

Safe use of rotary flail hedge cutters

HSE information sheet

Agriculture Information Sheet No 21

Introduction

This information sheet outlines the main dangers of tractor-mounted rotary flail hedge cutters and gives advice on how to operate them safely.

HSE has investigated a number of accidents, including fatalities, involving hedge cutters and knows of many near-miss incidents. Risk assessment for this type of machine shows many dangers that could result in serious injury to the operator or other people.

All users of rotary flail hedge cutters need to identify the dangers caused by their hedge cutters and make sure anyone working with them knows and follows safe working practices to prevent accidents and serious injuries.

What are the dangers?

Injuries to the operator and others can be caused by:

- being hit by thrown debris;
- being hit by ejected machine parts;
- contacting moving parts (eg the PTO shaft, cutting head parts, belt and pulleys, or blowers);
- the machine coming into contact with overhead power lines (OHPLs);
- being hit by the cutting head or machine arm as it moves;
- being trapped between the machine and the tractor when hitching or unhitching;
- the tractor overbalancing when the machine arm is extended;
- injection of high-pressure oil from damaged hydraulic hoses or couplings;
- the machine overbalancing when free standing (out of use);
- road traffic accidents due to collisions or debris on the road.

Safe operator

Operators need to be competent and capable of operating the tractor/hedge cutter combination. Ensure any operator is trained in how to use the machine efficiently and safely.

- Make use of relevant training courses such as those run by Lantra Awards, agricultural colleges, manufacturers and dealers. Make sure the operator reads, understands and follows the instruction handbook.
- Do not use a new machine until you have familiarised yourself with, and practised with, the controls.
- If you need to dismount from the tractor for any reason, lower the cutting heads to a safe position, eg to the ground, and use 'Safe stop': **Handbrake on. Controls in neutral. Engine off and remove key.** HSE's publication *Tractor action* has further details on safe driving practice (see 'Further reading').
- Never operate the tractor controls from any position other than the driving seat especially when hitching/unhitching the machine.
- Never carry out maintenance with the tractor engine running.
- Do not carry out maintenance on the hedge cutter with the cutting arm raised unless the arm is properly supported.
- Make sure the machine is left in a stable position when it is removed from the tractor, using any stands or props provided, and securing it if necessary.
- Never allow children on or near the tractor or machine.
- Clear up debris after cutting if it could be a hazard to others.

Safe machine

Make sure:

- the tractor rear and side(s) are fitted with protective glazing, metal mesh or polycarbonate guards of a size/strength specified by the hedge cutter manufacturer to protect the operator against thrown debris or parts;
- the tractor mesh/polycarbonate guards are suitable for the job, undamaged and maintained in accordance with the manufacturer's instructions;
- all hedge cutter guards and safety devices are in position, correctly fitted and maintained in accordance with the manufacturer's recommendations;
- flails and their fixings are of the type recommended by the manufacturer, securely attached, and that none of the flails are missing or damaged;
- flails and their fixing heads are the right size for the task;
- hydraulic pipes are carefully routed to avoid damage;
- you follow the manufacturer's instructions for hitching or unhitching the machine from the tractor;
- you check that machine fittings and couplings are in good condition;
- the tractor is at least the minimum weight recommended by the hedge cutter manufacturer. Use ballast as necessary.

Safe site

- Inspect the hedge before starting to cut and remove wire, bottles, cans and other debris.
- Use warning signs to alert others to the hedge-cutting operation if necessary.
- Work at a safe speed taking account of the conditions (eg terrain, proximity to the highway, or obstacles).
- Use safe practices when work needs to be done near OHPLs. Find out the height of power lines you may encounter and the reach of the machine arm. Avoid working within a 10 m horizontal distance of OHPLs. Always allow enough clearance to avoid contact with the lines and remember that electricity can jump gaps. If you have OHPLs where you are working, **before you start work** you should read Agriculture Information Sheet AIS8 for further details (see 'Further reading').

Roadside hedges

Take extra care if you are hedge cutting along a road. Consider other road users (eg vehicles, cyclists, pedestrians, or horse riders). Stop the machine immediately if anyone is in danger of being hit by thrown debris. Warn people to stand clear of any danger zone. Clear any debris left on the road to prevent accidents to other road users.

Warning signs

Work should be kept within an area covered by warning signs of a size and type specified by the Department for Transport (DfT). Position any signs used in accordance with DfT and Local Highway Authority guidelines.

Non-authorised placement of road signs may create offences under the Highways Act.

Contact your Local Highway Authority advising them of the time and location of intended work, asking what signs and procedures are required. The following guidelines may be helpful (remember Local Highway Authority consent is still required):

Requirements when hedge cutting on roads

- **'Road works ahead'** warning sign with supplementary **'Hedge cutting'** plate. **'For 1 mile'** or appropriate shorter distance may be added to the plate.
- **'Road narrows'** warning sign with supplementary **'Single file traffic'** plate on two-way roads.
- On roads with a permanent speed limit of 30 mph or less, white on blue **'Keep right'** arrow sign on tractor rear. An approved small illuminated **'Light Arrow'** sign on the tractor rear on roads with a higher speed limit.
- On two-way roads one set of signs is needed facing traffic in each direction. Work should be within one mile of the signs.
- Work only in good visibility and during periods of low risk (eg not during rush-hour). Vehicles should have a flashing beacon.
- Ideally vehicles should be conspicuously coloured.
- Clear debris from paths and roads as soon as practicable, wearing high-visibility clothing while on the road, still working within signs.
- Collect all road signs promptly after the job is finished.

Additional signing will be required by the Local Highway Authority where junctions enter the road along which the work is taking place or it is a high-speed road or a dual carriageway.

The Local Highway Authority may require debris to be cleared within a specified time after work is completed. **Leaving any debris on the road may create offences under the Highways Act.**

Refer to your Local Highway Authority for further information.

The law

Employers and the self-employed must ensure that people carrying out work under their control are suitably trained and competent. They also have a duty to assess the risks to themselves and others affected by their work and to take appropriate steps to ensure the health and safety of themselves and others. Employees also have duties to ensure their own health and safety and that of others.

Manufacturers and suppliers have responsibilities to ensure that any machine they supply is safe. The manufacturer should ensure that the machine has an instruction handbook, a declaration of conformity and is marked with a CE mark.

Further reading

Traffic signs manual. Chapter 8. Traffic safety measures and signs for road works and temporary situations. Part 2: Operations (Second edition) TSO 2009 ISBN 978 0 11 553052 4 or view online at www.dft.gov.uk

Tractor action: A step-by-step guide to using tractors safely INDG185(rev1) HSE Books 2003 (single copy free or priced packs of 10 ISBN 978 0 7176 2711 0) Web version: www.hse.gov.uk/pubns/indg185.pdf

Working safely near overhead power lines Agriculture Information Sheet AIS8(rev2) HSE Books 2000 Web version: www.hse.gov.uk/pubns/ais8.pdf

Further information

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This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

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