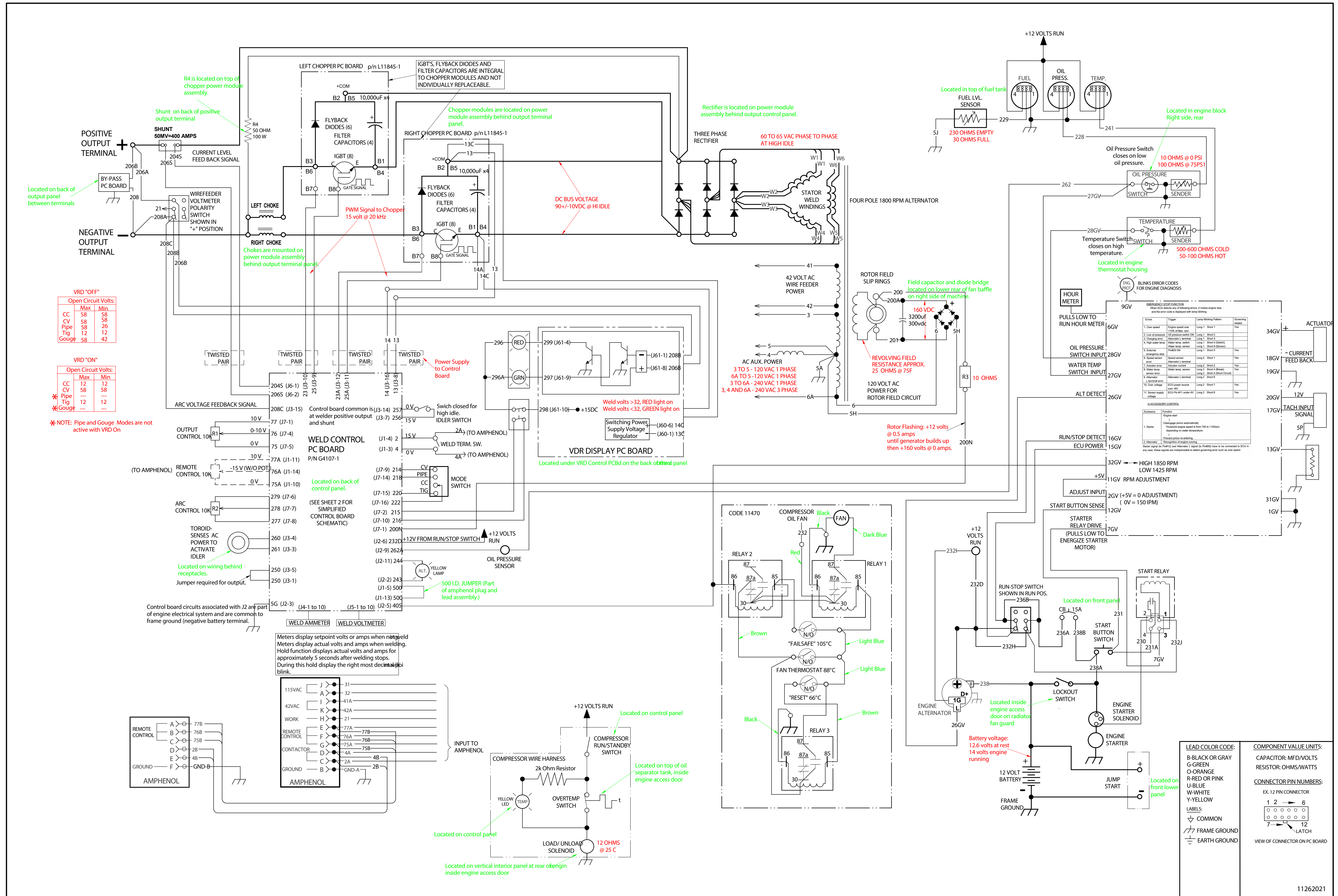


# AIR VANTAGE 500 MACHINE SCHEMATIC G6311 REV: A



**VRD "OFF"**

	Max	Min
CC	58	58
CV	58	58
Pipe	58	26
Tig	12	12
Gauge	58	42

**VRD "ON"**

	Max	Min
CC	12	12
CV	58	58
Pipe	---	---
Tig	12	12
Gauge	---	---

\* NOTE: Pipe and Gauge Modes are not active with VRD On

**EMERGENCY STOP FUNCTION**

When ECU detects any of following errors, it causes engine stop and the error code is displayed with lamp blinking.

Error	Trigger	Lamp Blinking Pattern	Covering Method
1. Over speed	Engine speed over 10% of Max. speed	Long 1 Short 1	Yes
2. Low oil pressure	Oil pressure switch ON	Long 1 Short 2	Yes
3. Charging error	Alternator L terminal	Long 1 Short 3	Yes
4. High water sensor	Water temp. sensor	Long 1 Short 4 (Blink)	Yes
5. External emergency stop	EMERGENCY STOP	Long 1 Short 5	Yes
6. Speed sensor error	Alternator L terminal	Long 2 Short 1	Yes
7. Fuel sensor error	Alternator L terminal	Long 2 Short 2	Yes
8. Water temp. sensor error	Water temp. sensor	Long 2 Short 3 (Blink)	Yes
9. Alternator error	Alternator L terminal	Long 2 Short 4 (Blink)	Yes
10. Over voltage	ECU power source over 90V	Long 2 Short 7	Yes
11. Sensor supply voltage	ECU PH #11 under 4V	Long 2 Short 8	Yes

**ADJUSTABLES CONTROL**

Accessory	Function
1. Starter	Chargenage prior automatically. Throttle engine speed is from 700 to 1100rpm depending on water temperature.
2. Alternator	Prevent prior re-starting.
3. Alternator	Recognition of engine cutting.

Starter signal to Purge and Alternator signal to PWR(ON) have to be connected to ECU in any case these signals are independent to detect governing error such as over speed

**LEAD COLOR CODE:**

- B-BLACK OR GRAY
- G-GREEN
- O-ORANGE
- R-RED OR PINK
- U-BLUE
- W-WHITE
- Y-YELLOW

**LABELS:**

- ∇ COMMON
- ⊥ FRAME GROUND
- ⊥ EARTH GROUND

**COMPONENT VALUE UNITS:**

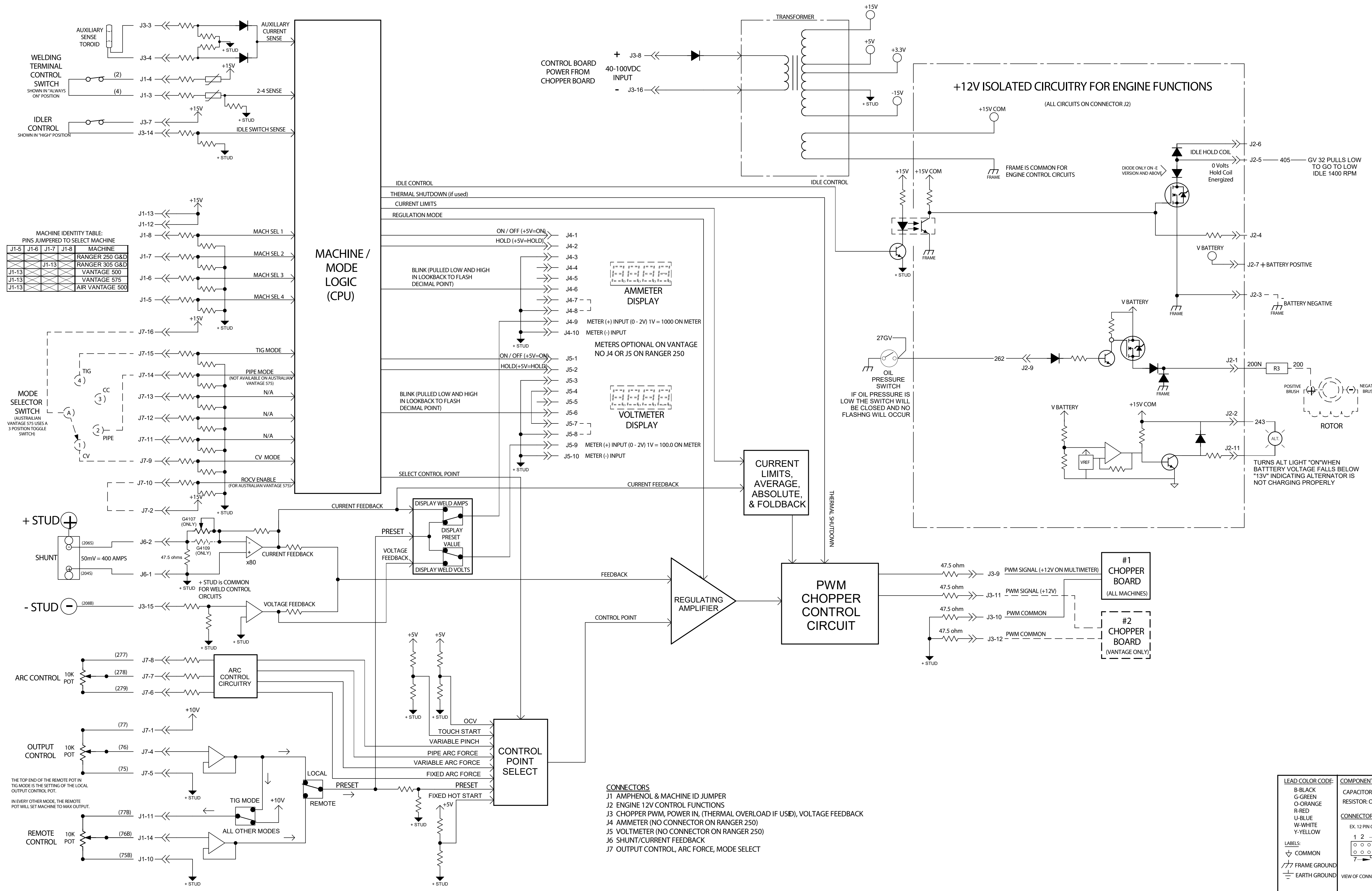
CAPACITOR: MFD/VOLTS  
RESISTOR: OHMS/WATTS

**CONNECTOR PIN NUMBERS:**

EX. 12 PIN CONNECTOR

VIEW OF CONNECTOR ON PC BOARD

SIMPLIFIED CONTROL BOARD SCHEMATIC



MACHINE IDENTITY TABLE:  
PINS JUMPED TO SELECT MACHINE

J1-5	J1-6	J1-7	J1-8	MACHINE
				RANGER 250 G&D
				RANGER 305 G&D
				VANTAGE 500
				VANTAGE 575
				AIR VANTAGE 500

- CONNECTORS**
- J1 AMPHENOL & MACHINE ID JUMPER
  - J2 ENGINE 12V CONTROL FUNCTIONS
  - J3 CHOPPER PWM, POWER IN, (THERMAL OVERLOAD IF USED), VOLTAGE FEEDBACK
  - J4 AMMETER (NO CONNECTOR ON RANGER 250)
  - J5 VOLTMETER (NO CONNECTOR ON RANGER 250)
  - J6 SHUNT/CURRENT FEEDBACK
  - J7 OUTPUT CONTROL, ARC FORCE, MODE SELECT

LEAD COLOR CODE:	COMPONENT VALUE UNITS:
B-BLACK	CAPACITOR: MFD/VOLTS
G-GREEN	RESISTOR: OHMS/WATTS
O-ORANGE	
R-RED	
L-BLUE	CONNECTOR PIN NUMBERS:
W-WHITE	EX. 12 PIN CONNECTOR
Y-YELLOW	
LABELS:	
COMMON	
FRAME GROUND	
EARTH GROUND	