HYDRAULIC TRACK-JACK HYL5 - HYL10

CERT. N° IT05/0072

COMPANY WITH CERTIFIED QUALITY CONTROL SYSTEM

Dear Customer,

we would like to take this opportunity to thank you for choosing an ***FCS srl*** *product. We are pleased to supply you this manual to allow you to obtain optimal use of our product..*

We invite you to read carefully the recommendations that follow and provide this manual to the personnel that will deal with the operation and the maintenance of the machine.

FCS srl *is at your beck and call for all the clarification you will need, both in the initial stage and during the use of the machine.*

In case of extraordinary and ordinary repairs, ***FCS srl*** *provides its personnel to give you all the services and spare parts you will need.*

This document contains all the necessary information to start using the machine along, according to safety guidelines and for maintenance of the machine.
We suggest to read it carefully and respect the instruction written here, and to store it in an accessible place for future reference.
We suggest to contact ***FCS srl*** in case of spare parts, advice in choosing particular equipment and for all future eventualities.
We suggest the machine's owner to fill the lines below as they are essential data to request services and spare parts

Machine's model: .....

Machine's serial number: .....

Engine serial number: .....

Year of construction: .....

Date of purchase:.....

Manual Code: M-HYL-01-01

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Author last revision: ..... C. Bido

Author of traduction:.....N. Gerani

Original drafting of the manual in Italian

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1 PREFACE

1.1 MANUAL'S AIM

This manual is an integral part of the machine and has the aim to give all the necessary information for:

- The correct raising awareness of the operators for safety issues.
- Machine's handling, packed and unpacked in safety conditions;
- Machine's correct installation;
- The depth knowledge of its work and of its limits;
- Its correct use in safety conditions;
- To do maintenance request interventions, in a correct and safety way;
- To break up the machine in safety conditions and according to guidelines for workers and environmental protection.

The responsible of the staff department, when this machine will be installed, according to guidelines, have to read carefully this manual and have to make the operators and the maintenance men read it for the parts that are up to them, to conductors and maintenance men in charge, for the parts that interest them.

The time you spend for this will be largely reward by the correct works of the machine and by its use in safety conditions.

This document presumes that, in the establishment in which the machine is designed for, are applied the safety and hygiene of the work guidelines.

The instructions, the pictures and the documents that are in this manual are of reserved technical nature, owner strictly possession and mustn't be reproduced in any way, both in full and in part.

The customer has also the responsibility to be sure that, if this document will be modified by the constructor, only the update versions are present in the point in which the machine is used.

NOTE: It is forbidden to reproduce o translate in full o in part this manual without the authorization written by FCS srl.

1.2 HOW TO READ THE MANUAL

This manual is divided in chapters, each one is referred to a specific operator (Install men, conductor and maintenance man), for which are be defined the necessary qualifications to operate on the machine in safety conditions.

The sequence of the chapters corresponds to the machine's life time logic.

To ease the immediate understanding of the text, we use terms, abbreviations and pictograms, which meaning is indicated at paragraph 1.6.

The manual has a cover, an index and a series of chapters (sections). In the initial page there are machine's and model's identification data, and eventually the serial number, the revision of the manual and a picture/design of the described machine, to ease the reader to identify the machine and its manual.

UNIT OF MEASUREMENT

The unit of measurement are those provided in the **I**nternational **S**ystem (**IS**).

1.3 RETENTION OF THE MANUAL

The manual has to be keep in safe and must be with the machine in each transfer of property that it would have during its life.

The retention have to be eased by handling with care, with clean hands and without putting it on dirty surface.

You mustn't pull out or modify any part. The manual must be file in an environment without damp and heat and near to the machines. The constructor, under user's request, can give further copies of the manual.

1.4 MANUAL UPDATE METHOD

The Constructor has the right to modify the project and improve it without communicate it to customers, and without update the manual already given to the user.

In addition, in case of modifications in the machine installed, according with the Constructor and that need the modification of one or more chapters of the manual, it will be up to the constructor to send manual's owner the chapters that have to be modified, with its new model of revision.

The user, according to the indications that are in the upgrade document, has to substitute in all the copies the old chapters, the initial page and the index with those of the new level of revision.

The constructor is responsible of the descriptions in the Italian version; some translations couldn't be verified at all, so if there is an inconsistency, you have to make reference to the Italian version and eventually call up our counting house that will do the appropriate modification.

1.5 ADRESSEE

This manual is for: the install man, the operator and the trained personnel for the machine's maintenance.

EXPOSED PERSON

Every person who is, completely or in part, in a dangerous area.

OPERATOR

The officer that has to install, operate, adjust, clean, repair and move a machine and has to do its maintenance.

TRAINED PERSONNEL – TRAINED OPERATOR

Who had attend a training course, a specialization course, etc., and are experienced in installation, operation and maintenance, reparation and machine's transport.

