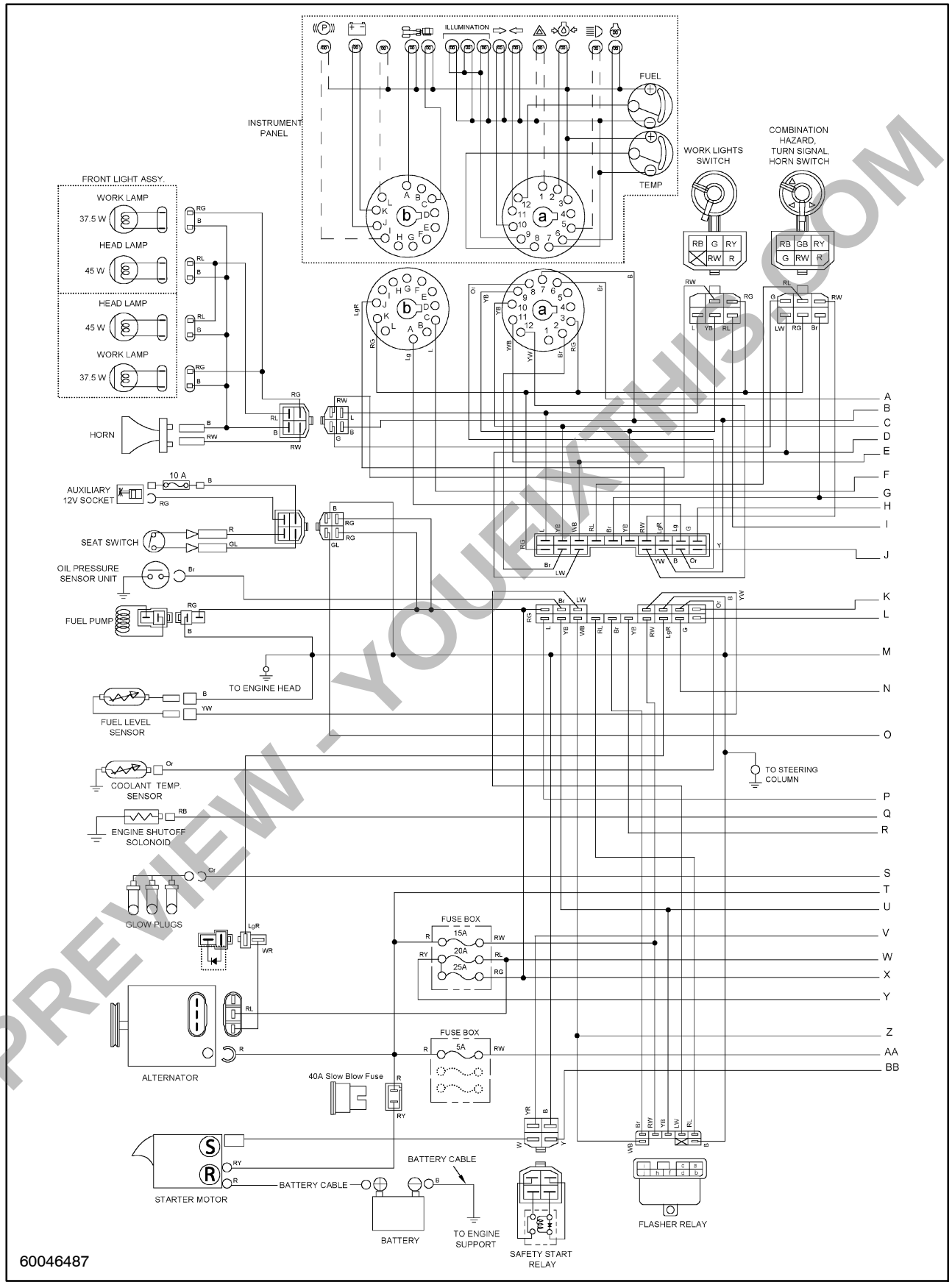
ELECTRICAL WIRING DIAGRAM



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

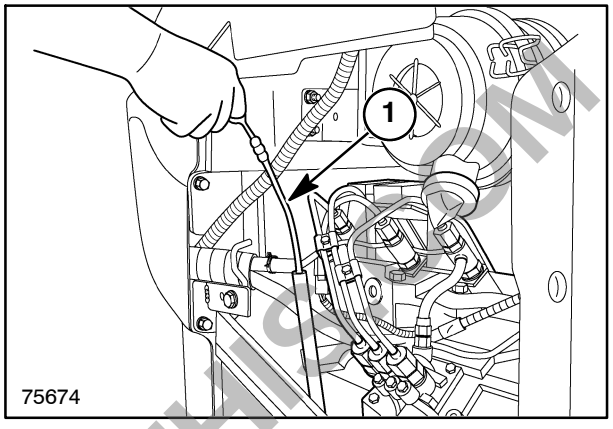
FUEL AND LUBRICANT SERVICE PROCEDURES

ENGINE

Checking the Engine Oil Level

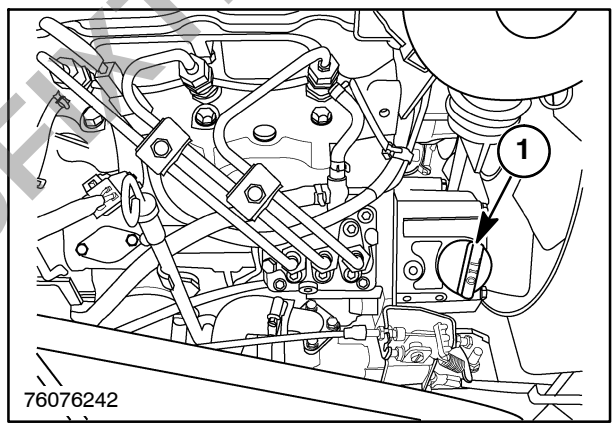
NOTE: *Check the engine oil level daily, or after every 10 hours of operation.*

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, 1.



3

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.



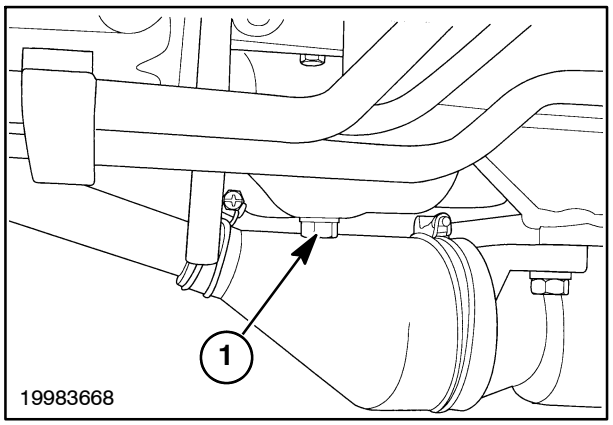
4

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.



