

2700, 2800 and 2900 Tractors



JOHN DEERE

TECHNICAL MANUAL 2700, 2800 and 2900 Tractors

TM1564 (08FEB95) English

JDI GmbH-ISB
TM1564 (08FEB95)

LITHO IN U.S.A.
ENGLISH




Introduction

FOREWORD

This manual is written for an experienced technician. Essential tools required in performing certain service work are identified in this manual and are recommended for use.

Live with safety: Read the safety messages in the introduction of this manual and the cautions presented throughout the text of the manual.

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

Information is organized in groups for the various components requiring service instruction. At the beginning of each group are summary listings of all

applicable essential tools, service equipment and tools, other materials needed to do the job, service parts kits, specifications, wear tolerances, and torque values.

Technical Manuals are concise guides for specific machines. They are on-the-job guides containing only the vital information needed for diagnosis, analysis, testing, and repair.

Fundamental service information is available from other sources covering basic theory of operation, fundamentals of troubleshooting, general maintenance, and basic type of failures and their causes.

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

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A John Deere ILLUSTRATION® Manual

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Section 05 Safety

05

Contents

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Group 05—Safety Precautions 05-05-1

HANDLE FLUIDS SAFELY—AVOID FIRES

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.



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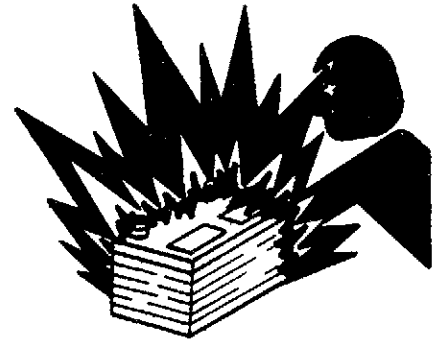
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PREVENT BATTERY EXPLOSIONS

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).



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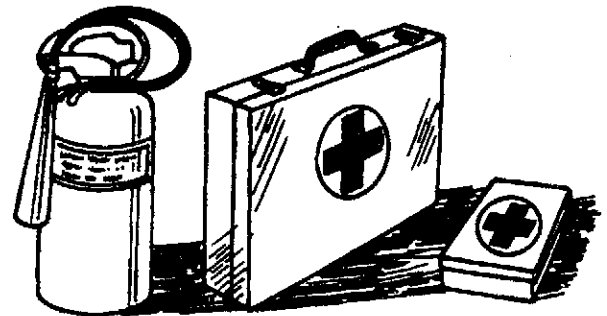
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PREPARE FOR EMERGENCIES

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.



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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 the hazard by:

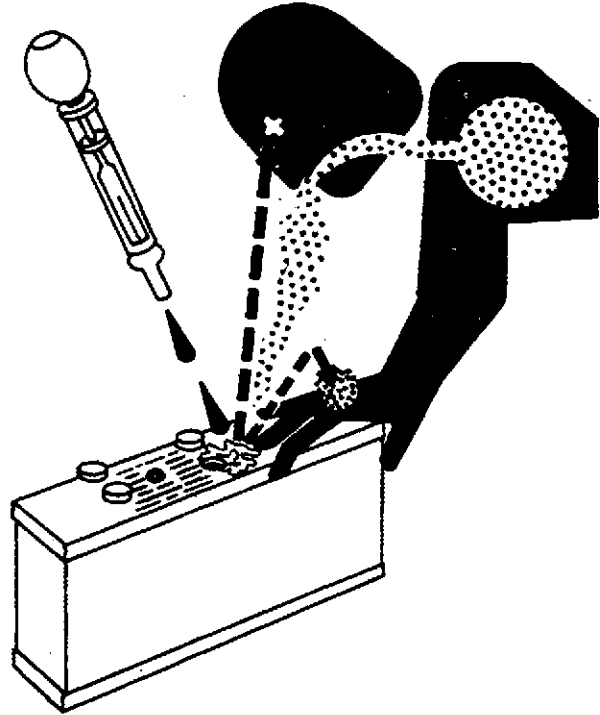
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

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 15—30 minutes. Get medical attention immediately.

If acid is swallowed:

1. Do not induce vomiting.
2. Drink large amounts of water or milk, but do not exceed 2 L (2 quarts).
3. Get medical attention immediately.



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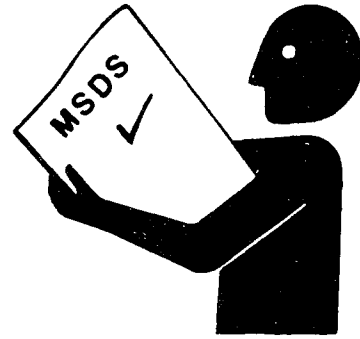
HANDLE CHEMICAL PRODUCTS SAFELY

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.

(See your John Deere dealer for MSDS's on chemical products used with John Deere equipment.)



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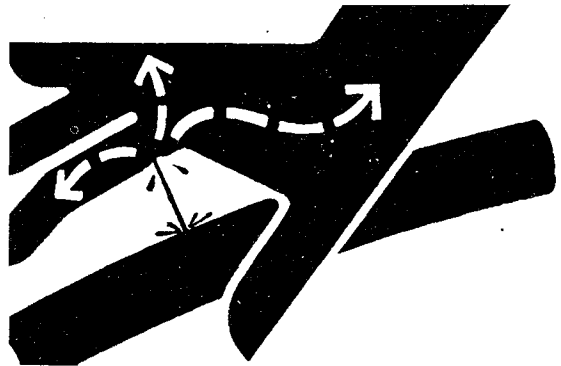
AVOID HIGH-PRESSURE FLUIDS

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.



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SEPARATE TRANSMISSION FROM ENGINE

1. If tractor is equipped with cab, remove cab from platform.

NOTE: Cab removal information not available at time of printing.

2. If tractor is equipped with front wheel drive, remove drive shaft from front axle and gear box.

NOTE: Front wheel drive information not available at time of printing.

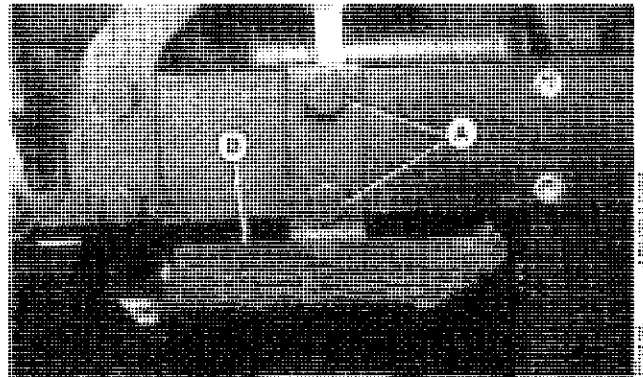
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3. Remove platform (See **Platform Removal**, Section 90, Group 10).

