FEATURES I

- SAE B 2/4 bolt mounting flange
- 7/8" Hollow keyed shaft
- Tach sensor port & pickup ring included
- Tach sensor optional
- Plunger design improves thermal shock resistance
- Valve cap improves hydrostatic performance
- Optional 7/8"-13T splined shaft avalible only on 21 mm stroke pumps. Add "S" after part number Ex: TSF2021HYDS



SPECIFICATIONS |

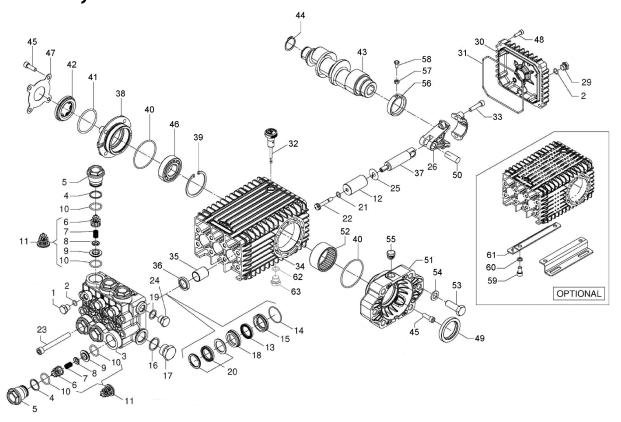
Pump Model	TSF1819HYD TSF2019HYD TSF2021HYD* TSF2219HYD TSF2221HYD* TSF2819HYD TSF2421H						
Max Volume	6.3 GPM	7.6 GPM	8.5 GPM	9.3 GPM	10.2 GPM	12.1 GPM	12.0 GPM
Max Discharge Pressure	4,350 PSI	4,000 PSI	0 PSI	2,200 PSI	2,500 PSI		
Horsepower (Hydraulic)	16 HHP	17.8 HHP	17.9 HHP	16.3 HHP	17.9 HHP	15.6 HHP	17.5 HHP
Max Pump Speed	1,750 RPM 1,450 RPM 1,750 I						
Inlet Pressures	Flooded to 70 PSI						
Plunger Bore	.709 in/18 mm	.787 in	1.102 in/28 mm	.945 in/24 mm			
Plunger Stroke	.748 in/19 mm						
Oil Capacity	37.2 oz.						
Max Fluid Temp	165° F						
Inlet Port Thread	3/4"-14 BSP-F						
Discharge Port Thread	3/8"-19 BSP-F						
Shaft Diameter	7/8" Hollow keyed Shaft SAE B / Optinal 7/8"-13T Splined*						
Weight	40.7 lbs/18.5 kg						
Dimensions	14.94" x 9.78" x 6.99"						

* Avaliable with optional 7/8"-13T Splined shaft.









PARTS LIST

No.		Description	Qty
1	98204300	Plug G 1/4" x 13	3
2	701013	O-ring, Ø .426 x .070	4
	66124541	Manifold, Ø 18 mm	1
	66120041	Manifold, Ø 20 mm	1
3	66120141	Manifold, Ø 22 mm	1
	66120241	Manifold, Ø 24 mm	1
	66124641	Manifold, Ø 28 mm	1
4	90516500	Anti-ext ring, Ø24.7x29x1.5	6
5	66130041	Plug, M32x1.5x29.5	6
6	36203551	Valve Guide	6
7	94738800	Valve Spring, Ø 10x18.5	6
8	36203476	Valve Poppet	6
9	36203366	Valve Seat	6
10	90385700	O-ring, Ø23.81 x 2.62	12
11	36712701	Valve Assembly, Complete	6
	66040309	Plunger, Ø 18 mm	3
	66040009	Plunger, Ø 20 mm	3
12	66040109	Plunger, Ø 22 mm	3
	66040409	Plunger, Ø 24 mm	3
	66041009	Plunger, Ø 28 mm	3
	90265200	LP Seal, Ø 18 mm	3
	90269000	LP Seal, Ø 20 mm	3
13	90271500	LP Seal, Ø 22 mm	3
	90273800	LP Seal, Ø 24 mm	3
	90275300	LP Seal, Ø 28 mm	3 3 3 3 3 3 3 3 3 3 3 3 3
14	90361600	O-ring, Ø36.65 x 1.78	3
	66080370	Seal Retainer, Ø18 mm	3
	66080070	Seal Retainer, Ø20 mm	3
15	66080170	Seal Retainer, Ø22 mm	3
	66080470	Seal Retainer, Ø24 mm	3
	66082570	Seal Retainer, Ø28 mm	3

