12PB/12PC/12SB 14PB/14PT/14PZ 14SB/14SC/14SX 14SE/14ST/14SZ Walk-Behind Mowers (S.N. GX-010001-)

> John Deere Horicon Works TM1471 (16JUL96)

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 and service parts kits.

Section 10, Group 15—Specifications consist of all applicable specifications, near tolerances and specific torque values for various components on each individual engine.

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 type 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 technical manuals are written as stand-alone manuals covering multiple machine applications.

MX,TM1471,IFC -19-01OCT92

JOHN DEERE DEALERS

This is a complete revision for TM1471, 21-Inch Rear-Discharge Walk-Behind Rotary Mowers (S.N. 010,001-).

Discard old TM1471 dated O1 Oct 92 and replace it with this manual.

New information added to this manual includes:

- 1. Repair and diagnosis information for the new 14SX mower.
- 2. Repair information for Kawasaki (FC150V) 4-cycle engine.
- 3. This book has been divided into two parts; Repair Sections, Sections 10 through 80 (providing remove and install procedures), and Operation and Tests Sections, Sections 210 through 255 (providing theory

of operation, test and adjustment procedures, and diagnostic information).

- 4. Model designation is broken down as follows:
- 1 = Derived from 21-inch cutting width
- 2 = 2-Cycle Engine Design
- 4 = 4-Cycle Engine Design
- B = Blade Brake Clutch (BBC)
- C = Commercial Mower
- E = Electric Start
- P = Push Mower
- S = Self-Propelled Mower (2 or 5 speed transaxle)
- T = Tri-Cycler Mower
- Z = Zone Start (from Operator's station or ZONE) with flywheel band brake
- 5. The new 1995 K-Series and B-Series 4-Cycle Engines are classified as 5.5-HP engines.

MX,DPS,TM1471 -19-16JUL96

TM1471 (16JUL96) 21" RDWB MOWER

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All information, illustrations and specifications in this 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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HANDLE FLUIDS SAFELY—AVOID FIRES

When you work around fuel, do not smoke or work near heaters or other fire hazards.

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

Do not store oily rags; they can ignite and burn spontaneously.



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522

DX,FLAME

-19-04JUN90

PREVENT BATTERY EXPLOSIONS

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

Never check battery charge by placing a metal object across the posts. Use a volt-meter or hydrometer.

Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).



DX,SPARKS

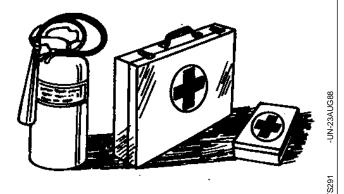
-19-03MAR93

PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



DX,FIRE2

19-03MAR93

10-05-2

PREVENT ACID BURNS

Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid the hazard by:

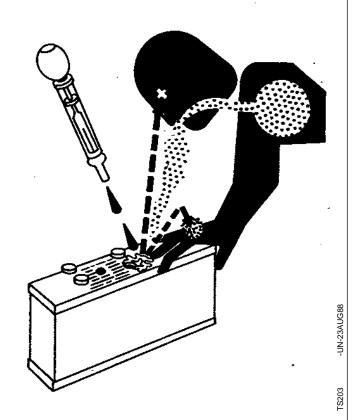
- 1. Filling batteries in a well-ventilated area.
- 2. Wearing eye protection and rubber gloves.
- 3. Avoiding breathing fumes when electrolyte is added.
- 4. Avoiding spilling or dripping electrolyte.
- 5. Use proper jump start procedure.

If you spill acid on yourself:

- 1. Flush your skin with water.
- 2. Apply baking soda or lime to help neutralize the acid.
- 3. Flush your eyes with water for 15-30 minutes. Get medical attention immediately.

If acid is swallowed:

- 1. Do not induce vomiting.
- 2. Drink large amounts of water or milk, but do not exceed 2 L (2 quarts).
- 3. Get medical attention immediately.



