



714



OPERATOR'S MANUAL

(ORIGINAL INSTRUCTIONS)

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A WARNING MANUAL



A.1 MECHANICAL HAZARDS

A.1.1 MECHANICAL RESISTANCE

The main hazards resulting from failure to follow the operating instructions described in the user manual are listed below:

- **Environmental temperature range**
 - Weakening of the crane structure
 - Hydraulic fluid viscosity too low/high
 - Hydraulic fluid overheating
 - Weakening of plastic components
 - Degradation of flexible hoses (-40°C ÷ 100°C)
- **Maximum incline**
 - Crane rotation not possible
 - Excessive pressure in rotation rod
 - Excessive stress on rack - pinion wheel or thrust block - motor coupling
 - Excessive stress on crane structure
 - Loss of stability
- **Maximum oil flow rate to main control valve**
 - Overloads on the structure caused by excessive speed of movement
 - Excessive oil temperature
- **Maximum wind speed**
 - Excessive stress on crane structure
 - Excessive oscillation of the load
 - Loss of stability
- **Precipitation**
 - Lightening, electric shock
 - General malfunctioning of the electric system
- **Use in explosive environments**
 - Flammable hydraulic fluid and plastic components
- **Use in marine environment**
 - Rapid corrosion of structural components (cylinders, pins)
 - Excessive stress caused by fixed/marine installation conditions
- **Rigid installation base**
 - Excessive inertia
 - Excessive oscillation of the load
- **Lifting component**
 - Excessive stress if components other than hook used
- **Power supply voltage**
 - Incorrect functioning of safety devices
 - Incorrect functioning of controls
- **IP protection level**
 - Electric system faults (safety and controls)



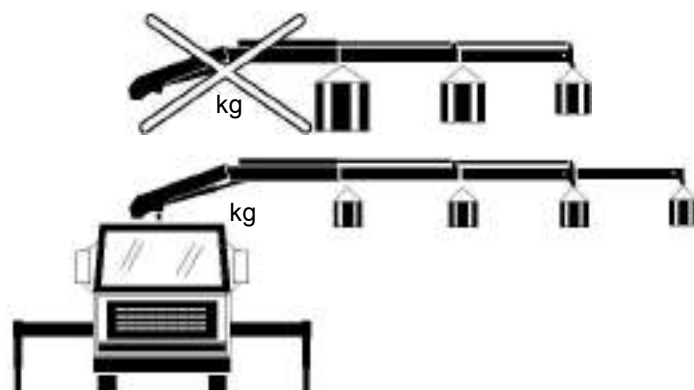
WARNINGS

- Do NOT use the crane if the operating conditions are incompatible with the instructions given in this manual (§B.3.3). Specifically, the user must contact the manufacturer of the crane in the event of environmental temperatures outside the range indicated in this manual.



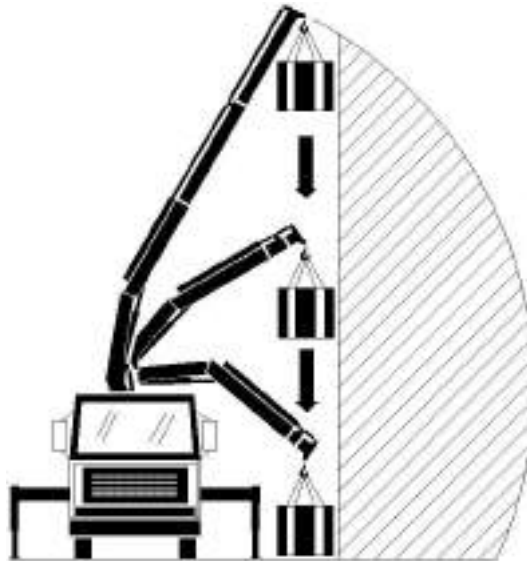
- Clear any snow or ice from the crane booms to prevent excessive stress caused by the extra weight and to ensure that movement of telescopic components is not affected.
- Contact an authorised assistance centre before using or transporting the crane in a marine environment.
- The lifting component to which the diagrams refer in this manual is the crane hook. If other lifting components are to be used the user must contact an authorised assistance centre to obtain dedicated load diagrams.

If a manual extension is used then the maximum load for this component is valid for all operating configurations even when the telescopic sections are fully retracted. Therefore whatever the distance from the column axis the maximum load permitted is the one for the manual extension currently in use (the load is indicated on the load diagram shown on the plate and specified in the user manual).





- Do NOT exceed the maximum crane load moment as this may cause uncontrollable descent of the load, damage to components and tipping up of the vehicle.



- Maintenance on the machine which requires welding is forbidden. Refer to an authorised assistance centre if repairs or modifications to metalwork are required.





A.1.2 CRUSHING HAZARD

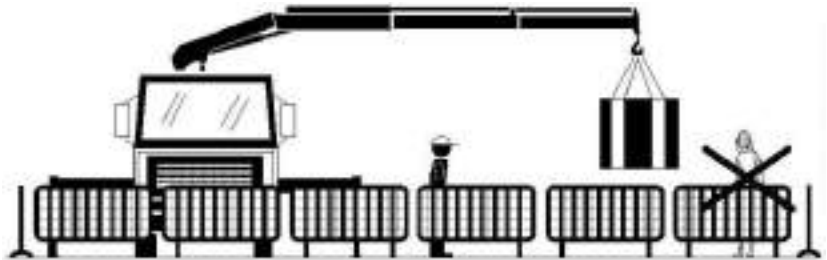
Crushing hazards derive from moving components on the crane:

- body crushing between the crane, truck cabin and truck body
- upper limb crushing between base and crane booms
- body crushing between stabilisers and a stationary object stabilizer opening
- limb crushing when stabiliser rods are retracted
- lower limb crushing under the plate for the stabiliser cylinders
- limb crushing in openings



WARNINGS

- Cordon off the working area using barriers and warning signs before starting any operations with the crane. Use special signals to warn others when crane movement is about to start.



