



COMPONENT	MASS (kg)	WR <sup>2</sup> (kgm <sup>2</sup> )
SHAFT	8.9077	0.0035
FAN	0.976	0.0067
MAIN ROTOR	30.532	0.1451
EXCITOR ROTOR	5.120	0.0201
TOTAL WITHOUT EBG ROTOR	45.536	0.1754
EBG ROTOR	1.701	0.0017
TOTAL WITH EBG ROTOR	47.237	0.1771

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 FACE 'A' IS  $3.7815 \times 10^6$  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 BACK TO THE FACTORY.

ADAPTOR SAE No.	COUPLING SAE No.	COUPLING DIMENSIONS		MASS OF DISC (kg) (1 X 3mm THICK)	MASS OF SHAFT SPACER (kg)	MASS OF PRESSURE PLATE (kg)	TOTAL MASS OF COUPLING ASSEMBLY (kg)	COUPLING STIFFNESS (kgcm/rad)	COUPLING DISC WR <sup>2</sup> (kgm <sup>2</sup> )
		ØXX mm	YY mm						
4/5	6 1/2	215.8	10	0.850	0.233	0.069	1.152	$13.955 \times 10^6$	0.0049
4/5	7 1/2	241.2	10	1.069	0.233	0.069	1.371	$13.835 \times 10^6$	0.0079
3/4/5	8	263.5	41.8	1.275	0.974	0.069	2.318	$13.747 \times 10^6$	0.0111
2/3/4	10	314.2	33.6	1.819	0.783	0.069	2.671	$13.616 \times 10^6$	0.0225
2/3	11 1/2	352.3	19.4	2.287	0.452	0.069	2.808	$13.555 \times 10^6$	0.0355

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MATERIAL PROPS	-	DIMENSIONS IN MILLIMETRES (MM) AT 20°C	PROJECTION			
FINISH SPEC	-					
GEOMETRY SPEC	-		WEIGHT =			
ASSEMBLY SPEC	-		DRAWN	BSR	25/04/07	
PERFORMANCE SPEC	-		CHECKED	DSG	22/05/07	
QUALITY SPEC	-	UNLIMITED DIMS ±		APPROVED	DPC	22/05/07

PI4E ONE BEARING MOMENTS OF INERTIA AND SHAFT DETAILS	
SCALE 3:10	MATERIAL --
DRG. SIZE C	CASTING No -
REL. PHASE P	PART No L15-13182
Pro/ENGINEER	ISSUE A
SHEET 1	OF 1 SHEETS

MOD.	ISSUE	DRAWN	DATE	MODIFICATION
4-8440-50	A	BSR	25/04/07	ORIGINAL ISSUE