

NOTES:-

SHAFT STIFFNESS:-

THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE  $\phi$  AND THE SHAFT EXTENSION  $\phi$  IS  $1.5833 \times 10^6$  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.

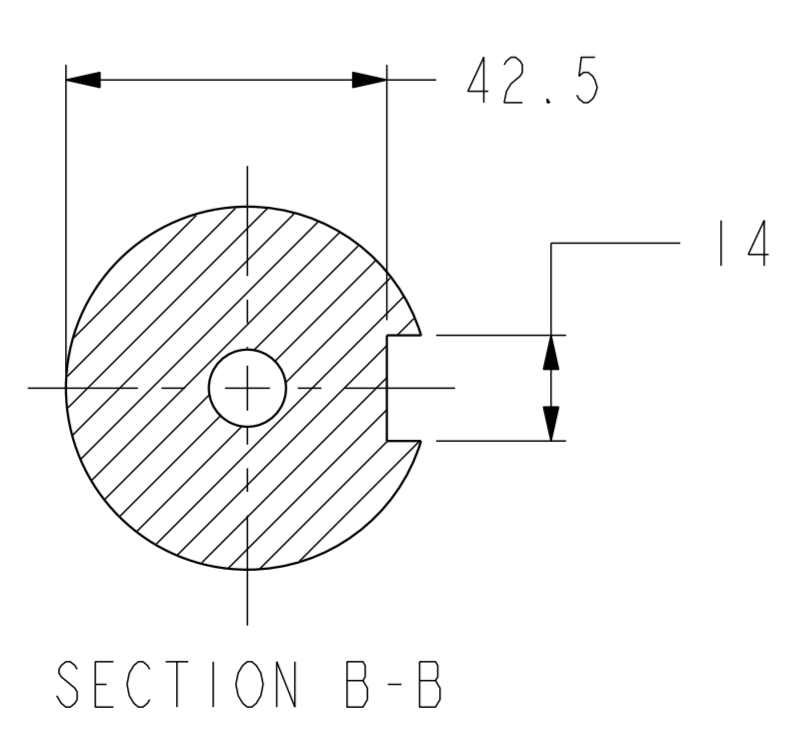
CUMMINS GENERATOR TECHNOLOGIES LTD SHOULD BE NOTIFIED OF ANY ROTORS NOT COMPLYING WITH THESE RULES. CUMMINS GENERATOR TECHNOLOGIES LTD BALANCE ROTORS TO COMPLY WITH INTERNATIONAL STD BS ISO 1940 PARTS 1 AND 2 .

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	11.505	0.0040
FAN	0.976	0.0067
MAIN ROTOR	37.368	0.1328
EXCITOR ROTOR	5.120	0.0201
TOTAL WITHOUT EBG ROTOR	54.969	0.1636
EBG ROTOR	1.701	0.0017
TOTAL WITH EBG ROTOR	56.670	0.1653

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



MOD.	ISSUE	DRAWN	DATE	MODIFICATION
4-9111-14	A	BSR	16.07.07	ORIGINAL ISSUE

<b>CONFIDENTIAL PROPERTY OF CUMMINS GENERATOR TECHNOLOGIES LTD.</b>				P12J TWO BEARING MOMENTS OF INERTIA AND SHAFT DETAILS												
MATERIAL PROPS	-	DIMENSIONS IN MILLIMETRES (MM) AT 20°C	PROJECTION	SCALE	3:10	MATERIAL										
FINISH SPEC	-	SURFACE FINISH VALUES IN MICRO METRES		DRG. SIZE	A	CASTING No										
GEOMETRY SPEC	-			WEIGHT	=	PART No										
ASSEMBLY SPEC	-	UNLIMITED DIMS ±	<table border="1"> <tr> <td>DRAWN</td> <td>BSR</td> <td>16.07.07</td> </tr> <tr> <td>CHECKED</td> <td>RPM</td> <td>16.07.07</td> </tr> <tr> <td>APPROVED</td> <td>DPC</td> <td>16.07.07</td> </tr> </table>	DRAWN	BSR	16.07.07	CHECKED	RPM	16.07.07	APPROVED	DPC	16.07.07	REL. PHASE	P	L15-13236	
DRAWN	BSR	16.07.07														
CHECKED	RPM	16.07.07														
APPROVED	DPC	16.07.07														
PERFORMANCE SPEC	-			PROJ. ENGINEER		SHEET 1 OF 1 SHEETS										
QUALITY SPEC	-					ISSUE A										