



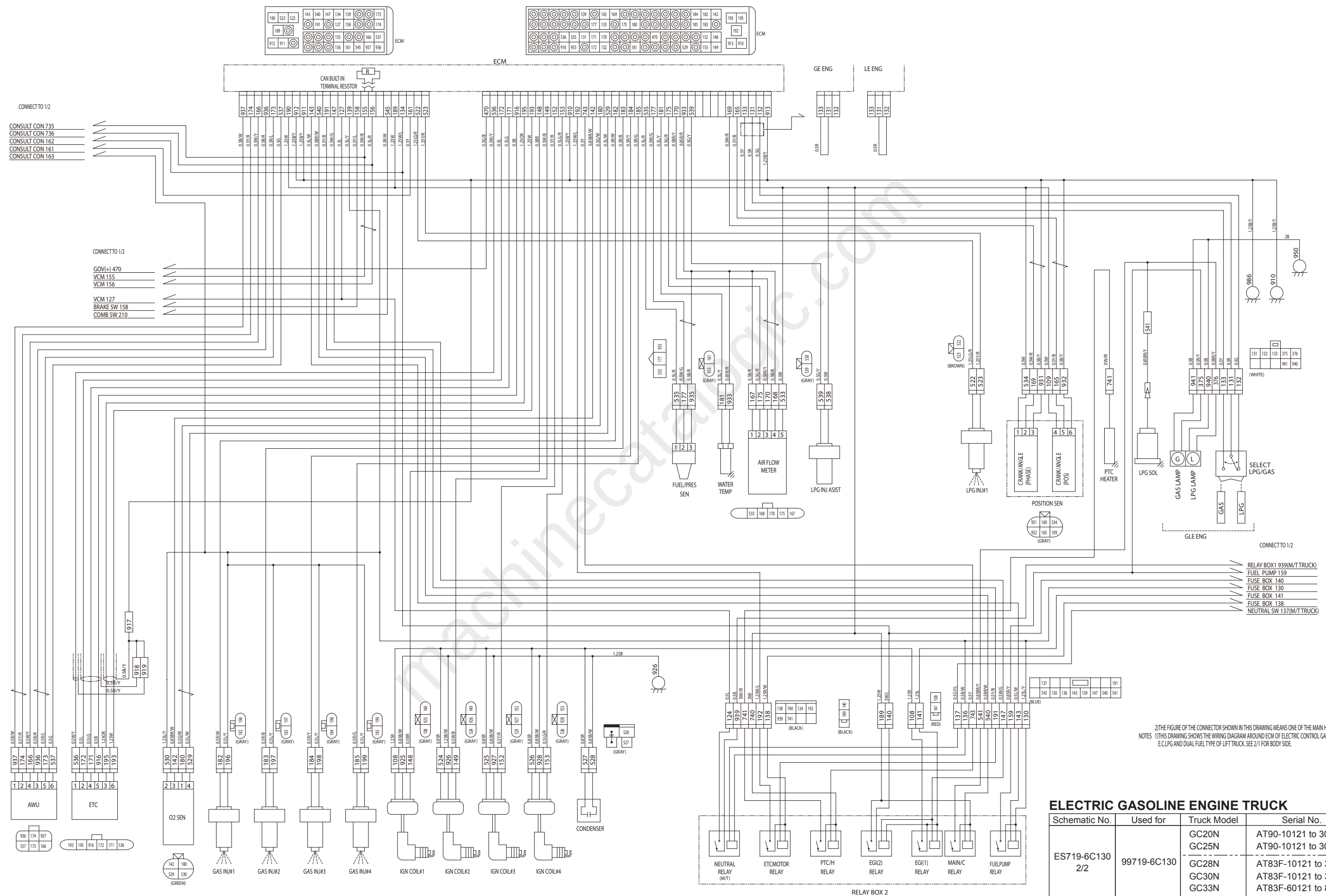
Service Manual

Chassis & Mast

MC

GC20N	AT90-10121 to 30120
GC25N	AT90-10121 to 30120
GC28N	AT83F-10121 to 30120
GC30N	AT83F-10121 to 30120
GC33N	AT83F-60121 to 80120

Electrical Schematic (2/2)



