

JOHN DEERE
WORLDWIDE COMMERCIAL & CONSUMER
EQUIPMENT DIVISION

XUV Gator Utility Vehicle
825i

TM107119 JULY 2010

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 and 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

Power Train

Steering

Brakes

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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SAFETY

Safety

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.

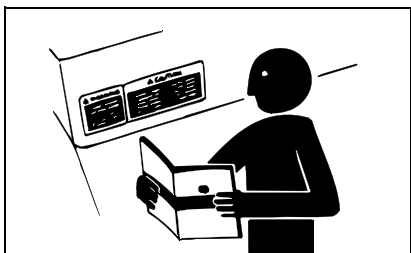
Follow recommended precautions and safe servicing practices.

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

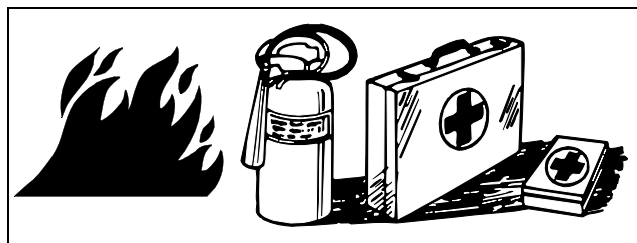


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Replace missing or damaged safety signs. See the machine operator's manual for correct safety sign placement.

Handle Fluids Safely - Avoid Fires

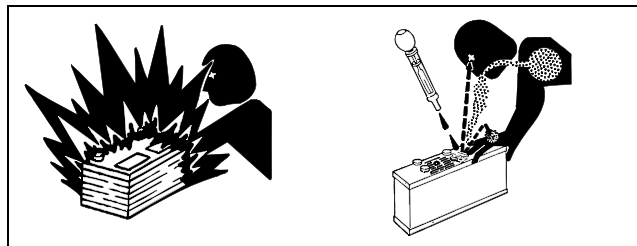
Be Prepared For Emergencies



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- 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.
- 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.

Use Care In Handling And Servicing Batteries



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Prevent Battery Explosions

- 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 volt-meter 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:

1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.

SAFETY

3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

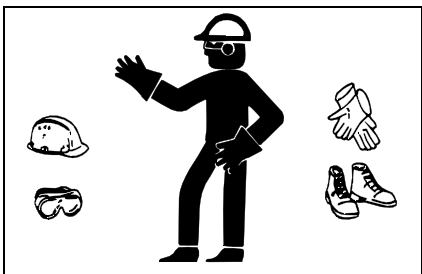
If you spill acid on yourself:

1. Flush your skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush your eyes with water for 10 - 15 minutes.
4. Get medical attention immediately.

If acid is swallowed:

1. Drink large amounts of water or milk.
2. Then drink milk of magnesia, beaten eggs, or vegetable oil.
3. Get medical attention immediately.

Wear Protective Clothing



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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.

Use Care Around High-pressure Fluid Lines

Avoid High-Pressure Fluids



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Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid injury from escaping fluid under pressure by stopping the engine and relieving pressure in the system before disconnecting or connecting 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.

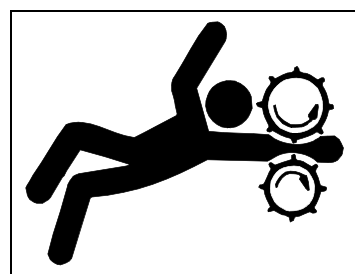
Avoid Heating Near Pressurized Fluid Lines



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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.

Service Machines Safely



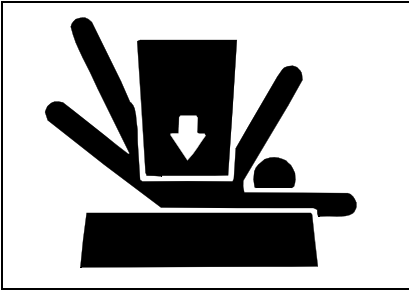
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Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

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

SAFETY

Support Machine Properly and Use Proper Lifting Equipment



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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.

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.

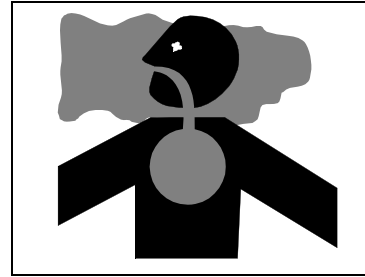
Using High Pressure Washers

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



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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.

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 heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.

SAFETY

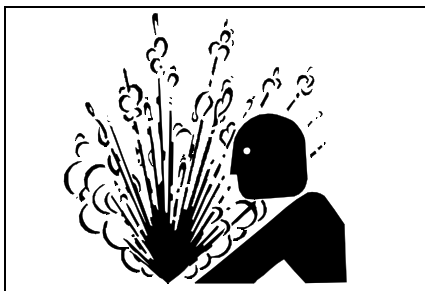
Avoid Injury From Rotating Blades, Augers And PTO Shafts



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Keep hands and feet away while machine is running. Shut off power to service, lubricate or remove mower blades, augers or PTO shafts.

Service Cooling System Safely

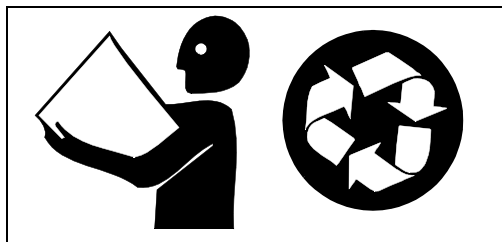


MIF

Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut off machine. Only remove filler cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

Handle Chemical Products Safely



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Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with John Deere equipment include such items as lubricants, coolants, paints, and adhesives.

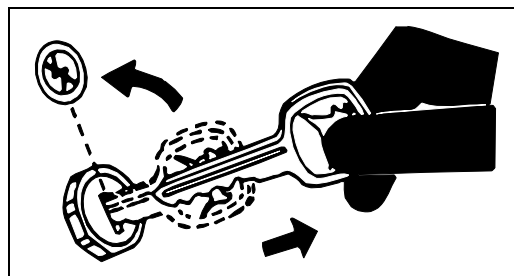
A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques.

Check the MSDS before you start any job using a hazardous chemical. That way you will know exactly what the risks are and how to do the job safely. Then follow procedures and recommended equipment.

Dispose of Waste Properly

Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries. Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them. Do not pour waste onto the ground, down a drain, or into any water source. Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.

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. Lock the park brake.
4. Disconnect the battery ground strap.
5. Hang a "DO NOT OPERATE" tag in operator station.

Live With Safety



MIF

Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.

POWER TRAIN TESTS AND ADJUSTMENTS

Tests and Adjustments

Differential Lock Adjustment

Purpose:

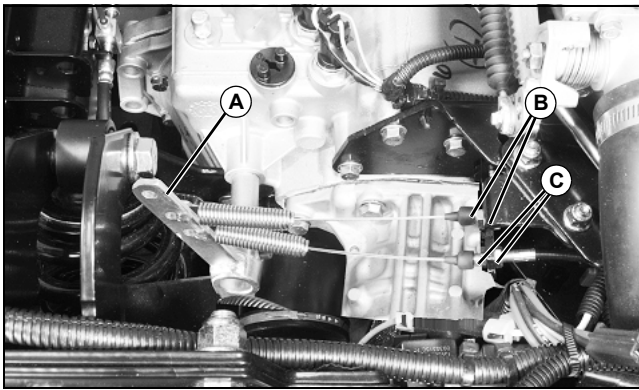
To insure differential shift lever fully engages and disengages differential lock.

To insure differential lock works with park brake.

Procedure:

1. Park machine safely. See "Parking Safely" in the Safety section.
2. Raise and lock cargo box.
3. Block wheels to prevent machine from rolling.
4. Unlock park brake.

Note: *Setting the park brake engages the differential lock and locks the rear wheels together before the park brake is engaged.*



MX46039

5. Check differential control cable length, and adjust if needed. Cable length should be adjusted so that cable places slight tension on cable-end spring, but does not move transaxle lever (A).
 - a. Loosen jam nuts (B) on differential lock control cable ferrule.
 - b. Adjust position of jam nuts on ferrule to remove slack in control cable.
 - c. Tighten jam nuts on ferrule.
6. Check park brake differential control cable length, and adjust if needed. Cable length should be adjusted so that cable places slight tension on cable-end spring, but does not move transaxle control lever.
 - a. Loosen jam nuts (C) on park brake differential lock control cable ferrule.
 - b. Adjust position of jam nuts on ferrule to remove slack in control cable.

- c. Tighten jam nuts on ferrule.

Results:

1. Move differential lock and park brake operator control levers to engaged and released position several times.
 - With both controls in the released position, check to see if control cables place slight tension on the cable-end springs, with no movement of differential lock arm.
 - With either control lever moved to the engaged position, check that the differential lock arm moves to engaged position. (It may be necessary to push the machine a short distance with the steering wheel turned until the differential lock engages.)

Transmission Shift Adjustment

The transmission should shift fully into each selected gear or neutral position with the shift control in the appropriate segment of the shift quadrant. There should be clearance between the gear shift control and the end of the selector quadrant slot with the transmission shifted to reverse or forward low range. If the shift control contacts the end of the quadrant slot without fully shifting into either gear position, the shifter should be adjusted.

1. Park machine safely. See "Park Machine Safely" in the Safety section.

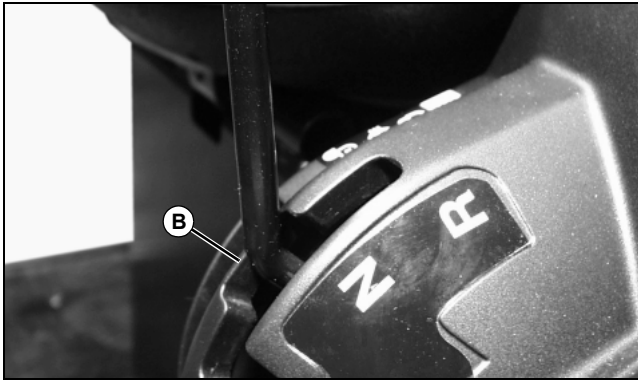
Note: *It may be necessary to rock the machine to shift the transmission fully into gear.*



MX45389

2. Check for clearance (A) between shift control and end of shift quadrant slot with transmission shifted fully into reverse and forward low range.

POWER TRAIN REPAIR

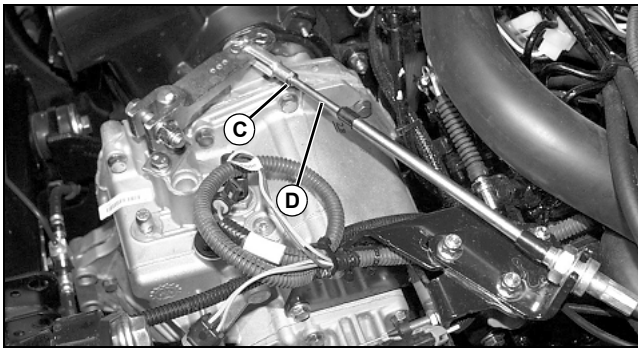


MX45336

3. Check to see that transmission shift control is within neutral segment (B) of shift quadrant with transmission shifted fully into neutral.
4. Adjust shift rod position at transmission shift arm if shift control clearance or position is not correct.
 - a. Raise and secure cargo box.



Caution: Avoid Injury! Touching hot surfaces can burn skin. The engine, components, and fluids will be hot if the engine has been running. Keep hands and body away from hot surfaces when servicing or working near the engine and components. Allow engine to cool.



MX44716

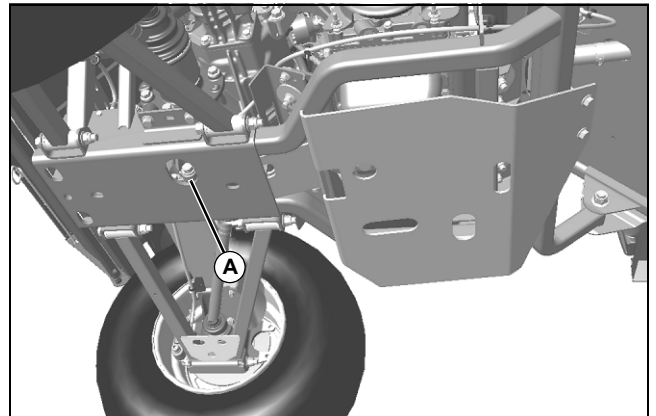
- b. Loosen hex nut (C) securing shift rod (D) to transmission shift arm.
 - c. Move shift rod to properly locate shift control within shift quadrant.
 - d. Tighten hex nut (C).
 - e. Recheck shift control clearance to quadrant slots.
5. Shift transaxle to neutral and check engine start.

Repair

Changing Transmission Oil

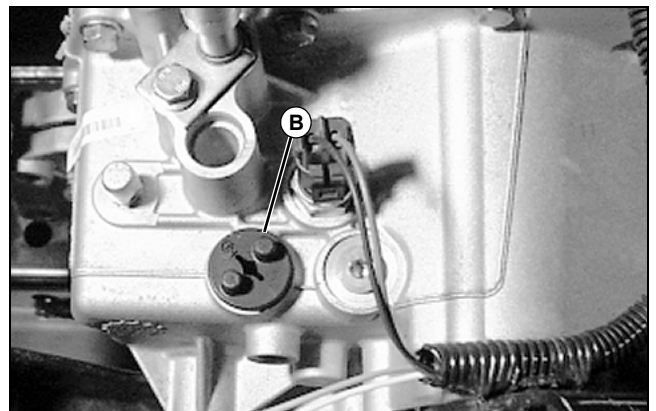
1. Operate machine to warm transmission oil.
2. Park machine safely. See "Park Machine Safely" in the Safety section.
3. Lock park brake.
4. Raise and secure cargo box.

Important: Avoid Damage! Dirt and debris in oil may cause damage to the transmission. Clean area around opening before removing plug or dipstick.



MX38608

5. Position drain pan under transmission drain plug (A).
6. Plug vent tube on top of transmission.
7. Remove drain plug. Small amount of oil will start to drain. Slowly loosen dipstick until desired amount of oil flow is achieved.
8. Check O-ring on drain plug. Replace if missing or in poor condition.
9. Install and tighten drain plug to 44 - 54 N•m (32.5 - 39.9 lb-ft).
10. Remove plug from transmission vent tube.



MX45281

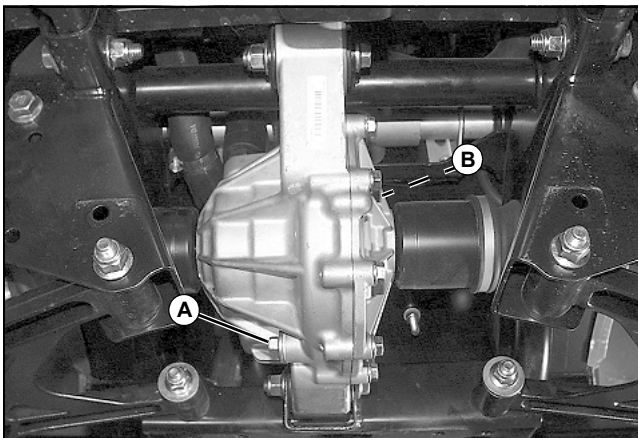
POWER TRAIN REPAIR

11. Remove dipstick (B) located on top of transmission housing. Wipe dipstick clean.
12. Add approximately 3.8 L (4.0 qt) of J20C or J20D (See temperature chart in owners manual) HY-GARD oil.
13. Check oil level by setting dipstick on threads in transmission case, then removing and checking oil level.
14. Wait for two minutes then check oil level. Add oil if necessary.
15. Install dipstick and tighten.
16. Lower the cargo box.

Changing EMFWD Front Differential Oil

1. Operate machine to warm front differential oil.
2. Park machine safely. See "Park Machine Safely" in the Safety section.
3. Lock park brake.

Important: Avoid Damage! Dirt and debris in oil may cause damage to the MFWD differential. Clean area around opening before removing plug.



Shown without skid plates.

4. Place a drain pan under front differential and remove drain plug (A).
5. Remove fill plug (B) located on left side of front differential just above and behind inner CV joint.
6. Allow oil to drain.
7. Clean drain plug and install with new nylon sealing washer. Tighten to specification.
8. Fill gear case with approximately 580 ml (19 oz) of J20C HY-GARD™ oil or until the level is even with the bottom of the fill port.
9. Install fill plug and tighten to specification.

Specifications:

Front Differential Oil J20C
Front Differential Oil Quantity (approx) . 580mL (19 oz)

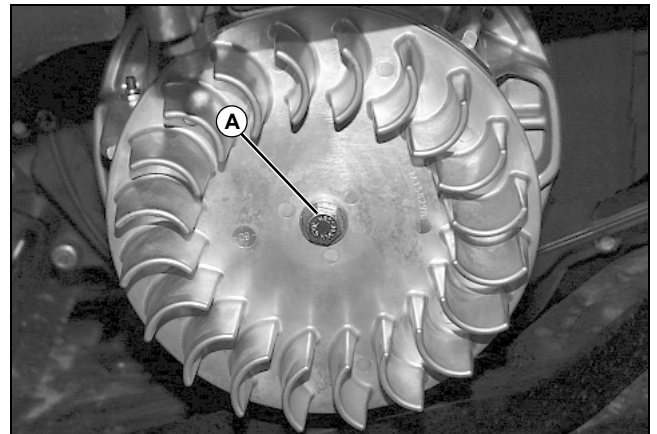
Torque Specifications:

Front Differential Drain Plug 12 N•m (106 lb-in.)
Front Differential Fill Plug 13.5 N•m (119 lb-in.)

Cleaning Primary Drive Clutch

Important: Avoid Damage! Never lubricate any part of the primary drive clutch.

1. Park machine safely. See "Park Machine Safely" in the Safety section.
2. Raise and secure cargo box.
3. Remove clutch enclosure. See "Clutch Housing Removal" on page 258.



MX44820

4. Remove bolt and washer (A) securing fan. Remove fan.
5. Use compressed air to blow dust and debris out of clutch.
6. Install fan and tighten screws (A).

