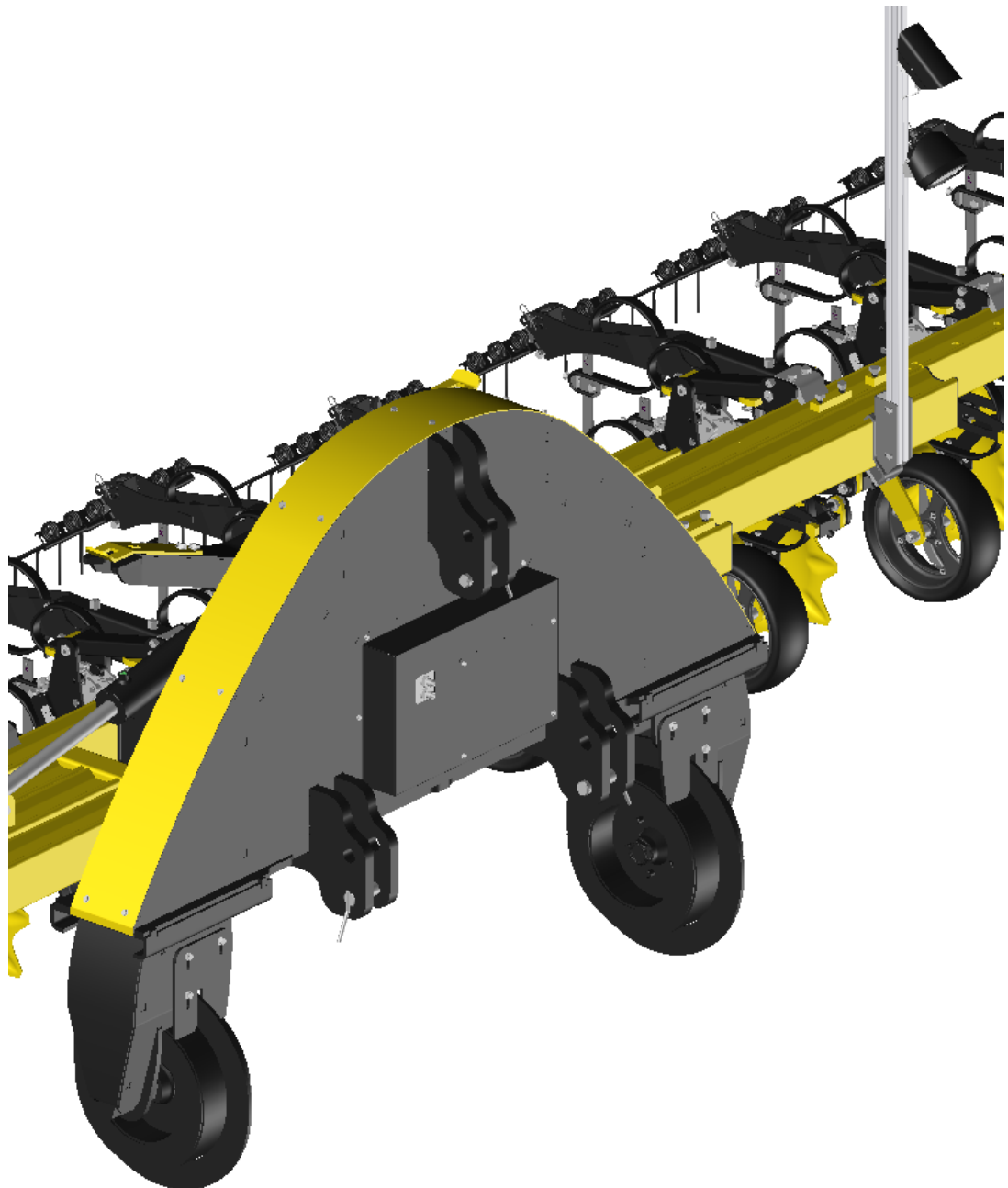




GUIDANCE INTERFACE LYNX^X



B.C. TECHNIQUE AGRO-ORGANIQUE S.A.S.





Dear user,

First we would like to thank you for your confidence and hope that your LYNX guidance interface will give you full satisfaction.

The few minutes you will spend reading this leaflet will allow you to use the full performances of your LYNX guidance interface, to save its service life and work in full safety conditions.

This user guide is an important document, keep it safe and refer to it if needed. Provide it to any other user and to the new owner, should you resell it.

Should any picture or technical data included in this document not be precisely matching your LYNX guidance interface, operating conditions would however remain unchanged.





1. Conformity statement and device identification

1.1. Conformity statement



The manufacturer:

**BC TECHNIQUE AGRO-ORGANIQUE
Bois Choppard
F-89270 VERMENTON**

Declares the the devices:

LYNX guidance interface

Serial nr:



Fulfil the statements of directive 2006/42/CE of European parliament
and council dated May 17th, 2006 suitable to machines.

Vermenton, on : / / .

Mathias BOUNON
Chairman
B.C. TECHNIQUE AGRO-ORGANIQUE S.A.S.



1.2. Data plate

	B.C. TECHNIQUE Agro-organique Bois Choppard F-89270 VERMENTON
Désignation / Type :	<input type="text"/>
N° de série / Serial number :	<input type="text"/>
Poids / Weight :	<input type="text"/>
Année / Year :	<input type="text"/> 

Appear on this plate designation and serial number both required for any request of information, spare parts or technical support.



2. General safety rules

2.1. Obligations and responsibilities

These instructions should be considered only as guidelines, and non-binding, in any case for neither BC TECHNIQUE's nor its representative's responsibility. The entire responsibilities of operation, road transportation, maintenance and servicing lies with owners and operators.

The owner and operator are entirely liable for the correct operation of the device in every respect. The owner is also responsible of ascertaining the staff operating the device read and understood these instructions and works in accordance with regulations and provisions in force.

Should one of the device's operators find out a breach of security rules, this must be addressed immediately.

Prior to delivery, every machine is submitted to quality inspection and tries in operation. However, the operator/owner remains fully liable of of the device's proper operation in the field.

Modifications applied to the machine's design are part of our continuous improvement process. The machine's description apply to its configuration at the time of this leaflet's writing. The user guide may include pictures showing a machine that does not match exactly yours, depending on model, options or performed upgrades.

2.2. To do before use

-Carefully read these instructions and make sure their content being understood.

-Learn to operate properly the machine, keeping prudent.

If operated by an untrained operator, or neglectfully used, the machine may turn out to be hazardous.

The machine will be part of the user and colleague's workplace. Therefore, care has to be taken of everyone's safety and of proper use of individual protection equipment.

2.3. Description of safety symbols



Always pay particular attention to instructions or diagrams highlighted by this symbol. This symbol warns against a deathly hazard, serious physical injuries or important material damage should no action being taken to avoid it.

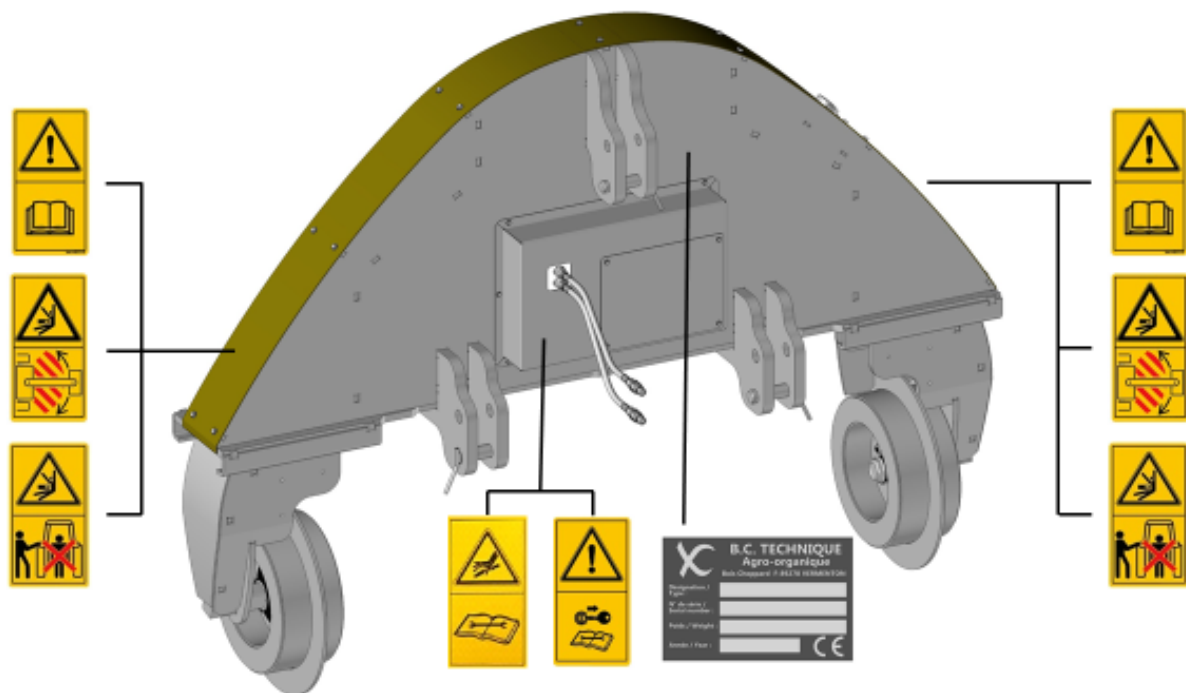


This symbol calls to a particular situation or required action to ensure proper use of the machine. Breaching these instructions may result in issues affecting either the machine or its surroundings.



