



58ON
58OSN-WT
58OSN
59OSN
Loader Backhoe

OPERATOR'S MANUAL



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1 - GENERAL INFORMATION

Intended use

This loader backhoe, with standard equipment and authorized attachments, is intended for general earth moving purposes, handling, ditch digging, etc. Use only approved accessories and attachments designed for your machine. This Operator's Manual does not include instructions for attachments. Read the manual(s) provided with the authorized attachment to learn safe maintenance and operation of the machine. Make sure the machine is suitably equipped for the type of work to be performed. Contact your dealer if you have any questions concerning the use of attachments for these machines.

All persons who will be operating this machine shall possess a valid local vehicle operating permit and/or other applicable local age work permits.

Do not use this machine for any purpose or in any manner other than as described in the manual, decals, or other product safety information provided with the machine. These materials define the machine's intended use.

Consult an authorized dealer or CNH America LLC on changes, additions, or modifications that can be required for this machine to comply with various country regulations and safety requirements. Unauthorized modifications will cause serious injury or death. Anyone making such unauthorized modifications is responsible for the consequences.

ATTENTION: *The fuel system and engine on your machine are designed and built to government emissions standards. Tampering by dealers, customers, operators, and users is strictly prohibited by law. Failure to comply could result in government fines, rework charges, invalid warranty, legal action, and possible confiscation of the machine until rework to original condition is completed. Engine service and/or repairs must be done by a certified technician only!*

CNH America LLC technical manuals

Manuals are available from your dealer for the operation, service, and repair of your machine. For prompt convenient service, contact your dealer for assistance in obtaining the manuals for your machine.

Your dealer can expedite your order for Operator's Manuals, Parts Catalogs, Service Manuals, and maintenance records.

Always give the machine name, model, and product identification number (PIN) of your machine so your dealer can provide the correct manuals for your machine.

The company is continually striving to improve its products and therefore reserves the right to make improvements and changes when it becomes practical and possible to do so, without incurring any obligation to make changes or additions to the equipment sold previously.

All data given in this manual is subject to production variations.

NOTICE: *Operating and service messages displayed on the electronic operating panel may vary from what is shown in the Operator's Manual. Should this occur, adhere to the latest instruction on the electronic operating panel.*

Dimensions and weights are approximate only and the illustrations do not necessarily show the machine in standard condition. For exact information about any particular machine, consult your dealer.

Electro-Magnetic Compatibility (EMC)

Interference may arise as a result of add-on equipment which may not necessarily meet the required standards. As such interference can result in serious malfunction of the unit and/or create unsafe situations, you must observe the following:

- The maximum power of emission equipment (radio, telephones, etc.) must not exceed the limits imposed by the national authorities of the country where you use the machine.
- The electro-magnetic field generated by the add-on system should not exceed **24 V/m** at any time and at any location in the proximity of electronic components.
- The add-on equipment must not interfere with the functioning of the onboard electronics. Failure to comply with these rules will render the warranty null and void.

Note to the owner

This manual contains important information about the safe operation, adjustment, and maintenance of your loader backhoe. This manual is divided into chapters as outlined in the table of contents. Refer to the index at the end of this manual for locating specific items about your machine. The loader backhoe conforms to current safety regulations.

Use this manual as a guide. Your machine will remain a reliable working tool as long as it is kept in working condition and serviced properly.

DO NOT operate or permit anyone to operate or service this machine until you or the other persons have read and understand the safety, operation, and maintenance instructions in this manual. Use only trained operators who have demonstrated the ability to operate and service this machine correctly and safely.

The information in this manual is provided on the basis of information that was available at the time that the manual was written. Settings, procedures, part numbers, software, and other items can change. These changes can affect the service that is given to the machine. Ensure that you have the complete and most current information from your dealer before you start any machine operation.

The Operator's Manual is to be stored in the manual compartment equipped on this machine. Make sure this manual is complete and in good condition. Consult your dealer to obtain additional manuals or manuals in other languages. A safety video is included with each machine. Take the time to watch this safety video and understand its content.

Contact your dealer for any further information or assistance about your machine. Your dealer has Corporation approved service parts. Your dealer has technicians with special training that know the best methods of repair and maintenance for your machine.

Read the Operator's Manual

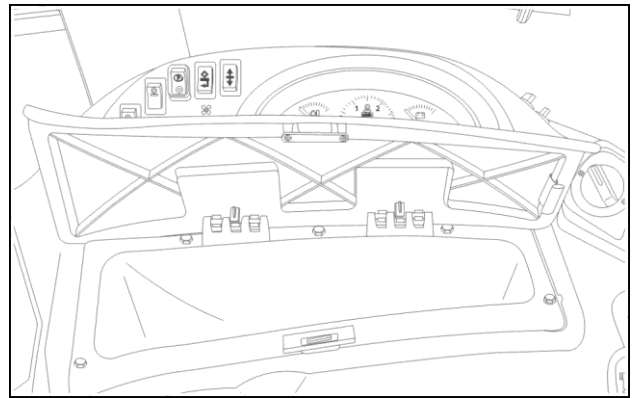
Improper operation of this machine can cause death or serious injury. Before using the machine, make certain that every operator

- is instructed in safe and proper use of the machine.
- reads and understands the manual(s) pertaining to the machine.
- reads and understands all safety decals on the machine.
- clears the area of other persons and domestic animals.
- learns and practices safe use of machine controls in a safe, clear area before operating this machine on a job site.

It is your responsibility to observe pertinent laws and regulations and follow CNH America LLC instructions on machine operation and maintenance.

Manual storage

Keep the Operator's Manual and the safety video in the storage compartment provided on the loader backhoe. The Operator's Manual and safety video must be available for use by all operators.



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Identification numbers

Record the machine and part identification numbers. If needed, give these numbers to your dealer when you need parts or information for your machine. Keep a record of these numbers and your Manufacturer's Statement of Origin in a safe place. If the machine is stolen, report the numbers to your local law enforcement agency.

Machine identification

Model name

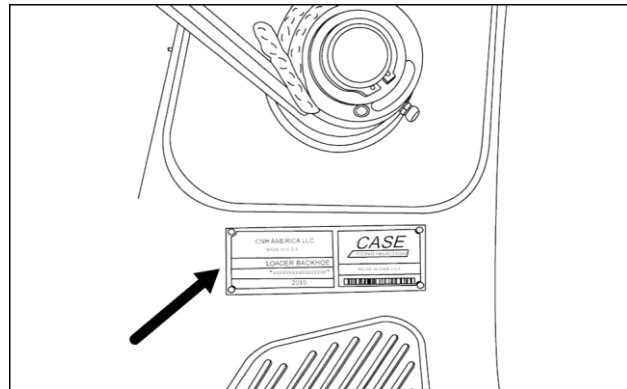
PIN

Model year

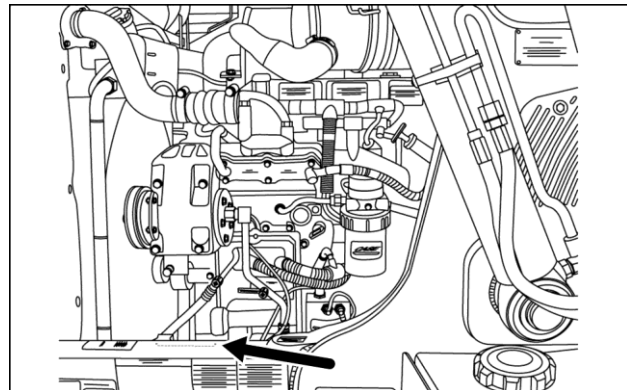
The PIN plate is located on the left-hand side beneath the pivot for the loader lift cylinder. The PIN is 17 characters long.

NOTE: Hoses removed for illustration clarity.

NOTE: The PIN is also stamped on the chassis.

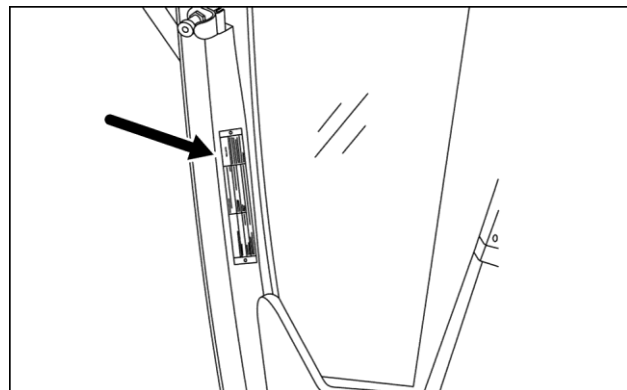


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RCPH10TLB325AAF 2

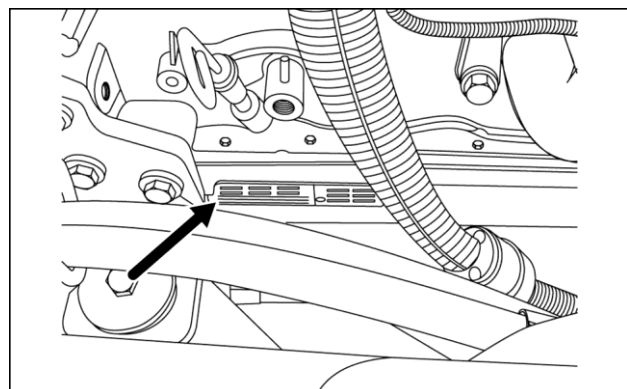
Roll-Over Protective Structure (ROPS)



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Engine - Mechanical (580N)

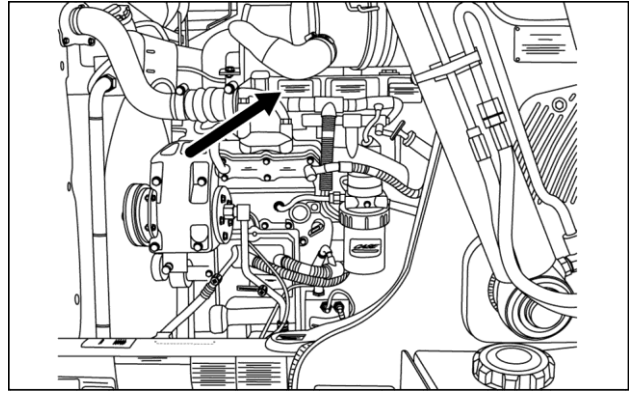
The PIN plate is on the oil pan.



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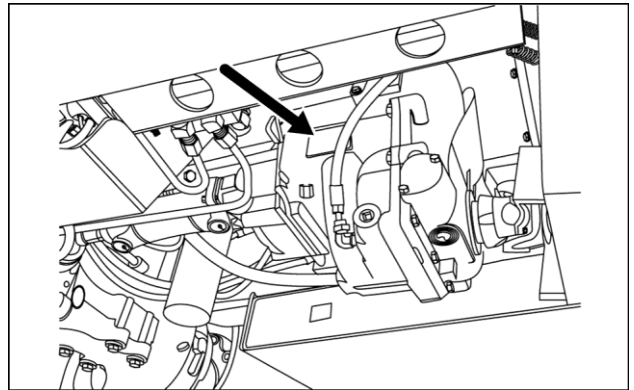
Engine - HPCR (580SN, 580SN-WT, 590SN)

The PIN plate is on the valve cover.



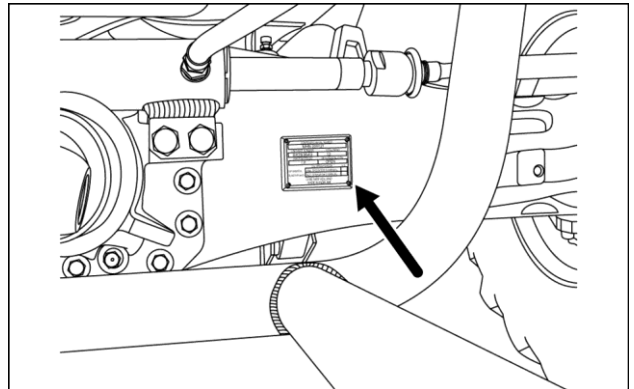
RCPH10TLB325AAF 5

Transmission



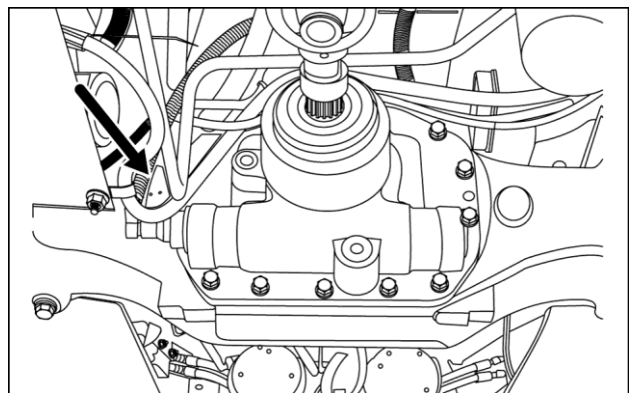
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Front drive axle (4WD)



