



MITSUBISHI

FORKLIFT TRUCKS

SERVICE MANUAL

TR3500 Control 36/48v & 72/80v

36/48v

FBP16	E1BP1-62001-up
FBP18	E1BP1-72001-up
FBP20	E1BP2-62001-up
FBP25	E1BP2-72001-up
FBP30	E1BP3-62001-up

72/80v

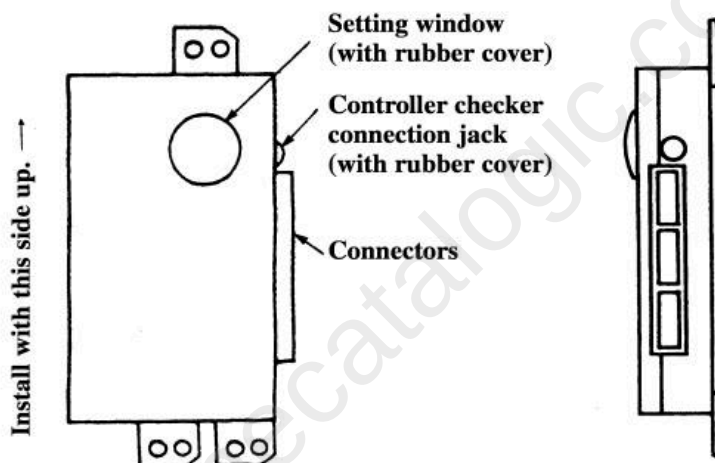
FBP16	E1BP1-82001-up
FBP18	E1BP1-87001-up
FBP20	E1BP2-82001-up
FBP25	E1BP2-85001-up
FBP30	E1BP2-82001-up

AC
MC

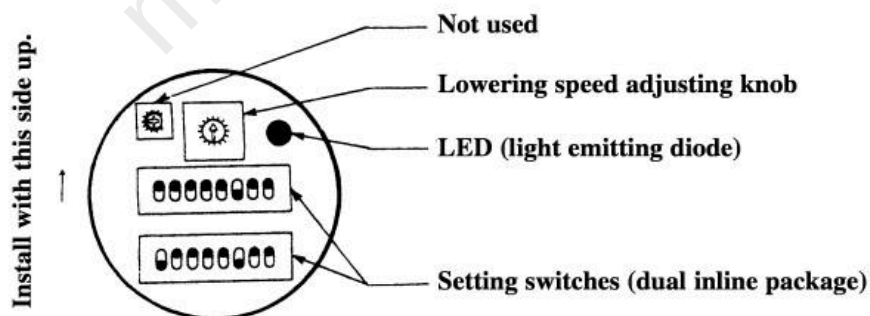
How to Set the Controller

Set the controller on any of the following occasions:

Occasion	What to do
After the mast has been changed, or an optional equipment added	Resetting of the setting switches
After the control valve lift section solenoid has been replaced (or the control valve replaced)	Adjustment of maximum lowering speed (when required)
After the controller assembly has been changed	- Resetting of the setting switches - Adjustment of maximum lowering speed (when required)



Setting window (without rubber cover)



205000

Test L: Aux 1 Switch Circuit

Pull the Aux 1 lever back to maximum and release.

Display = 09 Aux 1 switch circuit defect.

See Troubleshooting Problem 46.

Display = 10 Aux 1 switch circuit OK.

Test M: Aux 2 Switch Circuit

NOTE: If Aux 2 does not exist on the test truck, bypass by toggling the DRS switch from DIAG. to RUN and back to DIAG.

Pull the Aux 2 lever back to maximum and release.

Display = 10 Aux 2 switch circuit defect.

See Troubleshooting Problem 47.

Display = Flashing 00 Aux 2 switch circuit OK.

