



Service Manual

Chassis & Mast

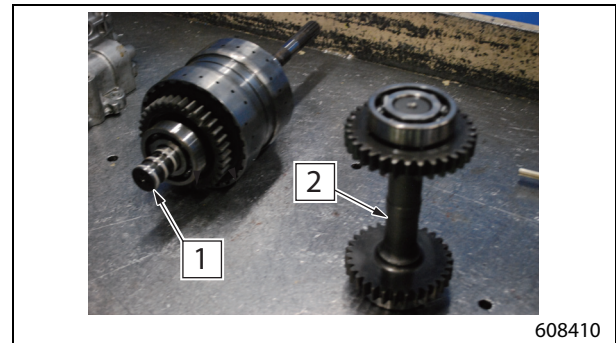
MC

GP20S	CT54-10011-up
GP25S	CT54-50011-up
GP30S	CT55-10011-up

DP20HS	CT50-10011-up
DP25HS	CT50-50011-up
DP30HS	CT51-10011-up

For use with K25 and S4S
Engine Service Manuals.

99729-90100



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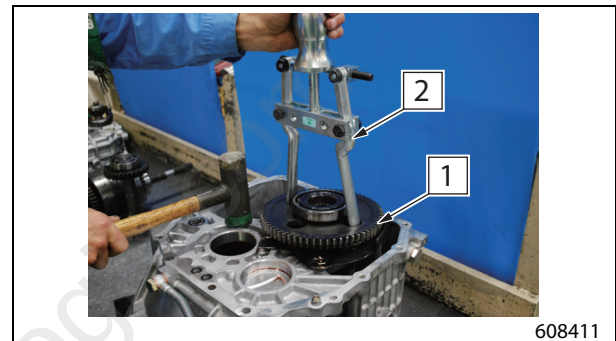
1. Input shaft assembly

2. Idler shaft assembly

Removing output gear

- (1) Lay as shown so that the torque converter housing faces down.
- (2) Sling the bearing puller and install the bearing puller to the output gear.
- (3) By tapping the torque converter housing with a plastic hammer, remove the output gear.

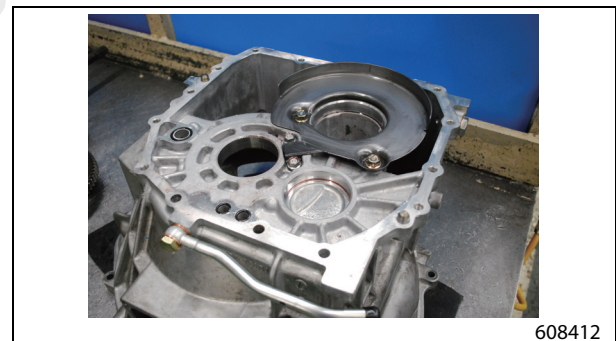
Note: Do not tap the mating face between torque converter housing and transmission housing. Oil leaks can occur.



