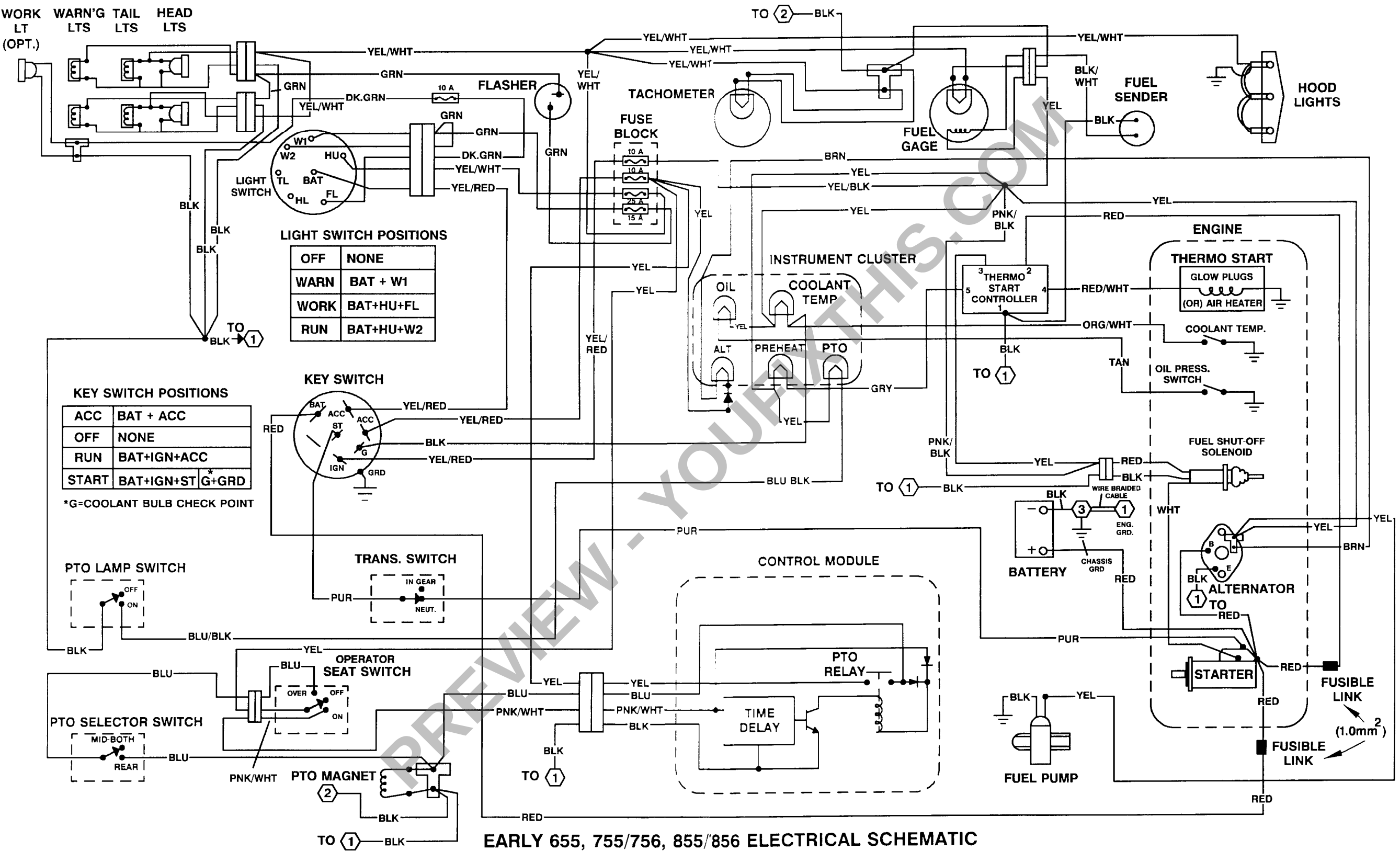




EARLY 655, 755/756, 855/856 ELECTRICAL SCHEMATIC

WIRING HARNESS NUMBERS
655 AM102054, 755/756 AM102145, 855/856 AM102053

M42200



55 SERIES HYDRAULIC SCHEMATIC

EXPLODED VIEW—POWER TRAIN GEARS AND SHAFTS

- | | | | |
|--|--|--|--|
| 1—MFWD Left Hub Shaft | 17—MFWD Right Hub Shaft | 32—Transaxle Rear PTO | 46—Left Final Drive Pinion Carrier |
| 2—MFWD Left Final Drive Ring Gear -(32T-655/755/855,40T-955) | 18—MFWD Differential Input Shaft Pinion Gear -(8T-655/755/855, 9T-955) | Reduction Gear - (35T-All) | 47—Left Final Drive Pinion /Brake Drive Shaft - (12T-All) |
| 3—MFWD Left Bottom Spindle Gear -(13T-655/755/855, 12T-955) | 19—MFWD Differential Transfer Gear -(20T-655/755/855/, 22T-955) | 33—Transaxle Rear PTO Reduction Shaft Pinion Gear - (11T-All) | 48—Transaxle Differential (Left) Side Pinion Gear (16T-All) |
| 4—MFWD Left Spindle Shaft | 20—MFWD Differential Input Gear -(25T-655/755/855, 28T-955) | 34—Transaxle Mid PTO Transfer Gear - (32T-All) | 49—Transaxle Differential Pinion Gears - (10T-All) |
| 5—MFWD Left Top Spindle Gear - (16T-All) | 21—MFWD Differential Input Shaft | 35—Transaxle Mid PTO Output Drive Shaft | 50—Transaxle Differential (Right) Side Pinion Gear (16T-All) |
| 6—MFWD Left Spindle Input Gear - (15T-All) | 22—Transaxle MFWD Output Shaft | 36—Transaxle Mid PTO Output Gear - (30T-All) | 51—Transaxle Differential Ring Gear-(41T-655/755/855, 39T-955) |
| 7—MFWD Left Axle Drive Shaft | 23—Transaxle MFWD Output Gear - (26T-655,20T-755/855/955) | 37—Transaxle Hi-Range Reduction Gear - (31T-All) | 52—Transaxle Rear PTO Output Gear - (24T-All) |
| 8—MFWD Differential Ring Gear - (41T-655/755/855, 38T-955) | 24—Transaxle MFWD Drive Gear - (13T-All) | 38—Transaxle Hi/Lo Transfer Shaft | 53—Transaxle Rear PTO Output Drive Shaft |
| 9—MFWD Differential Side Pinion Gears - (14T-All) | 25—Hydro/Transaxle Input Drive Gear - (19T-All) | 39—Transaxle Lo-Range Speed Gear - (23T-655/755/855/, 21T-955) | 54—Right Final Drive Pinion/Brake Drive Shaft (12T-All) |
| 10—MFWD Differential Pinion Gears - (10T-All) | 26—Transaxle Main PTO Drive Gear - (19T-655/755/855, 17T-955) | 40—Transaxle Hi-Range Speed Gear - (20T-All) | 55—Right Final Drive Pinion Carrier |
| 11—MFWD Right Axle Drive Shaft | 27—Transaxle Main PTO/ Hydraulic Pump Drive Shaft | 41—Transaxle Lo-Range Reduction Gear - (28T-655/755/855, 30T-955) | 56—Right Final Drive Pinion Gears - (16T-All) |
| 12—MFWD Right Spindle Input Gear - (15T-All) | 28—Transaxle Mid PTO Input Gear - (29T-All) | 42—Transaxle Hi/Lo Input Shaft Pinion Gear -(8T-655/755/855, 7T-955) | 57—Right Final Drive Ring Gear - (45T-All) |
| 13—MFWD Right Top Spindle Gear - (16T-All) | 29—Transaxle Rear PTO Input Gear - (19T-All) | 43—Left Final Drive Hub Shaft | 58—Right Final Drive Hub Shaft |
| 14—MFWD Right Spindle Shaft | 30—Transaxle PTO Clutch Drive Gear - (28T-655/755/855, 25T-955) | 44—Left Final Drive Ring Gear - (45T-All) | |
| 15—MFWD Right Bottom Spindle Gear -(13T-655/755/855, 12T-955) | 31—Transaxle PTO Clutch/ Brake Drive Shaft | 45—Left Final Drive Pinion Gears - (16T-All) | |
| 16—MFWD Right Final Drive Ring Gear-(32T-655/755/855, 40T-955) | | | |

