## Handbook

Instructions for maintenance Security norms

Hole-Digger Model: PV



Please read this manual carefully, before effecting any operation -Should this machine be resold, please, hand over this manual to the new proprietor



VIA G. ANTONIUCCI, 19 - ZONA IND. REGNANO - 06012 CITTÀ DI CASTELLO (PG) ITALY
TELEFONO (075) 8511366 - FAX (075) 8511367
www.fazasrl.com - info@fazasrl.com - tecn@fazasrl.com

#### Introduction

This manual is meant to inform the client of handling formalities, servicing and spare parts of the hole-digger.

The hole-digger is designed for agricultural fields and in order to use it, it is compulsory to use a tractor provided with a hydraulic lifter and a 3-point universal linkage as well as a power-take-off shaft which gives motion to the rotor.

The machine has been planned to be used for all kind of agricultural fields, so a good operation depends on a correct use and on an adequate maintenance of the hole-digger.

## Warning

The operator is bound to read and to understand all the instructions included in the manual before using the machine.

The non-compliance of one or more instructions exempts the manufacturer from any responsibilities, in case of damage to the machine or things and people.

We recommend to use only original spare parts in order to preserve a perfect efficiency of the machine. Otherwise, the manufacturer exempts himself from any kind of responsibility, and, in consequence the guarantee decays.

Danger and warning signals are applied onto the machine. They are in form of stickers and plates and have to be considered as an integral part of the machine. They must always be kept clean and intact.

## Attention

The hole-digger is a "residual risk" machine as some mobile parts with which it is provided, cannot be integrally protected, in order not to compromise the functionality of the machine, itself.

## Security rules and prevention of accidents

The personnel assigned to use the hole-digger must be competent and must possess good physical and visual conditions and must be able to co-ordinate the different functions. Moreover they must apply the established rules and they must act with the necessary precaution while carrying out a job, so that they do not expose themselves or other people to danger.

The operator must put the indications given in this manual into practice and he has also to make possible third persons assume their responsibilities.

The operator must act only after being certain and sure on how to use the entire equipment. He must not neglect the servicing of the machine.

During the job, the operator must be able to control the machine and the proximity where the machine operates.

If there are people in the immediate working range, the work must be stopped and taken up again only after the area is safe.

It is compulsory to wear working garments which are not too wide, preferably overalls, which have no loose parts that can get entangled with parts of the machine.

Do not work without a sufficient lighting of the working area.

Do not make any emergency repairs on the machine in order to start or finish a job.

Check that the instruction/warning plates and adhesives are clean as to be easily seen and that the security devices are in place and well locked.

Do not drink alcohol or take medicines before or during the work or when carrying out maintenance/service work.

Always use gloves and if necessary safety eye glasses during the servicing of the hole-digger machine.

Do not clean or oil parts of the machine while in motion/use.

Check the conditions of the bolts and tighten them adequately before starting to work.

Do not carry objects that could slip out of your pockets or your breast-pockets while leaning over the machine.

The operator must never leave the driving place before:

- 1. disconnecting the power-take-off shaft
- 2. lowering the hole-digger machine to the ground
- 3. turning off the tractor engine
- 4. inserting the parking brake and low gear
- 5. taking the ignition key out of the control board

All the necessary interventions must be carried out when the hole-digger machine is turned off.

## Symbology

Adhesives and plates with symbols are applied on the equipment. These security symbols serve to attract the operator's attention in order to avoid possible risks of accidents during work, servicing and storage.

This manual will explain the following symbols:

Symbol	Description
	Use protection gloves
	Use safety eye glasses

The following symbols are attached to the equipment:

Symbol	Description			
	Consult the operator's and servicing manual			
	Do not pass or stay near the equipment while in use			

#### Traffic circulation

The machine has been planned to operate on agricultural fields, should it be necessary to run on public road the operator must strictly follow the traffic rules. The operator must particularly control:

- longitudinal axle protrusions
- lateral protrusions
- · efficiency of the breaking system
- lights and refractive devices

If the operator thinks that the transport of the machine does not correspond to the specific rules here above listed he will have to provide for the transport through adequate alternative means.

