

Operators manual MANIP' MPower

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English



MANIP'

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GENERAL INFORMATION

To the user

You have just bought a Manip loader and we thank you for this. Spare a moment to read this manual as it has been made to help you use your loader at its maximum capacity.

When your loader was delivered, your dealer should have given you a copy of your warranty certificate. If not ask him for a copy. You will need this document if you have to make a warranty claim. This claim will not be granted if a signed copy has not been sent to us.

The warranty certificate indicates:

That the assembly is conforming to specifications and accepted.

That the user has received the manual.

That the user has been informed about the use of the loader, about the attachment and detachment, about maintenance and safety regulations.

That the warranty conditions have been read and accepted.

**The user manual
is an important
document that should
be readily available
when needed.**

IMPORTANT

***A loader
is a complex tool;
incorrect or neglected
use may lead to
important damages.
Comply with the
safety regulations***

2• SAFETY REGULATIONS

These regulations should be read carefully. Non-compliance with these will relieve the Manip Company from any responsibility in event of any incidents and may entail the cancellation of the warranty.

PROTECTION

against falling object and tipping over.

Warning. If a tractor is not equipped with a protection against falling objects or a 4-pole structure against tipping over (tractors with 2-pole arch), then the driver is exposed to a continuous risk when he manipulates a load.

Restrictions. In this case the loader should be equipped with a mechanism that maintains the tool level.

Reminder. Only tools recommended by Manip should be used.

OBLIGATIONS

Read the manual: Read and study carefully this manual before using the loader, always have this manual within reach, store it inside your tractor, if your manual is damaged or lost get another one.

Assembly out with the current recommendations at the date of purchase is a risk for both the loader and the tractor. Consequently no warranty claim will be taken into consideration for any assembly out with our recommendations.

On delivery the following should be explained:

Safety regulations.

Control workings and use.

Recommendations of use.

Attachment and detachment of the loader.

Attachment and detachment of the tools.

Some warning stickers are at different places on the loader and on the tool, read them and understand their meanings before using the loader or the tool.

If you cannot read one of the stickers or it has been damaged then replace it.

WARNING

A safety belt needs to be fitted and readjusted during work.

Use a sufficient counter-weight to ensure the stability of the tractor. Around 20% of the total weight should be supported by the rear axle.

Control the loader exclusively from the driver's seat.

Keep control over the controls until movements are completed.

Transport on the road should be with the arm raised and empty. Do not hide the traffic lights.

At your work place loaded implements should be transported in a lowered position at all times and at a low speed, in particular on uneven ground. Avoid working on slopes.

During work keep away any person in the area of the loader.

Be careful at all times that the loader does not interfere with overhead obstacles.

Implement changing: check that they are properly locked on by forcing down slightly on the ground.

When not being used, the detached loader should rest on its parking stand with the pins and locking pins delivered with the machine.

Only use implements suitable for the job to be done.

Periodically check the hydraulic system.

3• PROHIBITIONS

Standing under a loader is forbidden.

Never stay under a lifted loader unless the mechanical or hydraulic shut off device is in a locked position.

Never detach a loader without a tool. Always detach the loader on a firm flat ground.

Never modify the original hose connection.

Never modify a sub frame. The sub frames are made for a specific type of tractor. Never fit a sub frame on a tractor that it is not made for.

Any modification of the Manip equipment and the fitting of an implement of another origin than Manip automatically cancels the liability and the warranty on the entire equipment.

Manip may not be held liable in the event of non-compliance with these safety regulations.

**NEVER USE
THE LOADER FOR
ANYTHING OTHER
THAN TRANSPORT
OF MATERIALS
TO USE THE LOADER
FOR LIFTING WORK,
IT HAS TO BE EQUIPPED
WITH SAFETY VALVES**

*see page.23:
COLLECTIVITY KIT
safety with tipping
and lifting.*

*Norm EN 12525:
2000/prA1: July 2008*

**LIFTING
OR CARRYING
PEOPLE WITH
THE LOADER**

IS FORBIDDEN.

4• SAFETY STICKERS



*Read and keep
the maintenance
and user manual.*



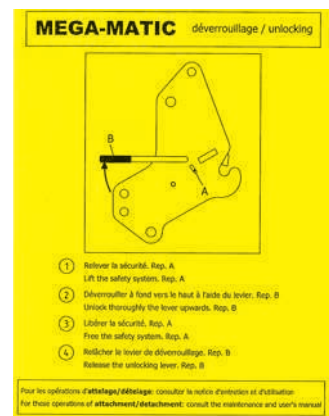
*Never use the loader
To carry people*



*Do not stand under the
loader*



*Compulsory
protections
against tipping
over and falling
objects*



*Unlocking
Security device*



*Lifting hooks for
Loader maintenance*

5• LOCATION OF THE STICKERS



Left bearing box



Right bearing box



Tool carrier left hand side



Tool carrier right hand side



*Tipping
balancing system
left and right*

6• IDENTIFICATION PLATE

The identification plate is located on the outside of the rear left arm, is mentioned: Year of manufacture, Type or model; Serial number; Weight.



Location on the arm

IMPORTANT

The loader serial number is necessary for any inquiry about spare parts or technical assistance.

7• COUNTER LOAD

Usage without counterweight

When the use of a counterweight is not possible, then the stability can be maintained by adding weights on the rear wheel or liquid in the tires in accordance to the following formula:

$$\frac{G \times l_2 - N \times b}{l_2} \leq \frac{P + N}{5}$$

METHOD OF CALCULATION

12525:2000

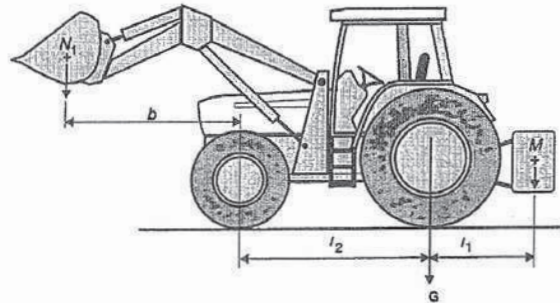
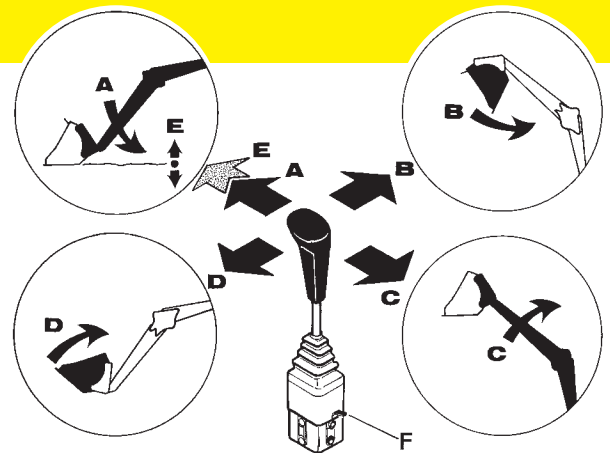


