

**JOHN DEERE**  
**WORLDWIDE COMMERCIAL & CONSUMER**  
**EQUIPMENT DIVISION**

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**Mid-Mount Z-Trak®**  
**737 and 757**

TM2003 FEB02

**TECHNICAL MANUAL**



**JOHN DEERE**

North American Version  
Litho in U.S.A.

# INTRODUCTION

## Manual Description

This technical manual is written for an experienced technician and contains sections that are specifically for this product. It is a part of a total product support program.

The manual is organized so that all the information on a particular system is kept together. The order of grouping is as follows:

- Table of Contents
- Specifications
- General Information
- Identification Numbers
- Tools and Materials
- Component Location
- Schematics and Harnesses
- Theory of Operation
- Operation and Diagnostics
- Diagnostics
- Tests and Adjustments
- Repair
- Other

***NOTE: Depending on the particular section or system being covered, not all of the above groups may be used.***

The bleed tabs for the pages of each section will align with the sections listed on this page. Page numbering is consecutive from the beginning of the Safety section through the last section.

We appreciate your input on this manual. If you find any errors or want to comment on the layout of the manual please contact us.

**Safety**

**Specifications and Information**

**Engine**

**Electrical**

**Hydrostatic Power Train**

**Brakes**

**Attachments**

**Miscellaneous**

All information, illustrations and specifications in this manual are based on the latest information at the time of publication. The right is reserved to make changes at any time without notice.

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Consumer Equipment Division  
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# SAFETY INFORMATION

## Information

### Recognize Safety Information



MIF

This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

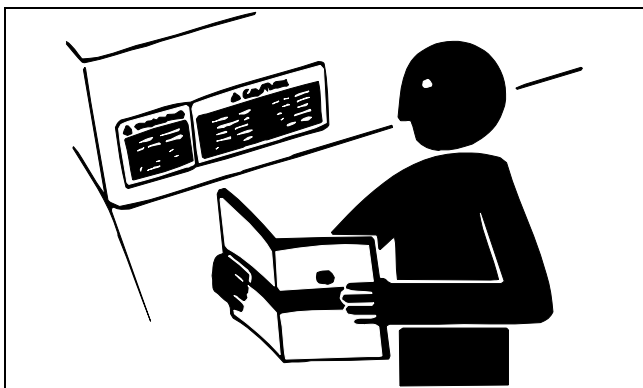
Follow recommended precautions and safe servicing practices.

### Understand Signal Words

A signal word - DANGER, WARNING, or CAUTION - is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

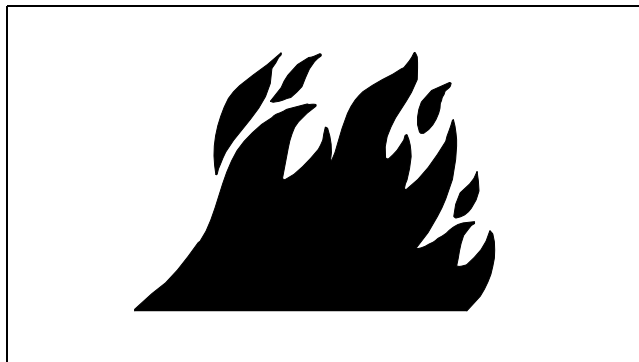
### Replace Safety Signs



MIF

Replace missing or damaged safety signs. See the machine operator's manual for correct safety sign placement.

## Be Prepared for Emergencies



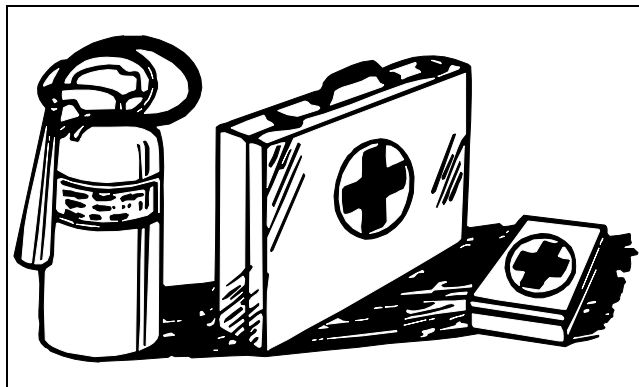
MIF

When you work around fuel, do not smoke or work near heaters or other fire hazards.

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

Do not store oily rags; they can ignite and burn spontaneously.



MIF

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.

**<https://www.ebooklibonline.com>**

Hello dear friend!

Thank you very much for reading.

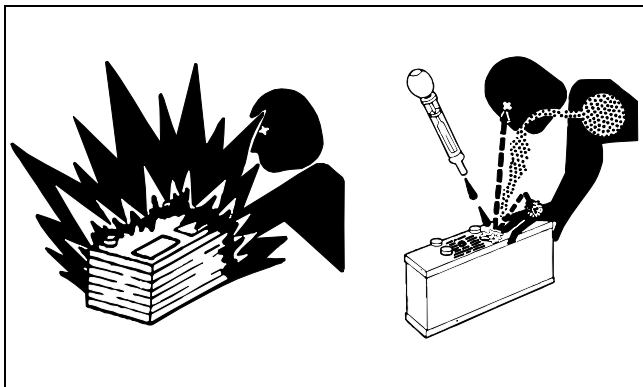
Enter the link into your browser.

The full manual is available for immediate download.

**<https://www.ebooklibonline.com>**

# SAFETY INFORMATION

## Prevent Battery Explosions



MIF

- Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.
- Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.
- Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).

## Prevent Acid Burns

- 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 acid burns by:**
  - a. Filling batteries in a well-ventilated area.
  - b. Wearing eye protection and rubber gloves.
  - c. Avoiding breathing fumes when electrolyte is added.
  - d. Avoiding spilling or dripping electrolyte.
  - e. Using proper jump start procedure.
- **If you spill acid on yourself:**
  - a. Flush your skin with water.
  - b. Apply baking soda or lime to help neutralize the acid.
  - c. Flush your eyes with water for 10-15 minutes.
  - d. Get medical attention immediately.
- **If acid is swallowed:**
  - a. Drink large amounts of water or milk.
  - b. Then drink milk of magnesia, beaten eggs, or vegetable oil.
  - c. Get medical attention immediately.

## Avoid High-Pressure Fluids



MIF

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.

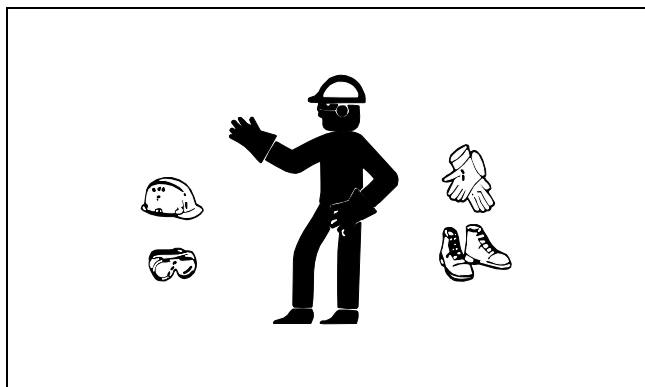
If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A. Information may be obtained in the United States and Canada only by calling 1-800-822-8262.

## Avoid Heating Near Pressurized Fluid Lines

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can be accidentally cut when heat goes beyond the immediate flame area.

# SAFETY INFORMATION

## Wear Protective Clothing



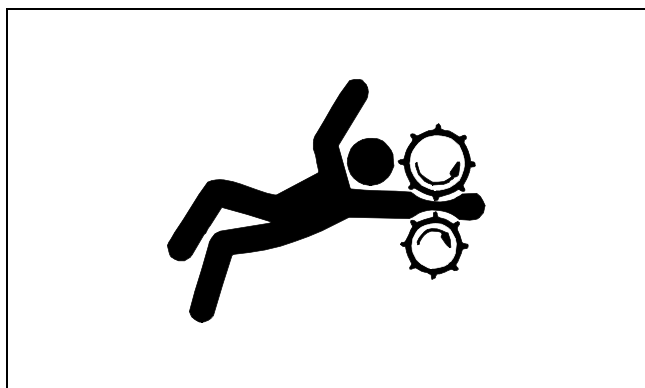
MIF

Wear close fitting clothing and safety equipment appropriate to the job.

