

Motor and Relief Valve sold separately.

O.E.M. Stainless Steel Direct-Drive Plunger Pump

Models 2SF05SEEL
2SF10SEEL, 2SF15SEEL
2SF25SEEL, 2SF29SEEL
2SF35SEEL

FEATURES

- Triplex design provides smoother liquid flow.
- Unique spring loaded Inlet Valves and flow through ceramic plungers assure smooth, consistent liquid flow through pump.
- 316L Stainless Steel Manifolds for strength and corrosion resistance.
- OPTIONAL Stainless Steel Unloader for system pressure control and pump protection.
- Ultra compact, lightweight direct-drive design.

COMMON SPECIFICATIONS

Inlet Pressure Range	Flooded to 60 PSI	(Flooded to 4 BAR)
Shaft Diameter5/8"	(15.9 mm)
Bore.....	0.709"	(18 mm)
Maximum Liquid Temperature	160°F	(71°C)
Above 130°F call CAT PUMPS for inlet conditions and elastomer recommendations.		
Crankcase Capacity	12.0 oz.	(0.36 L)
Inlet Port (1).....	3/8" NPTF	(3/8" NPTF)
Discharge Ports (2).....	3/8" NPTF	(3/8" NPTF)
By-Pass Port (1)	1/4" NPTF	(1/4" NPTF)
Weight (Pump Only)	10.6 lbs.	(4.8 kg)
Dimensions (Pump Only).....	8.3x7.5x6.3"	(213x191x160 mm)

⚠ WARNING

All systems require both a primary pressure regulating device (i.e., regulator, unloader) and a secondary pressure safety relief device (i.e., pop-off valve, safety valve). Failure to install such relief devices could result in personal injury or damage to the pump or to system components. CAT PUMPS does not assume any liability or responsibility for the operation of a customer's high pressure system.

SPECIFICATIONS

U.S. Measure

Metric Measure

MODEL 2SF05SEEL

Flow.....	0.5 GPM	(1.9 L/M)
Discharge Pressure Range.....	100-1200 PSI	(7-85 BAR)
RPM	1725 RPM	(1725 RPM)
Stroke.....	0.067"	(1.7 mm)

MODEL 2SF10SEEL

Flow.....	1.0 GPM	(3.8 L/M)
Discharge Pressure Range.....	100-1200 PSI	(7-85 BAR)
RPM	1725 RPM	(1725 RPM)
Stroke.....	0.122"	(3.1 mm)

MODEL 2SF15SEEL

Flow.....	1.5 GPM	(5.7 L/M)
Discharge Pressure Range.....	100-1200 PSI	(7-85 BAR)
RPM	1725 RPM	(1725 RPM)
Stroke.....	0.177"	(4.5 mm)

MODEL 2SF25SEEL

Flow.....	2.5 GPM	(9.5 L/M)
Discharge Pressure Range.....	100-1200 PSI	(7-85 BAR)
RPM	1725 RPM	(1725 RPM)
Stroke.....	0.278"	(7.3 mm)

MODEL 2SF29SEEL

Flow.....	2.85 GPM	(10.8 L/M)
Discharge Pressure Range.....	100-1200 PSI	(7-85 BAR)
RPM	1725 RPM	(1725 RPM)
Stroke.....	0.335"	(8.5 mm)

