XUV Gator™ Utility Vehicle 825i S4

TECHNICAL MANUAL

XUV Gator™ Utility Vehicle 825i S4

TM121519 19JUN15 (ENGLISH)

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John Deere Horicon Works
PRINTED IN U.S.A.

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Recognize Safety Information

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.



T81389 —UN—28JUN13

DX,ALERT -19-29SEP98-1/1

Understand 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.

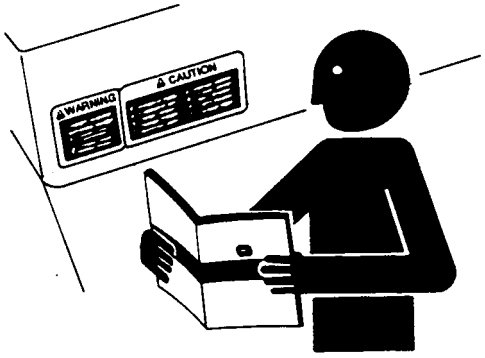


TS187 —19—30SEP88

DX,SIGNAL -19-03MAR93-1/1

Replace Safety Signs

Replace missing or damaged safety signs. See the machine operator's manual for correct safety sign placement.



TS201 —UN—15APR13

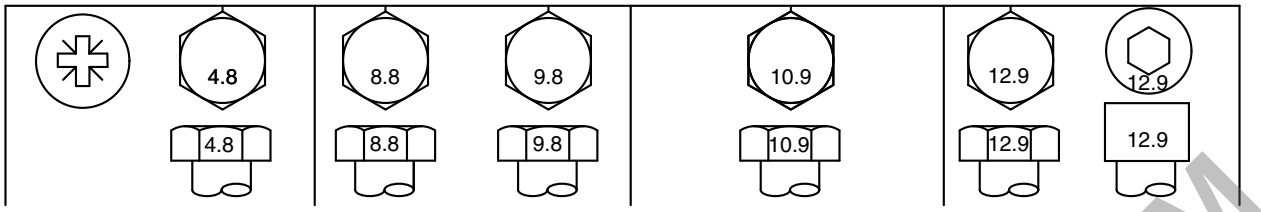
DX,SIGNS1 -19-04JUN90-1/1

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Metric Bolt and Screw Torque Values

TS1670 —UN—01MAY03



Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]	
	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 are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For stainless steel fasteners or for nuts on U-bolts, see the tightening instructions for the specific application. Tighten plastic insert or crimped steel type lock nuts by turning the nut to the dry torque shown in the chart, unless different instructions are given for the specific application.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class. Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

[a] *"Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or M20 and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.*

[b] *"Dry" means plain or zinc plated without any lubrication, or M6 to M18 fasteners with JDM F13B, F13E or F13H zinc flake coating.*

DX,TORQ2 -19-12JAN11-1/1

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Machine Specifications

NOTE: Specifications and design subject to change without notice.

	XUV825i S4
Ground Speed:	
Forward HI	71 km/h (44 mph)
Forward LO	43 km/h (27 mph)
Reverse	48 km/h (30 mph)
Engine:	
Make	Chery
Type	Gas
Model	SQR372 FI
Slow Idle Speed	950 ± 50 rpm
Rev Limiter Speed	6150 rpm
Cylinders	3
Displacement	812 cm^3 (49.5 $in.^3$)
Spark Plug	NGK BKR6 EGP
Spark Plug Gap	0.9—1.05 mm (0.035—0.041 in.)
Bore	72 mm (2.835 in.)
Stroke	66.5 mm (2.618 in.)
Oil	John Deere Plus-4™ or John Deere TURF-GARD™
Oil Filter	Spin On
Cooling System (including recovery tank)	5.0 L (5.2 qt.)
Air Cleaner	Dry Replaceable Single Element with Remote Intake
Engine Shut Off	Key Switch
Fuel System:	
Fuel System Pressure	315—345 kPa (45.6—50.4 psi)
Electrical System:	
Type	12 volt
Starter	Solenoid Shift
Battery	BCI Group U1
Cold Cranking Amps @ -18° C (0° F)	480 amps
Charging System (@ Output at 1900 rpm)	36 amps
Charging System (Rated Output at 6000 rpm)	75 amps
Charging System Static Draw	5 mA

Power Train:	
Drive Belt Width (Nominal)	31.75 mm (1.25 in.)
Drivetrain	Continuously Variable Transmission (CVT) with Clutch Enclosure
Clutch Engagement	1350 rpm
Clutch Disengagement	1250 rpm
Transmission Oil	Hy-Gard™ J20C or J20D (Cold Weather)
EMFWD Oil	Low Viscosity Hy-Gard™ J20C
Steering:	
Type	Rack and Pinion
Brakes:	
Type	All Wheel Hydraulic Disc

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Other Material

Number	Name	Use
PM38609 (U.S.) (U.S.) PM37469 (Canada) (U.S.) 7649 ( ) (U.S.®)	Form-in-Place Gasket	Applied to mating surfaces of oil pan and engine block.
TY15130 (U.S.)	Form-in-Place Gasket	Applied to mating surfaces of cylinder head.
545 ( ) (U.S.®)		Apply to threads of camshaft sprocket bolt.
Red 0.050—0.15 mm (0.002-0.006 in.) (U.S.)	PlastigagePlastigage®	Used to check main bearing clearances.
		Used to measure main bearing clearance.
TY12130 (U.S.)	Form-in-Place Gasket Sealer	Apply to mating surface of engine block for oil seal case
		Apply to transmission flange
J20D (U.S.)	Hy-Gard	Use to fill park brake assembly

Loctite is a trademark of Henkel Corporation
Plastigage is a trademark of Perfect Circle Corporation

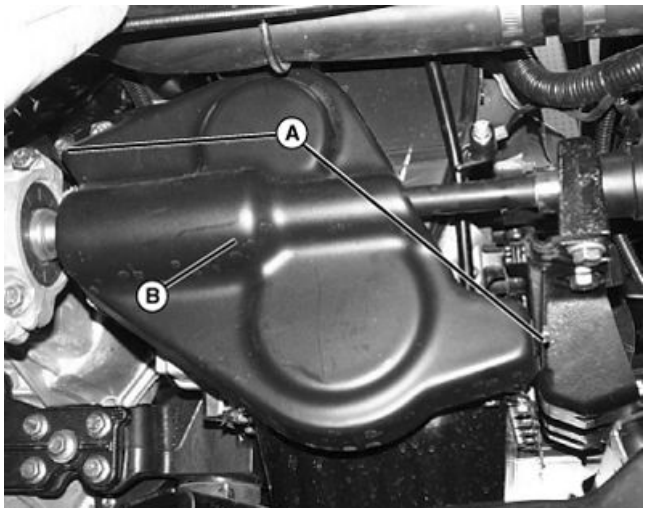
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Remove and Install Engine

Removal

CAUTION: Avoid Injury! USE CAUTION AROUND MOVING PARTS. STOP engine. Remove ignition key. Wait for all moving parts to STOP.

1. Park vehicle safely.
2. Remove cargo box.
3. Disconnect negative (—) cable from the battery.
4. Remove two bolts (A). Remove alternator and water pump belt cover (B).



LVAL22458 —UN—01MAY12

A—Bolts (2 Used)

B—Alternator and Water Pump Belt Cover

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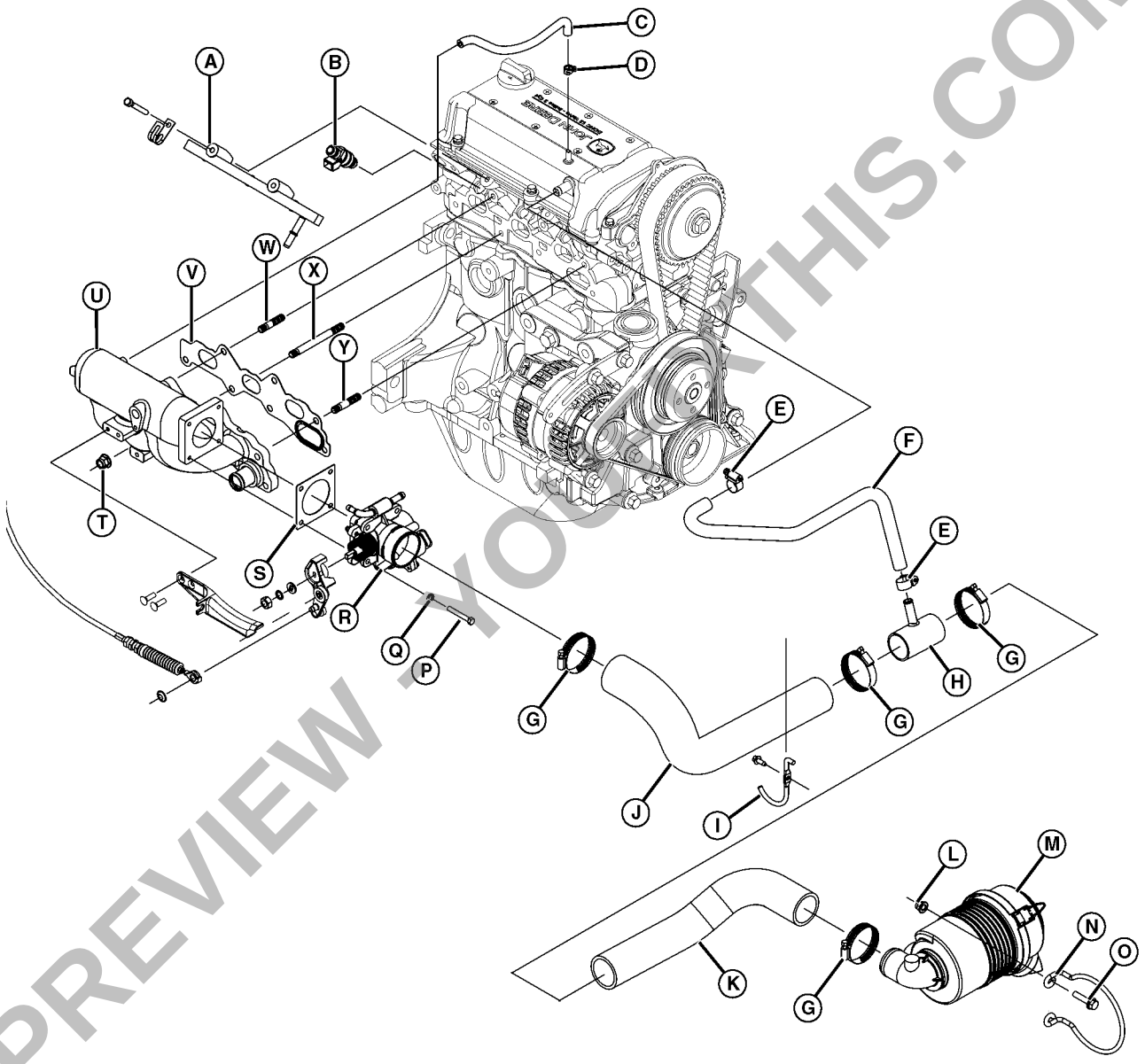
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Summary of References

- Engine Intake Components
- Engine Exhaust Components
- Engine Mounting Components
- Engine Coolant Lines Components (SN -080000)
- Engine Coolant Lines Components (SN 080001-)
- Engine Block and Head Components
- Engine Crankshaft and Pistons Components
- Engine Valve Train Components

OUMX068,00000DF -19-23AUG13-1/1

Engine Intake Components



LVAL22426 —UN—01MAY12

A—Fuel Rail
B—Fuel Injector
C—Hose
D—Clamp
E—Clamp (2 Used)
F—Hose
G—Clamp (4 Used)
H—Adaptor
I— Bracket
J—Hose
K—Hose
L—Flange Nut (2 Used)
M—Air Filter Assembly
N—Bracket
O—Bolt (2 Used)
P—Screw (4 Used)
Q—Washer (4 Used)
R—Throttle Body Assembly
S—Gasket
T—Flange Nut (7 Used)
U—Intake Manifold
V—Gasket
W—Stud (5 Used)
X—Stud
Y—Stud

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Error Codes List

P0031 O^2 Sensor Heater Circuit Low (Bank1 Sensor 1)

P0032 O^2 Sensor Heater Circuit High (Bank1 Sensor 1)

P0107 Manifold Absolute Pressure Circuit Low Input

P0108 Manifold Absolute Pressure Circuit High Input

P0112 Intake Air Temperature Circuit Low Input

P0113 Intake Air Temperature Circuit High Input

P0116 Engine Coolant Temperature Circuit Range/Performance

P0117 Engine Coolant Temperature Circuit Low Input

P0118 Engine Coolant Temperature Circuit High Input

P0119 Engine Coolant Temperature Circuit Intermittent

P0122 Throttle Position Sensor/Pedal Position Circuit Input Low

P0123 Throttle Position Sensor/Pedal Position Circuit Input Low

P0130 O^2 Sensor Circuit Malfunction (Bank 1 Sensor 1)

P0131 O^2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)

P0132 O^2 Sensor Circuit High Voltage (Bank 1 Sensor 1)

P0134 O^2 Sensor No Activity Detected (Bank 1 Sensor 1)

