

# 31PC WIRE DIAGRAM INDEX

## AC CIRCUITS

110V AC SCHEMATIC.....	04
220V AC SCHEMATIC.....	05
AIR CONDITIONER	
ELECTRICAL.....	06A
PLUMBING.....	06B
BATTERY CHARGER.....	07A
GALLEY.....	09B
GENERATOR.....	08
HEATER, CABIN.....	13B
ICE MAKER.....	09A
OUTLETS	
PORT.....	10A
STBD.....	10B
SHOREPOWER.....	12
STOVE.....	11A
TELEVISION.....	07B
WALL VACUUM.....	11B
WATER HEATER.....	13A

## DC CIRCUITS

12V SCHEMATIC.....	14
ALARM, HIGH WATER.....	16
BATTERY CHARGING, ALT.....	17
BLOWERS	
ENGINE.....	18
HEAD.....	19
BOW THRUSTER.....	20
CO DETECTOR.....	22A
DC SUPPLY.....	15

## DC CIRCUITS

DEPTH SOUNDER.....	21
ENGINE HATCH.....	23
FIRE SHUTDOWN SYSTEM.....	59
MANUAL FIRE SYSTEM.....	24A
AUTOMATIC FIRE SYSTEM.....	24B
FUEL SYSTEM	
DIESEL.....	25
GAS.....	26
FUME DETECTOR.....	22B
GENERATOR START/STOP	
DIESEL.....	57
GAS.....	58
GALVANIC ISOLATOR.....	31
GPS.....	27
HORN.....	28
IGNITION	
DIESEL.....	29
GASOLINE.....	30
INSTRUMENT PANELS	
ACCESSORY.....	32
AFT BREAKER.....	33
DASH BREAKER.....	34
IGNITION (GAS).....	35
IGNITION (DIESEL).....	68
LOWER.....	36
MAIN.....	37
MAIN INBOARD.....	38
LIGHTS	
CABIN AREA	
AFT CABIN	
FLOOR.....	39A
OVERHEAD.....	39B
READING.....	42A
HEAD UNIT	
OVERHEAD.....	41B
MAIN CABIN	
FLOOR.....	41A
PORT.....	40A
STBD.....	40B
V-BERTH CABIN	
OVERHEAD.....	42B



# 31PC WIRE DIAGRAM INDEX

## DC CIRCUITS

LIGHTS (CONT.)	
COCKPIT COURTESY.....	43A
ENGINE BILGE.....	43B
NAV/ANCHOR.....	44A
SPOTLIGHT.....	44B

MACERATOR	
ELECTRICAL.....	45A
PLUMBING.....	45B

OUTLET 12V DC DECK.....	46A
OUTLET 12V DC CABIN.....	46B

PUMPS	
BILGE	
CABIN.....	48
ENGINE.....	47
FRESH WATER	
PLUMBING.....	50
HEAD UNIT.....	49
SHOWER SUMP	
ELECTRICAL.....	51A
PLUMBING.....	51B

SEAKEY.....	67
-------------	----

STEREO	
COMPLETE WIRING.....	52B
COMPONENT LOCATION.....	52A

TRIM TABS.....	53
----------------	----

VHF RADIO.....	54
----------------	----

WINDLASS.....	56
---------------	----

WIPERS.....	55
-------------	----

## OTHER

INDEX.....	01
------------	----

INDEX.....	02
------------	----

HARNESS & PIGTAIL #'S.....	03
----------------------------	----

BONDING.....	60
--------------	----

COAXIAL.....	61
--------------	----

## ELECTRONICS

CHARTPLOTTER OPTION #1.....	62
CHARTPLOTTER OPTION #2.....	63
FULL ELECTRONICS PACKAGE.....	64
FULL ELECTRONICS W/SMARTCRAFT...	65
FULL ELECTRONICS E-SERIES.....	66

## BOW THSTR / WNDLS AUTOCHARGING SYSTEM MANUAL

BOW THRUSTER/WINDLASS DIAGRAM...	69
AUTOMATIC CHARGING RELAY.....	70
100A BATTERY CHARGER BREAKER...	71
BATTERY SWITCH.....	72
250A FUSE BLOCK.....	73
SWITCH (WINDLASS) SOLENIOD.....	74
100A WINDLASS BREAKER.....	75
BOW THSTR/WNDLS SYST.COMPLETE...	76



# 31PC HARNESS AND PIGTAIL #'S

## AC HARNESSES

110 VOLT.....	33208
220 VOLT.....	33209
GALLEY, 110V.....	33211
GALLEY, 220V.....	33212

## AC PIGTAILS

AC/DC PANEL, 120V.....	33217
AC/DC PANEL, 220V.....	33218

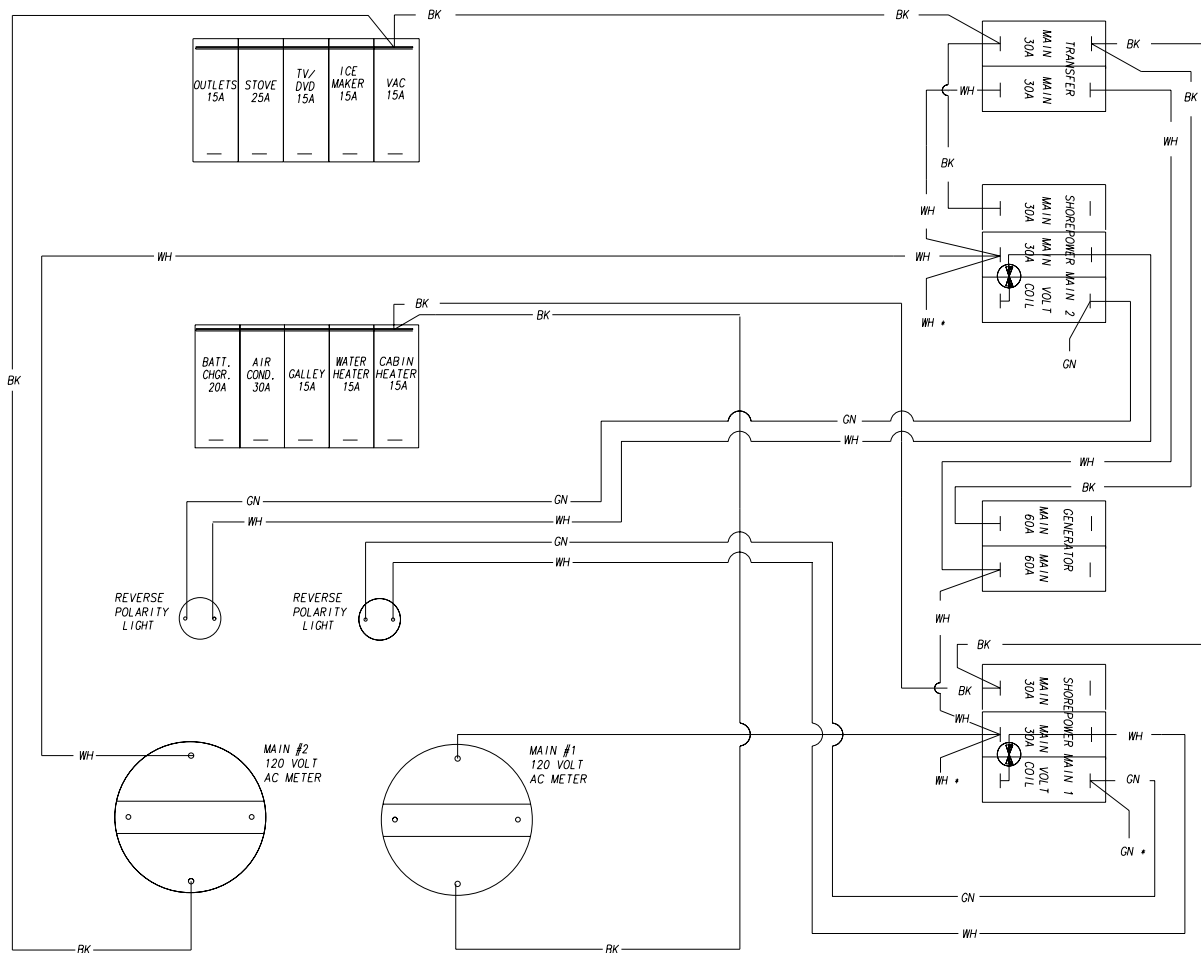
## DC HARNESSES

DECK.....	43901
HULL.....	43902

## DC PIGTAILS

ACCESSORY PANEL.....	33215
AC/DC PANEL.....	33216
AFT BREAKER PANEL.....	33219
DASH BREAKER PANEL.....	43906
ENTRY WALL.....	33221
FIRE SYSTEM.....	33713
FIRE SYSTEM LOOP.....	33712
GALLEY.....	33222
HEAD.....	33223
IGNITION.....	43903
LOWER INSTRUMENT PANEL.....	43905
MAIN INSTRUMENT PANEL.....	43904
MAST LIGHT.....	198043
RADAR ARCH.....	33228
TRIM TAB.....	33229
STEREO LOOP.....	33753
VOLUME CONTROL.....	33752



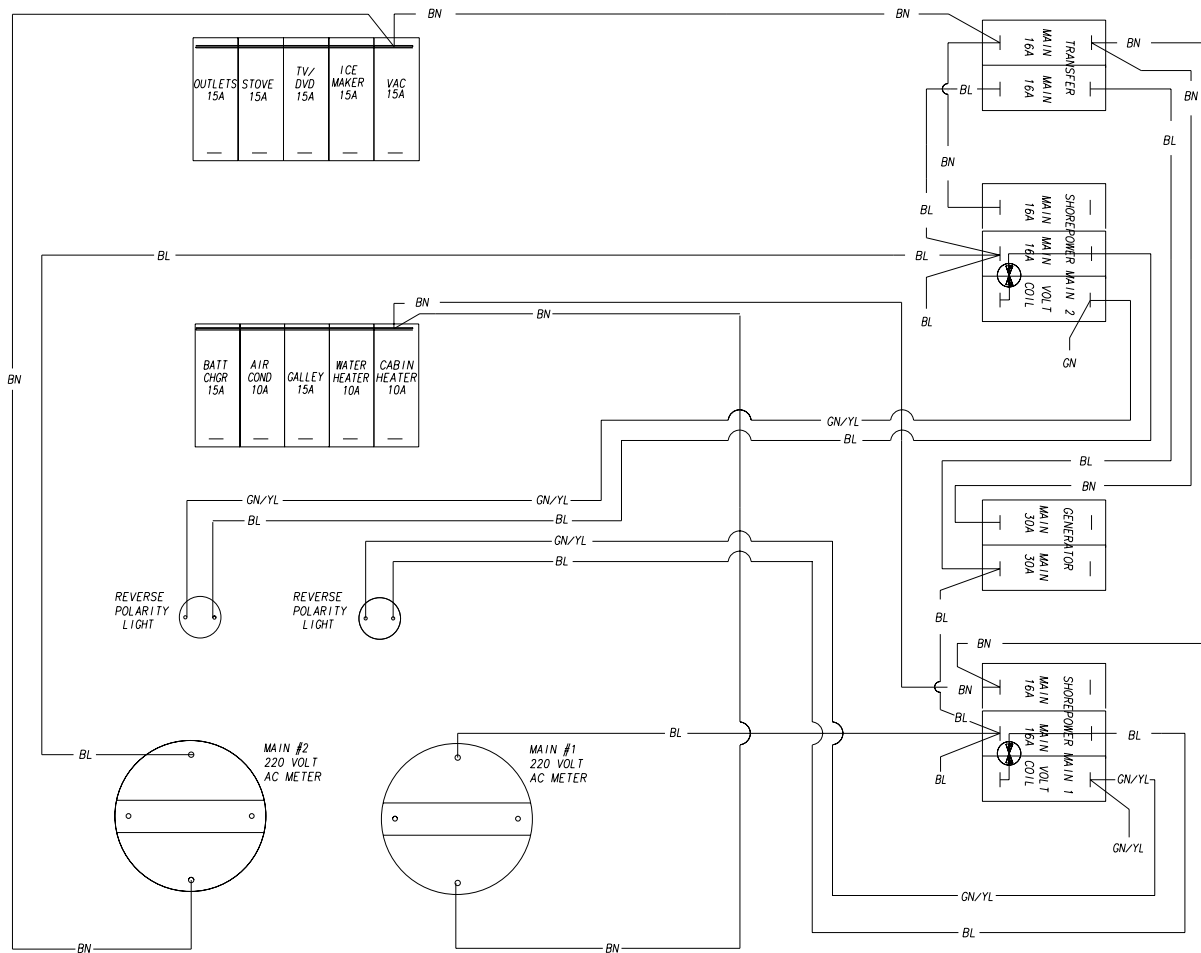


THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: 110V AC  
SCHEMATIC

MOD.: 31-PC  
DR BY: CWM

04



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: 220V AC  
SCHEMATIC


MOD.: 31-PC  
DR BY: CWM

05

## LEGEND

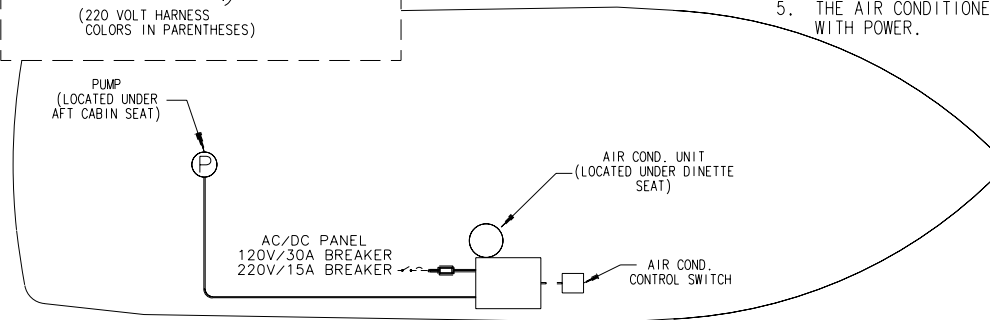
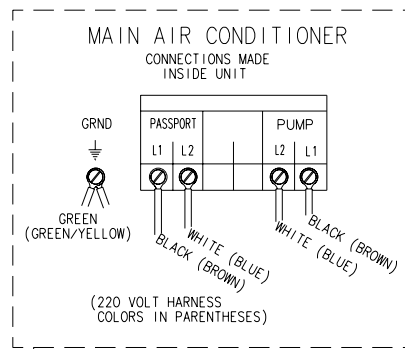
CONTROL  
CABLE - - - -

3 WIRE AC  
CONDUCTOR ———

AC PLUG 

### CAUTION!

DO NOT RUN BOTH AIR CONDITIONER  
AND HEATER AT THE SAME TIME.  
DOING THIS MAY TRIP THE BREAKER.



TO OPERATE:

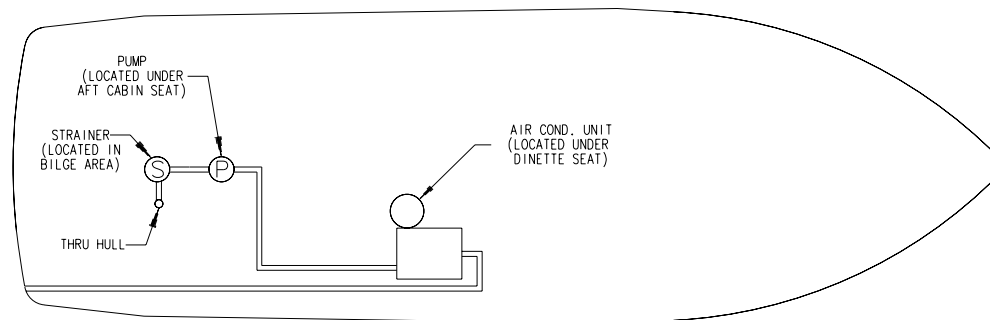
1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. BEHIND THE COCKPIT LOUNGE SEAT, STBD SIDE, SWITCH SHOREPOWER BREAKERS TO "ON".
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH SHOREPOWER BREAKER #1 TO "ON" OR GENERATOR BREAKER TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "AIR COND." BREAKER TO "ON".
5. THE AIR CONDITIONER IS NOW SUPPLIED WITH POWER.

TITLE: AIR CONDITIONER,  
ELECTRICAL

MOD.: 31-PC

DR BY: CWM

06A



TITLE: AIR CONDITIONER,  
PLUMBING

MOD.: 31-PC

DR BY: CWM

06B

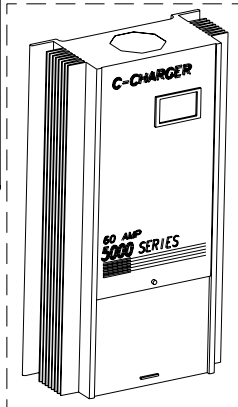
## LEGEND

OUTLET ●

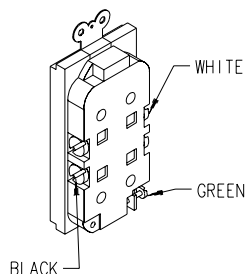
BREAKER 

AC PLUG 

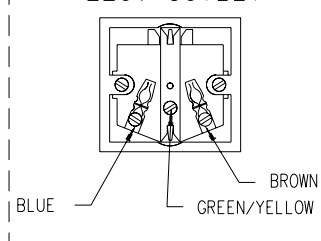
JUNCTION BOX 



### 120V OUTLET



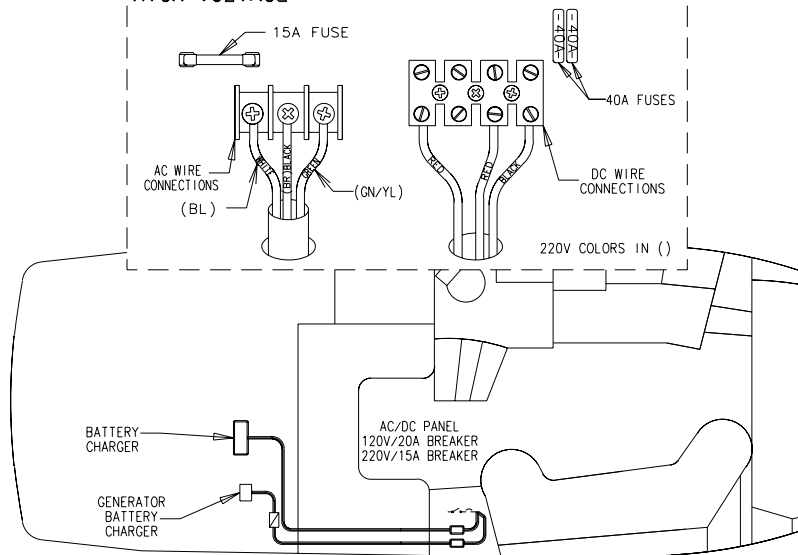
### 220V OUTLET



THUNDERBIRD  
PRODUCTS  
ENGINEERING

## CAUTION! HIGH VOLTAGE

BATTERY CHARGER  
CONNECTIONS MADE INSIDE UNIT



### TO OPERATE:

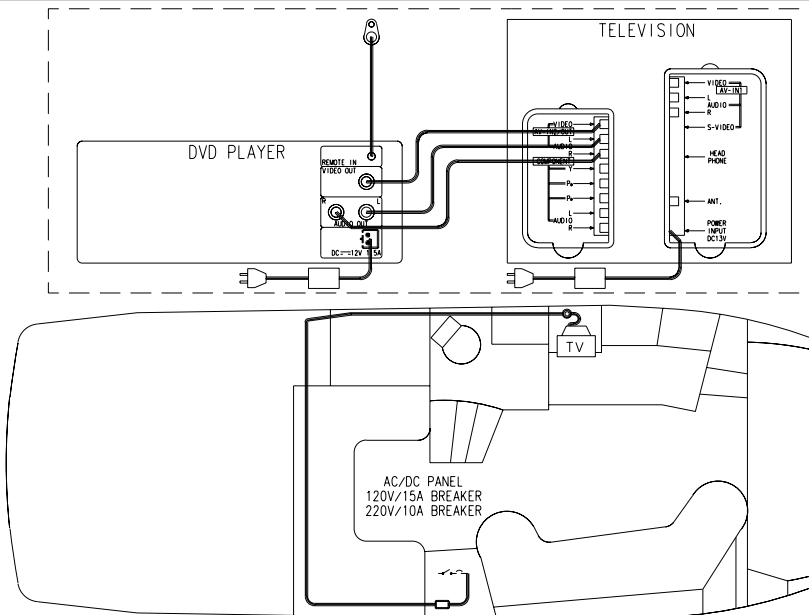
1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. UNDER THE COCKPIT LOUNGE SEAT, STBD SIDE, SWITCH SHOREPOWER BREAKER TO "ON".
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH SHOREPOWER BREAKER #1 AND #2 OR, #1 AND TRANSFER TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "BATT. CHARGER" BREAKER TO "ON".
5. CHECK FACE OF BATTERY CHARGER FOR "DC AVAILABLE" LIGHT.
6. AFTER 24 HOURS OF CHARGING, BATTERIES SHOULD READ 12+ VOLTS ON THE DASH VOLTMETER.
7. IF BATTERIES READ BELOW 12V OR DROP BELOW 12V WITHIN 15 MINUTES, HAVE THE BATTERIES CHECKED.

TITLE: BATTERY  
CHARGERS

MOD.: 31-PC  
DR BY: CWM

07A

## TELEVISION



### TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. UNDER THE COCKPIT LOUNGE SEAT, STBD SIDE, SWITCH SHOREPOWER BREAKER TO "ON".
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH SHOREPOWER BREAKER #1 AND #2, OR #1 AND TRANSFER TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "TELEVISION" BREAKER TO "ON".
5. THE TELEVISION IS NOW SUPPLIED WITH POWER.

TITLE: TELEVISION

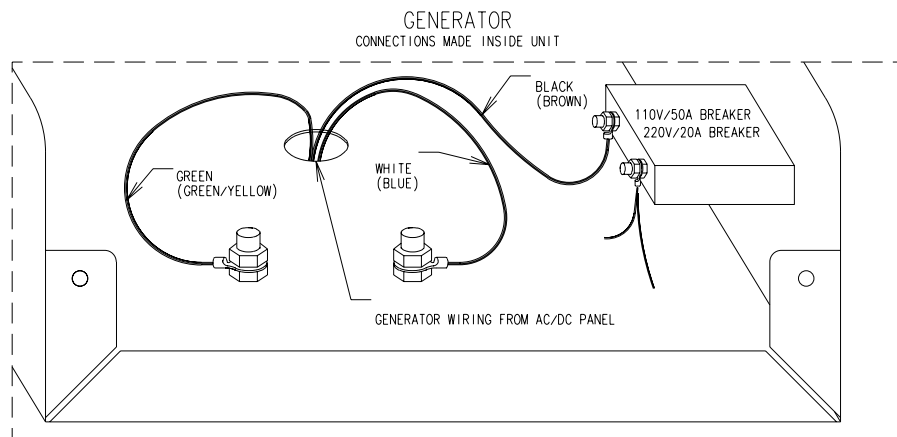
MOD.: 31-PC  
DR BY: CWM

07B

## LEGEND

PLUG 

BREAKER  
SWITCH 



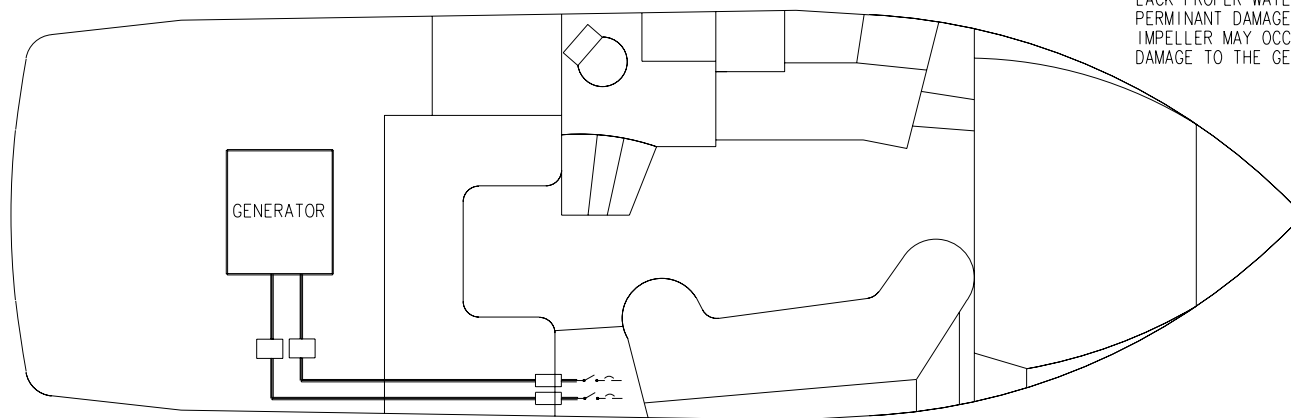
AFTER READING AND UNDERSTANDING THE GENERATOR OPERATOR'S MANUAL:

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 IN THE CABIN, SWITCH THE "BLOWERS" BREAKER TO "ON" AND RUN THEM A MINIMUM OF FOUR (4) MINUTES.
3. PLACE THE "SHOREPOWER 1/GENERATOR" SLIDE BAR IN THE "SHOREPOWER 1" POSITION.
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 "SHORE POWER 1/GENERATOR" SLIDE BAR IN THE "GENERATOR" POSITION.
7. PLACE THE "SHOREPOWER 2/TRANSFER" SLIDE BAR IN THE "TRANSFER" POSITION.
8. 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. PERMANENT DAMAGE TO GENERATOR IMPELLER MAY OCCUR, CAUSING DAMAGE TO THE GENERATOR.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

AC/DC PANEL  
120V/60A BREAKERS  
220V/20A BREAKERS

TITLE: GENERATOR

MOD.: 31-PC  
DR BY: CWM

08



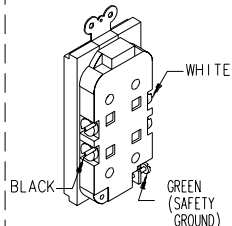
## LEGEND

BREAKER  
SWITCH 

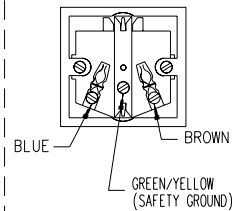
OUTLET 

AC PLUG 

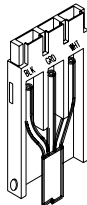
110V AC OUTLET  
(REAR VIEW)



220V AC OUTLET  
(REAR VIEW)



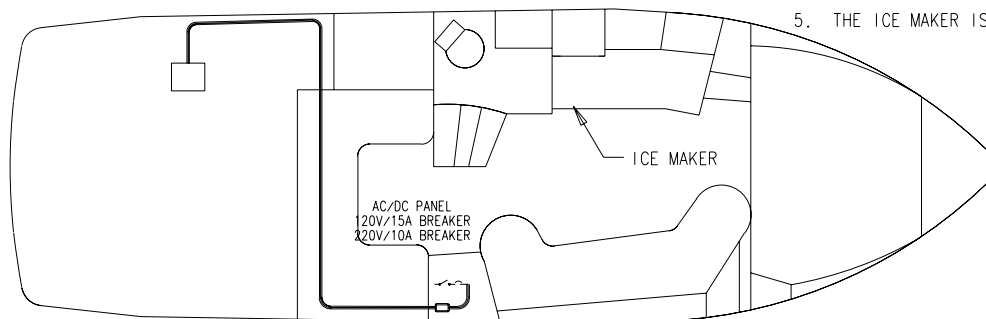
AC HARNESS PLUG



THUNDERBIRD  
PRODUCTS  
ENGINEERING

### TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. UNDER THE COCKPIT LOUNGE SEAT STBD SIDE, SWITCH SHOREPOWER BREAKERS TO "ON".
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH SHOREPOWER BREAKER #1 TO "ON", OR GENERATOR BREAKER TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "ICE MAKER" BREAKER TO "ON".
5. THE ICE MAKER IS NOW SUPPLIED WITH POWER.



TITLE: ICE MAKER

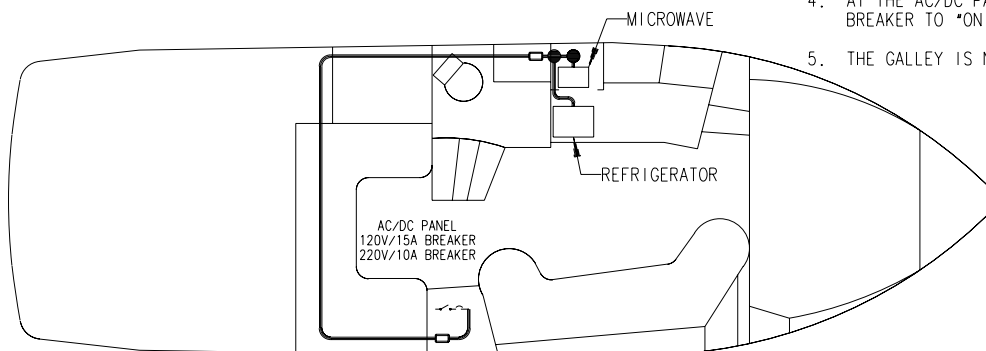
MOD.: 31-PC

DR BY: CWM

09A

### TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. UNDER THE COCKPIT LOUNGE SEAT STBD SIDE, SWITCH SHOREPOWER BREAKERS TO "ON".
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH SHOREPOWER BREAKER #1 TO "ON", OR GENERATOR BREAKER TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "GALLEY" BREAKER TO "ON".
5. THE GALLEY IS NOW SUPPLIED WITH POWER.



TITLE: GALLEY

MOD.: 31-PC

DR BY: CWM

09B

# LEGEND

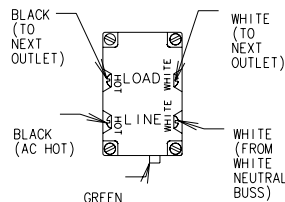
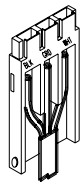
BREAKER SWITCH 

GFCI OUTLET 

AC PLUG 

OUTLET 

AC HARNESS PLUG

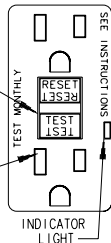


120V AC GFCI OUTLET

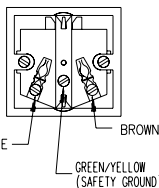
120V AC GFCI OUTLET RESET

IF AN OUTLET DOES NOT WORK AFTER POWER IS SUPPLIED, PRESS THE "RESET" BUTTON.

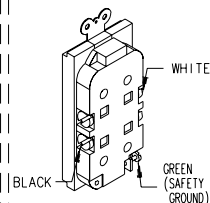
NOTE:  
ALL GFCI OUTLETS SHOULD BE TESTED MONTHLY. TO TEST, PRESS THE "TEST" BUTTON; THE INDICATOR LIGHT ON THE OUTLET WILL ILLUMINATE IF OPERATING PROPERLY.



220V AC OUTLET (REAR VIEW)



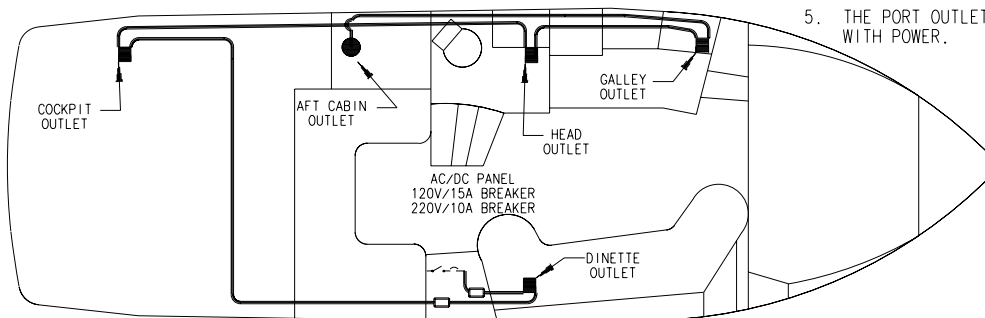
110 AC OUTLET (REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. UNDER THE COCKPIT LOUNGE SEAT STBD SIDE, SWITCH SHOREPOWER BREAKERS TO "ON".
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH SHORE POWER BREAKER #1 TO "ON", OR GENERATOR BREAKER TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "PORT OUTLETS" BREAKER TO "ON".
5. THE PORT OUTLETS ARE NOW SUPPLIED WITH POWER.



TITLE: 110V  
OUTLETS

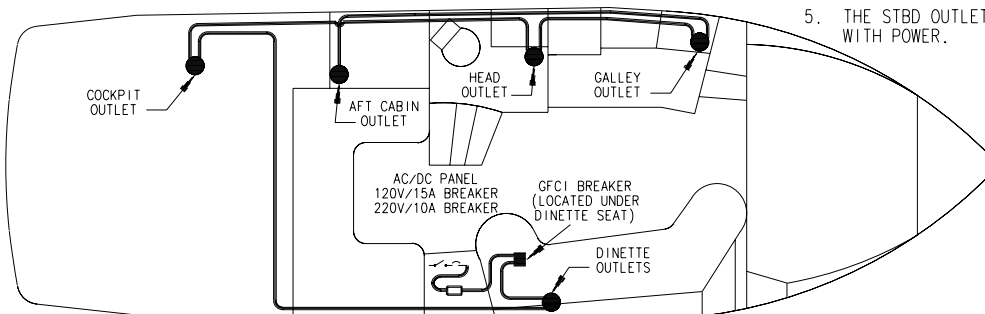
MOD.: 31-PC

DR BY: CWM

10A

TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. UNDER THE COCKPIT LOUNGE SEAT STBD SIDE, SWITCH SHOREPOWER BREAKERS TO "ON".
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH SHORE POWER BREAKER #1 TO "ON", OR GENERATOR BREAKER TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "STBD OUTLETS" BREAKER TO "ON".
5. THE STBD OUTLETS ARE NOW SUPPLIED WITH POWER.



TITLE: 220V  
OUTLETS

MOD.: 31-PC

DR BY: CWM

10B

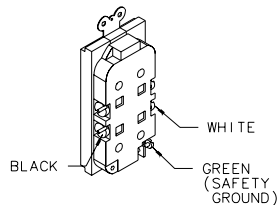
## LEGEND

BREAKER  
SWITCH 

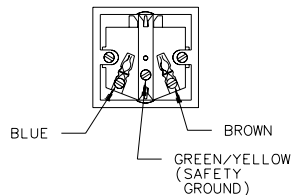
AC PLUG 

OUTLET 

### 110V AC OUTLET (REAR VIEW)



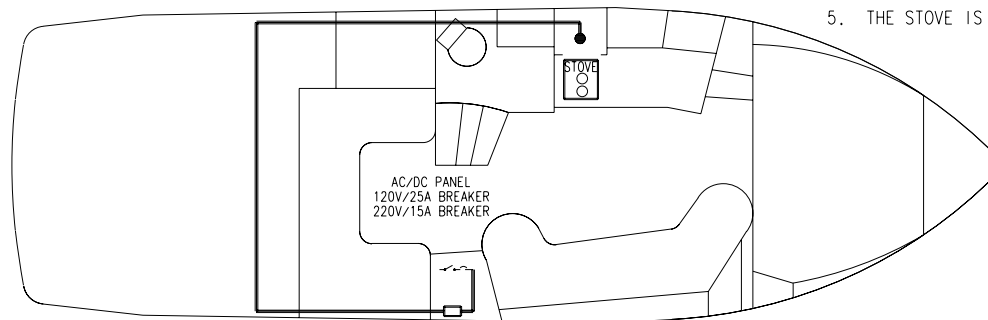
### 220V AC OUTLET (REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

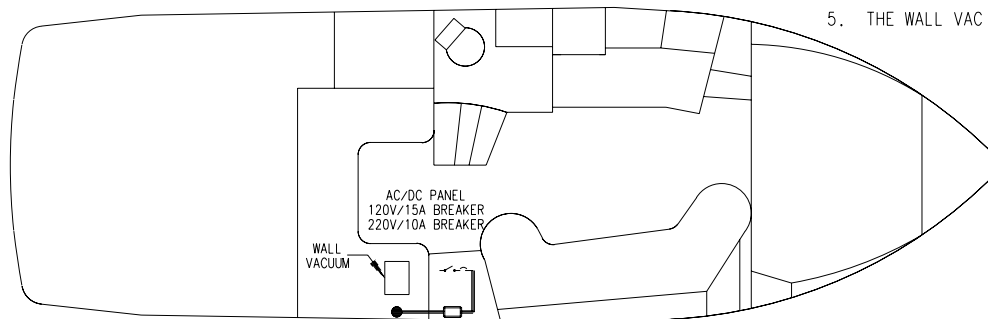
1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. UNDER THE COCKPIT LOUNGE SEAT, STBD SIDE, SWITCH SHOREPOWER BREAKER TO "ON".
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH SHOREPOWER BREAKER #1 AND #2 OR, #1 AND TRANSFER TO "ON".
4. AT THE AC/DC PANEL SWITCH THE "STOVE" BREAKER TO "ON".
5. THE STOVE IS NOW SUPPLIED WITH POWER.



