SAFETY EQUIPMENT

All machines have certain built in safety equipment designed to protect the operator from possible injury. If this equipment is removed for service or adjustment of the machine, it **MUST** be replaced and be in proper working condition before the machine is put back into service. These items include:

ROPS – Roll Over Protective Structure.

FOPS – Falling Object Protective Structure (incorporated in ROPS).

Lift Arm Stops – Located in the ROPS - also available in lift cylinder lock form. P/N 490-23325.

Safety Interlock – Prevents movement of the lift arm and bucket when the operator is not in the seat with the seat belt fastened.

CAUTION! The safety interlocks are not meant to prevent movement of the Lift Arm when people are under it. ALWAYS USE THE LIFT ARM STOP FOR THIS PURPOSE.

Parking Brake – To keep the machine from moving when the engine is shut off, and/or the machine is parked.

Neutral Centering Device – A spring loaded device used to return the steering controls to the neutral position.

Neutral Start Switches – Incorporated in the Neutral Centering Device to prevent the machine from starting if the steering controls are not in neutral.

Caution and Warning Decals – Designed to warn the operator of possible hazards that could cause injury if correct procedures are not followed.

Safety decals are available at no charge from our parts department. If these decals are damaged, lost or machines are repainted, please be sure they are replaced.

All safety equipment should be inspected for proper operation and safety decals for clarity and proper placement anytime you come in contact with a *MUSTANG* product. Any faults must be corrected before the machine is put back into operation.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

GENERAL SPECIFICATIONS
Model 2060

ENGINE SPECIFICATIONS

Make:	Isuzu
Model:	4JB1
Displacement:	169 CID (2.8 L)
Horse Power:	62 HP (46.3 kW)
Max. RPM @ No Load:	2850 RPM
Low Idle Speed:	1200 RPM
Fuel Injection:	Direct
Number of Cylinders:	4
Bore and Stroke:	3.66 x 4.02 (93 x 102)
Injection Timing:	17 degrees BTDC
Valve Lash: (cold)	.016 in (0.40 mm)
Cooling Medium:	Liquid
Lubrication:	Pressure System w/Filter
Electrical System:	12 V Neg. Ground
Alternator:	55 Amp
Battery (Group Class):	31
(Cold Crank Rating):	700 CCA
Fuel Shut Off:	Electric Solenoid
Air Cleaner:	Dual Element, Replaceable Dry Cartridge
Engine Gradability:	30 Degrees (intermittent) 25 Degrees (continuous)

FLUID CAPACITIES

Cooling System:	14 qt. (13.2 L)
Fuel Tank:	18.5 gl. (70 L)
Engine Oil:	7 qt. (6.6 L)
(Oil Spec.):	Class CG-4 15W-40
Chain Case: (each)	4.5 gl. (17 L)
(Oil Spec.):	Hydraulic Oil ISO 46
Hydraulic Reservoir	22 gl. (83.3 L)
(Oil Spec.):	Hydraulic Oil ISO 46

HYDRAULIC SYSTEM

Maximum Pressure:	3000 PSI (207 Bar)
Control Valve Make/Model:	Gresen/V20
Spool Sections:	3 Spool, Open Center
Pump Make:	Eaton
Pump Type:	Gear
Pump Output:	22 GPM (53 L/m)

TRANSMISSION and FINAL DRIVES

Type:	Hydrostatic
Make:	Eaton/Variable Piston
System Relief Pressure:	4500 PSI (310 Bar)
Charge Pressure Relief:	120 PSI (8.2 Bar)
Drive Motors (type):	Geroller
Make:	Eaton
Model:	6000 Series
Final Drive Chains	
Reduction from motors:	80 HK
Reduction to axles:	100 K
Travel Speed:	0-7 MPH (0-11.2 Km/hr)
Steering Control:	T-Bar (Dual Lever)
Axle Type:	Forged
Diameter:	2.625 in (66.7 mm)

