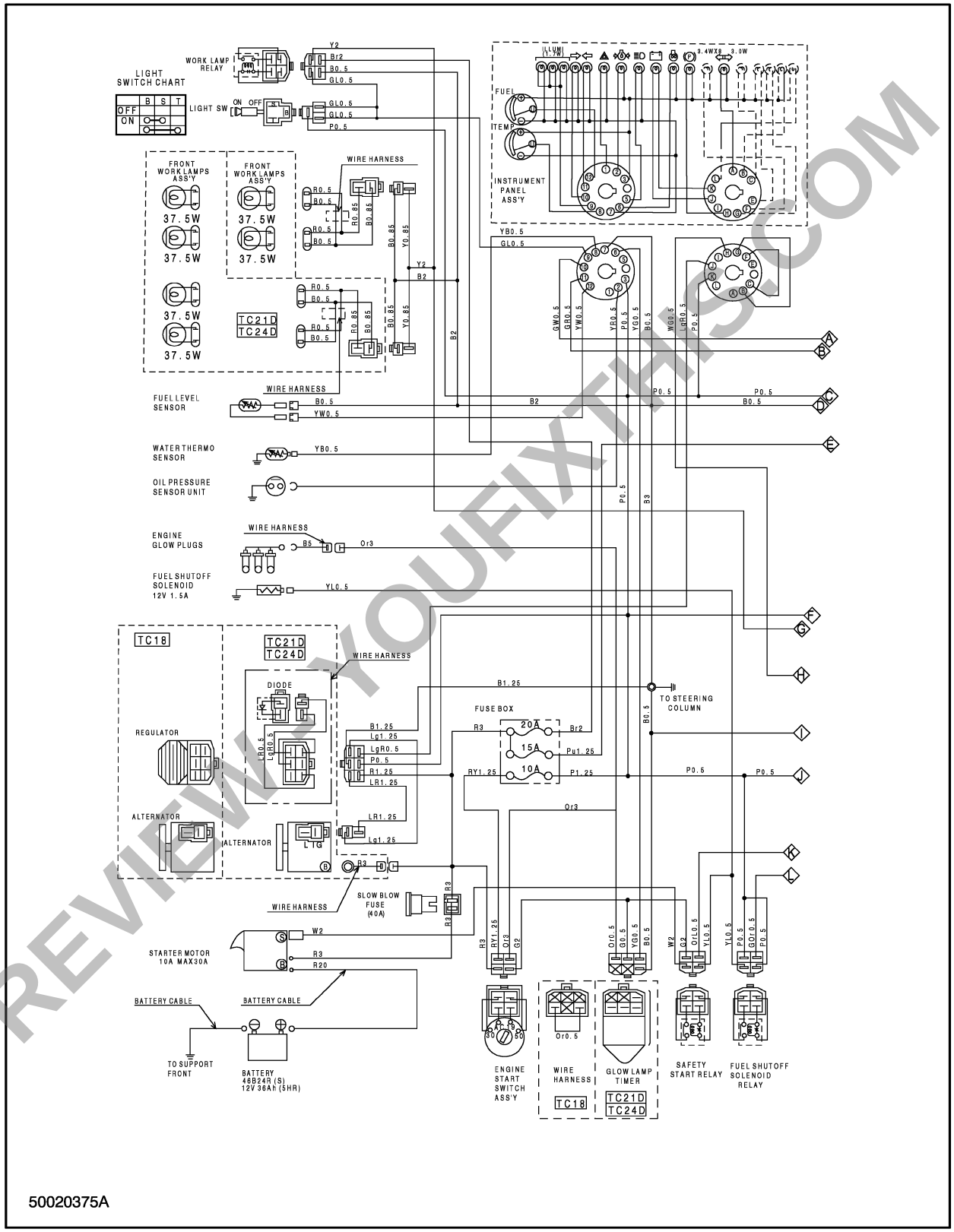
ELECTRICAL WIRING DIAGRAM



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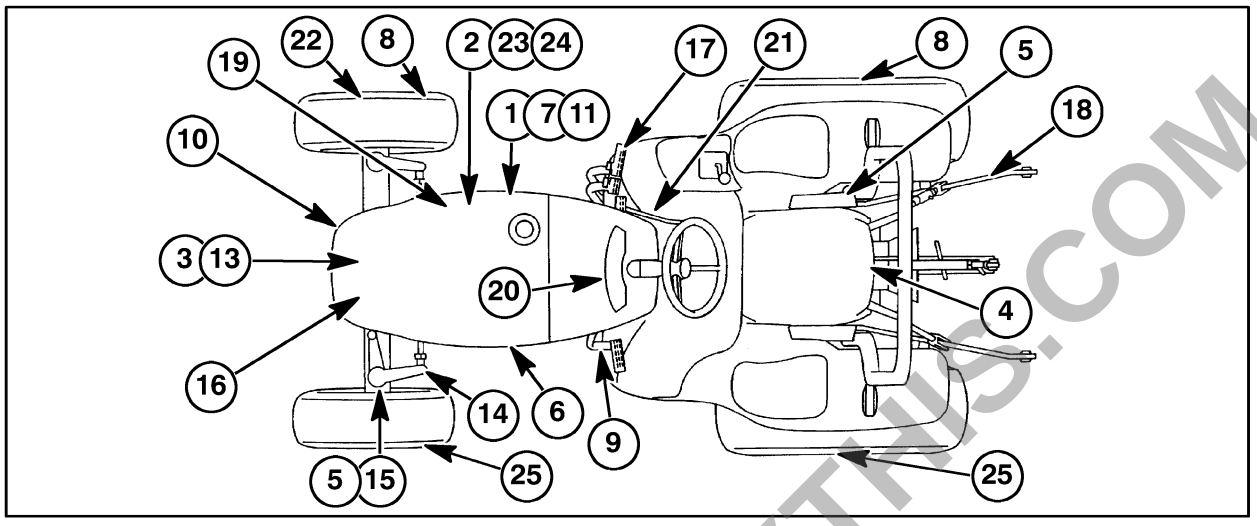
SECTION 4
SPECIFICATIONS

	Model TC18— Hydrostatic/Gear
ENGINE	
Type	Diesel
Engine Gross Horsepower	18.5
Cylinders	3
Bore	75 mm (2.95″)
Stroke	72 mm (2.83″)
Displacement	0.954 L (58.2 cu. in.)
Compression Ratio	23:1
Firing Order	1-2-3
Low Idle Speed	1100-1200 RPM
Maximum Speed:	
High Idle	2800-2850 RPM
Rated	2600 RPM
Valve Clearance (Cold):	
Intake	0.20 mm (0.008″)
Exhaust	0.20 mm (0.008″)
CAPACITIES	
Fuel Tank	20 liters/ 5.3 U.S. gals.
Cooling System	3.5 liters/ 3.7 U.S. qts.
Engine Crankcase:	
Less Filter	2.6 liters/ 2.7 U.S. qts.
With Filter Change	2.8 liters/ 2.9 U.S. qts.
Rear Axle & Transmission (Includes Hydraulics)	16 liters/ 4.23 U.S. gals.
Front Axle Final Reduction	0.8 liter/ 0.85 U.S. qt. per side
Differential Gear Case	1 liter/ 1.06 U.S. qts.

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LUBRICATION AND MAINTENANCE CHART
NEW HOLLAND TC18 — TWO-WHEEL DRIVE



1

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		
25	Wheel Bolt Torque	X					
—	All Fluid Levels	X					
8	Tires	X					Every 50 Hours
9	Clutch Pedal	X		X		X	
10	Battery	X					
11	Fuel Filter	D	R	A	I	N	
13	Fan Belt	X					
	Lubrication Fittings:						
14	Steering Linkage			X			
15	Front Wheel Spindles (2)			X			
16	Pivot Shaft			X			
17	Brake Pedal			X			
18	3-Point Linkage			X			
19	Power Steering Cylinder			X			
20	Pedal Shaft			X			
21	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	
25	Wheel Bolt Torque	X					
	Steering Free Play	X				X	
4	Transmission Oil				X		Every 300 Hours
5	Hydraulic Filter				X		
6	H.S.T. Filter				X		
22	Front Wheel Bearings			X			Every 600 Hours
23	Fuel Injectors	X					
24	Valve Clearance	X					
2	Air Cleaner Element				X		Seasonal
3	Radiator Coolant				X		
2	Safety Air Filter Element				X		Every Third Primary Element Change or Every **1000** Hours, Whichever Comes First

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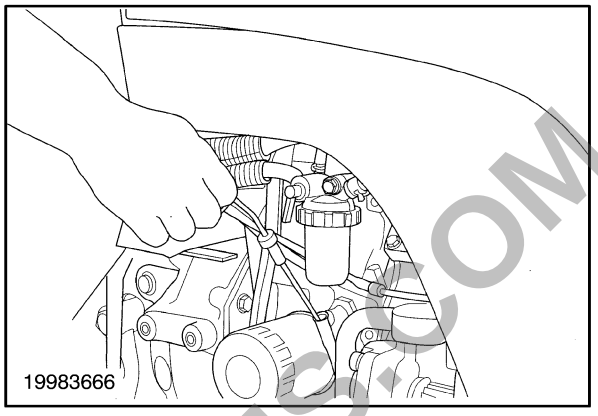
FUEL AND LUBRICANT SERVICE PROCEDURES

ENGINE

Checking the Engine Oil Level

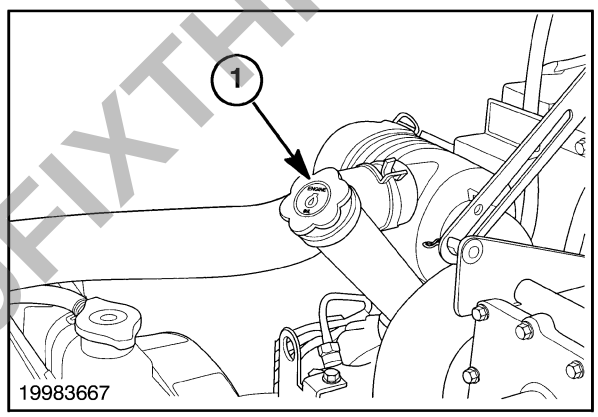
NOTE: *Check the engine oil level daily or after every 10 hours of operation.*

1. After the engine has been stopped for a period of time and with the tractor standing level, check the oil level using the dipstick.



4

2. If the oil level is low, remove the filler cap, 1, and add oil through the filler hole. Add enough oil so that the level registers between the two marks on the dipstick. Do not overfill.



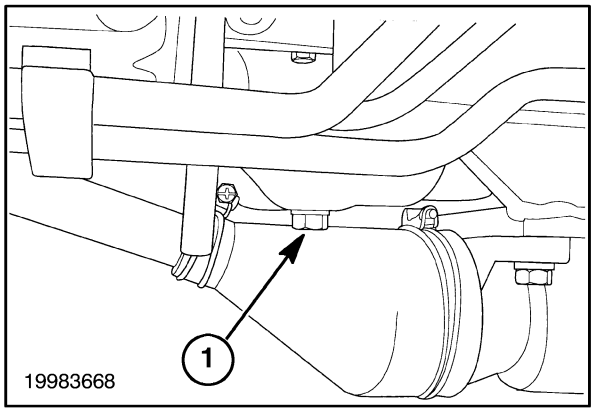
5

Changing the Engine Oil

NOTE: *Change the engine oil and filter after the first 50 hours of operation, then every 100 hours thereafter. If the tractor is operated for extended periods of time at maximum rated power and speed, or under other types of continuous, severe operating conditions, the engine oil and filter should be changed at 70-hour intervals following the initial oil change.*

To change the engine oil:

1. Place a suitable container beneath the drain opening to catch the used oil. With the tractor engine off but at normal operating temperature, remove the drain plug, 1. Reinstall the plug after all of the oil has been drained.



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MINIMUM HARDWARE TIGHTENING TORQUES

IN FOOT POUNDS (NEWTON-METERS) FOR NORMAL ASSEMBLY APPLICATIONS

INCH HARDWARE AND LOCKNUTS

NOMINAL SIZE	SAE GRADE 2		SAE GRADE 5		SAE GRADE 8		LOCKNUTS		NOMINAL SIZE
	UNPLATED or PLATED SILVER	PLATED W/ZnCr GOLD	UNPLATED or PLATED SILVER	PLATED W/ZnCr GOLD	UNPLATED or PLATED SILVER	PLATED W/ZnCr GOLD	GR.B w/GR5 BOLT	GR.C w/GR8 BOLT	
1/4	55* (6.2)	72* (8.1)	86* (9.7)	112* (13)	121* (14)	157* (18)	61* (6.9)	86* (9.8)	1/4
5/16	115* (13)	149* (17)	178* (20)	229* (26)	250* (28)	324* (37)	125* (14)	176* (20)	5/16
3/8	17 (23)	22 (30)	26 (35)	34 (46)	37 (50)	48 (65)	19 (26)	26 (35)	3/8
7/16	27 (37)	35 (47)	42 (57)	54 (73)	59 (80)	77 (104)	30 (41)	42 (57)	7/16
1/2	42 (57)	54 (73)	64 (87)	83 (113)	91 (123)	117 (159)	45 (61)	64 (88)	1/2
9/16	60 (81)	77 (104)	92 (125)	120 (163)	130 (176)	169 (229)	65 (88)	92 (125)	9/16
5/8	83 (112)	107 (145)	128 (174)	165 (224)	180 (244)	233 (316)	90 (122)	127 (172)	5/8
3/4	146 (198)	189 (256)	226 (306)	293 (397)	319 (432)	413 (560)	160 (217)	226 (306)	3/4
7/8	142 (193)	183 (248)	365 (495)	473 (641)	515 (698)	667 (904)	258 (350)	364 (494)	7/8
1	213 (289)	275 (373)	547 (742)	708 (960)	773 (1048)	1000 (1356)	386 (523)	545 (739)	1

NOTE: Torque values shown with * are inch pounds.

IDENTIFICATION
CAP SCREWS AND CARRIAGE BOLTS



SAE GRADE 2 | SAE GRADE 5 | SAE GRADE 8

REGULAR NUTS | SAE GRADE 5 HEX NUTS | SAE GRADE 8 HEX NUTS

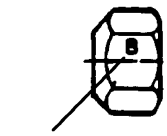
LOCKNUTS



GRADE IDENTIFICATION
GRADE A NO NOTCHES
GRADE B ONE CIRCUMFERENTIAL NOTCH
GRADE C TWO CIRCUMFERENTIAL NOTCHES



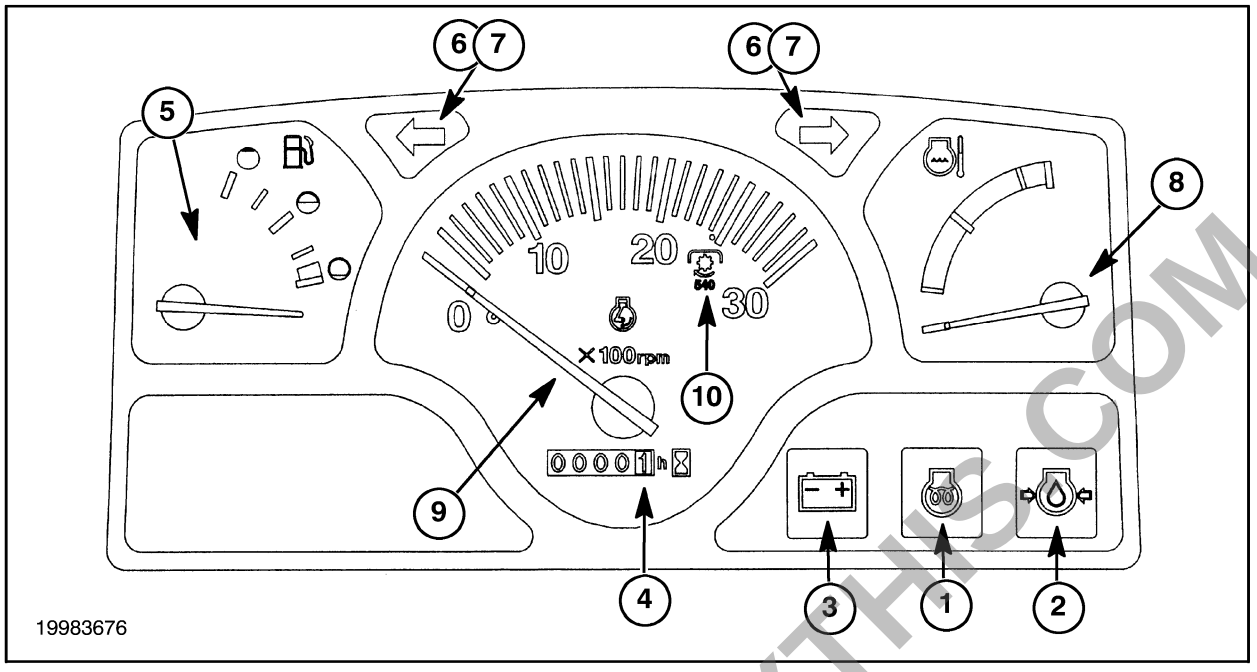
GRADE IDENTIFICATION
GRADE A NO MARKS
GRADE B THREE MARKS
GRADE C SIX MARKS
MARKS NEED NOT BE LOCATED AT CORNERS



GRADE IDENTIFICATION
GRADE A NO MARK
GRADE B LETTER B
GRADE C LETTER C

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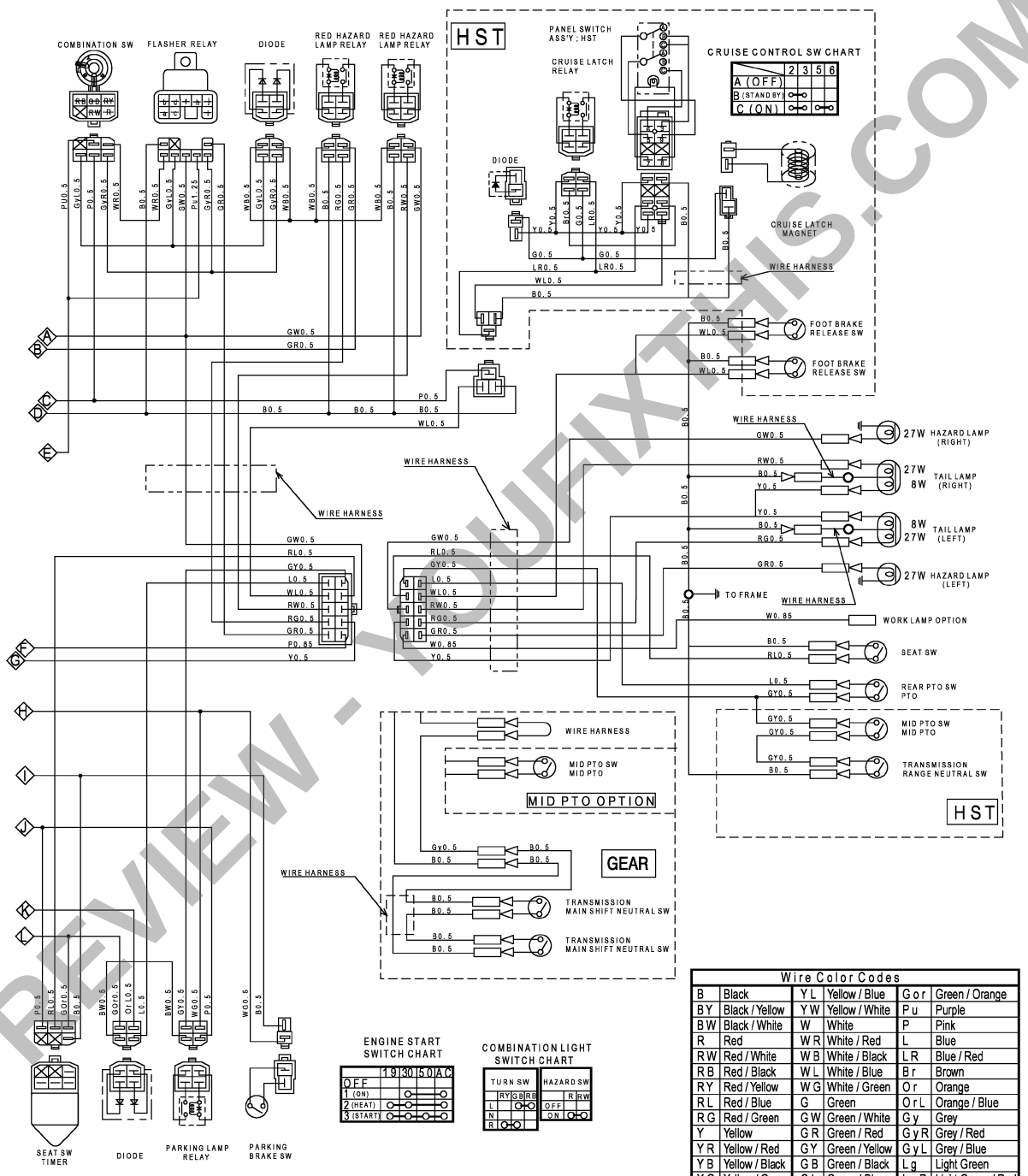
INSTRUMENT PANEL

1. **Cold Starting Indicator Light**— Illuminates when the key switch is turned to the “HEAT” position. It remains lit for approximately 5 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 based on an average engine speed of 1833 RPM. Engine speeds below 1833 RPM accumulate engine hours at a slower rate than clock hours. Engine speeds above 1833 RPM accumulate engine hours faster than clock hours. 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 register empty with the key switch in the “STOP” position.
6. **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.
7. **Flasher Turn Lights**—Operate when the turn signal switch is activated. Rotate the switch counterclockwise for right turns, the right arrow will flash. Rotate the switch clockwise for left turns, the left arrow will flash. The key switch has to be in the “RUN” position.
8. **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.
9. **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.

