

RX and SX Series Riding Mowers



TECHNICAL MANUAL RX and SX Series Riding Mowers

TM1391 (01JUN88) English

TM1391 (01JUN88)

LITHO IN U.S.A.
ENGLISH



Introduction

FOREWORD

This manual is written for an experienced technician. Essential tools required in performing certain service work are identified in this manual and are recommended for use.

Live with safety: Read the safety messages in the introduction of this manual and the cautions presented throughout the text of the manual.



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

Technical manuals are divided in two parts: repair and diagnostics. Repair sections tell how to repair the components. Diagnostic sections help you identify the majority of routine failures quickly.

Information is organized in groups for the various components requiring service instruction. At the beginning of each group are summary listings of all applicable essential tools, service equipment and tools, other materials needed to do the job, service parts kits, specifications, wear tolerances, and torque values.

Binders, binder labels, and tab sets can be ordered by John Deere dealers direct from the John Deere Distribution Service Center.

This manual is part of a total product support program.

FOS Manuals-reference

Technical Manuals-machine service

Component Manuals-component service

Fundamentals of Service (FOS) Manuals cover basic theory of operation, fundamentals of troubleshooting, general maintenance, and basic types of failures and their causes. FOS Manuals are for training new personnel and for reference by experienced technicians.

Technical Manuals are concise guides for specific machines. Technical manuals are on-the-job guides containing only the vital information needed for diagnosis, analysis, testing, and repair.

Component Technical Manuals are concise service guides for specific components. Component technicals manuals are written as stand-alone manuals covering multiple machine applications.

TO JOHN DEERE DEALERS

FILING INSTRUCTIONS

TM-1391 (JULY 1988)

RX63, RX73, RX75, SX75, RX95, SX95 Riding Mowers

This is a complete revision of TM-1391. Please discard old TM-1391 dated February 1987.

For complete engine repair information use CTM-5. Engine tests and adjustments are covered in Section 220 of this manual.

Model RX63 has been added.

An abundance of diagnostic information has been added to the operation and test sections.

**Thanks very much for your reading,
Want to get more information,
Please click here, Then get the complete
manual**

JustClickHere 

NOTE:

**If there is no response to click on the link above,
please download the PDF document first, and then
click on it.**

**Have any questions please write to me:
admin@servicemanualperfect.com**

Contents

RX AND SX SERIES RIDING MOWERS TECHNICAL MANUAL TM—1391 (JUN-88)

SECTION AND GROUP CONTENTS

SECTION 10—SAFETY AND SPECIFICATIONS

- Group 05—Safety
- Group 10—Repair Specifications

SECTION 20—ENGINE REPAIR

- Group 05—Engine Removal and Installation

SECTION 30—FUEL AND AIR SYSTEM REPAIR

- Group 05—Fuel Transfer System
- Group 10—Fuel and Air System

SECTION 50—POWER TRAIN REPAIR

- Group 05—Clutch Linkage and Belts
- Group 10—Variable Speed System
- Group 15—Transaxle
- Group 20—PTO Linkage

SECTION 60—STEERING AND BRAKE REPAIR

- Group 05—Steering System Repair
- Group 10—Brake Repair

SECTION 80—MISCELLANEOUS REPAIR

- Group 05—Mower Spindles
- Group 10—Mower Deck and Lift Linkage
- Group 15—Engine Shroud

SECTION 210—SPECIFICATIONS AND OPERATIONAL CHECKOUT

- Group 01—Specifications
- Group 05—Operational Checkout Procedure

SECTION 220—ENGINE/FUEL SYSTEM OPERATION AND TESTS

- Group 05—Engine System Checkout
- Group 10—Engine Tests and Adjustments

SECTION 240—ELECTRICAL SYSTEM OPERATION AND TESTS

- Group 05—Electrical System Checkout
- Group 10—Electrical System Diagnosis
- Group 15—Component Locations/Wiring Diagrams

SECTION 250—POWER TRAIN OPERATION AND TESTS

- Group 05—Power Train System Checkout
- Group 10—Power Train System Diagnosis

All information, illustrations and specifications contained in this technical manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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A John Deere ILLUSTRATION™ Manual

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Section 10 SAFETY AND SPECIFICATIONS

CONTENTS

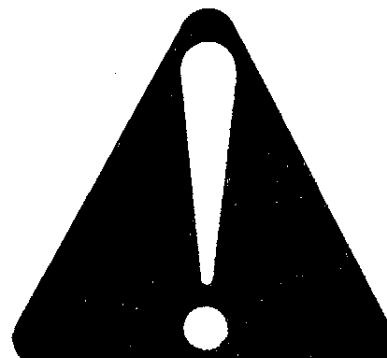
	Page
GROUP 05—Safety	10-05-1
GROUP 10—Repair Specifications	
Bolt Torque Chart	10-10-1
Metric Hardware Torque Specificaitons . . .	10-10-2
O-Rings Boss Fitting Service Recommendations	10-10-3
Engine	10-10-4
Other Material	10-10-5

Contents

RECOGNIZE SAFETY INFORMATION

This is the 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.