EXPLODED VIEW—GEAR-MESH PATTERN

- | | | |
|--------------------|--|---|
| 1 With 2 | 29 With 32 | 47 (Right Set) With 48 |
| 2 With 1 and 3 | 33 (Pinion) With 52 | 48 With 47 (Right Set) and 49 |
| 5 With 6 | 34 With 28 & 36 | 49 With 50 |
| 8 With 18 (Pinion) | 37 With 25 & 40 | 50 With 49 & 54 (Left Set) |
| 9 With 10 | 39 With 41 | 54 (Left Set) With 50 |
| 12 With 13 | 42 (Pinion) With 51 | 54 (Inside Right Set) With Brake/Separator Plates |
| 15 With 16 | 43 With 46 | 54 (Far Right Set) With 56 |
| 19 With 20 | 44 With 45 | 55 With 58 |
| 23 With 24 | 45 With 44 & 47 (Far Left Set) | 56 With 54 & 57 |
| 25 With 37 | 47 (Inside Left Set) With Brake/Separator Plates | |
| 26 With 30 | | |
| 28 With 34 | | |

METRIC FASTENER TORQUE VALUES

Property Class and Head Markings	4.8   		8.8    		10.9  		12.9    	
	5   		10   		10   		12   	

TS1163

SIZE	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a	
	N•m	lb-ft	N•m	lb-ft	N•m	lb-ft	N•m	lb-ft	N•m	lb-ft	N•m	lb-ft	N•m	lb-ft	N•m	lb-ft
M6	48	3.5	6	4.5	9	6.5	11	8.5	13	9.5	17	12	15	11.5	19	14.5
M8	12	8.5	15	11	22	16	28	20	32	24	40	30	37	28	47	35
M10	23	17	29	21	43	32	55	40	63	47	80	60	75	55	95	70
M12	40	29	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	47	80	60	120	88	150	110	175	130	225	165	205	150	260	109
M16	100	73	125	92	190	140	240	175	275	200	350	225	320	240	400	300
M18	135	100	175	125	260	195	330	250	375	275	475	350	440	325	560	410
M20	190	140	240	180	375	275	475	350	530	400	675	500	625	460	800	580
M22	260	190	330	250	510	375	650	475	725	540	925	675	850	625	1075	800
M24	330	250	425	310	650	475	825	600	925	675	1150	850	1075	800	1350	1000
M27	490	360	625	450	950	700	1200	875	1350	1000	1700	1250	1600	1150	2000	1500
M30	675	490	850	625	1300	950	1650	1200	1850	1350	2300	1700	2150	1600	2700	2000
M33	900	675	1150	850	1750	1300	2200	1650	2500	1850	3150	2350	2900	2150	3700	2750
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2750	4750	3500

DO NOT use these hand torque values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only and include a $\pm 10\%$ variance factor. Check tightness of fasteners periodically. DO NOT use air powered wrenches.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Fasteners should be replaced with the same grade. Make sure fastener threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

When bolt and nut combination fasteners are used, torque values should be applied to the **NUT** instead of the bolt head.

Tighten toothed or serrated-type lock nuts to the full torque value.

^a "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated (yellow dichromate - Specification JDS117) without any lubrication.

Reference: JDS—G200.

REMOVE AND INSTALL OIL COOLER

NOTE: Late model 755/756 Tractor shown. See *Remove and Install Radiator* in Group 15 of this section for steps required to reach disassembly point shown. Have a clean oil pan, several shop cloths, and two oil caps and plugs ready to catch, trap, and/or clean-up hydraulic oil.

1. Remove two cap screws (A).
2. Disconnect oil cooler lines (B).
3. Lift cooler from base clips (C), one on each side.
4. Drain oil cooler and remove to bench.
5. Remove and discard O-rings.
6. Install new O-rings.
7. Set oil cooler in base clips (C), one on each side.

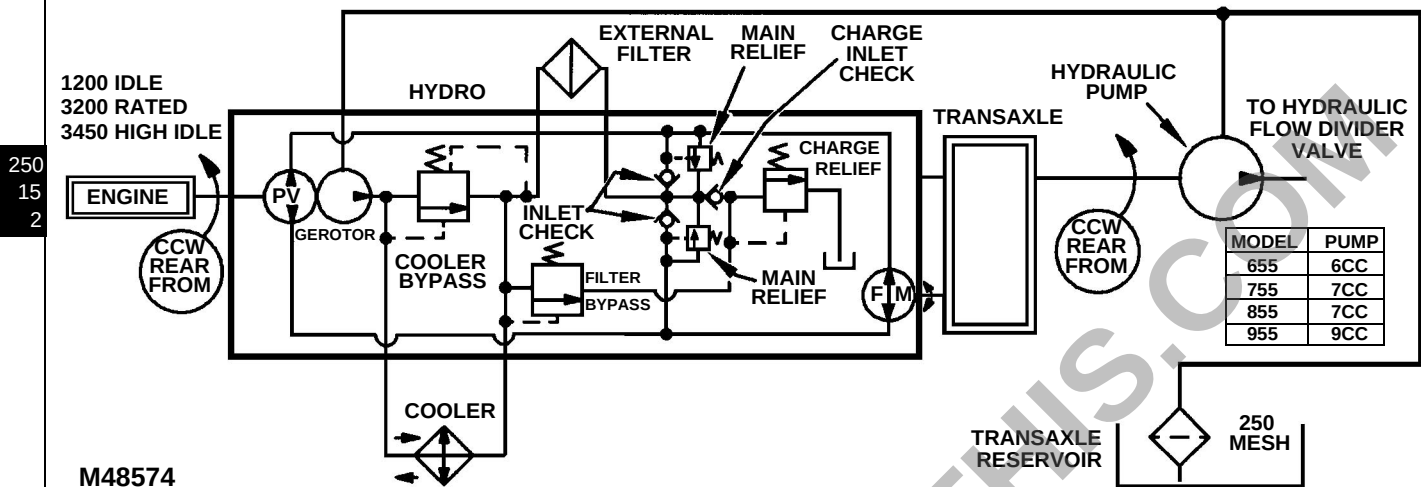
IMPORTANT: Do not flex oil cooler lines.
Hydrostatic line fittings must align with oil cooler fittings before lines are installed onto oil cooler.

8. Loosen clamp that retains hydraulic lines to the frame.
9. Move hydraulic line's until hydraulic line and oil cooler line fitting's align.
10. Connect oil cooler lines (B) and tighten clamp. If at this time hydraulic oil cooler line's do not align, bend slightly until they do align.
11. Install and tighten two cap screws (A).
12. See *Remove and Install Radiator* in this section for final assembly steps.



M42294

HYDROSTATIC TRANSMISSION GENERAL OPERATION



Whenever the engine is running, the transmission and hydraulic systems are filled with charge oil generated from their shaft driven pumps. Oil is drawn through the 250 mesh screen from the transaxle reservoir by the hydraulic pump at the rear of the transaxle and by the charge pump at the front of the hydrostatic transmission, a shared reservoir system. The hydrostatic transmission has a fixed, gerotor-type charge pump that forces the oil out through the oil cooler and external filter. Both the oil cooler and filter have a bypass valve, located in the center section, to ensure oil will always be supplied to the hydro should the cooler and/or filter become plugged.

From the filter, oil flows through the two inlet check valves of the center section into the transmission variable-displacement, axial-piston pump and to the fixed-displacement, axial-piston motor. The charge relief valve provides sufficient back-pressure to keep the hydro lubricated. It is set between 120—180 psi and is shim adjustable. There are two, non-adjustable, closed-loop main system relief valves (one for each direction) located in the center section, which are set at 6000—6500 psi.

