



Air-Cooled Condensing Units

INDEX

MODEL	V/PH (60-Hz)	LABEL DIAGRAM		STARTING SERIAL NO.
		Fig.	No.	
38GR	002301 002311 003301 003311 004301 004311	230/1	1	38GR503404
	003411 003511 004411 004511	200/3 230/3 200/3 230/3	2	38GR502464
	004611	460/3	3	38GR502474
	045301 045311	230/1	4	38GR502444
	045401 045411	200/3	2	38GR502464
	045501 045511	230/3		
	045601 045611	460/3	3	38GR502474
	005301 005311	230/1	5	38GR502434
	005401 005411	200/3	6	38GR502484
	005501 005511	230/3		
	005601 005611	460/3	7	38GR502494
	006301 006311	230/1	8	38GR502454
	006401 006411	200/3	6	38GR502484
	006501 006511	230/3		
	006601 006611	460/3	7	38GR502494
38SE	002300 003300 004300	230/1	9 10	38SE500194 38SE500184

B433200

A415951

NOTES

- Compressor and fan motor thermally protected.
- Power required for control relay, 24-volt, NEC, Class 2 circuit, 10 va
- CPCS set to trip at 140% compressor full load amps (See table below for trip amp values)

MODEL	COMPRESSOR PROTECTION CONTROL SYSTEM NO.	TRIP AMPS
002301 002311	38GR500474	20.7
003301 003311	38GR500484	26.8
004301 004311	38GR500494	32.0
003411	38GR500664	18.2
003511	38GR500674	16.1
004411	38GR500684	19.6
004511	38GR500694	17.6
004611	38GR500704	9.1
045301 045311 045401 045411 045501 045511 045601 045611	38GR500504 38GR503504 38GR500904 38GR500944 38GR500914 38GR500684 38GR500924 38GR501484	37.6 33.5 20.8 22.5 22.1 19.6 10.9 9.98
005301 005311	38GR500514 38GR503514	42.6 39.0
005401 005411	38GR500934	26.0
005501 005511 005601 005611	38GR500944 38GR500914 38GR500954 38GR500994	22.5 22.1 11.6 11.2
006301 006311 006401 006411 006501 006511 006601 006611	38GR500524 38GR503424 38GR500964 38GR500964 38GR500974 38GR503434 38GR500984 38GR500984	54.6 46.8 32.2 32.2 28.6 27.9 14.4 14.4
002300 003300 004300	38GR503344 38GR500474 38GR500484	14.0 20.7 26.8

38GR,SE Control Circuit Connections

Fig 11

LEGEND

C	—	Contactors
CH	—	Crankcase Heater
Comp	—	Compressor
CPCS	—	Compressor Protection Control System
CR	—	Control Relay
CT	—	Current Transformer
FC	—	Fan Capacitor
FM	—	Fan Motor
FT	—	Fan Thermostat
HPS	—	High-Pressure Switch
IFR	—	Indoor Fan Relay
IP	—	Internal Protector
LPS	—	Low-Pressure Switch
QT	—	Quad Terminal
RC	—	Run Capacitor
Recp	—	Receptacle
SC	—	Start Capacitor
SR	—	Start Relay
ST	—	Starting Thermistor
Tran	—	Transformer
TP	—	Thermal Protector

	Component Connections (Marked)
	Component Connections (Unmarked)
	Field Splice
	Junction
	Field Power Wiring
	Field Control Wiring NEC Class 2
	To indicate common potential only Not to represent wire
	Plug Connection
	Receptacle Connection

PHASING TRANSFORMERS FOR 38GR UNITS

When furnace transformer is used together with condensing unit transformer, the transformers may have to be phased. It is always necessary to phase a 2-transformer hookup on an automatic change-over (heating to cooling) system. If transformers are not phased, they may be damaged. Check phasing on the transformers (after system is wired) as follows:

Remove thermostat base from the subbase. Turn power on to system and take a voltage reading between subbase terminals RH and RC or R and 4. If a zero voltage reading is indicated, the transformers are phased. If other than a zero voltage reading is indicated, the transformers are not phased. To phase transformers, shut power off to system and switch position of line power leads to condensing unit. After switching leads, a zero voltage reading at subbase terminals RH and RC or R and 4 should be indicated.

Tag unit near controls to specify that this is a 2-transformer system.