TITLE: STOVE	
MOD.: 31-PC	11A
DR. BY: CWM	

TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. UNDER THE COCKPIT LOUNGE SEAT, STBD SIDE, SWITCH SHOREPOWER BREAKER TO "ON".
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH SHOREPOWER BREAKER #1 AND #2 OR, #1 AND TRANSFER TO "ON".
4. AT THE AC/DC PANEL SWITCH THE "VAC" BREAKER TO "ON".
5. THE WALL VAC IS NOW SUPPLIED WITH POWER.



TITLE: WALL VAC	
MOD.: 31-PC	11B
DR. BY: CWM	

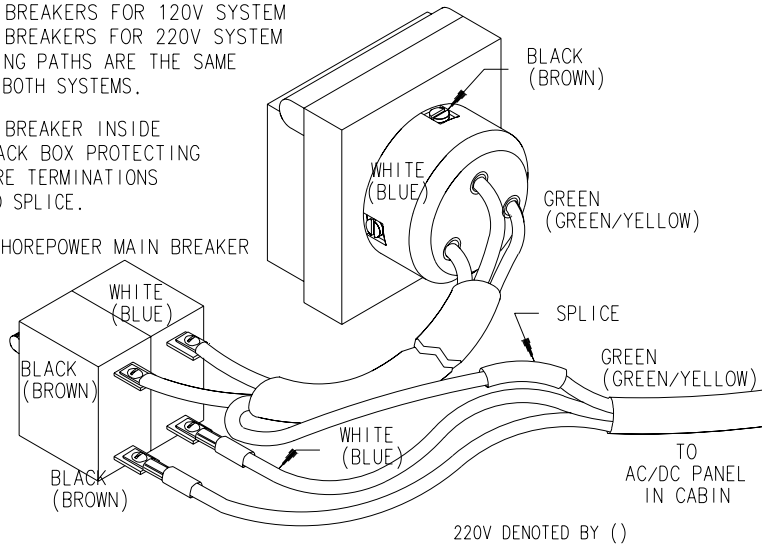
# SHOREPOWER INLET

FIG. 1

30A BREAKERS FOR 120V SYSTEM  
16A BREAKERS FOR 220V SYSTEM  
WIRING PATHS ARE THE SAME  
FOR BOTH SYSTEMS.

AC BREAKER INSIDE  
BLACK BOX PROTECTING  
WIRE TERMINATIONS  
AND SPLICE.

SHOREPOWER MAIN BREAKER



\*(READ THIS COMPLETELY BEFORE OPERATING)

TO OPERATE:

1. BEFORE PLUGGING INTO SHOREPOWER SWITCH "OFF" ALL AC EQUIPMENT AND MAIN BREAKERS AT AC/DC PANEL IN CABIN. ALSO SWITCH "OFF" SHOREPOWER MAIN BREAKERS BEHIND AFT COCKPIT LOUNGE SEAT (STBD SIDE).
2. PLUG BOAT'S SHOREPOWER CORD(S) INTO SHOREPOWER.
3. SWITCH SHOREPOWER MAIN BREAKERS TO "ON". UNDER AFT LOUNGE SEAT (STBD SIDE).
4. IN CABIN, SWITCH SHOREPOWER BREAKERS TO "ON".

WARNING!

IF REVERSED POLARITY LIGHT IS ILLUMINATED\*

-DO NOT TOUCH ELECTRICAL APPLIANCES

-LEAVE BOAT IMMEDIATELY

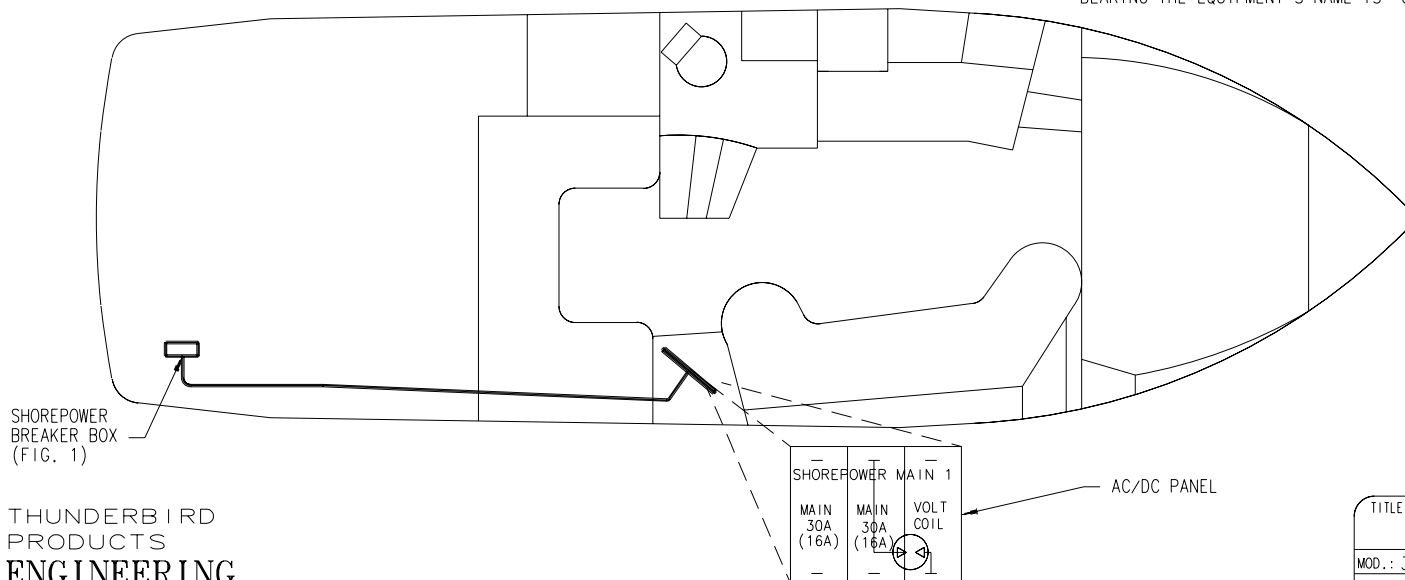
-DISCONNECT ALL SHOREPOWER

ALSO:

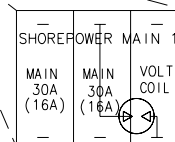
-CONTACT MARINA TO HAVE SHOREPOWER TESTED FOR REVERSED POLARITY

-CONTACT FORMULA'S TECHNICAL ASSISTANCE GROUP FOR ADDITIONAL ASSISTANCE.

5. WHEN MAIN BREAKERS OR MAIN BREAKER #1 AND TRANSFER ARE "ON" AND NO REVERSE POLARITY LIGHT IS ILLUMINATED, ALL AC EQUIPMENT BREAKERS ARE SUPPLIED WITH POWER.
6. EQUIPMENT IS OPERATIONAL WHEN THE BREAKER BEARING THE EQUIPMENT'S NAME IS "ON".



THUNDERBIRD  
PRODUCTS  
ENGINEERING



AC/DC PANEL

TITLE: SHOREPOWER

MOD.: 31-PC  
DR BY: CWM

12

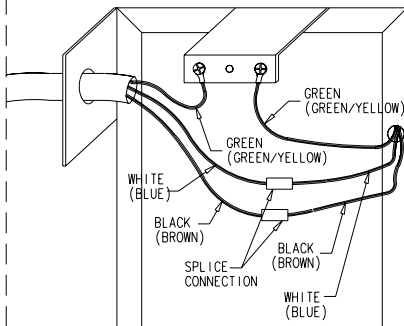
## LEGEND

CONTROL  
CABLE - - - -

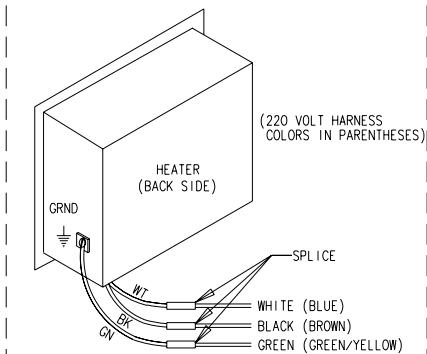
3 WIRE AC  
CONDUCTOR ———

AC PLUG □

### WATER HEATER CONNECTIONS MADE INSIDE UNIT



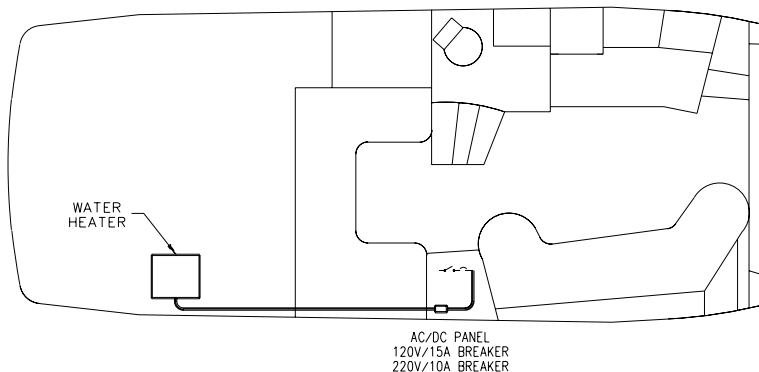
### CABIN HEATER CONNECTIONS MADE AT UNIT



THUNDERBIRD  
PRODUCTS  
ENGINEERING

## CAUTION!

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



TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. UNDER THE COCKPIT LOUNGE SEAT, STBD SIDE, SWITCH SHOREPOWER BREAKERS TO "ON".
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH SHOREPOWER BREAKER #1 AND #2 OR, #1 AND TRANSFER TO "ON".

OR

AT THE AC/DC PANEL IN THE CABIN, SWITCH THE GENERATOR BREAKERS AND TRANSFER TO "ON".

4. AT THE AC/DC PANEL, SWITCH THE "WATER HEATER" BREAKER TO "ON".
5. THE WATER HEATER IS NOW SUPPLIED WITH POWER.

TITLE: WATER  
HEATER

MOD.: 31-PC  
DR BY: CWM

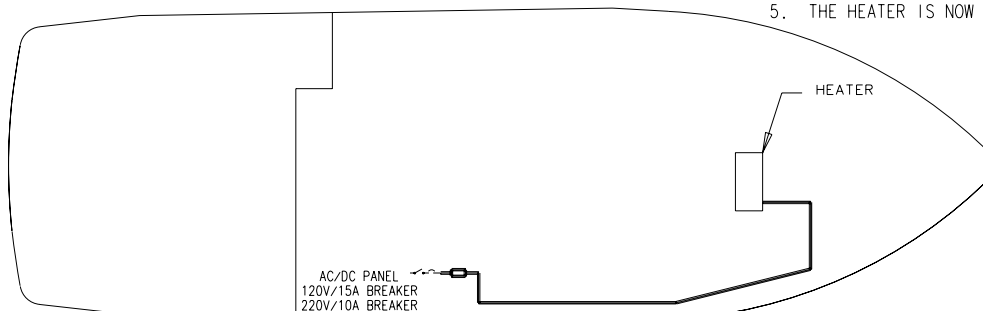
13A

TO OPERATE:

1. MAKE SURE THE BOAT IS SUPPLIED WITH SHOREPOWER OR GENERATOR POWER.
2. BEHIND THE COCKPIT LOUNGE SEAT, STBD SIDE, SWITCH SHOREPOWER BREAKERS TO "ON".
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH SHOREPOWER BREAKER #1 TO "ON" OR GENERATOR BREAKER TO "ON".
4. AT THE AC/DC PANEL, SWITCH THE "AIR COND." BREAKER TO "ON".
5. THE HEATER IS NOW SUPPLIED WITH POWER.

## CAUTION!

DO NOT RUN BOTH AIR CONDITIONER  
AND HEATER AT THE SAME TIME.  
DOING THIS MAY TRIP THE BREAKER.



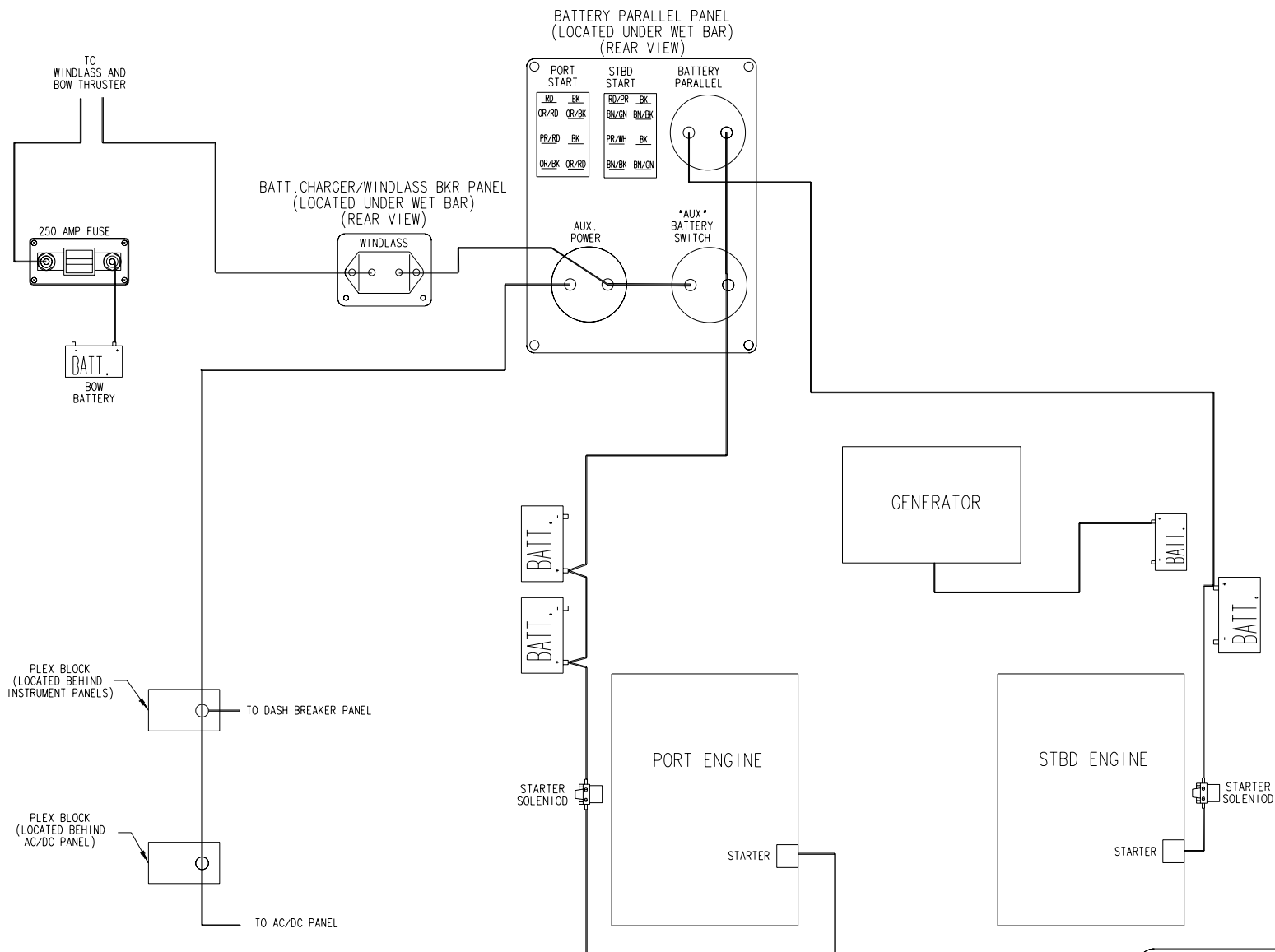
TITLE: HEATER,  
CABIN

MOD.: 31-PC  
DR BY: CWM

13B



14









THUNDERBIRD  
PRODUCTS  
ENGINEERING

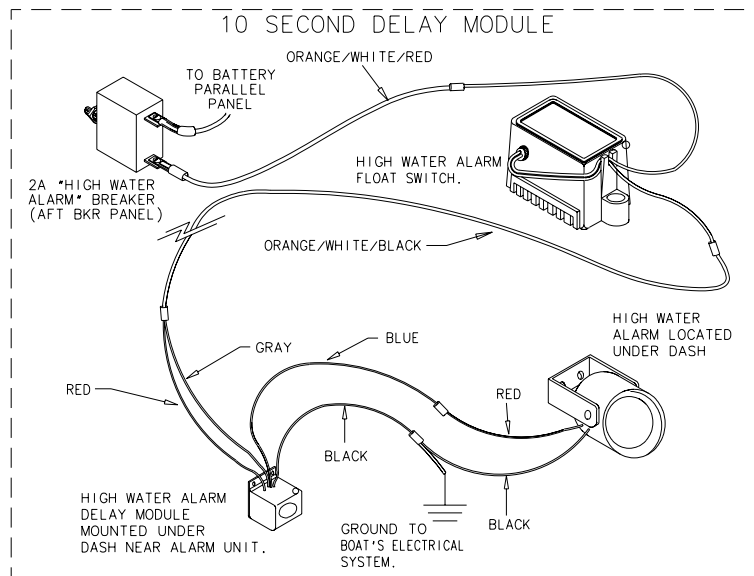
TITLE: DC SUPPLY

MOD.: 31-PC  
DR BY: DJT

15

## LEGEND

GROUND	
DASH BREAKER	
FLOAT SWITCH	
ALARM	
PLUG	
BREAKER	



### TO OPERATE:

1. HIGH WATER ALARM IS CONNECTED TO STBD BATTERY SWITCH, LOCATED UNDER DAY HATCH.

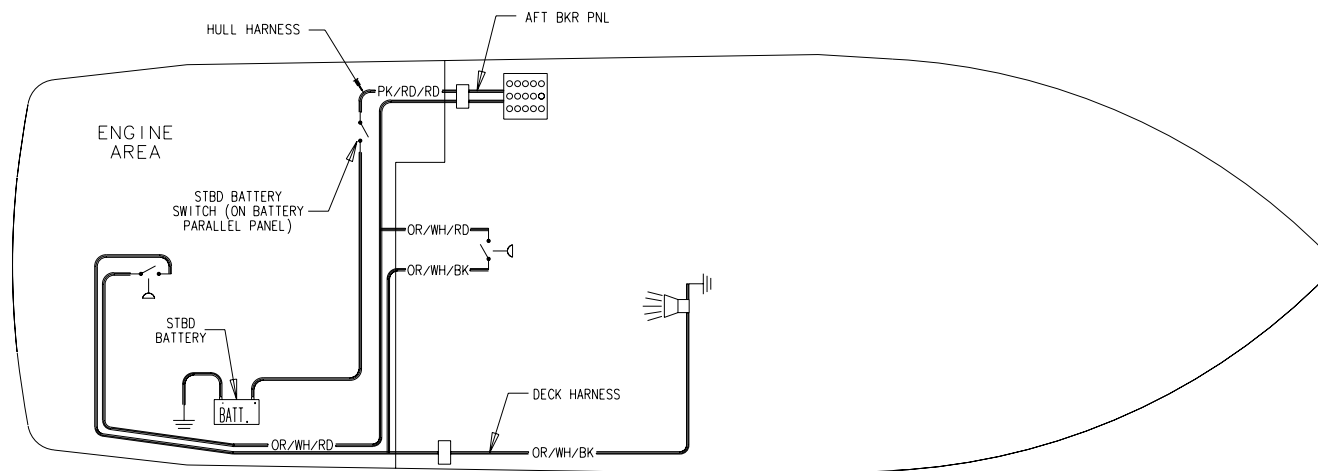
### NOTE:

THE BATTERY SELECTOR 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.



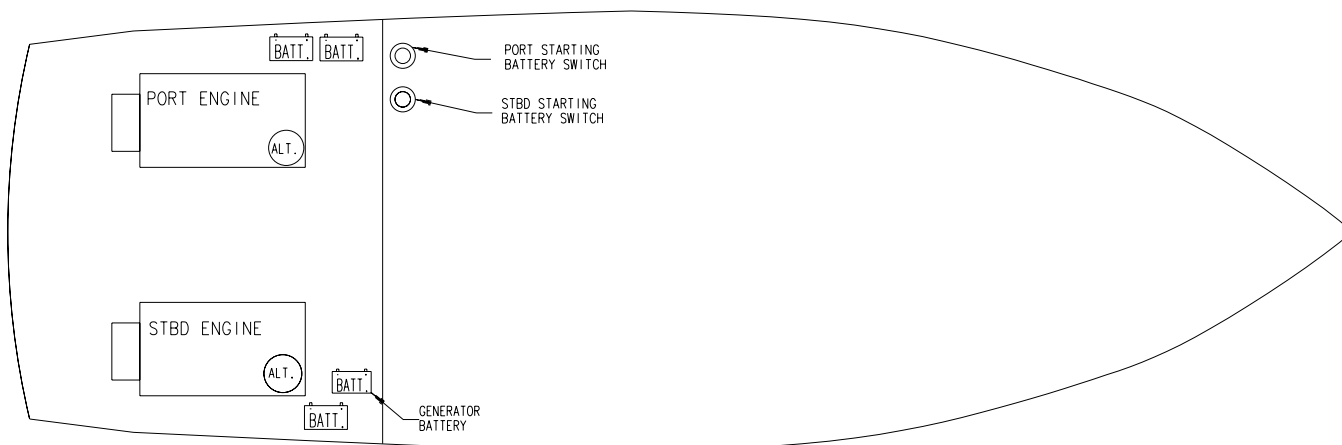
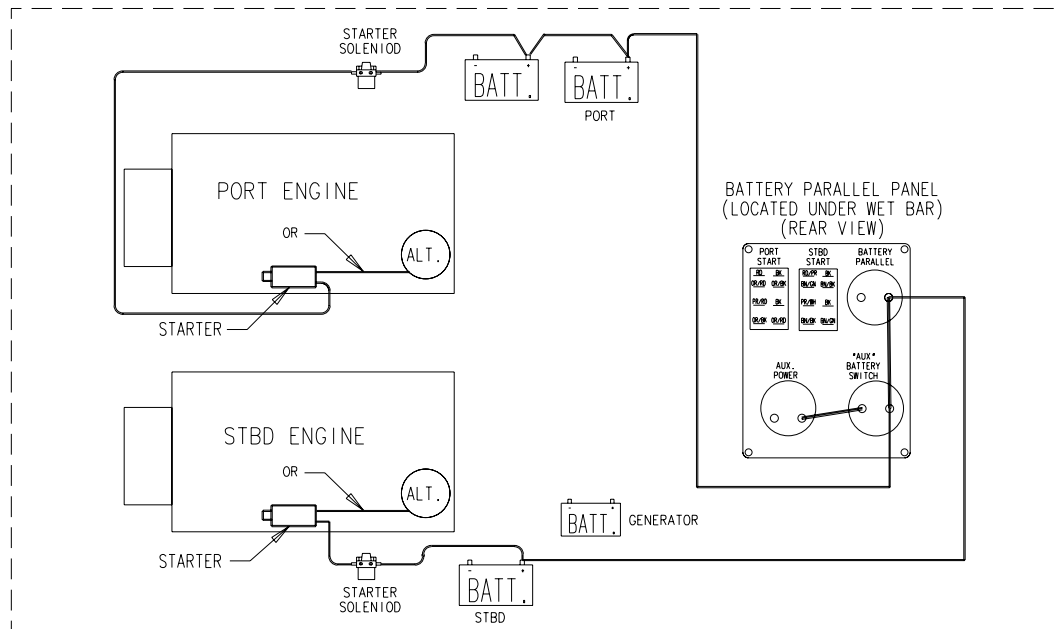
THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: HIGH WATER ALARM	
MOD.: 31-PC	16
DR BY: CWM	



# LEGEND

BATTERY



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: BATTERY  
CHARGING, ALTERNATORS

MOD.: 31-PC  
DR BY: CWM

17

## LEGEND

GROUND 

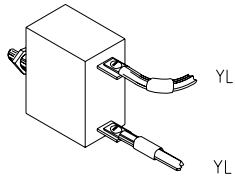
BREAKER 

BLOWER 

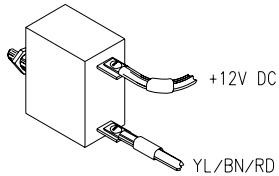
PLUG 

SWITCH 

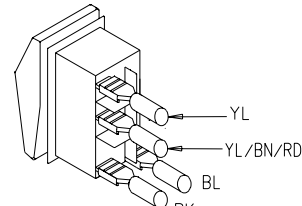
BLOWER BKR 15A  
(AFT BKR PANEL)  
(REAR VIEW)



BLOWER BKR 30A  
(DASH BKR PANEL)  
(REAR VIEW)



BLOWER SWITCH  
(IGNITION PANEL)  
(REAR VIEW)



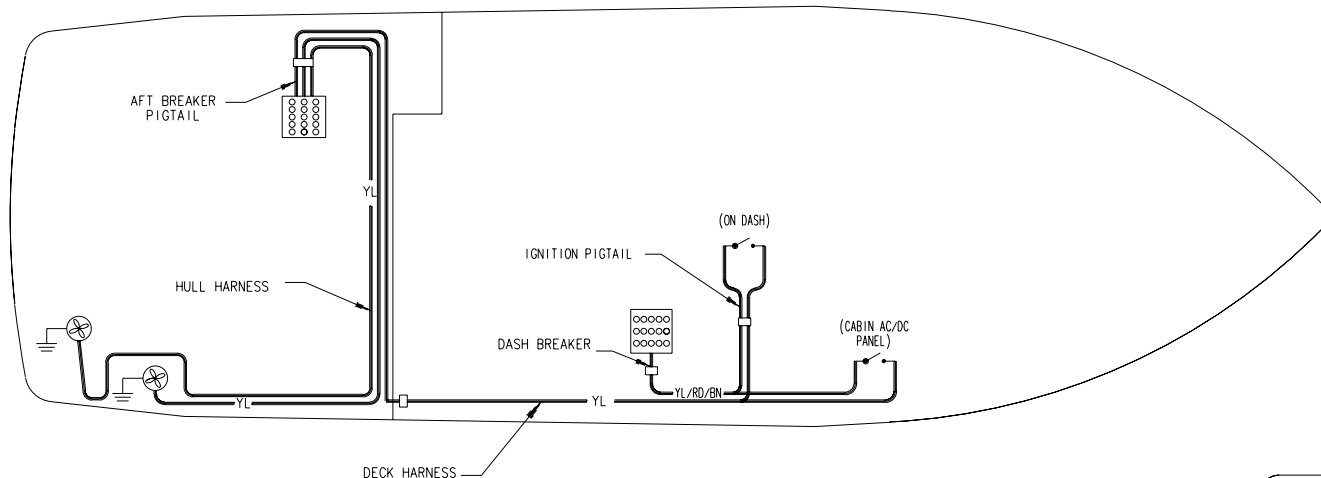
## WARNING!

GASOLINE VAPORS CAN EXPLODE,  
BEFORE STARTING ENGINES:

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

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE DASH BREAKER PANEL, THE "BLOWERS" BREAKER MUST BE PUSHED IN (CLOSED).
3. AT THE AFT BREAKER PANEL, BOTH OF THE "BLOWER" BREAKERS MUST BE PUSHED IN (CLOSED).
4. THE BLOWERS CAN NOW BE OPERATED BY THE "BLOWER" SWITCH ON THE IGNITION PANEL.
5. THE BLOWERS CAN ALSO BE OPERATED BY SWITCHING THE "BLOWER" BREAKER ON THE AC/DC PANEL TO "ON".



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: BLOWERS,  
ENGINE BILGE

MOD.: 31-PC

DR BY: CWM

18

## LEGEND

GROUND

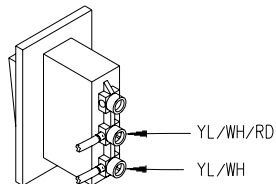
DASH BREAKER

BLOWER

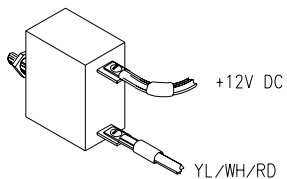
PLUG

SWITCH

HEAD BLOWER SWITCH

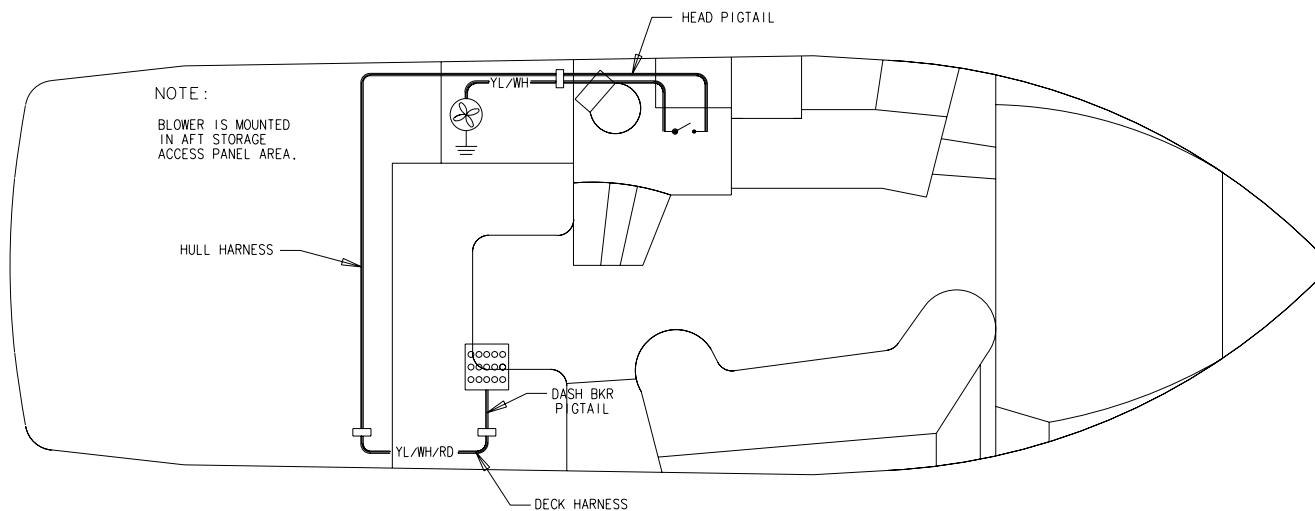


BLOWER BKR 5A  
(DASH BKR PANEL)  
(REAR VIEW)



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE DASH BREAKER PANEL, THE "HEAD BLOWER" BREAKER MUST BE PUSHED IN (CLOSED)
3. THE "BLOWER" CAN NOW BE OPERATED BY THE BLOWER SWITCH AT THE HEAD UNIT.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: BLOWER,  
HEAD

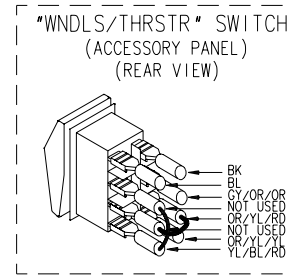
MOD.: 31-PC  
DR BY: CWM

19

**LEGEND**

BATTERY	
SWITCH	
PLUG	
GROUND	
BREAKER PANEL	

BREAKER  
PANEL

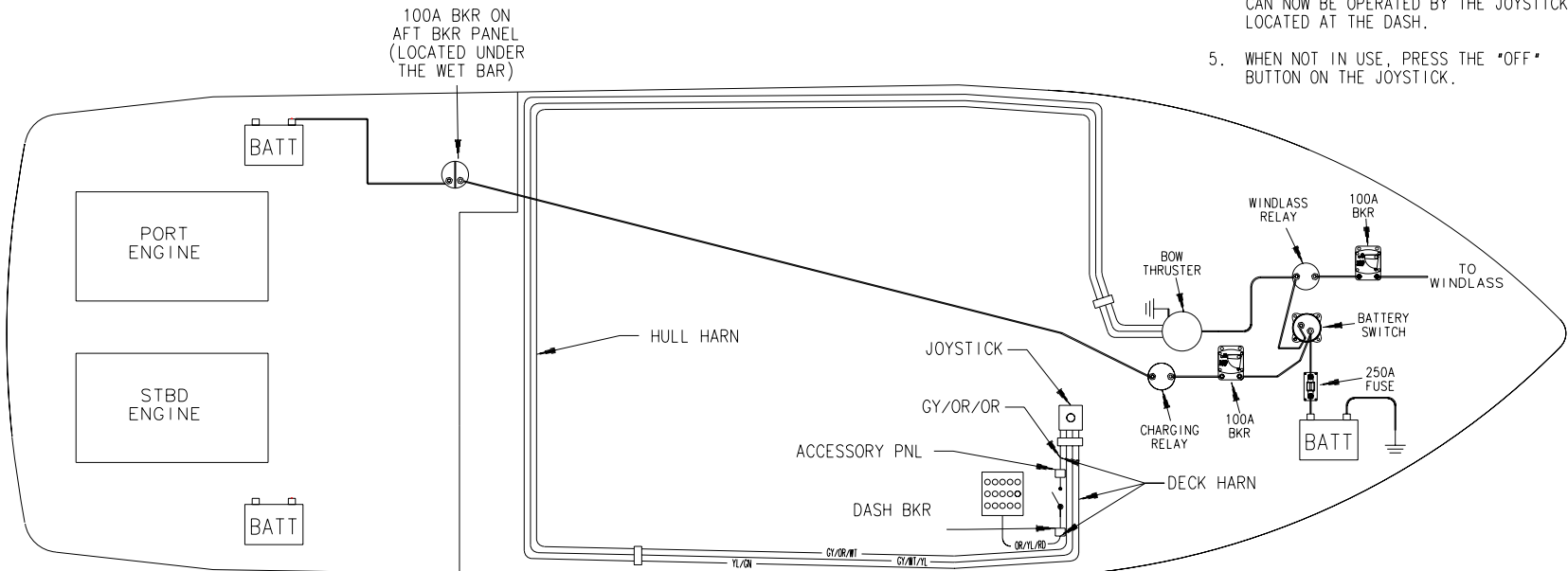


**DO NOT OPERATE BOW THRUSTER!**

IT IS VERY DANGEROUS TO RUN THE THRUSTER OUT OF THE WATER, EVEN FOR A FEW SECONDS! THE MOTOR MAY OVER SPEED BY 300%, CAUSING DAMAGE TO THE SEALS. THE PROPELLER WILL CAUSE SERIOUS DAMAGE TO WHATEVER IT COMES INTO CONTACT WITH, INVALIDATING THE WARRANTY.

