

SAFETY IN AGRI-CULTURE



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**PREFECTURE OF TRAPANI
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Sector: Protecting Health and Safety at Work *“Dr. G. Morsello”*

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More knowledge less risk

Con il presente manuale, rivolto a chi lavora in agricoltura, settore ad alto rischio infortuni, si è voluto porre l'attenzione, attraverso schede semplici e di facile applicazione, sulle principali misure di prevenzione che l'agricoltore ed i lavoratori devono attuare nel proprio lavoro quotidiano, con l'augurio che contribuisca a favorire la divulgazione nelle aziende agricole della cultura della sicurezza.

By means of this book for the persons who work at the agriculture (a sector with a high risk of injury) we would like to draw attention to the simple cards with the safety rules which should be observed by the agricultural workers in their daily work. We want to popularize the culture of safety at the agricultural enterprise.

إن هذا الدليل موجه إلى الذين يعملون في ميدان الزراعة حيث الحوادث عالية المخاطر ، ثم تركيز على تدابير وقائية ورئيسة يجب على المزارع تنفيذها وذلك من خلال بطاقات بسيطة وسهلة تطبيقها أملا في نشر ثقافة أمن وسلامة داخل الميدان الزراعي .

Cu prezentul manual, îndrumat către cei care lucrează în agricultură, sector cu riscuri mari de accidente, s-a vrut să se pună atenție pe fișe simple și ușoare de aplicat, pentru principalele măsuri de a prevedea că agricultorul și muncitorii trebuie să pună în practică în munca sa de zi cu zi, cu urări de bine, care să contribuie în favoarea divulgării culturii de siguranță în întreprinderile agricole.

- ⇒ **HAZARD:**
- ⇒ **Overturning / capsizing** of the vehicle with the following crushing of worker by the tractor

SAFETY MEASURES:

All tractors should be equipped with:

- ⇒ **a Roll Over Protective Structure (ROPS)**



- ⇒ **a seat belt**



**THE TRACTOR CAN NOT BE USED WITHOUT
A ROLL OVER PROTECTIVE STRUCTURE (ROPS)**



- ⇒ **HAZARDS:**
- ⇒ **Pulling** of the clothes into the cardan shaft with injuries and limb loss

SAFETY MEASURES:

- ⇒ Cardan shaft should be equipped with **DRIVE SHAFT GUARD** covering the universal joint cross more than 5 cm (1,9685 inches) and held by the chain to prevent the guard rotating.



REPLACE IMMEDIATELY THE PROTECTIONS IN CASE OF FAILURE OR DETERIORATION



**HAZARDS:**

- ⇒ contact with rototillers;
- ⇒ catching and pulling of the operator's loose clothing;
- ⇒ contact with hot surfaces.

**SAFETY MEASURES:**

- ⇒ The motor cultivator should be equipped with a **GUARD** to protect the operator from any contact with mechanisms used for tillage.

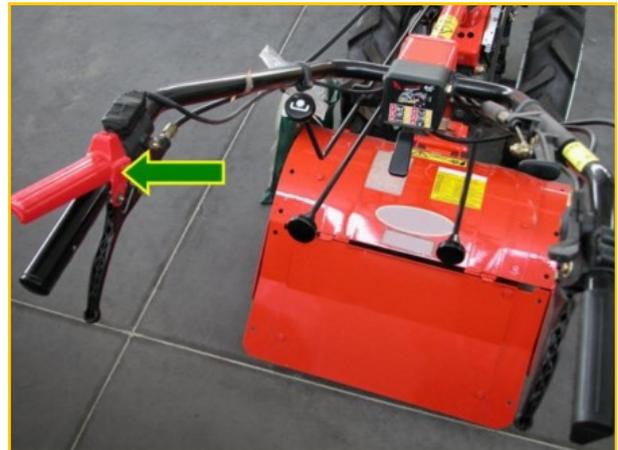


FOLLOW THE WORK INSTRUCTIONS INDICATED IN THE OPERATIONS AND MAINTENANCE MANUAL BECAUSE IT IS A HIGH-RISK IMPLEMENT AND THE RISK CAN'T BE ELIMINATED FOR TECHNICAL REASONS (THE WORKING PARTS ARE NOT COMPLETELY ISOLATED)



SAFETY MEASURES :

- ⇒ The movements of the vehicle and driving actuation of the work implement should be possible only with **engine stop safety devices** that should be mounted on the handle;
- ⇒ The moto cultivator should be equipped with a protection which prevents a contact with hot surfaces.



STOP ENGINE DEVICES SHOULD BE ACTIVATED ONLY BY OPERATOR AND NOT BY THE OTHER OPERATION THAT CAN BE DANGEROUS FOR PERSONS



**HAZARDS :**

- ⇒ **Overturning** caused by loss of stability ;
- ⇒ **Catching and pulling** of loose clothing by the working parts;

SAFETY MEASURES:

- ⇒ Estimate always the real conditions of soil specially during the use of combine with self-leveling system .
- ⇒ Don't work on hillside exceeding provided one.
- ⇒ Pay attention to the proximity to the parts of header (blades, cutterbar, auger, reel) and the parts of chaff-cutter. They are dangerous even if a vehicle doesn't move, and they can't be protected for technical reasons.
- ⇒ Never carry passengers.
- ⇒ Before the beginning of work make sure that there isn't anybody in work range of combine harvester.
- ⇒ Turn off the vehicle and push the brakes before getting out of the combine.



These belts are without protection



THE EMPLOYER SHOULD ENTRUST A VEHICLE ONLY TO THE HIGH SKILLED AND TRAINED WORKERS .





Utilization of this vehicle doesn't involve a lot of risks owing to the automated harvesting. However in any case it's necessary to pay attention to the good condition of the vehicle maintenance, especially to the entrance to the elevated driver's cabin (parapet, handrail, antiskid steps).



During the work operation make sure that there is nobody near the working parts, that can't be protected for technical reasons.



Protected ladder and steps with anti-slip surface



IF VEHICLE COMBINES WITH A TRACTOR, CHECK AVAILABILITY AND GOOD CONDITIONS OF DEVICES FOR PROTECTION OF CARDAN DRIVES.



ATOMIZER (SPRAYING MACHINE)



HAZARDS:

- ⇒ **contact with moving parts** of the fan;
- ⇒ **trapping and pulling** of the loose clothes into the car-dan shaft;
- ⇒ **fluid leakage from the tank**

SAFETY MEASURES :

- ⇒ Use a robust grille of the fan to avoid any contact with a fan. These grilles can be removed only with special tools.
- ⇒ All the drivetrain components of the vehicle (pulleys, drive belts) should be protected by the transmission cases.



Protective grille of the fan is too large



- ⇒ The tank cap should be leakproof and closed by means of mechanical action.
- ⇒ The fluid level should be visible to the operator during the tank filling up and emptying.
- ⇒ If the tanks aren't under pressure, they should be equipped with breather (pressure compensator for the process of tankage and emptying).



EQUIP A VEHICLE WITH A TANK OF CLEAR WATER FOR OPERATOR'S NEEDS; THE TANK CAPACITY SHOULD BE NOT LESS THAN 15 LITRES.





HAZARDS:

- ⇒ contact with working parts of the vehicle;
- ⇒ trapping and pulling of the loose clothes;
- ⇒ ejection of material.

SAFETY MEASURES :

- The working parts should be protected by the cases or strut rails;
- All the drivetrain components (pulleys, drive belts) should be protected by the transmission case.



DON'T START CLEANING OF THE WORKING PARTS IF THE VEHICLE ISN'T TURNED OFF .





HAZARDS :

- ⇒ **contact with cutting parts;**
- ⇒ **trapping and pulling** of loose clothes into the rotating parts;
- ⇒ **ejection of material** during the work.

SAFETY MEASURES :

- As cutting parts can't be protected for technical reasons, protect the workplace from the possible ejection of material .
-



OUT OF THE OPERATING AREA PROTECT THE CUTTING PARTS WITH GUARDS.





HAZARDS:

- **OVERTURNING** in case of the limited space for maneuvers with knolls, potholes and surface irregularity and as a result of the raising of plow during the maneuvers on the limited space;
- **REAR OVERTURNING** of tractor if soil has a high resistance to the plow.

SAFETY MEASURES:

- Optimize balance regulation of the plow to avoid overturning during the turning maneuvers and reduce the speed;
- Keep enough margin of the plough-land for maneuvers of tractor.



NEVER PARK THE TRACTOR WITH RAISED PLOW





HAZARD:

- ⇒ **Contact** with rotating part placed inside of the hopper (agitator);
- ⇒ Accidental **contact** with distributors.

SAFETY MEASURES:

- ⇒ Install a fixed metal grid or other spacer inside of fertilizer tank;
- ⇒ Place the suitable cases intended to isolate the components of motion transmission.



TURN OFF THE VEHICLE BEFORE REMOVING OF THE PROTECTING GRID IF THE PART OF AGITATOR IS CLOGGED





HAZARDS :

- ⇒ Cut caused by the moving part;
- ⇒ Ejection of ring caused by braking of the chain;
- ⇒ Ejection of the wood chips ;
- ⇒ Contact with hot surfaces.
- ⇒ .

SAFETY MEASURES:

- ⇒ **Protecting devices** of the chainsaw are necessary to avoid the contact between operator and cutting parts which can happen under certain conditions.



- ⇒ Protect hot surfaces with **SAFETY DEVICES**

- ⇒ On the rear side of the handle should be available the **lockout device**, which allows to block the chain or to prevent activation of accelerator (operator **presence control**).



- ⇒ The chainsaw must be equipped with a stop button to stop the engine immediately and with a throttle trigger interlock to prevent any involuntary acceleration. So in case of abandonment of the handle the chain comes to a stop.
- ⇒ .



ACTIVATION OF SAFETY DEVICES SHOULD BE EFFECTED ONLY BY OPERATOR, BECAUSE ANOTHER OPERATION CAN BE DANGEROUS FOR PERSON USING A CHAINSAW.





HAZARDS OF WORKING WITH PNEUMATIC AND ELECTRIC SCISSORS:

- ⇒ cut / scratch
- ⇒ stumbling / fall caused by wires and power cords.

⇒ SAFETY MEASURES:

- The scissors must be equipped with a device like an “operator presence control”;
- Protection system against involuntary activation;
- Wires and power cords should not hinder the movements of the operator. It is recommended to use the cable winders.



HAZARDS OF WORKING WITH MANUAL SCISSORS CUT

SAFETY MEASURES:

- ⇒ The free hand should be protected by protective glove.



DURING THE PRUNING KEEP THE FREE HAND AT SOME DISTANCE FROM THE CUTTING POINT.





- ⇒ **HAZARDS:**
- ⇒ Falls from ladder caused by disequilibrium;
- ⇒ Fall from ladder if it is not fixed well during the work;
- ⇒ Fall caused by breaking and deterioration of the parts of ladder.

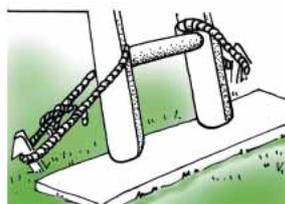
SAFETY MEASURES:

- ⇒ Lean ladder against the tree on the stable resistant abutment near to the point the operator can reach up, to avoid the lateral oscillation of body;
- ⇒ See to the periodic maintenance of ladder to keep its components in good condition.



Using tripod ladder is more safe than traditional wood ladder, because it helps to avoid :

1. the necessity to look for an abutment;
2. obstacles, caused by the top rails.



IN CASE OF REPAIR CHANGE ONE ELEMENT, DON'T PROCEED TO ANY REPARATION



PHYTOSANITARY PRODUCTS



HAZARD:

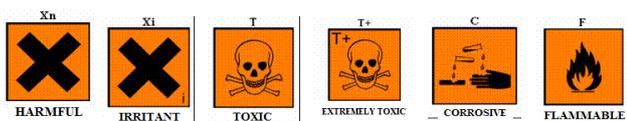
⇒ Acute intoxication

SAFETY MEASURES:

- ⇒ During sanitary manipulations operators should use the safety mask equipped with compound filter for powder, vapour and aerosol, the protective goggles, protective gloves, boots, protective suit etc;
- ⇒ Utilization of product can be effected only by the professional, high skilled and trained workers;
- ⇒ The phytosanitary product must be stored in the locked, dry, ventilated places and chests.



LOOK AT THE SAFETY SIGN TO UNDERSTAND IF THE SUBSTANCE IS DANGEROUS





HAZARDS:

- ⇒ Lumbar spine injuries caused by incorrect carrying of too heavy loads.

SAFETY MEASURES:

- ⇒ **Reduce** a weight of the transported loads;
- ⇒ **Grip** the load securely;
- ⇒ **Bend** your knees during the lifting of loads;
- ⇒ **Resort** to the help of other people or use the specific equipment for heavy or bulky loads.



**DON'T MAINTAIN A STATIC POSITION FOR LONG PERIODS OF TIME,
CHANGE THE WORK STAGES.**

Choose your SAFETY,



*because....
Agriculture is Agri-CULTURE.*



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