

YORK FAULT CODE QUICK REFERENCE CHART

Fault Code	YorkGuard® Heat Pump	Gas Packs board	80% & 90% standard	80% & 90% standard	80% & 90% 2-stage	Variable speed
Continuous Flash	Normal operation	Ignition attempts or recycles	Flame sensed with gas off	Flame sensed with gas off	Flame sensed with gas off	Flame sensed with gas off
Rapid flash	NOT USED	NOT USED	Incorrect 24V phasing of twinning error	NOT USED	NOT USED	NOT USED
2-flash	Discharge pressure reaches 400 psig	Compressor low pressure switch open	Pressure switch stuck closed	Pressure switch stuck closed	Pressure switch stuck closed	Pressure switch stuck closed
3-flash	Discharge temp. reaches 275°	Compressor high pressure switch open	Pressure switch stuck open	Pressure switch stuck open	Pressure switch stuck open	Pressure switch stuck open
4-flash	Discharge temp. did not reach 90° within one hour of operation	Flue inducer centrifugal switch open (fault) or closed (fault)	Limit open	Limit open	Limit or roll-out switch open	Limit or roll-out switch open
5-flash	Two default defrosts within one hour	Roll-out switch open	Roll-out open	Roll-out open	NOT USED	NOT USED
6-flash	Discharge sensor failed	Furnace high limit switch open	Pressure switch opened 4 times during a call for heat	Pressure switch opened 5 times during a call for heat	Pressure switch opened 5 times during a call for heat	Pressure switch opened 5 times during a call for heat
7-flashes	Outdoor sensor failed	(optional) Heating mode 1 hour waiting period for auto reset from flame failure to lockout	No flame sensed at start of cycle	No flame sensed at start of cycle	No flame sensed at start of cycle	No flame sensed at start of cycle
8-flashes	Liquid sensor failed	NOT USED	Flame sensed but lost 5 times during a single cycle	Flame sensed but lost 5 times during a single cycle	Flame sensed but lost 5 times during a single cycle	Flame sensed but lost 5 times during a single cycle
9-flashes	Bonnet sensor shorted	NOT USED	Reversed line polarity	NOT USED	NOT USED	NOT USED
11-flashes	NOT USED	NOT USED	Broken roll-out sensor (when used) or improper ground	NOT USED	NOT USED	NOT USED
Steady On	NOT USED	Board failure	Internal fault	Internal fault	Internal fault	Internal fault
Steady Off	No power to the board	Normal operation	Normal operation	Normal operation	Normal operation	Normal operation

Most faults will reset themselves or will be reset by the 1-hour "Watch-Dog" circuit. Auxiliary limits and roll-outs are MANUAL reset. Continuous Flash and Continuous ON are "Hard Lock Outs". To reset any condition, turn power off for 30 seconds and then back on.

**Flow of Gas
Through Fixed Orifices**

LP Gases

	Propane	Butane
BTU per Cu. Ft.	2516	3280
Specific Gravity	1.52	2.01
Pressure @ Orifice, In. W.C.	11	11
Orifice Coefficient	0.9	0.9

Orifice or Drill Size	BTUH @ Sea Level (Propane)
70	6375
69	6934
68	7813
67	8320
66	8848
65	9955
64	10,535
63	11,125
62	11,735
61	12,367
60	13,008
59	13,660
58	14,333
57	15,026
56	17,572
55	21,939
54	24,630
53	28,769
52	32,805
51	36,531
50	39,842
49	43,361
48	46,983
47	50,088
46	53,296
45	54,641
44	60,229
43	64,369
42	71,095
41	74,294
40	78,029
39	80,513
38	83,721
37	87,860
36	92,207
35	98,312
34	100,175
33	103,797
32	109,385
31	117,043
30	134,119
29	150,366
28	160,301
27	168,580