Fig B.1 – Static stability calculation

8• USE OF THE MONO LEVER

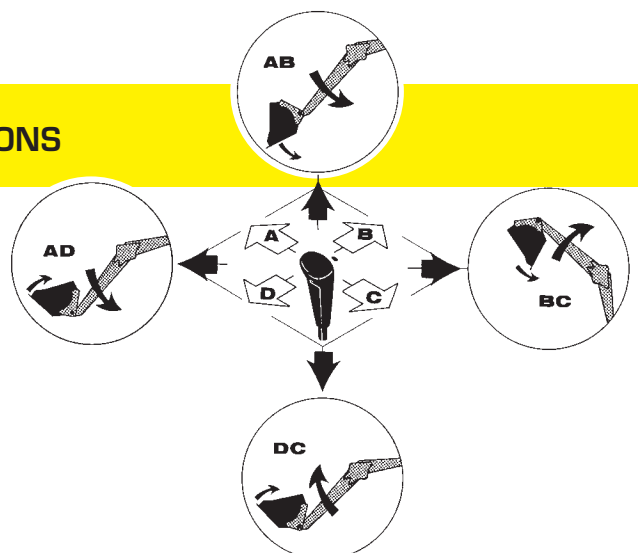
SINGLE FUNCTIONS

- A Down
- B Tip
- C Lift
- D Dig
- E Float



COMBINED FUNCTIONS

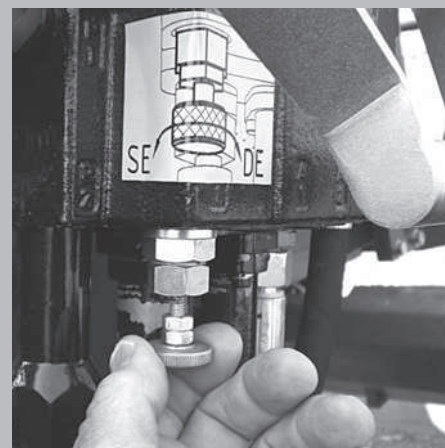
- A-B Down, Tip
- A-D Down, Dig
- B-C Lift, Tip
- D-C Lift, Dig



9• SWITCHING FROM DOUBLE TO SINGLE EFFECT LIFTING

**Loader with Manip monolever
and Manip Drive only**

A valve situated underneath the distributor allows you to switch from
SINGLE EFFECT (VALVE OPEN)
DOUBLE EFFECT (VALVE CLOSED)



10• 3RD AND 4TH FUNCTION

3rd FUNCTION

Double effect hydraulic function to command a tool's hydraulics
This 3rd function is activated by a switch situated on the side of the mono lever.

When the switch is activated, then the mono lever in a tip or dig position will order the opening or closing of a tool.

When the switch is released then the mono lever will command the tipping or digging of the tool.



3rd function command

4th FUNCTION

Supplementary double effect hydraulic function to command a double function tool's hydraulics.

This 4th function is activated by a switch situated on the side of the mono lever.

When the switch is activated, then the mono lever in a tip or dig position will command the 2nd tool's cylinder (lift, accessories...)

When the switch is released, then the monolever will command the tipping or digging of the tool.



4th function command

11• USER INSTRUCTIONS

***MANIP tools
have been designed
for specific use,
they have their own
resistance limits.
Type of use such
as public works,
land clearing,
root cutting
is prohibited.***

OBLIGATIONS

Read the loader and sub frame's user manual before using the loader.

Control the loader exclusively from the driver's seat; keep control of the controls until movements are completed.

Never leave the tractor with its loader in a raised position. All valves generate an internal oil leak necessary for operation, consequently the loader may drop.

Only use implements suitable for the job to be done.

WARNINGS

Use a sufficient counter-weight to ensure the stability of the tractor,

(See page 6 COUNTER LOAD).

Adjust the maximum permissible tyre track of the tractor to increase stability, refer to the manual of the tractor.

Make sure that the machine is not damaged or that some components are not missing and that the maintenance is followed.

Periodically control that the nuts and bolts are tight especially around the wheels and the sub-frame.

Warning. If a tractor is not equipped with a protection against falling objects or a 4-pole structure against tipping over (tractors with 2-pole arch), then the driver is exposed to a continuous risk when he manipulates a load.

Always be aware of your surrounding and make sure that nobody (especially children) is in your working area.

Study your working area and what the ground looks like; mind the holes and hidden obstacles.

Verify and note the passage height compared to the height of the loader.

Do not work near or on a slope.

Make sure that the headlights are always visible and are not hidden by the tool.

Always look at the tool, objects can sometimes fall and roll towards the driver.

Drive carefully always thinking of safety.

Never drive faster than 10 km/h when the tool is loaded.

Slow down when you are turning, lower the loader as much as possible when in motion.

INTERDICTIONS

Never use the loader or the tool as a working plan.
Never use the loader to carry or lift people.
Never pass or stand under a lifted loader.
Never stay under a lifted loader unless the mechanical or hydraulic shut off device is in a locked position.
Never detach the loader without a tool.
Never use the loader for anything other than transport of materials.
Never lift a weight with the tool angle.

