

### BILL OF MATERIALS ◻

| ITEM | QTY | DESCRIPTION                        | MODEL #       |
|------|-----|------------------------------------|---------------|
| 1    | 1   | EUROBEX CUSTOM ENCLOSURE           | ES482412      |
| 2    | 2   | RC 2000 INPUT MODULE               | CW4769-1      |
| 3    | 1   | RC 2000 OUTPUT MODULE              | CW5218-2      |
| 4    | 2   | WIELAND. 40 PIN TERMINATION BLOCK  | 87.210.2208.3 |
| 5    | 4   | WIELAND. 26 PIN TERMINATION BLOCK  | 87.210.2005.3 |
| 6    | 2   | WEILAND ANALOG NON-INCENDIVE BARR. | WW.900.102    |
| 7    | 0   | WEILAND DI NON-INCENDIVE BARRIER   | 10-12-01      |
| 8    | 21  | WDK 2.5 STACKED FEED THROUGH TERM. | 102150        |
| 9    | 2   | WEID. WPE 4 GROUND TERMINAL        | 101010        |
| 10   |     |                                    |               |
| 11   |     |                                    |               |
| 12   |     |                                    |               |
| 13   | 1   | AB RED PUSH BUTTON                 | 800T-FX6      |
| 14   | 2   | N/C CONTACT BLOCK                  | 800T-XD2P     |
| 15   | 2   | WEID SAKS 1/35 FUSED TERMINAL      | 50162         |
| 16   | 16  | WEID WDU 2.5 FEED THROUGH TERMINAL | 102000        |
| 17   | 2   | WEID WDU 10 FEED THROUGH TERMINAL  | 102030        |
| 18   | 6   | WEIL. SLIM LINE RELAY              | 80.010.4000.0 |
| 19   | LOT | 1X2 GRAY PANDUIT                   | F1X2LG6       |
| 20   | LOT | 2X4 GRAY PANDUIT                   | F2X4LG6       |
| 21   | LOT | 1X2 WHITE PANDUIT                  | F1X2WH6       |
| 22   | LOT | 1X3 WHITE PANDUIT                  | F1X3WH6       |
| 23   | LOT | 2X3 WHITE PANDUIT                  | F2X3WH6       |
| 24   | LOT | GROUND BAR                         |               |
| 25   | 1   | RC 2000 CPU MODULE                 | 691420-1      |
| 26   | 1   | WEID. SPARE FUSE HOLDER            | 7914760001    |
| 27   |     |                                    |               |
| 28   |     |                                    |               |
| 29   | 1   | ILSCO ISOLATED GROUND LUG          |               |
| 30   | 1   | ILSCO PANEL GROUND LUG             |               |
| 31   |     |                                    |               |
| 32   |     |                                    |               |
| 33   | LOT | TS-35 MOUNTING RAIL                | 38340         |
| 34   | LOT | EW 35 END STOPS                    | 38356         |
| 35   | LOT | SCHT5s TERMINAL STRIP MARKERS      | 163193        |
| 36   |     |                                    |               |
| 37   |     |                                    |               |
| 38   |     |                                    |               |
| 39   |     |                                    |               |

### LAMACOIDS SCHEDULE ◻

| ITEM | QTY | TEXT  | SIZE               |
|------|-----|---|--------------------|
| A    | 1   | INCENDIVE I/O   | SCHT5s             |
| B    | 1   | 24 VDC DISTRIBUTION   | SCHT5s             |
| C    | 1   | IGNITION DISTRIBUTION   | SCHT5s             |
| D    | 1   | ALTERNATOR DISTRIBUTION   | SCHT5s             |
| E    | 1   | PANEL SHUTDOWN  | 1" X 3"            |
| A    | 1   | WARNING:<br>EXPLOSION HAZARD<br>SUBSTITUTION OF COMPONENTS<br>MAY IMPAIR SUITABILITY FOR CLASS 1<br>DIV 2 HAZARDOUS LOCATIONS DO NOT<br>DISCONNECT IF CIRCUIT IS LIVE OR UNLESS<br>THAT AREA IS KNOWN TO BE NON HAZARDOUS | 2" x 4"<br>WHT/RED |
| G    | 1   | ENERFLEX CSA LAMACOIDS  | 2" X 4"            |
| H    |     |   |                    |
| I    | 1   | NON-INCENDIVE I/O   | SCHT5s             |
| J    | 1   | WARNING :<br>DISCONNECT CABLE CONNECTION<br>TO INPUT / OUTPUT BOARDS<br>BEFORE WELDING  | 2" x 4"<br>WHT/RED |

| LEGEND |                       | WIRE COLOR LEGEND                |  |
|--------|-----------------------|----------------------------------|--|
| 1. —   | PANEL WIRING          | 1. +24VDC: RED                   |  |
| 2. —   | FIELD WIRING          | 2. -24VDC: YELLOW                |  |
| 3. ▲   | UNFUSED TERMINAL      | 3. SWITCHED: ORANGE              |  |
| 4. □   | FUSED TERMINAL        | 4. ANALOG INPUT/OUTPUT - : BLACK |  |
| 5. ▲   | FEED THROUGH TERMINAL | 5. ANALOG INPUT/OUTPUT + : WHITE |  |
| 6. ▲   | DISCONNECT TERMINAL   | 6. ANALOG LOOP: PURPLE           |  |

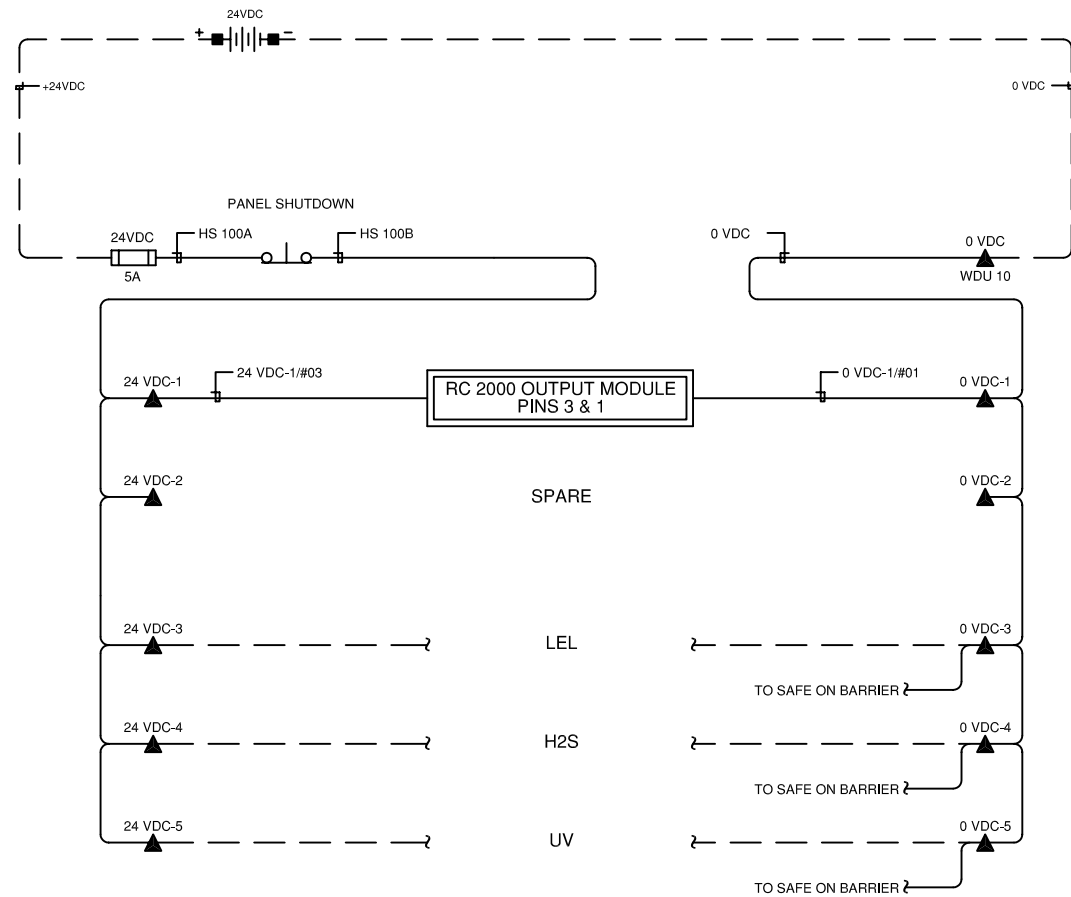
| Rev. | Soft Rev. | Revision Description    | By | Date       | Checked | Aprvd |
|------|-----------|-------------------------|----|------------|---------|-------|
| 1    | A         | REVISED AS BUILT        | BR | 13.01.2005 |         |       |
| 1    |           | PANEL SHOP AS BUILT     | BR | 06.01.2005 |         |       |
| 0    |           | ISSUED FOR CONSTRUCTION | BR | 20.12.2004 |         |       |

|               |                                  |  |
|---------------|----------------------------------|--|
| Project Title | COMPRESSION SERVICES<br>RC 10276 |  |
| Drawing Title | PANEL LAYOUT DRAWING             |  |

# Syntech

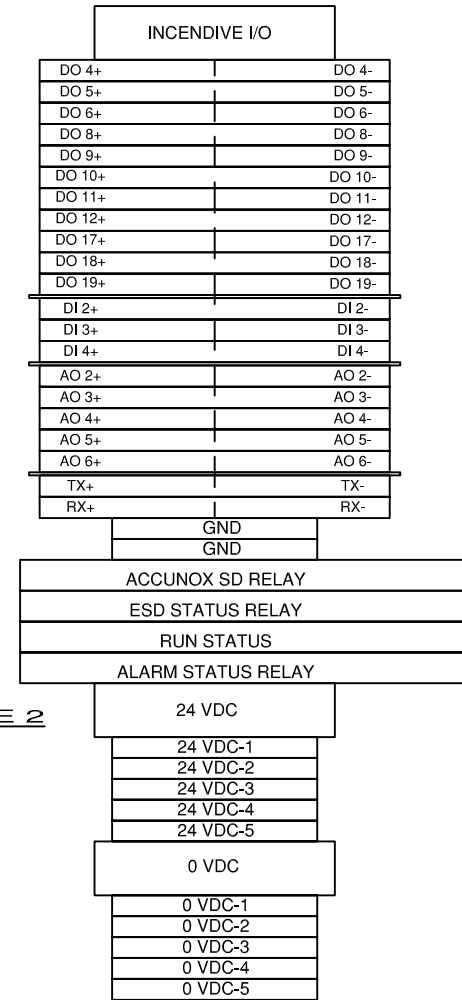
Syntech Drawing Number **4190208-01** 1 of 1  
 Customer Drawing Number **CS04663** NTS

## 24VDC POWER DISTRIBUTION



## 24VDC TERMINAL LAYOUT

TOP LEVEL      BOTTOM LEVEL



NOTES:  
1. ALL FUSES ARE GDA TYPE.  
2. SEPARATE 24 VDC POWER PROVIDED FOR PANEL

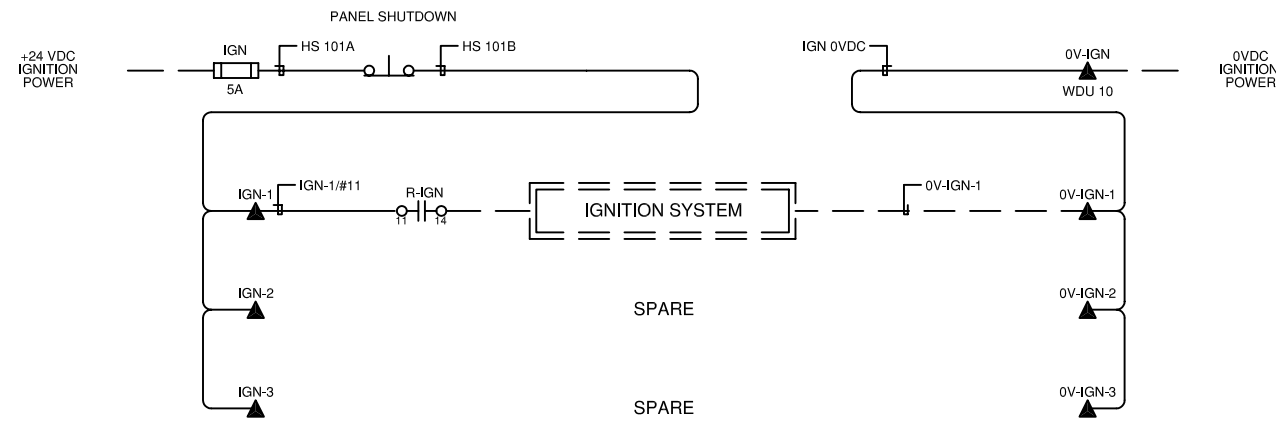
| LEGEND                    |                                 | WIRE COLOR LEGEND         |                                 |
|---------------------------|---------------------------------|---------------------------|---------------------------------|
| 1.  PANEL WIRING          | 1. +24VDC: RED                  | 2.  FIELD WIRING          | 2. -24VDC: YELLOW               |
| 2.  UNFUSED TERMINAL      | 3. SWITCHED: ORANGE             | 3.  FUSED TERMINAL        | 4. ANALOG INPUT/OUTPUT -: BLACK |
| 3.  FUSED TERMINAL        | 5. ANALOG INPUT/OUTPUT +: WHITE | 4.  FEED THROUGH TERMINAL | 6. ANALOG LOOP: PURPLE          |
| 4.  FEED THROUGH TERMINAL |                                 | 5.  DISCONNECT TERMINAL   |                                 |
| 5.  DISCONNECT TERMINAL   |                                 |                           |                                 |
| 6.  DISCONNECT TERMINAL   |                                 |                           |                                 |

| Rev. | Soft Rev. | Revision Description    | By | Date       | Checked | Aprvd |
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| 1    | A         | REVISED AS BUILT        | BR | 13.01.2005 |         |       |
| 1    |           | PANEL SHOP AS BUILT     | BR | 06.01.2005 |         |       |
| 0    |           | ISSUED FOR CONSTRUCTION | BR | 20.12.2004 |         |       |

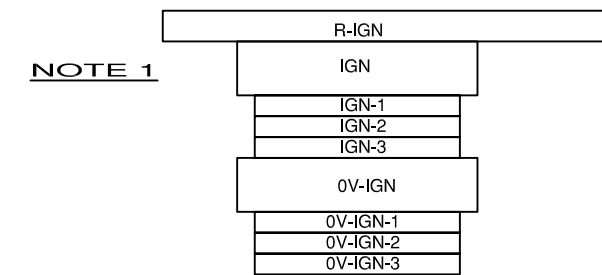
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| Project Title | COMPRESSION SERVICES<br>RC 10276            |  |
| Drawing Title | 24 VDC POWER DISTRIBUTION<br>LAYOUT DRAWING |  |

|                         |               |
|-------------------------|---------------|
| <h1>Syntech</h1>        |               |
| Syntech Drawing Number  | 4190208-05    |
| Customer Drawing Number | CS04663       |
|                         | 1 of 1<br>NTS |

## IGNITION DISTRIBUTION



## IGNITION TERMINAL LAYOUT



**NOTES:**

1. SEPARATE 24 VDC POWER PROVIDED FOR IGNITION

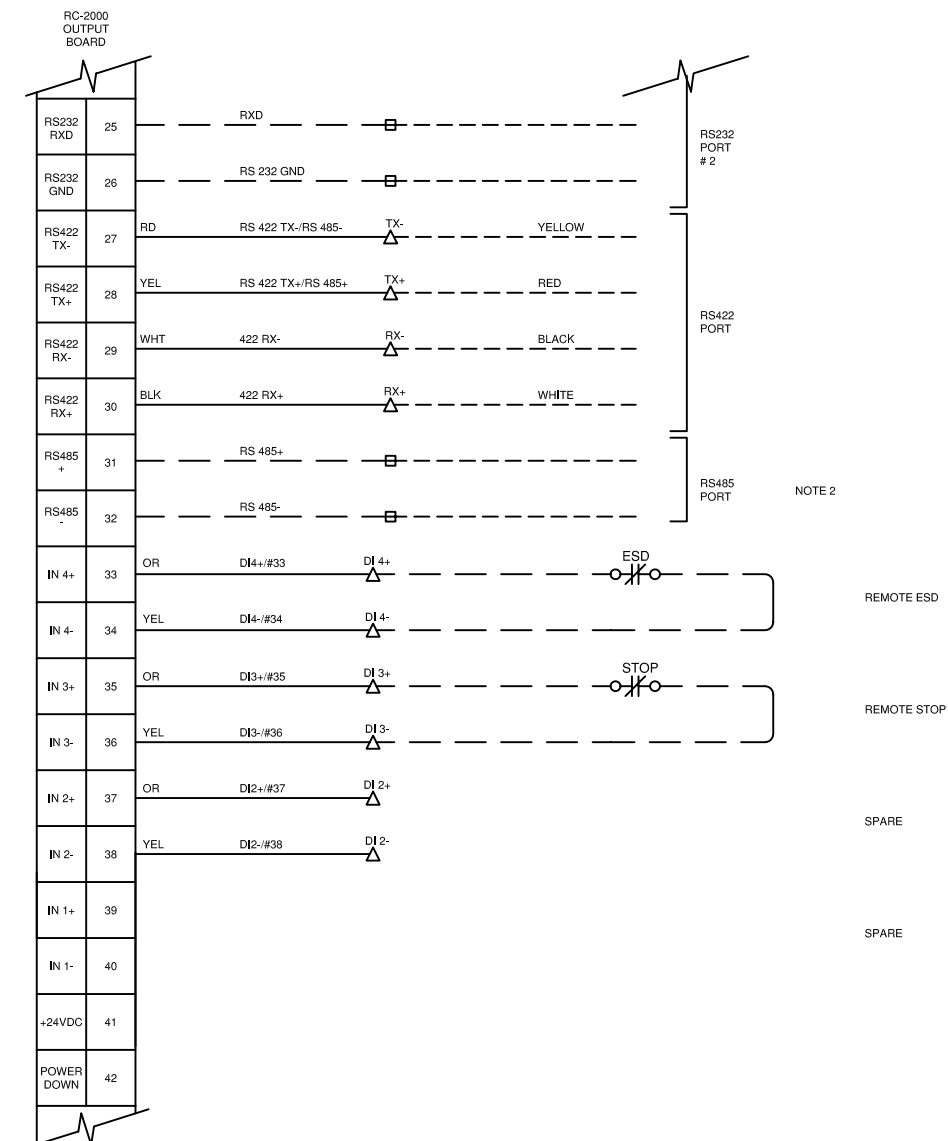
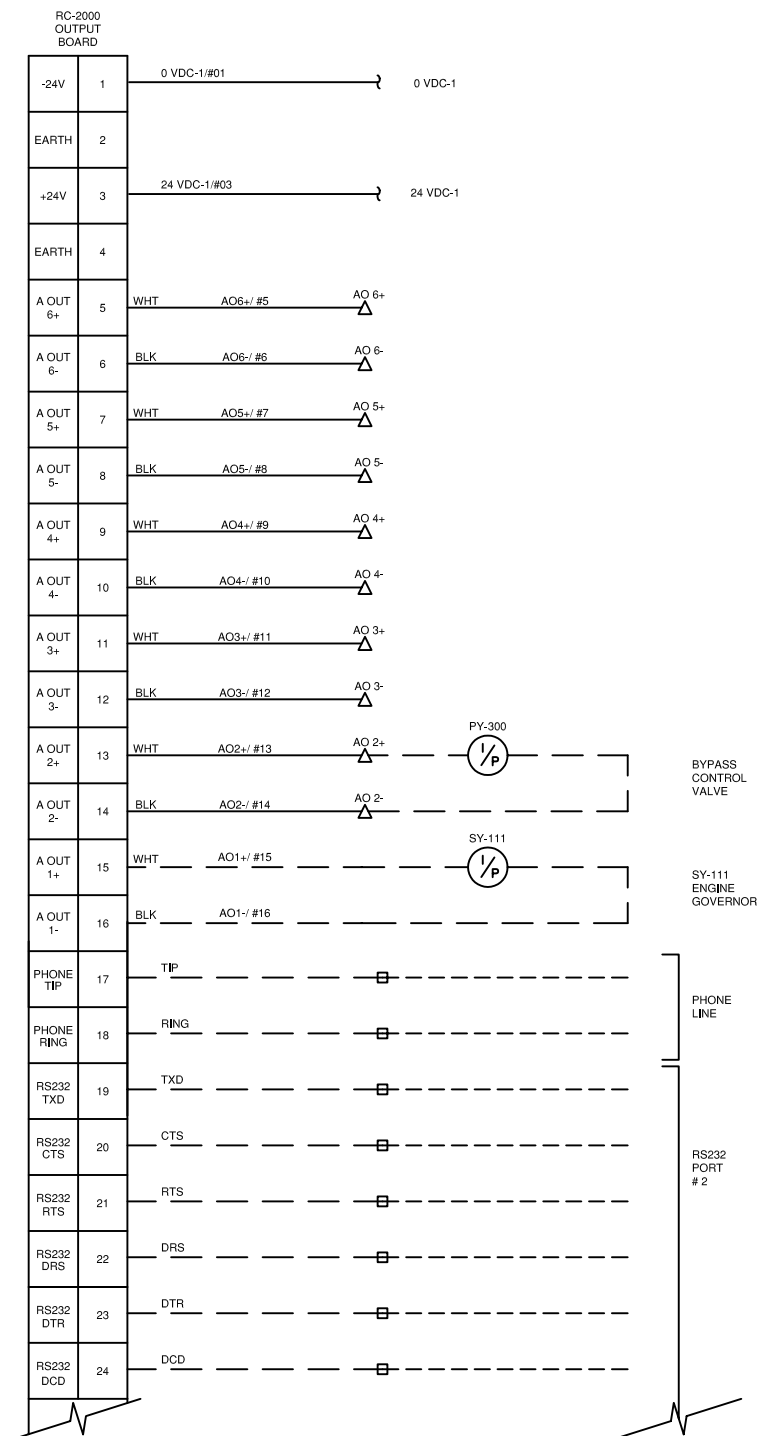
**LEGEND**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>1.  PANEL WIRING</li> <li>2.  FIELD WIRING</li> <li>3.  UNFUSED TERMINAL</li> <li>4.  FUSED TERMINAL</li> <li>5.  FEED THROUGH TERMINAL</li> <li>6.  DISCONNECT TERMINAL</li> </ul> | <p><b>WIRE COLOR LEGEND</b></p> <ul style="list-style-type: none"> <li>1. +24VDC: RED</li> <li>2. -24VDC: YELLOW</li> <li>3. SWITCHED: ORANGE</li> <li>4. ANALOG INPUT/OUTPUT - : BLACK</li> <li>5. ANALOG INPUT/OUTPUT + : WHITE</li> <li>6. ANALOG LOOP: PURPLE</li> </ul> |
|--|--|