P0230 Fuel Pump Circuit Malfunction

P0261 Cylinder 1 - Injector Circuit Low

P0262 Cylinder 1 - Injector Circuit High

P0264 Cylinder 2 - Injector Circuit Low

P0265 Cylinder 2 - Injector Circuit High

P0267 Cylinder 3 - Injector Circuit Low

P0268 Cylinder 3 - Injector Circuit High

P0325 Knock Sensor 1 Circuit Malfunction

P0335 Crankshaft Position Sensor Circuit Malfunction

P0340 Camshaft Position Sensor Circuit Malfunction

P0351 Ignition Coil 'A' Primary Secondary Circuit Malfunction

P0352 Ignition Coil 'B' Primary Secondary Circuit Malfunction

P0353 Ignition Coil 'C' Primary Secondary Circuit Malfunction

P0505 Idle speed actuator command signal incorrect

P0506 Idle Control System – RPM lower than expected

P0507 Idle Control System – RPM higher than expected

P0560 System Voltage Problem

P0605 Internal Control Module Read Only Memory (ROM) Error

P0650 Malfunction Indicator Lamp (MIL) Control Circuit

P1166 O^2 Sensor – Controller Adaptation Diagnosis Malfunction

P1624 Cooling Fan Relay – Circuit Malfunction – "Low" Circuit

P1625 Cooling Fan Relay – Circuit Malfunction – "High" Circuit

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Diagnose Engine Malfunctions

Diagnose Engine Malfunctions

CAUTION: Avoid Injury! Engine radiator fluid is extremely hot during operation. The radiator fan may start to rotate at any time. Keep hands away from all moving parts when testing.

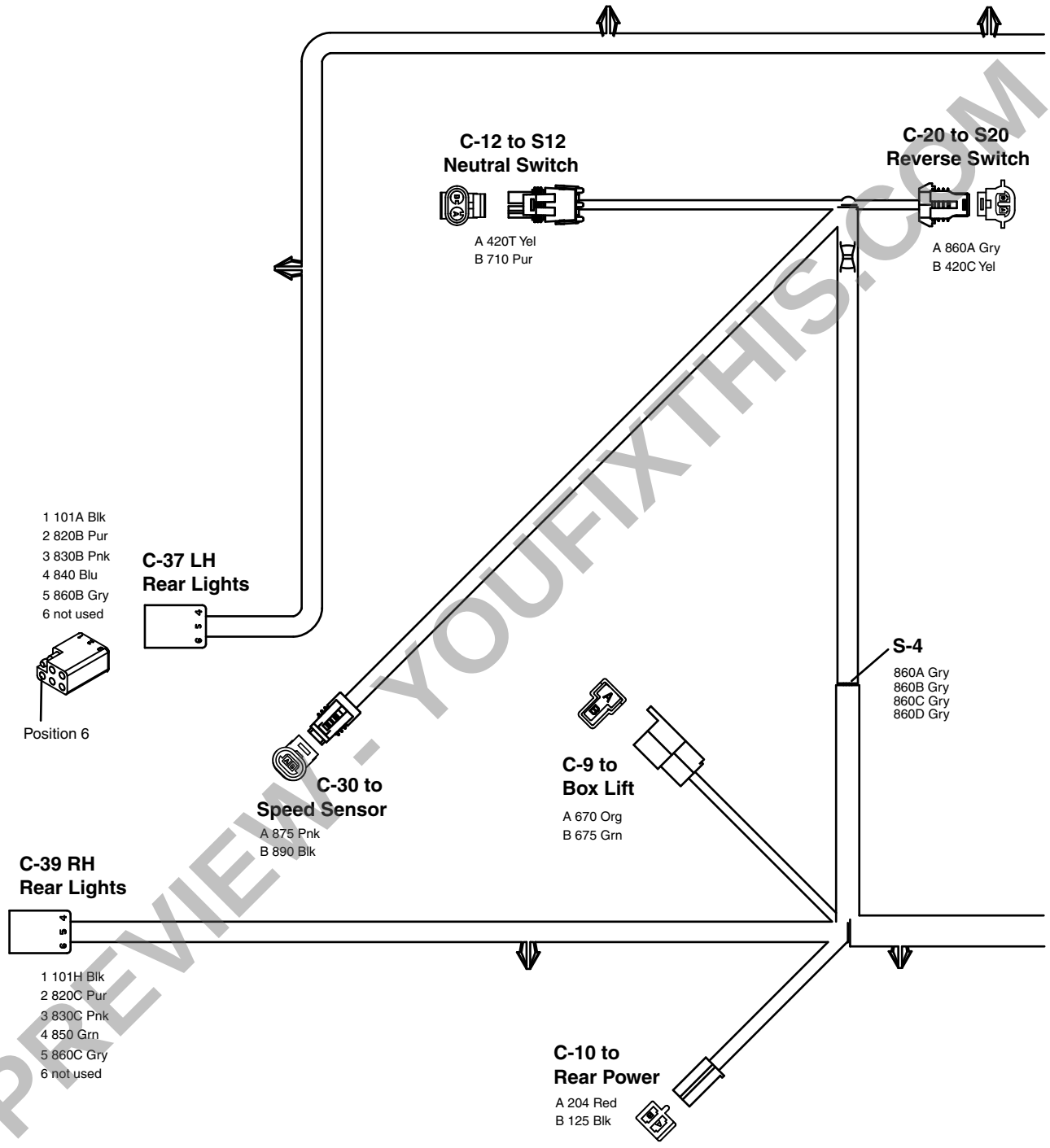
NOTE: When certain problems are detected by the ECU, the **System Diagnostic** *light illuminates on the dashboard. The engine then goes into a "safe mode" which shuts off the fuel to number three cylinder and greatly reduces engine performance. For loss of power or poor performance problems, connect machine to Service ADVISOR™ and check for a fault code. Repair the cause before considering mechanical problems with the engine.*

Symptom	Problem	Solution
Engine Starting Problems	Engine will not crank	Battery weak or discharged.
		Fusible link defective.
		Check key switch or wiring.
		Starter solenoid defective.
		Starter motor defective.
		Engine seized.
	Engine will not start; spark plug wet	Check spark plug gap and spark (Refer to Electrical section).
		Timing belt broken or has jumped time.
	Engine is hard to start when cold.	Improper viscosity engine oil.
		System diagnostic light illuminated, check code(s) and repair.
	Engine cranks but will not start	Battery weak or discharged.
		Check spark (Refer to Electrical section).
		Weak or faulty spark plug(s).
		Faulty high tension leads.
		Faulty ignition coil(s).
		Faulty electronic control unit.
		Contaminated fuel or faulty fuel supply system.
		Defective fuel pump.
		Clogged fuel line or filter.

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Main Wiring Harness (SN -080000)



Main Harness (1 of 6)

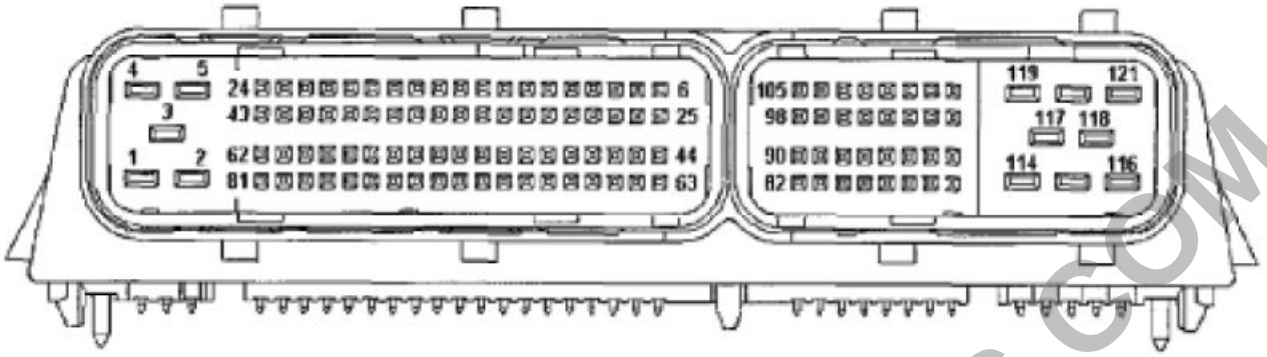
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MX52301,00007C5 -19-12NOV14-1/6

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ECU Pin Locations



LVAL22641 —UN—27APR12

Pin No.	Signal
1	Ground
2	Ground
3	Ignition Coil 3
4	Ignition Coil 1
5	Ignition Coil 2
6	Not Used
7	Not Used
8	O2 Sensor Signal Out
9	Not Used
10	Knock Sensor Out
11	Not Used
12	Not Used
13	Not Used
14	Not Used
15	Not Used
16	Not Used
17	Not Used
18	Not Used
19	Idle Air Control Coil A +
20	Idle Air Control Coil A -
21	Main Relay Power in (V_EL)
22	Ignition Switch Power In
23	Injector 3 Control
24	Injector 1 Control
25	Not Used
26	Not Used
27	Crank Sensor Ground
28	Not Used
29	Crank Sensor Signal In
30	Cam Sensor In

Pin No.	Signal
31	Coolant Temp Sensor In
32	Throttle Position Sensor In
33	Not Used
34	Not Used
35	Idle Air Control Coil B +
36	Idle Air Control Coil B -
37	Not Used
38	Throttle Position Sensor Ground
39	Not Used
40	Not Used
41	Not Used
42	Not Used
43	O2 Sensor +
44	ECU +12Vdc In
45	Throttle Position Sensor +5Vdc
46	TMAP +5Vdc Out (Pressure)
47	Not Used
48	TMAP Ground (Temperature)
49	Not Used
50	Not Used
51	Not Used
52	Not Used
53	Not Used
54	Knock Sensor Ground
55	Ignition Coil Shield
56	TMAP Sensor In (Temperature)
57	Not Used
58	Not Used
59	O2 Ground
60	TMAP Ground (Pressure)

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BS62576,0000C02 -19-06NOV12-1/2

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Summary of references

- Adjust Throttle Cable
- Check Idle Speed
- Test Fuel Pump and Regulator Pressure
- Test Cylinder Leak-Down
- Adjust Valve Clearance
- Test Oil Pressure
- Test Thermostat

OUMX068,0000094 -19-09OCT12-1/1

Specifications

Item	Measurement	Specification
Thermostat Specifications		
Begin-to-Open	Temperature	@ 82° C (180° F)
Full-Open	Temperature	@ 96° C (205° F)
Valve Clearance		
Intake Valve	Clearance	0.18 ± 0.05 mm (0.007 ± 0.002 in.)
Exhaust Valve	Clearance	0.25 ± 0.05 mm (0.010 ± 0.002 in.)
Throttle Cable Slack (Maximum)	Deflection	1—3 mm (0.040—0.120 in.)
Throttle Cable Free Play	Deflection	1—3 mm (0.039—0.118 in.)
Throttle Pedal to Stop Bolt	Gap	1—1.5 mm (0.04—0.06 in.)
Low Idle	Speed	950 ± 50 rpm
Fuel	Pressure	315—345 kPa (45.6—50.4 psi)
Valve Cover Bolt Torque	Torque	6 N·m (53 lb.-in.)
Oil	Pressure	206—482 kPa (30—70 psi)

OUMX068,000009C -19-09OCT12-1/1

Service Equipment and Tools

NOTE: Order tools according to information given in the SERVICEGARD™ Catalog. Some tools may be available from a local supplier.

SERVICEGARD is a trademark of Deere & Company

OUMX068,0000097 -19-18NOV13-1/9

Digital Pulse Tachometer.....JT07270	Use to check idle speed.

OUMX068,0000097 -19-18NOV13-2/9

400 kPa (60 psi) Pressure Gauge JT07032	Used to check fuel pressure.

OUMX068,0000097 -19-18NOV13-3/9

Compression Leakdown Tester JT03502	Check cylinder leakdown

OUMX068,0000097 -19-18NOV13-4/9

Valve Shim Removal Tool..... JDG10985	Used to remove valve shims

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Remove and Install Oil Pan and Strainer

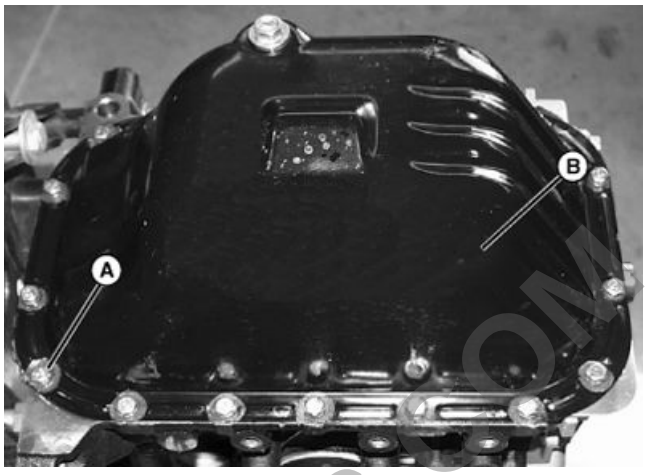
Removal

1. Remove oil pan cap screws (A).

IMPORTANT: Avoid Damage! Use care not to bend oil pan when trying to break the seal.

2. Use a thin tool like a putty knife to break the bond of the gasket sealant and carefully pry oil pan (B) from block.

A—Cap Screws **B—Oil Pan**



LVAL22531 —UN—01MAY12

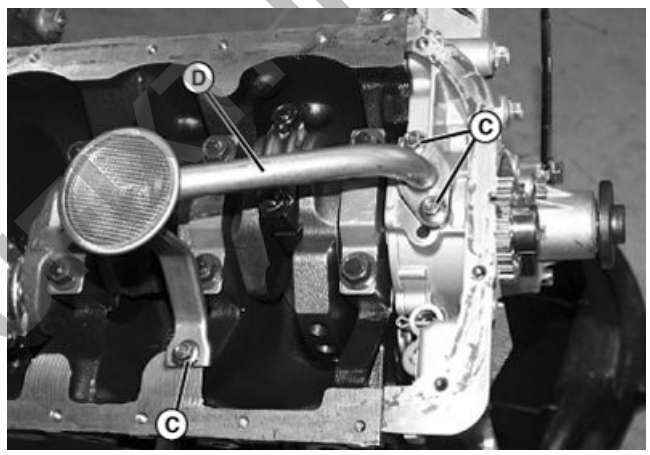
OUMX068,000006F -19-08OCT12-1/2

3. Remove cap screws for oil pickup tube (C) and remove oil pickup tube (D).

Installation

1. Replace gasket on pickup tube, and install pickup tube.
2. Clean gasket mating surfaces and apply John Deere™ Form-in-Place Gasket on all mating surfaces.
3. Install oil pan. Tighten cap screws to specification.

Specification	
Oil Pan Cap Screw—Torque	6 N·m (53 lb.-in.)
Oil Pan—Capacity	2.2 L (2.3 qt.)



LVAL22532 —UN—01MAY12

C—Screws (3 Used) **D—Oil Pickup Tube**

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Main Wiring Harness Color Codes (SN 080001-100000)

Size/No./Color	Wire Connection Points
13.0 100 Blk	T-11, T-7
0.8 102 Blu	C-98, C-25
3.0 125 Blk	S-3, C-10
2.0 199 Fuselink	S-8, T-32
2.0 201 Fuselink	S-6, T-8
5.0 200 Pnk	T-21, C-80
5.0 202 Red	S-6, C-8
3.0 203 Red	C-6, C-32
3.0 204 Red	C-10, C-33
3.0 205 Red	S-6, S-12
1.0 207 Red	C-60, C-38
1.0 208 Red	C-60, C-3
2.0 218 Fuselink	S-5, T-8
2.0 219 Red	RC-32, C-89
0.8 226 Red	C-19, C-60
3.0 252 Org	C-31, C-60
3.0 253 Red	C-60, C-60
0.8 300 Org	C-26, C-19
0.8 305 Pnk	C-19, C-25
0.8 310 Org	C-19, C-60
3.0 315 Org	C-22, C-60
0.8 421 Yel	C-88, C-25
0.8 425 Yel	C-7, C-7
1.0 427 Yel	C-90, C-60
0.8 450 Pnk	C-26, C-55
0.8 455 Wht	C-25, C-77
0.8 500 Blu	C-19, C-26
0.8 508 Red	C-26, C-60
0.8 550 Grn	C-60, C-19
0.8 555 Blu	C-60, C-29
0.8 556 Red	C-60, C-60
0.8 601 Tan	C-26, C-19
0.8 610 Brn	C-25, C-19
0.8 615 Gry	C-34, C-50
0.8 616 Gry	C-25, C-34
0.8 669 Brn	C-19, C-50
0.8 670 Org	C-9, C-2
0.8 675 Grn	C-9, C-2
0.8 684 Grn	C-4, C-50
3.0 689 Red	C-19, C-8
1.0 699 Red	C-19, C-8
1.0 700 Pur	C-60, C-19
0.8 705 Pur	C-3, C-50
0.8 710 Pur	C-3, C-12
0.8 711 Pur	C-3, C-50
0.8 785 Grn	C-19, C-25
0.8 800 Pnk	C-15, C-7
0.8 801 Pnk	C-7, C-17
0.8 810 Pnk	T-10, C-25
0.8 811 Pnk	C-44, C-97
0.8 840 Blu	C-40, C-37
0.8 850 Grn	C-40, C-39
0.8 875 Pnk	C-98, C-30
0.8 890 Blk	C-98, C-30
0.8 940 Blu	C-25, C-40
0.8 950 Grn	C-25, C-40
0.8 961 Wht	C-25, C-50
0.8 999 Org	C-98, C-99
0.8 1000 Yel	C-98, C-16
0.8 1001 Blu	C-16, C-58
0.8 1002 Blu	C-50, C-59
0.8 1004 Pnk	T-10, C-44
0.8 1005 Pur	C-44, C-50
3.0 100A Blk	S-1, C-22
1.0 100C Blk	S-1, C-38
3.0 100D Blk	S-1, C-6
0.8 100E Blk	S-1, C-5
0.8 100F Blk	S-15, C-17
0.8 100G Blk	C-15, S-15
3.0 100J Blk	S-1, S-3
0.8 100R Blk	T-13, S-15
0.8 100V Blk	T-12, C-55
0.8 100X Blk	S-1, C-60
5.0 100Y Blk	C-98, T-12
0.8 100Z Blk	T-12, C-50
0.8 100AA Blk	C-56, C-2
0.8 100CC Blk	C-2, C-34
0.8 100EE Blk	C-34, C-7
0.8 100FF Blk	C-59, S-1
0.8 100HH Blk	C-58, S-15
0.8 100JJ Wht	C-57, S-15
0.8 100KK Wht	S-15, C-56
0.8 100LL Blk	C-11, T-12
0.8 101A Blk	S-15, C-37
0.8 101C Blk	C-29, S-3
0.8 101D Blk	S-3, C-19
0.8 101F Blk	S-3, C-27
5.0 101G Blk	T-7, S3
0.8 101H Blk	C-39, S-15
5.0 101J Blk	T-7, C-100
5.0 101K Blk	T-7, C-100
1.0 101Z Blk	C-90, C-27
0.8 102E Blk	T-12, C-26

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MX52301,0000776 -19-09JUN15-1/3

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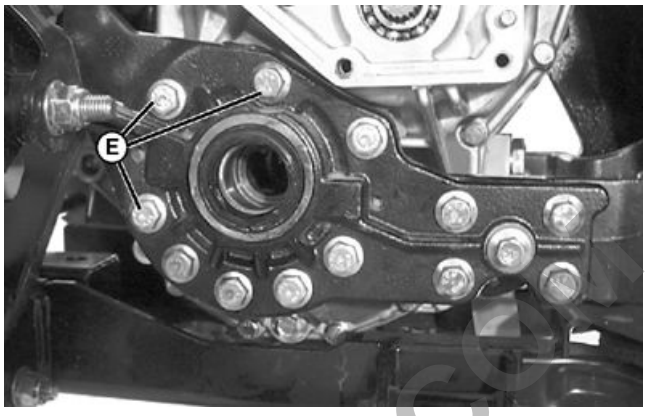
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8. Install remaining bolts (E). Tighten all bolts to specification.

Specification

Transmission Mount to Transmission Bolts—Torque.....73 N·m (54 lb.-ft.)

E—Bolts

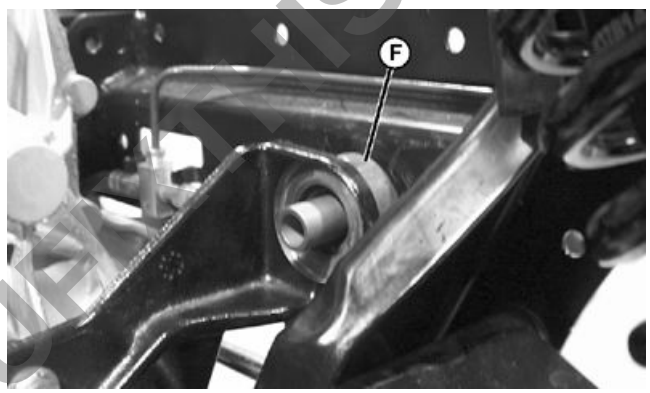


LVAL22839 —UN—30APR12

OUMX068,00001AF -19-15NOV12-5/19

9. Right-Hand Side: Seat isolator (F) between side plate and frame. Install spacer through isolator to frame.

F—Isolator



LVAL22840 —UN—30APR12

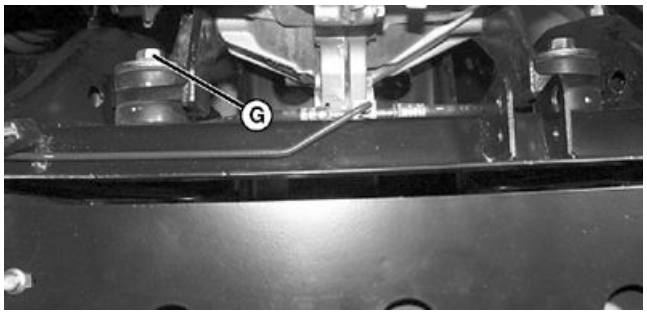
OUMX068,00001AF -19-15NOV12-6/19

10. Install the second isolator, washer, bolt (G) and nut. Tighten to specification.

Specification

Transmission Second Isolator Nut and Bolt—Torque.....109 N·m (80 lb.-ft.)

G—Second Isolator Bolt and Nut



LVAL22841 —UN—30APR12

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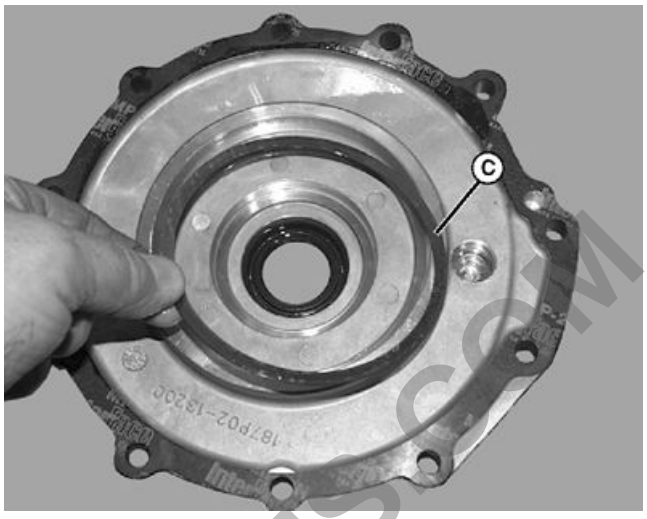
OUMX068,00001AF -19-15NOV12-7/19

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2. Shim(s) (C) will either be in the cover or on the bearing. Retain the shim(s) for possible re-use during assembly.

C—Shims

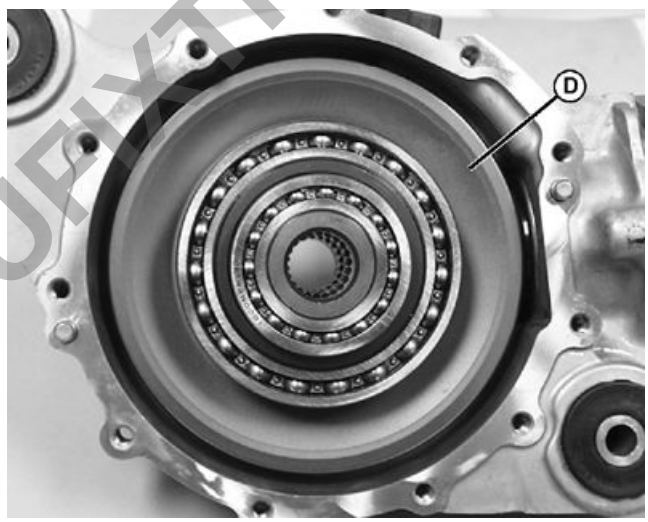


LVAL23893 —UN—07MAY12

OUMX068,00001A3 -19-25OCT13-2/32

3. Remove ring gear assembly (D).

D—Ring Gear Assembly

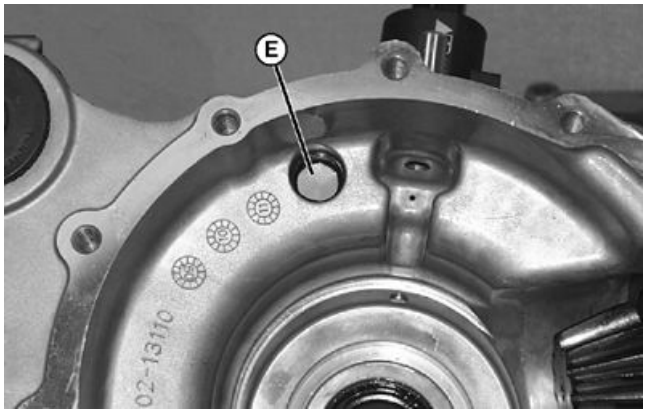


LVAL23894 —UN—07MAY12

OUMX068,00001A3 -19-25OCT13-3/32

4. Drive out plug (E) from inside. Hole will be used during assembly for checking gear backlash.

E—Plug



LVAL23895 —UN—07MAY12

Continued on next page

OUMX068,00001A3 -19-25OCT13-4/32

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Specifications

Item	Measurement	Specification
Brake Friction Material (min)	Thickness	1 mm (0.04 in.)
Rotor (min)	Thickness	4.76 mm (0.19 in.)
Caliper Sliding Pins	Torque	46 N·m (34 lb.-ft.)
Wheel Lug Bolt (Alloy Wheel)	Torque	142 N·m (105 lb.-ft.)
Wheel Lug Bolt (Steel Wheel)	Torque	108 N·m (80 lb.-ft.)
Master Cylinder to Mount Nuts	Torque	40 N·m(30 lb.-ft.)
Master Cylinder Banjo Fitting Bolt	Torque	27 N·m(20 lb.-ft.)
Brake Line Block to Firewall Nut	Torque	10.4 N·m (92 lb.-in.)
Front Brake Hose Retainer to Firewall Bolt	Torque	10.4 N·m (92 lb.-in.)
Front Brake Hose Retainer to Suspension Arm Bolt	Torque	10.4 N·m (92 lb.-in.)
Front Caliper Banjo Fitting Bolt	Torque	27 N·m (20 lb.-ft.)
Brake Line Flare Nut	Torque	15 N·m (133 lb.-in.)
Brake Line Block to Frame Bolt	Torque	10.4 N·m (92 lb.-in.)
Caliper Banjo Fitting Bolt	Torque	27 N·m (20 lb.-ft.)
Park Brake Cable End to Actuator Shoulder Bolt	Torque	9 N·m (80 lb.-in.)
Park Brake Control Lever to Mounting Bracket Nut	Torque	28 N·m (20 lb.-ft.)
Park Brake Control Lever Mounting Bracket to Frame Bolt	Torque	28 N·m (20 lb.-ft.)
Friction Disk Holding Tool (Maximum)	Torque	8 N·m (60 lb.-in.)
Park Brake Friction Disks (Minimum)	Thickness	2 mm (0.080 in.)
End Plate to Housing Bolt	Torque	19 N·m (168 lb.-in.)
Park Brake to Gearbox Bolt	Torque	102 N·m (75 lb.-ft.)
Park Brake Lubricant Quantity (Dry Housing)	Capacity	50 mL (1.7 oz.)
Park Brake Housing Brake Hold Tool Plug	Torque	15 N·m (132 lb.-in.)
Park Brake Housing Fill Plug	Torque	24 N·m (18 lb.-ft.)
Park Brake Housing Fluid Level Plug	Torque	15 N·m (132 lb.-in.)

OUMX068,0000167 -19-20JAN15-1/1

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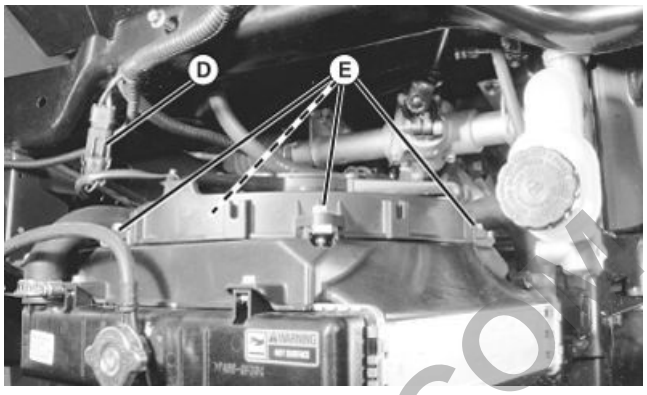
7. Move radiator forward and to the left side of chassis as allowed by radiator hoses. Secure radiator.
8. Separate radiator cooling fan wiring harness connector (D).
9. Remove four M6x25 hex bolts (E) securing cooling fan to radiator shroud. Remove fan.

Installation:

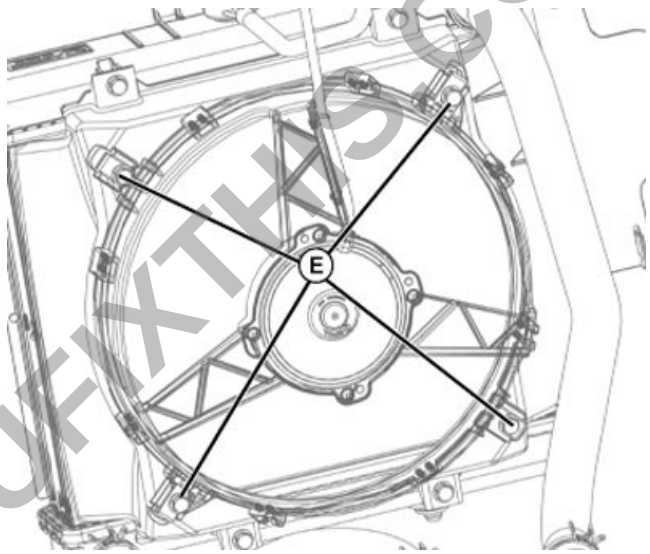
- Installation is in the reverse order of removal.

D—Cooling Fan Wiring Harness Connector

E—M6x25 Hex Bolts (4 Used)



LVAL23242 —UN—01MAY12



LVAL23243 —UN—01MAY12

OUMX068,00000AB -19-10OCT12-4/4

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1D Continued	*NOTE: The headlight bulb glass envelope must be free of dirt, oil and fingerprints. Clean with rubbing alcohol and a soft cloth. Use care when handling bulb.* Is continuity to ground present at pin A of connectors E-15 (Left), 100G Blk wire and E-17 (Right), 100F Blk wire (D)?	**YES:** Replace headlight(s). Reattach connector(s). Continue with next test procedure (if applicable). **NO:** Check 100G (Left), 100F (Right), 100J and 101G Blk wires and connections.

BS62576,0000B9F -19-02NOV12-6/11

2 Test Procedure B:

BS62576,0000B9F -19-02NOV12-7/11

2A Light Switch:	**Test Conditions** • Park brake locked. • Open hood and remove storage tray. • Key switch in RUN position, engine not running. • Headlight Circuit Test completed; circuit functional. • Light switch position as directed. • Check wire connections for looseness and corrosion. Press light switch to center position. Is voltage present at Pin 4 of C-7 light switch, 830A Pnk wire?	**YES:** Go to next step. **NO:** Test light switch.

BS62576,0000B9F -19-02NOV12-8/11

2B Continued	Press light switch to fully ON position. Is voltage present at Pin 4 of C-7 light switch, 830A Pnk wire?	**YES:** Go to next step. **NO:** Test light switch.

BS62576,0000B9F -19-02NOV12-9/11

2C Rear Light Connectors	Move light switch to center position. Is voltage present at Pin 3 of rear light connectors C-37 (Left), 830B Pnk wire, and C-39 (Right), 830C Pnk wire?	**YES:** Go to next step. **NO:** Check the 830-series Pnk wires.

BS62576,0000B9F -19-02NOV12-10/11

2D Rear Light Connectors	Is continuity to ground present at Pin 1 of rear light connectors C-37 (Left), 101A Blk wire, and C-39 (Right), 101H Blk wire?	**YES:** Marker Lights circuit test complete. **NO:** Check 101A (Left), 101H (Right), 100J and 101G Blk wires and connections.

BS62576,0000B9F -19-02NOV12-11/11

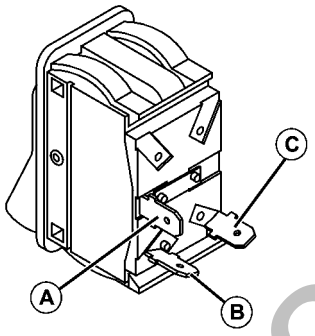
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Light Switch Test (3 Position)

1. Park machine safely.
2. Disconnect switch from wiring harness and remove switch from machine.
3. Use ohmmeter to check continuity across switch terminals.
   a. If continuity is not present between terminals listed for each switch position, replace switch
   b. If continuity exists between terminals not listed for each switch position, replace switch.

Switch Continuity	
Off	None
Marker	A — C
Marker and Headlights	A — C and A — B and B — C



MXT001136 —UN—03OCT11

A—Common
B—Headlights
C—Marker Lights

OUMX258,0000223 -19-07NOV14-1/1

4WD Switch Test

Reason:

To verify proper operation of the 4WD switch.

Equipment:

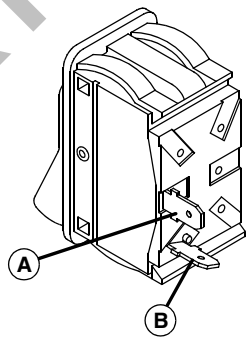
- Ohmmeter or Continuity Tester

Procedure:

1. Park machine safely. (See the “Safety Section”.)
2. Disconnect 4WD switch from connector.
3. Move 4WD switch to the ON and then the OFF position. Check continuity between terminals (A and B).

Results:

- Terminals should have continuity with switch ON.
- Terminals should not have continuity with switch OFF.
- If continuity is not correct, replace 4WD switch.



LVAL22752 —UN—27APR12

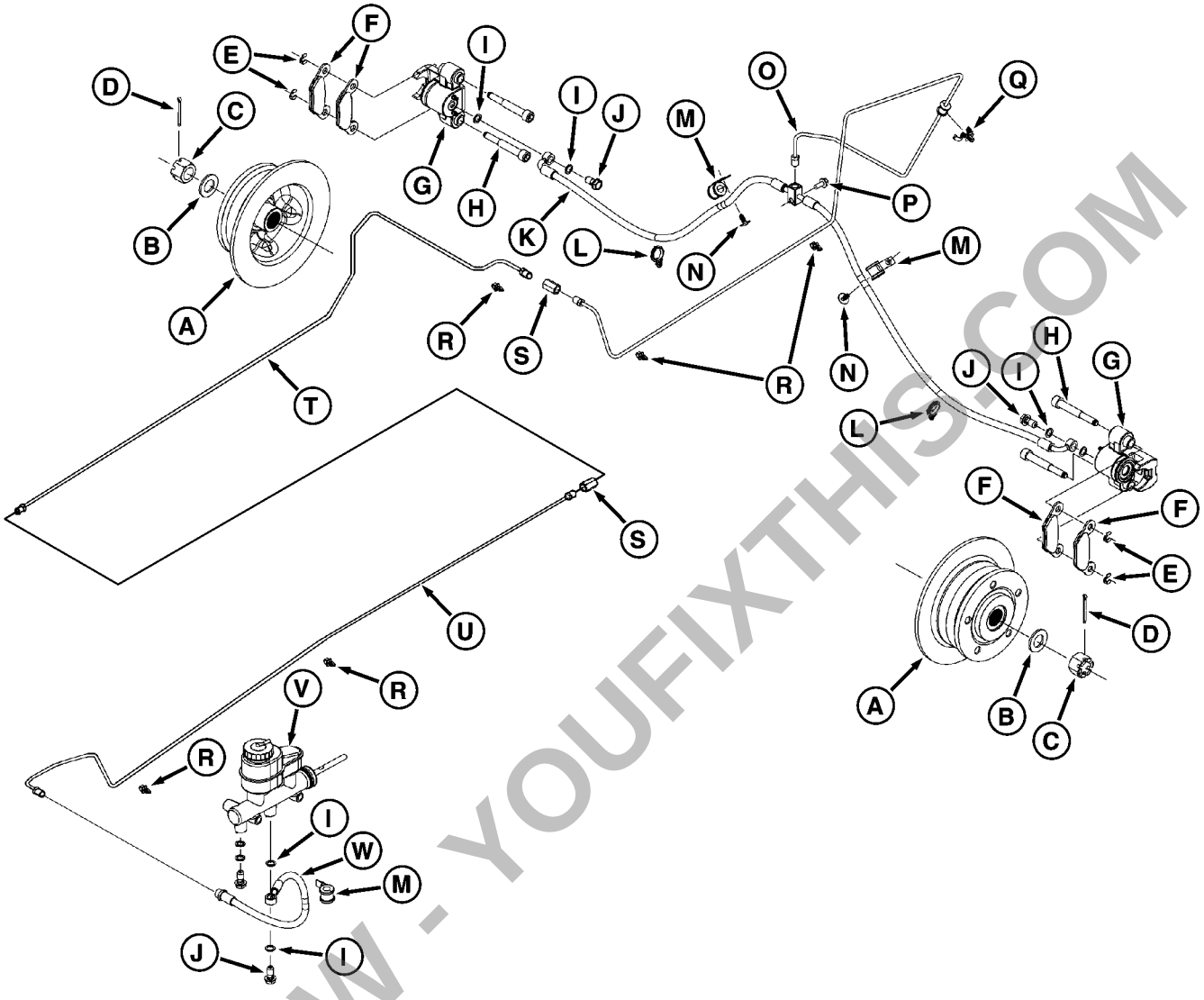
A—Terminal
B—Terminal

OUMX258,0000625 -19-11NOV14-1/1

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Brake Components—Rear



A—Hub w/Brake Rotor (2 Used)
B—Washer (2 Used)
C—Castle Nut (2 Used)
D—Cotter Pin (2 Used)
E—Clip (4 Used)
F—Brake Pad (4 Used)
G—Brake Caliper Assembly (2 Used)
H—Brake Sliding Pin (4 Used)
I— Seal Washer (6 Used)
J— Banjo Fitting Bolt (3 Used)
K—Rear Brake Hose Assembly
L—Snap-In Clip (2 Used)
M—Brake Hose Clamp (3 Used)
N—Push Fastener (2 Used)
O—Brake Pipe, Rear
P—Bolt
Q—Snap-In Clip
R—Retainer (6 Used)
S—Coupler
T—Brake Pipe, Center
U—Brake Pipe, Front
V—Brake Master Cylinder
W—Brake Hose

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