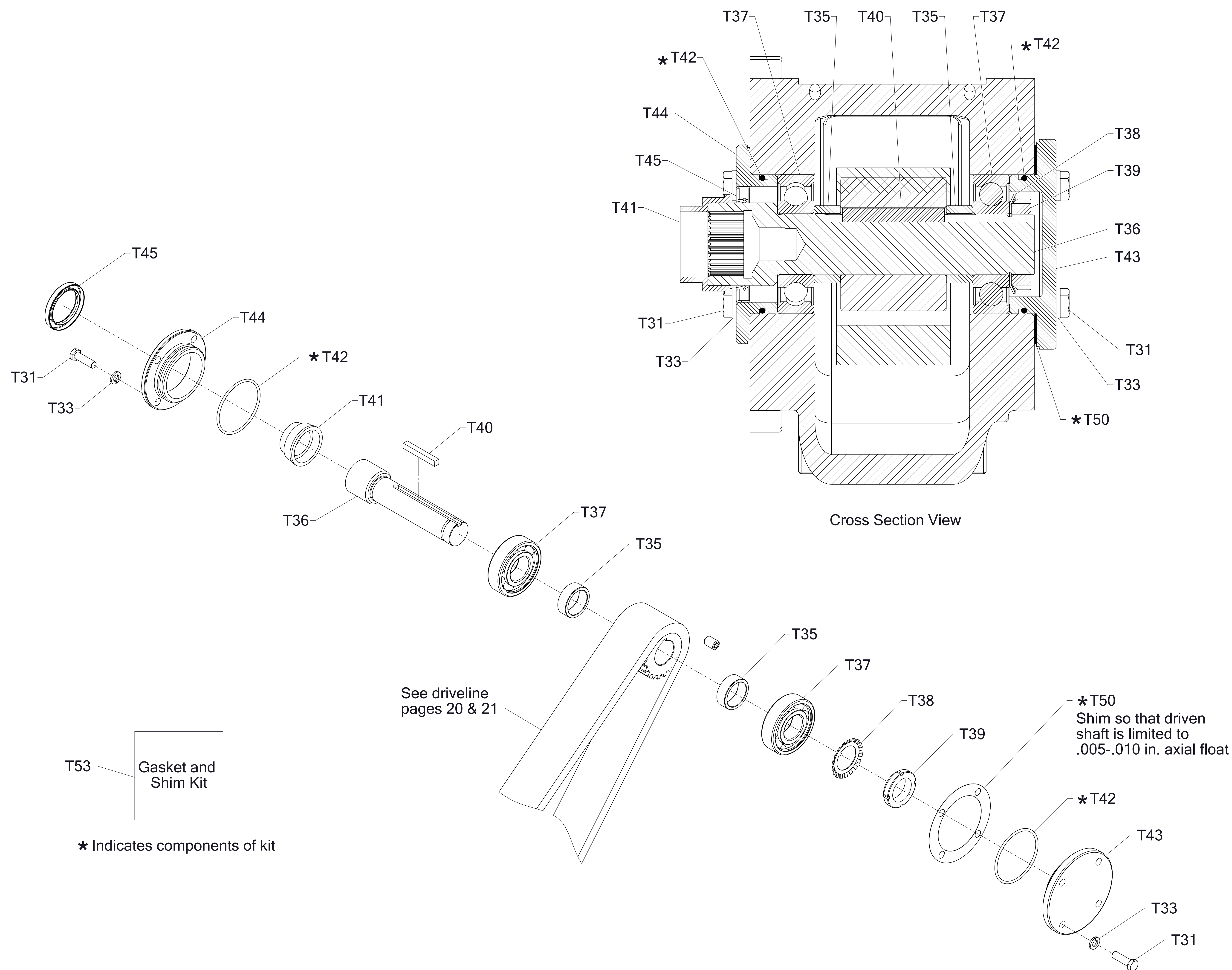
Components	Type		Complete Pump/Transmission Model (Located on Pump Serial Plate)	Connection Opposite Pump	See Page	
Driven Shaft	Pump Series	CM, CS	CMPA, CMUPA, CSPA, CSUPA	None	2, 3	
				CPK-1 or CPK-2 Pump	4, 5	
				Shaft with 1-3/8-10 SAE Spline	6, 7	
				Shaft with Key (Compressor Drive)	8, 9	
		CG	CGNPA, CGRPA, CGGPA, CGVPA, CGVNPA, CGVRPA, CGVGPA	None	10, 11	
		CL	CLRPA, CLSPA, CLVPA	None	10, 11	
		CX	CXNPA, CXSPA, CXVPA	None	10, 11	
				Shaft with Key (Compressor Drive)	12, 13	
				Hydraulic Adapter Flange	14, 15	
		S100	S100PA	None	16, 17	
				Shaft with Key (Compressor Drive)	18, 19	
		HLU	HLUPA (Case includes an Oil Cooler)	None	2, 3	
Driveline	Input Shaft Only		All	--	20, 21	
	Input and Output Shaft			--	22, 23	
Case Assembly	Vertical (Right) Mounting			--	24, 25	
	Horizontal (Left) Mounting			--	26, 27	
HLU Oil Cooler Lines and Fittings					28, 29	
CM/CS Oil Cooler Lines and Fittings					30, 31	



Driven Shaft, Separable Impeller Shaft CM, CS & HLU Pump Series

REF NO.	DESCRIPTION
T31	Hex Hd Screw, 3/8-16 x 1-1/4 in.
T33	Lock Washer, 3/8 in.
T35	Driven Shaft Spacer
T36	Driven Shaft
T37	Ball Bearing, Single Row
T38	Bearing Lock Washer
T39	Bearing Lock Nut
T40	Square Key, 5/16 x 5/16 x 2-5/16 in.

REF NO.	DESCRIPTION
T41	Sealing Boot
T42	O-Ring, 2-7/8 x 3-1/8 in.
T43	Oil Seal Housing
T44	Oil Seal Housing
T45	Oil Seal, 1-7/8 x 2-5/8 in.
T50	Driven Shaft Shim, 0.005 and 0.010 in. Thick
T53	Gasket and Shim Repair Kit

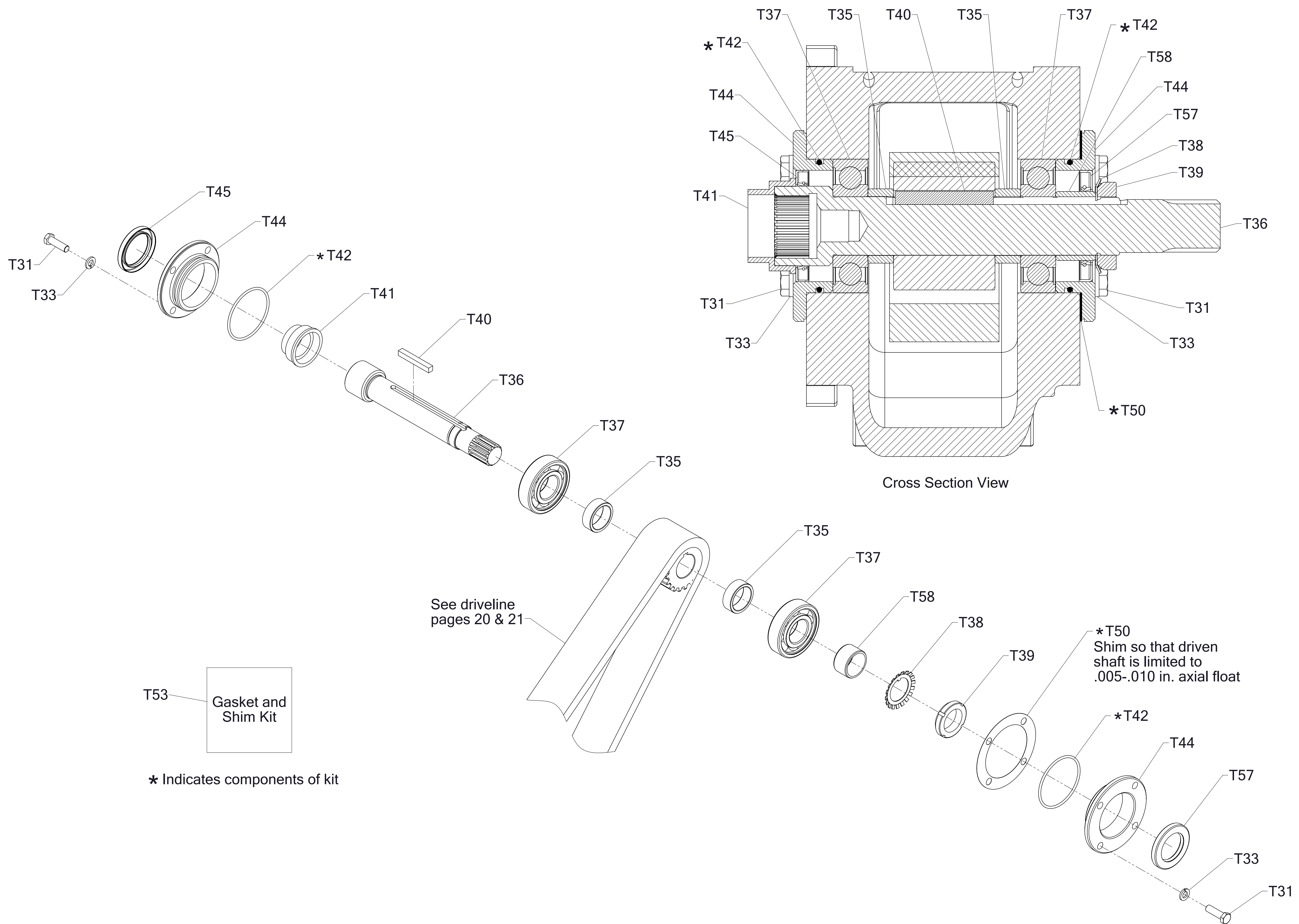


Driven Shaft
 Separable Impeller Shaft
 CM, CS, & HLU Pump Series

Driven Shaft, Separable Impeller Shaft CM & CS Pump Series, Combination Pump

REF NO.	DESCRIPTION
T31	Hex Hd Screw, 3/8-16 x 1-1/4 in.
T33	Lock Washer, 3/8 in.
T35	Driven Shaft Spacer
T36	Driven Shaft
T37	Ball Bearing, Single Row
T38	Bearing Lock Washer
T39	Bearing Lock Nut
T40	Square Key, 5/16 x 5/16 x 2-5/16 in.

