CAT® Lift Trucks

# Service Manual

## Wet Brake System Supplement

| | | | |
|---|---|---|---|
| GP20N | ET17DL-01001-up | DP20N | ET18C-01001-up |
| GP20HN | ET17DL-01001-up | DP25N | ET18C-55001-up |
| GP25N | ET17DL-53001-up | DP30N | ET14E-04001-up |
| GP25HN | ET17DL-53001-up | DP35N | ET14E-53001-up |
| GP30N | ET13FL-02001-up | | |
| GP35N | ET13FL-51001-up | | |

99719-6W110

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# WIRING DIAGRAM
# (GASOLINE)

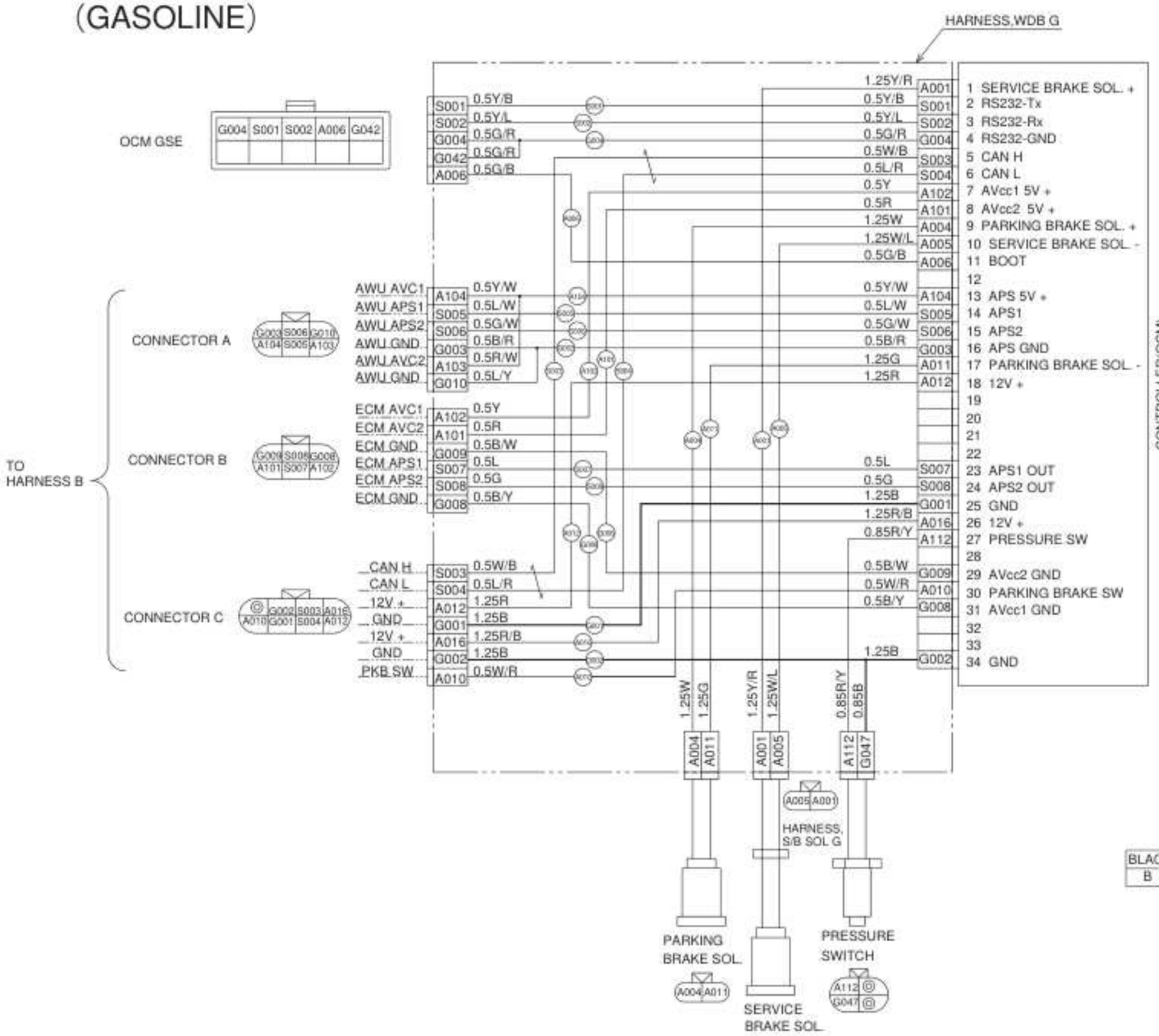



TABLE - 1
COMPARISON TABLE OF WIRE SIZE

| | |
|---|---|
| 5 | 10 |
| 3 | 12 |
| 2 | 14 |
| 1.25 | 16 |
| 0.85 | 18 |
| 0.5 | 20 |
| $mm^2$ | AWG |

3) REFER TO TABLE-1 FOR COMPARISON BETWEEN AWG SIZE AND NOMINAL CROSS-SECTIONAL AREA.
2) THE FIGURE OF THE CONNECTOR SHOWN IN THIS DRAWING MEANS HARNESS, WDB G SIDE.
NOTES 1) THIS DRAWING SHOWS THE WIRING DIAGRAM OF WET DISC BRAKE FOR GASOLINE TRUCK.

| BLACK | WHITE | RED | GREEN | YELLOW | BLUE | BROWN | Light green | ORENGE | PURPLE | GRAY |
|---|---|---|---|---|---|---|---|---|---|---|
| B | W | R | G | Y | L | BR | LG | OR | PU | GY |

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| Schematic No. | Used for |
|---|---|
| ES019-6W110 | 99719-6W110 |

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# WIRING DIAGRAM (DIESEL)

