Technical Specifications of 2WD Machine

NOTE:

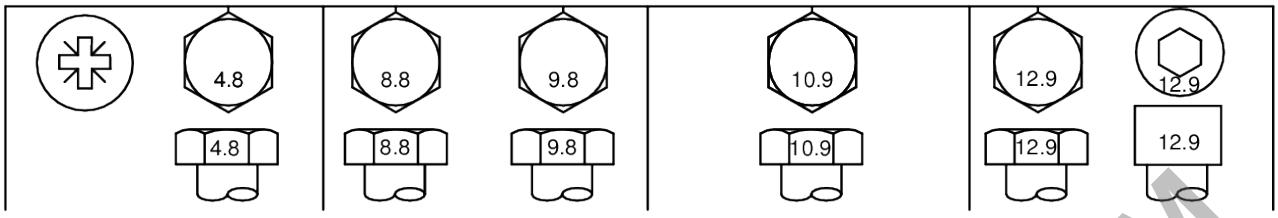
Technical specifications and structural design are subject to change without notice.

General Technical Specifications									
Machine Parameters									
Model		550(5055B)	550-1	600	600-1	650	650-1	700	700-1
Type		2WD							
Dimensions	Length (including front and rear counterweights)	3920 mm (154.33 in.)				4210 mm (165.75 in.)			
	Width (to the outer edge of rear counterweights)	1765 mm (64.49 in.)	1775 mm (69.88 in.)	1765 mm (64.49 in.)	1775 mm (69.88 in.)	1920 mm (75.59 in.)	2020 mm (79.53 in.)	1990 mm (78.35 in.)	2090 mm (82.28 in.)
	Height (to the end of muffler)	2125 mm (83.66 in.)				2140 mm (84.25 in.)			
	Height (to the top of ROPS)	2495 mm (98.23 in.)	-	2495 mm (98.23 in.)	-	2510 mm (98.82 in.)	-	2510 mm (98.82 in.)	-
	Height (to the top of cab)	-	2500 mm (98.43 in.)	-	2500 mm (98.43 in.)	-	2505 mm (98.62 in.)	-	2530 mm (99.61 in.)
	Height (to the highest point of steering wheel)	1805 mm (71.06 in.)				1820 mm (71.65 in.)			
Wheel Tread	Front Wheels	1400—1700 mm (55.12~66.93 in.)				1400—1700 mm (55.12~66.93 in.)			
	Front Wheels (factory state)	1400 mm (55.12 in.)				1500 mm (59.06 in.)			
	Rear Drive Wheels	1450—1750 mm (57.09~68.90 in.)				1450—1750 mm (57.09—68.90 in.)		1500—1800 mm (59.06—70.87 in.)	
	Rear Drive Wheels (factory state)	1450 mm (57.09 in.)				1550 mm (61.02 in.)		1600 mm (62.99 in.)	
Wheelbase		2140 mm (84.25 in.)							
Minimum Ground Clearance		385 mm (15.16 in.)				395 mm (15.55 in.)			
Mass	Structure Mass	2300 kg (5071 lb.)	2500 kg (5512 lb.)	2300 kg (5071 lb.)	2500 kg (5512 lb.)	2310 kg (5093 lb.)	2500 kg (5512 lb.)	2360 kg (5203 lb.)	2550 kg (5622 lb.)
	Minimum Usage Mass	2495 kg (5501 lb.)	2735 kg (6030 lb.)	2495 kg (5501 lb.)	2735 kg (6030 lb.)	2505 kg (5523 lb.)	2735 kg (6030 lb.)	2555 kg (5633 lb.)	2785 kg (6140 lb.)
Mass Distribution (%)	Front Wheels	40							
	Rear Drive Wheels	60							
Counterweights Mass	Front Counterweights	23 kg (51 lb.) every piece 6 pieces at most							
	Rear Counterweights	50 kg (110 lb.) every piece 4 pieces at most				55 kg (121 lb.) every piece 6 pieces at most		55 kg (121 lb.) every piece 6 pieces at most	
Tractor Theoretical Speed / Creeper Gear Speed									
Rear Tire Model		12.4-32				14.9-28		14.9-30	
Low Gear	Ⅰ	2.190 km/h (1.361 mph) /0.205 km/h (0.127 mph)				2.198 km/h (1.366 mph) /0.206 km/h (0.128 mph)		2.278 km/h (1.415 mph) /0.214 km/h (0.133 mph)	
	Ⅱ	3.358 km/h (2.087 mph) /0.315 km/h (0.196 mph)				3.370 kmh (2.094 mph) /0.316 km/h (0.196 mph)		3.494 km/h (2.171 mph) /0.327 km/h (0.203 mph)	
	Ⅲ	5.257 km/h (3.267 mph) / (0.493 km/h (0.306 mph)				5.277 km/h (3.279 mph) / 0.494 km/h (0.307 mph)		5.470 km/h (3.399 mph) /0.513 km/h (0.319 mph)	
	Ⅳ	7.195 km/h (4.471 mph) /0.674 km/h (0.419 mph)				7.222 km/h (4.488 mph) /0.677 km/h (0.421 mph)		7.486 km/h (4.652 mph) /0.702 km/h (0.436 mph)	
High Gear	Ⅴ	8.561 km/h (5.320 mph) /0.802 km/h (0.498 mph)				8.592 km/h (5.339 mph) /0.805 km/h (0.500 mph)		8.907 km/h (5.535 mph) /0.835 km/h (0.519 mph)	
	Ⅵ	13.126 km/h (8.156 mph) /1.230 km/h (0.764 mph)				13.175 km/h (8.187 mph) /1.235km/h (0.767 mph)		13.657 km/h (8.486 mph) /1.280 km/h (0.795 mph)	
	Ⅶ	20.551 km/h (12.770 mph) /1.926 km/h (1.197 mph)				20.627 km/h (12.817 mph) /1.933 km/h (1.201 mph)		21.382 km/h (13.286 mph) /2.004 km/h (1.245 mph)	
	Ⅷ	28.128 km/h (17.478 mph) /2.636 km/h (1.638 mph)				28.231 km/h (17.542 mph) /2.646 km/h (1.644 mph)		29.265 km/h (18.184 mph) /2.742 km/h (2.704 mph)	
Reverse	Ⅰ	2.545 km/h (1.581 mph) /0.238 km/h (0.148 mph)				2.554 km/h (1.587 mph) /0.239 km/h 0.149 mph)		2.648 km/h (1.645 mph) /0.248 km/h (0.154 mph)	
	Ⅱ	3.902 km/h (2.425 mph) /(0.366 km/h (0.227 mph)				3.917 km/h 2.434 mph /(0.367 km/h) 0.228 mph)		4.060 km/h (2.523 mph) /0.380 km/h (0.236 mph)	

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Metric Bolt and Screw Torque Values



TS1670-UN: Metric Bolts and Screws

Specifications of Bolts or Cap Screws	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated ["Lubricated type" refers to coated with a layer of lubricant, such as engine oil, or fasteners coated with phosphate and oil film, or the M20 or above fasteners with JDM F13C, F13F or F13J galvanized coating.]		Dry type ["Dry type" refers to the ordinary or galvanized fasteners without lubrication, or the M6 - M18 fasteners with JDM F13B, F13E or F13H galvanized coating.]		Lubricated type ["Lubricated type" refers to coated with a layer of lubricant, such as engine oil, or fasteners coated with phosphate and oil film, or the M20 or above fasteners with JDM F13C, F13F or F13J galvanized coating.]		Dry type ["Dry type" refers to the ordinary or galvanized fasteners without lubrication, or the M6 - M18 fasteners with JDM F13B, F13E or F13H galvanized coating.]		Lubricated ["Lubricated type" refers to coated with a layer of lubricant, such as engine oil, or fasteners coated with phosphate and oil film, or the M20 or above fasteners with JDM F13C, F13F or F13J galvanized coating.]		Dry type ["Dry type" refers to the ordinary or galvanized fasteners without lubrication, or the M6 - M18 fasteners with JDM F13B, F13E or F13H galvanized coating.]		Lubricated type ["Lubricated type" refers to coated with a layer of lubricant, such as engine oil, or fasteners coated with phosphate and oil film, or the M20 or above fasteners with JDM F13C, F13F or F13J galvanized coating.]		Dry type ["Dry type" refers to the ordinary or galvanized fasteners without lubrication, or the M6 - M18 fasteners with JDM F13B, F13E or F13H galvanized coating.]	
	N·m	***lb.-in.***	***N·m***	***lb.-in.***	***N·m***	***lb.-in.***	***N·m***	***lb.-in.***	***N·m***	***lb.-in.***	***N·m***	***lb.-in.***	***N·m***	***lb.-in.***	***N·m***	***lb.-in.***
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									N·m	***lb.-ft.***	***N·m***	***lb.-ft.***	***N·m***	***lb.-ft.***	***N·m***	***lb.-ft.***
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			N·m	***lb.-ft.***	***N·m***	***lb.-ft.***	***N·m***	***lb.-ft.***								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	N·m	***lb.-ft.***														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

Torque values listed in this chart, based on the strength of the bolts or screws, are for general use only. For certain applications, if the specified torque values or fastening methods are different, do not use the recommended value mentioned above. For stainless steel fasteners or nuts of U-shaped bolts, please refer to the fastening requirements specified for special applications. Follow the dry state torque values in the chart to fasten steel lock nuts which are with plastic pads or with wrinkles, unless fastening requirements are specified for special applications.

