

CONVERSION FACTORS		
TO CONVERT	TO	DIVIDE BY
kg	lb	0.453592
kgm <sup>2</sup>	lbf ft <sup>2</sup>	0.04214
kgcm/rad	lbin/rad	1.1521246
N/m <sup>2</sup>	lbf/in <sup>2</sup>	6894.76

NOTES:-

SHAFT STIFFNESS:-

THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE  $\phi$  AND THE SHAFT EXTENSION  $\phi$  IS  $2.1329 \times 10^6$  kgcm/radian (STIFFENING EFFECT OF MAIN ROTOR CORE IS NOT INCLUDED IN THIS FIGURE)

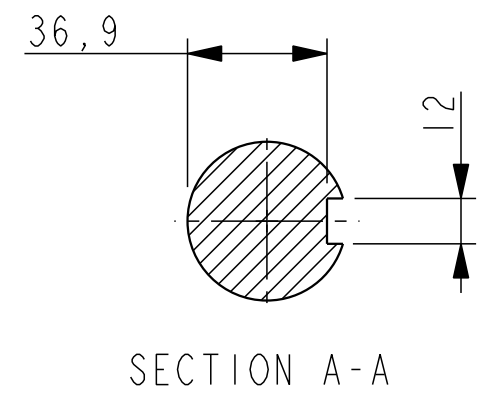
SHAFT MATERIAL:-

STEEL - C40E TO BSEN 10083-2 2006 (APPROVED BY MARINE AUTHORITIES WHEN APPROPRIATE) MAXIMUM RECOMMENDED VIBRATORY STRESS LEVEL IN THE SHAFT IS  $34.47 \times 10^6$  N/m<sup>2</sup> FOR SPEED RANGE OF 0.95 TO 1.1 x NOMINAL SPEED AND  $68.94 \times 10^6$  N/m<sup>2</sup> 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 ISO 1940 PARTS 1 AND 2 . BALANCE GRADE 2.5.

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



COMPONENT	MASS (kg)	WR <sup>2</sup> (kgm <sup>2</sup> )
SHAFT	7.937	0.0030
FAN	0.976	0.0067
MAIN ROTOR	13.207	0.0642
EXCITER ROTOR	3.495	0.0139
TOTAL WITHOUT EBG ROTOR	25.615	0.0878
EBG ROTOR	1.701	0.0017
TOTAL WITH EBG ROTOR	27.316	0.0895

APPROVED DOCUMENT

<b>CONFIDENTIAL</b> PROPERTY OF CUMMINS GENERATOR TECHNOLOGIES LTD.				P04D TWO BEARING MOMENTS OF INERTIA AND SHAFT DETAILS			
MATERIAL PROPS	-	DIMENSIONS IN MILLIMETRES (MM) AT 20°C	PROJECTION		SCALE	MATERIAL	
FINISH SPEC	-			3:10	--		
GEOMETRY SPEC	-	SURFACE FINISH VALUES IN MICRO METRES	WEIGHT =		DRG. SIZE	CASTING No	
ASSEMBLY SPEC	-		DRAWN	BSR	08/05/07	-	
PERFORMANCE SPEC	-	UNLIMITED DIMS ± 0.25	CHECKED	DSG	25/6/07	PART No	
QUALITY SPEC	-		APPROVED	DPC	25/6/07	L15-13188	ISSUE
				REL. PHASE		A	
				Pro/ENGINEER		SHEET 1 OF 1 SHEETS	

MOD.	ISSUE	DRAWN	DATE	MODIFICATION
4-8440-77	A	BSR	08/05/07	ORIGINAL ISSUE