

Issued: 05/23/88

Revised: 12/07/06

**W A T E R O U S**

**WATEROUS COMPANY**

SOUTH ST. PAUL, MINNESOTA

## Y SERIES CHAIN DRIVE TRANSMISSION

REF NO.	DESCRIPTION	REF NO.	DESCRIPTION
T1	Ball bearing	T30	Shim, bearing housing, 0.005 (blue) and 0.010 (brown) in. thick
T2	Spacer, coupling shaft	T31	Pump support housing
T3	Ball bearing, drive shaft pilot	T32	Bearing lock washer
T4	Shift collar	T33	Bearing lock nut
T5	Drive sprocket	T34	Oil circulating pump
T6	Needle bearing	T37	Pivot pin, 5/8 x 2-3/4 in.
T7	Thrust washer	T38	Locking arm assembly
T8	Hex hd screw w/thread sealant, 3/8-16 x 1-1/4 in.	T39	O-ring, 1/4 x 3/8 in.
T9	Lock washer, 3/8 in.	T40	Shifter shoe
T10	Drive gear or pulse generator, tachometer	T41	Shim, coupling shaft housing, 0.005 (blue), 0.007 (natural) and 0.010 (brown) in. thick
T11	Drive shaft housing subassembly	T42	Coupling shaft housing
T12	Cotter pin, SS, 1/8 x 1-3/4 in.	T43	Shaft nut
T13	Drive shaft	T44	Coupling shaft
T14	Oil seal sleeve	T45	Oil seal, 2-1/2 x 3-1/4 or 2-3/4 x 3-1/2 in.
T15	Ball bearing, drive shaft	T46	Shift shaft
T17	Drive shaft housing gasket	T47	Sector gear
T18	Drive chain	T48	Gear sector spacer
T19	Oil seal, 1-7/8 x 2-3/4 in.	T49	O-ring, 7/8 x 1 in.
T22	Lock washer, 5/16 in.	T50	Shift shaft bushing
T23	Oil seal housing	T51	Spirol pin, SS, 5/16 x 1-3/8 in.
T24	Oil seal housing gasket	T52	Hex hd screw, 1/2-13 x 1-1/4 in., Grade 5
T25	Ball bearing, driven shaft	T53	Lock washer, 1/2 in.
T26	Driven sprocket	T54	Spirol pin, heavy duty, 3/8 x 1-3/4 in. (prior to 9/25/98 on pneumatic shift, prior to 12/20/02 on manual or electric shift).
T27	Breather, 1/2 NPT	T55	Shift cover
T28	Chain case assembly (Supplied as assembly only consisting of mid section and bottom section)	T56	Shift cover gasket
T29	Bearing spacer, driven shaft		

**PLEASE NOTE**

**WHEN ORDERING PARTS PLEASE SUPPLY PUMP SERIAL NUMBER**

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## Y SERIES CHAIN DRIVE TRANSMISSION

REF NO.	DESCRIPTION	REF NO.	DESCRIPTION
T57	Street elbow, 90°, 1/2 in. NPT	T89	Driven gear, tachometer
T58	Magnetic drain plug, 3/4 in. NPT	T90	Driven gear sleeve, tachometer
T59	Spring housing, shift arm	T93	Hex hd screw, 1/2-20 x 1-3/4 in.
T60	Spirol pin, SS, 1/4 x 1-1/4 in.	T94	Washer, plain, 1-1/4 in.
T61	Shift arm spring	T95	Bearing spacer, driven shaft
T62	Shift arm	T96	Gasket, oil pump
T64	Hose, oil pump to spray tube	T97	Hex hd screw, 5/15-18 x 3-1/4 in.
T65	Chain case cap	T98	Square hd pip plug, 1/2 in. NPT, steel
T66	Straight adapter union, 1/2 in.	T99	Spacer, cap
T67	Hose, sump to oil pump	T100	Spacer, cap (YC, YD, YE & YF)
T68	Hex hd screw, 1/2-20 x 2-1/4 (YB) or 4-1/2 in. (YC) or 5 in., 5-1/2 in. and 6 in. (YD)	T101	Nipple, pipe, 1/2 in. NPT
T69	Hex nut, 1/2-20	T102	Tee, pipe, 1/2 in. NPT
T70	Hex hd screw, 1/2-13 x 1-1/2 in. (YB) or 3-1/2 in. (YC) or 4-1/2 in., 4-3/4 in. and 5 in. (YD)	T103	Pin, dowel, 1/2 x 1-1/2 in. (YB) or 3 in. (YC)
T72	Hex hd screw, 1/2-13 x 1 in., Grade 5 (with thread sealant)	T104	Spacer, tachometer gear
T73	Square hd pipe plug, 3/4 in. NPT	T105	Ring, retaining (chain repairs)
T75	Shifter shoe (included with fork T80) Available individually for repairs	T106	Hex hd screw, 1/2-20 x 2 in.
T76	Shift shoe stud (included with fork T80) Available individually for repairs	T108	Spirol pin, heavy duty, 1/16 x 1/4 in. (chain repairs)
T80	Shift fork (supplied with shifter shoe T75 and shifter shoe studs T76)	T109	Stud, 1/2-13 x 1/2-20, 4-1/4 in. (YC only) or 5-1/4 in. (YD)
T83	Connecting pin set (chain repairs)	T110	Stud, 1/2-20 x 1/2-20, 4-3/4 (YC only) or 6, 6-1/4 in. (YD)
T85	Drain pipe	T112	Lower shift shaft bearing
T86	Adjusting screw	T131	Pin, dowel, 3/8 x 1 in. (part of T28)
T87	Adjusting screw retainer	T132	Oil strainer
T88	Driven gear bushing, tachometer	T133	Hex hd screw, 3/8-16 x 1 in.
		T134	Sight plug
		T135	Shaft, driven
		T136	Square key, 5/16 x 2-5/16 in.