TO OPERATE:

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



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: BOW THRUSTER

MOD.: 31-PC  
DR BY: DJT

20

# LEGEND

GROUND



DASH  
BREAKER



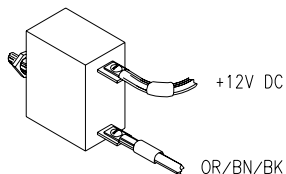
PLUG



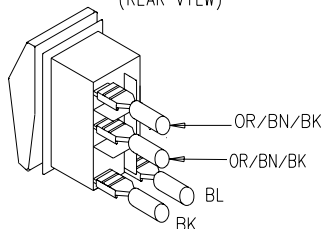
SWITCH



DEPTH SNDR BKR 5A  
(DASH BKR PANEL)  
(REAR VIEW)

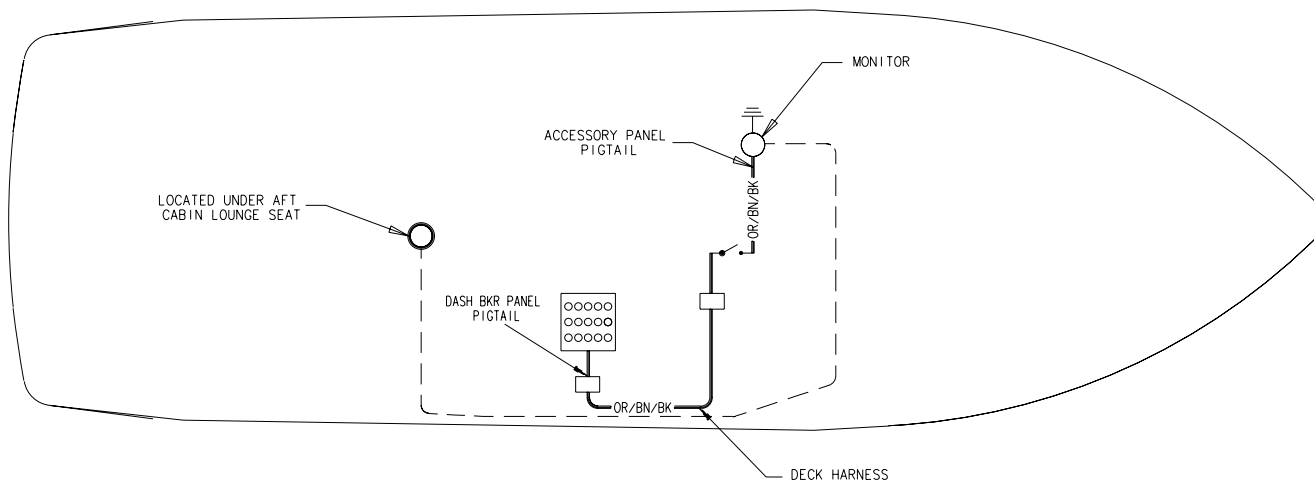


DEPTH SNDR SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



## TO OPERATE:

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



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: DEPTH  
SOUNDER

MOD.: 31-PC  
OR BY: CWM

21

## LEGEND

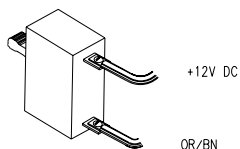
GROUND 

PLUG 

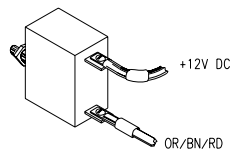
DASH  
BREAKER 

AC/DC  
BREAKER 

CO DETECTOR BKR 2A  
(AC/DC BKR PANEL)  
(REAR VIEW)



FUME DETECTOR BKR 2A  
(DASH BKR PANEL)  
(REAR VIEW)

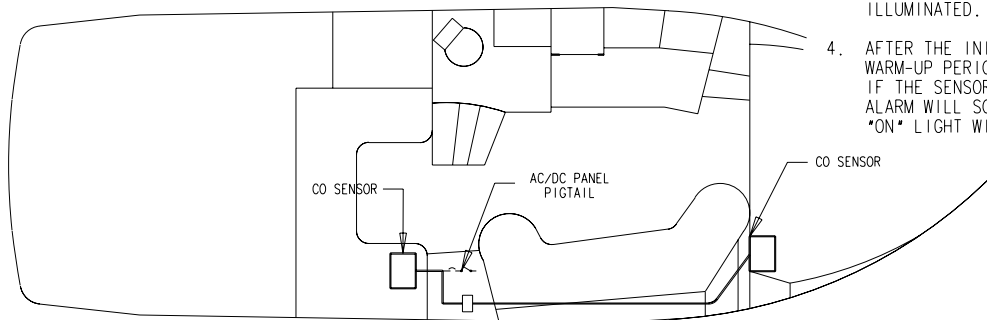


NOTE: THE CO DETECTOR PROVIDES AN AUDIBLE AND VISUAL ALARM IF CARBON DIOXIDE IS PRESENT IN THE CABIN AREA.

TO OPERATE:

READ AND FULLY UNDERSTAND THE OWNER'S MANUAL.

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT AC/DC PANEL IN THE CABIN, SWITCH THE "CO SENSOR" BREAKER TO "ON".
3. CHECK THE CO DETECTORS 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 O.K., THE AUDIBLE ALARM WILL SOUND AND THE GREEN POWER "ON" LIGHT WILL CHANGE TO RED.



TITLE: CO  
DETECTOR

MOD.: 31-PC  
DR BY: CWM

22A

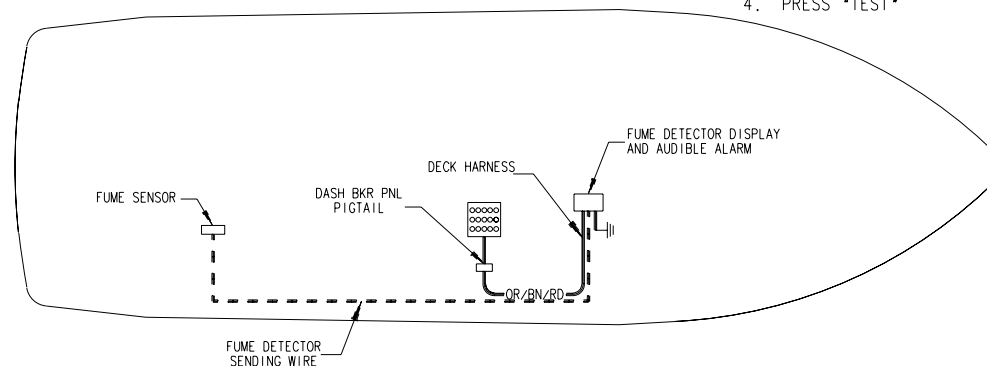
NOTE: THE FUME DETECTOR PROVIDES AN AUDIBLE AND VISUAL ALARM IF EXPLOSIVE GASES ARE PRESENT IN THE ENGINE BILGE AREA.

IN THE EVENT THE DETECTOR GOES INTO THE ALARM MODE, OPERATE THE ENGINE BLOWERS AND INSPECT FOR THE SOURCE.

TO OPERATE:

READ AND FULLY UNDERSTAND THE OWNER'S MANUAL.

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE DASH BREAKER PANEL, THE "FUME DETECTOR" BREAKER MUST BE PUSHED IN (CLOSED).
3. FUME DETECTOR WILL AUTOMATICALLY TURN "ON".
4. PRESS "TEST"



TITLE: FUME  
DETECTOR

MOD.: 31-PC  
DR BY: CWM

22B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

# LEGEND

GROUND



DASH  
BREAKER



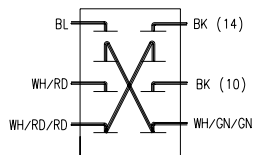
PLUG



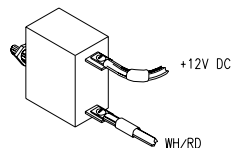
SWITCH



ENGINE HATCH SWITCH  
(AFT STORAGE LOCKER)  
(REAR VIEW)

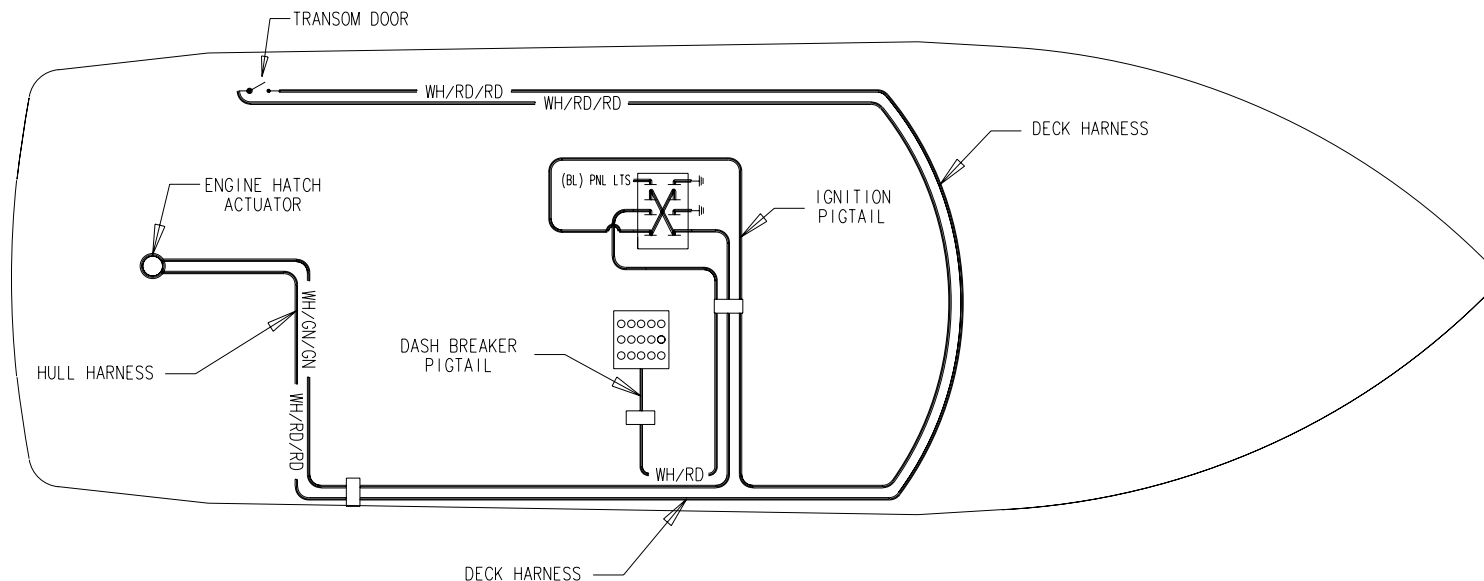


ENGINE HATCH BKR 20A  
(DASH BKR PANEL)  
(REAR VIEW)



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE DASH BREAKER PANEL, THE "ENGINE HATCH" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE ENGINE HATCH CAN NOW BE RAISED AND LOWERED BY THE "ENG HATCH" SWITCH, LOCATED ON THE IGNITION PANEL.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: ENGINE  
HATCH

MOD.: 31-PC  
DR BY: CWM

23

## LEGEND

GROUND 

HALON  
LIGHT 

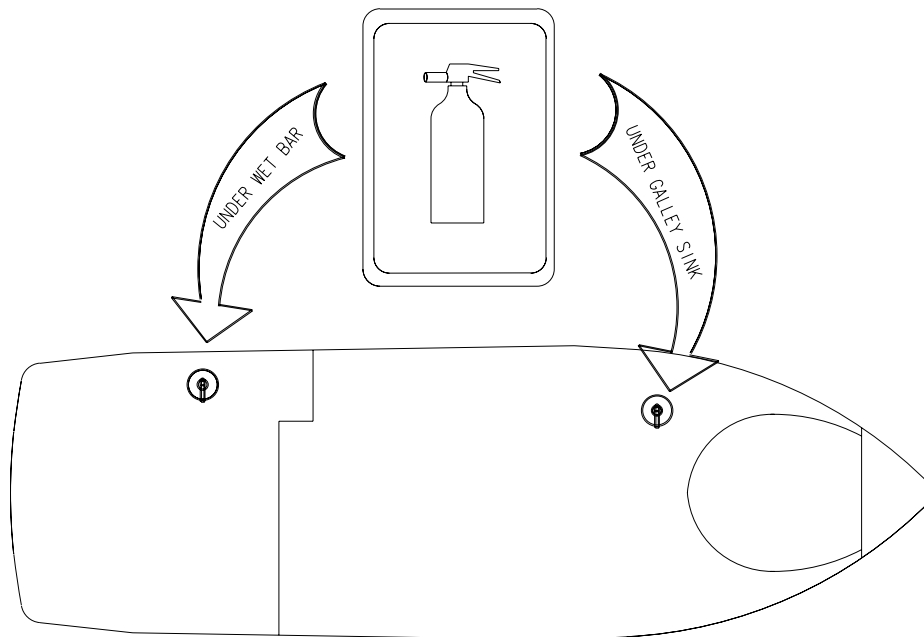
PLUG 

FIRE  
EXTINGUISHER 

IGNITION 

### NOTE:

LABEL REPRESENTS THE  
PRESENCE OF A DRY  
CHEMICAL EXTINGUISHER  
WITHIN.



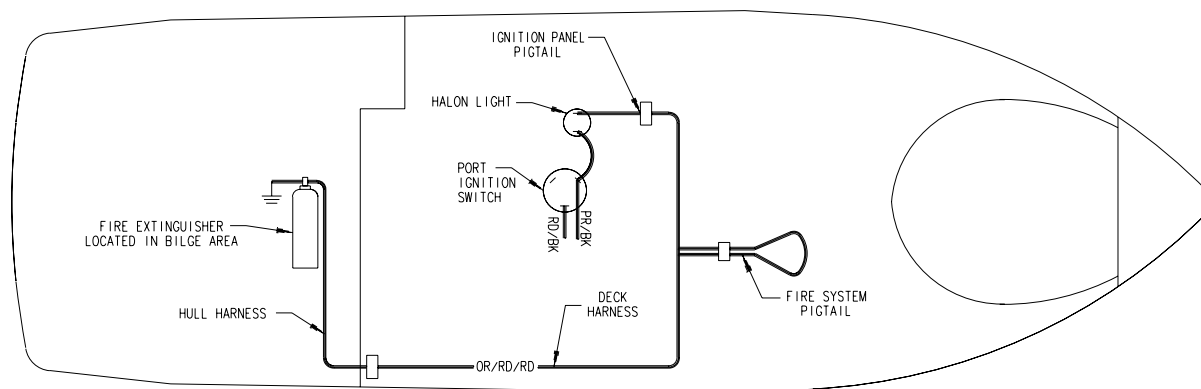
TITLE: MANUAL FIRE EXTINGUISHER SYSTEM	
MOD.: 31-PC	24A
DR BY: CWM	

### OPERATION:

THE FIRE EXTINGUISHER SYSTEM  
INDICATOR LIGHT IS POWERED BY  
THE PORT STARTING/AUX BATTERY  
WHEN THE IGNITION SWITCH IS  
IN THE "ON" POSITION. THE  
GREEN LIGHT INDICATES TO THE  
OPERATOR THERE IS SUFFICIENT  
PRESSURIZATION TO EXPEL THE  
AGENT OF THE ENGINE  
COMPARTMENT EXTINGUISHER.  
THE UNIT DOES NOT REQUIRE  
12 VOLTS TO EXPEL THE AGENT.

### NOTE:

IGNITION IS SUPPLIED  
WITH 12V DC FROM THE  
START BATTERY.  
(SEE IGNITION CIRCUITS)



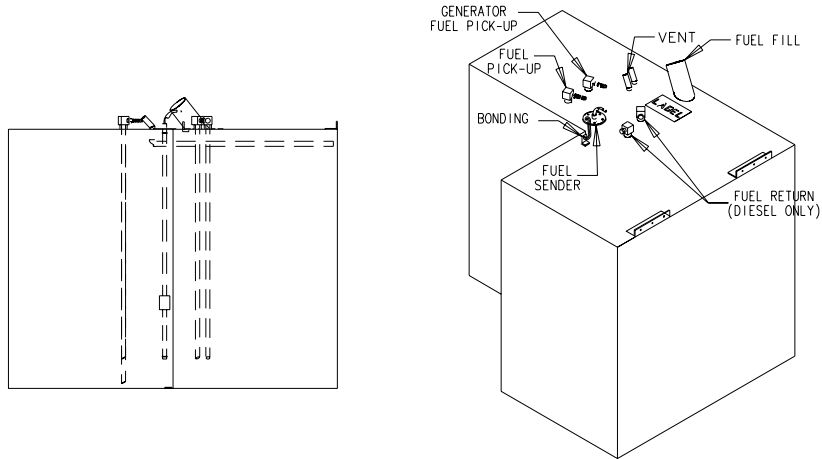
TITLE: AUTOMATIC FIRE EXTINGUISHER SYSTEM	
MOD.: 31-PC	24B
DR BY: CWM	



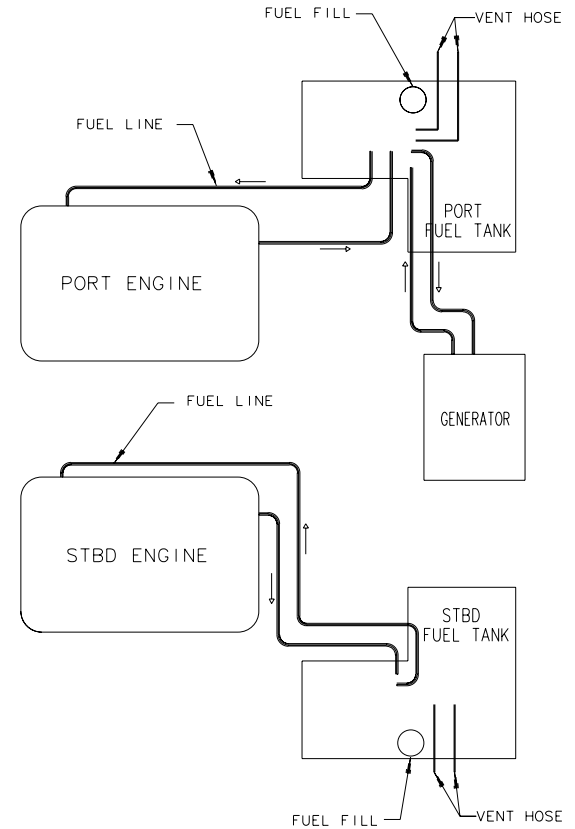
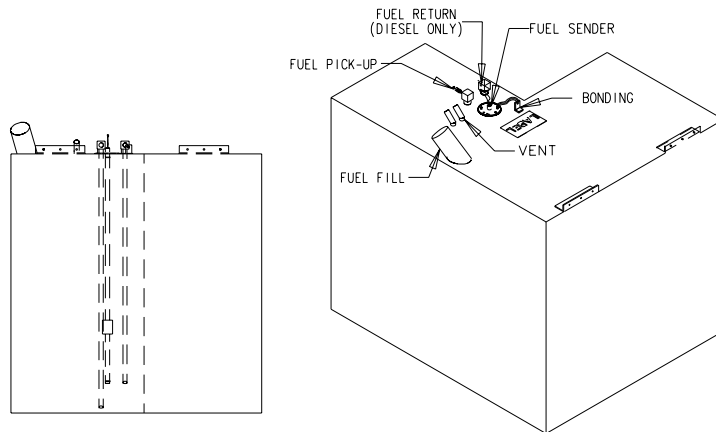
THUNDERBIRD  
PRODUCTS  
ENGINEERING



## PORT FUEL TANK

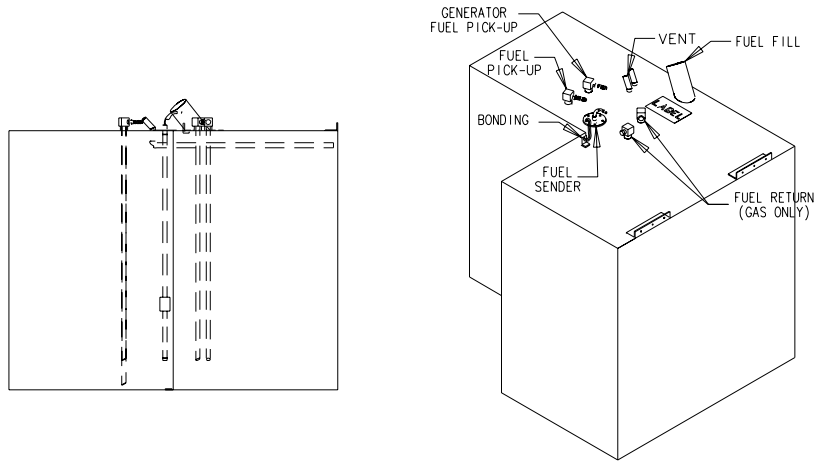


## STBD FUEL TANK

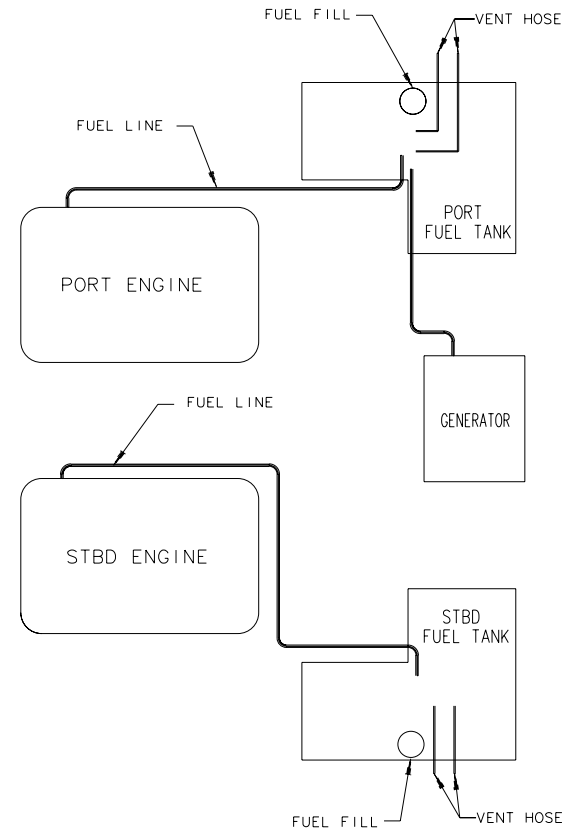
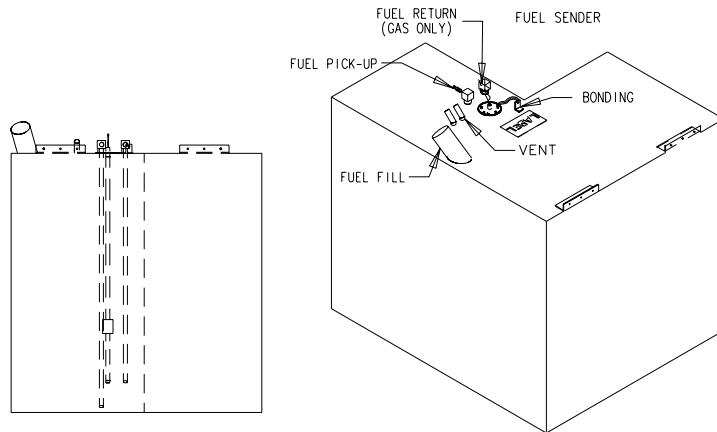


THUNDERBIRD  
PRODUCTS  
ENGINEERING

## PORT FUEL TANK



## STBD FUEL TANK




THUNDERBIRD  
PRODUCTS  
ENGINEERING

LEGEND	
GROUND	
BREAKER PANEL	
PLUG	



○	○	○	○	○
○	○	○	○	●
○	○	○	○	○

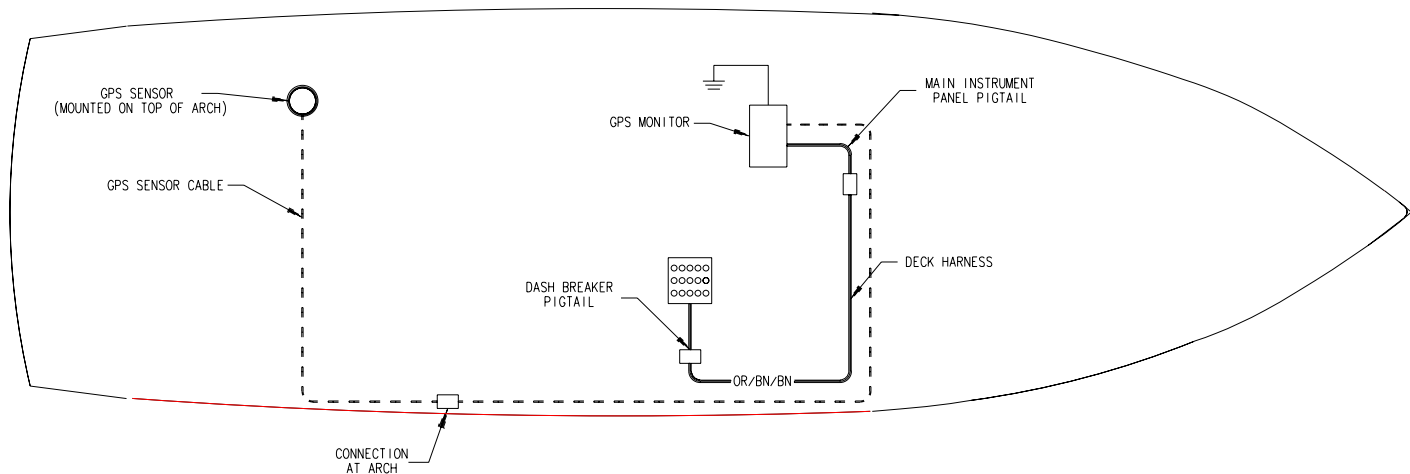


A diagram showing a cable connected to a device. The cable is plugged into a port on the side of a rectangular box, which represents a device. The cable has a standard RJ45 connector.

+12V DC

OR/BN/BN

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




GPS

27

## LEGEND

GROUND 

SWITCH 

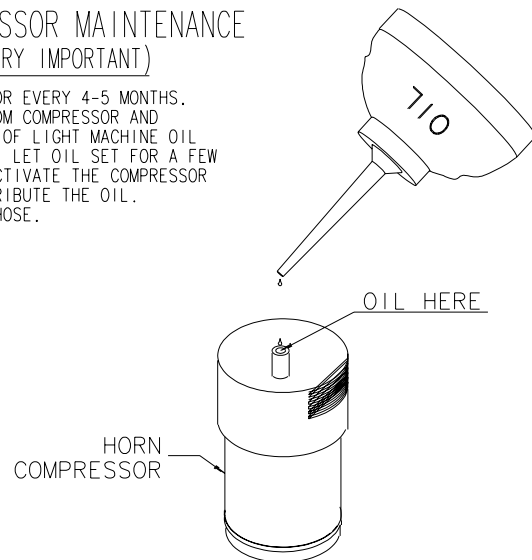
PLUG 

DASH BREAKER 

COMPRESSOR 

## HORN COMPRESSOR MAINTENANCE LUBRICATION (VERY IMPORTANT)

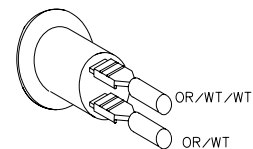
LUBRICATE COMPRESSOR EVERY 4-5 MONTHS. REMOVE AIR HOSE FROM COMPRESSOR AND APPLY 3 TO 4 DROPS OF LIGHT MACHINE OIL INTO THE AIR PORT. LET OIL SET FOR A FEW MINUTES AND THEN ACTIVATE THE COMPRESSOR MOMENTARILY TO DISTRIBUTE THE OIL. RECONNECT THE AIR HOSE.



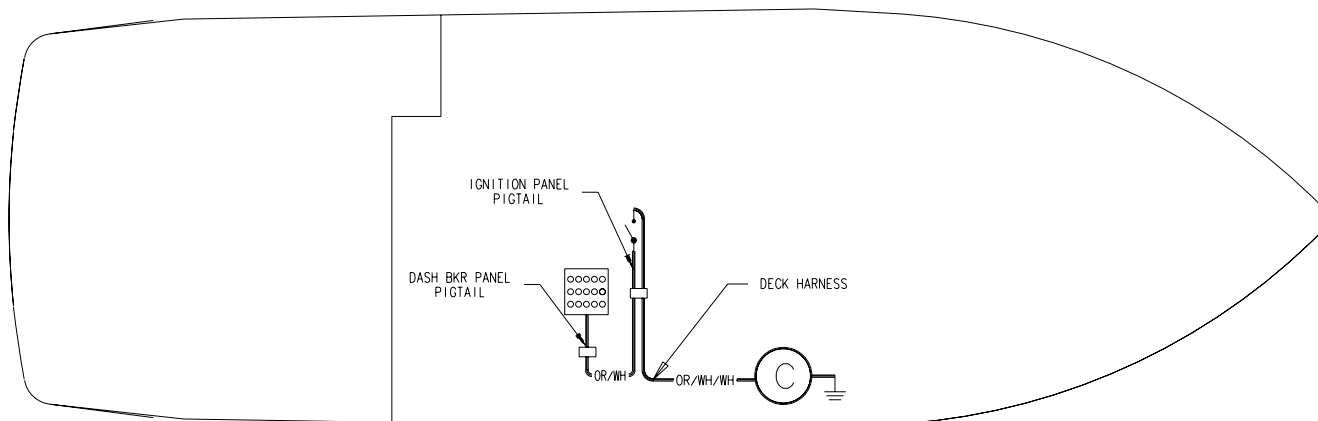
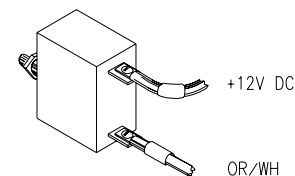
## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "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 ON THE IGNITION PANEL.

HORN SWITCH  
(IGNITION PANEL)  
(REAR VIEW)



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



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: HORN

MOD.: 31-PC  
DR BY: CWM

28

# LEGEND

GROUND



IGNITION  
SWITCH



BREAKER  
PANEL

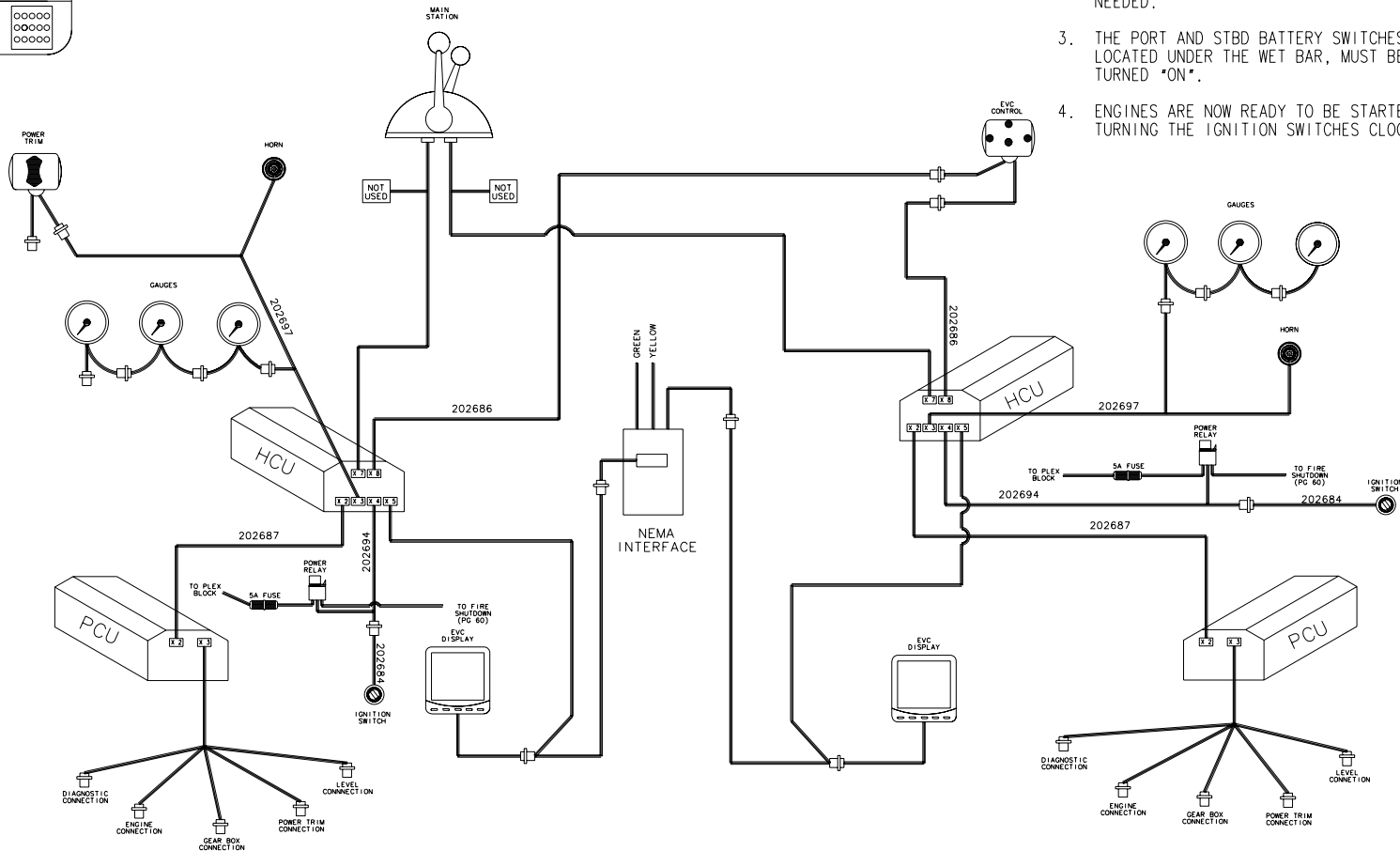


NOTE:

SEE VOLVO MANUAL FOR FURTHER  
INFORMATION AND WARNING  
CONNECTIONS ON ENGINE EQUIPMENT.