The operator will have to remember that the transport of the machine can influence the road adherence, the breaking and direction of the tractor wheels

Before using the tractor on public roads, the operator must eliminate probable earth lumps which will have accumulated in various parts of the tractor and machine in order to avoid dirtying the roads; as in fact a dirty road could provoke accidents.

The driver has to remember to lift the hole-digger to the top with the lift device. For no reason must the hole-digger touch the ground when the tractor is moving.

## **Important**

Children, people who have no driving license, people who are inexperienced and people who are not in good physical and psychological conditions are forbidden to drive the tractor.

The operator is completely responsible for the tractor when circulating on public roads.

## Assemblage

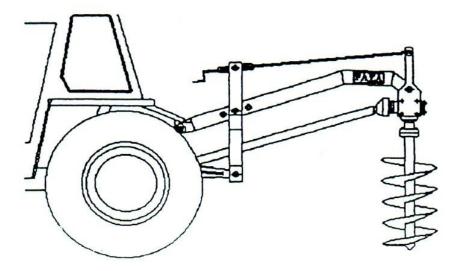
The hole-digger can also be supplied not assembled, in this case it is necessary to assemble the various parts:

- frame
- gear unit
- auger

## Assembling phases

- Fit the draw bar (1) to the box frame (2) and insert the nuckle pin in one of the pivot bushings and lock it with a split pin.
- Fit the gear box (45) to the holding plates (44), position these plates on the frame bushing and insert a pin.
- Connect the tie-rod (3) between the draw bar arms and regulate the plates of the gear box through the handle in such a way that the draw bar and the gear box are parallel.
- Screw the auger to the gear box support with supplied screws and nuts.
- At this piont, check all types of lockings as to make sure to have assembled the machine in the correct way.
- After using the machine for the first time, we suggest, that you check again all lockings of the machine and where necessary tighten them again.

## Coupling the hole-digger machine to the tractor



The coupling operation can present some dangers, in order to safeguard the safety of the operator and of possible assistants, you are kindly requested to follow the following instructions with the greatest care.

#### Attention

All coupling operations must be carried out on a level ground, the engine off, the parking brake and low gear inserted, in the presence of the operator and possible authorised assistants.

## Preparatory and control and coupling phases

- · check the setting adequately.
- verify that the power-take-off and the 3-point linkage are of the same category needed to fit the machine.
- check that the 3-point linkage is in vertical position and that there isn't any shifting or overturning risk.
- verify if the power and the weight of the tractor are adequate to transport the hole-digger machine.
- keep in mind the capacity of the lifter, that is, consider that the barycentre of the machine is in the centre line of the length.
- While checking that the P.T.O. shaft is idle, bring the tractor near the hole-digger.
- Connect the machine hooks with the respective arms of the lift of the tractor.

- Now insert the security locks in their respective holes
- Connect the shaft to the P.T.O., then insert the anti-rotation chain for the protection of the shaft (tractor side).
- Secure the lift arms in order to avoid oscillations, then adjust them so that the machine will be parallel to the ground.
- Check that at least 20% of the total weight rests on the front wheels; if this situation does
  not subsist take care by ballasting the front part of the tractor, but without exceeding the
  capacity limits of the pneumatics.

#### Attention

All the operations for the connection are easy, however, it is important to remember that with any operation, it is necessary to keep the maximum attention, in order to avoid any risk of accident.

## Directions for use

In this paragraph of the manual we have listed the modalities of use of the machine, considering the operations of control, of clenching and of loading the hole-digger, as already executed.

Always check that nobody is in the immeditaesecurity range. When digging check that the parking brake is inserted and the gear is in neutral position. Insert the P.T.O. shaft slowly, release the clutch pedal in such a way as to control a perfect function of the machine. Note that the tractor must absolutely not move while operating the machine.

