

NOTES:

1. AC AND DC ELECTRICAL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION, ALL POWER OFF (SHELF STATUS).

2. SOLAR BRANDED WIRE NUMBERS ARE IN DEDICATED GROUPS. PRIMARY REFERENCE IS THE CIRCUIT NUMBER. TERMINAL STRIP, EXAMPLE (TS213-12) = CIRCUIT NUMBER 21312 WHICH IS BRANDED ON THE WIRE TERMINATED AT THAT LOCATION. THE CIRCUIT NUMBER IS THE FIRST TWO DIGITS OF THE CIRCUIT NUMBER. FUNCTIONAL DEVICES SUCH AS RELAY TO RELAY, OR RELAY TO MOTOR, ARE GIVEN 3 OR 4 DIGIT NUMBERS WHICH ARE ARBITRARY AND ARE NOT RELATED TO TERMINATION POINTS.

3. NOTE NOT USED.

4. WIRE SHIELDING GROUNDS ARE PER SOLAR SPEC. 9-8-83 & 9-8-88. SHIELD GROUNDS ARE NOT REQUIRED FOR TOTAL LENGTH OF SHIELD AND GROUNDED AT ONE POINT ONLY.

5. INPUT VOLTAGES SHOWN REPRESENT NOMINAL VALUES. RANGES OF MINUS TEN PERCENT VARIATION FROM THE VALUES SHOWN IS ACCEPTABLE.

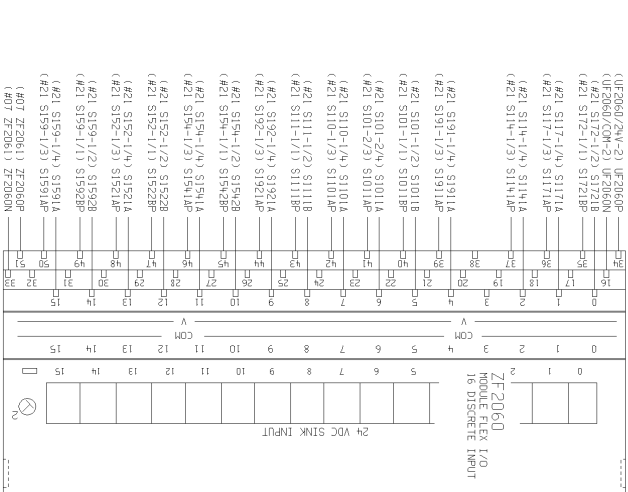
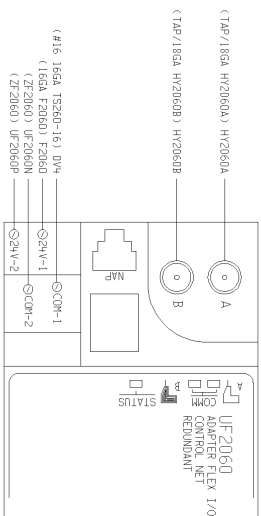
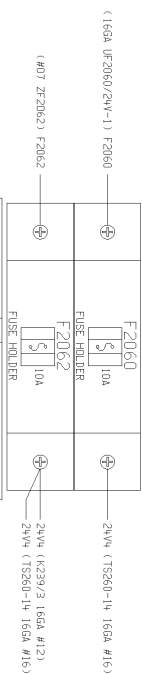
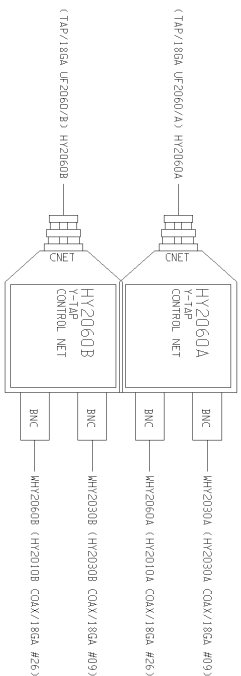
6. WIRE GAGES SHOWN FOR INTERCONNECTS ARE RECOMMENDED MINIMUM SIZES. FOR UP TO 200 FEET OF MILITARY-BRAND COPPER CONDUCTORS BASED ON THE NATIONAL ELECTRICAL CODE (N.E.C.) FOR 75 DEGREE CELSIUS WIRE. IN 30 DEGREE CELSIUS AMBIENT, CURRENT TRANSFORMER INTERCONNECT WIRING C-10 RED WIRE MUST BE 12 GAGE MINIMUM. WIRE C-10 RED WIRE MUST BE 12 GAGE MINIMUM. NOTE AC WIRING SEPARATED FROM DC WIRING.



[illegible]







LEFT SIDE PANEL

202-01 TURBINE CONTROL BOX  
20 WIRE GAUGE UNLESS OTHERWISE NOTED.

|                |    |
|----------------|----|
| Solar Turbines |    |
| PLANTING NO.   |    |
| 59111-119481   |    |
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| 001            | 01 |

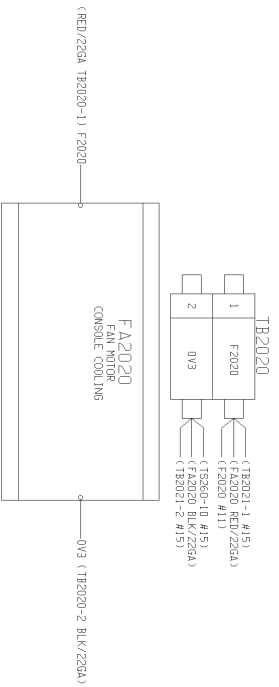
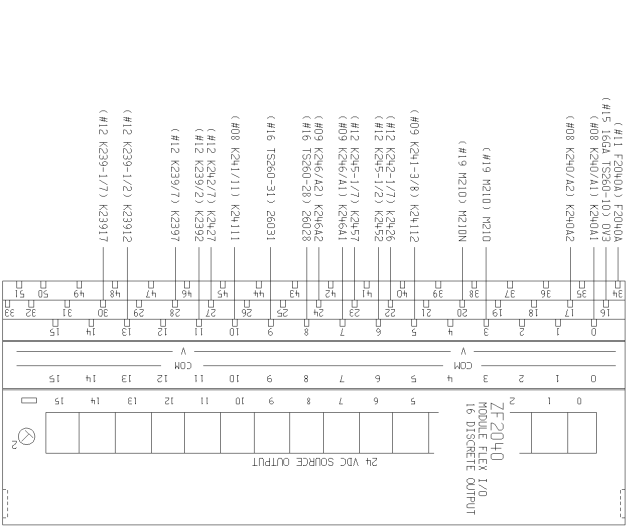
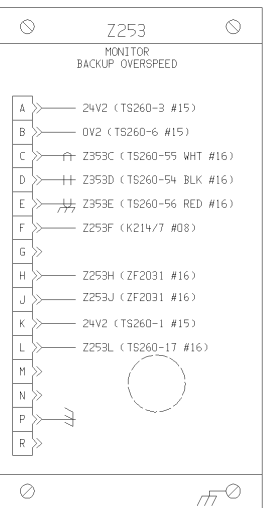
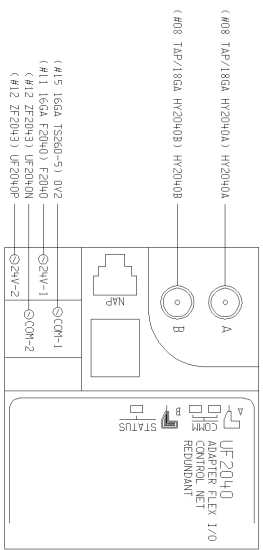
THIS IS A WARNING: READ AND UNDERSTAND ALL INSTRUCTIONS AND SAFETY INFORMATION BEFORE USING THIS PRODUCT. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY OR DEATH. ALWAYS USE PROPER SAFETY PROCEDURES WHEN USING THIS PRODUCT.



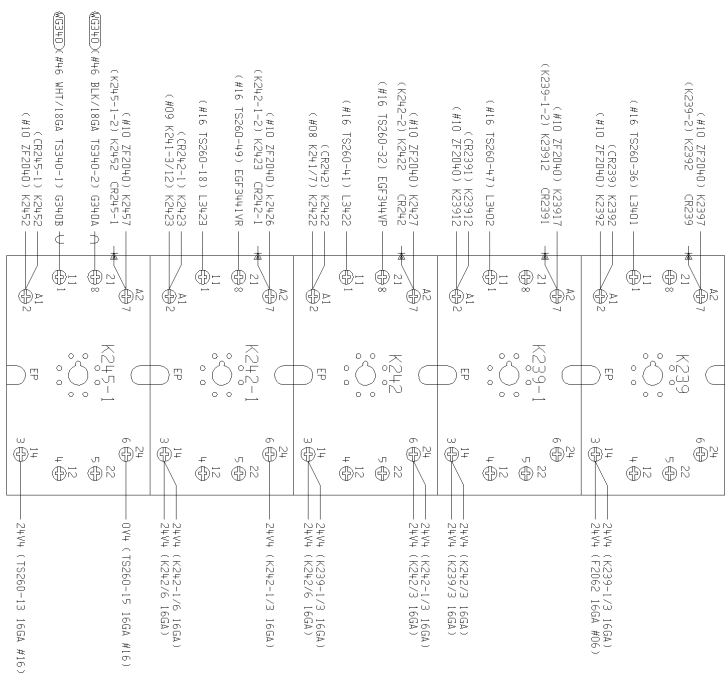
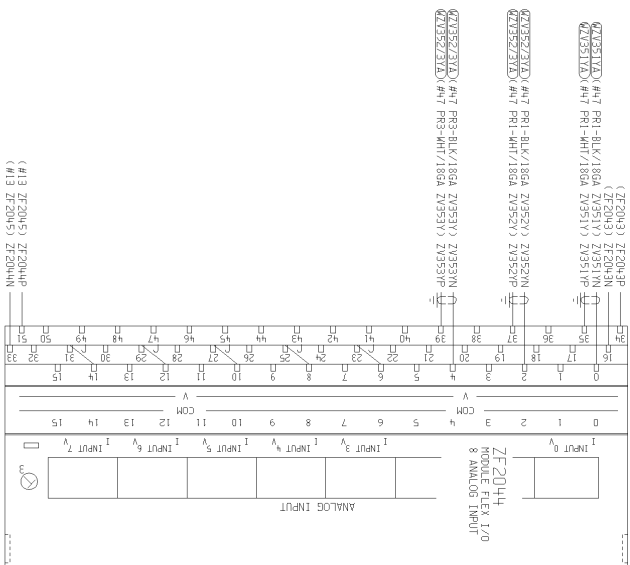
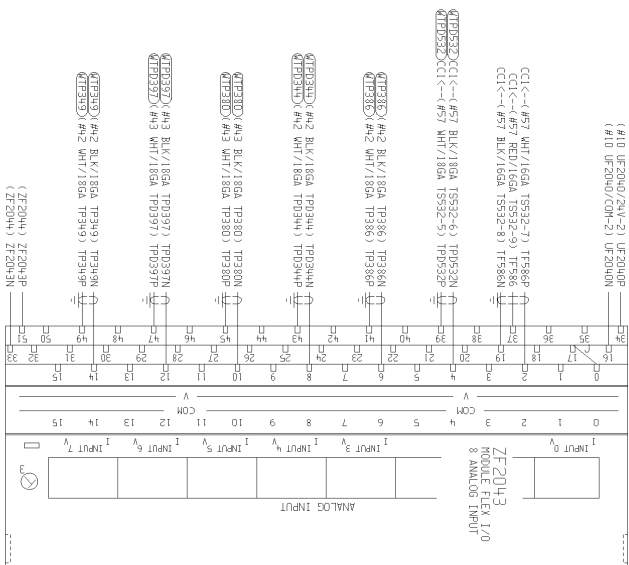
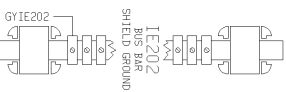