BEFORE YOU START

Always perform the system checkout procedure in Group 05 before making any tests or adjustments in this group. The step-by-step procedures in this group provide you with the detailed diagnostic information you will need to isolate a malfunction. Basic diagnostic equipment is used.

It is assumed that you are familiar with the machine and its engine and fuel system components.

Engine rpm and temperature are critical in most engine tests. Be sure to follow test specifications carefully.

Always start with the first step and follow the sequence from left to right. Read each step completely before performing the tests.

Upon completing a test or adjustment, check to see whether the problem is corrected by performing the corresponding checkout procedure in Group 05.

<p>1 ENGINE OPERATING CHECK</p> <p>Operator on seat. Master/Park brake pedal locked in PARK position. PTO lever OFF.</p>	<p>If engine DOES NOT operate properly, select the appropriate symptom.</p> <p>If engine DOES NOT crank, see Section 240.</p>	<p>ENGINE WILL NOT START OR STARTS HARD: GO TO A</p> <p>ENGINE SURGES OR STALLS FREQUENTLY: GO TO B</p> <p>ENGINE MISSES: GO TO C</p> <p>ENGINE DOES NOT DEVELOP FULL POWER: GO TO D</p> <p>EXCESSIVE BLACK OR GRAY EXHAUST SMOKE: GO TO E</p> <p>WHITE EXHAUST SMOKE: GO TO F</p> <p>SLOW ACCELERATION: GO TO G</p> <p>ABNORMAL ENGINE NOISE: GO TO H</p> <p>WHITE SMOKE COMING FROM CRANKCASE BREATHER: GO TO R</p> <p>CAN'T LOWER ENGINE RPM: GO TO S</p> <p>BLUE EXHAUST SMOKE: GO TO T</p> <p>LOW OIL PRESSURE: GO TO I</p> <p>HIGH OIL PRESSURE: GO TO J</p> <p>OIL IN COOLANT OR COOLANT IN OIL: GO TO K</p> <p>ENGINE OVERHEATS: GO TO L</p> <p>ENGINE RUNS COLD: GO TO M</p> <p>ENGINE STARTS BUT THEN STOPS WHEN KEY IS RELEASED: GO TO N</p> <p>DIESEL FUEL IN CRANKCASE: GO TO O</p> <p>IDLE ERRATIC, CAN'T KEEP AIR BLED FROM INJECTION LINES: GO TO P</p> <p>FUEL SHUTOFF SOLENOID RELEASES WHEN ENGINE WARMS UP: GO TO Q</p> <p>ENGINE RUNS FINE FOR AN HOUR, LOSES POWER THEN STOPS: GO TO U</p>
---	---	---

GENERAL TRACTOR SPECIFICATIONS

ITEM	655	755/756	855/856	955
ENGINE:				
Engine Model	3TN66UJ	3TNA72UJ	3TN75RJ	3TN84RJ
Engine Horsepower, Net.	16 (11.9 kW)	20 (14.9 kW)	24 (17.9 kW)	33 (24.6 kW)
PTO Horsepower	10.6 (8.1 kW)	15 (11.2 kW)	19 (14.2 kW)	27 (20.1 kW)
Rated Engine Speed.	3200 rpm	3200 rpm	3200 rpm	3200 rpm
Type	Diesel	Diesel	Diesel	Diesel
Operating Range	1400-3425 rpm	1400-3425 rpm	1400-3425 rpm	1400-3425 rpm
Number of Cylinders	3	3	3	3
Displacement	40.2 cu. in. 658 cm ³	53.6 cu. in. 879 cm ³	60.7 cu. in. 995 cm ³	87.3 cu. in. 1430 cm ³
Bore and Stroke	2.59x2.53 in. (66x64.2 mm)	2.83x2.83 in. (72x72 mm)	2.95x2.95 in. (75x75 mm)	3.31x3.39 in. (84x86 mm)
Compression Ratio	22.4:1	22.3:1	17.8:1	18.0:1
Lubrication	Pressured	Pressured	Pressured	Pressured
Cooling System.	Water-pump	Water-pump	Water-pump	Water-pump
Air Cleaner	Dry-Type with Safety Element	Dry-Type with Safety Element	Dry-Type with Safety Element	Dry-Type with Safety Element
Engine Shutoff	Key	Key	Key	Key
Engine Torque at Rated Speed.	35 N•m (26 lb-ft)	45 N•m (33 lb-ft)	58 N•m (39 lb-ft)	73 N•m (54 lb-ft)
ELECTRICAL SYSTEM:				
Type	12 volt	12 volt	12 volt	12 volt
Battery Size	491 Cold Cranking Amps @ -18° C	491 Cold Cranking Amps @ -18° C	475 Cold Cranking Amps @ -18° C	475 Cold Cranking Amps @ -18° C
Alternator	35 Amp 40 Amp	35 Amp 40 Amp	35 Amp 40 Amp	N/A 40 Amp
Starter Size	1.3 hp (1.0 kW)	1.3 hp (1.0 kW)	1.3 hp (1.0 kW)	1.9 hp (1.4 kW)
FUEL SYSTEM:				
Type	Indirect Injection	Indirect Injection	Direct Injection	Direct Injection
Injection Pump Type	In-line with Electric Shutoff	In-line with Electric Shutoff	In-line with Electric Shutoff	In-line with Electric Shutoff
Gallon/hr at 75% load (mowing).	Not Available	0.86	0.79	1.4
DRIVE TRAIN:				
Transmission Type	Hydrostatic-2-range	Hydrostatic-2-range	Hydrostatic-2-range	Hydrostatic-2-range
Transaxle Speed Ranges	High/Lo	High/Lo	High/Lo	High/Lo
Number of Speeds	Infinite	Infinite	Infinite	Infinite
Final Drive.	Planetary	Planetary	Planetary	Planetary
Brakes.	Wet Disk	Wet Disk	Wet Disk	Wet Disk
Steering	Power	Power	Power	Power
Drawbar Tonque Weight Capacity	675 lb. (306 kg)	675 lb. (306 kg)	675 lb. (306 kg)	800 lb. (363 kg)

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.



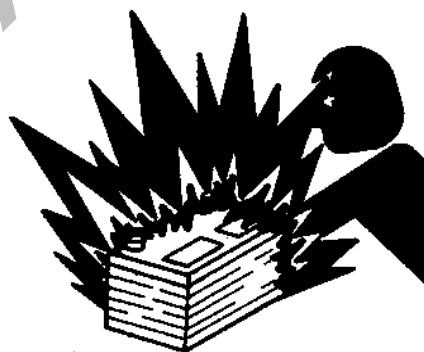
DX,FLAME -19-04JUN90

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).



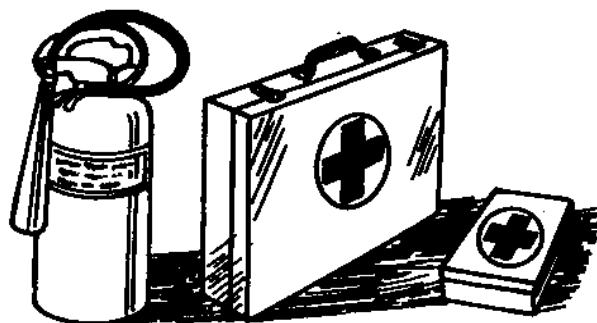
DX,SPARKS -19-04JUN90

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

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

COPYRIGHT©1996
DEERE & COMPANY
Moline, Illinois
All rights reserved
A John Deere ILLUSTRATION Manual
Previous Editions
Copyright© 1991, 1990, 1986 Deere & Company

Index

	Page		Page
A		B	
Adjust		Battery	
Charge Relief Valve	250-10-6	Charge	240-10-3
Cruise Control Lock	250-10-9	Load Test	240-10-4
Forward Control Pedal	250-10-9	Test	240-10-3
Fuel Shutoff Solenoid—655/755/756	240-10-17	Voltage Test	240-10-3
Fuel Shutoff Solenoid—855/856/955	240-10-17	Bleed	
MFWD Front Axle End-Play	50-20-32	Fuel Injection System	220-10-6
MFWD Front Axle Toe-In	50-20-32	Bleed Procedure	
Operator's Height—European	80-15-18	Hydraulic System	50-05-28, 70-05-8
Operator's Seat—European	80-15-10	Brake Disks	
Operator's Weight—European Seat	80-15-12	Repair	60-15-11
PTO Lever/PTO Selector Lever	250-10-8	Brake Linkage	
Reverse Control Pedal	250-10-10	Install	60-15-6
Rockshaft Control Valve	70-15-23	Remove	60-15-1
Rockshaft Valve	270-10-4	Service Equipment and Tools	60-15-1
Seat/Control Pedals Lockout Rod	250-10-10	Specifications	60-15-1
Slow/Fast Idle	220-10-7	Brakes Operation	260-15-1
Standard Front Axle End-Play	60-05-4		
Standard Front Axle Toe-In	60-05-9	C	
Throttle Cable	220-10-4	Charge Battery	240-10-3
Transaxle Diff. Assembly Backlash	50-10-56	Charge Pump—Hydrostatic Transmission	
Transaxle Differential Lock Pedal	250-10-8	Remove/Install	50-05-5
Transaxle Two-Speed Axle Lever	250-10-9	Charge Relief Valve	
Transmission Neutral	250-10-1	Adjust	250-10-6
Transmission Neutral Return Spring	250-10-2	Check	250-10-5
Turn Brake Pedals Freeplay	260-10-8	Check	
Air Cleaner		Air Restriction Indicator	220-05-1
Remove and Install	30-20-2	Charge Relief Valve	250-10-5
Air Cleaner Specifications	30-20-1	Coolant Lamp/Neutral Start	210-05-1, 240-05-1
Air Restriction Indicator		Coolant Temperature Lamp	240-10-9
Check	30-20-6, 220-05-2	Cruise Control Adjustment	250-05-5
Remove and Install	30-20-4	Cruise Control Lock	210-05-8
Alternator		Cruise Control Lock/Release	210-05-5
Installation	40-10-1	Cruise Control Release (Forward)	250-05-5
Ground Test	240-10-6	Cruise Control Release (M/P Brake)	250-05-5
Regulated Current Output Test	240-10-6	Differential Lock	210-05-9
Unreg'd Current Output Test—35 Amp	240-10-7	Engine Coolant	220-05-1
Unreg'd Current Output Test—40 Amp	240-10-8	Engine Idle Speed	220-05-4
Alternator Specifications	40-05-1	Engine Lubrication	220-05-1
Assemble		Engine Oil Pressure	220-05-4
Final Drives Axle Housing Assembly	50-15-13	Engine Operating	220-10-1
Hydraulic Pump	70-05-5	Engine Performance	210-05-3, 220-05-4
MFWD Axle Housing	50-20-30	Engine Preheat Circuit	240-10-8
MFWD Differential	50-20-26	Engine Start	220-05-4
MFWD Final Drive Case	50-20-6	Fan and Belt	220-05-2, 220-10-9
MFWD Spindle Gear Case	50-20-18	Foot Control Pedal Lockout	210-05-1
Rockshaft Control Valve	70-15-19	Forward Control Pedal	250-05-6
Rockshaft Housing	70-15-12	Fuel Gauge	210-05-2, 240-05-1
Steering Valve	60-10-13	Fuel System	220-05-3
Steering Valve Control Valve Sect.	60-10-19		
Steering Valve Metering Section	60-10-14		
Transaxle PTO Clutch	50-10-47		

240

250

260

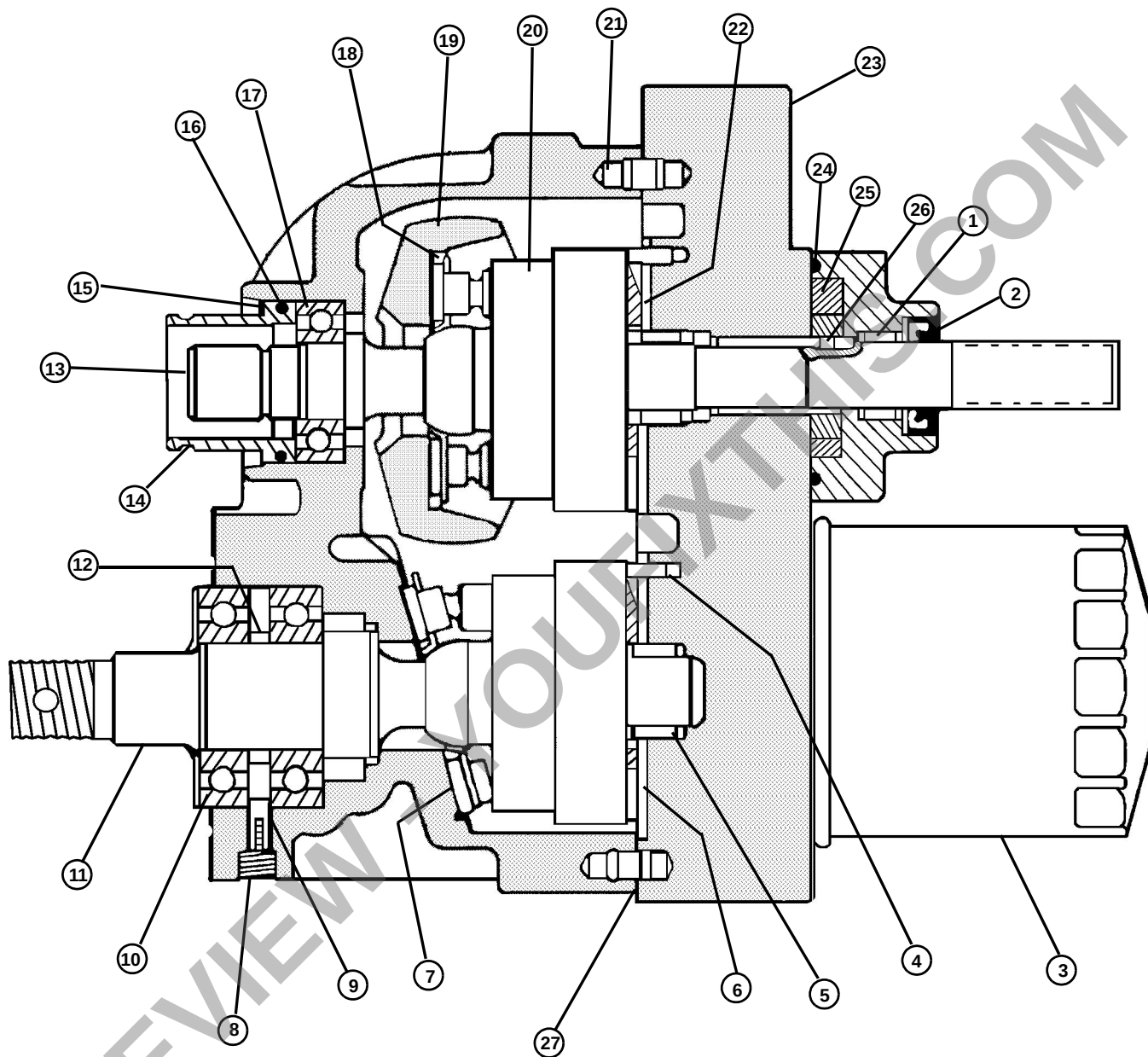
270

INDEX

PREVIEW - YOUFIXTHIS.COM

PREVIEW - YOUFIXTHIS.COM

CROSS-SECTION VIEW—HYDROSTATIC TRANSMISSION



M85125

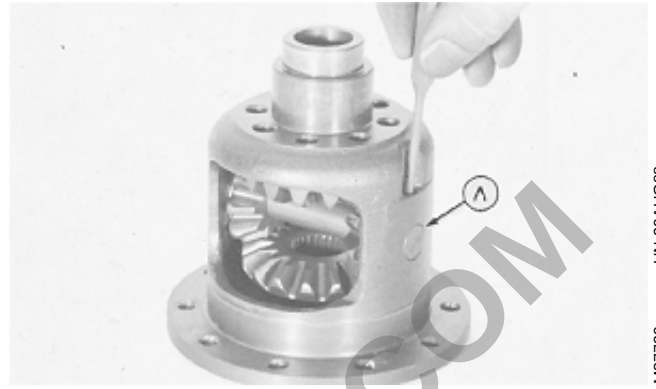
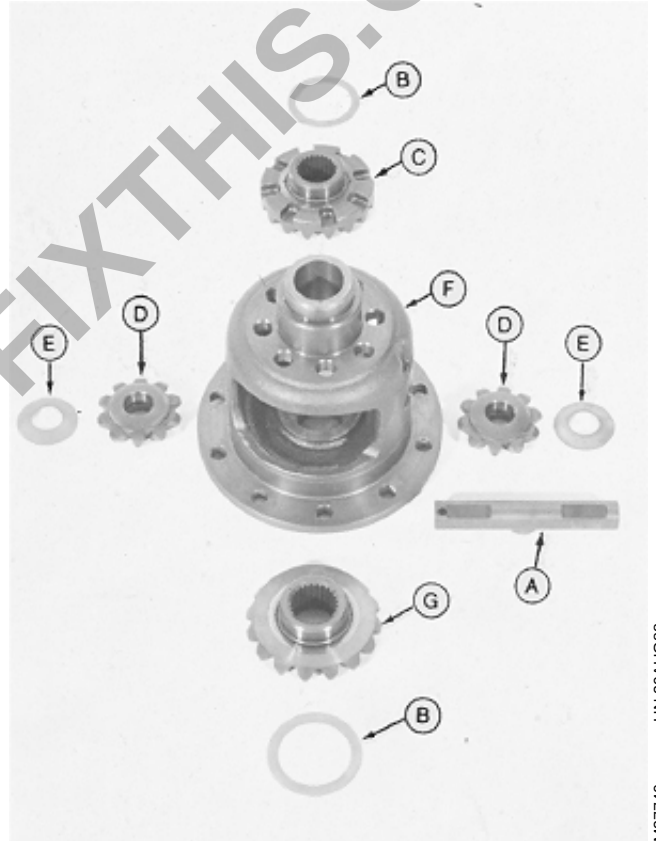
- | | | | |
|---|---|---|---------------------------|
| 1—Needle Bearing | 8—Drain Plug | 14—Seal Guide | 21—Pin (2 Used) |
| 2—Seal | 9—Bearing Retaining Pin | 15—Snap Ring | 22—Pump Valve Plate |
| 3—Filter | 10—Ball Bearing (2 Used) | 16—O-Ring | 23—Center Section |
| 4—Pin (2 used) | 11—Late Model Motor Shaft
(Early Models Are Not
Threaded) | 17—Ball Bearing | 24—O-Ring |
| 5—Needle Bearing (2 Used) | 12—Collar | 18—Thrust Plate | 25—Gerotor Charge
Pump |
| 6—Motor Valve Plate | 13—Pump Shaft | 19—Variable Swash Plate | 26—Gerotor Drive Pin |
| 7—Motor Cylinder Block
Assembly With Fixed
Thrust Plate | | 20—Pump Cylinder Block
Assembly (2 Used) | 27—Gasket |

7. Drive spring pin from cross shaft (A) to disassemble differential pinion gears (D), bevel washers (E), locking side gear (C), side gear (G) and flat thrust washers (B).

8. Inspect spring pin, cross shaft, pinion gears, side gears, and washers for wear or damage—replace if necessary.

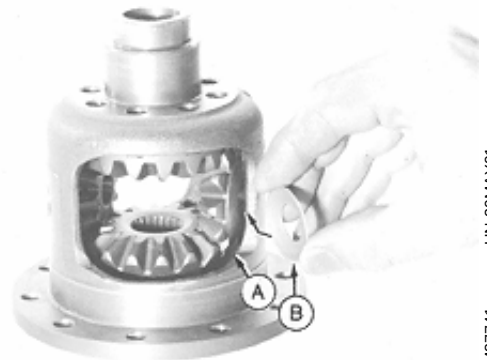
9. Install side gears (C and G) (16 teeth) with flat thrust washers (B) inside housing.

- A—Pinion Shaft
- B—Flat Thrust Washer
- C—Right Side Gear
- D—Pinion Gears
- E—Bevel Thrust Washer
- F—Differential Carrier
- G—Left Side Gear



MX,HU,5010,43 -19-16OCT91

10. Install pinion gears (A) (10 teeth) between side gears and slide bevel thrust washers (B) between pinion gears (A) and differential housing.

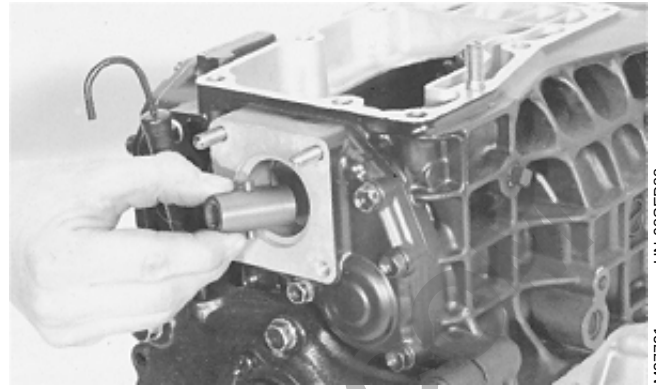


MX,HU,5010,44 -19-16OCT91

INSTALL OIL SUPPLY SYSTEM

1. Install pump drive coupling. The coupling fits in either direction.

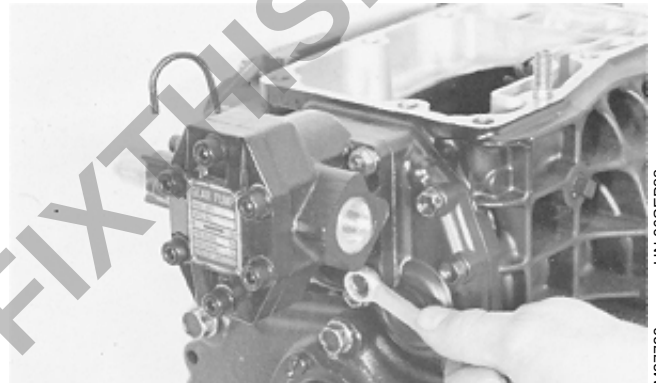
Rear View



MX,HU,5010,144 -19-16OCT91

M37721 -UN-08SEP88

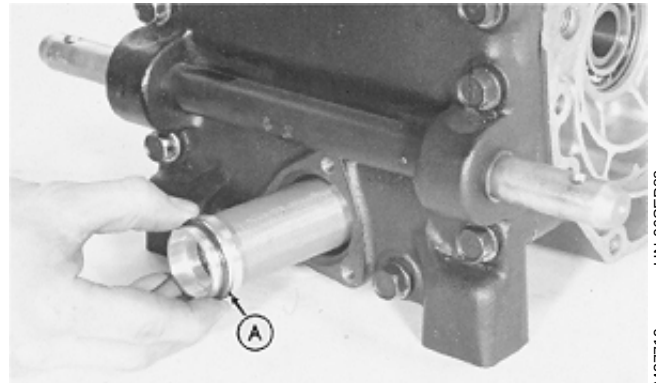
2. Install main hydraulic pump. Use two nuts and two cap screws to attach pump, tighten them to 26 N·m (19 lb-ft).



