

**XTALK NETWORK**

| P5        |              |
|-----------|--------------|
| DIO 1     | -MOLEX PLUG- |
| n/c 2     | -MOLEX PLUG- |
| BUS0L 3   | -MOLEX PLUG- |
| BUS0H 4   | -MOLEX PLUG- |
| BUS1L 5   | -MOLEX PLUG- |
| BUS1H 6   | -MOLEX PLUG- |
| NET_GND 7 | -MOLEX PLUG- |
| GUARD 8   | -MOLEX PLUG- |

Connector is Molex #19418-0023  
Pins are Molex #19420-0009  
Mates with J5 on EnerMatic Engine Controller  
All connector wires are #16 AWG  
Plug Molex #19417-0119

| P4     |  |
|--------|--|
| Tx_0 1 |  |
| Rx_0 2 |  |
| Gnd 3  |  |
| Tx_1 4 |  |
| Rx_1 5 |  |
| Gnd 6  |  |

Connector is Molex #19418-0021  
Pins are Molex #19420-0009  
Mates with J4 on EnerMatic Controller  
All connector wires are #16 AWG

| P3                 |              |
|--------------------|--------------|
| B1_VOLTS 1         |              |
| FIELD VOLTS 2      |              |
| IGNITION INPUT 0 3 | -MOLEX PLUG- |
| IGNITION INPUT 1 4 | -MOLEX PLUG- |
| ERROR OUT(+) 5     | -MOLEX PLUG- |
| STATUS OUT(+) 6    | -MOLEX PLUG- |
| SOLAR OUT(+) 7     | -MOLEX PLUG- |
| WIND OUT(+) 8      | -MOLEX PLUG- |
| TOD_OUT(+) 9       | -MOLEX PLUG- |
| B1T(-) 10          |              |
| ASHA 11            |              |
| ASHG 12            |              |
| BSHG 13            |              |
| BSHB 14            |              |
| B1T(+) 15          |              |
| PARALLEL OUT(+) 16 | -MOLEX PLUG- |

Connector: Molex #19418-0039  
Pins are Molex #19420-0009  
Mates with J3 on EnerMatic Engine Controller  
All connector wires are #16 AWG  
Plug Molex #19417-0119

| P2              |  |
|-----------------|--|
| B+ 1            |  |
| 12V_PWR 2       |  |
| Analog Ground 3 |  |
| Ground 4        |  |

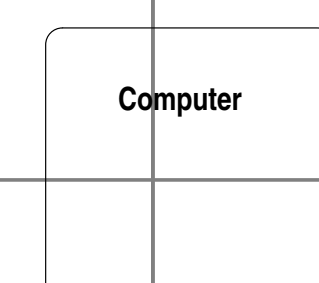
Connector: Molex #19418-0025  
Pins are Molex #19420-0009  
Mates with J2 on EnerMatic Engine Controller  
All connector wires are #16 AWG

| P1                               |              |
|----------------------------------|--------------|
| Water Temp. Switch 1             |              |
| Water Temp. Switch Return 2      |              |
| Water Temp. Sensor Signal 3      |              |
| Water Temp. Sensor Return 4      |              |
| Oil Pressure Switch 5            |              |
| Oil Pressure Switch Return 6     |              |
| Oil Pressure Sensor Signal 7     |              |
| Oil Pressure Sensor Return 8     |              |
| Gear Tooth Sensor (12V_PWR) 9    |              |
| Gear Tooth Sensor Signal 10      |              |
| Gear Tooth Sensor Return 11      |              |
| Fuel and Oil Sender (12V_PWR) 12 | -MOLEX PLUG- |
| Fuel Sender Signal 13            | -MOLEX PLUG- |
| Fuel Sender Return 14            | -MOLEX PLUG- |
| Oil Level Sender Signal 15       | -MOLEX PLUG- |
| Oil Level Sender Return 16       | -MOLEX PLUG- |

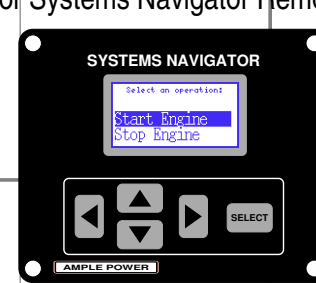
Connector: Molex #19418-0039  
Pins are Molex #19420-0009  
Mates with J1 on EnerMatic Engine Controller  
All connector wires are #16 AWG  
Plug Molex #19417-0119

| DB9 FEMALE CONNECTOR |  |
|----------------------|--|
| 2                    |  |
| 3                    |  |
| 5                    |  |

| DB9 FEMALE CONNECTOR |  |
|----------------------|--|
| 2                    |  |
| 3                    |  |
| 5                    |  |



| X1 RAP PORT   |  |
|---|--|
| Reserved for Network Controller or Systems Navigator Remote Display |  |



| REMOTE REGULATOR P6 |              |
|---------------------|--------------|
| Y0 1                | -MOLEX PLUG- |
| Z0 2                | -MOLEX PLUG- |
| Y1 3                | -MOLEX PLUG- |
| Z1 4                | -MOLEX PLUG- |
| Ground 5            | -MOLEX PLUG- |
| 5V 6                | -MOLEX PLUG- |
| Ground 7            | -MOLEX PLUG- |
| 5V 8                | -MOLEX PLUG- |

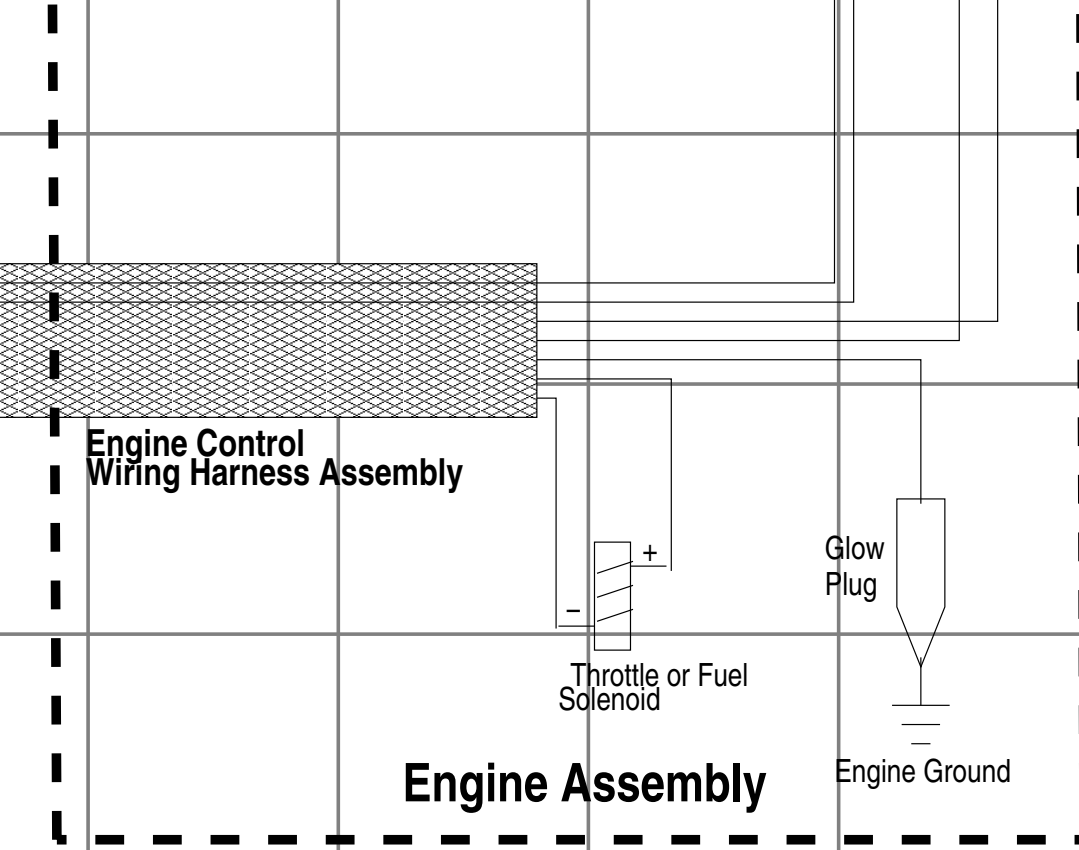
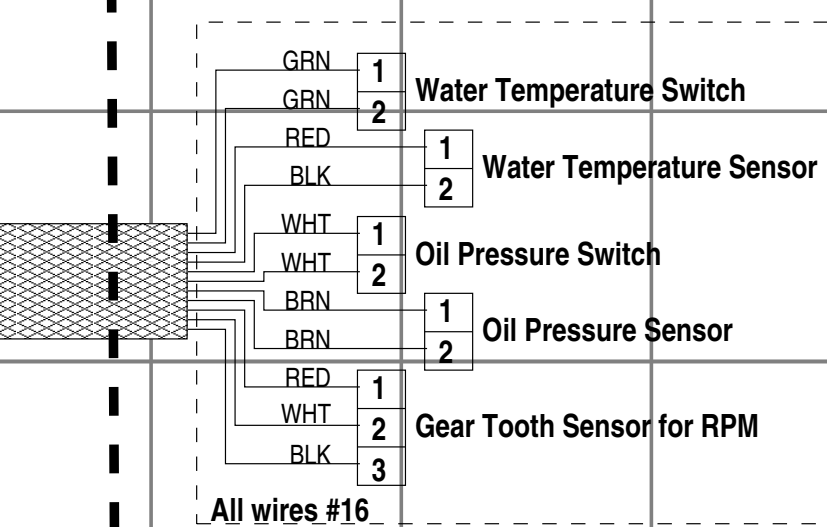
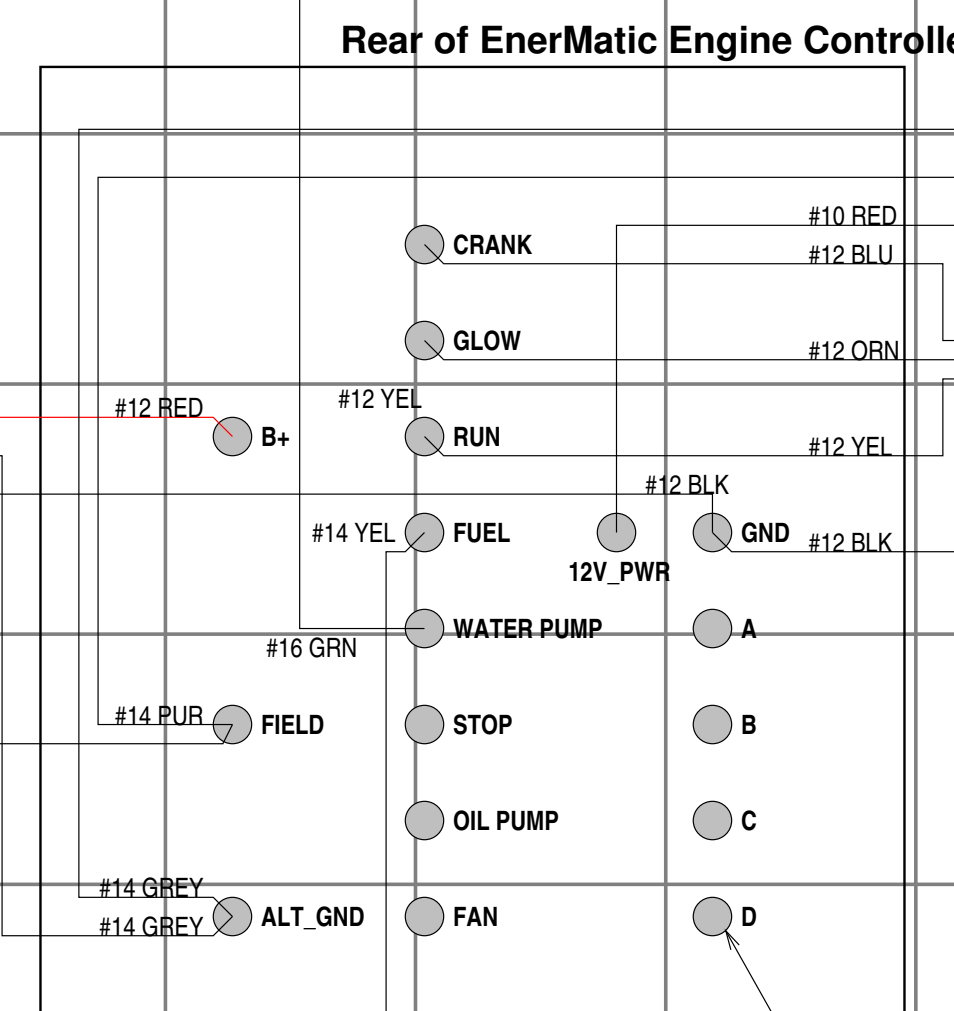
Connector is Molex #19418-0023  
Pins are Molex #19420-0009  
Mates with J6 on EnerMatic Engine Controller  
All connector wires are #16 AWG  
Plug Molex #19417-0119

| P7        |              |
|-----------|--------------|
| T1_IN 1   | -MOLEX PLUG- |
| T2_IN 2   | -MOLEX PLUG- |
| AUX_IN 3  | -MOLEX PLUG- |
| V3_IN 4   | -MOLEX PLUG- |
| BB_LINE 5 | -MOLEX PLUG- |
| AOUT 6    | -MOLEX PLUG- |
| Ground 7  | -MOLEX PLUG- |
| 5V 8      | -MOLEX PLUG- |

Connector is Molex #19418-0023  
Pins are Molex #19420-0009  
Mates with J7 on EnerMatic Engine Controller  
All connector wires are #16 AWG  
Plug Molex #19417-0119

| P8                     |              |
|------------------------|--------------|
| Emergency Stop Input 1 |              |
| Remote Run Input 2     |              |
| TOD2 OUT 3             | -MOLEX PLUG- |
| Temperature 2(+) 4     |              |
| Limit (Closed) Input 5 | -MOLEX PLUG- |
| Limit (Open) Input 6   | -MOLEX PLUG- |
| Ground 7               | -MOLEX PLUG- |
| Watchdog Output 8      | -MOLEX PLUG- |

Connector is Molex #19418-0023  
Pins are Molex #19420-0009  
Mates with J8 on EnerMatic Engine Controller  
All connector wires are #16 AWG  
Plug Molex #19417-0119



**Notes:**  
Pyrometer switch required to protect exhaust over-temperature due to loss of water flow  
All wires to P1 thru P8 shall be #16 AWG Marine Grade wire.  
Color codes are suggested and make troubleshooting easier.  
Heavy current wires must be sized according to length.  
Many other electrical circuits exist alongside those shown here.  
Proper fusing is mandatory.  
Wire exactly as shown - DO NOT combine wires.

|                 |            |   |
|-----------------|------------|---|
| CONTRACT NUMBER | DATE       | <b>AMPLE POWER™ COMPANY</b>                               |
| DRAWN DMI       | 09-02-2008 | 2442 NW MARKET ST., #5, SEATTLE, WA 98107                 |
| CHECKED         |            | Ph: (206) 759-0871 Fax: (206) 759-0003 www.amplepower.com |
| MECH            |            | <b>Enermatic Engine Controller</b>                        |
| ELEC            |            | <b>System Wiring Diagram</b>                              |
| APPROVED        |            | COPYRIGHT © 2007, 2008                                    |
| RELEASED        |            | AP0801069DMI  |
|                 | SCALE 1:1  | FILENAME all_wiring.dwg                                   |
|                 |            | SHEET 1 OF 4  |