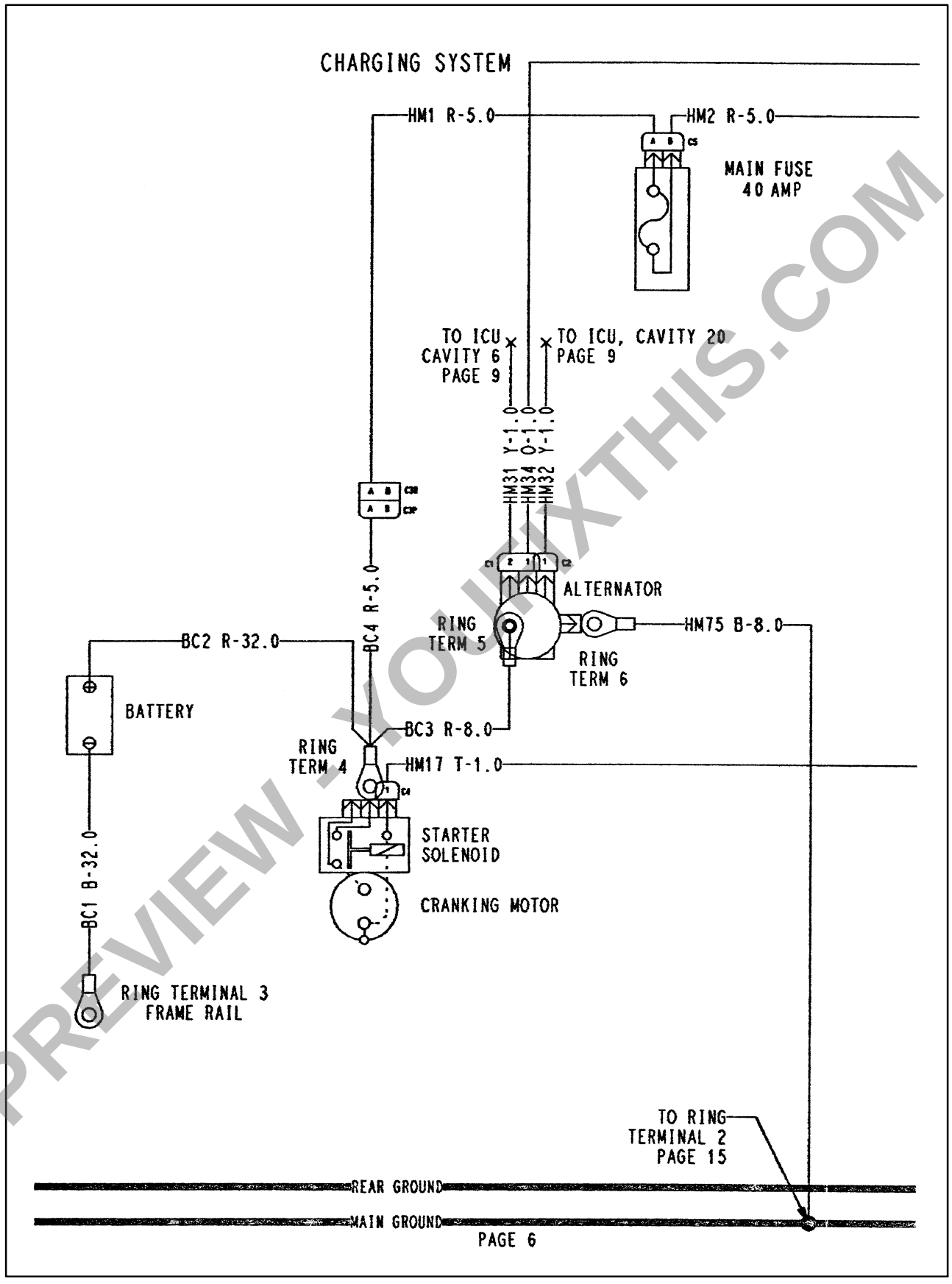


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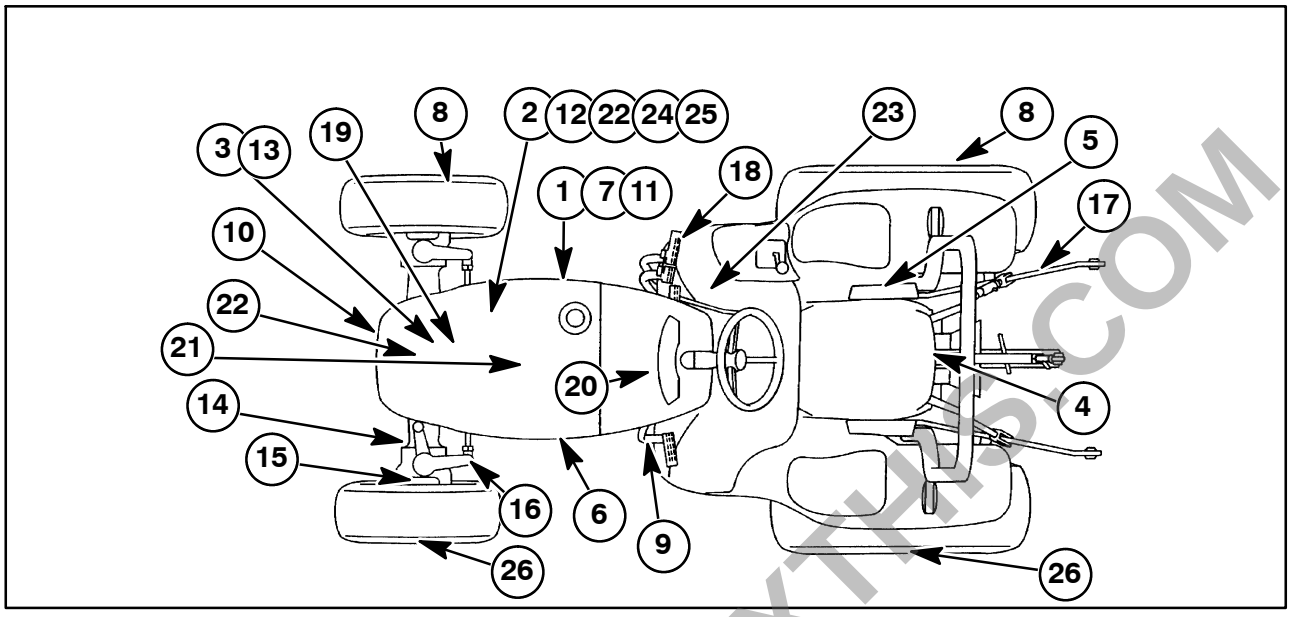
SECTION 4
SPECIFICATIONS

	Model TC29DA—Hydrostatic/Gear	Model TC33DA—Hydrostatic/Gear
ENGINE		
Type	Diesel	Diesel
Engine Gross Horsepower	21.6 kw (29)	24.6 kw (33)
Cylinders	3	3
Bore	84 mm (3.31″)	84 mm (3.31″)
Stroke	80 mm (3.15″)	90 mm (3.54″)
Displacement	1.33 L (81.2 cu. in.)	1.50 L (91.3 cu. in.)
Compression Ratio	22.7:1	22.2:1
Firing Order	1-2-3	1-2-3
Low Idle Speed	1000 RPM	1000 RPM
Maximum Speed:		
High Idle	3040 RPM	3040 RPM
Rated	2800 RPM	2800 RPM
Valve Clearance (Cold):		
Intake	0.20 mm (0.008″)	0.20 mm (0.008″)
Exhaust	0.20 mm (0.008″)	0.20 mm (0.008″)
CAPACITIES		
Fuel Tank	27.6 liters/ 7.3 U.S. gals.	27.6 liters/ 7.3 U.S. gals.
Cooling System	4.0 liters/ 4.2 U.S. qts.	4.0 liters/ 4.2 U.S. qts.
Engine Crankcase:		
With Filter	4.0 liters/ 4.2 U.S. qts.	4.0 liters/ 4.2 U.S. qts.
Rear Axle & Transmission (Includes Hydraulics)		
Gear	32.5 liters/ 8.6 U.S. gals.	32.5 liters/ 8.6 U.S. gals.
HST	33.3 liters/ 8.8 U.S. gals.	33.3 liters/ 8.8 U.S. gals.
Power Steering	1.6 liters/ 1.7 U.S. qts.	1.6 liters/ 1.7 U.S. qts.
Front Axle Final Reduction	0.8 liters/ 0.85 U.S. qts.	0.8 liters/ 0.85 U.S. qts.
Differential Gear Case	1.4 liters/ 1.5 U.S. qts.	1.4 liters/ 1.5 U.S. qts.

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LUBRICATION AND MAINTENANCE CHART
NEW HOLLAND TD29DA, TC33DA — FRONT-WHEEL DRIVE



