



**NOTES:**

- SHAFT STIFFNESS:  
THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE  $\phi$  AND THE COUPLING HUB IS  $132.52 \times 10^6$  Kgcm/radian (STIFFENING EFFECT OF MAIN ROTOR CORE IS NOT INCLUDED IN THIS FIGURE)
- SHAFT PROPERTIES:  
MINIMUM YIELD : 260MPa  
MINIMUM ULTIMATE TENSILE STRENGTH : 530MPa  
SHAFT MATERIAL IS 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 ISO 1940 GRADE 2.5 AND BS 6861 PART 1 GRADE 2.5
- FOR UNBALANCED MAGNETIC PULL (U.M.P) FORCES PLEASE CONTACT CUMMINS GENERATOR TECHNOLOGIES LTD

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

COMPONENT	Mass [kg]	Inertia [kg*m <sup>2</sup> ]
1 SHAFT	622	3.9
2 FAN + HUB	80	4.8
3 MAIN ROTOR	1398	81
4 EXCITER	94	2.1
<b>TOTAL</b>	<b>2194</b>	<b>91.8</b>

**Cummins Generator Technologies**

DIMENSIONS ARE IN: MILLIMETERS  
[ ] ARE IN: ----

SIZE: A2 SCALE: 1:5

DIMENSIONING AND TOLERANCING PER: ASME Y14.5M-2009

THIRD ANGLE PROJECTION

CAD SYSTEM  
AutoCAD

S9 E CORE, 2 BRG, ROTOR TORSIONAL DRAWING



**Part Number: A063V977**

Change Notice	CN00023770	Alternates	
Manufacturer Part (MEP)	No	Usage	Production Only
Release Phase Code	Production (P)	Drawing Specification	DS47022079
External Regulations		No External Regulation	

3D image provided when available for visual reference only.

**Associated Specifications**

Number	Name	Type	Category	Sub-Category
ESA030B356	SPECIFICATION,MATERIAL	Engineering Specification	Material Specification	Prohibited and Restricted  Prohibited and Restricted

**Drawing Revision Information**

Description of Change(s)
UPDATED TORSIONAL DATA.

**Drawing Authorization**

Drafter	Mihai-Cristian Ilinca	Date	15SEP2020
Checker	Daniel Ciochina	Date	16SEP2020
Approver	NO APPROVAL REQUIRED	Date	

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