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DEAR CUSTOMER!

The «Mekhanika» company thanks you and appreciates your choice of our vehicle. Please get acquainted with present Manual of exploitation for the safe and accident-free exploitation of our ATVs.

GENERAL DATA

TINGER tracked all-terrain vehicles serve for the transportation of people and baggages generally on snow and swampy off-road conditions, and also through forest roads, broken terrains and other impassable areas. ATVs are characterized by the possibility to pass deep snow cover with low floatation features and also overhydralized clays (fluid-flow state), clay loams, areas covered with the organic mass (peat or silt) with the thickness not more than 300 mm, and natural and artificial bends, hillsides, trenches, mucks and swampy spaces.

SPECIFIED LIFETIME, STORAGE' PERIOD AND CONDITIONS

TINGER tracked vehicles' reliability in exploitory conditions stated in general data is characterized

- by : specified lifetime - 6 years
- storage period - 1 year

Stated specified lifetime is not available for details and components subjected to timewearing, periodic replacement, with limited lifetime (brake pads and discs, catenary loops, driving belts, filters, accumulator battery, exploitory liquids, etc.).

One of important factors providing flawless ATV' exploitation is its' correct storage. Correct storage decreases the impact of external factors and provides operability of technical characteristics of all-terrain vehicle during the whole specified lifetime.

To keep your ATV in an operable state and constant readiness for the usage after the storage you must follow pointed rules due to the regular exploitation (at least once a month):

- detrain the all-terrain vehicle;
- clean the all-terrain vehicle from dirt and foreign objects including passenger end engine blocks;
- store your ATV in a specifically equipped place (heated and nonheated rooms, tents minimizing the influence of the external factors on the vehicle and providing an easy access to it);

- turn the ATV' "mass" off;
- fix the ATV with counterrecoil devices;

If you use your snowmobile irregularly (less than once a month) you must add followed points to the already stated:

- slack off tracks' pulling;
- turn off and remove the accumulator battery;

If you plan not to use the ATV more than 3 months you must conserve your all-terrain vehicle to provide its' safety due to long-lasting inactivity. To perform the conservation it is necessary to:

- store the ATV in a specifically equipped place (heated and nonheated rooms minimizing the influence of external factors on the vehicle and providing an easy access to it);
- carefully clean the ATV from dirt outside and inside;
- detrain the all-terrain vehicle;
- change the engine oil;
- lubricate catenary loops;
- lubricate collars of driveshafts, bearing and holding rollers;
- slack off tracks;
- post and fix the ATV with bums under the lower body along the whole length in such way when tracks don't touch the floor;

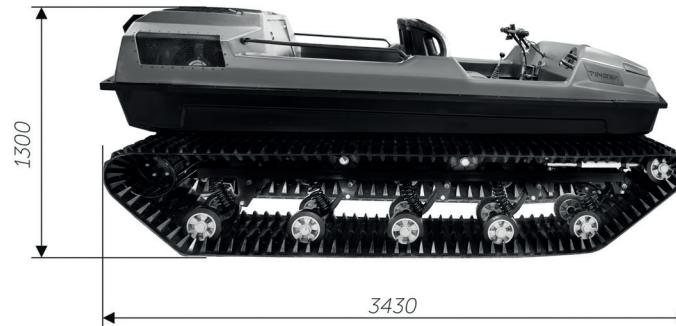
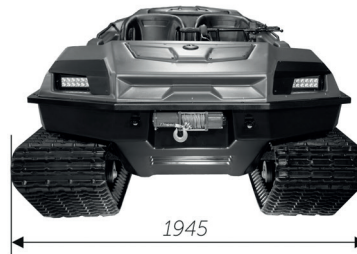
- slack off the aggregates' driving belt;
- turn off and remove the accumulator battery;
- pour the extra-amount of the fuel. Fuel level in the capacity must be not more 1/4 of the tank' height;
- cover the ATV with the special tent.

If the storage period is above the stated one (12 months), it is necessary to change engine oil and entirely check the workability of all ATV' systems before the riding.

MANUFACTURER' WARRANTY

Manufacturer warrants you the accordance of the TINGER all-terrain vehicles to technical requirements due to the following exploitary', maintenance' and storage' rules. You can find the more detailed data on warranty and its' terms in the correspond part of the Service book. Warranty period of the TINGER all-terrain vehicle is 12 months or 200 operation hours (depending on what moment comes earlier).

Capacity TINGER TR5



TECHNICAL CHARACTERISTICS OF TINGER TR5

Model	TR5
Engine type	4-stroke overhead-valve petrol engine, electronic ignition, underpressured lubricant and oil filter
Engine mark	SQRB2G06
Power kWt (l.s.) on r/min	42(57,1) on 6000
Volume, cm ³	812
Amount of cylinders	3
Amount of valves	12
Cooling system	Liquid
Starter	Electronic
Brakes	Hydraulic
Control	Ergonomic control by one steering lever
Transmission	Transmission with planetary differential having hig and low gears and reverse gear
Driveshaft	Moment of engine goes over the variator to the gearbox and then to the driving sprocket
Frame	Welded construction of steel section with heavy-duty and long durability. Protective coat of polyether spatter
Towing device	Maximal job of the ball - 100 kg
Body	Vaccum-pressed high-density polyethelen

Elevating capacity	500 kg
Towing capacity	1100 kg
Amount of passengers	5
Volume of gasoline tank	110 litres, polyethylen gasoline tank
On-ground speed	35 km/h
Dead weight	1100 kg
Soil bearing pressure	0.05 kg/cm ²
Length	3430 mm
Width	1945 mm
Height	1300 mm
Height with tent	2030 mm
Clearance	300 mm
Temperature interval	-30° C ... +30° C

DETAILS ON SAFETY MEASURES

All-terrain vehicle it's not a toy! Its' driving may be dangerous! ATV' driving needs skills of driving tracked vehicle.

All-terrain vehicle is an non-road vehicle meant to drive on snow cover and swampy areas, forest roads, rough terrain and other impassable places.

ATTENTION!

- *follow all instructions for the storage, maintenance and exploitation of the ATV stated in present Manual and on informational plates mounted on the all-terrain vehicle body.*
- *don't start to ride the ATV without the previous coaching and training.*
Driver must have Class A License for a tractor' drivers.
- *It is forbidden to drive the ATV to persons under the age 16.*
- *It is forbidden to drive the ATV without the certified and correctly clasped head helmet of your size. You also must use protective glasses, mask or screen covering your face; ride in gloves, high boots, slong-sleeved shirt and triousers.*
- *It is forbidden to drive the ATV in intoxicated state.*
- *Check the whole ATV and its' mechanisms statement before every riding.*
Carry out all instructions for the checking and maintenance of your all-terrain vehicle according to the reglament stated in present Manual.

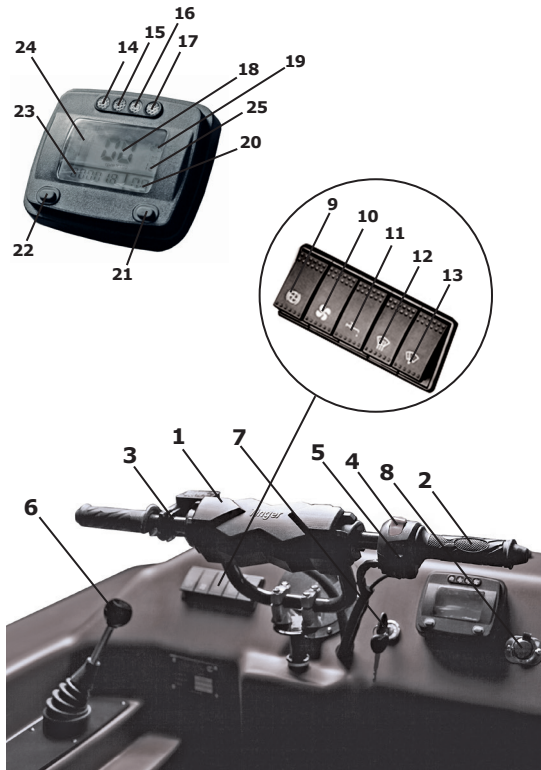
- *ATV' manipulating differs vastly from the manipulating the other vehicles such as motorcycles or automobiles. Due to non-compliance to the precautionary measures emergency situation or rollover may occur within such typical moves as turnovers, motion on hilled areas and passing of obstacles.*
- *be extremely careful while choosing the route! Correlate possibilities of the ATV with environmental factors. Remember that TINGER has wide but not unlimited possibilities in motion in non-road conditions.*
- *don't drive with the speed that is not odd to your driving skills or move conditions. Speed must accord to the surface' statement, vision conditions and other external conditions, and also your driving experience.*
- *It is necessary to keep the steering wheel with both hands and push the floor by legs while riding. Move slowly and be very attentive while moving in unfamiliar terrain. Be constantly ready for changes in road conditions.*
- *don't pass through large obstacles like boulders, fallen trees, ditches and stubs. Collision with such obstacles may lead to deterioration of the suspension' elements.*
- *it is forbidden to use the ATV on automobile roads of public service with solid cover including streets, footpaths and parkings.*
- *while riding on the soil ground and streets of public service track attentively the motion of other vehicles. Make sure the local law doesn't forbid the ATV' motion on soil ground.*

- *we recommend you to avoid the ATV' riding on extremely rough surfaces till your driving skills is not at the level allowing to drive confidently in such conditions. Be very careful on such parts of the route.*
- *don't lift on too sharp bends if you don't sure your driving skills allow you to perform such lifting. Begin to raise your skills on small obstacles and only after that try to pass hillside.*

- *avoid diagonal descents, otherwise the ATV may bend sharply. Drive along the hillside if it's possible.*

- *in the case of reverse motion always check is there any obstacles or people behind you. Keep the low speed. If it's necessary ask other people for help. It will help you to perform the manoeuver more safe.*
- *always switch off the engine during the fuel filling. Don't smoke while filling and don't perform the filling near the sources of sparks, free flame and in other places where the flame formation is possible. Flashed petrol may cause burns.*
- *the petrol is toxic. If the petrol entry into your eyes, digestive tract, and also after long-lasting impact of petrol vapour it is necessary to immediately apply for the medical help. If the petrol gets on your skin, wash this place with water and soap. Change splashed by petrol clothes.*
- *provide horizontal statement of the ATV while transporting it by other vehicle. Otherwise fuel leak from the tank may occur.*
- *don't modify the ATV by yourself. Don't install unoriginal accessoires and additional equipment. Apply to authorized TINGER Dealer for the installation of accessoires and equipment.*
- *don't exceed the allowed elevating capacity of the all-terrain vehicle. The baggage must be correctly located and fixed on the ATV.*
- *in the case of long-lasting parking in the street untwist the drain plug on the lower body of the ATV. It prevents its' filling with a rainwater.*
- *maintain the ATV in a well ventilated place. Don't start the engine in the closed room. Exhausted gases are toxic and can lead fast to a faint and death.*

CONTROL PARTS AND AGGREGATES



pc. 1

pc.1

- 1 - steering wheel
- 2 - accelerator handle
- 3 - brake handle
- 4 - engine emergency stop button
- 5 - glimmers switcher
- 6 - gearbox switcher lever
- 7 - ignition locker
- 8 - power supply socket «+12B/10A»
- 9 - brake cooling start button
- 10 - engine forcing engine cooling blowers start button
- 11 - bilge pump start button (option)
- 12 - windscreen heating start button (option)
- 13 - windscreen wiper start button (option)

- 14 - engine error indicator
- 15 - engine increasing temperature indicator
- 16 - AB charging indicator
- 17 - oil pressure indicator
- 18 - revmeter
- 19 - engine temperature indicator
- 20 - speed indicator
- 21 - button switching km/h, miles/h
- 22 - button switching oper.hours/km
- 23 - indicator oper.hours/km
- 24 - fuel level indicator
- 25 - vehicle network' voltage indicator

Ignition locker has followed functional statements:

- **OFF** - all electric equipment and chains are off. You can insert and remove the ignition locker only in this position.
- **ACC** - glimmers and lights turned on after the starting of switcher of lighting equipment. Engine electric chains are inactive, engine start is impossible in this position.
- **ON** - all electric equipment is on, engine electric chains is active. Glimmers and lights turned on after the starting of switcher of lighting equipment. Engine starting is performed in this position.

- **ST (START)** - engine start. Turn the ignition locker into the **ST** position and keep it till the engine is started. After the starting let the locker and it will come back to the **ON** position independently.

