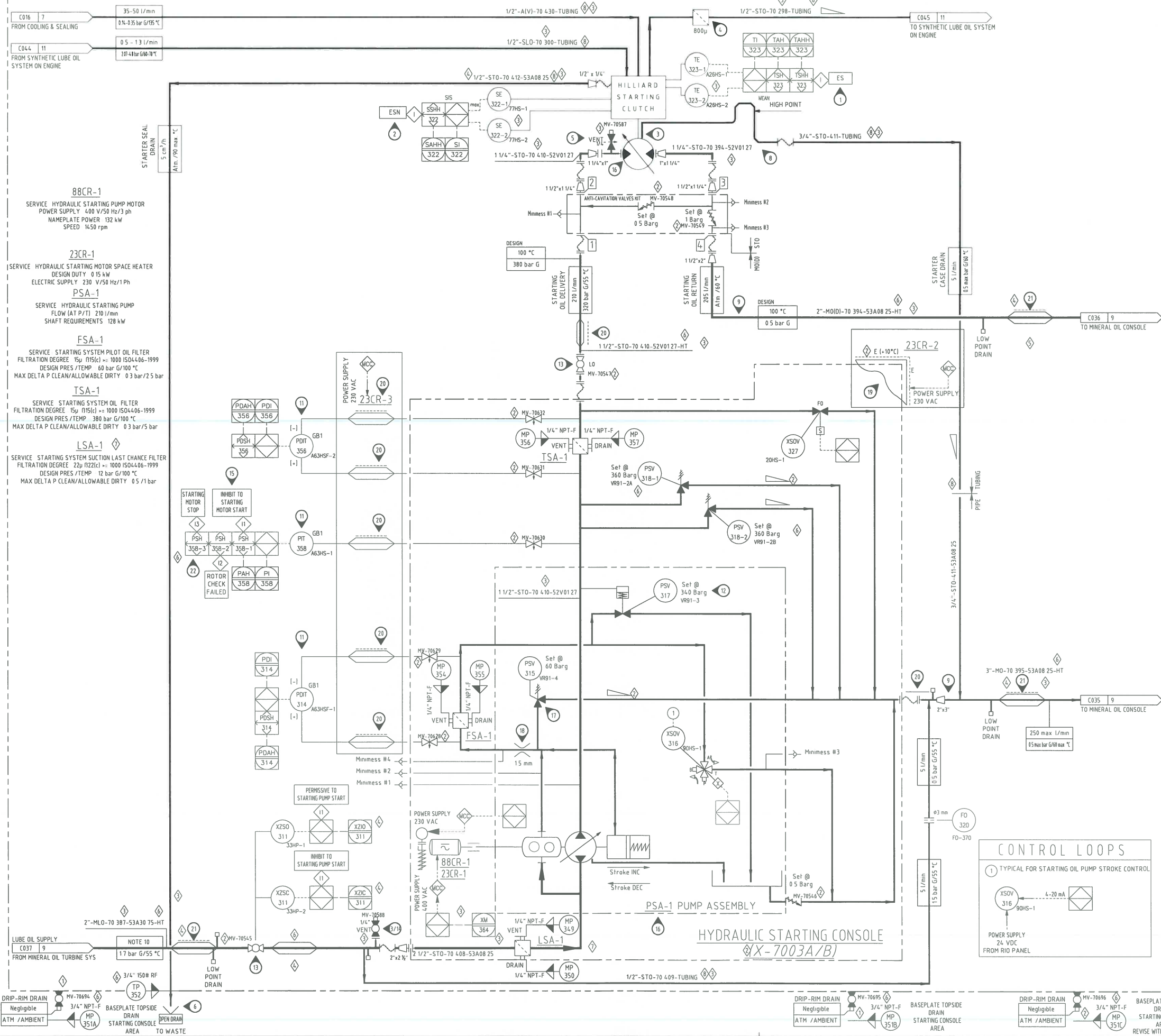


# TURBOUNIT BASEPLATE/ENCLOSURE



## NOTES

- IF DIFFERENTIAL TEMPERATURE BETWEEN (A26HS-1/2) - (TLUB-A/B) >25 °C ALARM, IF DIFFERENTIAL TEMPERATURE BETWEEN (A26HS-1/2) - (TLUB-A/B) >30 °C ES
- ALARM IF SPEED >4968 rpm DURING START-UP SHUTDOWN IF SPEED >5400 rpm SHUTDOWN IF SPEED >900 rpm 20 sec AFTER STARTING PUMP MOTOR STOP
- STARTER CASE DRAIN PORT (TOPSIDE CONNECTION)
- LAST CHANCE MESH FILTER
- STARTER UPSTREAM PIPING NETWORK MUST BE PROPERLY VENTED BEFORE FIRST STARTUP OR AFTER ANY MAINTENANCE THAT REQUIRED PIPING DISMANTLING LACK OF ABOVE PRESCRIPTION MAY RESULTS IN HARDWARE DAMAGE
- TO BE LEFT OPEN TO ATMOSPHERE AND VISIBLE IN ORDER TO ALLOW FLOW MONITORING DO NOT COLLECT TO ANY OTHER DRAIN NO BACKPRESSURE IS ALLOWED
- IF NOT OTHERWISE INDICATE, ALL THE HYDRAULIC STARTING SYSTEM IS COMPOSED BY RUBBER FLEXIBLE HOSE LINES AND BLOCKS SUITABLE FOR MAXIMUM PRESSURE AS FOLLOWS  
- DESIGN PRESSURE PIPES = 380 Barg  
- DESIGN PRESSURE BLOCKS = 360 Barg
- HYDRAULIC GUARD (CASE DRAIN LINE HIGH POINT) TO MAINTAIN STARTER HOUSING FULL OF OIL AND GUARANTEE PROPER BEARINGS LUBRICATION
- MAX PRESSURE DROP OF RETURN TO TANK PIPE 0.5 Bar
- STEADY STATE FLOW TO HYDRAULIC STARTING SYSTEM  
- 5 l/min IN CASE OF WINTERIZATION  
- 0 l/min IN CASE OF NO WINTERIZATION  
TRANSIENT FLOW TO HYDRAULIC STARTING SYSTEM  
- 250 l/min MAX ONLY DURING TURBINE START-UP
- THE GB1 LOCATED ON SYNTHETIC OIL CONSOLE) TO BE ARRANGED WITH SUFFICIENT ROOM FOR FUTURE INSTALLATION OF PRESSURE INDICATORS FOR A63HSF-1, A63HSF-2 AND A63HS-1
- VR91-3 IS A 'PRESSURE CUTOFF DEVICE' INT PSA-1 PUMP BODY AT PSA-1 DELIVERY PRE LOWER THAN 340 BARG THE PUMP ACTUAL STROKE S ONLY FUNCTION OF 4 TO 20 mA SENT TO 90HS-1 PROPORTIONAL VALVE WHEN PSA-1 PUMP DELIVERY PRESSURE REACH 340 BARG THE PRESSURE CUTOFF DEVICE OVERRIDE THE 90HS-1, ADJUSTING THE PSA 1 PUMP ACTUAL STROKE TO AVOID THE DELIVERY PRESSURE TO FURTHER INCREASE AT ITS MAXIMUM EXTENT (IE IN CASE OF MANUAL VALVE ON DELIVERY FULLY CLOSED), THE PRESSURE CUTOFF DEVICE IS CAPABLE OF SET THE PUMP STROKE TO VIRTUAL ZERO RESULTING IN NO DELIVERED FLOW, MAINTAINING THE 340 BARG PRESSURE VALUE ON DELIVERY SIDE