Adressee's qualification (see paragraph 1.6)

The machine is intended for industrial use, so not for a general use but for a professional one, so its use could be entrust to qualified figures, in particular:

- They have reached the age of majority;
- They are physically and psychically suitable to carry out work of particular technical difficulty;
- Have been adequately instructed on the operation and maintenance of the machinery;
- Have been judged by the employer to be fit to carry out the task entrusted to him;
- Are able to understand and interpret the operator's manual and safety prescriptions;
- Know the emergency procedures and their implementation;
- Possess the ability to operate the specific type of equipment;
- Be familiar with the specific rules of the case;
- They have understood the operating procedures defined by the Manufacturer of the machine.

1.6 GLOSSARY AND PICTOGRAMS

In this paragraph are listed in non common terms or with a different from common meaning.

Here follows the abbreviations that are used and the meanings of the pictograms to indicate the qualification of the operator and the machine's status, its use allows to, rapidly and univocally, give necessary information for the correct use of the machine in safety conditions.

GLOSSARY (All. I p. 1.1.1 Dir. 2006/42/CE)

DANGER

A likely source of wound or a health damage;

DANGER AREA

Every area inside and/or near to a machine where the presence of a person is a risk for safety and health of this person;

EXPOSED PERSON

Every person that is totally or in part in a danger area;

OPERATOR

People entrust to install, operate, adjust, clean, repair and move the machine and do the maintenance;

RISK

Combination of probability and seriousness of a hurt or a damn for health that could arise in a dangerous situation;

SHELTER

Machine's element that is specifically used to guarantee the protection throughout a material crash barrier;

SECURITY DEVICE

Device (different from a shelter) that reduces the risk, alone or associated with a crash barrier;

EXPECTED USE

Machine's use according to information given in the manual;

INCORRECT USE RESONABLY EXPECTED

A machine's use, different from that given in the manual, that could be associated to human behaviour easily foreseeable.

OTHER DEFINITIONS

MAN-MACHINE INTERACTION

Any situation in which the operator interact with the machine in any operative stage in any moment of its life;

OPERATOR QUALIFICATION

Minimum level of ability that the operator have to own to execute the described operation;

NUMBER OF OPERATORS

Number of operators adequate to execute in an optimal way the described operation and results from a careful analysis made by the constructor, so a use made by a different number of operators could obstacle the expected result or could endanger personnel involved;

MACHINE'S STATUS

Machine's status involves operation modalities, for example automatic gear, maintained action control (jog), stop, etc., the conditions of Securities present in the machine as protections included, except protections, pressed emergency stop, type of thermal insulation etc.

RESIDUAL RISK:

Risk that continue inspite of are been adopted protection measures integrated in the project of the machine and inspite of the adopted complementary protection measures.

SECURITY COMPONENT PART

Component part:

- Designed for execute a security function;
- Its break down and/or malfunctioning, endanger people (ex: lifting equipment; fixed protector; mobile, adjustable, etc, electronic and electric device, optical pneumatic, hydraulic, that interstops a protector, etc.)

PICTOGRAMS

Descriptions anticipated by this symbol have: very important information/prescription, in particularly about safety.

The failed respect could carry:

- Dangers for operators safety;
- Lose of contractual warranty;
- Discharge of constructor's duty.

Its functions is to give relevance to particular information as:

DANGER

It refers to dangers dealing with the described activity. When there is "DANGER" we refer to activities that could occur while using the machine and could endanger people.

ATTENTION

It refers to dangers dealing with the described activity. When there is "ATTENTION" we refer to activities that could occur while using the machine and could endanger the machine.

WARNNG

We refer to integrations or suggestions for a correct use of the machine and to illustrate basic characteristics.

SECURITY'S PICTOGRAMS

- **Pictograms inside a triangle indicate DANGER.**
- **Pictograms inside a circle impose a PROHIBITION/OBLIGATION.**

Pictograms	Description
	Danger electric tension.
	Arms crushing.
	Hitching on.
	Dragging.

	Generic danger.
	No entry for not authorized personnel.
	Don’t remove security devices.
	Don’t clean, oil, grease, repair or adjust working parts by hand.
	Don’t execute works before remove tension.
	Obligatory protection gloves.
	Obligatory safety footwear.
	Obligatory safety helmet.

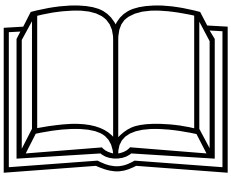
UNIFIED SYMBOLS ON THE MACHINE

Unified symbols that follows indicate danger operation or situations that could occur while using the machine.

ATTENTION

If the sticky tags (illustrated above) aren't still readable, you have to substitute them with new ones.

This symbol indicates that you have to consult the manual.



2 GENERAL INFORMATION

2.1 CONSTRUCTOR'S IDENTIFICATION DATA

CONSTRUCTOR:

FCS srl

REGISTERED OFFICE – PREFECTURE:

Via Enzo Ferrari, 30 - 45038 Polesella (RO) - Italy

AFTER-SALE/SPARE PARTS' SERVICE

Phone: *+39 0425* 947707

Fax:+39 0425 30132

E-mail: fcsrail@fcsrail.com

2.2 IDENTIFICATION DATA AND MACHINE'S PLATE

Every machine is identified by a CE plate on which are written, in a permanent way, its data.

