



Document Number	Issue Date	Rev. Date
SPL70831	09/21/60	03/27/09

CG Series Pump Impeller Shaft Service Parts List

Index:

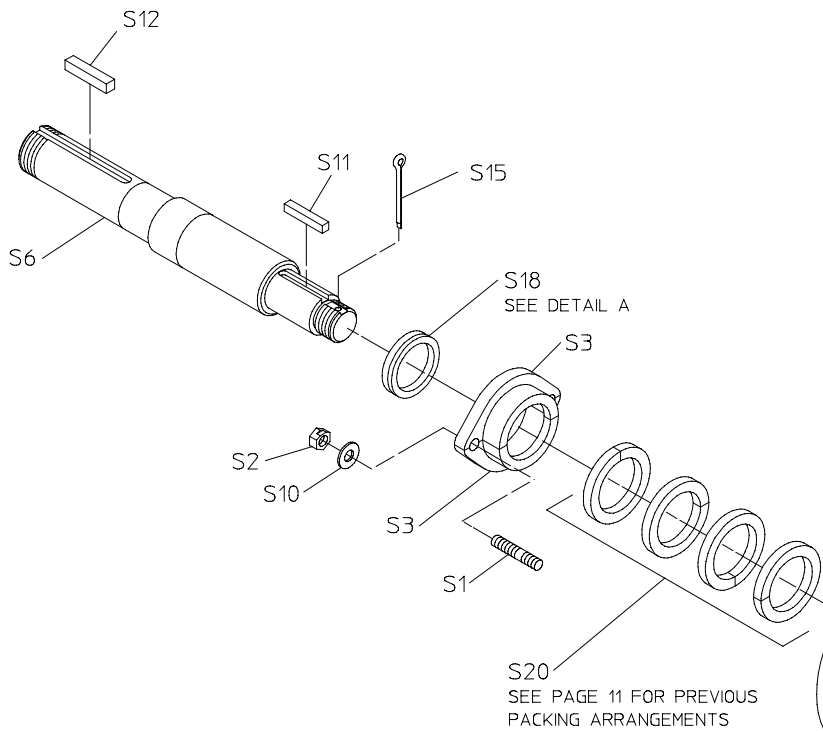
Pump Type	Pump Model <i>(Located on Pump Serial Plate)</i>	Transmission Model <i>(Located on Pump Serial Plate)</i>									See Pages				
		C10 Series	C20 Series	F Series	K Series	M Series	P Series	T Series	W Series	Y Series	Seal Type				Packing Arrangements
											Packing		Mechanical Seal		
											Exploded View	Cross--Section View	Exploded View	Cross--Section View	
Single Stage	CGN, CGR, CGV, CGVN, CGVR, CGG, CGVG	C10B C10C C10D C10E C10F	C20B C20C C20D C20E C20F	F	K KC	M MB MC	PA	T	WB WBX WK	YB, YBX YC, YCX YD, YDX YE, YEX YF, YFX	2, 3	4, 5	6, 7	8, 9	10, 11
Two Stage Combination Pump	CGG/CPK-1	-	-	-	-	-	-	-	WB WBX	-	-	-	6, 7	-	-

Note: When ordering repair parts provide Pump Serial Number

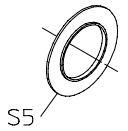
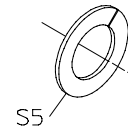
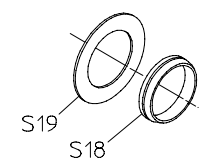
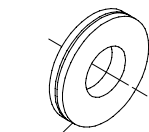
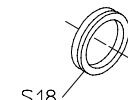
Packing Seal (Exploded View)