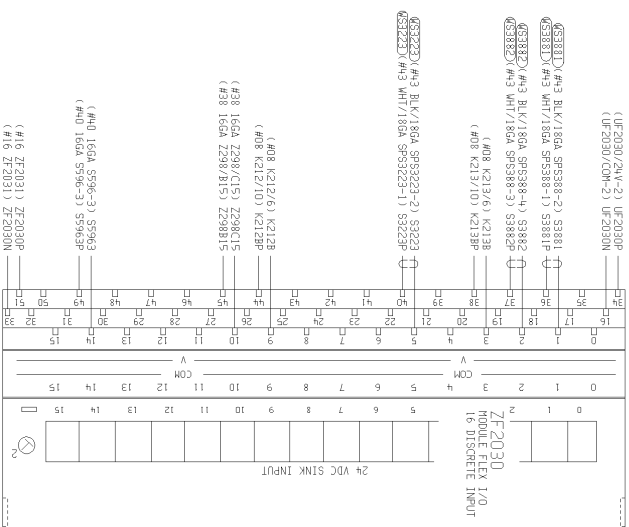
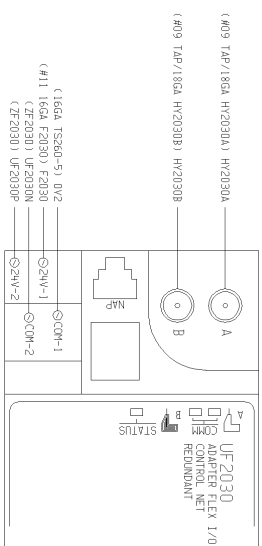
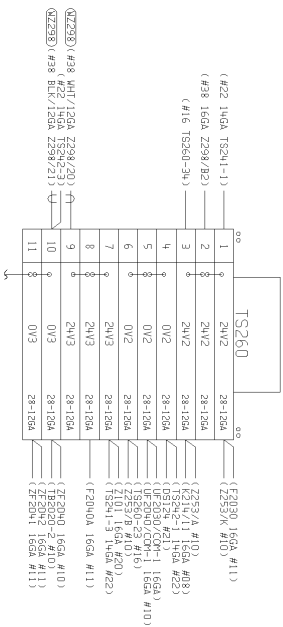
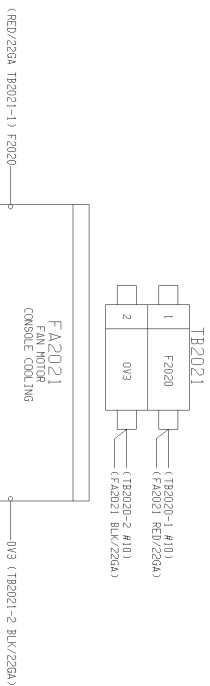












## RIGHT SIDE OF CENTER PANEL

# Solar Turbines

A Caterpillar Company

DRAWING NO.

DRAWING NO.  
59111-14948

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|-----|----|

|       |         |
|-------|---------|
| REV   | CO      |
| SAFET | 15 0661 |

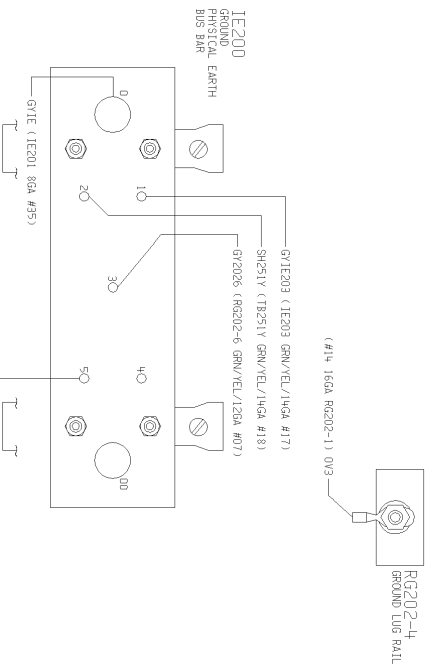
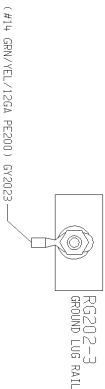
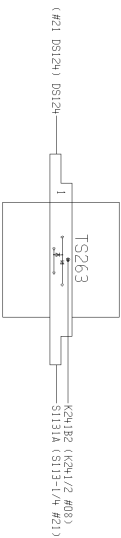
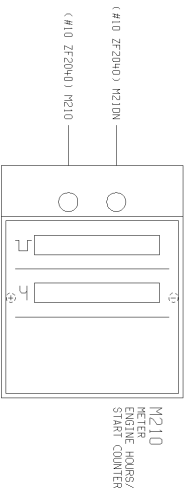
THIS IS A PREPARED SECTION OF SOLAR THERMALS DEVELOPED, REPRODUCED, AND DISTRIBUTED FOR USE OF ALL ASSOCIATED, SUBASSOCIATED, OR BOUND INDICATED MEMBERS OF THE SECTION OF AMERICAN ASSOCIATION OF SOLAR THERMAL ENGINEERS ONLY. IF EXPRESSED BY AUTHORITY OF SOLAR THERMAL ENGINEERS, THE INFORMATION CONTAINED HEREIN IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM THE ASSOCIATION OF SOLAR THERMAL ENGINEERS.

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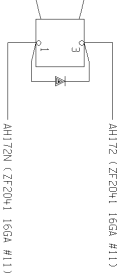




AH198-42  
HORN  
SYSTEM  
WARNING

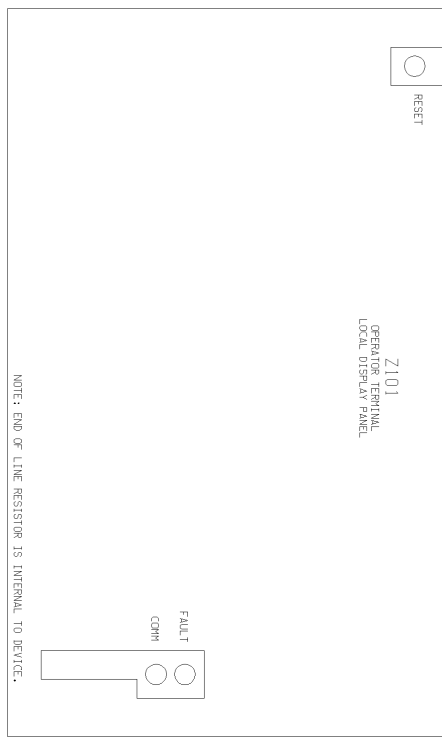


AH172  
HORN  
AUDIO ALARM

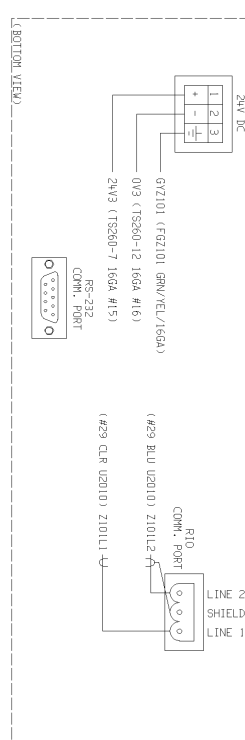


MOUNTED FLUSH ON DOOR

ALLEN BRADLEY  
PANEL VIEW 1000



(SHOWN SMALLER THAN ACTUAL SIZE)



100-01 TURBINE CONTROL BOX (DOOR)

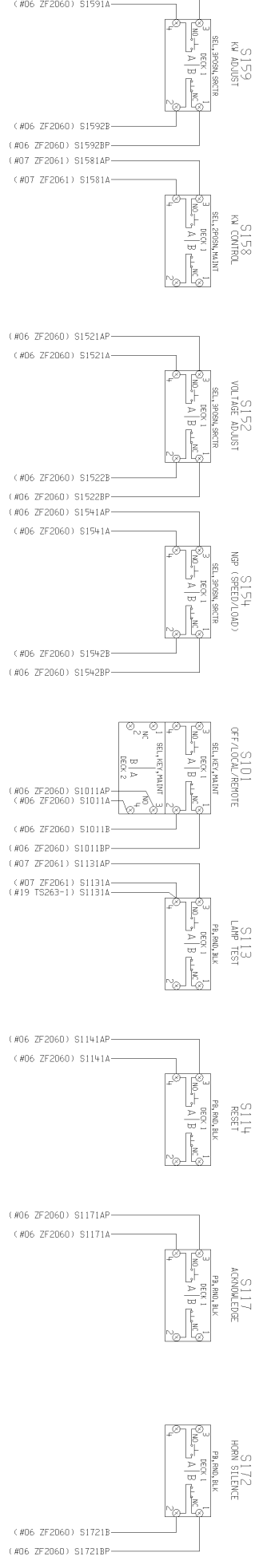
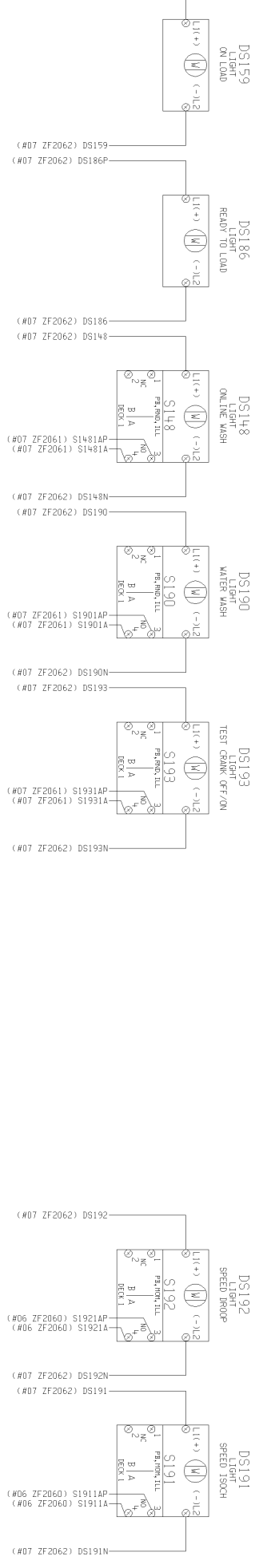
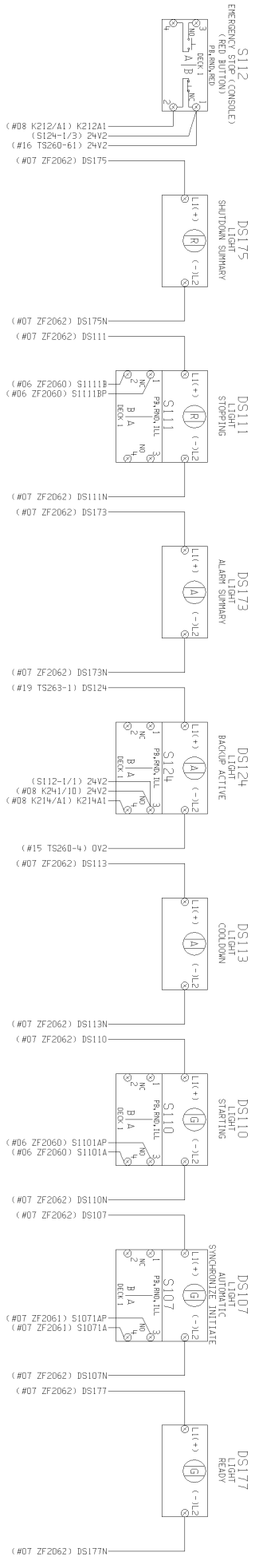
20 WIRE GAGE UNLESS OTHERWISE NOTED.

