



Date:	25-05-06	Reference:	Ph	Initials:	PB
Customer:				Special Requirements:	
Vessel:	47' Cruiser				
Engine:	Cummins 6QSM11 (650hp @ 2300rpm) Weight = 1100 kg				
Gearbox:	Twin Disc MGX-5114A [reduction 1.77:1] wt= 250kg				

Engine & Gearbox Specifications [as supplied]

Engine HP @ rpm
 Number of Cylinders
 Gearbox Reduction :1
 Approx Engine+ Gear Weight[kg] Number of Propeller Blades
 Engine Idle RPM Vessel Use: Private Commercial Survey
 Hull Type Application Type

'Estimated Bollard Pull' req'd for calculations 'Bollard Pull or Thrust' supplied for calculations [kg] =
 Estimated Thrust Load on Engine [kg] = Approx Output Torque [Nm] =

Mount Selection

Front Mount Model: Number of Mounts @ Front of Eng
 Rear Mount Model: Number of Mounts @ Rear of Eng
 Thrust Mount Model: Number of Thrust Mounts

Cores/Mount

Dimensions are in [mm] unless stated otherwise - (see data sheets for further information)

	Bolt Centres	Stud Size	Free adj height	O/A height	O/A Length	O/A Width	Shipping Weight[kg]
Front Mount Dimensions	140 (5 1/2")	M24	112	197	188	100	1.5
Rear Mount Dimensions	250	M24	123	221	300	100	3
Thrust Mount Dimensions	0	0	0	0	0	0	0

Approx System 'Static Axial Deflection' [mm] = **4.1**
 4-Stroke Engine Firing Frequency @ idle 'fe' [Hz] = **30.0**

Axial Stiffness [kg/cm] per resilient element
 Ka (front) Ka (rear)

Natural Frequency of Engine/ Mount System 'fn' [Hz] = **7.8**

Approx Vibration Isolation @ 600 rpm Idle [%] = **93**

1. Minimum Vibration Isolation @ Idle = 80%
2. Maximum engine movement due to 'steady state thrust' = 3.0mm

Approx Engine Movement due to 'Steady State' Thrust Load [mm] = **1.6**

Thrust Stiffness [kg/cm] per resilient element
 Kt (front) Kt (rear)

Critical Engine RPM for shaft misalignmet/ out-of-balance = **830** [where shaft rpm corresponds to fn]

Critical Engine RPM for secondary vibratory input @ 4 xshaft rpm= **208**

GRAPH 1: Vibration Transmissibility v RPM for the 'Static Axial Deflection' entered above.

