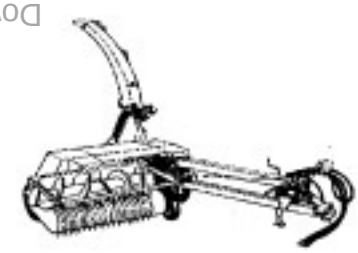
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Harvester 790



SERVICE MANUAL

NEW HOLLAND

PREVIEW - YOURFIXTHIS.COM

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PLEASE READ CAREFULLY!

INCLUDED THROUGHOUT THIS MANUAL AND ON MACHINE DECALS YOU WILL FIND PRECAUTIONARY STATEMENTS SUCH AS "CAUTION", "WARNING" AND "DANGER", FOLLOWED BY SPECIFIC INSTRUCTIONS.

THESE PRECAUTIONS ARE INTENDED FOR THE PERSONAL SAFETY OF YOU AND THOSE WORKING WITH YOU. PLEASE TAKE THE TIME TO READ THEM.

PERSONAL SAFETY!

CAUTION: THE WORD "CAUTION" IS USED WHERE A SAFE BEHAVIORAL PRACTICE ACCORDING TO OPERATING AND MAINTENANCE INSTRUCTIONS AND COMMON SAFETY PRACTICES WILL PROTECT THE OPERATOR AND OTHERS FROM ACCIDENT INVOLVEMENT.

WARNING: THE WORD "WARNING" DENOTES A POTENTIAL OR HIDDEN HAZARD WHICH HAS A POTENTIAL FOR SERIOUS INJURY. IT IS USED TO WARN OPERATORS AND OTHERS TO EXERCISE EVERY APPROPRIATE MEANS TO AVOID A SURPRISE INVOLVEMENT WITH MACHINERY.

DANGER: THE WORD "DANGER" DENOTES A FORBIDDEN PRACTICE IN CONNECTION WITH A SERIOUS HAZARD.

ADDITIONAL PRECAUTIONARY STATEMENTS SUCH AS "ATTENTION" AND "IMPORTANT" ARE FOLLOWED BY SPECIFIC INSTRUCTIONS. THESE STATEMENTS ARE INTENDED FOR MACHINE SAFETY.

MACHINE SAFETY!

ATTENTION: THE WORD "ATTENTION" IS USED TO WARN THE OPERATOR OF POTENTIAL MACHINE DAMAGE IF A CERTAIN PROCEDURE IS NOT FOLLOWED.

IMPORTANT: THE WORD "IMPORTANT" IS USED TO INFORM THE READER OF SOMETHING HE NEEDS TO KNOW TO PREVENT MINOR MACHINE DAMAGE IF A CERTAIN PROCEDURE IS NOT FOLLOWED.

IMPORTANT!

FAILURE TO FOLLOW THE "CAUTION", "WARNING", AND "DANGER" INSTRUCTIONS MAY POSSIBLY RESULT IN SERIOUS BODILY INJURY OR DEATH.

