



GENESIS

RESCUE SYSTEMS

HYDRAULIC RAMS USER GUIDE

CONVENTIONAL DEVICES (21" Mini Push-Pull, 31" Push-Pull, 41" Push-Pull, 55" Push-Pull, 12-24 Ultra Mini Telescopic, 15-30, 21-46 Telescopic, 26-59 Telescopic, 19-51 3 Stage Telescopic, 26-59 XL Large Capacity Telescopic)

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GENERAL INFORMATION

About the operating manual

This operating manual provides important information on using the hydraulic Rams. Proper compliance with all specified safety instructions and guidelines is a prerequisite for safe work.

Furthermore, adhere to the local accident prevention guidelines and general safety regulations for the region in which the devices are used.

These operating instructions must be carefully read prior to starting any work! They are an inherent part of the product and must be kept in a place that is known and accessible to personnel at all times.

This documentation contains information for operating your equipment. However, you may also find information which may not directly apply to your specific equipment.

All information, technical data, graphics and diagrams contained in these operating instructions are based on the latest data available at the time of the document's creation.

We recommend that, in addition to carefully reading through the operating manual, you be trained on handling the rescue equipment (possible applications, application tactics, etc.) by our qualified trainers.

EXPLANATION OF SYMBOLS

Warnings

Warnings are marked by symbols in this operating manual. The individual instructions are introduced by signal words that express the severity of the hazard.

It is essential to comply with the instructions in order to prevent accidents, injuries and damage to property.



DANGER!

... indicates an imminently dangerous situation that can result in death or serious injury if not avoided.



WARNING!

... indicates a potentially dangerous situation that can result in death or serious injury if not avoided.



CAUTION!

... indicates a potentially dangerous situation that can result in minor or light injuries if not avoided.



ATTENTION!

... indicates a potentially dangerous situation that can result in material damage if not avoided.



NOTE!

... highlights useful tips and recommendations, as well as information for efficient, trouble-free operation.

LIMITATIONS OF LIABILITY

All information and instructions in this operating manual have been compiled in keeping with applicable standards and guidelines, the current state of technology, and our many years of knowledge and experience.

The manufacturer assumes no liability for damage due to:

- Failure to comply with the operating manual
- Unintended use
- Assignment of untrained personnel
- Unauthorized modifications
- Technical changes
- Use of non-approved replacement parts
- Use of non-original replacement parts

The actual scope of delivery can vary from the explanations and graphic representations provided in this manual in the case of special versions, or due to technical changes.

COPYRIGHT

All texts, diagrams, drawings and images in this operating manual may be used without restriction and without any prior approval.



NOTE!

Further information, images and drawings can be found on our website
www.genesisrescue.com

WARRANTY CONDITIONS

The warranty conditions can be found as a separate document in the sales documentation.

CUSTOMER SERVICE

Contact your local Genesis sales representative. If you are unsure you can contact Genesis Rescue Systems direct at.

**American Rescue Technology
2780 Culver Ave.
Kettering, Ohio
45429**

**Tel: 1.937.293.6240
Fax: 1.937.293.7049
www.genesisrescue.com**



NOTE!

When contacting customer service please state your equipment's designation, type and production year. These details can be found on the equipment type plate.

SAFETY

This section of the operating manual provides a comprehensive overview of all important safety aspects for optimal protecting operating personnel and for safe, trouble-free operation.

Significant hazards may occur if the handling and safety instructions in this manual are not complied with.

INTENDED USE

The hydraulic devices are designed and tested exclusively for the intended applications described here. All other activities are strictly forbidden.

CONVENTIONAL DEVICES (21" Mini Push-Pull, 31" Push-Pull, 41" Push-Pull, 55" Push-Pull, 12-24 Ultra Mini Telescopic, 15-30, 21-46 Telescopic, 26-59 Telescopic, 19-51 3 Stage Telescopic, 26-59 XL Large Capacity Telescopic)

- All of the rescue rams are designed as one-man devices and may therefore be operated by one person only.
- The devices serve exclusively to push steering columns, vehicle roofs and other obstacles upwards and to push vehicle parts out of the way.
- In addition, they can be used to brace, stiffen and pull.
- The chain set is to be used exclusively for pulling.



WARNING!
Improper use can be dangerous!

Any improper or unintended use of the devices can be hazardous!

Therefore, make absolutely sure that:

- » **The devices are used only for the applications stated above.**

RESPONSIBILITY OF THE CUSTOMER

In addition to the health and safety instructions in this operating manual, one must adhere to the safety, accident prevention, and environmental protection guidelines for the region in which the equipment is used. Particularly applicable in this regard:

- The customer must be familiar with the applicable health and safety provisions and in a hazard analysis identify other hazards that may exist at the equipment's installation site due to the special working conditions.
- The customer must clearly regulate and specify responsibilities for installation, operation, maintenance and cleaning.
- The customer must ensure that all personnel who handle the equipment have fully read and understood the operating manual.
- In addition, at regular intervals, the operator must train personnel and inform them of the hazards of working with the equipment.