| Rev. | Soft Rev. | Revision Description    | By | Date       | Checked | Aprvd |
|------|-----------|-------------------------|----|------------|---------|-------|
| 1    | A         | REVISED AS BUILT        | BR | 13.01.2005 |         |       |
| 1    |           | PANEL SHOP AS BUILT     | BR | 06.01.2005 |         |       |
| 0    |           | ISSUED FOR CONSTRUCTION | BR | 20.12.2004 |         |       |

|  |   |
|--|---|
| <p>Project Title</p> <p style="text-align: center;"><b>COMPRESSION SERVICES<br/>RC 10276</b></p> | <p>Drawing Title</p> <p style="text-align: center;"><b>IGNITION POWER DISTRIBUTION<br/>LAYOUT DRAWING</b></p> |
|--|---|

|                         |               |
|-------------------------|---------------|
| Syntech                 |               |
| Syntech Drawing Number  | 4190208-10    |
| Customer Drawing Number | CS04663       |
|                         | 1 of 1<br>NTS |



**OUTPUT BOARD NODE 2**

BOARD EDGE

DIP SWITCH SETTINGS

1 0

DIP 1

DIP 2

DIP 3

DIP 4

1 0

**NOTES ON DIP SETTINGS**

MODE IS ALWAYS SET TO 0  
DIP SWITCHES 2,3 AND 4 SET TO BOARD ADDRESS

NOTES:  
1. WHEN REMOTE STOP BARRIER IS USED, REMOVE WIRES TO R-DSM RELAY CONTACTS  
2. USE ONLY INTERNALLY

**LEGEND**

|        |                       |
|--------|-----------------------|
| 1. ——— | PANEL WIRING          |
| 2. ——— | FIELD WIRING          |
| 3. ▲   | UNFUSED TERMINAL      |
| 4. □   | FUSED TERMINAL        |
| 5. ▲   | FEED THROUGH TERMINAL |
| 6. ▲   | DISCONNECT TERMINAL   |

**WIRE COLOR LEGEND**

|                                  |
|----------------------------------|
| 1. +24VDC: RED                   |
| 2. -24VDC: YELLOW                |
| 3. SWITCHED: ORANGE              |
| 4. ANALOG INPUT/OUTPUT - : BLACK |
| 5. ANALOG INPUT/OUTPUT + : WHITE |
| 6. ANALOG LOOP: PURPLE           |

|      |           |                         |    |            |         |       |  |
|------|-----------|-------------------------|----|------------|---------|-------|--|
| 1    | A         | REVISED AS BUILT        | BR | 13.01.2005 |         |       |  |
| 1    |           | PANEL SHOP AS BUILT     | BR | 06.01.2005 |         |       |  |
| 0    |           | ISSUED FOR CONSTRUCTION | BR | 20.12.2004 |         |       |  |
| Rev. | Soft Rev. | Revision Description    | By | Date       | Checked | Aprvd |  |

Project Title  
**COMPRESSION SERVICES RC 10276**

Drawing Title  
**INCENDIVE OUTPUT BOARD LAYOUT DRAWING**

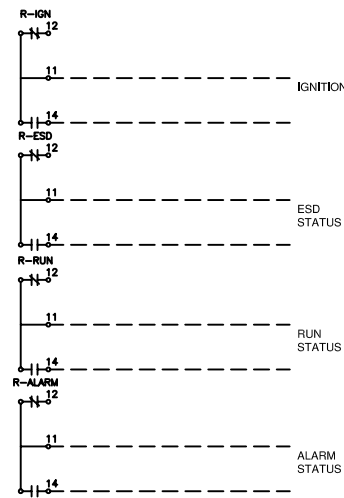
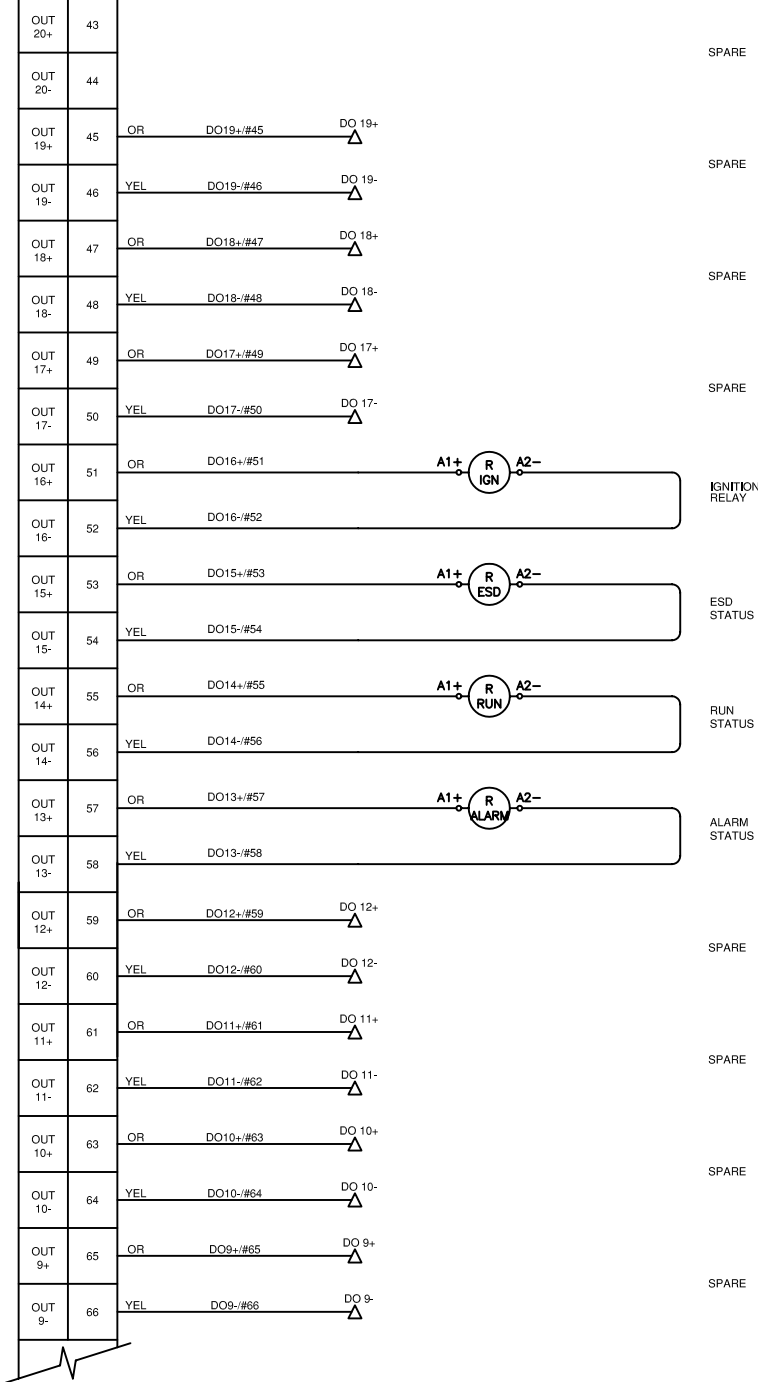
**Syntech**

Syntech Drawing Number **4190208-11**

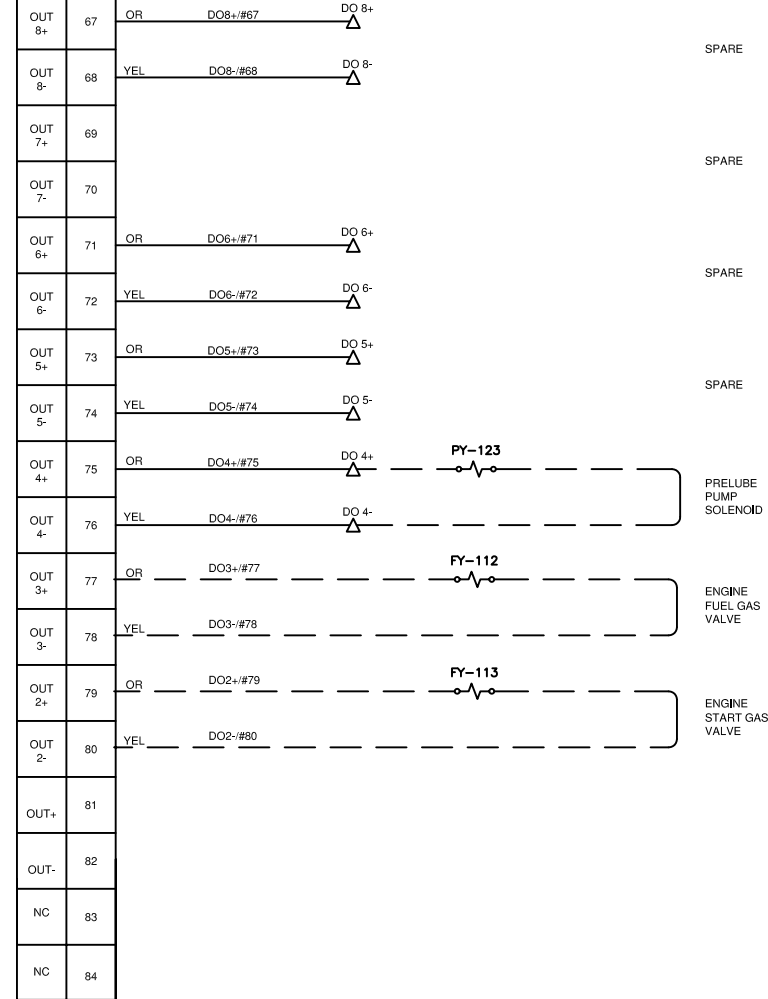
Customer Drawing Number **CS04663**

1 of 1  
NTS

RC-2000  
OUTPUT  
BOARD



RC-2000  
OUTPUT  
BOARD



**OUTPUT BOARD  
NODE 2**

1 0

DIP 1

DIP 2

DIP 3

DIP 4

1 0

DIP SWITCH SETTINGS

**NOTES ON DIP SETTINGS**

MODE IS ALWAYS SET TO 0  
DIP SWITCHES 2,3 AND 4 SET TO BOARD ADDRESS

NOTES:  
1. WHEN BLOW CASE OPTION 626 IS USED, RETAG SOLENOID LY-310 TO LY-313A

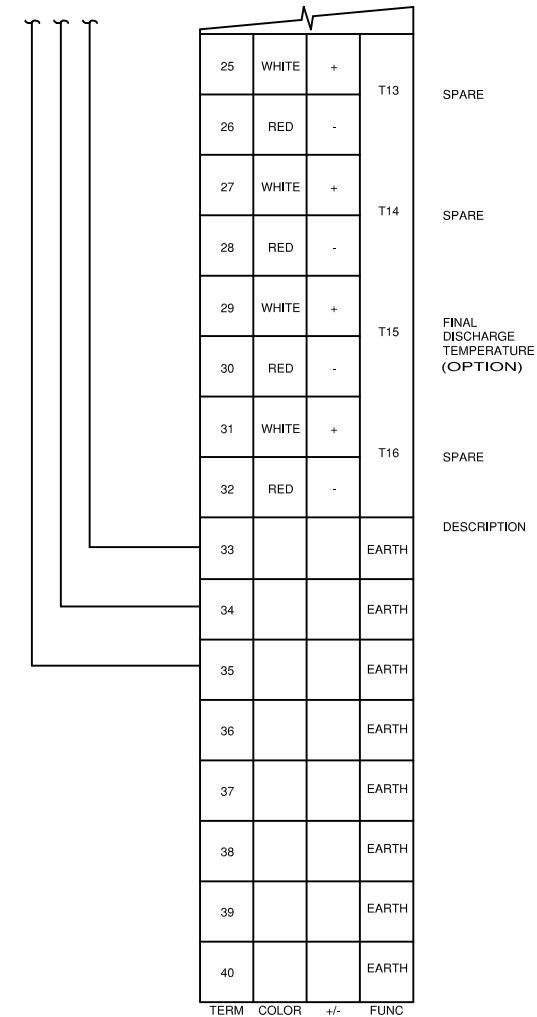
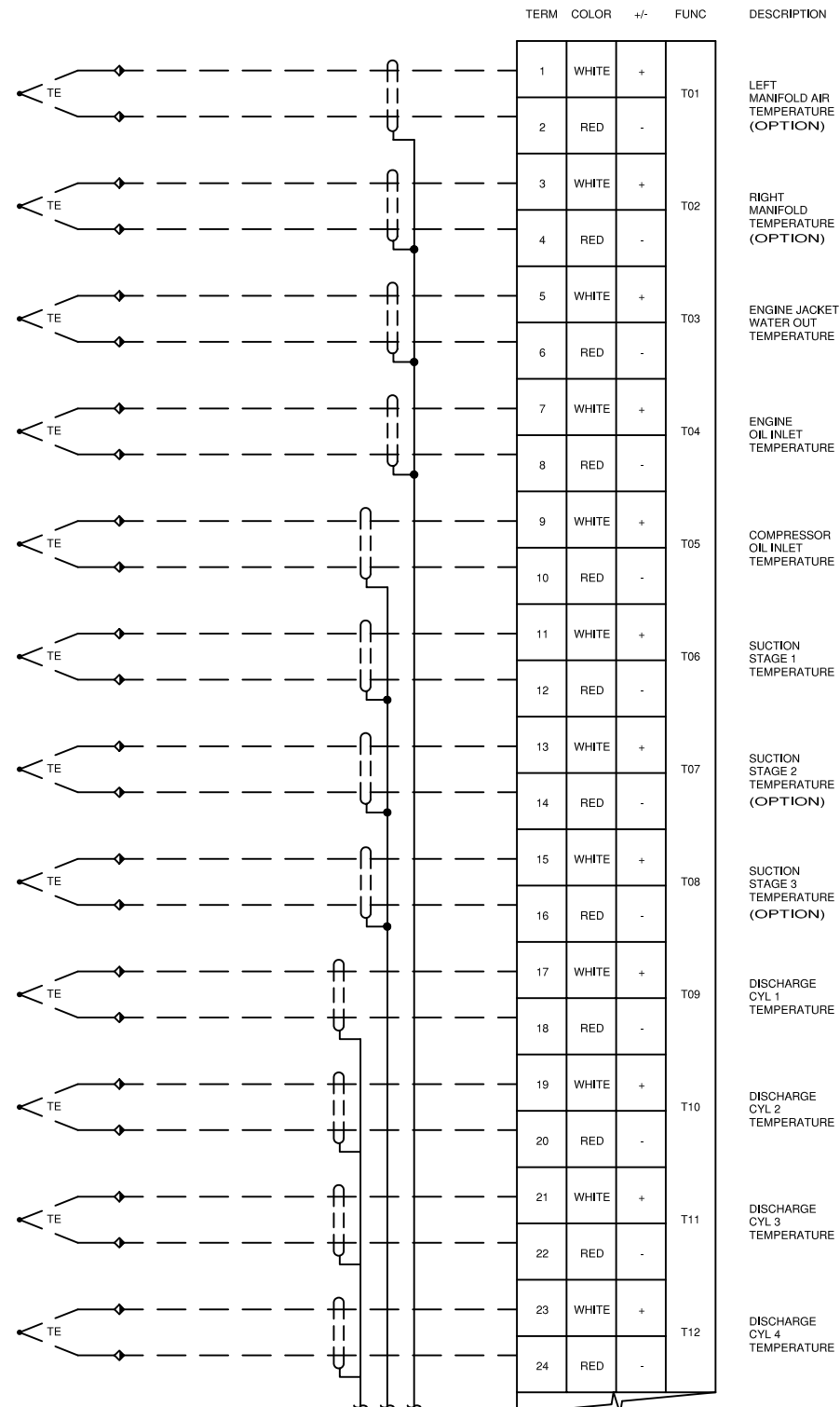
| LEGEND |                       | WIRE COLOR LEGEND                |  |
|--------|-----------------------|----------------------------------|--|
| 1. —   | PANEL WIRING          | 1. +24VDC: RED                   |  |
| 2. —   | FIELD WIRING          | 2. -24VDC: YELLOW                |  |
| 3. —   | UNFUSED TERMINAL      | 3. SWITCHED: ORANGE              |  |
| 4. —   | FUSED TERMINAL        | 4. ANALOG INPUT/OUTPUT - : BLACK |  |
| 5. —   | FEED THROUGH TERMINAL | 5. ANALOG INPUT/OUTPUT + : WHITE |  |
| 6. —   | DISCONNECT TERMINAL   | 6. ANALOG LOOP: PURPLE           |  |

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| 1    | A         | REVISED AS BUILT        | BR | 13.01.2005 |         |       |
| 1    |           | PANEL SHOP AS BUILT     | BR | 06.01.2005 |         |       |
| 0    |           | ISSUED FOR CONSTRUCTION | BR | 20.12.2004 |         |       |

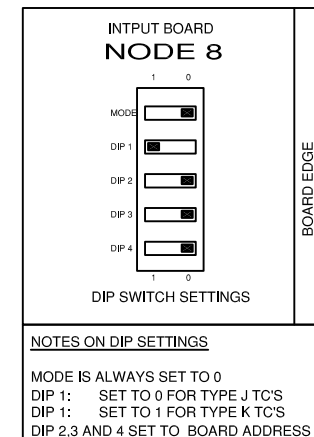
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| Project Title |  | COMPRESSION SERVICES<br>RC 10276               |  |
| Drawing Title |  | INCENDIVE OUTPUT BOARD con't<br>LAYOUT DRAWING |  |

|  |  |                         |            |        |
|--|--|-------------------------|------------|--------|
|  |  | Syntech Drawing Number  | 4190208-12 | 1 of 1 |
|  |  | Customer Drawing Number | CS04663    | NTS    |

