



Service Manual

Chassis & Mast

MC

GP20S CT54-10011-up

GP25S CT54-50011-up

GP30S CT55-10011-up

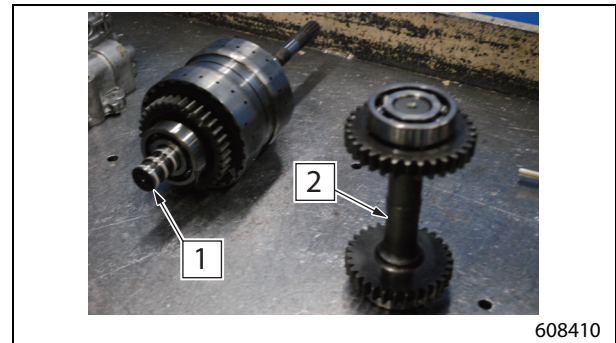
DP20HS CT50-10011-up

DP25HS CT50-50011-up

DP30HS CT51-10011-up

For use with K25 and S4S
Engine Service Manuals.

99729-90100



608410

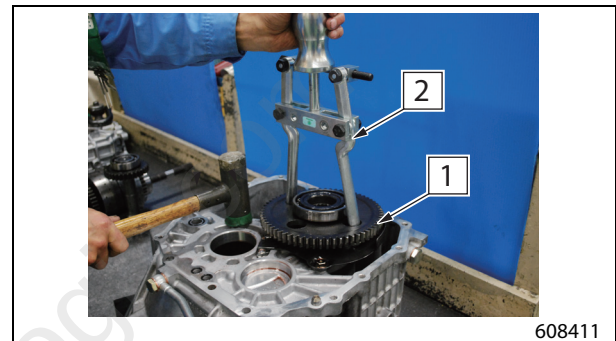
1. Input shaft assembly

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.

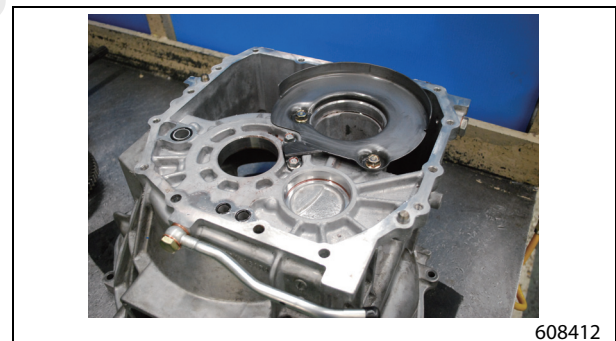
Note: Do not tap the mating face between torque converter housing and transmission housing. Oil leaks can occur.



