

# 48Y WIRE DIAGRAM INDEX

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# 48Y WIRE DIAGRAM INDEX

## DC CIRCUITS

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MAIN.....	202290
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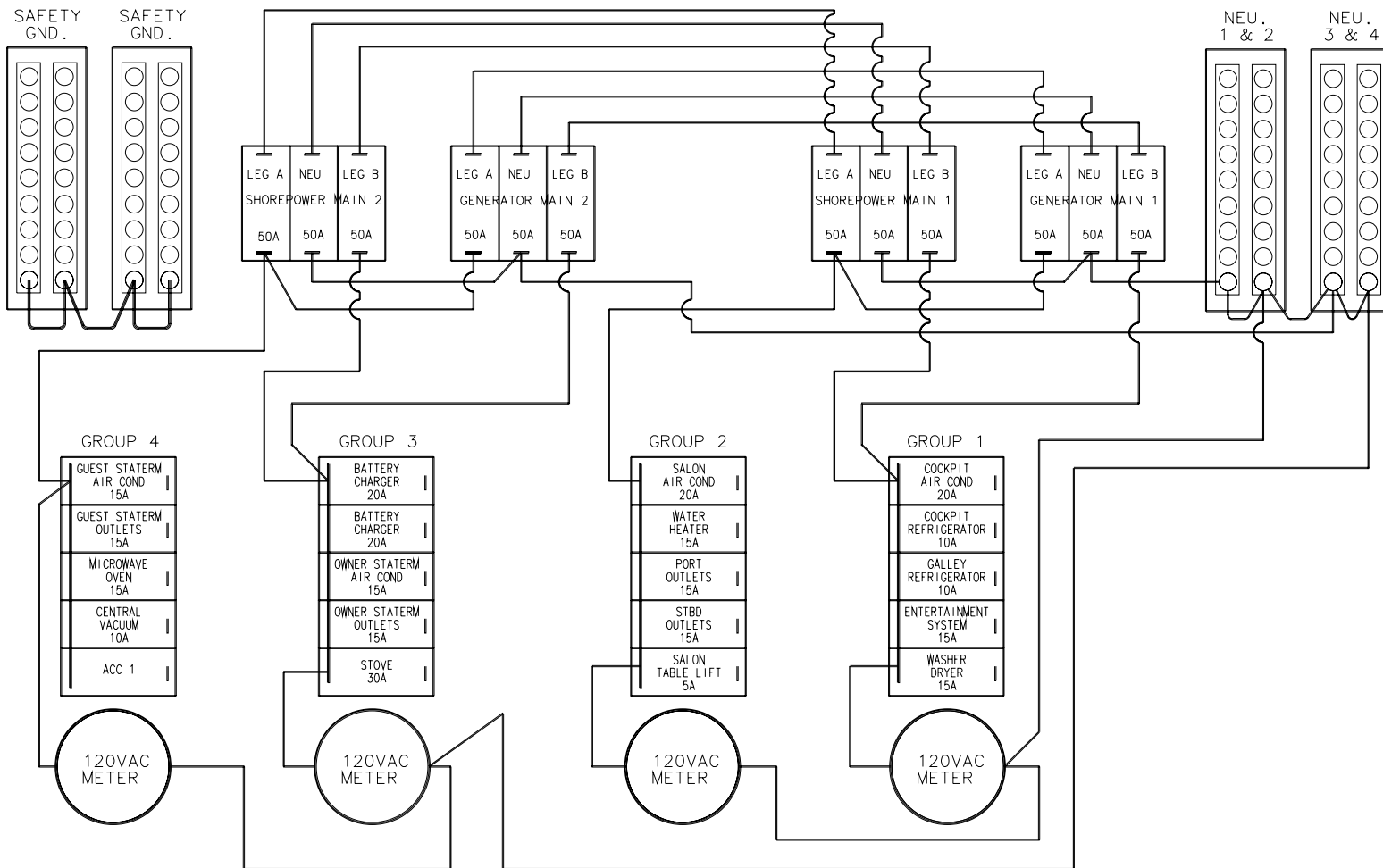
## DC 12V HARNESSES

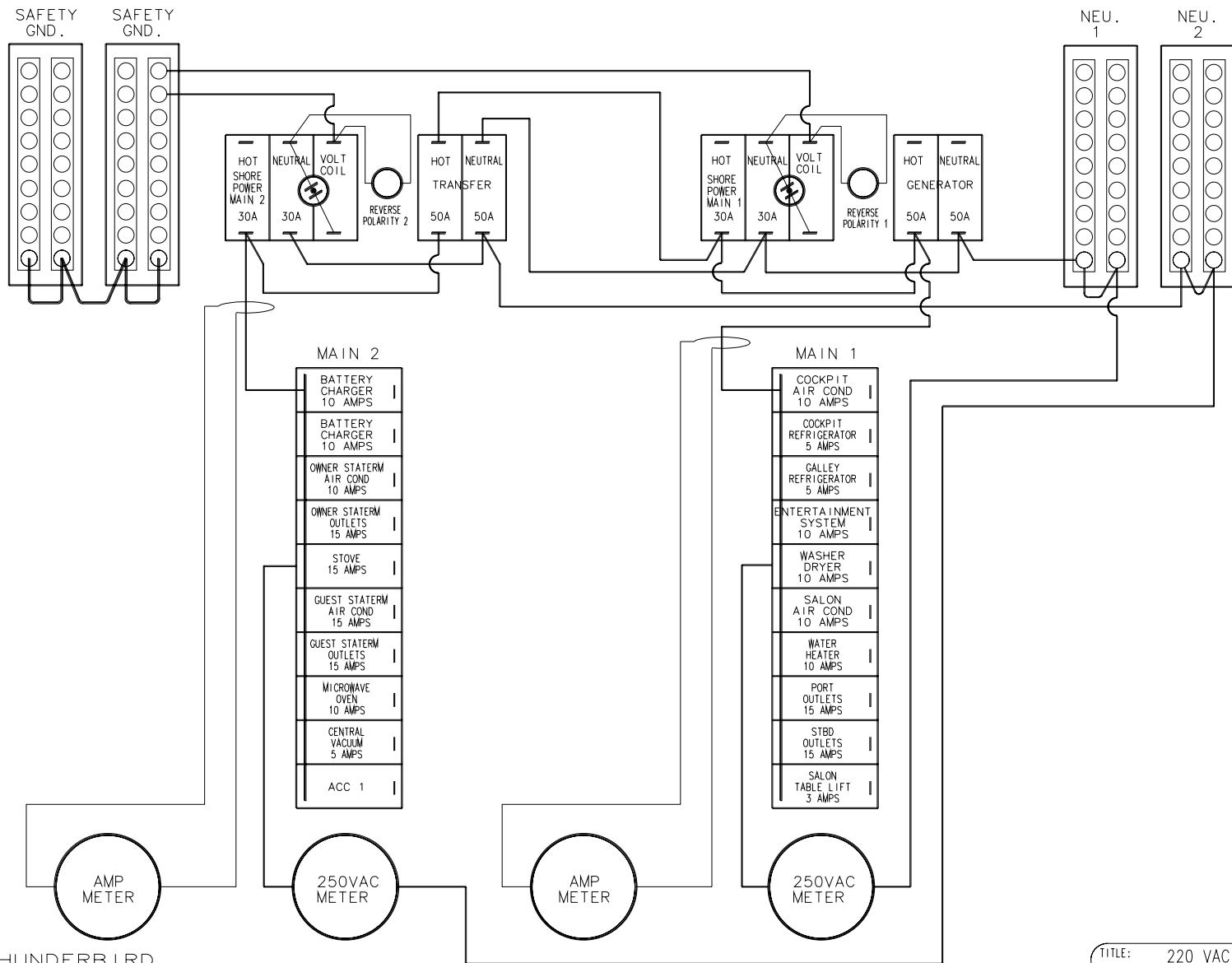
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THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: 220 VAC  
SCHEMATIC  
MOD.: 48Y  
DR BY: JAW

05

# LEGEND

3-WIRE AC CONDUCTOR

BREAKER

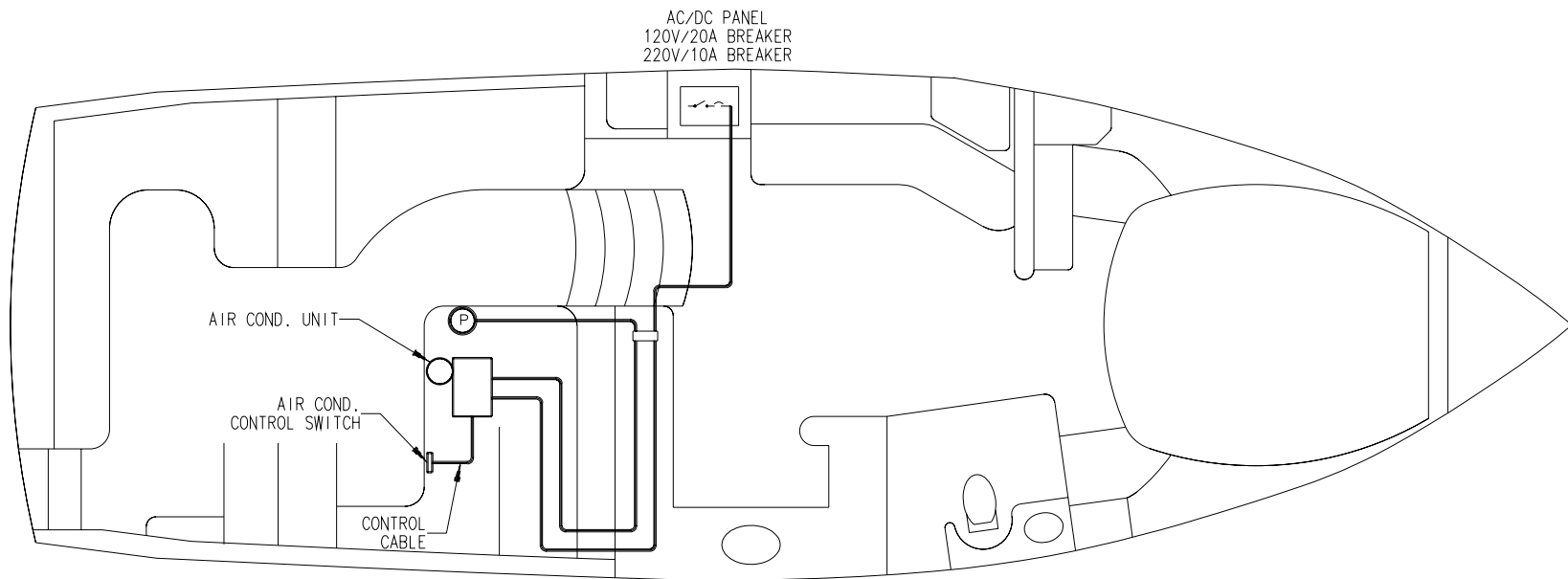
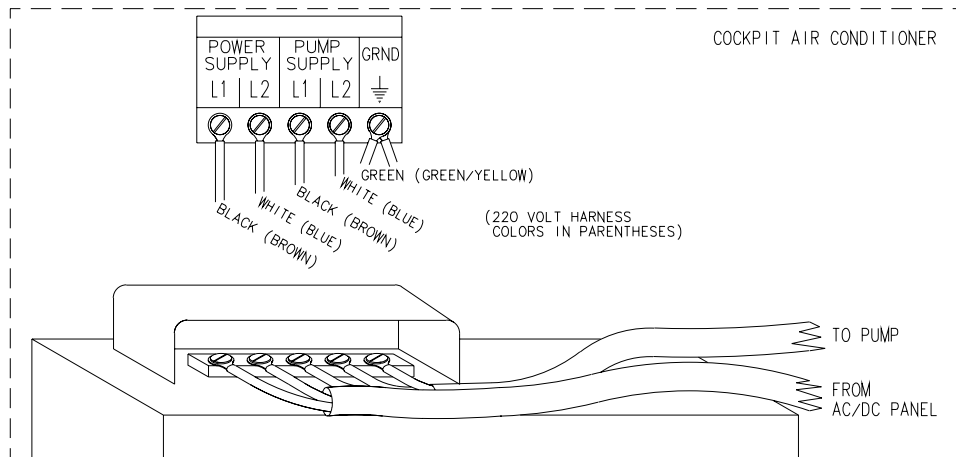
PUMP

AC PLUG

COCKPIT AIR CONDITIONER

TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 1 & 2, TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "COCKPIT AIR COND" BREAKER TO "ON".
4. THE COCKPIT AIR CONDITIONER IS NOW SUPPLIED WITH POWER.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: AIR CONDITIONER,  
COCKPIT

MOD.: 48Y  
DR BY: JAW

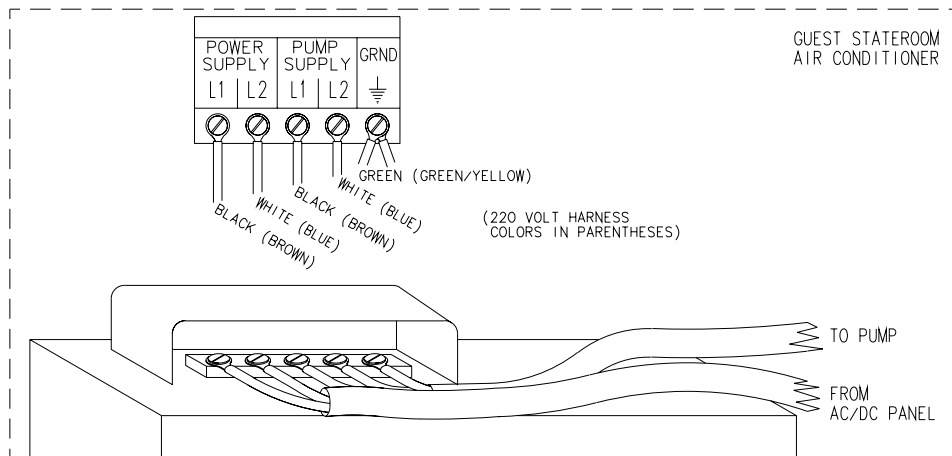
06

# LEGEND

3-WIRE AC CONDUCTOR

BREAKER

PUMP

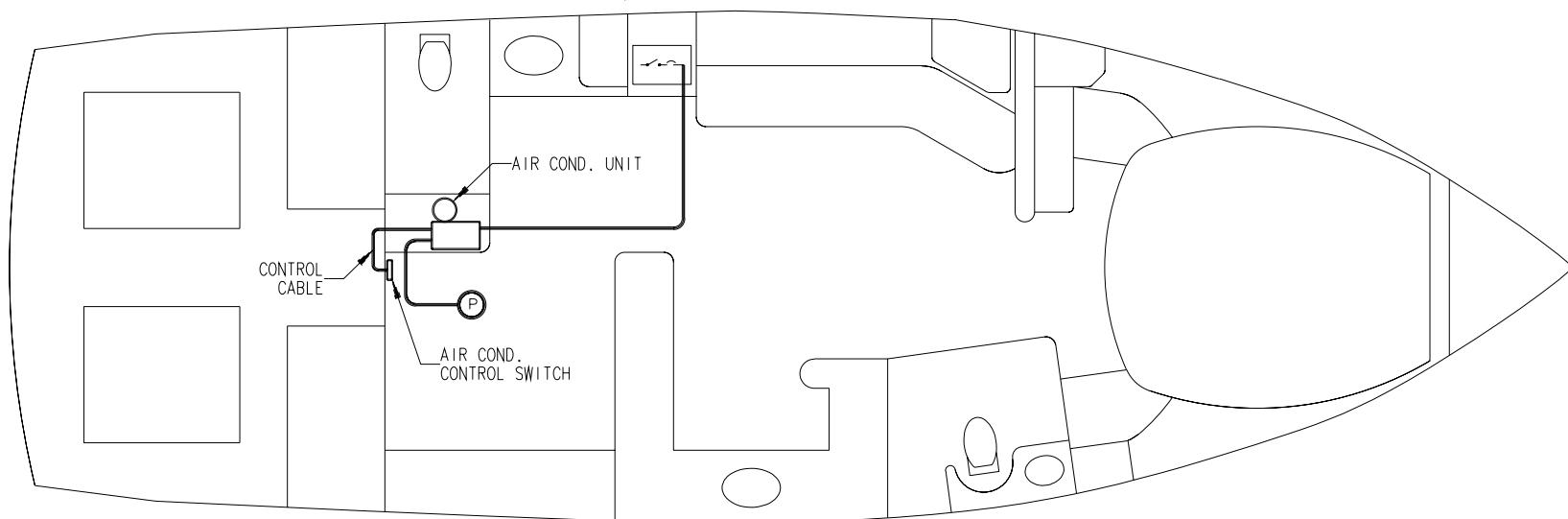


GUEST STATEROOM  
AIR CONDITIONER

TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 3 & 4, TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GUEST STATEROOM AIR COND" BREAKER TO "ON".
4. THE GUEST STATEROOM AIR CONDITIONER IS NOW SUPPLIED WITH POWER.

AC/DC PANEL  
120V/15A BREAKER  
220V/10A BREAKER






THUNDERBIRD  
PRODUCTS  
ENGINEERING

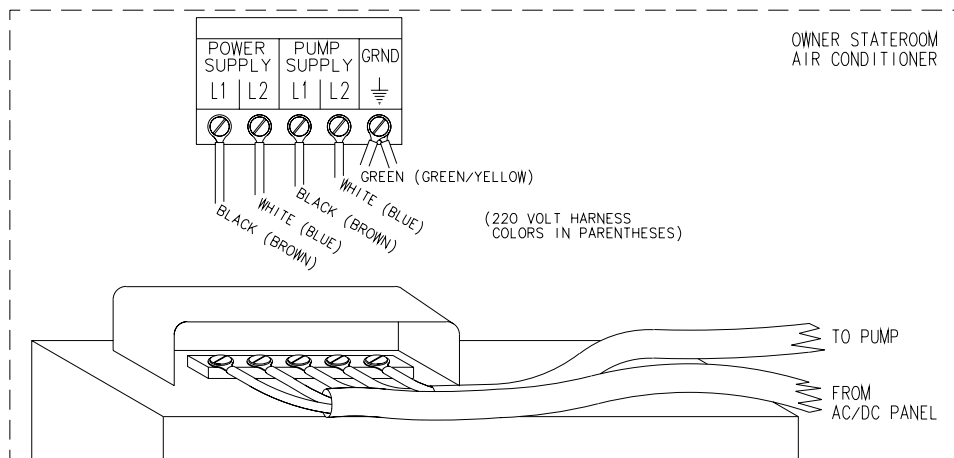
TITLE: AIR CONDITIONER,  
GUEST STATEROOM

MOD.: 48Y  
DR BY: JAW

07

# LEGEND

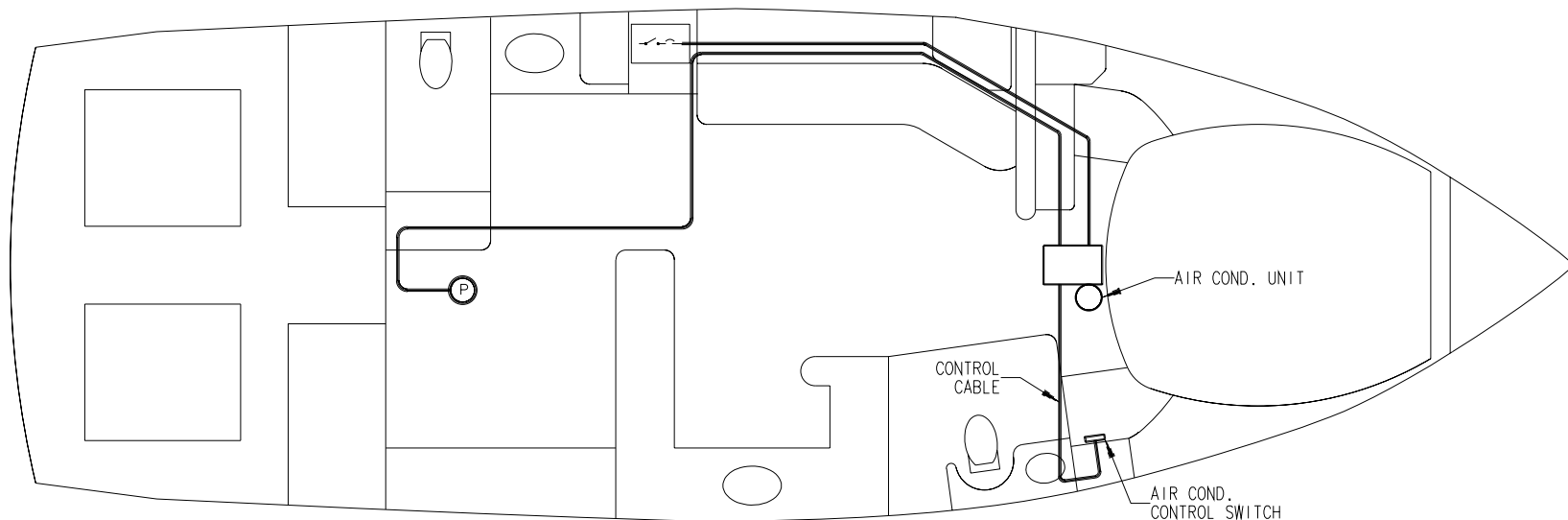
3-WIRE AC CONDUCTOR	
BREAKER	
PUMP	



## TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 3 & 4, TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER STATEROOM AIR COND" BREAKER TO "ON".
4. THE OWNER STATEROOM AIR CONDITIONER IS NOW SUPPLIED WITH POWER.

AC/DC PANEL  
120V/15A BREAKER  
220V/10A BREAKER






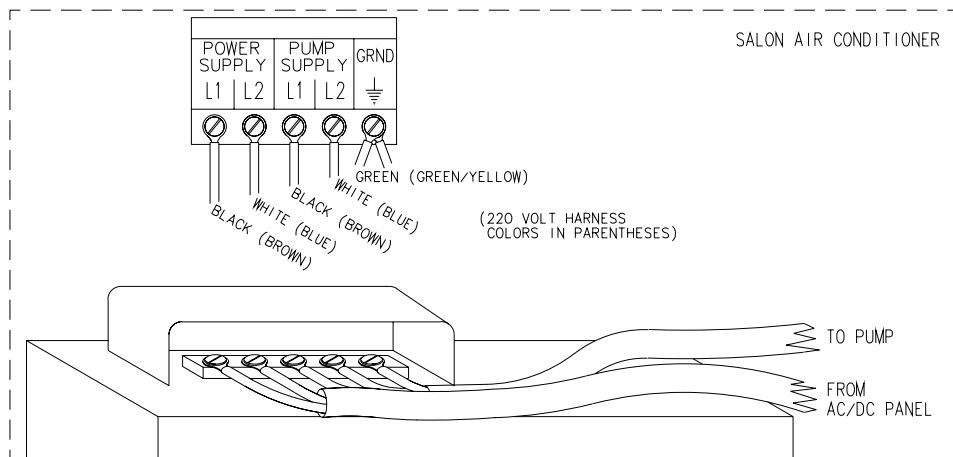
THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: AIR CONDITIONER, OWNER STATEROOM	
MOD.: 48Y	08
DR BY: JAW	



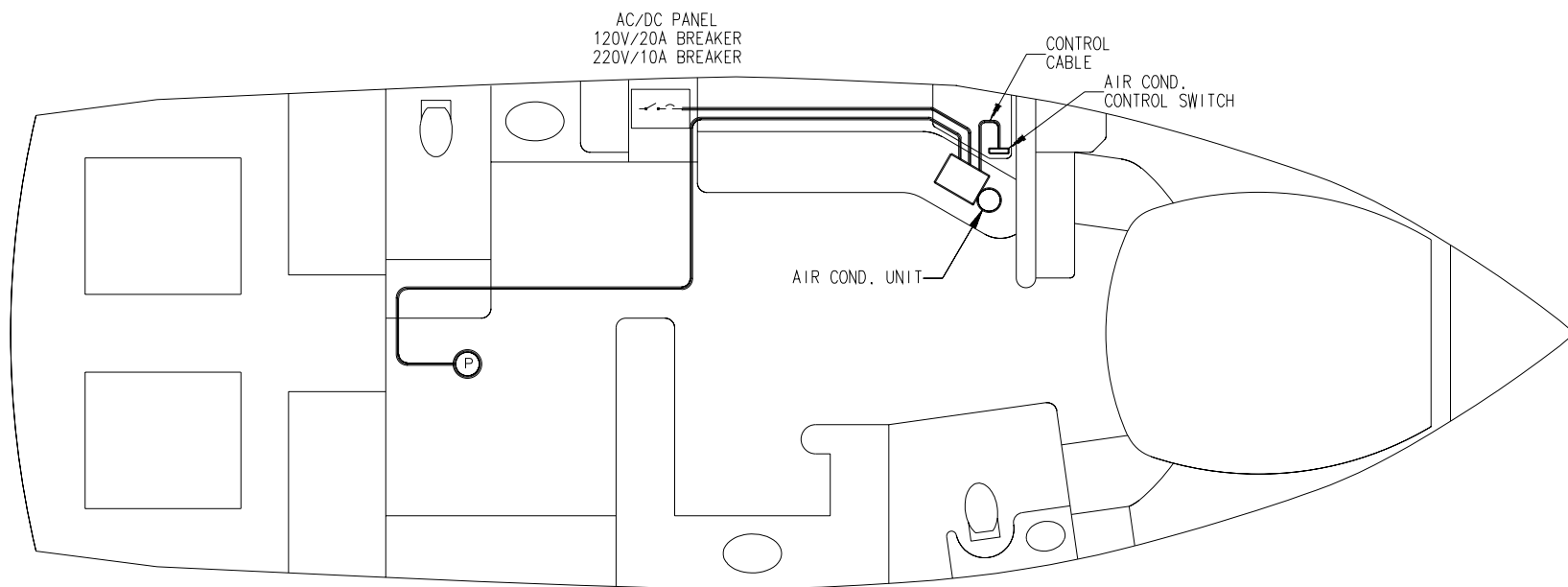
# LEGEND

3-WIRE AC CONDUCTOR	
BREAKER	
PUMP	



## TO OPERATE:



1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 1 & 2, TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "SALON AIR COND" BREAKER TO "ON".
4. THE SALON AIR CONDITIONER IS NOW SUPPLIED WITH POWER.

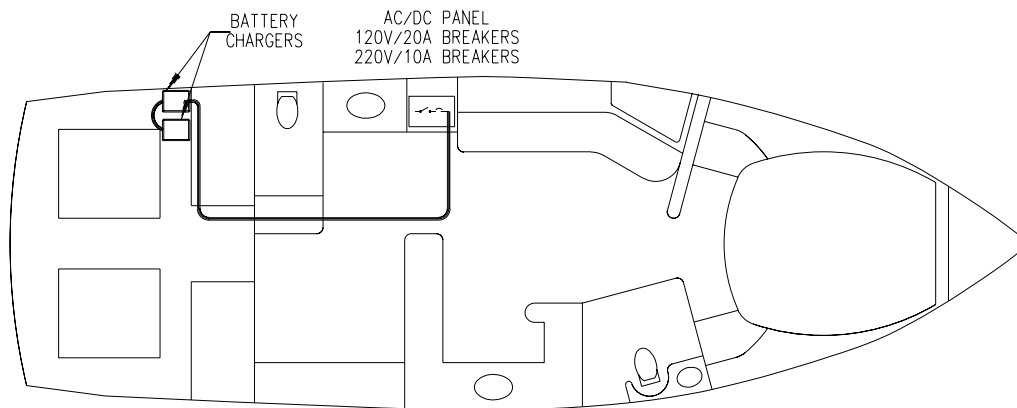


THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: AIR CONDITIONER, SALON	
MOD.: 48Y	09
DR BY: JAW	

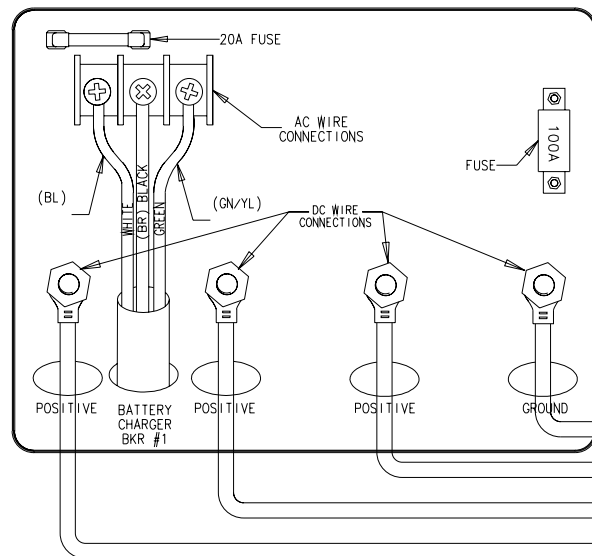
# LEGEND

BREAKER	
3-WIRE AC CONDUCTOR	

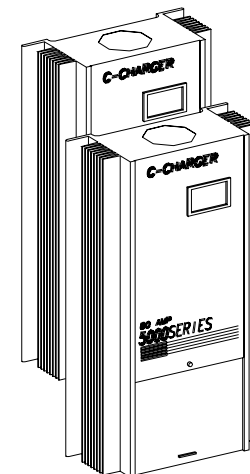
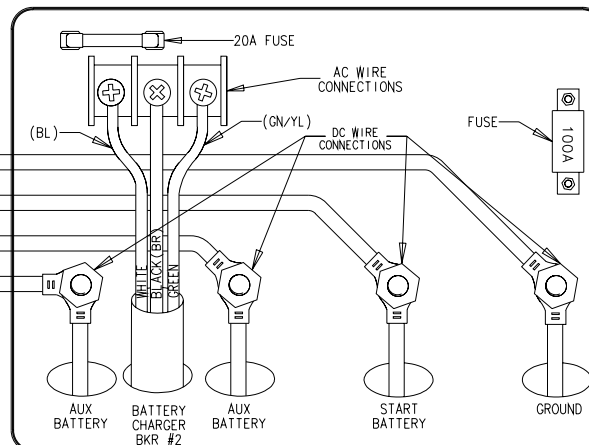


## TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH BOTH SHOREPOWER BREAKERS TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "BATTERY CHARGER" BREAKERS TO "ON".
4. CHECK FACE OF BATTERY CHARGER FOR "DC AVAILABLE" LIGHT.
5. AFTER 24 HOURS OF CHARGING, BATTERIES SHOULD READ 12+ VOLTS ON THE DASH VOLTMETER.
6. IF BATTERIES READ BELOW 12V OR DROP BELOW 12V WITHIN 15 MINUTES, HAVE THE BATTERIES CHECKED.



**CAUTION!**  
HIGH VOLTAGE  
220V COLORS IN ( )



TITLE: BATTERY CHARGERS

MOD.: 48Y  
DR. BY: JAW

10



THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND

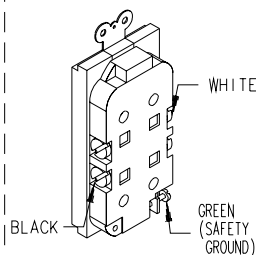
3-WIRE AC CONDUCTOR

BREAKER

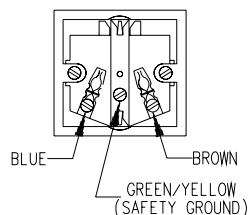
AC PLUG

OUTLET

## 120V AC OUTLET (REAR VIEW)



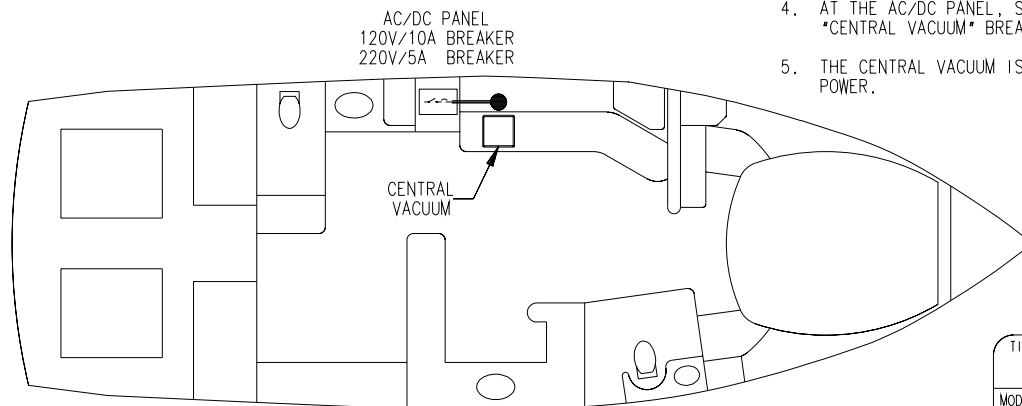
## 220V AC OUTLET (REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

## TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 3 & 4, TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "CENTRAL VACUUM" BREAKER TO "ON".
5. THE CENTRAL VACUUM IS NOW SUPPLIED WITH POWER.



TITLE: CENTRAL  
VACUUM

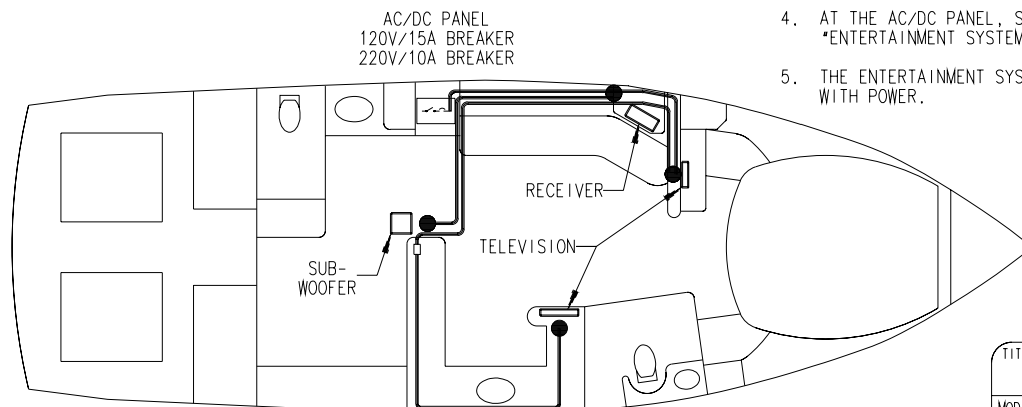
MOD.: 48Y

DR BY: JAW

11A

## TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 1 & 2, TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "ENTERTAINMENT SYSTEM" BREAKER TO "ON".
5. THE ENTERTAINMENT SYSEM IS NOW SUPPLIED WITH POWER.



TITLE: ENTERTAINMENT  
SYSTEM

MOD.: 48Y

DR BY: JAW

11B

# LEGEND

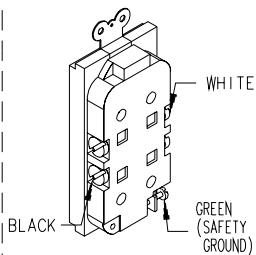
OUTLET ●

BREAKER 

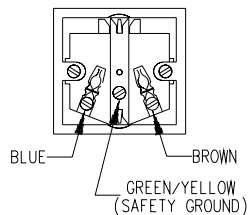
AC PLUG □

3-WIRE AC CONDUCTOR —

120V AC OUTLET  
(REAR VIEW)



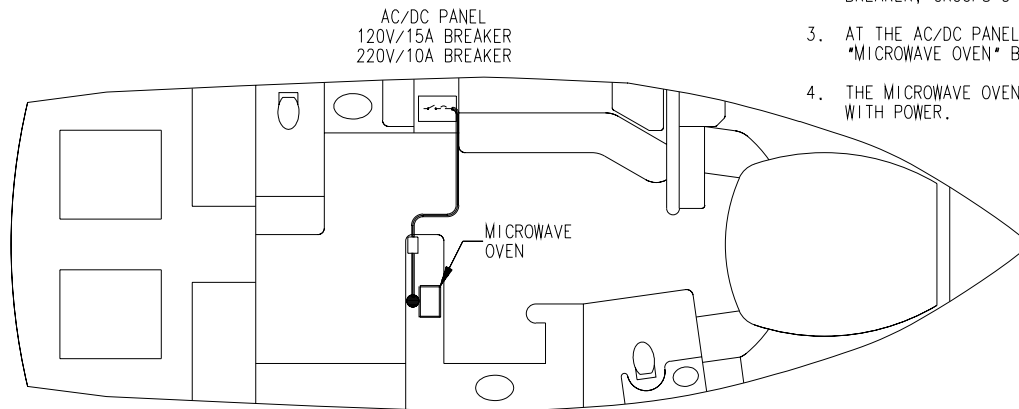
220V AC OUTLET  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

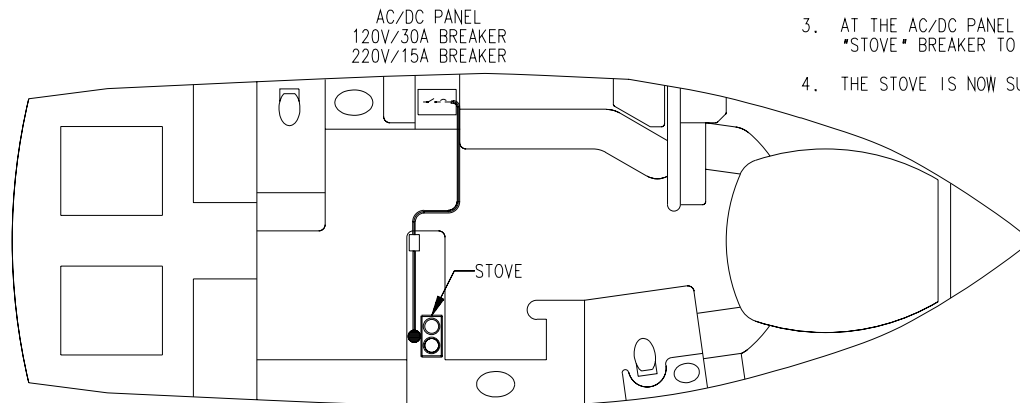
1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 3 & 4, TO "ON".
3. AT THE AC/DC PANEL SWITCH THE "MICROWAVE OVEN" BREAKER TO "ON".
4. THE MICROWAVE OVEN IS NOW SUPPLIED WITH POWER.



TITLE: MICROWAVE OVEN  
MOD.: 48Y  
DR BY: JAW  
12A

TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 3 & 4 TO "ON".
3. AT THE AC/DC PANEL SWITCH THE "STOVE" BREAKER TO "ON".
4. THE STOVE IS NOW SUPPLIED WITH POWER.



TITLE: STOVE  
MOD.: 48Y  
DR BY: JAW  
12B

# LEGEND

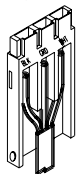
3-WIRE AC  
CONDUCTOR

BREAKER

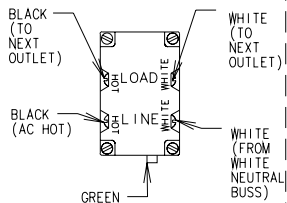
OUTLET

GFCI  
OUTLET

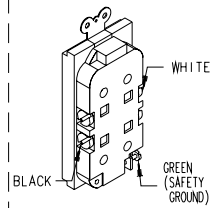
AC HARNESS PLUG



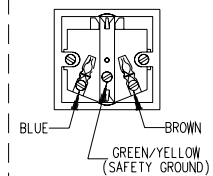
## 120V AC GFCI OUTLET



## 120V AC OUTLET (REAR VIEW)

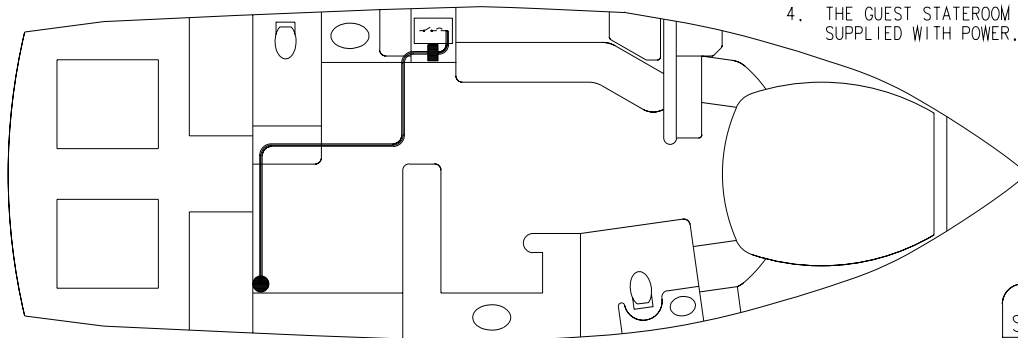


## 220V AC OUTLET (REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

AC/DC PANEL  
120V/15A BREAKER  
220V/15A BREAKER



TITLE: GUEST  
STATEROOM OUTLETS  
MOD.: 48Y  
OR BY: JAW  
13A

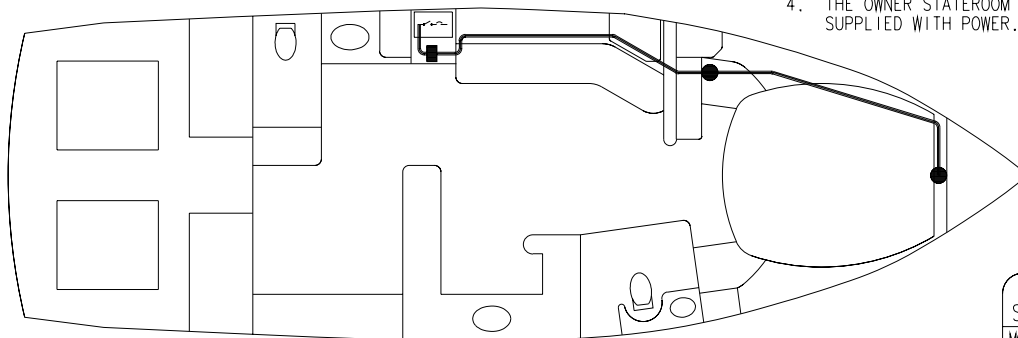
## TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 3 & 4, TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GUEST STATEROOM OUTLETS" BREAKER TO "ON".
4. THE GUEST STATEROOM OUTLETS ARE NOW SUPPLIED WITH POWER.

## TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 3 & 4 TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER STATEROOM OUTLETS" BREAKER TO "ON".
4. THE OWNER STATEROOM OUTLETS ARE NOW SUPPLIED WITH POWER.

AC/DC PANEL  
120V/15A BREAKER  
220V/15A BREAKER



TITLE: OWNER  
STATEROOM OUTLETS  
MOD.: 48Y  
OR BY: JAW  
13B

# LEGEND

AC PLUG 

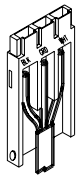
BREAKER 

OUTLET 

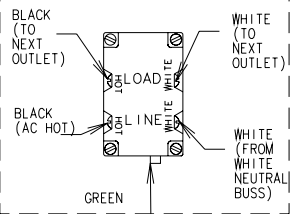
GFCI  
OUTLET 

3-WIRE AC  
CONDUCTOR 

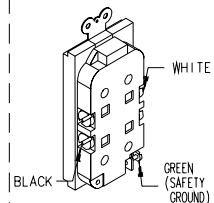
AC HARNESS PLUG



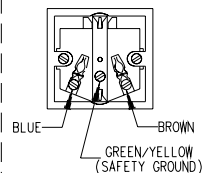
## 120V AC GFCI OUTLET



## 120V AC OUTLET (REAR VIEW)



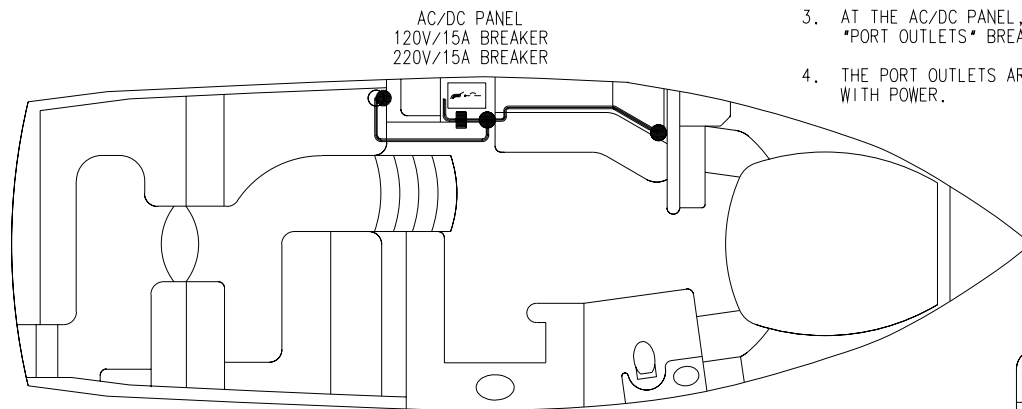
## 220V AC OUTLET (REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 1 & 2 TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "PORT OUTLETS" BREAKER TO "ON".
4. THE PORT OUTLETS ARE NOW SUPPLIED WITH POWER.



TITLE: PORT  
OUTLETS

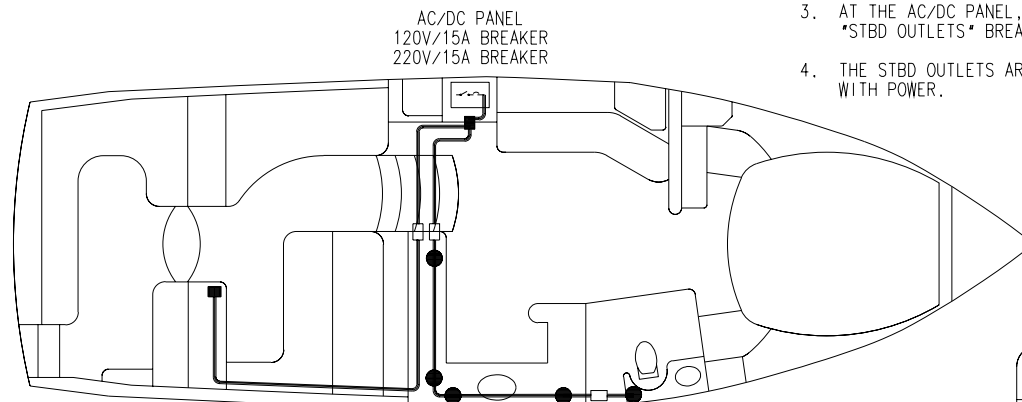
MOD.: 48Y

DR BY: JAW

14A

TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 1 & 2 TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "STBD OUTLETS" BREAKER TO "ON".
4. THE STBD OUTLETS ARE NOW SUPPLIED WITH POWER.



TITLE: STBD  
OUTLETS

MOD.: 48Y

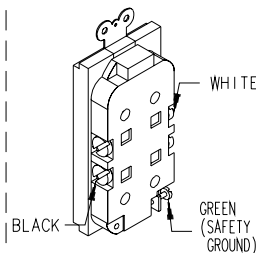
DR BY: JAW

14B

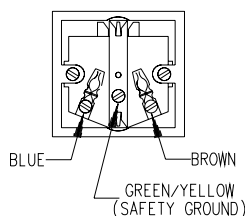
# LEGEND

OUTLET	●
BREAKER	—
AC PLUG	□
3-WIRE AC CONDUCTOR	—

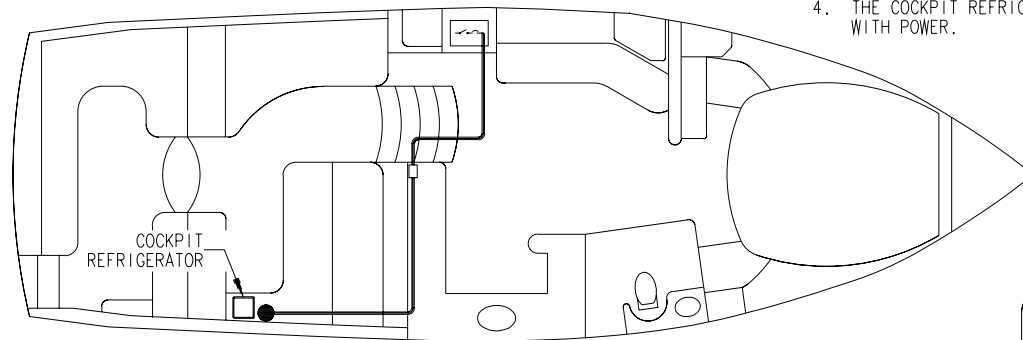
120V AC OUTLET  
(REAR VIEW)



220V AC OUTLET  
(REAR VIEW)



AC/DC PANEL  
120V/10A BREAKER  
220V/5A BREAKER



TITLE: COCKPIT  
REFRIGERATOR  
MOD.: 48Y  
DR BY: JAW

15A

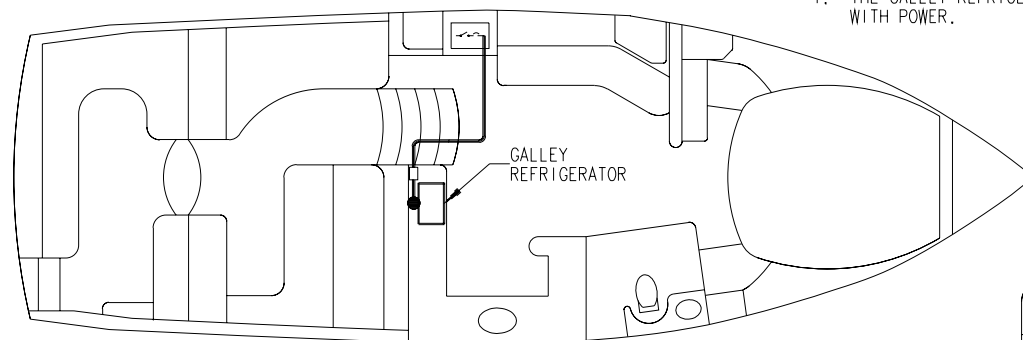
TO OPERATE:  
1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.

2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 1 & 2, TO "ON".

3. AT THE AC/DC PANEL, SWITCH THE "COCKPIT REFRIGERATOR" BREAKER TO "ON".

4. THE COCKPIT REFRIGERATOR IS NOW SUPPLIED WITH POWER.

AC/DC PANEL  
120V/10A BREAKER  
220V/5A BREAKER



TITLE: GALLEY  
REFRIGERATOR  
MOD.: 48Y  
DR BY: JAW

15B

TO OPERATE:  
1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.

2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 1 & 2, TO "ON".

3. AT THE AC/DC PANEL, SWITCH THE "GALLEY REFRIGERATOR" BREAKER TO "ON".

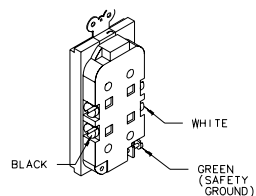
4. THE GALLEY REFRIGERATOR IS NOW SUPPLIED WITH POWER.