NON-INCENDIVE  
THERMOCOUPLE  
BOARD #1



NON-INCENDIVE  
THERMOCOUPLE  
BOARD #1



LEGEND

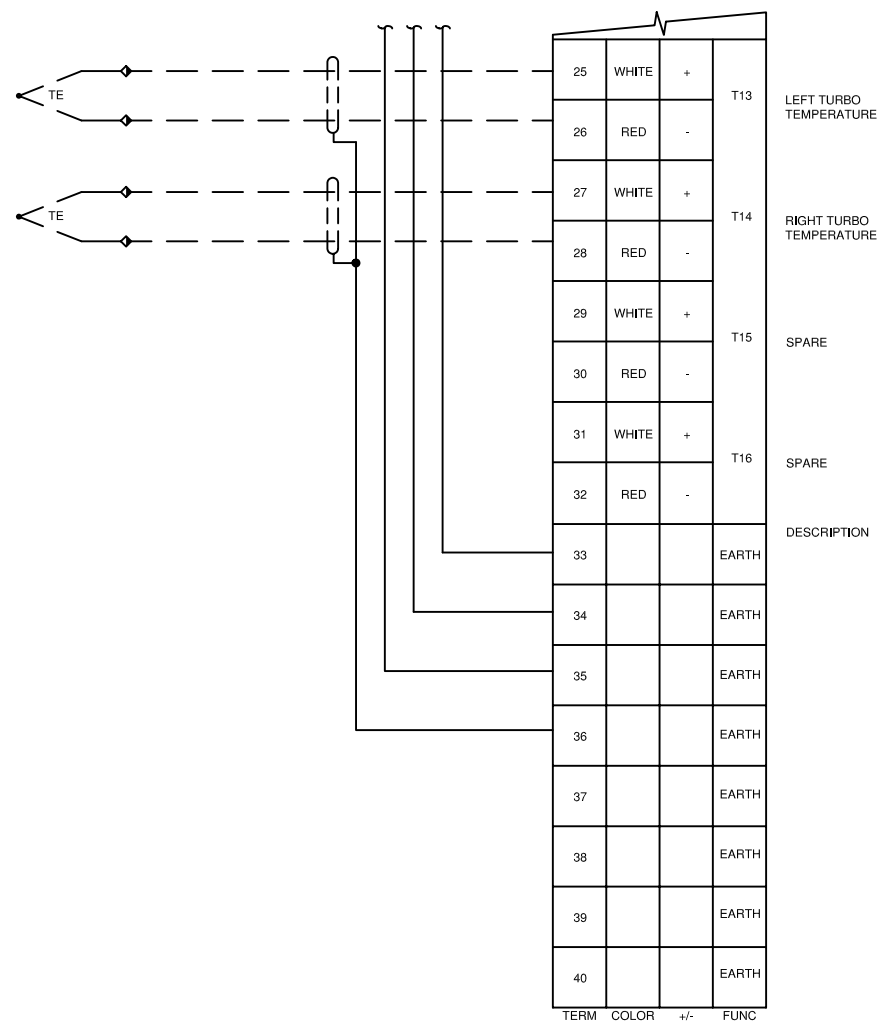
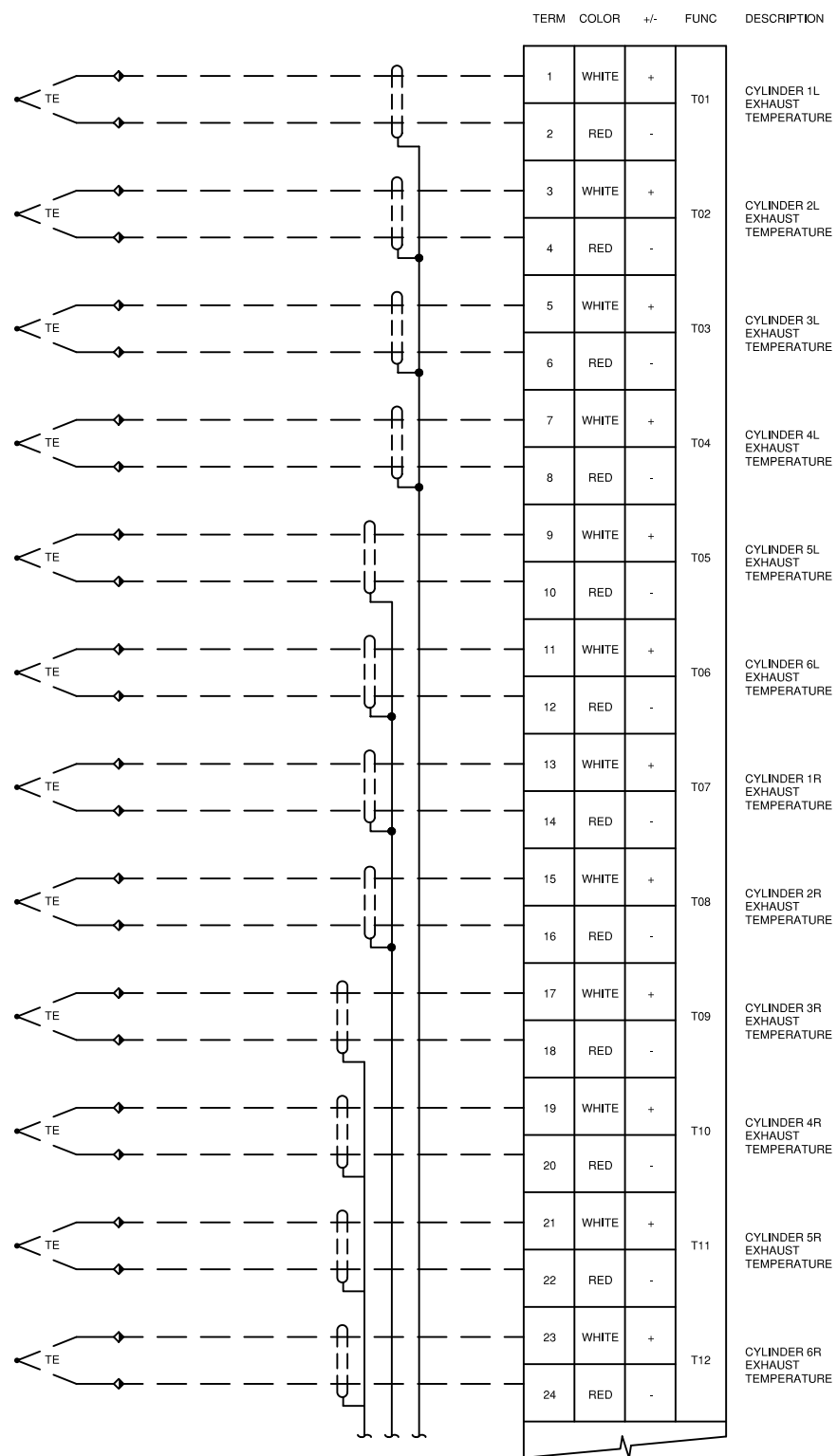
- |                           |                                 |
|---------------------------|---------------------------------|
| 1.  PANEL WIRING          | 1. +24VDC: RED                  |
| 2.  FIELD WIRING          | 2. -24VDC: YELLOW               |
| 3.  UNFUSED TERMINAL      | 3. SWITCHED: ORANGE             |
| 4.  FUSED TERMINAL        | 4. ANALOG INPUT/OUTPUT -: BLACK |
| 5.  FEED THROUGH TERMINAL | 5. ANALOG INPUT/OUTPUT +: WHITE |
| 6.  DISCONNECT TERMINAL   | 6. ANALOG LOOP: PURPLE          |

| Rev. | Soft Rev. | Revision Description    | By | Date       | Checked | Aprvd |
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| 1    | A         | REVISED AS BUILT        | BR | 13.01.2005 |         |       |
| 1    |           | PANEL SHOP AS BUILT     | BR | 06.01.2005 |         |       |
| 0    |           | ISSUED FOR CONSTRUCTION | BR | 20.12.2004 |         |       |

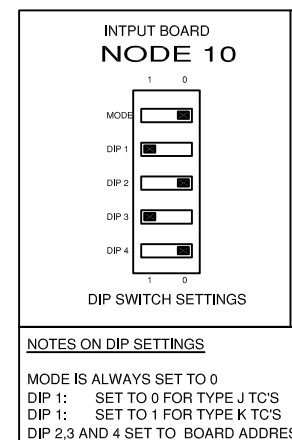
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| Project Title |  | COMPRESSION SERVICES<br>RC 10276                            |
| Drawing Title |  | NON-INCENDIVE INPUT BOARD #1<br>THERMOCOUPLE LAYOUT DRAWING |

|  |  |                         |            |        |
|--|--|-------------------------|------------|--------|
|  |  | Syntech Drawing Number  | 4190208-15 | 1 of 1 |
|  |  | Customer Drawing Number | CS04663    | NTS    |

NON-INCENDIVE  
THERMOCOUPLE  
BOARD #2



NON-INCENDIVE  
THERMOCOUPLE  
BOARD #2



LEGEND

- 1. PANEL WIRING
- 2. FIELD WIRING
- 3. UNFUSED TERMINAL
- 4. FUSED TERMINAL
- 5. FEED THROUGH TERMINAL
- 6. DISCONNECT TERMINAL

WIRE COLOR LEGEND

- 1. +24VDC: RED
- 2. -24VDC: YELLOW
- 3. SWITCHED: ORANGE
- 4. ANALOG INPUT/OUTPUT -: BLACK
- 5. ANALOG INPUT/OUTPUT +: WHITE
- 6. ANALOG LOOP: PURPLE

| Rev. | Soft Rev. | Revision Description    | By | Date       | Checked | Aprvd |
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| 1    | A         | REVISED AS BUILT        | BR | 13.01.2005 |         |       |
| 1    |           | PANEL SHOP AS BUILT     | BR | 06.01.2005 |         |       |
| 0    |           | ISSUED FOR CONSTRUCTION | BR | 20.12.2004 |         |       |

Project Title

COMPRESSION SERVICES  
RC 10276

Drawing Title

NON-INCENDIVE INPUT BOARD #2  
THERMOCOUPLE LAYOUT DRAWING

# Syntech

Syntech  
Drawing Number

4190208-16

1 of 1

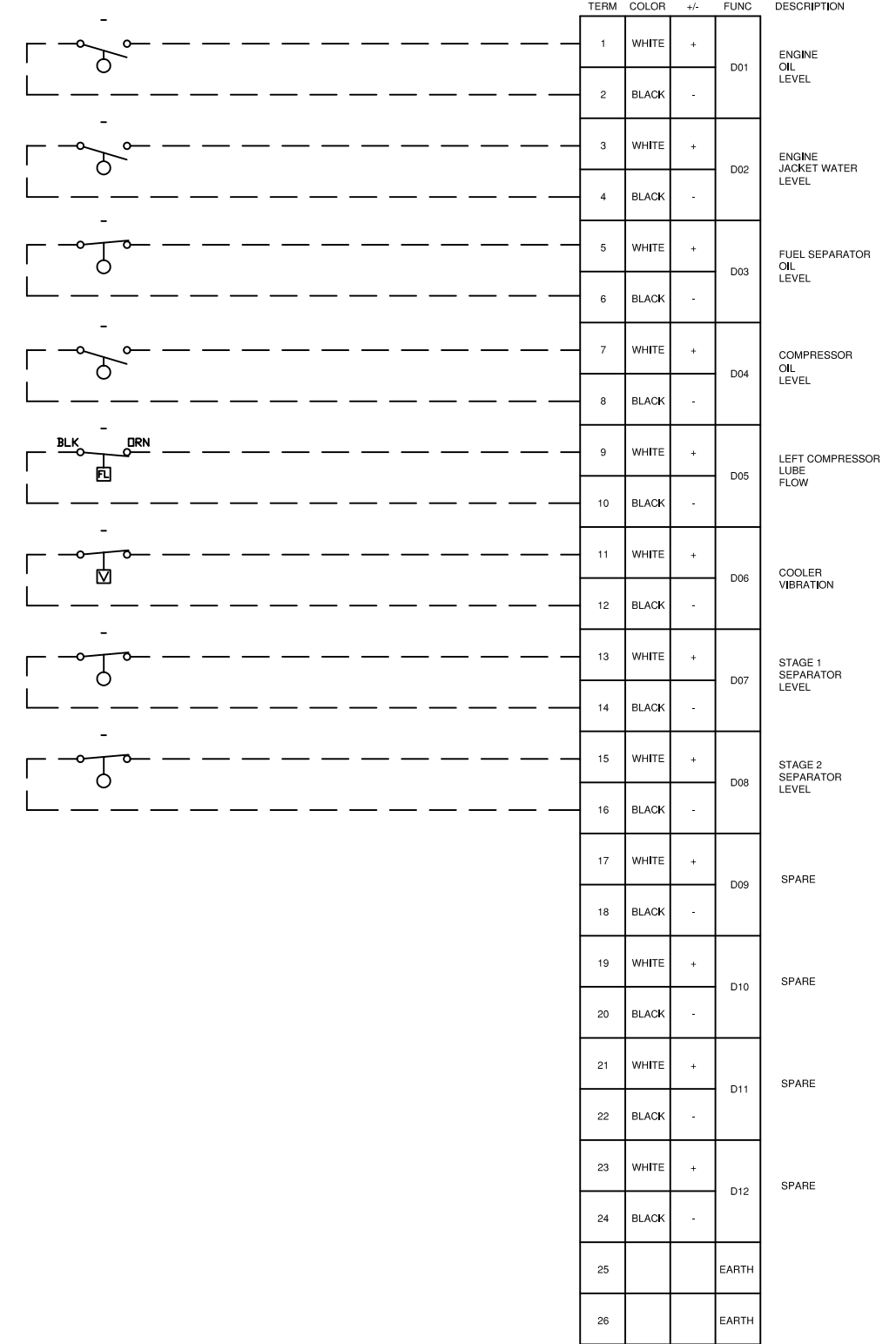
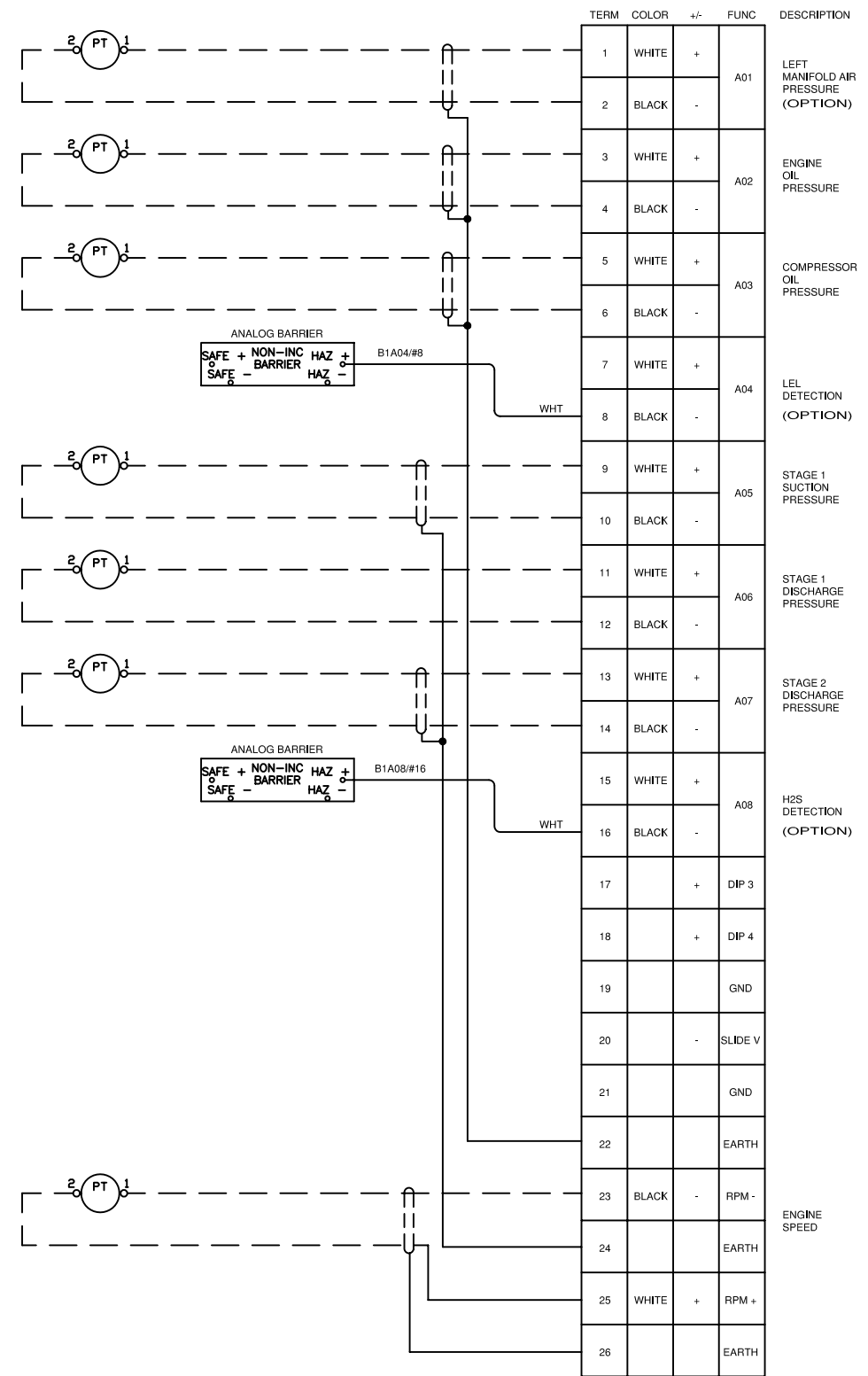
Customer  
Drawing Number

CS04663

NTS

NON-INCENDIVE  
ANALOG  
BOARD #1

NON-INCENDIVE  
DISCRETE  
BOARD #1



**INPUT BOARD  
NODE 8**

**DIP SWITCH SETTINGS**

**NOTES ON DIP SETTINGS**

MODE IS ALWAYS SET TO 0  
 DIP 1: SET TO 0 FOR TYPE J TC'S  
 DIP 1: SET TO 1 FOR TYPE K TC'S  
 DIP 2,3 AND 4 SET TO BOARD ADDRESS

NOTES:  
1. WHEN FIRE LOOP OPTION IS USED, TERMINATE TO BARRIER PSL-900

| LEGEND |                       | WIRE COLOR LEGEND                |  |
|--------|-----------------------|----------------------------------|--|
| 1. —   | PANEL WIRING          | 1. +24VDC: RED                   |  |
| 2. —   | FIELD WIRING          | 2. -24VDC: YELLOW                |  |
| 3. ▲   | UNFUSED TERMINAL      | 3. SWITCHED: ORANGE              |  |
| 4. □   | FUSED TERMINAL        | 4. ANALOG INPUT/OUTPUT - : BLACK |  |
| 5. ▲   | FEED THROUGH TERMINAL | 5. ANALOG INPUT/OUTPUT + : WHITE |  |
| 6. ▲   | DISCONNECT TERMINAL   | 6. ANALOG LOOP: PURPLE           |  |

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| 1    |           | PANEL SHOP AS BUILT     | BR | 06.01.2005 |         |       |
| 0    |           | ISSUED FOR CONSTRUCTION | BR | 20.12.2004 |         |       |

|               |  |  |
|---------------|--|--|
| Project Title | COMPRESSION SERVICES<br>RC 10276                                 |  |
| Drawing Title | NON-INCENDIVE INPUT BOARD #1<br>ANALOG / DISCRETE LAYOUT DRAWING |  |

|                |  |                         |            |        |
|----------------|--|-------------------------|------------|--------|
| <b>Syntech</b> |  | Syntech Drawing Number  | 4190208-17 | 1 of 1 |
|                |  | Customer Drawing Number | CS04663    | NTS    |

