



# UTILITY VEHICLE

## Training Manual



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## WELCOME

This program has been designed to improve safety in relation to operating ATV Utility Vehicles.

The following vehicles are covered by this training manual:

- KUBOTA: RTV-900XT, RTV1140CPX, RTV-X900, RTV-X1120D
- CFMOTO: CF500UU
- KAWASAKI MULE: 610 4/4 600, PRO-DXT, 4010 Trans 4/4 Diesel, PRO-FXT
- KYMCO: UXV 450i
- POLARIS RANGER: 500 EFI 4/4, 500 EFI CREW
- LANDBOSS

This training manual does not replace the Operator's Manual. The Operator's Manual for the specific vehicle should be read in conjunction with this training manual.

## TOPICS

This training course covers instructions for the safe operation of the above listed ATV Utility Vehicles.

## WHY IS THIS IMPORTANT

**ATV Utility Vehicles** used for work are regulated under model WHS laws as plant. Plant is a major cause of workplace death and injury in Australian workplaces. There are significant risks associated with using plant and severe injuries can result from the unsafe use of plant.

## THE MEANING OF KEY TERMS

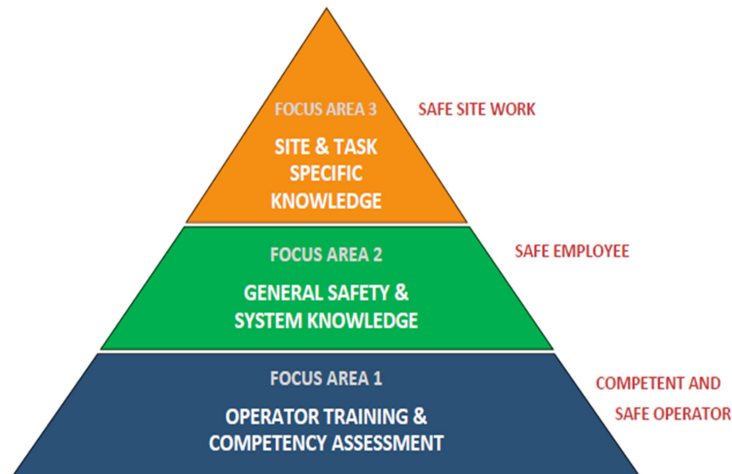
**Plant** includes any machinery, equipment, appliance, container, implement and tool, and includes any component or anything fitted or connected to any of those things. Plant includes items as diverse as lifts, cranes, computers, machinery, conveyors, forklifts, vehicles, power tools and amusement devices.

**Competent person** means a person who has acquired through training, qualification or experience the knowledge and skills to carry out the task.

- A competent person has a more specific meaning in the following circumstances:
  - For design verification, the person must have the skills, qualifications, competence and experience to design the plant or verify the design.
  - For inspection of plant for registration purposes the person must have:
    - educational or vocational qualifications in an engineering discipline relevant to the plant being inspected, or

- knowledge of the technical standards relevant to the plant being inspected.

## COMPETENCY TRAINING



### Operator training and competency assessment

The National Health and Safety legislation requires operators of plant items to be trained and deemed as competent to a transparent standard.

This helps to reduce the risks associated with the various plant items and to ensure a minimum standard of competency.

### General safety system knowledge

This is principally aimed at ensuring operators have been through relevant inductions and have a good working understanding of the safe systems of work employed by their organisation to manage safety risks, no matter where they are working.

This includes:

- Hazard identification, risk assessment, incident reporting and injury management process
- Emergency procedures

### Site specific procedures and knowledge

This topic is in relation to Site rules and requirements based upon the contents of the site WHS Management Plan, including:

- Key personnel and responsibilities

- Consultation, cooperation and coordination arrangements
- Provision of facilities and housekeeping
- Specific site safety rules

## PERSONAL PROTECTIVE EQUIPMENT

You will be required to wear personal protective equipment (PPE), like safety shoes and high visibility clothing. Crash hat or helmet are optional and recommended if operating in harsh or recreational conditions. Do not wear loose clothing or jewellery that can be caught on the control levers and other machine parts.

Ensure you have read the Operator's Manual associated with the vehicle you are driving, follow the instructions about the required PPE for your Vehicle

## SAFE OPERATING PROCEDURES AND PRECAUTIONS

ATV vehicles come in a rear two-wheel drive version and a four-wheel drive version. Before operating the Utility Vehicle, it is important to understand which version you are driving. The two different versions have different capabilities off road and will react differently to the various ground surfaces and loads carried.

Drivers of the ATV Utility Vehicles should have a current driver's license.

Outlined below are step by step instructions showing the safe way to operate the Utility Vehicles.

## BEFORE OPERATING THE VEHICLE

Each driver, operator or helper should be competent and instructed in this Training Manual and the Operator's Manual. Only trained personnel should be allowed to operate the unit.

The pre-operation checklist should be completed before starting the Utility Vehicle. If any defects are found do not operate the vehicle until all defects are reported or rectified. A pre-operation checklist is available upon request from Paton's Event Hire.

The Pre-Operation Checklist should be completed before using the ATV, ensure the engine is off, parking brake engaged, implements lowered and on a level surface.



Typical Operator's Manual

Typical Pre-Operation Checklist items:

- Conduct a general walk around visual inspection of the vehicle, checking for signs of damage, oil leaks, coolant leaks and any obvious safety issues, e.g. worn tyres
- Check engine oil level, should be between half and full on the engine oil dip stick
- Check transmission fluid level, should be between half and full on the transmission dip stick
- Check brake fluid level, visual sight glass or plastic reservoir.

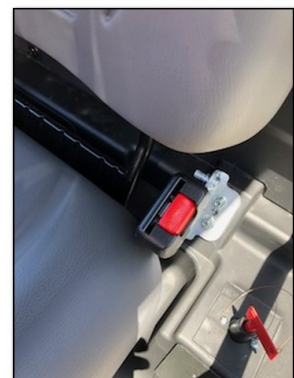
- Check hydraulic tank oil level, should be between half and full on hydraulic tank dip stick
- Check coolant level, check coolant expansion tank, level should be between high and low marks on tank.
- Clean grill, radiator screen (When used in a dusty place) Blow out with compressed air or low-pressure water
- Check brake pedal, check for resistance when pressed, indicates proper function.
- Check parking brake, check for easy operation to engage and release
- Check indicators, gauges and meters, warning lights or buzzers sounding
- Check lights
- Check seat belt and ROPS, correct operation of seat belts and check for damage to ROPS
- Check CV joint boots for damage or grease leaking out
- Check tire inflation pressure, check recommended inflation pressure marked on the tyre
- Check to see if all shields are in place.
- Check brakes, speed control pedal, and other mechanical parts for improper adjustment and wear. Contact Paton's Event Hire for any repairs or adjustments to be carried out, do not repair unless authorised by Paton's Event Hire.
- Check the tightness of all nuts and bolts regularly. (For further details, see "MAINTENANCE" section in the Operator's Manual.)
- Inspect all danger, warning and caution labels, read and understand them (See "DAILY CHECK" in "PERIODIC SERVICE" section of the Operator's Manual.)

## Prior to Driving

- a) Know your equipment and its limitations. Read the Operator's Manual before attempting to start and operate the vehicle.
- b) Pay special attention to the Danger, Warning and Caution labels on the vehicle.



- c) Check if the Roll Over Protection (ROPS) is in place and undamaged.
- d) Always use the seat belts. Check the seat belts regularly and replace if frayed or damaged.



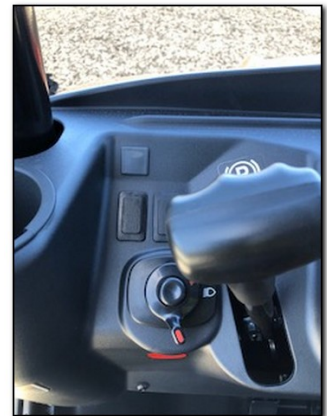
- e) Never wear loose, torn, or bulky clothing around the vehicle. It may catch on moving parts or controls, leading to the risk of an accident. Use additional safety items, e.g. helmet, safety boots or shoes, eye and hearing protection, gloves, etc., as appropriate or required.
- f) Keep your vehicle clean. Dirt, grease, and trash build up may contribute to fires and lead to personal injury.

## Driving

It is the operator's responsibility to be alert for any equipment or environmental condition that could compromise safe operation.

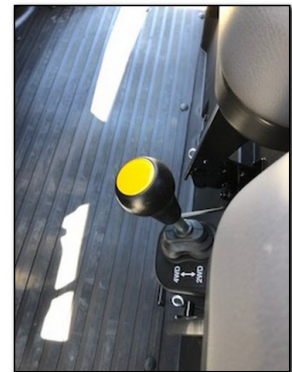
## Starting

- a) Always sit in the operator's seat when starting engine or operating levers or controls.
- b) Before starting the engine, make sure that all levers are in their neutral positions, that the parking brake is engaged, and that the hydraulic outlet (if equipped) is OFF. And make sure the engine hand throttle (if equipped) is in its idle engine speed position.
- c) Do not start engine by shorting across starter terminals or bypassing the safety start switch. The vehicle may start in gear and move if normal starting circuitry is bypassed.
- d) Be sure that the operator and all passengers are properly positioned, and seat belts are appropriately fastened. Ensure that everyone in the vehicle is able to reach all grab handles and the floor. **Only carry the recommended number of passengers.**
- e) Do not operate or idle engine in a non-ventilated area. Carbon monoxide gas is colorless, odorless, and deadly.
- f) Carefully check the vicinity in the rear-view mirror (if equipped) before operating the vehicle or any implement attached to it. Check for overhead clearance which may interfere with the CAB or ROPS.
- g) Do not operate or start the vehicle or any implement attached to it while under the influence of alcohol, medication, controlled substances or while fatigued.
- h) Keep all shields and guards in place. Replace any that are missing or damaged



## Driving

- a) Avoid sudden starts. To avoid rollovers, slow down when turning, on uneven ground, and before stopping. While increasing engine speed with the engine hand throttle (if equipped), operate the speed control pedal with great care to avoid sudden starts.
- b) Always keep both hands on the steering wheel, always keep arms and legs inside the operating compartment and never operate the vehicle while standing.
- c) UTV's have great difficulty turning with the differential locked and attempting to do so could be dangerous. They are not designed to drive on pavement in 4wd mode. Controlling the vehicle on pavements is difficult and should be avoided in 4wd mode.
- d) Do not operate near ditches, holes, embankments, or other ground surface features which may collapse under the vehicle's weight. The risk of vehicle upset is even higher when the ground is loose or wet.
- e) Watch where you are going at all times. Watch for and avoid obstacles. Be alert at row ends, near trees, and other obstructions.
- f) Be Aware that in the differential mode, if either wheel leaves the ground it will spin freely, and that the wheel on the ground will transmit very little power. When the spinning wheel touches the ground again, it may grab abruptly, causing the operator to lose control.



- g) Pull only from the trailer hitch (if equipped). Never hitch to any other point except trailer hitch; such arrangements will increase the risk of serious personal injury or death due to a vehicle upset.
- h) Do not stand between vehicle and trailer unless parking brake is applied.
- i) When working in groups, always let the others know what you are going to do before you do it.
- j) Never try to get on or off a moving vehicle.

## Driving on slopes



Slopes are a major factor related to loss-of-control and tip over accidents, which can result in severe injury or death. All slopes require extra caution. **DO NOT** exceed the Maximum Downhill speed as is specified in your Operator's Manual

- a) Travel straight up or down hill.



- b) Reduce load when operating on hilly or over rough terrain.
- c) Keep front wheels straight at crest of hill or going over bumps.
- d) Do not stop or start suddenly when going uphill or downhill. Be especially cautious when changing direction on slopes.
- e) If vehicle stops or loses power going up a hill, lock parking brake to hold vehicle on slope. Maintain direction of travel and release brake slowly. Back straight downhill while maintaining control. Do not turn vehicle sideways. Vehicle is more stable in a straight forward or rearward position.
- f) When driving on soft terrain, turn front wheels slightly uphill to keep vehicle on a straight line across the hill.
- g) If the vehicle begins to tip, turn front wheels downhill to gain control before proceeding.
- h) To avoid upsets, always back up steep slopes. If you cannot back up the slope or if you feel uneasy on it, do not operate on it. Stay off slopes too steep for safe operation.
- i) Driving forward out of a ditch, mired condition or up a steep slope increases the risk of a vehicle to be upset backward. Always back out of these situations. Extra caution is required with 4-wheel drive mode because the increased traction can give the operator false confidence in the vehicle's ability to climb slopes.
- j) Keep all movement on slopes slow and gradual. Do not make sudden changes in speed, direction or apply brake and make sudden motions of the steering wheel.
- k) Special attention should be made to the weight and location of implements and loads as such will affect the stability of the vehicle.
- l) DO NOT operate the vehicle up, down or across a slope in excess of the vehicle's capabilities as is specified in the Operator's Manual, take into account how the load you are carrying affects the stability of the vehicle on a slope.

## Driving in inclement conditions

Only operate the vehicle during daylight or with good artificial light and operate the vehicle in an open, unobstructed area.

- a) Use protective gear as appropriate or required for the operating conditions.
- b) Reduce speed according to trail, terrain and visibility conditions.
- c) Never drive exceeding the limit of visibility. Slow down near crest of hill until getting a clear view of the other side.
- d) Stay alert for holes, rocks and other hidden hazards in the terrain.

- e) Never cross any body of water where depth may be unknown to the operator (Deep water is considered anything in excess the bottom edge of the axle cap). Choose a course within the waterway where both banks have a gradual incline. Cross at a point known to be safe. Be aware that the brakes may be affected when wet and initially have reduced braking power.



## Driving the vehicle at high speeds

- a) Check the front wheel engagement. The braking characteristics are different between 2 and 4-wheel drive. Be aware of the difference and use carefully.
- b) Always slow the vehicle down before turning. Turning at high speed may tip the vehicle over.
- c) Turn the headlights on.
- d) Drive at speeds that allow you to maintain control at all times.
- e) Do not apply the differential lock while traveling at high speeds. The vehicle may run out of control.
- f) Avoid sudden motions of the steering wheel as they can lead to a dangerous loss of stability. The risk is especially great when the vehicle is traveling at high speeds.

## HAULING LOADS IN THE CARGO BED

Be sure that the load is evenly distributed as the load will affect the way the vehicle handles. Be sure to reduce the cargo capacity to match operating conditions. Avoid top-heavy loading and ensure that the center-of gravity remains as low as possible.

- a) No riders in cargo bed or anywhere else.
- b) Do not overload vehicle. Securely anchor all loads. Do not carry anything which sticks outside the cargo bed.



- c) Reduce cargo capacity when operating on rough or hilly terrain.
- d) Balance loads evenly and secure them. Braking could shift the load and affect vehicle stability.
- e) Never operate vehicle with the cargo bed raised.
- f) Operate cargo bed dump with vehicle stationary and parking brake locked. Do not dump while moving.
- g) Operate hydraulic dump (if equipped) on level ground only.
- h) Operate dump as appropriate.
- i) Do not place hands or body under the cargo bed when lowering bed.

## PARKING THE VEHICLE

Make sure the HYDRAULIC OUTLET is off (if equipped), lower all implements to the ground, place all control levers in their neutral positions unless a park selection in the gear shift lever is equipped, set the parking brake, stop the engine, and remove the key.

Make sure that the vehicle has come to a complete stop before dismounting.

Avoid parking on steep slopes, if at all possible park on a firm and level surface; if not, park across a slope with chock the wheels and always with attachment on the ground.

## TRANSPORTING

Disengage power to attachment(s) when transporting or not in use.

Do not tow this vehicle. Use a suitable truck or trailer when transporting on public roads.

Use extra care when loading or unloading the vehicle into a trailer or truck.

## MISCELLANEOUS

Clean platform if dirty and remove any debris from around foot controls.

Do not wear headphones while operating.

Do not tow a buggy with any passengers on it.

Never attempt wheelies, jumps or other stunts

Only use approved implements for the vehicle you are using, ensuring the specifications for the vehicle are met.

## Towing a trailer

Check the specifications in the operator's manual for the cargo/trailer maximum capacities to avoid overloading the vehicle and trailer.

Take care when turning, trailer wheels track in a different arc to the tow vehicle and can easily run from tracks, paths or roads causing vehicle instability and can lead to rollovers and dangerous situations.

Trailers can be quite difficult to reverse, we recommend you seek assistance for someone to "Spot" you.

Ensure the towing coupling is engaged and locked properly before loading and moving the vehicle.

## Safety for children

Tragedy can occur if the operator is not alert to the presence of children. Children generally are attracted to vehicles and the work they do.

- a) Never assume that children will remain where you last saw them.
- b) Keep children out of the work area and under the watchful eye of another responsible adult.
- c) Be alert and shut your vehicle down if children enter the work area.
- d) Never carry children in the cargo bed. There is no safe place for them to ride. Do not carry small children on lap.
- e) Never allow children to operate the vehicle even under adult supervision.
- f) Never allow children to play on the vehicle or on the implement.
- g) Use extra caution when backing up. Look behind and down to make sure area is clear before moving.

## Quiz

1. Can you drive the Utility Vehicle without the Roll Over Protection (ROPS) in place?

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2. Is Competency Training for plant items compulsory?

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3. Name 3 items from the pre-operation checklist

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4. What are the requirements for passengers?

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5. Is it advised to turn on a slope?

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6. What happens to the brakes when the vehicle has gone through water?

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7. Are you allowed to carry people in the cargo area?

## Additional safety advice for the Kubota RTV-X900, RTV1140 & RTV-X1120D

### Operating hydraulic outlet driven equipment (if equipped)

Before installing or using hydraulic outlet driven equipment, read the manufacturer's manual and review the safety labels attached to the equipment.

Wait until all moving components have completely stopped before getting off the vehicle, connecting, disconnecting, adjusting, cleaning, or servicing any hydraulically driven equipment.

When operating stationary hydraulically driven equipment, always apply the vehicle parking brake and place chocks behind and in front of the rear wheels. Stay clear of all rotating parts. Never step over rotating parts.