608411

1. Output gear

2. Bearing puller



608412

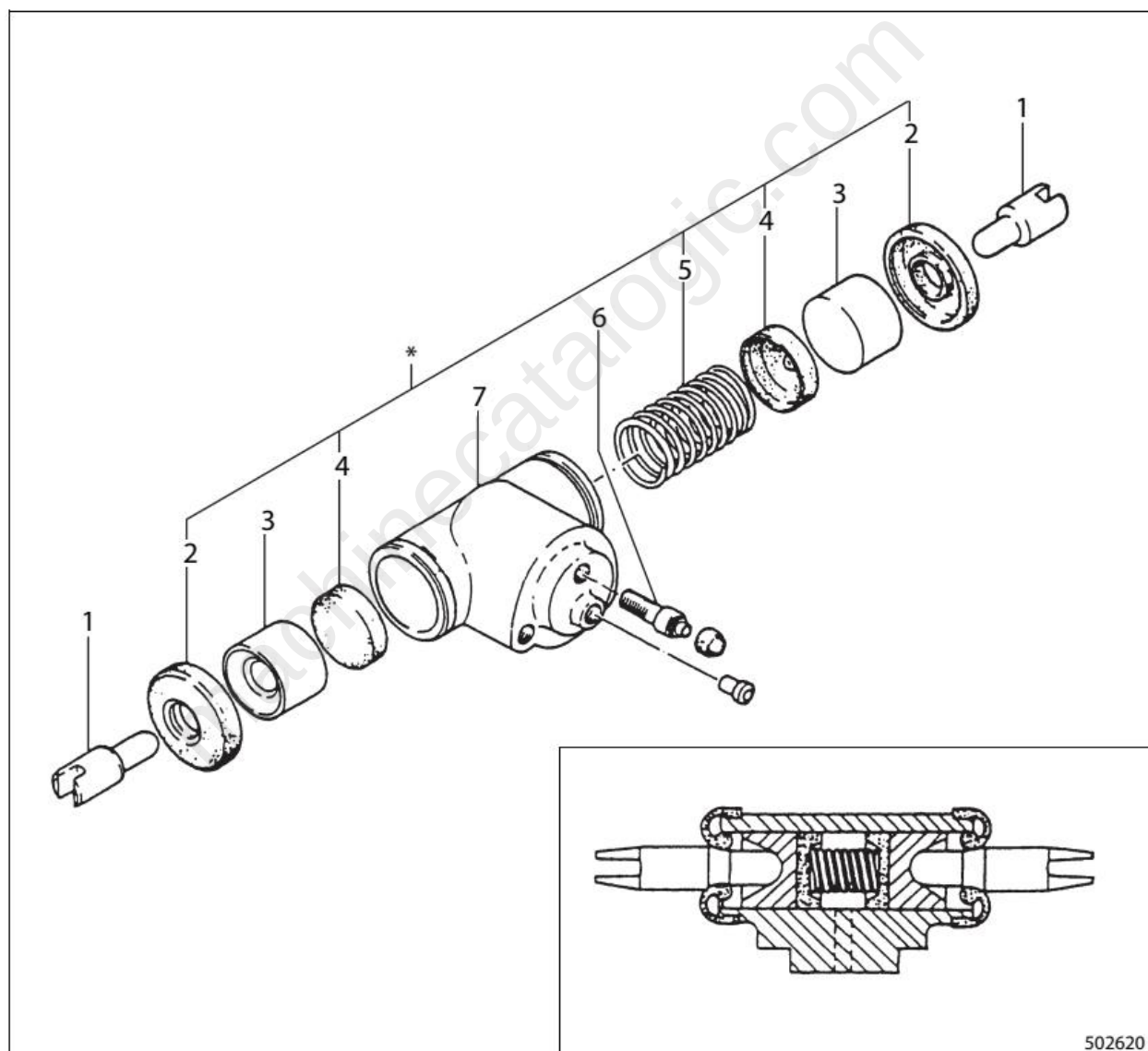
Installing automatic adjuster

- 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

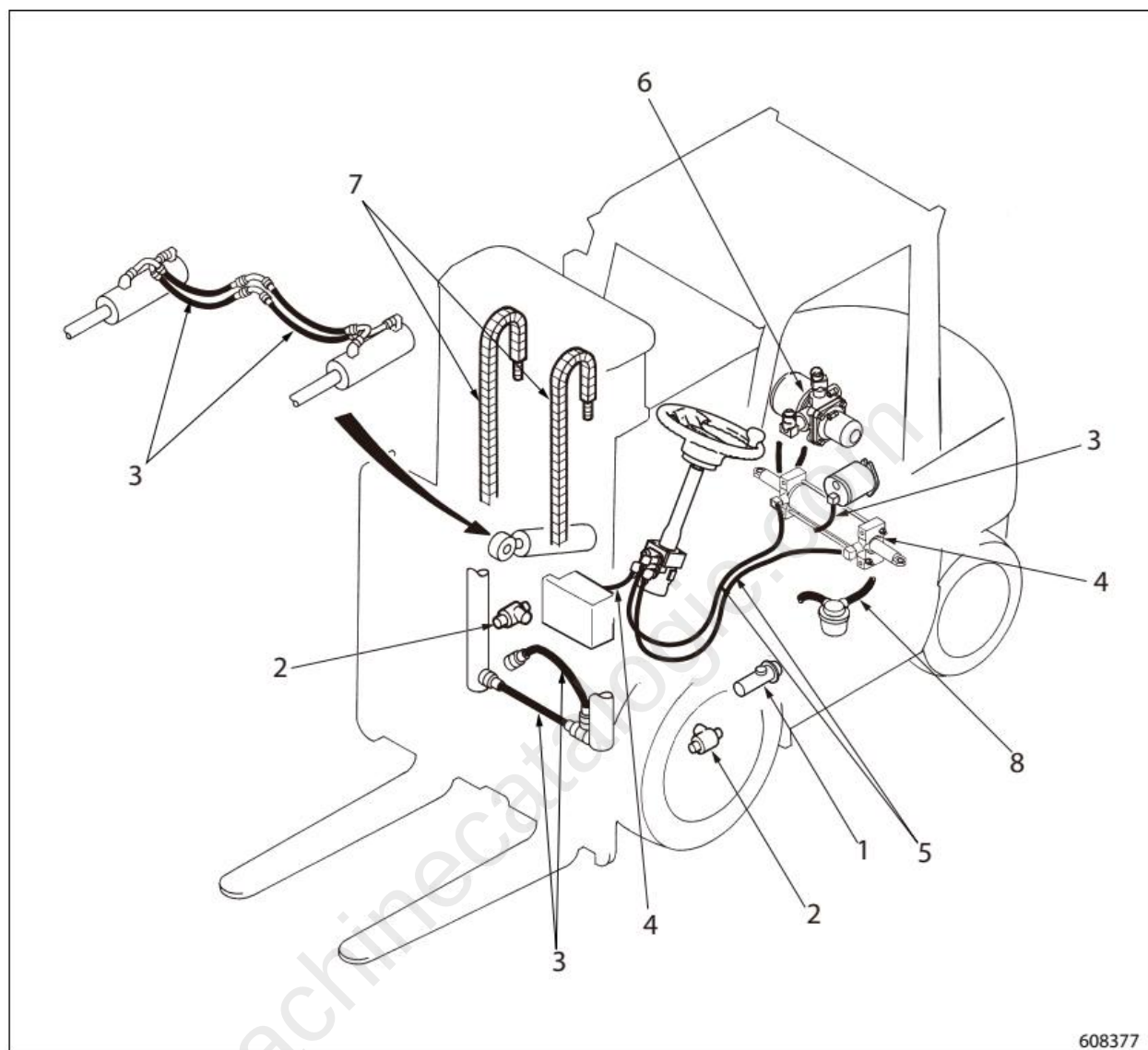


1. Connector link
2. Boot*
