



wiring diagrams

12 SEER SPLIT-SYSTEM AIR CONDITIONERS SIZES 018-060 208/230V, 1 PHASE, 60 HERTZ

563C
563G

Cancels: WD 563C.18.1 WD 563C.18.2
2-04

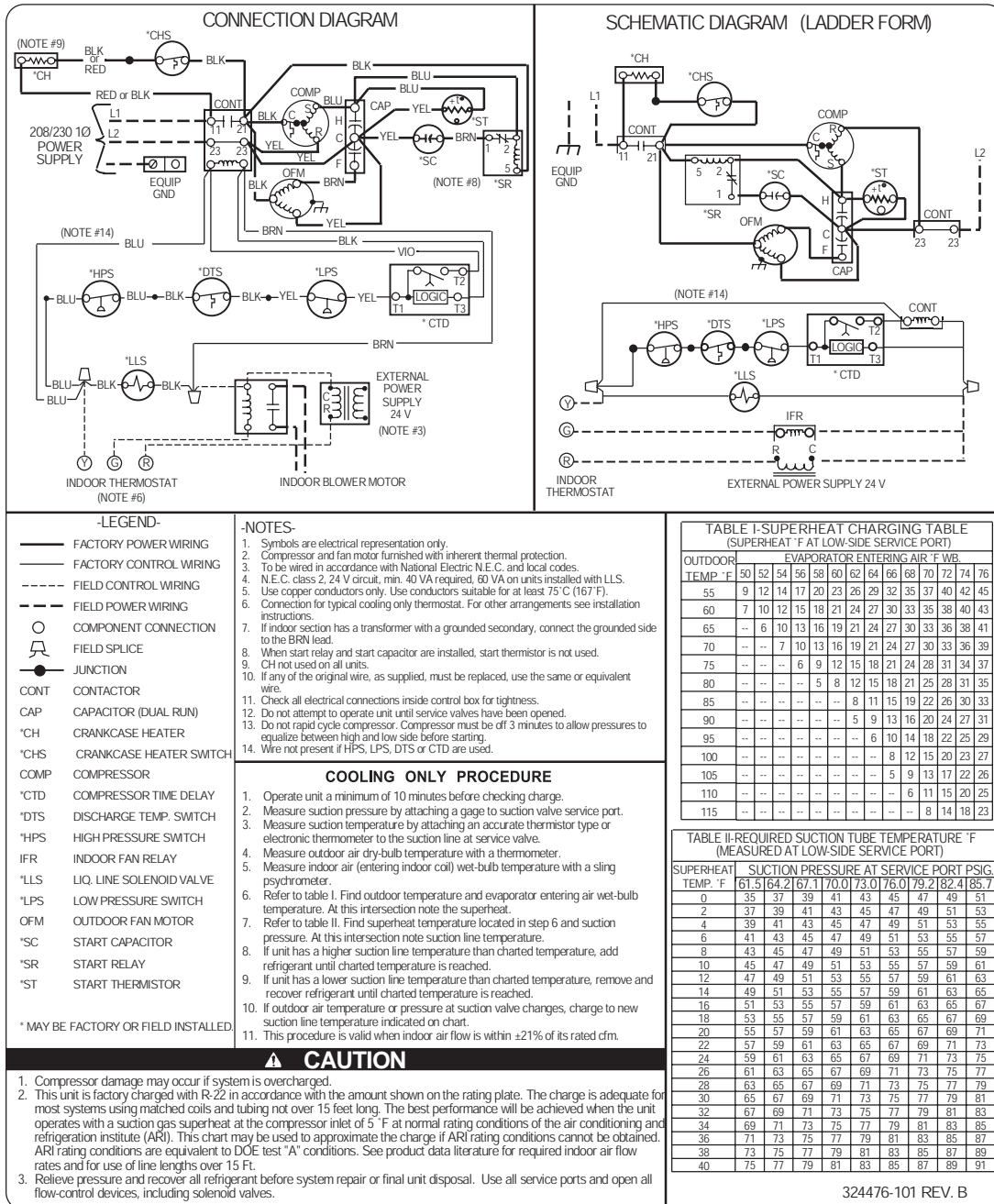
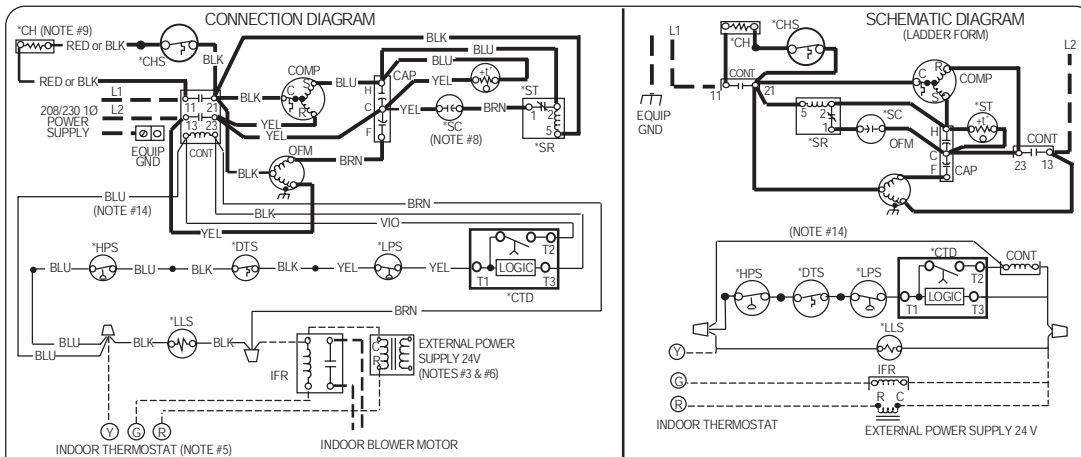


Fig. 1—563C and 563G 018-048 208/230v, 1 Phase, 60 Hertz

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- LEGEND-**
- FACTORY POWER WIRING
 - FACTORY CONTROL WIRING
 - FIELD CONTROL WIRING
 - FIELD POWER WIRING
 - COMPONENT CONNECTION
 - ⌚ FIELD SPlice
 - JUNCTION
 - CONT CONTACTOR
 - CAP CAPACITOR (DUAL RUN)
 - *CH CRANKCASE HEATER
 - *CHS CRANKCASE HEATER SWITCH
 - COMP COMPRESSOR
 - *CTD COMPRESSOR TIME DELAY
 - *DTS DISCHARGE TEMP. SWITCH
 - *HPS HIGH PRESSURE SWITCH
 - IFR INDOOR FAN RELAY
 - *LLS LIQ. LINE SOLENOID VALVE
 - *LPS LOW PRESSURE SWITCH
 - OFM OUTDOOR FAN MOTOR
 - *SC START CAPACITOR
 - *SR START RELAY
 - *ST START THERMISTOR
- * MAY BE FACTORY OR FIELD INSTALLED.

- NOTES:**
1. Symbols are electrical representation only.
 2. Compressor and fan motor furnished with inherent thermal protection.
 3. To be wired in accordance with National Electric N.E.C. and local codes.
 4. N.E.C. class 2, 24 V circuit, min. 40 VA required, 60 VA on units installed with LLS.
 5. Use copper conductors only.
 6. Connection for typical cooling only thermostat, for other arrangements, see installation instructions.
 7. If indoor section has a transformer with a grounded secondary, connect the grounded side to the BRN lead.
 8. When start relay and start capacitor are installed, start thermistor is not used.
 9. CH not used on all units.
 10. If any of the original wire, as supplied, must be replaced, use the same or equivalent wire.
 11. Check all electrical connections inside control box for tightness.
 12. Do not attempt to operate unit until service valves have been opened.
 13. Do not rapid cycle compressor. Compressor must be off 3 minutes to allow pressures to equalize between high and low side before starting.
 14. Wire not present if HPS, LPS, DTS or CTD are used.
 15. Use conductors suitable for at least 75 °C (167 °F).

- COOLING ONLY CHARGING PROCEDURE**
1. Operate unit a minimum of 10 minutes before checking charge.
 2. Measure suction pressure by attaching a gage to suction valve service port.
 3. Measure suction temperature by attaching an accurate thermistor type or electronic thermometer to the suction line at service valve.
 4. Measure outdoor air dry-bulb temperature with a thermometer.
 5. Measure indoor air (entering indoor coil) wet-bulb temperature with a sling psychrometer.
 6. Refer to table I. Find outdoor temperature and evaporator entering air wet-bulb temperature, at this intersection note the superheat.
 7. Refer to table II. Find superheat temperature located in step 6 and suction pressure, at this intersection note suction line temperature.
 8. If unit has a higher suction line temperature than charted temperature, add refrigerant until charted temperature is reached.
 9. If unit has a lower suction line temperature than charted temperature, remove and recover refrigerant until charted temperature is reached.
 10. If outdoor air temperature or pressure at suction valve changes, charge to new suction line temperature indicated on chart.
 11. This procedure is valid when indoor air flow is within ±21% of its rated CFM.

TABLE I-SUPERHEAT CHARGING TABLE (SUPERHEAT °F AT LOW-SIDE SERVICE PORT)

OUTDOOR TEMP °F	EVAPORATOR ENTERING AIR °F WB.													
	50	52	54	56	58	60	62	64	66	68	70	72	74	76
55	9	12	14	17	20	23	26	29	32	35	37	40	42	45
60	7	10	12	15	18	21	24	27	30	33	35	38	40	43
65	--	6	10	13	16	19	21	24	27	30	33	36	38	41
70	--	--	7	10	13	16	19	21	24	27	30	33	36	39
75	--	--	--	6	9	12	15	18	21	24	28	31	34	37
80	--	--	--	--	5	8	12	15	18	21	25	28	31	35
85	--	--	--	--	--	8	11	15	19	22	26	30	33	37
90	--	--	--	--	--	--	5	9	13	16	20	24	27	31
95	--	--	--	--	--	--	--	6	10	14	18	22	25	29
100	--	--	--	--	--	--	--	--	8	12	15	20	23	27
105	--	--	--	--	--	--	--	--	--	5	9	13	17	22
110	--	--	--	--	--	--	--	--	--	--	6	11	15	20
115	--	--	--	--	--	--	--	--	--	--	--	8	14	23

TABLE II-REQUIRED SUCTION TUBE TEMPERATURE °F (MEASURED AT LOW-SIDE SERVICE PORT)

SUPERHEAT TEMP. °F	SUCTION PRESSURE AT SERVICE PORT PSIG.								
	61.5	64.2	67.1	70.0	73.0	76.0	79.2	82.4	85.7
0	35	37	39	41	43	45	47	49	51
2	37	39	41	43	45	47	49	51	53
4	39	41	43	45	47	49	51	53	55
6	41	43	45	47	49	51	53	55	57
8	43	45	47	49	51	53	55	57	59
10	45	47	49	51	53	55	57	59	61
12	47	49	51	53	55	57	59	61	63
14	49	51	53	55	57	59	61	63	65
16	51	53	55	57	59	61	63	65	67
18	53	55	57	59	61	63	65	67	69
20	55	57	59	61	63	65	67	69	71
22	57	59	61	63	65	67	69	71	73
24	59	61	63	65	67	69	71	73	75
26	61	63	65	67	69	71	73	75	77
28	63	65	67	69	71	73	75	77	79
30	65	67	69	71	73	75	77	79	81
32	67	69	71	73	75	77	79	81	83
34	69	71	73	75	77	79	81	83	85
36	71	73	75	77	79	81	83	85	87
38	73	75	77	79	81	83	85	87	89
40	75	77	79	81	83	85	87	89	91

CAUTION

1. Compressor damage may occur if system is over charged.
2. This unit is factory charged with R-22 in accordance with the amount shown on the rating plate. The charge is adequate for most systems using matched coils and tubing not over 15 feet long. The best performance will be achieved when the unit operates with a suction gas superheat at the compressor inlet of 5 °F at normal rating conditions of the air conditioning and refrigeration institute (ARI). This chart may be used to approximate the charge if ARI rating conditions cannot be obtained. ARI rating conditions are equivalent to DOE test "A" conditions. See product data literature for required indoor air flow rates and for use of line lengths over 15 ft.
3. Relieve pressure and recover all refrigerant before system repair or final unit disposal. Use all service ports and open all flow-control devices, including solenoid valves.

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Fig. 2—563C and 563G 060 208/230v, 1 Phase, 60 Hertz