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ELECTRICAL WIRING DIAGRAM



Wire Color Codes					
B	Black	YL	Yellow / Blue	Gor	Green / Orange
BY	Black / Yellow	YW	Yellow / White	Pu	Purple
BW	Black / White	W	White	P	Pink
R	Red	WR	White / Red	L	Blue
RW	Red / White	WB	White / Black	LR	Blue / Red
RB	Red / Black	WL	White / Blue	Br	Brown
RY	Red / Yellow	WG	White / Green	Or	Orange
RL	Red / Blue	G	Green	OrL	Orange / Blue
RG	Red / Green	GW	Green / White	Gy	Grey
Y	Yellow	GR	Green / Red	GyR	Grey / Red
YR	Yellow / Red	GY	Green / Yellow	GyL	Grey / Blue
YB	Yellow / Black	GB	Green / Black	Lg	Light Green
YG	Yellow / Green	GL	Green / Blue	LgR	Light Green / Red

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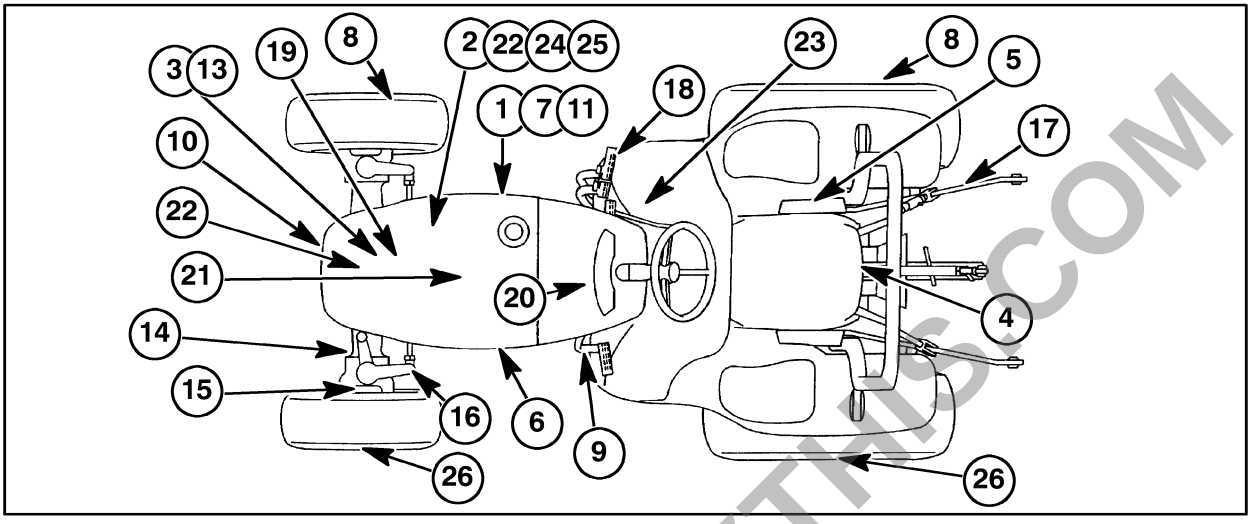
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	Model TC18— Hydrostatic/Gear
COOLING SYSTEM	
Type	Pressurized Liquid with Recirculating Bypass
Water Pump:	
Type	Centrifugal
Drive	V-Belt
Belt Deflection	10 mm-15 mm (7/16″-9/16″) when 9-11 kg (20-25 lbs.) thumb pressure is applied mid-way between belt pulleys
Fan Diameter	335 mm (13.19″)
Thermostat:	
Start to Open	82°C (200°F)
Fully Open	95°C (228.6°F)
Radiator Cap	0.9 bar (13 PSI)
ELECTRICAL SYSTEM	
Alternator	12-volt, 20 amps
Battery	12-volt, w/ negative ground, 325 cca
Starting Motor	Solenoid Pre-Engaged Reduction
FUEL SYSTEM	
Fuel Type	Diesel
Type of Fuel to Use if Above 40°F	No. 2-Diesel, Cetane Rating: Minimum 40
Type of Fuel to Use if Below 40°F	No. 1-Diesel, Cetane Rating: Minimum 40
Injection Pump:	
Type	In-Line
Timing	21° BTDC

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LUBRICATION AND MAINTENANCE CHART
NEW HOLLAND TC18 — FRONT-WHEEL DRIVE



2

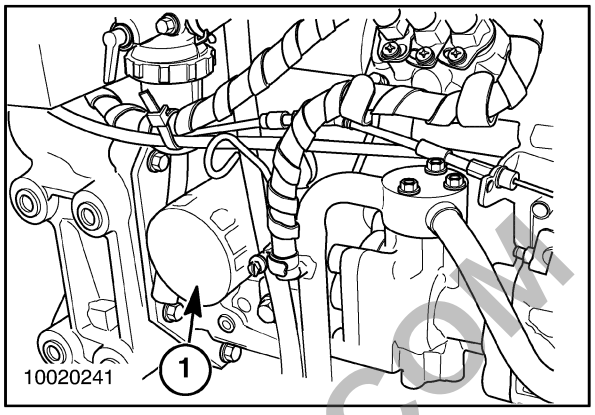
NO.	LUBRICATION & MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTER-VALS
1	Engine Oil Level	X					Every
2	Air Cleaner	X					10
3	Radiator Coolant	X					Hours or
4	Transmission Oil Level	X					Daily
5	Hydraulic Filter				X		First
6	H.S.T. Filter				X		50
1, 7	Engine Oil & Filter				X		Hours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

NO.	LUBRICATION & MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTER-VALS
1, 7	Engine Oil & Filter				X		Every
2	Air Cleaner Element		X				100 Hours
11	Fuel Filter		X				
8	Brake					X	Every
11	Fuel Filter Element				X		200
13	Fan Belt					X	Hours
26	Wheel Bolt Torque	X					
	Steering Free Play	X				X	
4	Transmission Oil				X		Every
5	Hydraulic Filter				X		300
6	H.S.T. Filter				X		Hours
14	Front Axle Oil				X		
15	Final Reduction Gear Cases Oil				X		
24	Fuel Injector	X				X	Every
25	Valve Clearance	X				X	600 Hours
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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2. Next, place a container below the oil filter, 1, to catch the used oil and unscrew the oil filter. Discard the used oil and filter.
3. Coat the gasket on the new filter with a film of clean oil. Screw the filter into place until the gasket contacts its mating surface, then turn the filter approximately three-quarters of a turn by hand. Do not overtighten.
4. Add the proper type and level of new oil, then start the engine and check the filter for leaks.



7

Recommended Oils

Ambient Temp (°F)	Recommended Oil
+ 40-120°	SAE 30W
+ 10-120°	SAE 15W-40
- 10-120°	SAE 10W-30
- 20-60°	SAE 5W-30
NOTE: *Tractors are originally shipped with 10W-30 oil.*	

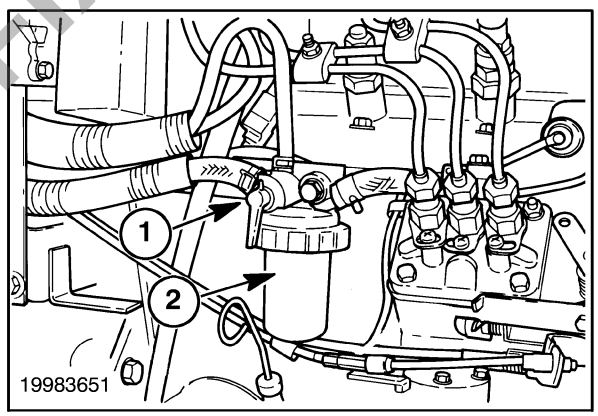
FUEL FILTER

Draining the Fuel Filter

NOTE: *The fuel filter should be drained after every 100 hours of operation.*

1. Make sure there is adequate fuel in the fuel tank and close the fuel shutoff valve, 1 (the handle should be pointing to the “C” position). Remove the fuel sediment bowl, 2.
2. Open the fuel shutoff valve until all water has been removed and only fuel flows from the filter base.
3. Install the fuel sediment bowl and bleed the system as outlined in “Bleeding the Fuel System.”

NOTE: *Valve is shown in open position.*



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MINIMUM HARDWARE TIGHTENING TORQUES

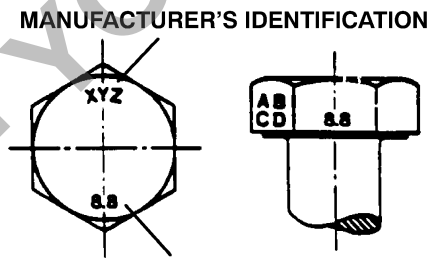
IN FOOT POUNDS (NEWTON-METERS) FOR NORMAL ASSEMBLY APPLICATIONS

METRIC HARDWARE AND LOCKNUTS

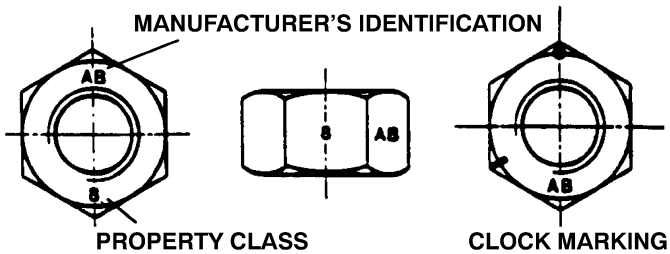
NOMINAL SIZE	CLASS 5.8		CLASS 8.8		CLASS 10.9		LOCKNUT CL.8 W/CL8.8 BOLT
	UNPLATED	PLATED W/ZnCr	UNPLATED	PLATED W/ZnCr	UNPLATED	PLATED W/ZnCr	
M4	15* (1.7)	19* (2.2)	23* (2.6)	30* (3.4)	33* (3.7)	42* (4.8)	16* (1.8)
M6	51* (5.8)	67* (7.6)	79* (8.9)	102* (12)	115* (13)	150* (17)	56* (6.3)
M8	124* (14)	159* (18)	195* (22)	248* (28)	274* (31)	354* (40)	133* (15)
M10	21 (28)	27 (36)	32 (43)	41 (56)	45 (61)	58 (79)	22 (30)
M12	36 (49)	46 (63)	55 (75)	72 (97)	79 (107)	102 (138)	39 (53)
M16	89 (121)	117 (158)	137 (186)	177 (240)	196 (266)	254 (344)	97 (131)
M20	175 (237)	226 (307)	277 (375)	358 (485)	383 (519)	495 (671)	195 (265)
M24	303 (411)	392 (531)	478 (648)	619 (839)	662 (897)	855 (1160)	338 (458)

NOTE: Torque values shown with * are inch pounds.

IDENTIFICATION
HEX CAP SCREW AND CARRIAGE BOLTS
CLASSES 5.6 AND UP



HEX NUTS AND LOCKNUTS
CLASSES 05 AND UP



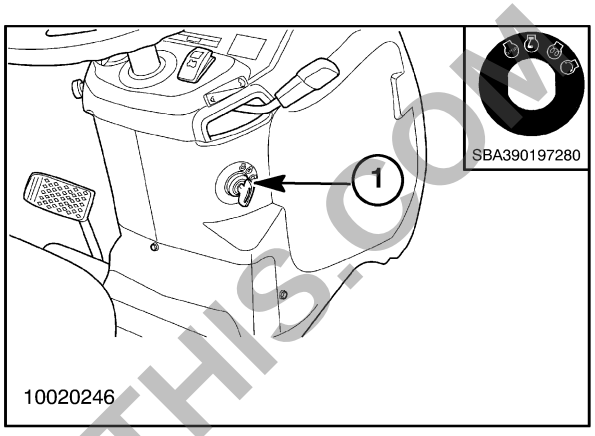
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10. **Rear PTO Speed**—Determined by the position of the needle on the tachometer. The tachometer is marked to indicate 540 PTO RPM. Engine RPM should remain close to this mark while using the rear PTO; running the engine faster than this results in a dangerous overspeed condition.

KEY SWITCH

The key switch, 1, is located on the right-hand side of the console just below the hand throttle. Turning the key right to the “ON” position activates the warning lights and instruments. The pre-heat system is activated when the key is turned further to the right to the “HEAT” position, and the engine starts when the key is turned to the extreme right. The key spring returns to the “ON” position when released.



8

PRE-HEATING THE SYSTEM

Your tractor has a diesel engine. Before starting a cold engine, the precombustion chambers must be heated.

To pre-heat the engine, turn the key switch to the “HEAT” position and hold the key in this position for approximately 5 seconds. The glow plugs heat the precombustion chambers during this time, and the engine will start.

NOTE: *When ambient temperatures are colder, a longer pre-heat time is necessary. Even after the cold start indicator light has gone out, the glow plugs will continue to heat if the key is held in the “HEAT” position.*

WARNING

Do not use ether with the thermostat starting aid.

NOTE: *A coolant immersion heater is available as a dealer-installed option. This heater allows for easier starting in temperatures below 0°F (-17.7°C) by warming the engine coolant.*

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