REF NO.	DESCRIPTION
T41	Sealing Boot
T42	O-Ring, 2-7/8 x 3-1/8 in.
T44	Oil Seal Housing
T45	Oil Seal, 1-7/8 x 2-5/8 in.
T50	Driven Shaft Shim, 0.005 and 0.010 in. Thick
T53	Gasket and Shim Repair Kit
T57	Oil Seal, 1-5/8 x 2-5/8 in.
T58	Oil Seal Sleeve

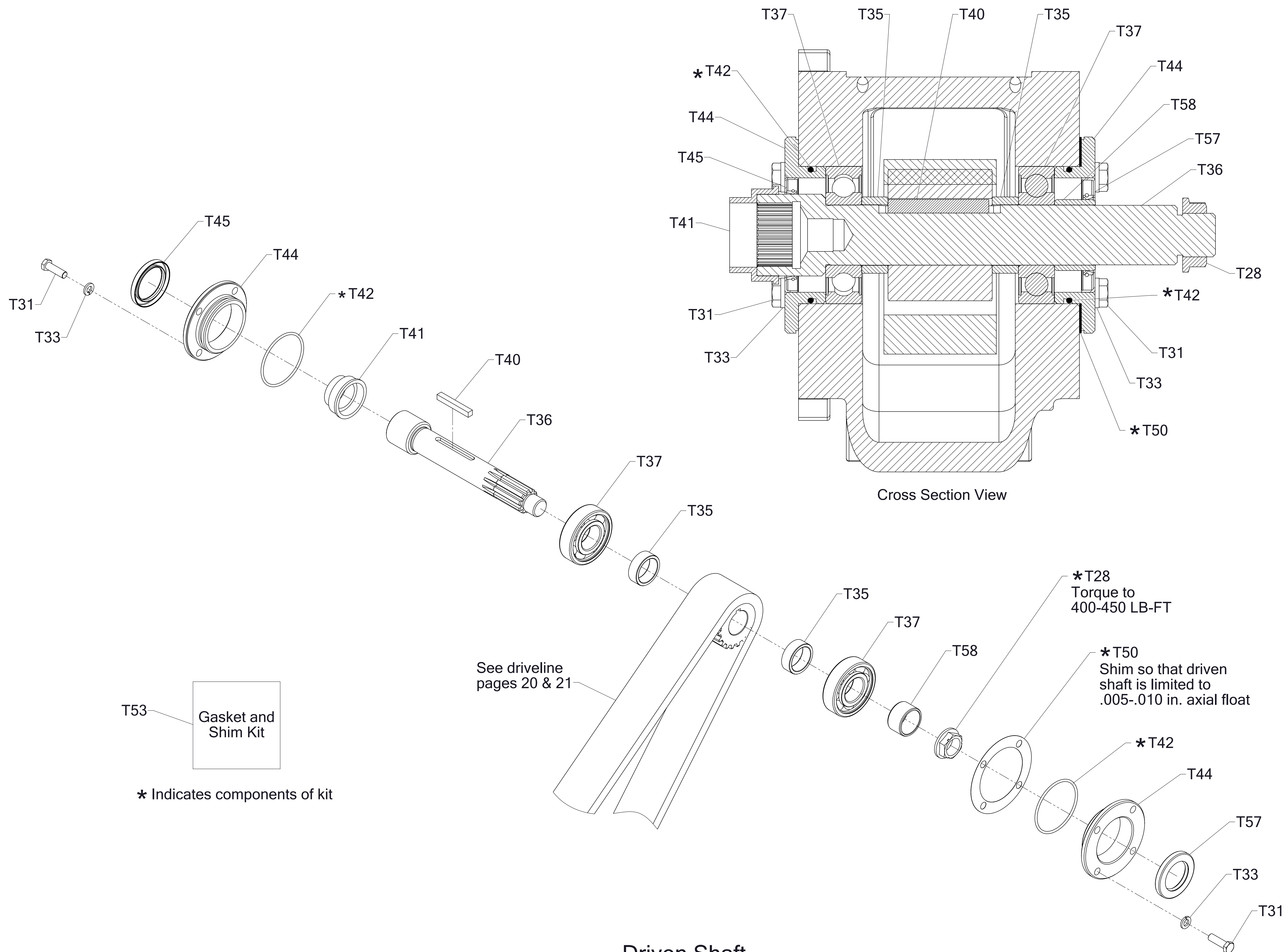


Driven Shaft
 Separable Impeller Shaft
 CM, CS Pump Series
 Combination Pump

Driven Shaft, Separable Impeller Shaft
CM & CS Pump Series with 1-3/8-10 SAE Spline

REF NO.	DESCRIPTION
T28	Shaft Nut
T31	Hex Hd Screw, 3/8-16 x 1-1/4 in.
T33	Lock Washer, 3/8 in.
T35	Driven Shaft Spacer
T36	Driven Shaft
T37	Ball Bearing, Single Row
T40	Square Key, 5/16 x 5/16 x 2-5/16 in.
T41	Sealing Boot

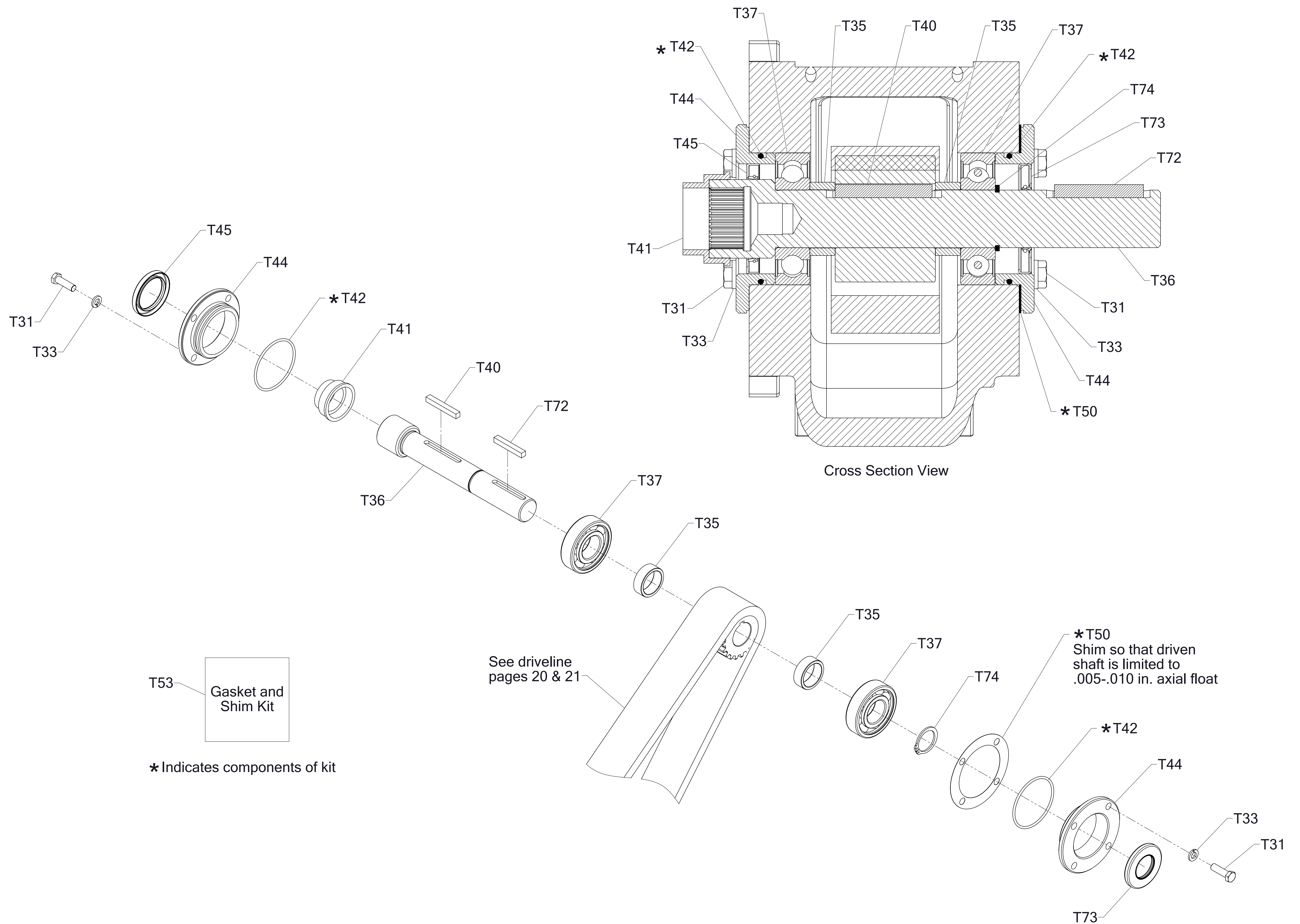
REF NO.	DESCRIPTION
T42	O-Ring, 2-7/8 x 3-1/8 in.
T44	Oil Seal Housing
T45	Oil Seal, 1-7/8 x 2-5/8 in.
T50	Driven Shaft Shim, 0.005 and 0.010 in. Thick
T53	Gasket and Shim Repair Kit
T57	Oil Seal, 1-5/8 x 2-5/8 in.
T58	Oil Seal Sleeve



Driven Shaft, Separable Impeller Shaft
CM & CS Series, Extended Shaft with Key (Compressor Drive)

REF NO.	DESCRIPTION
T31	Hex Hd Screw, 3/8-16 x 1-1/4 in.
T33	Lock Washer, 3/8 in.
T35	Driven Shaft Spacer
T36	Driven Shaft
T37	Ball Bearing, Single Row
T40	Square Key, 5/16 x 5/16 x 2-5/16 in.
T41	Sealing Boot

REF NO.	DESCRIPTION
T42	O-Ring, 2-7/8 x 3-1/8 in.
T44	Oil Seal Housing
T45	Oil Seal, 1-7/8 x 2-5/8 in.
T50	Driven Shaft Shim, 0.0005 and 0.010 in. Thick
T53	Gasket and Shim Repair Kit
T72	Square Key, 5/16 x 5/16 x 2-1/8 in.
T73	Oil Seal, 1-3/8 x 2-5/8 in.
T74	Retaining Ring

