Safety rules

⚠ General safety rules ⚠

Use caution when you operate the machine on slopes. Raised equipment, full tanks and other loads will change the center of gravity of the machine. The machine can tip or roll over when near ditches and embankments or uneven surfaces.

Never permit anyone other than the operator to ride on the machine.

Never operate the machine under the influence of alcohol or drugs, or while you are otherwise impaired.

When digging or using ground-engaging attachments, be aware of buried cables. Contact local utilities to determine the locations of services.

Pay attention to overhead power lines and hanging obstacles. High voltage lines may require significant clearance for safety.

Hydraulic oil or diesel fuel leaking under pressure can penetrate the skin, causing serious injury or infection.

- DO NOT use your hand to check for leaks. Use a piece of cardboard or paper.
- Stop the engine, remove the key, and relieve the pressure before you connect or disconnect fluid lines.
- Make sure that all components are in good condition. Tighten all connections before you start the engine or pressurize the system.
- If hydraulic fluid or diesel fuel penetrates the skin, seek medical attention immediately.
- Continuous long term contact with hydraulic fluid may cause skin cancer. Avoid long term contact and wash the skin promptly with soap and water.

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.

DO NOT attempt to remove material from any part of the machine while it is being operated or while components are in motion.

Make sure that all guards and shields are in good condition and properly installed before you operate the machine. Never operate the machine with shields removed. Always close access doors or panels before you operate the machine.

Dirty or slippery steps, ladders, walkways, and platforms can cause falls. Make sure these surfaces remain clean and clear of debris.

A person or pet 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.

Raised equipment and/or loads can fall unexpectedly and crush persons underneath. Never allow anyone to enter the area underneath raised equipment during operation.

Never operate the engine in enclosed spaces as harmful exhaust gases may build up.

Before you start the machine, be sure that all controls are in neutral or park lock position.

Start the engine only from the operator's seat. If you bypass the safety start switch, the engine can start with the transmission in gear. Do not connect or short across terminals on the starter solenoid. Attach jumper cables as described in the manual. Starting in gear may cause death or serious injury.

Always keep windows, mirrors, all lighting, Slow-Moving Vehicle (SMV) emblem and Speed Identification Symbol (SIS) clean to provide the best possible visibility while you operate the machine.

Operate controls only when seated in the operator's seat, except for those controls expressly intended for use from other locations.

Do not make any adjustments (e.g. seat, steering, light, mirror, ...) while the machine is in motion. Ensure that all adjustments are locked prior to use. Check the tightness of the securing screws and that the adjustment controls are working properly. Fitting and/or repairing the seat shall only be performed by skilled personnel.

Before you leave the machine:

1. Park the machine on a firm, level surface.
2. Put all controls in neutral or park lock position.
3. Engage the parking brake. Use wheel chocks if required.
4. Lower all hydraulic equipment — Implements, header, etc.
5. Turn off the engine and remove the key.

When, due to exceptional circumstances, you would decide to keep the engine running after you leave the operator's station, then you must follow these precautions:

1. Bring the engine to low idle speed.
2. Disengage all drive systems.

3. **⚠ WARNING**

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

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   Shift the transmission into neutral.
4. Apply the parking brake.

⚠ General maintenance safety ⚠

Keep the area used for servicing the machine clean and dry. Clean up spilled fluids.

Service the machine on a firm, level surface.

Install guards and shields after you service the machine.

Close all access doors and install all panels after servicing the machine.

Do not attempt to clean, lubricate, clear obstructions, or make adjustments to the machine while it is in motion or while the engine is running.

Always make sure that working area is clear of tools, parts, other persons and pets before you start operating the machine.

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 the equipment is securely supported.

Jack or lift the machine only at jack or lift points indicated in this manual.

Incorrect towing procedures can cause accidents. When you tow a disabled machine follow the procedure in this manual. Use only rigid tow bars.

Stop the engine, remove the key, and relieve pressure before you connect or disconnect fluid lines.

Stop the engine and remove the key before you connect or disconnect electrical connections.

Scalding can result from incorrect removal of coolant caps. Cooling systems operate under pressure. Hot coolant can spray out if you remove a cap while the system is hot. Allow the system to cool before you remove the cap. When you remove the cap, turn it slowly to allow pressure to escape before you completely remove the cap.

Replace damaged or worn tubes, hoses, electrical wiring, etc.

The engine, transmission, exhaust components, and hydraulic lines may become hot during operation. Take care when you service such components. Allow surfaces to cool before you handle or disconnect hot components. Wear protective equipment when appropriate.

When welding, follow the instructions in the manual. Always disconnect the battery before you weld on the machine. Always wash your hands after you handle battery components.

Do not climb on the machine. Do not use the attachment as a ladder, or platform for working at heights. Use appropriate means according to national/local safety rules (for example, an individual rolling platform, etc.) to access the areas of the machine not reachable from the ground level.

Always use the machine's locking devices to prevent any unintentional movements of the machine (mounted or towed) or parts of it that may occur while roading or servicing (unfold, swing out, or other). Read and follow all related instructions in the manual provided by the machine manufacturer.

⚠ Wheels and tires ⚠

Make sure that tires are correctly inflated. Do not exceed any recommended load or pressure. Follow the instructions in the manual for proper tire inflation.

Tires are heavy. Handling tires without proper equipment could cause death or serious injury.

Never weld on a wheel with a tire installed. Always remove the tire completely from the wheel prior to welding.

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.

DO NOT weld to a wheel or rim until the tire is completely removed. Inflated tires can generate a gas mixture with the air that can be ignited by high temperatures from welding procedures performed on the wheel or rim. Removing the air or loosening the tire on the rim (breaking the bead) will NOT eliminate the hazard. This condition can exist whether tires are inflated or deflated. The tire MUST be completely removed from the wheel or rim prior to welding the wheel or rim.

Install stalk stompers, stubble mats, or other devices to prevent tire damage when:

- working on harvested fields with rough stubble

- working on harvested fields in dry conditions, when the stubble is harder and tougher

⚠ Driving on public roads and general transportation safety ⚠

Comply with local laws and regulations.

Use appropriate lighting to meet local regulations.

Make sure that the SMV emblem and Speed Identification Symbol (SIS) are visible.

Make sure that the brake pedal latch is engaged. You must lock brake pedals together for road travel.

Use safety chains for trailed equipment when safety chains are provided with machine or equipment.

Lift implements and attachments high enough above ground to prevent accidental contact with road.

When you transport equipment or a machine on a transport trailer, make sure that it is properly secured. Be sure the SMV and SIS on the equipment or machine are covered while being transported on a trailer.

Be aware of overhead structures or power lines and make sure that the machine and/or attachments can pass safely under.

Travel speed should be such that you maintain complete control and machine stability at all times.

Slow down and signal before turning.

Pull over to allow faster traffic to pass.

Follow correct towing procedure for equipment with or without brakes.

Always use the Hydraulic Master switch to disable the hitch and remote valve controls before roading.

Always use the machine's locking devices to prevent any unintentional movements of the machine (mounted or towed) or parts of it that may occur while roading or servicing (unfold, swing out, or other). Read and follow all related instructions in the manual provided by the machine manufacturer.

⚠ Fire and explosion prevention ⚠

Fuel or oil that is leaked or spilled on hot surfaces or electrical components can cause a fire.

Crop materials, trash, debris, bird nests, or flammable material can ignite on hot surfaces.

Always have a fire extinguisher on or near the machine.

Make sure that the fire extinguisher(s) is maintained and serviced according to the manufacturer’s instructions.

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 the engine, transmission, exhaust, battery, etc. More frequent cleaning of your 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 fans, etc. More frequent cleaning of your machine may be necessary depending on the operating environment and conditions.

Inspect the electrical system for loose connections and frayed insulation. Repair or replace loose or damaged parts.

Do not store oily rags or other flammable material on the machine.

Do not weld or flame cut any items that contain flammable material. Clean items thoroughly with non-flammable solvents before welding or flame-cutting.

Do not expose the machine to flames, burning brush, or explosives.

Promptly investigate any unusual smells or odors that may occur during operation of the machine.

⚠ General battery safety ⚠

Always wear eye protection when you work with batteries.

Do not create sparks or have open flame near a battery.

Ventilate the area when you charge a battery or use a battery in an enclosed area.

Disconnect the negative (-) terminal first and reconnect the negative (-) terminal last.

When you weld on the machine, disconnect both terminals of the battery.

Do not weld, grind, or smoke near a battery.

When you use auxiliary batteries or connect jumper cables to start the engine, use the procedure shown in the operator’s manual. Do not short across terminals.

Follow the manufacturer's instructions when you store and handle batteries.

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

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.

Keep out of reach of children and other unauthorized persons.

⚠ Instructional seat safety ⚠

- Extra riders, especially children, are not allowed to ride on the tractor.
- The instructional seat is to be used only when training a new operator or when a service technician is diagnosing a problem.
- When required for the purposes of training or diagnostics, only one person may accompany the operator, and that person must be seated in the instructional seat.
- When the instructional seat is occupied, the following precautions must be followed:
  - Tractor should only be driven at slow speeds and over level ground.
  - Avoid driving on highways or public roads.
  - Avoid quick starts or stops.
  - Avoid sharp turns.
  - Always wear correctly adjusted seat belts.
  - Keep doors closed at all times.

⚠ Operator presence system ⚠

Your machine is equipped with an operator presence system to prevent the use of some features while the operator is not in the operator's seat.

Never disconnect or bypass the operator presence system.

If the operator presence system is inoperable, then it must be repaired.

⚠ Power Take-Off (PTO) ⚠

PTO-driven machinery can cause death or serious injury. Before you work on or near the PTO shaft or service or clear the driven machine, put the PTO lever in the disengage position, stop the engine, and remove the key.

Whenever a PTO is in operation, a guard must be in place to prevent death or injury to the operator or bystanders.

When doing stationary PTO work, keep clear of all moving parts and make sure that appropriate guards are in place.

⚠ Reflectors and warning lights ⚠

You must use flashing amber warning lights when you operate equipment on public roads.

⚠ Seat belts ⚠

Seat belts must be worn at all times.

Seat belt inspection and maintenance:

- Keep seat belts in good condition.
- Keep sharp edges and items than can cause damage away from the belts.
- Periodically check belts, buckles, retractors, tethers, slack take-up system, and mounting bolts for damage and wear.
- 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 the belt is attached to the seat, make sure that the 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.