# W A T E R O U S

WATEROUS COMPANY

SOUTH ST. PAUL, MINNESOTA

## Y SERIES CHAIN DRIVE TRANSMISSION

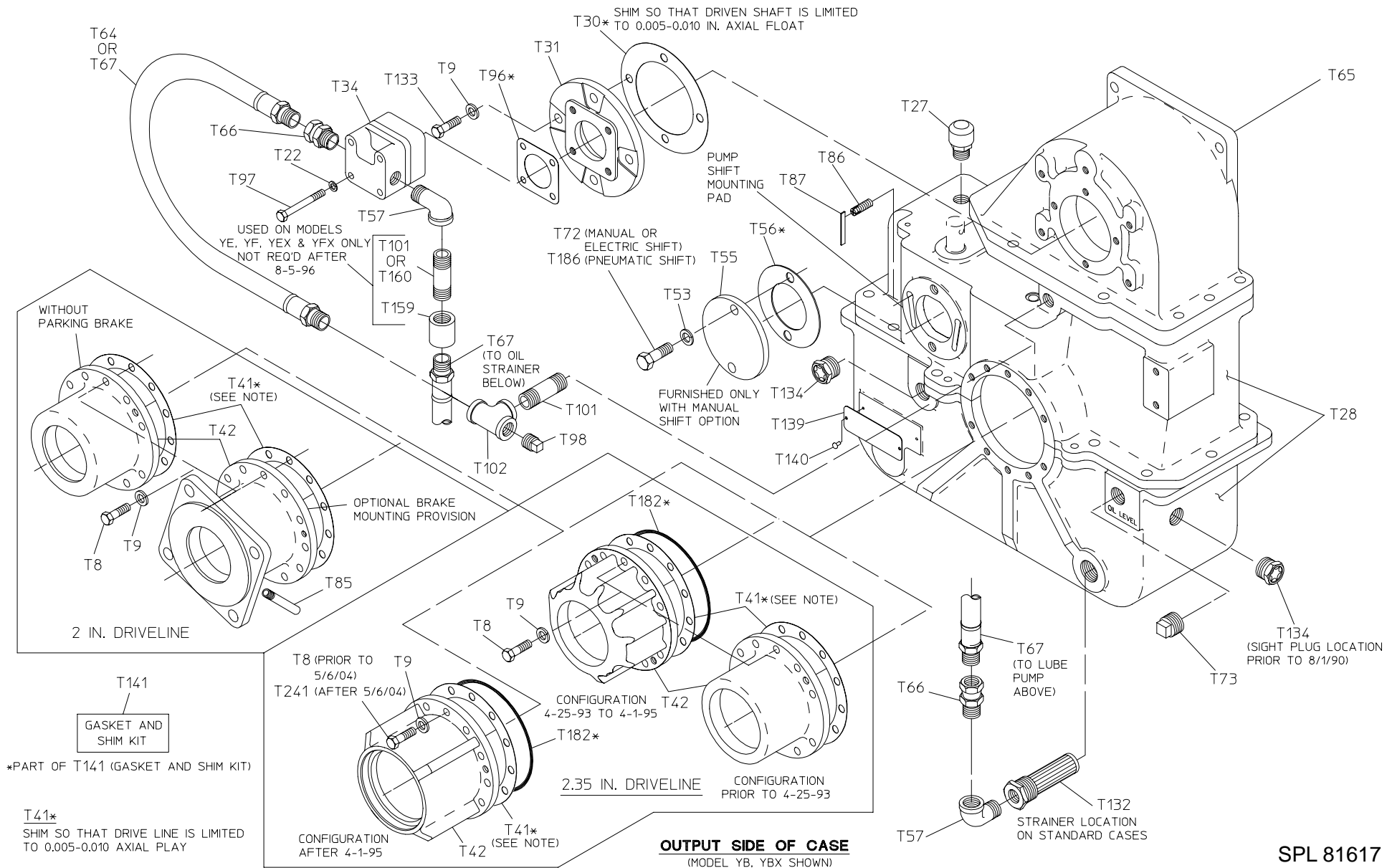
REF NO.	DESCRIPTION	REF NO.	DESCRIPTION
T138	V-ring flinger (used prior to 8/26/93)	T176	Retaining washer
	Sealing boot (used after 8/26/93)	T177	Dowel pin, 1/2 x 1-3/4 in. (YF only)
T139	Serial plate	T178	Hex nut, 12-13
T140	Round hd drive screw, No. 6 x 1/4 in.	T179	Socket hd screw, 5/16-24 x 1
T141	Gasket and shim kit, consists of: T17, T24, T30, T39, T41, T43, T49, T56, T94, T96, T108 and T182	T180	Magnetic pickup
T147	Stud, 1/2-13 x 1/2 x 1-3/4 in. (YE) or 8-3/4 in. (YF)	T181	O-ring, 5/8-3/4 in.
T148	Stud, 1/2-13 x 1/2-20 x 7-1/2 in. (YE)	T182	O-ring, 4-3/4 x 5 in.
T149	Stud, 1/2-13 x 1/2-20 x 6-1/2 in. (YE)	T184	Ball bearing, double row
T150	Stud, 1/2-20 x 1/2-20 x 8-3/8 in. (YE) or 9-1/2 in. (YF)	T185	Hex hd screw, 1/2-13 x 1-1/4 in., Grade 5 (with thread sealant)
T151	Stud, 1/2-20 x 1/2-20 x 8 in. (YE)	T186	Hex hd screw, 1/2-13 x 1-1/4 in., Grade 5 (with thread sealant)
T152	Stud, 1/2-20 x 1/2-20 x 7 in. (YE)	T187	Oil seal, 3-1/2 x 4-3/8 in.
T153	Hex hd screw, 1/2-13 x 6 in. (YE)	T190	Bearing sleeve
T154	Hex hd screw, 1/2-13 x 7 in. (YE) or 8 in. (YF)	T191	Stud, 1/2-20 x 1/2-20 x 2-3/4 in. (YD)
T155	Hex hd screw, 1/2-20 x 6-1/4 in. (YE)	T230	Drive shaft spacer
T156	Hex hd screw, 1/2-20 x 6-1/4 in. (YE) or 1/2-13 x 9 in. (YF)	T231	Oil seal, 2-1/2 x 3-1/2 in.
T157	Hex hd screw, 1/2-20 x -1/4 in. (YE)	T237	Shoulder screw, 3/8 x 1-3/4 in. (after 9/25/98 on pneumatic shift, after 12/20/02 on manual or electric shift)
T158	Hex hd screw, 1/2-20 x 7-1/2 in. (YE)	T238	Lock nut, 5/16-18 in. (after 9/25/98 on pneumatic shift, after 12/20/02 on manual or electric shift)
T159	Coupling pipe, 1/2 NPT	T239	Spacer, tachometer
T160	Pipe nipple, 1/2 x 3-1/2 NPT	T240	Hex hd screw, 1/2-20 x 2-1/2 in.
T173	Actuating shift lever	T241	Hex hd screw with thread sealant, 3/8-16 x 1-1/2 in.
T174	Hex hd screw, 1/2-13 x 1-3/4 in. (YB)		
T175	Pipe plug, 1 NPT		

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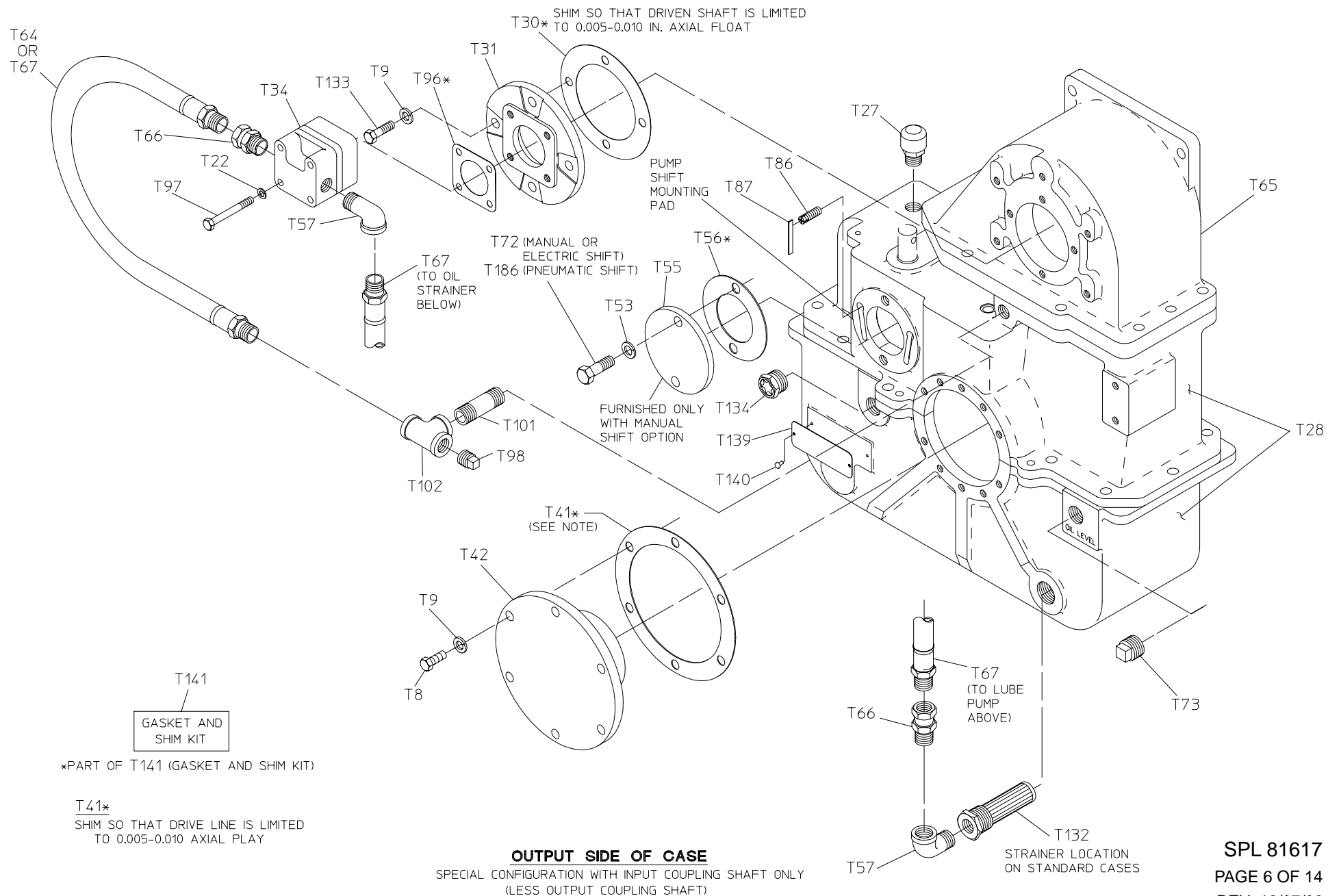




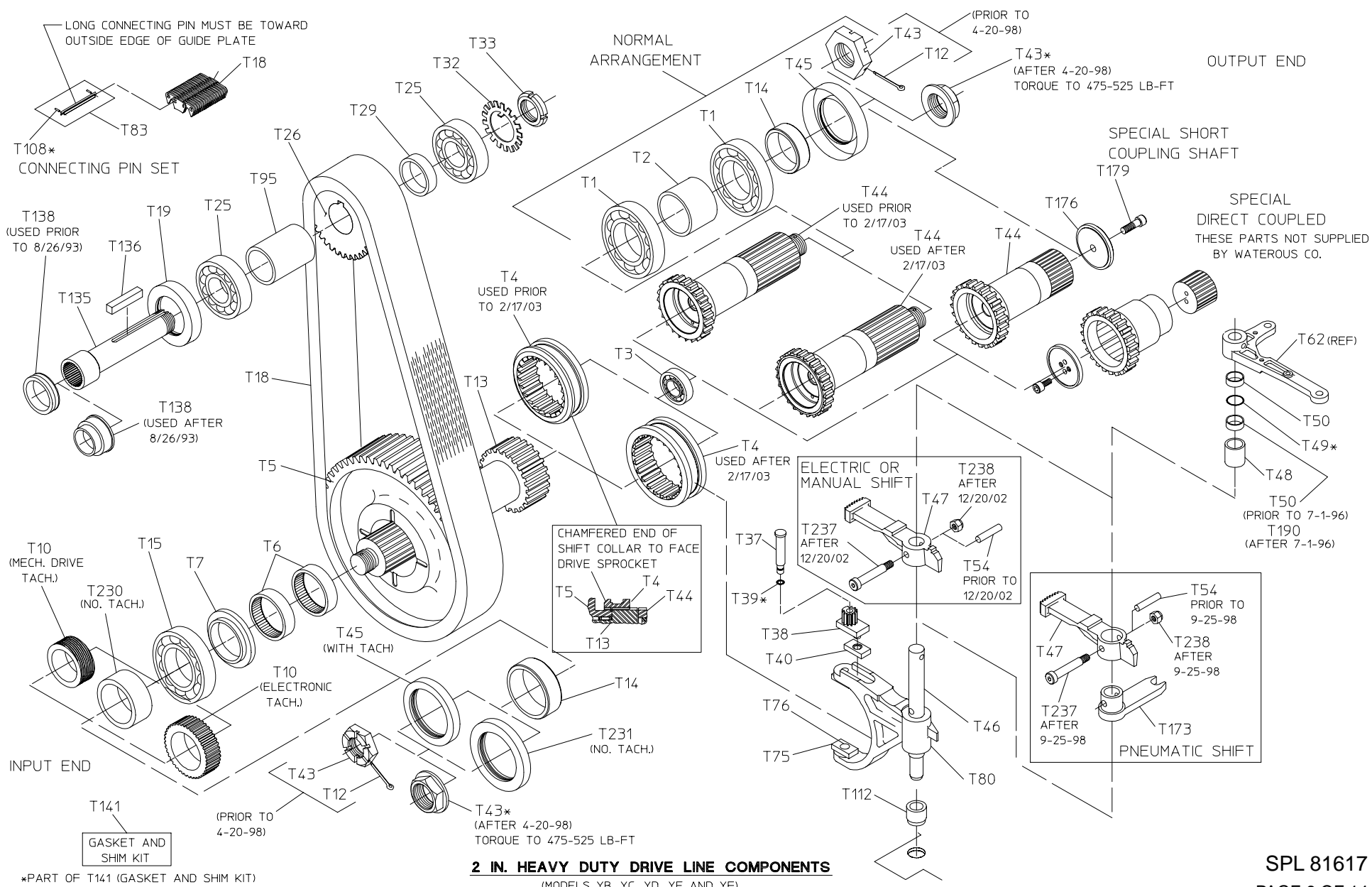
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\*PART OF T141 (GASKET AND SHIM KIT)

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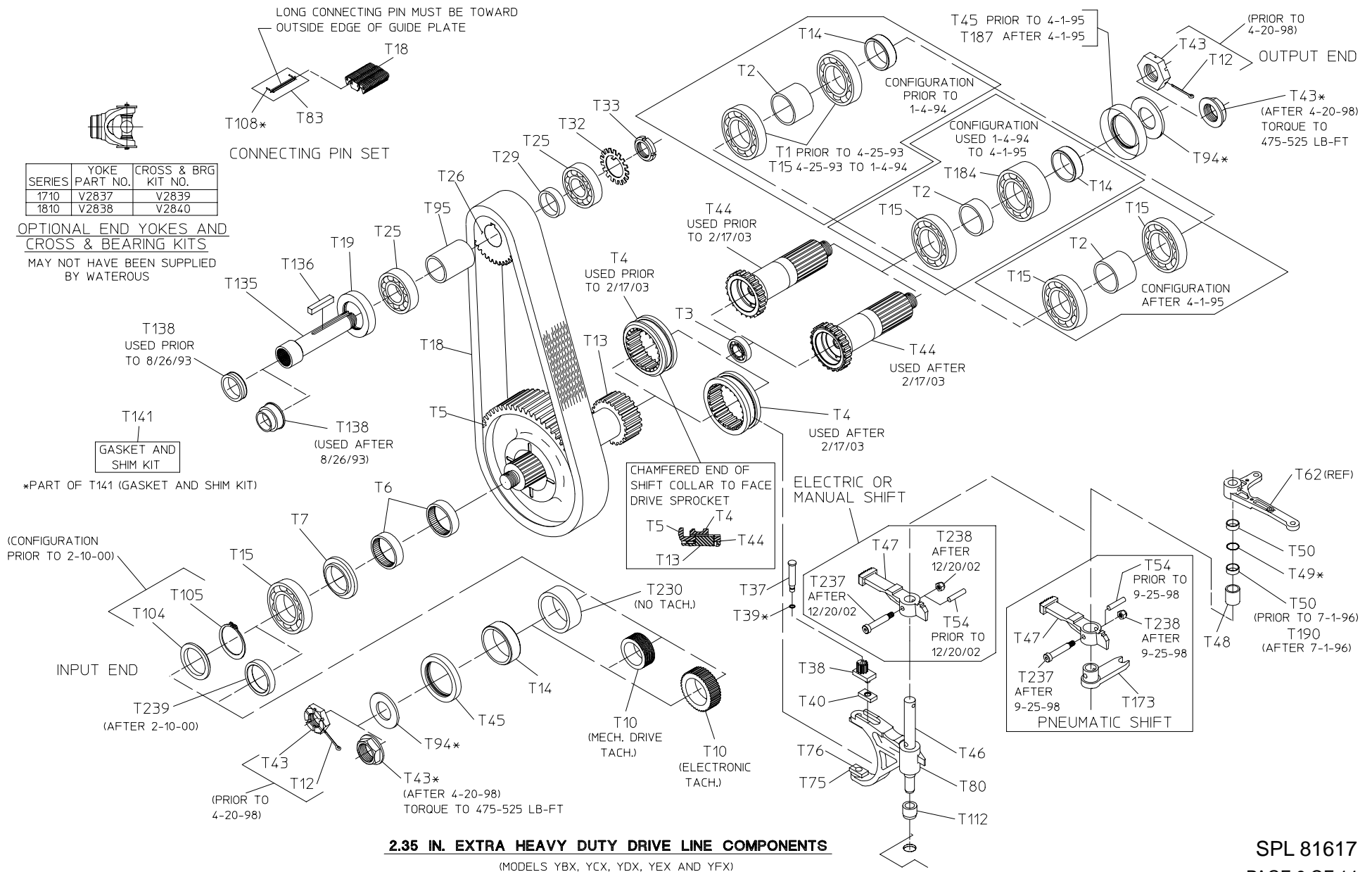
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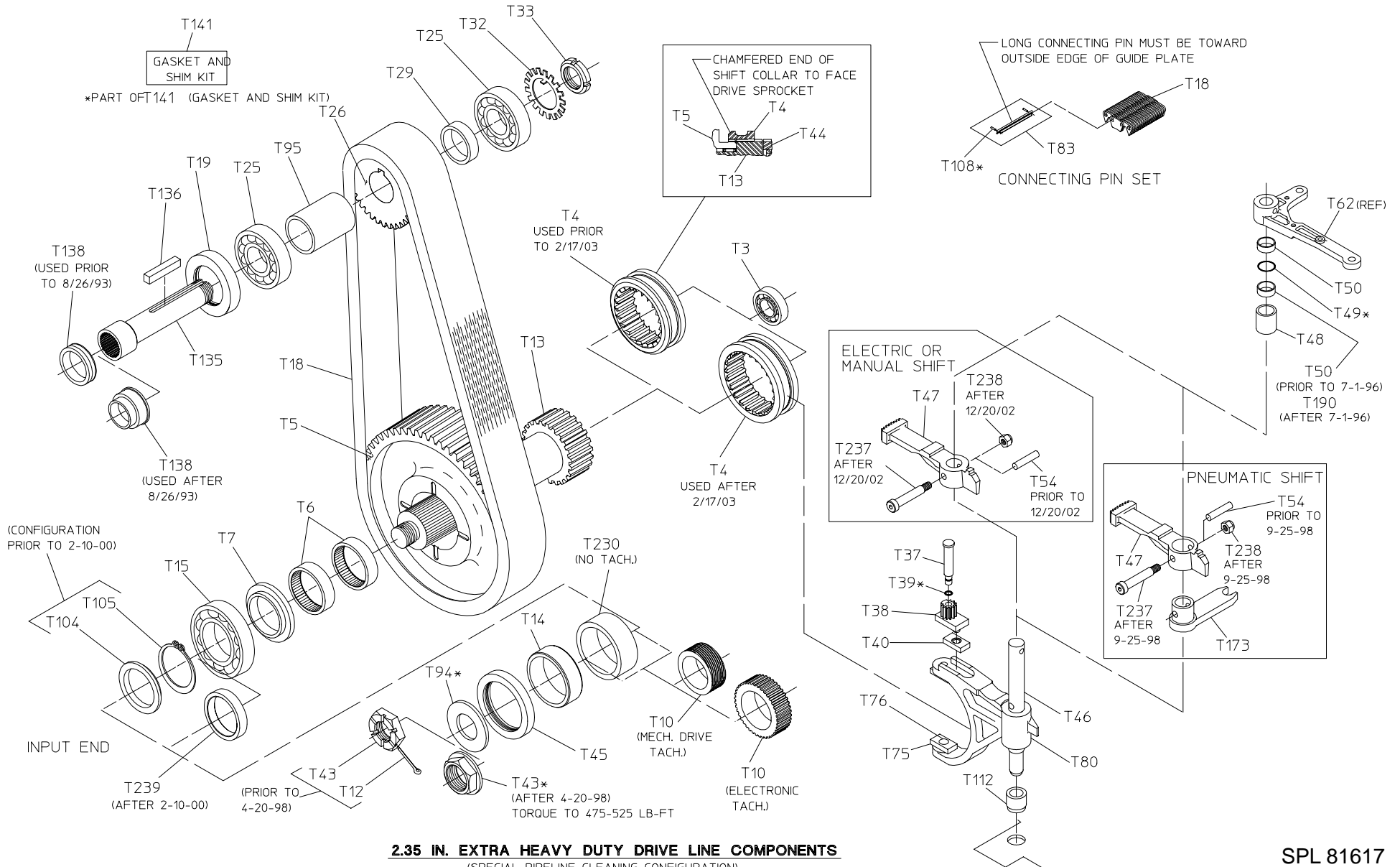


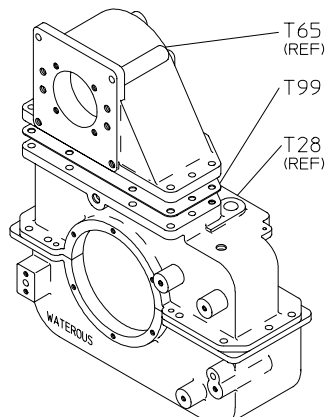
SERIES	YOKE PART NO.	CROSS & BRG KIT NO.
1710	V2837	V2839
1810	V2838	V2840

# OPTIONAL END YOKES AND CROSS & BEARING KITS

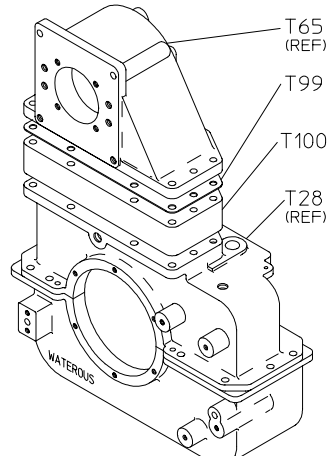
MAY NOT HAVE BEEN SUPPLIED BY WATEROUS



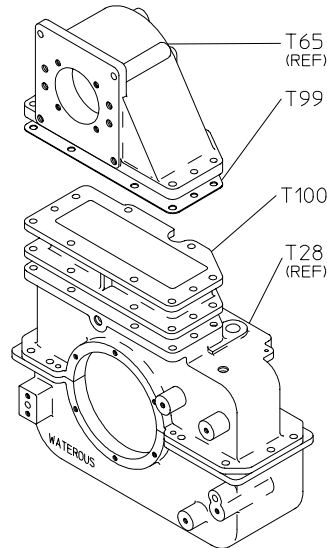




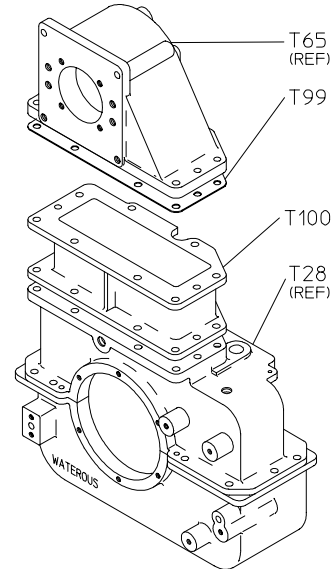
MODELS YB, YBX



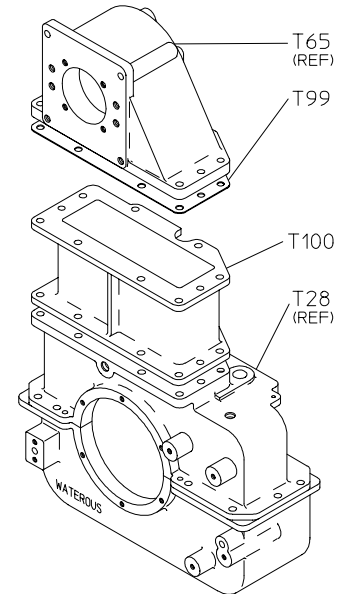
MODELS YC, YCX



MODELS YD, YDX  
(AFTER 8-5-96)



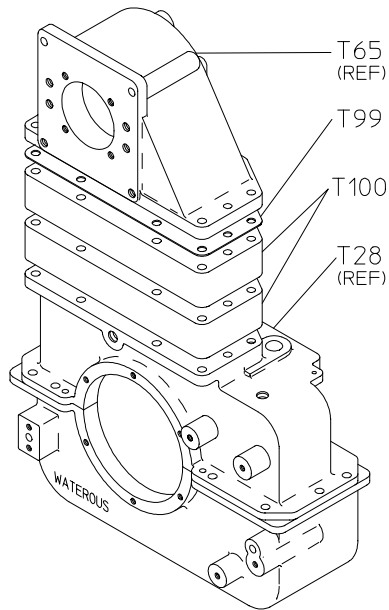
MODELS YE, YEX  
(AFTER 8-5-96)



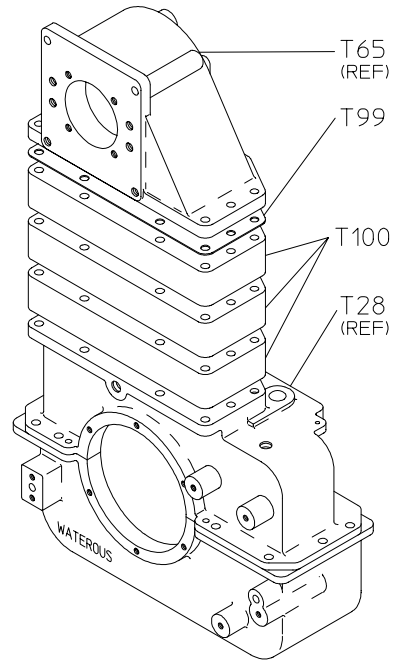
MODELS YF, YFX  
(AFTER 8-5-96)

RATIOS	MODELS YB, YBX	MODELS YC, YCX		MODELS YD, YDX (AFTER 8-5-96)		MODELS YE, YEX (AFTER 8-5-96)		MODELS YF, YFX (AFTER 8-5-96)	
	T99	T99	T100	T99	T100	T99	T100	T99	T100
1.14	2	6	1	4	1	3	1	2	1
1.27	0	0	1	3	1	2	1	1	1
1.41	0	3	1	3	1	2	1	1	1
1.48	4	5	1	3	1	1	1	1	1
1.58	0	2	1	2	1	1	1	0	1
1.69	4	0	1	1	1	4	1	4	1
1.79	2	1	1	1	1	3	1	2	1
1.88	2	0	1	1	1	3	1	2	1
1.97	2	1	1	2	1	2	1	3	1
2.03	0	2	1	2	1	1	1	2	1
2.27	0	3	1	0	1	0	1	0	1
2.46	3	3	1	1	1	3	1	3	1
2.73	3	1	1	3	1	2	1	2	1

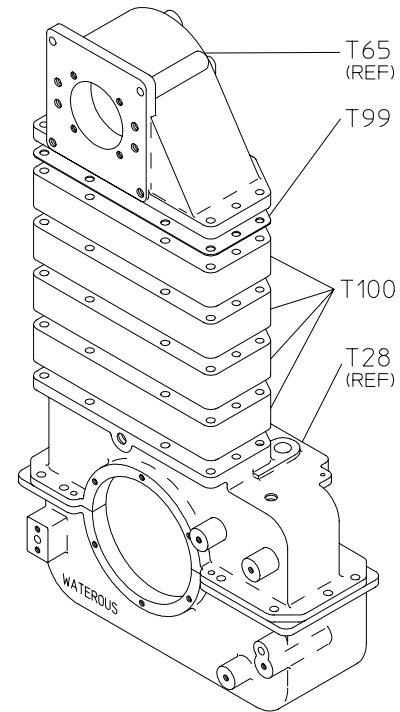
SPACERS BETWEEN CAP (T65) AND CASE (T28)  
(SEE FOLLOWING PAGES FOR HARDWARE DETAILS)  
CURRENT CONFIGURATION



MODELS YD, YDX  
(PRIOR TO 8-5-96)



MODELS YE, YEX  
(PRIOR TO 8-5-96)



MODELS YF, YFX  
(PRIOR TO 8-5-96)

