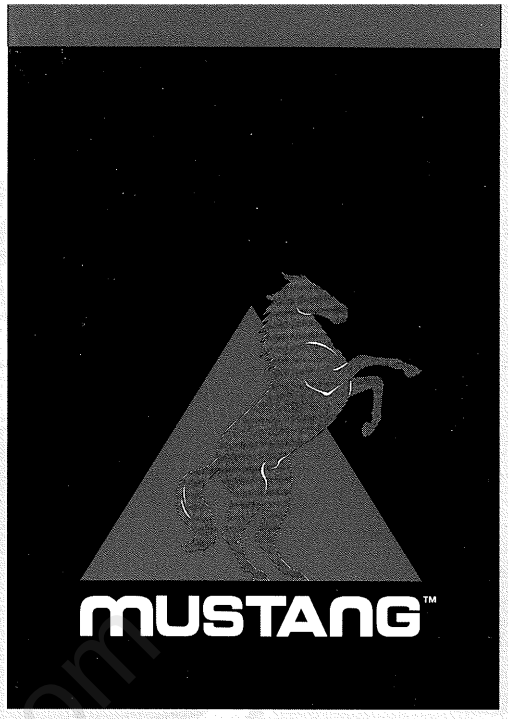
920
921
930A

MUSTANG SKID STEER LOADER



OPERATOR'S MANUAL

Part #000-59895
Revised February, 1992

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Mustang 920, 921 and 930A Skid Steer Loader Operator Manual

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Machine: Skid Steer Loader

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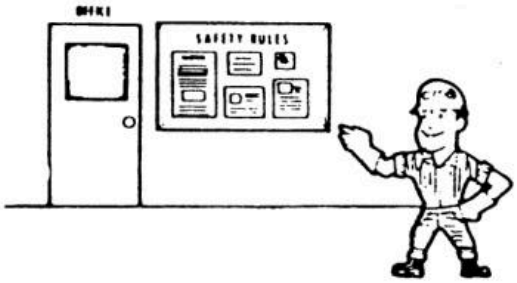
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SAFETY RECOMMENDATIONS

KNOW THE RULES - Every employer is concerned about the safety of those who work for him. Check for the meanings of all the signs, flags, markings, signals and safe operating practices. KNOW THE RULES - LIVE BY THEM. PROTECT YOURSELF - Wear all protective clothing and personal safety devices issued to you by your employer. You may need a hard hat, safety shoes, safety glasses, personal hearing protection, heavy gloves and others. AN OUNCE OF PROTECTION IS WORTH A POUND OF BLOOD.



KNOW YOUR EQUIPMENT - Know your loader, all controls and gauges, study the manual and play it safe. Make sure you KNOW how it operates and WHAT IT CAN and CAN NOT DO.

CLEAN UP - Keep your work area clean, windshields clean, wipe grease and oil, brush away dust or mud, scrape away snow and ice to eliminate slippery surfaces. They become DANGEROUS. A BAD SLIP CAN GET YOU A TRIP — TO THE HOSPITAL.



CHECK YOUR WORK AREA - Inspect the surface over which you will travel. Look for deep holes, drop offs, obstacles, wet, slippery surfaces, loose material, ditches, overhead clearance and terrain. Rough terrain can easily cause an up-set of a vehicle. KEEP ALERT, KEEP SET - DON'T UP-SET VEHICLE.

ADDING FUEL - The key must be off and engine must be off and cooled down before adding fuel! Ground the funnel or fuel nozzle against the filler neck to prevent sparks. When fill is complete, make sure the fuel tank cap is replaced securely! Do not fill fuel tank while smoking, near an open flame or with the engine running. It is recommended that a fire extinguisher be accessible on vehicle or at fuel supply system. YOU CAN GET REAL HIGH BY MIXING GASOLINE WITH A LIGHTED CIGARETTE.

MOUNT PROPERLY - Mount vehicle slowly. Always clean your shoes and wipe your hands before climbing on and operating the controls. Start safely from the operator's seat only with the seat belt fastened. Never start up until you have warned others in the area. BUCKLE UP - THEN START UP.