Information involved in this symbol are of interest, because they offer advice or particularly useful information about the proper operation of the machine.

2.4. Warning signs








 <small>6041 402 310</small>	<p>Prior to putting the machine into use, please read the user guide and fulfil the safety instructions its states.</p>
---------------------------------	--

	<p>Risk of crushing due to machine's parts in action ! This may cause extremely severe injuries like the loss of members. Avoid anyone remaining in this dangerous zone as long as the tractor's engine is running and hydraulic and electronic systems are into action.</p>
	<p>Risk of injury by contact with high pressure hydraulic fluid leaking, due to hydraulic hose's sealing defect. High pressure hydraulic fluid jet leaking may penetrate the skin and result in extremely serious or lethal injuries.</p> <ul style="list-style-type: none"> • Never be trying under any circumstance to plug a hydraulic hose leak with fingers or hands. • Please read and fulfil safety instructions from the user guide leaflet prior to proceeding in any servicing or repairing hydraulic hoses. • Should such injury happen, immediately consult a doctor.
	<p>Risks of crushing between the tractor's back and the machine when coupling or uncoupling it. This may cause extremely serious injuries or death.</p> <ul style="list-style-type: none"> • It is forbidden to activate the tractor's 3-points hitch hydraulic circuit as long as people stand between the tractor's back and the machine. • Action levers of the 3-points hitch should be actioned <ul style="list-style-type: none"> - only from the working zone dedicated to that purpose - never, under any circumstance, when you are standing in the hazard zone between the tractor and the machine.
	<p>Hazardous situations for the operator when taking action to the machine, for example when mounting, setting up, troubleshooting, cleaning, servicing or repairing, due to the machine's inadvertent start or move! Possible risk may result in severe body injuries and death.</p> <ul style="list-style-type: none"> • Prior to any action on the machine, have every measures taken to prevent inadvertent start or move. • Regarding the type of action to be taken, read and fulfil the instruction of the relevant chapter of this user guide leaflet.






2.5. Safety instructions

2.5.1 Safety instructions relevant to the machine's setup and maintenance



	Always park the device on a plain and steady ground.
	The machine is featured with a hydraulic circuit, under pressure when the interface is coupled to a tractor. Always stop the tractor and disconnect power source depending on during every repair or maintenance action taken to the interface.
	Regularly check the 3-points hitch's balls and pins for wear, as well as the interface's coupling pins.
	Prior to connecting the hydraulic hoses, always make sure the male connectors of the interface and the female connectors of the tractor are clean and free from dust.
	In order to safeguard the quality and safety of the equipment, only original BC TECHNIQUE spare parts are to be used. Terms of warranty as well as any claim referring it will be void, should non-original spare parts having been used.

2.5.2 Safety instructions for road transport

	The entire responsibility of transport on public roads lies on the owner and driver.
	Having first coupled the carriage, make sure that at least 20% of the tractor's weight bears upon the front wheels. This will preserve the carriage's manoeuvrability during the drive.
	To avoid any hazard resulting from errors during the drive on roads, the whole electronic control equipment, either outside or inside the cabin, must be shut off before beginning to drive.



2.5.3 Safety instructions during the machine's operation

	<p>When the tractor's engine is running, make sure that surrounding people stand at a sufficient safe distance from any suspended load, and from any lifted or mobile machine member.</p>
	<p>Every time there is work being done beneath the machine, or every time there is a risk of injury by crushing, the machine has to be fully and properly lifted and supported. Use some stands.</p>



3. Introduction to the machine

3.1. General information

The main purpose of the interface is to ensure the tilling device an accurate following of the seeding lines.

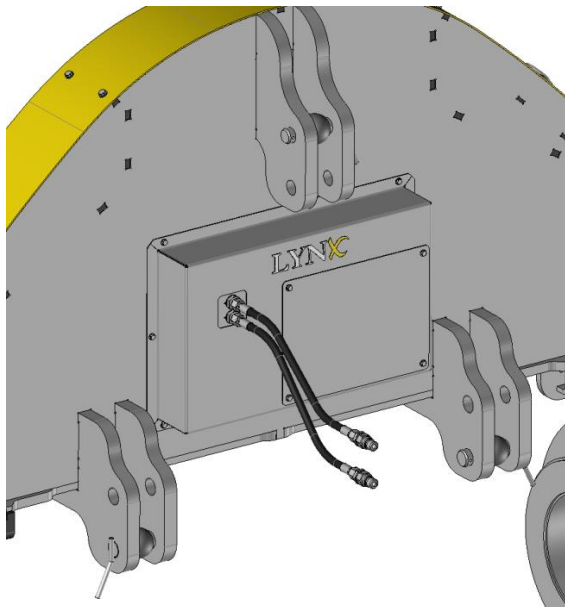
All optional features can be subsequently mounted to the basic machine



Post-delivery assembly should be performed only by required technical-skilled staff.

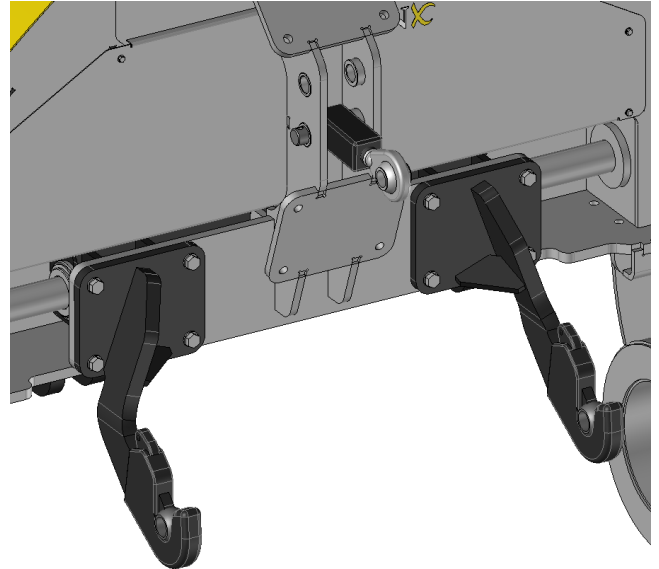
3.2. Guidance interface linkage

The LYNX guidance interface is featured with standard linkage cat.3



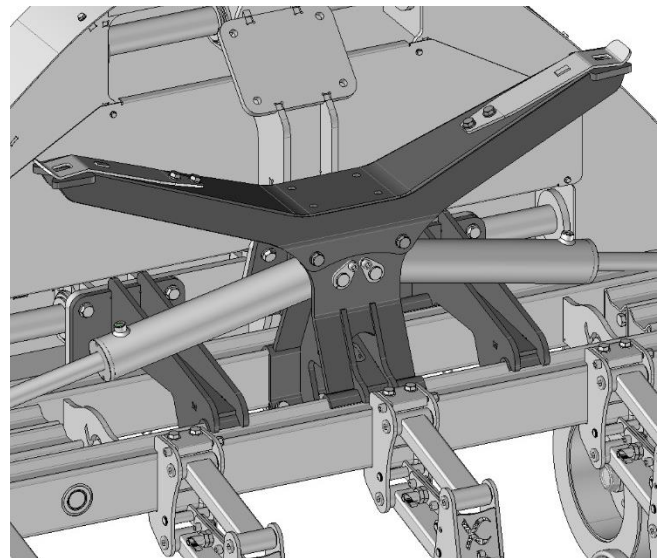
3.3. Rear linkage

The rear linkage plates are pierced with various sets of holes allowing various attachments to be coupled to the interface, BC TECHNIQUE devices as well as other brand's devices.