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Rear axle



RCPH09TLB006AAF 8

Hydraulic pump

Not shown

Control valve

Not shown

Loader bucket

Not shown

Bucket type

PIN

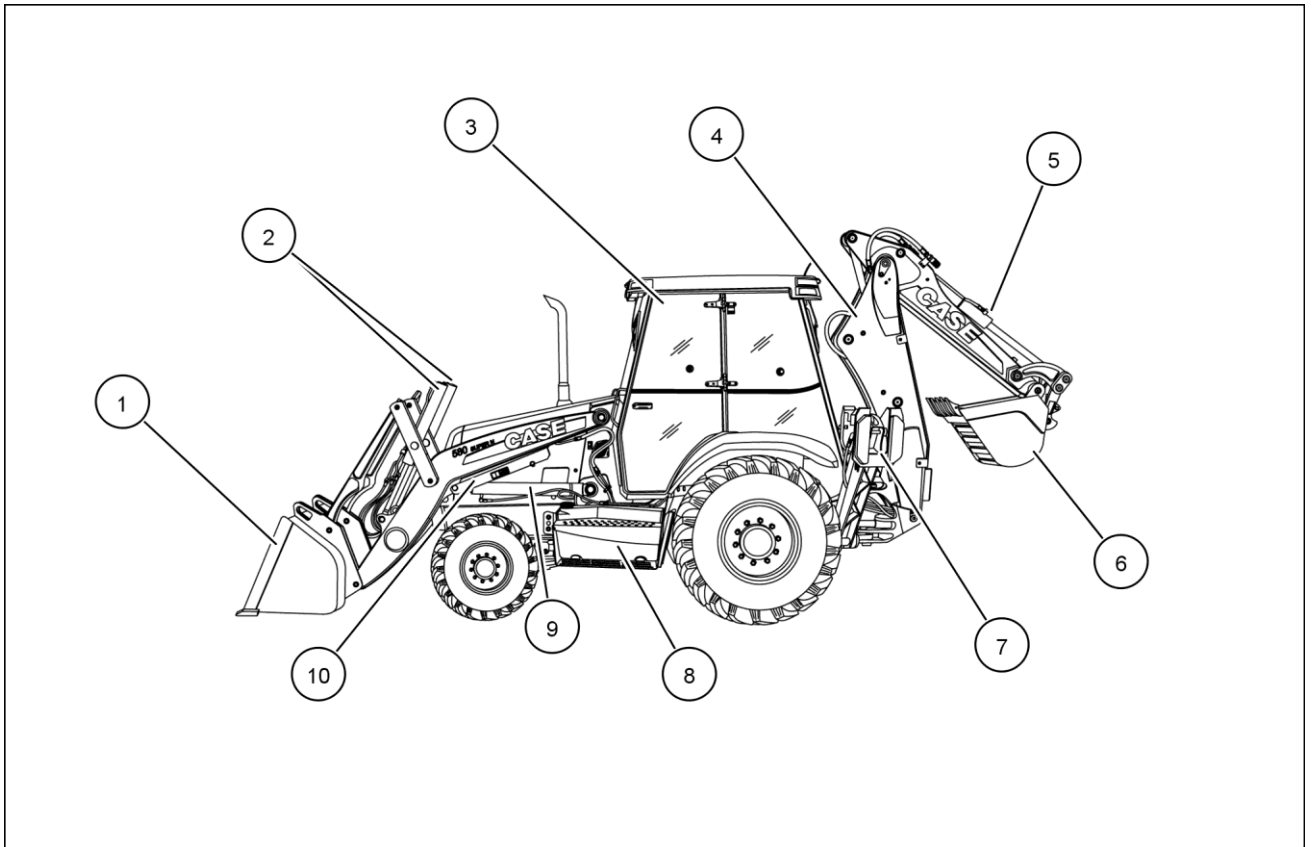
Backhoe bucket

Not shown

Bucket type

PIN

Component Identification

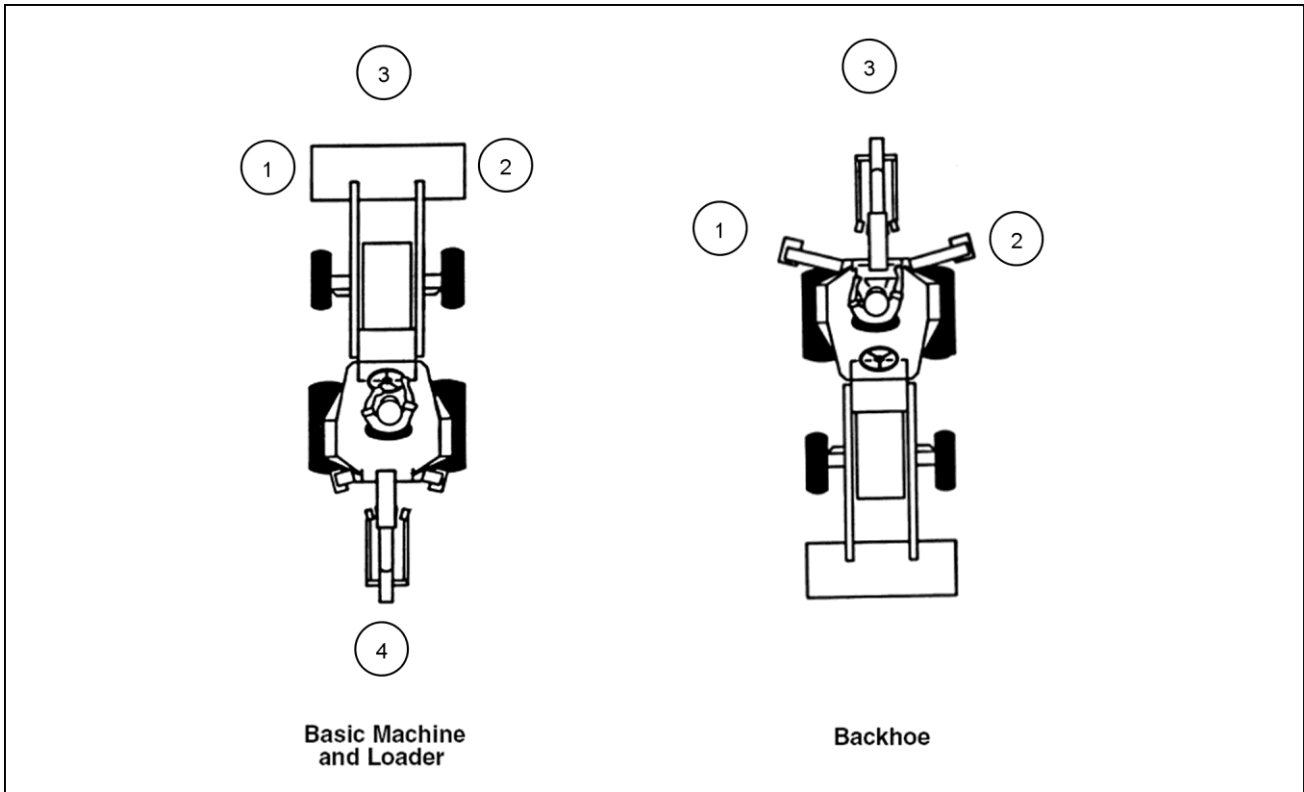


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- | | |
|------------------------------|---|
| 1. Loader bucket | 6. Backhoe bucket |
| 2. Bucket cylinders | 7. Stabilizer (shown in transport position) |
| 3. Cab | 8. Fuel tank and operator's step |
| 4. Boom | 9. Loader lift cylinder |
| 5. Dipper (Extendahoe shown) | 10. Lift arm support strut |

Right, left, front and rear of the machine

The terms right-hand and left-hand, when used in this manual, indicate the right and left sides of the machine as seen from the operator's seat.



RCPH09TLB002FAF 1

- 1. Left
- 2. Right
- 3. Front
- 4. Rear

2 - SAFETY INFORMATION

Safety rules and signal word definitions


Personal safety





This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual and on machine decals, you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

 DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury. The color associated with DANGER is RED.

 WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury. The color associated with WARNING is ORANGE.

 CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. The color associated with CAUTION is YELLOW.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: Notice indicates a situation which, if not avoided, could result in machine or property damage. The color associated with Notice is BLUE.

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

Information

NOTE: Note indicates additional information which clarifies steps, procedures, or other information in this manual.

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

Proposition 65

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

RCIL08CCH001EAA 1

Safety rules - General



Understand that your safety and the safety of other workers or bystanders is measured by how you service and operate this machine. Know the positions and operation of all controls before you try to operate. **CHECK ALL CONTROLS IN A SAFE AREA BEFORE STARTING YOUR WORK.**

READ THIS MANUAL COMPLETELY and make sure you understand the controls. All equipment has a limit. Make sure you understand the speed, brakes, steering, stability, and load characteristics of this machine before you start to operate.

Most accidents involving machine operation and maintenance can be avoided by following basic safety rules and precautions. Read and understand all the safety messages in this manual, the safety manual, the safety decals on the machine, and the safety video before you operate or service the machine. See your dealer if you have any questions.

The safety information given in this manual does not replace safety codes, insurance needs, or federal, state, and local laws. Make sure your machine has the correct equipment according to these rules or laws.

CNH America LLC is continuing to work for your safety by making loader backhoes with better protection and by providing rules for safe operation.

- Do not rush. Walk, do not run.
- Dirty or slippery steps, ladders, walkways and platforms can cause falls. Make sure these surfaces remain clean and clear of debris.
- Wear protective equipment when appropriate. Hard hats, protective glasses, protective shoes, gloves, reflector type vests, respirators, and ear protection are examples of equipment that may be required.
- Certain protective equipment should be replaced and renewed upon age and wear. Old hard hats may not afford the original user's intention. Faded and soiled vest are no longer as highly visible as original intent. See the manufacture's recommendation.
- Wear the seat belt to maximize the protection capability of the cab or ROPS. Inspect the mounting bolts for the seat belt and the ROPS, if equipped, on a daily basis to ensure their integrity.
- Do not permit riders on the machine or attachments.
- Remove all loose objects stored in the machine. Remove all objects which do not belong in or on the machine and its equipment.
- Do not operate this machine or perform maintenance work if you have not had appropriate training, and read and fully understand the instructions and warnings in this manual.

Safety rules - Air conditioning system



- The air conditioning system is under high pressure. Do not disconnect any lines. The release of high pressure can cause serious injury.
- Only a trained service technician shall service, repair, or recharge the air condition system.
- Always wear safety protection when working around the liquid refrigerant. The refrigerant can cause serious injury to eyes and skin.

Safety rules - Basic operating



- Always check the operating and the road safety of the machine before starting.
 - Always make sure the working area is clear of other persons, domestic animals, tools, etc. before you start operating the machine.
 - Another worker or bystander within the operating area of a machine can be struck or crushed by the machine or its equipment. DO NOT allow anyone to enter the work area.
 - Always sound horn before starting the machine.
 - Never operate the engine in enclosed spaces as harmful exhaust gases may build up.
 - Check brakes, steering, and other machine control devices in accordance with maintenance instructions, prior to starting operation. Observe all gauges or warning instruments for proper operation. Operate all controls to ensure proper operation. If any malfunctions are found, remove the key and attach a 'Do Not Operate' tag on the machine until the malfunction is corrected.
 - If a failure that causes loss of control such as steering, service brakes, or engine occurs, stop the machine motion as quickly as possible. Make sure the machine is securely parked. Remove the key and attach a 'Do Not Operate' tag on the machine until the malfunction is corrected or the machine can be safely towed.
- ⚠ WARNING**
- Escaping fluid!**
Hydraulic fluid or diesel fuel leaking under pressure can penetrate the skin and cause infection or other injury. To prevent personal injury: Relieve all pressure before disconnecting fluid lines or performing work on the hydraulic system. Before applying pressure, make sure all connections are tight and all components are in good condition. Never use your hand to check for suspected leaks under pressure. Use a piece of cardboard or wood for this purpose. If injured by leaking fluid, see your doctor immediately.
Failure to comply could result in death or serious injury.
- W0178A
- Make sure all components are in good condition and tighten all connections before starting the engine or pressurizing the system.
 - Make sure all guards and shields are in good condition and properly installed before operating machine.
- Never operate the machine with the shields removed. Always close access doors or panel before operating the machine.
 - Before starting the engine, be sure all operating controls are in the neutral or park lock position.
 - Start the engine only from the operator's seat.
 - Operate controls only when seated in the operator's seat, except for those controls expressly intended for use from other locations.
 - Do not allow other persons to ride on the machine or on an attachment/implement.
 - Operate and drive the machine with care and at speed compatible with conditions. Use extra caution when operating over rough ground, on slopes, and when turning.
 - If your machine has a cab, make sure that all windows are clean and that the windshield wipers work correctly.
 - Dust, fog, smoke, etc., can decrease your vision and cause an accident. Stop the machine or decrease the speed until you can see.
 - Understand the machine limitations and keep the machine under control.
 - Before you operate at night, check that all lamps illuminate.
 - Select a gear that will prevent excessive speed when going downhill. Do not coast downhill.
 - DO NOT attempt to remove material from any part of the machine while it is being operated or components are in motion.
 - When using the backhoe:
 - Position the stabilizer pads for maximum stability.
 - Install a guard rail and warning signs to keep other persons away from the machine if operating in an area with reduced visibility, such as a building.
 - Place the direction control lever and the transmission in neutral and apply the parking brake before turning the operator's seat around to the backhoe position.
 - Ensure the seat is locked into position.
 - Know which control pattern is engaged before actuating the hydraulics (pilot control machines only).
 - Use caution when swinging the backhoe completely to the side to prevent contact with the stabilizers.

- Before leaving the vehicle:
 - Park the vehicle on a hard, level surface.
 - Put all controls in neutral or park lock position.
 - Engage the parking brake; use wheel chocks if required.
 - Lower all hydraulic equipment, attachments/implements or tools, to the ground.
 - Shut down the engine and remove the key.
- In a rare circumstance when the engine must be running without an operator in the cab, take these precautions:
 - Reduce engine speed to low idle.

•▲ WARNING

Some components may continue to run down after disengaging drive systems. Make sure all drive systems are fully disengaged. Failure to comply could result in death or serious injury.

W0113A

Disengage all drive systems.

- Put the transmission in neutral.
- Apply the parking brake.

Safety rules - Battery



- Follow manufacturer's instructions when storing and handling batteries.
- Always wear eye protection when working with a battery.
- Do not create sparks or have open flame near the battery.
- Do not weld, grind, or smoke near a battery.
- Ventilate when charging or using a battery in an enclosed area.
- When disconnecting the battery terminals, remove the negative (-) cable first; then remove the positive (+) cable. When connecting the battery terminals, connect the positive (+) cable first; then connect the negative (-) cable.
- Disconnect the battery (both terminals) before welding on any part of the machine. Failure to do so may cause damage to sensitive electrical components. For additional welding precautions, refer to page 7-7.
- When using auxiliary batteries or connecting booster cables to start the engine, use the procedure shown in this manual. DO NOT short across terminals.
- When working around storage batteries, remember that all of the exposed metal parts are "live". Never lay a metal object across the terminals because a spark, short circuit, explosion, or personal injury may result.
- Frozen electrolyte can cause the battery to explode. Do not charge a frozen battery or use a frozen battery to booster start the machine. Always keep the battery at full charge to prevent the electrolyte from freezing.

•▲ WARNING

Battery acid causes burns. Batteries contain sulfuric acid. Avoid contact with skin, eyes or clothing. Antidote (external): Flush with water. Antidote (eyes): flush with water for 15 minutes and seek medical attention immediately. Antidote (internal): Drink large quantities of water or milk. Do not induce vomiting. Seek medical attention immediately. Failure to comply could result in death or serious injury.

W0111A

- Keep batteries out of reach of children and other unauthorized persons.
- Battery posts, terminals, and related accessories contain lead and lead compounds. Wash hands after handling.

Safety rules - Electrical storm safety



- Do not operate machine during an electrical storm.
- If an electrical storm should strike during operation, remain in the cab. Do not leave cab or operator's platform. Do not make contact with the ground or objects outside the machine.
- If you are on the ground during an electrical storm, stay away from machinery and equipment. Seek shelter in a permanent, protected structure.

Safety rules - Fire or explosion prevention



- Leaked or spilled fuel/oil on hot surfaces or electrical components can cause a fire.
- Sparks from the electrical system or engine exhaust can cause an explosion and fire. Before you operate the machine in an area with flammable dust or vapors, use good ventilation to remove the flammable dust or vapors.
- Engine fuel can cause an explosion or fire. Do not fill the fuel tank with the engine running, if you are near an open fire, or if you are welding, smoking, etc.
- Do not weld or flame cut any items that contain flammable material. Clean items thoroughly with non-flammable solvent before welding or flame cutting.
- Always have a fire extinguisher near or on the machine. Make sure the fire extinguisher(s) is maintained and serviced according to the manufacturer's instructions.
- If a fire extinguisher has been used, always recharge or replace the fire extinguisher before operating the machine.
- Do not expose the machine to flames, burning brush, or explosives.
- At least once each day, and at the end of the day, remove all trash and debris from the machine especially around hot components such as engine, transmission, exhaust, battery, etc. More frequent cleaning of the machine may be necessary depending on the operating environment and conditions.
- At least once each day, remove debris accumulation around moving components such as bearings, pulleys, belts, gears, cleaning fan, etc. More frequent cleaning of the machine may be necessary depending on the operating environment and conditions.
- If the machine has an oil, fuel, or hydraulic fluid leak, always repair the leak and clean the area before operating.
- Keep the cooling system clean and maintain the correct coolant level.
- Do not store oily rags or other flammable materials on the machine.
- Inspect the electrical system for loose connections or frayed insulation. Repair or replace loose or damaged parts.
- Promptly investigate any unusual smells or odors that may occur during operation of the machine.
- If you weld, grind, or use a cutting torch on the machine:
 - Clean the area to be repaired.
 - Disconnect or isolate the drive train controller.
 - Keep the ground cable from the welder as near to the work area as possible.
- Sparks or flame can cause the hydrogen gas in a battery to explode. To prevent an explosion:
 - Connect the negative (-) cable last.
 - When connecting booster cables to start the engine, use the procedure shown in this manual.
 - Do not short circuit the battery posts with metal items.
 - Do not weld, grind, or smoke near the battery.

Safety rules - Fuel handling precautions



- Do not smoke or permit open flames while fueling or near fueling operations.
- Do not fill the fuel tank completely to the top. Allow room for expansion.
- Clean up spilled fuel immediately and dispose of contaminated material in an environmentally correct manner.
- Tighten the fuel tank cap securely. Should the fuel cap be lost, replace it only with the original manufacturer's approved cap. Use of a non-approved cap without proper venting may result in pressurization of the tank.
- Never use fuel for cleaning purposes.
- Use the correct fuel grade for the operating season.

Safety rules - Hazardous chemicals



- If you are exposed to, or come in contact with, hazardous chemicals you can be seriously injured. The fluids, lubricants, paints, adhesives, coolants, etc. required for the function of the machine can be hazardous. They may be attractive and harmful to domestic animals as well as humans.
- Material Safety Data Sheets (MSDS) provide information about chemical substances within a product, safe handling procedures, first aid measures, and procedures to be taken in the event of a spill or accidental release. MSDS are available from your dealer.
- Before you service the machine, check the MSDS for each lubricant, fluid, etc. used in the machine. This information indicates the associated risks and will help you service the machine safely. Follow the information in the MSDS, on manufacturer's containers, as well as the information in this manual when servicing the machine.
- Dispose of all fluids, filters, and containers in an environmentally safe manner according to local laws and regulations. Check with local environmental and recycling centers or your dealer for correct disposal information.
- Store fluids and filter in accordance with local laws and regulations. Use only appropriate containers for the storage of chemicals or petrochemical substances.
- Keep out of reach of children or other unauthorized persons.

Safety rules - Lifting and overhead loads



- Never lift loads in excess of capacity.
- Carry loads in recommended positions for maximum stability.
- Never use buckets, forks, etc. or other lifting, handling, or digging equipment to lift persons.
- Do not use raised equipment as a work platform.
- Know the full area of movement of the machine and equipment and do not enter or permit anyone to enter the area of movement while the machine is in operation.
- Never enter or permit anyone to enter the area underneath raised equipment. Equipment and/or loads can fall unexpectedly and crush persons underneath it.
- Do not leave equipment in raised position while parked or during service, unless securely supported. Hydraulic cylinders must be mechanically locked or supported if they are left in a raised position for service or access.
- Buckets, forks, etc. or other lifting, handling, or digging equipment and its load will change the center of gravity of the machine. This can cause the machine to tip on slopes or uneven ground.

- Load items can fall off the bucket or lifting equipment and crush the operator. Care must be taken when lifting a load. Use proper lifting equipment.
- Use the recommended machine ballast and counter-weighting.
- Do not lift load higher than necessary. Lower loads to transport. Remember to leave appropriate clearance to the ground or other obstacles.
- Equipment and associated loads can block visibility and cause an accident. Do not operate with insufficient visibility.

Safety rules - Maintenance precautions



- Keep area used for servicing the machine clean and dry. Clean up spilled fluids.
- Service machine on firm level surface.
- Do not attempt service unless trained. Refer to manuals and experienced service personnel for help.
- Wear protective glasses and other required safety equipment when servicing the machine.
- Wear gloves to protect hands when handling cables.
- Disconnect the battery before working on the electrical system. Know the consequences of disconnecting any electronic or computer devices.
- Do not attempt to clean, lubricate, clear obstructions, or make adjustments to the machine while it is in motion or while engine is running.
- If the engine must be in operation to make certain adjustments, place the transmission in neutral, apply the parking brake, place the equipment in a safe position, securely block the wheels, and use extreme caution.
- Unsupported hydraulic cylinders can lose pressure and drop the equipment causing a crushing hazard. Do not leave equipment in a raised position while parked or during service, unless securely supported.
- Shut down the engine, remove the key, and relieve the pressure before disconnecting or connecting fluid lines.
- Shut down the engine and remove the key before disconnecting or connecting electrical components.
- Replace damaged or worn tubes, hoses, electrical wiring, etc.
- Scalding can result from incorrect removal of coolant caps. Cooling system operates under pressure. Hot coolant can spray out if a cap is removed while the system is hot. Allow the system to cool before removing cap. When removing a cap, turn it slowly to allow pressure to escape before completely removing the cap.
- Engine, transmission, exhaust components, and hydraulic lines may become hot during operation. Take care when servicing such components. Allow surfaces to cool before handling or disconnecting hot components. Wear protective equipment where appropriate.
- Continuous long term contact with hydraulic fluid may cause skin cancer. Avoid long term contact and wash the skin promptly with soap and water.
- When replacing hardened pins, use a brass drift or other suitable material between the hammer and pin.
- When welding, follow the instructions in this manual. Always disconnect battery before welding on machine. Always wash your hands after handling battery components.
- Keep the brakes and steering systems in good operating condition.
- Replace all missing, illegible, or damaged safety signs. Keep all safety signs clean.
- Install guards and shields after servicing the machine.
- Close all access doors and install all panels after servicing the machine.
- Always make sure working area is clear of tools, parts, other persons, and domestic animals before you start operating the machine.

Safety rules - Mounting and dismounting



- Face the machine when mounting and dismounting.
- Mount and dismount the machine only at designated locations that have hand holds, steps, or ladders.
- Maintain a three-point contact with steps, ladders, and hand holds.
- Do not jump off the machine.
- Never mount or dismount from a moving machine.
- Do not use the steering wheel or other controls or accessories as hand holds when entering or exiting the cab or operator's platform.
- Make sure steps, ladders, and platforms remain clean and clear of debris and foreign substances. Injury may result from slippery surfaces.

Safety rules - Operator precautions



- Continuous long term contact with hydraulic fluid may cause skin cancer. Avoid long term contact and wash the skin promptly with soap and water.
- Know and understand the job site traffic flow patterns and obey signalmen, road signs, and flagmen.
- Know and use the hand signals required for particular jobs, and know who has the responsibility for signaling. Refer to page 2-33.
- Know and understand that job site conditions may change on an hourly basis. Hills of dirt, debris, or obstructions may grow and change from the time you began the day. It is your responsibility to monitor the changes and keep the machine, tools, and attachments/implements, etc. a safe distance.
- Keep clear of moving parts. Loose clothing, jewelry, watches, long hair, and other loose or hanging items can become entangled in moving parts.
- Wear protective equipment when appropriate. Hard hats, protective glasses, protective shoes, gloves, retractor type vests, respirators, and ear protection are examples of equipment that may be required.
- Walk around the work area before you start and look for hazards. Note and avoid all hazards and obstructions such as ditches, underground lines, trees, cliffs, overhead electrical wires, or areas where there is danger of a slide.
- Do not operate the machine if you do not feel well. This can be dangerous for you and for the people around you.
- Do not operate the machine while under the influence of alcohol, drugs, or while otherwise impaired.
- OSHA requirements make it the employer's responsibility to fully instruct each operator in the proper and safe operation of all operative equipment. Both employer and employee should thoroughly familiarize themselves with this manual and the safety video.

Safety rules - Specific precautions to this machine



- Keep the load or tool as low as possible while moving the machine around the work site.
- Adjust the rear window before actuating the backhoe hydraulics. The rear window could come into contact with the control lever.
- Pilot control machines are equipped with two backhoe control patterns. You must know which pattern the machine is in, before operating the machine (actuating the hydraulics).
- Release all hydraulic pressure before servicing the machine.
- You must know which circuits have accumulators and how to release pressure properly.
- Always use the lift arm support strut when servicing the machine with lift arms up.

Safety rules - Transporting precautions



- Comply with local laws and regulations.
- Use appropriate lighting as defined by local regulations. A rotating beacon is recommended.
- Make sure the slow moving vehicle (SMV) and/or speed indicator symbol (SIS) is visible.
- Never transport the machine without the backhoe in the transport position with the swing lock pin installed.
- Incorrect towing procedures can cause accidents. When towing a disabled machine, follow the procedure in this manual. Use only rigid tow bars.
- When absolutely necessary to tow the machine, do not exceed the recommended towing speed. Be sure the towing machine has sufficient braking capacity to stop the towed load. If the towed machine cannot be braked, a towbar must be used or two towing machines must be used - one in front pulling and one in the rear to act as a brake. Avoid towing over long distances.
- Lock the brake pedals together when roading to provide equalized brake application.
- Lift implements and attachments high enough above ground to prevent accidental contact with road.
- Be aware of overhead structures or power lines and make sure the machine and/or attachments can pass safely under.
- Travel speed should be such that complete control and machine stability is maintained at all times.
- Slow down and signal before turning.
- Pull over to allow faster traffic to pass.
- Use approved drawbar and/or attachment point, (if equipped), if using your machine to tow another machine. If a cable or chain is used, keep people away from the tow line.
- Follow correct towing procedure for equipment with or without brakes.

Safety rules - Utility precautions



- During operation it is likely that you will be working around or near buried utility lines which may include, but are not limited to:
 - Electrical power line
 - Gas line
 - Water line
 - Communication line - telephone or cable television
 - Sewer line
- When digging or using ground engaging equipment, be aware of buried cables and other services. Contact your local utilities or authorities, as appropriate, to determine the locations of services.
- In U.S.A. and Canada call one of many One Call System Director services. If you do not know the local number, call the national number (U.S.A. and Canada only): 1-888-258-0808. This number will direct you to the state or regional utility that assists with excavation activity.
- After locating any buried utility lines, carefully dig a hole by hand and/or automatic vacuum equipment to the utility line to verify the location and depth of the line.
- Where applicable, know the utility color code.

Electric	Red
Gas, oil, or petroleum	Yellow
Communication, telephone, television	Orange

Water	Blue
Sewer	Green/Brown
Proposed excavation	White
Surveying	Pink
Reclaimed water and slurry	Purple

- Make sure the machine has sufficient clearance to pass in all directions. Pay special attention to overhead power lines and hanging obstacles. High voltage lines may require significant clearance for safety. Contact local authorities or utilities to obtain safe clearance distances from high voltage power lines.
- Retract raised or extended components, if necessary. Remove or lower radio antennas or other accessories. Should contact occur between the machine and an electric power source, the following precautions must be taken:
 - Stop the machine movement immediately.
 - Apply the parking brake, shut down the engine, and remove the key.
 - Check if you can safely leave the cab or your actual position without contact with electrical wires. If not, stay in your position and call for help. If you can leave your position without touching lines, jump clear of the machine to make sure you do not make contact with the ground and machine at the same time.
 - Do not permit anyone to touch the machine until power has been shut off to the power lines.

Safety rules - Wheels and tires



• **⚠ DANGER**

Explosion hazard!

Welding to a wheel can create an explosive air and gas mixture. Removing air from the tire or loosening the tire on the wheel (breaking the bead) will NOT eliminate the hazard. ALWAYS remove the tire completely from the wheel before welding. Failure to comply will result in death or serious injury.

D0033A

- Tires are heavy. Handling tires without the proper equipment could cause death or serious injury.
- Make sure tires are correctly inflated. Do not exceed recommended load or pressure. Follow instructions in this manual for proper tire inflation.
- Always have a qualified tire technician service the tires and wheels. If a tire has lost all pressure, take the tire and wheel to a tire shop or your dealer for service. Explosive separation of the tire can cause serious injury.

Ductile iron

Before you weld, cut, or drill holes on any part of this machine, make sure the part is not cast ductile iron. See your dealer if you do not know if a part is cast ductile iron. The following are cast ductile iron parts:

- two wheel drive steering link
- dump links
- front axle
- stabilizers
- extendable dipper
- swing tower
- bucket linkage

Unauthorized modifications to cast ductile iron parts can cause injury or death. Welding, cutting, or drilling can cause cast ductile iron to break. Do not weld, cut, or drill to repair or to attach items to cast ductile iron parts on this machine.

Operator protective structure

▲ DANGER

Crushing hazard!

DO NOT operate the machine with the Roll-Over Protective Structure (ROPS) removed. Remove the ROPS only for service or replacement.

Failure to comply will result in death or serious injury.

D0032A

Your machine is equipped with a ROPS (cab or canopy) protective structure.

A ROPS label is fastened to the protective structure and shows the ROPS PIN, the gross weight, approval, regulation, and model numbers of the machine.

The protective structure is a special safety component of your machine.

DO NOT attach any device to the protective structure for pulling purposes. DO NOT drill holes into the protective structure.

After an accident, fire, tip over, or roll over, the following MUST be performed by a qualified technician before returning the machine to field or job side operation:

- The protective structure MUST be replaced.
- The mounting or suspension for the protective structure, operator's seat and suspension, seat belt and mounting components, and wiring within the protective structure MUST be carefully inspected for damage.
- All damaged parts MUST be replaced.

DO NOT WELD, DRILL HOLES, ATTEMPT TO STRAIGHTEN, OR REPAIR THE PROTECTIVE STRUCTURE. MODIFICATION IN ANY WAY CAN REDUCE THE STRUCTURAL INTEGRITY OF THE STRUCTURE WHICH COULD CAUSE DEATH OR SERIOUS INJURY IN THE EVENT OF FIRE, TIP OVER, ROLL OVER, COLLISION, OR ACCIDENT.

Seat belts are part of the protective system and must be worn at all times. The operator must be held to the seat inside the frame in order for the protective system to work.

Seat belt

⚠ WARNING

Roll-over hazard!

Securely fasten the seat belt. Your machine is equipped with a Roll-Over Protective Structure (ROPS) cab, ROPS canopy, or ROPS frame for your protection. The seat belt can help ensure your safety if it is properly used and maintained. Never wear a seat belt loosely or with slack in the belt system. Failure to comply could result in death or serious injury.

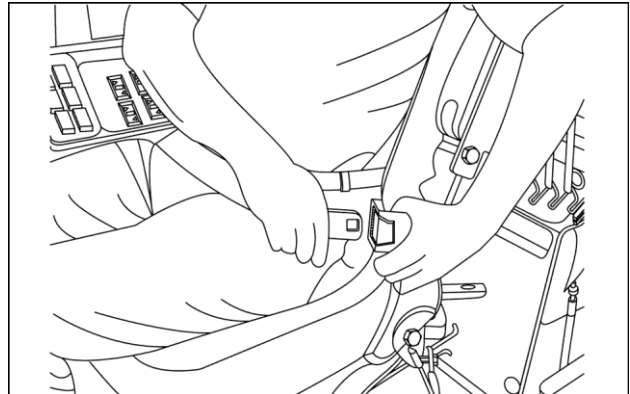
W0143A

Seat belts must be worn at all times.

- Keep seat belts in good condition.
- Keep sharp edges and items that can cause damage away from the belts.
- Periodically check belts, buckles, retractors, tethers, slack take-up system, and mounting bolts for damage.
- Replace all parts that have damage or wear.
- Replace belts that have cuts that can make the belt weak.
- Check that bolts are tight on the seat bracket or mounting.
- If belt is attached to seat, make sure seat or seat brackets are mounted securely.
- Keep seat belts clean and dry.
- Clean belts only with soap solution and warm water.
- Do not use bleach or dye on the belts, because this can make the belts weak.

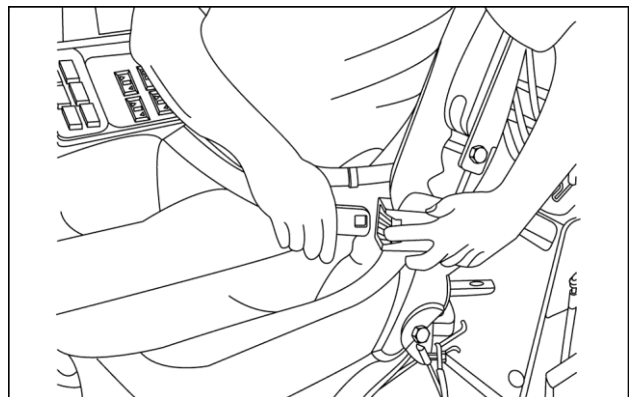
Fasten/release

1. Pull the right-hand belt strap from the retractor.
2. Insert the metal end into the latch mechanism of the left-hand side of the seat.



RCPH10TLB155AAF 1

3. To release, press the red button on the latch mechanism. The seat belt will automatically retract.



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Safety decals

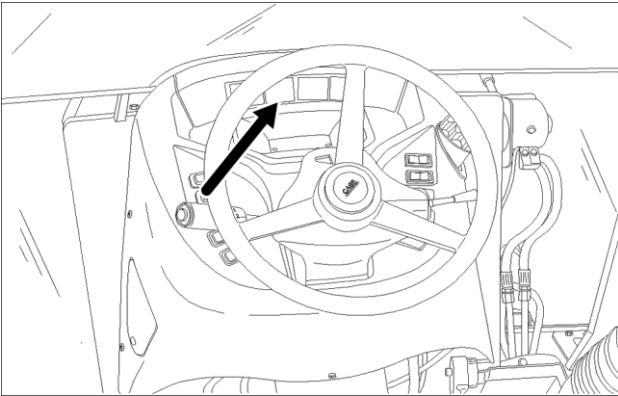
Make sure that you read all the safety decals and all instructional decals. The decals are intended for the personal safety of you and those working with you. Please take this manual, walk around your machine and note the content and location of the decals. Review the decals with all machine operators.

NOTE: Some decal locations may vary slightly between various model configurations.

It is the owner's/operator's responsibility to keep the decals legible. When you clean the decals, use only a cloth, water, and soap. Do not use solvent, gasoline, etc.

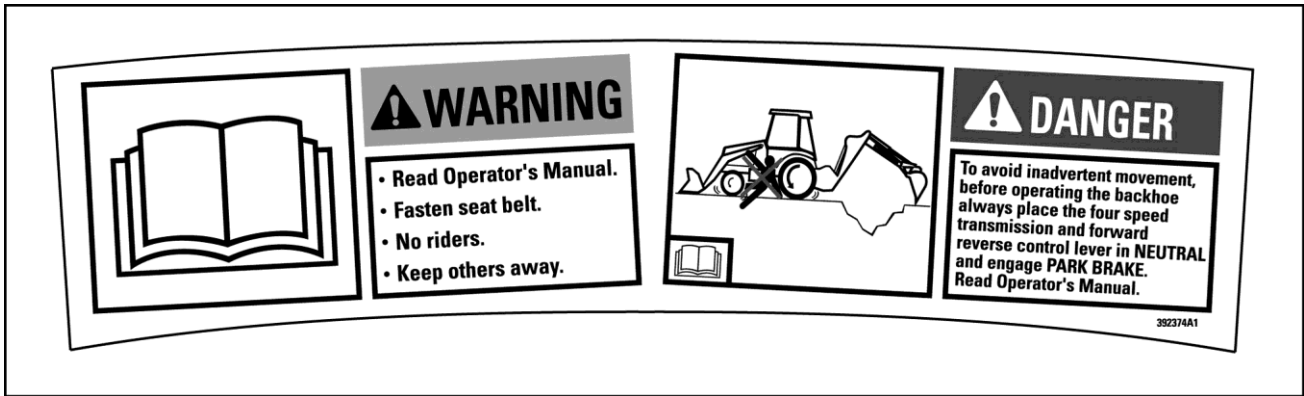
You must replace a decal if the decal is damaged, missing, or cannot be read. If a decal is on a part that is replaced, make sure the decal is on the new part. Part numbers are on the decal. See your dealer for new decals.

Operator instruction



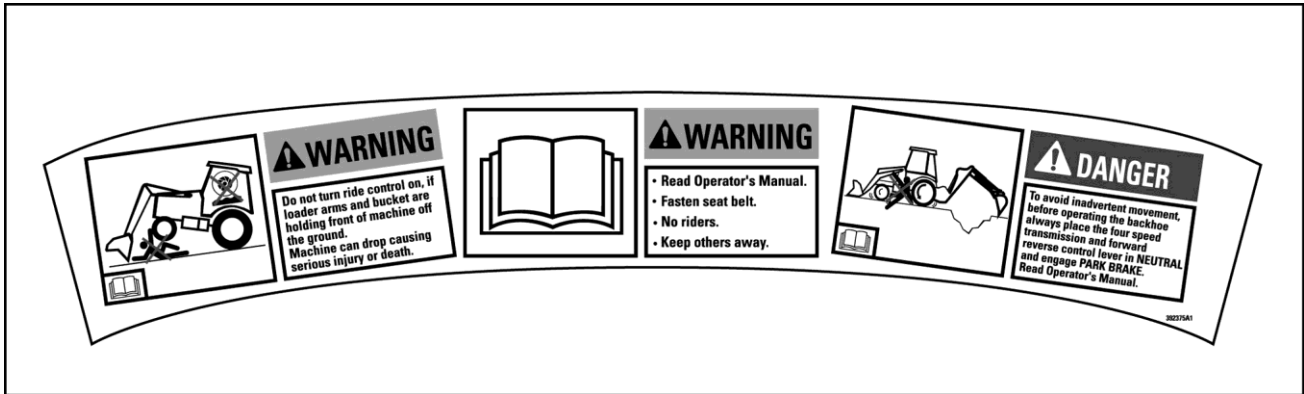
RCPH10TLB190AAF 1

Front console



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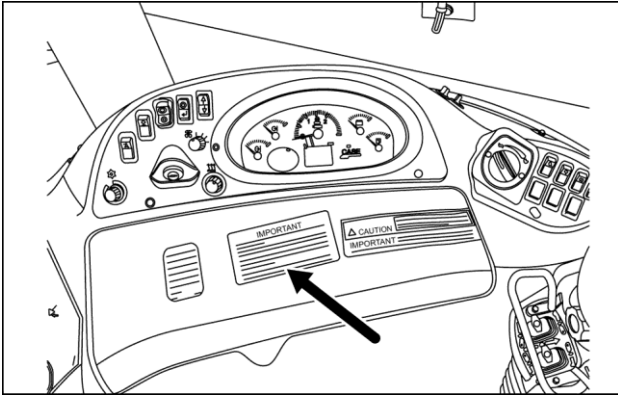
Machines without ride control



RCIL10TLB001EAF 3

Machines with ride control

Read operator's manual



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Right console

IMPORTANT

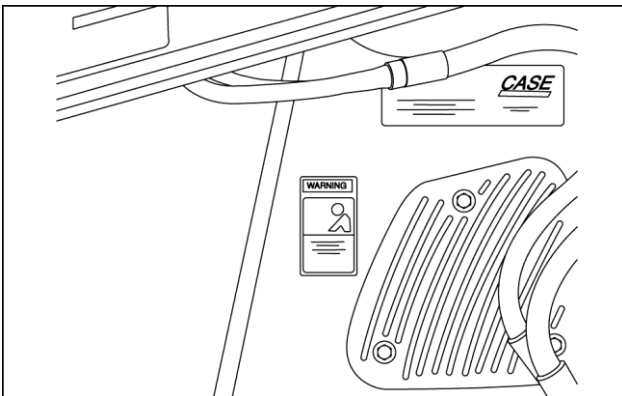
- Operators manual in box underneath this cover. Do not remove. Before operating, read all operators manual(s), safety and instructional signs on this machine.
- It is your responsibility to follow all laws and regulations and to follow all instructions in the operators manual.
- See your Case dealer for additional operators manuals, parts manuals and service manuals.

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Explosion hazard, ether

NOTE: Machines with grid heater only.



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Frame, left-hand

WARNING



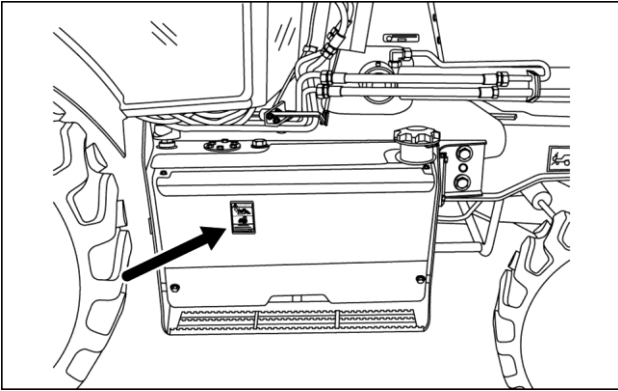
**EXPLOSION
HAZARD**

**Do not use
ether.**

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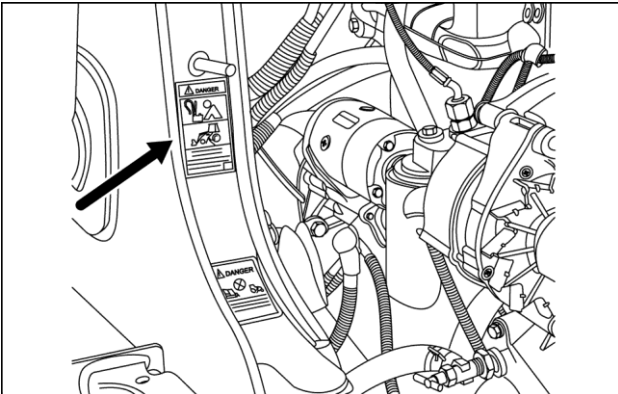
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Explosion and run over hazard, booster start



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Battery compartment/operator's step, right-hand



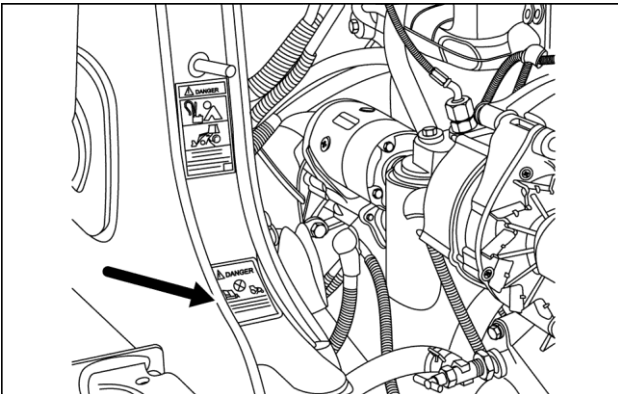
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Chassis, inside, right-hand



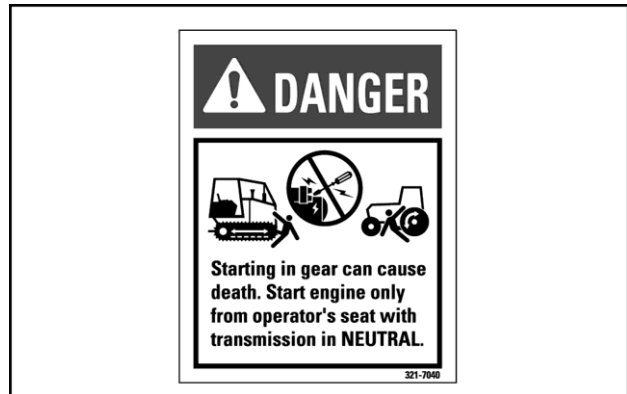
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Do not start in gear/start only from operator's seat



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Chassis, inside, right-hand



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