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1. Output gear

2. Bearing puller



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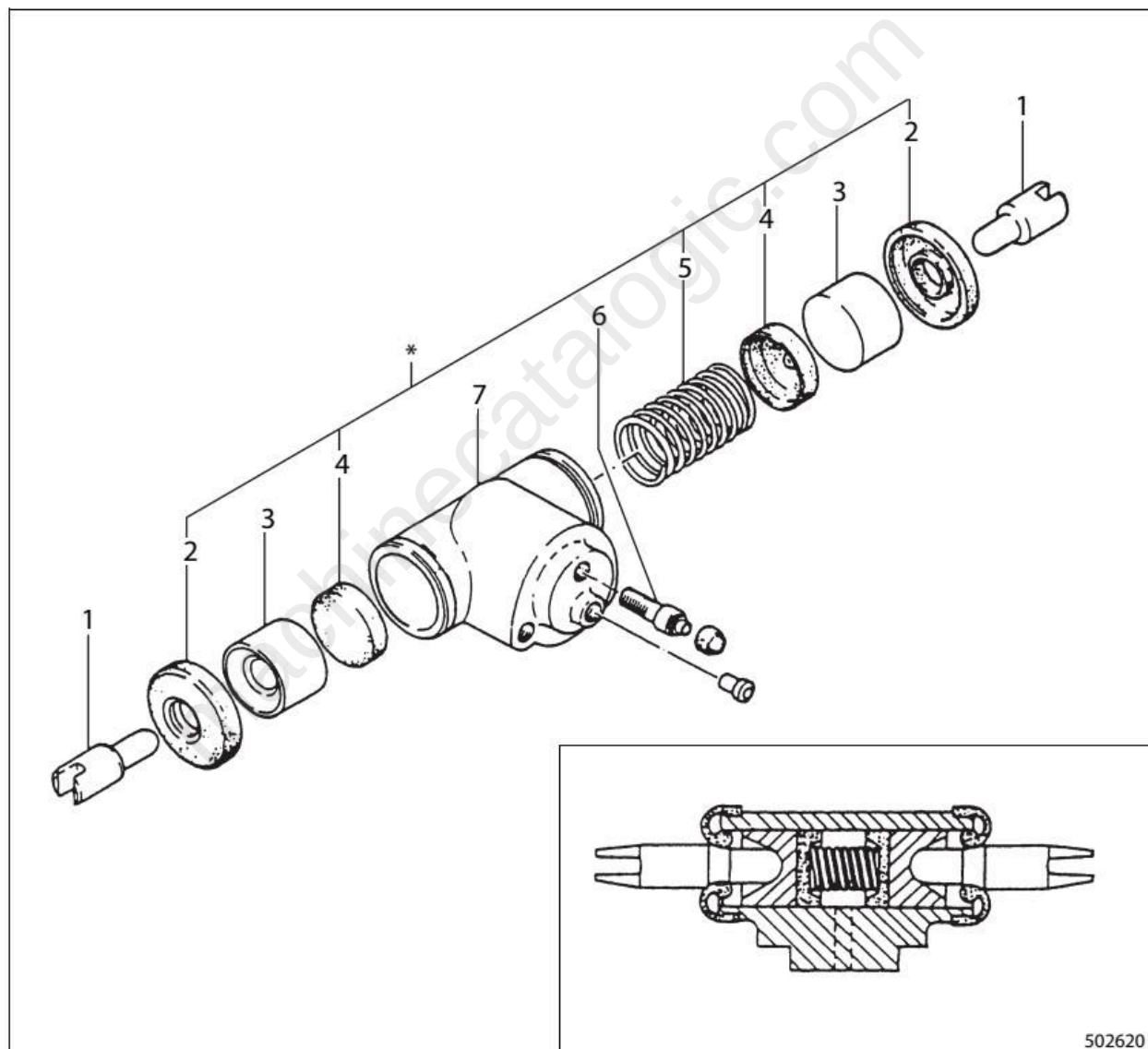
Installing automatic adjuster

- Clean adjusting screws and apply grease to the threaded portion and the screw socket mounting surface. Ensure that the screws turn easily by hand.
If screw movement is not smooth, replace it with a new one.
- Identification of adjusting screws and levers:
Left side (left-hand thread) = white color plating
Right side (right-hand thread) = yellowish color plating

Note: After assembly, bleed air out of the brake lines. (Refer to "12. Brake System, Inspecting and Adjusting.")