Solar Turbines

PLANTING NO.  
59111-119481

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DATE  
07-61



100-01 TURBINE CONTROL BOX (DOOR)

DOOR

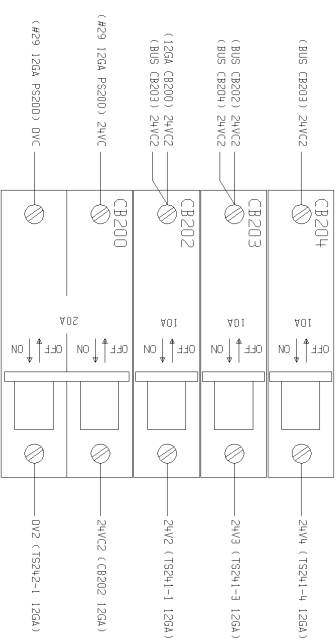
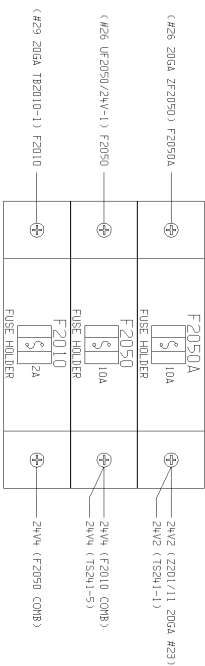
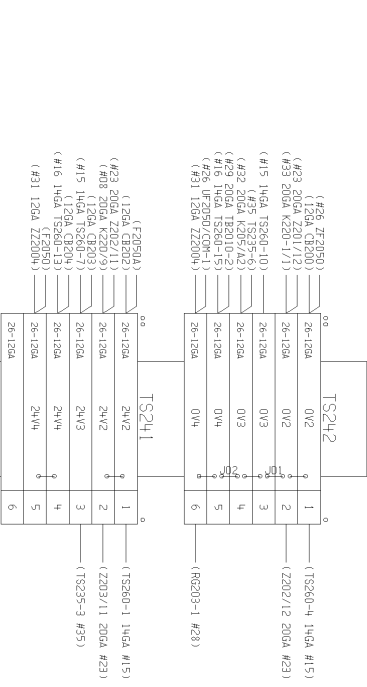
**Solar Turbines**

PLANTING NO. 59111-149481

REV. BO

DATE: 07-61

THIS IS A WARNING: READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS BEFORE OPERATING THIS EQUIPMENT. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN DEATH OR SERIOUS INJURY. ALWAYS WEAR YOUR SAFETY GEAR. NEVER WORK ON LIVE EQUIPMENT. ALWAYS LOCK OUT AND TAG OUT BEFORE WORKING ON EQUIPMENT. ALWAYS USE PROPER LIFTING TECHNIQUES. ALWAYS FOLLOW THE MANUFACTURER'S INSTRUCTIONS. ALWAYS USE THE CORRECT TOOLS AND EQUIPMENT. ALWAYS BE AWARE OF YOUR SURROUNDINGS. ALWAYS BE RESPONSIBLE. ALWAYS BE SAFE.



203-01 GENERATOR CONTROL BOX  
16 WIRE GAGE UNLESS OTHERWISE NOTED.

LEFT SIDE PANEL

Solar Turbines

59111-119481

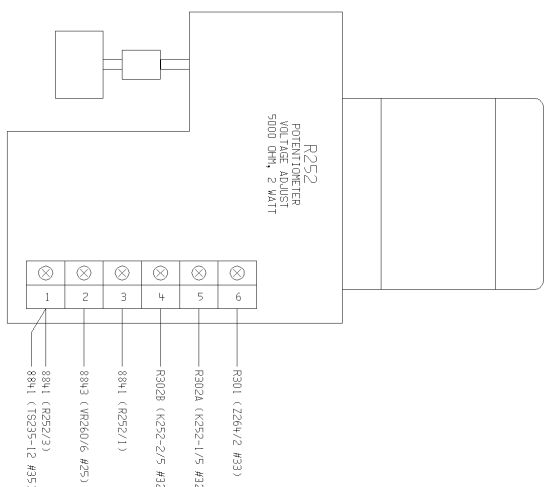
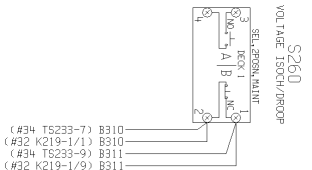
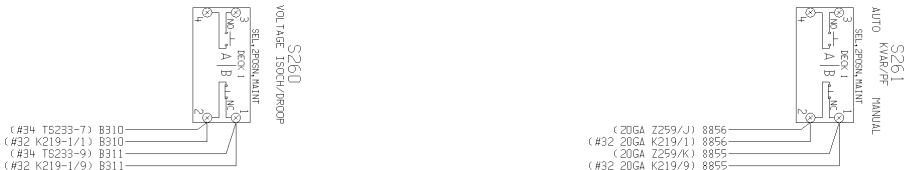
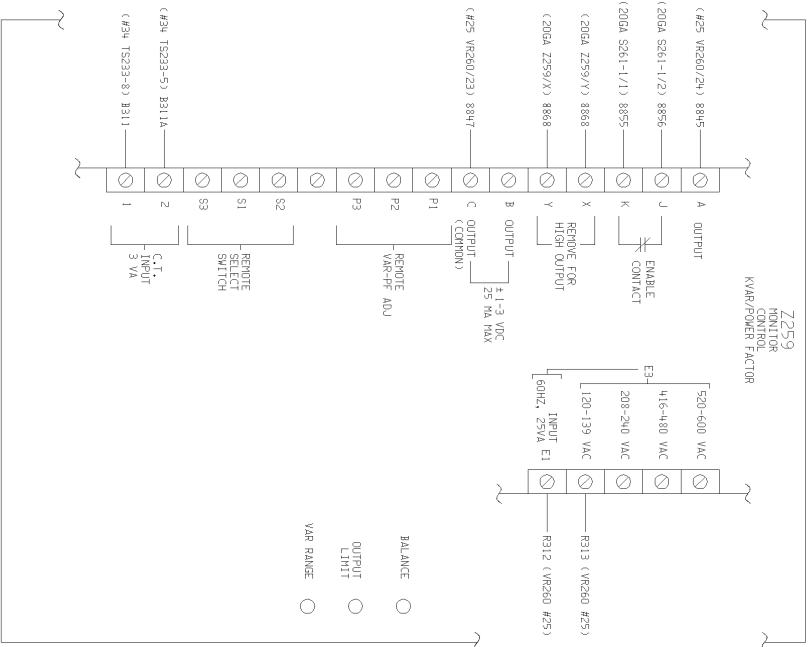
REVISION NO.

59111-119481

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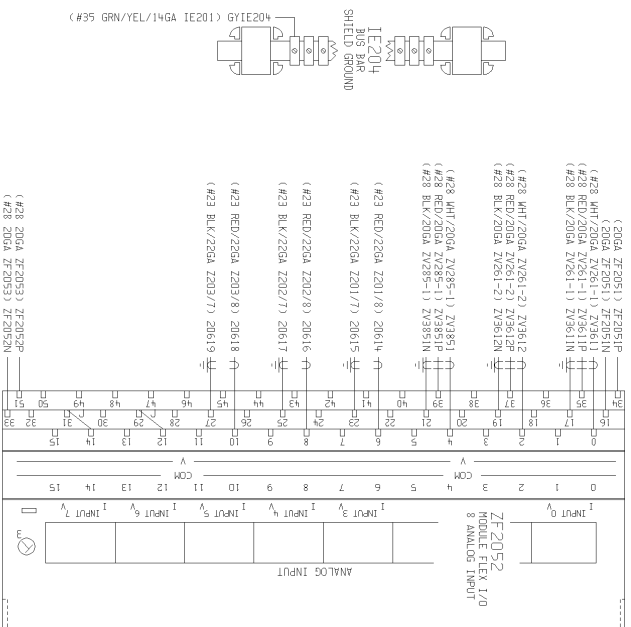
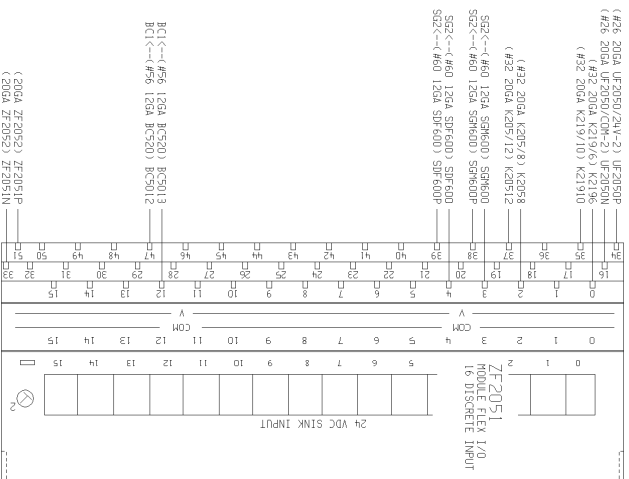




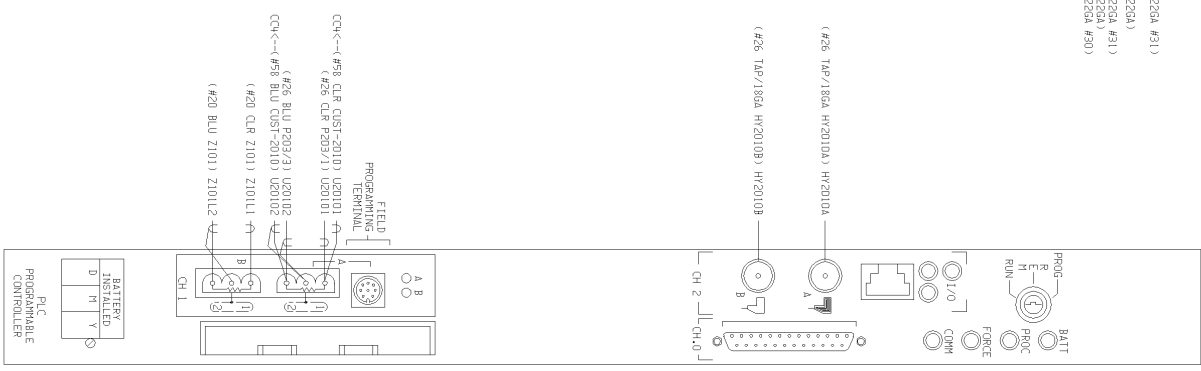
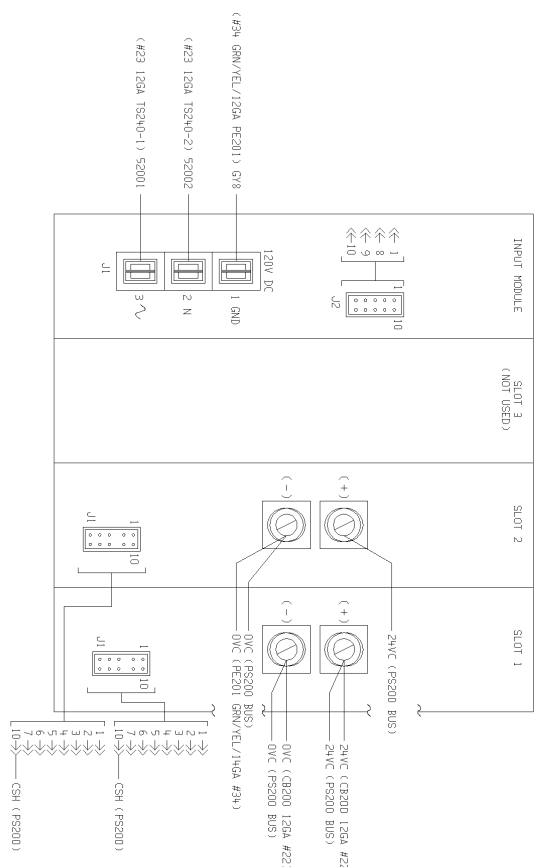
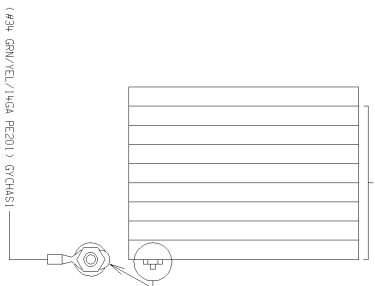
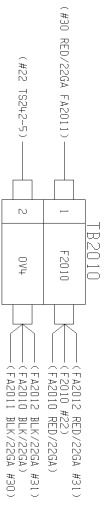












