

Industrial Case Study

In a bid to cut development time and costs, a growing number of agricultural Original Equipment Manufacturers (OEMs) are taking advantage of a unique collaboration programme offered by Perkins, called Technology Integration Workshops (TIW). Daniel Clayton, segment marketing manager takes us through this important activity.

The concept is a simple one: side-by-side working in a purpose-built facility that encourages swift and effective resolution of many of the challenges faced by OEMs when trying to integrate engines into their machines.

Customer focused integration

Started in 2008 the TIW programme was set up to help OEMs tackle the many technology and engineering issues arising at that time from the EU Stage IIIB/U.S. EPA Tier 4 Interim emission standards. Since then more than 500 engine/machine installations have been completed for over 150 OEM customers.

The results to date have been impressive. Not only are participating OEMs finding the optimal solution to power their next generation machines, but development times have been cut by up to six months on average. Furthermore development costs have been reduced and by introducing machines earlier OEMs can start to see a return on investment more quickly.

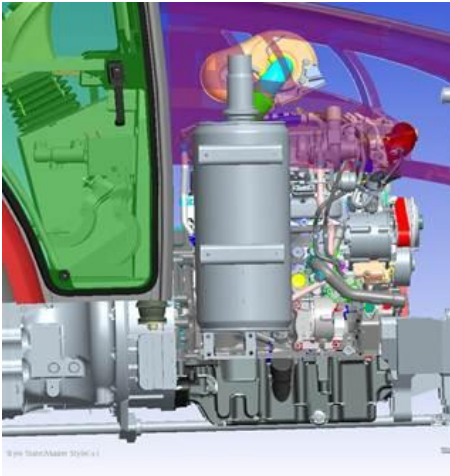
Five years ago Perkins invested in a Collaboration Centre on-site in Peterborough, UK, which features the very latest in engineering software tools and allows installation capabilities to be explored in a virtual way. Packaging challenges can be met without the expense of cutting metal, and, once the best solution is arrived at, further application specific work can be carried out to ensure that engine performance is tailored to the machine's duty cycle.

A typical agenda for a programme would include legislation, a product overview, emissions technology, aftertreatment, engine architecture and performance, and a virtual installation.

In advance of the TIW, applications engineers use a Computer Aided Design (CAD) model of the application to create an engine design specification. At the TIW itself OEMs have the opportunity to further discuss the technologies used to optimise the engine's performance and enable the creation of a virtual installation.



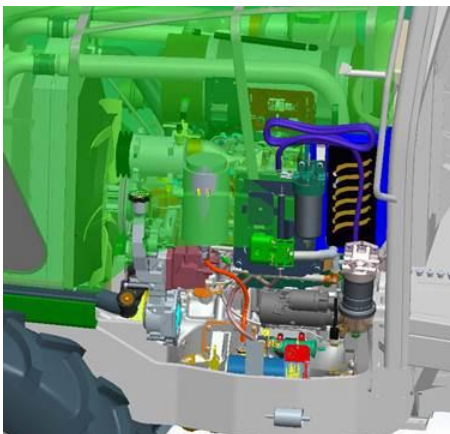
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Where appropriate, a prototype engine for installation in the customer's machine can then be built. If necessary, the applications team can make a site visit to resolve any issues arising after installation. So before a single full production part has been assembled, the customer has a proven, optimum engine solution for their needs.

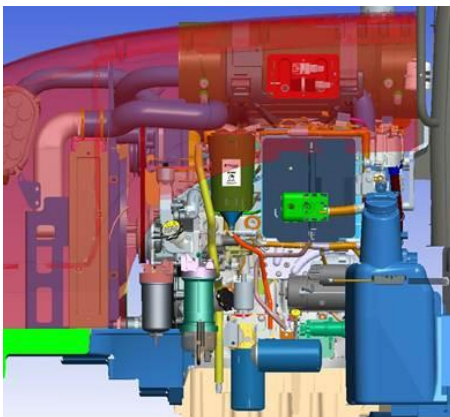
Collaboration at work

The centre is configured in such a way as to encourage collaborative working with banks of large LED screens set around desk pods so that engineers from both the customer and Perkins can work side by side. Over 50 dedicated application engineers are on hand to work with OEMs.



For many OEMs, packaging new emissions technologies involves high levels of engineering resource, significant amounts of development time and increased risk. Our TIW allows them to share our resource, reduce the time needed to work up final designs, thereby mitigating the risks associated with engine/machine integration.

In typically two to three days we can achieve together what used to take weeks if not months. We do not rely on file exchanges, telephone discussions or websites. We work with the OEM, side by side, to ensure optimal integration between engine and machine.



Perkins range of Stage IIIB/Stage IV and Tier 4 Interim/Tier 4 Final engines have been designed from the ground up, to provide our customers with the right technologies to provide industry-leading performance, fluid efficiency, reliability and flexibility. In order to best optimise the engines for our customers' machines, we encourage OEMs to get involved in the TIW process to find the right solution for their applications and sectors. The best way to do this is with a Perkins TIW, either at our facilities across the world or at our customers' own place of work.

The result

With OEMs facing huge competition in the marketplace to make their machines more competitive, any advantage in terms of reducing time to market, optimising engine installations and lessening development costs, can only be beneficial. By getting a better machine as a result of the TIW process, it has to be a win-win situation for the OEM.