ELECTRIC GASOLINE ENGINE TRUCK

Schematic No.	Used for	Truck Model	Serial No.
ES719-6C130 2/2	99719-6C130	GC20N	AT90-10121 to 30120
		GC25N	AT90-10121 to 30120
		GC28N	AT83F-10121 to 30120
		GC30N	AT83F-10121 to 30120
		GC33N	AT83F-60121 to 80120

4.4 Assembly

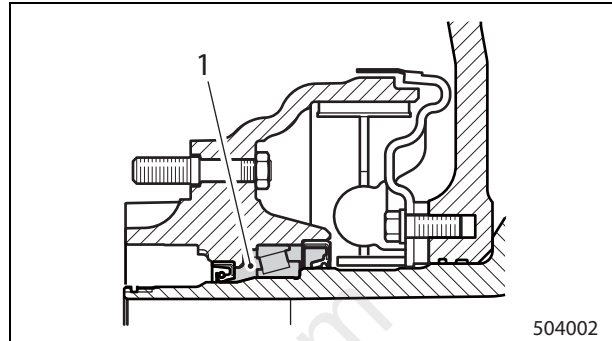
To assemble follow the disassembly sequence in reverse, paying attention to the following points.

Oil seals

Replace with new.

Front wheel hub

- (1) Fill grease (Autolex A or equivalent) in the front wheel hub as shown.
Stuff grease in the roller holder of the tapered roller bearing (inner) using the palm.
Apply grease to the lip groove of oil seal.

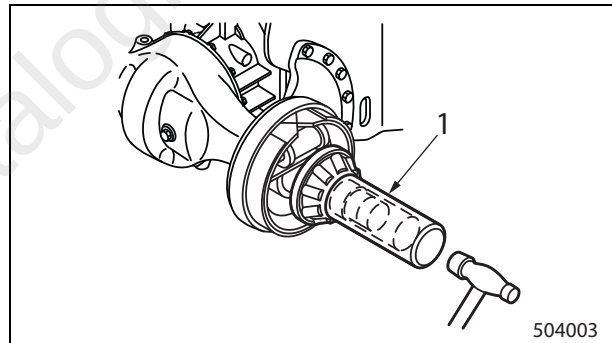


1. Grease

⚠ WARNING

Use care not to let grease enter the brake drums.

- (2) Using the installer (special tool), install the inner race and oil seal retainer of the wheel hub bearing.



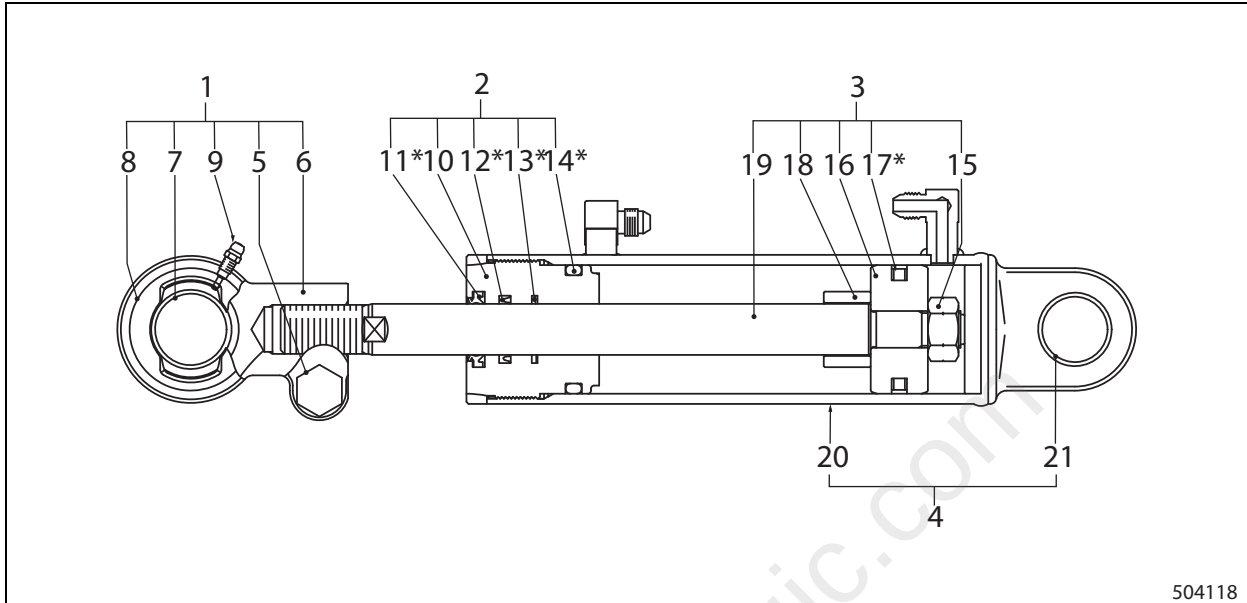
1. Installer

Special tool		
Installer	2, 3 ton classes	91468 - 00300

- (3) Apply sealant (ThreeBond #1184) to the flange surfaces of the axle shaft.