MODEL 2SF35SEEL

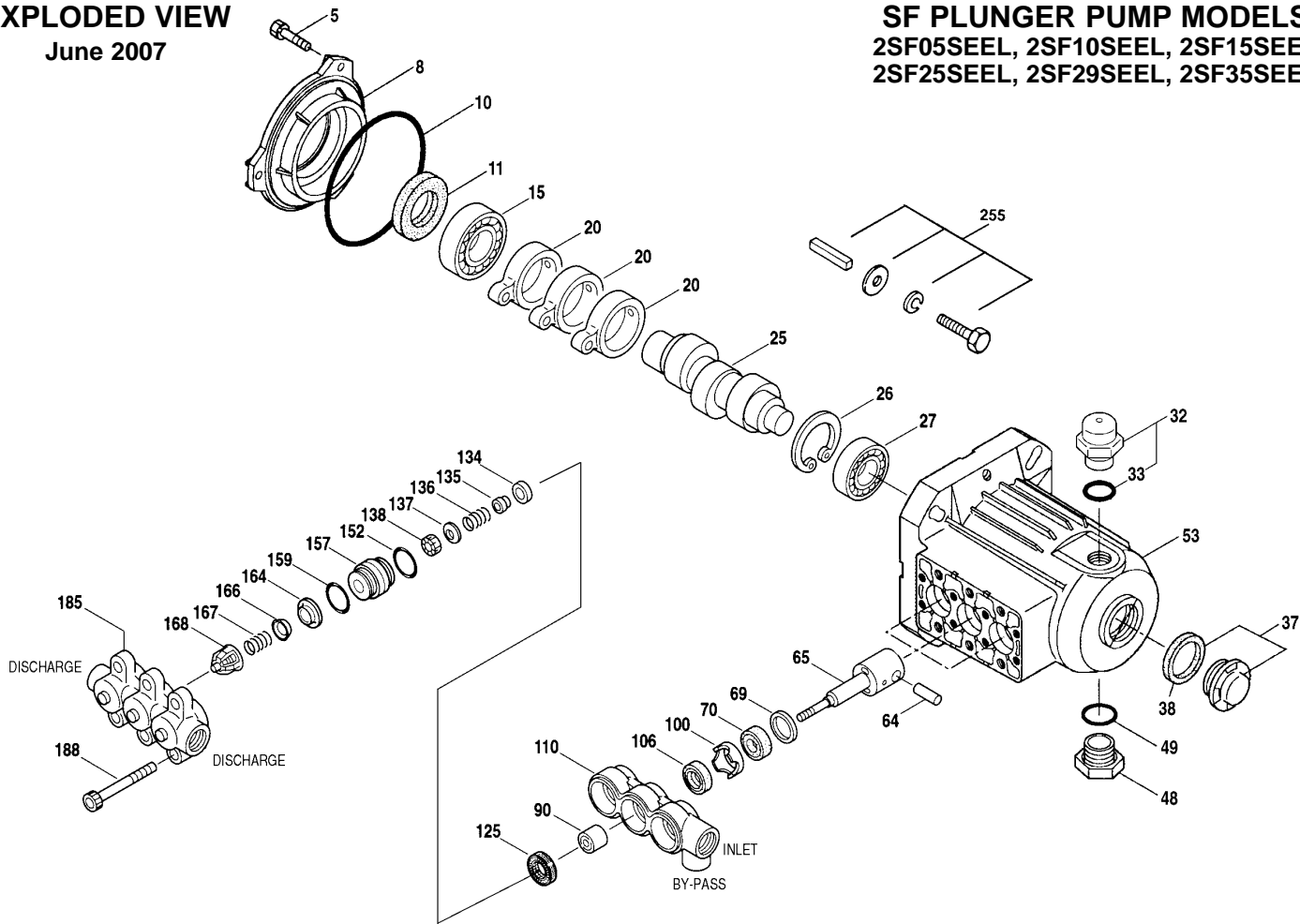
Flow.....	3.5 GPM	(13.2 L/M)
Discharge Pressure Range.....	100-1200 PSI	(7-85 BAR)
RPM	1725 RPM	(1725 RPM)
Stroke.....	0.402"	(10.2 mm)

Refer to pump **Service Manual** for repair procedure, additional technical information and **pump warranty**.

“Customer confidence is our greatest asset”

