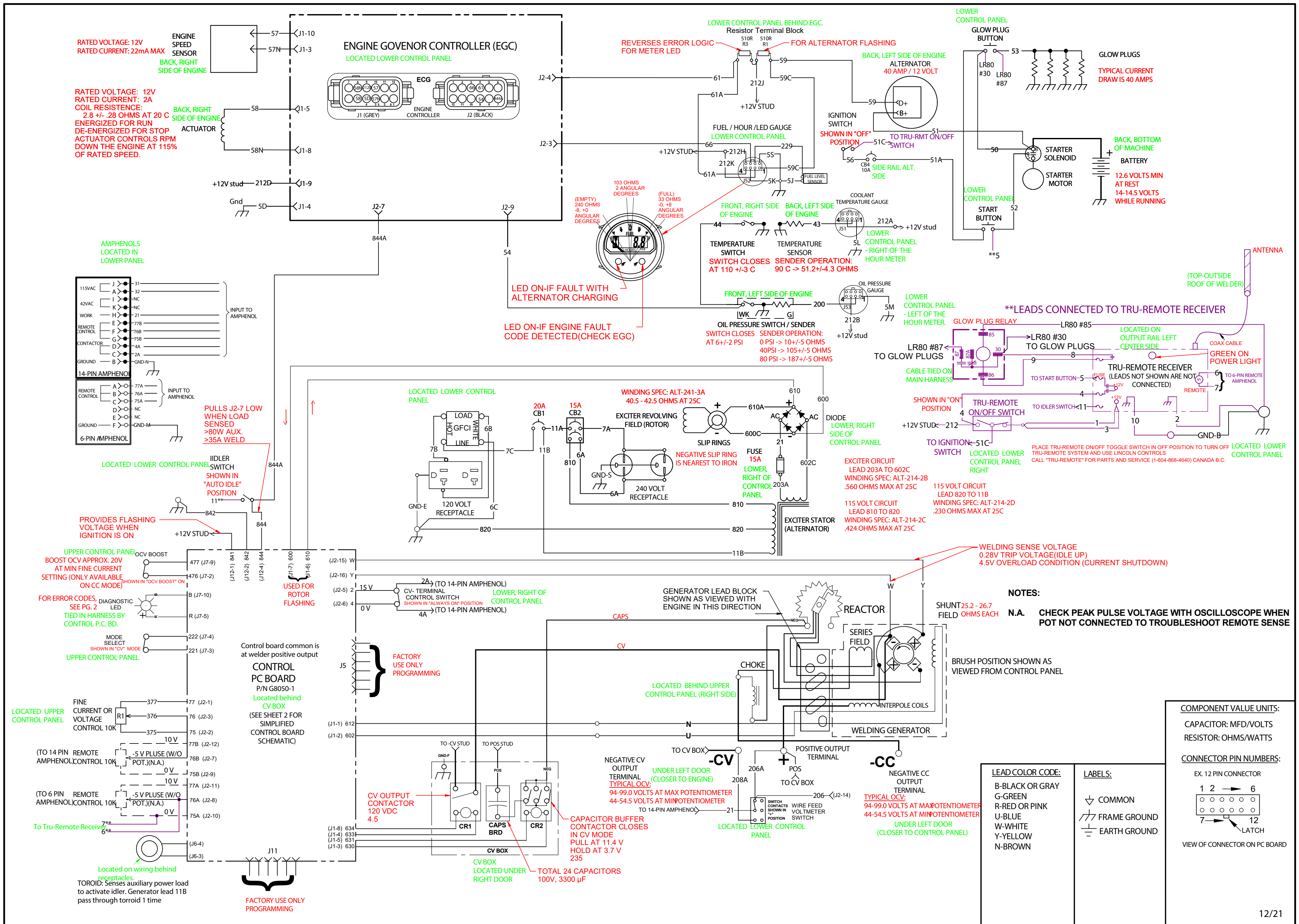


# SAE 300 MACHINE SCHEMATIC L17076 REV: B



**RATED VOLTAGE: 12V**  
**RATED CURRENT: 22mA MAX**  
 BACK, RIGHT SIDE OF ENGINE

**RATED VOLTAGE: 12V**  
**RATED CURRENT: 2A**  
**COIL RESISTANCE: 2.8 +/- .28 OHMS AT 20 C**  
 ENERGIIZED FOR RUN  
 DE-ENERGIIZED FOR STOP  
 ACTUATOR CONTROLS RPM  
 DOWN THE ENGINE AT 115%  
 OF RATED SPEED.

AMPHENOLS LOCATED IN LOWER PANEL

14-PIN AMPHENOL  
 INPUT TO AMPHENOL

6-PIN AMPHENOL  
 INPUT TO AMPHENOL

PULLS J2-7 LOW WHEN LOAD SENSED >80W AUX. >35A WELD

UPPER CONTROL PANEL  
 BOOST OCV APPROX. 20V AT MIN FINE CURRENT SETTING (ONLY AVAILABLE ON CC MODE)

FOR ERROR CODES, DIAGNOSTIC LED TIED IN HARNESS BY CONTROL P.C. BD.

MODE SELECT SHOWN IN "OFF" MODE

LOCATED UPPER CONTROL PANEL

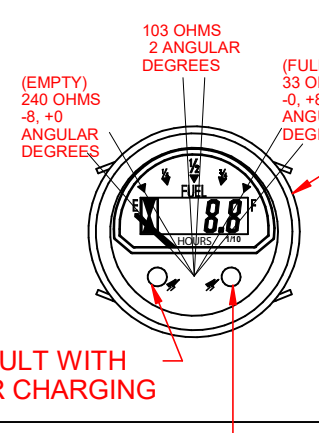
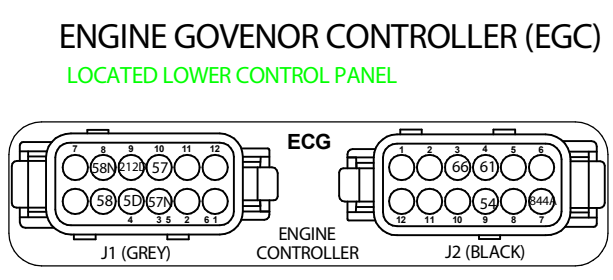
FINE CURRENT OR VOLTAGE CONTROL 10K

(TO 14 PIN REMOTE AMPHENOL) CONTROL 10K

(TO 6 PIN REMOTE AMPHENOL) CONTROL 10K

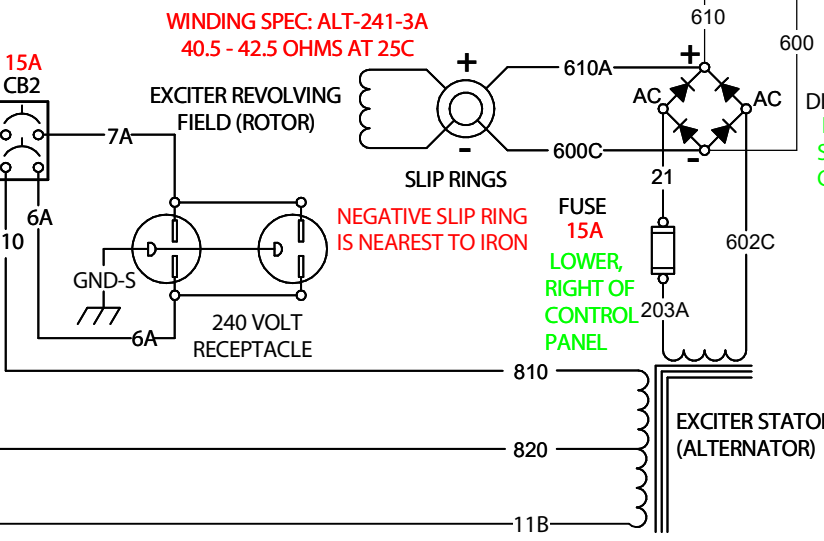
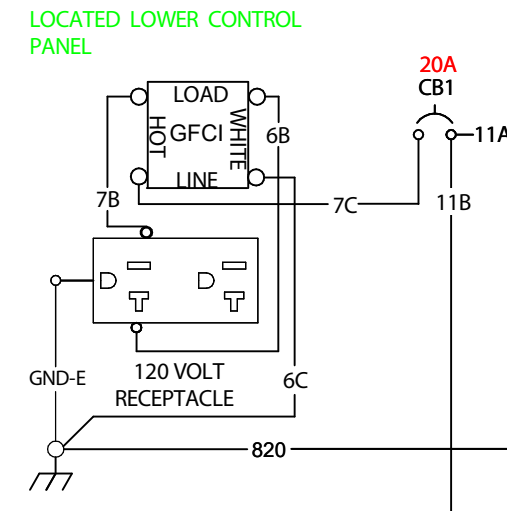
To Tru-Remote Receiver

