



- A CONTROL AIR SUPPLY UNIT
- B FUEL SUPPLY
- D SERVO OIL SUPPLY
- E VALVE UNIT FOR START
- H INSTRUMENT PANEL
- I PRESSURE SWITCHES AND PRESSURE TRANSMITTERS
- K LOCAL CONTROL PANEL

1. SPEED SETTING SYSTEM
 - 1.01 CRANK ANGLE SENSOR UNIT
 - 1.04 SPEED PICK-UPS
2. STARTING SYSTEM
 - 2.03 SHUT OFF VALVE FOR STARTING AIR
 - 2.04 NON-RETURN VALVE
 - 2.05 CONTROL VALVE
 - 2.06 DRAIN AND TEST VALVE
 - 2.07 STARTING VALVE
 - 2.08 FLAME ARRESTER
 - 2.09 RELIEF VALVE
 - 2.10 HANDWHEEL FOR SHUT OFF VALVE
 - 2.13 BLOCKING VALVE ON TURNING GEAR
 - 2.21 VENTING VALVE
 - 2.27 VENTING VALVE

3. FUEL SYSTEM
 - 3.01 FUEL INJECTION VALVE
 - 3.02 INJECTION CONTROL UNIT
 - 3.03 FUEL QUANTITY SENSOR
 - 3.05 FUEL RAIL
 - 3.06 FUEL PRESSURE CONTROL VALVE
 - 3.08 FUEL SHUTDOWN PILOT VALVE
 - 3.10 LEVEL SWITCH
 - 3.14 FUEL PUMP
 - 3.15 FUEL BOOSTER PUMP (PLANT)
 - 3.17 INSPECTION POINT
 - 3.19 CUT-OUT DEVICE (TOOL)
 - 3.21 FUEL PUMP ACTUATOR
 - 3.22 NON-RETURN VALVE
 - 3.24 FUEL INLET PIPE
 - 3.29 FUEL RISING PIPE
 - 3.39 PLUG
 - 3.40 STOP VALVE
 - 3.41 INJECTION CONTROL VALVE
 - 3.42 FUEL QUANTITY PISTON
 - 3.43 ACTUATOR PISTON
 - 3.46 FUEL LEAKAGE PIPE
 - 3.47 INJECTION PIPE
 - 3.48 FUEL LEAKAGE PIPE PRESSURIZED
 - 3.49 FUEL LEAKAGE PIPE INJECTOR
 - 3.52 FUEL OVERPRESSURE SAFETY VALVE
 - 3.53 PRESSURE RETAINING VALVE
 - 3.55 CAMSHAFT
 - 3.67 NON-RETURN VALVE
 - 3.76 RAIL VALVE
 - 3.77-1 PRESSURE TRANSMITTER
 - 3.77-2 PRESSURE TRANSMITTER
 - 3.81-1 NON-RETURN VALVE
 - 3.81-2 NON-RETURN VALVE
 - 3.81-3 NON-RETURN VALVE

4. EXHAUST VALVE DRIVE
 - 4.01 EXHAUST VALVE
 - 4.02 AIR SPRING
 - 4.03 VALVE DRIVE
 - 4.06 NON-RETURN VALVE WITH THROTTLE
 - 4.08 AIR SPRING VENTING
 - 4.10 EXHAUST VALVE ACTUATOR
 - 4.11 SERVO OIL RAIL
 - 4.14 LEAKAGE INSPECTION DEVICE
 - 4.15 SERVO OIL PUMP
 - 4.16 PRESSURE CONTROL VALVE
 - 4.17 INSPECTION POINT
 - 4.18 AUTOMATIC FILTER
 - 4.22 CRANKCASE
 - 4.23 SAFETY VALVE
 - 4.24-1 NON-RETURN VALVE
 - 4.24-2 NON-RETURN VALVE
 - 4.37 STOP VALVE
 - 4.39 GEAR WHEEL CRANKSHAFT
 - 4.41 INTERMEDIATE WHEEL SUPPLY UNIT
 - 4.42 GEAR WHEEL
 - 4.44 GEAR WHEEL
 - 4.45 PINION
 - 4.50 CARRIER WITH SHEARABLE OVERLOAD PROTECTION
 - 4.51 SUPPLY PIPE
 - 4.53 NON-RETURN VALVE
 - 4.54 FLOW SENSOR
 - 4.55 SERVO OIL RISING PIPE
 - 4.63 SERVO OIL RETURN PIPING
 - 4.64 PRESSURE RETAINING VALVE
 - 4.66 ACTUATOR PIPE
 - 4.68 DISC SPRING
 - 4.70-1 STROKE SENSOR
 - 4.70-2 STROKE SENSOR
 - 4.71 STROKE MEASURING DEVICE
 - 4.76 RAIL VALVE
 - 4.77-1 PRESSURE TRANSMITTER
 - 4.77-2 PRESSURE TRANSMITTER
 - 4.88 SERVO OIL SERVICE PUMP

7. MONITORING
 - 7.18 COLLECTOR FOR LEAKAGE OIL FROM AIR SPRING

8. CYLINDER LUBRICATING SYSTEM
 - 8.06 CYLINDER LUBRICATING PUMP
 - 8.11-1 PRESSURE REDUCING VALVE
 - 8.12 LUBRICATING OUILL WITH INJECTION NOZZLE
 - 8.13 NON-RETURN VALVE
 - 8.17 PIPING FILTER

9. ENGINE ROOM
 - 9.01 STARTING AIR BOTTLES

- LOW PRESSURE OIL CIRCUITS
- HIGH PRESSURE OIL CIRCUITS
- LOW PRESSURE FUEL CIRCUITS
- HIGH PRESSURE FUEL CIRCUITS
- HEATING
- CONTROL AIR CIRCUITS
- STARTING AIR CIRCUITS

PULSE LUBRICATION

Engine type	7-52.391	28.03.07		
Number	7-74.085	03.07.09		
Scale	1:1			
Author	J. Schiller	16.03.07		
Checked				
Approved				
ENGINE CONTROL DIAGRAM				
DENS-9520 / WECS-9520				
Scale	1:1			
Sheet	4003			
Project	150/2788			
Drawn				
Checked				
Approved				
O-107.383.325				
WARTSILA				

SURFACE PROTECTION SEE GROUP 6544
GENERAL TOLERANCES ACCORDING TO ISO 2768-mS