TZ18DA, TZ22DA, TZ24DA, TZ25DA REPAIR MANUAL COMPLETE CONTENTS

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The following pages are the collation of the contents pages from each section and chapter of the TZ18DA, TZ22DA, TZ24DA, TZ25DA Repair manual. Complete Repair part # 87350100.

The sections used through out all New Holland product Repair manuals may not be used for each product. Each Repair manual will be made up of one or several books. Each book will be labeled as to which sections are in the overall Repair manual and which sections are in each book.

The sections listed above are the sections utilized for the TZ18DA, TZ22DA, TZ24DA, TZ25DA Tractors.

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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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METRIC BOLT TORQUE SPECIFICATIONS

Bolt Size	Grade No.	Coarse Thread			Fine Thread		
		Pitch (mm)	Pounds-Feet	Newton-Meters	Pitch (mm)	Pounds-Feet	Newton-Meters
M6	4T (4T) (4.8)	1.0	3.6– 5.1	4.9– 6.9	–	–	–
	7T (7T) (8T) (8.8)		6.1– 8.3	8.3– 11.3			
	10T (10T) (11T)		8.7– 11.6	11.8– 15.7			
M8	4T	1.25	9.4– 12.3	12.7– 16.7	1.0	11.2– 14.8	15.2– 20.1
	7T		16.6– 21.0	22.6– 28.4		19.5– 25.3	26.5– 34.3
	10T		21.0– 26.8	28.4– 36.3		22.4– 29.7	30.4– 40.2
M10	4T	1.5	18.8– 24.6	25.5– 33.3	1.25	21.0– 26.8	28.4– 36.3
	7T		32.5– 41.2	44.1– 55.9		36.2– 46.3	49.0– 62.8
	10T		39.8– 51.4	53.9– 69.6		42.7– 54.2	57.9– 73.5
M12	4T	1.75	27.5– 34.7	37.3– 47.1	1.25	31.8– 40.5	43.1– 54.9
	7T		48.5– 61.5	65.7– 83.4		55.0– 69.4	74.5– 94.1
	10T		68.0– 85.4	92.2–116		73.1– 93.3	99.0–127
M14	4T	2.0	46.3– 59.3	62.8– 80.4	1.5	51.4– 64.4	69.6– 87.3
	7T		76.7– 96.9	104 –131		86.1–109	117 –148
	11T		102 –129	139 –175		108 –137	147 –186
M16	4T	2.0	63.6– 81.0	86.3–110	1.5	67.3– 84.6	91.2–115
	7T		110 –136	149 –184		116 –142	157 –192
	11T		152 –188	206 –255		163 –199	221 –270
M18	4T	2.0	83.9–104	114 –141	1.5	96.9–120	131 –163
	7T		145 –174	196 –235		170 –206	230 –279
	11T		203 –246	275 –333		221 –271	299 –368
M20	4T	2.5	106 –132	144 –179	1.5	127 –156	172 –211
	7T		177 –213	240 –289		203 –246	275 –333
	11T		268 –325	363 –441		293 –358	397 –485

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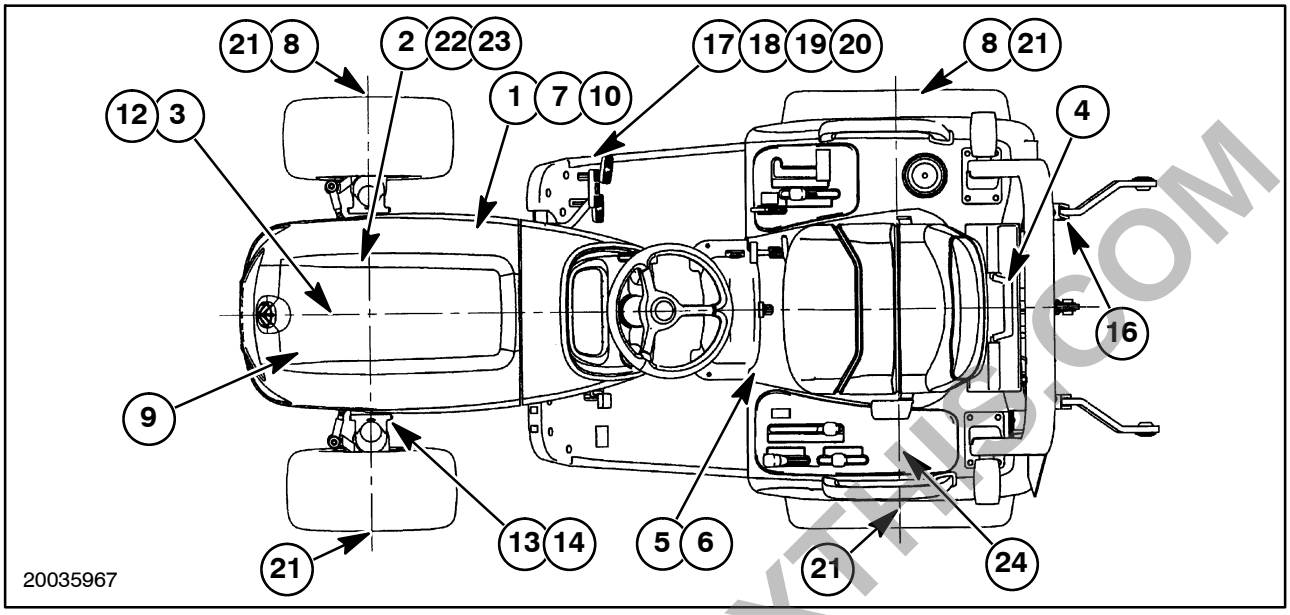
SPECIFICATIONS

	Model TZ18DA Hydrostatic	Model TZ22DA Hydrostatic	Model TZ24DA Hydrostatic	Model TZ25DA Hydrostatic
ENGINE				
Type	S753 Diesel	S753 Diesel	S773 Diesel	S773 Diesel
Engine Gross Horsepower	18.0	22.0	24.0	25.0
Cylinders	3	3	3	3
Bore	75 mm (2.95″)	75 mm (2.95″)	77 mm (3.03″)	77 mm (3.03″)
Stroke	72 mm (2.83″)	72 mm (2.83″)	72 mm (2.83″)	72 mm (2.83″)
Displacement	0.954 L (58.2 cu. in.)	0.954 L (58.2 cu. in.)	1.005 L (61.3 cu. in.)	1.005 L (61.3 cu. in.)
Compression Ratio	24:1	24:1	23.1:1	24.5:1
Firing Order	1 – 2 – 3	1 – 2 – 3	1 – 2 – 3	1 – 2 – 3
Low Idle Speed	1380 ± 50 rpm	1380 ± 50 rpm	1300 ± 50 rpm	1380 ± 50 rpm
Maximum Speed				
High Idle	3200 ± 25 rpm	3200 ± 25 rpm	3200 ± 50 rpm	3300 ± 25 rpm
Rated	3000 ± 50 rpm	3000 ± 50 rpm	3000 ± 50 rpm	3100 ± 50 rpm
Valve Clearance (Cold):				
Intake	0.20 mm (0.008″)	0.20 mm (0.008″)	0.20 mm (0.008″)	0.20 mm (0.008″)
Exhaust	0.20 mm (0.008″)	0.20 mm (0.008″)	0.20 mm (0.008″)	0.20 mm (0.008″)
CAPACITIES				
Fuel Tank	29.5 liters/ 7.8 U.S. gals.	29.5 liters/ 7.8 U.S. gals.	29.5 liters/ 7.8 U.S. gals.	29.5 liters/ 7.8 U.S. gals.
Cooling System	3.5 liters/ 3.7 U.S. qts.	3.5 liters/ 3.7 U.S. qts.	3.5 liters/ 3.7 U.S. qts.	3.5 liters/ 3.7 U.S. qts.
Engine Crankcase				
With Filter	3.3 liters/ 3.5 U.S. qts.	3.3 liters/ 3.5 U.S. qts.	3.3 liters/ 3.5 U.S. qts.	3.3 liters/ 3.5 U.S. qts.
Rear Axle & Transmission	13 liters/ 13.8 U.S. qts.	13 liters/ 13.8 U.S. qts.	13 liters/ 13.8 U.S. qts.	13 liters/ 13.8 U.S. qts.
Power Steering	Using Transmission Oil (Common Use)	Using Transmission Oil (Common Use)	Using Transmission Oil (Common Use)	Using Transmission Oil (Common Use)
Front Axle Differential/ Final Reduction Gear Case	2.0 liters/ 2.12 U.S. qts.	2.0 liters/ 2.12 U.S. qts.	2.0 liters/ 2.12 U.S. qts.	2.0 liters/ 2.12 U.S. qts.

