



USER AND MAINTAINCE MANUAL

Comfort series irrigation hose reel

(Universal Sales T2.0"/492' and T2.0"/656' travelers)

(Version: 2015-04-10)



IRRILAND SRL

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INTRODUCTION

Thanks for choosing an IRRILAND machine. This manual is a fundamental part of the machine and has to follow it in case you give/sell it to other users.

Before doing any operation the assembling person and the user have to read and follow up strictly the indications given here following.

ATTENTION



Don't start using the machine if you haven't carefully read this manual first. Don't work with the machine close to kids or close to not authorized personnel. Avoid that the kids go close to the machine.



Attention when you disconnect the flex supply hose.

If the machine is equipped with a closing (or shut off) valve the flex supply hose remains pressurized at the end of the cycle so **DO NOT DISCONNECT** the flex supply hose before you release the pressure



Attention to the sprinkler

The pressurized water of the sprinkler can cause severe injuries and damages to persons and things.



Precaution along the freight

The machine can't circulate (move around) on public roads. Don't exceed the towing speed of 10 km/h (6 mph) on plain roads and 3 km/h (2 mph) on not leveled fields.



Never service the machine when it's working

To do any maintenance, please stop the machine and disconnect it from the supply line. It's necessary to mount all the protections before the machine start to work again.



Precaution with the electric power lines

Make sure the throw of the water doesn't touch the electric power lines and/or any other item of electric power supply at any time.

SYMBOLS ON THE MACHINE AND RELATIVE MEANING



ATTENTION

1) This symbol means different risky situations:

1a) The operations of the part can be risky for the user safety. When you see this symbol, please read carefully the relative information as there's an incident risk.

1b) Don't open the couplings in case there's pressure in the pipeline. Before you open the couplings you have to be sure there's no pressure in the pipeline.

1c) Electricity risk: you can never place the sprinkler near to any energy source. You must be sure that the sprinkler water will not be in contact with any energy source, house, or working place except what eventually specified by the producer.

1d) Read carefully this manual before you use the machine.

1e) Before you start the machine and you do any service on it, please stop it and disconnect it from the feeding pipeline.



2) This symbol indicates the risk relative to moving parts. Don't use the machine before you mount again the safety parts and guards. When you use a winch please be sure to follow the safety procedures.



3) This symbol means moving parts. Please stay away from the machine when is working.

4) This symbol indicates the point to connect the lifting hooks. Don't connect the hooks in other points of the machine because it can be very dangerous.



5) This symbol indicates the points that need to be lubricated: look at the manual carefully and follow up the instructions. Correct lubrication will improve the machine efficiency, reduce the risk to break some parts, and extend a lot the machine working life.

IMPORTANT ADVICE

Read and follow precisely the instructions labeled on the machines.

They don't substitute the manual but focus the attention on some parts and info that are important for the use, maintenance, and the safety.



BRIEF USE INSTRUCTIONS

READ THE COMPLETE INSTRUCTION MANUAL OF THE MACHINE BEFORE ANY OPERATION

- 1 - Position the machine, aligning the drum with the strip to irrigate
- 2 - Lower the front jack (and eventually stabilizers), unfasten the hitch and drive the tractor forward
- 3 - Adjust the track width of the sprinkler cart as wide as possible
- 4 - Lower the rear anchoring legs and plant them properly in the ground
- 5 - Take the safety pin off the cart loading system (for automatic loading system only)
- 6 - Be sure the gear box is disengaged: the p.t.o. should turn easily with the hand wheel
- 7 - Insert the hand wheel on the p.t.o., turn it a bit counterclockwise and put the safety dog of the crown gear in pulling out position
- 8 - Discharge the sprinkler cart onto the ground by using the p.t.o. hand wheel or the hydraulic system, if equipped. Pay attention to the cart and lifting system height: it's mandatory the cart can be loaded (with automatic cart lifting system) and the lifting system (or the cart itself) can disengage the gear box or the drive system at the run end
- 9 - Adjust the irrigation sector on the sprinkler
- 10 - Turn the computer on, if equipped. Turn on the simple computer Controller after the pulling out.
- 11 - Release the sprinkler cart safety chain, if equipped, then hook the sprinkler cart with the tractor and unroll the polyethylene hose (3 km/h - 2 mph) slowly
- 12 - Put the crown gear safety dog, if equipped, in working position.
- 13 - Connect the flexible feeding hose and start the irrigation
- 14 - 3 speeds gear box: put the left lever in 2nd gear and engage the gearbox with the right lever.
1 speed gear box: engage the gearbox with the lever on top
- 15 - On the 3 speed gear box, find the best gear ratio by trying the different gears and adjusting the bypass valve. Most systems will operate best using the 2nd gear. Always disengage the gear box with the right lever before you change the speed with the left lever.
- 16 - The speed indicator, if equipped, shows the real polyethylene pull in speed on the first winding diameter of the drum. For the larger diameters look at the labeled speed chart.
- 17 - Machines with computer: follow the computer instructions.
- 18 - Automatic cart lifting: after the run the sprinkler cart will automatically load. Insert the safety pin and/or fix the safety chain to lock the cart in place.
Hydraulic cart lifting: fix the safety chain, if equipped, and load the sprinkler cart.
- 19 - Lift the anchoring legs, turn the upper frame and prepare the machine to be shifted to next position. MAX SPEED ON GOOD FLAT ROADS 10 KM/H (6 MPH)

INSTRUCTIONS FOR REWINDING BY P.T.O.