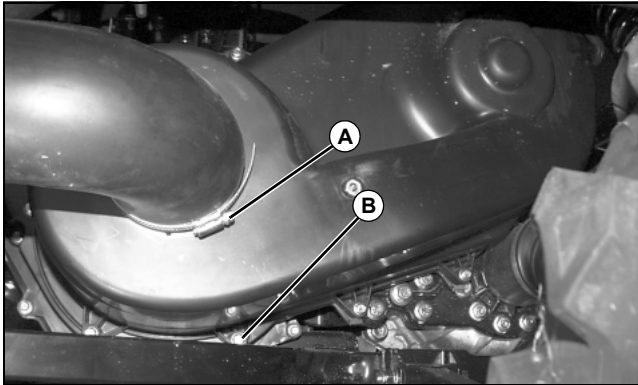
POWER TRAIN REPAIR

Clutch Removal and Installation

Required Tool:

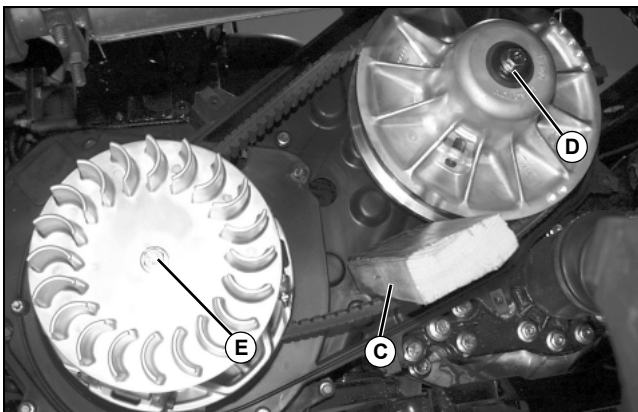
- JDG61641 Clutch Removal Tool

Clutch Housing Removal



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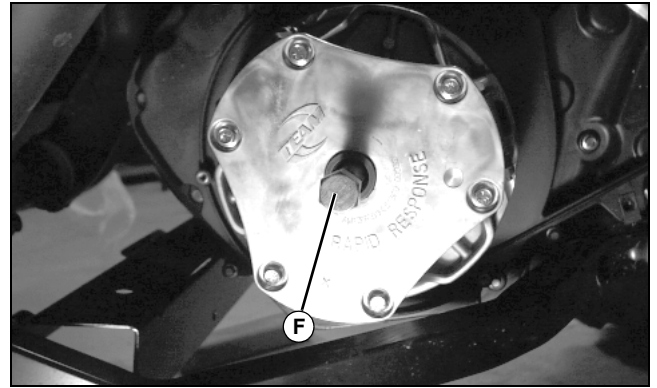
1. Loosen hose clamp (A) and remove cooling air intake tube from clutch housing and frame bracket.
2. Remove air intake filter from tube. Clean filter to remove any dirt or debris. Set filter aside to dry.
3. Remove 11 M6 hex bolts (B) securing outer housing to inner housing. Remove outer housing.



MX45405

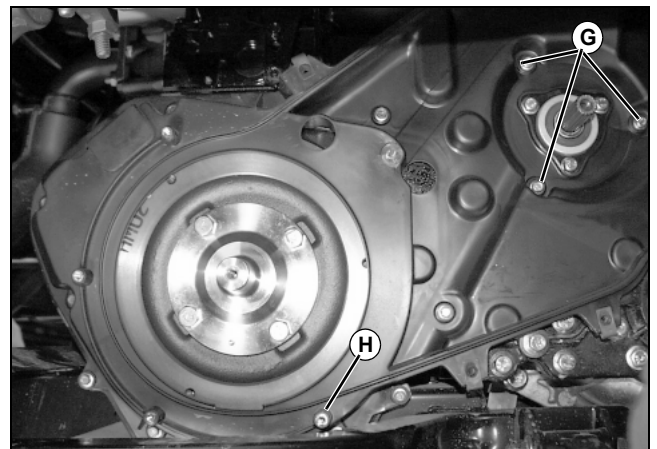
4. Insert a short wood block between drive belt (C) and secondary clutch (or use an impact wrench) to loosen secondary clutch M10 center bolt (D).
5. Slide driven clutch out from the transmission and roll the drive belt over the clutch and remove the belt.
6. Remove center bolt and washer securing secondary clutch to transmission input shaft.
7. Remove secondary clutch assembly.
8. Remove M8 center bolt (E) and washer securing primary clutch to engine output shaft.

Important: Avoid Damage! Place a small amount of grease on the contact tip of clutch removal tool JDG61641 before use. Failure to lubricate the clutch removal tool may result in damage to the engine output shaft or tool contact surface.



MX45406

9. Install clutch removal tool JDG61641 (F) and separate primary clutch from engine crankshaft.
10. Remove primary clutch assembly.

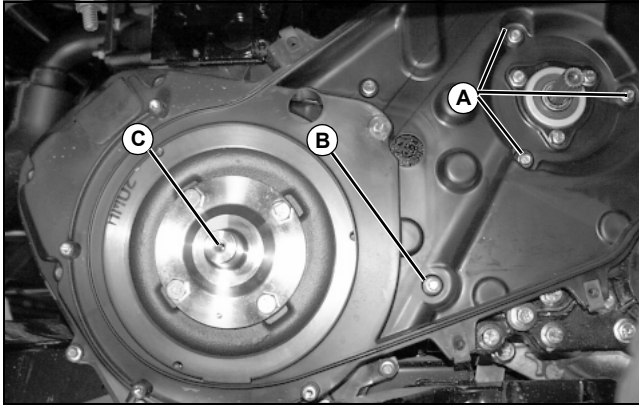


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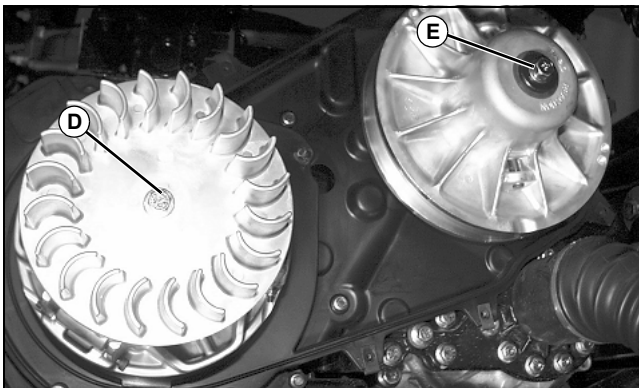
11. Remove 3 M8x12 bolts (G) securing inner housing to transmission bracket.
12. Remove nine remaining M6x12 hex bolts (H) and bushings.
13. Remove inner housing.

POWER TRAIN REPAIR

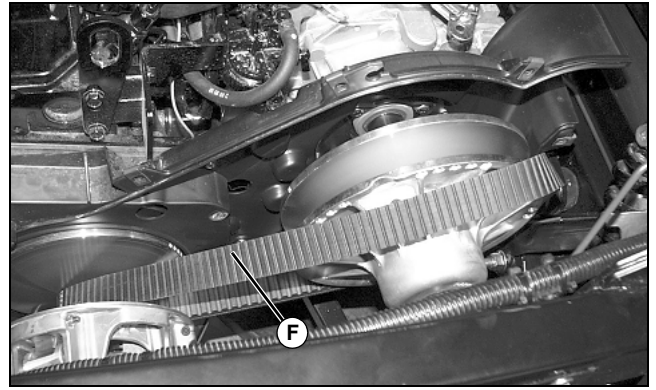
Clutch Housing Installation



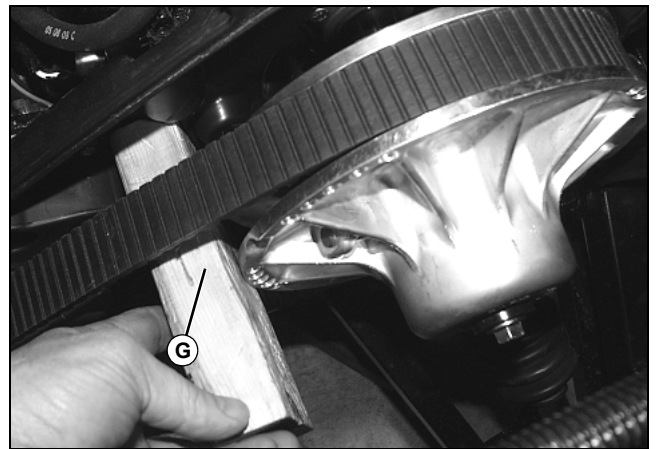
1. Install inner clutch housing over engine and transmission shafts. Loosely install 3 M8x12 bolts (A) to secure inner housing to transmission bracket.
2. Install nine M6 hex bolts (B) with bushings through housing seal to secure housing and tighten to specification.
3. Tighten 3 M8x12 bolts (A) securing housing to transmission bracket.
4. Ensure that engine crankshaft taper (C) and mating primary clutch socket are clean.



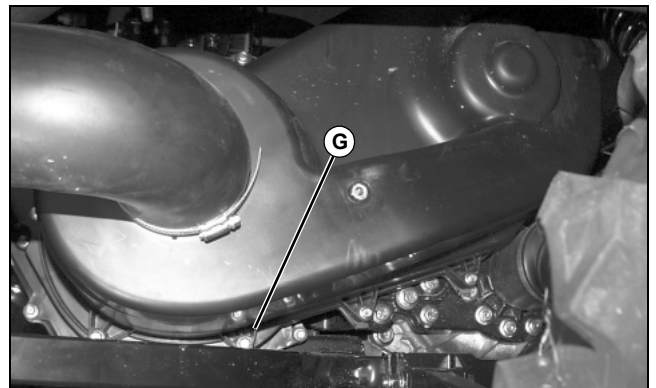
5. Install primary clutch assembly to crankshaft taper, and secure with M8x150 hex bolt (D) and washer. Tighten bolt to specification.
6. Install secondary clutch to transmission input shaft, and secure with M10x80 hex bolt (E) and washer.



7. Install drive belt (F) to primary and secondary clutch sheaves.

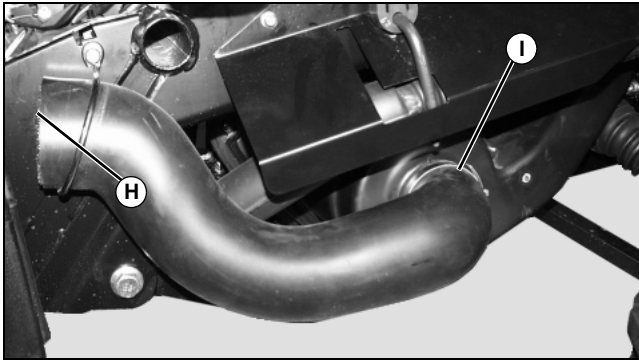


8. Insert a short wood block (G) between drive belt and secondary clutch, and tighten secondary clutch center bolt to specification.



9. Install outer clutch housing to inner housing, and secure with 11 M6 bolts (G).

POWER TRAIN REPAIR



MX45411

10. Install filter (H) to air intake tube. Press filter into tube until 3-5 mm of filter remains exposed.

11. Install cooling air intake tube through frame support and to clutch housing inlet. Tighten hose clamp (I) to secure intake to housing inlet.

Torque Specifications:

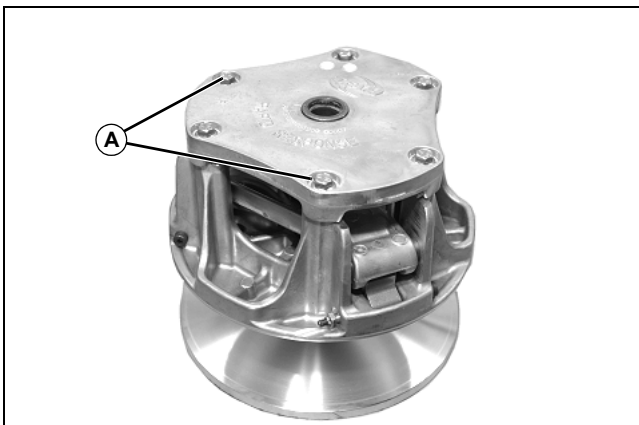
Clutch Housing Bolt	11 N•m (97 lb-in.)
Clutch Housing to Transmission Shoulder Bolt	32 N•m (24 lb-ft)
Drive Clutch to Crankshaft Bolt	37 N•m (26 lb-ft)
Driven Clutch to Transmission Bolt	73 N•m (52 lb-ft)

Primary Drive Clutch Repair

Disassembly:

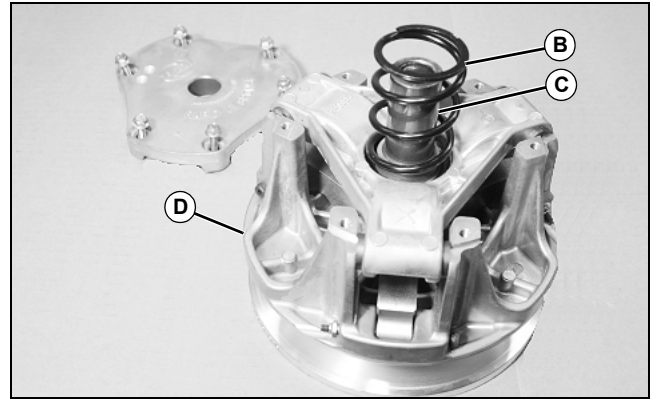


Caution: Avoid Injury! Components are installed under spring tension. Wear eye protection and use proper tools when installing and removing components with spring tension.



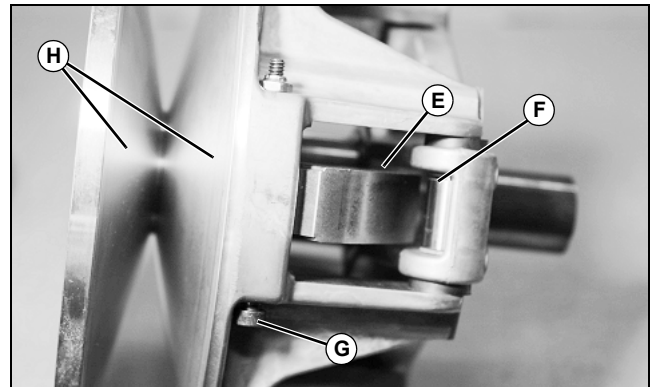
MX46050

1. Evenly loosen six 1/4-20 x1 1/4 in. clutch cover bolts (A) in sequence.



MX46051

2. Remove cover and spring (B).
3. Check center shaft (C) for wear or damage.
4. Slide moveable sheave section (D) up and down center shaft to check for freedom of movement.



MX46052

5. Check contact surfaces of three flyweights (E) and rollers (F) for wear or damage.
6. Check flyweights for freedom of movement. Replace weights and pivot bolts (G) if weights are damaged or do not move smoothly.
7. Check belt contact surfaces (H) of sheaves for wear or damage.
8. Replace worn or damaged clutch or components.

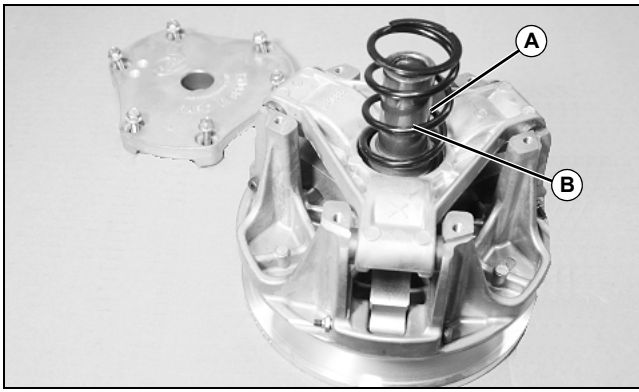
Assembly:

Primary clutch assembly is the reverse of disassembly. Ensure that alignment marks "X" on the clutch cover and flyweight are aligned.



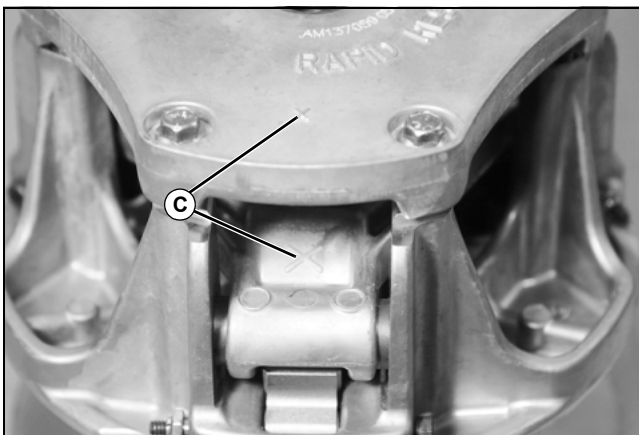
Caution: Avoid Injury! Components are installed under spring tension. Wear eye protection and use proper tools when installing and removing components with spring tension.

POWER TRAIN REPAIR



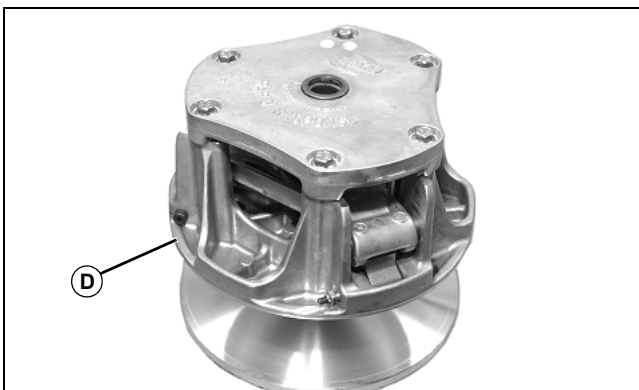
MX46051

1. Ensure that clutch center shaft (A) is clean.
2. Install spring (B) to seat in clutch spider.



MX46053

3. Install clutch cover, aligning "X" match marks (C) on clutch cover and flyweight.



MX46050

4. Align cover with center shaft. Raise moveable sheave (D), and press down on cover to start an opposing pair of cover bolts.
5. Start remaining cover bolts. Tighten bolts evenly to prevent binding between cover and center shaft.
6. Tighten bolts to specification.

Torque Specifications:

Clutch Cover Bolt. 12 - 13.5 N•m (105 - 120 lb-in.)

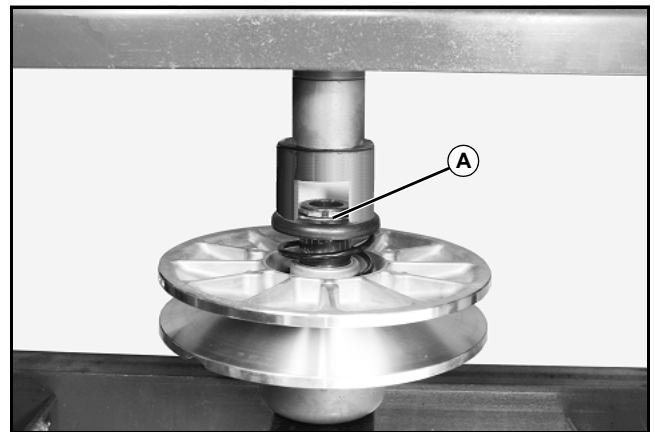
Flyweight Pivot Bolt Nut 8 - 9.5 N•m (72 - 84 lb-in.)

Driven Clutch Disassembly and Assembly

Disassembly:

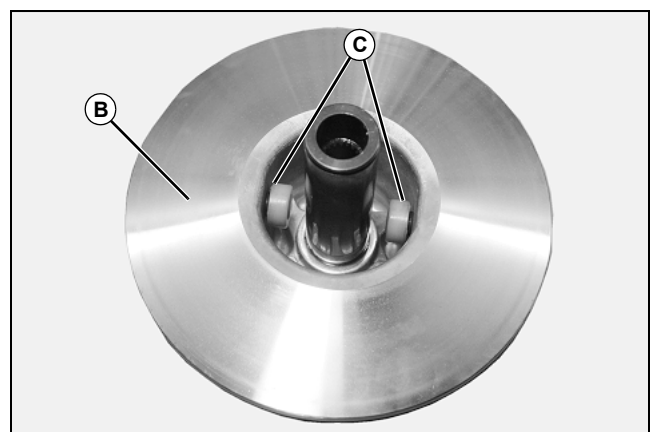


Caution: Avoid Injury! Components are installed under spring tension. Wear eye protection and use proper tools when installing and removing components with spring tension.



MX46044

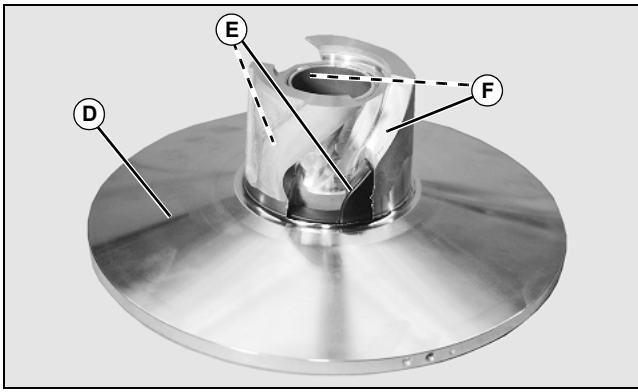
1. Compress clutch spring and collar, and remove snap ring (A). Remove collar and spring.
2. Inspect spring for damage. Replace if needed.
3. Separate moveable clutch section from stationary section.



MX46048

4. Inspect belt contact surface (B) of stationary sheave section. Ensure that surface is smooth.
5. Inspect condition of rollers (C). Ensure that rollers are not damaged and rotate freely.

POWER TRAIN REPAIR

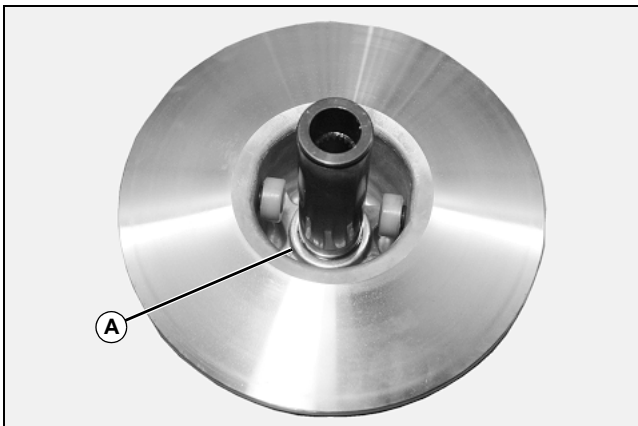


MX46049

6. Inspect condition of belt contact surface (D), ramps (E) and helical slots (F) in moveable sheave section. Ensure that all surfaces are smooth and free of damage.

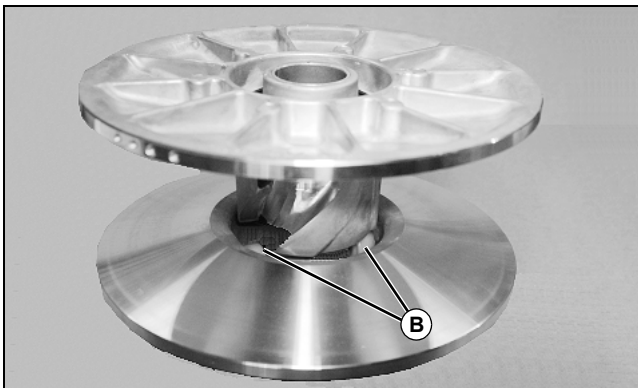
Assembly:

Secondary clutch assembly is the reverse of disassembly. Ensure that alignment marks "X" are opposed when the moveable and stationary sheaves are assembled.



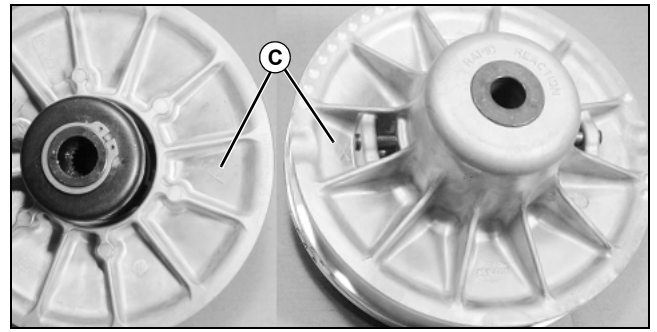
MX46048

1. Ensure that spacer (A) is in place in well of stationary clutch section.



MX46045

2. Install moveable sheave to fixed sheave by aligning helical slots to rollers (B).

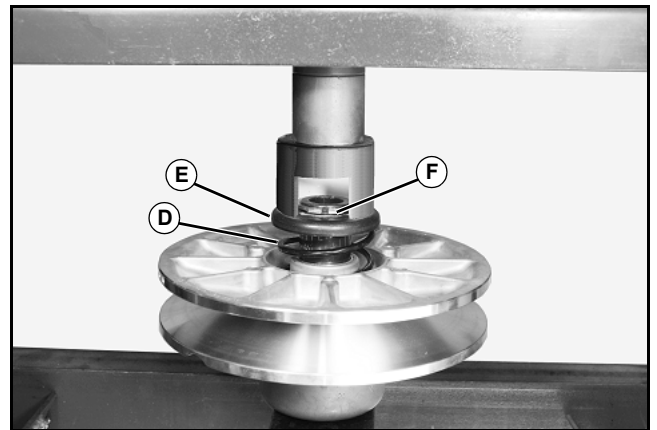


MX46047

3. With moveable sheave fully inserted in fixed sheave, "X" alignment marks (C) should be opposed.



Caution: Avoid Injury! Components are installed under spring tension. Wear eye protection and use proper tools when installing and removing components with spring tension.



MX46044

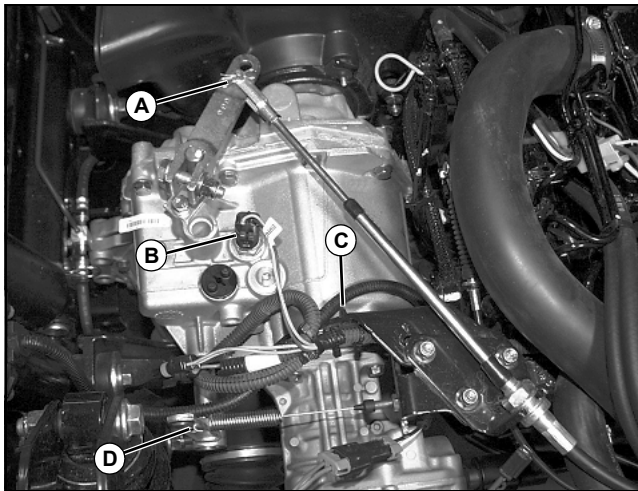
4. Install spring (D) and spring collar (E) to moveable sheave.

5. Compress spring, and install snap ring (F). Ensure that snap ring is fully installed to groove.

Transmission Removal

1. Park machine safely. See "Park Machine Safely" in the Safety section.
2. Block front wheels to prevent machine from rolling.
3. Remove cargo box from machine.
4. Jack up rear of machine and safely support machine on stands.
5. Remove rear wheels.
6. Drain oil from transmission.

