

NOTES:-

SHAFT STIFFNESS:-

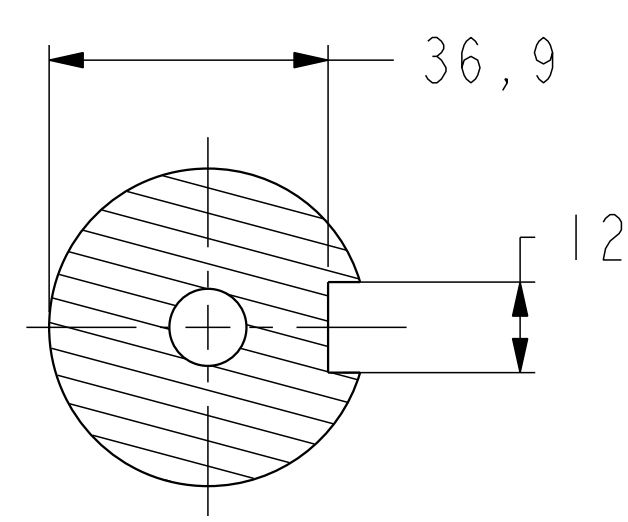
THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE ϕ AND THE SHAFT EXTENSION ϕ IS 1.6553×10^6 kgcm/radian (STIFFENING EFFECT OF MAIN ROTOR CORE IS NOT INCLUDED IN THIS FIGURE)

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.

APPROVED DOCUMENT

COMPONENT	MASS (kg)	WR ² (kgm ²)
SHAFT	8.337	0.0028
FAN	0.976	0.0067
MAIN ROTOR	20.356	0.0711
EXCITOR ROTOR	3.495	0.0139
TOTAL WITHOUT EBG ROTOR	33.164	0.0945
EBG ROTOR	1.701	0.0017
TOTAL WITH EBG ROTOR	34.865	0.0962



SECTION B-B

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

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

CONFIDENTIAL PROPERTY OF CUMMINS GENERATOR TECHNOLOGIES LTD.				P12D 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	L15-13231
ASSEMBLY SPEC	-	UNLIMITED DIMS ± --	DRAWN	BSR	16.07.07	REL. PHASE	P
PERFORMANCE SPEC	-		CHECKED	RPM	16.07.07	PROJ. ENGINEER	-
QUALITY SPEC	-		APPROVED	DPC	16.07.07	SHEET	1 OF 1 SHEETS