ADVICE

Use the strength of the engine and a slow speed to engage the tool into the load you have to move ; the valve in a neutral position to avoid putting the loader and the tractor under abnormal stress that can consequently be harmful to both.
Do not insist if the load you have to lift is too heavy, release the valve lever and start again in a rational manner.
Work according to the loader's strength.
Never lift with the angle of the tool, the concentration of the weight on one side can cause the bending of the arm.
Never carry a load in high position as the loader may lose its balance.
Use and regulate the level indicator to know the position of the tool whilst it is descending.
Tractors with a low hydraulic flow, we advise you to keep a certain engine flow by lowering the arm or by tipping the tool, this is to improve the filling up of the cylinders with oil and avoid the response time.
For levelling work, tip the tool in a 45° angle so that the blade is in contact with the ground, and not the bottom of the tool. This will reduce the wear of the tool.



12• MM AND HD LOADER DETACHMENT

PROCEDURE

IMPORTANT

*Never detach the loader without a tool, choose a flat and stable surface.
This manoeuvre will only be done by the driver who will leave his seat and **FORBID**
any manoeuvre whilst he is working on the loader.
Use all the commands on the engine lower flow.*

CHOOSE a FLAT and STABLE surface.

- 1• TOOL at least 1 meter from the ground. Put the tool in its MAXIMUM DIGGING POSITION.
- 2• LOWER the loader's arm.
- 3• PUSH the lowering lever as far as possible PUT INTO FLOATING POSITION.

IMPORTANT

THE FLOATING POSITION MUST be maintained until the end of the detachment.

PINCHING RISKS

*(manipulate
with caution).*

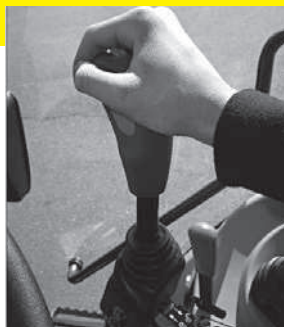
- 4• TIP the tool to put it FLAT on the ground.
Engage the hand break.
- 5• CHECK the lift cylinder's travel dimension 20mm minimum.
- 6• Position the parking PROPS using the original pins.
- 7• UNLOCK the left side, using the lever. The loader will drop down slightly.
UNLOCK the right side, same as for the left side.
- 8• CHECK the pin's clearance in relation to the hooks; otherwise lightly push the lever towards tipping. KEEP IN A FLOATING POSITION.
- 9• DISCONNECT the hydraulic plugs or the Manip Fast (depending on options) (see pages 14 and 15 HYDRAULIC COUPLING).
- 10• Put the flex away in the according support.
Put the protective caps on the couplings, or shut the protective hood for the Manip Fast (according to option).
Return to the tractor cab and check that the 2 axles are off the hooks.
- 11• Slowly REVERSE the tractor making sure that nothing gets caught up.
- 12• CHECK the stability of the loader on its props.

ATTENTION

***THE LOADER
CAN DROP DOWN
DURING THIS
MANOEUVRE***



1- Dig the tool 1 meter from the ground



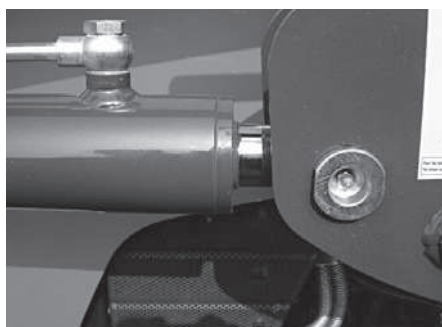
2- Lower the loader to the ground



3- Put to float position



4- Tool flat on the ground



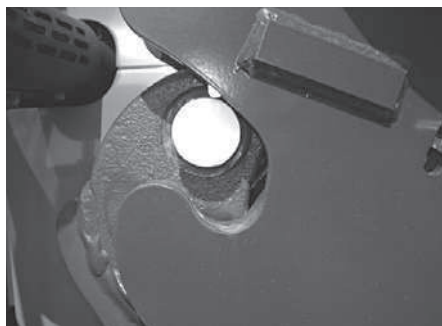
5- Cylinder travel dimension



6- Parking props on the ground



7- Unlock the loader



8- Release the axles before reversing



9- Disconnect hydraulics



10- Put the flex away



11- Slowly reverse the tractor



12- Check the stability

13• MM AND HD LOADER ATTACHMENT

PROCEDURE

IMPORTANT

*This manoeuvre will only be done by the driver who will leave his seat and **FORBID** any manoeuvre whilst he is working on the loader.*

Use the commands on the engine lower flow.

Pinching and crushing RISKS,

*make sure that hands
and feet are away
from moving parts;
do not use fingers
to check the position
of the pins.*

IMPORTANT

**AN INCOMPLETE
OR INCORRECT
ATTACHMENT
CAN HAVE IMPORTANT
OR EVEN LEATHAL
CONSEQUENCES.**

- 1• DRIVE the tractor **FORWARDS SLOWLY** and in a straight line, centred between the loader arms.
- 2• ENGAGE totally the hooks under the pins. **WITHOUT PUSHING THE LOADER.**
- 3• PUT ON floating position, with the lever as far forward as possible.
- 4• Connect the hydraulic hoses (depending on option).
The hydraulic hoses are identified by different colour caps, after checking that they are clean. Make sure that the hoses are the right way round. Always connect according to the colour coding.
Manip'Fast, (see pages 14 and 15 **HYDRAULIC COUPLING**).
- 5• CHECK the position (on each side) of the pins in relation to the hooks. If necessary, move the tractor slowly forward again, without pushing the loader. To vary the loader's hitching height, put into floating position and slowly manipulate the tool.
IN TIPPING to lower the loader
IN DIGGING to raise it
PUT ON the break
CHECK once more the position (on each side) of the pins in relation to the hooks
- 6• FROM THE INSIDE OF THE CAB using the lever, slowly MANIPULATE the lift cylinders to raise the hooks under the hitching points.
If it does not work, PUT ON once again the floating position and start again.
SLOWLY RAISE the loader, locking is AUTOMATIC.
- 7• CHECK on each side that the pins are in their housing.
- 8• FOLD UP the props.
Do not exert any pressure on the props as this may damage them.
CONTROL. Once the attaching is done. Put the tool on the ground to check that the loader is correctly attached.



1- Centre the tractor
between the loader
arms, slowly go
forward



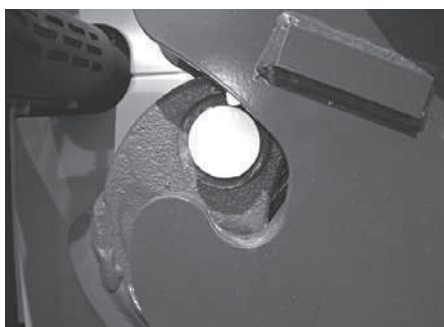
2- Position of the pins before attachment



3- Floating position



4- Hydraulic coupling



5- Check position of pins before attachment



6- Slowly manipulate lift cylinders



7- Check position
of pins after
attachment



8- Fold up
and secure props

14• HYDRAULIC COUPLING MANIP'FAST

DISCONNECT

IMPORTANT

Faulty use or maintenance provoked by high oil pressure may cause serious damage to the couplings.

If you cannot manually connect, never use a lever or an extension as this may damage the mechanism and the couplings.



1- Press on the lock and raise the lever.



2- Remove the upper part of the mobile unit.



3- Hook the disconnected unit on the loader hitch bracket

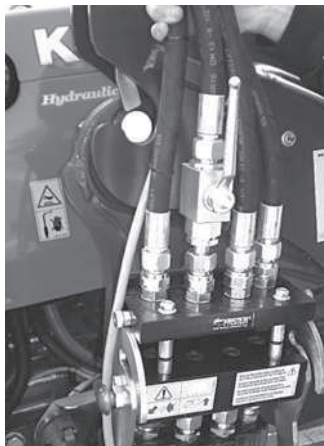


4- Close the protection cover.

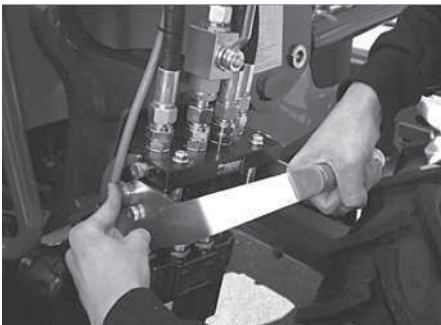
CONNECTER



*1- Open the cover (Protection cover)
Carefully clean the space for the
couplings.*



*2- Position the removable unit
opposite the fixed unit.
Centre the guiding pins.*



*3- Press on the lock.
Raise the lever.*



*4- Position the roller
of the removable unit
in the lever guides
and lower lever until
the safety lock is secured.*

MAINTENANCE

Lubricate the contact points at regular intervals.

If the couplings are damaged because of impurities or due to an excessive oil pressure on connecting, replace the couplings.

15• MANIP LOCK IMPLEMENT DETACHMENT (HYDRAULIC LOCK)

PROCEDURE

IMPORTANT

This operation is to be carried out by the driver from his tractor seat – any outside manoeuvre is forbidden.



Tip the implement slightly.

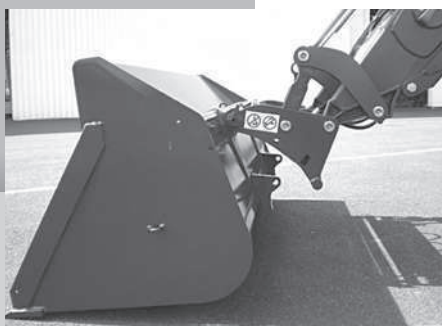


Lower the loader, tool is detached.

Choose a flat and stable surface.
Lower the loader at about 50 cm from the ground.
Put the hand break on.
Put the tool into digging position.

Tools with hydraulic function.
Stop the engine.
Release the oil pressure, move the lever left and right by pressing on the 3rd and 4th function switches.
Disconnect the hydraulic plugs or the Manip Fast tool (According to option, see page 18)
Put the flex away.
Put the protective caps on the couplings, or shut the protective hood on the Manip Fast tool (according to option).

Start the tractor.
Unlock the tool.
Simultaneously press with both hands on both, 3rd and 4th function switches.
Manœuver the lever:
Towards the right to unlock the tool.
Release the switches and back to neutral.



Check the stability of the implement on the ground.

16• MANIP LOCK IMPLEMENT ATTACHMENT (HYDRAULIC LOCK)

Operators manual
MANIP' MPower

PROCEDURE

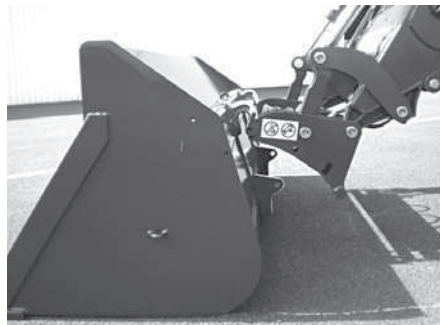
Start the tractor.

Make sure that the locks are in unlocked position, if it is not the case then unlock it, (See chapter. Implement detachment page.16).

Tip the tool carrier frame at a 45° angle.
Slowly bring the tool holder under the upper hooks of the tool.



Lift and dig the tool.



Lock the tool.

Simultaneously press with both hands on
Both 3rd and 4th function switches
Manœuver the lever.

Towards the left to lock the tool,
Release the switches and back to neutral.



WARNING

*Pinching and crushing risk,
a tool badly locked can come loose
Always control that the tool is locked
by pushing it against the ground.*

Tools with hydraulic function only

Stop the engine

Release the oil pressure. Move the lever left and right by
pressing on the 3rd and 4th function switches.

Connect the hydraulics or the MANIP Fast tool, (according to
option see page18).

IMPORTANT

*This operation
is to be carried out
by the driver
from his tractor seat –
any outside manœuvre
is forbidden.*

IMPORTANT

*Do not use tools
which are not
recommended by Manip.
A badly designed
implement can detach
itself and have severe
or even lethal
consequences.
Respect the safety
regulations.*

17• HYDRAULIC COUPLING MANIP'FAST OUTIL 2 AND 4

IMPORTANT

Faulty use or maintenance provoked by high oil pressure may cause serious damage to the couplings.

If you cannot manually connect, never use a lever or an extension as this may damage the mechanism and the couplings.

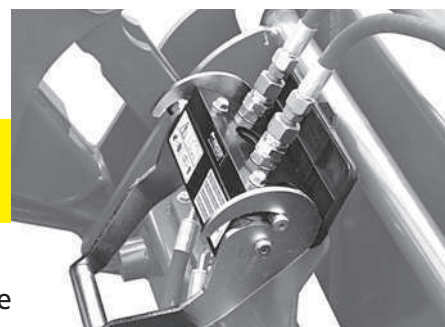
*See pages 14-15
Hydraulic coupling
Manip'Fast.*

IMPORTANT

The handle and the cover of the Manip Fast tool should ALWAYS be on a lock position, if not it can interfere in the digging position and can be worn.

DISCONNECT

Press on the lock switch.
Raise the lever.
Remove the upper part of the mobile unit.
Hook the disconnected unit on the tool.
Close the protection cover.



CONNECT

Open the hood (protection cover).
Carefully clean the surfaces of the space for coupling.
Position the removable unit opposite the fixed unit.
Centre the guiding pins.
Press on the lock button and raise the lever.
Position the roller of the removable unit.
Lower the lever until the safety lock is secured.

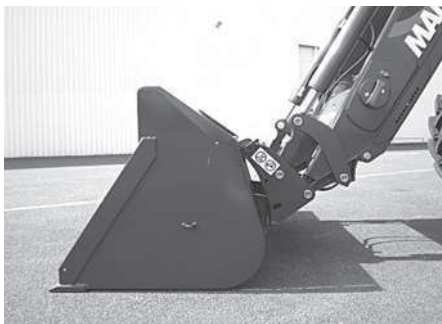
MAINTENANCE

Lubricate the contact points at regular intervals.
If the couplings have been damaged because of impurities or due to an excessive oil pressure on connecting, replace the couplings.

18• LEVEL INDICATOR

THE INDICATOR ENABLES YOU TO POSITION THE IMPLEMENT WHILST LOWERING.

ADJUSTMENT



Position the implement flat on the ground.



Check that the white index can be seen by the driver, if not, slide the rod using the nut.



*Tightening and loosening can be done by hand.
A supple bush will block the rod.*

19• MANIP'PIC

IMPORTANT

*For your own safety,
the Manip Pic
is to be used
only to handle round
and rectangular bales.
ONLY ONE BALE
SHOULD BE
TRANSPORTED
AT ONCE.*

PROTECTION

Warning. If a tractor is not equipped with a protection against falling objects or a 4-pole structure against tipping over (tractor with 2-pole arch), then the driver is exposed to continuous risks when he manipulates a load.

The use of the Manip Pic other than for round and rectangular bales can break the tines and deteriorate the loader; Manip will not be held responsible if those instructions are not respected.

For transport, dismount the tines and put them away in its storage space.

The Manip Pic is not a tool but an accessory; ALWAYS use a tool to detach the loader.



USAGE

Loosen the security screw of the drawer situated inside the loaders tube; with the handle move the drawer clockwise, then pull the handle, the course is limited by a strap.



Position the 2 tines in the sockets located in the tool carrier.

Fasten them with the pins provided

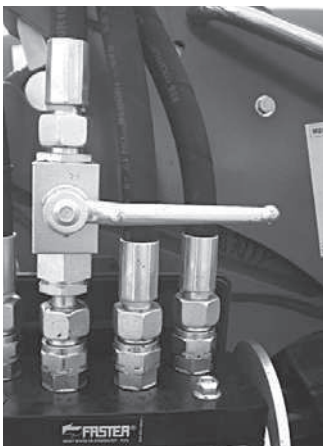
After use, put the tines and the pins away in the drawer.
Push the drawer back and twist it anticlockwise.
Fasten the security screw.

The Manip Activ suspension is there to absorb the shocks when driving on uneven surfaces.

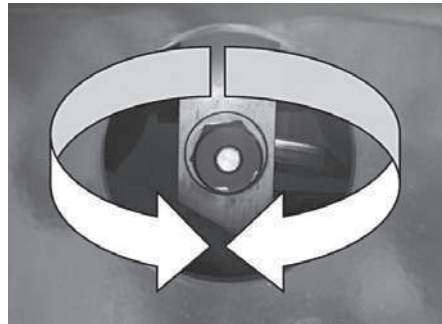
The Manip Activ suspension does not need a shut-off tap; it works with an empty or loaded attached tool.

Manip Activ with tap option.

For any intervention on a raised loader, apart from hydraulic, ALWAYS switch the stop valve on the lifting device supply line in a CLOSED position.



Stop valve
Closed position



To deactivate the MANIP'ACTIV suspension.
Screw the tap.

To activate the MANIP'ACTIV suspension.
Unscrew the tap.

IMPORTANT

The batteries used by the Manip Activ system are pre charged in the plant at precise pressure and are not rechargeable.

Do not open the batteries as they contain nitrogen and can have a suffocation risk.

Do not make any modification of the pressure; a bursting risk can cause serious bodily harm.

21• COLLECTIVITY KIT SAFETY WITH LIFTING AND TIPPING

Extract of the norm. EN 12525:2000/prA1: July 2006.

If the use set out for front loader by the manufacturer includes the operation of the front loader in association with accessories, e.g. big bags handling, pallet stacker and requires the presence of persons close to the front loader when it is in lifted position, then ways to avoid risks of sudden lowering of the front loader accessories must be installed for example in the case of a hose rupture.

THESE SAFETY DEVICES
are to be mounted on lifting and tipping when the loader is used with such accessories.

SAFETY

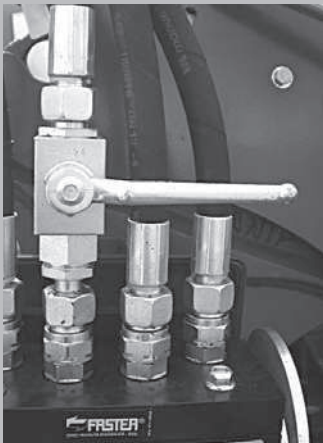
For any kind of intervention on a raised loader, apart from hydraulic system, ALWAYS switch the stop valve on the lifting device supply line into a closed position.

Do not use the stopping valve for intervention on the hydraulic system.

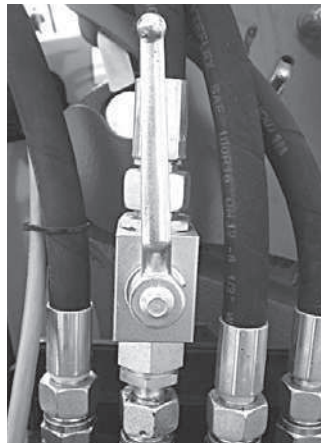
In this case the loader should rest on the ground.

Switch the engine off; lower the oil pressure before conducting any work on the hydraulic system.

High pressure oil can cause serious damages.



Tap closed



Tap open

TRACTOR MAINTENANCE

Detaching the loader is a simple and quick operation, for the maintenance of the tractor; we would advise detaching the loader for reasons of safety and efficiency.

Check regularly the hydraulic oil level and that the circuit is leak-proof.

Regularly drain the oil in the hydraulic circuit of the tractor, and change the filters as prescribed by the manufacturer.

Used oil deteriorates the hydraulic units and may cause serious damage on the tractor and on the loader.

LOADER MAINTENANCE

Control the flexes and the hydraulic links; make sure that the flexes do not rub on other components, change if damaged or if leaking.

Lubricate all the grease nipples on the bearing every 10 hours of usage and after each wash.

When detaching the loader and its implement, protect the couplings by fitting the dust caps.

Prolonged use of the loader leads to a normal wear of the bearings – it is recommended to change the wear bushes before there is too much play which may cause a deterioration of the pins and the wear bushes.

Prolonged stocking. Apply a thin layer of grease on the visible part of the cylinder's rod.

The fitting and the repairs of the cylinder should be done by a specialised dealer who will only be using the parts recommended by the manufacturer.

SUB-FRAME MAINTENANCE

Check that the screws are tightened at the torque, the first time after 10 hours of use and then every 50 hours.

The torques indicated are given for dry and clean threading.

An out of place tightening can damage the tractor structures and cause expensive repair costs.

TIGHTENING TORQUE

QUALITY 5 (classe 8,8)		QUALITY 8 (classe 10,9)	
<i>Diameter</i>	<i>torque</i>	<i>Diameter</i>	<i>torque</i>
1/4	13,6 Nm	1/4	14,9 Nm
5/16	27,1 Nm	5/16	32,5 Nm
3/8	47,5 Nn	3/8	59,7 Nn
1/2	100 Nm	1/2	114 Nm
5/8	230 Nm	5/8	301 Nm
3/4	405 Nm	3/4	440,6 Nm
M8	27,1 Mn	M8	32,5 Mn
M10	54,2 Nm	M10	63,7 Nm
M12	94,9 Nm	M12	108,4 Nm
M14	119,3 Nm	M14	176,3 N
M16	189,8 Nm	M16	271,2 Nm
M20	264,4 Nm	M20	542,3 Nm

Lubricate lightly the slide ramp to help with the attachment.

Control the state of the welds, a crack, even small is a warning; it can in time lead to a rupture and cause important material or corporal damages.

IMPORTANT

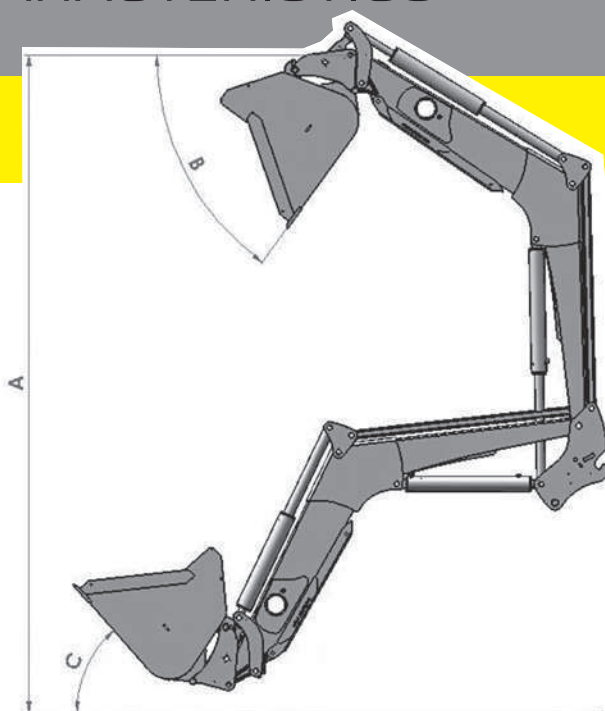
*Never modify
a sub frame.
The sub frames
are made for a specific
type of tractor.
Never fit a sub frame
on a tractor
that it is not made for.*

23• TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
I=Insufficient lifting and excavation capacity.	<i>Oil pressure too low. Damaged hydraulic pump. Control lever inverted.</i>	Check oil pressure before and after valve.
Double Acting valve without floating position.	<i>Valve incorrectly connected. Control cables incorrectly adjusted.</i>	See valve assembly instructions.
The control lever is hard to manoeuvre.	<i>Control cables too short or jammed.</i>	Check assembly, curve angle too short. Lubricate with fluid oil. Risk of freezing.
The loader does not keep load up when the valve is in neutral position. NOTA there is always a minor internal leakage.	<i>Oil leakage in the security valve (tipping). Damaged valve spool. Leakage in the selector. Cylinder leaking.</i>	Check each element one after another.
The loader works very slowly or stops.	<i>Too little oil in the circuit. Damaged or incorrectly connected quick coupling. Faulty hose connection. Too little oil flow.</i>	Fill up the oil level. Check the coupling. Change the fitting. Connect using colour marking. Control tractor hydraulics.
Oil leakage in the cylinder.	<i>Damaged seals. Damaged piston rods. Damaged cylinder body. Defective welding.</i>	Replace the seals checking that other parts are not damaged. To order seals, indicate the loader serial number.
Oil leak at the valve spools.	<i>Defective seals.</i>	Change seals. Check the return pipe to tractor.
The tipping does not hold the lift load.	<i>Adjust the security valve. Excavation 225 bars. Tipping 140 bars.</i>	Adjust using a manometer. Check the valves.
Unusual wear of the bucket blade.	<i>Wrong working method.</i>	Use the floating position. Work in simple effect. See chapter Switching from double to single effect.
Difficulty in attaching or detaching the loader.	<i>Floating position non existent or badly positioned. Stand askew.</i>	See chapter attachment and detachment.
Difficulty in attaching the tool.	<i>Hooks on the tools are incorrectly positioned.</i>	See chapter attaching tool.
3rd function does not work.	<i>Fuse dead. Bad electrical connection. Short circuit.</i>	Check plugs and connections. Check fuses. Wires cut.
Off cantered loader.	<i>Out of shape arm. Sub frame out of shape.</i>	Exchange of the arm. Exchange of the sub frame.

24• TECHNICAL CHARACTERISTICS

Operators manual
MANIP' MPower



CHARACTERISTICS

MODELS	MPower 60	MPower 80	MPower 100	MPower 120	MPower 140	MPower 160	MPower 180
Tractor power HP	50 to 80	60 to 95	70 to 115	95 to 140	100 to 160	110 to 160	150 and +
Lift height tool axes A **	3 m 55	3 m 80	4 m 00	4 m 15	4 m 27	4 m 27	4 m 50
Lifting capacity pallet stacker on the ground *	1560 kg	2100 kg	2440 kg	2510 kg	2910 kg	2910 kg	2900 kg
Lifting capacity pallet stacker at 2m *	1320 kg	1810 kg	2160 kg	2400 kg	2545 kg	2545 kg	2560 kg
Lifting capacity max. height *	1200 kg	1420 kg	1880 kg	2160 kg	2125 kg	2125 kg	2300 kg
Excavation angle on the ground C	44°	49°	51°	52°	49°	44°	48°
Tipping angle maxi. height B	58°	56°	54°	55°	54°	61°	63°
Dimensions of lift cylinders	65 x 40	75 x 40	80 x 50	80 x 50	80 x 50	80 x 50	90 x 50
Lifting DE commutable SE ***	yes	yes	yes	yes	yes	yes	yes
Tipping parallelogram	mechanical	mechanical	mechanical	mechanical	mechanical	mechanical	mechanical
Tool carrier (with Manip'Lock)	euro	euro	Euro	Euro	Euro	Euro	Euro
Width of the arm (Entraxe)	1020mm	1020mm	1020 mm	1020 mm	1020 mm	1120mm	1120mm
Tool carrier predisposed for Manip Pic	2 tines	2 tines	2 tines	2 tines	2 tines	3 tines	3 tines
Arms weight without options	540 kg	640 kg	670 kg	700 kg	820 kg	900 kg	1000 kg
Sub frame	MM	MM	MM	MM	MM	HD	HD

EQUIPMENT

3 rd function	option	option	option	option	option	option	option
4 th function	option	option	option	option	option	option	option
Manip'Lock	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Manip'Activ with or without tap	option	option	option	option	option	option	option
Manip'Fast Tool 2	option	option	option	option	option	option	option
Manip'Fast Tool 4	option	option	option	option	option	option	option
Manip'Pic	option	option	option	option	no	no	no
Kit collectivity (No Manip'Activ)	option	option	option	option	option	option	option

*Power at 180bars at 60 litres/mn. **Variable according to tractor type. ***Only with monolever.

IMPORTANT

The serial number is needed in case of any information, any spare parts or any technical assistance.

EXTRACT OF THE GENERAL SALES CONDITIONS

PRICE LIST :

Our discounts are applicable to the **"FRANCE" PRICE LIST - EX-WORKS**. Our price list may be reviewed in the light of economical changes, this revision would be notified 1 month beforehand. This clause also applies to all orders already registered.

For postal packages - on all dispatchments by EXPRESS or AIR, the dispatchment expenses will be included in the invoice.

DELIVERIES :

Delivery times will be taken into account of, as far as possible.

The final breakdown of truck loads be sent 15 days before the requested delivery date.

Late deliveries due to cases of force majeure or to any reason beyond our control will involve the automatic adjustment of granted advantages. It will be the same for delayed collection by customer or for requested delivery postponement.

The delivery time shown on the order acknowledgment is the only valid one. COMPAGNIE COMMERCIALE RIBOULEAU undertakes to guarantee this delivery time more or less two weeks. If the machine is delivered within the delivery time of more or less two weeks, the buyer cannot claim any compensation for late delivery.

In the event of exceeding these 2 weeks and if this delay prevents the basic use of the machine during the season, COMPAGNIE COMMERCIALE RIBOULEAU in the position of not finding a substitution solution to help out the customer, any compensation will not exceed 1 % per week late and will have reached a ceiling of 5 % of the net value (based on invoice) of the machine.

PAYMENT :

Invoicing in EURO.

Payment must be made by bank transfer in EURO by IBAN (the IBAN number will figure on each invoice).

Payment delay will lead to an interest invoice of 0,75 % every two weeks. We remind you that payment made by bank transfers should entirely correspond to the invoice(s) consequently all charges are at the customer's expense.

PRE-PAYMENT (when requested by CC Ribouleau) :

In order to respect the delivery times announced, the entire payment of the invoice must be received (credited to our account) 8 days before the programmed shipment.

In certain cases, a downpayment of 20 % will be requested with the order.

GUARANTEE (Service Discount) :

A service discount of 0,5 gross point for 1 year is granted at the end of the season together with the replacement of defective parts in order to cover eventual guarantee claims, which will consequently be covered by the importer. Spare parts which would have been replaced under guarantee should be sent to us at the end of the season, whereas the return of certain parts is absolutely necessary for control by our Technical Department.

26• DECLARATION C.E. OF CONFORMITY

The manufacturer: **MANIP**

Avenue de la coopération
86200 LOUDUN
France

Declares that the equipment.

MPower60, MPower80, MPower100, MPower120, MPower140,
MPower160, MPower180

Is according to the directive dispositions "Machines" 98/37/CE
et 2004/108/CE and to the national legislations

Is according to the NF.EN.953, NF.EN.14018 and NF 12525
standards: 2000/prA1: July 2008.

The manufacturer.

Made out in Loudun, the

The Managing Director
Dominique BERGERE



[illegible]

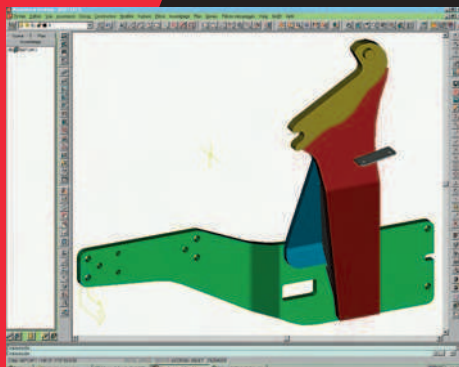
This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface. There is no handwriting or other markings on the paper.

LE SAVOIR-FAIRE MANIP'

For Manip' your satisfaction is our priority. This is why from the design to the forwarding of the product; we do all that is possible to deliver you a high quality product.



*Machine tooling
with numerical control.*



*Computer-assisted design
and drawing (CAD & CAX).*



*Environment friendly
painting powders.*



Numeric drill



*Oxycutting with numerical
control.*



*Shot-blasting of the loader parts
and tools before painting.*



MANIP'

**Factories - Technics
Research - Information**

MANIP' - Av. de la Coopération - 86200 LOUDUN
Tél. 00 33 5 49 98 04 27 - Fax. 00 33 5 49 22 41 32
www.manip.com

Distribution

COMPAGNIE COMMERCIALE RIBOULEAU

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75008 PARIS - FRANCE
Tél. 00 33 5 49 81 50 00 - Fax. 00 33 5 49 72 09 70

MANIP' has the right to modify the characteristics, the equipment and the prices without any notice.
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QUEST IMPRESSIONS EUROPE

ERROR: undefined
OFFENDING COMMAND: def0

STACK:

```
0
/byte-offset
0
-mark-
-null-
-null-
-null-
true
[/DeviceN [(Cyan) (Magenta) (Yellow)] [/DeviceCMYK ] {-dictionary- --begin
-- / x2 xdf / x1 xdf / x0 xdf / t0 x0 --dup-- 1 --ge-- {-pop-- 9 } {-
dup-- 0 --le-- {-pop-- 0 } {9 --mul-- } --ifelse-- } --ifelse-- --def-- /
t1 x1 --dup-- 1 --ge-- {-pop-- 9 } {-dup-- 0 --le-- {-pop-- 0 } {9 --
mul-- } --ifelse-- } --ifelse-- --def-- / t2 x2 --dup-- 1 --ge-- {-pop
-- 9 } {-dup-- 0 --le-- {-pop-- 0 } {9 --mul-- } --ifelse-- } --ifelse--
--def-- /min0 t0 --cvi-- --def-- /max0 t0 --ceiling-- --cvi-- --def--
/min1 t1 --cvi-- --def-- /max1 t1 --ceiling-- --cvi-- --def-- /min2
t2 --cvi-- --def-- /max2 t2 --ceiling-- --cvi-- --def-- /f0 min0 max0
--eq-- {{min0 f1 }} {{-mark-- min0 f1 max0 f1 0 1 3 {-dup-- 3 --index
-- --exch-- --get-- --exch-- 2 --index-- --exch-- --get-- t0 min0 max0
5 3 --roll-- int 3 1 --roll-- } --for-- --pop-- --pop-- --]} --ifelse
-- --def-- /f1 min1 max1 --eq-- {{/p0 xdf min1 f2 }} {{/p0 xdf --mark--
min1 f2 max1 f2 0 1 3 {-dup-- 3 --index-- --exch-- --get-- --exch-- 2
--index-- --exch-- --get-- t1 min1 max1 5 3 --roll-- int 3 1 --roll-- }
--for-- --pop-- --pop-- --]} --ifelse-- --def-- /f2 min2 max2 --eq--
{{/p1 xdf min2 f3 }} {{/p1 xdf --mark-- min2 f3 max2 f3 0 1 3 {-dup-- 3
--index-- --exch-- --get-- --exch-- 2 --index-- --exch-- --get-- t2
min2 max2 5 3 --roll-- int 3 1 --roll-- } --for-- --pop-- --pop-- --]}
} --ifelse-- --def-- /f3 {/p2 xdf --mark-- 0 9 p2 lmt 10 --mul-- 0 9 p1
lmt --add-- 10 --mul-- 0 9 p0 lmt --add-- 64 --mul-- 4 {-dup-- -3 --
bitshift-- /byte-offset --exch-- def0 0 1 1 {byte-offset --add-- Sample
--exch-- --get-- --exch-- 8 --bitshift-- --or-- } forexch 16 --add-- } --
repeat-- --pop-- --]} --def-- /rnd {65536 --mul-- 0.5 --add-- --floor
-- 65536 --div-- } --def-- f0 {} --forall-- --dup-- 65535 --ge-- {-pop--
1 } {-dup-- 0 --le-- {-pop-- 0 } {65535 --div-- } --ifelse-- } --ifelse--
0 1 3 2 --roll-- lmt rnd 4 1 --roll-- --dup-- 65535 --ge-- {-pop-- 1 } {-
dup-- 0 --le-- {-pop-- 0 } {65535 --div-- } --ifelse-- } --ifelse-- 0 1 3
2 --roll-- lmt rnd 4 1 --roll-- --dup-- 65535 --ge-- {-pop-- 1 } {-dup
-- 0 --le-- {-pop-- 0 } {65535 --div-- } --ifelse-- } --ifelse-- 0 1 3 2
--roll-- lmt rnd 4 1 --roll-- --end-- }]
```