



6030 Tractor



JOHN DEERE

TECHNICAL MANUAL 6030 Tractor

TM1052 (01MAR83) English

John Deere Tractor Works
TM1052 (01MAR83)

LITHO IN U.S.A.
ENGLISH



6030 TRACTOR

TECHNICAL MANUAL

TM-1052 (JAN-73)

CONTENTS

- SECTION 10 - GENERAL
- Group 5 - General Tractor Specifications
 - Group 10 - Predelivery, Delivery, and After-Sale Services
 - Group 15 - Tune-Up and Adjustment
 - Group 20 - Lubrication
 - Group 25 - Separation
 - Group 30 - Specifications and Special Tools
- SECTION 20 - ENGINE
- Group 5 - General Information, Diagnosis, and Tests
 - Group 10 - Cylinder Head, Valve Train and Camshaft
 - Group 15 - Cylinder Block, Liners, Pistons, and Rods
 - Group 20 - Crankshaft, Main Bearings, and Flywheel
 - Group 25 - Lubrication System
 - Group 30 - Cooling System
 - Group 35 - Specifications and Special Tools
- SECTION 30 - FUEL SYSTEM
- Group 5 - Diagnosing Malfunctions
 - Group 10 - Air Intake System
 - Group 15 - Diesel Fuel System
 - Group 20 - Control Linkage
 - Group 25 - Specifications and Special Tools
- SECTION 40 - ELECTRICAL SYSTEM
- Group 5 - Information and Wiring Diagrams
 - Group 10 - Motorola Charging Circuit
 - Group 15 - Delcotron Charging Circuit
 - Group 20 - Delco-Remy Starting Circuit
 - Group 22 - John Deere Starting Circuit
 - Group 25 - Lighting and Accessory Circuits
 - Group 30 - Specifications and Special Tools
- SECTION 50 - POWER TRAIN
- Group 5 - Clutch
 - Group 10 - Syncro-Range Transmission
 - Group 15 - Differential
 - Group 20 - Final Drive
 - Group 25 - Power Take-Off
 - Group 30 - Specifications and Special Tools
- SECTION 60 - STEERING AND BRAKES
- Group 5 - General Information
- SECTION 70 - HYDRAULIC SYSTEM
- Group 5 - General Information, Diagnosis, and Tests
 - Group 10 - Reservoir, Filters, Valves, and Oil Cooler
 - Group 15 - Hydraulic Pumps
 - Group 20 - Power Steering
 - Group 25 - Power Brakes
 - Group 30 - Rockshaft and Implement Hitches
 - Group 35 - Selective Control Valve, Breakaway Couplers, and Remote Cylinders
 - Group 40 - Specifications and Special Tools
- SECTION 80 - MISCELLANEOUS
- Group 5 - Front Axle

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.

Copyright © 1973
DEERE & COMPANY
 Moline, Illinois
 All rights reserved

	6531A	6531D
CAPACITIES:		
Fuel tank	73 U.S. gals.	68 U.S. gals.
Crankcase (with filter change)	26 U.S. qts.	20 U.S. qts.
Transmission-hydraulic system	16 U.S. gals.	16 U.S. gals.
Cooling system (add 2 qts. for cab heater)	40 U.S. qts.	33 U.S. qts.

TRANSMISSION:

Type	Syncro-Range, constant mesh	
Clutch	Two plates, heavy-duty, foot operated	
Size	13-1/2 in.	12 in.
Gear selections	8 forward and 2 reverse	
Shifting	4 stations, synchronized shifting within stations	

POWER TAKE-OFF:

Type	Independent, rear	
Clutch	Wet disk, hydraulically actuated	
Speed (2100 engine rpm)	1024 rpm	1024 rpm

PTO ahead of drawbar hitch point

1-3/8 in. shaft	16 in.	16 in.
1-3/4 in. shaft	20 in.	20 in.

HYDRAULIC SYSTEM:

Type	Closed center, constant pressure. Includes power steering, power brakes and implement control	
Standby pressure	2250 psi	

BRAKES

Hydraulically power actuated, disk-type operating in oil
Provision for manual operation with brake accumulator to supply oil

STEERING

Full power, hydrostatic type
Provision for manual operation

ELECTRICAL SYSTEM:

Type	12-volt, negative ground	
Batteries	Two 6-volt, 87-plate, 204 ampere-hour group 6T3A, tractor-type, connected in series	
Alternator	12-volt, with integral transistorized regulator:	
Capacity	55 amp. without air conditioning 72 amp. with air conditioning	

FRONT TIRES:*

Standard	11.00-16, 8-ply-rating	
Row-Crop	9.50-20, 8-ply-rating	

REAR TIRES:*

Standard	24.5-32, 10-ply-rating	
Row-Crop	18.4-38, 12-ply-rating	

FRONT WHEEL TREAD:

Fixed tread	69 or 71 in.	
Adjustable tread (11.00-16 tires)	68 to 80 in.	

