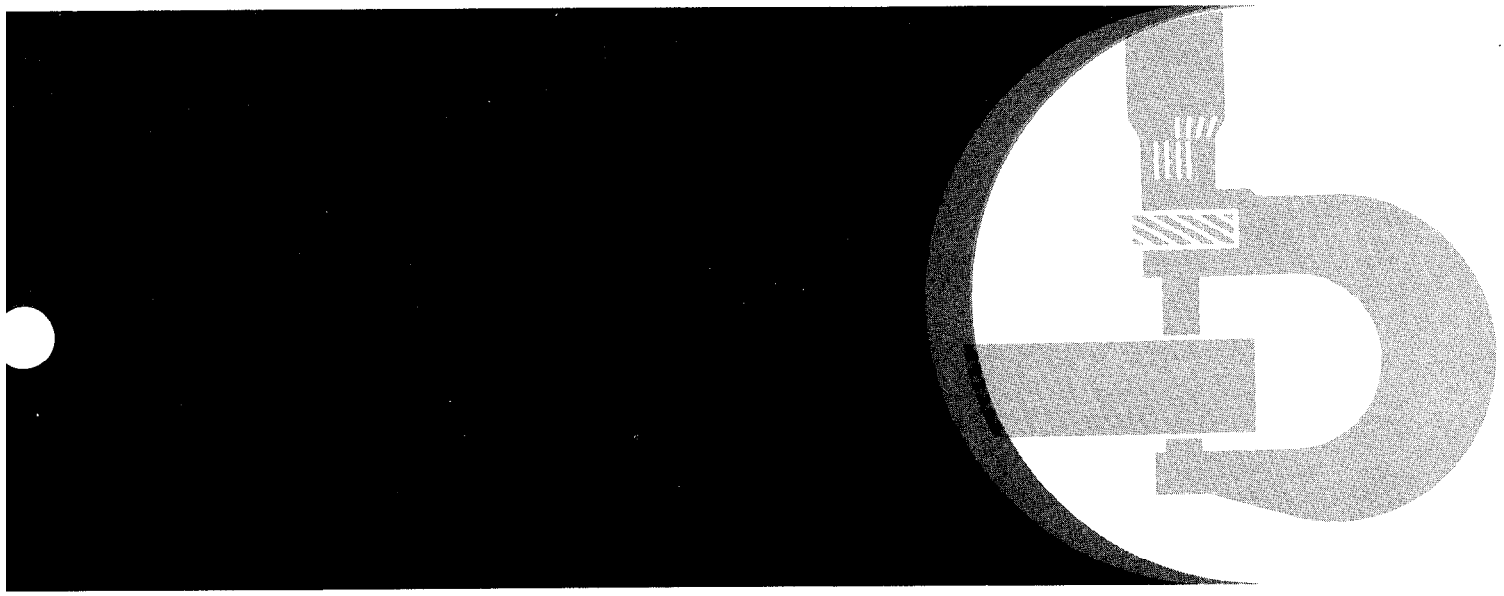
John Deere 350B Crawler Tractors and Crawler Loaders



TECHNICAL MANUAL

John Deere Dubuque Works
TM-1032
LITHO IN U.S.A

JD350-B CRAWLER TRACTORS AND CRAWLER LOADERS

Technical Manual TM-1032 (Jun-80)

CONTENTS

The specifications and design information contained in this manual were correct at the time it was printed. It is John Deere's policy to continually improve and update our machines. Therefore, the specifications and design information are subject to change without notice. Wherever applicable, specifications and design information are in accordance with SAE and IEMC standards.

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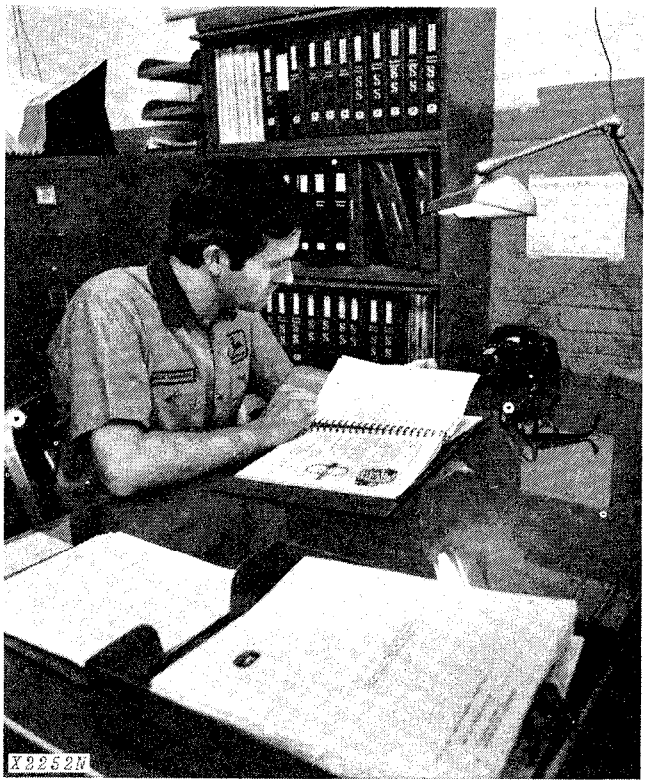
INTRODUCTION



Use FOS Manuals for Reference

This technical manual is part of a twin concept of service:

The two kinds of manuals work as a team to give you both the general background and technical details of shop service.

•FOS Manuals—for reference

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

When a service technician should refer to a FOS Manual for more information, a FOS symbol like the one at the left is used in the TM to identify the reference.

•Technical Manuals—for actual service

Technical Manuals are concise service guides for a *specific* machine. Technical manuals are on-the-job guides containing only the vital information needed by an experienced service technician.

Use Technical Manuals for Actual Service

This technical manual was planned and written for you—an experienced service technician. Keep it in a permanent binder in the shop where it is handy. Refer to it whenever in doubt about correct service procedures or specifications.

Some features of this technical manual:

- *Table of contents at front of manual*
- *Exploded views showing parts relationship*
- *Photos showing service techniques*
- *Specifications grouped for easy reference*

This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

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TEMPORARY TECHNICAL MANUAL PAGE

Filing Instructions: Remove page 10-5-1 and 10-5-2 dated May-73 and replace with this temporary page.

Section 10
GENERAL

CONTENTS OF THIS SECTION

Group 5
SPECIFICATIONS

Engine

Type	3-cylinder-in-line, valve-in-head, 4-stroke cycle

	Gasoline	Diesel
Flywheel horsepower (observed) at 2500 rpm (net)	42.0	42.0
Drawbar horsepower (observed)	31.2	31.2
Torque (ft-lbs) max. at 1300 rpm (observed) (nominal)	110.0	110.0
Bore and stroke, inches	3.86 x 3.86	3.86 x 4.33
Displacement, cubic inches	135.0	152.0
Compression ratio	7.5:1*	16.2:1
N.A.C.C. or A.M.A. horsepower rating for tax purposes	17.88	17.88

* *8.6:1 with high-altitude pistons*

	Gasoline	Diesel
Governed speed range (rpm)	600-2770	800-2650
Engine clutch (without direction reverser)	11-inch, single disk, foot-operated	

Electrical System

Battery voltage (nominal)	12 volts
Battery specific gravity (full charge) (corrected to 80°F.)	1.260
Battery terminal grounded	Negative

Hydraulic System

Type	Open-center, includes power steering, power brakes, loader, dozer, ripper, backhoe and three-point hitch

Transmission

Type . . . . . Manually selected, sliding gear with four forward speeds and one reverse

Travel speeds, mph (no slip):

Gear	1500 rpm	2100 rpm	2500 rpm
1st	0.9	1.2	1.4
2nd	1.2	1.6	1.9
3rd	2.0	2.8	3.3
4th	3.9	5.5	6.5
Rev.	1.2	1.6	1.9

Direction Reverser

Type . . . . Hydraulic, wet clutches, reversing "on the go" without declutching engine.

Steering-Brakes

Type . . . . Multiple-disk clutches and contracting band.
Manual: Standard
Power Steering-Brakes: Optional with integral reservoir (early models), pump and cylinders

Power Take-Off

Type . . . . . Transmission-driven, rear, 540 rpm at 1620 rpm engine speed

Track and Track Frame

Five rollers non-oscillating, one carrier roller each side. Hydraulic track adjusters, 36 track shoes per side.

Track shoes (types and sizes): Grouser, 12 or 14-inch. Notched open-center grouser, 12 or 14-inch. Triple semi-grouser open-center, 12 or 14-inch. Rubber, 10-inch. Open-center 33-inch.

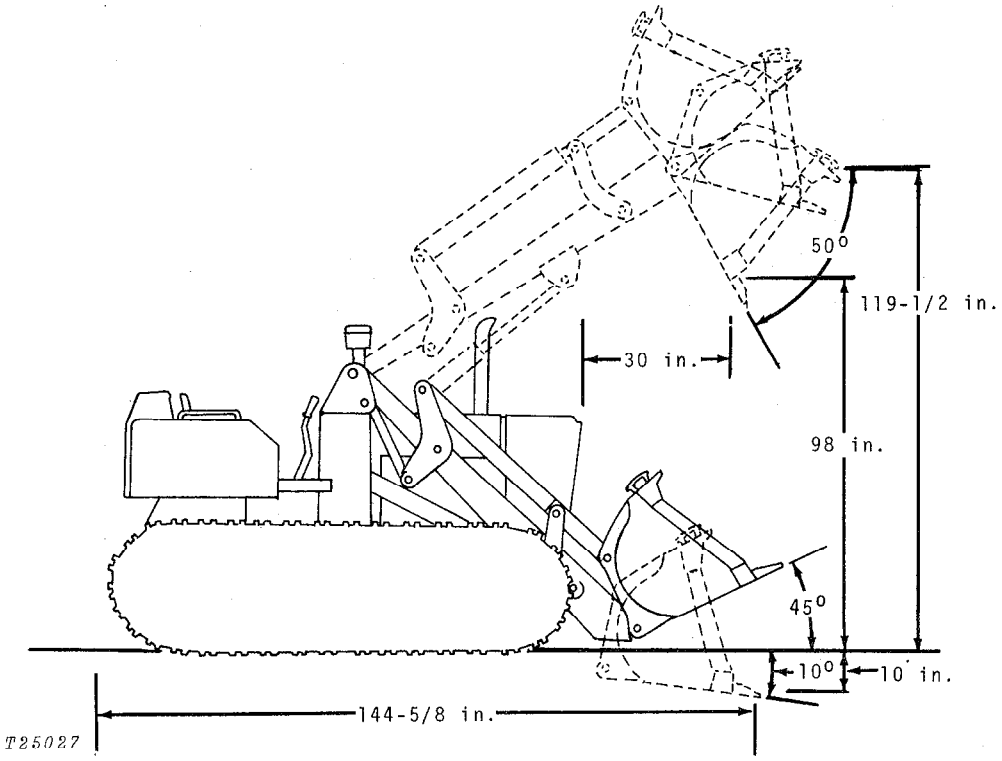
Weight Distribution

		Bulldozers		
	Loader	6300	6305	6310
SAE Operating Weight (lbs.)*	12,400	10,300	10,600	10,400
Ground Contact (Sq. In.)	1,662	1,940	1,940	1,940
Ground Pressure (PSI)	7.2	5.3	5.5	5.4
Track on Ground (Inches)	69.3	69.3	69.3	69.3

* *1973 Representative Tractor*
Includes fully serviced tractor, 175 lb. operator, and R.O.P.S.

Capacities (U.S. Standard Measures)

Fuel tank	22 gals.
Cooling system	13 qts.
Engine crankcase (including filter)	9 qts.
Transmission case	9 qts.
Direction reverser case	12 qts.
Final drives, each	3 qts.
Crawler tractor hydraulic system	16 qts. (min.)
Crawler loader hydraulic system (including reverser)	50 qts.
Winch housing reservoir	3 qts.



JD350-B Operating Dimensions

DIMENSIONS (Crawler Tractor)

Maximum height (with exhaust stack)	84 in.
Height to top of hood	52 in.
Over-all width (with 12-inch shoes)	60-1/8 in.
Over-all length	99 in.
Ground clearance at rear crossbar	13-1/4 in.
Shipping weight (approx.)	8,560 lbs. Gasoline 8,630 lbs. Diesel

DIMENSIONS (Crawler Loader)

Maximum height (with exhaust stack)	84 in.
Height to top of hood	52 in.
Over-all width (with 12-in. shoes)	66 in.
Over-all length (with weights)	144-5/8 in.
Clearance (at rear crossbar)	13-1/4 in.
Total weight (with bucket and counter-weights)	
Gasoline	11,860 lbs.
Diesel	11,930 lbs.
Dumping reach (full height) (bucket at 45° angle)	30 in.
Dumping clearance (full height) (bucket at 45° angle)	98 in.
Maximum lift (full height)	119-1/2 in.
Digging depth below ground (bucket at 10° angle)	10 in.
Bucket width (3/4 cu. yd. size)	66 in.
Dump angle (full height)	50°
Bucket roll-back (ground level)	45°
Grading angle	70° from horizontal
Turning clearance circle (carry height, bucket rolled back)	234 in.
Lifting capacity	7,500 lbs.
Breakout force	12,100 lbs.

Thank you very much for your reading. Please Click Here Then Get More Information.

NOTE:

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

Group 10
PREDELIVERY, DELIVERY, AND AFTER-SALES SERVICES

PREDELIVERY SERVICE

Because of the shipping factors involved, plus extra finishing touches that are necessary to promote customer satisfaction, proper predelivery service is of prime importance to the dealer.

A tag pointing out the factory-recommended procedure for predelivery service is attached to each new crawler before it leaves the factory.

After completing the factory recommended dealer checks and services listed on the predelivery tag, remove the tag from the crawler and file it with the job shop order. The tag will then serve as a basis for certifying that the crawler has received the proper predelivery service when that portion of the customer's John Deere Delivery Receipt is completed.

TEMPORARY CRAWLER STORAGE

Service	Specification	Reference
Check radiator for coolant loss and antifreeze protection.	. . . . .	Section 10, Group 15
Fill fuel tank.	. . . . .	Operator's Manual
Check crankcase oil level.	. . . . .	Operator's Manual
Relieve hydraulic pressure.	Stop engine, lower blade or bucket to ground	. . . . .
Cover crawler for protection and cleanliness.	. . . . .	. . . . .

BEFORE DELIVERING CRAWLER

Electrical System

Inspect electrolyte	. . . . .	Operator's manual
Check alternator belt tension.	3/4-inch deflection, with 20 lb. force	Operator's manual
Punch date code on battery tag.	. . . . .	. . . . .
Clean terminals and check battery cable connections.	. . . . .	Operator's Manual

Cooling System

Inspect radiator for coolant loss.	Midway between core and filler neck	Operator's Manual
Check antifreeze protection.	. . . . .	. . . . .

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BEFORE DELIVERING CRAWLER—Continued

Service	Specification	Reference
Track		
Check track tension.	. . . . .	Section 80
Lubrication		
Check crankcase oil level.	Midway between marks on dipstick	Operator's Manual
Check transmission oil level.	Midway between marks on gauge	Operator's Manual
Check final drive oil level.	To level of filler holes	Operator's Manual
Check rockshaft housing oil level.	To level of filler hole	Operator's Manual
Check direction reverser oil level.	Midway between marks on gauge	Operator's Manual
Check winch reservoir oil level.	To level of oil level hole	Operator's Manual
Lubricate grease fittings.	. . . . .	Operator's Manual
Check distributor lubrication (Gasoline).	. . . . .	Operator's Manual
Engine		
Check air cleaner.	. . . . .	Operator's Manual
Fill fuel tank and start engine.	. . . . .	Operator's Manual
Check operation of lights and gauges.	. . . . .	Operator's Manual
Check speed control and governor linkage for free operation.	. . . . .	Section 20
Check engine idle speeds.	. . . . .	Section 20
Operation		
Check engine clutch operation (without reverser).	. . . . .	Section 50
Shift transmission through all gears.	. . . . .	Operator's Manual
Check direction reverser.	. . . . .	Section 50
Check power take-off operation.	. . . . .	Operator's Manual
Check operation of 3-point hitch.	. . . . .	Operator's Manual

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BEFORE DELIVERING CRAWLER—Continued

Service	Specification	Reference
Check hydraulic system operation.	.....	Operator's Manual
Check brake operation.	.....	Section 60
Check steering operation.	.....	Section 60
Check bucket level indicator and electrical return-to-dig mechanism (if present).	.....	Operator's Manual
General		
Tighten accessible nuts and cap screws.	Standard torque chart	Section 10
Clean crawler and touch up paint.	.....	.....

DELIVERY SERVICE

A thorough discussion of the operation and service of a new machine at the time of delivery helps to assure complete customer satisfaction. Proper delivery should be an important phase of a dealer's program. A portion of the John Deere Delivery Receipt emphasizes the importance of proper delivery service.

It is a well-known fact that many complaints have arisen simply because the owner was not shown how to operate and service his new machine properly. Enough time should be devoted, at the customer's convenience, to introducing the owner to his new machine and explaining to him how to operate and service it.

The following procedure is recommended before the serviceman and owner complete the delivery acknowledgements portion of the delivery receipt.

Using the machine operator's manual as a guide, be sure that the owner understands these points thoroughly:

1. Controls and instruments.
2. How to start and stop the engine.
3. The importance of the break-in period.
4. How to use cast-iron ballast.
5. All functions of the hydraulic system.
6. The importance of safety.
7. The importance of lubrication and periodic services.

After explaining and demonstrating the above features, have the owner sign the delivery receipt and give him the operator's manual.

AFTER-SALES SERVICE

The purchaser of a new John Deere machine is entitled to a free inspection at some mutually agreeable time within the warranty period after the equipment has been "run in."

The purpose of this inspection is to make sure that the customer is receiving satisfactory performance from his machine. At the same time, the inspection should reveal whether or not the machine is being operated, lubricated, and serviced properly.

If the recommended after-sales service inspection is followed, the dealer can eliminate a needless volume of service work by preventing minor irregularities from developing into serious problems later on. This will promote strong dealer-customer relations and give the dealer an opportunity to answer questions that may have arisen during the first few days of operation. During the inspection service, the dealer has the additional opportunity of promoting the possible sales of other new equipment.

The following is a recommended inspection program.

INSPECTION PROCEDURE

Service	Specification	Reference
Cooling System		
Check radiator coolant level.	Midway between core and filler neck	Operator's Manual
Check external surface of radiator core.	. . . . .	Operator's Manual
Check hoses and connections for leaks.	. . . . .	. . . . .
Fuel System		
Remove water and foreign matter from fuel pump and filter sediment bowls.	. . . . .	Operator's Manual
Bleed fuel system.	. . . . .	Operator's Manual
Tighten loose connections and check entire system for leaks. Correct if necessary.	. . . . .	. . . . .
Check air cleaner cup, element, and unloading valve. Clean element if necessary.	. . . . .	Operator's Manual
Electrical System		
Check specific gravity of battery.	1.215 to 1.270 at 80° F.	Operator's Manual
Check level of battery electrolyte.	To bottom of filler neck above plates	Operator's Manual
Check belt tension.	3/4-inch belt flex with 20-pound force	Operator's Manual
Start engine and check action of starter, lights and gauges.	. . . . .	Operator's Manual

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INSPECTION PROCEDURE—Continued

Service	Specification	Reference
Lubrication		
Check crankcase oil level.	Between marks on dipstick	Operator's Manual
Check transmission oil level.	Between marks on gauge	Operator's Manual
Check final drive oil level.	To level of filler holes.	Operator's Manual
Check rockshaft housing oil level.	To level of filler hole.	Operator's Manual
Check direction reverser oil level.	Midway between marks on gauge.	Operator's Manual
Check winch reservoir oil level.	To level of oil level hole.	Operator's Manual
Lubricate grease fittings.	. . . . .	Operator's Manual
Check distributor lubrication (gasoline)	. . . . .	Operator's Manual
Engine		
Check valve clearance.	Diesel: Intake - 0.014 inch, Exhaust - 0.018 inch; Gasoline: 0.014 inch, 0.022 inch	Operator's Manual
Check engine speed under load and horsepower (Dynamometer test).	42 hp at 2500 rpm	FOS - ENGINES
General		
Check clutch pedal free travel (Constant Mesh Transmission)	. . . . .	Operator's Manual
Check transmission linkage adjustment	. . . . .	Section 50
Check power take-off operation.	. . . . .	Operator's Manual
Check hydraulic system.	. . . . .	Section 70
Check steering clutches and brakes.	. . . . .	Section 60
Check track tension.	. . . . .	Section 80
Check winch operation.	. . . . .	Section 80
Tighten accessible nuts and cap screws.	. . . . .	Section 10, Group 25

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