Moreover, the customer is responsible for ensuring that the equipment is always in technically faultless condition. Consequently, the following applies:

- After each use, and at least once a year, a visual inspection of the equipment must be carried out by a trained individual (according to GUV-G 9102 or country-specific guidelines).
- Every three years, or if you have doubts about the safety or reliability of the equipment, functional testing and stress testing must be carried out (according to GUV-G 9102 or country-specific guidelines).

OPERATING PERSONNEL

The following qualifications are cited in the operating instructions for the various activity areas:

- **Trained individual**
is informed through training offered by the customer about the tasks assigned to him and the possible dangers of improper conduct.
- **Specialist**
is someone who, due to specialized training, skills and experience, as well as knowledge of the applicable stipulations by the manufacturer, is capable of executing the tasks assigned to him or her and of independently recognizing possible hazards.



WARNING!

Inadequate training can result in injuries!
Improper handling of the equipment can lead to serious injury or material damage.

Therefore, make absolutely sure to:

- » allow particular tasks to be carried out only by the persons stated in the relevant chapter of this manual.
- » When in doubt, call in specialists immediately.



NOTE!

The equipment may not be used by personnel who have consumed alcohol, medication or drugs!

PERSONAL PROTECTIVE EQUIPMENT

Wearing personal protective equipment (PPE) is essential to minimize the risks to operating personnel when working with the hydraulic rescue devices. It is essential to wear the following protective clothing for all work:



Protective work clothing

Tight-fitting work clothing with tight sleeves and no protruding parts must be worn when working. It mostly serves to protect against entanglement by moving equipment parts.



Safety shoes

Steel-toed safety shoes must always be worn as protection against heavy falling parts and from slipping on slick surfaces.



Work gloves

Work gloves must be worn when working with the equipment to provide protection from sharp edges and shards of glass.



Helmet with face shield

A helmet with face shield must be worn for protection against flying or falling parts and shards of glass.



Protective goggles

Protective goggles must also be worn in addition to the face shield in order to protect the eyes from flying objects.

The following must also be worn for certain work:



Ear protectors

In addition to the basic protective equipment, ear protectors must also be worn to protect your hearing.

SPECIFIC HAZARDS

The hazards arising from the risk analysis are listed in the following section.

Follow the safety instructions listed here and the warnings in the other sections of this manual to minimize potential health hazards and avoid dangerous situations.

ELECTRICITY



DANGER!

Danger of fatal electric shock!

There is an imminent life-threatening danger if live parts are touched. Damage to insulation or to specific components can pose a fatal hazard.

Therefore:

- » If the insulation is damaged, immediately disconnect the power supply and arrange for repairs.
- » Allow only qualified electricians to work on the electrical equipment.
- » For all work on the electrical equipment, it must be disconnected from the power source, and it must be checked that the device is powered off.
- » Prior to maintenance, cleaning and repair work, the power supply must be switched off and secured to prevent it from being switched back on again.
- » Do not bypass or disable fuses. When changing the fuses, ensure that they have the correct amperage.
- » Keep moisture away from live parts. This can lead to a short-circuit.

NOISE



WARNING!

Noise can damage hearing!

The noise occurring in the work area can cause severe hearing damage.

Therefore:

- »» You should also wear ear protectors when carrying out certain noise-producing tasks.
- »» Do not stay in the hazardous area longer than necessary.

HYDRAULIC POWER



WARNING!

Hydraulic power hazard!

Serious injury can result due to the released hydraulic forces and escaping hydraulic oil.

Therefore:

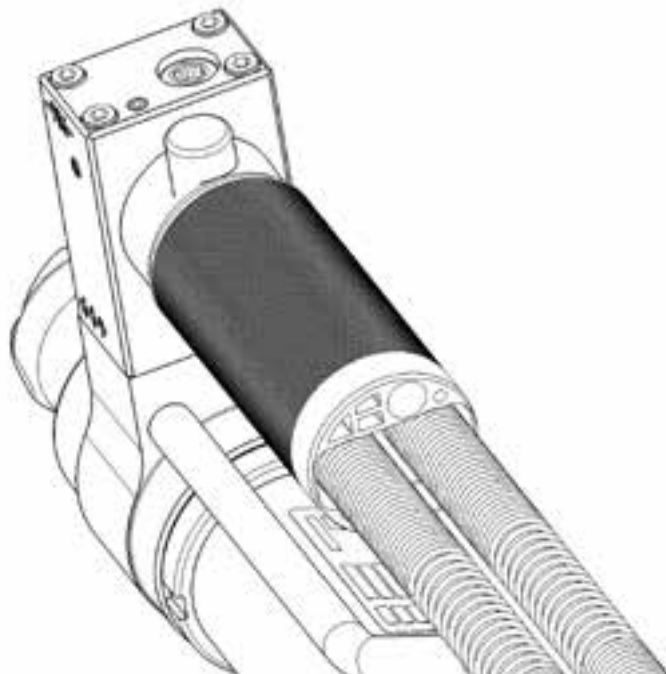
- »» Constantly monitor the device during the work procedure and set down if necessary.
- »» Inspect the hose lines and devices for damage after every use.
- »» Avoid skin contact with the hydraulic oil (wear protective gloves).
- »» Immediately remove the hydraulic oil from wounds and consult a doctor.

SAFETY DEVICES

Safety valve for SKS couplings

If the return line is not correctly coupled such that the oil cannot return then a safety valve integrated into the control handle actuates in order to protect the equipment and the operator. This causes hydraulic oil to seep harmlessly from the end of the handle.

Move the switching valve on the hydraulic power unit immediately to the „0“ position and connect the coupling parts together correctly.



HOW TO RESPOND IN THE EVENT OF DANGER OR ACCIDENTS

Preventive measures

- Always be prepared for accidents
- Keep first aid equipment (first aid kit, blankets, etc.) at hand
- Familiarize personnel with accident alarms, first aid gear, and emergency equipment
- Keep entryways clear for emergency vehicles

In the event of an accident

- Shut down equipment immediately
- Initiate first aid measures
- Get people out of the danger zone
- Inform the responsible parties at the site of the incident
- Notify a doctor and/or the fire brigade
- Clear entryways for emergency vehicles

SIGNAGE

The equipment bears the following WARNING label.



Comply with the operating manual

Do not use the marked equipment until you have read this operating manual.



WARNING!

Danger of injury due to illegible symbols!

Over time, stickers and symbols on the equipment can become soiled or otherwise illegible.

Therefore, make absolutely sure to:

- » Keep all safety, warning and operating information on the device easily legible.
- » Replace damaged signs and stickers immediately.

TECHNICAL DATA

VERSION PCT.11.29.2018

ART.021.900.1

CERTIFICATIONS

- NFPA 1936:2015 COMPLIANT
- ISO 9001:2008

GENESIS

RESCUE SYSTEMS

WWW.GENESISRESCUE.COM

21" PUSH-PULL RAM

SPECIFICATIONS

LENGTH(IN/MM) - 16.4/416

WIDTH(IN/MM) - 4/101

DEPTH(IN/MM) - 10.4/265

WEIGHT(LBS/KGS) - 26/11.9

OPERATING PRESSURE(PSI/BAR) - 10,000/700

LENGTH OPEN(IN/MM) - 23.4/594

LENGTH RETRACTED(IN/MM) - 16.4/416

NFPA 1936 COMPLIANT - YES

NFPA 1936 HSF (LBF/KN) - 32,300/143.7

NFPA 1936 HPF (LBF/KN) - 10,300/45.8



SPECIFICATIONS



LOOKING FOR TRAINING

ART.031.900.1

CERTIFICATIONS

- NFPA 1936:2015 COMPLIANT
- ISO 9001:2008

GENESIS

RESCUE SYSTEMS

WWW.GENESISRESCUE.COM

31" PUSH-PULL RAM

SPECIFICATIONS

LENGTH(IN/MM) - 20.5/521

WIDTH(IN/MM) - 4/101

DEPTH(IN/MM) - 8/204

WEIGHT(LBS/KGS) - 30/13.6

OPERATING PRESSURE(PSI/BAR) - 10,000/700

LENGTH OPEN(IN/MM) - 31.8/807

LENGTH RETRACTED(IN/MM) - 20.5/521

STROKE(IN/MM) - 11.3/286

NFPA 1936 COMPLIANT - YES

NFPA 1936 HSF (LBF/KN) - 32,300/143.7

NFPA 1936 HPF (LBF/KN) - 10,300/45.8



SPECIFICATIONS



LOOKING FOR TRAINING

TECHNICAL DATA

VERSION PCT.2.2016

ART.041.900.1

CERTIFICATIONS

- NFPA 1936:2015 COMPLIANT
- ISO 9001:2008

GENESIS

RESCUE SYSTEMS

WWW.GENESISRESCUE.COM

41" PUSH-PULL RAM

SPECIFICATIONS

LENGTH(IN/MM) - 25.4/646

WIDTH(IN/MM) - 4/101

DEPTH(IN/MM) - 8/204

WEIGHT(LBS/KGS) - 35.7/16.2

OPERATING PRESSURE(PSI/BAR) - 10,000/700

LENGTH OPEN(IN/MM) - 41.5/1054

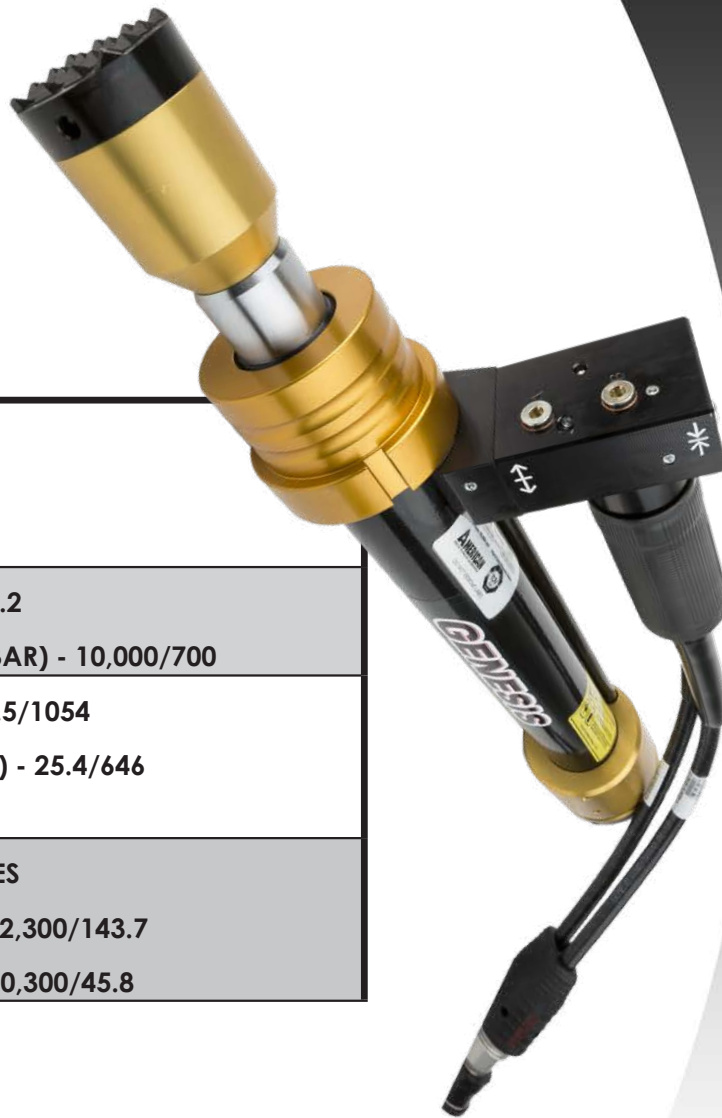
LENGTH RETRACTED(IN/MM) - 25.4/646

STROKE(IN/MM) - 16/408

NFPA 1936 COMPLIANT - YES

NFPA 1936 HSF (LBF/KN) - 32,300/143.7

NFPA 1936 HPF (LBF/KN) - 10,300/45.8



SPECIFICATIONS



LOOKING FOR TRAINING

TECHNICAL DATA

VERSION PCT.11.28.2018

ART.055.900.1

CERTIFICATIONS

- NFPA 1936:2015 COMPLIANT
- ISO 9001:2008

GENESIS

RESCUE SYSTEMS

WWW.GENESISRESCUE.COM

55" PUSH-PULL RAM

SPECIFICATIONS

LENGTH(IN/MM) - 36.0/914

WIDTH(IN/MM) - 4/101

DEPTH(IN/MM) - 8/204

WEIGHT(LBS/KGS) - 50.5/22.9

OPERATING PRESSURE(PSI/BAR) - 10,000/700

LENGTH OPEN(IN/MM) - 55.7/1415

LENGTH RETRACTED(IN/MM) - 36/914

STROKE(IN/MM) - 19.7/501

NFPA 1936 COMPLIANT - YES

NFPA 1936 HSF (LBF/KN) - 21,892/97.3

NFPA 1936 HPF (LBF/KN) - 10,300/45.8



SPECIFICATIONS



LOOKING FOR TRAINING

GENESIS
RESCUE SYSTEMS

TECHNICAL DATA

VERSION ACT.3.2016

ART.593.693.4

CERTIFICATIONS

- NFPA 1936:2015 COMPLIANT
- ISO 9001:2008

GENESIS

RESCUE SYSTEMS

WWW.GENESISRESCUE.COM

12-24 TELESCOPIC RAM



SPECIFICATIONS

LENGTH(IN/MM) - 11.8/300

WIDTH(IN/MM) - 3.5/88

HEIGHT(IN/MM) - 11.6/295

WEIGHT(LBS/KGS) - 20.5/9.3

OPERATING PRESSURE(PSI/BAR) - 10,000/700

LENGTH EXTENDED(IN/MM) - 23.6/600

LENGTH RETRACTED(IN/MM) - 11.8/300

STROKE(IN/MM) - 11.8/300

NFPA 1936 COMPLIANT - YES

HIGHEST SPREADING FORCE 1 STAGE(LBF/KN) - 42,615/189.4

HIGHEST SPREADING FORCE 2 STAGE(LBF/KN) - 22,250/99

SPECIFICATIONS



LOOKING FOR TRAINING

TECHNICAL DATA

VERSION ACT.3.2016

ART.593.140.1

CERTIFICATIONS

- NFPA 1936:2015 COMPLIANT
- ISO 9001:2008

GENESIS

RESCUE SYSTEMS

WWW.GENESISRESCUE.COM

15-30 TELESCOPIC RAM



SPECIFICATIONS

LENGTH CLOSED(IN/MM) - 15.5/393

WIDTH(IN/MM) - 7.9/200

HEIGHT(IN/MM) - 3.4/86

WEIGHT(LBS/KGS) - 28.4/12.9

OPERATING PRESSURE(PSI/BAR) - 10,500/720

LENGTH EXTENDED(IN/MM) - 29.6/751

HIGHEST SPREADING FORCE 1 STAGE(LBF/KN) - 42,615/189.4

HIGHEST SPREADING FORCE 2 STAGE(LBF/KN) - 22,275/99

NFPA 1936 COMPLIANT - YES

SPECIFICATIONS



LOOKING FOR TRAINING

ART.593.414.1

CERTIFICATIONS

- NFPA 1936:2015 COMPLIANT
- ISO 9001:2008

GENESIS

RESCUE SYSTEMS

WWW.GENESISRESCUE.COM

19-52 3-STAGE TELESCOPIC RAM



SPECIFICATIONS

LENGTH(IN/MM) - 18.9/480

WIDTH(IN/MM) - 8.7/221

HEIGHT(IN/MM) - 4.3/109

WEIGHT(LBS/KGS) - 38/17.2

OPERATING PRESSURE(PSI/BAR) - 10,000/700

LENGTH EXTENDED(IN/MM) - 51.6/1310

LENGTH RETRACTED(IN/MM) - 18.9/480

STROKE(IN/MM) - 1.8/45.4

NFPA 1936 COMPLIANT - YES

HIGHEST SPREADING FORCE 1 STAGE(LBF/KN) - 60,615/269.4

HIGHEST SPREADING FORCE 2 STAGE(LBF/KN) - 29,137/129.5

HIGHEST SPREADING FORCE 3 STAGE(LBF/KN) - 10,215/45.4

SPECIFICATIONS



LOOKING FOR TRAINING

TECHNICAL DATA

VERSION ACT.11.17

ART.105.014.9

CERTIFICATIONS

- NFPA 1936:2015 COMPLIANT
- ISO 9001:2008

GENESIS

RESCUE SYSTEMS

WWW.GENESISRESCUE.COM

21-46 TELESCOPIC RAM



SPECIFICATIONS

LENGTH CLOSED(IN/MM) - 21.3/540

WIDTH(IN/MM) - 7.9/200

HEIGHT(IN/MM) - 3.5/88

WEIGHT(LBS/KGS) - 33.5/15.2

OPERATING PRESSURE(PSI/BAR) - 10,000/700

LENGTH EXTENDED(IN/MM) - 49/1170

LENGTH RETRACTED(IN/MM) - 21.3/540

STROKE(IN/MM) - 24.8/630

NFPA 1936 COMPLIANT - YES

HIGHEST SPREADING FORCE 1 STAGE(LBF/KN) - 42,615/189.4

HIGHEST SPREADING FORCE 2 STAGE(LBF/KN) - 22,275/99

SPECIFICATIONS



LOOKING FOR TRAINING

ART.105.004.1

CERTIFICATIONS

- NFPA 1936:2015 COMPLIANT
- ISO 9001:2008

GENESIS

RESCUE SYSTEMS

WWW.GENESISRESCUE.COM

26/59 TELESCOPIC RAM

The 26/59 Telescopic Ram provides rescue personnel with an optimal pushing distance and power.



SPECIFICATIONS

LENGTH(IN/MM) - 25.6/650
WIDTH(IN/MM) - 7.9/200
DEPTH(IN/MM) - 3.5/88
WEIGHT(LBS/KGS) - 39.6/18
OPERATING PRESSURE(PSI/BAR) - 10,000/700
LENGTH OPEN(IN/MM) - 59/1500
LENGTH RETRACTED(IN/MM) - 25.6/650
STROKE(IN/MM) - 33.5/850
NFPA 1936 COMPLIANT - YES
1 STAGE MAX FORCE(LBF/KN) - 42,615/189.4
2 STAGE MAX FORCE(LBF/KN) - 22,275/99

SPECIFICATIONS



LOOKING FOR TRAINING

TECHNICAL DATA

VERSION ACT.3.2016

ART.593.229.7

CERTIFICATIONS

- NFPA 1936:2015 COMPLIANT
- ISO 9001:2008

GENESIS

RESCUE SYSTEMS

WWW.GENESISRESCUE.COM

26/59XL TELESCOPIC RAM



SPECIFICATIONS

LENGTH CLOSED(IN/MM) - 25.6/650

WIDTH(IN/MM) - 3.5/88

HEIGHT(IN/MM) - 7.8/199

WEIGHT(LBS/KGS) - 46.1/20.9

OPERATING PRESSURE(PSI/BAR) - 10,000/700

LENGTH EXTENDED(IN/MM) - 59.1/1502

LENGTH CLOSED(IN/MM) - 25.6/650

STROKE(IN/MM) - 33.4/850

NFPA 1936 COMPLIANT - YES

HIGHEST SPREADING FORCE 1 STAGE(LBF/KN) - 60,473/269.4

HIGHEST SPREADING FORCE 2 STAGE(LBF/KN) - 29,112/129.5

SPECIFICATIONS



LOOKING FOR TRAINING

OPERATING CONDITIONS

The permissible temperature range of the E-FORCE devices is between -4°F and +176°F. Reliable operation cannot be guaranteed outside of this range.

Underwater operation

The cutters (exception: Hand Vario) can also be used under water. Do not exceed the maximum submersion depth of 40 metres with this. At this depth the water pressure still has no influence on the hydraulic pressure in the equipment and the hoses.

TYPE PLATE

On all E-FORCE devices, the type plate is located on the body. It shows the serial number, production date, nominal pressure and device designation.

DESIGN AND FUNCTION

Overview of Conventional Hydraulics



Brief description

Hydraulic ram are specially designed rescue equipment for pushing/pulling bodywork parts. They are used for rescuing trapped or enclosed accident victims. Driven by a hydraulic power unit it is possible to cut door and roof pillars, posts and sills etc. with the cutters.

The speed of movement of the rod is controlled by the greater or lesser degree of force applied to the pushbutton on the handle. The maximum pushing/pulling force is only applied when the pushbutton is fully depressed.

HYDRAULIC SUPPLY

Power units and pumps

Only Genesis Rescue power units and hand pumps may be used to drive the ram. Equipment from other manufacturers can only be used under certain conditions. Therefore always consult with us before operating a device with a power unit from another manufacturer!



ATTENTION !

Before using pumps and power units from other manufacturers always contact Genesis Rescue or an authorized dealer. Incorrect application can lead to hazardous situations for which we cannot accept any liability!

Hoses

The connection of the device with the power unit is carried out via high pressure hoses. Hoses are available various lengths. As the length of the hoses increases so too does the associated pressure loss. With a line length of 50 yards this pressure loss remains acceptable and has no significant effect.



CAUTION !

Do not use damaged hoses !

With damaged hoses there is a danger of escaping hydraulic medium under pressure, or of the hoses whipping around.

Therefore:

»»» The hoses should be subjected to a visual inspection (leak-tightness, surface damage such as kinks) after every use and at least once per year.



- »»» Every three years, or in the event of doubts about the safety or reliability, carry out an additional functional and load test (as per GUV-G 9102 or specific national directive).
- »»» Replace hoses every 10 years! The date (code letters or quarter/year) is specified on the hose bonding.
- »»» Ensure that the hoses are not exposed to tension or torsion (turning).
- »»» Do not kink the hoses or draw them over edges (smallest bend radius 40 mm).
- »»» Do not subject the hoses to high temperatures.
- »»» Protect hoses from contact with materials that can cause damage to the outer covering e.g. acids, alkalis, or solvents.

Hydraulic oil

All cutters are designed and tested for Genesis hydraulic oil ID No. 804932. This oil possesses a particularly high purity level and also works flawlessly at temperatures below zero, down to -20° C.



NOTE !

In addition to the oil mentioned above we recommend:

- »»» AERO Fluid 41 (Shell)
- »»» Unavis HVI-13 (Esso)
- »»» Aero-hydraulic 520 (Total)
- »»» Hydraulik DB (Castrol)
- »»» Renolin/MR310 (Fuchs)

EQUIPMENT CONNECTIONS

OSC

Connecting:

Remove the protective cap from the coupling male and the coupling female (Fig. 1). Conflate Single coupling male and female in the bayonet catch (Fig. 2). Hold coupling female on the black slew ring and turn clockwise until the coupling snaps in (Fig. 3). Put protective caps together (Fig. 4). You don't have to switch the power unit to position 0 to connect or disconnect the coupling!

Disconnecting:

Remove the protective caps. Hold coupling female on the black slew ring and turn counter clockwise direction. Turn the black slew ring until you can release the coupling easily. Put protective caps to coupling male and the coupling female.



Fig. 1



Fig. 2



Fig. 3



Fig. 4

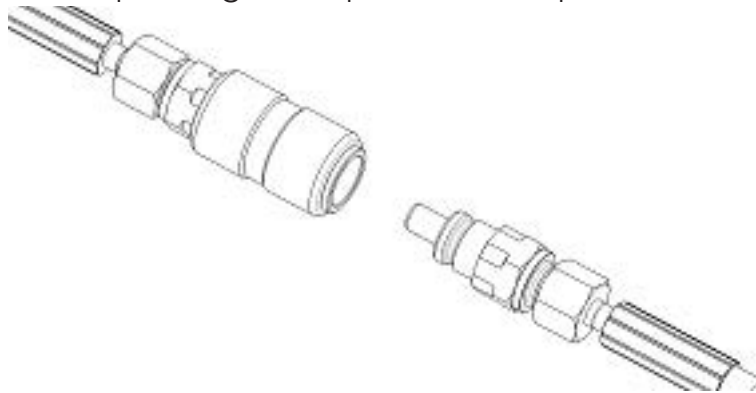
PLUG-IN COUPLING

Connecting:

Remove the protective cap from the coupling male. Take hold of the coupling female by the knurled sleeve cover and pull out the protective plug. With one hand take hold of sleeve cover of the coupling female, with the other grasp the coupling male (black) by the hex nut, and press the sleeve cover slightly against the coupling male until the ball bearings engage. Twisting the male coupling slightly when pressing together eases the coupling process.

Disconnecting:

Grasp the coupling male (black) by the hex nut with one hand and with the other take hold of the sleeve cover and draw it back. The disconnecting will cause a few drops of hydraulic oil to escape. Plug in the protective caps immediately.



CAUTION !

When coupling SKS connections the power unit operating lever must be in the „0“ position.



NOTE !

A pressure relief connector is fitted to the hydraulic power units and the hand pump, with which a few drops of oil can be discharged from the hoses. This permits re-coupling following pressure increases in de-coupled equipment.

In this case simply insert the pressure relief connector into the coupling sleeve and turn the knurled screw to the right until oil leaks out.

USE OF THE CONTROL HANDLE



The ram can be operated by the pushbutton on the control handle. The speed of movement of the rod is controlled precisely by the greater or lesser degree of force applied to the pushbutton.

The maximum pushing/pulling force is only applied when the pushbutton is fully depressed.

Closing the ram



The primary motion direction of the device (closing) is triggered by pressing the lower tapered (convex) end of the button.

The direction of movement is marked on the equipment with the symbol:



Opening the ram

The ram are opened with the upper curved (concave) end of the button, which is marked with the following symbol:

Dead-man's switching

If the pushbutton is released then it returns to the neutral position automatically. With this, the device stops still in any position (including under load).

TRANSPORT, PACKAGING AND STORAGE

Safety information



CAUTION!

Incorrect transport can cause damage!
Improper transport can cause significant material damage.

Therefore:

- » Proceed with caution when unloading the packages, and observe the symbols on the packaging.
- » Do not fully open and remove the package until it has reached its actual storage location.

Transport inspection

Upon receipt, the delivery should be checked immediately for completeness and damage during transport so that a quick remedy can be performed, if necessary.

If there is visible external damage, please proceed as follows:

- Do not accept the delivery, or only accept it with reservation.
- Note the extent of the transport damage on the transport documents or on the transport company's delivery note.
- File a complaint.



NOTE!

Report any defect as soon as it is detected.
Claims for damages can be directed to our customer service department.

DISPOSAL OF PACKAGING



All packaging materials and disassembled parts (transport protection) must be disposed of properly, in accordance with local regulations.

STORAGE

The equipment must be stored in a dry and dust-free environment, where possible. Avoid direct UV radiation to the hoses.



CAUTION!

The equipment must be stowed securely in the mountings provided in order to avoid damage during transit, etc.

INSTALLATION AND COMMISSIONING

Safety information



WARNING!

Danger of injury due to improper operation!
Improper operation can cause serious injury or material damage.

Therefore, make absolutely sure to:

- » All operating steps are executed in keeping with the information in this operating manual.
- » All covers and protective devices are installed and in proper working order prior to starting work.

Personal protective equipment

Wear the protective equipment for all work!



NOTE!

Special reference is made where it is necessary to wear additional protective equipment for certain work with or on the device.

CHECKING

Inspect the Cutter devices for damage. If the cutting device is not in pristine condition, it must not be used! In this case, immediately contact your supplier.

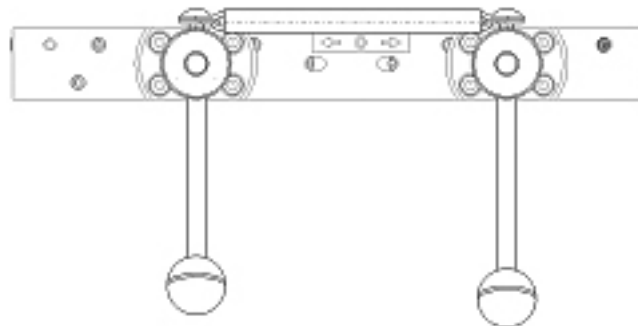
- Check the blades (damage)
- Check the control handle including pushbutton (function)
- Check the couplings (damage, dirt)
- Check the hand grip (securely fastened)
- Check the protective cover (damage)
- Check the hoses (damage)

INSTALLATION

Move both control levers on the hydraulic power unit to the „0“ position, pull off the dust protection cover on the coupling and connect the hydraulic hoses with the cutter as described in chapter 4.4. In order to avoid contamination then recouple the protective caps.

When using the OSC coupling can also be carried out without pressure („0“ position on power unit not necessary).

When operating a hydraulic power unit observe the operating instructions for the equipment!



SHUT-DOWN (END OF WORK)

After work is over, the blade tips must be placed one above the other to prevent injury. The blades of the cutting device must not be completely closed, as otherwise tension will build up in the device.



NOTE !

With combi tools, drive the spreader arms to within a few millimetres of each other in order to relieve the hydraulics.

Then the equipment can be disconnected providing that the power unit control lever is in the „0“ position. Care must be taken to ensure that no dirt ends up on the coupling and that the protective caps are immediately fitted.

SERVICE

Safety information



WARNING!

Risk of injury due to improperly performed maintenance work!

Improper maintenance of the equipment can cause serious injury or material damage.

Therefore, make absolutely sure to:

- » Only let qualified personnel carry out maintenance work.
- » Make sure the installation site is organized and clean! Loose components and tools lying around are sources of danger.
- » Wear protective gloves for all work!

CARE AND MAINTENANCE

PREVENTATIVE MAINTENANCE

Genesis recommends that all hydraulic rescue tools be serviced by a certified factory technician at a frequency of once every 12 months. Just like a vehicle this crucial maintenance ensures the tool functions at top performance and safety. Your sales representative can answer any question you may have.

We recommend only qualified personnel carry out maintenance.

GENESIS PREVENTATIVE MAINTENANCE PROGRAM

The following are recommended service intervals for Genesis tools.

Each Use

- Equipment should be wiped down to remove debris
- Clean male and female couplers
- Clean ram parts
- check whipends for damage
- check for damage

Weekly Inspections and Maintenance

- Check all couplers and fittings for tightness
- Run each tool and build pressure
- Check handles and guards, tighten if necessary

CARE AND MAINTENANCE

Annual Maintenance

- Change and replace the engines oil
- Change and replace the hydraulic fluid
- Test the engines performance
- Change the spark plug
- Clean and replace the air filter
- Lubricate moving parts
- Pressure check all lines and fittings
- Check opening and closing pressure
- Disassemble and examine all critical components
- Check the power units operating pressure
- Check all valves
- Provide loaner equipment during service
- Provide a detailed report

ATTENTION!



Prior to all maintenance work, the equipment must be cleaned of any dirt so that it does not get into the hydraulic system. The cleaning can be carried out using a conventional citrus cleaner or using WD 40.



NOTE!

If there are any problems with the maintenance of the devices, contact your local sales representative.

TROUBLE SHOOTING

Fault	Possible cause	Remedial measures
Device does not reach full performance	Control buttons not fully depressed	Fully depress control buttons
Equipment delivers no power or moves in the opposite direction to that commanded	Pressure line (P) and return line (T) were transposed when hoses or couplings were replaced	Change round in accordance with the repair instructions
Cutter cannot be coupled	Pressure build-up due to heating (only SKS coupling) Coupling halves are damaged or heavily soiled	Drain a little oil out of the equipment with the pressure relief plug, see chapter 4.3 (only SKS coupling)
Oil escaping at the control handle (hole between the hoses)	Return hose is not correctly coupled (only SKS coupling)	Move power unit control lever to the "0" position and couple correctly (only SKS coupling)
Equipment non-functional despite actuating the control buttons	Pressure hose is not coupled	Move power unit control lever to the "0" position and couple correctly (only SKS coupling)
Combi tool exhibits movement in the opposite direction under load	Check non-return valve	Have the equipment checked by authorised customer services
Oil discharge on the hoses or their bondings	Hoses leaking, possibly due to damage	Replace hoses, see repair instructions
Degradation of the surfaces of the hoses	Contact with aggressive chemical fluids	Replace hoses, see repair instructions
Oil escaping at the coupling halves	Coupling leaking	Replace coupling, see repair instructions
Blades loose and gaping apart when cutting	Attachment of blades to the shearing head not in accordance with specifications	Repair by authorised customer service
Tip spread of cutter below target value	Shearing head settings incorrect	Repair by authorised customer service
Tip spread of combi tool below target value	Shearing head settings incorrect	Repair by authorised customer service
Pressure build up despite movement (open - closed) without any load	Hex nut / central bolt too firmly tightened	Repair by authorised customer service
Nick or gouge in blade	Blade damaged e.g. through cutting hardened materials	Can be reground up to approx. 2 mm (see repair instructions), otherwise replace
Chip or groove	Blade damaged e.g. through cutting high-strength materials	Have the blades replaced by authorised customer services

DECOMMISSIONING/RECYCLING

After the end of the normal service life, the equipment must be professionally disposed of. Individual parts can, however, certainly be used again.

The hydraulic oil must be completely drained and collected. Make sure that the hydraulic oil is disposed of separately!

For disposal of all device components and packaging materials, the disposal conditions of the specific location apply.

Do not discard electric tools with household waste!



NOTE!

Please ask your supplier about disposing of the device.

GENESIS

RESCUE SYSTEMS

GENESIS RESCUE SYSTEMS

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