# LEGEND

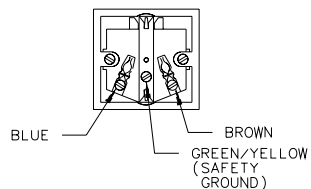
OUTLET ●

BREAKER 

3-WIRE AC CONDUCTOR 



120V AC OUTLET  
(REAR VIEW)



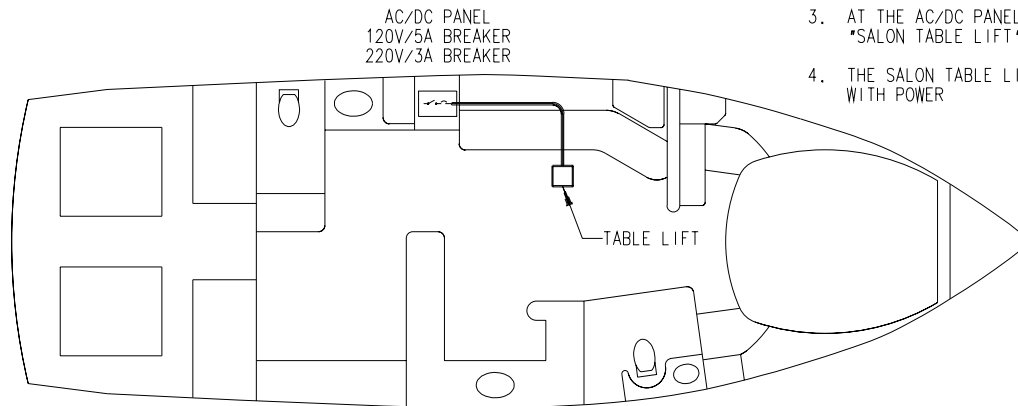
220V AC OUTLET  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

## TO OPERATE:

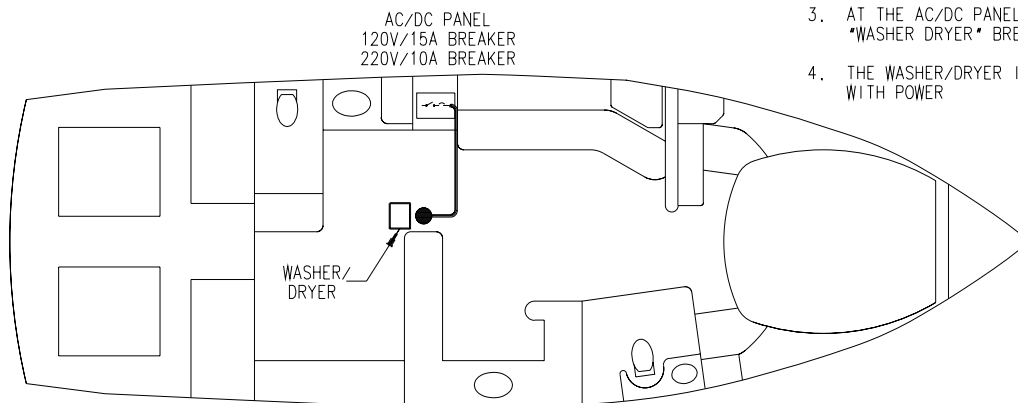
1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUP 1 & 2, TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "SALON TABLE LIFT" BREAKER TO "ON".
4. THE SALON TABLE LIFT IS NOW SUPPLIED WITH POWER



TITLE: SALON  
TABLE LIFT  
MOD.: 48Y  
DR BY: JAW  
16A

## TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH SHOREPOWER BREAKER OR GENERATOR BREAKER, GROUPS 1 & 2, TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "WASHER DRYER" BREAKER TO "ON".
4. THE WASHER/DRYER IS NOW SUPPLIED WITH POWER



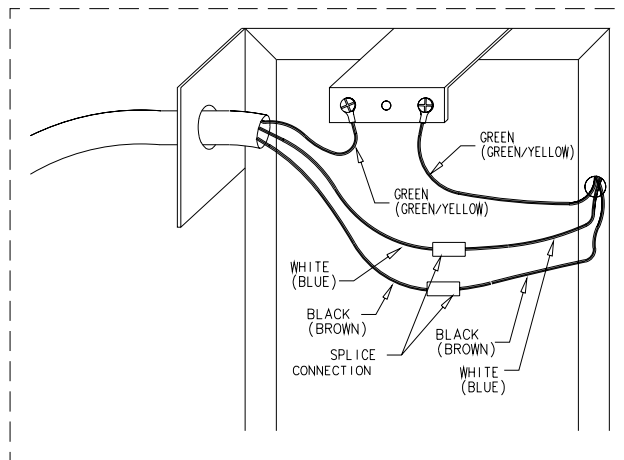
TITLE: WASHER/  
DRYER  
MOD.: 48Y  
DR BY: JAW  
16B



## LEGEND

BREAKER 

3-WIRE AC  
CONDUCTOR 

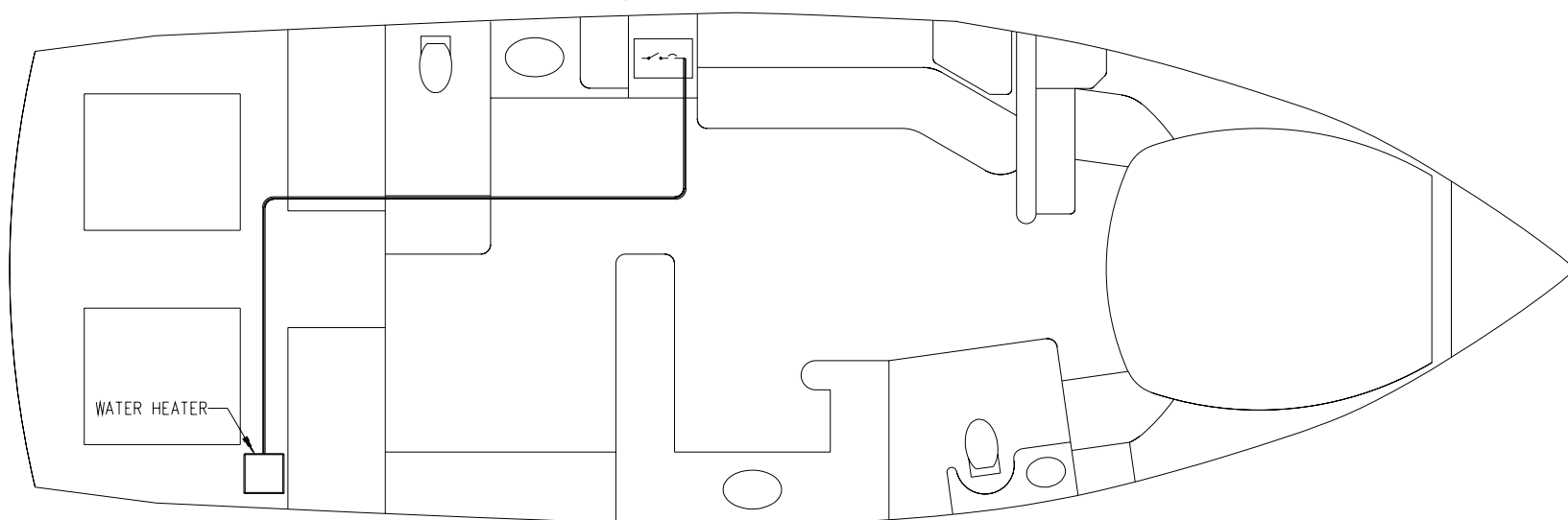


TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH BOTH SHOREPOWER BREAKERS TO "ON", OR BOTH GENERATOR BREAKERS TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "WATER HEATER" BREAKER TO "ON".
5. THE WATER HEATER IS NOW SUPPLIED WITH POWER.

**CAUTION!** BE SURE THE BOAT IS SUPPLIED WITH WATER IN THE FRESH WATER TANK.

AC/DC PANEL  
120V/15A BREAKER  
220V/10A BREAKER



THUNDERBIRD  
PRODUCTS  
ENGINEERING

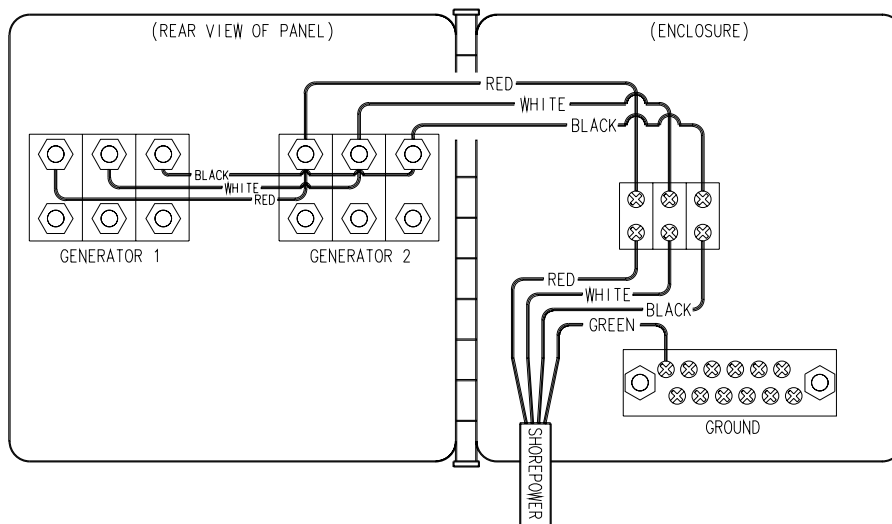
TITLE: WATER HEATER

MOD.: 48Y  
DR BY: JAW

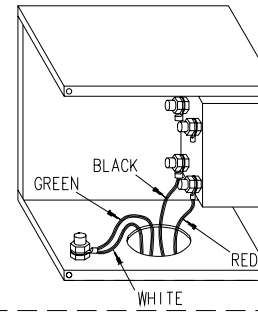
17

FIG. 1

AC/DC PANEL (W/ DOOR OPEN)



GENERATOR WIRING FROM AC/DC PANEL



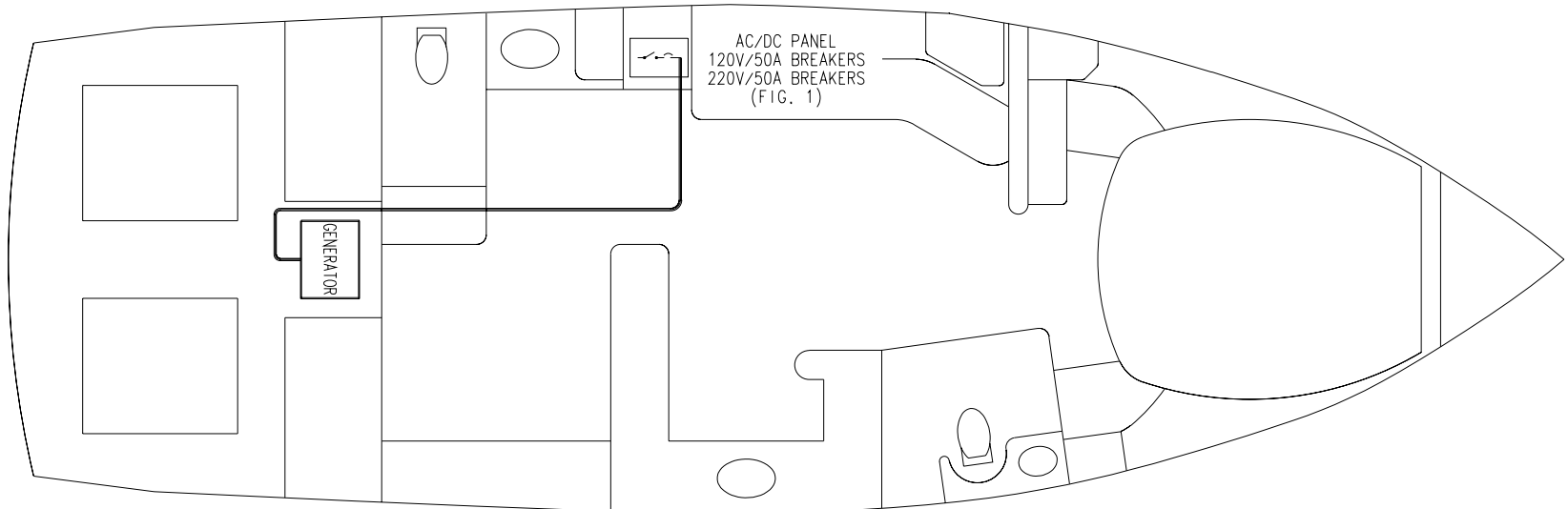
AFTER READING AND UNDERSTANDING THE GENERATOR OPERATOR'S MANUAL:

OPERATE GENERATOR FROM THE REMOTE SWITCH:

1. TEST THE CARBON MONOXIDE DETECTOR AND BE CERTAIN IT IS OPERATING PROPERLY.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE "BLOWERS" BREAKER TO "ON" AND RUN THEM A MINIMUM OF FOUR (4) MINUTES.
3. PLACE THE "SHOREPOWER/GENERATOR" SLIDE BARS IN THE "SHOREPOWER" POSITIONS.
4. SWITCH ALL AC CIRCUIT BREAKERS TO THE "OFF" POSITION.
5. PRESS AND HOLD THE GENERATOR "START" SWITCH. NOTE: DO NOT CRANK THE ENGINE CONTINUOUSLY FOR MORE THAN TEN (10) SECONDS AT A TIME.
6. AFTER THE GENERATOR IS RUNNING, PLACE THE "SHOREPOWER/GENERATOR" SLIDE BARS IN THE "GENERATOR" POSITIONS.
7. SWITCH "ON" THE AC CIRCUIT BREAKERS (ONE AT A TIME) FOR THE ITEMS TO BE USED.

**CAUTION!**

AT OR ABOVE CRUISING SPEEDS GENERATOR COOLING SYSTEM MAY LACK PROPER WATER FLOW CAUSING GENERATOR TO SHUT DOWN.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: GENERATOR

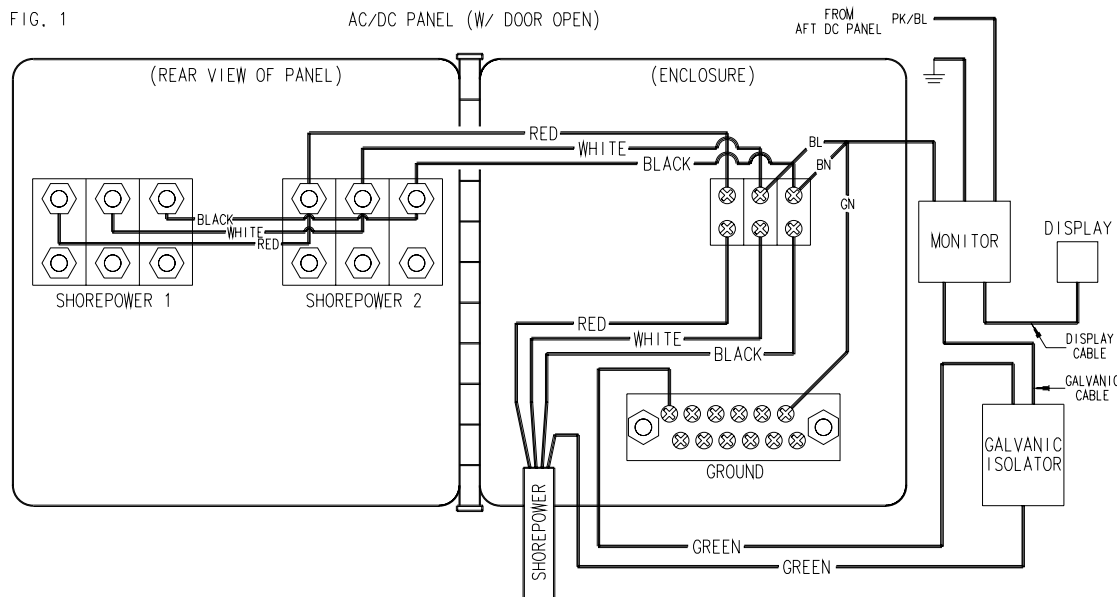
MOD.: 48Y

DR BY: JAW

18

FIG. 1

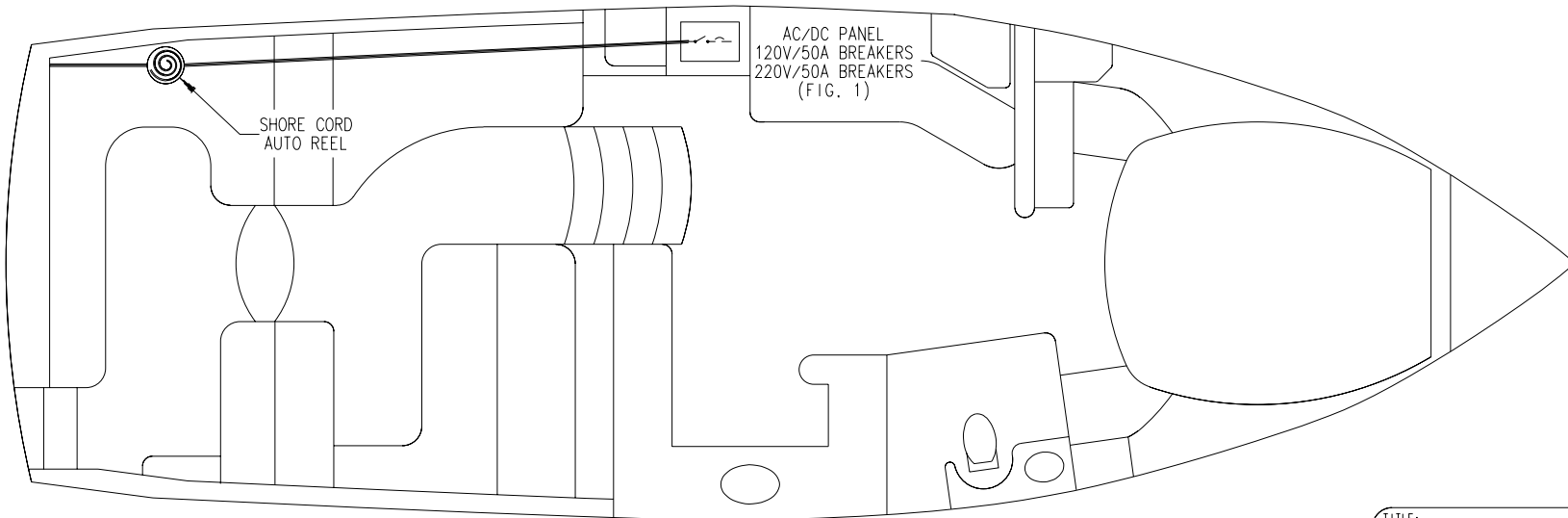
AC/DC PANEL (W/ DOOR OPEN)



\*(READ THIS COMPLETELY BEFORE OPERATING)

TO OPERATE:

- BEFORE PLUGGING INTO SHOREPOWER, SWITCH "OFF" ALL AC EQUIPMENT AND MAIN BEAKERS AT THE AC/DC PANEL, LOCATED IN THE CABIN.
- PLUG BOAT'S SHOREPOWER CORD INTO SHOREPOWER.
- IN CABIN, SWITCH SHOREPOWER BREAKERS TO "ON".  
WARNING !  
IF REVERSED POLARITY LIGHT IS "ILLUMINATED":  
-DO NOT TOUCH ELECTRICAL APPLIANCES  
-LEAVE SHIP IMMEDIATELY  
-DISCONNECT SHOREPOWER  
ALSO:  
-CONTACT MARINA TO HAVE SHOREPOWER TESTED FOR REVERSED POLARITY  
-CONTACT FORMULA'S TECHNICAL ASSISTANCE GROUP FOR ADDITIONAL ASSISTANCE.
- WHEN THE MAIN BREAKERS ARE "ON" AND NO REVERSE POLARITY LIGHT IS ILLUMINATED, ALL AC EQUIPMENT BREAKERS ARE NOW SUPPLIED WITH POWER.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: SHOREPOWER

MOD.: 48Y

DR BY: JAW

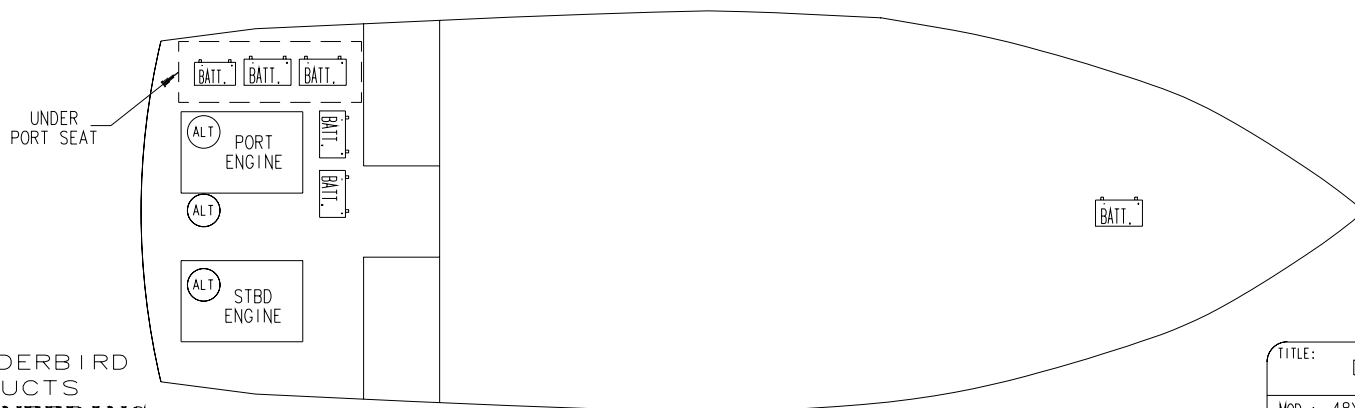
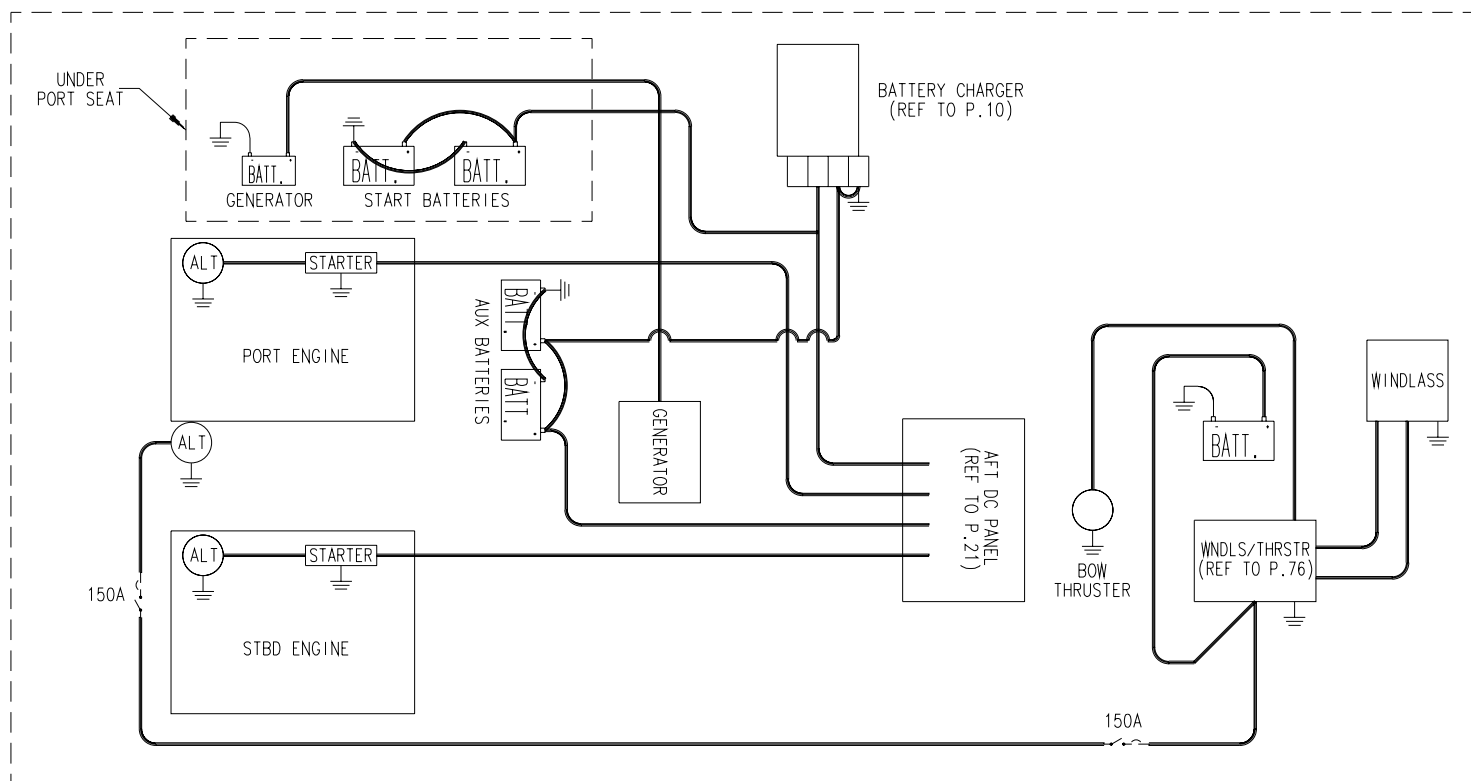
19

# LEGEND

GROUND 

BATTERY 

BREAKER 



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: DC SUPPLY

MOD.: 48Y  
DR BY: JAW

20

# LEGEND

BATTERY



SWITCH

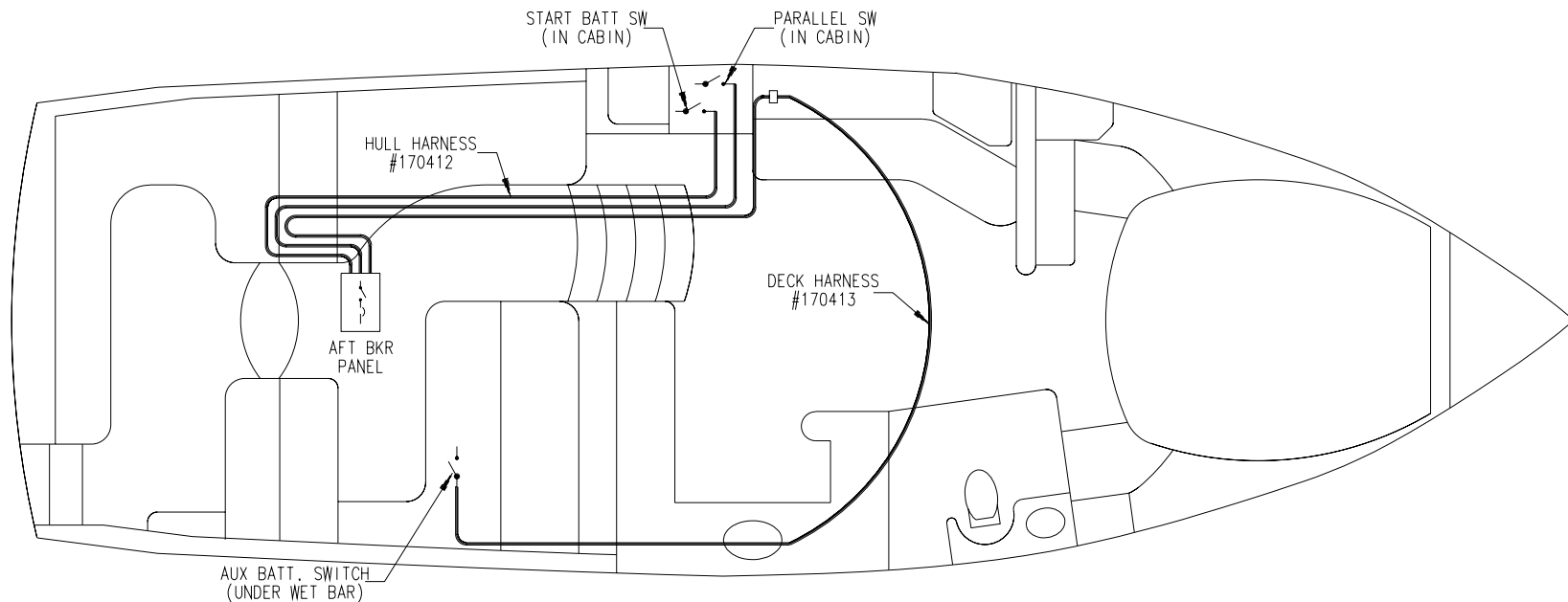


PLUGS



NOTE:

REFER TO PAGE 22 FOR DETAILED SCHEMATIC INFORMATION ABOUT THE 12V DC SUPPLY SWITCHES.



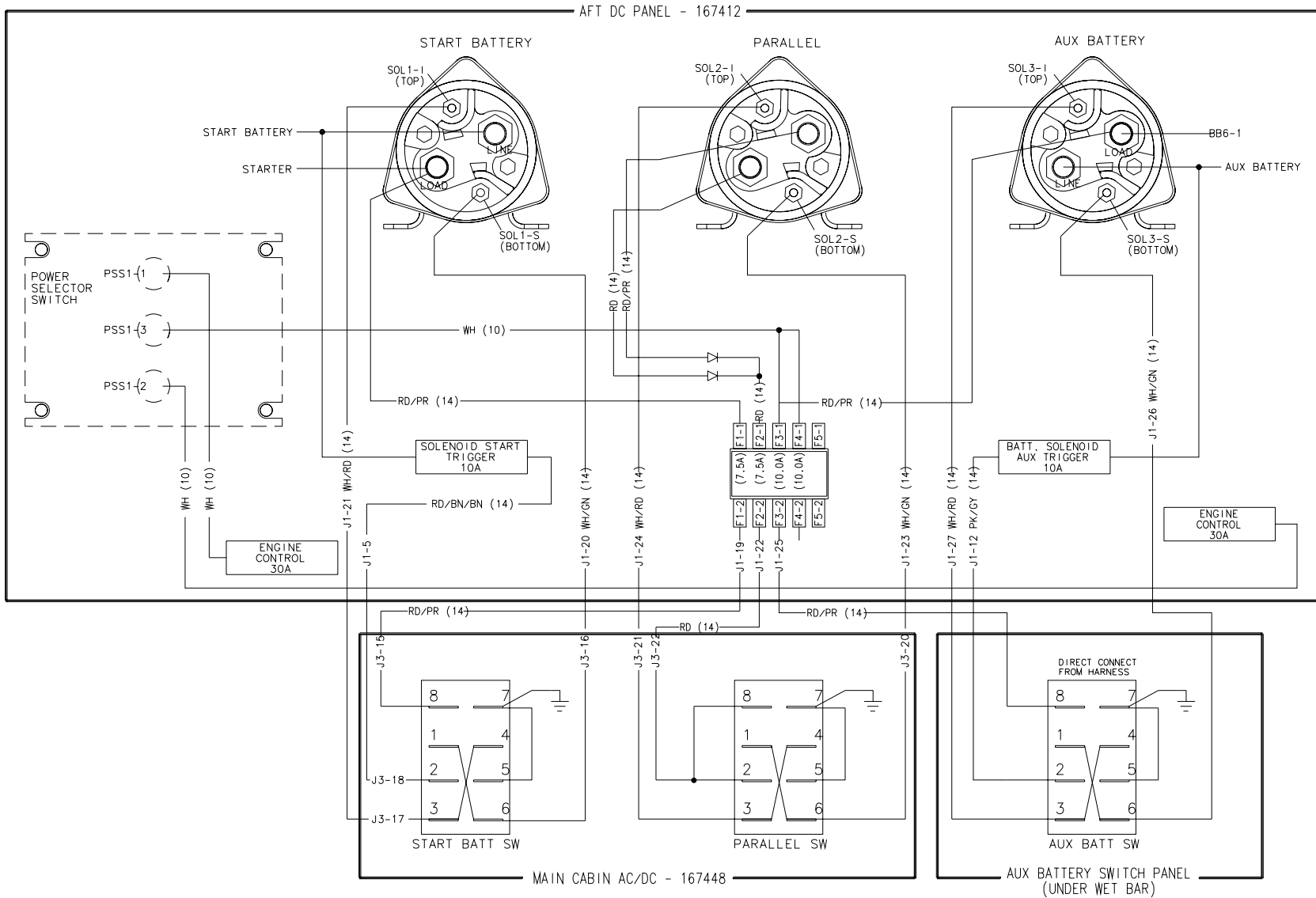
THUNDERBIRD  
PRODUCTS  
ENGINEERING

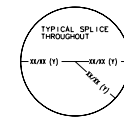
TITLE: 12V SUPPLY  
SWITCHES, LOCATION

MOD.: 48Y

DR BY: JAW

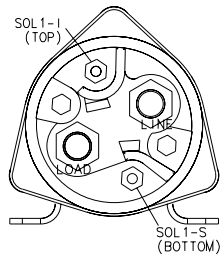
21



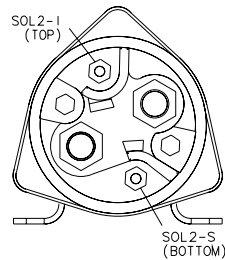


(REAR VIEW)

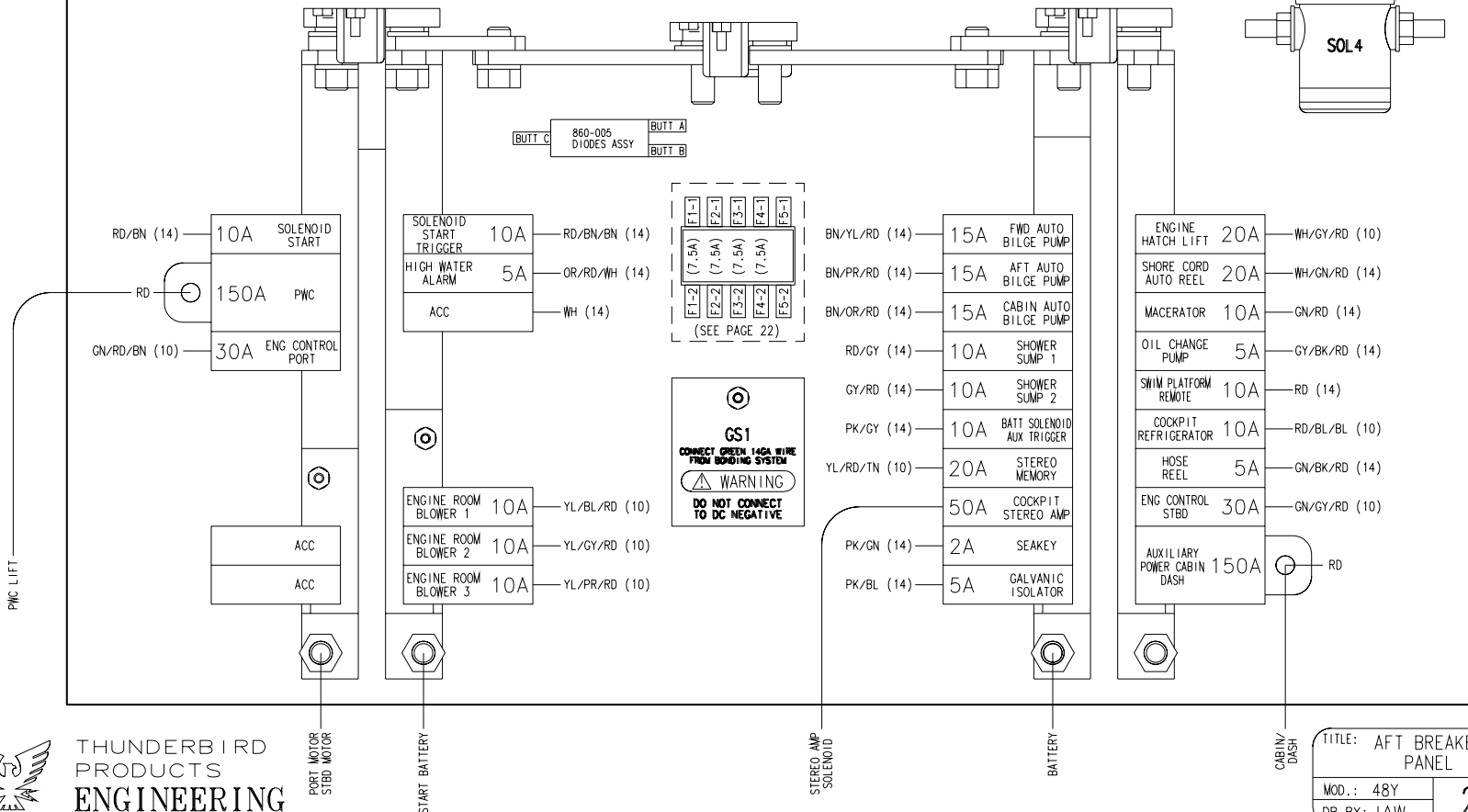
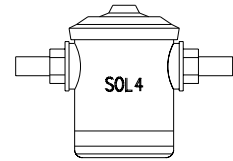
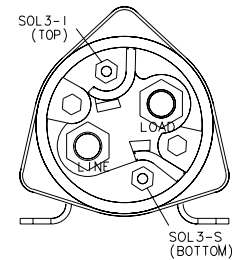
## START BATTERY



## PARALLEL



## AUX BATTERY



THUNDERBIRD  
PRODUCTS  
ENGINEERING





TITLE: AFT BREAKER  
PANEL

MOD.: 48Y  
DR BY: JAW

24

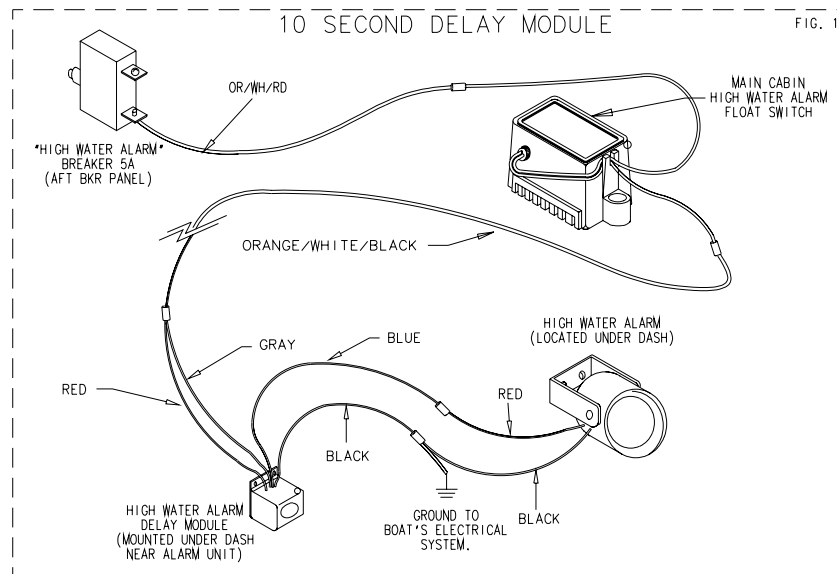


# LEGEND

GROUND	
ALARM	
FLOAT SWITCH	
PLUGS	

## 10 SECOND DELAY MODULE

FIG. 1



### TO OPERATE:

1. THE "CONST POWER" BREAKER MUST BE PUSHED IN (CLOSED).
2. AT THE AFT BKR PANEL, SWITCH THE "HIGH WATER ALARM" BREAKER TO "ON".

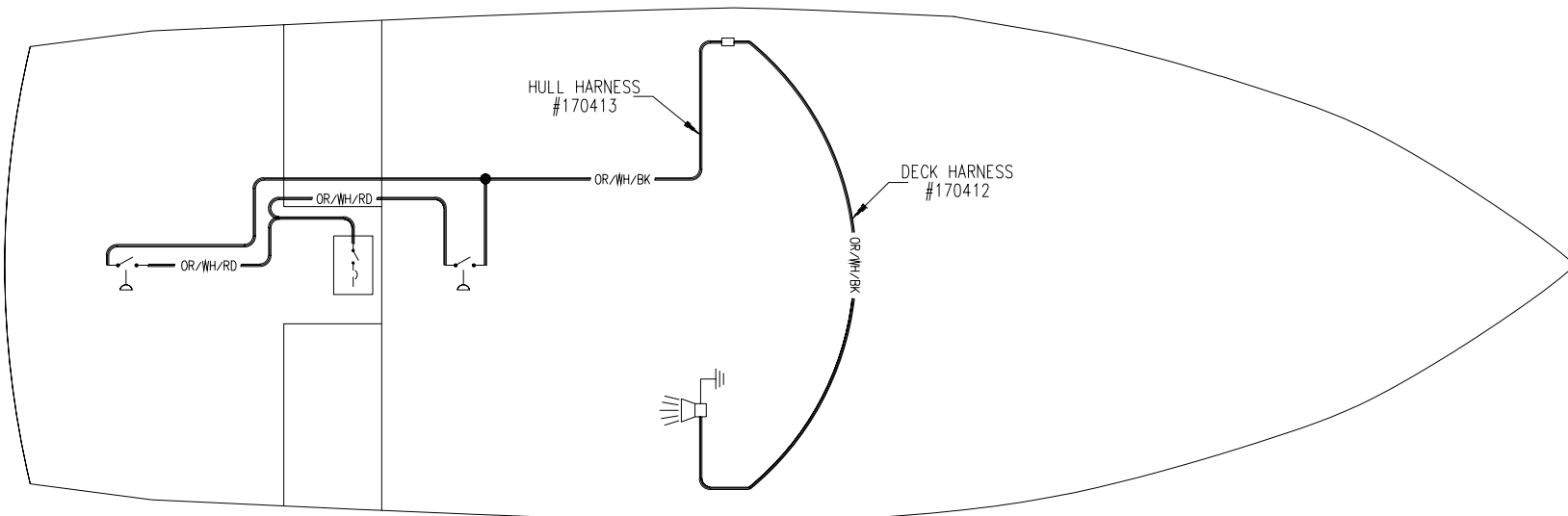
### NOTE:

THE "AUX BATT" SWITCH DOES NOT NEED TO BE SWITCHED TO "ON" FOR THE HIGH WATER ALARM TO WORK.

WHEN WATER IN THE ENGINE BILGE OR CABIN IS AT A LEVEL THAT MAY REQUIRE MANUAL PUMPING, THE UNDER-DASH ALARM WILL SOUND.

### WHEN ALARM SOUNDS:

1. CHECK ENGINE ROOM AND CABIN FOR HIGH WATER.
2. CHECK BILGE PUMPS TO SEE IF THEY ARE FUNCTIONING PROPERLY.
3. CONSULT MARINA'S SERVICE DEPARTMENT OR CALL FORMULA'S TECHNICAL ASSISTANCE GROUP.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: HIGH WATER  
ALARM

MOD.: 48Y


DR BY: JAW


25

# LEGEND

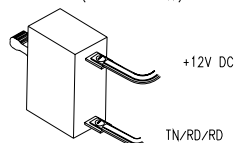
GROUND 

BREAKER 

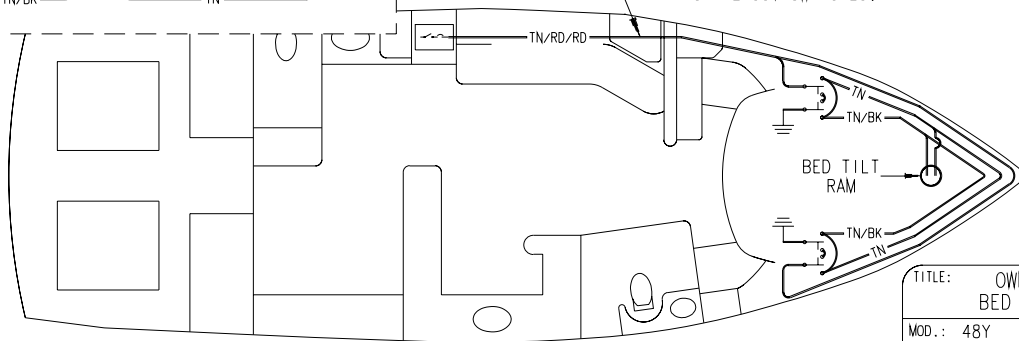
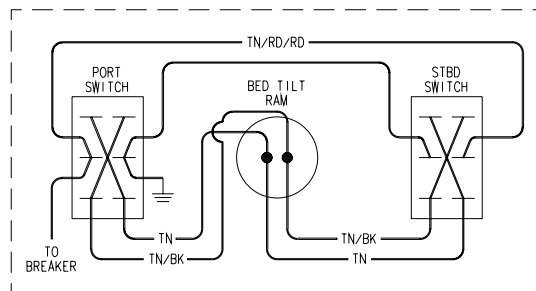
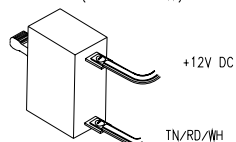
SWITCH 

DPDT SWITCH 

"OWNER STATERM BED TILT"  
BKR 10A  
(AC/DC BKR PANEL)  
(REAR VIEW)



"GUEST STATERM BED SLIDE"  
BKR 10A  
(AC/DC BKR PANEL)  
(REAR VIEW)

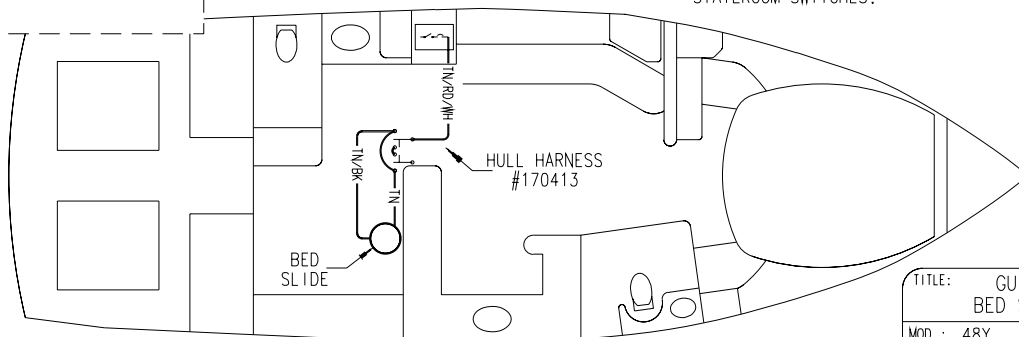
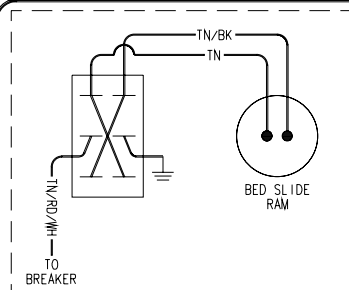


TITLE: OWNER  
BED TILT

MOD.: 48Y

DR BY: JAW

26A



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER STATERM BED TILT" BREAKER TO "ON".
4. THE BED TILT CAN BE OPERATED BY THE OWNER STATEROOM SWITCHES.

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
2. AT THE AC/DC PANEL, SWITCH THE "GUEST STATERM BED SLIDE" BREAKER TO "ON".
3. THE BED SLIDE CAN BE OPERATED BY THE GUEST STATEROOM SWITCHES.

TITLE: GUEST  
BED SLIDE

MOD.: 48Y







DR BY: JAW

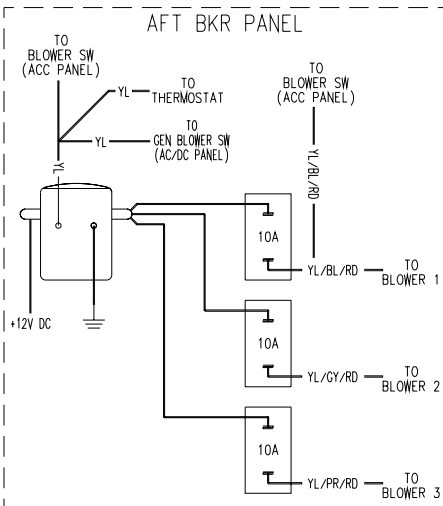
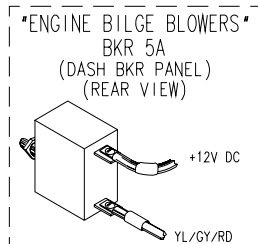
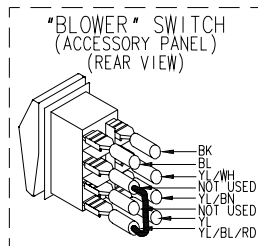
26B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND

GROUND	
BLOWER	
DPDT SWITCH	
PLUGS	
BREAKER	
BREAKER PANEL	



## WARNING!

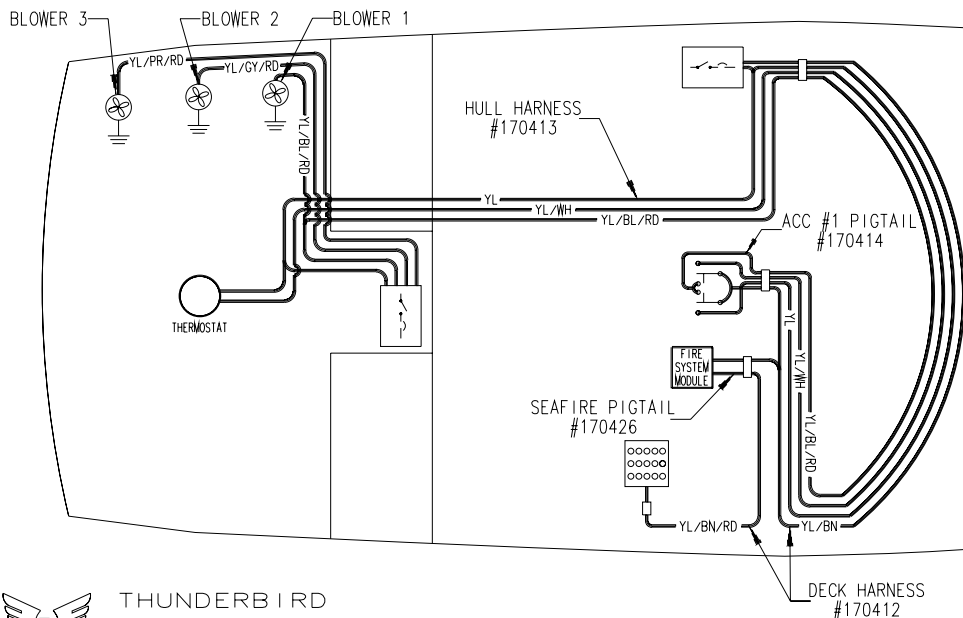
GASOLINE VAPORS CAN EXPLODE.

BEFORE STARTING ENGINE:

- CHECK ENGINE BILGE FOR GASOLINE VAPORS.
- OPERATE BLOWERS FOR FOUR (4) MINUTES, RUN BLOWERS BELOW CRUISING SPEED.

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "ENGINE BILGE BLOWERS" BREAKER MUST BE PUSHED IN (CLOSED).
3. AT THE AFT BKR PANEL, SWITCH THE "ENGINE ROOM BLOWER 1", "ENGINE ROOM BLOWER 2", AND "ENGINE ROOM BLOWER 3" BREAKERS TO "ON".
4. THE ENGINE BILGE BLOWERS CAN NOW BE OPERATED BY THE "BLOWER" SWITCH LOCATED ON THE ACCESSORY PANEL.
5. THE ENGINE BILGE BLOWERS CAN ALSO BE OPERATED BY SWITCHING THE "GENERATOR BLOWER" BREAKER AT THE AC/DC PANEL, LOCATED IN THE CABIN, TO "ON".



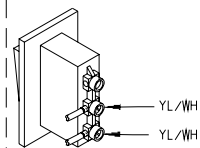
THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE:	BLOWERS, ENGINE BILGE
MOD.:	48Y
DR BY:	JAW

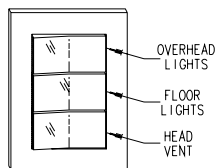
# LEGEND

GROUND	
BLOWER	
BREAKER	
PLUGS	
SWITCH	

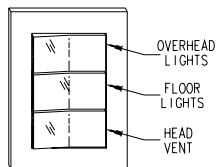
OWNER HEAD BLOWER SWITCH  
(REAR VIEW)



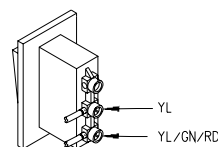
OWNER HEAD LIGHT SWITCHES



GUEST HEAD LIGHT SWITCHES



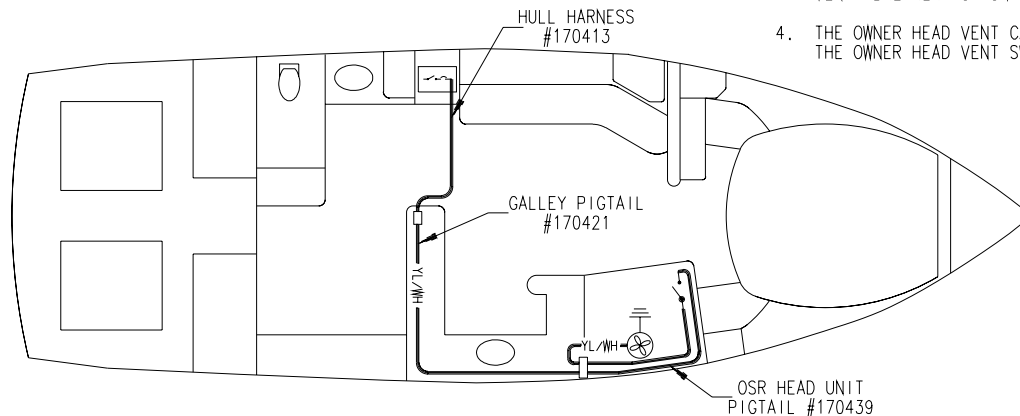
GUEST HEAD BLOWER SWITCH  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER HEAD VENT" BREAKER TO "ON".
4. THE OWNER HEAD VENT CAN NOW BE OPERATED BY THE OWNER HEAD VENT SWITCH.



TITLE: BLOWER, OWNER HEAD

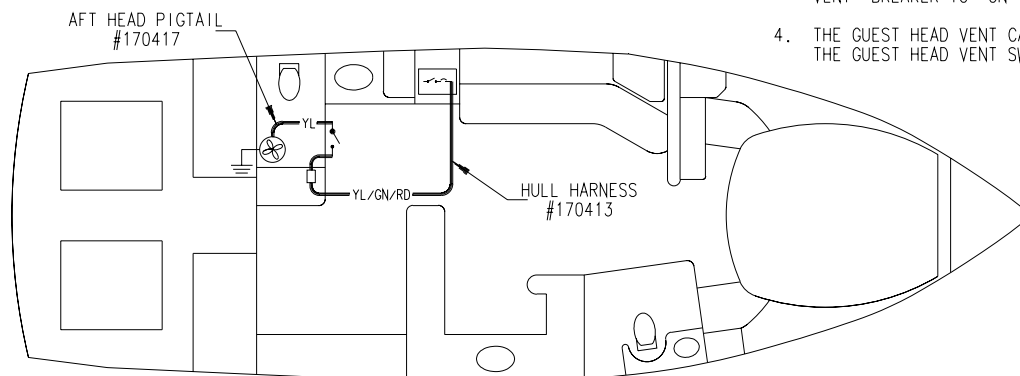
MOD.: 48Y

DR BY: JAW

28A

## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GUEST HEAD VENT" BREAKER TO "ON".
4. THE GUEST HEAD VENT CAN NOW BE OPERATED BY THE GUEST HEAD VENT SWITCH.