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LUBRICATION AND MAINTENANCE CHART
NEW HOLLAND TZ18DA/TZ22DA/TZ24DA/TZ25DA — 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					
11	Fuel Filter				X		
26	Wheel Bolt Torque	X					
—	All Fluid Levels	X					
8	Tires	X					Every 50 Hours
9	Battery	X					
10	Fuel Filter	D	R	A	I	N	
12	Fan Belt	X					
13	Front Axle Oil Level	X					
14	Final Reduction Gear Cases Oil Level	X					
	Lubrication Fittings:						
16	3-Point Linkage			X			
17	Brake Pedal			X			
18	Pedal Shaft			X			
19	H.S.T. Pedal Pivot			X			
1, 7	Engine Oil & Filter				X		Every 100 Hours
2	Air Cleaner Element		X				
10	Secondary Fuel Filter		X				

NO.	LUBRICATION & MAINTENANCE ITEMS	CHECK	CLEAN	LUBE	CHANGE	ADJUST	SERVICE INTER-VALS
20	Brake					X	Every 200 Hours
10	Fuel Filter Element				X		
12	Fan Belt					X	
21	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		
13	Front Axle Oil				X		
14	Final Reduction Gear Cases Oil				X		
24	Primary Fuel Filter				X		
22	Fuel Injector	X				X	Every 600 Hours
23	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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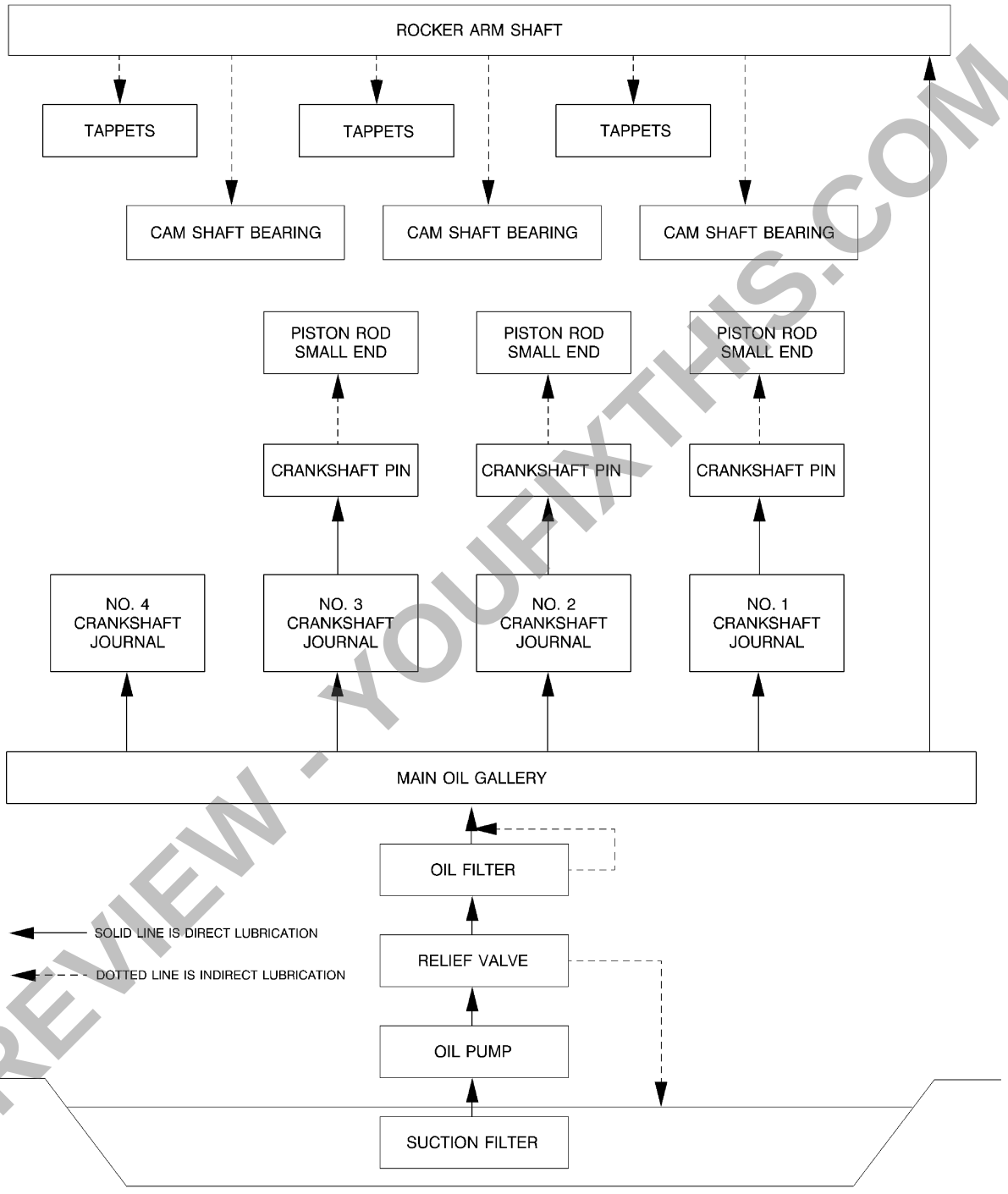
TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTION
Engine does not develop full power	Clogged air cleaner	Inspect and replace air cleaner if necessary
	Fuel line obstructed	Check for crimping fuel line. Inspect fuel filter for cleanliness. Repair/ replace components as required
	Improper injection Timing	Correct injection timing
	Improper nozzle injection pressure and angle	Inspect for proper injection pressure and angle
	Low cylinder compression	Check engine compression
	Insufficient fuel injection	Repair at authorized shop
	Improper valve lash adjustment	Adjust valves to correct tolerances
	Burned, worn, or sticking valves	Inspect and replace as necessary
	Blown head gasket	Replace head gasket
	Worn or sticking piston rings	Overhaul as necessary
	Faulty engine stop solenoid	Replace stop solenoid
Low oil pressure	Engine oil level low	Fill to proper level
	Wrong grade oil	Replace with correct grade oil
	Clogged oil filter	Change oil filter
	Faulty oil pressure relief valve	Replace relief valve
	Worn oil pump gears, or broken pipe	Inspect oil system and components. Replace defective components
	Excessive main or connecting rod bearing clearance	Replace bearings or crankshaft if necessary
Engine will not stop	Faulty engine stop solenoid	Replace stop solenoid
	Faulty starter switch	Replace starter switch