Located on wiring behind receptacles.  
 TOROID: Senses auxiliary power load to activate idler. Generator lead 11B pass through torroid 1 time



LED ON-IF FAULT WITH ALTERNATOR CHARGING

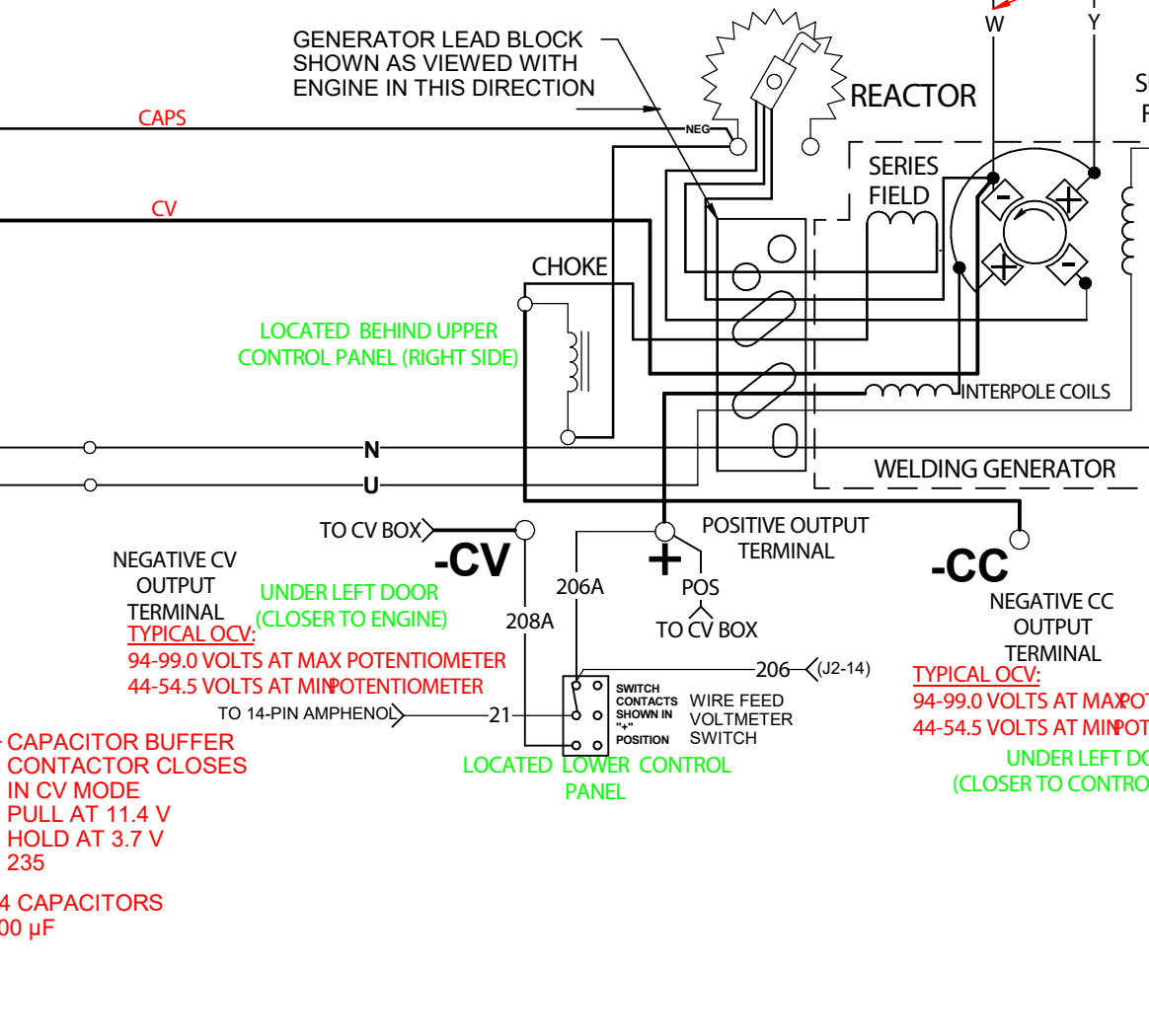
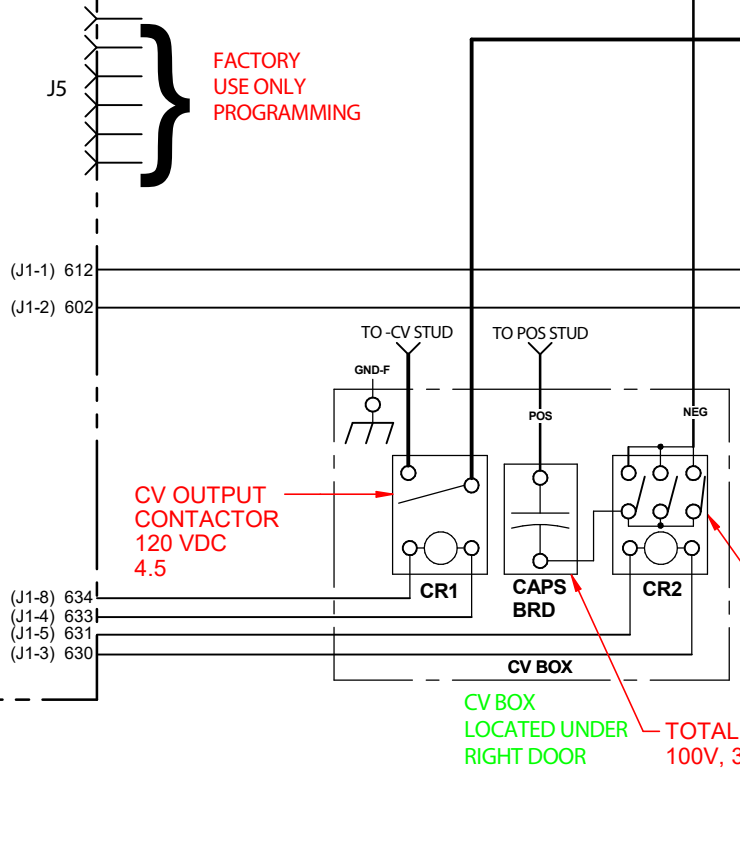
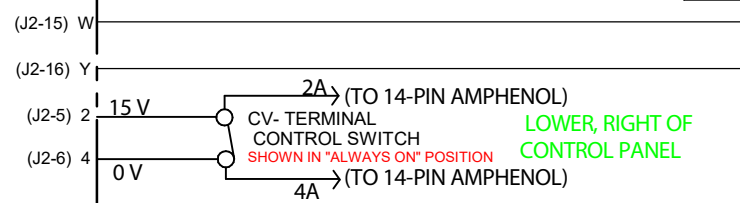
LED ON-IF ENGINE FAULT CODE DETECTED(CHECK EGC)



EXCITER CIRCUIT  
 LEAD 203A TO 602C  
 WINDING SPEC: ALT-214-2B  
 .560 OHMS MAX AT 25C

115 VOLT CIRCUIT  
 LEAD 810 TO 820  
 WINDING SPEC: ALT-214-2C  
 .424 OHMS MAX AT 25C

WELDING SENSE VOLTAGE  
 0.28V TRIP VOLTAGE (IDLE UP)  
 4.5V OVERLOAD CONDITION (CURRENT SHUTDOWN)



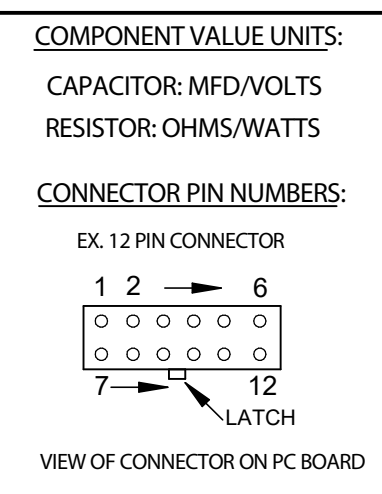
**NOTES:**  
 N.A. CHECK PEAK PULSE VOLTAGE WITH OSCILLOSCOPE WHEN POT NOT CONNECTED TO TROUBLESHOOT REMOTE SENSE

**LEAD COLOR CODE:**

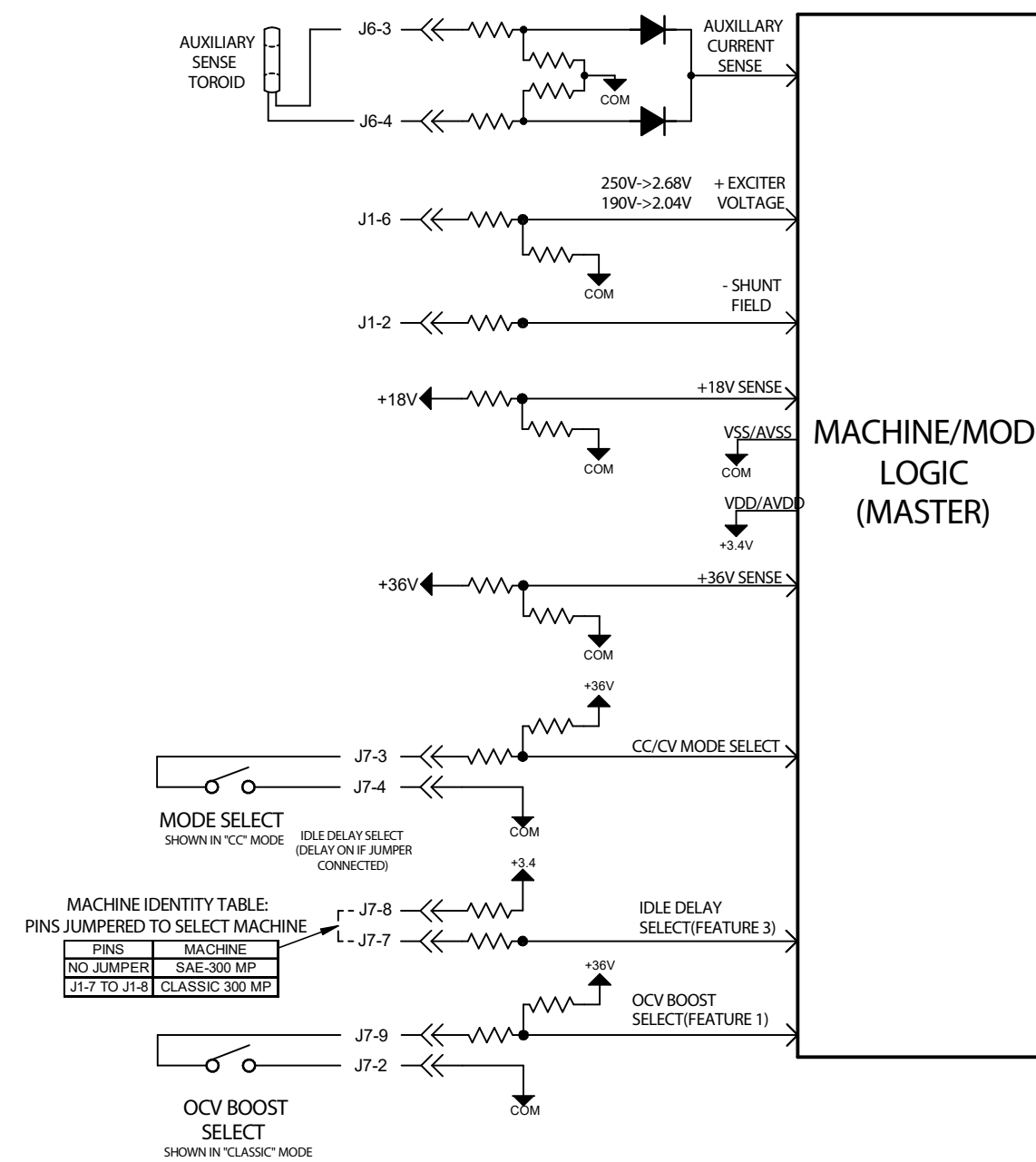
- B-BLACK OR GRAY
- G-GREEN
- R-RED OR PINK
- U-BLUE
- W-WHITE
- Y-YELLOW
- N-BROWN

**LABELS:**

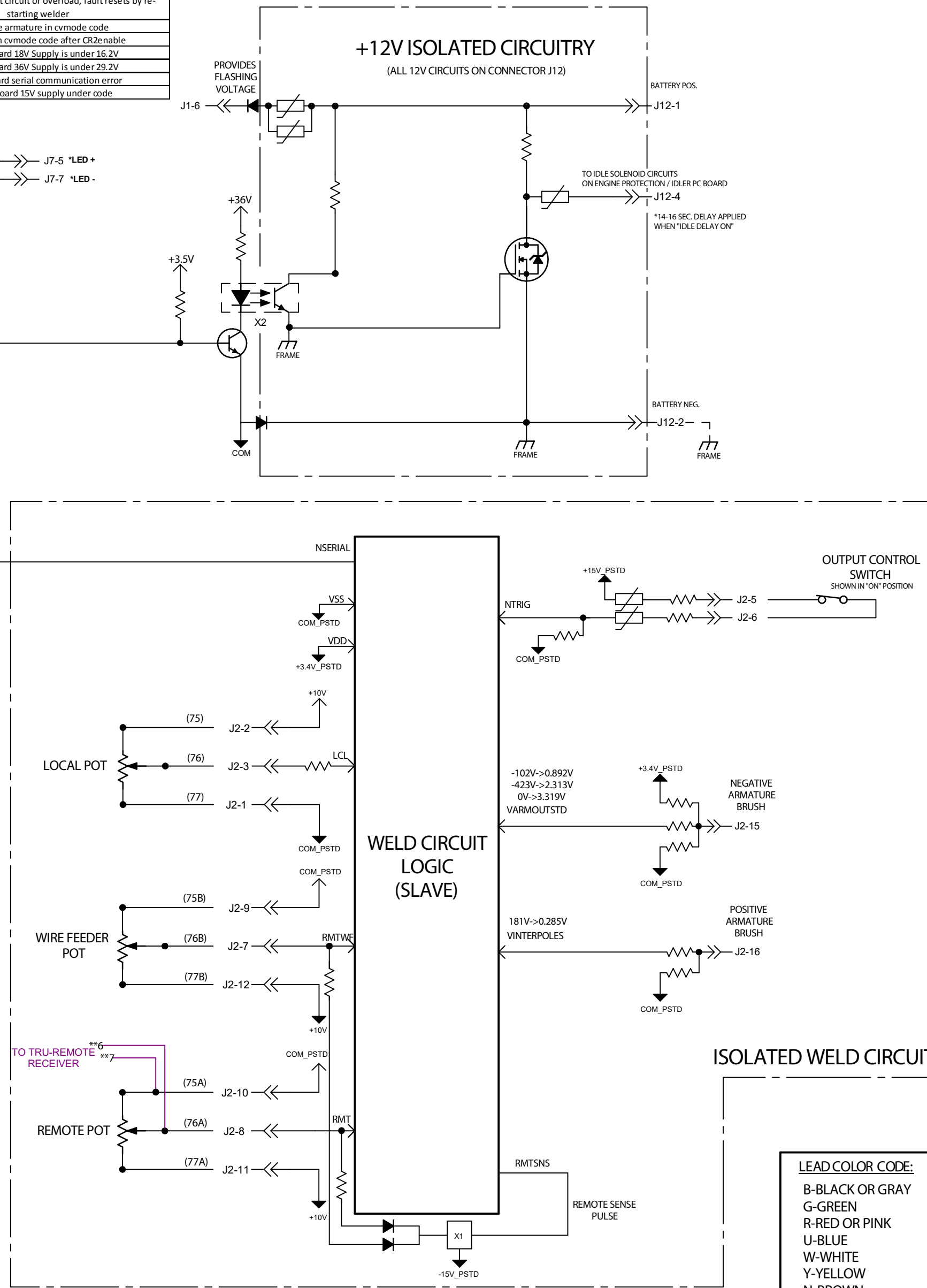
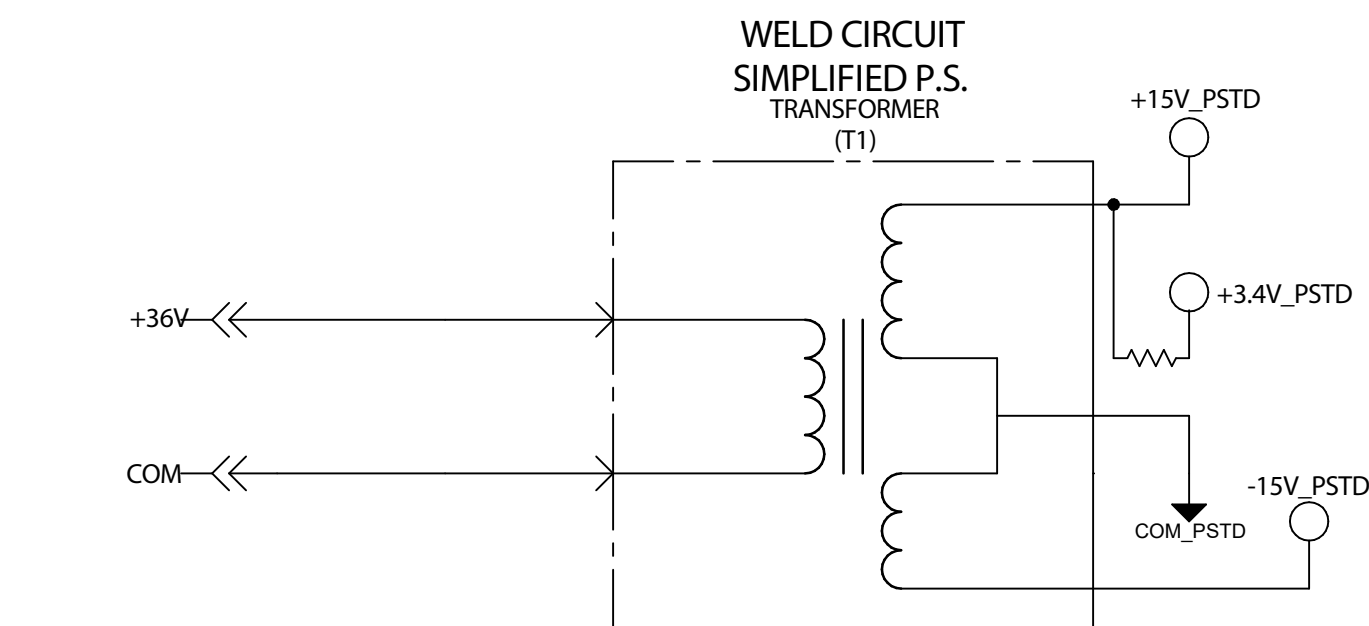
- COMMON
- FRAME GROUND
- EARTH GROUND



*Diagnostic LED Flash Codes		
Long Flash	Short Flash	Description
2	1	Field coil shorted- fault can only be reset by re-starting welder
2	3	Welder output short circuit or overload, fault resets by re-starting welder
3	2	Negative armature in cvmode code
3	3	V <sub>Arm</sub> >90V in cvmode code after CR2enable
4	2	Control board 18V Supply is under 16.2V
4	1	Control board 36V Supply is under 29.2V
5	1	Control board serial communication error
4	3	Control board 15V supply under code



- CONNECTORS**
- J1 FIELD, EXCITER, CR1, CR2
  - J2 WELD CIRCUIT
  - J6 TOROID
  - J7 MACH. SELECT, OCV MODE, DIAG. LED
  - J12 FLASHING, IDLER



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- LABELS:**
- COMMON
  - FRAME GROUND
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