9. Disassembling Wheel Cylinder

9.1 Disassembly Sequence

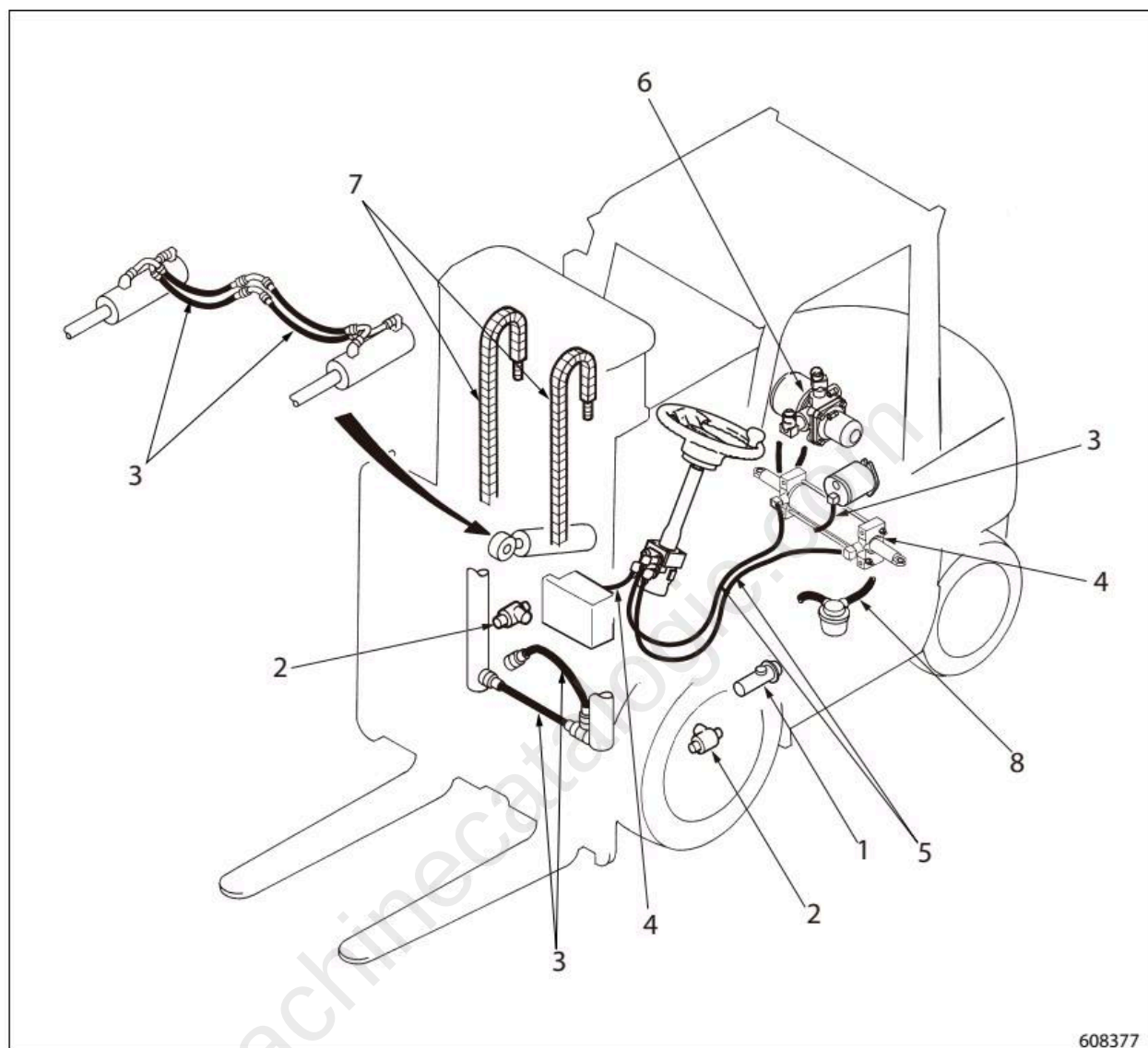


1. Connector link
2. Boot*
3. Piston
4. Piston cup*

5. Return spring*
6. Breeder screw, Cap
7. Cylinder body

Note: The parts marked with * are included in the repair kit.

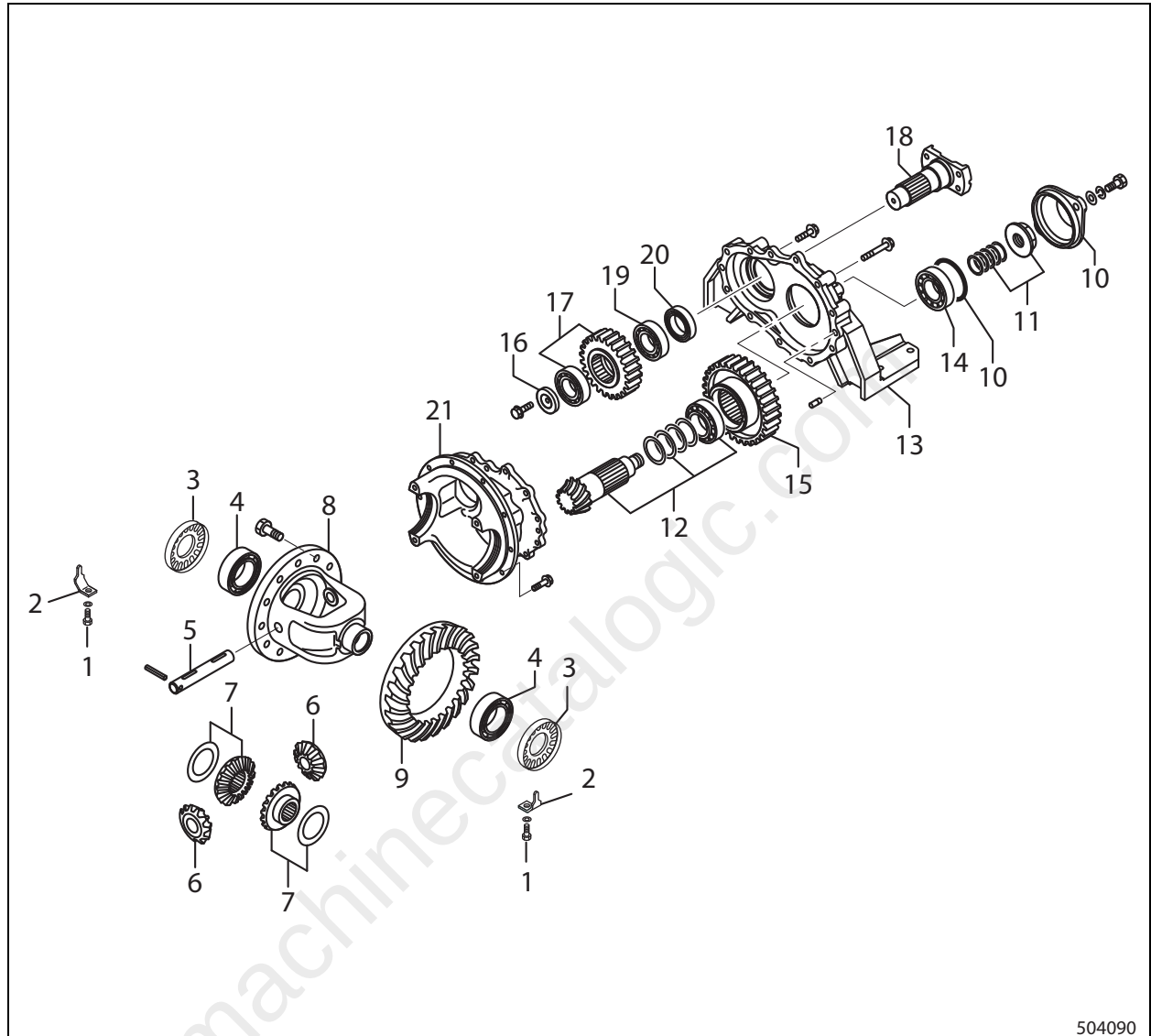
3.1 Safety Critical Parts



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9. Disassembling Reduction Differential

9.1 Disassembly Sequence



- | | |
|---------------------------|---|
| 1. Bolt, Washer | 12. Reduction pinion, Tapered roller bearing (inner), Shims |
| 2. Lockplate | 13. Carrier cover |
| 3. Side bearing nut | 14. Tapered roller bearing |
| 4. Tapered roller bearing | 15. Driven gear |
| 5. Pinion shaft | 16. Plate |
| 6. Differential pinion | 17. Drive gear, Ball bearing |
| 7. Bevel gear, Spacer | 18. Input flange |
| 8. Differential case | 19. Ball bearing |
| 9. Bevel gear | 20. Oil seal |
| 10. Cover, O-ring | 21. Differential case |
| 11. Locknut, Shims | |

Note: Remove parts 4 through 9 as an assembly.