- A - Be sure the gear box is disengaged: the p.t.o. should turn easily with the hand wheel
- B - Connect the pto shaft only if the tractor is stopped or you are sure the pto can't turn
- C - To prevent damage, stop the motorized roll up with 2-3 meters (6-9 feet) of pipe unrolled.
Complete the roll up process by hand with the p.t.o. hand wheel.

WARNING

Don't forget to check the oil level and the chain tension and to grease the points stated in the manual (crown gear, bearings, hubs, jacks, brake, joint points) EVERY 20 WORKING HOURS

USE CONDITIONS

This machine has been designed to be used with water for irrigation. In case of sand and other solids or other solids in the water, the machine can function with up to 12% solids with reduced efficiency and working life. With more than 12% solids, the functioning of the machine isn't warranted. The machine can be used with one to three sprinklers with slow return speeds, multiple under foliage nozzles or with an irrigation boom. For all these uses please look at the specific instructions.

IDENTIFICATION DATA AND MACHINE CONTROLS



IRRILAND S.R.L. Via Togliatti n°4 Z.I. S. Giacomo 42016 Guastalla -RE- ITALY P.I. 01526580350		[CE]	
TEL. +39 0 522 831544		FAX +39 0 522 831548	
www.irriland.it info@irriland.it			
Y.			
MOD.			
N°			
KG.		KG.	
[]		[] +H ₂ O	
[] 0,5 rad. S ⁻¹		[] P.T.O. 540 n/1'	

Y. > production year

Mod. > machine model (OD in mm and length in m)

N°. > serial number composed by the corder confirmation number and the machine structure (last three numbers / letters)

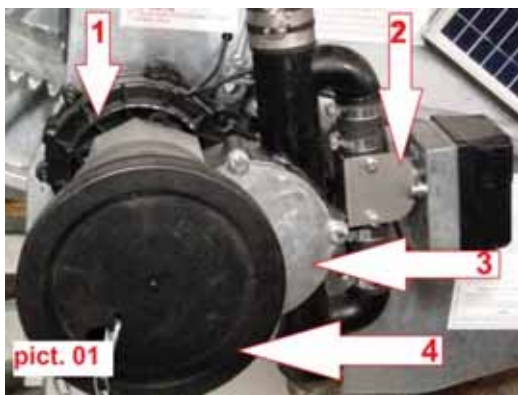
Kg. > dry machine weight / weight of the machine full of water

0,5 rad S-1 > max rotation speed of the sprinkler

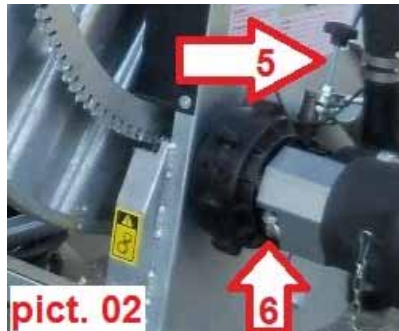
PTO 540 n/1' > max rpm of the power take off

In addition to the CE label the serial nr and the model are printed on the frame!

COMFORT SERIES: CONTROLS AND DETAILS OF THE MACHINE



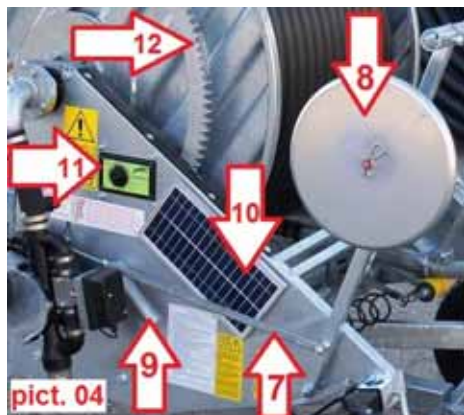
1. Gear box
2. by-pass with electric valve and motor
3. Turbine
4. Pto shaft safety protection