⚠ Operator protective structure ⚠

Your machine is equipped with an operator protective structure, such as: a Roll Over Protective Structure (ROPS), Falling Objects Protective Structure (FOPS), or a cab with a ROPS. A ROPS may be a can frame or a two-posted or four-posted structure used for the protection of the operator to minimize the possibility of serious injury. The mounting structure and fasteners forming the mounting connection with the machine are part of the ROPS.

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 to the protective structure.

The protective structure and interconnecting components are a certified system. Any damage, fire, corrosion, or modification will weaken the structure and reduce your protection. If this occurs, THE PROTECTIVE STRUCTURE MUST BE REPLACED so that it will provide the same protection as a new protective structure. Contact your dealer for protective structure inspection and replacement.

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-site operations:

- The protective structure MUST BE REPLACED.
- The mounting or suspension for the protective structure, operator's seat and suspension, seat belts and mounting components, and wiring within the operator's protective system 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 your 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.

⚠ 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.

The air-conditioning system contains gases that are harmful to the environment when released into the atmosphere. Do not attempt to service or repair the system.

Only trained service technicians can service, repair, or recharge the air-conditioning system.

⚠ Personal Protective Equipment (PPE) ⚠

Wear Personal Protective Equipment (PPE) such as hard hat, eye protection, heavy gloves, hearing protection, protective clothing, etc.

⚠ Do Not Operate tag ⚠

Before you start servicing the machine, attach a 'Do Not Operate' warning tag to the machine in an area that will be visible.

⚠ Hazardous chemicals ⚠

If you are exposed to or come in contact with hazardous chemicals you can be seriously injured. The fluids, lubricants, paints, adhesives, coolant, etc. required for the function of your 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 the chemical substances within a product, safe handling and storage procedures, first aid measures, and procedures to take in the event of a spill or accidental release. MSDS are available from your dealer.

Before you service your machine check the MSDS for each lubricant, fluid, etc. used in this machine. This information indicates the associated risks and will help you service the machine safely. Follow the information in the MSDS, and on manufacturer containers, as well as the information in this manual, when you service 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 filters in accordance with local laws and regulations. Use only appropriate containers for the storage of chemicals or petrochemical substances.

Keep out of reach or children or other unauthorized persons.

Applied chemicals require additional precautions. Obtain complete information from the manufacturer or distributor of the chemicals before you use them.

⚠ Utility safety ⚠

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.

Make sure that 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 a contact between the machine and an electric power source occur, the following precautions must be taken:

- Stop the machine movement immediately.
- Apply the parking brake, stop 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 that you do not make contact with the ground and the machine at the same time.
- Do not permit anyone to touch the machine until power has been shut off to the power lines.

⚠ Electrical storm safety ⚠

Do not operate machine during an electrical storm.

If you are on the ground during an electrical storm, stay away from machinery and equipment. Seek shelter in a permanent, protected structure.

If an electrical storm should strike during operation, remain in the cab. Do not leave the cab or operator's platform. Do not make contact with the ground or objects outside the machine.

⚠ Mounting and dismounting ⚠

Mount and dismount the machine only at designated locations that have handholds, steps, and/or or ladders.

Do not jump off of the machine.

Make sure that steps, ladders, and platforms remain clean and clear of debris and foreign substances. Injury may result from slippery surfaces.

Face the machine when you mount and dismount the machine.

Maintain a three-point contact with steps, ladders, and handholds.

Never mount or dismount from a moving machine.

Do not use the steering wheel or other controls or accessories as handholds when you enter or exit the cab or operator's platform.

⚠ Working at heights ⚠

When the normal use and maintenance of the machine requires you to work at heights:

- Correctly use installed steps, ladders, and/or hand holds.
- Do not stand on tractor areas that are not designed as steps or platforms.
- When necessary, use appropriate means according to national/local safety rules (for example, an individual rolling platform, etc.) to reach components such as mirrors, rotating beacons, air filters, GPS receivers, or other components not reachable from the ground.
- Never use steps, ladders, and/or hand holds when the tractor is in motion.

Do not use the machine as a lift, ladder, or platform for working at heights.

⚠ Lifting and overhead loads ⚠

Never use loader 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.

Loader 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 loader bucket or lifting equipment and crush the operator. Care must be taken when lifting a load. Use proper lifting equipment.

Do not lift load higher than necessary. Lower loads to transport. Remember to leave appropriate clearance to the ground and other obstacles.

Equipment and associated loads can block visibility and cause an accident. Do not operate with insufficient visibility.

Electronic Draft Control (EDC)

⚠ WARNING

Unexpected machine movement!
Always use the machine's locking devices to prevent any unintentional movements of the machine (mounted or towed) or parts of it that may occur while roading or servicing (unfold, swing out, or other). Read and follow all related instructions in the manual provided by the machine manufacturer. Failure to comply could result in death or serious injury.

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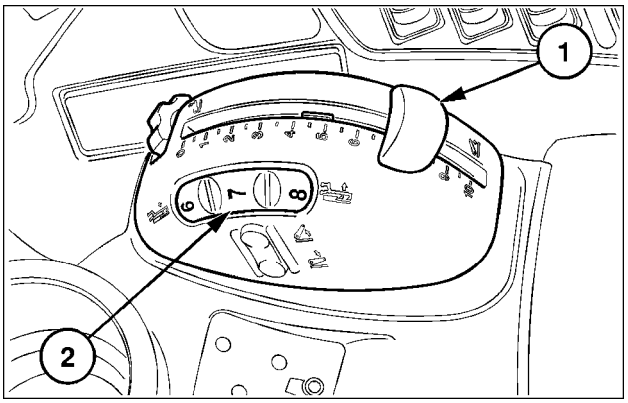
PRE- OPERATION SETTINGS

Attach the implement to the 3- point.

Turn the draft loading wheel **(2)** fully forward (position 10), this is the Position Control setting.

Start the engine and, using the Position Control lever **(1)**, raise the implement in stages, ensuring there is at least **100 mm** (**3.94 in**) clearance between the implement and any part of the tractor. Note the digital display reading on the instrument cluster. If the reading is less than '99' it means that the implement is not fully raised.



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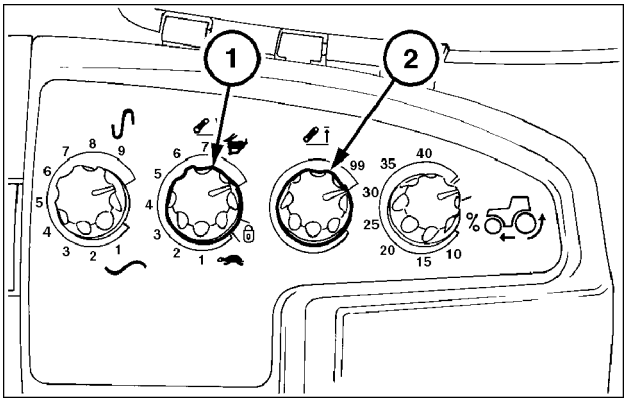
Adjust the height limit control knob **(1)** to prevent the hitch being raised further and so avoid the possibility of the implement damaging the tractor when fully raised.

When the raise/ lower switch or the Position Control lever is used to raise the implement, it will only raise to the height set by the limit control, as determined in the previous step.

Adjust the rate of drop, to suit the size and weight of the attached implement by rotating the drop rate control knob **(2)**. Turn the knob clockwise to speed up the drop rate or anti- clockwise to slow down the drop rate.

NOTICE: *When first setting the implement up for work, keep the drop rate control knob in the slow drop position ('tortoise' symbol).*

When the raise/ lower switch is used to lower the implement, it will lower at a controlled rate as determined in the previous step.



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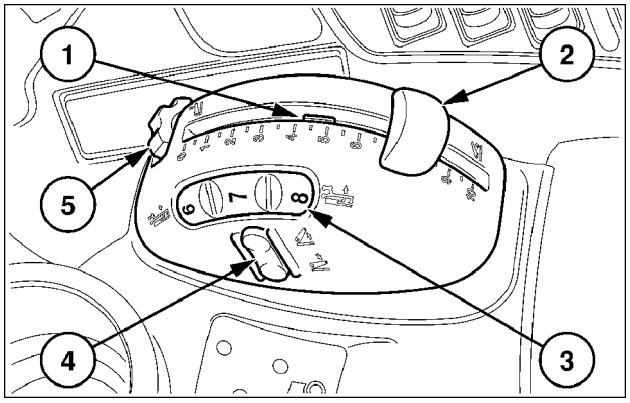
Position Control Operation



BRI4098C 3

To operate in Position Control, the draft loading wheel **(3)** should, ideally, be rotated fully forward to position 10.

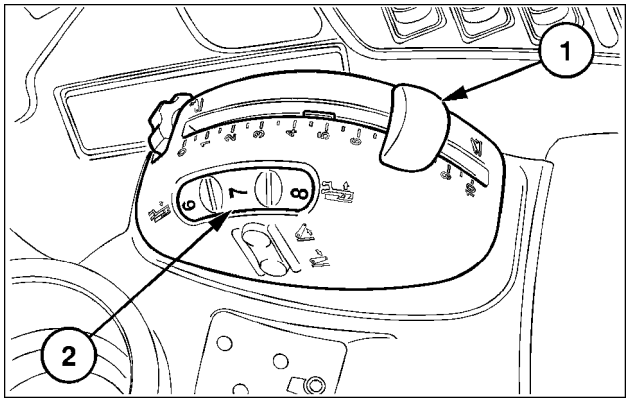
Use the Position Control lever **(2)** to raise and lower the 3- point hitch. The implement will raise and stop at the height set by the height limit control knob.

NOTE: *The rate of lift will be adjusted automatically. If a large movement of the position control lever is made then the lower links will respond by moving rapidly. As the links approach the position set by the Position Control lever, implement movement will be slower.*

When the implement is at the required working height, use thumbwheel **(5)** to set the adjustable stop **(1)** against the Position Control lever **(2)**. Every time the Position Control lever is moved, it may be quickly returned to it's original position, against the stop, to maintain the required implement height.

If it is required to raise the implement at the headland, momentarily depress the top of the raise/ lower switch **(4)** to lift the implement to the position set by the height limit control knob. When re- entering the work area, depress the lower part of the switch and the implement will return to the height originally set by the Position Control lever **(2)**.

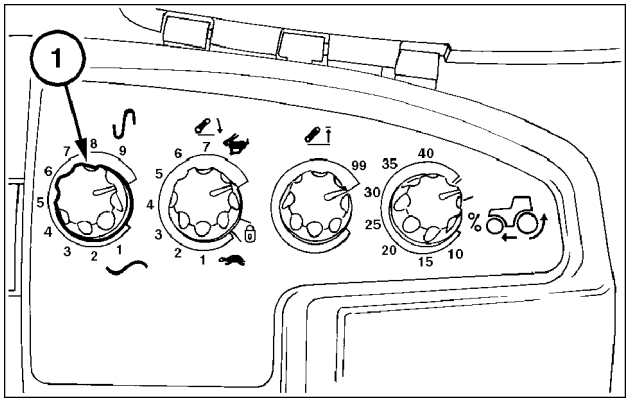
Draft Control Operation



BRI4098B 4

To operate in Draft Control adjustment of several controls is necessary to suit the implement and field conditions.

The draft loading wheel **(2)**, determines implement depth by setting a required force on the draft sensing pins Set the wheel to the mid-position (position 5) prior to commencing work.

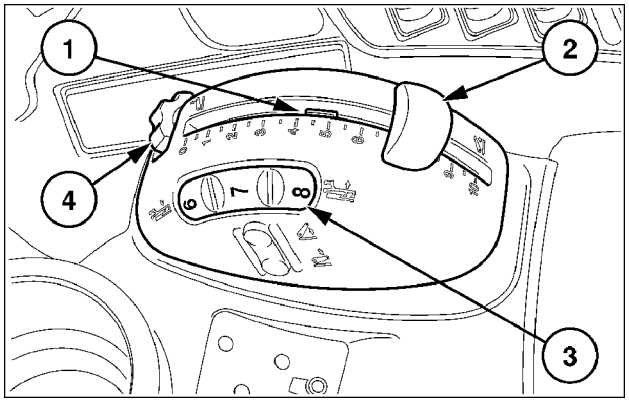


BSE2884C 5

The position of the draft sensitivity knob **(1)**, determines the sensitivity of the system. Set the knob to the mid-position before entering the field.

Drive the tractor into the field and lower the implement into work by moving the Position Control lever **(2)** forward. Use the Position Control lever to set the maximum depth and so prevent 'diving' when areas of light soil are encountered. Set the required implement working depth by rotating the draft loading wheel **(3)**.

Rotate the thumbwheel **(4)** to move the adjustable stop **(1)** against the Position Control lever so that the selected setting may be quickly found.



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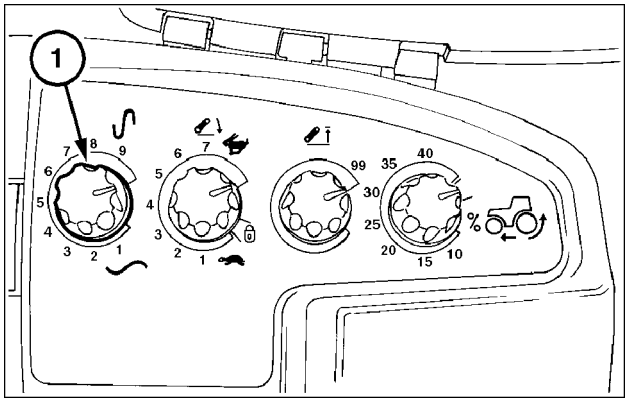
Observe the implement as it pulls through the soil and adjust the draft sensitivity knob **(1)**, until the tendency to raise or lower, due to variations in soil resistance, is satisfactory. Once set, the tractor hydraulic system will automatically adjust implement depth to maintain an even pull (draft load) on the tractor.

The optimum setting will be achieved by observing the movement indicator lights **(2)** and **(3)**. The upper light **(2)** will illuminate every time the system raises the implement as normal draft corrections occur. The lower light **(3)** will illuminate as the implement lowers.



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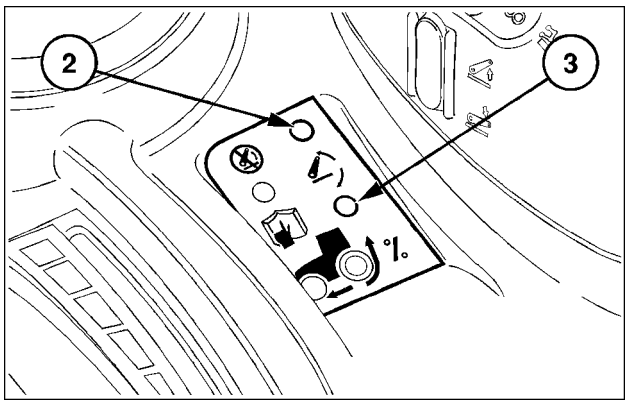
Turn the draft sensitivity knob **(1)** slowly clockwise. The system will respond with smaller, quicker movements as will be seen by both the indicator lights flickering. At this point, turn the knob slightly anti-clockwise until either of the indicator lights flashes once every **2 s** or **3 s** or, as required, to suit the soil conditions.

Once the required working conditions have been established there is no need to move the position control lever again until the work in hand is completed.



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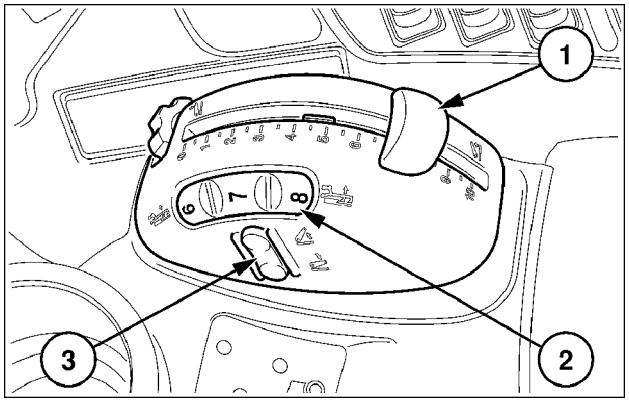
Upon reaching the headland, momentarily depress the top of the raise/lower switch **(3)** to quickly lift the implement to the position set by the height limit control knob. When re-entering the working area, momentarily depress the lower part of the switch and the implement will descend at the rate set by the drop rate control knob and stop when it reaches the depth set by the draft loading wheel **(2)**.

During the raise cycle, momentarily depressing the top of the raise/lower switch will pause implement lift.

NOTE: *Depressing the top of the raise/ lower switch during the lift cycle will temporarily disable the hitch. Depressing the top of the switch again will re- enable hitch operation but initial movement will be slow.*



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Faster implement penetration may be required, for example, after turning at a narrow headland. Also, some implements are reluctant to penetrate, particularly if the ground is heavy. Press and hold the bottom of the raise/ lower switch **(3)** and the implement will lower at the rate set by the drop rate control knob, until it contacts the ground.

The drop rate and the Position Control settings will then be overridden and the implement will quickly penetrate the ground, rising to the preset working depth when the switch is released.

Alternatively, the adjustable stop may be used to set the implement depth. When the required implement depth has been established, rotate the thumbwheel **(4)**. This will move the stop **(1)** so that it is against the front edge of the position control lever **(2)**. Whenever the implement is raised, using the Position Control lever, it will always return to the same working depth when the lever is moved forward to contact the stop.

NOTE: *If required, the Position Control lever may be eased sideways (to the left), in order to bypass the stop, to lower the implement further.*

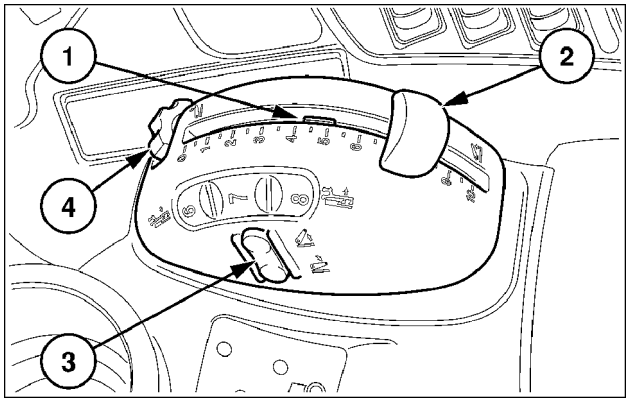
The slip limit control **(1)**, available only with the optional radar sensor unit, enables the operator to select a wheel slip threshold which, if exceeded, will result in the implement working depth being adjusted to reduce wheel slip.

When slip control is activated, the Draft Control system will temporarily reduce the working depth of the implement. As rear wheel slip reduces, Draft Control will lower the implement back to its original working depth.

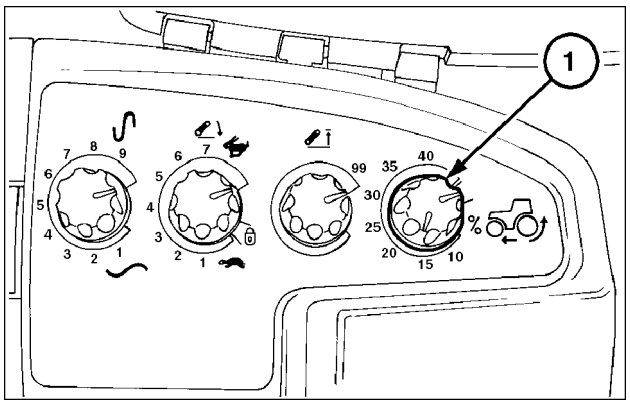
Care must be taken not to select a wheel slip limit that is either too high or too low. Setting the slip limit to a very low level, unobtainable in wet conditions, may have a detrimental effect on the work rate and depth.

NOTE: *The wheel slip function does not work in Position Control.*

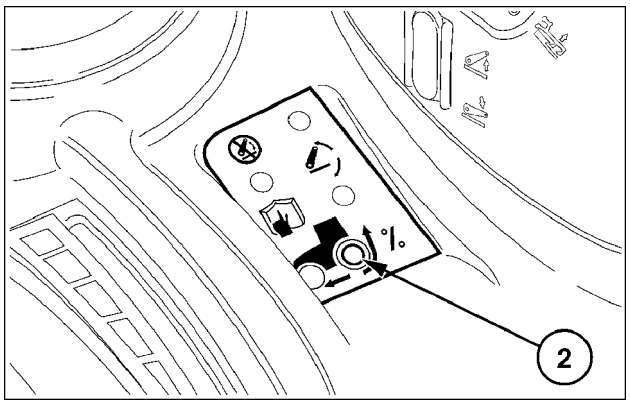
The slip limit ‘on’ indicator **(2)** will illuminate when slip control is activated and the implement is raising to restore the selected slip rate. The knob is detented at the ‘off’ position (knob fully clockwise).



BRI4098G 10



BSE2884D 11



BRI4097B 12

Transport Lock

When transporting equipment on the 3-point hitch, turn the drop rate control knob **(2)**, fully anti-clockwise to the transport lock position (padlock symbol). This will prevent the implement from accidentally lowering and damaging the road surface.

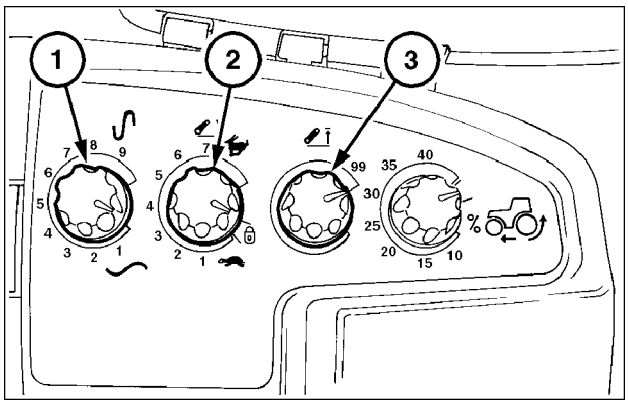
Dynamic Ride Control

When transporting equipment on the 3-point hitch, implement bounce can lead to lack of steering control at transport speeds. With Ride Control selected, when the front wheels hit a bump, causing the front of the tractor to rise, the hydraulic system will immediately react to counter the movement and minimise implement bounce to provide a smoother ride.

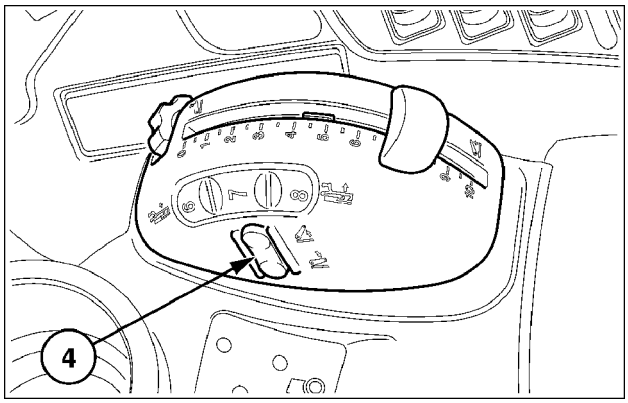
To engage Ride Control, turn the draft sensitivity knob **(1)**, fully anti- clockwise. Using the raise/ lower switch **(4)** Figure **14**, raise the implement to the height set by the height limit control **(3)**.

Turn the drop rate control knob **(2)** fully anti-clockwise to the transport lock position (padlock symbol).

Ride Control will only operate at speeds above **8 km/h** (**5 mph**). When tractor speed exceeds **8 km/h** (**5 mph**), the implement will drop by 4 - 5 points (as displayed on the instrument cluster) as the hydraulic system makes corrections to counteract implement bounce. When tractor speed falls below **8 km/h** (**5 mph**) the implement will raise again to the height set by the height limit control and ride control will become inoperative.



BSE2884E 13



BRI4098H 14

Roading

⚠ WARNING

Moving parts!
Always use the Hydraulic Master switch to disable the hitch and remote valve controls before roading.
Failure to comply could result in death or serious injury.

W1587A

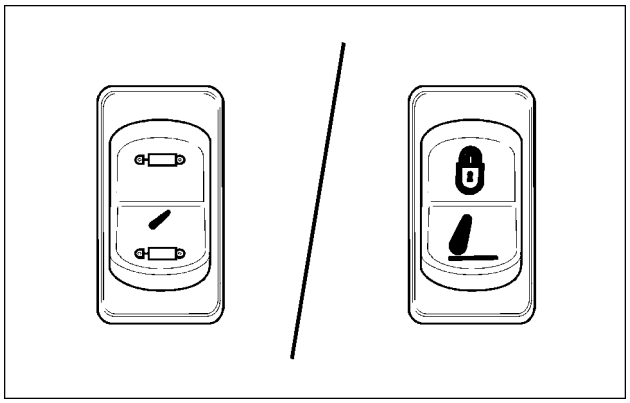
⚠ WARNING

Unexpected machine movement!
Always use the machine's locking devices to prevent any unintentional movements of the machine (mounted or towed) or parts of it that may occur while roading or servicing (unfold, swing out, or other). Read and follow all related instructions in the manual provided by the machine manufacturer.
Failure to comply could result in death or serious injury.

W1789A

Always fully raise the hitch for road transport.

Use the Hydraulic master switch in the right hand control console to lock the hitch and remote valves during road transport.



SVIL18TR02290AA 15

Hitch operation

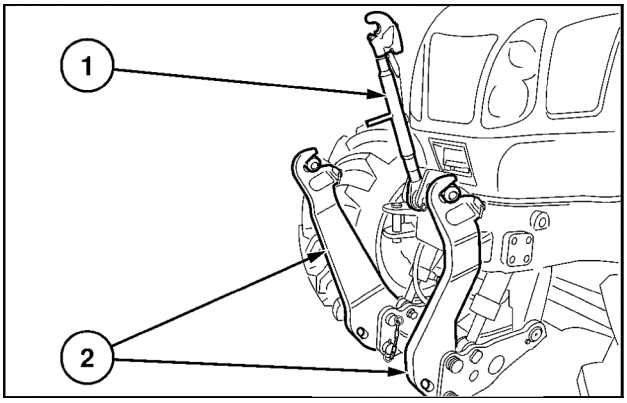
⚠ WARNING

Unexpected machine movement!
Always use the machine's locking devices to prevent any unintentional movements of the machine (mounted or towed) or parts of it that may occur while roading or servicing (unfold, swing out, or other). Read and follow all related instructions in the manual provided by the machine manufacturer. Failure to comply could result in death or serious injury.

W1789A

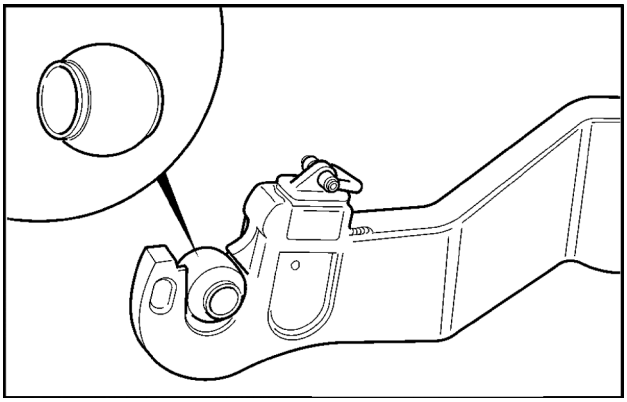
FRONT THREE-POINT HITCH (where fitted)

The optional front hitch, consists of an adjustable top link **(1)** and a pair of folding lower links **(2)**. The top link and the lower links have open claw ends that permit rapid coupling and uncoupling of implements. The claws are equipped with self-locking latches to ensure positive retention of the tractor linkage to the implement.



SVIL20TR02242AA 1

Three ball-bushings are supplied for installation on the implement hitch pins.



SVIL20TR02243AA 2

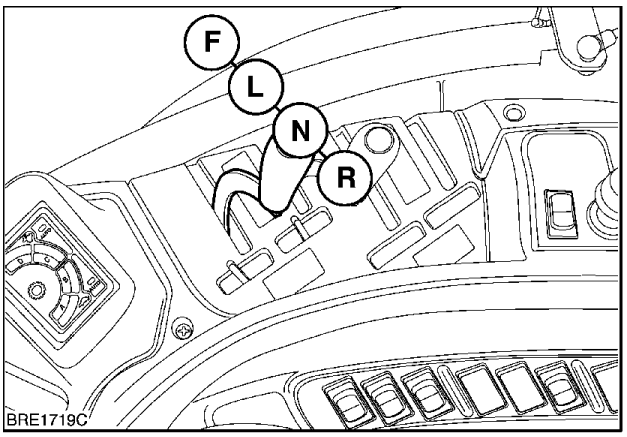
Operating the Front Linkage

The front hitch may be controlled through the rear remote valves, or by a dedicated mid-mounted twin spool remote valve.

- with mechanical rear remote valves:

Using valves 1 or 2 at the rear of the tractor, operation of the front hitch may be controlled via the remote valve levers.

With the front linkage connected to valve number I, pull the lever rearwards **(R)** to raise the front linkage. Move the lever to **(N)** to halt linkage movement, the linkage will maintain its height position. Select **(L)** to lower the linkage. With the lever in the float position **(F)**, the linkage can move up and down (float) allowing the implement to follow the ground contours.

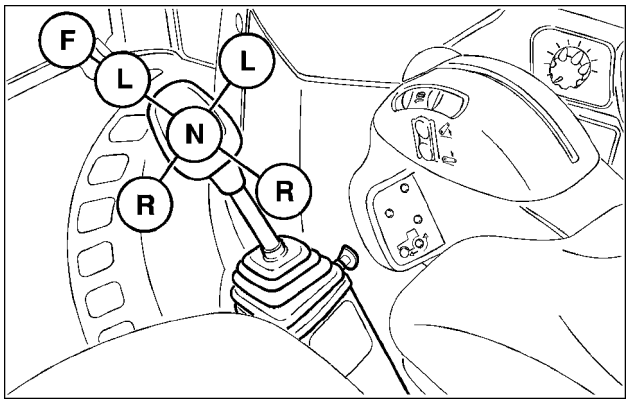


BRE1719C 3

If the implement requires additional hydraulic services, these may be connected to any unused remote valve. However, for convenience, it is recommended the second valve 2 is used for this purpose.

As an alternative, the levers operating remote valves 1 and 2 may be replaced by a joystick located in a forward position on the right- hand side of the operators seat.

NOTICE: *With the joystick operating the rear remote valves, a float position* ***(F)*** *is available by moving the lever fully to the right. This function is not available when operating with a mid-mounted 2- spool remote valve.*



BRH3757B 4

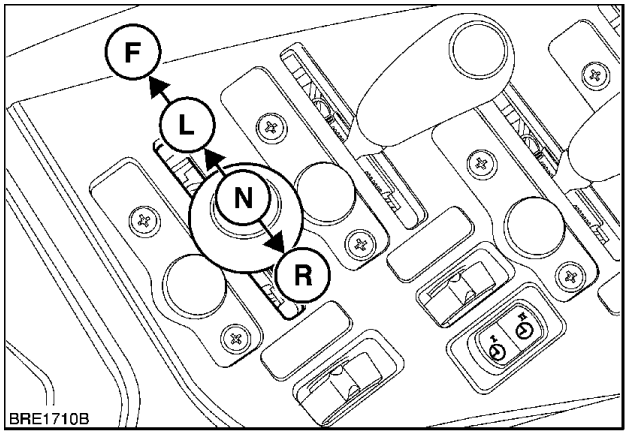
- with Electro Hydraulic remote valves:

Electro Hydraulic valves may be used to operate the front hitch using the remote valve lever or electronic joystick (where fitted). The Electro Hydraulic levers function in a similar way to the mechanical levers.

The standard default valve to operate the hitch will always be valve number 4. However, it is possible to set the default to alternative remote valve if required.

The default valve 4 is programmed to operate in conjunction with the front hitch height limiter. If an alternative valve is used, the height limiter will not function until the new valve has been programmed.

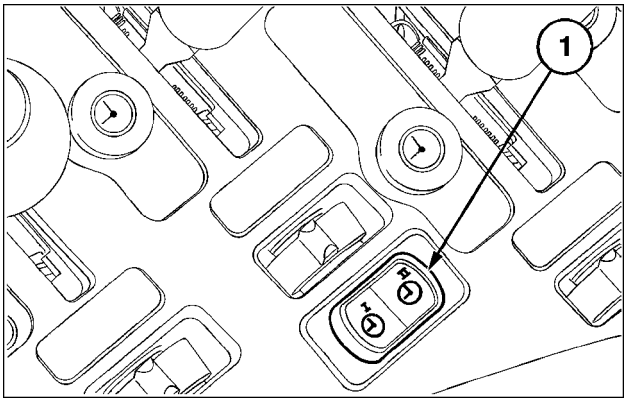
To reset the default valve, the tractor must be stationary with the parking brake applied, ensure all hydraulic lines are disconnected from the remote valve couplings.



BRE1710B 5

- Ensure all EHR timer switches **(1)**, are in the off position.
- Turn the key- start on, but do not start the engine.
- Depress the timer switch for remote valve No.1 then, within five seconds, depress the timer switch for valve No. 2.
- 'FEhr' will appear in the Dot Matrix Display, after two seconds this will change to show the current default valve, for example 'Ehr4'.
- Choose the new default valve and depress the timer switch for that valve three times, the display will change to show the new selection, for example 'Ehr1'.
- Turn the key- start off, the new default valve for front linkage operation is now memorized.

NOTE: *For programming procedures on EHR remote valves, see* ***Remote control valves (35.204)***



BRE1702B 6

With twin spool mid mounted remote valve: (where fitted)

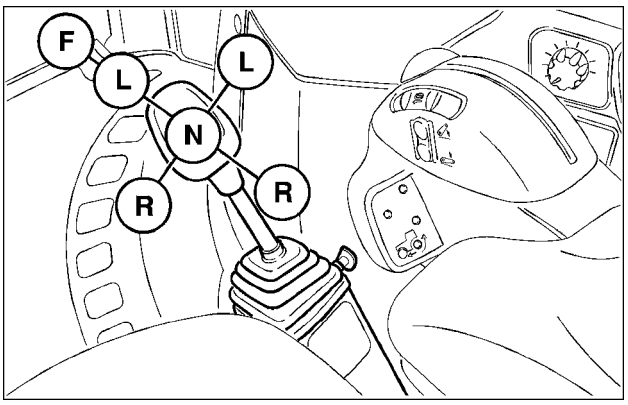
The optional mid mount remote valve is controlled by a joystick located on the right- hand side of the seat. The mid mount valve provides two additional double acting services, one of which may be utilized to operate the front hitch.

Pull the joystick rearwards **(R)** to raise the implement. When the hydraulic lift reaches the height set by the height limit rotary control the joystick will return automatically to neutral **(N)**. Alternatively, the hydraulic lift will stop raising when the joystick is manually returned to the neutral position. Moving the joystick fully rearward against spring pressure will provide a faster rate of lift.

Pushing the joystick forward to the 'lower' position **(L)** will cause the implement to lower to the ground at a controlled rate of descent.

Further forward movement of the joystick will select 'float' **(F)** which will allow the cylinder to extend or retract freely. When in the float position, pushing the joystick fully forward against spring pressure will slow the movement of the cylinder.

NOTE: *Always use the 'float' position to lower a single-acting cylinder. The 'lower' position is for double- acting cylinders only.*

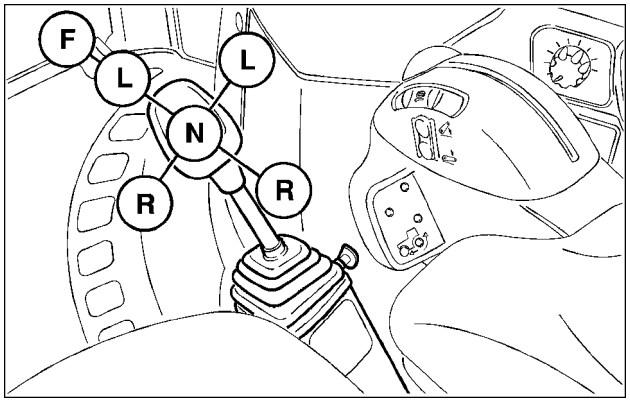


BRH3757B 7

The joystick may also be moved laterally, **(R)** and **(L)**, to provide oil flow for equipment connected to the optional front couplers.

NOTE: *With the joystick operating the rear remote valves, a float **(F)** position is available by moving the lever fully to the right. This float facility is not available when operating with a mid-mounted 2- spool remote valve.*

NOTICE: *When operating with a hydraulic motor always use 'lower' and 'float' positions to control motor rotation. To stop the motor, move the lever from the 'lower' (drive) position to the 'float' position. The motor will then slow to a gradual halt and not stop abruptly which may cause internal damage to the motor.*



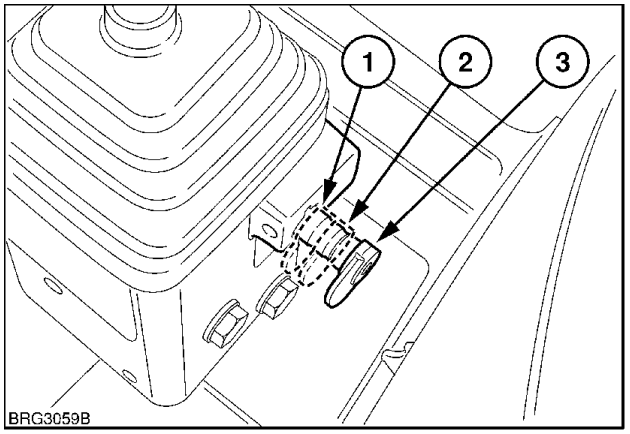
BRH3757B 8

The joystick has the added advantage of being able to operate two cylinders simultaneously by moving it diagonally.

The joystick safety lock lever is used to prevent accidental operation of the remote valve(s).

The safety lock on the joystick has three positions:

(1)	Fully out.	All joystick movements available.
(2)	Mid Position.	Lateral movement locked out.
(3)	Fully in.	All joystick movements locked.

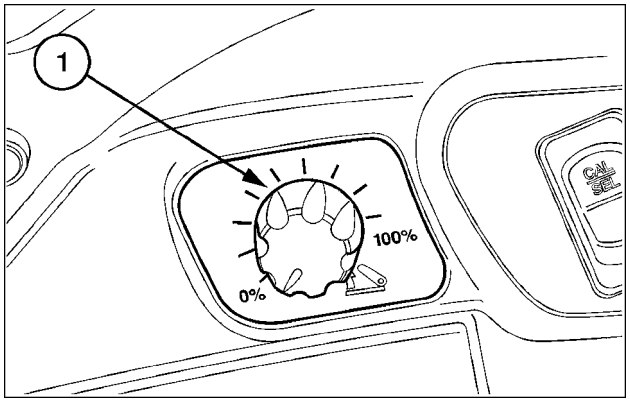


BRG3059B 9

Setting the Height of the Front Hitch

Height limit control is provided by a rotary knob **(1)** on the right-hand console. Fully clockwise is maximum height. Turn anti-clockwise for minimum height.

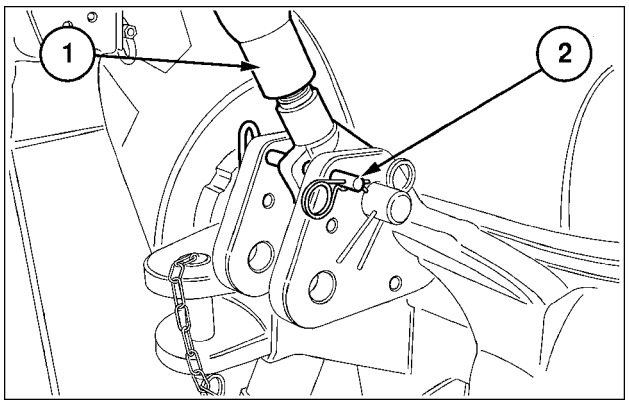
NOTE: *The height limit setting is affected by the oil flow through the system. For example, if the flow control setting is set to maximum and engine speed is high then hitch height may be up to **10 cm** (**4 in**) higher than would be achieved if engine speed and oil flow rate were low.*



BRH3230B 10

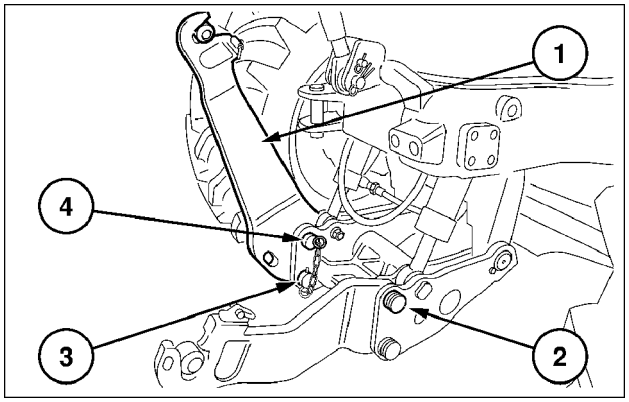
Transport Position

The top link and lower links should be placed in the transport position when not in use. Raise the top link **(1)** to the vertical position and secure by inserting the lock pin **(2)** through the top link and anchor bracket. Secure the pin with the spring clip as shown



BRH3269B 11

Each lower link pivots about the pivot bolt **(2)**. The pivot bolt should not be removed unless it is required to remove the lower links. Extract the lower pin **(3)** from the link assembly and raise the lower link **(1)** to the vertical position, as shown. Insert the pin through the upper hole in the inner link arm when the holes in the inner and outer links **(4)** are correctly aligned. Before operating the tractor ensure both pins are secured with lynch- pins.

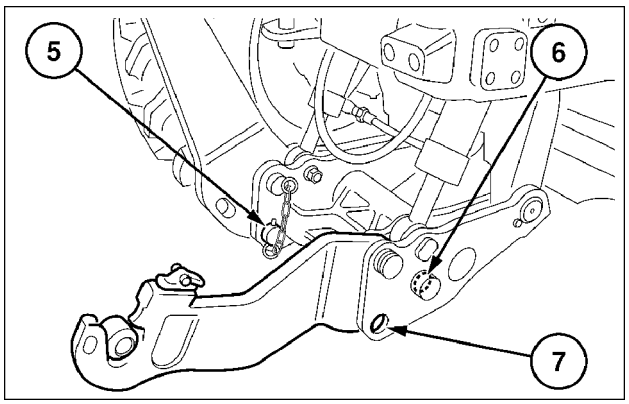


BRH3294B 12

To convert to the working position, remove the lynch- pin, pull out the pin **(5)** and manually lower the link arm down to the operating position, as shown. Install the removed pin in one of the holes **(6)** or **(7)**, as required.

When installed in the rear hole **(6)** as shown, the lower link will be locked as a rigid unit. If the pin is installed in the front hole **(7)**, the lower link will be allowed to move up and down freely (float) through a range of approximately **75 mm** (**3 in**) . Secure the pin with the lynch- pin.

Repeat on the other lower link, ensuring that both lower links are set up the same, i.e., both are locked as rigid units or both are allowed to float.

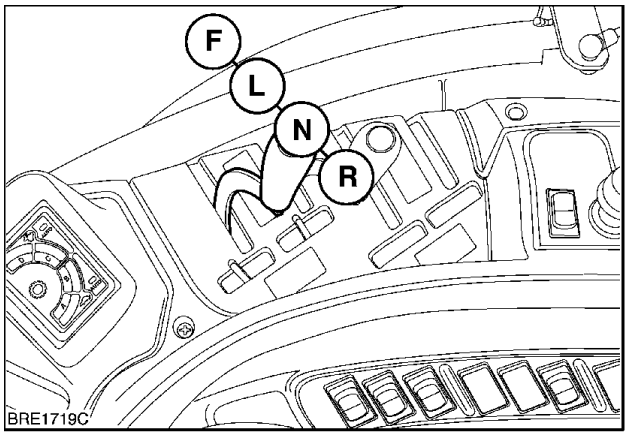


BRH3293B 13

NOTE: *With the lower links pinned in the float position, the left and right-hand sides of the implement can move up and down independently to allow for operation on uneven surfaces. In addition, the remote control valve float function will allow the whole implement to move up or down as it passes over uneven ground.*

Coupling Implement to Tractor

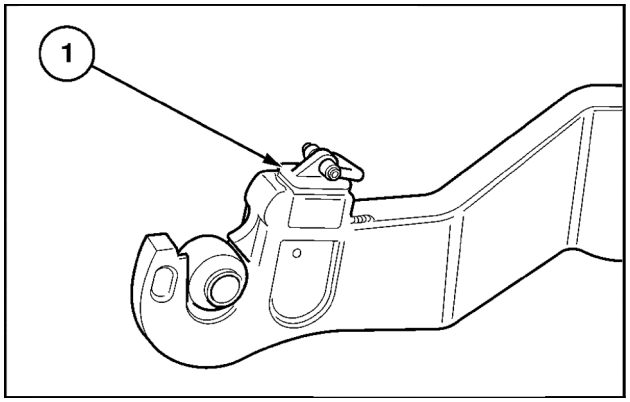
Start the engine. Move the remote valve lever or joystick (where fitted) from neutral **(N)** to lower **(L)** until the link arms are just clear of the ground. Position the tractor so that the open claw ends are beneath the implement hitch pins.



BRE1719C 14

Slowly move the remote valve lever or joystick rearward to raise the lower links until the claw couplers engage the ball-bushings. An audible click will be heard as the self-locking latches engage the ball-bushings on the implement. The lift control should be returned to the neutral position before the lower links start to lift the implement from the ground.

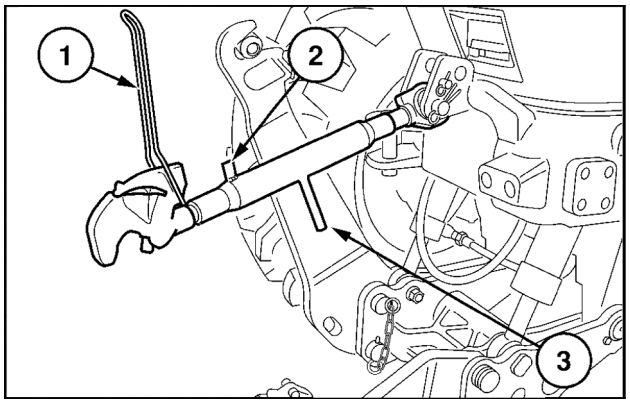
NOTICE: *Before operating the tractor, ensure the release latches **(1)**, are fully retracted into the link end.*



SVIL20TR02245AA 15

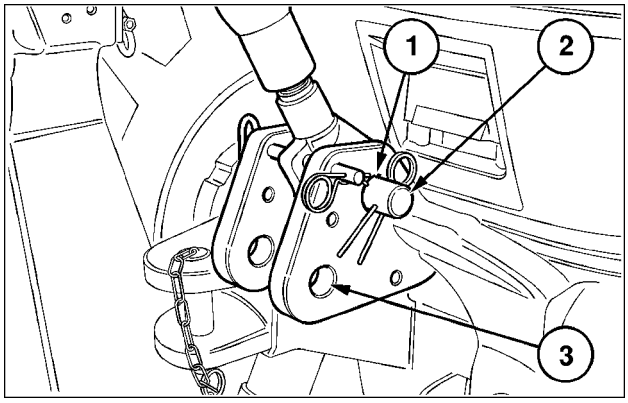
Attach the top link to the implement, adjusting to the correct length by rotating the threaded centre section using the handle **(3)** as leverage. To prevent the centre section from rotating while in work, place the locking latch **(1)** over the pin **(2)** or adjuster handle **(3)**. The top link has a similar claw end to the lower links. Lower the top link claw onto the upper implement ball-bush and press down until the latch is heard to engage.

The implement supports, where fitted, may now be removed or retracted and the implement supported on the front linkage.



SVIL20TR02246AA 16

The top link is connected to the bracket with the pin **(2)** secured by the split pin. Two holes are provided in the top link bracket for location of the top link. Use the top hole **(1)**, as shown, for maximum lift capacity. Use the lower hole **(3)**, to provide the greatest implement height, when raised.



BRH3268C 17

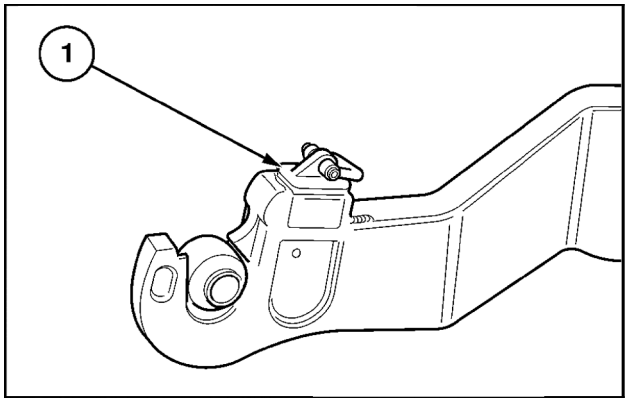
Uncoupling Implement from Tractor

Using the remote valve lever or joystick, lower the implement to the ground, ensuring that it cannot fall when disconnected from the front hitch. Use the implement supports (where fitted).

Pull back the lever on the top link to release the claw from the implement upper hitch pin.

Pull the ring **(1)** on both lower links fully rearwards. The lever will lock in position with the latch retracted. This will allow the links to clear the ball-bushings on the implement lower hitch pins when the links are lowered fully.

Fully lower the lower links using the remote lever or joystick and reverse the tractor clear of the implement.



SVIL20TR02245AA 18

Roading

⚠ WARNING

Moving parts!
Always use the Hydraulic Master switch to disable the hitch and remote valve controls before roading.
Failure to comply could result in death or serious injury.

W1587A

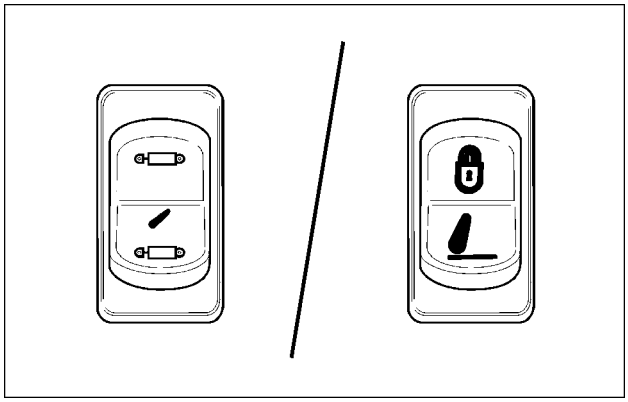
⚠ WARNING

Unexpected machine movement!
Always use the machine's locking devices to prevent any unintentional movements of the machine (mounted or towed) or parts of it that may occur while roading or servicing (unfold, swing out, or other). Read and follow all related instructions in the manual provided by the machine manufacturer.
Failure to comply could result in death or serious injury.

W1789A

Always fully raise the hitch for road transport.

Use the Hydraulic master switch in the right-hand control console to lock the hitch and remote valves during road transport.



SVIL18TR02290AA 19

Remote control valves

⚠ WARNING

Unexpected machine movement!
Always use the machine's locking devices to prevent any unintentional movements of the machine (mounted or towed) or parts of it that may occur while roading or servicing (unfold, swing out, or other). Read and follow all related instructions in the manual provided by the machine manufacturer. Failure to comply could result in death or serious injury.

W1789A

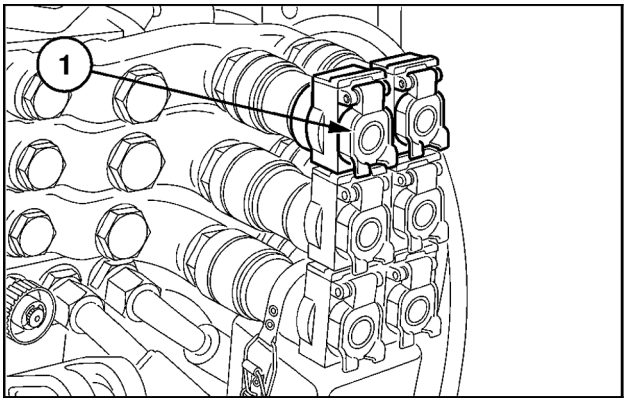
Hydraulic remote control valves are available to operate external hydraulic cylinders, motors etc. All models have two valves as standard, installed at the rear of the tractor.

A third remote valve **(1)** is available as an option.

The valves are operated by levers which are located in the console to the right of the operator's seat.

The remote valves may be adjusted to provide single or double acting operation.

Each remote valve is equipped with two 1/2" quick release couplers for implement hose connection.

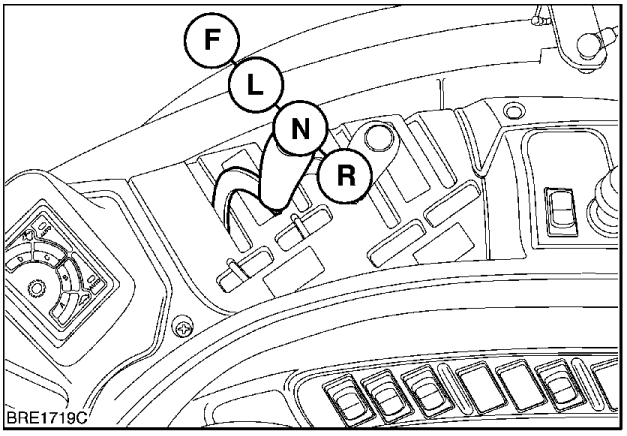


SVIL20TR02079AA 1

Control Levers

Each remote valve control lever has four operating positions as follows:

1. Raise **(R)** - Pull a lever back to extend the cylinder to which it is connected and raise the implement.
2. Neutral **(N)** - Push the lever forward from the raise position to select neutral and stop connected cylinder movement.
3. Lower **(L)** - Push the lever further forward, past neutral, to retract the cylinder and lower the implement.
4. Float **(F)** - Push the lever fully forward, beyond the 'lower' position, to select 'float'. This will permit the cylinder to extend or retract freely, thereby allowing equipment such as scraper blades to 'float' or follow the ground contour.



BRE1719C 2

The extend, neutral, retract and float positions are identified by symbols on an adjacent decal.

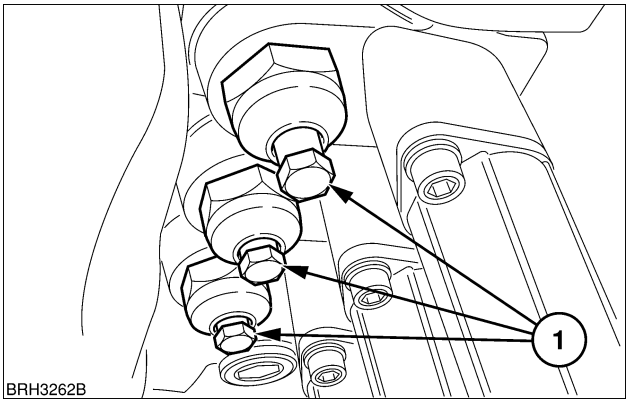
To aid identification the remote valves and levers are numbered, as follows:

Lever No.	Valve Position
1	Lower valve
2	Centre valve
3	Upper valve

Converting Remote Valves to Single or Double Acting Operation

Each remote valve is equipped with a screw **(1)** which converts the valve from double to single acting operation.

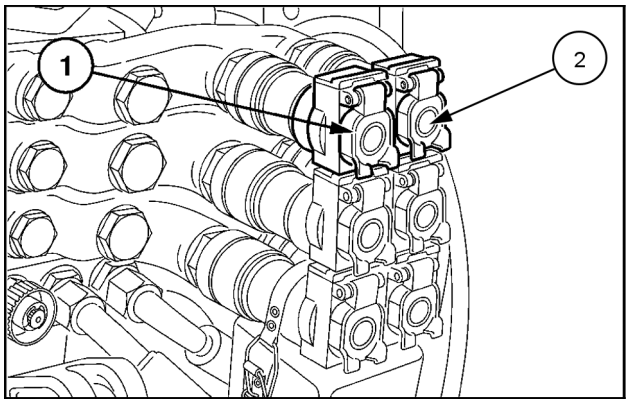
- Single Acting: Unscrew the adjusting screw fully outwards (anti- clockwise) until it stops. Do not overtighten.
- Double Acting: Screw the adjusting screw fully inwards (clockwise). Do not overtighten.



BRH3262B 3

Connecting Remote Cylinders

Each remote control valve has a pair of 1/2 in. quick-disconnect, female couplers. The couplers are of a self-sealing/locking design but will allow remote cylinder hoses to pull free if the implement should become disconnected from the tractor. The left- hand coupler **(1)** of each pair is for feed hoses, the right- hand couplers **(2)** are for return hoses.



SVIL20TR02079AA 4

To connect a remote cylinder, lift the protective cover until it locks into the raised position and insert the feed and/or return hose into the coupler, ensuring that it is correctly seated. Check that there is sufficient slack in the hose(s) to allow the tractor/implement to turn in either direction.

Before connecting or disconnecting hydraulic hoses at the remote cylinders, stop the engine and relieve the pressure in the circuit by moving the remote control valve lever(s) fully forward to the 'float' position then back to neutral.

To disconnect, grip the hose a short distance from the coupler, push the hose forward, into the coupler, then quickly pull on the hose to 'pop' the coupler free. Close the protective cover.

⚠ WARNING

Crushing hazard!
Loss of hydraulic pressure or movement of a control can cause raised equipment to fall. Never work under an implement or attachment supported only by the hydraulic system. Always use suitable equipment to support an implement or attachment that must be serviced in a raised position.
Failure to comply could result in death or serious injury.

W0430A

NOTE: *Some implements require the use of an additional, remotely mounted control valve. When such a valve is plumbed in to receive an oil supply from the tractor remote valve, it must be of the open centre type.*

NOTE: *To avoid contamination of the hydraulic oil system, ensure implement couplers are thoroughly cleaned before inserting into the tractor remote valve.*

Connecting and Operating Single-Acting Cylinders

The remote valves on your tractor can be used to operate a single- acting service in one of two ways.

With the remote valve set to double- acting mode:

Connect the hose **(1)** from a single- acting cylinder to the right- hand coupler **(2)**. To extend the cylinder move the remote valve lever to the Lower position, to retract the cylinder move the lever to the Float position.

NOTE: *A remote valve lever will not automatically return to neutral from the float position.*

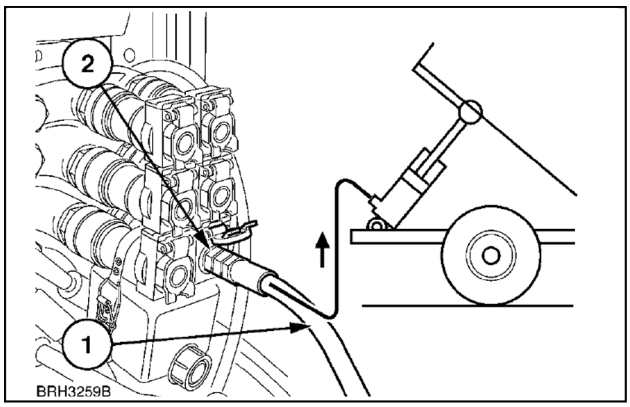
With the remote valve set to single- acting mode:

Connect the hose **(1)** from a single- acting cylinder to the left- hand coupler **(2)** . To extend the cylinder move the remote valve lever to the Raise position, to retract the cylinder move the lever to the Lower position.

Manually return the lever to the neutral position to stop the cylinder before it is fully extended or, if the remote control valve has the kick-out feature, allow the valve to return to neutral automatically when the cylinder reaches the end of its stroke.

NOTE: *When in the single-acting mode, a control lever will only return to neutral automatically at the end of the lift stroke.*

NOTE: *Do not hold the lever in the raise or lower position once the remote cylinder has reached the end of the stroke as this will cause the relief valve to 'blow'. Forcing oil through the relief valve for extended periods will overheat the oil and may lead to failure of hydraulic and driveline components.*



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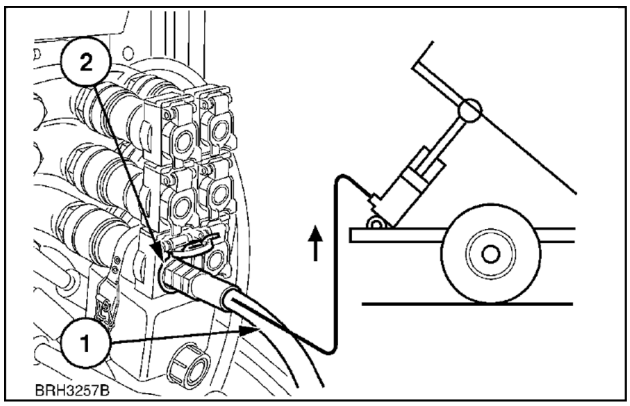

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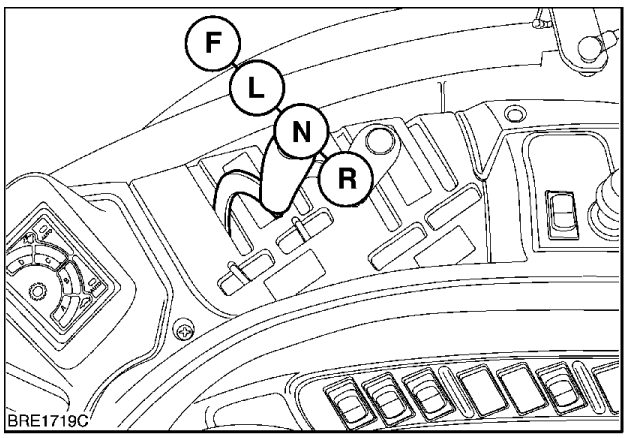

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Connecting and Operating Double-Acting Cylinders

To operate a double-acting cylinder, connect the pipework to a remote control valve operating in the double- acting mode.

Connect the feed hose **(1)** from a double-acting cylinder to the left- hand coupler on a remote control valve and the return hose **(2)** to the right- hand coupler on the same valve, as previously described.

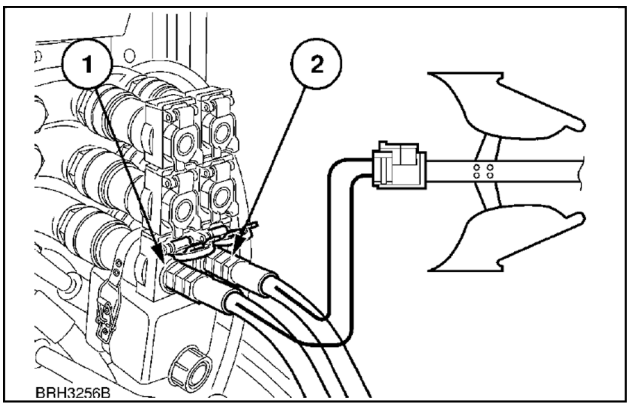
NOTICE: *Operating loaders with detented valves (valves with kick-out) may result in uncontrolled movement, resulting in spillage of material from the bucket or objects rolling down the loader arms onto the operator.*

To extend a double-acting cylinder, pull the control lever rearwards to the ‘raise’ position.

To retract a double-acting cylinder, push the control lever forward, past neutral, to the ‘lower’ position.

Further forward movement of the lever will select ‘float’ which will allow the cylinder to extend or retract freely. This feature is of great benefit when carrying out work with equipment such as scraper blades and loaders.

NOTE: *A detent will hold the lever in the selected raise or lower position until the remote cylinder reaches the end of the stroke when the control lever will automatically return to neutral. Alternatively, the lever may be returned to neutral manually. The lever will not return automatically from the float position.*



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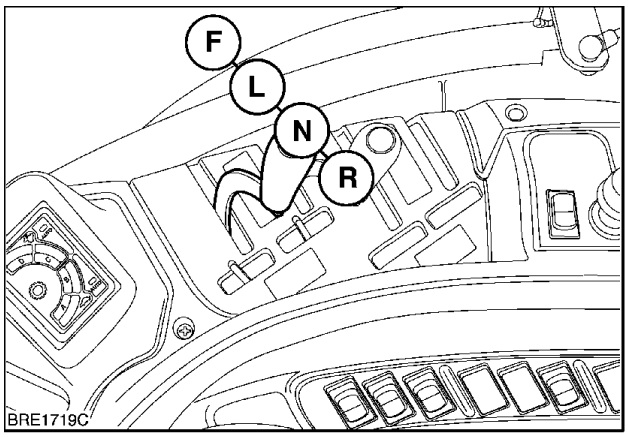

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Joystick operation with a front loader

⚠ WARNING

Unexpected machine movement!
Always use the machine's locking devices to prevent any unintentional movements of the machine (mounted or towed) or parts of it that may occur while roading or servicing (unfold, swing out, or other). Read and follow all related instructions in the manual provided by the machine manufacturer. Failure to comply could result in death or serious injury.

W1789A

(where fitted)

Where a front loader is installed as a factory option, an electronic joystick is provided to control the electronic remote control valves (EHRs) used for operating the loader and attachments.

NOTE: *If a loader has been installed on a tractor where the mid-mount remote valves are configured for front hitch operation or front coupler operation, it is most important that the valves are re- configured for loader operation. It is essential this procedure is completed so that mid-mount remote valve HTS programme and timer functions are disabled for front loader operation. Re-configuration of the remote valves requires the use of special tools and MUST be carried out by an authorized dealer. Re-configuring the remote valves will also provide the advanced features available when the loader is used in conjunction with the color display.*

Joystick for 2 remote valves

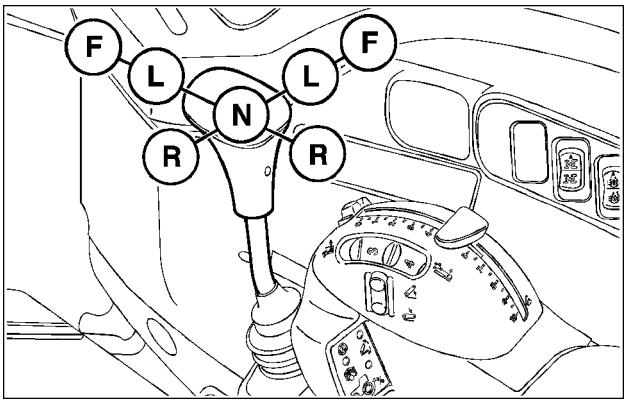
The joystick, actuates valves 1 and 2, operating in a cross pattern.

Moving the joystick backwards and forwards in a straight line actuates valve No. 1.

Moving the joystick sideways in a straight line actuates valve No. 2.

Moving the joystick diagonally will actuate both valves simultaneously. By applying directional bias, one valve can be made to actuate at a faster or slower rate than the other.

Move the joystick rearward from the neutral position and the cylinder connected to valve No. 1 will extend to raise the implement. Push the joystick forward, past neutral, to retract (lower) the cylinder. Pushing it fully forward, beyond the ‘retract’ position, will select ‘float’ which will permit the cylinder connected to remote control valve No. 1 to extend or retract freely, thereby allowing equipment such as scraper blades to ‘float or follow the ground contour.



BRE1533B 1

Move the joystick to the left from the neutral position and the cylinder connected to valve No. 2 will extend to raise the implement. Move the joystick to the right, past neutral, to retract the cylinder. Move the it fully to the right, beyond the ‘retract’ position, will select ‘float’ which will permit the cylinder connected to remote control valve No. 2 to extend or retract freely.

The joystick and it’s respective valves are color coded for identification.

⚠ WARNING

Crushing hazard!
Lower all components, attachments, or implements to the ground before leaving the cab. Failure to comply could result in death or serious injury.

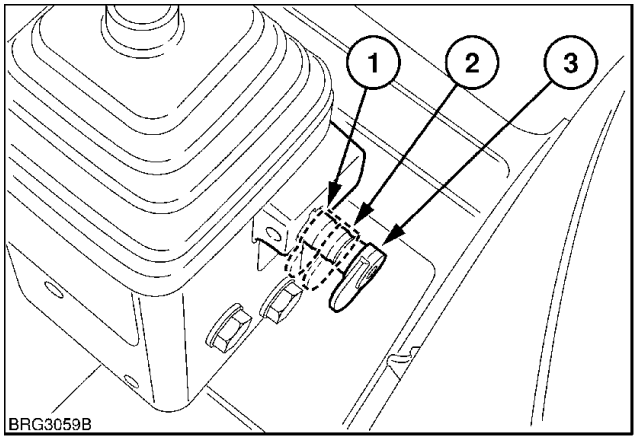
W0419A

Joystick Lock

The lever lock provides selective control of the joystick. With the lock pushed fully in, position **(1)**, the joystick is fixed in neutral and the remote valves cannot be operated, either by accident or by choice.

If the lock is pulled fully out, position **(3)**, valves 1 and 2 may be operated independently or together by moving the joystick control in the appropriate direction.

In the intermediate position **(2)**, lateral movement of the joystick that operates valve 2 is locked.



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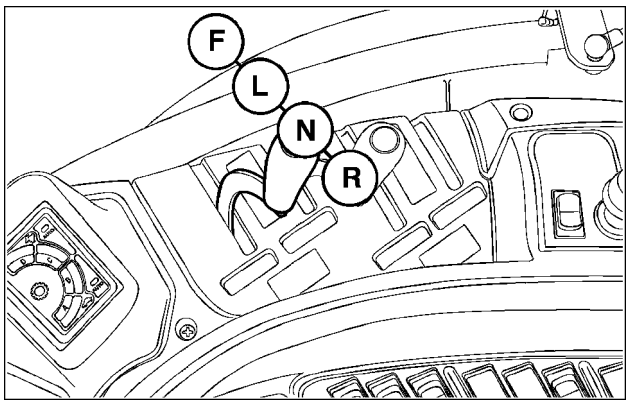
Joystick or Lever Controls

The extend (raise), neutral, retract (lower) and float positions are identified by symbols on a decal next to the joystick and/or control levers.

A detent will hold the joystick/lever in the selected extend or retract position until the remote cylinder reaches the end of the stroke when the control lever will automatically return to neutral. Alternatively, the lever may be returned to neutral manually. The lever will not return automatically from the float position.

NOTE: *Do not hold the joystick/lever in the extend or retract position once the remote cylinder has reached the end of the stroke as this will cause the relief valve to 'blow'. Forcing oil through the relief valve for extended periods will overheat the oil and may lead to failure of hydraulic and driveline components.*



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This maintenance step below is required **EVERY 600 HOURS**.

Check the handbrake

The handbrake should be checked and adjusted by your authorized dealer as the procedures require the removal of some components.