TITLE: BLOWER, GUEST HEAD

MOD.: 48Y

DR BY: JAW

28B

# LEGEND

GROUND



BLOWER



BREAKER



PLUGS



SWITCH



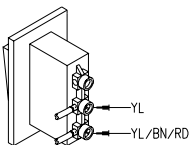
BREAKER  
PANEL



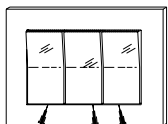
12V OUTLET



STOVE TOP VENT  
SWITCH  
(REAR VIEW)

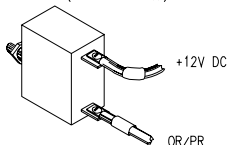


## GALLEY SWITCHES

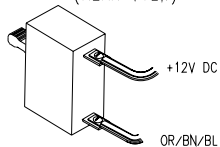


GALLEY MOOD LIGHTS  
STOVE TOP VENT  
UNDER CABINET LIGHTS

"12 VOLT OUTLET" BKR 15A  
(DASH BKR PANEL)  
(REAR VIEW)



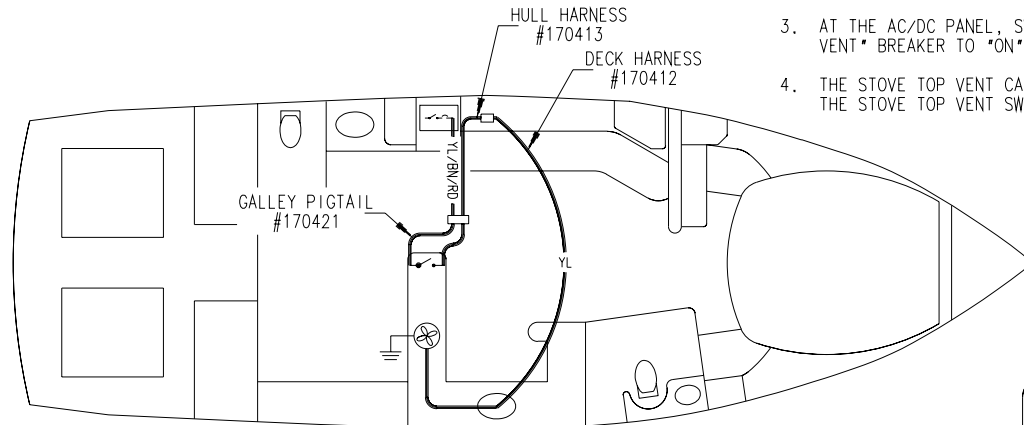
"12 VOLT OUTLETS" BKR 15A  
(CABIN AC/DC PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "STOVE TOP VENT" BREAKER TO "ON".
4. THE STOVE TOP VENT CAN NOW BE OPERATED BY THE STOVE TOP VENT SWITCH.



TITLE: BLOWER,  
STOVE TOP

MOD.: 48Y

OR BY: JAW

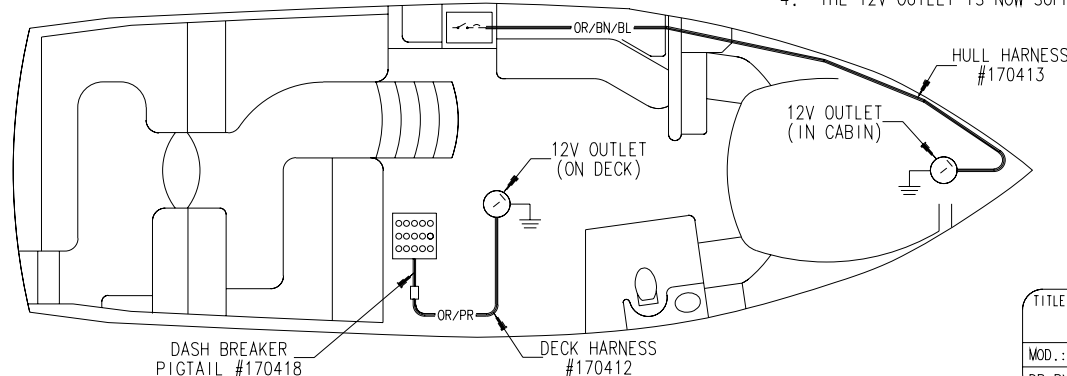
29A

TO OPERATE (DECK 12V OUTLET):

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "12 VOLT OUTLET" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE 12V OUTLET IS NOW SUPPLIED WITH POWER.

TO OPERATE (CABIN 12V OUTLET):

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "12V OUTLETS" BREAKER TO "ON".
4. THE 12V OUTLET IS NOW SUPPLIED WITH POWER.



TITLE: 12V OUTLETS

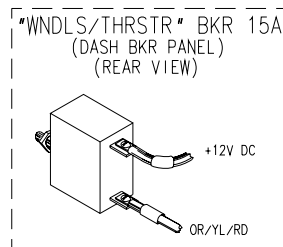
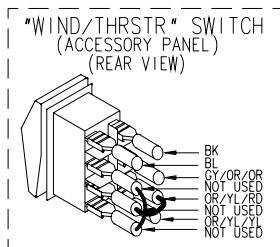
MOD.: 48Y

OR BY: JAW

29B

## LEGEND

PLUGS	□ □
BREAKER PANEL	oooo oooo oooo
GROUND	⏏
SWITCH	⏏
SOLENOID	⊙



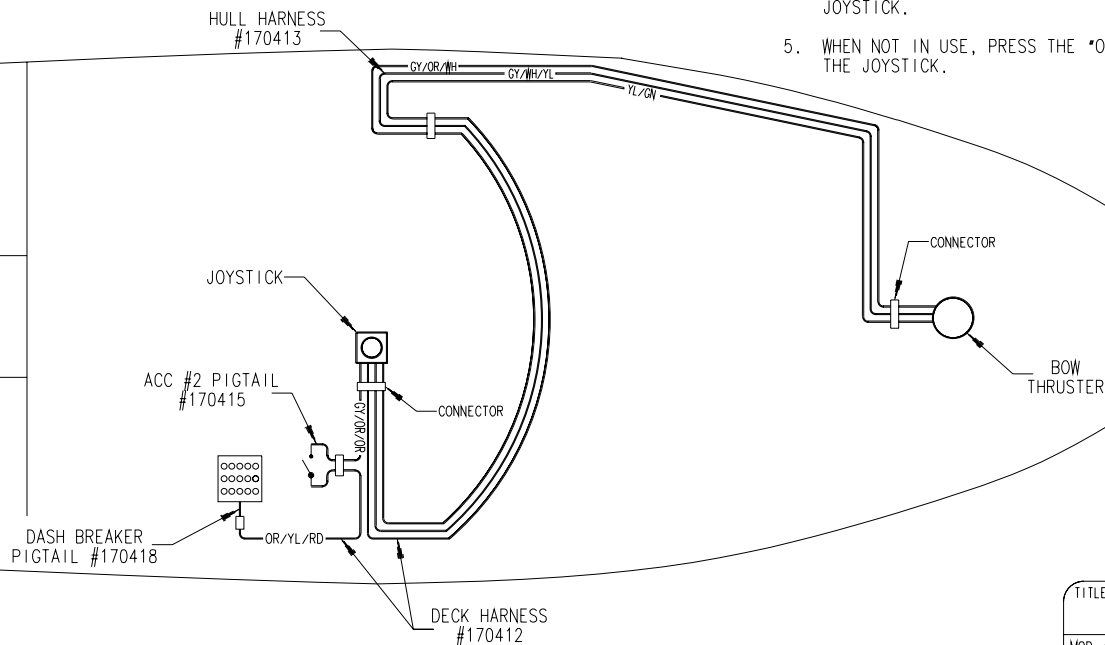
## WARNING!

### DO NOT OPERATE BOW THRUSTER!

It is very dangerous to run the thruster out of the water, even for a few seconds, the motor will over speed by 300%, causing damage to the seals etc. and the propeller will cause serious damage to whatever it comes into contact with and invalidate the warranty.

### TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "WINDLS/THRSTR" BREAKER MUST BE PUSHED IN (CLOSED).
3. LOCATED ON THE ACCESSORY PANEL, THE "WIND/THRSTR" SWITCH MUST BE IN THE "THRSTR" POSITION. (WINDLASS AND BOW THRUSTER CANNOT BE OPERATED SIMULTANEOUSLY.)
4. ON THE BOW THRUSTER JOYSTICK, LOCATED ON THE DASH, PRESS BOTH "ON" BUTTONS SIMULTANEOUSLY. THE BOW THRUSTER CAN NOW BE OPERATED BY THE JOYSTICK.
5. WHEN NOT IN USE, PRESS THE "OFF" BUTTON ON THE JOYSTICK.



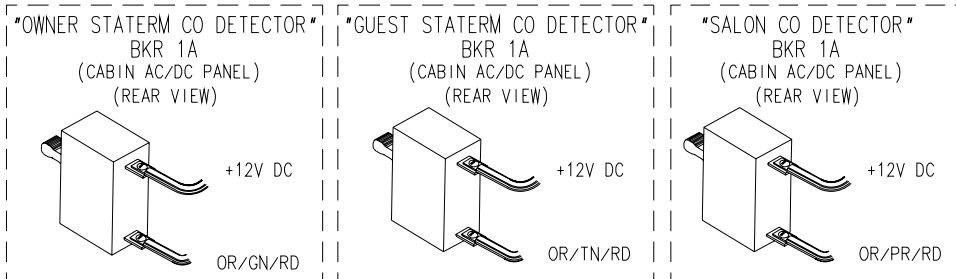
THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: BOW THRUSTER  
MOD.: 48Y  
DR BY: JAW

30

# LEGEND

GROUND	
PLUGS	
BREAKER PANEL	
BREAKER	

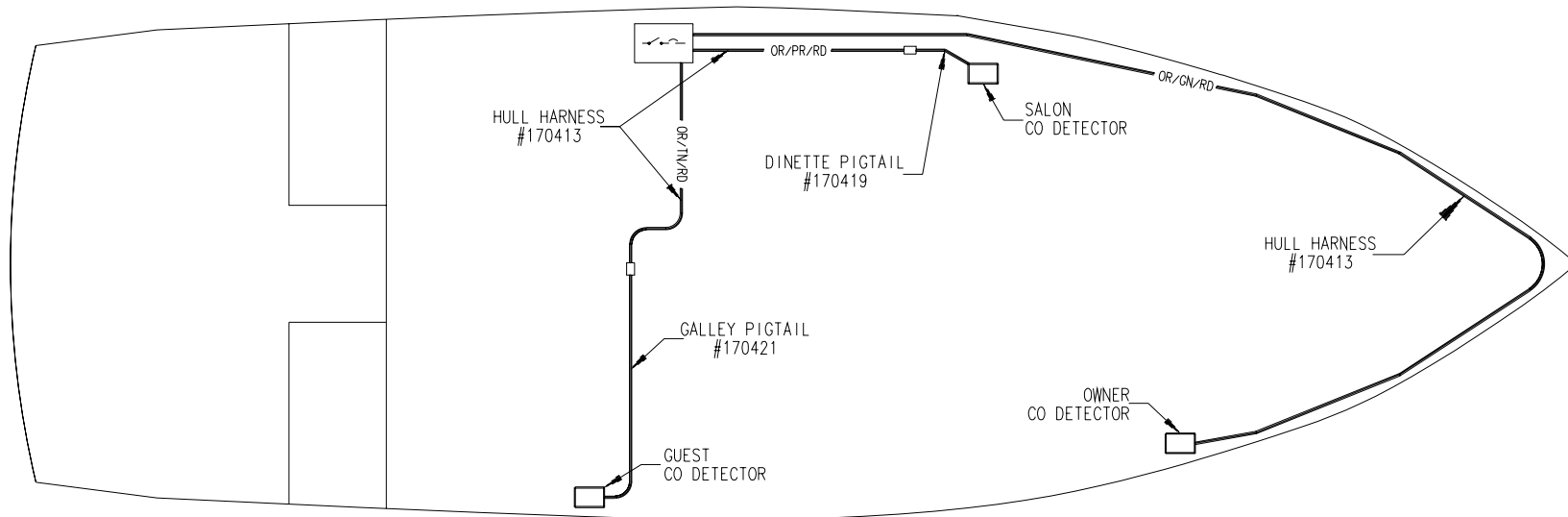


## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE "OWNERS STATERM CO DETECTOR", "SALON CO DETECTOR", AND "GUEST STATERM CO DETECTOR" BREAKERS TO "ON".
3. CHECK THE CO SENSORS TO BE SURE THE GREEN POWER "ON" INDICATOR IS ILLUMINATED.
4. AFTER THE INITIAL TEN (10) MINUTE WARM-UP PERIOD, PRESS THE "TEST" BUTTON. IF THE SENSOR IS OK THE AUDIBLE ALARM WILL SOUND AND THE GREEN POWER "ON" LIGHT WILL CHANGE TO RED.

NOTE: THE CO DETECTOR PROVIDES AN AUDIBLE AND VISUAL ALARM IF CARBON DIOXIDE IS PRESENT IN THE CABIN AREA.

CO DETECTORS SHOULD REMAIN ON AT ALL TIMES WHILE BOAT IS OCCUPIED.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: CO DETECTORS

MOD.: 48Y

DR BY: JAW

31

# LEGEND

GROUND 

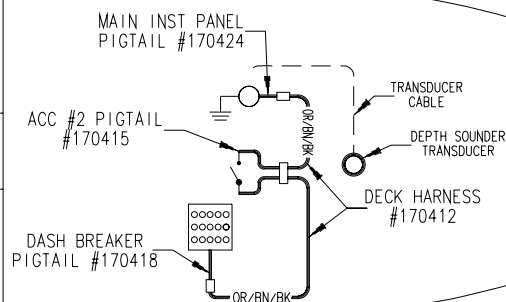
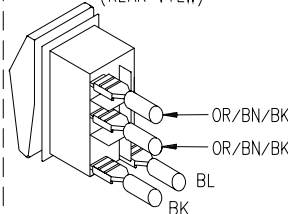
PLUGS 

BREAKER PANEL 

SWITCH 

BREAKER 

## "DEPTH SOUNDER" SWITCH (ACCESSORY PANEL) (REAR VIEW)



### TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "DEPTH SOUNDER" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE DEPTH SOUNDER CAN NOW BE OPERATED BY THE "DEPTH SOUNDER" SWITCH LOCATED ON THE ACCESSORY PANEL.

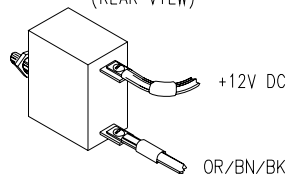
TITLE: DEPTH  
SOUNDER

MOD.: 48Y

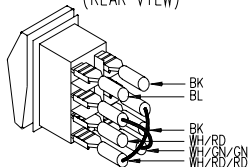
DR BY: JAW

32A

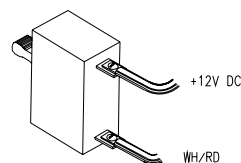
## "DEPTH SOUNDER" BKR 5A (DASH BKR PANEL) (REAR VIEW)



## "ENG HATCH" SWITCH (AFT BKR PANEL) (REAR VIEW)

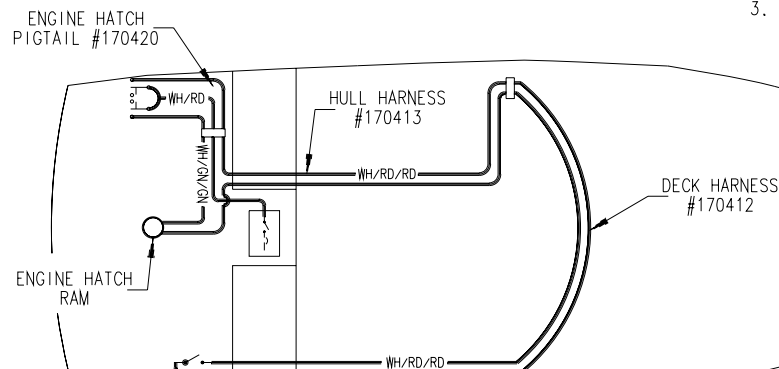


## "ENGINE HATCH LIFT" BKR 20A (AFT BKR PANEL) (REAR VIEW)



### TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT BKR PANEL, SWITCH THE "ENGINE HATCH LIFT" BREAKER TO "ON".
3. THE ENGINE HATCH CAN BE RAISED AND LOWERED BY THE "ENG HATCH" SWITCH, LOCATED UNDER THE AFT COCKPIT SEAT.



TITLE: ENGINE  
HATCH

MOD.: 48Y

DR BY: JAW

32B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

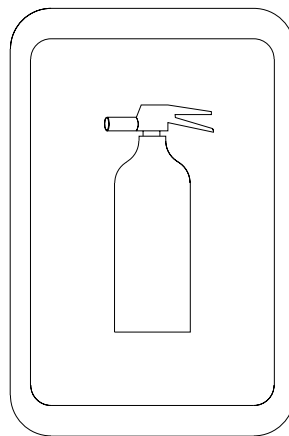


# LEGEND

PLUGS □ □

GROUND ⏏

FIRE EXTINGUISHER 🔑



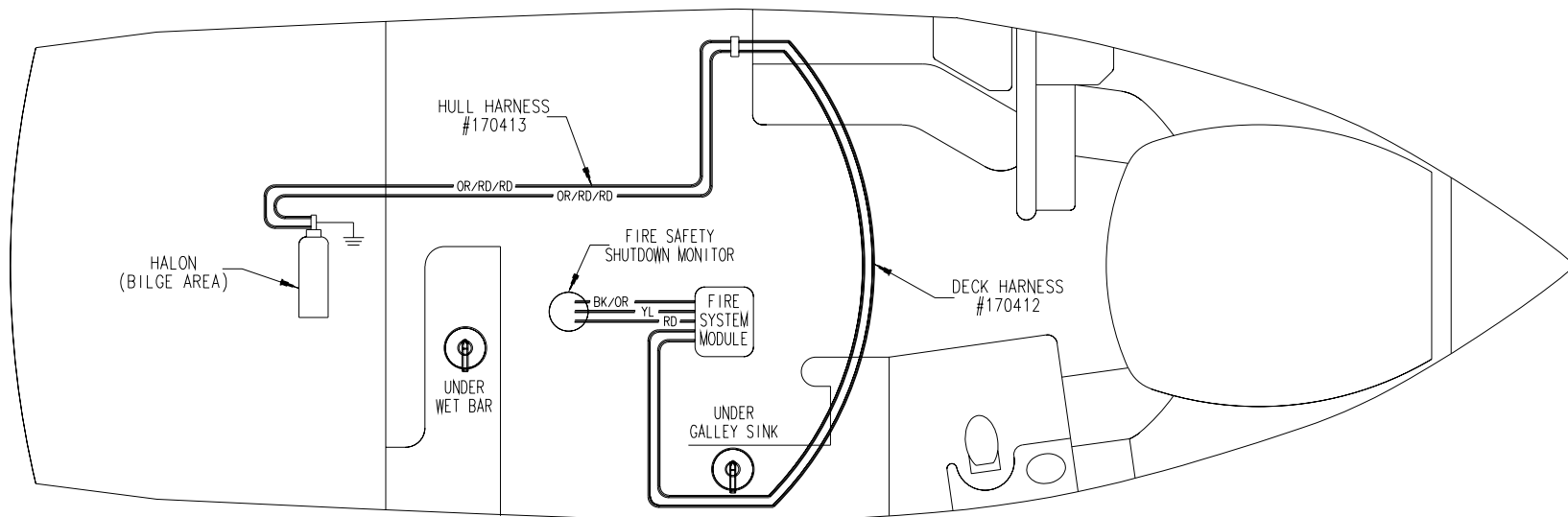
LABEL REPRESENTS THE PRESENCE OF A DRY CHEMICAL EXTINGUISHER WITHIN

## OPERATION:

THE ENGINE INTERRUPT/RESTART SYSTEM, WHEN PROPERLY INSTALLED, HAS PROVISIONS FOR SIMULTANEOUS EQUIPMENT SHUTDOWN UPON EXTINGUISHER DISCHARGE. THIS IS ACCOMPLISHED BY USE OF AN IN-CYLINDER PRESSURE SWITCH, WHICH IS STANDARD EQUIPMENT ON ALL AUTOMATIC FIRE EXTINGUISHERS.

IMMEDIATELY UPON SYSTEM DISCHARGE THE PRESSURE SWITCH WILL DEACTIVATE THE CONTROL UNIT. THIS IN TURN WILL OPEN OR CLOSE THE CONTROL CONTACTS THEREBY DISRUPTING ELECTRICALLY CONTROLLED FUEL SOLENOID VALVES AND AIR DAMPERS ON DIESEL(S).

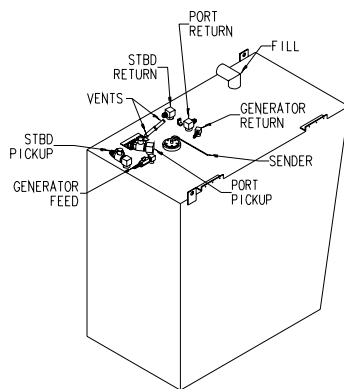
SYSTEM STATUS	DISPLAY UNIT	INDICATOR	LIGHT	STATUS
		<u>AUDIBLE SOUND</u>	<u>GREEN LED</u>	<u>RED LED</u>
NORMAL POWER "ON"	OFF	ON	ON	OFF
ALARM (DISCHARGE)	ON	OFF	OFF	ON
OVERRIDE MODE	OFF	OFF	OFF	OFF



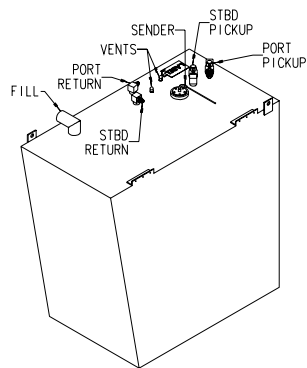
THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE:	FIRE SYSTEM
MOD.: 48Y	33
DR BY: JAW	

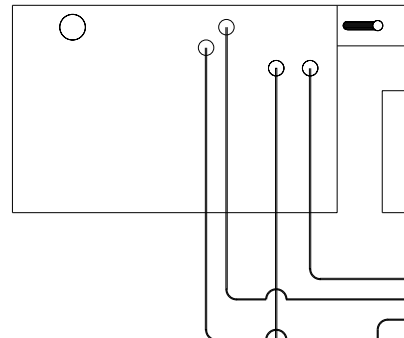
## PORT FUEL TANK



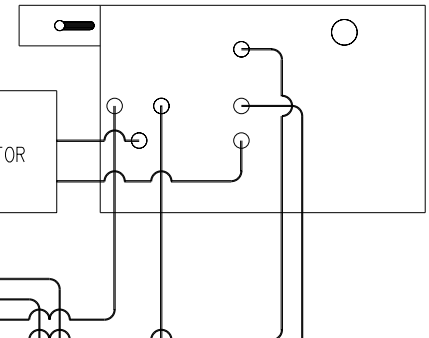
## STBD FUEL TANK



## STBD FUEL TANK (TOP VIEW)

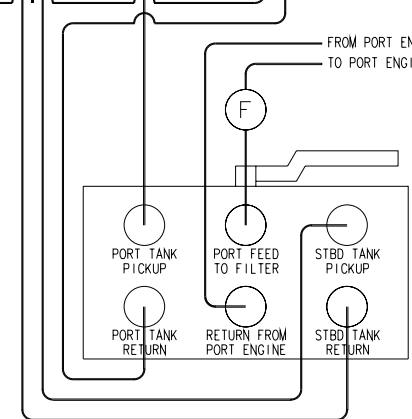
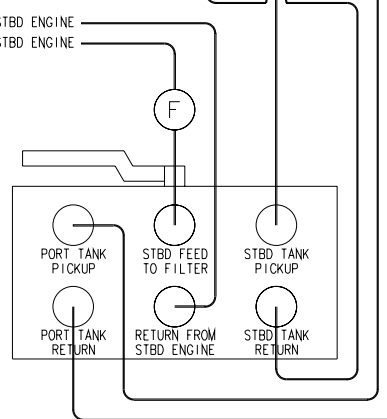


## PORT FUEL TANK (TOP VIEW)



FROM STBD ENGINE  
TO STBD ENGINE

FROM PORT ENGINE  
TO PORT ENGINE



## STBD VALVE (BACK VIEW)

## PORT VALVE (BACK VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: FUEL  
SYSTEM  
MOD.: 48Y  
DR BY: JAW

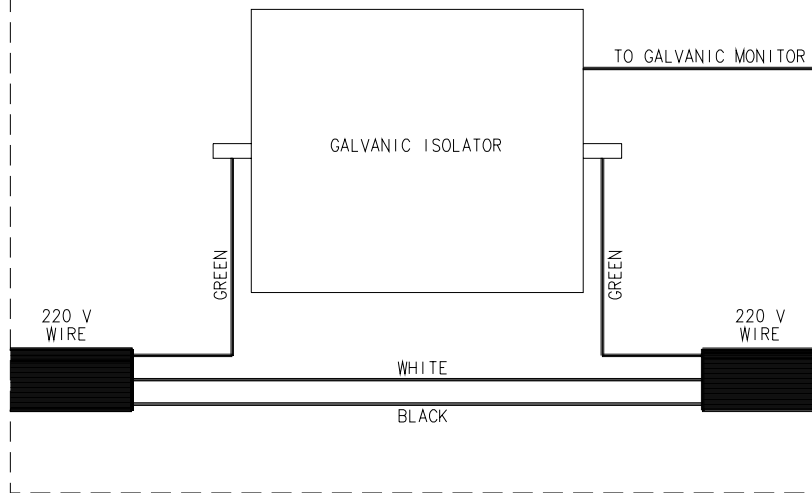
# LEGEND

PLUGS 

BREAKER 

GROUND 

FIG 1

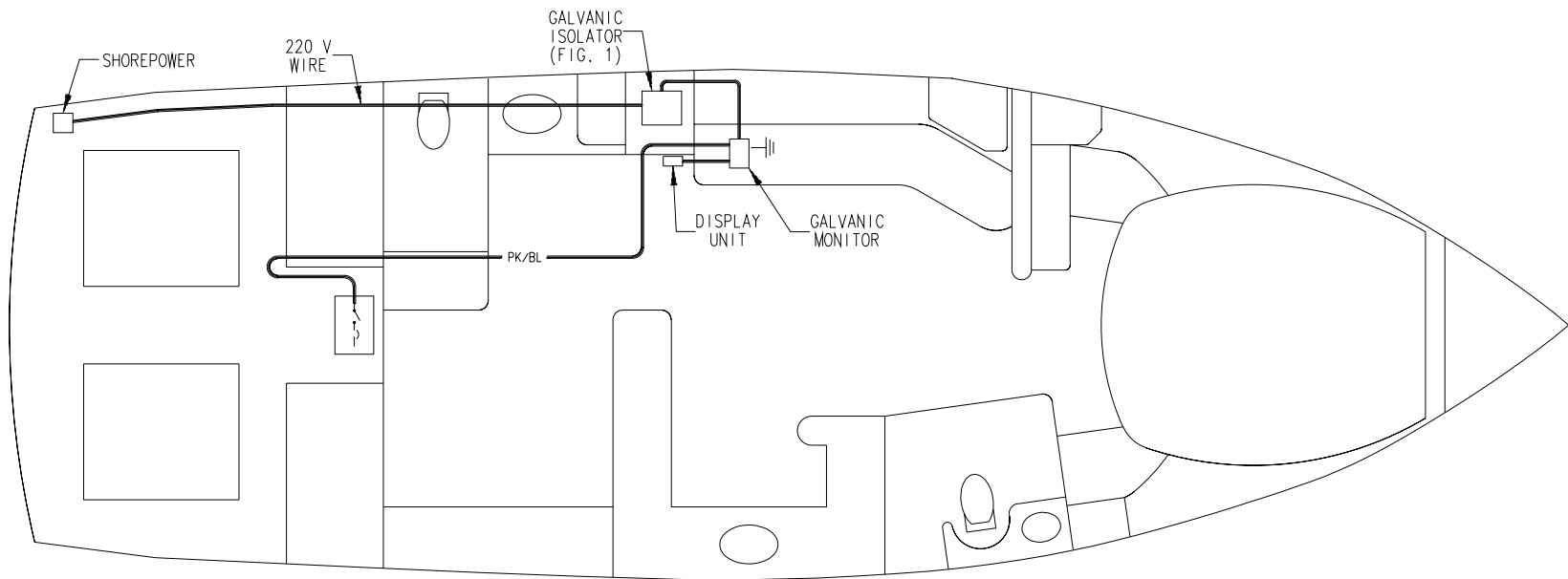


## TEST PROCEDURE:

1. PLUG IN SHORE CORD AND TURN ON SHOREPOWER BREAKERS.
2. LOOK AT GALVANIC DISPLAY; IT SHOULD SAY GROUND WIRE NORMAL AND GALVANIC ISOLATOR NORMAL.

## NOTE:

GALVANIC ISOLATOR WILL OPERATE AUTOMATICALLY WHEN BOAT IS SUPPLIED WITH SHOREPOWER.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: GALVANIC  
ISOLATOR

MOD.: 48Y

DR. BY: JAW

35

# LEGEND

GROUND 

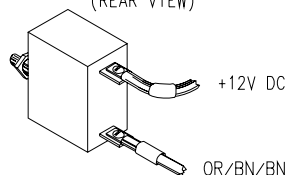
PLUGS 

BREAKER PANEL 

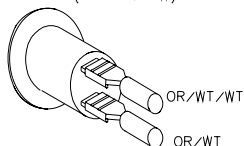
SWITCH 

COMPRESSOR 

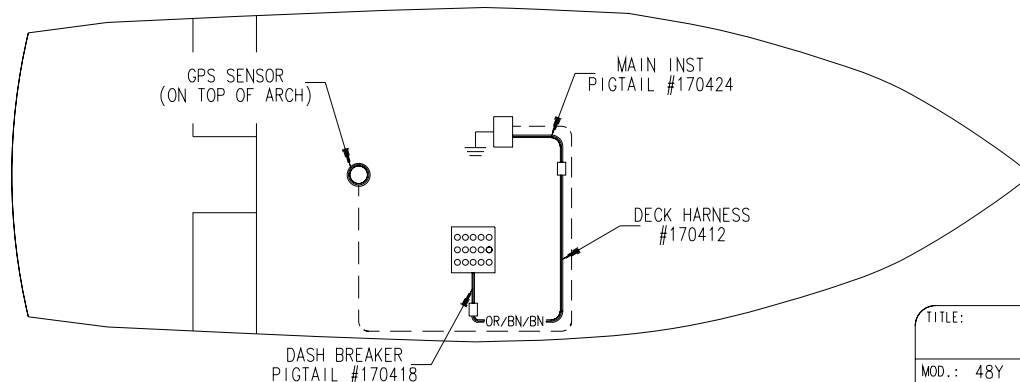
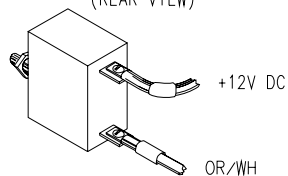
"GPS" BKR 5A  
(DASH BKR PANEL)  
(REAR VIEW)



"HORN" SWITCH  
(IGNITION PANEL)  
(REAR VIEW)



"HORN" BKR 20A  
(DASH BKR PANEL)  
(REAR VIEW)



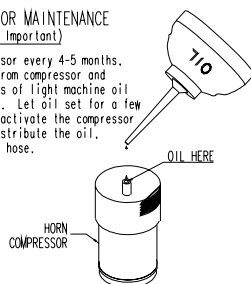
TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "GPS" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE GPS UNIT CAN BE TURNED ON BY PRESSING THE "POWER" BUTTON LOCATED ON THE GPS UNIT.

TITLE: GPS	
MOD.: 48Y	36A
DR BY: JAW	

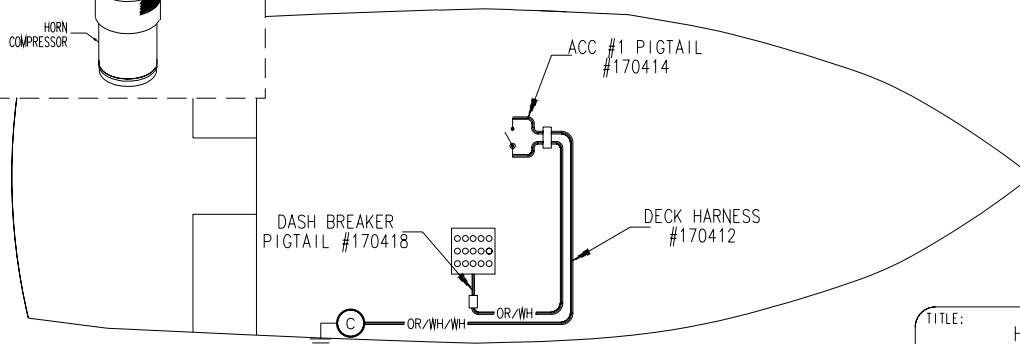
## HORN COMPRESSOR MAINTENANCE LUBRICATION (Very Important)

Lubricate compressor every 4-5 months. Remove air hose from compressor and apply 3 to 4 drops of light machine oil into the air port. Let oil set for a few minutes and then activate the compressor momentarily to distribute the oil. Reconnect the air hose.



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "HORN" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE HORN CAN NOW BE OPERATED BY THE "HORN" SWITCH LOCATED AT THE ACCESSORY PANEL.



TITLE: HORN	
MOD.: 48Y	36B
DR BY: JAW	



THUNDERBIRD  
PRODUCTS  
ENGINEERING

## LEGEND

GROUND



BREAKER

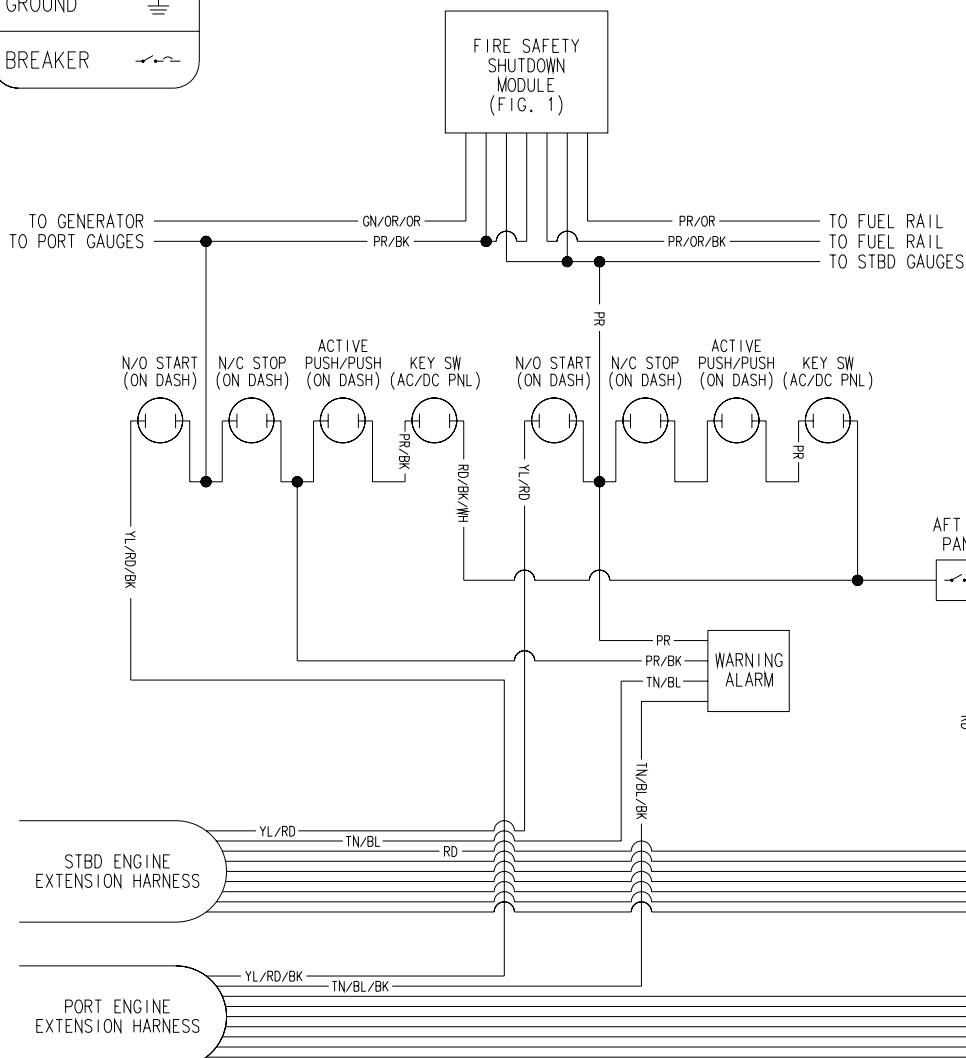
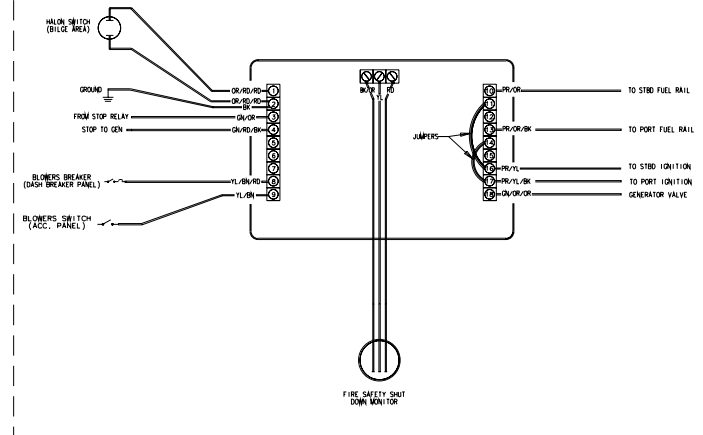
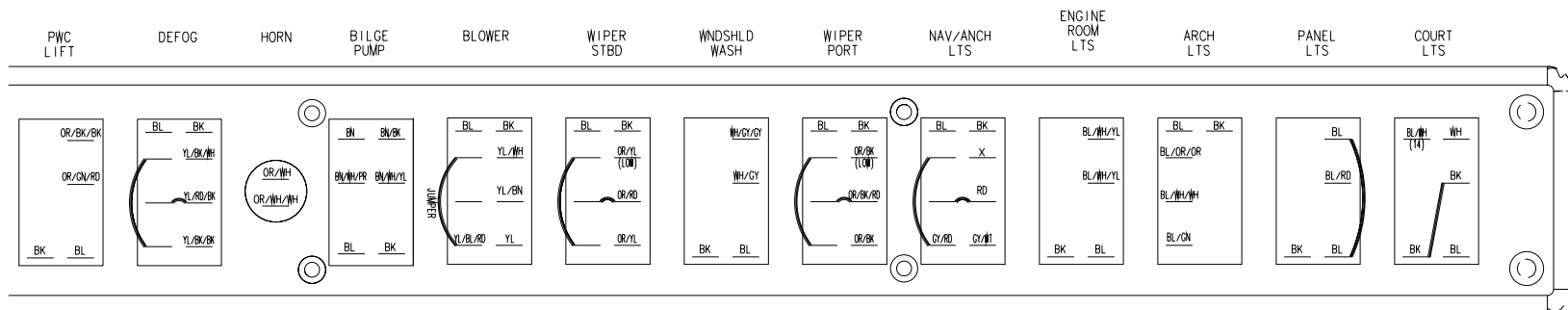


FIG. 1 FIRE SAFETY SHUTDOWN MODULE

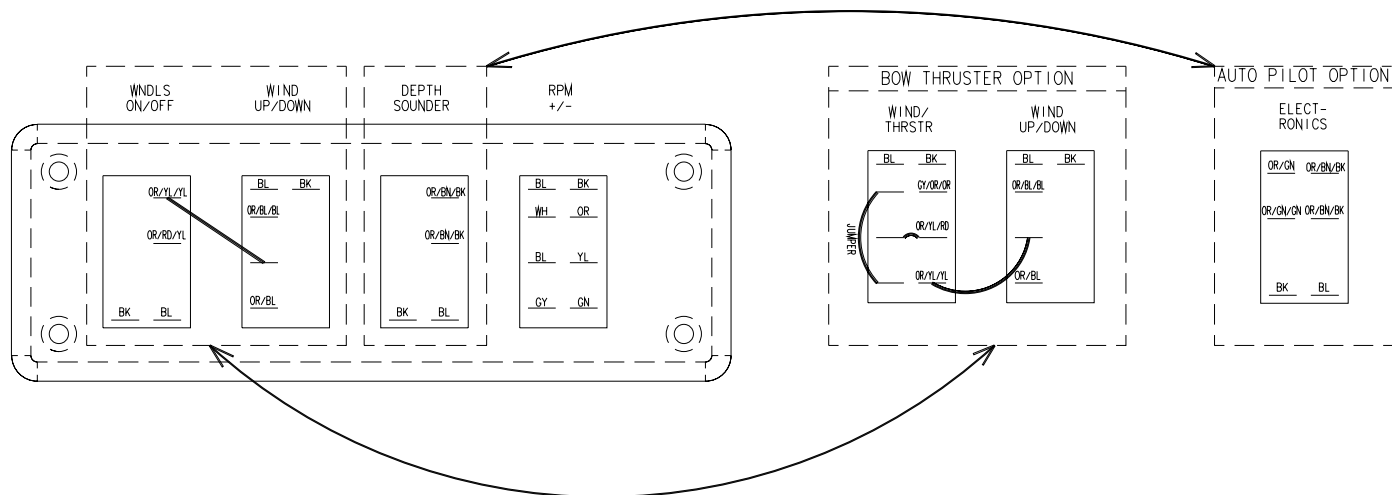




## ACCESSORY PANEL #1

PANEL #169584

PIGTAIL #170414



## ACCESSORY PANEL #2

PANEL #169585

PIGTAIL #170415



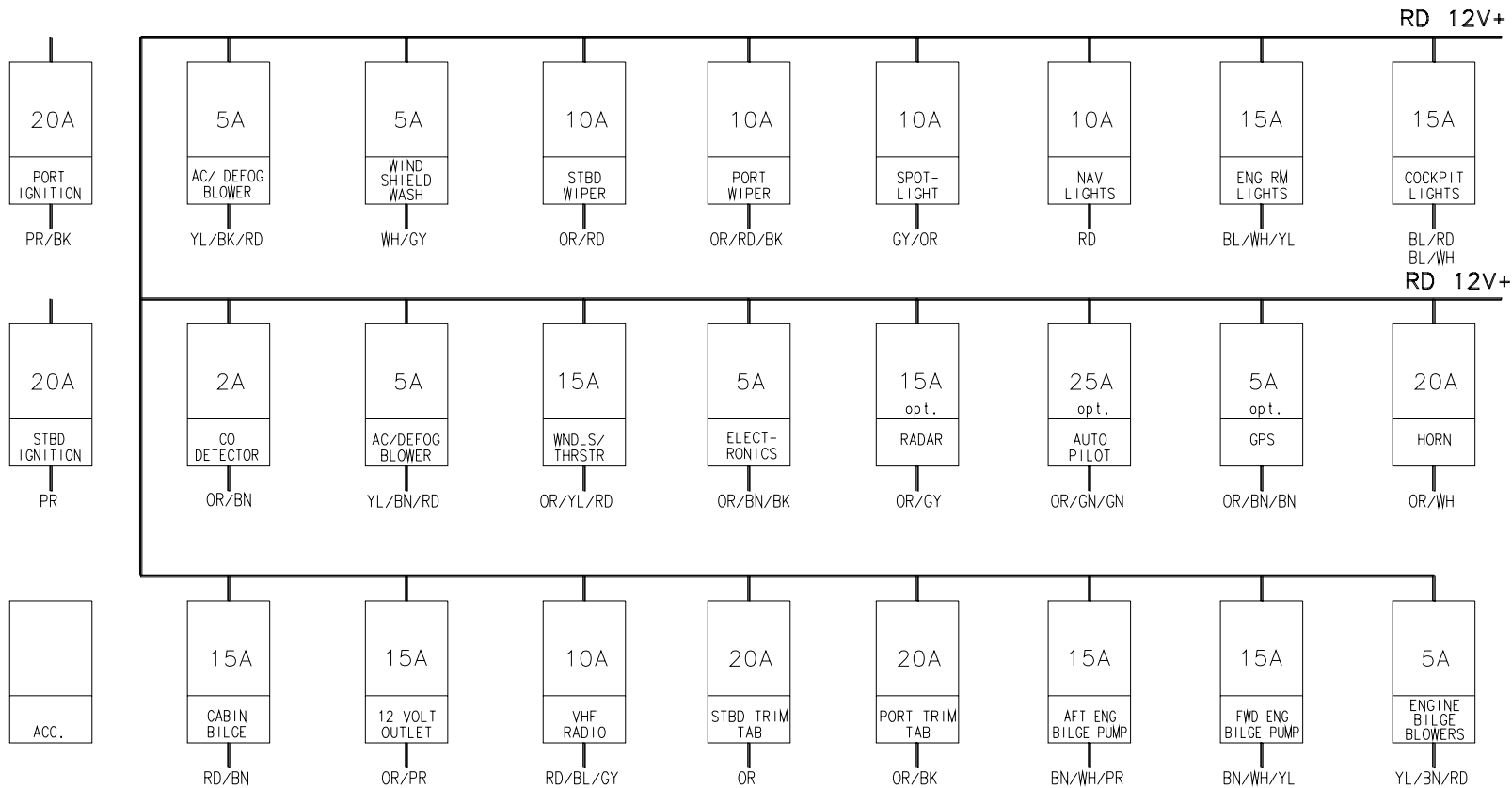
THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: ACCESSORY  
PANELS

MOD.: 48Y

DR BY: JAW

38



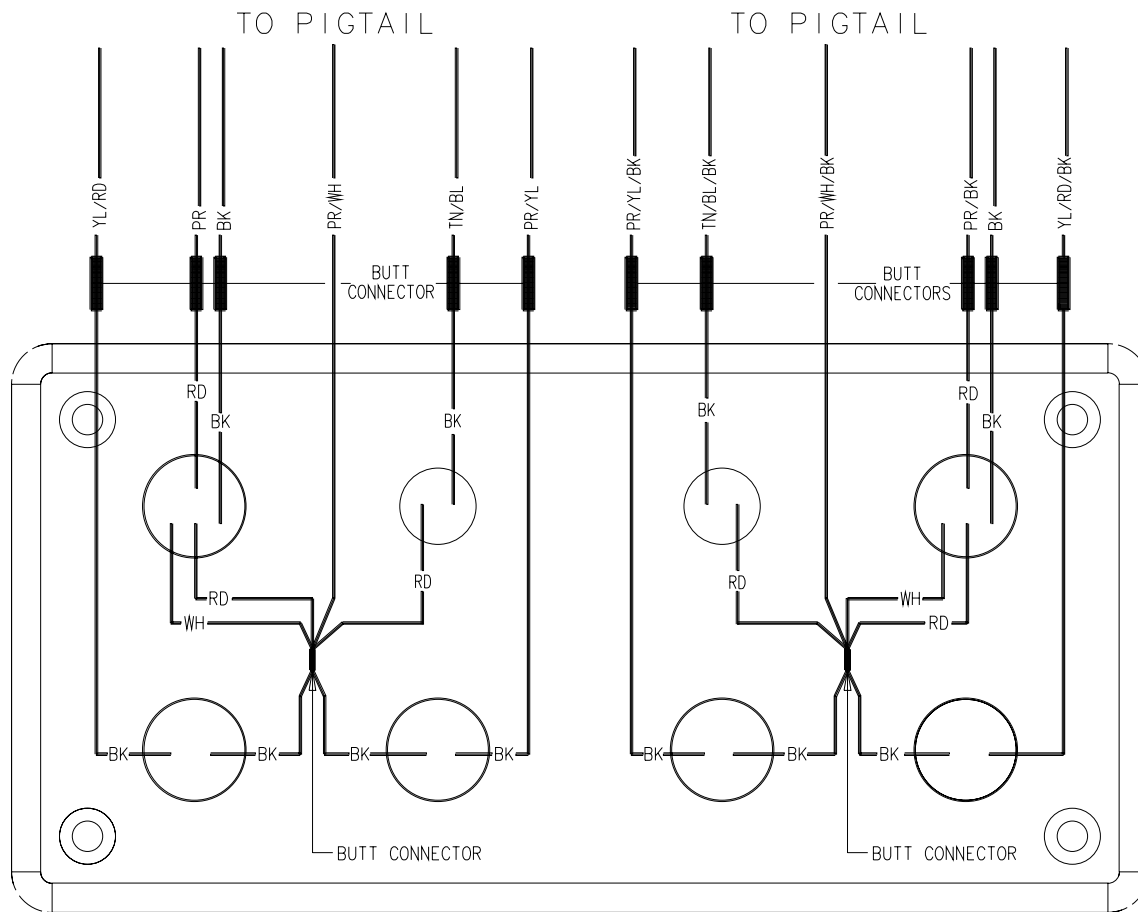
(rear view)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

PANEL #169643  
PIGTAIL #170418

TITLE: DASH BREAKER PANEL	
MOD.: 48Y	39
DR BY: JAW	



(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

PANEL #169583

PIGTAIL #170422

TITLE: IGNITION  
PANEL

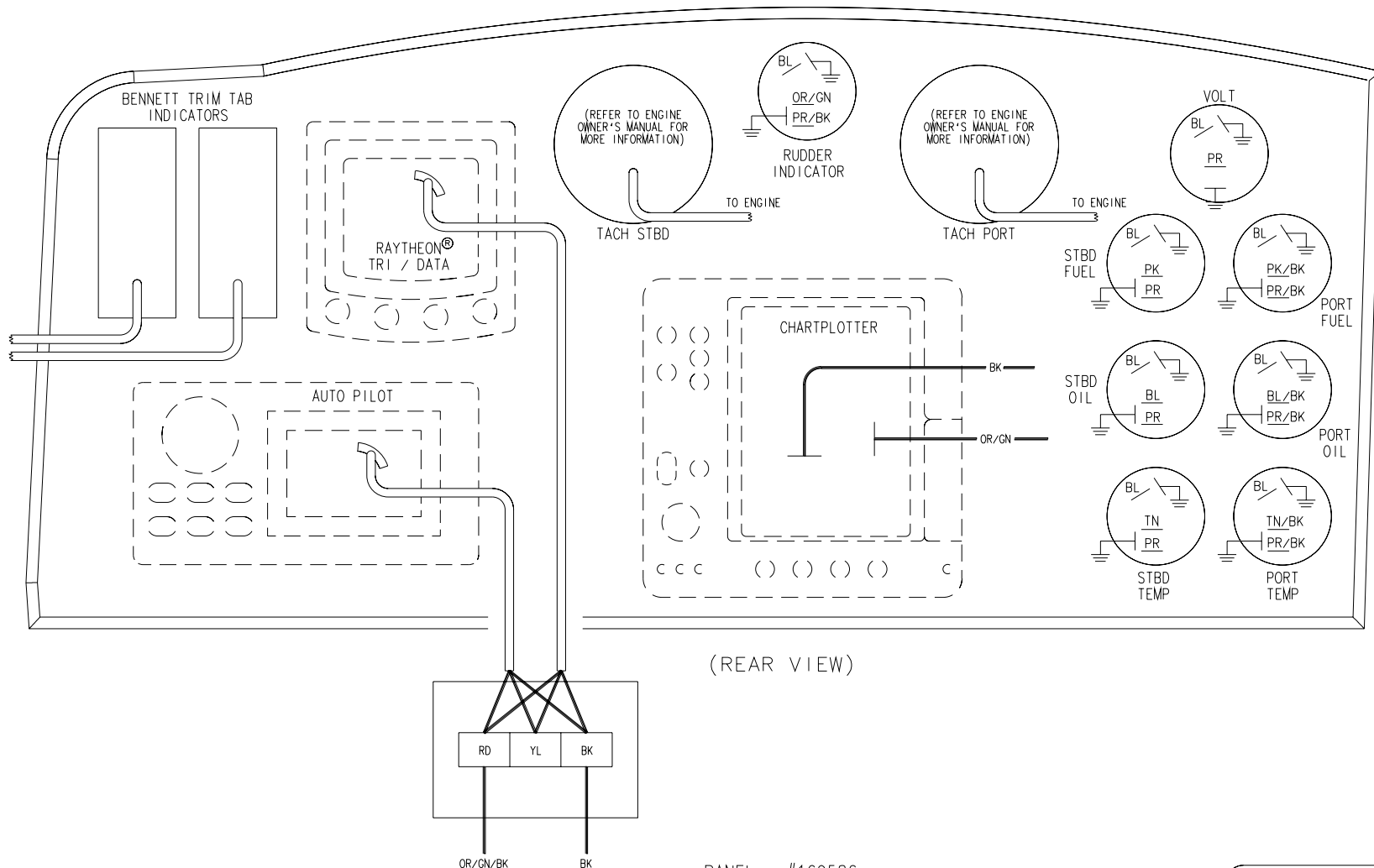
MOD.: 48Y

DR BY: JAW

40



NOTE:  
 RAYTHEON® TRI/DATA IS STANDARD  
 EQUIPMENT. SEE RAYTHEON® TRIDATA  
 USER MANUAL FOR INSTRUCTIONS.



