

NOTES:-

SHAFT STIFFNESS:-

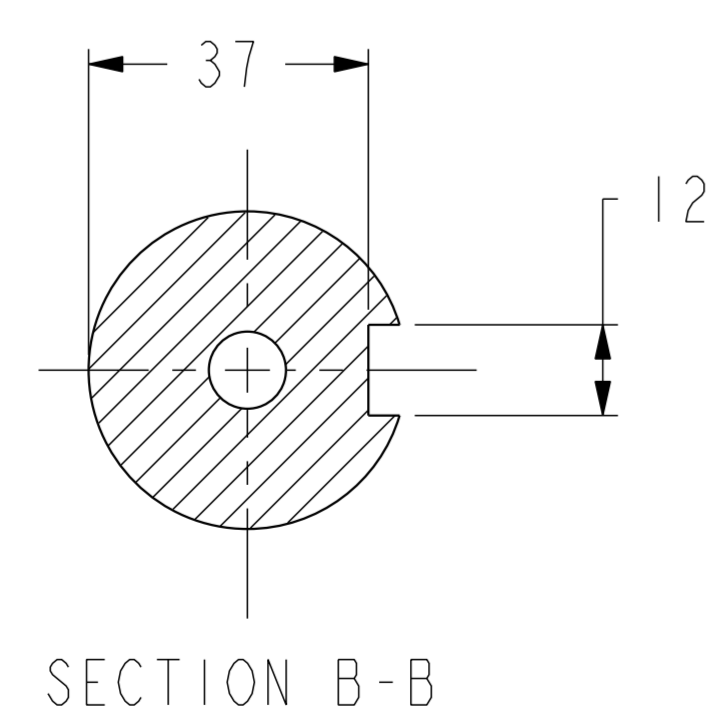
THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE  $\phi$  AND THE SHAFT EXTENSION  $\phi$  IS  $1.4098 \times 10^6$  kgcm/radian (STIFFENING EFFECT OF MAIN ROTOR CORE IS NOT INCLUDED IN THIS FIGURE)

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	10.753	0.0036
FAN	0.976	0.0067
MAIN ROTOR	33.786	0.1199
EXCITOR ROTOR	5.120	0.0201
TOTAL WITHOUT EBG ROTOR	50.635	0.1503
EBG ROTOR	1.701	0.0017
TOTAL WITH EBG ROTOR	52.336	0.1520



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

4-9111-40	B	BSR	02.09.07	Ø48 & Ø50 REDUCED TO Ø42 & Ø45 RESPECTIVELY, KEY WAS 14 NOW 12, LENGTH 41 REDUCED TO 39 AND TABLE UPDATED
4-9111-14	A	BSR	16.07.07	ORIGINAL ISSUE
MOD.	ISSUE	DRAWN	DATE	MODIFICATION

CONFIDENTIAL PROPERTY OF CUMMINS GENERATOR TECHNOLOGIES LTD.						P12H TWO BEARING MOMENTS OF INERTIA AND SHAFT DETAILS				
MATERIAL PROPS	-	DIMENSIONS IN MILLIMETRES (MM) AT 20°C		PROJECTION		SCALE	MATERIAL			
FINISH SPEC	-	SURFACE FINISH VALUES IN MICRO METRES		WEIGHT =		3:10	-			
GEOMETRY SPEC	-	UNLIMITED DIMS ±		DRAWN		DRG. SIZE	CASTING No			
ASSEMBLY SPEC	-	-		BSR		A	PART No			
PERFORMANCE SPEC	-	-		16.07.07		REL. PHASE	L15-13235			
QUALITY SPEC	-	-		3/10/07		P	ISSUE			
						APPROVED	DPC		3/10/07	
						Prd/ENGINEER		SHEET 1 OF 1 SHEETS		