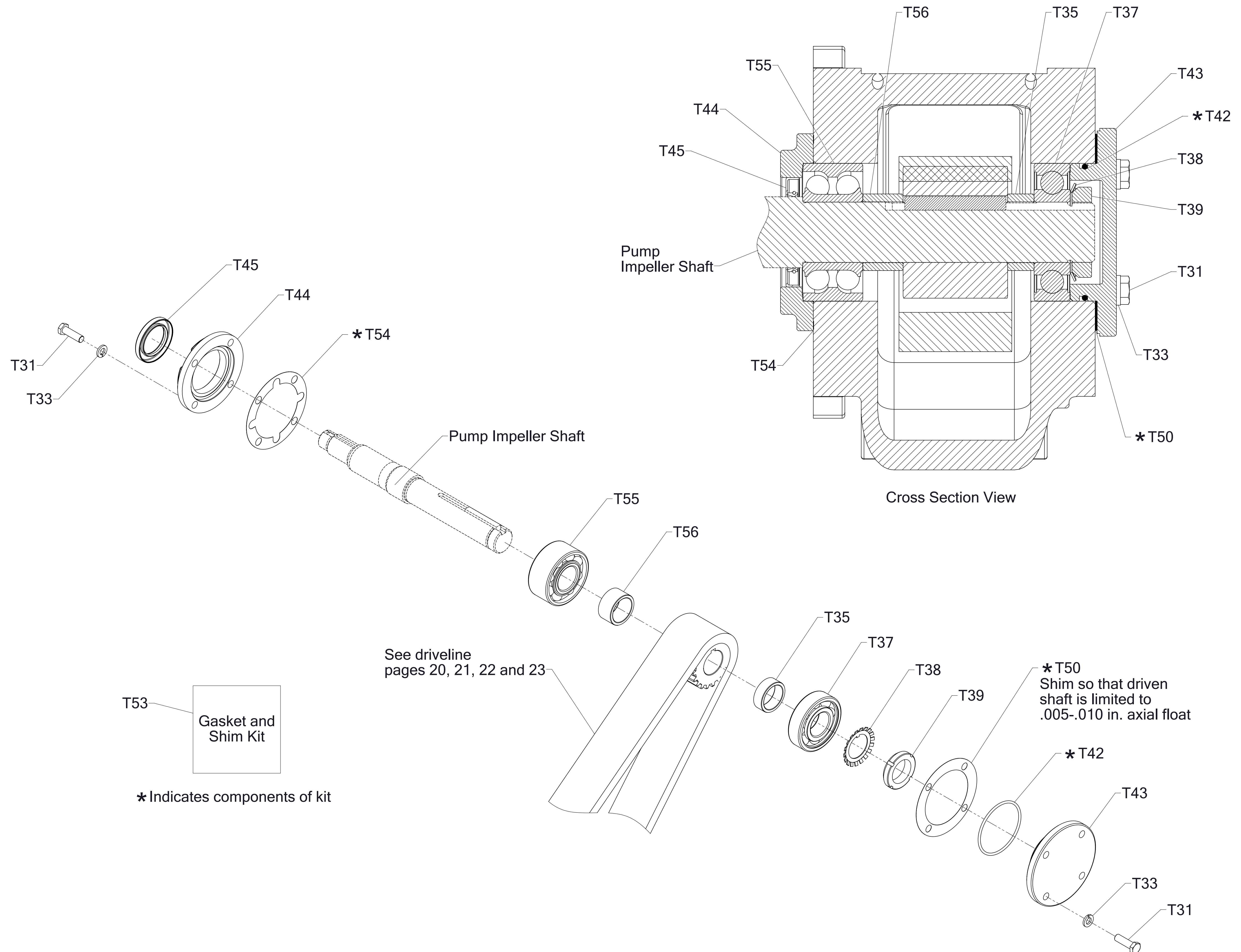


Driven Shaft
 Separable Impeller Shaft
 CM, CS Pump Series
 Extended Shaft with Key (Compressor Drive)

Driven Shaft, Non-Separable Impeller Shaft
CG, CL and CX Pump Series

REF NO.	DESCRIPTION
T31	Hex Hd Screw, 3/8-16 x 1-1/4 in.
T33	Lock Washer, 3/8 in.
T35	Driven Shaft Spacer
T37	Ball Bearing, Single Row
T38	Bearing Lock Washer
T39	Bearing Lock Nut
T42	O-Ring, 2-7/8 x 3-1/8 in.
T43	Oil Seal Housing

REF NO.	DESCRIPTION
T44	Oil Seal Housing
T45	Oil Seal, 1-5/8 x 2-1/2 in.
T50	Driven Shaft Shim, 0.005 and 0.010 in. Thick
T53	Gasket and Shim Repair Kit
T54	Gasket
T55	Ball Bearing, Double Row
T56	Driven Shaft Spacer

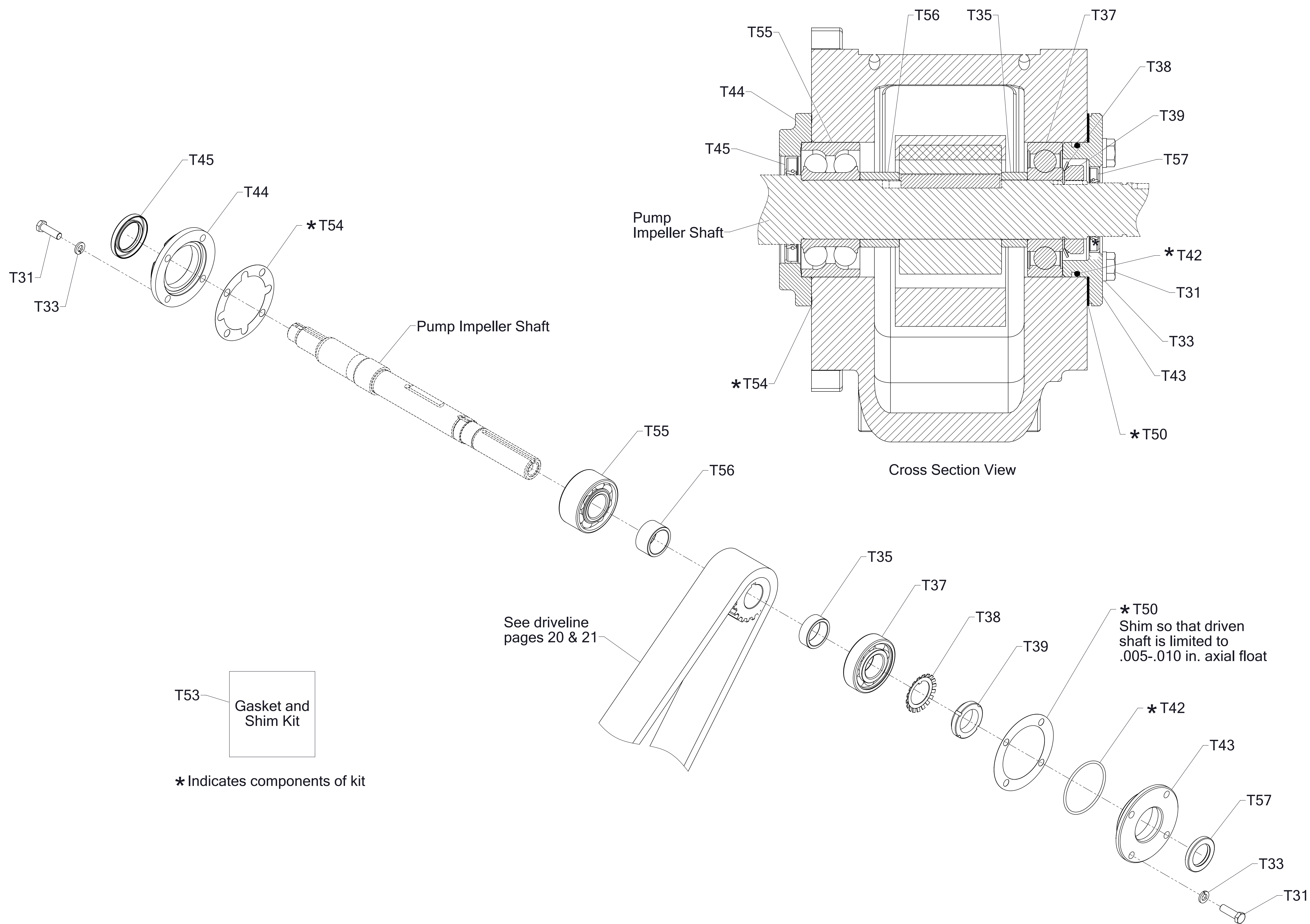


Driven Shaft
 Non-Separable Impeller Shaft
 CG, CL, CX Pump Series

Driven Shaft, Non-Separable Impeller Shaft
CX Pump Series with Keyed Shaft (Compressor Drive)

REF NO.	DESCRIPTION
T31	Hex Hd Screw, 3/8-16 x 1-1/4 in.
T33	Lock Washer, 3/8 in.
T35	Driven Shaft Spacer
T36	Driven Shaft
T37	Ball Bearing, Single Row
T38	Bearing Lock Washer
T39	Bearing Lock Nut
T42	O-Ring, 2-7/8 x 3-1/8 in.
T43	Oil Seal Housing

REF NO.	DESCRIPTION
T44	Oil Seal Housing
T45	Oil Seal, 1-5/8 x 2-1/2 in.
T50	Driven Shaft Shim, 0.005 and 0.010 in. Thick
T53	Gasket and Shim Repair Kit
T54	Gasket
T55	Ball Bearing, Double Row
T56	Driven Shaft Spacer
T57	Oil Seal, 1-1/4 x 2 in.