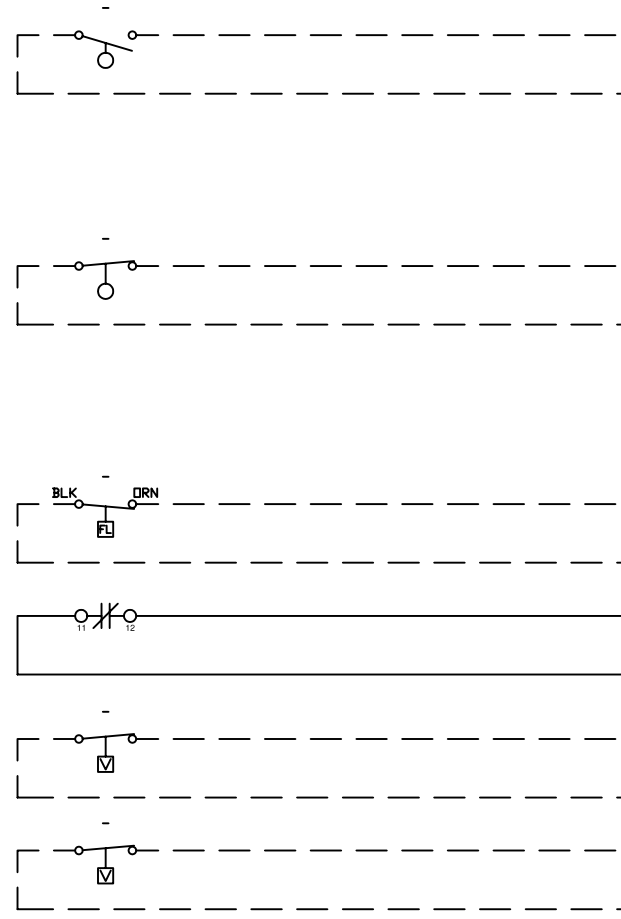
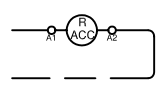


NON-INCENDIVE  
ANALOG  
BOARD #2

| TERM | COLOR | +/- | FUNC    | DESCRIPTION                |
|------|-------|-----|---------|----------------------------|
| 1    | WHITE | +   | A01     | SPARE                      |
| 2    | BLACK | -   | A01     | SPARE                      |
| 3    | WHITE | +   | A02     | SPARE                      |
| 4    | BLACK | -   | A02     | SPARE                      |
| 5    | WHITE | +   | A03     | SPARE                      |
| 6    | BLACK | -   | A03     | SPARE                      |
| 7    | WHITE | +   | A04     | STAGE 3 DISCHARGE PRESSURE |
| 8    | BLACK | -   | A04     | STAGE 3 DISCHARGE PRESSURE |
| 9    | WHITE | +   | A05     | SPARE                      |
| 10   | BLACK | -   | A05     | SPARE                      |
| 11   | WHITE | +   | A06     | SPARE                      |
| 12   | BLACK | -   | A06     | SPARE                      |
| 13   | WHITE | +   | A07     | SPARE                      |
| 14   | BLACK | -   | A07     | SPARE                      |
| 15   | WHITE | +   | A08     | SPARE                      |
| 16   | BLACK | -   | A08     | SPARE                      |
| 17   |       | +   | DIP 3   |                            |
| 18   |       | +   | DIP 4   |                            |
| 19   |       | -   | GND     |                            |
| 20   |       | +   | SLIDE V |                            |
| 21   |       | -   | GND     |                            |
| 22   |       | -   | EARTH   |                            |
| 23   | BLACK | -   | RPM -   |                            |
| 24   |       | -   | EARTH   |                            |
| 25   | WHITE | +   | RPM +   |                            |
| 26   |       | -   | EARTH   |                            |

NON-INCENDIVE  
DISCRETE  
BOARD #2

| TERM | COLOR | +/- | FUNC  | DESCRIPTION               |
|------|-------|-----|-------|---------------------------|
| 1    | WHITE | +   | D01   | AUXILIARY COOLANT LEVEL   |
| 2    | BLACK | -   | D01   | AUXILIARY COOLANT LEVEL   |
| 3    | WHITE | +   | D02   | SPARE                     |
| 4    | BLACK | -   | D02   | SPARE                     |
| 5    | WHITE | +   | D03   | STAGE 3 SEPARATOR LEVEL   |
| 6    | BLACK | -   | D03   | STAGE 3 SEPARATOR LEVEL   |
| 7    | WHITE | +   | D04   | SPARE                     |
| 8    | BLACK | -   | D04   | SPARE                     |
| 9    | WHITE | +   | D05   | RIGHT COMPRESOR LUBE FLOW |
| 10   | BLACK | -   | D05   | RIGHT COMPRESOR LUBE FLOW |
| 11   | WHITE | +   | D06   | ACCUNOX SHUTDOWN          |
| 12   | BLACK | -   | D06   | ACCUNOX SHUTDOWN          |
| 13   | WHITE | +   | D07   | ENGINE VIBRATION          |
| 14   | BLACK | -   | D07   | ENGINE VIBRATION          |
| 15   | WHITE | +   | D08   | COMPRESSOR VIBRATION      |
| 16   | BLACK | -   | D08   | COMPRESSOR VIBRATION      |
| 17   | WHITE | +   | D09   | SPARE                     |
| 18   | BLACK | -   | D09   | SPARE                     |
| 19   | WHITE | +   | D10   | SPARE                     |
| 20   | BLACK | -   | D10   | SPARE                     |
| 21   | WHITE | +   | D11   | SPARE                     |
| 22   | BLACK | -   | D11   | SPARE                     |
| 23   | WHITE | +   | D12   | SPARE                     |
| 24   | BLACK | -   | D12   | SPARE                     |
| 25   |       |     | EARTH |                           |
| 26   |       |     | EARTH |                           |



**INPUT BOARD  
NODE 10**

DIP SWITCH SETTINGS

**NOTES ON DIP SETTINGS**

MODE IS ALWAYS SET TO 0  
 DIP 1: SET TO 0 FOR TYPE J TC'S  
 DIP 1: SET TO 1 FOR TYPE K TC'S  
 DIP 2,3 AND 4 SET TO BOARD ADDRESS

**LEGEND**

|      |                       |
|------|-----------------------|
| 1. — | PANEL WIRING          |
| 2. — | FIELD WIRING          |
| 3. ▲ | UNFUSED TERMINAL      |
| 4. □ | FUSED TERMINAL        |
| 5. ▲ | FEED THROUGH TERMINAL |
| 6. ▲ | DISCONNECT TERMINAL   |

**WIRE COLOR LEGEND**

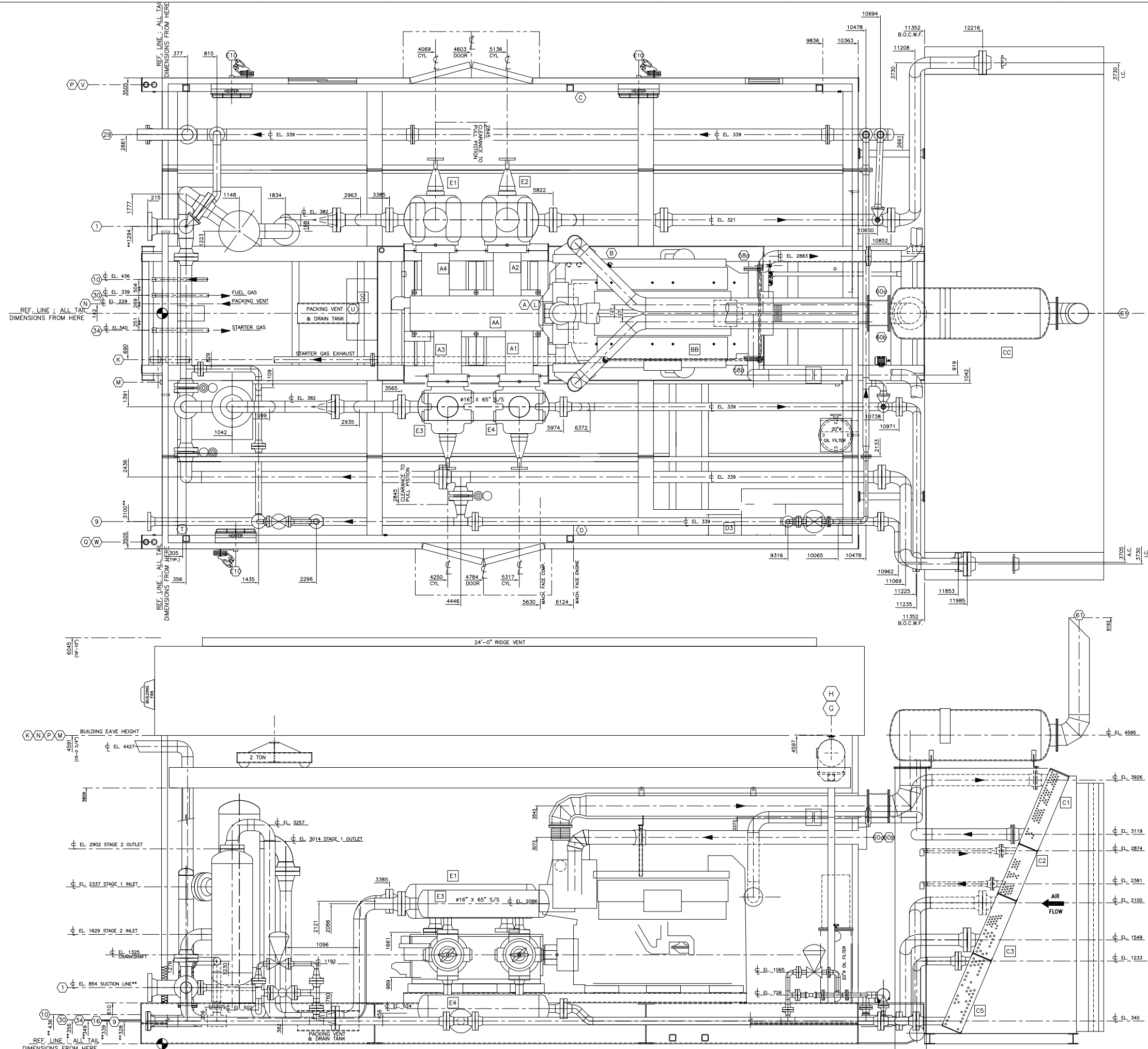
|                                 |
|---------------------------------|
| 1. +24VDC: RED                  |
| 2. -24VDC: YELLOW               |
| 3. SWITCHED: ORANGE             |
| 4. ANALOG INPUT/OUTPUT -: BLACK |
| 5. ANALOG INPUT/OUTPUT +: WHITE |
| 6. ANALOG LOOP: PURPLE          |

| Rev. | Soft Rev. | Revision Description    | By | Date       | Checked | Aprvd |
|------|-----------|-------------------------|----|------------|---------|-------|
| 1    | A         | REVISED AS BUILT        | BR | 13.01.2005 |         |       |
| 1    |           | PANEL SHOP AS BUILT     | BR | 06.01.2005 |         |       |
| 0    |           | ISSUED FOR CONSTRUCTION | BR | 20.12.2004 |         |       |

|               |  |
|---------------|--|
| Project Title | COMPRESSION SERVICES<br>RC 10276                                 |
| Drawing Title | NON-INCENDIVE INPUT BOARD #2<br>ANALOG / DISCRETE LAYOUT DRAWING |

**Syntech**

|                         |            |        |
|-------------------------|------------|--------|
| Syntech Drawing Number  | 4190208-18 | 1 of 1 |
| Customer Drawing Number | CS04663    | NTS    |



| CUSTOMER CONNECTIONS |                                   |            |
|----------------------|-----------------------------------|------------|
| NO.                  | DESCRIPTION                       | SIZE       |
| 8                    | STAGE 1 INLET                     | 8"-600# RF |
| 9                    | FINAL DISCHARGE                   | 4"-600# RF |
| 10                   | STAGE 1 SCRUBBER DRAIN HEADER     | 1" NPT     |
| 16                   | STAGE 2 & 3 SCRUBBER DRAIN HEADER | 1" NPT     |
| 29                   | PRESS-RELIEF HEADER               | 6"-150# RF |
| 30                   | FUEL GAS SUPPLY                   | 1 1/2" NPT |
| 34                   | START GAS SUPPLY                  | 2" NPT     |
| 36                   | INSTRUMENT AIR SUPPLY             | 1" NPT     |
| 58A/B                | UNIT GLYCOL DRAIN (LOCAL)         | 3/4" NPT   |
| 60A/B                | ENGINE AIR INTAKE                 | 8" TUBE    |
| 61                   | ENGINE EXHAUST                    | 12" TUBE   |

| OTHER CONNECTIONS |                                       |                 |
|-------------------|---------------------------------------|-----------------|
| CONN.             | DESCRIPTION                           | SIZE            |
| A                 | COMPRESSOR OIL TANK FILL (LOCAL)      | 2" NPT          |
| B                 | ENGINE OIL TANK FILL (LOCAL)          | 2" NPT          |
| C                 | COMPRESSOR OIL TANK FILL              | 1" NPT          |
| D                 | ENGINE OIL TANK FILL                  | 1" NPT          |
| E10               | HEATER CONNECTION (3)                 | 1" NPT          |
| G                 | JACKET WATER SURGE FILL               | 2"-7# PRESS.CAP |
| H                 | AUXILIARY WATER SURGE FILL            | 2"-7# PRESS.CAP |
| J                 | CONTROL PANEL VENT                    | 1" NPT          |
| K                 | START GAS VENT                        | 3" TUBE         |
| L                 | COMPRESSOR CRANK CASE VENT            | 2" TUBE         |
| M                 | CONTROL VENT HEADER                   | 1" STACK        |
| N                 | PACKING / DISTANCE PIECE TANK VENT    | 2" NPT          |
| P                 | WASTE OIL TANK VENT                   | 2" STACK        |
| Q                 | GLYCOL TANK VENT                      | 2" STACK        |
| S                 | ENGINE OIL TANK VENT                  | 1 1/2" NPT      |
| T                 | COMPRESSOR OIL TANK VENT              | 1 1/2" NPT      |
| U                 | PACKING / DISTANCE PIECE TANK PUMPOUT | 2" NPT          |
| V                 | WASTE OIL TANK PUMPOUT                | 2" NPT          |
| W                 | GLYCOL TANK PUMPOUT                   | 2" NPT          |

- MAJOR COMPONENTS**
- AA COMPRESSOR
    - (1) ARIEL JGK/4 S/N: F20513
    - A1 (2) 9-5/8" Dia. K CLASS CYL. MAMP 1270 PSIG S/N: C-81943, C-81941
    - A2 (2) 6-1/4" Dia. K CLASS CYL. MAMP 2050 PSIG S/N: C-21578, C-35855
  - BB ENGINE
    - (1) WALKESHA L7042GSI S/N: 261907
  - CC COOLER
    - (1) AIR-X-CHANGERS, 144E-104-24, S/N: 990544
    - C1 (1) ENGINE JACKET WATER SECTION - DESIGN PRESSURE 14 PSIG @ 300/-20 F. S/N:
    - C2 (1) AUXILIARY WATER SECTION - DESIGN PRESSURE 14 PSIG @ 300/-20 F. S/N:
    - C3 (1) INTERSTAGE COOLER SECTION #1 - DESIGN PRESSURE 1315 PSIG @ 300/-20 F. S/N:
    - C4 (1) AFTERCOOLER SECTION - DESIGN PRESSURE 1315 PSIG @ 300/-20 F. S/N:
  - DD SCRUBBERS
    - D1 24" Dia. x 90" S/S - MAMP: 1315 PSIG @ 300F S/N: 94037-01
    - D2 24" Dia. x 64" S/S - MAMP: 850 PSIG @ 300F S/N: 030475-07
  - EE BOTTLES
    - E1 20" Dia. x 65" S/S - MAMP: 1270 PSIG @ 350F S/N: 05-803
    - E2 20" Dia. x 65" S/S - MAMP: 1270 PSIG @ 350F S/N: 05-804
    - E3 16" Dia. x 65" S/S - MAMP: 850 PSIG @ 300F S/N: 98015-05
    - E4 16" Dia. x 65" S/S - MAMP: 1600 PSIG @ 300F S/N: 98015-05
  - GG CONTROL PANEL
    - (1) RC 2000

- GENERAL NOTES**
1. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS STAMPED "ISSUED FOR CONSTRUCTION".
  2. DO NOT SCALE THIS DRAWING.
  3. ALL DIMENSIONS ARE IN MILLIMETERS.
  4. FOR DESIGN PARAMETERS AND PAINT SPECIFICATION REFER TO PROJECT SCOPE SUMMARY DRAWING NO. SS075143
  5. ALL PIPING MUST BE SELF SUPPORTING BEYOND UNIT CONNECTIONS.
  6. LOCATIONS OF CUSTOMER CONNECTIONS ARE NOT GUARANTEED AS THESE DIMENSIONS MAY BE SUBJECT TO AN ACCUMULATION OF TOLERANCES ON SEVERAL COMPONENTS. MINOR CHANGES MAY ALSO BE MADE ON SCREWED SERVICE PIPING IN ORDER TO FACILITATE INSTALLATION AND MAINTENANCE. ON COMPLETION A FINAL DRAWING WILL BE ISSUED WITH FIELD CONNECTIONS CORRECTED TO 5 mm.
  7. IT IS CS'S RECOMMENDATION THAT ANY PRE-SPOOLING TO THIS COMPRESSOR PACKAGE CONTAIN FIELD WELDS AT ALL CUSTOMER CONNECTIONS.
  8. THE FOLLOWING ITEMS WILL BE SHIPPED LOOSE FOR FIELD INSTALLATION BY OTHERS: MUFFLER, EXHAUST PIPING, PIPING SPOOL'S SURGE TANK, COOLER.
  9. UNIT WEIGHTS ARE APPROXIMATE AND MAY BE SUBJECT TO CHANGE UPON COMPLETION OF FABRICATION. FOUNDATION DESIGN IN GENERAL, PILE DESIGN, PILE LOCATION AND QUANTITY OF PILES ARE THE RESPONSIBILITY OF THE CUSTOMER.
  10. \*\* WILL INDICATE AS-BUILT.
  11. PIPING FLANGES ASSEMBLY TO COMPLY WITH ASME B31.3, SECTION 335.1.1. MATING PIPE FLANGE FACES TO BE ALIGNED TO WITHIN 1mm IN 200mm MEASURED ACROSS THE DIAMETER. FLANGE BOLT HOLES TO BE ALIGNED WITHIN 3mm MAXIMUM OFFSET.

| COMPRESSOR UNBALANCED FORCES @ 1200 RPM |         |           |
|---|---------|-----------|
|   | PRIMARY | SECONDARY |
| HORIZONTAL FORCE, KIPS                  | 0.00    | 0.000     |
| VERTICAL FORCE, KIPS                    | 0.00    | 0.00      |
| HORIZONTAL COUPLE, KIPS-FT              | 6.855   | 0.00      |
| VERTICAL COUPLE, KIPS-FT                | 16.905  | 0.00      |

\*Zero Loading Only  
Does Not Include Cold Loading\*

CAD  
MAKE NO REVISIONS TO THIS REPRODUCIBLE

CUSTOMER MATERIAL CONFIRMATION  
CONFIRMATION OF CUSTOMER OWNED PIPING MATERIALS WILL REMAIN THE SOLE RESPONSIBILITY OF THE UNIT'S PRESENT OWNER. PLEASE NOTE THAT REGISTRATION OF THE COMPLETED PROCESS SYSTEM WILL ALSO REMAIN THE RESPONSIBILITY OF THE OWNER.

