

John Deere 93, 93 Series A, 94, 95 and 95 Series A Backhoes



JOHN DEERE

SERVICE MANUAL

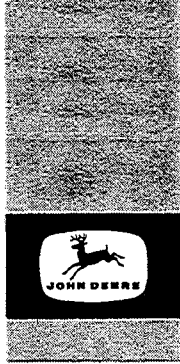
John Deere 93, 93 Series A, 94, 95 and
95 Series A Backhoes

SM2062 (01MAY66) English

John Deere Dubuque Works
SM2062 (01MAY66)

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ENGLISH





SERVICE MANUAL

JOHN DEERE
93, 93 Series A, 94,
95, and 95 Series A
BACKHOES

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INTRODUCTION



This service manual contains service and maintenance information for the hydraulic systems used on the John Deere 93, 94 and 95 Backhoes. Every effort has been made to include all information covering the hydraulic systems.

This service manual is divided into sections; each covers a certain part of the system. Within each section, the information is sub-divided into groups.

Within the service manual is a brief explanation of the basic principles of hydraulics, and the theory of operation of the various adaptations of hydraulics as used in the 93, 94 and 95 Backhoes. This is included with the thought in mind that if a serviceman thoroughly understands the principles of hydraulics and the theory of operation of

the various units, he will be better able to intelligently analyze and correct irregularities.

All sections should be diligently studied by the servicemen.

The methods used for disassembly and repair are, for the most part, those proved to be the most practical both from a factory standpoint and a field standpoint.

Section 30 contains trouble shooting information which lists symptoms, causes, and remedies for troubles encountered in the various hydraulic systems. It will be helpful in diagnosing the trouble; then, reference can be made to the section applying the that particular phase of the system for recommended service procedures.

This service manual will be useful in the training of new men within the organization.

This manual was prepared for the service department; it should be kept there, and used often. If this manual is used in conjunction with current parts catalogs (for correct parts replacement) your backhoe service work can be done more efficiently and in less time.

This manual is prepared in loose-leaf form. Whenever newer or improved service methods are developed, or improvements are made in the backhoes, information will be provided to you on new loose-leaf pages. Insert these pages in your manual as soon as you receive them, and your service manual will prove to be a valuable asset in your service department.



Section 10

DESCRIPTION AND OPERATION

Group 5

IDENTIFICATION AND SPECIFICATIONS

DESCRIPTION AND IDENTIFICATION

The 93 Backhoe is a single-position machine designed for use with various John Deere loaders and bulldozers. The 94 Backhoe is a single-position machine designed specifically for the JD400 Wheel Loader. The 95 Backhoe is a multi-position machine designed for use with various John Deere loaders and bulldozers. The multi-position feature allows the 95 Backhoe to be offset for digging next to foundations.

The introduction of the 94 Backhoe brought a new swing cylinder into the backhoe line. The new swing cylinder, along with other features, was incorporated into the 1966 versions of the 93 and 95 Backhoes. Beginning at serial number SNE0093005701U, the 93 Backhoe became the 93 Series A Backhoe. Beginning at serial number SNE0095002451U, the 95 Backhoe became the 95 Series A Backhoe.

Double-acting hydraulic cylinders are used in four operations of the backhoes. Two cylinders are used to raise and lower the stabilizers; one cylinder is used to raise and lower the boom; one (crowd) cylinder is used to move the dipperstick in or out; and one cylinder is used to move the bucket to the dump or load positions.

A rotary, vane-type cylinder is used to swing the boom during operation. A hydraulic swing brake is built into the swing cylinder to automatically slow the boom when it travels too far to the right or left.

John Deere backhoes operate with a two-lever control. The two-lever control, with its universal-joint-type hookup, provides eight operations. Both operating control levers provide normal simultaneous operation with minimum fatigue to, and effort by the operator. Two shorter levers operate the stabilizers, which are individually controlled.

John Deere backhoes can be used for a great variety of jobs, in addition to digging and loading dirt and other materials. They are adaptable to any trenching job, such as working in cramped

quarters, trenching sidewall excavations, or cleaning highway culverts.

In addition to model number designations, backhoes are also identified by serial numbers. Each backhoe has two serial numbers; one on the swing cylinder and one on the main frame.

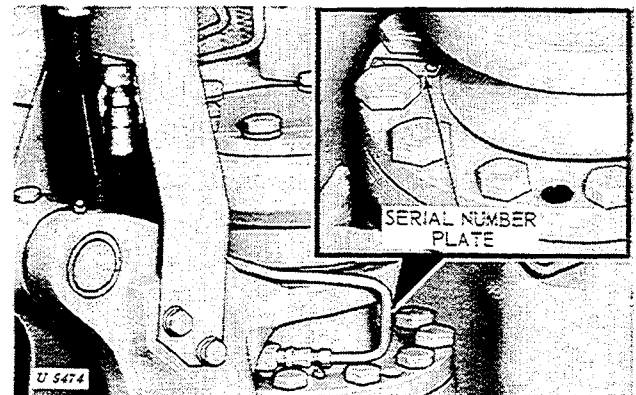


Fig. 10-5-1—Serial Number Plate, Swing Cylinder

The swing cylinder serial number plate (Fig. 10-5-1) is located at the front of the top plate. The main frame serial number plate (Fig. 10-5-2 or 10-5-3) is located on the right-hand side of the frame.