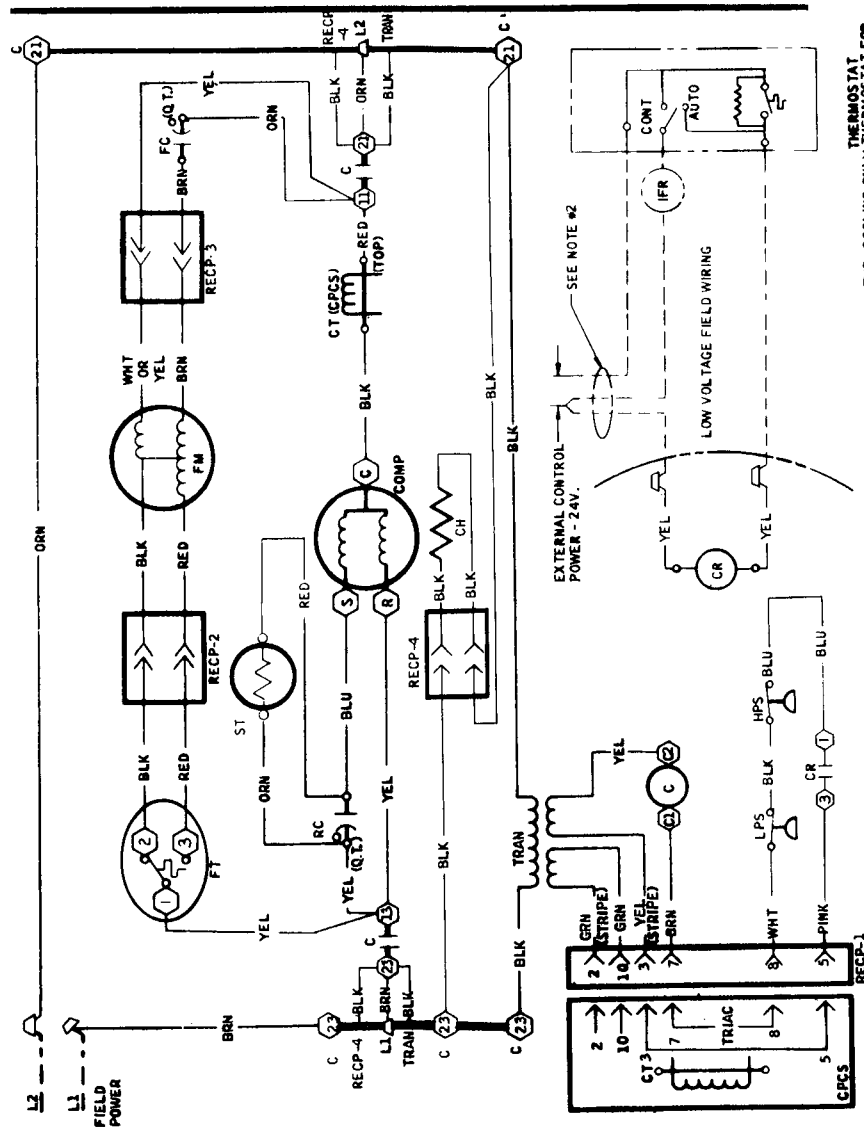
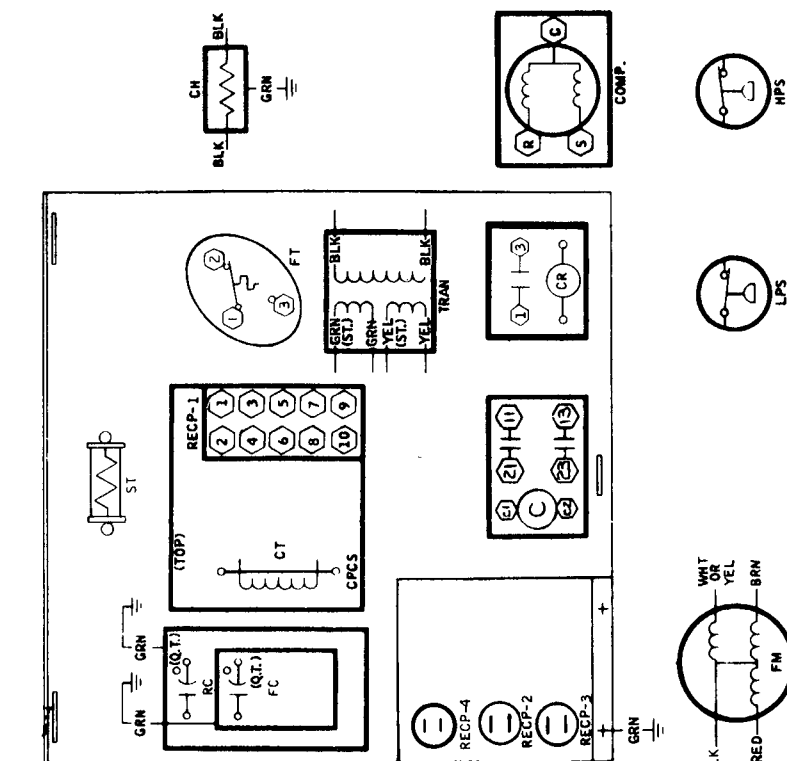