(REAR VIEW)



THUNDERBIRD  
 PRODUCTS  
 ENGINEERING

PANEL #169586

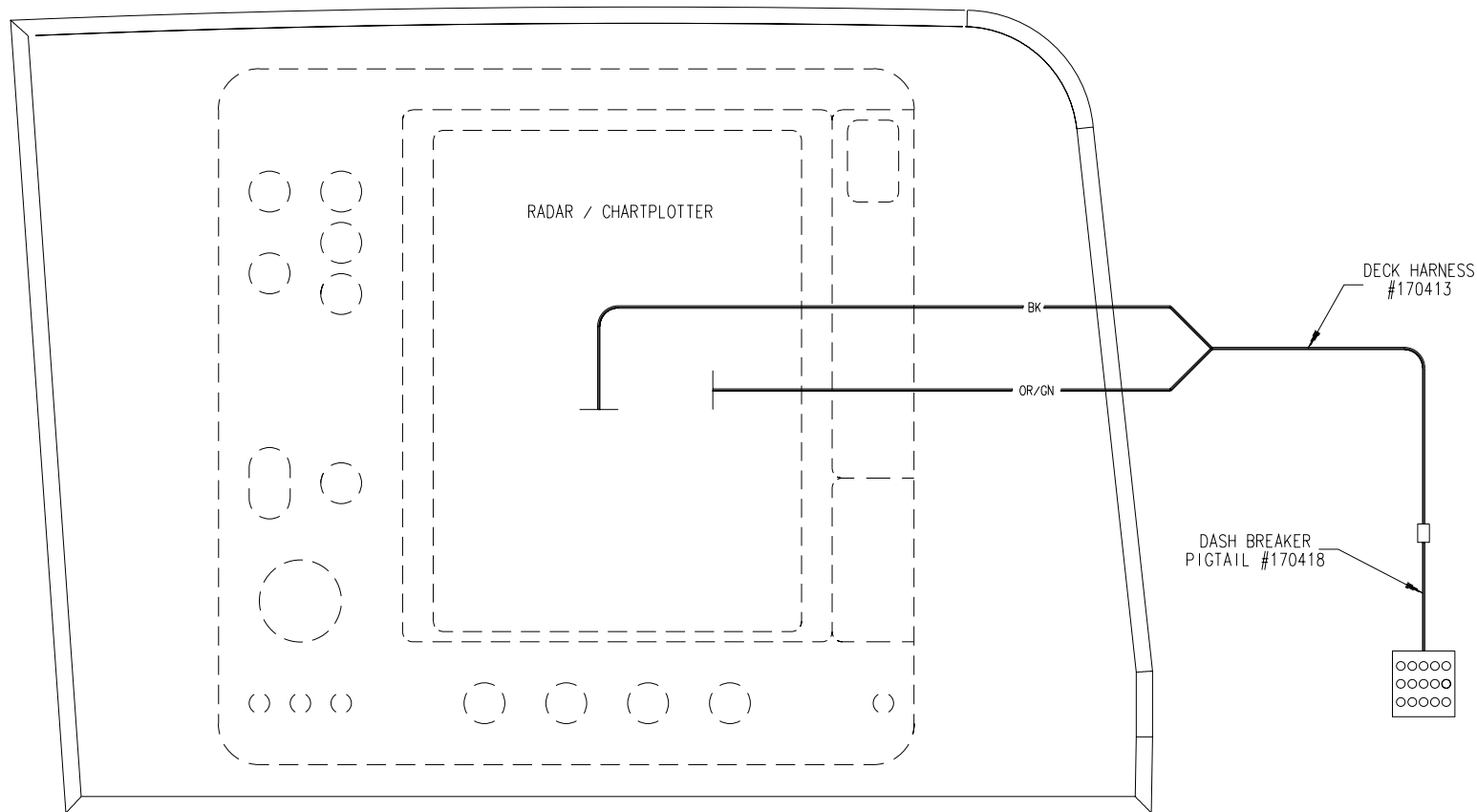
PIGTAIL #170424

TITLE: MAIN  
 INSTRUMENT PANEL

MOD.: 48Y

DR BY: JAW

41



THUNDERBIRD  
PRODUCTS  
ENGINEERING

PANEL #169587

TITLE: MAIN INBOARD PANEL	
MOD.: 48Y	42
DR BY: JAW	

# LEGEND

GROUND



BREAKER



PLUGS



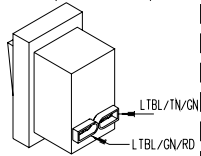
SWITCH



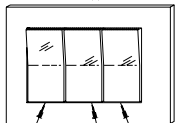
ROPE  
LIGHTS



GALLEY MOOD  
LIGHT SWITCH  
(REAR VIEW)



GALLEY  
LIGHT SWITCHES

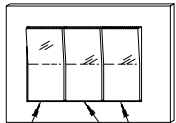


MOOD  
LIGHTS

STOVE  
VENT

UNDER  
CABINET  
LIGHTS

STBD ENTRY WALL  
LIGHT SWITCHES

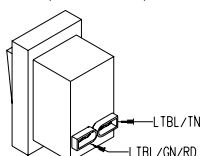


SALON  
FLOOR  
LIGHTS

RACETRACK  
LIGHTS

GALLEY  
OVERHEAD  
LIGHTS

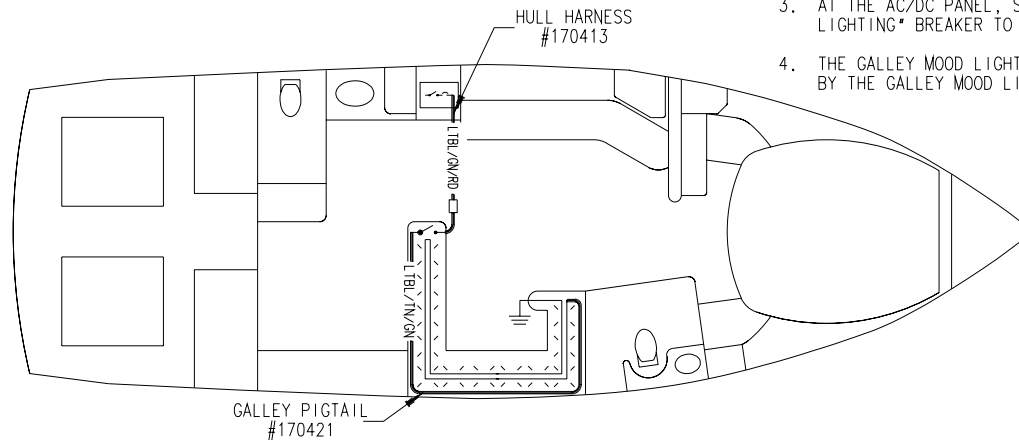
RACETRACK  
LIGHT SWITCH  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GALLEY LIGHTING" BREAKER TO "ON".
4. THE GALLEY MOOD LIGHTS CAN NOW BE OPERATED BY THE GALLEY MOOD LIGHTS SWITCH.



TITLE: LIGHTS,  
GALLEY MOOD

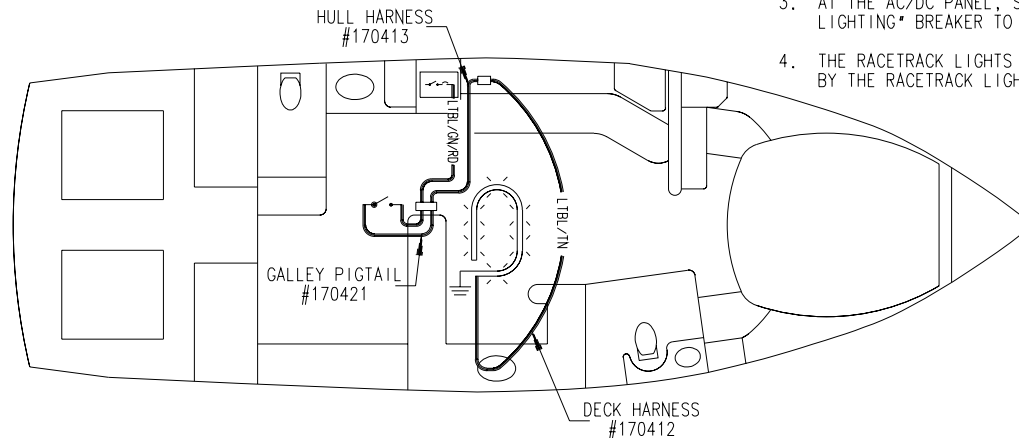
MOD.: 48Y

DR BY: JAW

43A

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GALLEY LIGHTING" BREAKER TO "ON".
4. THE RACETRACK LIGHTS CAN NOW BE OPERATED BY THE RACETRACK LIGHTS SWITCH.



TITLE: LIGHTS,  
RACETRACK

MOD.: 48Y

DR BY: JAW

43B

# LEGEND

GROUND 

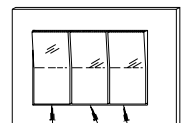
LIGHT 

BREAKER 

PLUGS 

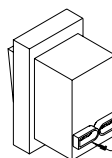
SWITCH 

## GALLEY LIGHT SWITCHES



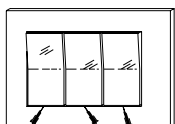
MOOD LIGHTS STOVE VENT UNDER CABINET LIGHTS

## GALLEY UNDER CABINET LIGHT SWITCH (REAR VIEW)



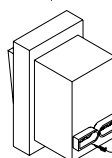
LTBL/BL/GN  
LTBL/GN/RD

## STBD ENTRY WALL LIGHT SWITCHES



SALON FLOOR LIGHTS RACETRACK LIGHTS GALLEY OVERHEAD LIGHTS

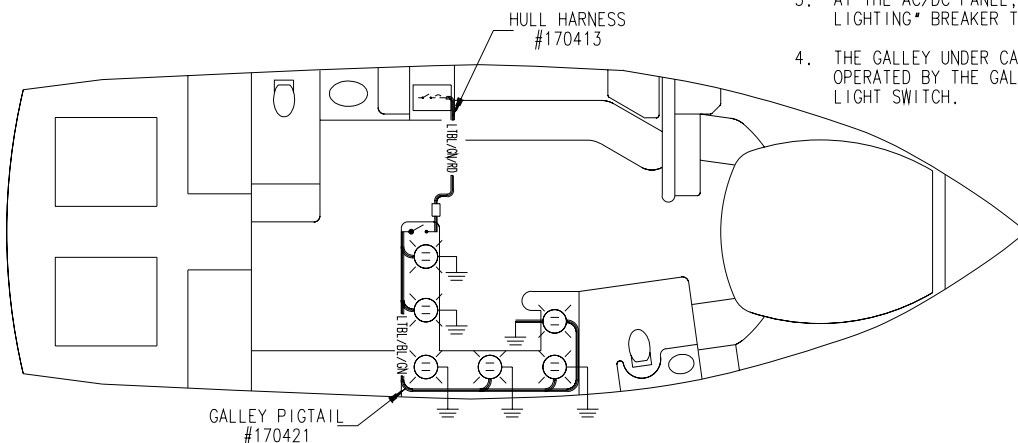
## GALLEY OVERHEAD LIGHT SWITCH (REAR VIEW)



LTBL/WH  
LTBL/GN/RD

## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GALLEY LIGHTING" BREAKER TO "ON".
4. THE GALLEY UNDER CABINET LIGHTS CAN NOW BE OPERATED BY THE GALLEY UNDER CABINET LIGHT SWITCH.



TITLE: LIGHTS, GALLEY UNDER CABINET

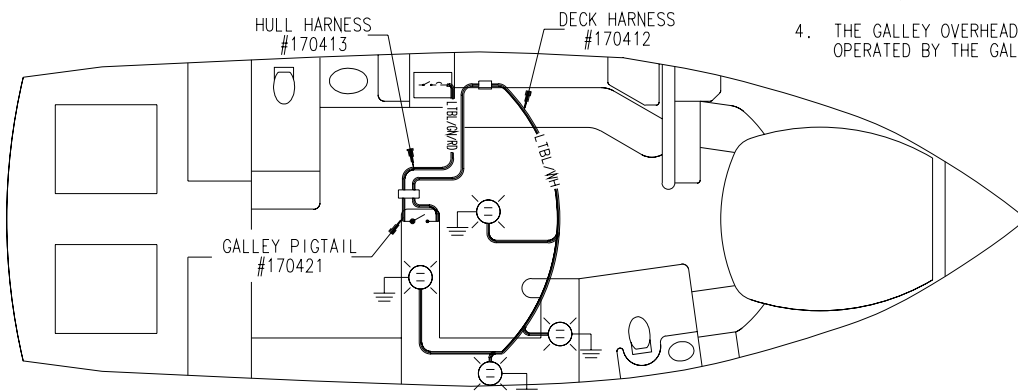
MOD.: 48Y

DR BY: JAW

44A

## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GALLEY LIGHTING" BREAKER TO "ON".
4. THE GALLEY OVERHEAD LIGHTS CAN NOW BE OPERATED BY THE GALLEY OVERHEAD LIGHT SWITCH.



TITLE: LIGHTS, GALLEY OVERHEAD

MOD.: 48Y

DR BY: JAW

44B

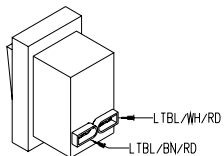


THUNDERBIRD  
PRODUCTS  
ENGINEERING

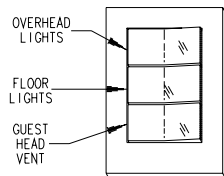
# LEGEND

GROUND	
LIGHT	
BREAKER	
PLUGS	
SWITCH	

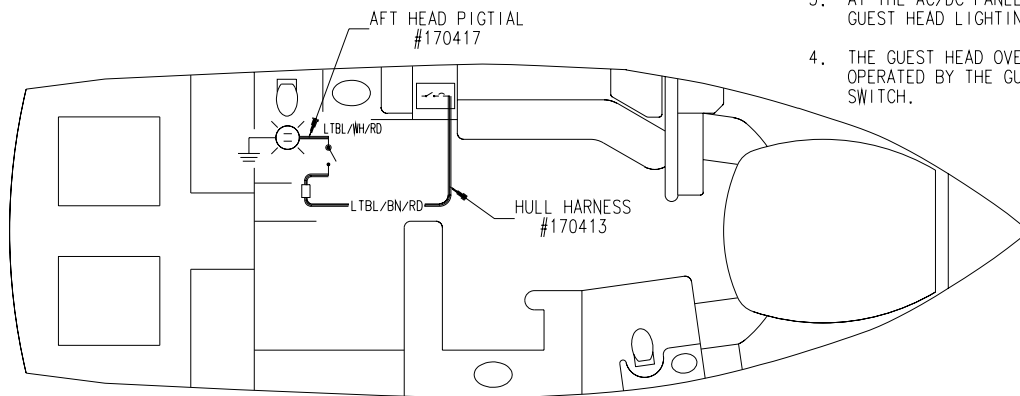
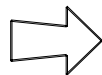
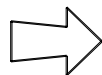
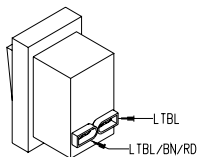
## GUEST HEAD OVERHEAD LIGHT SWITCH (REAR VIEW)



## GUEST HEAD LIGHT SWITCHES



## GUEST HEAD FLOOR LIGHT SWITCH (REAR VIEW)



## TO OPERATE:

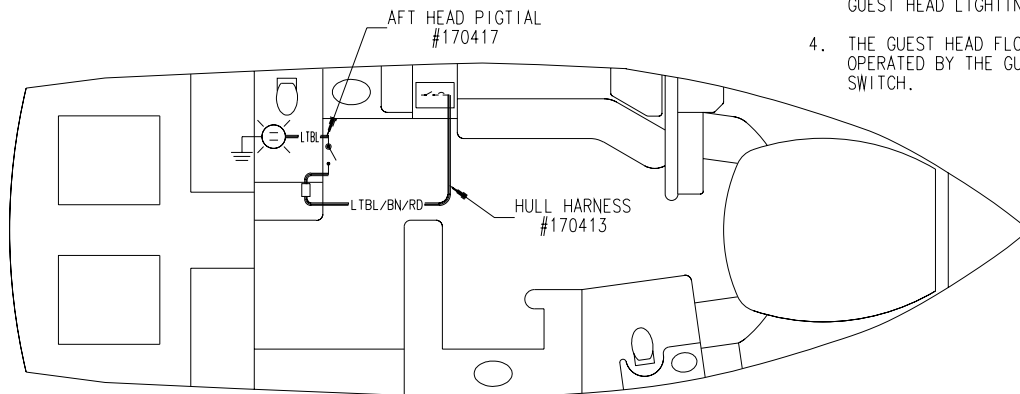
1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER AND GUEST HEAD LIGHTING" BREAKER TO "ON".
4. THE GUEST HEAD OVERHEAD LIGHTS CAN NOW BE OPERATED BY THE GUEST HEAD OVERHEAD LIGHT SWITCH.

TITLE: LIGHTS, GUEST HEAD OVERHEAD

MOD.: 48Y

DR BY: JAW

45A



## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER AND GUEST HEAD LIGHTING" BREAKER TO "ON".
4. THE GUEST HEAD FLOOR LIGHTS CAN NOW BE OPERATED BY THE GUEST HEAD FLOOR LIGHT SWITCH.

TITLE: LIGHTS, GUEST HEAD FLOOR

MOD.: 48Y

DR BY: JAW

45B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND

GROUND



LIGHT



BREAKER



PLUGS



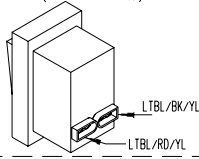
SWITCH



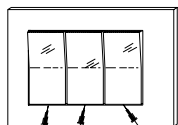
ROPE  
LIGHTS



GUEST MOOD  
LIGHT SWITCH  
(REAR VIEW)



GUEST STATEROOM  
LIGHT SWITCHES

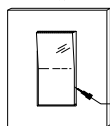


OVERHEAD  
LIGHTS

MOOD  
LIGHTS

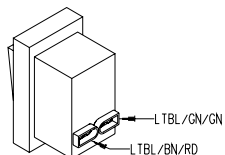
FLOOR  
LIGHTS

GUEST VANITY  
LIGHT SWITCHES



VANITY  
LIGHTS

GUEST VANITY  
LIGHT SWITCH  
(REAR VIEW)



LTBL/GN/GN

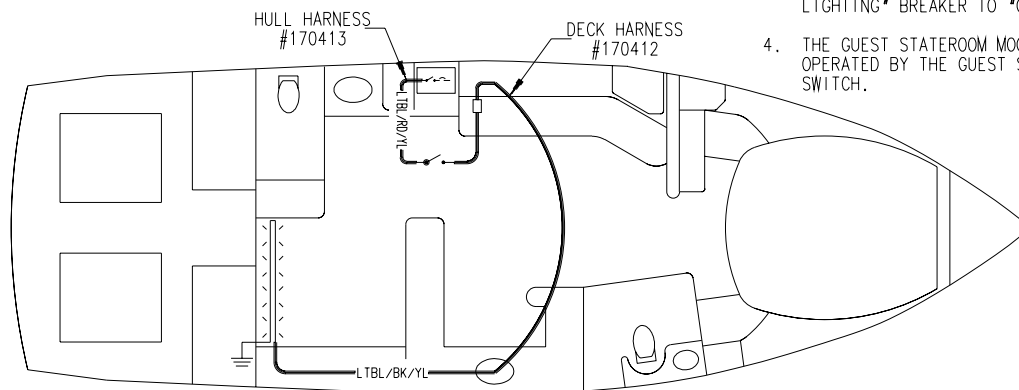
LTBL/BN/RD



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GUEST STATERM LIGHTING" BREAKER TO "ON".
4. THE GUEST STATEROOM MOOD LIGHTS CAN NOW BE OPERATED BY THE GUEST STATEROOM MOOD LIGHT SWITCH.



TITLE: LIGHTS, GUEST  
STATEROOM MOOD

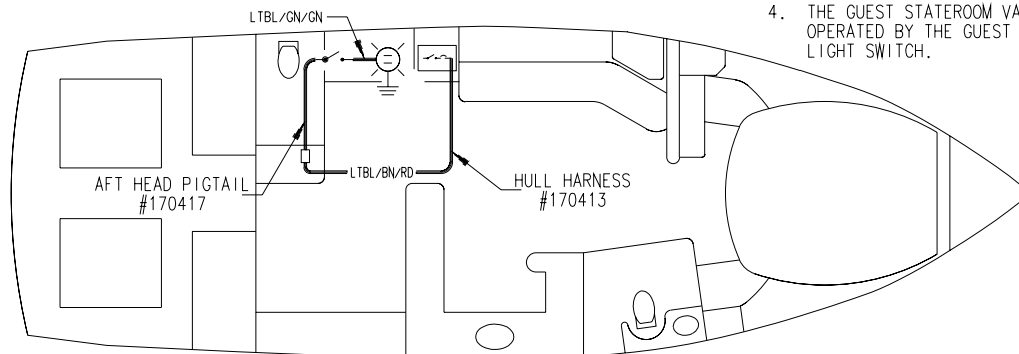
MOD.: 48Y

DR BY: JAW

46A

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GUEST STATERM LIGHTING" BREAKER TO "ON".
4. THE GUEST STATEROOM VANITY LIGHTS CAN NOW BE OPERATED BY THE GUEST STATEROOM VANITY LIGHT SWITCH.



TITLE: LIGHTS, GUEST  
STATEROOM VANITY

MOD.: 48Y

DR BY: JAW

46B

# LEGEND

GROUND 

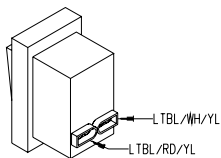
LIGHT 

BREAKER 

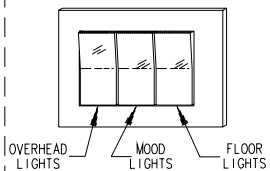
PLUGS 

SWITCH 

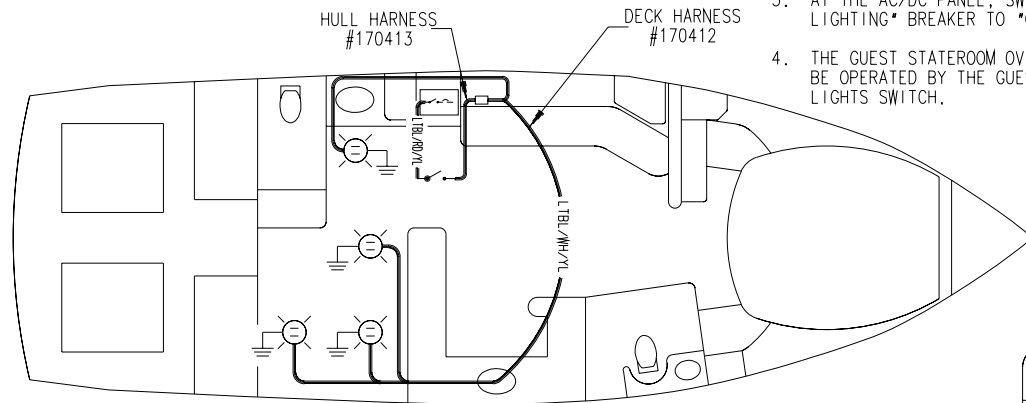
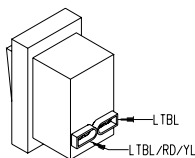
GUEST OVERHEAD  
LIGHT SWITCH  
(REAR VIEW)



GUEST STATEROOM  
LIGHT SWITCHES



GUEST FLOOR  
LIGHT SWITCH  
(REAR VIEW)



TO OPERATE:

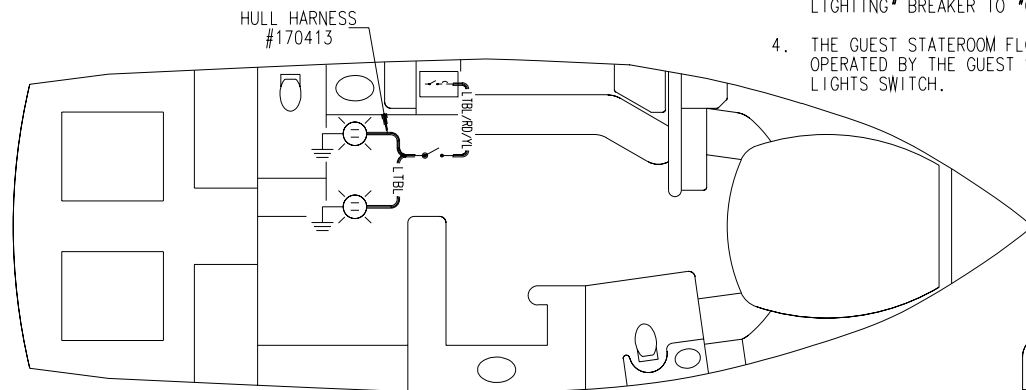
1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GUEST STATERM LIGHTING" BREAKER TO "ON".
4. THE GUEST STATEROOM OVERHEAD LIGHTS CAN NOW BE OPERATED BY THE GUEST STATEROOM OVERHEAD LIGHTS SWITCH.

TITLE: LIGHTS, GUEST  
STATEROOM OVERHEAD

MOD.: 48Y

DR BY: JAW

47A



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GUEST STATERM LIGHTING" BREAKER TO "ON".
4. THE GUEST STATEROOM FLOOR LIGHTS CAN NOW BE OPERATED BY THE GUEST STATEROOM FLOOR LIGHTS SWITCH.

TITLE: LIGHTS, GUEST  
STATEROOM FLOOR

MOD.: 48Y

DR BY: JAW


47B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND

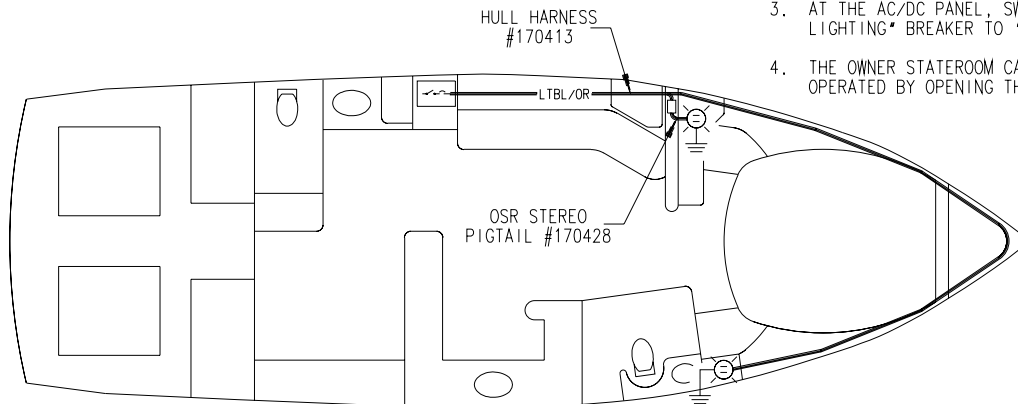
GROUND 

LIGHT 

BREAKER 

PLUGS 

SWITCH 



TO OPERATE:

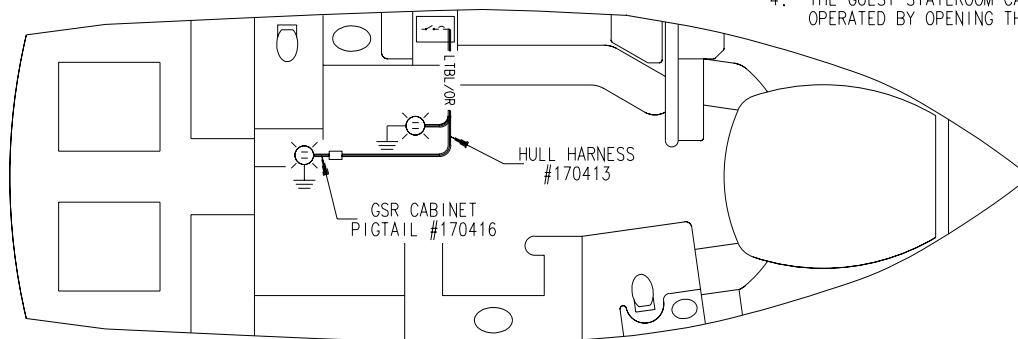
1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER STATERM LIGHTING" BREAKER TO "ON".
4. THE OWNER STATEROOM CABINET LIGHTS CAN NOW BE OPERATED BY OPENING THE CABINET DOORS.

TITLE: LIGHTS,  
OWNER CABINET

MOD.: 48Y

DR BY: JAW

48A



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GUEST STATERM LIGHTING" BREAKER TO "ON".
4. THE GUEST STATEROOM CABINET LIGHTS CAN NOW BE OPERATED BY OPENING THE CABINET DOORS.

TITLE: LIGHTS,  
GUEST CABINET

MOD.: 48Y

DR BY: JAW

48B



THUNDERBIRD  
PRODUCTS  
ENGINEERING





# LEGEND

GROUND 

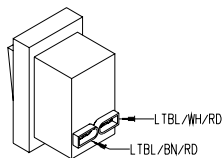
LIGHT 

BREAKER 

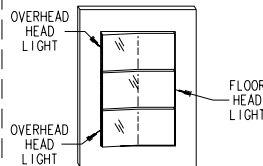
PLUGS 

SWITCH 

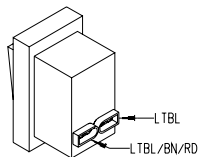
OWNER HEAD OVERHEAD  
LIGHT SWITCH  
(REAR VIEW)



OWNER HEAD  
LIGHT SWITCHES

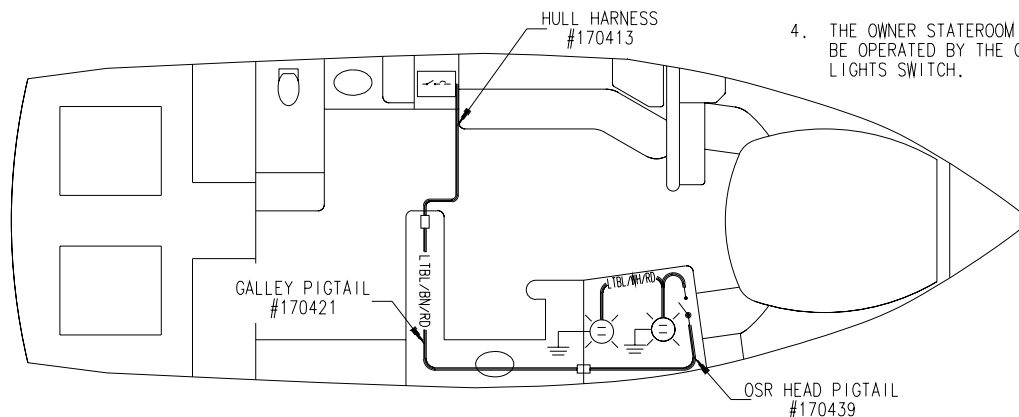


OWNER HEAD FLOOR  
LIGHT SWITCH  
(REAR VIEW)



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER STATERM LIGHTING" BREAKER TO "ON".
4. THE OWNER STATEROOM OVERHEAD LIGHTS CAN NOW BE OPERATED BY THE OWNER STATEROOM OVERHEAD LIGHTS SWITCH.



TITLE: LIGHTS, OWNER  
HEAD OVERHEAD

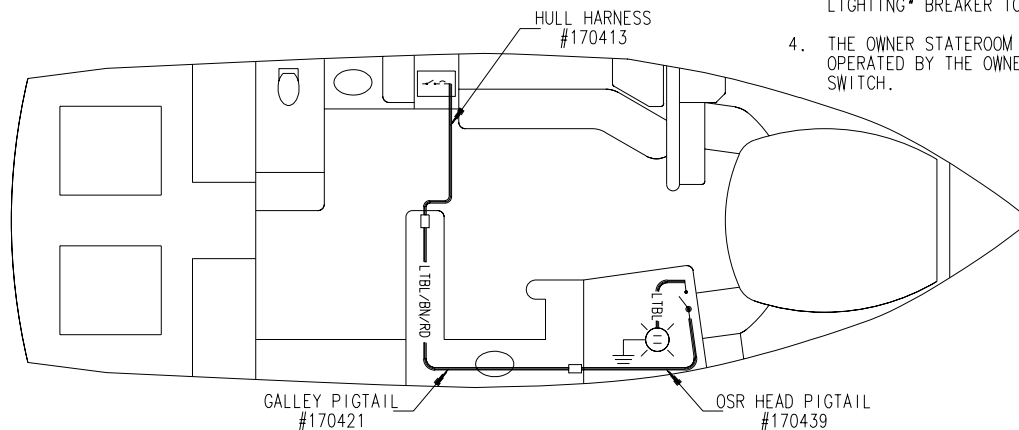
MOD.: 48Y

DR BY: JAW

49A

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER STATERM LIGHTING" BREAKER TO "ON".
4. THE OWNER STATEROOM FLOOR LIGHTS CAN NOW BE OPERATED BY THE OWNER STATEROOM FLOOR LIGHTS SWITCH.



TITLE: LIGHTS, OWNER  
HEAD FLOOR

MOD.: 48Y

DR BY: JAW

49B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND


GROUND 

LIGHT 

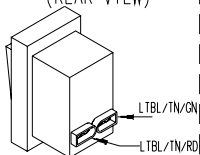
BREAKER 

PLUGS 

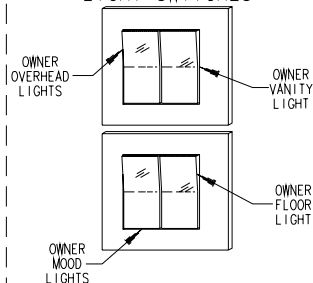
SWITCH 

ROPE LIGHT 

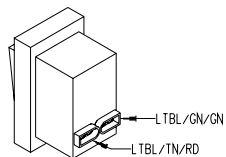
OWNER'S MOOD  
LIGHT SWITCH  
(REAR VIEW)



OWNER'S ENTRY WALL  
LIGHT SWITCHES



OWNER VANITY  
LIGHT SWITCH  
(REAR VIEW)



HULL HARNESS  
#170413

DINETTE PIGTAIL  
#170419

OSR ENTRY WALL  
PIGTAIL #173730

DECK HARNESS  
#170412

HULL HARNESS  
#170413

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER STATERM LIGHTING" BREAKER TO "ON".
4. THE OWNER STATEROOM MOOD LIGHTS CAN NOW BE OPERATED BY THE OWNER STATEROOM MOOD LIGHTS SWITCH.

TITLE: LIGHTS, OWNER  
STATEROOM MOOD

MOD.: 48Y  
DR BY: JAW

50A

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER STATERM LIGHTING" BREAKER TO "ON".
4. THE OWNER STATEROOM VANITY LIGHTS CAN NOW BE OPERATED BY THE OWNER STATEROOM VANITY LIGHTS SWITCH.

DINETTE PIGTAIL  
#170419

HULL HARNESS  
#170413

OSR ENTRY WALL  
PIGTAIL #173730

TITLE: LIGHTS, OWNER  
STATEROOM VANITY

MOD.: 48Y  
DR BY: JAW

50B

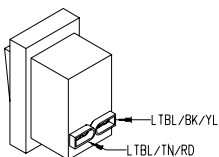


THUNDERBIRD  
PRODUCTS  
ENGINEERING

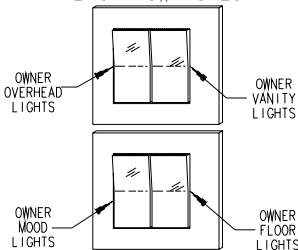
# LEGEND

GROUND	
LIGHT	
BREAKER	
PLUGS	
SWITCH	

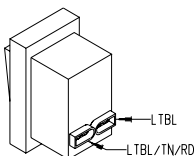
## OWNER OVERHEAD LIGHT SWITCH (REAR VIEW)



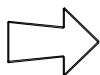
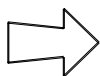
## OWNER ENTRY WALL LIGHT SWITCHES



## OWNER FLOOR LIGHT SWITCH (REAR VIEW)

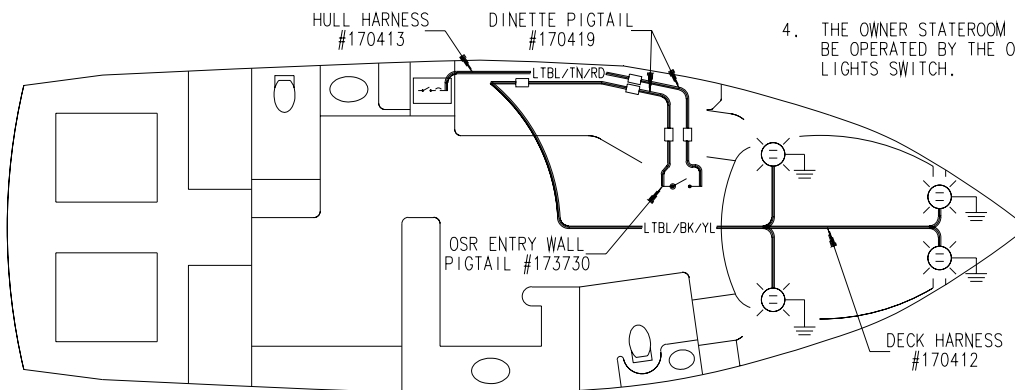


THUNDERBIRD  
PRODUCTS  
ENGINEERING



## TO OPERATE:

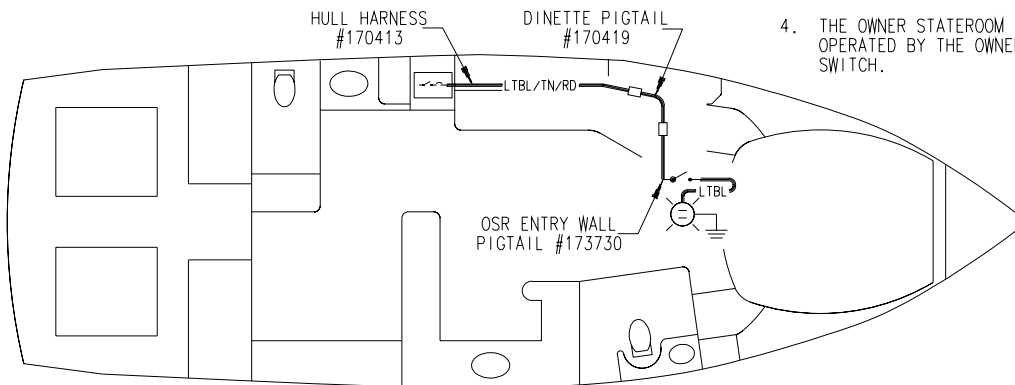
1. LOCATED UNDER THE WET BAR, TURN THE "BATTERY AUX" SWITCH TO "ON".
2. ON THE AC/DC PANEL IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. ON THE AC/DC PANEL, SWITCH THE "OWNER STATERM LIGHTING" BREAKER TO "ON".
4. THE OWNER STATEROOM OVERHEAD LIGHTS CAN NOW BE OPERATED BY THE OWNER STATEROOM SWITCHES.



TITLE: LIGHTS, OWNER  
STATEROOM OVERHEAD  
MOD.: 48Y  
DR BY: JAW  
**51A**

## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER STATERM LIGHTING" BREAKER TO "ON".
4. THE OWNER STATEROOM FLOOR LIGHTS CAN NOW BE OPERATED BY THE OWNER STATEROOM FLOOR LIGHT SWITCH.



TITLE: LIGHTS, OWNER  
STATEROOM FLOOR  
MOD.: 48Y  
DR BY: JAW  
**51B**

# LEGEND

GROUND



LIGHT



BREAKER



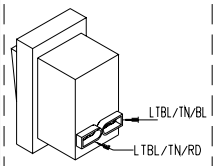
PLUGS



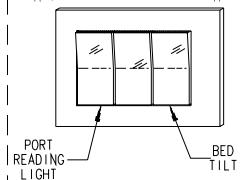
SWITCH



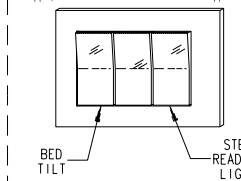
OWNER PORT READING  
LIGHT SWITCH  
(REAR VIEW)



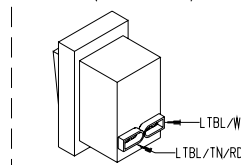
OWNER PORT LIGHT SWITCH



OWNER STBD LIGHT SWITCH



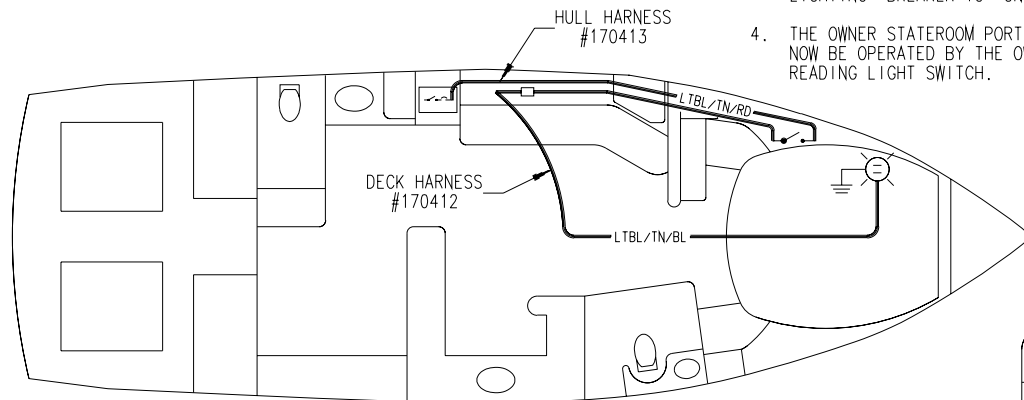
OWNER STBD READING  
LIGHT SWITCH  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER STATERM LIGHTING" BREAKER TO "ON".
4. THE OWNER STATEROOM PORT READING LIGHTS CAN NOW BE OPERATED BY THE OWNER STATEROOM PORT READING LIGHT SWITCH.



TITLE: LIGHTS, OWNER  
STATEROOM PORT READING

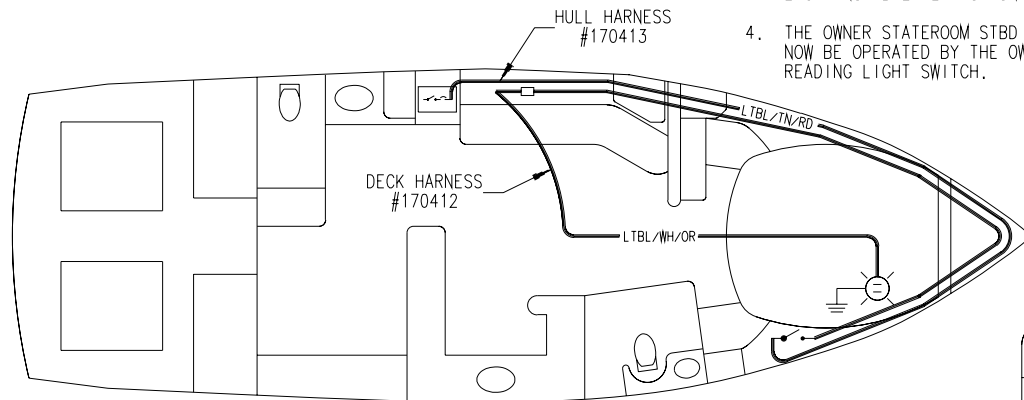
MOD.: 48Y

DR BY: JAW

52A

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "OWNER STATERM LIGHTING" BREAKER TO "ON".
4. THE OWNER STATEROOM STBD READING LIGHTS CAN NOW BE OPERATED BY THE OWNER STATEROOM STBD READING LIGHT SWITCH.



TITLE: LIGHTS, OWNER  
STATEROOM STBD READING

MOD.: 48Y

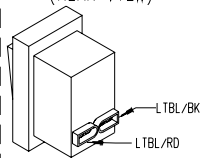
DR BY: JAW

52B

# LEGEND

GROUND	
LIGHT	
BREAKER	
PLUGS	
SWITCH	
ROPE LIGHTS	

SALON MOOD  
LIGHT SWITCH  
(REAR VIEW)



PORT ENTRY WALL  
LIGHT SWITCHES

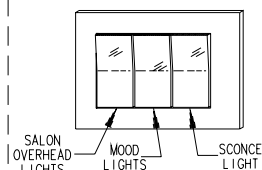
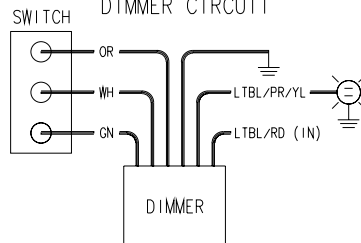
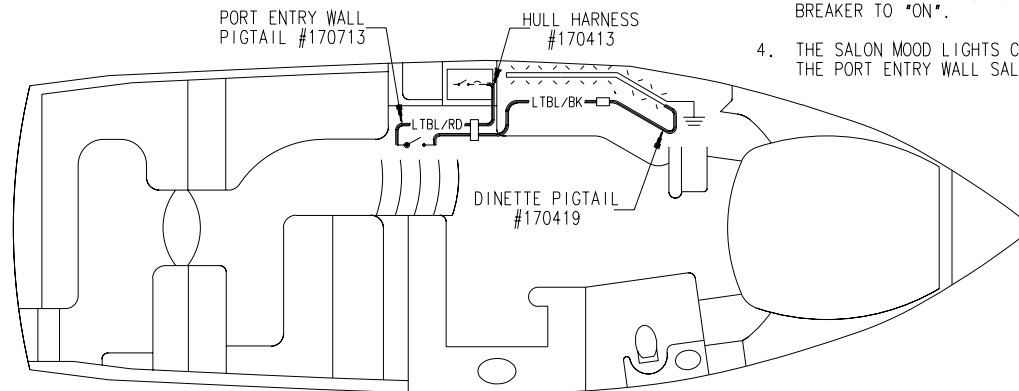


FIG. 1 SALON SCONCE LIGHT  
DIMMER CIRCUIT



## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "SALON LIGHTING" BREAKER TO "ON".
4. THE SALON MOOD LIGHTS CAN NOW BE OPERATED BY THE PORT ENTRY WALL SALON MOOD LIGHTS SWITCH.



TITLE: LIGHTS,  
SALON MOOD

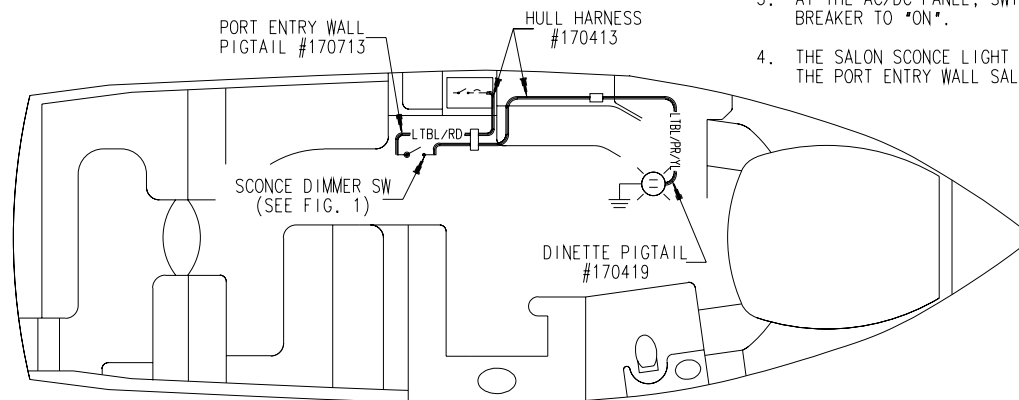
MOD.: 48Y

DR BY: JAW

53A

## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "SALON LIGHTING" BREAKER TO "ON".
4. THE SALON SCONCE LIGHT CAN NOW BE OPERATED BY THE PORT ENTRY WALL SALON SCONCE LIGHT SWITCH.



TITLE: LIGHT,  
SALON SCONCE

MOD.: 48Y

DR BY: JAW

53B




THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND

GROUND 

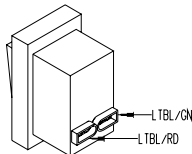
LIGHT 

BREAKER 

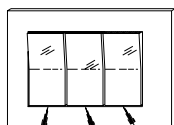
PLUGS 

SWITCH 

SALON OVERHEAD  
LIGHT SWITCH  
(REAR VIEW)



PORT ENTRY WALL  
LIGHT SWITCHES

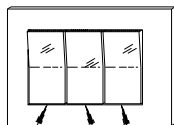


SALON  
OVERHEAD  
LIGHTS

SALON  
MOOD  
LIGHTS

SALON  
SCONCE  
LIGHTS

STBD ENTRY WALL  
LIGHT SWITCHES

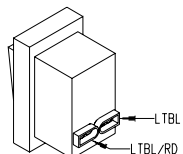


SALON  
FLOOR  
LIGHTS

RACE  
TRACK  
LIGHTS

GALLEY  
OVERHEAD  
LIGHTS

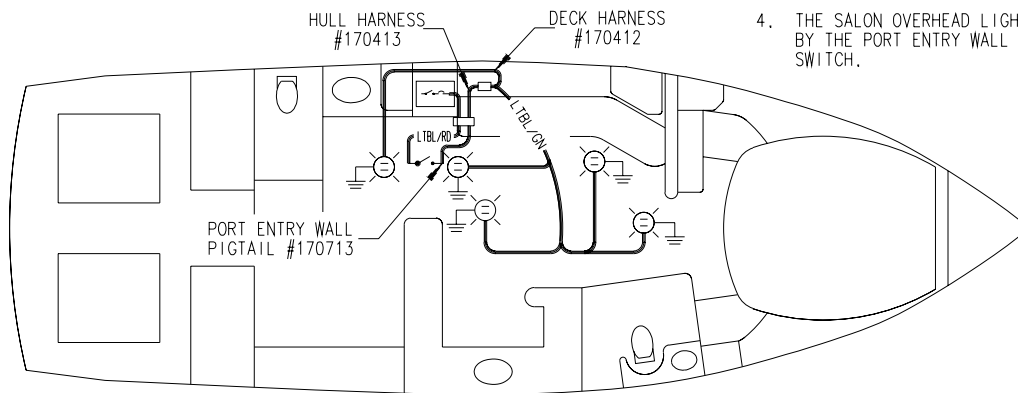
SALON FLOOR  
LIGHT SWITCH  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "SALON LIGHTING" BREAKER TO "ON".
4. THE SALON OVERHEAD LIGHTS CAN NOW BE OPERATED BY THE PORT ENTRY WALL SALON OVERHEAD LIGHTS SWITCH.



TITLE: LIGHTS,  
SALON OVERHEAD

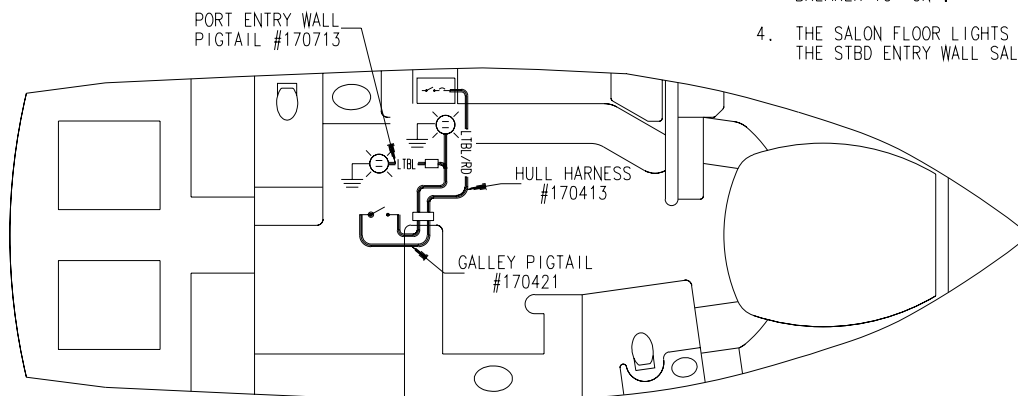
MOD.: 48Y

DR BY: JAW

54A

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "SALON LIGHTING" BREAKER TO "ON".
4. THE SALON FLOOR LIGHTS CAN NOW BE OPERATED BY THE STBD ENTRY WALL SALON FLOOR LIGHTS SWITCH.








TITLE: LIGHTS,  
SALON FLOOR

MOD.: 48Y

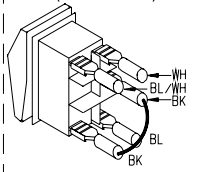
DR BY: JAW

54B

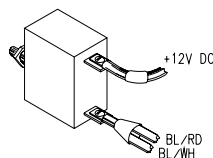
# LEGEND

GROUND	
BREAKER PANEL	
SWITCH	
PLUGS	
LIGHT	

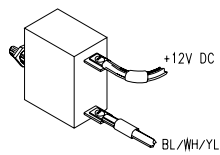
"COURT LTS" SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



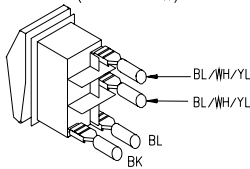
"COCKPIT LIGHTS" BKR 15A  
(DASH BKR PANEL)  
(REAR VIEW)



"ENG RM LIGHTS" BKR 15A  
(DASH BKR PANEL)  
(REAR VIEW)



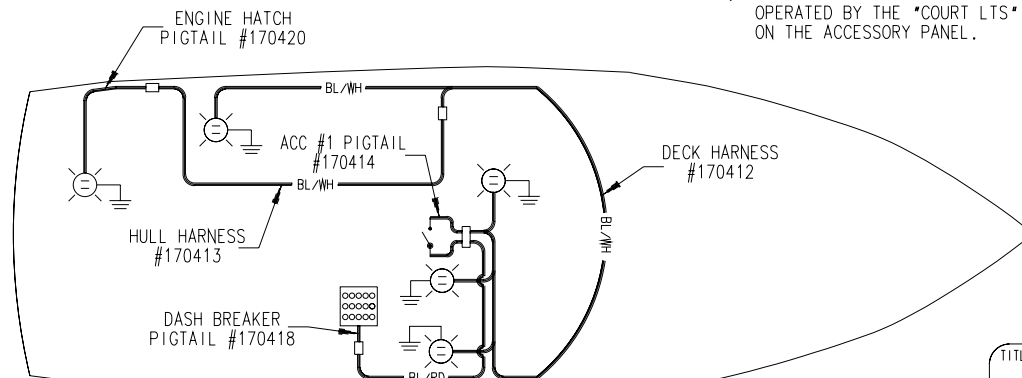
"ENGINE ROOM LTS" SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "COCKPIT LIGHTS" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE COCKPIT COURTESY LIGHTS CAN NOW BE OPERATED BY THE "COURT LTS" SWITCH LOCATED ON THE ACCESSORY PANEL.

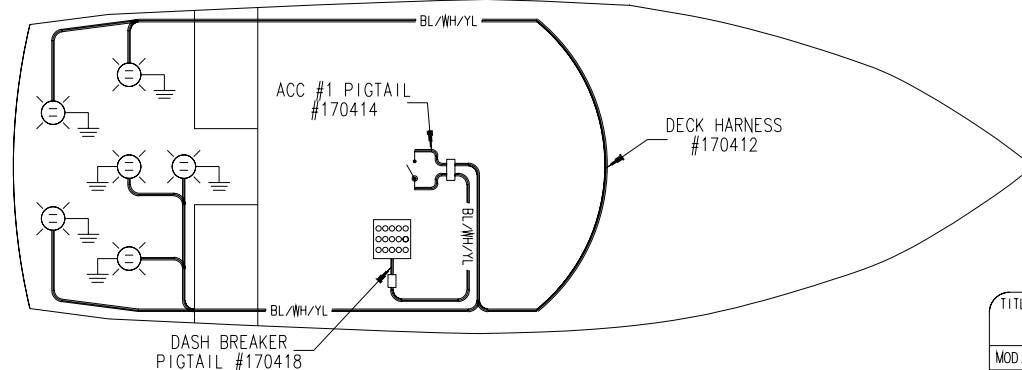


TITLE: LIGHTS,  
COCKPIT COURTESY  
MOD.: 48Y  
DR BY: JAW

55A

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "ENG RM LIGHTS" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE ENGINE ROOM LIGHTS CAN NOW BE OPERATED BY THE "ENGINE ROOM LTS" SWITCH LOCATED ON THE ACCESSORY PANEL.



TITLE: LIGHTS,  
ENGINE ROOM  
MOD.: 48Y  
DR BY: JAW

55B

# LEGEND

GROUND 

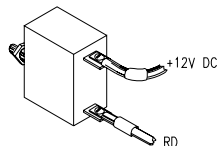
BREAKER PANEL 

SWITCH 

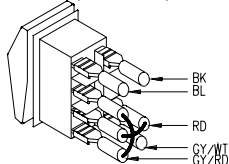
PLUGS 

LIGHT 

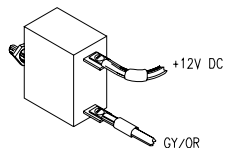
"NAV LIGHTS" BKR 10A  
(DASH BKR PANEL)  
(REAR VIEW)



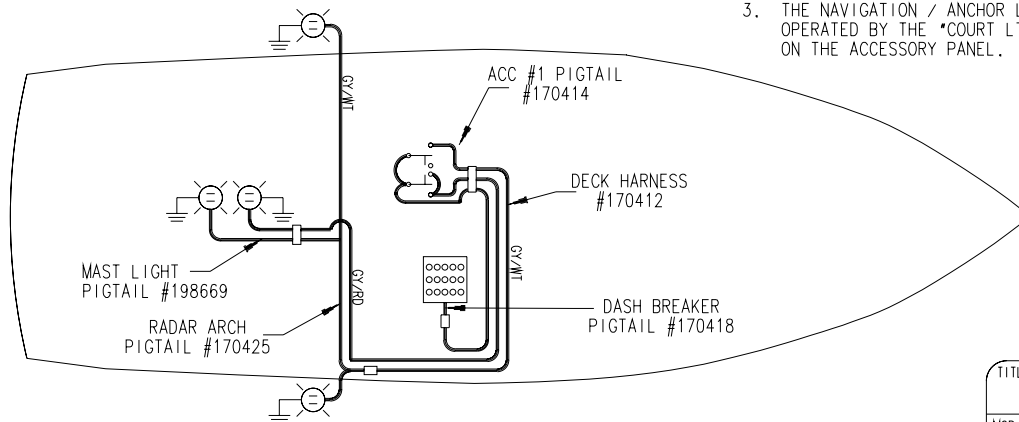
"NAV/ANCH LTS" SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



"SPOTLIGHT" BKR 10A  
(DASH BKR PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING



TO OPERATE:

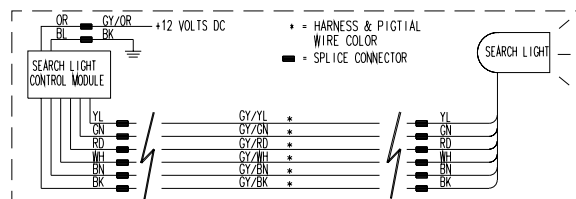
1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "NAV LIGHTS" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE NAVIGATION / ANCHOR LIGHTS CAN NOW BE OPERATED BY THE "COURT LTS" SWITCH LOCATED ON THE ACCESSORY PANEL.

TITLE: LIGHTS,  
NAV/ANCHOR

MOD.: 48Y

DR BY: JAW

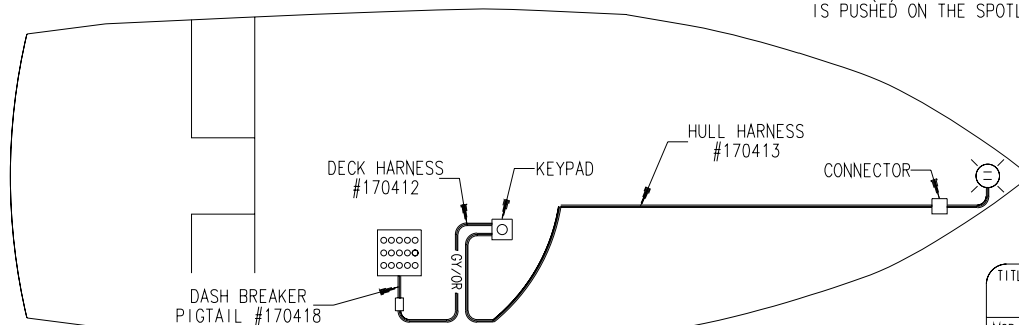
56A



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "SPOT-LIGHT" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE SPOT LIGHTS CAN NOW BE OPERATED BY THE KEYPAD LOCATED ON THE IGNITION PANEL.

NOTE: SPOTLIGHT WILL ILLUMINATE APPROXIMATELY THREE (3) SECONDS AFTER THE "ON" BUTTON IS PUSHED ON THE SPOTLIGHT KEYPAD.



TITLE: LIGHTS,  
SPOTLIGHT

MOD.: 48Y

DR BY: JAW

56B




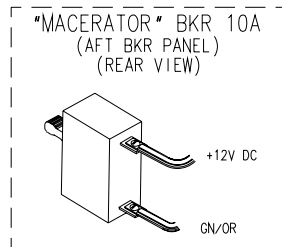
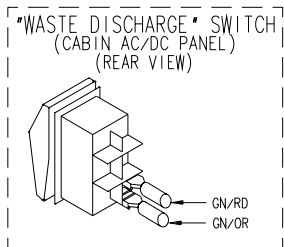
## LEGEND

GROUND 

PLUGS 

BREAKER 

SWITCH 

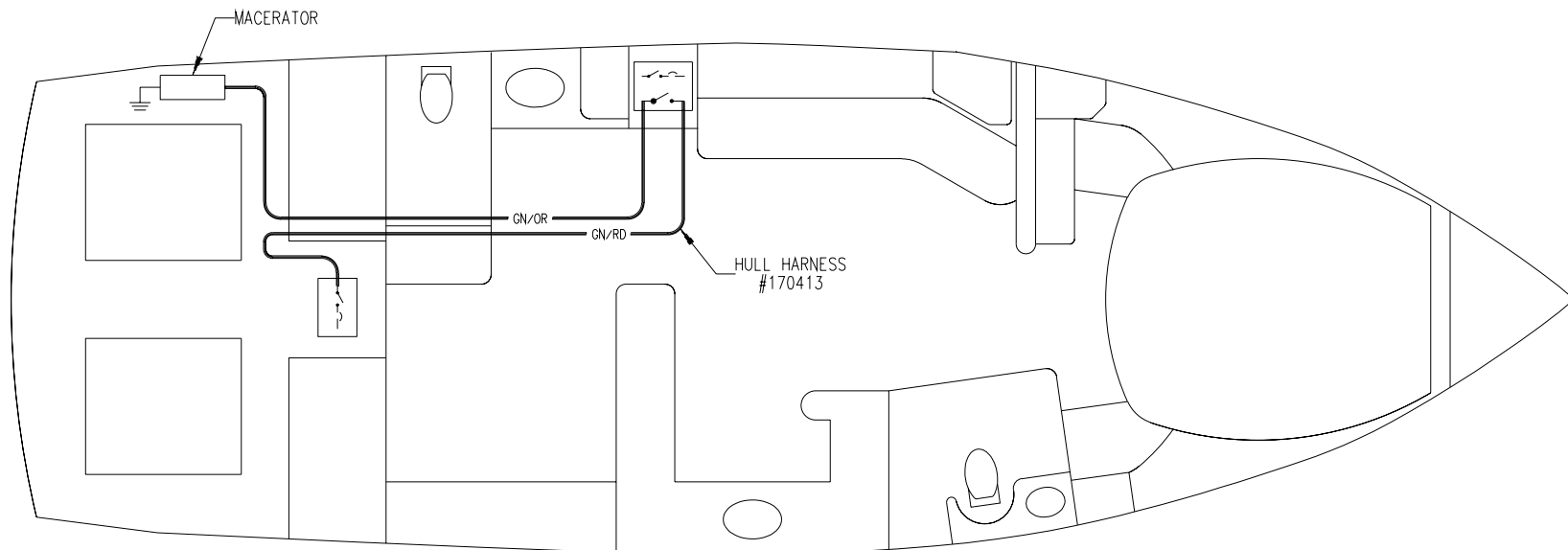


TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT BKR PANEL, SWITCH THE "MACERATOR" BREAKER TO "ON".
3. IN THE ENGINE BILGE AREA, PLACE THE SEACOCK VALVE IN THE "OPEN" POSITION.
4. AT THE CABIN AC/DC PANEL, HOLD THE "WASTE DISCHARGE" SWITCH UNTIL THE "EMPTY" LIGHT ILLUMINATES.

## CAUTION!

FOLLOW LOCAL, STATE, AND FEDERAL GUIDELINES FOR WASTE DISCHARGE.



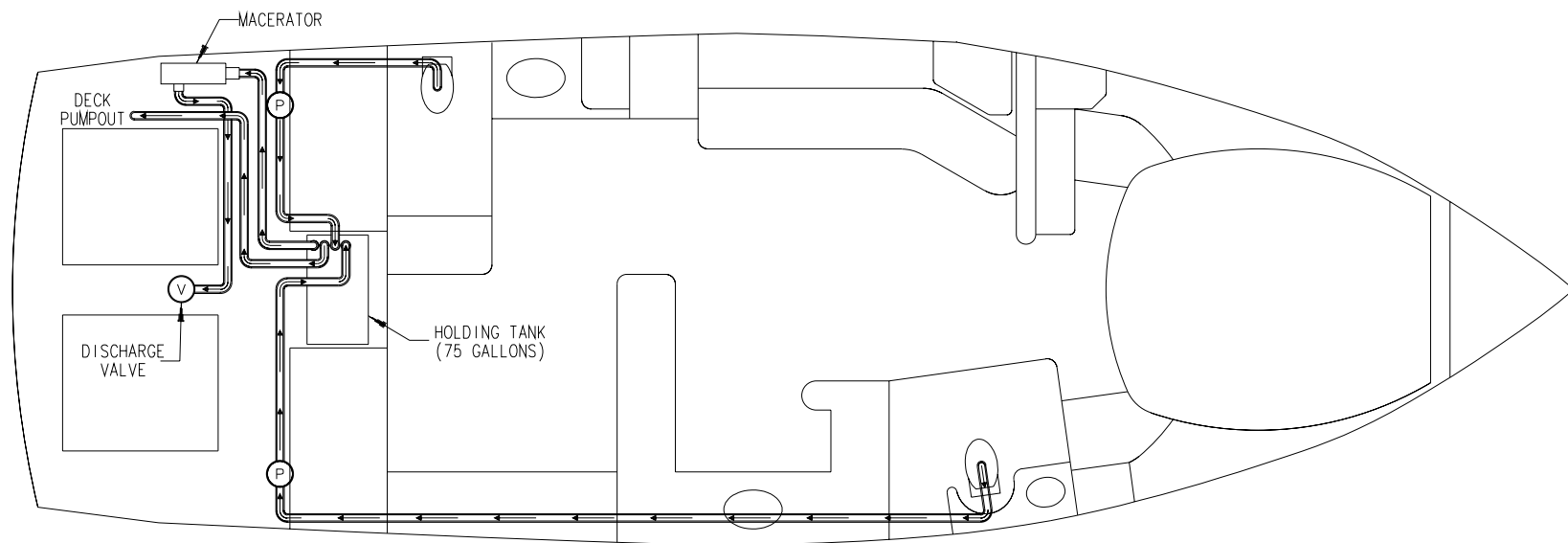
THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE:	MACERATOR, ELECTRICAL
MOD.: 48Y	57
DR BY: JAW	

# LEGEND

VALVE (V)

PUMP (P)



THUNDERBIRD  
PRODUCTS  
ENGINEERING





TITLE: MACERATOR,  
PLUMBING

MOD.: 48Y

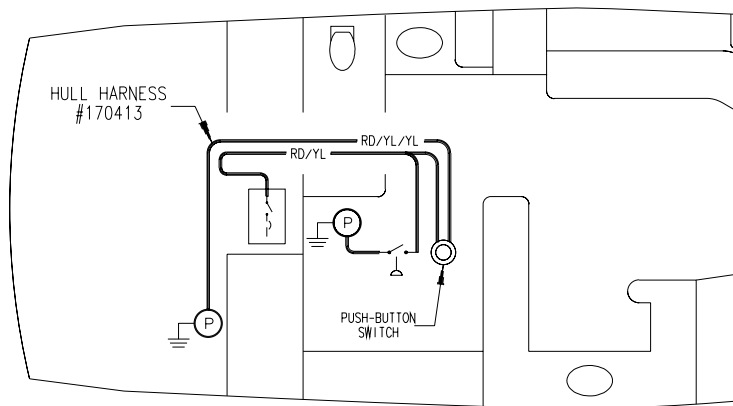
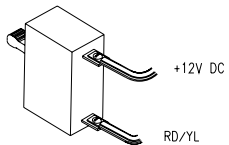
DR BY: JAW

58

# LEGEND

GROUND	
BREAKER	
PUMP	
FLOAT SWITCH	

"CABIN AUTO BILGE PUMP"  
BKR 15A  
(AFT BKR PANEL)  
(REAR VIEW)



TO OPERATE:

1. AT THE AFT BKR PANEL, SWITCH THE "CABIN AUTO BILGE PUMP" BREAKER TO "ON".
2. THE CABIN BILGE PUMP IS NOW SUPPLIED WITH 12V DC.

NOTE:

THE CABIN BILGE PUMP WILL AUTOMATICALLY START WHEN WATER IS AT A LEVEL HIGH ENOUGH TO ACTIVATE THE FLOAT SWITCH.

THE CABIN BILGE PUMP CANNOT BE TURNED OFF BY TURNING THE "BATTERY AUX" SWITCH TO "OFF".

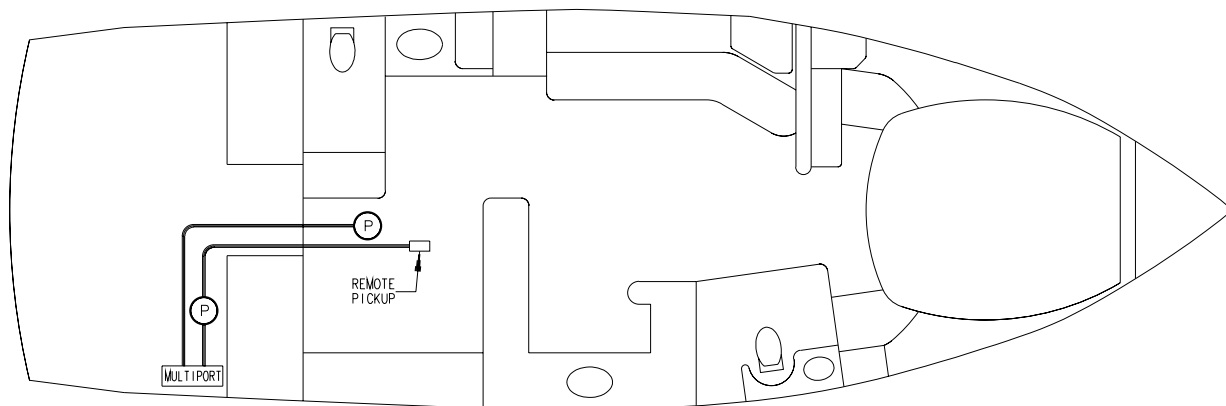
THE CABIN BILGE PUMP CAN ALSO BE OPERATED BY PRESSING AND HOLDING THE PUSH-BUTTON SWITCH LOCATED UNDER THE GUEST STATEROOM FLOOR.

TITLE: CABIN BILGE,  
ELECTRICAL

MOD.: 48Y

DR BY: JAW

59A



TITLE: CABIN BILGE,  
PLUMBING

MOD.: 48Y

DR BY: JAW

59B





THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND

GROUND 


BREAKER 

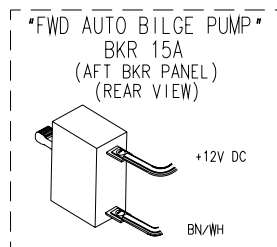
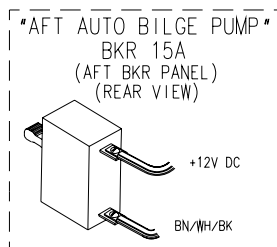
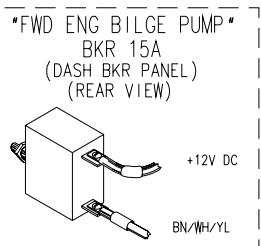
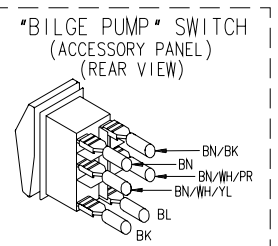
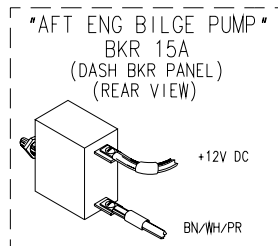
PUMP 

SWITCH 

PLUGS 

FLOAT SWITCH 

BREAKER PANEL 



## TO OPERATE:

1. AT THE AFT BKR PANEL, SWITCH THE "AFT AUTO BILGE PUMP" AND "FWD AUTO BILGE PUMP" BREAKERS TO "ON".
3. THE ENGINE BILGE PUMPS ARE NOW SUPPLIED WITH 12 VOLTS DC.

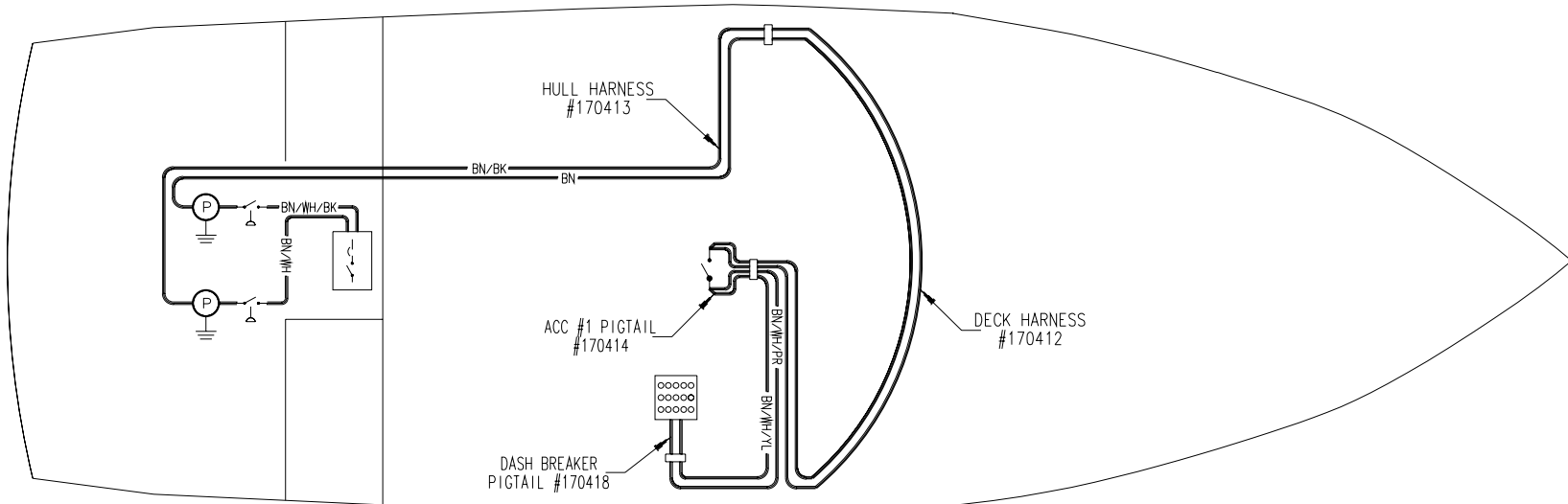
## NOTE:

THE ENGINE BILGE PUMPS WILL AUTOMATICALLY START WHEN WATER IS AT A LEVEL HIGH ENOUGH TO ACTIVATE THE FLOAT SWITCH.

THE ENGINE BILGE PUMPS CANNOT BE TURNED OFF BY TURNING THE "BATTERY AUX" SWITCH TO "OFF".

## TO OPERATE MANUALLY:

1. LOCATED UNDER THE WET BAR, TURN THE "BATTERY AUX" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "AFT ENG BILGE PUMP" AND "FWD ENG BILGE PUMP" BREAKERS MUST BE PUSHED IN (CLOSED).
3. THE ENGINE BILGE PUMPS CAN NOW BE OPERATED BY THE "BILGE PUMP" SWITCH ON THE ACCESSORY PANEL.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: ENGINE BILGE,  
ELECTRICAL

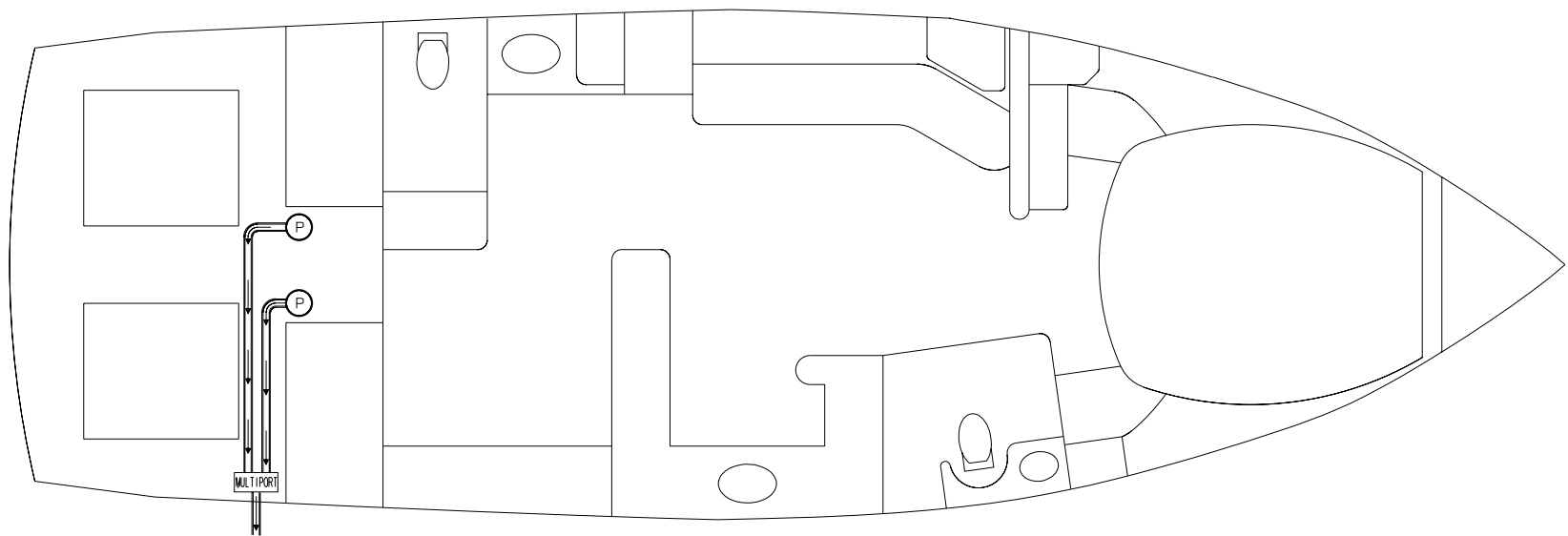
MOD.: 48Y

DR BY: JAW

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# LEGEND

PUMP



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: ENGINE BILGE,  
PLUMBING


MOD.: 48Y  
DR BY: JAW

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## LEGEND

PLUGS  

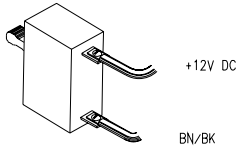
BREAKER 

GROUND 

FUSE 

PUMP (P)

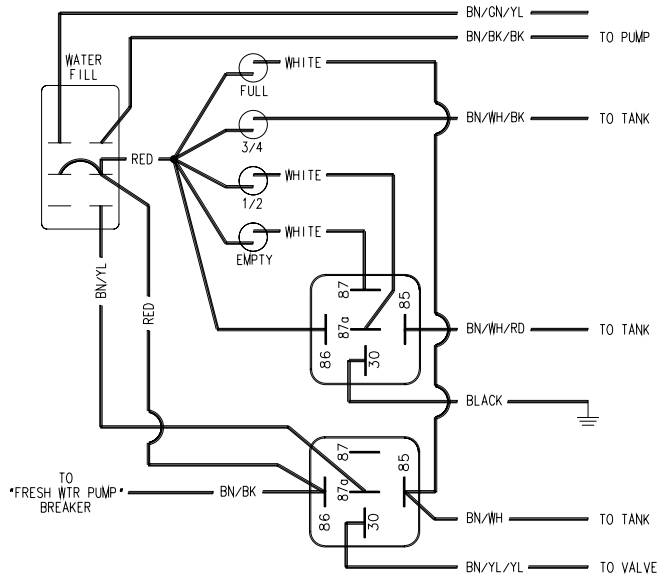
"FRESH WATER PUMP" BKR 30A  
(CABIN AC/DC PANEL)  
(REAR VIEW)



+12V DC

BN/BK

FIG. 1



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "FRESH WATER PUMP" BREAKER TO "ON".
4. THE FRESH WATER PUMP IS NOW ON, AND WILL SHUT OFF AUTOMATICALLY WHEN THERE IS SUFFICIENT WATER PRESSURE IN THE SYSTEM.

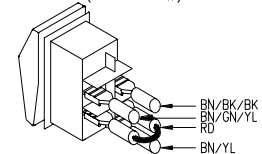
NOTE:

THE WATER PUMP DOES NOT NEED TO BE IN OPERATION WHEN BOAT IS CONNECTED TO SHORE WATER.

WARNING!

MAKE SURE WATER TANK HAS SUFFICIENT  
AMOUNT OF WATER TO RUN SYSTEM.  
RUNNING THE SYSTEM DRY CAN CAUSE DAMAGE  
TO THE WATER PUMP.  
WATER TANK GAUGE IS LOCATED IN CABINET,  
UNDER SINK.

ONE POINT WATER FILL SWITCH  
(GALLEY UNIT)  
(REAR VIEW)



(SEE FIG. 1 FOR DETAILED  
CIRCUIT INSIDE PANEL)

HULL HARNESS  
#170413

15A FUSE

WATER  
TANK

# LEGEND

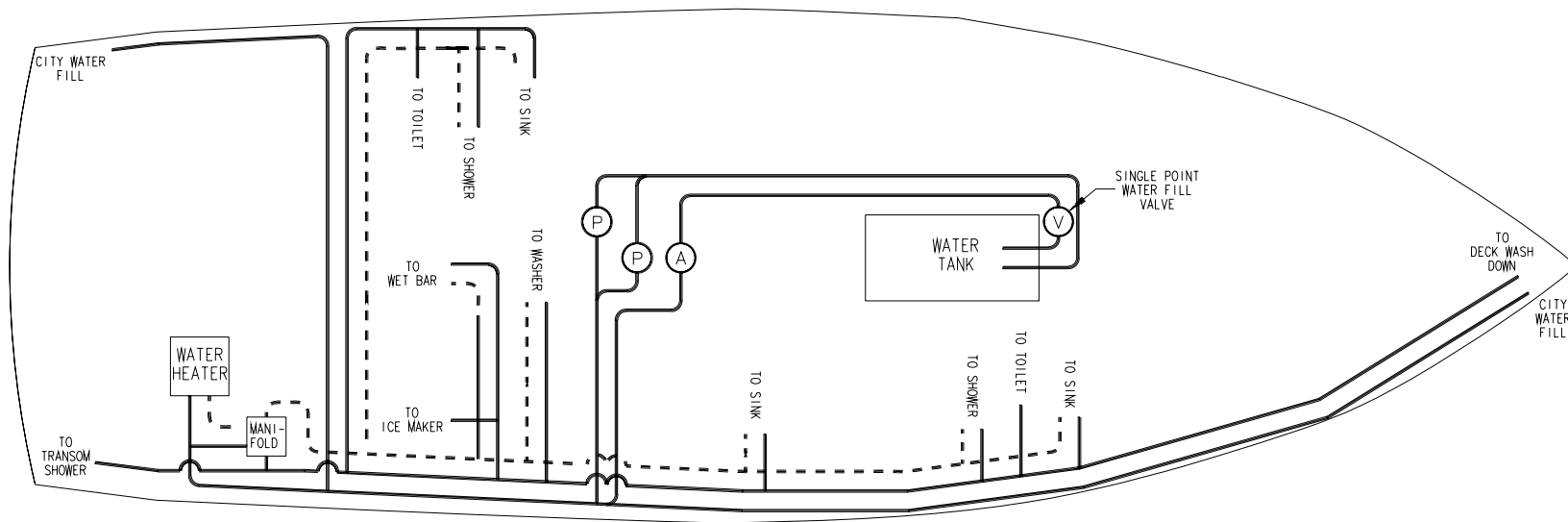
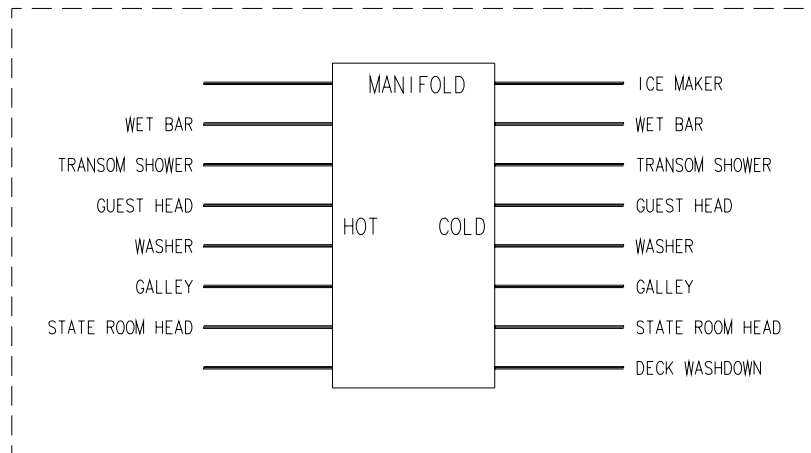
COLD WATER LINE ———

HOT WATER LINE - - - -

PUMP (P)

ACCUMULATOR (A)

VALVE (V)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: FRESH WATER  
PUMP, PLUMBING

MOD.: 48Y

DR BY: JAW

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# LEGEND

PLUGS



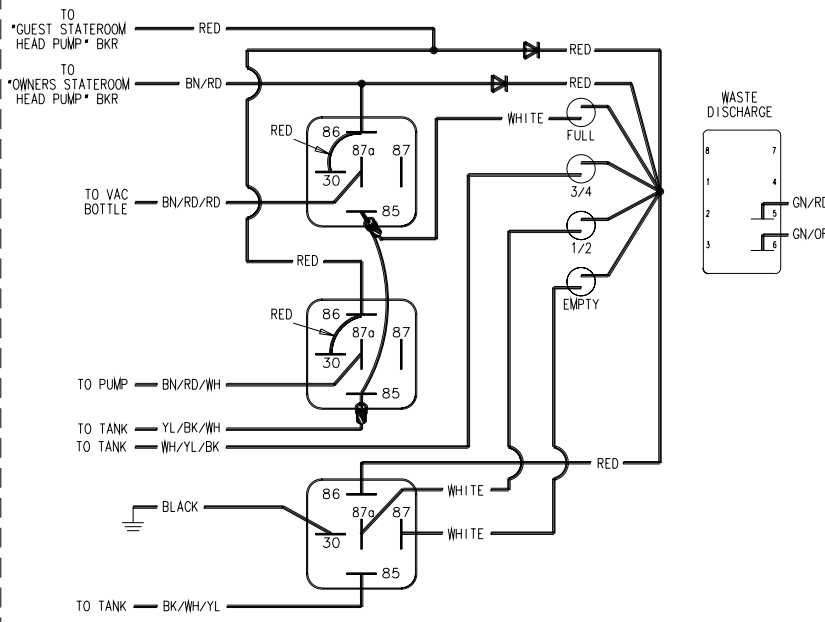
BREAKER



GROUND



PUMP



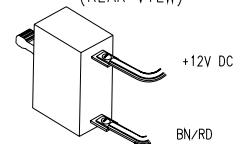
TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE \*AUX BATT\* SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC \*MAIN 1\* BREAKER TO \*ON\*.
3. AT THE AC/DC PANEL, SWITCH THE \*HEAD PUMP\* BREAKER TO \*ON\*.
4. THE HEAD PUMP IS NOW OPERATIONAL, AND THE TOILET CAN BE FLUSHED.

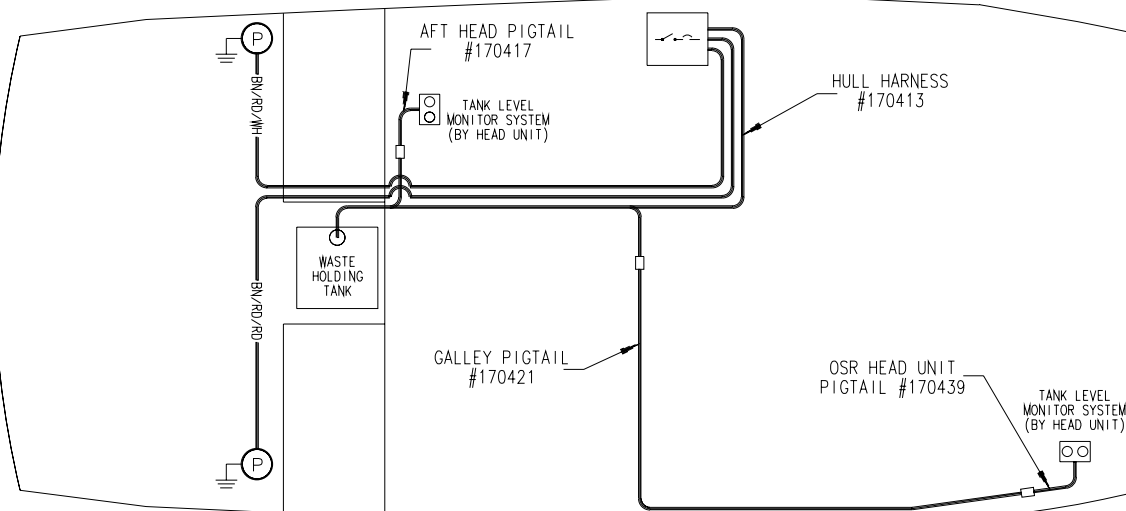
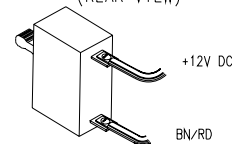
NOTE:

WHEN THE \*FULL\* LIGHT IS ILLUMINATED ON THE TANK LEVEL MONITOR THE VACUUM PUMP SHUTS DOWN AND THE TOILET WILL NOT FLUSH.

\*GUEST STATERM HEAD PUMP\*  
BKR 20A  
(AC/DC BKR PANEL)  
(REAR VIEW)



\*OWNER STATERM HEAD PUMP\*  
BKR 20A  
(AC/DC BKR PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: HEAD PUMPS,  
ELECTRICAL

MOD.: 48Y

DR BY: JAW

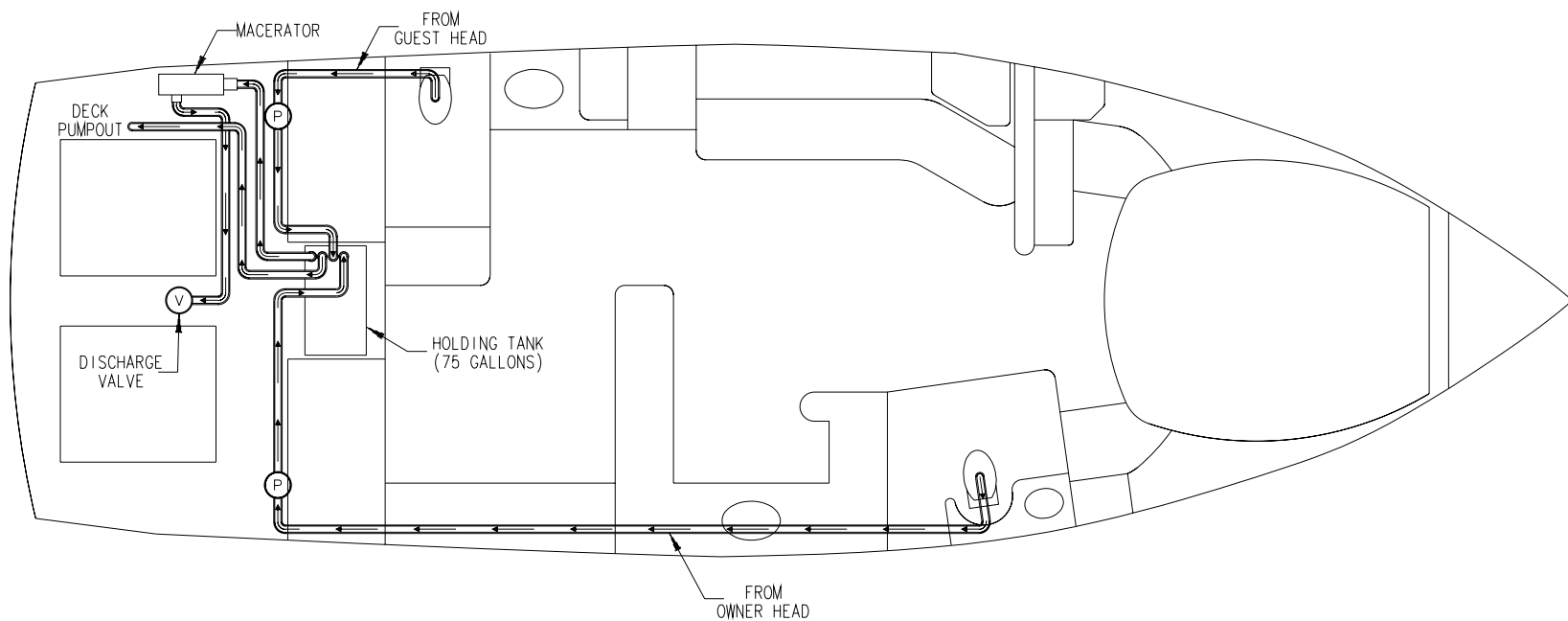
64



# LEGEND

VALVE (V)

PUMP (P)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: HEAD PUMPS,  
PLUMBING

MOD.: 48Y

DR BY: JAW

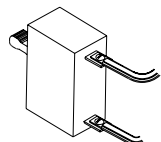
65

# LEGEND

GROUND 

BREAKER 

"OIL CHANGE PUMP" BKR 5A  
(AFT BKR PANEL)  
(REAR VIEW)

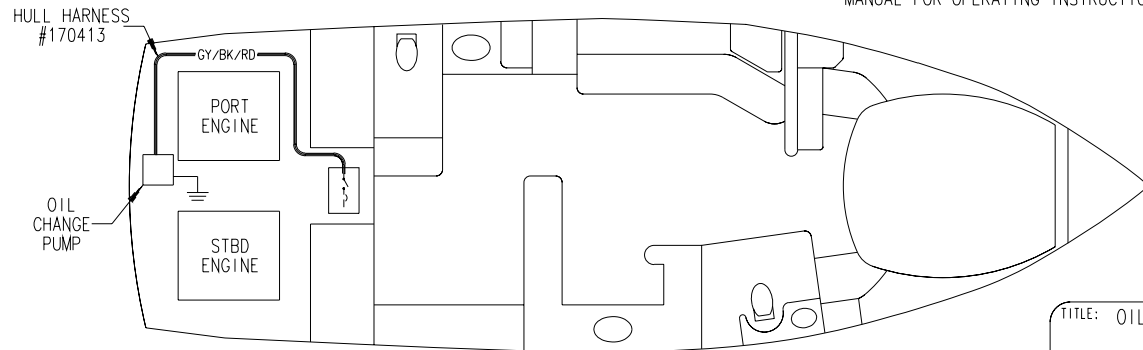


+12V DC

GY/BK/RD

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT BKR PANEL, SWITCH THE "OIL CHANGE PUMP" BREAKER TO "ON".
3. THE OIL CHANGE PUMP IS NOW SUPPLIED WITH 12V DC. SEE THE OIL CHANGE PUMP OPERATOR'S MANUAL FOR OPERATING INSTRUCTIONS.

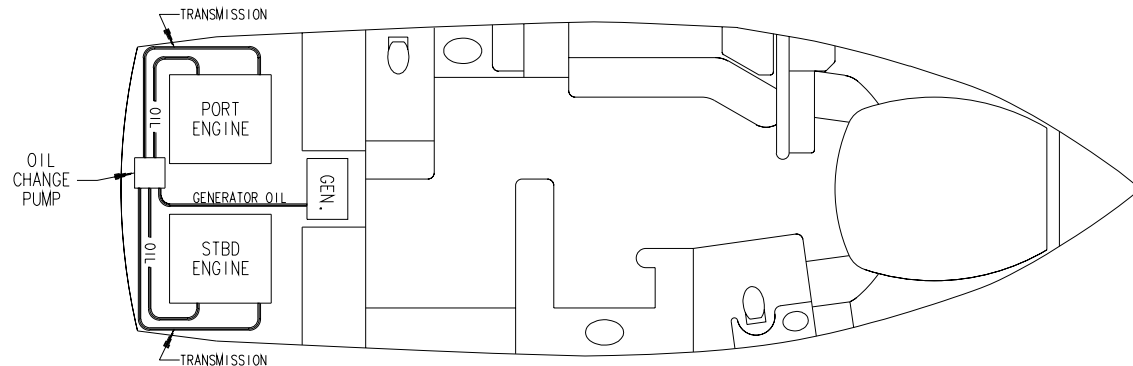


TITLE: OIL CHANGE PUMP,  
ELECTRICAL

MOD.: 48Y

DR BY: JAW

66A



TITLE: OIL CHANGE PUMP,  
PLUMBING

MOD.: 48Y

DR BY: JAW

66B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND

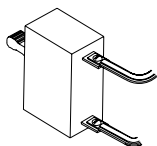
GROUND 

PUMP 

BREAKER 

FLOAT SWITCH 

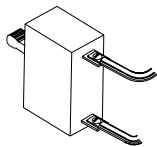
"SHOWER SUMP 1" BKR 10A  
(AFT BKR PANEL)  
(REAR VIEW)



+12V DC

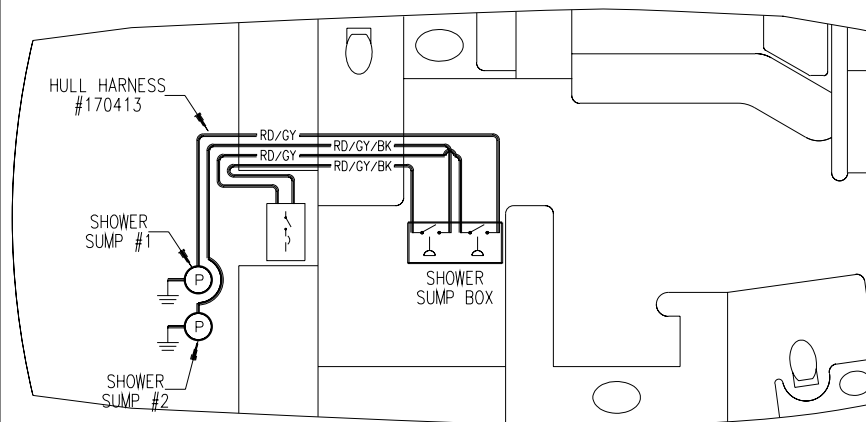
RD/GY

"SHOWER SUMP 2" BKR 10A  
(AFT BKR PANEL)  
(REAR VIEW)



+12V DC

RD/GY/BK



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT BKR PANEL, SWITCH THE "SHOWER SUMP 1" AND "SHOWER SUMP 2" BREAKERS TO "ON".
3. THE SHOWER SUMPS ARE NOW SUPPLIED WITH 12 VOLTS DC.

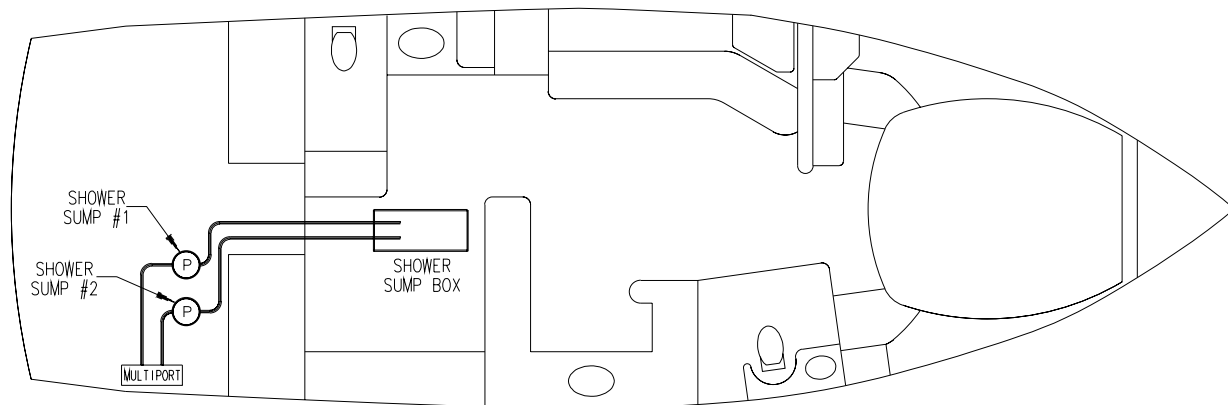
NOTE:  
THE SHOWER SUMPS WILL AUTOMATICALLY START WHEN THE WASTE WATER IS AT A LEVEL HIGH ENOUGH TO ACTIVATE THE FLOAT SWITCH.

TITLE: SHOWER SUMPS,  
ELECTRICAL

MOD.: 48Y

DR BY: JAW

67A



TITLE: SHOWER SUMPS,  
DRAINAGE

MOD.: 48Y

DR BY: JAW


67B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND

GROUND 

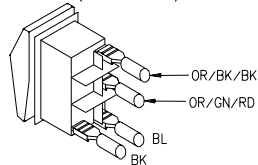
PLUGS 

BREAKER PANEL 

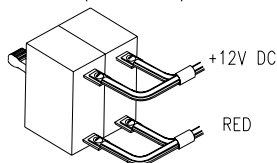
SWITCH 

PUMP 

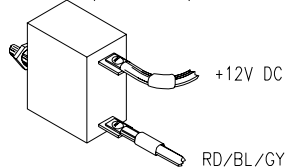
"PWC LIFT" SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



STEREO AMP BKR 10A  
(AFT BKR PANEL)  
(REAR VIEW)



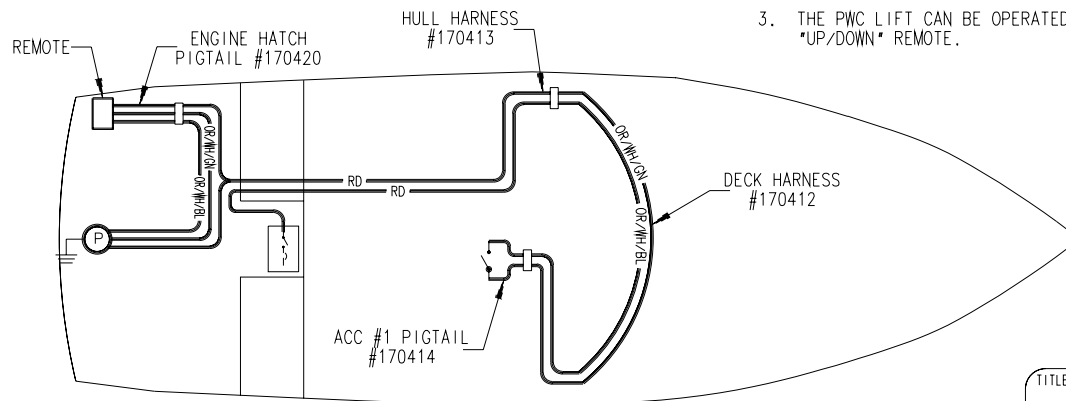
"VHF RADIO" BKR 10A  
(DASH BKR PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

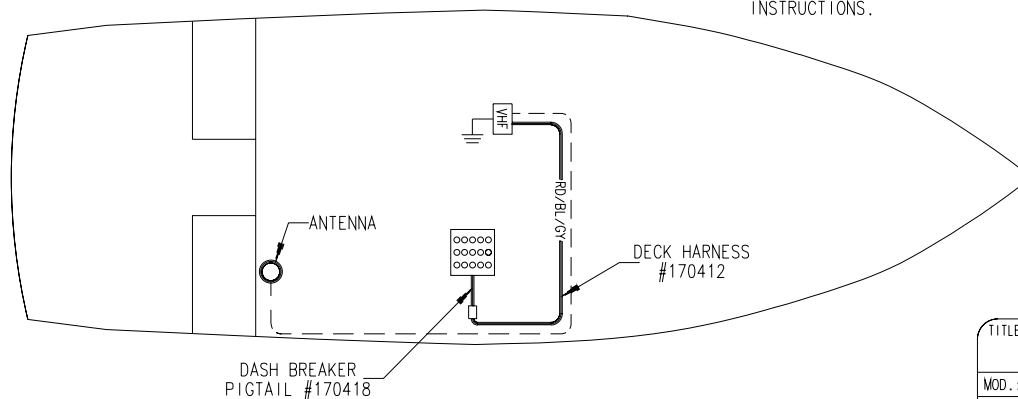
1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT BKR PANEL, SWITCH THE "PWC" BREAKER TO "ON".
3. THE PWC LIFT CAN BE OPERATED BY THE "UP/DOWN" REMOTE.



TITLE: PWC LIFT	
MOD.: 48Y	68A
DR BY: JAW	

TO OPERATE:


1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "VHF RADIO" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE VHF RADIO IS NOW SUPPLIED WITH 12V DC. SEE OPERATOR'S MANUAL FOR OPERATING INSTRUCTIONS.



TITLE: VHF RADIO	
MOD.: 48Y	68B
DR BY: JAW	

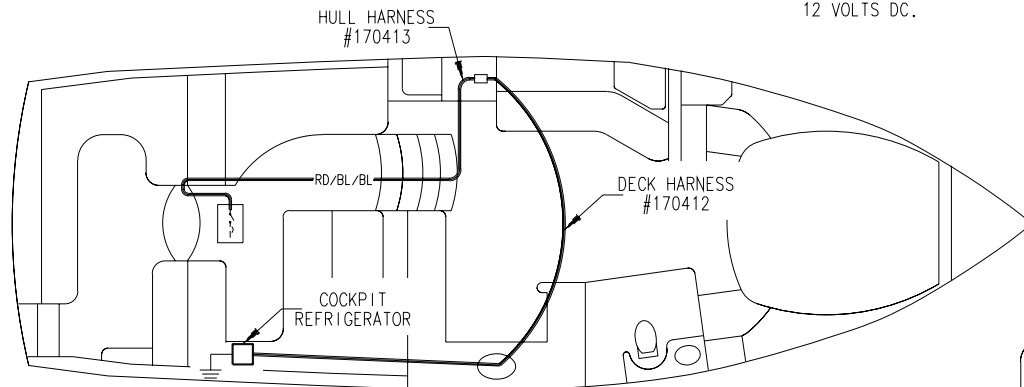
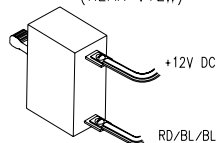
# LEGEND

BREAKER 

PLUG 

GROUND 

"COCKPIT REFRIGERATOR"  
BKR 10A  
(AFT BKR PANEL)  
(REAR VIEW)



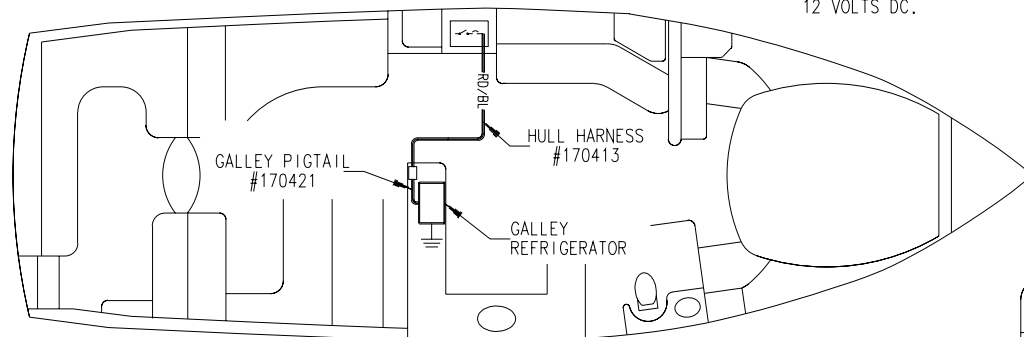
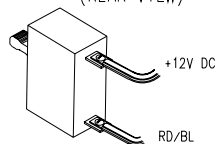
TITLE: COCKPIT  
REFRIGERATOR

MOD.: 48Y

DR BY: JAW

69A

"GALLEY REFRIGERATOR"  
BKR 10A  
(CABIN AC/DC PANEL)  
(REAR VIEW)



TITLE: GALLEY  
REFRIGERATOR

MOD.: 48Y

DR BY: JAW

69B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT BKR PANEL, SWITCH THE "COCKPIT REFRIGERATOR" BREAKER TO "ON".
3. THE COCKPIT REFRIGERATOR IS NOW SUPPLIED WITH 12 VOLTS DC.

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "GALLEY REFRIGERATOR" BREAKER TO "ON".
4. THE GALLEY REFRIGERATOR IS NOW SUPPLIED WITH 12 VOLTS DC.

# LEGEND

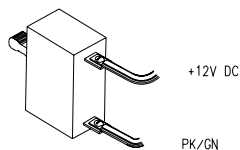
GROUND 

BREAKER 

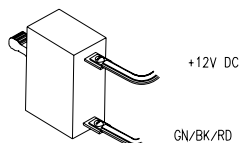
PLUGS 

FLOAT SWITCH 

"SEAKEY" BKR 2A  
(AFT BKR PANEL)  
(REAR VIEW)



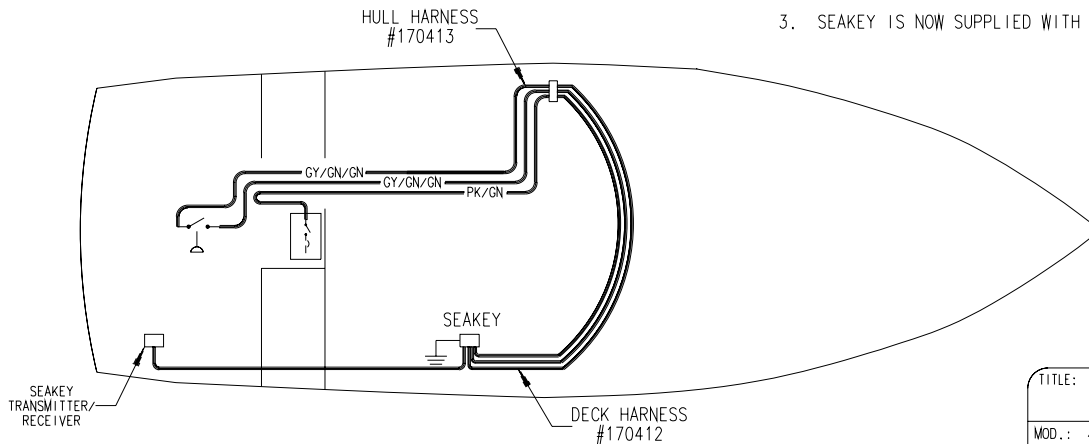
"HOSE REEL" BKR 5A  
(AFT BKR PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT BKR PANEL, SWITCH THE "SEAKEY" BREAKER TO "ON".
3. SEAKEY IS NOW SUPPLIED WITH 12 VOLTS DC.



TITLE: SEAKEY

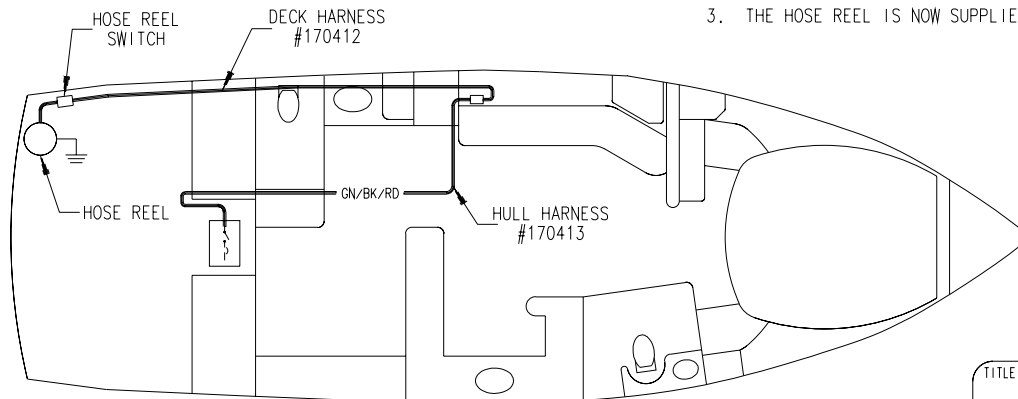
MOD.: 48Y

DR BY: JAW

70A

## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT BKR PANEL, SWITCH THE "HOSE REEL" BREAKER TO "ON".
3. THE HOSE REEL IS NOW SUPPLIED WITH 12 VOLTS DC.







TITLE: HOSE REEL

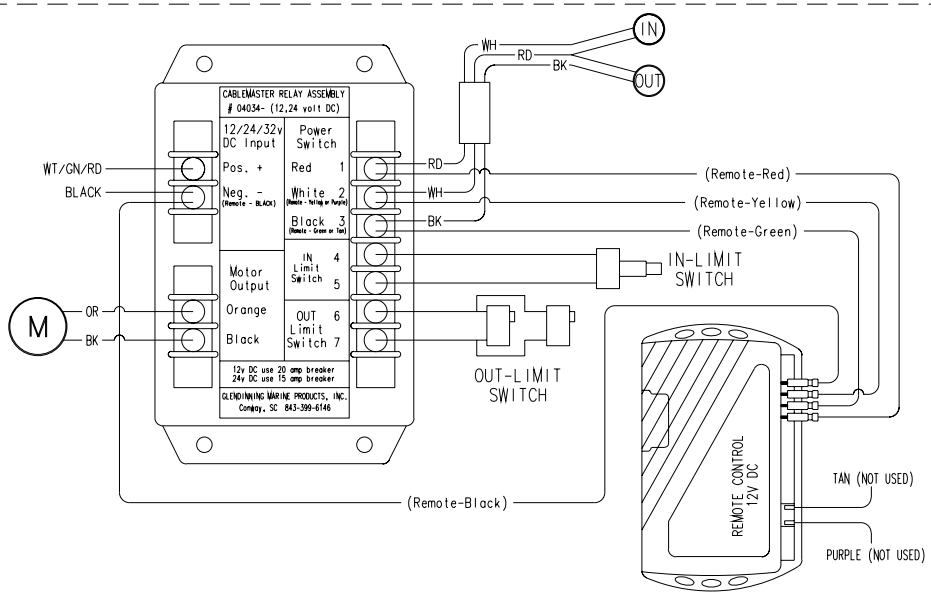
MOD.: 48Y

DR BY: JAW

70B

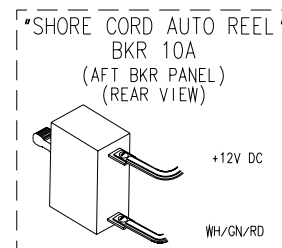
# LEGEND

GROUND	
BREAKER	
SWITCH	
PLUGS	

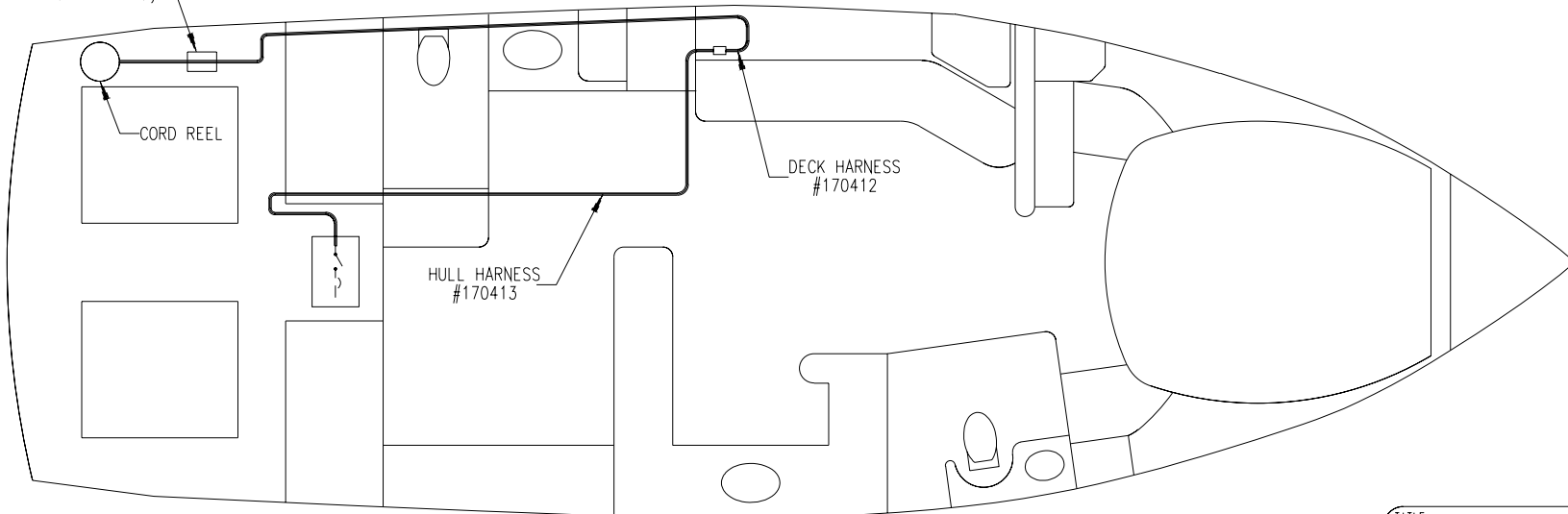


TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT BKR PANEL, SWITCH THE "SHORE CORD AUTO REEL" BREAKER TO "ON".
3. THE SHORE CORD AUTO REEL CAN NOW BE OPERATED BY THE IN/OUT BUTTONS.



CORD REEL SWITCH  
(SEE ABOVE DIAGRAM)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: SHORE CORD  
AUTO REEL

MOD.: 48Y

DR BY: JAW

# LEGEND

GROUND 

PLUGS 

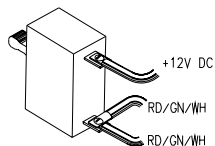
BREAKER 

SPEAKER 

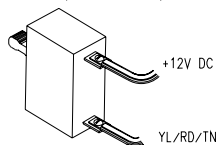
SOLENOID 

PLEX  
BLOCK 

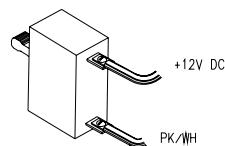
"COCKPIT STEREO" BKR 15A  
(CABIN AC/DC PANEL)  
(REAR VIEW)



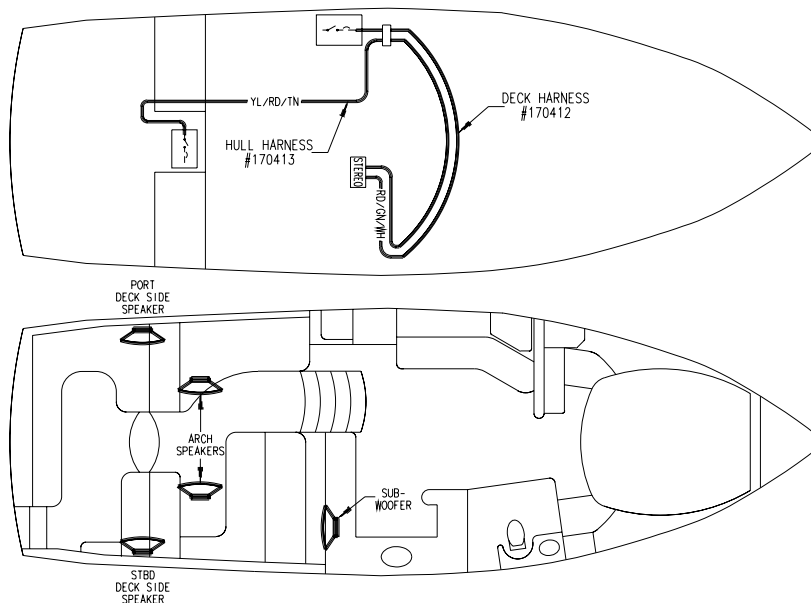
"STEREO MEMORY" BKR 20A  
(AFT BKR PANEL)  
(REAR VIEW)



"COCKPIT STEREO AMP" BKR 50A  
(AFT BKR PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING



TO OPERATE:

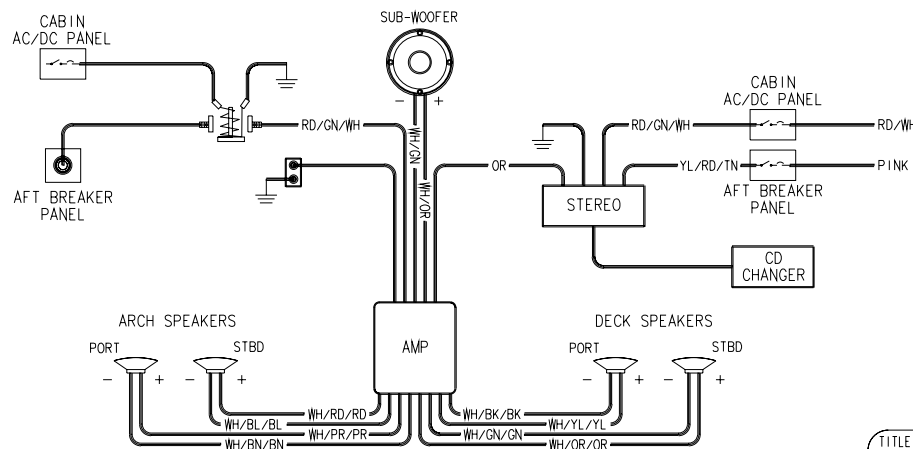
1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT BKR PANEL, SWITCH THE "STEREO MEMORY" AND "COCKPIT STEREO AMP" BREAKERS TO "ON".
3. THE COCKPIT STEREO SYSTEM IS NOW SUPPLIED WITH 12 VOLTS DC AND READY FOR OPERATION.
4. SEE STEREO'S OPERATING MANUAL FOR INSTRUCTIONS ON OPERATING STEREO FUNCTIONS.

TITLE: COCKPIT STEREO,  
COMPONENT LOCATION

MOD.: 48Y

DR BY: JAW

72A



TITLE: COCKPIT STEREO,  
COMPLETE WIRING

MOD.: 48Y

DR BY: JAW

72B

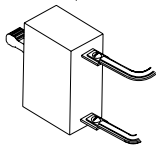


## LEGEND



The diagram shows two types of switches. On the left is a closed switch, represented by a horizontal line with a diagonal line segment connecting it to another horizontal line, forming a continuous path. On the right is an open switch, represented by a horizontal line with a gap in the middle, and a curved line segment above the gap indicating the switch is not connected.

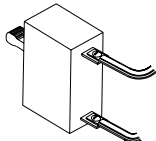
"OWNER STATERM STEREO"  
BKR 15A  
(AC/DC BKR PANEL)  
(REAR VIEW)



+12V DC

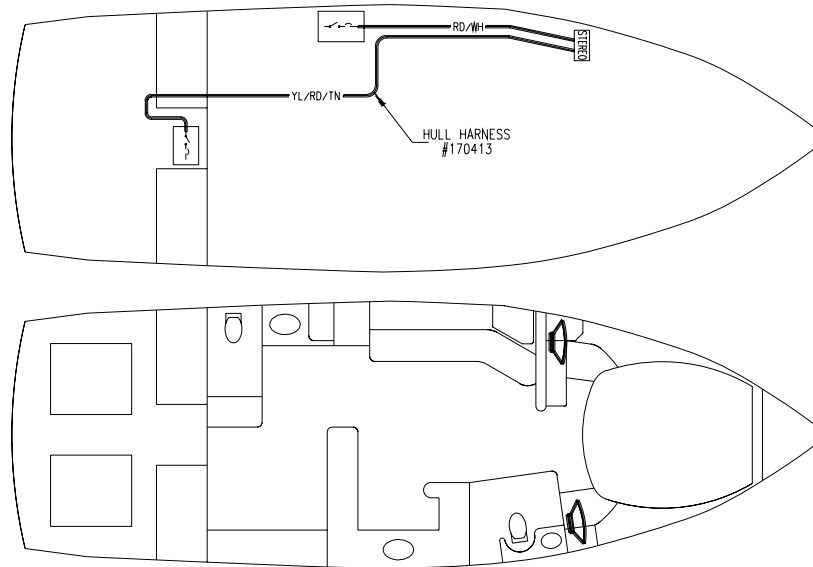
RD/WH

"STEREO MEMORY" BKR 20A  
(AFT BKR PANEL)  
(REAR VIEW)



+12V DC

YL/RD/TN



TO OPERATE:

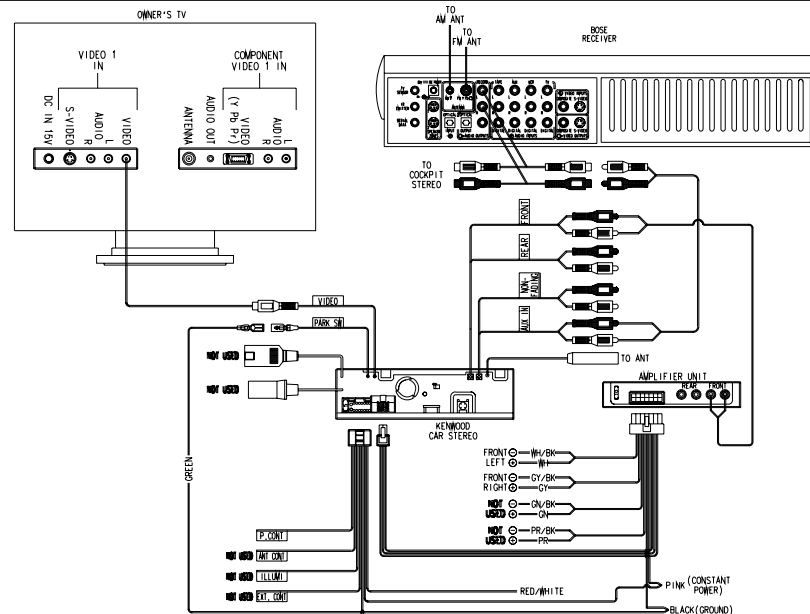
1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT DC PANEL, SWITCH THE "STEREO MEMORY" BREAKER TO "ON".
3. AT THE CABIN AC/DC PANEL, SWITCH THE "OWNER STATERM STEREO" BREAKER TO "ON".
4. THE OWNER STATEROOM STEREO IS NOW SUPPLIED WITH 12 VOLTS DC AND IS READY FOR OPERATION.
5. SEE STEREO'S OPERATING MANUAL FOR INSTRUCTIONS ON OPERATING STEREO FUNCTIONS.

TITLE: OWNER STEREO,  
COMPONENT LOCATION

MOD.: 48Y

DR BY: JAW

73A



TITLE: OWNER STEREO,  
COMPLETE WIRING

MOD.: 48Y

DR BY: JAW

73B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

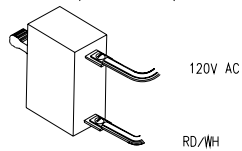
# LEGEND

GROUND 

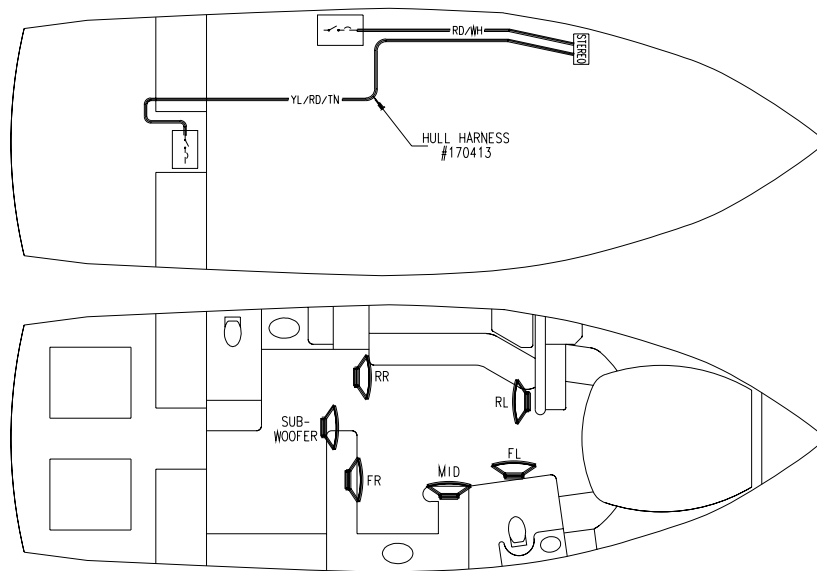
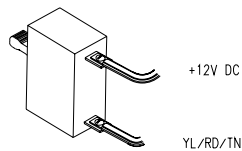
BREAKER 

SPEAKER 

"ENTERTAINMENT SYSTEM" BKR 15A  
(AC/DC BKR PANEL)  
(REAR VIEW)



"STEREO MEMORY" BKR 20A  
(AFT BKR PANEL)  
(REAR VIEW)



TO OPERATE:

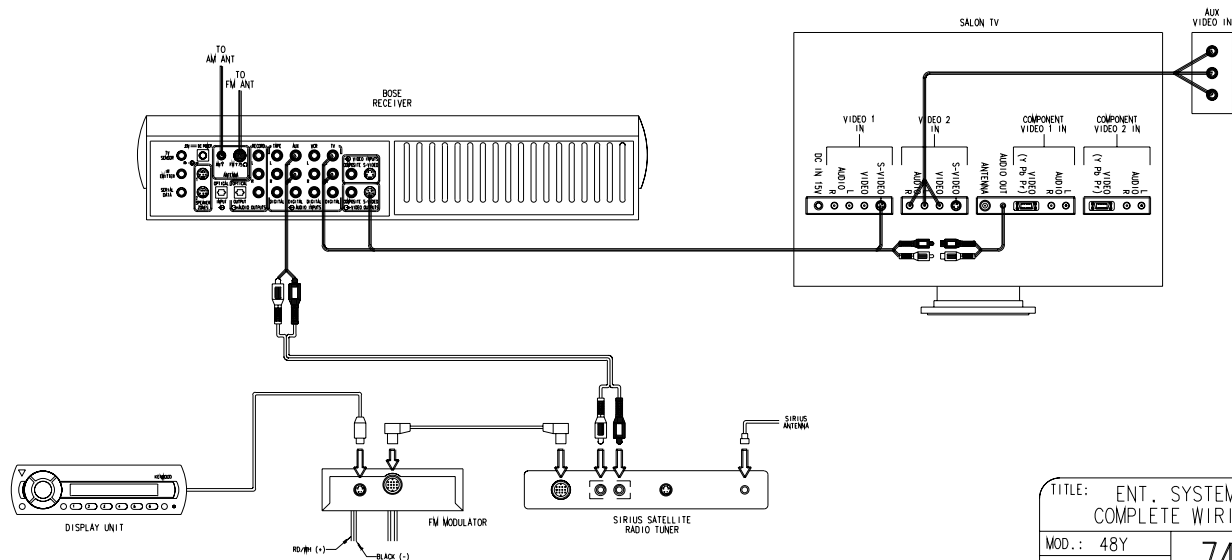
1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AFT DC PANEL, SWITCH THE "STEREO MEMORY" BREAKER TO "ON".
3. AT THE CABIN AC/DC PANEL, SWITCH THE "ENTERTAINMENT SYSTEM" BREAKER TO "ON".
4. THE SALON ENTERTAINMENT SYSTEM IS NOW SUPPLIED WITH 12 VOLTS DC AND IS READY FOR OPERATION.
5. SEE SALON ENTERTAINMENT SYSTEM OPERATING MANUAL FOR INSTRUCTIONS ON OPERATING STEREO FUNCTIONS. (ALSO SEE PAGE 09B.)

TITLE: ENT. SYSTEM,  
COMPONENT LOCATION

MOD.: 48Y

DR BY: JAW

74A



TITLE: ENT. SYSTEM,  
COMPLETE WIRING

MOD.: 48Y

DR BY: JAW

74B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND

BREAKER  
PANEL



PUMP



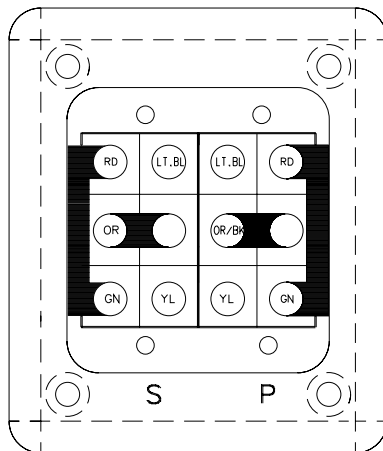
PLUGS



GROUND



## TRIM TAB SWITCHES (TRIM TAB PANEL) (REAR VIEW)



PANEL #166088  
PIGTAIL #170427

### TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "PORT TRIM TAB" AND "STBD TRIM TAB" BREAKERS MUST BE PUSHED IN (CLOSED).
3. THE TRIM TABS CAN NOW BE OPERATED BY THE "TRIM TAB" SWITCHES LOCATED ON THE TRIM TAB PANEL.

### NOTE:

FOR ADDITIONAL INFORMATION SEE BENNETT TRIM TABS OWNER'S MANUAL.

PORT  
TRIM TAB  
PUMP



PORT BENNET  
TRIM TAB PUMP  
PIGTAIL

HULL HARNESS  
#170413

TRIM TAB PIGTAIL  
#170427



DASH BREAKER  
PIGTAIL #170418

DECK HARNESS  
#170412

STBD  
TRIM TAB  
PUMP



STBD BENNET  
TRIM TAB PUMP  
PIGTAIL



THUNDERBIRD  
PRODUCTS  
ENGINEERING




TITLE: TRIM TABS

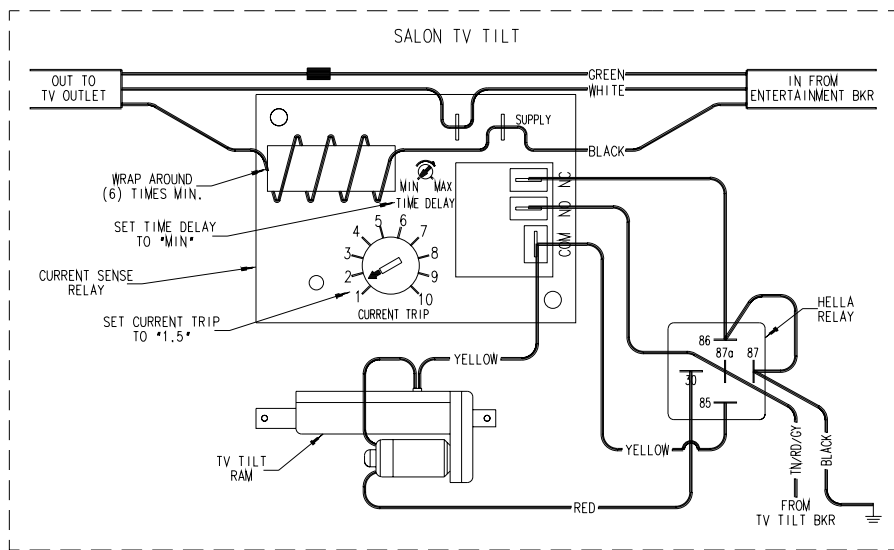
MOD.: 48Y

DR BY: JAW

75

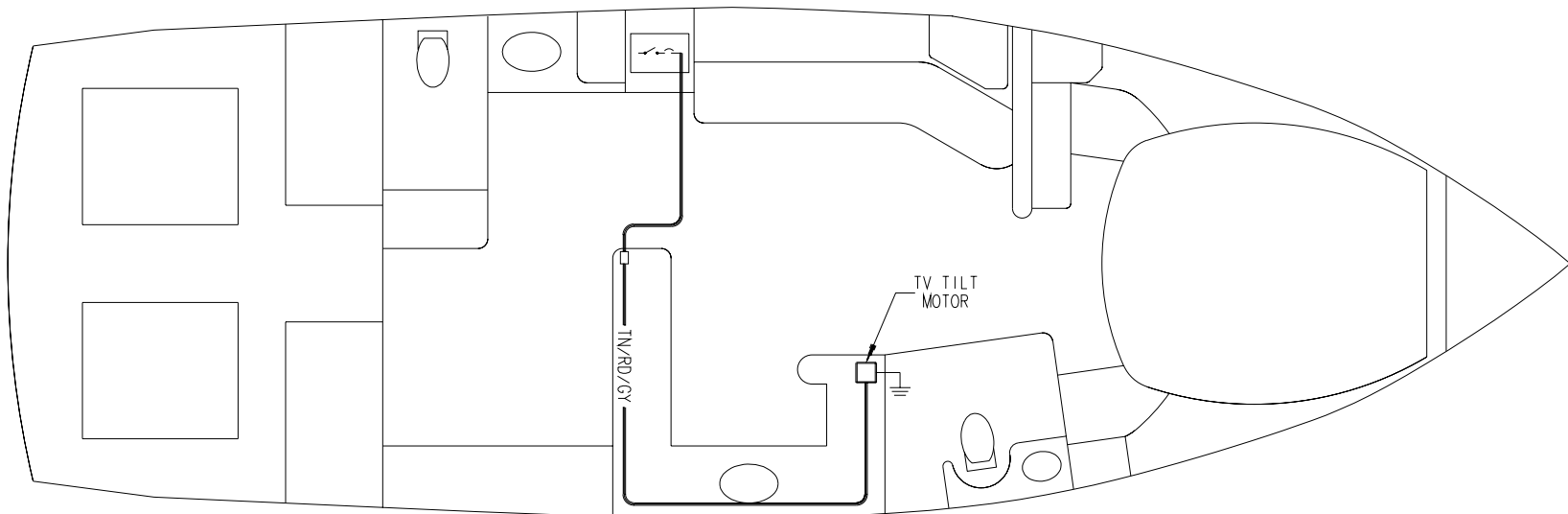
# LEGEND

PLUGS	
BREAKER	
GROUND	



## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE AC/DC PANEL, LOCATED IN THE CABIN, SWITCH THE DC "MAIN 2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "ENTERTAINMENT SYSTEM" BREAKER TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "SALON TV TILT" BREAKER TO "ON".
5. THE TELEVISION WILL TILT OUT WHEN POWER IS TURNED "ON".
6. THE TELEVISION WILL TILT IN WHEN POWER IS TURNED "OFF".



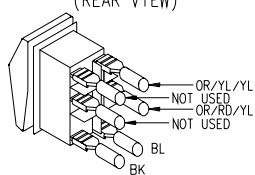
THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE:	TV TILT, SALON
MOD.: 48Y	76
DR BY: JAW	

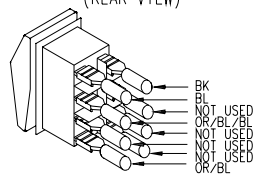
# LEGEND

PLUGS	
BREAKER PANEL	
GROUND	
SOLENOID	
FUSE	
MOTOR	
BREAKER	
DPDT SWITCH	
SWITCH	

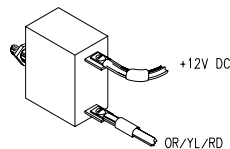
"WINDLS ON/OFF" SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



"WIND UP/DOWN" SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)

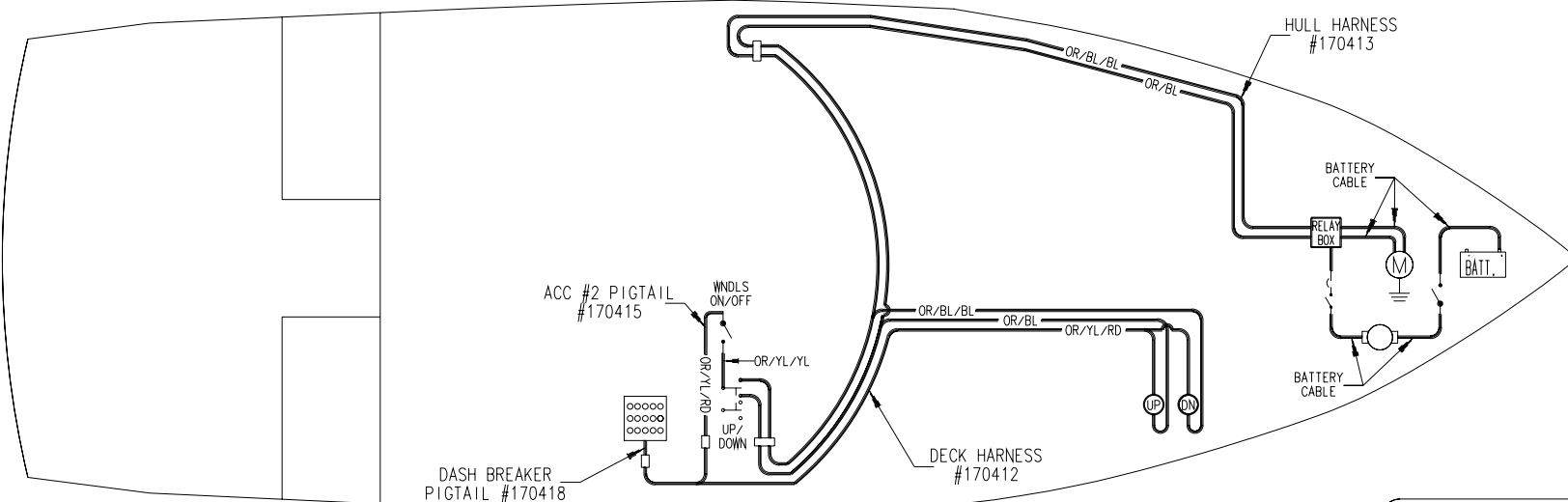
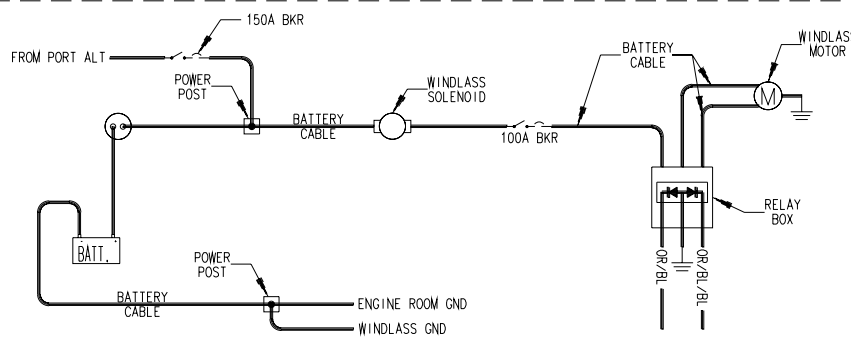


"WINDLS/THRSTR" BKR 15A  
(DASH BKR PANEL)  
(REAR VIEW)



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "WINDLS/THRSTR" BREAKER MUST BE PUSHED IN (CLOSED).
3. SWITCH "WINDLS ON/OFF" SWITCH TO "ON".
4. WINDLASS CAN NOW BE OPERATED BY THE "WIND UP/DOWN" SWITCH LOCATED ON THE ACCESSORY PANEL, OR BY THE "UP" OR "DOWN" FOOT SWITCHES ON THE FORE DECK.



TITLE: WINDLASS










MOD.: 48Y  
DR BY: JAW

77

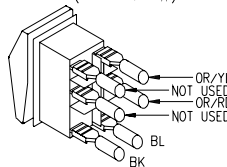


THUNDERBIRD  
PRODUCTS  
ENGINEERING

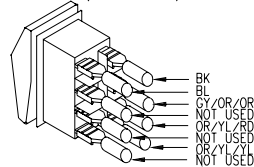
# LEGEND

PLUGS	
BREAKER PANEL	
GROUND	
SOLENOID	
FUSE	
MOTOR	
BREAKER	
DPDT SWITCH	
SWITCH	

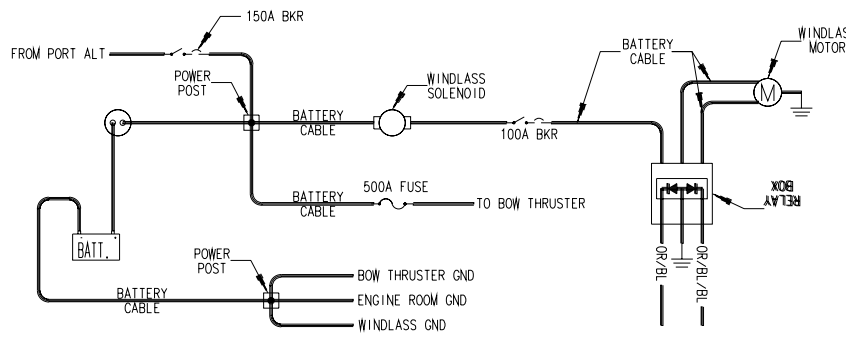
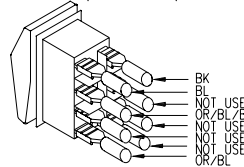
"WINDLS ON/OFF" SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



"WIND/THRSTR" SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



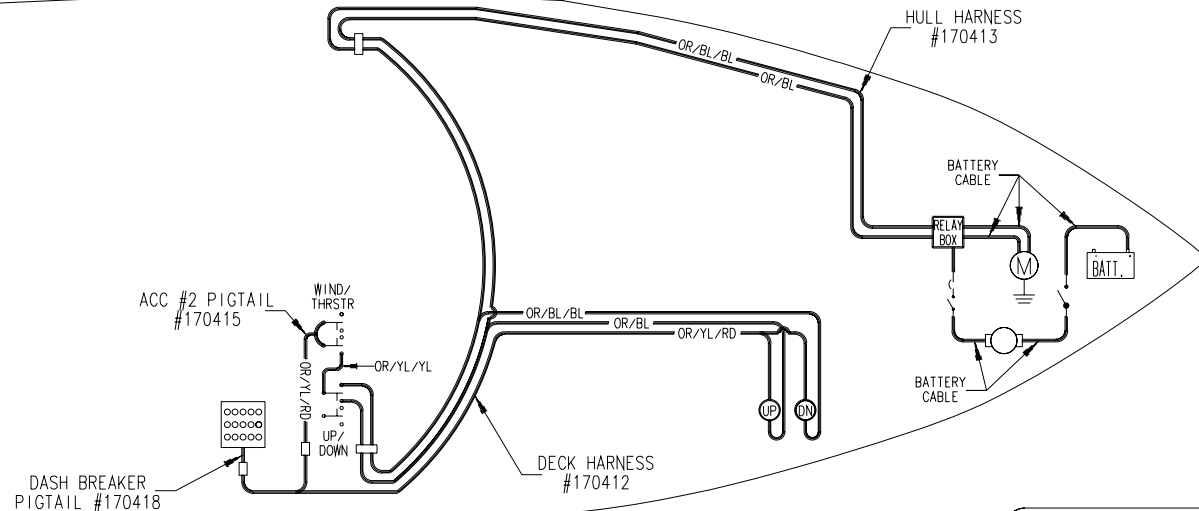
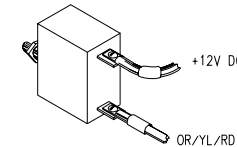
"WIND UP/DOWN" SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "WINDLS/THRSTR" BREAKER MUST BE PUSHED IN (CLOSED).
3. SWITCH "WIND/THRSTR" SWITCH TO WINDLASS POSITION.
4. WINDLASS CAN NOW BE OPERATED BY THE "WIND UP/DOWN" SWITCH LOCATED ON THE ACCESSORY PANEL, OR BY THE "UP" OR "DOWN" FOOT SWITCHES ON THE FORE DECK.

"WINDLS/THRSTR" BKR 15A  
(DASH BKR PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND

GROUND



PLUGS



BREAKER  
PANEL

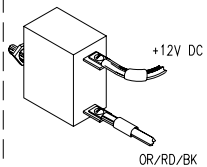


DPDT

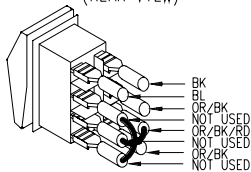
SWITCH



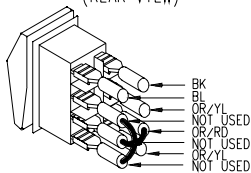
"PORT WIPER" BKR 10A  
(DASH BKR PANEL)  
(REAR VIEW)



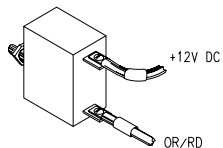
"WIPER PORT" SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



"WIPER STBD" SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



"STBD WIPER" BKR 10A  
(DASH BKR PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

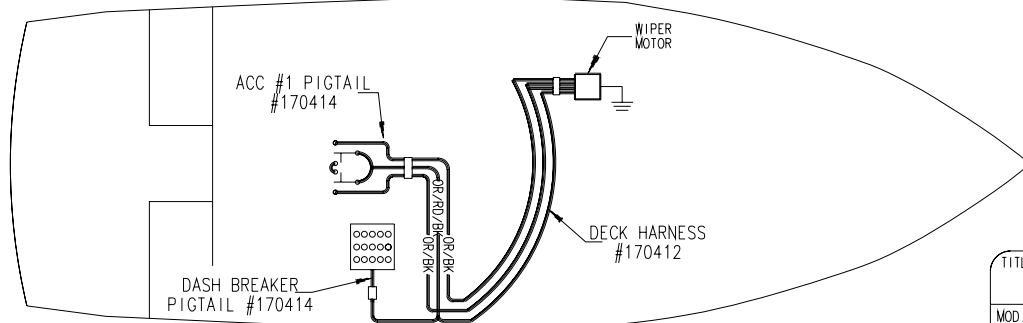
HULL HARNESS  
#170413

CONNECTOR

OR/BK  
OR/BK  
OR/RD/BK

GN  
RD  
BN  
BK

WIPER  
MOTOR



TITLE: WIPER,  
PORT  
MOD.: 48Y  
OR BY: JAW 79A

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "PORT WIPER" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE PORT WIPER CAN BE OPERATED BY THE "WIPER PORT" SWITCH LOCATED ON THE ACCESSORY PANEL.

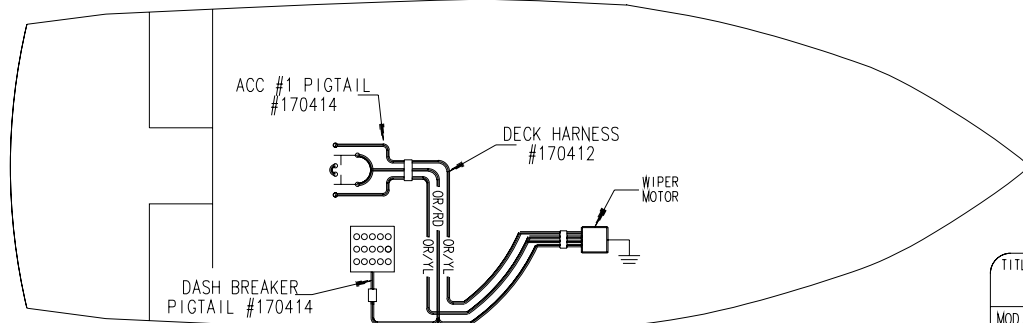
HULL HARNESS  
#170413

CONNECTOR

OR/YL  
OR/YL  
OR/RD

GN  
RD  
BN  
BK

WIPER  
MOTOR








TITLE: WIPER,  
STBD  
MOD.: 48Y  
OR BY: JAW 79B

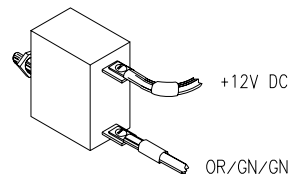
TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "STBD WIPER" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE STBD WIPER CAN BE OPERATED BY THE "WIPER STBD" SWITCH LOCATED ON THE ACCESSORY PANEL.

## LEGEND

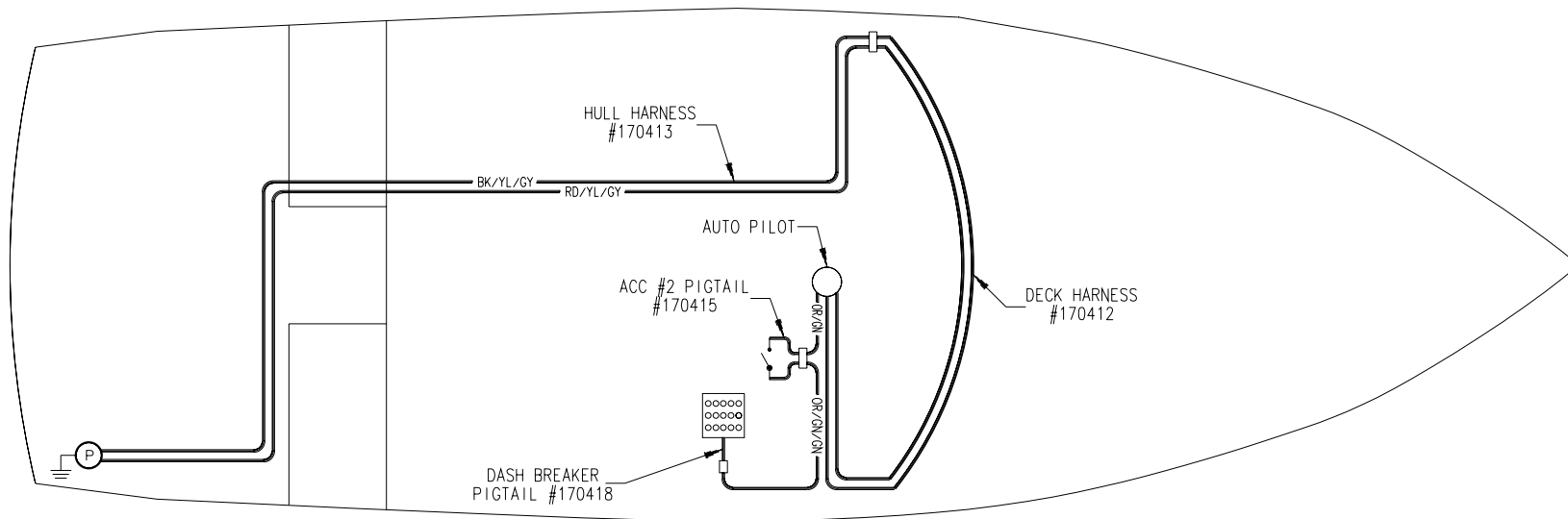
GROUND	
SWITCH	
BREAKER PANEL	
PLUGS	
PUMP	

"AUTO PILOT" BKR 25A  
(DASH BKR PANEL)  
(REAR VIEW)



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUX BATT" SWITCH ON.
2. AT THE DASH BREAKER PANEL, THE "AUTO PILOT" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE AUTO PILOT IS NOW SUPPLIED WITH POWER.
4. REFER TO RAYMARINE'S OPERATING MANUAL FOR OPERATING INSTRUCTIONS.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: AUTO PILOT

MOD.: 48Y  
DR BY: JAW

80



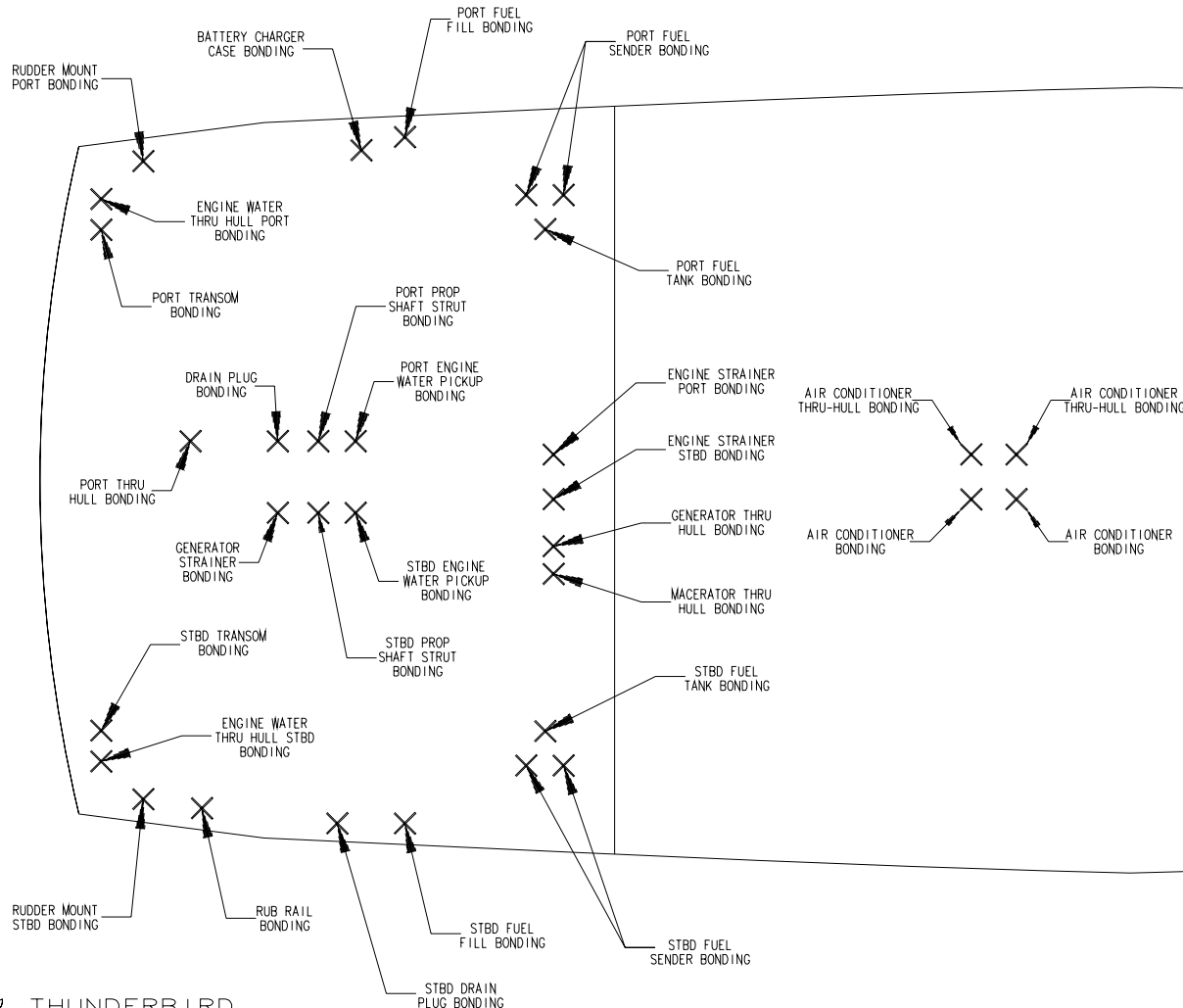


# LEGEND

GROUND



NOTE:  
ALL BONDING WIRES ARE LIGHT GREEN.  
ALL GROUND WIRES ARE BLACK.



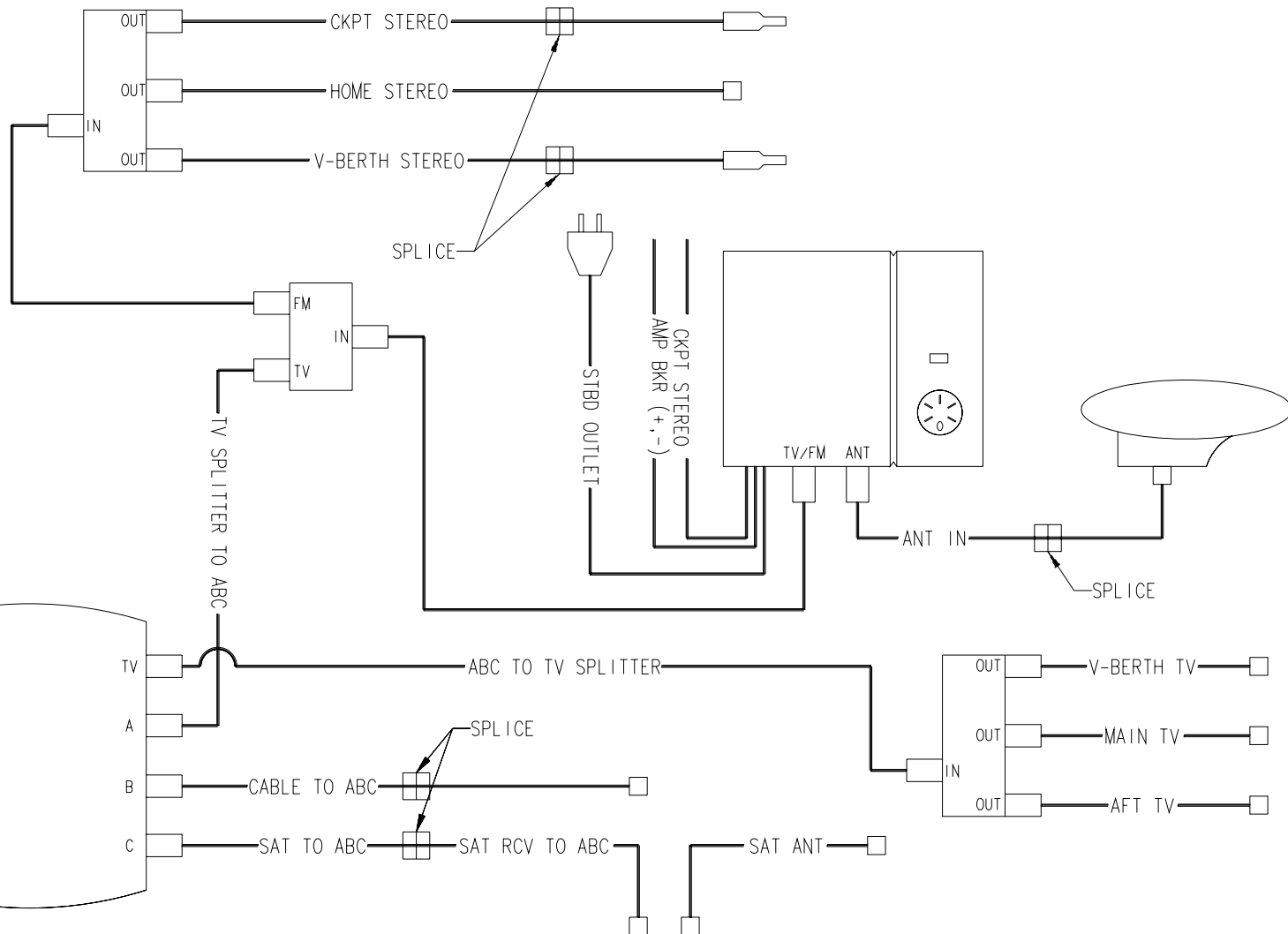
TITLE: BONDING

MOD.: 48Y  
DR BY: JAW

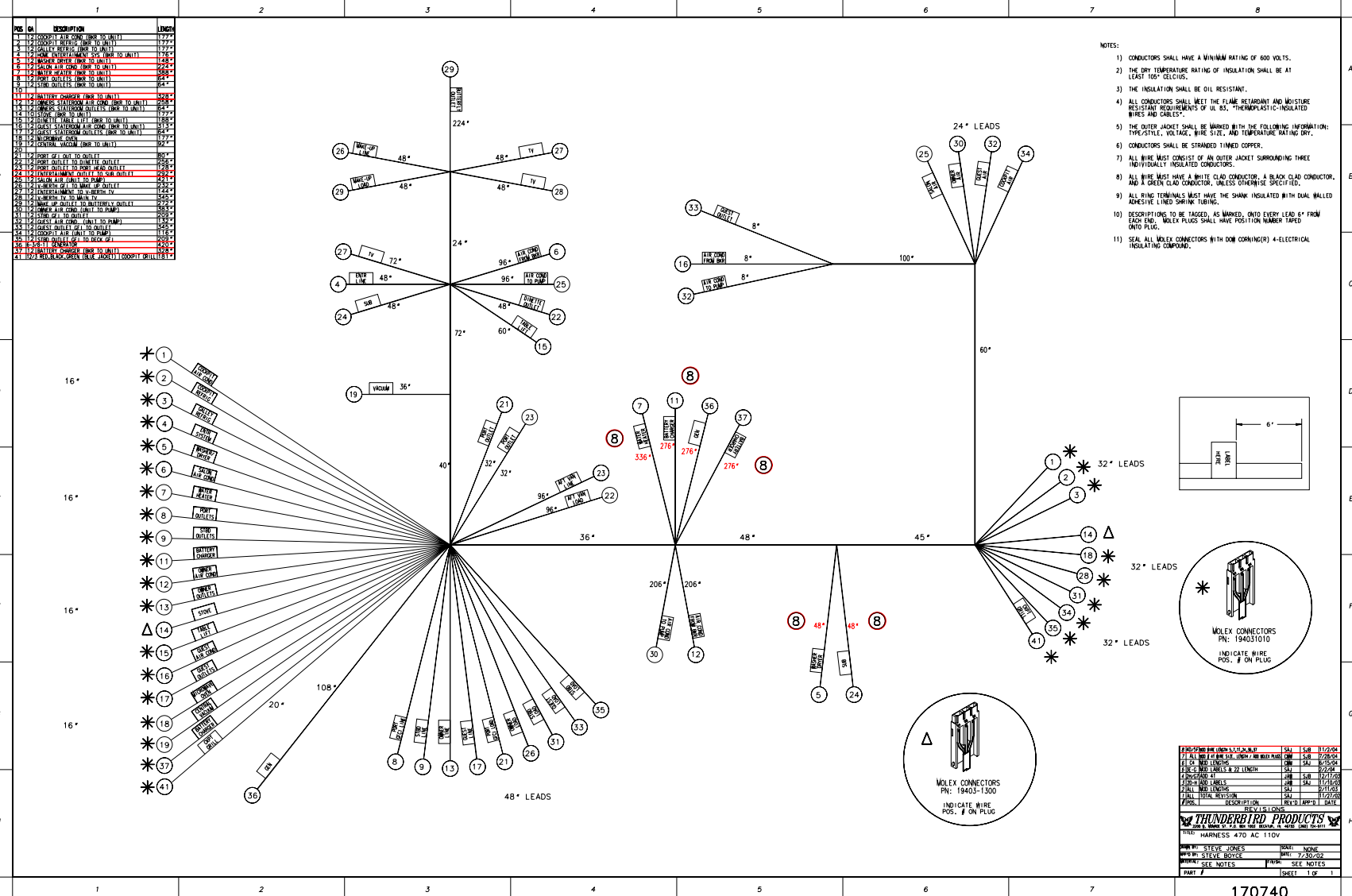
82



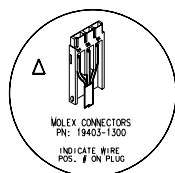
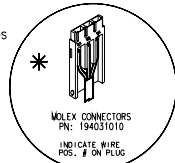
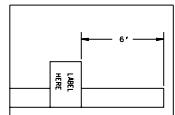
THUNDERBIRD  
PRODUCTS  
ENGINEERING



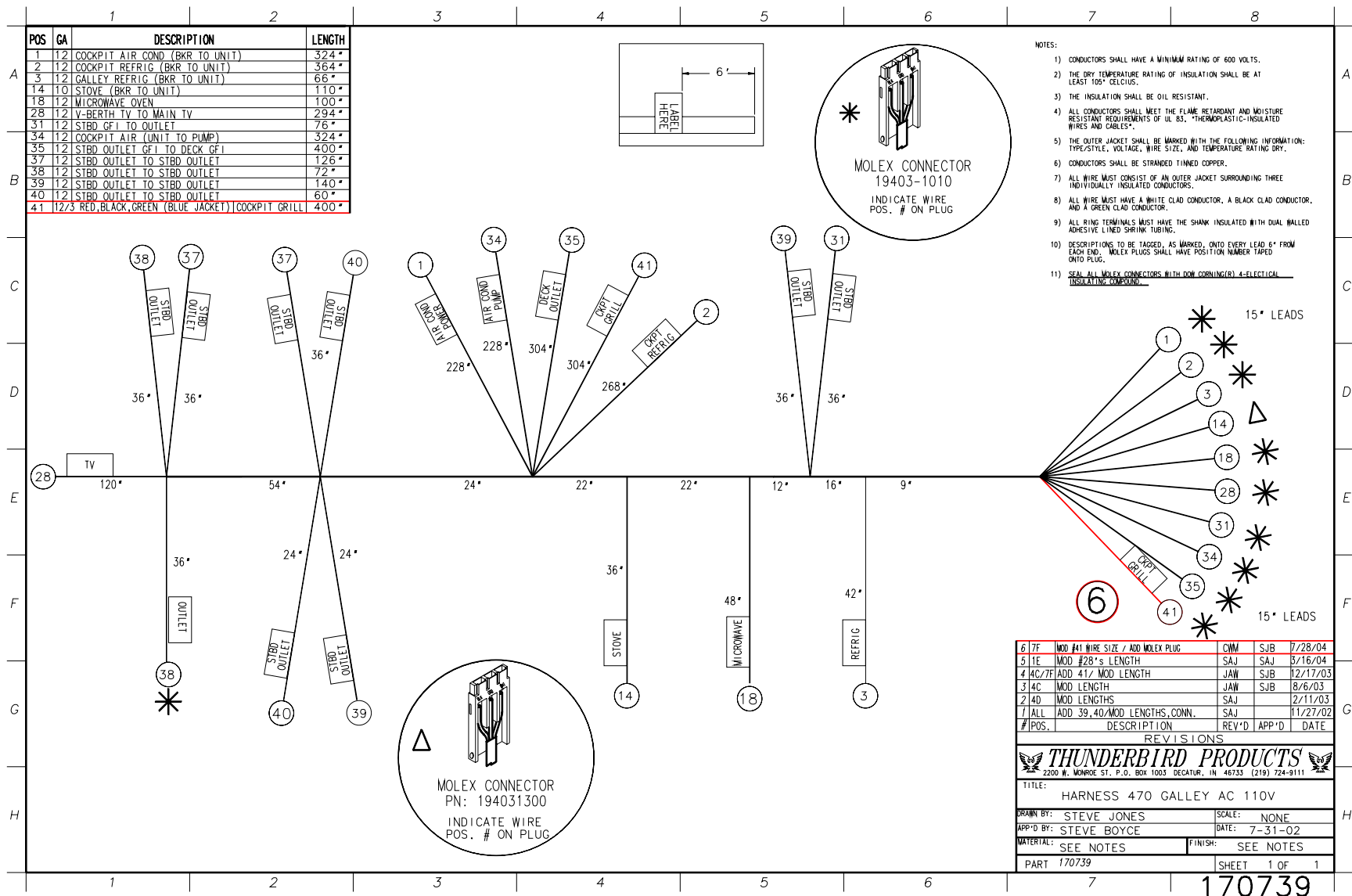
REV	ON	DESCRIPTION	DATE
1		1.000001 AIR COND (PUMP TO UNIT)	1777
2		2.000002 REFRIG (LINE TO UNIT)	1777
3		3.000003 REFRIG (LINE TO UNIT)	1777
4		4.000004 REFRIG (LINE TO UNIT)	1777
5		5.000005 REFRIG (LINE TO UNIT)	1777
6		6.000006 REFRIG (LINE TO UNIT)	1777
7		7.000007 REFRIG (LINE TO UNIT)	1777
8		8.000008 REFRIG (LINE TO UNIT)	1777
9		9.000009 REFRIG (LINE TO UNIT)	1777
10		10.000010 REFRIG (LINE TO UNIT)	1777
11		11.000011 REFRIG (LINE TO UNIT)	1777
12		12.000012 REFRIG (LINE TO UNIT)	1777
13		13.000013 REFRIG (LINE TO UNIT)	1777
14		14.000014 REFRIG (LINE TO UNIT)	1777
15		15.000015 REFRIG (LINE TO UNIT)	1777
16		16.000016 REFRIG (LINE TO UNIT)	1777
17		17.000017 REFRIG (LINE TO UNIT)	1777
18		18.000018 REFRIG (LINE TO UNIT)	1777
19		19.000019 REFRIG (LINE TO UNIT)	1777
20		20.000020 REFRIG (LINE TO UNIT)	1777
21		21.000021 REFRIG (LINE TO UNIT)	1777
22		22.000022 REFRIG (LINE TO UNIT)	1777
23		23.000023 REFRIG (LINE TO UNIT)	1777
24		24.000024 REFRIG (LINE TO UNIT)	1777
25		25.000025 REFRIG (LINE TO UNIT)	1777
26		26.000026 REFRIG (LINE TO UNIT)	1777
27		27.000027 REFRIG (LINE TO UNIT)	1777
28		28.000028 REFRIG (LINE TO UNIT)	1777
29		29.000029 REFRIG (LINE TO UNIT)	1777
30		30.000030 REFRIG (LINE TO UNIT)	1777
31		31.000031 REFRIG (LINE TO UNIT)	1777
32		32.000032 REFRIG (LINE TO UNIT)	1777
33		33.000033 REFRIG (LINE TO UNIT)	1777
34		34.000034 REFRIG (LINE TO UNIT)	1777
35		35.000035 REFRIG (LINE TO UNIT)	1777
36		36.000036 REFRIG (LINE TO UNIT)	1777
37		37.000037 REFRIG (LINE TO UNIT)	1777
38		38.000038 REFRIG (LINE TO UNIT)	1777
39		39.000039 REFRIG (LINE TO UNIT)	1777
40		40.000040 REFRIG (LINE TO UNIT)	1777
41		41.000041 REFRIG (LINE TO UNIT)	1777



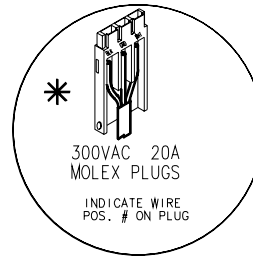
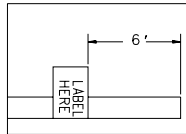
- NOTES:
- 1) CONDUCTORS SHALL HAVE A MINIMUM RATING OF 600 VOLTS.
  - 2) THE DRY TEMPERATURE RATING OF INSULATION SHALL BE AT LEAST 100° CELSIUS.
  - 3) THE INSULATION SHALL BE OIL RESISTANT.
  - 4) ALL CONDUCTORS SHALL MEET THE FLAME RETARDANT AND MOISTURE RESISTANT REQUIREMENTS OF UL 85, "THERMOPLASTIC-INSULATED WIRES AND CABLES".
  - 5) THE OUTER JACKET SHALL BE MARKED WITH THE FOLLOWING INFORMATION: TYPE/STYLE, VOLTAGE, WIRE SIZE, AND TEMPERATURE RATING DRY.
  - 6) CONDUCTORS SHALL BE STRANDED TINNED COPPER.
  - 7) ALL WIRE MUST BE COVERED BY AN OUTER JACKET SURROUNDING THREE INDIVIDUALLY INSULATED CONDUCTORS.
  - 8) ALL WIRE MUST HAVE A WHITE CLAD CONDUCTOR, A BLACK CLAD CONDUCTOR, AND A GREEN CLAD CONDUCTOR, UNLESS OTHERWISE SPECIFIED.
  - 9) ALL WIRE TERMINALS MUST HAVE THE SHANK INSULATED WITH DUAL WALLED ADHESIVE LINED SHRINK TUBING.
  - 10) DESCRIPTIONS TO BE TAGGED, AS MARKED, ONTO EVERY LEAD 6" FROM EACH END. MOLEX PLUGS SHALL HAVE POSITION NUMBER TAPED ONTO PLUG.
  - 11) SEAL ALL MOLEX CONNECTORS WITH DOW CORNING® 4-ELECTRICAL INSULATING COMPOUND.



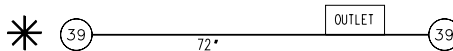
REV	ON	DESCRIPTION	DATE
1		1.000001 AIR COND (PUMP TO UNIT)	1777
2		2.000002 REFRIG (LINE TO UNIT)	1777
3		3.000003 REFRIG (LINE TO UNIT)	1777
4		4.000004 REFRIG (LINE TO UNIT)	1777
5		5.000005 REFRIG (LINE TO UNIT)	1777
6		6.000006 REFRIG (LINE TO UNIT)	1777
7		7.000007 REFRIG (LINE TO UNIT)	1777
8		8.000008 REFRIG (LINE TO UNIT)	1777
9		9.000009 REFRIG (LINE TO UNIT)	1777
10		10.000010 REFRIG (LINE TO UNIT)	1777
11		11.000011 REFRIG (LINE TO UNIT)	1777
12		12.000012 REFRIG (LINE TO UNIT)	1777
13		13.000013 REFRIG (LINE TO UNIT)	1777
14		14.000014 REFRIG (LINE TO UNIT)	1777
15		15.000015 REFRIG (LINE TO UNIT)	1777
16		16.000016 REFRIG (LINE TO UNIT)	1777
17		17.000017 REFRIG (LINE TO UNIT)	1777
18		18.000018 REFRIG (LINE TO UNIT)	1777
19		19.000019 REFRIG (LINE TO UNIT)	1777
20		20.000020 REFRIG (LINE TO UNIT)	1777
21		21.000021 REFRIG (LINE TO UNIT)	1777
22		22.000022 REFRIG (LINE TO UNIT)	1777
23		23.000023 REFRIG (LINE TO UNIT)	1777
24		24.000024 REFRIG (LINE TO UNIT)	1777
25		25.000025 REFRIG (LINE TO UNIT)	1777
26		26.000026 REFRIG (LINE TO UNIT)	1777
27		27.000027 REFRIG (LINE TO UNIT)	1777
28		28.000028 REFRIG (LINE TO UNIT)	1777
29		29.000029 REFRIG (LINE TO UNIT)	1777
30		30.000030 REFRIG (LINE TO UNIT)	1777
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32		32.000032 REFRIG (LINE TO UNIT)	1777
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34		34.000034 REFRIG (LINE TO UNIT)	1777
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36		36.000036 REFRIG (LINE TO UNIT)	1777
37		37.000037 REFRIG (LINE TO UNIT)	1777
38		38.000038 REFRIG (LINE TO UNIT)	1777
39		39.000039 REFRIG (LINE TO UNIT)	1777
40		40.000040 REFRIG (LINE TO UNIT)	1777
41		41.000041 REFRIG (LINE TO UNIT)	1777




POS	GA	DESCRIPTION	DESCRIPTION	LENGTH
39	12	HEAD GFCI	(FROM STBD OUTLET)	72"



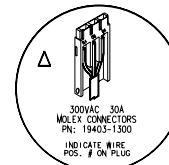
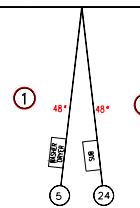
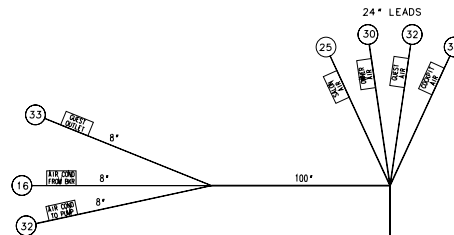
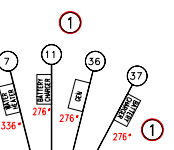
- NOTES:
- 1) CONDUCTORS SHALL HAVE A MINIMUM RATING OF 600 VOLTS.
  - 2) THE DRY TEMPERATURE RATING OF INSULATION SHALL BE AT LEAST 105° CELCIUS.
  - 3) THE INSULATION SHALL BE OIL RESISTANT.
  - 4) ALL CONDUCTORS SHALL MEET THE FLAME RETARDANT AND MOISTURE RESISTANT REQUIREMENTS OF UL 83, "THERMOPLASTIC-INSULATED WIRES AND CABLES".
  - 5) THE OUTER JACKET SHALL BE MARKED WITH THE FOLLOWING INFORMATION: TYPE, STYLE, VOLTAGE, WIRE SIZE, AND TEMPERATURE RATING DRY.
  - 6) CONDUCTORS SHALL BE STRANDED TINNED COPPER.
  - 7) ALL WIRE MUST CONSIST OF AN OUTER JACKET SURROUNDING THREE INDIVIDUALLY INSULATED CONDUCTORS.
  - 8) ALL WIRE MUST HAVE A WHITE CLAD CONDUCTOR, A BLACK CLAD CONDUCTOR, AND A GREEN CLAD CONDUCTOR.
  - 9) ALL RING TERMINALS MUST HAVE THE SHANK INSULATED WITH DUAL WALLED ADHESIVE LINED SHRINK TUBING.
  - 10) DESCRIPTIONS TO BE TAGGED, AS MARKED, ONTO EVERY LEAD 6" FROM EACH END. MOLEX PLUGS SHALL HAVE POSITION NUMBER TAPED ONTO PLUG.



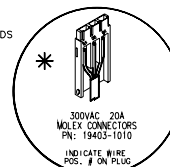
5					
4					
3					
2					
1					
#	POS.	DESCRIPTION	REV'D	APP'D	DATE
REVISIONS					
 <b>THUNDERBIRD PRODUCTS</b> 2200 W. MONROE ST., P.O. BOX 1003 DECATUR, IN 46733 (219) 724-9411					
TITLE: HARNESS 470 HEAD AC 110V					
DRAWN BY: STEVE JONES			SCALE: NONE		
APP'D BY: STEVE BOYCE			DATE: 7-31-02		
MATERIAL: SEE NOTES			FINISH: SEE NOTES		
PART 170739			SHEET 1 OF 1		


170833

①

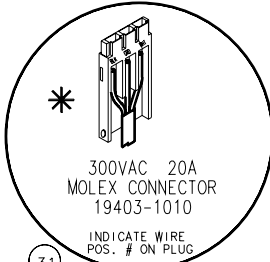
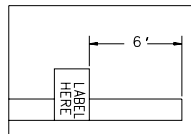


- 
- Diagram of a rectangular box with a label on its front face. The label is 6 inches wide and 12 inches high. The box is 12 inches high and 12 inches wide. The label is positioned on the front face, centered vertically and horizontally.

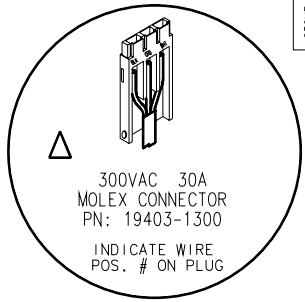
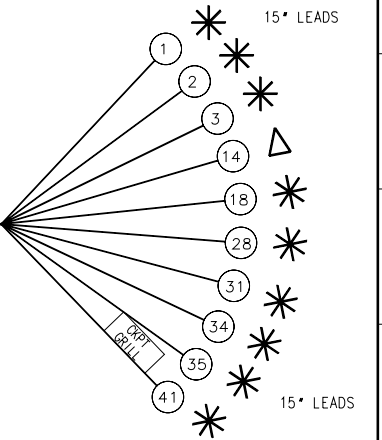
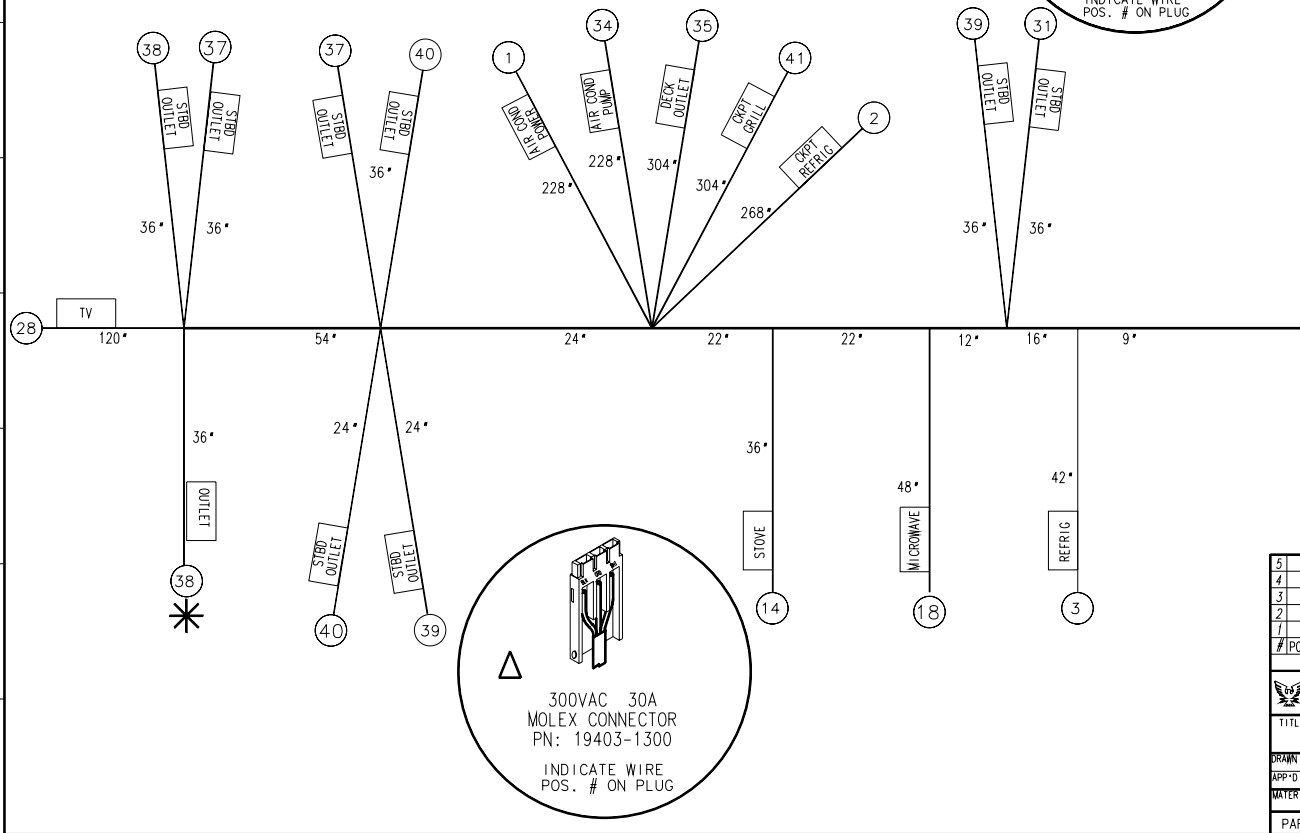


6					
7					
8					
9					
10					
11	140	SEMOB WIRE (LENGTH 5, 7, 15, 24, 55, 57)	SA	SJB	11/22/04
12	7	DESCRIPTION	REV'D	APP'D	DATE
REVIEWS					
 <b>THUNDERBIRD PRODUCTS</b>					
2000 E. HOWARD ST. P.O. BOX 1903 BEAUMONT, TX 77705 (281) 794-9111					
TITLE: HARNESS 470 AC 220V					
APPROVED BY: CHRIS MOHREY			DATE: NONE		
DRAWN BY: STEVE BOYCE			DATE: 7/8/04		
REVISIONS: SEE NOTES			P/APP: SEE NOTES		

POS	GA	DESCRIPTION	LENGTH
1	12	COCKPIT AIR COND (BKR TO UNIT)	324"
2	12	COCKPIT REFRIG (BKR TO UNIT)	364"
3	12	GALLEY REFRIG (BKR TO UNIT)	66"
14	10	STOVE (BKR TO UNIT)	110"
18	12	MICROWAVE OVEN	100"
28	12	V-BERTH TV TO MAIN TV	294"
31	12	STBD GF1 TO OUTLET	76"
34	12	COCKPIT AIR (UNIT TO PUMP)	324"
35	12	STBD OUTLET GF1 TO DECK GF1	400"
37	12	STBD OUTLET TO STBD OUTLET	126"
38	12	STBD OUTLET TO STBD OUTLET	72"
39	12	STBD OUTLET TO STBD OUTLET	140"
40	12	STBD OUTLET TO STBD OUTLET	60"
41	12	COCKPIT GRILL	400"



- NOTES:
- 1) CONDUCTORS SHALL HAVE A MINIMUM RATING OF 600 VOLTS.
  - 2) THE DRY TEMPERATURE RATING OF INSULATION SHALL BE AT LEAST 105° CELCIUS.
  - 3) THE INSULATION SHALL BE OIL RESISTANT.
  - 4) ALL CONDUCTORS SHALL MEET THE FLAME RETARDANT AND MOISTURE RESISTANT REQUIREMENTS OF UL 83, "THERMOPLASTIC-INSULATED WIRES AND CABLES".
  - 5) THE OUTER JACKET SHALL BE MARKED WITH THE FOLLOWING INFORMATION: TYPE/STYLE, VOLTAGE, WIRE SIZE, AND TEMPERATURE RATING DRY.
  - 6) CONDUCTORS SHALL BE STRANDED TINNED COPPER.
  - 7) ALL WIRE MUST CONSIST OF AN OUTER JACKET SURROUNDING THREE INDIVIDUALLY INSULATED CONDUCTORS.
  - 8) ALL WIRE MUST HAVE A BLUE CLAD CONDUCTOR, A BROWN CLAD CONDUCTOR, AND A GREEN/YELLOW CLAD CONDUCTOR.
  - 9) ALL RING TERMINALS MUST HAVE THE SHANK INSULATED WITH DUAL WALLED ADHESIVE LINED SHRINK TUBING.
  - 10) DESCRIPTIONS TO BE TAGGED, AS MARKED, ONTO EVERY LEAD 6" FROM EACH END. MOLEX PLUGS SHALL HAVE POSITION NUMBER TAPED ONTO PLUG.
  - 11) SEAL ALL MOLEX CONNECTORS WITH DON CORNING(R) 4-ELECTICAL INSULATING COMPOUND.

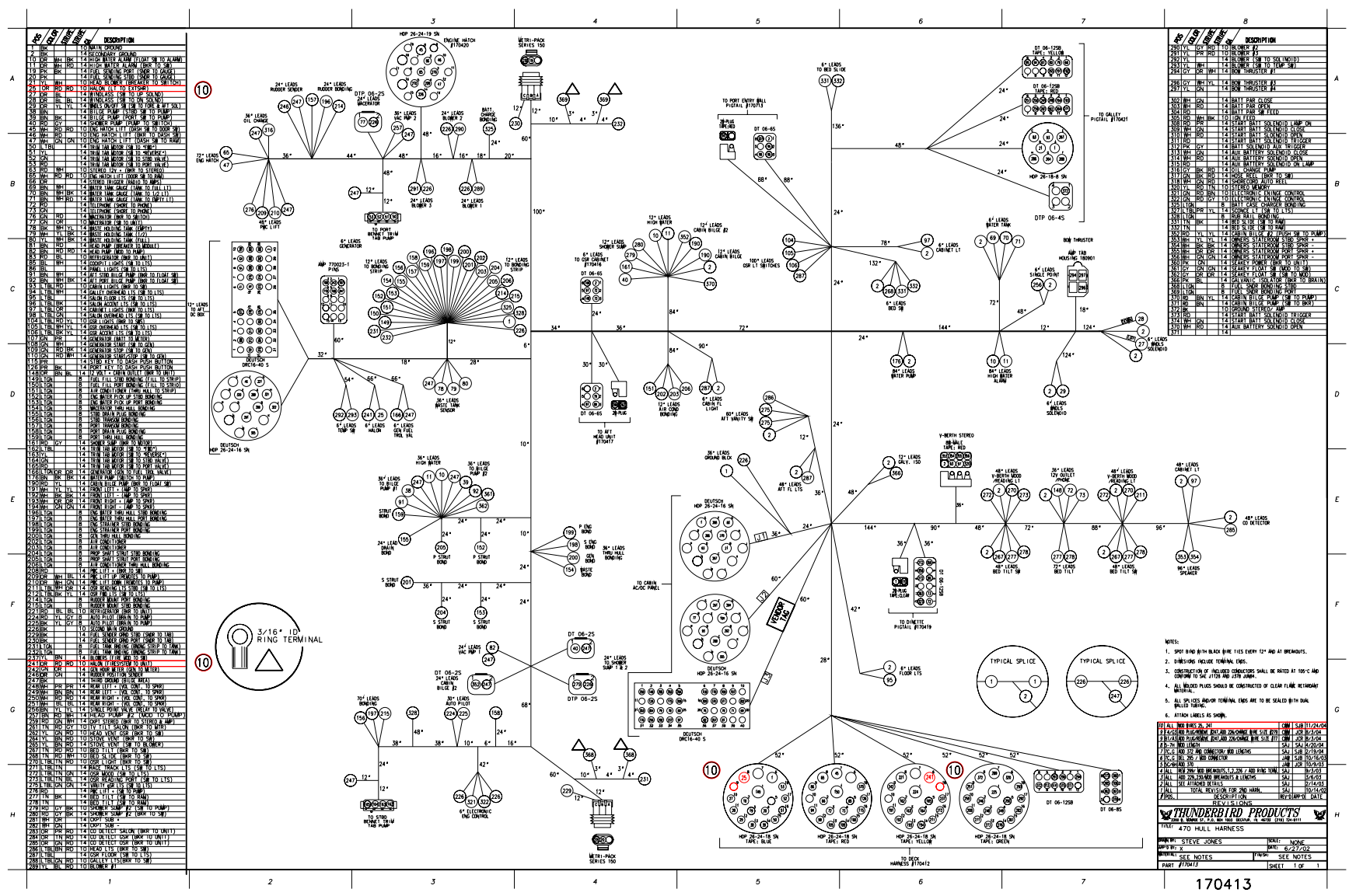


5					
4					
3					
2					
1					
# POS.	DESCRIPTION	REV'D	APP'D	DATE	
REVISIONS					
TITLE: HARNESS 470 GALLEY AC 220V					
DRAWN BY: CHRIS MOWERY			SCALE: NONE		
APP'D BY: STEVE BOYCE			DATE: 7/8/04		
MATERTAL: SEE NOTES			FINISH: SEE NOTES		
PART 202289			SHEET 1 OF 1		



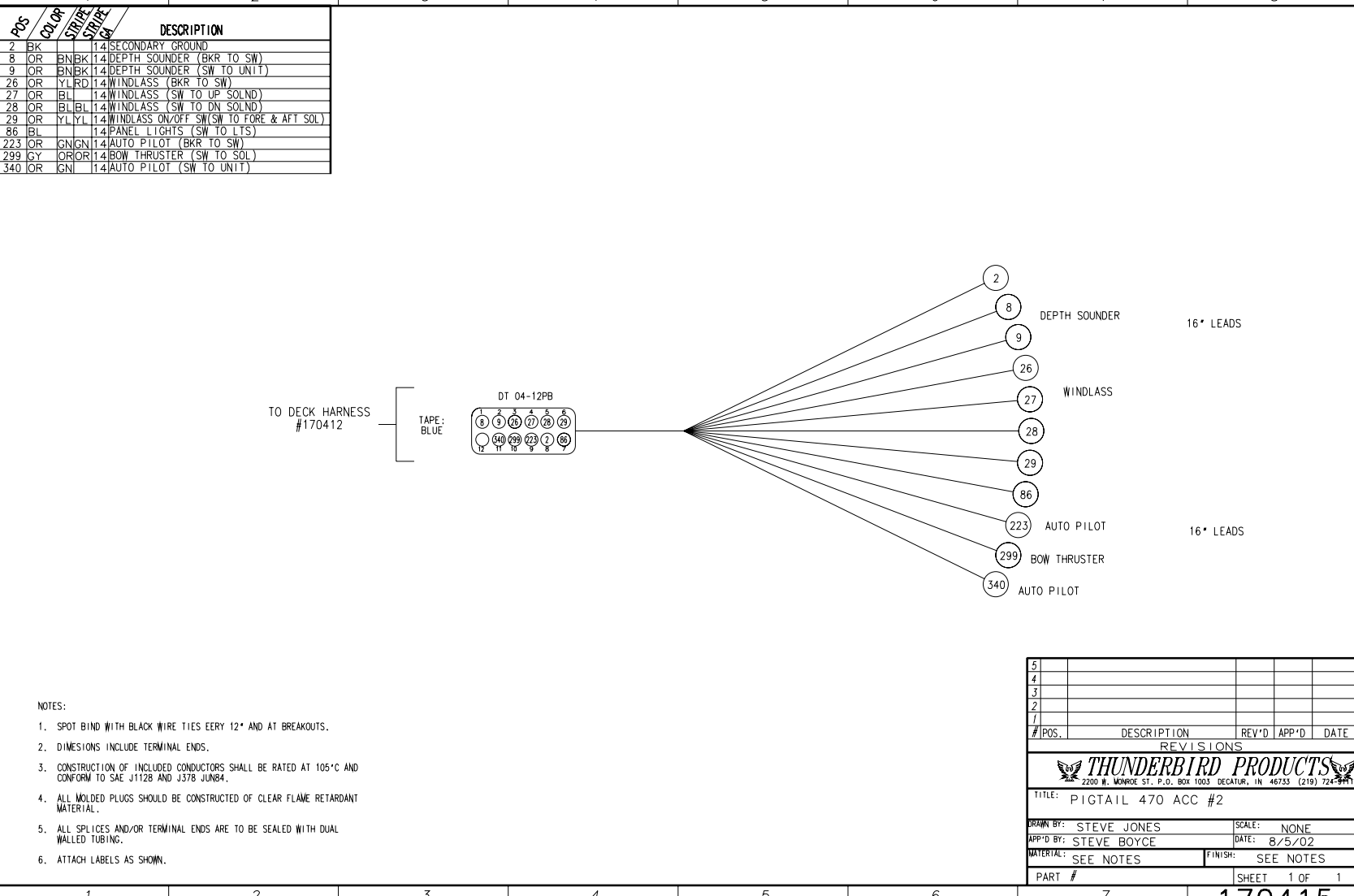








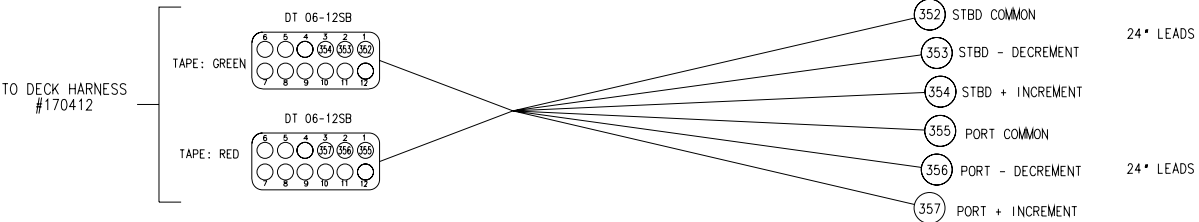
POS	COLOR	STRIP	STRIP	DESCRIPTION
2	BK		14	SECONDARY GROUND
8	OR	BN	BK	14 DEPTH SOUNDER (BKR TO SW)
9	OR	BN	BK	14 DEPTH SOUNDER (SW TO UNIT)
26	OR	YL	RD	14 WINDLASS (BKR TO SW)
27	OR	BL		14 WINDLASS (SW TO UP SOLND)
28	OR	BL	BL	14 WINDLASS (SW TO DN SOLND)
29	OR	YL	YL	14 WINDLASS ON/OFF SW (SW TO FORE & AFT SOL)
86	BL			14 PANEL LIGHTS (SW TO LTS)
223	OR	GN	GN	14 AUTO PILOT (BKR TO SW)
299	GY	OR	OR	14 BOW THRUSTER (SW TO SOL)
340	OR	GN		14 AUTO PILOT (SW TO UNIT)



- NOTES:
- SPOT BIND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
  - DIMENSIONS INCLUDE TERMINAL ENDS.
  - CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
  - ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
  - ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.
  - ATTACH LABELS AS SHOWN.

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# POS.	DESCRIPTION	REV'D	APP'D	DATE	
REVISIONS					
<b>THUNDERBIRD PRODUCTS</b> 2200 W. MONROE ST. P.O. BOX 1003 DECATUR, IN 46733 (219) 724-3441					
TITLE: PIGTAIL 470 ACC #2					
DRAWN BY: STEVE JONES			SCALE: NONE		
APP'D BY: STEVE BOYCE			DATE: 8/5/02		
MATERIAL: SEE NOTES			FINISH: SEE NOTES		
PART #			SHEET 1 OF 1		

POS	COL	STRIP	DESCRIPTION
352	BL		14 STBD COMMON
353	WH		14 STBD - DECREMENT
354	GY		14 STBD + INCREMENT
355	YL		14 PORT COMMON (SWITCH TO IIM)
356	OR		14 PORT - DECREMENT
357	GN		14 PORT + INCREMENT



- NOTES:
1. SPOT BIND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
  2. DIMENSIONS INCLUDE TERMINAL ENDS.
  3. CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
  4. ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
  5. ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.
  6. ATTACH LABELS AS SHOWN.

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#	POS.	DESCRIPTION	REV'D	APP'D	DATE
REVISIONS					
<b>THUNDERBIRD PRODUCTS</b> <small>2200 W. MONROE ST. P.O. BOX 1003 DECATUR, IN 46733 (219) 724-9471</small>					
TITLE: PIGTAIL 470 ACC #3					
DRAWN BY: STEVE JONES			SCALE: NONE		
APP'D BY:			DATE: 9/12/02		
MATERIAL: SEE NOTES			FINISH: SEE NOTES		
PART #			SHEET 1 OF 1		

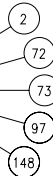
POS	COLOR	STRIP	DESCRIPTION
2	BK		14SECONDARY GROUND
72	RD		14TELEPHONE (SHORE TO PHONE)
73	GN		14TELEPHONE (SHORE TO PHONE)
97	L TBLOR		14CABINET LTS (BKR TO LTS)
148	OR	BNBL	1412V + CABIN OUTLET (BKR TO OUTLET)

TO HULL HARNESS  
#170413





138"

12" LEADS



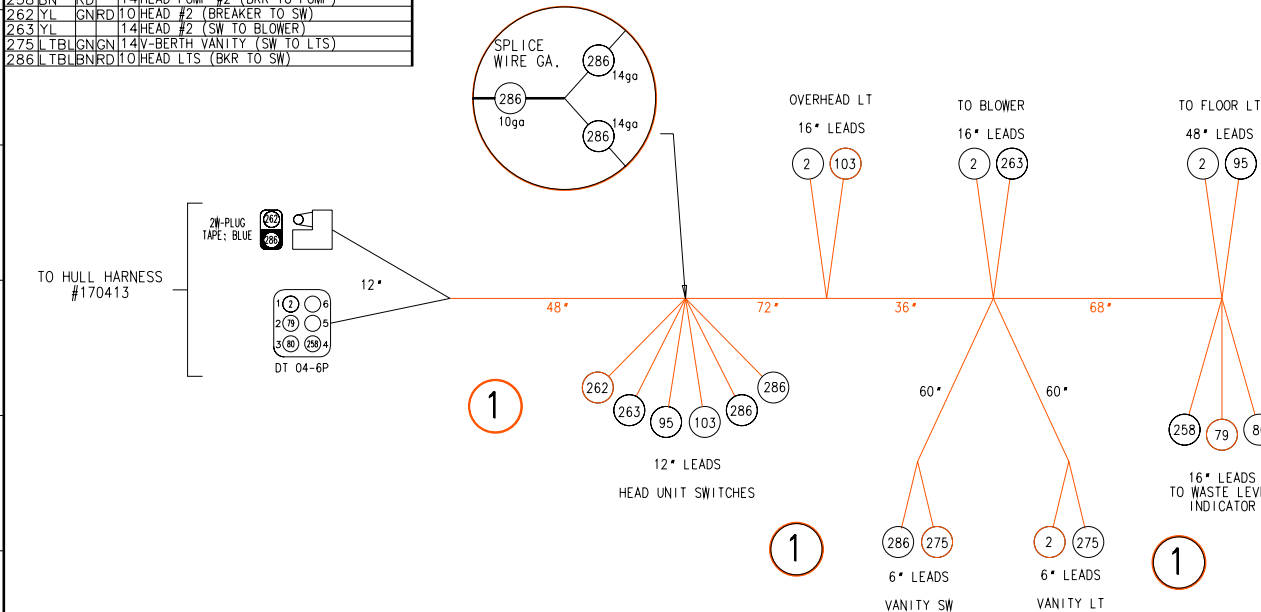
NOTES:

1. SPOT BIND WITH BLACK #16 WIRE TIES EVERY 12" AND AT BREAKOUTS.
2. DIMENSIONS INCLUDE TERMINAL ENDS.
3. CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
4. ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
5. ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.
6. ATTACH LABELS AS SHOWN.

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# POS.	DESCRIPTION	REV'D	APP'D	DATE	
REVISIONS					
 <b>THUNDERBIRD PRODUCTS</b> 					
TITLE: PIGTAIL 470 AFT CABIN CABINET					
DRAWN BY: STEVE JONES		SCALE: NONE			
APP'D BY: STEVE BOYCE		DATE: 8/5/02			
MATERIAL: SEE NOTES		FINISH: SEE NOTES			
PART #		SHEET 1 OF 1			

170416

POS	COLOR	STRIP	DESCRIPTION
2	BK		14 SECONDARY GROUND
79	WH	YL BK	14 WASTE HOLDING TANK (1/2)
80	YL	WH BK	14 WASTE HOLDING TANK (FULL)
95	LTBL		14 MAIN CABIN FLOOR LTS (SW TO LTS)
103	LTBL	WH RD	14 OVERHEAD LT IN HEAD (SW TO LT)
258	BN	RD	14 HEAD PUMP #2 (BKR TO PUMP)
262	YL	GNRD	10 HEAD #2 (BREAKER TO SW)
263	YL		14 HEAD #2 (SW TO BLOWER)
275	LTBL	GNRD	14 V-BERTH VANITY (SW TO LTS)
286	LTBL	BN RD	10 HEAD LTS (BKR TO SW)

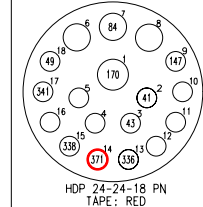
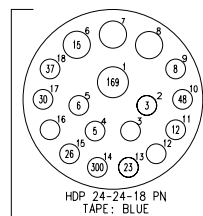
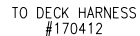


- NOTES:
1. SPOT BIND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
  2. DIMENSIONS INCLUDE TERMINAL ENDS.
  3. CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
  4. ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
  5. ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.
  6. ATTACH LABELS AS SHOWN.

5					
4					
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1	ALL	MODIFY BREAKOUTS	SAJ		11/18/02
	POS.	DESCRIPTION	REV'D	APP'D	DATE
REVISIONS					
<b>THUNDERBIRD PRODUCTS</b> 2200 W. MONROE ST. P.O. BOX 1003 DECATUR, IN 46733 (219) 724-9441					
TITLE: PIGTAIL 470 AFT HEAD					
DRAWN BY: STEVE JONES			SCALE: NONE		
APP'D BY: STEVE BOYCE			DATE: 8/1/02		
MATERIAL: SEE NOTES			FINISH: SEE NOTES		
PART #			SHEET 1 OF 1		

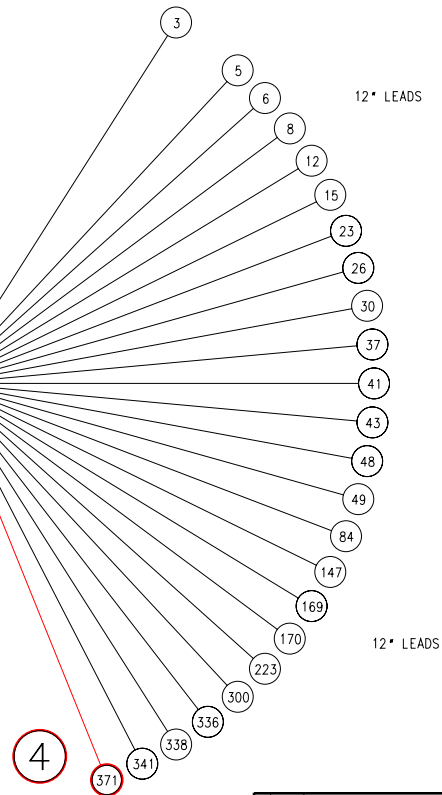


	POS	COLOR	STRIP	GRADE	DESCRIPTION
A	5	OR	GY	14	RADAR (BKR TO RADAR)
	5	OR	BNRN	14	GPS (BKR TO GPS)
	6	RD	BLGY	14	VHF RADIO (BKR TO RADIO)
	8	OR	BNBK	14	DEPTH SOUNDER (BKR TO SW)
	12	OR	PR	14	1/2V DASH OUTLET (BKR TO OUTLET)
	15	OR	WH	10	HORN (BKR TO SW)
	23	YL	BNRD	14	BLOWERS (BKR TO SW)
	26	OR	YL RD	14	WINDLASS (BKR TO SW)
	30	GY	OR	14	SPOTLIGHT (BKR TO SW)
B	37	BN	WHPR	14	BILGE PUMP PORT (BKR TO SW)
	41	RD	RD	14	WIPER STBD (BKR TO SW)
	43	OR	BK RD	14	WIPER PORT (BKR TO SW)
	44	OR	BK	14	TRIM TAB + PORT (BKR TO SW)
	49	OR	BK	14	TRIM TAB + STBD (BKR TO SW)
	84	BL	RD	10	DASH LTS (BKR TO SWS)
	147	BN	WHYL	14	BILGE PUMP STBD (BKR TO SW)
	169	RD		8	12 VOLT + BKR FEED (PLEX BLOCK TO BKR)
	170	RD		8	12 VOLT + BKR FEED (PLEX BLOCK TO BKR)
C	223	OR	GNGN	14	TO PILOT (BKR TO UNIT)
	300	YL	RD BN	14	DEFOG (BKR TO SW)
	336	BL	WHYL	14	ENG ROOM LTS (BKR TO SW)
	338	WH	GY	14	WINDSHIELD WASH (BKR TO SW)
	341	RD		14	NAV LIGHTS
	371	RD	BN	14	CABIN BILGE PUMP (SW TO BKR)





4

INCLUDE: 2-PANEL NUT PN# 2411-001-2405  
2-GASKET PN# 16-04477



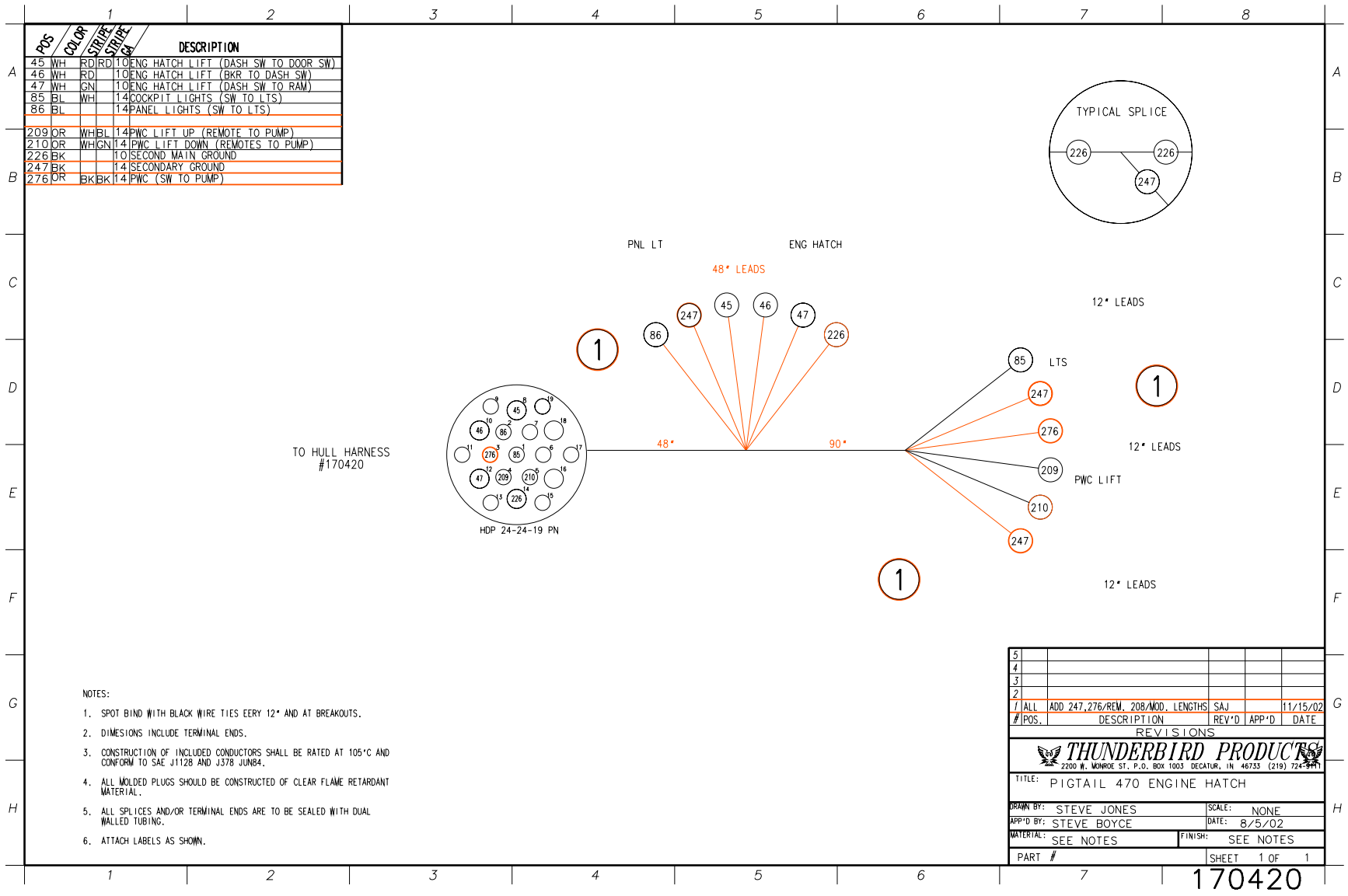
NOTES:

1. SPOT BOND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
2. DIMENSIONS INCLUDE TERMINAL ENDS.
3. CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN04.
4. ALL MOLED PULGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
5. ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.
6. ATTACH LABELS AS SHOWN.

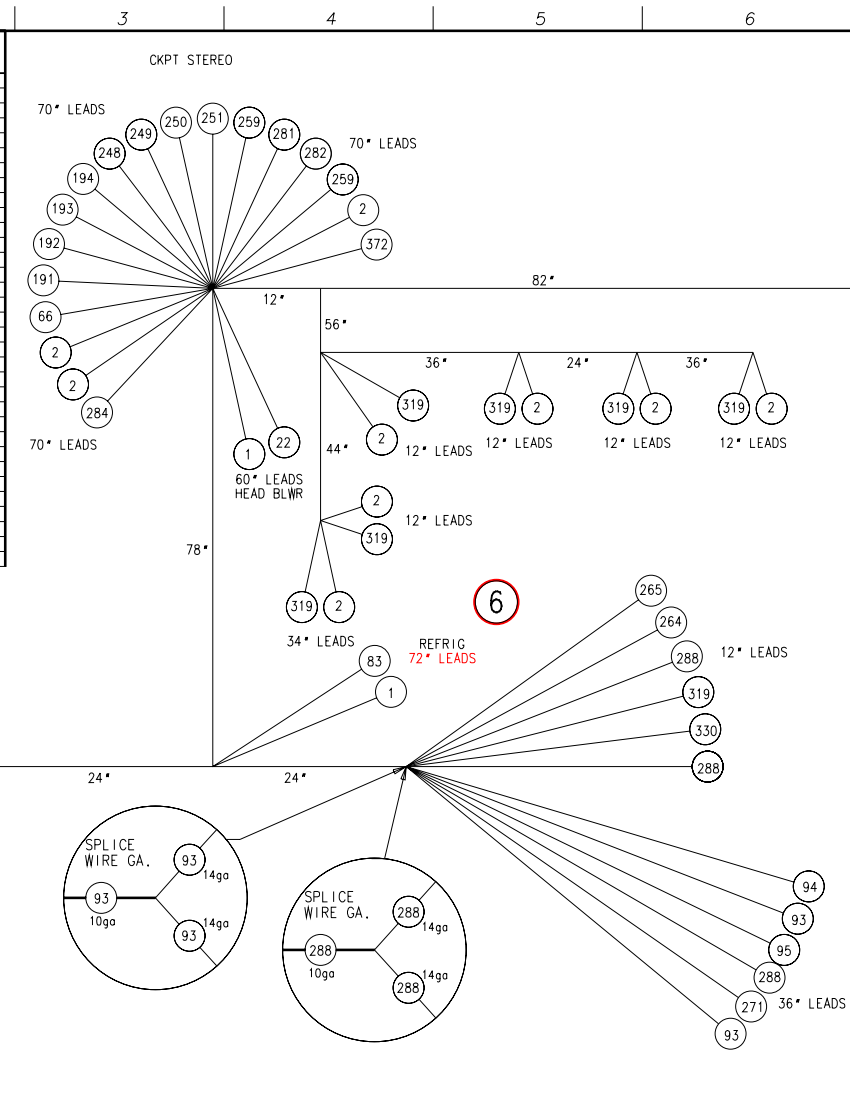
5							
4	4E/6F	ADD 371		JAW	JCR	10/9/03	
3	ALL	REM 4, 323		SAJ		9/4/03	
2	4B/6G	MOD 37 / REM 337		SAJ		2/13/03	
1	4D, 6F	MODIFY 49x50 / ADD 300&323		SAJ		11/7/02	
#	POS.	DESCRIPTION	REV'D	APP'D	DATE		
REVISIONS							
 <b>THUNDERBIRD PRODUCTS</b> 							
2200 N. MONROE ST. P.O. BOX 1003 DECATUR, IN 46735 (260) 724-9111							
TITLE:    P1CITAL 470 DASH BREAKER							
DRAWN BY:    STEVE JONES				SCALE:    NONE			
APP'D BY:    STEVE BOYCE				DATE:    8/1/02			
MATERIAL:    SEE NOTES				FINISH:    SEE NOTES			
PART #				SHEET    1 OF    1			

170418





POS	COLOR	STRIP	STRIP	DESCRIPTION
1	BK	1	2	10 MAIN GROUND
2	BK	1	2	14 SECONDARY GROUND
21	YL	WH	10	10 HEAD BLOWER (BKR TO SW)
22	YL	WH	10	10 HEAD BLOWER (SW TO MTR)
66	OR	1	14	14 STEREO TRIGGER (RADIO TO AMPS)
79	WH	YL	BK	14 WASTE HOLDING TANK (3/4)
80	YL	WH	BK	14 WASTE HOLDING TANK (FULL)
81	BN	RD	14	14 HEAD PUMP (BKR TO MOD)
83	RD	BL	10	10 REFRIG (BKR TO UNIT)
93	LT	BL	RD	10 MAIN CABIN LTS (BKR TO UNIT)
94	LT	BL	WH	14 GALLEY OVERHEAD (SW TO LTS)
95	LT	BL	14	14 MAIN CABIN FLOOR LTS (SW TO LTS)
191	WH	YL	YL	14 FRONT LEFT + (VOL CONT TO SPKR)
192	WH	BK	BK	14 FRONT LEFT - (VOL CONT TO SPKR)
193	WH	OR	OR	14 FRONT RIGHT + (VOL CONT TO SPKR)
194	WH	GN	GN	14 FRONT RIGHT - (VOL CONT TO SPKR)
248	WH	PR	PR	14 REAR LEFT + (VOL CONT TO SPKR)
249	WH	BN	BN	14 REAR LEFT - (VOL CONT TO SPKR)
250	WH	RD	RD	14 REAR RIGHT + (VOL CONT TO SPKR)
251	WH	BL	BL	14 REAR RIGHT - (VOL CONT TO SPKR)
259	RD	GN	WH	14 CKPT STEREO AMP (BKR TO AMP)
261	TN	RD	GY	10 TV TILT SALON (BKR TO MTR)
264	YL	BN	RD	10 STOVE VENT (BKR TO SW)
265	YL	1	14	14 STOVE VENT (SW TO MOTOR)
271	LT	BL	TN	14 RACE TRACK LTS (SW TO LTS)
281	WH	OR	14	14 COCKPIT SUB +
282	WH	GN	14	14 COCKPIT SUB -
284	OR	TN	RD	14 CO DETECTOR GUEST (BKR TO UNIT)
286	LT	BL	BN	10 HEAD LTS (BKR TO SW)
288	LT	BL	GN	10 GALLEY LTS (BKR TO SW)
319	LT	BL	GN	14 GALLEY UNDER CABINET (SW TO LTS)
330	LT	BL	TN	14 GALLEY MOOD LTS (SW TO LTS)
372	BK	1	10	10 GROUND STEREO/AMP



TO FORE HEAD UNIT #170439

48-VALE TAPE: RED

DT 06-65

40°

84°

48° LEADS

TYPICAL SPLICE

NOTES:

- SPOT BIND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
- DIMENSIONS INCLUDE TERMINAL ENDS.
- CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
- ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
- ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.

REVISIONS					
#	POS.	DESCRIPTION	REV'D	APP'D	DATE
6	4B, 1H	MOD 83, 1 LENGTH	SAJ	SAJ	4/20/04
5	4B, 1H	ADD 372 AND CONNECTOR	SAJ	SJB	2/5/04
4	3D, 6H	MOD BREAKOUTS	SAJ	SAJ	5/19/03
3	3D, 6H	MOD BREAKOUTS	SAJ	SAJ	5/5/03
2	3F, 2D	MOD 2, 265	SAJ	SAJ	2/17/03
1	ALL	TOTAL REV.	SAJ	SAJ	11/18/02

**THUNDERBIRD PRODUCTS**  
2200 W. MONROE ST., P.O. BOX 1003, DECATUR, IN 46733 (219) 724-5971

TITLE: PIGTAIL 470 GALLEY

DRAWN BY: STEVE JONES SCALE: NONE

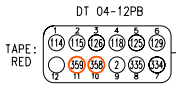
APP'D BY: STEVE BOYCE DATE: 8/1/02

MATERIAL: SEE NOTES FINISH: SEE NOTES

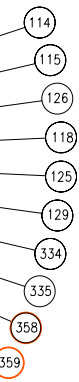
PART # SHEET 1 OF 1

POS	COLOR	STRIP	STRIP	DESCRIPTION
2	BK			14MAIN GROUND
114	TN	BL		14AUDIBLE ALARM STBD (ENG SW TO ALARM)
115	PR			14IGN SWITCHED + STBD (SW TO PUSH BUTTON)
118	YL	RD		14IGN START STBD (NEU/SFTY SW TO STRTR SOLE)
125	TN	BL	BK	14AUDIBLE ALARM (PORT ENG SWS TO ALARM)
126	PR	BK		14IGN SWITCHED + PORT (SW TO PUSH BUTTON)
129	YL	RD	BK	14IGN START PORT (NEU/SFTY SW TO STRTR SOLE)
334	PR	YL	BK	IGN SW TO GAUGE PORT
335	PR	YL		14IGN SW TO GAUGE STBD
358	PR	WH		14IGN PUSH SW TO GAUGE STBD
359	PR	BKWH		14IGN PUSH SW TO GAUGE PORT

TO DECK HARNESS  
#170412



1





16\* LEADS

16\* LEADS

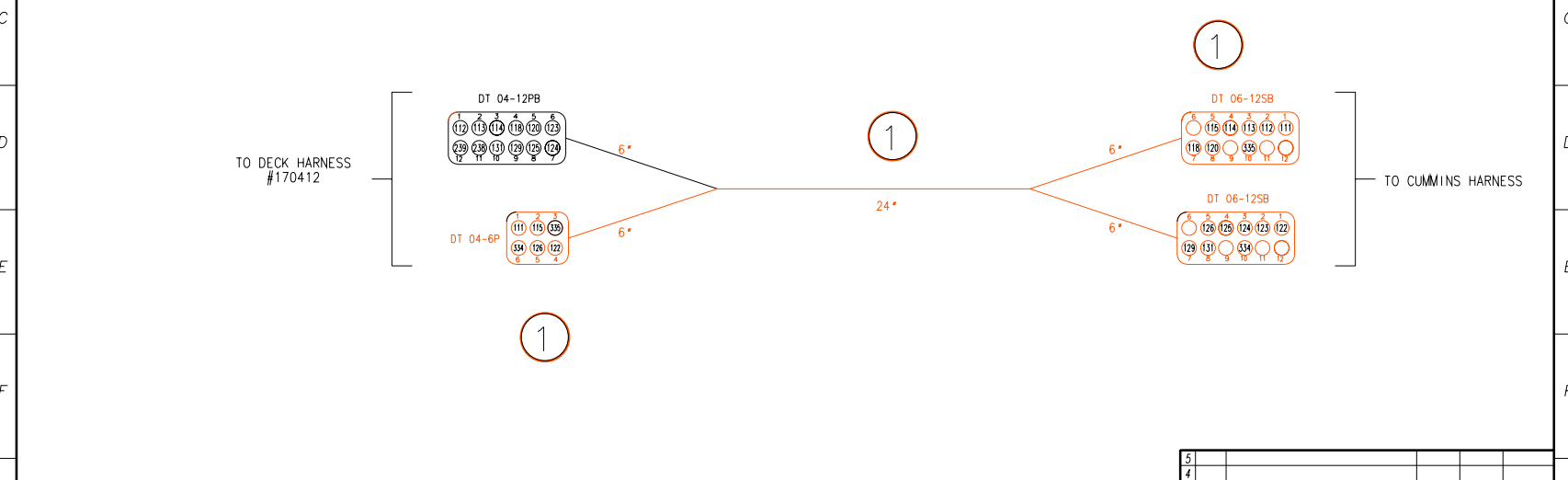
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NOTES:

1. SPOT BIND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
2. DIMENSIONS INCLUDE TERMINAL ENDS.
3. CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
4. ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
5. ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.
6. ATTACH LABELS AS SHOWN.

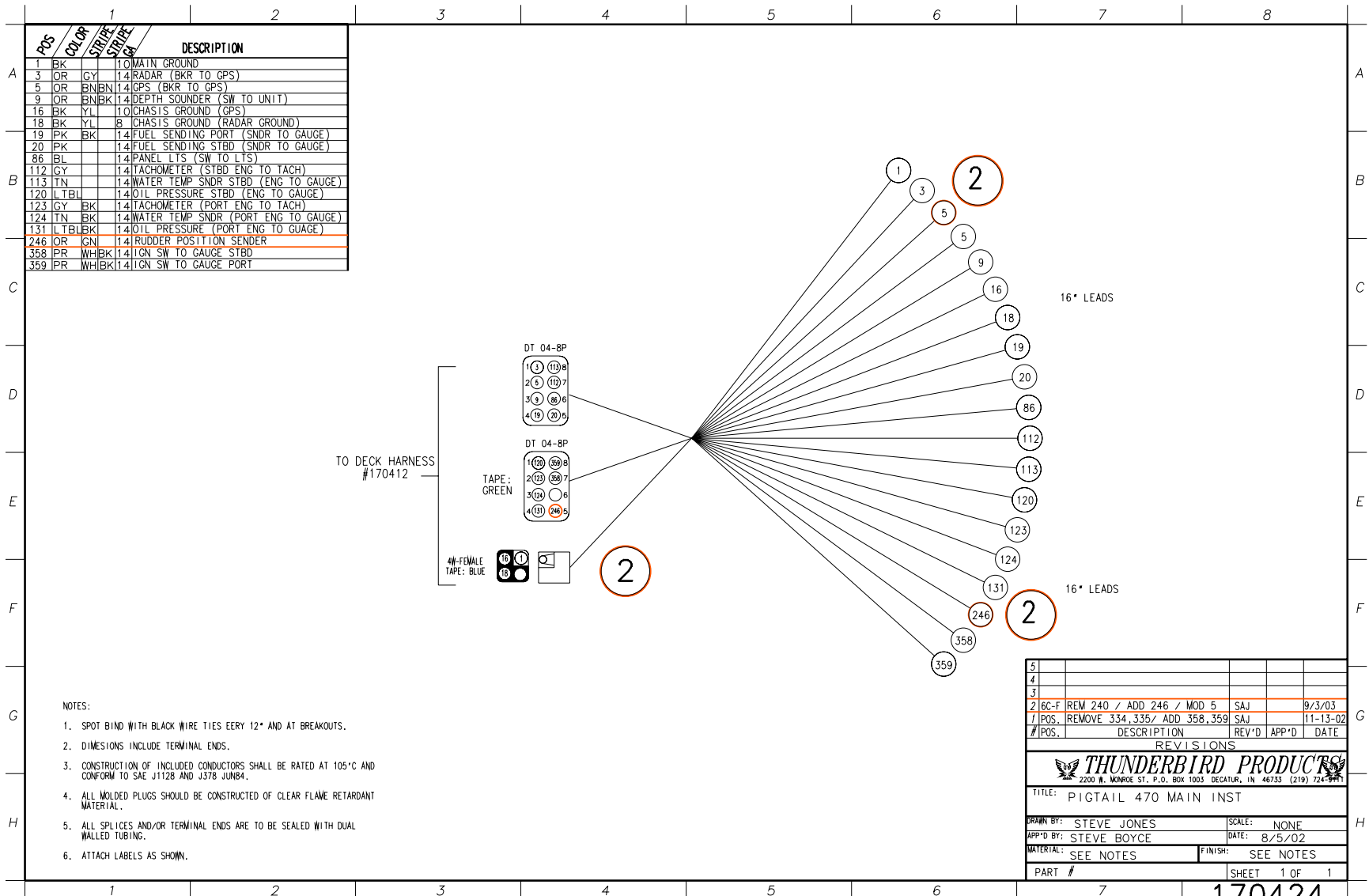
5					
4					
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2					
1	3E/6F	ADD 358 & 359	SAJ		11/7/02
# POS.		DESCRIPTION	REV'D	APP'D	DATE
REVISIONS					
 <b>THUNDERBIRD PRODUCTS</b> 					
2200 W. MONROE ST. P.O. BOX 1003 DECATUR, IN 46733 (219) 724-9441					
TITLE: PIGTAIL 470 IGNITION					
DRAWN BY: STEVE JONES			SCALE: NONE		
APP'D BY: STEVE BOYCE			DATE: 8/5/02		
MATERIAL: SEE NOTES			FINISH: SEE NOTES		
PART #			SHEET 1 OF 1		

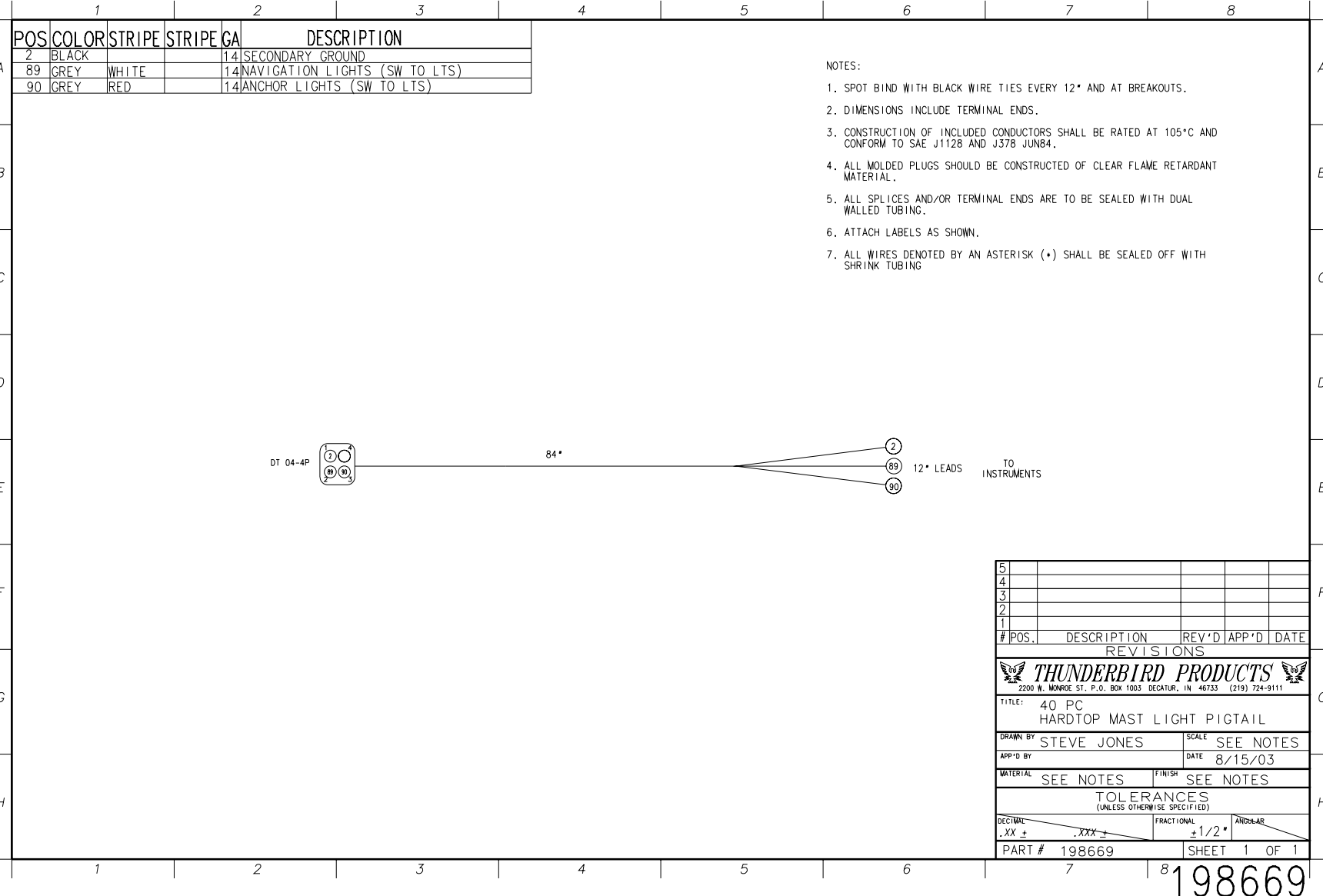
POS	COLOR	STRIP	STRIP	DESCRIPTION
111	BK			14 ENGINE GROUND
112	GY			14 TACH STBD (ENGINE TO TACH)
113	TN			14 WATER TEMP SNDR STBD (ENG TO GAUGE)
114	TN	BL		14 AUDIBLE ALARM STBD (ENG SWS TO ALARM)
115	PR			14 IGN SWITCHED + STBD (SW TO PUSH BUTTON)
118	YL	RD		14 IGN START STBD (NEU/SFTY SW TO STARTER SOLE)
120	LT	BL		14 OIL PRESSURE STBD (ENG TO GAUGE)
122	BK			14 ENGINE GROUND PORT (ENGINE TO TACH)
123	GY	BK		14 TACHOMETER (PORT TACH TO ENG)
124	TN	BK		14 WATER TEMP SNDR (PORT ENG TO GAUGE)
125	TN	BL	BK	14 AUDIBLE ALARM (PORT ENG SWS TO ALARM)
126	PR	BK		14 IGN SWITCHED + PORT (SW TO PUSH BUTTON)
129	YL	RD	BK	14 IGN START PORT (NEU/SFTY SW TO START SOLE)
131	LT	BL	BK	14 OIL PRESSURE (PORT ENG TO GAUGE)
238	PR	OR		14 IGN STBD (MOD TO ENG)
239	PR	OR	BK	14 IGN PORT (MOD TO ENG)
334	PR	YL	BK	14 IGN SW TO GAUGE PORT
335	PR	YL		14 IGN SW TO GAUGE STBD



- NOTES:
- SPOT BIND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
  - DIMENSIONS INCLUDE TERMINAL ENDS.
  - CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
  - ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
  - ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.
  - ATTACH LABELS AS SHOWN.

5					
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2					
1	POS.	ADD 115,126,334,335/ MOD 111&122	SAJ		11/7/02
	# POS.	DESCRIPTION	REV'D	APP'D	DATE
REVISIONS					
<b>THUNDERBIRD PRODUCT</b>					
TITLE: PIGTAIL 470 IIM					
DRAWN BY: STEVE JONES			SCALE: NONE		
APP'D BY: STEVE BOYCE			DATE: 8/5/02		
MATERIAL: SEE NOTES			FINISH: SEE NOTES		
PART #			SHEET 1 OF 1		







POS	COLOR	STRIPE	STRIPE	GA	DESCRIPTION
2	BLACK			14	SECONDARY GROUND
89	GREY	WHITE		14	NAVIGATION LIGHTS (SW TO LTS)
90	GREY	RED		14	ANCHOR LIGHTS (SW TO LTS)

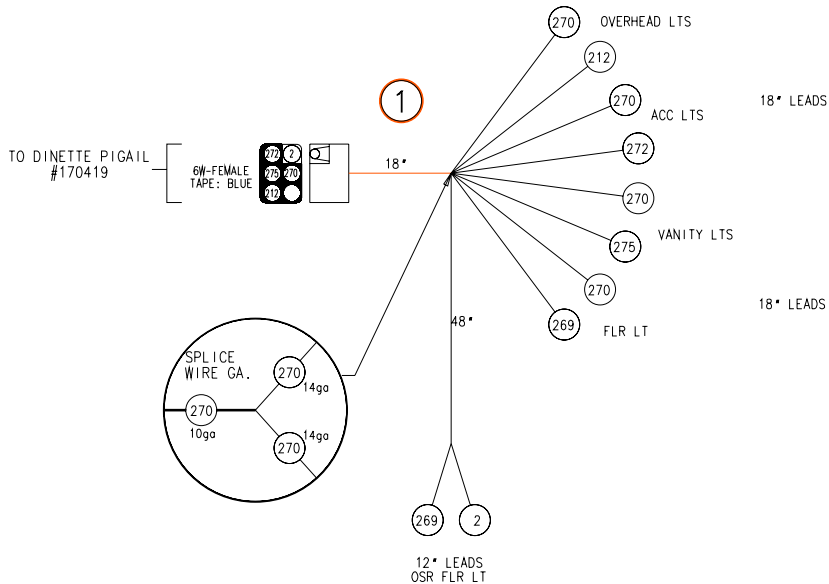
NOTES:

1. SPOT BIND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
2. DIMENSIONS INCLUDE TERMINAL ENDS.
3. CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
4. ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
5. ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.
6. ATTACH LABELS AS SHOWN.
7. ALL WIRES DENOTED BY AN ASTERISK (\*) SHALL BE SEALED OFF WITH SHRINK TUBING

5					
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#	POS.	DESCRIPTION	REV'D	APP'D	DATE
REVISIONS					
 <b>THUNDERBIRD PRODUCTS</b>  2200 W. MONROE ST. P.O. BOX 1003 DECATUR, IN 46733 (219) 724-9111					
TITLE: 40 PC HARDTOP MAST LIGHT PIGTAIL					
DRAWN BY		STEVE JONES		SCALE	SEE NOTES
APP'D BY				DATE	8/15/03
MATERIAL		SEE NOTES		FINISH	SEE NOTES
TOLERANCES (UNLESS OTHERWISE SPECIFIED)					
DECIMAL		FRACTIONAL		ANGULAR	
.XX ±		.XXX ±		± 1/2°	
PART # 198669				SHEET 1 OF 1	



POS	COLOR	STRIP	STRIP	DESCRIPTION
2	BK			14 SECONDARY GROUND
212	L TBL	BK	YL	14V-BERTH FWD LTS (SW TO LTS)
269	L TBL			14OSR FLOOR LT (SW TO LT)
270	L TBL	TN	RD	10OSR LIGHT (BKR TO SW)
272	L TBL	TN	GN	14ORS MOOD (SW TO LTS)
275	L TBL	GN	GN	14OSR VANITY LTS (SW TO LTS)

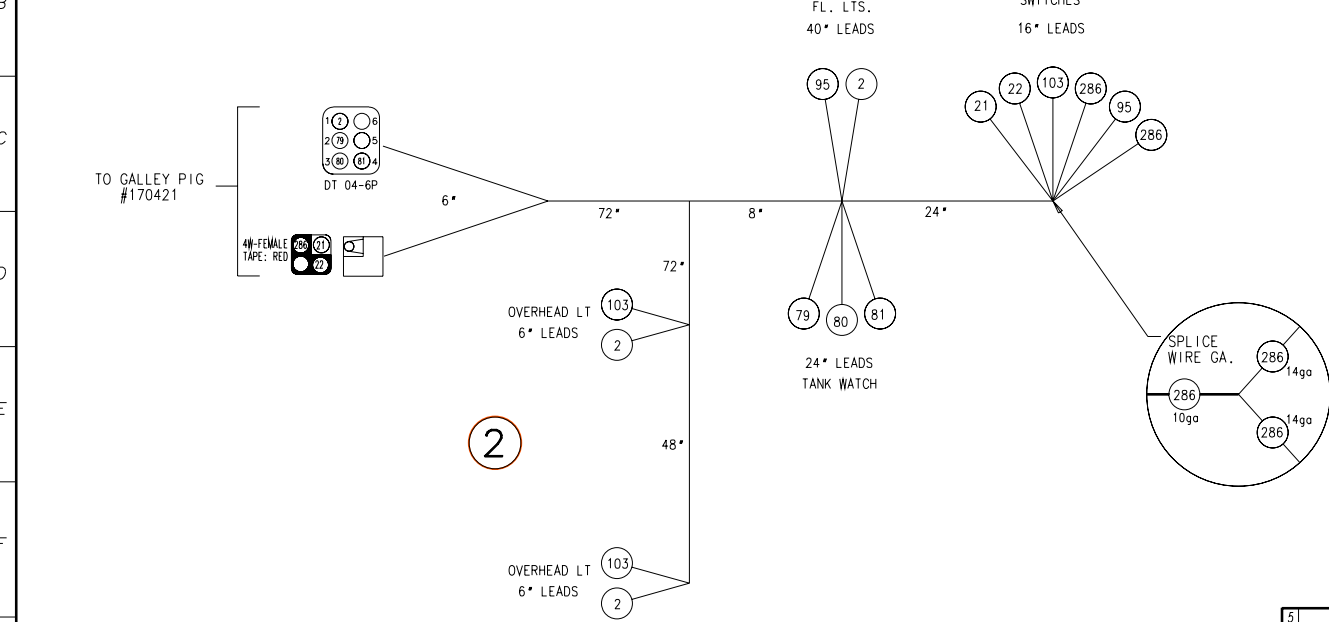


NOTES:



1. SPOT BIND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
2. DIMENSIONS INCLUDE TERMINAL ENDS.
3. CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
4. ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
5. ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL HALLED TUBING.
6. ATTACH LABELS AS SHOWN.

5					
4					
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2					
4C	MOD LENGTH	SAJ		2/13/03	
# POS.	DESCRIPTION	REV'D	APP'D	DATE	
REVISIONS					
<b>THUNDERBIRD PRODUCTS</b>					
2200 W. MONROE ST., P.O. BOX 1003 DECATUR, IN 46733 (219) 724-9111					
TITLE: PIGTAIL 470 OSR ENTRY WALL					
DRAWN BY: STEVE JONES			SCALE: NONE		
APP'D BY: STEVE BOYCE			DATE: 11/20/02		
MATERIAL: SEE NOTES			FINISH: SEE NOTES		
PART #			SHEET 1 OF 1		

POS	COLOR	STRIP	STRIP	DESCRIPTION
2	BK			14SECONDARY GROUND
21	YL	WH		10HEAD BLOWER (BKR TO SW)
22	YL	WH		10HEAD BLOWER (SW TO MOTOR)
79	WH	YL	BK	14WASTE HOLDING Tnk (3/4)
80	YL	WH	BK	14WASTE HOLDING TANK (FULL)
81	BN	RD		14HEAD PUMP (BKR TO MOD)
95	LTBL			14FLOOR LTS OSR HEAD (SW TO LT)
103	LTBL	WH	RD	14OVER HEAD HEAD LIGHT (SW TO LT)
286	LTBL	BN	RD	10HEAD LTS (BKR TO SW)

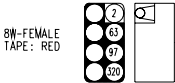


- NOTES:
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  2. DIMENSIONS INCLUDE TERMINAL ENDS.
  3. CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
  4. ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
  5. ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.
  6. ATTACH LABELS AS SHOWN.

5					
4					
3					
2	3E	MOD 2, 103	SAJ		5/7/03
1	ALL	REMOVE 272 / MOD. ALL	SAJ		11/15/02
#	POS.	DESCRIPTION	REV'D	APP'D	DATE
REVISIONS					
 <b>THUNDERBIRD PRODUCTS</b>  2200 W. MONROE ST. P.O. BOX 1003 DECATUR, IN 46733 (219) 724-3471					
TITLE: PIGTAIL 470 OSR HEAD UNIT					
DRAWN BY: STEVE JONES			SCALE: NONE		
APP'D BY: STEVE BOYCE			DATE: 8/5/02		
MATERIAL: SEE NOTES			FINISH: SEE NOTES		
PART #			SHEET 1 OF 1		

POS	COLOR	STRIP	STRIP	DESCRIPTION
2	BK			14SECONDARY GROUND
63	RD	WH	10	STEREO 12V + (BKR TO STEREO)
97	L	BLOR	14	CABINET LTS (BKR TO LTS)
320	YL	RD	14	STEREO MEMORY


TO HULL HARNESS  
#170413



12" LEADS  
TO V-BERTH  
LT SWITCHES

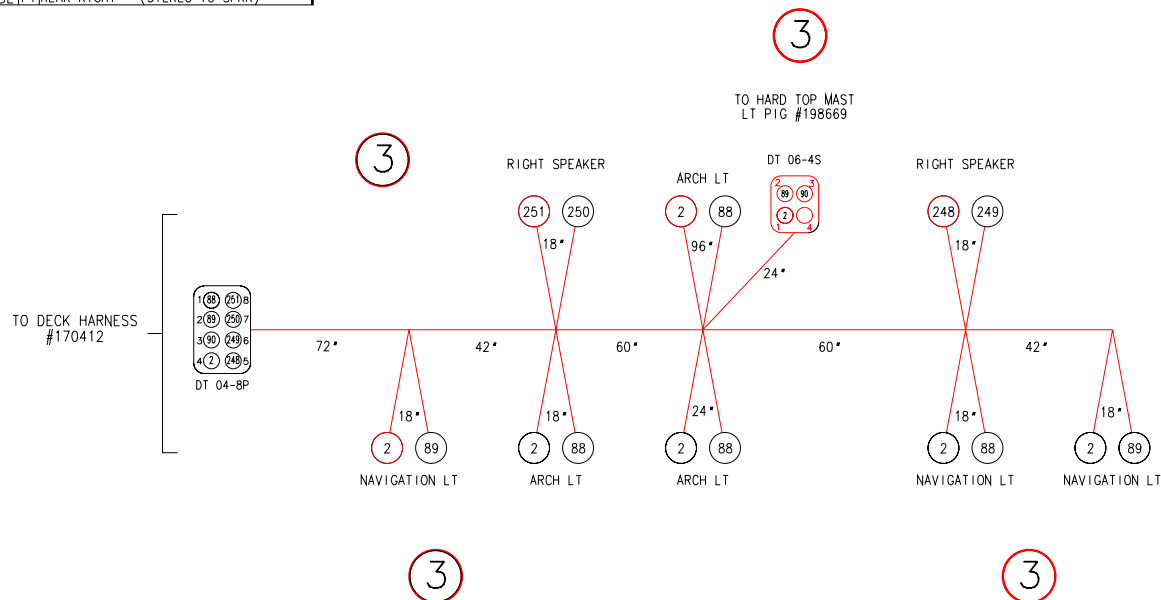
12" LEADS  
TO V-BERTH  
LT SWITCHES

- NOTES:
- SPOT BIND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
  - DIMENSIONS INCLUDE TERMINAL ENDS.
  - CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
  - ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
  - ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.
  - ATTACH LABELS AS SHOWN.

5					
4					
3	ALL	DEL 353,354,355,356	SAJ	SJB	11/2/04
2	ALL	MOD 2 & 97	SAJ		5/6/03
1	ALL	TOTAL REV.	SAJ		11/14/02
# POS.	DESCRIPTION		REV'D	APP'D	DATE
REVISIONS					
 <b>THUNDERBIRD PRODUCTS</b> 2200 W. MONROE ST., P.O. BOX 1003 DECATUR, IN 46733 (219) 724-5441					
TITLE: PIGTAIL 470 OSR STEREO					
DRAWN BY: STEVE JONES			SCALE: NONE		
APP'D BY: STEVE BOYCE			DATE: 7/25/02		
MATERIAL: SEE NOTES			FINISH: SEE NOTES		
PART #			SHEET 1 OF 1		





1		2		DESCRIPTION
POS	COLOR	STRIP	GA	
2	BK		14	SECONDARY GROUND
88	BK	WHRD	14	ARCH LIGHTS UP(SW to LTS)
88	GY	WH	14	NAVIGATION LTS (SW to LTS)
80	CY	RD	14	ANCHOR L (SW to L)
248	WH	PNPR	14	REAR LEFT + (STEREO to SPKR)
248	WH	BNBR	14	REAR LEFT - (STEREO to SPKR)
250	WH	RD RD	14	REAR RIGHT + (STEREO to SPKR)
251	WH	BL BL	14	REAR RIGHT - (STEREO to SPKR)

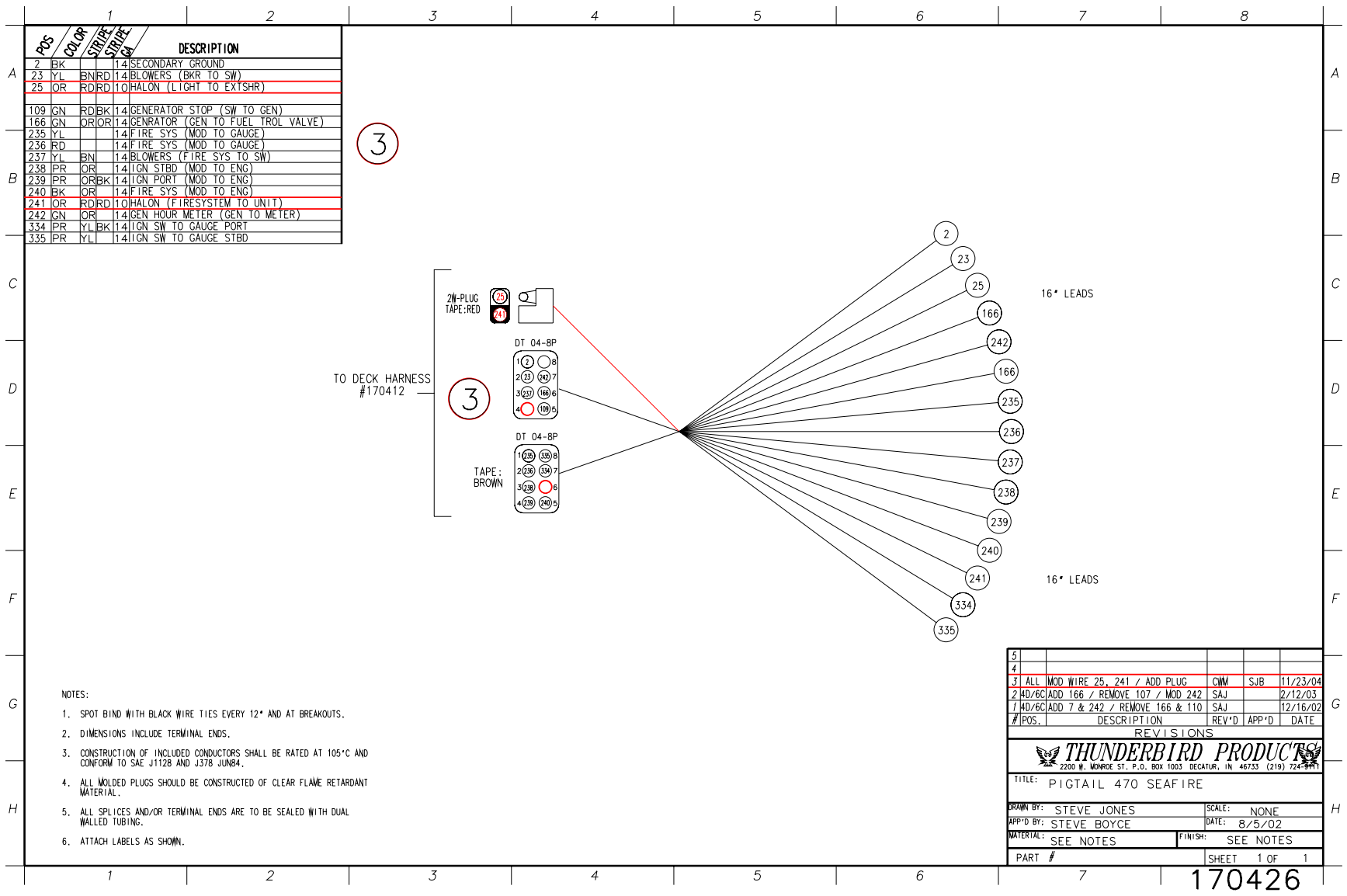


NOTES:

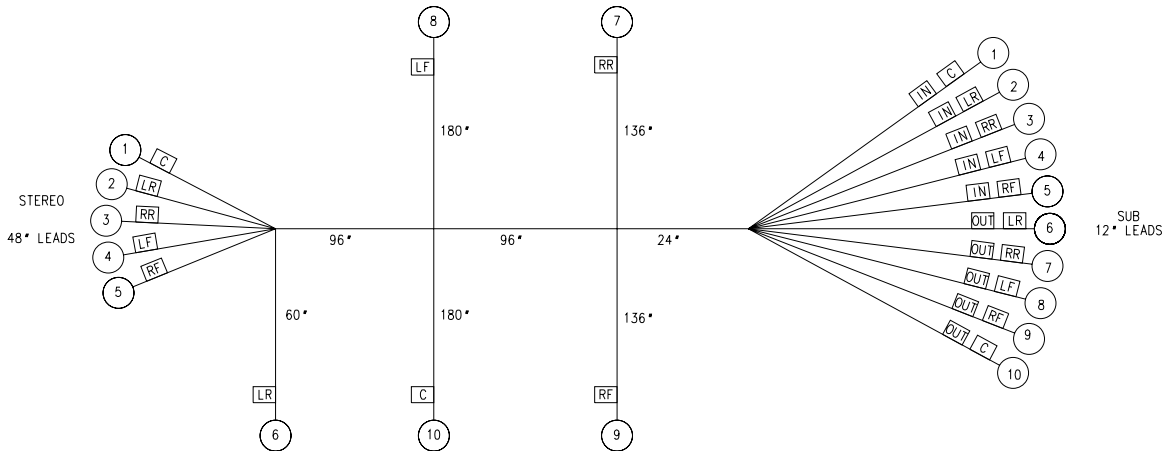
1. SPOT BIND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
2. DIMENSIONS INCLUDE TERMINAL ENDS.
3. CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
4. ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
5. ALL SPLICES AND/OR TERMINAL ENDS ARE TO BE SEALED WITH DUAL WALLED TUBING.
6. ATTACH LABELS AS SHOWN.


5							
4							
3	ALL	MOD ALL BREAKOUTS / ADD CONNECTOR			SAJ	SAJ	11/3/03
2	2C/4E	REMOVE	31, 32, 33, 34, 35, 36, 363,	PLUG	SAJ		2/13/03
1	2C/4E	ADD	363		SAJ		11/21/02
#	POS.	DESCRIPTION			REV'D	APP'D	DATE
REVISIONS							
 <b>THUNDERBIRD PRODUCTS</b> 							
2220 W. MONROE ST. P.O. BOX 1003 DECATUR, IN 46733 (219) 724-3441							
TITLE: PIGTAIL 470 RADAR ARCH							
DRAWN BY: STEVE JONES					SCALE: NONE		
APP'D BY: STEVE BOYCE					DATE: 8/5/02		
MATERIAL:					FINISH: SEE NOTES		
PART #					SHEET 1 OF 1		

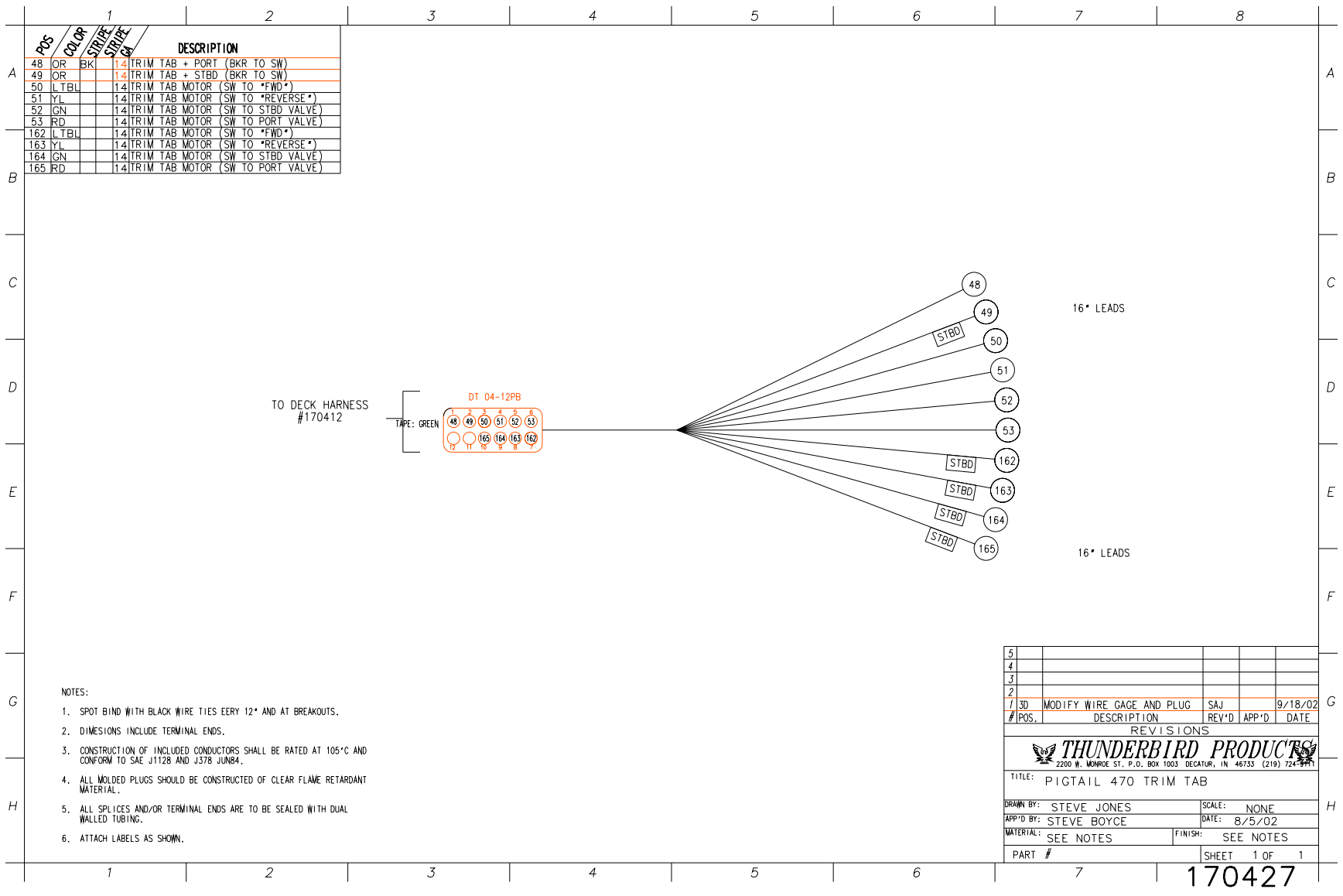
170425



POS	MATERIAL	GA	DESCRIPTION
1	SPEAKER WIRE	18	CENTER - STEREO TO SUB
2	SPEAKER WIRE	18	LEFT REAR - STEREO TO SUB
3	SPEAKER WIRE	18	RIGHT REAR - STEREO TO SUB
4	SPEAKER WIRE	18	LEFT FRONT - STEREO TO SUB
5	SPEAKER WIRE	18	RIGHT REAR - STEREO TO SUB
6	SPEAKER WIRE	18	CENTER - SUB TO SPEAKER
7	SPEAKER WIRE	18	LEFT REAR - SUB TO SPEAKER
8	SPEAKER WIRE	18	RIGHT REAR - SUB TO SPEAKER
9	SPEAKER WIRE	18	LEFT FRONT - SUB TO SPEAKER
10	SPEAKER WIRE	18	RIGHT REAR - SUB TO SPEAKER




5					
4					
3					
2					
1					
#	POS.	DESCRIPTION	REV'D	APP'D	DATE
REVISIONS					
 <b>THUNDERBIRD PRODUCTS</b> <small>2200 W. MONROE ST., P.O. BOX 1003 DECATUR, IN 46733 (219) 724-7471</small>					
TITLE: PIGTAIL 470 STEREO SPEAKER WIRE					
DRAWN BY: STEVE JONES			SCALE: NONE		
APP'D BY: JEFF ROBINSON			DATE: 8/1/02		
MATERIAL: SEE NOTES			FINISH: SEE NOTES		
PART #			SHEET 1 OF 1		



POS	COLOR	STRIP	STRIP	GA	DESCRIPTION
48	OR	BK	14		TRIM TAB + PORT (BKR TO SW)
49	OR		14		TRIM TAB + STBD (BKR TO SW)
50	L TBL		14		TRIM TAB MOTOR (SW TO *FWD*)
51	YL		14		TRIM TAB MOTOR (SW TO *REVERSE*)
52	GN		14		TRIM TAB MOTOR (SW TO STBD VALVE)
53	RD		14		TRIM TAB MOTOR (SW TO PORT VALVE)
162	L TBL		14		TRIM TAB MOTOR (SW TO *FWD*)
163	YL		14		TRIM TAB MOTOR (SW TO *REVERSE*)
164	GN		14		TRIM TAB MOTOR (SW TO STBD VALVE)
165	RD		14		TRIM TAB MOTOR (SW TO PORT VALVE)

- NOTES:
- SPOT BIND WITH BLACK WIRE TIES EVERY 12" AND AT BREAKOUTS.
  - DIMENSIONS INCLUDE TERMINAL ENDS.
  - CONSTRUCTION OF INCLUDED CONDUCTORS SHALL BE RATED AT 105°C AND CONFORM TO SAE J1128 AND J378 JUN84.
  - ALL MOLDED PLUGS SHOULD BE CONSTRUCTED OF CLEAR FLAME RETARDANT MATERIAL.
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5					
4					
3					
2					
1	3D	MODIFY WIRE GAGE AND PLUG	SAJ		9/18/02
#	POS.	DESCRIPTION	REV'D	APP'D	DATE
REVISIONS					
 <b>THUNDERBIRD PRODUCTS</b> 2200 W. MONROE ST., P.O. BOX 1003 DECATUR, IN 46733 (219) 724-7471					
TITLE: PIGTAIL 470 TRIM TAB					
DRAWN BY: STEVE JONES			SCALE: NONE		
APP'D BY: STEVE BOYCE			DATE: 8/5/02		
MATERIAL: SEE NOTES			FINISH: SEE NOTES		
PART #			SHEET 1 OF 1		