MX,HU,5010,145 -19-16OCT91

M37720 -UN-06SEP88

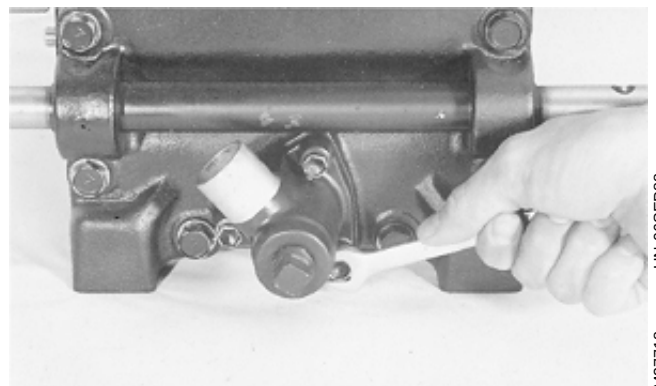
3. Install new O-ring (A) on end of new or cleaned oil supply filter screen and coat with oil before installing filter into case.



MX,HU,5010,146 -19-16OCT91

M37719 -UN-06SEP88

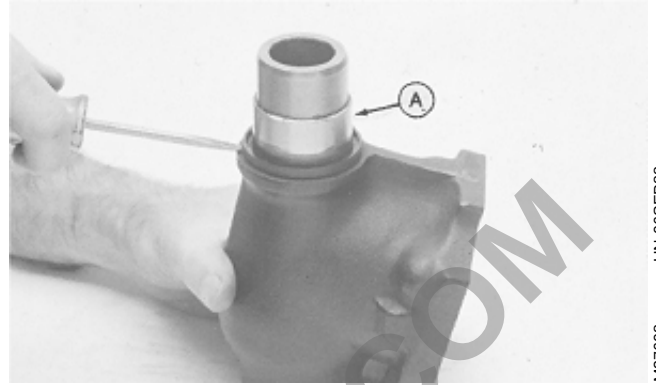
4. Install filter housing with three cap screws. Tighten cap screws to 26 N·m (19 lb-ft).



MX,HU,5010,147 -19-16OCT91

M37718 -UN-06SEP88

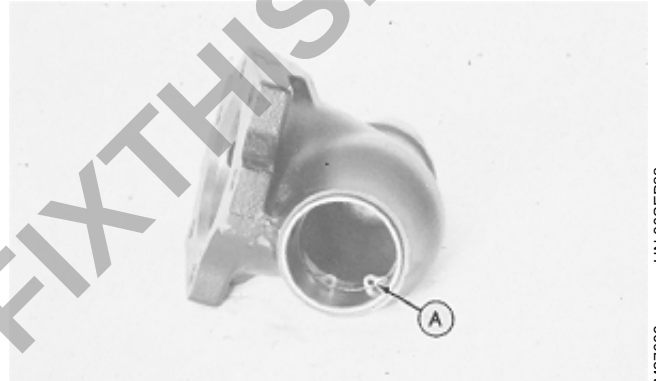
11. Inspect oil seal wear sleeve (A) for damage. Remove and replace, if required.



MX,HU,5020,34 -19-16OCT91

M37608 -UN-06SEP88

12. Inspect upper gear case snap ring (A) for damage. Remove and replace, if required.

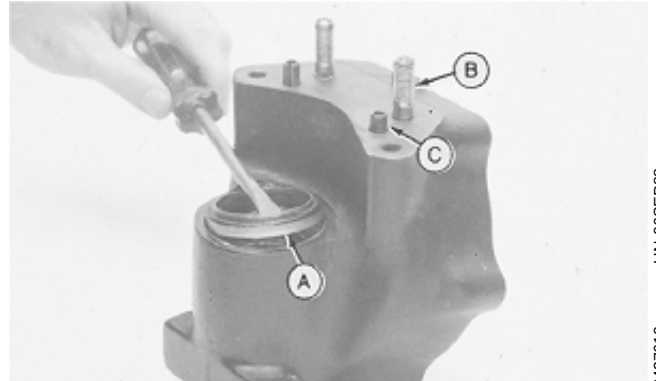


MX,HU,5020,35 -19-16OCT91

M37609 -UN-06SEP88

13. Remove sleeve (A) from lower gear case. Inspect and replace, if required.

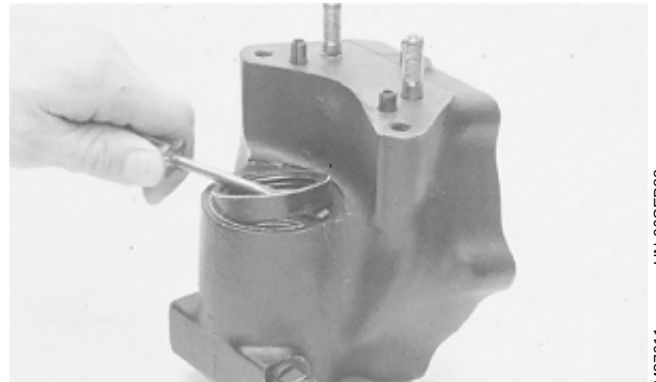
14. Inspect stud bolts (B) and spring pins (C) for damage. Remove and replace, if required.



MX,HU,5020,36 -19-16OCT91

M37610 -UN-06SEP88

15. Remove and discard oil seal.



MX,HU,5020,37 -19-16OCT91

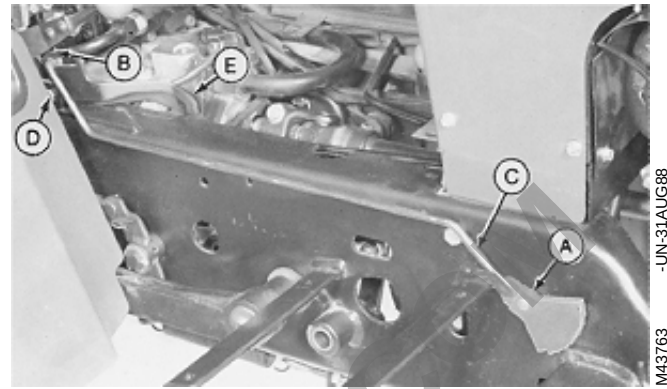
M37611 -UN-06SEP88

PREVIEW - YOUFIXTHIS.COM

25. Remove roll pin (A) and cotter pin (B) to remove link (C).

26. Remove bolt (D) to remove transmission lock lever (E).

- A—Roll Pin
- B—Cotter Pin
- C—Transmission Lock Link
- D—Bolt
- E—Transmission Lock Lever

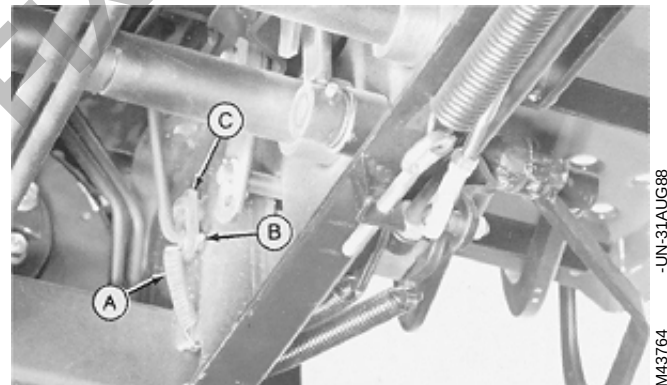


Right Side

MX,HU,6015,14 -19-16OCT91

27. Disconnect spring (A). Remove cotter pin (B) to remove brake lock rod.

28. Remove pivot (C).

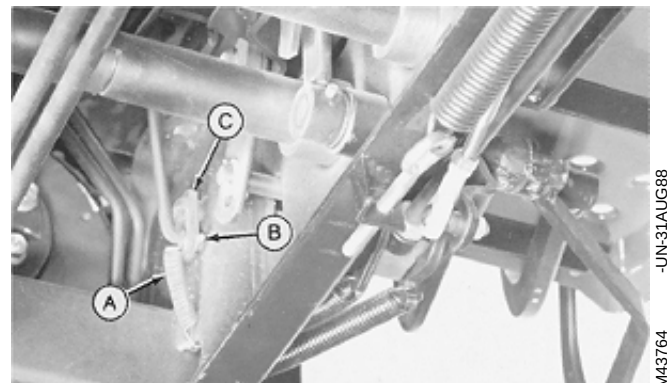


Bottom View-Inside Right Frame

MX,HU,6015,15 -19-16OCT91

INSTALL BRAKE LINKAGE

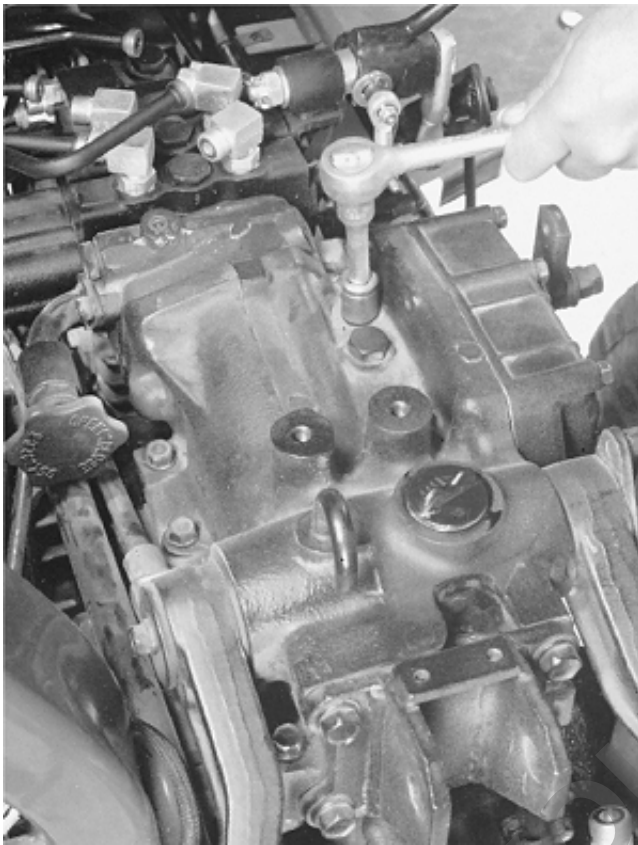
1. Install brake lock pivot (C).
2. Install brake lock rod. Fasten it with a washer and cotter pin (B).
3. Install spring (A).



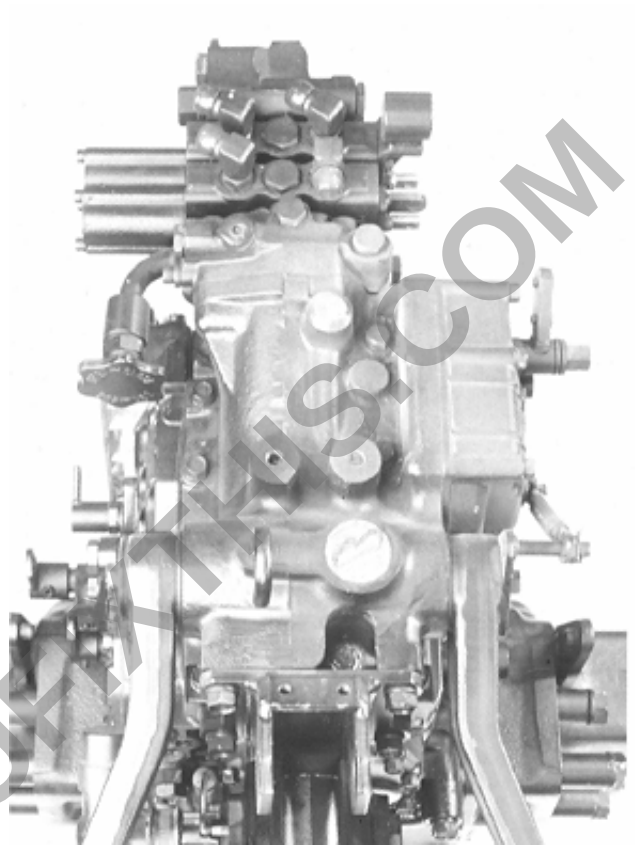
Bottom View-Inside Right Frame

MX,HU,6015,16 -19-16OCT91

INSTALL ROCKSHAFT HOUSING



Early Model Rockshaft Shown



Late Model Rockshaft Shown

1. Replace rockshaft-to-transaxle gasket.
2. Install rockshaft housing. Install and tighten eight cap screws and one nut with lock washers to 53 N·m (38 lb-ft).

MX,HU,7015,27 -19-16OCT91

3. Install gear pump to flow divider line (A).
4. Connect flow divider and selective control valve lines.



MX,HU,7015,28 -19-16OCT91

PREVIEW - YOUFIXTHIS.COM

80
20
4

BEFORE YOU START

Always begin with this group to identify a failure in the electrical system. The step-by-step procedures in this group provide you a quick check of the system. No tools are required to perform these checks. If a failure is detected, you will be referred to a more detailed check, adjustment, or test.

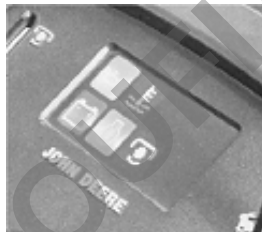
Always start with the first step and follow the sequence from left to right. Read each step completely before performing the check.

This procedure is designed as a quick check of the system. While performing the check, concentrate only on the check you are performing and disregard signals from unrelated components. If you are unfamiliar with the operation or location of system components, refer to Group 15 in this section.

MX,24005HU,1 -19-16OCT91

; INSTRUMENT PANEL LAMPS CHECK

Lock master/park brake pedal into PARK position.



M43925 -UN-31AUG88

Turn key switch ON.

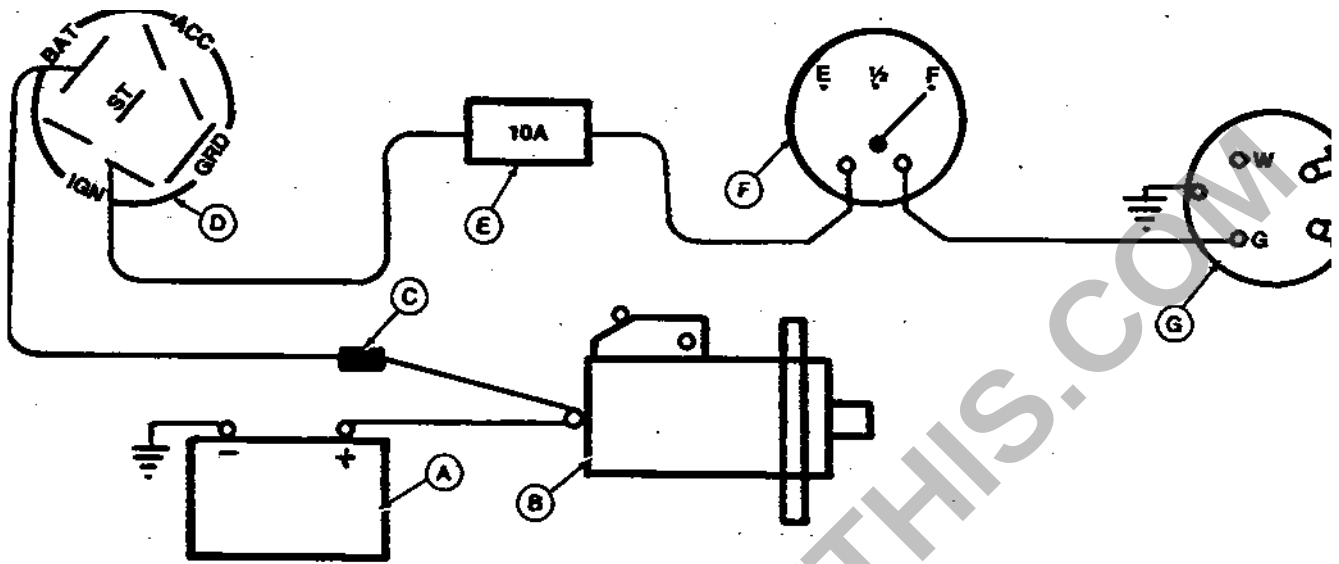
LOOK: Oil pressure, battery discharge, and engine preheat lamp ON.

NOTE: On 655 and 755/756 tractors less. preheat lamp will go OFF in 8 seconds or less or may not come ON if engine is hot or ambient temperature is above 4.4°C (40°F).
On later 855 and all 955, setting is 18°C (64°F) or less.
On early 855/856, preheat lamp will only come ON if ambient temperature is about 4.4°C (40°F) or less.

OK: GO TO '
NOT OK: GO TO ; ,
GROUP 10

MX,24005HU,2 -19-16OCT91

FUEL GAUGE CIRCUIT OPERATION



A—Battery
B—Starter

C—Fusible Link
D—Key Switch

E—Fuse
F—Fuel Gauge

G—Fuel Level Sensor

Fuel level is monitored by a dash mounted dial gauge. The dial gauge is electrically connected to an in-tank float type sending unit.

Current flows from the battery (A) to the starter (B) common terminal and to the key switch (D) "BAT" terminal. The starter to key switch connection contains a 16-gauge fusible link (C).

When the key switch is in the ON or START position current flows to the "IGN" terminal, the 10-amp fuse (E), the fuel gauge (F), and fuel level sensor (G).

The fuel level sensor consists of a ball float connected to a variable resistor. The ball float and resistor position varies with fuel level. Circuit resistance decreases as fuel level decreases.

The fuel gauge is calibrated to reflect changes in circuit resistance (fuel level) through dial movement. When the fuel level is low, the resistance is decreased to the point that dial reads EMPTY, time to refill the tank.

MX,24015HU,26 -19-16OCT91

ABOUT THIS GROUP

Always perform the system checkout procedure in Group 05 BEFORE making any tests or adjustments in this group. The step-by-step procedures in this group provide you with the detailed diagnostic information you will need to correct a malfunction. Basic diagnostic equipment is used.

It is assumed that you are familiar with the machine and its power train components.

Complete the following visual checks before doing any tests or adjustments:

- Oil level and condition.
- External leaks from lines and fittings.
- Loose linkage.

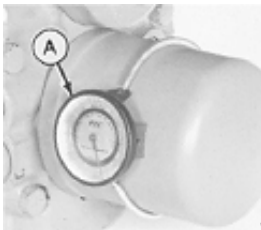
Engine rpm and oil temperature are critical in most hydraulic tests. Be sure to follow test specifications carefully.

Always start with the first step and follow the sequence from left to right. Read each step completely before performing the test.

Upon completing a test or adjustment, check to see whether the problem is corrected by performing the checkout procedure in Group 05.

MX,25010HU,1 -19-16OCT91

HYDRAULIC OIL WARM-UP PROCEDURE



M43859 -UN-31AUG88

Install JDG282 Temperature Gauge (A) on transmission oil filter.



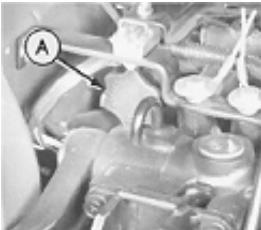
M43860 -UN-31AUG88

Put cardboard or paper around oil cooler to restrict air flow.



M43861 -UN-31AUG88

Lock master/park brake pedal into PARK position.
Run engine at FAST idle.
Move rockshaft control lever FORWARD to lower lift arms.

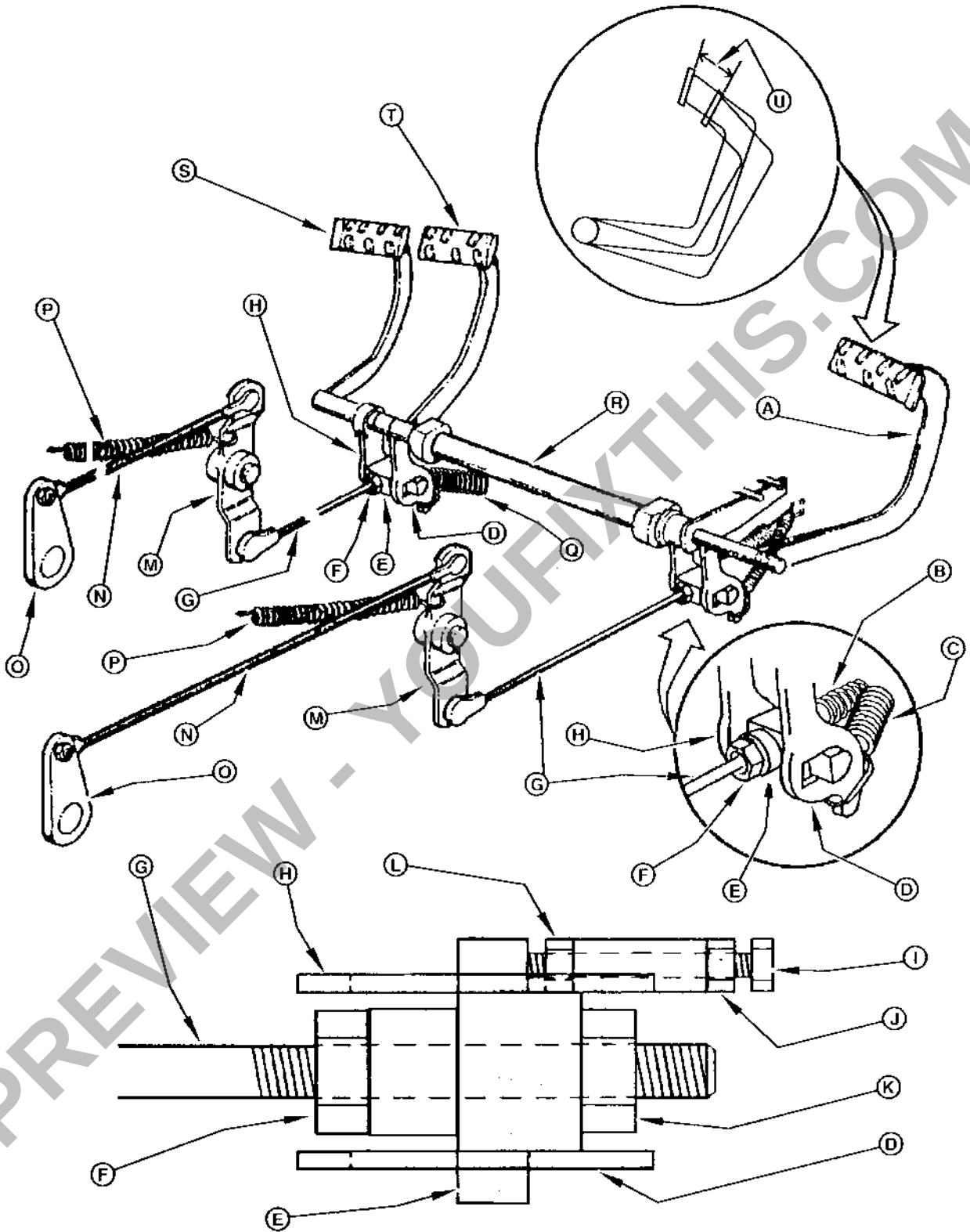


M43862 -UN-31AUG88

Turn stop valve (A) to CLOSED position.
Move rockshaft control lever REARWARD to raise lift arms.
Periodically cycle all hydraulic functions to distribute heated oil.

Heat oil to temperature specified in test.
After oil is heated, turn stop valve to OPEN position.
After test is completed and before tractor is returned to customer, make sure you remove cardboard or paper from around oil cooler.

MX,25010HU,2 -19-16OCT91



PREVIEW ONLY

You're viewing 25 of 570 pages

The full manual includes:

- All 570 pages, complete
 - Searchable PDF (find any keyword)
 - No watermarks
 - Instant download
 - Print-ready quality
-

GET FULL MANUAL NOW

John Deere 655, 755, 855, 955, 756, 856 Technical Manual



Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual