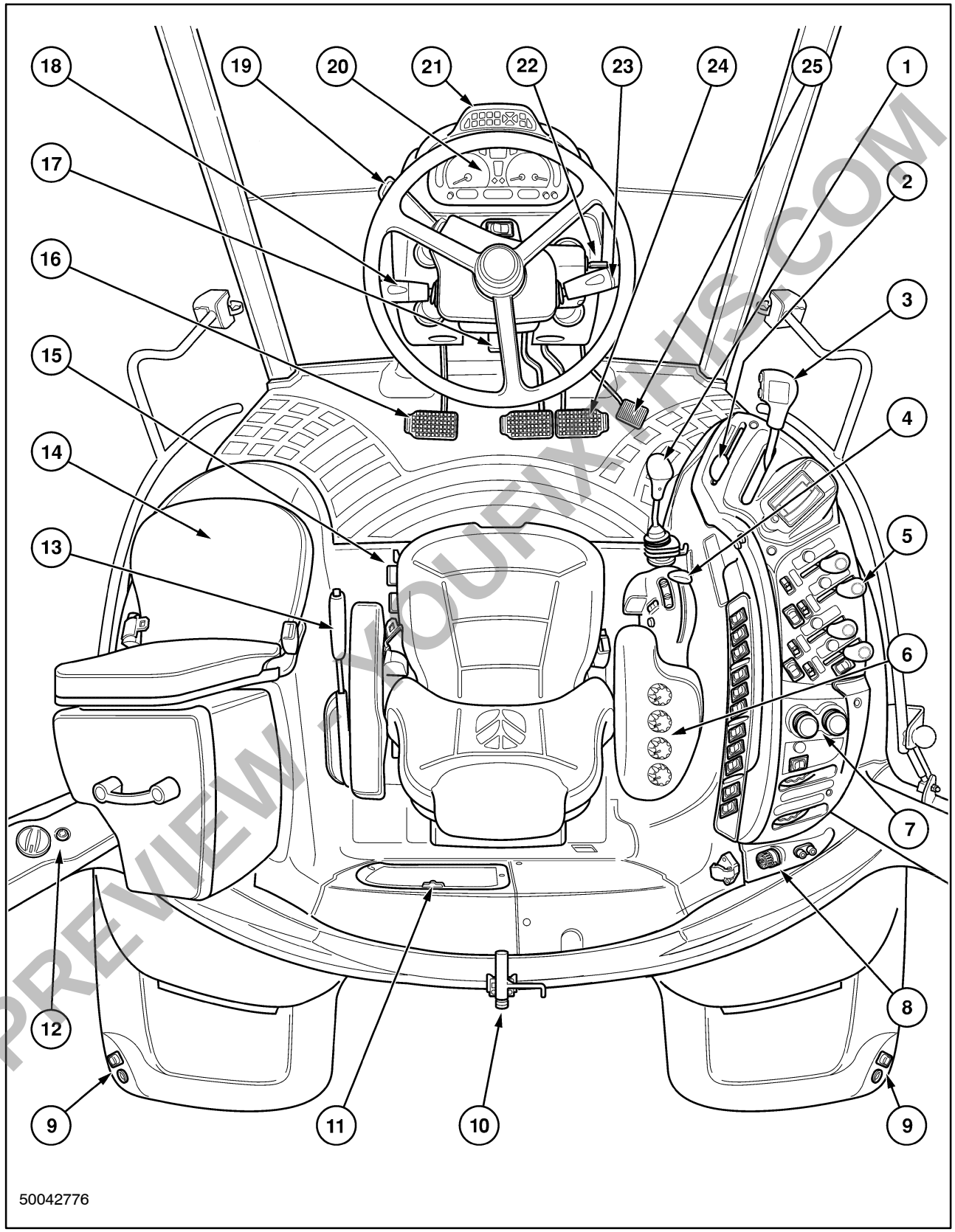
CAB AND PLATFORM CONTROLS



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General View of Tractor Controls - With Cab

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ENGINE TROUBLESHOOTING

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.
	Fuel pump inoperative.	Check fuse. If satisfactory, replace pump.
	Clogged fuel filter(s).	Replace fuel filter element(s).
	Malfunctioning fuel 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 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.

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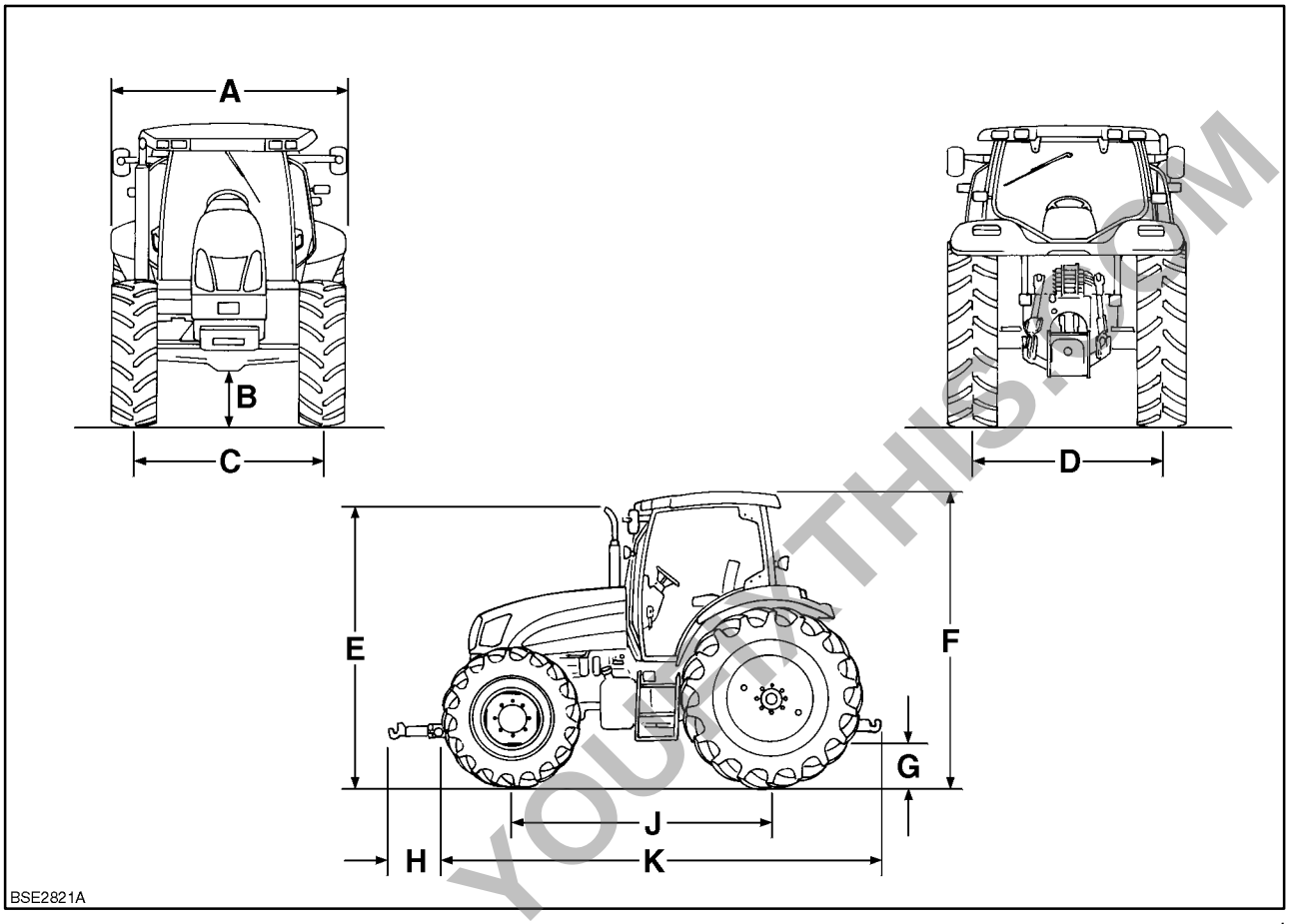
GENERAL DIMENSIONS T6010 AND T6020



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

		T6010 and T6020		
		2WD	**FWD**	**SuperSteer**
The following dimensions are based	Front	7.50 x 16	14.9 R24	14.9 R24
on tractors with tire sizes shown:	Rear	16.9 R38	16.9 R38	16.9 R38
A. Width across fenders				
Standard fenders	mm	2170	2170	2170
	in	85.4	85.4	85.4
Extended fenders	mm	2550	2550	2550
	in	100.3	100.3	100.3

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LUBRICATION AND MAINTENANCE CHART

Service Interval	Operation No.	Maintenance Requirement	Check	Clean	Lube	Change	Adjust	Drain	Wash	Page No.
When warning lamp lights	1	Engine air cleaner outer element	X	X						4-12
	2	Brake fluid level	X				X			4-14
	3	Fuel system water separator	X					X		4-14
Every 10 hours or daily	4	Engine coolant level	X				X			4-15
	5	Engine oil level	X				X			4-16
	6	Windscreen washer reservoir (where fitted)	X				X			4-16
Every 50 hours	7	Radiator,oil cooler and air conditioner condenser	X	X						4-17
	8	Cab air filters	X	X						4-18
	9	All grease fittings			X					4-20
Every 100 hours	10	A/C Compressor drive belt (where fitted)	X				X			4-26
Every 300 hours	11	Poly V-belt	X				X			4-26
	*12	Battery electrolyte level (tropical climates)	X	X			X			4-26
	13	FWD suspension cylinder upper bearing			X					4-27
	14	Transmission/rear axle/hydraulics oil level	X				X			4-28
	15	Parking brake	X				X			4-28
Every 600 hours	#16	Engine oil and filter				X				4-29
	17	Hydraulic and transmission oil filters				X				4-31
	18	Air cleaner outer element				X				4-32
	19	Engine air intake connections	X							4-32
	20	Fuel Pre-filter and fuel filter elements	X			X				4-33
	21	Four wheel drive front axle and hubs oil level	X				X			4-35
Every 1200 hours or annually	22	Cab air filters				X				4-36
	23	Transmission/rear axle/hydraulic oil and filter				X				4-37
	24	Four wheel drive axle differential oil				X				4-38
	25	Four wheel drive axle hub oil				X				4-38
	26	Battery electrolyte level (temperate climates)	X	X			X			4-39
Every 1200 hours or two years	27	Engine coolant				X				4-40
	28	Engine air cleaner inner element				X				4-44
Every 1800 hours	29	Fuel injectors	X	X			X			4-45
Every Three Years	30	Air Conditioner System	X	X		X				4-45
General Maintenance	31	Bleeding the fuel injection system	X				X			4-46
	32	Fuel Pre-Filter	X	X		X		X		4-46
	33	Footbrakes	X				X			4-47
	34	Front and rear wheel nut torque	X				X			4-48
	35	Tire pressures and condition	X				X			4-48
	36	Engine idle speed	X				X			4-49
	37	Remote control valve drain bottle(s)	X							4-49
	38	Headlight and work lamp adjustment	X			X				4-50
	39	Bulb replacement	X			X				4-51
	40	Fuse replacement	X			X				4-55
	41	Power Adjust mirror fuse and timer relay	X			X				4-63
	42	Cleaning the tractor	X	X						4-64

***** Batteries on tractors operating in temperate climates need only be checked every 1200 hours. See Operation 26.

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.

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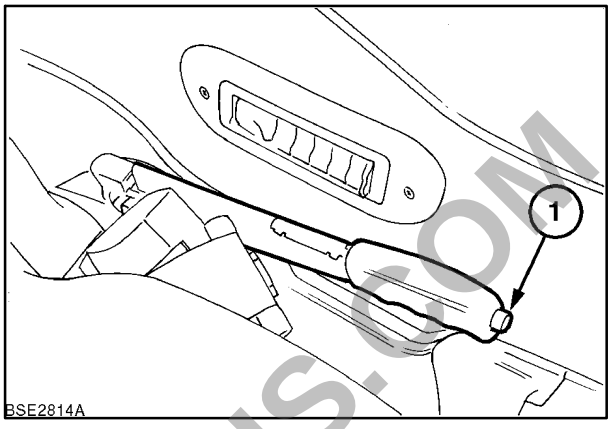
HAND BRAKE, THROTTLE AND FOOT PEDALS

HANDBRAKE

A conventional handbrake lever is installed to the left of the driver's seat.

To apply the handbrake, pull the lever up. A warning light will illuminate in the instrument panel when the handbrake is applied. To release, ease the lever up further, depress the button, 1, on the end and lower the lever fully.

IMPORTANT: *Ensure that the handbrake is fully released before driving off.*



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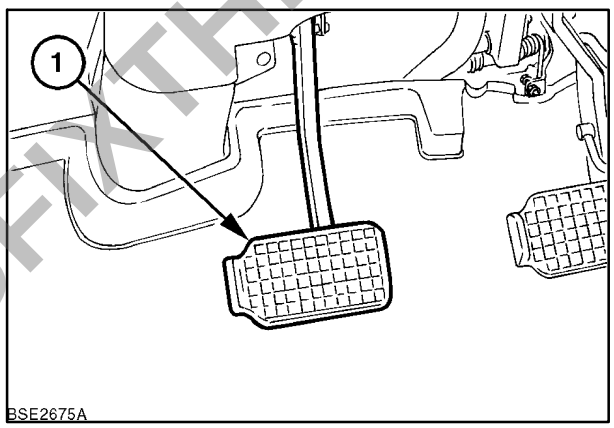
CLUTCH/INCHING PEDAL

When the clutch pedal, 1, is depressed the drive between the engine and transmission will be disengaged. Use the pedal to transfer engine power smoothly to the driving wheels when moving off from a standstill. See 'TRANSMISSION' later in this section for further details.

NOTE: *To avoid premature wear, do not use the clutch pedal as a footrest.*



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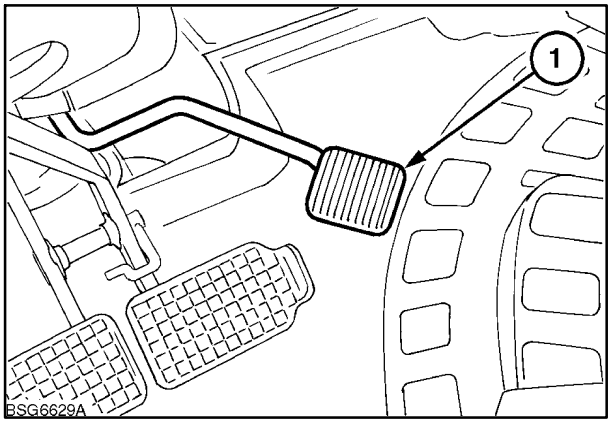
FOOT THROTTLE

The foot throttle, 1, may be used independently of the hand throttle to control the speed of the tractor. It is recommended that you use the foot throttle when driving on the highway.

NOTE: *When the foot throttle is released, engine speed will reduce to the level set by the hand throttle. When using the foot throttle, set the hand throttle to the minimum speed position (lever fully rearward).*



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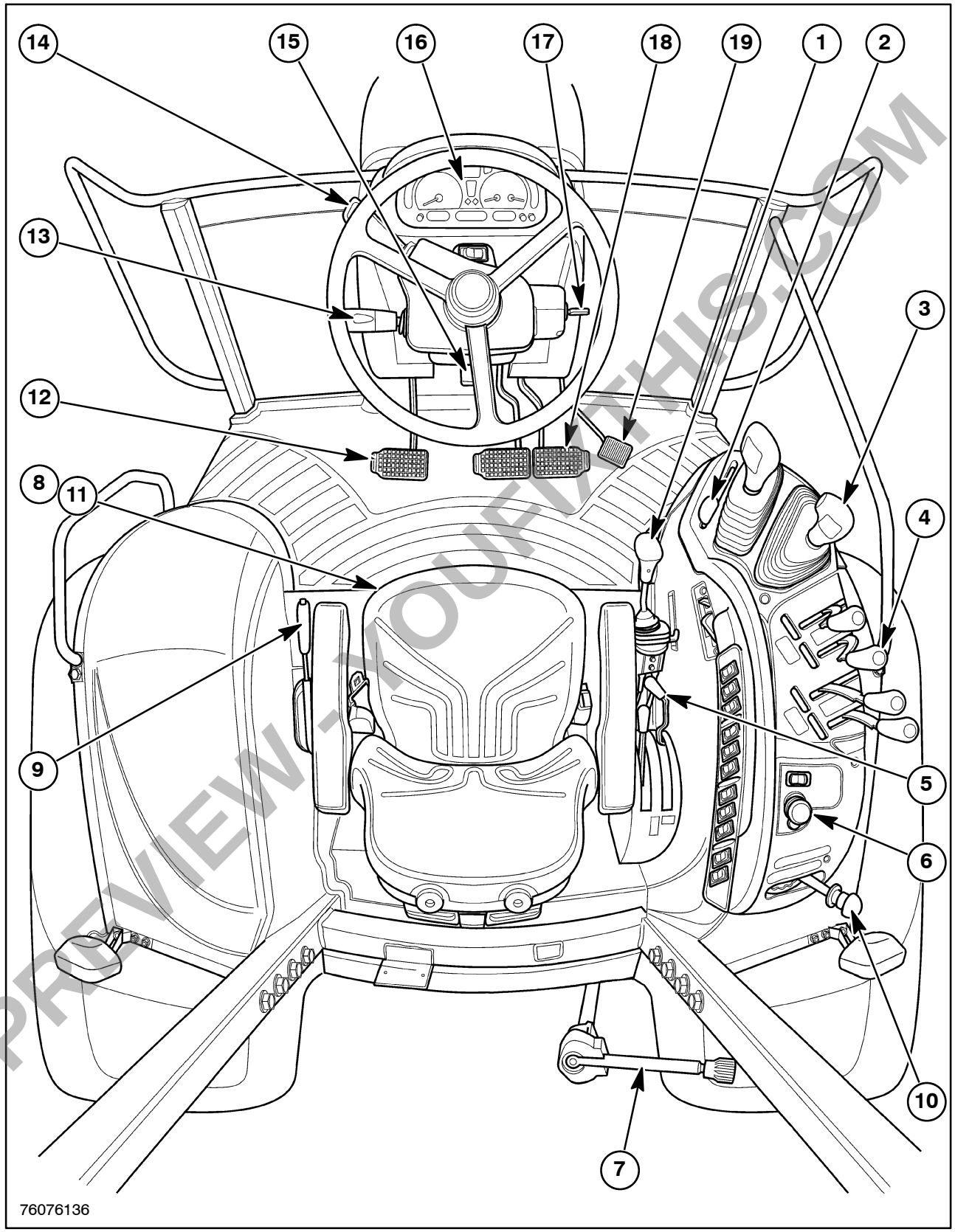
PLATFORM CONTROLS



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General View of Tractor Controls - Less Cab

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TRANSMISSION TROUBLESHOOTING - SYNCHRO COMMAND

PROBLEM	POSSIBLE CAUSE	CORRECTION
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.
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 authorized dealer.
Gear engagement difficult	Incorrect linkage adjustment or worn linkage.	Adjust linkage, replace worn parts or see your authorized dealer.
	Worn shift forks/selectors.	See your authorized dealer.
	Worn bearings.	See your authorized dealer.
	Air in hydraulic clutch system.	Bleed system or see your authorized dealer.
Jumping out of gear	Incorrect linkage adjustment or worn linkage.	Adjust linkage, replace worn parts or see your authorized dealer.
	Worn shift forks/synchronizers.	See your authorized dealer.
	Worn bearings.	See your authorized dealer.
	Faulty detents.	Replace detent balls and springs or see your authorized dealer.
Holding in gear	Incorrect linkage adjustment or worn linkage.	Adjust linkage, replace worn parts or see your authorized dealer.
	Worn couplers.	See your authorized dealer.

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ENGINE		T6010	T6020	T6030	T6050	T6070
PTO Horsepower	Hp	80	90	95	105	120
Advertised engine power	Kw	74	82	86	93	104
(at rated speed, ISO TR 14396)	Hp (cv)	101	112	117	127	142
Number of cylinders		4	4	6	6	6
Valves per cylinder		2	2	2	2	2
Aspiration		Turbo		Turbocharged and intercooled		
Bore	mm	104	104	104	104	104
	in.	4.0	4.0	4.0	4.0	4.0
Stroke	mm	132	132	132	132	132
	in.	5.19	5.09	5.09	5.19	5.19
Displacement	cm^3	4485	4485	6728	6728	6728
	in^3	273	273	410	410	410
Compression ratio		17.5:1	17.5:1	17.5:1	17.5:1	17.5:1
Firing order		1.3.4.2.			1.5.3.6.2.4.	
Rated engine speed	rpm	2200	2200	2200	2200	2200
Idle speed	rpm	850-950			850-950	
Maximum no-load speed	rpm	2375			2375	
Valve tappet clearance (cold)						
Intake	mm	0.25	0.25	0.25	0.25	0.25
	in	0.010	0.010	0.010	0.010	0.010
Exhaust	mm	0.51	0.51	0.51	0.51	0.51
	in	0.020	0.020	0.020	0.020	0.020

FUEL SYSTEM						
System type		Mechanical fuel injection				
Fuel injection pump		Delphi		Bosch VE mechanical		
Dynamic timing (BTDC)		0°	1.5°	5°	5°	5°

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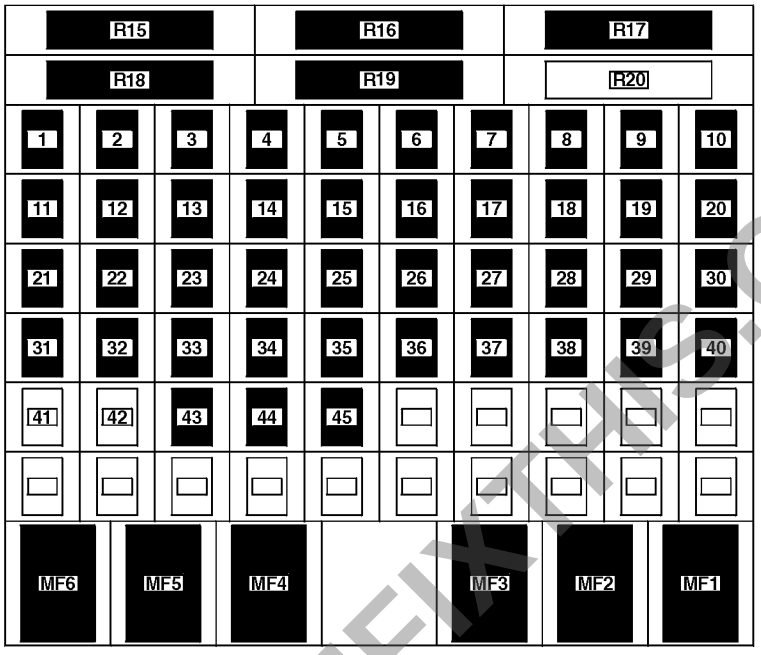
FUSE AND RELAY LOCATIONS

FUSEBOX, RELAYS AND MAXI-FUSES



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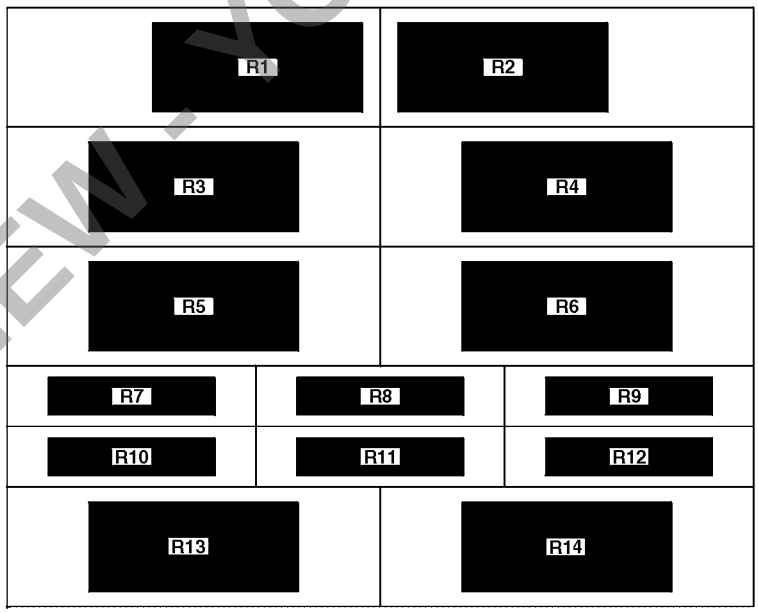
RELAYS



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MULTI-FUNCTION SWITCH

The stalk-type switch is mounted on the left-hand side of the steering column. The switch controls the tractor lights, horn and turn signals.

The center of the stalk switch rotates. With reference to Figure 65, turn the switch away from you, to position, 1, to turn on the instrument and position lights. Turn the switch to position, 2, to select the headlights.

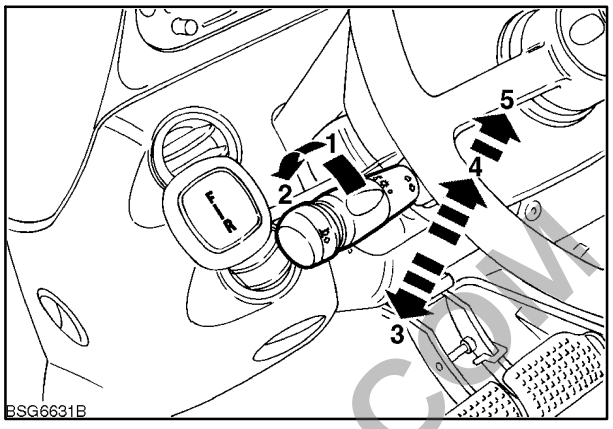
With the headlights on, push the stalk away from you, position, 3, to change from dipped to high beam. Pull the stalk toward you, position, 4, to change back to dipped beam. With high beam selected, the blue indicator light on the instrument panel is illuminated.

With the headlights off, pull the stalk towards you, position, 5, against spring pressure, to flash the headlight high beam. The stalk will return to the central position when released.

Move the stalk to position, 6, to operate the right turn signals, position, 7, will activate the left turn signals. Indicator lights on the instrument panel will also flash when the turn signals are actuated. A warning buzzer will sound if the indicators are not cancelled within 20 seconds.

NOTE: *The turn signals will only operate with the key-start switch turned on.*

Press in the end of the stalk, position, 8, to sound the horn.



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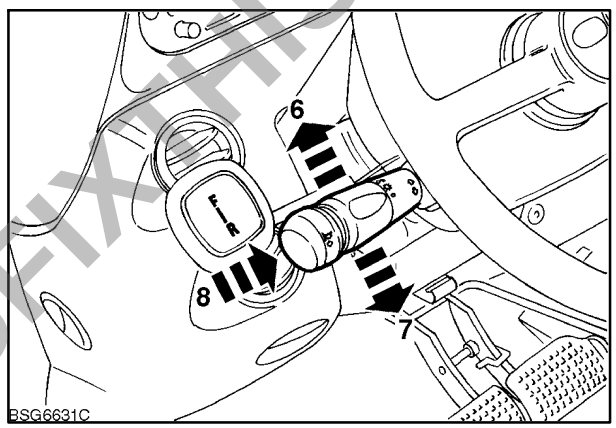

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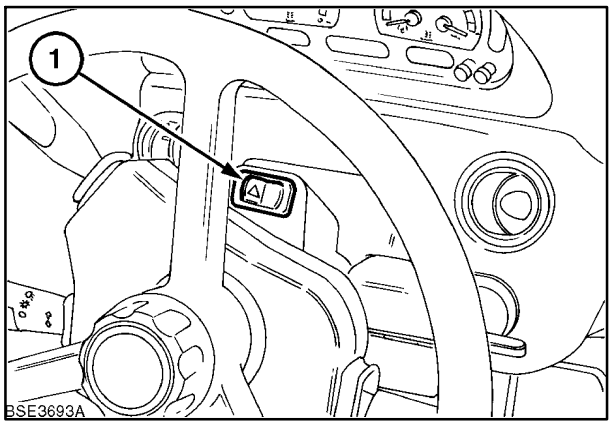
HAZARD WARNING LIGHTS SWITCH

Press the left-hand side of the switch, 1, to operate all the turn signals simultaneously. The switch will flash with the turn signals.



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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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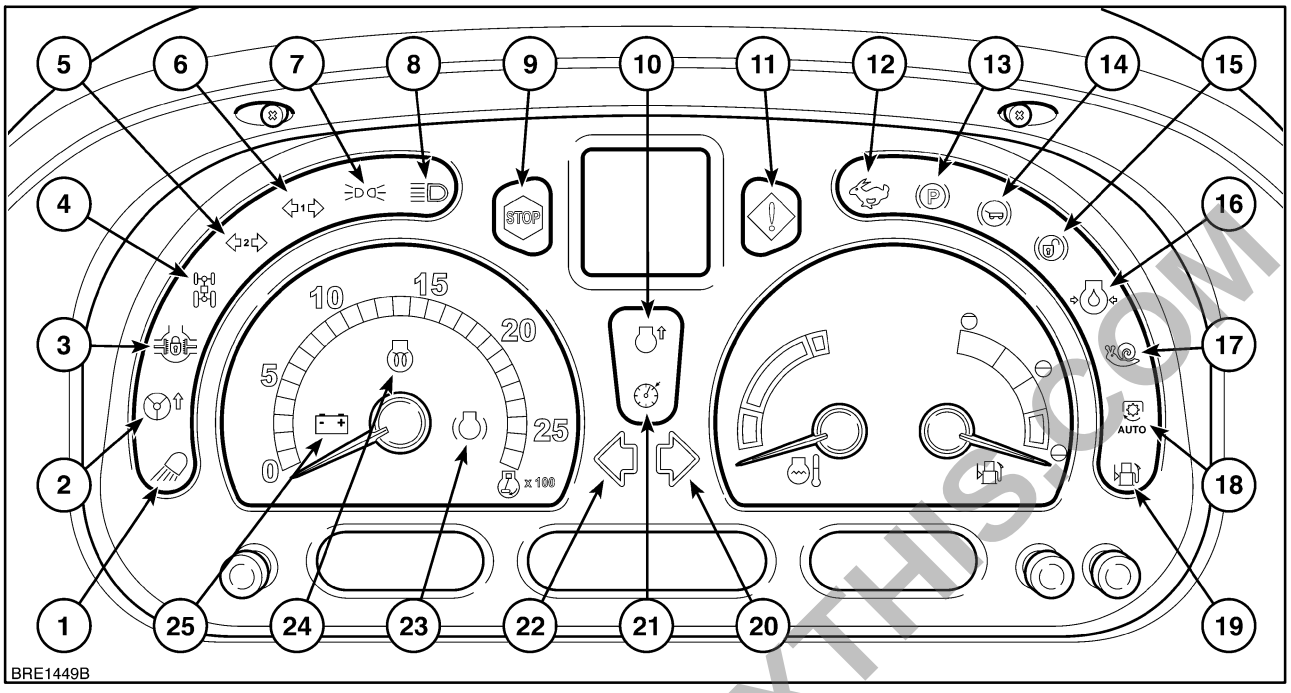

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INDICATOR AND WARNING LIGHTS (CONTINUED)

10. Not used.
11. Amber Warning light - Illumination of this light will be accompanied by a warning symbol in the Dot Matrix Display. Stop the tractor and investigate the cause.
12. Direct drive indicator (Dual Command transmission only) - Light will illuminate to indicate transmission is in direct drive.
13. Parking brake - Light will flash with key-start switch on and parking brake applied. If the key-start switch is turned off and the parking brake not applied, or the operator leaves the seat without applying the handbrake, a warning buzzer will sound for approximately 10 seconds or until the handbrake is applied.
14. Not used.
15. Brake pedals not latched - Light will illuminate to show when pedal latch is unlocked (Japan only).
16. Engine oil pressure low - Steady light accompanied by the Red Stop light will indicate low engine oil pressure. Stop the engine and investigate the cause.
17. Creeper gears - Light will illuminate when creeper gears are engaged.

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NOTE: *If tractor speed exceeds 10 KPH (6.2 MPH) with Fast Steer in operation, it will be disengaged and the indicator light, 2, will flash.*

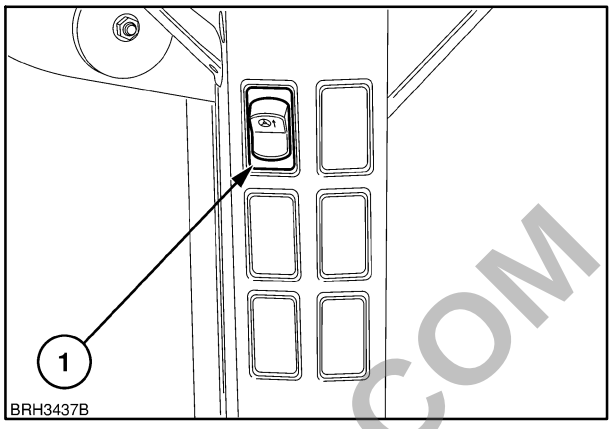
NOTE: *Where the transmission oil temperature is low and Fast Steer is to be used, it is recommended to turn the steering wheel twice, from full lock to full lock, before commencing Fast Steer operation.*

Fast Steer will be disabled if a fault occurs. Should the system become disabled, an audible warning will sound and an error code will appear in the Dot Matrix Display. If the fault is of a critical nature, the 'STOP' warning lamp will also flash on the instrument panel, consult your authorized dealer.

To re-activate Fast Steer, turn the isolator switch, 1, 'OFF', correct the fault, and then turn the isolator switch 'ON'.

⚠ CAUTION ⚠

To promote safe operation of Fast Steer, it is advised that the operator become familiar with the system before operating in the field.



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DYNAMIC FRONT FENDERS (WHERE FITTED)

Two types of optional front fender are available, both offering a full range of adjustment to suit varying tire sizes and track widths. The method of adjustment is very similar for both, but the following text describes the setting of the dynamic fender. Ensure all fixing bolts are re-tightened after adjustment.

Dynamic fenders turn with the front wheels as the tractor is steered. As the steering angle increases, a spring centered pivot in the fender mount restricts the turn angle of the fenders. This prevents interference with the tractor hood or loader frame while allowing the wheels to continue turning beneath the fender. As a result, tighter turns can be achieved that would not be possible with a conventional fender, particularly at narrower track settings.

FRONT FENDER ADJUSTMENT

A fender may be moved laterally, towards or away from the tractor, vertically up or down, and may be tilted forwards or rearwards.

Lateral Adjustment, Fender Support

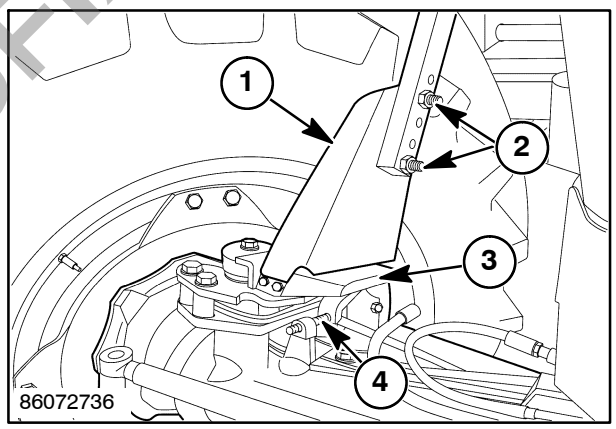
To move the complete fender assembly laterally, loosen the two clamp bolts securing the fender support, 1, to the mounting bracket, 3. Move the support to the desired position and re-tighten the bolts.

Vertical Adjustment

The fender may be moved vertically by relocating the bolts, 2, in the appropriate holes in the fender support. A number of the holes are elongated allowing the fender to be tilted forward or rearward.

Fender Turn Stop

An adjustable stop bolt, 4, is fitted to both fender support brackets. When turning, the bolt contacts a fixed stop, on the axle housing restricting the angle at which the fender will turn while allowing the wheels to continue turning beneath the fender. The stops may require adjusting if the track width or tire size is changed.



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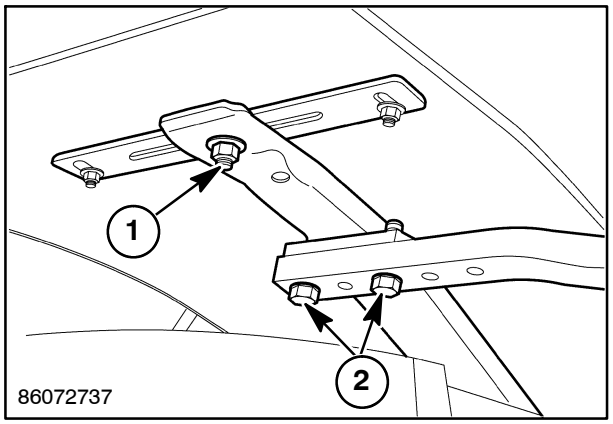
Lateral Adjustment, Fender

The fender support bolt, 1, and bracket attachment points, 2, beneath the fender, provide further lateral adjustment allowing the fender to be centered over the tire.

NOTE: *A second fender support bolt (not shown) is located on the opposite end of the support bracket.*



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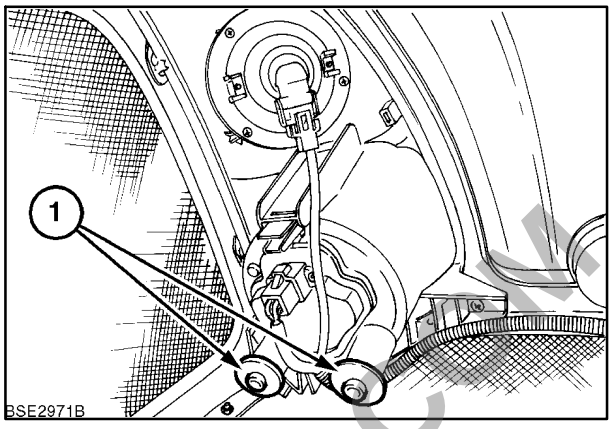
OPERATION 38
HEADLIGHT AND WORK LAMP ADJUSTMENT

Headlights

To avoid blinding on coming drivers, adjust the angle of the headlight beams.

Each headlight is adjusted by rotating the two adjusters, 1, clockwise or counter-clockwise according to the amount of correction required.



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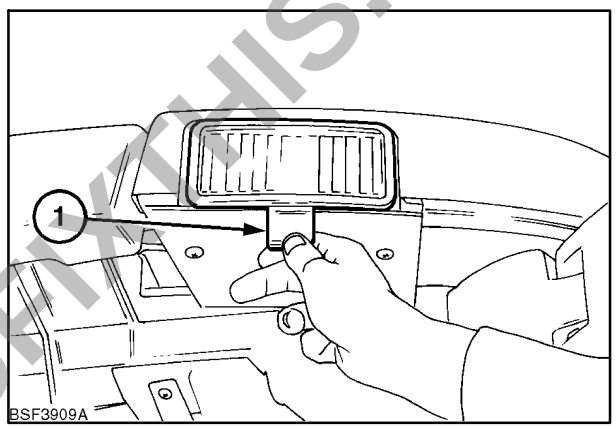
Work Lamps

Dependant upon model and specification, adjustable work lamps may be installed on the front and rear of of the cab roof, low down at the front of the cab or on the rear fenders. Non-adjustable work lamps are mounted on the front of the hood , adjacent to the headlights.

Cab roof mounted work lamps are adjusted by moving the protruding lever, 1, backwards or forwards.



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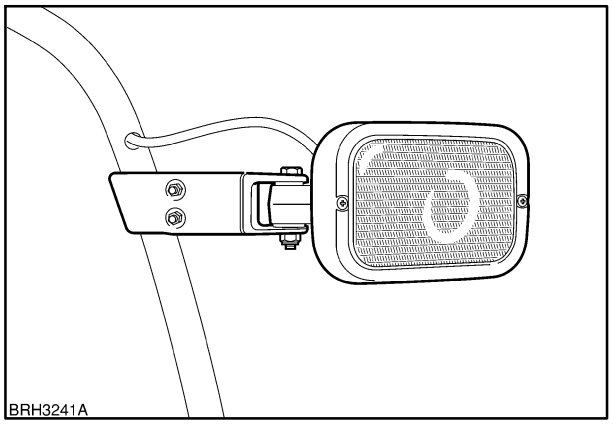
Grab Rail Mounted with Low Profile Cab

To adjust the position of the light, grasp the lamp assembly and rotate upwards or downwards.



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