5

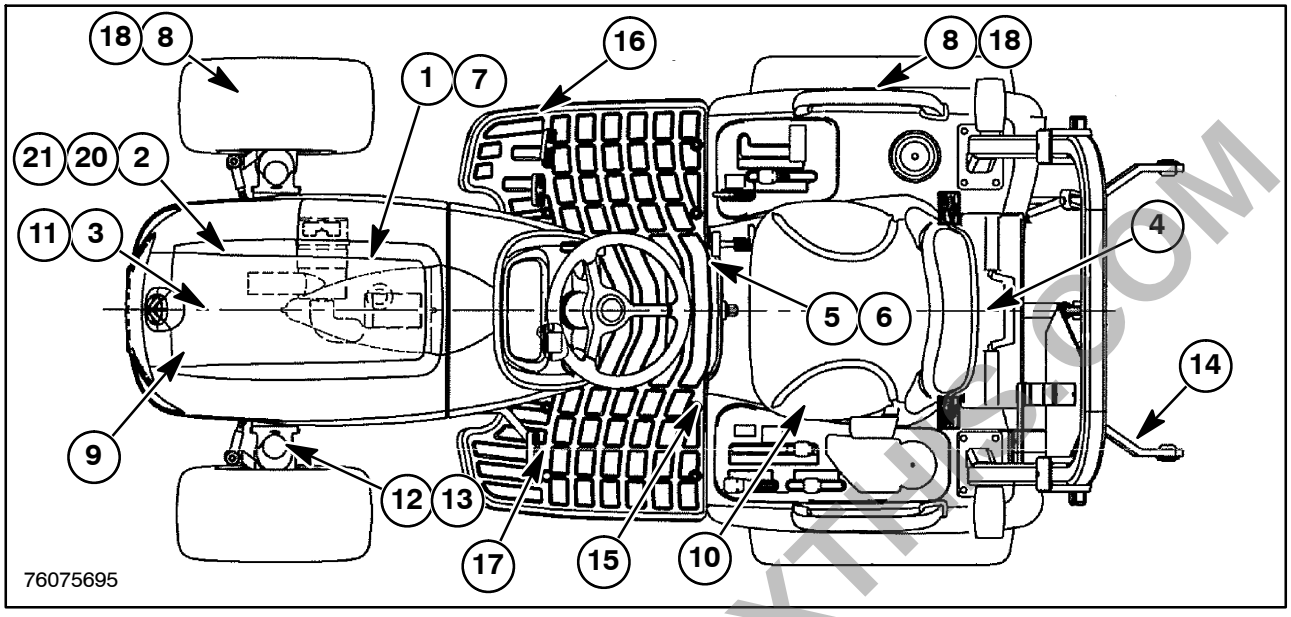
⚠ CAUTION ⚠

Engine oil could be hot, use caution during draining.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

LUBRICATION AND MAINTENANCE CHART
NEW HOLLAND T1110 - FRONT-WHEEL DRIVE



1

NO.	LUBRICATION & MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTER-VALS
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					
10	Fuel Filter				X		
18	Wheel Bolt Torque	X					
—	All Fluid Levels	X					
17	Brake Pedal Free Play	X					
8	Tires	X					Every 50 Hours
9	Battery	X					
11	Fan Belt	X					
12	Front Axle Oil Level	X					
13	Final Reduction Gear Cases Oil Level	X					
17	Brake Pedal Free Play	X					
	Lubrication Fittings:						
14	3-Point Linkage			X			
15	Differential Lock Pedal			X			
16	H.S.T. Pedal Pivot			X			
1, 7	Engine Oil & Filter				X		Every 100 Hours
2	Air Cleaner Element		X				

NO.	LUBRICATION & MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTER-VALS
17	Brake Pedal Free Play					X	Every 200 Hours
10	Fuel Filter				X		
11	Fan Belt					X	
18	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		
12	Front Axle Oil				X		
13	Final Reduction Gear Cases Oil				X		
20	Fuel Injector	X				X	Every 600 Hours
21	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

