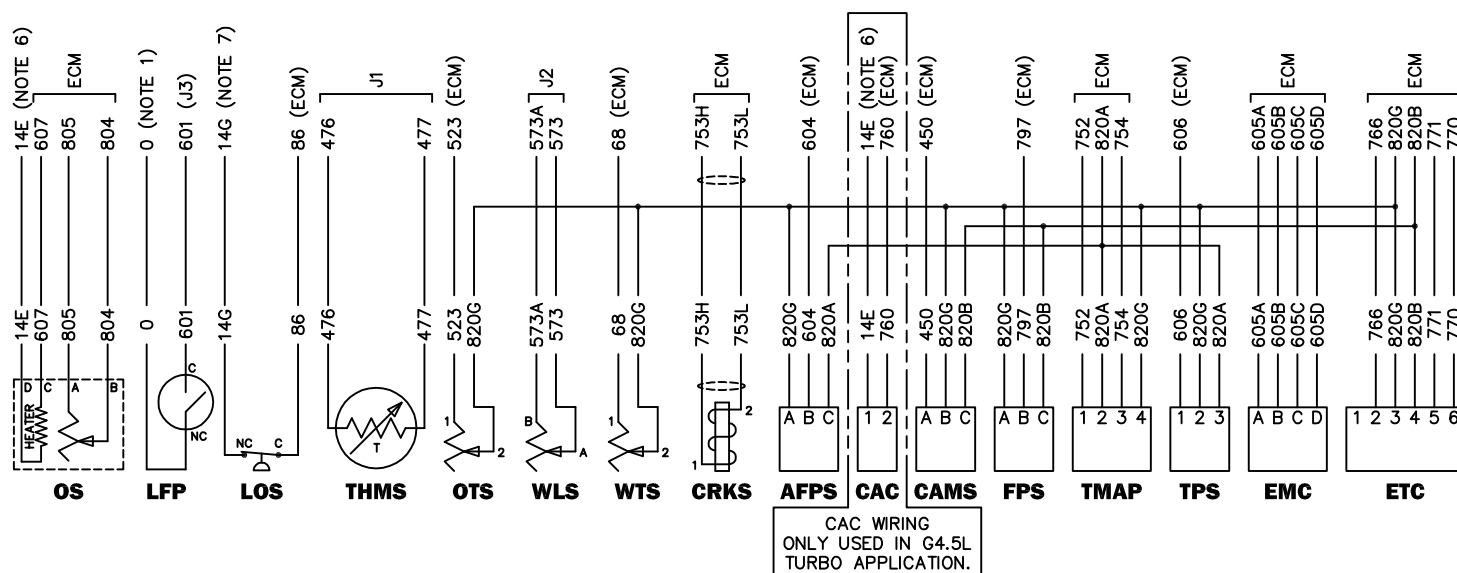
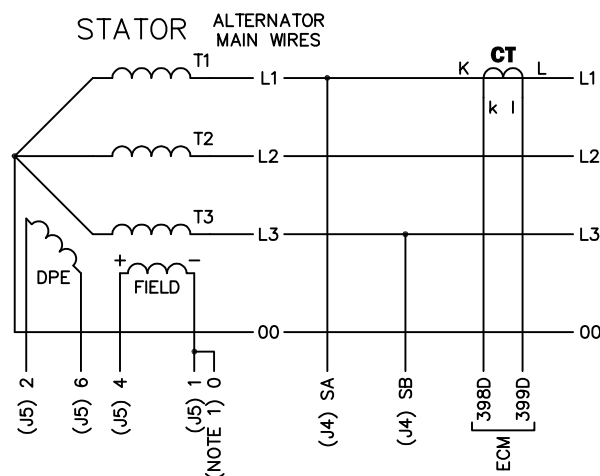
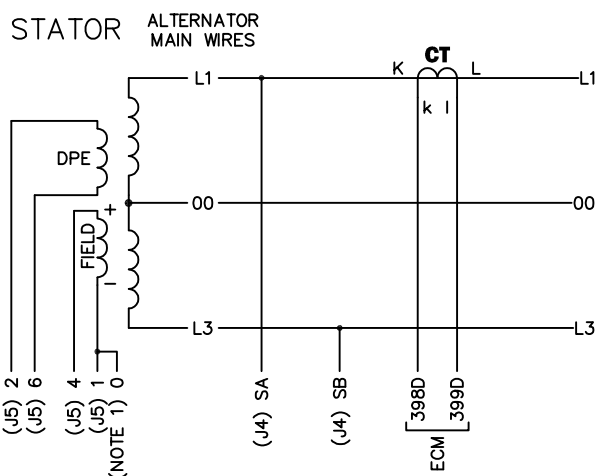
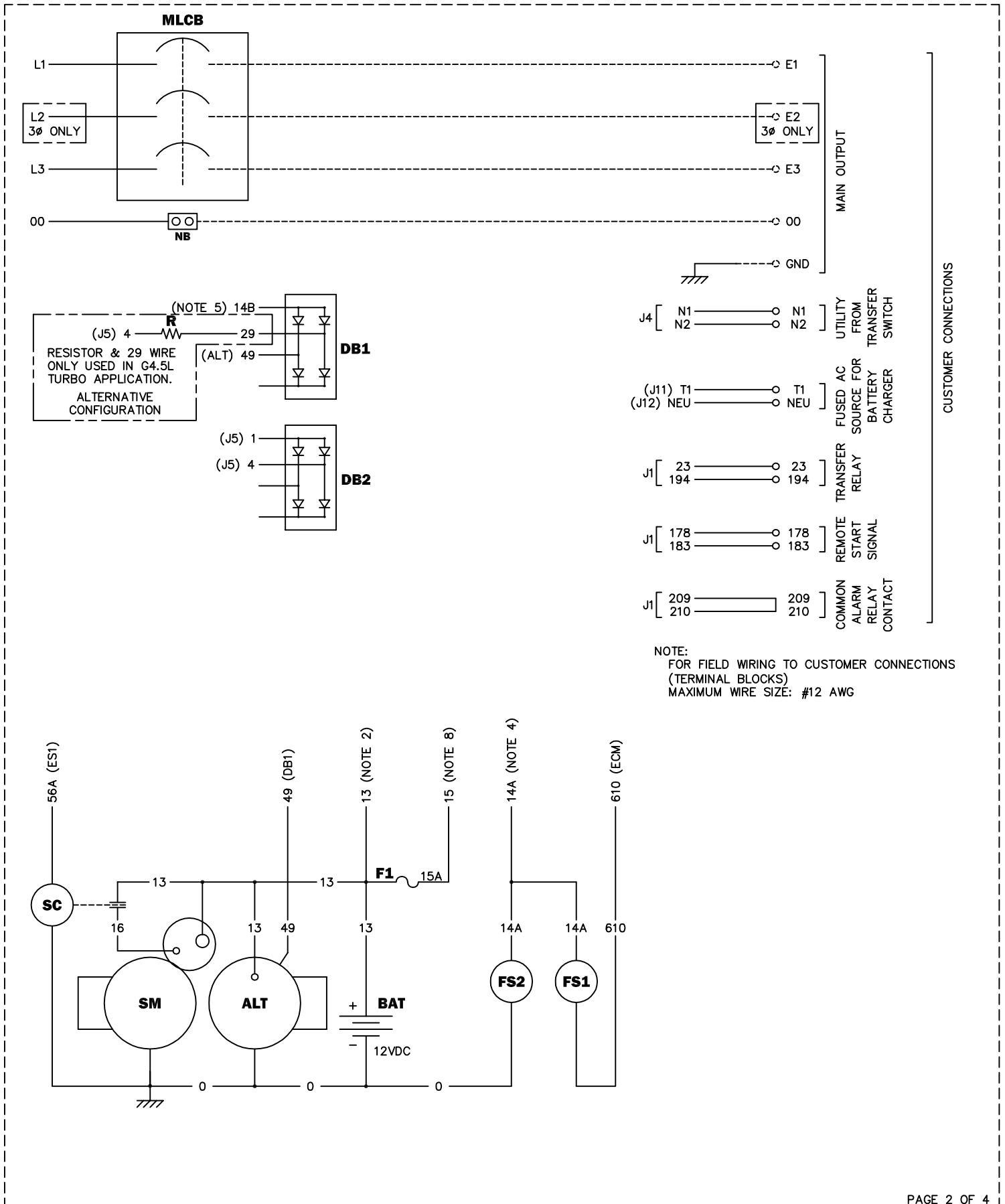
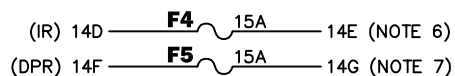
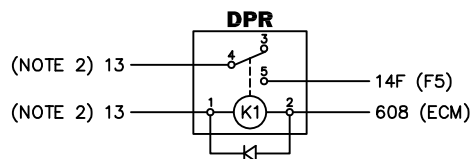
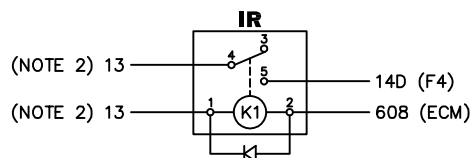
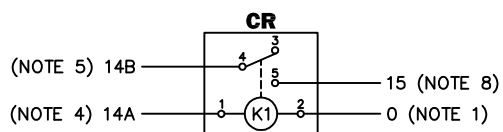
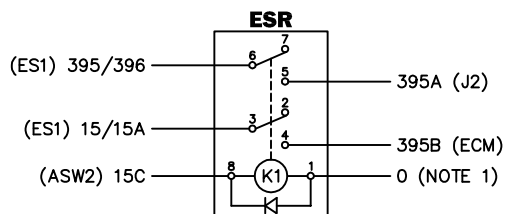
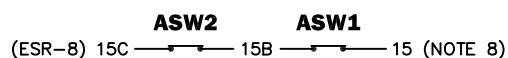
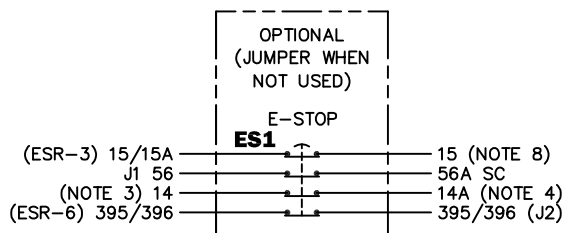
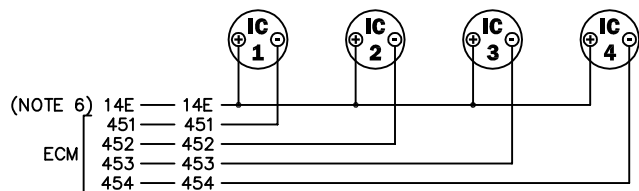


## LEGEND

|                                   |                                         |                                           |
|-----------------------------------|-----------------------------------------|-------------------------------------------|
| AFPS - AIR FILTER PRESSURE SENSOR | EMC - ELECTRONIC MIXER CONTROL VALVE    | MLCB - MAIN LINE CIRCUIT BREAKER          |
| ALT - DC CHARGE ALTERNATOR        | ES - EMERGENCY STOP                     | NB - NEUTRAL BLOCK                        |
| ASW - AUXILIARY SHUTDOWN SWITCH   | ESR - EMERGENCY STOP RELAY              | OS - OXYGEN SENSOR                        |
| BAT - BATTERY                     | ETC - ELECTRONIC THROTTLE CONTROL VALVE | OTS - OIL TEMPERATURE SENSOR              |
| CAC - CHARGE AIR COOLER           | F - FUSE                                | R - RESISTOR                              |
| CAMS - CAMSHAFT SENSOR            | FPS - FUEL PRESSURE SENSOR              | SC - STARTER CONTACTOR                    |
| CR - CONTROL RELAY                | FS - FUEL SOLENOID                      | SM - STARTER MOTOR                        |
| CRKS - CRANKSHAFT SENSOR          | IC - IGNITION COIL                      | THMS - THERMISTOR (BATTERY AMBIENT TEMP.) |
| CT - CURRENT TRANSFORMER          | IR - IGNITION RELAY                     | TMAP - MANIFOLD TEMPERATURE AND PRESSURE  |
| DB - DIODE BRIDGE                 | J - MAIN CONTROLLER CONNECTORS          | TPS - MIXER POSITION SENSOR               |
| DPE - EXCITER                     | LFP - LOW FUEL PRESSURE SWITCH          | WLS - COOLANT LEVEL SENSOR                |
| DPR - DRIVER POWER RELAY          | LOS - LOW OIL PRESSURE SWITCH           | WTS - COOLANT TEMPERATURE SENSOR          |
| ECM - ELECTRONIC CONTROL MODULE   |                                         |                                           |







## MAIN CONTROLLER CONNECTIONS

## J1

| PIN | WIRE    | TO       | FUNCTION                     |
|-----|---------|----------|------------------------------|
| 1   | 15      | F1       | NOTE 8                       |
| 2   | 15      | F1       | NOTE 8                       |
| 3   | 56/56A  | ES1      | STARTER OUTPUT               |
| 4   | 0       | GND      | NOTE 1                       |
| 5   | 183     | CUST CON | REMOTE START                 |
| 6   | 194     | CUST CON | TRANSFER RELAY COIL (+)      |
| 7   | 23      | CUST CON | TRANSFER RELAY COIL CONTROL  |
| 8   | 209/210 | CAR      | COMMON ALARM RELAY           |
| 9   | 14/14A  | ES1      | NOTE 3/NOTE 4                |
| 11  | 476     | THMS     | THERMISTOR (BATTERY CHARGER) |
| 12  | 477     | THMS     | THERMISTOR (BATTERY CHARGER) |
| 14  | 178     | CUST CON | REMOTE START                 |
| 15  | 209/210 | CAR      | COMMON ALARM RELAY           |
| 16  | 172     | ECM-20   | RUN SIGNAL                   |

## J2

| PIN | WIRE    | TO        | FUNCTION                    |
|-----|---------|-----------|-----------------------------|
| 4   | 395/396 | ES1       | EMERGENCY STOP              |
| 6   | SHLD    | ECM (CUT) | CAN COMMS TO ECM (SHIELD)   |
| 8   | 395A    | ESR-5     | EMERGENCY STOP              |
| 9   | 573     | WLS-A     | COOLANT LEVEL SIGNAL        |
| 10  | 573A    | WLS-B     | COOLANT LEVEL SIGNAL RETURN |
| 11  | 743A    | ECM-2C    | CAN COMMS TO ECM (HIGH)     |
| 12  | 744A    | ECM-2B    | CAN COMMS TO ECM (LOW)      |

## J3

| PIN | WIRE | TO  | FUNCTION          |
|-----|------|-----|-------------------|
| 4   | 0    | GND | NOTE 1            |
| 5   | 601  | LFP | LOW FUEL PRESSURE |

## J4

| PIN | WIRE | TO       | FUNCTION                  |
|-----|------|----------|---------------------------|
| 1   | SA   | MLCB     | OUTPUT VOLTAGE SENSING A  |
| 3   | N1   | CUST CON | UTILITY VOLTAGE SENSING 1 |
| 4   | SB   | MLCB     | OUTPUT VOLTAGE SENSING B  |
| 6   | N2   | CUST CON | UTILITY VOLTAGE SENSING 2 |

## J5

| PIN | WIRE | TO    | FUNCTION        |
|-----|------|-------|-----------------|
| 1   | 2    | DPE   | EXCITER OUTPUT  |
| 2   | 1    | FIELD | FIELD (BRUSH) - |
| 3   | 6    | DPE   | EXCITER RETURN  |
| 4   | 4    | FIELD | FIELD (BRUSH) + |

## NOTES:

1) WIRE #0 IS CHASSIS GROUND (BATTERY-) UNLESS NOTED OTHERWISE.

2) WIRE #13 IS UNFUSED +12VDC (BATTERY+).

3) WIRE #14 IS FUSED +12VDC WHEN GENERATOR IS CRANKING OR RUNNING.

4) WIRE #14A IS FUSED +12VDC WHEN GENERATOR IS CRANKING OR RUNNING AND E-STOP IS NOT ACTIVATED.

5) WIRE #14B IS FUSED +12VDC WHEN GENERATOR IS CRANKING OR RUNNING AND E-STOP IS NOT ACTIVATED (FUSED WIRE #15 & SWITCHED WIRE #14A).

6) WIRE #14E IS FUSED +12VDC FOR IGNITION COILS, CHARGE AIR COOLER BYPASS, AND OXYGEN SENSOR HEATER.

7) WIRE #14G IS FUSED +12VDC FOR THE ECM DRIVER POWER.

8) WIRE #15 IS FUSED +12VDC FOR GENERAL USE.

## ENGINE CONTROL MODULE CONNECTIONS

## ECM

| PIN | WIRE | TO                                    | FUNCTION                              |
|-----|------|---------------------------------------|---------------------------------------|
| 1A  | 605C | EMC-C                                 | ELECTRONIC MIXER CONTROL VALVE B (+)  |
| 1B  | 753L | CRKS-2                                | CRANKSHAFT POSITION SENSOR (-)        |
| 1C  | 753H | CRKS-1                                | CRANKSHAFT POSITION SENSOR (+)        |
| 1D  | 760  | CAC                                   | CHARGE AIR COOLER BYPASS              |
| 1G  | 607  | OS-C                                  | OXYGEN HEATER                         |
| 1H  | 608  | IR/DPR                                | ECM MAIN POWER RELAY                  |
| 1J  | 610  | FS1-B                                 | FUEL SHUT OFF VALVE                   |
| 1L  | 820A | AFPS/TMAP/TPS                         | SENDER POWER 1                        |
| 1M  | 820B | CAMS/ETC/FPS                          | SENDER POWER 2                        |
| 1N  | 797  | FPS-B                                 | FUEL PRESSURE SENSOR                  |
| 1O  | 606  | TPS-1                                 | MIXER POSITION SENSOR                 |
| 1P  | 771  | ETC-5                                 | ELECTRONIC THROTTLE CONTROL VALVE (-) |
| 1Q  | 770  | ETC-6                                 | ELECTRONIC THROTTLE CONTROL VALVE (+) |
| 2A  | 605D | EMC-D                                 | ELECTRONIC MIXER CONTROL VALVE B (-)  |
| 2B  | 744A | J2-12                                 | CAN COMMS TO CONTROLLER (LOW)         |
| 2C  | 743A | J2-11                                 | CAN COMMS TO CONTROLLER (HIGH)        |
| 2D  | 754  | TMAP-3                                | INTAKE AIR TEMPERATURE                |
| 2E  | 820G | AFPS/CAMS/ETC/FPS<br>OTS/TMAP/TPS/WTS | SENDER GROUND                         |
| 2L  | 450  | CAMS-A                                | CAMSHAFT POSITION SENSOR              |
| 2M  | 752  | TMAP-1                                | MANIFOLD AIR PRESSURE                 |
| 2N  | 766  | ETC-2                                 | ELEC. THROTTLE CONTROL VALVE POSITION |
| 2O  | 172  | J1-16                                 | RUN SIGNAL                            |
| 2P  | 14G  | F5-Y                                  | NOTE 7                                |
| 2Q  | 14G  | F5-Y                                  | NOTE 7                                |
| 3A  | 605A | EMC-A                                 | ELECTRONIC MIXER CONTROL VALVE A (+)  |
| 3B  | 399D | CTC2-1                                | CURRENT TRANSFORMER (-)               |
| 3C  | 398D | CTC2-2                                | CURRENT TRANSFORMER (+)               |
| 3E  | 805  | OS-A                                  | OXYGEN SENSOR (-)                     |
| 3G  | 523  | OTS-1                                 | OIL TEMPERATURE SENSOR                |
| 3J  | 395B | ESR-4                                 | EMERGENCY STOP                        |
| 3L  | 86   | LOS-1                                 | LOW OIL PRESSURE SIGNAL               |
| 3O  | 15   | F1                                    | NOTE 8                                |
| 3P  | 0    | GND                                   | NOTE 1                                |
| 3Q  | 0    | GND                                   | NOTE 1                                |
| 4A  | 605B | EMC-B                                 | ELECTRONIC MIXER CONTROL VALVE A (-)  |
| 4B  | 604  | AFPS-B                                | AIR FILTER PRESSURE SENSOR            |
| 4D  | 804  | OS-B                                  | OXYGEN SENSOR                         |
| 4F  | 68   | WTS-1                                 | COOLANT TEMPERATURE SENSOR            |
| 4L  | 452  | IC2-C                                 | IGNITION COIL 2                       |
| 4M  | 453  | IC3-C                                 | IGNITION COIL 3                       |
| 4N  | 454  | IC4-C                                 | IGNITION COIL 4                       |
| 4O  | 451  | IC1-C                                 | IGNITION COIL 1                       |
| 4P  | 0    | GND                                   | NOTE 1                                |
| 4Q  | 0    | GND                                   | NOTE 1                                |