

644K 4WD Loader (SN. E634315-658064) with Engine 6090HDW13 (iT4) Repair



REPAIR TECHNICAL MANUAL

**4WD Loaders with Engines 6090HDW13 models 644K (PIN:
1DW644KZ**E634315-658064)**

TM12107 22 FEB 16 (ENGLISH)

For complete service information also see:

644K 4WD Loader Engine 6090HDW13 (iT4) Diagnostic	TM12105
JLink (MTG) Technical Manual	TM114519
JDPS Master Tool Manual	TM111119
TMIV1200 - 1400 Series Inboard Planetary Axles	CTM442
120 Series Hydraulic Cylinders	CTM114519
185 Series Hydraulic Cylinders	CTM109319
120 Series Hydraulic Cylinders	CTM104819
125 Series Hydraulic Cylinders	CTM10006
6090 PowerTech Diesel Engine (Interim Tier 4) Level 21 ECU	
JDLINK/ZXLINK Machine Monitoring System	



Table of contents

FOREWORD

MANUAL IDENTIFICATION—READ THIS FIRST!

Section 00 - GENERAL INFORMATION

Group 0001 - Safety

Group 0003 - Torque Values

Section 01 - WHEELS

Group 0110 - Powered Wheels and Fasteners

Section 02 - AXLES AND SUSPENSION SYSTEMS

Group 0200 - Removal and Installation

Group 0225 - Input Drive Shafts And U-Joints

Group 0250 - Axle Shaft, Bearings, And Reduction Gears

Group 0260 - Hydraulic System

Section 03 - TRANSMISSION

Group 0300 - Removal and Installation

Group 0350 - Gears, Shafts, Bearings and Power Shift Clutch

Group 0360 - Hydraulic System

Section 04 - ENGINE

Group 0400 - Removal and Installation

Section 05 - ENGINE AUXILIARY SYSTEMS

Group 0505 - Cold Weather Starting Aids

Group 0510 - Cooling System

Group 0520 - Intake System

Group 0530 - External Exhaust System

Group 0560 - External Fuel Supply Systems

Section 07 - DAMPER DRIVE

Group 0752 - Elements

Section 09 - STEERING SYSTEM

Group 0960 - Hydraulic System

Section 10 - SERVICE BRAKES

Group 1011 - Active Elements

Group 1060 - Hydraulic System

Section 11 - PARK BRAKE

Group 1111 - Active Elements

Group 1160 - Hydraulic System

Section 17 - FRAME OR SUPPORTING STRUCTURE

Group 1740 - Frame Installation

Group 1746 - Frame Bottom Guards

Group 1749 - Chassis Weights

Section 18 - OPERATOR'S STATION

Group 1800 - Removal and Installation

Group 1810 - Operator Enclosure

Group 1821 - Seat and Seat Belts

Group 1830 - Heating and Air Conditioning

Section 19 - SHEET METAL AND STYLING

Group 1910 - Hood or Engine Enclosure

Section 31 - LOADER

Group 3102 - Bucket

Group 3140 - Frames

Group 3160 - Hydraulic System

Section 99 - DEALER FABRICATED TOOLS

Group 9900 - Dealer Fabricated Tools

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.



CAUTION:

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 operation and tests. Repair sections tell how to repair the components. Operation and tests 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.

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

Fundamental service information is available from other sources covering basic theory of operation, fundamentals of troubleshooting, general maintenance, and basic type of failures and their causes.

Manual Identification—READ THIS FIRST!

IMPORTANT:

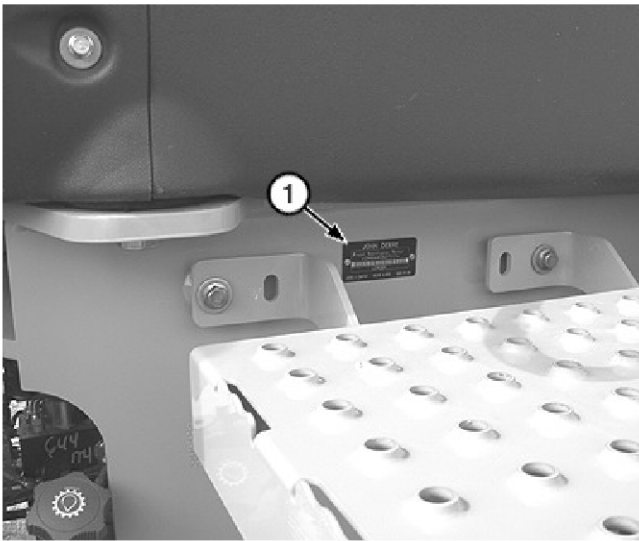
Use only supporting manuals designated for your specific machine. If incorrect manual is chosen, improper service may occur. Verify product identification number (PIN) and engine model number when choosing the correct manual.

Choosing the Correct Supporting Manuals

John Deere four wheel drive (4WD) loaders are available in different machine configurations based on the various markets into which they are sold. Different supporting manuals exist for different machine configurations.

When necessary, product serial numbers and engine model numbers are listed on the front covers of 4WD loader manuals. These numbers are used to identify the correct supporting manual for your machine.

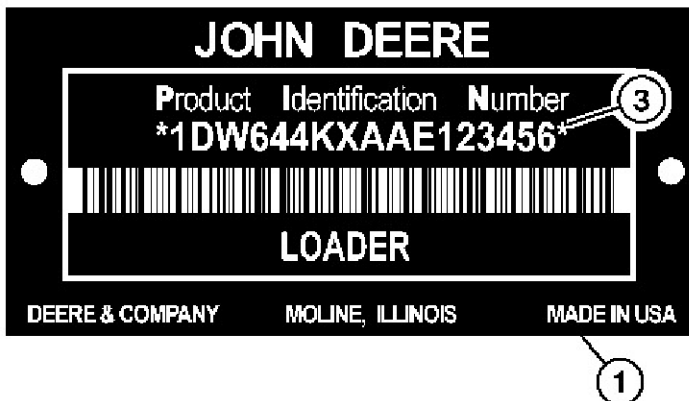
Product Serial Number Identification



PIN Plate Location

LEGEND:

- 1 PIN Plate
- 3 17-Character PIN



PIN Plate (17-character)

The product identification number (PIN) plate (1) is located on left side of machine frame under the cab door. Each machine has a 17-character PIN (3) shown on PIN plate. The last 6 characters of the PIN represent the machine's product serial number.

The PIN identifies the producing factory, machine model number, machine option, year of manufacture, engine emission level, and machine serial number.

PIN Identification Table

17-Character PIN Example															
(3)			(4)				(5)	(6)	(7)	(8)	(9)				
1	D	W	6	4	4	K	Z	_	D	E	X	X	X	X	X

- **(3)—World Code** —Identifies location where machine is manufactured.
- **(4)—Machine Model Identifier** —Identifies model number.
- **(5)—Machine Option Code** —Identifies which major machine option is equipped. This character will change from one machine to another.
- **(6)—Check Letter** —This is a random character assigned by the factory. This is not used in machine identification.
- **(7)—Manufacturing Year Code** —Identifies year of machine manufacture.
- **(8)—Engine Emission Code** —Represents engine emission certification.
- **(9)—Machine Serial Number** —Identifies machine serial number. This character will change from one machine to another.

The following is an example for a 644K machine that meets Interim Tier 4 and Stage III B emission levels:

PIN Identification

1DW644KZ _ DEXXXXXX

1DW

1DW

1T8

1T0

644K

Z

Z

H

P

_

D

C

D

E

F

G

E

C

D

E

F

XXXXXX

World Code (manufacturing location)

Davenport Works

Thibodaux Works

Dubuque Works

Machine Model Identifier

Machine Option Code (variable)

Z Bar Linkage

High Lift Linkage

Powerlifel[™] Linkage

Check Letter (variable)

Manufacturing Year Code (variable)

2012

2013

2014

2015

2016

Engine Emission Code

Tier 2 and Stage II

Tier 3 and Stage III A

Interim Tier 4 and Stage III B

Tier 4

Machine Serial Number



Thank you very much
for your reading.
Please click here
to get more information.