T53

Gasket and Shim Kit

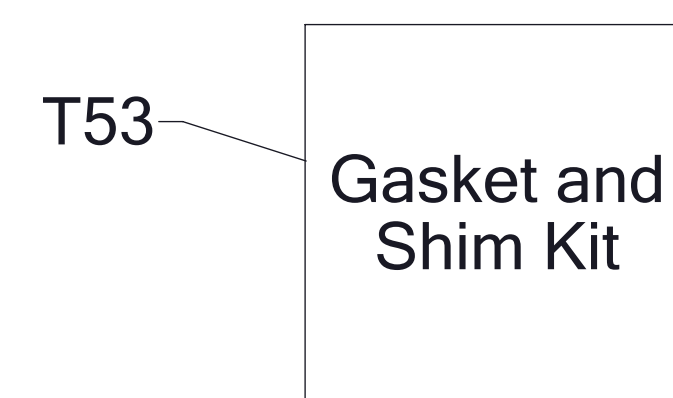
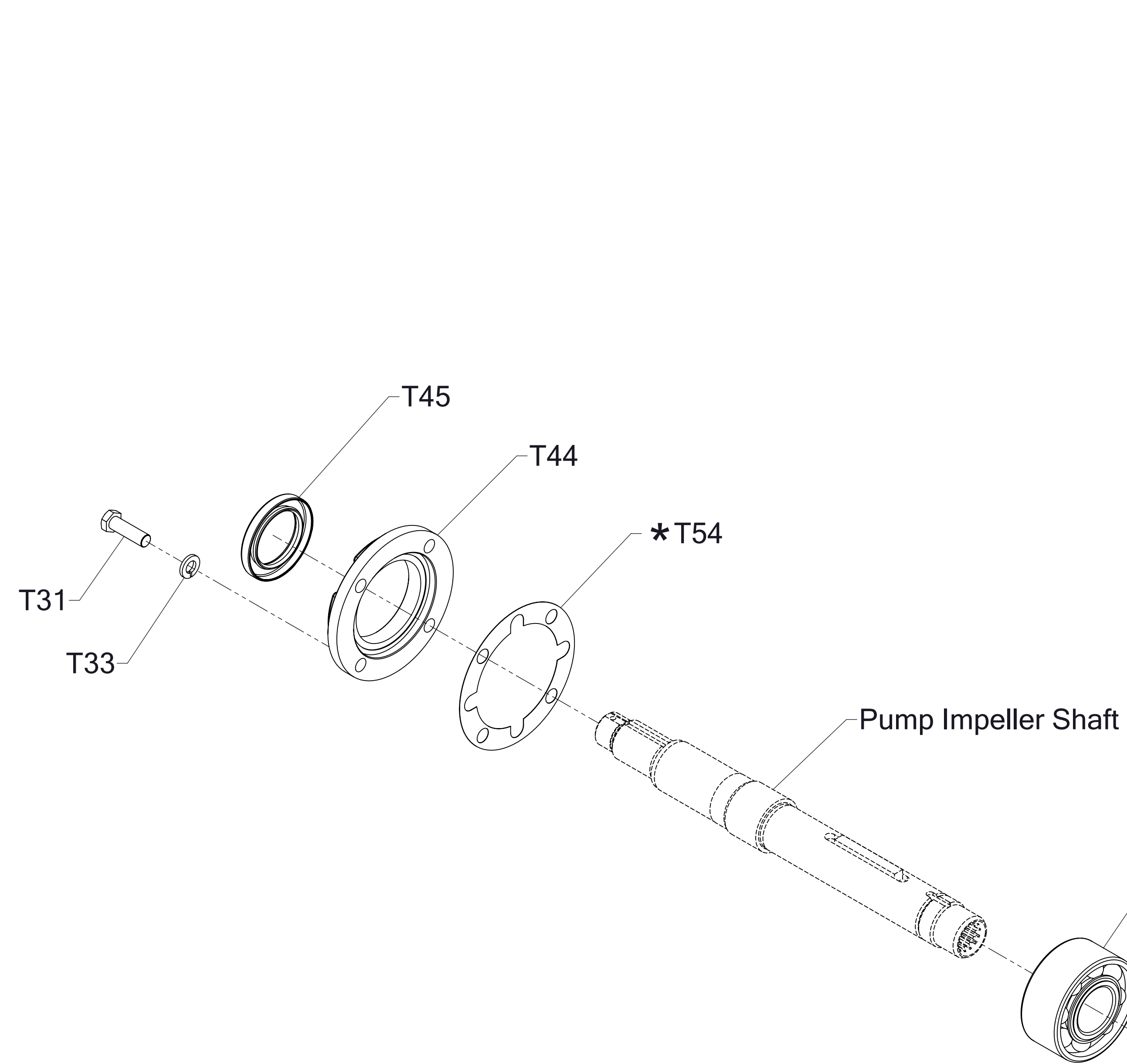
* Indicates components of kit

Driven Shaft
 Non-Separable Impeller Shaft
 CX Pump Series
 Shaft with Keyed (Compressor Drive)

Driven Shaft, Non-Separable Impeller Shaft
CX Pump Series with Hydraulic Adapter Flange

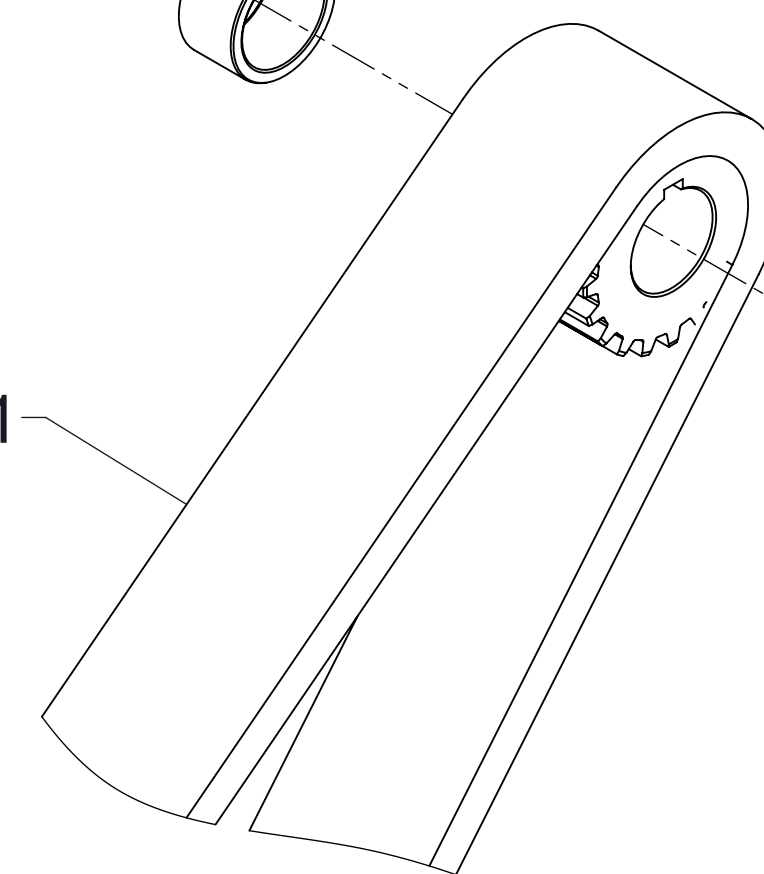
REF NO.	DESCRIPTION
T31	Hex Hd Screw, 3/8-16 x 1-1/4 in.
T33	Lock Washer, 3/8 in.
T35	Driven Shaft Spacer
T37	Ball Bearing, Single Row
T38	Bearing Lock Washer
T39	Bearing Lock Nut
T42	O-ring, 2-7/8 x 3-1/8 in.
T44	Oil Seal Housing

REF NO.	DESCRIPTION
T45	Oil Seal, 1-5/8 x 2-1/2 in.
T50	Driven Shaft Shim, 0.005 and 0.010 in. Thick
T53	Gasket and Shim Repair Kit
T54	Gasket
T55	Ball Bearing, Double Row
T56	Driven Shaft Spacer
T57	Oil Seal, 1-1/4 x 2 in.
T72	Hydraulic Adapter Flange



