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APPLICATION SHEET: Mount Selection Method

STEP 1.

It is critically important to gather the correct information regarding the machinery specifications, as shown in the 'Customer Inquiry Sheet'.

Check these machinery specifications against the 'IsoFlex Standard Engine & Gearbox Matrix' for mount specification. If not a standard arrangement see Step 2.

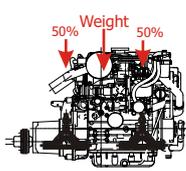
If the inquiry requires the replacement of existing mounts, given the make & model of the mounts to be replaced - check against the IsoFlex 'Replacement Mount Matrix'

CUSTOMER INQUIRY SHEET				
Number	Engine	Rated HP @ RPM	Weight [kg]	Total Weight [kg]
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Number	Gearbox	Reduction	Weight [kg]	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Any other Ancillary Equipment - extra Alternators/Pumps, etc.			Weight [kg]	<input type="text"/>
Specify type & location <input type="text"/>			<input type="text"/>	

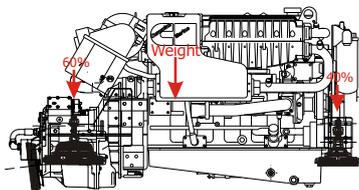
STEP 2.

Determine the number of mounts required for the particular application, taking into account the weight distribution for the front and rear mounts.

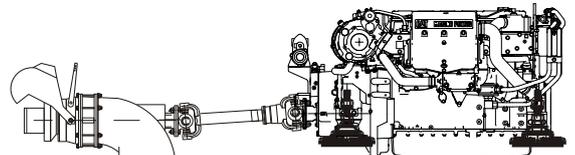
[Sample application arrangements shown: where 50/50 loading is equal loading front to rear mounts & 60/40 is where the rear mounts take 60% & front take 40%]



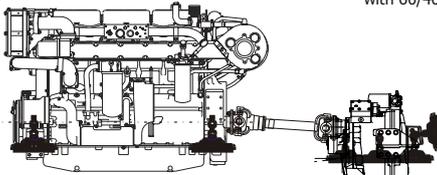
Typical small diesel engine with 50/50 mount loading



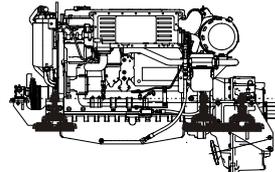
Typical diesel engine & gearbox with 60/40 mount loading



Typical Jet Drive diesel engine & gearbox with 50/50 mount loading, - with no thrust on mounts.



Typical Remote Vee Drive diesel engine with 50/50 mount loading on engine, - with thrust taken by gearbox mounts.



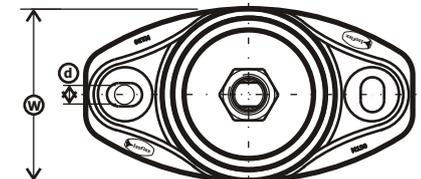
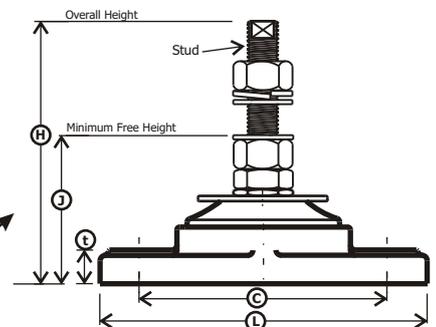
Typical Integral Vee Drive diesel engine & gearbox with preferable 6 mount arrangement.

STEP 3.

In general, the mount model to be specified is determined by the dimensional requirements and the core hardness is determined by the weight to be taken by each mount.

MOUNT DIMENSIONAL REQUIREMENTS:	
Engine bracket hole size	<input type="text"/>
Height from engine bed to underside of bracket	<input type="text"/>
Engine mount base bolt hole centres mm(ins)	<input type="text"/>
Engine bed width mm.	<input type="text"/>

See IsoFlex 'Mount Specification Sheet' for appropriate mount model.



STEP 4.

Calculate the weight taken by each mount. Then refer to the Axial Load v Deflection graph for the mount to determine the axial (vertical) deflection for that weight for each hardness - now select the appropriate hardness core with the following points in mind:

1. Vibration Isolation: [Minimum of 80%]

- for 6 cylinder engines the mount should have a deflection of approximately 2.0 to 3.0mm maximum, a deflection of 2.5mm is optimal, as this would result in a Vibration Isolation of approx 90% @ 650rpm idle.
- for 4 cylinder engines this deflection needs to be approx 3.5mm to provide similar isolation.
- for 3 & 2 cylinder engines this deflection needs to be approx 4.5mm.

2. Engine Movement due to Thrust: [Maximum 3mm]

From the 'Thrust Calculator' determine the total thrust load on the mounts - then divide this thrust value by the number of mounts.

Refer to the mount Thrust Data Sheet to determine the mount deflection due to thrust. (See example)

If the deflection due to the thrust load is greater than 3.0mm, then either the number of mounts needs to increase or a larger mount model needs to be specified.

Note: If the mounts need to be changed from the original specification, then the Axial deflection & Vibration Isolation needs to be re-calculated.

