SERVICE MANUAL

GRADALL®

534D-9
534D-10

9134-4004

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0544001 thru 0744407
& 0160000112 thru 0160000446

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& 0160000125 thru 0160000446

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TABLE OF CONTENTS

IMPORTANT SAFETY NOTICE	inside front cover
TABLE OF CONTENTS	
INTRODUCTION	
General	
Operator Qualifications	
Orientation	
Related Manuals & Decals	
Serial Number Location	
NOMENCLATURE	
SAFETY HIGHLIGHTS	1.0
DECALS	2.0
Decals Inside Cab	
Decals Outside Cab	
OPERATORS CAB	3.0
Cab	
Control & Instrument Identification	
CHECKS & SERVICES BEFORE STARTING ENGINE	4.0
WARM-UP & OPERATIONAL CHECKS	5.0
ENGINE OPERATION	6.0
Starting the Engine	
Cold-Weather Starting Aids	
Battery-Boosted Starting	
Normal Engine Operation	
Stopping the Engine	
John Deere Engine Shut-Down Protection Feature	
BRAKE SYSTEM	7.0
General	
Inching Travel	
Service Brakes	
Parking Brakes	
PARKING THE HANDLER	8.0
STEERING SYSTEM	9.0
DRIVE TRAIN	10.0
LEVELING THE HANDLER	11.0
OPERATING PROCEDURE & TECHNIQUES	12.0
Hydraulic Controls	
Rated Capacity Chart	
ATTACHMENTS	13.0
Approved Attachments	
Non-Approved Attachments	
Carriage/Fork Capacities	
Other Attachment Capacities	
Attachment Installation	
Attachment Operation	
OBTAINING HYDRAULIC OIL SAMPLE FOR ANALYSIS	14.0
LOADING & SECURING FOR TRANSPORT	15.0
MOVING HANDLER IN EMERGENCY	16.0
Moving Short Distances	
Moving Longer Distances	
To Activate Tow Bypass	
To Release Parking Brake	
To Restore Parking Brake	
MAINTENANCE SECTION	17.0
Nomenclature	
Lubrication and Maintenance	
Lubrication Chart	
Torque Chart	
Boom	
Stabilizer	
INSPECTION AND MAINTENANCE LOG	18.0
HAND SIGNALS	inside back cover

MidWestTech | Gradall 534D-9, 534D-10 Telehandler Service Manual | Publication 91344004 Order the manual at mid-west-tech.com >

MERITOR™

Table of Contents

Section 1: Introduction

Description 1
Identification

Section 2: Removal and Disassembly

Remove Axle 2
Disassemble Ball and Ramp Brake
Disassemble Trumpet Assembly 3
Disassemble Planetary System and Axle Shaft 4
Disassemble Hydraulic Apply Wet Disc Brake 5
Disassemble Three Function Wet Disc Brake
Disassemble Main Housing 7
Disassemble Differential Case 8
Disassemble Pinion Bearing Cage 10

Section 3: Prepare Parts for Assembly

Clean Ground and Polished Parts 13
Clean Parts With Rough Finish
Clean Axle Assemblies
Dry Cleaned Parts
Prevent Corrosion
Inspect Parts
Inspect Tapered Roller Bearings 14
Inspect Hypoid Pinion and Ring Gear Sets 15
Inspect Main Differential Assembly
Inspect Axle Shafts
Inspect Main Housing 16
Inspect Yoke
Inspect Planetary System Parts
Inspect Brakes
Repair or Replace Parts
Repair Welding
Liquid Adhesive 17
Disassemble Locked Sets
Cleaning
Reassembly
Application
Apply Silicone Gasket Material 18
Duo-Cone Oil Seal: Mount and Install

Section 4: Assembly and Installation

Assemble Differential Case 23
Check Rotating Resistance of Differential Gears (Not Limited Slip) 26
Assemble Drive Pinion and Bearing Cage 27
Adjust Pinion Bearing Preload (Without Press) 28
Adjust Thickness of Pinion Bearing Cage Shim Pack (Depth of Pinion) 29
Install Pinion Bearing Cage Assembly on Main Housing 31
Install Differential Housing Assembly into Main Housing (With Shims) 32
Install Differential Housing Assembly into Main Housing (With Adjusting Ring 2 Sides) 33
Assemble Axle Shaft 34
Assemble Trumpet Assembly 35

MidWestTech | Gradall 534D-9, 534D-10 Telehandler Service Manual | Publication 91344004 Order the manual at mid-west-tech.com >

