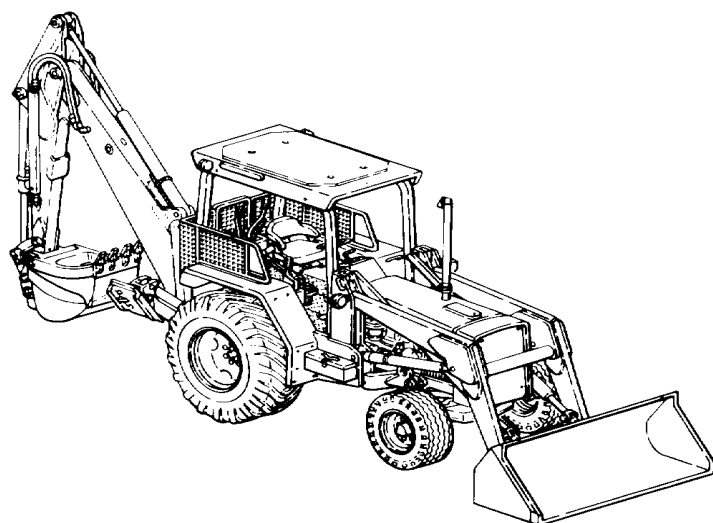


This copy is a reprint which includes current pages from Change 1.

**TECHNICAL MANUAL
ORGANIZATIONAL MAINTENANCE MANUAL
VOLUME 2 OF 3**



**MAINTENANCE
INSTRUCTIONS -
CONTINUED
PAGE 2-435**

**INDEX
PAGE Index-1**

**TRACTOR, WHEELED,
DED, LOADER BACKHOE:
WITH HYDRAULIC IMPACT TOOL AND
WITH HYDRAULIC EARTH AUGER ATTACHMENT
JOHN DEERE MODEL JD410 (CCE)
WITH BUCKET, IMPACTOR,
AND EARTH DRILL
(NSN 2420-00-567-0135)**

1 SEPTEMBER 1987

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED

HEADQUARTERS, DEPARTMENT OF THE ARMY

TECHNICAL MANUAL
NO. 5-2420-222-20-2

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC 1 September 1987

ORGANIZATIONAL MAINTENANCE MANUAL

TRACTOR, WHEELED,
DED, LOADER BACKHOE:
WITH HYDRAULIC IMPACT TOOL AND
WITH HYDRAULIC EARTH AUGER ATTACHMENT
JOHN DEERE MODEL JD410 (CCE)
WITH BUCKET, IMPACTOR,
AND EARTH DRILL
(NSN 2420-00-567-0135)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be sent to you.

TABLE OF CONTENTS

VOLUME 2 OF 3

	Page
CHAPTER 2 MAINTENANCE INSTRUCTIONS - CONTINUED	2-435
Section XII Electrical System.....	2-435
Section XIII Transmission	2-811
Section XIV Brakes	2-855
Section XV Wheels and Tracks	2-899
Section XVI Steering	2-927
Section XVII Frame, Towing Attachments, Drawbars, and Articulation Systems	2-993
Section XVIII Body, Cab, Hood, and Hull.....	2-997
Section XIX Body, Chassis, and Hull Accessory Items.....	2-1179
INDEX	Index-1

*This manual supersedes Organizational portion of TM 5-2420-222-14&P1 and TM 5-2420-222-14&P2 dated October 1982, including all changes.

Approved for public release; distribution is unlimited.

Section XII. ELECTRICAL SYSTEM

Page	Page
Ac Generator 2-436	Horn Wiring Harness (Serial Numbers 235786 thru 235999 Only) 2-732
Ac Generator Mounting Brackets 2-444	Ignition Lock Switch and Key 2-565
Ac Generator Pulley 2-448	Indicator Lights 2-550
Batteries 2-692	Light Switch 2-589
Battery Connector Cable 2-704	Main and Front Light Wiring Harness 2-774
Battery Ground Cable 2-696	Parking Brake Horn Relay (Serial Numbers 319995 thru 342573 Only) 2-489
Battery Starter Cable 2-710	Parking Brake Horn-to-Relay Lead (Serial Numbers 319995 thru 342573 Only) 2-505
Battery Tray 2-719	Parking Brake Warning Light (Serial Numbers 319995 thru 342573 Only) 2-489
Brake Light Pressure Switches 2-476	Parking Brake Warning Light Ground Wire (Serial Numbers 319995 thru 342573 Only) 2-500
Cigar Lighter 2-619	Parking Brake Warning Switch (Serial Numbers 319995 thru 342573 Only) 2-482
Cigar Lighter Ground Wire Assembly (Serial Numbers 235786 thru 235999 Only) 2-532	Parking Brake Wiring Harness (Serial Numbers 319995 thru 342573 Only) 2-494
Cigar Lighter Ground Wire Assembly (Serial Numbers 319995 thru 342573 Only) 2-536	Plexiglass Dash Cover 2-576
Cigar Lighter Lead Wire Assembly (Serial Numbers 235786 thru 235999 Only) 2-528	Rear Light Wiring Harnesses 2-738
Circuit Breakers 2-516	Reverse Warning Alarm 2-682
Combination Tail and Floodlights 2-638	Reverse Warning Alarm Ground Wire Assembly 2-688
Combination Tail and Stoplight Leads (Serial Numbers 31995 thru 342573 Only) 2-762	Reverse Warning Alarm Sensitive Switch and Fitting 2-677
Combination Tail and Stoplight Plug and Wire Assemblies 2-746	Starter 2-460
Combination Tail and Stoplights 2-633	Starter Neutral Safety Switch 2-471
Cowl Wiring Harness 2-559	Starter Switch 2-571
Dash 2-579	Stoplight Wiring Harness 2-752
Dash Light 2-554	Time Total Meter and Lead 2-510
Electric Horn and Bracket 2-668	Turn Signal Switch 2-594
Electrical System Diagram (Schematic) (Serial Numbers 235786 thru 235999 Only) 2-807	Turn Signal Switch In-Line Fuse 2-602
Electrical System Diagram (Schematic) Serial Numbers 319995 thru 342573 Only) 2-809	Voltage Regulator 2-452
Engine Oil Pressure Switch 2-468	Warning Alarm Wiring Harness 2-724
Engine Starting Aid Solenoid Lead 2-609	Warning Light Flasher and Bracket 2-657
Engine Starting Aid Solenoid Switch 2-604	Warning Light Leads 2-766
ENGINE WATER TEMP. Indicator 2-545	Warning Lights 2-626
Front Lights 2-648	
Fuel Level Gage 2-539	
Fuel Gage Sender 2-662	
Horn Switch 2-672	

AC GENERATOR

This task covers:

- | | |
|-----------------------------|--|
| a. Removal (page 2-436) | d. Inspection/Replacement (page 2-440) |
| b. Disassembly (page 2-439) | e. Assembly (page 2-441) |
| c. Cleaning (page 2-439) | f. Installation (page 2-441) |
-

INITIAL SETUP:

Tools

Handle, ratchet, 3/8-inch drive
Screwdriver, flat-tip, 3/16-inch
Socket, 3/8-inch drive, 1/2-inch
Socket, 3/8-inch drive, 9/16-inch
Wrench, open-end, 7/16-inch
(two required)
Wrench, box, 9/16-inch

Materials/Parts

Lockwasher, ac generator adjusting
strap screw
Lockwasher, ac generator plate
terminal nut
Lockwasher, ac generator mounting
screw nut

Materials/Parts - Continued

Rags, wiping (item 21, Appendix C)
Solvent, drycleaning (item 28, Appendix C)
Tags, marking (item 30, Appendix C)

Personnel Required

One

Equipment Condition

1. Battery ground cable disconnected (page 2-696)
2. Hood removed (page 1025)

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

NOTE

Loader backhoes have two configurations of ac generators. Both are maintained the same way. Ac generator for loader backhoes with Serial Numbers 319995 thru 342573 shown.

REMOVAL

- | | | |
|----------------------------------|--|--|
| 1. Connector (1) | Connector (2) | <ol style="list-style-type: none"> a. Tag (page 2-137). b. Using 3/16-inch flat-tip screwdriver, lift up lock tab. c. Unplug. |
| 2. Terminal (3) and terminal (4) | Nut (5), lockwashers (6), and insulator washer (7) | <ol style="list-style-type: none"> a. Using two 7/16-inch open-end wrenches, unscrew and take off. b. Get rid of lockwasher (6). |

AC GENERATOR - CONTINUED

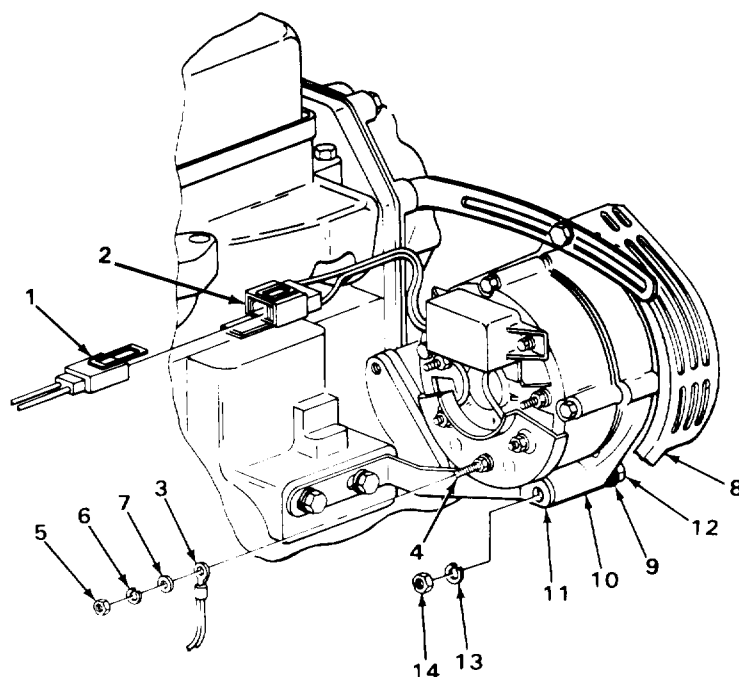
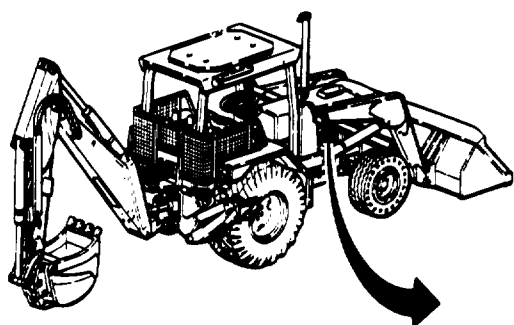
LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

- | | | | |
|----|--------------|--------------|--------------------------------------|
| 3. | Terminal (4) | Terminal (3) | a. Tag (page 2-137).
b. Take off. |
|----|--------------|--------------|--------------------------------------|

NOTE

Some loader backhoes have ac generator fan and belt guard, some do not.

- | | | | |
|----|--|--|---|
| 4. | Belt guard (8) if present, engine accessory bracket (9), ac generator (10) and double angle bracket (11) | Screw (12), lock-washer (13), and nut (14) | Using 9/16-inch box wrench, 9/16-inch, 3/8-inch drive socket, and ratchet handle, loosen. |
|----|--|--|---|



TA242923

AC GENERATOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
5. Ac generator adjusting strap (1), belt guard (2), if present, and ac generator (3)	Screw (4), lockwasher (5), and washer (6)	a. Using 1/2-inch, 3/8-inch drive socket and ratchet handle, unscrew and take out. b. Get rid of lockwasher (5).
6. Ac generator adjusting strap (1) and water pump (7)	Screw (8)	Using 9/16-inch, 3/8-inch drive socket and ratchet handle, loosen.
7. Ac generator (3) and water pump (7)	Ac generator adjusting strap (1)	Push up out of the way.
8. Engine accessory bracket (9) and double angle bracket (10)	Ac generator (3)	Push toward engine.
9. Ac generator pulley (11)	V-belt (12)	Take off.
10. Belt guard (2) if present, engine accessory bracket (9), ac generator (3), and double angle bracket (10)	Screw (13), nut (14), and lockwasher (15)	a. Unscrew and take out. b. Get rid of lockwasher (15).
11. Ac generator (3) and engine accessory bracket (9)	Belt guard (2)	If present, take off.
12. Engine accessory bracket (9) and double angle bracket (10)	Ac generator (3)	Take off.

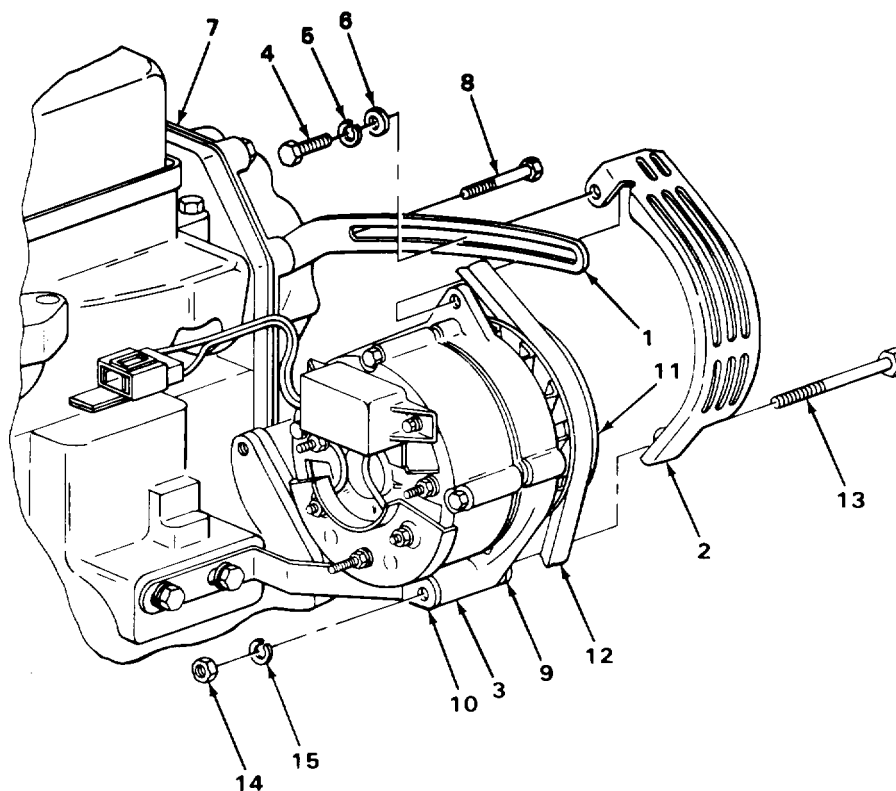
AC GENERATOR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY			
13. Ac generator	Voltage regulator	Remove (page 2-452).	
14.	Ac generator pulley	Remove (page 2-448).	

CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-137).



TA242924

AC GENERATOR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

CLEANING - CONTINUED

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective goggles and gloves and use only in a well ventilated area. Avoid contact with skin, eyes, and clothes and don't breathe vapors. Do not use near open flame or excessive heat. The flashpoint is 1000F to 138°F (380 to 590C). If you become dizzy while using cleaning solvent, get fresh air immediately and get medical aid. If contact with eyes is made, wash your eyes with water and get medical aid immediately.

- | | | |
|-----|-----------------------|---|
| 15. | Ac generator (1) | <ul style="list-style-type: none"> a. Using clean rag dampened in dry-cleaning solvent, wipe outside clean. b. Using clean, dry rags, wipe dry. |
| 16. | All other metal parts | <ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Using clean, dry rags, wipe dry. |

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-VI-1).

Replace defective parts as needed.

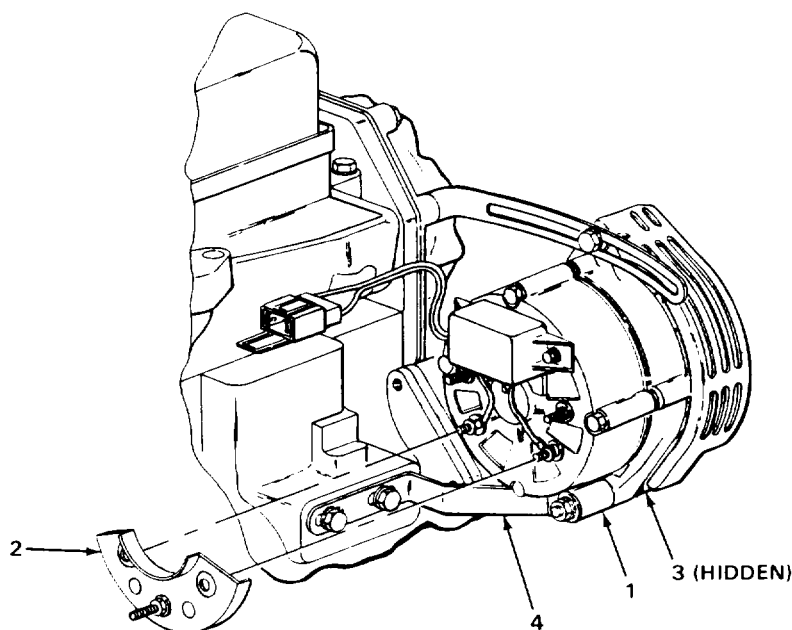
- | | | |
|-----|---------------------------------|--|
| 17. | Ac generator (1) | <ul style="list-style-type: none"> a. Look for cracks and breaks in housing. b. Look for broken terminals. c. Turn rotor shaft. <p>Rotor should turn freely with some drag from brushes, but no binding.</p> |
| 18. | Ac generator plate assembly (2) | <ul style="list-style-type: none"> a. Look for cracks, breaks, and abnormal bends. b. Look for corroded terminal. c. Look for burned diode. |
| 19. | All other metal parts | Look for cracks, breaks, and abnormal bends. |
| 20. | All threaded parts | Look for damaged threads. |

AC GENERATOR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY			
21. Ac generator	Ac generator pulley	Install (page 2-448).	
22.	Voltage regulator	Install (page 2-452).	
INSTALLATION			
23. Engine accessory bracket (3) and double angle bracket (4)	Ac generator (1)	Put in place and support.	

NOTE

Some loader backhoes may not have belt guard.



TA242925

AC GENERATOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
24. Ac generator (1) and engine accessory bracket (2)	Belt guard (3)	If present, put in place and support.
25. Belt guard (3) if present, engine accessory bracket (2), ac generator (1), and double angle bracket (4)	Screw (5), nut (6) and new lock-washer (7)	Screw together until snug.
26. Ac generator pulley (8)	V-belt (9)	Put on.
27. Water pump (10) and ac generator (1)	Ac generator adjusting strap (11)	Move down into place.
28. Ac generator adjusting strap (11), belt guard (3) if present, and ac generator (1)	Screw (12), new lockwasher (13), and washer (14)	Screw in until snug.
29. Terminal (15)	Terminal (16)	a. Put on. b. Take off tags.
30. Terminal (15) and terminal (16)	Insulator washer (17), new lockwasher (18), and nut (19)	Screw on and tighten, using two 7/16-inch open-end wrenches.
31. Connector(20)	Connector (21)	a. Plug in. b. Take off tags.