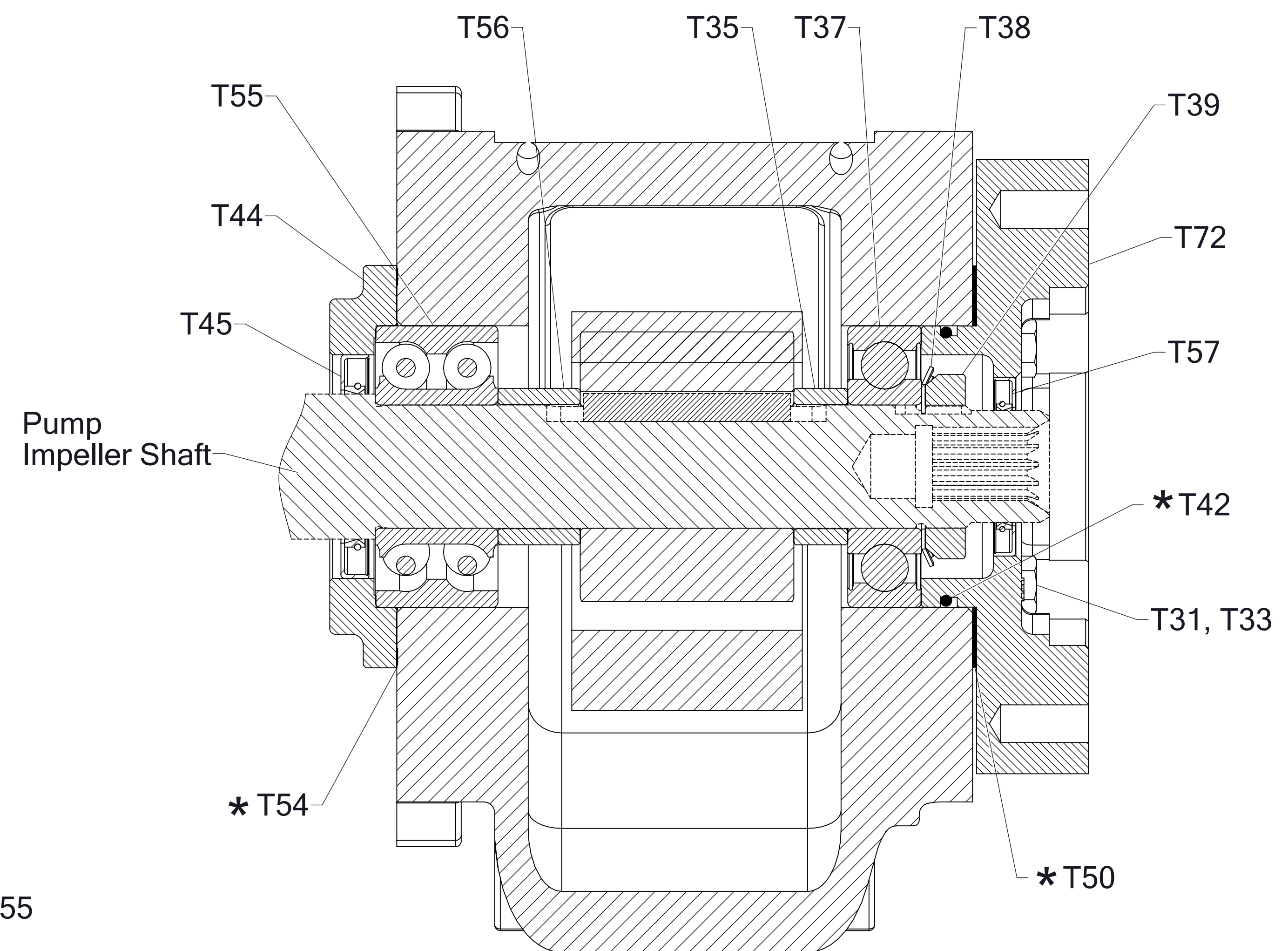
* Indicates components of kit

See driveline
pages 20 & 21



Driven Shaft

Non-Separable Impeller Shaft
CX Pump Series
Hydraulic Pump Adapter Flange



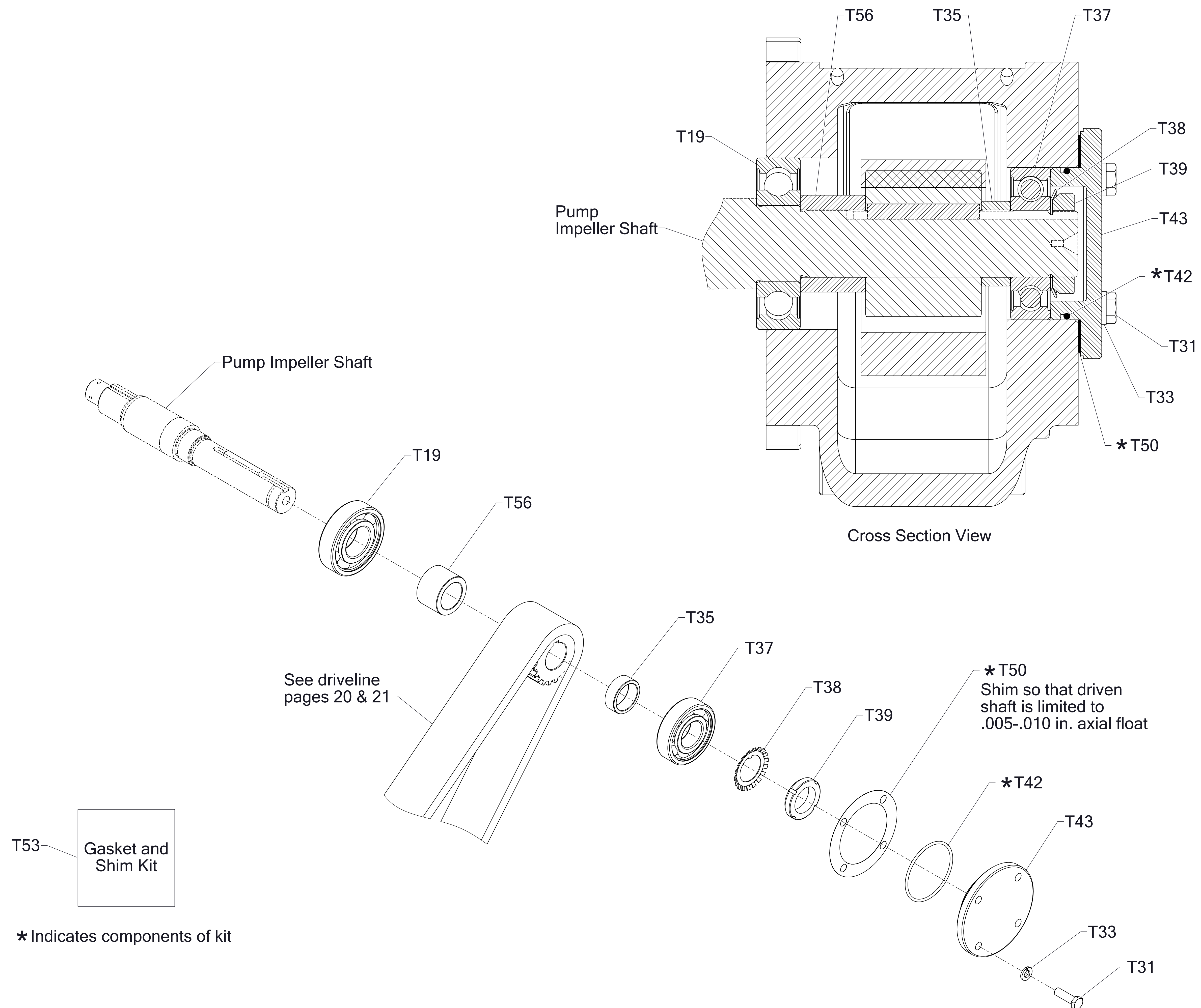
Cross Section View

* T50
Shim so that driven
shaft is limited to
.005-.010 in. axial float

Driven Shaft, Non-Separable Impeller Shaft
S100 Pump Series

REF NO.	DESCRIPTION
T19	Ball Bearing, Single Row
T31	Hex Hd Screw, 3/8-16 x 1-1/4 in.
T33	Lock Washer, 3/8 in.
T35	Driven Shaft Spacer
T37	Ball Bearing, Single Row
T38	Bearing Lock Washer

REF NO.	DESCRIPTION
T39	Bearing Lock Nut
T42	O-Ring, 2-7/8 x 3-1/8 in.
T43	Oil Seal Housing
T50	Driven Shaft Shim, 0.005 and 0.010 in. Thick
T53	Gasket and Shim Repair Kit
T56	Driven Shaft Spacer

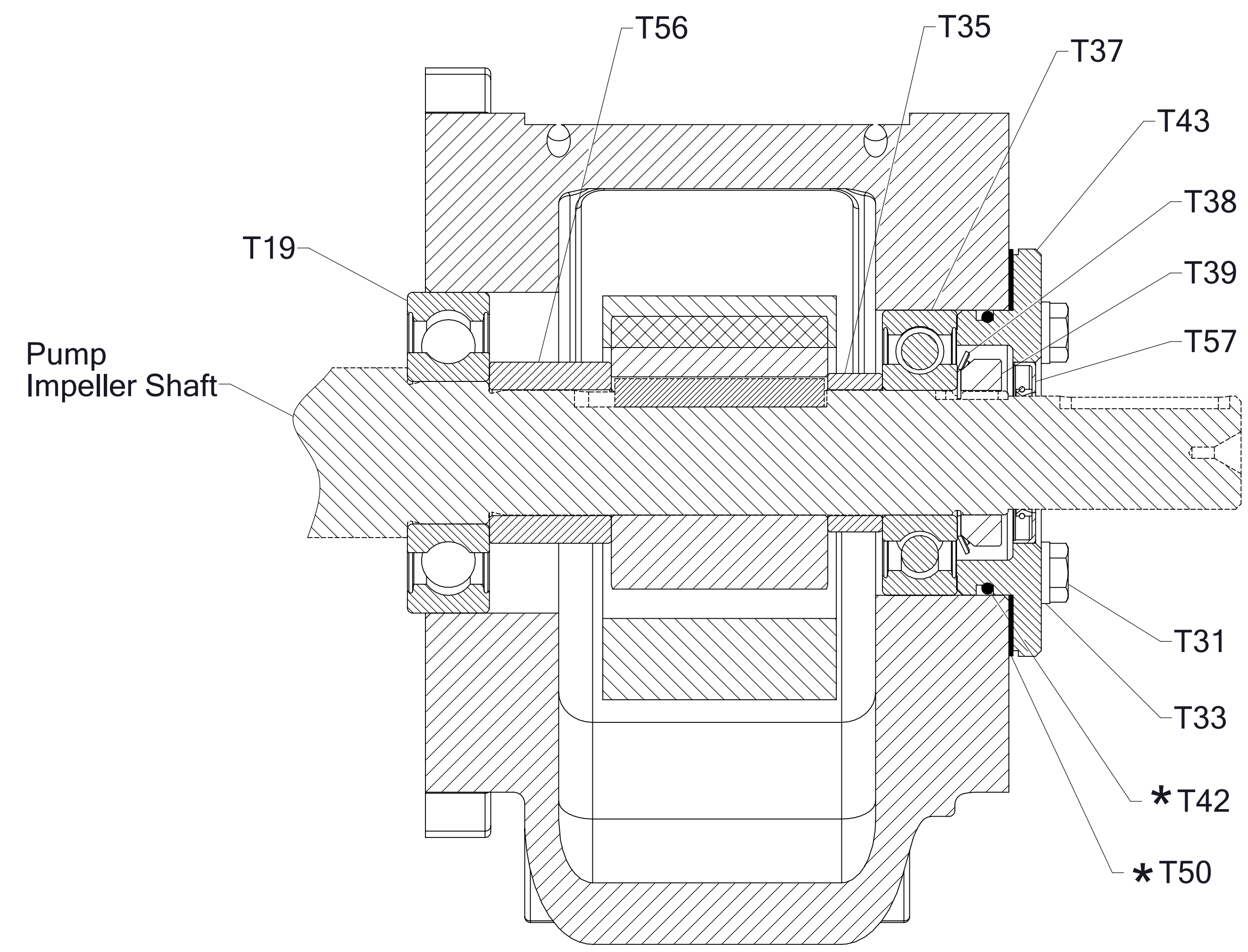


Driven Shaft
Non-Separable Impeller Shaft
S100 Pump Series

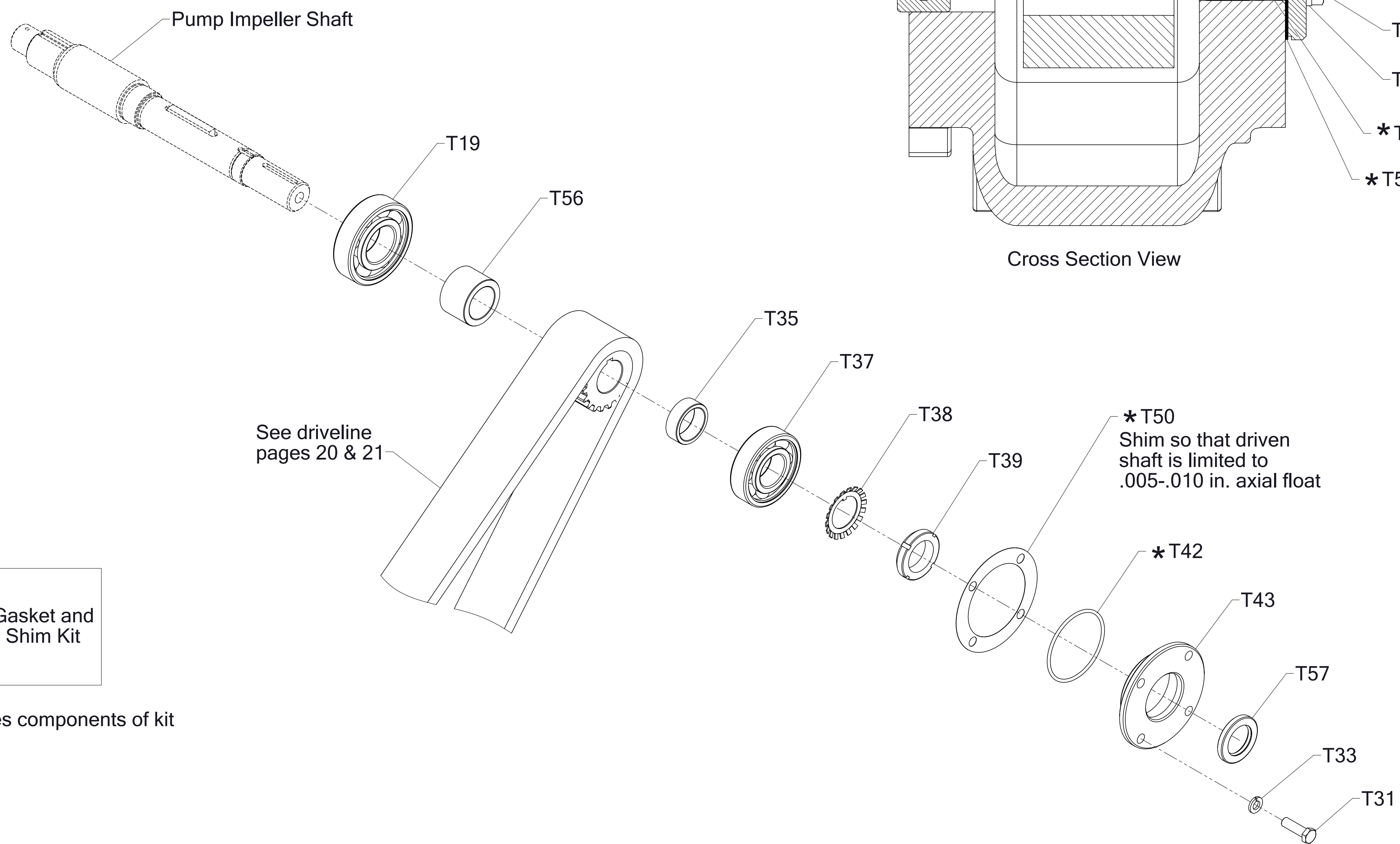
Driven Shaft, Non-Separable Impeller Shaft
S100 Pump Series with Keyed Shaft (Compressor Drive)