Table of Contents

Assemble Hydraulic Apply Brake Housing Assembly 38
Hydraulic Apply Brake Housing Functional Test
Assemble Three Function Brake Housing Assembly 39
Assemble Ball and Ramp Brakes, Brake Discs, Reaction Plate and Pins 42
Assemble Three Function Brake, Brake Discs, Reaction Plate and Pins 43
Install Housing Assembly into Main Housing
Assemble Three Function Brake Release Bolts and Sleeves 44
Assemble Ball and Ramp Brake Cylinder Assembly and Install on Main Housing

Section 5: Adjustments

Check Ring Gear Runout Specification: 0.008 in. (0.20 mm) 47
Adjust Pinion and Ring Gear Backlash Specification: 0.005 in-0.015 in (0.13 mm-0.38 mm)
Teeth Contact Patterns 48
Verification Procedure
Correct Contact Patterns 49
Incorrect Contact Patterns
High Contact Pattern
Deep Contact Pattern 50
Variations Along Length of Gear Teeth
Replace Lubricant 51

Section 6: Specifications

Oil Change Intervals and Specifications 52
Nut Lock Special Tool 53
Torque Charts
PROA 352/382 54
PRA 352 56
PROA 352 G2H/G2M 58

MidWestTech | Gradall 534D-9, 534D-10 Telehandler Service Manual | Publication 91344004 Order the manual at mid-west-tech.com >

Items needed to Use a Capacity Chart

There are five items you must know and/or have in order to properly use a Capacity Chart:

1. The weight of the load to be lifted
2. The angle of the boom
3. How much boom extension will be needed
4. The proper Capacity Chart
5. A Gradall-approved Attachment

Every Gradall attachment comes with its own Identification Plate. This Plate has the Attachment Serial Number, Part Number, Attachment Capacity and Attachment Weight stamped on it. Make sure that the Capacity Chart you are using matches the attachment exactly. This may be done by matching the attachment part number on the Capacity Chart to the part number stamped on the Identification Plate. The Machine Serial Number Plate is mounted inside the cab and lists all standard attachments that may be used with the machine by part number, at the time it was shipped from the factory. Be aware that a specific Capacity Chart must not only match the attachment, but also the machine model.

The boom angle can be determined by looking at the angle indicator mounted on the side of the boom. **(See figure 12-4)**

The boom extension can be determined by looking at the second boom section. As the second boom section slides out of the main boom, numbers are revealed starting with 1. Each number represents approximately 5 feet of total boom extension. **(See figure 12-4) It is important to remember that these numbers are designed to be read from the *operator's seat only!***

How to read a Capacity Chart

When reading the capacity chart you must check to be sure the correct model number is listed. **(See figure 12-5)** The next thing to look for is that the part number of your attachment is listed under the "Use With" section.
Identify and find the amount of boom extension required, along with the angle of the boom. Trace the boom extension arc down until it intersects with the appropriate boom angle. If the intersection of the boom extension arc and the boom angle line occur within a weight region, the value within that region is the maximum capacity for that particular lift. If the intersection occurs on a bold line separating capacity regions, the smaller of the two values must be used. The regions are clearly marked with heavier outlines as shown on page 12.3. If you do not have the correct capacity chart for your machine and/or attachment, contact your Distributor or Gradall to order one.

Example:
A contractor has purchased a 534D-10 with the 48" Slope Piler Carriage Attachment. **(See figure 12-5)** He knows his attachment may be used with this model since the attachment part number, 9108-5058, matches the attachment part number stamped on the machine Serial Number Plate. He also knows that the Capacity Chart is correct since it is clearly marked for use with a 534D-10 and that the attachment he is using is listed at the bottom by part number. He has determined the weight of the load to be lifted is 3000 lbs. and that he needs to place the load at a boom extension of 5 at a boom angle of 20°. By tracing the boom extension arc down to where the 20° line intersects it, the contractor can see that the maximum weight he can lift, with stabilizers down, is 4000 lbs. In this case, he may lift the load.

NOTE!

Some attachments may not be approved for use with certain machine models.