Test N: Hydraulic Speed Check

After a successful Aux 2 circuit test, the flashing number in the display can show the speed associated with each hydraulic function. For example, if you pull back on the tilt lever, you will see the tilt speed on the display. Only one lever should be tested (pulled back) at a time. Exception (MC): If you are using only the lift 0 and lift 1 switches, you can test them both at the same time. The speed displayed represents the second lift speed.

To exit the hydraulic speed check (bypass the flashing 00), toggle the DRS switch from DIAG to RUN and back to DIAG.

Display = 11 Ready for the next test.

Thermal Switch

⚠ WARNING

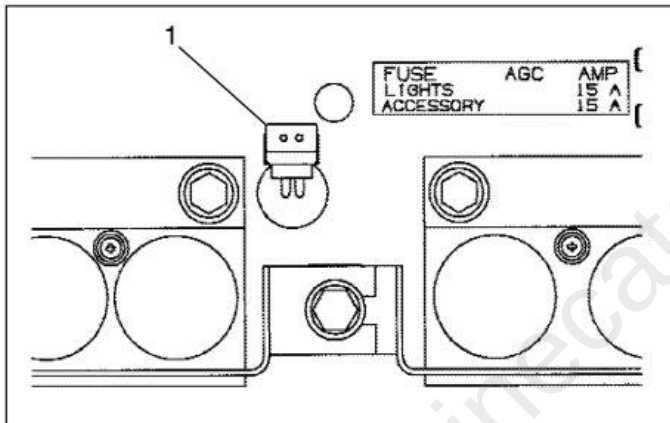
Battery voltage and high amperage are present. Injury to personnel is possible. Disconnect the battery and discharge the head capacitors (HEAD CAP) before any contact is made with the control panel.

NOTICE: Do not heat the thermal switch over an open flame. Damage to the thermal switch will occur.

Control Panel

NOTE: If the thermal switch is removed from the heatsink, it can be tested in an oven. Switch (1) will open circuit if the temperature is 81°-89°C (178°-192°F) and close (short circuit) at 69°-77°C (156°-171°F).

Refer to the topic "Run-Time Diagnostics", Overtemperature Indicator ON, in the Troubleshooting Section.



Location of Components: (1) Thermal switch

Pump and Traction Motor

NOTE: If the pump or drive thermal switch is removed from the motor, it can be tested in an oven. Switches will open circuit if the temperature is 144°-156°C (291°-312°F) and close (short circuit) at 124°-136°C (255°-276°F).

Refer to the related problems under "Run-Time Diagnostics", Overtemperature Indicator ON, in the Troubleshooting Section.

Electrical System Adjustments

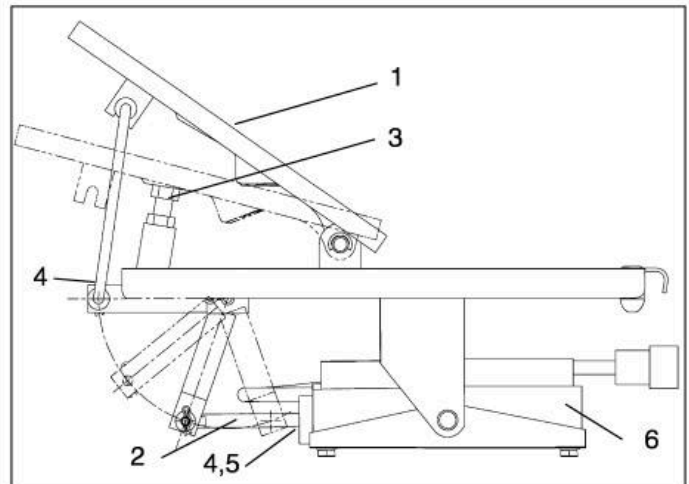
Method A (Mechanical)

1. Disconnect the battery.
2. Fully depress the accelerator pedal (1) until pedal is stopped on bolt (3). Adjust bolt so that groove (4) on accelerator control shaft (2) is even with face (5) of accelerator control (6). The groove should not reach the shaft wiper.
3. Release accelerator pedal (1).

Method B (Electrical)

1. Place the truck in the "Self" diagnostic mode and proceed to test 5.
2. Cycle the RUN/DIAG/SETUP switch so that the accelerator speed is flashed on the display.
3. Depress the accelerator pedal until the floor plate bolts stops the pedal motion.
4. Adjust the floor plate bolt until a "14" is flashed on the display. If the speed flashed is less than "14", adjust the bolt to allow more pedal travel. If the speed flashed is more than "14", adjust the bolt to allow less pedal travel.
5. Adjust the floor plate bolt just enough to get the display to change from a flashing "14" to a flashing "15". Ensure that the groove on the accelerator control shaft does not reach the shaft wiper when the accelerator is fully depressed.

Accelerator Control Linkage



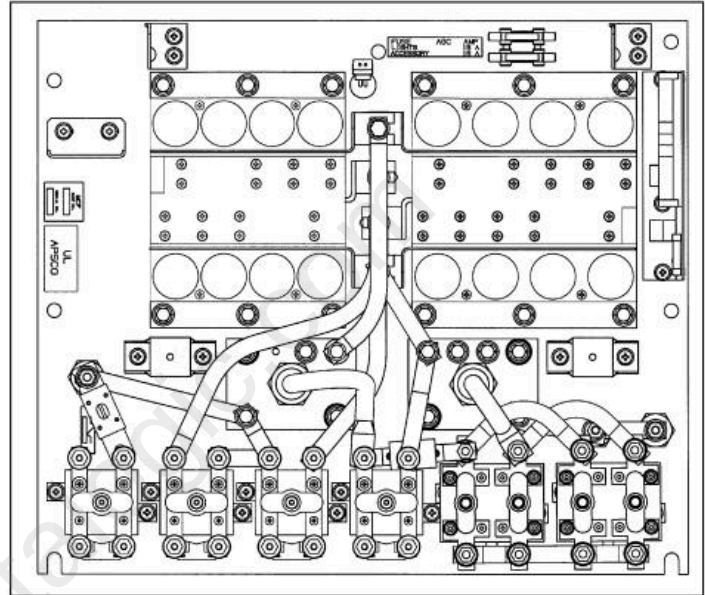
Accelerator Control Linkage: (1) Accelerator Pedal (2) Accelerator Control Shaft (3) Bolt (4) Shaft Groove (5) Face (6) Accelerator Control

Module Replacement

WARNING

The forklift truck can move suddenly. Injury to personnel or damage to the forklift truck is possible. Safely lift the drive wheels off the floor. Put blocks of wood under the frame so the both drive wheels are free to turn.

1. Begin this procedure with the key switch OFF and the park brake applied. Put blocks of wood under the drive wheels so that the wheels are free to turn.
2. Disconnect the battery.
3. Disconnect Logics connectors P1, P2, and P3. Remove the Logics from the truck.
4. Discharge the head capacitors.
5. Disconnect the module connector (P20 for the Traction Module, P4 for the Pump Module).
6. Remove the four center bus bars.
7. Remove the six module mounting bolts.
8. Gently lift the module away from the control panel.
9. To replace the module, wipe clean the back of the replacement module and the control panel.
10. Apply an even and thin coat of 5P8937 Thermal Joint Compound to the back of the module.
11. Position the module on the control panel.
12. Reinstall the six module mounting bolts.
13. Reinstall the four center bus bars.
14. Reconnect the module connector (P20 or P4).
15. Reinstall Logics and reconnect Logics connectors P1, P2, and P3.



Full Version Available

Mitsubishi FBP20 36V,48V - TR3500 Forklift Service Manual (99759-50100)

Mitsubishi FBP20 36V,48V - TR3500 Forklift service manual PDF, covers drive, mast, hydraulics, wiring, and diagnostics. Instant PDF download.

VIEW THE FULL MANUAL

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