

# **655, 755, 855, 955, 756 and 856 Compact Utility Tractors**

## **TECHNICAL MANUAL**

**John Deere  
Lawn & Grounds Care Division  
TM1360 (June 1996)**

# Contents

## SECTION 10—GENERAL INFORMATION

- Group 05—Safety
- Group 10—Repair Specifications
- Group 15—Repair Information
- Group 20—Fuels, Lubricants, and Coolants
- Group 25—Serial Number Locations

## SECTION 20—DIESEL ENGINE REPAIR

- Group 05—Yanmar Diesel Engine Repair
- Group 10—Remove and Install Oil Cooler
- Group 15—Remove and Install Radiator
- Group 20—Remove and Install Diesel Engine

## SECTION 30—FUEL AND AIR REPAIR

- Group 05—Fuel Transfer Pump
- Group 10—Fuel Tank
- Group 15—Fuel Tank Tube and Sender
- Group 20—Air Cleaner

## SECTION 40—ALTERNATOR REPAIR

- Group 05—Alternator Repair Specifications
- Group 10—Alternator Installation

## SECTION 50—POWER TRAIN REPAIR

- Group 05—Hydrostatic Transmission
- Group 10—Transaxle
- Group 15—Final Drives
- Group 20—Mechanical Front Wheel Drive (MFWD)
- Group 25—Power Train Gears and Shafts
- Group 30—Speed Control Linkage

## SECTION 60—STEERING AND BRAKES REPAIR

- Group 05—Standard Front Axle
- Group 10—Steering Valve
- Group 15—Brake Linkage

## SECTION 70—HYDRAULICS REPAIR

- Group 05—Hydraulic Pump
- Group 10—Flow Divider and Selective Control Valves (SCV's)
- Group 15—Rockshaft
- Group 20—Hydraulic Hoses

## SECTION 80—MISCELLANEOUS REPAIR

- Group 15—Operator's Seat
- Group 20—European Roll-Gard®
- Group 25—German Rear Hitch
- Group 30—3-Point Hitch

## SECTION 210—MACHINE OPERATIONAL CHECKOUT PROCEDURE

- Group 05—Machine Operational Checkout Procedure

## SECTION 220—ENGINE/FUEL OPERATION AND TESTS

- Group 05—Engine Systems Operational Checkout Procedure
- Group 10—Engine System Diagnosis

## SECTION 240—ELECTRICAL OPERATION AND TESTS

- Group 05—Electrical System Checkout
- Group 10—Electrical System Diagnosis
- Group 15—Theory of Operation

## SECTION 250—POWER TRAIN OPERATION AND TESTS

- Group 05—Power Train System Checkout
- Group 10—Power Train Tests and Adjustments
- Group 15—Theory of Operation

## SECTION 260—STEERING AND BRAKE OPERATION AND TESTS

- Group 05—Steering and Brakes System Checkout
- Group 10—Steering and Brakes Tests and Adjustments
- Group 15—Theory of Operation

## SECTION 270—HYDRAULIC OPERATION AND TESTS

- Group 05—Hydraulic System Checkout
- Group 10—Hydraulic System Tests and Adjustments
- Group 15—Theory of Operation