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THESE MATERIALS SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN THE REPAIR AND MAINTENANCE OF THE PRODUCTS TO WHICH THEY RELATE.

| SHIPPING WEIGHTS           |       |       |
|----------------------------|-------|-------|
|                            | KG.   | LIBS. |
| ENGINE                     | 9523  | 20995 |
| COMPRESSOR (C/W CYLINDERS) | 3397  | 7490  |
| COOLER                     | 5577  | 12300 |
| VESSELS                    | 6046  | 13330 |
| SKID                       | 35530 | 78330 |
| MISC. & LIQUIDS            | 8329  | 18362 |
| BUILDING                   | 4255  | 9381  |
| CRANE                      | 2860  | 6305  |
|                            | -     | -     |
|                            | -     | -     |

|                     |       |        |
|---------------------|-------|--------|
| TOTAL SHIPPING WT.  | 81507 | 179923 |
| SHIPPED LOOSE ITEMS | 16580 | 36550  |
| TOTAL UNIT WEIGHT   | 98087 | 216473 |

| UNIT DIMENSIONS                 | LENGTH                                     |          | WIDTH |        | HEIGHT |            |
|---------------------------------|--|----------|-------|--------|--------|------------|
|                                 | mm   | ft/in    | mm    | ft/in  | mm     | ft/in      |
| MAIN SKID w/ ALL EQUIP. MOUNTED | 14250                                      | 46'-9"   | 7706  | 25'-6" | 6200   | 20'-4"     |
| SHIPPING DIMENSIONS             | 11654                                      | 38'-3"   | 7214  | 23'-8" | 6043   | 19'-10"    |
| COOLER                          | 2720                                       | 8'-11"   | 7800  | 25'-8" | 4100   | 13'-5 1/2" |
| 7                               | REVISED PER CS055869 SCOPE OF SUPPLY       | 06/05/12 | JK    | TD     | AA     |            |
| 6                               | AS BUILT AS PER CS04663                    | 05/09/12 | DZ    | BNF    | LED    |            |
| 5                               | ADDED GENERATOR                            | 05/03/12 | JB    | BNF    | LED    |            |
| 4                               | SUCTION SWIVELANE HEADER DISCHARGE CHANGED | 05/01/10 | GD    | BNF    | LED    |            |
| 3                               | REVISED BUILDING HEIGHT                    | 05/02/12 | GD    | BNF    | LED    |            |
| 2                               | AS PER SOLD SCOPE OF SUPPLY                | 05/02/12 | GD    | BNF    | LED    |            |
| 9                               | AS BUILT                                   | 07/10/10 | JKP   | FW     | AA     |            |
| 8                               | REVISED AS PER CS075143 SCOPE OF SUPPLY    | 07/04/10 | RF    | FW     | AA     |            |

| REV | DESCRIPTION | DATE | DRAWN BY | CHECKED BY | ENG. BY |
|-----|-------------|------|----------|------------|---------|
|     |             |      |          |            |         |
|     |             |      |          |            |         |

**CompressorServices**

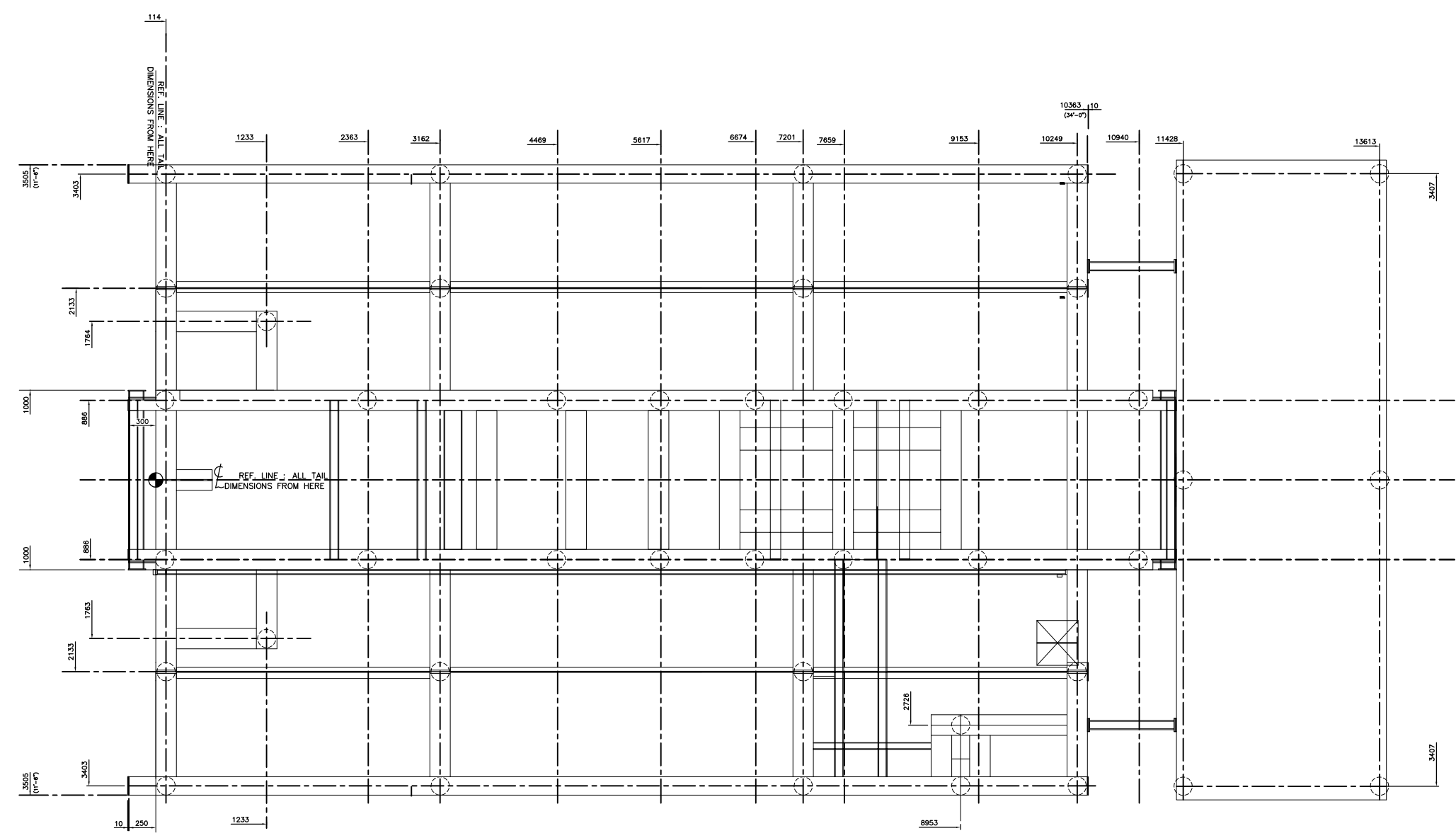
ENERFLEX  
5089-74 Avenue SE Calgary AB Canada T2C 5K2 Canada Tel: +1403.720.3822 Fax: +1403.720.3765 www.enerflex.com


TITLE: GENERAL ARRANGEMENT  
ARIEL JGK/4, WAUKESHA L7042 GSI, A-X-C 144 EH-104-24 COMPRESSOR PACKAGE

FOR: CONOCO PHILLIPS CANADA LTD. SUNDOWN, B.C.

CONSULTANT: LBD: D-18-1/93-P-7  
P.O.: JOB NO.: CS075143  
DATE: 05/02/12 DESIGN BY: GD DATE: 05/02/12 DATE: 05/02/12 DATE: 05/02/12  
DWN BY: GD CHECKED BY: BF DATE: 05/02/12 DATE: 05/02/12 DATE: 05/02/12  
SCALE: 1:25 APPR'D BY: LED DATE: 05/02/12 DATE: 05/02/12 DATE: 05/02/12



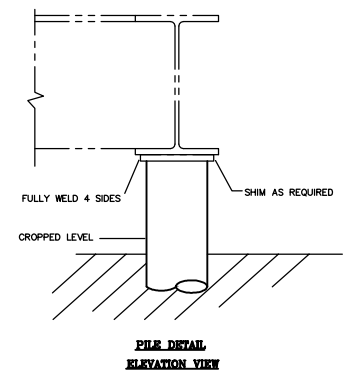


 **RECOMMENDED SUPPORT LOCATIONS**

**NOTES:**

1. UNIT WEIGHTS ARE APPROXIMATE AND MAY BE SUBJECT TO CHANGE UPON COMPLETION OF FABRICATION DRAWINGS.
2. PILE QUANTITY AND PLACEMENTS ARE THE MINIMUM RECOMMENDED TO SECURE EQUIPMENT. THE END USER MUST ENSURE ADEQUATE LOAD BEARING CAPACITY OF THE PILES.
3. FOUNDATION DESIGN IN GENERAL, PILE DESIGN AND QUANTITY IN PARTICULAR, ARE THE RESPONSIBILITY OF THE CUSTOMER.
4. CUT-OUTS WILL BE REQUIRED IN THE PAN FOR INSTALLATION.

**NOTE:**  
REFER TO GA DRAWING FOR UNBALANCED FORCES AND WEIGHTS.



| REV | DESCRIPTION         | DATE     | DRAWN BY | CHECKED BY | ENG. BY |
|-----|---------------------|----------|----------|------------|---------|
| 0   | ISSUED FOR APPROVAL | 05/03/09 | G.D.     | BKF        | L.D.    |

**CompressorServices**  
ENGINEER FLEX

508-74 Avenue SE Calgary AB Canada T2C 3K2 Canada Tel: +1403.726.3622 Fax: +1403.726.3765 www.csa-flex.com

**TITLE:**  
SUGGESTED PILE LOCATIONS  
ARIEL JGK/4, WAUKESHA 170420SI, AIR-X-144EH  
COMPRESSOR PACKAGE

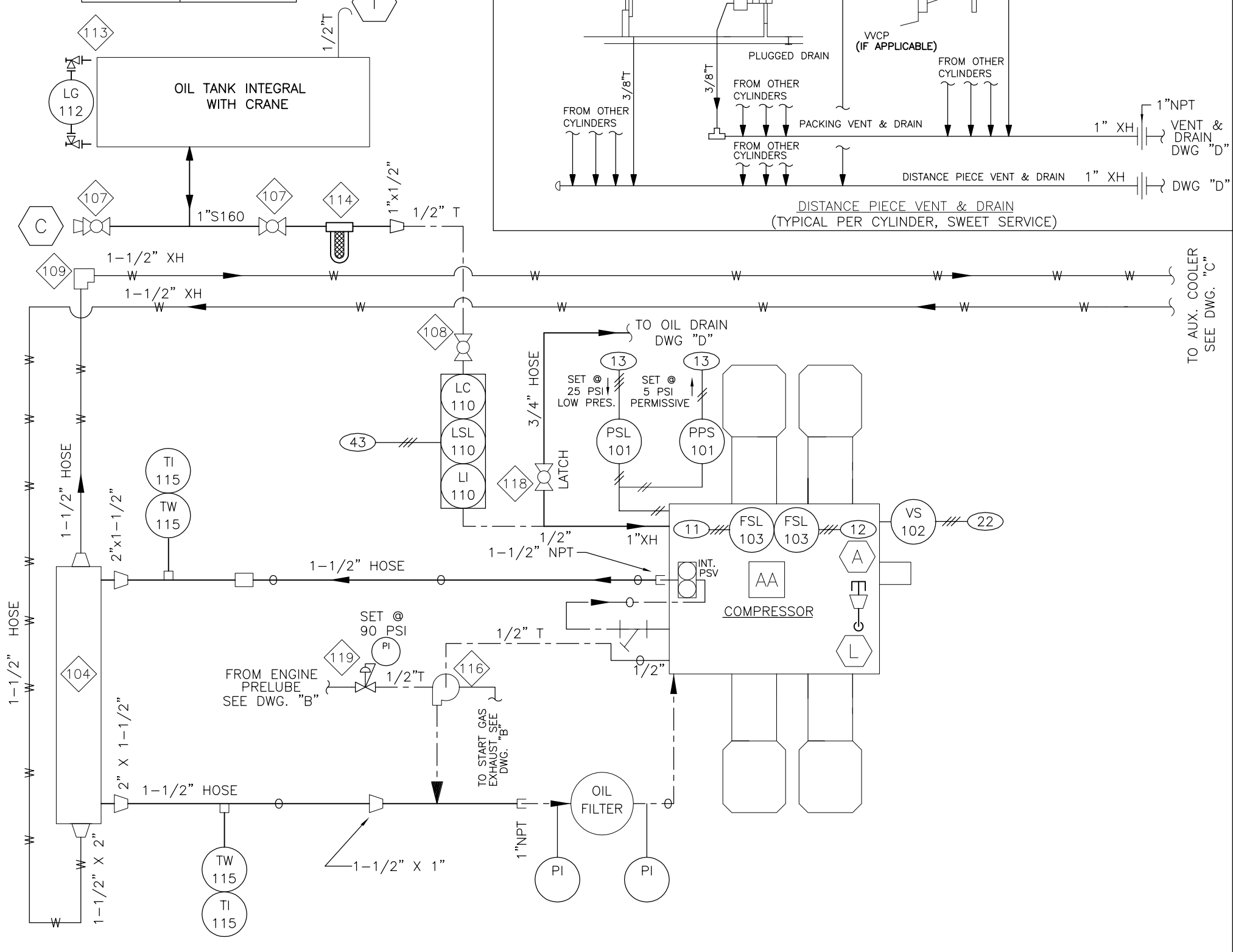
**FOR:** BURINGTON RESOURCES (SUNDOWN, BC) **ISS:** D-16-1/08-P-7

**CONSULTANT:** N/A **P.O.:** **JOB No.:** CS04663

|                       |                         |                       |                   |
|-----------------------|-------------------------|-----------------------|-------------------|
| <b>DATE:</b> 04/08/09 | <b>DESIGN BY:</b> BKF   | <b>DATE:</b> 04/05/13 | <b>DWG. NO.:</b>  |
| <b>DRN BY:</b> BKF    | <b>CHECKED BY:</b> J.L. | <b>DATE:</b> 04/05/04 | <b>OPER'N BY:</b> |
| <b>SCALE:</b> 1:25    | <b>APPR'D BY:</b> J.L.  | <b>DATE:</b> 04/05/02 | <b>PL04663</b>    |

NOTE:  
1. SEE THE GENERAL ARRANGEMENT DRAWING FOR THE CORRECT CYLINDER ORIENTATION.

|          |           |
|----------|-----------|
| OIL CAP. | 155 L     |
| OIL FLOW | 95 L/min. |



### BILL OF MATERIAL (PHASE 20.000)

| ITEM | QTY | N/E | DESCRIPTION   |
|------|-----|-----|---|
| 101  | 01  | N   | PRESS TRANSMITTER, WIKA, 892.13.500, RANGE 0-160 PSIG, MOP = 400 PSI, 4-20 MA   |
| 102  | 01  | N   | VIBRATION SWITCH, MURPHY, VS2-E, XP, MANUAL RESET   |
| 103  | 02  | N   | DIGITAL NO-FLOW, ARIEL, PROFLO, A-11295   |
| 104  | 01  | N   | LUBE COOLER, ARIEL B2073, SINGLE PASS   |
| 107  | 02  | N   | BALL VALVE, WKM, B136-CS-42-CS/HL, 1" NPT, RP, LATCHING HANDLE  |
| 108  | 01  | N   | BALL VALVE, WKM, B136-CS-42-CS/HL, 1/2" NPT, RP, LATCHING HANDLE  |
| 109  | 01  | N   | SLEEVE COUPLING, DRESSER, 1-1/2" NPT, STYLE 90, 90° ELB.  |
| 110  | 01  | N   | LUBE OIL LEVEL CONTROLLER, KENCO, KLCE-9, XP, CSA, SIGHT GLASS, LEVEL REG., SHUTDOWN, UNIVERSAL ADAPTOR, 1/15 FT STATIC HEAD PRESSURE, 1/2" INLET X 3/4" OUTLET |
| 112  | 01  | N   | SIGHT GLASS, 5/8" DIA. ACRYLIC TUBING   |
| 113  | 01  | N   | GAUGE VALVES, PENBERTHY N7A, 1/2" NPT   |
| 114  | 01  | N   | OIL FILTER ASSEMBLY, BALDWIN, BF914, 1" NPT, W/BT839 ELEMENT  |
| 115  | 02  | N   | TI, WIKA, 0-250 DEG. F, DUAL SCALE, 3" FACE, 1/2" MNPT CONNECTION, U = 2-1/2", THERMOWELL, WIKA, 3/4" MNPT PROCESS X 1/2" NPT INSTR. CONNECTION, 304SS          |
| 116  | 01  | N   | PRE/ POST LUBE PUMP, WILDEN, M2-00/BN/BN/AB, SUPPLY PRESS. 70 PSIG, MOP = 125 PSI, 1" FNPT INLET X 3/4" FNPT OUTLET   |
| 118  | 01  | N   | BALL VALVE, WKM, B136-CS-42-S2/HL, 3/4" NPT, RP LATCHING HANDLE   |
| 119  | 01  | N   | REGULATOR, FISHER, 67 CFR-601, 1/4", RANGE 0-125 PSIG, SET@ 90 PSIG, PRESSURE INDICATOR   |
| 120  | 01  | N   | THERMOCOUPLE, AIRCOM TC5-PT90-6.5-K-U-72-BE WITH STANDARD ADAPTER TC5SA-1-18, 3/4" NPT T?WELL 316SS STEM = 4", U = 2-1/2"                                       |

FILENAME: SFO4663A.  
ISSUE#: DWG  
LAST DRAWING SAVE DATE: 05/03/28 1:46 PM

**CompressionServices**  
5540-74 Avenue SE Calgary AB Canada T2C 3H2 Canada Tel. +1.403.720.3822 Fax +1.403.720.3765  
www.enersflex.com

CUSTOMER: BURLINGTON RESOURCES (SUNDOWN, BC)  
LSD: D-16-1/93-P-7  
JOB No.: CS04663

| Rev. | Description             | By  | Date     |
|------|-------------------------|-----|----------|
| 2    | AS BUILT AS PER CS04663 | LED | 05/03/28 |
| 1    | ISSUED FOR CONSTRUCTION | LED | 05/01/12 |

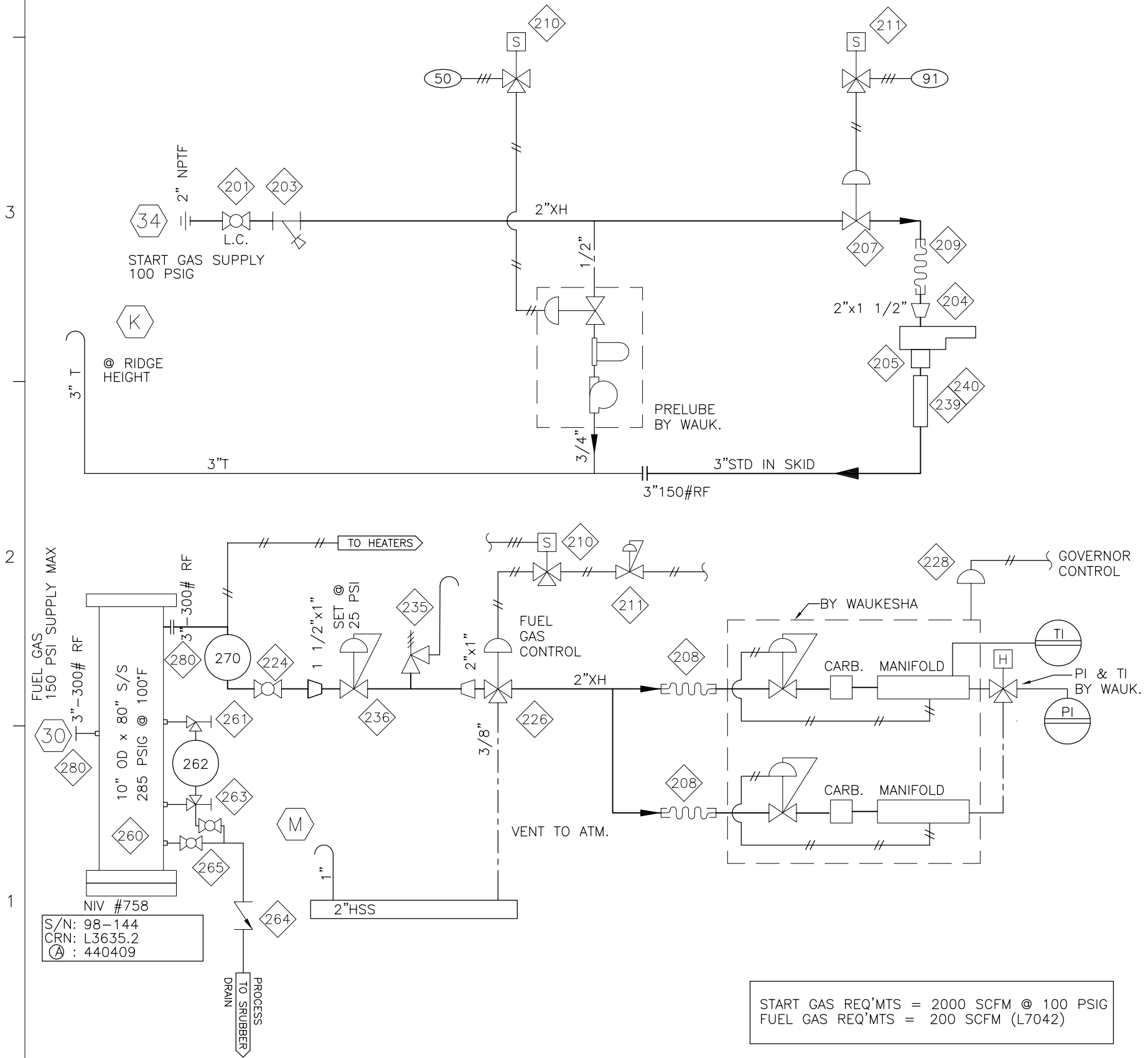
ORIG DWN BY: FW  
DATE: 05/01/12  
APPR'D BY: L.D.  
DATE: 05/01/12

TITLE: STANDARD SCHEMATIC COMPRESSOR EQUIPMENT AND CONTROLS ARIEL JGK-4 / ENGINE DRIVE  
DWG: SFO4663A  
REV #: 2

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 REPAIR AND MAINTENANCE OF THE PRODUCTS TO WHICH THEY RELATE.

## BILL OF MATERIAL PHASE 22

| ITEM | QTY | N/E | DESCRIPTION  |
|------|-----|-----|--|
| 201  | 02  | N   | BALL VALVE, WKM, B136-CS-42-CS/HL, 2" NPT, RP, LATCHING HANDLE   |
| 203  | 01  | N   | Y-STRAINER, ALTO, 2" NPT, CS, 1/32 SCREEN, 304SS   |
| 204  | 01  | N   | STARTER, TDI T112-60001-B1R, STD PRESSURE  |
| 205  | 01  | N   | STARTER EXHAUST ELBOW, TDI, T100-28012   |
| 207  | 01  | N   | START RELAY, TDI, RLVA25683001201  |
| 208  | 01  | N   | BRAIDED STEEL HOSE, 2" NPTM ENDS X 12" LONG  |
| 209  | 01  | N   | BRAIDED STEEL HOSE, 1-1/2" NPTM ENDS X 12" LONG  |
| 210  | 02  | N   | SOLENOID, ASCO EF8320G202 24 VDC   |
| 211  | 02  | N   | REGULATOR, FISHER, 67 CFR-601, 1/4", RANGE 0-125 PSIG, SET @ 90 PSIG, PRESSURE INDICATOR                       |
| 224  | 01  | N   | BALL VALVE, WKM B138-CS-43-CS HL, 1-1/2" NPT, FP, LATCHING HANDLE  |
| 226  | 01  | N   | SHUTOFF VALVE, AMOT 4418F6A6X000, 2" NPT, 3 - WAY  |
| 228  | 01  | N   | AIR/GAS GOVERNOR ACTUATOR C/W MOUNTING BRACKET (SUPPLIED WITH ENGINE)  |
| 236  | 01  | N   | REGULATOR, FISHER, 627-493, 1" NPT, 3/8" ORIFICE, RANGE 15 - 40 PSIG, SET @ 25 PSIG, 150 - 500 SUPPLY PRESSURE |
| 235  | 01  | N   | PSV, FISHER 1805-12X1, CS, 1" NPT, SPRING RANGE 10-60 PSI, SET @ 30 PSIG                                       |
| 237  | 02  | N   | SHUTTLE VALVE, FESTO, 668-2, 0S-1/4" B, NPT 9396 ADAPTORS  |
| 239  | 01  | N   | HOSE, 3" MARINE X 12" LONG, GREENLINE G388-350   |
| 240  | 02  | N   | CLAMP HOSE, 3" HEAVY DUTY, HCS-350   |
| 260  | 01  | N   | FUEL GAS SCRUBBER, 8.625" OD, MAWP 285 psig @ 100 F, Peco Filter Element part # FG-12                          |
| 261  | 01  | N   | GAUGE VALVE SET, PENBERTHY 330J  |
| 262  | 01  | N   | SIGHT GLASS, PENBERTHY 1RL7, CS  |
| 263  | 01  | N   | BALL VALVE, 1/2" NPT, WITH LATCHING HANDLE   |
| 264  | 01  | N   | CHECK VALVE, PISTON, NEWCO 1" NPT  |
| 265  | 01  | N   | BALL VALVE, WKM 1" NPT   |
| 270  | 01  | N   | FUEL METER, ROOTS, 8C-175  |



START GAS REQ'MTS = 2000 SCFM @ 100 PSIG  
 FUEL GAS REQ'MTS = 200 SCFM (L7042)

FILENAME: SF04663B.DWG  
 LAST DRAWING SAVE DATE: 05/09/27 9:45 AM

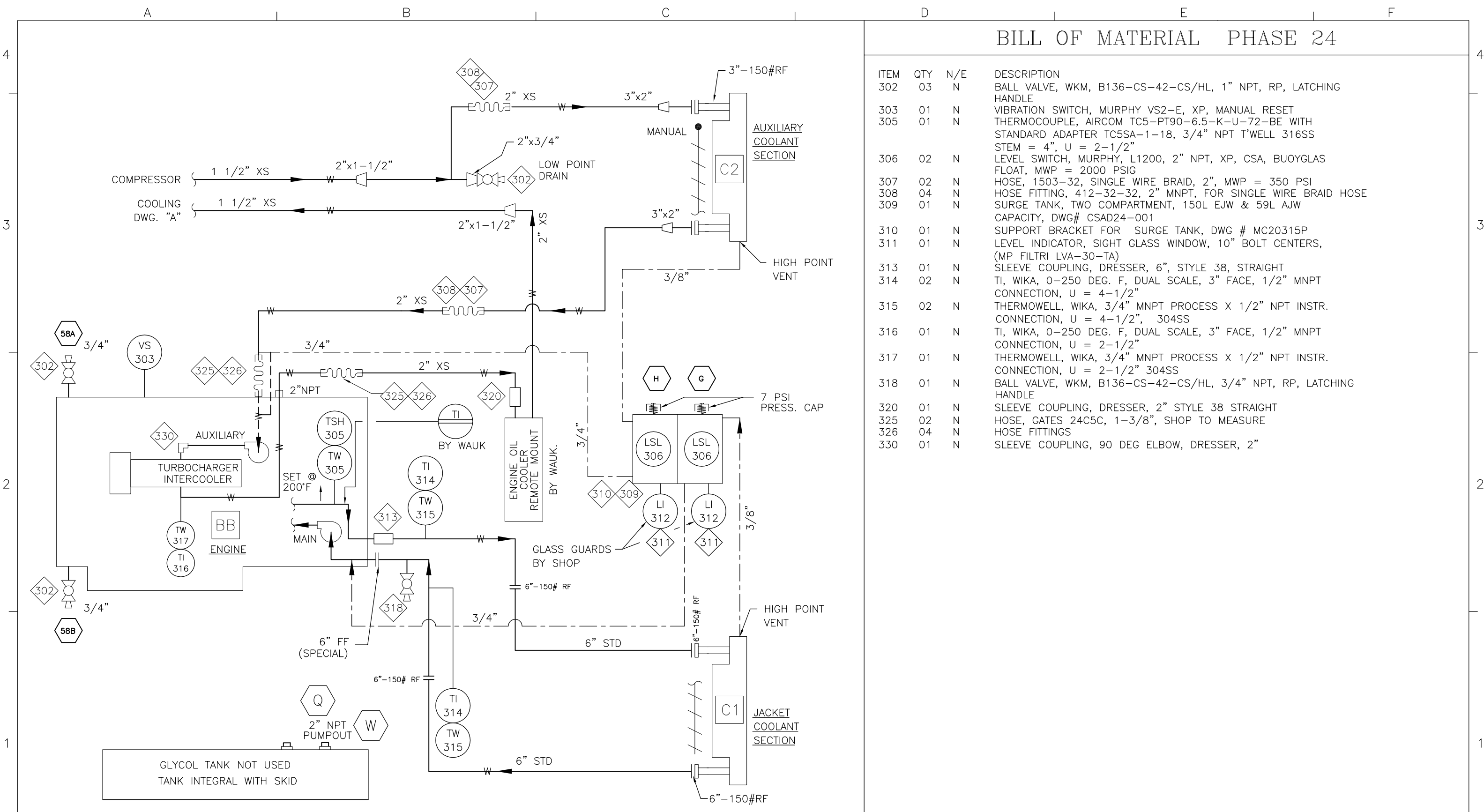
**Compressor Services**  
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 5048-74 Avenue SE Calgary AB Canada T2C 3R2 Canada Tel: +1.403.720.3622 Fax: +1.403.720.3765 www.enerflex.com

CUSTOMER: BURLINGTON RESOURCES (SUNDOWN, BC)  
 LSD: D-16-1/93-P-7  
 JOB No.: CS04663

| Rev. | Description             | By   | Date     |
|------|-------------------------|------|----------|
| 4    | AS BUILT AS PER CS04663 | L.D  | 05/09/27 |
| 3    | ADD PSV                 | LED  | 05/03/29 |
| 2    | AS PER CUSTOMER REQUEST | LD   | 05/02/15 |
| 1    | ISSUED FOR CONSTRUCTION | L.D. | 05/01/12 |

ORIG DWN BY: FW  
 DATE: 05/01/12  
 APPR'D BY: LED  
 DATE: 05/01/12


TITLE: FUEL & START GAS SCHEMATIC ENGINE EQUIPMENT AND CONTROLS WAUKESHA P-VHP-GSI SERIES  
 DWG: SF04663-B REV #: 4

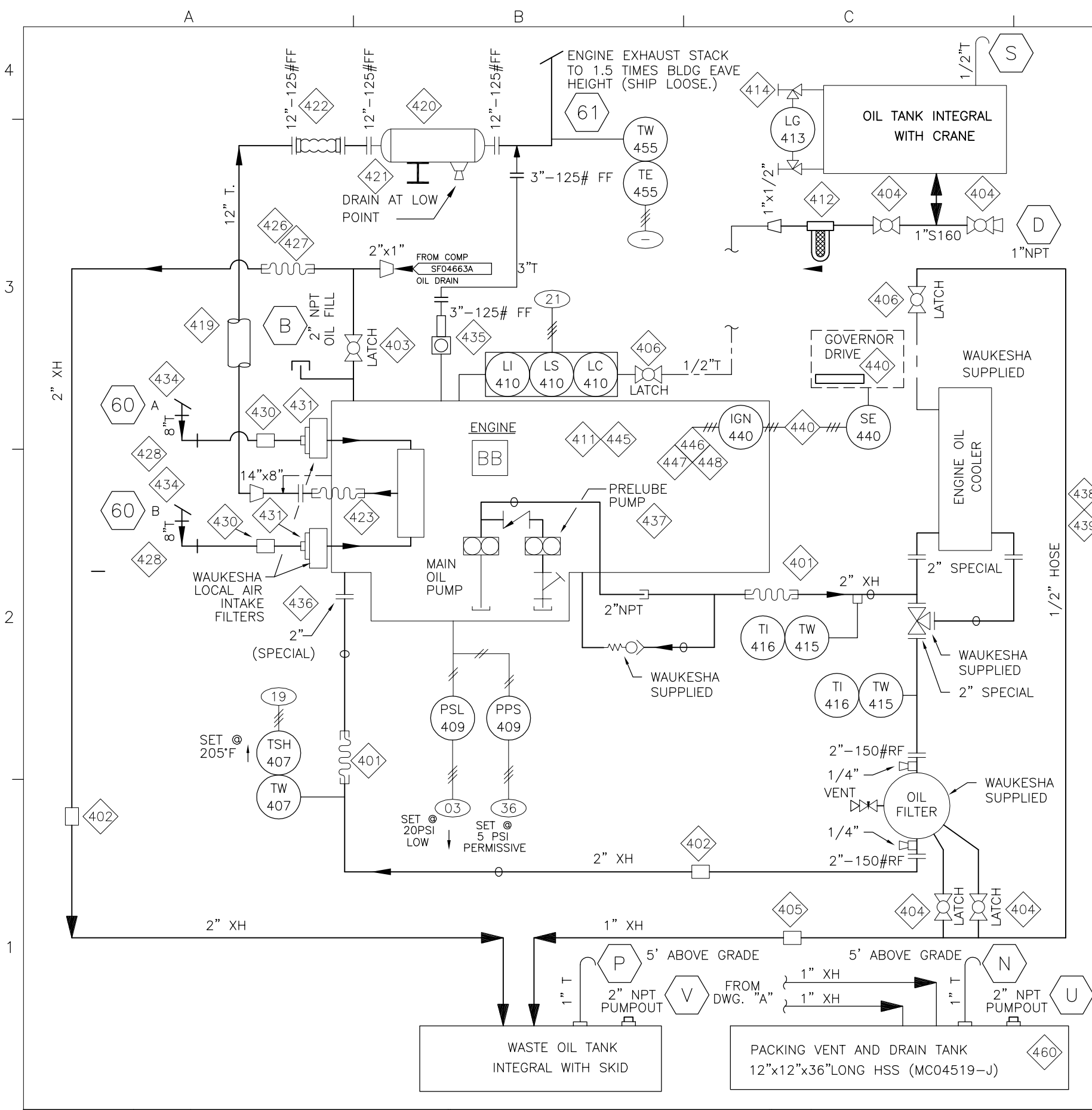


### BILL OF MATERIAL PHASE 24

| ITEM | QTY | N/E | DESCRIPTION   |
|------|-----|-----|---|
| 302  | 03  | N   | BALL VALVE, WKM, B136-CS-42-CS/HL, 1" NPT, RP, LATCHING HANDLE  |
| 303  | 01  | N   | VIBRATION SWITCH, MURPHY VS2-E, XP, MANUAL RESET  |
| 305  | 01  | N   | THERMOCOUPLE, AIRCOM TC5-PT90-6.5-K-U-72-BE WITH STANDARD ADAPTER TC5SA-1-18, 3/4" NPT T'WELL 316SS STEM = 4", U = 2-1/2" |
| 306  | 02  | N   | LEVEL SWITCH, MURPHY, L1200, 2" NPT, XP, CSA, BUOYGLAS FLOAT, MWP = 2000 PSIG   |
| 307  | 02  | N   | HOSE, 1503-32, SINGLE WIRE BRAID, 2", MWP = 350 PSI   |
| 308  | 04  | N   | HOSE FITTING, 412-32-32, 2" MNPT, FOR SINGLE WIRE BRAID HOSE  |
| 309  | 01  | N   | SURGE TANK, TWO COMPARTMENT, 150L EJW & 59L AJW CAPACITY, DWG# CSAD24-001   |
| 310  | 01  | N   | SUPPORT BRACKET FOR SURGE TANK, DWG # MC20315P  |
| 311  | 01  | N   | LEVEL INDICATOR, SIGHT GLASS WINDOW, 10" BOLT CENTERS, (MP FILTRI LVA-30-TA)  |
| 313  | 01  | N   | SLEEVE COUPLING, DRESSER, 6", STYLE 38, STRAIGHT  |
| 314  | 02  | N   | TI, WIKA, 0-250 DEG. F, DUAL SCALE, 3" FACE, 1/2" MNPT CONNECTION, U = 4-1/2"   |
| 315  | 02  | N   | THERMOWELL, WIKA, 3/4" MNPT PROCESS X 1/2" NPT INSTR. CONNECTION, U = 4-1/2", 304SS                                       |
| 316  | 01  | N   | TI, WIKA, 0-250 DEG. F, DUAL SCALE, 3" FACE, 1/2" MNPT CONNECTION, U = 2-1/2"   |
| 317  | 01  | N   | THERMOWELL, WIKA, 3/4" MNPT PROCESS X 1/2" NPT INSTR. CONNECTION, U = 2-1/2" 304SS  |
| 318  | 01  | N   | BALL VALVE, WKM, B136-CS-42-CS/HL, 3/4" NPT, RP, LATCHING HANDLE  |
| 320  | 01  | N   | SLEEVE COUPLING, DRESSER, 2" STYLE 38 STRAIGHT  |
| 325  | 02  | N   | HOSE, GATES 24C5C, 1-3/8", SHOP TO MEASURE  |
| 326  | 04  | N   | HOSE FITTINGS   |
| 330  | 01  | N   | SLEEVE COUPLING, 90 DEG ELBOW, DRESSER, 2"  |

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|   |                |   |  |             |                         |      |                |                 |   |
|---|----------------|---|--|-------------|-------------------------|------|----------------|-----------------|---|
| FILENAME:<br>SF04663C.                      | ISSUE#:<br>DWG | <br><b>ENERFLEX SYSTEMS LTD.</b><br>COMPRESSION Services | CUSTOMER:<br>BURLINGTON RESOURCES<br>(SUNDOWN, BC) | 2           | AS BUILT AS PER CS04663 | LED  | 05/03/28       | ORIG DWN BY: FW | TITLE: COOLING SYSTEM SCHEMATIC<br>ENGINE EQUIPMENT AND CONTROLS<br>WAUKESHA L-VHP-GSI SERIES |
| LAST DRAWING SAVE DATE:<br>05/03/28 3:05 PM |                |   | LSD: D-16-1/93-P-7                                 | 1           | ISSUED FOR CONSTRUCTION | L.D. | 05/01/12       | APPR'D BY: L.D. |   |
| JOB No.: CS04663                            |                |   | Rev.   | Description | By                      | Date | DATE: 05/01/12 | DWG. SF04663-C  | REV #: 2  |



## BILL OF MATERIAL PHASE 26

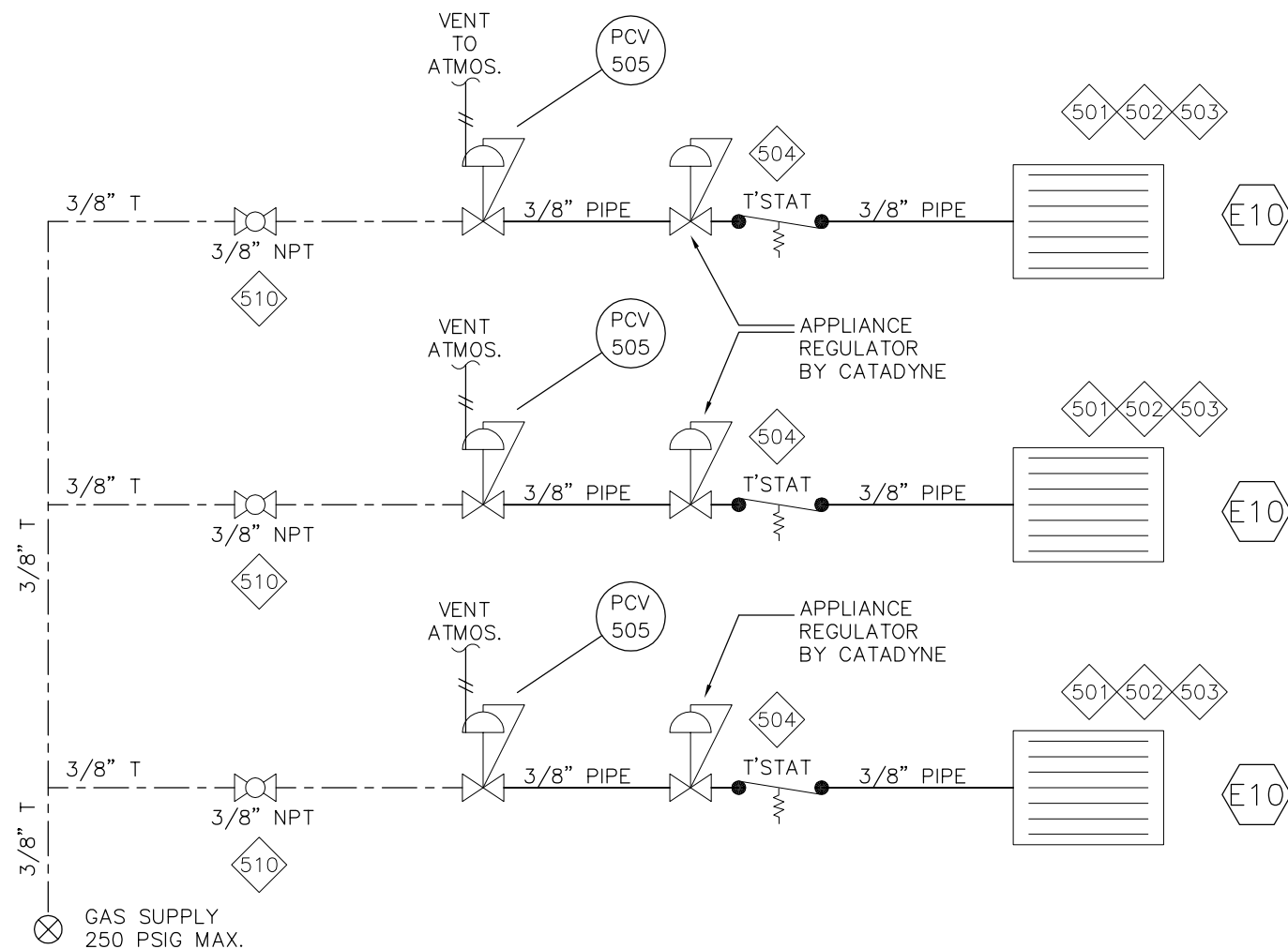
| ITEM | QTY  | N/E | DESCRIPTION   |
|------|------|-----|---|
| 401  | 02   | N   | BRAIDED STEEL HOSE, 2" NPTM, 12" LONG   |
| 402  | 02   | N   | SLEEVE COUPLING, 2" DRESSER, STRAIGHT   |
| 403  | 01   | N   | BALL VALVE, WKM B136-CS-02-CS-HL, 2" NPT, 2250# WOG, RP, LATCHING HANDLE  |
| 404  | 04   | N   | BALL VALVE, WKM B136-CS-02-CS-HL, 1" NPT, 2250# WOG, RP, LATCHING HANDLE  |
| 405  | 01   | N   | SLEEVE COUPLING, 1" DRESSER, STRAIGHT   |
| 406  | 03   | N   | BALL VALVE, WKM B136-CS-02-CS-HL, 1/2" NPT, 2250# WOG, RP, LATCHING HANDLE  |
| 407  | 01   | N   | THERMOCOUPLE, AIRCOM TC5-PT90-6.5-K-U-72-BE WITH STANDARD ADAPTER TC5SA-1-18, 3/4" NPT T'WELL 316SS STEM = 4", U = 2-1/2"   |
| 409  | 01   | N   | PRESSURE TRANSMITTER, WIKA, 892.13.500, RANGE 0-160 PSIG, MOP = 400 PSI, 4-20 MA  |
| 410  | 01   | N   | LUBE OIL LEVEL CONTROLLER, KENCO LCE-17, XP, CSA  |
| 411  | 310L | N   | LUBE OIL CHARGE   |
| 412  | 01   | N   | OIL FILTER, BALDWIN, BF914, 1" NPT, BT839 ELEMENT   |
| 413  | 01   | N   | GAGE GLASS, CLEAR ACRYLIC TUBING WITH GLASS GUARD   |
| 414  | 01   | N   | GAUGE VALVE SET, PENBERTHY, N7A, 1/2" NPT   |
| 415  | 02   | N   | T'WELL, 3/4" NPTM X 1/2" NPTF, 304 SS, U = 2-1/2"   |
| 416  | 02   | N   | TI, WIKA, 0-250 DEG. F, DUAL SCALE, 3" FACE, 1/2" MNPT CONNECTION, U = 2-1/2"   |
| 419  | 01   | N   | EXHAUST LINE, 12" SS TUBE, WITH THERMAL BARRIER, ALUMINIUM CLAD CEREWOL SILICATE FIBRE INSULATION, 6# DENSITY RATED FOR 2300° F, GALVANIZED STEEL LINER, WITH NO AIR GAP AS PER DWG # MC04519-B |
| 420  | 01   | N   | MUFFLER / CATALYTIC CONVERTOR, SILEX SC-JBT-12-X60-30-SI-AL-A, CRITICAL GRADE, SIDE IN END OUT, 12"-125#FF  |
| 421  | 01   | N   | MUFFLER/CATALYTIC CONVERTOR MOUNTING BRACKET AS PER DWG# MC04519-C  |
| 422  | 01   | N   | FLEXIBLE EXHAUST CONNECTION, 12"-125#FF X 12" LONG  |
| 423  | 01   | N   | FLEXIBLE EXHAUST CONNECTION, 8"-125#FF X 12" LONG TO FIT VHP TUBRO OUTLET, P/N 199515G  |
| 426  | 01   | N   | HOSE, 2", STEEL BRAID   |
| 427  | 02   | N   | HOSE FITTINGS, 2"   |
| 428  | 02   | N   | RUBBER HUMP HOSE CONNECTOR, 45° ELBOW   |
| 429  | 08   | N   | HOSE CLAMP, HEAVY DUTY, 8"  |
| 430  | 02   | N   | RUBBER HUMP HOSE CONNECTOR, 8" 90° ELBOW  |
| 431  | 02   | N   | AIR FILTER ADAPTER, 8" OD, AS PER DWG # MC04519-H   |
| 434  | 02   | N   | AIR LINE TERMINATOR, 16Gd, 8" OD WITH BIRD SCREEN   |
| 435  | 01   | N   | CRANKCASE BREATHER EJECTOR SYSTEM, P/N PAMEXTRACT-12  |
| 436  | 01   | N   | OIL STRAINER ADAPTOR BLOCK FOR 12 CYLINDER VHP AS PER DWG #26-601   |
| 437  | 01   | N   | PRE/POST LUBE PUMP, WAUK. STD AIR/GAS MOTOR DRIVEN, SUPPLIED WITH ENGINE  |
| 438  | 01   | N   | HOSE, STEEL BRAID, 1/2"   |
| 439  | 02   | N   | HOSE FITTINGS   |
| 440  | 01   | N   | CEC IGNITION MODULE, CABLE, TIM'N DISC & SENSOR, WAUK. SUP.   |
| 445  | 01   | N   | ACCU/NOX AIR/FUEL RATIO CONTROLLER MODEL PRE5001635-012K WITH INSTALLATION KIT/SUPPORT STRUCTURE  |
| 446  | 12   | N   | SPARK PLUGS, CHAMPION RTM77N FOR ALL VHP MODELS   |
| 447  | 12   | N   | IGNITION COILS, ALTRONIC 591-011B FOR ALL VHP MODELS  |
| 448  | 01   | N   | HARNESS, PAMCO PART NO. C1WVHP12-3  |
| 455  | 01   | N   | THERMOCOUPLE, PAMCO PART NO. PAMK49TC   |
| 460  | 01   | N   | PACKING VENT AND DRAIN TANK AS PER DWG MC04519-J  |

|   |                |  |   |                           |  |                 |   |
|---|----------------|--|---|---------------------------|--|-----------------|---|
| FILENAME:<br>SF04663D.                      | ISSUE#:<br>DWG | <b>CompressorServices</b><br><small>ENERFLEX</small><br><small>508-74 Avenue SE Calgary AB Canada T2C 3R2 Canada Tel. +1.403.720.3822 Fax +1.403.720.3765 www.enerflex.com</small> | CUSTOMER:<br><b>BURLINGTON RESOURCES</b><br>(SUNDOWN, BC) |                           |  | ORIG DWN BY: FW | TITLE:<br>OIL, ING, AIR & EXHAUST SCHEMATIC<br>ENGINE EQUIPMENT AND CONTROLS<br>WAUKESHA L-VHP-GSI SERIES |
| LAST DRAWING SAVE DATE:<br>05/03/29 7:36 AM |                |  | LSD: D-16-1/93-P-7  | 2 AS BUILT AS PER CS04663 |  | DATE: 05/01/12  | APPR'D BY: L.D.   |
| JOB No.: CS04663                            |                |  |   | 1 ISSUED FOR CONSTRUCTION |  | DATE: 05/01/12  |   |
| CADD FILE: SF04663D                         |                |  |   | Rev. Description          |  | DATE: 05/01/12  |   |
| DRAWN BY: JB STATUS: AP=AB                  |                |  |   |                           |  | DWG. SF04663-D  |   |
|   |                |  |   |                           |  | REV #: 2        |   |



# BILL OF MATERIAL PHASE 72

| ITEM | QTY | N/E | DESCRIPTION  |
|------|-----|-----|--|
| 501  | 03  | N   | GAS HEATER, CATADYNE, AC-03-100, 33,750 BTU, BX-24" X 36", 120 V, SAFETY SHUTOFF VALVE           |
| 502  | 06  | N   | PROTECTION GRILL, CATADYNE, AC-SNAP-1824   |
| 503  | 03  | N   | MOUNTING BRACKET, SHOP TO SUIT   |
| 504  | 03  | N   | THERMOSTAT, CATADYNE, AC-TC-12000N-7   |
| 505  | 03  | N   | REGULATOR, CATADYNE, AC1167, MAX INLET 250 PSIG, 11" WC OUTLET, 3/8" NPT INLET X 1/4" NPT OUTLET |
| 510  | 03  | N   | BALL VALVE, 3/8" NPT   |



BUILDING EQUIPMENT AND CONTROLS

FILENAME: SF04663E.DWG  
 ISSUE#: DWG  
**CompressionServices**  
5049-74 Avenue SE Calgary AB Canada T2C 3R2 Canada Tel. +1.403.720.3822 Fax +1.403.720.3765 www.enflex.com

CUSTOMER: **BURLINGTON RESOURCES**  
 (SUNDOWN, BC)  
 LSD: D-16-1/93-P-7  
 JOB No.: **CS04663**

| Rev. | Description             | By   | Date     |
|------|-------------------------|------|----------|
| 2    | AS BUILT AS PER CS04663 | LED  | 05/03/29 |
| 1    | ISSUED FOR CONSTRUCTION | L.D. | 05/01/12 |

ORIG DWN BY: FW  
 DATE: 05/01/12  
 APPR'D BY: L.D.  
 DATE: 05/01/12

TITLE: STANDARD SCHEMATIC BUILDING HEATERS  
 DWG: SF04663-E  
 REV #: 2

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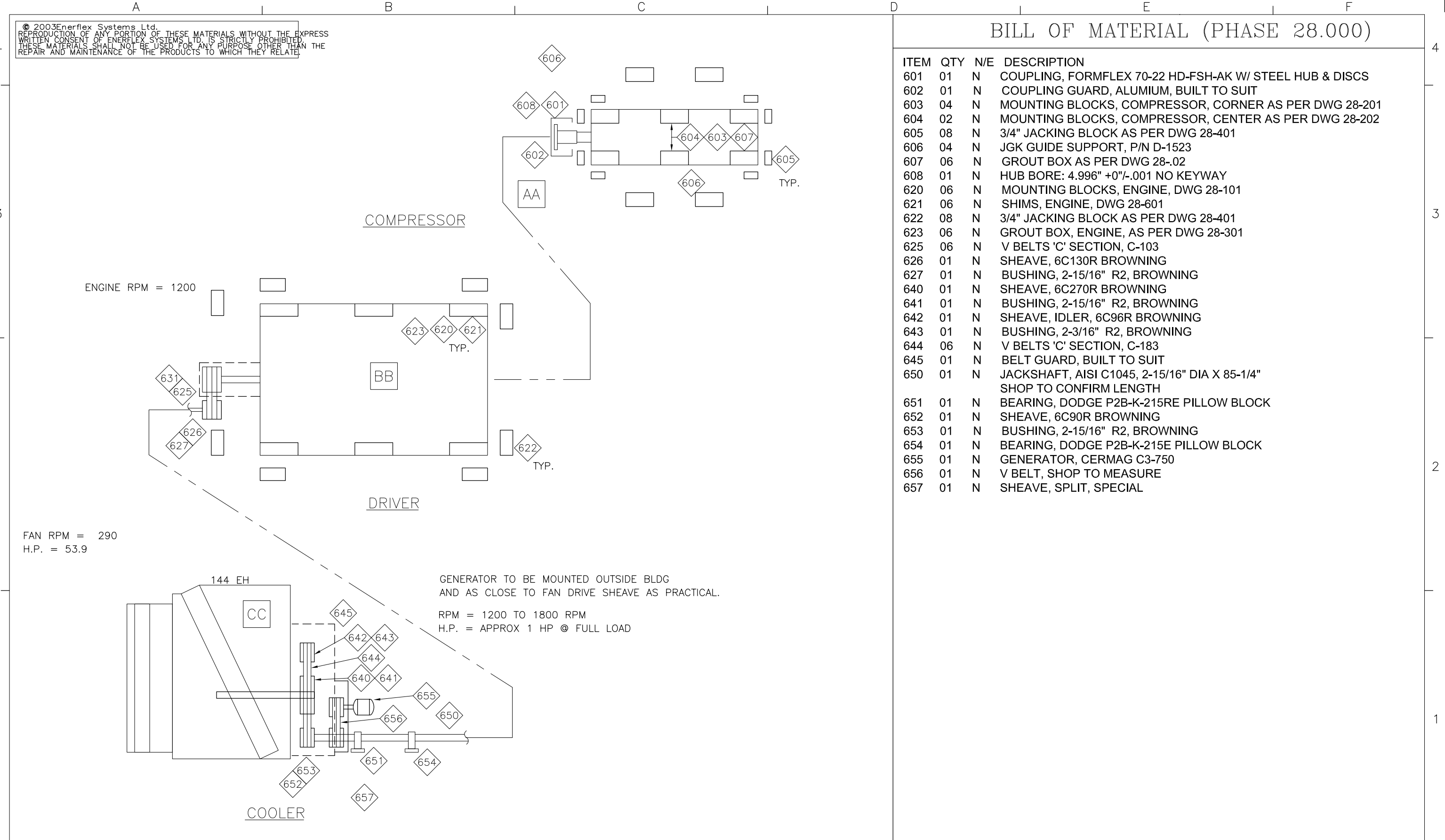
# BILL OF MATERIAL (PHASE 28.000)

| ITEM | QTY | N/E | DESCRIPTION   |
|------|-----|-----|---|
| 601  | 01  | N   | COUPLING, FORMFLEX 70-22 HD-FSH-AK W/ STEEL HUB & DISCS |
| 602  | 01  | N   | COUPLING GUARD, ALUMIUM, BUILT TO SUIT                  |
| 603  | 04  | N   | MOUNTING BLOCKS, COMPRESSOR, CORNER AS PER DWG 28-201   |
| 604  | 02  | N   | MOUNTING BLOCKS, COMPRESSOR, CENTER AS PER DWG 28-202   |
| 605  | 08  | N   | 3/4" JACKING BLOCK AS PER DWG 28-401                    |
| 606  | 04  | N   | JGK GUIDE SUPPORT, P/N D-1523                           |
| 607  | 06  | N   | GROUT BOX AS PER DWG 28-.02                             |
| 608  | 01  | N   | HUB BORE: 4.996" +0"/-0.001 NO KEYWAY                   |
| 620  | 06  | N   | MOUNTING BLOCKS, ENGINE, DWG 28-101                     |
| 621  | 06  | N   | SHIMS, ENGINE, DWG 28-601                               |
| 622  | 08  | N   | 3/4" JACKING BLOCK AS PER DWG 28-401                    |
| 623  | 06  | N   | GROUT BOX, ENGINE, AS PER DWG 28-301                    |
| 625  | 06  | N   | V BELTS 'C' SECTION, C-103                              |
| 626  | 01  | N   | SHEAVE, 6C130R BROWNING                                 |
| 627  | 01  | N   | BUSHING, 2-15/16" R2, BROWNING                          |
| 640  | 01  | N   | SHEAVE, 6C270R BROWNING                                 |
| 641  | 01  | N   | BUSHING, 2-15/16" R2, BROWNING                          |
| 642  | 01  | N   | SHEAVE, IDLER, 6C96R BROWNING                           |
| 643  | 01  | N   | BUSHING, 2-3/16" R2, BROWNING                           |
| 644  | 06  | N   | V BELTS 'C' SECTION, C-183                              |
| 645  | 01  | N   | BELT GUARD, BUILT TO SUIT                               |
| 650  | 01  | N   | JACKSHAFT, AISI C1045, 2-15/16" DIA X 85-1/4"           |
|      |     |     | SHOP TO CONFIRM LENGTH                                  |
| 651  | 01  | N   | BEARING, DODGE P2B-K-215RE PILLOW BLOCK                 |
| 652  | 01  | N   | SHEAVE, 6C90R BROWNING                                  |
| 653  | 01  | N   | BUSHING, 2-15/16" R2, BROWNING                          |
| 654  | 01  | N   | BEARING, DODGE P2B-K-215E PILLOW BLOCK                  |
| 655  | 01  | N   | GENERATOR, CERMAG C3-750                                |
| 656  | 01  | N   | V BELT, SHOP TO MEASURE                                 |
| 657  | 01  | N   | SHEAVE, SPLIT, SPECIAL                                  |

ENGINE RPM = 1200

FAN RPM = 290  
 H.P. = 53.9

GENERATOR TO BE MOUNTED OUTSIDE BLDG  
 AND AS CLOSE TO FAN DRIVE SHEAVE AS PRACTICAL.  
 RPM = 1200 TO 1800 RPM  
 H.P. = APPROX 1 HP @ FULL LOAD



|                         |                 |   |   |                         |                         |          |                       |                        |                                 |
|-------------------------|-----------------|---|---|-------------------------|-------------------------|----------|-----------------------|------------------------|---------------------------------|
| FILENAME:<br>SF04663F   | ISSUE#:<br>.dwg | <b>Compression Services</b><br><small>ENERFLEX</small><br><small>5049-74 Avenue SE Calgary AB Canada T2C 3K2 Canada Tel. +1403.720.3822 Fax +1403.720.3785 www.enerflex.com</small> | CUSTOMER:<br><b>BURLINGTON RESOURCES</b><br>(SUNDOWN, BC) | 3                       | AS BUILT AS PER CS04663 | LED      | 05/03/29              | ORIG DWN BY: <u>FW</u> | TITLE:<br>DRIVE TRAIN EQUIPMENT |
| LAST DRAWING SAVE DATE: |                 |   | LSD: D-16-I/93-P-7  | 2                       | ADDED GENERATOR         | LED      | 05/03/17              | DATE: <u>05/01/12</u>  |                                 |
|                         |                 | JOB No.: CS04663  | 1   | ISSUED FOR CONSTRUCTION | LED                     | 05/01/12 | APPR'D BY: <u>LED</u> |                        |                                 |
|                         |                 |   | Rev.  | Description             | By                      | Date     | DATE: <u>05/01/12</u> | DWG. SF04663F          | REV # : 3                       |

NOTE:  
SEE GENERAL ARRANGEMENT DRAWING FOR ACTUAL  
LOCATIONS OF BUILDING EQUIPMENT.

