

Things to Consider

Industrial Diesel Engines

Power Requirement

How much power do you need and what is the duty cycle? A water pump running 24/7 is a continuous load. The engine's power output also needs to be at the continuous rating. An engine driving a hydraulic pumps for a crane application is an example of an intermittent application where the engine would only occasionally be required to provide full power.

Ambient Conditions

What will be the highest and lowest temperatures at which the engine will be expected to function? What will the maximum altitude be? Will it operate in dusty conditions? This will affect the air cleaner and pre-cleaner selection and may affect the fin spacing on the cooling radiator.

Enclosure Requirement

If the engine will be housed in an enclosure you may want to think about the possibility of the enclosure being affected by ice buildup or other weather related concerns. Service access will normally be looked after by the supplier but deserves consideration. Is sound attenuation required?

Power Transmission

This is a big topic and cannot be covered in a paragraph or two but getting the power from the engine's flywheel to the driven equipment requires careful consideration.

Many commonly driven items such as water pumps are available with convenient adapters. Other equipment may cause problems if the correct coupling methods are not used. An example of this would be a high inertial load. These loads can cause coupling damage or in severe cases they can damage the engine's crankshaft. Similarly care must be taken to avoid "end loading" the crankshaft, causing thrust bearing damage.

Mounting

Do you use rigid or flexible mounts? Flexible mounts reduce noise and vibration transmission but need to be correctly chosen for the overall system.