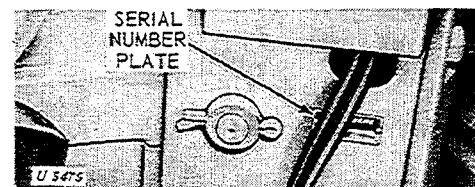


Fig. 10-5-2—Serial Number Plate, 93 and 94 Backhoes



Fig. 10-5-3—Serial Number Plate, 95 Backhoe

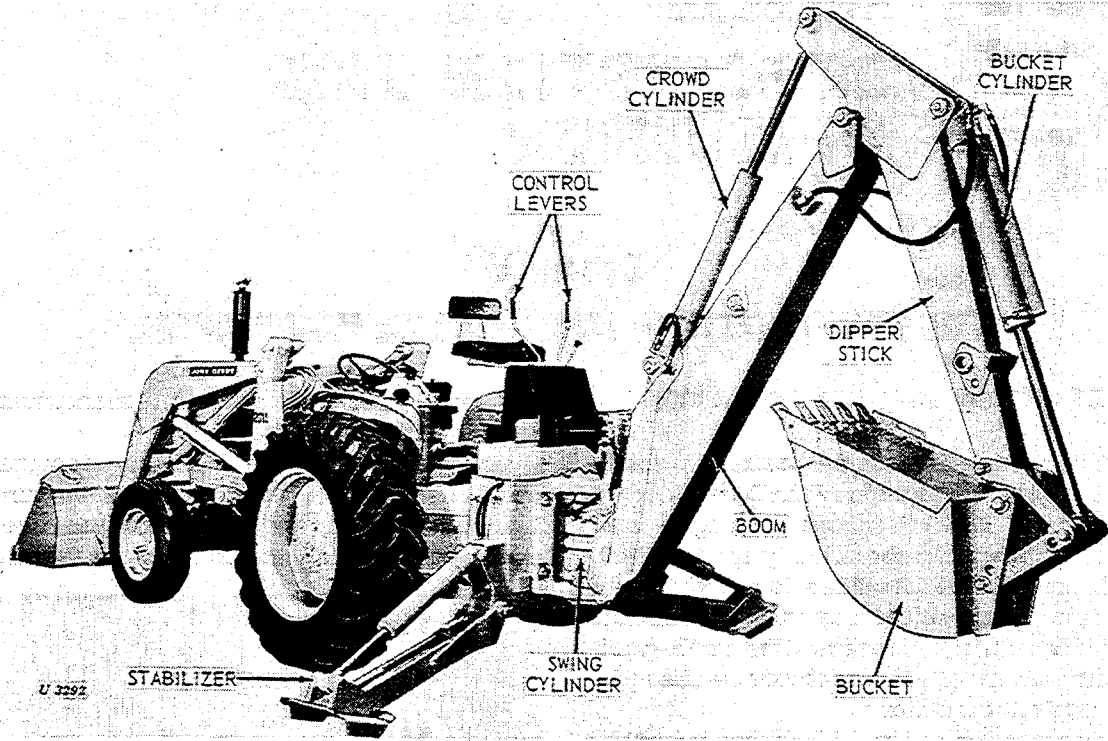


Fig. 10-5-4—John Deere 93 Backhoe Mounted on 2010 Wheel Loader

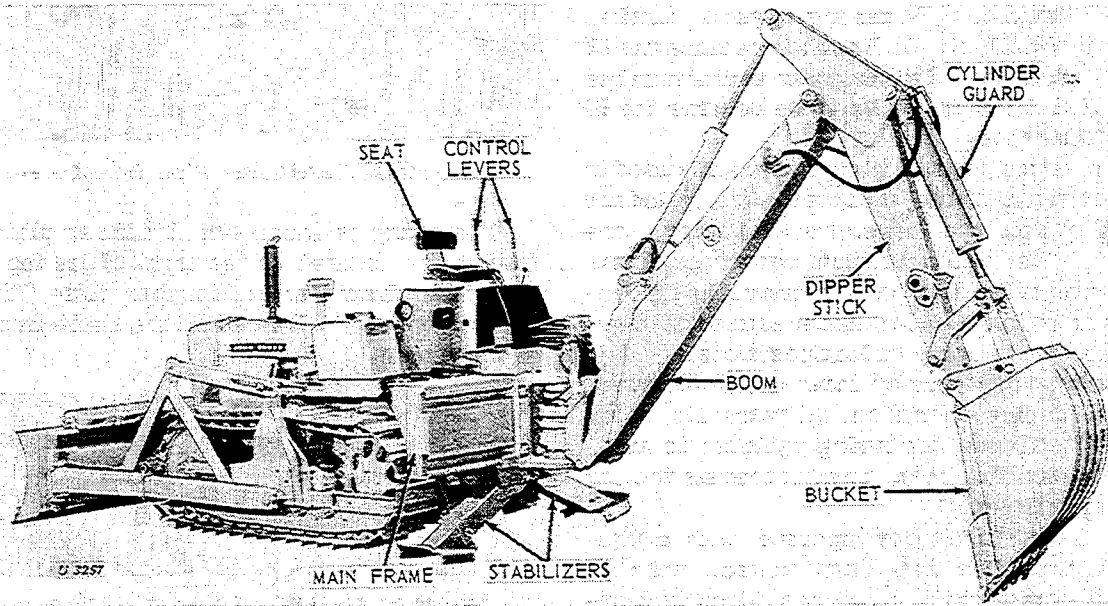


Fig. 10-5-5—John Deere 95 Backhoe on 2010 Crawler Tractor with Bulldozer

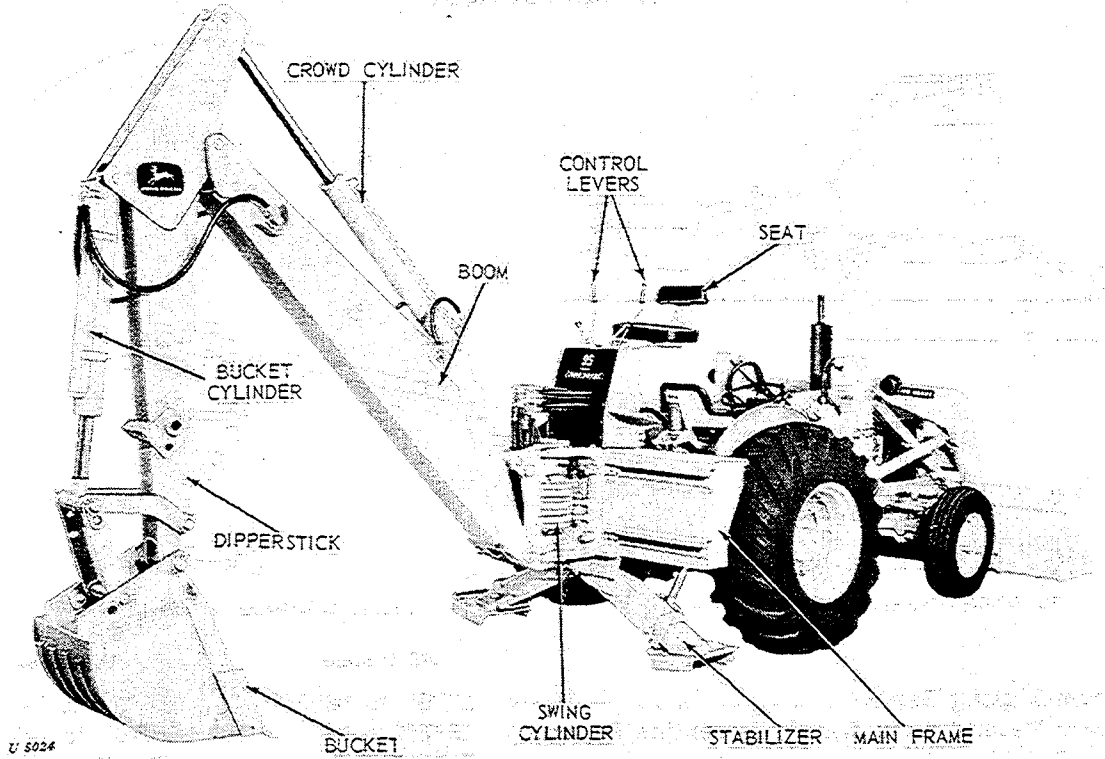


Fig. 10-5-6—John Deere 95 Series A Backhoe Mounted on JD400 Wheel Loader

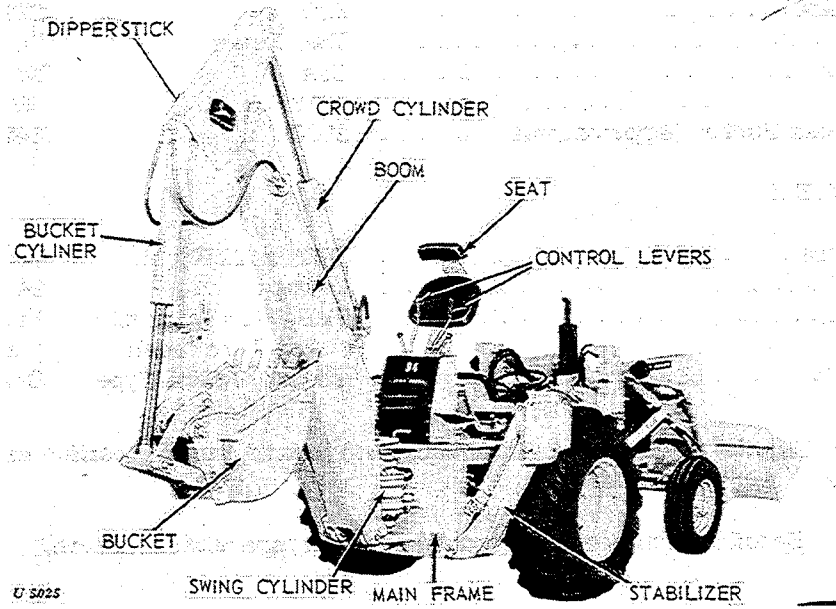


Fig. 10-5-7—John Deere 94 Backhoe Mounted on JD400 Wheel Loader

SPECIFICATIONS

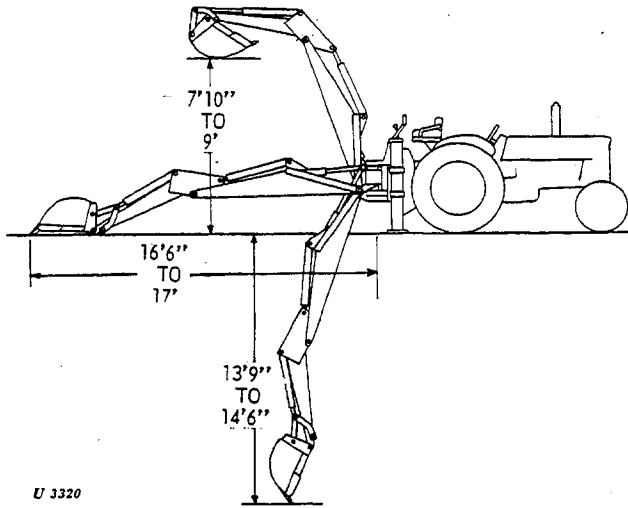


Fig. 10-5-8—Vertical Range of Operation

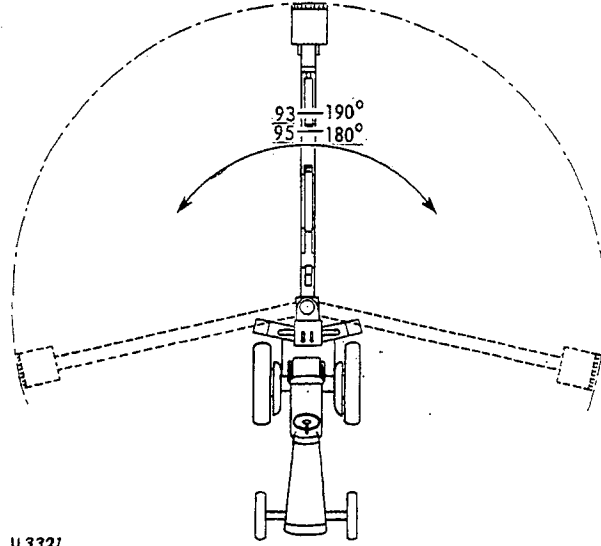


Fig. 10-5-9—Horizontal Range of Operation

	93 Backhoe	95 Backhoe
Maximum Digging Depth	13' 9" to 14' 6"	13' 9" to 14' 6"
Maximum Reach Ground Level (Centerline Cylinder)	16' 6" to 17'	16' 6" to 17'
Loading Height	7' 10" to 9'	7' 10" to 9'
Maximum Swing	190°	180°
Bucket Rotation	155° or 170°	155° or 170°
Bucket Roll-Back	27° or 45°	27° or 45°
Digging Force (Lbs.)	8200	8200
Controls	Two Lever	Two Lever
Positions Available	One	No Limit
Transport Height	10' 8" to 11'	10' 8" to 11'
Shipping Weight less Bucket (Approximate)	2928 Lbs.	3428 Lbs.

HYDRAULIC SYSTEM

Operating Pressure	2000 to 2250 psi.	2000 to 2250 psi.
Pump	24 gpm.	24 gpm.
Filters	Full-Flow Micronic and Wire Mesh	Full-Flow Micronic and Wire Mesh
Valve	Cessna (Stack-Type)	Cessna (Stack-Type)

When the term "Right" or "Left" is used, it is determined from a position on the backhoe seat facing the backhoe.

(Specifications and design subject to change without notice.)

SPECIFICATIONS

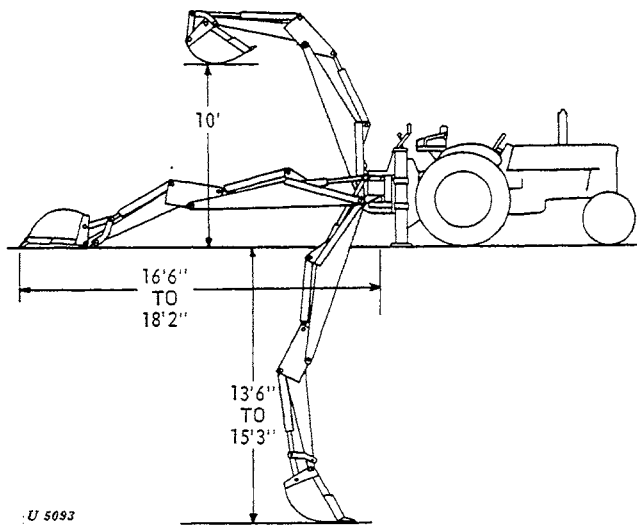


Fig. 10-5-10—Vertical Range of Operation

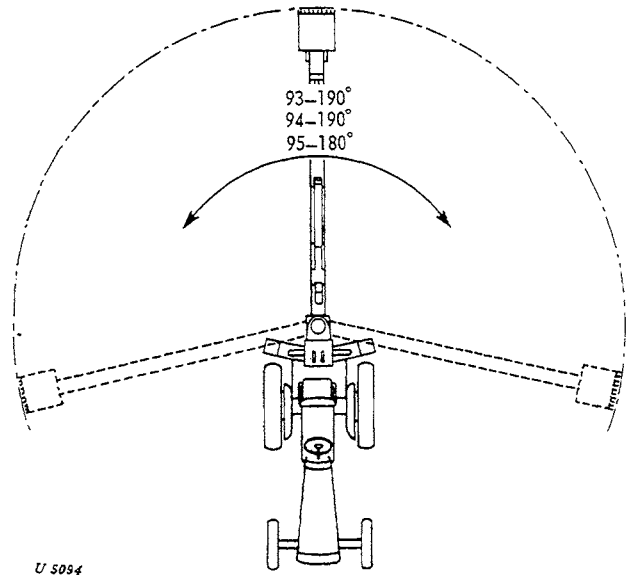


Fig. 10-5-11—Horizontal Range of Operation

	93 Series A Backhoe	94 Backhoe	95 Series A Backhoe
Maximum Digging Depth	13' 6" to 15' 3"	13' 6" to 15' 3"	13' 6" to 15' 3"
Maximum Reach Ground Level (Centerline Cylinder)	16' 6" to 18' 2"	16' 6" to 18' 2"	16' 6" to 18' 2"
Loading Height	10'	10'	10'
Maximum Swing	190°	190°	180°
Bucket Rotation	155° or 170°	155° or 170°	155° or 170°
Bucket Roll-Back	27° or 45°	27° or 45°	27° or 45°
Digging Force (Lbs.)	8800	8800	8800
Controls	Two Lever	Two Lever	Two Lever
Positions Available	One	One	No Limit
Transport Height	11'	11'	11'
Shipping Weight less Bucket (Approximate)	2850 Lbs.	3091 Lbs.	3378 Lbs.

HYDRAULIC SYSTEM

Operating Pressure	2000 to 2250 psi	2250 psi	2000 to 2250 psi
Pump	24 gpm	28 gpm at 2500 rpm	24 gpm
Valve	Cessna (Stack-Type)	Cessna (Stack-Type)	Cessna (Stack-Type)

When the term "Right" or "Left" is used, it is determined from a position on the backhoe seat facing the backhoe.

(Specifications and design subject to change without notice.)

John Deere 93 95 Backhoe Service Manual En Sec Wat

Full download: <http://manualplace.com/download/john-deere-93-95-backhoe-service-manual-en-sec-wat/>

Backhoes, 93, 93 Series A, 94, 95 and 95 Series A—

10-5-6

Description and Operation

*Identification
and Specifications*