DX.POISON

-19-21APR93

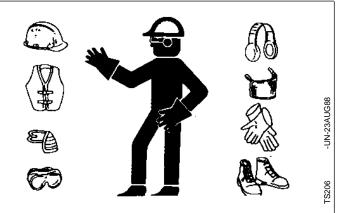
WEAR PROTECTIVE CLOTHING

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

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.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

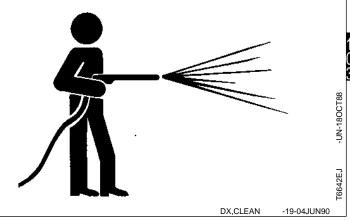


-19-10SEP90

WORK IN CLEAN AREA

Before starting a job:

- Clean work area and machine.
- Make sure you have all necessary tools to do your job.
- Have the right parts on hand.
- Read all instructions thoroughly; do not attempt shortcuts.



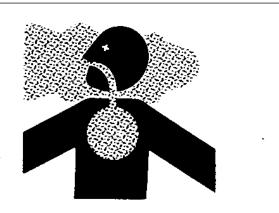
WORK IN VENTILATED AREA

WARNING

California Proposition 65 Warning: Gasoline engine exhaust from this product contains chemicals known to to State of California to cause cancer, birth defects, or other reproductive harm.

Engine exhaust fumes can cause sickness or death, If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.



MX,AIR

-19-16JUL96

ILLUMINATE WORK AREA SAFELY

Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

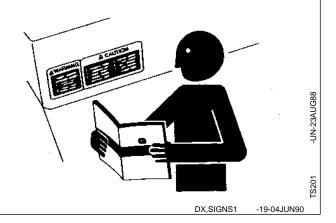


DX,LIGHT

19-04JUN90

REPLACE SAFETY SIGNS

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



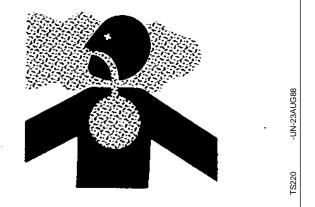
AVOID HARMFUL ASBESTOS DUST

Avoid breathing dust that may be generated when handling components containing asbestos fibers. Inhaled asbestos fibers may cause lung cancer.

Components in products that may contain asbestos fibers are brake pads, brake band and lining assemblies, clutch plates, and some gaskets. The asbestos used in these components is usually found in a resin or sealed in some way. Normal handling is not hazardous as long as airborne dust containing asbestos is not generated.

Avoid creating dust. Never use compressed air for cleaning. Avoid brushing or grinding material containing asbestos. When servicing, wear an approved respirator. A special vacuum cleaner is recommended to clean asbestos. If not available, apply a mist of oil or water on the material containing asbestos.

Keep bystanders away from the area.



DX,DUST -19-15MAR91

Use tools appropriate to the work. Makeshift tools and procedures can create safety hazards.

Use power tools only to loosen threaded parts and fasteners.

For loosening and tightening hardware, use the correct size tools. DO NOT use U.S. measurement tools on metric fasteners. Avoid bodily injury caused by slipping wrenches.

Use only service parts meeting John Deere specifications.



DX,REPAIR -19-04JUN90

DISPOSE OF WASTE PROPERLY

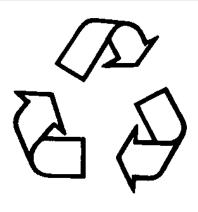
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.



-UN-26NO

X,DRAIN -19-03MAF

LIVE WITH SAFETY

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



-19-0

DX,LIVE

-19-25SEP92

MACHINE SPECIFICATIONS—12PB, 12PC, AND 12SB

| MODEL | 12PB | 12PC | 12SB |
|-----------------|-------------------|--------------------------------------|--------------------------------------|
| Engine: | | | |
| Туре | | Briggs & Stratton | Briggs & Stratton |
| | 2-Cycle Design | 2-Cycle Design | 2-Cycle Design |
| Series | 96722 I/C | 96722 I/C | 96722 I/C |
| Horsepower— | 0.01111/4.1) | 0.01111/411 | 0.01144/41 |
| Early Models | | 3.0 kW (4 hp) | 3.0 kW (4 hp) |
| 1991 Models | | 3.7 kW (5 hp) 141 cm ³ | 3.7 kW (5 hp) 141 cm ³ |
| Displacement | (8.60 cu. in.) | (8.60 cu. in.) | (8.60 cu. in.) |
| Bore x Stroke | | 60 x 50 mm | 60 x 50 mm |
| Bole X Guone | (2.34 x 1.95 in.) | (2.34 x 1.95 in.) | (2.34 x 1.95 in.) |
| Idle Speed | | 1750 ±200 rpm | 1750 ±200 rpm |
| Operation Range | | 3100 ±100 rpm | 3100 ±200 rpm |
| Starting | | Recoil | Recoil |
| Ignition | MAGNETRON® | MAGNETRON® | MAGNETRON® |
| Governor | | Mechanical Flyweight | Mechanical Flyweight |
| Carburetor | | Float Type With | Float Type With |
| | Fixed Main Jet | Fixed Main Jet | Fixed Main Jet |
| Air Cleaner | | Dual Stage | Dual Stage |
| Lubrication | 50:1 Fuel/Oil Mix | 50:1 Fuel/Oil Mix | 50:1 Fuel/Oil Mix |
| Power Train: | | | |
| Туре | Push | Push | 5-Speed Transaxle |
| | | | |
| Travel Speeds | N/A | N/A | 1st.—1.9 kph (1.2 mph) |
| | | | 2nd.—2.9 kph (1.8 mph) |
| | | | 3rd.—3.9 kph (2.4 mph) |
| | | | 4th.—4.8 kph (3.0 mph) |
| Capacities: | | | 5th.—6.6 kph (4.1 mph) |
| Fuel/Oil Tank | 191 (2 at) | 1.9 L (2 qt) | 1.9 L (2 qt) |
| Transaxle | , , , | N/A | 70 g (2.5 oz) |
| Transaxio | 14/7 | 14// | John Deere Non-Clay, |
| | | | High-Temperature |
| | | | EP Grease®—JDM J13E4, |
| | | | NLGI Grade 2 |
| | | | (North America) |
| | | | or |
| | | | GREASE-GARD™— |
| | | | JDM J13E4, |
| | | | NLG1 Grade 2 (Europe) |
| | | | |

MACHINE SPECIFICATIONS—14PB, 14PT, 14PZ AND 14SB

| Engine: Type Kawasaki Briggs & Stratton Kawasaki 4-Cycle Design 4-Cycle Design 4-Cycle Design Series FC150V 122700 FC150V Horsepower— Early Models 3.4 kW (4.5 hp) N/A 3.0 kW (4.0 hp) 3.4 kW (4.5 hp) 1991 Models 3.7 kW (5.0 hp) N/A 3.7 kW (5.0 hp) N/A 1993 Models N/A N/A N/A N/A | MODEL | 14PB | 14PT | 14PZ | 14SB |
|--|---------------|------------------|-----------------|-----------------|-------------------|
| 4-Cycle Design | Engine: | | | | |
| Series FC150V FC150V 122700 FC150V Horsepower— Early Models . 3.4 kW (4.5 hp) N/A 3.0 kW (4.0 hp) 3.4 kW (4.5 hp) 1991 Models . 3.7 kW (5.0 hp) N/A 3.7 kW (5.0 hp) 3.7 kW (5.0 hp) | | | | | |
| Horsepower— Early Models . 3.4 kW (4.5 hp) N/A 3.0 kW (4.0 hp) 3.4 kW (4.5 hp) 1991 Models . 3.7 kW (5.0 hp) N/A 3.7 kW (5.0 hp) 3.7 kW (5.0 hp) | Carias | | | , , | , |
| Early Models . 3.4 kW (4.5 hp) N/A 3.0 kW (4.0 hp) 3.4 kW (4.5 hp) 1991 Models . 3.7 kW (5.0 hp) N/A 3.7 kW (5.0 hp) 3.7 kW (5.0 hp) | | FC150V | FC150V | 122700 | FC150V |
| | - | 3.4 kW (4.5 hp) | N/A | 3.0 kW (4.0 hp) | 3.4 kW (4.5 hp) |
| 1993 Models . N/A | | ` ', | | ` ., | 3.7 kW (5.0 hp) |
| | | | 3.7 kW (5.0 hp) | N/A | N/A |
| 1995 Models . 4.1 kW (5.5 hp) 4.1 kW (5.5 hp) 3.7 kW (5.0 hp) 4.1 kW (5.5 hp) Displacement 153 cm ³ 190 cm ³ 153 cm ³ | | | | | |
| (9.34 cu. in.) (9.34 cu. in.) (11.57 cu. in.) (9.34 cu. in.) | Displacement | | | | |
| Bore x Stroke 65 x 46 mm 65 x 46 mm 68 x 51.8 mm 65 x 46 mm | Bore x Stroke | , | | | |
| (2.56 x 1.81 in.) (2.56 x 1.81 in.) (2.64 x 2.04 in.) (2.56 x 1.81 in.) | | , | • | , | , |
| Idle Speed 1500 ±200 rpm 1500 ±200 rpm 1750 ±200 rpm 1500 ±200 rpm Operation Range .3075 ±75 rpm 3075 ±75 rpm 3000 ±100 rpm 3075 ±75 rpm | | | • | • | |
| Starting Recoil Recoil (Zone Start) Recoil (Zone Start) Recoil | | | • | • | |
| Ignition Flywheel Magneto Flywheel Magneto MAGNETRON® Flywheel Magneto | | | | | |
| Governor Mechanical Mechanical Mechanical Mechanical | Governor | | | | |
| Flyweight Flyweight Flyweight Flyweight Carburetor Float Type With Float Type With Float Type With | Carburator | | | | |
| Fixed Main Jet Fixed Main Jet Fixed Main Jet Fixed Main Jet | Carburetor | | | · . | |
| Air Cleaner Dual Stage Dual Stage Dual Stage Dual Stage | Air Cleaner | | | | |
| w/ Mechanical w/ Mechanical w/ Mechanical | | | | | |
| Pre-Cleaner Pre-Cleaner Pre-Cleaner Pre-Cleaner Lubrication Pressure Splash Lube Pressure | Lubrication | | | Calcab Luba | |
| Lubrication Pressure Splash Lube Splash Lube Pressure (Optional Oil (Optional Oil | Lubrication | | Spiasii Lube | Spiasii Lube | |
| Filter Kit) | | ` • | | | ` • |
| Power Train: | Power Train: | | | | |
| Type Push Push Push 5-Speed Transaxle | Туре | Push | | | 5-Speed Transaxle |
| Travel Speeds N/A N/A N/A 1st.—1.9 kph (1.2 mph) | Travel Speeds | N/A | N/A | N/A | |
| 2nd.—2.9 kph (1.8 mph) 3rd.—3.9 kph (2.4 mph) | | | | | |
| 4th.—4.8 kph (3.0 mph) | | | | | |
| 5th.—6.6 kph (4.1 mph) | | | | | |
| Capacities: | Canacities: | | | | |
| Fuel Tank 1.3 L (1.4 qt) | · · | 1.3 L (1.4 at) | 1.3 L (1.4 at) | 1.4 L (1.5 at) | 1.3 L (1.4 at) |
| Crankcase 0.60 L (1.25 pt) 0.60 L (1.25 pt) 0.60 L (1.25 pt) 0.60 L (1.25 pt) | | 0.60 L (1.25 pt) | , | , ., | 0.60 L (1.25 pt) |
| (without filter) (without filter) | Troposite | | NI/A | N1/A | , |
| Transaxle N/A N/A N/A 70 g (2.5 oz) John Deere Non-Clay, | i ransaxie | IN/A | IN/A | IN/A | |
| High-Temperature | | | | | • |
| EP Grease®— | | | | | |
| JDM J13E4, | | | | | - |
| NLGI Grade 2 (North America) | | | | | |
| or | | | | | ` ' |
| Grease-Gard™— | | | | | |
| JDM J13E4, NLGI Grade 2 (Europe) | | | | | · · |
| MX,1010BV,2 -19-16JUL96 | | | | | ` ' |

MACHINE SPECIFICATIONS—14SC/14SX, 14SE, AND 14ST

| MODEL Engine: | 14SC/14SX | 14SE | 14ST |
|-----------------------|------------------------|------------------------|-------------------------------|
| Type | Kawasaki | Kawasaki | Kawasaki |
| | 4-Cycle Design | 4-Cycle Design | 4-Cycle Design |
| Series Horsepower— | , | FC150V | FC150V |
| Early Models | 3.4 kW (4.5 hp) | 3.4 kW (4.5 hp) | N/A |
| 1991 Models | | 3.7 kW (5.0 hp) | N/A |
| 1993 Models | | N/A | 3.7 kW (5.0 hp) |
| 1995 Models | | 4.1 kW (5.5 hp) | 4.1 kW (5.5 hp) |
| Displacement | | 153 cm ³ | 153 cm ³ |
| Diopiacoment | (9.34 cu. in.) | (9.34 cu. in.) | (9.34 cu. in.) |
| Bore x Stroke | ' | 65 x 46 mm | 65 x 46 mm |
| Boto x Ottoko | (2.56 x 1.81 in.) | (2.56 x 1.81 in.) | (2.56 x 1.81 in.) |
| Idle Speed | | 1500 ±200 rpm | 1500 ±200 rpm |
| Operation Range . | | 3075 ±75 rpm | 3075 ±75 rpm |
| Starting | | Electric (Key Start) | Recoil (Zone Start) |
| Ignition | | Flywheel Magneto | Flywheel Magneto |
| Governor | | Mechanical | Mechanical |
| | Flyweight | Flyweight | Flyweight |
| Carburetor | | Float Type With | Float Type With |
| | Fixed Main Jet | Fixed Main Jet | Fixed Main Jet |
| Air Cleaner | Dual Stage | Dual Stage | Dual Stage |
| | w/Mechanical | w/Mechanical | w/Mechanical |
| | Pre-Cleaner | Pre-Cleaner | Pre-Cleaner |
| Lubrication | Pressure | Pressure | Splash Lube |
| | (Optional Oil | (Optional Oil | |
| | Filter Kit) | Filter Kit) | |
| Dower Train | | | |
| Power Train: Type | 5 Spood Transaylo | 5-Speed Transaxle | 2-Speed Transaxle |
| | 1st.—1.9 kph (1.2 mph) | 1st.—1.9 kph (1.2 mph) | 1st.—3.2 kph (2.0 mph) |
| Traver Speeds | 2nd.—2.9 kph (1.8 mph) | 2nd.—2.9 kph (1.8 mph) | 2nd.—5.3 kph (3.3 mph) |
| | 3rd.—3.9 kph (2.4 mph) | 3rd.—3.9 kph (2.4 mph) | 211d.—5.5 kpii (5.5 iiipii) |
| | 4th.—4.8 kph (3.0 mph) | 4th.—4.8 kph (3.0 mph) | |
| | 5th.—6.6 kph (4.1 mph) | 5th.—6.6 kph (4.1 mph) | |
| | 0.0 Kpii (4.1 ilipii) | от. ото крт (4.1 трт) | |
| Capacities: | | | |
| Fuel Tank | 131 (14 at) | 1.3 L (1.4 qt.) | 1.3 L (1.4 qt.) |
| Crankcase | | 0.6 L (1.25 pt) | 0.6 L (1.25 pt) |
| 0.0 | (Without Filter) | (Without Filter) | 0.0 <u>1</u> (<u>10 p.</u>) |
| Transaxle | , | 70 g (2.5 oz.) | 70 g (2.5 oz.) |
| | John Deere Non-Clay | John Deere Non-Clay | John Deere Non-Clay |
| | High-Temperature EP | High-Temperature EP | High-Temperature EP |
| | Grease®—JDM J13E4, | Grease®—JDM J12E4, | Grease®—JDM J13E4, |
| | NLGI Grade 2 | NLGI Grade 2 | NLGI Grade 2 |
| | (North America) | (North America) | (North America) |
| | or | or | or |
| | GREASE-GARD™— | GREASE-GARD™— | GREASE-GARD™— |
| | JDM J13E4, | JDM J13E4, | JDM J13E4, |
| | NLGI Grade 2 (Europe) | NLGI Grade 2 (Europe) | NLGI Grade 2 (Europe) |
| | | | |

MACHINE SPECIFICATIONS—14SZ

| MODEL | 14SZ | 14SZ |
|---------------------|--|---|
| Engine: | | |
| Type | | Briggs & Stratton |
| | 4-Cycle Design | 4-Cycle Design |
| Series | 122700 | 124700 |
| Horsepower— | | |
| Early Models | | N/A |
| 1991 Models | | N/A |
| 1993 Models | | N/A |
| 1995 Models | | 3.7 kW (5.0 hp) |
| Displacement | | 189 cm ³ |
| | (11.17 cu. in.) | (11.59 cu. in.) |
| Bore x Stroke | | 68.3 x 51.8 mm |
| | (2.64 x 2.04 in) | (2.69 x 2.04 in.) |
| Idle Speed | | 1750 ±200 rpm |
| Operation Range . | 3000 ±100 rpm | 3000 ±100 rpm |
| Starting | | Recoil (Zone Start) |
| Ignition | MAGNETRON® | MAGNETRON® |
| Governor | Mechanical | Mechanical |
| | Flyweight | Flyweight |
| Carburetor | | Float Type With |
| | Fixed Main Jet | Fixed Main Jet |
| Air Cleaner | Dual Stage | Dual Stage |
| Lubrication | Splash Lube | Splash Lube |
| Power Train: | | |
| | 2 Chard Transpula | 2 Coood Transcula |
| Type | 1st.—3.2 kph (2.0 mph) | 2-Speed Transaxle 1st.—3.2 kph (2.0 mph) |
| rraver Speeds | 2nd.—5.3 kph (3.3 mph) | 2nd.—5.3 kph (3.3 mph) |
| Consoltion | 211d.—5.5 kpri (5.5 mpn) | 211d.—5.3 kpii (5.3 ilipii) |
| Capacities: | 1 4 L (1 E at) | 1 4 1 (1 E at) |
| Fuel Tank Crankcase | | 1.4 L (1.5 qt) 0.6 L (1.25 pt) |
| | | 70 g (2.5 oz.) |
| Transaxle | John Deere Non-Clay | |
| | | John Deere Non-Clay |
| | High-Temperature EP Grease®—JDM J13E4, | High-Temperature EP Grease®—JDM J12E4, |
| | NLGI Grade 2 | NLGI Grade 2 |
| | | |
| | (North America) | (North America) |
| | OF ASE CARDIM | OF A CE CARDIM |
| | GREASE-GARD™— | GREASE-GARD™— |
| | JDM J13E4, | JDM J13E4, |
| | NLGI Grade 2 (Europe) | NLGI Grade 2 (Europe) |
| | | |

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General Specifications/Mower deck specifications

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REPAIR SPECIFICATIONS—BRIGGS & STRATTON 2-CYCLE ENGINE (12PB/12PC/12SB)

| Item Specification |
|---|
| |
| Inspection Specifications: |
| Piston Rings Inspection Depth (In Cylinder Bore) |
| Maximum Piston Rings End Gap 1.01 mm (0.039 in.) |
| Minimum Piston Skirt O.D |
| Minimum Piston Pin O.D |
| Maximum Piston Pin Bore I.D |
| Maximum Cylinder Bore I.D |
| Minimum Crankshaft Main Bearing Journals O.D |
| Maximum Crankshaft Journals Out-Of-Round |
| Maximum Connecting Rod End Bore I.D |
| Minimum BBC Brake Pad Thickness |
| Ignition Coil Air Gap |
| Spark Plug Gap |
| Engine Drive Sheave Installation (From End Of Crankshaft To Bottom Of Sheave) 38 mm (1.5 in.) |
| |
| Torque Specifications: |
| Crankcase Cap Screws |
| Cylinder Head Socket Cap Screws [In Increments of 4 N·m (35 lb-in.)] |
| Flywheel Nut |
| Muffler Cap Screws |
| Engine Drive Sheave Set Screw |
| Engine Mount Cap Screws |
| Blade Mount Cap Screw(s) |
| BBC Socket Head Cap Screw |
| Spark Plug |
| Recoil Start Retainer Cap Screw |
| Recoil Start Assembly Cap Screws |
| Recoil Start Cup To Flywheel Screen Cap Screws |
| Recoil Start Cover Cap Screws |
| Ignition Coil Cap Screws |
| Governor Lever Cap Screw and Nut |
| Carburetor Spacer Mounting Cap Screws |
| Carburetor Spacer Mounting Cap Screws |
| Engine Shroud Cap Screws |
| , , , |
| Fuel Tank/Engine Cover Cap Screws |
| |

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REPAIR SPECIFICATIONS—BRIGGS & STRATTON 4-CYCLE ENGINE (14PZ/14SZ)

| Item | Specification |
|--|-----------------------|
| Inspection Specifications: | |
| Piston Rings Inspection Depth (In Cylinder Bore) | |
| Maximum Piston Compression Rings End Gap | 0.89 mm (0.035 in.) |
| Maximum Piston Oil Ring End Gap | 1.14 mm (0.045 in.) |
| Maximum Piston Rings Side Clearance | |
| Minimum Piston Skirt O.D. | 59.85 mm (2.357 in.) |
| Minimum Piston Pin O.D | 12.42 mm (0.489 in.) |
| Maximum Piston Pin Bore I.D | ` , |
| Maximum Piston Pin Bearing I.D | |
| Maximum Standard Cylinder Bore I.D | |
| Maximum Cylinder Bore Out-Of-Round | |
| Maximum Cylinder Bore Allowable Wear | |
| Minimum Crankshaft Main Bearing Journal O.D. (Flywheel End) | |
| Minimum Crankshaft Main Bearing Journal O.D. (Output End) | |
| Minimum Crankshaft Connecting Rod Journal O.D | |
| Maximum Crankshaft Main Bearings I.D | |
| Maximum Crankshaft Runout (TIR) | , |
| Allowable Crankshaft End Play | , |
| Minimum Camshaft Journals O.D | |
| Maximum Camshaft Bearings O.D | |
| Maximum Crankcase Bearing I.D. (Cylinder Half) | |
| Maximum Crankcase Bearing I.D. (Cover Half) | |
| Crankcase Gasket Thickness (New) | , |
| Intake Valve Clearance | |
| Exhaust Valve Clearance 0 | ` , |
| Maximum Valve Guide I.D. | |
| Minimum Intake Valve Face Margin | , |
| Minimum Exhaust Valve Face Margin | , |
| Valve Seats Surface | |
| Intake Valve Seat Angle | |
| Exhaust Valve Seat Angle | • |
| Intake Valve Face Angle | |
| Exhaust Valve Face Angle | |
| Valves Narrowing Angle | |
| Maximum Breather Disc Valve Clearance | |
| Ignition Coil Air Gap | |
| Spark Plug Gap | |
| Engine Drive Sheave Installation (From End Of Crankshaft To Bottom Of Sh | eave) 38 mm (1.5 in.) |

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