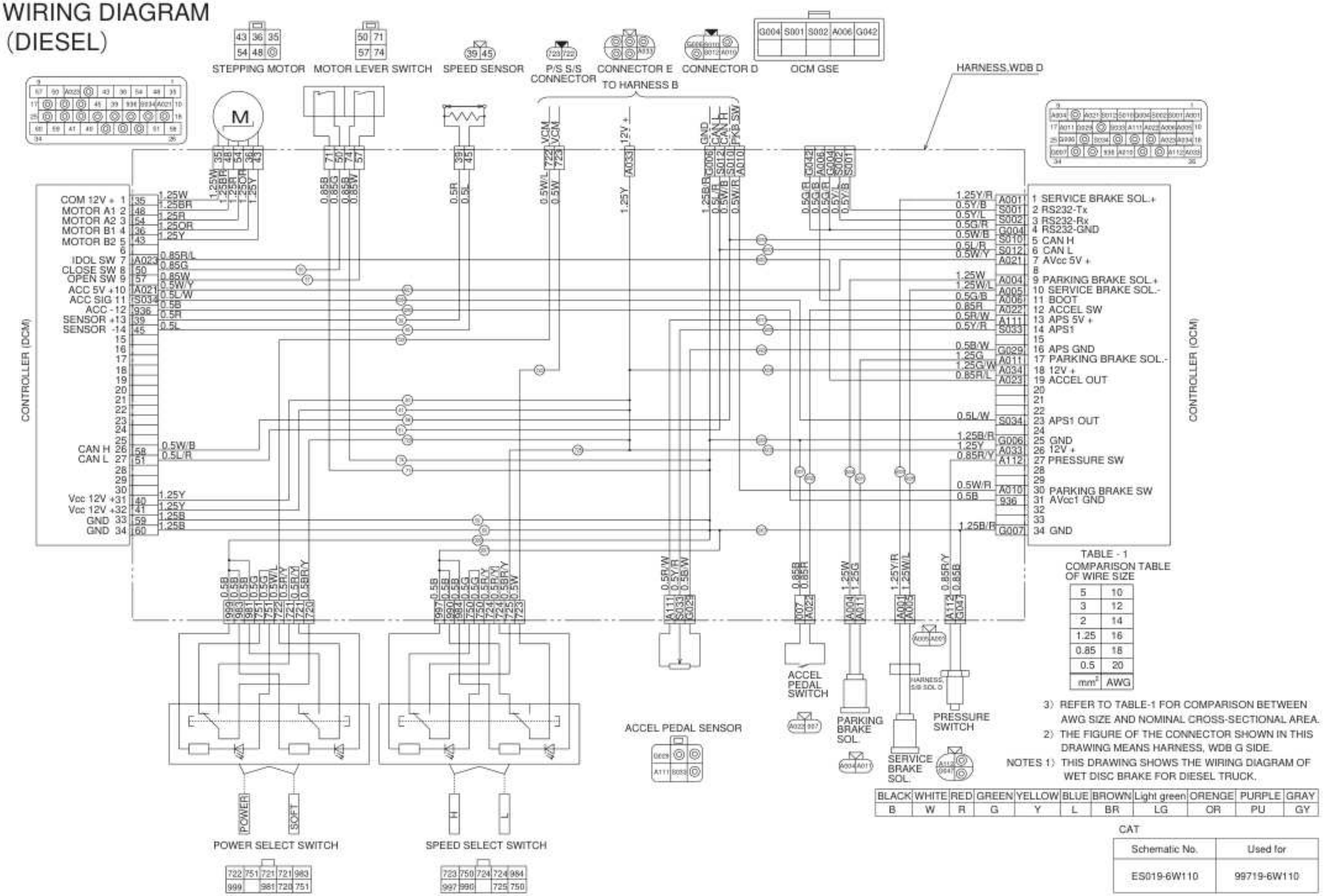



TABLE - 1
COMPARISON TABLE OF WIRE SIZE

| | |
|---|---|
| 5 | 10 |
| 3 | 12 |
| 2 | 14 |
| 1.25 | 16 |
| 0.85 | 18 |
| 0.5 | 20 |
| $mm^2$ | AWG |

3) REFER TO TABLE-1 FOR COMPARISON BETWEEN AWG SIZE AND NOMINAL CROSS-SECTIONAL AREA.
2) THE FIGURE OF THE CONNECTOR SHOWN IN THIS DRAWING MEANS HARNESS, WDB G SIDE.
NOTES 1) THIS DRAWING SHOWS THE WIRING DIAGRAM OF WET DISC BRAKE FOR DIESEL TRUCK.

| BLACK | WHITE | RED | GREEN | YELLOW | BLUE | BROWN | Light green | ORENGE | PURPLE | GRAY |
|---|---|---|---|---|---|---|---|---|---|---|
| B | W | R | G | Y | L | BR | LG | OR | PU | GY |

CAT

| Schematic No. | Used for |
|---|---|
| ES019-6W110 | 99719-6W110 |

Pub.No.99719-6W110


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# 1. Outline of the Electrical System

