



# OWNER'S MANUAL

All-terrain electric traction vehicle

MTT-154-20L

2024

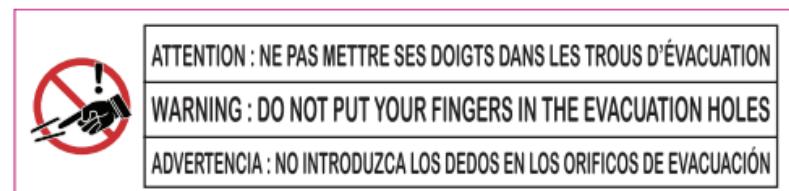
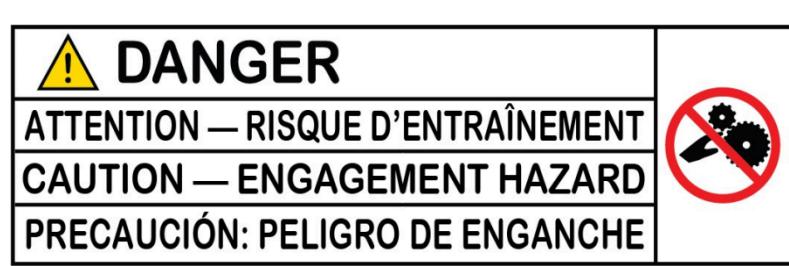
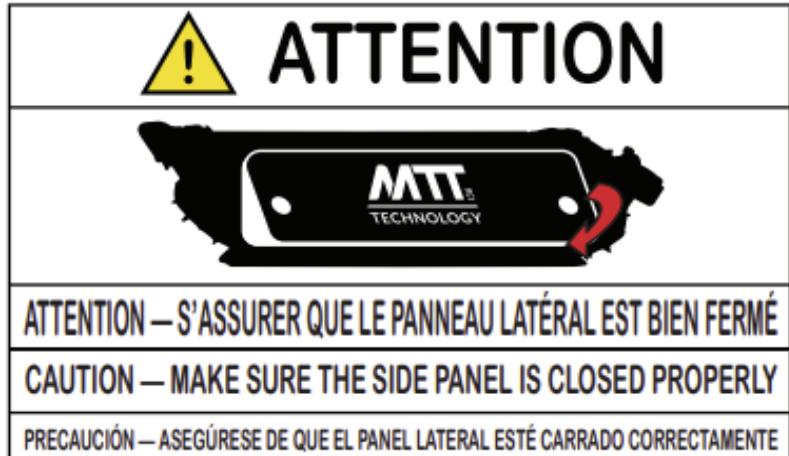
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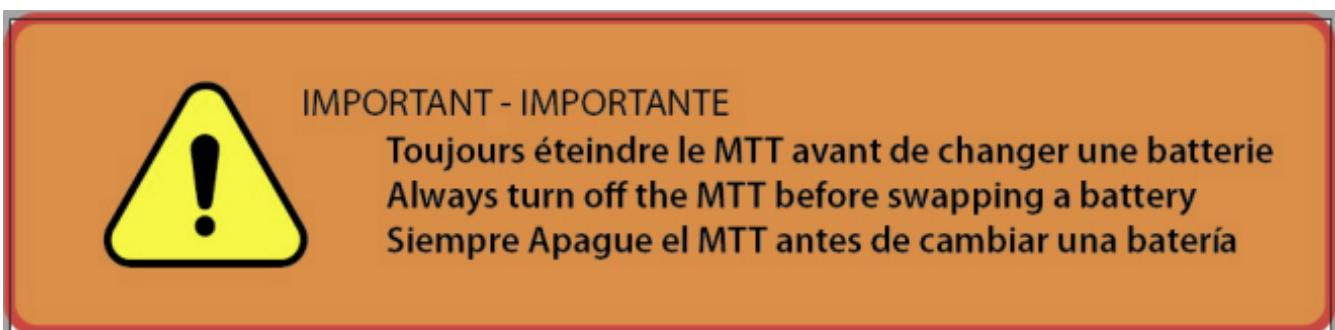
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## Warnings







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## Foreword

THIS VERSION OF THE MTT-154 OWNER'S MANUAL IS A TRANSLATION OF THE ORIGINAL ONE WRITTEN IN FRENCH. IN CASE OF AMBIGUITY AND/OR DIFFICULTY TO INTERPRET, PLEASE REFER TO THE ORIGINAL FRENCH VERSION. YOU CAN ALSO CONTACT THE MTT TECHNICAL SUPPORT FOR ASSISTANCE AND CLARIFICATIONS (see section "Contact us").

Congratulations on the purchase of your new MTT electric all-terrain traction vehicle. Regardless of the model, feature and option chosen, it will be covered by the MTT Manufacturier warranty as well as an after-sales service that can provide you with the required parts, service and accessories that you may need.

Before operating the vehicle, you must have read this manual to reduce the risk of injury or death to you, passenger(s) and others nearby. It is also important to read all safety labels affixed to the vehicle and its accessories. In addition to voiding the warranty, any neglect of the obligations, recommendations and warnings contained in this manual could result in serious injury or death.

This manual has been produced to introduce the MTT to its owner/driver. In addition, it defines the instructions for operating the machine safely as well as for maintaining it properly.

The information contained in this document was accurate at the time of publication. It should be noted that in the spirit of continuous improvement, there may be certain differences between the information conveyed in this document and the product as manufactured.

Note that this guide is translated into several languages. In the event of a discrepancy with the original French version, the latter takes precedence.

\*\* As of this writing, the owner's manual is available in French and English (translated version). You can contact your MTT seller to obtain an electronic copy of the version of your choice.

The key allowing the operation of the MTT is provided with an identification number. The replacement key should be kept in a safe place.



## Safety information

### General precautions

Improper use of the vehicle can result in a risk of electric shock and thus cause serious injury (electrification), or even death (electrocution).

Never plug the charging cord into the same wall outlet as another device. Do not insert or remove from the outlet if there is water on any part of the plug. Do not use an extension or adapter other than those recommended and/or supplied by MTT Manufacturier. Not splice the charging cord or cut or remove its grounding prong. If damaged, the charging cord must be replaced by the manufacturer, its service agent or a qualified person to avoid any hazard.

Contact with certain components may cause a risk of burns.

Never touch the electrical components, particularly the motor and the charger when they are in use and even a few hours after they have been turned off. Please note that the charger is used when recharging the MTT and not when it is operating.

Always turn off the electrical power (vehicle and battery if applicable) before cleaning the vehicle. Do not clean with a high pressure jet. If water enters any component, it could damage it and cause operational problems and void the warranty.

Improper use, handling or storage of the battery may result in fire or explosion and void the warranty.

Do not use the battery if it has major scratches, any source of deformation or external damage. Use a charger specifically designed for this purpose and follow the instructions for recharging. Store the battery in a cool, clean, dry place out of the reach of children. Do not leave a battery near a heat source, heat it or throw it into a fire; This could cause the battery to ignite or explode. Do not attempt to disassemble, modify or otherwise alter an MTT battery; This may cause it to leak, short circuit, overheat, explode or ignite. Avoid contact with humidity as much as possible. Clean the battery only with a dry or very slightly damp cloth; IN NO WAY THE BATTERY SHOULD NOT COME INTO CONTACT WITH WATER; it is not designed for this purpose.

If you need spare parts or accessories for your MTT, be sure to use only original MTT Manufacturier parts or accessories.



## Safe use

SERIOUS INJURY AND EVEN DEATH can occur if the following instructions are not followed:

Certain special knowledge is required to operate your MTT safely. Careful reading of this manual will help you adopt safe behavior for all operators, regardless of age and experience. All new operators must read and understand the safety labels affixed to the vehicle.

The operator, passenger(s) or bystanders may be injured or even die following an accident due to dangerous use of the vehicle, which exceeds the skills of the driver/occupant(s) or the capabilities of the vehicle. Beyond local regulations regarding age and training requirements, MTT Manufacturier requires that the operator be at least 14 years old and has read this manual.

Always wear personal protective equipment appropriate for the environment. Wearing protective equipment such as helmet, safety glasses/visor, gloves, closed shoes and clothing that covers, but is not loose and/or clinging, is strongly recommended for the physical operator as well as passengers.

It is recommended not to venture out alone and to inform a third person of your destination and the expected time of your return.

Systematically carry out an inspection before switching on the machine (see section “Inspection before use”). Never use the machine if there is anything abnormal or damaged. Ensure that the cargo, if applicable, is securely secured.

**NEVER LEAVE THE VEHICLE RUNNING UNATTENDED.** In addition to a safety risk, certain electronic components could be damaged if an unused vehicle is left powered on for an extended period of time.

**ALWAYS PUT THE VEHICLE IN NEUTRAL WHEN STOPPED AND APPLY THE PARKING BRAKE WHEN STANDING ON A SLOPE.** In the event of prolonged immobilization on a slope (i.e. more than 2 hours) and/or human operation near the vehicle, place an object acting as a wedge between the ground and the track on the lower side of the slope.

Note that as a safety measure, neutral is automatically applied if the accelerator and/or brake are not used for more than 15 seconds; see the “Operation” section for details.



In case of emergency, you can turn off power to the MTT by pressing the red emergency stop switch on the controller or the one on the MTT.

Always remove the key from the switch when not using the MTT to prevent accidental use, unsupervised use by children, or theft.

Safe operation of your MTT depends on many factors such as visibility, speed, environment, terrain, weather conditions, vehicle condition, and the weight loaded and towed. In addition, the state of mind as well as the physical and medical condition of the driver must be taken into consideration. Never operate the vehicle under the influence of alcohol, drugs or medication that could affect your abilities and/or your judgment.

The MTT and its accessories are designed according to use criteria which must be respected at all times. **AN MTT MUST BE COUPLED TO AN ACCESSORY SUCH AS A TRAILER, A SLEG OR ANOTHER MACHINE IN ORDER TO BE ABLE TO CHANGE DIRECTION.**

Be sure to use accessories appropriate for the terrain and designed and/or approved by MTT Manufacturier.

No one must sit on the machine itself or any other device not designed for this purpose when the vehicle is in motion.

**ALWAYS MAKE SURE THERE IS NO LOAD ON THE LUGGAGE RACK BEFORE OPENING THE SWIVEL PANEL.**

The driver is responsible for his own safety and that of his passengers if applicable. Make sure that all occupants, including yourself, adopt a stable and safe position and remain attentive to the signs of your passengers to ensure everyone's safety during the journey.

The motorization and traction system of an MTT are particular and different from traditional machines such as a snowmobile; It therefore takes time to adapt in order to obtain the full possible performance of the vehicle. It is recommended that you first familiarize yourself with the different controls on open, flat terrain. Once you are comfortable with the controls (operating intuitively) and have a feeling of confidence in your abilities and those of the vehicle, you will gradually be able to venture into different types of environments and terrains. Only drive at a speed appropriate to your physical conditions and abilities.



The manner of maneuvering the machine as well as the stopping distance is strongly influenced by these characteristics: the physical configuration (single, "snake", side-by-side, quad, etc.), the number of batteries, the mass on-board as well as the towed load. Although the MTT can operate on slippery surfaces, its performance such as traction level and braking distance may be affected. It is recommended to reduce speed and be extra vigilant in such conditions.

Be sure to maintain an adequate safety distance from people and other vehicles.

A beginner rider must become familiar with the MTT by practicing on a flat surface, without obstacles and at reduced speed.

#### THE MTT IS NOT DESIGNED FOR USE ON PUBLIC ROADS OR CYCLING PATHS.

Thanks to its front headlight, the MTT can be operated in the dark, but you will need to be extra vigilant due to reduced visibility. Avoid unfamiliar terrain and make sure the light is working before setting off. In addition, it is recommended to carry a personal flashlight and a first aid kit.

Always turn off the machine by pressing the emergency stop button before removing any debris from the vehicle such as snow, ice or branches that may interfere with the proper operation of the vehicle.

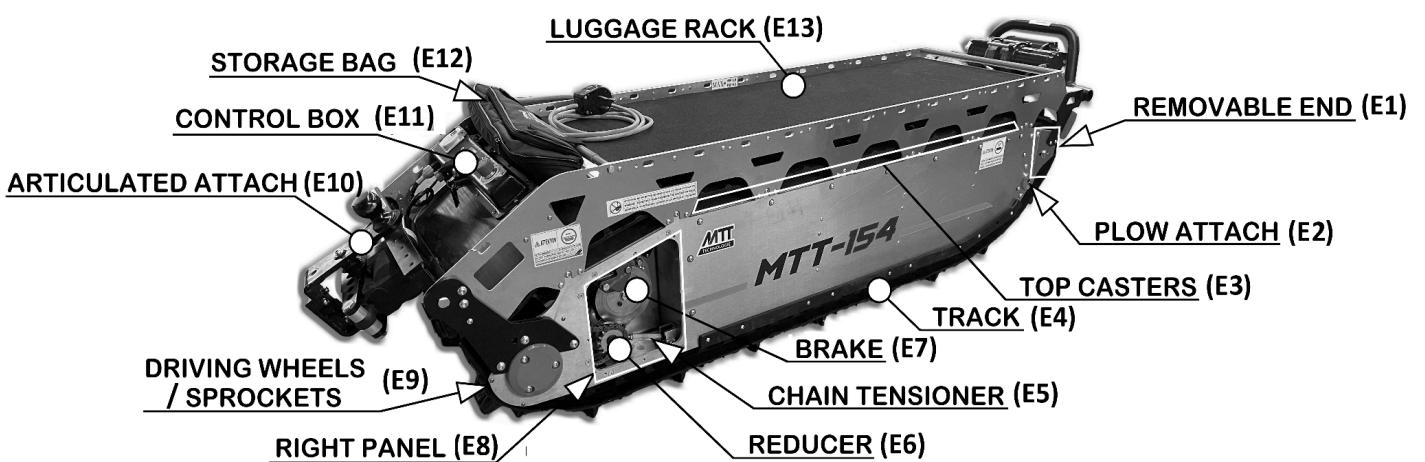
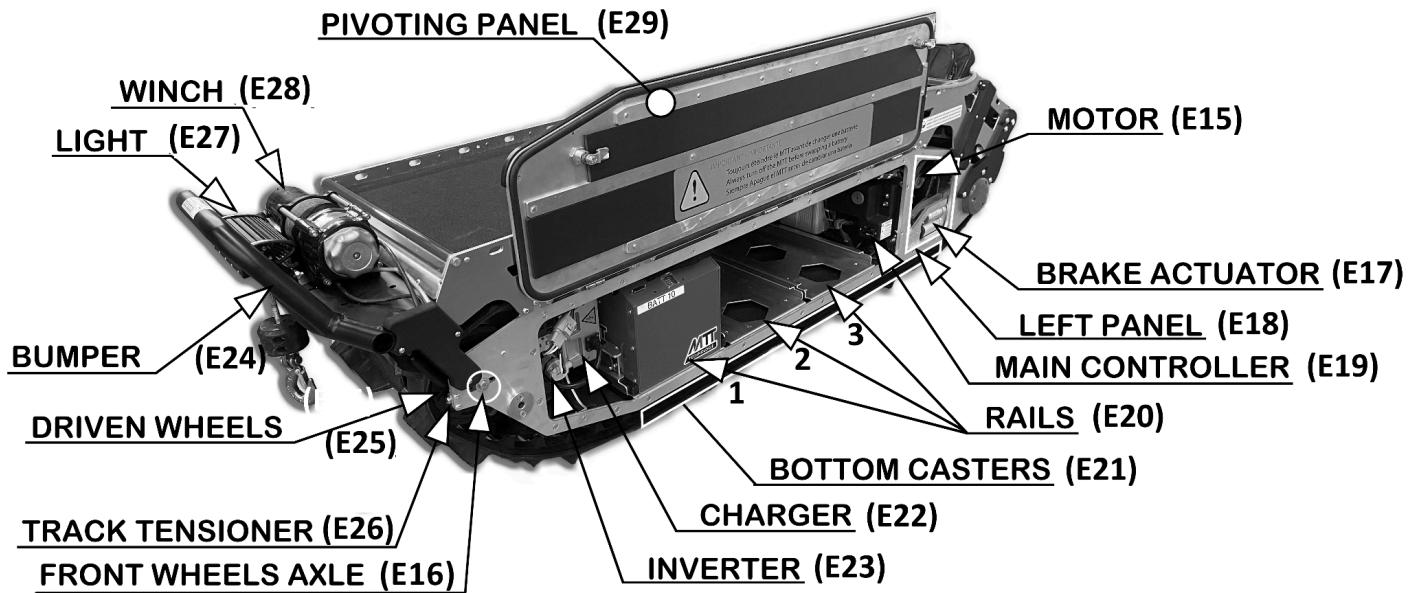
Never remove the original equipment from your MTT. Every vehicle contains numerous safety features in the form of various physical, electronic protections and safety labels. Do not modify or alter the vehicle in such a way that its capabilities (e.g.: top speed, maximum load) are changed. If applicable, the warranty no longer applies.

Never attempt to modify or repair electrical components yourself. Specialized maintenance operations (not described in this manual) as well as repairs to parts and systems must be carried out by a qualified technician.

Do not install studs on the track unless it has been designed for this purpose and/or the modification has been approved by MTT Manufacturer.

