

QT025A | 2.4L | 25 kW

INDUSTRIAL GASEOUS GENERATOR SET

EPA Certified Stationary Emergency

**GENERAC** | **INDUSTRIAL  
POWER**

### Standby Power Rating

25 kW, 31 kVA, 60 Hz



\*Assembled in the USA using domestic and foreign parts

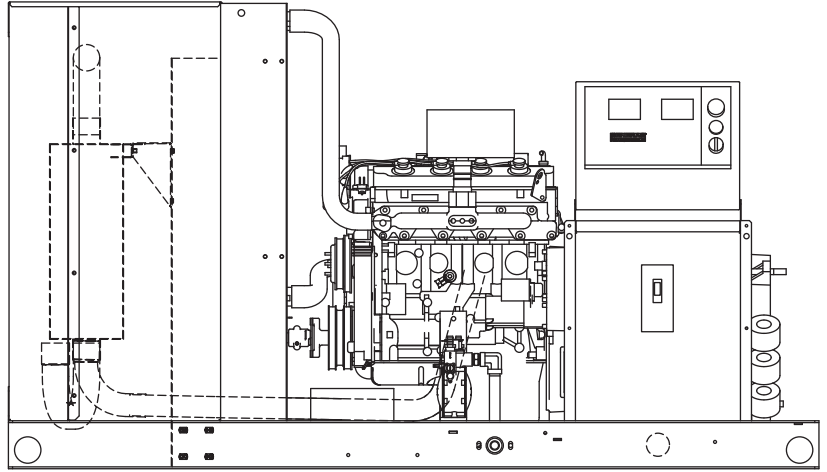


Image used for illustration purposes only

## Codes and Standards

Generac products are designed to the following standards:



UL2200, UL508, UL489



CSA 22.2



BS5514 and DIN 6271



SAE J1349



NFPA 37, 70, 99, 110



NEC700, 701, 702, 708



ISO 3046, 7637, 8528, 9001



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41



IBC 2009, CBC 2010, IBC 2012,  
ASCE 7-05, ASCE 7-10, ICC-ES AC-  
156 (2012)

## Powering Ahead

Generac ensures superior quality by designing and manufacturing most of its generator components, such as alternators, enclosures, control systems and communications software. Generac also makes its own spark-ignited engines, and you'll find them on every Generac gaseous-fueled generator. We engineer and manufacture them from the block up — all at our facilities throughout Wisconsin. Applying natural gas and LP-fueled engines to generators requires advanced engineering expertise to ensure reliability, durability and necessary performance. By designing specifically for these dry, hotter-burning fuels, the engines last longer and require less maintenance. Building our own engines also means we control every step of the supply chain and delivery process, so you benefit from single-source responsibility.

Plus, Generac Industrial Power's distribution network provides all parts and service so you don't have to deal with third-party suppliers. It all leads to a positive owner experience and higher confidence level. Generac spark-ignited engines give you more options in commercial and industrial generator applications as well as extended run time from utility-supplied natural gas.

## STANDARD FEATURES

### ENGINE SYSTEM

- Oil Drain Extension
- Heavy Duty Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Exhaust Silencer (Enclosed Only)

### Fuel System

- Fuel Lockoff Solenoid
- Secondary Fuel Regulator
- Flexible Fuel Lines
- Fuel Line - NPT Connection
- Primary and Secondary Fuel Shutoff

### Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator

- 50/50 Ethylene Glycol Antifreeze
- 120VAC Coolant Heater

### Electrical System

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

### ALTERNATOR SYSTEM

- GENprotect™
- Fault Protection
- 10A UL Float/Equalize Battery Charger
- Main Line Circuit Breaker
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless Excitation
- Sealed Bearing
- Amortisseur Winding
- Full Load Capacity Alternator

### GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits-High/Low Voltage
- Separation of Circuits-Multiple Breakers
- Wrapped Exhaust Piping (Enclosed Only)
- Standard Factory Testing
- 2 Year Limited Warranty
- Silencer Mounted in the Discharge Hood (Enclosed Only)

### ENCLOSURE (If Selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuation Enclosures)
- Gasketed Doors
- Stamped Air-Intake Louvers
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

## CONFIGURABLE OPTIONS

### ENCLOSURE

- Level 1 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)

### CONTROL SYSTEM

- Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)

### CONTROL SYSTEM



Digital H Control Panel—Dual 4x20 Display

#### Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- 3-Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Isochronous Governor Control

- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus® Protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground
- 16 Channel Remote Trending
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

#### Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total, and Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage

- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

#### Alarms and Warnings

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Low Fuel Pressure Alarm
- Engine Overspeed
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

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APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Generac
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Engine Reference	See Emissions Data Sheet
Cylinder #	4
Type	In-Line
Displacement - in <sup>3</sup> (L)	146.4 (2.4)
Bore - in (mm)	3.41 (86.61)
Stroke - in (mm)	3.94 (100.08)
Compression Ratio	9.5:1
Intake Air Method	Naturally Aspirated
Number of Main Bearings	5
Connecting Rods	Forged Steel
Cylinder Head	Aluminum
Cylinder Liners	No
Ignition	High Energy
Piston Type	Aluminum Alloy
Crankshaft Type	Cast Steel
Lifter Type	Overhead Cam
Intake Valve Material	Steel Alloy
Exhaust Valve Material	Hardened Steel
Hardened Valve Seats	Yes

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow Spin-On Cartridge
Crankcase Capacity - qt (L)	4 (3.8)

Cooling System

Cooling System Type	Pressurized Closed Recovery
Fan Type	Pusher
Fan Speed - rpm	1,980
Fan Diameter - in (mm)	18 (457)

Fuel System

Fuel Type	Natural Gas, Propane Vapor
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure - in H <sub>2</sub> O (kPa)	5 - 14 (1.2 - 3.5)

Engine Electrical System

System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	Generac 390 mm
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5% (3-Phase)
Telephone Interference Factor (TIF)	<50
Standard Excitation	Synchronous Brushless

Bearings	Sealed Ball
Coupling	Flexible Disc
Load Capacity - Standby	100%
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

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### OPERATING DATA

#### POWER RATINGS—Natural Gas/Propane Vapor

Standby		
Single-Phase 120/240 VAC @1.0pf	25 kW	Amps: 104
Three-Phase 120/208 VAC @0.8pf	25 kW	Amps: 87
Three-Phase 120/240 VAC @0.8pf	25 kW	Amps: 75
Three-Phase 277/480 VAC @0.8pf	25 kW	Amps: 38

#### STARTING CAPABILITIES (sKVA)

##### sKVA vs. Voltage Dip

277/480 VAC								208/240 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%	Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	25	16	25	33	41	49	57	Standard	25	12	19	25	31	37	43

#### FUEL CONSUMPTION RATES\*

##### Natural Gas – ft<sup>3</sup>/hr (m<sup>3</sup>/hr)

Percent Load	Standby
25%	140 (3.9)
50%	220 (6.2)
75%	300 (8.5)
100%	380 (10.8)

##### Propane Vapor - ft<sup>3</sup>/hr (m<sup>3</sup>/hr)

Percent Load	Standby
25%	56 (1.6)
50%	87 (2.5)
75%	119 (3.4)
100%	151 (4.3)

\* Fuel supply installation must accommodate fuel consumption rates at 100% load.