No.	Part No.	Description	Qty
16	96770000	Washer, Ø26.5x32x1.5	1
17	98226800	Plug, G3/4"x16	1
	66216370	Intermediate Ring, Ø18mm	3
	66216070	Intermediate Ring, Ø20mm	3
18	66216170	Intermediate Ring, Ø22mm	3
	66216470	Intermediate Ring, Ø24mm	3 3
	66220070	Intermediate Ring, Ø28mm	
19	96738000	Washer Ø 17.5 x 23 x 1.5	1
	90265500	HP Seal, Ø18 mm	3
	90269200	HP Seal, Ø20 mm	3
20	90271700	HP Seal, Ø22 mm	3
	90274100	HP Seal, Ø24 mm	3
	90275400	HP Seal, Ø28 mm	3
21	90358400	O-ring, Ø 10.82 x 1.78	3
22	66219566	Plunger Bolt	3
23	99380100	Headbolt, M10 x 90	8
24	98210000	Plug, G3/8" x 13	1
25	96710100	Flinger Washer	3
26	66030001	Connecting Rod, Comp.	3
29	98204250	Plug, G 1/4"x9	1
30	66160022	Rear Cover	1
31	90392200	O-ring Ø 133.02 x 2.62	1
32	98210600	Dipstick	1
33	99309900	Con-rod Screw	6
34	66010022	Crankcase	1
35	90912600	Bushing Ø 22 x 25 x 30	3
36	90162500	Ring, Ø 22.0 x 32.0 x 5.5	3
37	66050066	Piston Guide	
38	59150022	Side Cover	1
39	90085000	Stop Ring, Ø 62	1
40	701147	O-ring, Ø 67.95 x 2.62	2