PREVIEW - YOUFIXTHIS.COM

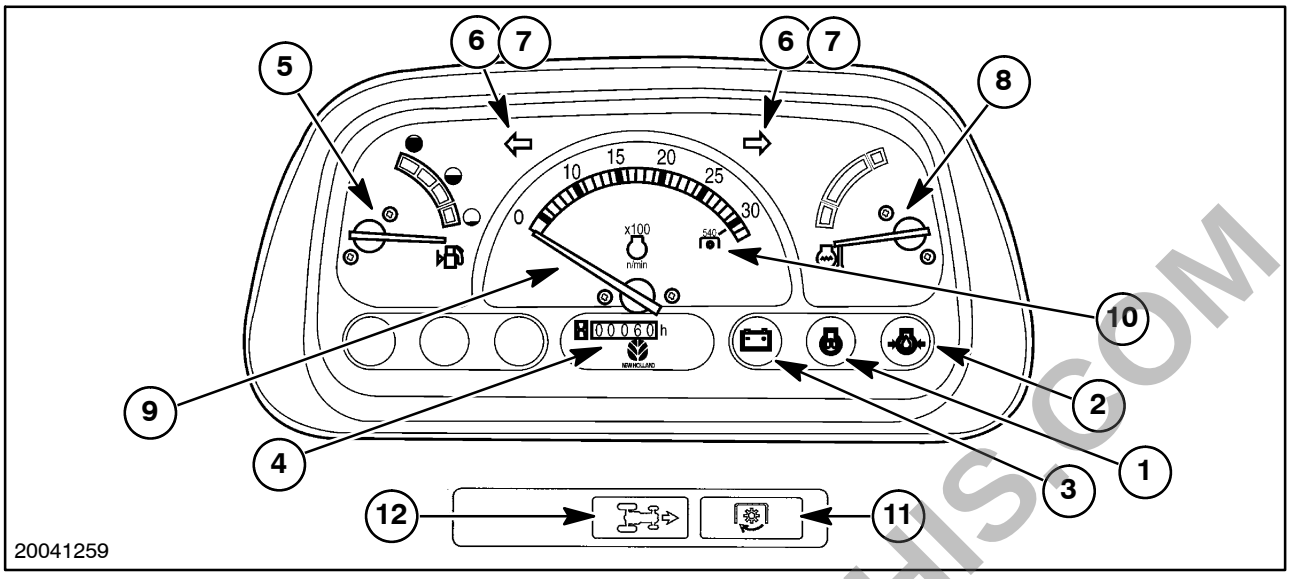
Download full manual at youfixthis.com

SECTION 5
SPECIFICATIONS

	Model T1110 Hydrostatic
ENGINE	
Type	S773L Diesel
Engine Gross Horsepower	28.0
Cylinders	3
Bore	77 mm (3.03 in)
Stroke	81 mm (3.19 in)
Displacement	1.13 L (69.0 cu-in)
Compression Ratio	24:1
Firing Order	1 - 2 - 3
Low Idle Speed	1350 ± 50 RPM
Maximum Speed	
High Idle	3325 ± 25 RPM
Rated	3000 ± 50 RPM
Valve Clearance (Cold):	
Intake	0.20 mm (0.008 in)
Exhaust	0.20 mm (0.008 in)
CAPACITIES	
Fuel Tank	26.0 liters/7.1 U.S. gals
Cooling System	3.5 liters/3.7 U.S. qts
Engine Crankcase	
With Filter	3.3 liters/3.5 U.S. qts
Rear Axle & Transmission	13 liters/13.8 U.S. qts
Power Steering	Using Transmission Oil (Common Use)
Front Axle Differential/ Final Reduction Gear Case	2.0 liters/2.12 U.S. qts

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com



6

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 3000 RPM. Engine speeds below 3000 RPM accumulate engine hours at a slower rate than clock hours. Engine speeds above 3000 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 to the right for right turns, the right arrow will flash. Rotate the switch to the left 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.
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.