TO OPERATE:

1. MAKE SURE THAT THE AUX. BATTERY SWITCH, LOCATED UNDER WET BAR, IS TURNED "ON".
2. THIS WILL ALLOW BOTH THE FUME DETECTOR AND THE ENGINE BLOWERS TO OPERATE WHEN NEEDED.
3. THE PORT AND STBD BATTERY SWITCHES, LOCATED UNDER THE WET BAR, MUST BE TURNED "ON".
4. ENGINES ARE NOW READY TO BE STARTED BY TURNING THE IGNITION SWITCHES CLOCKWISE.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: IGNITION,  
DIESEL

MOD.: 31-PC

DR BY: CWM

29

# LEGEND

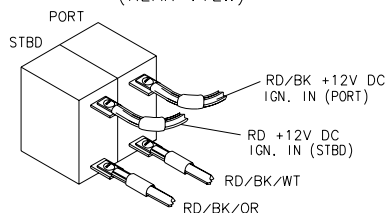
GROUND



BREAKER  
PANEL

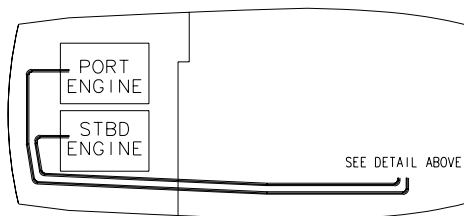
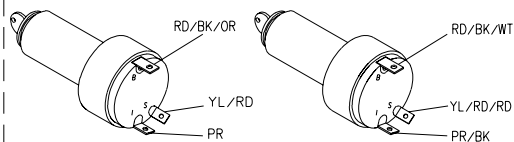


IGNITION BKRS 15A  
(DASH BKR PANEL)  
(REAR VIEW)



IGNITION SWITCH  
(STBD)

IGNITION SWITCH  
(PORT)

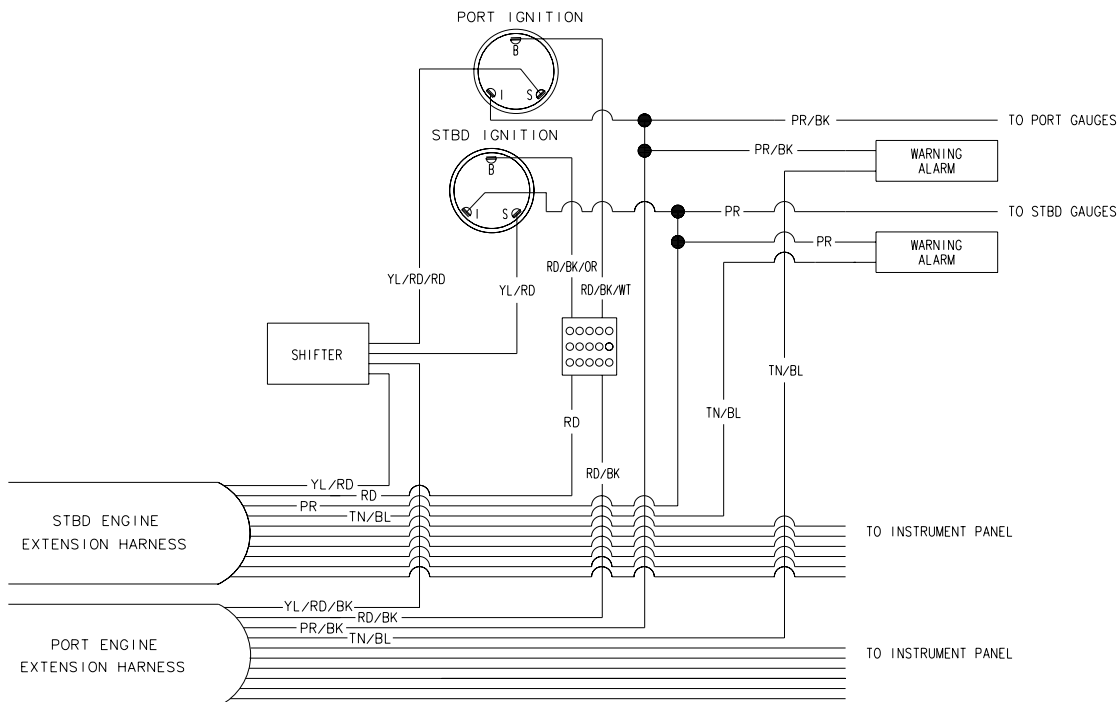


## NOTE:

SEE MerCRUISER OR VOLVO MANUAL  
FOR FURTHER INFORMATION AND  
WARNING CONNECTIONS ON ENGINE  
EQUIPMENT.

## TO OPERATE:

1. MAKE SURE THAT THE AUX. BATTERY SWITCH, LOCATED UNDER WET BAR, IS TURNED "ON".
2. THIS WILL ALLOW BOTH THE FUME DETECTOR AND THE ENGINE BLOWERS TO OPERATE WHEN NEEDED.
3. THE PORT AND STBD BATTERY SWITCHES, LOCATED UNDER THE WET BAR, MUST BE TURNED "ON".
4. ENGINES ARE NOW READY TO BE STARTED BY TURNING THE IGNITION SWITCHES CLOCKWISE.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: IGNITION,  
GASOLINE

MOD.: 31-PC

DR BY: CWM

30

# LEGEND

GROUND



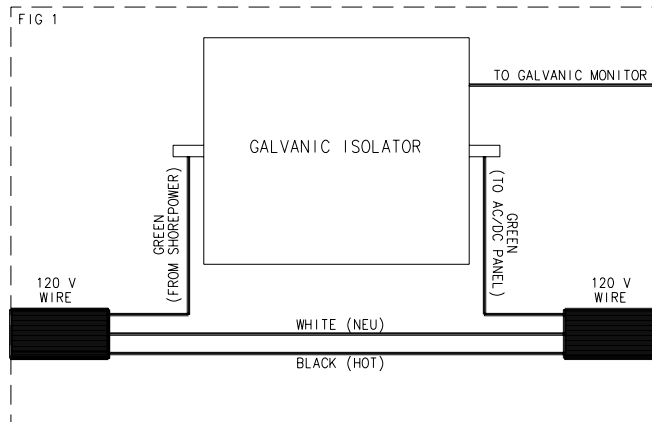
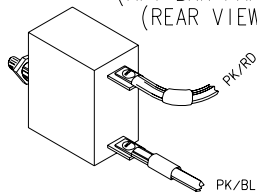
PLUG



AFT  
BREAKER



GALVANIC ISOLATOR BKR 2A  
(AFT BKR PANEL)  
(REAR VIEW)

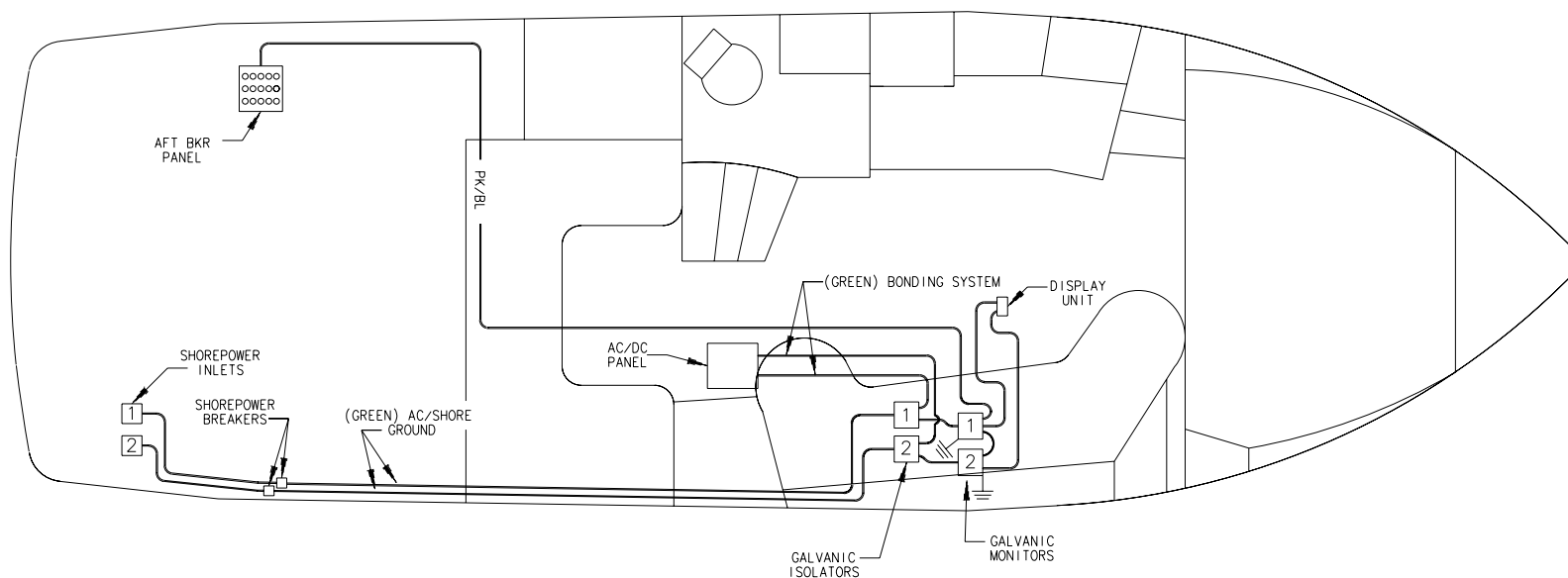


## TEST PROCEDURE:

1. PLUG IN SHORE CORD #1 AND TURN ON SHOREPOWER BREAKER #1.
2. LOOK AT GALVANIC DISPLAY: IT SHOULD SAY GROUND WIRE "NORMAL" AND GALVANIC ISOLATOR "NORMAL".
3. UNPLUG SHORE CORD #1 AND PLUG IN SHORE CORD #2.
4. TURN BREAKER TO SHOREPOWER #2.
5. 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.

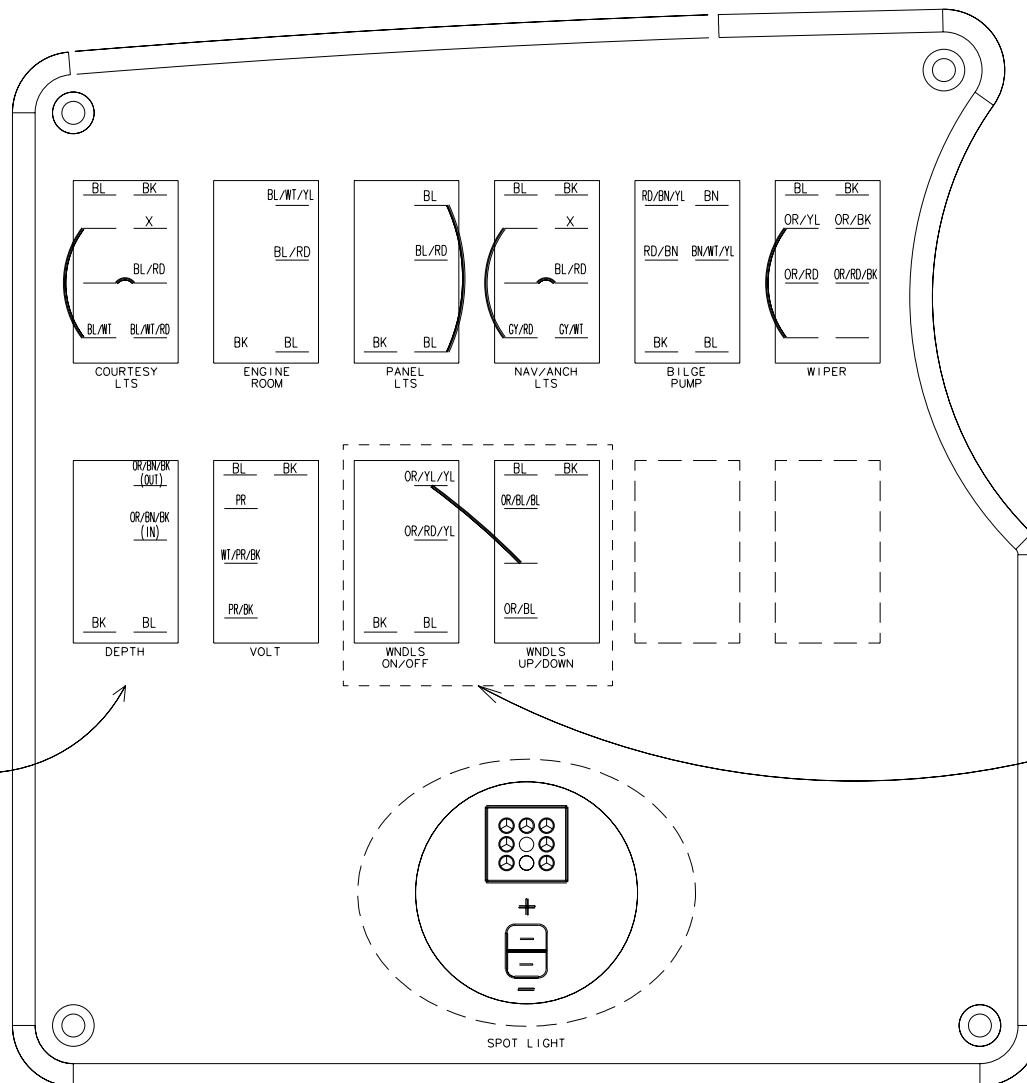


THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: GALVANIC  
ISOLATOR

MOD.: 31-PC  
DR BY: CWM

31



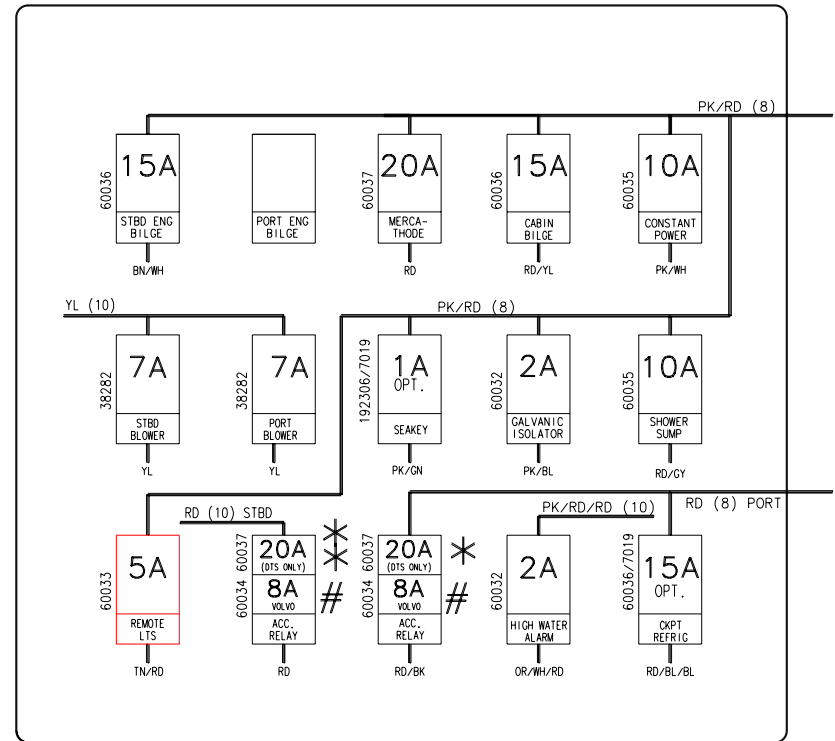
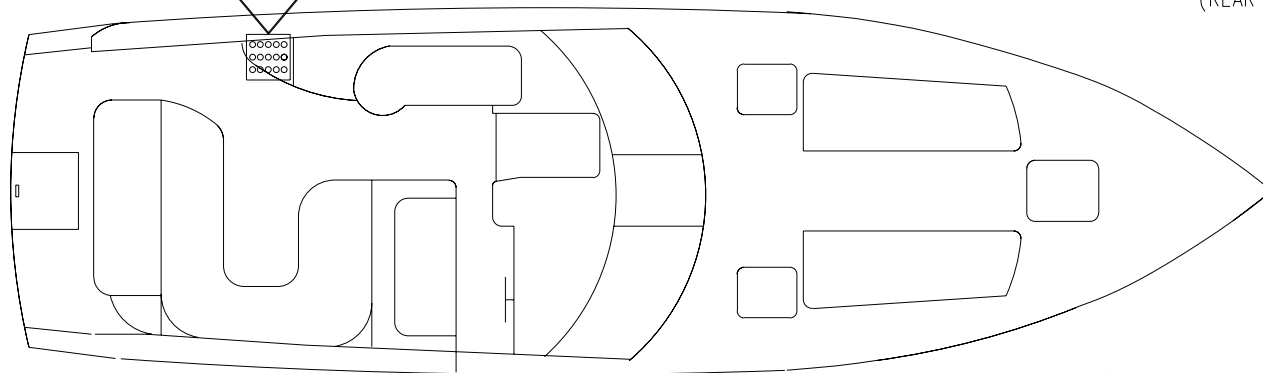
THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: ACCESSORY  
SWITCH PANEL  
MOD.: 31-PC  
DR BY: DJT

32



AFT BREAKER PANEL  
(LOCATED UNDER WET BAR)



(REAR VIEW)

\* PORT DTS CIRCUIT BREAKER IS USED WITH ALL GAS DTS ENGINES.

\*\* PORT AND STARBOARD DTS CIRCUIT BREAKERS ARE USED WITH TWIN MERCURY DTS DIESEL ENGINES.

# USED ONLY WITH VOLVO D-SERIES ENGINES.

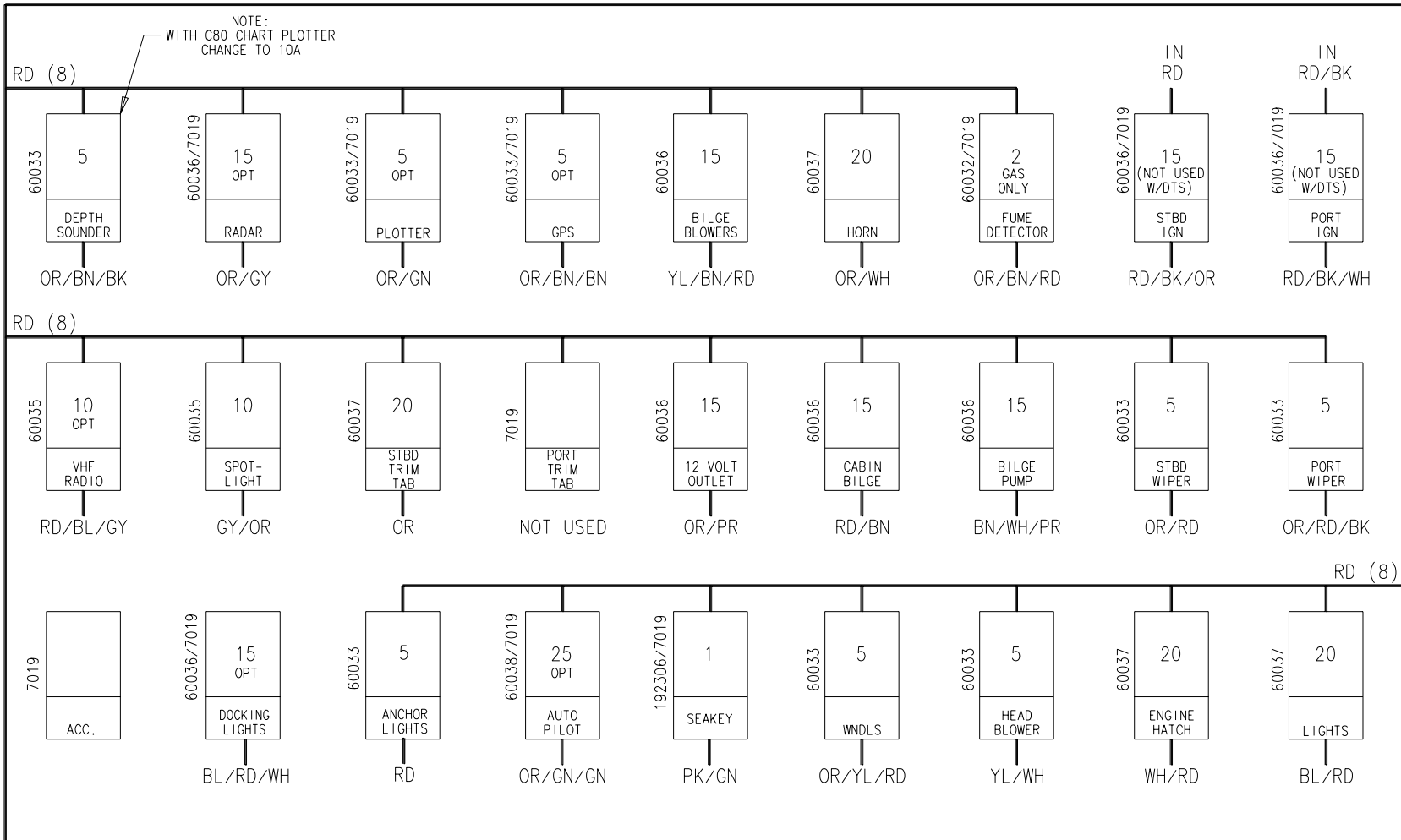


THUNDERBIRD  
PRODUCTS  
ENGINEERING

PANEL #185114

PIGTAIL #33219

TITLE: AFT BREAKER PANEL	
MOD.: 31-PC	33
DR BY: CWM	



(rear view)

## DASH BREAKER PANEL

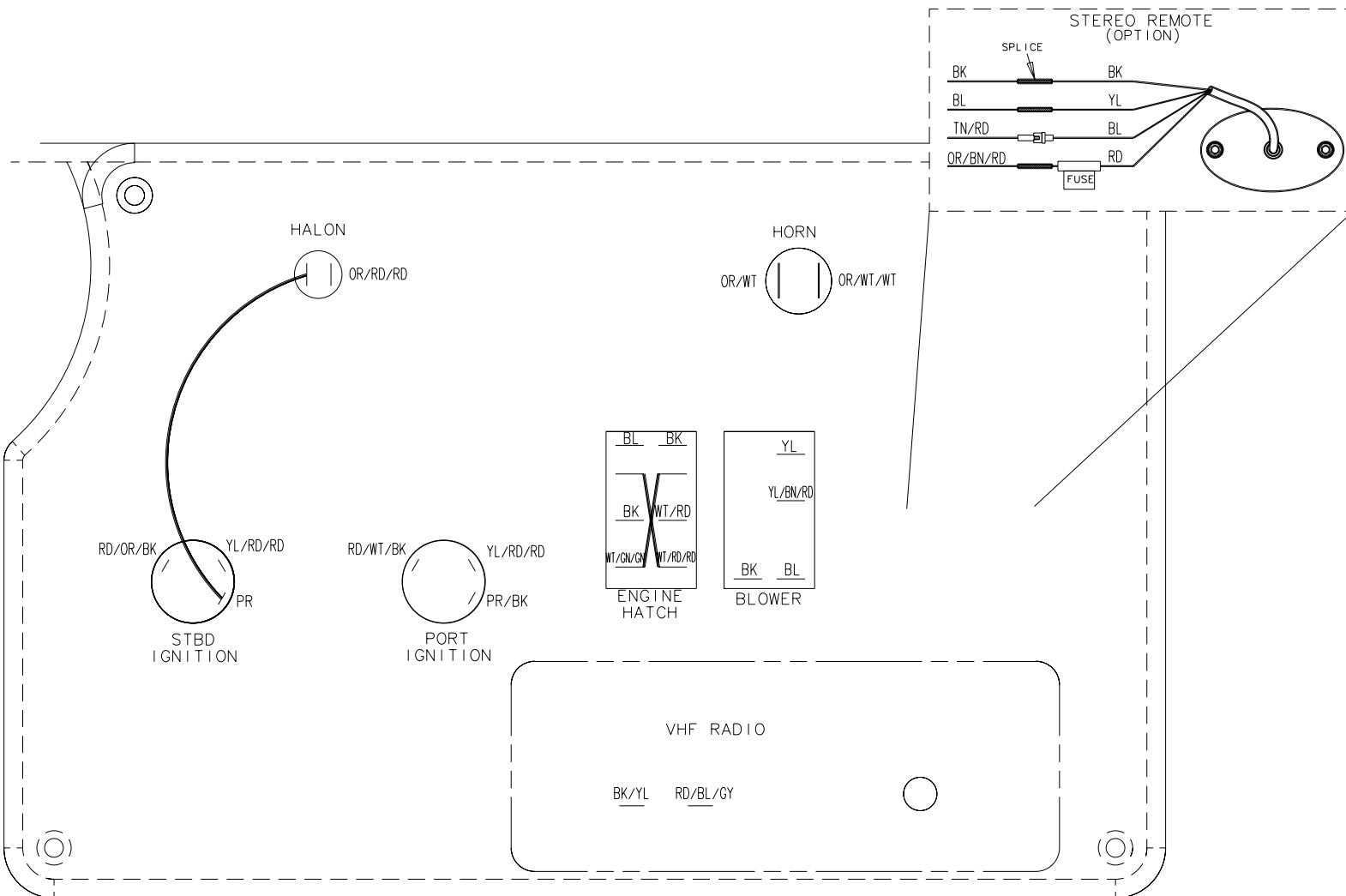
PANEL #197751

PIGTAIL #43906



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: DASH BREAKER PANEL	
MOD.: 31-PC	34
DR BY: DJT	



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: IGNITION  
PANEL (GAS)

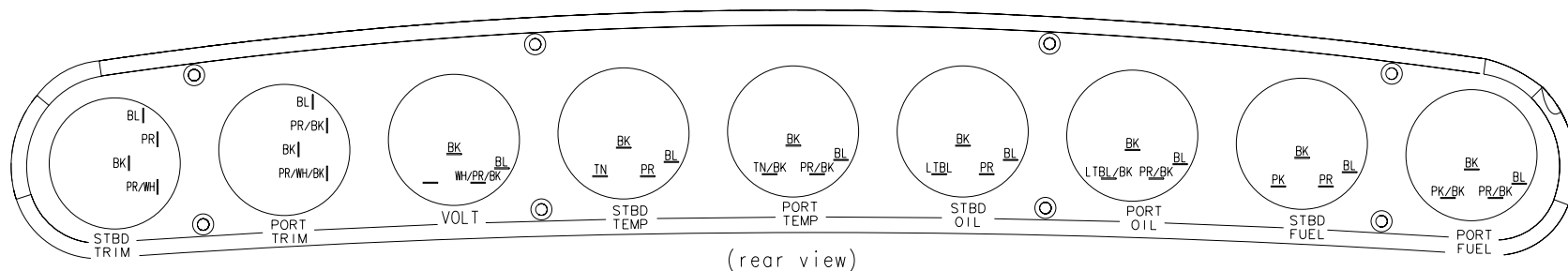
MOD.: 31-PC

DR BY: CWM

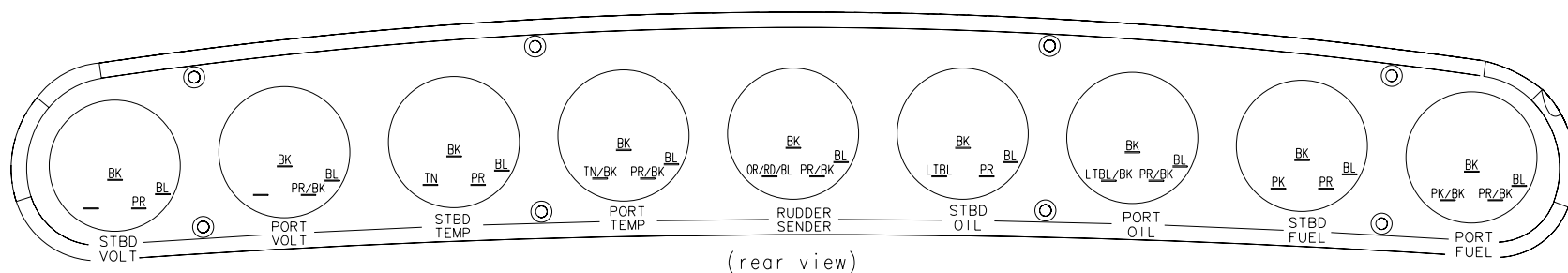
35

NOTE:  
ALL CONNECTIONS DENOTED BL  
ARE CONNECTED IN PARALLEL  
TO THE PANEL LIGHTS SWITCH  
ON THE ACCESSORY PANEL.

## STERN DRIVE



## V-DRIVE

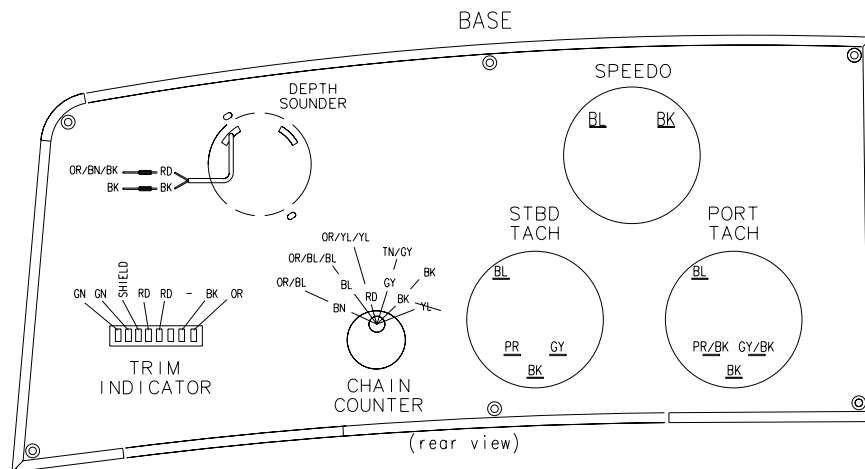


THUNDERBIRD  
PRODUCTS  
ENGINEERING

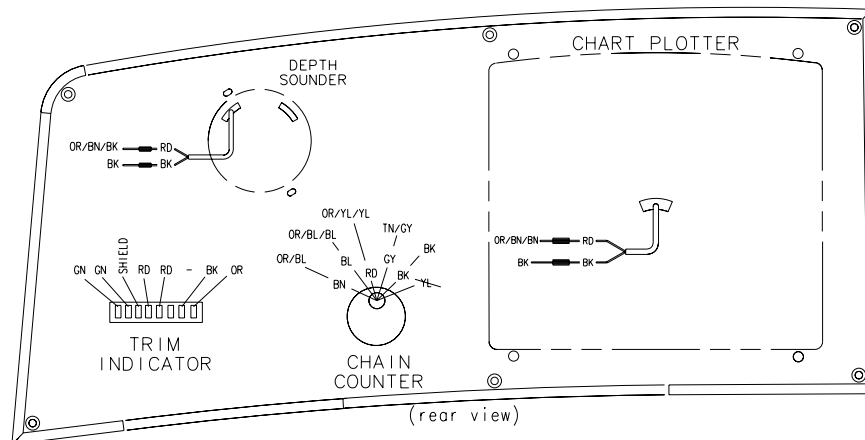
PANEL #123320

PIGTAIL #43905

TITLE: LOWER INSTRUMENT PANEL	
MOD.: 31-PC	36
DR BY: DJT	



### W/ GPS OR CHARTPLOTTER OPTION



PANEL #35441

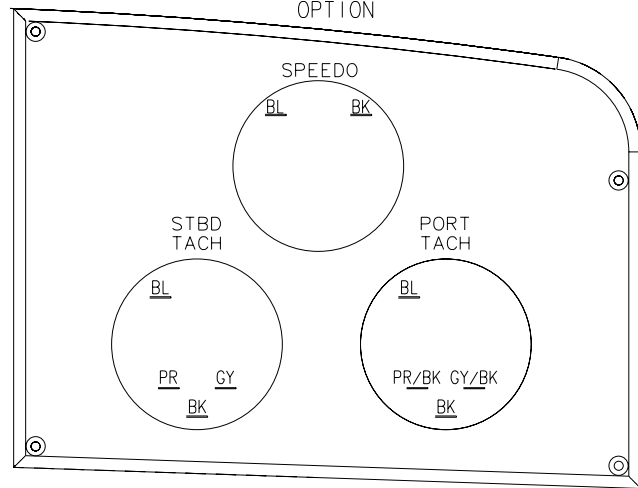
PIGTAIL #43904



THUNDERBIRD  
PRODUCTS  
ENGINEERING

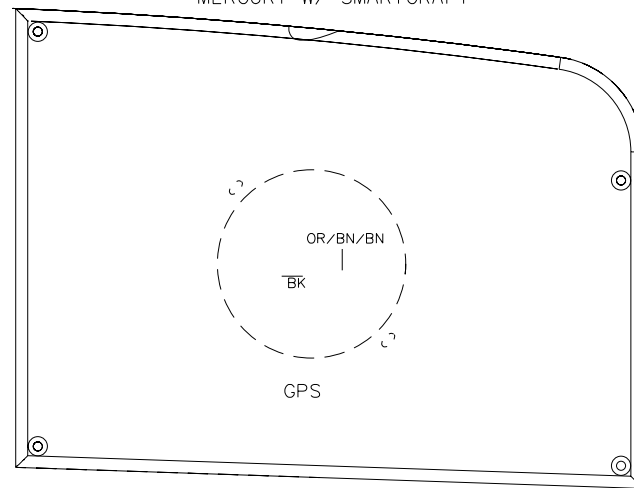
TITLE: MAIN INSTRUMENT PANEL	
MOD.: 31-PC	37
DR BY: DJT	

# GPS OR CHARTPLOTTER OPTION



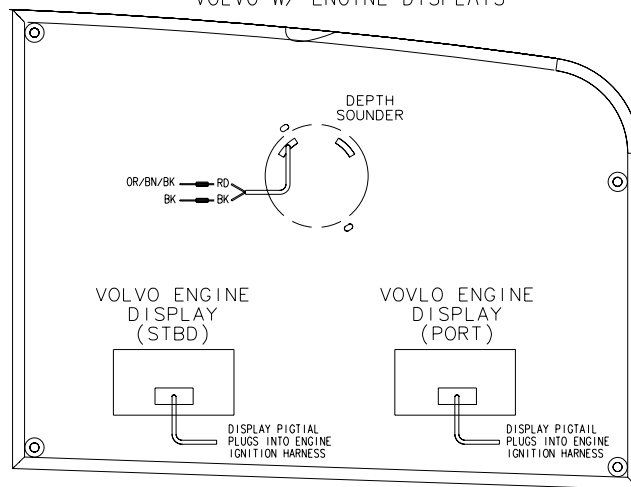
(rear view)

# MERCURY W/ SMARTCRAFT



(rear view)

# VOLVO W/ ENGINE DISPLAYS



(rear view)



THUNDERBIRD  
PRODUCTS  
**ENGINEERING**

PANEL #35454

PIGTAIL #43904

TITLE: MAIN INBOARD  
INSTRUMENT PANEL

MOD.: 31-PC

DR BY: DJT

38

# LEGEND

GROUND

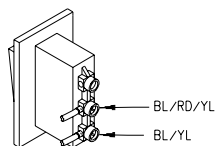
AC/DC  
BREAKER

PLUG

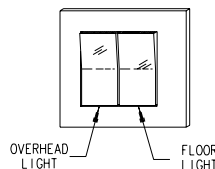
SWITCH

LIGHT

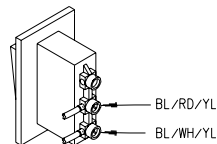
## LIGHT SWITCH AFT CABIN FLOOR



## LIGHT SWITCHES AFT CABIN



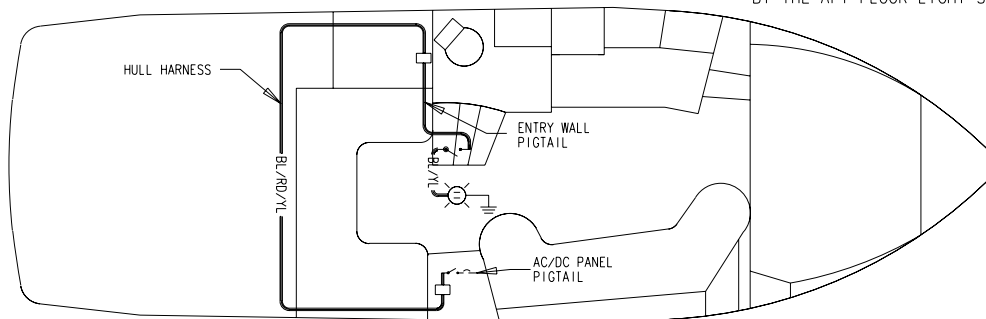
## LIGHT SWITCH AFT CABIN OVERHEAD



THUNDERBIRD  
PRODUCTS  
ENGINEERING

## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE AC/DC PANEL IN THE CABIN SWITCH THE DC "MAIN #1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE SECOND "LIGHTS" BREAKER TO "ON".
4. THE AFT FLOOR LIGHTS CAN NOW BE OPERATED BY THE AFT FLOOR LIGHT SWITCH.



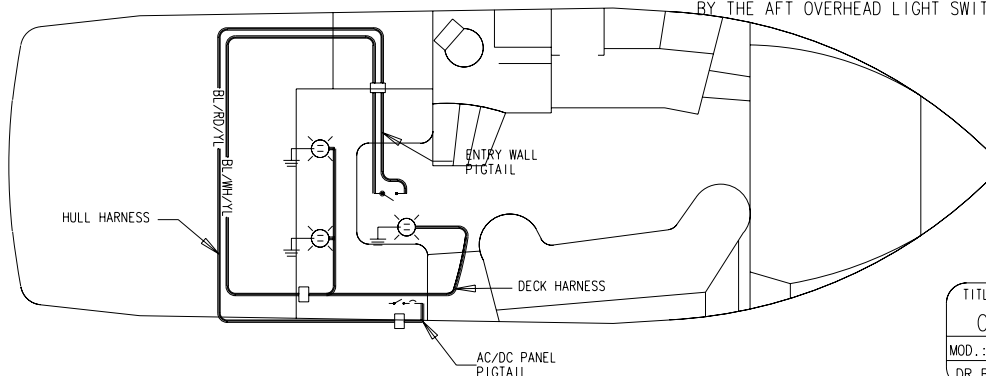
TITLE: AFT CABIN  
FLOOR LIGHTS

MOD.: 31-PC  
DR BY: CWM

39A

## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE AC/DC PANEL IN THE CABIN SWITCH THE DC "MAIN #1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE SECOND "LIGHTS" BREAKER TO "ON".
4. THE AFT OVERHEAD LIGHTS CAN NOW BE OPERATED BY THE AFT OVERHEAD LIGHT SWITCH.



TITLE: AFT CABIN  
OVERHEAD LIGHTS

MOD.: 31-PC  
DR BY: CWM

39B

## LEGEND

GROUND

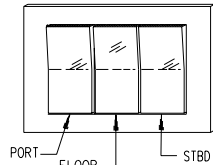
SWITCH

BREAKER

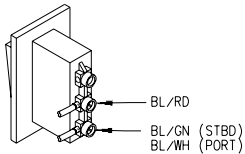
LIGHT

PLUG

### LIGHT SWITCHES CABIN ENTRANCE



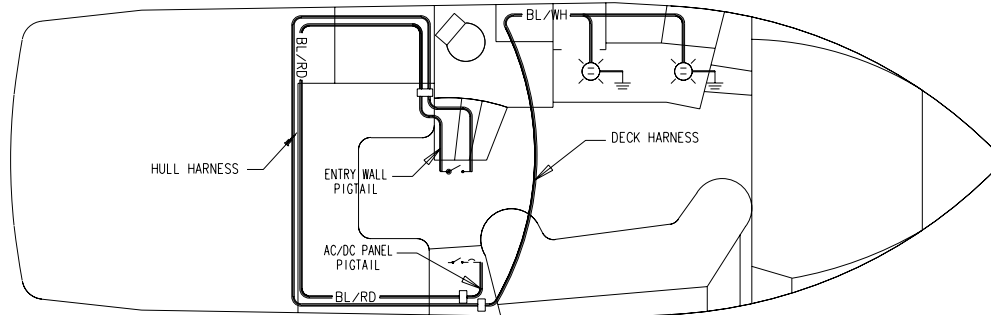
### LIGHT SWITCH CABIN ENTRANCE



THUNDERBIRD  
PRODUCTS  
ENGINEERING

### TO OPERATE:

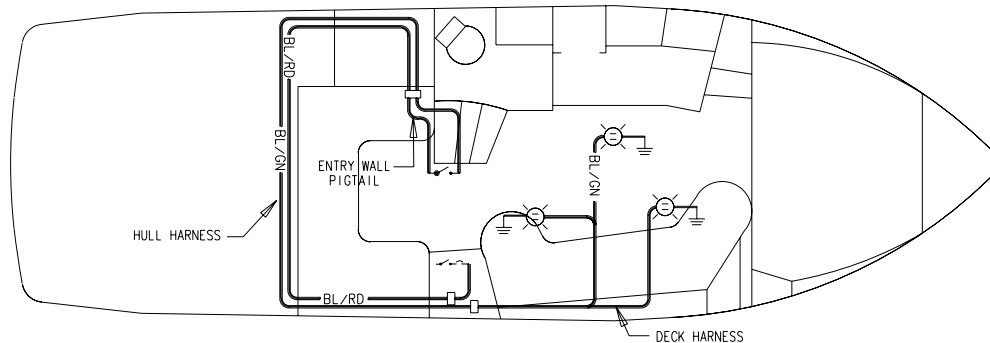
1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE AC/DC PANEL IN THE CABIN, SWITCH THE "MAIN #1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE FIRST "LIGHTS" BREAKER TO "ON".
4. THE MAIN CABIN PORT OVERHEAD LIGHTS CAN NOW BE OPERATED BY THE PORT MAIN CABIN LIGHT SWITCH.



TITLE:  
PORT CABIN LIGHT  
MOD.: 31-PC  
DR BY: CWM  
40A

### TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE AC/DC PANEL IN THE CABIN, SWITCH THE "MAIN #1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE FIRST "LIGHTS" BREAKER TO "ON".
4. THE MAIN CABIN STBD OVERHEAD LIGHTS CAN NOW BE OPERATED BY THE STBD MAIN CABIN LIGHT SWITCH.



TITLE:  
STBD CABIN LIGHT  
MOD.: 31-PC  
DR BY: CWM  
40B



## LEGEND

GROUND

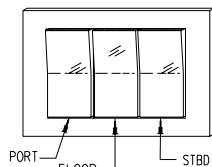
LIGHT

SWITCH

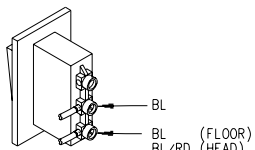
BREAKER

PLUG

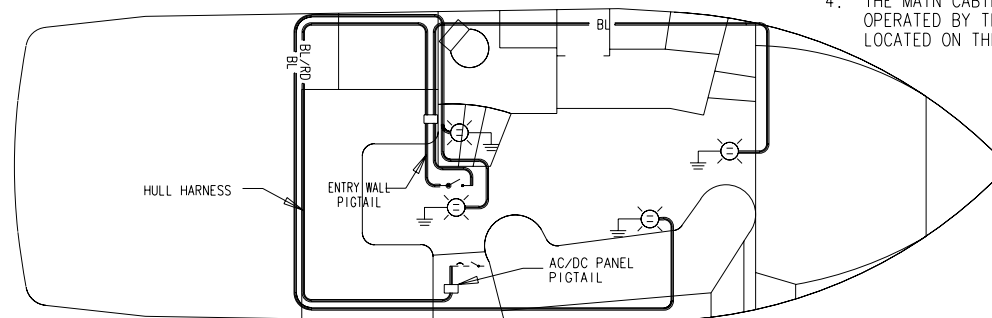
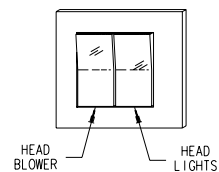
### LIGHT SWITCHES CABIN ENTRANCE



### LIGHT SWITCH HEAD UNIT



### HEAD UNIT SWITCHES



### TO OPERATE:

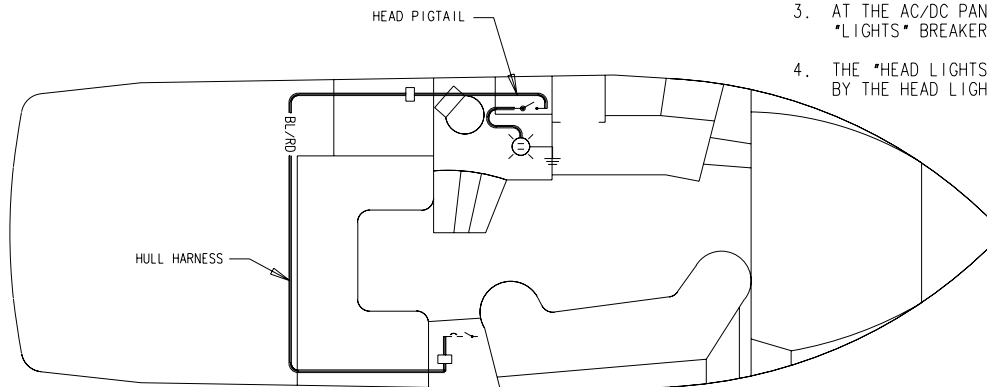
1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE AC/DC PANEL IN THE CABIN, SWITCH THE DC "MAIN #1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE FIRST "LIGHTS" BREAKER TO "ON".
4. THE MAIN CABIN FLOOR LIGHTS CAN NOW BE OPERATED BY THE FLOOR LIGHT SWITCH, LOCATED ON THE ENTRY WALL.

TITLE: MAIN CABIN  
FLOOR LIGHTS

MOD.: 31-PC

DR BY: CWM

41A



### TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE AC/DC PANEL IN THE CABIN, SWITCH THE DC "MAIN #1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE FIRST "LIGHTS" BREAKER TO "ON".
4. THE "HEAD LIGHTS" CAN NOW BE OPERATED BY THE HEAD LIGHT SWITCH.

TITLE: HEAD UNIT  
OVERHEAD LIGHTS

MOD.: 31-PC

DR BY: CWM

41B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

## LEGEND

GROUND



SWITCH



AC/DC  
BREAKER



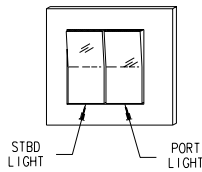
PLUG



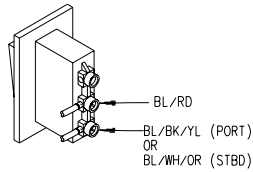
LIGHT



### V-BERTH READING LIGHT SWITCHES

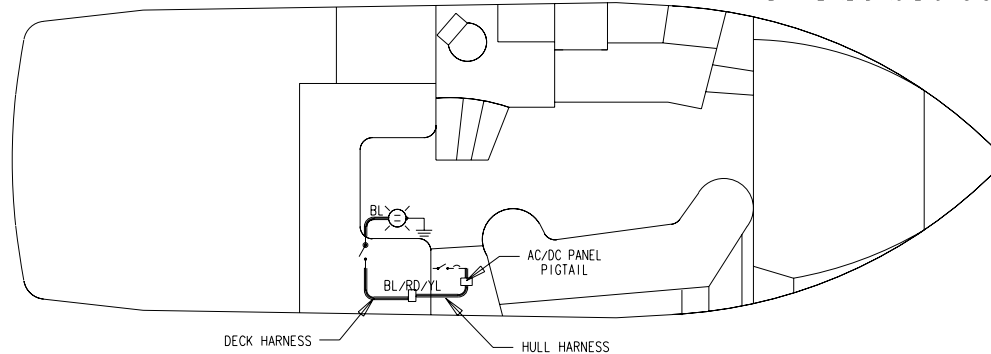


### LIGHT SWITCH, V-BERTH READING



### TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE AC/DC PANEL IN THE CABIN, SWITCH THE DC "MAIN #1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE FIRST "LIGHTS" BREAKER TO "ON".
4. THE AFT READING LIGHTS CAN NOW BE OPERATED BY THE READING LIGHTS SWITCHES.



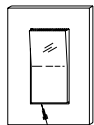
TITLE: LIGHTS,  
AFT READING

MOD.: 31-PC

DR BY: CWM

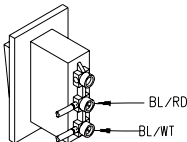
42A

### V-BERTH OVERHEAD LIGHT SWITCH



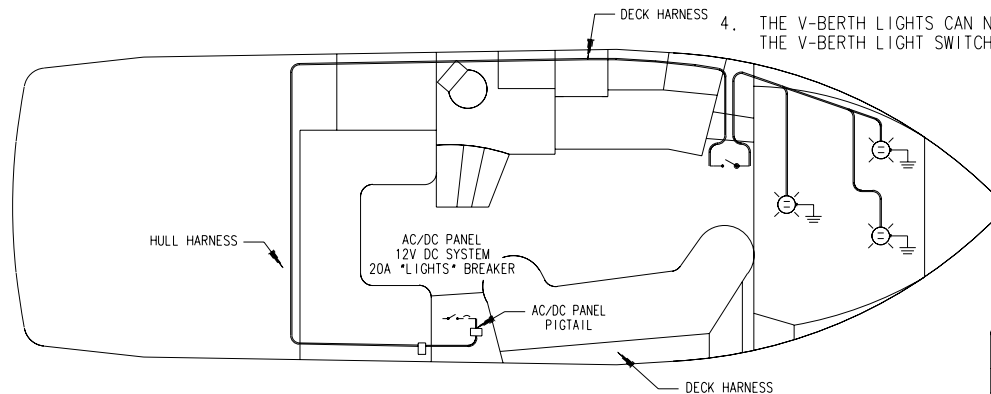
OVERHEAD  
V-BERTH

### LIGHT SWITCH, V-BERTH READING



### TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE AC/DC PANEL IN THE CABIN, SWITCH THE DC "MAIN #1" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE FIRST "LIGHTS" BREAKER TO "ON".
4. THE V-BERTH LIGHTS CAN NOW BE OPERATED BY THE V-BERTH LIGHT SWITCH.



TITLE: LIGHTS,  
OVERHEAD V-BERTH

MOD.: 31-PC

DR BY: CWM

42B



THUNDERBIRD  
PRODUCTS  
ENGINEERING

## LEGEND

GROUND



SWITCH



DASH  
BREAKER



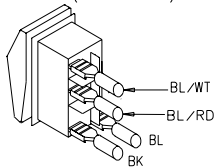
PLUG



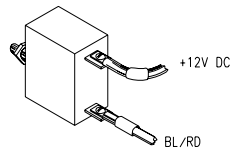
LIGHT



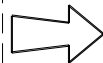
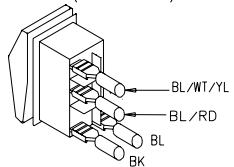
COURTESY SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



LIGHTS BKR 20A  
(DASH BKR PANEL)  
(REAR VIEW)



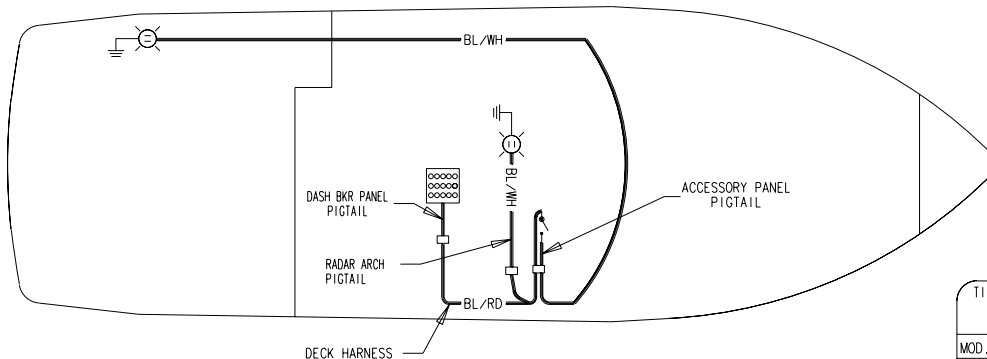
COURTESY SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE DASH BREAKER PANEL, THE "LIGHTS" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE COCKPIT COURTESY LIGHTS CAN NOW BE OPERATED BY THE "COURTESY LIGHT" SWITCH LOCATED ON THE ACCESSORY PANEL.



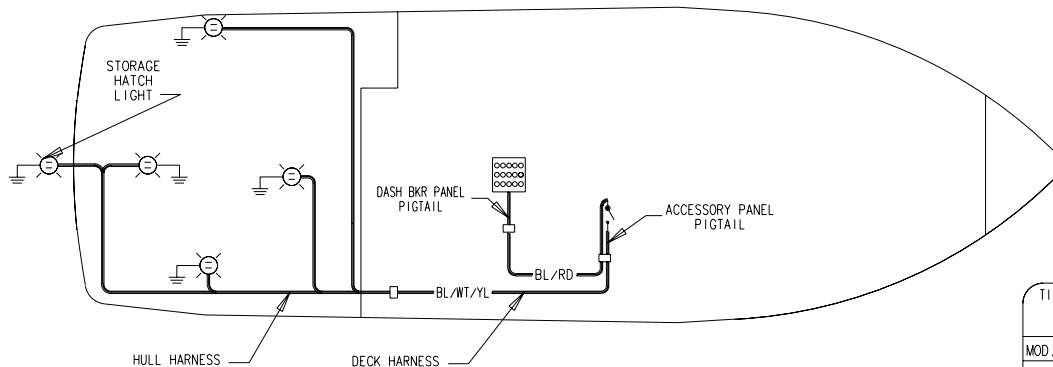
TITLE: LIGHTS,  
COCKPIT COURTESY

MOD.: 31-PC  
DR BY: CWM

43A

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE DASH BREAKER PANEL, THE "LIGHTS" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE ENGINE ROOM LIGHTS CAN NOW BE OPERATED BY THE "ENGINE ROOM LIGHT" SWITCH LOCATED ON THE ACCESSORY PANEL.



TITLE: LIGHTS,  
ENGINE BILGE

MOD.: 31-PC  
DR BY: CWM

43B

# LEGEND

GROUND



DPDT  
SWITCH



DASH  
BREAKER



PLUG



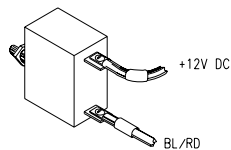
LIGHT



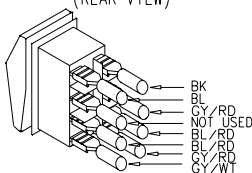
SPOTLIGHT



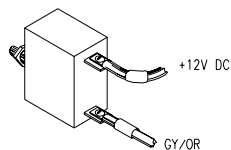
LIGHTS BKR 20A  
(DASH BKR PANEL)  
(REAR VIEW)



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



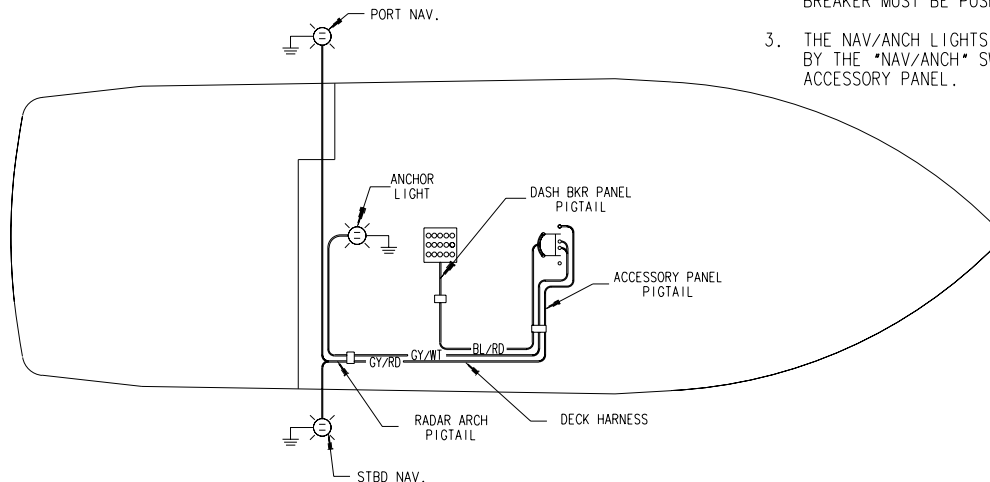
SPOTLIGHT BKR 10A  
(DASH BEAKER PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE DASH BREAKER PANEL, THE "LIGHTS" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE NAV/ANCH LIGHTS CAN NOW BE OPERATED BY THE "NAV/ANCH" SWITCH LOCATED ON THE ACCESSORY PANEL.



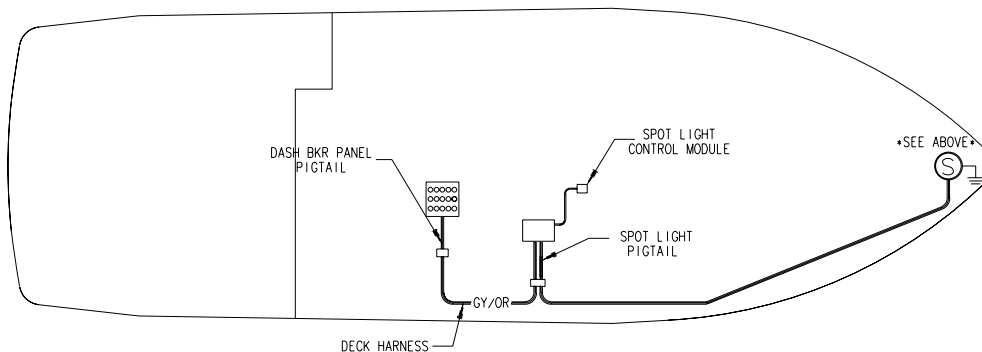
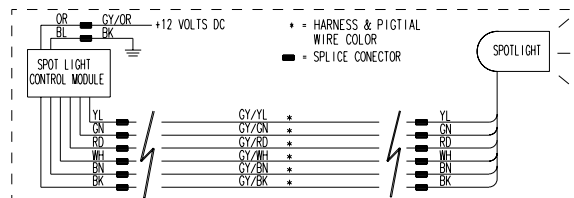
TITLE: LIGHTS,  
NAV. ANCHOR

MOD.: 31-PC  
DR BY: CWM

44A

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE DASH BREAKER PANEL, THE "LIGHTS" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE SPOTLIGHT CAN NOW BE OPERATED WITH THE KEYPAD LOCATED BY THE SHIFTERS.




TITLE: LIGHTS,  
SPOTLIGHT

MOD.: 31-PC  
DR BY: CWM

44B

## LEGEND

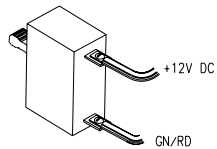
GROUND 

SWITCH 

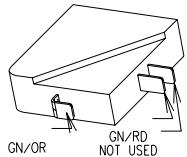
AC/DC  
BREAKER 

PLUG 

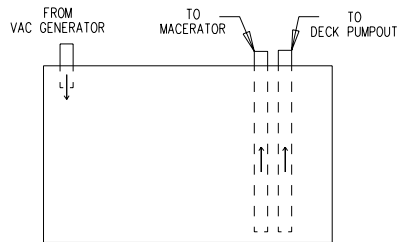
WASTE SYSTEM 20A  
(AC/DC BKR PANEL)  
(REAR VIEW)



MACERATOR SWITCH  
(HEAD)  
(REAR VIEW)



WASTE HOLDING TANK



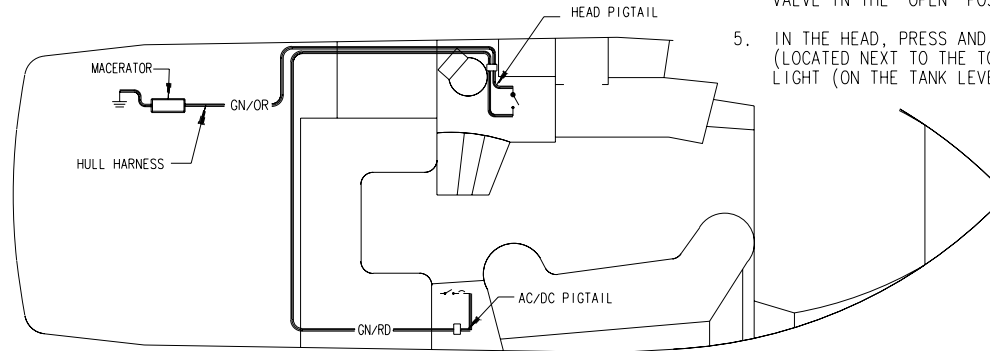
THUNDERBIRD  
PRODUCTS  
ENGINEERING

## CAUTION!

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

TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE AC/DC PANEL IN THE CABIN, SWITCH THE DC "MAIN #2" BREAKER TO "ON".
3. AT THE AC/DC PANEL, SWITCH THE "WASTE TREATMENT" BREAKER TO "ON".
4. IN THE ENGINE BILGE AREA PLACE THE SEACOCK VALVE IN THE "OPEN" POSITION.
5. IN THE HEAD, PRESS AND HOLD THE MACERATOR BUTTON (LOCATED NEXT TO THE TOILET) UNTIL THE "EMPTY" LIGHT (ON THE TANK LEVEL MONITOR) ILLUMINATES.



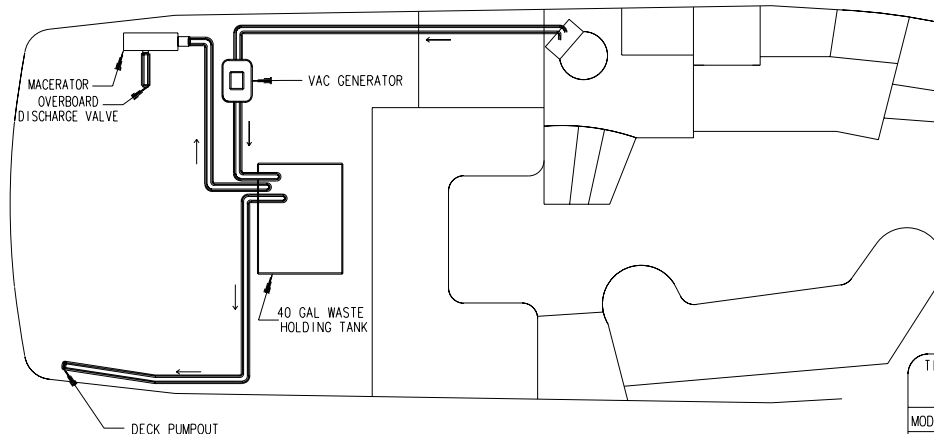
TITLE: MACERATOR  
(ELECTRICAL)

MOD.: 31-PC  
DR BY: CWM

45A

PUMP OUT DIRECTIONS:

1. UNSCREW CAP OFF WASTE "OUT" LINE, LOCATED AT THE STARBOARD AFT CORNER OF THE BOAT.
2. HOOK UP VACUUM AND BEGIN TO EMPTY UNTIL THE "EMPTY" LIGHT (ON LEVEL MONITOR) ILLUMINATES.



TITLE: MACERATOR  
(PLUMBING)

MOD.: 31-PC  
DR BY: CWM

45B

## LEGEND

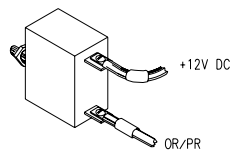
GROUND 

DASH BREAKER 

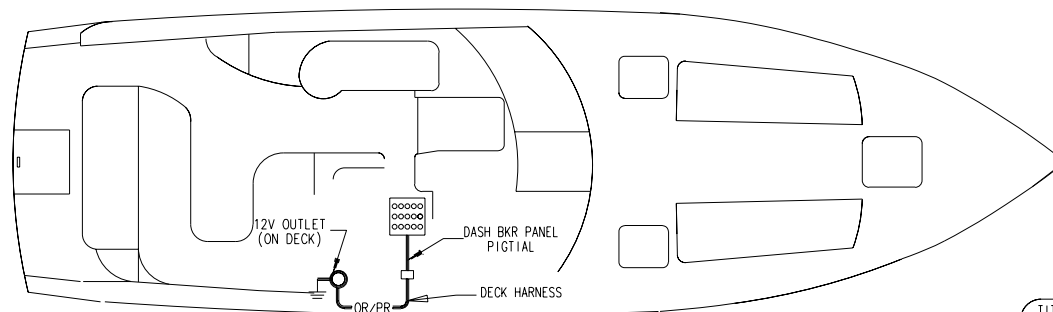
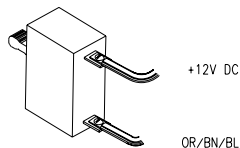
AC/DC BREAKER 

PLUG 

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



12 VOLT OUTLET BKR 15A  
(AC/DC BKR PANEL)  
(REAR VIEW)



TO OPERATE: (DECK 12V OUTLET)

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. THE "12V OUTLET" BUTTON MUST BE PUSHED IN AT THE DASH BREAKER PANEL.
3. THE 12V OUTLET IS NOW SUPPLIED WITH POWER.

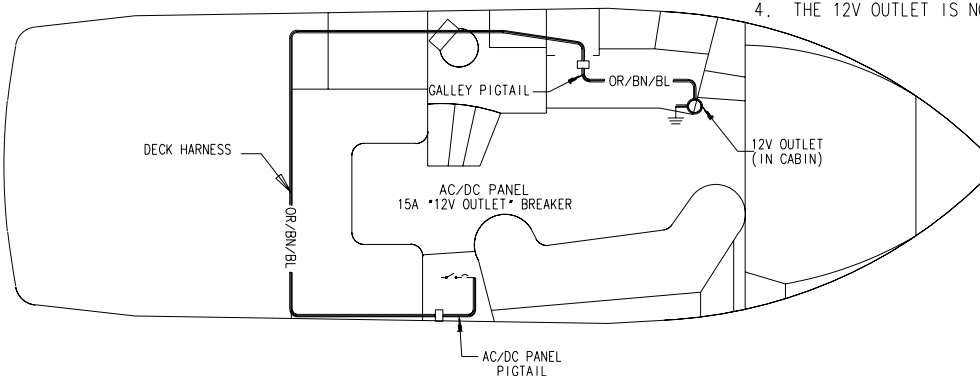
TITLE: 12V OUTLET  
DECK

MOD.: 31-PC  
DR BY: CWM

46A

TO OPERATE: (CABIN 12V OUTLET)

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



TITLE: 12V OUTLET  
CABIN

MOD.: 31-PC  
DR BY: CWM

46B

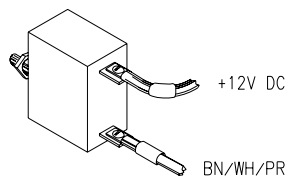


THUNDERBIRD  
PRODUCTS  
ENGINEERING

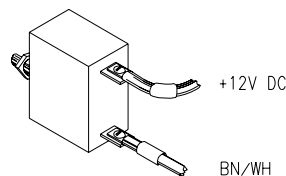
# LEGEND

GROUND	
BREAKER	
PLUG	
SWITCH	
FLOAT SWITCH	

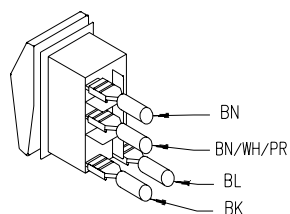
BILGE PUMP BKR 15A  
(DASH BKR PANEL)  
(REAR VIEW)



AFT BILGE BKR 15A  
(AFT BKR PANEL)  
(REAR VIEW)



BILGE PUMP SWITCH  
(ACCESSORY PANEL)  
(REAR VIEW)



## TO OPERATE:

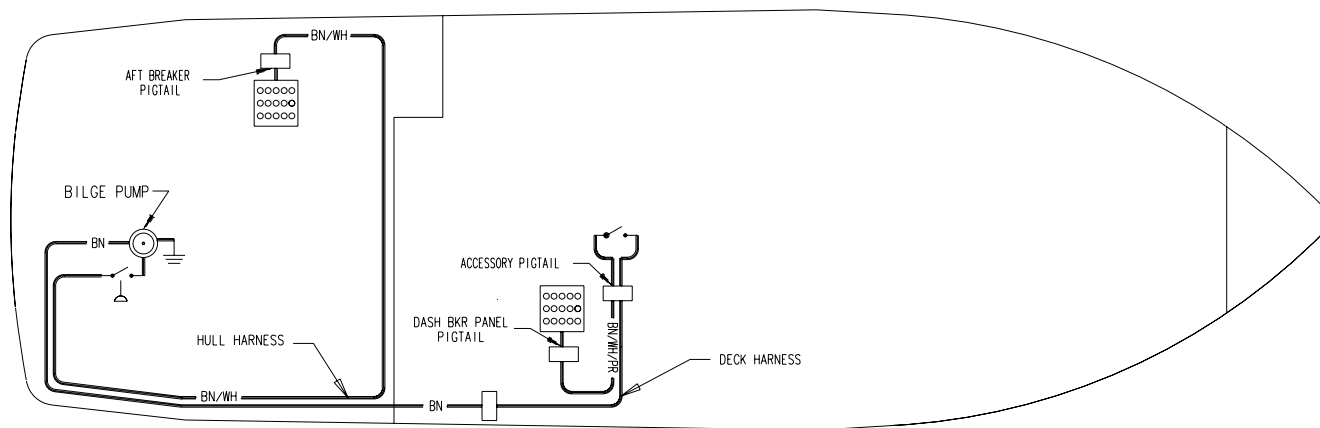
1. LOCATED UNDER DAY HATCH, AT THE SWITCH PANEL, THE "AUX" BREAKER MUST BE "ON".
2. LOCATED UNDER THE WET BAR, AT THE AFT BREAKER PANEL, THE "STBD ENG BILGE" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE ENGINE BILGE PUMP IS NOW SUPPLIED WITH 12 VOLTS DC.

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

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

## TO OPERATE MANUALLY:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE DASH BREAKER PANEL, THE "BILGE PUMP" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE AFT BILGE PUMP CAN NOW BE OPERATED BY THE "BILGE PUMP" SWITCH ON THE ACCESSORY PANEL.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: ENGINE  
BILGE PUMP  
MOD.: 31-PC  
DR BY: CWM

## LEGEND

GROUND



FLOAT  
SWITCH



DASH  
BREAKER



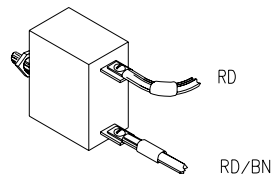
PLUG



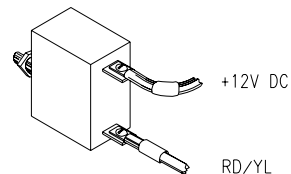
BILGE  
PUMP



CABIN BILGE BKR 15A  
(DASH BKR PANEL)  
(REAR VIEW)



CABIN BILGE BKR 15A  
(AFT BKR PANEL)  
(REAR VIEW)



### TO OPERATE:

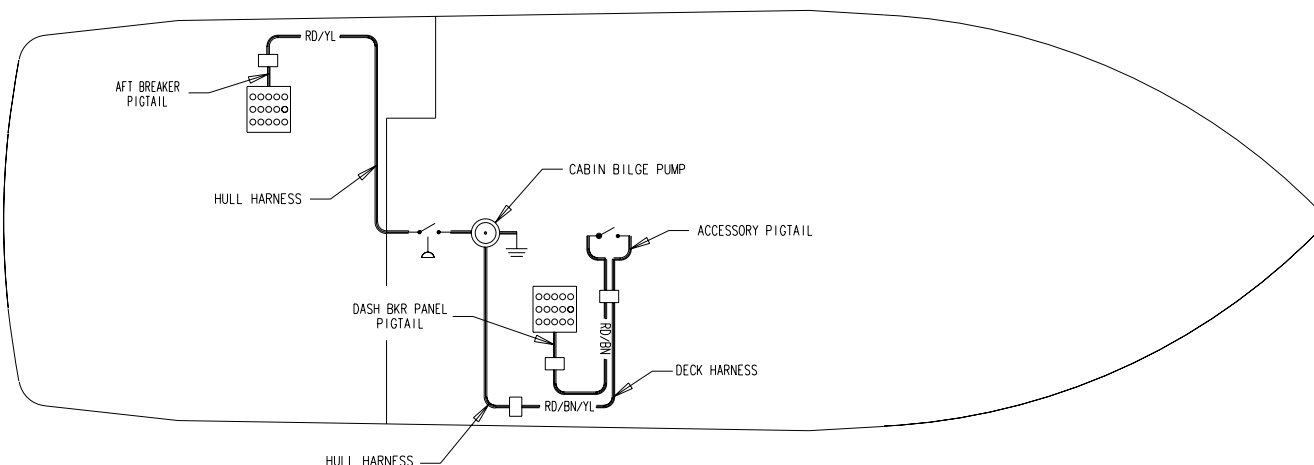
1. LOCATED UNDER THE WET BAR, AT THE SWITCH PANEL, THE "AUX" BREAKER MUST BE "ON".
2. LOCATED UNDER THE WET BAR, AT THE AFT BREAKER PANEL, THE "CABIN BILGE" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE CABIN BILGE PUMP IS NOW SUPPLIED WITH 12 VOLTS DC.