REF NO.	DESCRIPTION
T19	Ball Bearing, Single Row
T31	Hex Hd Screw, 3/8-16 x 1-1/4 in.
T33	Lock Washer, 3/8 in.
T35	Driven Shaft Spacer
T37	Ball Bearing, Single Row
T38	Bearing Lock Washer

REF NO.	DESCRIPTION
T39	Bearing Lock Nut
T42	O-Ring, 2-7/8 x 3-1/8 in.
T43	Oil Seal Housing
T50	Driven Shaft Shim, 0.005 and 0.010 in. Thick
T53	Gasket and Shim Repair Kit
T56	Driven Shaft Spacer
T57	Oil Seal, 1-1/4 x 2 in.



Cross Section View



See driveline
pages 20 & 21

T53
Gasket and
Shim Kit

* Indicates components of kit

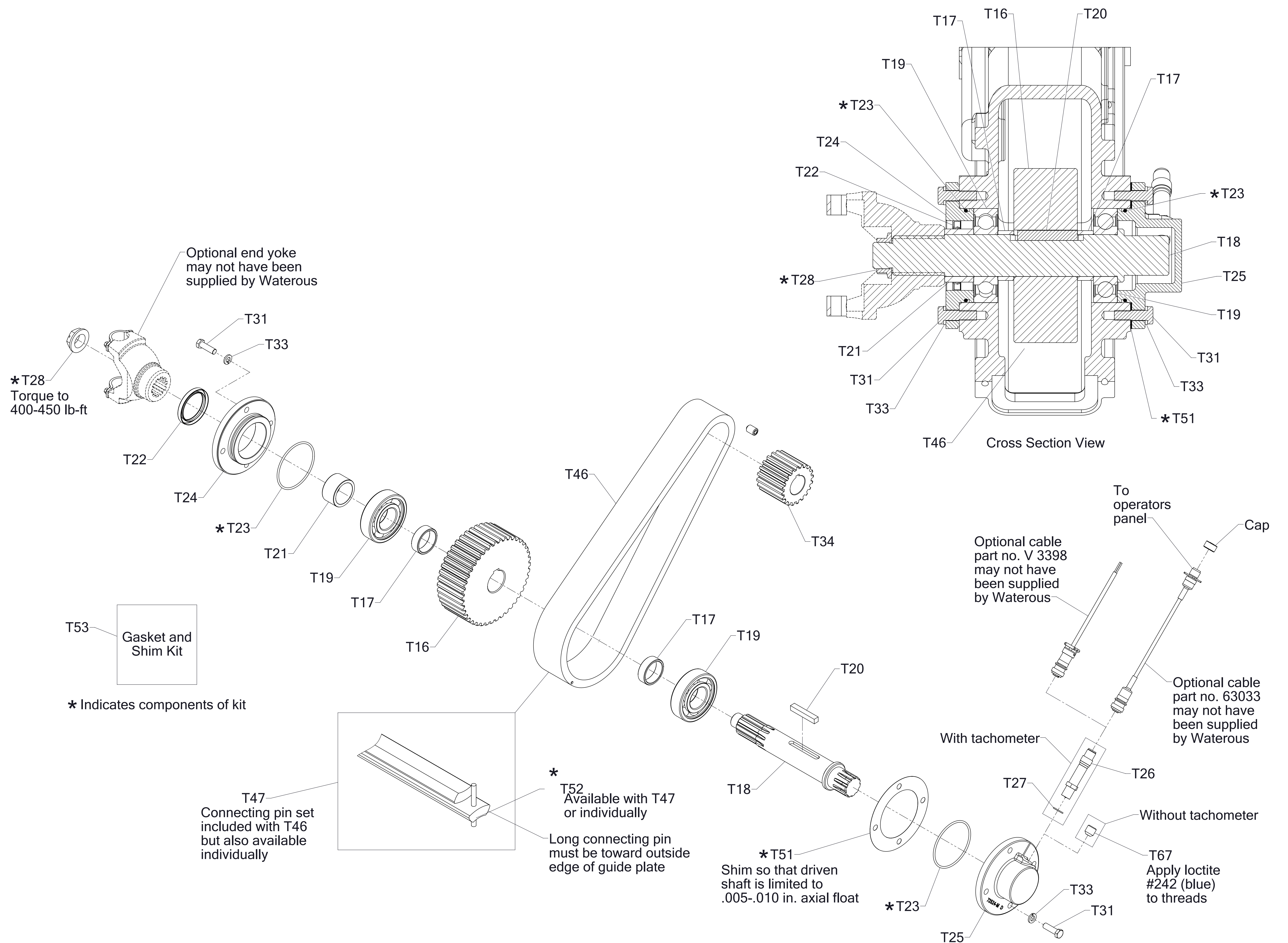
Driven Shaft

Non-Separable Impeller Shaft
S100 Pump Series
Shaft with Keyed (Compressor Drive)

Driveline
(Input Shaft Only,
Pump Flange Side)

REF NO.	DESCRIPTION
T16	Drive Sprocket
T17	Drive Shaft Spacer
T18	Drive Shaft
T19	Ball Bearing, Single Row
T20	Square Key, 3/8 x 3/8 x 2-1/4 in.
T21	Oil Seal Sleeve
T22	Oil Seal, 2 x 2-5/8 in.
T23	O-Ring, 3-1/4 x 3-1/2 in.
T24	Oil Seal Housing
T25	Tachometer Housing
T26	Magnetic Pick-Up

REF NO.	DESCRIPTION
T27	O-Ring, 5/8 x 3/4 in.
T28	Shaft Nut
T31	Hex Hd Screw, 3/8-16 x 1-1/4 in.
T33	Lock Washer, 3/8 in.
T34	Driven Sprocket
T46	Drive Chain
T47	Connecting Pin Set
T51	Drive Shaft Shim, 0.005 and 0.010 in. Thick
T52	Spirol Pin, Heavy, 1/16 x 1/4 or 1/16 x 5/16 in.
T53	Gasket and Shim Repair Kit
T67	Hex Socket Set Screw, 5/8-18 x 5/8 in.

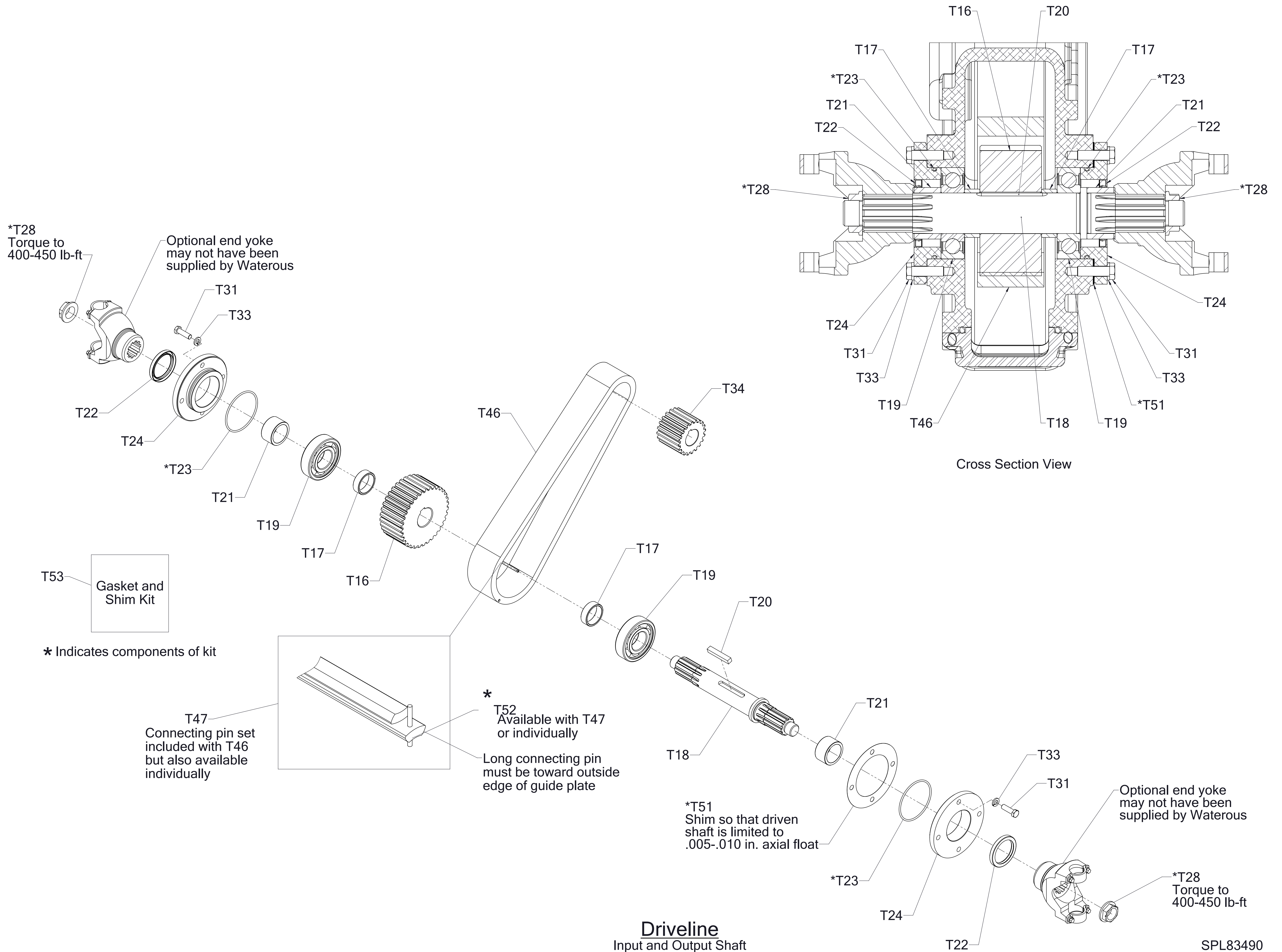


Driveline
Input Shaft Only,
Pump Flange Side

Driveline
(Input and Output Shaft)