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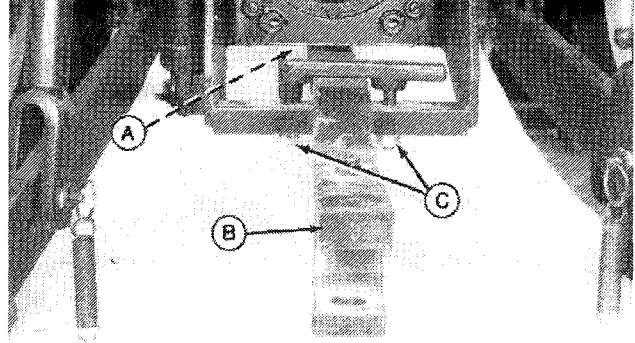
4. Remove two bolts and lock washers (A) from right rear tractor engine frame and remove step (B).



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Separate Transmission from Engine/Separate Transmission from Engine

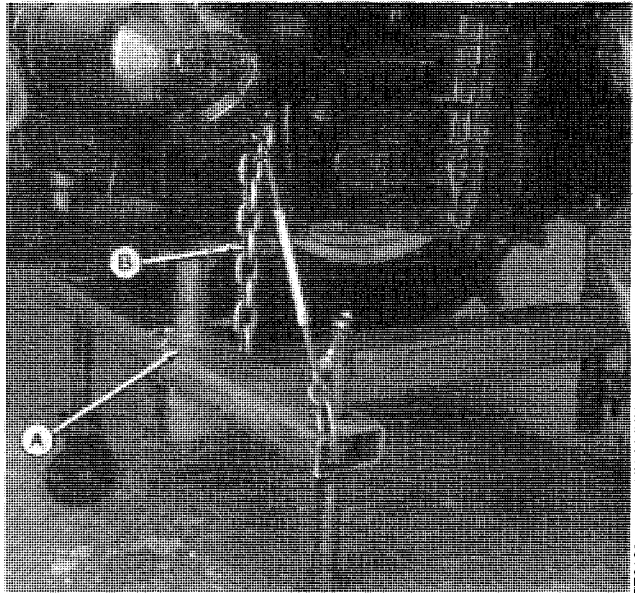
5. Remove drawbar ring pin (A) from front of drawbar (B). Loosen two nuts (C) on drawbar bridge and remove drawbar (B) from tractor.



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TM1564,1510,D -19-08FEB95

6. Position D05007ST rear tractor splitting stand (A) under tractor transmission. Adjust stand height to transmission at front and rear of stand. Install hold down chain (B) to stand and around transmission.

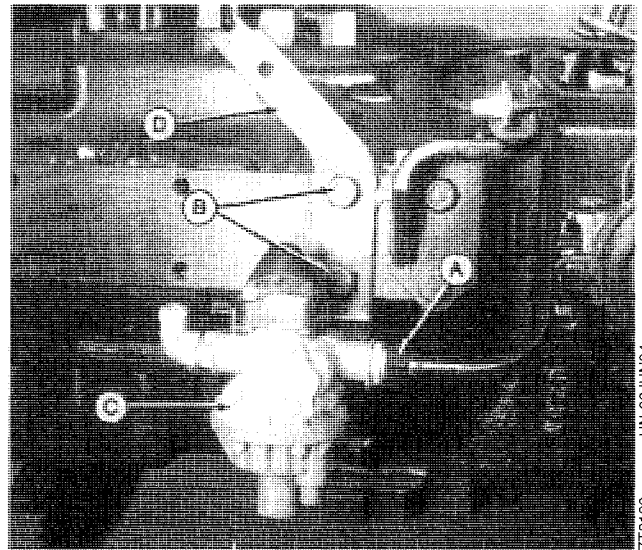


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7. Remove nut (A) from air regulator located at left rear engine frame. Remove two bolts and lock washers (B) from frame. Remove regulator (C), spacer and left rear side engine cover bracket (D) from tractor.

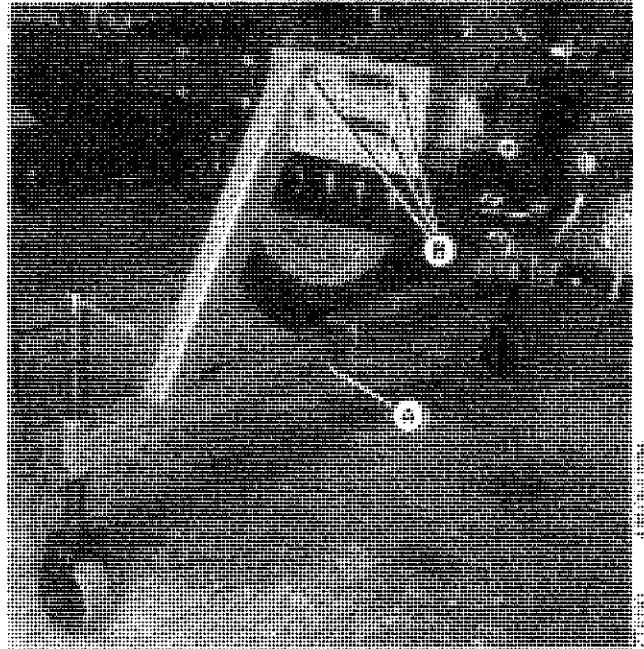
- A—Nut
- B—Bolts
- C—Regulator
- D—Cover Bracket



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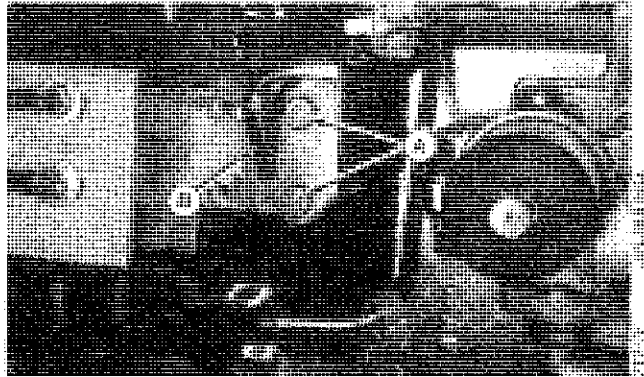
8. Position D05006ST front splitting stand (A) to rear of left and right-hand engine frame. Adjust height of stand and secure both sides of stand to tractor frame using three M15 x 50 bolts and flat washers (B) on each side of the frame.



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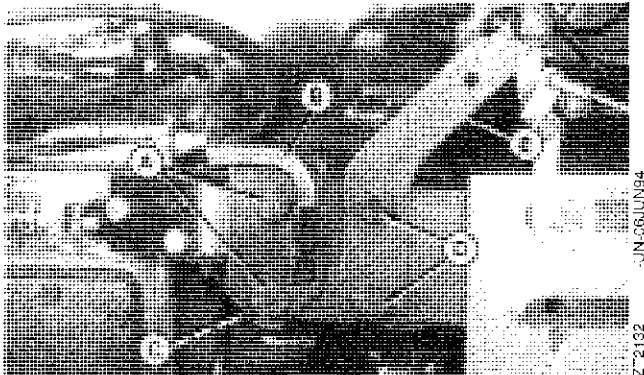
9. Remove two bolts and lock washers (A) and remove platform mounting bracket (B) from left side of clutch housing.



TM1564,1510,H -19-08FEB95

10. Remove two bolts and lock washers (A) from front right-hand platform mounting bracket (B) and remove bracket with spacer (C). Remove two bolts and lock washers (D) from right rear side cover bracket (E) and remove bracket from tractor.

- A—Bolts
- B—Platform Bracket
- C—Spacer
- D—Bolts
- E—Cover Bracket



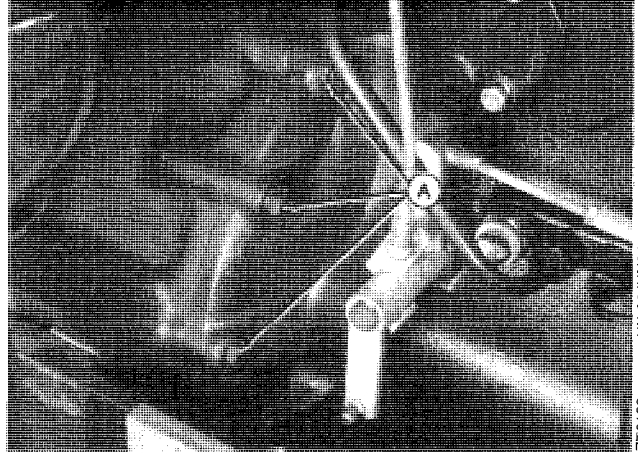
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Separate Transmission from Engine/Separate Transmission from Engine

11. Remove thirteen cap screws and lock washers (A) from around clutch housing to engine.

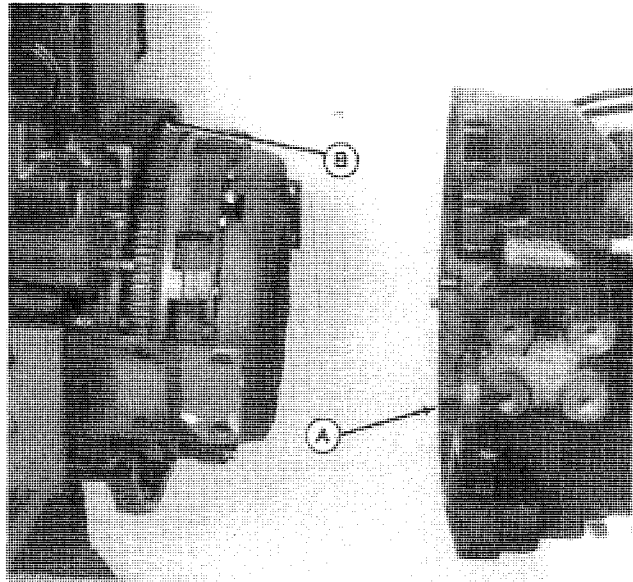
NOTE: Three cap screws illustrated.



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12. Separate transmission and rear of tractor (A) from engine and front of tractor (B) by blocking rear wheels of tractor and pushing front half of tractor forward.



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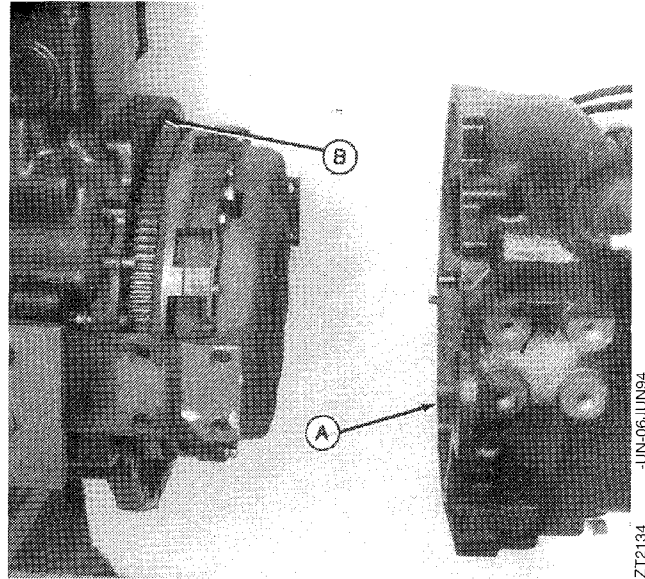
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CONNECTING TRANSMISSION ASSEMBLY TO ENGINE

1. Block rear wheels of rear half of tractor. Roll front half of tractor (B) to rear half of tractor (A) and align transmission shaft to engine clutch. Align dowel pins of engine to transmission clutch housing and mate front and rear halves of tractor together.

NOTE: It will be necessary to remove starter from engine to rotate clutch/flywheel assembly for alignment of transmission splined shaft into clutch assembly.

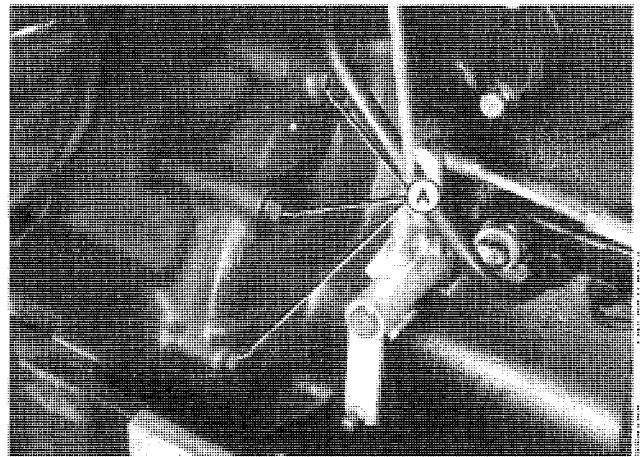


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2. Secure front and rear halves of tractor together with thirteen cap screws and lock washers (A).

NOTE: Three cap screws illustrated.

