570, 575 and 375 Skid-Steer Loaders

John Deere Horicon Works
TM1359 (20APR90)
LITHO IN U.S.A.
ENGLISH

Contents

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.

TM1359-19-20APR90

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TM1359-19-20APR90

Section 10
GENERAL INFORMATION

Contents

INTRODUCTION

This manual is part of a total service support program.

FOS MANUALS—REFERENCE

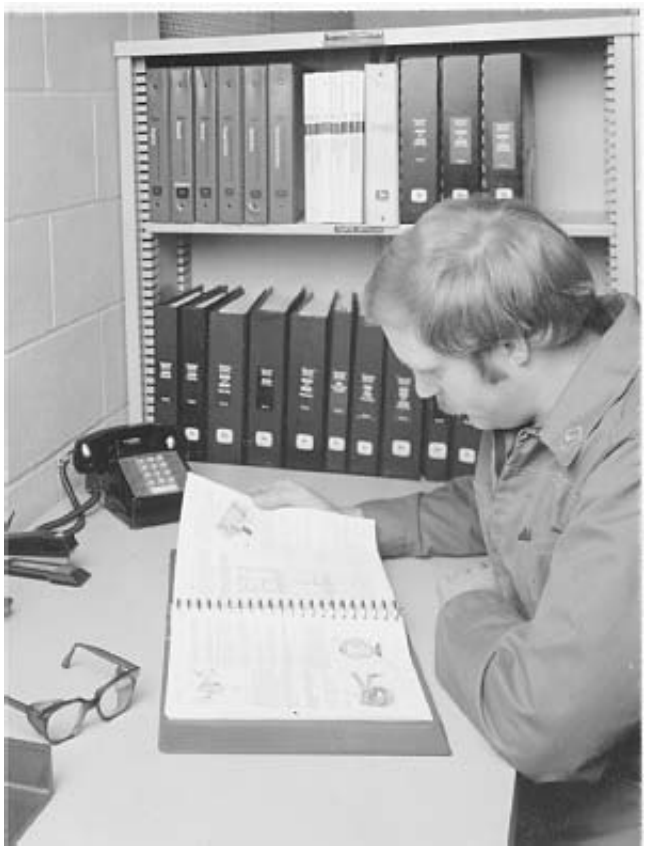
TECHNICAL MANUALS—MACHINE SERVICE

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

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05
2

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 logical 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 all 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.

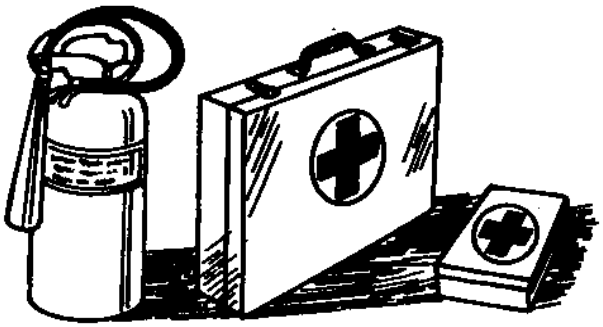
M45,1005A,3 -19-09JAN85

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.

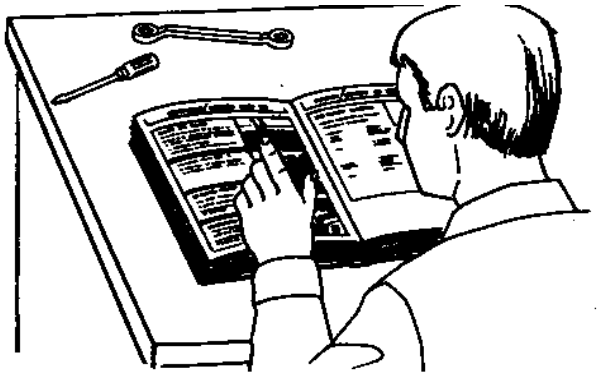
O53,FIRE1 -19-26JAN90

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 impair the function and/or safety and affect machine life.



O53,READ2 -19-08JUL85

WEAR PROTECTIVE CLOTHING

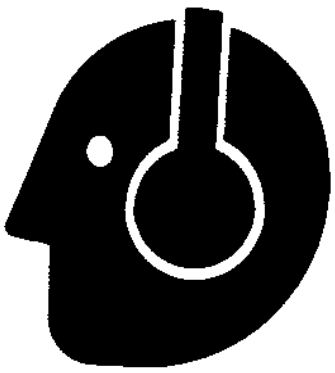
Wear fairly tight clothing .... and safety equipment.

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.



O53,NOISE -19-26JAN90

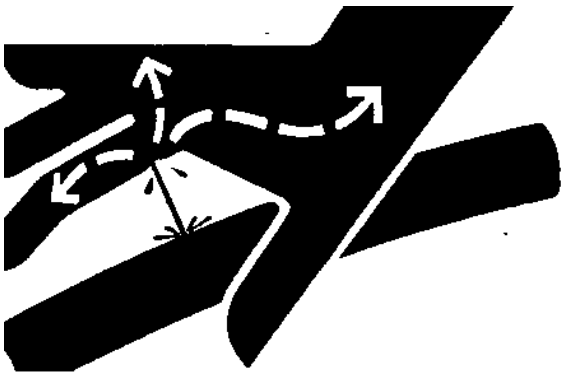
AVOID HIGH-PRESSURE FLUIDS

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.

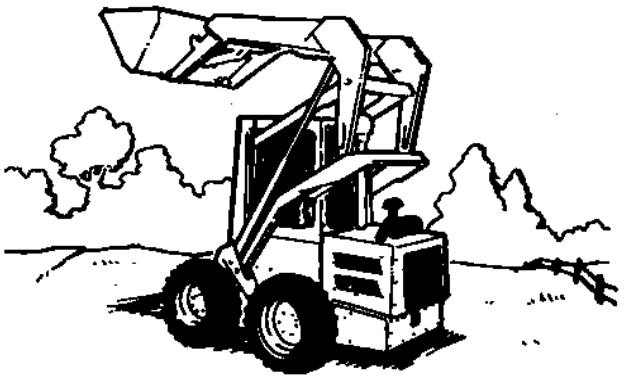
Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

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 lift 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 you install or remove attachments.

Before you make repairs or adjustments, stop the engine.

Do not change engine governor settings or overspeed 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.

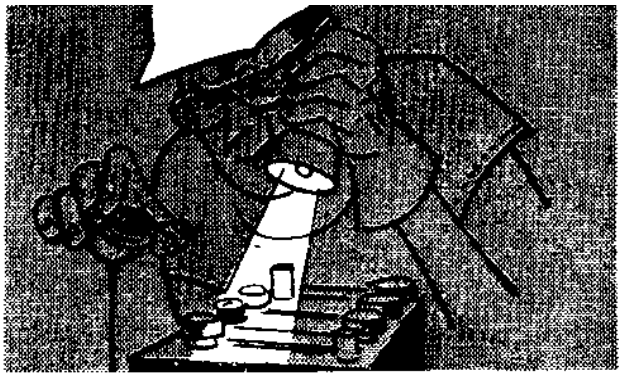
Before you work on any part of the engine, stop the engine, and let it cool. Hot engine parts can burn skin on contact.