3. Piston
4. Piston cup*

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

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

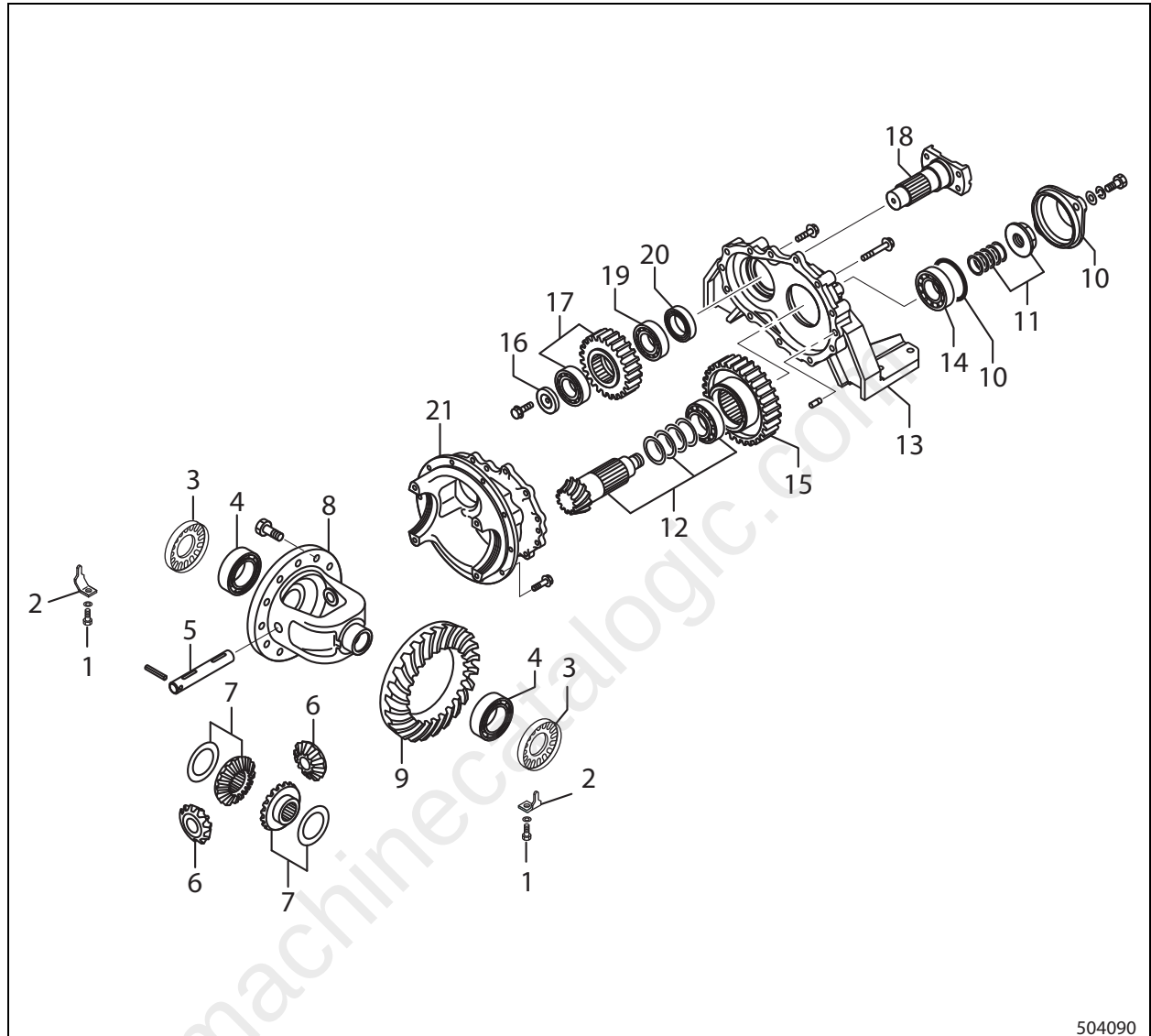
3.1 Safety Critical Parts



608377

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.

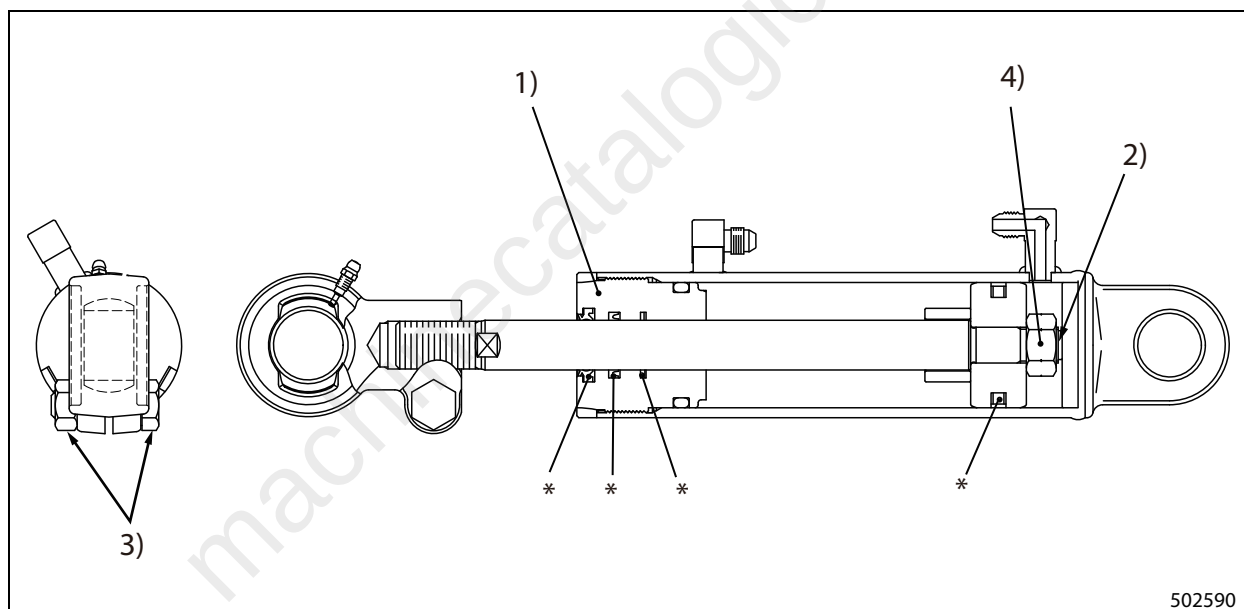
Rings and packings

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

18. Assembling Tilt Cylinder

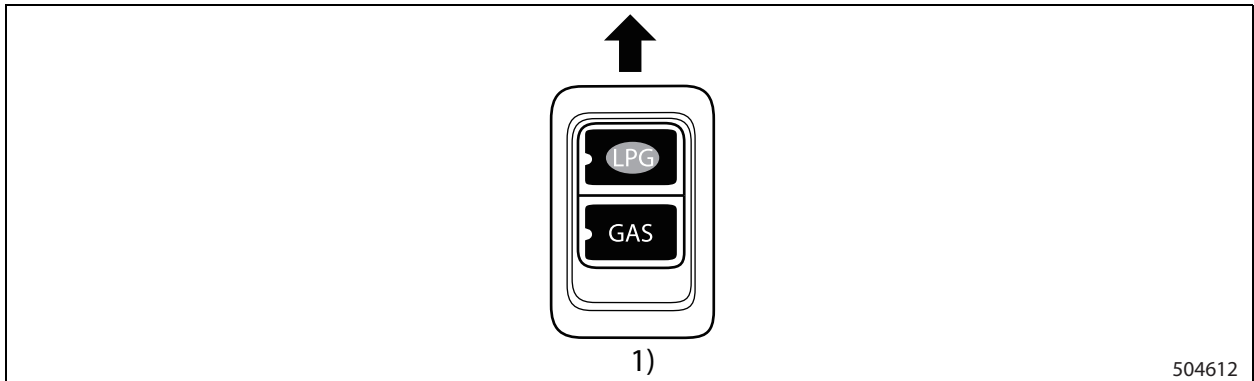
For assembly, follow the disassembly sequence in reverse.

18.1 Assembly Sequence



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

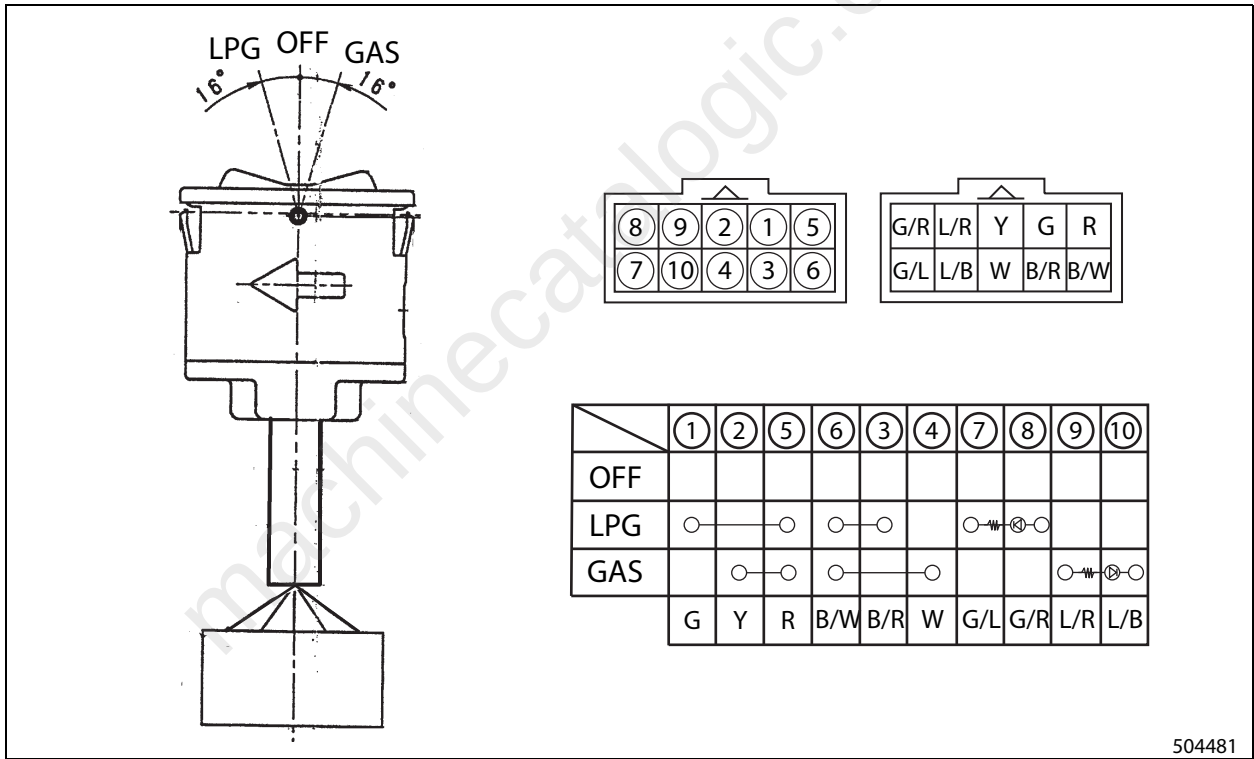
4.5 GAS/LPG Select Switch



1) Gasoline/LPG select switch

Note: Arrow indicates the front of truck.

GAS/LPG select switch



Full Version Available

Towmotor GP20S Forklift Service and Operator Manual (99729-90100)

Caterpillar GP20S forklift service manual, covers hydraulics, mast, wiring, power train, and engine service. Searchable PDF download.

VIEW THE FULL MANUAL

<https://machinecatalogic.com/towmotor-gp20s-forklift-service-and-operator-manual-99729-90100/>