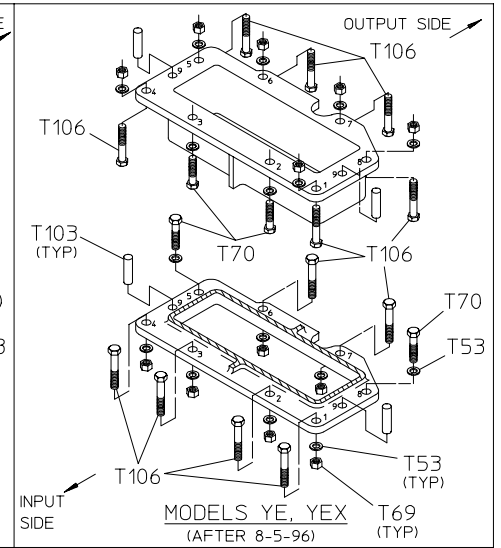
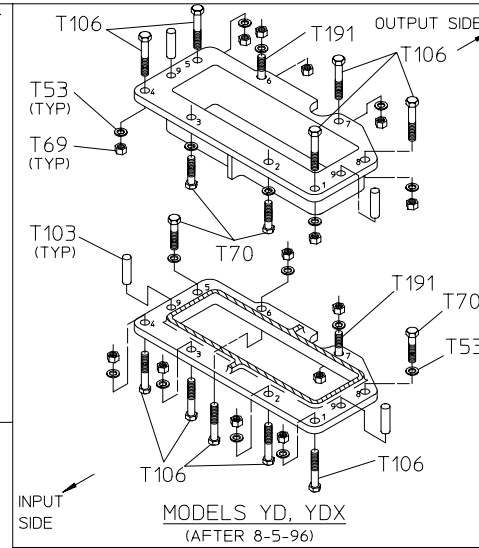
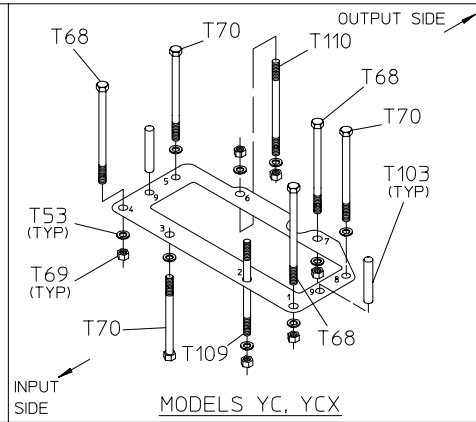
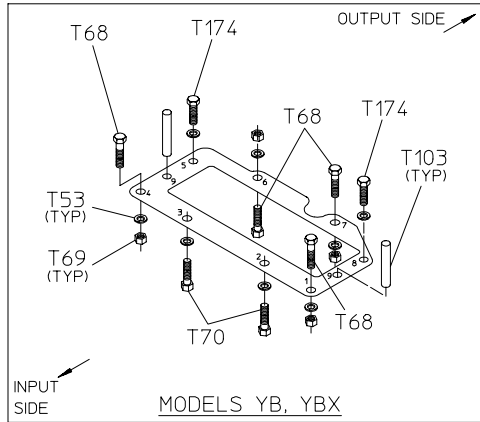
RATIOS	MODELS YD, YDX (PRIOR TO 8-5-96)		MODELS YE, YEX (PRIOR TO 8-5-96)		MODELS YF, YFX (PRIOR TO 8-5-96)	
	T99	T100	T99	T100	T99	T100
1.14	*	*	*	*	*	*
1.27	*	*	2	3	*	*
1.41	*	*	*	*	*	*
1.48	*	*	*	*	*	*
1.58	*	*	3	3	*	*
1.69	0	2	*	*	*	*
1.79	0	2	2	3	2	4
1.88	1	2	3	3	2	4
1.97	2	2	3	3	*	*
2.03	1	2	3	3	*	*
2.27	3	2	0	3	0	4
2.46	2	2	3	3	*	*
2.73	*	*	*	*	*	*

\*NOTE: THESE RATIOS ARE NOT AS YET AVAILABLE FOR THESE MODELS.

SPACERS BETWEEN CAP (T65) AND CASE (T28)

(SEE FOLLOWING PAGES FOR HARDWARE DETAILS)