REF NO.	DESCRIPTION
T16	Drive Sprocket
T17	Drive Shaft Spacer
T18	Drive Shaft
T19	Ball Bearing, Single Row
T20	Square Key, 3/8 x 3/8 x 2-1/4 in.
T21	Oil Seal Sleeve
T22	Oil Seal, 2 x 2-5/8 in.
T23	O-Ring, 3-1/4 x 3-1/2 in.
T24	Oil Seal Housing

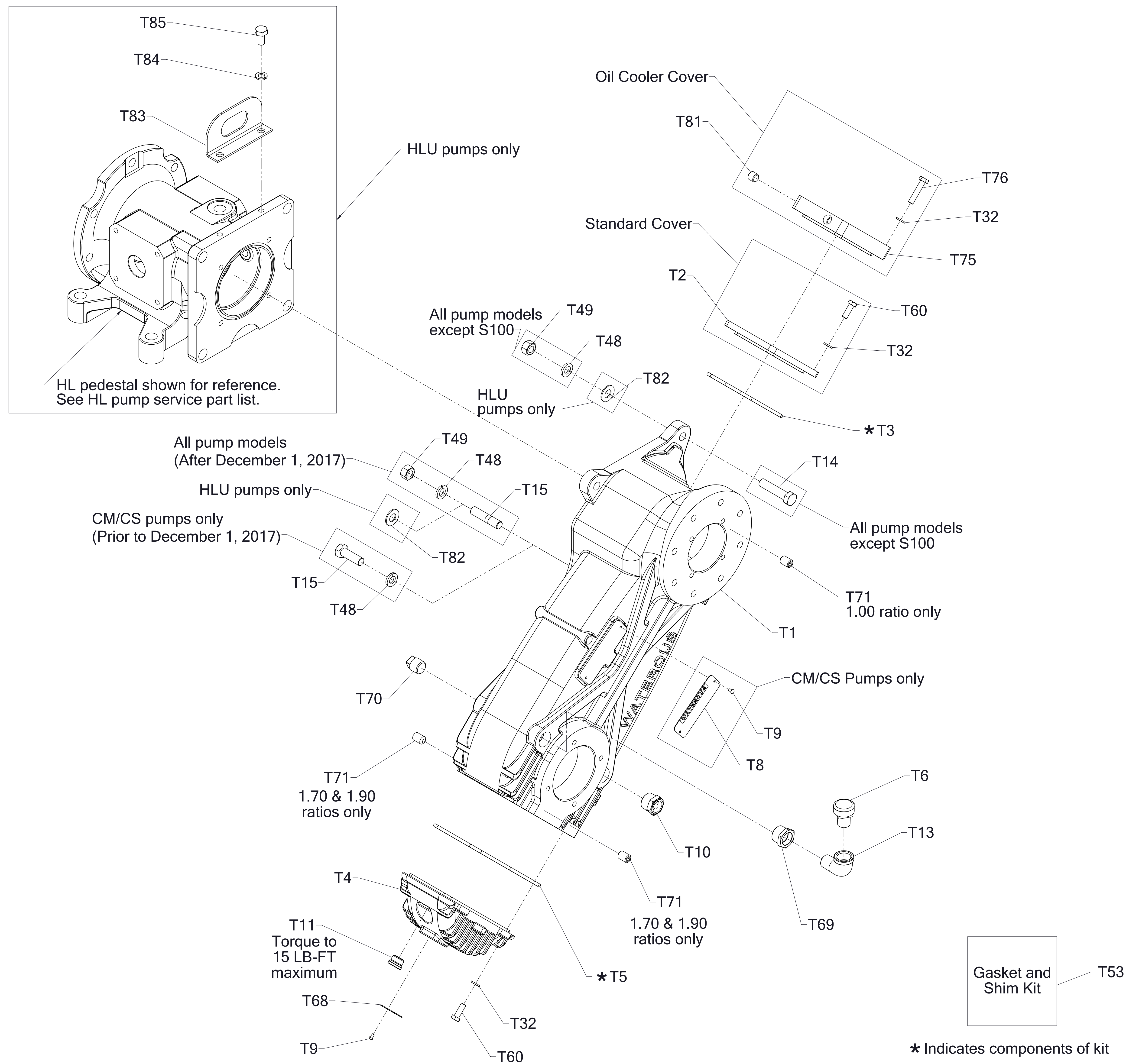
REF NO.	DESCRIPTION
T28	Shaft Nut
T31	Hex Hd Screw, 3/8-16 x 1-1/4 in.
T33	Lock Washer, 3/8 in.
T34	Driven Sprocket
T46	Drive Chain
T47	Connecting Pin Set
T51	Drive Shaft Shim, 0.005 and 0.010 in. Thick
T52	Spirol Pin, Heavy, 1/16 x 1/4 or 1/16 x 5/16 in.
T53	Gasket and Shim Repair Kit



Case Assembly
Vertical Mounting

REF NO.	DESCRIPTION
T1	Chain Case
T2	Cover
T3	O-Ring, 4-5/8 x 5 in.
T4	Pan
T5	O-Ring, 7 x 7-3/8 in.
T6	Breather, 1/2 NPT
T8	Serial Plate
T9	Rnd Hd Drive Screw, No. 6 x 1/4 in.
T10	Sight Plug
T11	Drain Plug
T13	Elbow, 90 Deg., 1/2 in.
T14	Screw, 1/2-13 x 2-1/4 in. (CG, CL, CX) (CM, CS After December 1, 2017)
	Screw, 1/2-20 x 2-1/4 in. (CM, CS) (Prior to December 1, 2017)

REF NO.	DESCRIPTION
T15	Screw, 1/2-13 x 1-1/2 in. (CM, CS) (Prior to December 1, 2017)
	Stud, 1/2-13 x 2-1/4 in. (S100)
	Stud, 1/2-13 x 2-1/4 in. (CG, CL, CX) (CM, CS After December 1, 2017)
T32	Lock Washer, 5/16 in.
T48	Lock Washer, 1/2 in.
T49	Hex Nut, 1/2-13 (CG, CL, CX, S100) (All Models After December 1, 2017)
	Hex Nut, 1/2-20 (CM, CS) (Prior to December 1, 2017)
T53	Gasket and Shim Repair Kit
T60	Hex Hd Screw, 5/16-18 x 7/8 in.
T68	Oil Level Plate
T69	Reducing Bushing, 3/4 NPT x 1/2 NPT
T70	Pipe Plug, 1/2 NPT
T71	Pipe Plug, 1/8 NPT (Prior to September 1, 2016)
T71	Screw-Set, 1/2-13 x 3/4 in. (After September 1, 2016)
T75	Plate-Cooler
T76	Hex Hd Screw, 5/16-18 x 1-1/2 in.
T81	Pipe Plug, 1/4
T82	Washer-Flat, 1/2
T83	Bracket-Lifting
T84	Washer-Lock, 10 mm
T85	Screw-Hex Hd, M10-1.5 x 20 mm



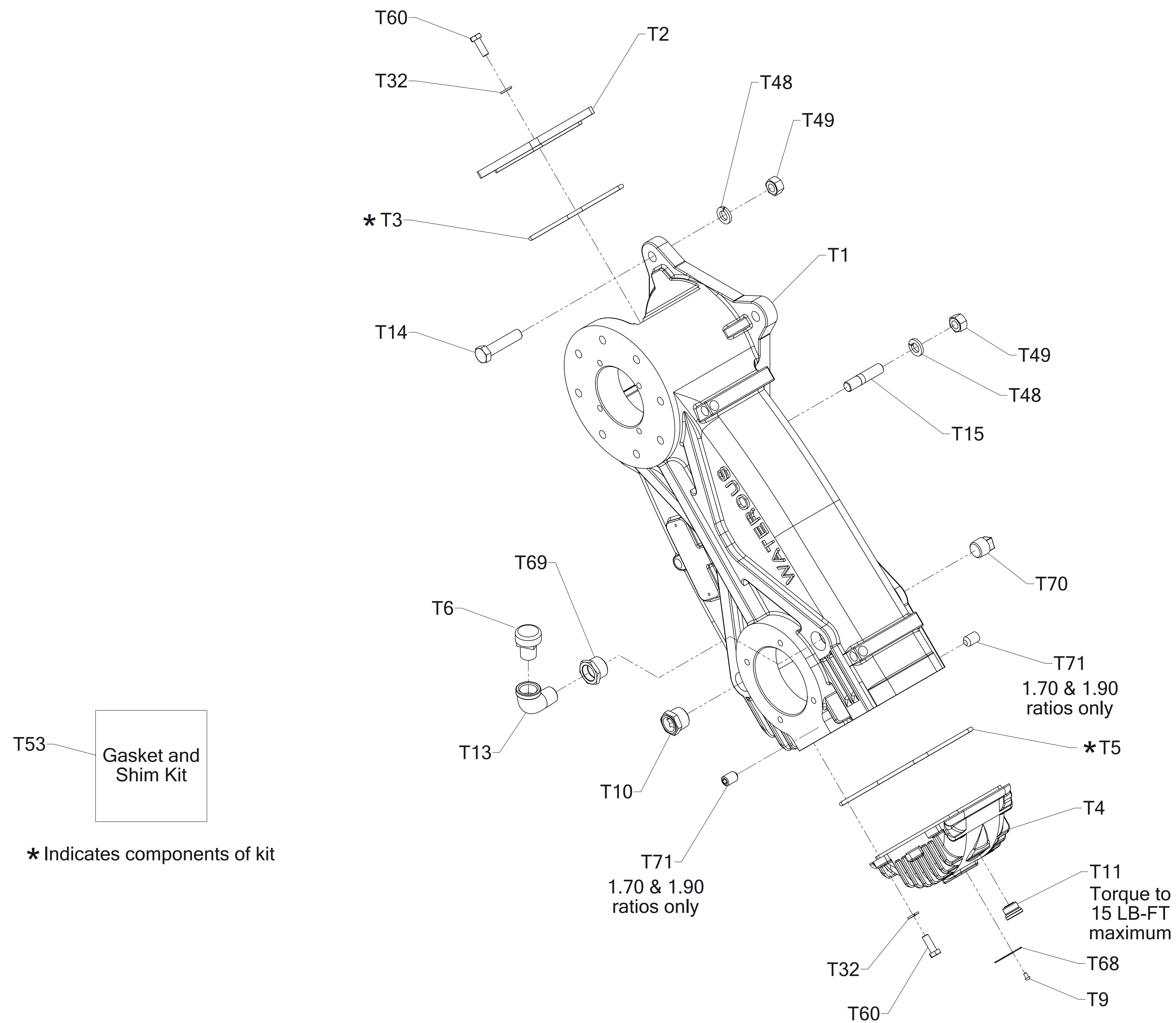
Case Assembly

Verticle Mounting

Case Assembly Horizontal Mounting

REF NO.	DESCRIPTION
T1	Chain Case
T2	Cover
T3	O-Ring, 4-5/8 x 5 in.
T4	Pan
T5	O-Ring, 7 x 7-3/8 in.
T6	Breather, 1/2 NPT
T10	Sight Plug
T11	Drain Plug
T13	Elbow, 90 Deg., 1/2 in.
T14	Stud, 1/2-13 x 1/2-13 x 2-1/4 in.