POWER TRAIN REPAIR



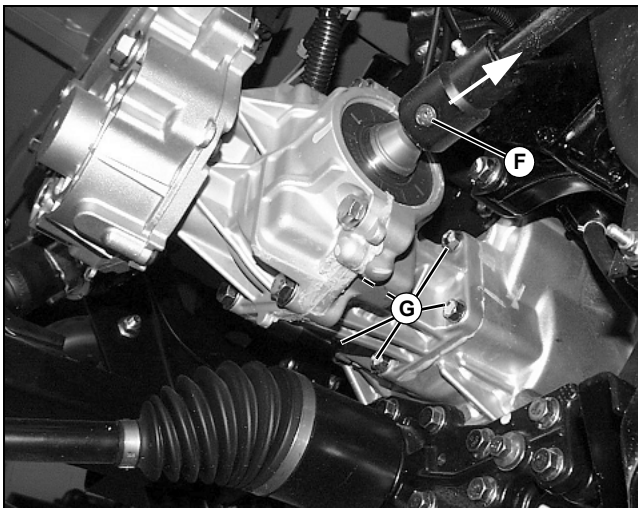
MX45396

7. Remove the spring clip (A) and disconnect the shift rod from the transmission.

8. Disconnect transmission neutral switch (B) and remove harness restrainer (C) from bracket.

Note: Note or mark hole on differential lock shift lever that connections are made to.

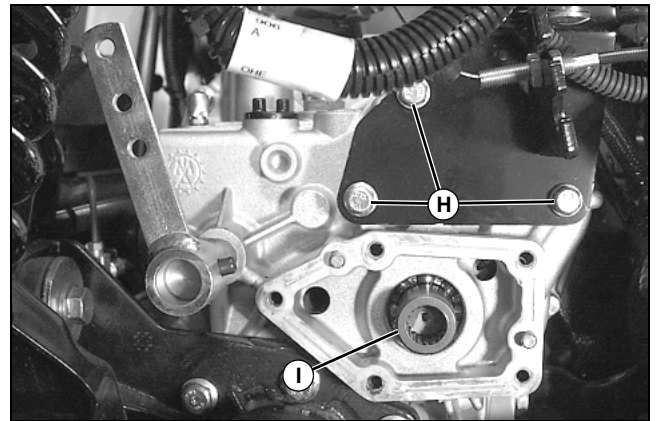
9. Disconnect park brake and differential lock cable springs (D) from the differential shift lever.



MX45791

10. Remove bolt from front drive shaft coupler (F) and slide coupler onto driveshaft.

11. Remove five bolts (G) securing right angle drive to transmission. Remove right angle drive and support it to avoid strain on park brake cable.



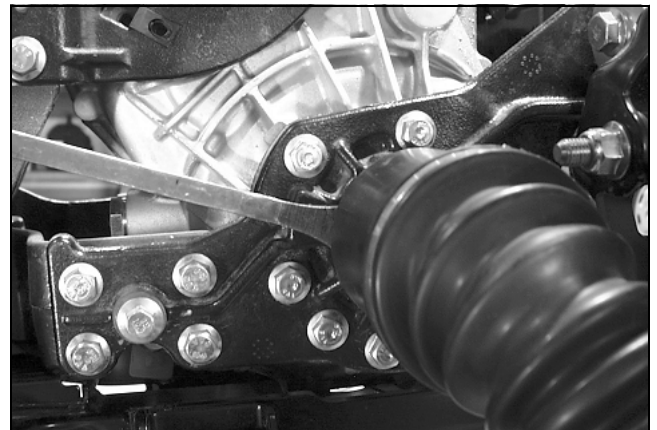
MX45290

12. Remove the three cap screws (H) and remove the cable mounting bracket from the transmission.

13. Remove coupler (I) if still on shaft.

14. Remove clutch cover, drive belt and driven clutch. See "Clutch Removal and Installation" on page 258.

Note: When prying axles to release them from transmission use built up wide area on transmission as a leverage spot to avoid damage to bearing housing. Built up areas are located at approximately 4 and 10 o'clock positions.



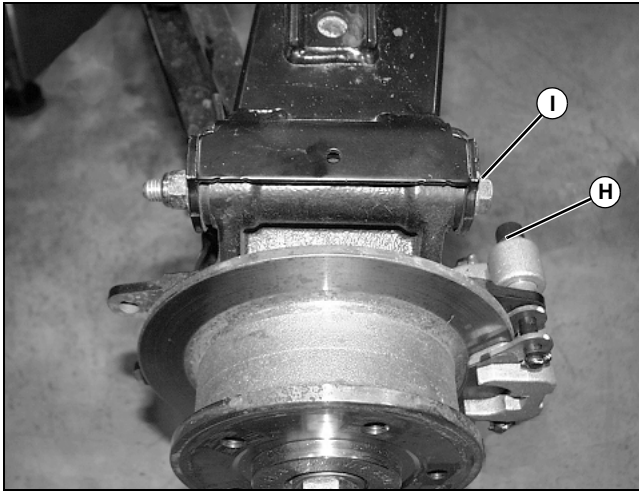
MX45291

Note pry bar location.

15. Release axle from transmission. Care taken not to damage seal area.

16. Repeat axle release from transmission for second axle.

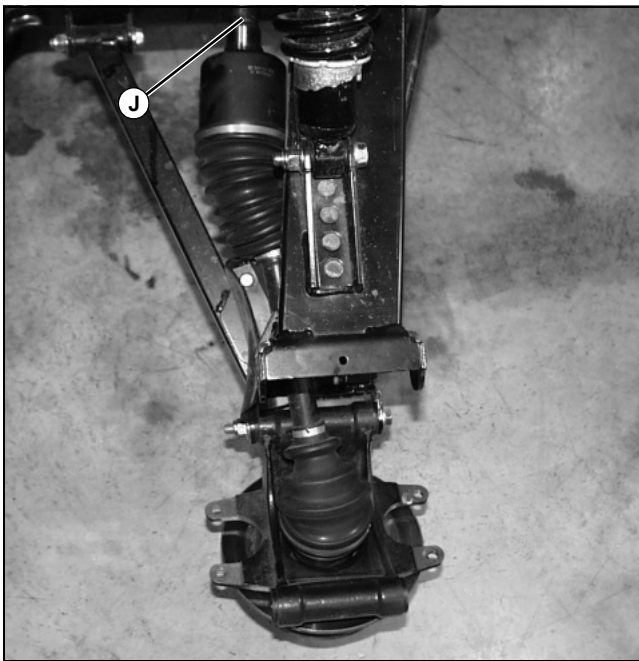
POWER TRAIN REPAIR



MX45266

17. Remove left and right brake calipers (H). Support calipers and brake lines.

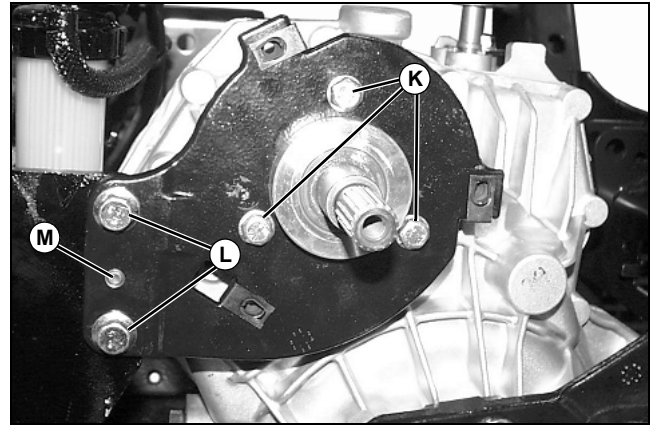
18. Support lower A-arm. Remove lock nut and bolt (I) securing upper A-arms to suspension uprights.



MX45269

19. Hold lower A-arm and remove support. Slowly lower A-arm and halfshaft while guiding bearing housing and shaft (J) out of transmission. Make sure brake lines are not getting pinched, kinked, or stretched.

20. Repeat on procedure on other side of machine.



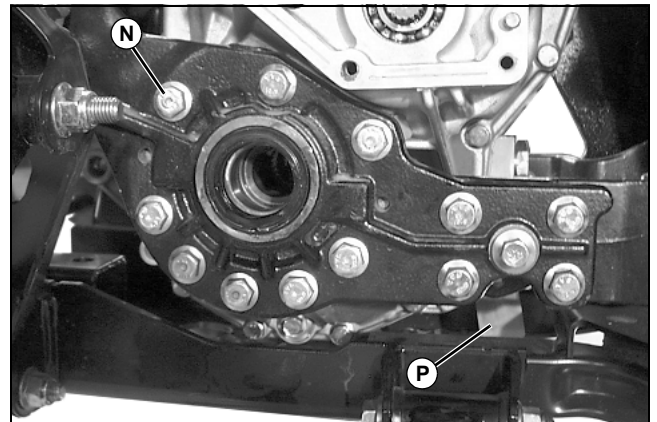
MX45293

21. Remove three bolts (K) securing plate to transmission.

22. Remove bolts (L) and flange nuts securing plate to engine back plate.

23. Remove plate being careful to keep pin (M) with plate.

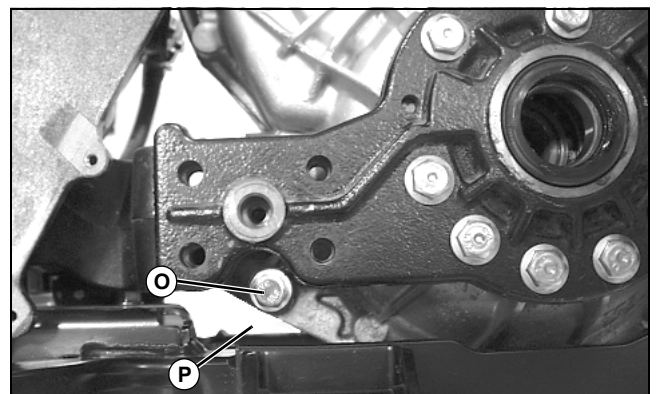
24. Support transmission assembly with a hoist.



MX45397

25. Right-Hand Side: Remove eight bolts (N) from transmission mount.

26. Disconnect speed sensor connector from wiring harness.

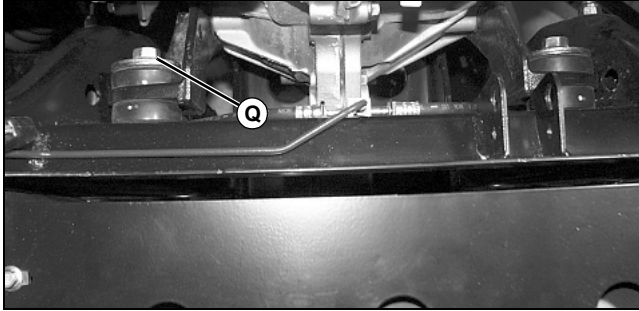


MX45292

27. Left-Hand Side: Remove five bolts to engine mount.

POWER TRAIN REPAIR

28. Remove center mount bolt (O) and shim(s) (P).

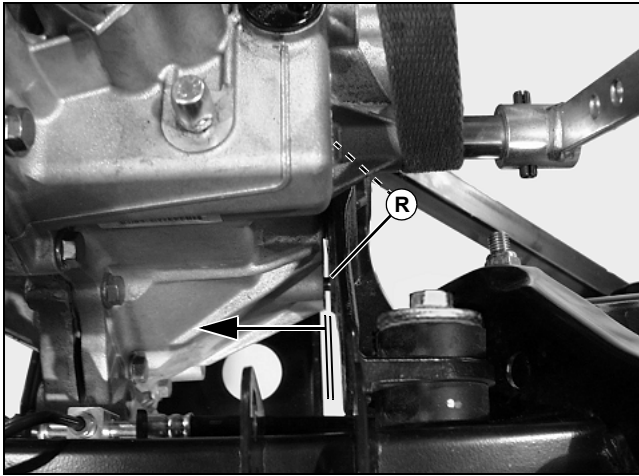


MX45398

Shown from top

29. Remove the left-hand rear transmission mounting bolt (Q) and isolator.

Important: Avoid Damage! Do not pry on mating surfaces.



MX45294

30. Carefully separate transmission from bearing holder side plate. Adjust hoist during separation to keep transmission parallel to side plate and from binding on alignment pins (R).

31. When alignment pins are free, tilt transmission slightly and lift it out from the machine with the hoist.

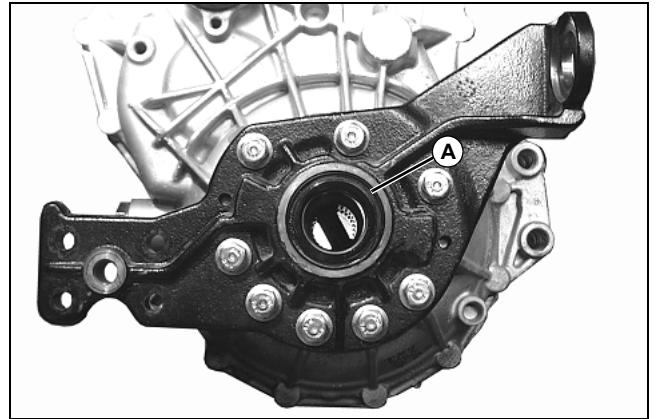
Transmission Installation

Installation:

Installation is performed in a specific sequence.

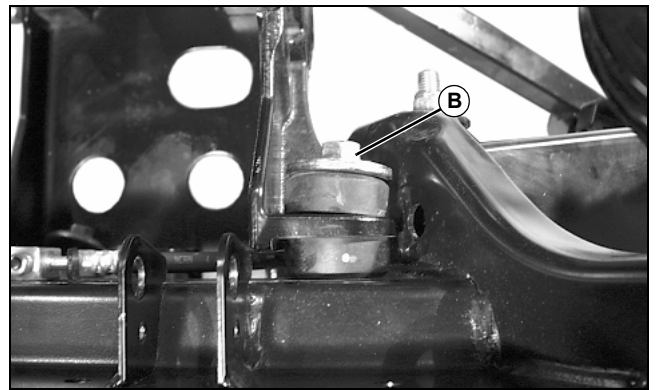
Note: Make sure the side plate is clean and dry, and has all old gasket material removed.

If necessary when installing side plate, use built up wide area on plate to tap with soft mallet to seat plate to transmission. Built up areas are located at approximately 4 and 10 o'clock positions.



MX45303

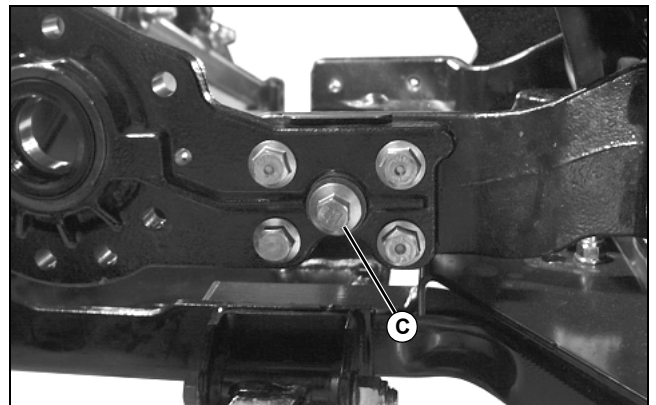
1. Install new gasket on inner left side bearing housing. Install bearing housing to transmission using eight bolts. Tighten bolts to **73 N•m (54 lb-ft)**.
2. Install new seal (A). Grease inside of seal to aid axle installation.
3. If removed, install right-hand bearing holder side plate.



MX45295

Shown from top

- a. Install rear isolator. Tighten bolt (B) to **109 N•m (80 lb-ft)**.



MX45296

- b. Install center bolt, shim(s) and four outer bolts.
 - Install shims and center bolt (C) and tighten to **25**

**Thank you very much for
your reading. Please Click
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MANUAL. NO WAITING**



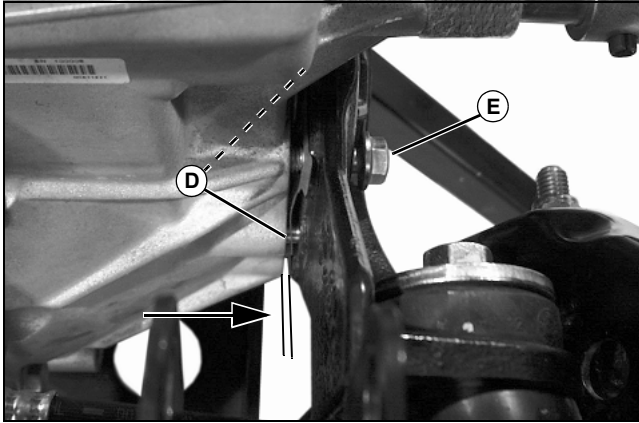
NOTE:

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please download the PDF
document first and then
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POWER TRAIN REPAIR

N•m (18 lb-ft).

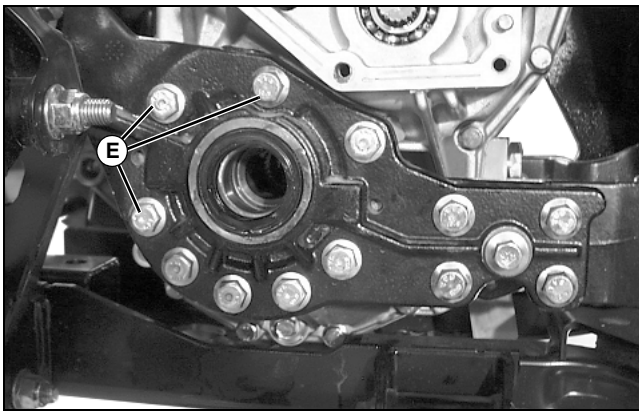
- Install four outer bolts.
4. Remove old gasket material from transmission and inner axle bearing housing.
 5. Check that alignment pins are in place in the transmission housing.



MX45697

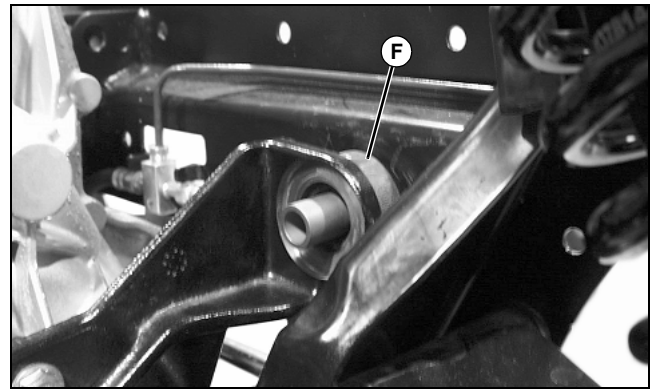
6. Carefully lower transmission into machine. Place new gasket on pins. Ensure that the gasket stays in place and the alignment pins (D) start to seat in right-hand bearing holder side plate.

7. Right-hand Side: Install two or more bolts (E) through side plate to transmission. Alternately tighten bolts to pull transmission to side plate.



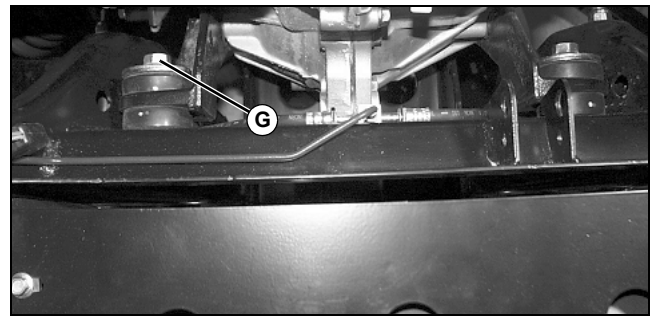
MX45397

8. Install remaining bolts (E). Tighten all bolts to **73 N•m (54 lb-ft)**.



MX45698

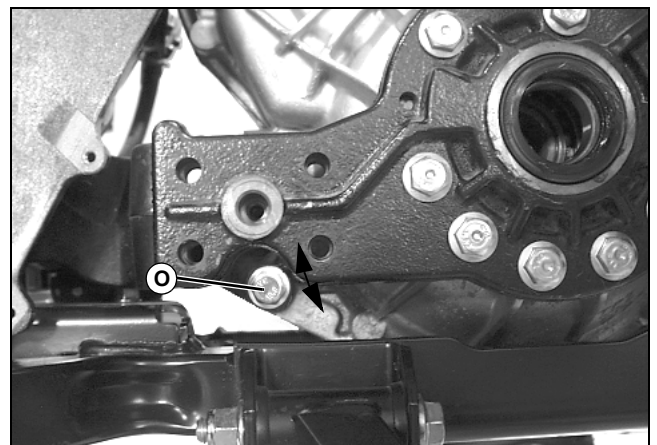
9. Right-hand Side: Seat isolator (F) between side plate and frame. Install spacer through isolator to frame.



MX45398

10. Install the second isolator, washer, bolt (G) and nut. Tighten to **109 N•m (80 lb-ft)**.

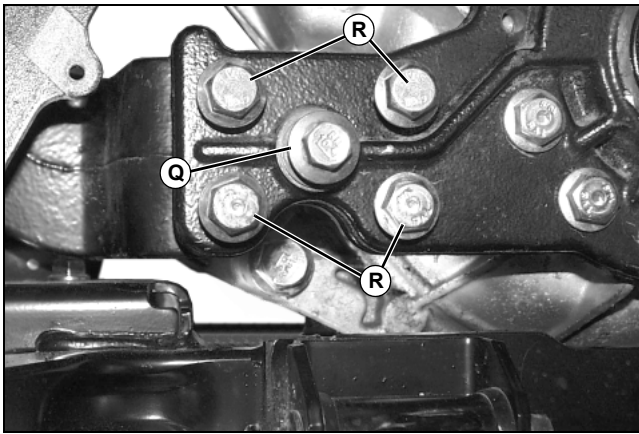
Note: Transmission may need to be rotated slightly up or down to insert center mount bolt. Do not install shim(s) at this time.



MX45292

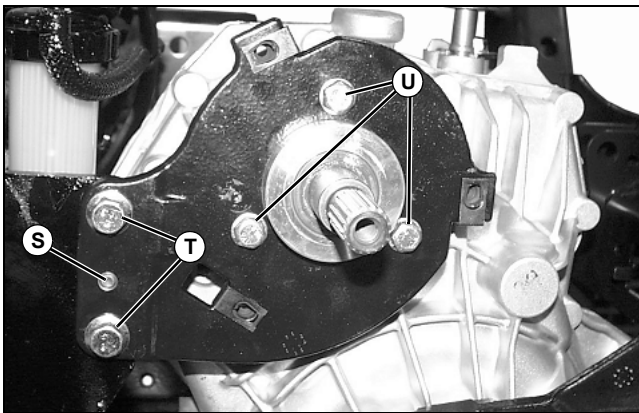
11. Install center mount bolt (O); start bolt into threads, do not tighten.

POWER TRAIN REPAIR



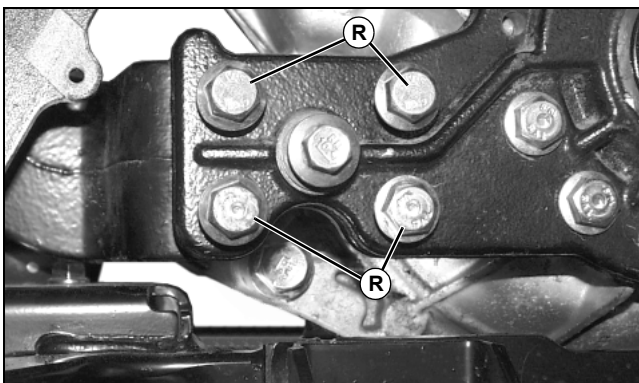
MX45700

12. Left-Hand Side: Install wave washer and center shoulder bolt (Q), do not tighten bolt.
13. Install four bolts (R), do not tighten.
14. Tighten center shoulder bolt (Q) to **25 N•m (18 lb-ft)**.



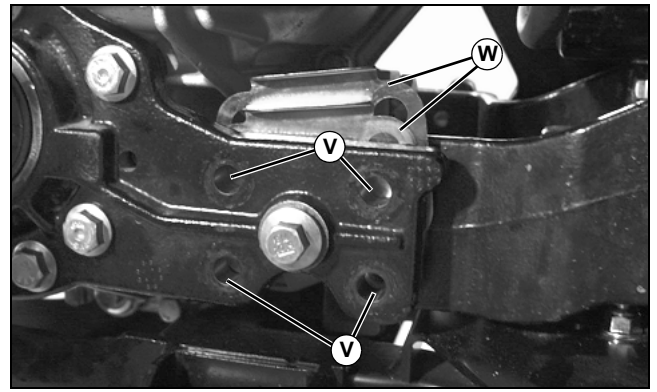
MX45293

15. Install plate on transmission bearing holder and seat locating pin (S) into engine backplate.
16. Install two bolts (T) and flange nuts. Tighten nuts to **73 N•m (54 lb-ft)**.
17. Install three bolts (U) securing plate to transmission. Tighten bolts to **73 N•m (54 lb-ft)**.



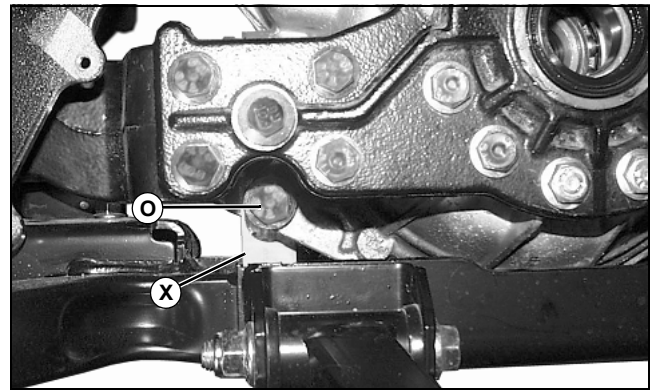
MX45700

18. Tighten four bolts (R) to **73 N•m (54 lb-ft)**.



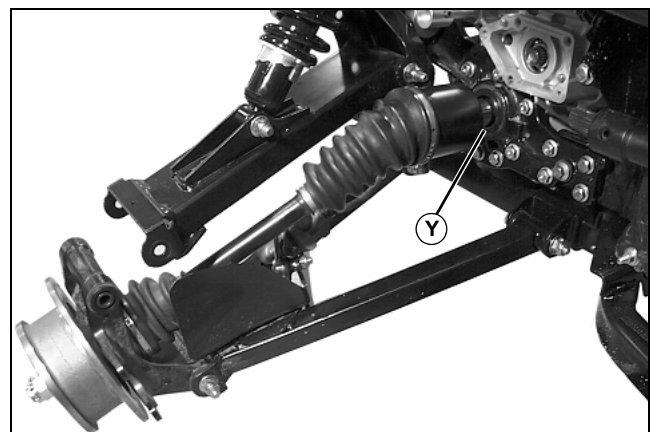
MX45701

19. Right-hand Side: Remove four bolts (V). Check shim (W) clearance. Two shims (+/- 1) should slide into place.
20. Install shim(s) and four bolts (V). Tighten bolts to **73 N•m (54 lb-ft)**.



MX45702

21. Left-hand Side: Remove center mount bolt (O). Install the same number of shims (X) as installed in previous step.
22. Install and tighten center mount bolt (O) to **109 N•m (80 lb-ft)**.



MX45703

23. Lightly grease the transmissions seals. Carefully install inner half shafts (Y) to transmission to protect the seal surfaces.