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 CAN NOT BE TURNED OFF BY TURNING THE AUX BATTERY SWITCH TO "OFF".

### TO OPERATE MANUALLY:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE DASH BREAKER PANEL, THE "CABIN BILGE" BREAKER MUST BE PUSHED IN (CLOSED).
3. THE CABIN BILGE PUMP CAN NOW BE OPERATED BY THE "BILGE PUMP" SWITCH ON THE ACCESSORY PANEL.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: CABIN BILGE  
PUMP

MOD.: 31-PC  
DR BY: CWM

48

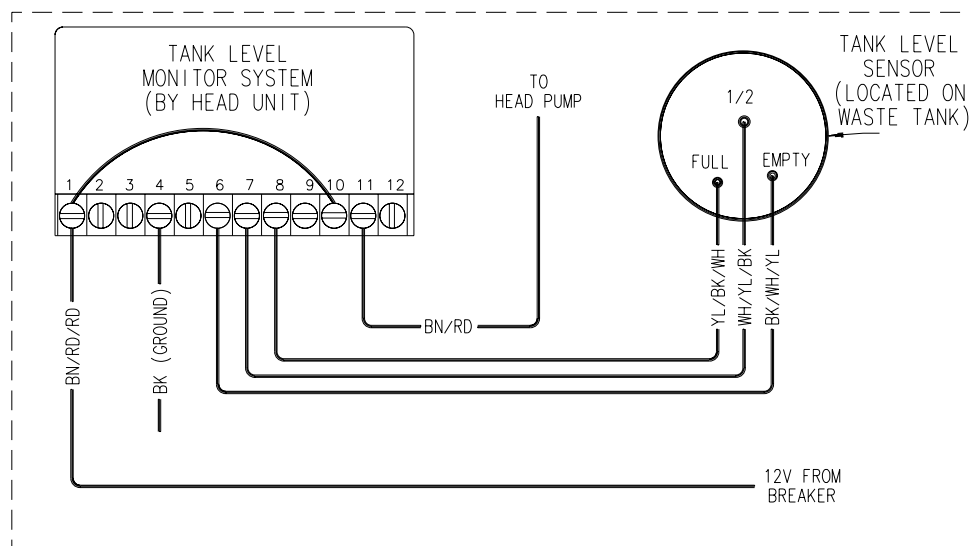


## LEGEND

GROUND

PLUG

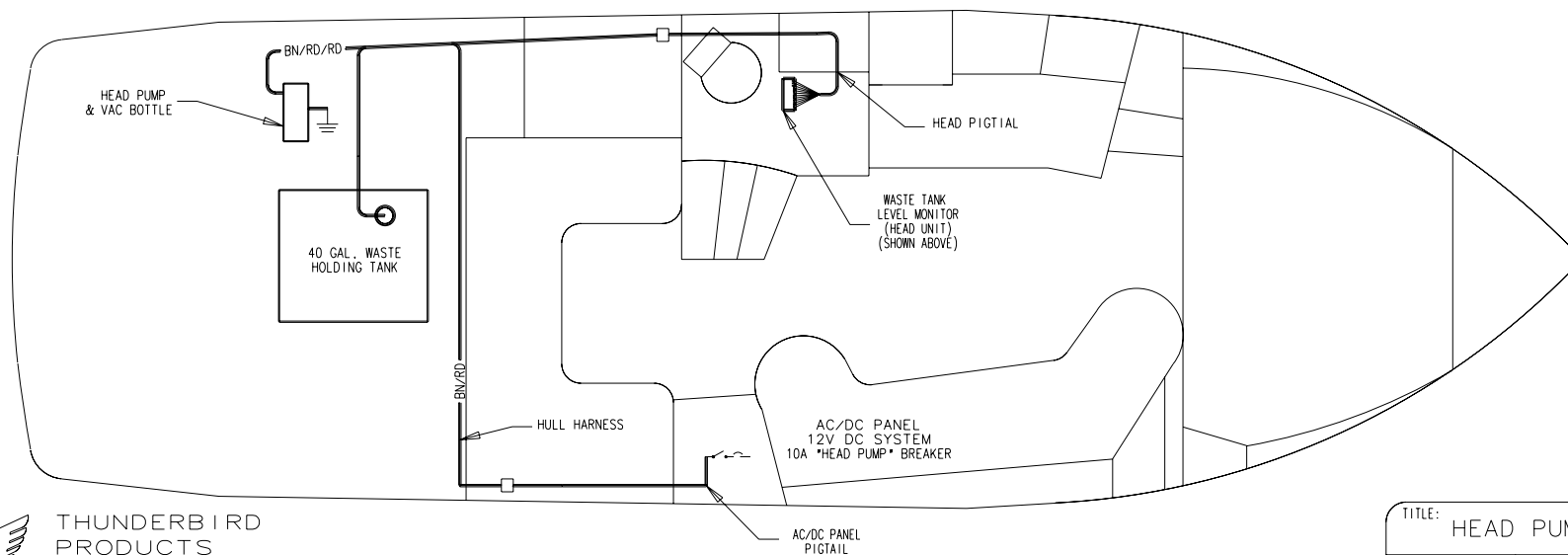
BREAKER



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE AC/DC PANEL 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.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: HEAD PUMP

MOD.: 31-PC  
DR BY: CWM

49

# LEGEND

PUMP (P)

ACCUMULATOR (A)

COLD WATER LINE

HOT WATER LINE

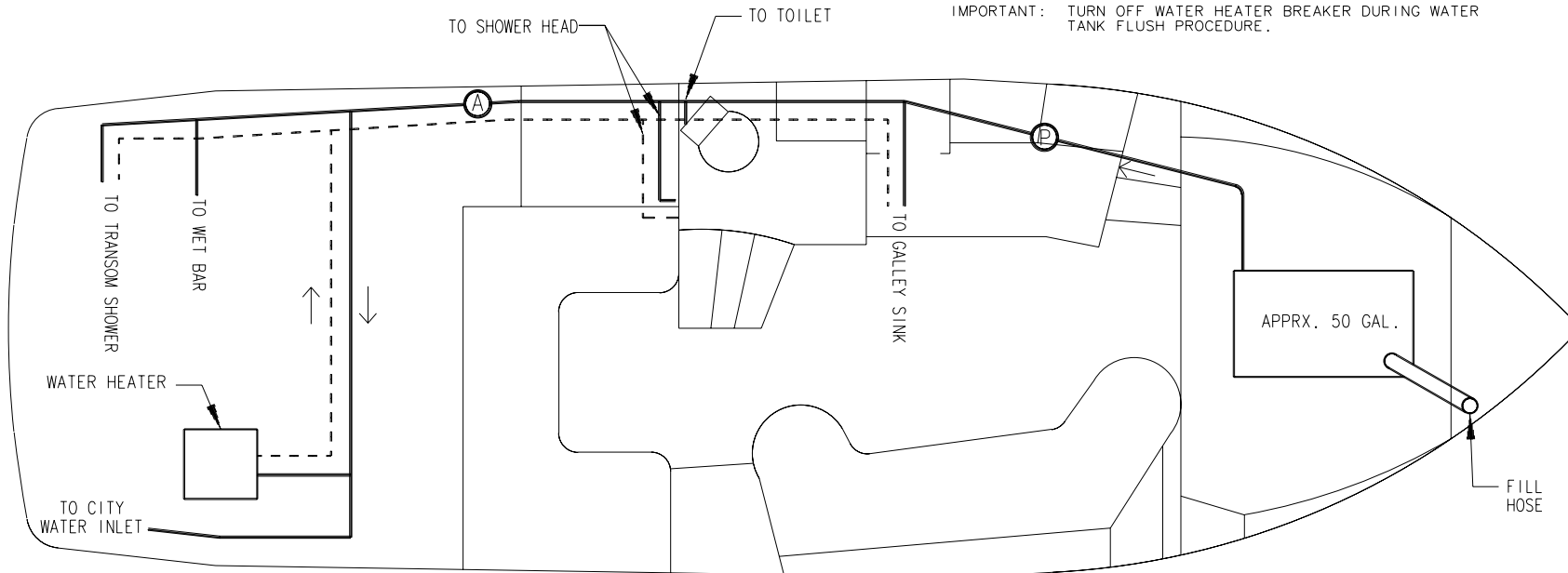
## TO FLUSH SYSTEM:

1. TURN OFF WATER HEATER BREAKER.
2. TURN ON WATER PUMP AND INDIVIDUALLY OPEN THE HOT AND COLD SIDE OF THE FAUCET FURTHEST AWAY FROM THE WATER TANK TO DRAIN THE EXCESS ANTIFREEZE FROM THE WATER SYSTEM. ONCE THE FLOW IS LOST TURN OFF THE WATER PUMP.
3. REFILL WATER TANK WITH FRESH WATER.
4. OPEN HOT SIDE OF GALLEY FAUCET THEN OPEN DRAIN COCK ON BOTTOM OF THE WATER HEATER TO DRAIN EXCESS ANTIFREEZE FROM THE WATER HEATER.
5. AFTER WATER HEATER IS DRAINED CLOSE THE DRAIN COCK AND THE GALLEY FAUCET.
6. TURN ON THE WATER PUMP AND INDIVIDUALLY OPEN THE HOT AND COLD SIDE OF THE FAUCET FURTHEST AWAY FROM WATER TANK, RUN UNTIL WATER IS CLEAN AND FREE FROM ODOR. THIS MAY TAKE A FEW TANKS.
7. ONCE CLEAN WATER IS FLOWING FROM THE HOT AND COLD SIDE OF THE FIRST FAUCET, INDIVIDUALLY OPEN THE HOT AND COLD SIDE OF EACH REMAINING FAUCET UNTIL CLEAN WATER IS FLOWING FROM EACH FAUCET.

IMPORTANT: TURN OFF WATER HEATER BREAKER DURING WATER TANK FLUSH PROCEDURE.

TO SHOWER HEAD

TO TOILET



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: FRESH WATER PUMP  
(PLUMBING)

MOD.: 31-PC  
DR BY: CWM

50

# LEGEND

GROUND 

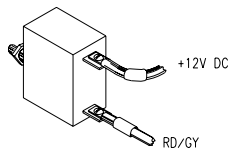
BREAKER PANEL 

FLOAT SWITCH 

PLUG 

PUMP 

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

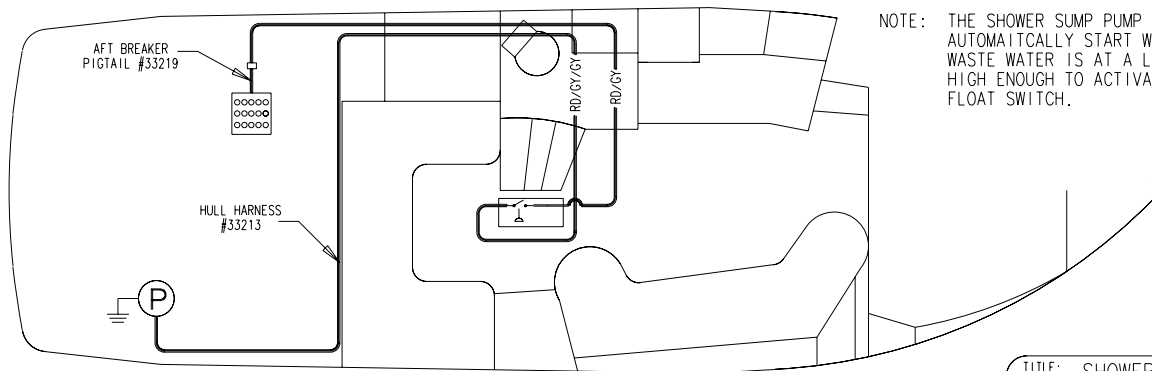


THUNDERBIRD  
PRODUCTS  
ENGINEERING

TO OPERATE:

1. AT THE AFT BREAKER PANEL THE "SHOWER SUMP" BREAKER MUST BE PUSHED IN (CLOSED).
2. THE SHOWER SUMP IS NOW SUPPLIED WITH 12V DC.

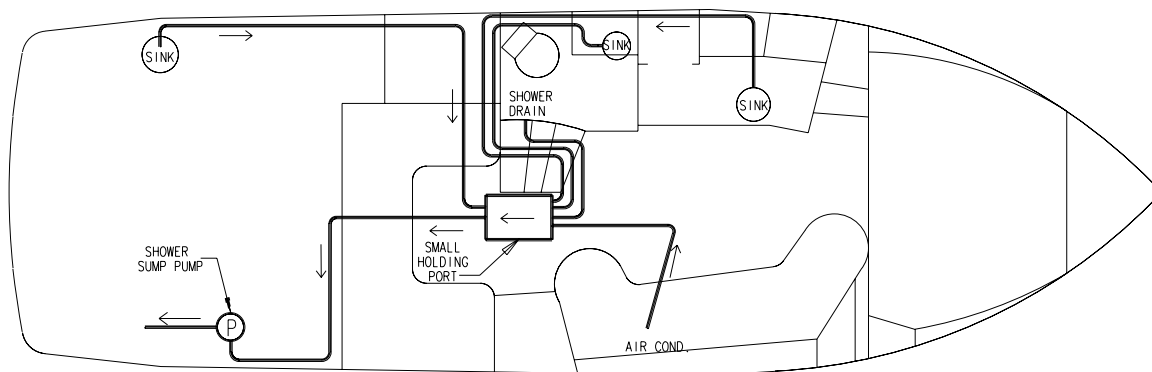
NOTE: THE SHOWER SUMP PUMP WILL AUTOMATICALLY START WHEN THE WASTE WATER IS AT A LEVEL HIGH ENOUGH TO ACTIVATE THE FLOAT SWITCH.



TITLE: SHOWER SUMP  
(ELECTRICAL)

MOD.: 31-PC  
DR BY: CWM

51A



TITLE: SHOWER SUMP  
(DRAINAGE)

MOD.: 31-PC  
DR BY: CWM


51B

# LEGEND

GROUND 

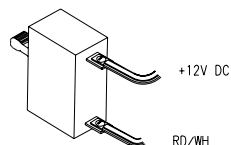
AFT  
BREAKER 

AC/DC  
BREAKER 

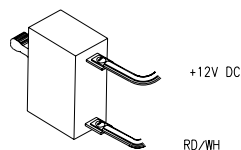
PLEX  
BLOCK 

SPEAKER 

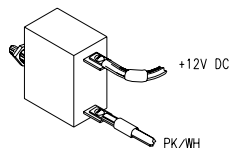
STEREO BKR 10A  
(AC/DC BKR PANEL)  
(REAR VIEW)



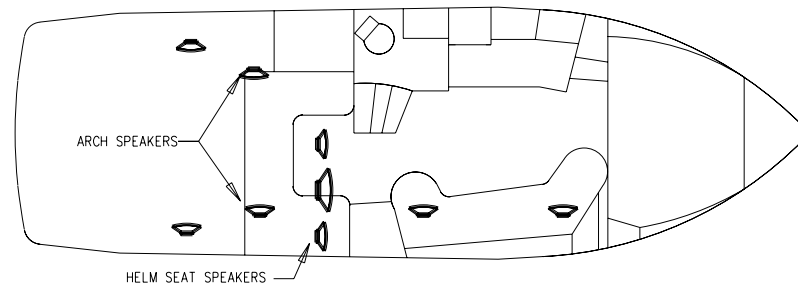
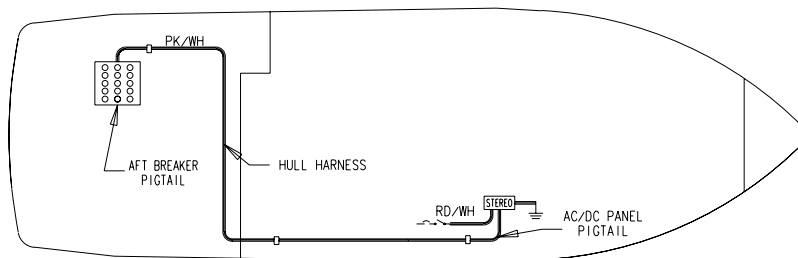
STEREO AMP BKR 10A  
(AC/DC BKR PANEL)  
(REAR VIEW)



CONST. PWR BKR 10A  
(AFT BKR PANEL)  
(REAR VIEW)



THUNDERBIRD  
PRODUCTS  
ENGINEERING



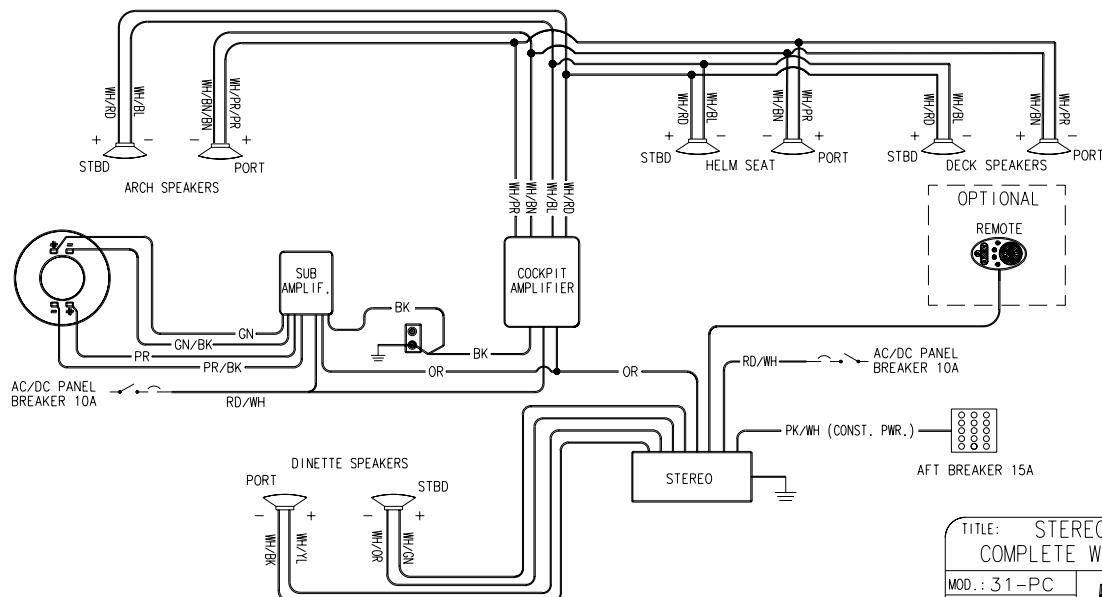
## TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE AFT BREAKER PANEL, THE "CONST. POWER" BREAKER MUST BE PUSHED IN (CLOSED).
3. AT THE AC/DC PANEL IN THE CABIN, SWITCH THE DC "MAIN #2", "STEREO", AND "STEREO AMP" BREAKERS TO "ON".
4. THE STEREO SYSTEM IS NOW SUPPLIED WITH 12 VOLTS DC AND READY FOR OPERATION.
5. SEE KENWOOD'S OPERATING MANUAL FOR INSTRUCTIONS ON OPERATING STEREO FUNCTIONS.

TITLE: STEREO,  
COMPONENT LOCATION

MOD.: 31-PC  
DR BY: CWM

52A



TITLE: STEREO,  
COMPLETE WIRING

MOD.: 31-PC  
DR BY: CWM

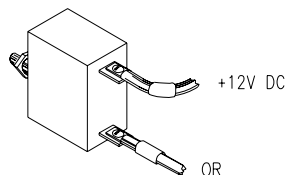
52B

# LEGEND

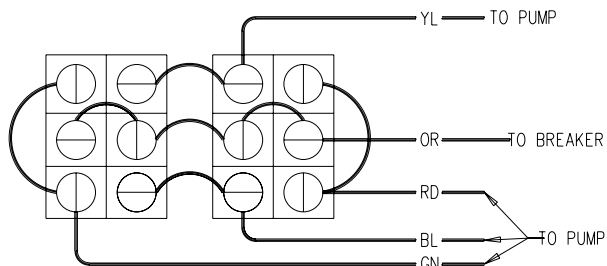
PLUG 

DASH  
BREAKER 

TRIM TABS BKR 20A  
(DASH BKR PANEL)  
(REAR VIEW)



TRIM TABS SWITCHES  
(SHIFTER PANEL)  
(REAR VIEW)

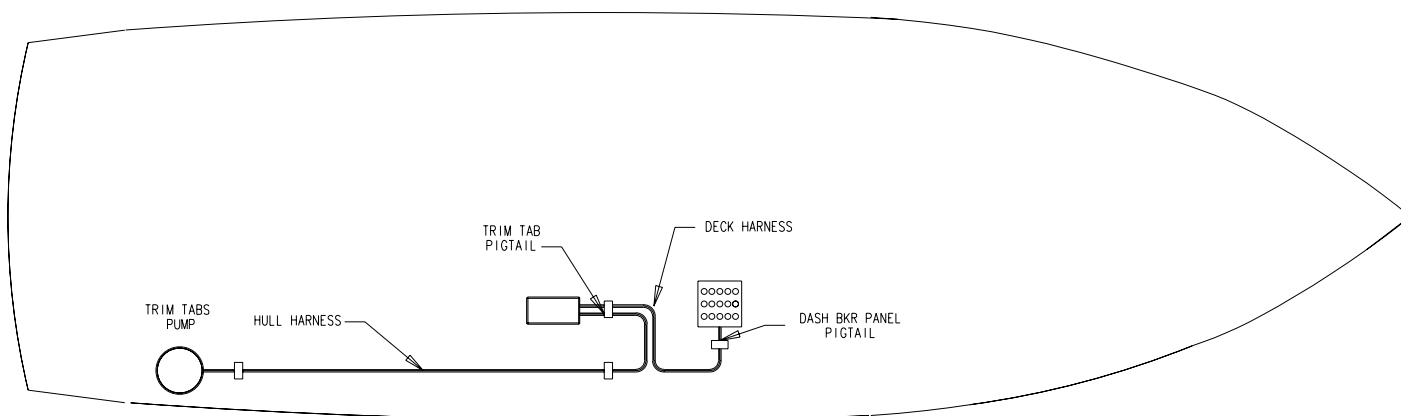


TO OPERATE:

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

NOTE:

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



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: TRIM TABS

MOD.: 31-PC

DR BY: CWM

53

## LEGEND

GROUND



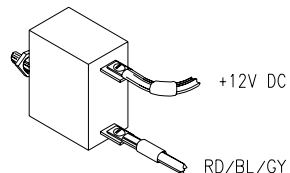
DASH  
BREAKER



PLUG

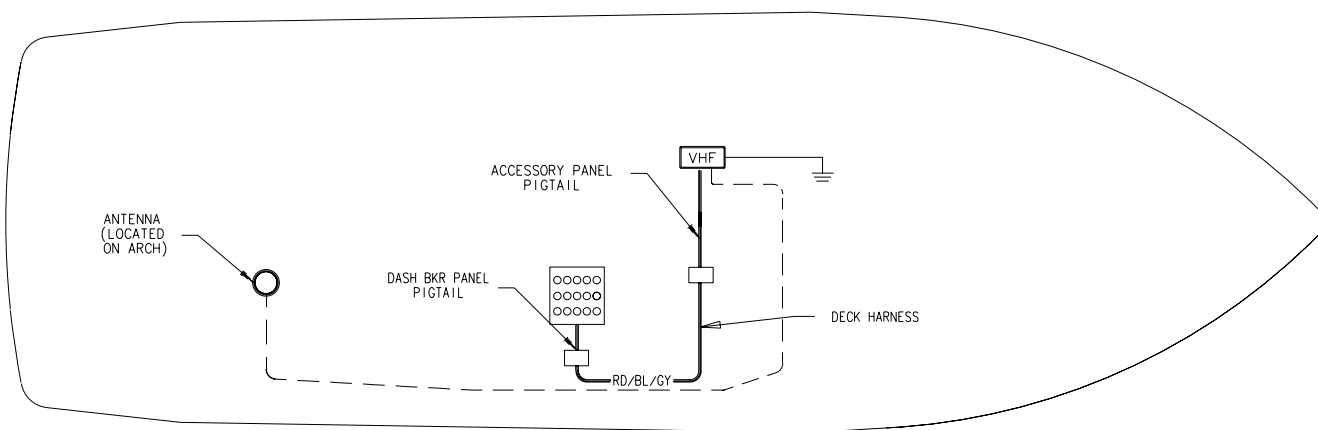


VHF RADIO BKR 10A  
(DASH BKR PANEL)  
(REAR VIEW)



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "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 VERTEX STANDARD OPERATOR'S MANUAL FOR OPERATOR INSTRUCTIONS.



THUNDERBIRD  
PRODUCTS  
**ENGINEERING**

TITLE: VHF RADIO

MOD.: 31-PC

DR BY: CWM

54

# LEGEND

GROUND



SWITCH



DASH  
BREAKER



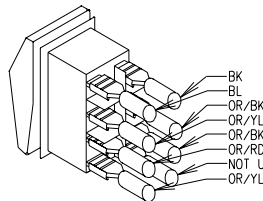
PLUG



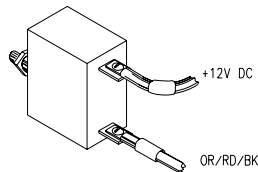
WIPER  
MOTOR



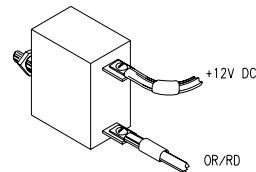
WIPER  
(ACCESSORY PANEL)  
(REAR VIEW)



PORT WIPER BKR 5A  
(DASH BKR PANEL)  
(REAR VIEW)



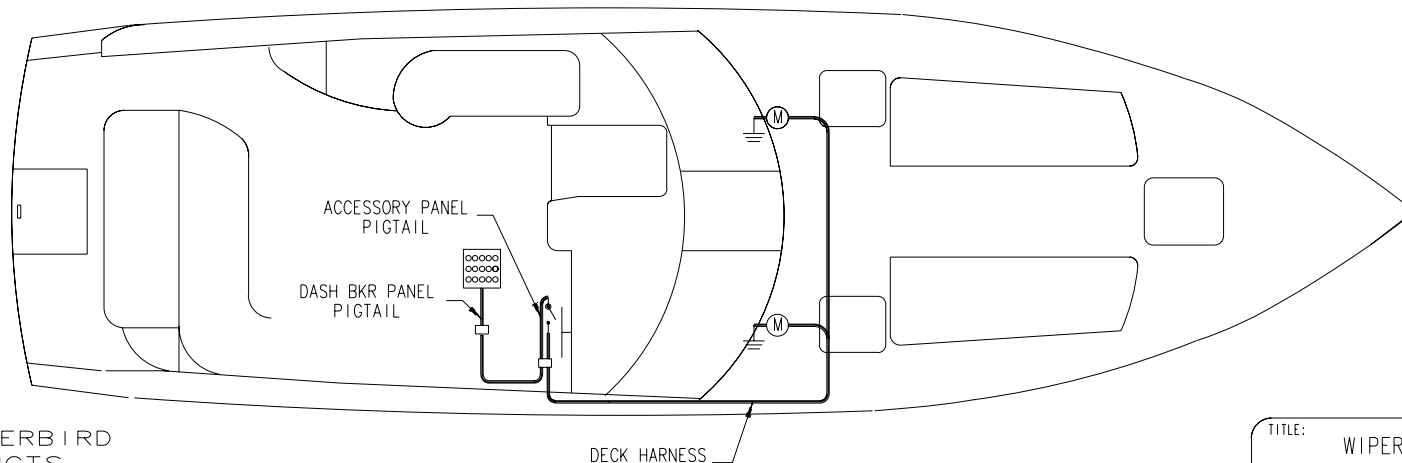
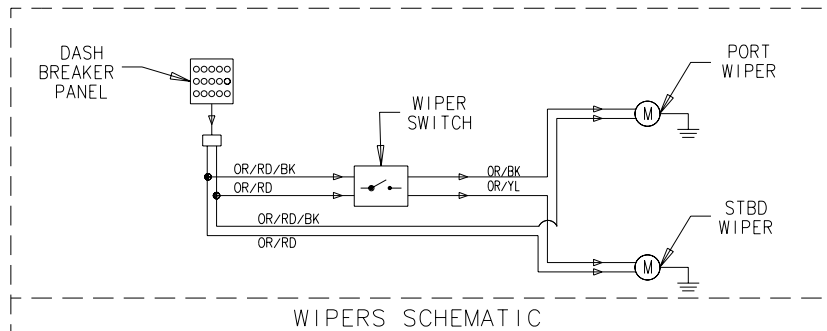
STBD WIPER BKR 5A  
(DASH BKR PANEL)  
(REAR VIEW)



TO OPERATE:

1. LOCATED UNDER THE WET BAR, TURN THE "AUXILIARY POWER" BATTERY SWITCH TO "ON".
2. AT THE DASH BREAKER PANEL, THE "PORT WIPER" AND "STBD WIPER" BREAKERS MUST BE PUSHED IN (CLOSED).
3. THE WIPERS CAN NOW BE OPERATED BY THE "WIPERS" SWITCH ON THE ACCESSORY PANEL.

NOTE: WHEN THE "WIPERS" SWITCH IS SWITCHED "UP", ONLY THE STBD WIPER WILL OPERATE.  
WHEN THE "WIPERS" SWITCH IS SWITCHED "DOWN", BOTH THE STBD AND PORT WIPERS WILL OPERATE.



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE:

WIPERS

MOD.: 31-PC  
DR BY: CWM

55

# LEGEND

GROUND



DASH  
BREAKER



SWITCH



WINDLASS  
MOTOR



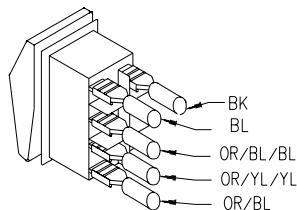
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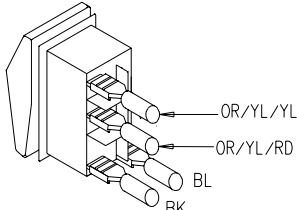
PLUG



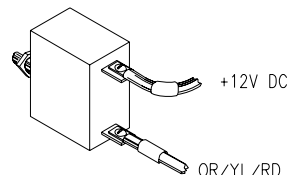
WINDLASS SWITCH UP/DOWN  
(ACCESSORY PANEL)  
(REAR VIEW)



WINDLASS SWITCH ON/OFF  
(ACCESSORY PANEL)  
(REAR VIEW)

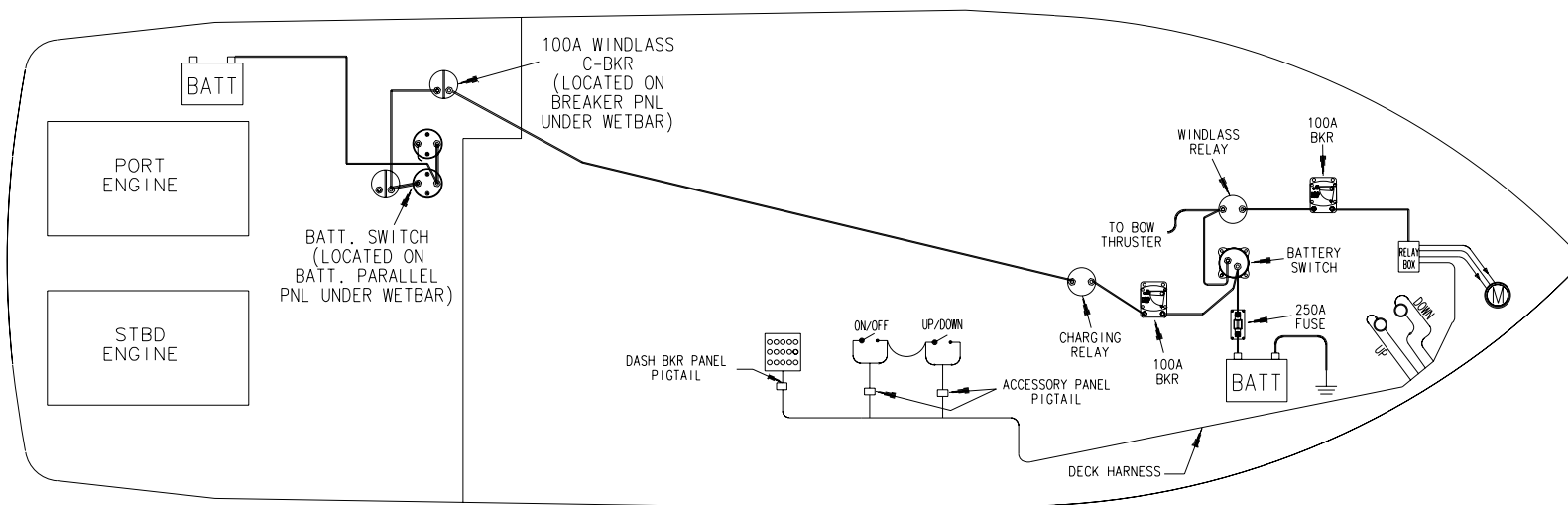


WINDLASS BKR 15A  
(DASH BKR PANEL)  
(REAR VIEW)



TO OPERATE:

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



THUNDERBIRD  
PRODUCTS  
ENGINEERING

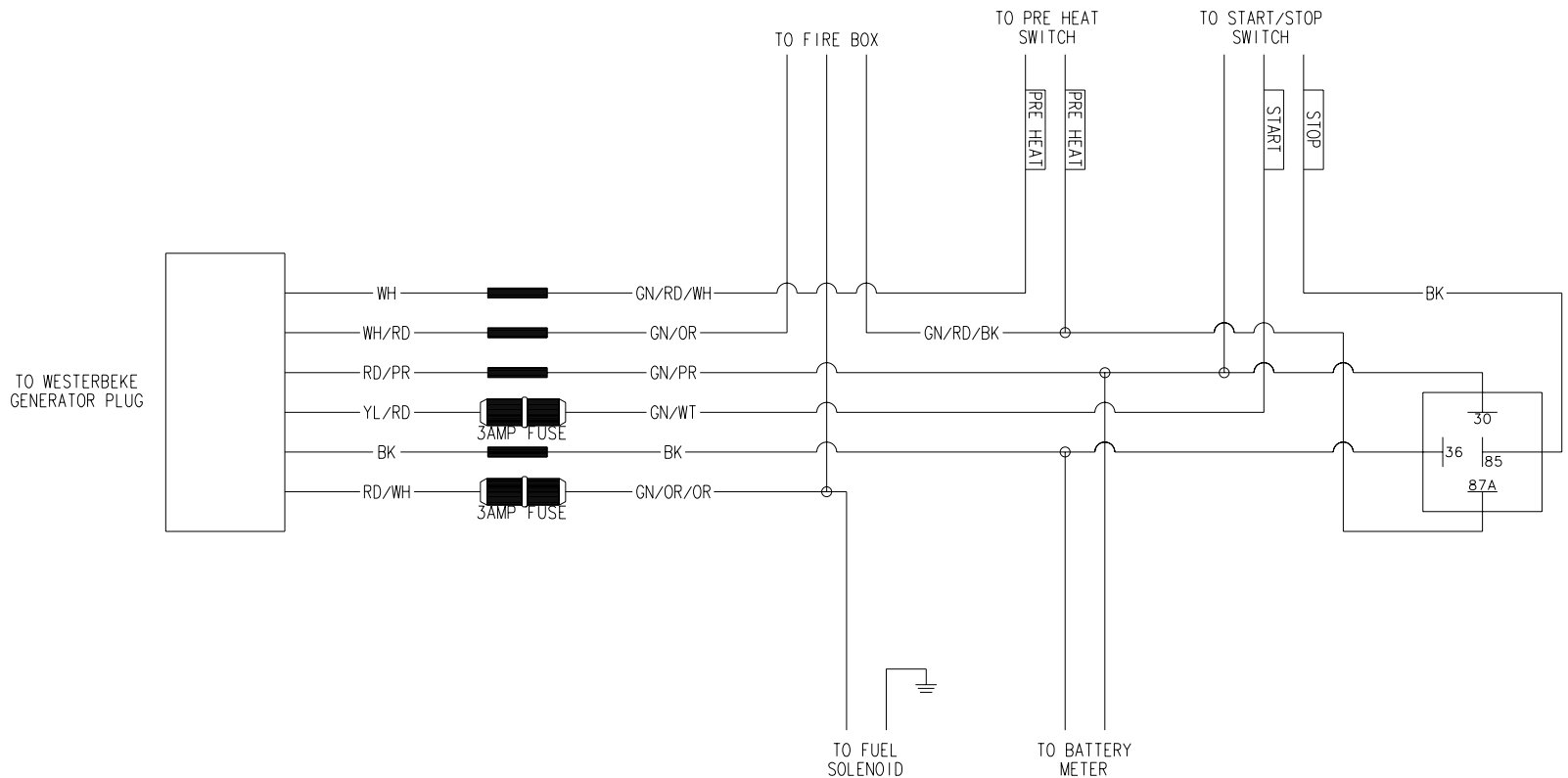
TITLE: WINDLASS  
MOD.: 31-PC  
DR BY: CWM