EXPLODED VIEW

June 2007



SF PLUNGER PUMP MODELS

2SF05SEEL, 2SF10SEEL, 2SF15SEEL
2SF25SEEL, 2SF29SEEL, 2SF35SEEL

PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	MODEL USED	QTY	ITEM	P/N	MATL	DESCRIPTION	MODEL USED	QTY
5	547445	S	Screw, HHC Sems (M6x14) [3/03]	All	3	137	88575	SS	Washer, Conical (M6)	All	3
8	547153	AL	Cover, Bearing [3/03]	All	1	138	543692	SS	Nut (M6)	All	3
10	14041	NBR	O-Ring, Bearing Cover - 70D [3/03]	All	1	152	† 26089	NBR	O-Ring, Adapter Spacer, Inner - 80D	All	3
11	55337	NBR	Seal, Oil, Crankshaft - 70D [3/03]	All	1		11377	FPM	O-Ring, Adapter Spacer, Inner - 80D	All	3
15	14488	STL	Bearing, Ball - Inner	All	1	157	544700	SS	Spacer, Discharge Valve	All	3
20	547046	TNM	Rod, Connecting	All	3	159	† 26089	NBR	O-Ring, Adapter Spacer, Outer - 80D	All	3
25	543135	FCM	Crankshaft, 1.7mm	05SEEL	1		11377	FPM	O-Ring, Adapter Spacer, Outer - 80D	All	3
	46109	FCM	Crankshaft, 3.1mm	10SEEL	1	164	544293	SS	Seat	All	3
	44931	FCM	Crankshaft, 4.5mm	15SEEL	1	166	543669	SS	Valve	All	3
	544693	FCM	Crankshaft, 7.3mm	25SEEL	1	167	543700	SS	Spring	All	3
	45426	FCM	Crankshaft, 8.5mm	29SEEL	1	168	44565	PVDF	Retainer, Spring	All	3
	544694	FCM	Crankshaft, 10.2mm	35SEEL	1	185	547705	SSL	Manifold, Discharge	All	1
26	12385	STL	Ring, Retaining, Bearing	All	1	188	544701	S	Screw, HSH (M8x80)	All	6
27	15710	STL	Bearing, Ball - Outer	All	1	255	30517	STZP	Assy, Bolt Mount	All	1
32	547961	RTP	Cap, Oil Filler w/O-Ring	All	1		30980	STZP R	Washer, Flat (3/8")	All	4
33	14179	NBR	O-Ring, Oil Filler Cap - 70D	All	2		30921	STZP R	Lockwasher (3/8")	All	4
37	92241	—	Gauge, Oil w/Gasket - 80D	All	1		34100	STZP	Screw, HH (3/8"-16x1-3/8")	All	4
38	44428	NBR	Gasket, Flat, Oil Gauge - 80D	All	1		126543	STZP R	Screw, HH (3/8"-16x1-3/8")	All	4
48	44842	NY	Plug, Drain	All	1		6106	—	Lubricant, Antiseize	All	1
49	14179	NBR	O-Ring, Drain Plug - 70D	All	1		30050	STL	Key (3/16"x3/16"x1-1/4" HD)	All	1
53	547285	AL	Crankcase [3/03]	All	1	283	990394	—	Kit, Oil Drain (Not Shown)	All	1
64	16948	CM	Pin, Crosshead	All	3	285	80228	STL	Screw (M8-1.25x80) (Motor Removal)	All	2
65	544695	SSZZ	Rod, Plunger	All	3	300	34973	NBR	Kit, Seal (Incls: 106, 125, 152, 159)	All	1
69	126259	STCP R	Washer, Oil Seal	All	3		33453	FPM	Kit, Seal (Incls: 106, 125, 152, 159)	All	1
70	25461	NBR	Seal, Oil Crankcase	All	3	310	34972	NBR	Kit, Valve (Incls: 152, 159, 164, 166, 167, 168)	All	1
90	544697	CC	Plunger, Ceramic (M18x18)	All	3		33454	FPM	Kit, Valve (Incls: 152, 159, 164, 166, 167, 168)	All	1
100	44869	PVDF	Retainer, Seal	All	3	311	39668	NBR	Kit, Inlet Valve (Incls: 134-138, 152, 159)	All	1
106	547683	NBR	Seal, LPS w/SS-Spg	All	3		34974	NBR	Kit, Inlet Valve (Incls: 134-138, 152, 159)	All	1
	545192	FPM	Seal, LPS w/SS-Spg	All	3		33460	FPM	Kit, Inlet Valve (Incls: 134-138, 152, 159)	All	1
110	547704	SSL	Manifold, Inlet	All	1	352	44050	STZP	Tool, Oil Gauge Removal	All	1
125	44652	SNG	Seal, HPS w/SS	All	3	400	7501	SS	Unloader (See Indiv. Data Sheet)	All	1
	46652	HT	Seal, Hi-Temp, 2-Pc w/S-Support	All	3		7501.100	SS	Relief Valve (See Indiv. Data Sheet)	All	1
134	543691	SS	Valve, Inlet [4/02]	All	3	—	6107	—	Oil, Bottle (21 oz) ISO 68 Multi-Viscosity Hydraulic (Fill to specified crankcase capacity prior to start-up)	All	1
	33873	NY	Valve, Inlet (Hi-Temp) [4/02]	All	3	—	6575	—	Plunger Pump Service DVD	All	1
135	543689	SS	Spacer	All	3	—	6119	—	Lubricant, Antiseize (1 oz.)	All	1
136	543690	SS	Spring, Inlet Valve	All	3						

Italics are optional items. [] Date of latest production change. † Production parts are different than repair parts. R Components comply with RoHS Directive. See Tech Bulletins 002, 036, 043, 055, 064, 070, 073, 074, 091, 092 and 095 for additional information.

NOTE: Discard Key that may come standard with most motors and engines and use only the key included in Bolt kit.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum CC=Ceramic CM=Chrome-Moly FCM=Forged Chrome-moly FPM=Fluorocarbon HT=Hi-Temp (EPDM Alternative) NBR=Medium Nitrile (Buna-N) NY=Nylon PVDF=Polyvinylidene Fluoride RTP=Reinforced Composite S=304SS SNG=Special Blend (Buna) SS=316SS SSL=316SS/Low Carbon SSZZ=316SS/Zamack STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength

MOTOR SPECIFICATIONS

Model 8059

Horsepower.....	0.75
Shaft Diameter.....	5/8"
Max. Volts.....	115/208-230
FULL LOAD AMPS.....	10.4/5.4-5.2
RPM.....	1725
Weight.....	35 lbs.
Phase.....	Single
Frame Size.....	56-C TEFC
Hertz.....	60
Service Factor.....	1.15
Max. Ambient Temp.....	104°F
Capacitor Start.....	Yes
Thermal Overload-Manual Reset.....	Yes
U.L. Construction Reference.....	E44549
U.L. Insulation Reference.....	E37878
CSA Reference.....	LR4642

Model 8062

Horsepower.....	2.0
Shaft Diameter.....	5/8"
Max. Volts.....	115/230
FULL LOAD AMPS.....	17.0/8.5
RPM.....	1725
Weight.....	45.65 lbs.
Phase.....	Single
Frame Size.....	56-C TEFC
Hertz.....	60
Service Factor.....	1.15
Max. Ambient Temp.....	104°F
Capacitor Start.....	Yes
Thermal Overload-Manual Reset.....	Yes
U.L. Construction Reference.....	E44549
U.L. Insulation Reference.....	E37878
CSA Reference.....	LR4642

Model 8060

Horsepower.....	1.5
Shaft Diameter.....	5/8"
Max. Volts.....	115/230
FULL LOAD AMPS.....	14.0/7.0
RPM.....	1725
Weight.....	42 lbs.
Phase.....	Single
Frame Size.....	56-C TEFC
Hertz.....	60
Service Factor.....	1.20
Max. Ambient Temp.....	104°F
Capacitor Start.....	Yes
Thermal Overload-Manual Reset.....	Yes
U.L. Construction Reference.....	E44549
U.L. Insulation Reference.....	E37878
CSA Reference.....	LR4642

Model 8062.050

Horsepower.....	1.75
Shaft Diameter.....	5/8"
Max. Volts.....	220
FULL LOAD AMPS.....	17.0/8.5
RPM.....	1425
Weight.....	45.65 lbs.
Phase.....	Single
Frame Size.....	56-C TEFC
Hertz.....	50
Service Factor.....	1.00
Max. Ambient Temp.....	104°F
Capacitor Start.....	Yes
Thermal Overload-Manual Reset.....	Yes
U.L. Construction Reference.....	E44549
U.L. Insulation Reference.....	E37878
CSA Reference.....	LR4642

Model 8060.050

Horsepower.....	1.5
Shaft Diameter.....	5/8"
Max. Volts.....	110/220
FULL LOAD AMPS.....	18.2/9.1
RPM.....	1425
Weight.....	42 lbs.
Phase.....	Single
Frame Size.....	56-C TEFC
Hertz.....	50
Service Factor.....	1.00
Max. Ambient Temp.....	104°F
Capacitor Start.....	Yes
Thermal Overload-Manual Reset.....	Yes
U.L. Construction Reference.....	E44549
U.L. Insulation Reference.....	E37878
CSA Reference.....	LR4642

Model 8082

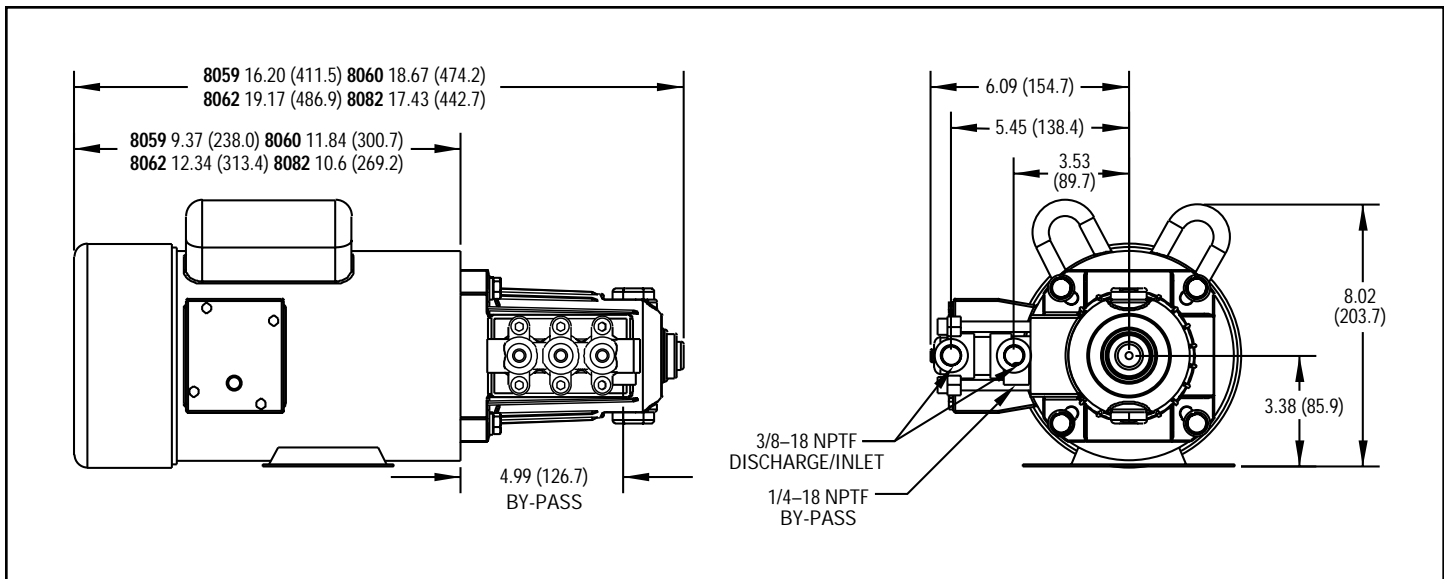
Horsepower.....	2
Shaft Diameter.....	5/8"
Max. Volts.....	208-230/460
FULL LOAD AMPS.....	5.8/2.9
RPM.....	1725
Weight.....	40 lbs.
Phase.....	Three
Frame Size.....	56HC TEFC
Hertz.....	60
Service Factor.....	1.15
Max. Ambient Temp.....	104°F

NOTE: Motor Start-Up AMPS may vary, then settle within FULL LOAD AMPS rating after initial run in time.

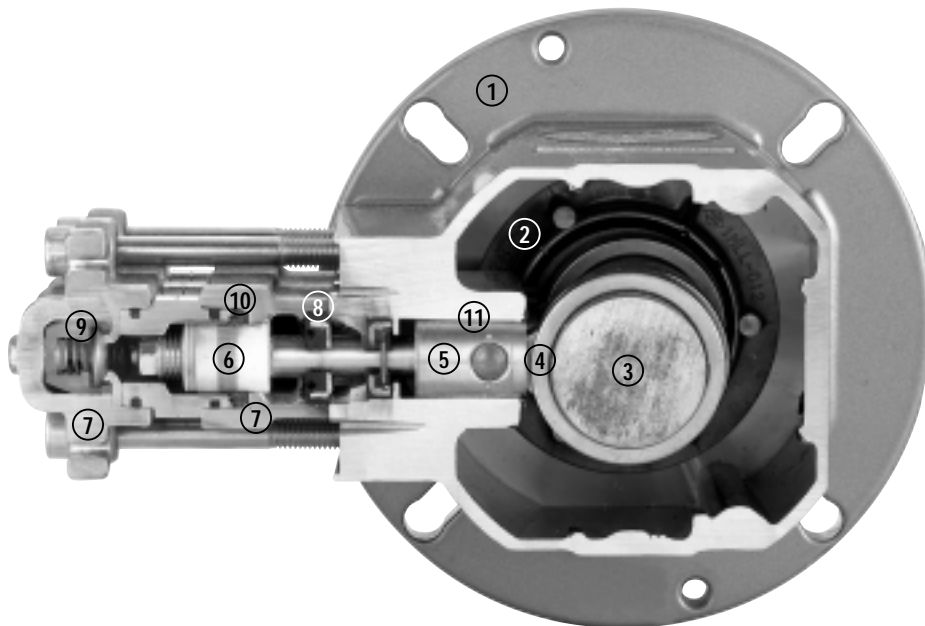
★ ★ Before mounting pump on motor, apply P.N. 6106 Antiseize Lubricant to pump shaft. ★ ★ Refer to Tech Bulletin 055 for instructions on removing pump from electric motor. For warranty consideration contact CAT PUMPS for the local **Authorized Service Center**. If you are uncertain as to the cause of failure (Pump or Motor), secure **Returned Goods Authorization number** and return complete assembly **PREPAID** to CAT PUMPS for evaluation.

ELECTRIC HORSEPOWER REQUIREMENTS					
FLOW		PRESSURE PSI (BAR)			PUMP RPM
U.S. GPM	Metric L/M	700 (50)	1000 (70)	1200 (85)	
0.5	1.9	.24	.35	.41	1725
1.0	3.8	.47	.68	.82	1725
1.5	5.7	.72	1.03	1.23	1725
2.5	9.5	1.19	1.71	2.05	1725
2.85	10.8	1.36	2.0	2.3	1725
3.5	13.2	1.67	2.39	2.87	1725

DETERMINING THE REQUIRED H.P.	
$\frac{\text{GPM} \times \text{PSI}}{1460}$	= Electric Brake H.P. Required



Models 2SF05SEEL, 2SF10SEEL, 2SF15SEEL, 2SF25SEEL, 2SF29SEEL, 2SF35SEEL



- | | | |
|---|---|---|
| <p>1 Die cast flange-style aluminum crankcase provides high strength, lightweight, and excellent tolerance control.</p> <p>2 Heavy-duty dual crankshaft bearings provide extended drive-end life.</p> <p>3 Chrome-moly crankshaft provides unmatched strength and surface hardness for long life.</p> <p>4 Matched oversized TNM connecting rods noted for superior tensile strength and bearing quality.</p> | <p>5 Special high strength plunger rods with Zamak crossheads for longevity and corrosion resistant.</p> <p>6 Special concentric, high-density, polished, solid ceramic plungers provide a true wear surface and extended seal life.</p> <p>7 Manifolds are 316L stainless steel for long term continuous duty and corrosion resistance.</p> <p>8 100% wet seal design adds to service life by allowing pumped liquids to cool and lubricate on both sides.</p> | <p>9 Stainless steel valves, seats and springs provide corrosion-resistance, positive seating and long life.</p> <p>10 Unique design and specially formulated Hi-Pressure Seals offer unmatched performance and seal life.</p> <p>11 Crossheads are 360° supported for uncompromising alignment.</p> |
|---|---|---|

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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