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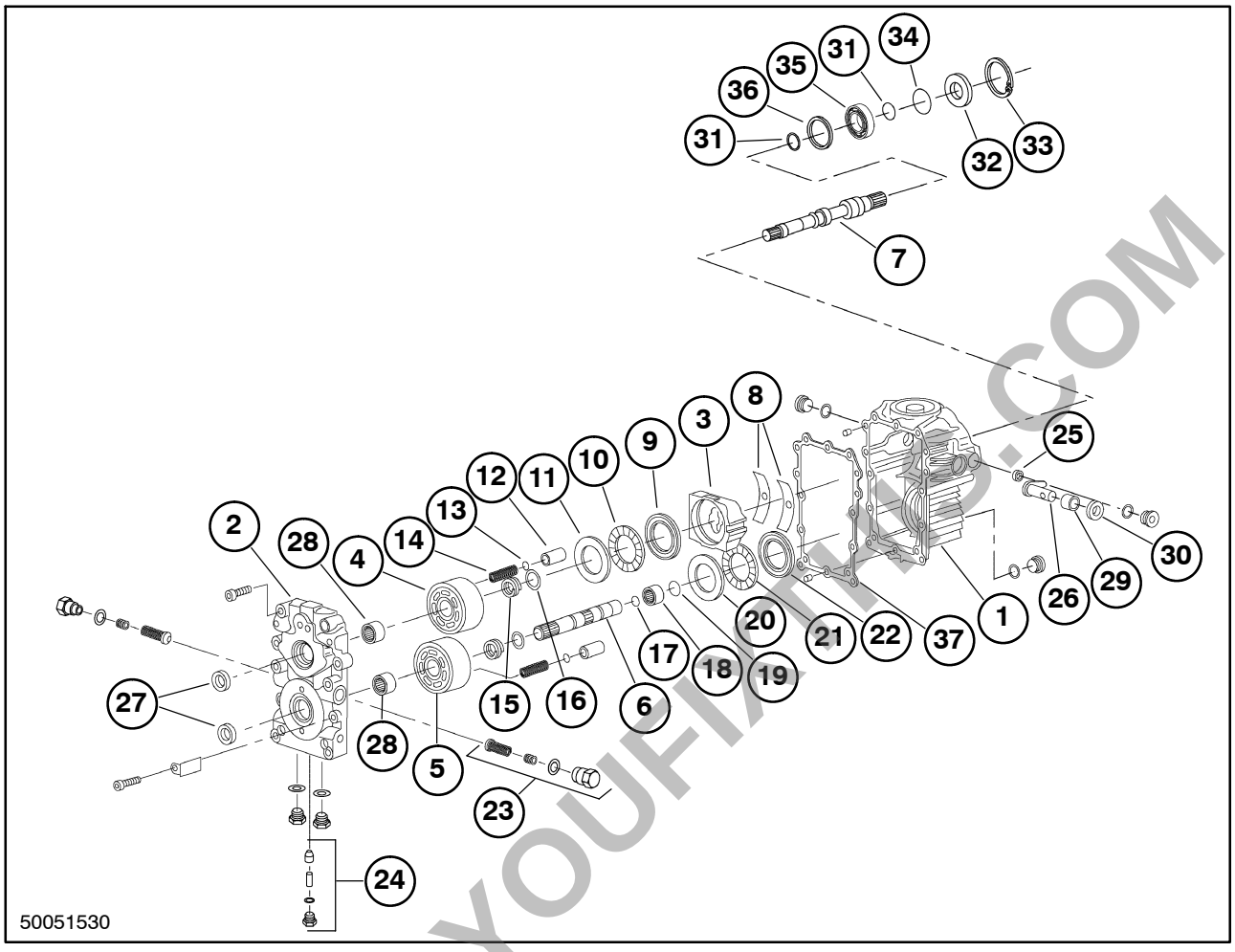
MODEL TZ18/22/24/25DA OIL FLOW CHART



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1	HST Housing	20	Thrust Washer 5.4 mm (.212 in.) I.D. 40 mm (1.57 in.)
2	Port Block	21	Thrust Bearing (Steel Retainer)
3	Swash Plate	22	Thrust Washer 5.4 mm (.212 in.) I.D. 42 mm (1.65 in.)
4	Pump Cylinder Block	23	High Pressure Relief Valve
5	Motor Cylinder Block	24	Low Pressure Relief Valve
6	Motor Shaft	25	Slot Guide Block
7	Pump Shaft	26	Displacement Control Shaft
8	Swash Plate Bearings	27	Seal
9	Thrust Washer 3.1 mm (.122 in.)	28	Needle Bearing
10	Thrust Bearing (Brass Retainer)	29	Bushing
11	Thrust Washer 4.6 mm (.181 in.)	30	Seal
12	Piston	31	Retaining Ring
13	Shim	32	Pump Shaft Seal
14	Spring	33	Snap Ring
15	Pump Cylinder Block Spring	34	Seal Spacer
16	Thrust Washer	35	Bearing
17	Spacer	36	Bearing Spacer
18	Needle Bearing	37	Gasket
19	Spacer		

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OVERHAUL

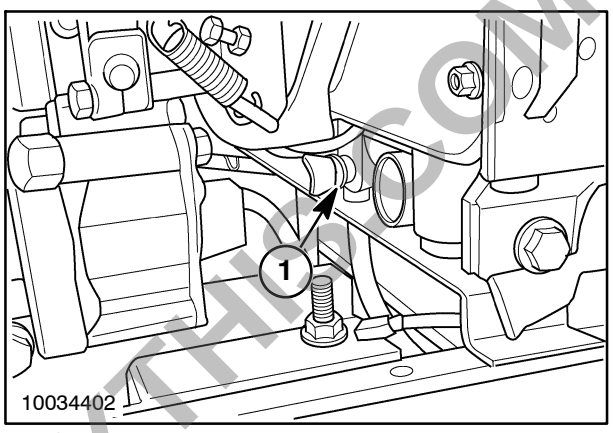
ENGINE ACCESS

Disassembly

1. Remove the engine compartment side panels.
2. Open the radiator drain, 1, and drain the coolant from the radiator.

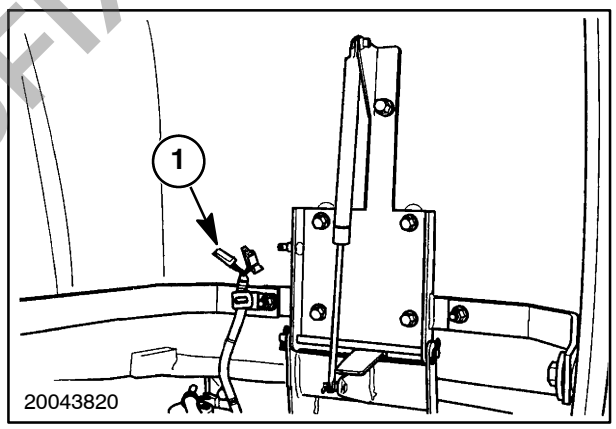
NOTE: *The cooling system capacity is 3.5 L (3.69 qt.).*

3. Remove the radiator assembly. See “Radiator Removal”, discussed later in this section.



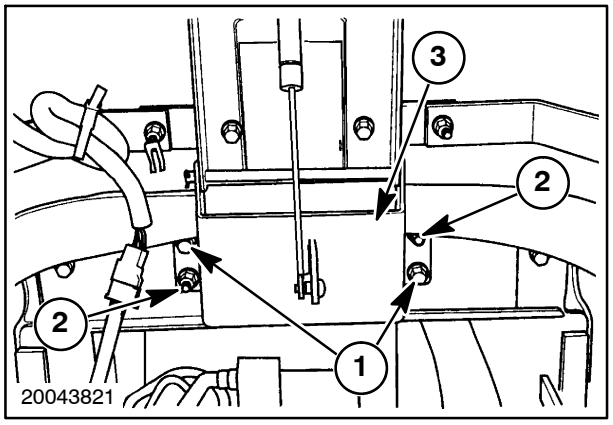
4

4. Disconnect the electrical connector, 1, joining the headlamp wiring harness to the main harness.



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5. Remove the two bolts, 1, and two hex nuts, 2, securing the hood hinge bracket, 3. to the firewall support, and carefully remove the hood with the hinge bracket attached.