11. **PTO Indicator Light** - Illuminates with the key switch in the “ON” position and the PTO clutch lever engaged. This light indicates that the PTO clutch is engaged.
12. **HST Cruise Control Indicator Light** - Illuminates with the key switch in the “ON” position and the cruise control engaged. This light indicates that the HST cruise control is engaged.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

MINIMUM HARDWARE TIGHTENING TORQUES

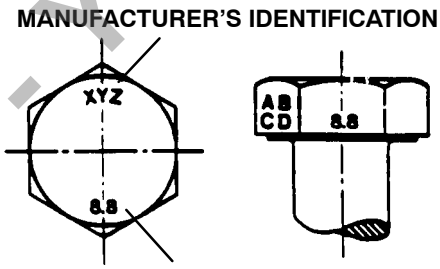
IN NEWTON-METERS (FOOT POUNDS) FOR NORMAL ASSEMBLY APPLICATIONS

METRIC NON-FLANGED HARDWARE AND LOCKNUTS

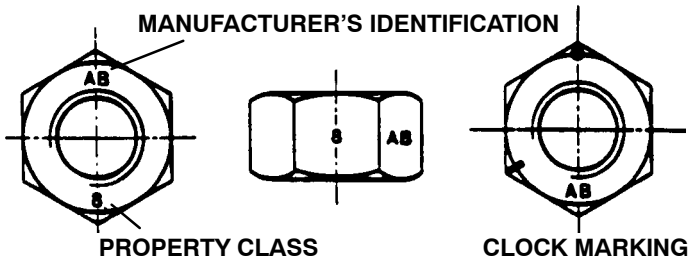
NOMINAL SIZE	CLASS 5.8		CLASS 8.8		CLASS 10.9		LOCKNUT CL.8 W/CL8.8 BOLT
	UNPLATED	PLATED W/ZnCr	UNPLATED	PLATED W/ZnCr	UNPLATED	PLATED W/ZnCr	
M4	1.7 (15)*	2.2 (19)*	2.6 (23)*	3.4 (30)*	3.7 (33)*	4.8 (42)*	2.3 (20)*
M6	5.8 (51)*	7.6 (67)*	8.9 (79)*	12 (102)*	13 (115)*	17 (150)*	7.8 (69)*
M8	14 (124)*	18 (159)*	22 (195)*	28 (248)*	31 (274)*	40 (354)*	19 (169)*
M10	28 (21)	36 (27)	43 (32)	56 (41)	61 (45)	79 (58)	38 (28)
M12	49 (36)	63 (46)	75 (55)	97 (72)	107 (79)	138 (102)	66 (49)
M16	121 (89)	158 (117)	186 (137)	240 (177)	266 (196)	344 (254)	164 (121)
M20	237 (175)	307 (226)	375 (277)	485 (358)	519 (383)	671 (495)	330 (243)
M24	411 (303)	531 (392)	648 (478)	839 (619)	897 (662)	1160 (855)	572 (422)

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

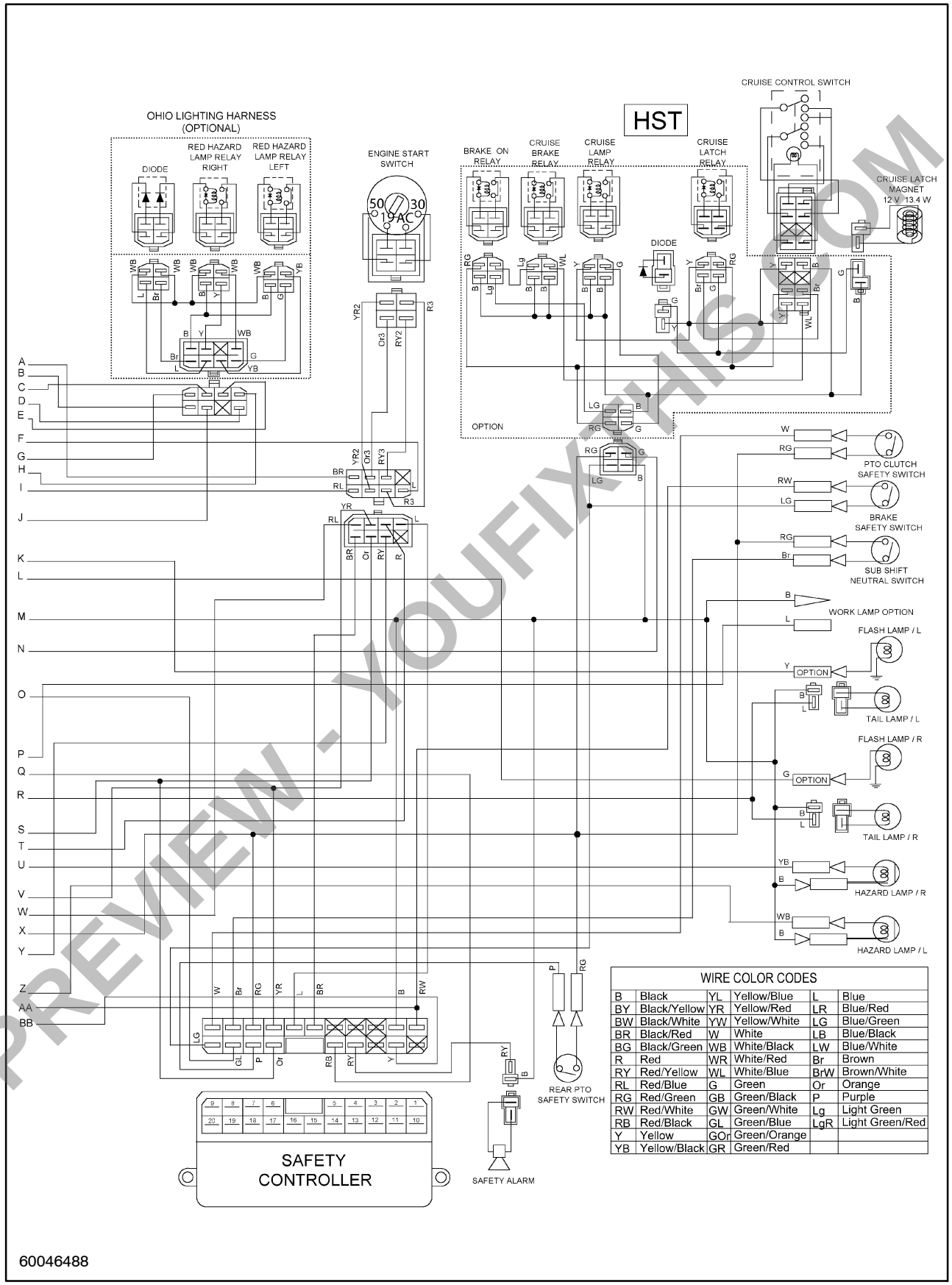


86529681 REV F 5.1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

ELECTRICAL WIRING DIAGRAM



WIRE COLOR CODES					
B	Black	YL	Yellow/Blue	L	Blue
BY	Black/Yellow	YR	Yellow/Red	LR	Blue/Red
BW	Black/White	YW	Yellow/White	LG	Blue/Green
BR	Black/Red	W	White	LB	Blue/Black
BG	Black/Green	WB	White/Black	LW	Blue/White
R	Red	WR	White/Red	Br	Brown
RY	Red/Yellow	WL	White/Blue	BrW	Brown/White
RL	Red/Blue	G	Green	Or	Orange
RG	Red/Green	GB	Green/Black	P	Purple
RW	Red/White	GW	Green/White	Lg	Light Green
RB	Red/Black	GL	Green/Blue	LgR	Light Green/Red
Y	Yellow	GOr	Green/Orange		
YB	Yellow/Black	GR	Green/Red		

60046488

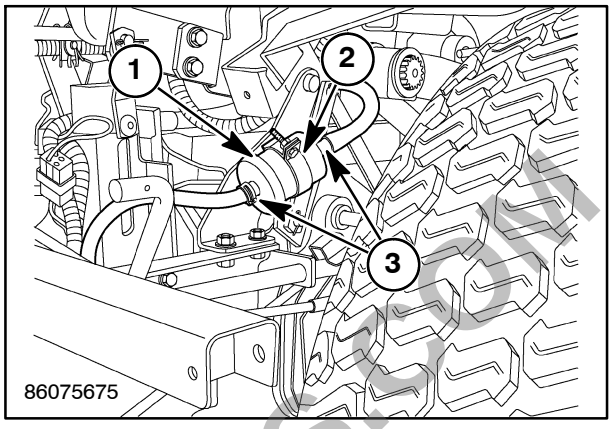
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

FUEL FILTER

NOTE: *Fuel filter should be replaced every 200 hours of operation.*

The fuel filter, 1, is installed in the fuel line between the fuel tank and the electric fuel pump. Location left rear of tractor, (left rear tire removed for clarity).



7

To replace filter:

1. Remove left rear tire assembly and support axle with jack stand.
2. Drain the fuel tank or pinch the fuel hose to prevent fuel leakage.
3. Remove filter mounting clamp, 2, from filter.
4. Loosen clamps, 3, from fuel line and remove fuel filter from fuel hose.
5. Install new fuel filter, **pay attention to directional arrow on filter**, arrow points in direction of fuel flow, from tank to engine.
6. Install line clamps, 3, and mounting clamp, 2, to filter.
7. Check for any leakage, place key switch in the “ON” position for a several seconds to bleed any air out of fuel system.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Lubricant	Type and Description	Part Number	Container Size
Engine Oil	AMBRA SUPER GOLD SSL ENGINE OIL SAE 10W40	86994335	2.5G / 9.46L
	AMBRA SUPER GOLD HSP ENGINE OIL SAE 10W	86641050	5G / 18.93L
	AMBRA SUPER GOLD HSP ENGINE OIL SAE 10W30	9613313	1QT / 0.946L
		86641052	1G / 3.785L
		9613314	2.5G / 9.46L
		9673508DS	5G / 18.93L
	AMBRA SUPER GOLD HSP ENGINE OIL SAE 30	9613286	1QT / 0.946L
		86641043	1G / 3.785L
		9613289	2.5G / 9.46L
		86641044	5G / 18.93L
	AMBRA SUPER GOLD HSP ENGINE OIL SAE 40	9624812DS	55G / 208.2L
	AMBRA SUPER GOLD HSP ENGINE OIL SAE 15W40	86641081	1QT / 0.946L
		86641082	1G / 3.785L
		86641084	2.5G / 9.46L
		86641083	5G / 18.93L
	AMBRA SUPER GOLD HSP ENGINE OIL SAE 20W50	86994337	5G / 18.93L
	AMBRA AUTO SUPREME SAE 5W30	9673589DS	1QT / 0.946L
	AMBRA AUTO SUPREME SAE 10W30	86641101	1QT / 0.946L
Transmission Oil	AMBRA MULTI TRAN	86639558	1G / 3.785L
		86639559	2.5G / 9.46L
		86639560	5G / 18.93L
	F200 Cold Weather Use	86523625DS	1G / 3.785L
		86523626DS	5G / 18.93L
	AMBRA MULTI TRAN SSL	86994339	2.5G / 9.46L
	AMBRA MULTI BIO S	86994341	2.5G / 9.46L
Hydraulic Oil	AMBRA MULTI G 134	9624655DS	1QT / 0.946L
		9624656DS	1G / 3.785L
		9624450	2.5G / 9.46L
		9624451	5G / 18.93L
	F200 Cold Weather Use	86523625DS	1G / 3.785L
		86523626DS	5G / 18.93L
	AMBRA HYDROSYSTEM 46 HYD FLUID	86109085	5G / 18.93L
	AMBRA HYDROSYSTEM 68 HYD FLUID	86994331	5G / 18.93L
	AMBRA HYDROSYSTEM 100 HYD FLUID	86994343	5G / 18.93L
ATF Oil	AMBRA HYDRODEX 3 ATF	9613304	1QT / 0.946L
		9613312	2.5G / 9.46L
Gear Oil	AMBRA HYPOIDE 90 GEAR LUBE	9613295	1QT / 0.946L
		9613294	2.5G / 9.46L
		86994348	16G / 60.6L
	AMBRA HYPOIDE 140 GEAR LUBE	87027134*	1QT / 0.946L
		87027135	2.5G / 9.46L
		86994351	16G / 60.6L
	AMBRA TRANSAXLE FLUID	86994352	5G / 18.93L
	AMBRA HYPOIDE SSL GEAR LUBE	86994354	1QT / 0.946L
Grease	AMBRA GR9 MULTI-PURPOSE GREASE	9613310	TUBE - 14 OZ
	AMBRA HI-TEMP GREASE	9861804DS	TUBE - 14 OZ
	AMBRA CORN HEAD GREASE	94107DS	TUBE - 14 OZ
	AMBRA GR 75 MD GREASE	87400001	TUBE - 14 OZ
	AMBRA GR 1000 SYNTHETIC GREASE	86994355	TUBE - 14 OZ
	LIMITED SLIP ADDITIVE	B96606	
Brake Fluid	BRAKE LHM FLUID (Mineral Based Oil)	86541699DS	1QT / 0.946L
Coolant	ESE-M97B18-D, Ethylene Glycol Coolant Concentrate	FGCC2701DS	1G / 3.785L
	Propylene Glycol Concentrate	FGCC2711DS	1G / 3.785L

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Model T1110
Hydrostatic

COOLING SYSTEM

Type . . . . . Pressurized Liquid with Recirculating Bypass

Water Pump:
- Type . . . . . Centrifugal
- Drive . . . . . V–Belt
- Belt Deflection . . . . . 10 - 15 mm (0.39 - 0.59 in) when 9-11 kg (20-25 lb) thumb pressure is applied midway between pulleys
- Fan Diameter . . . . . 330 mm (13.0 in)
- Number of Fan Blades 7

Thermostat:
- Start to Open . . . . . 82°C
- Fully Open . . . . . 95°C

Radiator Cap . . . . . 0.9 bar (13.1 PSI)

ELECTRICAL SYSTEM

Main System Protection . . . . . 40A Slow-Blow Fuse

Number of Fuses for Circuit Protection 3

Alternator 12V/40A

Battery Type . . . . . 51BCI/450 CCA

Start HP (Kw) Rating 1.6 (1.2)

Starting Motor . . . . . Pre-Engaged Reduction

FUEL SYSTEM

Fuel Type
- 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 . . . . . 23° BTDC

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2. The range lever, 1, is in the “NEUTRAL” position.

NOTE: *The tractor can be started with the operator out of the seat and the park brake* ***NOT*** *applied. However, an alarm will sound indicating that the operator needs to apply the park brake.*

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.

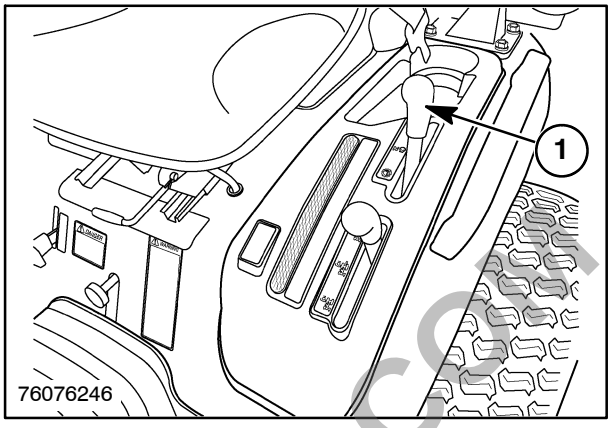
⚠ WARNING ⚠

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 range lever in the neutral position.

NOTE: *The range lever must be in the “NEUTRAL” position to allow the operator to leave the seat, when the tractor engine is in operation. If the PTO selector is in the “REAR PTO” position, the engine will remain operating. If the PTO selector is in the “MID PTO” or “MID/Rear PTO” position, the engine will shut off in approximately two seconds.*



10

OPERATOR PRESENCE SYSTEM OPERATION

START	ALARM	PARK BRAKE ON/OFF	RANGE NEUTRAL	SEAT IN/OUT	PTO CLUTCH	REAR PTO	MID PTO
YES	NO	EITHER	YES	EITHER	OFF	OFF	OFF
YES	NO	EITHER	YES	EITHER	OFF	ON	OFF
NO	YES	EITHER	NO	EITHER	ON	OFF	OFF
NO	NO	EITHER	YES	EITHER	OFF	OFF	ON
-	NO	ON	YES	EITHER	OFF	OFF	OFF
-	YES	OFF	YES	OUT	OFF	OFF	OFF
-	NO	ON	YES	EITHER	ON	ON	OFF
-	YES	OFF	YES	OUT	ON	ON	OFF
-	YES & SHUTDOWN	OFF	YES	OUT	ON	OFF	ON
-	YES & SHUTDOWN	OFF	NO	OUT	OFF	OFF	OFF
KEY OFF	YES	OFF	YES	EITHER	OFF	OFF	OFF

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

MINIMUM HARDWARE TIGHTENING TORQUES

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

INCH NON-FLANGED 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	6.2 (55)*	8.1 (72)*	9.7 (86)*	13 (112)*	14 (121)*	18 (157)*	8.5 (75)*	12.2 (109)*	1/4
5/16	13 (115)*	17 (149)*	20 (178)*	26 (229)*	28 (250)*	37 (324)*	17.5 (155)*	25 (220)*	5/16
3/8	23 (17)	30 (22)	35 (26)	46 (34)	50 (37)	65 (48)	31 (23)	44 (33)	3/8
7/16	37 (27)	47 (35)	57 (42)	73 (54)	80 (59)	104 (77)	50 (37)	71 (53)	7/16
1/2	57 (42)	73 (54)	87 (64)	113 (83)	123 (91)	159 (117)	76 (56)	108 (80)	1/2
9/16	81 (60)	104 (77)	125 (92)	163 (120)	176 (130)	229 (169)	111 (82)	156 (115)	9/16
5/8	112 (83)	145 (107)	174 (128)	224 (165)	244 (180)	316 (233)	153 (113)	215 (159)	5/8
3/4	198 (146)	256 (189)	306 (226)	397 (293)	432 (319)	560 (413)	271 (200)	383 (282)	3/4
7/8	193 (142)	248 (183)	495 (365)	641 (473)	698 (515)	904 (667)	437 (323)	617 (455)	7/8
1	289 (213)	373 (275)	742 (547)	960 (708)	1048 (773)	1356 (1000)	654 (483)	924 (681)	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 A NO MARK
GRADE B LETTER B
GRADE C LETTER C

GRADE IDENTIFICATION

86529681 REV F 5.2

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 12 of 140 pages

The full manual includes:

- All 140 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

New Holland T1110, 230GM Operator Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual