



APPROVED DOCUMENT

NOTES:
SHAFT STIFFNESS:-
THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE ϕ AND SHAFT EXTENSION ϕ IS $65,179 \times 10^6$ kgcm/radian (STIFFENING EFFECT OF MAIN ROTOR CORE IS NOT INCLUDED IN THIS FIGURE)
SHAFT MATERIAL:-
STEEL - C40E TO BSEN 10083-2 2006 (APPROVED BY MARINE AUTHORITIES WHEN APPROPRIATE)
MAXIMUM RECOMMENDED VIBRATORY STRESS LEVEL IN THE SHAFT IS 34.47×10^6 N/m² FOR SPEED RANGE OF 0.95 TO 1.1 X NOMINAL SPEED AND 68.94×10^6 N/m² FOR RUN THROUGH CONDITIONS, FOR INDUSTRIAL MACHINES. FOR MARINE AUTHORITIES, THEIR APPROPRIATE RULES WILL APPLY.

CUMMINS GENERATOR TECHNOLOGIES LTD SHOULD BE NOTIFIED OF ANY ROTORS NOT COMPLYING WITH THESE RULES. CUMMINS GENERATOR TECHNOLOGIES LTD BALANCE ROTORS TO COMPLY WITH INTERNATIONAL STD BS ISO 1940 PARTS 1 AND 2. BALANCE GRADE 2.5

FOR UNBALANCED MAGNETIC PULL (U.M.P.) REFER TO THE FACTORY.

COMPONENT	Wt kg	WR ² kgm ²
EX.ROTOR	46,791	0,7758
MAIN ROTOR	729,193	28,3983
FAN	28,800	1,6520
SHAFT	263,852	0,9035
P.MAG.ROTOR	6,970	0,0190
STUB SHAFT	0,929	0,0003
-	-	-
TOTAL	1076,535	31,7489

CONVERSION FACTORS		
TO CONVERT	TO	DIVIDE BY
kg	lb	0,453592
kg m ²	lb ft ²	0,04214
kgcm/rad	lbin/rad	1,1521246
N/m ²	lbf/in ²	6894,76

MOD'N	ISSUE	DRAWN	DATE	ALTERATION
5-0448-0	B	AJB	02.02.10	CHANGES TO STEEL SPECIFICATION; STANDARDS REFERENCES. CHANGE OF COMPANY NAME.
4/7252/2	A	AMH	27.4.04	ORIGINAL ISSUE

CERTIFIED PRINT (ONLY IF SIGNED)		
BY		
DATE		
DRAWN	AMH	27.4.04
CHECK	AJB	02.02.10
APPR'D	JKB	02.02.10

P7A TWO BEARING MOMENTS OF INERTIA AND SHAFT DETAILS	SCALE	FIRST W.O.
	NTS (SHEET 1:10)	UNIT OF MEASUREMENT MILLIMETRES (mm)
CUMMINS GENERATOR TECHNOLOGIES LTD.	L15-12974	ISSUE B