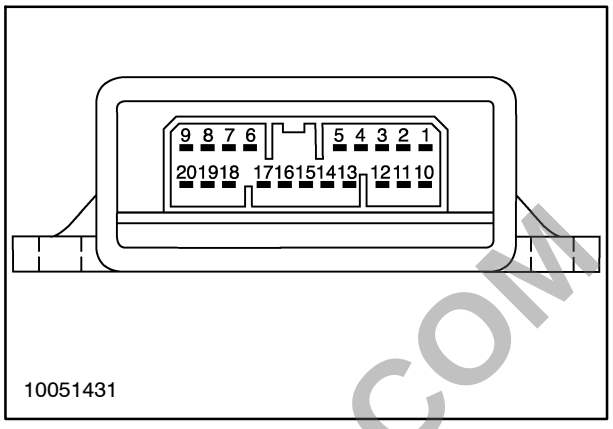
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CONTROLLER TERMINAL IDENTIFICATION (VIEWED FROM BOTTOM OF CONTROLLER)

NOTE: *Terminals not marked on the controller, identified on diagram for clarity.*



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Terminal #	Function	Terminal #	Function
1	Not Used	11	Ground (-)
2	Safety Start Relay (Output)	12	Not Used
3	Not Used	13	Not Used
4	Alarm (Output)	14	Not Used
5	Fuel Shutoff Solenoid (Output)	15	Glow Plug Indicator Light (Input) (-)
6	Key switch (HEAT) (Input)	16	PTO Clutch Indicator Light (Input) (-)
7	Rear PTO Switch (Input)	17	Key Switch (START) (Input)
8	Seat Switch (Input)	18	#3 (25-amp) fuse (Input)
9	Brake Switch (Input)	19	Range Gear switch (Input)
10	#4 (5 –amp) fuse (Input)	20	PTO clutch switch (Input)

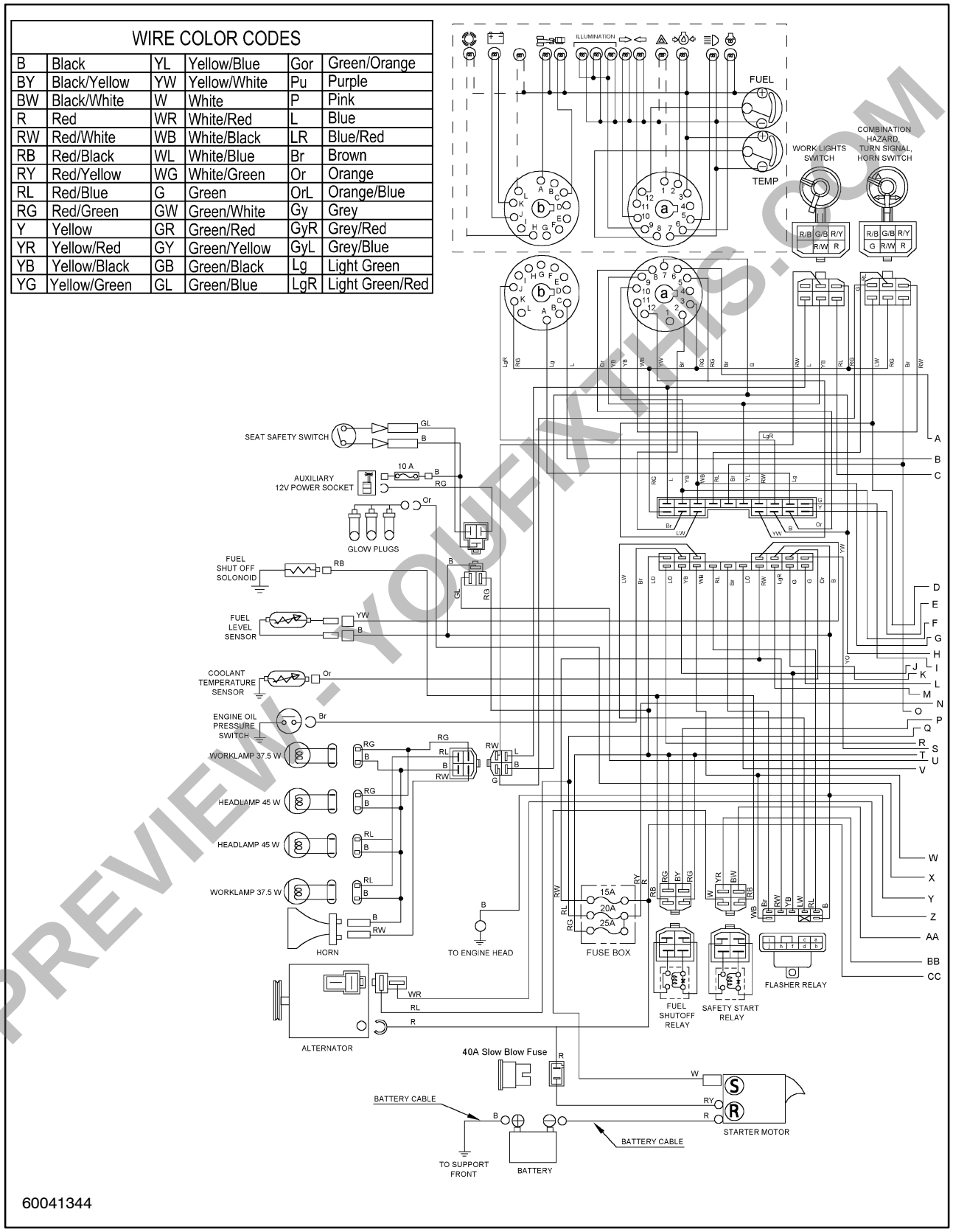
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ELECTRICAL CIRCUITS

COMPLETE CIRCUIT DIAGRAM – TZ18DA – Prior To PIN # HB20001, TZ24DA

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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SECTION 10 - ENGINE SYSTEMS

BOOK 1 - 87350101

Chapter 1 - Engine Systems

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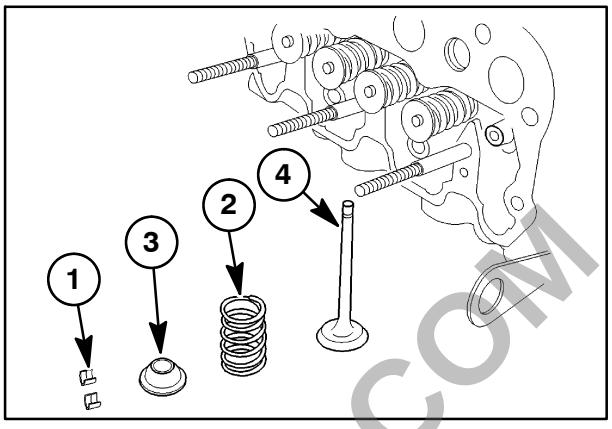
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Op. 18 110

CYLINDER HEAD

Disassembly

1. Clean the cylinder head and remove any carbon deposits from around the heads.
2. Use a valve spring compressor and remove the valve spring retainer locks, 1, spring, 2, and spring retainer, 3, from each valve, 4.
3. Remove the valves and place the valve components together in separately marked containers for re-assembly in their original position.



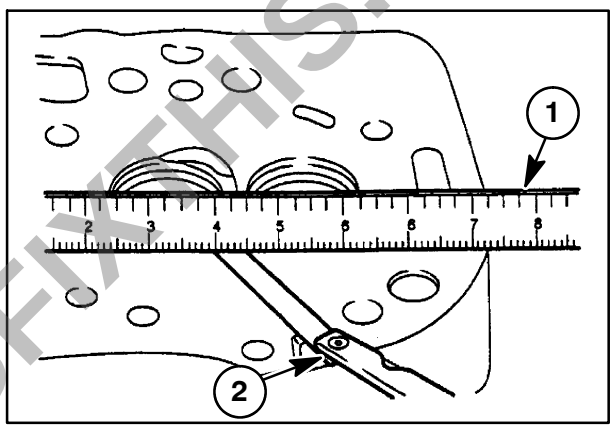
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Inspection and Repair

1. Clean all carbon deposits from the combustion chamber and valve ports using a wire brush and scraper.
2. Clean all dirt and residue from the gasket surface using care not to scratch or nick the machined surface.
3. Clean the cylinder head in solvent and air dry.
4. Inspect the head for cracks in the following areas:
   - Valve ports
   - Valve seats
   - Pre-chamber
5. Inspect the gasket surfaces for scratches or nicks, which could cause leakage.
6. Examine the core hole plugs for rust or signs of leakage. If a plug shows signs of damaging rust or leakage, replace all plugs in the head.
7. Using a straight edge, 1, and a feeler gauge, 2, check the cylinder head for warpage lengthwise, crosswise, and diagonally. Resurface or replace the head if the warpage is greater than 0.12 mm (0.005 in.).

NOTE: *If resurfacing requires removal of more than 0.50 mm (0.020 in.) material replace the head.*

8. Inspect the pre-chamber for carbon deposits and looseness. Remove any carbon deposits found. If the pre-chamber is found to be loose, the cylinder head is warped and must be replaced.

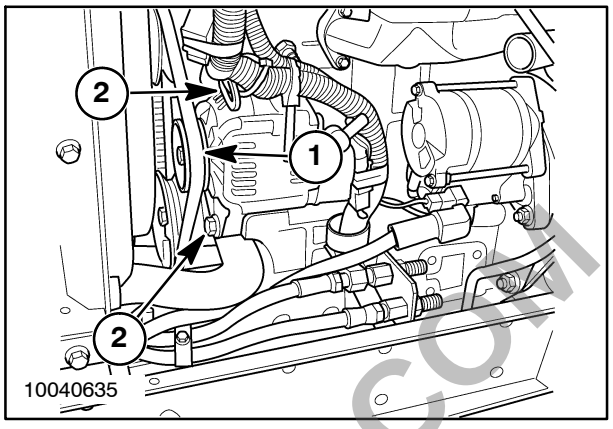


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9. Install the V-belt, 1, over the pulleys. Lever the alternator away from the engine to a position where 5 kg (11 lbs.) force applied to the belt midway between the pulleys yields a deflection of 5 – 10 mm (0.2 – 0.4 in.). Wrench-tighten the mounting bolts, 2, to hold the alternator in this position.
10. Install the radiator assembly and check for leaks. See “Radiator Installation”, discussed earlier in this section.



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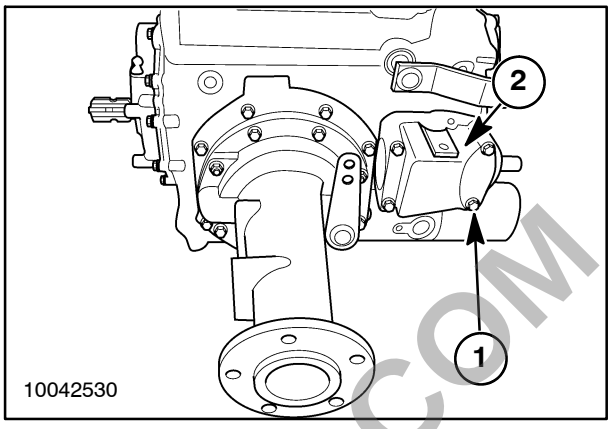
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FWD BOX

NOTE: *Transmission assembly must be removed from tractor frame before FWD box can be removed.*

Removal (Manual and Auto)

1. Remove the six retaining bolts, 1, from the FWD take-off box, 2.
2. Remove the take-off box from the housing.

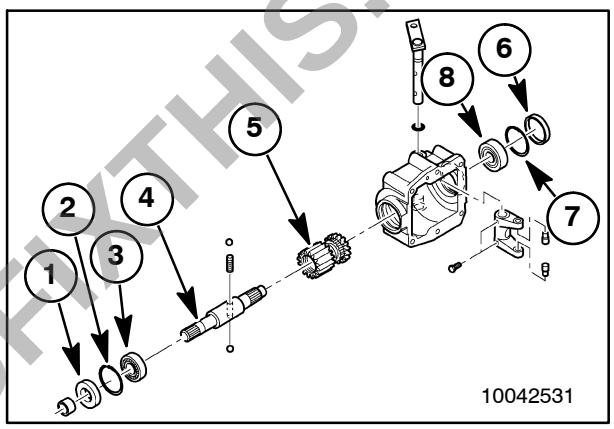


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MANUAL FWD BOX

Disassembly

1. Remove the oil seal, 1, and snap ring, 2, from the front of the take-off box.
2. Remove the front bearing, 3, drive shaft, 4, and sliding gear, 5, from the front of the take-off box as an assembly.
3. Remove the seal cover, 6, snap ring, 7, and rear bearing, 8, from the rear of the take-off box.

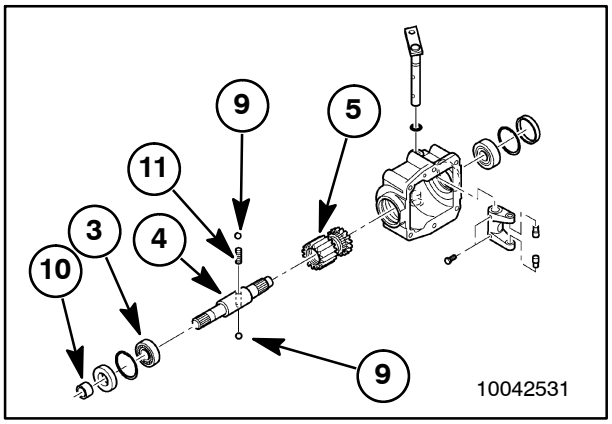


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⚠ WARNING ⚠

If removing the sliding gear, 5, from the drive shaft, 4, be sure to wrap a shop towel around the drive shaft during gear removal. The detent balls, 9, are under spring tension and could be expelled with force causing serious injury.

4. Remove the sleeve, 10, front bearing, 3, and sliding gear, 5, detent balls, 9, and spring, 11, from the drive shaft, 4.



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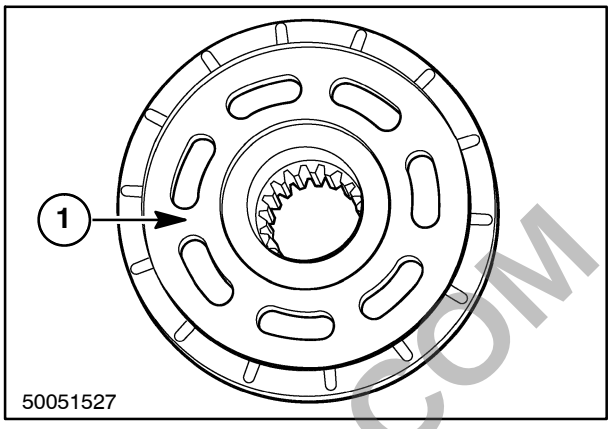
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INTERNAL PARTS - TROUBLESHOOTING

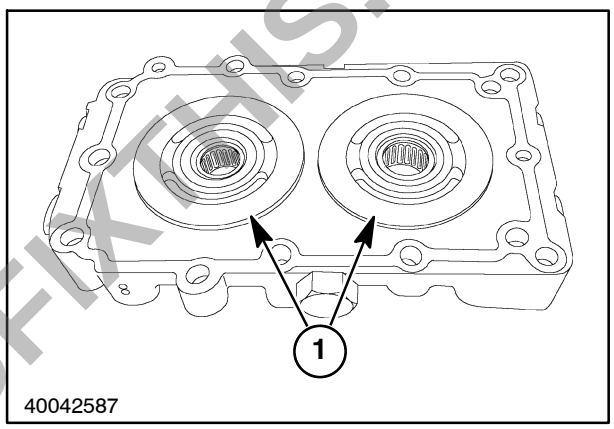
If cylinder blocks, 1, show evidence of discoloration, it is due to excessive heat, from overloading. Inspect each of the cylinder blocks, for signs of discoloration, excessive wear, pitting, scoring, or other damage. All surfaces must be free of any defects or damage. Replace the entire cylinder block if necessary.

***NOTE**: If the motor side of the HST unit is scored or pitted and NOT the pump side, this is due to high temperatures and overloading. If the pump side of the HST unit is scored and NOT the motor side, this is due to contamination.*



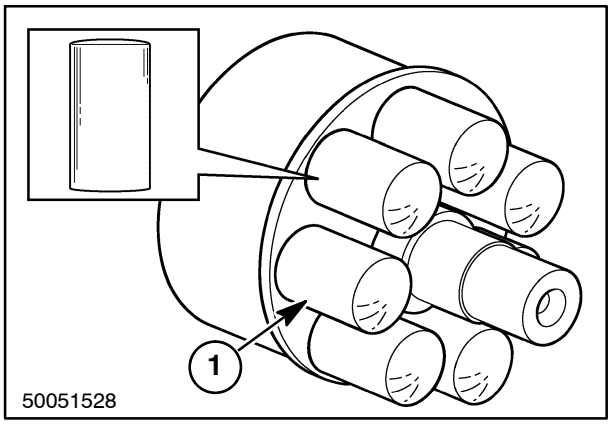
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If port block, 1, shows evidence of scoring, it is due to contamination of the hydraulic oil. Inspect the port block for signs of discoloration, excessive wear, pitting, scoring, or other damage. All surfaces must be free of any defects or damage. Replace the entire cylinder block if necessary.



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If the pistons, 1, show evidence of discoloration, excessive wear, pitting, scoring, or other damage, replace. Make sure all surfaces are free of any defects or damage. Replace the cylinder block and pistons as an assembly, if necessary



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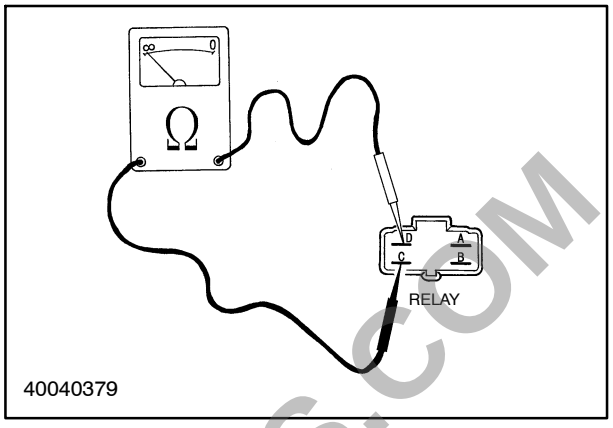
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Testing

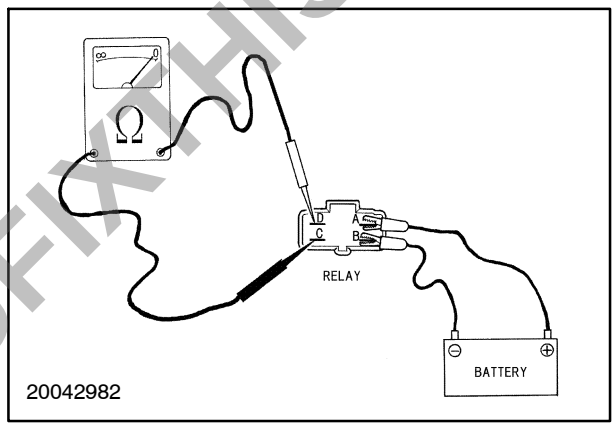
Testing Cruise Latch and Instrument Panel Relays (Normally Open)

1. Using an ohmmeter, connect test probes to terminals “C” and “D” on the relay and observe the ohmmeter reading.
2. There should be high resistance between terminals “C” and “D” on the relay; observe the ohmmeter reading.



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3. To test the relay when it is energized, use jumper wires to connect to a 12-volt power supply to terminals “A” and “B” (brass terminals) on the relay.
4. Touch the ohmmeter test probes to the “C” and “D” terminals on the relay and observe the ohmmeter readings. Little or no resistance between the terminals indicates there is continuity and the relay is functioning properly. If there is no continuity between the terminals, the relay is defective and needs replaced.



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Installation

1. Install the relay onto the tractor.
2. Connect the negative (–) battery cable to the battery.

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METRIC BOLT TORQUE SPECIFICATIONS

Bolt Size	Grade No.	Coarse Thread			Fine Thread		
		Pitch (mm)	Foot Pounds	Newton Meters	Pitch (mm)	Foot Pounds	Newton Meters
M6	4T, 4.8	1.0	3.6-4.3	4.9-6.9	------	------	------
	7T, 8T, 8.8		6.1-8.3	8.3-11.3			
	10T, 11T		8.7-11.5	11.7-15.7			
M8	4T, 4.8	1.25	9.4-12.3	12.7-16.7	1.0	11.2-14.8	15.2-20.1
	7T, 8T, 8.8		16.6-21	22.6-28.4		26.8-25.3	26.5-34.3
	10T, 11T		21-26.7	28.5-36.3		22.4-29.6	30.4-40.2
M10	4T, 4.8	1.5	18.8-24.6	25.5-33.3	1.25	21-26.7	28.4-36.2
	7T, 8T, 8.8		32.5-41.2	44.1-55.9		36.2-46.3	49-62.7
	10T, 11T		39.8-51.3	54-69.6		42.7-54.2	57.8-73.5
M12	4T, 4.8	1.75	27.4-34.7	37.3-47	1.25	31.8-40.5	43.1-54.9
	7T, 8T, 8.8		48.5-61.5	65.7-83.3		55-69.4	74.5-94.1
	10T, 11T		68-85.3	92-116		73-93.3	99-126
M14	4T, 4.8	2.0	46.3-59.3	62.8-80.4	1.5	51.4-64.3	69.6-87.2
	7T, 8T, 8.8		76.7-96.9	104-132		86.1-109	117-148
	10T, 11T		103-128	139-175		110-136	149-184
M16	4T, 4.8	2.0	64-81	86.1-110	1.5	67.3-84.6	91.1-114
	7T, 8T, 8.8		110-136	149-185		116-142	157-192
	10T, 11T		152-188	205-255		163-190	221-269
M18	4T, 4.8	2.0	84-104	113-141	1.5	97-120	132-162
	7T, 8T, 8.8		145-173	196-236		170-206	231-279
	10T, 11T		203-246	275-333		221-271	298-367
M20	4T, 4.8	2.5	107-132	144-180	1.5	127-155	172-210
	7T, 8T, 8.8		178-213	240-290		203-246	275-333
	10T, 11T		268-325	363-441		293-358	397-485

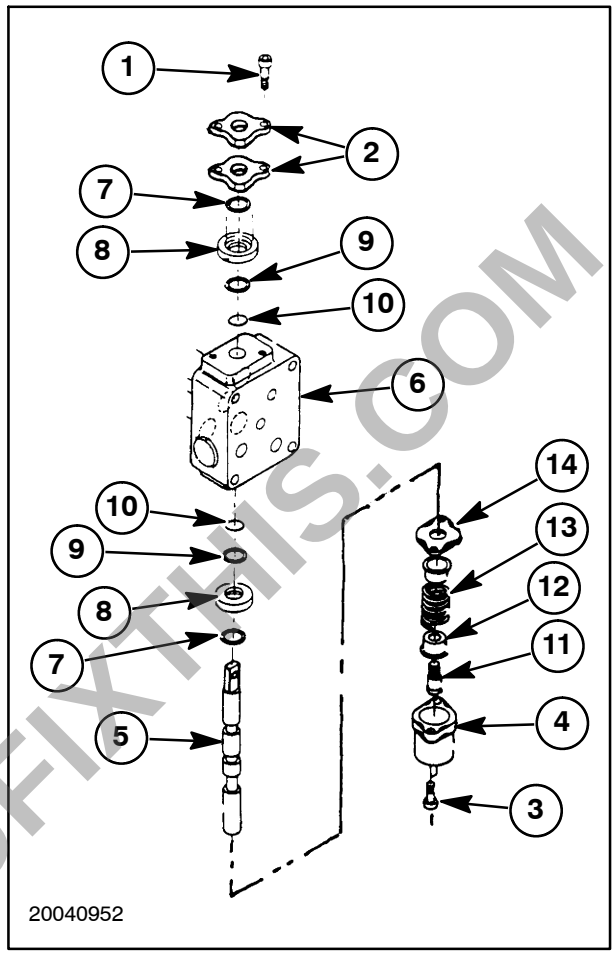
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Single-Spool Control Valve

The single-spool control valve is mounted on a dedicated bracket, just forward of the main HPL valve on the RH side of the tractor. The valve spool is equipped with a self-centering spring, which returns the spool to its “neutral” position when released from either the “raise” or “lower” position.

The only serviceable parts on the single-spool remote control valve are the wiper rings, 7, and O-rings, 10. If troubleshooting indicates a faulty valve, replace the valve with a new assembly.



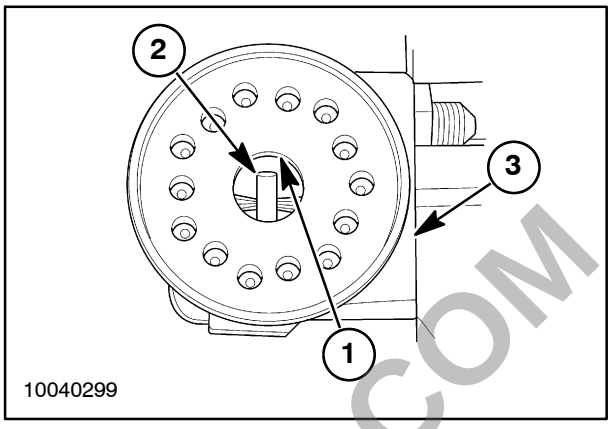
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1. Bolt
2. End Plate
3. Bolt
4. End Cap
5. Spool
6. Valve Body
7. Wiper Ring
8. Wiper Retainer
9. O-ring Spacer
10. O-ring
11. Bolt
12. Spring Seat
13. Spring
14. End Plate

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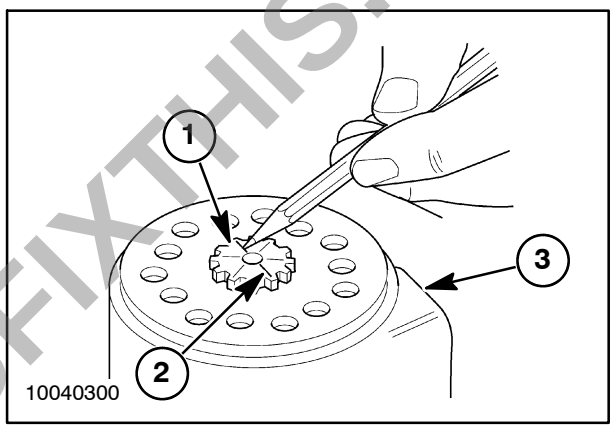
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13. Position the spool and sleeve, 1, so that the pin, 2, is parallel with the port face of the steering valve housing, 3.



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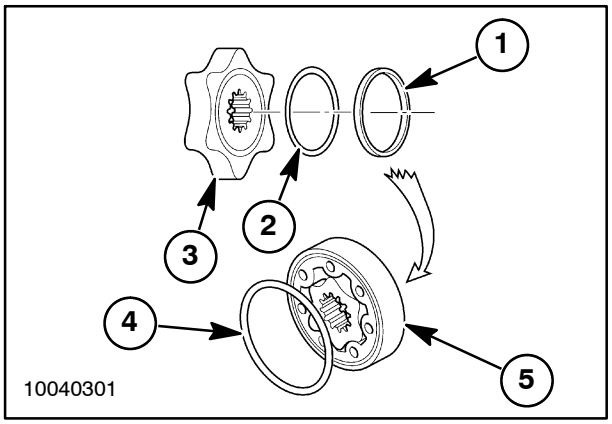
14. Insert the drive shaft, 1, into the valve so that its slotted end engages the pin in the spool and sleeve. Mark a line, 2, on the face of the drive shaft that is parallel to the pin and to the port face of the steering valve housing, 3.



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15. Coat a new O ring, 1, and seal ring, 2, with clean hydraulic fluid and install them on the rotor. Install a new O ring, 4, in the groove on the stator, 5, and then fit the rotor and stator together so that their O rings are on opposite sides.

NOTE:*The orientation of the rotor and stator on the drive shaft will determine valve timing in the steering valve. These parts must be installed exactly as described for proper operation.*



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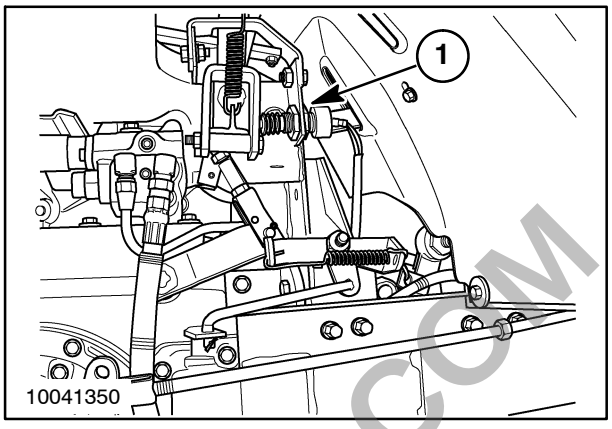
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PTO CLUTCH SAFETY SWITCH

The switch is a single-pole, push button type switch. The switch, 1, is located in front of the PTO clutch lever pivot under the right fender. When the PTO clutch engagement lever is in the “OFF” position the switch is closed. When the PTO clutch is in the “ON” position the switch is open.

Removal

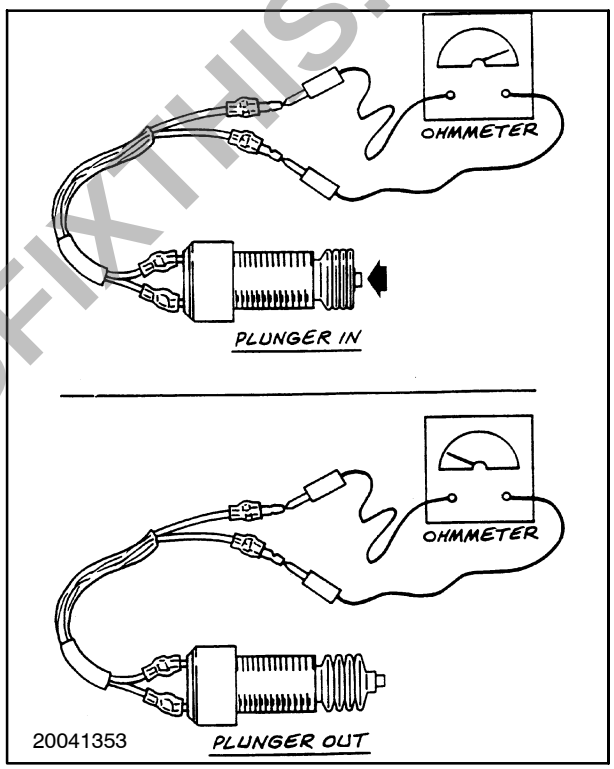
1. Disconnect the wire leads, 2, from the tractor wire harness.
2. Remove the switch from the mounting bracket.



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Inspection

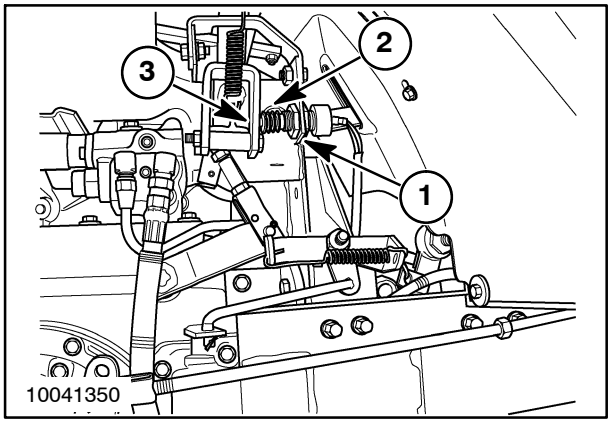
1. Using an ohmmeter, connect test leads to each terminal on the switch. Observe the ohmmeter reading.
2. With the switch button at the free position, the switch contacts should be open, and there will be high resistance, indicating no continuity in the switch.
3. With the switch button at the “IN” position, the switch contacts should be closed, and there will be low resistance, indicating continuity in the switch. If there is no continuity, the switch is defective and must be replaced.



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Adjustment

1. Place the PTO clutch lever in the “OFF” position.
2. Adjust the switch using jam nuts, 1, until the tip, 2, is depressed 2 - 3 mm (0.080 - 0.118 in.) by the pivot bracket, 3. Only when PTO clutch is in “OFF” position. Secure switch in position using jam nuts.



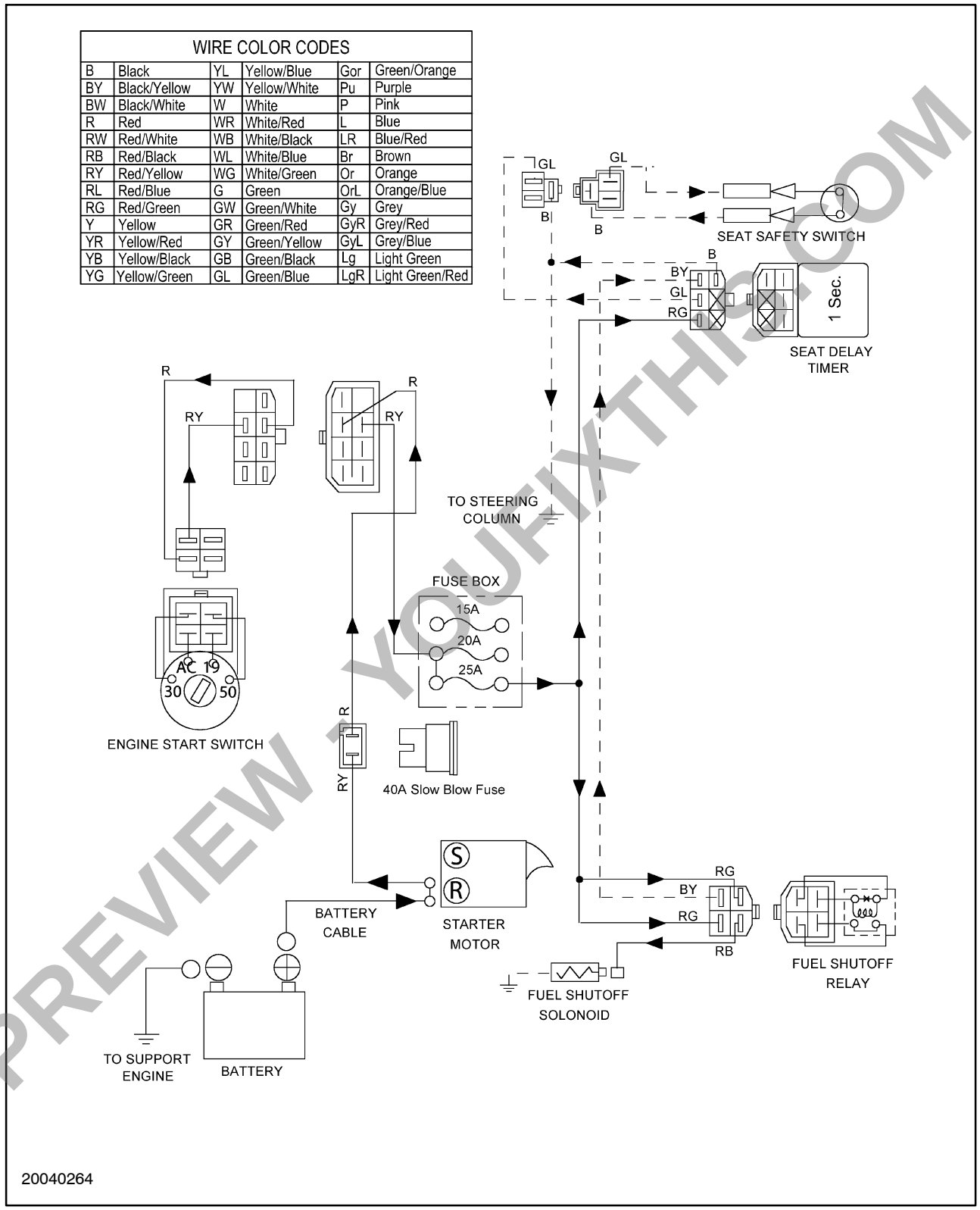
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SAFE OPERATION CIRCUIT (OPERATOR PRESENT)
TZ18DA - Prior to PIN # HB20001, TZ24DA

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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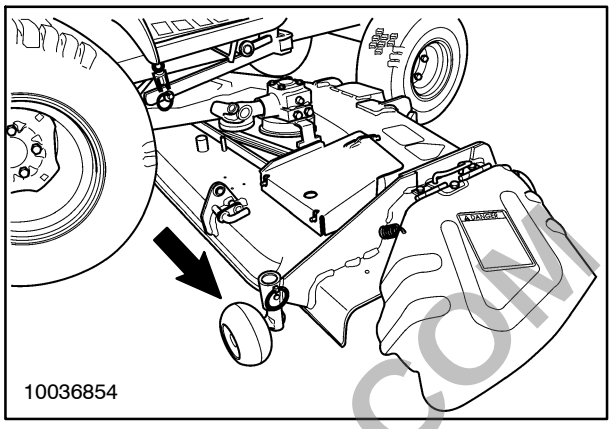
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⚠ CAUTION ⚠

When rolling the mower deck from under the tractor, be very careful not to strike the hydraulic filter with the mower deck.

17. Carefully roll the mower deck out from under the tractor.



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