3.4. Attachment for B.C. TECHNIQUE row hoe

This attachment has been specially designed to reduce the rear overhang.





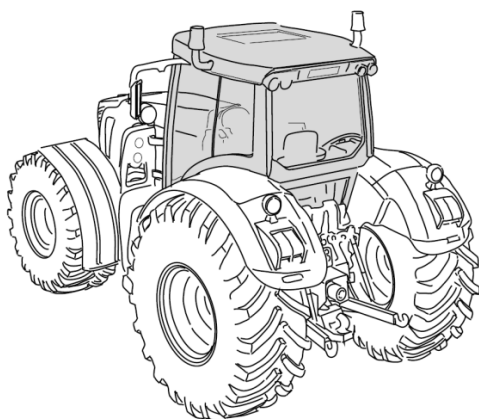
4. Set-up

4.1. Tractor requirements

The LYNX Interface requires at least a 100-HP tractor fitted with a 3-points linkage cat.3. The tractor should not be coupled to the machine if either the maximum load per axle or its specific maximum total authorized weight is exceeded.

The tractor must feature:

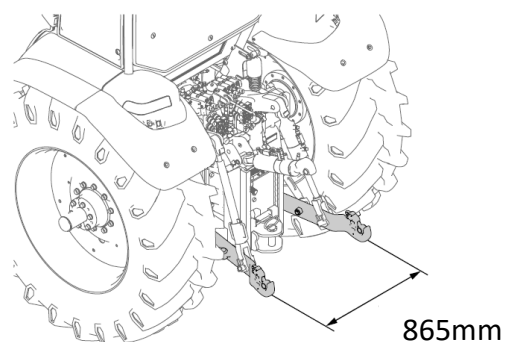
- 1 or 3 double-action hydraulic valves, depending on the device's options.



The tractor's cab should be designed to protect the operator from debris and dust which are dangerous for his health.

4.2. Hitching

1. Adjust both the tractor's hitch's arms so they stand the same height.
2. Should the tractor feature quick-hitching hooks (recommended) adjust the width between the hitch's arms so the optimal center distance of 865mm is fulfilled.



3. Drive in reverse gear till the tractor comes about one meter away in front of the interface's linkage points Engage the tractor's parking brake
4. Connect the hydraulic hoses and electric cables.
5. Drive one more meter backwards to the linkage points.



Nobody has to be standing between the tractor and the interface during the tractor's reverse drive.

6. Couple the interface's three points to the tractor's.
7. Lift the machine
8. Have the stands off.

4.3. Installation and connection

4.3.1 Hydraulic connection



Prior to boring an attachment hole in the tractor's cabin, make sure there is no concealed cable at the drilling spot.

Do not invert polarity

Having this connection properly made is important in order to prevent any malfunction due to eventual faulty wiring. (Diagram: see section 9)

Check that the machine's connection cable is not pinched under the tractor's rear window pane.

Unplug the power when the machine is out of the field.



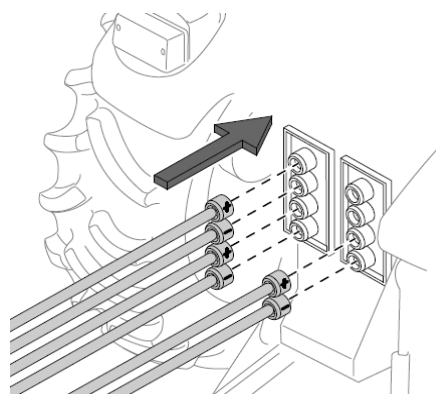
4.3.2 Hydraulic connection

Connect the hydraulic hoses to the tractor's hydraulic connectors. Carefully check that all hoses are properly connected to the relevant hydraulic connector.

For optimal operation of your LYNX interface, we recommend to connect the hydraulic return hose to a free connector on the tractor. (Diagram: see section 8)



Carefully clean connectors and adaptors. This will prevent a lot of issues, as well as early wear of the hydraulic circuit.

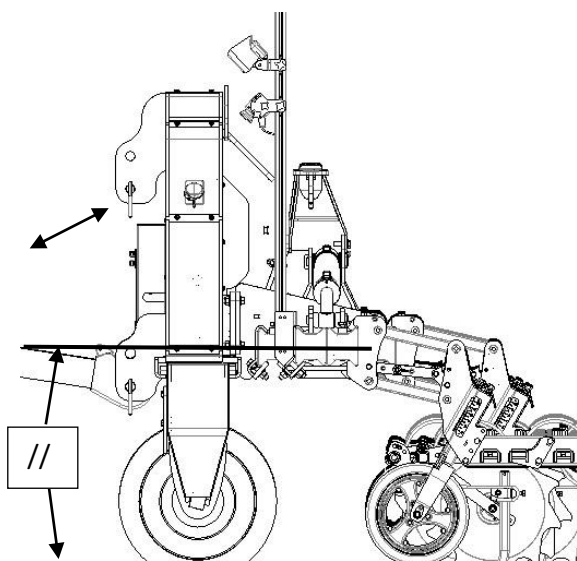




5. General settings

5.1. Levelling

The machine landing on the ground with discs entering the soil down to the wheel's tread band, adjust the top link's length so the chassis is parallel to the ground. Adjust the stabilizer links to prevent side shifts of the tractor's hitch arms.

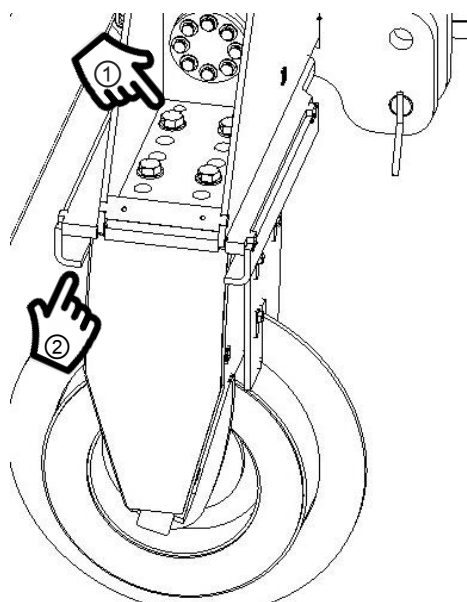


5.2. Setting of the track width

The LYNX guidance interface is featured with two stabiliser wheels. Their track-width has to be adjusted to fit the tractors track and till between two of your crop's rows.

To make this setting:

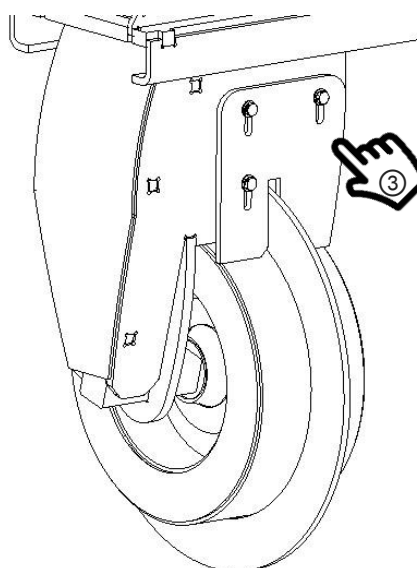
- Unfit the arched shroud.
- Unfit the fixing screws of each wheel-holder ①
- Slide the wheel holders in the guideways ② provided for this purpose and place them at the intended spacing.
- Now fit the screws back on each wheel-holder and remount the shroud.



5.3. Scrapers setting

By using the 3 setting screws ③, adjust the scrapers positions to get the wheel optimally cleared.

We recommend spacing the scraper 5 mm away from the wheel





6. Camera guidance

Please refer to the
Tillet&Hague
Reference Manual
[Link here](#)



7. Maintenance and servicing

Please fulfil the maintenance and servicing instructions stated below so you make sure your devices remain in perfect operating condition.

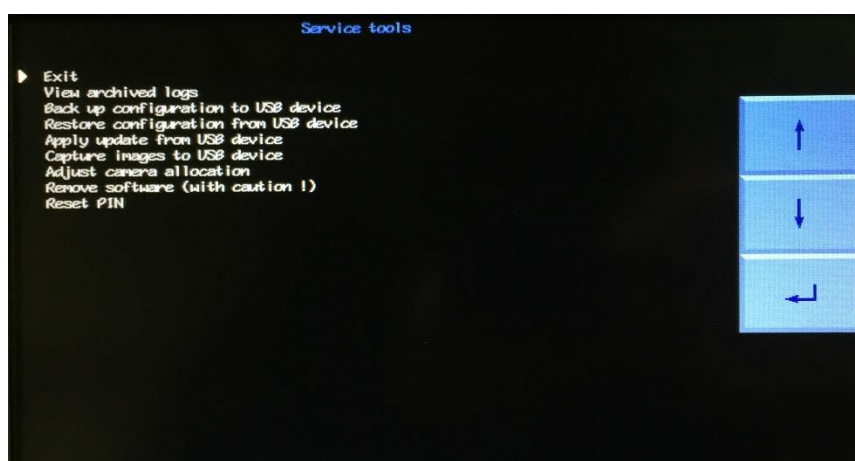
7.1. Maintenance and servicing of the guidance system

1. Regularly check the hoses and cables route and protect it against frictions.
2. Although all components having been designed to withstand rain, we recommend the control box being stored in a covered dry place away from inclemency when stored for long time.

3. Always make sure that the 12V electric power supply features a fuse protection (20 Amp).
4. Make sure the proper power polarity is fulfilled.

Blue = Negative

Brown (fuse side) = Positive



From the starting screen, the user will access the service menu by touching the tools icon. The above pictured service menu offers various useful tools for maintenance or troubleshooting of a system.

« **View archived logs** » accesses the archived logs cleared from the current errors log.

« **Back up configuration to USB** » requires an USB memory stick being inserted in the plug located at the console's bottom. It gets all configuration files and error logs saved to the memory stick.

This is helpful when using the same configuration on multiple machines, preparing upcoming console exchange, or storing a record of client's configurations.

It should be useful as well for remote error diagnosis, for the back-up file (hoe_backup.tgz) can be sent an expert by email for analysis.

« **Restore configuration from USB device** » loads the content of a back-up file (hoe_backup.tgz) from a USB memory stick inserted in the console's bottom's plug.

« **Apply update from USB device** » searches for the update file (update.tgz) on a memory stick inserted in the console's bottom's plug, and applies the update if selected.

« **Capture images to USB device** » records a single picture of the current camera view. If multiple cameras are installed, choice is asked. This feature is helpful for remote



troubleshooting, for the image file can be sent an expert by email for analysis.

« **Adjust camera allocation** » Allows the sorting of the cameras list

« **Remove software** » Feature allowing to suppress unintended operating modes. It is not

useful for inter-row operation and never should be selected.

« **Reset Pin** » resets the PIN code protection of configuration files editor.

7.2. Lubrication and greasing

A regular maintenance of your devices moving parts will ensure its optimal operation and enhance its service life.



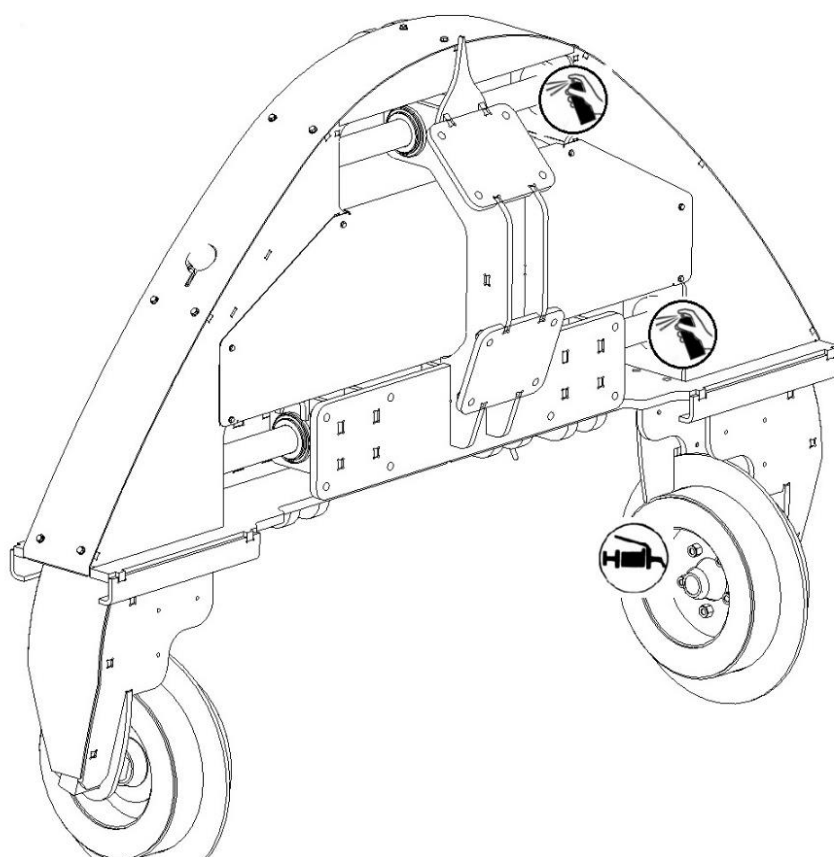
Sliders lubrication: Spray some PTFE dry lubricant on both guidance sliders.

Frequency: every 10 operating hours.



Greasing the wheels hubs: Unfit the hubs taps and fill in grease.

Frequency: Once a year.



7.3. Spare parts

In order to guarantee the safety of your LYNX interface's operation, as well as its service life, always use manufacturer's original spare parts. Fitting any other spare part the the manufacturer's will result in voiding the warranty.



Your machine holds the CE compliance mark. Use only new and original B.C. TECHNIQUE-approved spare parts.

7.4. Cleaning

When performing the clean-up with a HP cleaner, please spare the joints, rams, rollers, bearings.

Have a greasing done after every cleaning (see section 7.2)

7.5. Instructions for storage

Your LYNX guidance interface includes hydraulic systems, we suggest that it is to be stored in a covered dry place.

Prior to uncouple your machine, make sure the storing spot's ground is plain, clean and steady.

- Use the provided stands to stabilize the machine during and after uncoupling.
- Remove the pressure in the hydraulic circuits by actioning the tractor's controls (with engine stopped)



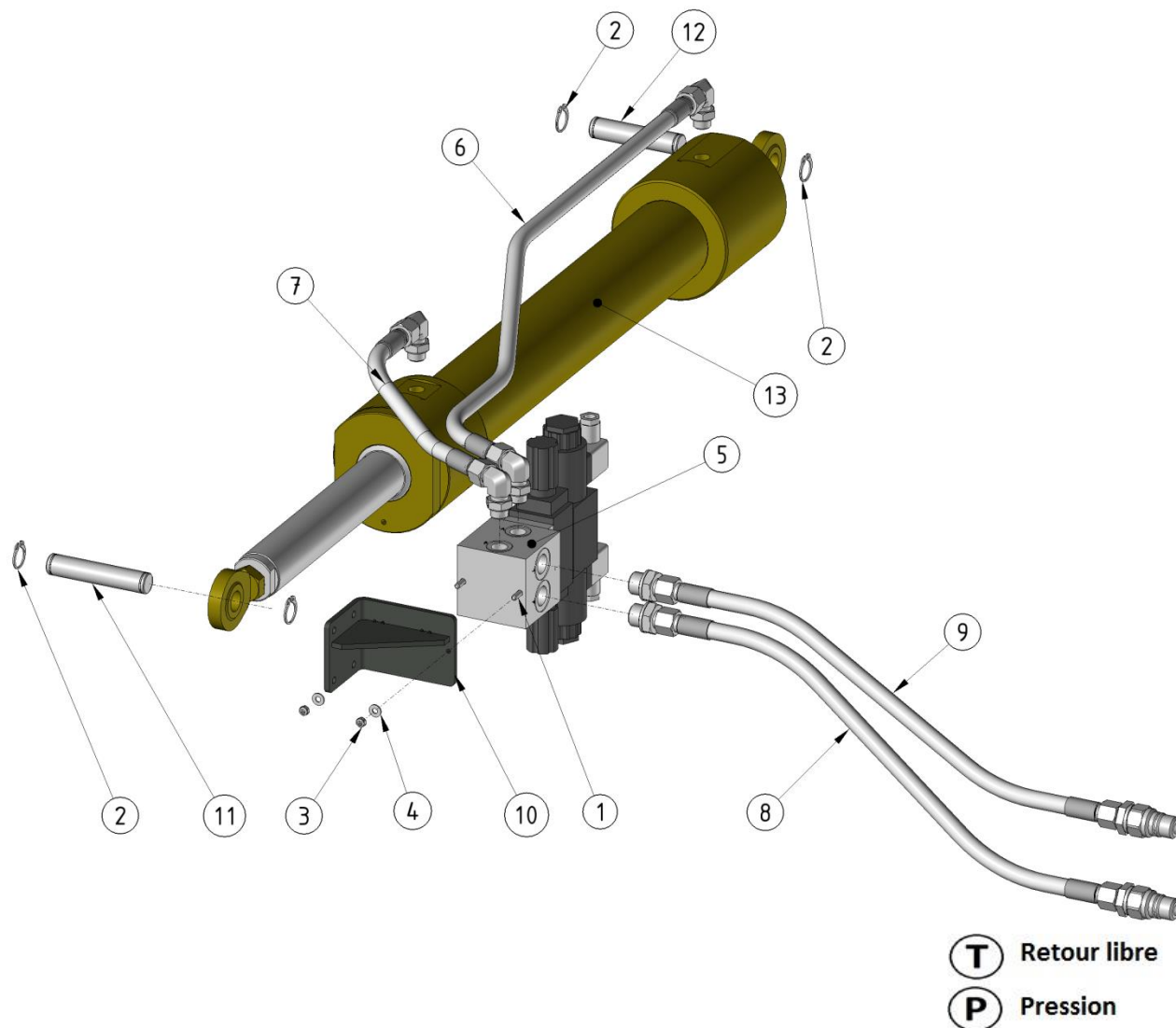
Never let children play around a farm machine.



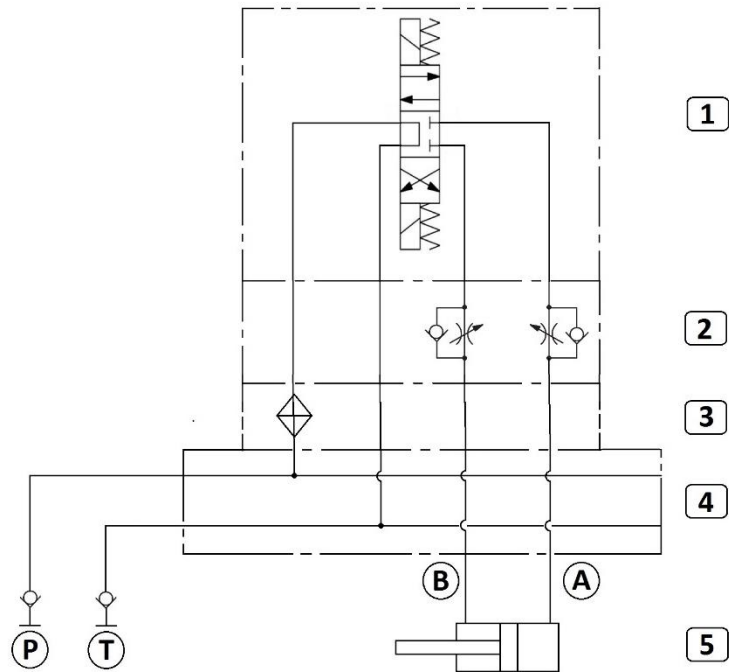




8. Hydraulic circuit

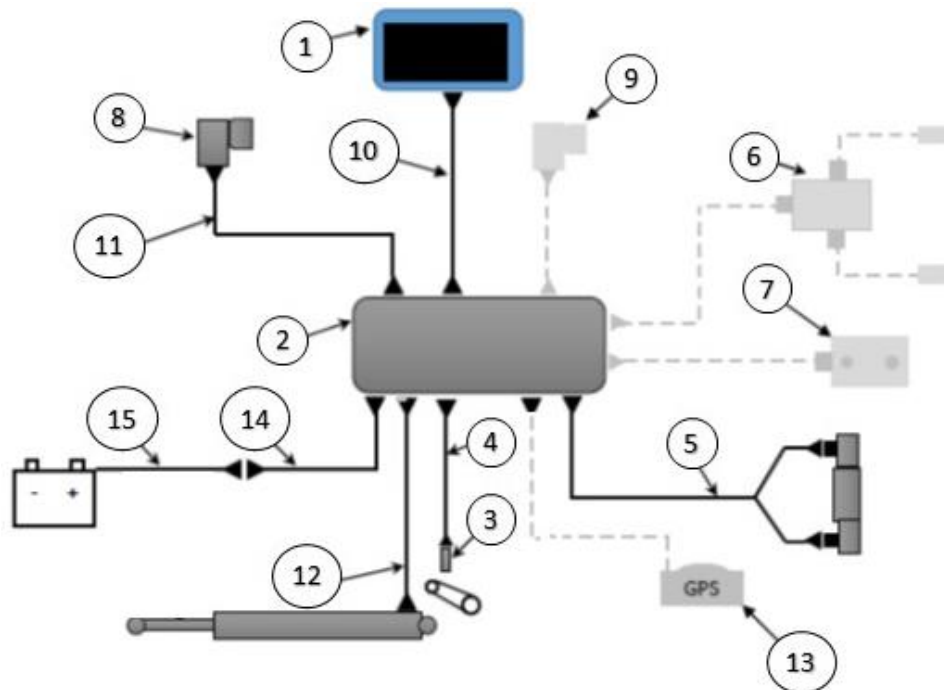


Mark	Reference	Designation
1	B5X75476288	M5 Cheese head screw
2	BAEEXT20471	Ø20 Axles circlips
3	BECHFR57040ZN	M5 Locking nut
4	BRD57089ZN	M5 Washer
5	CHY5	Interface hydraulic block unit
6	FHY1	Interface ram hose (head end)
7	FHY2	Interface ram hose (rod end)
8	FHY3	Interface pressure hose
9	FHY4	Interface return hose
10	MS25P	Hub holder corner
11	US38Z	Interface ram axle (rod end)
12	US39Z	Interface ram axle (head end)
13	VH4P	Interface side-shift ram with knob



Mark	Reference	Designation
1	CHY1	4/3 Solenoid valve
2	CHY2	Flow valve
3	CHY3	Filter
4	CHY4	Hub block
5	VH4P	Side-shift ram

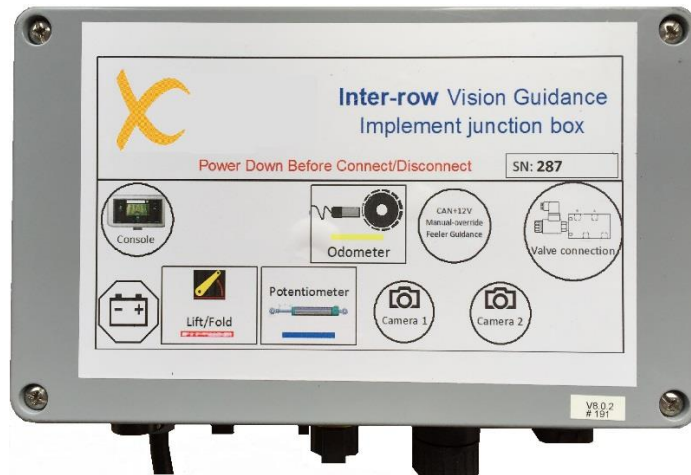
9. Electric circuit



Mark	Reference	Designation
1	CEL1	Camera system control unit
2	CEL2	Camera system electrical box
3	CEL3	Camera system lift sensor
4	CEL4	Camera system lift sensor wire
5	CEL5	Camera system distributor wire
6	CEL6	Feeler-guidance control box (option)
7	CEL7	Manual-guidance control box (option)
8	CEL8	Camera
9	CEL8	Camera (option)
10	CEL9	Camera system control unit to electrical box linking wire
11	CEL10	Camera wire
12	CEL11	Camera system knob wire
13	CEL12	Camera system GPS speed sensor (option)
14	CEL13	Camera system power cord
15	CEL14	Camera system battery linking cord (option)



Camera system control unit Ref: CEL1



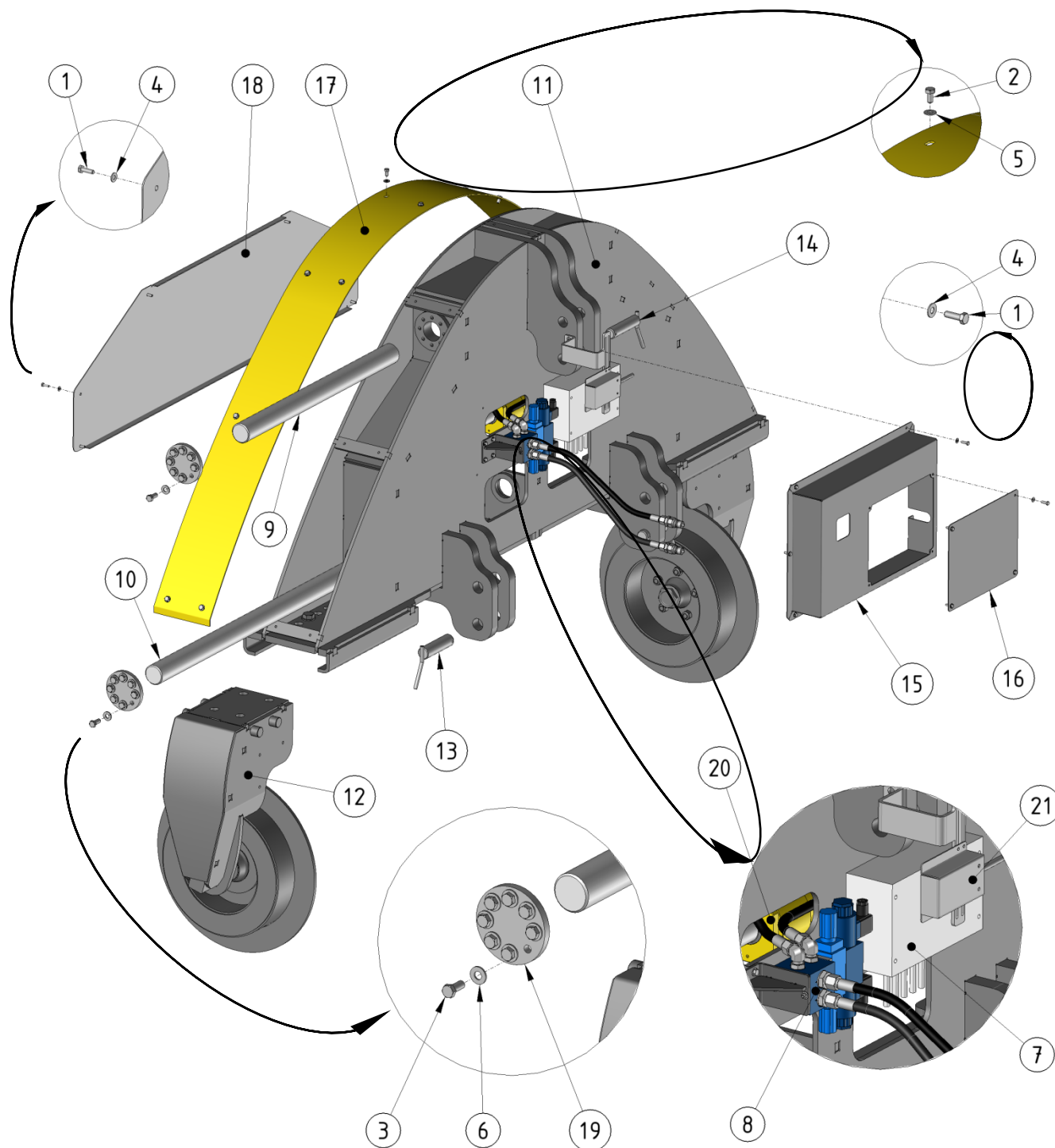
Electric box ref: CEL2





10. Nomenclature

10.1. Interface fixed chassis - Linkage



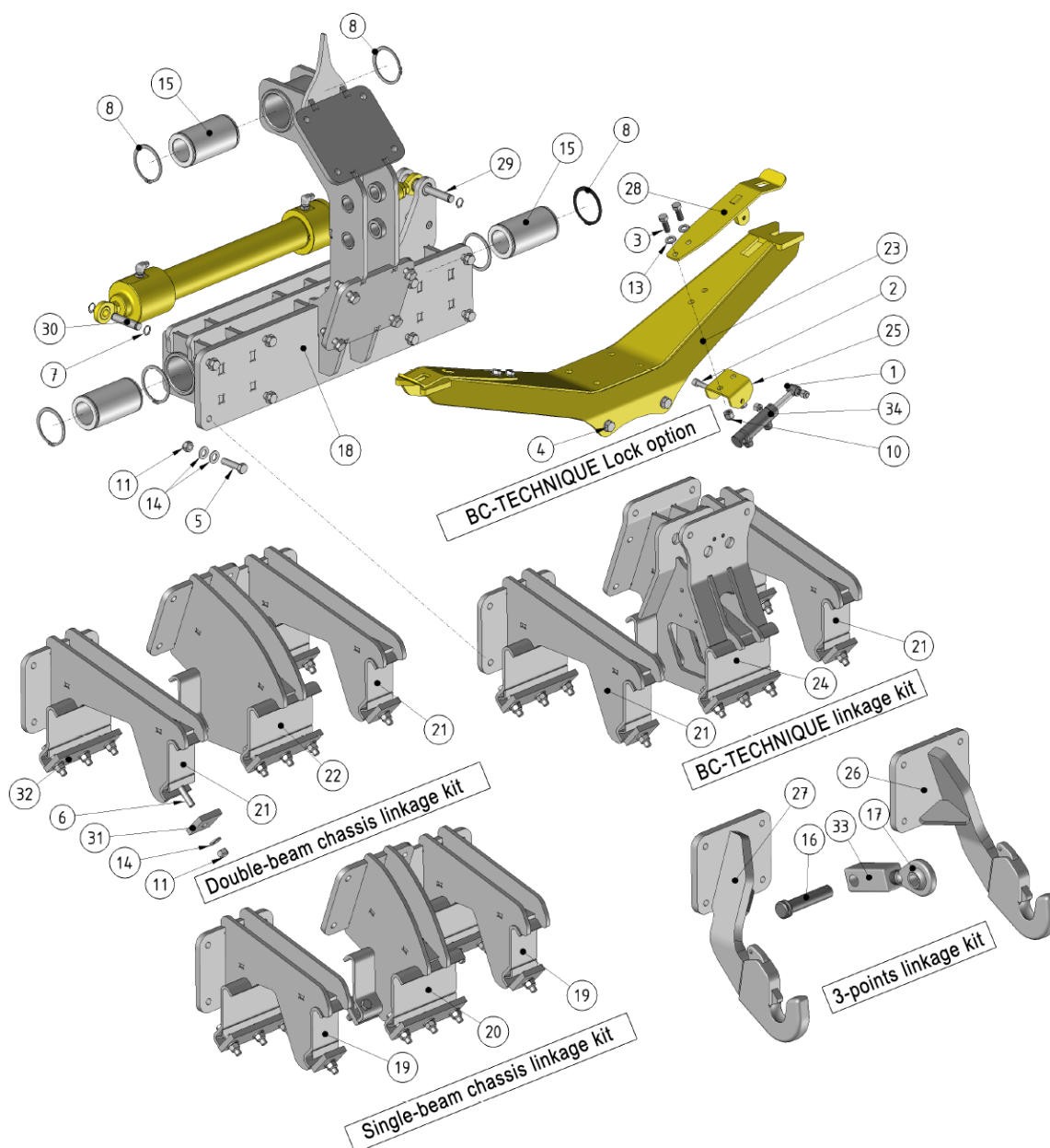


Nomenclature: Interface fixed chassis– Linkage

Mark	Reference	Designation
1	B6X20401788	Screw
2	B8X16401788	Screw
3	B12X30401788	Screw
4	BRD67089ZN	Washer
5	BRD87089ZN	Washer
6	BRD127089ZN	Washer
7	CEL2	Camera system electrical box
8	CHY5	Interface hydraulic block unit
9	DV17	Interface upper side-shift support
10	DV18	Interface lower side-shift support
11	MS24P	Interface chassis
12	MS28P	Interface wheel
13	DV44	Interface linkage yokes pins
14	DV21	Interface linkage top link
15	TL11P	Interface front tap
16	TL12P	Interface front tap sheet steel
17	TL13P	Interface upper tap
18	TL14P	Interface rear tap
19	US37P	Interface side-shift support end-cap
20	VH4P	Interface side-shift ram with knob
21		Lift sensor (option)