Utility Gases

Specific Gravity	0.60
Orifice Coefficient	0.90

Orifice or Drill Size	Pressure Cu. Ft./Hr. @ Sea Level			
	3" W.C.	3.5" W.C.	4" W.C.	5" W.C.
50	12.89	13.92	14.94	16.86
49	14.07	15.20	16.28	18.37
48	15.15	16.36	17.62	19.88
47	16.22	17.52	18.80	21.27
46	17.19	18.57	19.98	22.57
45	17.73	19.15	20.52	23.10
44	19.45	21.01	22.57	25.57
43	20.73	22.39	24.18	27.29
42	23.10	24.95	26.50	29.50
41	24.06	25.98	28.15	31.69
40	25.03	27.03	29.23	33.09
39	26.11	28.20	30.20	34.05
38	27.08	29.25	31.38	35.46
37	28.36	30.63	32.99	37.07
36	29.76	32.14	34.59	39.11
35	32.36	34.95	36.86	41.68
34	32.45	35.05	37.50	42.44
33	33.41	36.08	38.79	43.83
32	35.46	38.30	40.94	46.52
31	37.82	40.85	43.83	49.64
30	43.40	46.87	50.39	57.05
29	48.45	52.33	56.19	63.61
28	51.78	55.92	59.50	67.00
27	54.47	58.83	63.17	71.55
26	56.73	61.27	65.86	74.57
25	58.87	63.58	68.22	77.14
24	60.81	65.67	70.58	79.83
23	62.10	67.07	72.20	81.65
22	64.89	70.08	75.21	85.10
21	66.51	71.83	77.14	87.35
20	68.22	73.68	79.08	89.49
19	72.20	77.98	83.69	94.76
18	75.53	81.57	87.56	97.50
17	78.54	84.82	91.10	103.14
16	82.19	88.77	95.40	107.98
15	85.20	92.02	98.84	111.74
14	87.10	94.40	100.78	114.21
13	89.92	97.11	104.32	118.18
12	93.90	101.41	108.52	123.56
11	95.94	103.62	111.31	126.02
10	98.30	106.16	114.21	129.25
9	100.99	109.07	117.11	132.58
8	103.89	112.20	120.65	136.44
7	105.93	114.40	123.01	139.23
6	109.15	117.88	126.78	142.88
5	111.08	119.97	128.93	145.79

$$\text{Original Pressure} \times \left(\frac{\text{Reduced Capacity}}{\text{Original Capacity}} \right)^2 = \text{Reduced Pressure}$$

$$\text{Original Capacity} \times \sqrt{\frac{\text{Reduced Pressure}}{\text{Original Pressure}}} = \text{Reduced Capacity}$$

**York Commercial
HVAC Equipment**

"Simplicity Control"

Unit Control Board Flash Codes

Flash Code	Desc.
On Steady	Control failure – replace control
Heart Beat	Normal operation
1 Flash	N/A
2 Flashes	Control waiting ASCD*
3 Flashes	HPS1 – compressor lockout
4 Flashes	HPS2 – compressor lockout
5 Flashes	LPS1 – compressor lockout
6 Flashes	LPS2 – compressor lockout
7 Flashes	FS1 – compressor lockout
8 Flashes	FS2 – compressor lockout
9 Flashes	Ignition control locked out; ignition control failure; limit switch trip; no jumper plug in heat section
10 Flashes	Compressors locked out on low outdoor air temperature*
11 Flashes	Compressors locked out; economizer using free cooling*
12 Flashes	Fan overload switch trip
13 Flashes	Compressor held off; low voltage*
14 Flashes	EEPROM storage failure (control failure)
OFF	No power; control failure

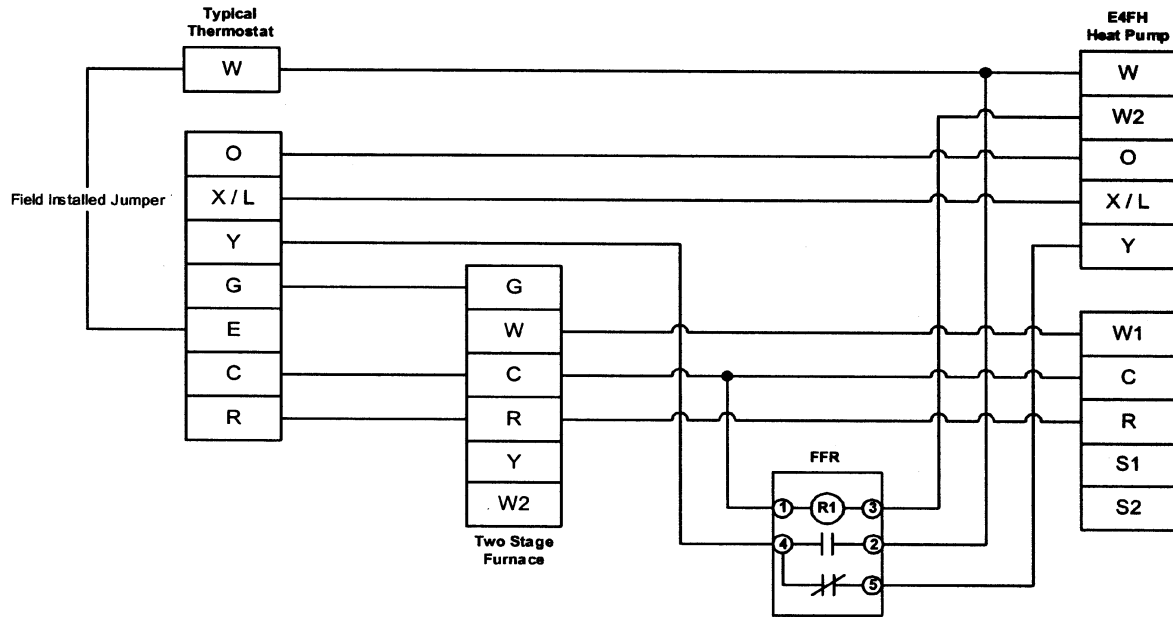
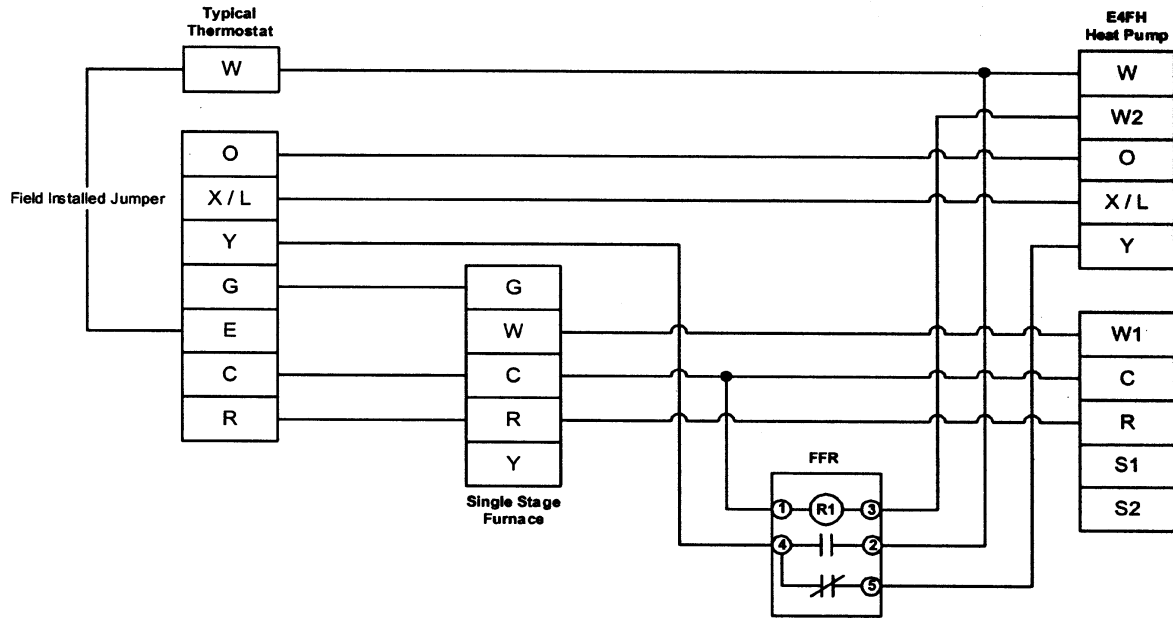
* Flash code does not represent alarm.

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Fossil Fuel Relay

Heat Pumps with York Guard V



E4FH heat pump using fossil fuel relay in place of bonnet sensor

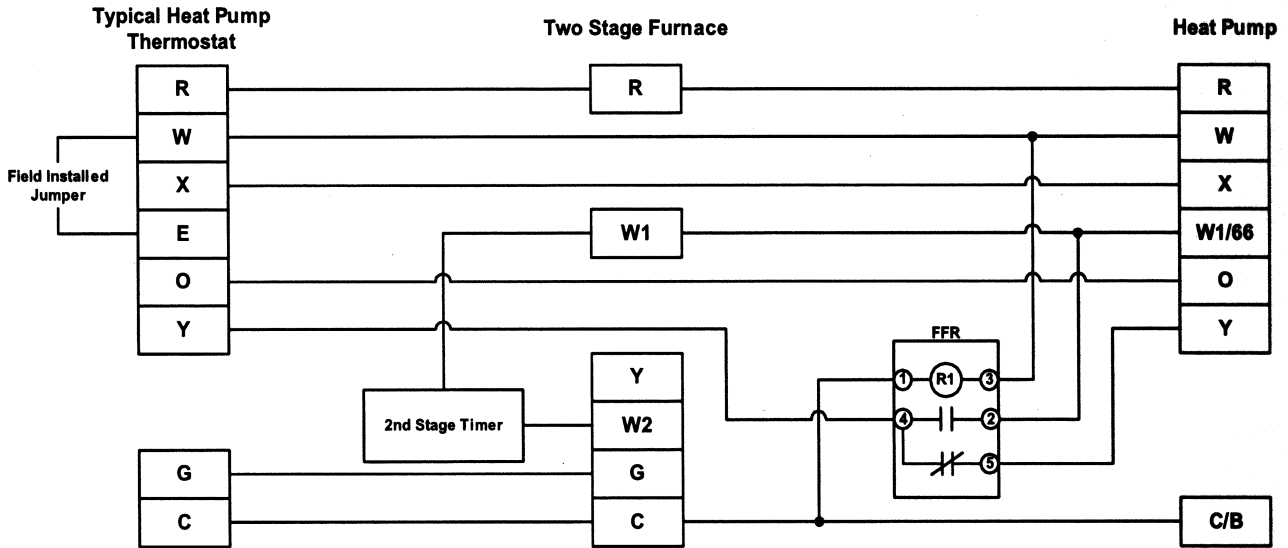
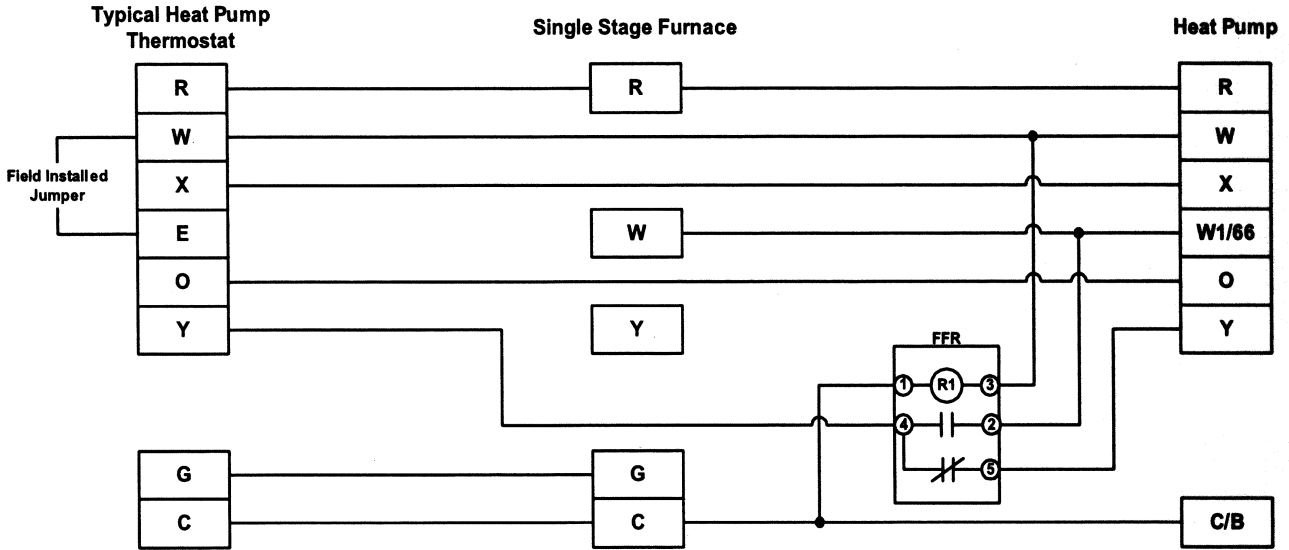
Note: This diagram is for 2-stage furnaces. Use timer in furnace to control 2nd stage operation.

IMPORTANT NOTICE:

This information is for reference only. Read and follow all manufacturer's installation instructions. All installations shall be in accordance with all applicable codes, standards, rules and requirements. This information for use only by licensed, qualified technicians and HVAC/R professionals.

Fossil Fuel Relay

Heat Pumps without York Guard V



Fossil fuel relay in dual-fuel system

Note: This diagram is for 2-stage furnaces. Use timer in furnace to control 2nd stage operation.

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