ATTENTION!

There is an engine emergency stop button mounted on the steering wheel. If it is in the OFF position you can't start the engine.

Cooling liquid temperature indicator demonstrates the temperature of an engine' cooling liquid.

ATTENTION!

The Owner must track the temperature of the engine and engine block, take into account exploitory conditions and external factors impacting on the engine' overwarming, and also do not allow the ATV' overload. Careless tracking of the temperature may cause the deterioration of the engine and/or its' components, defects of the body, brakestaff and other elements of the ATV. To avoid the engine' overwarming the ATV is equipped with the button of forcing start of cooling system' blowers. If the indicator shows the temperature above the nominal (more than 100 degrees) during the motion, turn this switcher on and stop the ATV as soon as possible, shut off engine and let it cooldown for 15 minutes.

Fuel level indicator indicates fuel amount in the fuel tank. This indicator lights fully to the F symbol (full), and as the level is decreasing it goes to the E symbol (empty).

ATTENTION!

Avoid the full drainage of the fuel tank due to it may cause the deterioration of the fuel pump or the cutting of its' productivity. These factors in turn lead to violations in the engine work.

Operation hours indicator shows how many time is the ATV in the working state. Track this indicator so it will help you to perform the schedule maintenance in-time.

Oil pressure indicator. Pay attention to this indicator: if it doesn't slake in 3-5 seconds after the engine is started or turns on during the work, shut off the engine immediately and don't make any efforts to restart it till the damage' reason is not eliminated. To detect and eliminate causes of the violation please apply to the official TINGER Dealer.

Engine error indicator. Indicator must light on when the ignition is started and slake in 3-5 seconds. If it doesn't turn on due to the ignition, doesn't slake or blinks upon the expiry of the stated time, this shows you defects in monitoring of engine control electronic systems (ECES). To detect and eliminate causes of the violation please apply to the official TINGER Dealer. We don't recommend you to operate the all-terrain vehicle with the defects in ECES due to it may lead to the violations in other elements in the ATV.

Accelerator handle serves to mark and keep the needed rate of the working engine and to regulate the ATV speed. Engine rate increases by turning the accelerator handle to yourself and decreases when turn in the reverse direction. When let the handle down due to the action of reversing spring it will come back to starting position, and the engine will come back to the rate of idle speed.

ATTENTION!

*It is necessary to check the operability of the accelerator handle before starting the engine. Handle must rotate easily and without any jams and return into the starting position. If you detect any violations of the operable state observe attentively all mechanisms (accelerator handle, cable, throttle stack) and eliminate the cause of violation before the riding. **It is forbidden to operate the ATV with the defective accelerator handle!** In the case of defects in accelerator handle you will have some troubles with speeding and braking. This in turn leads to emergency situations and accidents. If you can't eliminate the damage by yourself, apply to the authorized Dealer.*

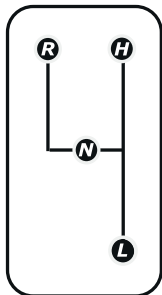
Brake handle is mounted on the steering wheel in the left and serves to delay, stop and fixation of the ATV in the motionless statement. To delay and stop push the lever onto the handle. To fix the all-terrain vehicle in the motionless statement fix the handle in the pushed position and press the stopper simultaneously. Make sure the brakestaff is operable before the riding. Check the level of brake liquid and press/ease the lever for several times. «Elasticity» of the lever while pressing demonstrates the operability of the brakestaff. If there is no resistance check the brake system and eliminate the violation. If you can't eliminate the defect by yourself please apply to the official TINGER Dealer. **It is strongly forbidden to drive the ATV with broken brakestaff!**

Glimmers switcher. To turn on the dimmed headlights and external lights set this switcher into the «ON» position, and to shut off all light aggregates set the switcher into the «OFF» position.

ATTENTION!

Don't turn on the light for the long time with the engine is off. It may cause discharge of the accumulator battery and it in turn leads to the impossibility of engine' start.

Gearbox switcher lever. With the help of this lever you can choose low (L) and high (H) gears, and also neutral (N) and reverse (R) gears. Visual location and the scheme of switching is mounted on the lever' handle and information plate.



ATTENTION!

Gearbox with the cam clutch of start. Don't make too much efforts to insert needed gear especially while the ATV is not started. In the case of difficult insertion slowly increase engine rates with the lever is pressed. Switch gears only after the whole stop of the all-terrain vehicle with the minimal rates. Make sure the previous gear is off by insertion of the neutral gear before the starting of further gear. To provide the correct work of the gearbox switch gears only by paths stated in the scheme. Noncompliance of these rules may lead to incorrect work of the gearbox and its' breakdown.

Power supply socket is mounted on the dashboard of the ATV. The socket serves to insert electric aggregates and additional equipment with the cut-in voltage 12V, input power not more than 120Wt and current not more than 10A. Cover the power supply socket with protective cap if it is not in usage at the moment. Use the power supply socket only with the started engine.

ATTENTION!

*The work of the additional equipment with not started engine may be the cause of accumulator battery' discharging and it in turn leads to the impossibility of the engine' start. Don't use electric equipment with characteristics above the acceptable values. It may cause the wirework' overload and blowing out of fusible plugs. **It is forbidden to use cigar sockets or such equipment which can damage the power supply socket due to warming!***

Battery charge indicator shows the deficient level of the accumulator battery' charge with the started engine. Due to the ignition this indicator must light on and slake after the engine is started. If the indicator doesn't slake, blinks or lights on while moving, this detects the deficient level of charge. One of the reason of deficient charge is defects in generator, battery charging circuit, large amount of simultaneously working current recipients.

ATTENTION!

Explotation of the ATV with this indicator is on will lead to the deep discharging of the accumulator battery and its' breakdown. This in turn causes the impossibility of the engine' start. If the damage is detected eliminate it by yourself or apply to the TINGER Dealer into the Service center.

Cut-in voltage indicator shows the measure of the cut-in voltage in ATV' wirework.

Revmeter shows the measure of the engine rate x100.

ATTENTION!

Long-lasting motion on high rates(more than4000r/min)leads to hard warming of the engine and elements of the exhaust system, and also to early loss of details of transmission, brakestaff, suspension and tracks. Choose the optimal combination of the gear and rates during riding.

Speedometer shows the speed of the all-terrain vehicle during the motion. Maximum speed of the motion - 35 km/h.

Steering wheel. We use motorcycle steering wheel to rotate on the motion. The vehicle will rotate right if you let your right hand to yourself and left in the reverse direction. If you change positions of your hands the vehicle will rotate left. The steering wheel is springed so it return into the central position automatically. The hydraulic system of the steering wheel is in neutral position without the pressure passing to the steering supports in this position.

The operating cycle of the steering wheel is not proportional to the turning radius. You'll gain the needed turning radius by keeping the steering wheel in the required position. Don't make much efforts on the steering wheel while manoeuvring due to it may cause its' breakdown.

Brake cooling start button serves to start forcing cooling of brake mechanisms and steerage. To avoid the overwarming and breakdown of brakes and steerage mechanisms you must always turn on the forcing cooling if the motion pattern means their frequent usage.

Engine emergency stop button serves for the fast stop of the engine in the case of emergencies (rollover, flooding, etc.). Don't use this button for the typical stop of the engine.

Bilge pump start button (option) starts the pump for dewatering of the bilge spaces of passenger and engine blocks. Use it if it's necessary. Productivity 28 l/min.

Engine forcing engine cooling blowers start button starts the blower of left radiator independently of the working temperature of the engine.

Windscreen heating button (option) starts on the heating of the windscreen to remove weeping and icing.

Windscreen wiper button (option) starts on the wiper to remove the extra-amounts of moisture and snow from the external surface of the windscreen.

EXPLOITATION

Perform the followed checks and observations before the exploitaion of the ATV and before every riding. If you detect any violations, remove them by yourself or apply into the Service center to the authorized TINGER Dealer.

Parameter	Actions and criteria
Fuel	<ul style="list-style-type: none"> • check the fuel level in the fuel tank. Fill it to the maximal level if it's necessary. Don't fill over the tank. Check the density of tank cap' fixation. • observe the fuel-feed tubes for the leaks.
Engine oil ¹	<ul style="list-style-type: none"> • check the level of engine oil. It must be located between Max and Min marks. Fill it to the Max if it's necessary. • observe the engine block for the leaks.
Transmission oil ¹	<ul style="list-style-type: none"> • check the oil level in the gearbox.It must be located between Max and Min marks. Fill it to the max if it's necessary. • observe the cooling system of the engine for the leaks.
Cooling liquid ¹	<ul style="list-style-type: none"> • check the level of the cooling liquid in expansion tank. It must be located between Max and Min marks. Fill it to the Max if it is necessary. • observe the cooling system of the engine for the leaks.
Brakes	<ul style="list-style-type: none"> • observe the mechanisms and hydratubes for the leaks. • check the level of brake liquid. If the system is waterproof decreasing of the liquid is caused by time-wearing of brake pads and you don't need to fill it. Maximal level of the liquid must be only with new brake pads. • check the statement of brake pads. Minimal thickness of brake-shoe linings must be 1 mm. • check the operability of brakes by pressing the lever for several times. It must move smoothly and be elastic. • check the operability of brakes by braking on low speed. Brakes must provide confident delay.

Parameter	Actions and criteria
Loops	<ul style="list-style-type: none"> • check the statement and pulling of catenary loops. Chain slack without weights must be in intervals 2-5 mm. Chains must be lubricated and don't have any damages.
Steerage	<ul style="list-style-type: none"> • observe mechanisms and hydratubes for the leaks. • check the level of brake liquid in expand tanks. If the system is waterproof the decreasing of this level is caused by time-wearing of brake pads and you don't need to fill it. Maximal level of the brake liquid must be with new brake pads. • check the statement of brake pads. Minimal thickness of pads must be 1 mm.. • check the operability of the steerage. The steering wheel must rotate smoothly and be elastic, and also it should return independently into neutral (medium) position.
Accelerator handle	<ul style="list-style-type: none"> • handle must rotate easily and come back to the starting position by itself.
Tracks ²	<ul style="list-style-type: none"> • check the statement of tracks. Track must have no large mechanical defects. • check the pulling of tracks. Correctly pulled track has spring with the length of the puller in 145-160 mm.
Variatory belt	<ul style="list-style-type: none"> • check the statement of the belt. It must have no stratifications or damages.
External light, noise and light alarm, switchers ³	<ul style="list-style-type: none"> • check the correctness of work and operability of components.
Body	<ul style="list-style-type: none"> • check the presence and reliability of installation of drain plugs. • observe the body for the defects.

1 - perform the checking with the nonwarmed engine and the ATV is set in a horizontal plane

2 - perform the checking in detrained mode

3 - perform the checking with the started engine

ATTENTION!

- *It is necessary to check brakes before every riding. If you detect any problems concerned to the brakestaff and also in the case of decreasing of its' efficiency, it is strongly forbidden to use the ATV due to it may cause accidents. Eliminate the defect by yourself or apply to the authorized TINGER Dealer to remove the damage.*
- *Always let the engine and radiator time to cooldown before you open the expansion tank. Otherwise you may be burnt by splashed liquid or underpressured vapour. Cover the cap of expansion plug by the textile while untwisting it. Carefully bleed down pressure.*
- *Motion on the ATV with incorrectly maintained or badly regulated brakes and steerage may cause the deterioration of delay and braking, causing the emergency situations.*

START OF THE ENGINE

- switch the gear on the neutral (N) position;
- press and keep the brake lever;
- make sure the engine emergency stop button is in ON position;
- turn the ignition locker into the «ST» statement and start the engine. When the engine is started, let down the locker and it will return into the «ON» position automatically;
- make sure all emergency indicators slaked;
- warm the engine till it gets to the rates of idle speed (950-1000 r/min).

ATTENTION!

- *Rates may reach 2000 r/min during the warming of the engine. Don't try to turn on gears till the rates are not go to the idle speed (950-1000 r/min). This may lead to the breakdown of transmission elements.*
- *Don't operate the starter more than 5 seconds through to avoid its' overwarming. Wait at least 30 seconds before every further starting to let it to cooldown and recover the accumulator battery' charge. Don't try to restart the engine before its' full stop.*

- *Always remove the ignition locker when leaving the ATV.*
- *To elongate the cycle life of the engine always warm it before the riding. Never open the throttle shutter sharply with the not warmed engine!*
- *Don't start the engine in the closed room or sealed space. Exhaust gases contain toxic carbon monoxide. It lacks with colour and smell but can seriously harm your health up to the death.*

ENGINE RUN-IN

First 20 operation hours are the most important in whole cycle life of the engine. So read followed information very attentive.

Don't overload the engine due to it is new at the moment. Variable engine details are working in and running in to correct operating gaps. Avoid long-lasting work of the engine with fully opened throttle shutter or in any other modes which can cause the overwarming of the engine or it's details.

0-10 oper. hours. Avoid long-lasting motion with the throttle shutter is open more than 1/2. Change the speed constantly. Don't drive with the constant position of throttle shutter for a long time.

10-20 oper. hours. Avoid long-lasting motion with the throttle shutter is open more than 3/4. Change speed and the move pattern maximally but don't open the throttle shutter fully.

20 oper. hours and later. You can operate the ATV in the whole allowed interval.

ATTENTION!

If you detect any problems during the running-in apply to the official TINGER Dealer immediately for the entire checking of your ATV.

GEAR SWITCHING AND START OF THE MOTION

- turn on the needed gear while keeping the brake handle pressed;
- let down the brake handle and smoothly increase rates till reach needed speed.

ATTENTION!

- *switch gears only after entire ATV stop and on minimal rates. In the case of noncompliance to this rule transmission breakdown may occur.*
- *choose the optimal combination of gear and engine rates during the motion. Motion on high rates (more than 4000 r/min) leads to early loss of elements in transmission, suspension and tracks and also overwarming of the engine and exhaust system.*
- *after the riding turn off the gear. Don't park the all-terrain vehicle with started gear.*

ATTENTION!

While reverse motion:

- *check is there people or obstacles behind you and then let the brake handle down and slowly open the throttle shutter;*
- *keep low speed;*
- *always keep track the external factors;*
- *avoid rolling on obstacles especially with the speed more than 3 km/h. Track' cut near the rear axle has the angle of attack above this one near the front axle and it limits the height of passable obstacles. Also the suspension' construction is such that work of the rear lever within the run on the obstacle (especially on high speed) changes to pulling. It may lead to lever' bend, break of the spring and immobilization of the ATV.*

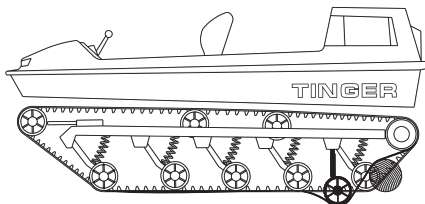
CONTROL

Driving the tracked vehicles has its' special features infont the driving the wheeled vehicles. Changing of the motion' direction is reached by delay a bit of one of the tracks with the constant motion of the other. Thus the turnover pathway looks like the angled line (pc. 3).

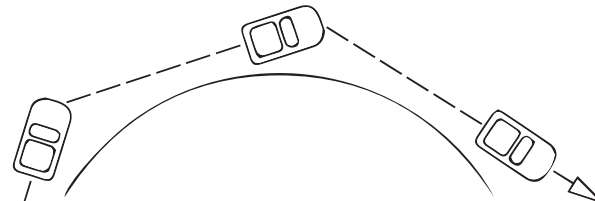
Operation cycle of the steering wheel is not proportional to the turning radius. To create the pathway that is closed to the smooth turnover radius we recommend you to impact on the steering wheel actively for several times. Kepp the wheel in center between impacts. Don't make much efforts to the steering wheel if the vehicle reacts in a unpredictable way. Extra-amount of efforts won't improve the vehicle controllability due to the tracks' blocking. Surplus rotation of the steering wheel may cause the damages in steerage.

To avoid the ATV' rollover don't make sharp turnovers especially on high speed or with hardly weighted all-terrain vehicle. Reduce speed before the turnover. The rear part of the vehicle is skidded by the centrifugal force on turns. Be very careful to avoid the collisions with people or any other objects. Don't brake sharply.

Remember that we use brake supports with friction pads for the ATV' control so long-lasting impact on the steering wheel to gain the smooth turnover leads to early loss of pads, overwarming of brake discs and mechanisms. To decrease the possibility of overwarming use the system of forcing cooling (blowing) of brakes.



pc. 2



pc. 3

STOP AND PARKING

To stop the ATV let down the accelerator handle till the engine rates decrease to the minimal. The ATV will stop by itself. Use brakes if it's necessary.

To park the ATV turn the gear off, press and fix brake handle and shut off the engine.

ATTENTION!

It is forbidden to park the all-terrain vehicle on hillsides and other bended surfaces. If you park on the hillside or any other bend the ATV may roll down or roll over independently and cause the emergency.

BAGGAGE UPLIFTING AND TRANSPORTATION

Transported baggage and/or trailer may influence on the ATV' stability and controllability. When transport the baggage and trailer' slipping follow these rules and recommendations:

- don't exceed the maximal allowed elevating capacity (500 kg). Maximal allowed load contain masses of the driver and passengers, mass of the transported baggage, mass on the towing ball. The ATV overload has an adverse effect on its' controllability. It causes the loss of control on the route and emergency situations. Also the overload leads to the damages in tracks and suspension elements and increases overweighting of engine and transmission.
- don't go above the maximal allowed job of the towing ball (100 kg). Gain the optimal load on the end of the towbar by moving the baggae.
- mount the baggage in the center of the ATV.
- fix the baggage robustly. Provide the impossibility of its' displacement: if the baggage is fixed not safely, the emergency may occure.
- make sure the baggage don't prevent the visibility.

- speed with baggage and/or trailer must be lower than without them. Regardless of the motion conditions we recommend you use the low gear (L) and don't go over 4000 r/min while transporting hard weights or trailer' slipping.
 - foresee the elongating of the brakeway. The more hard is vehicle, the more long the brakeway.
 - avoid sharp turnovers. If the avoiding is impossible perform them on the minimal speed.
 - try not to ride hills or rough terrain with baggage or trailer. Carefully think over the route.
- The increasing of the ATV' weight leads to deterioration of its' controllability and stability.

EXPLOITATION IN SPECIAL CONDITIONS

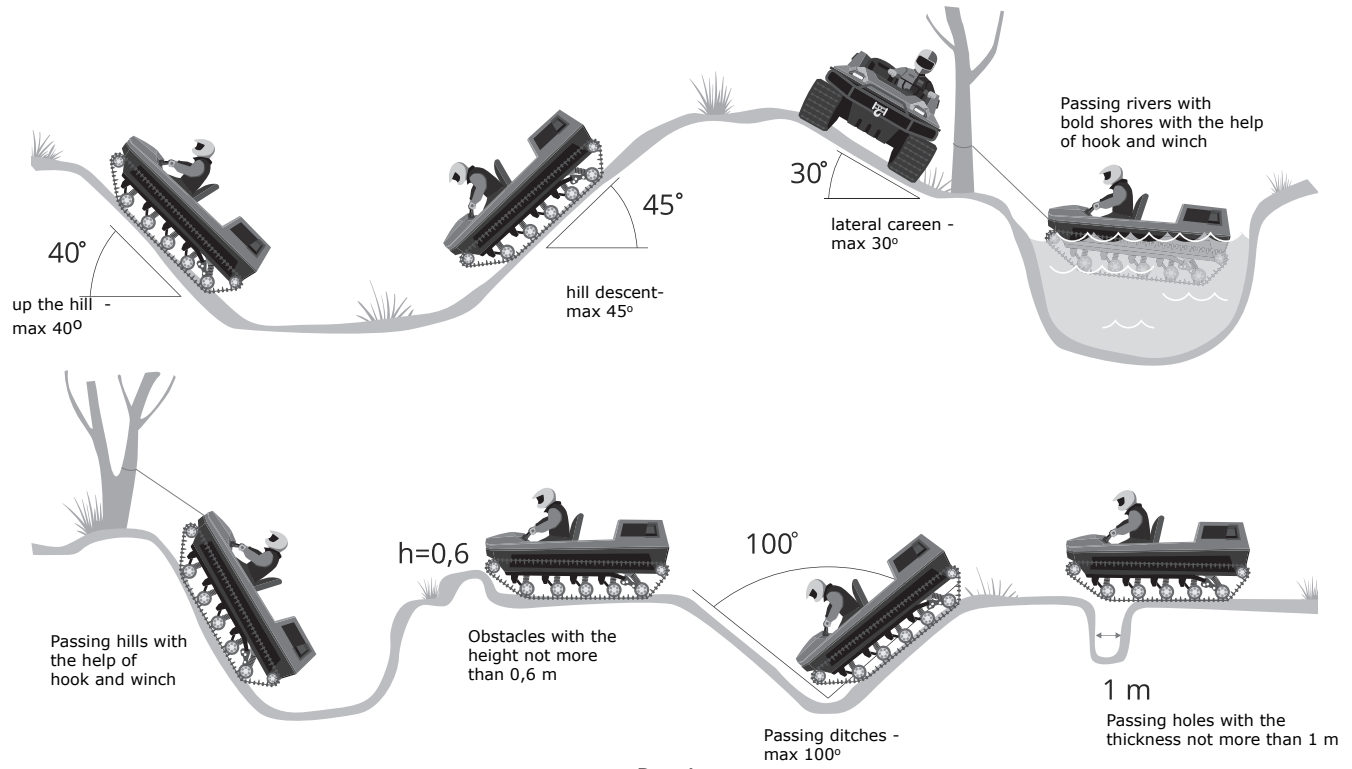
Pc. 4 demonstrates general passing possibilities of TINGER all-terrain vehicle. They are wide but not unlimited. While pass difficult areas:

- always remember and follow recommendations of the present Manual;
- judge adequately the ATV' possibilities and your driving skills;
- think over the route, pathway and speed, take into account the impact of external factors (cover' statement, weather conditions, etc.).

MOTION WITH THE BEND TO A HORIZONTAL PLANE (CAREEN)

ATTENTION!

- *motion with a careen requires more often usage of the brakes to correct the ATV position. It leads to the brakestaff warming and more active wearing of brake discs and pads.*
- *motion with a careen increases the possibility of tracks' unfitting and leads to the overload on elements of suspension and driveshaft causing their breakdown.*
- *motion with a careen impacts on levels of exploitary liquids. Most important of them are engine oil and fuel. Oil level doesn't change but displace concerning the input aperture of the oil pump and it causes the deficient ending of the oil and in concequence the oil starvation and engine breakdown may occur. Due to equal conditions the fuel may end deficiently. Engine may run harshly or fade and it lead to loss of ATV' control.*



PC. 4

PASSING HOLES, DITCHES AND STATIC OBSTACLES

For the safe passing through holes, ditches and static obstacles (stones, fallen trees, etc.) follow these recommendations and instructions:

- low the speed or stop. Never pass the obstacles on the motion.
- judge the pattern of the obstacle (pc. 4). Come around it if it's possible.
- plan the pathway of the riding.
- check fixation of the baggage.
- prepare passengers if they possibly must displace or leave the ATV to save its' stability and controllability.

- while passing the obstacles avoid sharp speedings and brakings.
- don't pass the obstacles with the one side of the ATV due to it may cause its' rollover.

PASSING THE WATER OBSTACLES

TINGER all-terrain vehicle is not a floatation device but it can keep on water for a long time with the save of floatage. Due to the driving power of tracks the ATV is capable of passing the water obstacles. For the safe and efficient passing through water obstacles follow these recommendations and instructions:

Before the forcing:

- check the presence and reliability of drain plugs in lower body;
- plan the pathway taking into account direction and speed of the stream;
- mount the baggage close to the ATV center and fix it robustly;
- check the operability of bilge pump;
- wear in the life-jacket and equip your passengers with it.

While forcing:

- don't dive the ATV and don't pass water obstacles while high water due to it may lead to water overtopping over the edge of ATV.
- don't exceed the allowed speed. It causes the water overtopping over the ATV' edge.
- don't move across the stream due to it leads to the water overtopping over the ATV' edges and its' turnover.

IN THE CASE OF LONG TRIPS OR EXPEDITIONS it is necessary to have:

- medical kit.
- communicators.
- survival kit.
- protective clothes and shoes.
- waterproof matches.
- candles.
- signal rockets.
- sufficient fuel amount in waterproof tanks.
- fire extinguisher.
- general mechanical instruments, necessary expendable materials and spare parts for the all-terrain vehicle.

Before the riding to the remote area perform the entire observation, necessary repair and

maintenance of your ATV. Tell your family members about your trip, route and planned time for comeback. In this way they can send help if it's necessary. Never ride the remote area alone. Equipment and spares must be chosen according to the climate and weather conditions. While riding the remote area remember the rules of safe driving. Avoid territories that can be unpassable.

ATTENTION!

• if you operate the ATV in low temperatures make sure the control parts move easily.

It is strongly forbidden to ride the ATV if the control parts is troubled due to the freezing. It may cause emergency situations. Eliminate malfunctions before the riding.

• *exploitation in high and dense grass may lead to its' winding on movable elements of suspension and driving drums, and it in turn causes the deterioration of exploitary characteristics and breakdown of ATV' components. Perform the external observation and remove winding grass and other foreign objects from the suspension in-time.*

• *while moving on nonsteady terrains (swamps, etc.) or slipping avoid extra acceleration.*

It leads to loss of road adherence and inhibit passing possibilities of the ATV. Motion on minimal speed with minimal slipping will be the optimal move pattern in such conditions.

• *while driving in sand terrain or in conditions of heavy dust the durability of filter elements, details working in friction conditions (catenary loops and sprockets, driving belt and variator, movable elements of suspension and drivetrain) vastly increases. To avoid early details' wearing and ATV' systems breakdown clean the all-terrain vehicle after every riding. Replace engine air filter before every usage if it's necessary.*

ACCESSOIRES

Original accessoires and additional equipment from TINGER company may extend possibilities of your ATV and also personalize it. Original TINGER accessoires are developed and tested especially for your all-terrain vehicle considering its' design and exploitary conditions. Unlike accessoires from other manufacturers, installation of our equipment doesn't need to run them in and takes less time. Ask your TINGER Dealer for original accessoires.

If you are thinking over the purchasing of accessoires and additional equipment please pay attention to followed points:

- carefully acquaint with instructions and recommendations attached to the equipment.
- additional equipment must be correctly installed and robustly fixed on the ATV. If the equipment displaces or detrain independently during the riding you will loss control on the ATV.
- don't install accessoires that can impact on the ATV' control (devices mounted on the steering wheel and other control parts, objects limiting visibility, located above the ATV' capacity, etc.).
- fix the outboard engine only on the original TINGER transom.
- use winch only to help the ATV pass the obstacle. If you want to increase the towing force of the winch use special roller block what will increase the on-winch force in 2 times. Don't use thw winch to move for long distances. It may lead to overwarming of the winch, ATV' wirework and flame formation.
- if you install electric accessoires and equipment don't exceed the maximal allowed values of drain current and voltage. It will lead to overload and breakdown of electric equipment of the all-terrain vehicle and also inhibit full usage of the additional equipment.
- usage of the original tent with transparent windows is allowed in temperature interval -15°C ... +30°C.

ATTENTION!

There are a lot of accessoires from other manufacturers in sale. But the TINGER company is not available to test them all so we don't know anything of their quality and compatibility with your ATV. Use only original accessoires and additional equipment of TINGER company.

SCHEDULE MAINTENANCE

General data

The most important factor impacting on the safety of exploitary characteristics during the whole cycle life is a correct and intimely performed scheule maintenance. Schedule maintenance (SM) is a complex of actions serving to keep the ATV in operable state and to detect possible damages early. SM is not an Owner liability in the face of the Manufacturer but the tribute to the mutual respect for your ATV for the reliable and safe work.

SM contains operations on replacement of exploitary liquids, filter elements, some details with limited operating life, adjustment parameters changing within the exploitation, cleaning and lubrication of liable elements working in friction conditions and also the complex ATV checking to judge its' operability. More detailed list of operations and their periodicity you can find in correspond part of the Service book. Stated SM operations must be considered as recommendations complying to the typical exploitary conditions. Depending on exploitary conditions it may be needed to decrease intervals between service works.

The Owner is personally responsible for the safe exploitation. There is a net of Dealers' Service centers to maintain your ATV. These centers have special equipment and instruments and also high-skilled workers to help you. They also have wide assortment of original spare parts and accessoires for your ATV. Intimely performed schedule maintenance provide ATV' safety and reliability and decrease costs on possible repair due to untimely detected defect. We recommend you to carry out the SM only in authorized Dealer Service center. It will warrant you the quality and fullness of performed operations according to the Manufacturers recommendations.

ATTENTION!

- *don't work on engine block with the engine is started. Clothes or body parts may entry into the movable mechanisms, and it will lead to injures. Some elements of electric equipment work under the high voltage and it may cause current injuries. If instructions allow for working with started engine, you must follow all precautionary measures stated in present instruction.*
- *don't fill the exploitary liquids above the maximal levels. It may lead to deterioration of work of aggregates and systems, stamping of extra-amounts through the plugs and sealings.*
- *it is forbidden to clean filter elements by expulsion, purging or any other method. Dirty filters must be replaced. You must strongly follow a correct positions (direction) of details during the replacement. Incorrect installation may seriously harm the systems' work and cause defects.*
- *lubricate catenary loops, collars of demiaxles, bearing and holding rollers every 25 hours of exploitation and after every diving and/or forcing water obstacles.*
- *replace the cooling liquid every 48 months. If it is needed to fill or replace the cooling liquid and the liquid is inaccessible, it is allowed to use distillate or any other soft water (rainy, swampy, melted snow)*. Don't use hard water with high salt concentartion. Such water doesn't provide needed heat elimination and causes corrosion in metal parts of cooling system. If you use or fill water, replace the cooling liquid as soon as it's possible. Otherwise there is a possibility of cooling system' deicing.*

* - clean such water of impurities before the usage.

