MXU115, MXU130 Tractors

Operator's Manual

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CASE IH

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PRECAUTIONARY STATEMENTS

PERSONAL SAFETY

Throughout this manual and on machine decals, you will find precautionary statements ("**DANGER**", "**WARNING**", and "**CAUTION**") followed by specific instructions. These precautions are intended for the personal safety of you and those working with you. Please take the time to read them.

⚠ DANGER ⚠

This word "DANGER" indicates an immediate hazardous situation that, if not avoided, will result in death or serious injury. The color associated with Danger is RED.

⚠ WARNING ⚠

This word "WARNING" indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. The color associated with Warning is ORANGE.

⚠ CAUTION ⚠

This word "CAUTION" indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

FAILURE TO FOLLOW THE "DANGER", "WARNING", AND "CAUTION" INSTRUCTIONS MAY RESULT IN SERIOUS BODILY INJURY OR DEATH.

MACHINE SAFETY

The precautionary statement ("**IMPORTANT**") is followed by specific instructions. This statement is intended for machine safety.

IMPORTANT: *The word "IMPORTANT" is used to inform the reader of something he needs to know to prevent minor machine damage if a certain procedure is not followed.*

INFORMATION

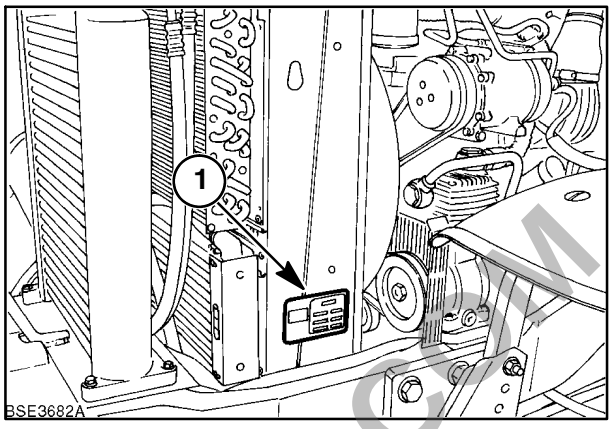
NOTE: *Instructions used to identify and present supplementary information.*

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PRODUCT IDENTIFICATION

The tractor and major components are identified using PIN numbers and/or manufacturing codes. Tractor identification data must be supplied to the dealer when requesting parts or service and will also be needed to aid in identifying the tractor if it is ever stolen.

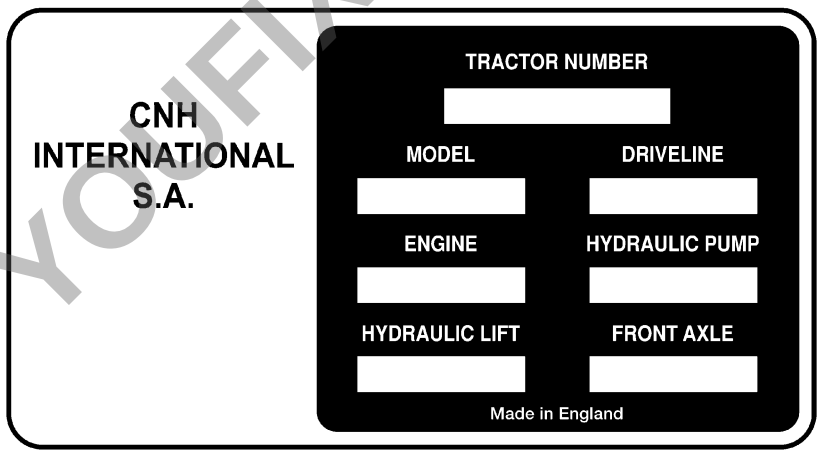
The following provides the locations of the identification data.



1

Vehicle Identification Plate

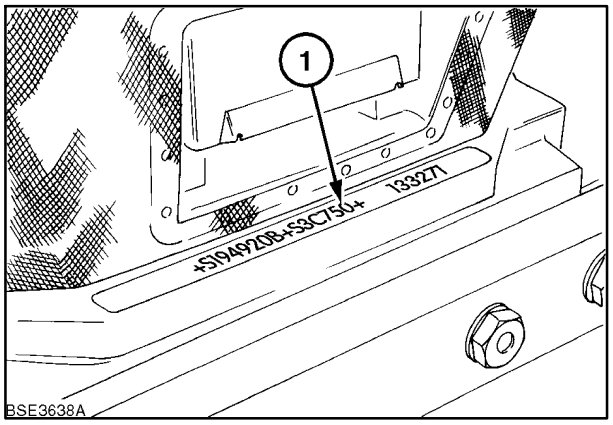
The vehicle identification plate, 1, Figure 1 is located on the left-hand radiator support. Record the information on the sample identification plate provided below.



2

Tractor Identification

The PIN number and model identification information is stamped on the top of the front support, 1. These numbers are also repeated on the vehicle identification plate reproduced above.



3

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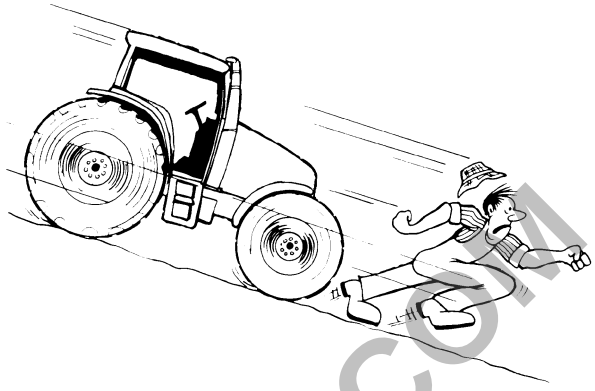
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OPERATING THE TRACTOR

1. Apply the parking brake, place the P.T.O. control in the 'OFF' position, the lift control lever in the down position, the remote control valve levers in the neutral position and the transmission levers in neutral before starting the tractor.
2. Do not start the engine or operate controls (other than externally located hydraulic lift or P.T.O. switches, if fitted) while standing beside the tractor. Always sit in the tractor seat when starting the engine or operating the controls.
3. Do not bypass the transmission and P.T.O. neutral start switches. Consult your authorized dealer if your neutral start controls malfunction. Use jump leads only in the recommended manner. Improper use can result in a tractor runaway.



4. Avoid accidental contact with the gear shift levers while the engine is running. Unexpected tractor movement can result from such contact.
5. Do not get off the tractor while it is in motion.
6. If the power steering or engine ceases operating, stop the tractor immediately as the tractor will be more difficult to control.
7. Before leaving the tractor, park the tractor on level ground, apply the parking brake, lower attached implements to the ground, disengage the P.T.O. and stop the engine.



8. Do not park the tractor on a steep incline.
9. The cab is designed to provide the minimum noise level at the operator's ears and meets or exceeds applicable standards in this respect. However, noise (sound pressure level) in the workplace can exceed 85 dB(A) when working between buildings or in confined spaces, with cab windows open. Therefore, it is recommended that operators wear suitable ear protectors when operating in high noise level conditions.

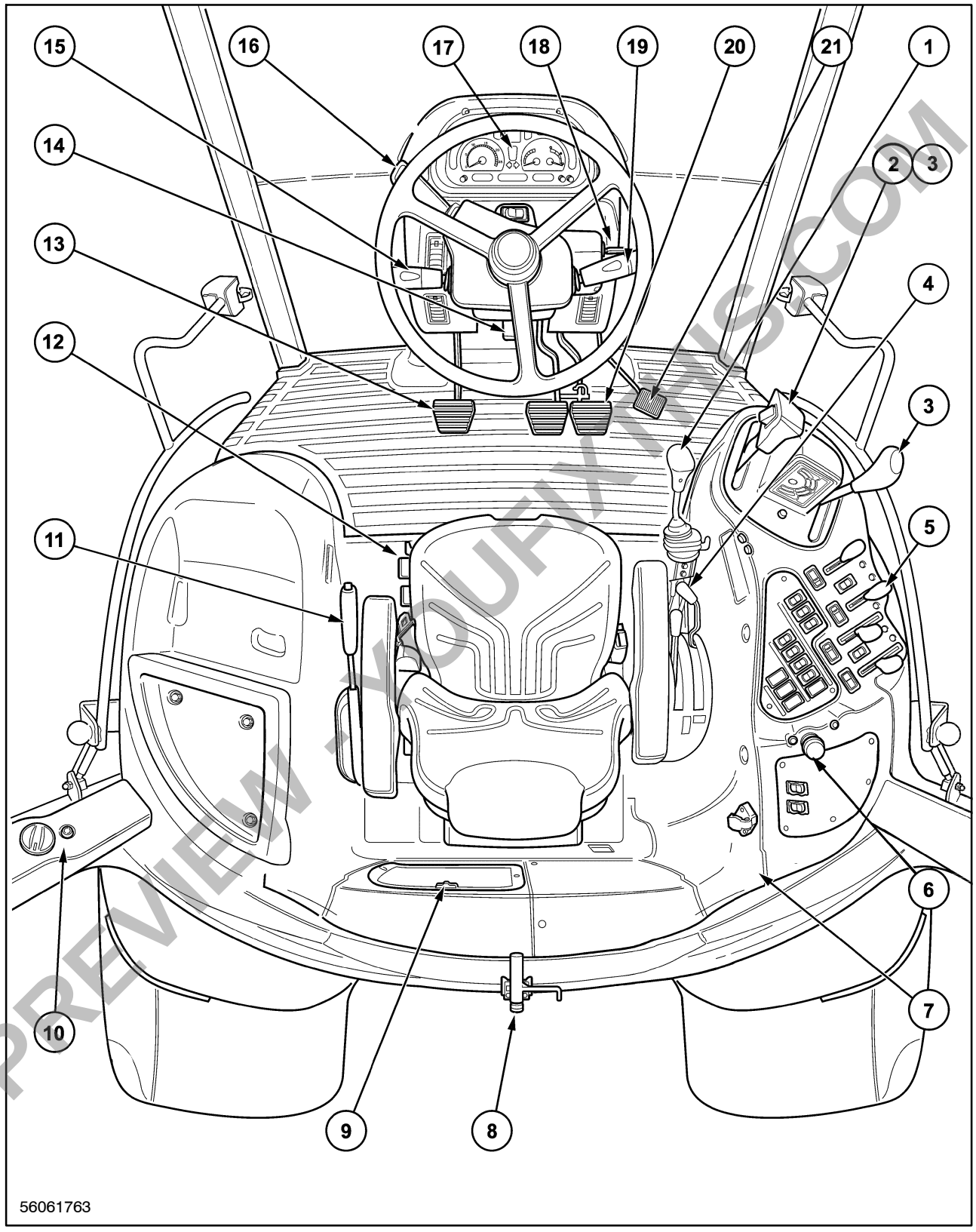


10. Do not run the tractor engine in an enclosed building without adequate ventilation. Exhaust fumes are toxic and can cause death.
11. Pull only from the pick-up hitch, swinging drawbar or the lower link drawbar in the lowered position. Use only a drawbar pin that locks in place. Pulling from the tractor rear axle or any point above the axle may cause the tractor to overturn.

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CAB AND PLATFORM CONTROLS



1

General View of Tractor Controls – With Cab

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Auto Calibration with CAL/SEL Button

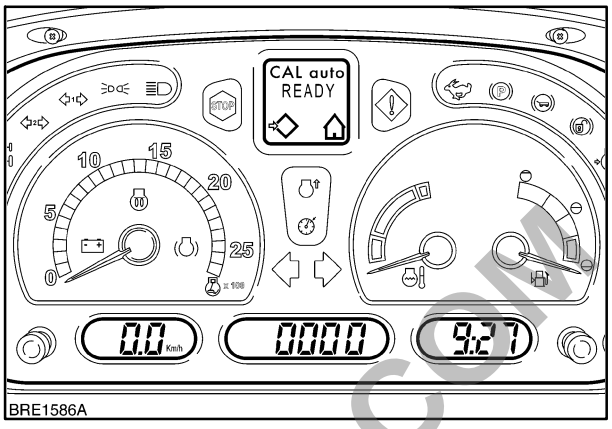
- Park the tractor a short distance from the start line and, with the engine running, press and hold the CAL/SEL button for 3 seconds to enter the calibration mode. SETUP_MENU will appear in the Dot Matrix Display. After approximately two seconds the display will change to CAL. Press the CAL/SEL button again to enter the calibration mode. Using the clock Hour button select CAL auto. Press the CAL/SEL button to confirm selection of CAL auto, the central LCD display will read 0000.

NOTE: *The set up procedure may be cancelled at any time by pressing the LCD dimmer control button or by turning the key-start off.*

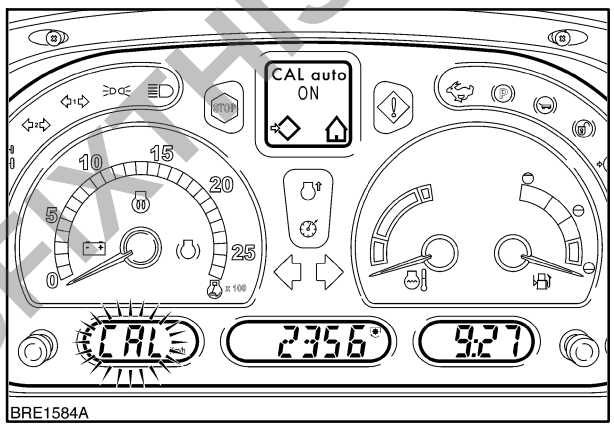
- Select a suitable transmission ratio to provide a speed above 3 KPH (1.8 MPH) and drive up to the start line, CAL auto READY will appear in the display. As the center of the front tires passes over the start line, press and release the CAL/SEL button. CAL will flash in the speed display, CAL auto ON will appear in the DMD and the central LCD will show a four digit figure that will increase as the tractor moves forward.

NOTE: *If the calibration procedure is incorrectly performed i.e. speed below 3 KPH (1.8 MPH), CAL KO will appear in the display, press CAL/SEL to restart sequence.*

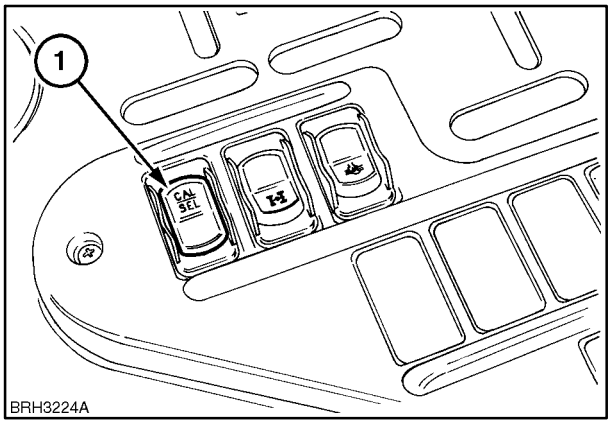
- As the center of the front tires passes over the finish line, press and release the CAL/SEL button, 1, again, CAL auto OK will appear in the Dot Matrix Display. Press the CAL/SEL button again select CAL display. Turn off the key-start to save the setting.



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69



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TOWING THE TRACTOR

IMPORTANT: *The tractor should only be towed a short distance, such as out of a building. Do not tow on roadways or as a method of transport.*

IMPORTANT: *If it is necessary to tow the tractor, all gear levers must be moved to the neutral position before stopping the engine otherwise damage to transmission components may occur during towing. If creeper gears (reduction gear set) are fitted, then the selector control must be in the off position.*

Use a strong chain when towing the tractor. Tow the tractor from the rear using only the drawbar, rear tow hitch or the three-point hitch. Tow the tractor from the front using the tow pin in the front weights or front support. Have an operator steer and brake the tractor.

To avoid damaging the transmission or other components that turn but are not lubricated during towing, observe the following.

- Only tow a short distance
- Keep speed below 8 KPH (5 MPH)
- If possible, run the engine to provide lubrication to the transmission and power steering.

⚠ CAUTION ⚠

Do not tow the tractor faster than 8 KPH (5 MPH). The steering is much slower and steering wheel effort is much greater without the engine running.

⚠ WARNING ⚠

Do not use cables or rope to tow the tractor. If the cable or rope breaks or slips, it may whip with sufficient force to cause serious injury. When using a chain, attach the chain with the hook open side facing up. If the hook slips, it will drop down instead of flying up.

NOTE: *Four wheel drive will be engaged if the engine is not running, regardless of the position of the MFD activation switch.*

CARRYING THE TRACTOR ON A TRANSPORTER

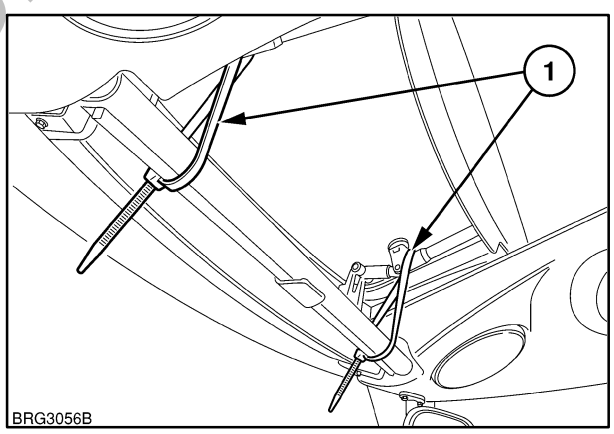
Transport the tractor with all four wheels on a flat bed trailer or truck. Securely chain the tractor to the transporter.

IMPORTANT: *Do not attempt to secure the tractor using the front drive shaft, steering cylinders, front wheel drive axle or other components that could be damaged by contacting the chain or by heavy loading.*

Use the drawbar or drawbar hanger for a rear tie down point.

IMPORTANT: *Cover the muffler outlet so that the wind does not spin the turbocharger and damage the bearings. Turbocharger turbine freewheeling (turning without engine running) must be avoided since lubrication will not be provided to the turbocharger bearings.*

Where road speeds in excess of 50 KPH (31 MPH) are likely to occur when transporting the tractor, it is advisable to secure a tilting high visibility roof panel (where fitted), with ties to prevent it from opening.



1

Secure both handles to the sunvisor support using a flexible strap such as a cable tie, 1, as shown in the illustration above. Do not use wire or metal straps as these may damage the paintwork.

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STARTING THE ENGINE

GRID HEATER (where fitted)

⚠ WARNING ⚠

Your tractor may be equipped with an electronic cold weather starting aid. Do not use ether with the cold start aid installed. The ether will explode in the intake manifold. If any difficulty is experienced when trying to start your tractor in cold temperatures, consult your authorized dealer.

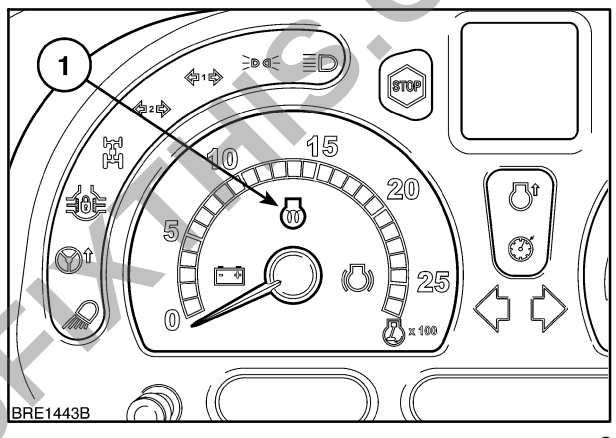
The grid heater, is effective in ambient temperatures down to –18°C (0°F). It consists of an electronically controlled heating element installed in the intake manifold. Operation of the grid heater is automatic when the the engine coolant temperature falls to –1.5°C (29°F) or less.

Turning the key-start switch to position 4, Figure 3, will activate the grid heater raising the temperature of the intake air prior to it being drawn into the combustion chambers. The cold start warning light, 1, will illuminate to confirm operation.

When the cold start warning light extinguishes, turn the key-start switch fully clockwise to position, 5, Figure 3, to operate the starting motor. Crank the engine until it starts but do not operate the starting motor for more than 60 seconds.

If temperatures below –18°C (0°F) are encountered, a block coolant heater is available as an accessory. The block coolant heater is effective in ambient temperatures down to –29°C (–20°F) when used in conjunction with the grid heater.

NOTE: *If the block coolant heater warms the engine coolant to greater than –1.5°C (29°F) the grid heater will not function.*



2

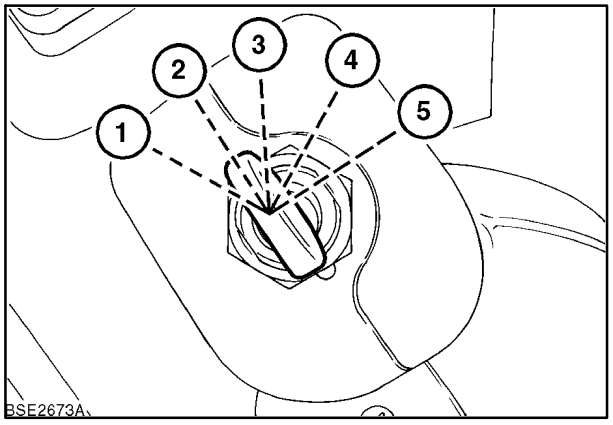
KEY START SWITCH

A five-position key-start switch is installed. The key-start switch positions are as follows:

Position 1	Not used
Position 2	Off
Position 3	Accessories on
Position 4	Warning lights, instruments and grid heater on
Position 5	Starter motor engaged

IMPORTANT: *Never push or tow the tractor to start the engine. Use an auxiliary battery and jump leads.*

NOTE: *Neutral start switches prevent operation of the starting motor unless the shuttle lever is in the neutral (N) position and the clutch pedal is fully depressed.*



3

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THREE-POINT LINKAGE

ATTACHING 3-POINT EQUIPMENT

NOTE: *Before attaching equipment, adjust lift rods and select the correct top link hole for the implement and work to be carried out.*

Ensure that the telescopic stabilizers are installed and correctly adjusted. Remove the swinging drawbar if close-mounted equipment is being attached.

IMPORTANT: *Always select Position Control when attaching equipment, transporting equipment, when no equipment is attached or at any time when not operating in Draft Control. With Lower Link Sensing hydraulics, set the Draft Control lever fully forward.*

Most equipment can be attached to your tractor as follows.

1. Position the tractor so that the lower link hitch points are level with and slightly ahead of the implement hitch pins. Carefully inch the tractor rearward to align the tractor and implement hitch points.
2. Attach the implement to the lower links, as described in FLEXIBLE LINK ENDS on page 3-33.

⚠ DANGER ⚠

Engage the parking brake before leaving the tractor to make the connections. It is essential to have the engine running to operate the external lift controls when making lower link connections. If your tractor does not have these switches or when making other connections, stop the engine.

IMPORTANT: *Before transporting or operating equipment, ensure that flexible link ends are locked in the operating position.*

3. With the engine stopped and parking brake engaged, adjust the top link until the implement mast pin can be inserted through the mast and top link. Ensure sufficient thread remains in the adjuster tube to prevent the threaded ends from pulling out under load.
4. Connect remote equipment, where applicable.
5. After attaching the implement and before actual operation check that:
   - No interference occurs with tractor components.
   - The top link does not contact the PTO guard with the implement at its lowest position.

IMPORTANT: *Before operating PTO driven equipment, check to make sure that the PTO driveline will not over-extend and become disengaged, bottom out or be at an excessive angle. Ensure that the driveline shield does not contact the PTO guard or drawbar. See ATTACHING P.T.O. DRIVEN EQUIPMENT.*

IMPORTANT: *When attaching mounted or semi-mounted equipment to the 3-point linkage or when attaching trailed equipment to the drawbar or hitch, ensure that there is adequate clearance between the implement and the tractor. Semi-mounted or trailed equipment may interfere with the tractor rear tires. If necessary, adjust steering stops (four wheel drive only) or stabilizers.*

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LUBRICATION AND MAINTENANCE CHART

Service Interval	Operation No.	Maintenance Requirement	Check	Clean	Lube	Change	Adjust	Drain	Page No.
When warning lamp lights	1	Engine air cleaner outer element	X	X					4-10
	2	Brake fluid level	X				X		4-12
	3	Fuel system water separator	X					X	4-12
	4	Engine coolant level	X				X		4-12
Every 10 hours or daily	5	Engine oil level	X				X		4-14
	6	Windshield washer reservoir	X				X		4-14
Every 50 hours	7	Radiator,oil cooler and air conditioner condenser	X	X					4-15
	8	Cab air filters	X	X					4-16
	9	All grease fittings			X				4-18
	10	Front and rear wheel nut torque	X				X		4-22
	11	Tire pressures and condition	X				X		4-23
	12	Remote control valve drain bottles	X						4-23
Every 100 hours	13	A/C Compressor drive belts	X				X		4-24
Every 300 hours	14	Poly V-belt	X				X		4-25
	*15	Battery electrolyte level (tropical climates)	X	X			X		4-25
	16	Four wheel drive front axle and hubs oil level	X				X		4-26
	17	Transmission/rear axle/hydraulics oil level	X				X		4-27
	18	Cab and safety frame mounting bolts torque	X				X		4-28
	19	Parking brake	X				X		4-29
Every 600 hours	#20	Engine oil and filter				X			4-31
	21	Hydraulic and transmission oil filters				X			4-32
	22	Air cleaner outer element				X			4-33
	23	Engine air intake connections	X						4-34
	24	Fuel Pre-filter and fuel filter elements	X			X			4-35
Every 1200 hours or annually	25	Cab air filters				X			4-36
	26	Transmission/rear axle/hydraulic oil and filter				X			4-37
	27	Four wheel drive axle differential oil				X			4-38
	28	Four wheel drive axle hub oil				X			4-39
	29	Battery electrolyte level (temperate climates)	X	X			X		4-40
Every 1200 hours or two years	30	Engine coolant				X			4-41
	31	Engine air cleaner inner element				X			4-45
	32	Engine valve tappet clearances	X				X		4-46
Every 1800 hours	33	Fuel injectors	X	X			X		4-47
Every Three Years	34	Air Conditioner System	X	X		X			4-48
General Maintenance	35	Bleeding the fuel injection system	X				X		4-49
	36	Footbrakes	X				X		4-49
	37	Engine idle speed	X				X		4-50
	38	Headlight and worklamp adjustment	X			X			4-51
	39	Bulb replacement	X			X			4-52
	40	Fuse replacement	X			X			4-55
	41	Cleaning the tractor	X	X					4-55

***** Batteries on tractors operating in temperate climates need only be checked every 1200 hours. See Operation 29.

Oil and filter change interval will be reduced if the diesel fuel has a high sulphur content or if the tractor is operated in extremely cold temperatures. See page 4-31.

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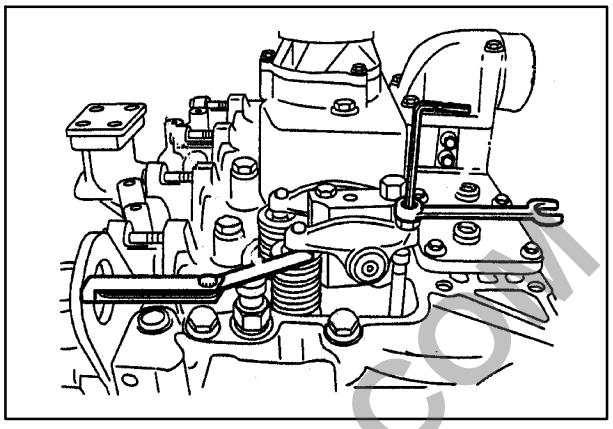
OPERATION 32

CHECK VALVE TAPPET CLEARANCE

With the engine cold, ease the ventilation tube from the valve rocker cover after removing the retaining bolt. Undo the retaining nuts, remove the valve cover and check the valve clearance.

The correct valve clearance for all models is:

Inlet	0.25 +/ – 0.05mm(0.009+/– 0.002in.)
Exhaust	0.51 +/ –0.05mm(0.020+/ –0.002in.)



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Check the valve clearance for MXU115 and MXU130 engines as follows.

Cylinder No.	1	2	3	4	5	6
Intake	–	–	*	–	*	*
Exhaust	–	*	–	*	–	*

Rotate the crankshaft and balance No. 1 cylinder valves. Adjust the valves marked by the asterisk (*) as shown in the table above.

Cylinder No.	1	2	3	4	5	6
Intake	*	*	–	*	–	–
Exhaust	*	–	*	–	*	–

Rotate the crankshaft and balance No.6 cylinder valves. Adjust the valves marked by the asterisk (*) as shown in the table above.

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