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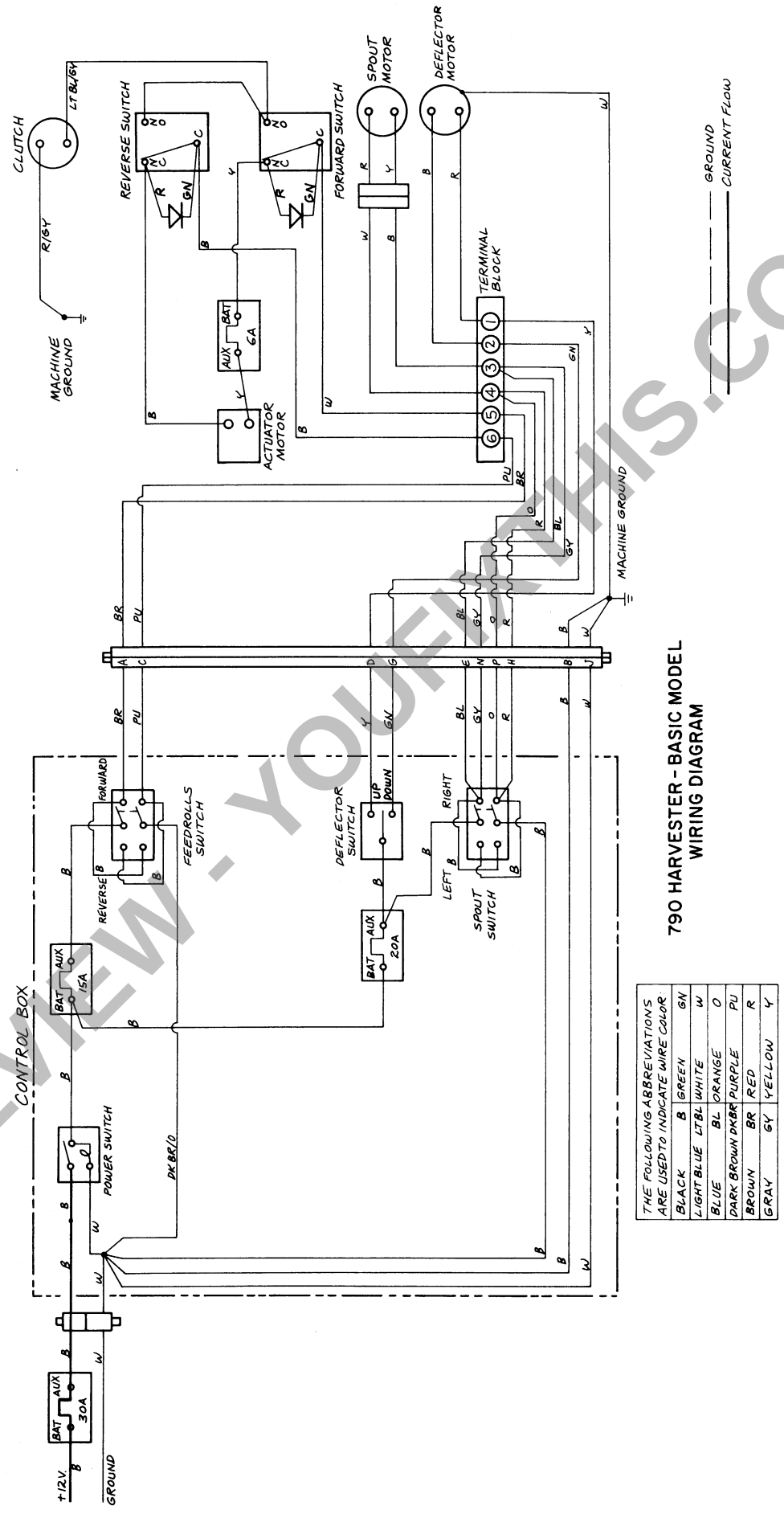


