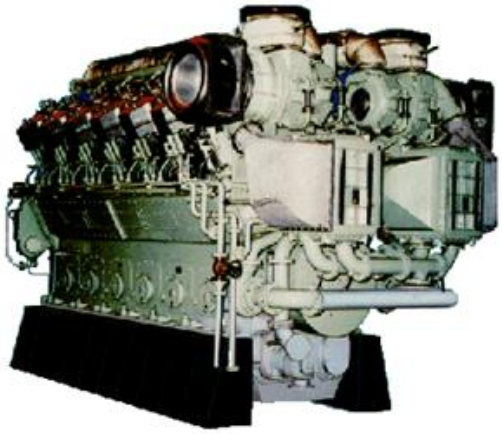
VTBNet –Practical approach to the Vibration & Temperature Monitoring of Diesel Engines

Typical Diesel Gas Engine used for industrial and marine applications

Machine running speed – 600 RPM, V-Form 18 cylinders, 4-cycle with turbocharger and air coolers



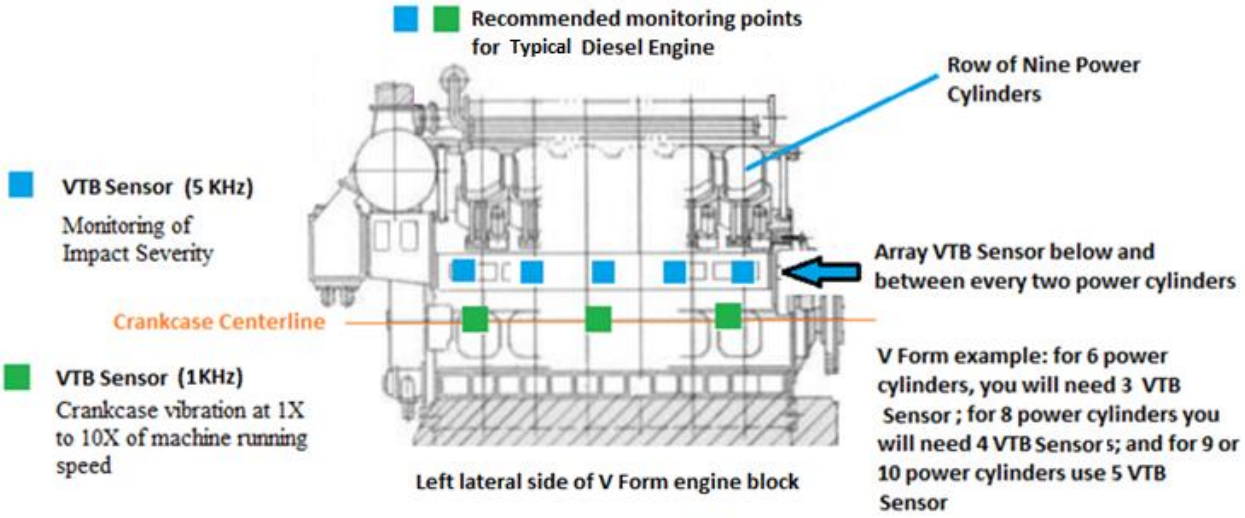
Diesel Engine

Mounting

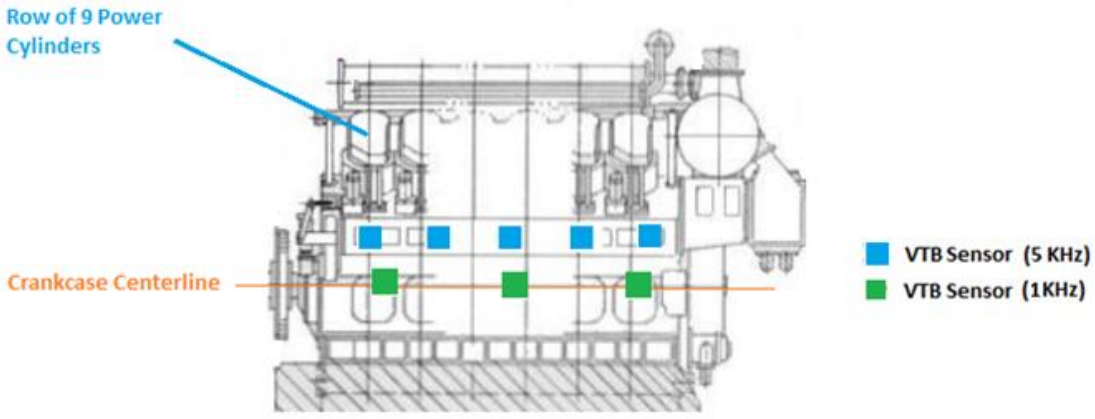
The Machine Saver sensor can be mounted on the engine block, center-lined to the machine casing. The green blocks below indicate where the sensors should be mounted when monitoring for engine block vibration and crankcase vibration at one to ten times the machine running speed (ips, rms).

The blue blocks indicate the best mounting location for sensors monitoring impacts. They should be mounted as closely as possible to the power cylinders to monitor and detect piston defects and impacts.

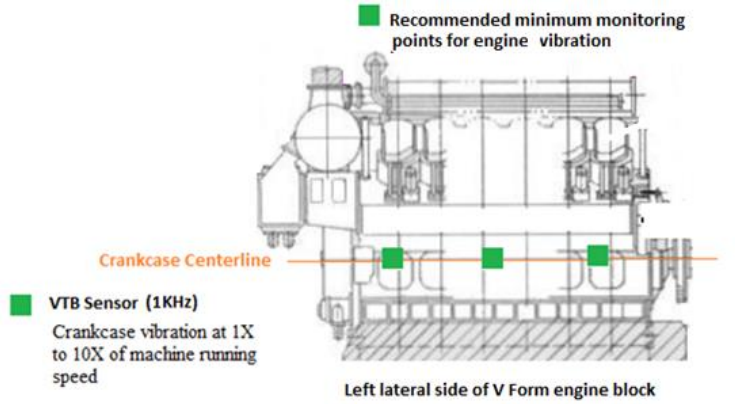
Note that this engine is a “V” configuration; the color blocks illustrate the mounting locations for sensors on the left and right lateral sides of the engine block. Mounting locations are based on the engine type, space available to mount the sensor, and room required for explosion enclosures (if required). Additionally, heat must also be considered during the mounting process. It is essential to take engine block temperature readings while the machine is running to avoid elevated exhaust manifold temperatures affecting the sensors negatively. The best cable protector for this particular application is the spiraled armor cable or equivalent.



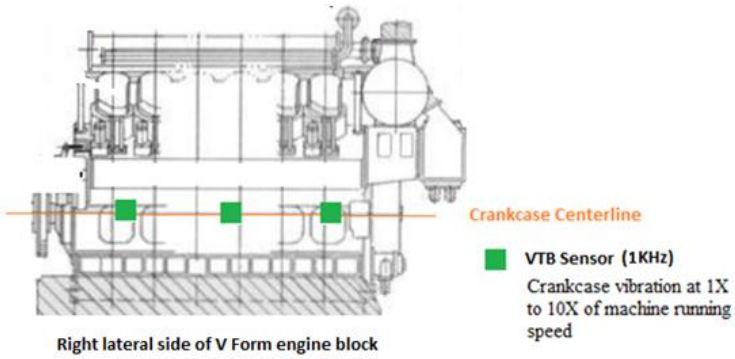
Left lateral side of V Form engine block



Right lateral side of V Form engine block



Left lateral side of V Form engine block



Right lateral side of V Form engine block

Conclusion

This technical brief has practical suggestions to assist you in monitoring your diesel engines. We want to support your company and applications with our proven product that can successfully and consistently monitor and protect your diesel engine investment. Let us know about your application by consulting with the Machine Saver team at sales@machinesaver.net. Our team can provide vibration monitoring solutions for your present application, and can extend their vibration expertise and new technology to your entire balance of plant. Product and application information is available at www.machinesaver.com