AB6;T61389 053;ALERT 160687

UNDERSTAND SIGNAL WORDS

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

Safety signs with signal word DANGER or WARNING are typically near specific hazards.

General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.



AB6;TS187 053;SIGNAL 071065

HANDLE FUEL SAFELY—AVOID FIRES

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

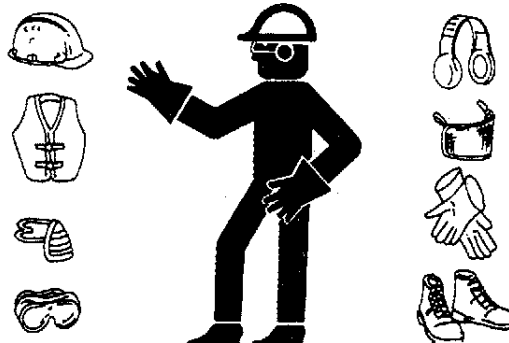
Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.



AB6;TS206 053;FIRE1 230487

WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.

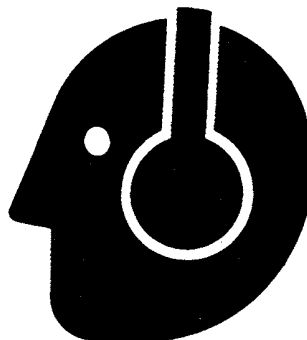


AB6;TS206 053;WEAR2 230487

PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



AB6;TS207 053;NOISE 230487

PRACTICE SAFE MAINTENANCE

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate or service machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

Disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.



AB6;TS218 053;SERV 211287

AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before unhooking hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Use a piece of cardboard to search for leaks.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.



AB6;X9811 053;FLUID 180987

BOLT TORQUE CHART

Grade of Bolt		SAE-2	SAE-5	SAE-8	Socket or Wrench Size	
Min. Tensile Strength		64,000 PSI	105,000 PSI	150,000 PSI		
Grade Marking on Bolt						
U.S. Standard					U.S. Regular	
Bolt Dia.	U.S. Dec. Equiv.	TORQUE IN FOOT POUNDS			Bolt Head	Nut
1/4	0.250	(8.14 N-m) 6	(13.56 N-m) 10	(18.98 N-m) 14	7/16	7/16
5/16	0.3125	(17.63 N-m) 13	(27.12 N-m) 20	(40.68 N-m) 30	1/2	1/2
3/8	0.375	(31.19 N-m) 23	(47.46 N-m) 35	(67.80 N-m) 50	9/16	9/16
7/16	0.4375	(47.46 N-m) 35	(74.58 N-m) 55	(108.48 N-m) 80	5/8	11/16
1/2	0.500	(74.58 N-m) 55	(115.26 N-m) 85	(162.72 N-m) 120	3/4	3/4
9/16	0.5625	(101.70 N-m) 75	(176.28 N-m) 130	(237.30 N-m) 175	13/16	7/8
5/8	0.625	(142.38 N-m) 105	(230.52 N-m) 170	(325.44 N-m) 240	15/16	15/16
3/4	0.750	(250.86 N-m) 185	(406.80 N-m) 300	(576.30 N-m) 425	1-1/8	1-1/8
7/8	0.875	(216.96 N-m) 160	(616.98 N-m) 445	(928.86 N-m) 685	1-5/16	1-5/16
1	1.000	(339.00 N-m) 250	(908.52 N-m) 670	(1396.68 N-m) 1030	1-1/2	1-1/2

Multiply readings by 12 for inch-pound values.

* "B" Grade bolts larger than 3/4-inch (19.1 mm) are sometimes formed hot rather than cold, which accounts for the lower recommended torque.

NOTE: Allow a tolerance of plus or minus 10 per cent on all torques given in this chart.

SET SCREW SEATING TORQUE CHART

Screw Size	Cup Point	Square Head
Torque in Inch Pounds		
#5	(1.02 N-m) 9	—
#6	(1.02 N-m) 9	—
#8	(2.26 N-m) 20	—
#10	(3.73 N-m) 33	—
1/4	(9.83 N-m) 87	(23.96 N-m) 212
5/16	(18.65 N-m) 165	(47.46 N-m) 420
3/8	(32.77 N-m) 290	(93.79 N-m) 830
7/16	(48.59 N-m) 430	—
1/2	(70.06 N-m) 620	(237.30 N-m) 2100
9/16	(70.06 N-m) 620	—
5/8	(138.43 N-m) 1225	(480.25 N-m) 4250
3/4	(240.13 N-m) 2125	(870.10 N-m) 7700

Divide readings by 12 for foot-pound values

NOTE: Allow a tolerance of plus or minus 10 per cent on all torques given in this chart.

METRIC HARDWARE TORQUE SPECIFICATIONS

Metric Standard Thread

Thread	8.8		10.9		12.9	
	N·m	(lb-ft)	N·m	(lb-ft)	N·m	(lb-ft)
M5	5.9	(4.4)	7.9	(5.8)	9.8	(7.2)
M6	9.8	(7.2)	13.8	(10.2)	16.7	(12.3)
M8	24.6	(18.1)	34.4	(25.4)	40.2	(29.6)
M10	48.1	(35.5)	67.8	(50.0)	81.5	(60.1)
M12	84.4	(62.2)	118.0	(87.0)	142.0	(105.0)
M14	133.0	(98.0)	187.0	(138.0)	226.0	(187.0)
M16	206.0	(152.0)	290.0	(214.0)	348.0	(257.0)
M18	285.0	(210.0)	398.0	(294.0)	476.0	(351.0)
M20	402.0	(296.0)	570.0	(420.0)	677.0	(499.0)
M22	540.0	(398.0)	765.0	(564.0)	914.0	(674.0)
M24	697.0	(514.0)	980.0	(723.0)	1180.0	(870.0)

Metric Fine Thread

Thread	8.8		10.9		12.9	
	N·m	(lb-ft)	N·m	(lb-ft)	N·m	(lb-ft)
M8 x 1	26.5	(19.5)	37.3	(27.5)	44.2	(32.6)
M10 x 1	47.1	(34.7)	68.8	(50.7)	81.5	(60.1)
M12 x 1.5	88.4	(65.2)	123.0	(91.0)	147.0	(106.0)
M14 x 1.5	147.0	(108.0)	206.0	(152.0)	246.0	(181.0)
M16 x 1.5	221.0	(163.0)	309.0	(228.0)	373.0	(275.0)
M18 x 1.5	319.0	(235.0)	451.0	(333.0)	540.0	(398.0)
M20 x 1.5	451.0	(333.0)	628.0	(463.0)	755.0	(557.0)
M22 x 1.5	599.0	(442.0)	845.0	(623.0)	1030.0	(760.0)
M24 x 2	765.0	(564.0)	1080.0	(796.0)	1275.0	(940.0)
M26 x 2	1130.0	(833.0)	1570.0	(1158.0)	1915.0	(1412.0)

AB6; 053;TORQUE 130385

O-RINGS BOSS FITTING SERVICE RECOMMENDATIONS

1. Inspect boss O-ring seat. It must be free of dirt and defects. If repeated leaks occur, inspect for defects with a magnifying glass. Some raised defects can be removed with a slip stone.

Occasionally a lower durometer O-ring will seal against a rough seat. If neither of these solutions work, the component must be replaced.

2. Put hydraulic oil, petroleum jelly or soap on the O-ring. Put a thimble over the threads to protect O-ring from nicks. Slide O-ring over the thimble and into the turned down section of fitting.

For angle fittings, loosen special nut and push special washer against threads so O-ring can be installed into the turned down section of fitting.

3. Turn fitting into the boss by hand until special washer or washer face (straight fitting) contacts boss face and O-ring is squeezed into its seat.

4. To position angle fittings, turn the fitting counterclockwise a maximum of one turn.

5. Tighten straight fittings to the torque value shown in chart. For angle fittings, tighten the special nut to valve shown in the chart while holding body of fitting with a wrench.

STRAIGHT FITTING OR SPECIAL NUT TORQUE (1)

Thread Size	Torque ¹		Number of Flats ²
	N·m	(lb-ft)	
7/16-20 UNF	12	(9)	2
1/2-20 UNF	16	(12)	2
9/16-18 UNF	24	(18)	2
3/4-16 UNF	46	(34)	2
7/8-14 UNF	62	(46)	1-1/2
1-1/16-12 UN	102	(75)	1
1-3/16-12 UN	122	(90)	1
1-5/16-12 UN	142	(105)	3/4
1-5/8-12 UN	190	(140)	3/4
1-7/8-12 UN	217	(160)	1/2

1. Tolerance ± 10 percent.

2. To be used if a torque wrench cannot be used. After tightening fitting by hand, put a mark on nut and boss; then tighten special nut or straight fitting the number of flats shown.

Repair Specifications/Engine

ENGINE

For complete specifications on repair of Kawasaki engines see CTM-5.

Engine sheave mounting cap screw torque	73 ±13 N·m (54 ±10 lb-ft)
Engine mounting cap screw torque	19 ±2 N·m (14 ±5 lb-ft)
Spark plug gap	0.76 N·m (0.030 in.)
Spark plug torque	9—20 N·m (80—180 lb-in.)
Idle mixture screw (initial setting)	
6 hp.	1-1/8 turns open
9 hp.	1-1/8 turns open
12.5 hp.	1-1/2 turns open
Idle speed	1550 ±75 rpm
Wide open throttle (no load).	3350 ±75 rpm
Fuel pump output at 3000 rpm (12.5 hp only).	0.09 L (0.2 pt) in 15 seconds

TRANSAXLE

Cover cap screw torque	10 N·m (95 lb-in.)
Shift lever detent set screw torque	Flush with cover
Brake lever nut torque	10 N·m (95 lb-in.)

STEERING

Tie rod attaching nut torque	25—30 N·m (18.5—2 lb-ft)
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BRAKE

Brake pedal free play.	19 mm (1-1/4 in.)
Brake pad thickness (min.).	6 mm (1/4 in.)

MOWER DECK

Mower spindle sheave locknut torque	140 N·m (103 lb-ft)
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M22;1010G -A 010788

OTHER MATERIAL

Number	Name	Use
T43511	John Deere LOCTITE [®] Clean and Cure Primer	Clean threads
TY9369	John Deere LOCTITE Threadlock and Sealer (low strength)	
T43512	John Deere LOCTITE Threadlock and Sealer (medium strength)	
TY6305	John Deere Flexible Sealant	
T43514	John Deere LOCTITE Plastic Gasket	
PT502	John Deere GASKET MAKER [®] PLASTIGAGE [®]	Measure engine bearing clearance
TY6431	John Deere SLIP-PLATE [®] Lubricant	
PT569	John Deere NEVER-SEEZ [®] Lubricant John Deere LUBRIPLATE [®] ALVANIA [®] EP2 Lubricant	
TY6333	Moly High-Temperature EP Grease TEFLON [®] Material	
TY9375	John Deere LOCTITE Pipe Sealant with TEFLON	

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 GASKET MAKER is a trademark of the Permatex Corp.
 PLASTIGAGE is a trademark of the TRW Corp.
 NEVER-SEEZ is a trademark of the Never-Seez Compound Corp.
 LUBRIPLATE is a trademark of Fiske Brothers Refining.
 ALVANIA is a trademark of the Shell Oil Co.
 TEFLON is a trademark of the Du Pont Co.

M22;1010G 2 011286

Repair Specifications/Other Material

Section 20 ENGINE

CONTENTS

Page

GROUP 01—Engine Repair

John Deere Engine Repair—Use

CTM-5 20-01-1

GROUP 05—Engine Removal and Installation

Remove Engine-12.5 HP Models 20-05-1

Install Engine-12.5 HP Models 20-05-3

Remove Engine-9 HP and 6 HP Models 20-05-5

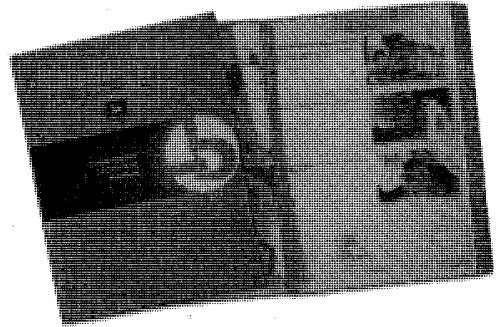
Install Engine-9 HP and 6 HP Models 20-05-7

Contents

JOHN DEERE ENGINE REPAIR—USE CTM-5

For complete repair information the component technical manual (CTM) is also required.

Use the component technical manual in conjunction with this machine manual.



AB6;TS225 M22;;2001G -1 100688