23. Disassembling Tilt Cylinder

23.1 Disassembly Sequence



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- | | |
|-------------------------------|---------------------------------|
| 1. Tilt socket sub-assembly | 12. Rod seal* |
| 2. Guide bushing sub-assembly | 13. Piston seal* |
| 3. Piston rod sub-assembly | 14. O-ring* |
| 4. Cylinder sub-assembly | 15. Nut |
| 5. Bolt, Nut | 16. Piston |
| 6. Tilt socket | 17. Buffering*, Energizer ring* |
| 7. Seal | 18. Spacer |
| 8. Bearing | 19. Rod |
| 9. Grease nipple | 20. Cylinder assembly |
| 10. Guide bushing | 21. Bushing |
| 11. Wiper* | |

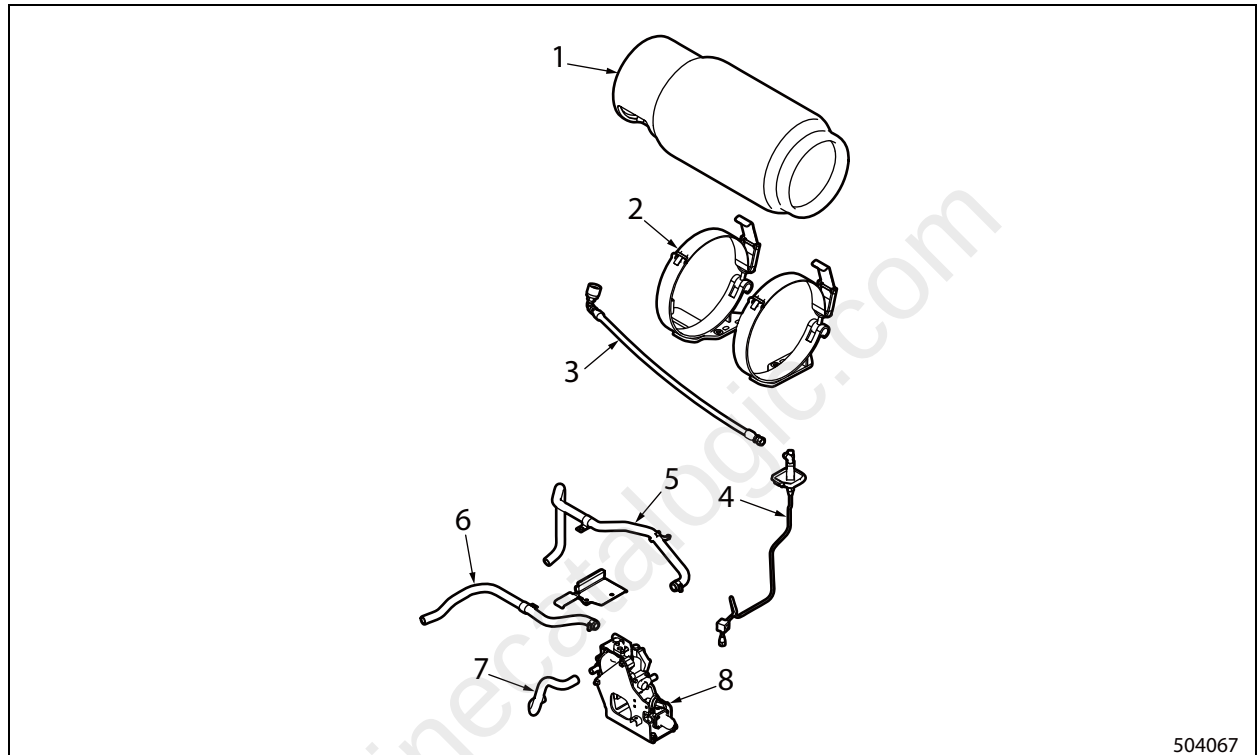
Note:

- (1) Before disassembly, make a record of the dimension from the holder edge to the socket edge when the rod is fully pushed in. The record will be helpful for assembly.
- (2) Do not disassemble the tilt socket bearing and cylinder tube bushing unless abnormality is found on inspection.
- (3) Do not disassemble the piston and nuts unless abnormality is found on inspection.