**CAD**  
MAKE NO REVISIONS  
TO THIS REPRODUCIBLE

**BILL OF MATERIAL PHASE 70**

| ITEM | QTY. | CODE No. | DESCRIPTION   |
|------|------|----------|---|
| 701  | 1    |          | SELF FRAMING METAL BUILDING WITH - EXTERIOR OF 22 GAUGE<br>GALVANIZED STEEL - INTERIOR OF 24 GAUGE FLUTED PERFORATED WHITE<br>INSULATION, WALLS/ROOF R12 FBRGLAS BATT |
| 702  | 4    |          | DOUBLE GLAZED 36" X 36" WINDOW SLIDERS c/w 1/2 SCREEN   |
| 703  | 2    |          | MAN DOOR, DOUBLE, STEEL, 6' X 7', R4 INSULATED, (1) IWG<br>WINDOW, (1)CLOSER (1) PANIC HARDWARE   |
| 704  | 2    |          | CANOPY OVER DOUBLE DOOR TO MATCH BLDG EXTERIOR  |
| 706  | 1    |          | (1) FAN, 16" EXHAUST, WALL MOUNTED, 1/4HP 120 VAC/60Hz/1PH,<br>CSA APPROVED FOR HAZARDOUS LOCATION, 1020 CFM.   |
| 707  | 1    |          | 30ft. LINEAL FEET OF RIDGE VENT, 9" THROAT C/W MANUAL DAMPER  |
| 708  | 2    |          | LOUVRE, MANUAL ADJUSTABLE 18" X 32"   |

**BILL OF MATERIAL PHASE 74**

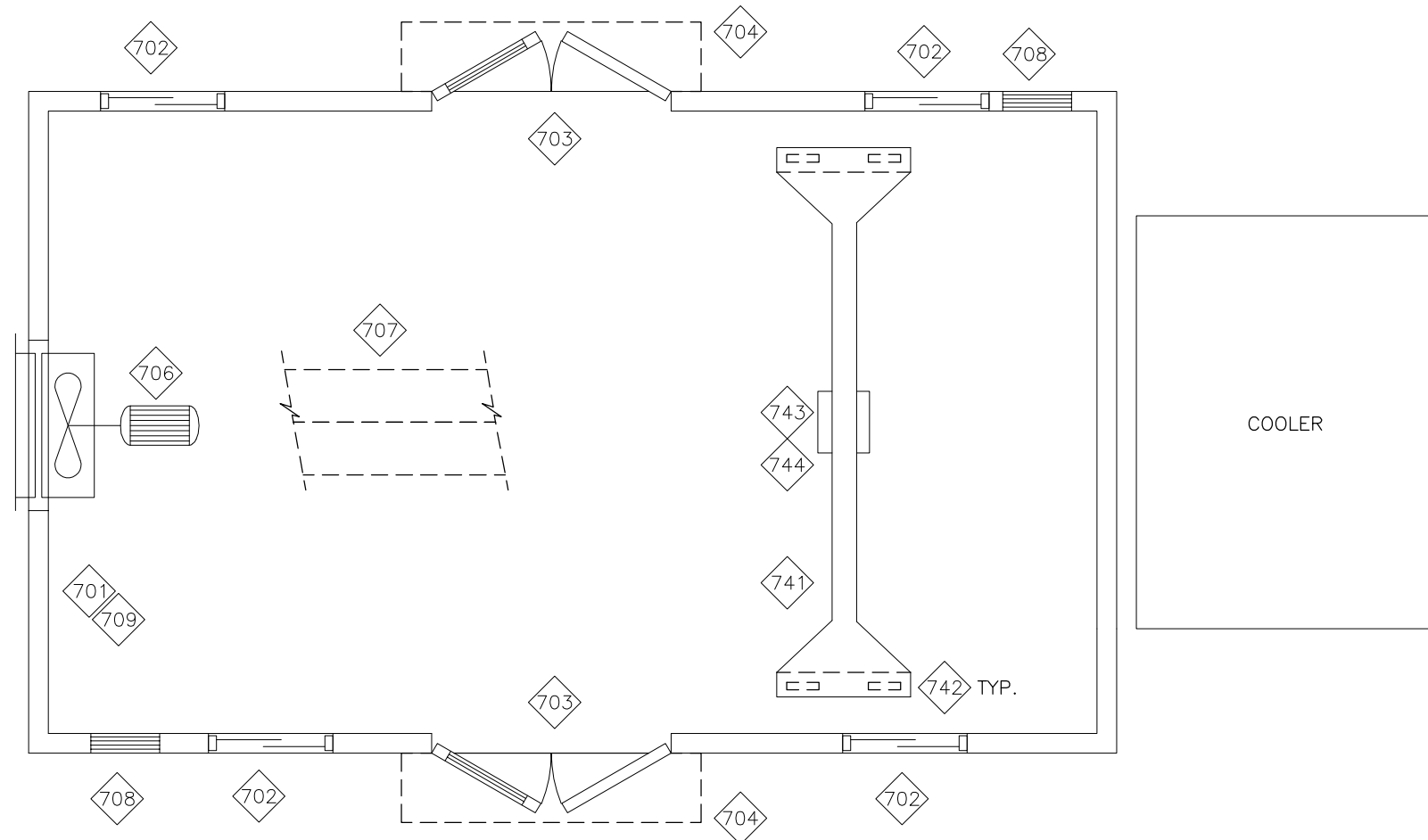
|     |   |  |   |
|-----|---|--|---|
| 741 | 1 |  | 2 TON RUNNING BRIDGE CRANE (BY CS SHOP)   |
| 742 | 4 |  | BESTWAY DUCTILE IRON WHEEL, CROWN TREAD, (6" DIA x 2-1/2",<br>1" BEARING 3500# CAPACITY, Pt# VG-6250-DU-RB. |
| 743 | 1 |  | 2 TON MANUAL CHAIN HOIST, PART # CM-2258  |
| 744 | 1 |  | 2 TON BALL BEARING TROLLEY, PART # CM-3346  |

COLOR SCHEDULE

|                      |                        |
|----------------------|------------------------|
| WALL INTERIOR LINER: | WHITE PERFORATED       |
| WALL EXTERIOR LINER: | NATURAL FINISH         |
| ROOF INTERIOR LINER: | WHITE FINISH           |
| ROOF EXTERIOR LINER: | NATURAL FINISH         |
| TRIM:                | SAME AS EXTERIOR LINER |
| COOLER:              | GRAY (STANDARD)        |
| EQUIPMENT:           | GRAY (STANDARD)        |
| SKID PERIMETER:      | GRAY (STANDARD)        |
| GRATING:             | BLACK (STANDARD)       |

DIMENSIONS

|              |        |
|--------------|--------|
| WIDTH:       | 23'-0" |
| LENGTH:      | 34'-0" |
| EAVE HEIGHT: | 13'-0" |
| ROOF SLOPE:  | 4:12   |



BUILDING EQUIPMENT AND DETAILS

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|   |                |  |  |                     |                         |          |                 |                   |  |
|---|----------------|--|--|---------------------|-------------------------|----------|-----------------|-------------------|--|
| FILENAME:<br>SF04663G.DWG                   | ISSUE#:<br>DWG | <p>5040-74 Avenue SE Calgary AB Canada T2C 3H2 Canada Tel. +1.403.720.3822 Fax +1.403.720.5785</p> | CUSTOMER:<br>BURLINGTON RESOURCES LTD<br>(SUNDOWN, BC) | 2                   | AS BUILT AS PER CS04663 | L.D.     | 05/09/28        | ORIG DWN BY: M.M. | TITLE:<br>STANDARD SCHEMATIC<br>BUILDING EQUIP, ELEC & PAINT |
| LAST DRAWING SAVE DATE:<br>05/09/28 8:10 AM |                |  | LSD: D-16-1/93-P-7                                     | 1                   | ISSUED FOR CONSTRUCTION | L.D.     | 04/05/19        | DATE: 04/03/17    |  |
|   |                | JOB No.: CS04663   | 0  | ISSUED FOR APPROVAL | L.D.                    | 04/03/17 | APPR'D BY: L.D. |                   |  |
|   |                |  | Rev.   | Description         | By                      | Date     | DATE: 04/03/17  | DWG. SF04663G     | REV #: 2   |

GENERAL SPECIFICATIONS

LOCATION Shop  Field 
PROCESS Sweet Gas Analysis Provided  yes  no

CUSTOMER SPECIFICATIONS

vessels  yes  no
piping  yes  no
skid  yes  no
instrumentation  yes  no
compressor  yes  no

customer approved vendor list supplied  yes  no (if yes, specifications must be referenced)

flanges  electrical fittings  instrumentation
valves  tubing fittings  other

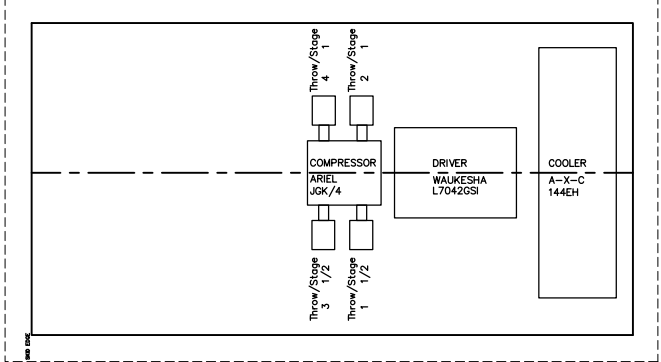
NOISE Restrictions Applicable  yes  no

applicable noise spec. \_\_\_ Dba \_\_\_ M test required \_\_\_

PHASE 10: GENERAL ARRANGEMENT

proposal layout reviewed  yes  no reference CS GA# 04663

PROPOSED LAYOUT :



PHASE 010.001 COMPRESSOR Mounting Type:  CS Std.  EFX Std.  Existing System

Make: ARIEL Model: JGK/4
Cylinders 1st stage 6 1/4 in. dia. 2050 MAWP
2nd stage in. dia. MAWP
3rd stage in. dia. MAWP
4th stage in. dia. MAWP

PHASE 010.002 DRIVER Mounting Type:  CS Std.  EFX Std.  Existing System 2 piece

Make: WAUKESHA Model: L7042GSI
Rating 1478 BHP @ 1200 rpm

PHASE 010.003 COOLER Mounting  On Skid  Off Skid, Butt Up  Off Skid Remote Mounted

water tubes SA-214 SA-179
gas tubes SA-214 SA-179
corrosion allowance (gas sections) 0" 1/16"
stress relieve gas headers  yes  no
radiograph gas header box  spot  100%

PHASE 022.000 : FUEL & START GAS

Skid edge supply : fuel gas supply 150 psig
Skid edge supply : start gas supply 100 psig

PHASE 026.000 : ENGINE AIR, EXHAUST, IGNITION, OIL & MISC.

Exhaust silencer Model: \_\_\_ catalytic converter  yes  no
Ignition: CSA Approval Required :  yes  no
Altronic III  IQ 500  CEC  other: \_\_\_

PHASE 028.000 :

Torsional Study required  yes  no
Flywheel included  yes  no
Drive Train  Direct Drive  Jack Shaft  Separate Drive (Electric)

PHASE 30 : SKID  Integrate Existing  All New

Type Tanks Drip Pan-Under Equipment Drip Pan-Under Skid
2-runner waste oil drip lip drip lip
bobbed glycol fullseal welded fullseal welded
full P & V drain spot seal welded spot seal welded
multi-piece & caulked & caulked
Concrete  yes  no control vent header (for instrument gas)
by/at CS  yes  no lifting lugs
by customer  yes  no lifting rolls

PHASE 040.000 : VESSELS

SPECIFICATIONS Radiography

ASME(1) FULL UW-11(a) ASME(2) FULL UW-11(a)5(b)
scrubber 
pulsation bottle 
other

Repsads (on Process Pipe Nozzles)
scrubbers  yes, specify \_\_\_
pulsation bottles  yes, specify \_\_\_

Fittings 3000# ANSI 6000# ANSI
threadlet  coupling 
flanged 
gusseted flanges

Miscellaneous minimum design temperature process -20F ambient -20F (\*-20F)
chary testing as req'd by code CS shop CS field By Others
chemical clean 
cleaned (SSPC-SP2)

PHASE 050.000 : PROCESS FLOW

VESSEL PROTECTION

suction block valve Yes  No 
thermal relief valve 
suction pressure control valve

PRESSURE RATINGS

Stage 1 suction 700 psig @ 50 F psv setting 727 psig
Stage 1 discharge 1200 psig @ 300 F psv setting 1315 psig
Stage 1/2 suction 700 psig @ 300 F psv setting 1315 psig
Stage 1/2 discharge 1200 psig @ 300 F psv setting 1315 psig

Note: This section indicates minimum design pressure & temperature ratings. Individual components may have higher MAWP's or temperatures. CS reserves the right to use generic vessels designs.

DESIGN CONDITION

Flow rate: 45.088 suction pressure: 700 psig suction temperature: 50 F
discharge pressure: 1200 psig discharge temperature: 120 F

ACOUSTICAL

formal study req'd:  yes, ordered by \_\_\_  no
performed by \_\_\_
Pulsation API 618 - design approach 1  CS std  customer spec.

PHASE 052.000 : PIPING SPOOLS

PROCESS PIPING SPECIFICATIONS ANSI B31.3
Materials standard (-20F) (utility/process) stainless steel
SA-106-B SA-333-GR.6 SA-312-TP316L
SA-234-WPB SA-420-WPL6/SA-350-LF2 SA-403-WP316L
SA-105 (N) SA-350-LF2 SA-182-F316L

Bolting SA-194-2H nuts SA-194-2H nuts
SA-193-B7M studs SA-193-B7M studs
304 S.S. spiral wound gaskets 304 S.S. spiral wound gaskets
Oval Soft Iron D Type Oval Soft Iron D Type

Aux. Process Piping fittings: 3000# ANSI 6000# ANSI
screwed 1-1/2" & under (\*1-1/2")
socket weld 1-1/2" & under (\*1-1/2")
butt weld 2" & over (\* 2")

Notes: 1. Fittings not permitted - bushings, street ells, street tees, all-thread nipples.
2. All 1" nipples to be "XXH". All 1-1/2" nipples to be S/160. All 1-1/2" & 2" piping to be min "XH". in a S.W. line add flanges with nipples to screwed valves.

Piping Radiography (percentage of butt welds fully radiographed) process 100% 10% none other
Miscellaneous (process) chemical clean cleaned (SSPC-SP2) oil internally corrosion allowance sandblast externally

SERVICE PIPING SPECIFICATIONS

fittings: 2000# ANSI 3000# ANSI
fuel start gas lube oil packing v & d aux. coolant control vent hdr
screwed socket weld butt weld 3" & over

INSTRUMENTATION

Tubing process control pkg & dist water & oil fuel gas & start gas
size - (\*1/4") - (\*1/4") - - - -
316SS     
Fittings c.s. zinc plated
instrument supply instrument vented to outside customer instr. mounting details apply instrument gauge scales

PHASE 060.000 : CONTROL PANEL

Type  Flexiguard  Microguard  Pneumatic  other RC 2000
control supply  air  gas  air or gas
power supply 24 VDC 120 VAC N/A
power supply by customer EFX CS on skid source
remote shutdown  yes  no if yes, voltage req'd \_\_\_
remote status  yes  no
cabinet  C.S.  SS

PHASE 070.000 : BUILDING, ELECTRICAL & PAINT

BUILDING  shop installed  field installed  not required
air changes per hour req'd \_\_\_ (customer)
gas detection req'd BY CUSTOMER
thermal/fire detection req'd BY CUSTOMER

PAINT & FINISH

Building exterior GAL. STEEL-NATURAL compressor CS STD. WARM GREY grating CS STD. BLACK
interior PERFORATED WHITE driver CS STD. WARM GREY piping CS STD. WARM GREY
trim GAL. STEEL-NATURAL cooler CS STD. WARM GREY vessels CS STD. WARM GREY
galvanizing requirements  yes  no skid CS STD. WARM GREY primer CS STD. control panel CS STD. WARM GREY

ELECTRICAL CONSIDERATIONS

Supply voltage - under 1 H.P. N/A
- 1 H.P. & over N/A
- main drive motor N/A
- engine ignition system -
- building lighting -
Area classification - CSA Zone:  0  1  2
Motors - classification  CSA  NEMA  IEC  SAA  other \_\_\_
- drive \_\_\_ - lubricator \_\_\_
- prelube \_\_\_ - exhaust fan \_\_\_
- cooler \_\_\_
- ambient design temperature \_\_\_ (\* 104F)

Instrumentation classification - intrinsically safe 
- Class 1 Zone 1 
- Class 1 Zone 2 
Control panel - classification -
- located on skid  off skid 
Junction boxes - classification -
- required at skid  wire directly into panel 
- IS  Class 1 Zone 1  Class 1 Zone 2

PHASE 072.000 : BUILDING HEATERS

Type : CATADYNE

PHASE 074.000 : BUILDING CRANE  New  Existing  None

1/2 ton jib 2 ton 3 ton integral oil tanks
plain hoist geared bridge air hoist integral structural
fall arrest trolley geared trolley electric hoist 'A' Frame

PHASE 080.000 : FINANCIAL, SHIPPING & FREIGHT

SHIPPING Loading  extra  firm price  extra, storage required  included only if done at time of shop removal
freight allowance  n/a  extra  estimated  firm price  actual  other.
Long term storage requirements  yes  no
EFX CS preservation procedure  standard  domestic  overseas  N/A
Export crating - supplied by EFX CS  yes  no
supplied by customer  yes  no
by freight forwarder  yes  no
EFX CS supplied rigging  yes  no
EFX CS supplied spreader bar  yes  no
Parameters for shipment - Province BC
maximum width 14'
maximum length 34'
maximum height 13'
maximum weight \_\_\_ (single module)

SPARE PARTS & SERVICE

Branch Pamco  Grande Prairie, (780) 539-5974  Medicine Hat, (403) 526-1866
Fort St. John, B.C. (250) 785-1171  Lloydminster, (306) 825-9800
Red Deer, (403) 341-3900  Fort McMurray, (780) 790-9612
Calgary, (403) 236-1900  Vancouver, B.C. (604) 669-3780
Edmonton, (780) 465-5371  Fort Nelson, B.C. (250) 774-2895
Atlas Pamco  Toronto, (416) 752-7150  Gas Drive Systems, Sydney, Australia
Contact Branch Manager for service & parts 011-612-748-7100

TEST RUN & INSPECTION

TEST RUN (Engine Drive Only, No Load) customer procedure applies  yes  no
witnessed  yes  no
hold point  yes  no
function test all instruments.  yes  no
electric prelude pump to be energized.  yes  no  n/a
cooler motor to be energized.  yes  no  n/a

INSPECTION PER CS PROJECT INSPECTION AND TEST PLAN (ITP)

DOCUMENTATION & DRAWINGS  weld procedures to be customer reviewed  yes  no
 manuals required - Qty 1  yes  no
 Q.A. data book required Qty 1

INSTRUMENTATION

data sheets  yes  no calibration sheets  yes  no
tagging  yes  no xp certificates  yes  no

DRAWINGS

Drawings  General Arrangement  Vessels  Skid  Cooler  Crane
 Process Flow  Service Flow  Control Panel

Quantity

For Approval [ 2 ] prints [ ] reproducible [ ] CAD disk  E-Mail  customer  consultant 
For Manufacture [ 2 ] prints [ ] reproducible [ ] CAD disk  E-Mail 
As Built [ 1 ] prints [ ] reproducible [ ] CAD disk  E-Mail 
approval drawings requested issue date \_\_\_
(to be confirmed by engineering/design)

ENGINEERING NOTES:

NOTE: #1 PIPING FLANGES ASSEMBLY TO COMPLY WITH ASME B31.3, SECTION 335.1.1.
MATING PIPE FLANGE FACES TO BE ALIGNED TO WITHIN 1mm IN 200mm MEASURED ACROSS THE DIAMETER. FLANGE BOLT HOLES TO BE ALIGNED WITHIN 3mm MAXIMUM OFFSET.
NOTE: #2 EQUIPMENT WARRANTY IS PER THE JOB SPECIFIC SCOPE OF WARRANTY DOCUMENT (CSP 103C)

\* DENOTES CS STANDARD

PROJECT CONTACT LIST table with columns: Name, Company, Phone, Fax. Includes Kory Galbraith, Lester Day, Scott King, Jeff McFarlane, Gary Danks.

Revision table with columns: REV, DESCRIPTION, ENG BY, DWN BY, DATE. Shows revisions for AS BUILT AS PER CS04663 and ISSUED FOR CONSTRUCTION.

Compressor Services logo and contact information. Includes address: 5049-74 Avenue SE Calgary AB Canada T2C 3H2. Also includes project title: PROJECT SCOPE SUMMARY - SWEET SERVICE ARIEL JGK/4, WAUKESHA L7042GSI, A-X-C- 144EH - 104 - 24 COMPRESSOR PACKAGE.