REAR WHEEL TREAD:

Standard:		
24.5-32 tire	70 to 81 in.	
18.4-34 tire (dual)	68 and 111 in.	
18.4-38 tire (dual)	65 to 119 in.	
Row-Crop:		
18.4-38 tire	60 to 119 in.	
24.5-32 tire	70-111 in.	

GROUND SPEEDS IN MILES PER HOUR
(2100 engine rpm with 24.5-32 tires)

1st	2.01
2nd	3.12
3rd	4.27
4th	5.29
5th	6.61
6th	8.73
7th	11.21
8th	18.50
1st reverse	4.70
2nd reverse	7.28

DIMENSIONS:

Standard (Fixed tread front axle):	
Wheel base	104 in.
Over-all length	172.3 in.
* * Over-all height	98.3 in.
Height to steering wheel	82.4 in.
Width	Regular wheel, 95.8 in.
Drawbar clearance	16 in.
Turning radius	12 ft. 6 in.
Row-Crop (81.5-inch tread front axle):	
Wheel base	102 to 106 in.
Over-all length	172.3 in.
* * Over-all height	98.3 in.
Height to steering wheel	82.4 in.
Over-all width	108.4 in.
Turning radius	13 ft.

SHIPPING WEIGHT (With equipment for average field service, less fuel and ballast).
Add 575 lbs. if equipped with Roll-Gard.

Standard	15,800 lbs.
Row-Crop	14,680 lbs.

- * Additional tire sizes available.
- * * Tractors with Air Conditioned Cab and 20.8-38 tires 116 in.
- Tractors with Cab and without Air Conditioning (20.8-38 tires) 109 in.

Group 10

PREDELIVERY, DELIVERY, AND AFTER-SALE 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.

Tractors shipped from the factory with the alternator completely disconnected require an AR47860 Auxiliary Ignition Battery Kit to supply power for the fuel shutoff solenoid on tractors with a 6531D engine. The adapter on the battery harness kit plugs into the

cigar lighter. Be sure to read the instructions attached to the tractor before starting the engine.

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

Temporary Tractor Storage

Service	Specification	Reference
Check radiator for coolant loss and antifreeze protection	Within 3/4-inch from bottom of filler neck (6531A), 1-1/2-inch above baffle (6531D)	
Reduce shipping pressure of tires		Operator's manual
Cover tractor and tires for protection and cleanliness		

Before Delivering Tractor

Electrical System

Install electrolyte and charge batteries		FOS-20
Punch date code on battery tag		
Connect Motorola alternator. Do not attempt to polarize		Section 40, Group 10
Install light switch knob		
Clean terminals and connect battery cables		Section 40, Group 5
Check alternator belt adjustment		
Tractors with 6531A engine	1-inch deflection, 25 lb. force	Operator's manual
Tractors with 6531D engine	1-inch deflection, 20 lb. force	Operator's manual

Before Delivering Tractor—Continued

Service	Specification	Reference
Cooling System		
Inspect radiator for coolant loss	Within 3/4-inch from bottom of filler neck (6531A); 1-1/2 in. above baffle (6531D)	
Check antifreeze protection		
Tires and Wheels		
Adjust pressure of tires		Operator's manual
Check front wheel hub bolts, rear wheel rim clamp nuts, and rear wheel retainer cap screws for tightness	Front hub bolts - 100 ft-lbs Rear hub bolts - 300 ft-lbs Rim clamp nuts - 170 ft-lbs	
Lubrication		
Check crankcase oil level	To upper marks on dipstick.	Operator's manual
Check transmission-hydraulic system oil level	To top of "SAFE" range on dipstick. Type 303 Special-Purpose Oil.	Operator's manual
Lubricate grease fittings	John Deere Multipurpose-Lubricant	Operator's manual
Engine		
Check air cleaner		Operator's manual
Fill fuel tank and start engine	Capacity - 73 U.S. gallons (6531A) 68 U.S. gallons (6531D) ..	Operator's manual
Check operation of gauges and indicator lamps		Operator's manual
Check speed control linkage for free operation		Section 30, Group 20
Check engine idle speeds		Section 30, Group 20
Operation		
Shift transmission through all speeds		Operator's manual
Check transmission clutch operation	Clutch pedal free travel should be 1-1/2 inches	Operator's manual
Check power take-off operation		Operator's manual
Check differential lock operation		Operator's manual
Check hydraulic system operation: Rockshaft, steering, remote cylinder, and brakes		Operator's manual

Before Delivering Tractor—Continued

Service	Specification	Reference
Check 3-point hitch operation	Operator's manual
Check seat operation	Operator's manual
Check cab pressurizer and wind- shield wiper operation, air conditioner and heater system operation (if equipped)	Operator's manual
Adjust headlights and check operation	Operator's manual
General		
Adjust air conditioner drive belt tension	1/4-inch deflection, 15 lb. force (6531A); 1-inch deflection, 25 lb. force (6531D)	Operator's manual
Tighten accessible nuts and cap screws
Clean tractor and touch up paint

DELIVERY SERVICE

A thorough discussion of the operation and service of a new tractor 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.

Many complaints have arisen simply because the owner was not shown how to operate and service his new tractor properly. Enough time should be devoted, at the customer's convenience, to introducing the owner to his new tractor and explaining to him how to operate and service it.

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

Using the tractor 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 liquid or cast-iron ballast.
5. All functions of the hydraulic system.
6. Using the power takeoff.
7. The importance of safety.
8. 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-SALE INSPECTION

The purchaser of a new John Deere tractor is entitled to a free inspection at some mutually agreeable time within the warranty period after the equipment has been "run in". The terms of this after-sale inspection are outlined on the back of the customer's John Deere Delivery Receipt.

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

If the recommended after-sale service inspection is followed, the dealer can eliminate needless service work by preventing minor irregularities from developing into serious problems later on. This will promote strong dealer-customer relations and present 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 further opportunity of promoting the sale of other new equipment.

The following inspection program is recommended within the first 100 hours of tractor operation.

Inspection Procedure

Service	Specification	Reference
Cooling System		
Check radiator coolant level	Within 3/4-inch from bottom of filler neck (6531A); 1-1/2 in. above baffle (6531D)	
Clean external surface of radiator core		
Check hoses and connections for leaks		
Fuel System		
Remove water and foreign matter from filter sediment bowl		Operator's manual
Bleed fuel system		Operator's manual
Tighten loose connections and check entire system for leaks. Correct if necessary		
Check air cleaner element and clean it if necessary		Operator's manual
Electrical System		
Check specific gravity and electrolyte level of batteries	Full charge - 1.260 at 80°F.	Operator's manual
Check belt tension	1-inch deflection with a 25-pound force (6531A); 1-inch deflection with 20 lb. force (6531D)	Operator's manual
Start engine and check operation of starter, lights, and indicator lamps		Operator's manual



Suggest:

If the above button click is invalid.

Please download this document

first, and then click the above link

to download the complete manual.

Thank you so much for reading

Inspection Procedure—Continued

Service	Specification	Reference
Lubrication		
Check crankcase oil level	To upper marks on dipstick.	Operator's manual
Check transmission-hydraulic system oil level	In "SAFE" range on dipstick. Use John Deere Type 303 Special-Purpose Oil	Operator's manual
Engine		
Check valve clearance	Intake - 0.018 inch. Exhaust - 0.028 inch.	Operator's manual
Check injection pump timing		
Tractors with 6531A engine	"INJ" Mark	Section 30, Group 15
Tractors with 6531D engine	"TDC" Mark	Section 30, Group 15
Check engine speed under load, fuel consumption, and horsepower.	Specification	Group 15 of this section
Clutches and Differential Lock		
Check transmission clutch free travel	Approximately 1-1/2-inch free travel	Operator's manual
Check PTO clutch and brake operation		Section 50, Groups 35 and 40
Check differential lock operation		Operator's manual
Hydraulic System		
Check rockshaft and remote cylinder operation		Operator's manual
Check power steering	Smooth, easy operation	Section 70, Group 20
Check power brakes and accumulator	The accumulator should supply oil to each brake for at least 20 applications at 5 second intervals after the engine has been stopped for 15 minutes, when applied individually	Operator's manual
Cab		
Check operation of cab controls		Operator's manual
Check air conditioning compressor drive belt tension	1/4-inch deflection, 15-lb force (6531A); 1-inch deflection, 25-lb force (6531D)	Operator's manual
Nuts and Cap Screws		
Tighten accessible nuts and cap screws that require adjustment		