



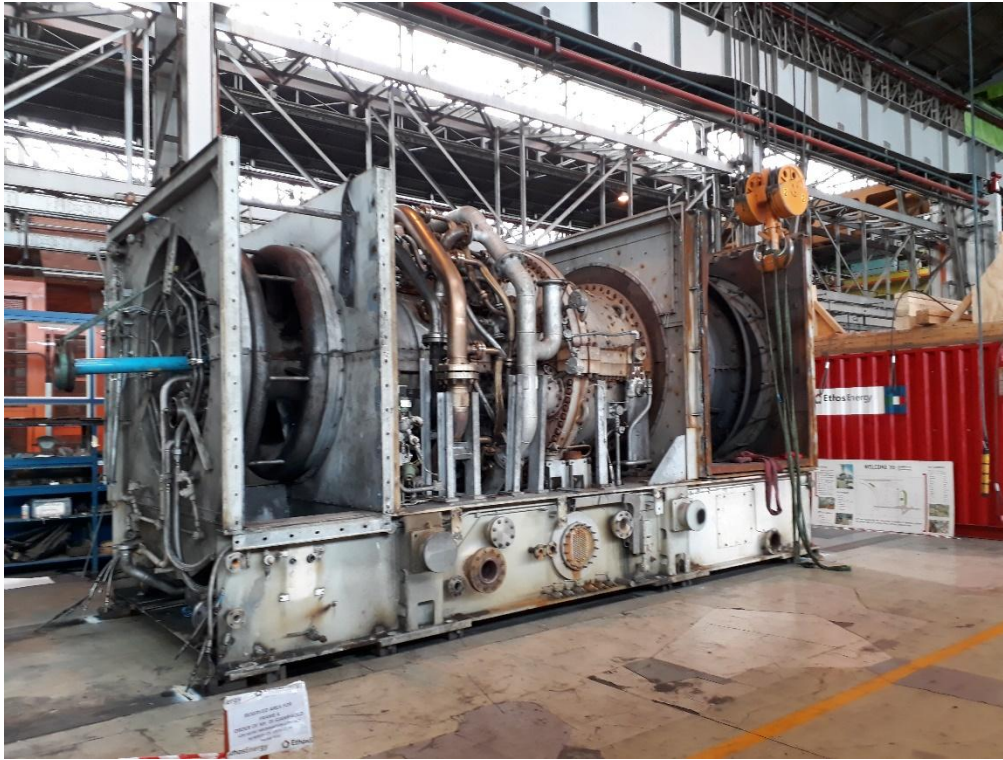
# EthosEnergy

## Frame 6B pre-owned Equipment list



## FRAME 6B GAS TURBINE

Gas Turbine is a General Electric MS 6541B (Frame 6B), manufactured in Italy by Nuovo Pignone.



Gas Turbine		
Manufacturer	[--]	General Electric (Nuovo Pignone)
Model	[--]	MS 6541B (Frame 6B) with Extendor upgrade kit
Serial	[--]	0296528
1st synchronizing	[--]	Aug 1994
Operating Fire Hours	[--]	110538 at 01/05/2010
Fuel		
- main	[--]	Natural gas
- backup	[--]	Diesel oil (never run)
Power @ base load, ISO conditions	[MWe]	39,340 (gas) 37,520 (oil – never run)
Heat rate @ base load, ISO conditions	[kJ/kWh]	11,460 (gas) 11,570 (oil – never run)
Speed	[rpm]	5100
Control system	[--]	Speedtronic MarkV (was MarkIV, upgraded in 2000)
Design temperature		
inlet air	[°C]	15
exhaust air	[°C]	540 ÷ 550 after installation of the Extendor kit (was originally 515°C)
Cooling system	[--]	Air-type for stator Water type for legs
Starting device	[--]	electric motor + torque converter
Mounting	[--]	Skid base

#### Compressor section details:

Compressor		
Type	[--]	Axial
Number of stages	[--]	17
Inlet flange	[--]	horizontal
Nominal Speed	[rpm]	5100
Inlet guide vanes	[--]	Regulating I.G.V.

#### Combustion section details:

Combustors		
Number of combustion chamber	[--]	10
Number of spark-plugs	[--]	2, electrode type
Flame detectors (number, type)	[--]	4, UV type
Conventional / DLN	[--]	Conventional
NOx reduction system		
type	[--]	steam injection
flow rate	[t/h]	9
pressure	[bar]	23,5
temperature	[°C]	298 ÷ 320°C
Fuel	[--]	Dual fuel (never run with diesel oil)

#### Turbine section details:

Turbine		
Number of stages	[--]	3
Nominal speed	[rpm]	5100



## MAIN GEARBOX

Gearbox		
Manufacturer	[--]	Flender-Graffenstaden
Model	[--]	TRL 65 CV
Speeds	[rpm]	in 5100 ; out 3000
Cooling	[--]	Oil





**Gearbox gears, during 2007 inspection**



## STARTING SECTION

About 700 starting performed during operation.

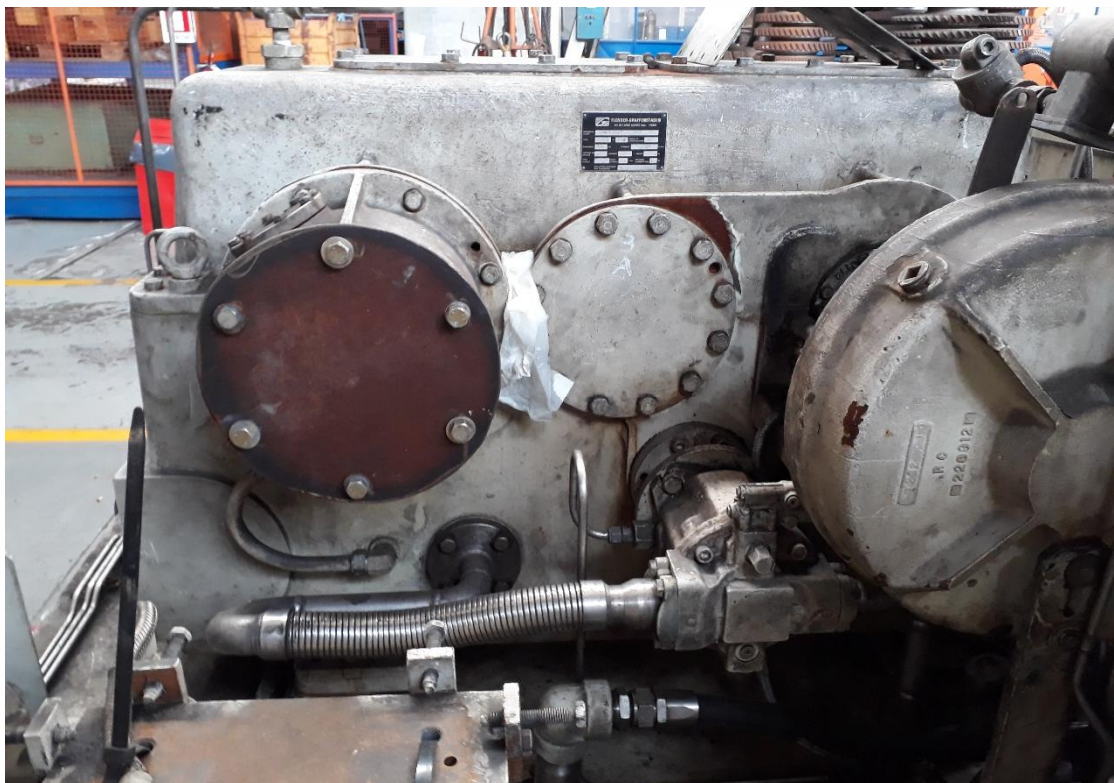
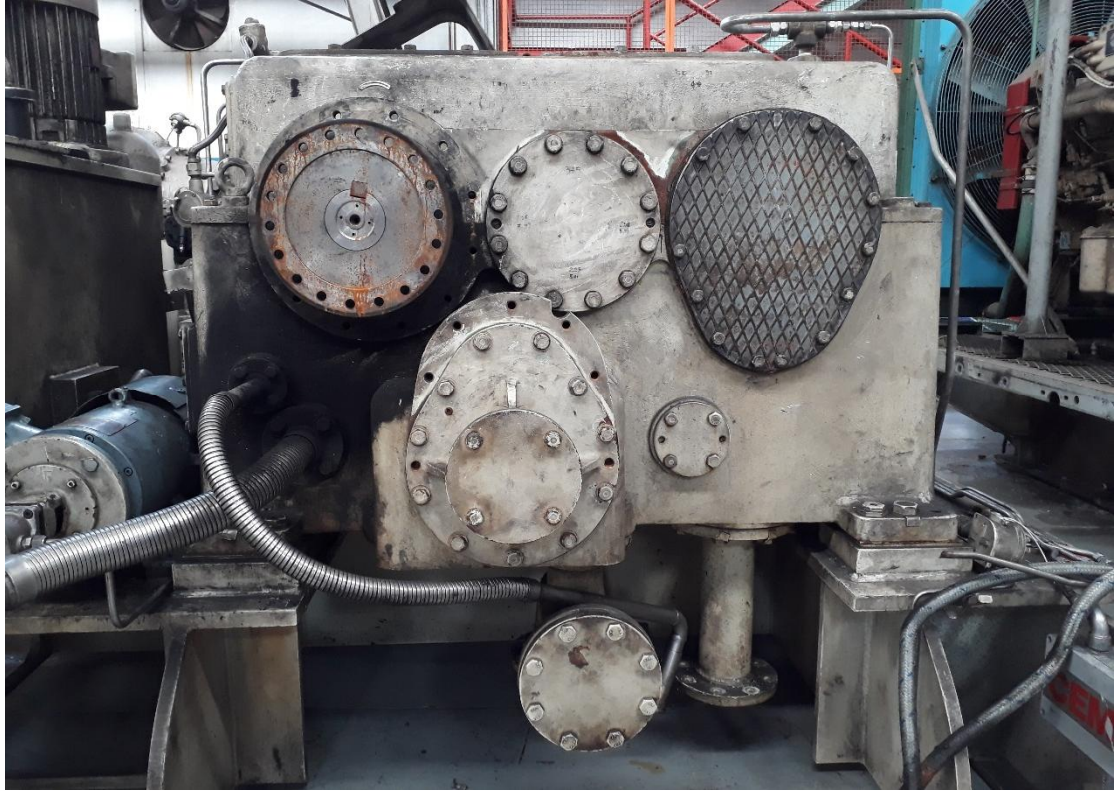
<u>Starting engine</u>		
Motor type	[--]	Electric
Manufacturer	[--]	GEC ALSTHOM
Model	[--]	AKG 400 L18
Serial	[--]	54EN14258
Rotor type	[--]	cage
Speeds	[rpm]	3000
Cooling	[--]	Self air-cooled
Electric motor		
rated power	[kW]	530
voltage level	[V]	6000
phases; poles; frequency	[ph; n; Hz]	3; 2; 50
nominal current	[A]	58,5
starting current / nominal current	[--]	5,7
Heaters (voltage, power)	[V ; W]	220 ; 300

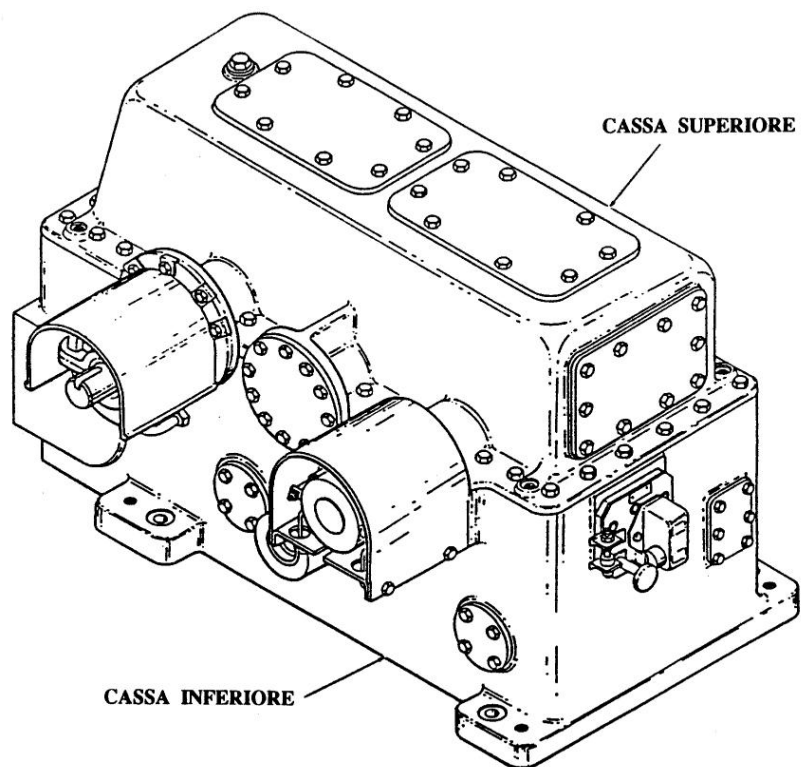






### Auxiliary Reduction Gearbox







## LUBE OIL ELECTRICAL PUMPS

Lube oil pump (auxiliary)		
Manufacturer	[--]	ARIS CHIAPPA
Model	[--]	CVTG 80-250
Year	[--]	1993
Number of units	[--]	1 x 100%
Electric motor		
Model	[--]	AP 225 M2
Rated power	[kW]	n/a
voltage level	[V]	380

Lube oil pump (emergency)		
Manufacturer	[--]	ARIS CHIAPPA
Model	[--]	CVTG 60-200
Year	[--]	1993
Number of units	[--]	1 x 100%
Electric motor		
rated power	[kW]	n/a
voltage level	[V]	n/a





## DISTILLATE OIL FLOW DIVIDER



## BLEED VALVES