REF NO.	DESCRIPTION
T15	Stud, 1/2-13 x 2-1/4 in.
T32	Lock Washer, 5/16 in.
T48	Lock Washer, 1/2 in.
T49	Hex Nut, 1/2-13
T53	Gasket and Shim Repair Kit
T60	Hex Hd Screw, 5/16-18 x 7/8 in.
T68	Oil Level Plate
T69	Reducing Bushing, 3/4 NPT x 1/2 NPT
T70	Pipe Plug, 1/2 NPT
T71	Pipe Plug, 1/8 NPT (Prior to September 1, 2016)
T71	Screw-Set, 1/2-13 x 3/4 in. (After September 1, 2016)



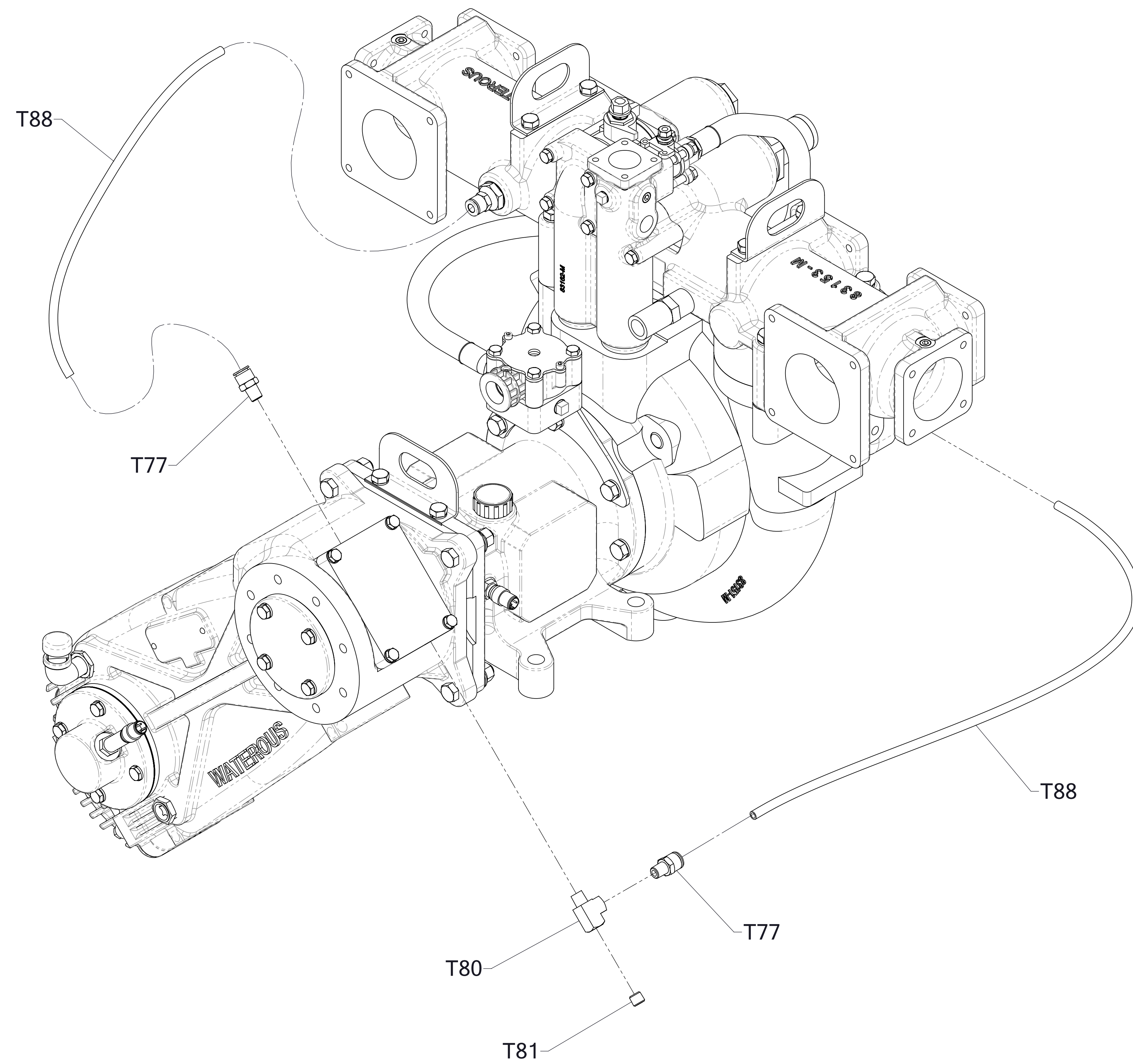
Case Assembly

Horizontal Mounting
CG, CL and CX Pumps

HLU Oil Cooler Lines and Fittings

REF NO.	DESCRIPTION
T77	Straight, 1/4 MNPT x 3/8 PTC
T80	Tee-Run, 1/4 FNPT x 1/4 MNPT x 1/4 FNPT

REF NO.	DESCRIPTION
T81	Plug-Pipe, Headless, 1/4 NPT
T88	Tubing-Nylon, 3/8

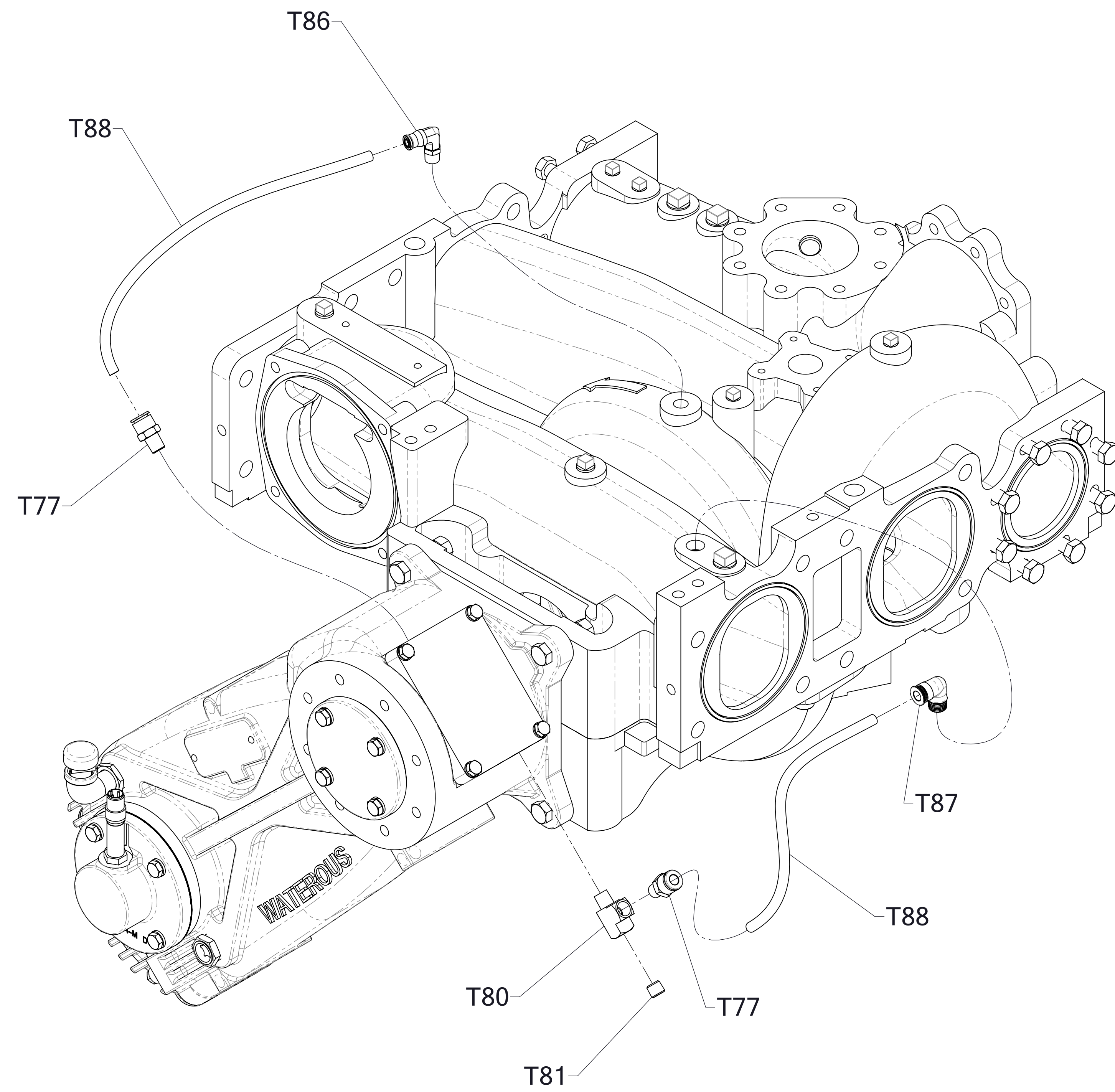


HLU Oil Cooler Lines and Fittings

CM/CS Oil Cooler Lines and Fittings

REF NO.	DESCRIPTION
T77	Straight, 1/4 MNPT x 3/8 PTC
T80	Tee-Run, 1/4 FNPT x 1/4 MNPT x 1/4 FNPT
T81	Plug-Pipe, Headless, 1/4 NPT

REF NO.	DESCRIPTION
T86	Elbow, 3/8 PTC x 1/4 MNPT, 90°
T87	Elbow, 3/8 PTC x 3/8 MNPT, 90°
T88	Tubing-Nylon, 3/8



CM/CS Oil Cooler Lines and Fittings