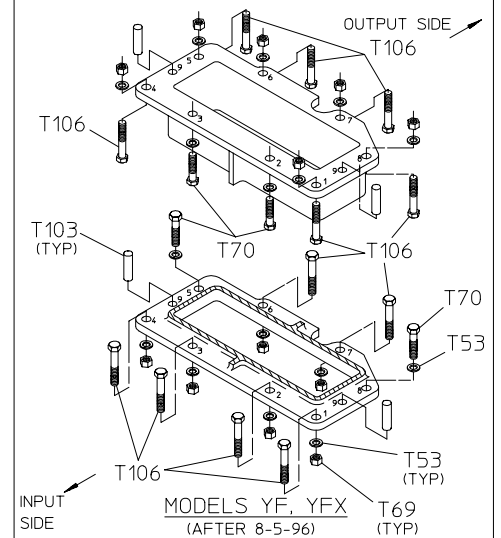
CONFIGURATION PRIOR TO 8-5-96

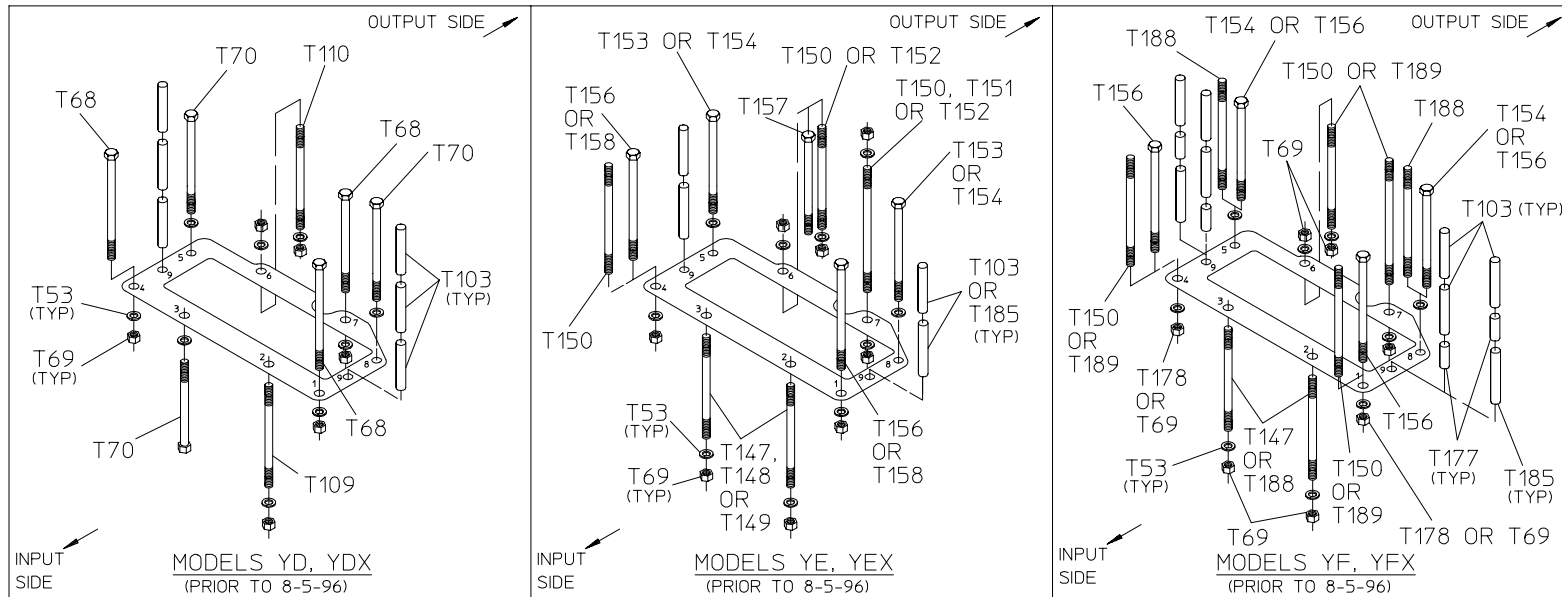


REF NO.	TYPE	THREAD	LENGTH (MODEL)				
			YB, YBX	YC, YCX	YD, YDX	YE, YEX	YF, YFX
T53	LOCKWASHER	1/2	---	---	---	---	---
T68	HEX HD SCREW	1/2-20	2-1/4	4-1/2	---	---	---
T69	HEX NUT	1/2-20	---	---	---	---	---
T70	HEX HD SCREW	1/2-13	1-1/2	3-1/2	1-1/2	1-1/2	1-1/2
T103	DOWEL PIN, 1/2	---	1-1/2	3	1-1/2	1-1/2	1-1/2
T106	HEX HD SCREW	1/2-20	---	---	2	2	2
T109	STUD	1/2-13 x 1/2-20	---	4-1/4	5-1/4 OR 5-3/4	---	---
T110	STUD	1/2-20 x 1/2-20	---	4-3/4	6 OR 6-1/4	---	---
T174	HEX HD SCREW	1/2-13	1-3/4	---	---	---	---
T191	STUD	1/2-20 x 1/2-20	---	---	2-3/4	---	---

HOLE NO.	MODELS YB, YBX ALL RATIOS	MODELS YC, YCX ALL RATIOS	MODELS YD, YDX (AFTER 8-5-96)		MODELS YE, YEX (AFTER 8-5-96)		MODELS YF, YFX (AFTER 8-5-96)	
			ALL RATIOS		ALL RATIOS		ALL RATIOS	
			UPPER	LOWER	UPPER	LOWER	UPPER	LOWER
1	T68	T68	T106	T106	T106	T106	T106	T106
2	T70	T109	T70	T106	T70	T106	T70	T106
3	T70	T70	T70	T106	T70	T106	T70	T106
4	T68	T68	T106	T106	T106	T106	T106	T106
5	T174	T70	T106	T70	T106	T70	T106	T70
6	T68	T110	T191	T106	T106	T106	T106	T106
7	T68	T68	T106	T191	T106	T106	T106	T106
8	T174	T70	T106	T70	T106	T70	T106	T70
9 (2) LOCATIONS	T103	T103	T103	T103	T103	T103	T103	T103

FLANGE HARDWARE BETWEEN CAP (T65) AND CASE (T28)  
CURRENT CONFIGURATION





REF NO.	TYPE	THREAD	LENGTH (MODEL)		
			YD, YDX	YE, YEX	YF, YFX
T53	LOCKWASHER	1/2	---	---	---
T68	HEX HD SCREW	1/2-20	5, 5-1/2 OR 6	---	---
T69	HEX NUT	1/2-20	---	---	---
T70	HEX HD SCREW	1/2-13	4-1/2, 4-3/4 OR 5	---	---
T103	DOWEL PIN, 1/2	---	1-1/2	3	3
T109	STUD	1/2-13 x 1/2-20	5-1/4 OR 5-3/4	---	---
T110	STUD	1/2-20 x 1/2-20	6 OR 6-1/4	---	---
T147	STUD	1/2-13 x 1/2-20	---	7-3/4	8-3/4
T148	STUD	1/2-13 x 1/2-20	---	7-1/2	---
T149	STUD	1/2-13 x 1/2-20	---	6-1/2	---
T150	STUD	1/2-20 x 1/2-20	---	8-3/8	9-1/2
T151	STUD	1/2-20 x 1/2-20	---	8	---
T152	STUD	1/2-20 x 1/2-20	---	7	---
T153	HEX HD SCREW	1/2-13	---	6	---
T154	HEX HD SCREW	1/2-13	---	7	8
T156	HEX HD SCREW	1/2-20	---	6-1/2	---
T157	HEX HD SCREW	1/2-13	---	---	9
T158	HEX HD SCREW	1/2-20	---	7-1/4	---
T177	DOWEL PIN, 1/2	---	---	---	1-3/4
T178	HEX NUT	1/2-13	---	---	---
T185	DOWEL PIN, 1/2	---	---	3-1/2	3-1/2
T188	STUD	1/2-13 x 1/2-20	---	---	9-1/2
T189	STUD	1/2-20	---	---	10

HOLE NO.	MODELS YD, YDX	MODELS YE, YEX								MODELS YF, YFX		
	1,69,1,79,1,88,1,97,2,03,2,27	1,27	1,58	1,79	1,88	1,97	2,03	2,27	2,46	1,79	1,88	2,27
1	T68	T156	T150	T150	T150	T156	T156	T158	T158	T189	T156	T150
2	T109	T149	T147	T147	T147	T149	T149	T148	T148	T188	T147	T147
3	T70	T149	T147	T147	T147	T149	T149	T148	T148	T188	T147	T147
4	T68	T156	T150	T150	T150	T156	T156	T158	T158	T189	T156	T150
5	T70	T153	T154	T154	T154	T153	T153	T154	T154	T188	T154	T156
6	T110	T152	T150	T150	T150	T152	T152	T157	T157	T189	T150	T150
7	T68	T152	T150	T150	T150	T152	T152	T151	T151	T189	T150	T150
8	T70	T153	T154	T154	T154	T153	T153	T154	T154	T188	T154	T156
9	T103	T103	T185	T185	T103	T103	T103	T103	T103	T103 (2)	T103 (2)	T103(1) T177(1)
(2) LOCATIONS		(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	T185 (1)	T177 (1)	T185(1)

FLANGE HARDWARE BETWEEN CAP (T65) AND CASE (T28)  
CONFIGURATION PRIOR TO 8-5-96