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Subject: Using machinery during the winter

Preventive maintenance the key to a trouble-free winter, says Case IH



Carrying out preventive maintenance will go a long way to ensuring that tractors and other powered farm machinery continues to operate reliably and safely throughout the winter period, according to leading farm equipment manufacturer Case IH (www.caseih.com).

“Temperatures in the UK rarely fall to the levels experienced in some other countries, but winter weather can nevertheless cause severe problems with the operation and reliability of farm machinery,” states Edward Watson of Case IH.

“The starting point is to ensure that machinery is serviced in accordance with the manufacturer’s schedule, ideally by an approved dealer with the necessary experience, knowledge and equipment to do it correctly. Over and above that there are a few quick, simple checks which operators can carry out for themselves that will save significant time, money and inconvenience over the winter period.”



PRESS RELEASE

Mr Watson suggests a number of action points:

Check coolant quality and level - Low coolant levels or coolant that contains insufficient antifreeze may cause the cooling system to freeze and failure of key components, including the engine. The level and quality of coolant should therefore be tested and maintained in accordance with the manufacturer's recommendations.

While the quality of ethylene glycol-based antifreeze, which is green in colour, can be checked using a simple hydrometer, more accurate results will be produced by a refractometer. This will also be suitable for testing propylene glycol-based antifreeze, which is recognisable by its red or pink colour and must contain a minimum of 50% ethylene glycol solution.

Modern antifreeze contains corrosion inhibitors, which is another reason to change the coolant frequently and run machines up to full operating temperature on a regular basis, thereby recirculating the corrosion inhibitor adequately.

Waxing of diesel fuel - another common problem, it can occur even when the air temperature is just a few degrees below freezing. The process occurs when the temperature of the fuel falls to a level at which the natural wax, which it contains, begins to crystallise. Even though the process will be reversed when the temperature begins to rise, taking steps to prevent it from happening in the first place will save significant time and inconvenience.

The grade of diesel that your fuel supplier uses is likely to differ with the seasons, with winter purchased fuel having a lower operating temperature than summer fuel, hence the need to order smaller amounts frequently to ensure adequate fuel turnaround.

In severe conditions where the temperature is likely to fall below the level at which waxing may be a problem, machinery should be stored inside, or at least under cover, when not in use, as this will also help to maintain the battery's cranking capacity. If this is not possible, consider adding an anti-waxing agent to the fuel to reduce its waxing point. To prevent condensation from forming in the fuel tank it should be filled at the end of each working day.

Lubricant viscosity – This can increase significantly at low temperatures, substantially reducing its ability to flow freely and perform effectively. Where a tractor is used in very cold weather it is advisable to allow the engine and transmission to warm up before starting work, as this will ensure that the oil is free-flowing and able to deliver adequate lubrication.

Certain tractors, including Case IH CVX models which are equipped with a Constantly Variable Transmission, are fitted with an inhibitor to prevent the driver from accessing the tractor's full capabilities until a safe operating temperature is reached. The engines are installed with a grid heater in the intake manifold. When starting in cold weather the throttle should be placed at the

half-way position and the grid heater indicator light should have been illuminated for 10-15 seconds before cranking the engine. When the engine starts, the throttle should be returned to normal.

In terms of driving safety, Case IH emphasises the need to use particular care when using any farm machinery during winter, as surfaces are often very slippery and the operator's senses and responses may be dulled by exposure to low temperatures. Mr Watson suggests a number of other action points which should be taken before operating equipment during the winter months:

1. Check your tyres – lower temperatures will cause inflation pressures to fall, so they must be adjusted to the correct level
2. Top up the washer bottle with a screen wash that is sufficiently concentrated to resist freezing
3. Ensure that lights and reflectors are kept clean
4. Make sure that lights are correctly adjusted for field and road work, both to maximise visibility and avoid inconveniencing others
5. Check warning beacons to ensure correct operation and clean them to maximise visibility
6. Remove ice from glazed areas and use the air conditioning, if fitted, to help demist the cab quickly and maximise visibility. Air conditioning should be used regularly throughout the year to ensure that the liquids circulate freely - a few minutes per week is ideal.
7. Keep cab glass clean, both inside and out. Using an anti-misting treatment will help to prevent them 'fogging' up

"It is vital that everyone is aware of the need to operate machinery appropriately and takes steps to do so even more safely during the winter months, when the risks to equipment and personnel are significantly greater. Carrying out a few simple checks and allowing a little more time will always pay dividends," Mr Watson emphasises.

ENDS:

NOTES TO EDITORS

MEDIA CONTACTS:

- Charles Macdowell, Kendalls Communications
Tel: 01394 610022 E: charles.macdowell@kendallscom.co.uk
- Jeanne Langton, Case IH
Tel: 01268 292821 E: jeanne.langton@caseih.com

ABOUT CASE IH

Case IH is the professionals' choice, drawing on more than 160 years of heritage and experience in the agricultural industry. A powerful range of tractors, combines and balers supported by a global network of highly professional dealers dedicated to providing our customers with the superior support and performance solutions to be productive and effective in the 21st century.

More information on Case IH products and services can be found online at www.caseih.com

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Carrying out a few simple checks will ensure that machinery operates safely and reliably during the winter, says Ed Watson.