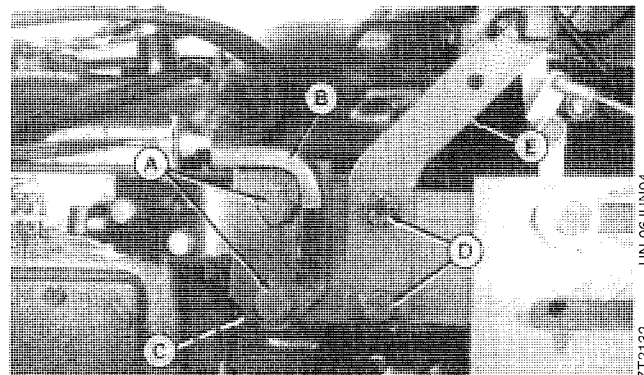


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3. Install right front platform mounting bracket (B) to frame using two bolts and lock washers (A) with spacer (C). Install right rear side engine cover bracket (E) using two bolts and lock washers (D).

- A—Bolts
- B—Platform Bracket
- C—Spacer
- D—Bolts
- E—Cover Bracket

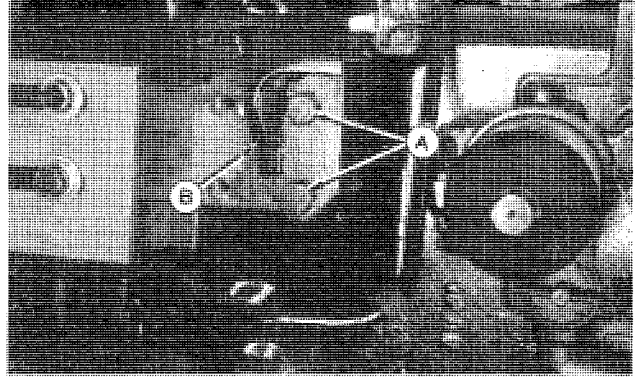


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Separate Transmission from Engine/Connecting Transmission Assembly to Engine

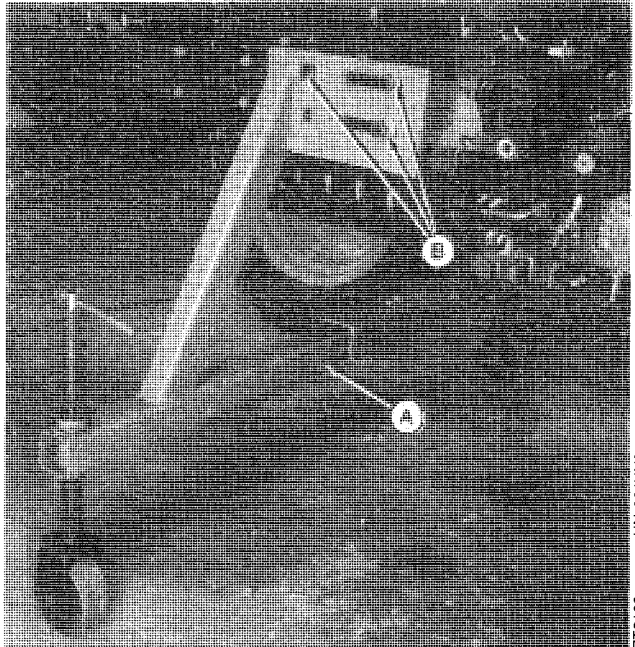
4. Install left front platform mounting bracket (B) using two bolts and lock washers (A).



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5. Remove front splitting stand (A) by removing three bolts and flat washers (B) from each side of stand.



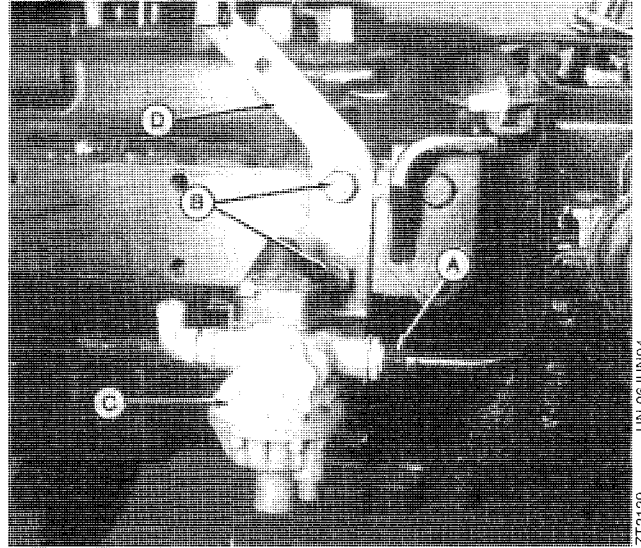
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Separate Transmission from Engine/Connecting Transmission Assembly to Engine

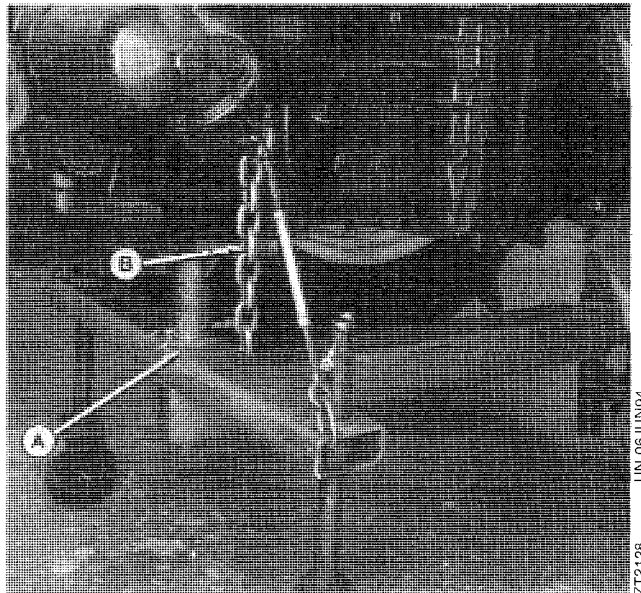
6. Install air regulator and bracket (C) with spacer and left rear engine side cover mount (D) to frame using two bolts and lock washers (B). Connect steel line to regulator with nut (A).

- A—Nut
- B—Bolts
- C—Regulator
- D—Cover Bracket



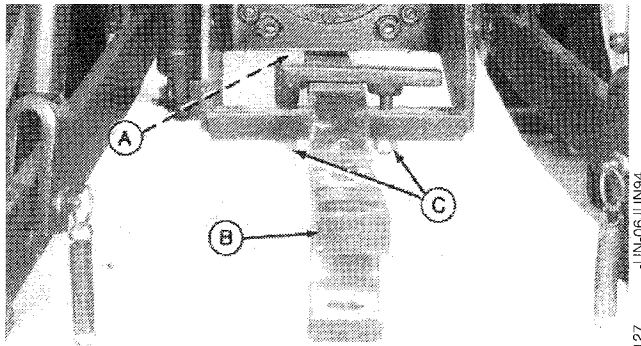
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7. Disconnect hold down chain (B) from rear splitting stand (A) and remove stand from under tractor.



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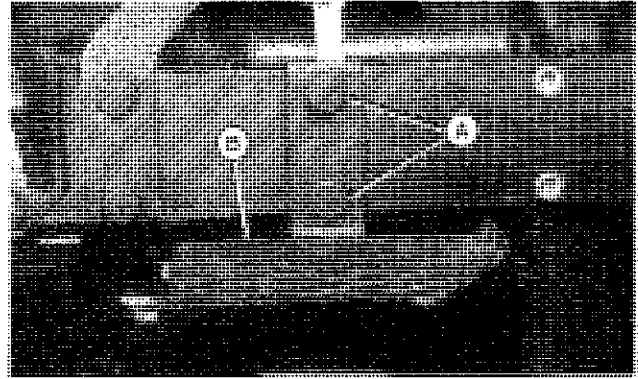
8. Install drawbar (B) and secure with ring pin (A) under transmission. Secure drawbar bridge to drawbar by tightening nuts (C).



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Separate Transmission from Engine/Connecting Transmission Assembly to Engine

9. Install step (B) to right rear frame of tractor by using two bolts and lock washers (A).



TM1564,1510,T -19-08FEB95

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8 10. Install platform (See **Platform Installation**, Section 90, Group 10).

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11. If tractor is equipped with front wheel drive, install drive line to gear box and front axle.

NOTE: Front wheel drive information not available at time of printing.

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12. If tractor is equipped with cab, install cab to platform.

NOTE: Cab installation information not available at time of printing.

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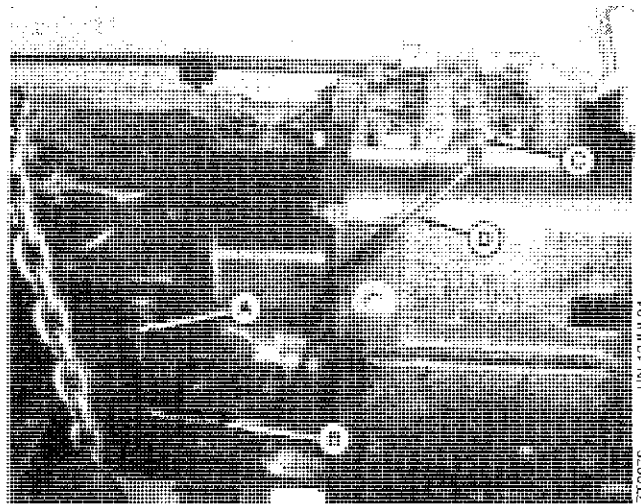
REMOVE CLUTCH/PTO HOUSING FROM TRANSMISSION

1. Separate transmission from engine. (See Group 10, this Section.)
2. Remove hydraulic pump and filter housing from clutch/PTO housing. (See "Remove Hydraulic Pump and Filter Housing", Section 70, Group 30).

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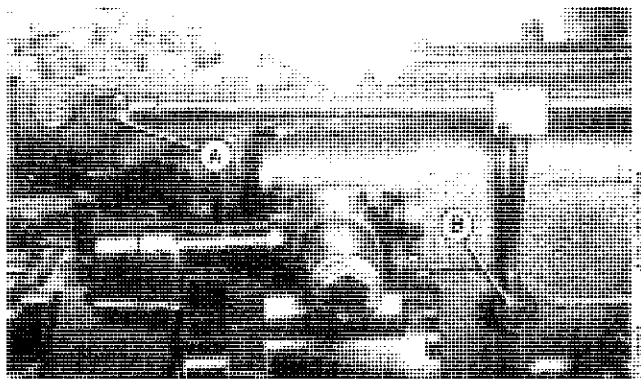
3. Remove hi-lo hydraulic line bolt (A), bolt (B) and line nut (C) from distributor. Remove hydraulic line (D).

- A—Bolt
- B—Bolt
- C—Line Nut
- D—Hydraulic Line



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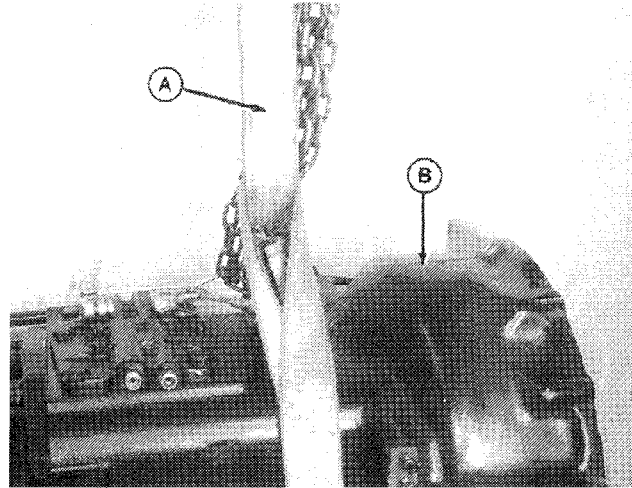
4. Remove hydraulic line hollow bolt (A) and hollow bolt (B) and remove line.



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Clutch/PTO Housing/Remove Clutch/PTO Housing from Transmission

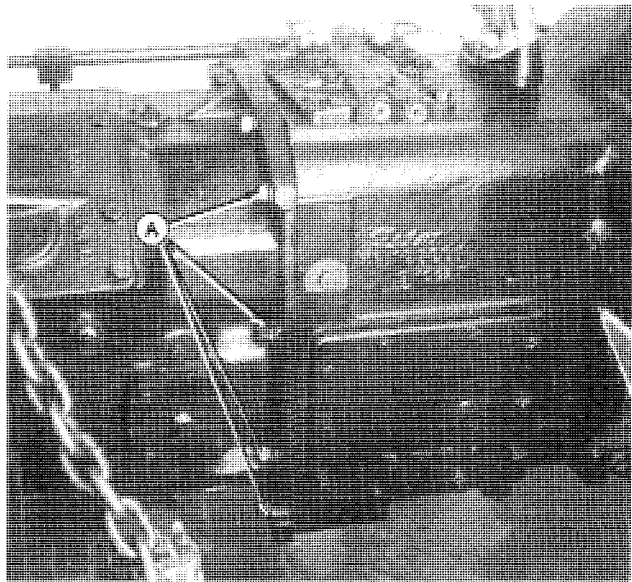
5. Attach nylon strap and hoist (A) to PTO clutch housing (B).



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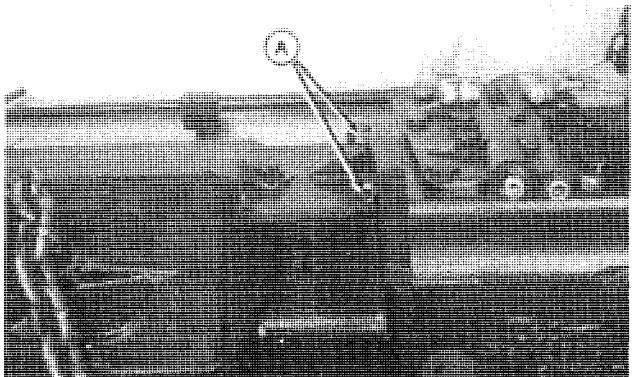
6. Remove ten 14 mm clutch housing to transmission bolts and lock washers (A).



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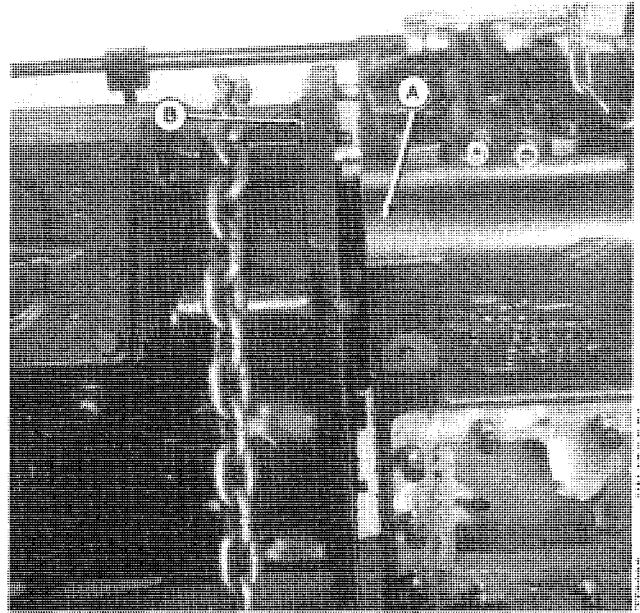
7. Remove two 14 mm clutch housing to transmission nuts and lock washers (A).



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8. Separate clutch/PTO housing (A) from transmission (B).

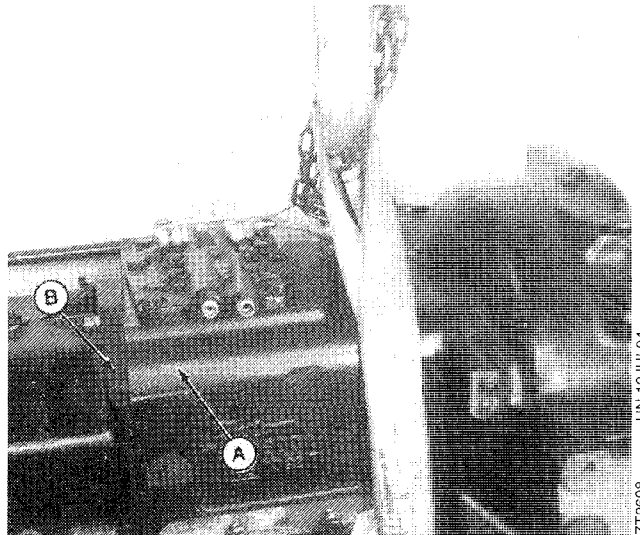


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• INSTALL CLUTCH/PTO HOUSING TO TRANSMISSION

1. Attach hoist and position clutch/PTO housing (A) to transmission (B).

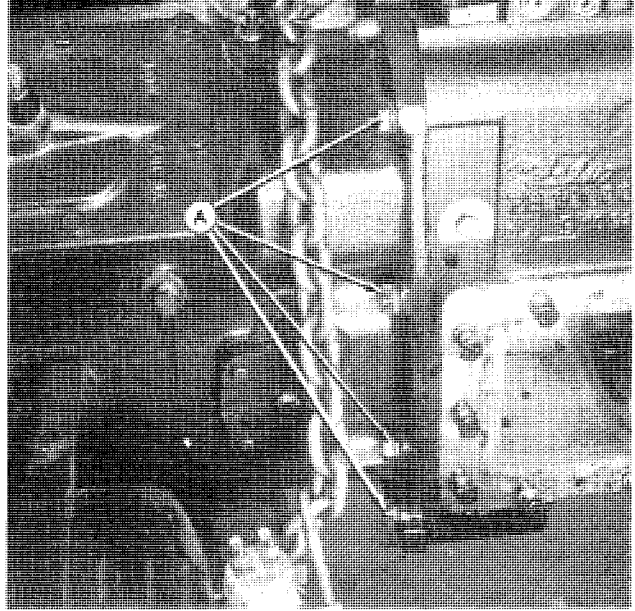


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Clutch/PTO Housing/Install Clutch/PTO Housing to Transmission

2. Install ten 14 mm bolts and lock washers (A) (four installed). Torque bolts to 150 N·m (110 lb-ft).

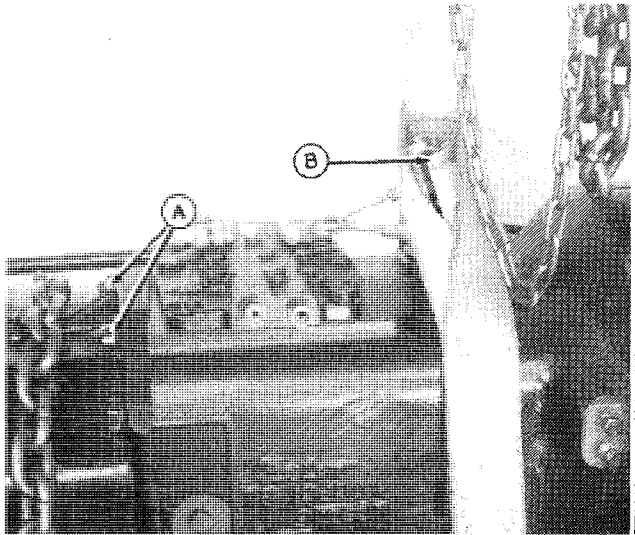


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3. Install two 14 mm clutch housing to transmission mounting nuts and lock washers (A). Torque to 150 N·m (110 lb-ft). Remove strap (B) from housing.



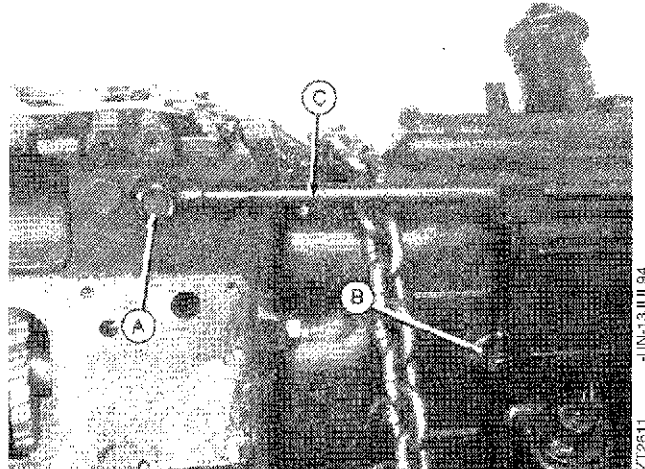
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Clutch/PTO Housing/Install Clutch/PTO Housing to Transmission

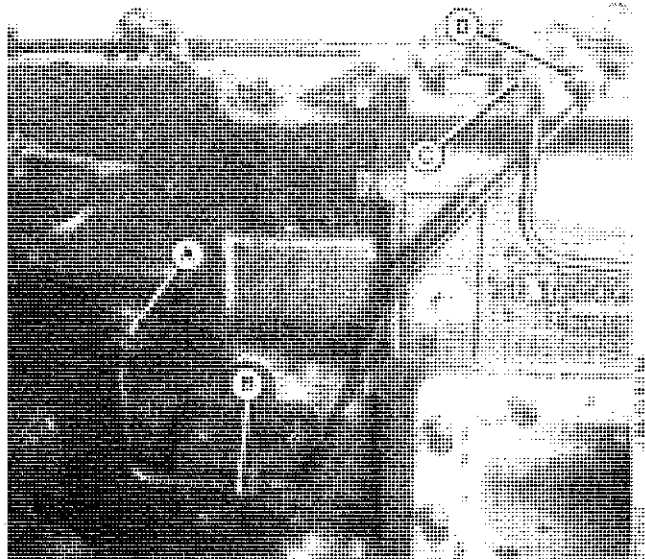
4. Install hollow bolts (A) and (B) with sealing rings to hydraulic line (C).



ZT1564,1515,J -19-08FEB95

5. Install distributor line using hydraulic bolts with sealing rings (A) and (B). Connect hydraulic line nuts (C) and (D) to distributor.

- A—Hydraulic Bolt
- B—Hydraulic Bolt
- C—Distributor Line Nut
- D—Distributor Line Nut



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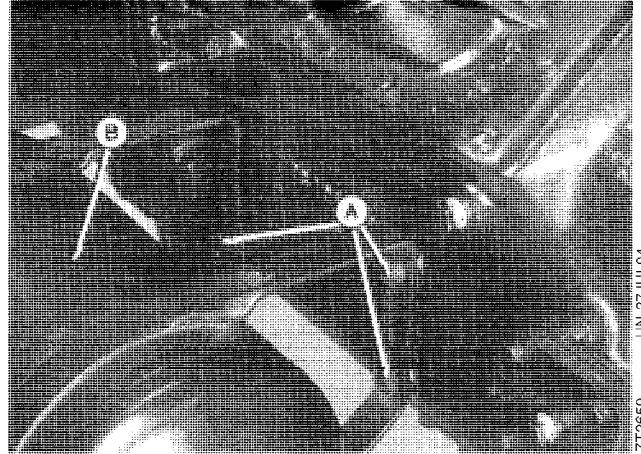
6. Install hydraulic pump and filter housing to clutch/PTO housing. (See "Install Hydraulic Oil Pump and Filter Housing", Section 70, Group 30).

7. Connect transmission to engine. (See "Connect Transmission to Engine", Group 10, this Section.)

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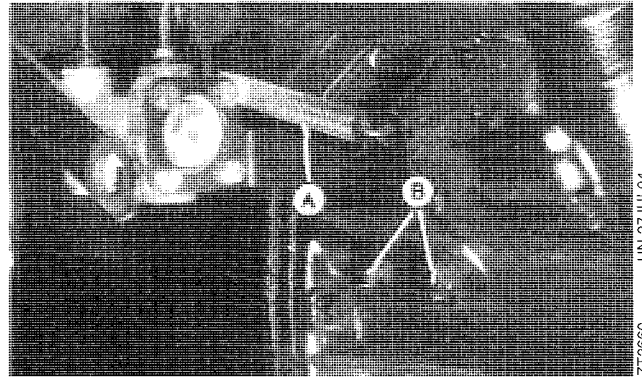
SEPARATE TRANSMISSION FROM FINAL DRIVE

1. Separate transmission assembly from engine. (See "Separate Transmission Assembly from Engine", Group 10, this Section.)
2. Remove clutch/PTO housing from transmission. (See "Remove Clutch/PTO Housing from Transmission", Group 15, this Section.)
3. Remove three M10 x 20 air tank mounting bolts and lock washers (A). Move air tank (B) aside to rear of tractor.



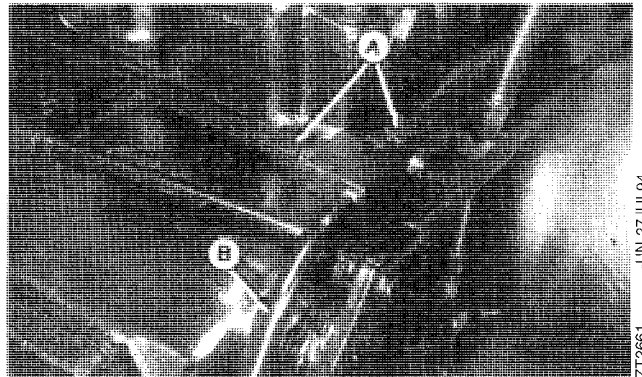
ZT1564,1520,A -19-08FEB95

4. Remove brake lever return spring (A). Remove two M10 x 25 bolts and lock washers (B) from brake proportional valve mount.



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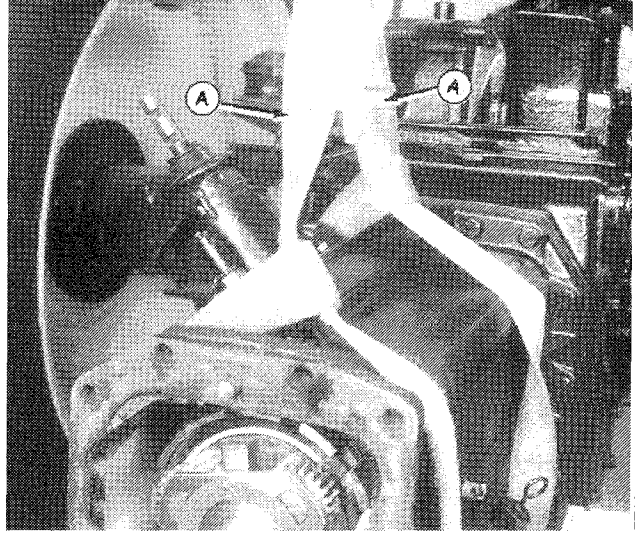
5. Remove two hydraulic line nuts (A). Remove line (B).



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Transmission/Separate Transmission from Final Drive

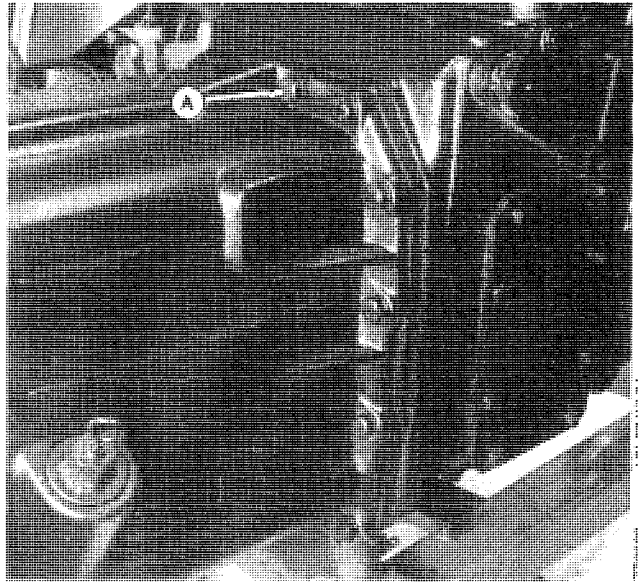
6. Attach hoist to transmission with nylon straps (A).



ZT2662
-UN-27JUL94

ZT1564,1520,D -19-08FEB95

7. Remove thirteen M12 x 65 transmission to final drive mounting bolts and lock washers (A).



ZT2662
-UN-27JUL94

ZT1564,1520,E -19-08FEB95

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Suggest:

If the above button click is invalid.

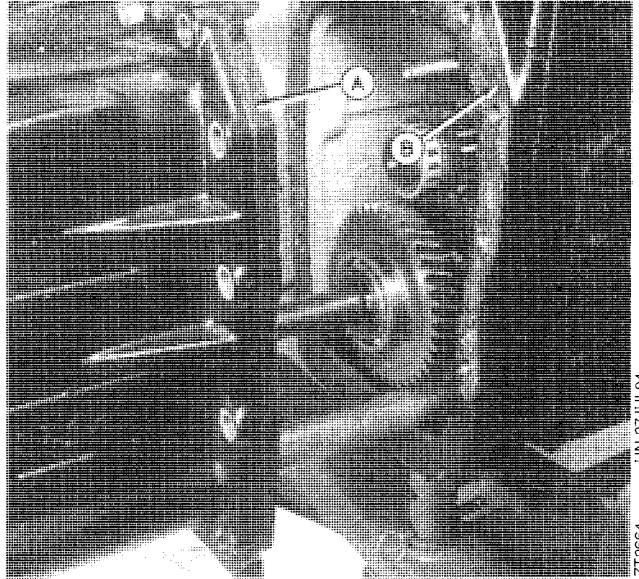
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8. Remove transmission (A) from final drive (B). Move transmission to work station.



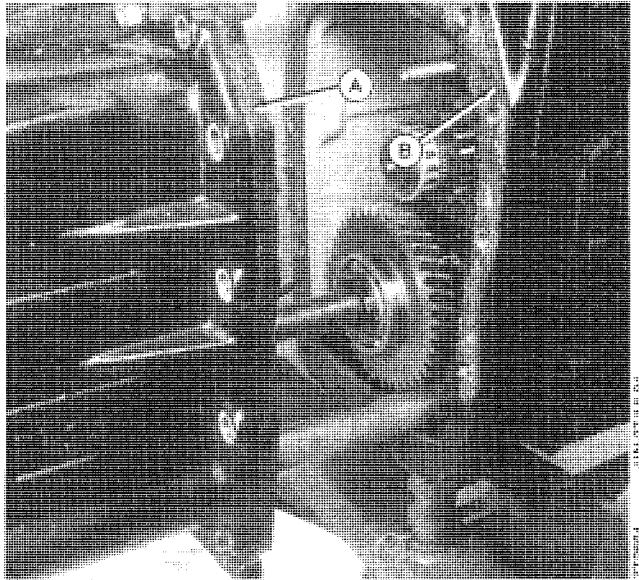
JUN-27JUL94
ZT2664

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ZT1564,1520,F -19-08FEB95

INSTALL TRANSMISSION TO FINAL DRIVE

1. Position transmission (A) to final drive assembly (B) using overhead hoist and lift straps.
2. Install new gasket using TY6304 Flexible Sealant.
3. Insert transmission into final drive housing aligning gears and dowel pins.



JUN-27JUL94
ZT2664

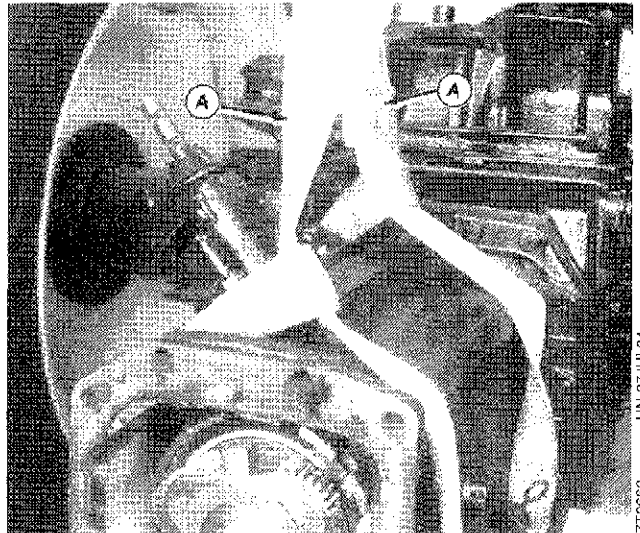
1564TM,1520,F -19-08FEB95

4. Install thirteen M12 x 65 bolts and lock washers (A). Torque bolts to 95 N-m (70 lb-ft).



1564TM,1520,G -19-08FEB95

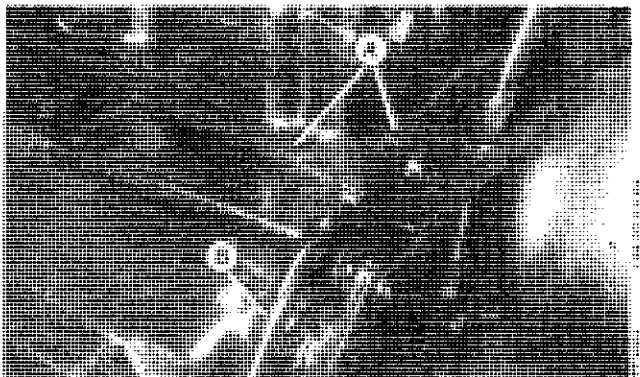
5. Remove lift straps (A) from overhead hoist and transmission.



ZT2062
-UN-27JUL94

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6. Install hydraulic line (B) and secure with line nuts (A).



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