10.2. Foldable interface chassis - Linkage and rear attachment



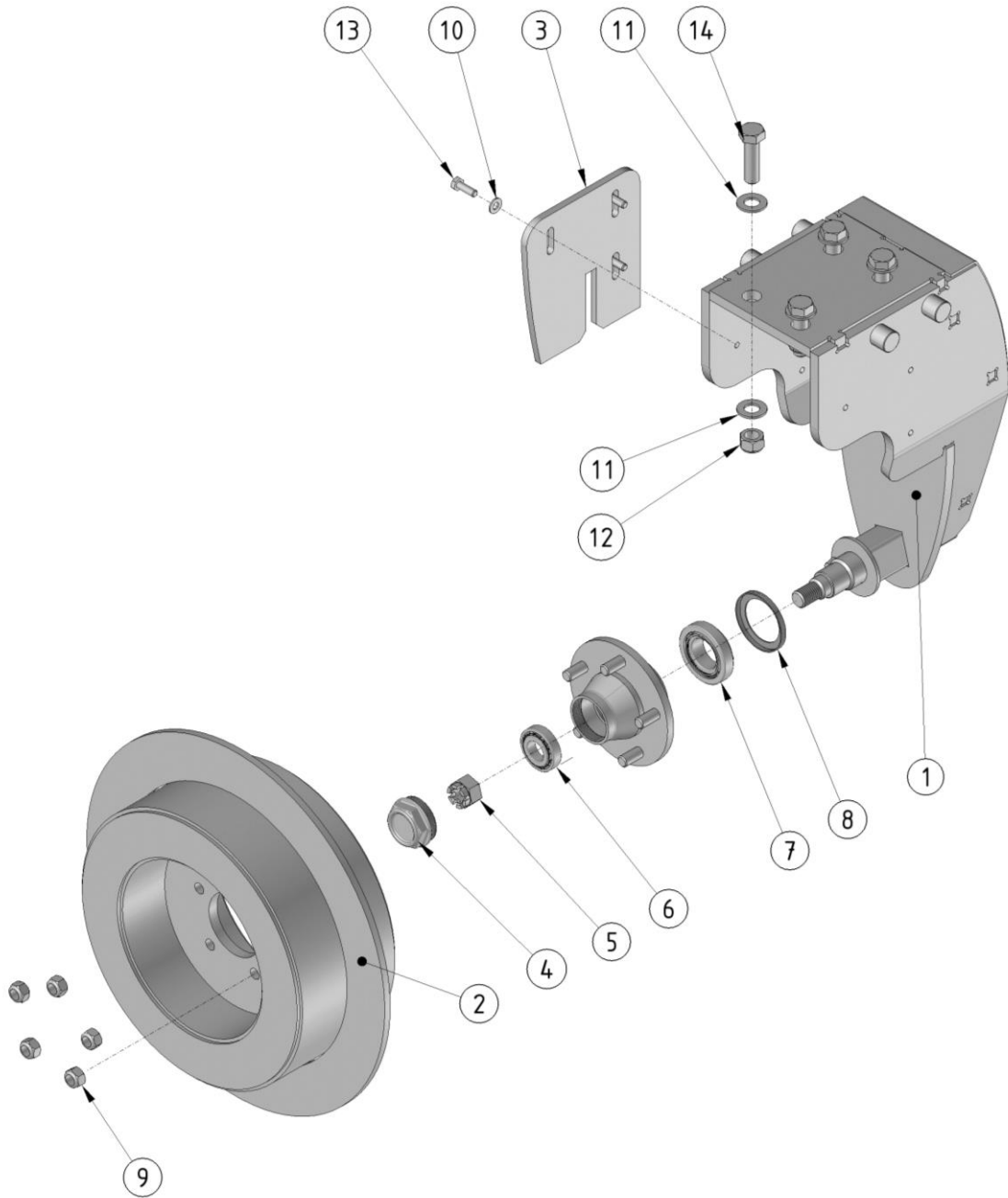


Nomenclature: Foldable interface chassis– Linkage and rear attachment

Mark	Reference	Designation
1	B12X60401788	Screw
2	B12X120476288	Screw
3	B14X40401788	Screw
4	B16X50401788	Screw
5	B16X65401788	Screw
6	B16X80401788	Screw
7	BAEEXT20471	Circlips
8	BAEEXT90471	Circlips
9	BECHFR127040ZN	Nut
10	BECHFR147040ZN	Nut
11	BECHFR167040ZN	Nut
12	BRD127089ZN	Washer
13	BRD147089ZN	Washer
14	BRD167089ZN	Washer
15	DV19	Interface Teflon ring
16	DV21	Axis $\varnothing 32$
17	DV22	M36x3 Right - cat.2 screw ball
18	MS29P	Interface folding chassis
19	MS30P	External support (single beam frame)
20	MS31P	External support (double beam frame)
21	MS32P	Extended external support (double beam frame)
22	MS33P	Extended internal support (double beam frame)
23	MS42P	Interface lock
24	MS43P	Interface centre attachment
25	MS44P	Cylinder attachment
26	MS49P	Right linkage support
27	MS50P	Left linkage support
28	TL9P	Spring lock
29	US38Z	Interface ram axle (head end)
30	US39Z	Interface ram axle (head end)
31	US59Z	1-Hole fitting flange
32	US18Z	3-Holes fitting flange
33	US49Z	Ball eye
34	VH1P	Locker ram
35	VH4P	Interface side-shift ram with knob



10.3. Interface wheel holder



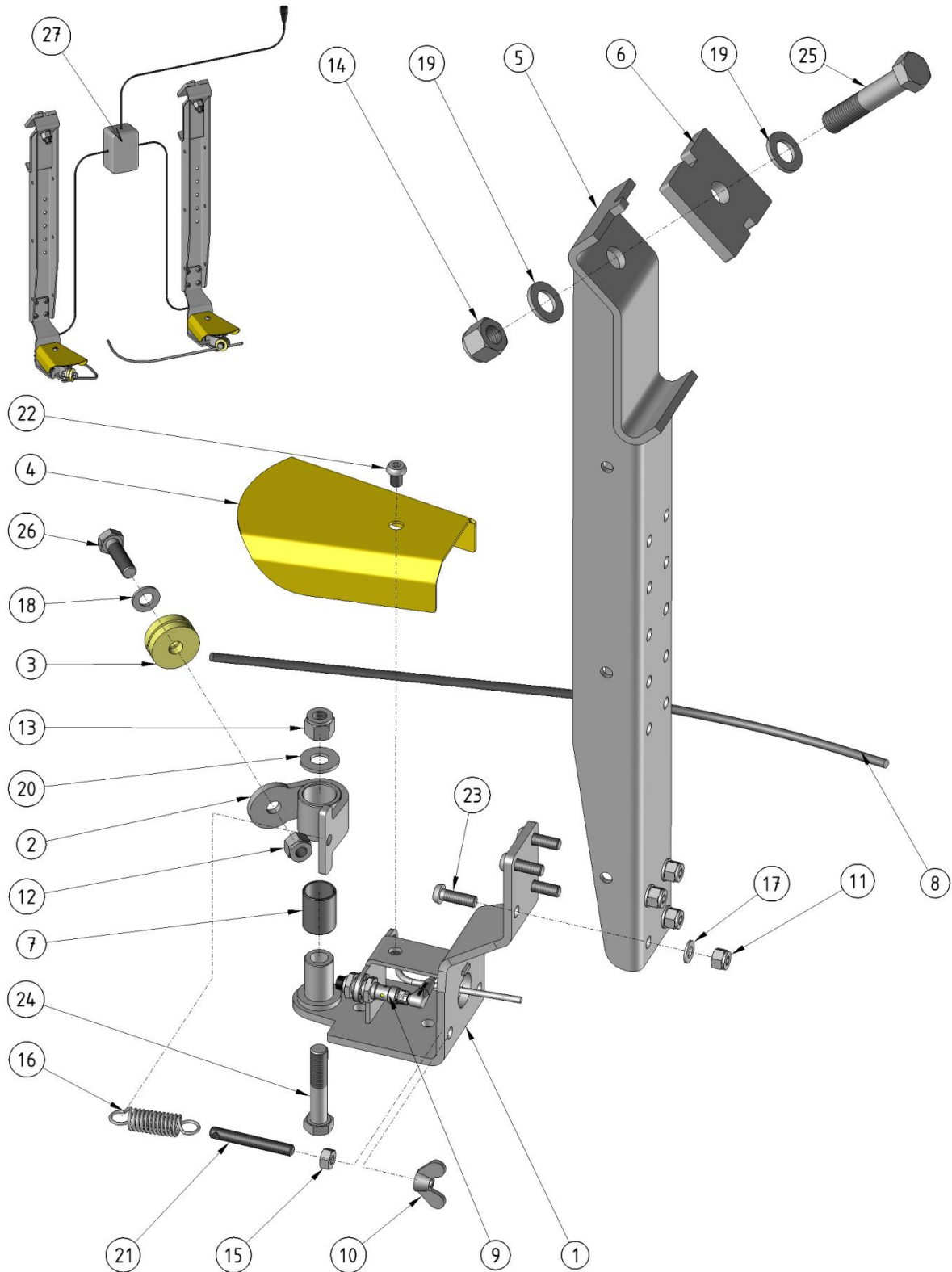


Nomenclature: Interface wheel holder

Mark	Reference	Designation	
1	MS27P	Interface wheel holder	
2	MS28P	Interface wheel	
3	US40P	Interface wheel scraper	
4	DV23	Axle cap	
5		Castellated nut	Repair kit
6		Interface wheel axle front ball-bearing	
7		Interface wheel axle rear ball-bearing	
8		Interface axle seal	
9		Wheel nut	
10	BRD107089ZN	Washer	
11	BRD247089ZN	Washer	
12	BECHFR7040ZN	Nut	
13	B10X30401788	Screw	
14	B24X80401788	Screw	



10.4. Feeler kit for interface



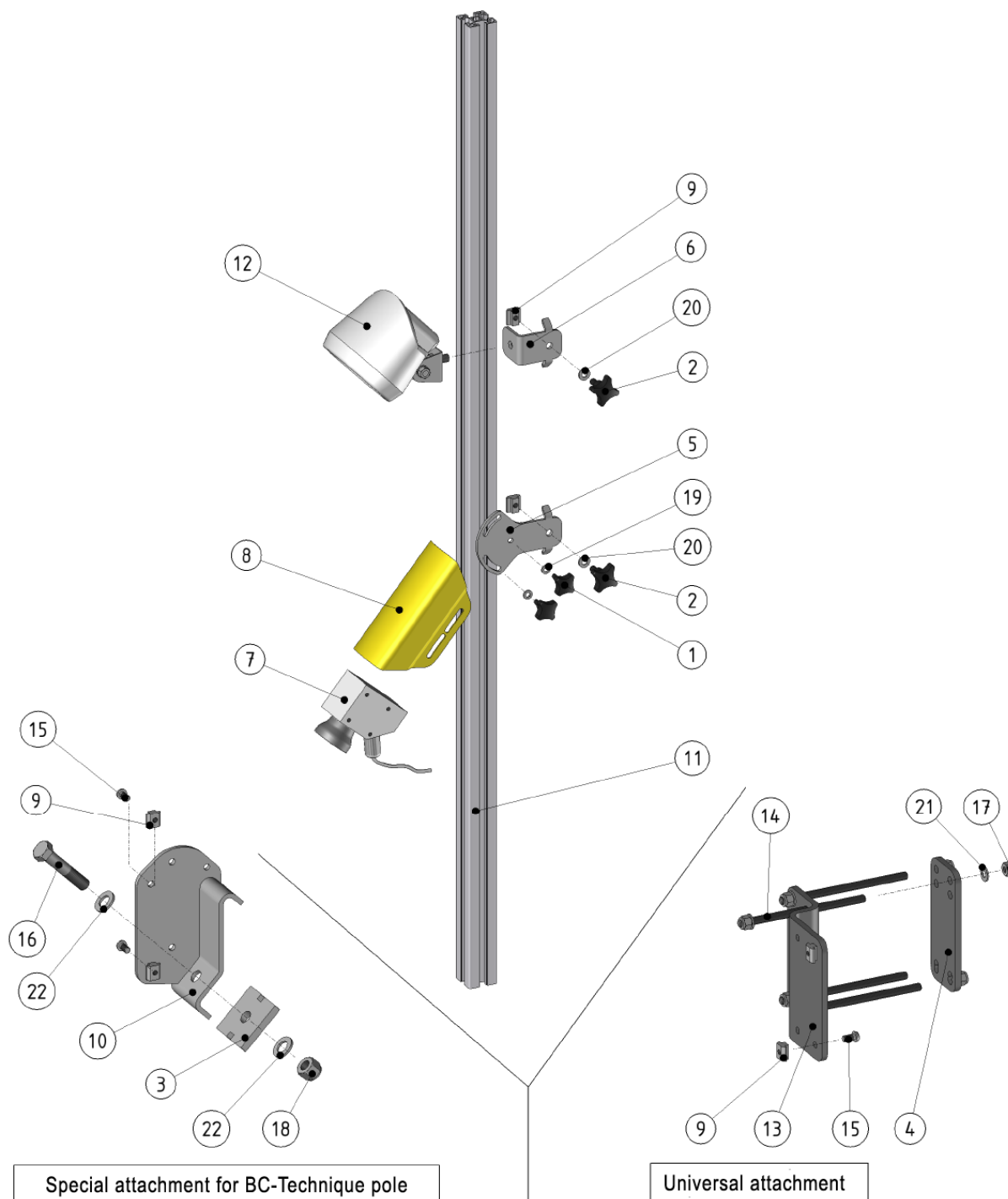


Nomenclature: Feeler kit for interface

Mark	Nr. Plan	Designation
1	MS53Z	Feeler holder
2	MS54Z	Feeler pivot
3	DV33	Feeler ball eye
4	TL20P	Feeler cap
5	MS55P	Vertical stand
6	US52Z	Flange
7	DV36	Cylindrical bushing
8	DV34	Feeler antenna
9	CEL3	Proximity sensor
10	DV37	Wing nut
11	BECHFR87040ZN	Nut
12	BECHFR107040ZN	Nut
13	BECHFR127040ZN	Nut
14	BECHFR167040ZN	Nut
15	BECH84032ZN	Nut
16	PF4Z	Feeler tension spring
17	BRD87089ZN	Washer
18	BRD107089ZN	Washer
19	BRD167089ZN	Washer
20	BRDL1225513ZN	Ø12 Large flat washer
21	DV38	Feeler tensioning threaded rod
22	BTB8X1273801	Screw
23	BTB8X2573801	Screw
24	B12X60401488	Screw
25	B16X80401788	Screw
26	B10X35401788	Screw
27	CEL6	Feeler-guidance control box



10.5. Camera and adaptors kit





Nomenclature: Camera and adaptors kit

Mark	Reference	Designation
1	DV29	Starred nut
2	DV30	Starred nut
3	US52Z	Flange
4	TL18Z	Adaptable flange
5	US51Z	Camera joint flange
6	TL21Z	Headlight joint flange
7	CEL8	Camera
8	TL19P	Camera cap
9	DV28	Standard Aluminium profile skid
10	MS52Z	Pole attachment
11	DV27	Aluminium stand
12	DV35	Work Headlight
13	TL17Z	Adaptable plate
14	DV32	Screw rod (20cm)
15	BTB8X1673801	Screw
16	B16X80401788	Screw
17	BECHFR107040ZN	Nut
18	BECHFR167040ZN	Nut
19	BRD67089ZN	Washer
20	BRD87089ZN	Washer
21	BRD107089ZN	Washer
22	BRD167089ZN	Washer



11. Notes







B.C TECHNIQUE AGRO-ORGANIQUE S.A.S.

Bois Choppard

F – 89270 VERMENTON

Phone : +33 (0)3 86 81 51 33@: commercial@bc-technique.com