## INDEX

*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.*

TM 1360-19-01Jun 96

10

20

30

40

50

60

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80

210

220

# Section 10

## General Information

### Contents

	Page		Page
<b>Group 05—Safety</b>		<b>Group 25—Serial Number Locations</b>	
Safety Items . . . . .	10-05-1	Product Serial Number . . . . .	10-25-1
<b>Group 10—Repair Specifications</b>		Engine Serial Number . . . . .	10-25-1
General Tractor Specifications . . . . .	10-10-1	Transaxle Serial Number . . . . .	10-25-1
<b>Group 15—Repair Information</b>		Mower Deck Serial Number . . . . .	10-25-1
Metric Fastener Torque Values . . . . .	10-15-1		
Inch Fastener Torque Values . . . . .	10-15-2		
O-Ring Face Seal Fittings . . . . .	10-15-3		
O-Ring Boss Fittings . . . . .	10-15-4		
<b>Group 20—Fuels, Lubricants, and Coolants</b>			
Diesel Fuel—North America . . . . .	10-20-1		
Diesel Fuel Lubricity—North America . . . . .	10-20-1		
Diesel Fuel Storage—North America . . . . .	10-20-1		
Diesel Fuel—Europe . . . . .	10-20-2		
Diesel Fuel Lubricity—Europe . . . . .	10-20-2		
Diesel Fuel Storage—Europe . . . . .	10-20-2		
Engine Oil—North America . . . . .	10-20-3		
Engine Oil—Europe . . . . .	10-20-4		
Break-in Engine Oil—North America . . . . .	10-20-5		
Break-in Engine Oil—Europe . . . . .	10-20-6		
Hydrostatic Transmission and Hydraulic Oil— North America . . . . .	10-20-7		
Hydrostatic Transmission and Hydraulic Oil— Europe . . . . .	10-20-8		
Gear Case Oil (MFWD)—North America . . . . .	10-20-9		
Gear Case Oil (MFWD)—Europe . . . . .	10-20-10		
Grease—North America . . . . .	10-20-11		
Grease—Europe . . . . .	10-20-12		
<b>North America</b>			
Alternative Lubricants . . . . .	10-20-13		
Synthetic Lubricants . . . . .	10-20-13		
Lubricant Storage . . . . .	10-20-13		
Mixing of Lubricants . . . . .	10-20-13		
Oil Filters . . . . .	10-20-13		
<b>Europe</b>			
Alternative Lubricants . . . . .	10-20-14		
Synthetic Lubricants . . . . .	10-20-14		
Lubricant Storage . . . . .	10-20-14		
Mixing of Lubricants . . . . .	10-20-14		
Oil Filters . . . . .	10-20-14		
Diesel Engine Coolant—North America . . . . .	10-20-15		
Diesel Engine Coolant—Europe . . . . .	10-20-16		

## 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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## 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).



DX,SPARKS -19-04JUN90

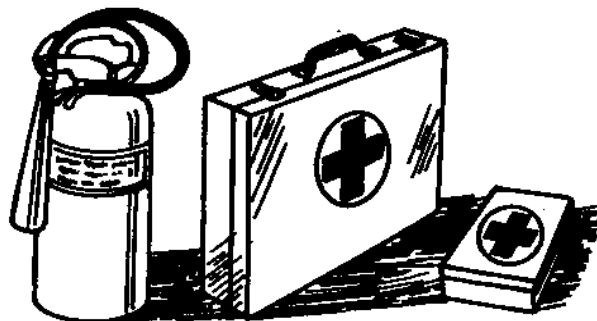
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## PREPARE FOR EMERGENCIES

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.



DX,FIRE2 -19-04JUN90

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TS291

## 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 10—15 minutes. 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.



DX, POISON -19-04JUN90

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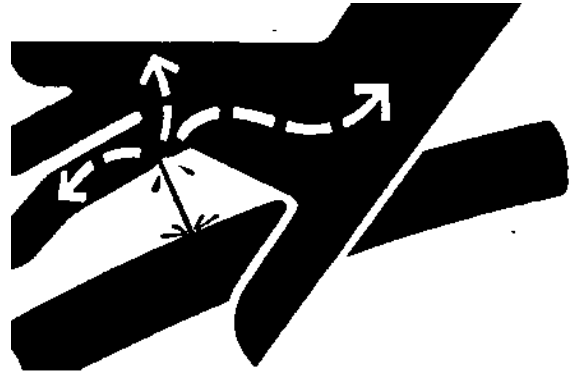
## AVOID HIGH-PRESSURE FLUIDS

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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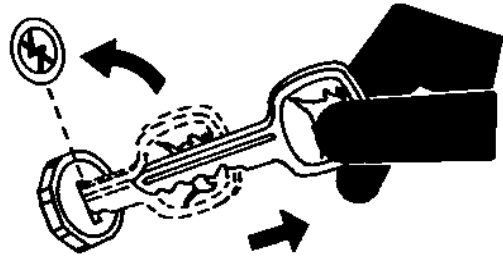
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## PARK MACHINE SAFELY

Before working on the machine:

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



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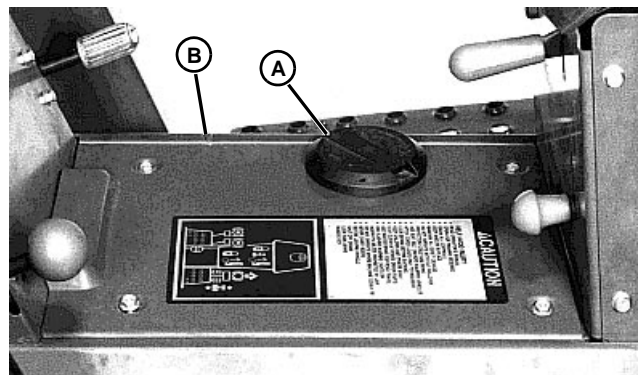
TS230

**SPECIFICATIONS**

Item	Measurement	Specification
Charge Pump	Cap Screw Torque	37—50 N•m (27—37 lb-ft)
Charge Inlet Fitting	Torque	95—230 N•m (70—170 lb-ft)
Drive Shaft-to-Engine	Cap Screw Torque	49 N•m (35 lb-ft)
Drive Shaft-to-Hydro	Cap Screw Torque	60 N•m (45 lb-ft)
Neutral Return Lever Bushing	Inside Diameter	19.088 ± 0.025 mm (0.7515 ± 0.001 in)
Drive Shaft Coupler to Hydro Input Shaft	Torque	60 N•m (45 lb-ft)
Swash Plate End Caps	Cap Screw Torque	8—9 N•m (72—84 lb-in)
Transmission Center Section-to-Housing	Cap Screw Torque	44—55 N•m (33—41 lb-ft)
Gear-to-Output Shaft	Cap Screw Torque (Early Models) Castle Nut Torque (Late Models)	54 N•m (40 lb-ft) 109 N•m (80 lb-ft)
Transmission Attaching	Cap Screw Torque	142 N•m (105 lb-ft)
Neutral Return Lever Spring	Adjusted Coil Length	133 mm (5.25 in)
Plugs:		
3/4-16 SAE O-ring	Torque	45—95 N•m (33—70 lb-ft)
1/4-20 SAE O-ring	Torque	4—7 N•m (36—60 lb-in)

**REMOVE AND INSTALL SHEET METAL PANELS**

1. Park tractor safely. Lock park brake, remove key.
2. Turn depth control lever (A) clockwise until it stops.
3. Remove four cap screws. To remove panel (B), lift up on right rear corner of panel first, then lift left side to clear head of depth control bolt, and move panel out from the right side of the tractor.



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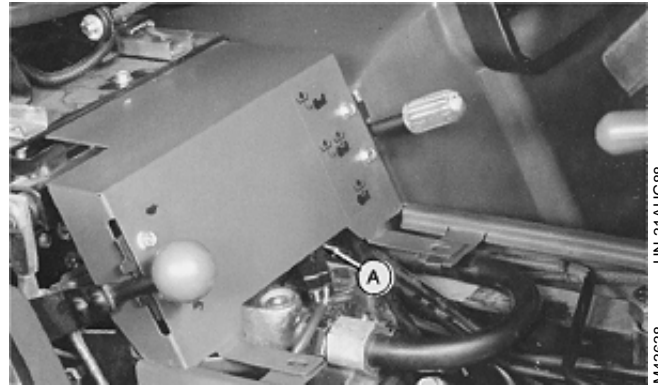
## Hydrostatic Transmission/Remove Drive Shaft

*NOTE: 755/756, 855/856, and 955 tractors have two additional side cap screws under each fender.*

4. Remove panel (A).

*NOTE: Panel need not be removed for driveshaft and charge pump repair.*

5. Install in reverse order. Be sure depth control lever aligns with bolt head.

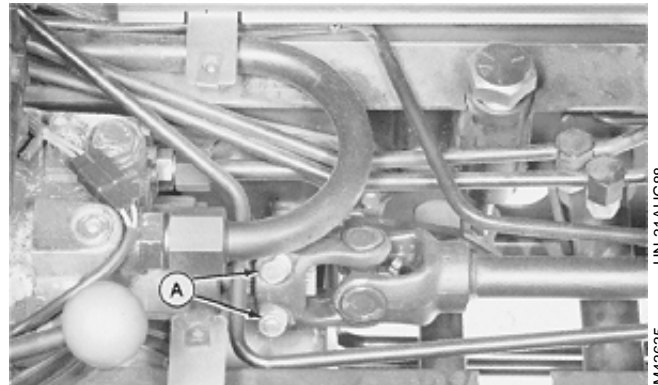


655 Shown

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### REMOVE DRIVE SHAFT

1. Loosen two bolts (A) of drive shaft coupler.

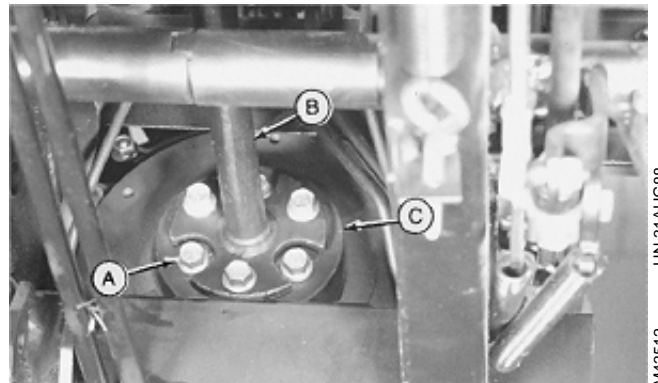


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2. Remove six cap screws (A).

3. Push driveshaft (B) back to remove isolator (C).

4. Remove driveshaft.

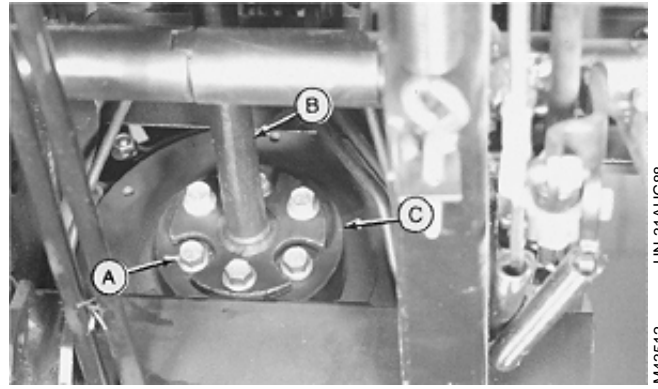


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## INSTALL DRIVE SHAFT

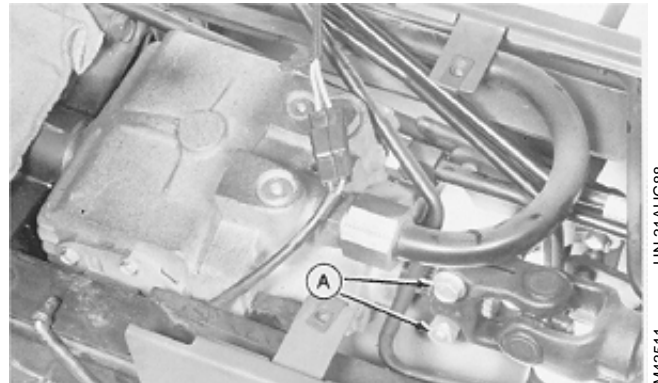
1. Put drive shaft (B) on transmission.
2. Install isolator (C). Be sure raised portion of unthreaded holes are toward engine.
3. Fasten isolator to engine with three longer cap screws and fasten drive shaft to isolator with three shorter cap screws (A). Tighten cap screws to 49 N·m (36 lb-ft).



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4. Tighten two bolts (A) of drive shaft coupler to 60 N·m (45 lb-ft).

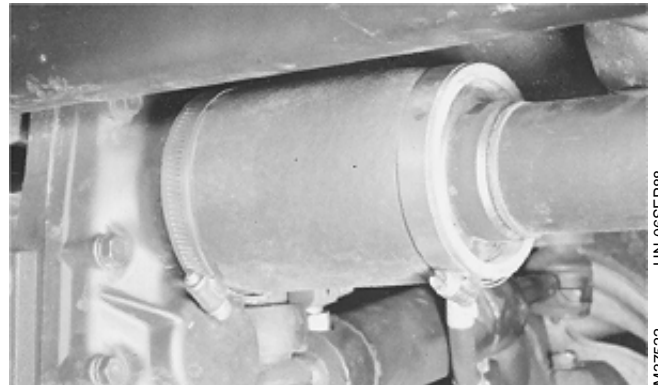


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## REMOVE AND INSTALL MFWD DRIVE SHAFT

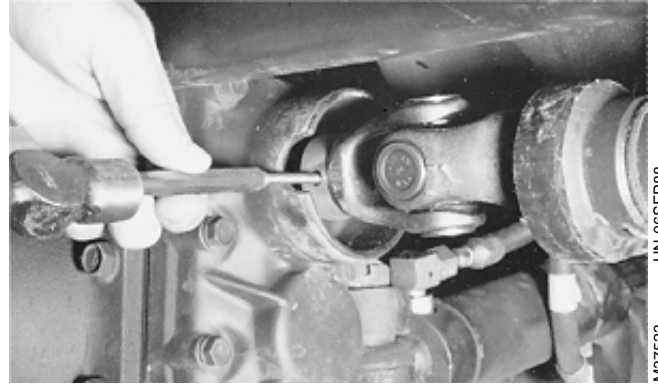
1. Loosen clamps. Slide front and rear covers away from universal joints.



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2. Drive pin out of front universal joint to remove shaft.
3. To install, align pin holes of drive shaft front U-joint and MFWD input shaft as you slide the shaft into position.
4. Fasten with spring pin removed earlier.
5. Fasten front cover in place with band clamps.
6. Fasten rear U-joint of drive shaft to transaxle output shaft.
7. Fasten rear cover in place with band clamps.



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MX,HU,5005,12 -19-16OCT91

## REMOVE AND INSTALL CHARGE PUMP

*NOTE: Orientation of charge pump: Flat on charge pump housing must be on right-hand side. If turned 180°, pump will not function.*

1. Remove two cap screws (A) to remove charge pump.



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2. Remove pin (A). Inspect pin for damage or wear. Replace if necessary.
3. Inspect machined surface of transmission for severe scoring. If scoring is noted, replace transmission.
4. Clean and dry all parts. Machined surface of transmission must be clean.
5. Apply clean transmission oil on all internal parts.
6. Install pin (A). Apply petroleum jelly to pin and shaft to hold pin in place during installation of charge pump.
7. Be sure O-ring is in place on pump.
8. Torque cap screws (Step 1) to specification.



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**TORQUE SPECIFICATION**

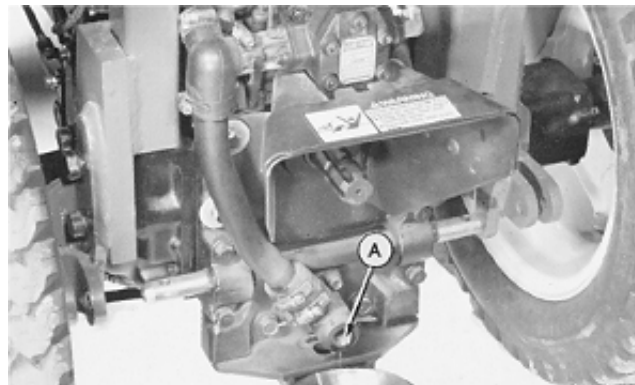
Charge Pump Cap Screws . . . . . 37-50 N·m (27-37 lb-ft)

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**REMOVE HYDROSTATIC TRANSMISSION**

1. Drain transaxle. Oil capacity is approximately 17 L (4.5 gal).
2. Remove the following:
  - Drawbar
  - Sheet Metal Panels (see procedures in this group)
  - Transmission Drive Shaft (see procedures in this group)
  - MFWD Drive Shaft (see procedures in this group).



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