Safety bolts under the pre-designed load becomes invalid. Replace them only with safety bolts which are of identical property category. Replace fasteners only with those of the same or higher attribute grade. If fasteners of higher attribute grade are used, tighten them to the required strength of the original fasteners. Make sure that the fastener thread is clean and the thread head can be combined with normally. When possible, lubricate ordinary or galvanized fasteners other than lock nuts, wheel bolts or nuts, unless different fastening requirements are specified for special applications.

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Remove and Install Engine

IMPORTANT:

1. **Before removing the engine, mark cables and hoses; This makes easier for reassembling.**

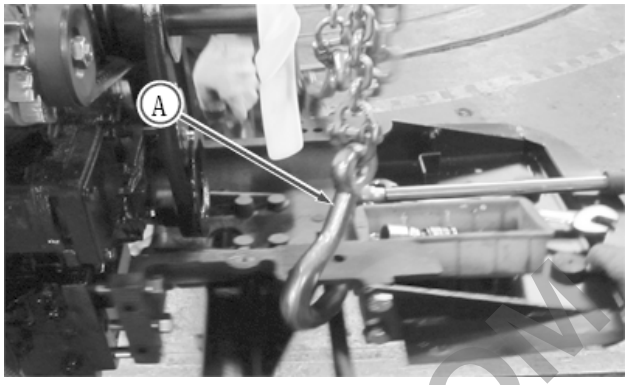
Park machine on level surface.

2. Shut off engine and remove key.
3. Block rear wheels to prevent tractor movement.

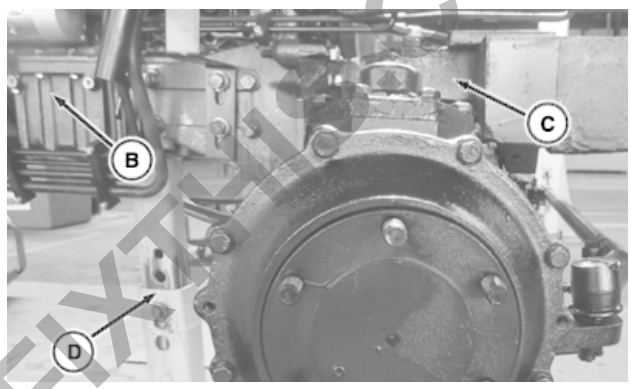
CAUTION:
Prevent possible injury from hot oil and water. DO NOT operate unless engine is cool.

4. Remove engine hood. (SeeRemove Engine Hoodin Section 80, Group 05.
5. Disconnect and remove battery. (SeeRemove and Install Batteryin Section 40, Group 05.
6. Drain oil and water into suitable container. (SeeDrain Oil and Water Before Servicingin Section 10, Group 25.
7. Remove counterweights from front support (if equipped).
8. Disconnect relevant cables. (SeeWiring Harnessin Section 40, Group 15.
9. Remove the engine control structure. (SeeSpeed Control Linkagein Section 30, Group 05.
10. Disconnect steering valve hoses. (SeeRemove and Install Steering Valvein Section 60, Group 05.
11. Remove radiator assembly. (SeeRemove, Inspect and Install Radiatorin Group 10 of this section.
12. Remove fuel tank. (SeeRemove and Install Fuel Tankin Section 30, Group 10.
13. Remove MFWD drive shaft. (SeeMFWD Drop Gearboxin Section 50, Group 40.

IMPORTANT:
Make sure that lifting hooks and jack are reliable to avoid incidents



14. N4A0000026-UN: Lifting Device



N4A0000621-UN: Bracket

LEGEND:
A-Lifting Device
B-Engine
C-Frame
D-Jack

Use a jack (D) or proper equipment to support the engine (B). Use lifting device (A) to lift the bracket.

15. Separate front axle from engine carefully by using lifting device and support. (SeeFront Axle-MFWDin Section 50, Group 45, andFront Axle-2WDin Section 50, Group 50.)

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Group 25
Wiring Diagram

Cable Color Codes

Cable colors	*Codes*
Red	R
Green	G
Blue	U
Yellow	Y
White	W
Brown	N
Gray	S
Black	B
Orange	O
Purple	P
Pink	K

Multi-color cables are represented by the mix of corresponding color codes.

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Group 05
Hydraulic Pump, Filter and Lines

Remove and Install Hydraulic Pump (OOS)

IMPORTANT:
Always use new O-rings. Damaged or used O-rings will leak.

Apply clean hydraulic oil to all internal parts before assembly.

NOTE:

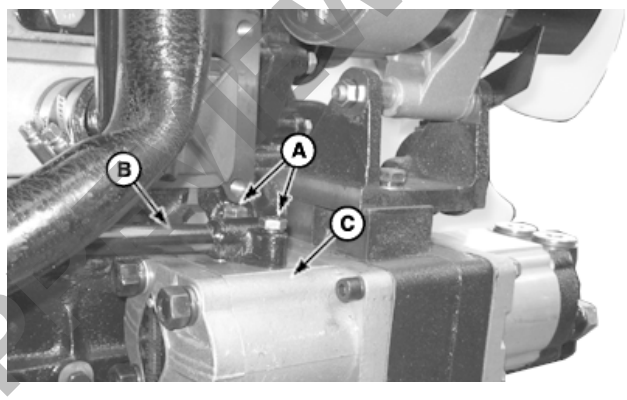
Coat all O-rings and seals with clean hydraulic oil during assembly.

1. Park machine on level surface.
2. Shut off engine and remove key.
3. Operate Selective Control Valve (SCV) and hitch levers to relieve hydraulic system pressure.
4. Block rear tires.

CAUTION:
Prevent possible injury from hot oil and water. DO NOT operate unless engine is cool.

5. Disconnect battery negative (—) cable .
6. Drain hydraulic oil to an appropriate container. See Section 10-25, ‘Lifter Oil Drain”.

7. Remove cap screws and washers (A).



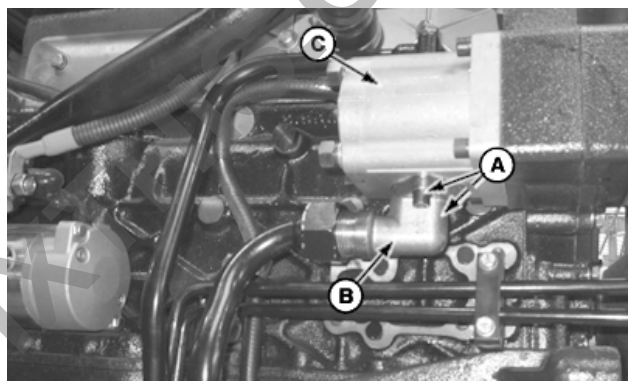
N4A0002715-UN: pump 1
LEGEND:
A-Cap Screw (2 Used) and Washer (2 Used)
B-Front Output Tube
C-Hydraulic Pump

8. NOTE:

There is an O-ring between front output tube (B) and hydraulic pump (C).

Disconnect front output tube and hydraulic pump.

9. Remove socket screws and washers (A).



N4A0002716-UN: pump 2
LEGEND:
A-Socket Screw (2 Used) and Washer (2 Used)
B-Suction Fitting
C-Hydraulic Pump

10. NOTE:

There is an O-ring between suction fitting (B) and hydraulic pump (C).

Disconnect suction fitting and hydraulic pump.

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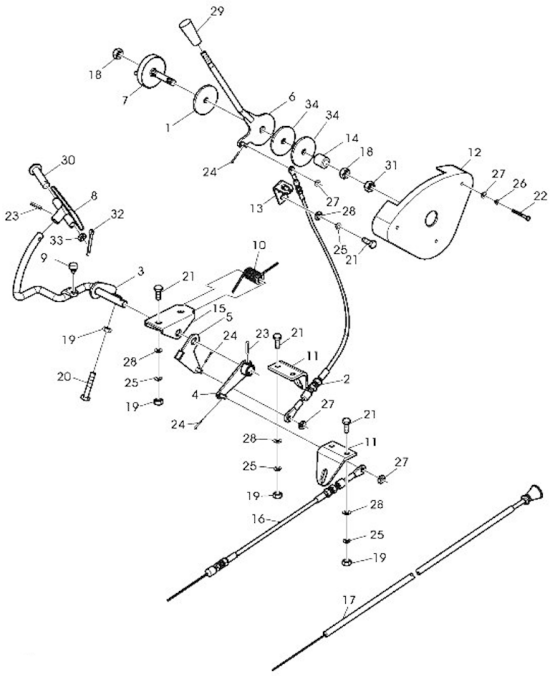
Inspect and Repair Speed Control Linkage (OOS)

1. Park machine on level surface.
2. Shut off engine and remove key.
3. Block rear wheels to prevent tractor movement.

CAUTION:
Prevent possible injury from hot oil and water. DO NOT operate unless engine is cool.

4. Remove parts. (1-34)
5. Inspect parts for damage, repair or replace as necessary.
6. Install parts in reverse order.
7. Adjust fast and slow idle. (SeeAdjust Throttle Linkagein this section.)
8. Adjust hand throttle handle. (SeeAdjust Hand Throttle Handlein this section.)
9. Adjust foot throttle pedal. (SeeAdjust Synchronization of Foot Throttle Pedal and Hand Throttle Handlein this section.)

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N4A0002242-UN: Exploded View of Speed Control Linkage

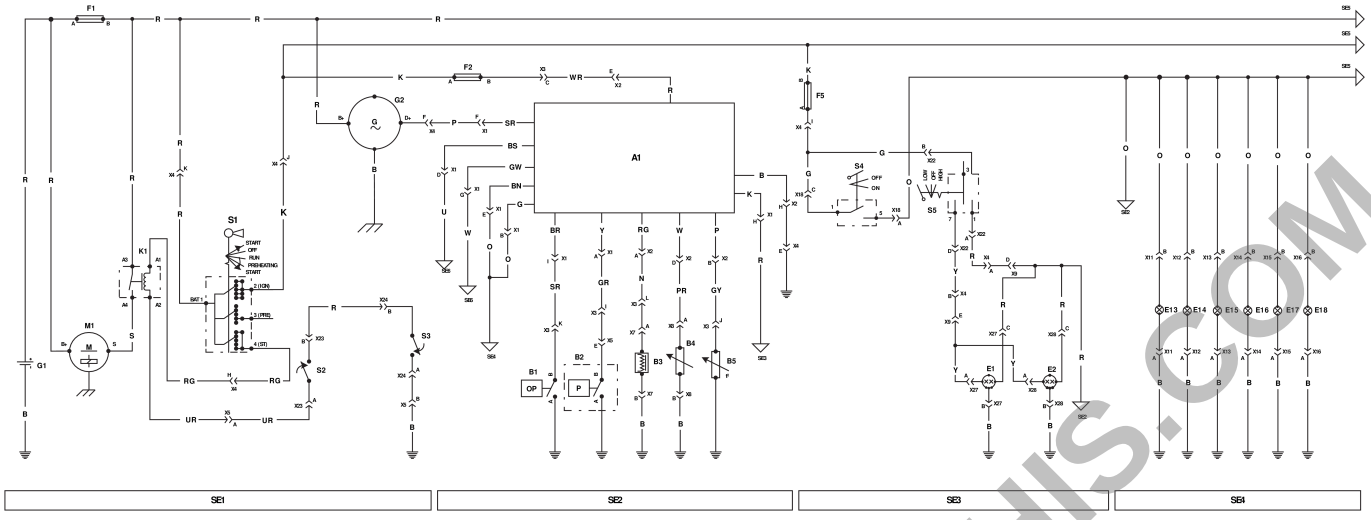
LEGEND:

1-Disk
2-Hand Throttle Cable
3-Foot Throttle Shaft
4-Foot Throttle Shaft Bracket
5-Hand Throttle Cable Bracket
6-Hand Throttle
7-Plate
8-Foot Throttle Pedal
9-Rubber Mat
10-Foot Throttle Turn Spring
11-Throttle Cable Bracket (2 used)
12-Hand Throttle Handle Cover
13-Throttle Cable Bracket
14-Spacer Plate
15-Foot Throttle Bracket
16-Foot Throttle Cable
17-Shut Down Cable
18-Nut (3 used)
19-Nut (7 used)
20-Cap Screw
21-Cap Screw (8 used)
22-Screw (3 used)
23-Pin
24-Cotter Pin (3 used)
25-Lock Washer (8 used)
26-Lock Washer (3 used)
27-Washer (3 used)
28-Washer (8 used)
29-Hand Throttle Knob
30-Pin
31-Nut
32-Cotter Pin
33-Washer
34-Disk Spring (2 used)

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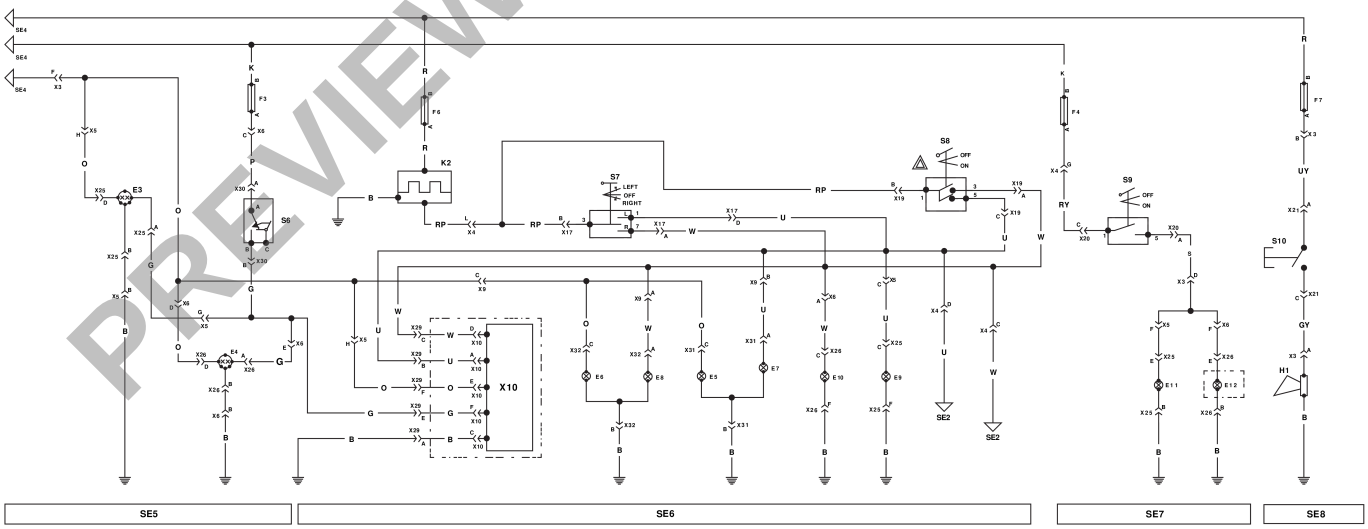
Electrical Schematic (OOS)



N4A0002737-UN: schematic OOS 1

LEGEND:

A1-Instrument Cluster
B1-Oil Pressure Switch
B2-Air Pressure Switch (If Equipped)
B3-Speed Sensor
B4-Fuel Level Sender
B5-Water Temperature Sensor
E1-Left Head Lamp
E2-Right Head Lamp
E13-Turn Switch Indicator Light
E14-Light Switch Indicator Light
E15-Hazard Warning Switch Indicator Light
E16-Floodlight Switch Indicator Light
E17-Horn Switch Indicator Light
E18-Head Lamp Switch Indicator Light
F1-Main Circuit Fuse-40 A
F2-Instrument Fuse-10 A
F5-Head Lamp Fuse-30 A
G1-Battery
G2-Alternator
K1-Starter Relay
M1-Starter Motor
S1-Key Switch
S2-Neutral Start Switch
S3-PTO Switch
S4-Light Switch
S5-Head Lamp Switch
X1-Connector (Instrument Cluster 1)
X2-Connector (Instrument Cluster 2)
X3-Connector (Instrument Cluster Harness—Main Harness 1)
X4-Connector (Instrument Cluster Harness—Main Harness 2)
X5-Connector (Main Harness—Left Back Light Harness)
X7-Connector (Speed Sensor)
X8-Connector (Fuel Level Sender)
X9-Connector (Main Harness—Front Light Harness)
X11-Connector (Turn Switch Indicator Light)
X12-Connector (Light Switch Indicator Light)
X13-Connector (Hazard Warning Switch Indicator Light)
X14-Connector (Floodlight Switch Indicator Light)
X15-Connector (Horn Switch Indicator Light)
X16-Connector (Head Lamp Switch Indicator Light)
X18-Connector (Light Switch)
X22-Connector (Head Lamp Switch)
X23-Connector (Neutral Start Switch)
X24-Connector (PTO Switch)
X27-Connector (Left Head Lamp)
X28-Connector (Right Head Lamp)



N4A0002738-UN: schematic OOS 2

LEGEND:

E3-Left Tail/Stop Lamp
E4-Right Tail/Stop Lamp
E5-Left Front Position Lamp
E6-Right Front Position Lamp
E7-Left Front Turn Lamp
E8-Right Front Turn Lamp
E9-Left Rear Turn Lamp
E10-Right Rear Turn Lamp
E11-Left Rear Floodlight
E12-Right Rear Floodlight (If Equipped)
F3-Brake Lamp Fuse-15 A
F4-Floodlight Fuse-15 A

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Group 05
Safety

Recognize Safety Information



T81389-UN: Safety-alert symbol

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

DX,ALERT-19-19980929

Live With Safety



TS231-19: Safety Systems

Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.

DX,LIVE-19-19920925

Understand Signal Words



TS187-19: Signal Words

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

DX,SIGNAL-19-19930303

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2. Set the auxiliary shift control lever (B) to low gear.

   NOTE:

   Before testing neutral start switch on transmission (A), Cover (C) or transmission shield (E) should be removed.

3. Turn the start switch to the right completely. The starter should not run. If that happens, please check the relevant circuits.
4. Set the auxiliary shift control lever to high gear. Repeat the test.
5. Repeat the above procedures to test neutral start switch on PTO (D).

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Tractor Operation Check

As stipulated in the operation manual, check the drive system, steering device and brakes, hydraulic system and cab.

If there is any fault, refer to the relevant sections in the technical manual.

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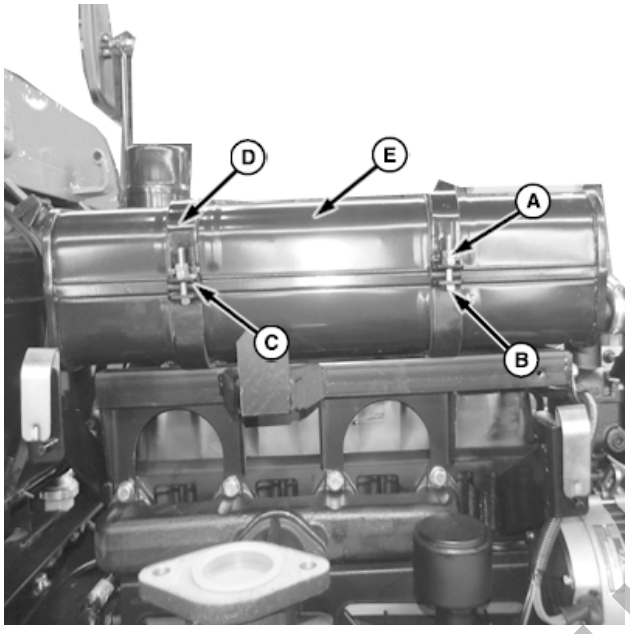
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10. NOTE:

    Remove two cap screws on either side of the fuel tank bracket to remove fuel tank.

    Remove nuts (A).



N4A0002233-UN: Remove Fuel Tank

LEGEND:

A-Nut (8 used)
B-Cap Screw (4 used)
C-Fuel Tank Gasket (2 used)
D-Fuel Tank Bracket (2 used)
E-Fuel Tank

11. Remove cap screws (B).
12. Remove fuel tank brackets (D) and fuel tank gaskets (C).
13. Remove fuel tank (E).
14. Inspect fuel tank for damage.
15. Repair or replace as necessary.
16. Remove portal frame. (SeeRemove and Install Portal Framein Section 90, Group 05.)

17. NOTE:

    Disconnect all the cables in the cowl before removing it. (SeeWiring Harness Routingin Section 40, Group 15)

    Remove cowl. (SeeRemove and Install Cowlin Section 90 Group 05.)



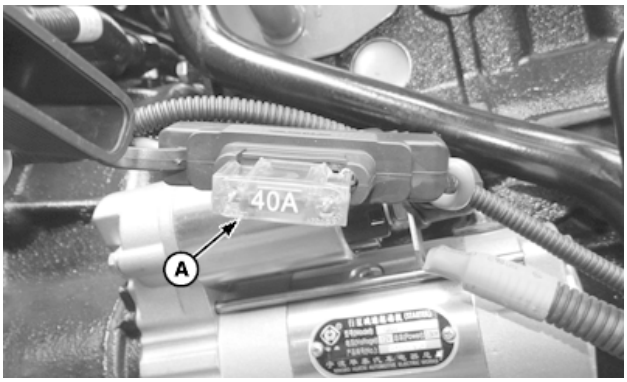
N4A0000650-UN: Remove Cowl

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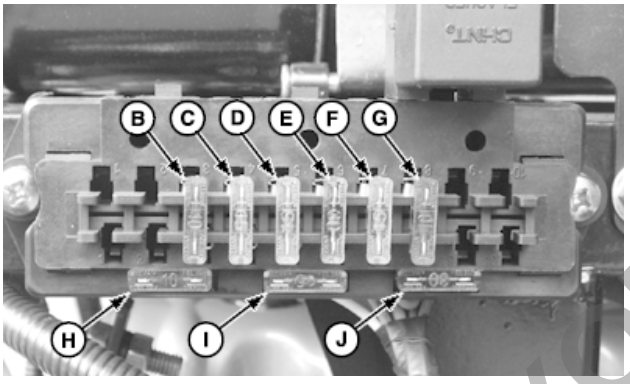
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Fuse Specification and Function

For OOS



N4A0001351-UN: Main Circuit Fuse

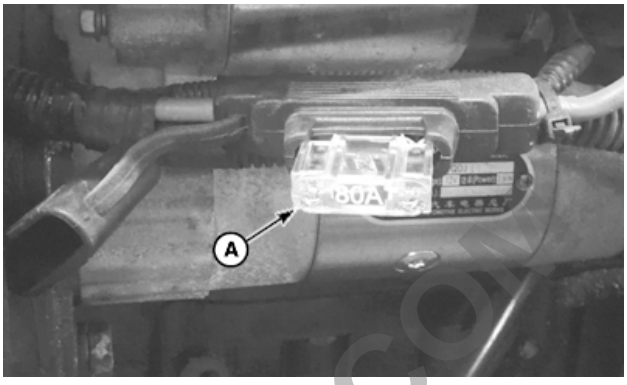


N4A0001350-UN: Fuse Box (For OOS)

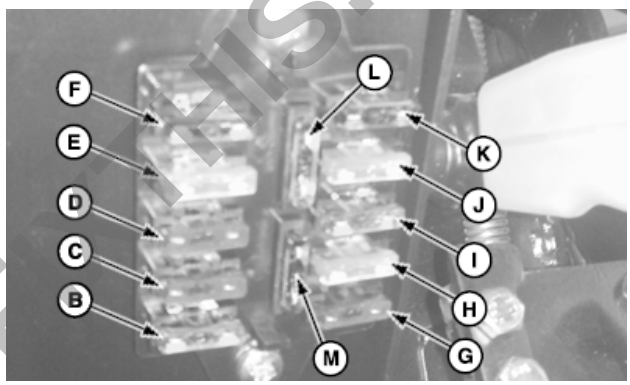
LEGEND:

A-Main Circuit Fuse (40 A)
B-Instrument Fuse (10 A)
C-Brake Lamp Fuse (15 A)
D-Floodlight Fuse (15 A)
E-Head Lamp Fuse (30 A)
F-Flasher Fuse (15 A)
G-Horn Fuse (10 A)
H-Spare Fuse (10 A)
I-Spare Fuse (15 A)
J-Spare Fuse (30 A)

For CAB



N4A0002894-UN: Main Circuit Fuse



N4A0002350-UN: Fuse Box (For CAB)

LEGEND:

A-Main Circuit Fuse (80A)
B-Brake Lamp Fuse (15 A)
C-Wiper Fuse (10 A)
D-Instrument Fuse (10 A)
E-Fan Fuse (5 A)
F-Floodlight Fuse (30 A)
G-Spare Fuse (10 A)
H-Dome Lamp Fuse (5 A)
I-Flasher Fuse (15 A)
J-Horn Fuse (5 A)
K-Head Lamp Fuse (30 A)
L-Spare Fuse (30 A)
M-Spare Fuse (15 A)

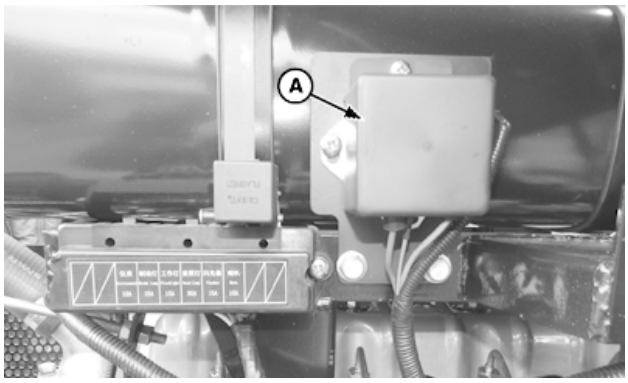
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Replace Starter Relay (OOS)

NOTE:

Starter relay is located on the left-hand side of engine, near fuse box.

1. Disconnect battery negative (—) cable.
2. Remove the cover (A) of starter relay.



N4A0001352-UN: starter relay cover

LEGEND:

A-Cover

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Group 15
Clutch

Essential or Recommended Tools

NOTE:

Order tools from the U.S. SERVICEGARD™ or European Microfiche Tool Catalogs.

ESSENTIAL TOOLS listed are required to perform the job correctly and are obtainable ***only*** from *SERVICEGARD* or *European Microfiche Tool Catalogs* .

RECOMMENDED TOOLS , as noted, are suggested to perform the job correctly. Some tools may be available from local suppliers or may be fabricated.

SERVICEGARD is a trademark of Deere & Company

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Service Equipment and Tools

NOTE:

Order tools according to information given in the U.S. SERVICEGARD™ Catalog or from the European Microfiche Tool Catalog (MTC). Some tools may be available from a local supplier.

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Other Material

Number	Name	Use
Sealant (U.S.)	603 Sealant	On gasket two surfaces.
Grease (U.S.)	Grease	On bearing, seal, and O-ring.

N400041,00014CE-19-20130829

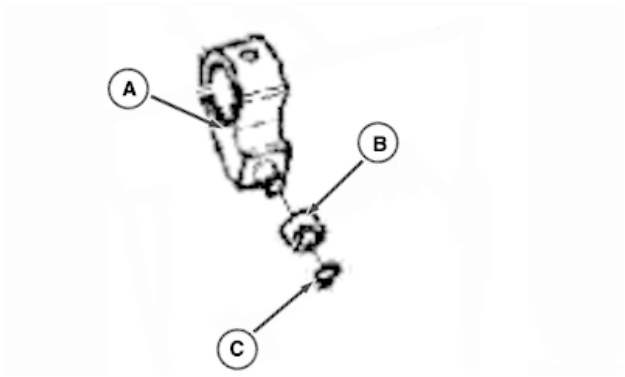
Specifications

Item	Measurement	Specification
Clutch Housing-to- Flywheel Mounting Bolts (A)	Torque	70-75 N·m (52-55 lb.-ft.)
Pedal Free Play	Length	30-40 mm (1.18-1.57 in.)
Pedal Separate Play	Length	185 mm (7.28 in.)
Flywheel Surface to Clutch Separate Level	Distance	89-90 mm (3.50-3.54 in.)
Adjust Nuts to Clutch Main Disk	Distance	1.45-1.55 mm (0.057-0.061 in.)

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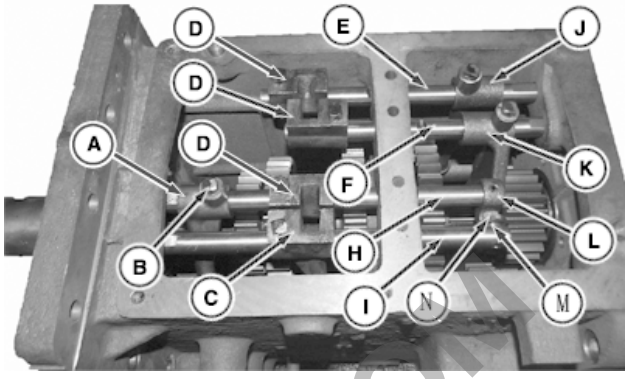
78. N4A0002328-UN: Install

LEGEND:

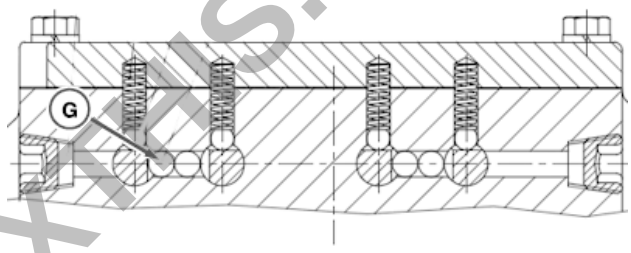
A-NSS Arm Support
B-Bushing
C-Snap Ring

Install bushing (B) on NSS arm support (A).

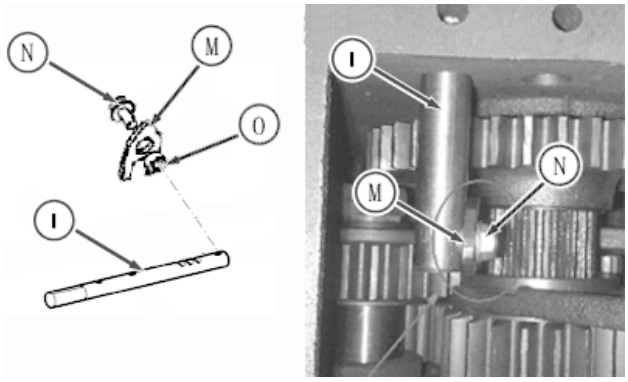
79. Install snap ring (C) on NSS arm support (A).



80. N4A0002327-UN: Install



N4A0002288-UN: Install



N4A0002329-UN: Install

LEGEND:

A-GearShift 1-2 Shifter
B-Locking Fork Screw (7 used)
C-Gearshift 3-4 Shifter
D-Shifter (3 used)
E-H-L Shift Shaft
F-Reverse Shift Shaft
G-Interlock Ball (4 used)
H-1-2 Shift Shaft
I-3-4 Shift Shaft
J-Rang Shift H-L Shifter
K-Reverse Shift Fork
L-Support Arm Assy
M-NSS Arm
N-Flanged Screw
O-Bushing

Install locking fork screw (B) a little in gearshift 1-2 shifter (A), gearshift 3-4 shifter (C), shifters (D), rang shift H-L shifter (J) and reverse shift fork (K).

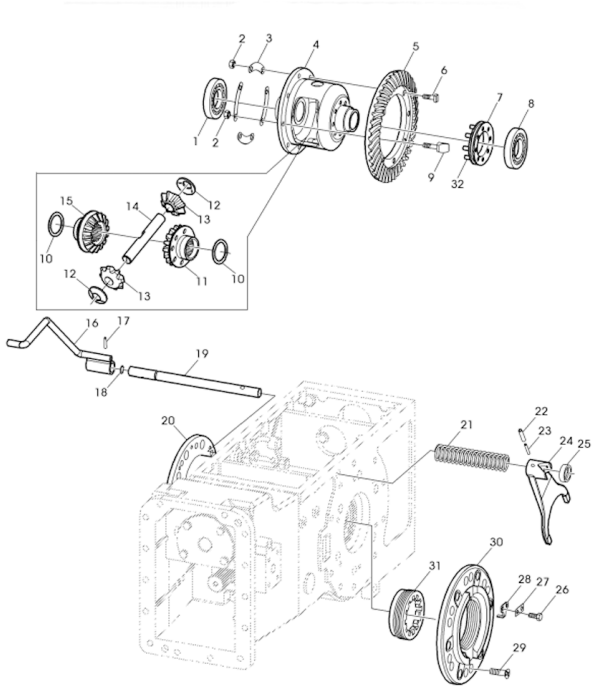
81. Install interlock balls (G).