56



# LEGEND

GROUND



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: GENERATOR  
START/STOP (DIESEL)

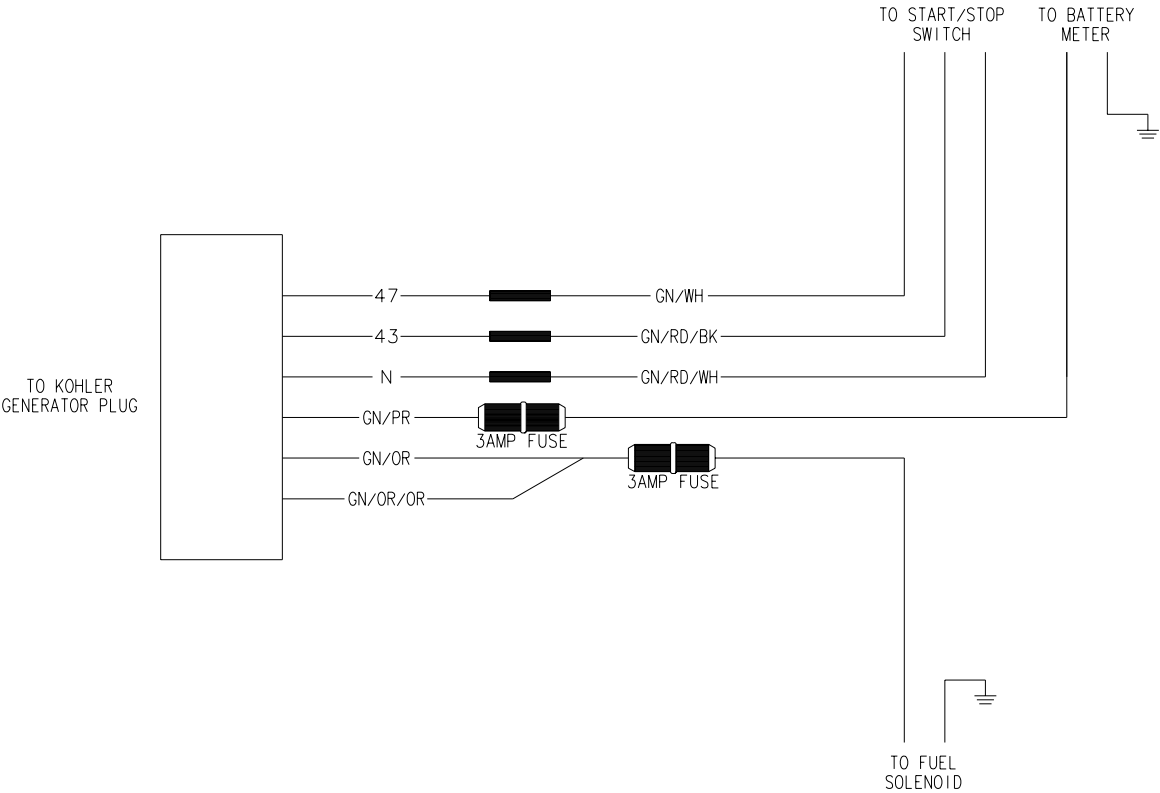
MOD.: 31-PC

DR BY: CWM

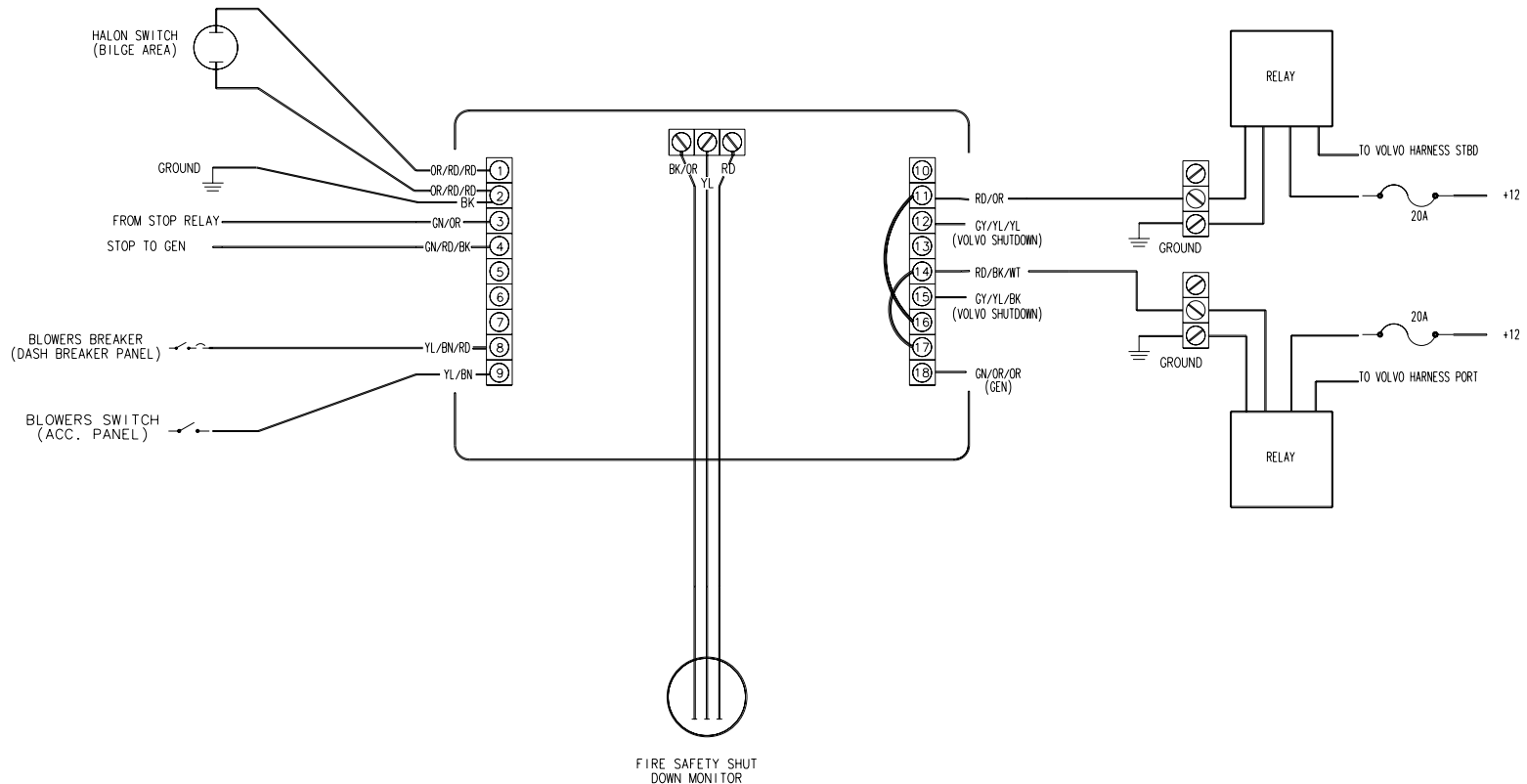
57

LEGEND

GROUND



THUNDERBIRD  
PRODUCTS  
ENGINEERING



THUNDERBIRD  
PRODUCTS  
ENGINEERING

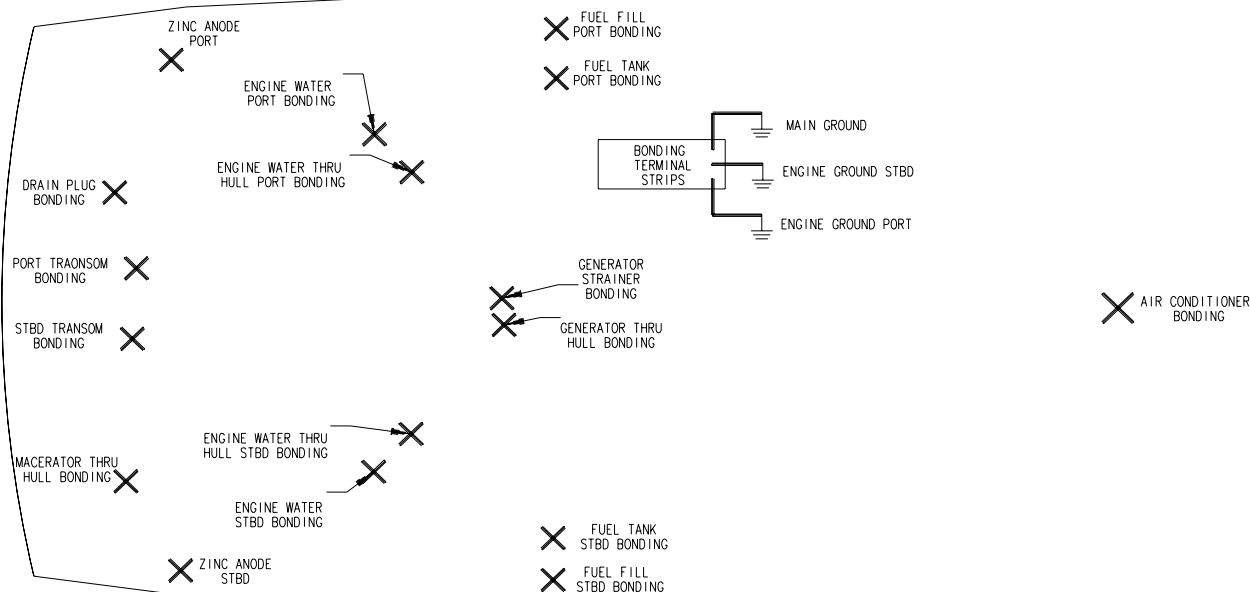
TITLE: FIRE SHUT DOWN SYSTEM	
MOD.: 31-PC	59
DR BY: CWM	

# LEGEND

GROUND



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

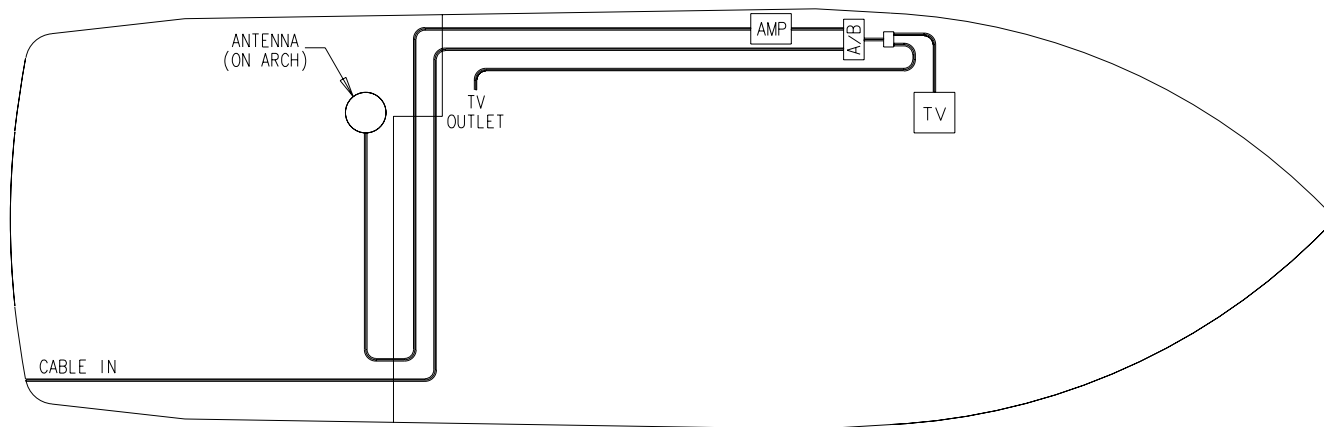
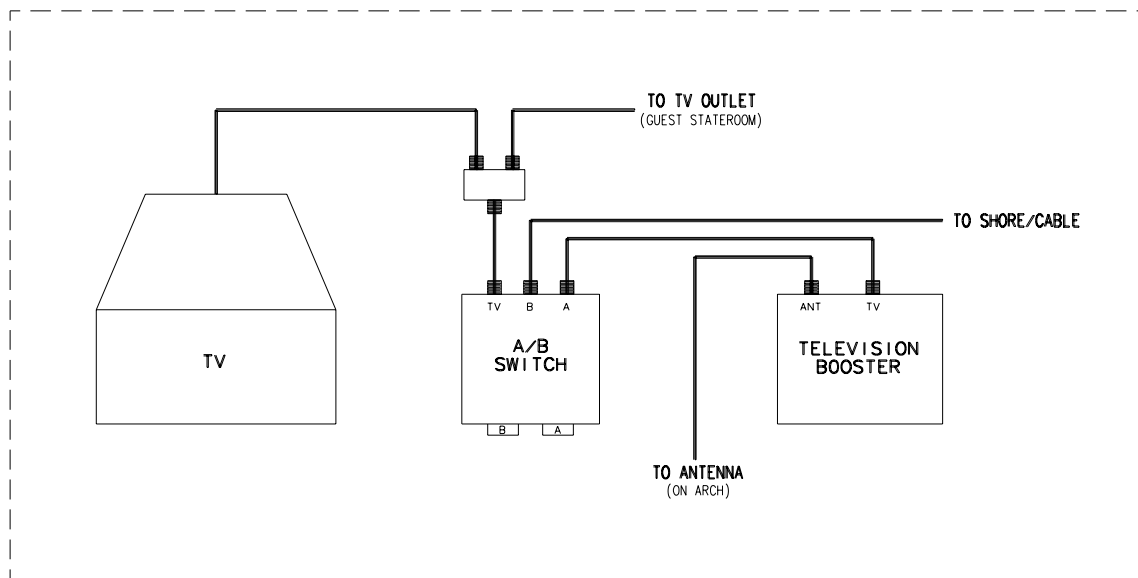


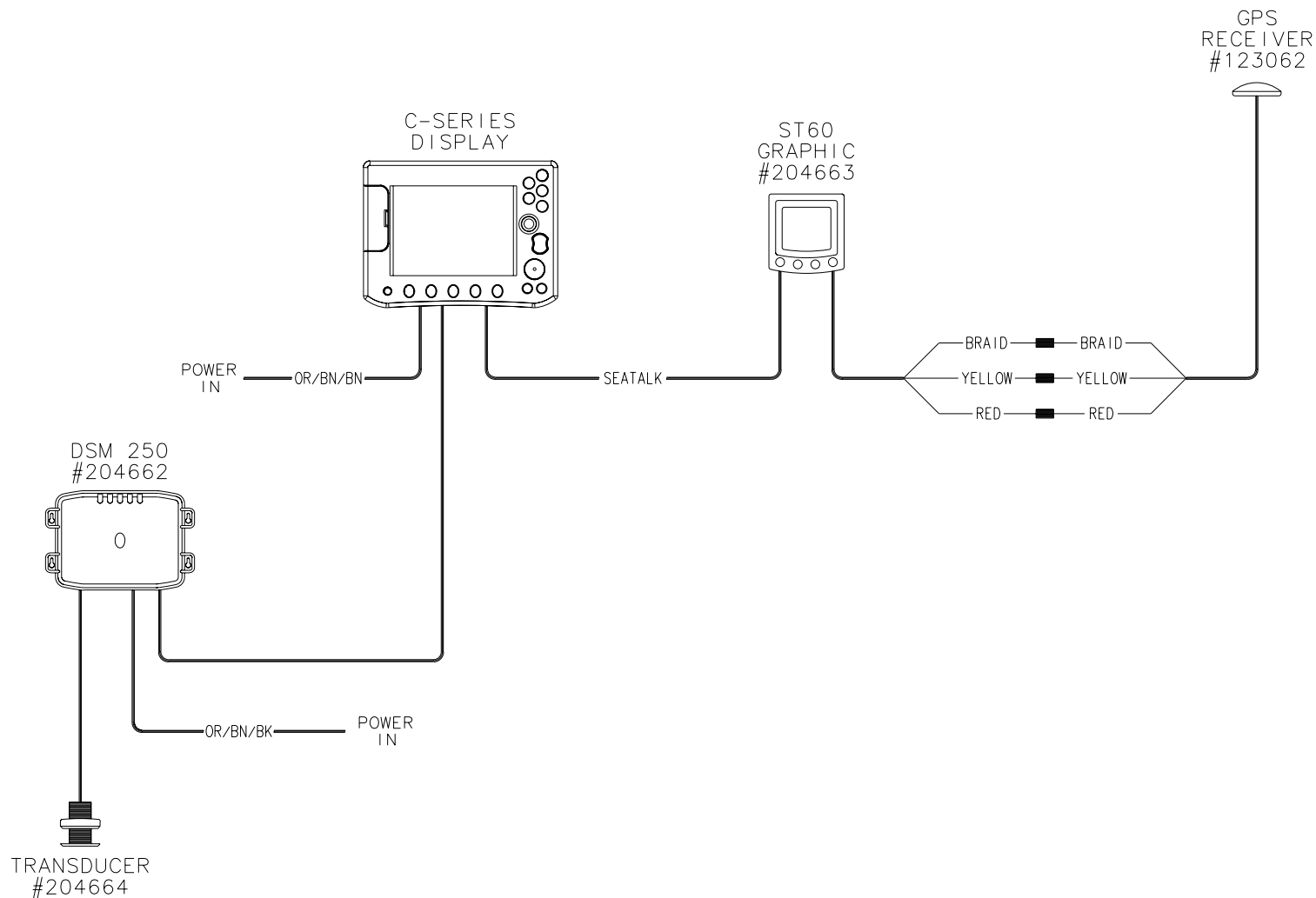
THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: BONDING

MOD.: 31-PC  
DR BY: CWM

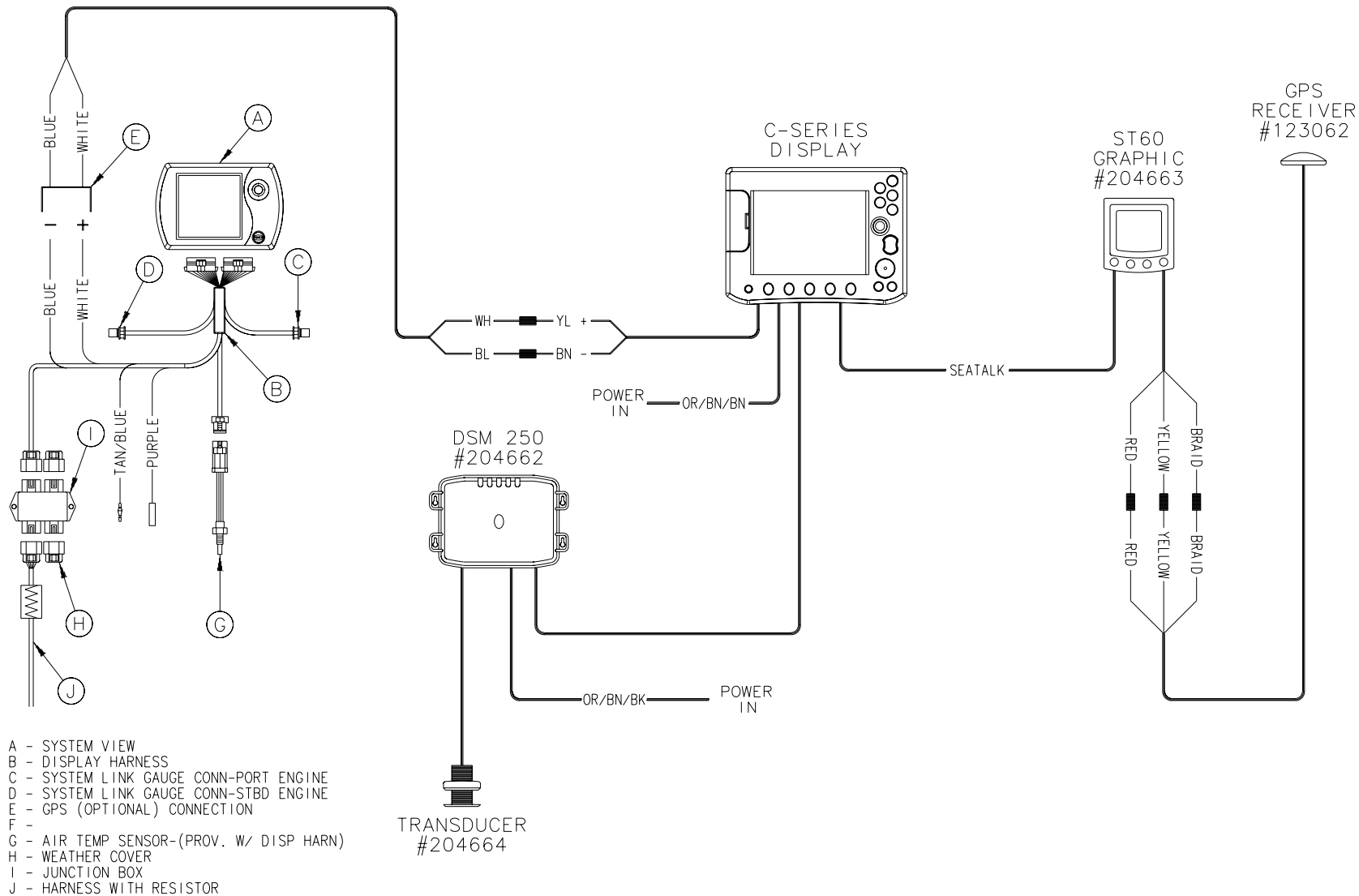
60





THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: CHARTPLOTTER OPTION #1	
MOD.: 31-PC	62
DR BY: CWM	

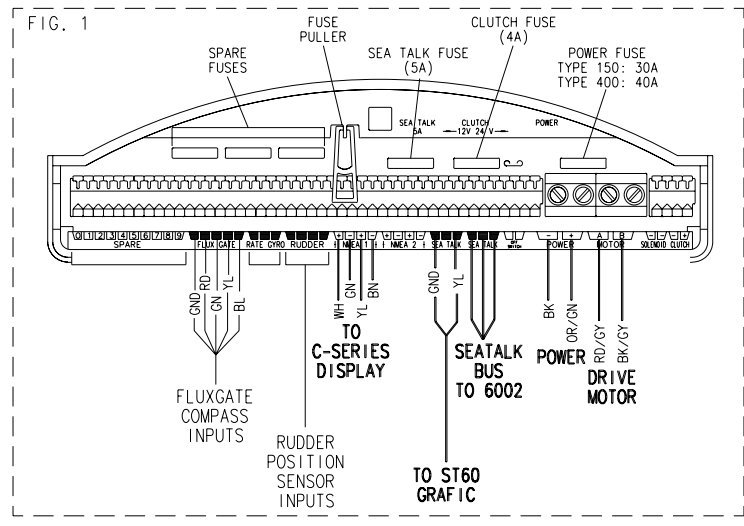
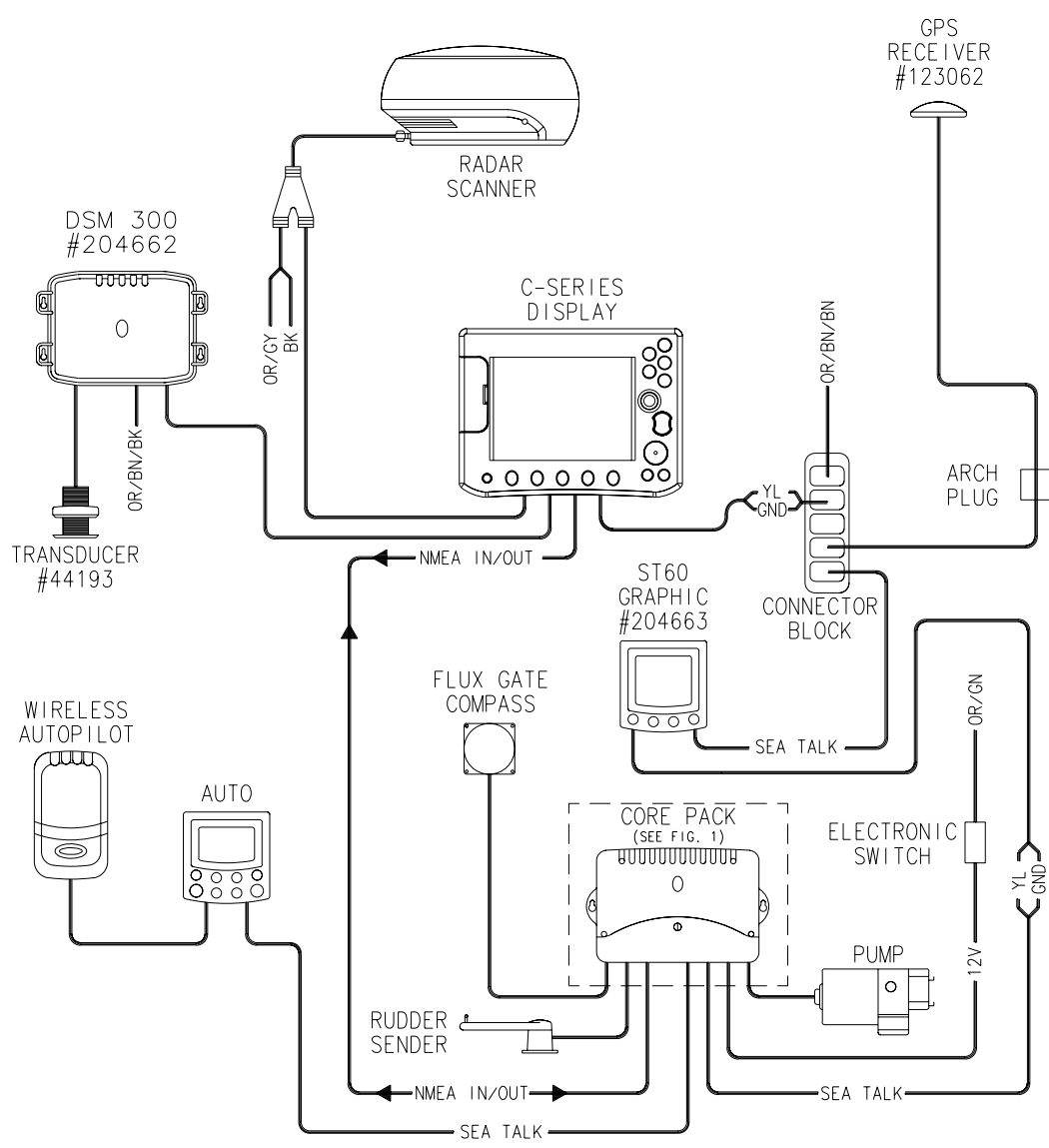


- A - SYSTEM VIEW
- B - DISPLAY HARNESS
- C - SYSTEM LINK GAUGE CONN-PORT ENGINE
- D - SYSTEM LINK GAUGE CONN-STBD ENGINE
- E - GPS (OPTIONAL) CONNECTION
- F -
- G - AIR TEMP SENSOR-(PROV. W/ DISP HARN)
- H - WEATHER COVER
- I - JUNCTION BOX
- J - HARNESS WITH RESISTOR



THUNDERBIRD  
PRODUCTS  
ENGINEERING

TITLE: CHARTPLOTTER OPTION #2	
MOD.: 31-PC	63
DR BY: CWM	





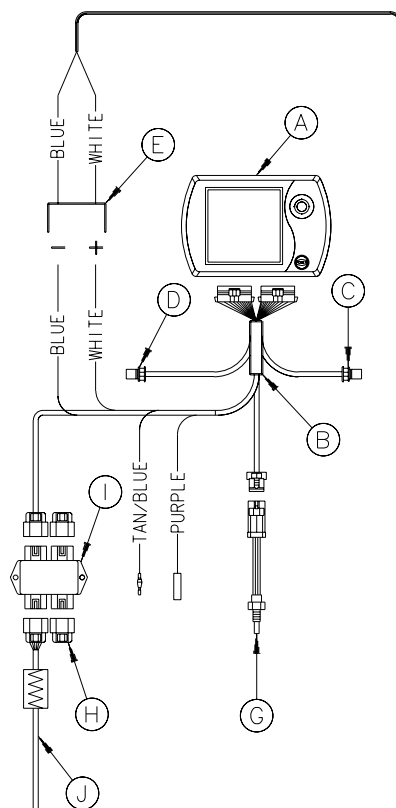
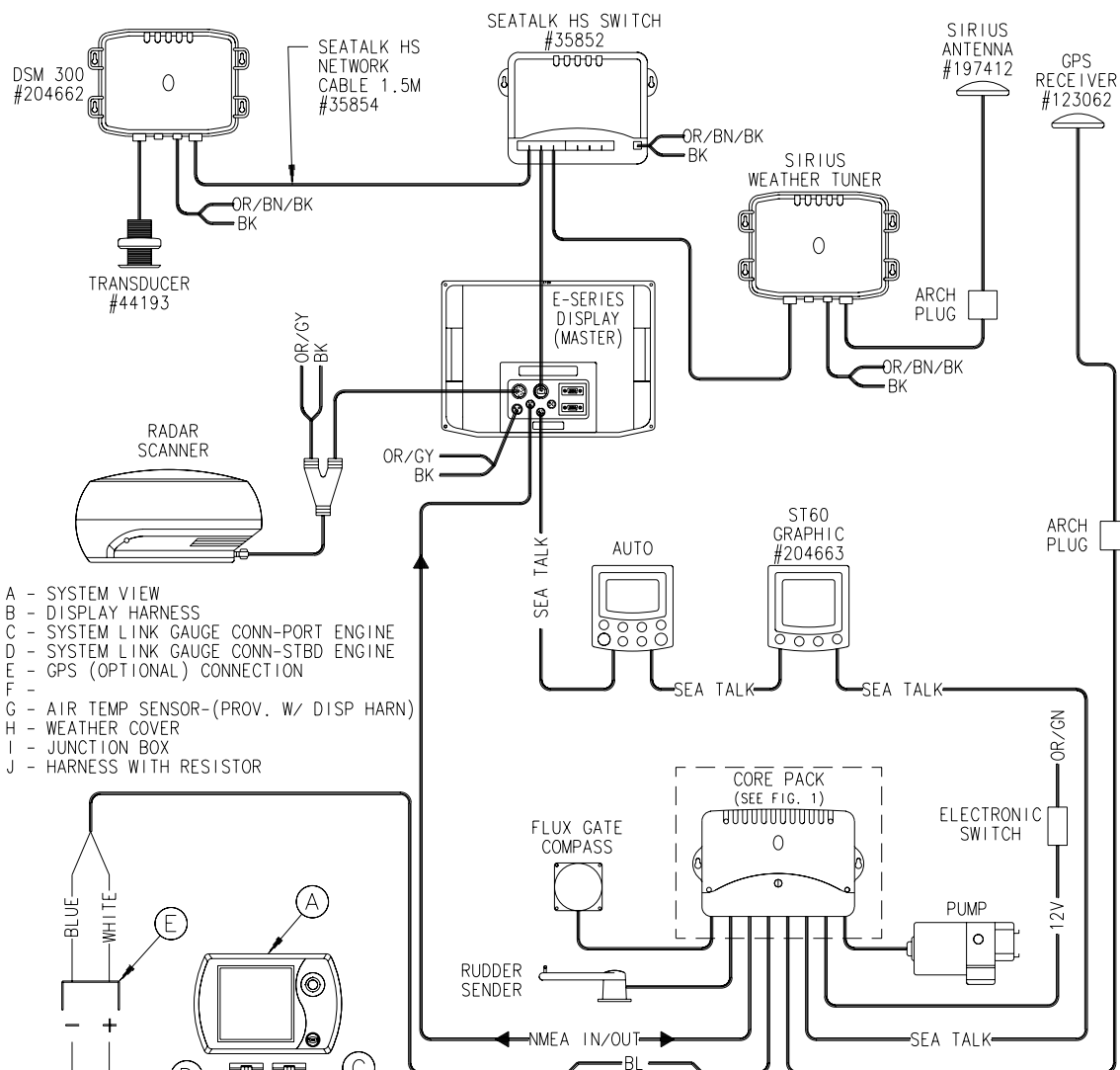
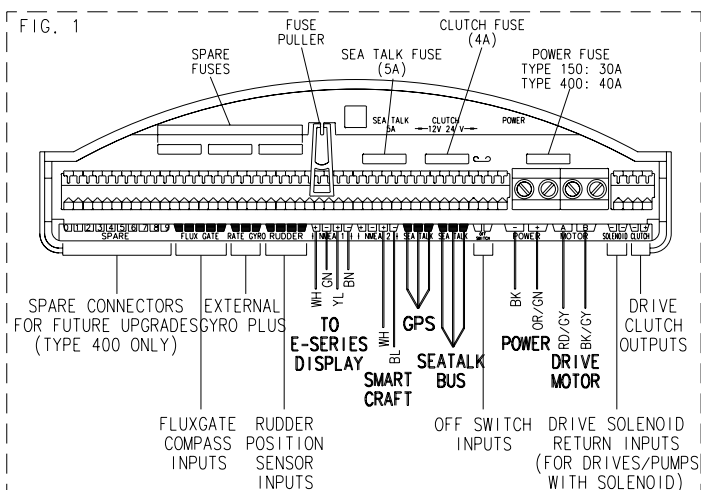
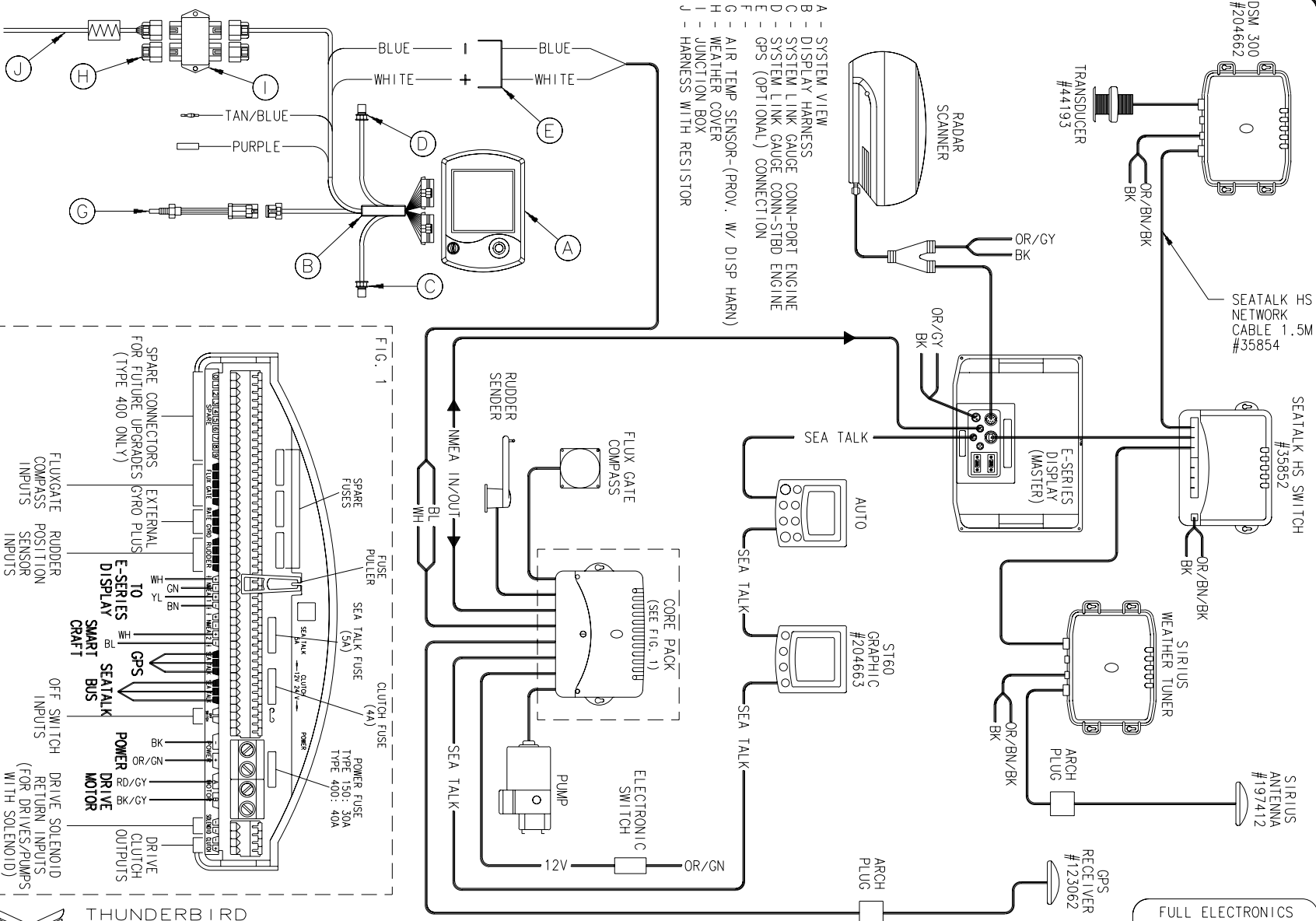


FIG. 1





## LEGEND

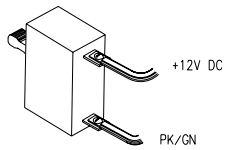
GROUND 

BREAKER 

PLUGS 

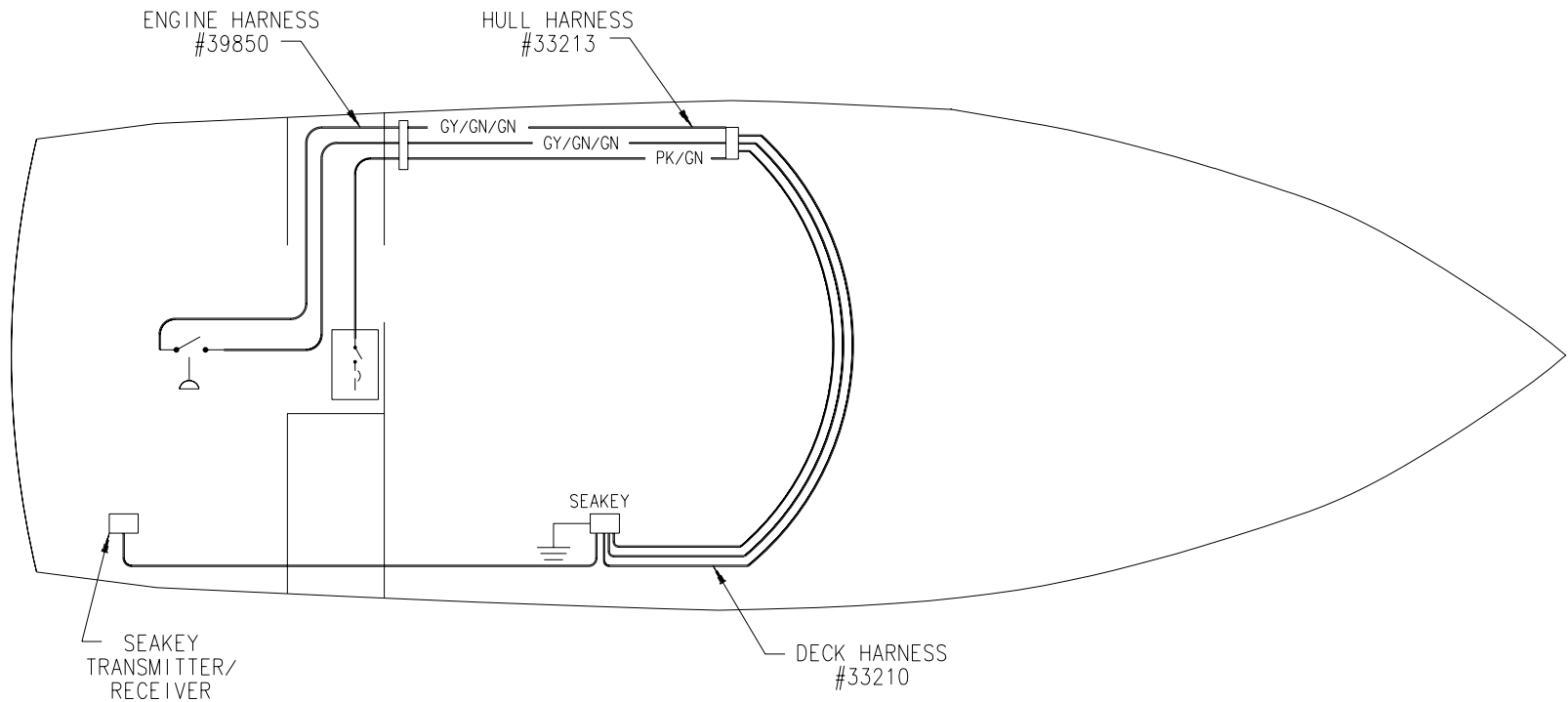
FLOAT SWITCH 

"SEAKEY" BKR 2A  
(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 "SEAKEY" BREAKER TO "ON".
3. SEAKEY IS NOW SUPPLIED WITH 12 VOLTS DC.

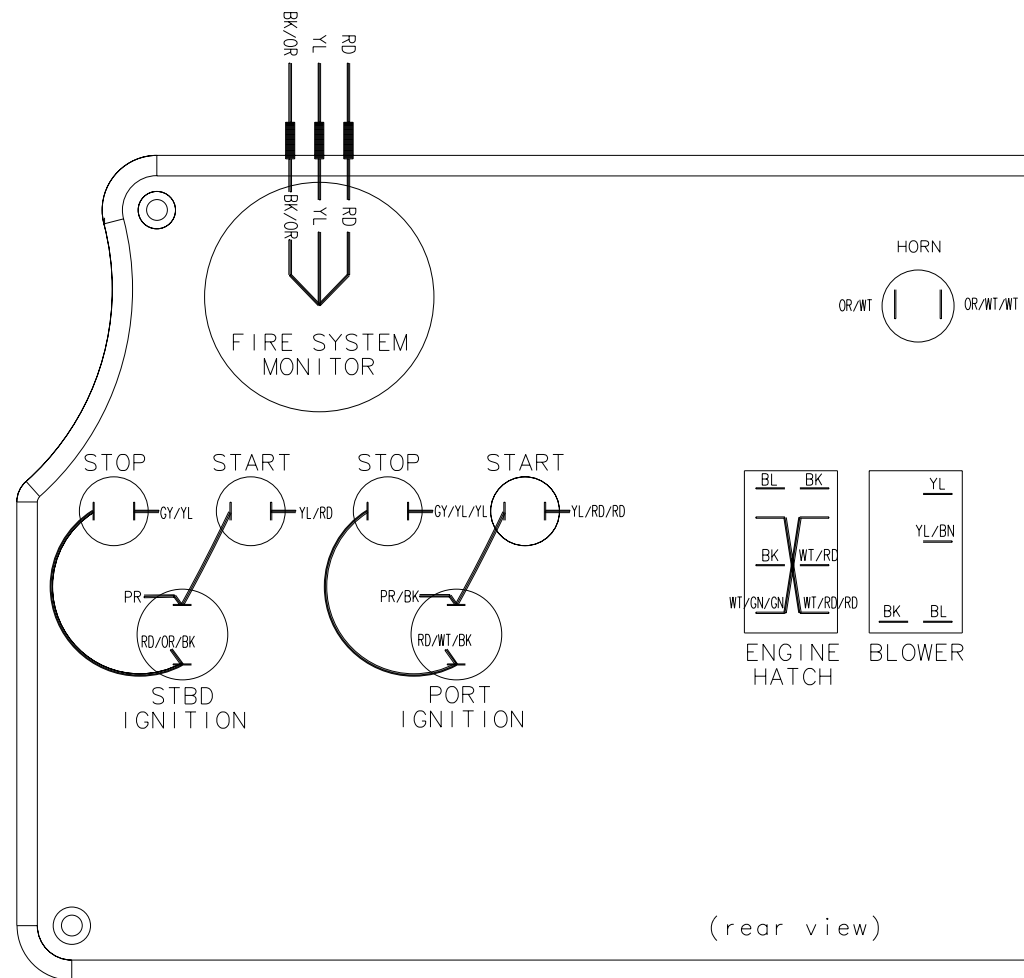
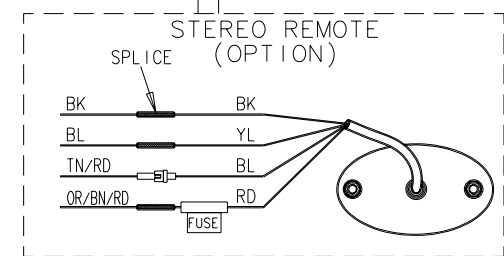
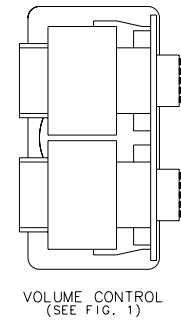
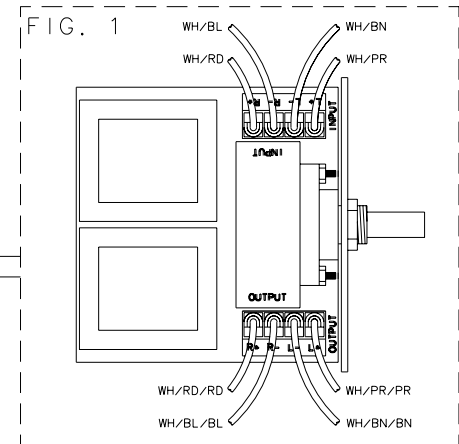


THUNDERBIRD  
PRODUCTS  
ENGINEERING

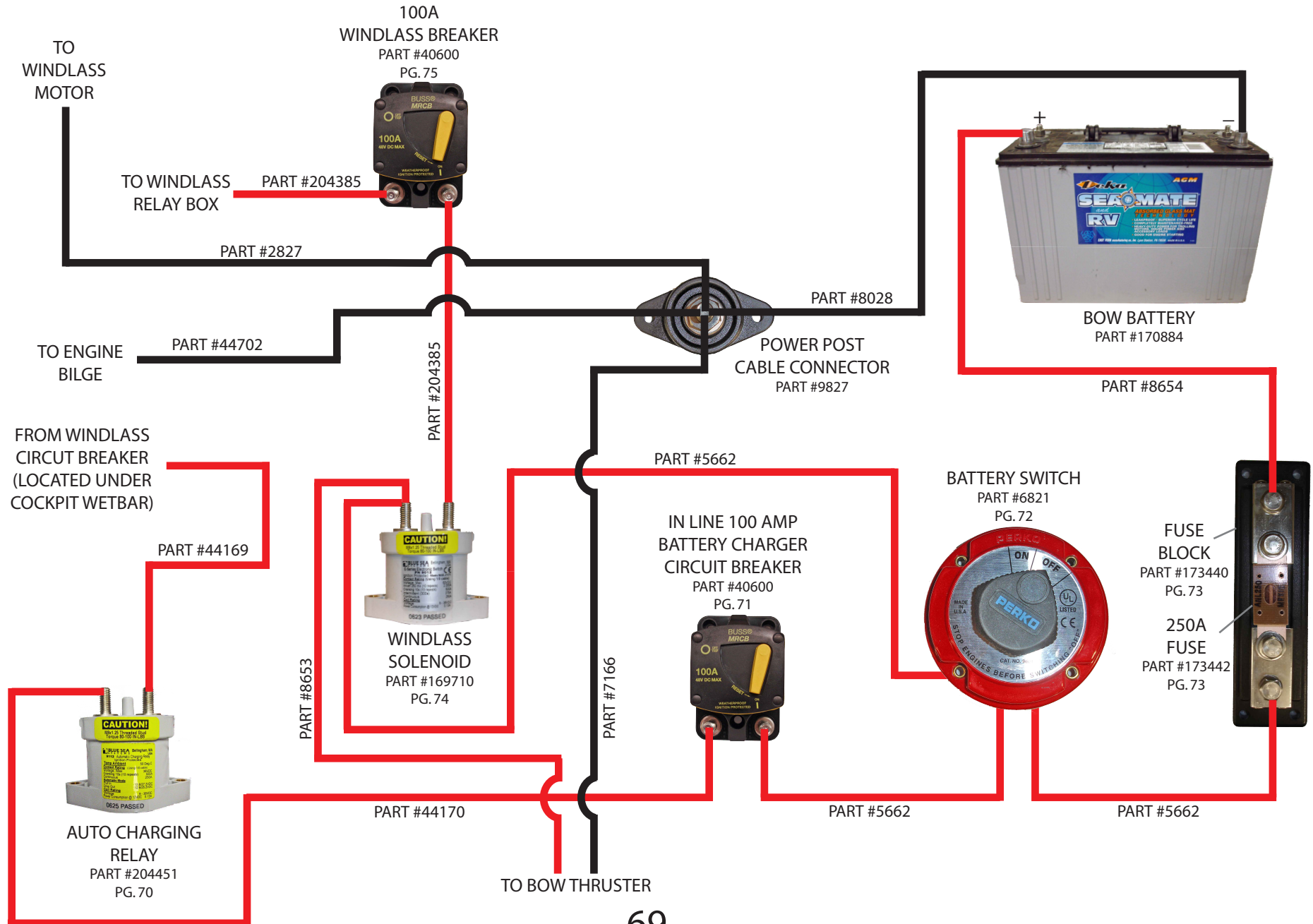
TITLE: SEAKEY

MOD.: 31PC  
DR BY: DJT

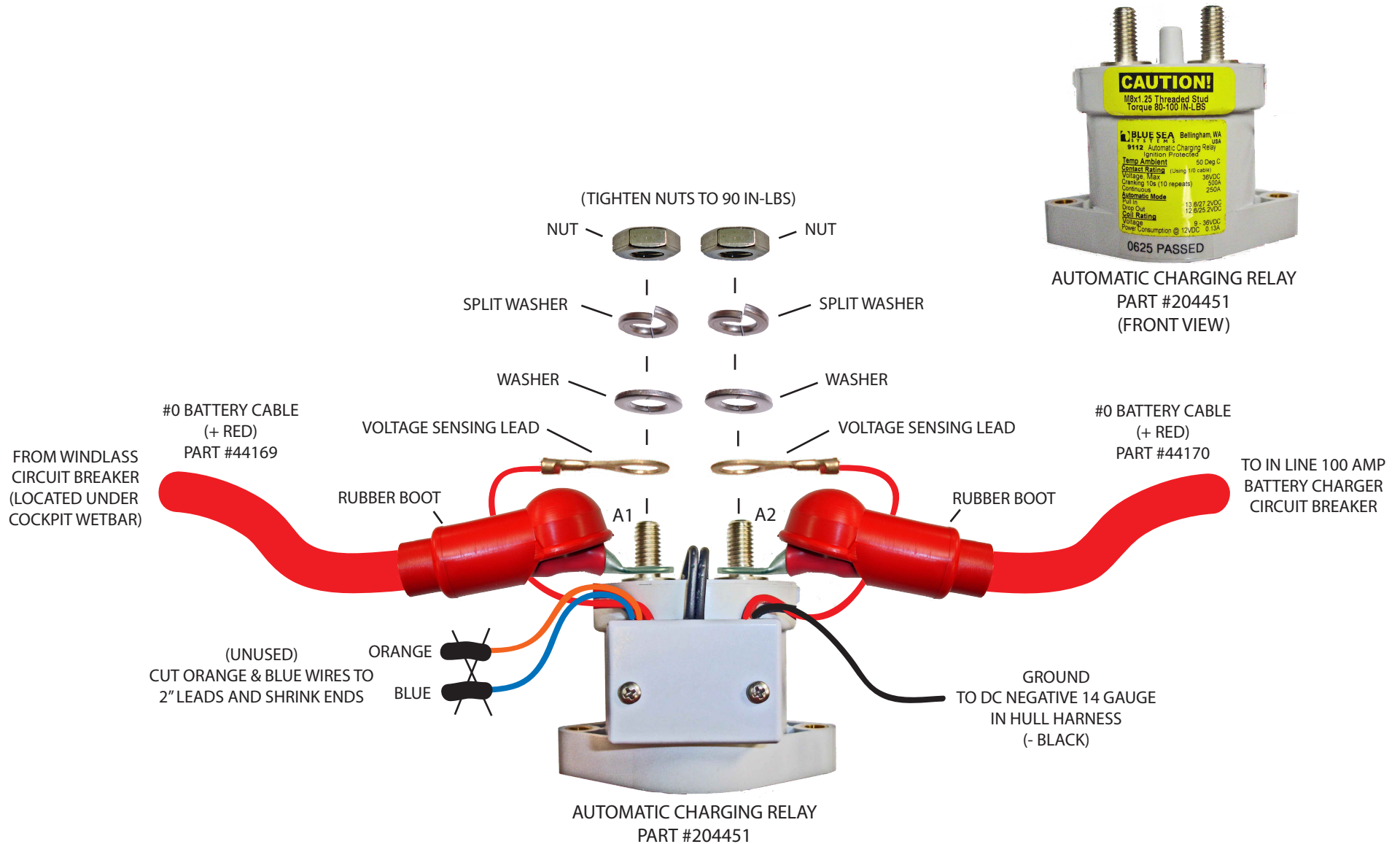
67



# BOW THRUSTER / WINDLASS WIRING DIAGRAM

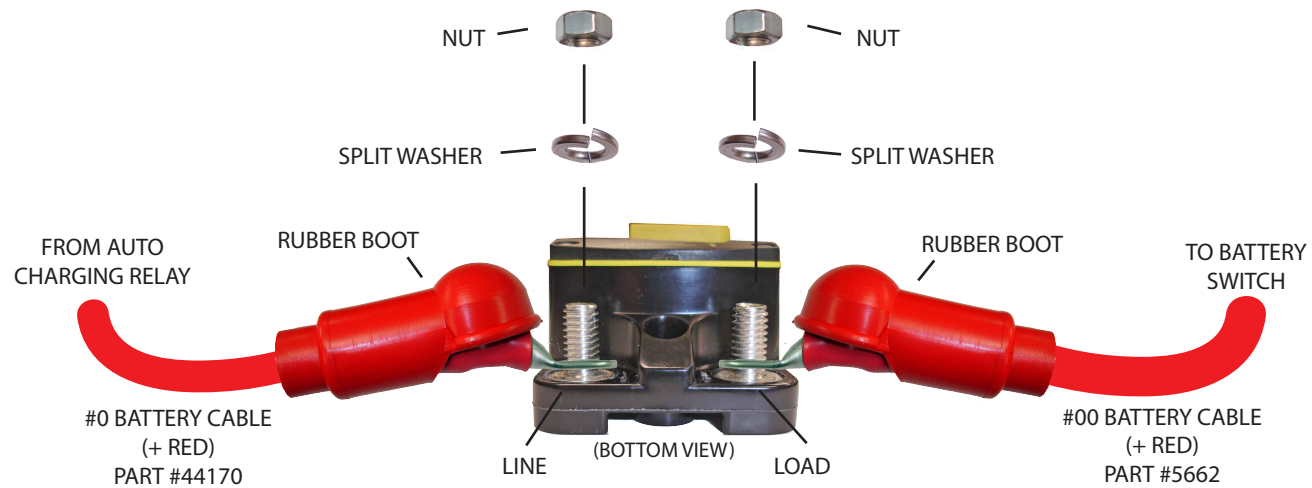


# AUTOMATIC CHARGING RELAY



THIS DOCUMENT ILLUSTRATES THE INSTALLATION SEQUENCE OF THE BATTERY CABLES AND HARDWARE.

# 100 AMP BATTERY CHARGER BREAKER



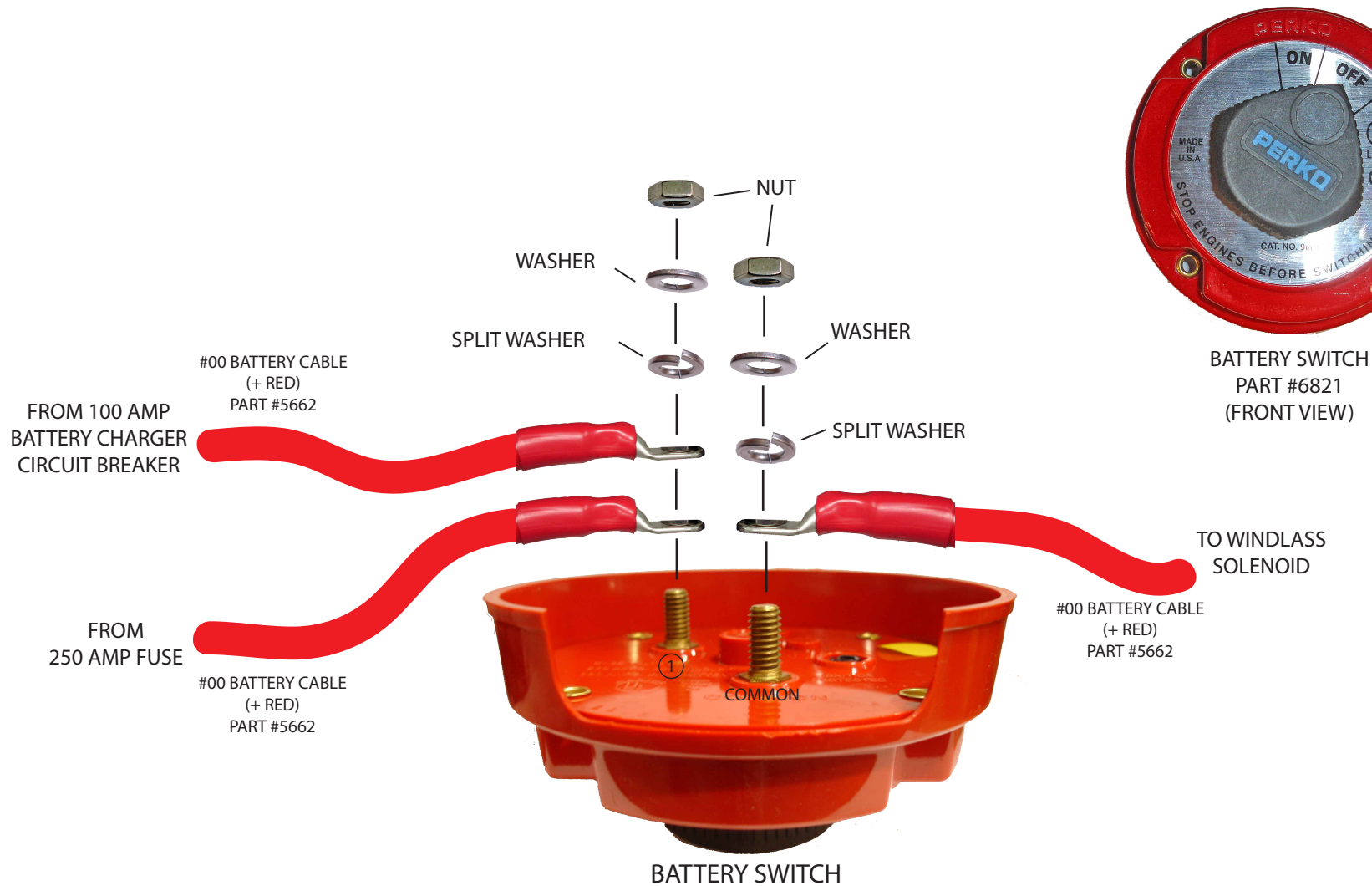
## IN LINE 100 AMP BATTERY CHARGER CIRCUIT BREAKER



PART #40600

THIS DOCUMENT ILLUSTRATES THE INSTALLATION SEQUENCE OF THE BATTERY CABLES AND HARDWARE.

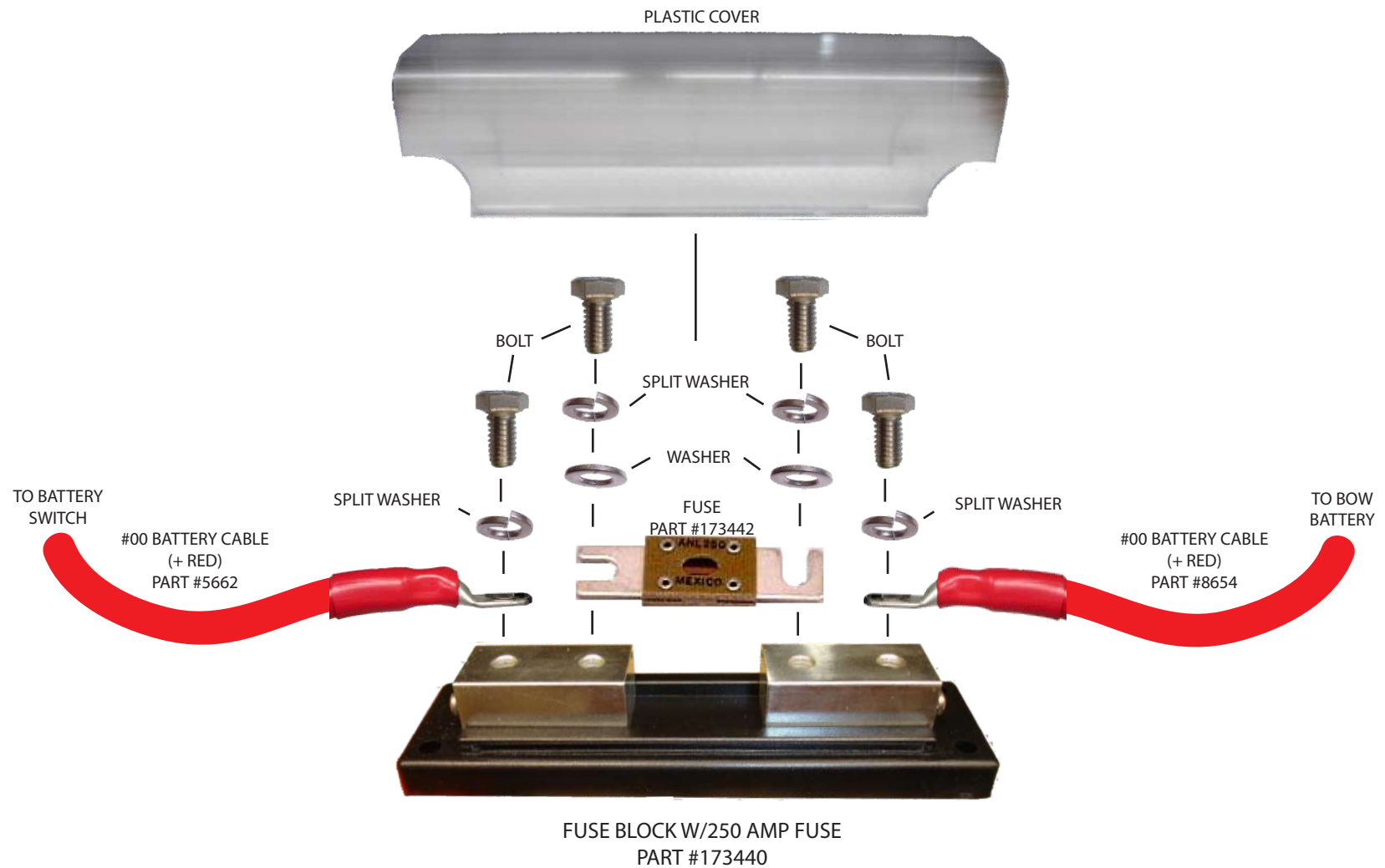
# BATTERY SWITCH



THIS DOCUMENT ILLUSTRATES THE INSTALLATION SEQUENCE OF THE BATTERY CABLES AND HARDWARE

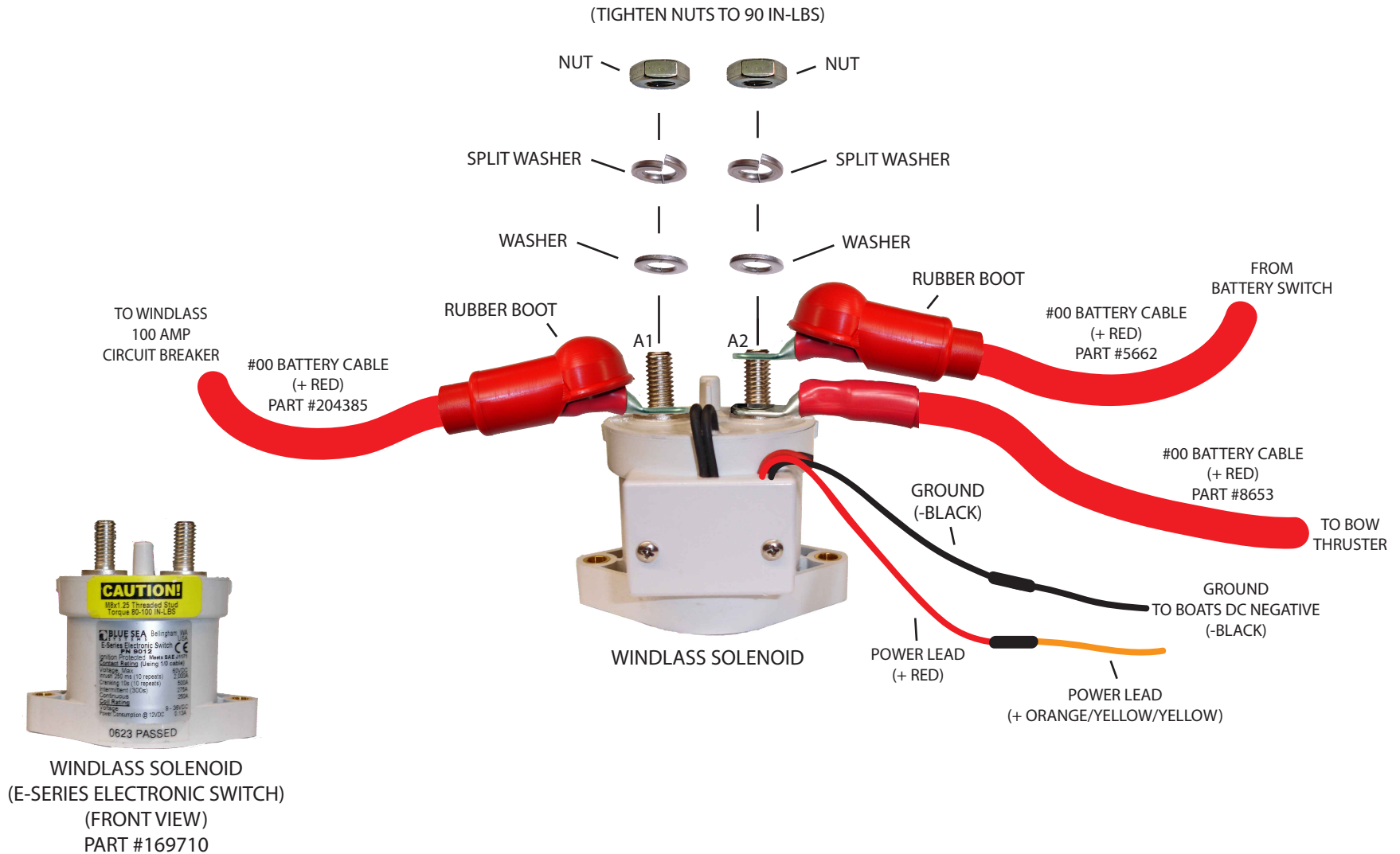


# 250 AMP FUSE



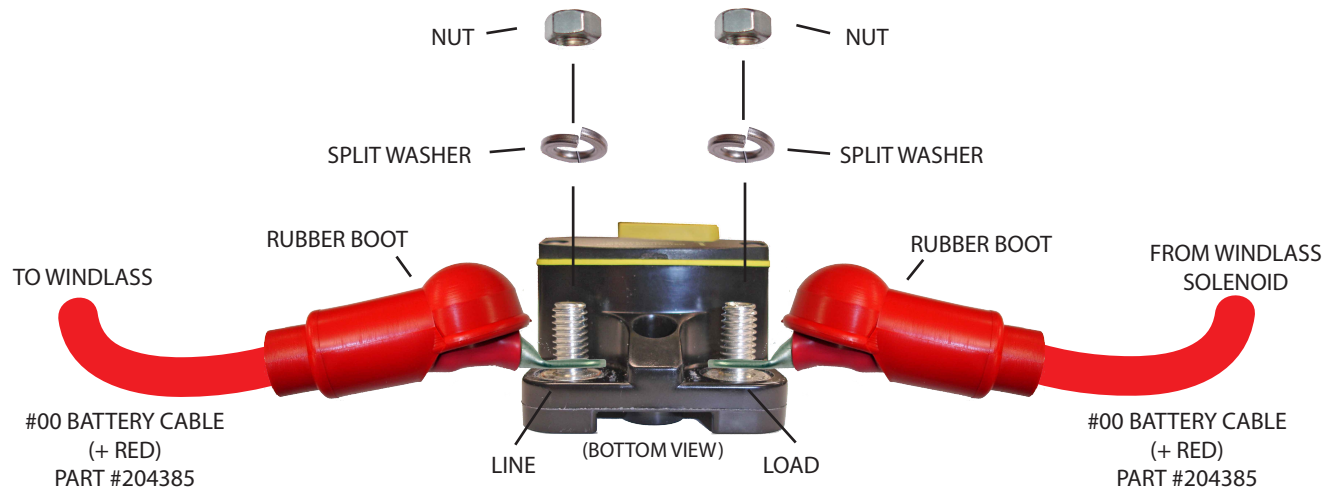
THIS DOCUMENT ILLUSTRATES THE INSTALLATION SEQUENCE OF THE BATTERY CABLES AND HARDWARE.

# SWITCH SOLENOID (WINDLASS)



THIS DOCUMENT ILLUSTRATES THE INSTALLATION SEQUENCE OF THE BATTERY CABLES AND HARDWARE

# 100 AMP WINDLASS BREAKER



100 AMP  
WINDLASS BREAKER



PART #40600

THIS DOCUMENT ILLUSTRATES THE INSTALLATION SEQUENCE OF THE BATTERY CABLES AND HARDWARE.

## BOW THRUSTER/WINDLASS INSTALLED

