

# Wiring Diagrams

**DETROIT DIESEL**



## Automatic Transfer Switches

Models:

**DSE TS 840, TS 870, and TS 880**

Power Switching Device:  
Service-Entrance Rated  
100-4000 Amperes

Controls:  
TSC 80  
TSC 800



# Product Identification Information

---

Product identification numbers determine service parts. Record the product identification numbers in the spaces below immediately after unpacking the products so that the numbers are readily available for future reference. Record field-installed kit numbers after installing the kits.

## Transfer Switch Identification Numbers

Record the product identification numbers from the transfer switch nameplate.

Model Designation \_\_\_\_\_

Serial Number \_\_\_\_\_

| Accessory Number | Accessory Description |
|------------------|-----------------------|
| _____            | _____                 |
| _____            | _____                 |
| _____            | _____                 |
| _____            | _____                 |
| _____            | _____                 |
| _____            | _____                 |
| _____            | _____                 |
| _____            | _____                 |
| _____            | _____                 |
| _____            | _____                 |

This manual provides wiring diagrams for the 100–4000 amp Model DSE service entrance rated automatic transfer switches.

Information in this publication represents data available at the time of print. The manufacturer of DDC/MTU Power Generation products reserves the right to change this publication and the products represented without notice and without any obligation or liability whatsoever.

## Service Assistance

---

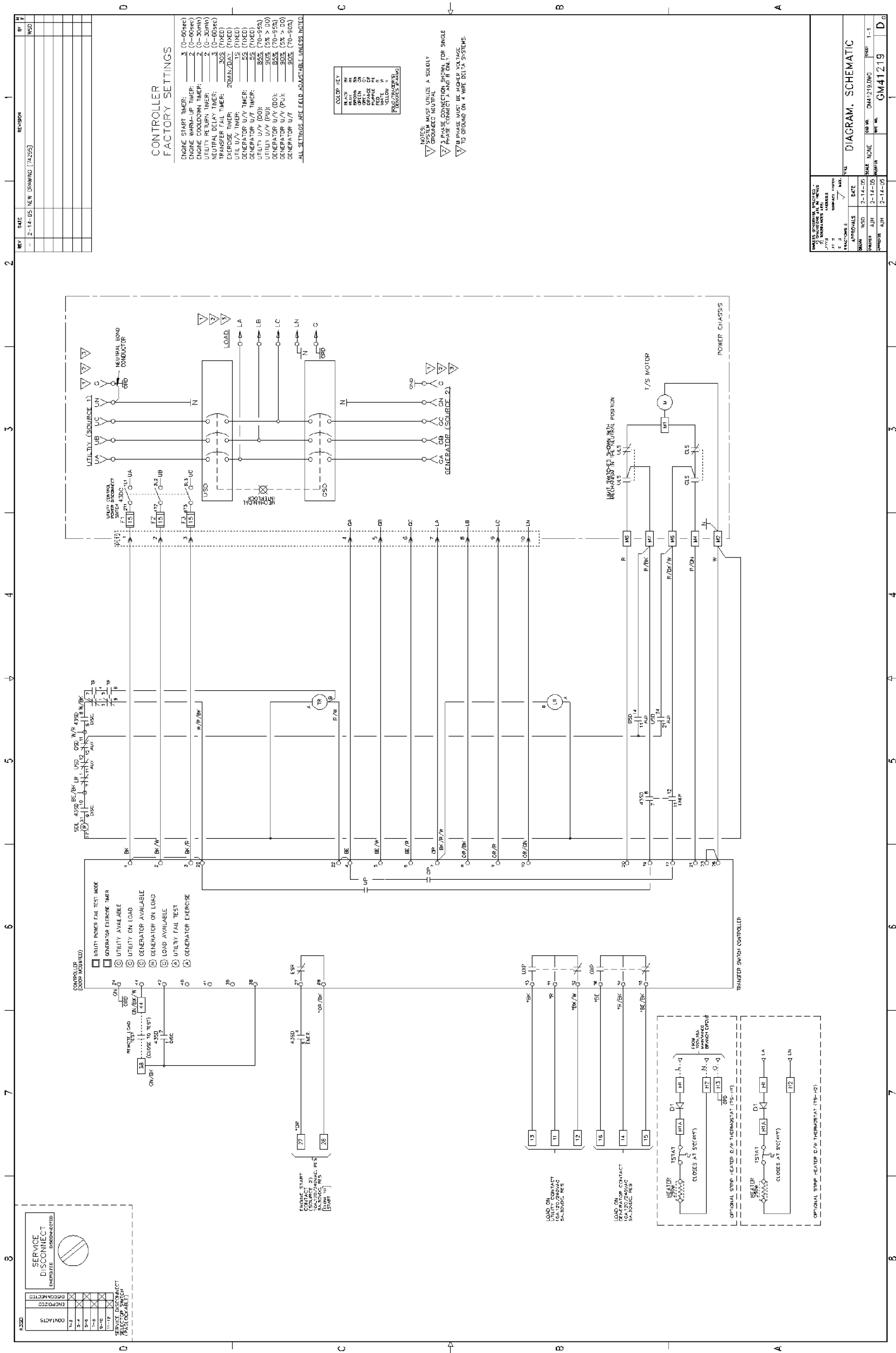
For professional advice on generator power requirements and conscientious service, please contact your nearest DDC/MTU Power Generation distributor.

- Consult the Yellow Pages under the heading Generators—Electric
- Visit the DDC/MTU Power Generation website at [ddcmtupowergeneration.com](http://ddcmtupowergeneration.com)
- Look at the labels and stickers on your DDC/MTU Power Generation product or review the appropriate literature or documents included with the product

# Wiring Diagrams

---

| Schematic Diagram                                  | Part Number | Page |
|----------------------------------------------------|-------------|------|
| 100-250A, 240V Max., 1/3-Phase, 2/3-Pole           | GM41219-S   | 5    |
| 400-800A, 240V Max., 1/3-Phase, 2/3-Pole           | GM41220-S   | 6    |
| 100-250A, 600V Max., 3/4-Pole, 4-Wire              | GM41222-S   | 7    |
| 100-250A, 600V Max., 3-Phase, 3-Wire, 3-Pole       | GM41223-S   | 8    |
| 100-250A, 240V Max., 1/3-Phase, 2/3-Pole           | GM41224-S   | 9    |
| 400-1200A, 600V Max., 3/4-Pole, 4-Wire             | GM41225-S   | 10   |
| 400-1200A, 600V Max., 3-Phase, 3-Wire, 3-Pole      | GM41226-S   | 11   |
| 400-1200A, 240V Max., 1/3-Phase, 2/3-Pole          | GM41227-S   | 12   |
| 100-250A, 600V Max., 3/4-Pole, 4-Wire              | GM41740-S   | 13   |
| 100-250A, 600V Max., 3-Phase, 3-Wire, 3-Pole       | GM41741-S   | 14   |
| 100-250A, 240V Max., 1/3-Phase, 2/3-Pole           | GM41742-S   | 15   |
| 400-1200A, 600V Max., 3/4-Pole, 4-Wire             | GM41743-S   | 16   |
| 400-1200A, 600V Max., 3-Phase, 3-Wire, 3-Pole      | GM41744-S   | 17   |
| 400-1200A, 240V Max., 1/3-Phase, 2/3-Pole          | GM41745-S   | 18   |
| 800-4000A, 600V Max., 3/4-Pole, 4-Wire, ICB        | GM41746-S   | 19   |
| 800-4000A, 600V Max., 3-Phase, 3-Wire, 3-Pole, ICB | GM41747-S   | 20   |
| 800-4000A, 240V Max., 1/3-Phase, 2/3-Pole, ICB     | GM41748-S   | 21   |