FIGURE 12-18

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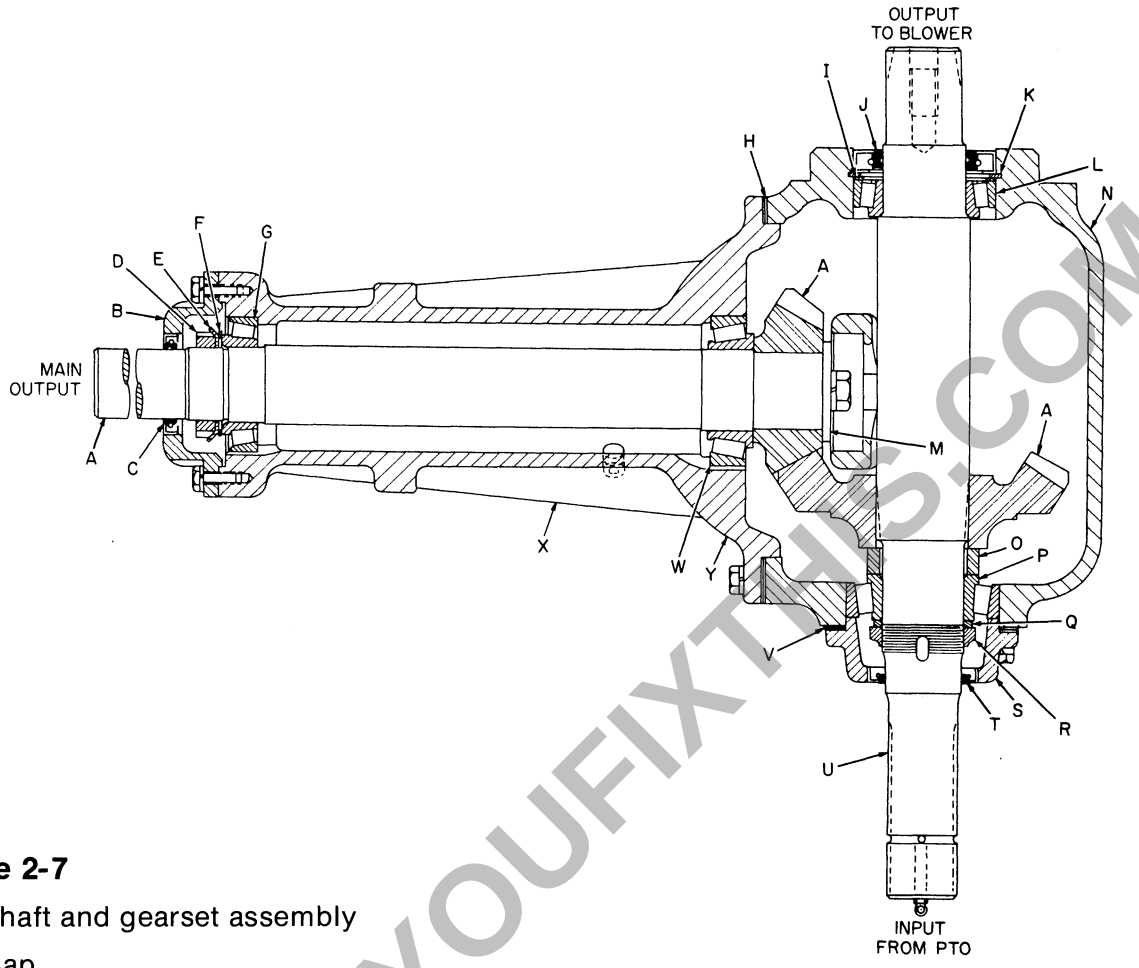


FIGURE 2-7

Figure 2-7

A Shaft and gearset assembly
B Cap
C Oil seal
D Spanner nut
E Tang washer
F Washer
G Bearing
H Shims - 0.003", 0.005", 0.020"
I Shims - 0.002", 0.005", 0.010", 0.030"
J Oil seal
K Snap ring
L Bearing
M Washer
N Housing
O Spacer - 540 RPM only
P Bearing
Q Washer
R Spanner nut
S Bearing cap
T Oil seal
U Shaft
V Shims - 0.003", 0.005", 0.020"
W Bearing
X Output housing
Y Output housing code

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INSPECTION

Remove all paint from the male telescoping shaft. There must be no paint on either the shaft or the nylon slides, as these parts have a close fit. Do not use emery cloth or other abrasive materials to remove paint. The telescoping shaft has a special coating which can be damaged with the use of emery cloth. Use a good quality paint remover to remove any paint from the metal.

Replace the shaft and bushings if there is any sign of wear.

If the nylon bushings are painted, replace them with new bushings. Using paint remover or abrasive materials on the nylon slides could damage them.

REASSEMBLY

Reverse the order of disassembly. Make sure the nylon slides are well greased during installation and that the entire PTO assembly is greased at C, Figure 1-5, after assembly is complete.

PTO PHASING

If ever disassembled, the universal joints on the long PTO shaft, A, Figure 2-2, should be reassembled "in phase."

