

P30 console machine control malfunction repair (errors 80 – 83)

Applies to

Product: P30 consoles

Mfg. Date: units prior to 8/17/2015

Issue/Symptoms

The P30 machine control may appear to malfunction due to intermittent connections causing error event codes 80 thru 83 to be logged.

- During a workout the incline may stop at the current level. Error 80 or 81 will scroll and a power cycle will be required to clear the error.
- During a workout, SPEED or RESISTANCE may start decreasing by min increments (0.1 base units) upon user machine control changes. Error 82 or 83 will scroll and a power cycle will be required to clear the error.
- The machine controller may lose functionality causing "P30 Machine Control Errors" codes 80 thru 83 to be logged.

Resolution

Apply dielectric grease to the P30 machine control cable connectors.

Tools Required

- #2 Phillips Screwdriver

Parts required

QTY	Part Number	Description
1	NAPA Auto Parts 765-1190 (or equivalent)*	Dielectric Grease

Note: * equivalent dielectric grease can be substituted.

Procedure

Review entire procedure before starting.



Video: [P30 machine control cable repair \(errors 80 - 83\)](#)

- 1 Remove power from the base unit.
- 2 Remove the P30 from the base.
- 3 Remove the P30 top cap rear cover, the HR access door, and the console access panel.
- 4 Disconnect the HR board connector and remove the rear cover.
- 5 Disconnect the machine control cable connector from the machine control PCA connector. Apply dielectric grease into each female pin of the machine control cable connector housing. Wipe excess grease from the connector housing and reconnect. Attach connector so that the yellow wire aligns with pin 1 of the PCA connection.



Note: Use fingertip to press grease into and completely fill each pin.

- 6 Disconnect the machine control cable connector from the Upper PCA "Machine Control" (J4) connection. Repeat step 4 and completely fill each female connector housing pin with grease. Wipe excess grease from the connector housing and reconnect. Attach connector so that the yellow wire aligns with pin 1 of the PCA connection. Reapply the cable routing Kapton tape.
- 7 Replace the removed console covers. Make sure to reconnect the HR cable connector.
- 8 Reinstall the console onto the base unit.

- 9 Connect power and verify operation of the machine INCLINE and SPEED/RESISTANCE controls.
 - a Go to Diagnostics Hardware Validation mode and select Keyboard Test.
 - b Slowly move the INCLINE control approximately half way until the first INCLINE LED switches OFF, pause, and continue movement to maximum and verify the second LED switches OFF. If the LEDs do not switch OFF there is a problem with the machine control. Perform this test for both increase and decrease directions.
 - c Repeat step 9b keyboard test for the SPEED/RESISTANCE control.
 - d Press and hold the PAUSE key to exit Diagnostic Hardware Validation mode.
 - e Operate the INCLINE control through the entire range from min to max levels.
 - f Operate the SPEED/RESISTANCE control through the entire range from min to max value
 - g Verify the HR function.
- 10 Verify exercise equipment operation and return to service.

Number	Description
1	Upper PCA
2	Machine Control Cable
3	Machine Control Assembly
4	Machine Control PCA
5	Upper PCA Machine Control (J4) Connector