HYDRAULIC CYLINDERS

	LIFT	TILT
Number:	2	2
Cylinder Type:	Double Acting	Double Acting
Bore Diameter:	2.5 in (63.5 mm)	3.0 in (76.2 mm)
Rod Diameter:	1.5 in (38.1 mm)	1.25 in (31.8 mm)
Stroke:	35.6 in (904 mm)	14.2 in (361 mm)

OPERATING SPECIFICATIONS

Load Rating (SAE):	1750 lb. (3175 kg)
Tipping Load (SAE):	3500 lb. (1591 kg)
Breakout (Lift):	4200 lb. (1905 kg)
(Tilt):	6000 lb. (2721 kg)
Raising Time:	5.0 seconds
Lowering Time:	3.3 seconds
Dumping Time:	1.8 seconds
Roll back Time:	2.0 seconds
Operating Weight:	7000 lb. (3175 kg)
Shipping Weight (w/bucket):	6700 lb. (3039 kg)
Braking System:	Hydrostatic
Parking Brake:	Mechanical with Hydraulic Release

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

GENERAL INFORMATION
SYSTEM CONTAMINATION CONTROL

Contamination is the most frequent cause of hydraulic system failures. Cavitation and dry start-up may be second (see page 5-16 for proper start up procedure). Fluid contamination level is the biggest single factor affecting the performance and the life of a hydraulic system. Contamination can come from fabrication residue, new oil, the environment, through breathers, worn wiper seals on cylinders, quick disconnects, and open caps.

Before a hydraulic component can be considered to have failed, it is absolutely essential that the following items be checked:

- Hydraulic oil level
- Filters
- Steering and control linkage (lost motion)
- Pump drive (input rotation)
- Motor (output rotation)
- Chain drive system

Any play in the control linkages can create effects which are often attributed to worn pumps and motors. The pumps try to destroke (decrease output) and stroke (increase output) depending upon the load and flow rate.

Keep in mind when trouble shooting the hydrostatic drive system that all steering, speed, direction and braking control is done by controlling the pump output through the swash plates (yokes). For proper adjustment of the steering and control linkage, see the Operator's Manual or specific section in this Service Manual.

One of the major areas of dirt entry into a hydraulic system is the rod seal (wiper) on the hydraulic cylinders. Tests have shown that wear-out of a rod seal can increase the amount of contamination entering the hydraulic system by more than ten fold.

A high contamination level can be generated very quickly in the field if entering contaminant is allowed to circulate and regenerate more contaminant. Topping off a reservoir under field conditions without dumping a large amount of dirt into the oil is very difficult. All oil added to the system should be clean. Scheduled maintenance, use of specified filters, and good assembly practices will result in prolonged service life of the hydraulic components.

It is **VITAL** that the area around a joint be clean when disassembling and reassembling. Contamination can fall or be pushed into the system. Shop rags should not be used to clean hydrostatic parts. Lint free paper towels should be used instead. Parts should be washed in new solvent and blown dry with clean air. Be sure to cap all ports, fittings and hoses after cleaning.

DO NOT reuse hydraulic oil in the hydrostatic system. The cost of oil is small compared to the cost of replacing hydrostatic components. **IT'S NOT WORTH THE RISK!** Clean looking oil may not be clean enough. Water and air are serious contaminants that cause changes in oil viscosity and lubricity. New "clean" oil in bulk containers, may not be clean enough for hydrostatic drive systems unless it is filtered through a 10 micron filter first. Oil in quart cans is normally acceptable. Use only Rykon 46 or equivalent.

Contamination in the system can cause three types of failures: *catastrophic* (large particles jamming a pump or valve), *intermittent* (contaminant on valve seat that is periodically washed away), and *degradation* (increased internal leakage caused by component wear or damage).

There are three major sources of contamination: new oil, built in, and environmental. New relatively clean oil is usually contaminated during storage and transfer before it reaches the system. Condensed water vapor and rust particles from the storage tank are typical contaminants.

A certain amount of contamination is built into a system. Although careful assembly and flushing will reduce it, traces of burrs, chips, flash, dirt, dust, fiber, sand, moisture, pipe sealant, weld spatter, and flushing solutions remain.

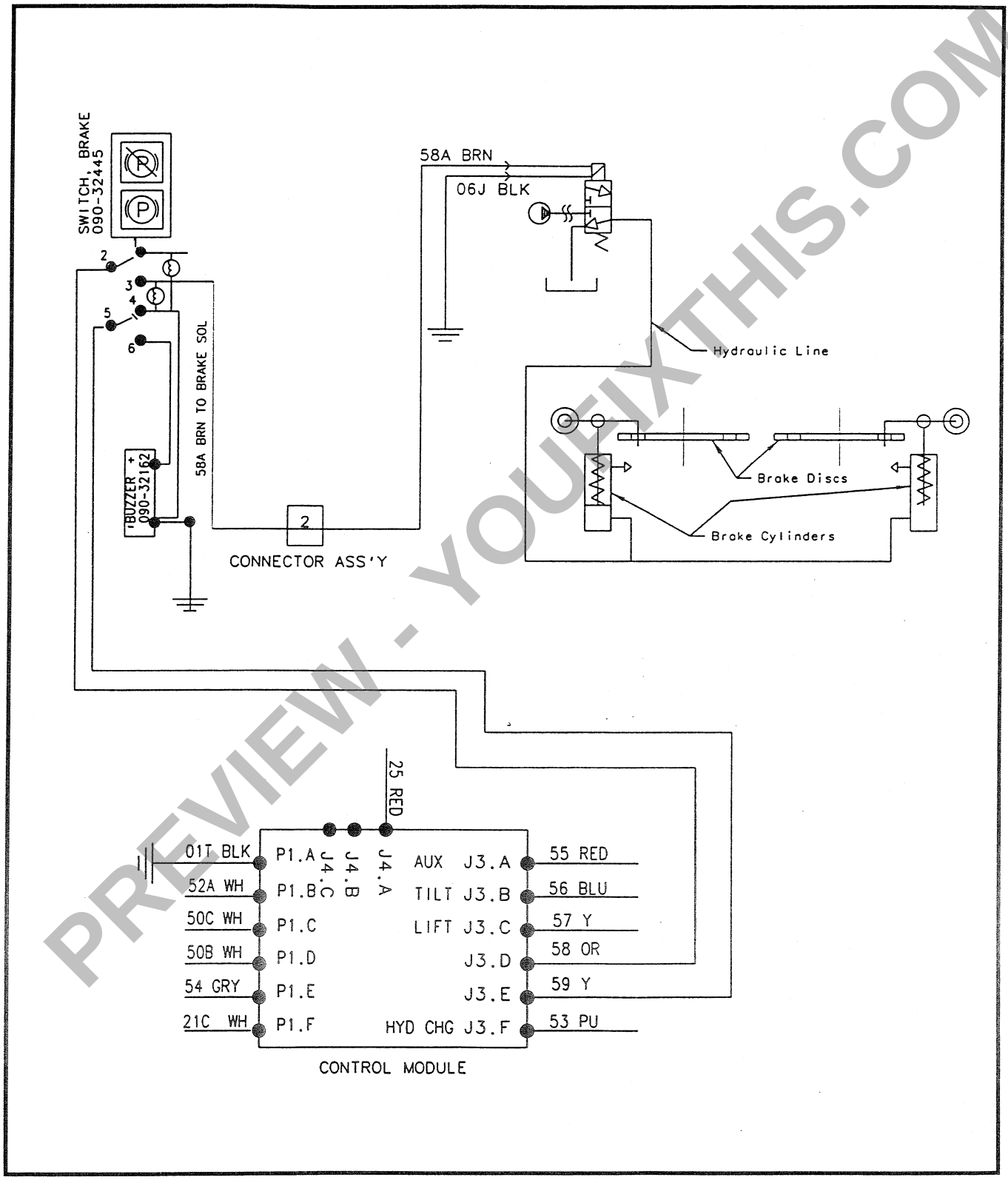
Contaminants from the immediate surroundings can be introduced into the system through air breathers and seals. In addition, operation of the system will generate internal contaminants, products of wear, corrosion, cavitation, and fluid breakdown.

