2042
2044
2054

MUSTANG SKID STEER LOADER

SERVICE MANUAL

Part # 000-78025
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SAFETY



General Precautions

The safety alert symbol shown means: ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! It stresses an attitude of "Heads Up for Safety" and can be found throughout this Service Manual and on the decals on the machine.

Before operating or working on this machine, read and study the following safety information. In addition, be sure that everyone who operates or works with this equipment is familiar with these safety precautions. It is essential to have competent and careful operators, who are not physically or mentally impaired, and who are thoroughly trained in the safe operation of the machine and handling of loads. It is recommended that the operator be capable of obtaining a valid motor vehicle operator's license.

The use of skid steer loaders is subject to certain hazards that cannot be eliminated by mechanical means, but only by exercising intelligence, care and common sense. Such hazards include, but are not limited to, hillside operation, overloading, instability of the load, poor maintenance and using the equipment for a purpose for which it is not intended or designed.

The Mustang Company ALWAYS considers the operator's safety when designing its machinery and guards exposed moving parts for the operator's protection. However, some areas cannot be guarded or shielded in order to assure proper operation. Furthermore, the Operator's Manual and the decals on the machine warn of additional hazards and should be read and observed carefully.

This section of the manual includes procedures, which when followed, will allow safe performance of service procedures: Mandatory Safety Shutdown Procedure, Lift arm Stops, Roll Over Protective Structure (ROPS)/Falling Object Protective Structure (FOPS), Safety Interlocks, Parking Brake, Lift Arm Bypass Switch, Loader Raising and Lowering Procedures.

Signal Words



DANGER

"DANGER" indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

"WARNING" indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

"CAUTION" indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also alert against unsafe practices.

Mandatory Safety Shutdown Procedure

BEFORE cleaning, adjusting, lubricating or servicing the unit, or leaving it unattended:

1. Move the drive control handle(s) to the NEUTRAL position.
2. Lower the lift arm and attachment completely. If the lift arm MUST be left in the "raised" position, BE SURE to properly engage the lift arm stops.
3. Move the throttle to the low idle position, shut off the engine and remove the key.

Only after these precautions can you be sure it is safe to proceed. Failure to follow the above procedure could lead to death or serious injury.

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SPECIFICATIONS
MODEL 2042

ENGINE SPECIFICATIONS

Make:	Yanmar, Diesel
Model:	4TNE84
Displacement:	122 CID (2.0 L)
Rated Power:	43 HP (32.1kW) @ 2900 RPM
Max Torque:	92 ft-lbs. (125 Nm) @ 1600 RPM
High Idle Speed:	3120 RPM
Low Idle Speed:	1200 RPM
Fuel Injection:	Direct
Number of Cylinders:	4
Bore and Stroke:	3.31” x 3.45” (84 x 90mm)
Injection Timing:	17 BTDC
Valve Clearance:	0.0098” (0.25mm)
Cooling Medium:	Liquid
Lubrication:	Pressure System with Filter
Electrical System:	12 V Negative Ground
Alternator:	40 AMP
Battery (Group Class):	31
(Cold Crank Rating):	700 CCA
Fuel Shutoff:	Electric Solenoid
Air Cleaner:	Dual Element, Replaceable Dry Cartridge
Engine Gradability:	30 (Intermittent) 25 (Continuous)
Oil Cooler Ratings:	425 BTU/min

(250 F oil in, 153 F air in, 18 GPM, 2000 ft/min air)

FUEL CONSUMPTION – 65% Duty Cycle

At Full Throttle:	1.44 gph (5.45 L/hr)

FLUID CAPACITIES

Cooling System:	6.5 qts. (6.2 L)
Fuel Tank:	14.3 gal. (54 L)
Engine Oil with Filter:	6 qt. (5.7 L)
(Oil Spec.):	Class CG-4 15W-40
Chain Case: (each)	7.0 gal (26.5 L)
(Oil Spec.):	Hydraulic Oil ISO VG 46
Hydraulic Reservoir	11.5 gal (43.5 L)
(Oil Spec.):	Hydraulic Oil ISO VG 46

