KNR 8.13 Plant Recovery Procedures

Originator:	Approved By:
Theophilus Moniz III	Albert F. Suchy

1. Purpose

The purpose of this procedure is to establish the guidelines for Main Engine Room Plant Recovery from “Dead Ship”.

2. Responsibility

It is the responsibility of the Chief Engineer to promulgate the instructions necessary to recover the vessel to a normal condition from a dead ship condition.

3. Procedure

DEAD SHIP START-UP PROCEDURE

The following steps define the procedures required to start a main engine/generator and supply power to the main propulsion system after a “Dead Ship” condition.

The main engines are fitted with air starters supplied with air stored in accumulators. The engine and generator control electronics are battery powered. The engine diesel oil and lube oil pumps are engine driven. The emergency generator has a battery starter, but power to the emergency switchboard should not be required to restart a main engine/generator as long as sufficient air reserves are present in the accumulators. Feedback from the Emergency Switchboard to the Main Switchboard is not required

The PMS 6000 system monitors and displays various alarm conditions and the CS 5000 controls the engine remote start/stop control. The battery for the PMS 6000, the CS 5000 and the engine/generator AC Control Module is charged by a battery charger powered from either the Main or Emergency Switchboard through the NORMAL/EMERGENCY transfer switch. Power to the Emergency Switchboard would be required to replenish the air accumulator or recharge totally depleted batteries.

Reset to Normal Power from Emergency Power. Move switch from “AUTO TRANS. TO NORMAL” to “RESET TO NORMAL”. Breakers will switch automatically and emergency generator can be secured.

Assuming the air accumulator has been depleted, start the emergency generator and start the air compressor. When the accumulator has been filled, begin the Main Engine start procedure.

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Completely Dead Ship

1. In the Upper Machinery (SCR) Room, turn ON the hands off control (HOC) circuit breaker located in the Bus Links cubicle to supply D.C. power to the Main Engine AC Modules. (Refer to Section 1-1 of the Ross Hill Manual.)

   NOTE: Once the generator exciter is activated, the AC Module is powered from the main bus.

2. Check/reset the AC Module alarm circuits by pushing the annunciator-reset button on the front of the module.

3. Verify all engine alarms on the PMS 6000 alarm system are cleared or understood.

4. On the generator cubicle, position the Frequency Control switch of the engine to be started to the ECC position. On the Bus Link cubicle, position the Synchronization location control switch to the ECC position.

5. The Engineers Control Console (ECC) must be manned, as all further operations will be continued there. Ensure all engine pre-starting inspections and preparations have been completed

6. Start engines in the normal start-up manner. Place on line as per Ross Hill Manual section 1-08-01-14. Engines #1-3 can go on line without stripping the electrical board. For #4 strip the board for ease of coming on line.

7. A number of equipment must be reset after a loss of power. Upon restoration of power, reset the equipment listed on the next page.

LIST OF EQUIPMENT TO BE RESET
UPON RESTORATION OF SHIPS POWER

Reset emergency power buss to normal ships power

Move switch from emergency generator to reset to normal. Switch is located on the Emergency diesel switchboard

Reset ventilation circuit breaker P-412 located on the 480 panel in the Engine Control Room (ECC) for Engine Room vent, Auxiliary Machinery Room and Machine Shop.

Main deck:

Exhaust Fan	1P-412	Bosun locker aft bulkhead
Supply Fan	8P-412	Main deck passage forward bulkhead
Exhaust Fan	7P-412	Main deck passage forward under ladder
Supply Fan	5P-412	Main deck passage forward under ladder
Galley		
Exhaust fan	3P-412	Outside galley door

Reset dampers first, (handles have dark red ball):

1 above steam kettle
1 above steam kettle in overhead
1 above stove top
1 above dishwasher in overhead

Exhaust Fan	9P-412	Outside hospital
Recirc. Fan	6P-412	Outside hospital
Recirc. Fan	2P-412-1	Main lab Starboard
Supply Fan	7P-412-1	Main lab Starboard

1st Platform:

Supply Fan	5P-412-1	Port side thruster room
Exhaust Fan	4P-412-1	Starboard side thruster room
Supply Fan	1P-403	Port motor room
Recirc. Fan	8P-403	Port motor room
Exhaust Fan	2P-403	Starboard motor room
Exhaust Fan	8P-403	Center line at from 84
Recirc. Fan	3P-412	Outside bosun's cabin 2-79-1

01 Deck:

Recirc Fan	4P-403	Outside radio room
Exhaust Fan	2P-412	Upper lab
Recirc Fan	1P-412-1	Upper Lab

Other equipment to reset:

Potable water pumps
MSD Unit
#1 air compressor
AC/Reefer compressors
Potable water heaters
Purifiers
Boiler/Electric Heater if in use
Hot water circulating pumps if being used (Important in cold weather)
Salt water circulating pumps
MG sets
Ozone unit