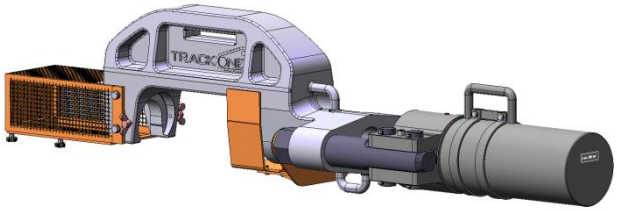
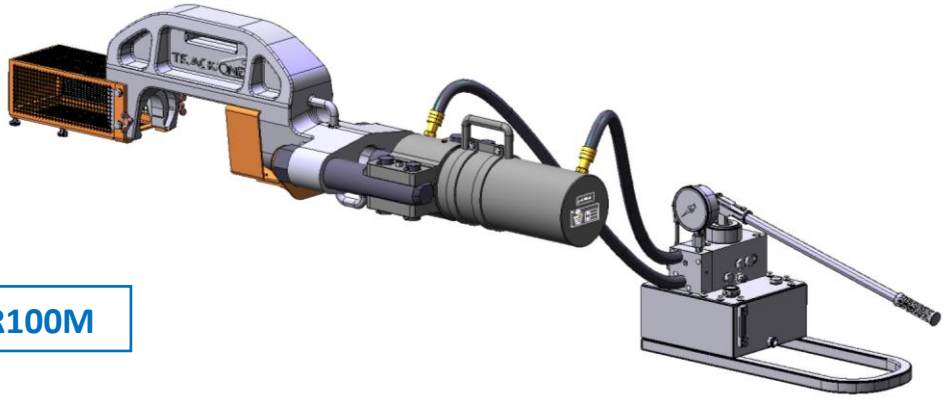
OPERATION AND MAINTENANCE MANUAL WITH SPARE PARTS

PORTABLE PRESS



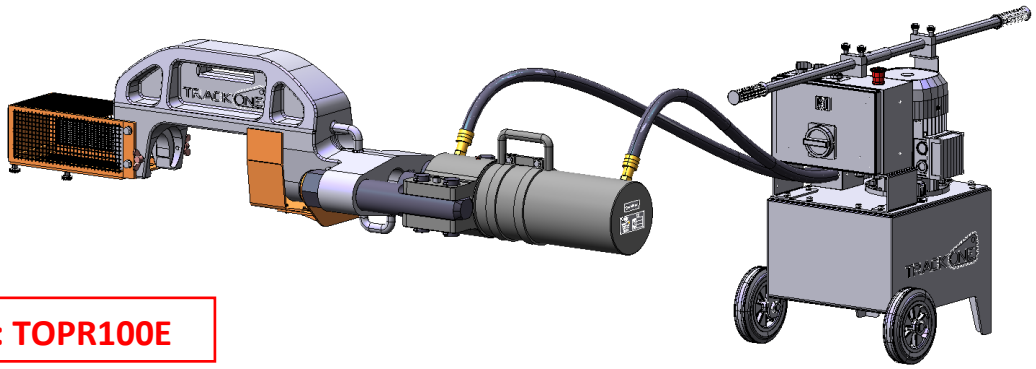
CODE : TOPR100

PORTABLE PRESS WITH MANUAL PUMP



CODE : TOPR100M

PORTABLE PRESS WITH ELECTRIC POWER UNIT



CODE : TOPR100E

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1. Safety and danger instructions that must be observed

Warning signs

Warning:

Safety prescriptions and standards that protect the operator and other individuals stationed in the area from the risk of injury or death.

Attention:

Special instructions to avoid damage to the machine. Failure to observe these instructions can cause the warranty to lapse.
This sign is used when partial observance of or failure to observe the operation and maintenance instructions can imply a danger to the operator and the press.
INDICATION: this sign is used to draw your attention to
a specific point.
Observing this indication generally means making the work operations easier.

NB:

Special instructions for better performance, control and adjustment procedures during operation, in addition to more correct maintenance procedures

1.1. Premise

These operational instructions are part of the machine referred to herein. They must be kept on hand and must remain with the machine during transfers of property.

All of the details, data and illustrations contained in these operational instructions are subject to change based on technological development and improvement. All rights reserved.

These operational instructions will not be subject to any updating service.

All Information on the most recent developments can be obtained from:

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All of the drawings contained herein are provided by way of example and may be subject to change.

1.2. General

The portable press with manual or electric actuation described in this operational manual is a portable hydraulic press, comprised of the press, hoses and a manual pump or an electric power unit.
The press, with "C"-shaped support unit and hydraulic piston, is built in compliance with today's techniques and safety regulations in force. Pump operation may nevertheless imply the danger of injury and death to the user or other individuals, or material damage to the press and others.
It must only be used in conditions of good operation, for its intended use, in observance of the safety regulations and dangers that may derive from it, and in accordance with the operating manual.
Immediately remove any faults that could affect safety.

ATTENTION

The portable press and piston are designed to operate with hydraulic oil ISO--VG32, as the element of fluid power. IT IS STRICTLY FORBIDDEN to use any other fluid, in its liquid or gaseous state, and any subsequent damage to product and people is the exclusive responsibility of the user. Accordingly,
the product manufacturer is relieved of any responsibility.

1.3. Intended use

The portable press is conceived exclusively to assemble and disassemble chains on tracked machines, with a pitch between 101.6 mm and 260.4 mm, with suitable equipment described in paragraph "Pin assembly and disassembly operations".

1.3.1 Proper use of the portable press

The press is conceived exclusively for the operating conditions described in chapter "Main characteristics of the portable press". Any other use is considered improper.
The manufacturer will not be held liable for any potential damage, the risk is borne solely by the user.
Correct press operation also involves consistent observance of this operating manual, particularly observance of the maintenance requirements.
The versions of the press TOPR100M and TOPR100E cannot be started up unless it is comprised of its parts “TOPR100” (TOPC100 + TOSC100) and ”TOPM2A” or “TOCE308”.
If it is assembled with any part other than these, it IS NOT compliant with press safety regulations.
The version of the press TOPR100 can be operated with any type of drive of customer supplied, manual or electric, but with the same technical and safety characteristic of the “TOPM2A” and “TOCE308” described in this manual.
If the drives supplied and used by the customer do not conform, is it NOT responding to the safety regulations of the press.
The manufacturer will not be held liable in case of failure to observe these requirements.
If the user employs parts of equipment that are not part of the TRACK ONE supply, TRACK ONE will not be held liable for any subsequent damage.
The risk posed by these parts (mechanical and fluid power) is borne exclusively by the user.
The operating manual, as well as the manual of the manual pump or of the electric power unit, are an integral part of the press supplied by TRACK ONE.
The serial number of the portable press is recorded by the manufacturer and displayed on the plate applied to the piston of the portable press.

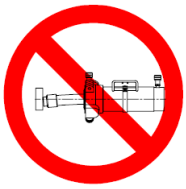
1.3.2 Suitable use of the hydraulic piston

The cylinder is conceived exclusively for the conditions of use that is was designed and built for. The force and stroke values provided by the manufacturer are the maximum values within the safety limits. Good standards of practice recommend staying below 80% of these values.
It is considered improper to use the piston for different purposes or beyond its capacities.
The manufacturer will not be held liable for any subsequent damage.
The risk is borne exclusively by the user.

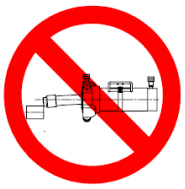
ATTENTION

NEVER EXCEED THE NOMINAL LOAD. NEVER attempt to apply loads that exceed piston capacity. Overloads cause damage to the equipment and injury to people. This piston was designed to operate at a max. pressure of 680 bar.
NEVER FEED THE CYLINDER WITH PUMPS THAT DELIVER A HIGHER PRESSURE.

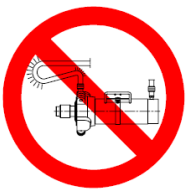
WARNING: Protect the cylinders from excessive heat sources, corrosive chemical agents, open flames and impact.



ATTENTION: NEVER EXCEED THE NOMINAL LOADS. NEVER attempt to apply loads that exceed the capacity of the cylinder. Overloads can cause damage to the cylinder and people.
NEVER EXCEED THE PRESSURE OF 680 bar.



ATTENTION: Eccentric loads generate stress that is harmful to the piston. Make sure that the applied load acts along the axis of the cylinder rod.



PRECAUTION: Avoid tight bends and coiling in the flexible hoses.
Tight bends can throttle the hoses, leading to dangerous counter-pressures that affect their service-life.

NEVER HANDLE PRESSURISED FLEXIBLE HOSES.
Pressurised oil spray can perforate skin and cause complications.

If the oil penetrates your skin, seek IMMEDIATE medical attention.

THE PISTON MUST ALWAYS BE USED WITH FIRMLY CONNECTED COUPLINGS. ALWAYS MAKE SURE THE COUPLINGS ARE WELL-CONNECTED.
NEVER USE COUPLINGS THAT APPEAR DAMAGED OR HAVE DAMAGED PARTS.

USE HOSE RETAINING SYSTEMS TO AVOID DANGEROUS PIPE WHIP CAUSED BY MALFUNCTIONS.

WEAR APPROPRIATE PROTECTIVE CLOTHING WHEN OPERATING FLUID POWER EQUIPMENT.

DO NOT STATION YOURSELF WITHIN THE AREA OF CYLINDER ACTION.

Correct cylinder operation also involves consistent observance of this operating manual, particularly observance of the maintenance requirements.
The manufacturer will not be held liable in case of failure to observe these requirements.
If the user employs parts of equipment, and such, that are not part of the TRACK ONE supply, TRACK ONE will not be held liable for any subsequent damage. The risk posed by these parts is borne exclusively by the user.

1.4. Safety

1.4.1 General safety rules

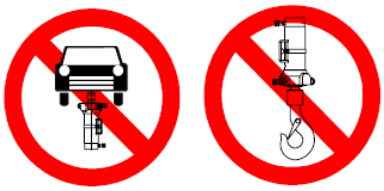
If the portable press is used for purposes other than its intended use or in a technically improper manner, you run the risk of:
-- putting the well-being and life of people in danger
-- damaging the press and other property in the user's facility
-- negatively affecting the operating efficiency of the press or operator

For this reason the manual contains numerous valid danger warnings for the applications and, if supplementary equipment supplied by TRACK ONE is being used, these warnings apply to them as well.
Prior to performing their tasks, all of the individuals employed to install, use, service and repair the press, must have read and understood
this operating manual, especially the documentation on safety, namely the parts of the text marked with:

Any text marked with  is of crucial importance, as it contains procedures to stop the machine and other warnings regarding operator safety.
This information must be observed, especially during installation, operation, adjustment, maintenance and repair work.
Installation, adjustment, control, maintenance and repair work must be carried out in observance of the requirements set forth in this operating manual, only by qualified, specialised and duly informed and trained staff.
The user must periodically make sure that staff is observing the correct operating procedure and safety standards.
The user must clearly define the qualifications regarding press
control, in order to exclude any qualification issues regarding safety.

1.4.2 Hydraulic piston safety rules

- The **TRACK ONE** piston must be used exclusively for the purpose it was designed for



The TRACK ONE piston MUST STRICTLY NEVER BE USED AS A LIFTING DEVICE

- It is forbidden to operate the piston if the ducts are not connected
- The ambient conditions must be suitable for the intended purpose, especially the temperature must not be any lower than **--10°C,** or any higher than **50°C**
- The TRACK ONE piston must be mounted accordingly.

ATTENTION

BE CAREFUL OF THE DANGER OF CRUSHING DURING ASSEMBLY OPERATIONS. ONLY SPECIALISED STAFF CAN PERFORM INSTALLATION.

- It is not possible to apply a load to the cylinder rod that exceeds the declared value
- The feed ducts must be checked on a regular basis.
  Damaged hoses and couplings must be immediately replaced

ATTENTION

BE VERY CAREFUL OF HYDRAULIC OIL LEAKS. SOME OILS CAN BE HARMFUL TO THE ENVIRONMENT.

- Only use the types of fittings identified in this manual and supplied by TRACK ONE
- Before starting up the piston, relieve it of any air contained in the chambers and hoses (relief)

DO NOT USE THE PISTON UNLESS YOU HAVE PERFORMED A COMPLETE RELIEF CYCLE.

DO NOT START UP THE PISTON UNLESS YOU HAVE RUN A SUITABLE NUMBER OF TEST CYCLES.

DO NOT PERFORM ADJUSTMENT OR MAINTENANCE OPERATIONS ON THE PISTON WHEN IT IS CARRYING A LOAD.

BEFORE DISCONNECTING THE OIL FEED HOSES, DISCHARGE ANY RESIDUAL PRESSURE.

1.4.3 User and operator safety

Before starting any adjustments, maintenance, repair work, switch off the press in observance of the requirements set forth in this operating manual.
If it is driven by a manual pump, detach the oil feed hoses from the cylinder.

It is forbidden to perform work that negatively affects press operation and operator safety.
The user and operator must also make sure that only authorised individuals work on the press.
The user must define the degree of operator responsibility and allow him/her to not perform any operation that is in violation of any safety provisions required by third parties.
Staff in training and apprentices, as well as staff that is taking part in general professional training courses, are allowed to use the portable press, however, only under the constant supervision of an expert.
Any work on the cylinder and manual pump must be carried out by expert staff in the field of fluid power.

The operator is required to immediately notify the user of any changes that have been made to the press or that can or lead one to assume that said changes jeopardise safety.
The user agrees to only use the press if it is working perfectly.

It is forbidden to take down or decommission the installed safety devices.

If it is necessary, however, to take down the safety devices to make adjustments and perform maintenance, you will need to stop the press and prepare it against any accidental start-up, as required by the provisions, in observance of those parts of the text marked with:

When you have completed the replacement, adjustment, maintenance and repair work operations, immediately
set the safety devices back up and make sure they are efficient.

IMPORTANT POINTS YOU ARE REQUIRED TO OBSERVE:
Prior to imminent press start-up, inform all affected individuals.
Only one person must be stationed **in the press operating area,** and this must be the same person running the press handling controls. A second person
must be stationed outside of the operating area, within visual contact.
If more than one person is working in the danger area, they must be able to maintain eye contact with each other
at all times. The qualification for the individual tasks and the individual people must be clearly defined.
Only designate qualified staff to perform replacement,
adjustment, maintenance and repair operations.
The movement of the press moving parts must not trap any parts or cause them to fall.
Avoid any movement of the press that could place people or objects in danger.
Be careful of any danger caused by external equipment, such as lifting devices.
It is forbidden to make changes to the press and piston, especially without explicit authorisation from TRACK ONE.
It is strictly forbidden to use non-original TRACK ONE equipment, or nevertheless equipment that is not authorised by the manufacturer.
Observe the maintenance frequency set forth herein.
This operating manual must always be kept on-hand in the location where the press is used, and it must also be kept safe.

1.4.4 Portable press safety

Load limits
The manual pump and the electric power unit are both fitted with a maximum pressure valve as an overload protection device that unloads oil into the tank and therefore limits the press in case the admissible maximum pressure limit is exceeded.
The same characteristics must be present on the manual or electric drive supplied by the customer in the case of purchase of the press TOPR100.

NEVER EXCEED THE PRESSURE OF 680 BAR FOR ANY REASON WHATSOEVER

1.5. Portable press operation

Before using the press, observe the following safety measures:

1.5.1 Admissible loads

Make sure that the moments, the accelerations, the weights and the mechanical or environmental stresses required by the field of application remain within the admissible limits.

1.5.2 Work areas

The safety areas must comply with the safety requirements, i.e. they must strictly exclude the danger of damage to people and equipment.
The danger area, i.e. the area that the press operates in, and the area surrounding the press, must be clearly marked off.

1.5.3 Tool change

Disassembly positions have been arranged for tool change operations. The operator must be able to access these positions from the outside of the danger area.

1.6. Installation, operation and miscellaneous

1.6.1 Safety regulations

Before installing the press, check the entire system to make sure that the user safety requirements and general work safety rules have been fulfilled.

Everyone working in the press danger area must wear protective clothing. Safety footwear, gloves, goggles with side protection, helmet and fitted clothing are particularly crucial.

The electric motor of the pump can reach operating temperatures that may caused burns. It is forbidden to perform any maintenance activity on this part of the press before it has cooled down sufficiently.

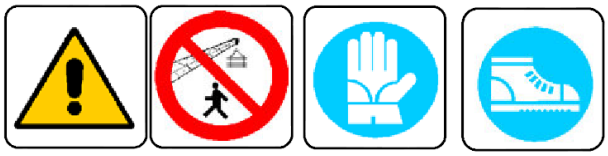
1.6.2 Connection to the electricity grid

For connection to the electricity grid, the conditions relating to the voltage and frequency stated in the paragraph must be observed.
In addition, the rules of the company providing the electricity must be observe

1.6.3 Transport

To transport the press, it is necessary to use the pre-defined transport positions.

It is only possible to use lifting and harnessing devices in perfect technical conditions and with suitable capacities.



Do not loiter or work under suspended loads.

Only designate qualified individuals to harness the load, signal the manoeuvre and drive the crane. The individual providing the signals must be in visual and audible contact with the operator.

1.6.4 Commissioning

Before commissioning the press, make sure that all of the system protective devices are working correctly.
As the press is being commissioned, no person or object can be stationed in the danger area (the press operating area).

1.6.5 Operation

During press operation, it is necessary to observe all of the safety rules.
It is not possible to change the safety devices and make changes to the protection measures. In case of malfunction, immediately stop the press and start it back up again when the failure has been fixed. Also, stop the press from being started up by unauthorised people and prevent every possible danger to people and damage to the equipment. Note down every malfunction and find the root cause.

Before every use, check whether the press, and therefore the piston, appears to have any visible damage or defects. Immediately notify the offices or qualified staff of any changes in the press. Immediately stop the press and avoid it from being started up by unauthorised people.

1.6.6 Decommissioning

Before performing any replacement, adjustment, maintenance and repair work operations, always
place the press out of service and ensure that it cannot be started up by unauthorised people. Detach the hydraulic oil feed hoses. If, for certain types of work it is absolutely necessary for the press to perform its movements, observe the contents of this manual closely.

1.6.7 Miscellaneous

Tighten all of the screws that were loosened to perform maintenance and repairs, according to specification. Dispose of operating equipment and auxiliary materials, as well as replaced parts, safely and in compliance with environmental protection standards. It is important to be very careful of hydraulic oil disposal.

1.6.8 Safety instructions

Staff appointed to installation, replacement, adjustment, control, maintenance and repair operations must be given instructions on the type and amount of work that needs to be carried out as well as any possible dangers, before starting. The contents and entity of the instructions that are given must be recorded.

Before every activity described above, make sure that the system has been discharged of any residual pressure. The staff named therein must receive verbal instructions, every six months, and written instructions, every two years, regarding the observance of safety regulations and precautions.
These instructions must be given by the safety staff (user).

1.7. Safety markings

1.7.1 General

All of the plates, indications symbols and markings are part of the press and are relevant to safety.
They must remain clearly visible and firmly secured to the selected point for the duration of the service life of the respective press and relative control.

It is forbidden to remove, cover with stickers, paint or make the press data plates, the danger signs, the safety signs, the identification plates and the fluid power hose markings unrecognisable in any other manner.