HYDRAULIC SYSTEM

Pressure Relief Setting:	2500 PSI (172 Bar)
Control Valve Make/Model:	Gresen V17
Spool Sections:	3-Spool, Open-Center
Pump Make:	Sauer Sunstrand
Pump Type:	Gear
Pump Output:	18 GPM (68 L/min)
Hydraulic Horsepower:	26.25 (19.6 kW)

TRANSMISSION and FINAL DRIVES

Type:	Hydrostatic
Make:	Sauer Sunstrand Variable Piston
System Relief Pressure:	4500 PSI (276 Bar)
Charge Pressure:	150 PSI (10.3 Bar)
Drive Motors (type):	Geroller
Make:	Danfoss
Model:	TMT Series
Final Drive Chains	80 HK
Reduction to Axles:	3.27 to 1
Travel Speed:	0-7 MPH (0-11.2 km/hr)
Steering Control:	T-Bar (Dual Lever)
Axle Type:	Forged
Diameter:	2.00” (51mm)
Axle Torque:	4900 ft-lb. (6653 Nm)

HYDRAULIC CYLINDERS

	LIFT	TILT
Number:	2	2
Cylinder Type:	Double Acting	Double Acting
Bore Diameter:	2.5” (63.5)	3.0” (76.2)
Rod Diameter:	1.5” (38.1)	1.25” (31.8)
Stroke:	28.375 “ (721)	11.375” (289)

OPERATING SPECIFICATIONS

Load Rating (SAE):	1350 lb. (612 kg)
Tipping Load (SAE):	2700 lb. (1225 kg)
Load Rating (SAE) with Weight Kit:	1450 lb. (658 kg)
Tipping Load (SAE) with Weight Kit:	2900 lb. (1315 kg)

Pallet Fork		[with Weight Kit]
Load Rating @ 24” (SAE)	835 lb (379 kg)	[910 lb (413 kg)]
Tipping Load @ 24” (SAE)	1670 lb (758 kg)	[1820 lb (826 kg)]

Breakout (Lift): (SAE)	3000 lb (1360 kg)
(Tilt): (SAE)	4000 lb. (1814 kg)
Raising Time: (SAE)	4.2 seconds
Lowering Time: (SAE)	3.0 seconds
Dumping Time: (SAE)	1.5 seconds
Roll Back Time:	1.8 seconds
Operating Weight:	5450 lb. (2472 kg)
Weight Distribution:	Rear: 70%
	Front: 30%

Shipping Weight with Flotation tires: 4850 lb (2200 kg)
(-75 fuel, -175 operator, -350 bucket)

Braking System:	Hydrostatic
Parking Brake:	Mechanical with Hydraulic Release

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GENERAL INFORMATION
MAINTENANCE CHART
RECOMMENDED INTERVALS FOR NORMAL OPERATING CONDITIONS

MAXIMUM HOUR INTERVAL					COMPONENTS	SERVICE REQUIRED	CAPACITY OR MEASUREMENT
10	100	200	500	1000 OR YEAR			
■					Air Cleaner Indicator	Empty Dust Cap	Replace filter as needed
■					Cooling System	Check Coolant Level	6.5 quarts
■					Engine Crankcase	Check Oil Level	Between Marks on Dipstick
■					Loader Pivot Pins	Lubricate grease fittings	
■					Loader Hydraulic System	Check Fluid Level	Between marks on dipstick when cold
■					General Conditions	Safety Devices: Loose, Missing or Damaged Parts	
■					Fuel Filter	Check for Water in Bowl	Drain as Needed
		■			Alternator Belt	Tighten to Proper Deflection	
		■			Radiator and Oil Cooler	Clean Fins	
	■				Tires	Check Air Pressure	Inflate to Correct Pressure
			■		Battery	Clean Terminals and Battery Top	
△	■				Wheel Lug Nuts	Check	Torque to 120-130 ft-lbs (160-175 Nm)
		■			Spark Arrestor Muffler	Remove Plug and Clean Out	Run Engine 1 Minute
□		■			Engine Oil and Filter	Change Oil and Filter	6.5 quarts
□			■		Hydraulic Filters	Replace Elements	
			■		Liquid Cooled Engine	Flush Cooling System	6.5 quarts
				■	Hydraulic Reservoir	Drain and Refill	11.5 Gallons
□				■	Chain Cases	Drain and Refill	4.5 Gallons each
			■		Fuel Filters	Change Filters	
				■	Diesel Injection Nozzles	Check Injection Pressure and Spray Pattern	

NOTE: Hourly interval must be decreased under very hot, cold, dusty or corrosive conditions.
ALWAYS USE MUSTANG APPROVED FILTERS

□ Perform the initial time at 50 hours, then at ■ intervals

△ Perform the initial time at 2 hours then at ■ intervals

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GENERAL INFORMATION
STANDARD TORQUE VALUE SPECIFICATIONS

NOTE: Some fasteners have torque specifications other than those shown below. Use this chart only for unspecified torques.

Torque values listed are for both non-plated and hex-head capscrews.

Capscrew Dia. Thread Pitch	Plain Head S.A.E. Grade 2 Foot-Pounds		3 Radial Dashes S.A.E. Grade 5 Foot-Pounds		6 Radial Dashes S.A.E. Grade 8 Foot-Pounds	
1/4 - 20	5		8		12	
1/4 - 28	6		10		14	
5/16 -18	11		17		24	
5/16 -24	13		19		27	
3/8 - 16	18		31		44	
3/8 - 24	20		35		49	
7/16 - 14	28		49		70	
7/16 - 20	30		55		78	
1/2 - 13	39		75		105	
1/2 - 20	41		85		120	
9/16 - 12	51		110		155	
9/16 - 18	55		120		170	
5/8 - 11	83		150		210	
5/8 - 18	95		170		240	
3/4 - 10	105		270		375	
3/4 - 16	115		295		420	
7/8 - 9	160		395		605	
7/8 - 14	175		435		675	
1” - 8	235		590		680	
1” - 14	150		660		740	

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HYDRAULIC SYSTEM
TROUBLESHOOTING

IMPORTANT

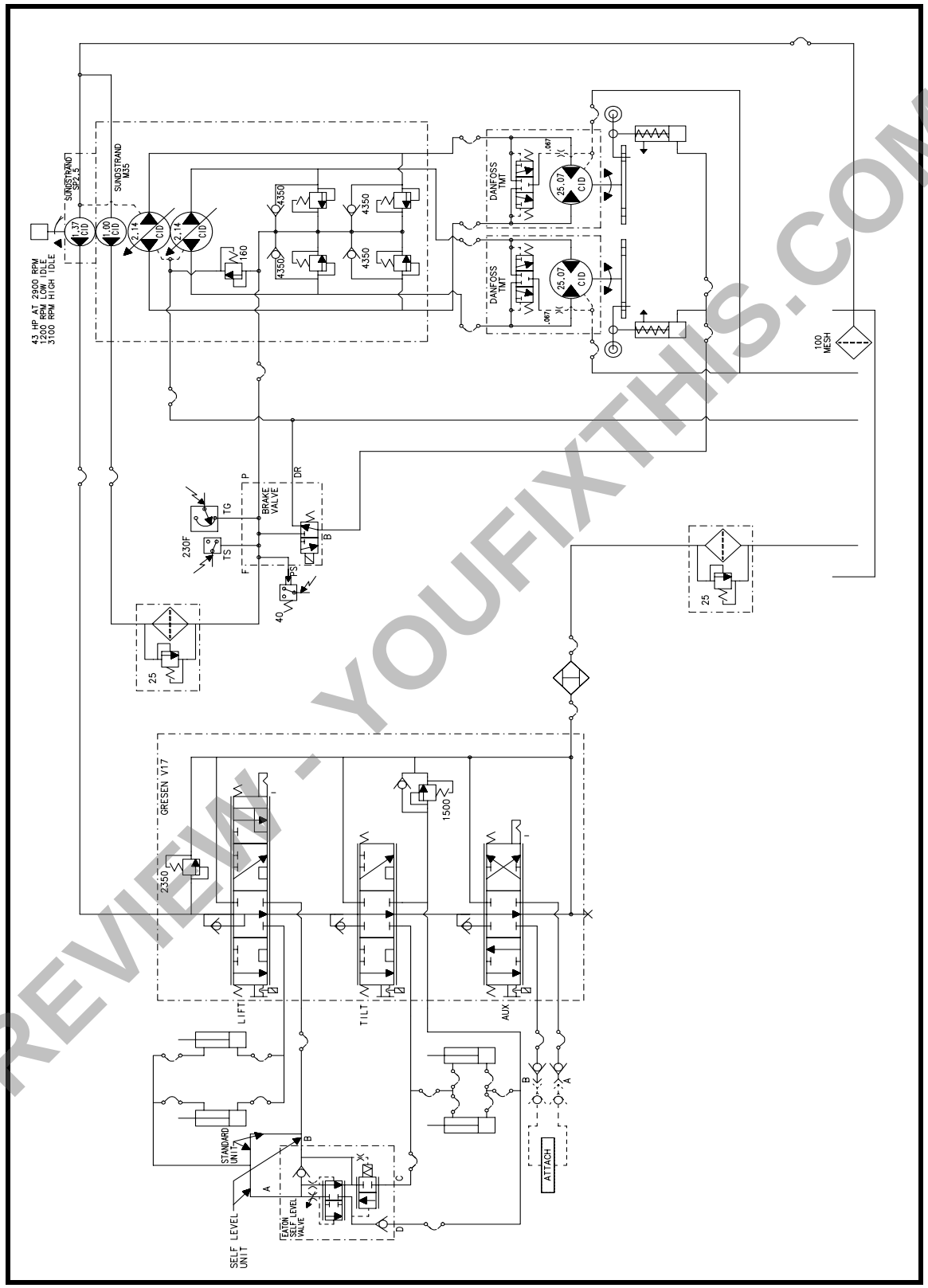
DO NOT attempt to service or repair major hydraulic system components, such as the hydrostatic pumps or drive motors unless authorized to do so by your Mustang dealer. Any unauthorized repair will void the warranty.

SYMPTOM	POSSIBLE CAUSE
Hydraulic action is slow or has jerky movement in either lift or tilt functions.	Check hydraulic fluid level Cold oil Check control linkages for binding interference Insufficient engine speed Oil leaking past cylinder packings (See procedure for checking cylinders on page 4-13, 14 & 15) Oil leaking within control valve Check for loose or leaking suction hoses or filters Check for obstruction in oil lines or valve Air leak in suction line Dirty hydraulic oil filter Restriction in suction line Hydraulic relief valve cartridge sticking, leaking internally, or pressure exceeds specification (see procedure for checking lift cylinder relief pressure on page 4-11)
Hydraulic action in only one circuit	Check control linkage for binding or interference Safety lock is holding one control in neutral Check hydraulic cylinders for external damage and/or leakage (See checking procedure for cylinders on page 4-13, 14 & 15) Control valve or parts of valve may need replacement

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HYDROSTATIC DRIVE SYSTEM
FLOW SCHEMATIC – 2042/2044

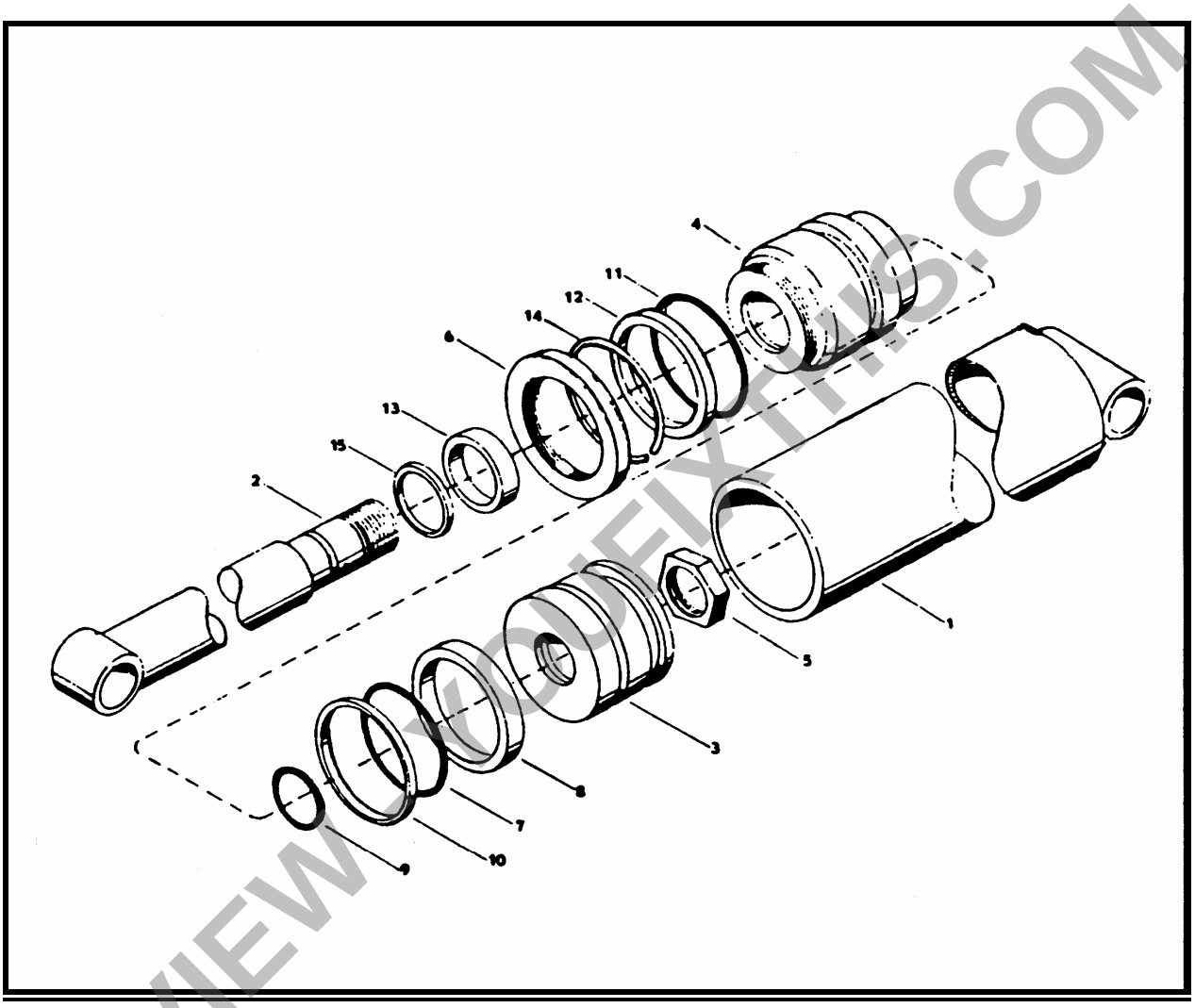


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HYDRAULIC SYSTEM
HYDRAULIC CYLINDERS

DIAGRAM



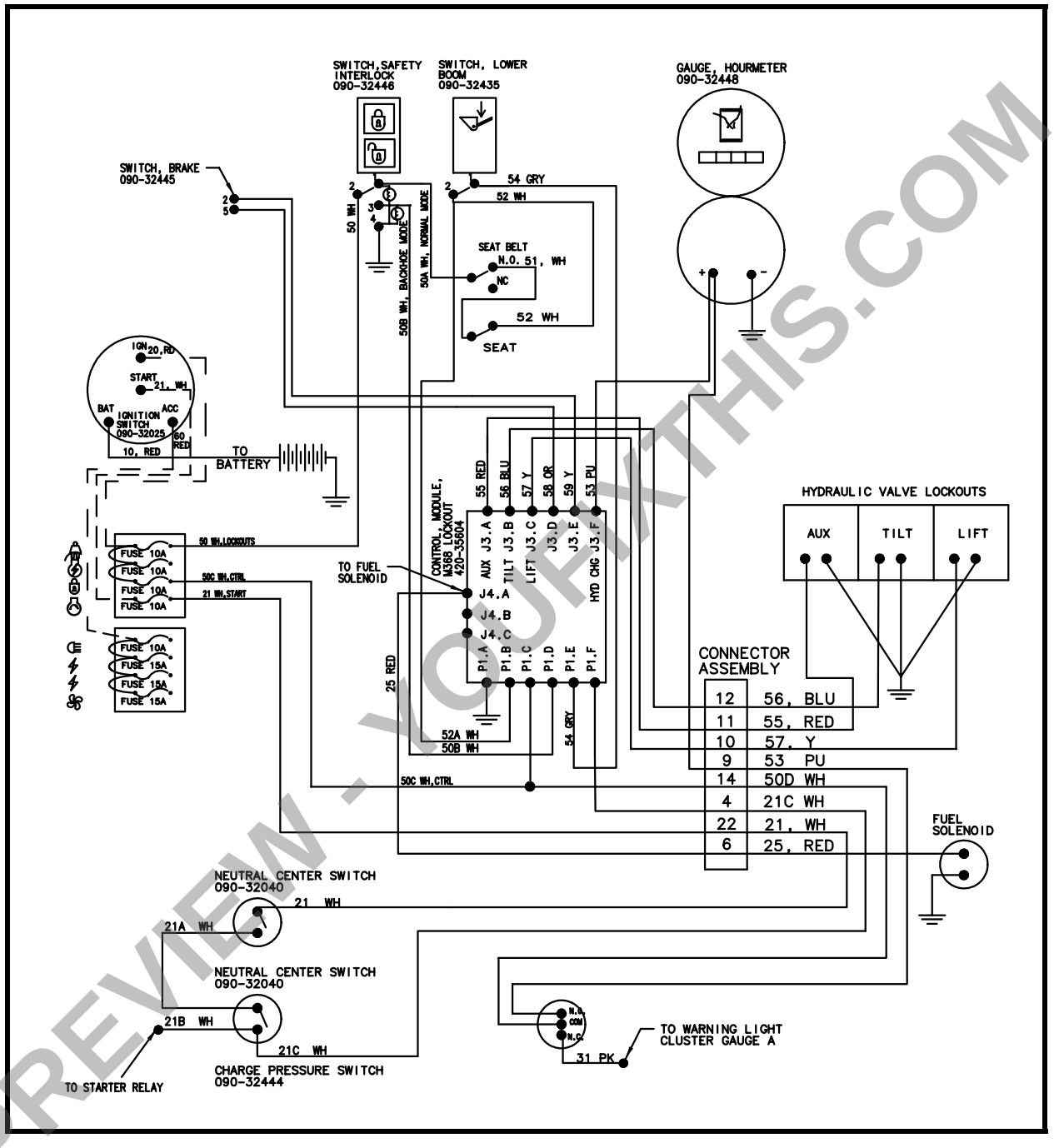
1. Barrel
2. Rod
3 Piston
4 Gland
5. Special Nut
6. Special Nut
7. O-Ring
8. Wear Ring, Piston
9. O-Ring
10. Seal, Piston
11. O-Ring
12. Backup Seal
13. Seal, Rod
14. Snap Ring
15. Wiper, Rod

Exploded View of Hydraulic Cylinder

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ELECTRICAL SYSTEM
INTERLOCK CIRCUIT



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SAFETY
LIFT ARM STOPS

WARNING

BEFORE leaving the operator's compartment to work on the loader with the lift arm raised, ALWAYS engage the lift arm stop pins. Turn the key switch to OFF, remove the key and take it with you.

Many service procedures require a raised lift arm to allow easier access to loader components. For operator and service personnel safety, lift arm stops are standard on Mustang skid steer loaders. Used as a cylinder block, they can prevent a raised lift arm from unexpectedly lowering.

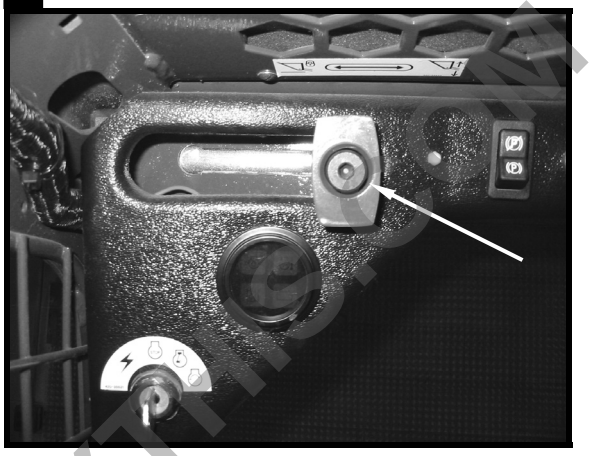
There are two lift arm stops located in the upper front corners of the ROPS. The stops are designed with adequate strength so if they are left extended, accidentally powering the lift arm up or down will not cause damage. However, if repeatedly abused, the pins will bend, damaging the pin mounting area of the ROPS.

To Remove:

1. With the lift arm lowered, remove the red plastic cover from the stop handle in the operator's area.

2. Using a 5/16" hex wrench, unscrew the retaining bolt, which extends through the spring and knob into the lock pin **[A]**.

A



3. Remove the pin from the ROPS

4. If there has been damage to the ROPS the complete structure must be replaced (P/N 190-32663).

Reverse the order of removal for installation. Apply red Loctite and torque hex bolt to 31 ft- lbs (42 Nm).

NOTE: A special tool, lift arm support device (P/N 490-23325) is available for use when the ROPS is removed and the lift arm needs to be raised for service **[B]**.

B



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SERIAL NUMBER SYSTEM

The serial number of a product is very important when ordering repair parts or obtaining service information. The purpose of a serial number is to identify an individual machine. The serial number should be understood to eliminate confusion and assure that correct parts are ordered and proper service procedures are followed.

The 2042 serial number consists of eleven digits.
It can be separated as follows:
(Example = Model 2042 S/N SJ00H000747)

S	**J**	**00**	**H**	**000747**
Skid Steer Loader	Model	Year of Manufacture	Month of Build	Sequence #
	2042 = J	99 = 1999 00 = 2000 01 = 2001 02 = 2002 03 = 2003 04 = 2004	A = Jan. G = July B = Feb. H = Aug. C = Mar. J = Sept. D = Apr. K = Oct. E = May L = Nov. F = June M = Dec.	

The 2044 serial number consists of eleven digits.
It can be separated as follows:
(Example = Model 2044 S/N SP02H000747)

S	**P**	**02**	**H**	**000747**
Skid Steer Loader	Model	Year of Manufacture	Month of Build	Sequence #
	2044 = P	02 = 2002 03 = 2003 04 = 2004 05 = 2005 06 = 2006	A = Jan. G = July B = Feb. H = Aug. C = Mar. J = Sept. D = Apr. K = Oct. E = May L = Nov. F = June M = Dec.	

The 2054 serial number consists of eleven digits.
It can be separated as follows:
(Example = Model 2044 S/N SQ02H000747)

S	**Q**	**02**	**H**	**000747**
Skid Steer Loader	Model	Year of Manufacture	Month of Build	Sequence #
	2054 = Q	02 = 2002 03 = 2003 04 = 2004 05 = 2005 06 = 2006	A = Jan. G = July B = Feb. H = Aug. C = Mar. J = Sept. D = Apr. K = Oct. E = May L = Nov. F = June M = Dec.	

Per ISO Recommendations the letter "I" is not used in the serial number system.
Please forward this information to any department involved in repairs, service, and parts ordering for Mustang Skid Steer Loaders.

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