## Regulation for the hole-digger machine:

- empty the auger at least 2 3 times for every hole you dig.
- before lifting the auger, it is best to stop the rotation, like this all the soil remains attached
  to the auger. This leaves the hole clean and extends the life of the p.t.o. shaft.
- those modells supplied with a reverser should be used only with p.t.o in neutral position.
   It is not recommended to entrust to a clutch the integrity of the gear box.
- make sure that the spring lock has been inserted properly and is clean, before taking up work, as not to damage the assembly.

#### Maintenance

The servicing is a very important part, which has to be considered with great attention, because it permits a lower operational costs and a long life of the tool

#### Different kinds of servicing

In this part of the manual we examine the mist frequent cases of servicing, that is:

#### after the use

- · wash the machine with water
- · dry all the metal parts carefully
- grease all the mobile parts of the machine check and tighten all bolts

#### periodical servicing

- · substitute the oil and grease of the gear box after its first 30 working hours.
- after every subsequent 250 hours of work this operation has to be repeated by unscrewing the drainage cap of the gear box and waiting for the oil to have completely come out.
- turn the machine in such a way as to have the cap opening in the ideal position to fill up the gear box with about 0,25 kg of new oil.
- check the metal parts which are under great strain during working conditions, if necessary replace them.

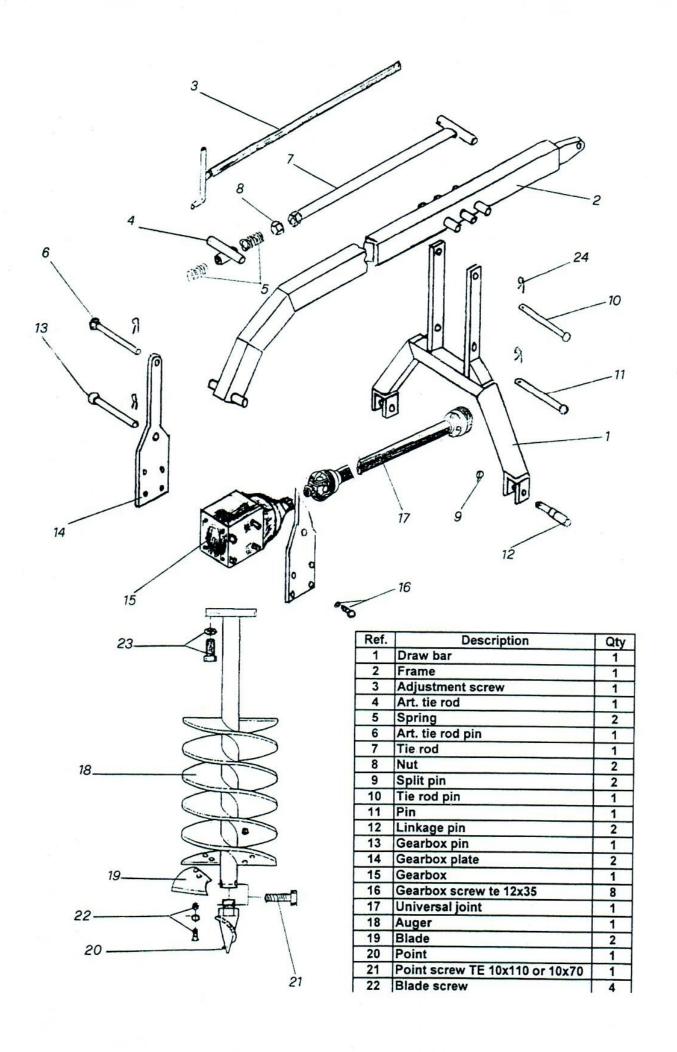
#### replacing, servicing

- wash the machine with water and sodium carbonate, taking care of drying the machine properly.
- retouch the metal parts with paint, where it is necessary, lubricate the mobile part with grease and for the rest, sprinkle with spray oil.
- protect the machine by covering it with a nylon or canvas cover, then stowing it in a dry
  room lacking humidity and in heightened position in comparison with the ground.