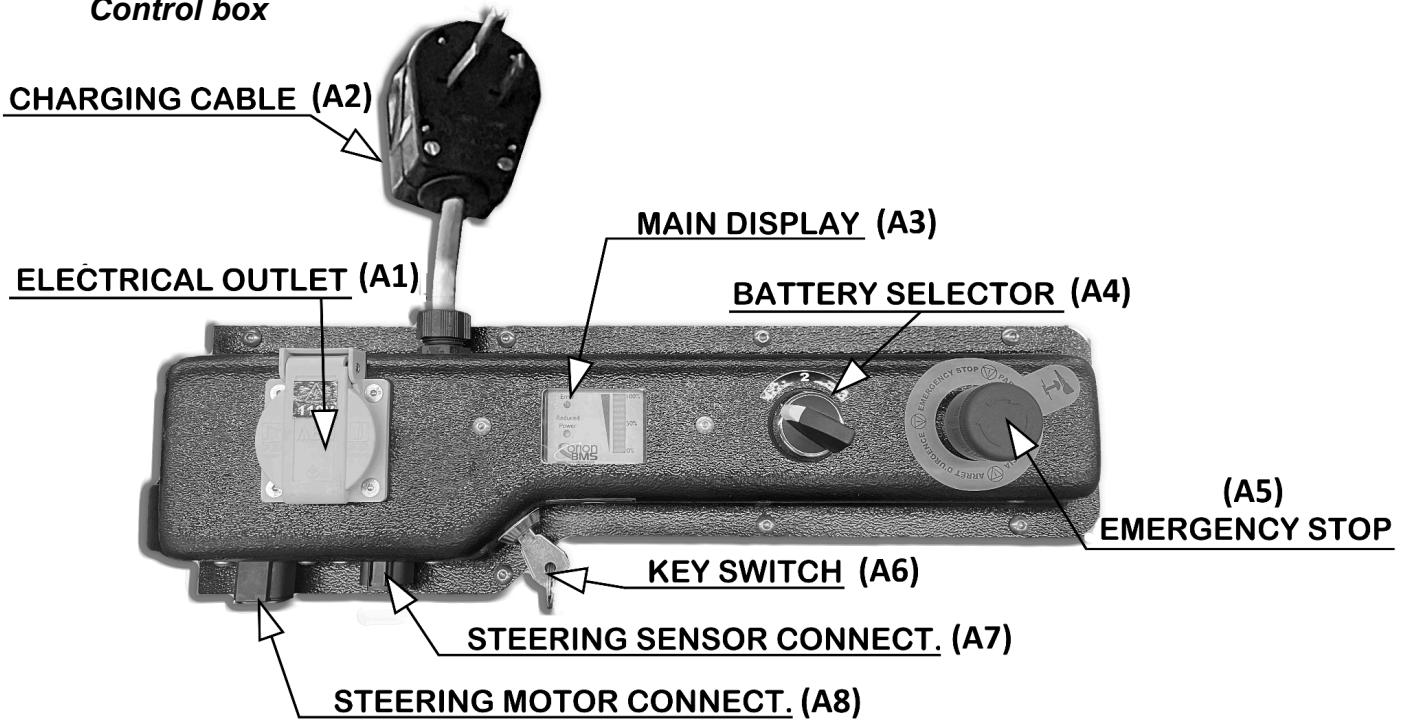
## Description of components

Your MTT integrates a multitude of components referred to in this manual, here are the main ones:

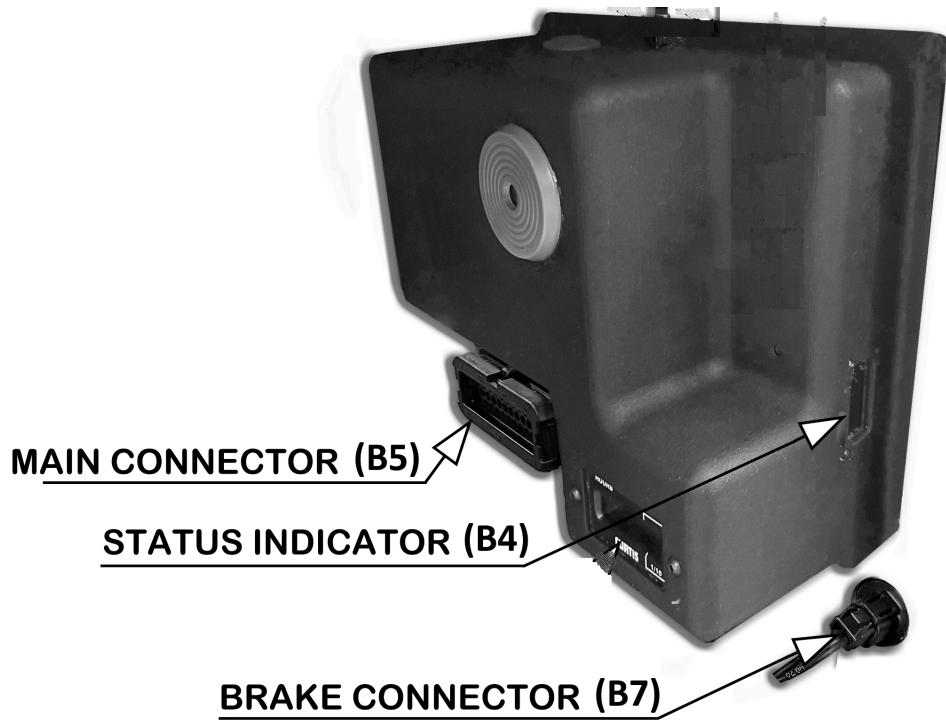


## Description of functions

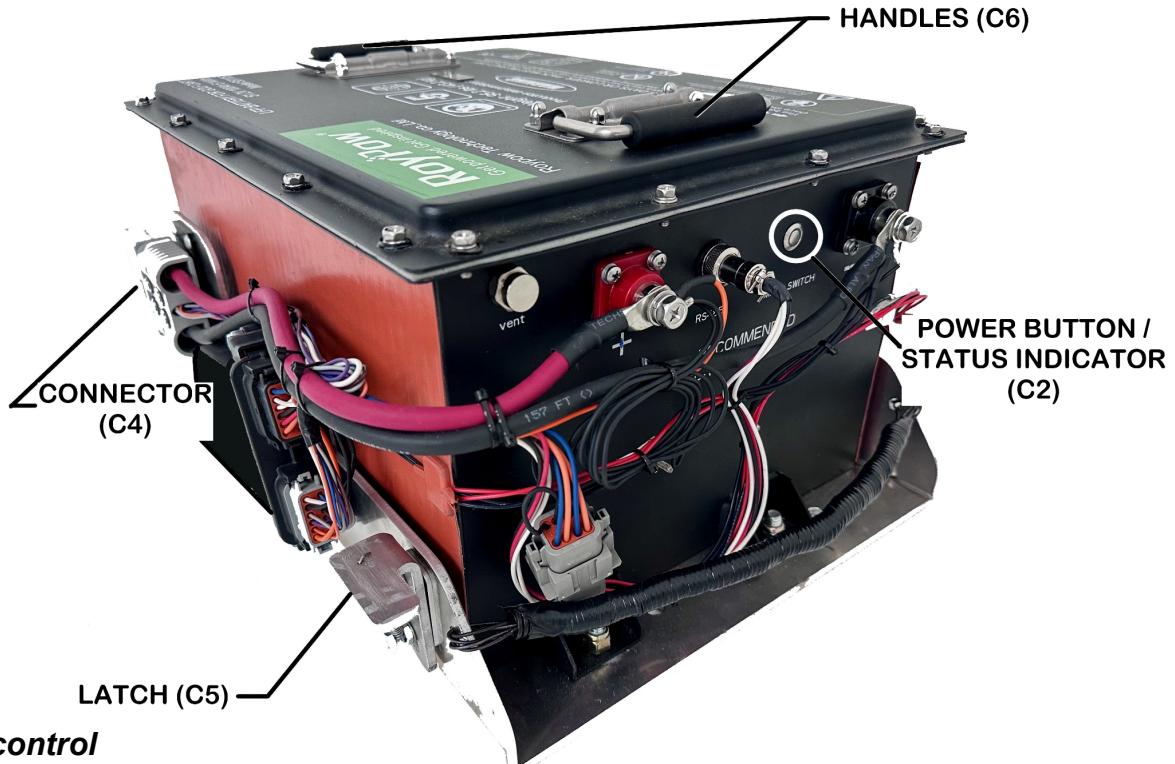
*Control box*



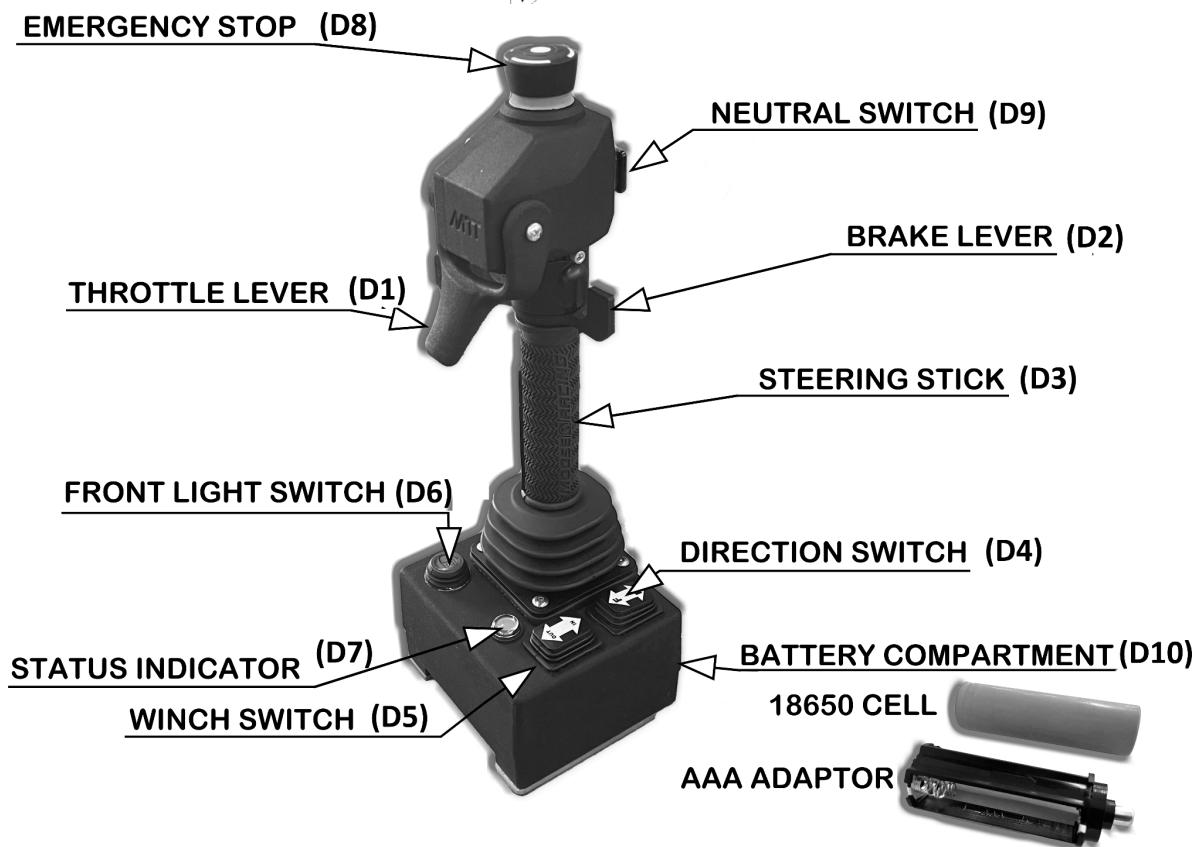
*Main control module*



### *Battery interface*



### *Joystick control*





## Inspection before use

ALWAYS MAKE SURE THE MACHINE IS TURNED OFF BEFORE STARTING THE INSPECTION.

Here is a list of checkpoints to inspect before each use of the vehicle:

- Checking the general condition of the vehicle;
- Bottom casters in place and in good condition;
- Top casters in place and in good condition;
- Hydrophobic air intakes intact and/or unobstructed;
- Swivel panel-chassis space (approximately 1/16”);
- No track obstruction;
- Battery MTT OK;
- Closed and “locked” pivoting panel;
- Handcuff batteries OK;
- Function test

The procedure for each inspection point is detailed on the next page.

Visually check the general condition of the vehicle: apparent breakage/damage, missing or loose bolt, as well as anything that appears abnormal and/or unsafe. Confirm that all casters, top and bottom, are in place. Check that the hydrophobic air intake membranes in the panels are intact and/or unobstructed. Visually check that the space between the chassis and the pivoting panel is similar all around (approximately 1/16" / 1.5mm). Ensure that nothing hinders the proper functioning of the vehicle, in particular the rotation of the track (i.e. accumulation of snow, ice, rocks, debris). **ALWAYS CHECK THAT THE SPACE BETWEEN THE TRACK AND THE TOP OF THE HOUSING IS FREE OF ANY DEBRIS AND/OR ACCUMULATION OF SNOW OR MUD.**

Start the machine by turning the key (A6) clockwise to the "ON" position. Deactivate the MTT emergency stop button (A5) by turning it clockwise so that it rises.

Remove any load from the rack, then open the swing panel. If this has not already been done, turn on the battery by pressing button C2 and check that the indicator light green constantly. If the light flashes, refer to the troubleshooting section and/or have it diagnosed. Close the panel and secure it by rotating the latches 180 degrees clockwise and/or to their limits. The panel should close without much effort; if this is not the case, check that nothing is obstructing its closing and that the frame is not twisted.

Check that the MTT battery(ies) and the controller battery are at an adequate charge level: see "Status indicators" section.

Ensure that the MTT is in a place free for operation and movement. Deactivate the emergency stop button on the control handle (D8) by turning it clockwise so that it rises. Deactivate neutral (D9) by lifting it. Using the joystick, operate the main controls one by one to ensure that everything is working correctly: lightly operate the accelerator control (D1), fully apply the brake (D2), then operate the direction (D3) to the left and right travel limits.

Press the emergency stop button on the control lever (D8) and confirm that the brake is activated (a short activation sound will be heard).

Press the MTT emergency stop button (A5) and confirm that it cuts off all power (a "click" will be heard).

## Status Indicators

\*\* Refer to the Troubleshooting section for more details on error codes and their resolution.

### Battery

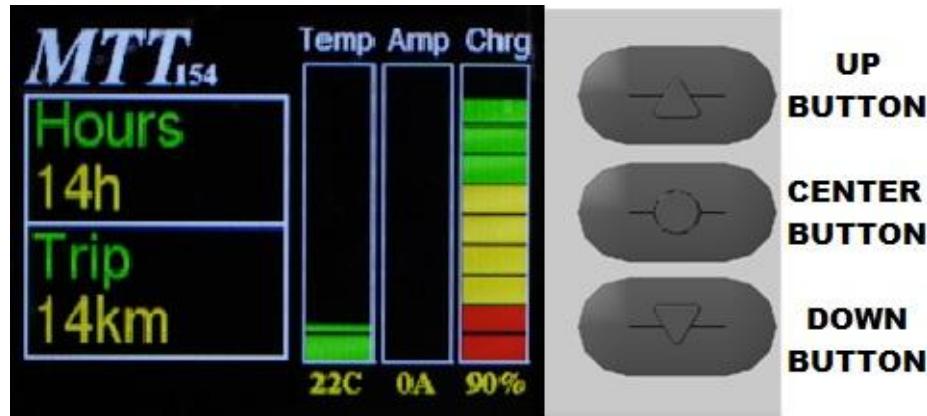
The indicator light (C2) on the front of the battery provides information regarding the state.

- Off – Power off
- Solid green – On
- Flashing green – Battery in protection



## Main display

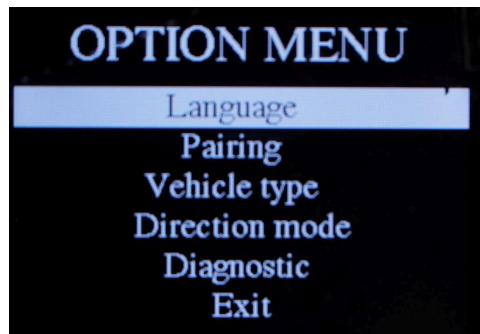
The MTT display screen (A3) located on the box control is composed of 3x boutons allowing you to navigate between the different functions of the system. To access the menu, press the CENTER button. The UP and DOWN arrows are used to navigate through the different menus.



This screen provides a wealth of information; here are the characteristics of the main display:

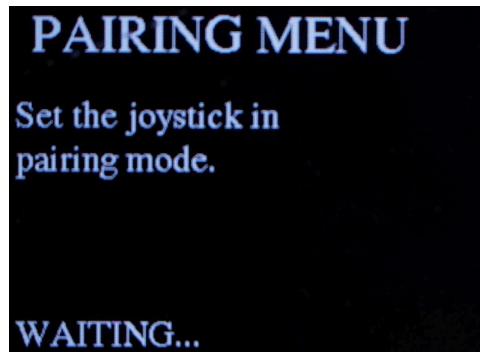
- Hours: Indicates the mechanical hours of the machine (the hours the machine is in motion). This information can be particularly useful in determining when to carry out your maintenance.
- Trip: Indicates the distance traveled by the machine, in the same way as on a motor vehicle. To reset, simply press the UP button.
- Temp: Indicates the engine temperature.  
\*\*If its temperature reaches a high level, a fan will turn on.
- Amp: Instantaneous current consumed (in amps) by the vehicle.
- Chrg: Approximate remaining battery charge level in percentage.  
\*\* Please note that battery life may vary depending on conditions of use.

The display screen can provide you with several other information via secondary menus; here is a non-exhaustive list, the most realistic at the time of writing these lines:



#### Option menu

By pressing the middle button, you will access the different secondary menus. You can navigate between these options using the UP/DOWN navigation keys and then press the middle button to select the desired one.



#### Pairing submenu

The Pairing menu allows you to synchronize a controller with the vehicle. Once in this menu, the initiation of pairing a new controller is initiated. You must follow the procedure for pairing the controller in the appendix. Once pairing is complete, a message is displayed on the screen to indicate that the procedure was successful.

## VEHICLE TYPE

Actual type: Single track  
Choose:

Single track  
Side by side left  
Side by side right

### Vehicle type submenu

The Vehicle Type menu is used to configure the vehicle according to its physical configuration.

The MTT vehicle can have different physical configurations:

- Single Track mode is the most common of all.  
In this configuration, the vehicle (a single track) located at the front tows an accessory (trailer, sled or other) or another MTT forming a snake assembly of several MTTs.
- Side-by-side modes require two vehicles coupled next to each other like the tracks of a tank.  
The caterpillar located on the left will use the left type and conversely the one on the right will be in the right type.  
Be sure to select the mode corresponding to the side of the vehicle you are configuring. Left side-by-side and side-by-side modesright allow proper coordination between the two coupled vehicles, but it is crucial to follow the instructions precisely to avoid the risk of accident or injury.