1.6 Preparation for Removing LPG System (Dual Fuel Gasoline and LPG Model)

- (1) Drain the fuel in the line by running the engine with the valve on LPG tank shut off.
- (2) Drain the coolant from engine by removing the drain plug.
- (3) Drain the coolant from the radiator by loosening the cock at the bottom of the radiator.

1.7 Removal Sequence of LPG System (Dual Fuel Gasoline and LPG Model)

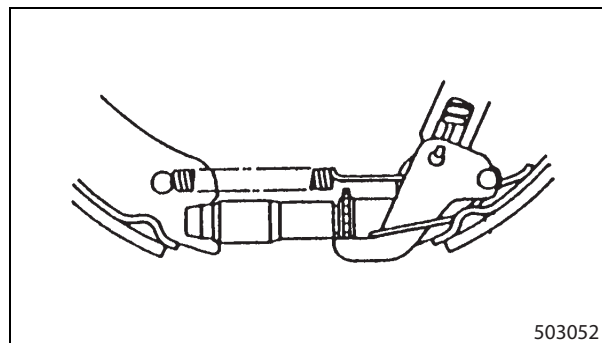


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- | | |
|------------------------------------|-----------------------|
| 1. LPG tank | 5. Water hose |
| 2. Tank bracket | 6. LPG hose |
| 3. LPG hose | 7. Water hose |
| 4. LPG pipe and Connector assembly | 8. Vaporizer assembly |

Installing automatic adjuster

- Clean the adjusting screw and associated parts, and apply grease to the threaded portions and the screw socket. Ensure that the screw turns easily when rotated by hand.
If the screw is hard to turn, replace it with a new one.
- Identification of adjusting screws and levers

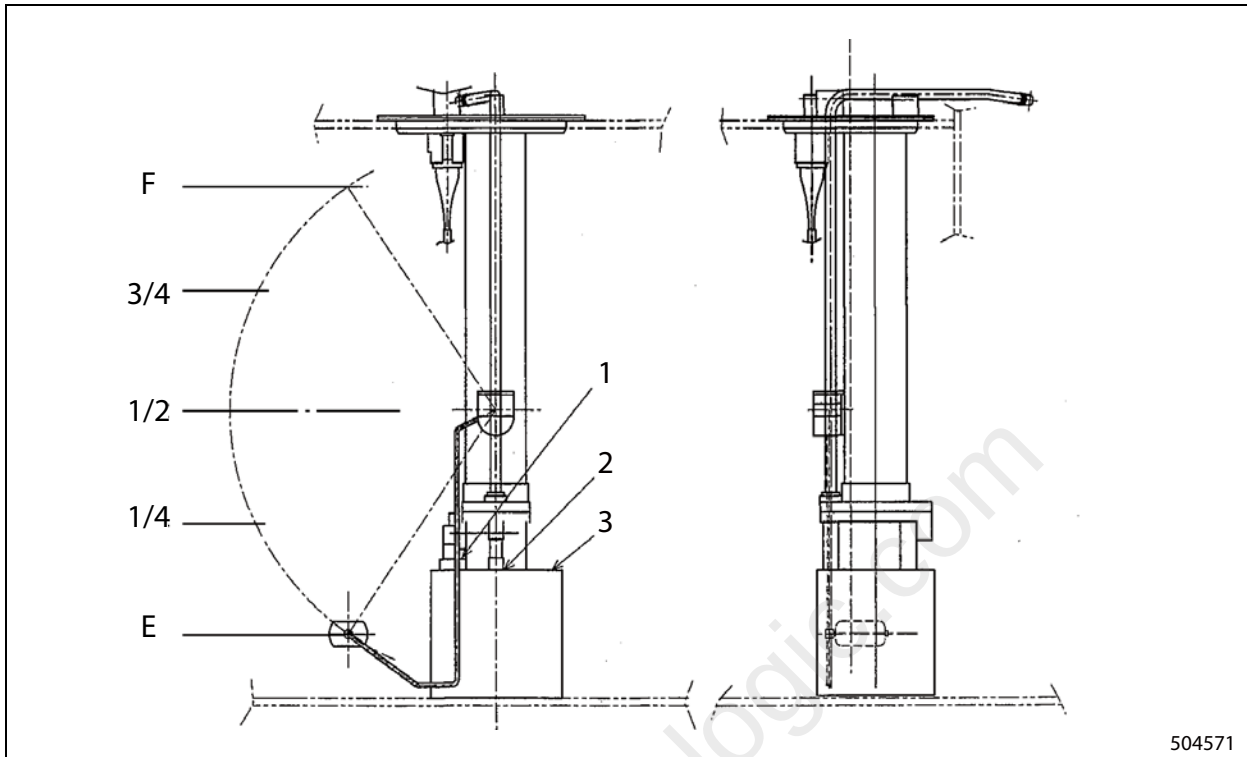


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Left-half parts (right-hand thread)	Plated in whitish color
Right-half parts (left-hand thread)	Plated in yellowish color

Note: After assembly, bleed air out of the brake lines. (Refer to 9-13 "Inspecting and Adjusting Brake System")

4.7 Tank Unit



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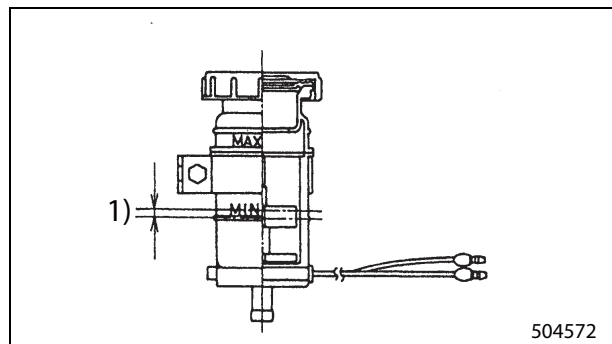
1. Fuel pump
2. Pressure relief valve
3. Fuel filter

Specifications

Float position	E	1/4	1/2	3/4	F
Standard resistance (ohm)	80	49.5	32	19	10
Tolerance (ohm)	+12 +2	-	±3	-	+1.0 -3.0

4.8 Brake Oil Sensor

Refer to the brake system.



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Ref.	Indicator ON activating position
1)	$3 \pm 2\text{mm}$ ($0.12 \pm 0.08\text{ in.}$)

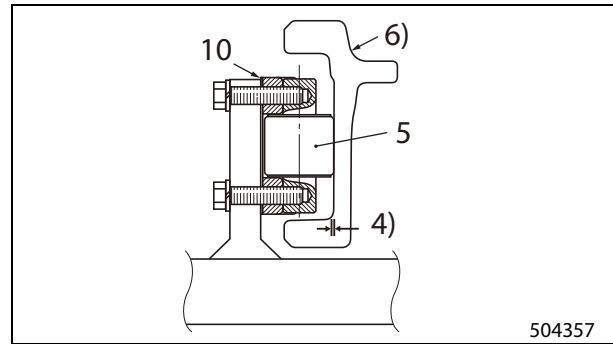
Adjusting clearance 4) between side roller rolling face and inner mast

Measure clearance 4) between the side roller's rolling contact surface and inner mast. If the measured clearance does not conform to the standard value, adjust clearance 4) in the manner described below.

Note: For measuring procedures, refer to 12-58 "Inspection and Adjustment".

If clearance 4) is excessive, increase the thickness of shims (d) 10 as required.

Note: At the assembly plant, shims (d) 10 are usually adjusted to 1 mm (0.04 in.) for shipment.



Side roller

FOREWORD

This service manual covers K21 and K25 Gasoline Engines installed in Cat[®] Lift Trucks and gives detailed maintenance and repair information. For your convenience the instructions are grouped by systems as a ready reference.

The long productive life of your lift truck(s) depends on regular and proper servicing—servicing consistent with what you will learn by reading this service manual. Read the respective sections of this manual carefully and familiarize yourself with all of the components before attempting to start a test, repair or rebuild job.

All descriptions, illustration, specifications, and serial numbers in this manual are effective as of the printing date of this manual. Cat Lift Trucks reserves the right to change specifications or design without notice and without incurring obligation.

Full Version Available

Caterpillar GC30N Forklift Service Manual (99719-6C130)

Caterpillar GC30N Forklift service manual, covers hydraulics, wiring, drive unit, mast, and engine repair. Searchable PDF download.

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