Properly rated filters and an appropriate filter inspection and replacement schedule are critical

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

ELECTRICAL SYSTEM
BRAKE CIRCUIT



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

STEERING CONTROLS
DUAL LEVER

Removal:

1. Remove the center step from between the foot pedals.
2. Remove the center steering control wrapper cover for access to steering linkage rod ends.
3. Disconnect the rod ends from the steering lever arms.
4. On the lever(s) with hydraulic control:
   a. Remove the cable cover at the bottom of the steering lever.
   b. Remove the two (2) hex head screws securing the control cable mount to the steering lever. (See figure 3-7)
   c. Remove the pivot screw and assembly from the handle.
   d. Pull the slack in the cable up into the lever channel to extract the handle with the cable attached, from the top of the steering lever.
5. Unbolt the pivot plates at each side panel. Unscrew the 3/8 inch bolts. Nuts are welded to the backside of the cabin panel.
6. Remove the dual lever assembly from the machine and slide each lever off the pivot shaft to service or replace pivot bushings.

Installation:

1. Inspect the pivot bushings and shaft for any signs of wear or damage. Replace parts as necessary.
2. Insert nylon bushings into both ends of each control lever tube.
3. Assemble both control levers on the pivot shaft.
4. Set the lever assembly into place in the machine.
5. Install one pivot plate on each end of the pivot shaft and shim between the end shaft and the cabin side panel as required to reduce shaft end play and center the levers for clearance between the lever and the side panel. (See figure 3-8)
6. Bolt the pivots with the spacer shims in place.
7. Reconnect the cables, hand controls, and the linkages in reverse order of disassembly.
8. Refer to the adjustment procedures on page 3-7 before reinstalling the center wrapper and center step plate.

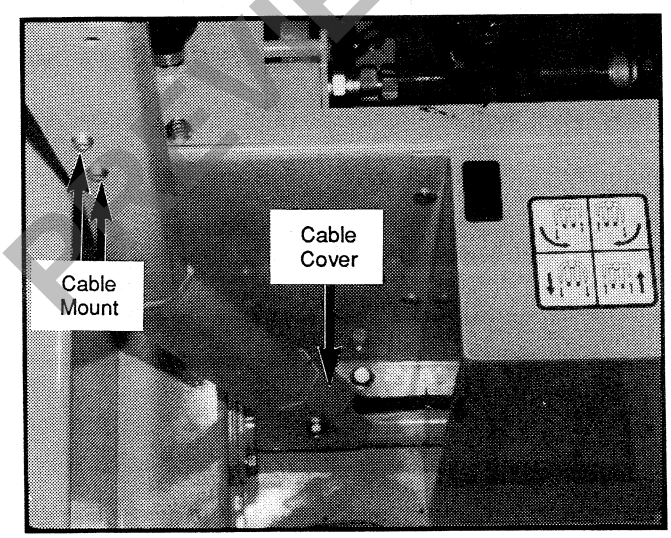


Figure 3-7

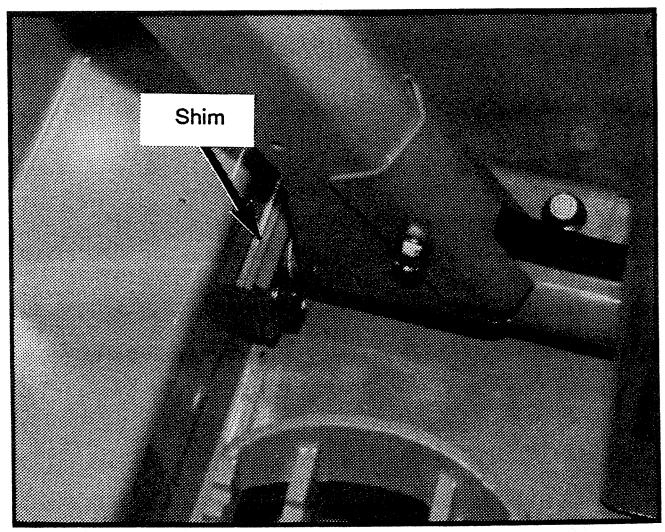


Figure 3-8

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

HYDRAULIC SYSTEM
HYDRAULIC CYLINDERS
Testing

TESTING LIFT CYLINDERS FOR LEAKING PISTON SEALS

1. Lower the lift arm all the way down.
2. Stop the engine. Activate all hydraulic controls to release the hydraulic pressure.
3. Disconnect the hydraulic hose at the base end of the lift cylinder. Cap the hose.
4. Start the engine. Activate the hydraulics to pressurize the rod end of the lift cylinders.
5. If there is fluid leakage from the base end fittings, remove the cylinder(s) and make repairs.

TESTING TILT CYLINDERS FOR LEAKING PISTON SEALS

1. Remove bucket or (other attachment) and roll Fast-A-Tach in full back position.
2. Stop the engine. Activate the hydraulic controls to release the hydraulic pressure.
3. Disconnect the hose that goes to the base end of the tilt cylinder(s). Cap the hose.
4. Start the engine. Activate the hydraulics to pressurize the rod end of the tilt cylinders.
5. If there is leakage from the base end fitting, remove the cylinder(s) and repair.



CAUTION! Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury.

Fluid may be hot. Allow system to cool before servicing.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

USE ONLY GENUINE

MUSTANG™

REPLACEMENT FILTERS

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SAFETY EQUIPMENT
LIFT ARM BYPASS SWITCH

Explanation

The Lift Arm Bypass Switch is located in the instrument panel next to the mode switch. (See figure 1-5) This is used to allow lowering of the lift arm if the engine stalls and cannot be restarted.

To Test For Proper Operation:

1. Sit in the seat.
2. Fasten the seat belt.
3. Depress the mode switch to green (locked) position.
4. Turn ignition switch on.
5. Depress and hold the lift arm bypass switch.

   ***Result** – The lift arm control (left foot pedal or hand control) should unlock allowing movement.*

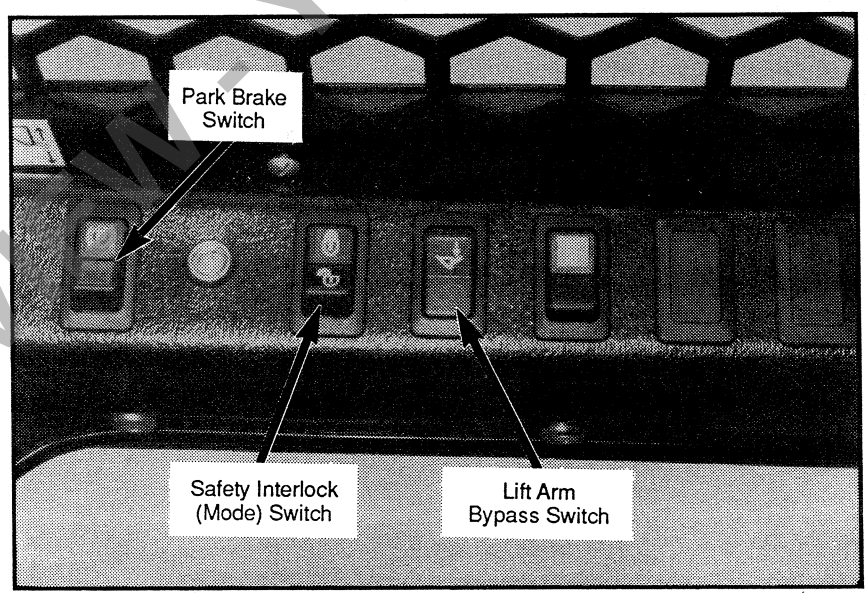


Figure 1-5

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SERIAL NUMBER SYSTEM

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

The 2060 and 2070 serial number system consists of eleven digits.
It can be broken down as follows:

(example = Model 2060 S/N SE95M000136)

S	E	95	M	000136
Skid Steer Loader	G Model	Year Of Manufacture	Month Of Build	Sequence #
	E= 2060 G= 2070	95 = 1995 96 = 1996 97 = 1997	A = Jan. B = Feb. C = Mar. D = Apr. E = May F = June	G = July H = Aug. J = Sept. K = Oct. L = Nov. 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.

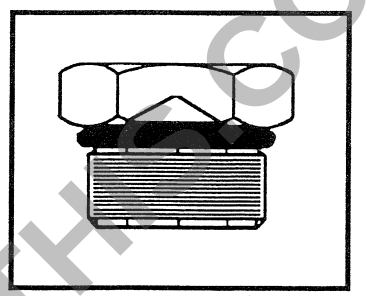
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

GENERAL INFORMATION
SPECIAL TOOLS and FITTINGS

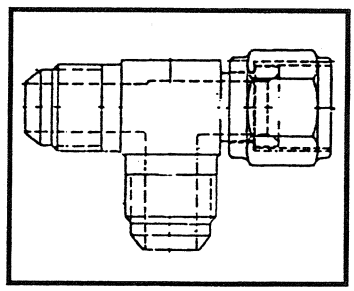
$1^{1}/_{16}$" O-RING PLUG
PN 230-21439

Used to plug outlet ports of hydrostatic pump.



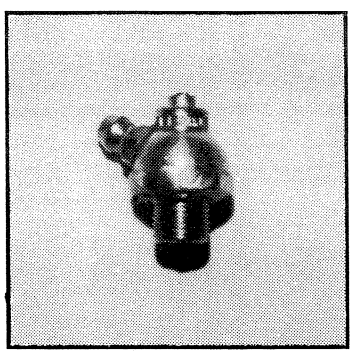
SWIVEL RUN TEE
#8 – PN 230-19184
#10 – PN 230-32255
#12 – PN 230-32591

Used to "tee" into lines for hydraulic pressure tests.



SPECIAL "POP-OFF" GREASE ZERK
PN 420-35822

Used to lubricate outer axle bearings.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

HYDRAULIC SYSTEM
CONTROL VALVE
Service and Repair - Gresen Valve

PROCEDURE FOR REPLACING SECTION ASSEMBLIES

NOTE: For clarification, we shall call the inlet cover containing the main relief the left side of the valve assembly.

1. Remove valve from machine and clean thoroughly.
2. Before disassembly, it is suggested that each valve section be marked numerically to avoid incorrect reassembly.
3. Remove three assembly stud nuts from the left end section using a 9/16 inch thin wall socket.
4. Remove valve sections by sliding from assembly studs.
5. Thoroughly clean o-ring counterbores and ground surfaces of each section.
6. Replace the four o-rings.
7. Replace valve sections on the assembly studs in the same order in which they were removed. O-ring counterbores should be to the left when facing port-end of valve.

   NOTE: Use care in replacing valve sections to avoid dislodging o-rings from counterbores.
8. When all valve sections are positioned on assembly studs, replace stud nuts and tighten evenly to 32 ft. lbs. (43 Nm) torque.

   CAUTION: If stud nuts are not tightened to the proper torque, valve spools may bind or stick, or cause seals to extrude.

