

Introduction

This leaflet covers the safe working practices to be adopted when using a **sit-astride all-terrain vehicle** (ATV), often known as an ATV quad bike. These are most commonly four-, but can be three- or even six-, wheeled vehicles designed for off-road use. See AFAG leaflet 702 *All-terrain vehicles* for advice on other types of ATV.

This leaflet does not cover the additional safety requirements when applying pesticides or operating powered ancillary equipment from ATVs and is not a substitute for proper training.

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 ATVs.

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:
 - Suitable head protection **must be worn**, eg a motorcycle helmet which meets BS 6658, or an ATV helmet/other head protection which meets BS EN 1384: 1997.
 - Eye protection (a visor or safety glasses to EN 166), against flying insects, dust or branches.
 - Protective boots with good grip and ankle support (complying with EN 345-1), when loading or unloading the ATV.
 - Gloves, for loading and unloading.
 - Non-s snag outer clothing. The use of high-visibility clothing may also be appropriate.
- ❑ 2 Carry a personal first-aid kit including a large wound dressing (see HSE leaflet INDG214 *First aid at work: Your questions answered*).

General

- ❑ 3 Do not carry passengers on ATVs or in trailers.
- ❑ 4 ATV capabilities and responses vary. If an ATV is changed the operator may require additional training.
- ❑ 5 The manufacturer's recommendations for operation and maintenance must be followed at all times.

Pre-start checks

- ❑ 6 Check the brake operation - footbrakes and handbrakes.
- ❑ 7 Check the tyre condition, for wear and visible damage.
- ❑ 8 Check the tyre pressures, using a pressure gauge capable of reading low pressures accurately (1 psi difference can cause control problems).

- ❑ 9 Check the steering, for smooth and positive operation.
- ❑ 10 Check the throttle, for smooth operation in all steering positions.
- ❑ 11 Check the security of the wheel nuts.
- ❑ 12 Check the security of the seat, carriers and loads.
- ❑ 13 Check all lights including warning lights.
- ❑ 14 Check the clutch (if manual), for smooth and positive operation.
- ❑ 15 Check you have enough fuel for the planned journey.

Emergency procedures

- ❑ 16 Ensure that a designated and responsible person knows the daily work programme and suitable emergency contact procedures. Where possible use a mobile phone or radio and a pre-arranged call-in system.
- ❑ 17 Ensure the operators can provide the emergency services with enough detail for them to be found if there is 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). Know the location details before they are needed in an emergency. (Also see AFAG leaflet 802 *Emergency planning*.)

Starting and stopping

- ❑ 18 Do not run the engine for long periods when parked in enclosed spaces.
- ❑ 19 Sit astride the ATV when starting the engine. (On certain models with a pull start this may not be possible.)
- ❑ 20 Ensure the gearbox is in neutral when starting.
- ❑ 21 Always park the ATV in a suitable position with the parking brake applied.

Route planning

- ❑ 22 Plan your route to avoid severe slopes and unstable ground conditions.
- ❑ 23 Always survey deep vegetation to identify hidden obstructions.
- ❑ 24 Plan regular routes to avoid rocks, stumps, drainage ditches and steep slopes. Drainage ditches should be piped or bridged on regular routes. Thatch soft spots where necessary. Luminous marker posts may be used on permanent routes to help the operator in poor weather or poor light. Remove the lower branches of trees on regular routes.

Driving

- ❑ 25 Drive with due care and attention at all times and be aware of other forest users.

- ❑ 26 Only select and use routes that are within the capabilities of the ATV and the operator.
- ❑ 27 Drive with feet on the footrests at all times.
- ❑ 28 Do not 'ride' the gear change lever as this can put the gearbox into neutral.
- ❑ 29 Use speeds appropriate to the terrain and tasks.
- ❑ 30 Position the body to increase stability on slopes.
- ❑ 31 Avoid changing gear on slopes. Select a suitable low gear **before** negotiating the slope or obstacle.
- ❑ 32 Be aware that:
 - front wheel brakes are either omitted on some ATVs, or may have reduced efficiency when rolling back;
 - on four-wheel-drive machines, using any brake will operate both front and rear wheels;
 - some ATVs have hydrostatic drives with no engine braking at zero revs, therefore maintain slight revs on downhill travel.
- ❑ 33 On ATVs without a differential, the driving technique used should allow for the difference between inside and outside wheel speeds during turns:
 - at slow speeds, shift body weight to the footrest on the outside of the turn while leaning the upper body into the turn;
 - at faster speeds, shift body weight to the inside footrest while leaning the upper body into the turn.
- ❑ 34 On paved surfaces, increased grip may prevent wheel slip on inside wheels and reduce turning efficiency - a sudden change in traction may cause a change in direction.
- ❑ 35 Sharp or quick application of the throttle in a low gear may cause the ATV to overturn backwards, especially when travelling up slopes.
- ❑ 36 If travelling behind another ATV/vehicle, ensure adequate separation to permit safe braking and to avoid any dust, spray or stones that may be thrown up.

Driving on difficult terrain

- ❑ 37 Only drive within the limits of visibility.
- ❑ 38 Maintain an even throttle while negotiating slopes.
- ❑ 39 Avoid side slopes and difficult obstacles by route planning.
- ❑ 40 Where side slopes are unavoidable lean and steer slightly uphill.
- ❑ 41 To ascend slopes:
 - select the appropriate low gear at the foot of the slope;
 - keep your weight as far forward as possible (lean over the handlebars);

- align the ATV directly uphill;
- be competent in techniques to recover from a failed hill climb.

- ❑ 42 To descend slopes:
 - select the appropriate low gear at the top of the slope and use engine braking (if available);
 - keep your weight as far back on the seat as possible;
 - align the machine directly downhill;
 - if needed, use only back brakes (be aware that on four-wheel-drive machines, operating the rear brake may also have a braking effect on the front wheels);
 - be aware of the danger of brakes locking causing a skid;
 - correct skids by releasing the brake and straightening the ATV;
 - very steep slopes need a run-out area at the bottom.
- ❑ 43 It is **not** possible to set a maximum safe slope. The ability to negotiate a slope safely will vary with:
 - the competence of the operator;
 - the type of ATV being used (eg two- or four-wheel drive);
 - the load weight and distribution, including mounted or trailed equipment;
 - the tyre type, condition and pressure;
 - the ground conditions, including soil type, evenness and vegetation;
 - the weather conditions - dry, wet, frosty etc.
- ❑ 44 In wet and boggy areas:
 - do not ford water deeper than 250 mm;
 - dismount from the upstream side of a stalled ATV;
 - test brakes after driving through water;
 - be competent in debugging techniques.

Carrying loads

- ❑ 45 The operator needs to know:
 - the manufacturer's recommended carrying limits;
 - the maximum front and rear load capacity;
 - the maximum ATV load;
 - how front and rear loads will affect stability.
- ❑ 46 Loads must be properly secured and distributed to allow for difficult terrain.