TEST THE CONTROLS - After starting, check all instruments, gauges and warning lights, flashers, brakes and steering. IF YOU DON'T THINK YOU CAN STOP, DON'T START.

MAKE THE RIGHT START - Be certain that you have the right vehicle to do the job. Use the bucket, blade or other attachment designed for this vehicle to do each job. When changing buckets or installing other attachments, make sure that the *Fast-A-Tach* hitch is properly engaged and secured. Don't overload the bucket or any attachment beyond its rated capacity. Do not use a loader blade as a battering ram. IT'S A LOADER - NOT A TANK.

KEEP YOUR MIND ON YOUR WORK - Always operate your loader from the operator's seat only. Never attempt to work the controls from the ground or leave the operator's seat without first shutting down the engine, lowering the bucket to the ground and setting the parking brake. Keep your entire body inside the operator's compartment area. STAY IN THE SEAT AREA.

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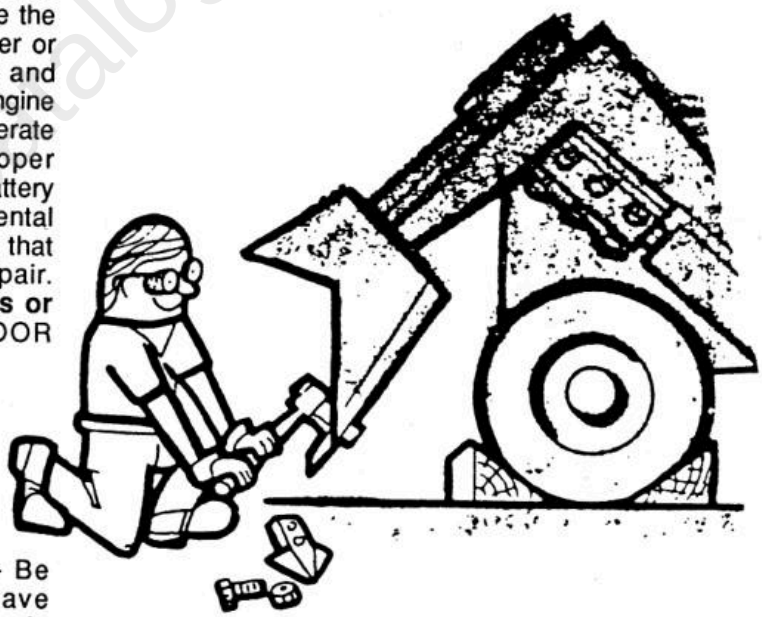
SAFETY RECOMMENDATIONS



AVOID FIRE AND EXPLOSION HAZARDS - Treat all fuels, oils, solvents and unknown dry chemicals with respect. Always work in a well ventilated area. Make sure you know where the fire extinguishers are kept and how to use them. Use a non-flammable solvent to clean parts instead of gasoline or diesel fuel. Never smoke while handling fuel or fuel containers or when working on the vehicle fuel system. Never cut or weld fuel lines, tanks or containers. Never fuel unit while engine is running or when engine is hot.

Always shut off engine and electrical equipment while filling the fuel tank. Always ground the fuel nozzle against the fuller neck to avoid sparks before starting fuel flow. Never smoke near a battery or check electrolyte level with an open flame. Hydrogen gas is highly explosive. KEEP COOL - DON'T LET YOURSELF GO UP IN SMOKE.

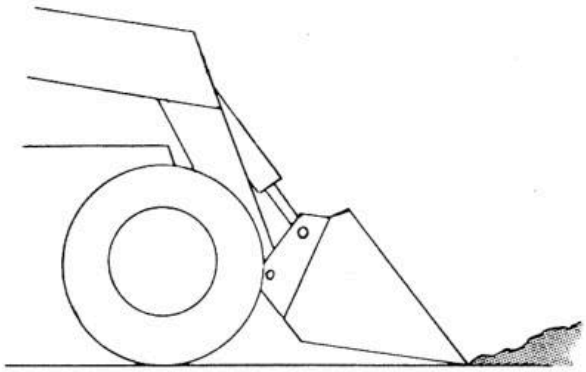
PREPARE THE MACHINE - Move the machine onto a level surface. Shut off the engine and operate the controls to release all hydraulic pressure. Lower or block all hydraulically operated attachments and place controls in neutral. Never work with the engine running unless absolutely necessary. Never operate the engine in an enclosed area without proper ventilation. Block the wheels, disconnect the battery and remove the ignition key to prevent accidental starting. Remove only those guards or covers that permit access to the equipment needing repair. When finished with repair, **replace all guards or covers**. EXHAUST FUMES ARE A POOR SUBSTITUTE FOR AIR.



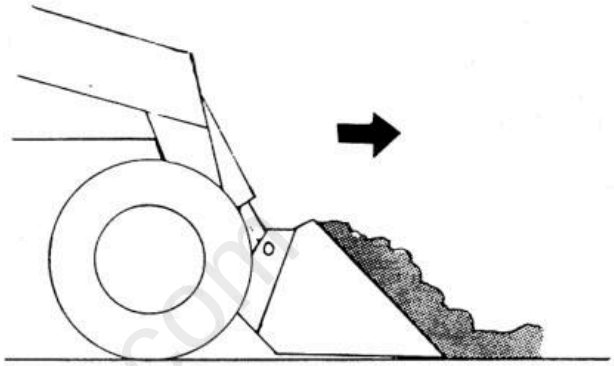
USE JACKS AND HOISTS CAREFULLY - Be certain that the hoists or jacks you use have adequate lifting capacity and are in good repair. Position jacks and hoists carefully, lift slowly and only as much as needed for clearance. When working beneath raised equipment, never depend on the hoist or jack alone, always use substantial blocks. Such blocks as concrete blocks are inadequate. ONLY A FOOL TRUSTS A JACK ALL BY ITSELF.

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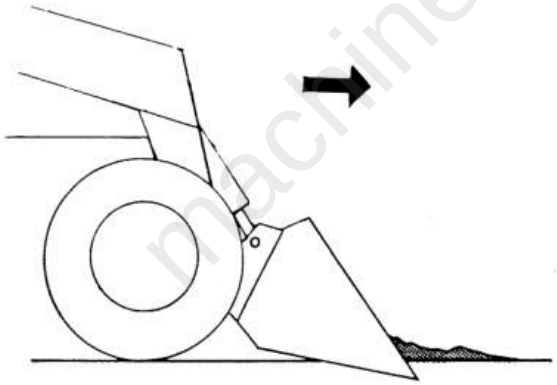
DIGGING WITH BUCKET



1. Approach digging site with lift arm slightly raised and bucket tilted forward until it contacts the ground.

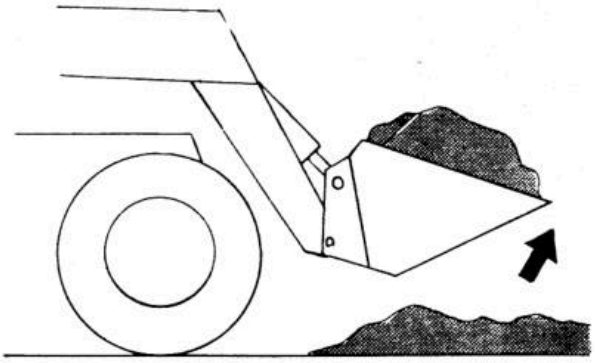


3. Raise the bucket slightly to maintain uniform depth and give added traction. Drive forward until the bucket is filled.



2. Break the ground by driving forward and lowering the lift arm gradually as the machine is driven forward. Use only sufficient bucket digging angle to easily fill the bucket.