REPLACING SPOOL SEALS

1. Remove valve from machine and clean thoroughly.
2. Remove bonnet assembly parts from back of valves and keep in order of disassembly.
3. Remove the spool lock and linkage bracket assembly.
4. Remove back-up washers and spool seals from both ends of valve.
5. Thoroughly clean counterbore.
6. Lightly oil new seals. Slide over valve spool and insert in seal counterbore.

   NOTE: For internal threads on the spool, apply type II, grade N, thread locking compound (ref. Loctite No. 242, blue) and torque to 10 ft. lbs. (13.5 Nm). Prevent spool from turning or moving by inserting a screw driver through clevis slot, or running a rod through the pin hole and using as a handle. **DO NOT** hold the spool with a wrench. This will destroy the finish.
7. Torque bonnet assembly and linkage bracket assembly to 10 ft. lbs./13.6 Nm.

RELIEF VALVES AND LOAD CHECKS

1. Due to close tolerances of the working parts, only the seals may be serviced or complete assembly replaced.
2. Lightly oil new seal when replacing.
3. Torque relief cartridge or load check plug to 20 ft. lbs./27.2 Nm.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

CHAIN CASE
DRIVE CHAIN & SPROCKET – R & R

Chain Removal:

1. Block machine off ground and remove wheels.
2. Drain chain case oil and remove side access panel.
3. Remove axle housing assembly for each chain being serviced. (See Axle Housing R & R) and slide axle towards center of chain case opening to remove drive chain from cluster sprocket.

   NOTE: a) It is necessary to remove the outer final drive chain prior to removing the inner chain because there is no connector link in the chain. b) The outer chains drive the left front wheel and the right rear wheel.
4. Remove final drive chain from sprocket. To install chains, reverse order of removal. Refer to Axle Housing Installation for proper torque and chain tension.

Sprocket Removal & Chain Case Disassembly:

5. Remove the park brake assembly from the top of the chain case and the brake disc from the motor sprocket. (See Brake Control R & R in Safety Equipment section.)
6. Rotate drive motor and cluster sprocket to position primary drive chain connector link directly opposite of drive motor; in center of access hole on inner wall of chain case, remove access cover if required, to remove connector link. (See figure 6-3)

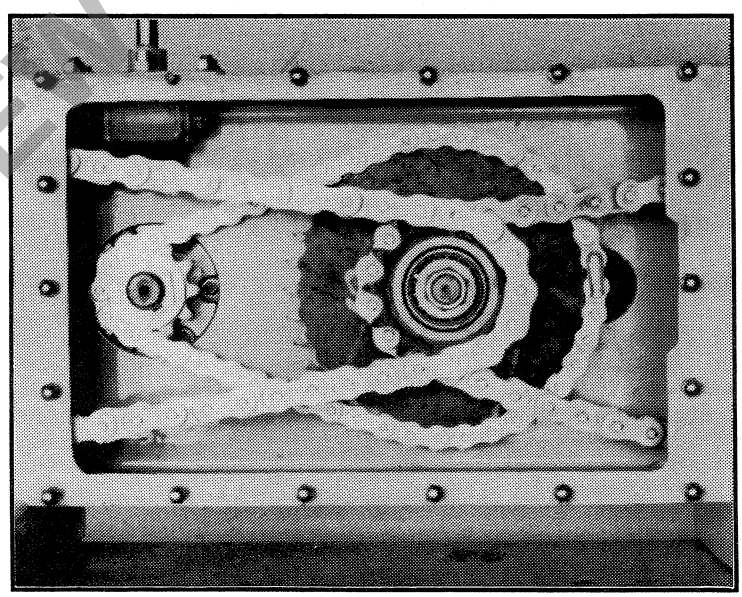


Figure 6-3

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 12 of 116 pages

The full manual includes:

- All 116 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Mustang 2060, 2070 Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual