

Fuelling

- 30 Stop the engine and, if necessary, allow to cool before refuelling.
- 31 Petrol vapour is invisible and can travel considerable distances from spillage or fuelling sites. Maintain a safe distance from all sources of ignition at all times.
- 32 Store fuel to avoid vapour ignition from any source such as fires, people smoking or the wood chipper. Select a site shaded from direct sunlight and away from watercourses and drains.
- 33 Containers must be clearly labelled and have securely fitting caps. Plastic containers must be designed and approved for use with petrol or diesel fuel.
- 34 Replace the fuel cap securely.
- 35 Keep fuel from contacting the skin. If fuel gets into the eyes wash out with sterile water immediately and seek medical advice as soon as possible.

Maintenance

- 36 Ensure maintenance is carried out in accordance with the manufacturer's handbook.
- 37 Check the chipping components and knives each day for damage and wear.
- 38 Wear gloves when handling the knives.
- 39 Before working on the knives, confirm that the engine is switched off, the start key removed, and the chipping component is stationary.
- 40 Before opening any guard/cover or reaching into the infeed hopper or discharge chutes make sure the engine is switched off, the start key removed and the dangerous moving parts have come to a complete standstill.
- 41 Knives must be changed or reversed if damaged or blunt. They must be scrapped when worn to the minimum size specified by the manufacturer.
- 42 When new/sharpened knives are fitted, ensure there is the recommended clearance between the knives and the anvil.

Moving the machine

- 43 Stop the engine and remove the start/stop key.
- 44 Lock the chipping components.
- 45 Secure the infeed hopper and the chip discharge chute in the transport position.
- 46 Check the towing bracket, attach, then lift and secure the jockey wheel.
- 47 Connect the electrics and safety chain(s) to the towing vehicle.
- 48 Ensure the load is secure and people are in a safe position before moving off.

Further reading

<i>Mechanical roadside processing</i>	AFAG605
<i>Emergency planning</i>	AFAG802
<i>Training and certification</i>	AFAG805
<i>First aid at work: Your questions answered</i>	INDG214
<i>Managing health and safety in forestry</i>	INDG294
<i>Protect your hearing or lose it!</i>	INDG363
<i>Power-fed mobile wood chippers: Operator protection at infeed chutes</i>	AIS38
<i>Power take-offs and power take-off drive shafts</i>	AS24

These publications are available from HSE Books - see 'Further information'.

Notes

Name:

Checklist verified by:

Date:

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.

This leaflet is available in priced packs of 15 from HSE Books, ISBN 0 7176 2655 5. Single free copies are also available from HSE Books.

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Wood chippers



Introduction

This leaflet covers the safe working practices to be followed when operating a wood chipper.

It does not cover a combination of machines working within each other's risk zones (see AFAG leaflet 605 *Mechanical roadside processing*).

You can use this leaflet, along with the manufacturer's handbook, as part of the risk assessment process to help identify the controls to put in place when using a wood chipper.

You must also assess the effect of the site and the weather as well as following this guidance.

All operators must have had appropriate training in how to operate the machine and how to carry out the tasks required (see AFAG leaflet 805 *Training and certification*).

Personal protective equipment (PPE)

- 1 Use the following PPE:
 - Asafety helmet, complying with EN 397, if identified as required in the risk assessment.
 - Eye protection (a mesh visor complying with EN 1731 or safety glasses to EN 166).
 - Hearing protection (complying with EN 352) where the noise level exceeds 85 dB(A) (see HSE pocket card INDG363 *Protect your hearing or lose it!*).
 - Gloves.
 - Safety boots with good grip and ankle support (complying with EN 345-1).
 - Non-snap outer clothing appropriate to the prevailing weather conditions. High-visibility clothing (complying with EN 471) should be worn when the risk assessment identifies that it is needed.
- 2 Each person should carry a personal first-aid kit including a large wound dressing (see HSE leaflet INDG214 *First aid at work: Your questions answered*).
- 3 Hand-cleaning material such as waterless skin cleanser or soap, water and paper towels should be readily available.

The machine

- 4 Before working with a machine, check it has been properly converted from any transport mode.
- 5 Ensure guards for dangerous parts (eg belts, pulleys, shafts etc) are secure and undamaged.
- 6 Ensure protective devices, such as the infeed control bar (incorporating the stopping device), are working correctly (see HSE leaflet AIS38 *Power-fed mobile wood chippers: Operator protection at infeed chutes*).

- 7 Ensure any lock for the chipping components has been disengaged.
- 8 Ensure the infeed hopper is clear of any materials.
- 9 Ensure any noise warning signs are in place.
- 10 For machines driven by a power take-off (PTO) shaft, before starting ensure:
 - the PTO shaft is fitted with a suitable guard, complying with EN 1152, that encloses the shaft along its full length from tractor to machine;
 - the guard is correctly fitted and in effective working order (see AS24(rev) *Power take-offs and power take-off drive shafts*);
 - the PTO speed is suitable for the machine.

Selecting the work area

- 11 Select as firm a surface as possible and stabilise the machine.
- 12 Ensure ventilation is adequate and any exhaust fumes are vented into open air if working in an enclosed space.
- 13 Where appropriate, if the chipper is detached from the tow vehicle, apply the handbrake and, if necessary, chock the wheels.
- 14 On all reasonably foreseeable approaches to the worksite, erect warning and prohibition signs conforming to the Health and Safety (Safety Signs and Signals) Regulations 1996, indicating a hazardous worksite and that unauthorised access is prohibited. In areas of very high public access, a risk assessment may indicate that additional controls (eg barrier tape, barriers, extra manning) are required.
- 15 Ensure all operations near to highways are adequately signed with the appropriate notices as specified in the DTLR Code of Practice *Safety at street works and road works* (available from The Stationery Office ISBN 0 11 551958 0).
- 16 Ensure the discharge chute is positioned to prevent chips being blown onto the highway during roadside operations, or in any direction where they can affect colleagues or members of the public.
- 17 Position the chipper so that operators do not have to stand on embankments/slopes when feeding material into the machine.

Emergency procedures

- 18 Ensure a designated and responsible person knows the daily work programme and agree with them a suitable emergency contact procedure. Where reasonably practicable use a mobile phone or radio and a pre-arranged call-in system.
- 19 Ensure the operators can provide the emergency services with enough detail for them to be found in the event of an accident, eg the grid reference, the distance from the main road,

the type of access (suitable for car/four-wheel drive/emergency service vehicles). In urban areas street names are essential. Know the location details before they are needed in an emergency. (Also see AFAG leaflet 802 *Emergency planning*.)

Operating the machine

- 20 Make sure the cuffs of gloves are close fitting or tucked into your sleeves to stop them being caught on material as it is fed into the chipper.
- 21 Set the engine speed (and set the stress control if fitted), to obtain optimum performance.
- 22 Check that material to be chipped is free from stones, metal and foreign objects.
- 23 Stand to one side of the infeed rollers to avoid being hit by ejected material.
- 24 Let material go as soon as it is engaged in the infeed rollers or chipping components.
- 25 Use a push-stick at least 1.5 m long for both short produce and for the last piece of produce to be chipped (see Figure 1).
- 26 **Do not put any part of your body (including hands or feet) into the infeed hopper while the machine is running.**
- 27 Always follow the manufacturer's instructions for dealing with any blockages on the machine.
- 28 Keep the area of ground in front of the infeed hopper free from debris to prevent any tripping hazard.
- 29 Remove the engine start key when the machine is left unattended or when undertaking any maintenance.



Figure 1 Using a push-stick