Parts Only

Pennant™

Pool Heater
Model PNCP

U.S. Reg. 2,765,423

FOR YOUR SAFETY: This product must be installed and serviced by a professional service technician, qualified in hot water boiler installation and maintenance. Improper installation and/or operation could create carbon monoxide gas in flue gases which could cause serious injury, property damage, or death. Improper installation and/or operation will void the warranty.

⚠WARNING
If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS

- **Do not try to light any appliance.**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Immediately call your gas supplier from a nearby phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

Installation and service must be performed by a qualified installer, service agency, or gas supplier.

⚠ AVERTISSEMENT
Assurez-vous de bien suivres les instructions données dans cette notice pour réduire au minimum le risque d'incendie ou d'explosion ou pour éviter tout dommage matériel, toute blessure ou la mort.

Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre appareil.

QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:

- **Ne pas tenter d'allumer d'appareils.**
- **Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones dansle bâtiment où vous vous trouvez.**
- **Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.**
- **Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le sservice des incendies.**

L'installation et l'entretien doivent être assurés par un installateur ou un service d'entretien qualifié ou par le fournisseur de gaz.

LAARS® Heating Systems Company
A subsidiary of BRADFORD WHITE® Corporation

H2311900D

Item	Description	Size 500	Size 750	Size 1000	Size 1250	Size 1500	Size 1750	Size 2000
	Sheet Metal Components							
	See Figure 10							
1	Panel, Jacket, Side Left	5C3420	5C3420	5C3420	5C3420	5C3420	5C3420	5C3420
2	Panel, Jacket, Side Right	5C3526	5C3526	5C3526	5C3526	5C3526	5C3526	5C3526
3	Panel, Jacket, Front	5C3320	7C3320	10C3320	12C3320			
3	Panel, Jacket, Front, Left					15C3320	17C3320	20C3320
4	Panel, Jacket, Front, Right					15C3320	17C3320	20C3320
5	Panel, Jacket, Rear	5C3220	7C3220	10C3220	12C3220	15C3220	17C3220	20C3220
5A	Panel, Jacket, Rear, Filter Enclosure					15C3026	15C3026	15C3026
6	Panel, Jacket, Top	5C3021	7C3021	10C3021	12C3021			
	Panel, Jacket, Top, Left					15C3021	17C3021	20C3021
7	Panel, Jacket, Top Right					15C3025	17C3025	20C3025
8	Control Door, Access	5C3011	5C3011	5C3011	5C3011	5C3011	5C3011	5C3011
9	Plate, Gas Pipe Seal	5C3304 (2)	5C3304 (2)	10C3304 (2)	20C3304 (2)	20C3304 (2)	20C3304 (2)	20C3304 (2)
10	Plate, Cover, Wiring	5C3502	5C3502	5C3502	5C3502	5C3502	5C3502	5C3502
11	Plate, Vent	5C3004	10C3004	10C3004	20C3004	20C3004	20C3004	20C3004
12	Cover, Vent Plate				20C3006	20C3006	20C3006	20C3006
13	Plate, Cover, Filter	5C3002	5C3002	5C3002	15C3002	15C3002	15C3002	15C3002
14	Collar, Vent	5C3106	10C3100	10C3100	15C3100	15C3100	20C3100	20C3100
15	Air Filter Assembly	5C3700	5C3700	10C3700	15C3700	15C3700	15C3700	20C3700
16	Air Filter	R2014700 (1)	R2014700 (1)	R2014700 (1)	R2014700 (2)	R2014700 (2)	R2014700 (2)	R2014700 (2)
16A	Trim, Jacket, Front	5C3019	7C3019	10C3019	12C3019	15C3019	17C3019	20C3019
16B	Housing, Rain Shield, Pump	5F3015	5F3015	5F3015	5F3015	5F3015	5F3015	5F3015
16C	Cover, Housing, Pump	5F3016	5F3016	5F3016	5F3016	5F3016	5F3016	5F3016
16D	Bracket, Support, Pump Cover	5F3017	5F3017	5F3017	5F3017	5F3017	5F3017	5F3017
	Internal Components							
	See Figures 11 and 12							
17	Base Assembly	5C1020	7C1020	10C1020	12C1020	15C1020	17C1020	20C1020
18	Chamber, Front	5C2003	7C2003	10C2003	12C2003	15C2003	17C2003	20C2003
18A	Chamber, Left Side, Front	5C2015	5C2015	5C2015	5C2015	5C2015	5C2015	5C2015
18B	Chamber, Right Side, Front	5C2016	5C2016	5C2016	5C2016	5C2016	5C2016	5C2016

Item	Description	Size 500	Size 750	Size 1000	Size 1250	Size 1500	Size 1750	Size 2000
19	Chamber, Rear	5C2006	7C2006	10C2006	12C2006	15C2006	17C2006	20C2006
20	Chamber Assembly, Left, Bottom	5C2601	5C2601	5C2601	5C2601	5C2601	5C2601	5C2601
21	Chamber Assembly, Right, Bottom	5C2201	5C2201	5C2201	5C2201	5C2201	5C2201	5C2201
22	Chamber, Top	5C2001	7C2001	10C2001	12C2001	15C2001	17C2001	20C2001
23	Chamber, Side, Top	5C2002	5C2002	5C2002	5C2002	5C2002	5C2002	5C2002
24	Exhaust Plenum	5C2007	10C2007	10C2007	20C2007	20C2007	20C2007	20C2007
25	Bracket, Chamber, Front	5C2009	7C2009	10C2009				
	Bracket, Chamber, Front Left				12C2011	15C2011	17C2011	20C2011
26	Bracket, Chamber, Front Right				12C2009	15C2009	17C2009	20C2009
27	Divider, Chamber, Front						15C2010	20C2002
27A	Divider, Upper, Chamber, Front				15C2005	15C2005		
27B	Divider, Lower, Chamber, Front				15C2002	15C2002		
28	Cover, Chamber	5C2004	7C2004					
	Cover, Chamber, Front Left			10C2004	12C2010	15C2004	17C2010	20C2010
29	Door, Chamber Access	5C2005	5C2005	5C2005	5C2005	5C2005	5C2005	5C2005
		(1)	(1)	(1)	(2)	(2)	(2)	(2)
30	Cover, Chamber, Front Right				12C2008	15C2004	17C2008	20C2008
	Gasket Tape, Rear, Base (43')	R2014500	R2014500	R2014500	R2014500	R2014500	R2014500	R2014500
	Gasket Tape, Front, Base (63')	R2014600	R2014600	R2014600	R2014600	R2014600	R2014600	R2014600
32	Ignitor, Hot Surface, with Gasket	2400-286	2400-286	2400-286	2400-286	2400-286	2400-286	2400-286
		(1)	(1)	(2)	(2)	(2)	(2)	(2)
33	Tile, Side (Right and Left)	T2015601	T2015601	T2015601	T2015601	T2015601	T2015601	T2015601
		(2)	(2)	(2)	(2)	(2)	(2)	(2)
34	Tile, Front	T2017300						
		(1)						
35	Tile, Front, Left Side		T2016200	T2016800	T2016800	T2016800	T2016800	T2016800
			(1)	(1)	(1)	(1)	(1)	(1)
35A	Tile, Front, Right Side		T2016300	T2017100	T2017900	T2017100	T2017900	T2017100
			(1)	(1)	(1)	(1)	(1)	(1)
35B	Tile, Front, Center				T2016900	T2016900	T2016900	T2016900
					(1)	(1)	(2)	(2)
36	Tile, Rear	T2015700						
		(1)						
37	Tile, Rear, Left Side		T2017500	T2016600	T2016600	T2016600	T2016600	T2016600

Item	Description	Size 500	Size 750	Size 1000	Size 1250	Size 1500	Size 1750	Size 2000
			(1)	(1)	(1)	(1)	(1)	(1)
37A	Tile, Rear, Right Side		T2016600	T2016600	T2018100	T2016600	T2018100	T2016600
			(1)	(1)	(1)	(1)	(1)	(1)
37B	Tile, Rear, Center				T2017200	T2017200	T2017200	T2017200
					(1)	(1)	(2)	(2)
38	Tile, Bottom	T2015500						
		(1)						
39	Tile, Bottom, Left Side		T2017400	T2017400	T2017400	T2017400	T2017400	T2017400
			(1)	(1)	(1)	(1)	(1)	(1)
39A	Tile, Bottom, Right Side		T2016500	T2017400	T2018000	T2017400	T2018000	T2017400
			(1)	(1)	(1)	(1)	(1)	(1)
39B	Tile, Bottom, Center				T2015900	T2015900	T2015900	T2015900
					(1)	(1)	(2)	(2)
41	Heat Exchanger, Copper	R2014901	R2014902	R2014903	R2026701	R2014904	R2026702	R2014905
	Heat Exchanger, Cupro-Nickel	R2027801	R2027802	R2027803	R2027804	R2027805	R2027806	R2027807
42	Water Barrier, Inlet/outlet	20230103	20230103	20230103	20230103	20230103	20230103	20230103
43	Water Barrier, Inlet	10338300	10338300	10338300	10338300	10338300	10338300	10338300
44	Gasket, Header	S0095100	S0095100	S0095100	S0095100	S0095100	S0095100	S0095100
		(2)	(2)	(2)	(2)	(2)	(2)	(2)
45	Cover, In/Out, Glass-Lined Cast Iron	10364504	10364504	10364504	10364504	10364504	10364504	10364504
	Cover, In/Out, Bronze	10364501	10364501	10364501	10364501	10364501	10364501	10364501
46	Well, Temperature Control	RE2058300	RE2058300	RE2058300	RE2058300	RE2058300	RE2058300	RE2058300
47	Gasket, Flange	S0063700	S0063700	S0063700	S0063700	S0063700	S0063700	S0063700
		(2)	(2)	(2)	(2)	(2)	(2)	(2)
48	Flange, Cast Iron	10391302	10391302	10391302	10391302	10391302	10391302	10391302
	Flange, Bronze	20255401	20255401	20255401	20255401	20255401	20255401	20255401
49	Relief Valve, PNCH, 75 PSI	A0063300	A0063600	A0063600	A0063600	A0063600	A0002700	A0002700
	Relief Valve, PNCV, 125 PSI	RA0001200	RA0001200	RA0001200	RA0001200	A0064400	A0064400	A0066400
50	Tee, Adapter, Outlet, Cast Iron	20150302	20150302	20150302	20150302	20150302	20150313	20150313
	Tee, Adapter, Outlet, Bronze	20150301	20150301	20150301	20150301	20150301	20150301	20150303
51	Flow Switch	RE0013000	RE0013000	RE0013000	RE0013000	RE0013000	RE0013000	RE0013000
52	Gauge, Temperature/Pressure	RA0079000	RA0079000	RA0079000	RA0079000	RA0079000	RA0079000	RA0079000
54	Low Water Cutoff	E2076500	E2076500	E2076500	E2076500	E2076500	E2076500	E2076500
55	Pump Housing, Glass-lined, Cast Iron	R20607600	R20607600	R20607600	R20607600	R20607600	R20607600	R20607600
	Pump Housing, Bronze	10483300	10483300	10483300	10483300	10483300	10483300	10483300

Item	Description	Size 500	Size 750	Size 1000	Size 1250	Size 1500	Size 1750	Size 2000
56	Gasket, Pump Adapter	*not used on current production (was S0024600)*						
57	Pump Adapter, Glass-lined Cast Iron	*not used on current production (was 10364200)*						
	Pump Adapter, Bronze	10364201	10364201	10364201	10364201	10364201	10364201	10364201
58	Baffle, Diffuser, Pump Inlet	10338400	10338400	10338400	10338400	10338400	10338400	10338400
59	Pressure Switch	RE0240900 (2)	RE0240900 (2)	RE0240900 (2)	RE0240900 (3)	RE0240900 (3)	RE0240900 (3)	RE0240900 (3)
60	Blower	R2060900 (1)	R2060900 (1)	R2060900 (1)	R2060900 (2)	R2060900 (2)	R2060900 (2)	R2060900 (2)
61	Weldment, Blower Mount	5C5300 (1)	5C5300 (1)	5C5300 (1)	5C5300 (2)	5C5300 (2)	5C5300 (2)	5C5300 (2)
62	Damper, Duct Assembly, Blower				15C5400 (2)	15C5400 (2)	15C5400 (2)	15C5400 (2)
	Electrical Components							
	See Figure 12A							
64	Bracket, Control Panel Mounting	5C7103	5C7103	5C7103	5C7103	5C7103	5C7103	5C7103
65	Terminal Board, Field Wiring	E2307400	E2307400	E2307400	E2307400	E2307400	E2307400	E2307400
66	Ignition Control, Single Try, CSD-1	E2107300 (1)	E2107300 (1)	E2107300 (2)	E2107300 (2)	E2107300 (2)	E2107300 (2)	E2107300 (2)
66A	Igniltion Control, 3-Try, non-CSD-1	E2313900 (1)	E2313900 (1)	E2313900 (2)	E2313900 (2)	E2313900 (2)	E2313900 (2)	E2313900 (2)
67	Diagnostic Board	E2105500	E2105500	E2105500	E2105500	E2105500	E2105500	E2105500
68	Indicator Light Panel Board	E2105600	E2105600	E2105600	E2105600	E2105600	E2105600	E2105600
69	Temperature Control	E2321700	E2321700	E2321700	E2321700	E2321700	E2321700	E2321700
70	High Limit, Auto Reset, 200°F	E2217700	E2217700	E2217700	E2217700	E2217700	E2217700	E2217700
71	High Limit, Auto Reset, 135°F	E2104800	E2104800	E2104800	E2104800	E2104800	E2104800	E2104800
72	Relay, Pump (SPST)	E0098300	E0098300	E0098300	E0098300	E0098300	E0098300	E0098300
	Relay, Fan (DPDT)				E0076600 (2)	E0076600 (2)	E0076600 (2)	E0076600 (2)
74	Transformer	E2310400	E2310400	E2310400	E2312800 (2)	E2312800 (2)	E2312800 (2)	E2312800 (2)
75A	Circuit Breaker (non-CSD-1)	E22106200	E22106200	E22106200	E2318800	E2318800	E2318900	E2318900
	Circuit Breaker, CSD-1	E22106200	E2318800	E2318800	E2318900	E2318900	E2318900	E2318900
75B	Switch, Rocker, 30A, 125VAC	E2343300	E2343300	E2343300	E2343300	E2343300	E2343300	E2343300
	Sensor, Universal (shipped loose)	R2014800	R2014800	R2014800	R2014800	R2014800	R2014800	R2014800

Item	Description	Size 500	Size 750	Size 1000	Size 1250	Size 1500	Size 1750	Size 2000
	Gas Train Components							
	See Figure 10							
76	Manifold, Gas Supply	5C6700	7C6700	10C6700	12C6700	15C6700	17C6700	20C6700
77	Valve, Ball	V2003100	V2003100	R2003700	R2011600	R2011600	R2011600	R2011600
	Burner Trays							
	Note: Burner Tray Assemblies contain item numbers 78 through 81.							
	Burner Manifold Assy, 3 Burners, Right, Nat	5C6600 (1)	5C6600 (1)		5C6600 (2)	5C6600 (1)	5C6600 (1)	
	Burner Manifold Assy, 3 Burners, Left, Nat	5C6500 (1)	5C6500 (2)		5C6500 (3)	5C6500 (1)	5C6500 (2)	
	Burner Manifold Assy, 4 Burners, Right, Nat			10C6600 (1)		10C6600 (1)	10C6600 (1)	10C6600 (2)
	Burner Manifold Assy, 4 Burners, Left, Nat			10C6500 (2)		10C6500 (2)	10C6500 (2)	10C6500 (4)
	Burner Manifold Assy, 3 Burners, Right, LP	5C6620 (1)	5C6620 (1)		5C6620 (2)	5C6620 (1)	5C6620 (1)	
	Burner Manifold Assy, 3 Burners, Left, LP	5C6520 (1)	5C6520 (1)		5C6520 (3)	5C6520 (1)	5C6500 (2)	
	Burner Manifold Assy, 4 Burners, Right, LP			10C6620 (1)		10C6620 (1)	10C6620 (1)	10C6620 (2)
	Burner Manifold Assy, 4 Burners, Left, LP			10C6520 (2)		10C6520 (2)	10C6520 (2)	10C6520 (4)
78	Valve, Gas, Combination	V2017600 (2)	V2017600 (3)	V2017600 (3)	V2017600 (5)	V2017600 (5)	V2017600 (6)	V2017600 (6)
79	Valve, Manual Shutoff	V2000200 (2)	V2000200 (3)	V2000200 (3)	V2000200 (5)	V2000200 (5)	V2000200 (6)	V2000200 (6)
80	Orifice, Gas, Natural	L2013000 (6)	L2013000 (9)	L2013000 (12)	L2013000 (15)	L2013000 (18)	L2013000 (21)	L2013000 (24)
	Orifice, Gas, Propane	L2012400 (6)	L2012400 (9)	L2012400 (12)	L2012400 (15)	L2012400 (18)	L2012400 (21)	L2012400 (24)
81	Burner Manifold, 3 Burners, Right	L2012900 (1)	L2012900 (1)		L2012900 (2)	L2012900 (1)	L2012900 (1)	

Item	Description	Size 500	Size 750	Size 1000	Size 1250	Size 1500	Size 1750	Size 2000
	Burner Manifold, 3 Burners, Left	L2012800 (1)	L2012800 (2)		L2012800 (3)	L2012800 (1)	L2012800 (2)	
	Burner Manifold, 4 Burners, Right			L2012700 (1)		L2012700 (1)	L2012700 (1)	L2012700 (2)
	Burner Manifold, 4 Burners, Left			L2012600 (2)		L2012600 (2)	L2012600 (2)	L2012600 (4)
82	Burner Tray, 3 Burners	L2012200 (2)	L2012200 (3)		L2012200 (5)	L2012200 (2)	L2012200 (3)	
	Burner Tray, 4 Burners			L2012500 (3)		L2012500 (3)	L2012500 (3)	L2012500 (6)
82A	Gasket, Burner Tray, 3 Burner	S2012700 (2)	S2012700 (3)		S2012700 (5)	S2012700 (2)	S2012700 (3)	
	Gasket, Burner Tray, 4 Burner			S2012500 (3)		S2012500 (3)	S2012500 (3)	S2012500 (6)

Figure 10. Sheet Metal Components.

Figure 11. Internal Components.

Enlargement from previous page

Figure 12. Heat Exchanger Components.

SECTION 10.
Wiring Diagrams

Figure 13. Pennant 500 - 1000 Ladder Diagram.

Figure 14. Pennant 1250 - 2000 Ladder Diagram.

Figure 15. Pennant 500 - 1000 Wiring Schematic.

Figure 16. Pennant 1250 - 1500 Wiring Schematic.

Figure 17. Pennant 1750 - 2000 Wiring Schematic.

Figure 18. Field Wiring.

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Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

Heating Systems Company
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