\*\* Do not forget to synchronize/pair the control pad(s) if necessary by following the correct procedure described in the appendix.

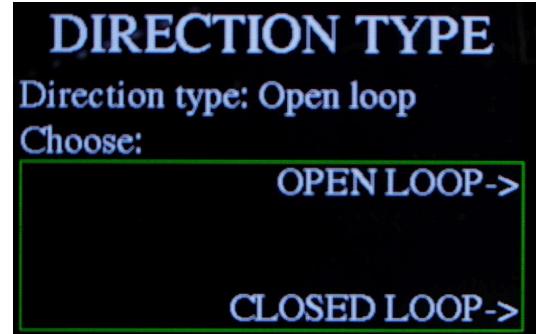
**IMPORTANT**, if you must choose a configuration other than Single Track, make sure you understand exactly how it works. The operating mode of the control stick will then be configured differently.

Handling the wrong physical type of vehicle can result in serious injury. For example, in a side-by-side configuration, moving the control stick from left to right will move the vehicle forward/backward rather than rotating if the vehicles have not been coupled together. .

### Direction type submenu

The type of direction allows you to choose the behavior of the vehicle based on the type of command sent by the control lever.

Make sure you understand the steering behavior depending on the type of control chosen for safe and efficient use of the vehicle.



- Open loop: This type of control is the default and used by the vast majority of systems including the standard control lever that was delivered to you with your vehicle. In this mode, the vehicle's steering cylinder maintains its position when the steering input from the joystick is released. In other words, the vehicle maintains steering control even after the lever automatically returns to its neutral position; which is contrary to an automobile steering wheel.
- Closed loop: This type of control responds based on the absolute position of the control stick. This means that when the latter is released, the vehicle's steering position will return to center. It is important to note that this type of control is not suitable for the standard control stick that usually comes with an MTT. This is a non-standard use available on request; for example, if the vehicle is controlled by an autonomous system.

Be sure to follow all recommended safety procedures, have the skills and knowledge required to operate the selected steering type before using it. If in doubt, contact customer service for further advice.

**IMPORTANT:** If you must choose the Closed Loop option, make sure you have all the necessary information and the correct connections to the vehicle.

The use of this type of steering requires special attention in terms of safety, because the automatic return of the steering to its center can lead to unexpected movements of the vehicle; therefore injuries.

For example, when releasing the control stick, the vehicle's steering position will return to center by itself rather than remaining stationary. This can cause a body part to become trapped between the mechanical parts of the vehicle when it is powered up.

### Diagnostic submenu

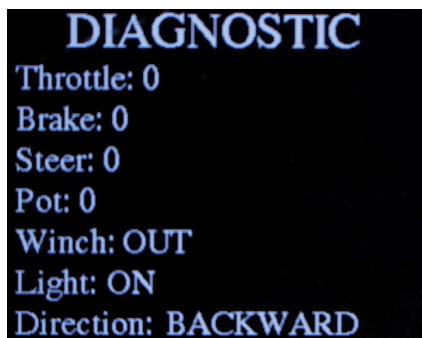
The Diagnostics menu has a host of information under several pages, both for troubleshooting and for other useful data, such as the number of hours of use or even to diagnose the correct operation of the control lever.

When entering this menu, a first window informs you that the control stick commands will be deactivated during navigation of the diagnostic menus; press the center button to confirm understanding of this.

### **WARNING!**

**The vehicle will halt  
the communication with the  
remote control**

You can then press the center button to move from one page to another.



### Diagnostic - Page 1

The first page of the diagnostic menu informs you of the real-time status of the various commands on the control stick. This way, if you have a problem with a particular function of the controller, you will be able to verify whether the problem is with the controller or the vehicle. This facilitates the troubleshooting process by identifying the potential source of the problem.

## DIAGNOSTIC

Temp1: -8 Heat Pad A: -13  
 Temp2: -7 Heat Pad B: -14  
 Temp3: -7 SOC: 90  
 Temp4: -8 Volt: 53  
 MOS: -13 Curr: 0  
 AMBI: -11 Charge: NO  
 Amp Max: 0

### Diagnostic - Page 2

Page No.2 of the diagnostic menu informs you about certain important parameters of the battery that is in use; particularly in the event of extreme temperature of the latter.

This information may be helpful to you in diagnosing any potential problems; all allowing you to take appropriate corrective action.

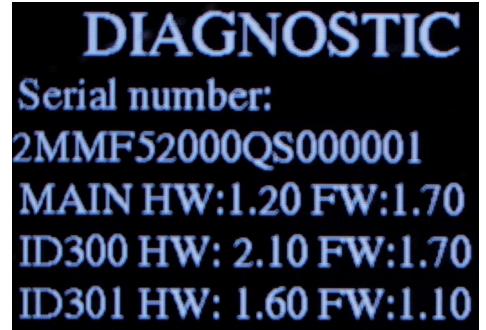
- Temp1 to Temp4: Temperature in degrees Celsius of the 4x groups of cells that make up the battery;
- MOS: Temperature in degrees Celsius of the system used to deliver battery power; technically it uses a MOSFET contactor system without relay;
- AMBI: Ambient temperature in degrees Celsius inside the battery itself;
- Amp Max: Maximum current in amps delivered by the battery during the current session. If you close the vehicle, this data is reset to zero;
- Heat Pad A and Heat Pad B: Temperature in degrees Celsius of the heating membranes used to warm the battery in cold weather;
- SOC: Abbreviation for State Of Charge.  
It indicates the level of charge remaining in the battery in percentage;
- Volt: Indicates the current battery voltage in volts;
- Curr: Indicates the current current consumption of the battery in amps;
- Charge: Indicates whether the battery is currently charging or not.

### Diagnostic – Page 3

Page No.3 of the diagnostic menu provides theoretical information about your MTT; starting with its serial number.

There is also information on the different modules used necessary for the operation of the vehicle:

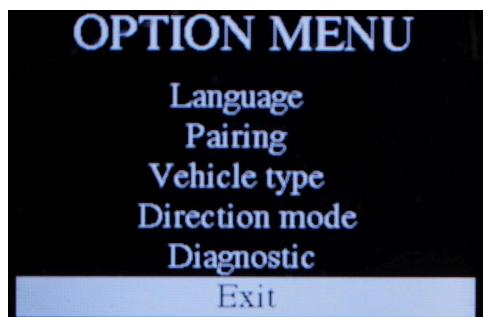
- ID: Physical address number of the module on the CANBUS system
- HW: Hardware (physical) revision number of a module;
- FW: Firmware (software) revision number of a module.



\*\*This information will be useful if you have to call MTT customer service.



Once you have navigated to the last menu page, a window will notify you that the control stick commands will be reactivated. Push the central button to confirm understanding of this.



### Exit submenu

The Exit menu allows you to return to the main system display interface.

## Joystick control

The battery charge level in the controller is communicated by its status indicator (D7) which changes color in a gradient manner:

- Solid green: Battery over 60% charged
- Solid yellow: Battery less than 60% charged
- Solid red: Battery less than 20% charged
- Flashing red : Battery less than 10% charged

	PILE À + DE 60% DE CHARGE BATTERY AT MORE THAN 60% CHARGE
	PILE À - DE 60% DE CHARGE BATTERY AT LESS THAN 60% CHARGE
	PILE À - DE 20% DE CHARGE BATTERY AT LESS THAN 20% CHARGE
	PILE À - DE 10% DE CHARGE BATTERY AT LESS THAN 10% CHARGE

In the case of a weak or discharged battery, replace the battery with an 18650 lithium type battery with the plastic sleeve or put 3 AAA type batteries in the battery adapter without the plastic sleeve. You can charge 18650 batteries using a dedicated charger but it is imperative that the battery is at a temperature above 5°C before starting charging otherwise the battery may explode.

The controller indicator light is also used to indicate the following potential error codes:

- Red – Green (periodic): Parking protection
- Red – Red – Green – Green – Off: Accelerator protection
- Red – Green – Green – Red – Off: Accelerator not in zero position
- Solid Orange: In pairing mode
- Orange – Red (periodic): Radio module communication error
- Orange – Green (periodic): Radio module check successful

## Main control module

The MTT General Status Indicator (B4) located to the right of the battery compartment reads:

- Green – Signal reception
- Red – Error
- Yellow – On

	• INDICATEUR DE RÉCEPTION DE SIGNAL • INDICATOR OF SIGNAL RECEPTION
	• INDICATEUR D'ERREUR • ERROR INDICATOR
	• INDICATEUR EN FONCTION • INDICATOR IN FUNCTION

## Operation

**Put an MTT into operation:** If this is not already the case, open the pivoting panel, then turn on the battery (C2). Then turn the key (A6) clockwise to the “ON” position and deactivate the MTT emergency stop button (A5) by turning it clockwise so that it raises. Two (2) beeps will be heard and the status indicator will turn on after a few seconds.

**Turn on a controller:** Deactivate the emergency stop button on the control handle (D8) by turning it clockwise so that it rises. One (1) beep will be heard and the status indicator (D7) will illuminate. Deactivate the neutral (D9) by pulling it.

\*\* Please note that the controller will automatically turn off if it is not used for more than 15 minutes. Simply restart the controller power cycle by pressing, then turning/lifting the emergency stop (D8) to turn it back on.

**Go forward go backward:** Toggle the F/R switch (D4) to “F” mode to move forward or “R” mode to move backward, then gradually press the lever (D1). Power is modulated according to the position of the accelerator lever. For better MTT performance, optimize traction by avoiding causing the track to slip on soft and/or slippery terrain. When the vehicle begins to skid or sink, stop, reverse; then move forward.

\*\* Please note that the vehicle must be stationary before changing the direction of travel.

**Brake:** Press the brake lever (D2), modulating the position according to the desired braking force.

**Change direction:** Tilt the stick (D3) in the direction of the turn. The stick tilt rate controls the speed of the steering cylinder.

\*\*PLEASE NOTE THAT AN MTT MUST BE COUPLED TO AN ACCESSORY SUCH AS A TRAILER, A SLEG OR ANOTHER MACHINE IN ORDER TO BE ABLE TO CHANGE DIRECTION. It is possible to disengage the steering cylinder by loosening the bypass valve located under it (red screw under the steering cylinder).



**Neutral** : Press the neutral button (D9). This feature deactivates the accelerator and makes it easier to move the vehicle manually.

\*\* Note that neutral is automatically applied if the accelerator and/or brake are not used for more than 15 seconds; the joystick status indicator (D7) will then flash red-green. Cycle and push and pull the neutral button (D9) to regain vehicle controls.

**Parking brake**: Hold the brake lever (D2) 100% and press the neutral button (D9). This function prevents the MTT from inadvertently moving forward or backward, so the accelerator is inactive and the brake is activated.

**Emergency stop**: Press one of the two red emergency stop buttons located on the control handle (D8) or on the machine control box (A5). The emergency stop on the control lever only activates the parking brake while the emergency stop on the vehicle cuts power in addition to engaging the parking brake.

**Winch**: Make sure the dial at the end of the winch is in the engaged position; otherwise turn it counterclockwise. Press the button (D5) in the desired direction: “IN” to wind up and “OUT” to unwind the cable. It is possible to release the cable more quickly by putting the winch dial in the neutral position by turning it backwards.

**Turn the light on/off**: Press the headlight button (D6) to turn the front lighting on or off.

**Turn off the vehicle**: Press both emergency stop buttons; one on the control handle (D8) and the other on the machine control box (A5), then turn the key (A6) counterclockwise to the “OFF” position.

It is best to turn off the battery if you plan not to use it for several hours, it is not charging and the ambient temperature is above -16 degrees Celsius; Otherwise your battery will slowly discharge on its own.

\*\* For enhanced safety purposes, a beep will be heard every 5 seconds if the vehicle is left powered on after closing the control lever.

Note that it is possible to eliminate these beeps; for example when using mobile energy delivered via the inverter; see section “Charging and auxiliary power”.



### **Learning mode (reduced speed and power)**

It is possible to put the vehicle in learning mode, which will limit its power and its speed to 4 km/h. First ensure that the control lever is powered off by pressing the emergency stop button (D8). While holding the winch switch IN (D5), deactivate the emergency stop of the handle by turning it clockwise so that it raises (D8), then release the winch button (D5); here you are in learning mode.

To return to normal mode, carry out the reverse procedure.

Always ensure that the control lever is turned off by pressing the emergency stop button (D8). Holding the winch switch OUT (D5), deactivate the emergency stop of the handle by turning it clockwise so that it raises (D8), then release the winch button (D5); you are now in standard mode.

## Performance Optimization

Please note that your MTT is a unique machine of its kind; it is a traction work vehicle with very high torque at start-up and at low speed.

As a result, it operates differently from what you are potentially used to. Unlike a snowmobile, success comes by optimizing traction rather than maximizing the rotational speed of the track.

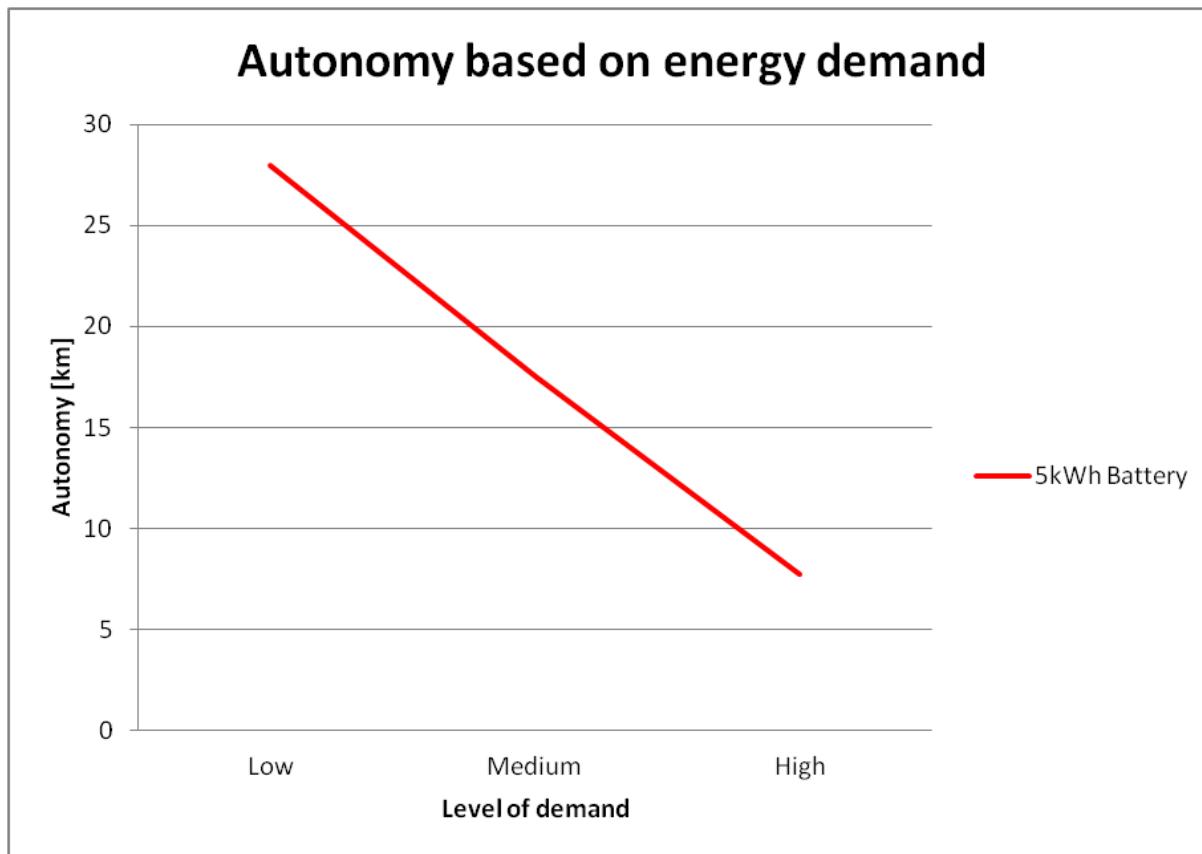
Here are some tips to optimize the performance of your MTT both technically and for its autonomy:

- Depress the accelerator gradually to use engine torque rather than power (HP);
- Optimize traction by avoiding causing the track to slip on soft and/or slippery terrain;
- If the vehicle begins to skid or sink, stop and reverse slightly; then move forward, gradually gauging the accelerator;
- Generally speaking, it is better to operate the vehicle gently to moderately rather than aggressively;
- Leave the vehicle to work; no need to force the controls and/or gain momentum;
- Turn using the steering system progressively and smoothly;
- When possible, use the engine brake (automatic slowdown) rather than the brake lever;
- Check regularly that all the casters turn easily and that nothing is hindering the rotation of the track (i.e. piles of snow/ice, mud, branches, stones, etc.);
- Get into the habit of turning off the battery(ies) (C2) if not in use for several hours and the battery is at a temperature above -16 degrees Celsius.
- Store the battery(ies) in a place cooled and at a charge level of approximately 50%.

Keep in mind that the best new operator will be one who is new to operating machines, since he will not have the reflexes of gasoline machines.

In any case, you will certainly need time to adapt in order to obtain the full possible performance of your MTT; so give yourself time ☺.

Here is a graph showing the theoretical autonomy of a battery in kilometers depending on the level of energy demand.



\*\*Note that these values are shown as achievable examples.

- A so-called low energy demand is characterized by use on a flat, hard surface and/or towing a light load as well as a gentle mode of operation of the vehicle.
- Conversely, high energy demand results in towing a heavy load in mountainous terrain on soft ground (i.e. deep snow, slush, mud, soft sand, etc.) and operating the vehicle aggressively.

Battery life may vary depending on several other factors such as the condition of your MTT and aggressive or inappropriate use of it.

## Towed accessory

BE SURE TO READ THE INSTRUCTIONS PROVIDED WITH THE ACCESSORY IN QUESTION IF APPROPRIATE IN ORDER TO OBTAIN COMPLETE INFORMATION REGARDING ITS USE.

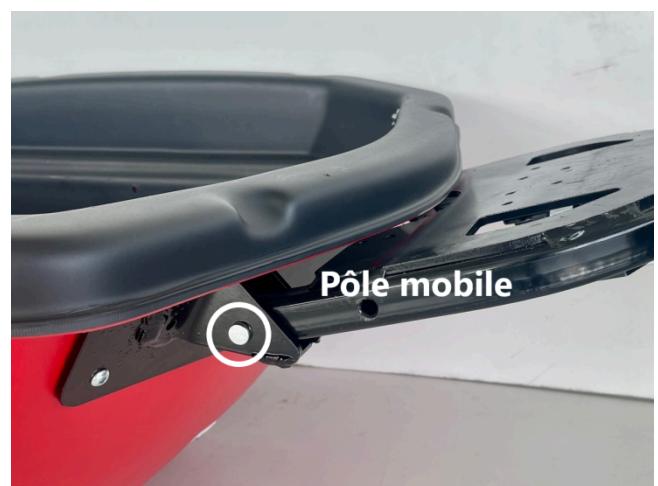
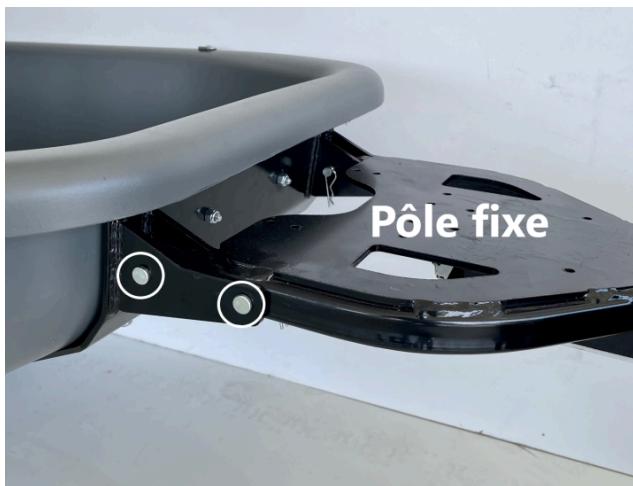
### Mount/dismount the pole of an accessory

The assembly and disassembly of a pole in relation to its accessory is carried out via the axes and quick pins connecting them together.

Note that the same pole can be adapted to several accessories if it is intended for this purpose. ALWAYS ensure that the axles with quick release pins are all in place on the accessory being used.



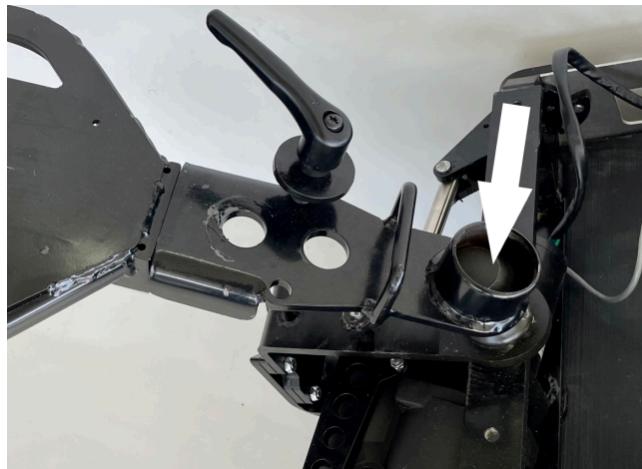
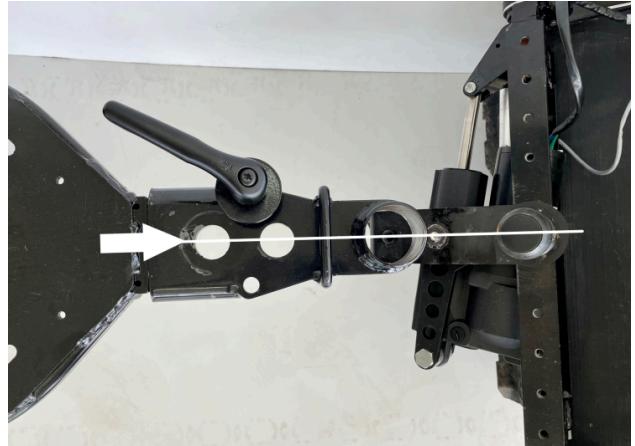
Some accessories require the pole to be fixed and others to be mobile; for example, the standard MTT trailer is operated with the pole made fixed using a double attachment while the standard MTT sled is operated with the pole made mobile using a single attachment point allowing pivoting on an axis.



### Couple a towed accessory(trailer, sled, etc.)

ALWAYS ensure that the accessory is in good condition, that the pole is securely attached to it and that there is no load on or in the accessory.

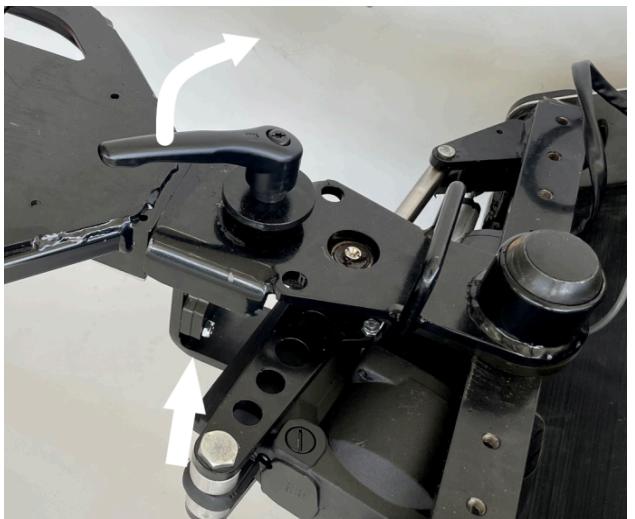
Approach the accessory to the MTT, then visually align the tip of the articulated attachment with the accessory either by moving the accessory if it is light and space permits or by moving the steering cylinder using the control stick (D3).



Lift the pole above the ball, then slip the female cylindrical part of the pole onto the ball.

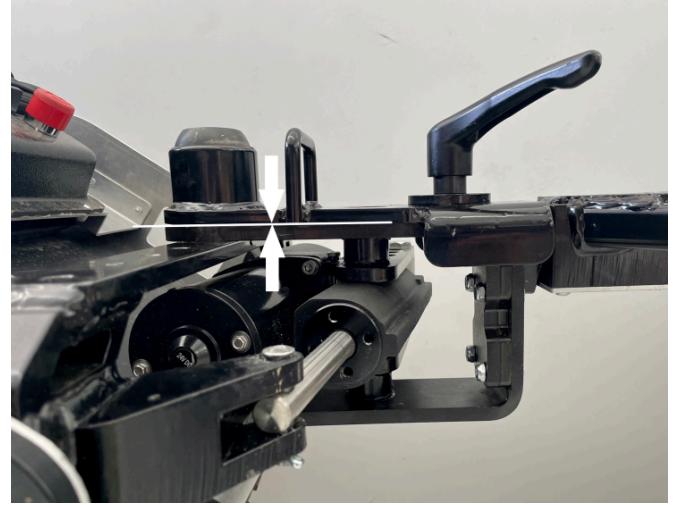
While manually lifting the hinged attachment with one hand, screw in the adjustable pole holding handle with the other hand by turning it clockwise.

If necessary, move the accessory or the steering slightly to properly align the threads.



Move the steering slightly from left to right, then tighten the adjustable pole retaining handle.

Make sure that the pole plate is firmly supported on the articulated fixing (no visual play between the two).

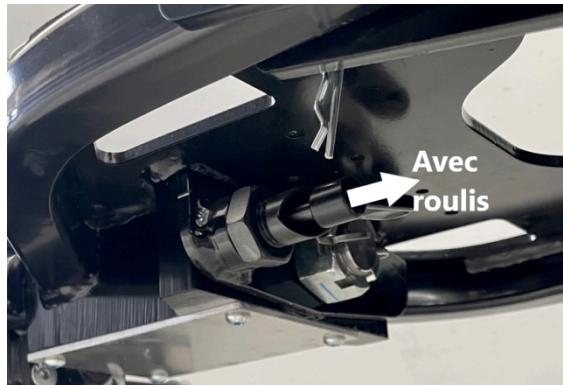
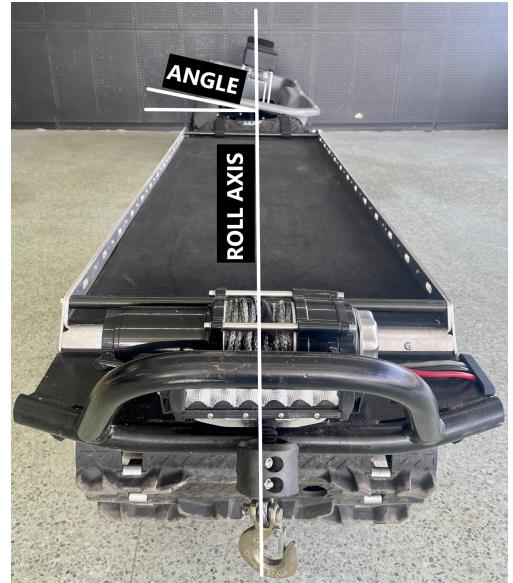


It is possible to reposition the handle of the handle at a more aesthetic and less bulky angle by lifting the handle on itself and turning it once screwed.

## Roll control

Roll is the rotational movement between the MTT and its accessory around their longitudinal axis.

NEVER operate an accessory without any roll limitation anywhere other than on flat ground since no mechanism maintains the angle between the MTT and its accessory and the possibility of overturning is greatly increased.



Some MTT accessories allow roll to be controlled via a lever under the pole; it can be operated by turning it on itself.

In the retracted position, no roll is allowed; therefore the accessory will follow the angle of the MTT and vice versa.



Otherwise, in the pulled position, a slight angle will be allowed between the two parts.

Note that the maximum angle is limited by rubberized stops; therefore the maximum permitted safe roll is reached gradually.

Depending on the terrain and conditions it may be preferable to allow rolling or not in order to obtain optimal performance from your MTT.

Generally speaking, it is recommended to allow the roll on hard ground such as the majority of the time in summer and to block it on soft ground; for example in soft snow in winter.

Your driving experience will allow you to familiarize yourself with this function in order to optimize the vehicle's skills.

## Replacing a Battery

First, turn off the MTT, then remove the key and tool from the switch.

**MAKE SURE THERE ARE NO LOAD ON THE LUGGAGE RACK BEFORE OPENING THE PANEL.**



Then unlock the panel latches using the tool and turn them counterclockwise, then rotate the panel upwards until it is raised vertically and secured in place.



Make sure the battery is off (C2), then insert it, making sure you hear the “click” of the latch when it is pushed all the way in. To remove or replace a battery, first turn the battery off (C2), then lift the latch (on the left) to release it and pull firmly towards you. Close the panel and lock it by rotating the latches 180 degrees clockwise and/or to their limits.

Position the battery selector button (A4) at the same position as the location of the battery being used. In order to optimize machine performance, favor the rail located furthest towards the front of the machine if there is only one battery in the MTT.



## Charging and auxiliary power

DO NOT insert or remove a connector from a power outlet when there is moisture or water on either of them.

DO NOT use any extension or adapter other than those recommended and/or provided by MTT.

AT NO TIME SHOULD A BATTERY COME INTO CONTACT WITH WATER; it is not designed for this purpose.

ALWAYS Place a battery on a flat surface with the handles facing up.

### Charging a battery

A battery can be recharged in two ways, either directly inside an MTT or via optional MTT equipment specifically designed for this purpose.

If necessary, use the 120V male to 240V female charging adapter provided with the vehicle.

In the case of 120V charging, a 12 gauge extension of maximum 50 feet (15m) can be used if necessary.

\*\* Please note that charging will be faster using a 240V power source (see specifications section).

The **recharge intra-MTT** is carried out using the charging cable (A2) coming out of the housing control and generally stored in the bag.

First, ensure that the battery to be recharged is inserted into the rail corresponding to the battery selection used (A4), then place it under voltage (C2); Approach the MTT and plug the charging cable into a suitable power source. The charge level and approximate remaining time is displayed on the MTT status indicator.

The **recharge hors-MTT** is carried out via auxiliary MTT equipment such as the energy station.

Make sure you are in a clean, dry place and protected from bad weather. If necessary, connect auxiliary equipment to a suitable power outlet. Make sure the switch is in the off position voltage (OFF), insert the battery to be recharged into a charging rail (rail opposite the switch), then turn on the auxiliary equipment switch and the battery.

ALWAYS Turn off the power switch before disconnecting/removing a battery.

### Auxiliary power supply (discharge)

The MTT battery can be used as a mobile and/or portable power source. Sheprovides an energy of 2000 Watts (15A @ 120V AC North America) via the inverter.

A 14 gauge extension of maximum 50 feet (15m) can be used if necessary.

**Intra-MTT mobile energy** can be used by plugging the device to be powered into the electrical outlet located on the housing machine control (A1) or directly on the inverter behind the pivoting panel (E23).

First make sure the battery selector (A4) matches the rail it is in.located the battery to be used. Put the MTT under tension by turning the key (A6) clockwise to the “ON” position and deactivate the MTT emergency stop button (A5) by turning it clockwise so that it rises. Then, turn on the control lever by turning its emergency stop button (D8) clockwise so that it raises, then while holding the brake (D2) completely depressed, turn off the ignition of the lever by pressing its emergency stop (D8) and release the brake.

\*\* This procedure eliminates the repetitive audible warning of forgetting the vehicle under voltage; it will return active during the next power cycle of the controller.

- You are now ready to use your electrical device.

For your safety and that of others, do not forget to put the MTT back voltage after using the auxiliary power supply.

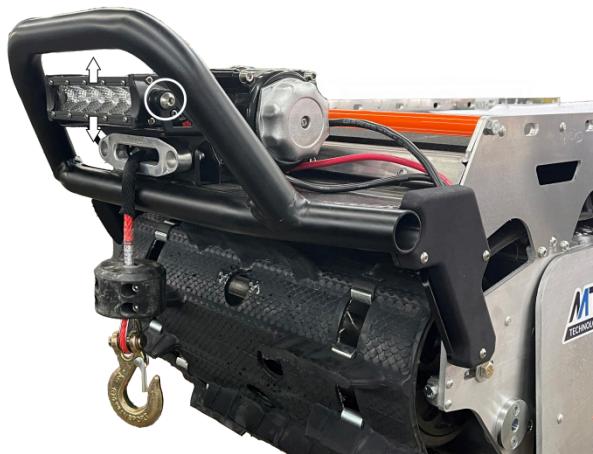
**Portable energy outside MTT** of a battery can be used via an optional accessory such as the energy station.

Make sure you are in a clean, dry place and protected from bad weather; insert the battery to be operated into a discharge rail (rail opposite an inverter); plug the device to be powered into one of the female electrical outlets; check that the inverter is powered on, then use your electrical appliance.

## Adjustments

### Brake lever position (control stick)

To adjust the angular position of the brake lever, fold the rubberized handle so that you can access the 4 screws located below the brake lever (D2). Then, unscrew these 4 screws, uncouple the brake lever by pushing it downwards, orient it according to the desired angle, reinstall it using the 4 screws and unwind the handle. If the lever does not go in easily, turn it slightly to help with alignment.



### Front lighting beam height

The height of the headlight beam can be adjusted by manually rotating it on its axis. If the operation is too difficult, slightly loosen the two end bolts using a 5mm hexagonal (Allen) wrench, then rotate the headlight to the desired position.

## Maintenance of an MTT

ALWAYS MAKE SURE THAT THE MACHINE IS TURNED OFF BEFORE STARTING ANY MAINTENANCE STEP.

ATTENTION, all retaining rings "circlips", split spring pins and rubber sealing washers are single use; these components must be replaced after each disassembly.

Here is the summary table of periodic maintenance to be carried out on your vehicle:

**Periodic maintenance MTT-154**

	<b>At first 10H</b>	<b>Every 20H</b>	<b>Every 40H</b>	<b>Every 80H</b>	<b>Every year or 200H</b>
Chain lubrication/tensioning	X	X			
Brake cleaning				X <sup>1</sup>	
Brake fluid level	X		X		
Replace brake fluid					X <sup>2</sup>
Track condition and tension	X		X		
Tightening bottom casters		X			
Steering lubrication			X <sup>1</sup>		
Lubrication of articulated fixing axes				X	
General inspection/maintenance					X <sup>1, 2</sup>

<sup>1</sup> In the case of severe use, reduce the interval by half

<sup>2</sup> Whichever comes first

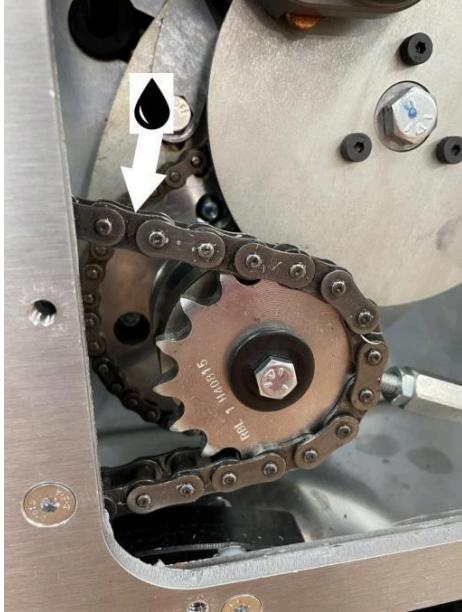
The procedure for each maintenance point is detailed on the following pages.

\*\* Some bolts require the application of Loctite 243 (blue) type thread locker and others require Loctite 263 (red); so ensure you to have them on hand before starting a maintenance procedure.

## Chain lubrication and tensioning

\*\* Note that it may be necessary to heat certain bolts that seem difficult to loosen in order to break the thread lock without damaging the grip of the bolt.

Chains should initially be lubricated and adjusted after 10 hours of use, then periodically every 20 hours. Check the adjustment of the chains if an abnormal noise (rattling) seems to come from the right rear of the machine.



**Coat secondary chain (single)** using lubricant chain suitable for motorcycles/ATVs, then wipe off the excess with a cloth. For best results, this operation should be carried out hot after using the vehicle. CAUTION, no lubricant must come into contact with the brake disc and pads. If this is the case, clean locally using brake cleaner.





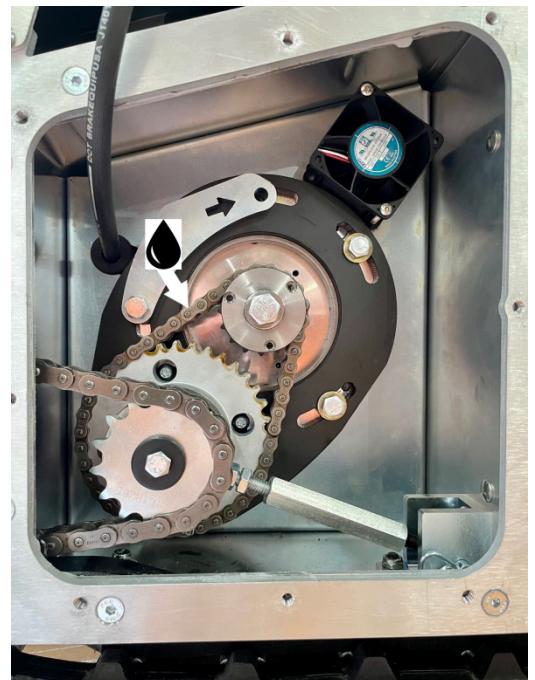
Coat the primary (dual) chain with motorcycle/ATV-grade chain lubricant, then wipe off excess with a cloth. For best results, this operation should be carried out hot after using the vehicle.

**CAUTION**, no lubricant must come into contact with the brake disc and pads. If this is the case, clean locally using brake cleaner

It is recommended to remove the caliper and brake disc to facilitate the **primary chain lubrication (double)** so that no lubricant comes into contact with the brake components.

To do this, unbolt the two (2) caliper bolts using 1/2" and 9/16" sockets; then using a wrench/bithexagon 1/8" male (Allen) unbolt the three (3) brake disc bolts. Subsequently, remove the caliper and brake disc at the same time.

\*\* The bolts holding the disc have threadlocker; so it is possible to have to heat to facilitate their unbolting.



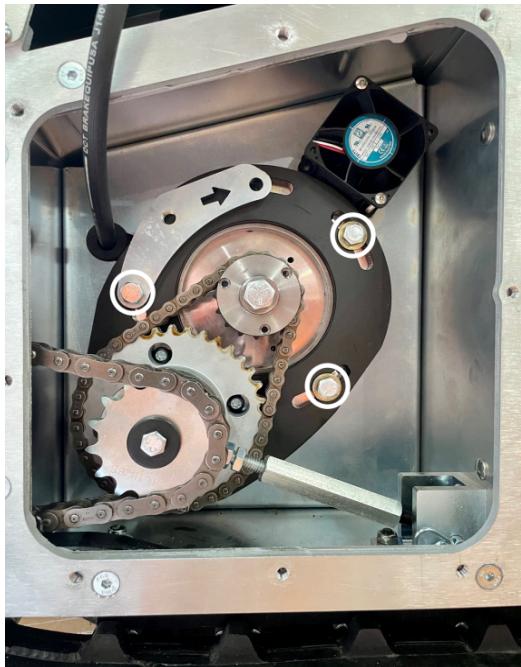
If no further maintenance steps in this area need to be performed, the caliper and brake disc can be reinstalled in reverse order.

\*\* CAUTION, Loctite 243 thread lock (blue) must be applied to the three (3) bolts holding the disc.

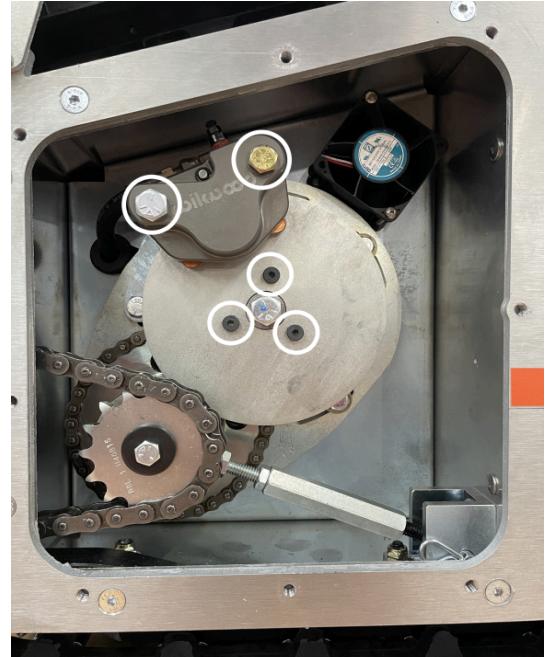
The **primary chain tension (double)** should be fitted snugly. If any play is noticeable to the touch, it must be adjusted.

If not already done in the chain lubrication step, unbolt the two (2) caliper bolts using  $\frac{1}{2}$ " and  $\frac{9}{16}$ " sockets; then using a  $\frac{1}{8}$ " male wrench/bithexagon (Allen) unbolt the three (3) brake disc bolts. Subsequently, remove the caliper and brake disc at the same time.

\*\* The bolts holding the disc have threadlocker; so it is possible to have to heat to facilitate their unbolting.



Subsequently, loosen the lock nut supported on the tensioner hexagon using a  $\frac{1}{2}$ " wrench, then completely relax the secondary chain with a  $\frac{9}{16}$ " wrench until the bolts are at the end of the holes oblongs of the eccentric plate.



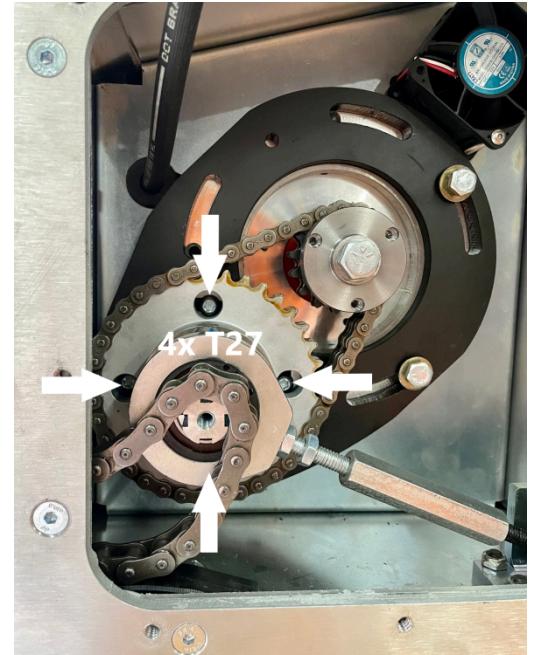
Using a  $\frac{1}{2}$ " socket, slightly loosen the three (3) remaining bolts passing through the bottom eccentric plate.



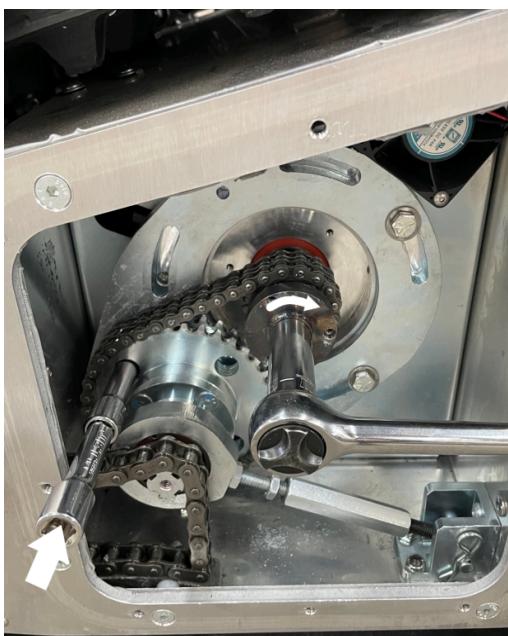


Using an impact wrench with a 7/16" socket unbolt the secondary gear and remove it.

By manually rotating the gears, aligner visually the four (4) holes of the large gear with the screw heads behind it; then using a Torx T27 bit, slightly loosen these 4x bolts.



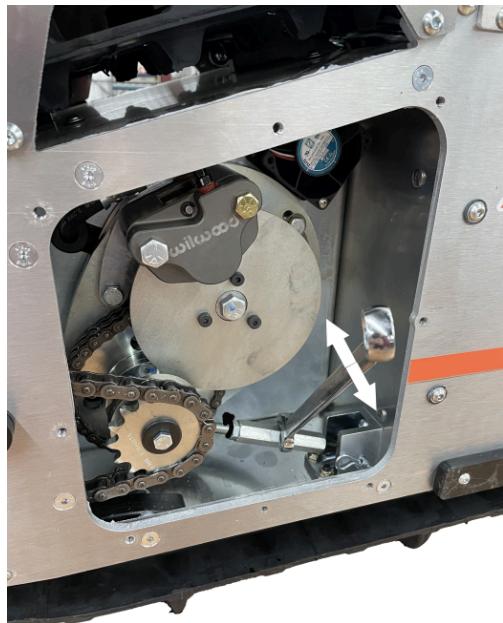
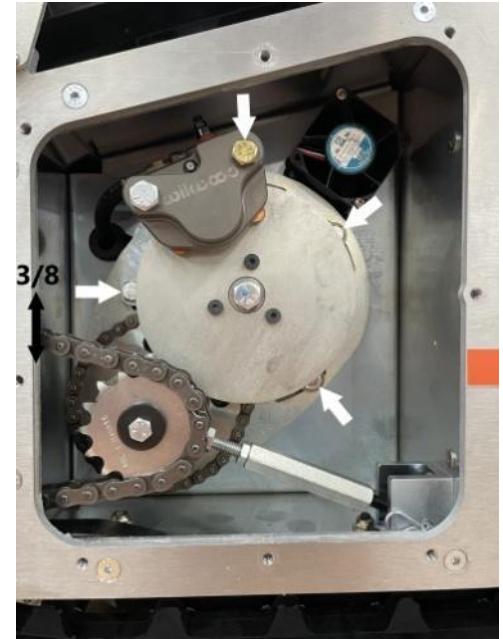
Manually advance the machine to align the nearest hole in the gear with the square in the backplate. Insert a 3/8" drive socket extension into the square hole (see arrow) and turn the screw in the center of the disc clockwise using a 5/8" socket until you obtain a medium strength "snug tight".



Manually rotate the gears clockwise to realign the holes with the four (4) Torx bolts and tighten them. Reinstall the secondary gear, taking care to apply Loctite 263 thread lock (red), tension the chain (see section "Tension of the secondary chain") and tighten the tensioner lock nut. Tighten the three (3x) eccentric plate bolts, then reinstall the brake rotor and caliper. Apply Loctite 243 thread lock (blue) to the 3x disc bolts.

The **secondary chain tension** must be checked by measuring a deflection of  $1/4"$  to  $3/8"$  (6 to 10 mm) at the panel opening in the chassis (see double arrow). It is adjusted using the hexagonal tensioner.

Using a  $1/2"$  socket, loosen the four (4) bolts passing through the bottom eccentric plate (see arrows).



Then, loosen the lock nut resting on the tensioner hexagon using a  $1/2"$  wrench. Make the adjustment by slightly rotating the hexagonal tensioner using a  $9/16"$  wrench. Tighten the tensioner lock nut as well as the four (4) bolts of the bottom eccentric plate; then recheck the chain deflection.

Once lubrication and chain adjustments are complete, reinstall the panel, taking care to clean its seal to remove any debris.

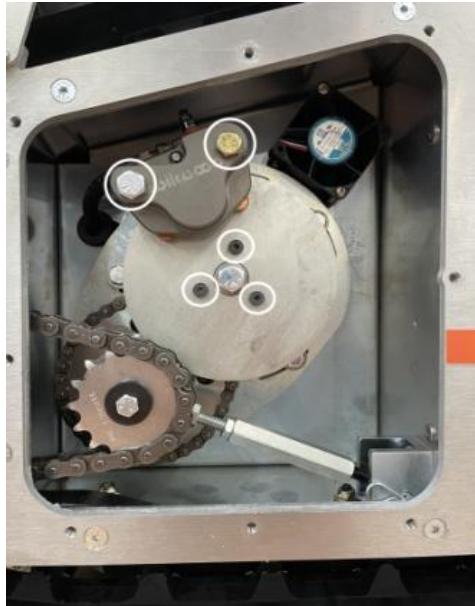
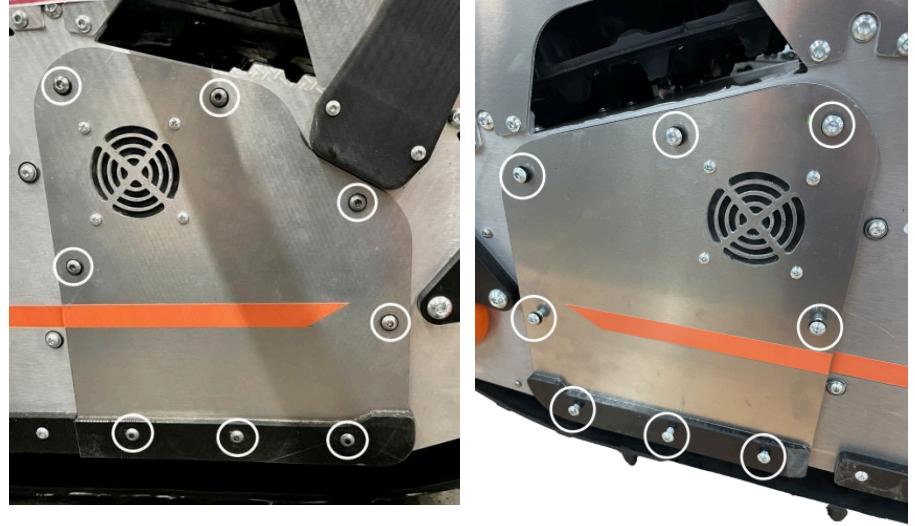
**ATTENTION** Do not overtighten the bolts to preserve the integrity of the slide and the plastic sealing washers.

## Brake cleaning

The brake caliper should be cleaned periodically every 80 hours. In the case of severe use of the braking system, clean it every 40 hours.

Make sure you are in a clean, dry place with a temperature above 20°C.

If not already done in a previous step, remove the left and right rear panels by unscrewing each of their eight (8) respective bolts using a 5/32" wrench/bit male hexagon (Allen).



Next, unbolt the two (2) caliper bolts using ½" and 9/16" sockets and using a 1/8" wrench/bithexagon male (Allen) unbolt the three (3) brake disc bolts, then remove the caliper and the brake disc at the same time.

\*\* The bolts holding the disc have threadlocker; so it is possible to have to heat to facilitate their unbolting.

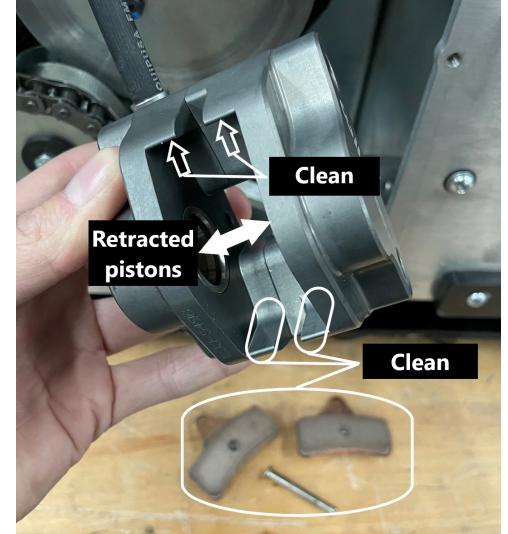


Once you have the caliper, first remove the "circlip" retaining ring, then remove the pad retaining pin from its housing.

Unscrew the brake fluid reservoir cap, then push back the pistons and remove the pads from the caliper.

BE CAREFUL to ensure that no liquid overflows from the tank.

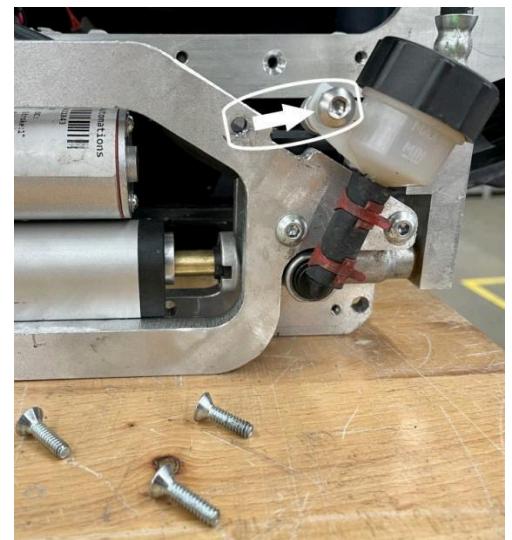
Clean the pads and slides by lightly scraping and/or sanding to remove any deposits that could limit the movement of the pads in their housing. The use of brake cleaner is recommended to help remove deposits.



Replace the pads, the pin and a new retaining ring (part number: McMaster-Carr No. 98543A112). Reinstall the disc and brake caliper in reverse order, taking care to apply Loctite 243 thread lock (blue) to the 3x disc bolts.



Replace the cap on the reservoir, then using a 1/8" male hexagon wrench/bit (Allen), unbolt the 3x screws holding the brake actuator module.

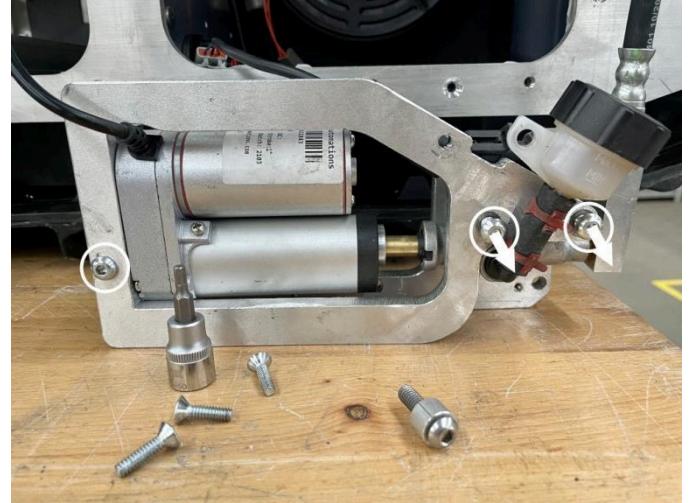


Remove the brake module from the compartment and turn it over to gain access to its rear side, then using a 5/32" wrench/bithexagon male (Allen) unbolt the tank and rotate it slightly.

Be careful not to lose the spacer washer.

Always using the 5/32" wrench/bithexagon male (Allen) loosen the screw securing the electric actuator to the frame by a few turns, then unbolt and remove the two (2) screws holding the master cylinder to its support.

Be careful not to lose the 4x spacer washers.



Remove the master cylinder from the frame and operate it manually (push on the rod) several times until the pads are visually pressed against the disc AND obtaining perceptible resistance of the system.

Check the brake fluid level and adjust if necessary (see “Brake fluid level” section).

Reinstall the master cylinder in its frame, tighten the screw securing the actuator, then reattach the tank.

Be careful not to forget any of the 5 spacers.

Reinstall the brake module in the machine compartment and test using the lever that the braking force is adequate. If not, repeat the previous steps and/or cycle the vehicle a few times to help purge the system.

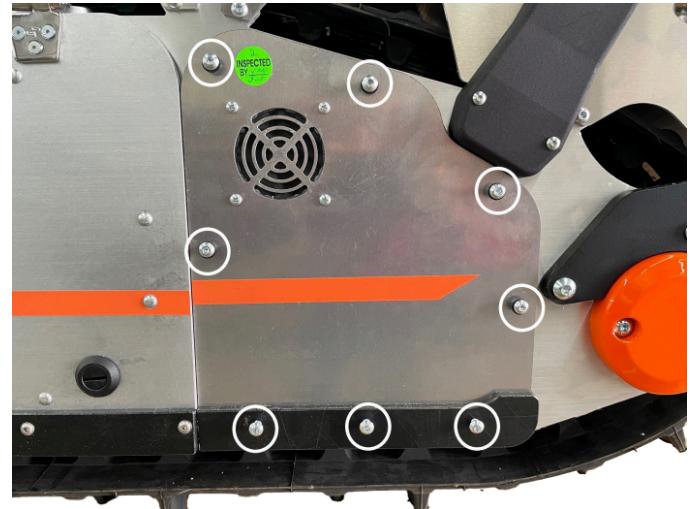
Both panels can be reinstalled once the effectiveness of the braking system is certified.

## Brake fluid level

The brake fluid level should initially be checked after 10 hours of use, then periodically every 40 hours thereafter.

**ATTENTION**, too low a brake fluid level can lead to serious consequences.

Make sure you are in a clean and dry place. Using a 5/32" male hexagon (Allen) wrench/bit, unbolt the eight (8) bolts from the left panel and remove it.



Check that the brake fluid level is above the level MIN of the tank located behind the hydraulic cylinder. If not, adjust the level using DOT 4 synthetic brake fluid.

Once the check/maintenance is complete, reinstall the panel, taking care to clean its seal to remove any debris.

**CAUTION** to not over tighten the bolts in order to preserve the integrity of the sealing washers and the plastic slide.

## Brake fluid replacement

Brake fluid should be replaced every 2 years or 400 hours whichever comes first.

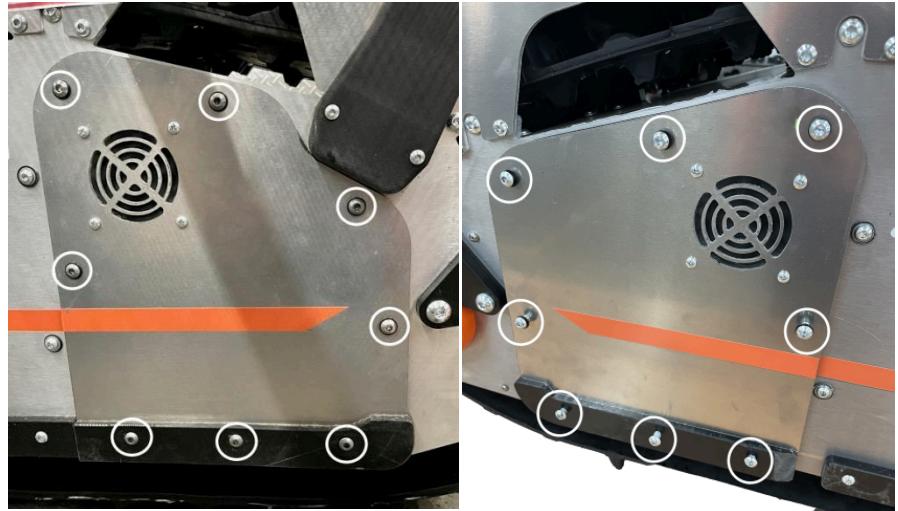
Use ONLY DOT 4 synthetic brake fluid.

You will also need a syringe with a tip that can connect to a rubber hose with an internal diameter of approximately 3/16in.

1. Remove left and right panels

Make sure you are in a clean, dry place with a temperature above 20°C.

Remove the left and right rear panels by unscrewing each of their eight (8) respective bolts using a 5/32" wrench/bithexagon male (Allen).



2. Disassemble the brake disc and caliper

On the right side of the machine, unbolt the two (2) caliper bolts using ½" and 9/16" sockets and using a 1/8" wrench/bithexagon male (Allen) unbolt the three (3) brake disc bolts, then remove the caliper and the brake disc at the same time.

\*\* The bolts holding the disc have threadlocker; so it is possible to have to heat to facilitate their unbolting.

### 3. Remove brake module

On the left side of the machine and using a 1/8" male hexagon wrench/bit (Allen), unbolt the 3x screws securing the brake actuator module to the chassis.



### 5. Bring in the pistons

Using a flathead screwdriver, fully insert each of the brake caliper pistons by using leverage on each of the brake pads.

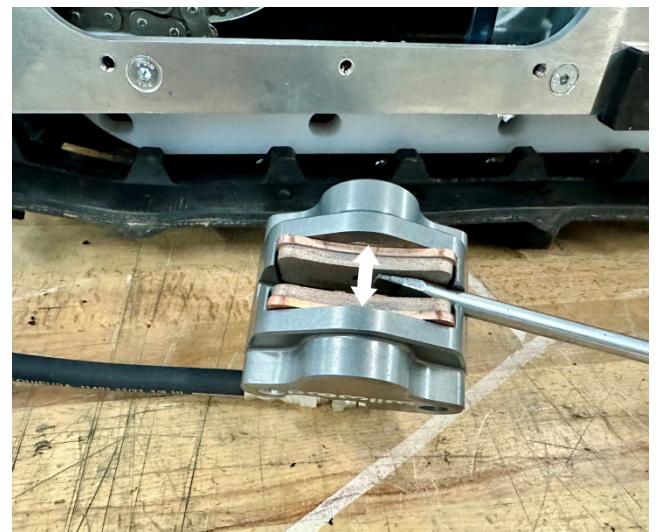
Visually check that the two pistons are fully inserted (pads touching the caliper frame).

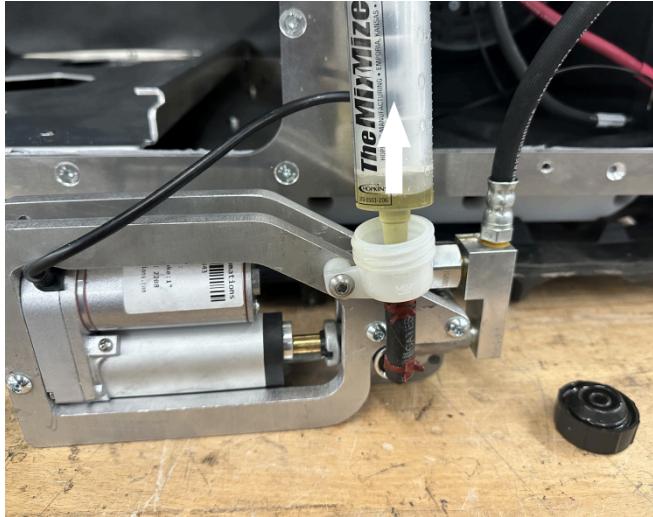
BE CAREFUL that no liquid overflows from the tank.



### 4. Remove cap

Take the brake actuator module out of the MTT and place it so that the brake oil reservoir cap is facing you and pointing upwards, then remove it and the rubber diaphragm.





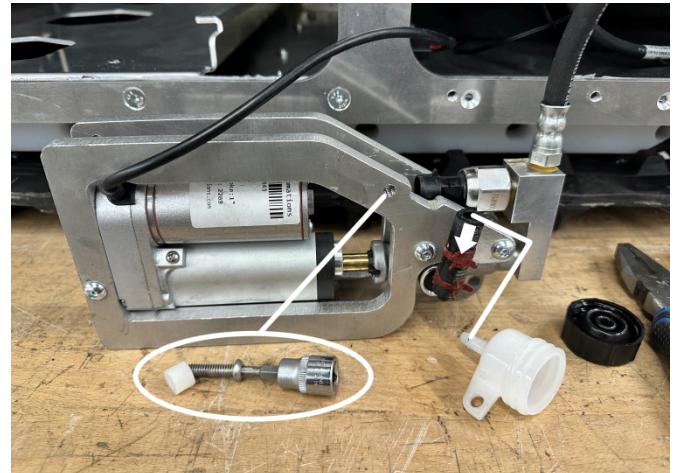
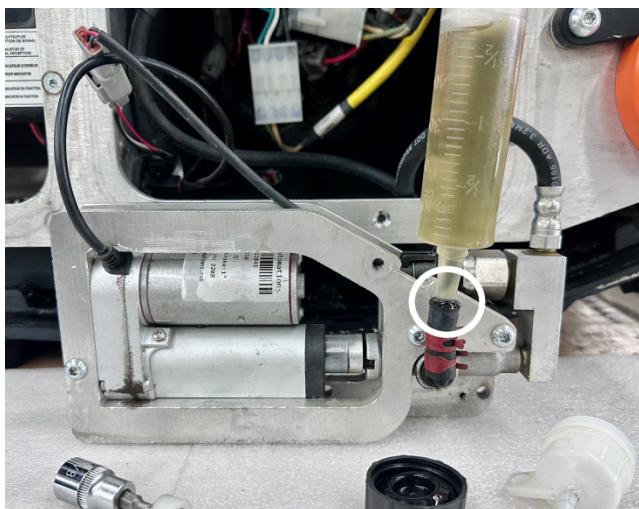
## 6. Empty the tank

Use the syringe in suction mode to empty as much of the brake fluid contained in the reservoir as possible and dispose of it in accordance with local regulations and/or standards.

## 7. Disassemble the tank

Using a 5/32" male hexagon (Allen) wrench/bit, unbolt the brake fluid reservoir from the frame. Be careful not to lose the spacer washer located between the tank and the frame.

Next, use pliers to lower the spring collar onto the pipe, then remove the tank by hand.



## 8. Fill syringe

Fill the syringe with new DOT 4 brake fluid, making sure no air bubbles enter, then connect it to the hose.

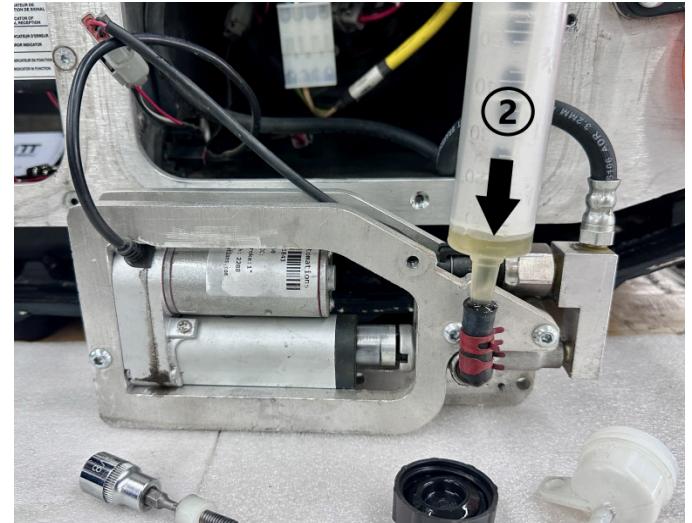
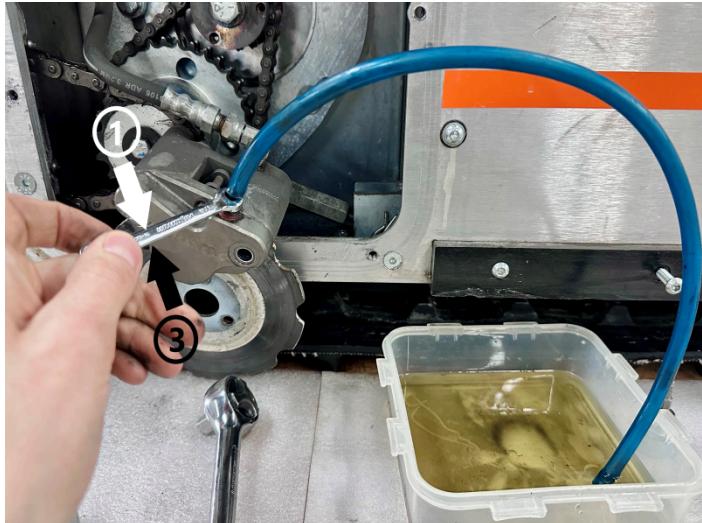


### 9. Connect drain line

Connect a 3/16" rubber hose to the caliper bleeder screw and dispose of the other end of this hose in a container that can accommodate the used fluid. It is also possible to proceed without a hose by placing the caliper head down in a container that can accommodate the used fluid.

### 10. Replace the oil

Using a  $\frac{1}{4}$ " wrench, unscrew the brake caliper bleeder screw (1) by approximately  $\frac{1}{2}$  turn, then inject 150 ml of new brake fluid into the system (2) and tighten it again. bleed screw afterwards (3).  
 \*\* This step can be carried out in several stages if your syringe cannot hold 150ml.



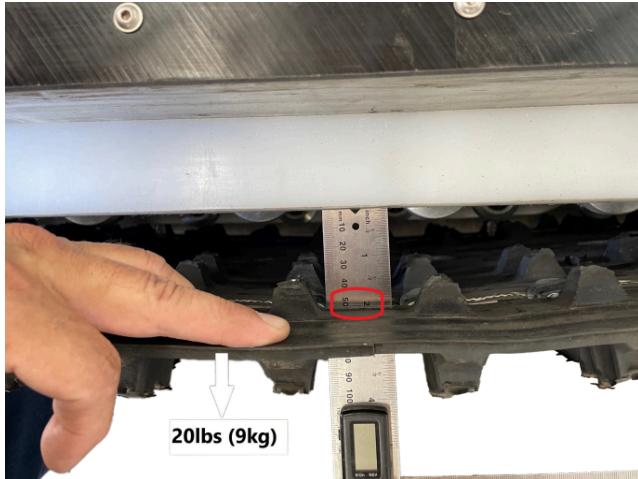


11. Remove the syringe from the hose as well as the hose from the bleeder screw.
12. Clean the brake caliper if necessary, then reassemble it with the disc in reverse order in step 2, taking care to apply Loctite 243 thread lock (blue) to the 3x disc bolts.
13. Reinstall the tank in reverse order in step 7.
14. Fill the reservoir with new brake fluid to the maximum level.
15. Reassemble the brake module in the MTT in reverse order in step 3.
16. Place the vehicle and the controller under voltage, then operate the brake system a few times until the pads are stuck to the disc.  
CAUTION to ensure that the liquid level in the tank is always above the minimum.
17. Readjust the brake fluid level in the reservoir if necessary.
18. Clean any traces of brake fluid on the disc, caliper, MTT or other using brake cleaner.
19. In a safe manner, put the MTT braking system to the test.
20. Both panels can be reinstalled in reverse order in step 1 once the effectiveness of the braking system has been validated.  
BE CAREFUL to not overtighten the bolts in order to preserve the integrity of the sealing washers and the plastic slide.

## Track condition and tension

The track should initially be checked/adjusted after 10 hours of use, then periodically every 40 hours thereafter.

To check and/or adjust the track tension, first make sure you are on a flat surface, then using a 9/16" wrench or socket, slightly loosen the two track bolts. front wheel axle (1 on each side).



Then, manually and slowly turn the machine over on one of its sides. By applying a tension force of 20 lbs (9 kg) to the longitudinal center of the track, measure the maximum deflection between the bottom point of the casters (caster-track contact point when in operation) and the inside of the stretched track .

Using a 7/16" wrench/socket, turn equally the two (2) tensioner bolts (1 on each side) until you obtain a relative deflection measurement of 2" (50 mm) @ 20 lbs (9 kg) of tension. Turn the machine over on its track and ensure the wheel axle bolts are equidistant in their respective fit, then re-tighten these bolts. Turn on the machine and make sure there is no abnormal noise when moving forward and backward.

At the same time, visually check the condition of the track to detect any incision or wear that could affect its integrity.



## Tightening the bottom casters

The bottom casters must be tightened every 20 hours of use.

Using a torque wrench and a 1/2" socket, apply a torque of 15 lb\*ft (20 N\*m) to each of the bottom caster bolts on each side of the MTT.



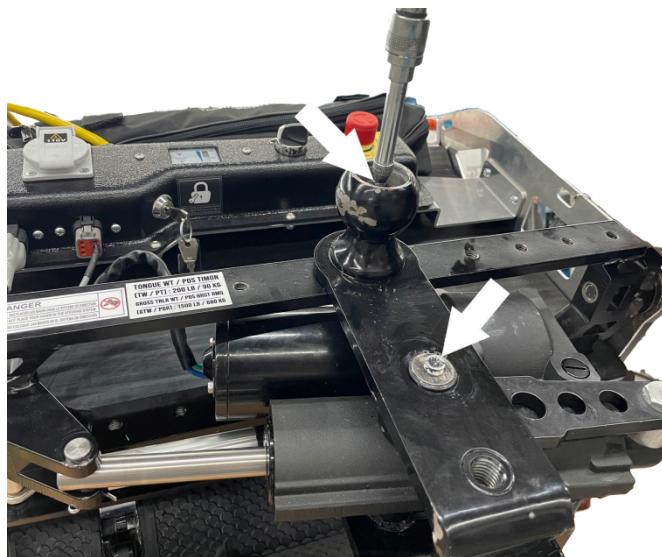
## Lubrication of pivot points

**The steering mechanism** The MTT is equipped with lubrication points that must be lubricated periodically every 40 hours of use. In severe use (intense work, dust, humidity, heat) this interval should be reduced by half, or every 20 hours.

Use standard multi-purpose grease such as Aerochem CS-40 or equivalent.

\*\* It is mandatory to use low temperature resistant grease if you use the vehicle below 5°C.

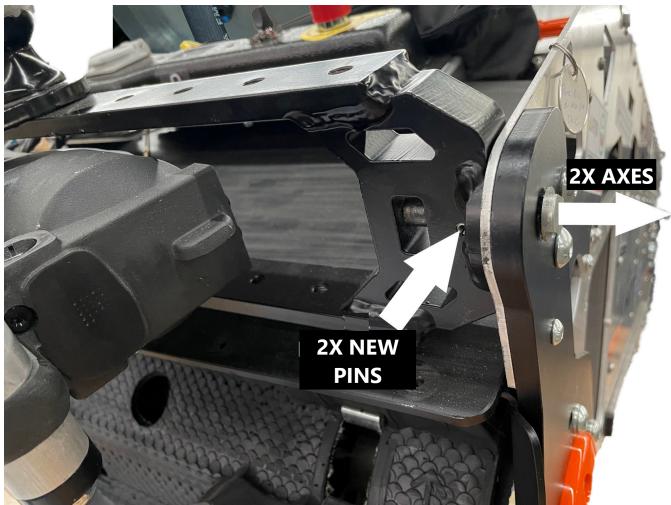
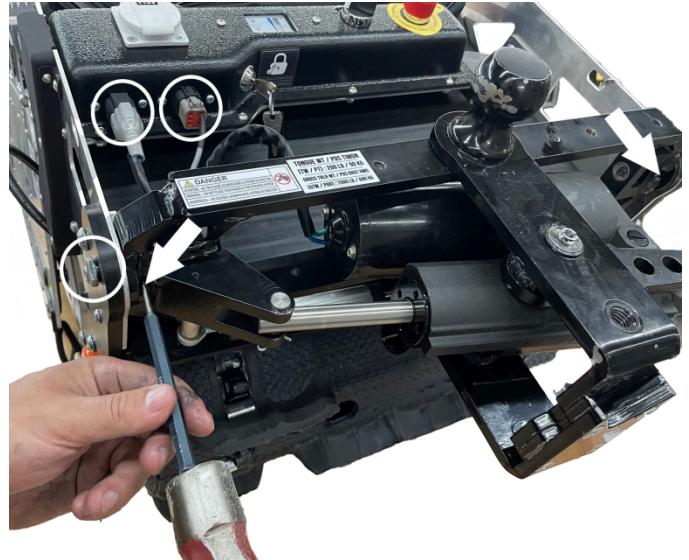
Connect the lubrication adapter supplied with the MTT to a standard grease gun, align the nozzle with one of the four (4) concave lubrication points, press firmly and inject grease until visual overflow appears around the circumference of the pivot; then wipe off the excess. Two of the lubrication points are above the hinged mount, one under the ball cover and two others below.



**Pivot axes** located on either side of the articulated fixing must be lubricated every 80 hours of use.

First disconnect the two cables connecting the hinged attachment to the machine control panel. Using a hammer and a pin punch, push the 2x spring pins (1 on each side) out of their housing, then remove the pivot pins.

CAUTION to support the articulated attachment during the axle removal maneuver.



Manually apply a thin layer of multi-purpose grease to the axles, then reinstall the articulated mount with the greased axles. Install new steel split spring pins diameter 3/16" x 1" long. (Ref.: McMaster-Carr No. 90692A725).

BE CAREFUL to index the hole in the axles before inserting the pins. Reconnect the two cables to the machine control box, then operate the machine steering at full stroke a few times.

## General cleaning

It is recommended to keep your machine clean to optimize the life of the components. In addition, periodic cleaning of the vehicle allows for better visual inspection and thus prevents possible breakage or accidents.

The machine can be cleaned using light soap and water.

WARNING, do not use a pressurized jet directly on the bearings, seals and greasable areas (i.e. wheels, panel edges, articulated fixing, etc.).



### **General inspection / maintenance**

In addition to the inspection before use as well as the various maintenance points listed above, a thorough general inspection of your MTT must be carried out every year or 200 hours of use whichever comes first. In the case of heavy use of the vehicle, cut this interval in half.

Since no complete detailed procedure can easily be described given the possible scope of the task, it is recommended that this be carried out by the manufacturer, its representative or any other person deemed competent in the matter.

Beyond the visual and functional side, the general inspection consists, among other things, of a check of all wearing parts and moving components such as, but not limited to, the track, pivot points, bearings, gears , chains, etc.

If a component turns out to be worn or broken, it is imperative to replace it immediately in order to limit possible breakage and/or subsequent damage and thus ensure safety.

## General maintenance MTT accessories

In addition to a visual inspection of the general condition of the bearings and various pivot points if applicable, certain MTT accessories require periodic maintenance.

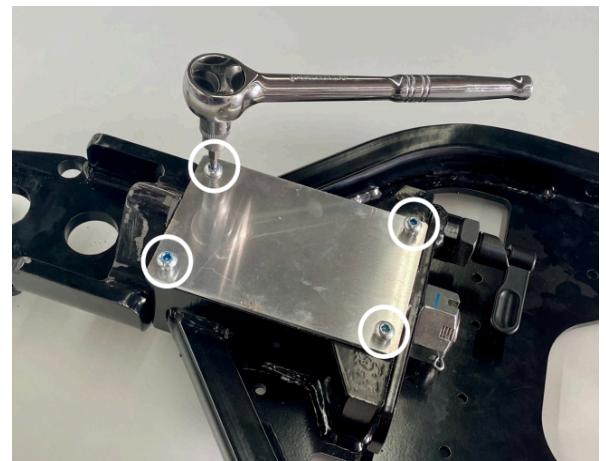
**BE SURE TO READ THE MANUAL PROVIDED WITH THE ACCESSORY IN QUESTION TO OBTAIN COMPLETE INFORMATION REGARDING ITS MAINTENANCE.**

### MTT pole for articulated fixation

The articulated attachment pole used in particular to couple a standard trailer or a standard sled to an MTT requires certain periodic maintenance.

**The roll axis** must be lubricated every 120 hours of use; to do this, it must first be dismantled:

1. In addition to uncoupling the pole from the MTT, it is best to disconnect it from the accessory by removing the axles with quick release pins;
2. Place the pole upside down on a table, then using a 5/32" wrench/bithexagon male (Allen) unbolt the four (4) cover bolts and remove it;



3. Next, use a 7/16" socket to unbolt the four (4) bolts from the roll plate and remove it;

4. Using pliers, unfold the cotter pin and remove it from the large rear nut;



6. Remove the shaft from its housing, then coat both parts with a thin layer of grease.

\*\* Use standard multi-purpose grease such as Aerochem CS-40 or equivalent. It is mandatory to use low temperature resistant grease if you use the vehicle below 5°C.

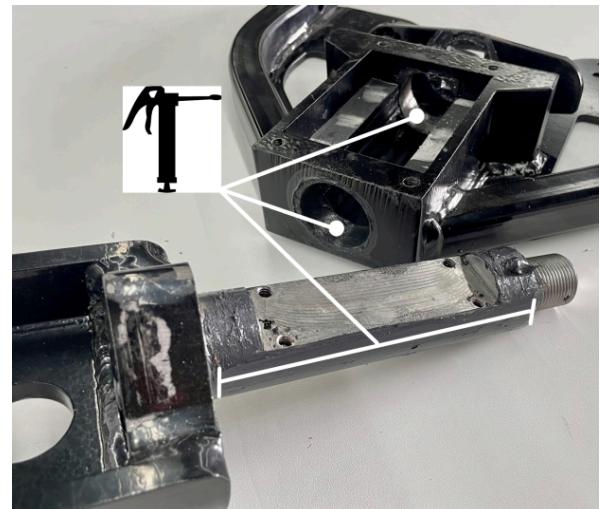
7. Reassemble the roll axis and repeat in descending order steps 1 to 6.

\*\* The use of a new 1/8" diameter steel cotter pin is recommended.

**BE CAREFUL TO REPLACE THE RUBBERS AS WELL AS THE ROLL STOP PLATE.** There should be one thin and one thick rubber one on top of the other on each side of the tree regardless of the order.



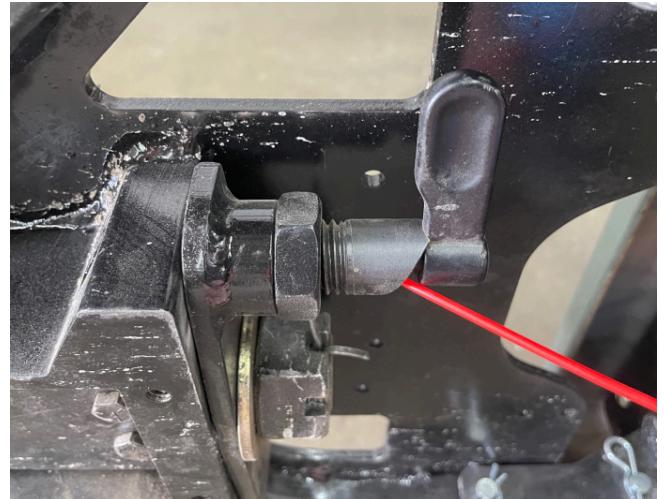
5. Using a 1-1/2" wrench or adjustable wrench, unscrew and remove the nut;





The nets of the **adjustable handle** holding the pole must be lubricated periodically in order to limit corrosion and facilitate its operation. A liquid or spray all-purpose silicone-based lubricant is recommended.

In the same vein, the **roll lock lever** located under the pole must also be lubricated periodically with an all-purpose liquid or silicone-based aerosol lubricant to facilitate its operation.





## MTT trailer

The **tandem pivots** (if equipped) must be lubricated periodically every 80 hours of use. To do this, connect a standard grease gun to the lubrication nozzle above the pivot of each tandem (between the wheels) and inject grease until visual overflow appears around the pivot; then wipe off the excess. Use standard multi-purpose grease such as Aerochem CS-40 or equivalent. It is mandatory to use low temperature resistant grease if you use the accessory below 5°C.

The ideal **tire pressure** depends on the type of accessory, terrain and driving. Generally speaking, it is recommended to adjust tire pressure between 6 and 10 psi (0.4 to 0.7 bar). Please note that the pressure recommended in the product specific instructions takes precedence over the values stated above.

**NEVER EXCEED THE MAXIMUM PRESSURE INDICATED ON THE SIDEWALL OF A TIRE.**

A lower pressure will ensure better passenger comfort (if applicable), but will be more likely to end up with a flat tire (therefore) when maneuvering requiring a tight turning radius and operating on uneven terrain and/or with high grip. In addition, low pressure generates greater contact with the ground, therefore better traction. This may be wise in order to have better steering control on slippery terrain or when the towed accessory is light compared to the MTT.

Conversely, a higher pressure is recommended during operations requiring a tight turning radius and/or in uneven terrain. The pressure can also be increased when a heavy load is supported by the tires (visually perceptible by a flared tire at the base).

**NEVER EXCEED THE MAXIMUM PRESSURE INDICATED ON THE SIDEWALL OF A TIRE.**

## Troubleshooting

	<p>Check that the key on the control box (A6) is horizontal (“ON” position).</p> <p>Check that the emergency stop on the control box (A5) is not pressed.</p> <p>Check that the battery selector on the control box (A4) is positioned on the correct battery.</p> <p>Check that the battery is working (C2 indicator light on steady green); otherwise press the battery power button (C2).</p> <p>The MTT does not turn on</p> <p>Check that the battery is properly inserted into its rail and all the way to the bottom.</p> <p>Use at very low temperatures:</p> <ul style="list-style-type: none"> <li>a) If it is equipped with the heating system, the battery can be used as soon as it has obtained the correct temperature without any additional action on your part. ** Note that a battery left in operation maintains an adequate temperature by itself.</li> <li>b) If your battery is not equipped with a heating system, you must place it in a warm place for a few hours so that its internal temperature is above -16 degrees Celsius before you can use it.</li> </ul>
When switching on the battery, the indicator light (C2) does not light up or turns off after a few seconds	<p>Your battery is in protection mode.</p> <p>It is possible to exit protection mode by recharging the battery for a few minutes, then restart it using button C2.</p> <p>If it still does not work, contact your dealer.</p>

The MTT does not want to move	<p>Check that the control lever is in operation (status indicator on).</p> <p>Verify that the control module is receiving data from the control joystick: signal reception indicator B4 green.</p> <p>Check that neutral (D9) is not applied to the control lever.</p> <p>If the vehicle is unused for more than 15 seconds (controller status indicator flashes red-green), carry out a cycle by engaging and disengaging the neutral button (D9).</p> <p>Check the operation indicator on the control lever (D7).</p> <p>Check that no obstacle hinders the free movement of the MTT.</p> <p>Check that the parking brake is not engaged by performing a cycle of neutral.</p> <p>Check that the brake has not remained engaged/stuck; if so, it can be manually disengaged using the brake release adapter (see Appendix C).</p> <p>Check that the hydrophobic air intakes are not blocked.</p> <p>Check that the light under the power controller which is located behind the main controller is lit green. If it lights red or flashes, refer to Appendix A and/or contact your dealer to have the controller checked (AC-Q-01). **Note that the light produced by the LED below the power controller is visible as a reflection in the aluminum plate at the bottom of the chassis.</p>
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The MTT does not receive data from the control stick	<p>Check that the control lever emergency stop (D8) is properly raised.</p> <p>Check the battery charge level in the control lever via the indicator (D7).</p> <p>Check that the battery compartment cap (D10) is tightly screwed on.</p> <p>Check that there is no red light permanently lit on the B4 status indicator of the main control module. If this is the case or if all the previous points are OK, follow the fitting procedure available in Appendix B.</p>
The controller does not work	<p>Check that the emergency stop of the control lever (D8) is properly lifted.</p> <p>If the controller is not used for more than 15 minutes, it will automatically turn off; perform a power cycle by engaging and its emergency stop button (D8).</p> <p>Check that the battery compartment cap (D10) is tightly screwed on.</p> <p>Check the color of the control lever operation indicator (D7); If it flashes red or does not light up, the battery needs to be replaced.</p>
The steering is completely at one end, no longer working and/or making a rumbling noise	<p>Check the connector (A7) of the steering position sensor.</p> <p>Check the cylinder position sensor.</p> <p>Use the supplied steering “dongle” bypass connector located in the storage bag (colored gray or red). ATTENTION, the steering cylinder is no longer protected.</p> 

Steering and winch not working	Contact your dealer to have the controller (AC-Q-02) checked.
The steering works and the winch does not work	<p>Check that the dial at the end of the winch is in the engaged position. Make sure the cables are securely attached to the winch and free from corrosion.</p> <p>Contact your dealer to have the controller (AC-Q-02) checked.</p>
The winch works and the steering does not work	<p>Check the connector (A8) power supply of the steering motor.</p> <p>Check if the bypass valve is tight (red screw under the steering cylinder).</p> <p>Contact your dealer to have the controller (AC-Q-02) checked.</p>
Front light does not work	<p>Check the light cable connection located on the bumper.</p> <p>Check the condition of the light.</p> <p>Contact your dealer to have the controller (AC-CP-03) checked.</p>

The battery is not charging	<p>Confirm that the battery is inserted all the way to the bottom of the selected rail.</p> <p>Check the electric charging cable.</p> <p>Check the electrical circuit breaker of your electrical installation.</p> <p>Check that the charger fan is working (noticeable sound).</p> <p>In the event of overuse of the vehicle and/or a battery in a hot environment, the battery may not be able to charge due to an internal temperature that is too high.</p> <p>Remove the battery from the vehicle, place it in a cool environment, wait a few hours, then try again.</p> <p>Use at low temperatures:</p> <ul style="list-style-type: none"> <li>c) If it is equipped with the heating system, the battery will start charging when it has reached the appropriate temperature.</li> <li>d) If your battery is not equipped with a heating system, you must place it in a warm place for a few hours so that its internal temperature is above 0 degrees Celsius before you can use it.</li> </ul>
Battery selector is broken	Move the battery into the rail corresponding to that of the selector position. If the selected position is not visible, go there by trial and error between the rails.
A continuous Biiliii [...] noise is heard	<p>This is the internal water detection alarm.</p> <p>Quickly bring the vehicle to a dry place and safe. Turn it off, then open the panels and dry up any water/moisture.</p> <p>Locate where the intrusion is coming from and apply fixes to reseal the vehicle as soon as possible.</p> <p>It is recommended to have the vehicle checked by a specialist to ensure that nothing has been damaged and that the vehicle is still safe.</p>

A beep is heard every 5 seconds	This is the vehicle's forgetting buzzer when it is switched on. Turn off the vehicle if you forget to do so. See the "Auxiliary Power" section to eliminate this beep when operating the vehicle in power source mode.
The machine is noisier than normal	<p>Visually check for accumulation of snow, mud or debris between the track and the luggage rack. A tool such as a stick can be used to help clear the obstruction. <b>ATTENTION</b>, always turn off the vehicle before removing it.</p> <p>Make sure the brake has not remained engaged/stuck; if so, it can be manually disengaged using the brake release adapter (see Appendix C).</p> <p>Check the condition of the casters and bearings above and below the housing.</p> <p>Check track tension</p> <p>Check the lubrication and tension of the chains.</p>
The MTT sinks/get stuck easily	<p>For better MTT performance, optimize traction by avoiding causing the track to slip on soft and/or slippery terrain. When the vehicle begins to skid or sink, stop, reverse; then move forward.</p> <p>The principle of traction and motorization is very different from a snowmobile, so it takes time to adapt in order to obtain the full performance possible from your MTT.</p> <p>Read the section « Performance Optimization » for more tips on this.</p>

# Specifications

## Powertrain

- Energy type Electric
- Batteries<sup>1</sup> 5.1 kWh Lithium
- Braking Disc brake

## Performance<sup>2</sup>

- |  |                                     |
|--|-------------------------------------|
| • Maximum speed                        | 20 km/h                             |
| • Towing capacity<br>(trailer or sled) | 1450 kg (3200 lb) on a flat surface |
| • Max attack angle when climbing       | 450 kg (1000 lb) all terrain        |
| • Max angle of attack when descending  | 35° to 45°                          |
| • Max side angle                       | 45°                                 |
|  | 35°                                 |

## Cooldown<sup>3</sup>

- |                          |                   |  |
|--------------------------|-------------------|--|
| • 13A base charger       | ○ 5.1 kWh battery | 8h @ 95% (120V / 240V)                 |
| • 22/25A fast charger    | ○ 5.1 kWh battery | 5 h @ 95% (120V) / 4h @ 95% (240V)     |
| • 40A charger (external) | ○ 5.1 kWh battery | 3.5 h @ 95% (120V) / 2.5h @ 95% (240V) |

## Dimensions

- |                |  |
|----------------|--|
| • Total length | 2235 mm (88 po)                        |
| • Total width  | 584 mm (23 po)                         |
| • Total height | 635 mm (25 po)                         |
| • Track width  | 508 mm (20 po)                         |
| • Track length | 3912 mm (154 po)                       |
| • Lug height   | 32 or 38 mm (1-1/4 inch or 1-1/2 inch) |

<sup>1</sup> Possible selection between 1 or 2 batteries per vehicle (from 5.1kWh to 10.2 kWh of energy).

<sup>2</sup> Depending on the conditions and type of terrain (temperature, inclination, soil type, etc.)

<sup>3</sup> A battery can be replaced in less than 30 seconds without tools.

## Weight

- MTT-154 empty 200 kg (440 lb)
- 5.1 kWh battery 43.2 kg (95 lb) per battery

## Distance / autonomy<sup>2</sup>

- 5.1 kWh battery 20 to 30 km / up to 4 hours per battery

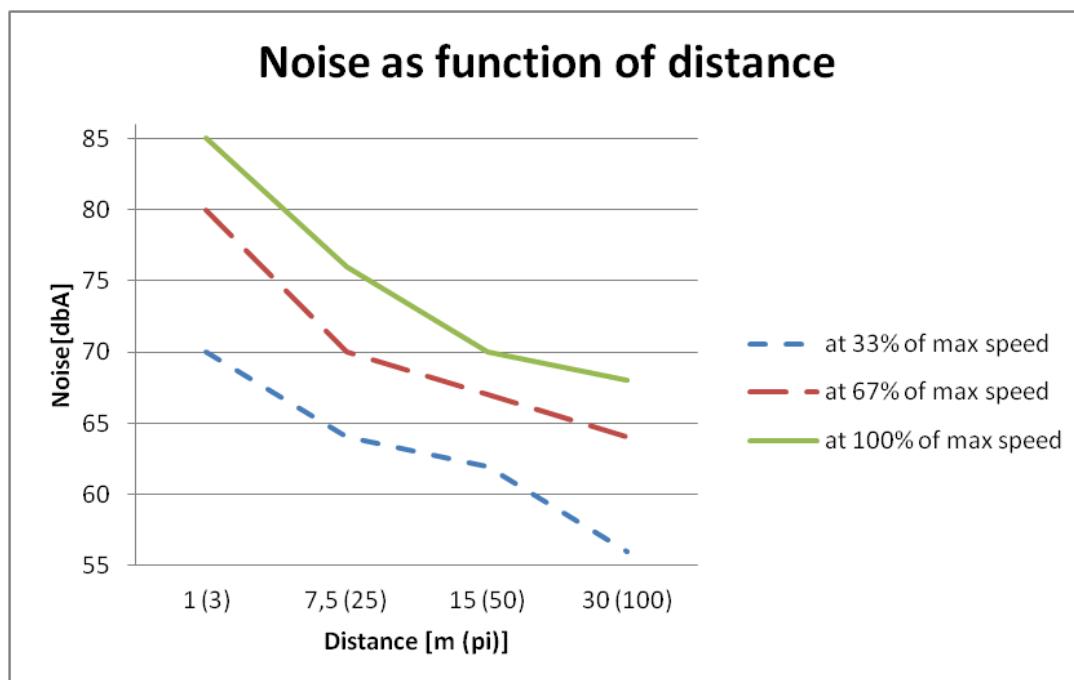
## Capacity

- Max mass on the luggage rack 182 kg (400 lb)
- Max drawbar weight 90 kg (200 lb)
- Max gross trailer weight 680 kg (1500 lb)

## Driving and types of control

- Standard On-board driving with wireless controller
- Standard Driving remotely by sight
- Optional Close monitoring of a person by physical link
- Optional Remote control (coming soon)
- Optional 100% autonomous (coming soon)

## Sound levels





## Features:

- Off-road utility vehicle (snow, sand, mud, difficult/stEEP terrain, restricted space, etc.);
- Can be used in any season and environment (high & low temperature, dust, humidity, etc.);
- Environmental tightness: dust, water (rain, splash);
- Box-type aluminum frame with integrated components inside;
- Can be controlled with a static operator;  
(visually) or dynamic (on board);
- Mobile energy source of 2000 Watts 120/240V;
- 2,500 lb synthetic cable winch;
- 3000 Lumens LED headlight;
- Vehicle status information screen;
- Integrated 2 in. hitch for MTT specialized trailer and sled.



## **Warranty**

### **Scope of Limited Warranty**

MTT Manufacturier guarantees its machines sold by authorized MTT dealers (as defined below) in the United States and Canada against any design or manufacturing defect for the period described below. This Limited Warranty will become void if: (1) the machine has been used in racing or other competition at any time, even by a previous owner; (2) a modification of the machine has resulted in an alteration of its operation, performance, lifespan and/or original use; (3) there is evidence of improper use of the vehicle; (4) there has been water intrusion into the vehicle. Parts and accessories not installed at the factory are not covered by this limited warranty. Please refer to the limited warranty text applicable to parts and accessories.

### **Limitation of liability**

THIS WARRANTY IS AGREED TO AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE DURATION OF IMPLIED WARRANTIES IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY. UNEXPECTED AND CONSEQUENTIAL DAMAGES ARE NOT COVERED UNDER THIS WARRANTY. SOME STATES OR PROVINCES DO NOT ALLOW THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE AND THEREFORE MAY NOT APPLY. THE SPECIFIC RIGHTS CONFERRED BY THIS WARRANTY APPLY TO ITS HOLDER, WHO MAY ALSO HAVE OTHER RIGHTS WHICH VARY BY STATE OR PROVINCE.

Neither a distributor, nor an MTT Manufacturier dealer, nor any other person is authorized to make any declarations or representations or to offer warranty conditions regarding the product, which are other than those stipulated in this limited warranty. MTT Manufacturier reserves the right to modify this limited warranty at any time, however this will have no effect on the applicable warranty conditions in force at the time of the sale of the products.

## **Exclusions (not covered by warranty)**

The following items are not, under any circumstances, covered by the warranty:

- Any wearing parts such as (but not limited to) bearings, chain and gears, seal, brake pads and disc, track, slideways, winch cable, insulating material;
- Deterioration caused by normal wear and tear of the vehicle and its components over time;
- Routine maintenance items, tune-ups and adjustments;
- Damage caused by failure to comply with maintenance or storage standards as stipulated in the Owner's Guide;
- Damage resulting from the removal of parts, incorrect repairs, maintenance or service, modification or use of parts or accessories not manufactured or approved by MTT Manufacturier, or damage resulting from repairs carried out by a person who is not an authorized MTT Manufacturer dealer;
- Damage caused by misuse, abnormal use, neglect or use not in accordance with the operations recommended in the Owner's Guide.
- Damage resulting from an accident, inappropriate submersion, fire, theft, an act of vandalism or any case of force majeure;
- The use of oils or lubricants not suitable for the product;
- Loss resulting from unforeseen damage, consequential damage or any other damage, including but not limited to excessive towing, storage, telephone calls, rental, use of a taxi, inconvenience, insurance coverage, reimbursement loans, wasted time and lost income.
- Damage following the installation of nails on the track if the installation does not comply with MTT Manufacturer's instructions.

## **Warranty duration**

This warranty will be effective from the earlier between the date of delivery to the first purchaser or the date the product is first put into service. The duration of the basic warranty is twelve (12) consecutive months or 200 hours; in the first eventuality reached. A warranty extension can be added when purchasing the new vehicle or subsequently up to 1 month before the end of the basic warranty. Repair or replacement of parts or provision of services under this warranty does not extend its duration beyond its original expiry date.



## **Warranty Requirements**

Execution of the warranty is only valid if each of the following conditions is met:

- The MTT vehicle must have been purchased as a new and unused vehicle by its first owner from an MTT Manufacturier dealer authorized to distribute MTT machines in the country where the sale was concluded ("the MTT Manufacturier dealer");
- The pre-delivery inspection process prescribed by MTT Manufacturier must have been carried out and documented;
- The MTT vehicle must have been properly registered by an authorized MTT dealer;
- The MTT machine must have been purchased in the country where its owner resides;
- Routine maintenance described in this Owner's Guide must be performed within the prescribed time frame for the warranty to continue. MTT Manufacturier reserves the right to make warranty coverage conditional on proof that maintenance has been carried out adequately. If one of the preceding conditions is not met, MTT Manufacturier has no obligation to honor the limited warranty related to the vehicles in question, for both private and commercial use. Such restrictions are necessary so that MTT Manufacturier can preserve the safety of its products as well as the safety of its customers and the public.

## **Conditions for Obtaining Warranty Coverage**

The consumer must stop using the machine as soon as an anomaly appears. The consumer must notify an MTT Manufacturier distributor within three (3) days following the discovery of a defect; he must also give him reasonable access to the product as well as a reasonable time to repair it. The consumer must present proof of purchase of the product to the MTT Manufacturier distributor and must sign the repair order before the start of repairs in order to validate a request for warranty work. Any part replaced under this limited warranty becomes the property of MTT Manufacturier.



## **What MTT Manufacturier will do**

MTT Manufacturier's obligations under this warranty are limited, at its option, either to repairing parts which, under normal conditions of use, maintenance and service, present a defect, or to replacing these parts with new or reconditioned original MTT Manufacturer parts, free of charge for the cost of parts and/or labor incurred by an MTT distributor for the duration of coverage and under the conditions of this warranty. No claim for breach of warranty may be grounds for cancellation or termination of the sale of the machine to the owner. If repair covered by this warranty is required while the product is located outside the country in which it was purchased, the owner will be responsible for additional charges caused by local practices and conditions, such as, but not limited to, the transportation, insurance, taxes, license fees, import charges, and any other disbursements, including those required by governments, states, territories and their respective agencies. MTT Manufacturier reserves the right to improve or modify its products at any time without incurring any obligation to modify previously manufactured products.

## **Transfer**

If ownership of a product is transferred during the warranty period, this limited warranty subject to its own terms and conditions will also be transferred and will be valid for the remainder of the coverage period, provided that MTT Manufacturier or an MTT Manufacturier distributor authorized receives proof that the previous owner accepted the transfer of ownership, and also receives the contact details of the new owner.

## **Customer service**

When faced with a conflict or service problem related to this limited warranty, MTT Manufacturier suggests that you try to resolve the situation directly at the authorized distributor in the presence of the service manager or owner. If the problem cannot be resolved, contact MTT Manufacturier by filling out the contact form you will find on our website or contact MTT Manufacturier by post at the address listed in the "Contact Us" section of this guide.



Contact us



**MTT Manufacturing, Inc.**

**888 boul. Talbot, Chicoutimi, Quebec, Canada, G7H 4B4**

Tel.: 418-696-0616

[mtt136.com/contact/](http://mtt136.com/contact/)

## APPENDIX A - Power Controller Error Codes

Here is the list of error codes given via the LED below the power controller which is located behind the main controller.

\*\* Note that the light produced by the LED is visible as a reflection in the aluminum plate at the bottom of the chassis; so ensure you to limit the light entering the compartment in order to see better.

**Fixed lights Table**

LED Code	Explanation	Solution
Green Off	No power or switched off	1. Check if all wires are correct. 2. Check fuse and power supply.
Green On	Normal operation	That's great! You got solution!
Green & Red are both On		1. Software still upgrading. 2. Supply voltage too low or battery too high 3. The controller is damaged. Contact MTT about a warranty repair.

## Flashing red light Table

Number of flashes		Error	Cause / solution
1,2	¤ ¤¤	Over voltage error	<ol style="list-style-type: none"> <li>1. Battery voltage is too high for the controller. Check battery volts and configuration.</li> <li>2. Regeneration over-voltage. Controller will have cut back or stopped regen.</li> <li>3. This only accurate to <math>\pm</math> 2% upon Overvoltage setting.</li> </ol>
1,3	¤ ¤¤¤	Low voltage error	<ol style="list-style-type: none"> <li>1. The controller will clear after 5 seconds if battery volts returns to normal.</li> <li>2. Check battery volts &amp; recharge if required.</li> </ol>
1,4	¤ ¤¤¤¤	Over temperature warning	<ol style="list-style-type: none"> <li>1. Controller case temperature is above 90°C. Current will be limited. Reduce controller loading or switch Off until controller cools down.</li> <li>2. Clean or improve heatsink or fan.</li> </ol>
2,2	¤¤ ¤¤	Internal voltage fault	<ol style="list-style-type: none"> <li>1. Measure that B+ &amp; PWR are correct when measured to B- or RTN.</li> <li>2. There may be excessive load on the +5V supply caused by too low a value of Regen or throttle potentiometers or incorrect wiring.</li> <li>3. Controller is damaged. Contact Kelly about a warranty repair.</li> </ol>
2,3	¤¤ ¤¤¤	Over temperature	The controller temperature has exceeded 100 °C . The controller will be stopped but will restart when temperature falls below 80°C.
2,4	¤¤ ¤¤¤¤	Throttle error at power up	Throttle signal is higher than the preset 'dead zone' at Power On. Fault clears when throttle is released.
3,1	¤¤¤ ¤	Frequent reset	May be caused by over-voltage, bad motor intermittent earthing problem, bad wiring, etc.

## Flashing red light Table (continued)

Number of flashes	Error	Cause / solution
3,2	xxxx xx	Internal reset May be caused by some transient fault condition like a temporary over-current, momentarily high or low battery voltage. This can happen during normal operation.
3,3	xxxx xxxx	Hall throttle is open or short-circuit When the throttle is repaired, a restart will clear the fault.
3,4	xxxx xxxx	Non-zero throttle on direction change Controller won't allow a direction change unless the throttle or speed is at zero. Fault clears when throttle is released.
4,1	xxxxx x	Regen or Start-up over-voltage Motor drive is disabled if an over-voltage is detected at start-up or during regen. The voltage threshold detection level is set during configuration. The max threshold is about 1.25 times of controller rated voltage. I.e. you may set threshold lower than 60V for 48V controller.
4, 3	xxxx xxxx	Motor over-temperature Motor temperature has exceeded the configured maximum. The controller will shut down until the motor temperature cools down.
The Red LED flashes once at power on as a confidence check and then normally stays Off. "1, 2" means the Red flashes once and after a second pause, flashes twice. The pause time between multiple flash code groups is two seconds.		

## APPENDIX B – Control lever synchronization procedure

Here is the step-by-step procedure for pairing a joystick with an MTT:

\*\*See section « Description of components » for references

### Part 1 – On the MTT

1. Go to the Option Menu of the MTT main display screen;
2. Select the Pairing submenu; once in this menu, the initiation of the pairing of a new controller is launched

\*\*If you are syncing a side-by-side, both machines must be in sync mode.

### Part 2 – On the controller

3. Turn off the joystick;
4. Ensure that the switch:
  - Neutral is pressed (Ref. D9),
  - Headlight is on (Ref. D6),
  - Direction is on “Reverse” (Ref. D4);
5. Then hold down at the same time:
  - The winch switch in “OUT” function (Ref. D5),
  - The brake lever fully (Ref. D2),Then, turn on the control lever (Ref. D8) and release the buttons;
6. The joystick status indicator will light up orange (Ref. D7);  
\*\*If the joystick indicator lights up Green, you are not in synchronization mode.  
\*\*\* If the joystick indicator flashes Orange-Red alternately, redo part 2; If the problem persists, contact your dealer.

### Part 3 – Synchronization in progress

7. Wait a few seconds;
8. The synchronization process will be completed when:
  - The joystick indicator will flash Orange-Green alternating,
  - A message indicating that the procedure was successful will be displayed on the MTT screen
9. Turn OFF the joystick and the MTT;
10. Synchronization is complete.
11. Turn the joystick back to ON position to use your MTT :)

## APPENDIX C – Manual brake release procedure

For one reason or another you may need to manually move, tow an MTT or simply rotate its track freely when it is powered off.

To do this, the parking brake must be manually disengaged using the adapter provided for this purpose supplied with the MTT normally located in the storage bag.

First take the adapter and insert an 18650 battery/cell into it if you haven't already done so. Note that it is also possible to use the cell in the control pad and vice versa.



Open the pivoting panel, locate the brake connector attached to the bottom right wall of the compartment and disconnect it.



Subsequently, connect the adapter to the fixed part of the connector; you will then hear the brake disengage.

**ATTENTION**, this procedure makes the braking system inactive until it is reconnected.

