6 - WORKING OPERATIONS

GENERAL INFORMATION

VARIABLE ENGINE POWER MANAGEMENT

Power MANAGEMENT

Power Management **(PM)** is an electronically controlled engine power boost function which increases power levels where high loads may compromise tractor performance.

When the system is activated, the **(PM)** light **(1)** in the instrument cluster will illuminate. As the power requirement reduces and **(PM)** is de- activated, the light will extinguish.

(PM) boost levels are variable depending on engine load, driveline torque and tractor speed. Dependent on tractor model, the available power increase is between **1 kW** (**1.4 Hp**) and **24 kW** (**32.6 Hp**) and will vary as the load on the engine changes.

(PM) is a totally automated function requiring no input from the operator. Engine power boost can be activated during P.T.O. operations, road transport applications and when operating with externally powered hydraulic equipment.

NOTE: *Power Management will be disabled if the engine coolant temperature exceeds **105 °C** (**221 °F**). In this situation either increase the engine speed or reduce the load on the engine until the coolant temperature is reduced.*

P.T.O. Operations

Power Management will only function when the following criteria are met:

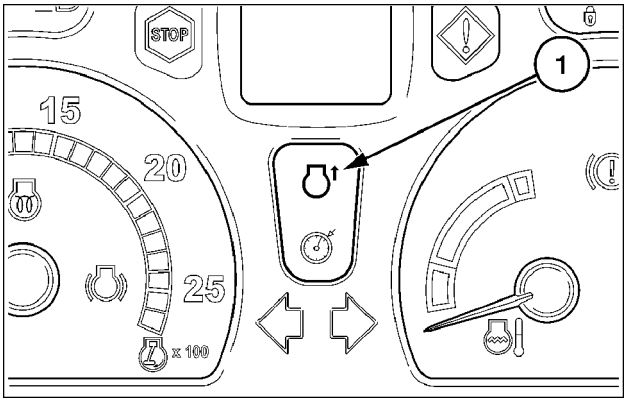
Engine speed above **1300 RPM**.
PTO fully engaged.
Tractor forward speed above **0.5 km/h** (**0.3 mph**).
PTO power output is above **27 kW** (**36.7 Hp**).
PTO driveline torque is above **250 Nm**.
Engine coolant temperature below **105 °C** (**221 °F**)

NOTE: *Power Management will operate at all P.T.O. speeds.*

With the tractor moving and the engine speed above **1300 RPM**. engaging the rear P.T.O. will put **(PM)** into standby mode.

As the torque and load on the PTO reaches or exceeds the above levels, the warning light **(1)** will illuminate and Power Management will be activated.

As the load on the engine is reduced, boost levels will gradually decrease until engine power levels are within normal limits.



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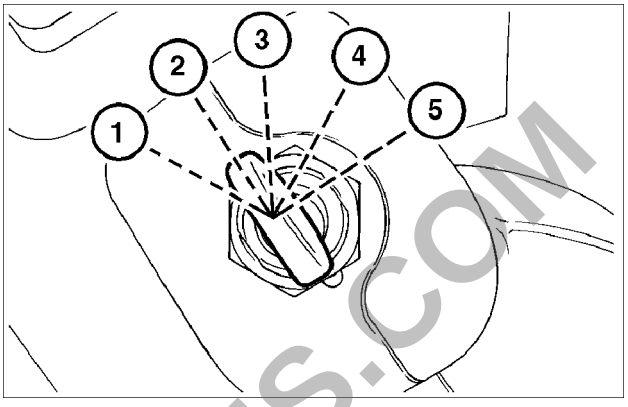
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FORWARD CONTROLS

KEY- START SWITCH

The key- start switch is a five- position switch and activates the grid heater cold start device, accessories and the starting motor.



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The key- start switch positions are as follows:

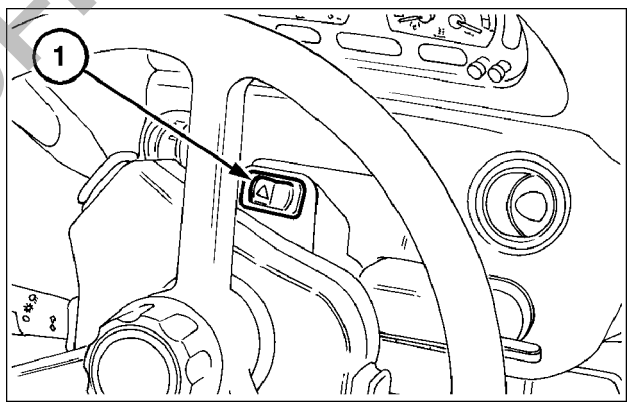
Position 1	Not used
Position 2	Off
Position 3	Accessories on
Position 4	Warning lights, instruments and Grid Heater on
Position 5	Grid heater on, Starter motor engaged

NOTICE: *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.*

HAZARD WARNING LIGHT SWITCH

Press the left- hand side of the switch **(1)** to operate all the turn signals simultaneously. The switch will flash with the turn signals and also the indicator lights in the instrument cluster.



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MAINTENANCE CHART

Maintenance Chart

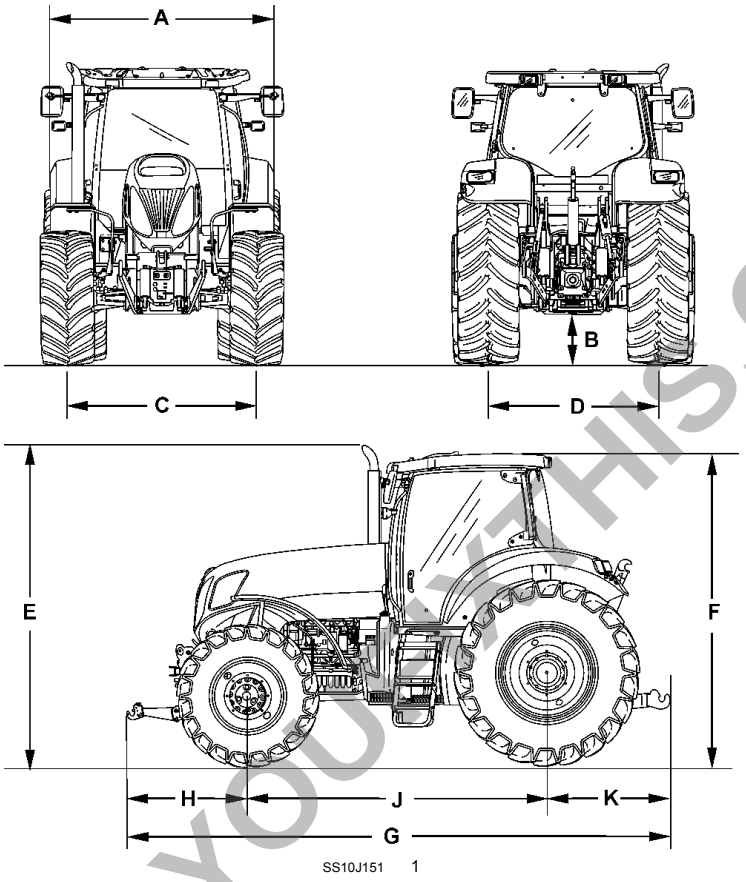
Interval	Page Nb.	Maintenance Action	Nb. of pts	Replace	Drain fluid	Check	Cleaning	Grease	Adjust	Change fluid	Bleed	Charging
WHEN THE WARNING LAMP LIGHTS	**7-14**	CHANGE THE ENGINE AIR CLEANER OUTER ELEMENT		X								
	7-15	DRAIN FUEL SYSTEM WATER SEPARATOR			X							
	7-16	CHECK BRAKE FLUID LEVEL				X						
EVERY 10 HOURS OR EACH DAY	**7-17**	CHECK ENGINE COOLANT LEVEL				X						
	7-18	CHECK ENGINE OIL LEVEL				X						
	7-18	CHECK REMOTE CONTROL VALVE DRAIN BOTTLES				X						
	7-19	CHECK WINDSCREEN WASHER RESERVOIR				X						
	7-19	DRAIN AIR RESERVOIR ON AIR OPERATED TRAILER BRAKE			X							
FIRST 50 HOURS	**7-20**	SERVICE OPERATIONS				X						
EVERY 50 HOURS	**7-21**	CLEAN THE CAB AIR FILTER							X			
	7-23	CLEAN THE COOLER SECTION							X			
	7-24	ALL GREASE FITTINGS						X				
	7-30	CHECK FRONT AND REAR WHEEL NUTS				X						
	7-30	CHECK TYRE PRESSURES AND TYRE CONDITION				X						
EVERY 100 HOURS	**7-31**	INSPECT POLY V-BELT				X						
	7-31	INSPECT COMPRESSOR DRIVE BELT				X						
EVERY 300 HOURS	**7-32**	CHECK BATTERY FLUID LEVEL				X						
	7-33	ADJUST HANDBRAKE						X				
	7-34	CHECK TRANSMISSION/REAR AXLE AND HYDRAULIC OIL LEVEL				X						
	7-35	CHECK 4WD FRONT AXLE DIFFERENTIAL AND HUBS OIL LEVEL				X						
	7-35	CHECK FRONT P.T.O. GEARBOX OIL LEVEL				X						
EVERY 600 HOURS	**7-36**	CHANGE ENGINE OIL AND FILTER		X								
	7-38	CHANGE FUEL PRE-FILTER AND FUEL FILTER ELEMENT		X								
	7-39	CHANGE THE ENGINE AIR CLEANER OUTER ELEMENT		X								
	7-40	CHANGE CHARGE PUMP OIL FILTER		X								
		CHANGE CHARGE PUMP AND GEAR PUMP OIL FILTER		X								
	7-41	CHECK ENGINE AIR INTAKE CONNECTIONS				X						
	7-42	CHECK TRANSMISSION OIL COOLER PIPE COUPLINGS				X						
	7-42	CLEAN DEF/ AdBlue INLINE FILTER							X			

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9 - SPECIFICATIONS

GENERAL DIMENSIONS



NOTE: *The following dimensions are based on standard tractors fitted with tyre size as shown. Allowance must be made for tyres of larger or smaller dimensions:*

		T7.170, T7.185, T7.200, T7.210
		4WD (Standard and Suspension Axles)
The following dimensions are based on tractors with tyre sizes:	Front	540/ 65R28
	Rear	650/ 65R38
A. Width across rear fenders		
Narrow fenders		**2164 mm** (**85.2 in**)
Wide fenders		**2338 mm** (**92.0 in**)
Wide fenders extensions		**2470 mm** (**97.2 in**)
B. Ground clearance below front axle		**495 mm** (**19.5 in**)
Ground clearance below rear axle		**535 mm** (**21.1 in**)
Ground clearance middle		**425 mm** (**16.7 in**)
Ground clearance below swinging drawbars		**536 mm** (**21.1 in**)
Ground clearance Tow hooks/ K80 ball/ biton		**505 mm** (**19.9 in**)
Ground clearance automatic pick up hitch		**347 mm** (**13.7 in**)

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ALARM(S)

FAULT CODES AND SYMBOLS

DMD	LAMP	FAULT CODE	AREA of FAULT	ACTION
	-	1---	Electronical hitch control	The system fault symbols relate to an operational fault in one or more of the tractors main components, either electrical, mechanical or hydraulic. The appearance of a fault symbol may be accompanied by a four digit fault code. Consult your authorised dealer.
	-	2---	Transmission	
	-	3---	Engine	
	-	4---	Rear electronic remote valves	
 F	-	45--	Front electronic remote valves	
	-	5---	Rear PTO system	
	-	6---	Front wheel drive	
	-	7---	Rear differential lock	
	-	8---	Front PTO system	
	-	9---	Front 3- point hitch	
	-	10--	Front suspension	
	-	12--	Electronic park lock	
	-	13--	Universal Control Module (UCM)	
	-	15--	Turn Assist system	
	-	16--	Cab auto temperature control	
	-	18--	Armrest controller	

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AUTOMATED HEADLAND FUNCTIONS

QUICK GUIDE

Headland Turn Sequence (HTS)

Where there is a need to repeat a sequence of actions, such as those made during a headland turn, HTS can be used to create, store and play- back a programme of these actions.

The following text is provided as a quick guide to the operation of Headland Turn Sequence . A more comprehensive guide to HTS can be found beginning on page **ELECTRONIC SYSTEM - Operating**.

NOTE: *For HTS to function, the hand throttle must be set above **1000 RPM**. HTS is able to record while the tractor is moving or stationary but playback requires the tractor to be moving. Playback will pause when the tractor is stationary.*

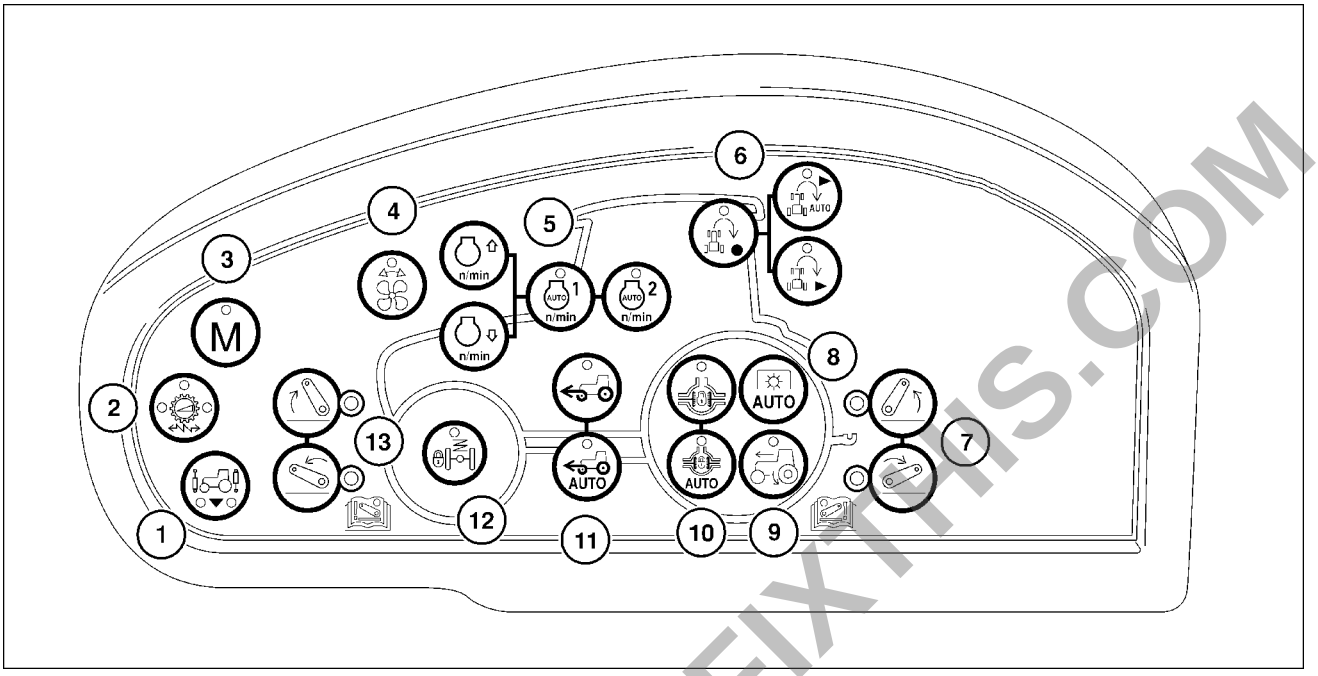
ACTION - RECORDING	CONTROL	VISUAL
1. Depress and hold the recording switch for **1 s**. The recording symbol will flash in the HTS display.		
2. To start recording a sequence, momentarily depress the step switch until a 'beep' is heard. The recording symbol will cease to flash and will remain displayed.		
3. Carry out the headland manoeuvre in the normal way. As each step in the sequence is recorded, the relevant symbol will appear in the display.		
When a step is completed and a new one started, the symbol for the completed step will scroll downwards to be replaced by the new one.		
To record a second HTS sequence go to paragraph 4. To end the current recording go to paragraph 6.		
4. To record a second sequence after the first one is completed, depress the step switch again momentarily, the recording symbol will start to flash.		
5. Carry out the second headland manoeuvre in the same way as the first one.		
6. When the HTS recordings are completed, momentarily depress the record switch to save the recorded sequences and exit HTS.		

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RIGHT-HAND SIDE CONTROLS

INTEGRATED CONTROL PANEL



SS10K056 1

Your tractor is equipped with a number of electronic control switches located on the right- hand side of the cab. Depending on the options fitted to your tractor, some of these switches may have more than one function. A full explanation of individual switch operation can be found in the relevant pages of this manual.

The grouping of the switches on the ICP in your tractor may appear different to those shown in some illustrations in Operator's Manual. However, their operation will be identical to that described.

1. Front/ rear joystick control selector
2. Auto Command acceleration rate control
3. Auto Command manual operation
4. Reversible engine fan control
5. Engine Speed Management settings
6. HTS Record/ Auto/ Manual select
7. Rear 3- point hitch EDC operation
8. Rear Auto PTO control
9. Wheel slip engagement
10. Rear axle differential lock, Auto/ Manual engagement
11. 4WD Auto or Manual engagement
12. Front axle suspension lock
13. Front 3- point hitch operation

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EVERY 600 HOURS

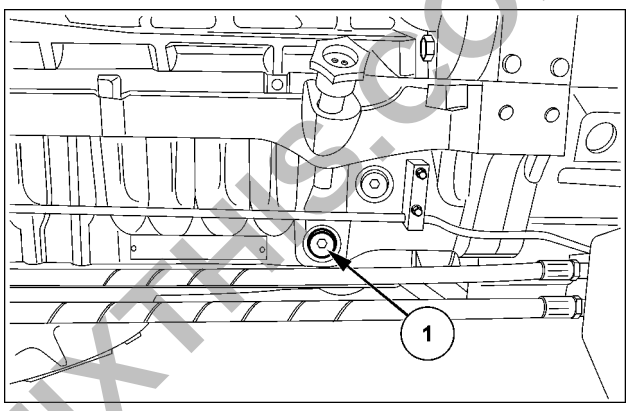
CHANGE ENGINE OIL AND FILTER

⚠ WARNING

Burn hazard!
Be very careful to avoid contact with hot fluids. If fluid is extremely hot, allow it to cool to a moderately warm temperature before proceeding.
Failure to comply could result in death or serious injury.

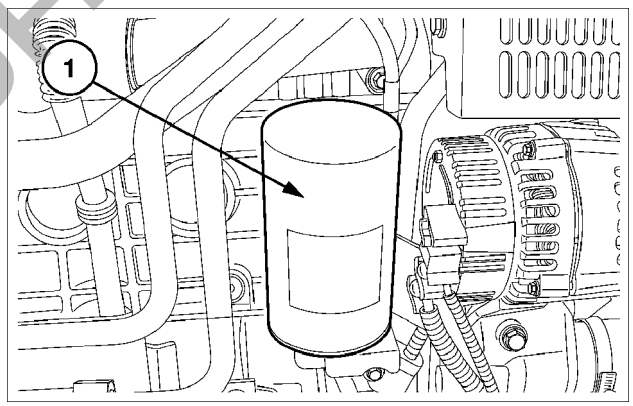
W0362A

1. Warm the engine to operating temperature. Stop the engine, remove the engine oil drain plugs **(1)** which are located at the rear of the sump on either side of the engine. Catch the oil in a suitable container and dispose properly.
2. Replace the seal of the drain plugs and refit the plug after the oil has drained.



SS10J179 1

3. Clean the oil filter area. Unscrew the oil filter **(1)** and discard. Catch any residual oil and dispose of properly.
4. Clean the new filter mounting surface.
5. Apply a thin coat of oil on the new filter sealing ring and install the filter. Turn until the sealing ring contacts the mounting surface, then tighten an additional 3/4 to 1 full turn. Do not overtighten.
6. Remove Dipstick/ Filler cap and fill with the correct amount of fresh oil as indicated below. Ensure the oil is of the correct grade and viscosity.



BRJ4905B 2

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GROUND SPEED CHART SEMI POWERSHIFT TRANSMISSION

The ground speed of your tractor may be displayed on the instrument panel. If your tractor is equipped with radar then the ground speed displayed will be a true reading. Tractors without radar will display a ground speed that is subject to minor inaccuracies due to the effects of wheel slip, tyre pressures, change of tyre size, etc.

The charts on the following pages show the ground speeds in km/h and MPH. To find the road speed for your tractor in any given gear ratio, use the column with your rear tyre size in the heading.

NOTICE: *The gear speeds shown in the charts are approximate and will vary depending on the make of tyre, pressure and load.*

If tyres of a different size are fitted to your tractor, ensure the Ground Speed Calibration procedure has been carried out to provide an accurate ground speed in the instrument panel display (see page **3-49**).

Calculating P.T.O. Speeds

The gear speeds shown in the ground speed charts are calculated at a rated engine speed of **2200 RPM**. To determine the ground speeds for P.T.O. operations divide the ground speeds in the chart by the rated engine speed and multiply by the P.T.O. engine speed.

For example, to determine the ground speed at **540 RPM** P.T.O. speed in gear B2 (**6.4 km/h**) use the following calculation:

6.4 km/h ÷ 2200 (rated speed) x 1970 (P.T.O. erpm) = **5.73 km/h**

GROUND SPEEDS in km/h and MPH at 2200 RPM Rated Engine Speed for 50 km/h, 40 km/h, 40 km/h Economy Transmissions - T7.170 AND T7.185

Gear Ratio	Range	Rear Tyre Size	
		18.4R38, 520/70R38, 650/60R38	20.8R38, 710/60R38, 650/70R38
Forward Ratios		Standard Speeds	
F1	A	2.4 km/h (1.5 mph)	2.5 km/h (1.6 mph)
F2	A	2.9 km/h (1.8 mph)	3.0 km/h (1.9 mph)
F3	A	3.4 km/h (2.1 mph)	3.6 km/h (2.2 mph)
F4	A	4.1 km/h (2.5 mph)	4.4 km/h (2.7 mph)
F5	A	4.9 km/h (3.0 mph)	5.1 km/h (3.2 mph)
F6	A	5.8 km/h (3.6 mph)	6.2 km/h (3.9 mph)
F1	B	5.5 km/h (3.4 mph)	5.9 km/h (3.7 mph)
F2	B	6.6 km/h (4.1 mph)	7.0 km/h (4.3 mph)
F3	B	8.0 km/h (5.0 mph)	8.5 km/h (5.3 mph)
F4	B	9.6 km/h (6.0 mph)	10.2 km/h (6.3 mph)
F5	B	11.3 km/h (7.0 mph)	12.0 km/h (7.5 mph)
F6	B	13.6 km/h (8.5 mph)	14.4 km/h (8.9 mph)
F1	C	15.7 km/h (9.8 mph)	16.6 km/h (10.3 mph)
F2	C	18.8 km/h (11.7 mph)	20.0 km/h (12.4 mph)
F3	C	22.6 km/h (14.0 mph)	24.0 km/h (14.9 mph)
F4	C	27.2 km/h (16.9 mph)	28.9 km/h (18.0 mph)
F5	C	32.0 km/h (19.9 mph)	33.9 km/h (21.1 mph)
F6	C	38.5 km/h (23.9 mph)	40.8 km/h (25.4 mph)
F7	C	48.3 km/h (30.0 mph)	49.7 km/h (30.9 mph)
F7(E)	C	41.9 km/h (26.0 mph)	41.9 km/h (26.0 mph)

NOTE: *Ratio F7 is only available with **50 km/h** (**31.1 mph**) transmission.*

NOTE: *Ratio F7 (E) is only available with **40 km/h** (**24.9 mph**) Economy transmission.*

NOTE: *Maximum gear speeds are electronically regulated.*

Reverse Ratios		Standard Speeds	
R1	-	4.7 km/h (2.9 mph)	5.0 km/h (3.1 mph)
R2	-	5.7 km/h (3.5 mph)	6.1 km/h (3.8 mph)
R3	-	6.9 km/h (4.3 mph)	7.3 km/h (4.5 mph)

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SYMPTOM(S)

ENGINE

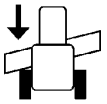
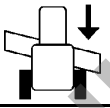
Problem	Possible Cause	Correction
Engine will not start or is difficult to start	Incorrect starting procedure.	Review starting procedure.
	Low or no fuel.	Check fuel level.
	Air in fuel lines.	Bleed fuel system.
	Low ambient temperature.	Use cold starting aid.
	Contaminated fuel system.	Clean and bleed fuel system.
	Clogged fuel filter(s).	Replace fuel filter element(s)
	Malfunctioning fuel pump or injectors.	See your authorised dealer.
	Malfunctioning fuel solenoid or solenoid relay.	See your authorised dealer.
	Incorrect engine oil viscosity.	Use correct viscosity oil.
	Incorrect fuel for operating temperature.	Use correct type fuel for temperature conditions.
	Slow starter speed.	See slow starter speed in Electrical.
Engine runs roughly and/ or stalls	Clogged fuel filter(s)	Replace fuel filter element(s).
	Contaminated fuel system.	Clean and bleed fuel system.
	Fuel solenoid incorrectly adjusted.	See your authorised dealer.
	Fuel cap vent blocked.	Wash cap in clean fuel oil.
Engine lacks power	Engine overloaded.	Shift to lower gear, reduce draft load or ballast carried.
	Air cleaner restricted.	Service air cleaner.
	Low engine operating temperature.	Check thermostats.
	Engine overheats.	See Engine overheats.
	Clogged fuel filter(s).	Replace fuel filter element(s).
	Incorrect fuel.	Use correct type fuel.
	Malfunctioning fuel injectors.	See your authorised dealer.
	Malfunctioning fuel injection pump.	See your authorised dealer.
	Maximum 'no- load' speed set too low	See your authorised dealer.
	Leaking air intake boost pipes or exhaust manifold.	Check and rectify or see your authorised dealer.
	Turbocharger malfunctioning.	See your authorised dealer.
	Implement incorrectly adjusted.	See implement Operator's Manual..
Engine knocks	Fuel injection pump timing.	See your authorised dealer.
	Low engine oil level.	Add oil, as required.
	Low engine oil pressure.	See your authorised dealer.
	Low engine operating temperature.	Check thermostats.
	Engine overheats.	See Engine overheats.
Engine overheats.	Low engine oil level.	Add oil, as required.
	Low engine coolant level.	Fill coolant recovery tank. Check cooling system for leaks.
	Defective thermostat(s).	Check thermostat(s).
	Dirty/ blocked radiator core.	Clean.
	Excessive engine overload.	Shift to lower gear, reduce draft load or ballast carried.
	Faulty radiator pressure cap.	Replace cap.
	Cooling system blocked.	Flush cooling system.
	Loose or worn fan belt.	Check tension, adjust or replace belt if worn.
	Leaking hose or connection.	Tighten connection and/ or replace hose.
	Malfunctioning temperature gauge or sender.	See your authorised dealer.
	Malfunctioning vistronic fan.	See your authorised dealer.
Low engine operating temperature	Malfunctioning thermostat(s).	Replace thermostat(s).

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EXPLANATION OF SYMBOLS

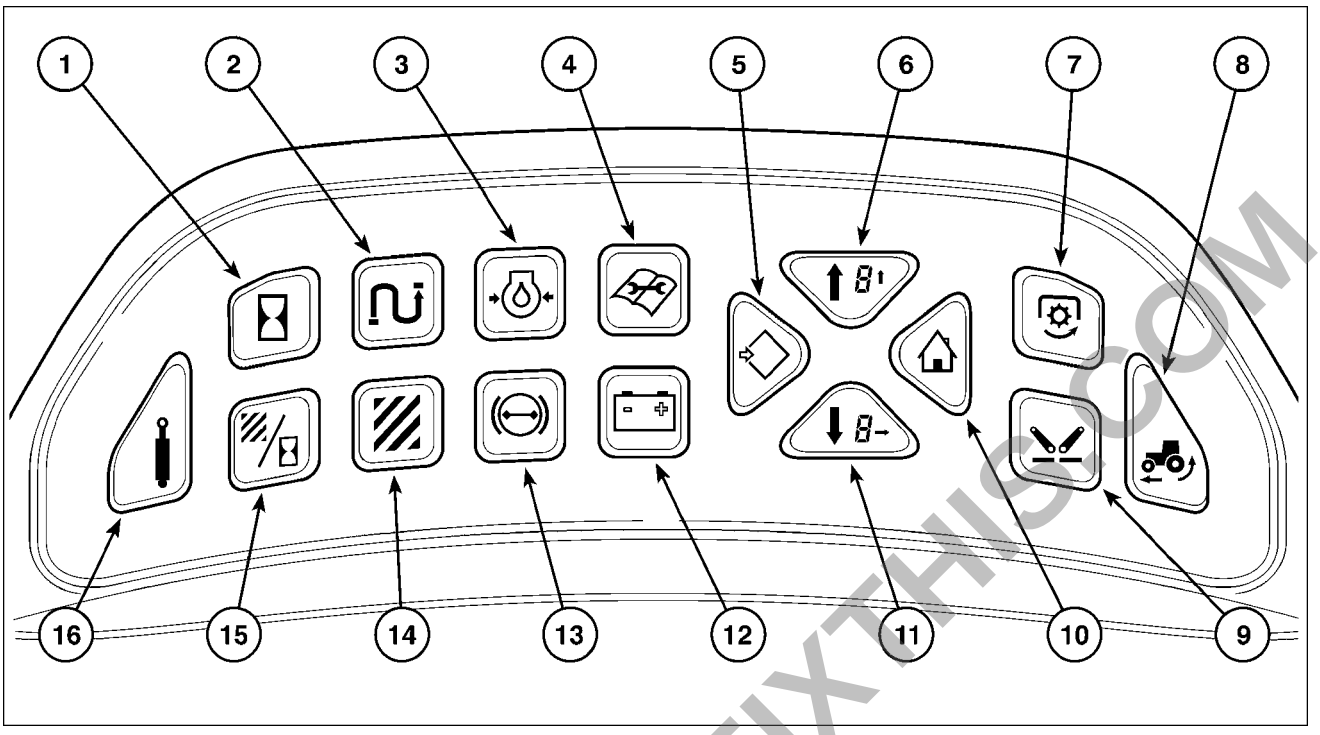
The symbols as shown are examples of those which may, depending on tractor specification and sequence content, appear in the display when HTS is active.

1	One		Remote Cylinder - Extend		Play (Manual)
2	Two		Remote Cylinder - Retract		HTS Error
3	Three		Remote Cylinder - Float		Adjust Right- Hand Hydraulic Lift Rod Down Right
4	Four		Front Hitch - Raise		Adjust Right- Hand Hydraulic Lift Rod Down Left
	Engine Speed - Up		Front Hitch - Lower		Adjust Hydraulic Top Link Upwards
	Engine Speed - Down		Front Hitch - Float		Adjust Hydraulic Top Link Downwards
	Rear Hitch- Raise		Pause		Reversible Fan
	Rear Hitch- Lower		Record		Front Remote Cylinder - Extend
	Up Shift		Down Shift		Front Remote Cylinder - Retract

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KEYPAD ENHANCED



BRE1455B 1

The enhanced keypad consists of 16 buttons or 'keys' that select, control or programme various functions and displays in the central and dot matrix screens. Keys 5, 6, 10 and 11 are used to set- up and programme many of the enhanced keypad functions.

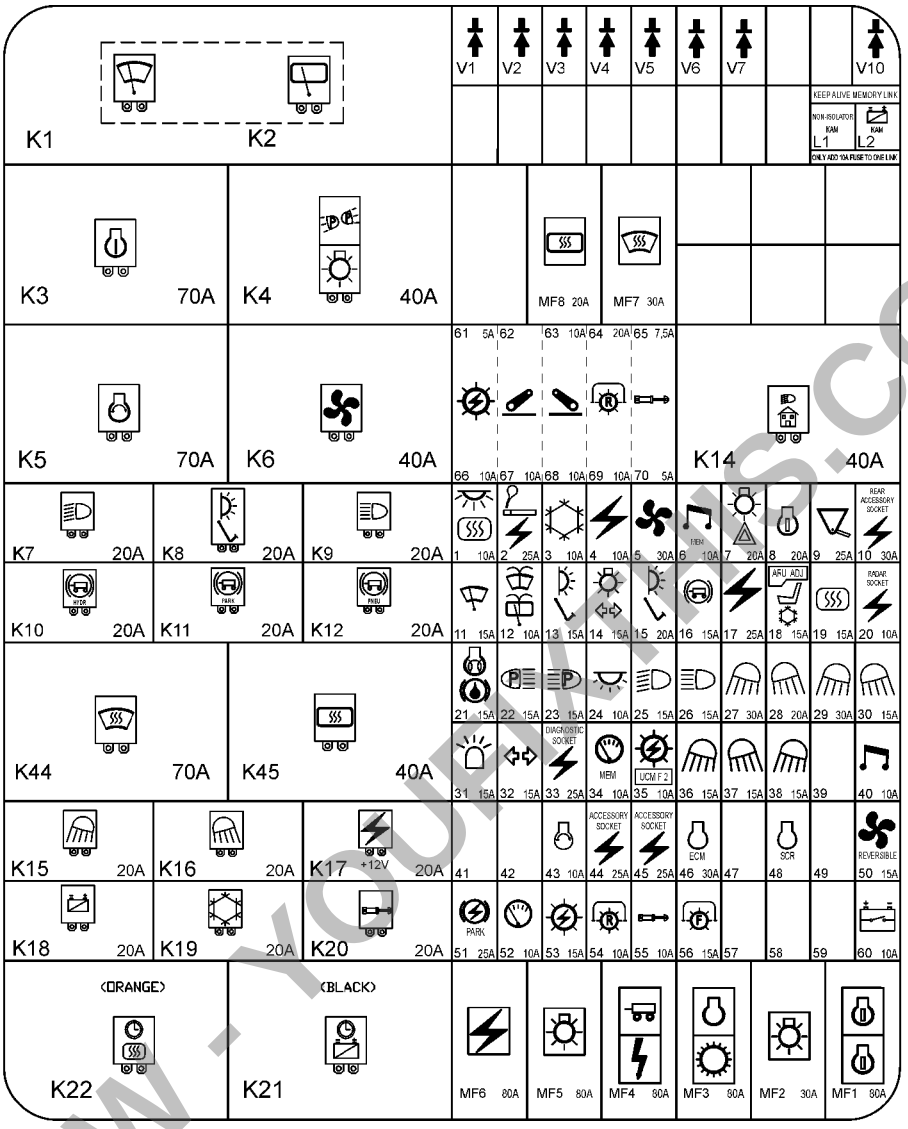
Unless otherwise described, depress the keys once to obtain the appropriate display. A symbol will appear in the display to confirm the function selected.

Legend: **(D)** = Dot Matrix Display
(C) = Centre Digital Display

1. Hourmeter **(D)**. Touch the key to view total number of hours that the tractor has operated. The hours recorded should be used as a guide to the service intervals for the tractor.
2. Odometer **(D)**. The odometer provides a visual record of the distance travelled in kilometres or miles depending on the ground speed unit selected. Two displays are available, '1' and '2'.
3. Engine Oil Pressure **(D)**. This key will display the engine oil pressure bargraph.
4. Programmed Maintenance Reminder **(D)**. The maintenance schedule key provides two levels of reminder identified as 'Heavy' and Light.
5. Menu Enter **(D)**. Depress to select set- up and programming modes.
6. Menu Scroll Up or Digit Value **(D)**. Depress this key repeatedly to scroll upwards through the menu or change the value of a number.
7. P.T.O. Speed **(C)**. Depress once to display rear Power Take Off speed, press again and hold for **3 s** to show front P.T.O. speed (where fitted).
8. Rear Wheel Slip **(C)**. The level of rear wheel slip will appear as a one or two digit percentage (%) figure (with radar option only).
9. Hitch Height Position **(C)**. Depress once to display the rear hitch height, press again and hold for **3 s** to show front linkage height (where fitted). The display will show a figure between **'0'** (fully lowered) and **'100'** (maximum raised position).
10. Exit/ Cancel **(D)**. Use this key to Exit or cancel set- up and programming modes.

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Fuse and Relay Locations



SS11A101 3

Mini Fuses

No.	Amps	Circuit	No.	Amps	Circuit
1	**10 A**	Interior and Puddle Lights + Heated Mirrors	38	**15 A**	6 Worklamps Roof Front
2	**25 A**	Cigar Lighter + Power Studs	39	-	Not Used
3	**10 A**	A/C Clutch	40	**10 A**	Radio
4	**10 A**	Power Studs	41	-	Not Used
5	**30 A**	Blower Motor	42	-	Not Used
6	**10 A**	Radio KAM + Worklamp ECU	43	**10 A**	Electronic Engine Module Ign.
7	**20 A**	Main Lights + Hazard Switch	44	**25 A**	Front Implement Power Socket
8	**20 A**	Starter Switch	45	**25 A**	**8 A** Socket C- Pillar LH
9	**25 A**	Loader Power	46	**15 A**	Electronic Engine Module (ECM) B+
10	**30 A**	Rear Accessory Socket	47	-	Not Used
11	**15 A**	Front Windscreen Wiper	48	**5 A**	SCR System
12	**10 A**	Rear Windscreen Wiper + Front and Rear Windscreen Washer	49	-	Not Used
13	**15 A**	Stop Lamps	50	**15 A**	Reversible Fan
14	**15 A**	Head Light Switch + Flasher Unit	51	**25 A**	Electronic Park Brake
15	**20 A**	Stop Lamp Switch + Pedal Latch	52	**10 A**	Instrument Cluster Supply Ignition
16	**15 A**	Electronic Park Brake, Trailer Brake	53	**15 A**	Transmission Control Supply Ign.

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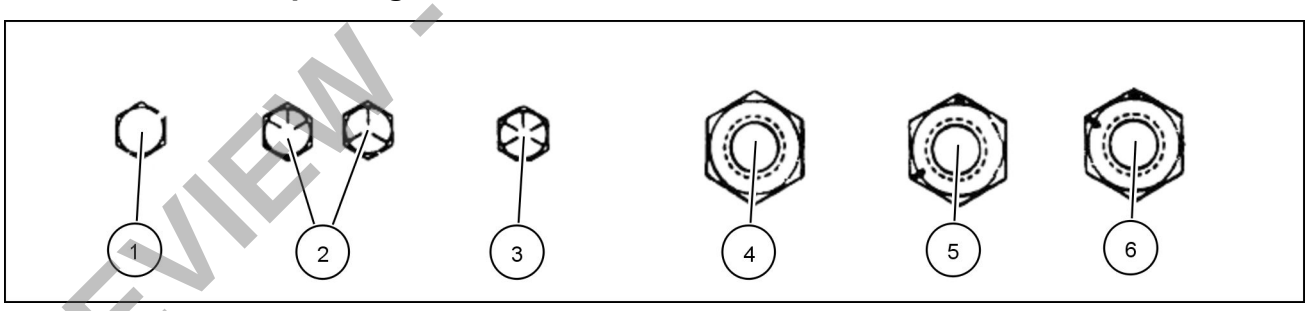
MINIMUM HARDWARE TIGHTENING TORQUES

INCH NON-FLANGED HARDWARE AND LOCKNUTS

NOMINAL SIZE	SAE GRADE 5 BOLT and NUT		SAE GRADE 8 BOLT and NUT		LOCKNUT GrB W/ Gr5 BOLT	LOCKNUT GrC W/ Gr8 BOLT
	UNPLATED or PLATED SILVER	PLATED W/ZnCr GOLD	UNPLATED or PLATED SILVER	PLATED W/ZnCr GOLD		
1/4	**9.7 Nm (85.9 lb in)**	**13 Nm (115.1 lb in)**	**14 Nm (123.9 lb in)**	**18 Nm (159.3 lb in)**	**6.9 Nm (61.1 lb in)**	**9.8 Nm (86.7 lb in)**
5/16	**20 Nm (177.0 lb in)**	**26 Nm (230.1 lb in)**	**28 Nm (247.8 lb in)**	**37 Nm (327.5 lb in)**	**14 Nm (123.9 lb in)**	**20 Nm (177.0 lb in)**
3/8	**35 Nm (26 lb ft)**	**46 Nm (34 lb ft)**	**50 Nm (37 lb ft)**	**65 Nm (48 lb ft)**	**26 Nm (19 lb ft)**	**35 Nm (26 lb ft)**
7/16	**57 Nm (42 lb ft)**	**73 Nm (54 lb ft)**	**80 Nm (59 lb ft)**	**104 Nm (77 lb ft)**	**41 Nm (30 lb ft)**	**57 Nm (42 lb ft)**
1/2	**87 Nm (64 lb ft)**	**113 Nm (83 lb ft)**	**123 Nm (91 lb ft)**	**159 Nm (117 lb ft)**	**61 Nm (45 lb ft)**	**88 Nm (65 lb ft)**
9/16	**125 Nm (92 lb ft)**	**163 Nm (120 lb ft)**	**176 Nm (130 lb ft)**	**229 Nm (169 lb ft)**	**88 Nm (65 lb ft)**	**125 Nm (92 lb ft)**
5/8	**174 Nm (128 lb ft)**	**224 Nm (165 lb ft)**	**244 Nm (180 lb ft)**	**316 Nm (233 lb ft)**	**122 Nm (90 lb ft)**	**172 Nm (127 lb ft)**
3/4	**306 Nm (226 lb ft)**	**397 Nm (293 lb ft)**	**432 Nm (319 lb ft)**	**560 Nm (413 lb ft)**	**217 Nm (160 lb ft)**	**305 Nm (225 lb ft)**
7/8	**495 Nm (365 lb ft)**	**641 Nm (473 lb ft)**	**698 Nm (515 lb ft)**	**904 Nm (667 lb ft)**	**350 Nm (258 lb ft)**	**494 Nm (364 lb ft)**
1	**742 Nm (547 lb ft)**	**960 Nm (708 lb ft)**	**1048 Nm (773 lb ft)**	**1356 Nm (1000 lb ft)**	**523 Nm (386 lb ft)**	**739 Nm (545 lb ft)**

IDENTIFICATION

Inch Bolts and free-spinning nuts



20083682 1

Grade Marking Examples

SAE Grade Identification			
1	Grade 2 - No Marks	4	Grade 2 Nut - No Marks
2	Grade 5 - Three Marks	5	Grade 5 Nut - Marks **120 °** Apart
3	Grade 8 - Five Marks	6	Grade 8 Nut - Marks **60 °** Apart

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Problem	Possible Cause	Correction
	Vistronic fan locked up.	See your authorised dealer.
Low engine oil pressure	Low oil level.	Add oil, as required.
	Wrong oil grade or viscosity.	Drain and refill with oil of the correct specification.
Excessive engine oil consumption.	Engine oil level too high.	Reduce oil level, as required.
	Wrong oil grade or viscosity.	Drain and refill with oil of the correct specification.
	Malfunctioning turbocharger.	See your authorised dealer.
	External oil leaks.	Repair leaks.
	Worn valve guides/ seals.	See your authorised dealer.
Excessive fuel consumption	Low engine operating temperature.	See Low engine operating temperature.
	Malfunctioning turbocharger.	See your authorised dealer.
	Engine overloaded.	Shift to lower gear, reduce draft load or ballast carried.
	Air cleaner restricted.	Service air cleaner.
	Incorrect fuel.	Use correct type fuel.
	Malfunctioning fuel injectors.	See your authorised dealer.
	Malfunctioning fuel injection pump.	See your authorised dealer.
	Leaking air intake or exhaust manifold.	Check and rectify or see your authorised dealer.
	Implement incorrectly adjusted.	See implement Operator's Manual.

TRANSMISSION

Problem	Possible Cause	Correction
Tractor does not drive in any gear	Error code will indicate source of malfunction.	Recalibrate the transmission or see your authorised dealer.
Gear shift sequence incorrect or gears missing	Error code will indicate source of malfunction.	Recalibrate the transmission or see your authorised dealer.
Jumping out of gear or holding in gear	Worn synchronisers/ couplers.	Recalibrate the transmission or see your authorised dealer.
Poor inching control when using inching pedal (clutch pedal) or jerky gear shifting	Transmission clutches require calibration.	Perform transmission clutch calibration procedure or see your authorised dealer.
High transmission operating temperature	Low oil level.	Add oil, as required.
	Incorrect oil grade/ viscosity.	Drain and refill with oil of the correct specification.
	Dirty or blocked transmission oil cooler.	Clean.
Low transmission oil pressure	Low oil level.	Add oil, as required.
	Incorrect oil grade/ viscosity.	Drain and refill with oil of the correct specification.
	Blocked transmission oil filter.	Replace filter.
Noisy transmission	Low oil level.	Add oil, as required.
	Incorrect oil grade/ viscosity.	Drain and refill with oil of the correct specification.
	Worn bearings or failed parts.	See your authorised dealer.

HYDRAULICS

Problem	Possible Cause	Correction
Hydraulic system does not operate	Error code will indicate source of malfunction.	See your authorised dealer.
	Hydraulics oil level very low.	Add oil, as required.
	Blocked hydraulic oil filter(s).	Replace oil filter(s).

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Contents

1 GENERAL INFORMATION

METRIC AND IMPERIAL UNITS ABBREVIATIONS 1-1
TO THE OWNER 1-3
PRODUCT IDENTIFICATION 1-5
ENGINE IDENTIFICATION 1-6
DRIVELINE IDENTIFICATION 1-7
CAB IDENTIFICATION 1-8
PRODUCT IDENTIFICATION PLATE 1-8
ECOLOGY AND THE ENVIRONMENT 1-9
PROGRAMMING TRACTOR FUNCTIONS 1-10
BEFORE OPERATING THE TRACTOR 1-11
INTERNATIONAL SYMBOLS 1-12
MACHINE STABILITY 1-13
INSTRUCTOR'S SEAT 1-17
SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM 1-18

2 SAFETY INFORMATION

SAFETY DECALS 2-1
SAFETY PRECAUTIONS 2-8
BEFORE DRIVING THE TRACTOR 2-9
DRIVING THE TRACTOR 2-10
OPERATING THE TRACTOR 2-11
OPERATING THE P.T.O. 2-13
OPERATING THE EXTERNAL CONTROLS 2-13
SERVICING THE TRACTOR 2-14
DIESEL FUEL 2-16
PREVENTION OF FIRE OR EXPLOSION 2-17
FIRE EXTINGUISHER 2-18
PROTECTION OFFERED BY THE TRACTOR 2-19
INTENDED USE STATEMENT 2-22

3 CONTROLS/INSTRUMENTS

ACCESS TO OPERATOR'S PLATFORM

INTRODUCTION 3-1
CAB AIR FILTERS 3-5
IN CAB STORAGE (where fitted) 3-6
CABLE AND WIRING ROUTING 3-7
MOBILE TELEPHONE USAGE 3-7
IMPLEMENT MONITOR INSTALLATION 3-8
CAB AIR PRESSURISATION MONITOR (where fitted) 3-8

OPERATOR'S SEAT

AIR SUSPENSION SEAT DELUXE 3-10
SEAT BELT 3-15

INSTRUCTOR'S SEAT

INSTRUCTIONAL SEAT (where fitted) 3-16

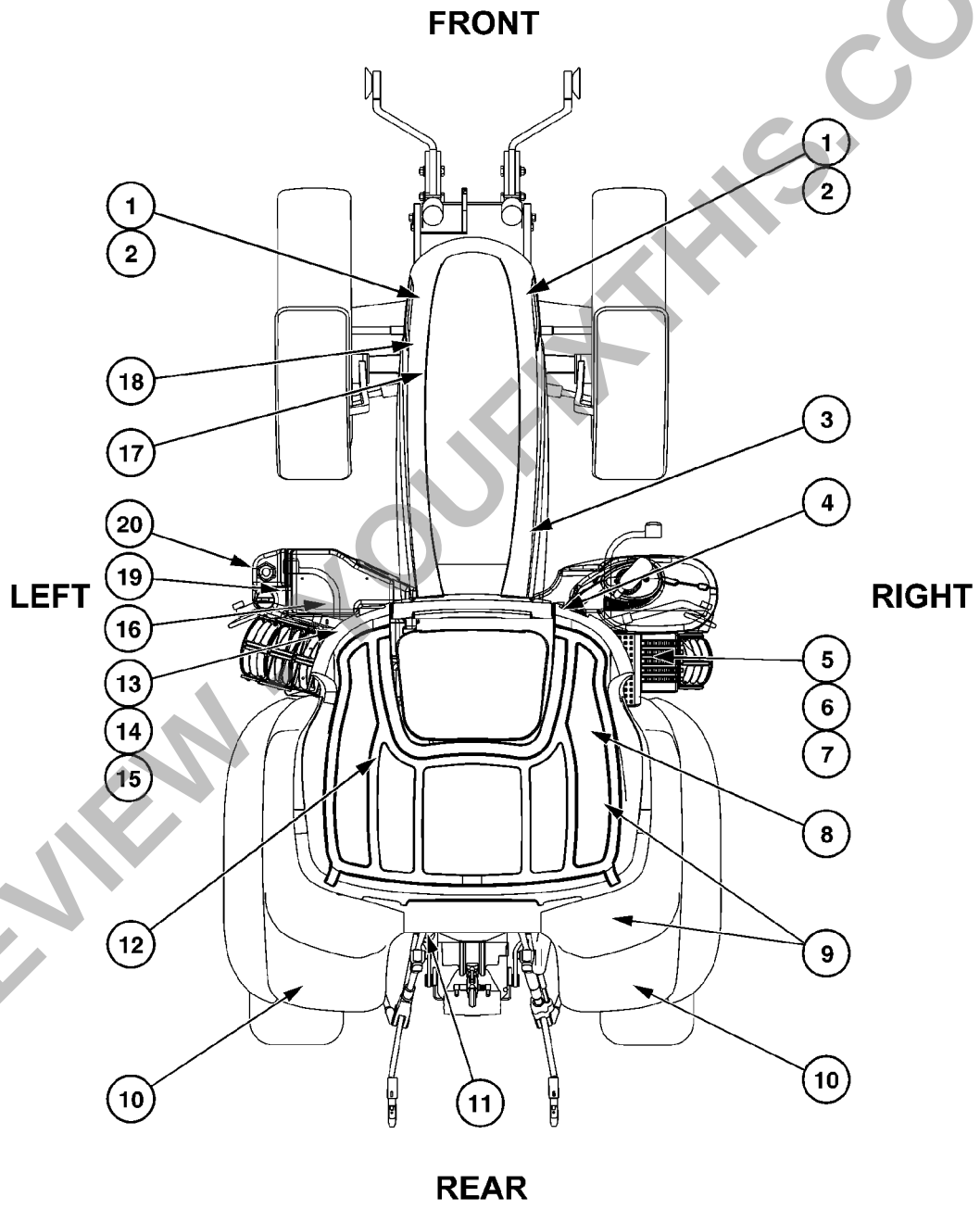
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2 - SAFETY INFORMATION

SAFETY DECALS

The decals reproduced on the following pages were installed on your tractor in the positions indicated in the drawings below. They are intended for your safety and for those working with you. Please take this Manual and walk around your tractor, noting the location of the decals and their significance. Review the decals and operating instructions detailed in this Manual with the machine operators. Clean decals and keep legible - do not use solvent, gasoline or other harsh chemicals to clean decals. Replace all worn, damaged or missing decals. If a decal is on a part that is replaced, make sure new part has the decal.



SS10M144 1

FRONT	Front side	**REAR**	Rear side
RIGHT	Right-hand side	**LEFT**	Left-hand side

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4 OPERATING INSTRUCTIONS

COMMISSIONING THE UNIT

TRACTOR REFUELLING 4-1

STARTING THE UNIT

STARTING THE ENGINE 4-3
GRID HEATER COLD START AID (where fitted) 4-4
FUEL HEATER (where fitted) 4-4
COOLANT IMMERSION HEATER (where fitted) 4-4
TRANSMISSION OIL HEATER (where fitted) 4-6
BOOSTING THE BATTERY 4-7

STOPPING THE UNIT

STOPPING THE ENGINE 4-8
AUTOMATIC ENGINE SHUTDOWN 4-8
AUTOMATIC ENGINE SHUTDOWN WITH ENHANCED KEYPAD (where fitted) 4-9

MOVING THE UNIT

OPERATING IN COLD TEMPERATURES 4-10
REVERSIBLE ENGINE FAN 4-10

5 TRANSPORT OPERATIONS

PREPARING FOR ROAD TRANSPORT

CARRYING THE TRACTOR ON A TRANSPORTER 5-1
SECURE THE HIGH VISIBILITY ROOF PANEL 5-1

RECOVERY TRANSPORT

TOWING THE TRACTOR 5-2

6 WORKING OPERATIONS

GENERAL INFORMATION

VARIABLE ENGINE POWER MANAGEMENT 6-1
CONSTANT ENGINE SPEED 6-3
DIFFERENTIAL LOCK 6-6
FOUR WHEEL DRIVE 6-8
FRONT AXLE SUSPENSION (where fitted) 6-10
AUTOMATED HEADLAND FUNCTIONS 6-11
QUICK GUIDE 6-11
RECORDING AND RE-PLAYING 6-13
EXPLANATION OF SYMBOLS 6-16
RECORDING A SEQUENCE 6-17
RE-PLAYING A SEQUENCE 6-22
DELETING A SEQUENCE 6-26

TRANSMISSION

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