- LOCATE THE VALVE AS CLOSE AS POSSIBLE TO HYDRAULIC STARTING CONSOLE THE VALVE MUST BE CLOSED FOR ANY MAINTENANCE ON STARTING PUMP MOTOR WHEN THE GAS TURBINE IS IN OPERATION
- PUMP UPSTREAM PIPING NETWORK MUST BE PROPERLY VENTED BEFORE FIRST STARTUP OR AFTER ANY MAINTENANCE THAT REQUIRED PIPING DISMANTLING LACK OF ABOVE PRESCRIPTION MAY RESULTS IN HARDWARE DAMAGE
- PAH ALARM AND PUMP MOTOR STOP INTERLOCK TO BE ACTIVATED AT PUMP MOTOR START AND DEACTIVATED AT 90HS-1 RAMP INITIATION
- STARTING PUMP AND STARTING MOTOR BODY MUST BE FILLED BEFORE FIRST START WITH AROUND 2.5-3.0 LITERS OF MINERAL LUBRICATING OIL (SAME IN USE IN THE MINERAL OIL RESERVOIR) LACK OF COMPLY WITH THIS PRESCRIPTION MAY RESULT IN HARDWARE DAMAGE
- VR91-4 IS INTEGRAL IN PSA-1 PUMP BODY
- EMBEDDED INSIDE PSA 1 PUMP BODY
- 23CR-2 HEATING - THERMAL SHIELD INCLUDES THE PSA-1 PUMP AREA AND ASSOCIATED COMPONENTS SUCH AS HYDRAULIC BLOCKS, FILTERS FSA 1 AND TSA-1, 20HS-1 SOLENOID VALVE 90HS 1 PROPORTIONAL VALVE, VR91 2 VR91 3 AN VR91 4 VALVES
- THE TUBING OF A63HSF 1/2 & A63HS 1 PRESSURE INSTRUMENTS TO BE INSULATED AND HEAT TRACED BY GENP UP TO SYNTHETIC OIL CONSOLE EDGE PUMP SUCTION, DELIVERY AND OIL DRAIN PIPES TO BE INSULATED AND HEAT TRACED FROM BASEPLATE TO PUMP
- ENTIRE OIL SUPPLY LINE FROM MINERAL OIL CONSOLE TO STARTING CONSOLE TO BE TRACED AND INSULATED BY CUSTOMER (PIPING BELOW BASEPLATE)
- THE FUNCTION IS ACTIVE ONLY DURING THE ROTATIONAL CHECK PHASE

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VENDOR : GE Nuova Pignone (AMEC FW)									
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REV	DATE	DESCRIPTION				DRN	CHK	APP	CLT

E Q U			
NP TAG n°	DESCRIPTION	CUSTOMER TAG n°	
PSA-1	HYDRAULIC START NG PUMP	X-7001A	X-7001B
88CR-1	HYDR STARTING PUMP MOTOR	P-7004A	P-7004B
FSA-1	HYDR STARTING FILTER MAIN	PM-7004A	PM-7004B
TSA-1	HYDR STARTING FILTER STAND-BY	F-7004A	F-7004B
23CR-1	ANTICONDENSATION HEATER	F-7003A	F-7003B
23CR-2	HYDR STARTING HEAT TRACING	PMH-7004A	PMH-7004B
23CR-3	INSTRUMENT TUBING HEAT TRACING	HTE-7003A	HTE-7003B
-	HYDRAULIC STARTING CONSOLE	HTE-7004A	HTE-7004B
LSA-1	STARTING SYSTEM SUCTION LAST CHANCE FILTER	X-7003A	X-7003B
		F-7080A	F-7080B
TITLE HYDRAULIC STARTING P&I DIAGRAM		DOCUMENT CODE	REVISION
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