

Modern Machinery Matters

Global experts, local service

The EST is a laptop computer that 'talks' to your machine and provides diagnostic information such as pin-pointing any trouble spots.

Modern machines need a modern support proposition – a local dealer mechanic who knows his stuff is essential, but it's not quite enough anymore. You need a more integrated approach that ensures your gear gets up and running faster, no matter what parts are needed or how advanced the technology.

With Case IH, while you might deal with a couple of contacts at your local dealership, a whole team of people around the world are working hard to make sure those people have the parts and the know-how to keep your machine running at full capacity. State-of-the-art technology – and processes that keep things moving – are just some of the support mechanisms going on behind the scenes.

Local machinery dealers invest a great deal of money and facilities in supporting local farmers. Your local Case IH dealer has access to extremely advanced diagnostic and repair tools as well as highly trained technicians who know how to use them. In fact, chances are your local technician has recently attended one of many training courses to ensure they are up to speed on the latest products and diagnostic and repair techniques.

Technical Support Managers and Product Performance Managers support deal-

ership technicians locally, while various technical product specialists and engineers make up a greater, global team of experts whose sole concern is keeping machines working.

Complementing the highly trained personnel are state-of-the-art technology systems which ensures the servicing, diagnosing and repairing of your equipment is faster and more accurate than ever.

Machines that self-diagnose

Case IH machines are now able to self-diagnose. For example, if a machine experiences a critical fault – one that prevents the machine from being operated safely – the machine displays the fault code on the

instrument cluster and, depending on the nature of the fault, can automatically shut itself down.

When you call your local dealer technician, you simply need to quote the code along with a description of what you were doing when the fault occurred.

The technician can then make sure that, if they need to come to your farm, they are armed with the specialist tools and parts needed to solve the problem on the spot. This reduces the chance of needing to come out twice – once to find out what the problem is, then again to solve it. And it gets you up and running faster.

Faults detected by the machine's self-diagnosis which aren't critical and don't affect safe operation, are stored in the system memory for retrieval and review at the next scheduled service.

How does this work?

For this self-diagnosis to be possible, Case IH have integrated the operation of various machine systems through a network of controllers that can communicate with each other and share input signals.

This system is called CAN-bus (Controller Area Network-bus) and is a specialised communications network adopted by most modern machinery manufacturers.

Here's an example of how CAN-bus

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works: The engine RPM signal is received by the engine controller which acts on the information. This signal is then sent onto the other controllers on the communication link. These other controllers on the network (such as transmission, PTO, front wheel assist and so on) then use or ignore this information according to instructions embedded in the controller's software.

By using this technology the length of a typical wiring harness for a CASE IH tractor has been reduced from nine km to just under five while at the same time, reducing the number of sensors required.

Electronic Service Tool

The EST is a laptop computer that can be plugged into most Case IH machines. The machine and computer then 'talk' to each other, so the technician can see on the laptop all the information needed for effective servicing, troubleshooting and diagnostics.

The EST can also be used to upgrade the machine's software, set the machine up to specific requirements and to meet local regulations and so on.

The recently released DATAR (Data Recording) Scope takes the EST even further. Its multi-system monitoring capability means components and connections can be directly diagnosed. The DATAR tool can simultaneously examine and diagnose the areas that aren't covered by the EST, including hydraulic and electrical circuits.

The results can also be logged and transferred back to the Case IH dealer support team for detailed investigation where needed.

The system allows hydraulic flow, hydraulic pressure, electrical current and voltage to be monitored with one device, allowing swift, accurate and comprehensive diagnostics.

Because this diagnostic tool uses CAN-bus it is not limited to Case IH equipment which allows your local dealership to service and maintain other modern brand equipment you may have.

The ASIST database

As well as diagnostic tools, Case IH dealer technicians can access a database of technical information. ASIST, contains Case IH-approved diagnostic information and solutions, including service bulletins, installation instructions, technical publications and software updates.

The solutions are written by Case IH engineers with more than 120 years of combined product knowledge – so your local technician is never on his own. He can



Case IH's sophisticated parts ordering system means the parts you need are at your fingertips.

bring in the global experts 'virtually and instantly' on any problem.

ASIST is constantly evolving because new information is added as concerns, resolutions and improvements are identified. For dealers and their customers, this means faster access to accurate, consistent information, reduced diagnostic time and improved customer support.

Processes that keep things moving

Of course, there's no point knowing what the problem is and how to fix it if you can't get hold of the parts you need.

Case IH's national parts warehouse in St Marys, on Sydney's western outskirts, holds 150,000 line items of parts.

Future parts demand is predicted using a computer system that analyses parts turnover for the past four years and by talking to dealers about what's happening on the ground. In this way the type and number of parts required each month is accurately predicted.

So you can be fairly certain that the Case IH part you need is no more than a few days away.

Parts may be even closer for customers in eastern states during harvest. Case IH's ProHarvest trailer is a mobile parts warehouse carrying more than 6800 individual parts.

It travels close to the main harvest activity, giving dealers in peak harvest areas access to a wide range of parts they don't normally carry. So if a customer has a breakdown, the closest dealer can get hold of the part and get the customer back up and running almost overnight.

Technical training

Australia-wide in 2009, Case IH trained approximately 700 dealership technicians on products offered in the Case IH range. The training programs are structured around the competencies required by technicians and the feedback provided by customers and dealers.

In this way, technician skills that need improving are identified.

The training goal is always to improve the technicians' knowledge, skills and ability to perform diagnostics and repairs in the shortest time and lowest cost possible.

Initially the focus is on systems training. This covers the fundamentals of the electrical and hydraulics systems, along with engines and EST.

Technicians are then trained to use a systematic and structured process for effective and efficient troubleshooting and diagnosis. Finding the cause of the fault – rather than just addressing the symptoms – is paramount.

This systems training is not specific to any one product.

The second phase of technical training then become product specific. Technicians are trained in areas such as:

- How to operate the product and know its capabilities and limitations;
- The actual systems design and functionality; and,
- What diagnostic requirements and capabilities are available on this model.

Through this combined approach of knowledgeable staff, state-of-the-art technology and smart processes, Case IH's local dealerships are able to provide exceptional support to farmers. ■