













John Deere Horicon Works
TM1359 (20APR90)

LITHO IN U.S.A.
ENGLISH



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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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SECTION 270—HYDRAULIC OPERATION AND

Group 05-Hydraulic System Checkout

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Section 10 GENERAL INFORMATION 10

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INTRODUCTION

This manual is part of a total service support program.

FOS MANUALS-REFERENCE

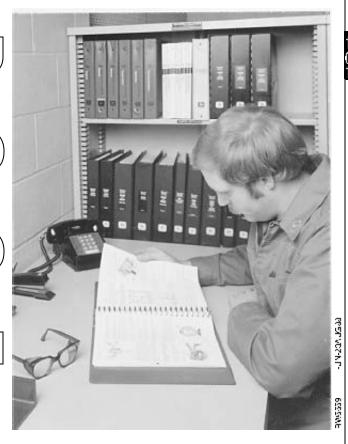
TECHNICAL MANUALS-MACHINE SERVICE

COMPONENT MANUALS—COMPONENT SERVICE

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

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

Component Technical Manuals are concise service guides for specific components. Component Technical Manuals are written as stand alone manuals covering multiple machine applications.





O53,INTRO2 -19-03JUL85







FEATURES OF THIS TECHNICAL MANUAL

John Deere ILLUSTRUCTION format emphasizing illustrations and concise instructions in easy-to-use modules.

Emphasis on diagnosis, analysis, and testing so you can

understand the problem and correct it. Diagnostic information presented with the most logic

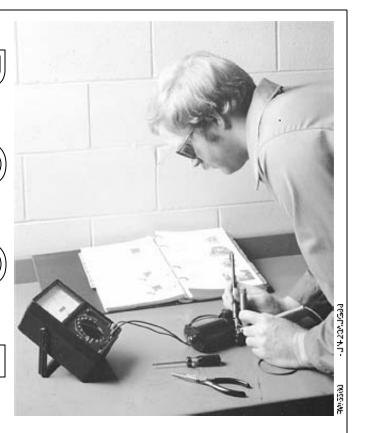
and easiest to isolate problems first to help you identify the majority of routine failures quickly.

Step-by-step instructions for teardown and assembly.

Summary listing at the beginning of each group of a applicable specifications, wear tolerances, torque values, essential tools, and materials needed to do the job.

An emphasis throughout on safety—so you do the job right without getting hurt.

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 when you need to know correct service procedures or specifications.



O53.INTRO3 -19-07OCT85

SAFETY AND YOU

CAUTION: This safety symbol is used for important safety messages. When you see this symbol, follow the safety message to avoid personal injury.





M45,1005A,3 -19-09JAN85



PREPARE FOR EMERGENCIES

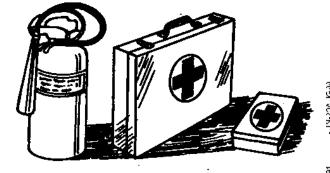
Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

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







O53,FIRE2 -19-26JAN90

HANDLE FUEL SAFELY—AVOID FIRES

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.

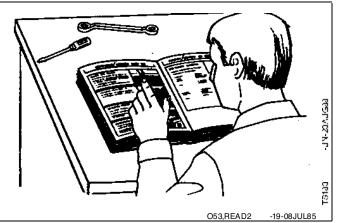


LEARN MACHINE SAFETY

Carefully read this manual. Learn how to operate the machine and how to use the controls properly.

Do not let anyone operate this machine without proper instruction.

Unauthorized modifications to the machine may implair the function and/or safety and affect machine life.



WEAR PROTECTIVE CLOTHING

Wear fairly tight clothing and safety equipment.





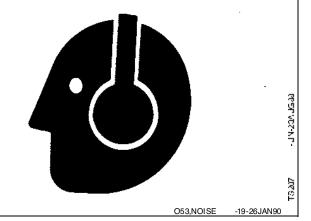


M45,1005A,6 -19-09JAN85

PROTECT AGAINST NOISE

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.



AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury may call the Deere & Company Medical Department in Moline, Illinois, or other knowledgeable medical source.





O53,FLUID -19-26JAN90





SERVICE LOADER SAFELY

Do not work under lift arms unless they are resting on arm stops.



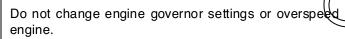
Before you work on loader or any attached equipment:

- -Lower attachments to ground, or
- -Rest lift arms on lift arm stops.

Lower lift arms all the way and stop engine before install or remove attachments.



Before you make repairs or adjustments, stop the engine.



Keep the loader and attachments in good operating condition.

Keep safety devices in place and in working condition.

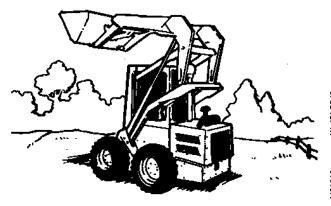
Keep all nuts, bolts, and screws tight so equipment is in safe working condition.

Before you work on any part of the engine, stop the engine, and let it cool. Hot engine parts can burn skin on contact.

Do not run engine unless park brake is locked.

Be careful to prevent clothing, jewelry, or long hair from getting caught in the fan blades, belts, or any other moving parts.





M21,SAU,I -19-09SEP85

PREVENT BATTERY EXPLOSIONS

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydometer.

Always remove grounded (-) battery clamp first and replace it last.



O53,EXPLO -19-29J

10-05-5



CAUTION: 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:

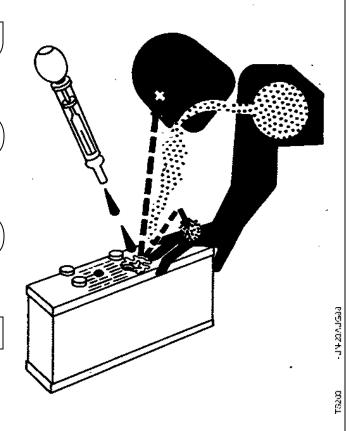
- 1. Filling batteries in a well-ventilated area.
- 2. Wearing eye protection and rubber gloves
- 3. Avoiding breathing fumes when electro yte is added.
- 4. Avoiding spilling or dripping electrolyte.
- 5. Use proper jump start procedure.

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 10—15 minutes. Get medical attention immediately.

If acid is swallowed:

- 1. Drink large amounts of water or milk.
- 2. Then drink milk of magnesia, beaten eggs, or vegetable oil.
- 3. Get medical attention immediately.





O53,ACID -19-29JAN86

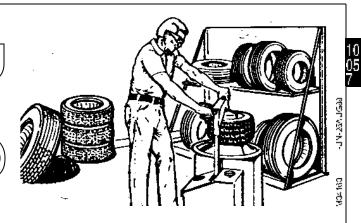




SERVICE TIRES SAFELY

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job. Have it done by your John Deere dealer or a qualified tire repair service.

When sealing tire beads on rims, never exceed 35 kg (241 kPa) (2.4 bar) or maximum inflation pressures specified by tire manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, relubricate bead and reinflate.



O53,TIRE4 -19-21 AP R86





















Group 10 General Specifications

570 SKID-STEER LOADER	
ENGINE Manufacturer Model Cylinders Bore and stroker 3.58 x 4.06 in. (91 x 103.2 mm) Displacement Fast idle Slow idle Horsepower Intake valve clearance (cold) Exhaust valve clearance (cold) Spark plug Spark Plug gap Spark Plug gap Spark plug torque Gradability (maximum angle for engine operation on intermittent basis)	
CAPACITIES Engine oil with filter Fuel tank Cooling system Hydraulic system	5 qt (4.7 L) 10 gal (38 L) 6 qt (5.7 L) 15 gal (57 L)
ELECTRICAL SYSTEM Battery	37 amp
HYDROSTATIC TRANSMISSION Manufacturer Charge filter Relief pressure Warning light pressure setting 50	
HYDRAULIC SYSTEM Relief pressure	Cessna
	M21,1010U,A -19-10JUN86
((



Rod size Breakout force BUCKET CYLINDER Type Bore Stroke Rod size Breakout force Raising time with SAE operati Dumping time with SAE operati Lowering time empty Retract time empty	ng load ting load			Double-acting
TIRE SIZES AND PRESSURES 5.70 X 15 (4-ply tubeless) 27 x 8.50 x 15 (6-ply tubeless 27 x 10.50 x 15 (6-ply tubeles Wheel bolt torque				50 psi (3.5 bar) (350 kPa) 40 psi (2.8 bar) (280 kPa) 40 psi (2.8 bar) (280 kPa) 150 lb-ft (200 N·m)
OPERATING WEIGHT				
BUCKET CAPACITIES AND V	VEIGHTS			
Bucket size in. (M)	Struck Capacity cu. ft. (M³)		Heaped Capacity cu. ft. (M³)	Weight lbs. (kg)
*47 (1.19) utility bucket 54 (1.37) dirt and foundry bucket 54 (1.37) utility bucket 60 (1.52) utility bucket 60 (1.52) low profile bucket 66 (1.68) light materials bucket	8.8 (0.25) 7.5 (0.21) 10.2 (0.29) 11.3 (0.32) 6.4 (0.18) 12.5 (0.35)		11.0 (0.31) 9.5 (0.27) 12.7 (0.34) 14.1 (0.40) 8.4 (0.24) 15.6 (0.44)	231 (105) 256 (116) 254 (115) 272 (123) 289 (131) 298 (135)
*Use with 5.70 x 15 tires only.				
(Specifications and design subject to	change without notice.)			M21,1010U,B -19-10OCT86



575 SKID-STEER LOADER

ENGINE Manufacturer Model Cylinders Bore and stroke Displacement Fast idle Slow idle Horsepower (mfg. rating) Operating horsepower Intake valve clearance (cold) Gradability (maximum angle for engine operation on intermittent basis) Yanmar Yanmar Yanmar Yanmar Yanmar Yanmar ATNA82RJL Diesel S128 x 3.39 in. (82 x 86 mm) 83.1 in.³ (1362 cm³) 83.1 in.³ (1362 cm³) 2950 rpm Slow idle 2950 rpm 28.7 at 2800 rpm (24.6 kW) 0014 in. (0.35 mm) Condability (maximum angle for engine operation on intermittent basis)
CAPACITIES Engine oil with filter 6.4 qt (6 L) Fuel tank 10 gal (38 L) Cooling system 6 qt (5.7 L) Hydraulic system 15 gal (57 L) ELECTRICAL SYSTEM Battery 12 V, cold cranking capacity: 445 amps at 0°F (-18°C)
Alternator
Manufacturer Cessna Charge filter 10 micron Relief pressure 4000 psi (276 bar) (27 580 kPa) Warning light pressure setting 50 psi (3.5 bar) (350 kPa)
HYDRAULIC SYSTEM Relief pressure 2000 psi (138 bar) (13 790 kPa) Pump manufacturer Cessna Return filter 10 micron Suction screen 100 mesh Pump output 8.2 gpm (31 L/min) at 2800 rpm
Displacement
Displacement

LIFT ARM CYLINDERS				Double-acting
Stroke		.		
BUCKET CYLINDER Type				Double-acting
Stroke				Double-acting 3 in. (76 mm) 9-1/2 in. (240 mm) 1-1/2 in. (38 mm) 1950 lb (885 kg) 4 sec 1.7 sec 2.7 sec
Retract time empty				
27 x 8.50 x 15 (6-ply tubeless) 27 x 10.50 x 15 (6-ply tubeless))			50 psi (3.5 bar) (350 kPa) 40 psi (2.8 bar) (280 kPa) 40 psi (2.8 bar) (280 kPa)
TRAVEL SPEEDS (Forward and Reverse) 0-7.5 mph (11.2 km/h)				
OPERATING WEIGHT				
BUCKET CAPACITIES AND WEIGHTS				
Bucket size in. (M)	Struck Capacity cu. ft. (M³)		Heaped Capacity cu. ft. (M³)	Weight Ibs (kg)
*47 (1.19) utility bucket 54 (1.37) dirt and foundry	8.8 (0.25)		11.0 (0.31)	231 (105)
bucket 54 (1.37) utility bucket 60 (1.52) utility bucket 60 (1.52) low profile bucket	7.5 (0.21) 10.2 (0.29) 11.3 (0.32) 6.4 (0.18)		9.5 (0.27) 12.7 (0.34) 14.1 (0.40) 8.4 (0.24)	256 (116) 254 (115) 272 (123) 289 (131)
66 (1.68) light materials bucket	12.5 (0.35)		15.6 (0.44)	298 (135)
*Use with 5.70 x 15 tires only.				
(Specifications and design subject to o	change without notice.)			M21,1010U,D -19-20MAY86



375 SKID-STEER LOADER

375 SKID-STEER LOADER
ENGINE Make and model Cooling system Fuel Cylinders Horsepower at governed rpm Bore Stroke Displacement RPM speeds: Fast (no load) Slow (no load) Slow (no load) Fuel tank capacity Cooling capacity Mater Cooled Yanmar 3T N66 A 3400 rpm (12.7 kW) Sample 3400 rpm (12.7 kW) A 14.8 cu in (.658 L) A 1.8 cu in (.658 L) Cooling capacity A 1.8 cu in (.658 L) A 1.
ELECTRICAL SYSTEM Alternator
TRANSMISSION Type
TRAVEL SPEED (Forward/Backward)
HYDRAULIC SYSTEM Pump type

Breakout force, (bucket) SAE IEMC	675 lb (306 kg)
SHIPPING WEIGHT Without attachments	. (
Boom lowered	
*Performance ratings taken with: —Full fuel tank, 175 lb operator	
—42-in. (106.7 cm) utility bucket —8.50x12-in. tires	_
(Specifications and design subject to change without notice.)	M21,1010U,F -19-10OCT86



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