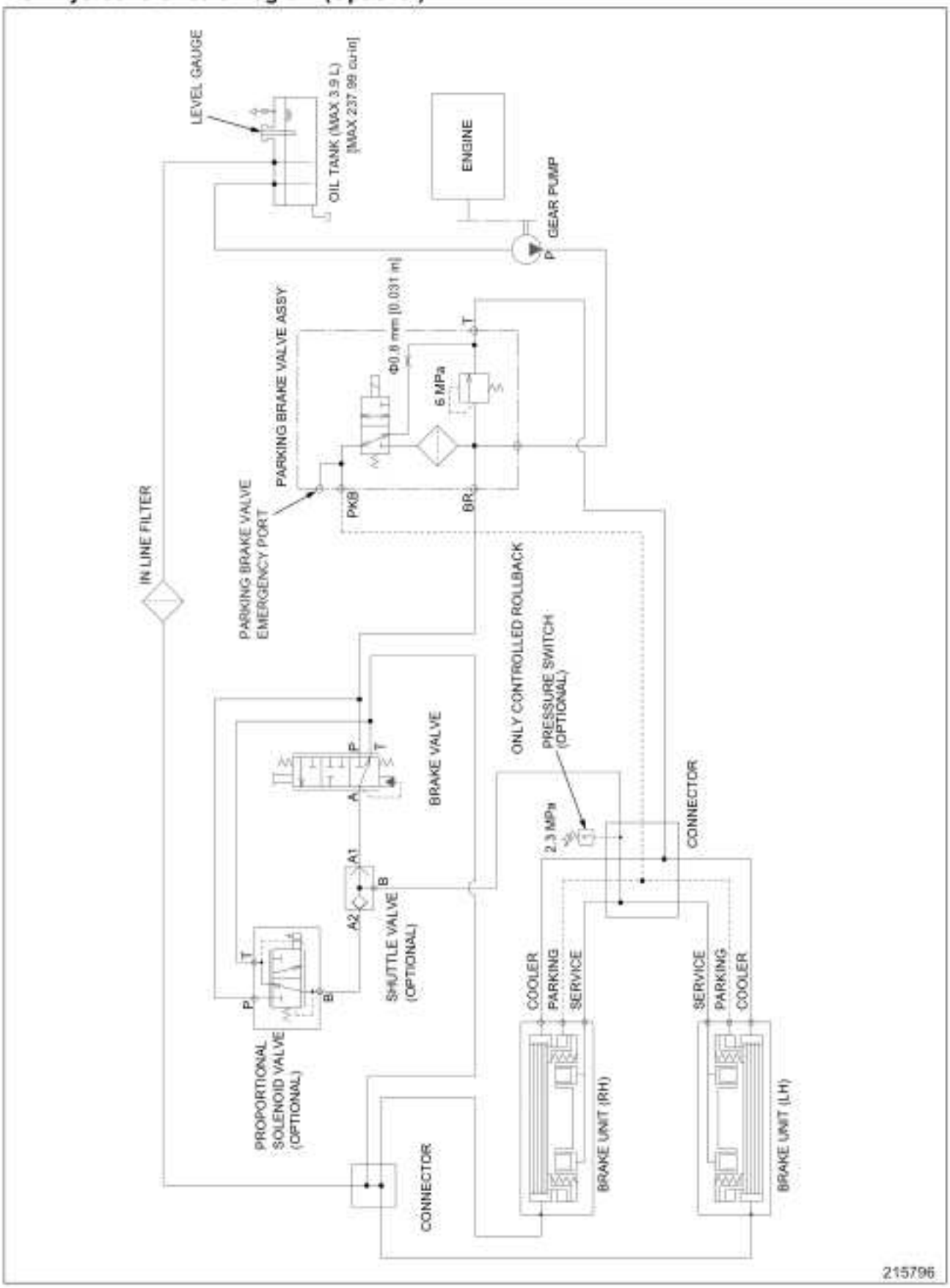
The following components described in this service manual are for a wet brake specification forklift truck, but are not installed on a standard specification model.

- Brake oil sensor
- Back lamp switch
- Neutral switch
- Brake oil level warning lamp



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## 1.3 Hydraulic Circuit Diagram (Optional)






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## 5. Troubleshooting

| Unit | Situation | Description | Remedy |
|---|---|---|---|
| Service brake | Brake does not function. | Leak from the hydraulic system, or main tank oil level is too low. | Repair leak and add brake oil. |
| | | Air mixed in the hydraulic system | Bleeding air from brake oil line. |
| | | Brake piston seal worn or damaged | Replace |
| | | Friction plate worn or facing damaged | Replace |
| | | Mating plate worn | Replace |
| | Uneven brake effect | Uneven tire pneumatic pressures | Adjust to the correct pneumatic pressure. |
| | | Friction plate worn or facing damaged | Replace |
| | | Mating plate worn | Replace |
| | Brake return failure | Piston return spring deteriorated | Replace |
| | | Spring guide bent | Replace |
| | Brake squeaks | Inappropriate brake oil | Replace with the specified brake oil. |
| | | Poor contact between friction plate and mating plate | Replace |
| Parking brake | Brake does not function. | Brake spring deteriorated | Replace |
| | | Oil line is sealed up. | After draining oil from the port to forcibly release the parking brake valve, disassemble and check the parking brake valve. |
| | Brake can not be released. | Insufficient oil line pressure | Measure the hydraulic pressure of the relief valve in the parking brake valve, and adjust it. |
| | | Parking brake valve failure | Replace |
| | | Electric wiring damaged | Check the wiring continuity. |



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