- Keep all personnel away from the hydraulic stabiliser rods during opening.



- Do NOT climb on to the crane base when the truck engine is running.

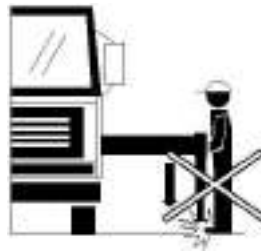




When handling the crane, avoid grasping the control levers: operate them only with the fingers.



- Do NOT place hands or feet under the stabiliser cylinder plate.



- Do NOT place any limbs between the base and boom during crane closing.



- Do NOT place lower limbs between the stabiliser cylinder and truck and do NOT place hands near the stabiliser rods during closing (retraction) of the stabiliser rods.

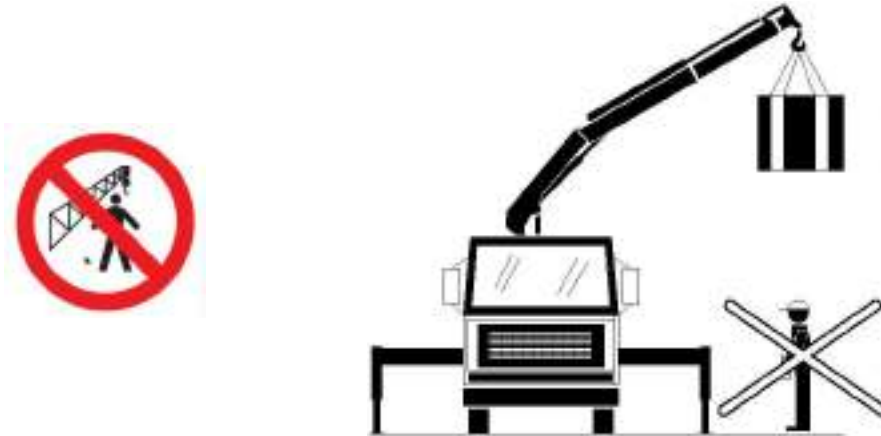


- Do NOT perform maintenance when the crane is moving or when the power take-off is enabled. Do NOT touch the crane when it is moving.





- Avoid hazardous situations in which the user, other personnel or passers-by may be crushed by the crane, stabilisers or the load.



- Always wear a helmet, industrial footwear and gloves. Do NOT wear loose or baggy clothing. Personnel must wear overalls.



- Abide by safety distances and make sure all others do the same (EN 349, see Tab. A-1).

Tab. A-1: *Min. safety distances*

CORPO BODY KÖRPER a > 500 mm	TESTA HEAD KOPF a > 300 mm	GAMBA LEG BEIN a > 180 mm	PIEDE FOOT FUSS a > 120 mm



A.1.3 CUTTING HAZARD

Residual hazard associated with movement of booms and any connecting rods. A residual cutting hazard exists for the upper limbs between moving parts associated with the booms, base and telescopic components.

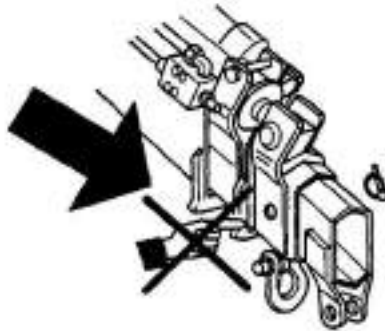


WARNINGS

- When the crane is in operation do NOT place upper limbs between the boom joints, near connecting rods or in the area where stabiliser rods are retracted into the base. Do NOT insert fingers, feet or limbs inside openings on moving parts.



- Do NOT insert fingers inside unoccupied pin or securing component housings (in particular pin housing for manual extensions).



- Do NOT stand between the base and booms during crane closing (see §A.1.2)
- Abide by safety distances and make sure all others do the same (see §A.1.2, Tab. A-1).



A.1.4 IMPACT HAZARD

Residual hazard associated with

- impact with the crane boom during opening/closing
- impact with the moving load
- impact with the stabilisers
- impact with manual extensions
- impact caused by release of the load



WARNINGS

- Take care not to bump into moving parts on the crane. Specifically, do NOT bang your head on the boom during crane opening and closing.



- Do NOT bang into the stabilisers when the crane is being stabilised.



- Take great care not to bump into the suspended load. The load must always be moved under safe conditions away from potential hazards and obstacles, as specified in this manual.





- Always check that the load lifting components (hook, shackle, slings, chains) are in perfect condition. Do NOT exceed the maximum load indicated on the plate. Check that the load is properly secured to prevent accidental falling. Do NOT stand under the load.



- If a manual extension is used avoid boom positions causing the unpinned extension to move at high speeds. Keep away from the extension's trajectory.



- The crane is equipped with turning stabilizer legs: take care to prevent impact with things and persons during the rotation.





A.1.5 OIL LEAK HAZARD

Hydraulic fluid leaks can cause burns, irritation to the skin and eyes and can even penetrate under the skin.

These hazards are associated with incorrect tightening of couplings, rubbing of flexible hoses against metal objects or components, excessive bending of hoses, incorrect disconnection of hoses during maintenance, incorrect repairs, ageing, etc.



WARNINGS

- When the crane is new and used for the first time small leaks of oil from the couplings may occur due to the heat expansion caused by the high temperature of the hydraulic fluid. Tighten the couplings using the torque settings suggested in the maintenance manual. Couplings may be damaged if they are too tight.
- The crane is designed in such a way to prevent rubbing of flexible hoses against moving parts. However the installation configuration may cause hoses to come into contact with other moving parts. If this happens use additional sheaths to protect the hoses.
- If a hose becomes damaged switch OFF the machine immediately and identify the damaged area using a piece of card or wood. spurts of fluid from a very small hole are powerful enough to penetrate the skin.
- Switch OFF the supply to the system and release the residual pressure from the hydraulic circuit before disconnecting any hoses.
- When using blowtorches and other welding equipment for repairs (authorised assistance centres only) switch OFF the pressure to the hydraulic system and work away from hoses and steel lines.



- All maintenance personnel operating on the hydraulic system must wear safety footwear, oil-proof gloves, overalls, helmet and goggles.



A.1.6 LOSS OF STABILITY

Loss of machine stability can cause serious damage to property and injury to persons. Carefully follow the stabilisation procedure instructions specified in the operator's manual. Do NOT tamper with safety devices. Stabilise the crane on firm ground.



WARNINGS



Stabilise the machine in accordance with the safety instructions given in the operator's manual, specifically:

- Check that the parking brake is ON and that the wheels are secured using chocks.

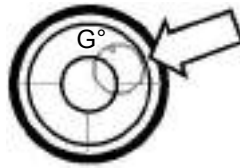


- Check that the beams are fully open.

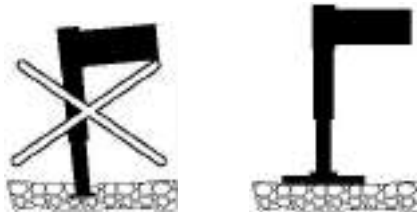




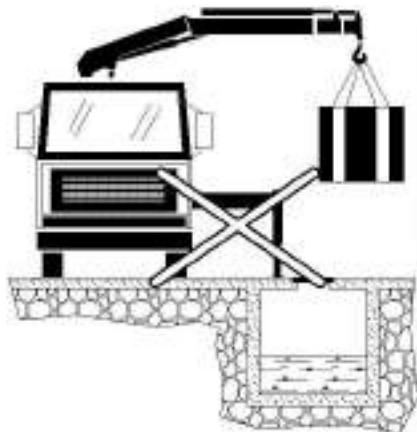
- Check that the crane is not inclined at an angle greater than the maximum permitted G value (use a spirit level).



- Make sure that the stabilizer feet are correctly deployed on ground and that this remains firm under their pressure. If it does not, retract the telescopic boom immediately, place the load on the ground and increase the support surface area of the plate using other larger plates before restarting work.

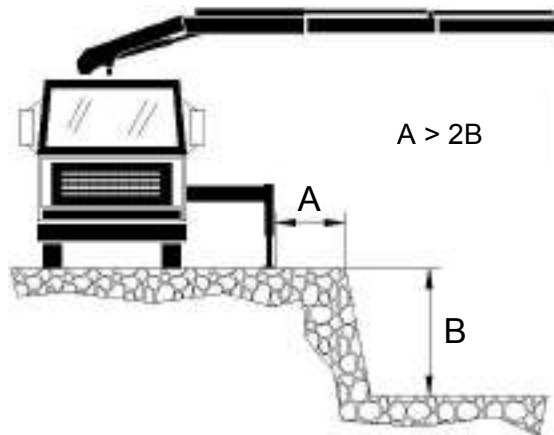


- Do NOT place the stabilisers near drains, manholes, wells, electric conduits and in general on any surface unable to support the full force of the stabilisers.





- When working on bridges the stabiliser must be located at least one metre from the edge. Make sure the stabilisers are at a safe distance from ditches and steep slopes. As a general rule the distance A between the stabiliser and edge must be double depth B of the ditch.



- Do NOT tamper with electrical, electronic and hydraulic safety devices on the machine. Check that all safety and protection devices are installed and functioning correctly before using the crane.



- When a load is lifted for the first time proceed slowly and carefully to ensure that the area of stability for the machine has been identified correctly. Inform the supervisor immediately of any loss of stability.
- Routinely check correct functioning of the stabiliser cylinder. Stop work immediately in the event of any faults and refer to an authorised assistance centre.
- Do not operate the crane under the hazardous conditions described in §A.11.



A.1.7 SLIPPING, TRIPPING AND FALLS

This hazard exists where the ground is slippery (oil, water or other material), bumpy, broken, etc.

- Fall hazard due to slippery or broken ground, etc.



WARNINGS

- Do NOT use the crane on unstable ground. Do NOT work on broken, slippery or uneven ground. Unexpected stops during movement or unwanted enabling of controls may cause serious damage to property and injury to persons.



A.2 ELECTRIC SHOCK HAZARD

A.2.1 CONTACT WITH LIVE COMPONENTS

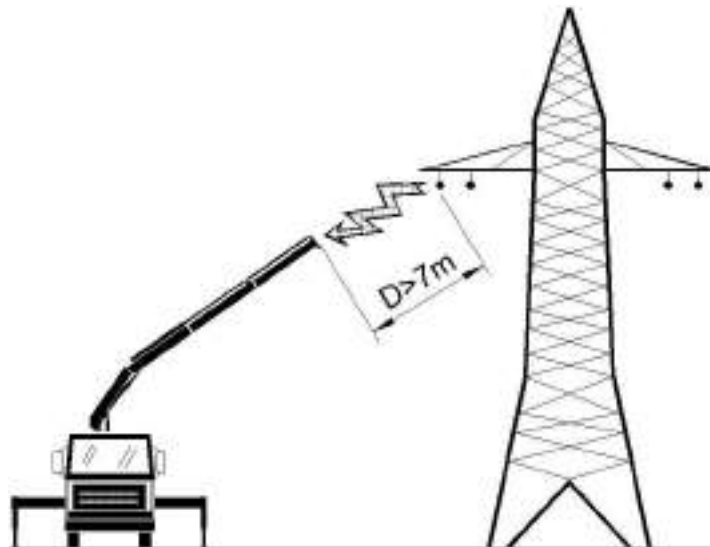
There is an electric shock hazard for the user under the following conditions:

- if the crane comes into contact with electricity power lines
- if the crane is struck by lightning



WARNINGS

- The crane should only be operated at a distance D of at least 7 m from electricity power lines. The crane can be used closer to electricity power lines if, following notification to the electricity supply company, suitable protection is adopted to prevent operation too close to the lines and accidental contact. The minimum operating distance must be calculated on the basis of maximum crane boom extension towards the lines and maximum movement of the lines.