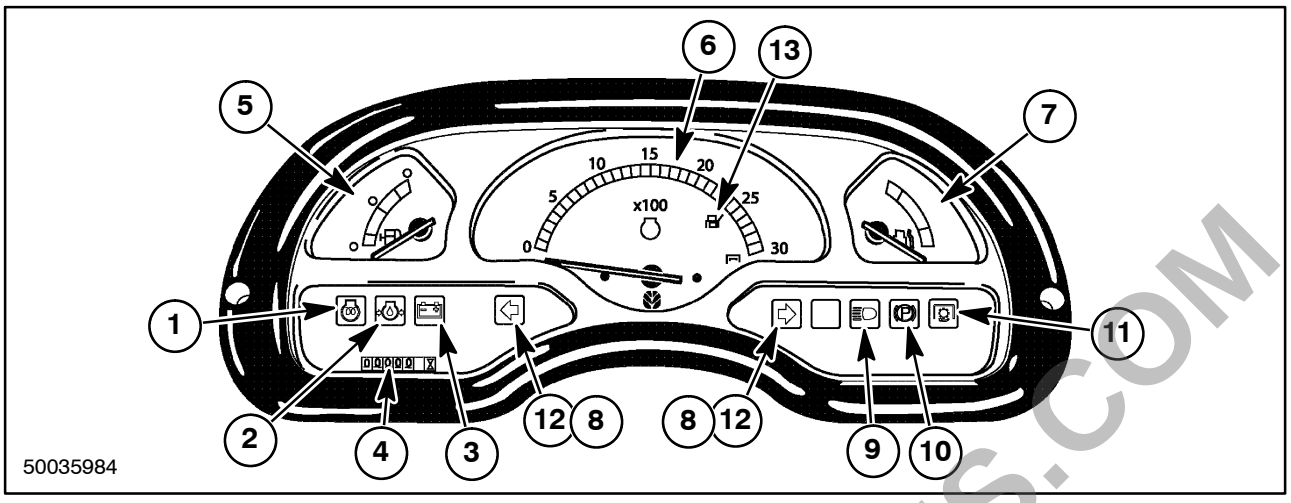
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NO.	LUBRICATION & MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTERVALS
1	Engine Oil Level	X					Every 10 Hours or Daily
2	Air Cleaner	X					
3	Radiator Coolant	X					
4	Transmission Oil Level	X					
5	Hydraulic Filter				X		First 50 Hours
6	H.S.T. Filter				X		
1, 7	Engine Oil & Filter				X		
8	Tire Pressure	X					
11	Fuel Filter				X		
26	Wheel Bolt Torque	X					
—	All Fluid Levels	X					
8	Tires	X					Every 50 Hours
9	Clutch Pedal	X		X		X	
10	Battery	X					
12	Power Steering Oil Level	X					
13	Fan Belt	X					
14	Front Axle Oil Level	X					
15	Final Reduction Gear Cases Oil Level	X					
	Lubrication Fittings:						
16	Steering Linkage			X			
17	3-Point Linkage			X			
18	Brake Pedal			X			
19	Power Steering Cylinder			X			
20	Pedal Shaft			X			
21	Drive Cover Shaft			X			
22	Pivot Shaft			X			
23	H.S.T. Pedal Pivot			X			

NO.	LUBRICATION & MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTERVALS
1, 7	Engine Oil & Filter				X		Every 100 Hours
2	Air Cleaner Element		X				
11	Fuel Filter		X				
8	Brake					X	Every 200 Hours
11	Fuel Filter Element				X		
13	Fan Belt					X	
26	Wheel Bolt Torque	X					
4	Transmission Oil				X		Every 300 Hours
5	Hydraulic Filter				X		
6	H.S. T. Filter				X		
14	Front Axle Oil				X		
15	Final Reduction Gear Cases Oil				X		
12	Power Steering Oil				X		Every 600 Hours *Refer to Repair Manual
24*	Fuel Injector	X				X	
25*	Valve Clearance	X				X	
2	Air Cleaner Element				X		Seasonal
3	Radiator Coolant				X		
2	Safety Air Filter Element				X		Every 3rd Primary Element Change or Every **1000** Hours, Whichever Comes First

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INSTRUMENT PANEL

1. **Cold Starting Indicator Light** – Illuminates when the key switch is turned to the “HEAT” position. It remains lit for approximately four seconds when the key is held in position, during which time the glow plugs are heating the precombustion chambers.
2. **Engine Oil Pressure Warning Light** – Illuminates with the key switch in the “ON” or “HEAT” positions and remains lit for a short period of time after the engine is started. The light indicates oil pressure only and goes out when sufficient oil pressure is present at the oil sender. If the bulb becomes lit during operation, stop the tractor engine immediately and investigate the cause.
3. **Battery Charge Warning Light** – Illuminates when the key switch is in the “ON” or “HEAT” positions and goes out when the engine is started. If this bulb becomes lit during operation, it indicates that the charging system is not operating normally. As the battery can become fully discharged under these conditions, the problem should be investigated as soon as possible.
4. **Proof Meter** – Records the hours and portions of hours that your tractor has been operated regardless of engine RPM. Use the proof meter as a guide to determine hourly service and maintenance intervals.
5. **Fuel Gauge** – Indicates the amount of diesel fuel remaining in the tank. The gauge is activated when the key switch is in the “ON” or “HEAT” positions. It will resister “empty” with the key switch in the “STOP” position.
6. **Tachometer** – Registers engine RPM (Revolutions Per Minute). The gauge is marked in increments of 100 and will return to zero when the engine is not running.
7. **Temperature Gauge** – Indicates coolant temperature. It is activated when the key switch is turned to the “ON” or “HEAT” positions. The gauge will register cold with the key switch in the “STOP” position. If the needle registers in the green range of the gauge, this indicates a normal operating temperature. If the needle moves to the red portion of the gauge, this indicates an overheated condition. Stop the tractor engine immediately and investigate the cause.
8. **Flasher Warning Lights** – Operate when the flasher switch is turned on, regardless of the key switch position. Use the flasher warning lights and the SMV emblem when traveling on public roads, day or night.
9. **High Beam Road Light Indicator** – The light symbol will illuminate “Blue” when the light switch is placed in the (High Beam) position.
10. **Parking Brake Light** – Illuminates if the parking brake is engaged when the key switch is turned from the “OFF” position.
11. **PTO On Indicator** – When either the rear or mid PTO is engaged, the indicator will be illuminated amber with the key in the “HEAT,” “START” or “ON” positions.
12. **Flasher Turn Lights** – Operate when the turn signal switch is moved upwards for right turns the right arrow will flash and moved downwards for left turns the left arrow will flash. The key switch has to be in the “ACC/RUN” or “START” positions.
13. **PTO Speed Indicator** – Determined by the position of the needle on the tachometer. The tachometer is marked to indicate 540 PTO RPM. If the needle registers above the 540 RPM mark, this indicates a dangerous over speed condition, and the engine RPM should be reduced immediately.

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SECTION 2
OPERATION

CONTROLS AND INSTRUMENTS

SEAT, SEAT BELT, AND ROLLOVER PROTECTIVE STRUCTURE (ROPS)

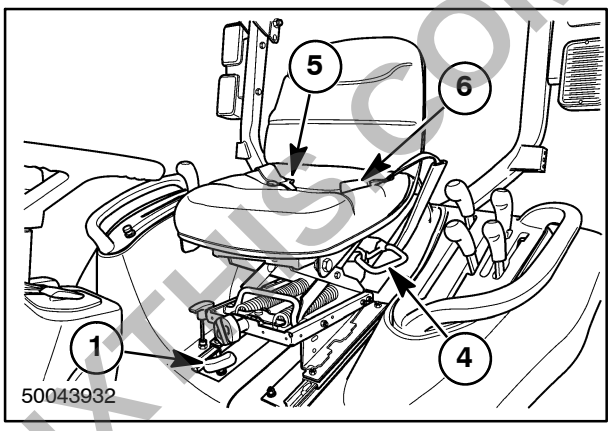
Adjusting the Tractor Seat

Your New Holland tractor is equipped with an adjustable suspension seat.

To move the seat fore and aft, raise the release lever, 1. Because the seat is on an inclined base, more effort is required to move the seat rearward than forward.

To adjust the flotation of the seat, pull out handle, 2, on knob, 3. Rotate the handle clockwise for a firmer ride or counterclockwise for a softer ride.

To swivel the seat, raise the handle, 4, and swivel in the desired direction. The seat will swivel and lock at 10° or 20° to the right or the left.



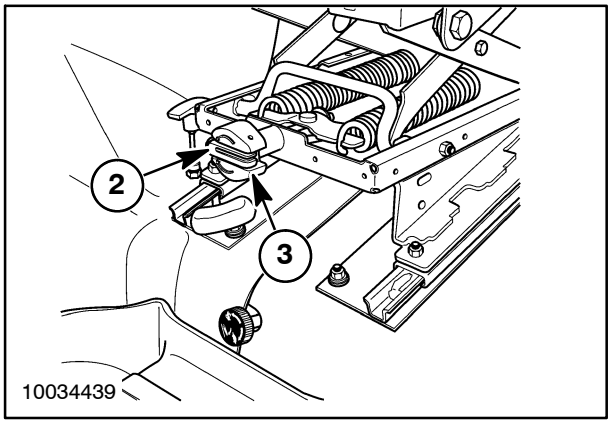
1

Adjusting the Seat Belt

The male end of the seat belt, 5, is part of a retraction mechanism, located on left side of the seat. To extend length of seat belt, pull out on male end until correct length is obtained. To latch seat belt, insert male end into belt latch, 6, located on right side of seat. Make sure belt is securely buckled and belt length is adjusted correctly for size of operator.

Use soap and water to clean the seat belt if necessary. Do not use carbon tetrachloride, naphtha, etc., as these substances will weaken the webbing. Additionally, do not bleach or redye the webbing, as these products will also weaken the webbing.

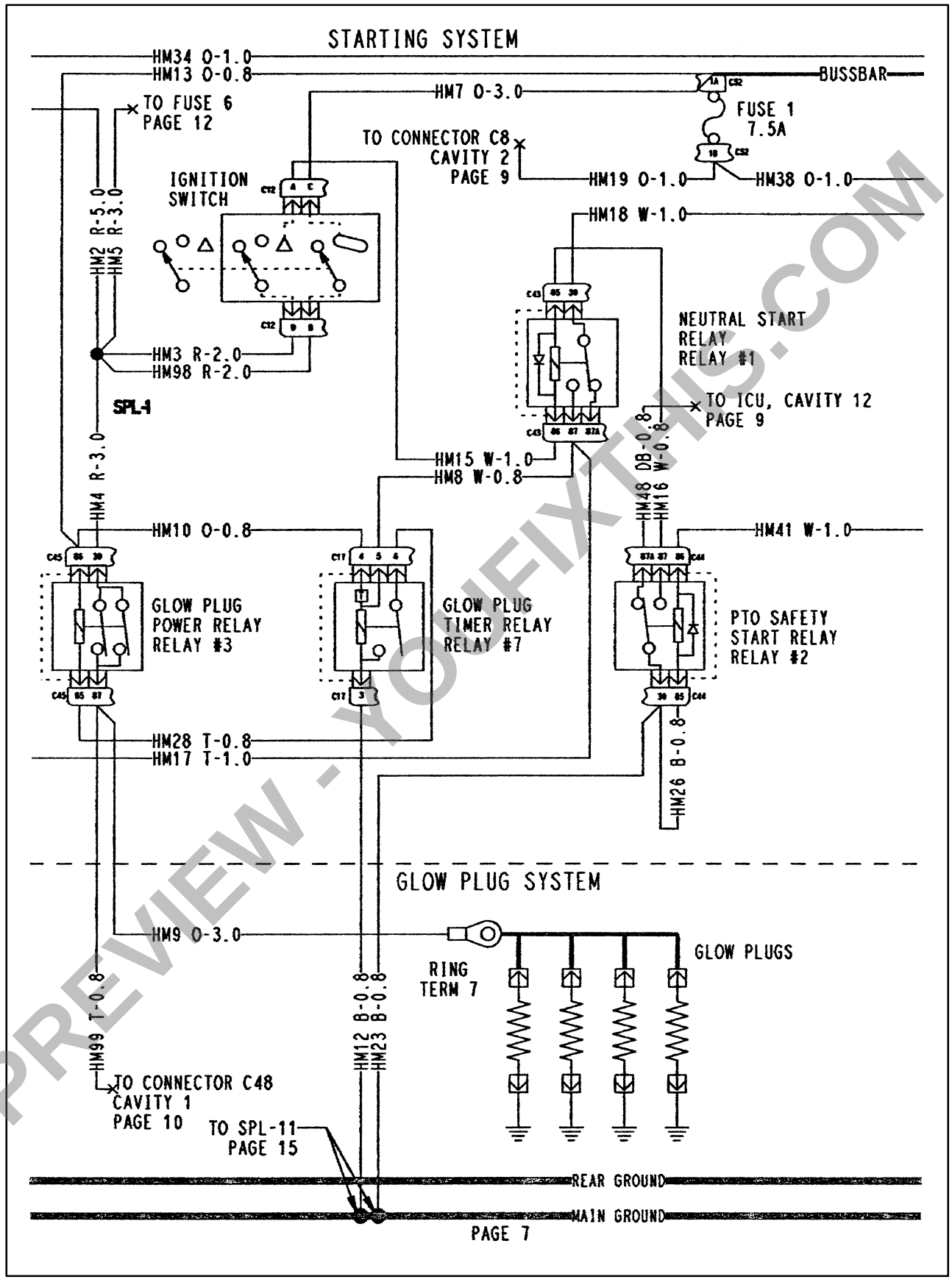
Replace the seat belt if it becomes damaged or worn.



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	Model TC29DA—Hydrostatic/Gear	Model TC33DA—Hydrostatic/Gear
COOLING SYSTEM		
Type	Pressurized Liquid with Recirculating Bypass	Pressurized Liquid with Recirculating Bypass
Water Pump:		
Type	Centrifugal	Centrifugal
Drive	V-Belt	V-Belt
Belt Deflection	10 mm-15 mm (7/16″-9/16″) when 9-11 kg (20-25 lbs.) thumb pressure is applied mid-way between belt pulleys	10 mm-15 mm (7/16″-9/16″) when 9-11 kg (20-25 lbs.) thumb pressure is applied mid-way between belt pulleys
Fan Diameter	340 mm (13.4″)	340 mm (13.4″)
Thermostat:		
Start to Open	71°C (160°F)	71°C (160°F)
Fully Open	85°C (185°F)	85°C (185°F)
Radiator Cap	0.9 bar (13 PSI)	0.9 bar (13 PSI)
ELECTRICAL SYSTEM		
Alternator	12-volt, Heavy Duty, 40 amps	12-volt, Heavy Duty, 40 amps
Battery	12-volt, w/ negative ground, 420 cca	12-volt, w/ negative ground, 420 cca
Starting Motor	Solenoid Pre-Engaged Reduction	Solenoid Pre-Engaged Reduction
FUEL SYSTEM		
Fuel Type	Diesel	Diesel
Type of Fuel to Use if Above 40°F	No. 2-Diesel, Cetane Rating: Minimum 40	No. 2-Diesel, Cetane Rating: Minimum 40
Type of Fuel to Use if Below 40°F	No. 1-Diesel, Cetane Rating: Minimum 40	No. 1-Diesel, Cetane Rating: Minimum 40
Injection Pump:		
Type	In-Line	In-Line
Timing	21° BTDC	21° BTDC

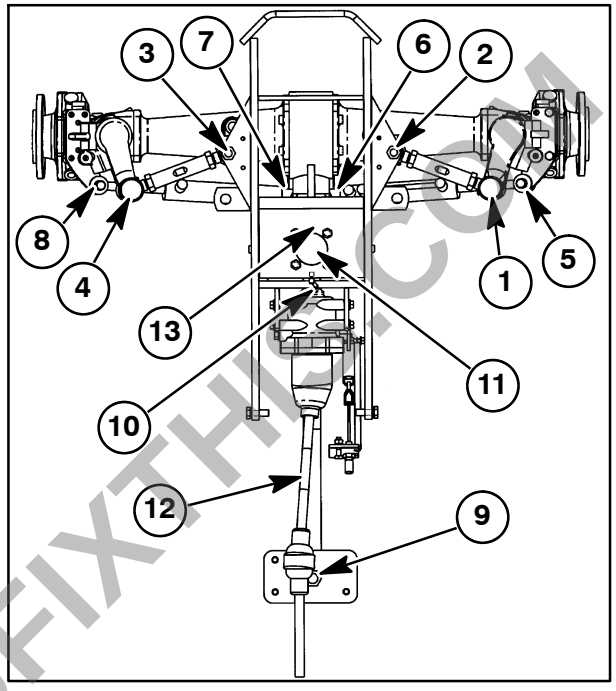
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LUBRICATION AND MAINTENANCE CHART
NEW HOLLAND TC29DA, TC33DA — FRONT-WHEEL DRIVE — SUPER STEER™

EVERY 50 HOURS

1. Right Tie Rod Outer Ball Joint
2. Right Tie Rod Inner Ball Joint
3. Left Tie Rod Inner Ball Joint
4. Left Tie Rod Outer Ball Joint
5. Right Steering Cylinder Outer Bushing
6. Right Steering Cylinder Inner Bushing
7. Left Steering Cylinder Inner Bushing
8. Left Steering Cylinder Outer Bushing
9. Stabilizer Rear Ball Joint
10. Stabilizer Front Ball Joint
11. Pivot Bearing
12. Rear Drive Shaft
13. Front Drive Shaft



2

CLUTCH HOUSING

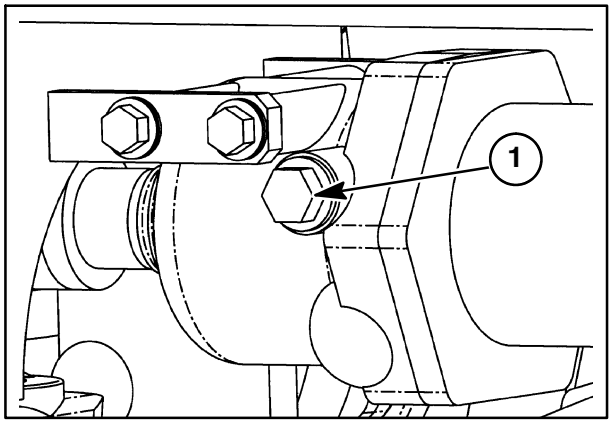
Check oil level – every 50 hours

Change oil – every 600 hours

To check oil level, remove check plug, 1. Oil is at correct level when fluid is even with check plug opening. Add NH 134 hydraulic oil through check plug opening until fluid is at correct level.

To change the oil of the clutch housing, remove clutch assembly from tractor and drain using check plug opening.

Fluid capacity of clutch housing: 0.3 liters (10.0 oz.).



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STARTING THE ENGINE

The key switch, 1, allows activation of the starter motor and fuel delivery only when:

1. The rear PTO, 2, and Mid PTO, 3, (if equipped) are in the “OFF” position.
2. The range lever, 4, is in the “NEUTRAL” position.
3. The operator is sitting in the seat OR the parking brake is engaged.

NOTE: *Without the operator in the seat or the parking brake not engaged. The starter motor will be activated but the engine will not start, because the fuel solenoid is not energized and not allowing fuel to flow to the injection pump.*

Always use safe practices when starting your tractor. Turn the key to the extreme right. Position the hand throttle forward so that it is one-fourth to one-third open.

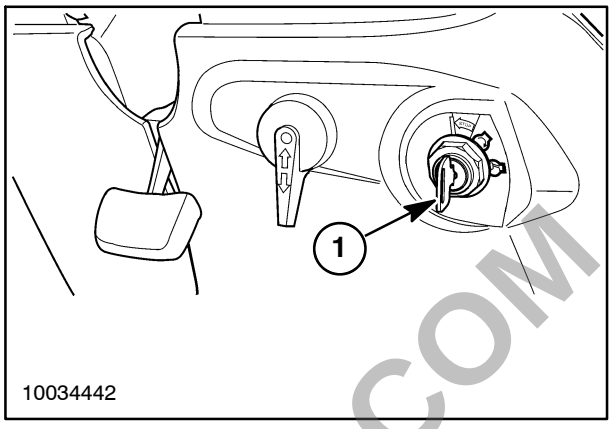
⚠ WARNING ⚠

Always sit in the operator’s seat when starting the tractor. Never attempt to start the engine while standing beside the tractor.

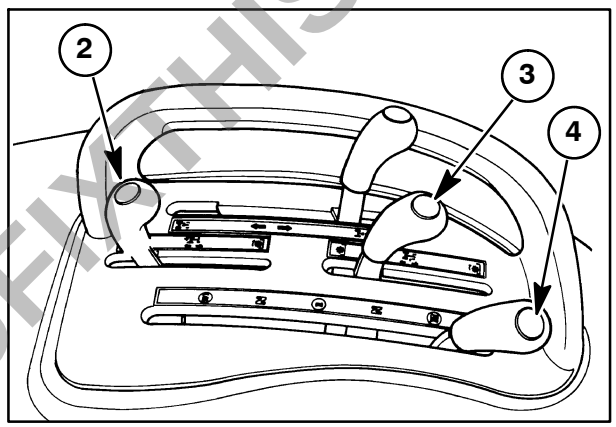
IMPORTANT: *Do not engage the starting motor continuously for more than 30 seconds. Doing so may cause starting motor failure.*

The engine will shut off in approximately two seconds if the operator leaves the seat without the parking brake engaged and without the range lever in the neutral position.

NOTE: *The parking brake MUST be engaged and the range lever must be in the neutral position to allow the operator to leave the seat, when the tractor engine is in operation.*



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STEERING WHEEL

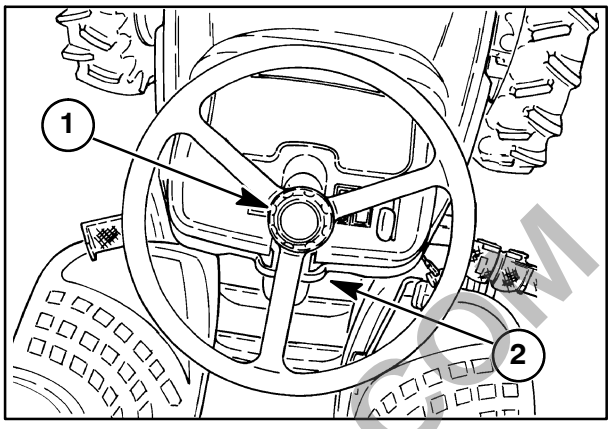
Adjusting the Steering Wheel

The tractor is equipped with an adjustable steering wheel which can telescope and tilt.

To telescope the wheel, turn the wheel hub, 1, to the left and raise or lower the steering wheel to the desired height. Then turn the hub to the right to lock it into position.

NOTE: *When locking the hub into position, do not overtighten.*

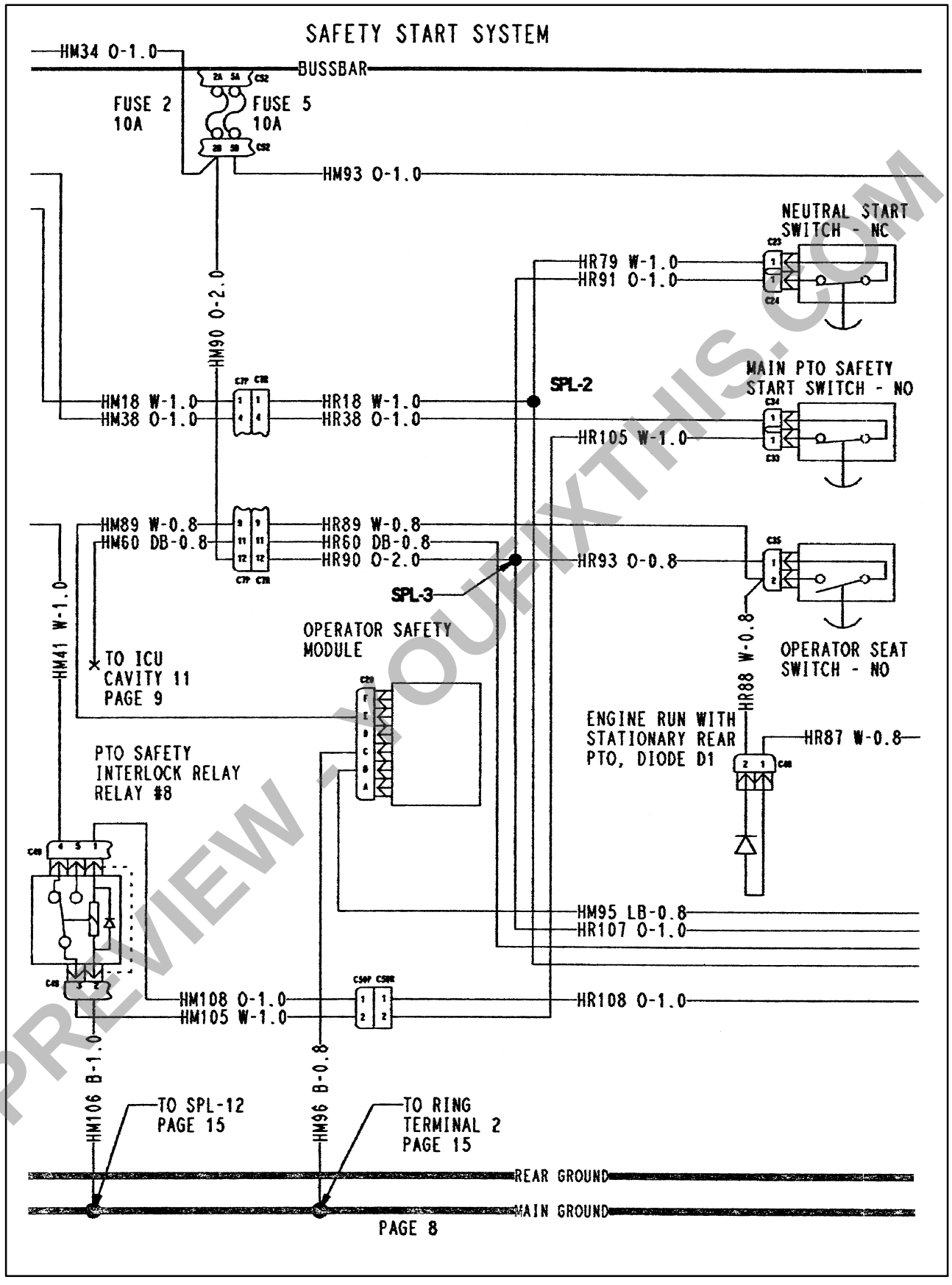
To tilt the wheel, pull up on the lever, 2, and move the steering wheel fore or aft to the desired position. If the wheel is not held in position when the lever is raised, the steering wheel will spring to its most forward position. Use this feature to gain additional clearance when mounting and dismounting the tractor.



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	Model TC29DA—Hydrostatic/Gear	Model TC33DA—Hydrostatic/Gear
CLUTCH		
Type	215 mm (8.46″) (HST) Dry Disc, Organic Face 215 mm (8.46″) – Transmission 9x3 Trans 215 mm (8.46″) – PTO 9 x 3 Trans	225 mm (8.86″) (HST) Dry Disc, Organic Face 225 mm (8.86″) – Transmission 9x3 Trans 215 mm (8.46″) – PTO 9 x 3 Trans
Pedal Free-Travel	19 mm-30 mm (3/4″-1-3/16″)	19 mm-30 mm (3/4″-1-3/16″)
BRAKES		
Type	Wet Disc	Wet Disc
Disc 2	155 mm x 118 mm Diameter (6.1″ x 4.65″)	155 mm x 118 mm Diameter (6.1″ x 4.65″)
STEERING		
Type	Power	Power
Turns Lock-to-Lock:		
FWD	3.1	3.1
Super Steer™	4.1	4.1
Front Wheel Toe-In	0 mm-5 mm (0″-13/64″)	0 mm-5 mm (0″-13/64″)
Turning Radius w/o Brakes:		
FWD	2946.4 mm (116″)	2946.4 mm (116″)
Super Steer™	2700 mm (106.3″)	2700 mm (106.3″)
POWER TAKE-OFF		
Type	Transmission Single Clutch – HST Live, Dual Clutch – Gear	Transmission Single Clutch – HST Live, Dual Clutch – Gear
Shaft:		
Rear PTO	35 mm (1-3/8″)	35 mm (1-3/8″)
Mid PTO	25.4 mm (1″)	25.4 mm (1″)
Engine Speed for 540 RPM Rear PTO Operation	2465 RPM – HST Transmission 2420 RPM – Gear Transmission	2465 RPM – HST Transmission 2420 RPM – Gear Transmission
Horsepower PTO Observed	17.6 kw (23.6 HP) – HST 18.7 kw (25.1 HP) – Gear	20.1 kw (26.9 HP) – HST 20.3 kw (28.6 HP) – Gear
Engine Speed for 2000 RPM Mid PTO Operation	2420 RPM – HST 2377 RPM – Gear	2420 RPM – HST 2377 RPM – Gear
HYDRAULIC LIFT SYSTEM		
Type	Open Center	Open Center
Pump Type	Gear	Gear
Pump Capacity	29 lpm (7.6 U.S. gpm)	29 lpm (7.6 U.S. gpm)
System Relief Valve Setting	147 bar (2133 PSI)	147 bar (2133 PSI)

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