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.

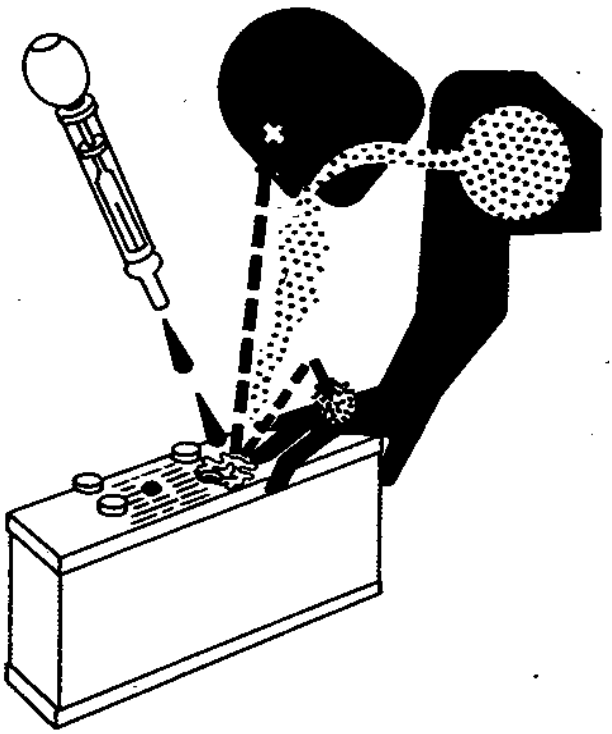
O53,EXPLO -19-29JAN86

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 electrolyte 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.

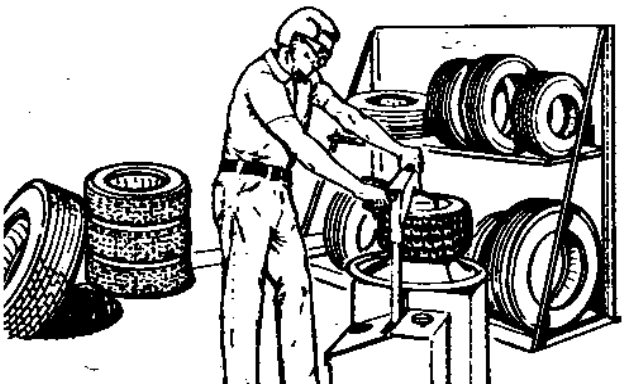


O53,ACID -19-29JAN86

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 psi (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 -19-21APR86

570 SKID-STEER LOADER

ENGINE

Manufacturer	Teledyne Continental
Model	TM13
Cylinders	2
Bore and stroker 3.58 x 4.06 in. (91 x 103.2 mm)	
Displacement	81.9 in.^{3} (1342 cm^3)
Fast idle	2800 rpm
Slow idle	1000 rpm
Horsepower	31 at 2800 rpm
Intake valve clearance (cold)	0.014 in. (0.35 mm)
Exhaust valve clearance (cold)	0.018 in. (0.46 mm)
Spark plug	Champion RN9YC
Spark Plug gap	0.035 in. (0.89 mm)
Spark plug torque	30 lb-ft (41 N·m)
Gradability (maximum angle for engine operation on intermittent basis)	45° all directions

CAPACITIES

Engine oil with filter	5 qt (4.7 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	37 amp
Circuit breaker	20 amp

HYDROSTATIC TRANSMISSION

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

M21,1010U,A -19-10JUN86

LIFT ARM CYLINDERS

Type . . . . . Double-acting
Bore 1-1/2 in. (38 mm)
Stroke . . . . . 33 in. (840 mm)
Rod size . . . . . 1-1/4 in. (32 mm)
Breakout force . . . . . 1800 lb (816 kg)

BUCKET CYLINDER

Type . . . . . Double-acting
Bore . . . . . 3 in. (76 mm)
Stroke . . . . . 9-1/2 in. (240 mm)
Rod size . . . . . 1-1/2 in. (38 mm)
Breakout force . . . . . 1950 lb (885 kg)
Raising time with SAE operating load . . . . . 4 sec
Dumping time with SAE operating load . . . . . 1.7 sec
Lowering time empty . . . . . 2.7 sec
Retract time empty . . . . . 1.8 sec
Maximum reach . . . . . 29 in. (740 mm)

TIRE SIZES AND PRESSURES

5.70 X 15 (4-ply tubeless) . . . . . 50 psi (3.5 bar) (350 kPa)
27 x 8.50 x 15 (6-ply tubeless) . . . . . 40 psi (2.8 bar) (280 kPa)
27 x 10.50 x 15 (6-ply tubeless) . . . . . 40 psi (2.8 bar) (280 kPa)
Wheel bolt torque . . . . . 150 lb-ft (200 N·m)

TRAVEL SPEEDS

(Forward and Reverse) . . . . . 0—7.5 mph (11.2 km/h)

OPERATING WEIGHT

. . . . . 3340 lb (1515 kg)

BUCKET CAPACITIES AND WEIGHTS

Bucket size in. (M)	**Struck Capacity cu. ft. (M^3)**	**Heaped Capacity cu. ft. (M^3)**	**Weight lbs. (kg)**
*47 (1.19) utility bucket	8.8 (0.25)	11.0 (0.31)	231 (105)
54 (1.37) dirt and foundry bucket	7.5 (0.21)	9.5 (0.27)	256 (116)
54 (1.37) utility bucket	10.2 (0.29)	12.7 (0.34)	254 (115)
60 (1.52) utility bucket	11.3 (0.32)	14.1 (0.40)	272 (123)
60 (1.52) low profile bucket	6.4 (0.18)	8.4 (0.24)	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 change without notice.)

M21,1010U,B -19-10OCT86

575 SKID-STEER LOADER

ENGINE

Manufacturer	Yanmar
Model	3TNA82RJL Diesel
Cylinders	3
Bore and stroke	3.23 x 3.39 in. (82 x 86 mm)
Displacement	83.1 in.^{3} (1362 cm^3)
Fast idle	2950 rpm
Slow idle	950 rpm
Horsepower (mfg. rating)	33 at 3600 rpm (24.6 kW)
Operating horsepower	28.7 at 2800 rpm (21.4 kW)
Intake valve clearance (cold)	0.014 in. (0.35 mm)
Exhaust valve clearance (cold)	0.018 in. (0.46 mm)
Gradability (maximum angle for engine operation on intermittent basis)	45° all directions

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	37 amp
Circuit breaker	20 amp

HYDROSTATIC TRANSMISSION

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	0.66 cu in. per rev (10.8 cm^3)

SAE RATED LOAD LIMIT

	1200 LB (544 KG)

DIMENSIONS—575 Skid-Steer Loader with 54-in. (1372 mm) bucket and 27 x 8.50 x 15 tires

Overall length	116-1/2 in. (2959 mm)
Overall width	54 in. (1372 mm)
Maximum height, bucket raised	126 in. (3200 mm)
Height to top of cab	171-3/4 in. (1822 mm)

M21,1010U,C -19-20MAY86

LIFT ARM CYLINDERS

Type . . . . . Double-acting
Bore . . . . .
Stroke . . . . . 33 in. (840 mm)
Rod size . . . . . 1-1/4 in. (32 mm)
Breakout force . . . . . 1800 lb (816 kg)

BUCKET CYLINDER

Type . . . . . Double-acting
Bore . . . . . 3 in. (76 mm)
Stroke . . . . . 9-1/2 in. (240 mm)
Rod size . . . . . 1-1/2 in. (38 mm)
Breakout force . . . . . 1950 lb (885 kg)
Raising time with SAE operating load . . . . . 4 sec
Dumping time with SAE operating load . . . . . 1.7 sec
Lowering time empty . . . . . 2.7 sec
Retract time empty . . . . . 1.8 sec
Maximum reach . . . . . 29 in. (740 mm)

TIRE SIZES AND PRESSURES

5.70 X 15 (4-ply tubeless) . . . . . 50 psi (3.5 bar) (350 kPa)
27 x 8.50 x 15 (6-ply tubeless) . . . . . 40 psi (2.8 bar) (280 kPa)
27 x 10.50 x 15 (6-ply tubeless) . . . . . 40 psi (2.8 bar) (280 kPa)
Wheel bolt torque . . . . . 150 lb-ft (200 N·m)

TRAVEL SPEEDS

(Forward and Reverse) . . . . . 0—7.5 mph (11.2 km/h)

OPERATING WEIGHT

. . . . . 3340 lb (1515 kg)

BUCKET CAPACITIES AND WEIGHTS

Bucket size in. (M)	**Struck Capacity cu. ft. (M^3)**	**Heaped Capacity cu. ft. (M^3)**	**Weight lbs (kg)**
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54 (1.37) utility bucket	10.2 (0.29)	12.7 (0.34)	254 (115)
60 (1.52) utility bucket	11.3 (0.32)	14.1 (0.40)	272 (123)
60 (1.52) low profile bucket	6.4 (0.18)	8.4 (0.24)	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 change without notice.)

M21,1010U,D -19-20MAY86

375 SKID-STEER LOADER

ENGINE

Make and model	Yanmar 3TN66
Cooling system	Water Cooled
Fuel	Diesel
Cylinders	3
Horsepower at governed rpm	17 hp @ 3400 rpm (12.7 kW)
Bore	2.6 in. (66 mm)
Stroke	2.53 in. (64.2 mm)
Displacement	41.8 cu in (.658 L)
RPM speeds:	
Fast (no load)	3600 to 3670 rpm
Slow (no load)	1400 to 1500 rpm
Fuel tank capacity	6 U.S. gal. (22.7 L)
Crankcase capacity	2.5 qt. (2.4 L)
Cooling capacity	4.6 qt. (4.4 L)

ELECTRICAL SYSTEM

Alternator	20 amp
Battery cold capacity amps at 0˚F (-18˚C)	390 amps
Battery	BCI-71, 12 V
Regulator	Solid state

TRANSMISSION

Type	Hydrostatic
Manufacturer	
—Pumps	Sundstrand
—Motors	Nichols 130 Series
Pump type	Axial piston, variable swash plate
Motor type	Geroller motor
Filter	10 micron (no by-pass)
Capacity	9 U.S. gal (34 L)

TRAVEL SPEED

(Forward/Backward)	0 to 5.8 mph (0 to 9.3 km/h)

BOOM CYLINDERS

	Double acting

HYDRAULIC SYSTEM

Pump type	Gear
Pump manufacturer	Parker
Output (at governed rpm)	8 gpm (30.2 L/min)
Displacement	13 cm^3 (.512 cu in)
Main system relief pressure	1600 psi (11,032 kPa)
Suction screen	100 mesh
Filter (return side no by-pass)	10 micron
Hydraulic fluid	JD HY-GARD® or equivalent SAE J20A oil

M21,1010U,E -19-10OCT86

PERFORMANCE RATING*

Operating load, SAE (per SAE J818)	675 lb (306 kg)
Tipping load, SAE	1365 lb (619 kg)
Breakout force, (bucket) SAE IEMC	1409 lb (619 kg)
Operating weight, SAE	2200 lb (998 kg)

SHIPPING WEIGHT

Without attachments	1750 lb (794 kg)

CYCLE TIMES (SECONDS)

Boom raised	5.5 seconds
Boom lowered	3.4 seconds
Bucket rollback	1.9 seconds
Bucket dumping	0.9 seconds

TIRE PRESSURE

5.70x12	50 psi (345 kPa)
23x8.50-12	35 psi (240 kPa)

**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

BOLT TORQUE CHART

Grade of Bolt		SAE-2	SAE-5	SAE-8		
Min. Tensile Strength		64,000 PSI	105,000 PSI	150,000 PSI		
Grade Marking on Bolt					Socket or Wrench Size	
U.S. Standard					U.S. Regular	
Bolt Dia.	U.S. Dec. Equiv.		TORQUE IN FOOT POUNDS		Bolt Head	Nut
1/4	0.250	(8.14 N-m) 6	(13.56 N-m) 10	(18.98 N-m) 14	7/16	7/16
5/16	0.3125	(17.63 N-m) 13	(27.12 N-m) 20	(40.68 N-m) 30	1/2	1/2
3/8	0.375	(31.19 N-m) 23	(47.46 N-m) 35	(67.80 N-m) 50	9/16	9/16
7/16	0.4375	(47.46 N-m) 35	(74.58 N-m) 55	(108.48 N-m) 80	5/8	11/16
1/2	0.500	(74.58 N-m) 55	(115.26 N-m) 85	(162.72 N-m) 120	3/4	3/4
9/16	0.5625	(101.70 N-m) 75	(176.28 N-m) 130	(237.30 N-m) 175	13/16	7/8
5/8	0.625	(142.38 N-m) 105	(230.52 N-m) 170	(325.44 N-m) 240	15/16	15/16
3/4	0.750	(250.86 N-m) 185	(406.80 N-m) 300	(576.30 N-m) 425	1-1/8	1-1/8
7/8	0.875	*(216.96 N-m) 160	(616.98 N-m) 445	(928.86 N-m) 685	1-5/16	1-5/16
1	1.000	(339.00 N-m) 250	(908.52 N-m) 670	(1396.68 N-m) 1030	1-1/2	1-1/2

Multiply readings by 12 for inch-pound values.

** "B" Grade bolts larger than 3/4-inch (19.1 mm) are sometimes formed hot rather than cold, which accounts fo the lower recommended torque.*

NOTE: Allow a tolerance of plus or minus 10 per cent on all torques given in this chart.

SET SCREW SEATING TORQUE CHART

Screw Size	Cup Point	Square Head
	Torque in Inch Pounds	
#5	(1.02 N-m) 9	—
#6	(1.02 N-m) 9	—
#8	(2.26 N-m) 20	—
#10	(3.73 N-m) 33	—
1/4	(9.83 N-m) 87	(23.96 N-m) 212
5/16	(18.65 N-m) 165	(47.46 N-m) 420
3/8	(32.77 N-m) 290	(93.79 N-m) 830
7/16	(48.59 N-m) 430	—
1/2	(70.06 N-m) 620	(237.30 N-m) 2100
9/16	(70.06 N-m) 620	—
5/8	(138.43 N-m) 1225	(480.25 N-m) 4250
3/4	(240.13 N-m) 2125	(870.10 N-m) 7700

Divide readings by 12 for foot-pound values
NOTE: Allow a tolerance of plus or minus 10 per cent on all torques given in this chart.

M21,1010K,C -19-25AUG82

METRIC HARDWARE TORQUE SPECIFICATIONS

Metric Standard Thread

Thread	8.8		10.9		12.9	
	N·m	(lb-ft)	N·m	(lb-ft)	N·m	(lb-ft)
M5	5.9	(4.4)	7.9	(5.8)	9.8	(7.2)
M6	9.8	(7.2)	13.8	(10.2)	16.7	(12.3)
M8	24.6	(18.1)	34.4	(25.4)	40.2	(29.6)
M10	48.1	(35.5)	67.8	(50.0)	81.5	(60.1)
M12	84.4	(62.2)	118.0	(87.0)	142.0	(105.0)
M14	133.0	(98.0)	187.0	(138.0)	226.0	(187.0)
M16	206.0	(152.0)	290.0	(214.0)	348.0	(257.0)
M18	285.0	(210.0)	398.0	(294.0)	476.0	(351.0)
M20	402.0	(296.0)	570.0	(420.0)	677.0	(499.0)
M22	540.0	(398.0)	765.0	(564.0)	914.0	(674.0)
M24	697.0	(514.0)	980.0	(723.0)	1180.0	(870.0)

Metric Fine Thread

Thread	8.8		10.9		12.9	
	N·m	(lb-ft)	N·m	(lb-ft)	N·m	(lb-ft)
M8 x 1	26.5	(19.5)	37.3	(27.5)	44.2	(32.6)
M10 x 1	47.1	(34.7)	68.8	(50.7)	81.5	(60.1)
M12 x 1.5	88.4	(65.2)	123.0	(91.0)	147.0	(106.0)
M14 x 1.5	147.0	(108.0)	206.0	(152.0)	246.0	(181.0)
M16 x 1.5	221.0	(163.0)	309.0	(228.0)	373.0	(275.0)
M18 x 1.5	319.0	(235.0)	451.0	(333.0)	540.0	(398.0)
M20 x 1.5	451.0	(333.0)	628.0	(463.0)	755.0	(557.0)
M22 x 1.5	599.0	(442.0)	845.0	(623.0)	1030.0	(760.0)
M24 x 2	765.0	(564.0)	1080.0	(796.0)	1275.0	(940.0)
M26 x 2	1130.0	(833.0)	1570.0	(1158.0)	1915.0	(1412.0)

O53,TORQUE -19-13MAR85

TUNE-UP SPECIFICATIONS

570 SKID-STEER LOADER

Fast idle	2800 rpm
Slow idle	1000 rpm
Horsepower	31 at 2800 rpm
Intake valve clearance (cold)	0.35 mm (0.014 in.)
Exhaust valve clearance (cold)	0.46 mm (0.018 in.)
Spark plug	Champion RN9YC
Spark plug gap	0.89 mm (0.035 in.)
Spark plug torque	41 N·m (30 lb-ft)
Gradability (maximum angle for engine operation on intermittent basis)	45° all directions

CAPACITIES

Engine oil with filter	4.7 L (5 qt)
Fuel tank	38 L (10 gal)
Cooling system	5.7 L (6 qt)
Hydraulic system	57 L (15 gal)

575 SKID-STEER LOADER

Fast idle	2950 rpm
Slow idle	950 rpm
Horsepower (mfg. rating)	33 at 3600 rpm (24.6 kW)
Operating horsepower	28.7 at 2800 rpm (21.4 kW)
Intake valve clearance (cold)	0.2 mm (0.008 in.)
Exhaust valve clearance (cold)	0.2 mm (0.008 in.)
Gradability (maximum angle for engine operation on intermittent basis)	45° all directions

CAPACITIES

Engine oil with filter	6.L (6.4 qt)
Fuel tank	38 L (10 gal)
Cooling system	5.7 L (6 qt)
Hydraulic system	57 L (15 gal)

375 SKID-STEER LOADER

Fast idle	3600/3670 rpm
Slow idle	1400/1500 rpm
Horsepower	17 at 3400 rpm (12.7 kW)
Intake valve clearance (cold)	0.2 mm (0.008 in.)
Exhaust valve clearance (cold)	0.2 mm (0.008 in.)
Gradability (maximum angle for engine operation on intermittent basis	45° all directions

CAPACITIES

Engine oil with filter	3 L (3.1 qt)
Fuel tank	22.7 L (6 gal)
Cooling system	4.4 L (4.6 qt)
Hydraulic system	34 L (9 gal)

M21,102OU,A -19-27OCT86

FUEL

CAUTION: Handle fuel carefully. If the engine is running, do not fill the fuel tank. If engine is hot, let engine cool several minutes before you add fuel. Do not smoke while you fill the fuel tank or service the fuel system. Fill fuel tank only to bottom of filler neck.

Fuel tank cap is vented, Use only a vented cap.

M21,FLU,A -19-30SEP85

Check Fuel Gauge Regularly

Use regular or unleaded gasoline. Do not alternate. Use one type. Regular gasoline should have minimum octane rating of 85. Gasohol is not recommended.

Fuel tank capacity is 10 gal (38 L).

Fill fuel tank at end of each day's operation.

M21,FLU,B -19-10SEP85

STORING AND HANDLING FUEL

Buy clean, high quality fuel from an honest supplier.

IMPORTANT: Keep dirt, scale, water or other foreign material out of fuel.

Keep fuel in a clean container in a protected area away from buildings.

Drain water and sediment from storage tank regularly.

Keep storage tank on its side with plug up.

Avoid storing fuel for a long time. If you keep fuel for a long time, add a fuel conditioner to prevent water condensation and varnish. See your John Deere dealer for conditioner.

M21,FLA,B -19-10APR85

ENGINE OIL

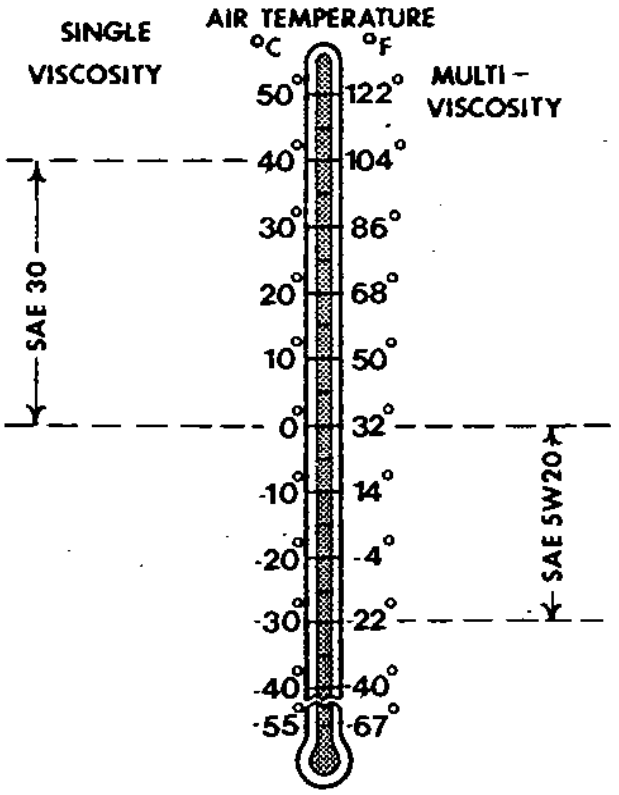
Use oil viscosity, as shown on the temperature chart for the expected air temperature range during the drain interval.

John Deere TORQ-GARD SUPREME® engine oil is recommended. If other oils are used, they must be premium quality engine oils meeting performance requirements of:

—API Service Classification SD, SE, SE/CC or SF.

Quality engine oils are blended, so additives are neither required nor recommended.

Some increase in oil consumption may be expected when SAE 5W-20 oil is used. Check oil level frequently.



M21,FLJ,02 -19-22APR83

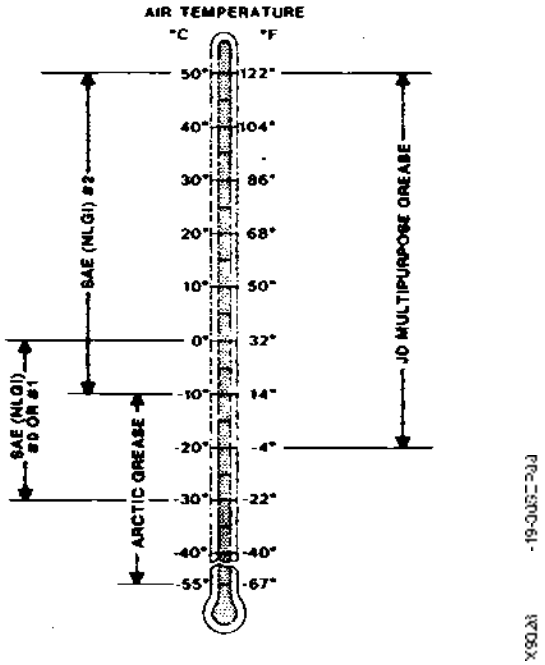
GENERAL PURPOSE GREASE

Use grease as shown on the temperature chart for the expected air temperature range during the service interval.

John Deere Multipurpose Grease is recommended. If other greases are used, use:

—SAE Multipurpose Grease.
—Multipurpose Grease containing 3 to 5 percent molybdenum disulfide.

At temperatures below -22˚F (-30˚C), use arctic greases such as those meeting Military Specification MIL-G-10924C.



M21,FLJ,05 -19-12MAY83

HYDRAULIC OIL

Use John Deere HY-GARD® Transmission and Hydraulic Oil or an equivalent or oil meeting John Deere J20A specifications.

M21,FLU,C -19-10SEP85

COLD WEATHER OPERATION

Additional information on cold weather operation is available from your John Deere dealer.

M21,FLA,E -19-23NOV83

ALTERNATIVE LUBRICANTS

Conditions in certain geographical areas outside the United States and Canada may require different lubricant recommendations than those printed in the operator's manual. Consult your John Deere dealer to obtain alternative lubricant recommendations.

M21,FLA,F -19-23NOV83

FUEL

CAUTION: Handle fuel carefully. If the engine is running, do not fill the fuel tank. If engine is hot, let engine cool several minutes before you add fuel. Do no smoke while you fill the fuel tank or service the fuel system. Fill fuel tank only to bottom of filler neck.

Fuel tank cap is vented. Use only a vented cap.

M21,FLW,A -19-11DEC85

Check fuel gauge regularly.

Fuel tank capacity is 10 gal (38 L).

Fill fuel tank at end of each day's operation.

If engine runs out of fuel:
—Fill full tank.
—Bleed fuel system. (See Bleeding Fuel System in Service/as Necessary section.)

M21,FLW,B -19-11DEC85

FUEL SPECIFICATIONS

Use ONLY clean, high-quality fuel.

Use Grade No. 2-D fuel at temperatures above 40˚F (4˚C).

Use Grade No. 1-D fuel at temperatures below 40˚F (4˚C).

Use Grade No. 1-D fuel for all air temperatures at altitudes above 5000 ft (1500 m).

IMPORTANT: Use fuel with less than 1.0 percent sulfur. If possible, use fuel with less than 0.5 percent sulfur.

If fuel sulfur is more than 0.5 percent, change engine oil and filter every 100 hours.

For maximum filter life, sediment and water should not be more than 0.10 percent.

The cetane number should be 40 minimum. If you operate your machine where air temperatures are normally low or where altitudes are high, you may need fuel with a higher cetane number.

Cloud Point—For cold weather operation, cloud point should be 10˚F (6˚C) below lowest normal air temperature.

M21,FLQ,A -19-12MAR85

FUEL STORAGE

NOTE: Diesel fuels stored for a long time may form gum and plug filters.

Keep fuel in a clean container in a protected area. Water and sediment must be removed before fuel gets to the engine. Do not use de-icers to remove water from fuel. Do not depend on fuel filters to remove water.

If possible, install a water separator at the storage tank outlet. (See you John Deere dealer for this part.)

IMPORTANT: Keep all dirt, scale, water or other foreign material out of fuel.

Store fuel drum on its side with plug up.

M21,FLQU,B -19-02APR85

DO NOT USE GALVANIZED CONTAINERS

IMPORTANT: Diesel fuel stored in galvanized containers reacts with zinc coating on the container to form zinc flakes. If fuel contains water, a zinc gel will also form. The gel and flakes will quickly plug fuel filters and damage fuel injectors and fuel pumps.

DO NOT USE a galvanized container to store diesel fuel.

Store fuel in:
—plastic containers.
—aluminum containers.
—specially coated steel containers made for diesel fuel.

DO NOT USE brass-coated containers: brass is an alloy of copper and zinc.

M21,FLQ,B1 -19-02AUG85

ENGINE OIL

Depending upon the expected air temperature range during the drain interval, use oil viscosity shown on the adjoining temperature chart.

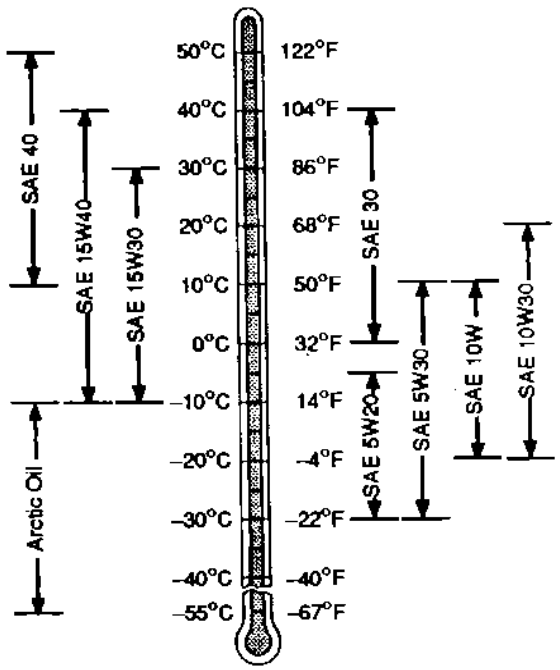
John Deere TORQ-GARD SUPREME® engine oil is recommended. If other oils are used, they must be premium quality engine oils meeting performance requirements of:

—API Service Classification CD/SC
—Military Specification MIL-L-2104C or MIL-L-2104D

Quality engine oils are blended, so additives are neither required nor recommended.

For SAE 5W20, SAE 10W20, and arctic oil viscosity grades, where oils meeting the above requirements may not be available, oils meeting a minimum of API Service classification CC/SC or Military Specification MIL-L46152 may be used, but at a short drain interval.

At temperatures below -30˚C (-22˚F), use arctic oils meeting a minimum of API Service Classification CC/SC or Military Specification MIL-L-46167, but at a shorter drain interval.



O53,ENGOIL -19-11MAY84

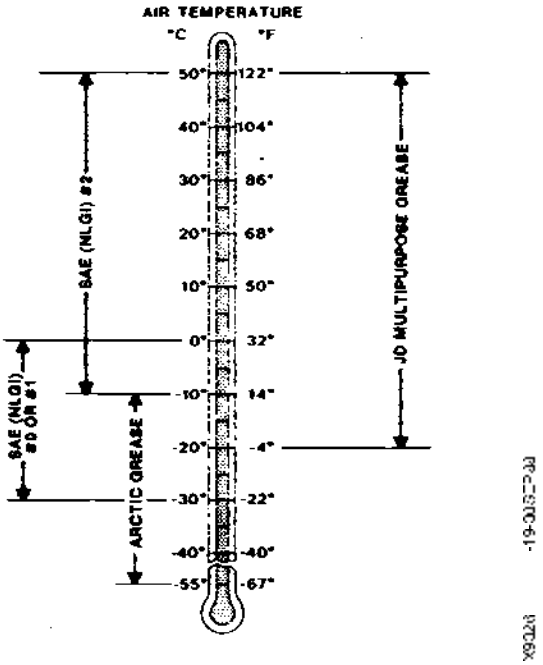
GENERAL PURPOSE GREASE

Use grease as shown on the temperature chart for the expected air temperature range during the service interval.

John Deere Multipurpose Grease is recommended. If other greases are used, use:

—SAE Multipurpose Grease.
—Multipurpose Grease containing 3 to 5 percent molybdenum disulfide.

At temperatures below -22˚F (-30˚C), use arctic greases such as those meeting Military Specification MIL-G-10924C.



M21,FLJ,05 -19-12MAY83

HYDRAULIC OIL

Use John Deere HY-GARD® Transmission and Hydraulic Oil or an equivalent or oil meeting John Deere J20A specifications.

M21,FLU,C -19-10SEP85

COLD WEATHER OPERATION

Additional information on cold weather operation is available from your John Deere dealer.

M45,FLA,E -19-23NOV83

SERIAL NUMBERS

When working on machines or components that are covered by warranty, it is IMPORTANT that you include the tractor Product Identification Number and the component serial number on the warranty claim form.

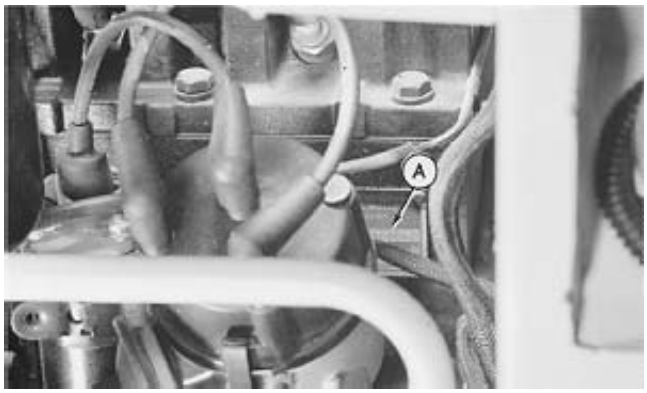
the location of component serial number plates are shown below.

M21,1030R,1 -19-22APR85

PRODUCT IDENTIFICATION NUMBER

M21,1035U,A -19-21MAY86

ENGINE SERIAL NUMBER



570

575 AND 375

M21,1035U,B -19-13JUN86

Section 20
DIESEL ENGINE

Contents

SERVICE EQUIPMENT AND TOOLS

NOTE: Order tools from the U.S. SERVICEGARD™ Catalog or from the European Microfiche Tool Catalog (MTC). Some tools may be available from a local supplier.

Name	Use
Load-Positioning Sling	To remove and install engine

M21,2005U,A -19-30MAY86

SPECIFICATIONS

Item	Measurement	Specification
Engine Mounting Angle Cap Screws	Torque	43 N·m (32 lb-ft)
Engine Mounting Pad Cap Screws	Torque	89 N·m (66 lb-ft)
Hydrostatic Pump Mounting Cap Screws	Torque	37—42 N·m 27—31 (lb-ft)
Engine Mount Bracket-to-Frame Cap Screws	Torque	9 N·m (66 lb-ft)

M21,2005U,B -19-30MAY86

REMOVE ENGINE

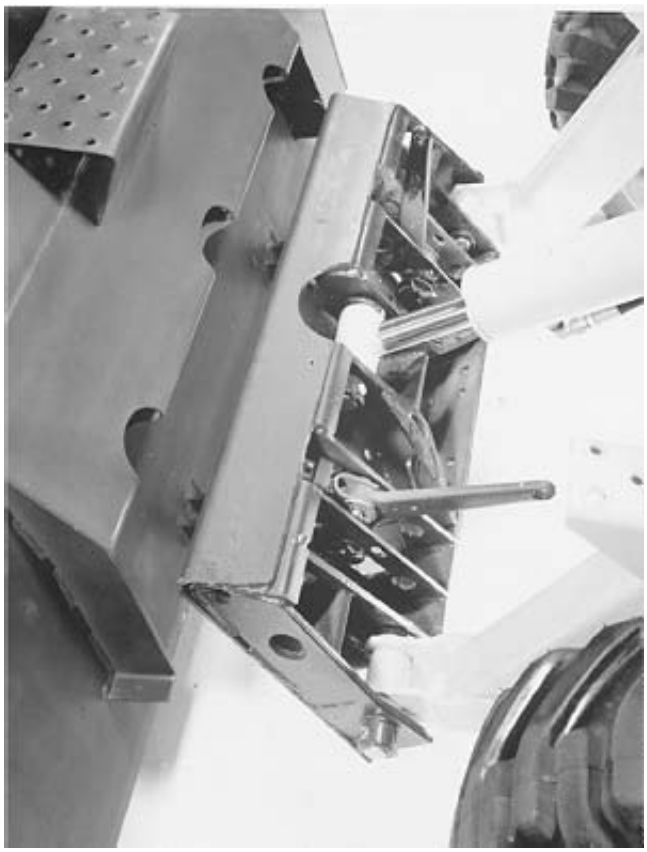
CAUTION: Skid steer is very unbalanced if bucket or attachment is on lift arms. Remove bucket or attachment before removing engine.

1. Remove bucket or any lift arm attachment.

2. Park skid steer safely. Put lift arms on lift arm stops. Open engine shield.

3. Remove radiator. (See Remove Radiator in Section 20, Group 10.)

4. Remove battery.



M21,2005U,C -19-09APR86

5. Remove three lower cap screws on engine shield.

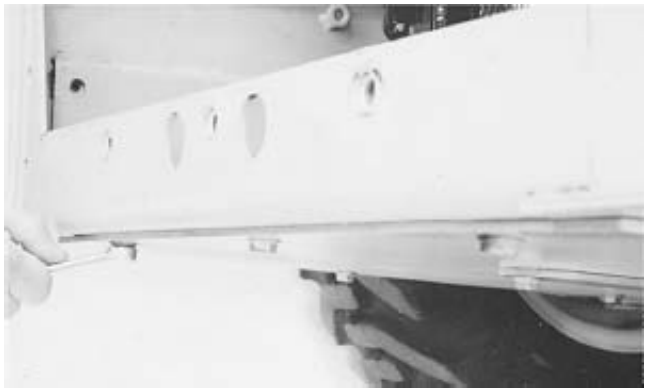
M21,2005U,D -19-09APR86

CAUTION: Engine shield is heavy. Handle this weight safely.

6. Open engine shield. Remove three cap screws on each side of engine shield. Remove engine shield.

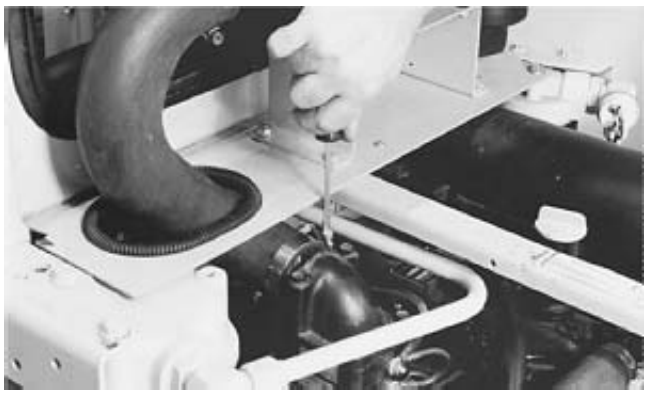
M21,2005U,E -19-09APR86

7. Remove engine belly pan.



M21,2005U,F -19-09APR86

8. Disconnect air cleaner hose.

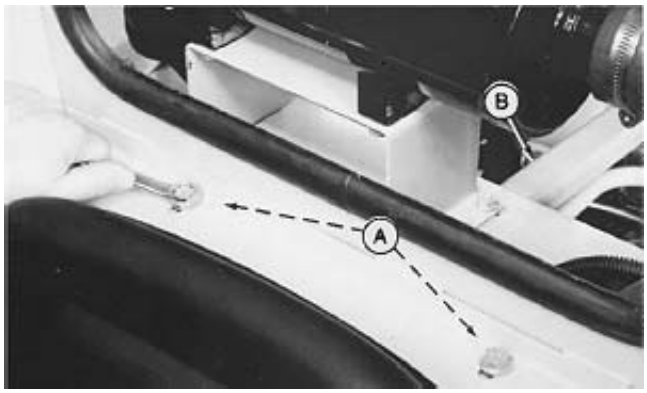


M21,2005U,G -19-09APR86

9. Remove cap screw. Remove cap screw, nut, and fuse holder (A).

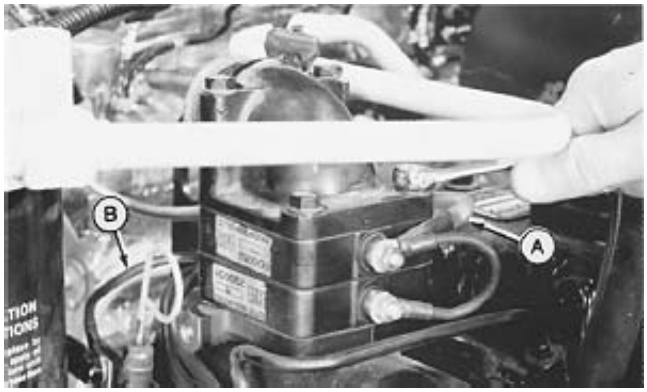
M21,2005U,H -19-09APR86

10. Remove two cap screws, nuts, and wiring harness straps (A). Remove air cleaner assembly (B).



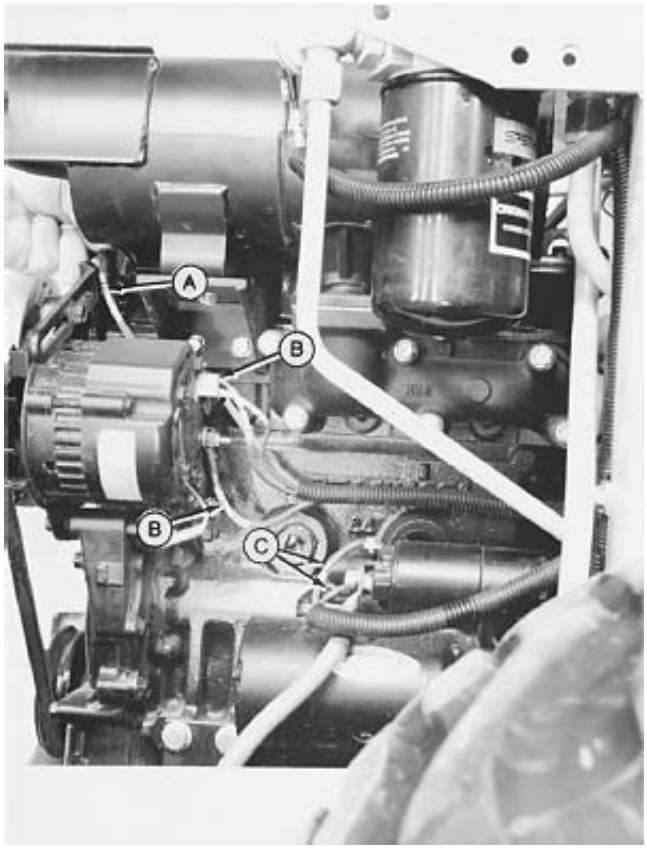
M21,2005U,I -19-09APR86

11. Disconnect air heater wires (A and B). Remove four cap screws and remove air heaters.



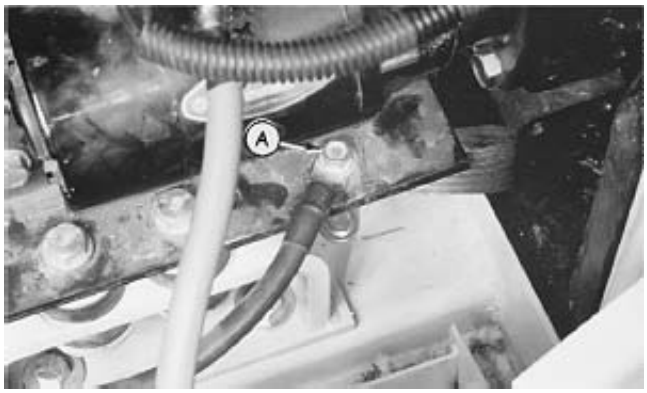
M21,2005U,J -19-09APR86

12. Disconnect wires (A, B and C) from sender, alternator, and starter.



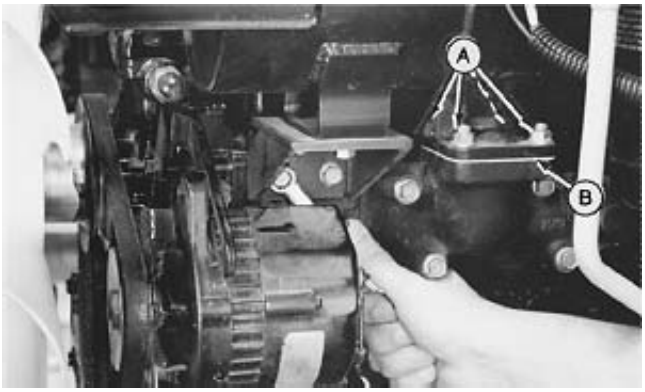
M21,2005U,K -19-30MAY86

13. Disconnect ground strap and negative battery cable from cap screw (A).



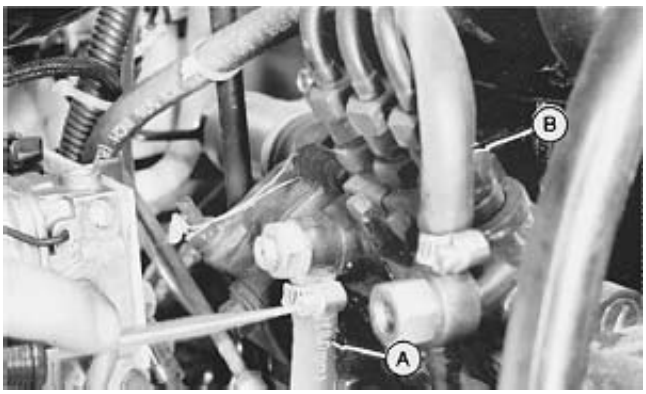
M21,2005U,L -19-09APR86

14. Remove two cap screws and four nuts (A). Remove muffler assembly and gasket (B).



M21,2005U,M -19-09APR86

15. Disconnect fuel lines (A and B). Remove fuel line (B) from behind injector lines and strap on dipstick tube.



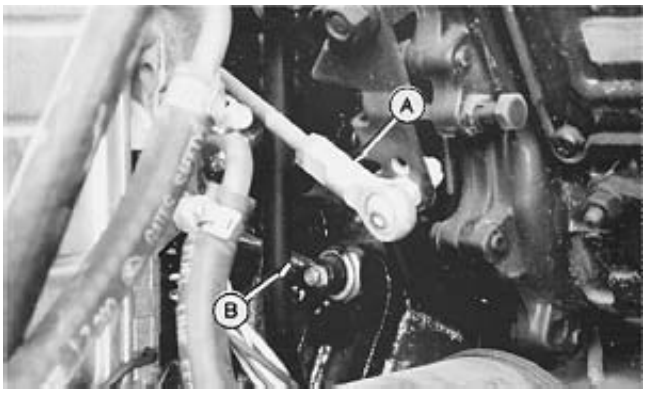
M21,2005U,N -19-09APR86

16. Disconnect wires form electric fuel shut-off harness (A).

M21,2005U,O -19-09APR86

17. Disconnect throttle linkage (A).

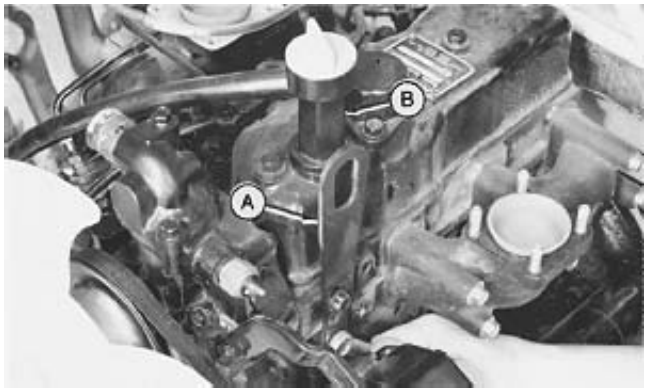
18. Disconnect wire (B) from sender.



M21,2005U,P -19-09APR86

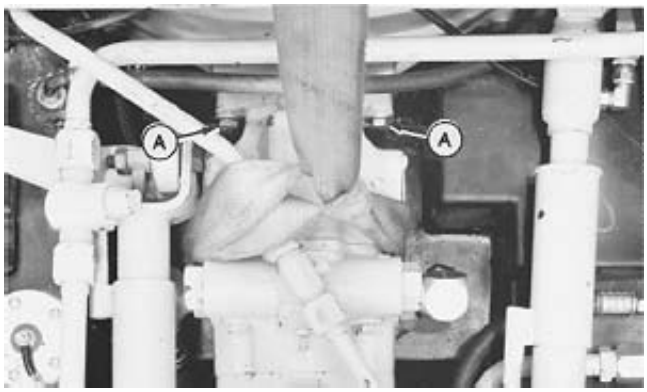
19. Remove wiring harness strap from engine. Install a lifting strap (A) in its place.

20. Remove oil fill tube (B).



M21,2005U,Q -19-09APR86

21. Support hydrostatic pumps with a lifting strap. Remove cap screws (A).



M21,2005U,R -19-09APR86

22. Remove cap screws and nuts from both engine mount brackets.

M21,2005U,S -19-09APR86

Thank you very much for your reading.

Please Click Here Then Get More Information.