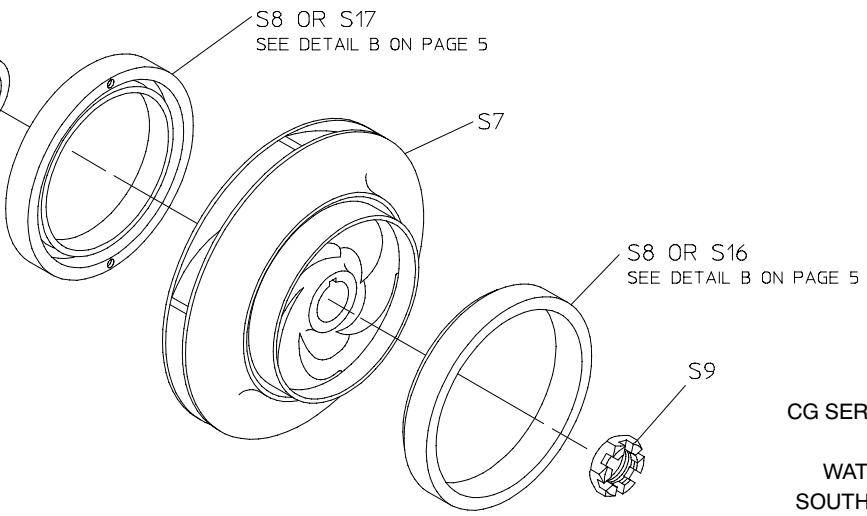
REF. NO.	DESCRIPTION
S1	Packing gland stud
S2	Unbalanced nut
S3	Packing gland half
S5	Flinger ring
S6	Impeller shaft
S7	Impeller
S8	Wear ring, plain hubs (std., 0.025. 0.050 and 0.075 in. U/S)
S9	Lock nut, 1"-14
S10	Plain brass washer, 5/16 in.

REF. NO.	DESCRIPTION
S11	Square key, SS or Monel, 1/4 x 1-7/16 in.
S12	Square key, 5/16 x 1-9/16 in., or 5/16 x 1-5/16 in.
S15	Cotter pin Monel shaft - 3/16 x 1-1/4 in. SS shaft - 1/8 x 1-3/4 in.
S16	Wear ring, labyrinth hubs (std., 0.025. 0.050 and 0.075 in. U/S)
S17	Wear ring, labyrinth hubs (std., 0.025. 0.050 and 0.075 in. U/S)
S18	Grommet, flinger or V-ring
S19	Flinger disk
S20	Packing replacement kit, BFG or Teflon Graphite



PACKING SEAL

 <p>S5</p> <p>SINGLE METAL RING NO LONGER AVAILABLE</p>	 <p>S5</p> <p>SINGLE METAL SPLIT RING NO LONGER AVAILABLE</p>	 <p>S19 S18</p> <p>METAL RING WITH RUBBER GROMMET USED FROM DECEMBER 16, 1981 NO LONGER AVAILABLE</p>
 <p>S18</p> <p>SINGLE RUBBER GROMMET USED FROM FEBRUARY 26, 2002 NO LONGER AVAILABLE</p>	 <p>S18</p> <p>SINGLE RUBBER V-RING CURRENT DESIGN</p>	
<p>DETAIL A FLINGER RING DESIGNS NOTE: CURRENT V-RING DESIGN WILL BE FURNISHED FOR REPAIRS</p>		

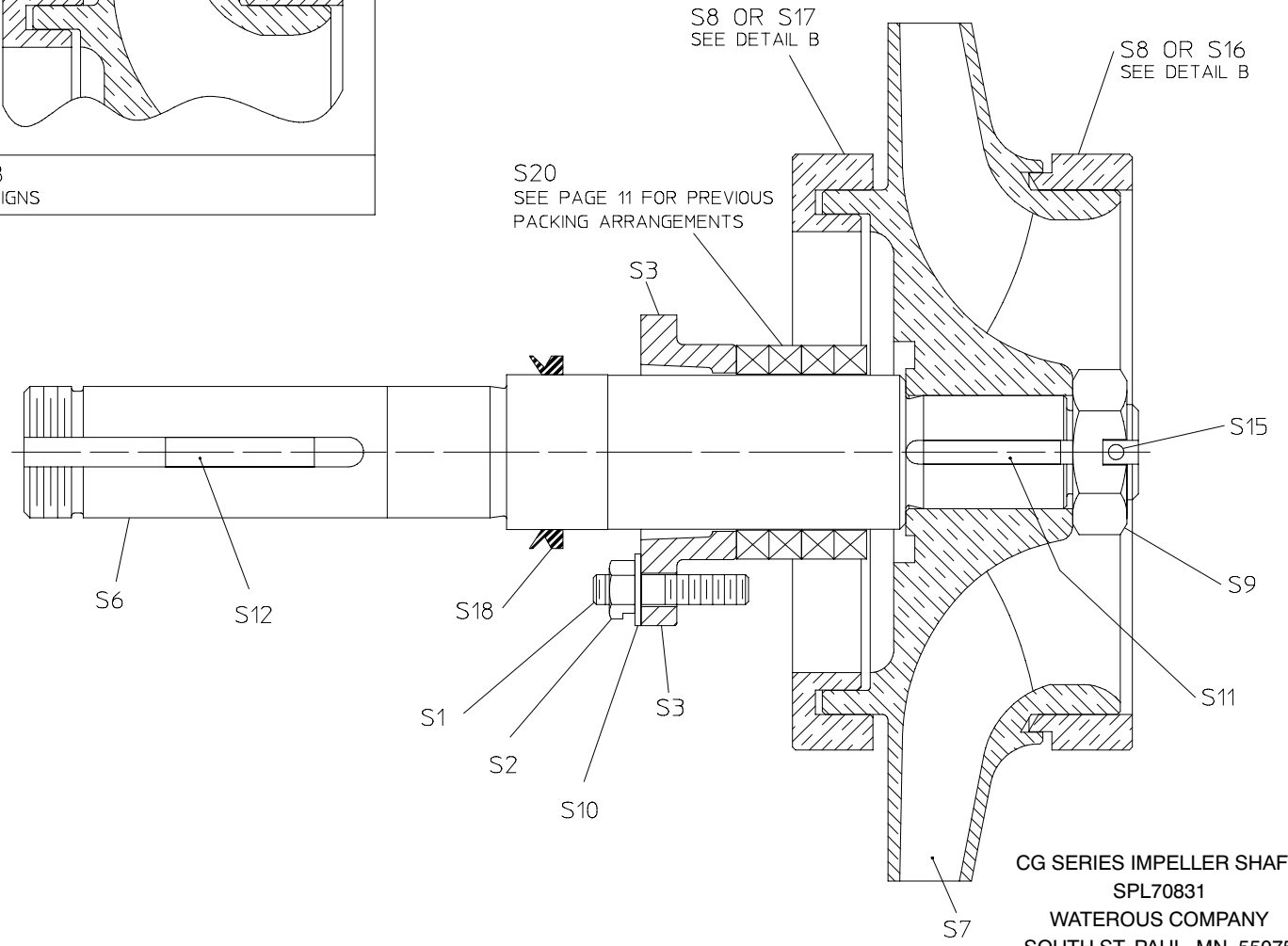
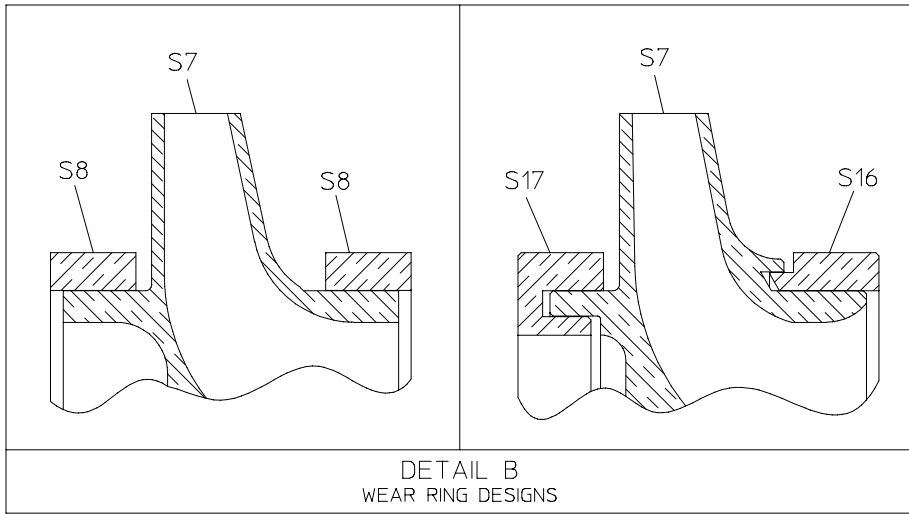


CG SERIES IMPELLER SHAFT
SPL70831
WATEROUS COMPANY
SOUTH ST. PAUL, MN 55075
PAGE 3 OF 11

Packing Seal (Cross-Section View)

REF. NO.	DESCRIPTION
S1	Packing gland stud
S2	Unbalanced nut
S3	Packing gland half
S6	Impeller shaft
S7	Impeller
S8	Wear ring, plain hubs (std., 0.025. 0.050 and 0.075 in. U/S)
S9	Lock nut, 1"-14
S10	Plain brass washer, 5/16 in.

REF. NO.	DESCRIPTION
S11	Square key, SS or Monel, 1/4 x 1-7/16 in.
S12	Square key, 5/16 x 1-9/16 in., or 5/16 x 1-5/16 in.
S15	Cotter pin Monel shaft - 3/16 x 1-1/4 in. SS shaft - 1/8 x 1-3/4 in.
S16	Wear ring, labyrinth hubs (std., 0.025. 0.050 and 0.075 in. U/S)
S17	Wear ring, labyrinth hubs (std., 0.025. 0.050 and 0.075 in. U/S)
S18	Grommet, flinger or V-ring
S20	Packing replacement kit, BFG or Teflon Graphite

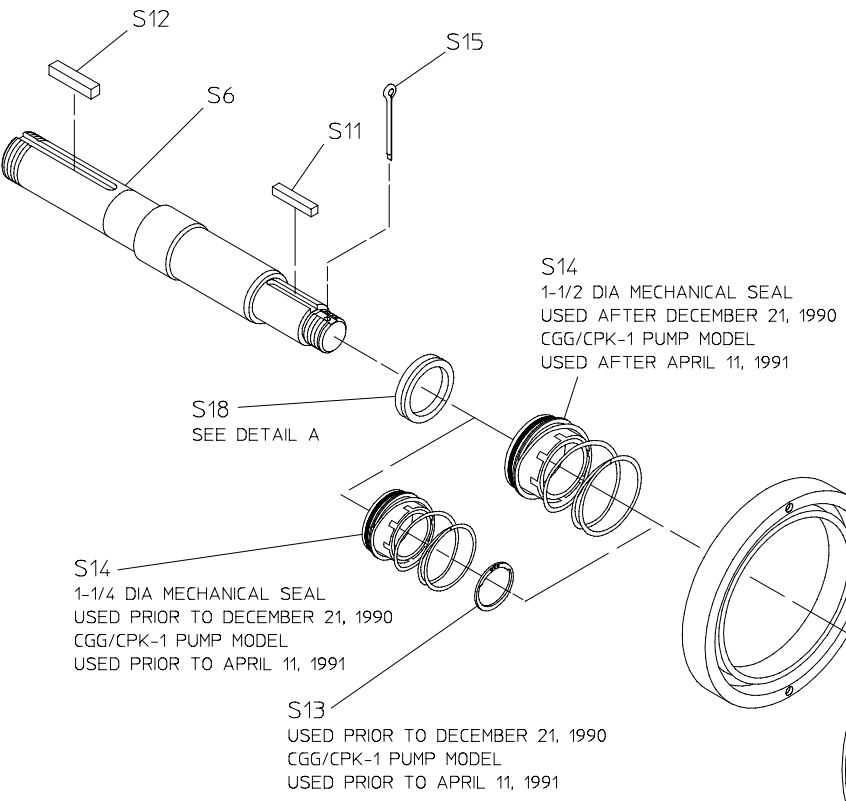


PACKING SEAL

Mechanical Seal (Exploded View)

REF. NO.	DESCRIPTION
S5	Flinger ring
S6	Impeller shaft
S7	Impeller
S8	Wear ring, plain hubs (std., 0.025, 0.050, 0.075 in. U/S)
S9	Lock nut, 1"-14
S11	Square key, SS or Monel, 1/4 x 1-7/16 in.
S12	Square key, 5/16 x 1-9/16 in., or 5/16 x 1-5/16 in.
S13	Retaining ring

REF. NO.	DESCRIPTION
S14	Mechanical seal
S15	Cotter pin Monel shaft - 3/16 x 1-1/4 in. SS shaft - 1/8 x 1-3/4 in.
S16	Wear ring, labyrinth hubs (std., 0.025, 0.050, 0.075 in. U/S)
S17	Wear ring, labyrinth hubs (std., 0.025, 0.050, 0.075 in. U/S)
S18	Grommet, flinger or V-ring
S19	Flinger disk



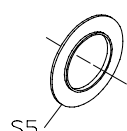
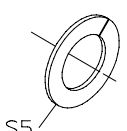
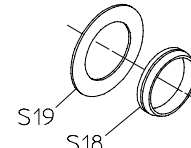
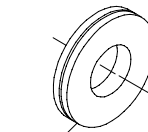
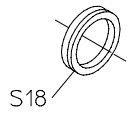
MECHANICAL SEAL

S14
1-1/4 DIA MECHANICAL SEAL
USED PRIOR TO DECEMBER 21, 1990
CGG/CPK-1 PUMP MODEL
USED PRIOR TO APRIL 11, 1991

S13
USED PRIOR TO DECEMBER 21, 1990
CGG/CPK-1 PUMP MODEL
USED PRIOR TO APRIL 11, 1991

S14
1-1/2 DIA MECHANICAL SEAL
USED AFTER DECEMBER 21, 1990
CGG/CPK-1 PUMP MODEL
USED AFTER APRIL 11, 1991

S18
SEE DETAIL A

 <p>S5 SINGLE METAL RING NO LONGER AVAILABLE</p>	 <p>S5 SINGLE METAL SPLIT RING NO LONGER AVAILABLE</p>	 <p>S19 S18 METAL RING WITH RUBBER GROMMET USED FROM DECEMBER 16, 1981 NO LONGER AVAILABLE</p>
 <p>S18 SINGLE RUBBER GROMMET NO LONGER AVAILABLE</p>	 <p>S18 SINGLE RUBBER V-RING CURRENT DESIGN</p>	
<p>DETAIL A FLINGER RING DESIGNS NOTE: CURRENT V-RING DESIGN WILL BE FURNISHED FOR REPAIRS</p>		

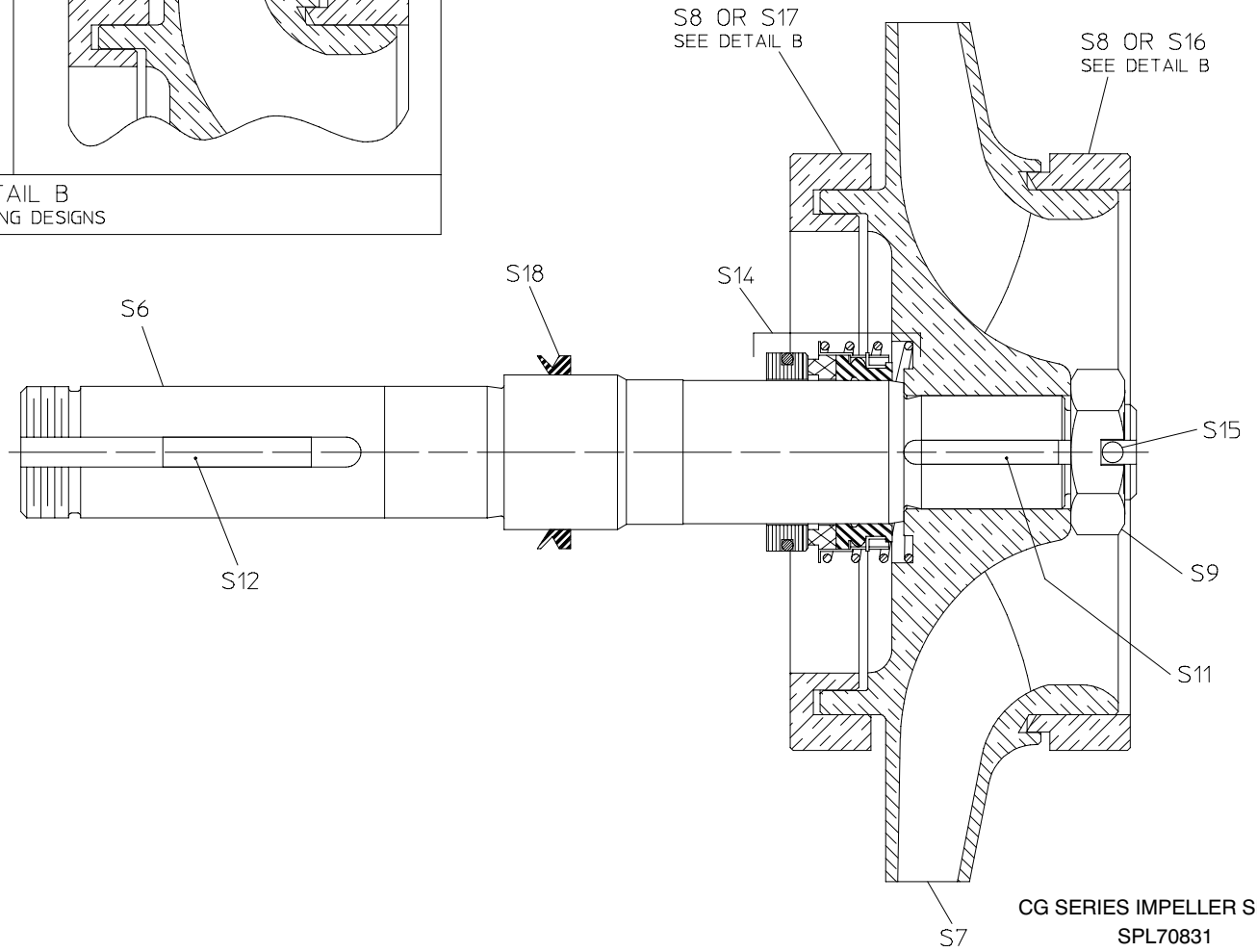
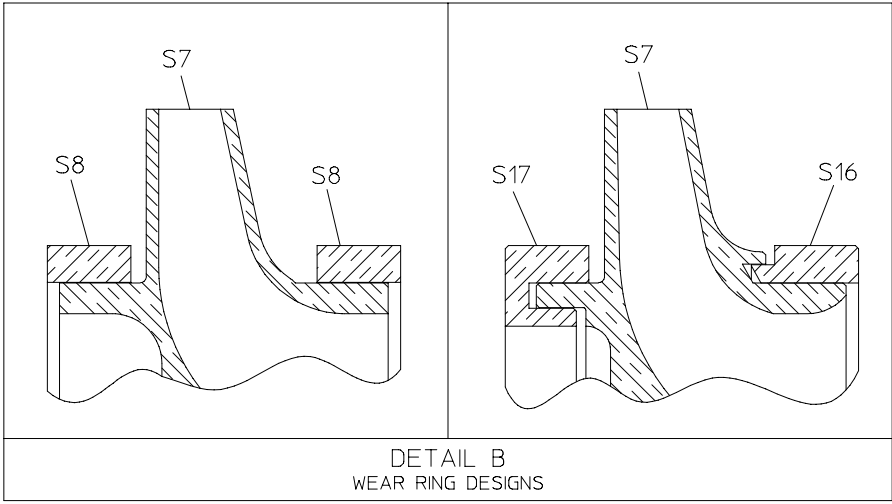
S8 OR S17
SEE DETAIL B ON PAGE 9

S8 OR S16
SEE DETAIL B ON PAGE 9

Mechanical Seal (Cross-Section View)

REF. NO.	DESCRIPTION
S6	Impeller shaft
S7	Impeller
S8	Wear ring, plain hubs (std., 0.025, 0.050, 0.075 in. U/S)
S9	Lock nut, 1"-14
S11	Square key, SS or Monel, 1/4 x 1-7/16 in.
S12	Square key, 5/16 x 1-9/16 in., or 5/16 x 1-5/16 in.

REF. NO.	DESCRIPTION
S14	Mechanical seal
S15	Cotter pin Monel shaft - 3/16 x 1-1/4 in. SS shaft - 1/8 x 1-3/4 in.
S16	Wear ring, labyrinth hubs (std., 0.025, 0.050, 0.075 in. U/S)
S17	Wear ring, labyrinth hubs (std., 0.025, 0.050, 0.075 in. U/S)
S18	Grommet, flinger or V-ring



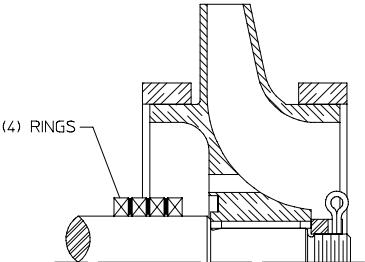
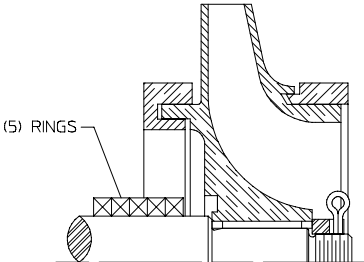
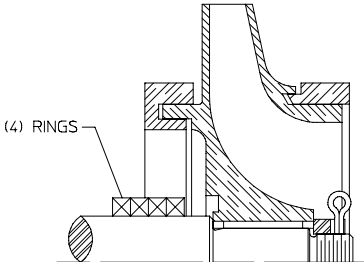
CG SERIES IMPELLER SHAFT
SPL70831
WATEROUS COMPANY
SOUTH ST. PAUL, MN 55075
PAGE 9 OF 11

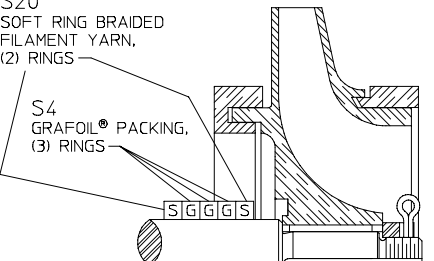
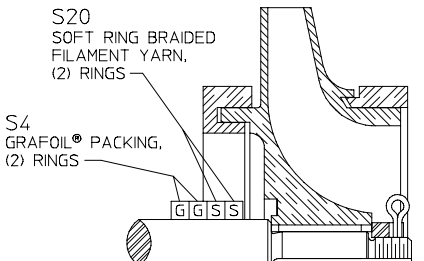
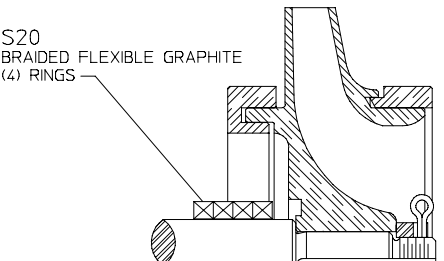
MECHANICAL SEAL

Packing Arrangements

REF. NO.	DESCRIPTION
S4	Packing ring, Flexible Graphite (Grafoil®)

REF. NO.	DESCRIPTION
S20	Packing replacement kit, BFG or Teflon Graphite

 <p>(4) RINGS</p>	 <p>(5) RINGS</p>	 <p>(4) RINGS</p>
<p>ARRANGEMENT A GRAPHITE RINGS USED PRIOR TO MARCH 1, 1969</p>	<p>ARRANGEMENT B GRAPHITE RINGS USED FROM MARCH 1, 1969 TO JANUARY 26, 1983</p>	<p>ARRANGEMENT C GRAPHITE RINGS USED FROM JANUARY 26, 1983 TO FEBRUARY 1, 1984</p>
<p>NO LONGER AVAILABLE, COMPLETE SET OF REF S20 TEFLON GRAPHITE RINGS WILL BE FURNISHED FOR REPAIRS</p>		

 <p>S20 SOFT RING BRAIDED FILAMENT YARN, (2) RINGS</p> <p>S4 GRAFOIL® PACKING, (3) RINGS</p>	 <p>S20 SOFT RING BRAIDED FILAMENT YARN, (2) RINGS</p> <p>S4 GRAFOIL® PACKING, (2) RINGS</p>	 <p>S20 BRAIDED FLEXIBLE GRAPHITE (4) RINGS</p>
<p>ARRANGEMENT D FLEXIBLE GRAPHITE (GRAFOIL®) RINGS USED PRIOR TO JANUARY 26, 1983 (INDIVIDUAL S4 RINGS ARE STILL AVAILABLE)</p>	<p>ARRANGEMENT E FLEXIBLE GRAPHITE (GRAFOIL®) RINGS USED FROM JANUARY 26, 1983 TO JULY 10, 2002 (INDIVIDUAL S4 RINGS ARE STILL AVAILABLE)</p>	<p>ARRANGEMENT F BRAIDED FLEXIBLE GRAPHITE RINGS USED AFTER JULY 10, 2002 CURRENT CONFIGURATION</p>
<p>COMPLETE SET OF RINGS ARE NO LONGER AVAILABLE REF S20 BRAIDED FLEXIBLE GRAPHITE (BFG) RINGS WILL BE FURNISHED FOR REPAIRS INDIVIDUAL S4 RINGS ARE STILL AVAILABLE FOR REPAIRS</p>		

PACKING ARRANGEMENTS
NOTE: ALWAYS STAGGER JOINTS IN PACKING RINGS

CG SERIES IMPELLER SHAFT
SPL70831
WATEROUS COMPANY
SOUTH ST. PAUL, MN 55075
PAGE 11 OF 11