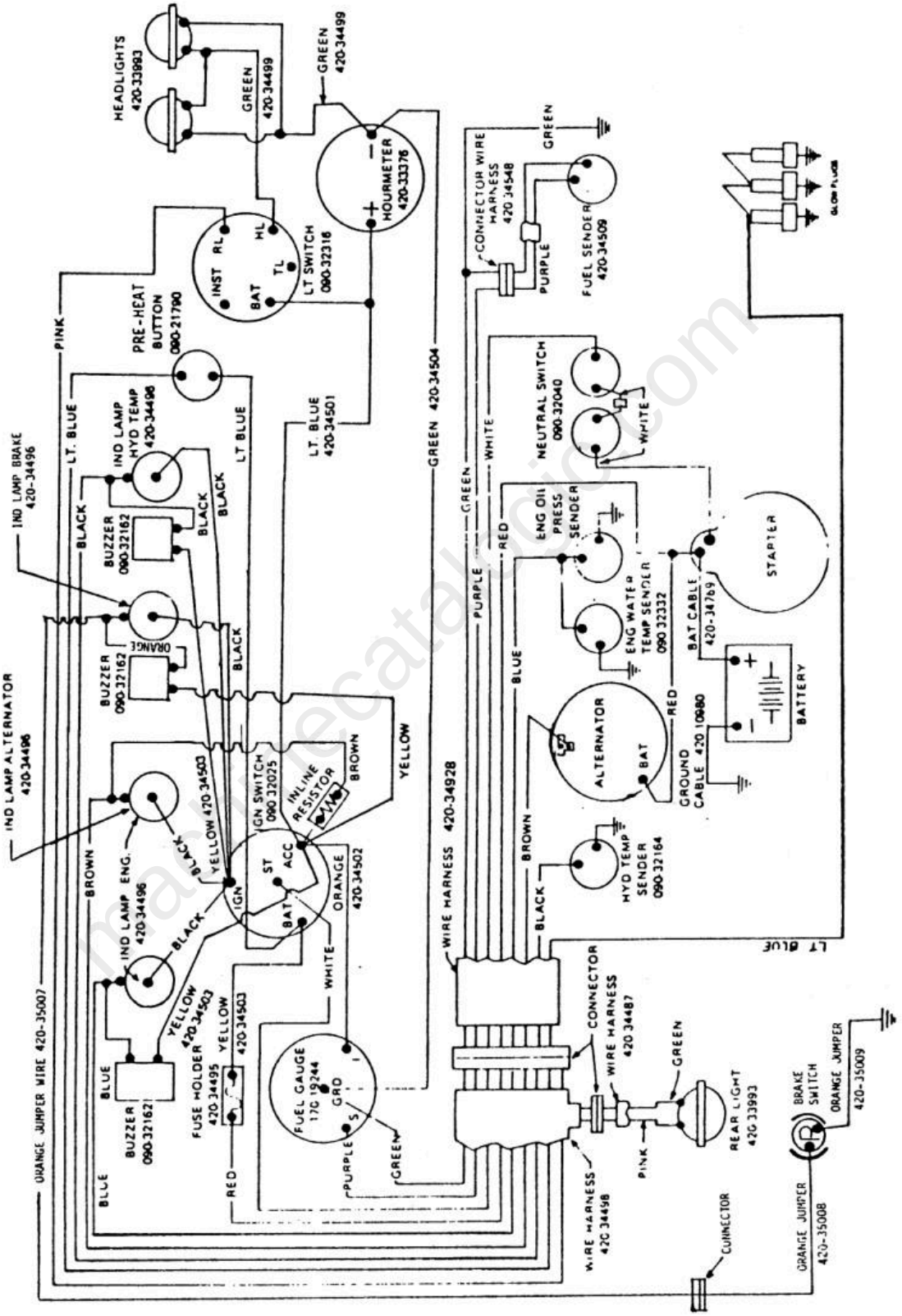
In very hard ground, use of optional bucket teeth is recommended. Reducing engine speed to 3/4 throttle will allow smoother digging when the first cut is made.



4. Roll the bucket up and back away from the cut. When starting an excavation, use as flat a ramp as possible. Plan so that most of the work can be done with the loader being driven forward out of the excavation, rather than being backed out. When driving the machine up an incline, always be sure the heavy end of the machine goes up first. If the machine has a load in the bucket, the machine should be driven up forward. If the bucket is empty, drive up the slope backwards.

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920 WIRING DIAGRAM



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930A SPECIFICATIONS

GENERAL SPECIFICATIONS

UNIT DESCRIPTION	
Model:	930A Mustang
Manufacturer:	MUSTANG MANUFACTURING COMPANY, INC.

ENGINE SPECIFICATIONS	
Make:	Yanmar Diesel
Model:	3TN82E
Displacement:	83 CID (1362 cc)
Max. HP (Mfg rating):	35 HP (25.5 kw) @ 3600 RPM
HP @ Governed RPM:	28 HP (20.6 kw) @ 2800 RPM
High Idle Speed, No Load:	3100 ± 50 RPM
Fuel Injection:	Direct
Number of Cylinders:	3
Bore and Stroke:	3.23 X 3.39 (82 X 86 mm)
Cooling Medium:	Liquid
Torque (ft. lbs.)	62.2 @ 2000 RPM (84 nm)
Electrical System:	12 Volt
Alternator:	35 Amp
Battery: (Group class):	26
(Cold crank rating):	500 Amps
Fuel Shutoff:	Manual
Air Cleaner:	Replaceable dry cartridge type
Fuel Consumption (Based on normal operation)	Est. 1.03 gal/hr

FLUID CAPACITIES	
Cooling System:	6 qts. (5.68 L)
Fuel Tank:	9 gal. (34.1 L)
Engine Oil:	5 qts. (4.7 L)
Oil spec.	SAE Class CC 15W40
Chain Case:	4 gal. (15.1 L) (2/side)
Oil spec.	Hydraulic oil ISO 46
Hydraulic System:	7.5 gal. (28.4 L)
Oil spec:	Hydraulic oil ISO 46

HYDRAULIC SYSTEM	
Pressure Relief:	2050 PSI (139 Bar)
Control Valve Make:	Victor Dukes
Spool Sections:	3 Spool
Pump Make:	Cessna
Pump Type:	Double Gear
Pump Output:	11 GPM (41.7 L/m)
Filters: (1) screen - 100 mesh (1) 7 micron return (1) 7 micron charge inlet	
Auxiliary Control:	Hand Lever
Auxiliary Hydraulic Power @ 90% Relief Pressure:	12 HP (8.9 kw)

TRANSMISSION and FINAL DRIVES	
Type: Hydrostatic	Make: Cessna
Model:	78116-RAK
System Relief Setting:	4500 PSI (306 Bar)
Charge Pressure Setting:	100 PSI (6.9 Bar)
Drive Motors (type):	Geroller
Make: Eaton	Model: 4000
Final Drive Chains	
Reduction from motors:	None
Reduction to axles:	#80H
Travel Speed:	5.7 MPH (9.2 km/h)
Steering:	T-Bar (Single Lever)
Turning Radius:	360 degrees in its own length
Axle Type: Forged	Diameter: 1 5/8" (41.3 mm)
Axle Torque: (Theoretical)	3175 ft. lbs. (4305 nm)

HYDRAULIC CYLINDERS	LIFT	TILT
Number:	2	1
Cylinder Type:	Double Acting	Double Acting
Bore Diameter:	2" (50.8 mm)	3" (76.2 mm)
Rod Diameter:	1.125" (28.6 mm)	1.25" (31.8 mm)
Stroke:	27.125" (689 mm)	9.8" (248 mm)

OPERATING SPECIFICATIONS	
Load Rating (SAE):	1000 lbs. (454 kg)
Tipping Load (SAE):	2000 lbs. (907 kg)
Breakout (LIFT):	2025 lbs. (918 kg)
(TILT):	1975 lbs. (896 kg)
Raising time:	5 seconds
Lowering time:	2.1 seconds
Dumping time:	.4 seconds
Roll back time:	1.2 seconds
Operating Weight:	4027 lbs. (1827 kg)
Shipping Weight:	3511 lbs. (1592 kg)
Weight Distribution	
Rear	2840 lbs. (1288 kg) 70%
Front	1187 lbs. (538 kg) 30%
Braking System:	Hydrostatic braking, parking brake/ positive lock.
Gradeability (degrees)	25
Maximum Recommended Working Incline (degrees)	10
Fuel Consumption (est)	1.03 gal/hr

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