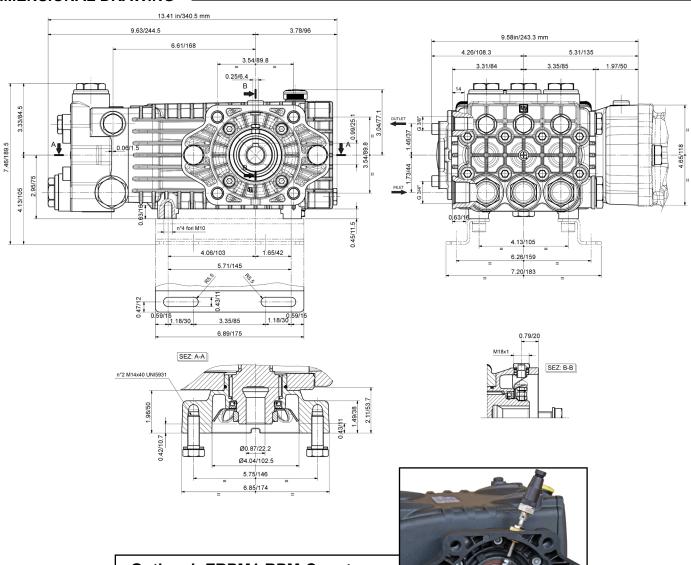
41 90409700 O-ring, Ø 55.56 x 3.53 1 42 44211801 Sight Glass 1 43 F66021465 TSF1819HYD,TSF2019HYD, TSF2219HYD, TSF2219HYD, TSF2221HYD, TSF2221HYD, TSF2421HYD 1 66021365 TSF2021HYD, TSF2221HYD, TSF2421HYD, TSF2021HYD, TSF2021HYD, TSF2021HYD, TSF2021HYD, TSF2021HYD, TSF2021HYD, TSF2421HYD 1 44 90066700 Stop Ring, Ø 30 1 45 99306900 Screw, M8 x 25 8 46 91837600 Roller Bearing 1 47 66150274 Side Cover 1 49 90169000 Ring, Ø 45.0 x 62.0 x 8.0 1 50 99740500 Pin Ø 14 x 39 3 51 F10087222 Hydraulic Flange, SAE-B 4 52 91858700 Roller Pin Bushing 1 53 F99484800 Screw, M14 x 40 2 54 F96728200 Washer, Ø 15 x 24 x 2.5 2 55 F90206500 Plug, Ø 17 1 56 F71228971 Ring, Ø 40 1	No.	Part No.	Description	Qty
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F66021465	42	44211801	Sight Glass	1
43 F66021365 TSF2219HYD, TSF2819HYD Crankshaft, C. 21 TSF2021HYD, TSF2221HYD, TSF2221HYD, TSF2421HYD Optional 7/8"-13 Splined Hollow Crankshaft C. 21 TSF2021HYD, TSF2221HYD, TSF2421HYD Stop Ring, Ø 30 1 45 99306900 Screw, M8 x 25 8 46 91837600 Roller Bearing 1 47 66150274 Side Cover 1 48 99188400 Screw, M6 x 20 4 49 90169000 Ring, Ø 45.0 x 62.0 x 8.0 1 50 99740500 Pin Ø 14 x 39 3 51 F10087222 Hydraulic Flange, SAE-B 4 52 91858700 Roller Pin Bushing 1 53 F99484800 Screw, M14 x 40 2 54 F96728200 Washer, Ø 15 x 24 x 2.5 2 55 F90206500 Plug, Ø 17 1 56 F71228971 Ring, Ø 40 1 57 92202500 Nut, M6 x 5 1			Crankshaft, C.19	
43 F66021365 Crankshaft,C. 21 TSF2021HYD, TSF2221HYD, 1 TSF2421HYD Optional 7/8*-13 Splined Hollow Crankshaft C. 21 TSF2021HYD, TSF2221HYD, 1 TSF2021HYD, TSF2221HYD, 1 TSF2021HYD, TSF2221HYD, 1 TSF2421HYD 44 90066700 Stop Ring, Ø 30 1 45 99306900 Screw, M8 x 25 8 46 91837600 Roller Bearing 1 47 66150274 Side Cover 1 48 99188400 Screw, M6 x 20 4 49 90169000 Ring, Ø 45.0 x 62.0 x 8.0 1 50 99740500 Pin Ø 14 x 39 3 51 F10087222 Hydraulic Flange, SAE-B 4 52 91858700 Roller Pin Bushing 1 53 F99484800 Screw, M14 x 40 2 54 F96728200 Washer, Ø 15 x 24 x 2.5 2 55 F90206500 Plug, Ø 17 1 56 F71228971 Ring, Ø 40 1 57 92202500 Nut, M6 x 5 1		F66021465	TSF1819HYD,TSF2019HYD,	1
F66021365 TSF2021HYD, TSF2221HYD, TSF2421HYD				
TSF2421HYD Optional 7/8"-13 Splined Hollow Crankshaft C. 21 TSF2021HYD, TSF202			Crankshaft, C. 21	
TSF2421HYD Optional 7/8*-13 Splined Hollow Crankshaft C. 21 TSF2021HYD, TSF2221HYD, TSF2421HYD 44 90066700 Stop Ring, Ø 30 1 45 99306900 Screw, M8 x 25 8 46 91837600 Roller Bearing 1 47 66150274 Side Cover 1 48 99188400 Screw, M6 x 20 4 49 90169000 Ring, Ø 45.0 x 62.0 x 8.0 1 50 99740500 Pin Ø 14 x 39 3 51 F10087222 Hydraulic Flange, SAE-B 4 52 91858700 Roller Pin Bushing 1 53 F99484800 Screw, M14 x 40 2 54 F96728200 Washer, Ø 15 x 24 x 2.5 2 55 F90206500 Plug, Ø 17 1 56 F71228971 Ring, Ø 40 1 57 92202500 Nut, M6 x 5 1	43	F66021365	TSF2021HYD, TSF2221HYD,	1
Hollow Crankshaft C. 21 TSF2021HYD, TSF2221HYD, TSF2421HYD Stop Ring, Ø 30 1 1 1 1 1 1 1 1 1	.			
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54 F96728200 Washer, Ø 15 x 24 x 2.5 2 55 F90206500 Plug, Ø 17 1 56 F71228971 Ring, Ø 40 1 57 92202500 Nut, M6 x 5 1	_			
55 F90206500 Plug, Ø 17 1 56 F71228971 Ring, Ø 40 1 57 92202500 Nut, M6 x 5 1	53	F99484800	Screw, M14 x 40	2
56 F71228971 Ring, Ø 40 1 57 92202500 Nut, M6 x 5 1		F96728200		2
57 92202500 Nut, M6 x 5 1	55	F90206500		
	56	F71228971	Ring, Ø 40	1
58 F70227034 Screw, M6 x 12 1	57	92202500	Nut, M6 x 5	
	58	F70227034	Screw, M6 x 12	1
59 99364400 Screw, M10 x 18 4	59	99364400	Screw, M10 x 18	4
60 96710600 Washer, Ø 12.2 x 16 x 2.5 4	60	96710600	Washer, Ø 12.2 x 16 x 2.5	
61 47200074 Pump Feet 2	61	47200074	Pump Feet	
62* 90383300 O-ring, Ø 13.95 x 2.62 1	62*	90383300	O-ring, Ø 13.95 x 2.62	
63* 98210050 Plug, G 3/8" x 13 1	63*	98210050	Plug, G 3/8" x 13	1

^{*} Only on older manufactured pumps

REPAIR KITS

KIT NO.	K02	K169	K180 (18mm)	K176 (18mm)	K170 (20mm)	K171 (20mm)	K172 (22mm)	K173 (22mm)	K181 (24 mm)	K182 (24mm)	K248 (28mm)	K247 (28mm)
POS. NO's INCLUDED IN KIT	36	6, 7, 8, 9, 10, (11)	13, 20	13, 14, 15, 18, 20		13, 14, 15, 18, 20	13, 20	13, 14, 15, 18, 20	13, 20	13, 14, 15, 18, 20	13, 20	13, 14, 15, 18, 20
NUMBER OF ASSEMBLIES IN KIT	3	6	3	1	3	1	3	1	3	1	3	1
NUMBER OF CYLINDERS KIT WILL SERVICE	3	6	3	1	3	1	3	1	3	1	3	1

DIMENSIONAL DRAWING



Optional: ZRPM1 RPM Counter

Inductive proximity sensor, c/w female connector M12 4 pin, IP67, field attachable, ring nut reduction M18 x 1.

Power Supply: 12/24 VDC

NOTE: 71 Series pump shown in image.

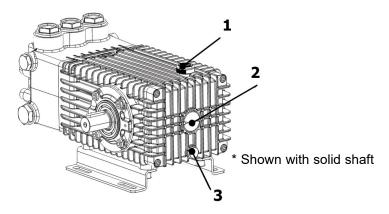


TORQUE SPECS*

POS.	Nm	Ft/lb
1	40	29.5
5	130	95.88
17	70	51.63
22	20	14.75
23	45	33.19
24	40	29.5
29	20	14.75
33	20	14.75
45	20	14.75
48	10	7.38
58	10	7.38
59	20	14.75
65	20	14.75

* Decrease torque by 20% if threads are lubricated

OIL CHANGING



- Oil changing must be done with the pump at operating temperature.
- 1.2 Put a container under the oil drain plug (3).
- 1.3 Remove the oil dipstick (1) and then the drain plug (3).
- 1.4 Wait until all the oil has drained out, then screw the drain plug (3) and tighten at the torque shown in the exploded diagram and above table.
- 1.5 Fill with new oil (General Pump Series 100) until the middle of the oil sight glass is reached, screw by hand the oil dipstick (1).

WARNINGS



A suitably-calibrated over pressure valve must be installed, as well as the pressure regulating valve, must be installed on the high-pressure line.

The high-pressure pipes must be correctly sized for the system's maximum working pressure and used exclusively within the working pressure range indicated by the pipe manufacture and marked on the pipe itself.



The ends of the high-pressure pipes must be sheathed and secured to a solid structure, so as it avoid the risk of whiplash if the connections burst or break.

The pump transmission systems (joints, pulleys, belts, rotary shafts), must be suitably covered by a protective case.

If in doubt, do not hesitate to call the Interpump Group / General Pump Customer Service.

WARNING: High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices properly could result in personal injury or damage to pump or property. GP does not assume any liability or responsibility for the operation of the user's high pressure system.



WARNING: This product can expose you to chemicals including lead, which is know to the state of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov