

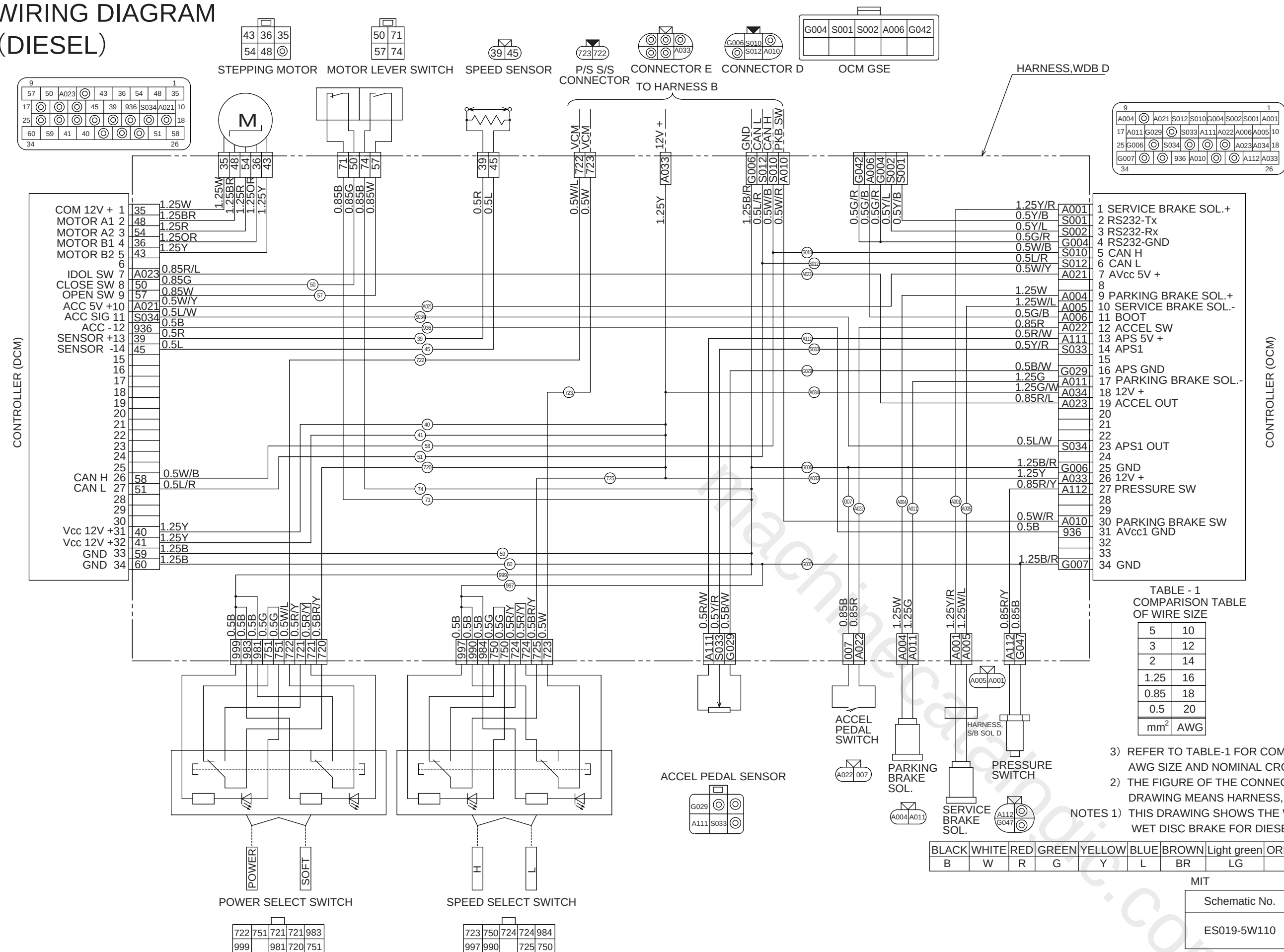


# Service Manual

## Wet Brake System Supplement

|               |                 |              |                |
|---------------|-----------------|--------------|----------------|
| <b>FG20N</b>  | EF17DL-01001-up | <b>FD20N</b> | EF18C-01001-up |
| <b>FG20HN</b> | EF17DL-01001-up | <b>FD25N</b> | EF18C-55001-up |
| <b>FG25N</b>  | EF17DL-53001-up | <b>FD30N</b> | EF14E-03001-up |
| <b>FG25HN</b> | EF17DL-53001-up | <b>FD35N</b> | EF14E-52001-up |
| <b>FG30N</b>  | EF13FL-02001-up |              |                |
| <b>FG35N</b>  | EF13FL-51001-up |              |                |

WIRING DIAGRAM  
(DIESEL)

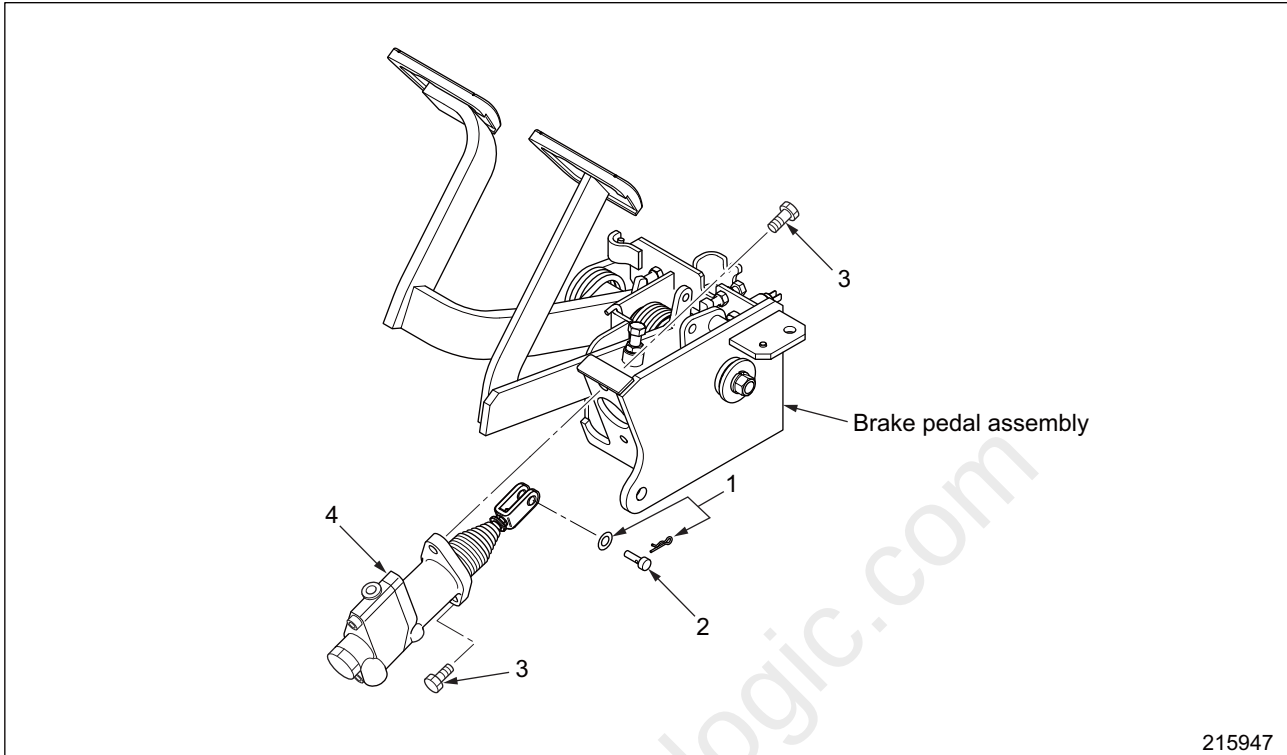


- (3) Connect the brake pipe.
- (4) When reattaching the exhaust pipe, replace the old gasket with a new one.
- (5) First make sure that the battery cables are properly connected and there are no connection mistakes, then tighten the (–) battery terminal.
- (6) Add engine oil, engine cooling water and transmission oil, then check for any water leaks or oil leaks. For the cooling water, unless otherwise specified, use soft tap water mixed with 35% anti-freeze solution. Replace the cooling water in the reservoir tank during an engine overhaul.
- (7) Relieve air from the engine fuel circuit.
- (8) When the inspection of each component is complete, check the amount of hydraulic oil available after operating the mast, tilt and steering wheel, etc. Also, check the engine oil, cooling water, and transmission oil.
- (9) Relieve air from the wet disc brakes.

Note: For the procedure, refer to section "1.1.5 Wet disc brake air relief procedure."

## 2.3 Brake Valves

### 2.3.1 Removal



#### Sequence

- |                    |                             |
|--------------------|-----------------------------|
| 1 Snap pin, washer | 3 Brake valve mounting bolt |
| 2 Clevis pin       | 4 Brake valve               |

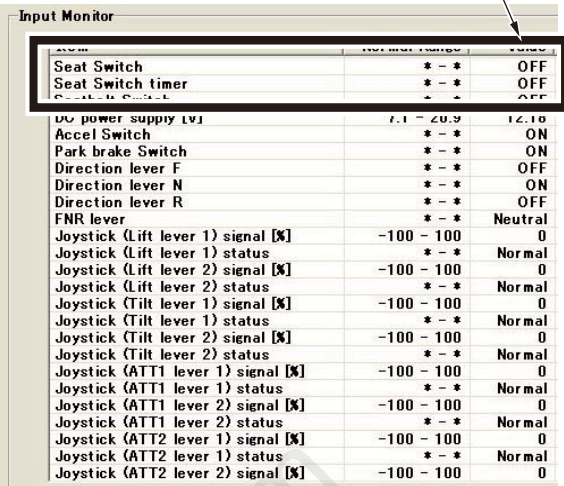
### 2.3.2 Reinstallation

Reinstall in the reverse order of removal.

After reinstallation, carry out air bleeding of the brake system.

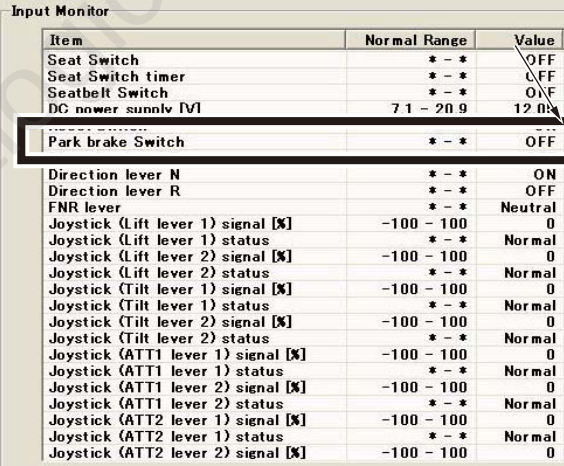
Note: For the procedure, refer to the section "1.1.5 Wet disc brake air bleeding procedure."

- (7) With the service tool, check that the seat switch is OFF and the parking brake switch is OFF. (Fig. 4-4, 4-5) Also make sure that the parking brake warning lamp in the instrument panel turns off and the warning buzzer activates. (Fig. 4-6)
- (8) Apply the parking brake switch. Make sure that the parking brake warning lamp in the instrument panel glows and the warning buzzer deactivates.



| Item                               | Normal Range | Value   |
|------------------------------------|--------------|---------|
| Seat Switch                        | * - *        | OFF     |
| Seat Switch timer                  | * - *        | OFF     |
| DC power supply [V]                | 7.1 - 20.9   | 12.10   |
| Accel Switch                       | * - *        | ON      |
| Park brake Switch                  | * - *        | ON      |
| Direction lever F                  | * - *        | OFF     |
| Direction lever N                  | * - *        | ON      |
| Direction lever R                  | * - *        | OFF     |
| FNR lever                          | * - *        | Neutral |
| Joystick (Lift lever 1) signal [%] | -100 - 100   | 0       |
| Joystick (Lift lever 1) status     | * - *        | Normal  |
| Joystick (Lift lever 2) signal [%] | -100 - 100   | 0       |
| Joystick (Lift lever 2) status     | * - *        | Normal  |
| Joystick (Tilt lever 1) signal [%] | -100 - 100   | 0       |
| Joystick (Tilt lever 1) status     | * - *        | Normal  |
| Joystick (Tilt lever 2) signal [%] | -100 - 100   | 0       |
| Joystick (Tilt lever 2) status     | * - *        | Normal  |
| Joystick (ATT1 lever 1) signal [%] | -100 - 100   | 0       |
| Joystick (ATT1 lever 1) status     | * - *        | Normal  |
| Joystick (ATT1 lever 2) signal [%] | -100 - 100   | 0       |
| Joystick (ATT1 lever 2) status     | * - *        | Normal  |
| Joystick (ATT2 lever 1) signal [%] | -100 - 100   | 0       |
| Joystick (ATT2 lever 1) status     | * - *        | Normal  |
| Joystick (ATT2 lever 2) signal [%] | -100 - 100   | 0       |

Fig. 4-4 Input monitor screen



| Item                               | Normal Range | Value   |
|------------------------------------|--------------|---------|
| Seat Switch                        | * - *        | OFF     |
| Seat Switch timer                  | * - *        | OFF     |
| Seatbelt Switch                    | * - *        | OFF     |
| DC power supply [V]                | 7.1 - 20.9   | 12.10   |
| Park brake Switch                  | * - *        | OFF     |
| Direction lever N                  | * - *        | ON      |
| Direction lever R                  | * - *        | OFF     |
| FNR lever                          | * - *        | Neutral |
| Joystick (Lift lever 1) signal [%] | -100 - 100   | 0       |
| Joystick (Lift lever 1) status     | * - *        | Normal  |
| Joystick (Lift lever 2) signal [%] | -100 - 100   | 0       |
| Joystick (Lift lever 2) status     | * - *        | Normal  |
| Joystick (Tilt lever 1) signal [%] | -100 - 100   | 0       |
| Joystick (Tilt lever 1) status     | * - *        | Normal  |
| Joystick (Tilt lever 2) signal [%] | -100 - 100   | 0       |
| Joystick (Tilt lever 2) status     | * - *        | Normal  |
| Joystick (ATT1 lever 1) signal [%] | -100 - 100   | 0       |
| Joystick (ATT1 lever 1) status     | * - *        | Normal  |
| Joystick (ATT1 lever 2) signal [%] | -100 - 100   | 0       |
| Joystick (ATT1 lever 2) status     | * - *        | Normal  |
| Joystick (ATT2 lever 1) signal [%] | -100 - 100   | 0       |
| Joystick (ATT2 lever 1) status     | * - *        | Normal  |
| Joystick (ATT2 lever 2) signal [%] | -100 - 100   | 0       |

Fig. 4-5 Input monitor screen

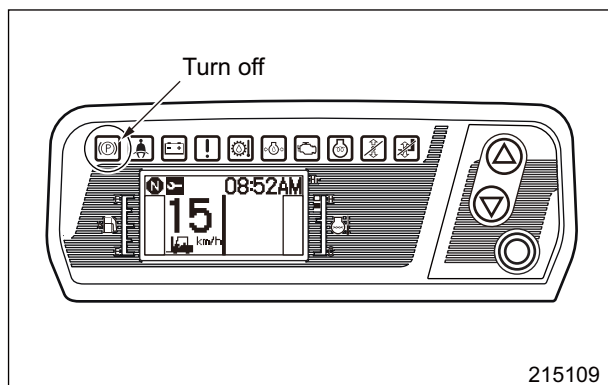


Fig. 4-6 Instrument panel screen

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