82. Place gearshift 3-4 shifter (C) in housing correct position.

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Install Differential Lock



N4A0002401-UN: Different kit

LEGEND:

1-Bearing
2-Nut (8 used)
3-Lock Washer (4 used)
4-Differential Housing
5-Spiral Bevel Gear
6-Bolt (6 used)
7-Locking Collar Assy
8-Bearing
9-Bolt (2 used)
10-Shim (AR used)
11-Bevel Gear Differential Pinion
12-Shim (AR used)
13-Bevel Gear Differential Pinion (2 used)
14-Planet Gear Shaft
15-Bevel Gear Differential Pinion
16-Pedal
17-Pin
18-O-ring
19-Differential Lock Shaft
20-RH Bearing Housing
21-Spring
22-Pin
23-Pin
24-Differential Fork
25-Plug
26-Bolt (4 used)
27-Lock Plate (2 used)
28-Thrust Washer (2 used)
29-Screw (12 used)
30-LH bearing Housing
31-Differential Nut (2 used)

1. Clean all parts before install



2. N4A0001134-UN: Remove

LEGEND:

B-Locking Collar Assy

Install locking collar assy (B).

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13. NOTE:

    Bearing font need upper after installing.

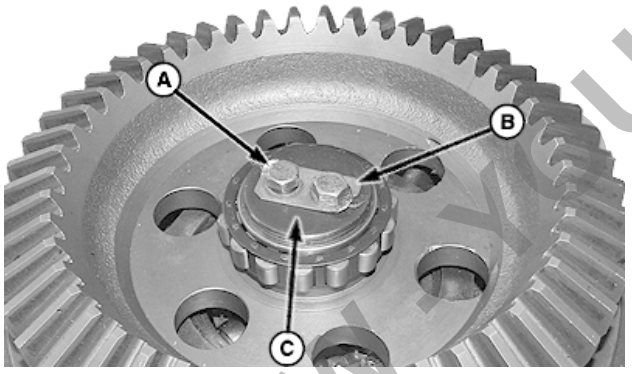


N4A0002580-UN: Install

LEGEND:

A-Bearing Cone

Install bearing cone (A) onto front drive shaft.



14. N4A0000815-UN: Remove



N4A0002581-UN: Install

LEGEND:

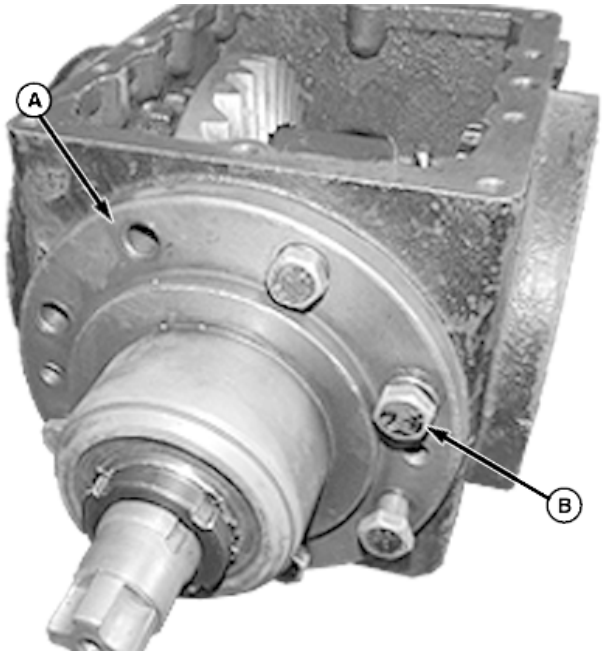
A-Bolt (2 used) **B-Safety Washer** **C-Pin Fastener**

Install pin fastener (C) on front drive shaft.

15. Install safety washer (B) on pin fastener (C).

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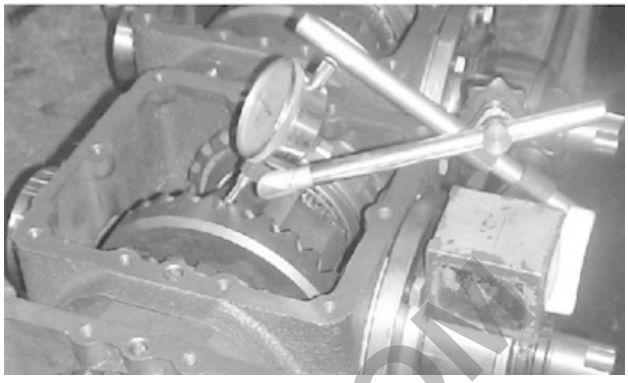
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37. N4A0000852-UN: Remove
LEGEND:
A-Front Drive Gear Assy
B-Bolt (8 used)
Use suitable cushions to install front drive gear assy (A).

38. Install and tighten bolts (B) with lock washers.

39. Inspect to ensure drive gear and differential kit rotate freely.



40. N4A0002634-UN: Install
Use tool to ensure the end play as specification.

Item	Measurement	Specification
Between drive gear and differential gear	End Play	0.2-0.4 mm (0.00787-0.01574 in.)

IMPORTANT:
a. **Drive gear (D) and driven gear (E) must match pairing before install.**

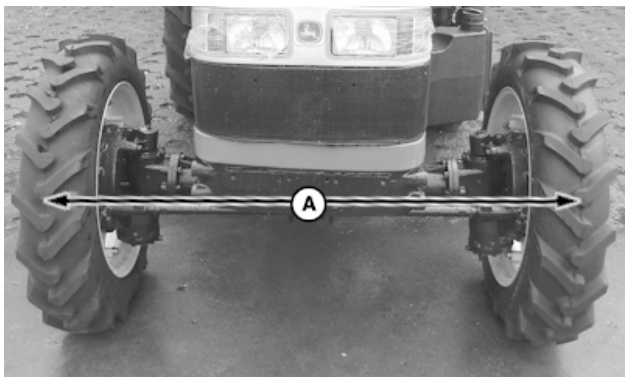
If not as specification, adjust it.

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Check Toe-in (MFWD)



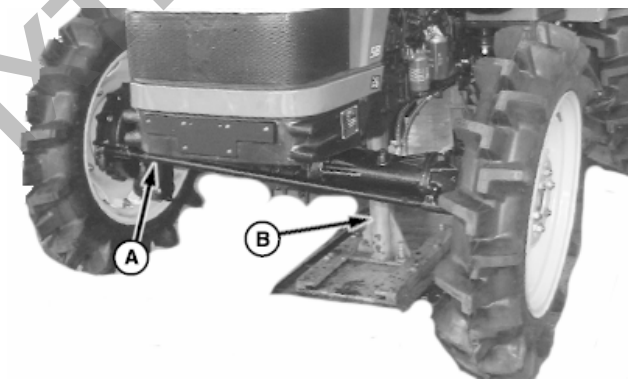
1. N4A0002169-UN: Check front wheel Toe-in (MFWD)
   LEGEND:
   A-Wheel Tread Midpoint Distance
   Park tractor on level ground.
2. Turn steering wheel so that front wheels are in straight forward direction.
3. Switch off engine.
4. Measure wheel tread midpoint distance (A) on axle wheel hub horizontal level. Record measured value and mark it on the tire.
5. Drive tractor backward for about 1 meter (3 ft), so that the mark turns to axle rear wheel hub horizontal level. Measure wheel tread midpoint distance again.Record measured value.
6. Verify the difference between the measured values at the front and at the rear. If the front measured value is smaller, it is toe-in. If the rear measured value is smaller, it is toe-out.
7. Front wheel tread midpoint distance should be 4—8 mm smaller than rear wheel tread midpoint distance. Adjust toe-in when needed.

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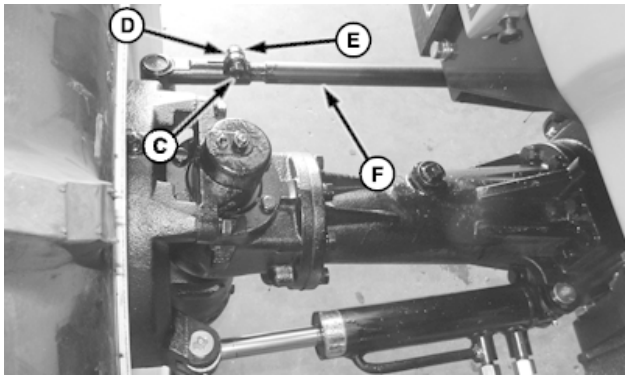
Adjust Toe-in (MFWD)

Adjust Front Wheel Toe-in

1. Park tractor on level ground.



2. N4A0002170-UN: Adjust toe-in



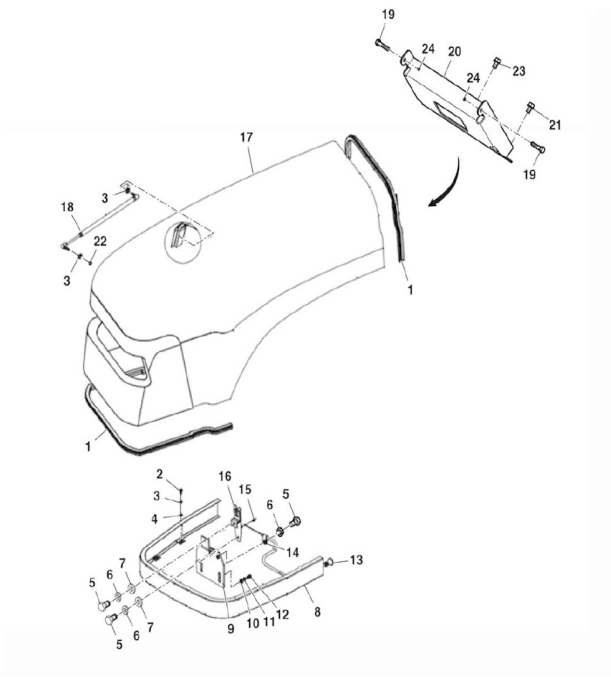
N4A0002171-UN: Adjust toe-in (2)
LEGEND:
A-Horizontal Lever Assembly
B-Bracket
C-Bolts (2 used)
D-Lock Washers (2 used)
E-Nuts (2 used)
F-Horizontal Lever
Set steering wheel to the middle.

3. Use a jack or other equipment to prop up front drive axle, so that front wheels are suspended.
4. Loosen nuts (E) and adjust toe-in.

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Engine Hood Explosive View (CAB)



N4A0002252-UN: Engine Hood Explosive View (CAB)

LEGEND:

1-Isolator (2 used)
2-Cap Screw (4 used)
3-Lock Washer (8 used)
4-Washer (4 used)
5-Cap Screw (3 used)
6-Lock Washer (3 used)
7-Washer (2 used)
8-Panel
9-Bracket
10-Washer (2 used)
11-Lock Washer (2 used)
12-Cap Screw (2 used)
13-Lock Cable
14-Clamp
15-Cap Screw
16-Lock
17-Engine Hood
18-Air Cylinder (2 used)
19-Cap Screw (2 used)
20-Hood Hinge Support
21-Cap Screw (3 used)
22-Flange Nut (2 used)
23-Cap Screw
24-Nut (2 used)

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10-Rear Window
11-Rivet (2 used)
12-Latch
13-Fulcrum
14-Spring Pin
15-Washer (6 used)
16-Lock Nut (6 used)
17-Washer (2 used)
18-Washer
19-Latch
20-Lock Nut
21-Gas Operated Cylinder (2 used)
22-Ball Stud (4 used)
23-Angle (2 used)
24-Washer (8 used)
25-Cap (8 used)
26-Lock Nut (2 used)
27-Washer (4 used)
28-Bushing (2 used)
29-Screw (4 used)

Stand on a stable platform to do this job.

IMPORTANT:
A second person is absolutely essential to perform this job.

1. Disengage the gas operated cylinders (21).
2. Remove screws (3) from hinges (4).
3. Remove rear window (10).
4. Inspect all parts for wear or damage replace if necessary.
5. NOTE:

   Apply Loctite® 242 on threads of lock nuts.

   When installing a new rear window, arrange the hardware as shown and bolt the rear window (10) to the hinges (4) with screws (3).
6. Engage the gas operated cylinders (21) to angles (23) of rear window (10).

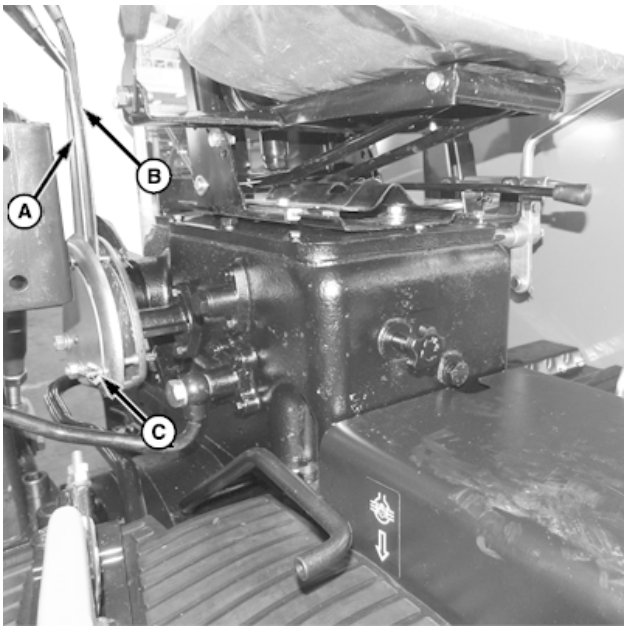
Loctite is a trademark of Henkel Corporation

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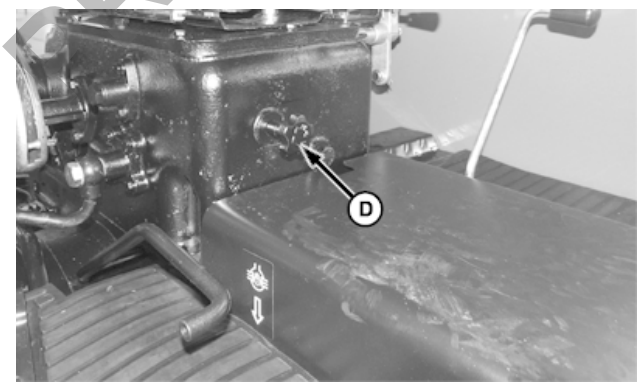
Rockshaft Check



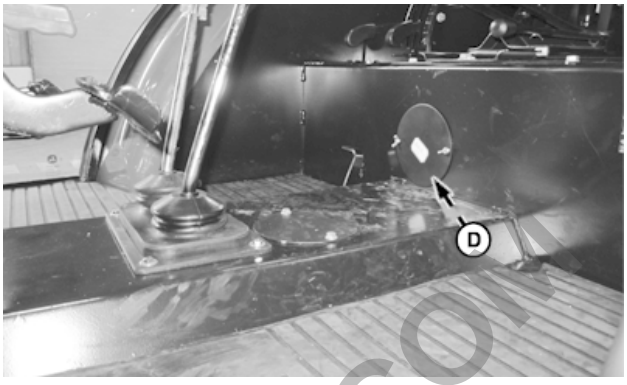
N4A0002434-UN: Hydraulic System Check (OOS)



N4A0002435-UN: Hydraulic System Check (CAB)



N4A0002441-UN: Rate-of-Drop Knob (OOS)



N4A0002442-UN: Rate-of-Drop Knob (CAB)

LEGEND:

A-Force Control Handle
B-Position Control Handle
C-Adjust Handle
D-Rate-of-Drop Knob

CONDITIONS:

Gear shift lever in park position and range shift handle in neutral position.
Engine running.
Hydraulic oil at operating temperature.

PROCEDURE:

Move control handle stop to forward position.
Move adjust handle (C) to forward position.
Move position control handle (B) to rearward position.
Move position control handle to forward position.
Observe the rate-of-drop with implement attached.

NORMAL:

Hitch should raise fully when position control handle is pulled rearward, and lower when handle is pushed forward.

NOTE:

Rate-of-drop knob (D) of CAB machine is in the cover.

Rockshaft rate-of-drop should be adjustable to a minimum of 2 seconds by turning rockshaft rate-of-drop knob (D).

IF NOT NORMAL:

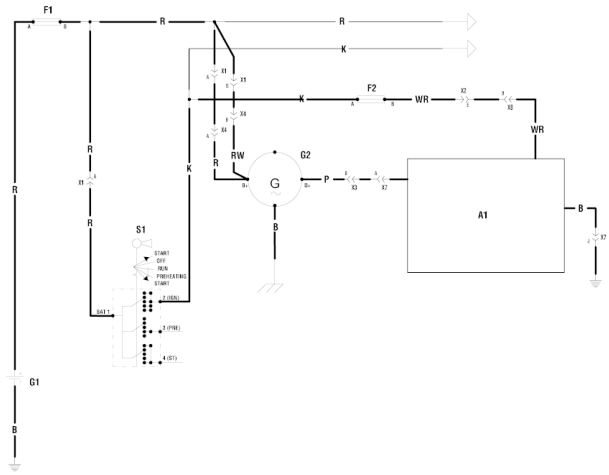
SeeDiagnosis, Tests, and Adjustmentsin Section 270 for rockshaft diagnosis, tests, and adjustments.

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Battery Charging System Operation (CAB)



N4A0002385-UN: charging-cab

LEGEND:

A1-Instrument Cluster
F1-Main Circuit Fuse-80 A
F2-Instrument Fuse-10 A
G1-Battery
G2-Alternator
S1-Key Switch
X1-Connector (Fuse Harness—Main Harness 1)
X2-Connector (Fuse Harness—Main Harness 2)
X3-Connector (Engine Harness—Main Harness 1)
X4-Connector (Engine Harness—Main Harness 2)
X7-Connector (Instrument Cluster 1)
X8-Connector (Instrument Cluster 2)

Function:

The charging system recharges battery after discharge from starter or other electrical load and also supplies current to electrical accessories with tractor running.

Main components:

- Instrument Cluster
- Main Circuit Fuse-80 A
- Instrument Fuse-10 A
- Battery
- Alternator
- Key Switch

Theory of operation:

After tractor is started, engine provides mechanical power to alternator (G2). Alternator starts to generate electricity through terminal ”B+” , wire ‘R”, pin A of connector X4, pin A of connector X1, as well as wire ‘RW”, pin B of connector X4, pin D of connector X1, to charge the battery (G1). Also, it provides power to other electrical accessories.

Voltage regulator controls the output voltage of alternator. Voltage regulator is non-adjustable and is built in the alternator. Its regulating range is 14.5 ± 0.25 volts.

Alternator outputs voltage through terminal ‘D+”, wire ‘P”, pin B of connector X3, pin A of connector X7 to instrument cluster (A1). Charging system indicator is to alert the operator of low or no charging system output. Under normal conditions, voltages at both ends of indicator should be the same. When current does not flow through the indicator, it is not lit.

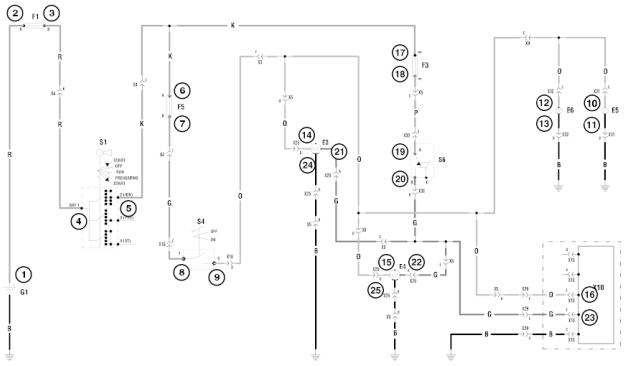
When battery charging system has no output voltage or output voltage is low, voltage of one end of the indicator drops. This will make the current flow through the indicator and the indicator is lit.

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Lighting System Test Points - Tail Lamp, Position Lamp and Brake Lamp (OOS)



N4A0002363-UN: tailight-oos

LEGEND:

E3-Left Tail/Stop Lamp
E4-Right Tail/Stop Lamp
E5-Left Front Position Lamp
E6-Right Front Position Lamp
F1-Main Circuit Fuse-40 A
F5-Head Lamp Fuse-30 A
F3-Brake Lamp Fuse-15 A
G1-Battery
S1-Key Switch
S4-Light Switch
S6-Brake Lamp Switch
X3-Connector (Instrument Cluster Harness—Main Harness 1)
X4-Connector (Instrument Cluster Harness—Main Harness 2)
X5-Connector (Main Harness—Left Back Light Harness)
X6-Connector (Main Harness—Right Back Light Harness)
X9-Connector (Main Harness—Front Light Harness)
X10-Connector (Trailer) (If Equipped)
X18-Connector (Light Switch)
X25-Connector (Left Back Lights)
X26-Connector (Right Back Lights)
X29-Connector (Left Back Light Harness—Trailer Harness)
X30-Connector (Brake Lamp Switch)
X31-Connector (Left Front Turn Light)
X32-Connector (Right Front Turn Light)

Conditions:

- Auxiliary shift lever is set to neutral position.
- PTO control lever is set to neutral position.
- Key switch is set to ‘OFF” position.
- Light switch is set to ‘OFF” position.
- Positive lead (red) of measurement meter is connected to the numbered test points.
- Negative lead (black) of measurement meter is connected to the battery negative terminal (-).
- Measurement meter is at DC voltage profile.

Test locations	Normal	If Not Normal
1. Battery (G1) positive terminal	Minimum 11.8 DC volts	Check battery. If it is normal, charge it. Replace damaged battery.
2. Main circuit fuse (F1) top terminal	Battery voltage	Check the cable and connection between battery and starter motor (M1). Check if the wire ”R” between main circuit fuse and starter motor is disconnected.
3. Main circuit fuse bottom terminal	Battery voltage	Check if fuse functions well. Replaced damaged fuse.
4. Key switch (S1) terminal 1	Battery voltage	Check if contacts are loose or corroded, or if connector X4 well connected, or if break in wire ‘R” between main circuit fuse and key switch.
5. Key switch terminal 2	Battery voltage	Check if switch functions well. If it is defective, replace it. Check if contacts are loose or corroded, or if break in wire.
6. Head lamp fuse (F5) top terminal	Battery voltage	Check if contacts are loose or corroded, or if connector X4 well connected, or if break in wire ‘K” between head lamp fuse and key switch.
7. Head lamp fuse bottom terminal	Battery voltage	Check if fuse functions well. Replaced damaged fuse.
8. Light switch (S4) terminal 1	Battery voltage	Check if contacts are loose or corroded, or if connectors X4, X18 well connected, or if the wire ”G” between head lamp fuse and light switch is disconnected.
9. Light switch terminal 5	Fewer than 0.2 volts	Check if switch functions well. If it is defective, replace it. Check if contacts are loose or corroded, or if break in wire.
17. Brake lamp fuse (F3) top terminal	Battery voltage	Check if contacts are loose or corroded, or if connector X4 well connected, or if break in wire ‘K” between brake lamp fuse and key switch.
18. Brake lamp fuse bottom terminal	Battery voltage	Check if fuse functions well. Replaced damaged fuse.
19. Brake lamp switch (S6) terminal ‘A”	Battery voltage	Check if contacts are loose or corroded, or if connector X6, X30 well connected, or if the wire ”P” between brake lamp fuse and brake lamp switch is disconnected.
20. Brake lamp switch terminal ‘B”	Fewer than 0.2 volts	Check if switch functions well. If it is defective, replace it. Check if contacts are loose or corroded, or if break in wire.

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E11-Left Rear Floodlight
E12-Right Rear Floodlight
E13-Left Front Floodlight (If Equipped)
E14-Right Front Floodlight (If Equipped)
E22-Hazard Warning Switch Indicator Light
E23-Dome Lamp
F3-Brake Lamp Fuse-15 A
F4-Floodlight Fuse-30 A
F6-Flasher Fuse-15 A
F7-Horn Fuse-10 A
F8-Wiper Fuse-10 A
F9-Fan Fuse-5 A
F10-Dome Lamp Fuse-5 A
H1-Horn
K2-Flasher
M2-Wiper Motor
S6-Brake Lamp Switch
S7-Turn Light Switch
S8-Hazard Warning Switch
S9-Rear Floodlight Switch
S10-Front Floodlight Switch
S11-Horn Switch
S12-Wiper Switch
S13-Dome Lamp Switch
X1-Connector (Fuse Harness—Main Harness 1)
X2-Connector (Fuse Harness—Main Harness 2)
X5-Connector (Main Harness—Head Lamp Harness)
X6-Connector (Main Harness—Roof Harness)
X8-Connector (Instrument Cluster 2)
X16-Connector (Hazard Warning Switch Indicator Light)
X17-Connector (Hazard Warning Switch)
X18-Connector (Turn Switch)
X20-Connector (Front Floodlight Switch)
X21-Connector (Rear Floodlight Switch)
X22-Connector (Horn Switch)
X24-Connector (Wiper Switch)
X25-Connector (Flasher)
X26-Connector (Wiper Motor)
X27-Connector (Dome Lamp)
X32-Connector (Left Back Lights)
X33-Connector (Right Back Lights)
X34-Connector (Main Harness—Trailer Harness)
X37-Connector (Left Front Turn Light)
X38-Connector (Right Front Turn Light)
X39-Connector (Left Front Floodlight)
X40-Connector (Right Front Floodlight)
X41-Connector (Left Rear Floodlight)
X42-Connector (Right Rear Floodlight)
X43-Connector (Fan)
X44-Connector (Trailer) (If Equipped)

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