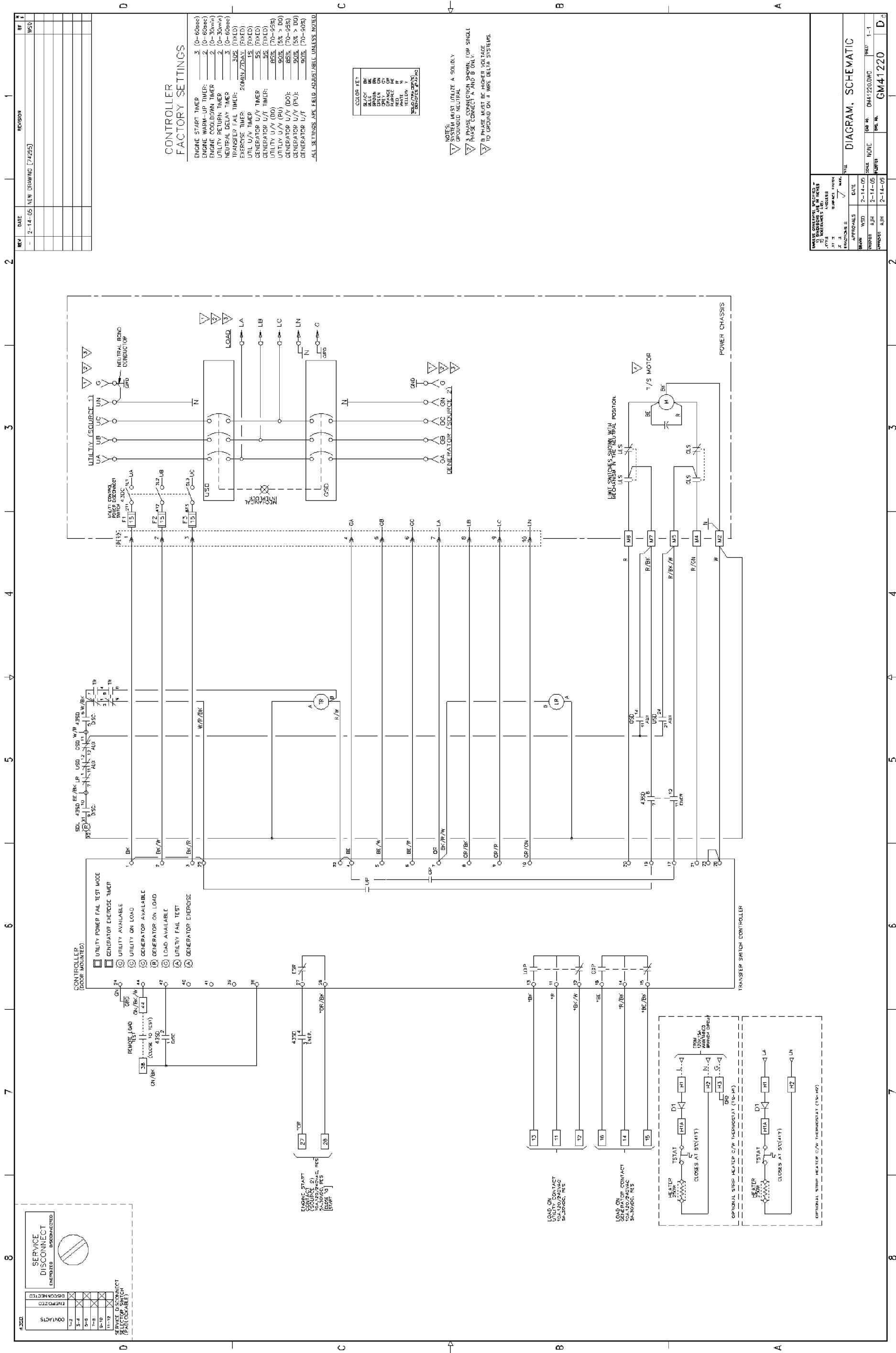


|         |  |       |  |             |  |           |  |
|---------|--|-------|--|-------------|--|-----------|--|
| DATE    |  | SCALE |  | DWG NO.     |  | SHEET NO. |  |
| 2-14-06 |  | 1-1   |  | 0441219.DWG |  | 1-1       |  |
| 2-14-05 |  | 2     |  |             |  |           |  |
| 2-14-05 |  | 3     |  |             |  |           |  |
| 2-14-05 |  | 4     |  |             |  |           |  |
| 2-14-05 |  | 5     |  |             |  |           |  |
| 2-14-05 |  | 6     |  |             |  |           |  |
| 2-14-05 |  | 7     |  |             |  |           |  |
| 2-14-05 |  | 8     |  |             |  |           |  |
| 2-14-05 |  | 9     |  |             |  |           |  |
| 2-14-05 |  | 10    |  |             |  |           |  |
| 2-14-05 |  | 11    |  |             |  |           |  |
| 2-14-05 |  | 12    |  |             |  |           |  |
| 2-14-05 |  | 13    |  |             |  |           |  |
| 2-14-05 |  | 14    |  |             |  |           |  |
| 2-14-05 |  | 15    |  |             |  |           |  |
| 2-14-05 |  | 16    |  |             |  |           |  |
| 2-14-05 |  | 17    |  |             |  |           |  |
| 2-14-05 |  | 18    |  |             |  |           |  |
| 2-14-05 |  | 19    |  |             |  |           |  |
| 2-14-05 |  | 20    |  |             |  |           |  |
| 2-14-05 |  | 21    |  |             |  |           |  |
| 2-14-05 |  | 22    |  |             |  |           |  |
| 2-14-05 |  | 23    |  |             |  |           |  |
| 2-14-05 |  | 24    |  |             |  |           |  |
| 2-14-05 |  | 25    |  |             |  |           |  |
| 2-14-05 |  | 26    |  |             |  |           |  |
| 2-14-05 |  | 27    |  |             |  |           |  |
| 2-14-05 |  | 28    |  |             |  |           |  |
| 2-14-05 |  | 29    |  |             |  |           |  |
| 2-14-05 |  | 30    |  |             |  |           |  |
| 2-14-05 |  | 31    |  |             |  |           |  |
| 2-14-05 |  | 32    |  |             |  |           |  |
| 2-14-05 |  | 33    |  |             |  |           |  |
| 2-14-05 |  | 34    |  |             |  |           |  |
| 2-14-05 |  | 35    |  |             |  |           |  |
| 2-14-05 |  | 36    |  |             |  |           |  |
| 2-14-05 |  | 37    |  |             |  |           |  |
| 2-14-05 |  | 38    |  |             |  |           |  |
| 2-14-05 |  | 39    |  |             |  |           |  |
| 2-14-05 |  | 40    |  |             |  |           |  |
| 2-14-05 |  | 41    |  |             |  |           |  |
| 2-14-05 |  | 42    |  |             |  |           |  |
| 2-14-05 |  | 43    |  |             |  |           |  |
| 2-14-05 |  | 44    |  |             |  |           |  |
| 2-14-05 |  | 45    |  |             |  |           |  |
| 2-14-05 |  | 46    |  |             |  |           |  |
| 2-14-05 |  | 47    |  |             |  |           |  |
| 2-14-05 |  | 48    |  |             |  |           |  |
| 2-14-05 |  | 49    |  |             |  |           |  |
| 2-14-05 |  | 50    |  |             |  |           |  |
| 2-14-05 |  | 51    |  |             |  |           |  |
| 2-14-05 |  | 52    |  |             |  |           |  |
| 2-14-05 |  | 53    |  |             |  |           |  |
| 2-14-05 |  | 54    |  |             |  |           |  |
| 2-14-05 |  | 55    |  |             |  |           |  |
| 2-14-05 |  | 56    |  |             |  |           |  |
| 2-14-05 |  | 57    |  |             |  |           |  |
| 2-14-05 |  | 58    |  |             |  |           |  |
| 2-14-05 |  | 59    |  |             |  |           |  |
| 2-14-05 |  | 60    |  |             |  |           |  |
| 2-14-05 |  | 61    |  |             |  |           |  |
| 2-14-05 |  | 62    |  |             |  |           |  |
| 2-14-05 |  | 63    |  |             |  |           |  |
| 2-14-05 |  | 64    |  |             |  |           |  |
| 2-14-05 |  | 65    |  |             |  |           |  |
| 2-14-05 |  | 66    |  |             |  |           |  |
| 2-14-05 |  | 67    |  |             |  |           |  |
| 2-14-05 |  | 68    |  |             |  |           |  |
| 2-14-05 |  | 69    |  |             |  |           |  |
| 2-14-05 |  | 70    |  |             |  |           |  |
| 2-14-05 |  | 71    |  |             |  |           |  |
| 2-14-05 |  | 72    |  |             |  |           |  |
| 2-14-05 |  | 73    |  |             |  |           |  |
| 2-14-05 |  | 74    |  |             |  |           |  |
| 2-14-05 |  | 75    |  |             |  |           |  |
| 2-14-05 |  | 76    |  |             |  |           |  |
| 2-14-05 |  | 77    |  |             |  |           |  |
| 2-14-05 |  | 78    |  |             |  |           |  |
| 2-14-05 |  | 79    |  |             |  |           |  |
| 2-14-05 |  | 80    |  |             |  |           |  |
| 2-14-05 |  | 81    |  |             |  |           |  |

|         |  |       |  |             |  |           |  |
|---------|--|-------|--|-------------|--|-----------|--|
| DATE    |  | SCALE |  | DWG NO.     |  | SHEET NO. |  |
| 2-14-06 |  | 1-1   |  | 0441219.DWG |  | 1-1       |  |
| 2-14-05 |  | 2     |  |             |  |           |  |
| 2-14-05 |  | 3     |  |             |  |           |  |
| 2-14-05 |  | 4     |  |             |  |           |  |
| 2-14-05 |  | 5     |  |             |  |           |  |
| 2-14-05 |  | 6     |  |             |  |           |  |
| 2-14-05 |  | 7     |  |             |  |           |  |
| 2-14-05 |  | 8     |  |             |  |           |  |
| 2-14-05 |  | 9     |  |             |  |           |  |
| 2-14-05 |  | 10    |  |             |  |           |  |
| 2-14-05 |  | 11    |  |             |  |           |  |
| 2-14-05 |  | 12    |  |             |  |           |  |
| 2-14-05 |  | 13    |  |             |  |           |  |
| 2-14-05 |  | 14    |  |             |  |           |  |
| 2-14-05 |  | 15    |  |             |  |           |  |
| 2-14-05 |  | 16    |  |             |  |           |  |
| 2-14-05 |  | 17    |  |             |  |           |  |
| 2-14-05 |  | 18    |  |             |  |           |  |
| 2-14-05 |  | 19    |  |             |  |           |  |
| 2-14-05 |  | 20    |  |             |  |           |  |
| 2-14-05 |  | 21    |  |             |  |           |  |
| 2-14-05 |  | 22    |  |             |  |           |  |
| 2-14-05 |  | 23    |  |             |  |           |  |
| 2-14-05 |  | 24    |  |             |  |           |  |
| 2-14-05 |  | 25    |  |             |  |           |  |
| 2-14-05 |  | 26    |  |             |  |           |  |
| 2-14-05 |  | 27    |  |             |  |           |  |
| 2-14-05 |  | 28    |  |             |  |           |  |
| 2-14-05 |  | 29    |  |             |  |           |  |
| 2-14-05 |  | 30    |  |             |  |           |  |
| 2-14-05 |  | 31    |  |             |  |           |  |
| 2-14-05 |  | 32    |  |             |  |           |  |
| 2-14-05 |  | 33    |  |             |  |           |  |
| 2-14-05 |  | 34    |  |             |  |           |  |
| 2-14-05 |  | 35    |  |             |  |           |  |
| 2-14-05 |  | 36    |  |             |  |           |  |
| 2-14-05 |  | 37    |  |             |  |           |  |
| 2-14-05 |  | 38    |  |             |  |           |  |
| 2-14-05 |  | 39    |  |             |  |           |  |
| 2-14-05 |  | 40    |  |             |  |           |  |
| 2-14-05 |  | 41    |  |             |  |           |  |
| 2-14-05 |  | 42    |  |             |  |           |  |
| 2-14-05 |  | 43    |  |             |  |           |  |
| 2-14-05 |  | 44    |  |             |  |           |  |
| 2-14-05 |  | 45    |  |             |  |           |  |
| 2-14-05 |  | 46    |  |             |  |           |  |
| 2-14-05 |  | 47    |  |             |  |           |  |
| 2-14-05 |  | 48    |  |             |  |           |  |
| 2-14-05 |  | 49    |  |             |  |           |  |
| 2-14-05 |  | 50    |  |             |  |           |  |
| 2-14-05 |  | 51    |  |             |  |           |  |
| 2-14-05 |  | 52    |  |             |  |           |  |
| 2-14-05 |  | 53    |  |             |  |           |  |
| 2-14-05 |  | 54    |  |             |  |           |  |
| 2-14-05 |  | 55    |  |             |  |           |  |
| 2-14-05 |  | 56    |  |             |  |           |  |
| 2-14-05 |  | 57    |  |             |  |           |  |
| 2-14-05 |  | 58    |  |             |  |           |  |
| 2-14-05 |  | 59    |  |             |  |           |  |
| 2-14-05 |  | 60    |  |             |  |           |  |
| 2-14-05 |  | 61    |  |             |  |           |  |
| 2-14-05 |  | 62    |  |             |  |           |  |
| 2-14-05 |  | 63    |  |             |  |           |  |
| 2-14-05 |  | 64    |  |             |  |           |  |
| 2-14-05 |  | 65    |  |             |  |           |  |
| 2-14-05 |  | 66    |  |             |  |           |  |
| 2-14-05 |  | 67    |  |             |  |           |  |
| 2-14-05 |  | 68    |  |             |  |           |  |
| 2-14-05 |  | 69    |  |             |  |           |  |
| 2-14-05 |  | 70    |  |             |  |           |  |
| 2-14-05 |  | 71    |  |             |  |           |  |
| 2-14-05 |  | 72    |  |             |  |           |  |
| 2-14-05 |  | 73    |  |             |  |           |  |
| 2-14-05 |  | 74    |  |             |  |           |  |
| 2-14-05 |  | 75    |  |             |  |           |  |
| 2-14-05 |  | 76    |  |             |  |           |  |
| 2-14-05 |  | 77    |  |             |  |           |  |
| 2-14-05 |  | 78    |  |             |  |           |  |
| 2-14-05 |  | 79    |  |             |  |           |  |
| 2-14-05 |  | 80    |  |             |  |           |  |
| 2-14-05 |  | 81    |  |             |  |           |  |

|         |  |       |  |             |  |           |  |
|---------|--|-------|--|-------------|--|-----------|--|
| DATE    |  | SCALE |  | DWG NO.     |  | SHEET NO. |  |
| 2-14-06 |  | 1-1   |  | 0441219.DWG |  | 1-1       |  |
| 2-14-05 |  | 2     |  |             |  |           |  |
| 2-14-05 |  | 3     |  |             |  |           |  |
| 2-14-05 |  | 4     |  |             |  |           |  |
| 2-14-05 |  | 5     |  |             |  |           |  |
| 2-14-05 |  | 6     |  |             |  |           |  |
| 2-14-05 |  | 7     |  |             |  |           |  |
| 2-14-05 |  | 8     |  |             |  |           |  |
| 2-14-05 |  | 9     |  |             |  |           |  |
| 2-14-05 |  | 10    |  |             |  |           |  |
| 2-14-05 |  | 11    |  |             |  |           |  |
| 2-14-05 |  | 12    |  |             |  |           |  |
| 2-14-05 |  | 13    |  |             |  |           |  |
| 2-14-05 |  | 14    |  |             |  |           |  |
| 2-14-05 |  | 15    |  |             |  |           |  |
| 2-14-05 |  | 16    |  |             |  |           |  |
| 2-14-05 |  | 17    |  |             |  |           |  |
| 2-14-05 |  | 18    |  |             |  |           |  |
| 2-14-05 |  | 19    |  |             |  |           |  |
| 2-14-05 |  | 20    |  |             |  |           |  |
| 2-14-05 |  | 21    |  |             |  |           |  |
| 2-14-05 |  | 22    |  |             |  |           |  |
| 2-14-05 |  | 23    |  |             |  |           |  |
| 2-14-05 |  | 24    |  |             |  |           |  |
| 2-14-05 |  | 25    |  |             |  |           |  |
| 2-14-05 |  | 26    |  |             |  |           |  |
| 2-14-05 |  | 27    |  |             |  |           |  |
| 2-14-05 |  | 28    |  |             |  |           |  |
| 2-14-05 |  | 29    |  |             |  |           |  |
| 2-14-05 |  | 30    |  |             |  |           |  |
| 2-14-05 |  | 31    |  |             |  |           |  |
| 2-14-05 |  | 32    |  |             |  |           |  |
| 2-14-05 |  | 33    |  |             |  |           |  |
| 2-14-05 |  | 34    |  |             |  |           |  |
| 2-14-05 |  | 35    |  |             |  |           |  |
| 2-14-05 |  | 36    |  |             |  |           |  |
| 2-14-05 |  | 37    |  |             |  |           |  |
| 2-14-05 |  | 38    |  |             |  |           |  |
| 2-14-05 |  | 39    |  |             |  |           |  |
| 2-14-05 |  | 40    |  |             |  |           |  |
| 2-14-05 |  | 41    |  |             |  |           |  |
| 2-14-05 |  | 42    |  |             |  |           |  |
| 2-14-05 |  | 43    |  |             |  |           |  |
| 2-14-05 |  | 44    |  |             |  |           |  |
| 2-14-05 |  | 45    |  |             |  |           |  |
| 2-14-05 |  | 46    |  |             |  |           |  |
| 2-14-05 |  | 47    |  |             |  |           |  |
| 2-14-05 |  | 48    |  |             |  |           |  |
| 2-14-05 |  | 49    |  |             |  |           |  |
| 2-14-05 |  | 50    |  |             |  |           |  |
| 2-14-05 |  | 51    |  |             |  |           |  |
| 2-14-05 |  | 52    |  |             |  |           |  |
| 2-14-05 |  | 53    |  |             |  |           |  |
| 2-14-05 |  | 54    |  |             |  |           |  |
| 2-14-05 |  | 55    |  |             |  |           |  |
| 2-14-05 |  | 56    |  |             |  |           |  |
| 2-14-05 |  | 57    |  |             |  |           |  |
| 2-14-05 |  | 58    |  |             |  |           |  |
| 2-14-05 |  | 59    |  |             |  |           |  |
| 2-14-05 |  | 60    |  |             |  |           |  |
| 2-14-05 |  | 61    |  |             |  |           |  |
| 2-14-05 |  | 62    |  |             |  |           |  |
| 2-14-05 |  | 63    |  |             |  |           |  |
| 2-14-05 |  | 64    |  |             |  |           |  |
| 2-14-05 |  | 65    |  |             |  |           |  |
| 2-14-05 |  | 66    |  |             |  |           |  |
| 2-14-05 |  | 67    |  |             |  |           |  |
| 2-14-05 |  | 68    |  |             |  |           |  |
| 2-14-05 |  | 69    |  |             |  |           |  |
| 2-14-05 |  | 70    |  |             |  |           |  |
| 2-14-05 |  | 71    |  |             |  |           |  |
| 2-14-05 |  | 72    |  |             |  |           |  |
| 2-14-05 |  | 73    |  |             |  |           |  |
| 2-14-05 |  | 74    |  |             |  |           |  |
| 2-14-05 |  | 75    |  |             |  |           |  |
| 2-14-05 |  | 76    |  |             |  |           |  |
| 2-14-05 |  | 77    |  |             |  |           |  |
| 2-14-05 |  | 78    |  |             |  |           |  |
| 2-14-05 |  | 79    |  |             |  |           |  |
| 2-14-05 |  | 80    |  |             |  |           |  |
| 2-14-05 |  | 81    |  |             |  |           |  |

|         |  |       |  |             |  |           |  |
|---------|--|-------|--|-------------|--|-----------|--|
| DATE    |  | SCALE |  | DWG NO.     |  | SHEET NO. |  |
| 2-14-06 |  | 1-1   |  | 0441219.DWG |  | 1-1       |  |
| 2-14-05 |  | 2     |  |             |  |           |  |
| 2-14-05 |  | 3     |  |             |  |           |  |
| 2-14-05 |  | 4     |  |             |  |           |  |
| 2-14-05 |  | 5     |  |             |  |           |  |
| 2-14-05 |  | 6     |  |             |  |           |  |
| 2-14-05 |  | 7     |  |             |  |           |  |
| 2-14-05 |  | 8     |  |             |  |           |  |
| 2-14-05 |  | 9     |  |             |  |           |  |
| 2-14-05 |  | 10    |  |             |  |           |  |
| 2-14-05 |  | 11    |  |             |  |           |  |
| 2-14-05 |  | 12    |  |             |  |           |  |
| 2-14-05 |  | 13    |  |             |  |           |  |
| 2-14-05 |  | 14    |  |             |  |           |  |
| 2-14-05 |  | 15    |  |             |  |           |  |
| 2-14-05 |  | 16    |  |             |  |           |  |
| 2-14-05 |  | 17    |  |             |  |           |  |
| 2-14-05 |  | 18    |  |             |  |           |  |
| 2-14-05 |  | 19    |  |             |  |           |  |
| 2-14-05 |  | 20    |  |             |  |           |  |
| 2-14-05 |  | 21    |  |             |  |           |  |
| 2-14-05 |  | 22    |  |             |  |           |  |
| 2-14-05 |  | 23    |  |             |  |           |  |
| 2-14-05 |  | 24    |  |             |  |           |  |
| 2-14-05 |  | 25    |  |             |  |           |  |
| 2-14-05 |  | 26    |  |             |  |           |  |
| 2-14-05 |  | 27    |  |             |  |           |  |
| 2-14-05 |  | 28    |  |             |  |           |  |
| 2-14-05 |  | 29    |  |             |  |           |  |
| 2-14-05 |  | 30    |  |             |  |           |  |
| 2-14-05 |  | 31    |  |             |  |           |  |
| 2-14-05 |  | 32    |  |             |  |           |  |
| 2-14-05 |  | 33    |  |             |  |           |  |
| 2-14-05 |  | 34    |  |             |  |           |  |
| 2-14-05 |  | 35    |  |             |  |           |  |
| 2-14-05 |  | 36    |  |             |  |           |  |
| 2-14-05 |  | 37    |  |             |  |           |  |
| 2-14-05 |  | 38    |  |             |  |           |  |
| 2-14-05 |  | 39    |  |             |  |           |  |
| 2-14-05 |  | 40    |  |             |  |           |  |





[illegible]

CONTROLLER  
FACTORY SETTINGS

|                       |            |           |
|-----------------------|------------|-----------|
| ENGINE START TIME:    | 1          | (0-60sec) |
| ENGINE WARM-UP TIME:  | 2          | (0-60sec) |
| ENGINE COOLDOWN TIME: | 2          | (0-30min) |
| NEUTRAL RETURN TIME:  | 2          | (0-30min) |
| NEUTRAL DELAY TIME:   | 2          | (0-60sec) |
| TRANSFER FUEL TIME:   | 30S        | (FIXED)   |
| EXHAUST FUEL TIME:    | 20MIN/7DAY | (FIXED)   |
| UTIL FUEL TIME:       | 1S         | (FIXED)   |
| GENERATOR FUEL TIME:  | 5S         | (FIXED)   |
| GENERATOR FUEL TIME:  | 5S         | (FIXED)   |
| UTILITY FUEL (DO)     | 85%        | (70-95%)  |
| UTILITY FUEL (PU)     | 90%        | (55-100)  |
| GENERATOR FUEL (DO)   | 85%        | (70-95%)  |
| GENERATOR FUEL (PU)   | 90%        | (55-100)  |
| GENERATOR FUEL        | 90%        | (70-90%)  |

ALL SETTINGS ARE FIELD ADJUSTABLE UNLESS NOTED.

| COLOR  | KEY |
|--------|-----|
| BLACK  | BT  |
| BLUE   | BE  |
| BROWN  | BN  |
| GREEN  | GN  |
| GREY   | GY  |
| ORANGE | OR  |
| PURPLE | PE  |
| RED    | R   |
| WHITE  | W   |
| YELLOW | Y   |

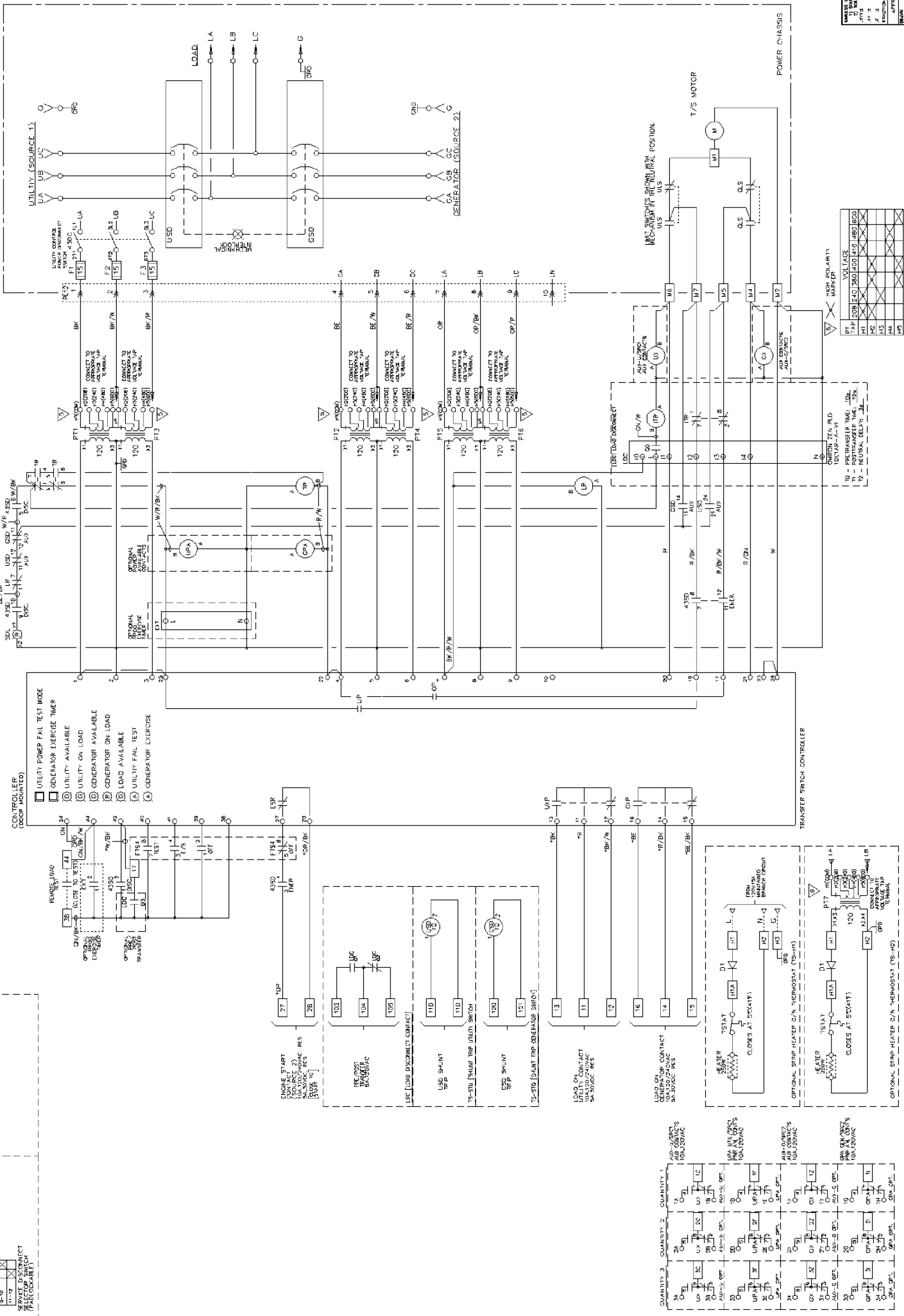
SOLID / TRACERS  
\* DENOTES PLUMB

NOTES:

1 SYSTEM MUST UTILIZE A SOLIDLY GROUNDED NEUTRAL

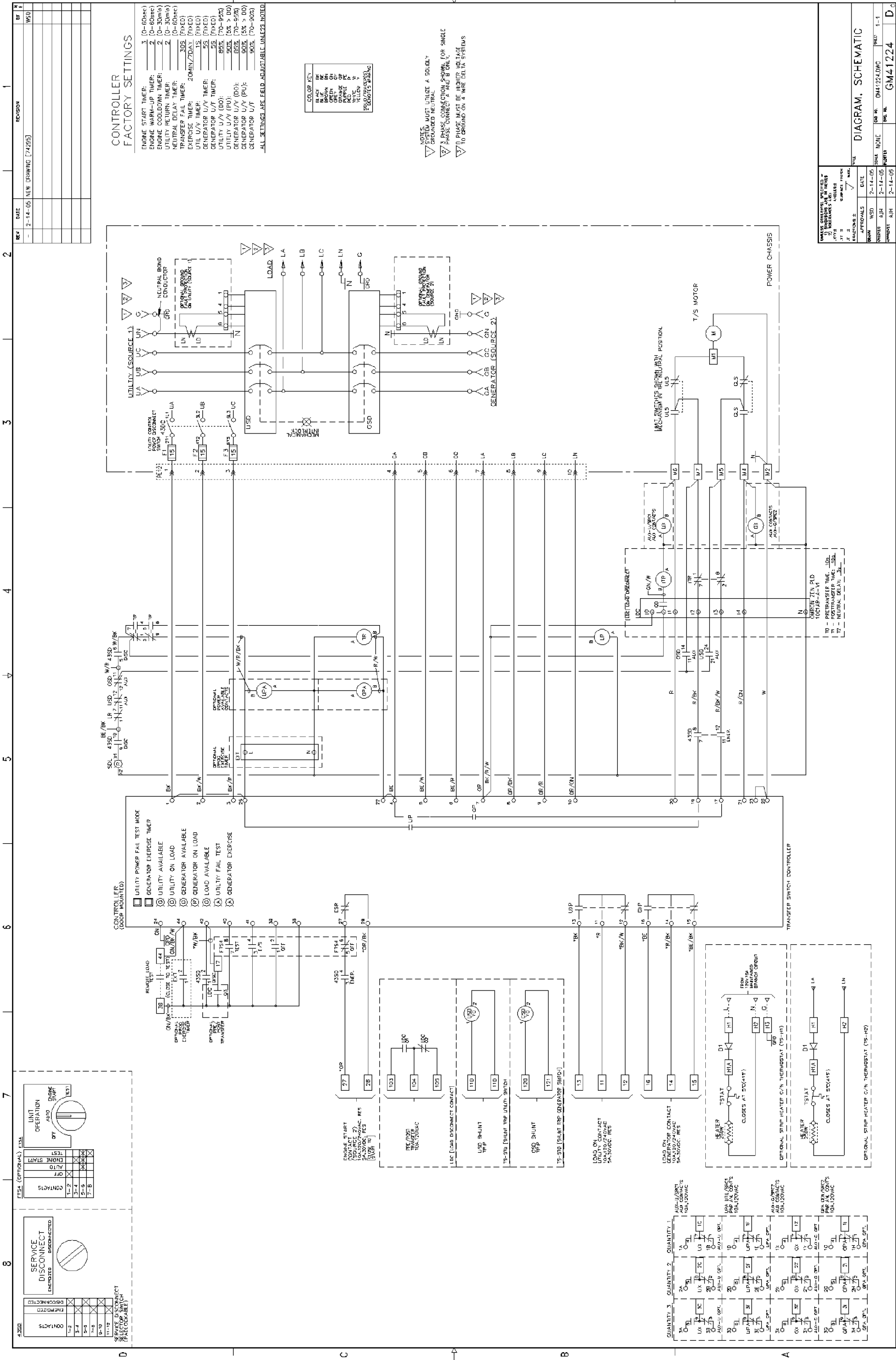
2 3 PHASE CONNECTION SHOWN. FOR SINGLE PHASE CONNECT A AND B ONLY.

**3** B PHASE MUST BE HIGHER VOLTAGE  
TO GROUND ON 4 WIRE DELTA SYSTEMS.



UNLESS OTHERWISE SPECIFIED -  
1) DIMENSIONS ARE IN INCHES  
2) TOLERANCES ARE:  
XXX ± .0005 ±  
XX ± .001 ±  
X ± .002 ±  
SURFACE FINISH

| SECTION 2 |  | SECTION 3 |  | SECTION 4 |  | SECTION 5 |  | SECTION 6 |  | SECTION 7 |  | SECTION 8 |  | SECTION 9 |  | SECTION 10 |  | SECTION 11 |  | SECTION 12 |  | SECTION 13 |  | SECTION 14 |  | SECTION 15 |  | SECTION 16 |  | SECTION 17 |  | SECTION 18 |  | SECTION 19 |  | SECTION 20 |  | SECTION 21 |  | SECTION 22 |  | SECTION 23 |  | SECTION 24 |  | SECTION 25 |  | SECTION 26 |  | SECTION 27 |  | SECTION 28 |  | SECTION 29 |  | SECTION 30 |  | SECTION 31 |  | SECTION 32 |  | SECTION 33 |  | SECTION 34 |  | SECTION 35 |  | SECTION 36 |  | SECTION 37 |  | SECTION 38 |  | SECTION 39 |  | SECTION 40 |  | SECTION 41 |  | SECTION 42 |  | SECTION 43 |  | SECTION 44 |  | SECTION 45 |  | SECTION 46 |  | SECTION 47 |  | SECTION 48 |  | SECTION 49 |  | SECTION 50 |  | SECTION 51 |  | SECTION 52 |  | SECTION 53 |  | SECTION 54 |  | SECTION 55 |  | SECTION 56 |  | SECTION 57 |  | SECTION 58 |  | SECTION 59 |  | SECTION 60 |  | SECTION 61 |  | SECTION 62 |  | SECTION 63 |  | SECTION 64 |  | SECTION 65 |  | SECTION 66 |  | SECTION 67 |  | SECTION 68 |  | SECTION 69 |  | SECTION 70 |  | SECTION 71 |  | SECTION 72 |  | SECTION 73 |  | SECTION 74 |  | SECTION 75 |  | SECTION 76 |  | SECTION 77 |  | SECTION 78 |  | SECTION 79 |  | SECTION 80 |  | SECTION 81 |  | SECTION 82 |  | SECTION 83 |  | SECTION 84 |  | SECTION 85 |  | SECTION 86 |  | SECTION 87 |  | SECTION 88 |  | SECTION 89 |  | SECTION 90 |  | SECTION 91 |  | SECTION 92 |  | SECTION 93 |  | SECTION 94 |  | SECTION 95 |  | SECTION 96 |  | SECTION 97 |  | SECTION 98 |  | SECTION 99 |  | SECTION 100 |  |
|-----------|--|-----------|--|-----------|--|-----------|--|-----------|--|-----------|--|-----------|--|-----------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|-------------|--|
| SECTION 2 |  | SECTION 3 |  | SECTION 4 |  | SECTION 5 |  | SECTION 6 |  | SECTION 7 |  | SECTION 8 |  | SECTION 9 |  | SECTION 10 |  | SECTION 11 |  | SECTION 12 |  | SECTION 13 |  | SECTION 14 |  | SECTION 15 |  | SECTION 16 |  | SECTION 17 |  | SECTION 18 |  | SECTION 19 |  | SECTION 20 |  | SECTION 21 |  | SECTION 22 |  | SECTION 23 |  | SECTION 24 |  | SECTION 25 |  | SECTION 26 |  | SECTION 27 |  | SECTION 28 |  | SECTION 29 |  | SECTION 30 |  | SECTION 31 |  | SECTION 32 |  | SECTION 33 |  | SECTION 34 |  | SECTION 35 |  | SECTION 36 |  | SECTION 37 |  | SECTION 38 |  | SECTION 39 |  | SECTION 40 |  | SECTION 41 |  | SECTION 42 |  | SECTION 43 |  | SECTION 44 |  | SECTION 45 |  | SECTION 46 |  | SECTION 47 |  | SECTION 48 |  | SECTION 49 |  | SECTION 50 |  | SECTION 51 |  | SECTION 52 |  | SECTION 53 |  | SECTION 54 |  | SECTION 55 |  | SECTION 56 |  | SECTION 57 |  | SECTION 58 |  | SECTION 59 |  | SECTION 60 |  | SECTION 61 |  | SECTION 62 |  | SECTION 63 |  | SECTION 64 |  | SECTION 65 |  | SECTION 66 |  | SECTION 67 |  | SECTION 68 |  | SECTION 69 |  | SECTION 70 |  | SECTION 71 |  | SECTION 72 |  | SECTION 73 |  | SECTION 74 |  | SECTION 75 |  | SECTION 76 |  | SECTION 77 |  | SECTION 78 |  | SECTION 79 |  | SECTION 80 |  | SECTION 81 |  | SECTION 82 |  | SECTION 83 |  | SECTION 84 |  | SECTION 85 |  | SECTION 86 |  | SECTION 87 |  | SECTION 88 |  | SECTION 89 |  | SECTION 90 |  | SECTION 91 |  | SECTION 92 |  | SECTION 93 |  | SECTION 94 |  | SECTION 95 |  | SECTION 96 |  | SECTION 97 |  | SECTION 98 |  | SECTION 99 |  | SECTION 100 |  |



| REV | DATE    | REVISION            | BY  |
|-----|---------|---------------------|-----|
| -   | 2-14-05 | NEW DRAWING [74195] | MSB |
|     |         |                     |     |
|     |         |                     |     |
|     |         |                     |     |
|     |         |                     |     |

| CONTROLLER FACTORY SETTINGS |                     |
|-----------------------------|---------------------|
| ENGINE START TIMER:         | 3 (0-60sec)         |
| ENGINE WARM-UP TIMER:       | 2 (0-60sec)         |
| ENGINE COOLDOWN TIMER:      | 2 (0-30min)         |
| UTILITY RETURN TIMER:       | 2 (0-30min)         |
| NEUTRAL DELAY TIMER:        | 2 (0-60sec)         |
| TRANSFER FAIL TIMER:        | 303 (FIXED)         |
| EXERCISE TIMER:             | 20MIN/7DDAT (FIXED) |
| UTIL U/V TIMER:             | 15 (FIXED)          |
| GENERATOR U/V TIMER:        | 55 (FIXED)          |
| UTILITY U/V (PO):           | 80% (70-90%)        |
| GENERATOR U/V (PO):         | 80% (70-90%)        |
| UTILITY U/V (PU):           | 90% (5% > 100)      |
| GENERATOR U/V (PU):         | 90% (5% > 100)      |
| GENERATOR U/V:              | 90% (70-90%)        |

| NOTES                                             |  |
|---------------------------------------------------|--|
| △ SYSTEM MUST UTILIZE A SOLIDLY GROUNDING NEUTRAL |  |
| △ 3 PHASE CONNECTION SHOWN FOR SINGLE             |  |
| △ B PHASE MUST BE HIGHER VOLTAGE                  |  |
| △ TO GROUND ON 4 WIRE DELTA SYSTEMS               |  |

| COLOR KEY        |     |
|------------------|-----|
| BLACK            | BLK |
| BLUE             | BLU |
| BROWN            | BWN |
| GREEN            | GRN |
| ORANGE           | ORG |
| PINK             | PNK |
| RED              | RED |
| WHITE            | WHT |
| YELLOW           | YEL |
| △ 300B/300S/300G |     |

| CONTROLLER (DOOR MOUNTED)    |  |
|------------------------------|--|
| UTILITY POWER FAIL TEST MODE |  |
| GENERATOR EXERCISE TIMER     |  |
| UTILITY AVAILABLE            |  |
| UTILITY ON LOAD              |  |
| GENERATOR AVAILABLE          |  |
| GENERATOR ON LOAD            |  |
| LOAD AVAILABLE               |  |
| UTILITY FAIL TEST            |  |
| GENERATOR EXERCISE           |  |

| SERVICE DISCONNECT |     |
|--------------------|-----|
| ENGINE START       | ON  |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |

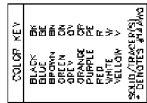
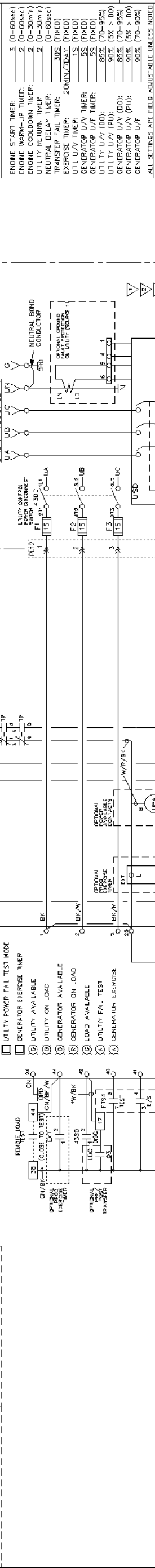
| UNIT OPERATION |     |
|----------------|-----|
| UNIT START     | ON  |
| UNIT STOP      | OFF |
| UNIT STOP      | OFF |
| UNIT STOP      | OFF |
| UNIT STOP      | OFF |
| UNIT STOP      | OFF |

| SERVICE DISCONNECT |     |
|--------------------|-----|
| ENGINE START       | ON  |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |

| SERVICE DISCONNECT |     |
|--------------------|-----|
| ENGINE START       | ON  |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |

| SERVICE DISCONNECT |     |
|--------------------|-----|
| ENGINE START       | ON  |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |
| ENGINE STOP        | OFF |

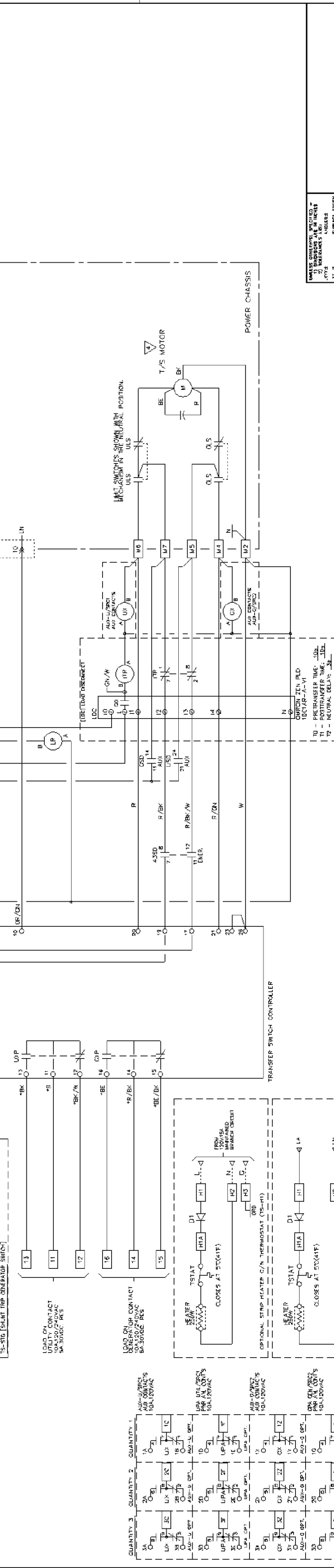


[illegible]

NOTE: SYSTEM MUST UTILIZE A SOLIDLY GROUNDED NEUTRAL

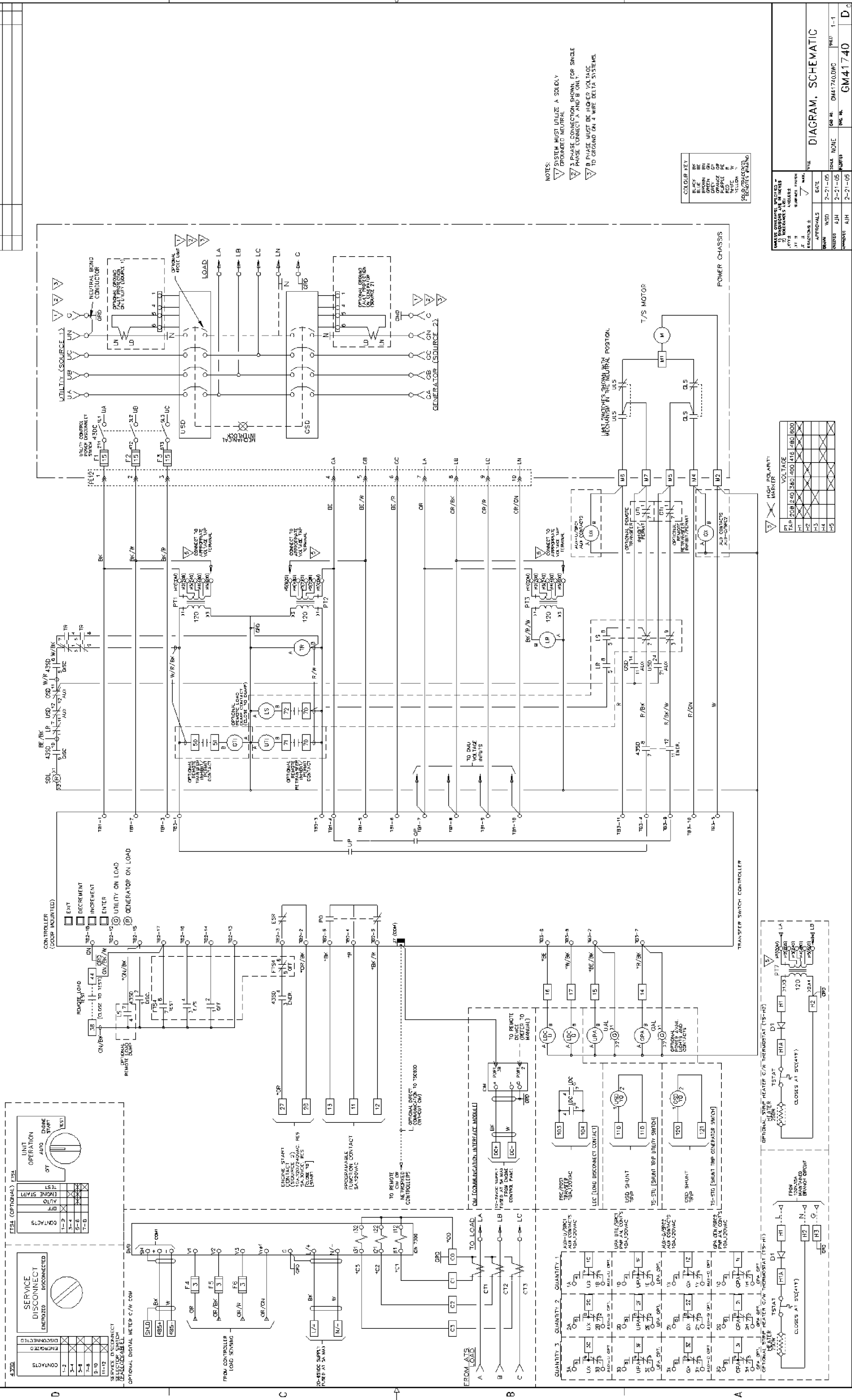
1 3 PHASE CONNECTION SHOWN, FOR SINGLE PHASE CONNECT A AND B ONLY

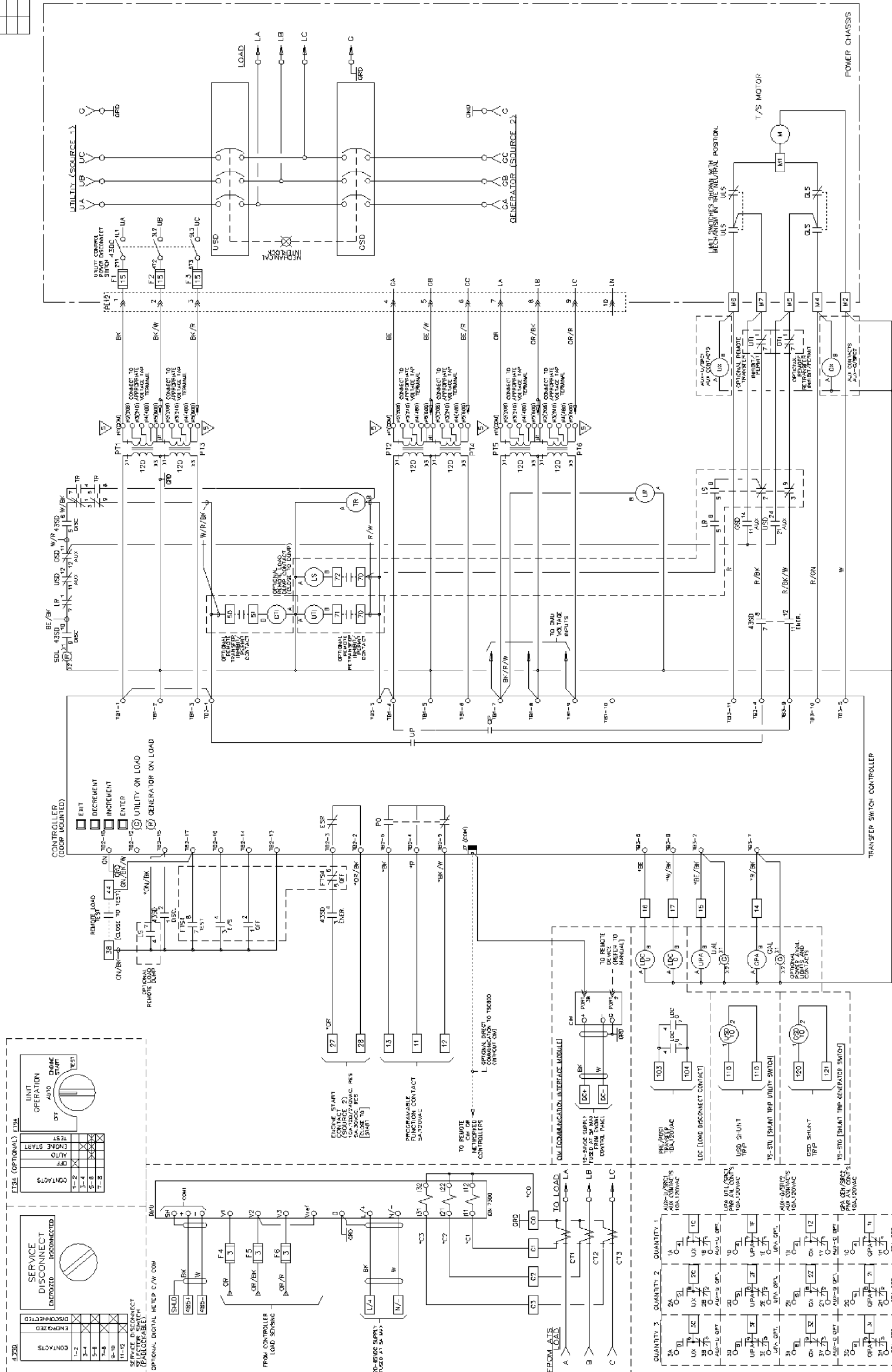
2 B PHASE MUST BE HIGHER VOLTAGE TO GROUND ON 4 WIRE DELTA SYSTEMS.



UNLESS OTHERWISE SPECIFIED -  
1) DIMENSIONS ARE IN INCHES  
2) TOLERANCES ARE:  
XXX ± .0005  
XXX ± .0005

| REV. | DATE    | APPROVALS  | REVISIONS ± |             | TITLE              |
|------|---------|------------|-------------|-------------|--------------------|
|      |         |            | BY          | DESCRIPTION |                    |
| 1    | 2-14-05 | WSD        | WSD         | 2-14-05     | DIAGRAM, SCHEMATIC |
| 2    | 2-14-05 | UNDESIGNED | WSD         | 2-14-05     |                    |
| 3    | 2-14-05 | UNDESIGNED | WSD         | 2-14-05     |                    |

[illegible]

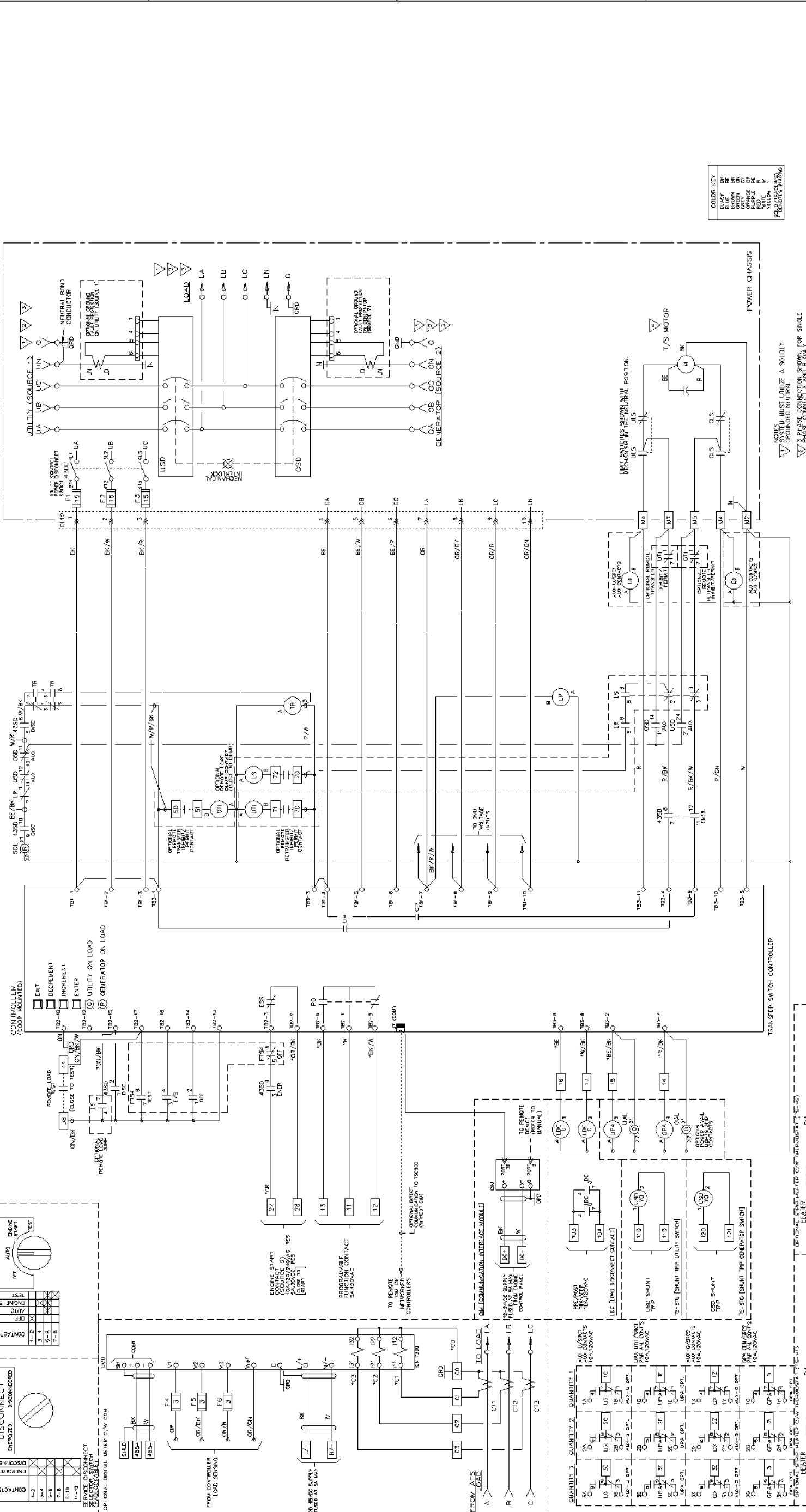
[illegible][illegible]



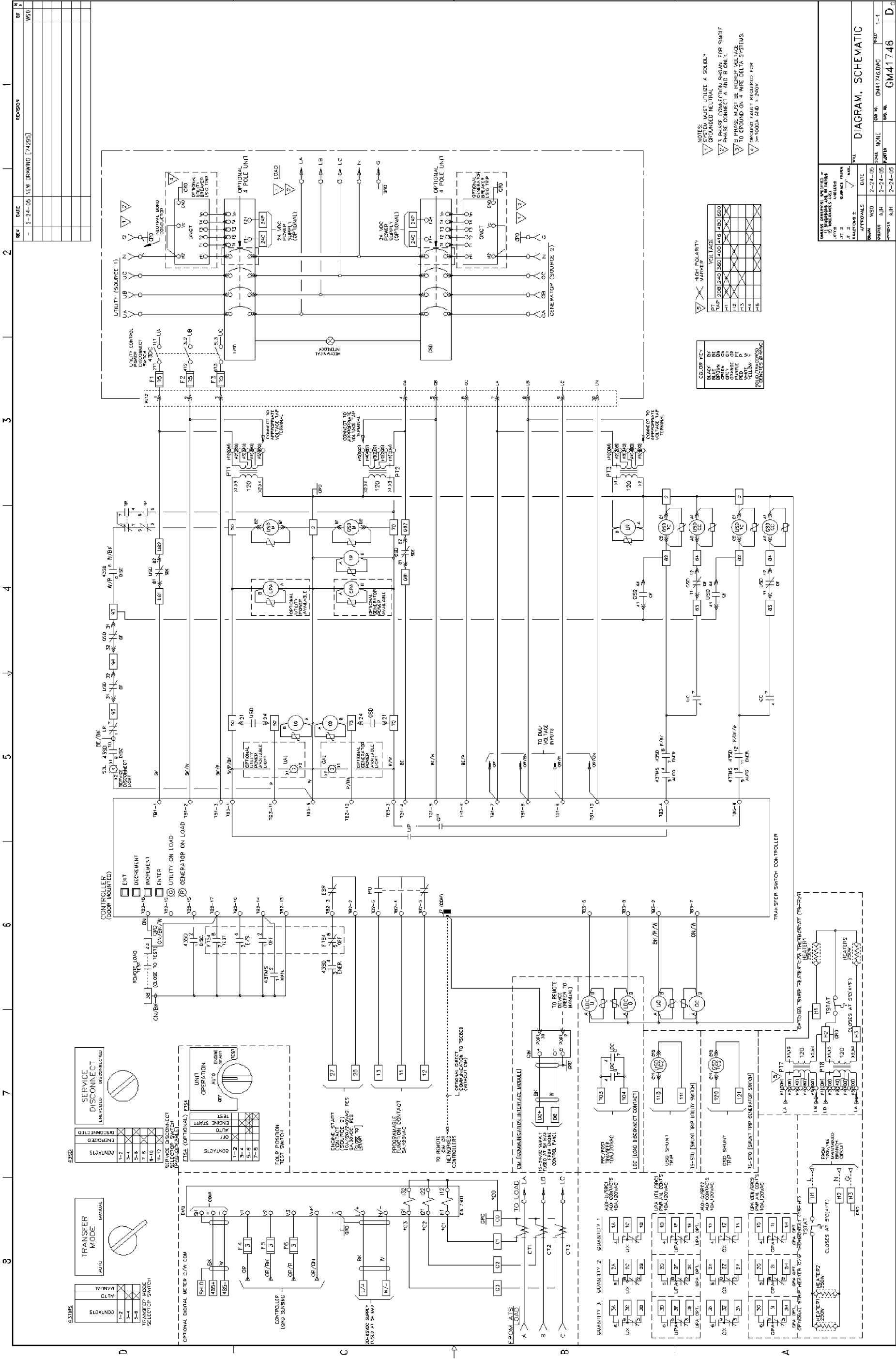


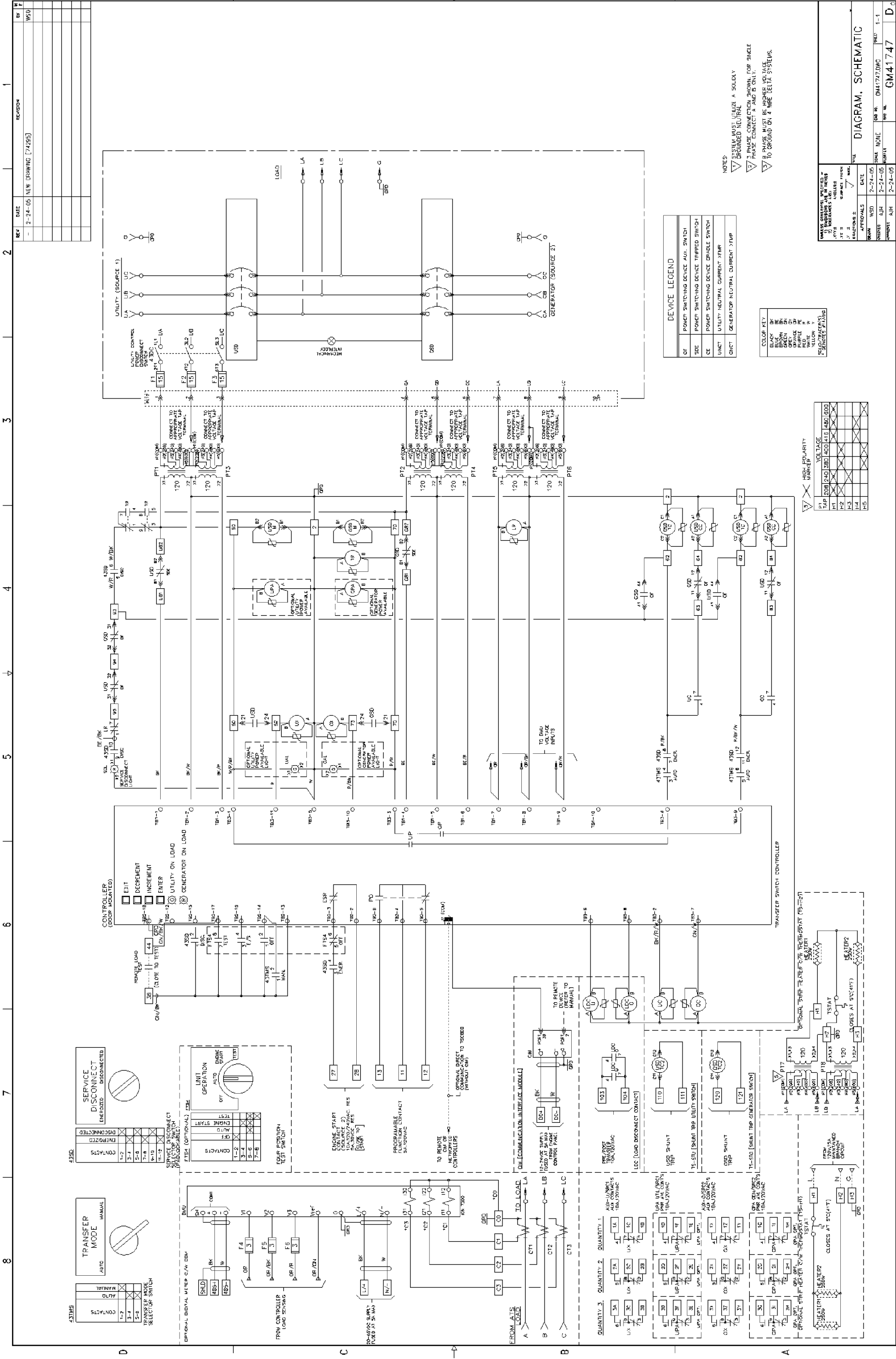


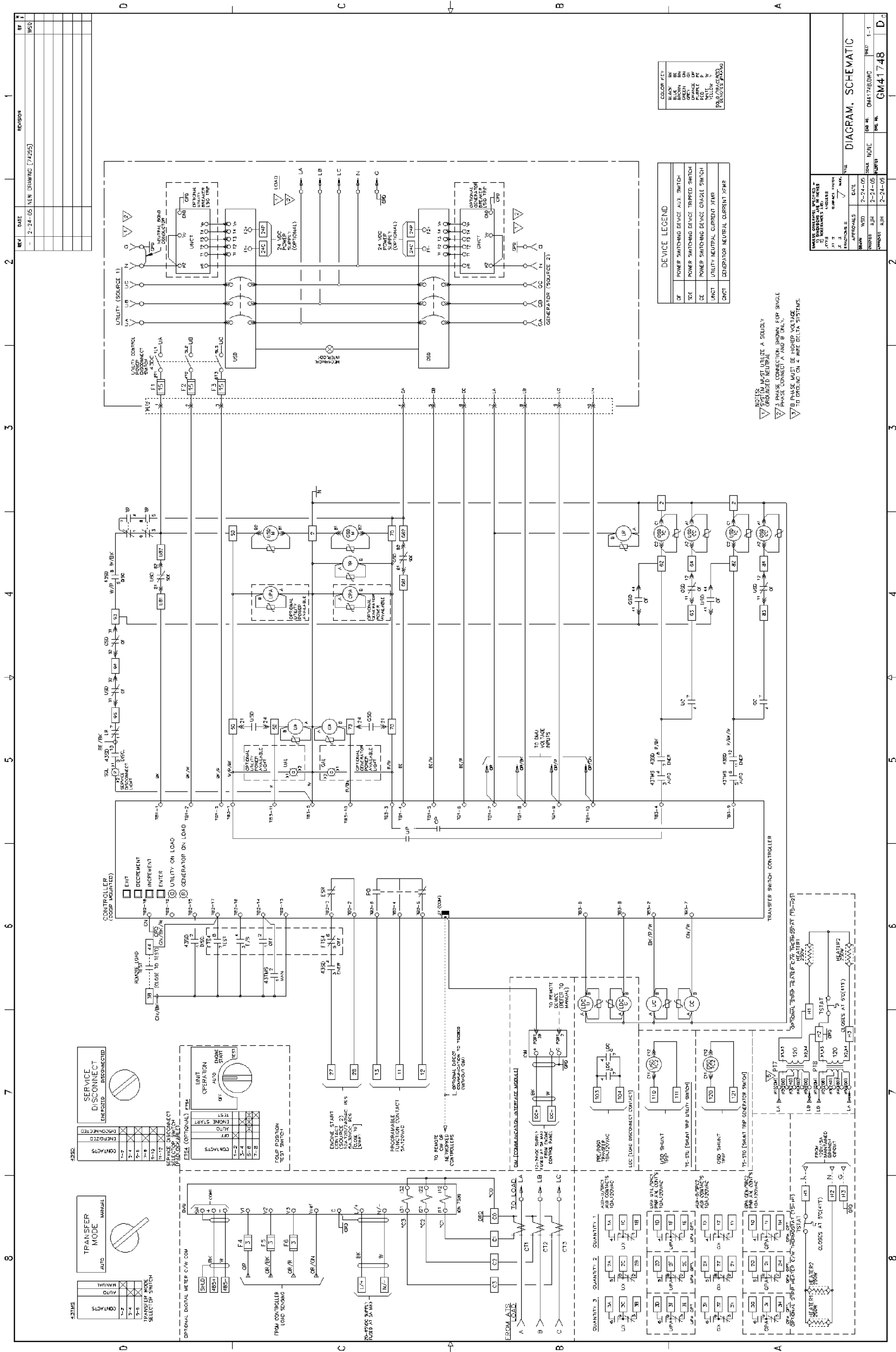
| REV | DATE    | REVISION            | BY  |
|-----|---------|---------------------|-----|
| 1   | 2-24-05 | NEW DRAWING [74295] | MSB |
|     |         |                     |     |
|     |         |                     |     |
|     |         |                     |     |
|     |         |                     |     |
|     |         |                     |     |
|     |         |                     |     |
|     |         |                     |     |
|     |         |                     |     |
|     |         |                     |     |



|                                                          |         |      |  |    |  |      |  |       |  |
|----------------------------------------------------------|---------|------|--|----|--|------|--|-------|--|
| UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES |         | DATE |  | BY |  | CHKD |  | APP'D |  |
| 1                                                        | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 2                                                        | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 3                                                        | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 4                                                        | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 5                                                        | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 6                                                        | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 7                                                        | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 8                                                        | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 9                                                        | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 10                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 11                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 12                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 13                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 14                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 15                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 16                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 17                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 18                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 19                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 20                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 21                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 22                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 23                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 24                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 25                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 26                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 27                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 28                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 29                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 30                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 31                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 32                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 33                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 34                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 35                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 36                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 37                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 38                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 39                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 40                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 41                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 42                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 43                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 44                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 45                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 46                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 47                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 48                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 49                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 50                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 51                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 52                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 53                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 54                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 55                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 56                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 57                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 58                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 59                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 60                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 61                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 62                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 63                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 64                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 65                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 66                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 67                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 68                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 69                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 70                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 71                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 72                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 73                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 74                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 75                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 76                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 77                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 78                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 79                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 80                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 81                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 82                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 83                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 84                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 85                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 86                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 87                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 88                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 89                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 90                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 91                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 92                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 93                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 94                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 95                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 96                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 97                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 98                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 99                                                       | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 100                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 101                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 102                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 103                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 104                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 105                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 106                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 107                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 108                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 109                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 110                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 111                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 112                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 113                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 114                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 115                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 116                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 117                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 118                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 119                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 120                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 121                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 122                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 123                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 124                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 125                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 126                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 127                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 128                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 129                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 130                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 131                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 132                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 133                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 134                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 135                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 136                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 137                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 138                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 139                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 140                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 141                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 142                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 143                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 144                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 145                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 146                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 147                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 148                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 149                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 150                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 151                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 152                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 153                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 154                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |
| 155                                                      | 2-24-05 | MSB  |  |    |  |      |  |       |  |







## Notes





DDC/MTU Power Generation  
605 North 8th Street, Suite 501  
Sheboygan, Wisconsin 53081 USA  
Phone 920-451-0846, Fax 920-451-0843  
[ddcmtupowergeneration.com](http://ddcmtupowergeneration.com)