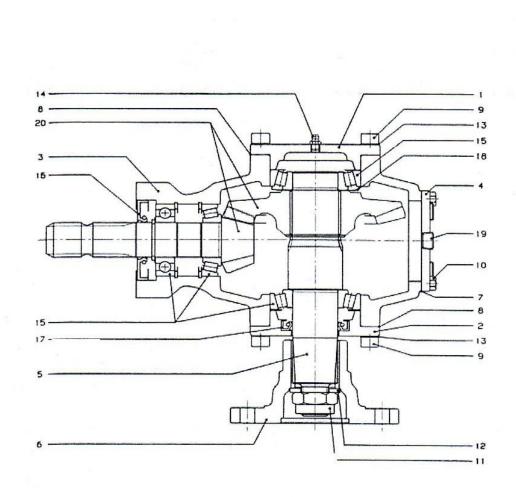
## **Demolition**

When the operator thinks it convenient to put the machine in disuse, he will have to remember:

- to wash the machine.
- to take away the grease and to remove the oil from the gear box.
- give everything to firms specialising in recycling and scrapping.



## **GEARBOX - POST HOLE DIGGER PV-1**

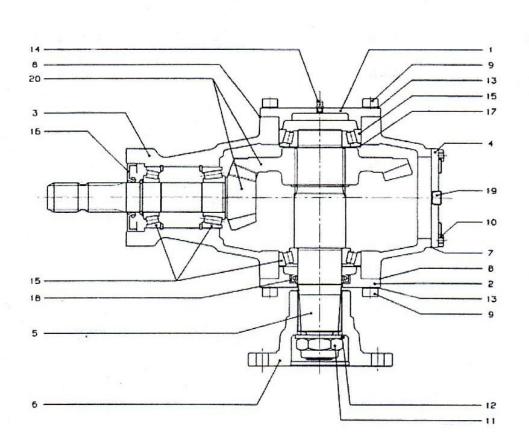


#### GEARBOX - RENVOI D'ANGLE - CAJA DE ENGRANAJES

REF. REP. REF.	DESCRIPTION DESCRIPTION DESCRIPCION	CODE CODIGO	REF. REF.	DESCRIPTION DESCRIPTION DESCRIPCION	CODE CODE CODIGO
1		29000A001	8		298538000
2		29000A002	9		303003400
3	ISO	290260206	10	A STATE OF S	310008000
	UNC	290260204	11		330024002
4		29065A002	12		332025000
5	·F	295244007	13		336010001
1	-R°	295244006	14		348006000
6		298103504			
7		298300019			

REF. REF.	DESCRIPTION DESCRIPTION DESCRIPCION	CODE CODE CODIGO
15	6207	354101035
	30207	354401035
	30208	354401040
16	35x80x10	355006035
17	40x60x10	355011040
18		355013040
19	3/8"GAS	373010000
20	R = 3,10	448310500F
	R = 4,50	447450401B

## **GEARBOX - POST HOLE DIGGER PV-2**



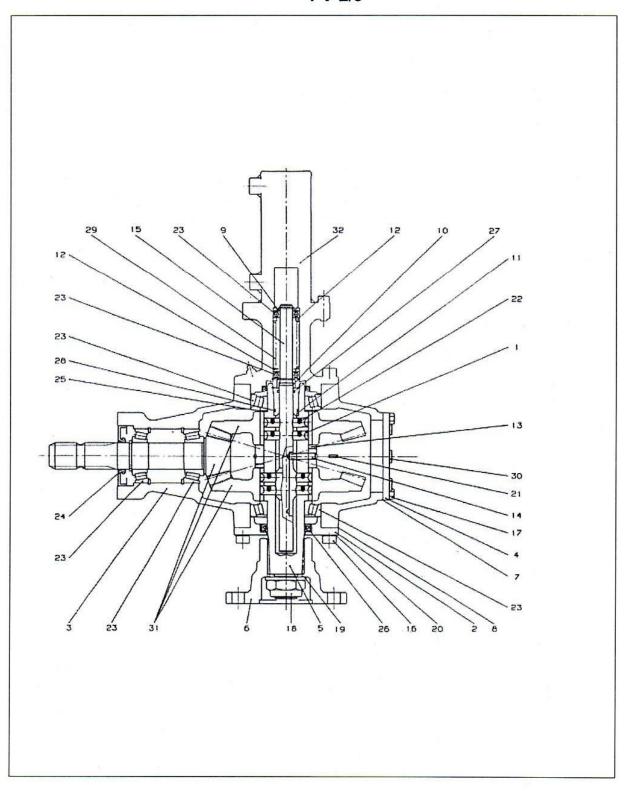
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2		29000B006	9	
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	UNC	290270117	11	MODERAL
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5	"F*	295244005	13	
	-R-	295244004	14	
6		298103800	15	:
7		298300020		:

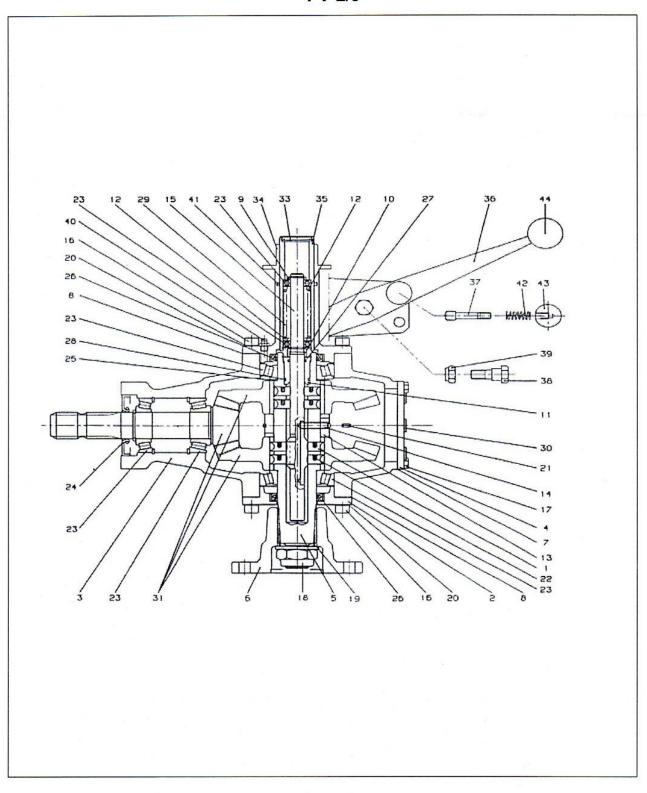
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9		303004400
10		310008000
11	MATERIAL PROPERTY AND ADDRESS OF THE PARTY AND	330027000
12		332028000
13		336010001
14		345006000
15	30209	354400045
	30207	354401035

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	32207	354407035
16	3/5×80×10	355006035
17		355006045
18	45x62x10	355007045
19	3/8"GAS	373010000
50	R = 1,93	448193501
	FI = 3,10	4483106000
	R = 4,11	4474115051

## GEARBOX POST HOLE DIGGER WITH HYDRAULIC DRIVE PV-1/2 PV-2/5



# GEARBOX POST HOLE DIGGER WITH LEVER DRIVE PV-1/2 PV-2/5



## GEARBOX - POST HOLE DIGGER WITH LEVER DRIVE PV - 2/5

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	UNC	290270117	1	30207	354401035			
4	NAME OF TAXABLE PARTY.	29075A000		32207	354407035.			
5	THE TOTAL PROPERTY OF	295405304	24	35x80x10	355006035		Ę	
6		298103800	25		355006045			
7	3.7	298300020	26	45x62x10	355007045			
8	A CONTRACTOR OF THE PARTY OF TH	298308500	27	- Post-Printbanka	358030000	DEFE	And the second second second	1
9		298401500	28		358031000			A CAMPAGE WATER COMPANY
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12		298402300	31	R.=.3,10	448310601R			
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17		3100080000	. 37		298701200			
18	MANUAL MA	330027000	38		298701601			
19		332028000	39	1	328008520			
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2		290008006	23	6002	354101015		V+	
3	ISQ	290270118		30209	354400045			
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4		29075A000		32207	354407035			
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GEARBOX - POST HOLE DIGGER WITH HYDRAULIC DRIVE PV - 2/5