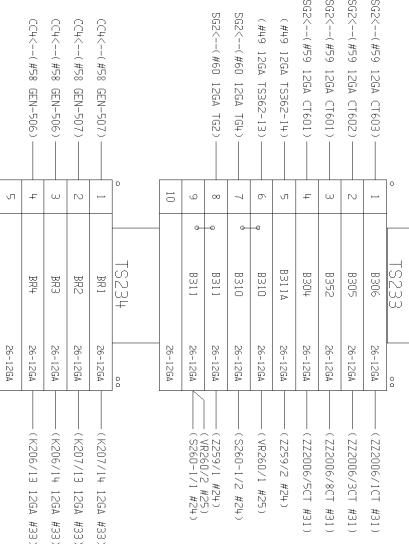
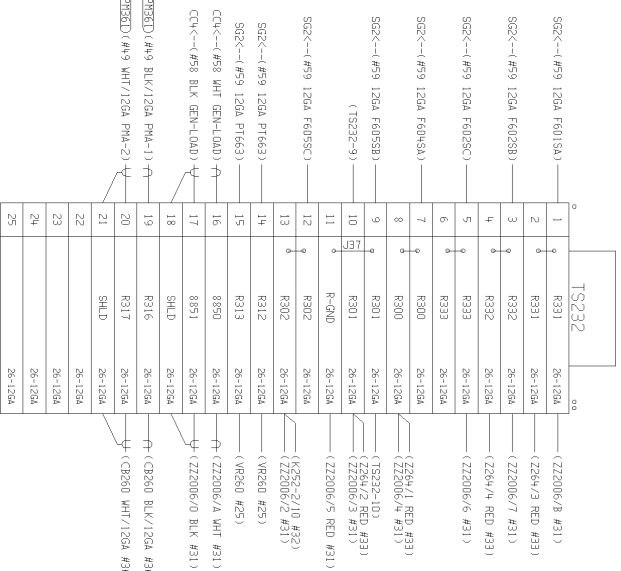
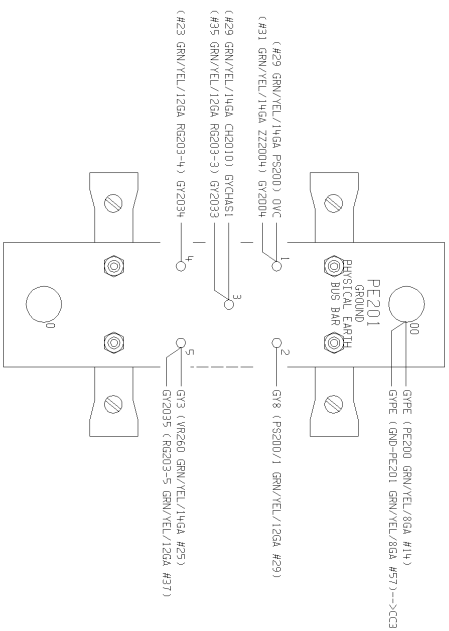












UPPER END OF PANEL

LEFT SIDE OF CENTER PANEL

# Solar Turbines

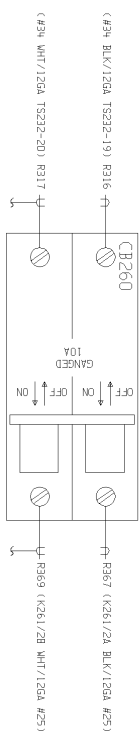
#### **A Katerpillar Company**

203-01 GENERATOR CONTROL BOX

16 WIRE GAGE UNLESS OTHERWISE NOTED.

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RIGHT SIDE PANEL

203-01 GENERATOR CONTROL BOX

16 WIRE GAGE UNLESS OTHERWISE NOTED.

59111-149481

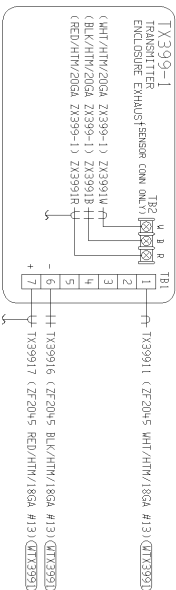
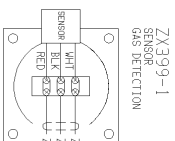
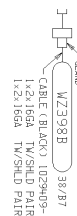
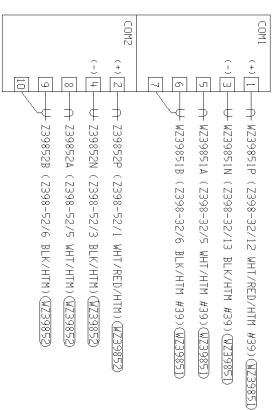
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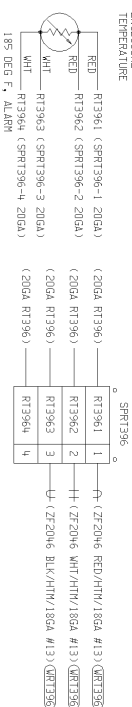




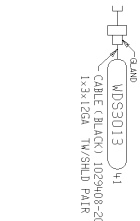
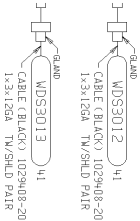
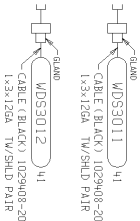
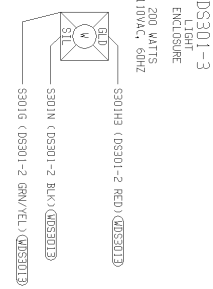
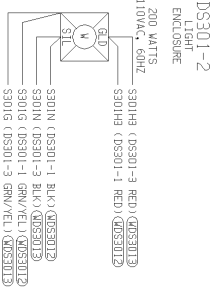
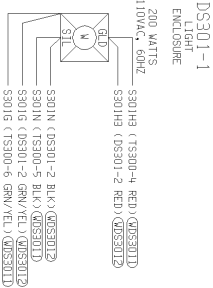
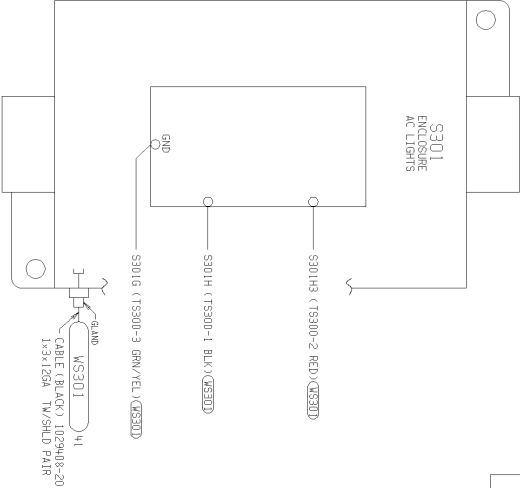
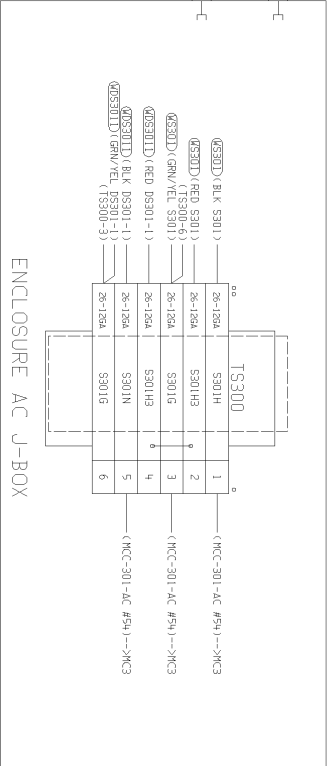
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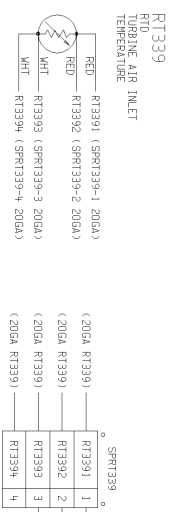
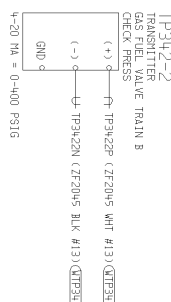
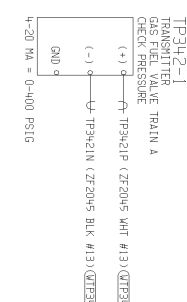
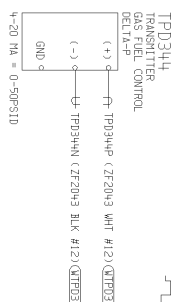
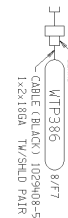
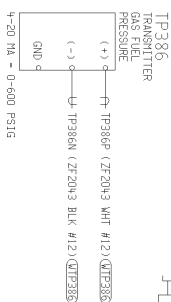
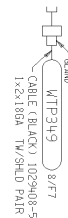
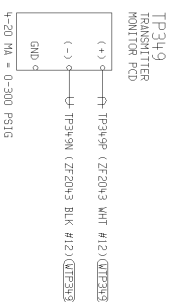
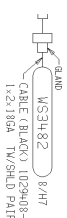
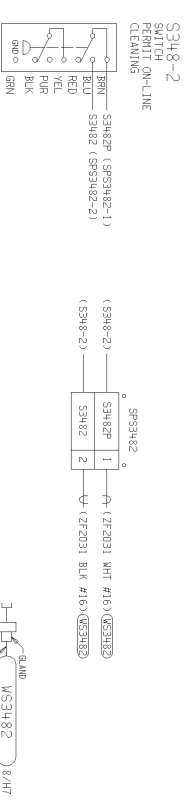
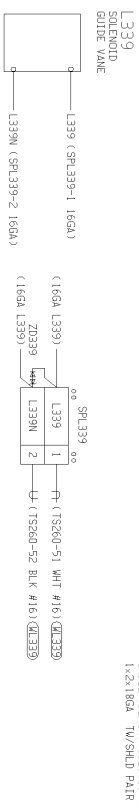
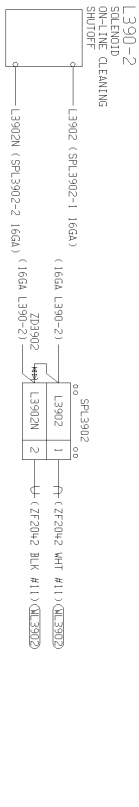
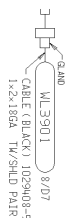
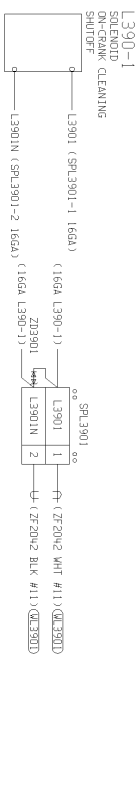
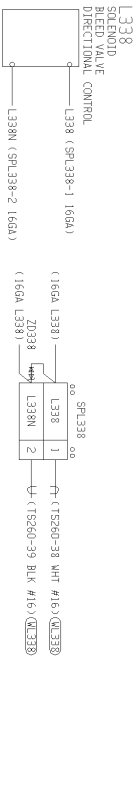
## RT396 RTD ENCLOSURE TEMPERATURE