The crane should only be used near live power lines if:

- Safety distances are adhered to
- Live parts are covered or surrounded by guards
- Overhead power lines are switched OFF for the entire duration of work



PROCEDURE IN THE EVENT OF CONTACT WITH ELECTRICITY POWER LINES

Follow the procedure described below in the event that the crane touches a power line despite the precautions taken:

1. Keep calm
2. Do not leave the control position
3. Do NOT touch any metal parts on the machine
4. Warn people nearby not to approach or touch the crane, truck, load or the person in the control position
5. Switch OFF the electricity power line.



WARNING

Do NOT leave the driving cabin or the loading platform. If you must abandon your position, do NOT touch the crane and the ground at the same time. Therefore leave your position by jumping to the ground. Do NOT climb down.

The only solution if personnel are electrocuted is to switch OFF the power lines. Do NOT approach electrocuted personnel. Such action may be fatal.



A.2.2 STATIC ELECTRICITY

The crane can accumulate static electricity. This generally occurs when the material placed between the stabiliser feet and the ground is an insulator e.g. wood, the crane is used near radio transmitters or high frequency switching systems and when a storm is approaching.

- Static electricity can affect correct functioning of pacemakers.



WARNINGS

- Accumulation of static electricity is prevented by connecting the crane truck chassis to earth using a special device.
- People with pacemakers fitted are forbidden from approaching or using the crane.





A.3 HEAT HAZARDS

A.3.1 BURNS

These hazards are caused by:

- Contact with hot hoses, hot tanks and damage to hoses resulting in spurts of hot oil.
- Use in explosive environments



WARNINGS

- Do NOT touch any part of the hydraulic system when the temperature exceeds 50°C (EN 563).



- Do NOT use the machine in explosive environments.

A.3.2 ENVIRONMENTAL TEMPERATURE



WARNINGS

- Control positions must be located so that operators cannot touch hot surfaces (>50°C - EN 563) during normal crane functioning. Specifically all hydraulic hoses containing fluid under pressure > 50 bar and/or with a temperature > 50°C and located at a distance of < 1 m from the operator (EN 12999) must be covered to protect the operator.
- Routinely check that the thermometer is functioning correctly. Refer to an authorised assistance centre in the event of a fault.
- Environmental temperature can affect crane control capacity. Do NOT use the crane under extreme environmental conditions (very hot, very cold, very high relative humidity).



A.4 NOISE HAZARDS

There are no significant noise hazards in that the crane does not include the power source.



WARNINGS

- Wear ear protection equipment if the noise level in the operating position exceeds 80 dB(A) as a result of other machinery or equipment in use.



A.5 VIBRATION HAZARDS

There are no significant vibration hazards in that a truck crane is used for short periods and therefore there is no significant effect on the operator.



A.6 HAZARDS RELATING TO SUBSTANCES USED BY THE MACHINE

A.6.1 TOXIC SUBSTANCE HAZARD (INHALATION OR CONTACT)

These hazards are associated with:

- Inhalation of exhaust fumes or toxic substances caused by the working environment and/or the substances moved.
- Incorrect handling or disposal of hydraulic fluid.
- Incorrect handling or disposal of grease.
- Fire caused by highly flammable hydraulic fluid.
- Incorrect disposal of crane components and accessories.



WARNINGS

TOXIC FUMES AND SUBSTANCES

Control positions must be located so that operators are not exposed to inhalation of exhaust fumes and toxic substances caused by the working environment and/or the substances moved.



If the operator is exposed to exhaust fumes move the exhaust pipe outlet point further away from the operating position (e.g. using removable flexible hosing).

Wear a mask if the crane is used in environments with toxic fumes or substances.





HYDRAULIC FLUID

Hydraulic fluid must be handled with care in a ventilated environment. Wear protective gloves and goggles. Hydraulic fluid must be stored and moved in sealed containers to prevent leaks and accidental contact with the oil.



Hydraulic fluid is flammable. Keep all naked flames well away.



Store used oil in sealed containers at a temperature less than 65 °C. Contact an authorised waste management company to dispose of used oil.



SPECIFIC HAZARDS

- Repeated and prolonged contact with the skin can cause itching, rashes and dermatitis.
- Irritant for the eyes.
- Flammable: do NOT use water to extinguish hydraulic oil fires. Use foam or CO₂. Wear a gas mask in the event of fire.



Use soil, sand or sawdust to contain the fluid in the event of accidental spillage. If the spillage occurs in water contact the relevant authorities.



FIRST AID

- Contact with the skin: wash using soap and water.
- Contact with the eyes: remove contact lenses and rinse using water.
- Swallowing fluid: call a doctor, do NOT induce vomiting.



INDUSTRIAL GREASE

Industrial grease must be stored in sealed containers. Wear protective gloves and goggles and handle with care.



Grease is flammable. Keep all naked flames well away.



Store used grease in sealed containers. Contact an authorised waste management company to dispose of used oil.



SPECIFIC HAZARDS

- Repeated and prolonged contact with the skin can cause itching, rashes and dermatitis.
- Irritant for the eyes.
- Flammable: do NOT use water to extinguish hydraulic oil fires. Use foam or CO₂. Wear a gas mask in the event of fire.



In the event of accidental spillage wait for the grease to solidify. Use a spade to scrape up the material and place it in a container suitable for recycling or disposal.



FIRST AID

- Contact with the skin: wash using soap and water.
- Contact with the eyes: remove contact lenses and rinse using water.
- Swallowing grease: as a general rule first aid is not required. Contact a doctor if symptoms persist.



A.7 ERGONOMIC HAZARDS

A.7.1 OPERATING POSITIONS

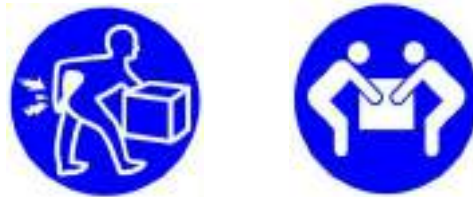


WARNINGS

- working areas with a significant electromagnetic field.



- Do not place the body under excessive strain when operating the crane. If manual operations are required (e.g. pivoting stabilizer legs, manual extensions, other lifting components) or the load must be moved by hand do not lift a weight of more than 25 kg (20 kg for women).



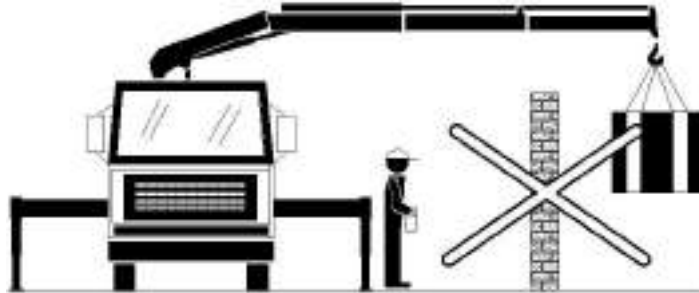


A.7.2 VISIBILITY



WARNINGS

- When using the crane the operator must have a perfect view of the entire range of machine use as well as control, emergency and safety devices.



- An additional lighting system conforming to EN 1837 must be installed if the crane is used at night.
- A qualified assistant must help the operator if the latter does not have a clear view of the entire range of machine use (see §B.7.5).



A.7.3 HUMAN ERROR

Hazards relating to human error exist due to the following:

- incorrect crane movement
- incorrect maintenance
- incorrect crane stabilisation
- incorrect crane use (see §A.11)
- incorrect/failed demarcation of crane operating area (see §A.1.2)



WARNINGS

- Personnel and assistants operating the crane must not be temporary staff. They must be at least 18 years old and physically fit enough to perform all tasks. The following aspects must be taken into consideration:

a) Physical:

- Sight and hearing
- No fear of heights
- Not under the effects of alcohol, drugs or prescription medicines

b) Psychological

- Conduct in stressful situations
- Mental balance
- Sense of responsibility

- Operators must be able to read and understand the language used to write the crane documents and information plates.

- Operators must be able to understand and apply the information and prescriptions given in this manual.

- Operators moving the vehicle on public roads must have the relevant authorisation and be aware of local driving legislation.



All those using the vehicle must receive adequate training (in accordance with ISO 9926-1) from those responsible for installing the crane on delivery. Use by all other personnel is forbidden.



A.8 UNEXPECTED START-UP AND SWITCH- OFF OF THE CRANE

Impact, crushing, load loss and stability loss hazards exist as a result of accidental crane start-up and switch-off.



WARNINGS

- Before using the crane check that there is enough fuel and that the battery is in good condition.
- Do NOT allow anyone to approach the crane or truck during operation (see §A.1.2).
- Those using the crane must be in full control of the machine with control and stop devices in easy reach from the moment of start-up.
- Control and maintenance operations must be performed with the machine and engine switched OFF, the brake ON and wheels blocked using special chocks





A.9 SAFETY DEVICE FAULTS

- Tampering with safety devices can cause excessive stress on the crane, loss of stability, impact, falling loads, sudden release of the lifting components and manual extensions, accidents when moving the vehicle, etc.
- Imperfect closure of the crane when moving the vehicle can cause serious damage due to impact of protruding components against various objects (bridges, garages, other vehicles, etc.).
- Failure to apply decals to the machine may cause the operator not to take into consideration hazards associated with normal crane use.



WARNINGS

- Do NOT remove, modify or disable safety devices be they mechanical (guards, locks, etc.) or electro-hydraulic (valves, limit switches, system seals). Failure to abide by this regulation shall cause the warranty to be declared null and void.



- Make sure lifting components and manual extensions are not supporting a load and are resting on a suitable support surface before disconnecting them.
- Do NOT tamper with or remove warning decals. Do NOT clean the decals with solvents. Do NOT use water or steam under pressure to clean the machine.





- Before moving the vehicle always check that:

- The crane is closed correctly in the rest position (1).
- The stabiliser extension rods are fully retracted and locked. If the rods are locked using a pin then the latter must be inserted perfectly in the rod (2).
- No crane components or accessories are protruding outside the profile of the vehicle (3).



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- The special boom stop used to lock crane rotation and the visual/luminous control indicating consent for road use (crane boom must not be more than 4 m from the ground) are installed if the crane is closed on the truck body .



Refer to an authorised assistance centre for a thorough service in the event faults to safety devices, impact or damage to the machine and missing warning decals.



A.10 COUPLING FAULTS

There is a serious risk of damage to property and injury to persons in the event of incorrect coupling of mechanical and hydraulic components between the crane and vehicle, crane and lifting components and between the lifting components themselves.



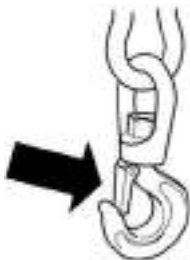
WARNINGS

The following checks should always be made before using the crane:

- Visually check that the hydraulic system is functioning correctly and that there are no fluid leaks between hoses and couplings.
- Visually check the integrity of the machine structure and hoses.
- Check that the load capacity of the lifting components is adequate.
- Check the integrity of the seals on the safety devices and valves.
- Check the efficiency of the safety devices and load lifting components.



- Check that hooks, shackles, slings, ropes, chains and relevant safety devices are in perfect condition.

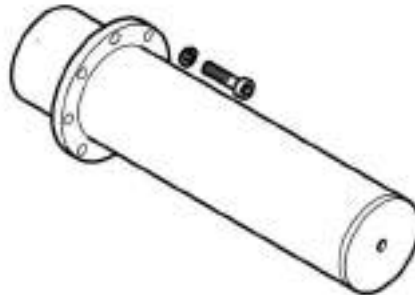




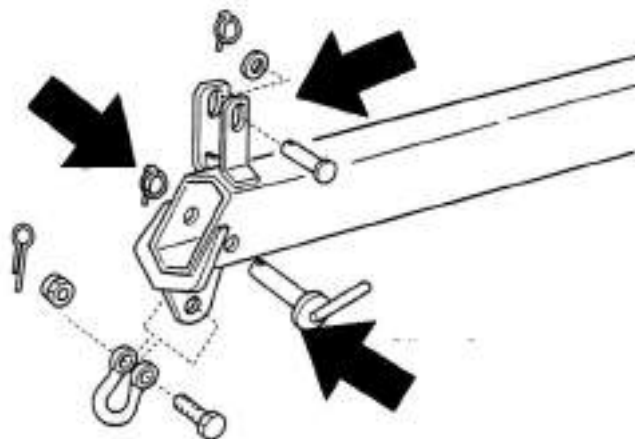
- Check that the tie rods used to secure the crane to the truck are secured correctly and that the crane is in the correct position relative to the frame of the truck.



- Visually check the tightness of rotation cylinder securing screws and all nuts and bolts in general.



- Check that pins and screws used in the extension and in other lifting tools are assembled and secured correctly.





A.11 HAZARDS DUE TO INCORRECT LOAD MOVEMENTS

Residual hazards exist as a result of incorrect load movements:

- Loss of stability
- Uncontrollable load, overload, exceeding the tip-up limit
- Uncontrollable speed of movements, oscillation of the load
- Unexpected or accidental movement of loads
- Unsuitable, worn or unsafe lifting devices/accessories
- Lifting of people
- Use during high winds
- Risk of damaging load support surfaces following movement
- Uncontrolled descent of the load and of the crane boom when the overpressure valve on the 2° boom cylinder operates.



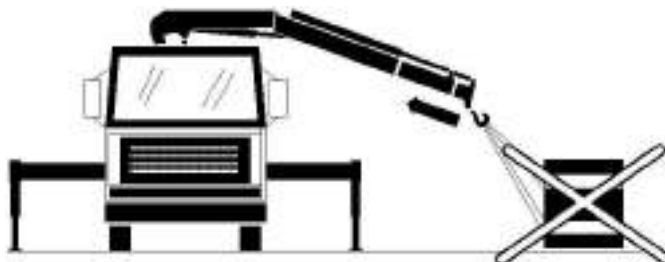
WARNINGS

The following movements and operations with the crane are strictly forbidden:

- Using the crane to drag, extract, remove, push or crush fixed or stuck objects.

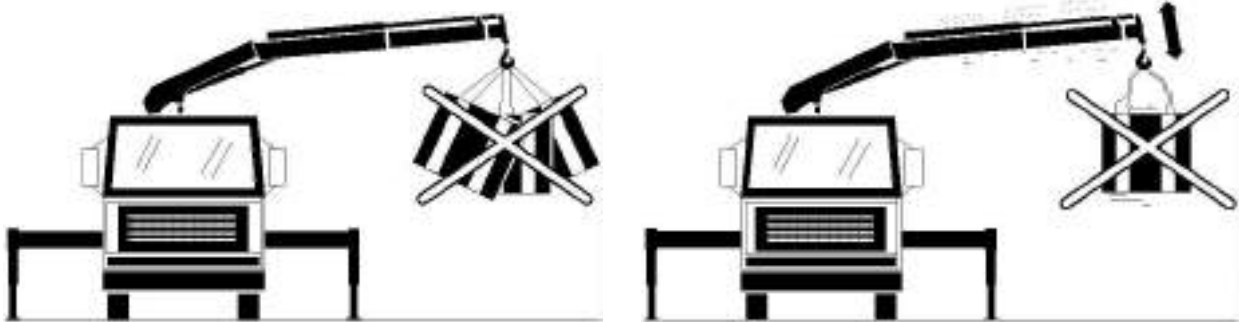


- Dragging of loads on the ground, on guides, resting against a wall, etc.





- Brisk movements (sudden rotation, ascent, descent) causing significant load oscillation or abnormal machine structure vibration.



- Lifting of loads not supported by objects secured solidly to the base of the crane unless the operator knows the precise size of the load being moved (e.g. forklift truck leaving an excessive weight on the crane hook, lifting a floating weight, etc.).

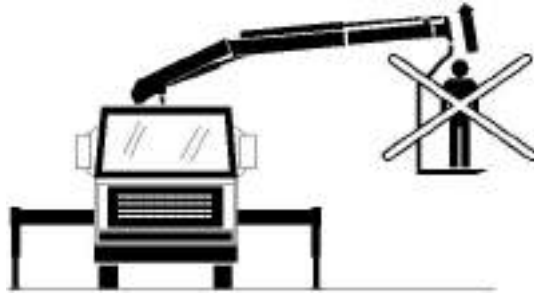


- Movements very close to fixed (walls, trees, etc.) and mobile (cranes, forklift trucks, gantry cranes, etc.) objects.

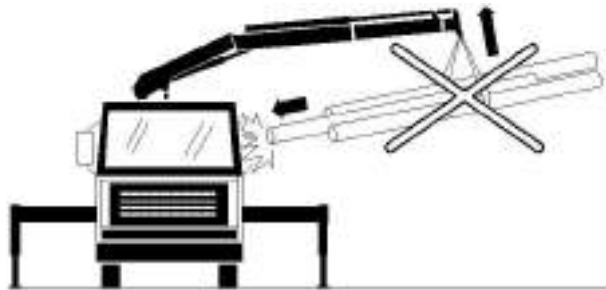




- Lifting of people.



- Using lifting components which are worn, not suitable for the load or without safety devices. Risk of accidental loss/fall, slipping, excessive rotation or tipping of the load and uncontrollable movements.



- Using the machine under adverse weather conditions (high winds).



- Resting the load on surfaces with unsuitable strength, area or incline.





A.12 WARNINGS TO LIFT AND TRASPOT THE CRANE

If not installed, the crane must be moved safely, in order to avoid falls and impacts with objects and persons.

During transport of the crane, the carrier must follow these instructions:

1. The carrier is responsible for the crane and he must be qualified.
2. Use means of transport or lifting with adequate capacity.
3. Raise the crane by lift-truck, crane or bridge crane.

LIFT TRUCK

Insert the forks under the base in correspondence to the indicated arrows (see §D.5 and fig.).

Keep the 2.boom of the crane at truck side: fix the crane to the truck.

CRANE

Insert the hook in the suitable attachment on the 1.boom of the crane. (see D.5 and fig.).

It's necessary to limit the load oscillations.



4. During the transport by land and sea, fix the crane or its container to the means of transport (body, container, hold, etc.).

Protect the crane properly from atmospheric agents. Never unpack the crane.



A.13 SUPPLEMENTARY WARNINGS FOR RADIO REMOTE CONTROL

There are specific hazards when operating the crane using a remote control unit caused by unexpected, interrupted or incorrect movement and electric hazards.

The hazards are associated with the following:

- incorrect control panel indications
- incorrect calibration of movements
- electromagnetic radio frequency interference
- excessive distance between transmitter and receiver
- damage to internal and external radio control devices (switches, potentiometers, circuitry, etc.)
- using the unit under conditions other than the prescribed ones (temperature, weather conditions, etc.)
- uncontrolled use of the transmitter controls due to impact, falls, crushing of levers and use by unauthorised personnel
- failed power supply from the transmitter batteries
- tampering with devices
- human error
- contact with live internal radio control unit components



WARNINGS

- Before starting work check that the crane will operate under the conditions permitting use: temperature, humidity, weather conditions etc. (see the user, maintenance and warnings manual for the crane).
- Check that the labels applied to the joystick on the transmitter are the same as the indications on the control valve levers.
- Before starting work with the crane move the joystick slowly and delicately to check that:
 - the direction of the controls is the same as that indicated on the labels
 - the emergency stop button is functioning correctly
 - the speeds of the crane movements are controlled proportionally and gradually by the travel of the trigger switch.



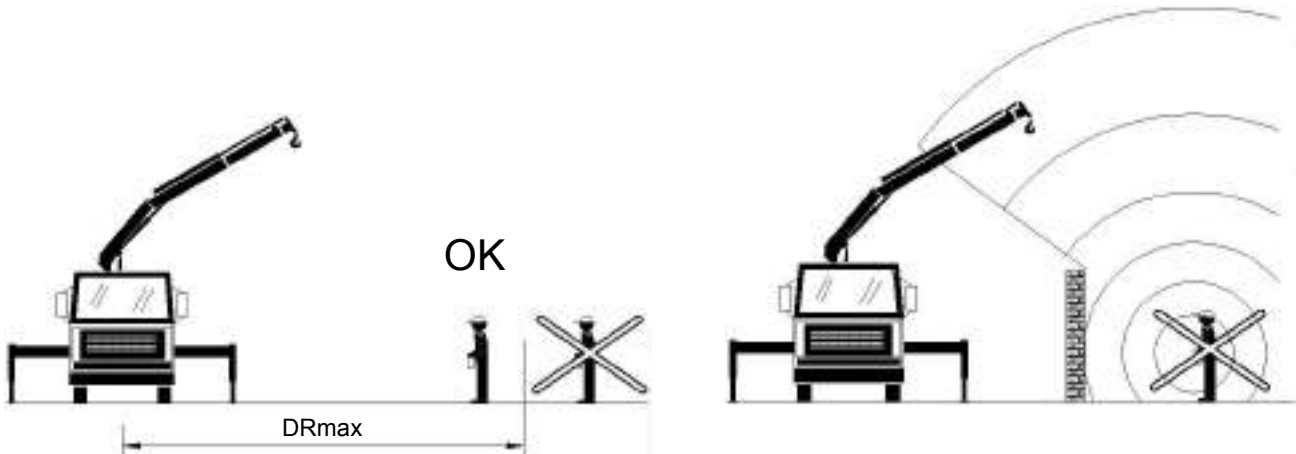
- Check for possible sources of electromagnetic disturbance in the vicinity of the working area (other radio control units, aerials, radio receivers and transmitters in general, electric systems generating powerful electromagnetic fields, magnets, etc.).



- Before starting work inform other personnel in the area that the crane is to be operated using the remote control unit.



- Do not use the transmitter at a distance from the receiver greater than that indicated (DRmax) in the radio control unit user manual. No physical obstacles should interfere with the radio signal.



- Visually check the external condition of the transmitter and receiver (switches, components and covers must be intact, clean and dry).



- Protect the radio control unit against water and damp.



- Check that no devices on the radio control unit have been modified or removed. The aerial must always be fitted to prevent irreparable damage to the internal receiver circuits.
- The operator must press the trigger switch gradually only after having selected a crane control, in order to avoid sudden crane movements.
- Switch OFF the transmitter during breaks from work and when the operating position is changed.
- All those using the vehicle must receive adequate training (in accordance with ISO 9926-1) from those responsible for installing the crane on delivery. Use by all other personnel is forbidden.
- During work the transmitter should be held at all times with the control panel facing the operator. Make sure that you are able to read and understand all labels and symbols to prevent incorrect movements.
- When you have finished using the remote control unit remove the key to switch OFF the unit and place the unit in a safe and secure place.



- If the transmitter is not used switch it OFF and keep it in a safe and secure place to prevent unwanted use.



- Contact with live components can be fatal. All covers marked with the following decal must only be opened by a qualified electrician after the service voltage has been cut.



Switch OFF the machine and the transmitter and contact an authorised service centre if under any circumstances the machine reacts incorrectly.



A.14 SUPPLEMENTARY WARNINGS FOR USE WITH JIB

There are additional specific hazards for cranes mounting a jib, as listed below:

- Crushing and cutting hazard for upper limbs between moving parts on the jib.
- Impact hazard with property and people during opening and closing of jib.
- Hazards during fitting/removing the jib

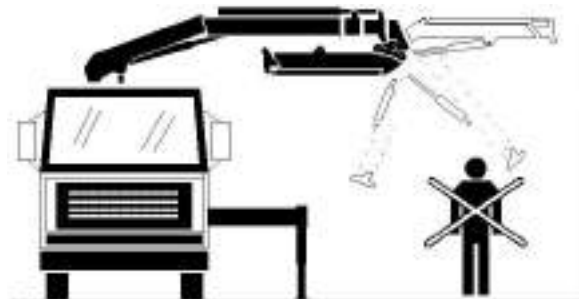


WARNINGS

- When the crane is operating do NOT approach or place upper limbs between the jib boom joints and connecting rods. Do NOT insert fingers, feet or limbs inside openings on moving parts.



- Take care not to bump into moving parts on the jib boom particularly during opening and closing of the jib.



- It's necessary to check for stable positioning and safe fitting of the jib extension during the mounting, taking off and stocking.



A.15 SUPPLEMENTARY WARNINGS FOR WINCH

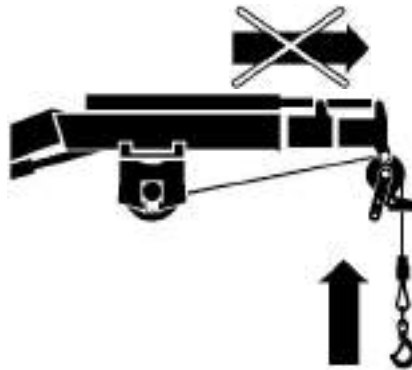
There are additional specific hazards for cranes mounting a winch as listed below:

- Excessive stress on the rope and structural parts of the crane which may affect structural safety.
- Crushing and cutting hazard for upper limbs between the winch rope and drum and between rope and pulley.
- Entanglement hazard in the rope
- Hazard involving contact with winch moving parts: crushing between the drum and base.
- Rope degradation hazard.
- Electric shock hazard caused by contact between rope or hook and electric power lines.

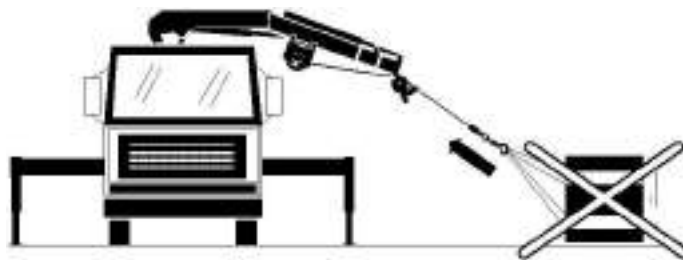


WARNINGS

- Do NOT lift the load by removing the crane telescopic boom.

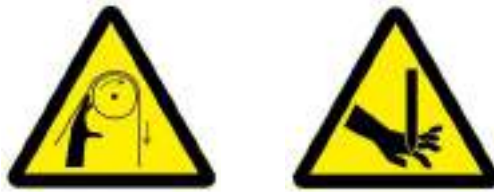


- Do NOT tow loads.





- Do NOT approach or touch the rope near the drum or pulley.



- Always wear a helmet, industrial footwear and gloves. Do NOT wear loose or baggy clothing. Personnel must wear overalls secured using buttons and without loose or baggy parts.



- During operation do NOT approach or touch the moving parts on the winch (drum, rope press, etc.).



- Before starting work carefully check the integrity of the thimble, pocket and rope. The most frequent cause of damage to the rope are as follows:

- rubbing against moving parts (1)
- running over worn pulleys (2)
- deformation of plastic due to crushing (3)
- excessive twisting (4)



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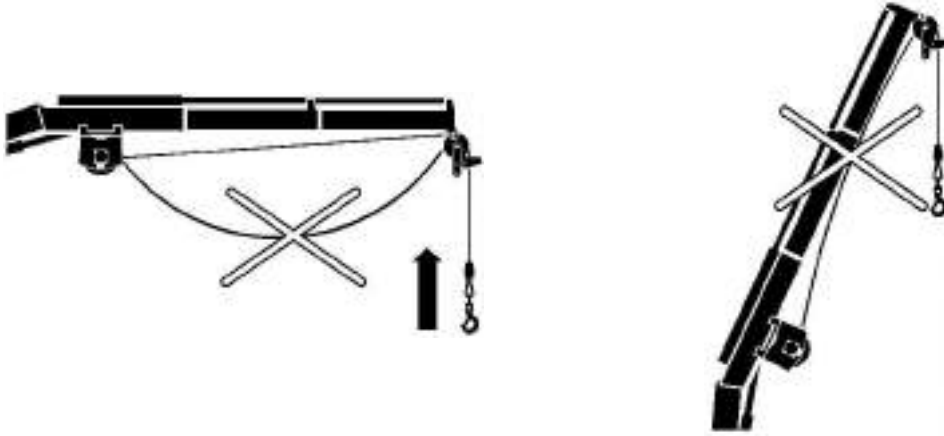
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- During operation always check that the rope is taut and not touching the crane structure or any component to prevent hazards caused by rope wear. Always operate the winch with the counterweight.



In the event of broken or permanently deformed strands on the rope (caused by crushing, excessive strain, etc.) contact an authorised assistance centre for immediate substitution of the rope.

- The winch rope must be kept at least 7 m from electric power lines bearing in mind possible rope oscillation.