1.8. The main points that need to be observed in terms of safety during the various phases of portable press use

Safety in the workplace is crucial, and it is necessary to carefully assess the resulting positive effects in relation to the investment that is made.
In order for a safety programme to be successful, it is necessary for all qualified bodies, management, maintenance staff, appointed staff and operators to collaborate.
The objective of each individual must be injury prevention, regardless of his/her position or his/her qualification
It is cost effective to work safely. A carefully monitored safety system helps avoid injury to technical staff and it also contributes to protecting
costly machine equipment.
In terms of safety, the working conditions must be checked periodically, and also take into account the fact that these conditions can change over time and it is therefore necessary to restore them as soon as they lapse.
Every effort must be made to maintain the maximum safety conditions of your **TRACK ONE** press.
The instructions below must be taken as general directives for safe use and maintenance.

1.9. Safety during preparation and use

The daily users of the press must be trained in the use of the manoeuvring elements, the safety devices and general use. The safety directives that follow apply to the preparation and use of the **TRACK ONE** press. These instructions must be integrated with the general compulsory safety requirements.
This means that the press must only be prepared, used and serviced by trained, informed and instructed staff.

1.10. Prior to commissioning

a) The instructions for use must be read carefully before preparing or commissioning the press. Failure to observe the required procedure can lead to injury of service staff and/or serious damage to the press;
b) Never attempt to adjust or operate the press without precise knowledge or instructions;
c) Make sure that all of the protections and protective devices are in good working order and in their correct positions;
d) Remove any tools, ladders or auxiliary devices that are used by maintenance staff;
e) Make sure no tools, nuts and screws or other parts have been left on the work area;
f) Make sure that none of the press surfaces have any flammable liquids;
g) Make sure that the work area is free and clear of any objects that could obstruct correct operation.

1.11. Press preparation

a) Check how clean it is when you change the equipment.
b) Never perform checks on parts during assembly / disassembly phases.

1.12. Work safety

a) Never remove any instruction or danger warning plates from the press.
b) Do not use the press with removed protections and/or safety devices.
c) If the press stops due to overloading, remove the cause before starting it back up again.
d) Unusual noise from the manual pump may be a sign of poor operation. You will need to intervene immediately to remove the fault.
e) Never grip moving parts of the press with your hands.
f) Never wear jewellery, scarves or loose clothing.
g) Always use personal protective equipment (ex. goggles, gloves, shoes, helmet, etc.).

1.13. Maintenance

Perfect maintenance, carried out on a regular basis, is crucial to a perfect safety programme. Before any maintenance is carried out, you must have a perfect knowledge of every aspect of the **TRACK ONE** press (control devices, safety devices and operating mode).
Read the operating manual for the manual pump before starting any maintenance activity. Maintenance activities must be carried out by specialised staff only.

1.14. Hydraulic piston

a) In case of repairs, only use original **TRACK ONE** parts. Failure to do so can create unsafe work conditions and invalidate the warranty
b) 4-5 days after the first installation, make sure that the rod is operating and positioned correctly
c) During maintenance operations, it is necessary to make sure that no dirt penetrates into the piston
d) Do not use compressed air to clean the cylinder. Use an industrial vacuum cleaner
e) Do not use hand tools during cylinder and rod cleaning operations
f) Before performing any use, maintenance, control activities, etc, make sure that the piston has been relieved of any residual pressure. Disconnect all of the fluid power and electrical power supplies;
g) For extended periods of downtime, completely empty out all oil from the piston and fill it with a preservative without creating any air bubbles inside of it. Then, close all of the holes with suitably-sized plugs.

1.15. Portable press

a) In case of repairs, only use original **TRACK ONE** parts. Failure to do so can create unsafe work conditions and invalidate the warranty.
b) Disconnect the press from the manual pump or electric power unit before carrying out any maintenance operations. Make sure no one can accidentally turn on the line that delivers electrical energy. Put up signs indicating that the press is undergoing "maintenance".
c) During maintenance it may be necessary to remove safety devices and protective sheets. Make sure that all of the safety devices are set back up correctly!
d) Do not use hand tools that are worn or faulty, or nevertheless unsuitable for the work that needs to be carried out.
e) All of the lifting devices must be kept in good conditions.
f) Do not overload the cranes and lifting devices. Attach cables or chains to the crane hook correctly. Make sure no one is stationed under the suspended loads.
g) Never use different hydraulic fluids other than the one specified by the manufacturer.
h) The press cannot be used in explosive atmospheres.

1.16. Electrical system

For any maintenance job on the electric power unit refer to its specific the manual of use and maintenance.

a) Only qualified electricians any allowed to perform this type of operation.
b) Any not allowed addition or change on the installation will invalidate the warranty and can cause incorrect functionality of the system.

1.17. Re-commissioning

a) Take all tools off of the press, including any auxiliary repair devices.
b) Make sure that all of the screws and clamping parts are tight.
c) Make sure all of the safety devices are in their correct positions and are in good working order.
d) Check the oil level of the hydraulic unit.
e) Make sure there is no one in the press operating field before it is started up.
f) Preventively perform the essential movements of the press to make sure there are no obstructions.
g) Observe press operations for a sufficiently long period of time, so as to be sure that the press and any auxiliary devices are in perfect working order.
h) Clean off any grease and oil from the press and the surrounding environment.

2. Technical data and main characteristics

2.1. Complete description of the portable press

TOPR100 is a portable hydraulic press used to assemble/disassemble chain joints on small and medium sized tracked vehicles.
It is designed for use "on site" to assemble and disassemble joint pins on assembled and to-be-assembled chains, and can only be used with equipment designed and developed specifically by the manufacturer.
The **TOPC100** hydraulic piston was designed to be used in combination with the **TOSC100** "C"-shaped support unit supplied by **TRACK ONE** to assemble and disassemble chain joining parts on tracked vehicles.
It can only be used with equipment designed and developed specifically by the manufacturer.
This equipment must be secured to its designated supports. Any operation that differs from those described herein is considered "**improper use of the piston"**

ONLY USE EQUIPMENT SUPPLIED BY TRACK ONE.

2.1.1 Improper use of the portable press

Any operation that goes against the safety and injury prevention regulations and using the press for operations other than the purposes it was built for, is considered **"IMPROPER USE OF THE PRESS".**
The following operations are also considered **"IMPROPER USE OF THE PRESS AND PISTON":**

- Using the press to assemble and/or disassemble parts that are not track chains.
- Assembling and/or disassembling hand-held parts.
- Assembling and/or disassembling complete chains or parts of them.
- Bending and/or forming sheets.
- Using equipment that is self-built or that is nevertheless NOT supplied by **TRACK ONE**.

THE MANUFACTURER WILL NOT BE HELD LIABLE FOR DAMAGE TO THE PRESS AND/OR OPERATOR AND/OR THIRD PARTIES, DUE TO NEGLIGENCE AND/OR IMPROPER USE OF THE PRESS.

IMPORTANT REMARKS FOR THE USER

a) The operator working on the tracked vehicle must be informed of the risks that he/she is taking should he/she **NOT** follow the safety instructions.
b) He/She is required to read the press **OPERATING MANUAL**, which he/she is required to hand-in to the employer before starting assembly and/or disassembly operations on the chain joint parts.
c) The employer is responsible for the instruction to the individuals who will be using the press.
d) The movement of the press cylinder must only be controlled by the supplied manual hydraulic control unit. The connection between the equipment and the press must only be set up with a forced locking device.
e) The term 'equipment' means the parts supplied with the press. Requests for any other from of equipment must be made to TRACK ONE.
f) To assemble the equipment, only use the devices supplied by the press manufacturer.
g) **FAILURE** to observe the above regulations is considered **IMPROPER USE OF THE PRESS.** The manufacturer will **not be held liable for damage** due to unsuitable use, and will be the full responsibility of the user.
h) Correct use of the press also includes the requirement to observe the operating conditions, maintenance and periodic checks set forth by the manufacturer.
i) Adjusting, using, servicing and repairing the press must only be carried out by specialised staff with the required professional training and knowledge of the possible dangers.
j) It is necessary to observe the work safety regulations, as well as any other local rules on technical safety and health preservation in the work place.

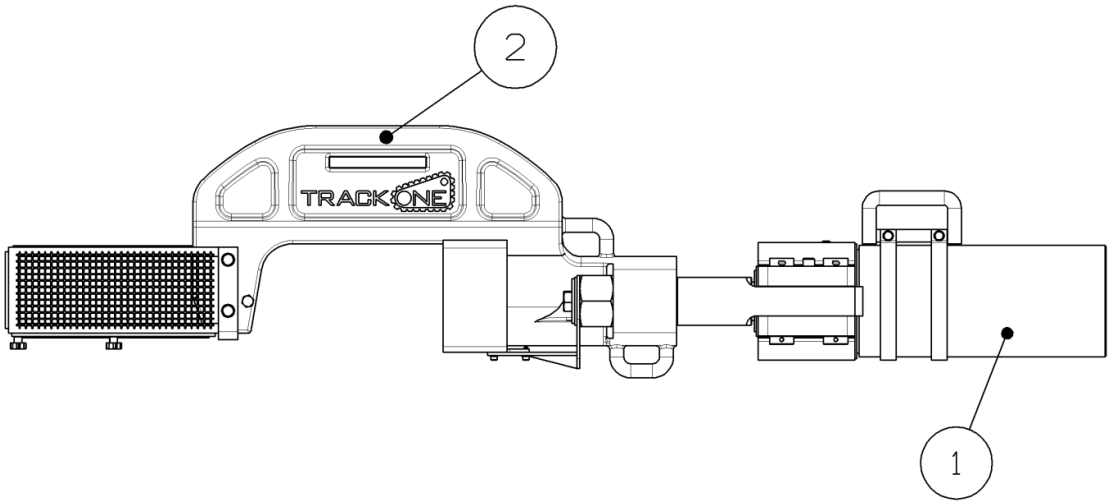
2.2. Main characteristics of the portable press

2.2.1 Composition of the TOPR100 press

The TOPR100 press is comprised of :

1) **TOPC100** hydraulic cylinder
2) **TOSC100** “C” –shaped support

ATTENTION! The TOPR100 press must only be composed of the aforementioned parts

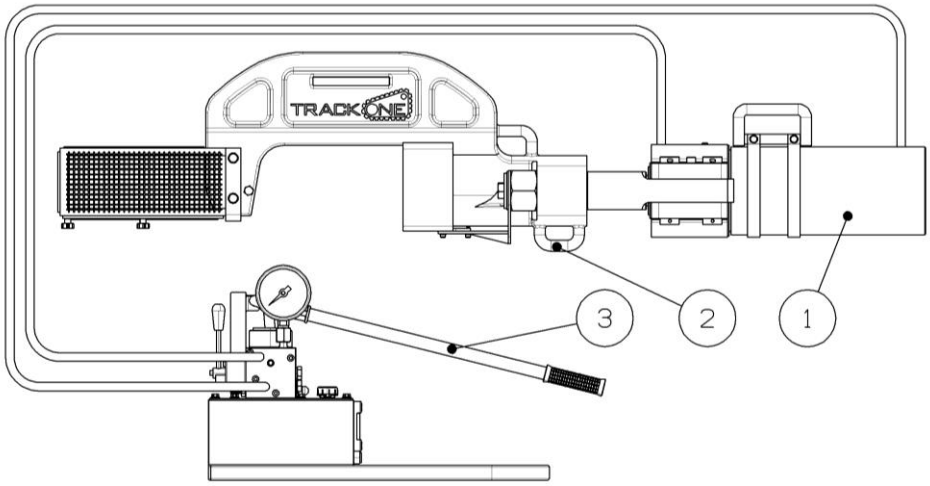


2.2.2 Composition of the TOPR100M press

The **TOPR100M** press is comprised of:

1) **TOPC100** hydraulic cylinder
2) **TOSC100** "C"-shaped support
3) **TOPM2A** manual pump

ATTENTION! The TOPR100M press must only be composed of the aforementioned parts.

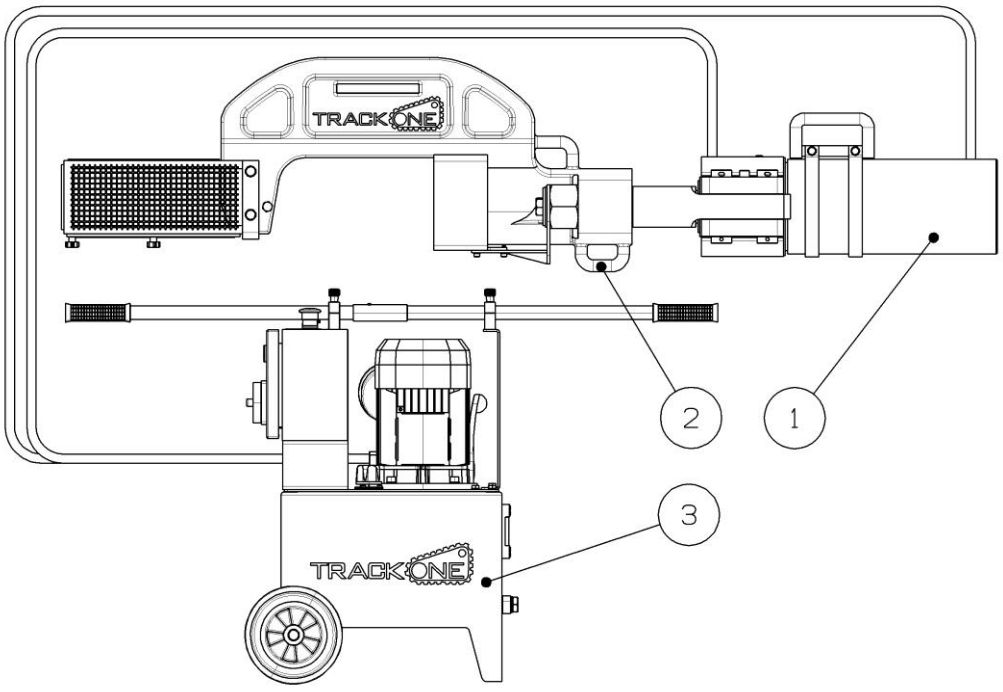


2.2.3 Composition of the TOPR100E press

The **TOPR100E** press is comprised of:

1) **TOPC100** hydraulic cylinder
2) **TOSC100** "C"-shaped support
3) **TOCE308** electric pump

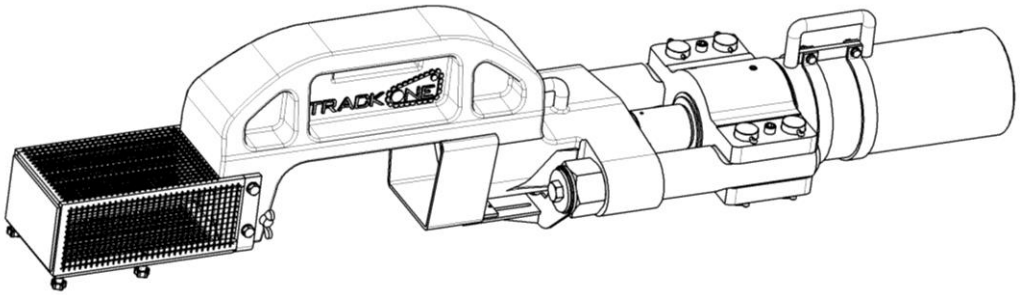
ATTENTION! The TOPR100E press must only be composed of the aforementioned parts.

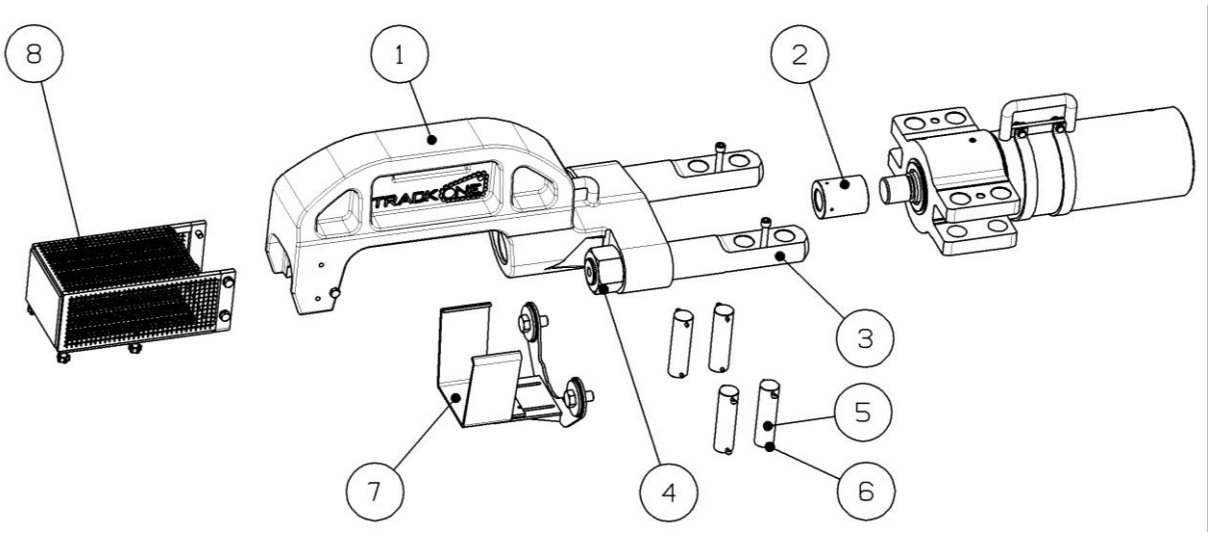


2.2.4 Characteristics of the "C"-shaped support unit

The TOSC100 "C"-shaped support unit is designed to assemble and disassemble the chain joint pins when they are mounted on the truck. The composition of the unit is illustrated in the figure below.

THE TOSC10 "C"-SHAPED SUPPORT UNIT IS DESIGNED FOR INSTALLATION ON THE TOPC100 PISTON ONLY. THE MAXIMUM APPLICABLE LOAD IS PROVIDED IN THE TECHNICAL DATA.
THE MANUFACTURER WILL NOT BE HELD RESPONSIBLE FOR DAMAGE TO PEOPLE, ANIMALS OR PROPERTY DUE TO OVERLOADING AND ASSEMBLIES THAT DIFFER FROM THE ABOVE.

