

NOTES:-

SHAFT STIFFNESS:-

THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE ϕ AND THE SHAFT FACE 'A' IS 4.7143×10^6 kgcm/radian (STIFFENING EFFECT OF MAIN ROTOR CORE IS NOT INCLUDED IN THIS FIGURE)

SHAFT MATERIAL:-

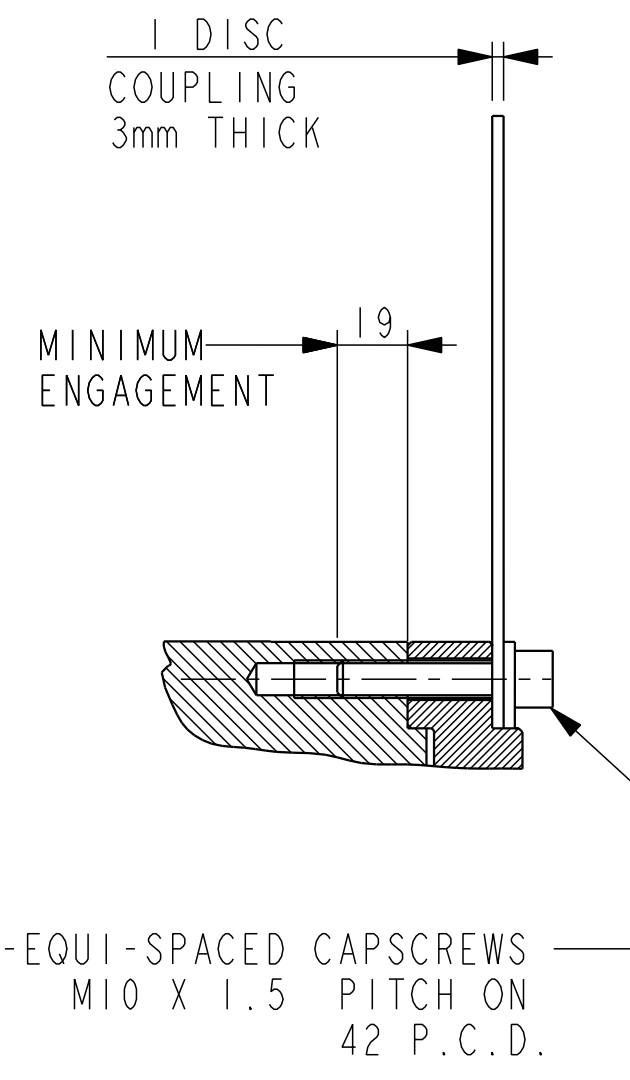
STEEL - C40E TO BSEN 10083-2 2006 (APPROVED BY MARINE AUTHORITIES WHEN APPROPRIATE) MAXIMUM RECOMMENDED VIBRATORY STRESS LEVEL IN THE SHAFT IS 34.47×10^6 N/m² FOR SPEED RANGE OF 0.95 TO 1.1 X NOMINAL SPEED AND 68.94×10^6 N/m² FOR RUN THROUGH CONDITIONS, FOR INDUSTRIAL MACHINES.

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



COMPONENT	MASS (kg)	WR ² (kgm ²)
SHAFT	7.451	0.0030
FAN	0.976	0.0067
MAIN ROTOR	20.508	0.0982
EXCITOR ROTOR	4.300	0.0170
TOTAL WITHOUT EBG ROTOR	33.235	0.1249
EBG ROTOR	1.701	0.0017
TOTAL WITH EBG ROTOR	34.936	0.1266

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

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 ² (kgm ²)
		Ø XX mm	YY mm						
4/5	6 1/2	215.8	10	0.850	0.233	0.069	1.152	13.955 X 10 ⁶	0.0049
4/5	7 1/2	241.2	10	1.069	0.233	0.069	1.371	13.835 X 10 ⁶	0.0079
3/4/5	8	263.5	41.8	1.275	0.974	0.069	2.318	13.747 X 10 ⁶	0.0111
2/3/4	10	314.2	33.6	1.819	0.783	0.069	2.671	13.616 X 10 ⁶	0.0225
2/3	11 1/2	352.3	19.4	2.287	0.452	0.069	2.808	13.555 X 10 ⁶	0.0355

CONFIDENTIAL PROPERTY OF CUMMINS GENERATOR TECHNOLOGIES LTD.

MATERIAL PROPS -				DIMENSIONS IN MILLIMETRES (MM) AT 20°C		PROJECTION		P04G ONE BEARING MOMENTS OF INERTIA AND SHAFT DETAILS	
FINISH SPEC -						WEIGHT =			
GEOMETRY SPEC -				SURFACE FINISH VALUES IN MICRO METRES		DRAWN BSR 25/04/07		SCALE 3:10	
ASSEMBLY SPEC -						CHECKED DSG 22/05/07		DRG. SIZE C	
PERFORMANCE SPEC -				UNLIMITED DIMS ± --		APPROVED DPC 22/05/07		CASTING No -	
QUALITY SPEC -						REL. PHASE P		PART No L15-13179	
						Pro/ENGINEER		SHEET 1 OF 1 SHEETS	

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