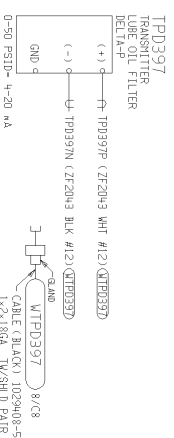
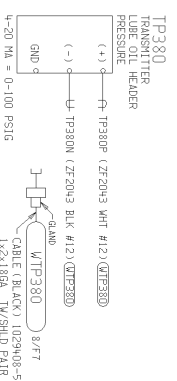
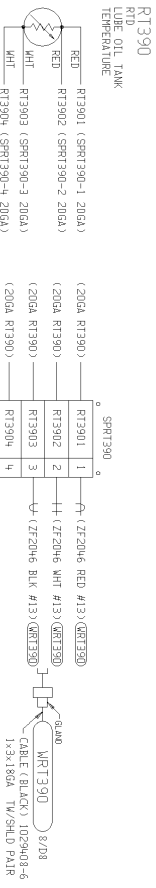
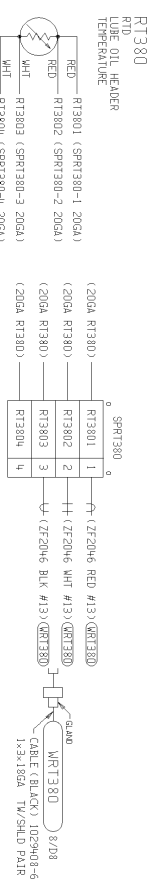
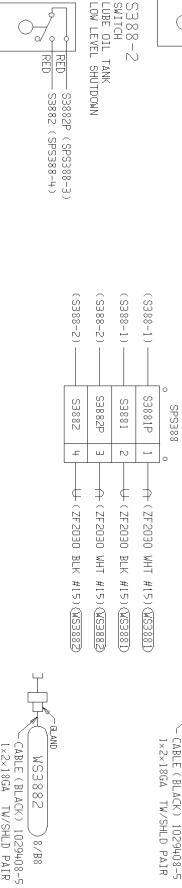
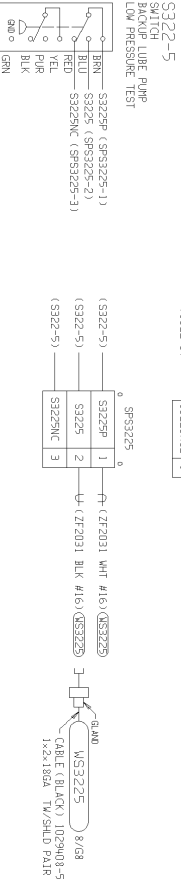
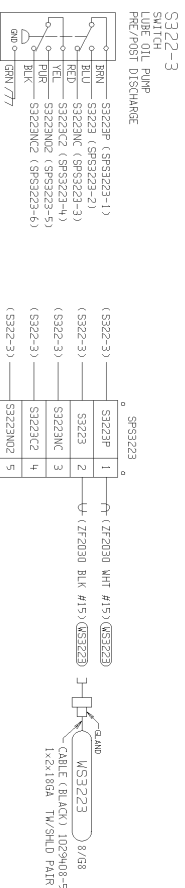
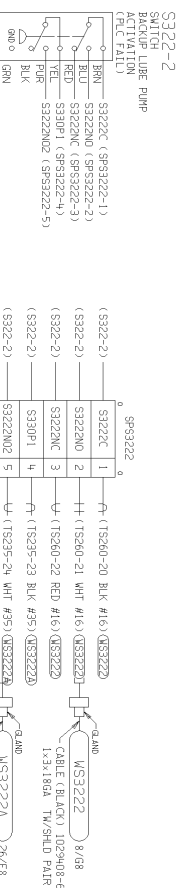
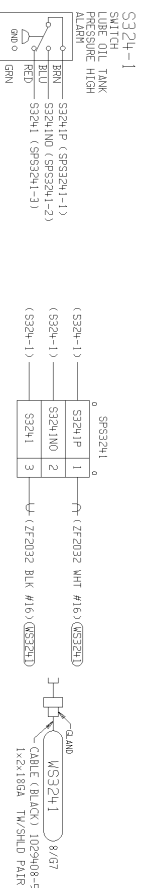
302-04 ENCLOSURE - AC LIGHTS

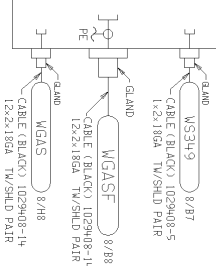
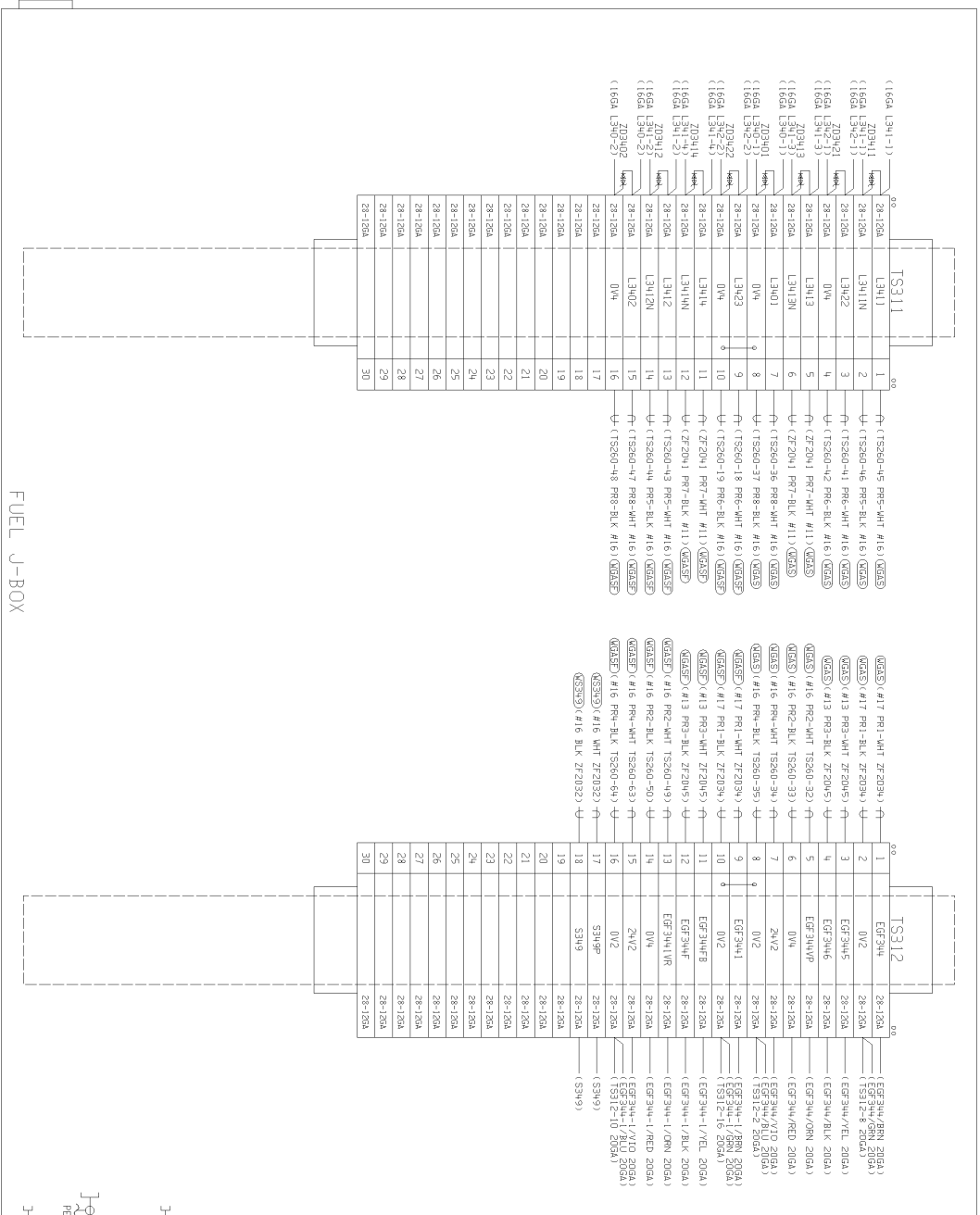
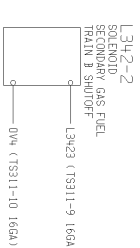
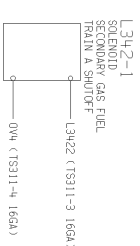
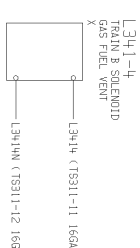
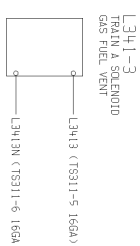
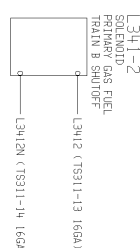
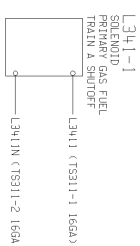
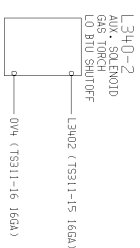
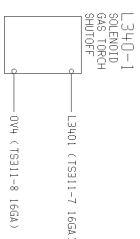
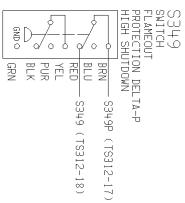
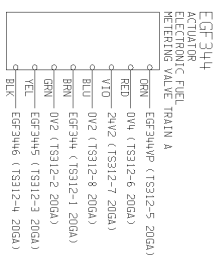
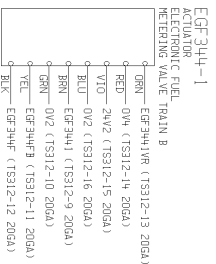


303-01 COMPONENTS TO CONSOLE J-BOX  
18 WIRE GAUGE UNLESS OTHERWISE NOTED.

**Solar Turbines**  
a Turbine Company  
59111-149481  
REV B0  
06/01

**AIR INLET**





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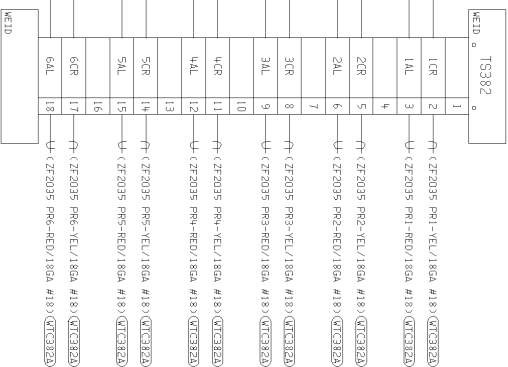
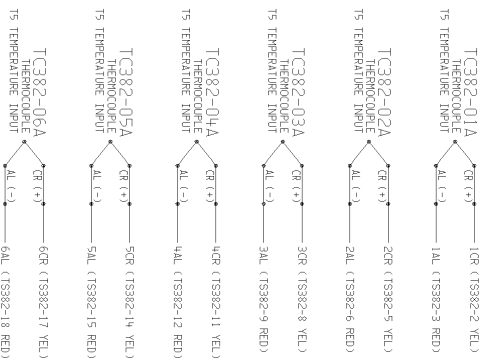
4

3

2

1

NOTE: KEEP ORIGINAL LABELS ON THERMOCOUPLE TERMINAL STRIP, AND ADD ON NUMBERED LABELS.



TS THERMOCOUPLE J-BOX

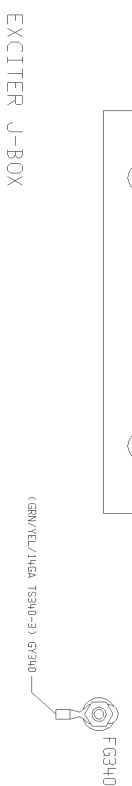
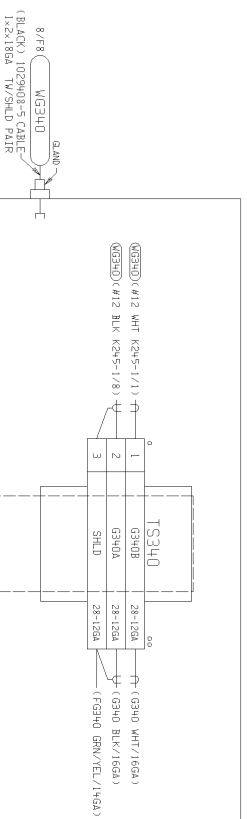
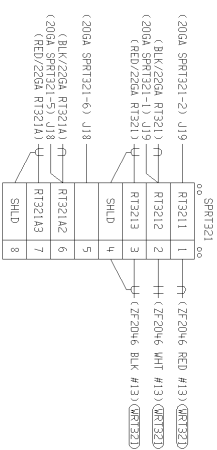
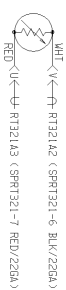
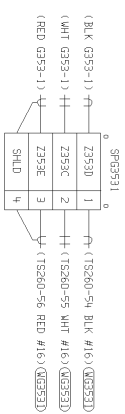
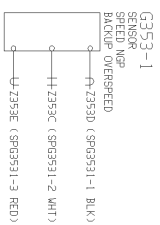
Solar Turbines

59111-119481

303-06 TS TEMPERATURE

20 WIRE GAUGE UNLESS OTHERWISE NOTED.

THIS IS A STANDARD 303-06 TS TEMPERATURE 20 WIRE GAUGE UNLESS OTHERWISE NOTED. 59111-119481



EXCITER J-BOX

303-07 IGNITION - SPEED

18 WIRE GAGE UNLESS OTHERWISE NOTED.

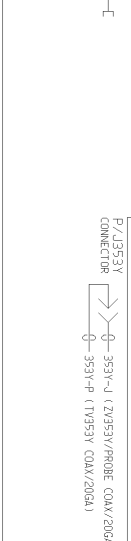
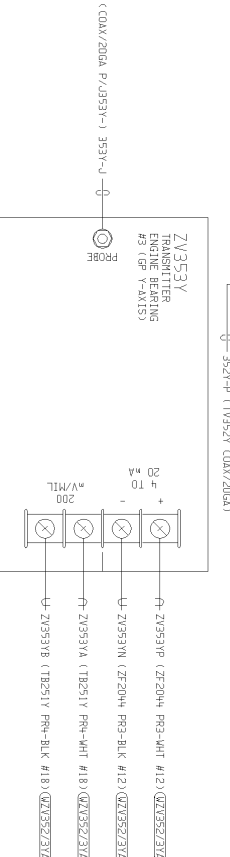
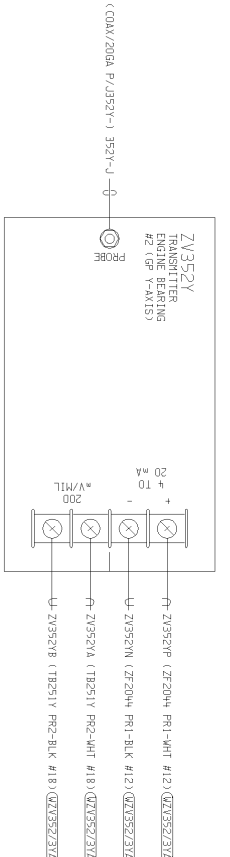
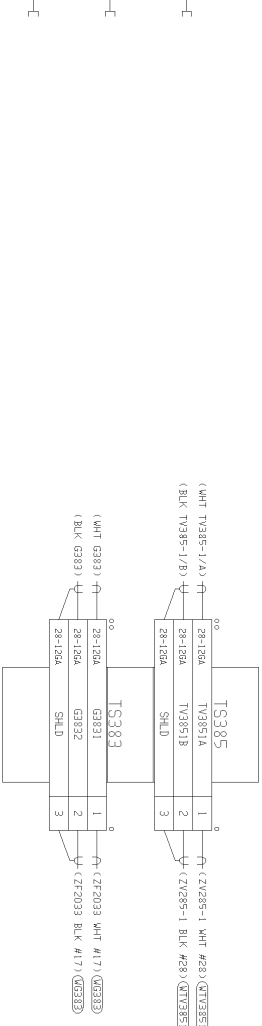
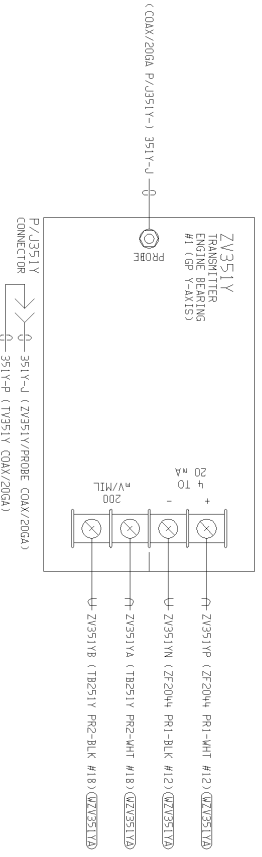
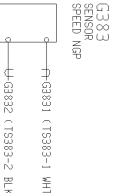
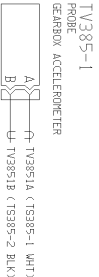
# Solar Turbines

**McCartaghy Company**

DRAWING NO. \_\_\_\_\_

59111-149481

\*THIS IS A PRELIMINARY VERSION OF SOLAR TUBES INCORPORATED, EFFICIENCY OF USE OF AIR



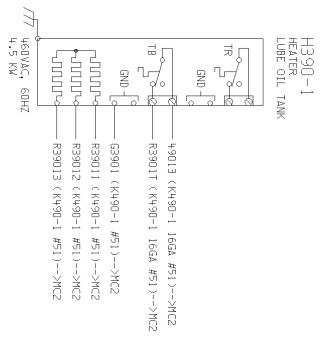
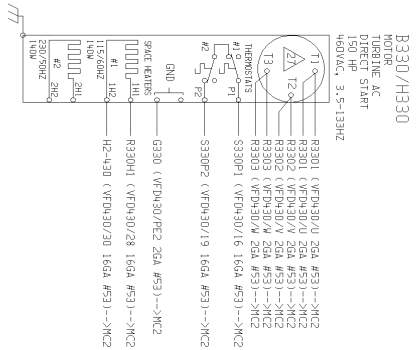
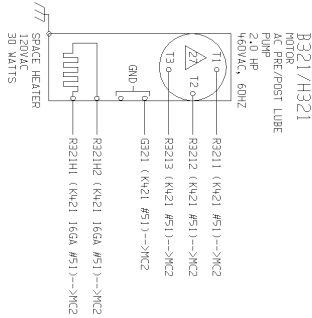
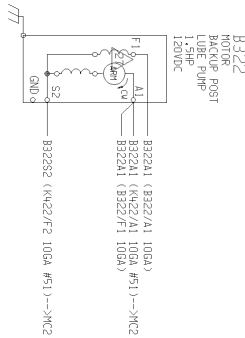
ENGINE / GEARBOX VIBRATION

304-01 ENGINE VIBRATION  
18 WIRE GAUGE (UNLESS OTHERWISE NOTED).

**Solar Turbines**  
a *Engine Turbines*

PRINTING NO. 59111-119481

REV 00  
DATE 07-61



SEE MOTOR NAMEPLATE FOR CONNECTION INFORMATION.

305-01 PACKAGE MOTORS AND HEATERS  
12 WIRE GAGE UNLESS OTHERWISE NOTED.

Solar Turbines

A Turbine Engine

PLANTING NO.  
59111-1149481

REV. B0  
06/11

THIS IS A WARNING: READ AND UNDERSTAND ALL INSTRUCTIONS AND SAFETY INFORMATION BEFORE USING THIS PRODUCT. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN DEATH OR SERIOUS INJURY. ALWAYS WEAR YOUR SAFETY GEAR. ALWAYS USE COMMON SENSE. ALWAYS FOLLOW THE RULES OF THE GAME.





R1370A  
RTD  
GENERATOR WINDING  
PHASE A



311 DEG F, AL-329 DEG F, S/D

R1370B  
RTD  
GENERATOR WINDING  
PHASE B



311 DEG F, AL-329 DEG F, S/D

R1370C  
RTD  
GENERATOR WINDING  
PHASE C



311 DEG F, AL-329 DEG F, S/D

R1370A-SP  
RTD  
GENERATOR WINDING  
PHASE A (SPARE)



R1370B-SP  
RTD  
GENERATOR WINDING  
PHASE B (SPARE)



R1370C-SP  
RTD  
GENERATOR WINDING  
PHASE C (SPARE)



R1370-1

RTD  
GENERATOR BEARING  
DRIVEN END



R1370-1SP  
RTD  
GENERATOR BEARING  
DRIVEN END (SPARE)



R1370-2

RTD  
GENERATOR BEARING  
EXCITER END



R1370-2SP  
RTD  
GENERATOR BEARING  
EXCITER END (SPARE)



| TS370              |           |    |
|--------------------|-----------|----|
| (22GA R1370A) —    | R1370A3   | 1  |
| (22GA R1370A) —    | R1370A2   | 2  |
| (22GA R1370A) —    | R1370A1   | 3  |
| (22GA R1370B) —    | R1370B3   | 4  |
| (22GA R1370B) —    | R1370B2   | 5  |
| (22GA R1370B) —    | R1370B1   | 6  |
| (22GA R1370C) —    | R1370C3   | 7  |
| (22GA R1370C) —    | R1370C2   | 8  |
| (22GA R1370C) —    | R1370C1   | 9  |
| (22GA R1370A-SP) — | R1370ASP3 | 10 |
| (22GA R1370A-SP) — | R1370ASP2 | 11 |
| (22GA R1370A-SP) — | R1370ASP1 | 12 |
| (22GA R1370B-SP) — | R1370BSP3 | 13 |
| (22GA R1370B-SP) — | R1370BSP2 | 14 |
| (22GA R1370B-SP) — | R1370BSP1 | 15 |
| (22GA R1370C-SP) — | R1370CSP3 | 16 |
| (22GA R1370C-SP) — | R1370CSP2 | 17 |
| (22GA R1370C-SP) — | R1370CSP1 | 18 |

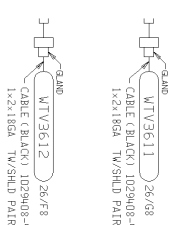
### GENERATOR WINDING TEMPERATURE CONNECTION BOX (MOUNTED AT EXCITER END)



| TS371              |           |    |
|--------------------|-----------|----|
| (R1370-2 22GA) —   | R137023   | 1  |
| (R1370-2 22GA) —   | R137022   | 2  |
| (R1370-2 22GA) —   | R137021   | 3  |
| (R1370-1 22GA) —   | R137013   | 4  |
| (R1370-1 22GA) —   | R137012   | 5  |
| (R1370-1 22GA) —   | R137011   | 6  |
| (R1370-2SP 22GA) — | R137023SP | 7  |
| (R1370-2SP 22GA) — | R137022SP | 8  |
| (R1370-2SP 22GA) — | R137021SP | 9  |
| (R1370-1SP 22GA) — | R137013SP | 10 |
| (R1370-1SP 22GA) — | R137012SP | 11 |
| (R1370-1SP 22GA) — | R137011SP | 12 |



| TS3611                       |         |   |
|------------------------------|---------|---|
| (BLU/RED/WHI/22GA TV361-1) — | TV3611A | 1 |
| (RED/WHI/22GA TV361-1) —     | TV3611B | 2 |
| (BLU/RED/WHI/22GA TV361-2) — | TV3612A | 4 |
| (RED/WHI/22GA TV361-2) —     | TV3612B | 5 |
| (BLU/RED/WHI/22GA TV361-2) — | TV3612C | 6 |



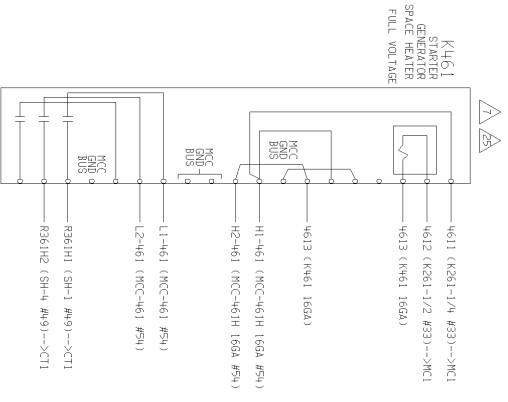
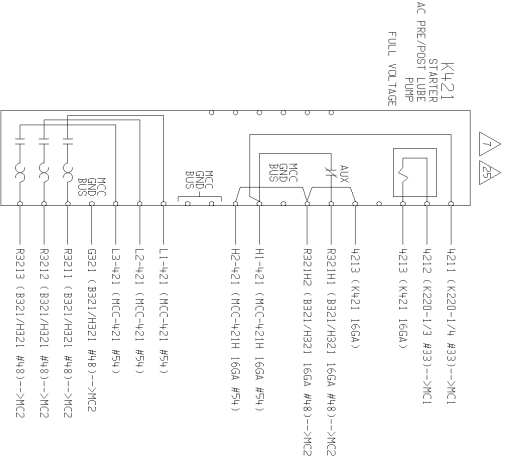
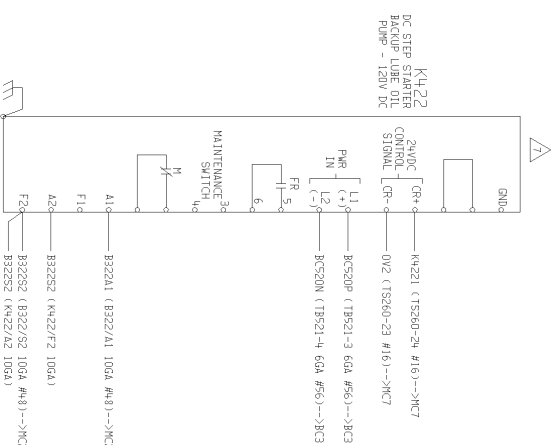
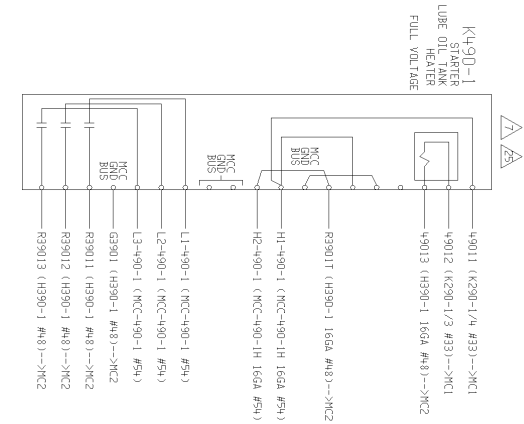
311-02 GENERATOR COMPONENTS  
18 WIRE GAUGE UNLESS OTHERWISE NOTED.

**Solar Turbines**  
A Turbine Company

PRINTING NO.  
59111-119481

REV. B0  
061

THIS IS A WARNING: IF YOU ARE A USER OF SOLAR TURBINES PRODUCTS, YOU ARE ADVISED THAT THE COMPANY AND ITS PRODUCTS ARE NOT DESIGNED OR INTENDED TO BE USED IN ANY MANNER THAT COULD BE CONSIDERED A VIOLATION OF ANY APPLICABLE LAWS, REGULATIONS, OR STANDARDS. THE COMPANY AND ITS PRODUCTS ARE NOT DESIGNED OR INTENDED TO BE USED IN ANY MANNER THAT COULD BE CONSIDERED A VIOLATION OF ANY APPLICABLE LAWS, REGULATIONS, OR STANDARDS.



**Solar Turbines**  
*A Turbine Engine*

PRINTING NO. 59111-119481

REV. 01

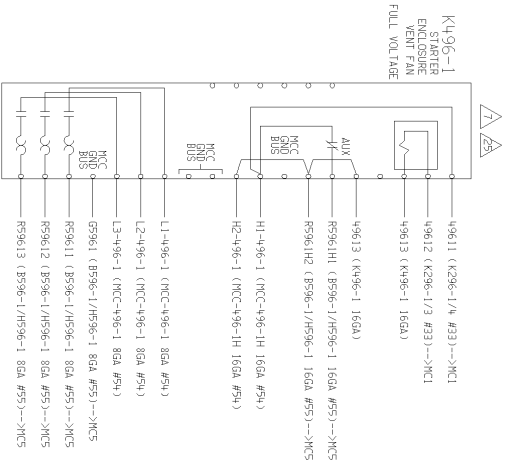
12 WIRE GAUGE UNLESS OTHERWISE NOTED.

400-01 MOTOR CONTROL CENTER

12 WIRE GAUGE UNLESS OTHERWISE NOTED.

**Customer Furnished.**

**Typical Connections Shown.**  
 SEE MOTOR CONTROL CENTER (MCC) DRAWING FOR SPECIFIC  
 STARTER CONNECTION INFORMATION.



△ CUSTOMER FURNISHED.

△ TYPICAL CONNECTIONS SHOWN.  
SEE MOTOR CONTROL CENTER (MCC) DRAWING FOR SPECIFIC  
STARTER CONNECTION INFORMATION.

**Solar Turbines**

*A Turbine Engine*

DRAWING NO.

59111-119481

REV. 00

DATE: 07-61

THIS IS A STANDARD DRAWING OF A TURBINE ENGINE. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE. IT IS THE USER'S RESPONSIBILITY TO VERIFY THE CORRECTNESS OF THE INFORMATION PROVIDED IN THIS DRAWING.

400-02 MOTOR CONTROL CENTER

12 WIRE GAUGE, UNLESS OTHERWISE NOTED.

⚠ SOLAR ORIENTED, LOOSE SHIPPED, FOR SITE INSTALLATION BY OTHERS, UNLESS OTHERWISE NOTED.

A

400-03 MOTOR CONTROL CENTER  
12 WIRE GAGE UNLESS OTHERWISE NOTED.

Solar Turbines

A Turbine Company

PLANTING NO.

59111-119481

REV

CO

DATE

07-61

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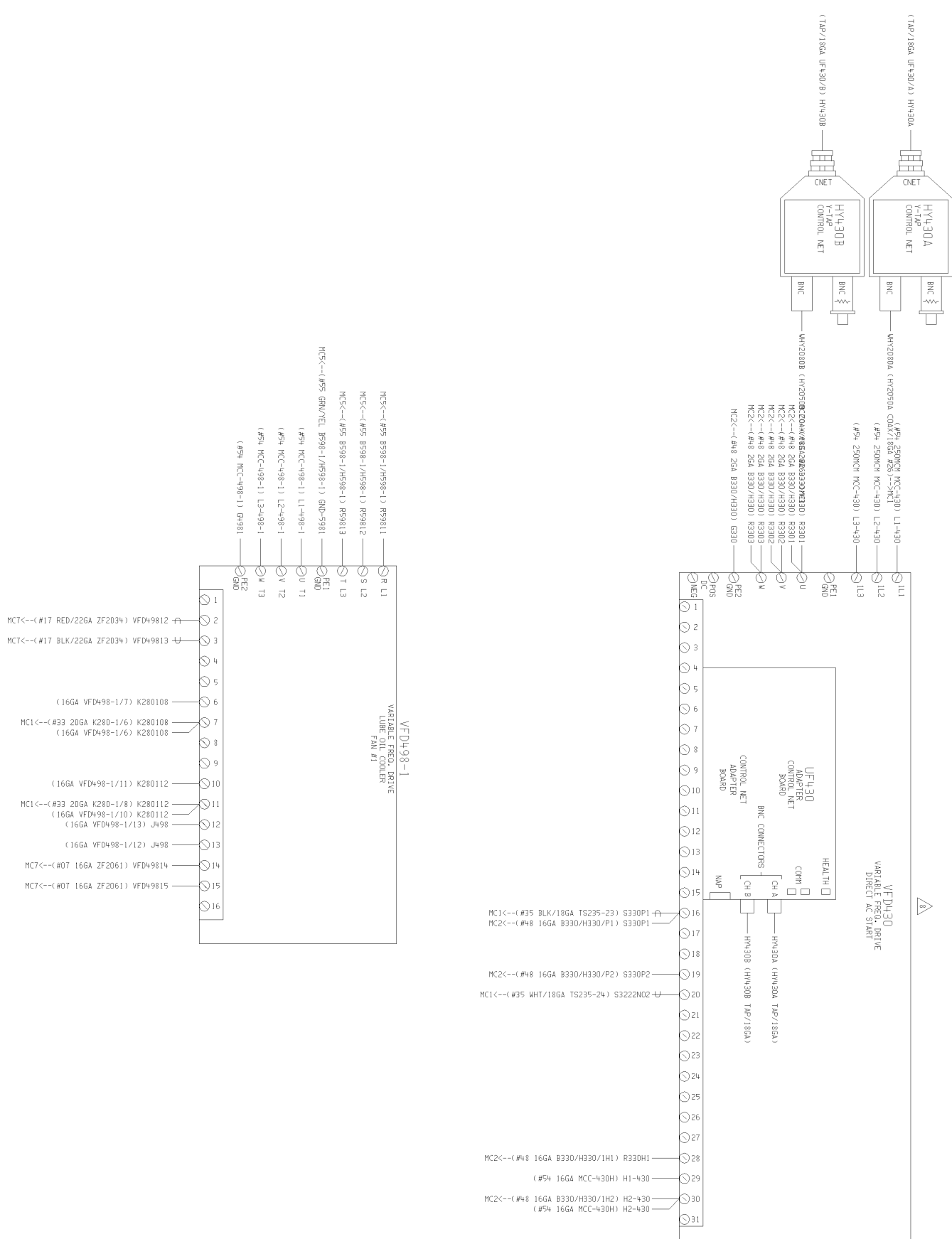
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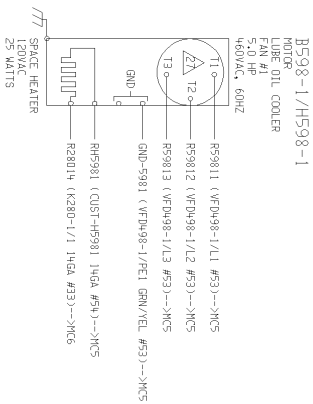
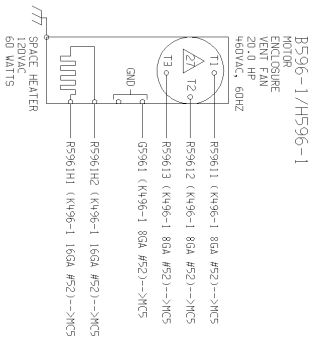
E

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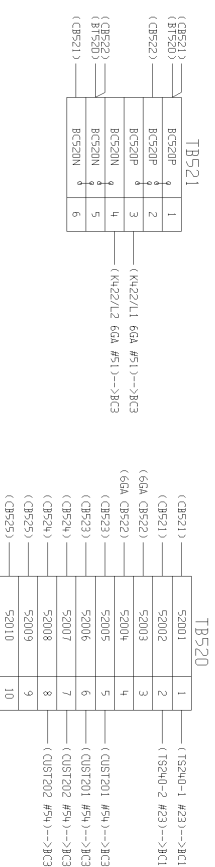
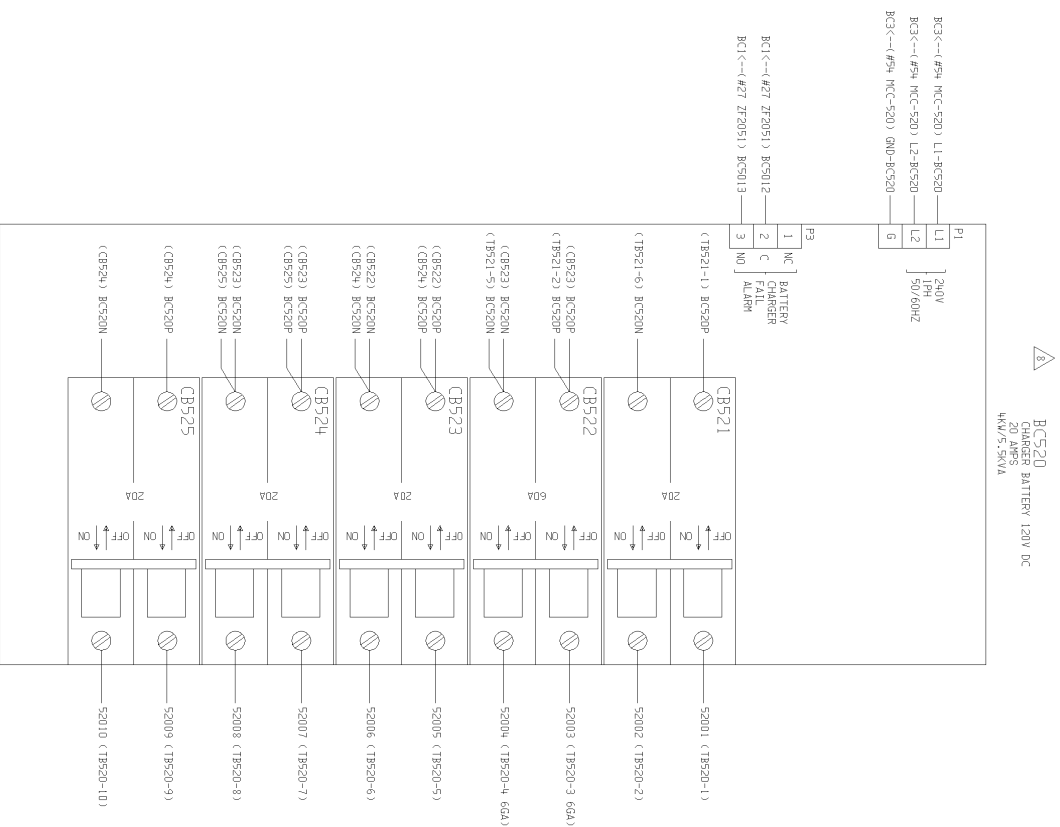




SEE MOTOR NAMEPLATE FOR CONNECTION INFORMATION.

500-01 OFFSKID MOTORS  
12 WIRE GAGE UNLESS OTHERWISE NOTED.

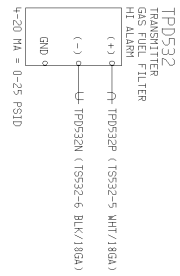
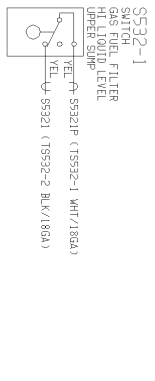
|                  |    |     |
|------------------|----|-----|
| Solar Turbines   |    |     |
| A Turbine Engine |    |     |
| PLANTING NO.     |    |     |
| 59111-119481     |    |     |
| REV              | BO | 061 |



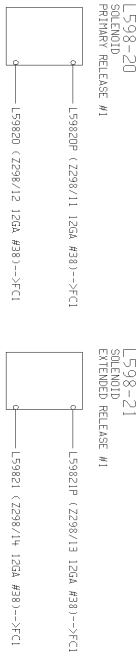
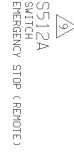


GAS FUEL FILTER EP BOX

| TS532 |         |         |
|-------|---------|---------|
| 1     | TS532IP | 24-100A |
| 2     | TS5321  | 24-100A |
| 3     | TS532P  | 24-100A |
| 4     | TS5322  | 24-100A |
| 5     | TS5322P | 24-100A |
| 6     | TS532N  | 24-100A |
| 7     | TS586P  | 24-100A |
| 8     | TS586N  | 24-100A |
| 9     | TS586   | 24-100A |



GAS FUEL FILTER/COALESTER SKID



SOLAR FURNISHED WITH STATION PANEL

500-03 CUSTOMER COMPONENTS  
16 WIRE GAUGE UNLESS OTHERWISE NOTED.

Solar Turbines

59111-149481

59111-149481

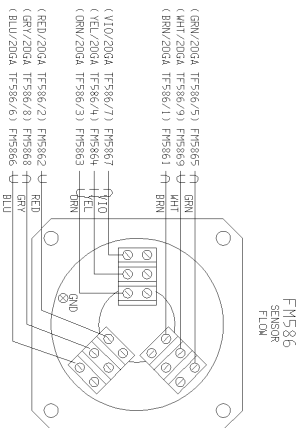
59111-149481

GEN-502  
CUST CONN  
SPLIT/200A WHT  
(GENERATOR BREAKER TRIP)  
9268 (TS236-5 #35)-->CQ  
9267 (TS236-4 #35)-->CQ  
9269 (TS236-6 #35)-->CQ

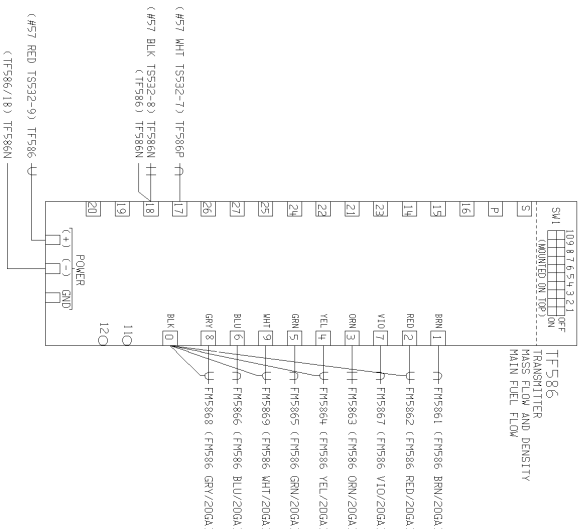
GEN-506  
CUST CONN  
SPLIT/200A WHT  
TRIP SIGNAL  
BR3 (TS234-3 #34)-->CQ  
BR4 (TS234-4 #34)-->CQ

GEN-507  
CUST CONN  
GENERATOR BREAKER  
CLOSE SIGNAL  
BR1 (TS234-1 #34)-->CQ  
BR2 (TS234-2 #34)-->CQ

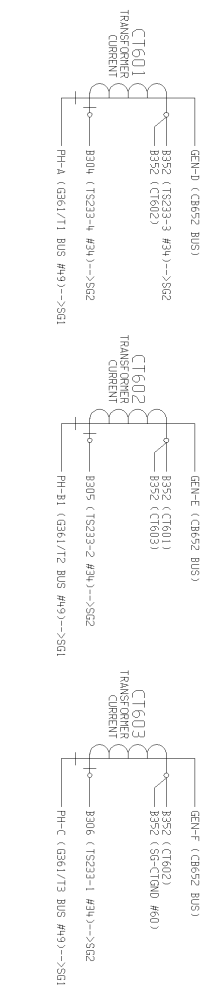
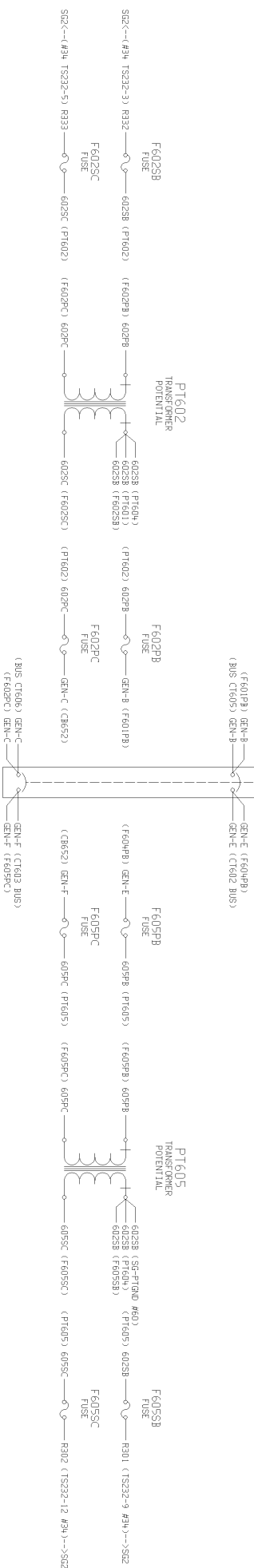
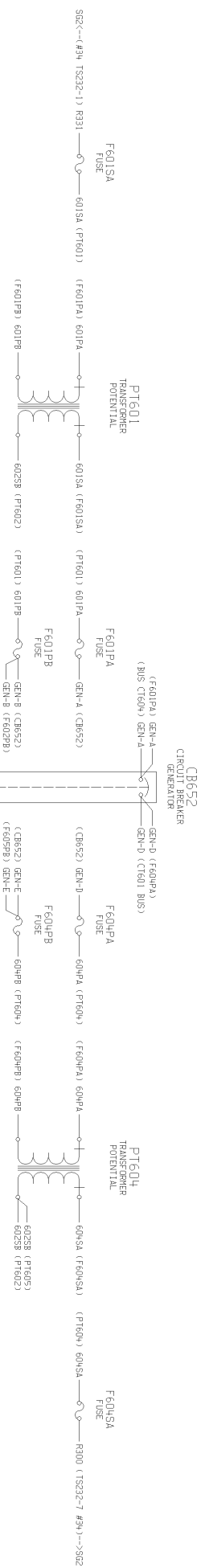
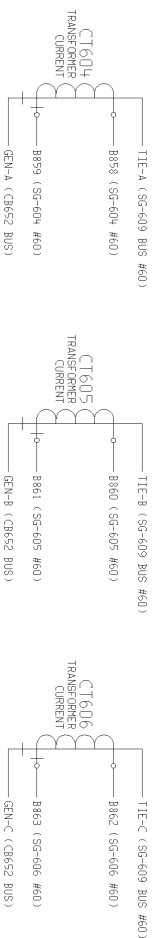
CUST-2010  
CUST CONN  
STATION DM+  
U20101 (U2010 CLR/200A #23)-->CQ  
U20102 (U2010 BLU/200A #23)-->CQ

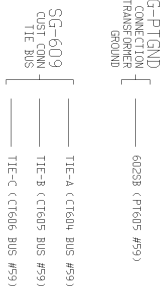
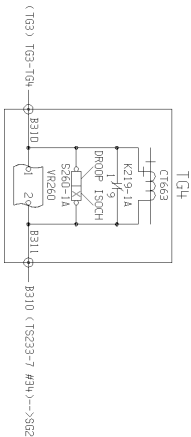
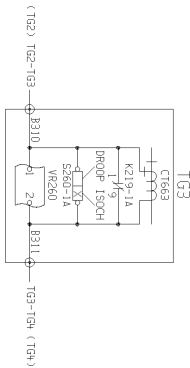
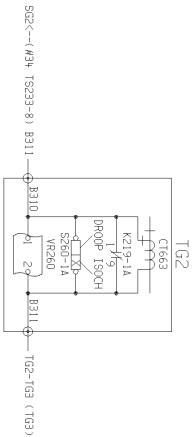
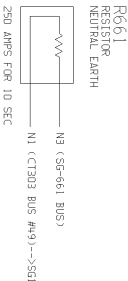
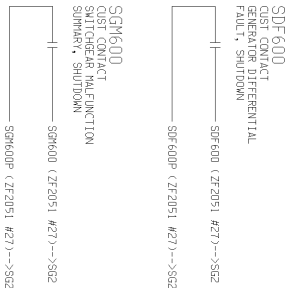
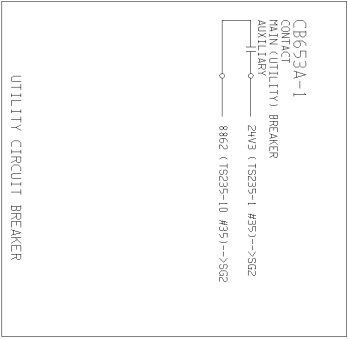
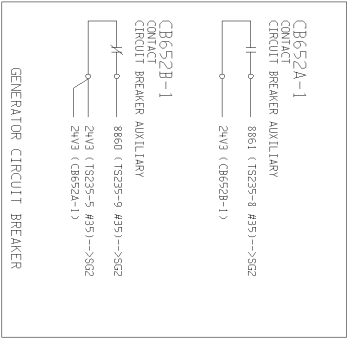
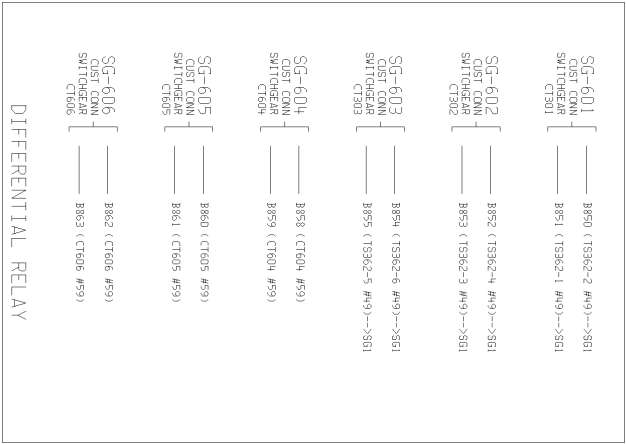


GEN-LOAD  
CUST CONN  
KV LOADS  
OTHER UNITS  
8850 (TS232-16 WHT #30)-->CQ  
8851 (TS232-17 BLK #30)-->CQ



500-04 CUSTOMER COMPONENTS  
16 WIRE GAUGE UNLESS OTHERWISE NOTED.





600-02 SWITCHGEAR  
12 WIRE GAGE UNLESS OTHERWISE NOTED.

Solar Turbines

A Turbine Company

PLANTING NO.

59111-119481

REV

B0

DATE

07-61

THIS IS A STANDARD DRAWING. ANY CHANGES TO THIS DRAWING MUST BE APPROVED BY THE DESIGNER. ANY CHANGES TO THIS DRAWING MUST BE APPROVED BY THE DESIGNER. ANY CHANGES TO THIS DRAWING MUST BE APPROVED BY THE DESIGNER.

DESIGN: A. J. JENSEN, JR. (A. J. JENSEN, JR.)

