



COMPONENT	MASS (kg)	WR ² (kgm ²)
SHAFT	8.003	0.0031
FAN	0.976	0.0067
MAIN ROTOR	26.750	0.1274
EXCITER ROTOR	4.300	0.0170
TOTAL WITHOUT EBG ROTOR	40.029	0.1542
EBG ROTOR	1.701	0.0017
TOTAL WITH EBG ROTOR	41.730	0.1559

NOTES:-

SHAFT STIFFNESS:-

THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE ϕ AND THE SHAFT FACE 'A' IS 3.9855×10^6 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 BACK TO THE FACTORY.

APPROVED DOCUMENT

ADAPTOR SAE No.	COUPLING SAE No. (DISHED)	MASS OF DISC (kg) (1x2.5mm THICK)	MASS OF SHAFT SPACER (kg)	MASS OF PRESSURE PLATE (kg)	TOTAL MASS OF COUPLING ASSEMBLY (kg)	COUPLING STIFFNESS (kgcm/rad)	COUPLING DISC WR ² (kgm ²)
4/5	7 1/2	0.892	0.233	0.069	1.194	11.529×10^6	0.0065

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

(NOTE SHAFT 6mm SHORT THAN STANDARD)

MOD.	ISSUE	DRAWN	DATE	MODIFICATION
5-0223-03	B	DW	14/08/09	CORRECTED SHAFT DIMS, MASS AND STIFFNESS
-	A	DW	05/06/09	ORIGINAL ISSUE

CONFIDENTIAL PROPERTY OF CUMMINS GENERATOR TECHNOLOGIES LTD.					PI4D (SHORT SHAFT) 1-BEARING MOMENTS OF INERTIA AND SHAFT DETAILS			
MATERIAL PROPS	-	DIMENSIONS IN MILLIMETRES (MM) AT 20°C	PROJECTION		SCALE 3:10	MATERIAL		
FINISH SPEC	-					-		
GEOMETRY SPEC	-		SURFACE FINISH VALUES IN MICRO METRES	WEIGHT =		DRG. SIZE C	CASTING No	
ASSEMBLY SPEC	-			-		REL. PHASE P	PART No L15-13329	
PERFORMANCE SPEC	-	UNLIMITED DIMS ± --	DRAWN DW	05/06/09	PRO/ENGINEER	ISSUE B		
QUALITY SPEC	-		CHECKED DSG	05/06/09	SHEET 1 OF 1 SHEETS			
			APPROVED JB	05/06/09				