SCHEDULE MAINTENANCE' WORK PLAN

operation' name	operation' periodicity			
	first 10 oper.hours	every 25 oper.hours	every 50 oper.hours	every 100 oper.hours
engine oil, engine oil filter (at least once in 12 months)	R	-	R	R
engine air filter	-	C	C	R
ignition plugs ¹	-	-	-	R
checking the fixation of aggregates	C	C	Π	C
checking the pulling and statement of driving belts	-	C	C	C
checking the fixation/statement of suspension and its' elements	C	C	C	C
checking the statement/pulling of tracks ² (for the tracked vehicles)	C	C	C	C
lubrication the suspension collars ³ (holding and bearing rollers, driving axles)	L/R	L/R	L/R	L/R
checking pulling/lubrication of catenary loops and statement of pullers	L/R	L/R	L/R	L/R
observation the aggregates for the leaks and external damages	C	C	C	C
checking the liquid level, waterproofness/statement of tubes, hoses, radiators of cooling system (for the ATV with liquid cooling system) ⁴	C	C	C	C
cleaning of cooling system' radiators and heat-exchange unit of lubrication system (option)	-	C	C	L/R
checking the waterproofness/statement of tubes and hoses of brakestaff and steerage	C	C	C	C
checking the operability of mechanisms of brakestaff and steerage (unfitting, cleaning, lubrication of directing ⁵ , checking the statement of brake pads and discs)	-	-	L/R	L/R

operation' name	operation' periodicity			
	first 10 oper.hours	every 25 oper.hours	every 50 oper.hours	every 100 oper.hours
brake liquid	replacement every 24 months			
checking the waterproofness/statement of the exhaust system	-	C	C	C
checking of the presence of drain plugs on lower body	C	C	C	C
checking the waterproofness/statement of fuel tank, plug, filler neck, feedtubes of fuel distribution	C	-	C	C
fuel filter	-	-	-	3
gearbox oil	-	-	R	-
checking the attachment of mechanism and easiness of gear switching	-	-	C	C
checking the operability of external lights, light and noise alarm	C	C	C	C
checking the attachment, cleaning/lubrication of AB terminals ⁶	-	-	L/R	L/R

«R» - replacement, «C» - checking, «L/R» - cleaning, lubrication, regulation

1 - DCPR8E

2 - check and pull tracks before every riding if it's necessary.

3 - lubricate demiaxle' collars, bearing Aand holding rollers after aevery diving or passing through water obstacles.

4 - replace the cooling liquid every 48 months.

5 - use special high-temperature lubricant for the brake mechanisms.

6 - carry out charging of the accumulator battery according to the maintenance instruction.

ACCUMULATOR BATTERY

Your all-terrain vehicle is equipped with accumulator battery (AB) of hermetically sealed type. It doesn't require any special maintenance. Its' maintenance contains the accumulator battery' checking, cleaning if it's needed and tightening of terminals, and also its' charging if it's necessary.

ATTENTION!

- *if you don't use your ATV more than 1 month, remove the AB, clean it and charge it fully and put into a cold place. Storage of discharged accumulator battery may lead to its' destruction especially in cold temperature' conditions.*
- *if you will store the AB more than 1 month check its' statement at least once a month and charge fully if it is necessary.*
- *don't unfit sealings of accumulator battery' due to it may cause irreparable damages in accumulator battery. Battery fluid is toxic and dangerous because it contains sulphuric acid causing serious burns.*
- *you need special charging equipment (DC-voltage) to charge the battery of hermetically sealed type. Usage of typical charging equipment will damage the accumulator battery.*

REFILL CAPACITY

name	characteristics	volume, l
lubrication system	engine oil at least API-SL class with viscosity to SAE-5W40/10W40	2,5 ¹
feed system	lead-free petrol with octane number at least 92	38
transmission oil	transmission oil API-GL4 or GL4/GL5 to SAE-75W85/75W90	1,5
cooling liquid	antifreeze containing corrosion inhibitor for the engines aluminium alloy, G-12	10 ²
brake liquid	DOT 5.1	0,2
steering liquid	DOT 5.1	0,4
collars of demi-axles, bearing and holding rollers	special lubricant for high-loaded collars working in aggressive conditions, waterproof and waterresistant	
catenary loops	special lubricant for loops with high waterresistant effect and not-causing sticking of dust and dirt	

1 - oil volume needed for the replacement including the oil filter.

2 - if you use a concentrate dilute it in distillate in proportion 1:1.

ACCEPTANCE CERTIFICATE

TINGER all-terrain vehicle _____ Manufacture
Nº of the frame _____
engine Nº _____ is according to technical terms
_____ and is qualified for the exploitation.

Release date _____

Section supervisor _____

Quality control head _____

CERTIFICATE OF CONSERVATION, PACKING AND ALIGNMENT

TINGER all-terrain vehicle _____
Manufacture Nº of the frame _____
engine Nº _____
is conserved according to the requirements _____

Conservation date _____

Conservation is performed by _____

Product after conservation is checked by _____

CRITICAL DENIAL LISTING AND LIMITING CONDITIONS CRITERIA

You must remove the ATV from operation when it reaches the limiting conditions criteria or in the case of occurrence ATV' critical denials. Further exploitation is allowed only after replacement of damaged or broken ATV' components. Otherwise it must be utilized. Followed situations are considered to be critical denials:

- heavy mechanical loss of liable details, bends and sealings;
- deformations, visible damages preventing invented usage;
- loss of strength in detachable joints that can't be recovered by tightening of fixing elements;
- degradation of general materials and welded junctions, integrity defects in body details;

- failure of completing equipment which work can't be recover foresee the exploitation manuals;

- destruction or rejection of liable details and bends.

Limiting conditions are always forego critical denials. We refer followed points to limiting conditions' criteria and marks:

- reaching the specify time;
- increasing frequency of work rejections;
- decreasing of exploitary characteristics, partial or entire defaults in invented functions;

- rejection or harsh work of brakestaff, steerage and safety aggregates;
- appearance of boosted noise, vibrations, overwarming, foreign smell and leaks.

ATTENTION!

We recommend you to apply only in authorized TINGER Dealers' Service centers to eliminate detected malfunctions.

F 9A CJ 5@: F CA `CD9F 5H=CB `5B 8 `I H=@N5H=CB

5HJ g'that are weared due to the incorrect exploitation, emergency situation or their remaining life are objected to the utilization. Exploitary liquids and ATV' details replaced during the repair and schedule maintenance are under the utilization too.

Processes of utilization and recycling must be organized in a such way to exlude the pollution of air, soil and water by repugnant substances and wastes, and also require special technological equipment and helper reagents. To utilize the ATV and its' components apply to special organizations having such authorities.

WISH YOU A SAFE TRIP!

Manufacturer: LLC «Mekhanika»
Russian Federation, 162611,
Vologodskaya oblast, Cherepovets
contacts: +7 (499) 350-25-05

CHANGES AND ADDITIONS

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