While communicating with the constructor or with the service department you have always to quote them.

Via E. Ferrari n° 30 45038 Polesella ROVIGO - ITALY

Phone: +39 0425 947707 Fax: +39 0425 30132

www.fcsrail.com

MOD:	Hydraulic track-jack HYL…….
S / N	……
N	/
Kw	…….
Kg	…….

CE

2.3 DECLARATIONS

The machine is realized according to the main requirements envisaged by the EU directives, that could be applied when put on the market. **ALLEGATO IV Direttiva 2006/42/CE** The machine isn't included in the mentioned in ALL.IV of the Direttiva 2006/42/CE.

ATTREZZATURE FERROVIARIE

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www.fcsrail.com fcsrail@fcsrail.com

DECLARATION OF CONFORMITY CE

(All. IIA DIR. 2006/42/CE)

THE MANUFACTURER

The company FCS srl, located in Street Enzo Ferrari 30, Postcode 45038, Polesella (RO) ITALY

IT IS HEREBY CERTIFIED THAT THE MACHINE

Machine **Hydraulic track-jack** Model HYL……

Serial Number **.....** Year of manufacture **.....**

Commercial Name **Hydraulic track-jack** Destination **Railway**

IS COMNFORMABLE TO INSTRUCTIONS

Directive 2006/42/CE of European Parliament and of the Council of 17 May 2006 for the machines and amendment the directive 95/16/CE.

The machine is conformable at legislative decree 81/2008 and next modification of integrations.

AND AUTHORIZE

Mr **Fabio Coltro**

Address **Via Enzo Ferrari, 30** Post code **45038**

City **Polesella (RO)** Country **Italy**

TO KEEP THE TECHNICAL FILE

Polesella, 05/06/2012

Fabio Coltro

President

CERT. N° IT05/0072

2.4 APPLIED COPYRIGHT LAW

UNI EN ISO 12100-1	Machinery safety – Fundamental concepts, general principles of design – Part 1: basic terminology, methodology
UNI EN ISO 12100-2	Machinery safety - Fundamental concepts, general principles of design - Part 2: Technical principles
UNI EN ISO 14121-1	Machinery safety – risk evaluation- Parte1: Principles
UNI EN 894-1	Machinery safety – Ergonomic requirements for the design of information and command devices- General principles for the interaction of man with information and command devices.

2.5 WARRANTY AND TECHNICAL SUPPORT

The materials provided by FCS srl enjoy of a 12-months warranty accrue from put on work, established by the bill given to the client.

Warranty application is regulated by FCS srl's terms of sale and use .

FCS srl reserves to repair or substitute parts we retain defective during warranty period. With the substitution od the retire defective part, FCS srl reserve free from any expenditure made by the Dealer or by the Client of the Dealer as presumed break down, present or future, ex. failed gain, conventional penalty, etc.

Ordinary and extraordinary maintenance have to happen according to manual's instructions. Warranty doesn't cover parts that are prone to normal wear and tear and declension. The equipment not build by FCS srl are prone to their constructor's warranty. Warranty will cease :

- If the Client doesn't obey to the payment contract;
- If the machine is used in a non conventional way instead of Sign's indications (machine's alteration, manoeuvre errors, overloaded, fuel use, hydraulic oil, improper lubricating or cooling water, non-observance of maintenance's rules also for non utilization periods, etc.);
- If the failure is due to the installation made by FCS srl's non authorized equipment or if the machine has been modified o repaired without FCS srl's authorization
- If are used non original spare parts or the extraordinary maintenance interventions and/or reparations are not made by FCS srl's non authorized personnel;

For all non included cases and for all kind of service we recommend to directly call FCS srl by recorded delivery or by fax, in case of phone arrangements.

FCS srl doesn't reserve any responsibility for delays or failed interventions

FCS srl is not responsible for breaks down or malfunctions due to technical interventions done on the machine by non authorized personnel.

2.6 RESPONSABILITA' RESPONSIBILITY

FCS srl is dispensed from any responsibility and obligations about any kind of accident to people and things, that could occur for::

- Failed observance of the instructions written in this manual concerning the conduction, the transport, the use and the maintenance of the machine

- Violent actions or incorrect manoeuvre during the transport, use and maintenance of the machine
- Made modifications to the machine without FCS srl authorization
- Events that doesn't deal with the normal and correct use of the machine

Anyway, if the user would attribute the accident to a machine's fault, would have to demonstrate that the occurred damage was a main and direct consequence of this "fault".

The responsibility of the formation, education, training and retraining of the personnel that uses the machine described in this manual, is exclusively depend on owner/user of the machine.

ATTENTIION

For the maintenance's reparations you have to use only original spare parts.. FCS srl declines all the responsibility for damages that could occur for non-fulfilment for what said before.

The machine is guaranteed according to contract stipulated during the sales.

Anyway, warranty decades if rules and instructions written in this manual haven't been obeyed

3 SAFETY

3.1 GENERAL WORNING

The machine has been designed and made by FCS srl according to art and rules in force of the tecnique for the lifting both in railway field and industrial field.

We observe rules, dispositions, prescriptions, ordinances, guidelines in force for this kind of machine.

The materials used and the equipment's parts, and the production processes, too, are warranty of quality and check, satisfy the maximum safety and reliability needs.

If you use the machine for the specified aims in this manual, if you manoeuvre it with the required carefulness, if you execute a careful maintenance and revisions professional made, you can expect high performances, long and continue life availability of the machine.

Experience allows FCS srl to have, for its products, high safety during the work. Nevertheless, these security conditions during the work can't be completely realized without the help of the operators and their assistant that had to always keep in mind general safety rules, here follows the main ones.

The machine can be used on a plane ground and solid enough to supporting the load that it will.

3.2 REQUIRED OPERATOR'S TRAINING

Every operators have to read entirely with maximum attention this manual and respect what is written.

The Employer is obliged to verify that the operator owns all the abilities required for the conduction of the machine and has carefully look over the manual and has to give to machine's user devices for personal protection (gloves, shoes, clothes, etc.) according to rules in force.

3.3 EXPECTED USE

The machine has been designed and made by FCS srl to execute loan lifting operations.

There must be carefully respected safety prescriptions passed from Railway Administrations for works on rails and near them. You have to start working only after the officials in charge for safety have given their acceptance.

You have quickly and carefully execute the guidelines conveyed by the Site Manager or the safety responsible. Always leave devices and material in a way that these ones can't collide with others railway vehicles. Don't use if there is a third rail.

3.4 SAFETY WORK

FCS srl doesn't answer for accidents, working's anomalies and/or damages during the machine's use, due to user's non observance of laws, prescriptions, dispositions and rules in force.

The use of the machine is allowed only at the trained personnel. Only authorized people can stay near the machine. You have always to stay by safety distances from mobile parts and check that during its work normal safety prescriptions are respected. You always have to assure that advertisement given to other people are understand and executed.

Dangers that couldn't be deleted from safety measures adopted by the constructor couldn't be caused by an incorrect use of the machine or by a failed respect, due to the user, of the rules described in this manual.

3.5 BASIC SAFETY INSTRUCTIONS

BASIC SAFETY INSTRUCTIONS FOR THE USE OF THE MACHINE

1. The operator and all the personnel that interact with the machine must be equipped of specific individual protection's devices (DPI).
2. Machine's manoeuvre and use are reserved only for in charge personnel.
3. Never use the instrument when its poor condition is evident. Remove all the instruments that has visible deformations. Constantly check the instrument's status.
4. Don't use the machine to lift people.
5. Don't lift loans that overcomes the maximum allow for the machine.
6. Do not use shims between the head or the arm of the machine and the loan to be lifted
7. Always check that the load is centered
8. The load to be lifted must be guided laterally, so that the foot of the jack, in operation, can not rotate about the axis during the climb.
9. For use on the foot is necessary that at least 3 teeth of the foot are in contact with the load.
10. Never work under a lifted loan
11. Do not bump the load being lifted
12. Do not lift loads that can deform or having parts not securely fastened to each other
13. Never leave the lifted load unattended
14. Before starting the manoeuvres you have to assure that in the sphere of activity of the machine there aren't people. If you need, signal the start of the operation.
15. During the lifting operations remain outside the zone of action of the machine to avoid being affected by a possible fall of the load
16. Lift the machine carefully avoiding the use of the control lever
17. Adequately light the working area

ATTENTION

It is impossible to list all the possible safety rules, so we entrust operator good sense, who, if he works with care and caution, guarantees the best safety against every kind of accident.

3.6 ENVIRONMENTAL CONDITIONS FOR WHICH THE MACHINE HAS BEEN DESIGNED FOR

The machine in standard configuration is designed to be used in these environmental conditions:

- Work temperature: + 25°C
- Max temperature: + 40°C
- Min temperature: – 20°C
- Relative dump: 20% - 80% (without moisture)

The machine in standard configuration has to work only in these environmental conditions.

ATTENTION

It is forbidden the use of the machine in standard execution in areas that are different from the listed above. The eventual use of the machine in non suitable places can cause the malfunctioning or the breaking of the machine's hydraulic components.

3.7 NOT ALLOWED USES

- Use the machine for aims that are different from those it is designed for
- Not handled machine, manoeuvre and started according to its safety/service rules
- Carelessness and/or absence of maintenance as prescribed or use of non original spare parts
- Use of the machine out of allow environmental conditions
- Use the machine with excluded or damaged safety devices
- Use the machine modified in any of its parts without a written FCS srl authorization
- Use of the machine on rails without respect the rules of the railway body owner of the railway
- Use of the machine on rails open traffic
- Use of the machine on track circuit
- Use the machine in presence of a third rails
- Use the machine in presence of inclination superior or equal to 40%
- Go away during its normal working

3.8 ALLOWED USES

- Use the machine built only with the compatible equipment, in specific working conditions.
- Use the machine only on non open traffic rails.

3.9 CARE AND MAINTENANCE

To execute maintenance and reparation works, you have to move the machine in a place authorized by the responsible of the yard

To maintain the machine clean, never use liquids easy flammable and corrosive products.

For the maintenance it's necessary the use of suitable tools.

ATTENTION

It is impossible to list all the possible safety rules, so we entrust operator good sense, who, if he works with care and caution, guarantees the best safety against every kind of accident

3.10 RESIDUAL RISK

Dangers that couldn't be deleted from safety measures adopted by the constructor couldn't be caused by an incorrect use of the machine or by a failed respect, due to the user, of the rules described in this manual.

The personnel in charge of the machine must be equipped of specific individual protection's devices

DANGER

During every kind of work pay attention of high voltage line, if you are next to them could cause DEATH.

4 MACHINE'S DESCRIPTION

4.1 GENERAL

The machine has been designed and made by FCS srl for the lifting in both railway field and industrial field. The machine has been made of high quality materials and guarantees high performances.
The adequate length of the lever, the tap for the fall, the valve that limits the overload guarantee the precision during the work with the minimum effort and the maximum safety for the operator. The structure, that has a rotation capacity of 360°, is made so as to support the load is on the foot on the head of the machine.

4.2 TECHNICAL CHATACTERISTICS

Model	Capacity [t]	Lifting height [mm]	Dimensions head and foot [mm]	Dimensions base [mm]	Dimensions [mm]	Weight [kg]
HYL5	5	120	55x65	170x230	220	12
HYL10	10	150	55x80	180x250	265	18,5

5 INSTALLATION

5.1 TRANSPORT AND MOVIMENT

The lifting of the machine can be done only by using highlighted devices' grips that are on the machine and identified by special pictograms.

ATTENTION

We recommend to use expected personal safety devices as: gloves, safety footwear with steel tip and overalls.

DANGER

Bump and crushing danger. During the lifting and moving you have to operate carefully.

5.2 PUT ON USE

5.2.1 FIRST START

At the first start of the machine you have to execute checks that follow:

1. Verify that the machine has:
   - Declaration of conformity CE
   - Use and Maintenance's manual
   -
2. General visual check of the machine

3. Check and verification of the presence of identification's plate and of safety labels
4. Varnishing's check
5. Running test-load operation, making sure that the lever moves without too much effort
6. After the necessary tests to check if there are losses.

ATTENTION

Before starting the machine the operator in charge has to read completely this manual

5.2.2 CHECKS AT THE BEGINNIG OF EVERY WORKING DAY

Before the start of every working day you have to check:

1. General visual check of the machine
2. Check and verification of the presence of identification's plate and of safety labels
3. Varnishing's check
4. Running test-load operation, making sure that the lever moves without too much effort
5. After the necessary tests to check if there are losses.

If one or more described points above happen, don't use the machine and provide for re-establish the machine in efficiency conditions.

If there are any anomalies that the operator couldn't solve, contact FCS srl.

5.3 PROTECTION AND STORING

When it is expected that the machine has to remain idle for a quite long period, it is necessary to take precautions to preserve machine's functionality.

5.3.1 IN PREPARATION FOR A BRIEF INACTIVITY

1. Put the machine in a way that can guarantee the adequate safety

5.3.2 STORING AND PREPARATION FOR A LONG INACTIVITY

As above, also:

1. Squirt protective oil on all the machine
2. If possible store the machine in a cover place, air, dry and non dusty, or protect the machine with a plastic sheet to avoid storm damages

5.3.3 RECLAMATION AFTER A LONG INACTIVY

1. Carefully clean the machine

5.4 MACHINE'S LIFTING

Machine's lifting could be done just by using grip devices that are on the machine and indicated by special pictograms.

ATTENTION

We recommend to use expected personal safety devices as: gloves, safety footwear with steel tip and overalls.

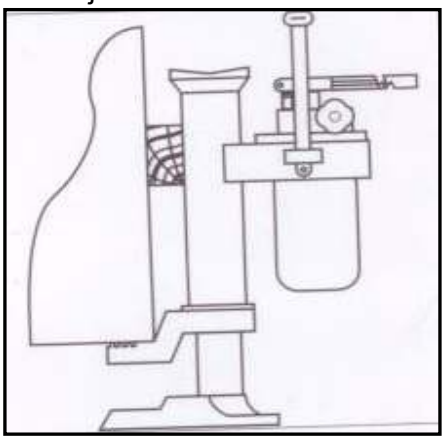
DANGER

Bump and crushing danger. During the lifting and moving you have to operate carefully.

6 MACHINE'S USE

6.1 HOW TO USE THE MACHINE

The movement of the machine in lifting is obtained by operating the control lever. In case of failure, screw, by hand, the exhaust valve.
The lifting operation can be interrupted at any position of the lever without that the load is affected by uncontrolled movements.
To make the descent of the load, is sufficient to open a left turn, by hand, the drain valve.
The descent of the load can be stopped at any position by screwing the button for manoeuvre of the exhaust valve.
To prevent overturning of the jack during the ascent, it is necessary that the load is supported on the body of the track jacks and possibly insert a wood thickness between the body of the jack and the load which must be as close as possible to the head, as shown in the diagram here.
The machine is equipped with a safety valve that limits the overload. The calibration of this valve is performed in the factory and requires no adjustment. The modification or deletion of this device is strictly prohibited.



DANGER

User that doesn't follows the instruction exposes to potential danger situations.

ATTENTION

We recommend to use expected personal safety devices as: gloves, safety footwear with steel tip and overalls.

ATTENTION

FCS S.R.L. is not responsible for damages that could occur to people or things because of an incorrect use of the machine that doesn't follows the indications that are in the manual.

6.2 LIGHTNING

Use the machine only in a well lighted environment.

7 . SEARCH FOR BREAK DOWN

BREAK DOWN	POSSIBLE CAUSES	REMEDIATION
The load does not lift	– lowering valve open	– Check the valve and screw it down
	– The load to be lifted exceeds the capacity of the machine	– Ensure the load

8 MAINTENANCE

ATTENTION

Maintenance operations have to de executed only by FCS srl's Customer Service or by qualified personnel

8.1 PREFACE

In order to obtain best performances and to assure all the elements the maximum life, is necessary that use and maintenance's rules are carefully followed by the operators in charge. For this we suggest to Customenrs, in their interest, to carefully read these notes and to consult the manual every time they need suggestions to avoid eventual inconvenients.

As the machine normally works closet o water, sand, ground, etc, a rational lubrication is necessary, that assumes a vital importance for the long use of the machine and to contain its exercise's cost.

For further clarifications call up our customer care:

- Ordinary maintenance includes all the necessary information for the good functioning and preservation of the machine.
- We suggest to let the same operator do maintenance's operations, who knows by heart how the machine works and has to know what it's here in the manual.

Ordinary maintenance's operations indicated on the table that follows must have the same frequency of the machine's working hours indicated on the column at the right, under period.

8.2 MAINTENANCE TABLE

Nº	OPERATION	PERIOD
1	Make FCS srl check the machine	Once a year
2	Substitute hydraulic oil	Once a year

8.3 SUBSTITUTION OF THE HYDRAULIC OIL

The hydraulic oil tank must be emptied at least once a year (more often in case of intensive use). DO NOT EVER DISPERDER THE HYDRAULIC OIL IN THE GROUND OR IN SEWERS.

- After a few hours of use of a new jack, replace the hydraulic oil content into the new oil. This is because after the first use, the oil may have collected the impurities resulting from the break made in the early hours of operation. This phenomenon is normal. To do this, proceed as follows:
    - unscrew the four screws on the lid duct the control lever;
    - Remove the plate that acts as a cap;
    - attention to the gasket. At the time of replacement is recommended to replace
    - drain the oil into a container.
- Fill the tank with solvent such as oil, gasoline, solvents, except acetone and derivatives, and derivatives of tricoretilene, followed by shaking and empty the tank again.
- Fill the tank with 0,8 l of oil as HLP 50 o TELLUS 23, be very careful not to introduce foreign matter into the tank.

9 FIRE

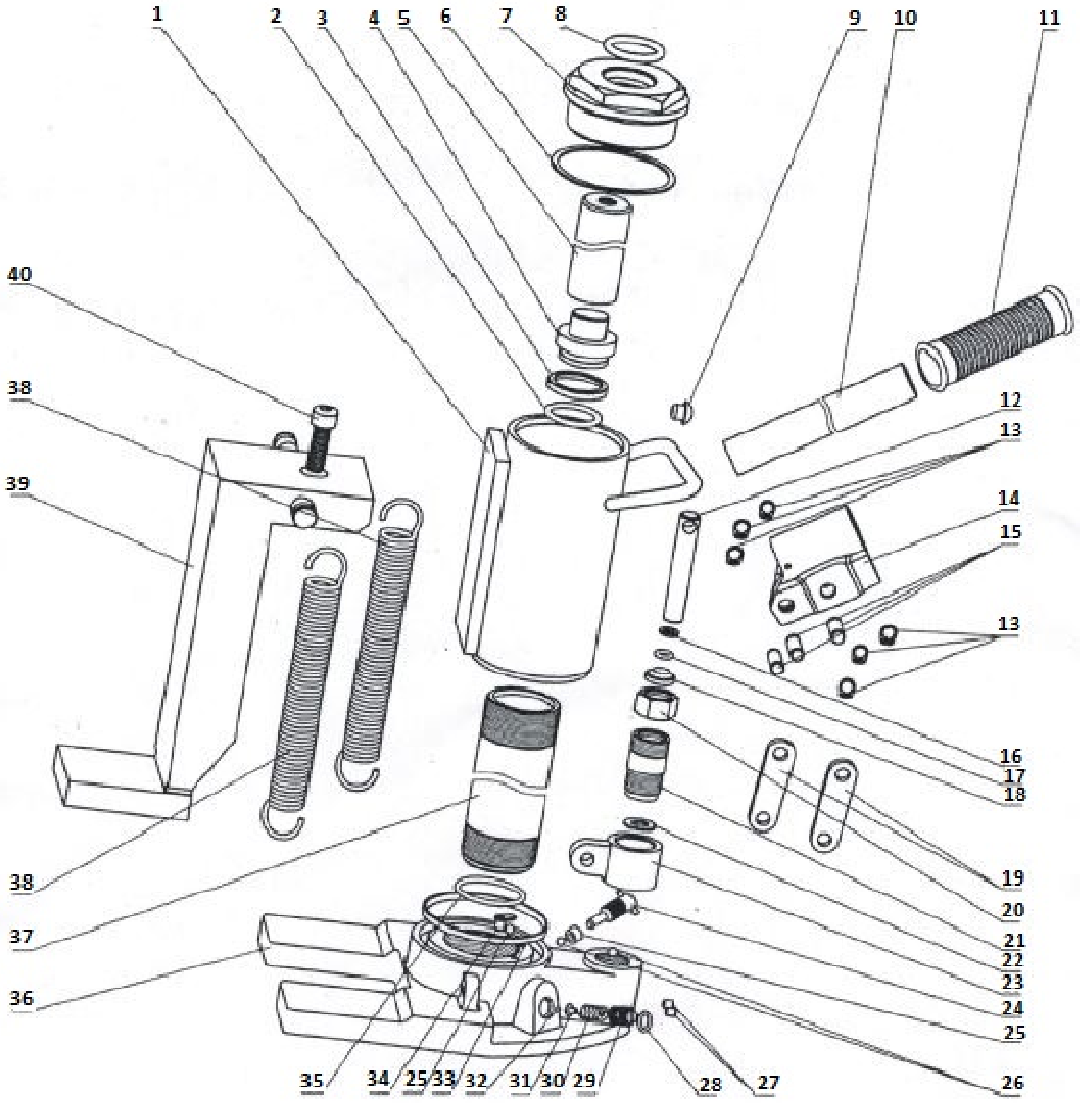
In case of a fire, use a CO2 extinguisher (not included) according to current regulations.

In case of machine's fire or if the machine is near a fire, give the alarm in the yard and call up the firemen.

10 BREAKING UP AND DISPOSAL

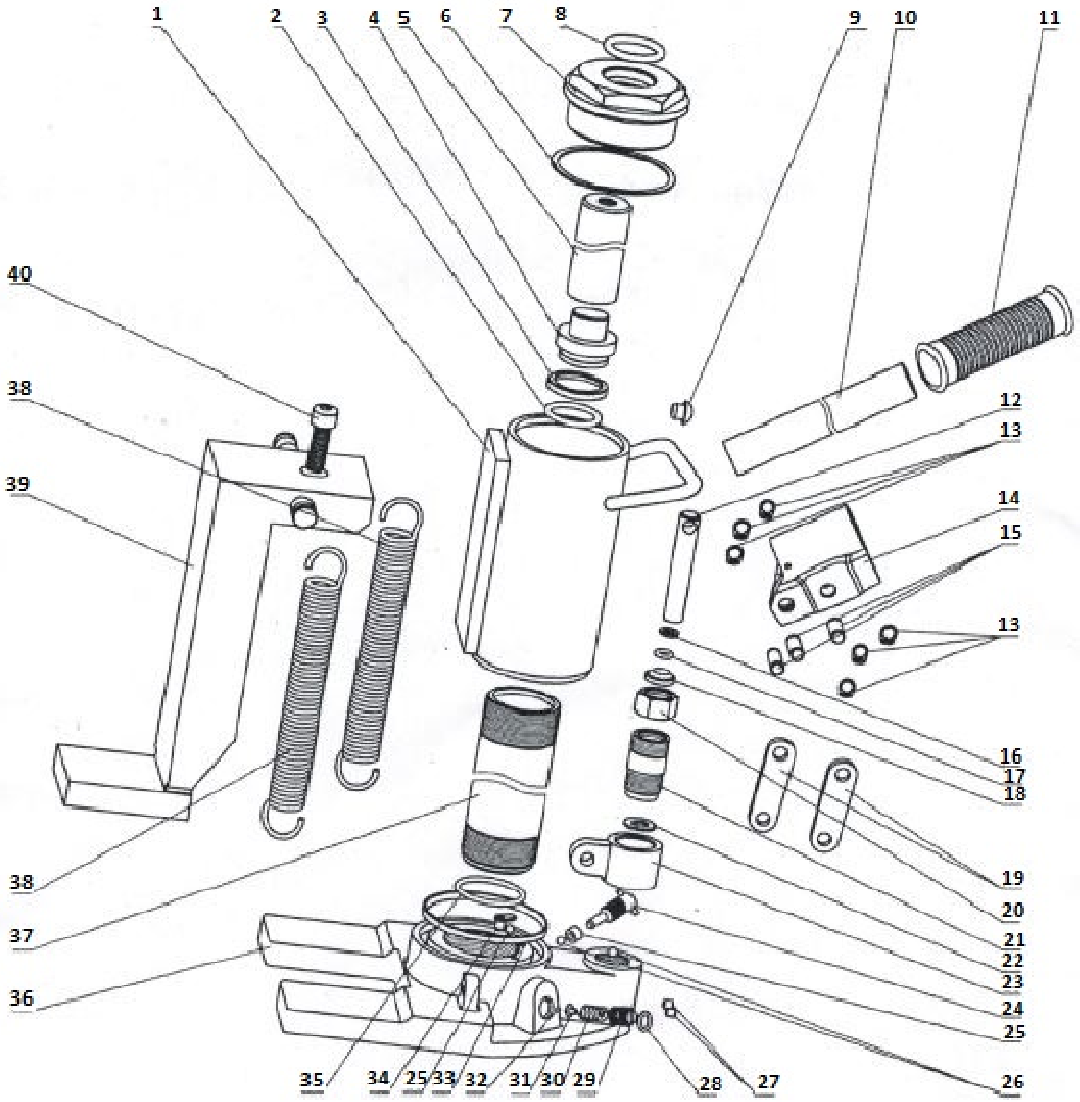
At the end of machine's life, remember that the owner of the mean must provide for the breaking up and for the machine's disposal according to guidelines in force and throughout authorized disposer for each component of the machine.
Remember that every time that you substitute oil, hose and every machine's detail prone to different disposal, you always need to make reference to rules in force and to authorized disposals.

11 SPARE PARTS HYL 5



N°	CODE	DESCRIPTION	N°	CODE	DESCRIPTION	N°	CODE	DESCRIPTION
01	HYL04388	TANK	15	HYL06825-7	PIVOT	28	HYL06825-19	O-RING
02	HYL04815	O-RING	16	HYL06825-8	SEEGER	29	HYL06825-20	SCREW REGULATOR PRESSURE
03	HYL04391	WASHER CUP SHAPE	17	HYL06825-9	O-RING	30	HYL06825-21	SPRING SAFETY VALVE
04	HYL04393	PISTON	18	HYL06825-10	GASKET	31	HYL06825-22	STEEL SPHERE SEAT
05	HYL04395	PISTON SHAFT	19	HYL06825-11	BRACKET	32	HYL06825-23	SPHERE
06	HYL04815	GASKET	20	HYL06825-12	NUT	33	HYL04818	T - GASKET
07	HYL04398	NUT	21	HYL06825-13	PUMP CYLINDER	34	HYL04403	STEEL SPHERE STOP
08	HYL04817	O-RING	22	HYL06825-14	WASHER MADE IN BRONZE	35	HYL04819	O-RING
09	HYL06825-1	CAP OF THE OIL	23	HYL06825-15	UNIT OF CONNECTION	36	HYL04405	BASE
10	HYL06825-2	HANDLE	24	HYL06825-16	OIL RETURN VALVE LEVEL	37	HYL04407	CYLINDER
11	HYL06825-3	HANDLE	25	4401	GASKET	38	HYL04409	SPRING TENSIONING
12	HYL06825-4	PISTON PUMP	26	HYL06825-17	SPHERE	39	HYL04411	PLATE
13	HYL06825-5	SEEGER	27	HYL06825-18	CONICAL SCREW	40	HYL06825-24	HEXAGON HEAD SCREW
14	HYL06825-6	SEAT HANDLE						

12 SPARE PARTS HYL 10



N°	CODE	DESCRIPTION	N°	CODE	DESCRIPTION	N°	CODE	DESCRIPTION
01	HYL04389	TANK	15	HYL06825-7	PIVOT	28	HYL06825-19	O-RING
02	HYL04390	O-RING	16	HYL06825-8	SEEGER	29	HYL06825-20	SCREW REGULATOR PRESSURE
03	HYL04392	WASHER CUP SHAPE	17	HYL06825-9	O-RING	30	HYL06825-21	SPRING SAFETY VALVE
04	HYL04394	PISTON	18	HYL06825-10	GASKET	31	HYL06825-22	STEEL SPHERE SEAT
05	HYL04396	PISTON SHAFT	19	HYL06825-11	BRACKET	32	HYL06825-23	SPHERE
06	HYL04397	GASKET	20	HYL06825-12	NUT	33	HYL04402	T - GASKET
07	HYL04399	NUT	21	HYL06825-13	PUMP CYLINDER	34	HYL04403	STEEL SPHERE STOP
08	HYL04400	O-RING	22	HYL06825-14	WASHER MADE IN BRONZE	35	HYL04404	O-RING
09	HYL06825-1	CAP OF THE OIL	23	HYL06825-15	UNIT OF CONNECTION	36	HYL04406	BASE
10	HYL06825-2	HANDLE	24	HYL06825-16	OIL RETURN VALVE LEVEL	37	HYL04408	CYLINDER
11	HYL06825-3	HANDLE	25	HYL04401	GASKET	38	HYL04410	SPRING TENSIONING
12	HYL06825-4	PISTON PUMP	26	HYL06825-17	SPHERE	39	HYL04412	PLATE
13	HYL06825-5	SEEGER	27	HYL06825-18	CONICAL SCREW	40	HYL06825-24	HEXAGON HEAD SCREW
14	HYL06825-6	SEAT HANDLE						