

D 7000 Class. STARTING SEQUENCE (CONTROL). Reference Drg. H21

NOTE. The Engine Start Isolation Switch, Control Circuit Breaker and Fuel Transfer Isolation Switch must be "made" (i.e. electrically closed).

<u>No. of Item Marked on Drg.</u>	<u>Name of Item.</u>	<u>Resulting Operation.</u>
1	Battery Isolating Switch(B.I.S.)	Switch to be made.
2	Fuel Pump	Pump now runs.
3	Vapor Watchman	Electrical supply available for Vapor Watchman through R.O.P.S.
4	Control Circuit Breaker	Switch is in "ON" position.
5	Master Key	Insert Key and select direction.
6	Cab Start Button	Press.
7	Oil Priming Pump Contactor (O.P.C)	Coils(Solenoid) now energised.
<u>BLUE PENCIL SEQUENCE.</u>		
8	O.P.C. Contacts	Contacts now made.
9	Lub. Oil Priming Pump	Pump now runs.
10	Lub. Oil Pressure Switch	Contacts move and make at 15 p.s.i.
11	O.P.C. Contacts	Contacts make at the same time as item 8
12	Cooling Water Temp.	Contacts move with increase of temp. and make at 43 ⁰ C.
13	Starting Relay (SR)	Coil(Solenoid) now energised.
14a.	SR Contacts.	Contacts move and make so by-passing R.O.P.S. (dotted blue line)
14b.	SR Contacts.	Move and make
15	Starting Contactor 1	Coil(Solenoid) now energised.
15a.	Starting Contactor 1	Contacts move and make (MAIN POWER)
15b.	Starting Contactor 1	Contacts move and make (AUXILIARY)
16	Starting Contactor 2	Coil (Solenoid) now energised.
17	Starting Contactor 2	Contacts move and make (MAIN POWER)
18	Dyno Starter	Circuit now completed from Battery to Dynostarter.

D 7000 STARTING SEQUENCE (Continued).RED PENCIL SEQUENCE.

<u>No. of Item Marked on Drg</u>	<u>Name of Item.</u>	<u>Resulting Operation.</u>
19	Engine Overspeed Protection Unit(E.O.P.U)	Electrical contacts normally made.
20	Local Stop	Electrical contacts normally made.
21	Water level switches	Electrical contacts normally made.
14a	SR Contacts	Contacts have been made.
22	Engine Run Valve	Energised. Fuel Oil now available Engine Fires.
23	Run Oil Pressure Switch	Mechanical Lub Oil Pump rotates and at 40 p.s.i. R.O.P.S. contacts move and make. This provides an electrical circuit to RUN VALVE SO CAB START button can be released with the consequent breaking of SR contacts 14 a.

This drawing shows an engine can be shut down for

- a. Engine Overspeeding
- b. Low Water Level.
- c. Low Lubricating Oil Pressure.

DIESEL TRAINING SCHOOL, SWINDON.