17. Inspection After Disassembling Tilt Cylinder

Cylinder tube

- Check the cylinder inner surface for wear, damage, or rust.
- Check the welded area for cracks, damage or dent.

Piston rod

- Check the rod surface for rust, damage, scratch marks, and dents.
- Replace if significant damage is found on its threads.

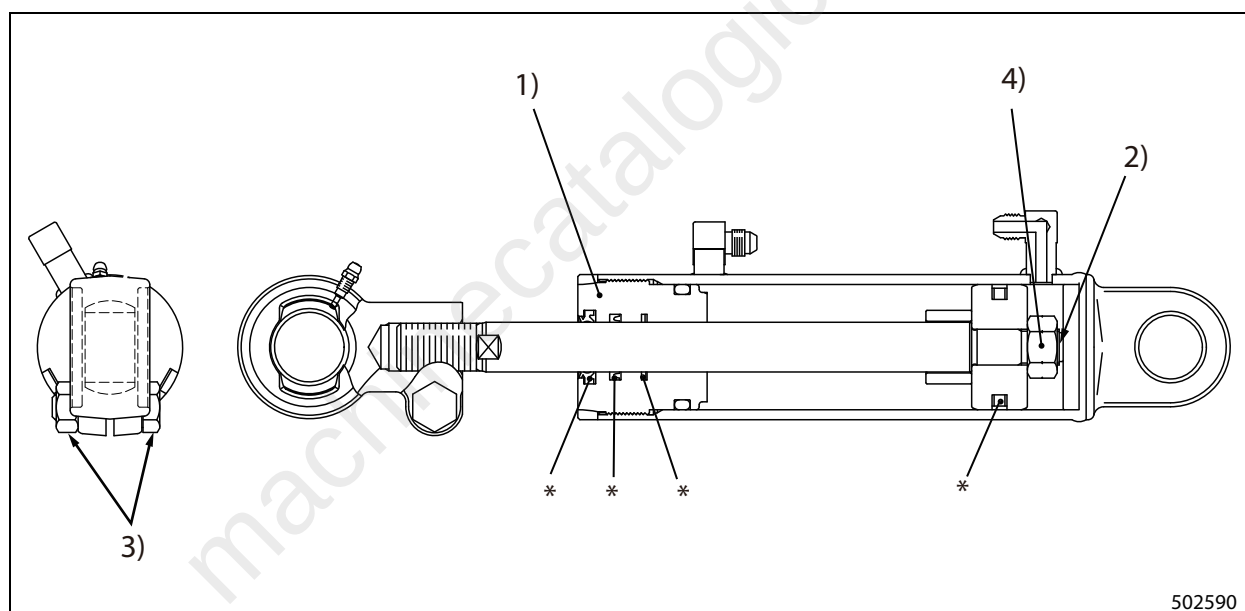
Rings and packings

- Check packings, dust seals, and piston seal lips for damage and distortion.
- Check rings for deterioration.

18. Assembling Tilt Cylinder

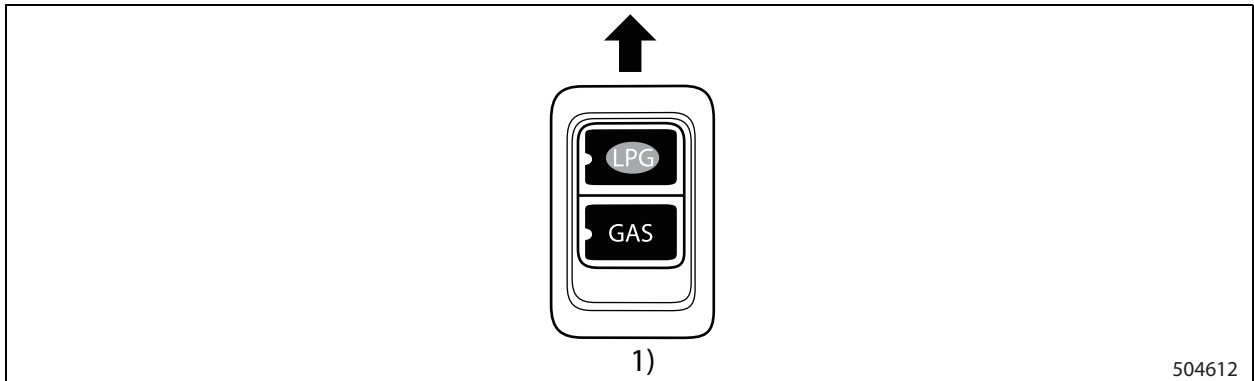
For assembly, follow the disassembly sequence in reverse.

18.1 Assembly Sequence



- | | |
|---|---|
| <p>1) Tightening torque
 2 ton class cylinder: 314 ± 31 N·m
 (32.0 ± 3.16 kgf·m) [231.59 ± 22.86 lbf·ft]
 3 ton class cylinder: 373 ± 37 N·m
 (38.0 ± 3.77 kgf·m) [275.11 ± 27.28 lbf·ft]</p> <p>2) Nuts should be swaged in two places after tightening.</p> | <p>3) Tightening torque: 157 to 182 N·m
 (16.0 to 18.6 kgf·m) [115.80 to 134.24 lbf·ft]</p> <p>4) Tightening torque
 2 ton class cylinder: 235 ± 19.6 N·m
 (24.0 ± 1.99 kgf·m) [173.33 ± 14.45 lbf·ft]
 3 ton class cylinder: 392 ± 25 N·m
 (40.0 ± 2.54 kgf·m) [289.12 ± 18.43 lbf·ft]</p> |
|---|---|

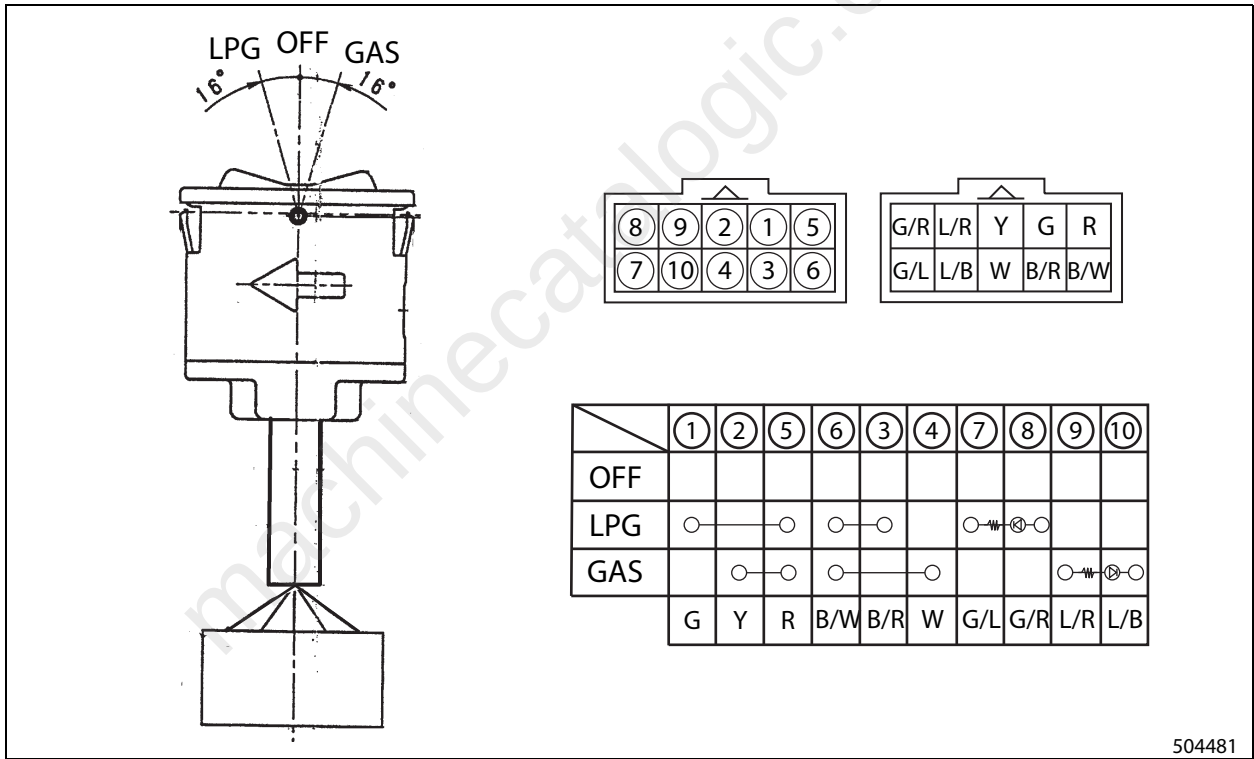
4.5 GAS/LPG Select Switch



1) Gasoline/LPG select switch

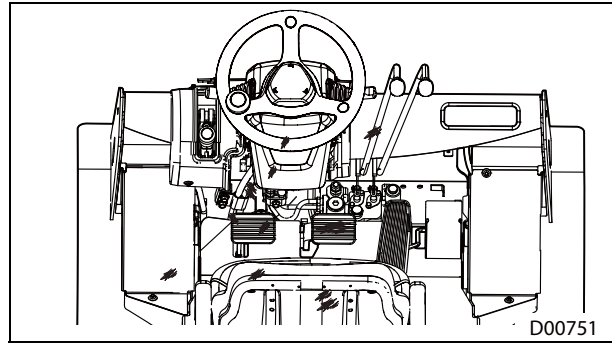
Note: Arrow indicates the front of truck.

GAS/LPG select switch

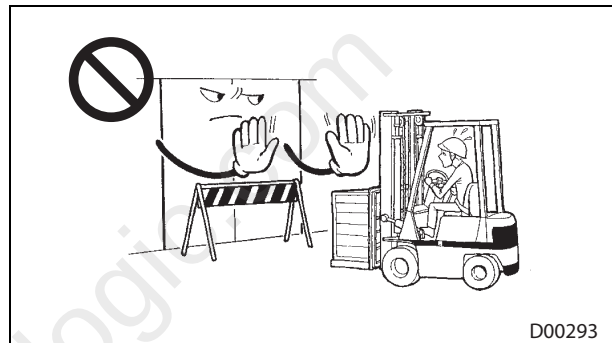


⚠ WARNING**Keep the operator compartment clean!**

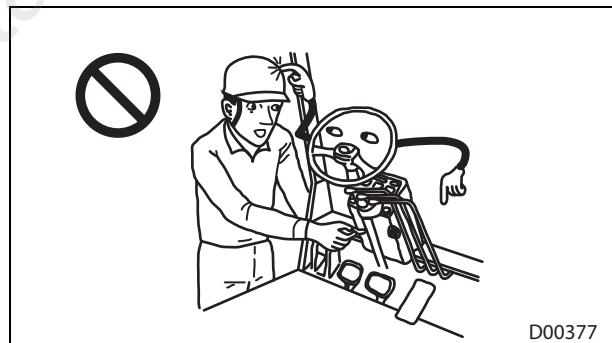
Keep your hands and shoes, as well as the floor and controls (steering wheel, levers and pedals) clean and free of grease, mud, and other materials. A slip could cause an accident.

**⚠ WARNING****Operate only in approved areas!**

Certain areas such as those containing hazardous flammable gases, liquid or other combustibles require a Safety Rated truck. If your forklift is not Safety Rated, the area must be avoided.

**⚠ WARNING****Sit in the operator seat when starting the engine!**

Start the engine only when seated in the normal operating position.

**⚠ WARNING****DO NOT operate a damaged or defective forklift!**

If the forklift is damaged, take it out of service until it has been restored to safe operating conditions. Park it in a non-operating area and remove the key. Attach a "DO NOT OPERATE" or similar warning tag to the forklift.

Contact your authorized Towmotor forklift seller for repairs.



Full Version Available

Towmotor DP20HS Forklift Service and Operator Manual (99729-90100)

Caterpillar DP20HS Forklift service manual, covers hydraulics, mast, wiring, drive unit, and engine service. Downloadable PDF format.

VIEW THE FULL MANUAL

<https://machinecatalogic.com/towmotor-dp20hs-forklift-service-and-operator-manual-99729-90100/>