5. Engage/disengage lever
6. Automatic brake



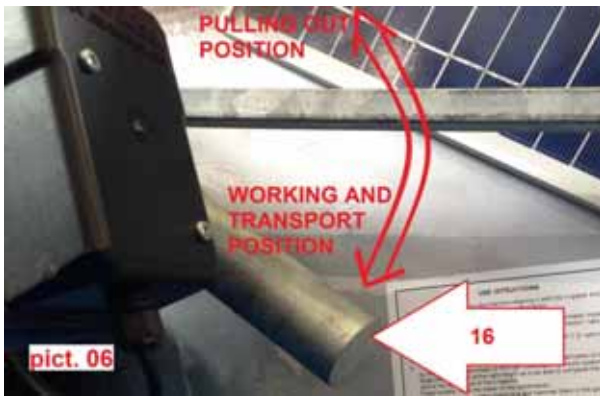
7. Disengagement rod



7. Disengagement rod
8. Hand wheel for pto
9. Safe dog
10. Solar panel
11. Controller
12. Crown gear

13. Cart Lifting system
14. Anchoring legs handle
15. Coupling for cart towing bar





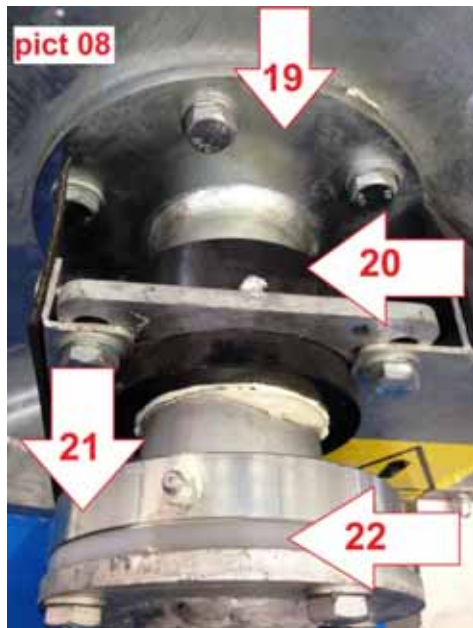
16. Safety dog

The working and transport position prevents the drum from turning backwards when irrigating and during transport. If the sprinkler cart is loaded, you can't pull it or the pipe out with the safety dog in this position.

The pulling out position releases the tooth from the crown gear and allows you to unload the sprinkler cart and pull out the polyethylene hose.

17. Pressure gauge

18. Flanged elbow for central drum inlet



19. Flanged hub on the drum

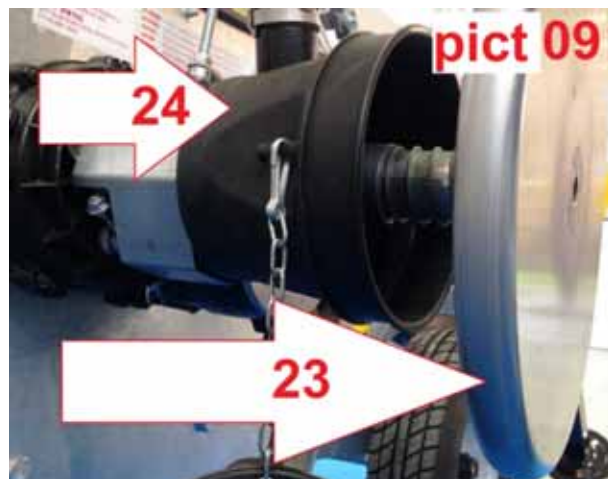
20. Drum bearing

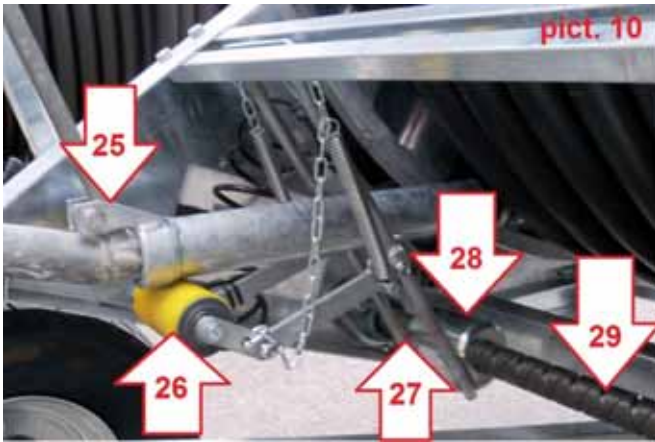
21. Machined ring

22. Central seal made by nylon

23. Hand wheel on pto shaft. ALWAYS Take it off after use

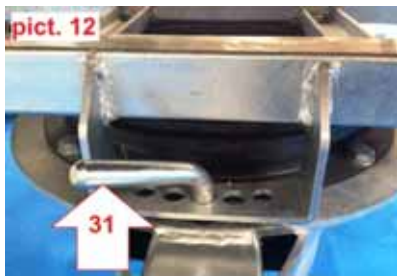
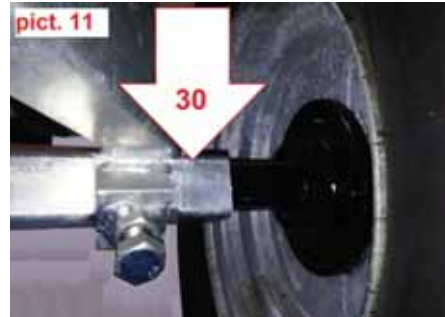
24. pto shaft protection. ALWAYS put the cover on after you have used the pto shaft





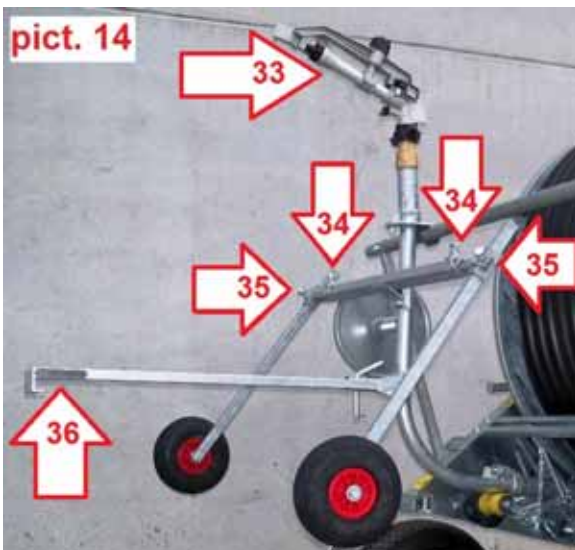
- 25. quick cart coupling with fixing bolt
- 26. Roller of the Controller computer
- 27. Pe hose guide fork
- 28. Hose guide block with greasing unit
- 29. no end screw (grooved scroll bar)

30. Axle of the machine tire and bolt to fix it



31. pin to stop the machine rotation

32. Turntable



- 33. sprinkler with adapter mounted on the cart
- 34. bolts to adjust the cart width
- 35. bolts to adjust the cart legs
- 36. cart towing bar

1.0 INFORMATION AND TECHNICAL DATA

1.1 DIMENSIONS AND WEIGHTS

ATTENTION: you have to carefully look at the weight and dimensions before any unloading and assembling of the machine (See chart). The unloading operations have to be done by qualified persons.

LOOK AT THE MACHINE STRUCTURE ON THE IDENTIFICATION DATA

STRUCTURE	H1	H2	H3	L1	L2	L3	L5
11 (2.0'/492')	1800mm 70.9"	1580mm 62.2"	1440mm 56.7"	2350mm 92.5"	1530mm 60.3"	1600mm 63.0"	2950mm 116.2"
14 (2.0'/623')	2050mm 80.7"	1770mm 69.7"	1600mm 63.0"	2450mm 96.5"	1850mm 72.8"	1600mm 63.0"	3050mm 120.0"
H1	Height with tires						
H2	Height with no tires						
H3	Height with no tires, chassis and turntable						
L1	Length with no sprinkler cart						
L2	Max width						
L3	Necessary space for machines loaded in series on flats with 2,45 m width						
L5	Total length with the towing bar and the sprinkler cart						

WEIGHT: always look at the weight indicated in the identification label on the machine !!

2.0 FREIGHT, DELIVERY, AND COMMISSIONING OF THE MACHINE

Attention: always work with working gloves!!

To facilitate the freight and the loading/unloading some parts can be dismantled: tires, drum and upper chassis, legs....can be delivered dismantled.

The producer of the person in charge will fix the machine on the loading flat paying attention to the instructions. To load and unload the machine it's necessary to hang it on the **3 points** indicated with the symbol



For example as shown in the picture n. 15, 16 and 17

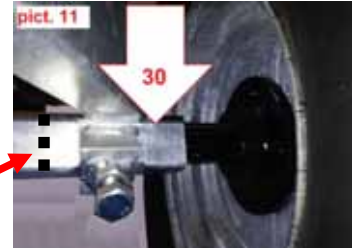


If the machine has been delivered with the mounted chassis pls hang the hooks the same way as above described: 3 points with the symbol indicated above (example pict. 15, 16, 17).

The following instructions are relative to the machine with several dismantled parts. Follow up carefully the relative instructions.

Controls to be made when you assemble the dismantled parts:

- 1) Mount the axles for the tires till the indicated point and and tight well the bolts to fix them: pict. 11 pos. 30
You can adjust the tire's width but be sure the axle ends at least 3 cm (1.2") after the bolt.



- 2) Mount the front jack pos. 40, fix it with the pin pos. 41 and adjust the height to get the chassis horizontal by turning the jack handle. Mount the anchoring legs pos. 43 and 45 and fix them with the bolts pos. 42 and 44. If the jack and the anchoring legs are already mounted, make sure the pins are secure and that the bolts are tight.



- 3) Mount the sprinkler pos 33 onto the adapter and mount them on the sprinkler cart.
- 4) Fix the pipes for the width adjustment with the bolts pos. 34
- 5) Fix the cart legs with the bolts pos. 35. When the cart is on the ground control the galvanized central pipe: it shouldn't touch the ground. In case it does, pls adjust the cart legs longer.
- 6) Mount the cart towing bar and fix it with the relative pin.



3.0 PREPARATION OF THE MACHINE FOR THE USE ON THE FIELD

CONTROLS TO BE DONE:

- 1) Check the gear box oil level and, if needed, add the Sae 90 oil till the cap level





2) Lubricate the machine using any greasing point on the machine (look at the symbol page 3) and also the crown gear on the drum as indicated in picture 21. Main points to lubricate: front jack, 2 anchoring legs, crown gear, drum bearing and ring on turbine side, brake on the gear box. It's necessary to lubricate every 50 working hours.

2) Check the machine and the cart tire pressure: look at the proper pressure on the tires and if necessary adjust it.

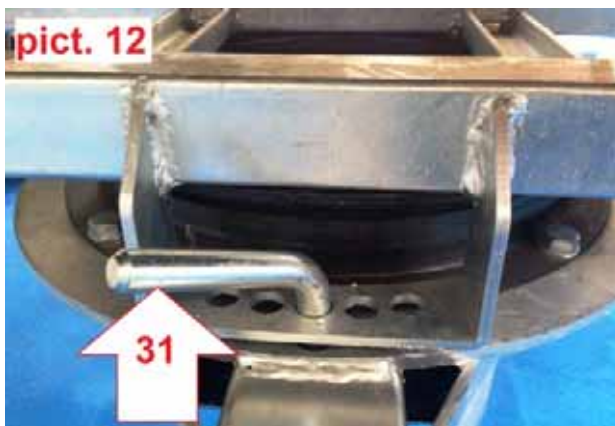
3.1 MACHINE SET UP ON THE FIELD

Attention: always work with the working gloves!!

1) To hook the machine with the tractor, lift it a bit by turning the front jack handle. When the machine is hooked, lower the chassis by turning the same handle the other direction till when the complete towing bar weight is held by the tractor. Take the front jack off and shift the machine to the next spot (max transport speed is 10 km/h / 6 mph on flat roads).



2) Take the pin of the rotation stop (pict 12 pos 31) off and put the drum in the proper direction toward the irrigation strip in order to get it aligned with the pull out direction of the pe hose: go on the back side of the drum and look along the side of the drum its alignment with the pulling out direction (pict 26). Turn the machine on the turntable till when the drum is well aligned.

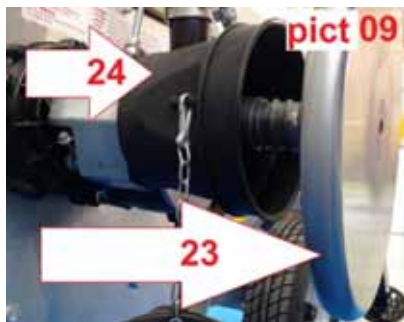


3) Put the pin of the rotation stop in its position to stop the rotation (pict 12 pos. 31)

- 4) Lower the anchoring legs pos 43 and 45 with their relative handles 42 and 44 to fix the machine properly on the ground.

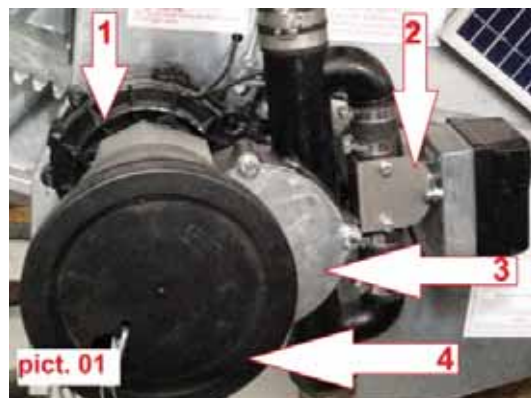


- 5) Put the hand wheel onto the pto shaft (pict 09 pos. 23), push it and turn a bit counterclockwise to release the safety dog: lift it up to “pulling out position” as you see in picture 06. Let the sprinkler cart drop down by turning the hand wheel. Always keep pushing the hand wheel when you use it.

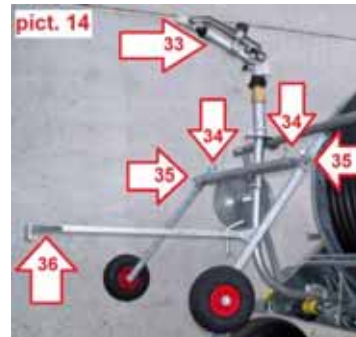


- 6) When the cart is on the ground, take the hand wheel off, place it on its position on the machine and secure it with its pin: picture 04 pos. 8. Then mount the cover on the pto shaft protection: picture 01, pos. 4.

Pay attention to the hand wheel: never leave it on the pto shaft if you're not using it as above described! It's very dangerous and can cause serious injuries:



9) Hook the towing bar of the sprinkler cart to the tractor (pict 14 pos.36) and pull out the cart along the field with the max speed of 3 km/h (2 mph). Before you stop the pulling please reduce the speed smoothly. There's no alarm nor signal about the poly hose length so be careful to don't pull it out too much! Check if the sprinkler irrigation sectors are ok and eventually adjust them. Disconnect the tractor and drive back to the machine.



Important: always leave at least one pe hose ring rolled on the drum and remember that along the first use of the machine is necessary to pull out the complete pe hose not leaving more than one or two rings on the drum : you'll need to roll up all the pe hose with inside pressure.

10) Place the safety dog (non return tooth) in its working position as shown in picture 06 pos 16



11) Connect the main line (hydrant head or pipeline outlet) to the machine by using the flexible hose. Open the hydrant gate valve a bit till when the water is coming out from the sprinkler, then open it completely. Control properly if the flexible hose couplings are well hooked before you open the hydrant: it's a pressurized system and could be dangerous if it's not managed properly.

12) Engage the gear box shifting the knob pos 5 toward the sprinkler cart



13) Adjust the pull in speed by turning the computer knob on the required speed.



3.2 MACHINE AUTOMATIC STOP

When the pe hose has been completely rewound and the sprinkler cart has been already loaded, the disengagement rod connected to the automatic loading system (pict. 03 and 04 pos. 7) pushes the gear box lever (pict. 03 pos.5) and disengages the gear box and the rewinding stops immediately.

The gear box remains disengaged (neutral position) till when it will be manually engaged. In case there aren't any low pressure/discharge/vacuum valves or high pressure/shut off valves on the machine the irrigation continues, even when the drum doesn't turn anymore.



3.3 SET UP CONTROLS

- 1) Check that the hose guide fork is positioned properly: it has to be well aligned with the pe hose when the pe hose has been completely unrolled. In case of need please adjust the guide fork position as follows:

- FIRST OF ALL STOP THE MACHINE!!

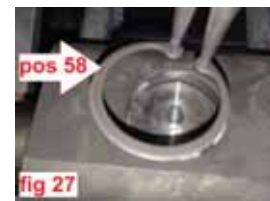
- take the elastic ring that fix the scroll bar insert off the block
Pict 27 pos 58

- take the insert off the block pulling it out from the greasing unit and look carefully the direction (position) of the half moon below pict 28 pos 59

- Align the guide fork to the pe hose and put the insert inside the block paying attention the half moon below is in the same direction as before.
- put the elastic ring back in its place and assure it's well positioned all around the groove

- 2) Check the engagement/disengagement lever pict. 03 pos. 5: to be pull it opposite side of the sprinkler cart.

When the sprinkler cart has been lowered you can check if the disengagement functions properly: push the lev pict. 03 pos 5 toward the sprinkler cart and now push up the automatic cart lifting system toward the machine till the end of its run to disengage the gear box.





If it doesn't work properly, pls adjust the length of the threaded rod indicated in pict. 03 pos.7

The lifting system should disengage the gear box when it arrives at the end of its run.

ATTENTION: When you drop down the sprinkler cart releasing the safety dog (non return tooth) and turning the pto shaft by means of the hand wheel you should use **working protection gloves!** Be sure nobody is close to the sprinkler cart before you release the safety dog and drop down the sprinkler cart.

- 7) Check that the gear box pinion is aligned with the crown gear and the teeth work well inside each other (allowed tolerance 0,5-2 mm). In case of any problem call the authorized dealer. Stand clear from the crown gear and the pinion to check the alignment and after you disengage the gear box you can test by hand the pinion and the crown gears are adjusted properly: turn the pto shaft with one hand left and right side. It should turn free just a little bit both sides.



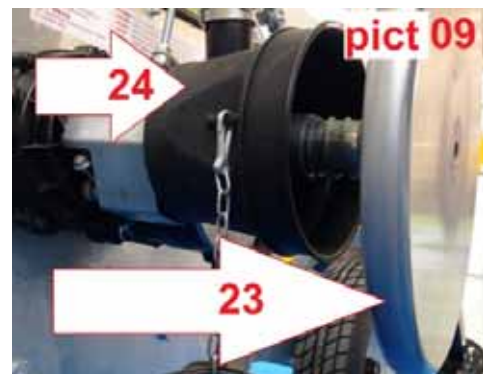
Due to safety reasons this operation can be done only when the machine has been stopped.

- 4) Check that all the bolts and screws are well tightened and that all the points indicated in this manual are well lubricate.

3.4 EMERGENCY PE HOSE REWINDING

The pto (power take off) of the gear box can be used for the emergency rewinding of the pe hose: it will be connected to the tractor by means of a cardan shaft.

- 1) Check that the gear box lever pict 03 pos. 5 is on neutral (push it opposite direction of the cart) because otherwise you can cause serious damages to the gear box.
- 2) Connect the cardan shaft to the pto shaft of the gear box: same position as the hand wheel pict 09 pos. 23



- 3) Start the pto shaft to rewind the pe hose.

Attention: when you use the pto drive the disengagement (automatic stop) doesn't work at the rewinding end. The rewinding has to be stopped before the cart arrives against the machine. The last 2 / 3 meters have to be rolled up manually with the hand wheel. If you want to rewind them with the tractor you can but you should roll it up very slowly and stop the rewinding before the loading system pushes the disengagement rod. Don't forget that the safety dog has to remain in working position before you start up rewinding the pe hose: look and read pict 06.



Attention: if the pe hose has been totally pulled out, to avoid an excessive ovalization is better to put some pressure inside before you start the rewinding.

3.5 USE OF THE MACHINE DURING THE NIGHT

The machine isn't provided with an own electric energy and or lamp (except the small battery needed for the computer): in case the machine has to be used with insufficient light it's important to provide an adequate lamp to follow up all the previously given instructions and avoid risks to persons and things.

4.0 MANTENANCE

- 1) Lubricate the parts indicated on the machine at least every 100 working hours: the main parts are the crown gear, the drum hub, the scroll bar (hose guide system), the front jack and the rear anchoring jacks.
- 2) Change the gear box oil every irrigation season or at least every 3000 working hours.
- 3) Control periodically the tires pressure.
- 4) Lubricate the sprinkler every 400 hours: only some sprinklers have to be lubricated.
- 5) Lubricate the connecting joints of the disengagement rod every 400 working hours: pict. 25 pos. 49 and pict. 26 pos.50



5.0 MACHINE STORAGE AT THE END OF THE IRRIGATION SEASON

- 1) If the winter temperature will drop below freezing in the place the machine will be stored, it's better to partially empty the pe hose. to do it you should pull out half of the pe hose as you do for a normal irrigation, then you take the sprinkler cart off and then you rewind the pe hose by means of the pto shaft (look at point 3.4)
- 3) For a longer lifetime of the machine is suggested to clean the machine with a water gun and after it's dry again, look at the point that eventually need some antioxidant.
- 4) Lubricate all the indicated points as you do for the normal maintenance.

6.0 PROBLEMS AND SOLUTIONS

1 The machines can't rewind the pe hose.

- Open and close completely the bypass by turning the Controller knob to "min" and to "max" and listen/look if the motor is moving the ball valve.

-If it doesn't turn check the Controller instructions manual and eventually control if the battery is charged and if all the wires of the battery, the solar panel, the Controller and the electric motor of the bypass are well connected. In case of need call the local service to change either the battery or the electric motor or to check up the computer.

- If the bypass valve works properly and the turbine impeller doesn't turn is possible that the turbine nozzle is blocked by a solid: dismount the inlet pipe, check and eventually clean it.

Is also possible a long fiber as a rope or something similar went inside the turbine and has been wounded all around the impeller: to check end eventually clean it you should take off the pto shaft protection and the turbine cover.

- Also check the gearbox position: in case the drive pinion it's too far or too much against the crown gear of the drum, it will not move. To check it disengage the gear box, hold the pto shaft by hand (mandatory with working gloves) and turn it back and forward: if the gearbox position is ok you should be able to move it a bit and hear a clear "tac" "tac"...every time the pinion teeth match the crown gear teeth. Between the pinion teeth and the crown gear teeth base you should have about 1 mm space.

- The gear box doesn't work: if the turbine impeller turns (you hear the noise) but the drum doesn't move, is possible that the lever on top of the gear box isn't well positioned and the gear box hasn't been engaged.

Place the lever in working position (toward the sprinkler cart) naturally after the sprinkler cart has been pulled out. If the turbine impeller turns, the gear box is well engaged and the drum doesn't turn pls call the local authorized service as maybe you have to change the gear box.

- The sprinkler nozzle is partially stopped and only some water comes out. Dismantle the nozzle and check.

- The filter (if ordered or mounted later on) at the machine inlet is full or at least dirty. Disconnect the flexible supply hose and clean the filter.

- The sprinkler is always supplied with some nozzles of different sizes. Is possible to change the nozzle with a smaller and/or with a larger one. The turbine nozzle is generally similar to the sprinkler nozzle. The sprinkler nozzle you use depends on the available flow and pressure. Try different nozzles and for each nozzle note carefully the sprinkler nozzle diameter, the pressure at the machine pressure gauge and the pull in speed you can reach. This way the service will have a complete and clear picture about the situation and will be able to help you.

- The pressure isn't enough at the turbine/machine inlet: first of all disengage the gear box placing the lever in neutral position. If the drum doesn't turn try to increase the pressure or advise the local authorized service and give all the data listed at the previous point.

- The pe hose has been pulled out, the gear box is properly engaged and all the above mentioned parts have been checked. The gear box may be damaged: call the local authorized service.

2 The machine isn't stable and try to move.

- The rear anchoring legs haven't been adjusted properly. Place the machine better and especially fix properly both rear anchoring legs in the ground.

- The pe hose has been pulled out, is on the field and is difficult to pull in. Wait that the soil becomes dry, then shift the pe hose beside its position by a chain or a rope: put the chain under the pe hose and connect it to the tractor lifting system and drive the tractor all along the pe hose shifting the pe hose beside. If you haven't a tractor you can put a wooden block under the pe hose every 6 m or less or you can do the operation manually: the target is to detach the pe hose from the sticky place and also clean it.

3 If the pe hose hasn't been rolled up properly pls check the drum is well aligned with the pulling out direction, pull the hose out and follow up the instruction to align the guide fork and then roll up the pe hose with pressure (inside the pe hose): it's possible to roll up the pipe by cardan shaft/pto or by turbine but always with pressure inside to avoid the pe hose excessive ovalization.

7.0 IMPORTANT SUGGESTIONS

- During the machine transport the max allowed speed is 10 km/h (6 mph) on good level flat roads.
- Before you roll up the pe hose by cardan shaft pls be sure the gear box lever is on neutral position otherwise the gear box can be strongly damaged
- The first time you pull the pe hose out to start the irrigation, you have to pull it out completely leaving only 1 or 2 rings on the drum.
- Any modification (that hasn't been authorized in written form by the supplier) invalid the warranty
- If the pe lays on the soil, then it rains, it's possible that the pe hose will stick to the soil so prior to start the irrigation and rewind it, it's mandatory to clean and shift it beside with a rope or chain as indicated at 6.2 above
- If the pe hose has been partially pulled out, probably some rings became loose on the drum and it's necessary to pull it out completely to roll it up again so it will be all well tightened.
- If both drum alignment and pe hose complete rewinding with pressure inside the hose have been done and you still have problems, pls call the local authorized service.
- Sprinkler cart: only the tires together with the pe hose have to support the cart weight.
- Don't pull out the pe hose or achieve any other function on the machine when the hand wheel is mounted on the pto shaft of the gear box. Always take it off the shaft after use.
- Don't use the machine when the protections aren't mounted and always stand clear from any possible squeezing point.

IMPORTANT NOTE: if these instructions will not be correctly followed, if non original parts will be installed or in case of not written authorized modifications the warranty is totally invalid. In this case the producer is not more responsible for any risk, injuries and damages may happen to the operator, to third parties.

8.0 ADDITIONAL RISKS

Even if IRRILAND pays attention to avoid dangers for the user during the design and the construction with functions and guards generally safe, it's always possible that some additional risk appear during the use of the machine.

- 1) Risk to hook and displacement between the drum and the structure during the structure and the drum rotation. This risk is higher during the machine placement and during the pe hose pulling out and rewinding. Be sure nobody is next to the machine during the rotation before the anchoring legs have been fixed and during the pe hose pulling out and rewinding. Only the authorized persons can remain close to the machine, nobody more.
- 2) Flattering and trapped risk between the pe hose and the drum along the rewinding. Avoid any contact with the pe hose during the rewinding and be sure no authorized persons can't access to the area.
- 3) Overturn risk: along the machine shifting and freight there's a serious risk to overturn the machine. The risk increases a lot if the slope is more than 6°. Drive with particular attention, don't increase the speed and drive through the best parts of the road. In case of excessive risk drive back and look for other way.
- 4) Risk of upper frame sudden rotation: when you place the machine especially in a slope area the upper frame could turn suddenly: to work with no risks in this situation the client has to hold the upper frame from the middle height of the drum before he removes the pin to stop the rotation.
- 5) Overturn risk during the upper frame rotation: Always load the cart (or leave it loaded), than position the rear anchoring legs with their points just some cm from the soil, check the front jack is well established and turn the upper frame. In case the machine isn't stable you need to fill it up with water to increase the stability, before the upper frame rotation.
- 6) Electricity risk: during the irrigation the sprinkler throw can match the power cables. The risk of a very dangerous electric shock through the metal structure is very high. Be sure there aren't electric lines in the sprinkler radius all along the pull.
- 7) Risk to impact directly the sprinkler throw. When the machine will be started and the water will be supplied to the machine, the throw can start suddenly and strong. It's always better to release the flow partially till the water pass through the sprinkler and then increase it till the normal working flow. Anyway be sure nobody is next to the sprinkler when you start the machine.
- 8) Shock risk against plugs and couplings of the machine and the flex hose. Don't open nor disconnect the plugs and the couplings with the pressure inside. Be sure there's no pressure before you release any plug or coupling. Control them carefully before you get pressure in the machine.
- 9) Risk of incidents on roads. Set up the sprinkler cart and the sprinkler in a way that the water throw will not wet a transit area to avoid damages to persons and things.

9.0 SHIFTING OF MACHINES CONNECTED TO PRESSURISED MAIN LINES

When the machine has finished the cycle, please reduce the pressure at the machine as follows:

- 1) Shut off the hydrant valve (where is connected the flex supply hose of the machine)
- 2) When the pressure gauge indicates pressure "0" and there's no more pressure in the flex supply hose you can disconnect the couplings of flex supply hose and shift the machine to the next position.