NEW HOLLAND



TC31DA
TC34DA
Tractors

REPAIR MANUAL

NEW HOLLAND AGRICULTURE

SERVICE

87531021

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TC31DA, TC34DA
REPAIR MANUAL
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The following pages are the collation of the contents pages from each section and chapter of the TC31DA, TC34DA Repair manual. Complete Repair part # 87531021.

The sections used through out all New Holland product Repair manuals may not be used for each product. Each Repair manual will be made up of one or several books. Each book will be labeled as to which sections are in the overall Repair manual and which sections are in each book.

The sections listed above are the sections utilized for the TC31DA, TC34DA Tractors.

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87531026 3/06

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SECTION 00 - GENERAL INFORMATION

BOOK 1 - 87531022

Chapter 1 - General Information

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SECTION 10 - ENGINE

BOOK 1 - 87531022

Chapter 1 - Engine Systems

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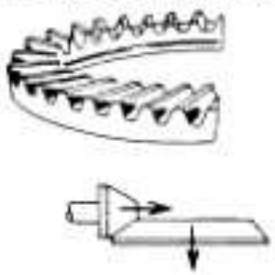
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SPECIFICATIONS

DIFFERENTIAL	
Differential Gear Thrust Washer	
Thickness	1.2 mm (0.047 in.)
Allowable Limit	0.9 mm (0.035 in.)
Differential Drive Pinion to Ring Gear Backlash	
Normal	0.1 - 0.3 mm (0.004 - 0.012 in.)
Allowable Limit	0.5 mm (0.02 in.)

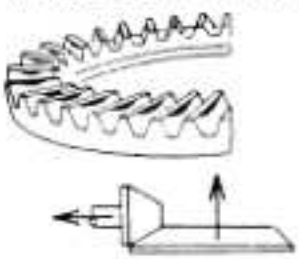
RING GEAR AND PINION GEAR PATTERN SPECIFICATION AND ADJUSTMENT

HEEL CONTACT:

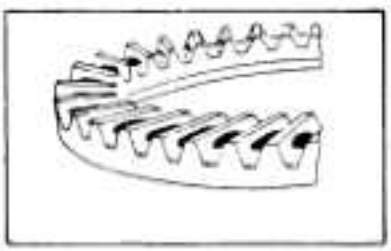


Select the shims so that the drive pinion is out nearer to the ring gear.

FACE CONTACT:

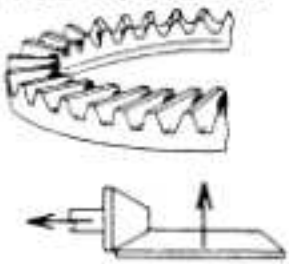


Select the shims so that the ring gear is put nearer to the drive pinion.



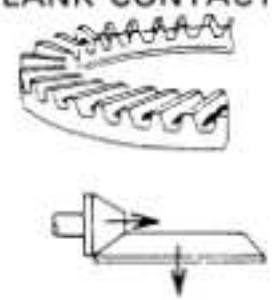
Correct pinion gear to ring gear tooth contact.

TOE CONTACT:



Select the shims so that the drive pinion is put farther from the ring gear.

FLANK CONTACT:



Select the shims so that the ring gear is put farther from the drive pinion.

1

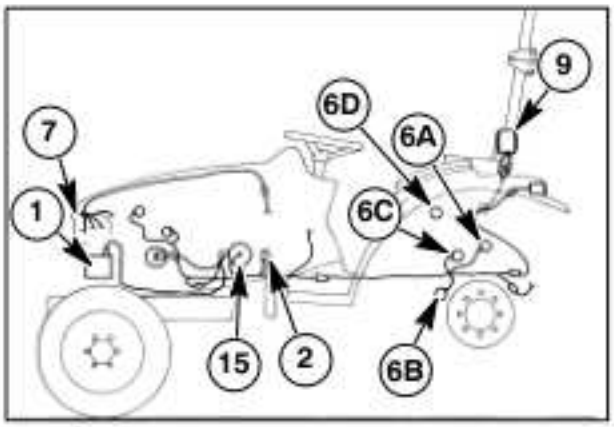
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DESCRIPTION OF ELECTRICAL SYSTEM

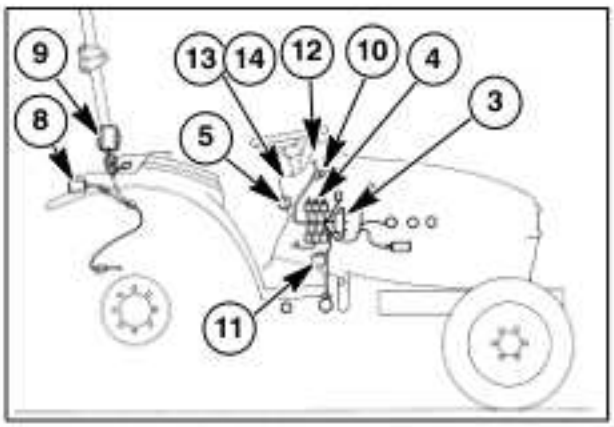
The electrical system is a 12-volt negative (-) ground system consisting of four wiring harnesses and an optional hydrostatic transmission speed control.

COMPONENT LOCATION AND FUNCTION

1. **Battery**—located under the hood, in front of the radiator.
2. **Main Fuse** (40 amp)—located on the left side of the engine compartment fire wall, or starter wiring harness; controls current flow for the entire tractor.
3. **Fuse Block**—located on the right side of the engine compartment fire wall; controls current flow for individual circuits.
4. **Relay-Diode Panels**—located under the instrument panel on the right and left rear side panels.
5. **Ignition Switch**—located on the right side of the operator's console; controls current flow to the electrical system.
6. **Safety Start Switches**—range gear (A), rear PTO (B), and mid PTO (C); located under the left fender; seat safety switch (D), control to starting and safe operation circuits.
7. **Headlights**—located on the front grill; illuminate the front of the tractor.
8. **Taillights**—located on both sides of the roll bar illuminate the rear of the tractor.
9. **Hazard Flashing Lights**—located on both sides of the roll bar; these amber-colored lights provide warning during transportation and emergency.
10. **Turn Signal/Flasher Control Module**—located on the right side of dash, under instrument panel.
11. **Cruise Control Relay**—located under the instrument panel on the right rear side panel.
12. **Instrument Panel**—located in the center of the dash; monitors tractor functions.
13. **Light Switch**—located on the right side of the dash; controls current to front and rear lights.
14. **Hazard Switch**—On left side of instrument panel; controls current flow to hazard flasher lights.
15. **Starter**—located to the left side of the engine; rotates the engine for starting.



1



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TROUBLESHOOTING GLOW PLUG CIRCUIT		
CONDITION	**POSSIBLE CAUSE**	**REMEDY**
Inoperative glow plugs	Blown Main Fuse	Check fuse and replace as necessary
	Malfunctioning Key Switch	Check Switch and Replace as necessary
	Poor Circuit Connections	Check Switch connections and circuit and repair as necessary
	Malfunctioning Glow Plugs	Test Glow Plugs and replace as necessary
	Glow Plug Power Relay (Relay #3)	Test relay and replace as necessary
Inoperative glow plug indicator light	Blown Bulb	Inspect Bulb and Replace as necessary
	Blown Fuse #1 (7.5-amp)	Inspect fuse and replace as necessary
	Defective Glow Plug Lamp Relay (Relay #6)	Test relay and replace as necessary
	Glow Plug Power Relay (Relay #3)	Test relay and replace as necessary
	Glow Plug Timer Relay (Relay #7)	Test relay and replace as necessary
	Damaged Wire or poor Ground	Inspect wiring and ground locations. Repair as necessary

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