#### COOLING

Standby		
Air Flow (Inlet Air Combustion and Radiator)	ft <sup>3</sup> /min (m <sup>3</sup> /min)	1,500 (42.48)
Coolant Flow	gal/min (l/min)	42 (160)
Coolant System Capacity	gal (l)	2.5 (9.5)
Heat Rejection to Coolant	BTU/hr (kPa)	95,000 (27.8)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199270SSD	
Maximum Radiator Backpressure	in H <sub>2</sub> O (kPa)	0.5 (0.12)

#### COMBUSTION AIR REQUIREMENTS

Standby	
Flow at Rated Power cfm (m <sup>3</sup> /min)	70 (2.0)

#### ENGINE

Standby		
Rated Engine Speed	rpm	1,800
Horsepower at Rated kW**	hp	40
Piston Speed	ft/min (m/min)	1,182 (360.3)
BMEP	psi (kPa)	120 (827)

#### EXHAUST

Standby		
Exhaust Flow (Rated Output)	cfm (m <sup>3</sup> /min)	220 (6.2)
Maximum Exhaust Backpressure	inHg (kPa)	1.5 (5.1)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	975 (524)

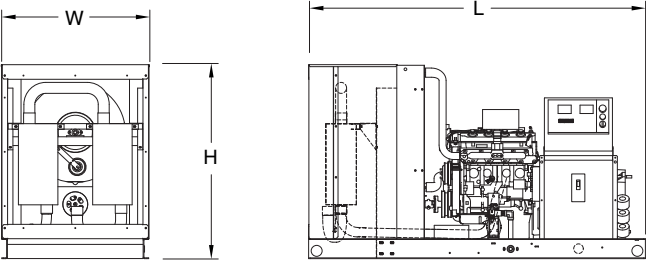
\*\* Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.

Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards.

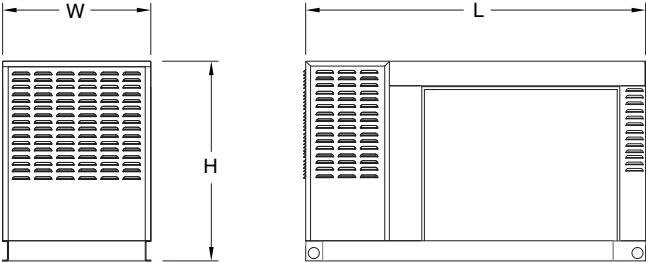
Standby - See Bulletin 0187500SSB

DIMENSIONS AND WEIGHTS\*



OPEN SET (Includes Exhaust Flex)

L x W x H - in (mm)	77 (1,956) x 34 (864) x 43 (1,092)
Weight - lbs (kg)	1,163 (528)



LEVEL 1 ACOUSTIC ENCLOSURE

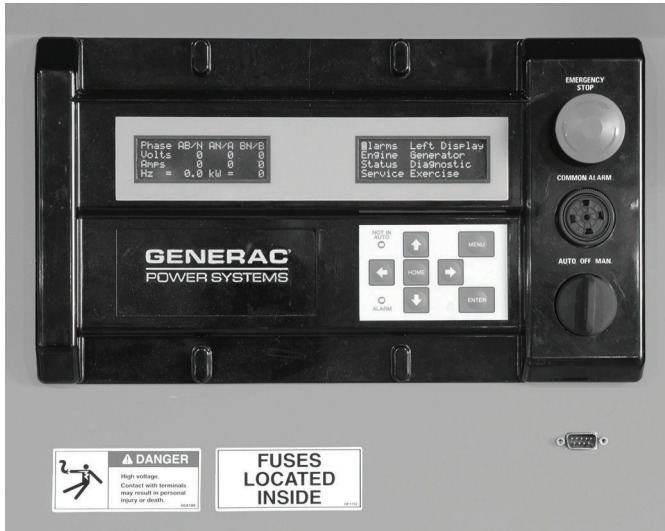
L x W x H - in (mm)	77 (1,956) x 34 (864) x 46 (1,168)
Weight - lbs (kg)	1,414 (641)

\* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings.

## H-100 CONTROL PANEL



### DESCRIPTION

- Digital controls for all safety shutdowns
- Isochronous governor control
- Digital 3Ø sensing voltage regulator
- Sealed Digital Circuit Board
- 2 Amp static battery charger
- Mates with HTS transfer switch and any 2-wire start ATS
- Alarm and event logging
- Built-in diagnostics
- Internal PLC
- Optional modem with dialout

### STANDARD FEATURES

The Quiet-Test™ H-100 Control Panel is a digital microprocessor electronic controller that integrates all engine and transfer switch functions into a single control system.

- Two 4 line x 20 displays
- Full system status
- 3 phase sensing digital voltage regulator
- Remote ports
  - RS232
  - RS485
  - Canbus
- Water proof connections
- All engine sensors are 4-20 ma for minimal interference
- Built in PLC

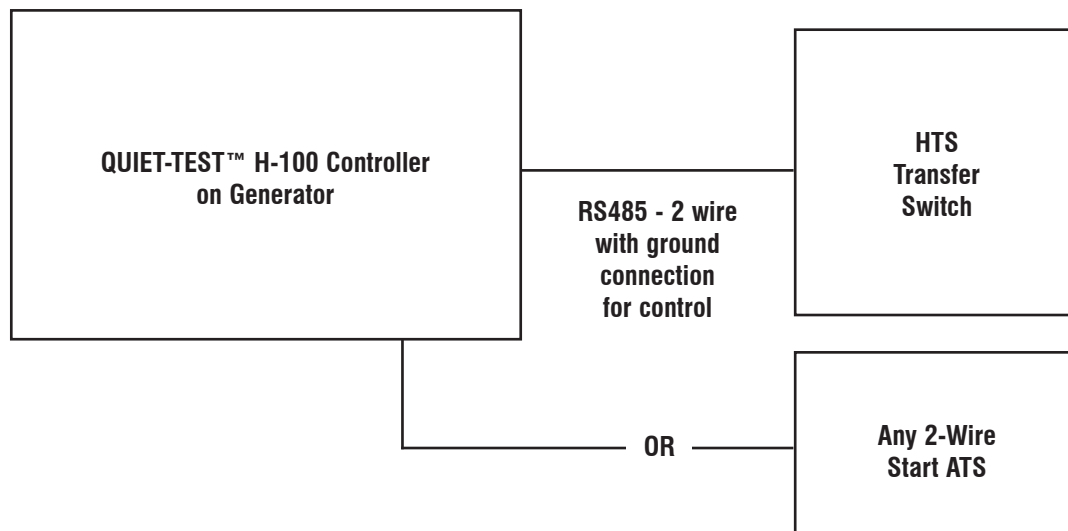
In addition, the generator set parameters can be manipulated and monitored without standing in front of the control panel with GenLink® software. The Generac H-100 control also monitors and controls transfer switch functions when used with the HTS Transfer Switch.

- Monitors utility voltage
- Monitors generator voltage
- Timer for line interrupt delay
- Timer for engine warmup
- Timer for minimum engine run time
- Timer for return to utility position
- Timer for engine cooldown
- Built in exerciser timer (7 day)
- Additional 2 wire start controls for any 2 wire transfer switch.

## H-100 CONTROL PANEL

- Full range stand-by operation
- Full system status
  - 3 phase AC volts
  - 3 phase amps
  - kW
  - Power factor
  - Reactive power
  - Oil pressure
  - Water temperature
  - Water level
  - Oil temperature (optional)
  - Fuel pressure
  - Engine speed
  - Battery voltage
  - Alternator frequency
  - Time
  - Date
  - Transfer switch status
  - Run hours
  - Service reminders
  - Trending
  - Fault history (alarm log)
  - I<sup>2</sup>t function for full generator protection
  - Built in PLC for special applications
- Shutdowns
  - Overvoltage
  - Overspeed
  - Low oil pressure
  - High coolant temperature
  - Low coolant level
- Remote communication
  - RS232
  - Optional modem
  - Canbus
- Configurable to NFPA 110, level 1 or 2
- Programmable auto crank
- Emergency Stop
- On Off Manual Switch
- Not in Auto flashing light
- Audible alarm for fault condition
- Transfer switch logic communicates with HTS transfer switch
- Weekly exerciser (programmable)
- Selectable Low speed exercise
- Digital voltage regulator with 3 phase sensing (3 phase units)
- Isochronous governor
- Waterproof electrical connectors
- Temperature Range -40° to 70° C

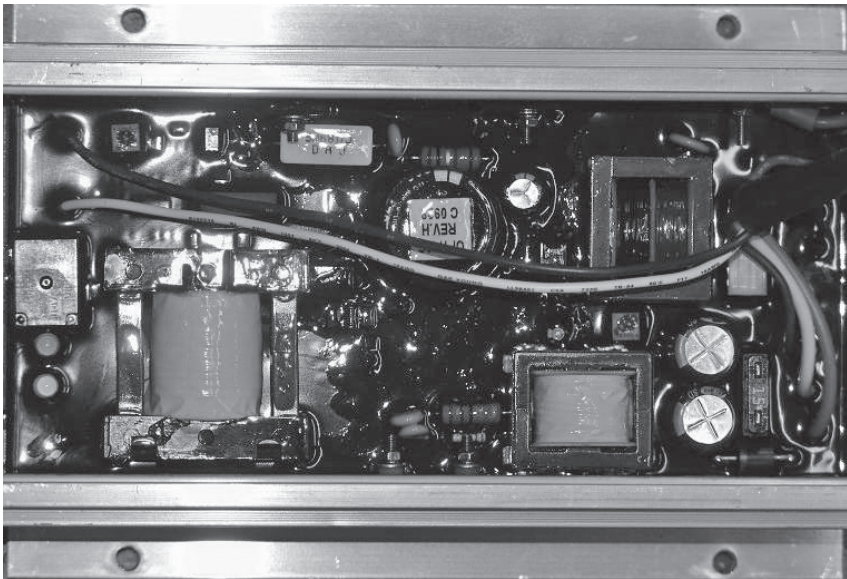
## TYPICAL CONTROL CONNECTION





BATTERY CHARGER

2.5A & 10A H-Panel



Battery Charger shown from inside of Control Panel Enclosure. Connections are made via an attached harness.

Specifications	2.5 Amp	10 Amp
Nominal Input	120 VAC	120 VAC
Operating AC Line Voltage Range	108 to 132 Volts AC	108 to 132 Volts AC
Input AC Line Frequency	50/60 Hz	50/60 Hz
Battery Fuse	N/A	15 Amps
Nominal Charge Rate	2.5 Amps	10 Amps
Equalize Voltage		13.8/27.6 Volts
Float Voltage	13.4	13.0/26.0
Current @ Equalize to Float Transition		5 Amps
Battery Under-voltage shutdown	N/A	11/22 Volts
LED Indicators		
AC Line Voltage	N/A	Green LED
Battery Connected and Charging	N/A	Yellow LED
Battery Current Drain	30 milliamp	30 milliamp
AC Line Connection	Connector Plug	Connector Plug
Battery Connection	Connector Plug	Connector Plug
Control Connection		AC Power Fail Relay Form C 2 Amp Rating
CUL Recognized	Yes	Yes
NFPA110 Compliant	No	Yes

The Generac 2.5A 12 volt and 10A 12/24 volt battery chargers are designed to work with the H and PM-DCP control panels to provide the ultimate in automatic battery voltage maintenance.

The 2.5 amp charger is self-regulating and produces instantaneous output current adjustments to keep the battery charged to an optimum level. Battery voltage is read on the control panel digital display.

The 10 amp charger has automatic float and equalize control. It precisely monitors the battery's voltage and automatically activates the correct charging mode. The charge rate is limited and controlled to efficiently and safely maintain ideal battery levels under varying conditions.

The equalize system uses a control circuit to limit charging current to 10 amps. When battery voltage drops below a preset level, charging current increases to 5 amps and then to the 10 amp charge rate if needed. When the battery reaches maximum charge, the charger switches to float mode to supply just enough current to maintain the battery at or above 13/26 volts. Battery voltage and charging current are read at the control panel digital display.

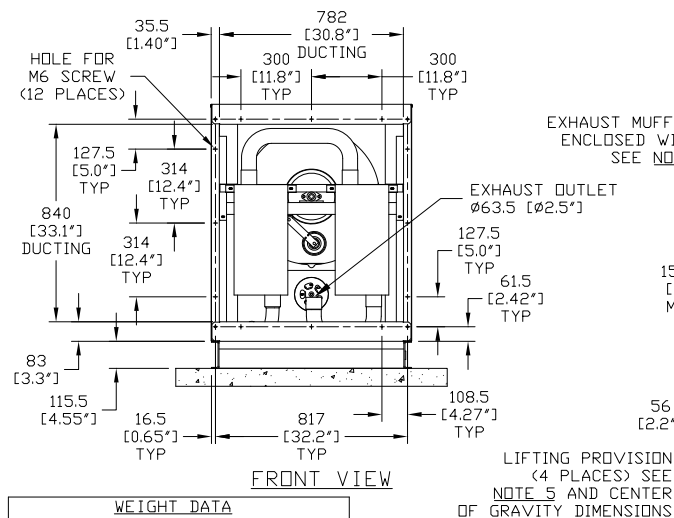




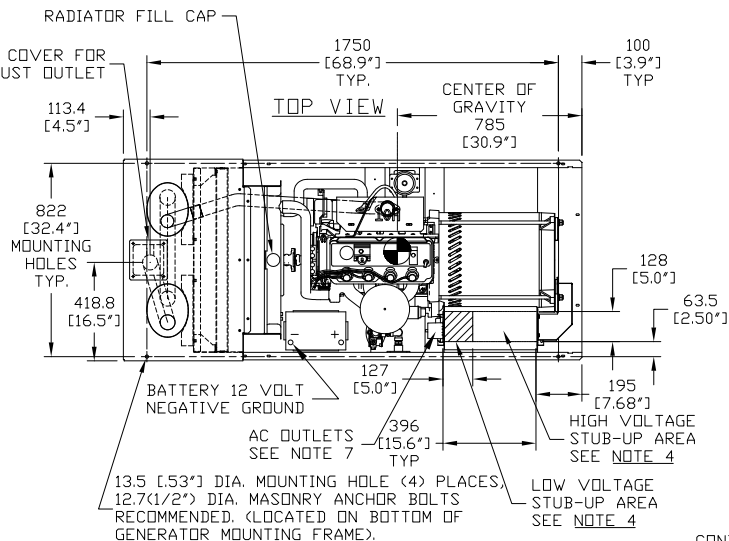
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## NOTES:

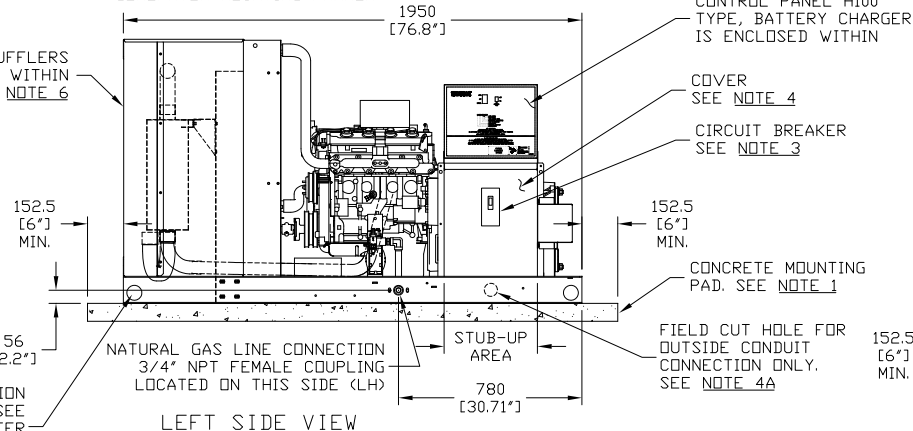
- 1) MINIMUM RECOMMENDED CONCRETE PAD SIZE: 1155 (45.5') WIDE X 2255 (88.8') LONG.
- 2) ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE AND LOCAL CODES FOR MINIMUM DISTANCES FROM OTHER STRUCTURES.
- 3) CIRCUIT BREAKER INFORMATION:  
SEE SPECIFICATION SHEET WITHIN OWNERS MANUAL.
- 4) REMOVE THE CIRCUIT BREAKER BOX FRONT COVER TO ACCESS THE STUB UP AREAS AS FOLLOWS:  
-HIGH VOLTAGE CONNECTION INCLUDING AC LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX) CONNECTION, GFCI 120 V AC OUTLET CONNECTION.  
-LOW VOLTAGE CONNECTIONS INCLUDING TRANSFER SWITCH CONTROL WIRES AND ACCESSORY RELAY CONNECTION (QTY 4)
- 4A) FIELD CUT HOLE IS ONLY REQUIRED FOR MOUNTING OF GENERATOR ON AN EXISTING PAD.
- 5) REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
- 6) REMOVE EITHER LEFT OR RIGHT HAND SIDE PANEL TO ACCESS EXHAUST MUFFLERS.
- 7) PRE-WIRED 20A GFCI OUTLET FOR ENG BLOCK HEATER.



WEIGHT DATA	
2.4L 25KW 528KG (1,163 LB)	
WOODEN SHIPPING SKIDS INCREASE OVERALL WEIGHT 42KG (98LB)	

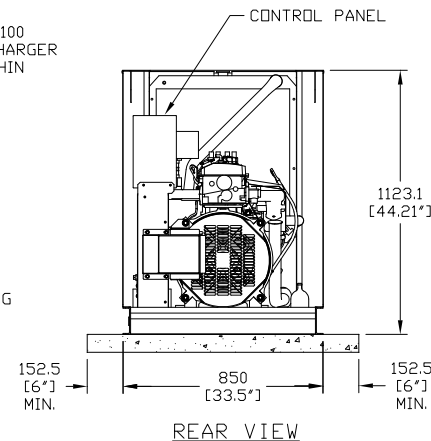


EXHAUST MUFFLERS ENCLOSED WITHIN SEE NOTE 6



SERVICE ITEM ACCESSIBILITY CHART	
SERVICE ITEM	2.4L
OIL FILL CAP	EITHER SIDE
OIL DIP STICK	RIGHT SIDE
OIL FILTER	RIGHT SIDE
OIL DRAIN HOSE	RIGHT SIDE
RADIATOR DRAIN HOSE	LEFT SIDE
AIR CLEANER ELEMENT	EITHER SIDE
SPARK PLUGS	RIGHT SIDE
MUFFLERS	SEE NOTE 6
FAN BELT	EITHER SIDE
BATTERY	LEFT SIDE
AC OUTLET(S)	LEFT SIDE

REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS



INSTALLATION DRAWING

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2.4L C2  
INDUSTRIAL QTA  
OPEN GENSET

9/21/11

**GENERAC POWER SYSTEMS**  
**Waukesha**  
P.O. BOX 8  
WAUKESHA, WIS. 53187

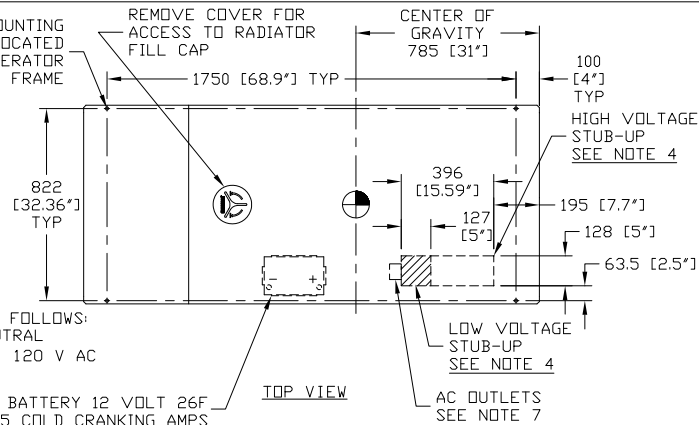
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SCALE	1 = 20	FIRST USE	IQTA
DWG NO.	0J7003A	REV	B

0J7003

<b>WEIGHT DATA</b> 2.4L 25 KW 642KG (1414 LB)
WOODEN SHIPPING SKIDS INCREASE OVERALL WEIGHT - 42KG (98 LB)

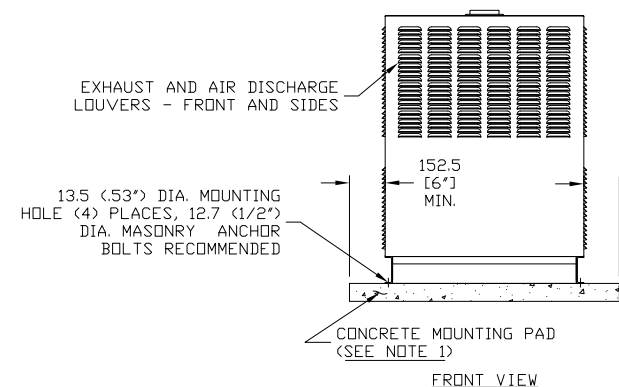
**NOTES:**

- 1) MINIMUM RECOMMENDED CONCRETE PAD SIZE: 1155 (45.5') WIDE X 2255 (88.8') LONG. REFERENCE INSTALLATION GUIDE SUPPLIED WITH UNIT FOR CONCRETE PAD GUIDELINES.
- 2) ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE AND LOCAL CODES FOR MINIMUM DISTANCES FROM OTHER STRUCTURES.
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-LOW VOLTAGE CONNECTIONS INCLUDING TRANSFER SWITCH CONTROL WIRES AND ACCESSORY RELAY CONNECTION (QTY 4)
- 4A) FIELD CUT HOLE IS ONLY REQUIRED FOR MOUNTING OF GENERATOR ON AN EXISTING PAD.
- 5) REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
- 6) REMOVE EITHER LEFT OR RIGHT HAND SIDE PANEL TO ACCESS EXHAUST MUFFLER AND FAN BELT.
- 7) PRE-WIRED 20A GFCI OUTLET FOR ENGINE BLOCK HEATER.

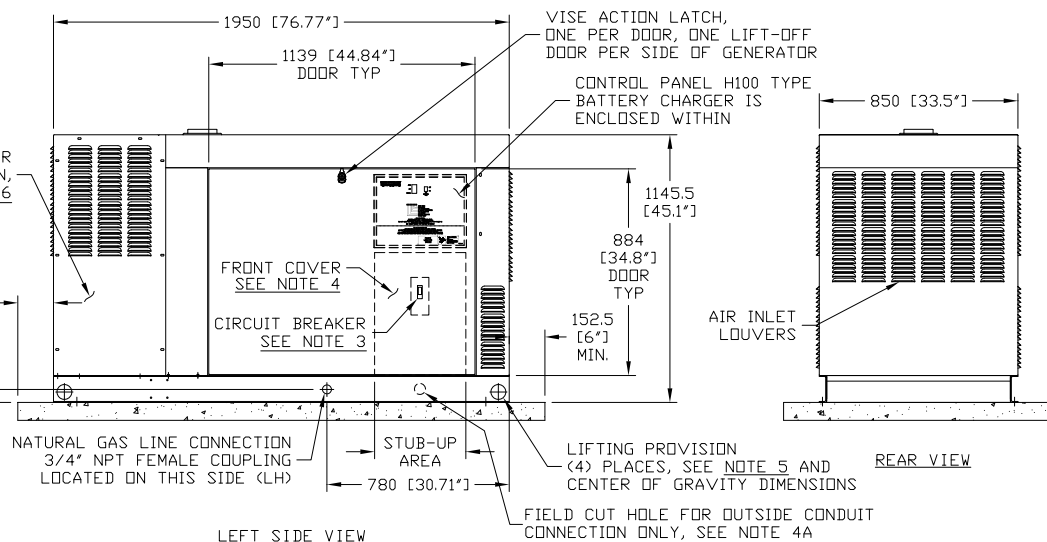


SERVICE ITEM ACCESSIBILITY CHART	
SERVICE ITEM	2.4L
OIL FILL CAP	EITHER DOOR
OIL DIP STICK	THRU RIGHT DOOR
OIL FILTER	THRU RIGHT DOOR
OIL DRAIN HOSE	THRU RIGHT DOOR
RADIATOR DRAIN HOSE	THRU LEFT DOOR
AIR CLEANER ELEMENT	EITHER DOOR
SPARK PLUGS	THRU RIGHT DOOR
MUFFLER	SEE NOTE 6
FAN BELT	SEE NOTE 6
BATTERY	THRU LEFT DOOR
AC OUTLET(S)	THRU LEFT DOOR

REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS



EXHAUST MUFFLER ENCLOSED WITHIN, SEE NOTE 6



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QTA 25

2.4L (25 KW) - G2

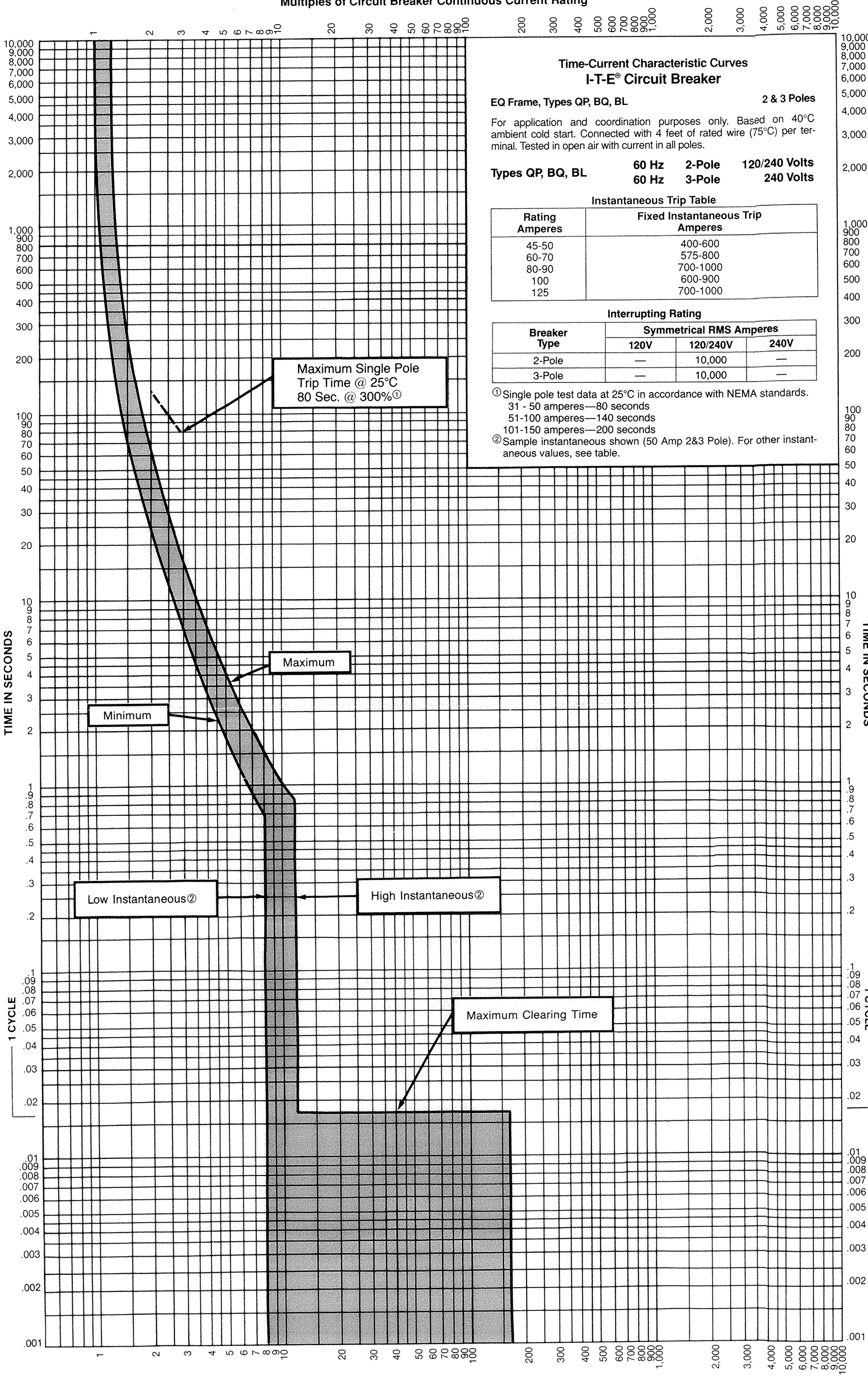
ENCLOSURE - C2

ISSUE DATE 09/21/11

**GENERAC POWER SYSTEMS**  
Waukesha  
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WAUKESHA, WIS. 53187

FILE NAME	0J7003.DWG	SIZE	B
SCALE	1 = 20	FIRST USE	QTA SERIES
DWG NO.	0J7003	REV	A

INSTALLATION DRAWING



## GROUP G

### LEGEND

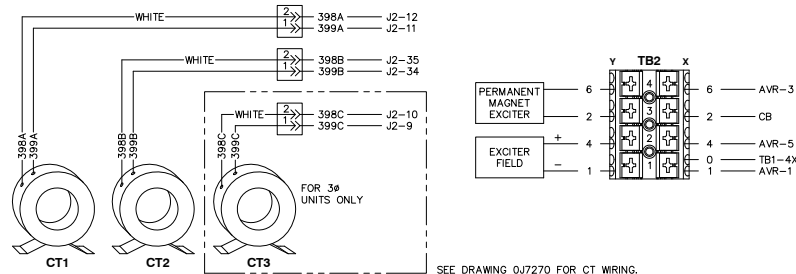
AFS - AIR/FUEL SOLENOID	ICM - IGNITION CONTROL MODULE
AH1 - ALARM HORN	IFT - INTERFACE TRANSFORMER
ALT - DC CHARGE ALTERNATOR	IM - INTERFACE MODULE
AVR - AUTOMATIC VOLTAGE REGULATOR	J - ELECTRONIC CONTROL MODULE CONNECTOR
BCC - BATTERY CHARGER CONNECTOR	LFP - LOW FUEL PRESSURE SWITCH
BCH - BATTERY CHARGER	MLCB - MAIN LINE CIRCUIT BREAKER
CB - CIRCUIT BREAKER DPE	MOD - MODEM CONNECTOR
CIM - CAM INTERFACE MODULE	MPU - MAGNETIC PICKUP
CO - CROSSOVER CONNECTOR	NB - NEUTRAL BLOCK
COM - COMMUNICATIONS PORT	OP51 - OIL PRESSURE SENDER
CP - COIL PACK	OS - OXYGEN SENSOR
CT - CURRENT TRANSFORMER	R1 - RESISTOR
DB - DIODE BRIDGE	RB - RELAY BOARD
ES1 - EMERGENCY STOP SWITCH	RB_A - RELAY BOARD CONNECTOR
F - FUSE	SC - START CONTACTOR
FS - FUEL SOLENOID	SM - STARTER MOTOR
FSP - FUEL SOLENOID PLUG	SP - SPARK PLUG
FSR - FUEL SOLENOID RECEPTACLE	SW1 - OFF/AUTO/MANUAL SWITCH
GA - GOVERNOR ACTUATOR	SWC - OPERATOR SWITCH CONNECTOR
GD - GOVERNOR DRIVER	TB - TERMINAL BLOCKS
GFCI - GROUND FAULT CURRENT INTERRUPT	WLS - COOLANT LEVEL SENDER
GND - GROUND BAR CONNECTION	WTS - COOLANT TEMPERATURE SENDER

NOTE: ALL WIRES 18 AWG  
300V UL LISTED UNLESS  
SHOWN OTHERWISE

12 AWG SIZE

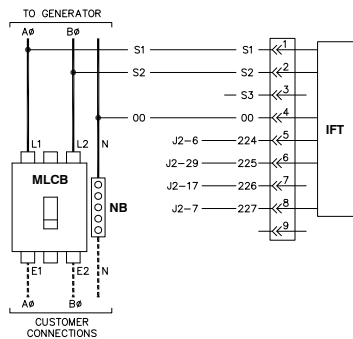
NOTE: ALL WIRES ON THIS  
PAGE ARE 600V RATED

### COMPONENTS LOCATED IN CUSTOMER CONNECTION BOX

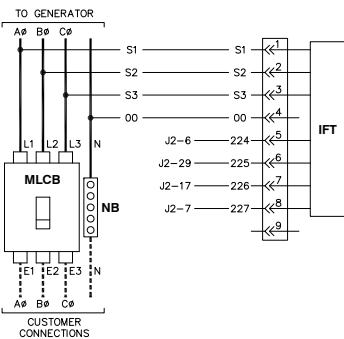


SEE DRAWING 0J7270 FOR CT WIRING.

### CONNECTIONS FOR 10 UNIT



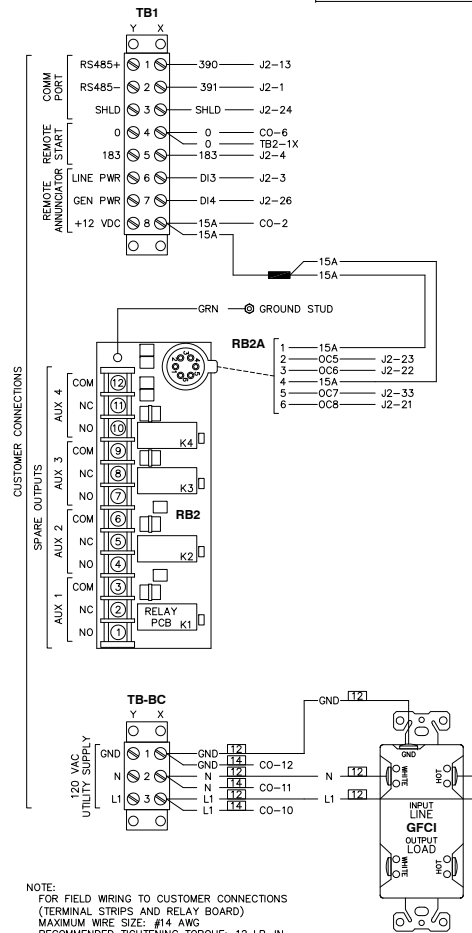
### CONNECTIONS FOR 30 UNIT



## GROUP G

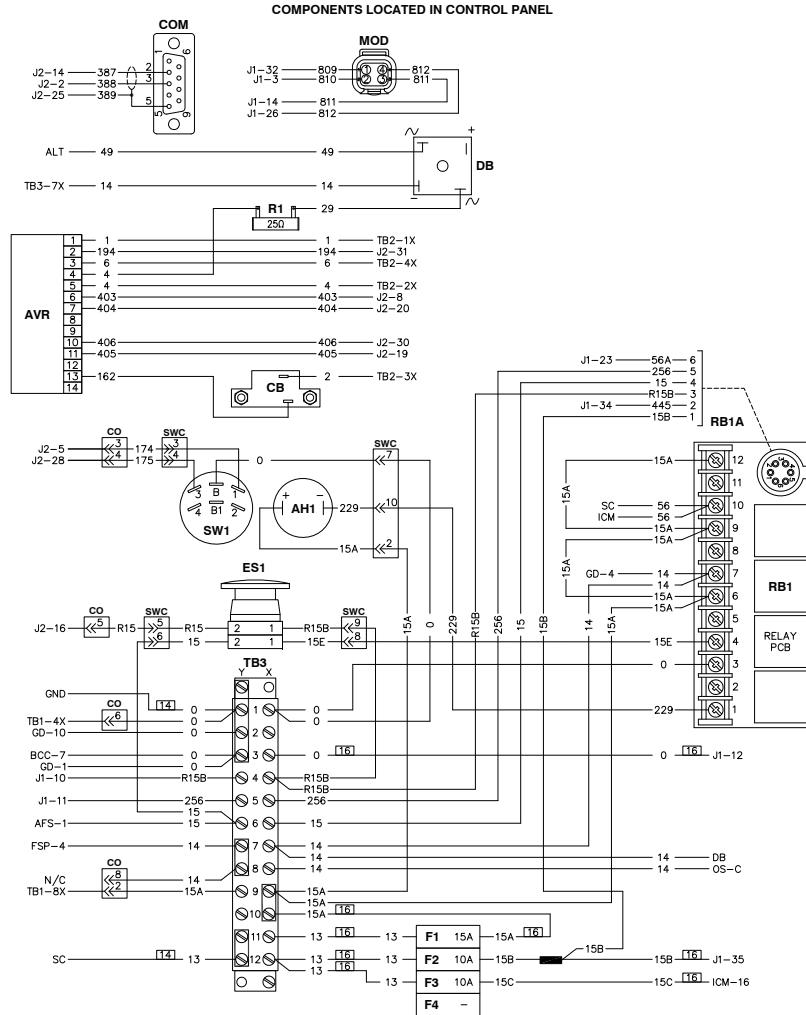
### COMPONENTS LOCATED IN CUSTOMER CONNECTION BOX

NOTE: ALL WIRES ON THIS  
PAGE ARE 600V RATED



NOTE:  
FOR FIELD WIRING TO CUSTOMER CONNECTIONS  
(TERMINAL STRIPS AND RELAY BOARD)  
MAXIMUM WIRE SIZE: #14 AWG  
RECOMMENDED TIGHTENING TORQUE: 12 LB-IN

GROUP G



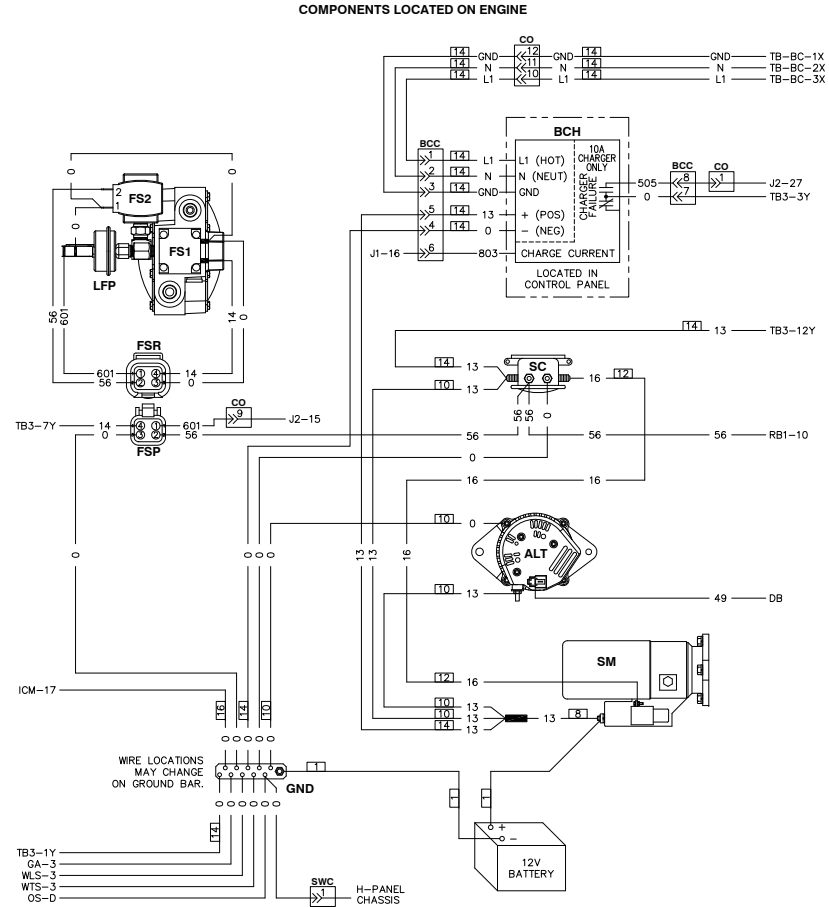
PAGE 3 OF 6

REVISION: -A-  
DATE: 9/23/11

PAGE 3 OF 6

WIRING - DIAGRAM  
G2.4L G2 QTA  
DRAWING #: 0J7177

GROUP G

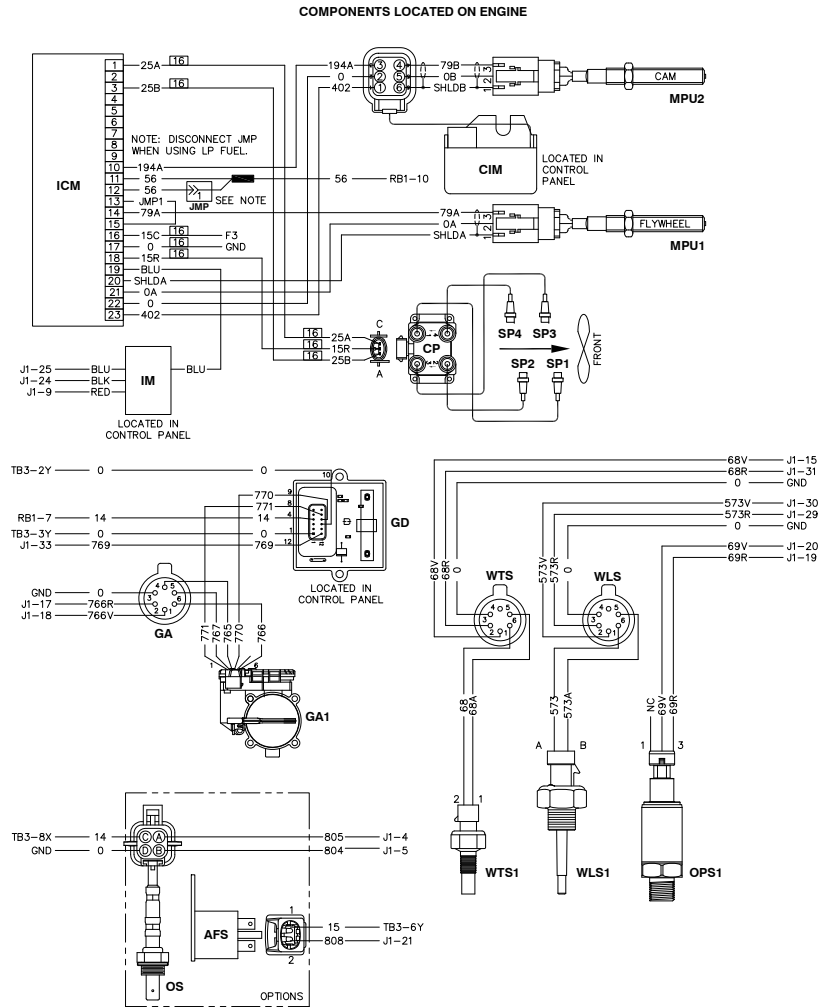


PAGE 4 OF 6

REVISION: -A-  
DATE: 9/23/11

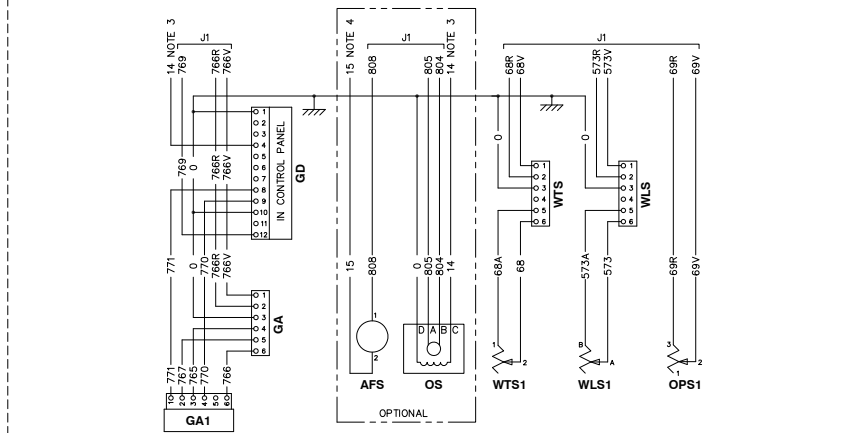
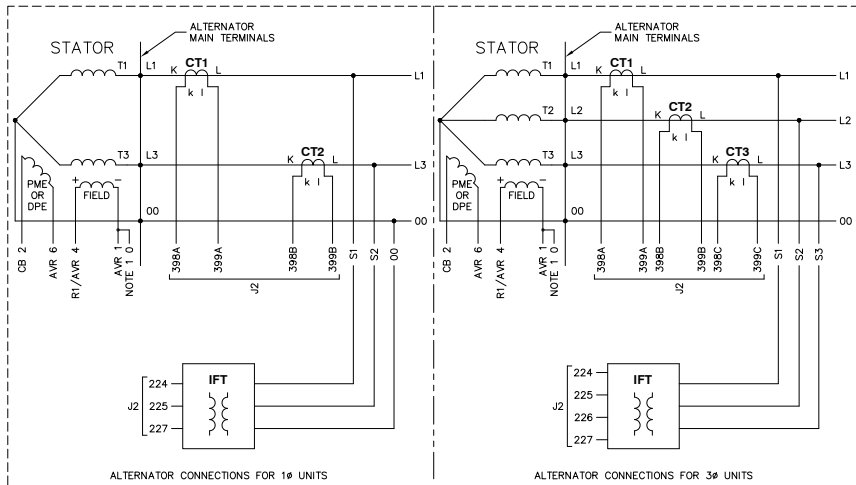
PAGE 4 OF 6

WIRING - DIAGRAM  
G2.4L G2 QTA  
DRAWING #: 0J7177

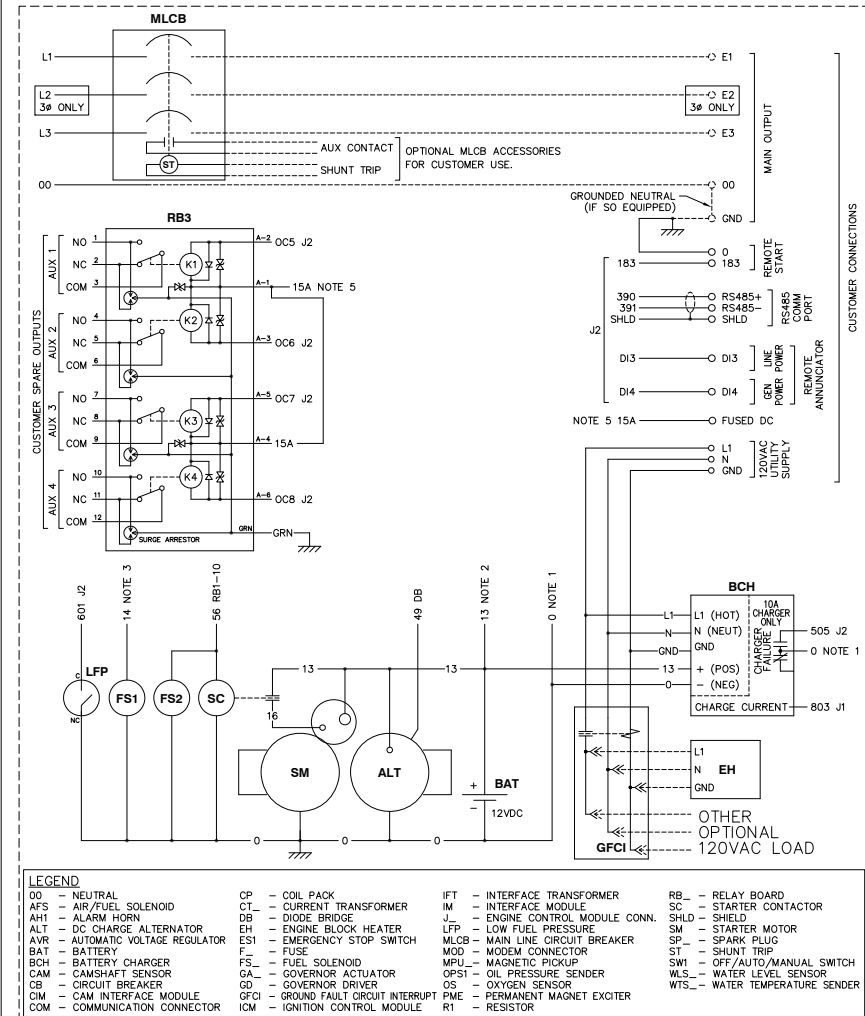


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# GROUP G

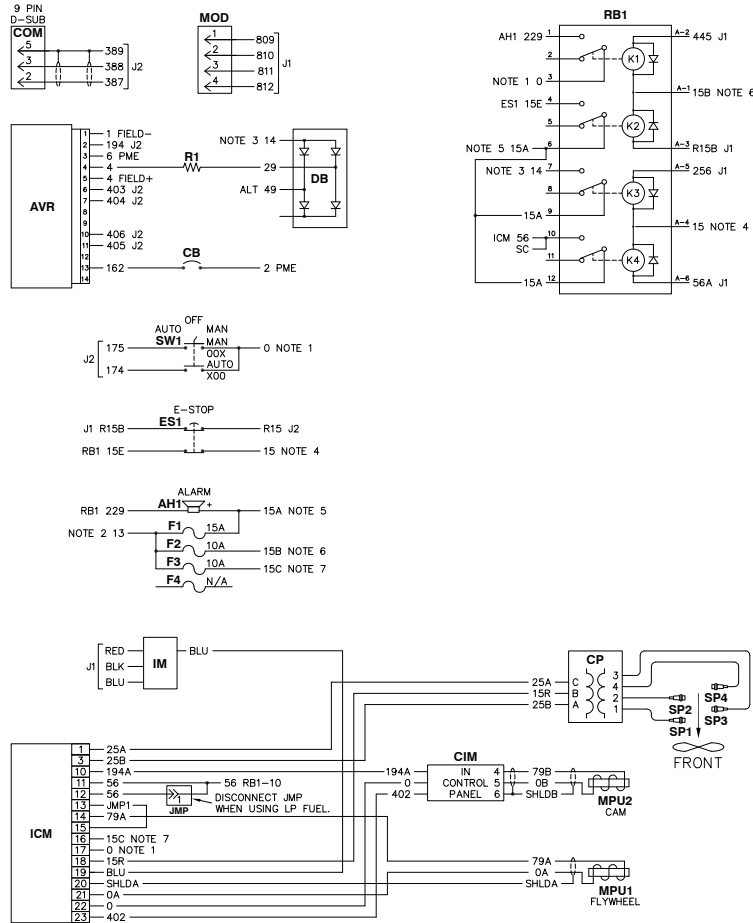


# GROUP G





# GROUP G



# GROUP G

## GD CONNECTOR

PIN	WIRE	TO	FUNCTION
1	0	GND	NOTE 1
2	15B	NOTE 6	
3	15C	NOTE 7	
4	15A	NOTE 4	
5	15B	NOTE 6	
6	15C	NOTE 7	
7	15A	NOTE 4	
8	15B	NOTE 6	
9	15C	NOTE 7	
10	15A	NOTE 4	
11	15B	NOTE 6	
12	15C	NOTE 7	

## AVR CONNECTOR

PIN	WIRE	TO	FUNCTION
1	1	FIELD	- FIELD
2	194	J2-31	+12VDC
3	6	PME	PME OUTPUT
4	4	R1	+ FIELD
5	4	FIELD	+ FIELD
6	403	J2-8	GATE TRIGGER B
7	404	J2-20	GATE TRIGGER A
10	406	J2-30	ZERO CROSSING 1/P
11	405	J2-19	ISOLATED GROUND
13	162	CB	PME OUTPUT (AFTER CB)

# COOLANT HEATER OPTION

## 1500 WATT, 120VAC

### SPECIFICATIONS:

VOLTAGE: 120VAC

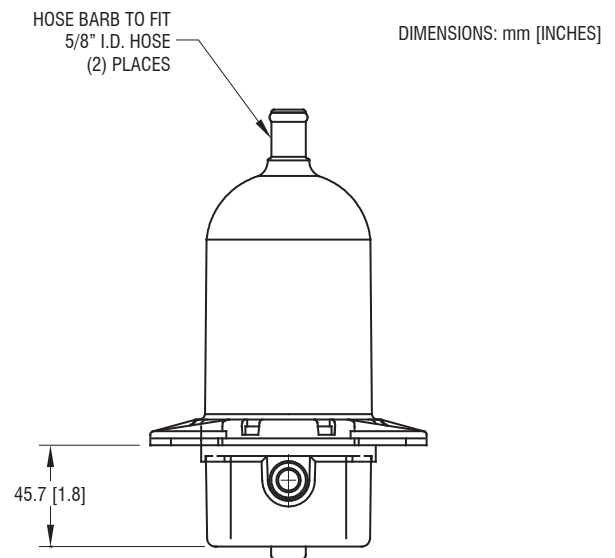
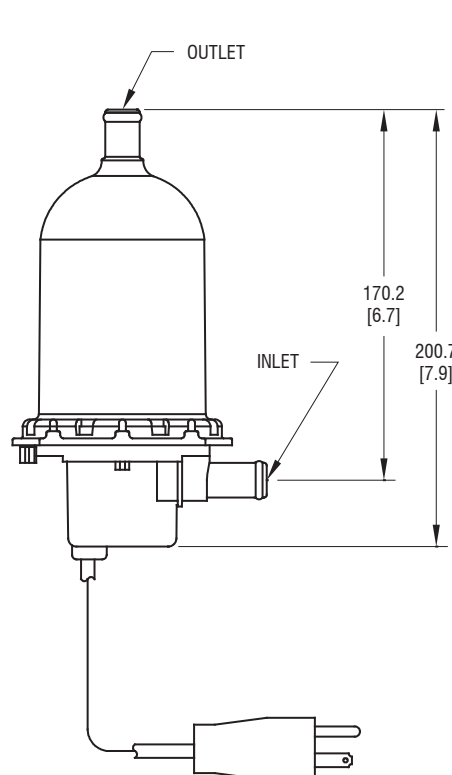
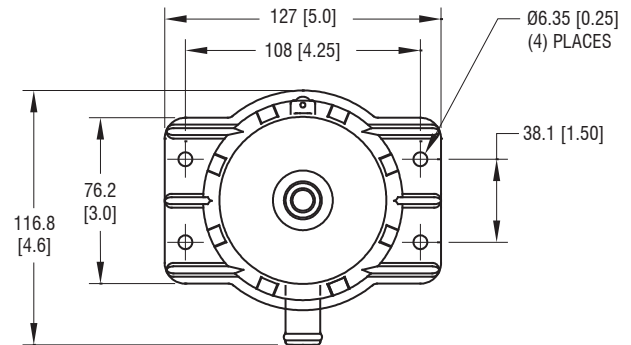
HEAT POWER: 1500W

FIXED THERMOSTAT: 100°-120°F

HEATING ELEMENT: INCOLOY 800

MAXIMUM PRESSURE: 90 PSI (620 kPa)

PLUG NEMA STD: 5-15P



DIMENSIONS: mm [INCHES]