Fig. 1 – 38GR002,003,004 Label Diagram; 230-1-60



COMPONENT ARRANGEMENT

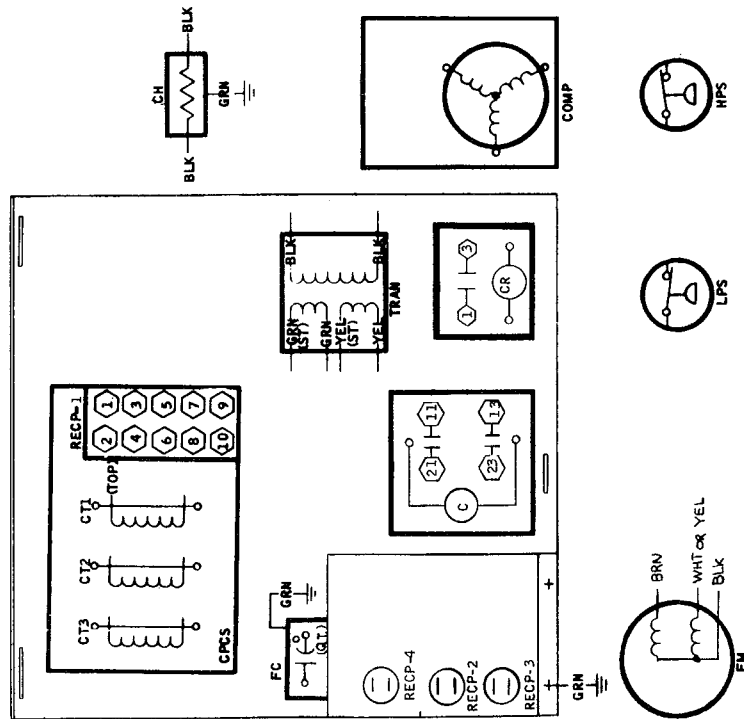


Fig. 2 — 38GR003,004,045 Label Diagram; 200-, 230-3-60

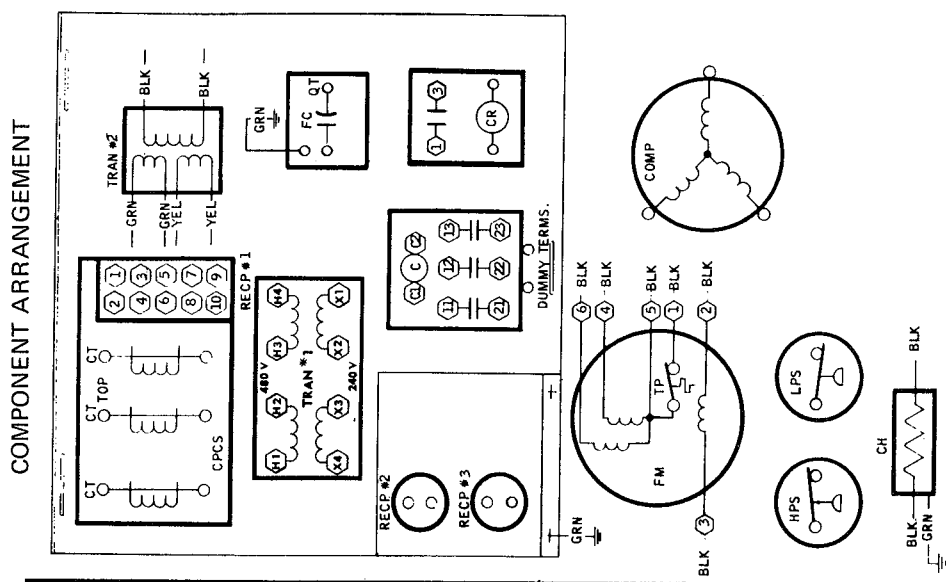
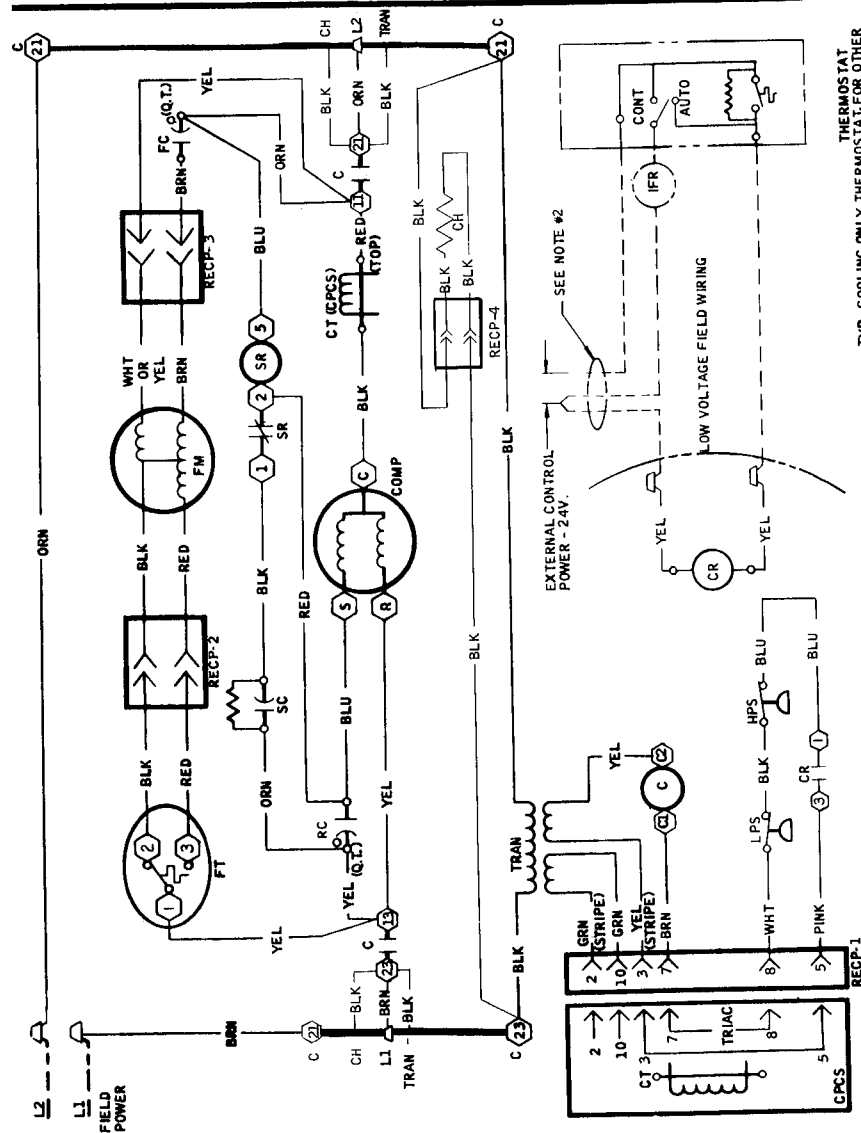


Fig. 3 – 38GR004,045 Label Diagram; 460-3-60

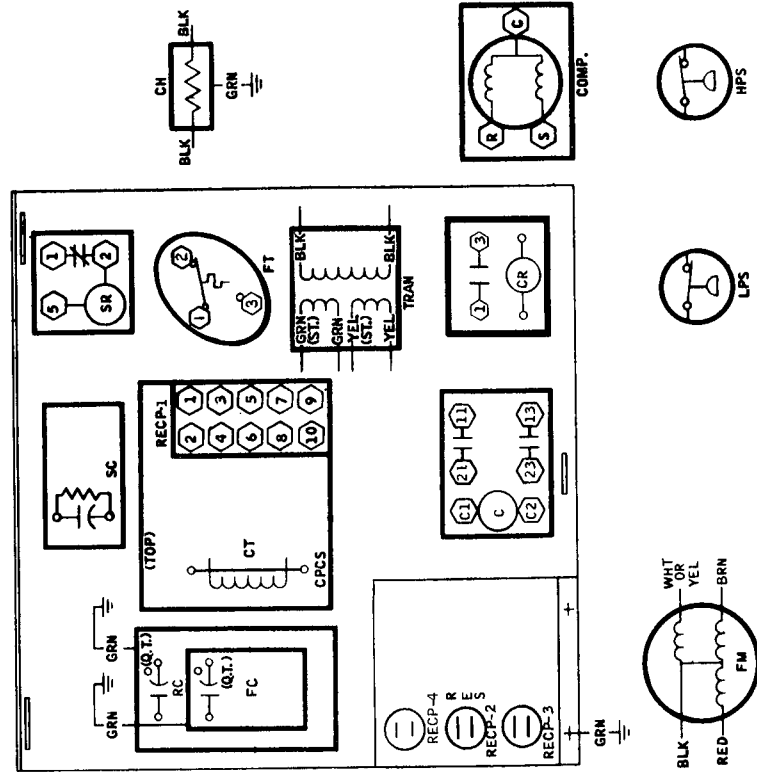
SCHEMATIC DIAGRAM



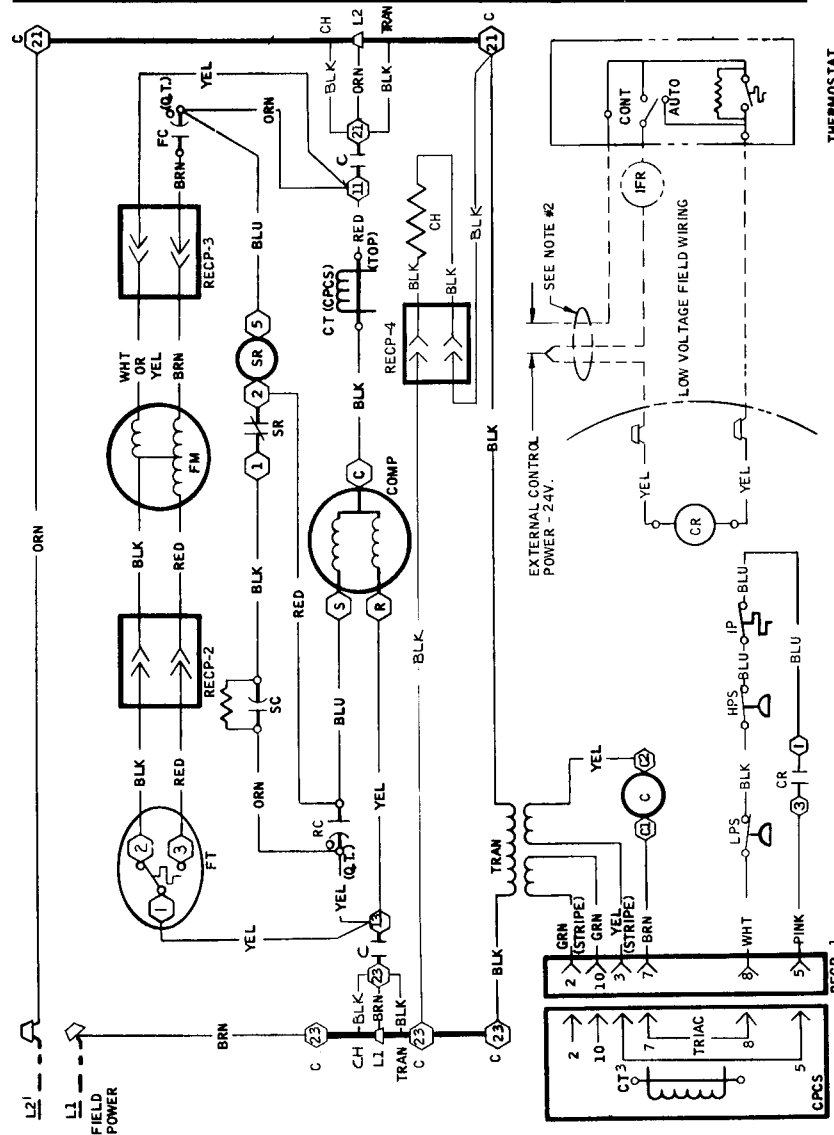
TYP. COOLING ONLY THERMOSTAT FOR OTHER
 ARRANGEMENTS, SEE INSTALLATION INSTRUCTIONS

Fig. 4 — 38GR045 Label Diagram; 230-1-60

COMPONENT ARRANGEMENT



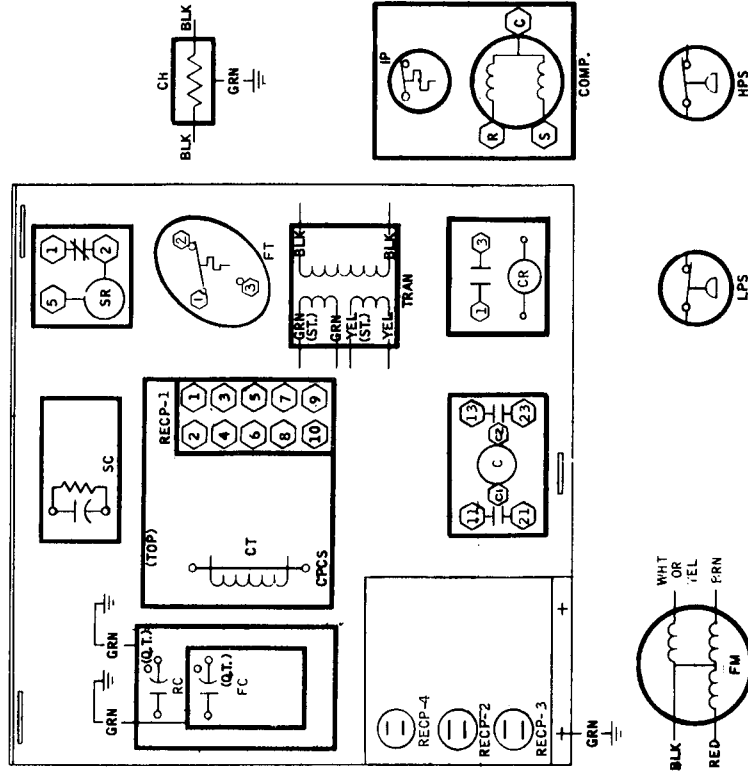
SCHEMATIC DIAGRAM

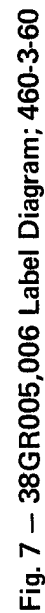
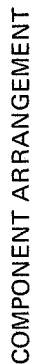


THERMOSTAT
TYP. COOLING ONLY THERMOSTAT FOR
OTHER ARRANGEMENTS. SEE INSTALLA-
TION INSTRUCTIONS.

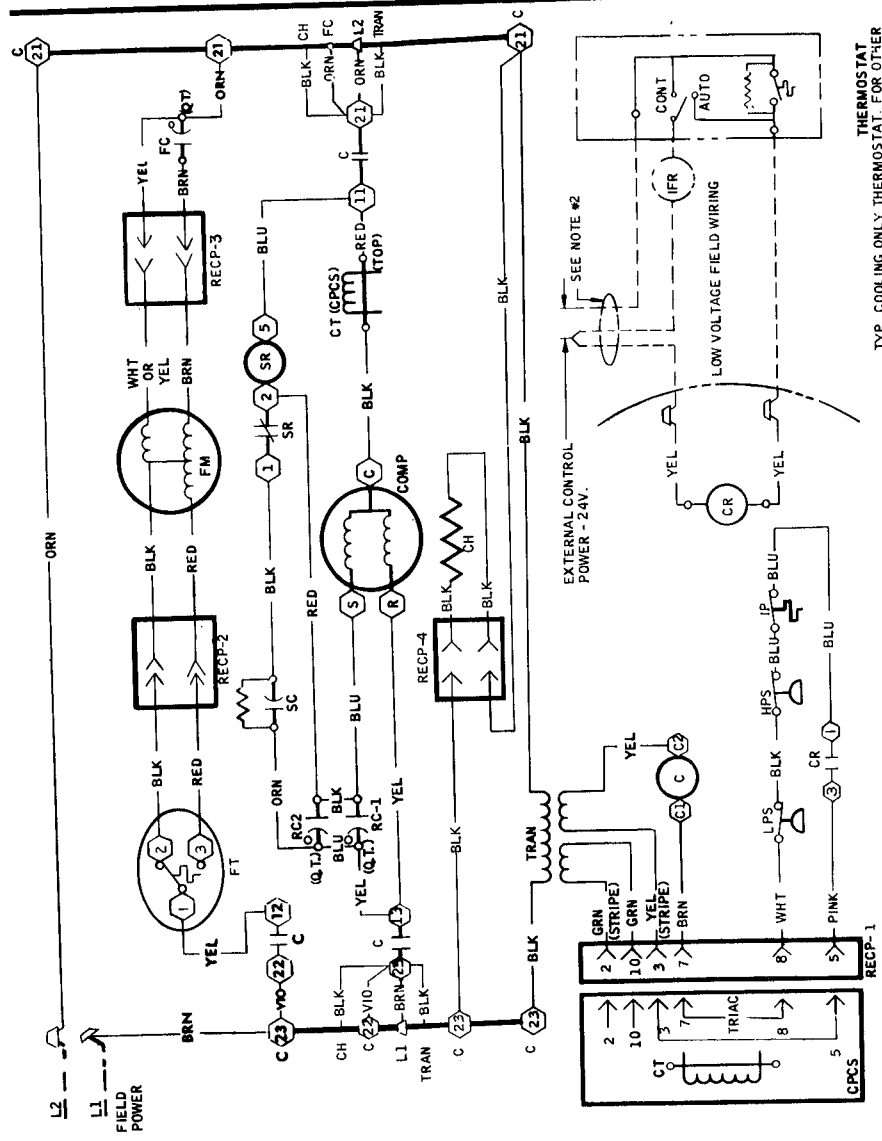
Fig. 5 — 38GR005 Label Diagram; 230-1-60

COMPONENT ARRANGEMENT

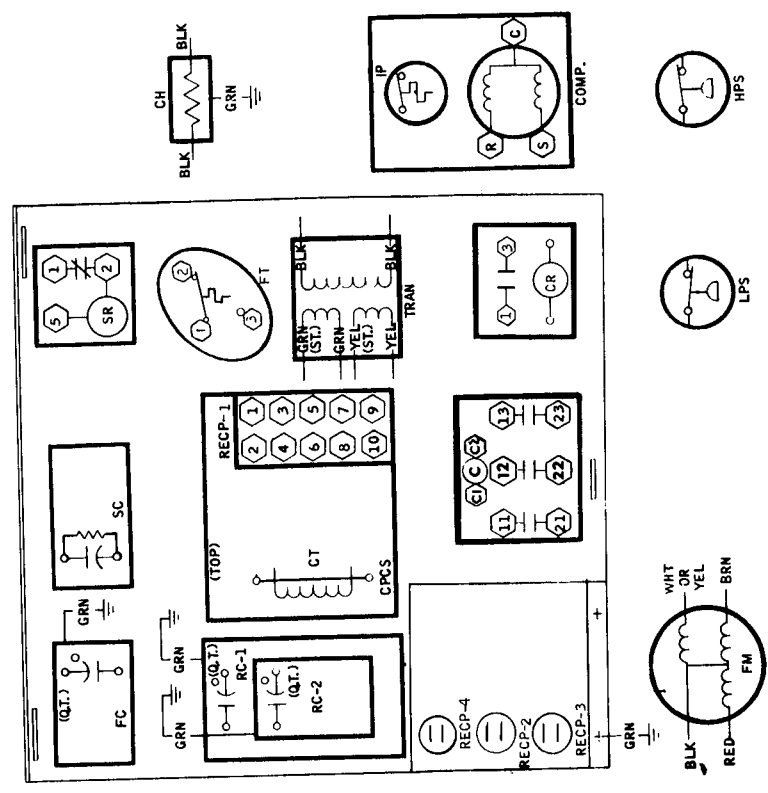




SCHEMATIC DIAGRAM



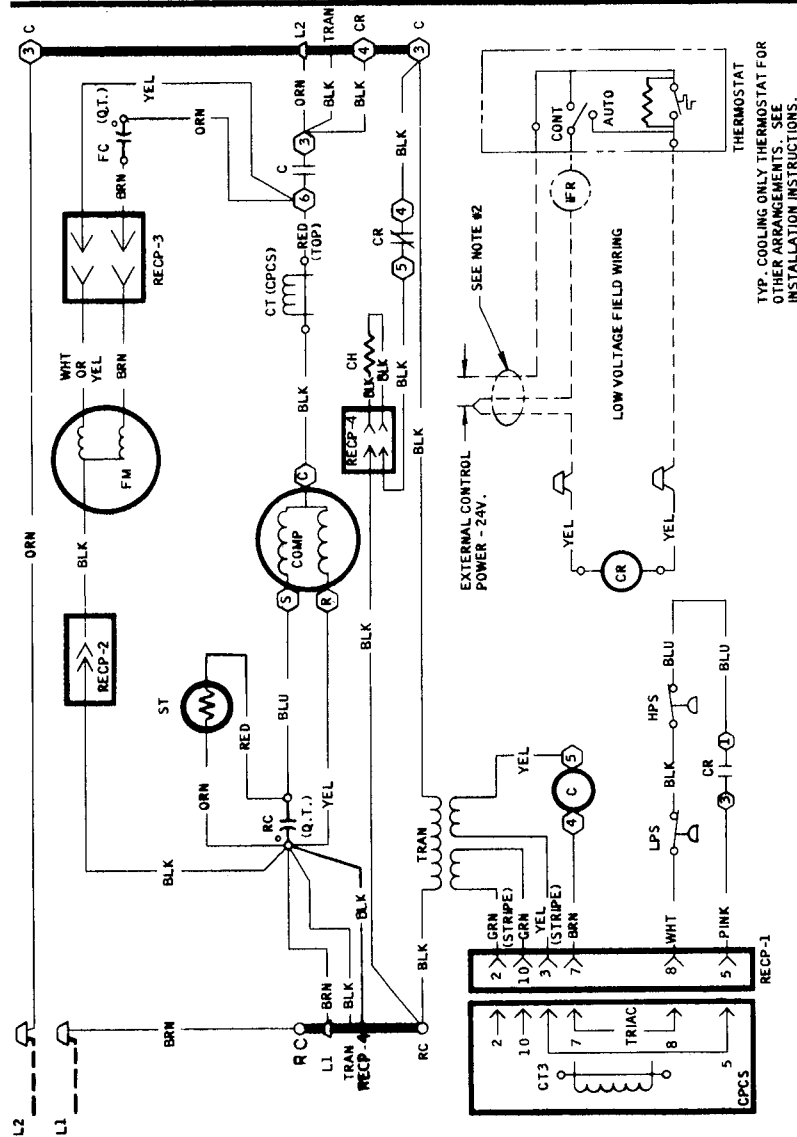
COMPONENT ARRANGEMENT



TYP. COOLING ONLY THERMOSTAT. FOR OTHER
 ARRANGEMENTS SEE INSTAL. INSTRUCTIONS.

Fig. 8 — 38GR006 Label Diagram; 230-1-60

SCHEMATIC DIAGRAM



COMPONENT ARRANGEMENT

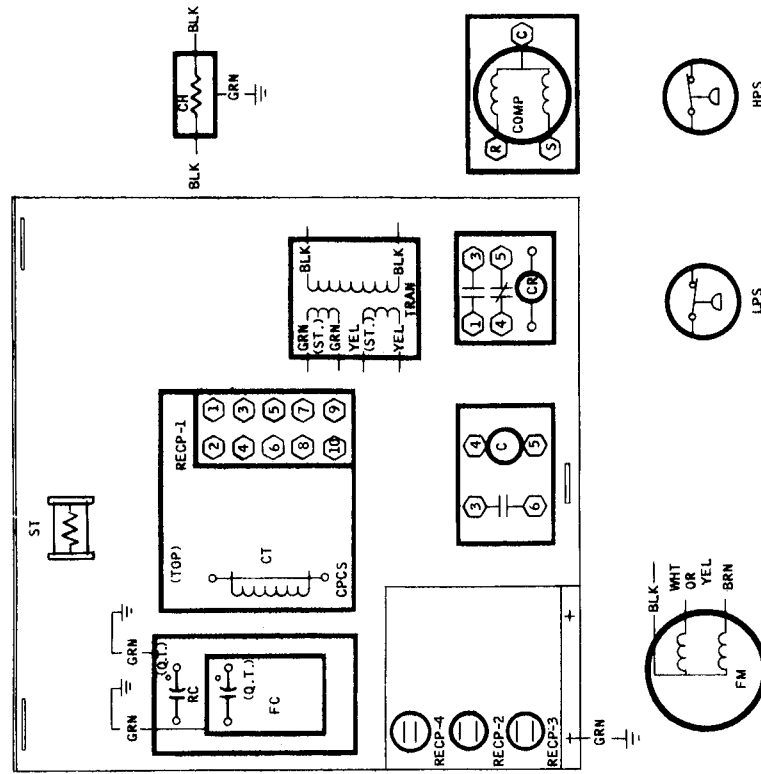
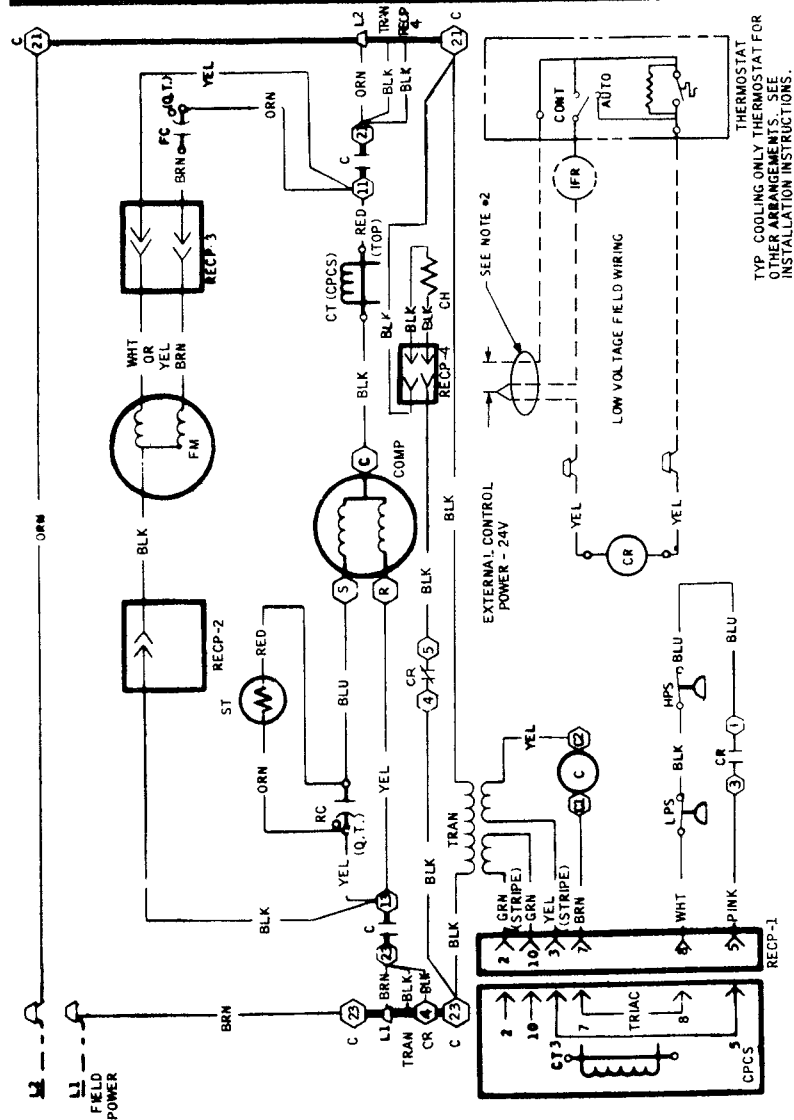


Fig. 9 — 38SE002 Label Diagram; 230-1-60

SCHEMATIC DIAGRAM



COMPONENT ARRANGEMENT

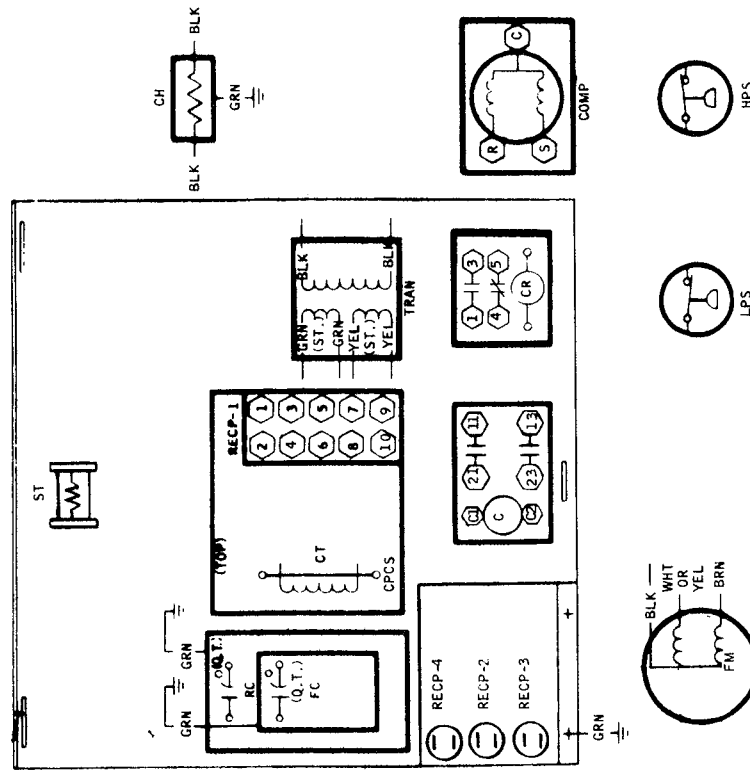
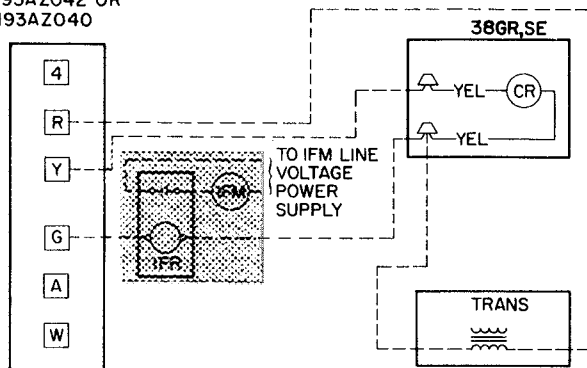


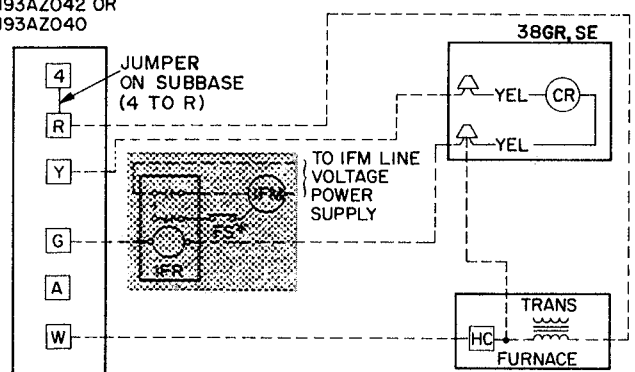
Fig. 10 — 38SE003,004 Label Diagram; 230-1-60

THERMOSTAT SUBBASE
HH93AZ042 OR
HH93AZ040



ARRANGEMENT A-
(COOLING ONLY)

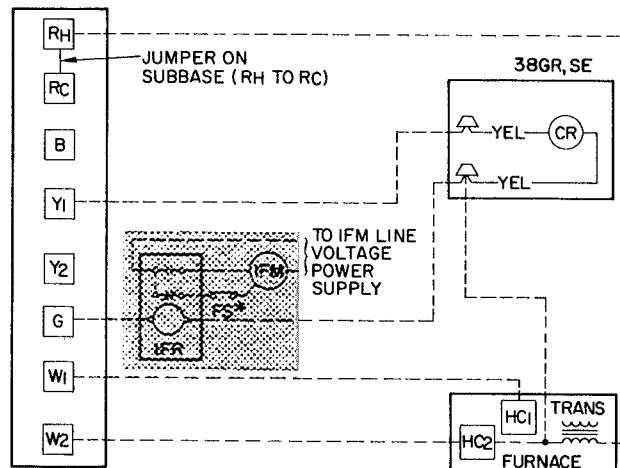
THERMOSTAT SUBBASE
HH93AZ042 OR
HH93AZ040



ARRANGEMENT B-
ONE TRANSFORMER
(COOLING AND ONE-STAGE HEATING)

*CONNECT FS TO LOW-SPEED INDOOR FAN TERMINAL
WHEN 2-SPEED FAN IS USED

THERMOSTAT SUBBASE
HH93AZ076



ARRANGEMENT C-
ONE TRANSFORMER
(COOLING AND 2-STAGE HEATING)

*CONNECT FS TO LOW-SPEED INDOOR FAN TERMINAL
WHEN 2-SPEED FAN IS USED.

IFR, FS and IFM are located in furnace on heating-cooling applications. If accessory IFR is required for cooling only applications, locate IFR in fan-coil

CR — Control Relay (10 va)
FS — Fan Switch
HC — Heating Control
IFM — Indoor Fan Motor

IFR — Indoor Fan Relay
Trans — Transformer
— Field Splice
--- Field Wiring
— Factory Wiring

Fig. 11 — Control Circuit Connections for 38GR,SE Units

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

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Form 38GR-3W New

Printed in U.S.A.

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PC 101

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