SLIDE COLLAR ASSEMBLY

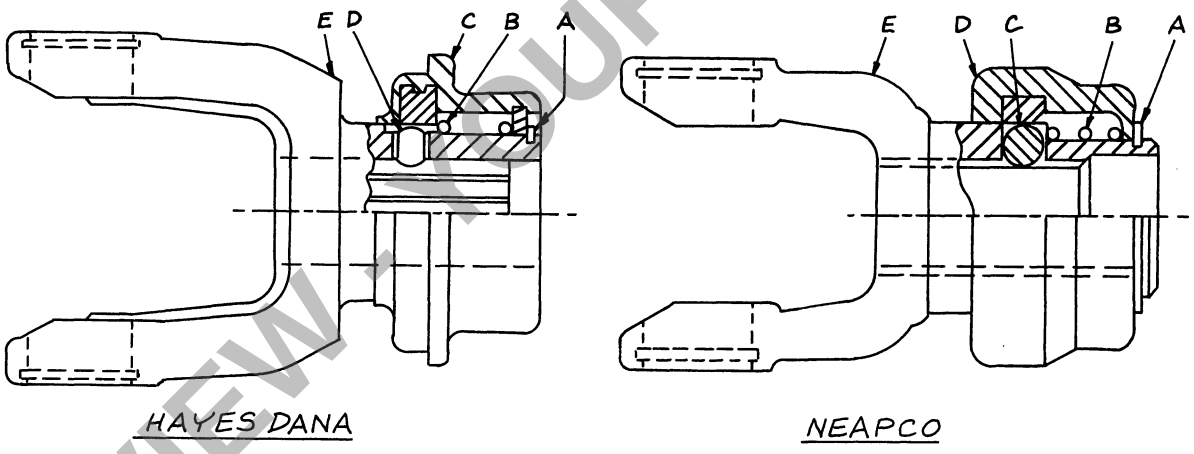


FIGURE 1-6

Two types of slide collar assemblies have been used on Model 790 harvesters. Refer to Figure 1-6 to determine which kind you have.

Ref.	Quantity Style A	Quantity Style B	Description
A	1	1	Retaining ring
B	1	1	Spring
C	3	2	Locking segment
D	1	1	Collar
E	1	1	Yoke

DISASSEMBLY

1. Remove the retaining ring, A.
2. Slide the collar off the yoke.

ASSEMBLY

1. Clean all parts thoroughly and then coat them with a light oil.
2. Install the locking segments and spring.
3. Install the collar and retaining ring.The collar must slide freely.

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TROUBLESHOOTING

Troubleshooting is divided into three main parts:

Spout and Deflector

Reversing Gearbox and Electric Clutch

Metalert II

Each section consists of a series of simple tests, in blocks, or observations that must be done in sequence. Each test or observation has two or three possible outcomes. Each outcome is followed by an additional test observation or possible cause of failure.

The following test tools are required:

1. 12-volt test lamp
2. Volt-ohmmeter
3. Metalert electronic metal detector test set

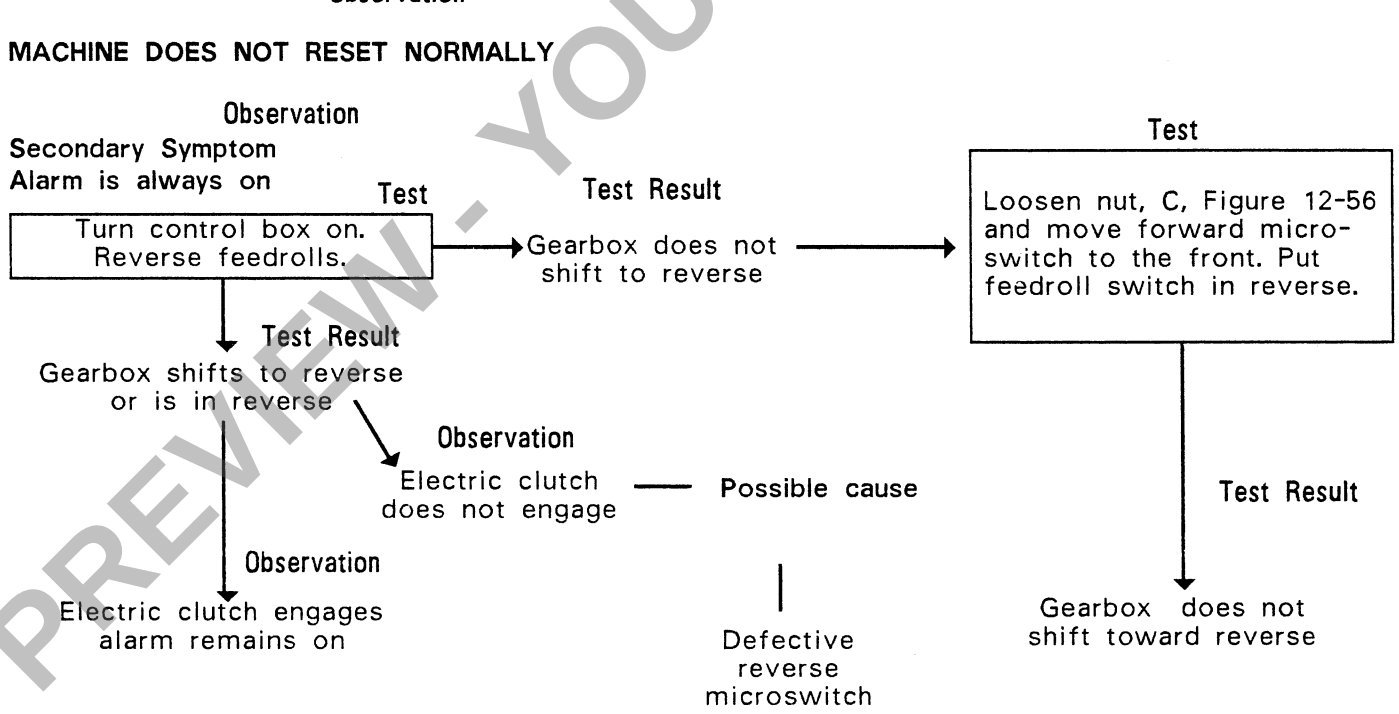
To use the guide do the first test. Follow the arrow to the test result or observation made.

NOTE: Before using the guide, become familiar with the location of the components on the machine. Refer to components in "System Operation".

From the observation, follow the arrow to the next observation or test. Continue this procedure until a possible cause of failure is suggested. A straight line without an arrow precedes a possible cause. Correct the cause of failure and then return to the start of the troubleshooting guide. When finished correcting all problems and checking the system using the guide, the outcome will be "system OK."

IMPORTANT: Do not skip a test.

EXAMPLE



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SECTION 1
TELESCOPING PTO

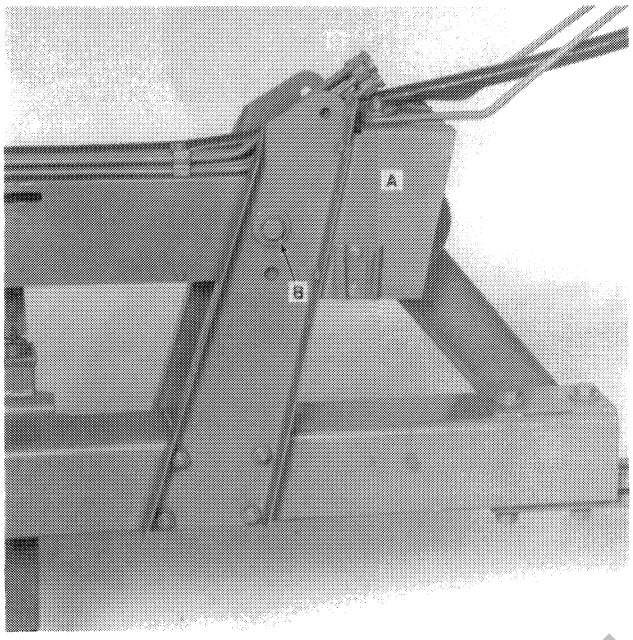


FIGURE 1-1

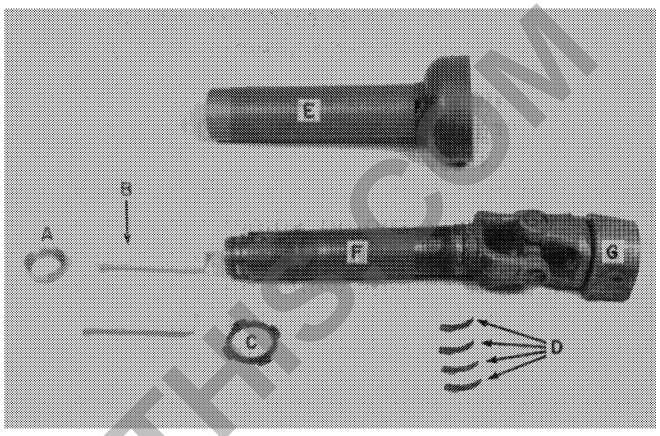


FIGURE 1-3

Figure 1-3

A Cap
B Slide bushings
C Shield support
D Retainer
E Shield
F Female PTO half
G Bearing housing

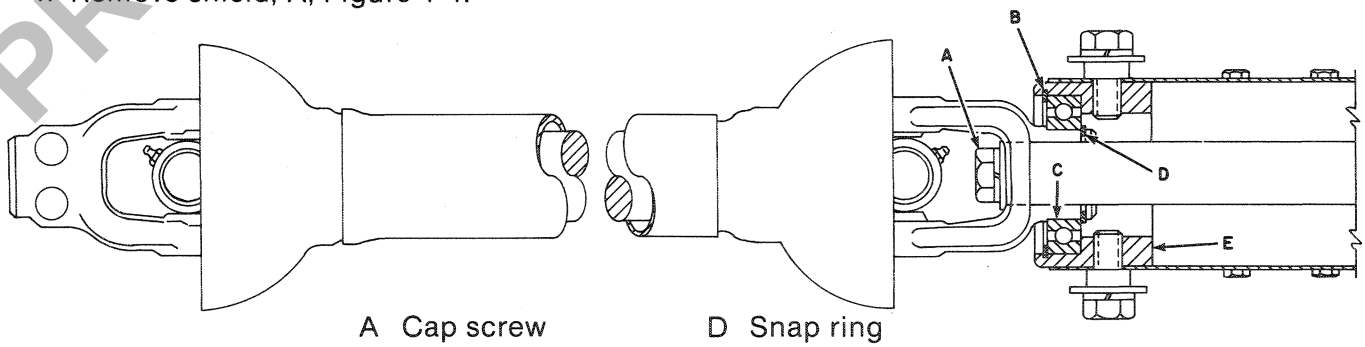
INTRODUCTION

The PTO driveline from the tractor to the main gearbox has Category VI universal joints and is available in 540 RPM or 1000 RPM. The 540 RPM driveline is rated to transmit 130 horsepower maximum input. The 1000 RPM driveline is rated to transmit 150 horsepower maximum input. The tractor PTO assembly contains a low friction bushing designed for reduced end thrust during telescoping.

REMOVAL

To remove the female section from the long drive shaft.

1. Remove shield, A, Figure 1-1.
2. Remove the bolt at A, Figure 1-2, fastening the U-joint to the shaft.
3. Support the driveline and remove bolt, B, Figure 1-1, from each side of the driveline.
4. Tap on the U-joint to loosen the PTO assembly from the tapered splines.



A Cap screw
B Retaining ring
C Bearing
D Snap ring
E Bearing housing

FIGURE 1-2

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SECTION 6
CUTTERHEAD

SPECIFICATIONS

Cutterhead bearings ..... 10 in. lbs.-15 in. lbs. (1 N·m-1.7 N·m) rolling torque
Knife bolt torque ..... 175 ft. lbs.-200 ft. lbs. (237 N·m-270 N·m)
Knife support block torque ..... 175 ft. lbs. (237 N·m)

INSTALLING AND ADJUSTING CUTTERHEAD KNIVES

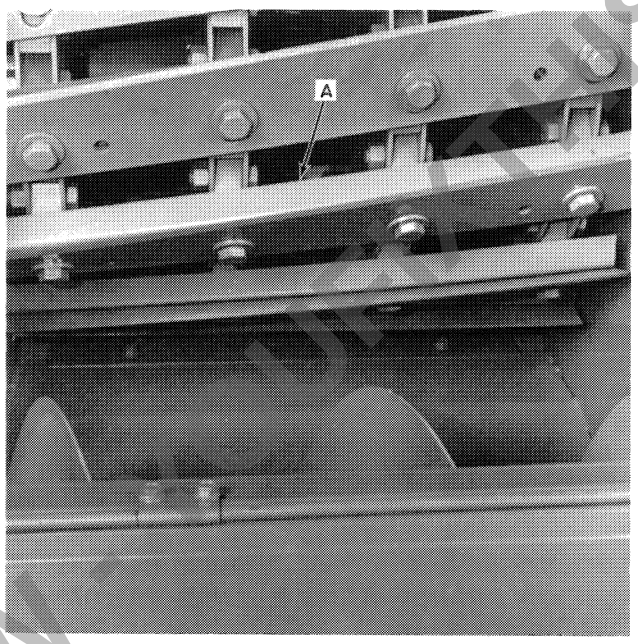


FIGURE 6-1

IMPORTANT: Inspect the cutterhead baffles, A, Figure 6-1, for wear when resetting the knives. Replace the baffles when the cutterhead knives are replaced.

NOTE: The following procedure is for resetting cutterhead knives. Replacing knives is similar except the knives are removed.

NOTE: If the knives are being reset, sharpen them before resetting. This will give a true edge, making adjustment easier.

DANGER: THE CUTTERHEAD KNIVES ARE SHARP. ALWAYS WEAR GLOVES WHEN INSTALLING AND ADJUSTING CUTTERHEAD KNIVES.

WHEN REPLACING KNIVES, REMOVE KNIVES ON OPPOSITE SIDES OF THE CUTTERHEAD TO PREVENT THE CUTTERHEAD FROM BECOMING UNBALANCED.

NOTE: An impact wrench is recommended for loosening cutterhead bolts. Do not use an impact wrench that is capable of tightening the bolts over 175 ft. lbs. (237 N·m), when installing knives. The knife bolts must never be tightened over 200 ft. lbs. (270 N·m).

1. Remove the shear bar. (See Section 8.)
2. Open the cutterhead cover and remove the sharpener shield.

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METALERT II TROUBLESHOOTING GUIDE

The first step when troubleshooting a metal detector is to observe what the machine is doing. Start the tractor and engage the PTO. Turn the control box on. The alarm horn should come on and stay on. Reverse the feed rolls. The reversing gearbox should shift to reverse and the electric clutch engage. The alarm horn should shut off and the stop pawl should retract. If it does, the main symptom is machine resets normally. If the system does not do any or all of those things, the symptom is machine does not reset properly.

The rest of this section is divided into two main parts based on these two symptoms.

Figure 12-53 shows an outline of the troubleshooting sections.

To identify the major symptom, start on page 12-51.

NOTE: The troubleshooting section assumes the machine is wired correctly. If the machine does not reset normally verify wiring.

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TROUBLESHOOTING OUTLINE

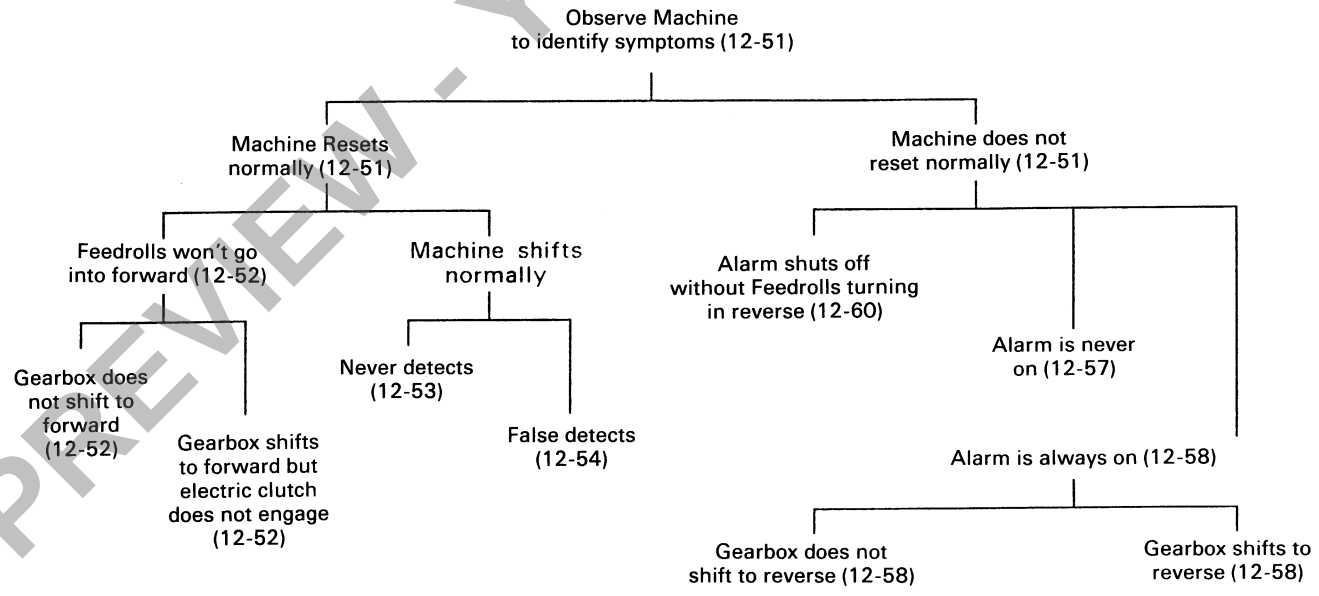


FIGURE 12-53

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SECTION 11
HYDRAULIC COMPONENTS
ATTACHMENT LIFT CYLINDER

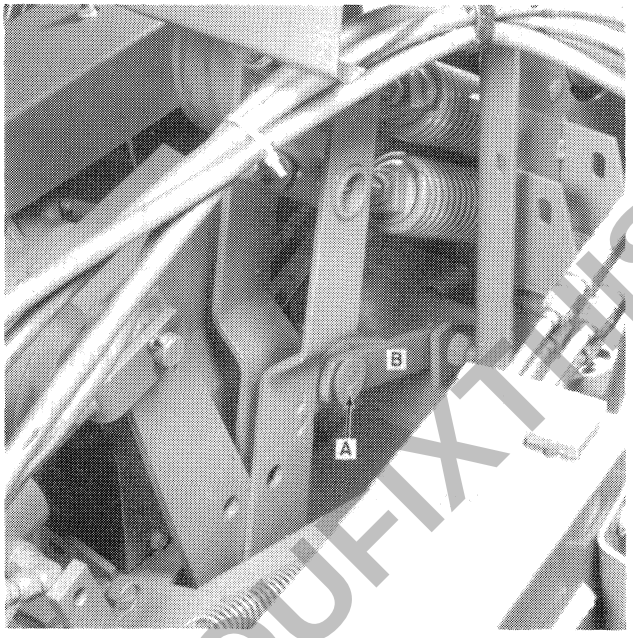


FIGURE 11-1

REMOVAL

1. If an attachment is installed, it should rest on the ground so there is no force on the lift cylinder. The safety lock can be installed if you want to keep the attachment raised.

   To install the safety lock, raise the attachment and install lockout pin, A, Figure 11-1, through safety lock B, as shown.

2. Disconnect the hydraulic hoses to the lift cylinder.

   NOTE: If the 90° fittings are removed, do not lose the orifice located in the port under each fitting.

3. Remove the two mounting pins and lift out the cylinder.

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