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Problema	Causa	Azione consigliata
Rottura denti pignone e corona	Carico d'urto dei componenti del differenziale	Controllare e/o sostituire altri componenti differenziale.
Scanalature dell'ingranaggio planetario consumate (gioco ecoessivo)	Uso intenso	Sostituire il gruppo ingranaggi differenziale. Sostituire il semiasse, se necessario.
Superfici della ralla di rasamento consumate o graffiate	1. Lubrificazione insufficiente 2. Lubrificazione scorretta 3. Lubrificante sporco	Sostituire tutte le ralle graffiate e quelle con uno spessore di 0,1 mm inferiore a quello delle ralle nuove. Usare il lubrificante corretto, riempire fino al giusto livello e sostituirlo agli intervalli raccomandati.
Diametro interno del cuscinetto a rulli conici del pignone consumato	1. Uso intenso 2. Gioco assiale del pignone eccessivo 3. Lubrificazione inadeguata 4. Lubrificante sporco	Sostituire il cuscinetto Controllare il gioco assiale del pignone Usare il lubrificante corretto, riempire fino al giusto livello e sostituirlo agli intervalli raccomandati.
Semiasse ritorto o rotto	Funzionamento intenso del veicolo, sovraccarico	Sostituire il semiasse
Semiasse spezzato presso la flangia ruota	1. Supporto della ruota allentato 2. Corpo trave piegato	Sostituire il semiasse Controllare la distorsione del corpo trave. Accertarsi che il sostegno della ruota non sia consumato o mal regolato.

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Cyclopac® Service Procedures

Proper air cleaner servicing results in maximum engine protection against the ravages of dust. Proper servicing can also save time and money by maximizing filter life and dust cleaning efficiency.

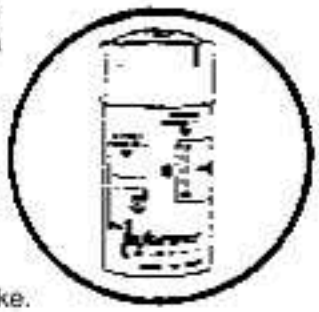
Two of the most common problems:

A) Over Servicing. New filter elements increase in dust cleaning efficiency as dust builds up on the media. Don't be fooled by filter appearance.... the filter should look dirty. By using proper filter measurement tools you will use the full life of the filter at maximum efficiency.

B) Improper Servicing. Your engine is vulnerable to abrasive dust contaminants during servicing. The most common cause of engine damage is careless servicing procedures. By following the steps shown, you can avoid unnecessary risk to the engine.

Measure Restriction

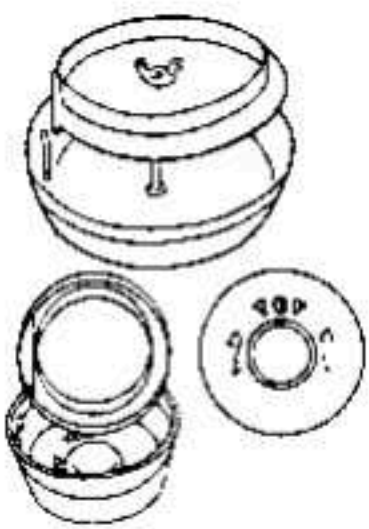
Measure the restriction of the air cleaner with a Donaldson restriction indicator, such as The Informer, a service gauge, or water manometer at the restriction tap provided in the air cleaner, the transfer pipe, or the blower intake.



One of two conditions will exist
(1) If the reading indicates the maximum restriction (per engine manufacturer's recommendations), change out the filter.
(2) If the reading shows below the maximum, the filter still has life left and should not be touched.

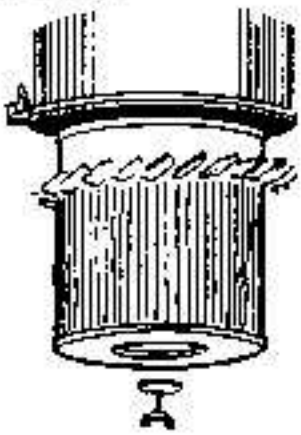
Empty the Dust Cup

Dust should not be allowed to build up closer than one inch from the baffle. On models equipped with a Donaldson Vacuator valve, dust cup service is cut to a minimum; all that is necessary is a quick check to see that the Vacuator valve is not inverted, damaged, or plugged.



Filter Servicing

When restriction indicates that filter servicing is required, loosen the wingnut and remove the primary filter. Before installing new filter, inspect the filter and gasket for shipping or storage damage. (See service tips on reverse side of this document.) Carefully install new element and wingnut.



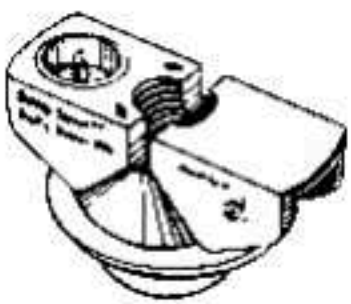
Always use authentic replacement Donaldson filters, which have been engineered to fit the air cleaner and engine intake system exactly.

Cover the Inlet

Don't leave the air inlet exposed! If the new filter won't be installed immediately, cover the opening to prevent stray contaminant from entering the induction system.

Safety Element Service

For Maximum engine protection and air cleaner service life, replace the safety filter **every third** primary filter change or cleaning, or as indicated by the Donaldson Safety Signal service indicator. Note that the safety element is not intended to be cleaned.



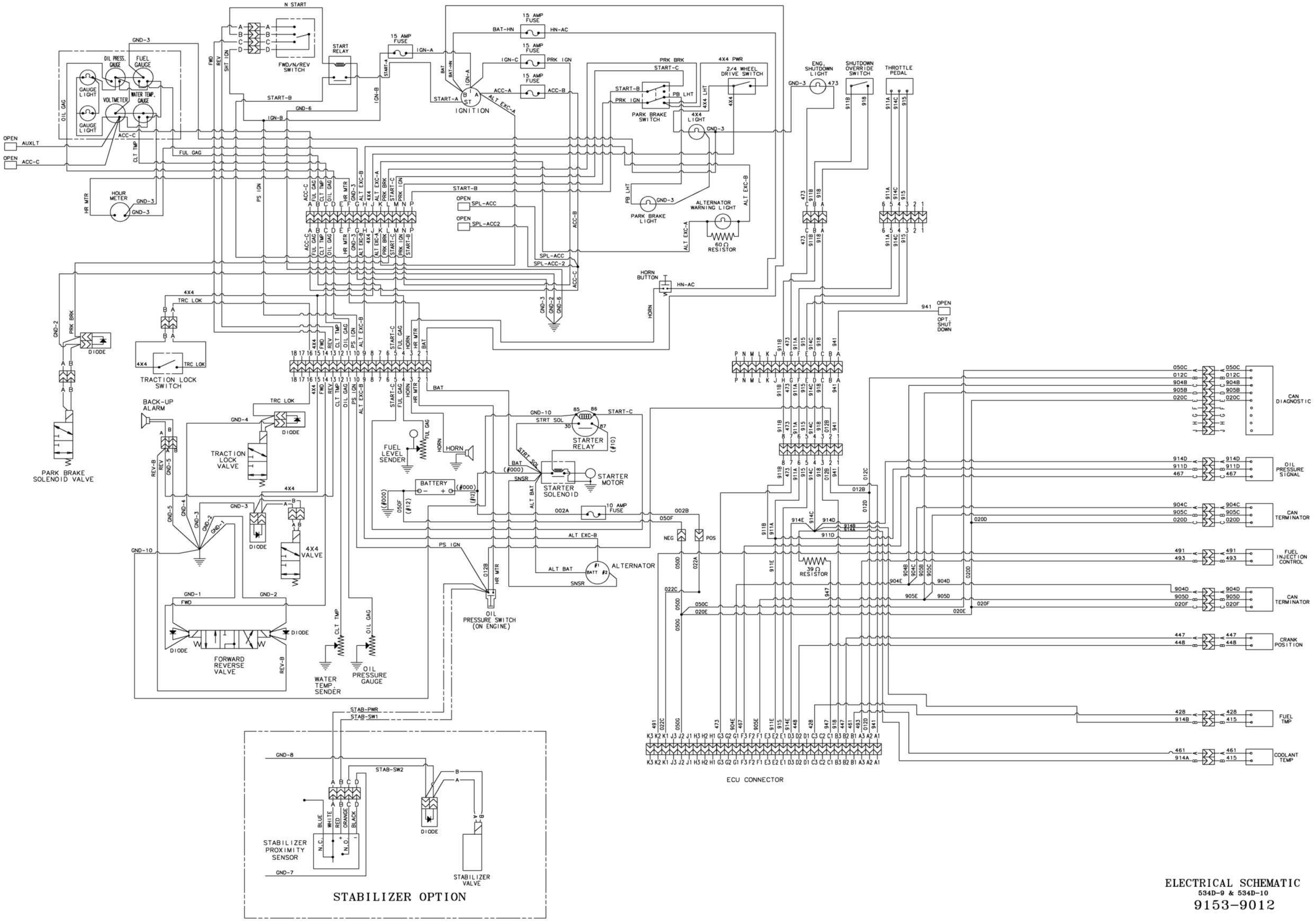
Reinstall the Dust Cup

Be sure the dust cup is sealed 360° around the air cleaner body. Reset the restriction indicator to green.

Check Connections

Ensure that all connections between the air cleaner and the engine are tight and leak-free.

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534D-9 & 534D-10
9153-9012

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