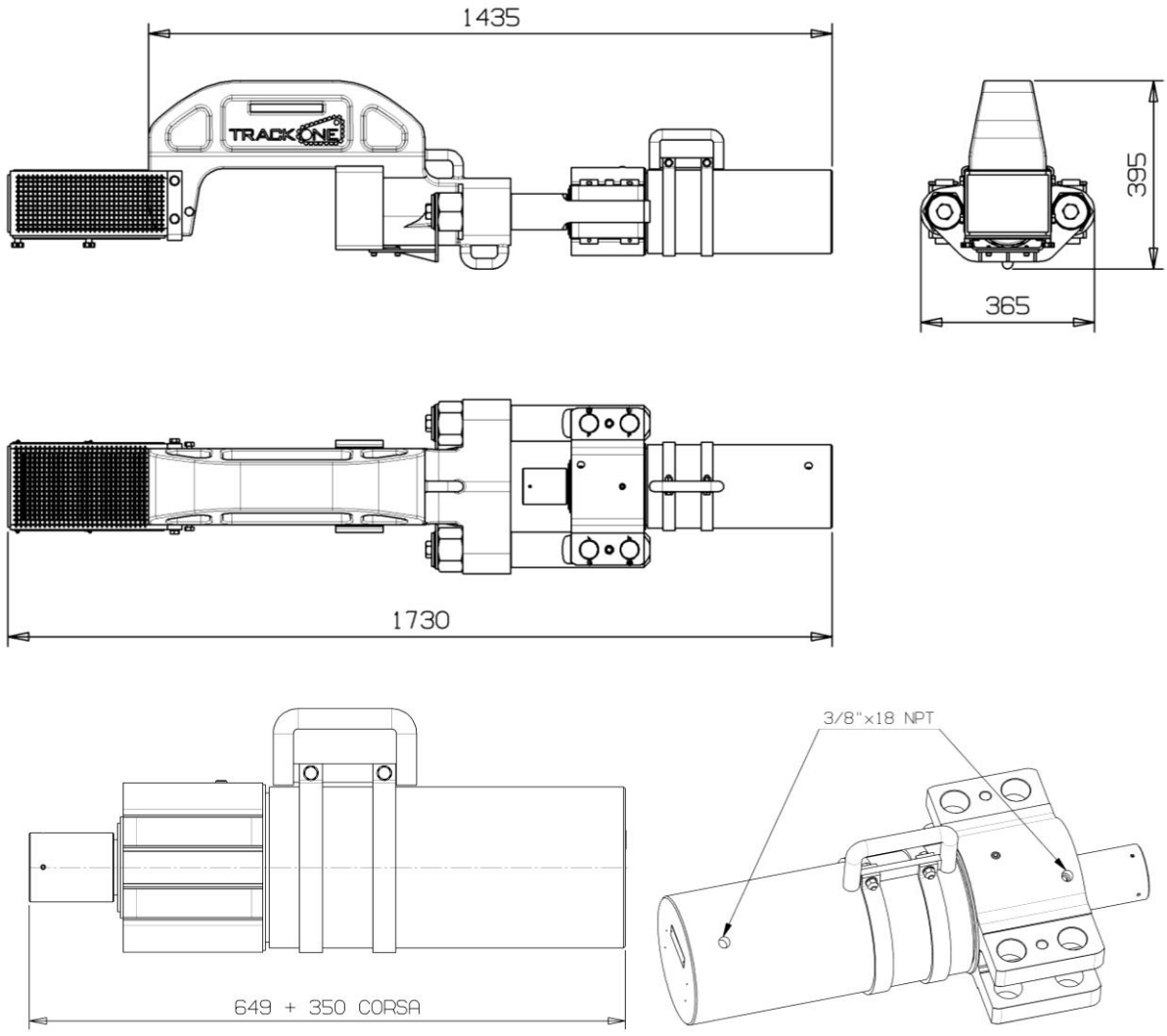




Pos.	Name	Pos.	Name
1	"C"-shaped support	**5**	Pin
2	Quick-fit coupling for pusher	**6**	Split pin
3	Tie rod	**7**	Mobile protection
4	Nut	**8**	Collecting casing

2.2.5 Technical data

TECHNICAL DATA	UNIT	VALUE
OPERATION		
Max thrust	kN (ton)	885 (90.2)
Max traction	kN (ton)	697 (71)
Max travel	mm (in)	350 (13.78”)
Max pressure	MPa (bar)	68 (680)
Manual pump tank capacity	dm^3 (l)	8 (8)
Electric power unit tank capacity	dm^3 (l)	8 (8)
WEIGHTS		
Approximate weight of TOCP100 piston	kg (lb)	80 (176)
Approximate weight of TOSC100 "C"-shaped support	kg (lb)	175 (386)
Approximate weight of TOPM2A manual pump	kg (lb)	20 (44)
Approximate weight of TOCE308 electric power unit	kg (lb)	40 (88)
MEASUREMENTS		
Length without collecting casing	mm (in)	1435
Total length	mm (in)	1730
Width	mm (in)	365
Height	mm (in)	395
Resting piston length	mm (in)	649
Piston stroke	mm (in)	350
TEMPERATURE		
Operating temperature	°C	-10 / +50



2.3. Safety

The safety objectives have been achieved by the manufacturer of the portable press through:

- construction conditions
- instructing user staff through the use of warnings on plates and signs applied to the press and contained in the operating manual.

The portable press can only be started up if the following conditions are satisfied:

- user staff is trained and has read the press operating manual at least once
- a safety area has been set up for the operator. For this purpose, in terms of the characteristics of the tracked vehicle, the user is responsible for installing barriers, shields, etc. that are suitable for protecting the operator during operation.
- warning signs must be displayed on the tracked vehicle, and must be clearly legible and compliant with safety standards for the workplace in the country of use.

- any worn warning signs and plates must be replaced immediately. Any request for new plates for the press must be made to the manufacturer, providing the serial number
- Cordon off and/or fence of the work area and put up the relative safety signs.

READ THE PRESS INSTRUCTIONS MANUAL BEFORE COMMISSIONING IT.

STRICTLY DO NOT TAKE DOWN, COVER OR TAMPER WITH ANY PLATES ON THE PORTABLE PRESS.

PERIODICALLY CHECK AND REPAIR, AS NEEDED, THE PRESS SAFETY SYSTEMS. THESE SYSTEMS MUST ALWAYS BE ASSEMBLED, EFFICIENT AND RUNNING.

ANY WORN AND/OR ILLEGIBLE PLATES MUST BE REPLACED IMMEDIATELY.

3. Transport, lifting, commissioning, maintenance and disposal

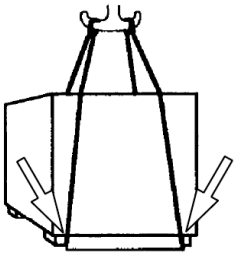
3.1. General

It is essential to be familiar with the following instructions in order to transport the TOPR100, TOPR100M and TOPR100E hydraulic press correctly and operate it safely.

These instructions must be read carefully before press placement and use

3.2. Transport

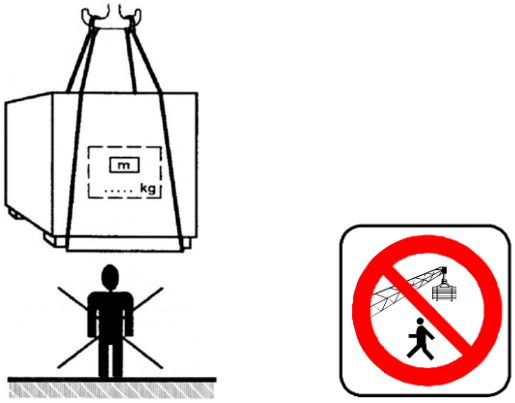
The cylinder comes packed in a crate or box. The entire crate or box can be handled with a fork lift truck. Alternatively, it is possible to use a lifting device with suitable slings attached to the lifting points identified in the figure below.



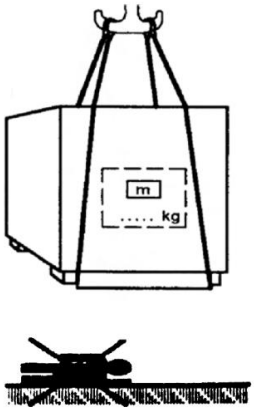
CAREFULLY READ THE OVERALL WEIGHT STATED ON THE PACKAGE AND USE SUITABLE ROPES AND LIFTING DEVICES.

ALL PORTABLE PRESS HARNESSING, LIFTING, HANDLING AND PLACEMENT OPERATIONS MUST BE CARRIED OUT BY EXPERT STAFF.

DO NOT STAND AND/OR TRANSIT UNDER SUSPENDED LOADS. DURING LIFTING OPERATIONS, THE HANDLING AREA MUST BE CLEARED OF ANY STAFF THAT IS NOT STRICTLY INVOLVED IN THE ABOVE OPERATION. AS NEEDED, THE HANDLING OPERATION MUST BE CARRIED OUT BY A SECOND OR ADDITIONAL INDIVIDUAL/S, WHO MUST FACILITATE THE HANDLING OPERATIONS BY COVERING THE AREAS THAT ARE NOT VISIBLE TO THE HANDLER.

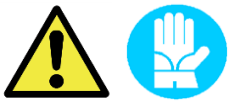


DO NOT INSPECT THE PACKAGING DURING LIFTING OPERATIONS.



3.3. Unpacking the portable press

The packaging that protects the press, ensuring transport without damaging the equipment, must be taken off being careful not to cause any deformation or denting that can jeopardise operation.



The unpacking operation must be carried out in observance of the safety regulations. Anyone performing these operations must protect his/her hands by wearing gloves.

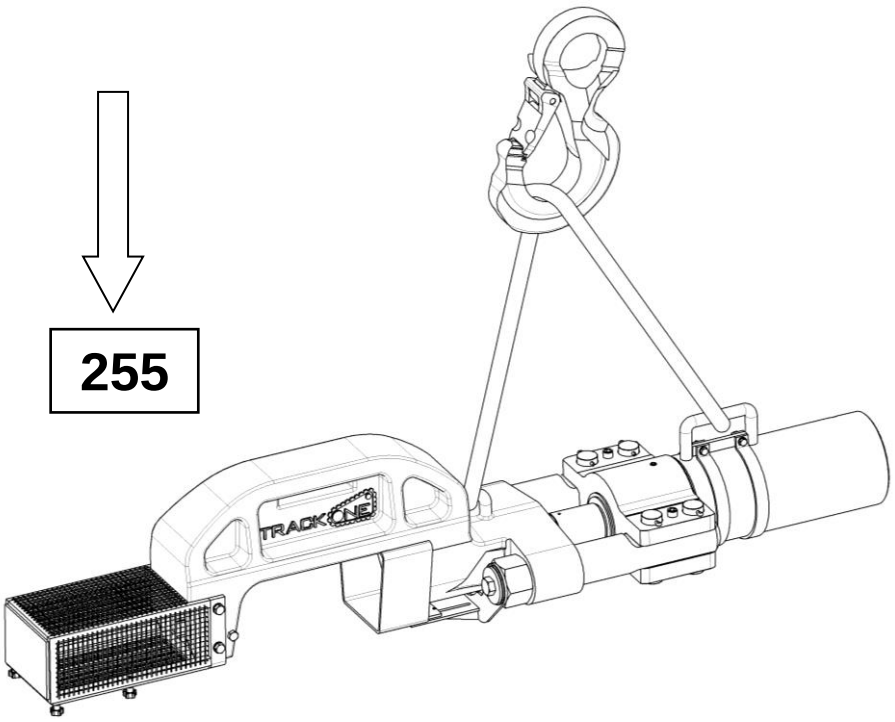
Be careful not to cause any damage as you are removing the portable press from the packaging.

Check for any damage that may have occurred to the portable press during transport and handling, and immediately notify the manufacturer. This check must also be carried out on auxiliary equipment, such as the assembly and disassembly equipment.

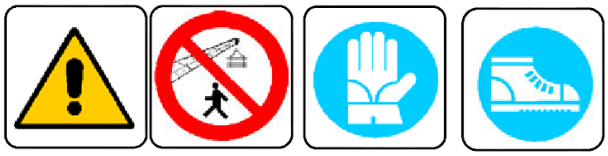
3.4. Lifting

3.4.1 Lifting the portable press

There is a ring and a handle applied to the "C"-shaped support unit and piston to attach a regulation sling, with a suitable capacity for the weight of the press.
Then, attach everything to a suitable lifting device. The approximate overall weight being lifted in 255 kg.



Check the sling identification plate for its capacity, to ensure it is suitable for the harness combination. The total minimum capacity must be no less than the weight of the portable press (the "C"-shaped support unit + piston + assembly or disassembly equipment), for the harnessing and lifting operation. Transport of the portable press must be carried out by qualified staff (crane and fork lift operators). The manufacturer will not be held liable for damage to people or property, due to operations carried out by unqualified staff.



DO NOT STAND under suspended loads FOR ANY REASON WHATSOEVER. Make sure that no one is in the immediate vicinity of the portable press during the handling operations to place it in position.
Use protective gloves and safety footwear to avoid injuring and crushing feet.

3.5. Storage

The piston must be stored in a dry location away from sources of heat. Observe the following precautions:

1) Take the equipment down from the cylinder
2) Completely drain all oil from the cylinder
3) Pull the cylinder piston all the way back
4) If the cylinder is left unused for a long period of time (ex. more than one month), fill the chambers, relieved of any air bubbles, with hydraulic oil
5) Plug the holes with their caps
6) Cover the cylinder rod and cylinder with suitable grease
7) Clean and oil the equipment to protect it from rust

3.6. Instructions for assembly

3.6.1 Hydraulic connections

The piston has 2 3/8”x18NPT threaded holes in it. These holes are provided for the supplied quick-fit couplings, to attach the supplied hydraulic feed hoses.
The supplied flexible hoses are suitable for the maximum declared operating pressure, and is printed on the hoses.

- **Quick-fit coupling**

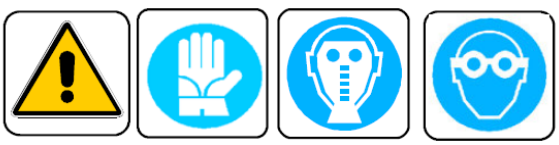
This is comprised of a male semi-joint fitted on the hose, and a female semi-joint with a protective cap.
The female semi-joint must be manually screwed on to the piston with Teflon tape has been applied to it, to ensure the seal on the threaded leg.
Incorrectly coupling the two joints will reduce or stop fluid from flowing through, jeopardising the correct operation of the entire system and possibly damage it.

3.7. Instructions for commissioning and maintenance

3.7.1 Portable press preparation

ATTENTION

Every part of the press that could be subject to rust is covered with a thick layer of grease. This grease must be cleaned off using a solvent that does not damage the paintwork.



These solvents are toxic through contact and inhalation. During cylinder preparation, adopt due safety measures. Only use solvents that fulfil the safety requirements of the country of use.

3.7.2 Filling and relieving the piston with hydraulic oil

ATTENTION

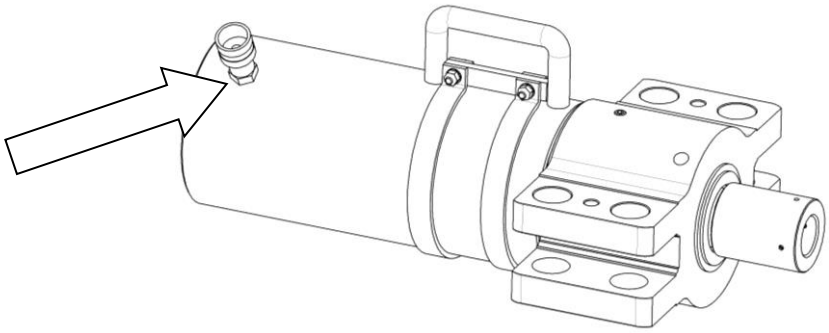
THE CYLINDER WAS DESIGNED FOR USE WITH ISO-VG 32 OIL

ATTENTION

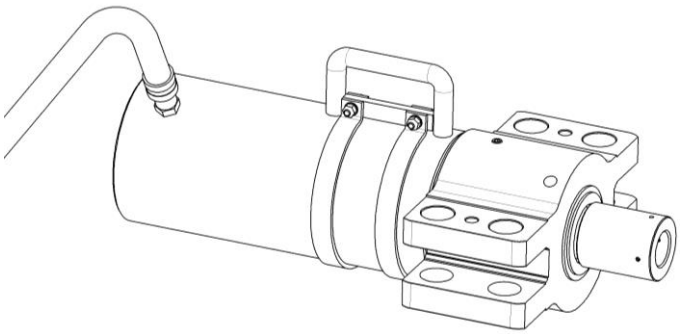
IT IS EXPRESSLY FORBIDDEN TO USE ANY FLUID OTHER THAN HYDRAULIC OIL, SUCH AS WATER, FLAMMABLE LIQUIDS OR GASES OR ANY OTHER COMPRESSED GAS OR AIR!

Perform the operations below:

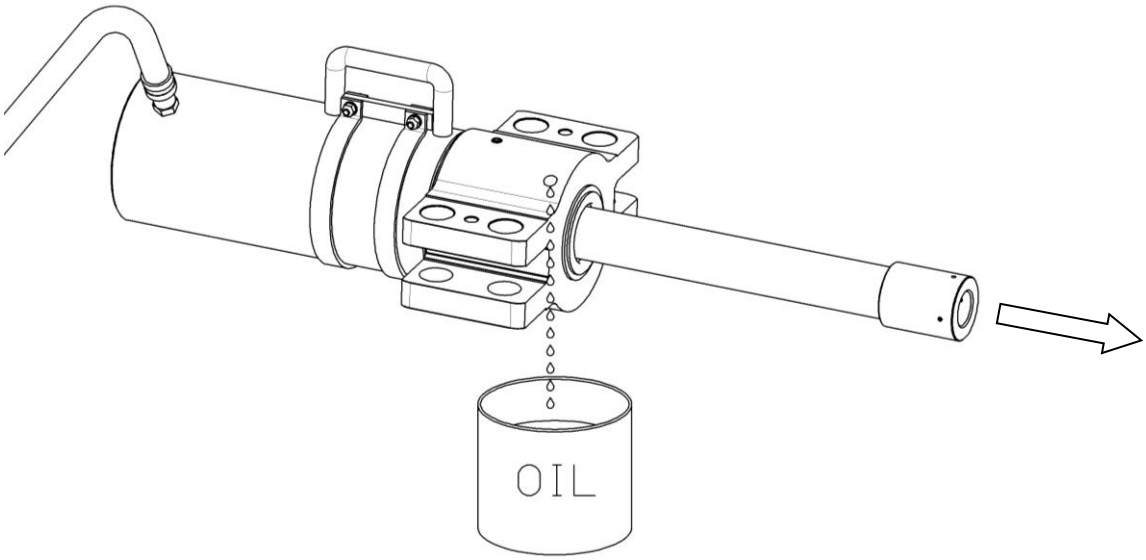
1) Take the caps off and assemble the quick-fit coupling on the bottom side



2) Fit one of the fittings into one of the two hoses on the cylinder quick-fit coupling, and its other end onto one of the two quick-fit couplings on the manual pump or electric power unit..



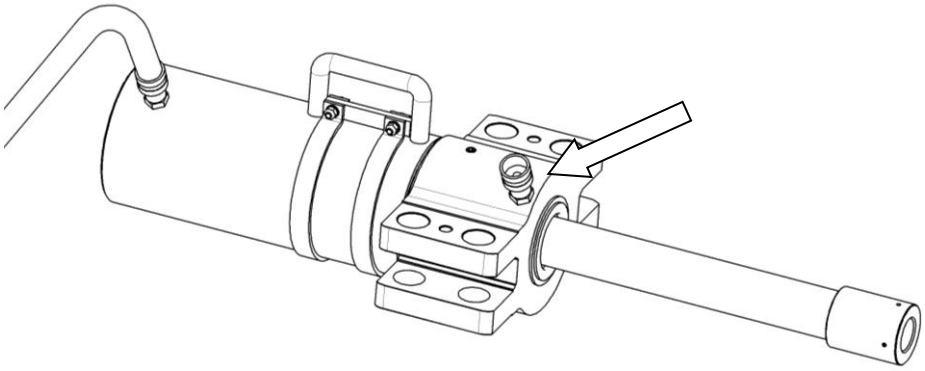
3) Make the rod come all the way out, bringing the air contained in the rod-side cylinder chamber out with it



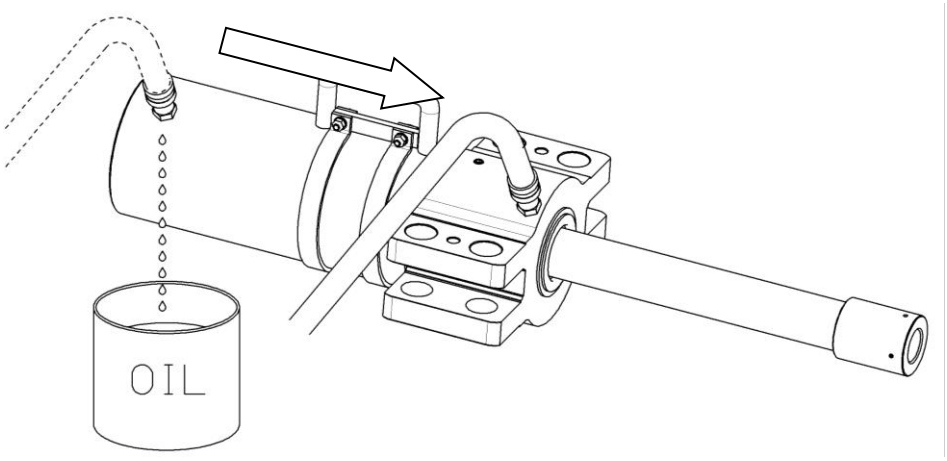
THE CYLINDER MAY CONTAIN OIL USED DURING THE TESTING PHASES. AVOID DISPOSING OF IT AS URBAN WASTE AND COLLECT IT IN DESIGNATED CONTAINERS.

THE OILS ARE HARMFUL IN CASE OF CONTACT. WEAR GLOVES AND GOGGLES ACCORDINGLY.
SOME HYDRAULIC OILS CAN BE HARMFUL TO THE ENVIRONMENT. ADOPT ALL NECESSARY MEASURES ACCORDINGLY.

4) Mount the quick-fit coupling on the rod-side of the cylinder

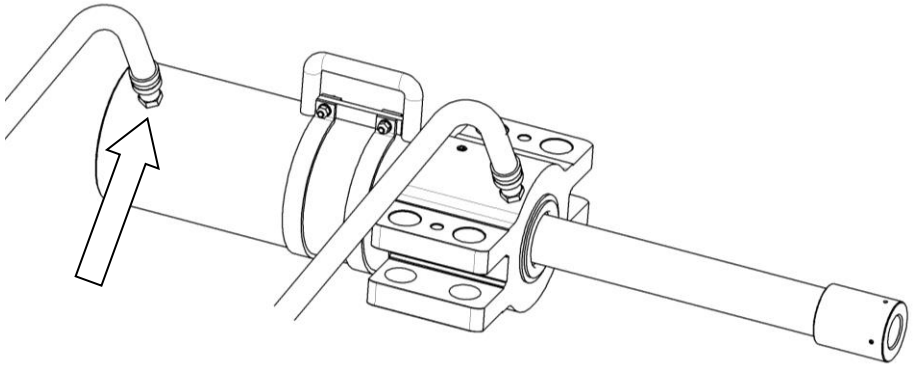


5) Detach the hose from the bottom-side and fit it onto the rod-side of the quick-fit coupling

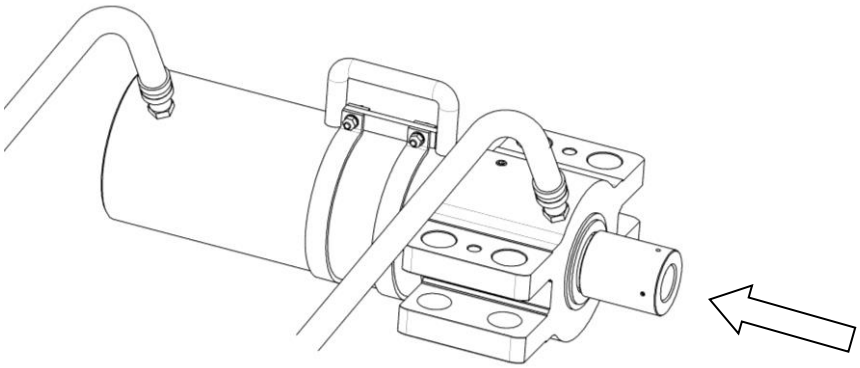


AVOID DISPOSING OF OIL AS URBAN WASTE AND COLLECT IT IN DESIGNATED CONTAINERS.
SOME HYDRAULIC OILS CAN BE HARMFUL TO THE ENVIRONMENT.
ADOPT ALL NECESSARY MEASURES ACCORDINGLY.

6) Fit one end of a new hose into the quick-fit coupling on the bottom-side of the cylinder, and its other end into the free quick-fit coupling on the pump



7) Make the rod retract completely, expelling all of the air contained in the hose with it



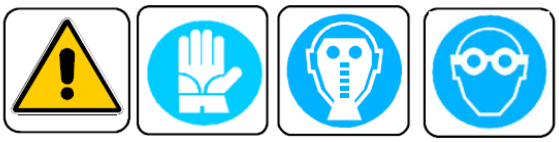
Cylinder preparation is now complete. Even the air contained in the cylinder and hoses has been completely relieved.
Perform complete stroke movements with the rod in both directions, without a load, to ensure that all of the air has been expelled. This operation must only be carried out as long as rod movement is regular and continuous, without any abrupt movements.

3.7.3 Maintenance

- Change the hydraulic oil as specified by the oil manufacturer
- Always keep the hoses, fittings and coupling surfaces of the quick-fit couplings clean
- Make sure that the quick-fit couplings are in good working order and change them as needed
- Check the pieces of equipment and change them if damaged
- Perform general cleaning using a non-aggressive detergent: do not use jets of water or compressed air
- Periodically check the cylinder and if there are any oil leaks, intervene to change any worn parts
- All cylinder parts are available from TRACK ONE on request

3.7.4 Re-commissioning the piston

To re-commission the cylinder following a period of downtime, completely remove all hydraulic oil from the cylinder and clean all protective grease from the rod and cylinder.



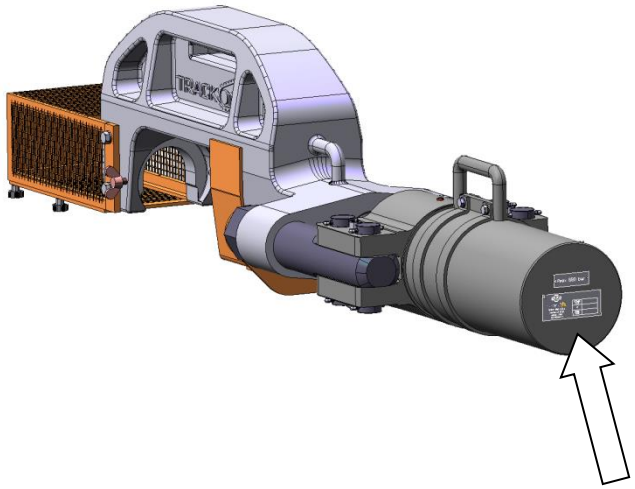
ADOPT ALL NECESSARY SAFETY MEASURES TO PERFORM THE CLEANING OPERATIONS. WEAR GLOVES, GOGGLES AND MASK.

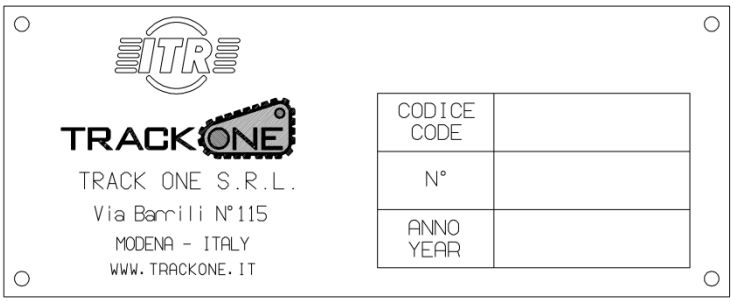
AVOID DISPOSING OF OIL AS URBAN WASTE AND COLLECT IT IN DESIGNATED CONTAINERS.
SOME HYDRAULIC OILS CAN BE HARMFUL TO THE ENVIRONMENT. ADOPT ALL NECESSARY MEASURES ACCORDINGLY.

3.8. Place and types of the identification plates

3.8.1 TOPR100 Portable press

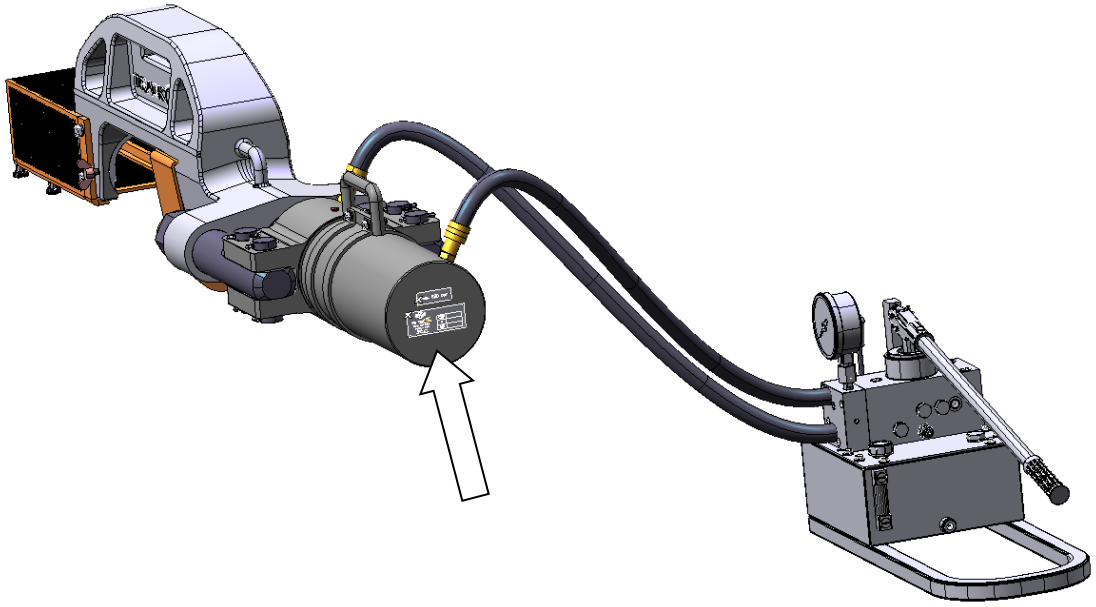
The identification plates are set up as illustrated in the figure below

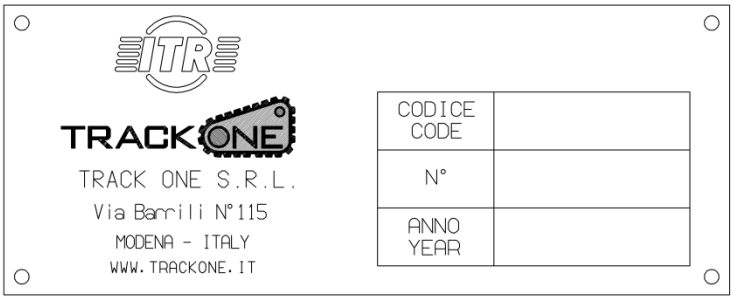


N.	Figura	Descrizione
1		Identification plate for the entire portable press. It provides the code, serial number and year of manufacture
1		Plate providing the max operating pressure That states that the max operating pressure must not exceed a value of 680 bar

3.8.2 TOPR100M Portable press with manual pump

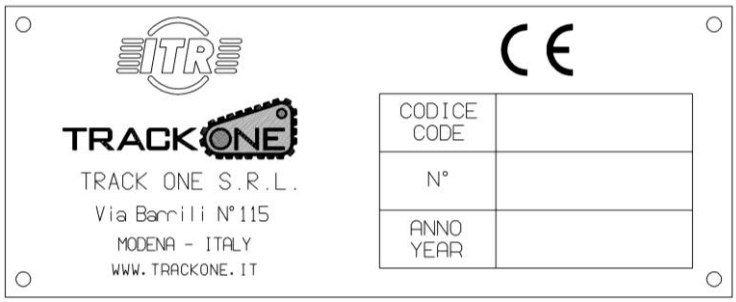
The identification plates are set up as illustrated in the figure below



No.	Figure	Description
1		Identification plate for the entire portable press with manual pump. It provides the code, serial number and year of manufacture
1		Plate providing the max operating pressure That states that the max operating pressure must not exceed a value of 680 bar

3.8.3 TOPR100E Portable press with electric power unit

The identification plates are set up as illustrated in the figure below

No.	Figure	Description
1		Identification plate for the entire portable press with electric power unit. It provides the code, serial number and year of manufacture
1		Plate providing the max operating pressure That states that the max operating pressure must not exceed a value of 680 bar

3.9. Scrapping the piston, the "C"-shaped support and disposal of the relative parts

ALWAYS MAKE SURE, BEFORE EVERY SCRAPPING / DISPOSAL OPERATION, THAT THERE IS NO PRESSURISED FLUID INSIDE THE CYLINDER CHAMBER

The press, with the piston, must be disassembled and the parts must be sorted by type of material.
Example:

- Mechanical parts (steel)
- Gaskets (plastic)
- Lubricants (hydraulic oil)

Delegate the scrapping and disposal operations to specialised and authorised companies with qualification certificates for these operations.

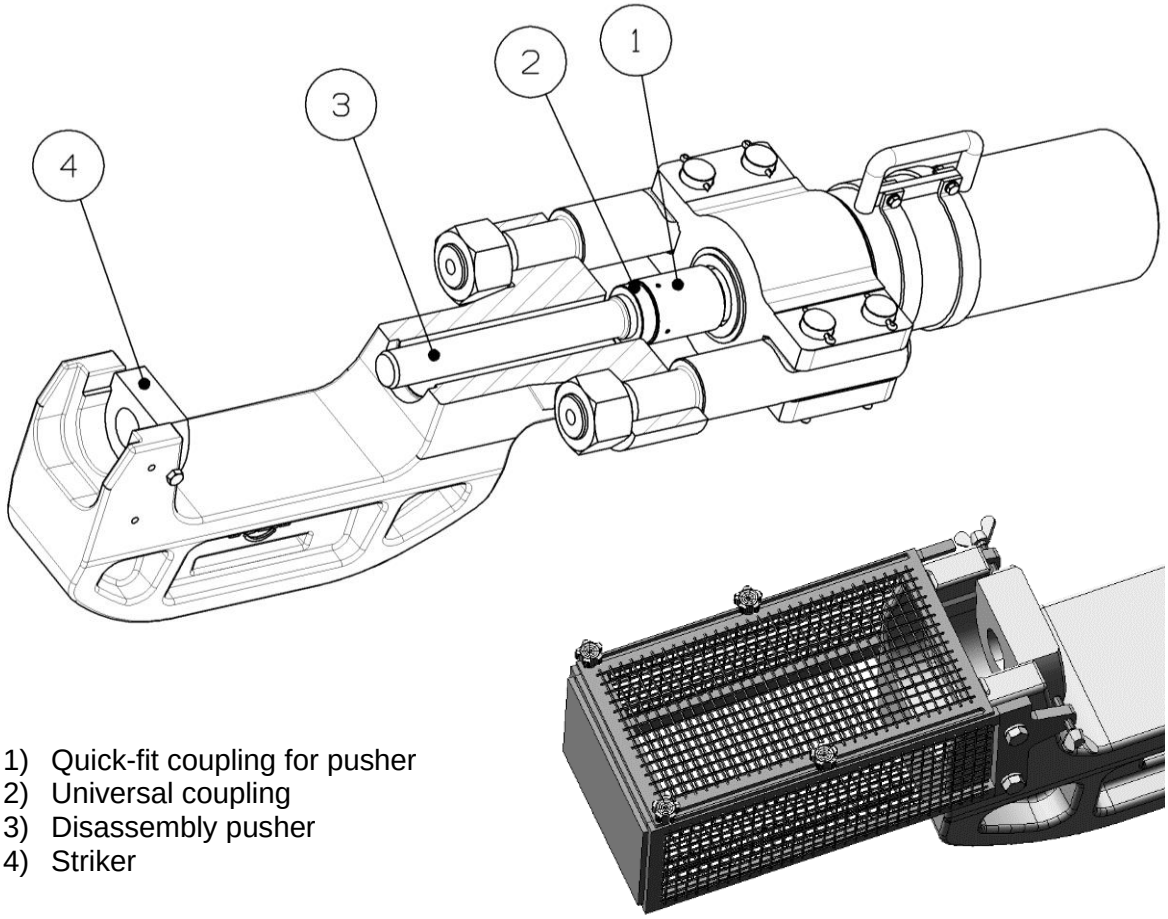
YOU MUST DISPOSE OF THE PISTON IN ACCORDANCE WITH THE STATE OF USE IN TERMS OF HAZARDOUS AND TOXIC WASTE DISPOSAL.

AVOID DISPOSING OF OIL AS URBAN WASTE AND COLLECT IT IN DESIGNATED CONTAINERS. SOME HYDRAULIC OILS CAN BE HARMFUL TO THE ENVIRONMENT, ADOPT ALL NECESSARY MEASURES ACCORDINGLY.

4. Pin assembly / disassembly operation

4.1. Press preparation

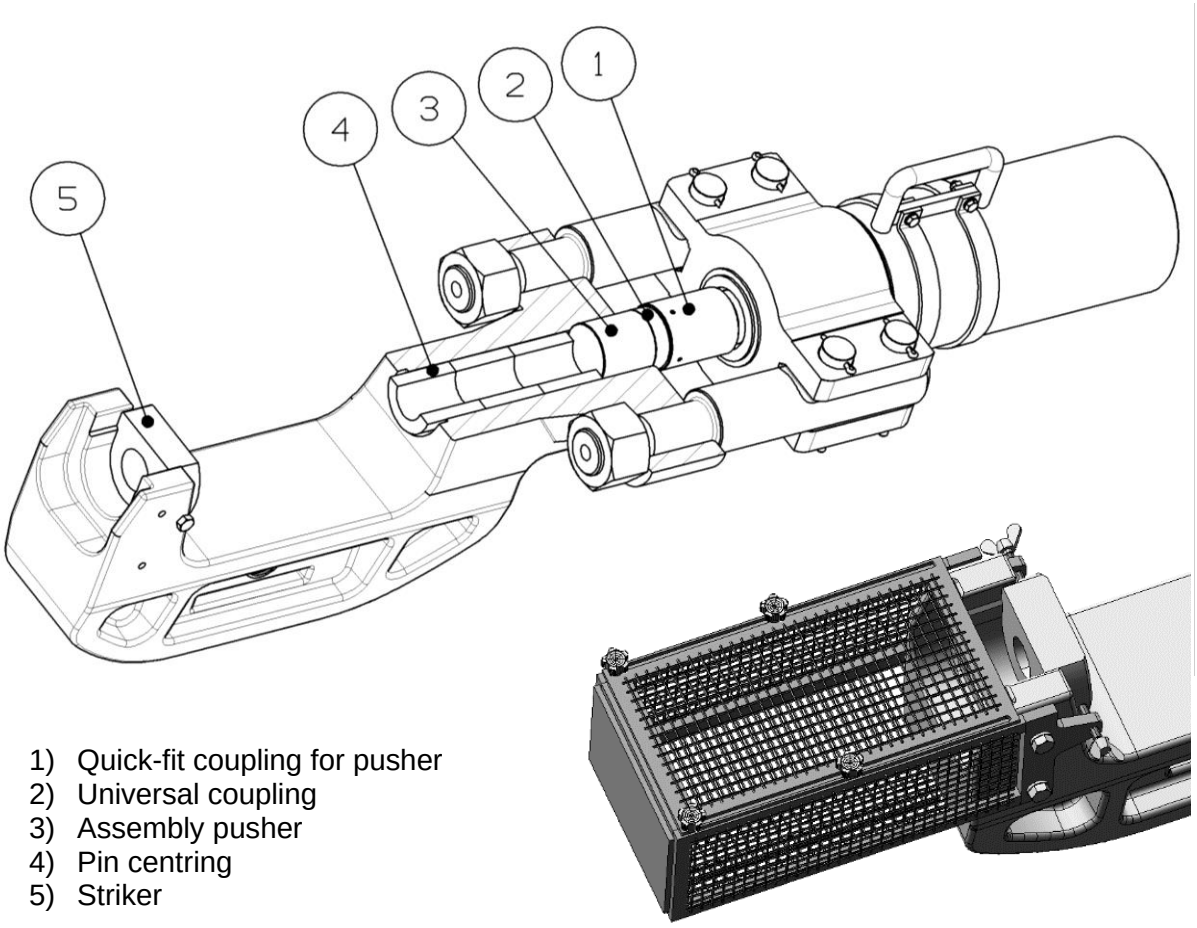
4.1.1 Equipment for disassembly



1) Quick-fit coupling for pusher
2) Universal coupling
3) Disassembly pusher
4) Striker

Assembly equipment parts must be requested from TRACK ONE.
Do not use self-built parts. Prior to use, make sure that the parts have been set up correctly.

4.1.2 Assembly equipment

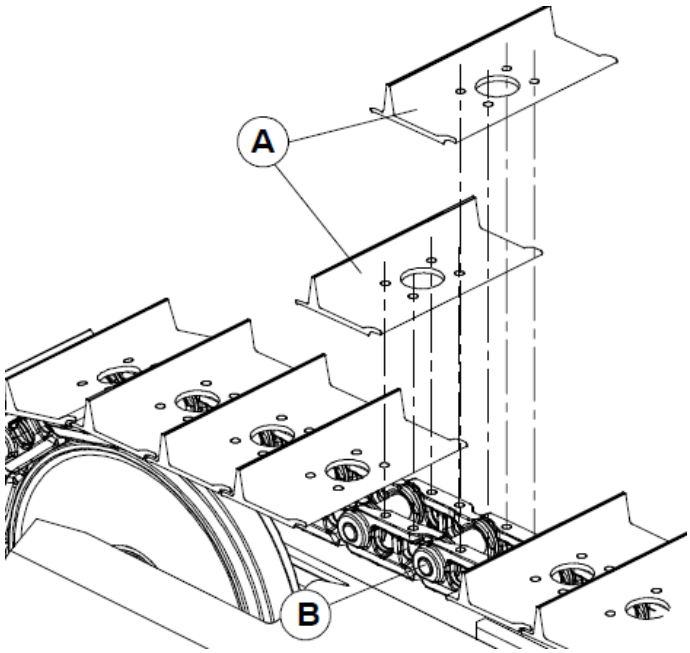


1) Quick-fit coupling for pusher
2) Universal coupling
3) Assembly pusher
4) Pin centring
5) Striker

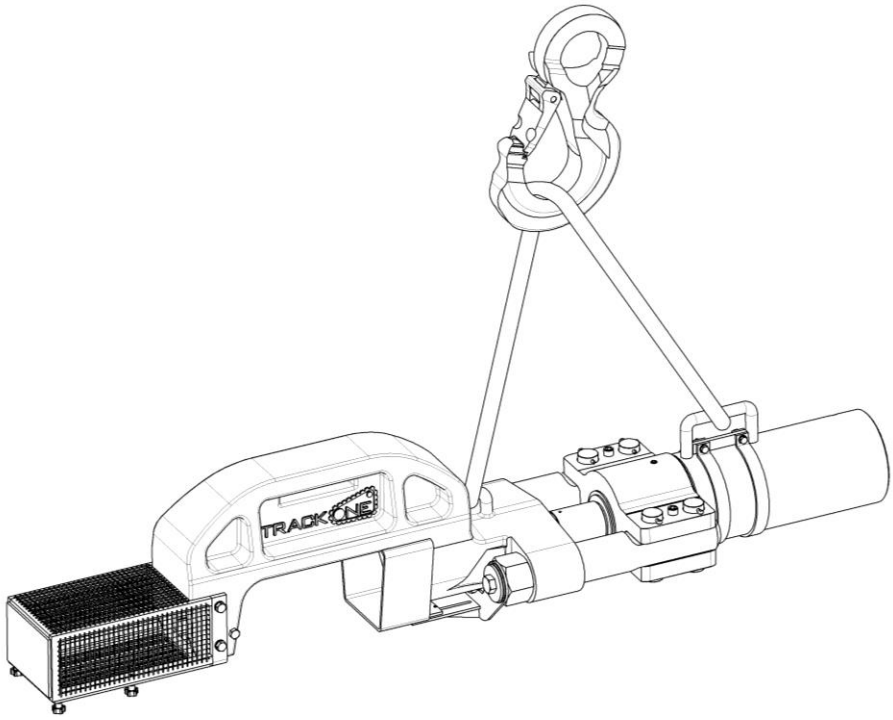
Assembly equipment parts must be requested from TRACK ONE.
Do not use self-built parts. Prior to use, make sure that the parts have been set up correctly.

4.2. Master pin assembly / disassembly operation

1) Remove the two sliding blocks ***A*** mounted on the links whose pin ***B*** needs to be taken down:



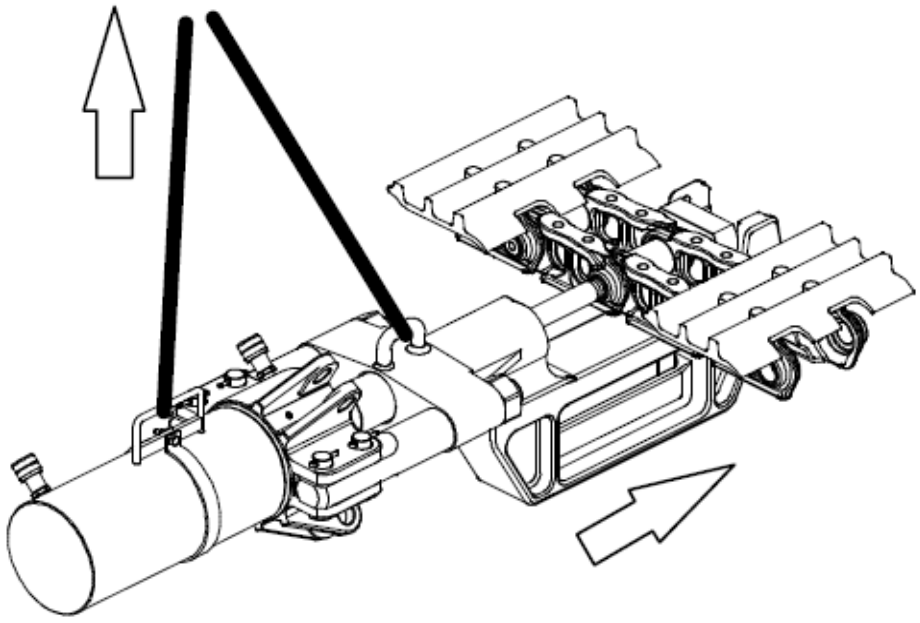
2) Lift the press according to the example illustrated in the figure below



Check the sling identification plates for their capacities, in reference to the harness combination. The minimum total capacity must be no less than the weight of the portable press. Harnessing operations, as well as lifting and transport operations, must be carried out by qualified staff (crane and fork lift truck drivers).
The manufacturer will not be held liable for damage to people or property, due to operations carried out by unqualified staff.

Do not stand under suspended loads for any reason whatsoever. Make sure that no one is stationed in the press area during manoeuvring operations.
Use protective gloves and safety footwear to avoid injuring and crushing feet.

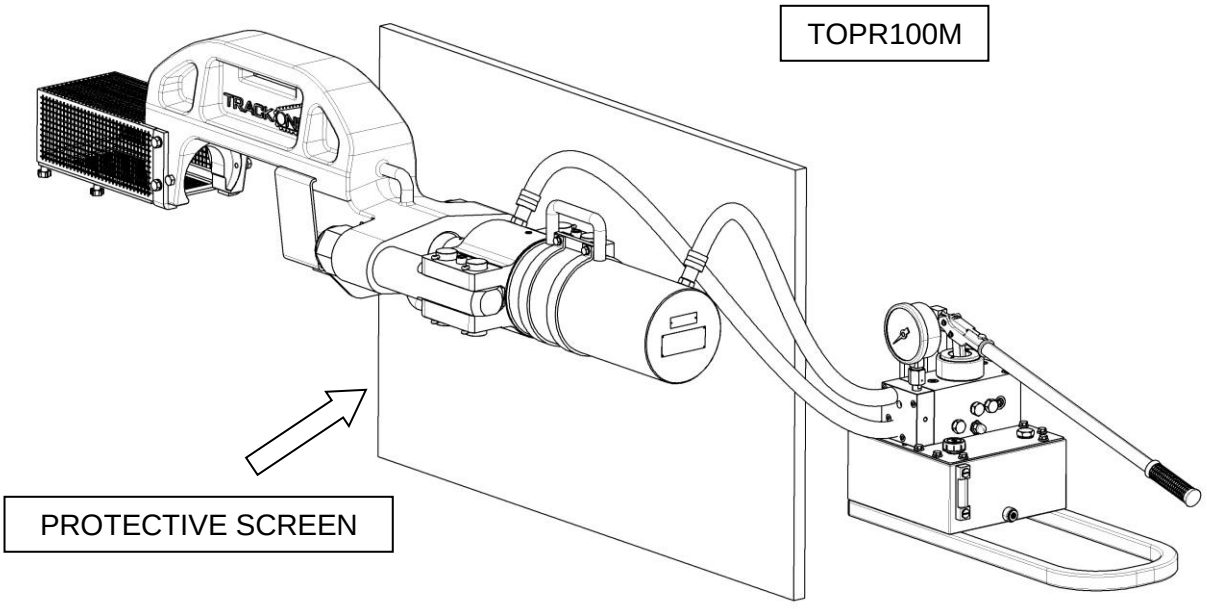
3) Position the press so that the rod is perfectly aligned with the pin that needs to be disassembled and assembled



The axis of the rod must be perfectly in line with the pin during the disassembly phase, and perfectly in line with the hole on the link during the assembly phase.

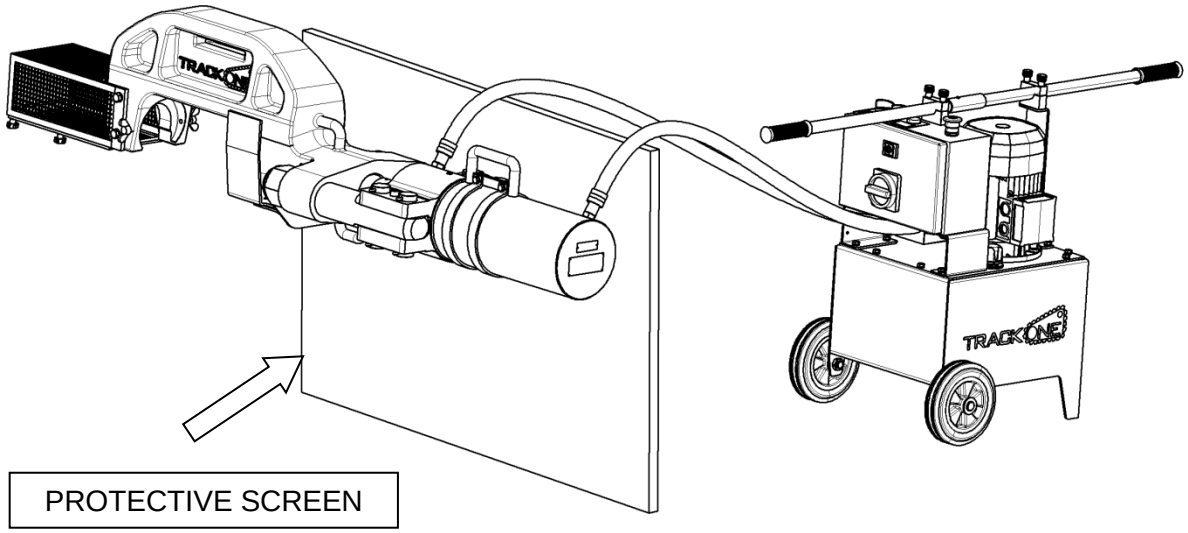
4) Place the manual pump or electric power unit near the press

TOPR100M



PROTECTIVE SCREEN

TOPR100E



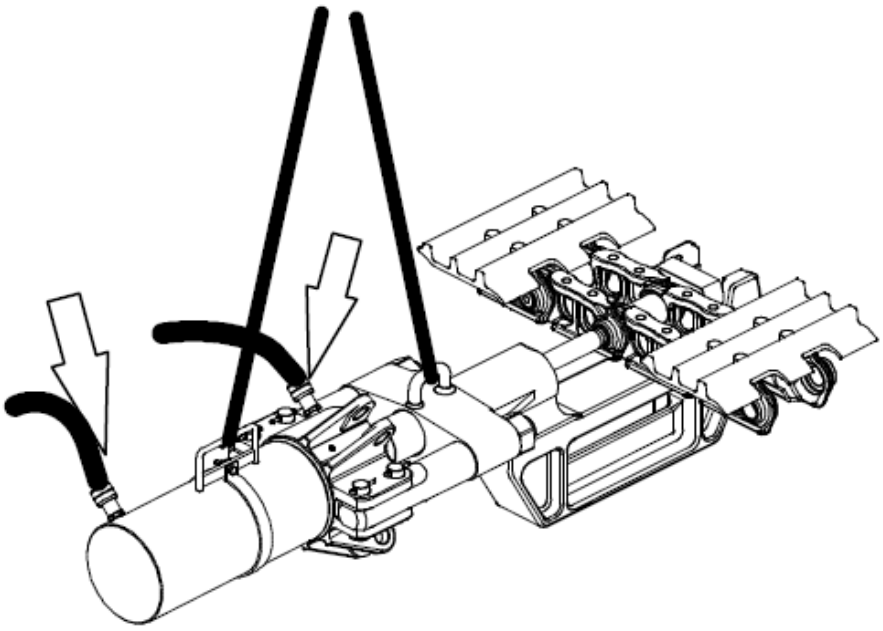
PROTECTIVE SCREEN

Use a protective screen between the press and the manual pump control area.
The screen, which must be provided by the user, must be sturdy enough and fitted with a transparent bullet-proof shield that allows the operations to be seen.

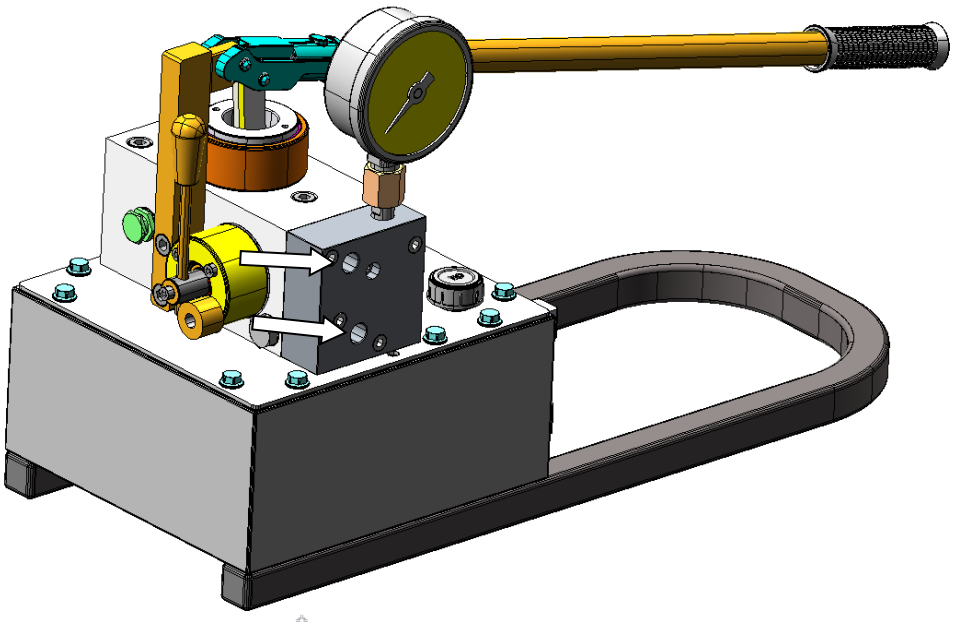
4.3. Auction for the master pin disassembly / assembly operation

4.3.1 Actuation with manual pump

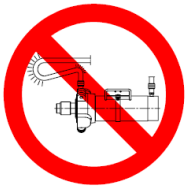
1) Connect the hoses to the press



2) Now connect the supplied hoses to the manual pump



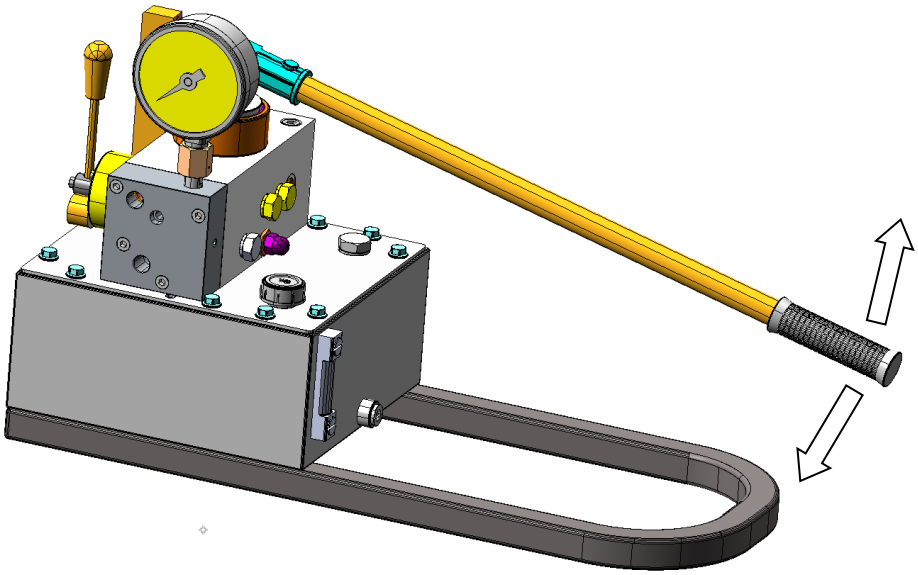
During the hose assembly operation, wear protective gloves and goggles to avoid contact with the hydraulic oil.



Avoid tight bends and coiling in the flexible hoses. Tight bends can throttle the hoses, leading to dangerous counter-pressures that affect their service-life.

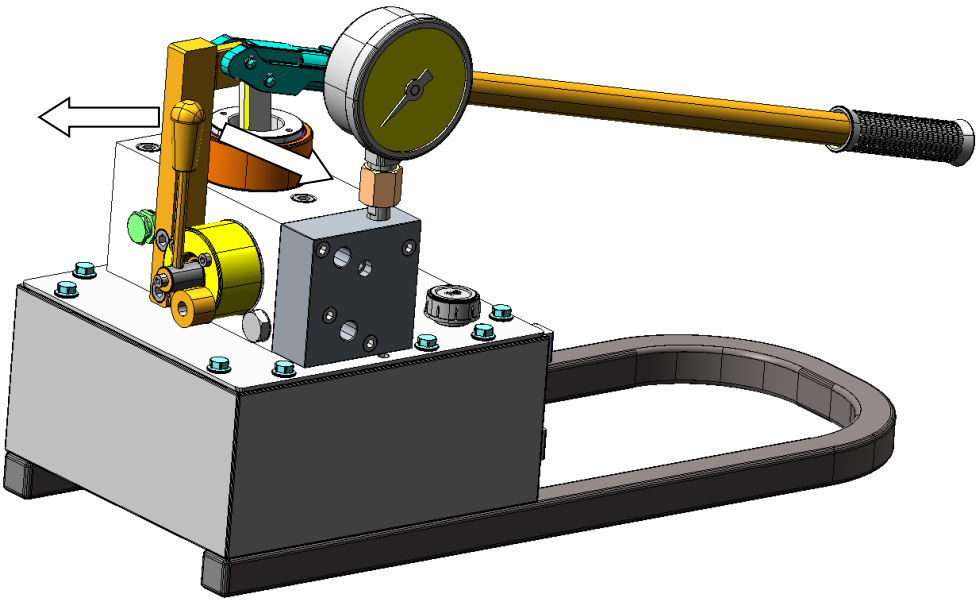
THE CYLINDER MUST ALWAYS BE USED WITH FIRMLY CONNECTED COUPLINGS.
ALWAYS MAKE SURE THE COUPLINGS ARE WELL-CONNECTED.
NEVER USE COUPLINGS THAT APPEAR DAMAGED OR HAVE DAMAGED PARTS.

3) Actuate the pump by moving the control lever



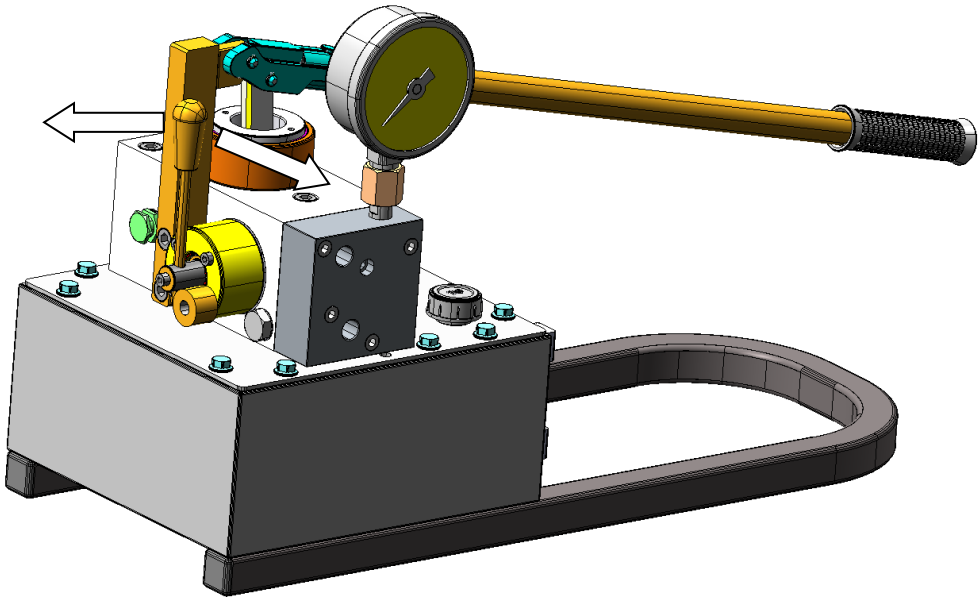
READ THE MANUAL PUMP OPERATING MANUAL PRIOR TO USE

4) Turn the 3-position valve lever counter-clockwise and check which direction the cylinder rod moves in;



To assemble / disassemble the chain on the truck, wear safety gloves, goggles, shoes and helmet.

5) Once the check has been carried out, make the rod come out



The movement of the cylinder rod creates a dangerous situation in the work area (joint pin). Before using the control lever, make sure there is no one in the immediate vicinity of the portable press, except for the operator.

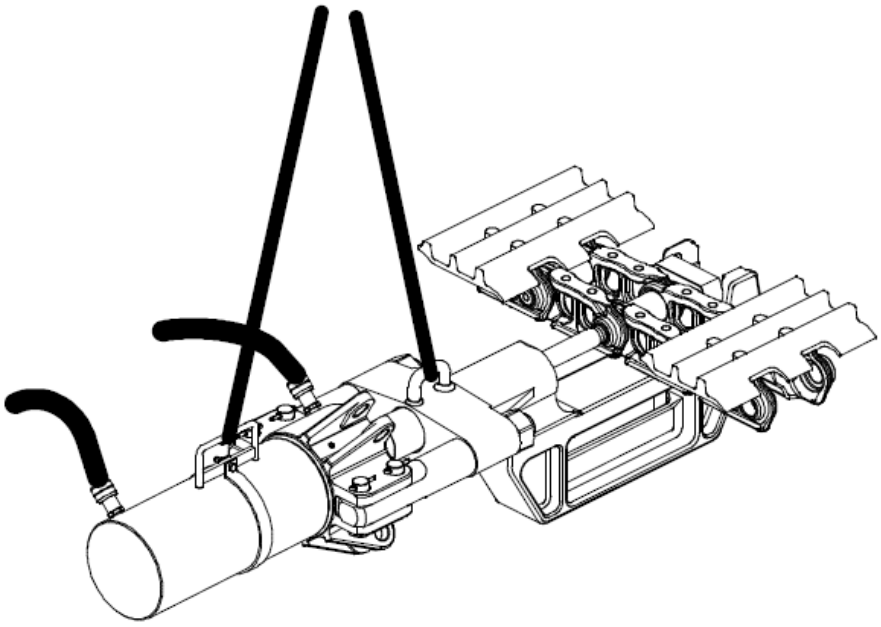
ATTENTION

The maximum operating pressure is 680 bar. The pump is equipped with safety / relief valve to avoid damage to the pump and operator.
ADJUSTING THE OPERATING PRESSURE BASED ON ACTUAL NEED.
DO NOT OVERLOAD THE HYDRAULIC PUMP WITH EXCESSIVE OPERATING PRESSURES.

IT IS STRICTLY FORBIDDEN TO REMOVE OR TAMPER WITH THE SAFETY VALVE. THE MANUFACTURER WILL NOT BE HELD LIABLE FOR INJURY OR MANUAL PUMP FAILURE DUE TO TAMPERING.

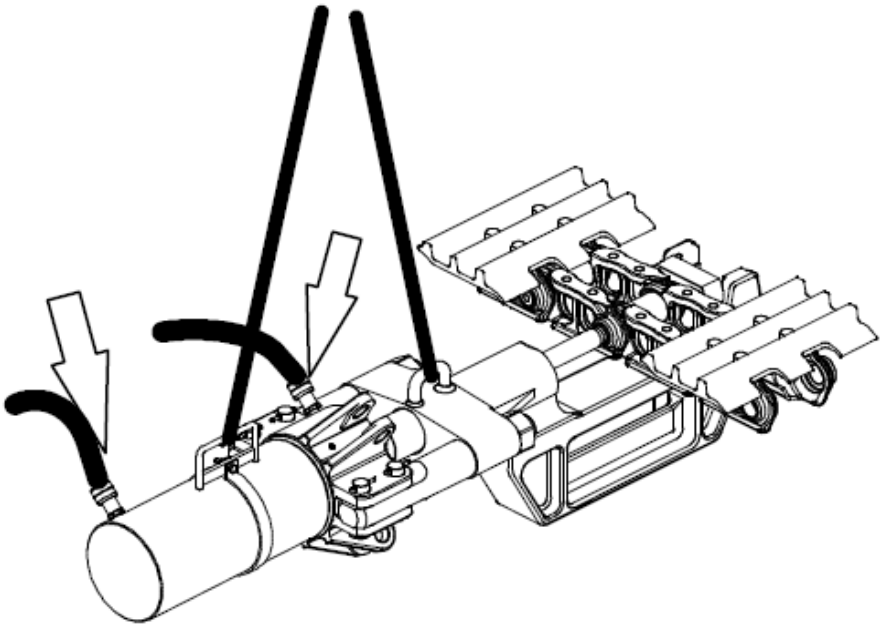
6) Disassembly / Assembly

- The disassembly pusher, mounted on the quick-fit coupling, rests on the joint pin and takes it out of the chain.
- The joining pin, inside the centring devices, rests on the guiding pin (previously installed between the adjacent links that need to be joined for alignment) and is inserted into its hole with interference

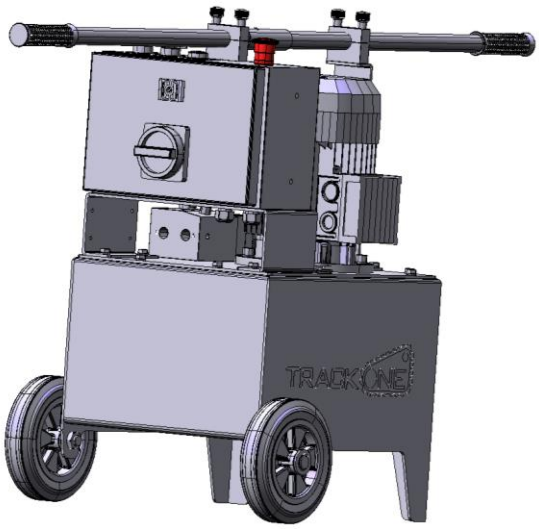


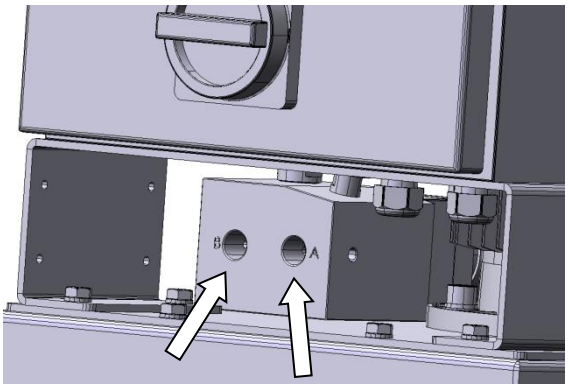
4.3.2 Actuation with electric power unit

1) Connect the hoses to the press

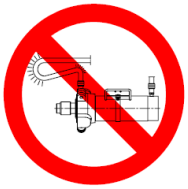


2) Now connect the supplied hoses to the electric pump





During the hose assembly operation, wear protective gloves and goggles to avoid contact with the hydraulic oil.



Avoid tight bends and coiling in the flexible hoses. Tight bends can throttle the hoses, leading to dangerous counter-pressures that affect their service-life.

THE CYLINDER MUST ALWAYS BE USED WITH FIRMLY CONNECTED COUPLINGS.
ALWAYS MAKE SURE THE COUPLINGS ARE WELL-CONNECTED.
NEVER USE COUPLINGS THAT APPEAR DAMAGED OR HAVE DAMAGED PARTS.

3) Connect the electric power unit to the electricity grid through the electric plug

NOTE : THE ELECTRIC POWER UNIT IS PROVIDED WITH ELECTRIC PLUG FOR THE CONNECTION TO THE ELECTICITY GRID. THE ELECTRIC PUMP OPERATING MANUAL MUST BE READ PRIOR USE

The connection of the electic power unit should be performed by experience and trained people in electrical engineering and has to be done entirely by the user.

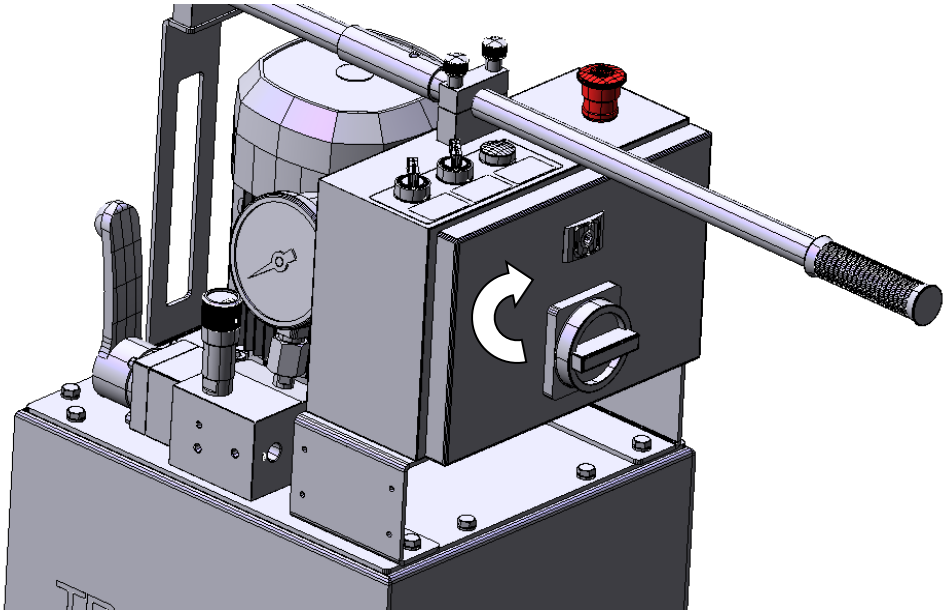
The compliance with the safety standards of the electricity grid must be verified by the user in order to avoid possible damage to the electrical equipment of the electric pump and ensure the security of the operators.

To ensure the safety of operator it is necessary that the electrical connection with the ground is in compliance with local regulations.

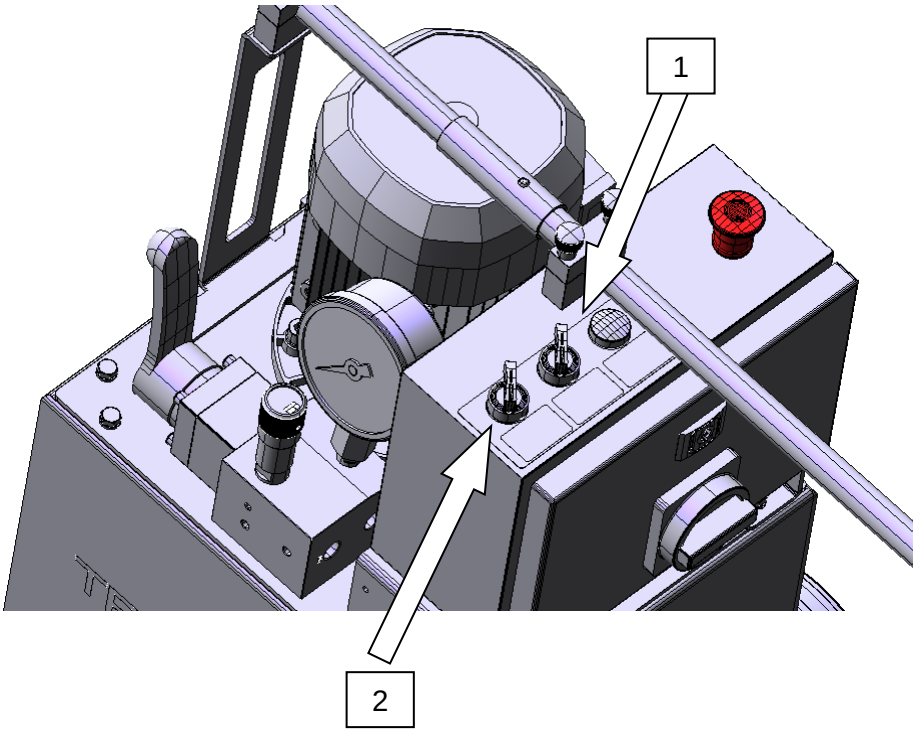
Before performing any maintenance work on the electric pump, "remove the connection from the electricity grid"

Once the electric power unit is connected to the press by hydraulic pipes and to the electrical distribution network by the plug, it is possible to start the disassembly operation of the master pin

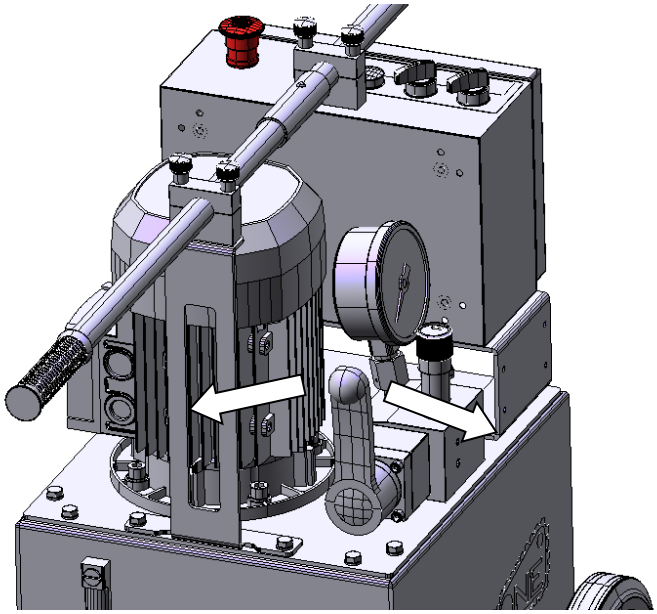
4) Enable the use of the electric power unit



5) Switch on the electric power unit, selector 1 to ON, selector 2 to CONTINUOS

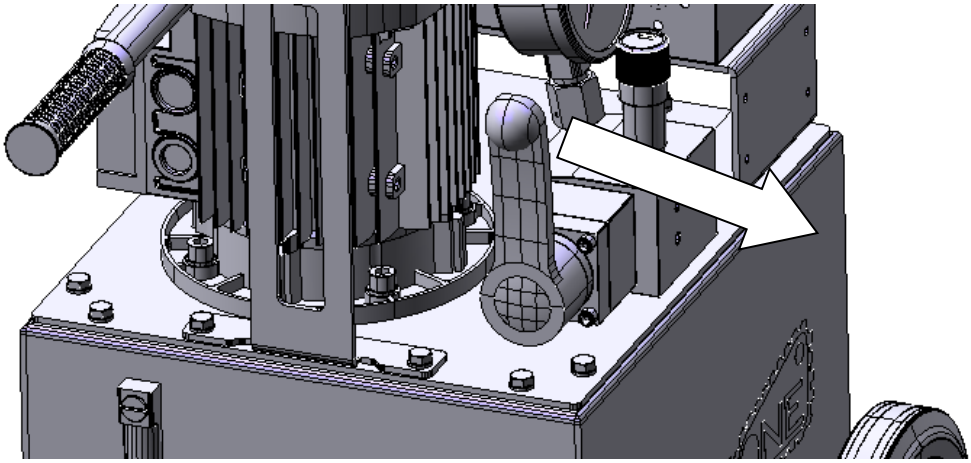


6) Turn the 3-position valve lever counter-clockwise and check the direction of the movement of the piston



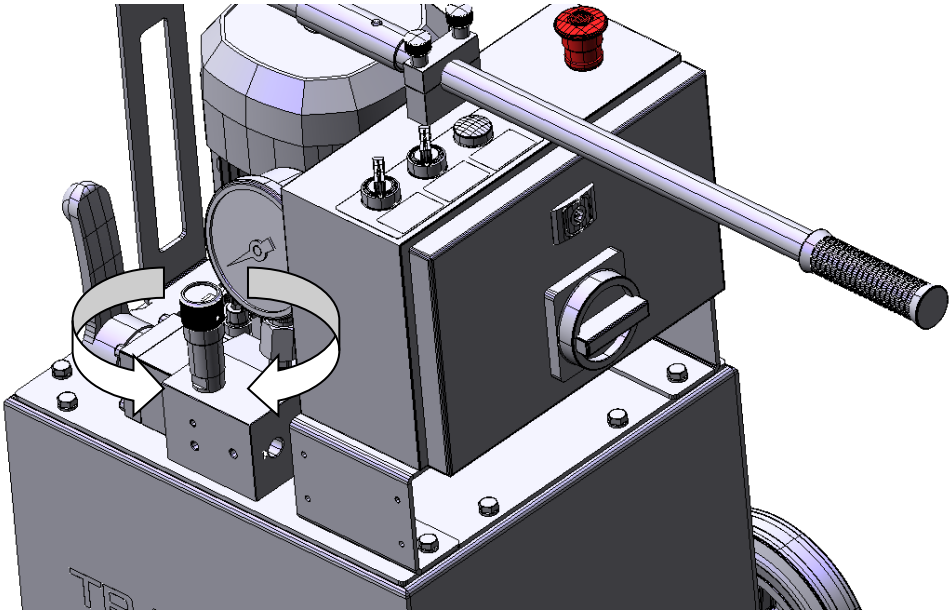
To assemble / disassemble the chain on the truck, wear safety gloves, goggles, shoes and helmet.

7) Once the check at the direction of the movement of the piston has been carried out, make the piston come out



The movement of the cylinder rod creates a dangerous situation in the work area (joint pin). Before using the control lever, make sure there is no one in the immediate vicinity of the portable press, except for the operator.

8) Adjust the pressure by the rotation of the regulating valve.



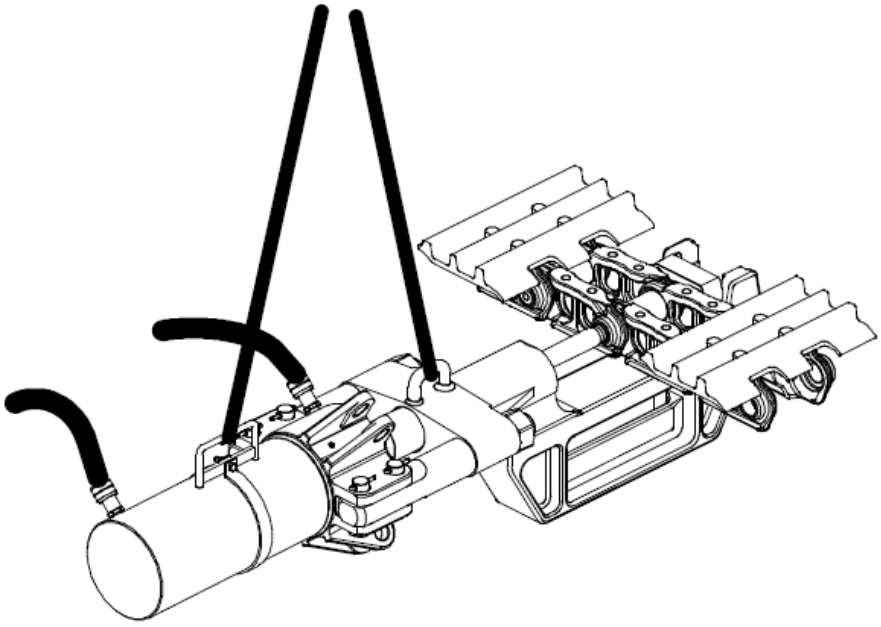
ATTENTION

The maximum operating pressure is 680 bar. The pump is equipped with safety / relief valve to avoid damage to the pump and operator.
ADJUSTING THE OPERATING PRESSURE BASED ON ACTUAL NEED.
DO NOT OVERLOAD THE HYDRAULIC PUMP WITH EXCESSIVE OPERATING PRESSURES.

IT IS STRICTLY FORBIDDEN TO REMOVE OR TAMPER WITH THE SAFETY VALVE. THE MANUFACTURER WILL NOT BE HELD LIABLE FOR INJURY OR MANUAL PUMP FAILURE DUE TO TAMPERING.

9) Disassembly / Assembly

- The disassembly pusher, mounted on the quick-fit coupling, rests on the joint pin and takes it out of the chain.
- The joining pin, inside the centring devices, rests on the guiding pin (previously installed between the adjacent links that need to be joined for alignment) and is inserted into its hole with interference



4.4. Manual pump TOPM2A

For further instruction regarding the use of the manual pump, refer to the manual of use and maintenance “TOPM2A” annexed with this manual.

4.5. Electric power unit TOCE308

For further instruction regarding the use of the electric power unit, refer to the manual of use and maintenance “TOCE308” annexed with this manual.

5. Maintenance

5.1. Periodic checks

EVERY 12 MONTHS, WITH OCCASIONAL USE, OR EVERY SIX MONTHS, WITH FREQUENT USE, HAVE SPECIALISED AND QUALIFIED STAFF IN THE SECTOR RUN A FUNCTIONAL CONTROL ON THE CYLINDER.

PERFORM ANY NECESSARY MAINTENANCE OPERATIONS TO MAKE SURE THE PISTON WILL OPERATE CORRECTLY.

ALWAYS MAKE SURE, BEFORE EVERY MAINTENANCE, REPAIR OR SCRAPPING / DISPOSAL OPERATION, THAT THERE IS NO PRESSURISED FLUID INSIDE THE PISTON CHAMBER

5.2. Check prior to every use

PRIOR TO EVERY USE IT IS IMPORTANT TO CHECK THE INTEGRITY OF THE PISTON, THE "C"-SHAPED SUPPORT AND THE ASSEMBLY OR DISASSEMBLY EQUIPMENT TO ENSURE YOU ARE WORKING IN SAFE CONDITIONS AND IN THE REQUIRED OPERATING CONDITIONS.

Paragraph 5. 3 contains a check list that provides a guideline for portable press control/testing.

IF YOU DISCOVER A FAULT WITH THE CYLINDER, IT MUST NOT BE USED FOR ANY REASON WHATSOEVER. IF YOU DISCOVER A FAULT WITH THE PORTABLE PRESS, IT MUST NOT BE USED FOR ANY REASON WHATSOEVER.
CONTACT A SPECIALISED AND QUALIFIED ASSISTANCE CENTRE.

5.2.1 Checking the piston

Periodic checks based on frequency of use, as reported in point 5.1.

5.2.2 Checking the "C"-shaped support unit

Run extensive checks on the "C"-shaped support unit at regular intervals (at least once a year), and perform maintenance as needed. All spare parts are available on request.
Paragraph 5. 4 contains a check list that provides a guideline for portable press control/testing.

5.2.3 Checking assembly and disassembly equipment

Run extensive checks on the assembly and disassembly equipment at regular intervals (at least once a year), and perform maintenance as needed. All spare parts are available upon request.
Paragraph 5. 4 contains a check list that provides a guideline for portable press control/testing.

5.3. Record of check carried out prior to each use

	CHECK PRIOR TO EACH USE	**Date** ……	
No.	**RECORD OF CHECK CARRIED OUT ON PORTABLE PRESS TOPR100**	**Pass**	
		YES	**NO**
1	Checking for scratches, dents and scoring on tie rods and relative nuts.		
2	Make sure the threading on the tie rods and relative nuts is intact and make sure they are coupled correctly (the nuts slide easily onto the tie rods)		
3	Make sure there are no scratches, dents and scoring on the connecting pins between tie rods and piston		
4	Make sure there are no scratches, dents and scoring on the "C"-shaped support		
5	Make sure the joint pin assembly and disassembly equipment is intact		

No.	RECORD OF CHECK CARRIED OUT ON TOPC100 PISTON	Pass	
		YES	NO
1	Check for scratching, scoring or other types of damage on the piston body, bottom and head.		
2	Make sure there is no oil leaking from the front rod sealing gaskets		
3	Make sure there is no oil leaking from the front rod static gaskets		
4	Make sure the cylinder head is closed perfectly (screwed all the way in)		
5	Make sure there is no oil leaking from the bottom of the piston		
6	Make sure there is no oil leaking from the connecting threading of the fittings		
7	Make sure there is no oil leaking from the connecting hose fittings.		
8	Check for oil leaks, deformation and damage to the oil feed hoses		

5.4. Record of period check (annual)

THE PERIODIC CHECK OF THE PORTABLE PRESS EQUIPMENT MUST BE CARRIED OUT BY A SPECIALISED LABORATORY THAT USES CERTIFIED TOOLS.

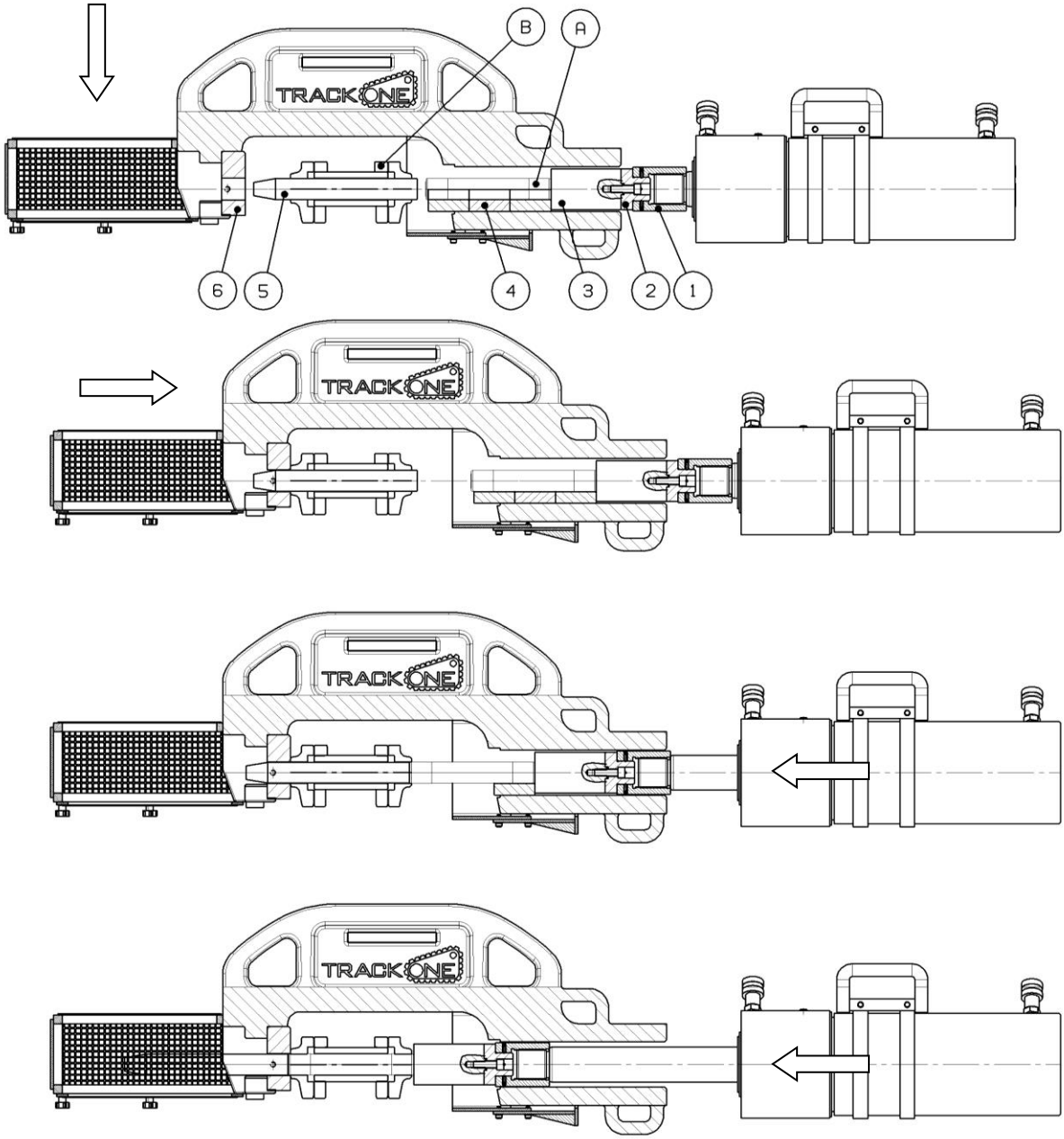
THE CHECK MUST BE CARRIED OUT USING NON-DESTRUCTIVE SYSTEMS SUCH AS PENETRATING LIQUIDS AND MAGNETIC INDUCTION SYSTEMS (MAGNAFLUX).

	PERIODIC CHECK	Date ……	
No.	**RECORD OF CHECK CARRIED OUT ON PORTABLE PRESS TOPR100**	**Pass**	
		YES	**NO**
1	Checking for scratches, dents and scoring on tie rods, including their threading		
2	Checking for scratches, dents and scoring on nuts, including their threading		
3	Make sure there are no scratches, dents and scoring on the connecting pins between tie rods and piston		
4	Make sure there are no scratches, dents and scoring on the "C"-shaped support		
5	Make sure the joint pin assembly and disassembly equipment is intact		
No.	**RECORD OF CHECK CARRIED OUT ON LOW PRESSURE TOPC100 PISTON**	**Pass**	
		YES	**NO**
1	No vibration or scoring has been detected during movement		
2	The piston stroke is in its position of maximum extension		
3	There is no leakage from the rod side of the gasket. When the cylinder is moving, the layer of oil on the rod must not be so thick that it drips or creates a ring of oil		
4	No oil has been found to be leaking from any of the static rings		
5	Make sure no oil is leaking from the threading of the oil feed connectors		
6	Make sure there is no oil leaking from the bottom of the piston		
No.	**RECORD OF CHECK CARRIED OUT ON TOPC100 PISTON MAX OPERATING PRESSURE ****	**Pass**	
		YES	**NO**
1	Apply the maximum pressure for at least 10 seconds in both cylinder chambers		
2	Check the structural integrity of the cylinder		
3	No oil has been found to be leaking from any of the static rings		
4	There is no leakage from the rod side of the gasket. When the cylinder is moving, the layer of oil on the rod must not be so thick that it drips or creates a ring of oil.		
5	Make sure no oil is leaking from the threading of the oil feed connectors.		
6	Make sure there is no oil leaking from the bottom of the piston		

(*) Check carried out on the low pressure cylinder at 5 bar with movement to the end run in both directions, at least 3 times.
(*) Check carried out at the maximum operating pressure set forth by the assembly drawing (680 bar)

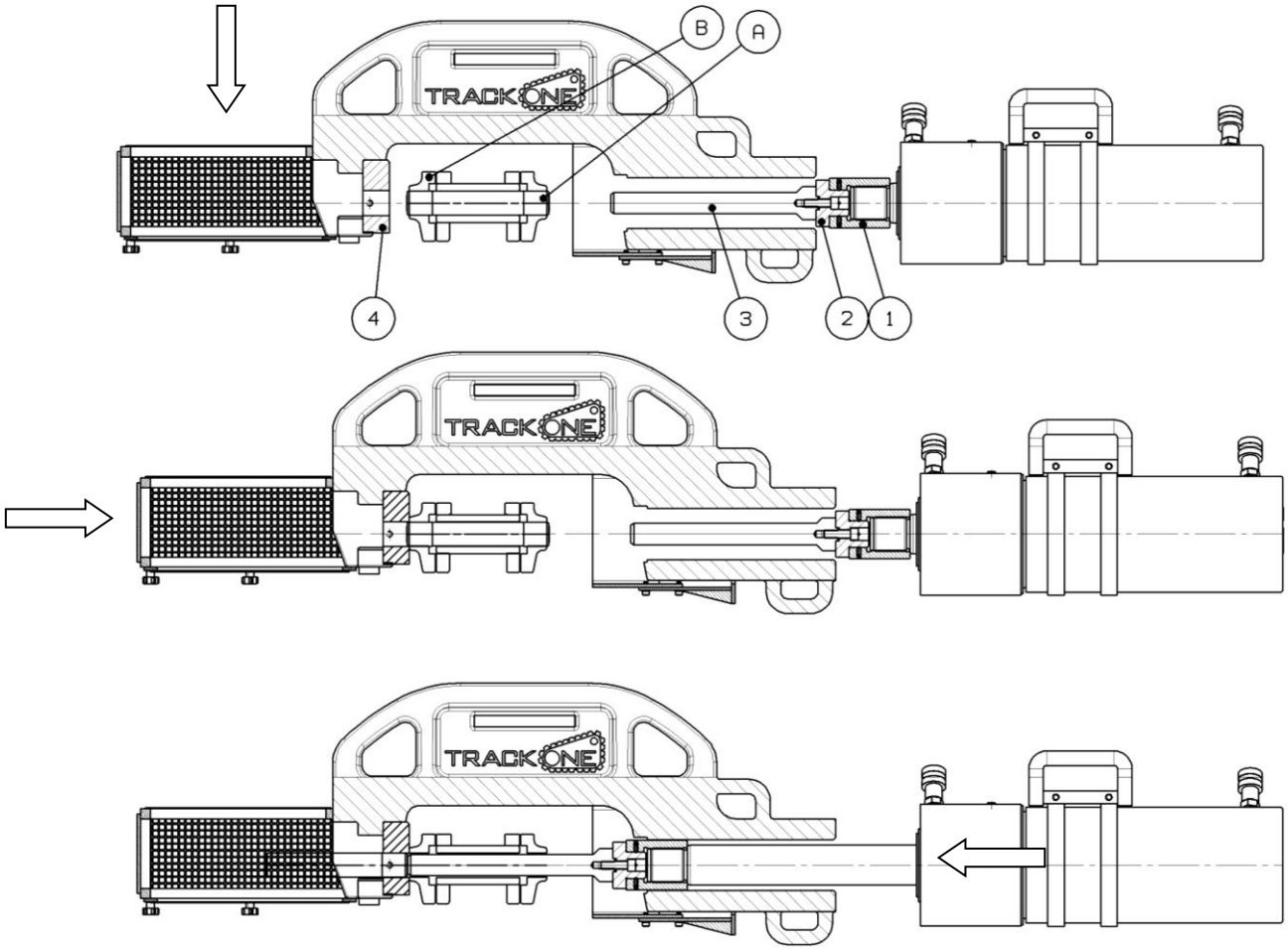
6. Pin assembly and disassembly sequences

6.1. Diagram of pin assembly sequence



Pos.	Description
A	Chain joint pin
B	Chain
1	Quick-fit coupling for pusher
2	Universal coupling for pusher
3	Assembly pusher
4	Pin centring
5	Centring pin
6	Striker

6.2. Diagram of pin disassembly sequence



Pos.	Description
A	Chain joint pin
B	Chain
1	Quick-fit coupling for pusher
2	Universal coupling for pusher
3	Disassembly pusher
4	Striker

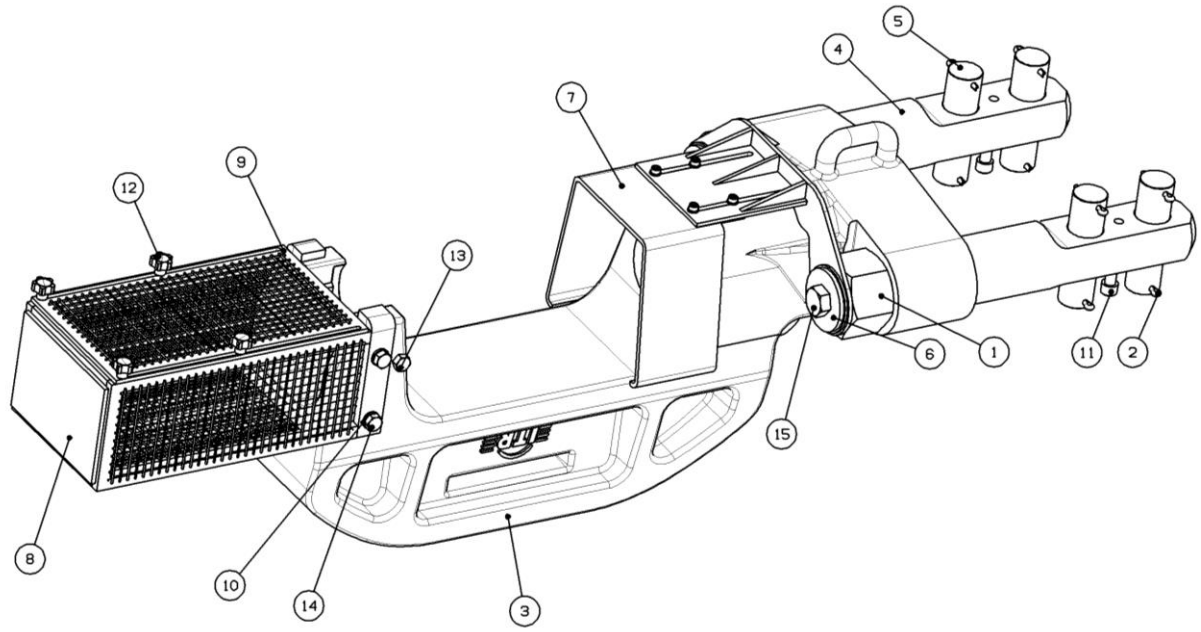
7. Troubleshooting

7.1. Outlining table of possible problems and relative solutions

FAULTS	CAUSES	SOLUTIONS
The piston rod does not move ahead or it does so slowly or in jerky movements	Not enough hydraulic oil	Add oil to the manual pump tank or to the electric power unit tank
	The coupling is not engaged correctly	Make sure the coupling is engaged correctly and tighten it
	Air in the circuit	Relieve any air from the circuit, as instructed above
	Piston frozen in the chamber	Have expert and qualified staff check the piston
The piston rods moves ahead but it does not maintain the pressure	Oil leak in the circuit	Check all of the fittings
	Oil leaks from the piston gaskets	Have expert and qualified staff check the piston
	Oil leaks inside the manual or electric pump	Have expert and qualified staff check the manual or electric pump
The piston rod does not go back in, or only partially or slower than usual	Discharge valve closed	Contact TRACK ONE
	Manual pump tank or electric power unit tank too full	Take out part of the oil from the manual pump tank or from the electric power unit tank ; make sure the level is not too low
	Loose quick-fit coupling	Contact TRACK ONE
	Air in the hydraulic circuit	Relieve any air from the circuit, as instructed above
	Clogged hydraulic circuit	Make sure the quick-fit couplings are tight and that the valves are working correctly
	Internal diameter of the hoses is too small or the hose is too long	Use hoses with an internal diameter that complies with the requirements and maximum operating pressure.

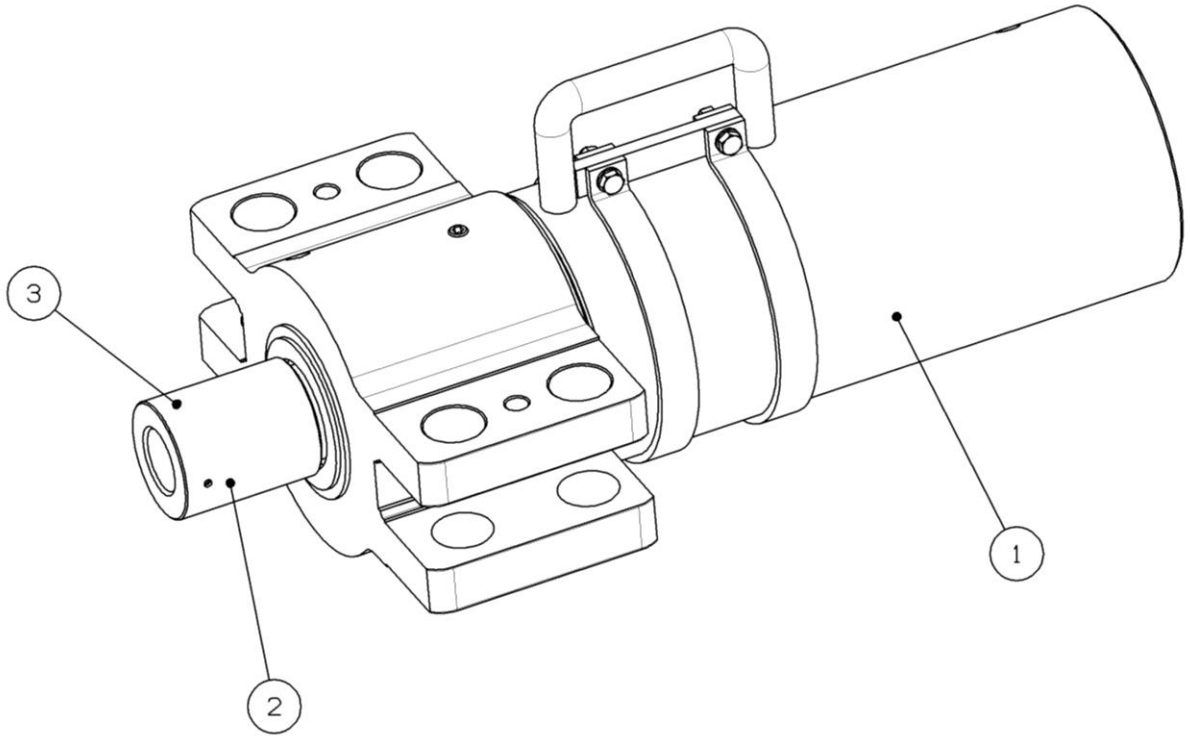
8. Parts

8.1. Parts for TOSC100 "C"-shaped support



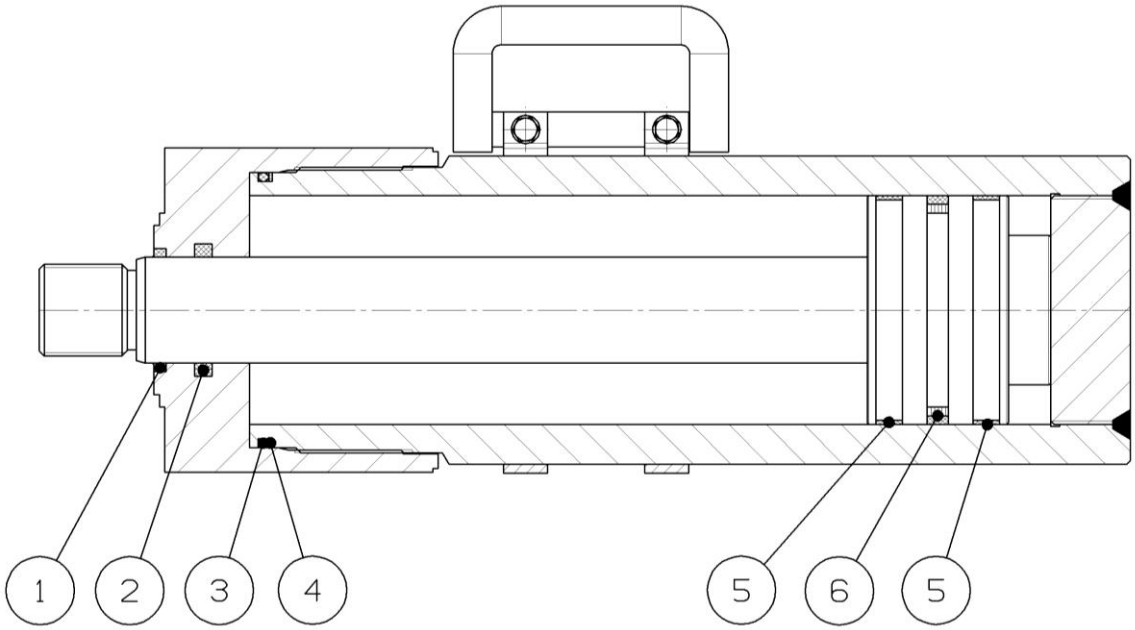
POS.	CODE	DESCRIPTION	Q.TY
1	TDE5205210	Hex nut	2
2	TCO059	Split pin	8
3	TOSC10001	"C"-shaped support	1
4	TOSC10002	Threaded tie rod	2
5	TOSC10003	Clamping pin	4
6	TOSC10004	Washer	2
7	TOSC10005	Pusher casing	1
8	TOSC10006	Pin collecting casing	1
9	TOSC10007	Mobile casing	1
10	TRP2010	Flat washer	4
11	TVC1205588	Hex socket head cap screw	2
12	TVC692P	Lobed hand-wheel	4
13	TVE1002088	Hex head screw	2
14	TVE1002588	Hex head screw	4
15	TVE2004010	Hex head screw	2

8.2. Spare parts for TOPC100 hydraulic piston



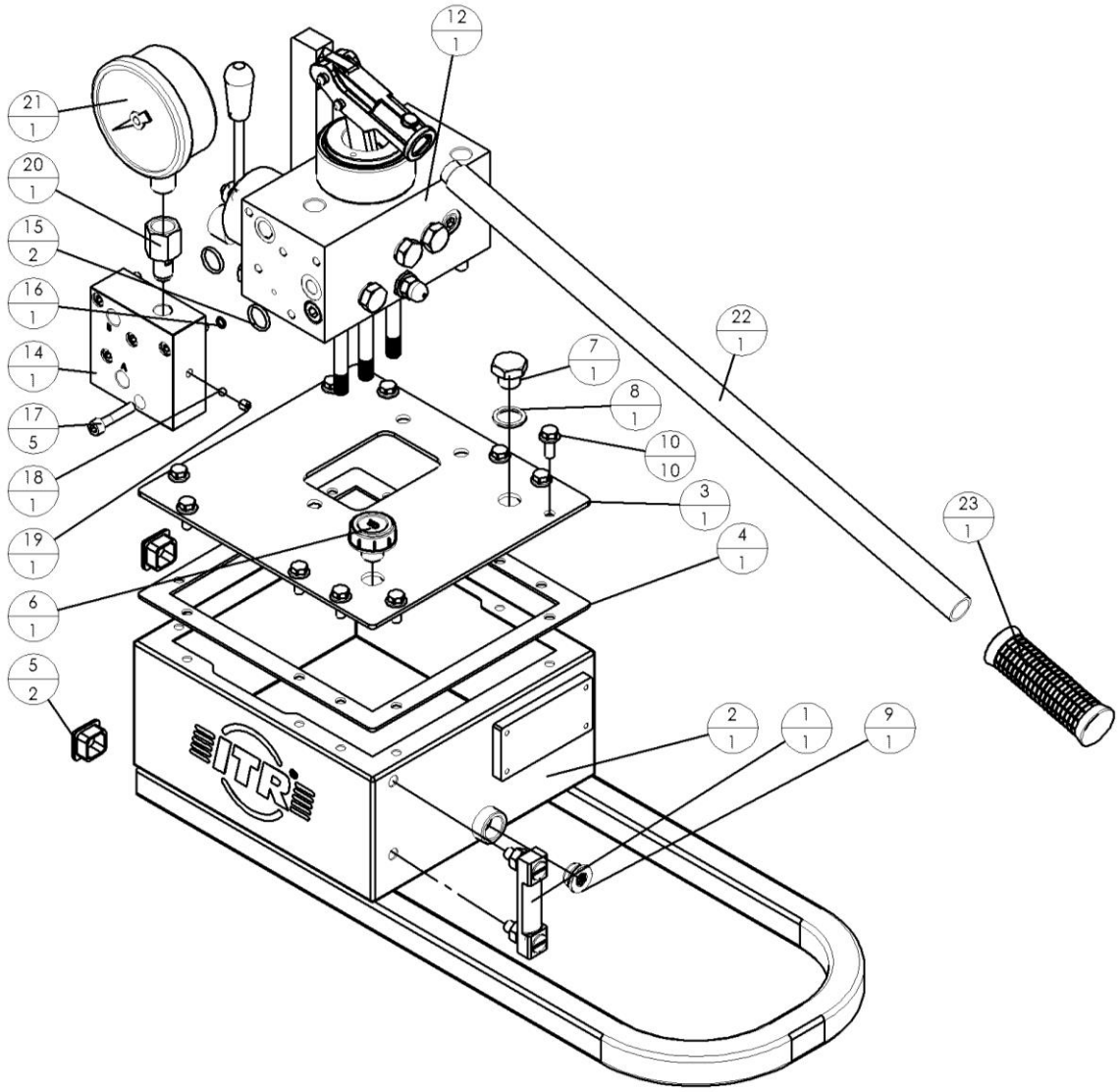
POS.	CODE	DESCRIPTION	Q.TY
1	TOPC10001	Piston	1
2	TOPC10002	Quick-fit coupling for assembly/disassembly equipment	1
3	TEH22030006	Ball positioning device	4

8.2.1 Hydraulic piston gaskets



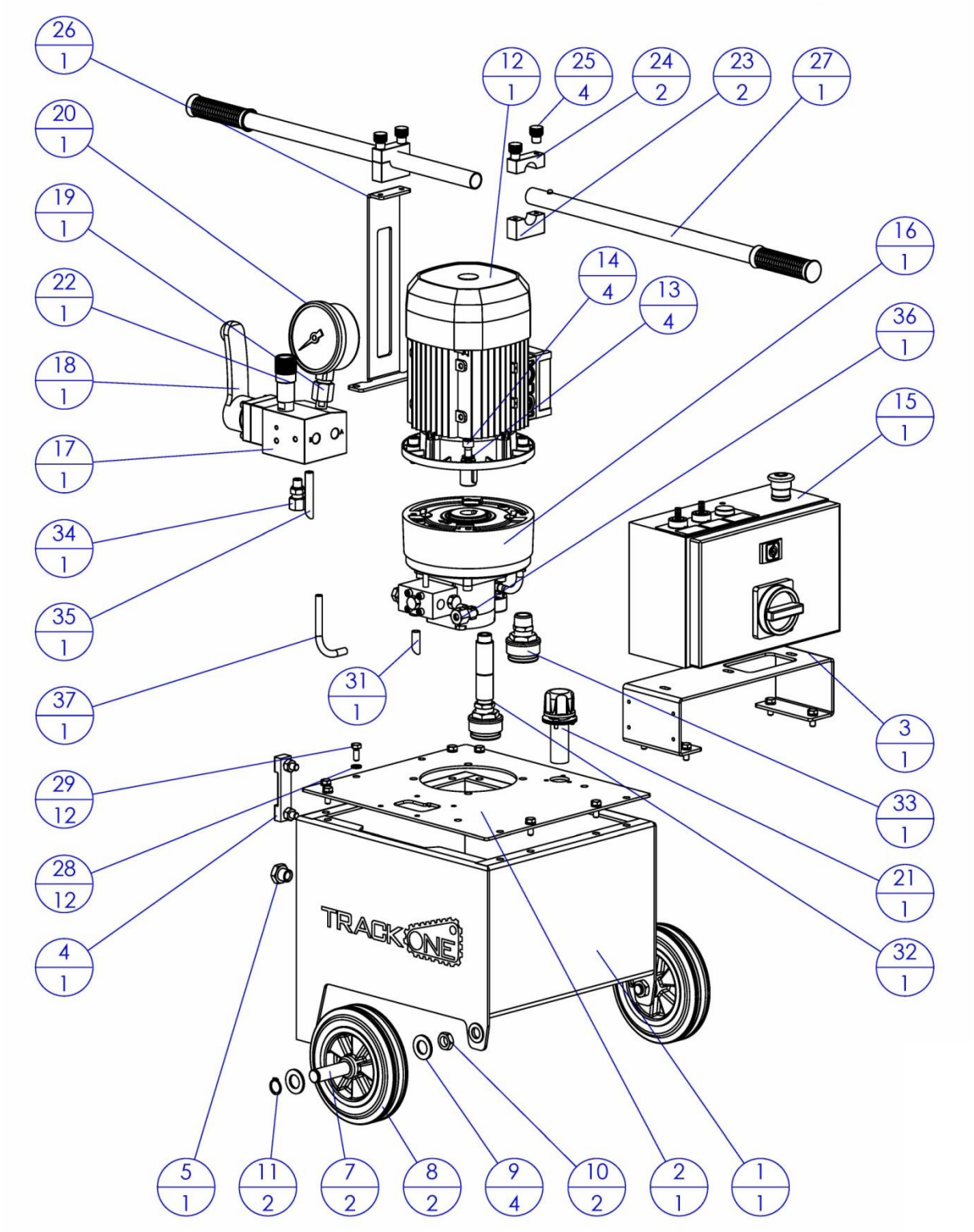
POS.	DESCRIPTION	Q.TY
1	Scraper	1
2	Gasket	1
3	O-ring	1
4	Anti-extrusion ring	1
5	Guiding ring	2
6	Gasket	1

8.3. Spare parts for TOPM2A manual pump



POS.	DESCRIPTION	Q.TY
1	Oil level	1
2	Tank/frame	1
3	Tank cover	1
4	Tank gasket	1
5	Plastic cap	2
6	Cap	1
7	Cap	1
8	Washer	1
9	Cap	1
10	Screw	10
12	Pump	1
14	Hydraulic block	1
15	O-ring gasket	2
16	O-ring gasket	1
17	Screw	5
18	Ball	1
19	Screw	1
20	Pressure gauge coupling	1
21	Pressure gauge	1
22	Lever	1
23	Knob	1

8.4. Spare parts for TOCE308 electric power unit



POS.	DESCRIZIONE	Q.TA'
1	Tank	1
2	Tank cover	1
3	Support	1
4	Oil level	1
5	Plug	1
7	Wheel shaft	2
8	Wheel	2
9	Washer	4
10	Nut	2
11	Seeger	2
12	Electric motor 3F 1.5Kw 4P Gr90LB B5	1
13	Washer	4
14	Bolt	4
15	Electrical panel	1
16	Pump	1
17	Valve	1
18	Lever	1
19	Plug for pressure gauge	1
20	Pressure gauge	1
21	Oil plug	1
22	Relief valve	1
23	Lower support	2
24	Upper support	2
25	Screw	4
26	Lever support	1
27	Lever group	1
28	Washer	12
29	Bolt	12
31	Drain hose	1
32	Oil inlet filter HP	1
33	Oil inlet filter BP	1
34	Fitting	1
35	Drain hose	1
36	Fitting	1
37	Inlet hose	1