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.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

## Service Machines Safely



MIF

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

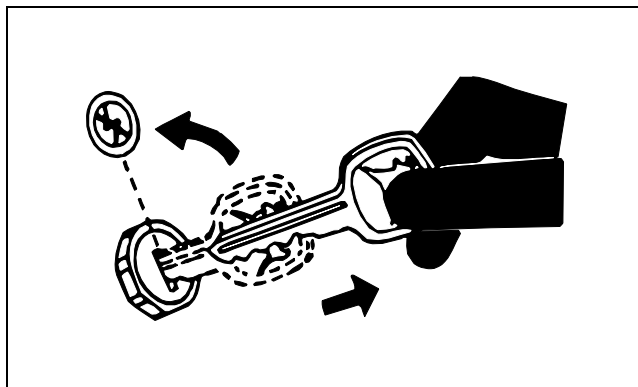
Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.

## Use Proper Tools

Use tools appropriate to the work. Makeshift tools and procedures can create safety hazards. Use power tools only to loosen threaded parts and fasteners. For loosening and tightening hardware, use the correct size tools. DO NOT use U.S. measurement tools on metric fasteners.

Avoid bodily injury caused by slipping wrenches. Use only service parts meeting John Deere specifications.

## Park Machine Safely

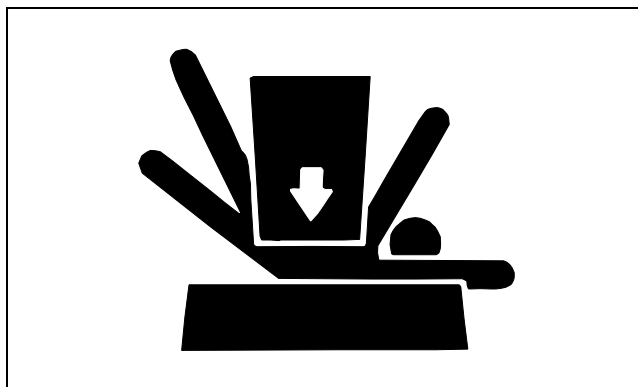


MIF

### Before working on the machine:

1. Lower all equipment to the ground.
2. Stop the engine and remove the key.
3. Disconnect the battery ground strap.
4. Hang a "DO NOT OPERATE" tag in operator station.

## Support Machine Properly and Use Proper Lifting Equipment



MIF

If you must work on a lifted machine or attachment, securely support the machine or attachment.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

Lifting heavy components incorrectly can cause severe injury or machine damage. Follow recommended procedure for removal and installation of components in the manual.

# SAFETY INFORMATION

## Work in Clean Area

### Before starting a job:

1. Clean work area and machine.
2. Make sure you have all necessary tools to do your job.
3. Have the right parts on hand.
4. Read all instructions thoroughly; do not attempt shortcuts.

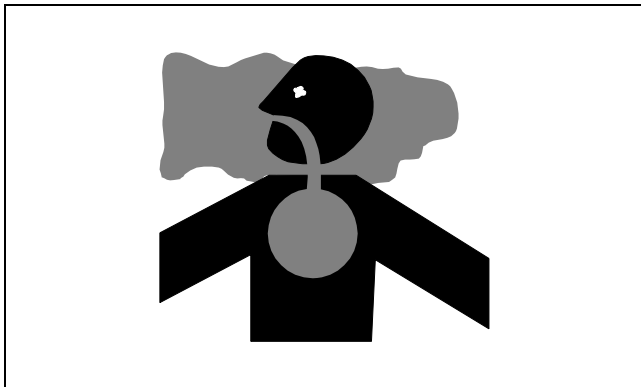
## Using High-Pressure Washers

Directing pressurized water at electronic/electrical components or connectors, bearings, hydraulic seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Reduce pressure and spray at a 45 to 90 degree angle.

## Illuminate Work Area Safely

Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

## Work in Ventilated Area



MIF

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.

## WARNING: California Proposition 65 Warning

Gasoline engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

## Remove Paint before Welding or Heating

Avoid potentially toxic fumes and dust. Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch. Do all work outside or in a well-ventilated area. Dispose of paint and solvent properly. Remove paint before welding or heating. If you sand or grind paint, avoid breathing the dust. Wear an approved respirator. If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

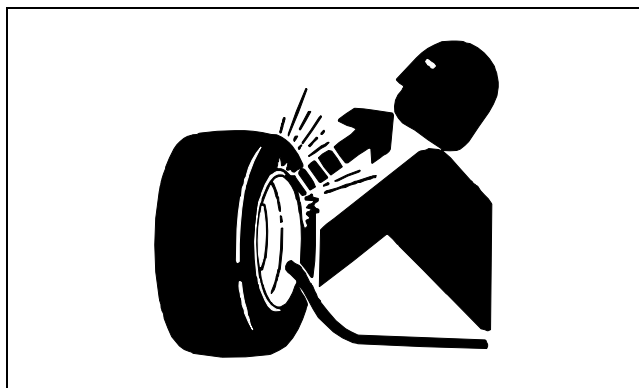
## Avoid Harmful Asbestos Dust

Avoid breathing dust that may be generated when handling components containing asbestos fibers. Inhaled asbestos fibers may cause lung cancer.

Components in products that may contain asbestos fibers are brake pads, brake band and lining assemblies, clutch plates, and some gaskets. The asbestos used in these components is usually found in a resin or sealed in some way. Normal handling is not hazardous as long as airborne dust containing asbestos is not generated.

Avoid creating dust. Never use compressed air for cleaning. Avoid brushing or grinding material containing asbestos. When servicing, wear an approved respirator. A special vacuum cleaner is recommended to clean asbestos. If not available, apply a mist of oil or water on the material containing asbestos. Keep bystanders away from the area.

## Service Tires Safely



MIF

Explosive separation of a tire and rim parts can cause serious injury or death.

- Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.
- Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or

# HYDROSTATIC POWER TRAIN TESTS & ADJUSTMENTS

## Checking and Adjusting Motion Control Linkages

### Reason

To ensure that the machine does not move when the control levers are in the NEUTRAL position, while the engine is running.



**CAUTION: Avoid injury! Do not attempt this adjustment unless you are a qualified and properly trained technician.**

### Checking Motion Control Linkages

**NOTE: Check and adjust motion control linkages with the machine parked on a hard, level surface.**



**CAUTION: Avoid injury! Engine exhaust fumes can cause sickness or death:**

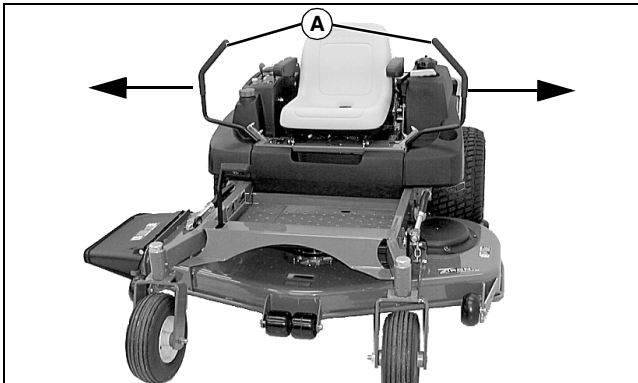
- If it is necessary to run an engine in an enclosed area, use an exhaust pipe extension to remove the fumes.
- Always try to work in a well ventilated area.

1. Start engine.
2. Set throttle lever to the fast position.
3. Unlock park brake.
4. If the rear drive wheels begin to creep, an adjustment is required.

### Adjusting Motion Control Linkages

**NOTE: Right and left control levers can be adjusted independently.**

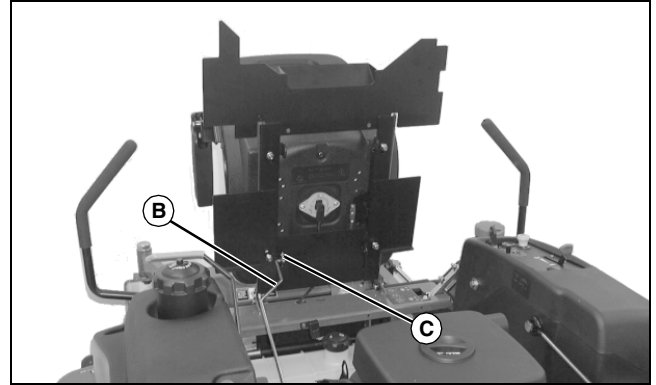
1. Stop engine and lock park brake.



MX10313

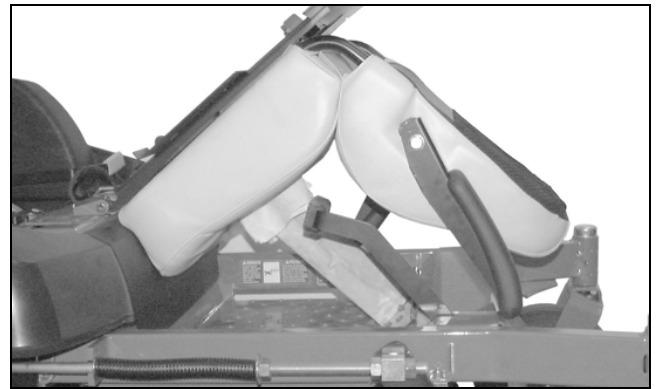
2. Move both motion control levers (A) to the neutral lock position.

3. Lift and secure operator seat in the raised position.



MX10292

4. Remove support rod (B) from side of seat frame.
  - Remove cotter pin and washer (C).
5. Tilt seat forward to rest on front frame.
6. Raise rear of machine with a safe lifting device.
  - Support with wood blocks or jackstands.
  - Rear drive wheels must have the ability to rotate freely.



MX6133

7. Activate operator seat safety switch.

**NOTE: To prevent damage to the bottom of the operator seat, cover end of wood block with a rag.**

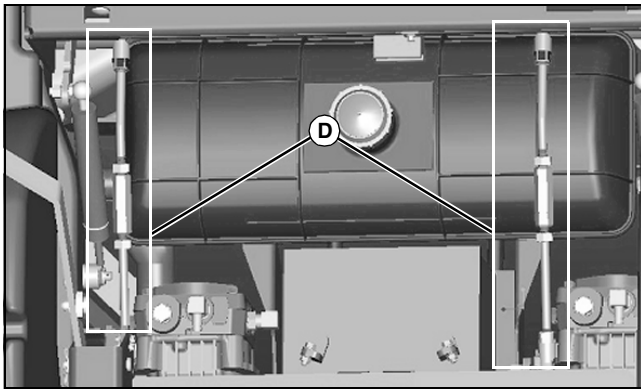
- Place a wood block approximately 35-40 cm (14-16 in.) long between the foot plate and the center of the seat.
8. Start engine.
  9. Set throttle to the fast position.



**CAUTION: Avoid injury! Help prevent serious personal injury when performing this service procedure. Keep hands, feet and clothing away from rotating tires.**

10. Unlock park brake.

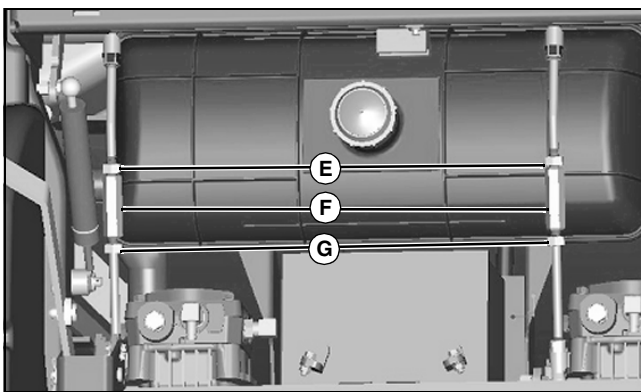
# HYDROSTATIC POWER TRAIN TESTS & ADJUSTMENTS



11. Locate left and right motion control linkages (D).

12. Move the right motion control lever into the neutral lock position.

- The right drive wheels must not turn. If it does turn, adjust the motion control linkage:



**NOTE: The hex nut (E) at the rear of each turnbuckle has left-hand threads.**

- loosen hex nuts (E) and hex nuts (G) on each side of the turnbuckle (F).
- Adjust turnbuckle (F). Keep adjusting the turnbuckle until the wheel stops rotating completely.
- Tighten hex nuts (E and G) against turnbuckle (F).

13. Move the right motion control lever completely rearward in the slot and release lever. The lever should return back to the neutral position (completely centered in the slot).

- The drive wheels must stop completely. If the drive wheel does not completely stop rotating, a damper mount adjustment is necessary:
- Adjust damper in slot as necessary, tighten nut to specification.

14. Move the right motion control lever completely forward and rearward in the slot and then back to the neutral lock position.

- The drive wheels must stop completely. If the drive

wheel does not completely stop rotating, repeat steps 12-14.

15. Repeat procedure to adjust the left motion control linkage.

**Result** Drive wheels do not rotate when in neutral lock position or when motion control levers return to central position in slot.

16. Stop engine.

17. Move both motion control levers to the neutral lock position.

18. Remove wood block from between foot plate and the operator seat.

19. Lower machine.

20. Install support rod to side of seat frame with cotter pin and washer.

21. Lower seat.

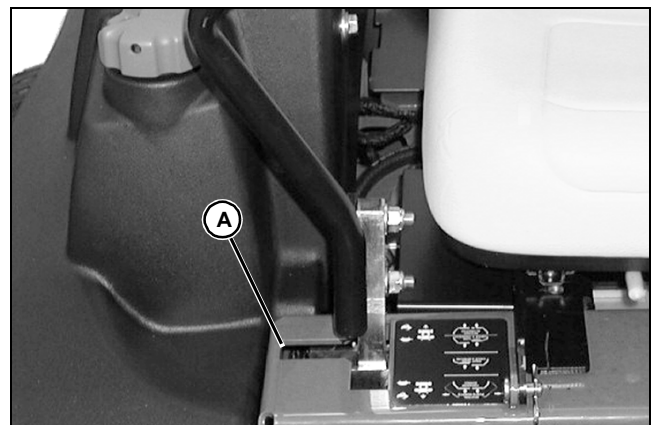
## Control Damper Neutral Check and Adjustment

### Reason

To ensure that the control levers return to the NEUTRAL position.

### Check Procedure

1. Park machine safely.



2. Pull both control levers back to the REVERSE position.

3. Release the levers. The levers should return to the NEUTRAL position (lever centered in the NEUTRAL LOCK slot [A]) where they can be moved to the NEUTRAL LOCK position without interference with the frame.

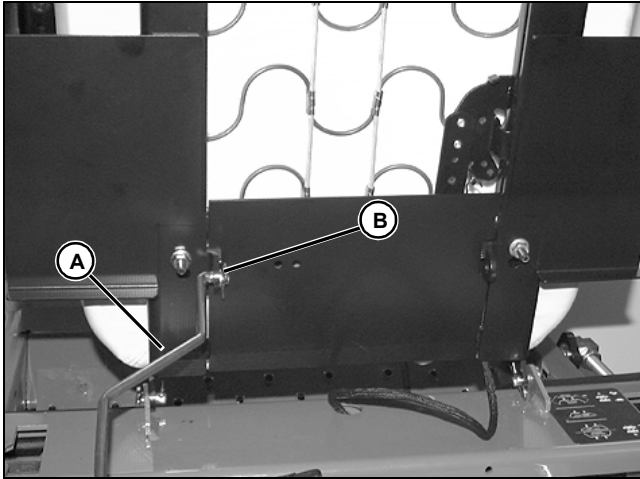
### Results

If control levers do not return as described, continue to "Adjustment Procedure" on page 179.

# HYDROSTATIC POWER TRAIN TESTS & ADJUSTMENTS

## Adjustment Procedure

1. Move control levers to NEUTRAL LOCK position.
2. Raise and latch seat platform.

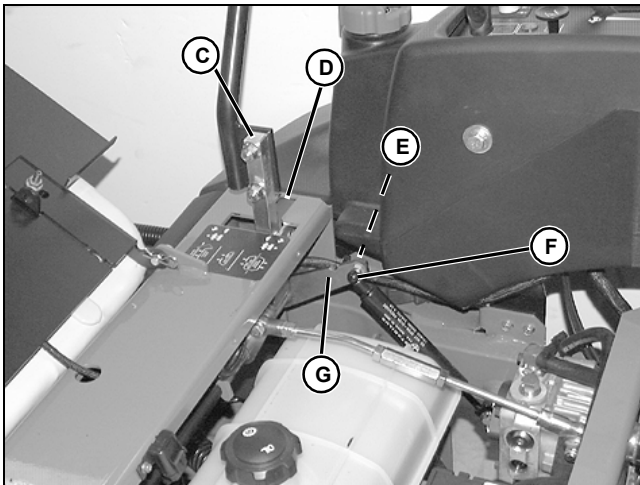


MX6132

3. Remove lock pin and washer (B) and support rod (A) from the seat bracket.
4. Tilt the seat forward and allow to rest against the vehicle frame.

**NOTE: Right and left control dampeners can be adjusted independently.**

5. Move the right control lever from the NEUTRAL LOCK to the NEUTRAL position.
6. Pull control lever to REVERSE position and release.



MX6135

7. Loosen lock nut (E). Move dampener pivot (F) in slot of linkage lever (G) until control lever (C) is aligned with NEUTRAL LOCK position (D).
8. Tighten lock nut (E).
9. Pull control lever to REVERSE position and release. Control lever should return to NEUTRAL position.

10. Repeat adjustment as necessary.

**NOTE: When properly adjusted, the control levers will return to the NEUTRAL position from the REVERSE position when the control levers are released, and reverse movement will stop.**

11. Repeat adjustment procedure for the LEFT control lever.

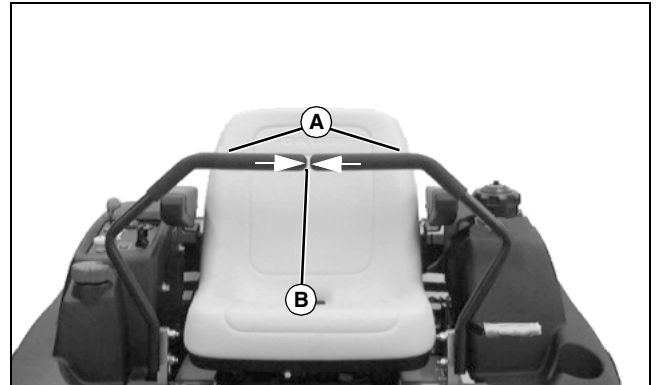
## Specifications

Damper Nut Torque . . . . . 20 N•m (15 lb-ft)

## Checking and Aligning Motion Control Levers

### Check Alignment

1. Park machine on a hard, level surface and set park brake.



MX10346

2. Move both motion control levers (A) forward.
3. Check levers for equal alignment.

- Check gap (B) between the levers. The recommended gap is 3-6 mm (1/8-1/4 in.).

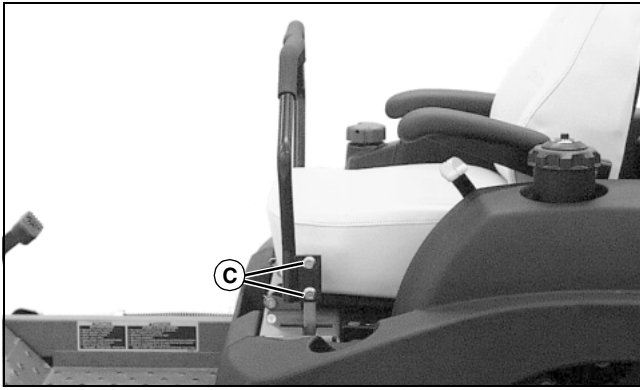
**NOTE: If the ends of the levers strike against each other while in the neutral position, move the levers to the neutral lock position and carefully bend them outward. Move them back to the neutral position and check for the recommended gap of 3-6 mm (1/8-1/4 in.).**

- If positions of the control levers are unequal, an adjustment is necessary.

### Alignment Procedure

1. Adjust position of motion control levers:

# HYDROSTATIC POWER TRAIN TESTS & ADJUSTMENTS



MX10334

- Loosen cap screws (C).
- Slide both levers forward or rearward to desired position within tab slots until levers are aligned.
- Tighten cap screws.

## Specifications

**Control Lever Tip Clearance . . . 3-6 mm (1/8-1/4 in.)**

## Neutral Lock Effort Check and Adjustment

### Reason

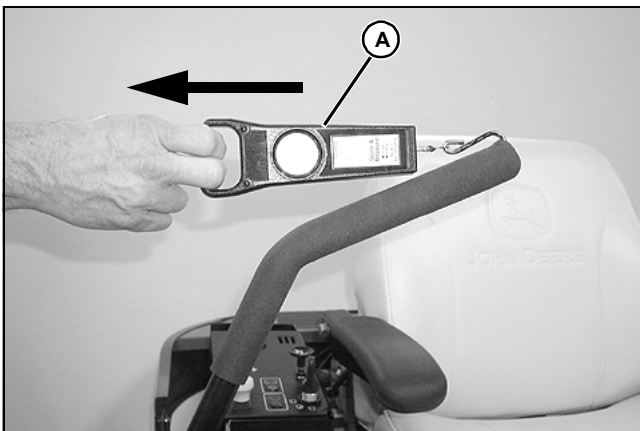
To ensure that control levers will lock into neutral position.

### Required Tools

Tool Name	Tool No.	Tool Use
Spring Scale	NA	Used to check steering lever to neutral lock effort.

### Procedure

1. Park machine safely.
2. Move control levers to neutral position.



MX6179

3. Attach an appropriate spring scale (A) to the top of the

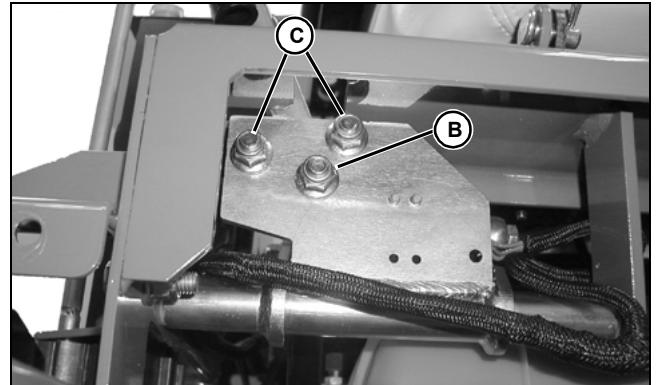
control lever.

4. Using spring scale, slowly pull control lever outward toward NEUTRAL LOCK position. Read pull effort while lever is moving. Reading on spring scale should be within specification.

### Results

If reading is not within specified range, perform "Adjustment Procedure" on page 180.

### Adjustment Procedure



MX6180

**Picture Note: Right Console and Fuel Tank Removed for Clarity of Photo**

1. Tighten or loosen lock nut (B) to obtain an even pull within specification.
2. If effort adjustment cannot be achieved, tighten or loosen locknuts (C) 1/8 turn and repeat step 1.

### Specifications

**Control Lever Pull Effort . . . 58-80 N (13-18 lb-force)**

# HYDROSTATIC POWER TRAIN TESTS & ADJUSTMENTS

## Hydraulic Pump Flow Test



**CAUTION: Avoid injury! 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 should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A. Information may be obtained in the United States and Canada only by calling 1-800-822-8262.**

**NOTE: Two persons may be required to perform this test. If unavailable, disconnect seat switch harness connector and install a jumper wire across seat switch terminals in main harness connector.**

### Reason

To determine if the hydraulic pump or wheel motor is faulty. Proper operation of the hydraulic pump indicates a faulty wheel motor.

### Required Tools

Tool Name	Tool No.	Tool Use
Bi-Directional Pressure Flow Meter	Hydro Gear 70661 <sup>a</sup>	Used to measure hydraulic pump flow and pressure.
Adapter Fitting (2 used)	38H1279	Used to connect test hoses to hydrostatic lines.
O-Ring (4 required)	T77857	Used on adapter fittings.

a. See Service Bulletin 02-11-65-02 for additional information.

### Test Conditions:

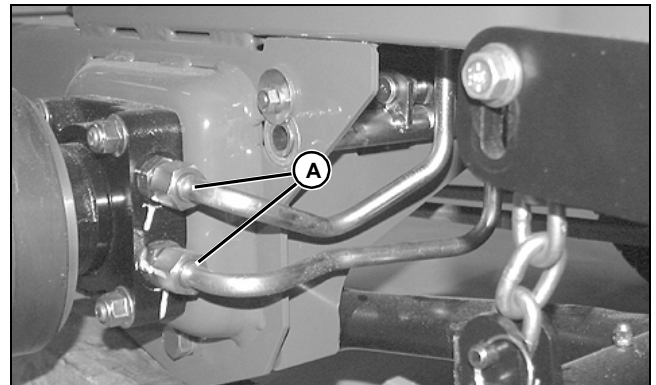
- Drive wheels removed.
- Park brake released.
- Hydraulic pump bypass valves fully closed.
- Engine at FAST idle.
- Directional control lever in FORWARD position.

### Procedure

1. Park machine safely.
2. Remove drive wheels. Block remaining tires to prevent machine from moving.

**NOTE: Hydro Gear 70661 Bi-Directional Pressure Flow Meter may be connected directly to the pump (Method A) or to the wheel motor feed lines (Method B).**

### Method A



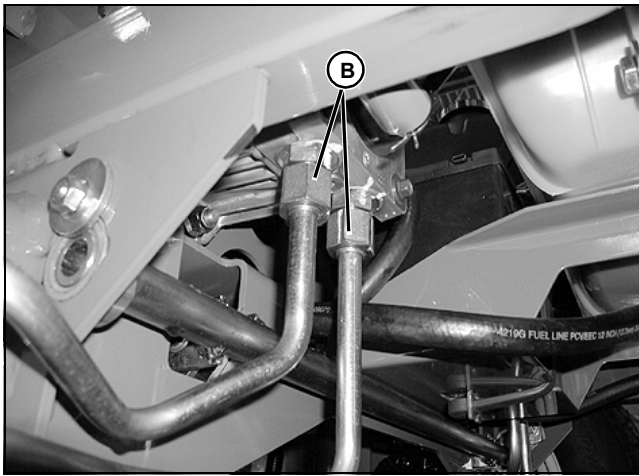
MX6141

**NOTE: Note positions of lines to ensure correct installation.**

1. Loosen lines (A) at wheel motor for pump being tested.

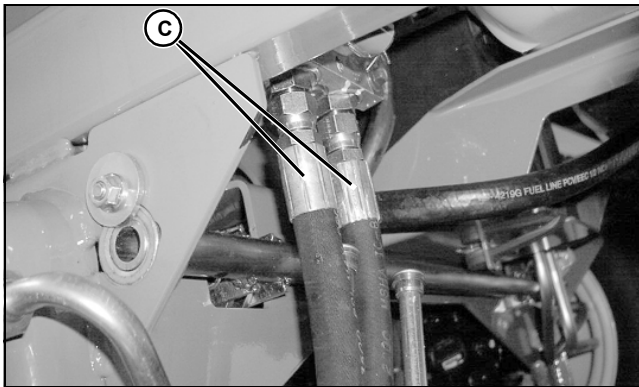
**IMPORTANT: Avoid damage! Plug lines to the wheel motors to prevent system contamination.**

# HYDROSTATIC POWER TRAIN TESTS & ADJUSTMENTS



MX6170

2. Disconnect lines (B) from pump, and move lines out of the way. DO NOT remove adapters from pump.



MX6171

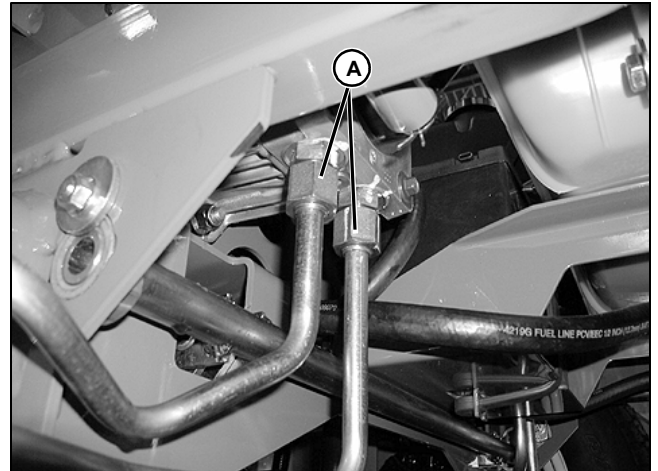


**CAUTION: Avoid injury! Ensure all fittings and hoses are attached securely. This test is being performed on the machine's high pressure system.**

**NOTE: Hydro Gear 70661 Bi-Directional Pressure Flow Meter can be connected to the pump for use in either direction.**

3. Connect hoses (C) of Hydro Gear 70661 Bi-Directional Pressure Flow Meter to pump as shown.

## Method B

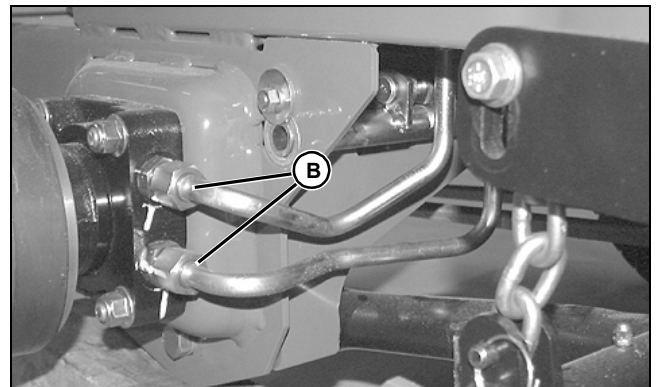


MX6170

**NOTE: Note positions of lines to ensure correct installation.**

1. Loosen lines (A) at pump being tested.

**IMPORTANT: Avoid damage! Plug wheel motor fittings to prevent system contamination.**



MX6141

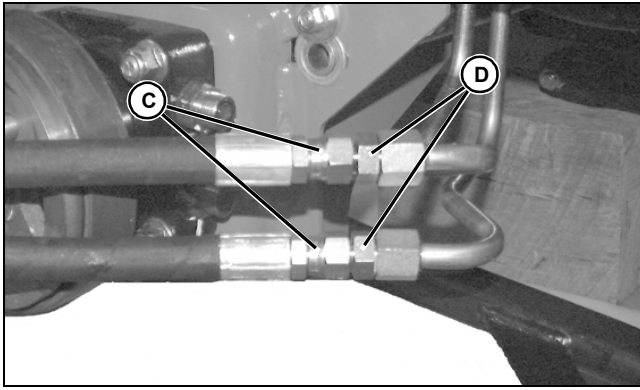
2. Disconnect lines (B) from wheel motor, and move lines out of the way.



**CAUTION: Avoid injury! Ensure all fittings and hoses are attached securely. This test is being performed on the machine's high pressure system.**

**NOTE: Hydro Gear 70661 Bi-Directional Pressure Flow Meter can be connected to the pump for use in either direction.**

# HYDROSTATIC POWER TRAIN REPAIR

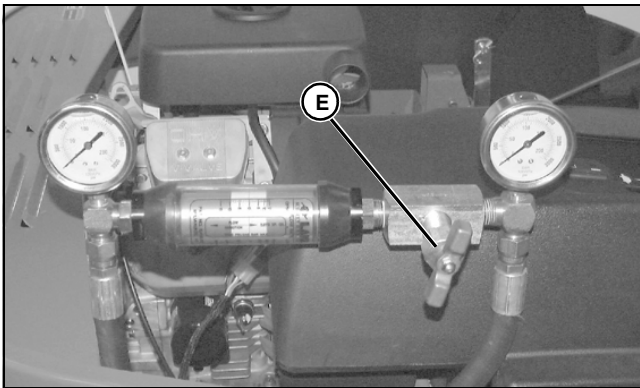


MX6205

3. Connect hoses (C) of Hydro Gear 70661 Bi-Directional Pressure Flow Meter to lines using 38H1279 Adapter Fittings (D) and O-rings as shown.

## Perform Test

1. Tighten all fittings.



MX6244

2. Turn load knob (E) on tester fully counterclockwise.



**CAUTION: Avoid injury! Engine exhaust fumes can cause sickness or death. If it is necessary to run machine in an enclosed area, use an exhaust pipe extension to remove the fumes.**

3. Start the engine and bring engine speed to FAST idle.
4. Operate hydraulics until system is at normal operating temperature. Normal range is 71.1°-98.9°C (160°-210°F).
5. Move the control arm to the full FORWARD position.
6. Turn the load knob on the tester CLOCKWISE to increase pressure to 2068 kPa (300 psi). Record the tester reading.
7. Continue to turn load knob CLOCKWISE until pressure reading is at 7584 kPa (1100 psi). Again, record tester reading.
8. Move the control lever to neutral, stop engine, and turn

load knob on tester fully counterclockwise.

9. Subtract the first reading from the second and record the difference. Compare your value to the specification.

## Results

- If pump flow is not within specification, repair or replace hydraulic pump. (See “Hydraulic Pump Removal/Installation” on page 186.)
- If pump flow is within specification, repair or replace wheel motor. (See “Wheel Motor Removal/Installation” on page 196.)

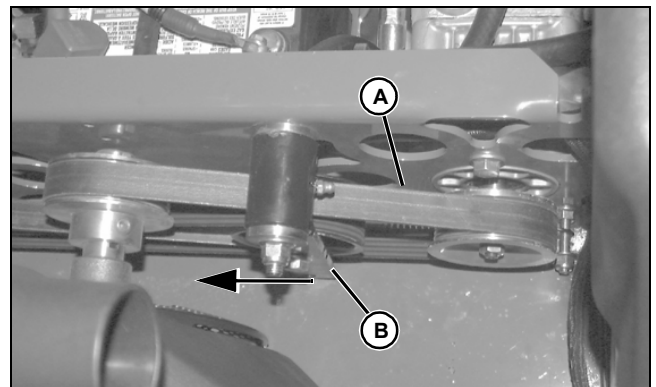
## Specifications

**Hydraulic Pump Flow Differential (Max) 5.6 L (1.5 gpm)**

## Repair

### Hydraulic Pump Drive Belt Removal/Installation

1. Park machine safely.
2. Raise and latch seat platform.



MX6137

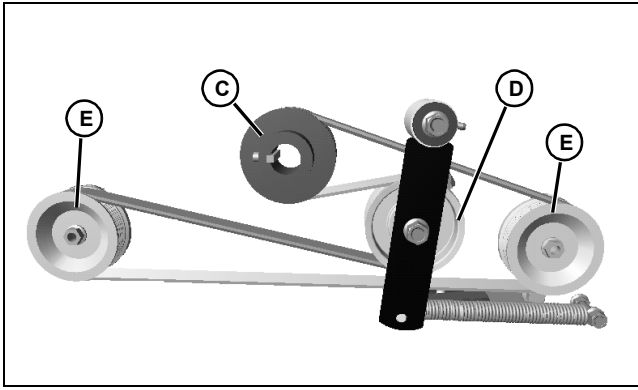
3. Relieve belt tension by using a pry bar to move the belt idler pivot (B).
4. Remove the drive belt (A).
5. Inspect the belt for cracks, damage or signs of wear. Replace as needed.

## Installation

Installation is done in the reverse order of removal.

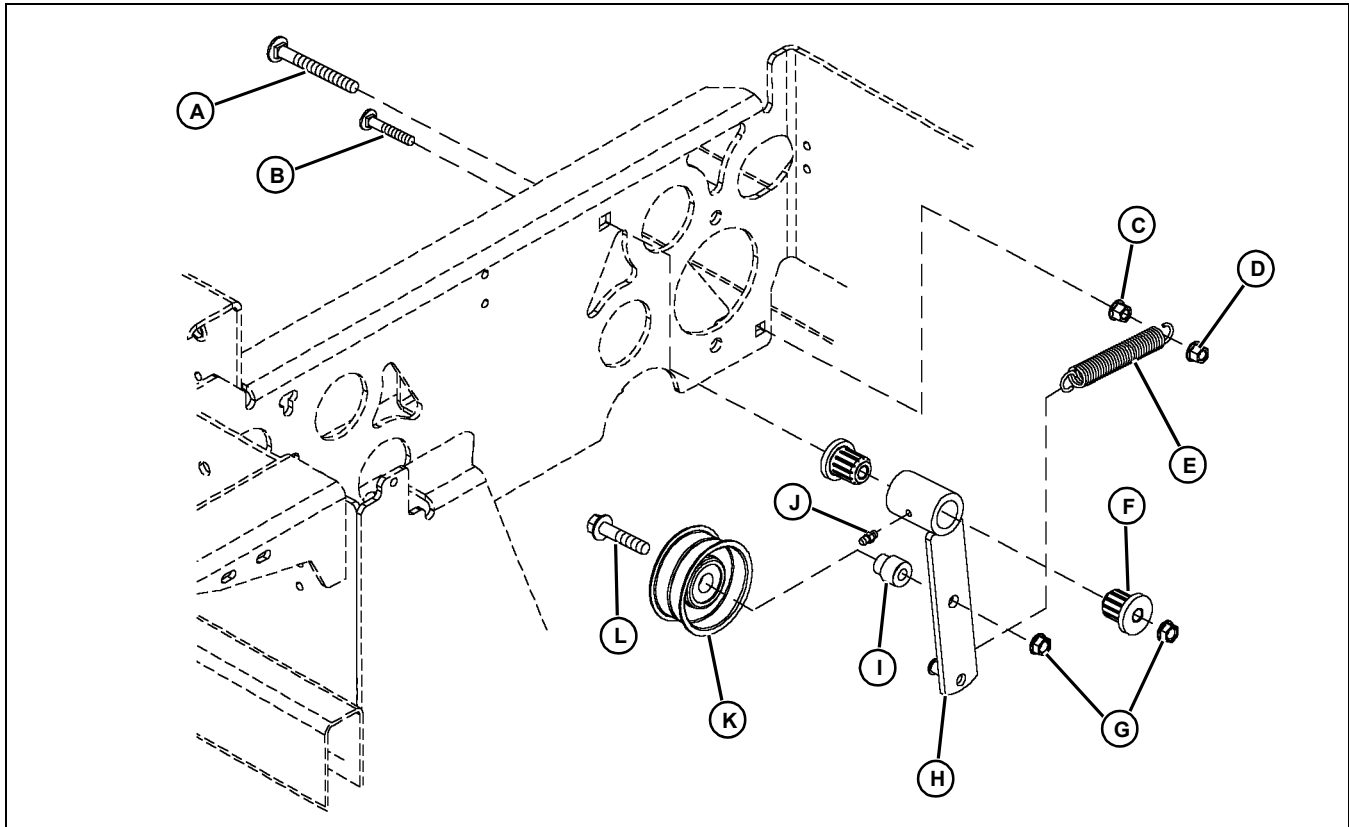
# HYDROSTATIC POWER TRAIN REPAIR

## Hydraulic Pump Drive Belt Tensioner Assembly Repair



MX10364

- Route belt around hydraulic pump sheaves (E), PTO shaft sheave (C), and idler sheave (D).



MX6138

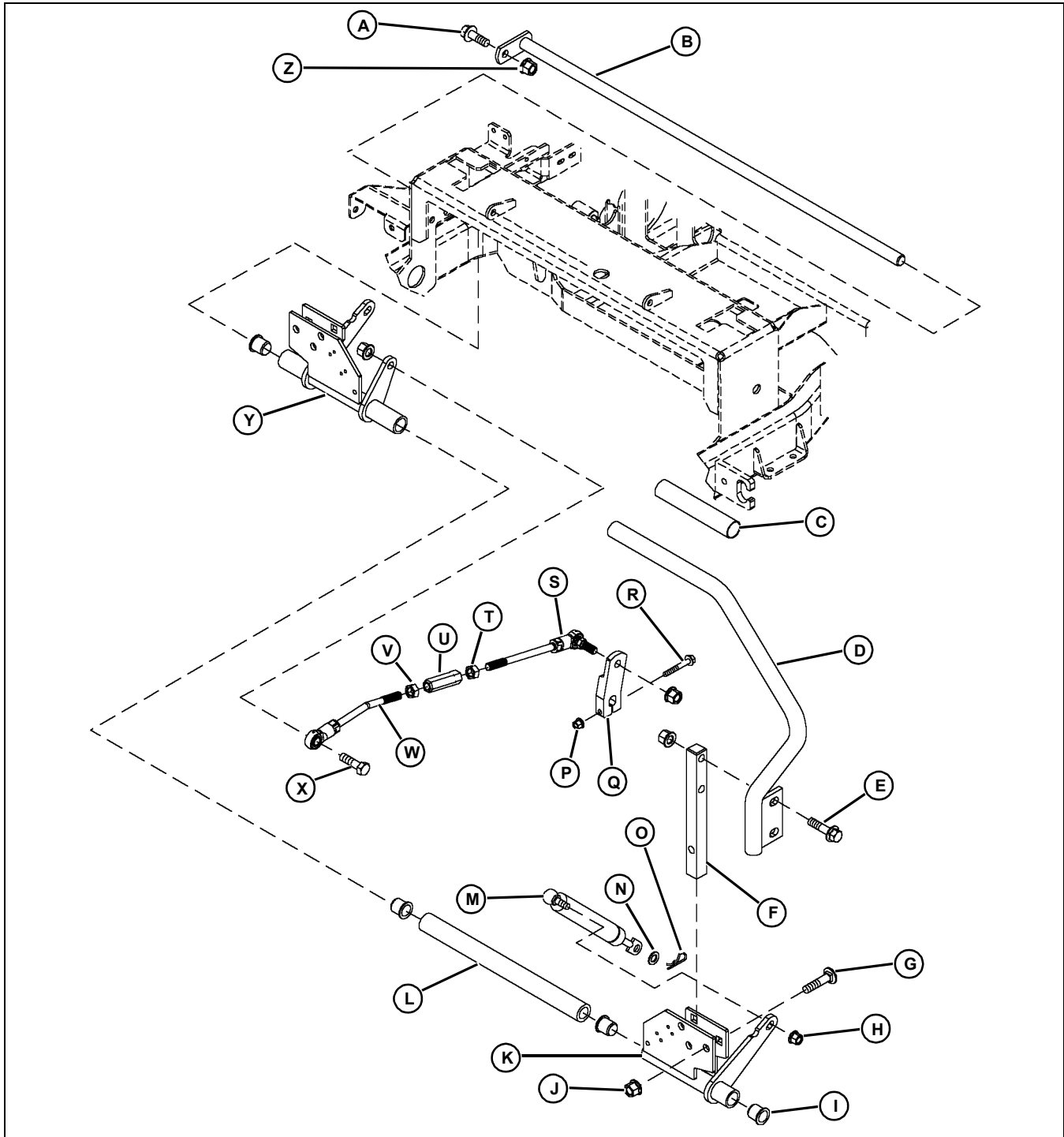
L - Cap Screw

- A - Carriage Bolt
- B - Carriage Bolt
- C - Flange Nut
- D - Lock Nut
- E - Spring
- F - Bearing (2 used)
- G - Lock Nut (2 used)
- H - Tension Bracket
- I - Bushing
- J - Lubrication Fitting
- K - Sheave

- Inspect all parts for wear or damage. Replace parts as needed.
- Apply grease to lubrication fitting. (See "Grease" on page 19.)

# HYDROSTATIC POWER TRAIN REPAIR

## Control Linkage Repair



MX6139

Picture Note: Quantities Shown Are Per Side

- A - Cap Screw
- B - Pivot Bar
- C - Grip
- D - Control Lever
- E - Cap Screw (2 used)
- F - Arm

- G - Carriage Bolt (3 used)
- H - Lock Nut
- I - Bushing (2 used)
- J - Lock Nut (7 used)
- K - Left-Hand Bracket
- L - Spacer
- M - Dampener
- N - Washer

# HYDROSTATIC POWER TRAIN REPAIR

- O - Lock Pin
- P - Lock Nut
- Q - Pump Arm
- R - Cap Screw
- S - Ball Joint
- T - Jam Nut (Left-Hand Thread)
- U - Turn Buckel
- V - Jam Nut (Right-Hand Thread)
- W - Ball Joint
- X - Cap Screw
- Y - Right-Hand Bracket
- Z - Lock Nut

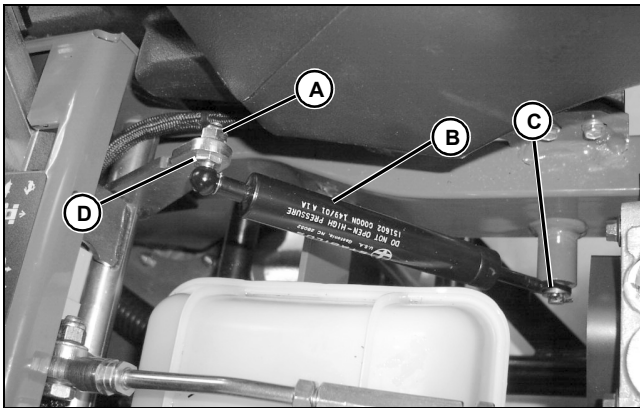
**NOTE:** Left control lever mechanism shown. Right control lever mechanism is the same.

- Inspect all parts for wear or damage. Replace parts as needed.
- Adjust control lever height. (See “Checking and Aligning Motion Control Levers” on page 179.)
- Adjust control linkage. (See “Checking and Adjusting Motion Control Linkages” on page 177.)

## Control Dampener Removal/Installation

**NOTE:** If a dampener requires replacement, it is recommended that both dampeners be replaced.

1. Park machine safely.
2. Raise and latch seat platform.



MX6183

3. Hold eyebolt (D) with a wrench and remove locknut (A).
4. Remove cotter pin and washer (C).
5. Remove control dampener (B).

## Installation

Installation is done in the reverse order of removal.

- Adjust control dampener. (See “Control Dampener Neutral Check and Adjustment” on page 178.)

## Specifications

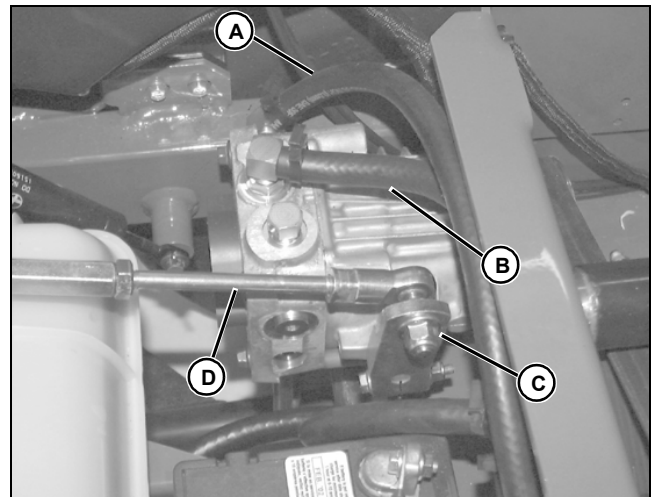
Damper Nut Torque . . . . . 20 N•m (15 lb-ft)

## Hydraulic Pump Removal/Installation

**CAUTION:** Avoid injury! 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 should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A. Information may be obtained in the United States and Canada only by calling 1-800-822-8262.

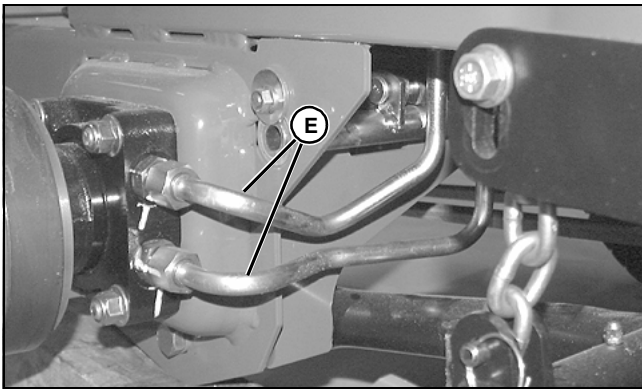
1. Remove drive wheel(s). (See “Remove and Install Rear Drive Wheels” on page 263.)
2. Remove pump drive belt. (See “Hydraulic Pump Drive Belt Removal/Installation” on page 183.)



MX6140

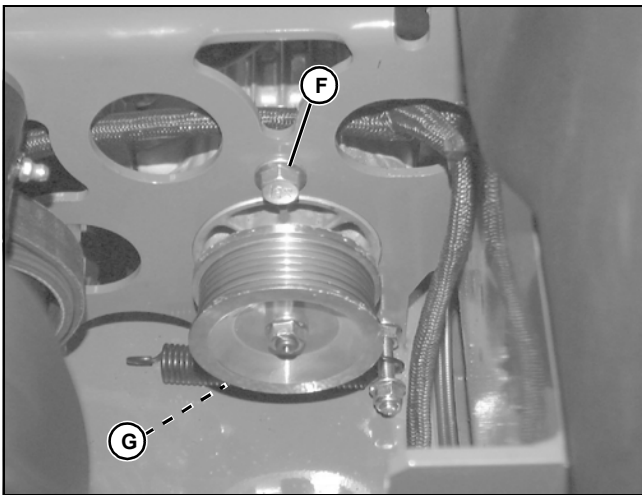
3. Remove lock nut (C).
4. Disconnect linkage (D).
5. Disconnect hoses (A and B).

# HYDROSTATIC POWER TRAIN REPAIR



MX6141

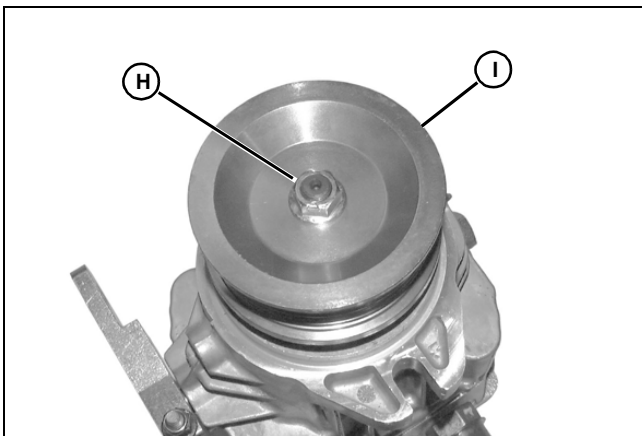
6. Remove hydraulic pump-to-wheel motor hydraulic lines (E).



MX6142

7. Remove the upper (F) and lower (G) cap screws, nut and washers.

8. Remove the hydraulic pump.

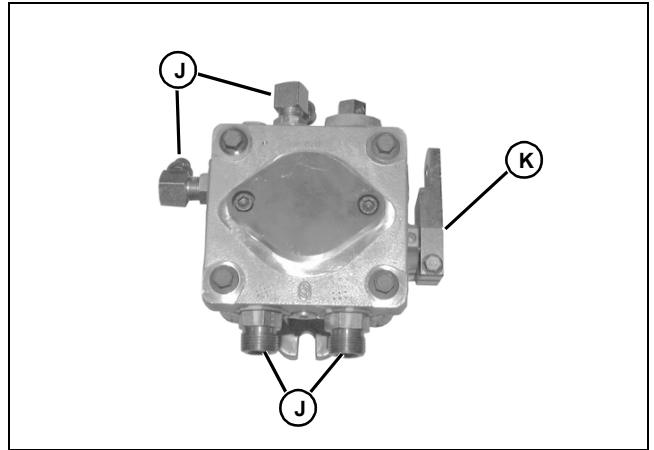


MX6162

9. If hydraulic pump is to be repaired or replaced, remove lock nut (H) and sheave (I).

**NOTE: Mark or record position of fittings for referral**

*when reassembling pump.*

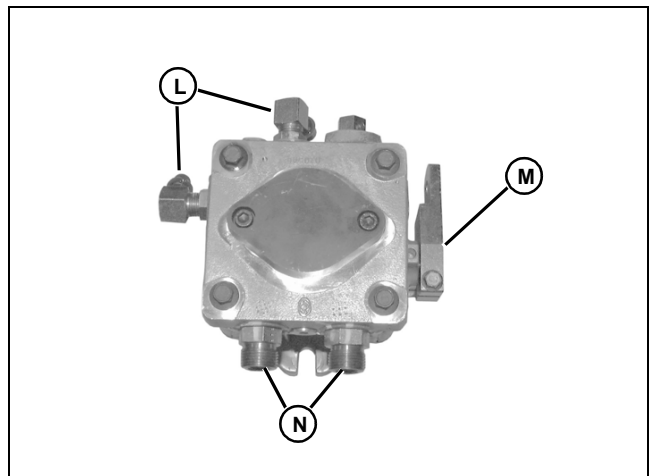


MX6163

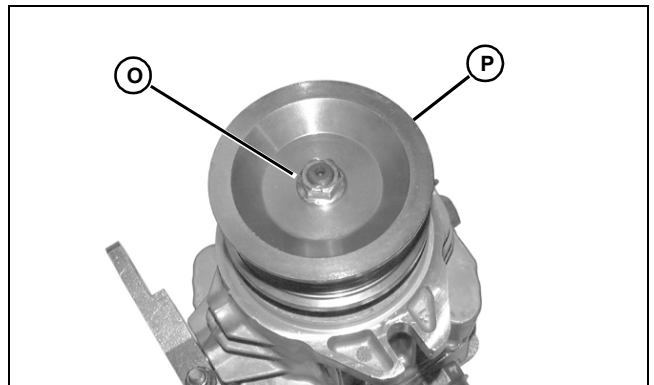
10. Remove fittings (J) and arm (K).

## Installation

Installation is done in the reverse order of removal.



MX6163



MX6162

- Install arm (M) and fittings (L - N). Tighten all fittings to specification.
- Install sheave (P) and new lock nut (O). Tighten lock nut to specification.



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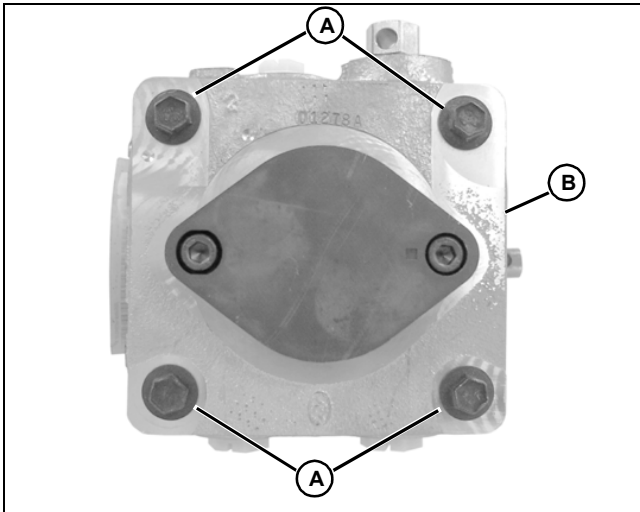
# HYDROSTATIC POWER TRAIN REPAIR

- Fill hydraulic reservoir to correct level with oil of proper specifications. (See “Hydrostatic Transmission and Hydraulic Oil” on page 19.)
- Bleed air from hydraulic system. (See “Hydraulic System Bleeding Procedure” on page 176.)

## Specifications

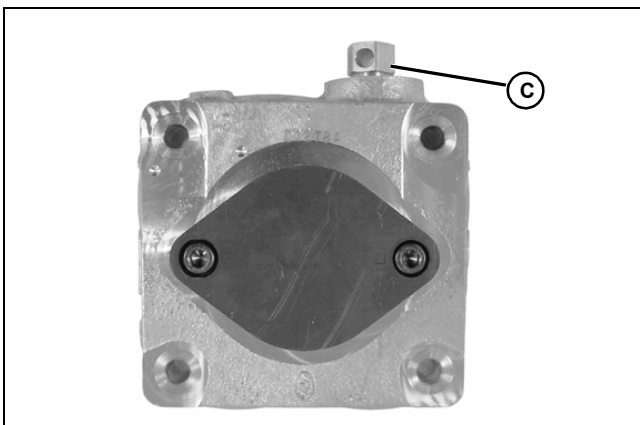
- Lock Nut (O) Torque . . . . . 45 N•m (33 lb-ft)**  
**Inlet and Outlet Fittings (L) Torque . . . 22.6-28.2 N•m (200-250 lb-in.)**  
**Pump Fittings (N) Torque. . . . . 41.8 N•m (370 lb-in.)**

## Hydraulic Pump Disassembly/Inspection



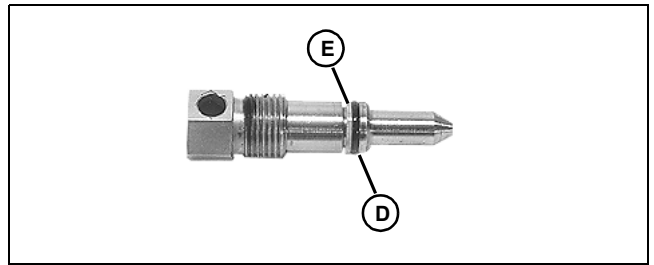
MMX6194

1. Remove four end cover cap screws (A).
2. Remove end cover (B).



MX6195

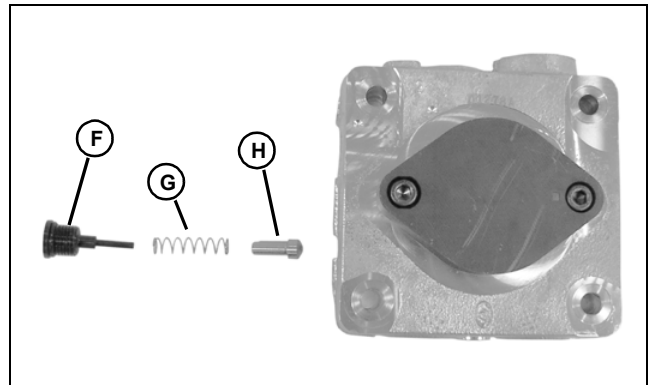
3. Remove the bypass valve (C) from end cover.



M84294

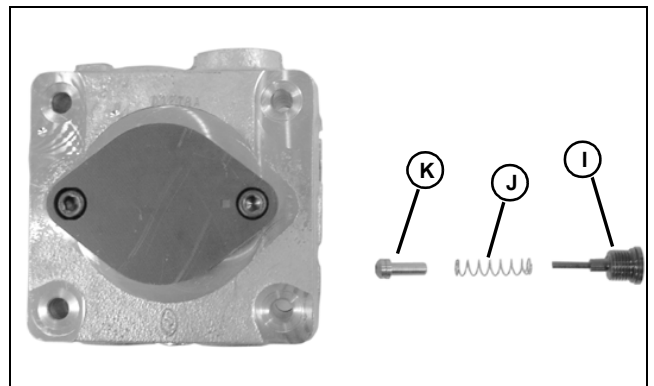
4. Remove O-ring (D) and backup ring (E).
5. Inspect bypass valve for damage. Replace if necessary.

**IMPORTANT: Avoid damage! Note location of check valve poppets for installation. Each poppet must be installed in the same check valve from which it was removed.**



MX6196

6. Remove left-hand charge check valve plug (F), spring (G), and poppet (H) from end cover.



MX6197

7. Remove right-hand charge check valve plug (I), spring (J), and poppet (K) from end cover.

**IMPORTANT: Avoid damage! Poppets must be replaced with the same type as removed.**

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