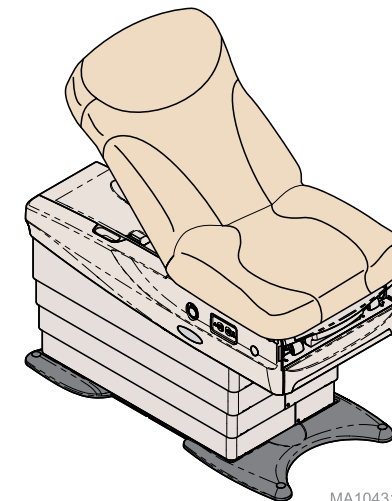




**Theory of Operation:
Barrier-Free® Exam Chair**
626 (-001 /-002 /-003 /-004 /-005 /-006) 627 (-011)

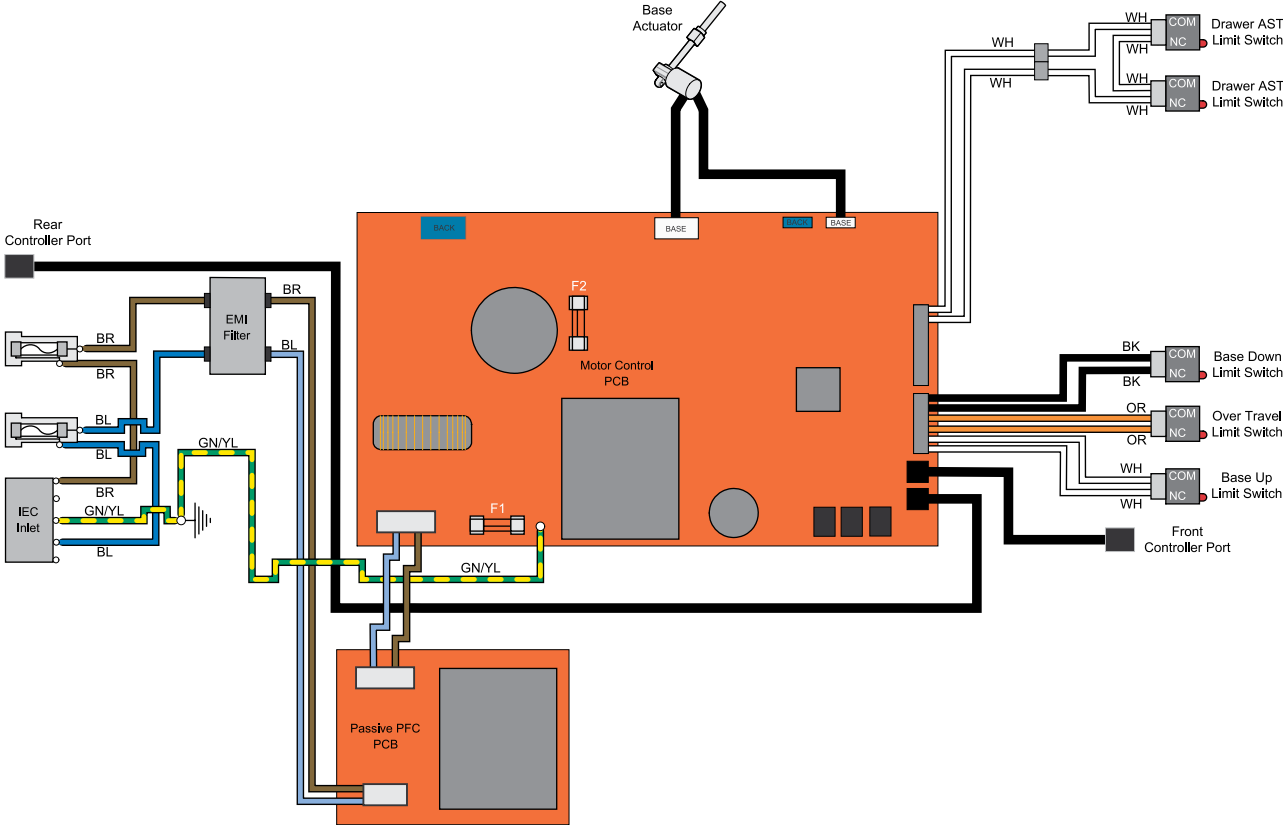


MA10431i

Model Numbers	Description	Serial Numbers:	Refer To:
626 (-001 /-002)	Base Up / Down Function	all	Base Up / Down Function
626 (-001 /-002)	Back Up / Down Function	all	Back Up / Down Function
626 (-003 /-004)	Base Up / Down Function	all	Base Up / Down Function
626 (-003 /-004)	Back Up / Down Function	all	Back Up / Down Function
626 (-005 /-006)	Base Up / Down Function	all	Base Up / Down Function
626 (-005 /-006)	Back Up / Down Function	all	Back Up / Down Function
627-011	Base Up / Down Function	all	Base Up / Down Function
627-011	Back Up / Down Function	all	Back Up / Down Function
626 (-001 /-002)	Table Receptacles	all	Table Receptacles
626 (-003 /-004 /-005 /-006)	Table Receptacles	all	Table Receptacles
626 (all)	Drawer Heater	all	Drawer Heater

Base UP / DOWN Function / 626 (-001 /-002)

This illustration shows only the components that affect the Base UP / DOWN function. Refer to the following page for a detailed description of Base UP / DOWN operation.



MA10422i

Base UP / DOWN Function 626 (-001 /-002)

Power to Foot / Hand Control

Line voltage (115 VAC) is supplied thru two primary fuses located at the table base.

The 115 VAC is sent thru the Passive PFC board to the Motor Control PC board.

The Motor Control PC board reduces the voltage to 3.3 VDC which is supplied to the foot / hand control.

Fuse F1 on the Motor Control PC board protects the transformer on the board and the electronics supplied by the transformer.

Base Up Operation

When the Base Up function is activated, the foot / hand control sends a command to the Motor Control PC Board.

The Motor Control PC board supplies the correct voltage to the Base actuator motor.

Fuse F2 on the Motor Control PC board protects the Base actuator motor.

The actuator motor runs and raises the table.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Base Up limit switch is tripped.
4. Overtravel limit switch is tripped.
5. Overcurrent protection tripped.

Base Down Operation

When the Base Down function is activated, the foot / hand control sends a command to the Motor Control PC board.

The Motor Control PC board supplies the correct voltage to the Base actuator motor.

Fuse F2 on the Motor Control PC board protects the Base actuator motor.

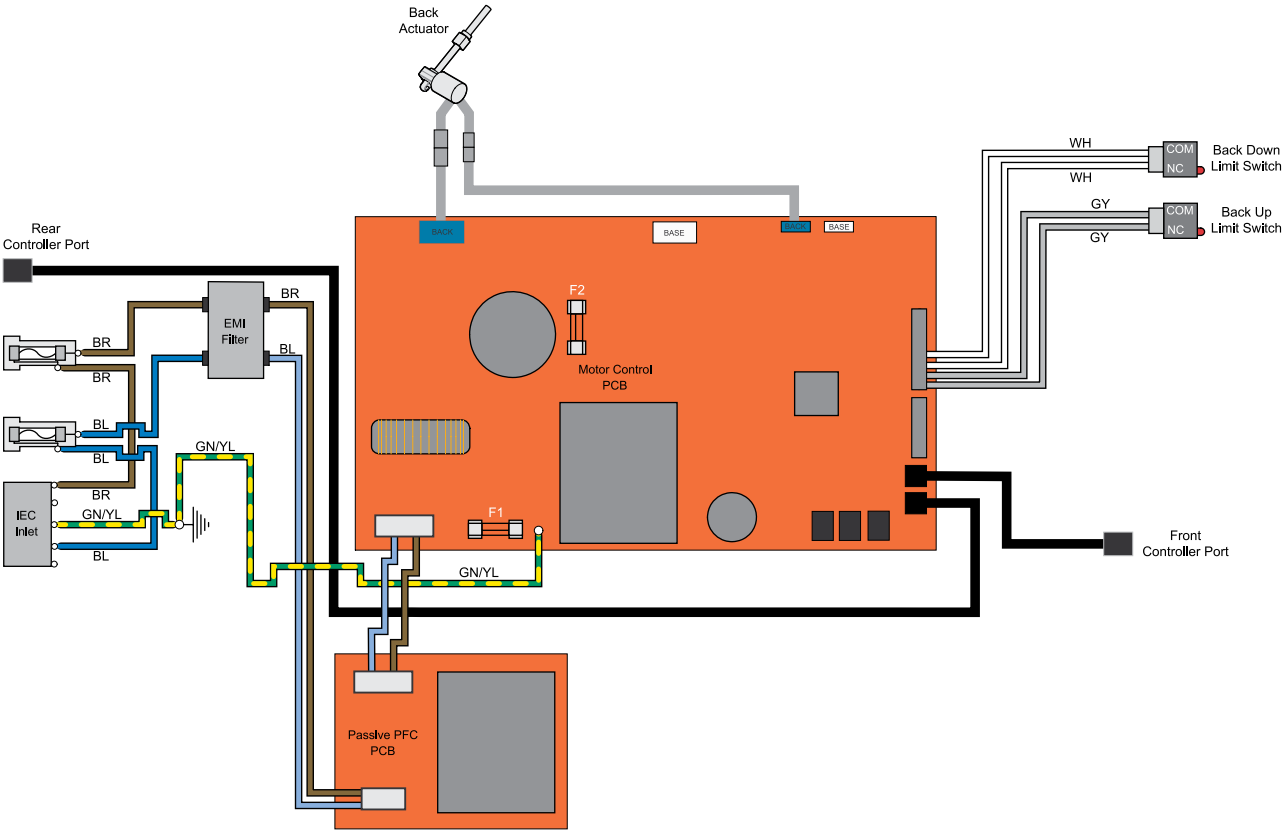
The actuator motor runs and lowers the table.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Base Down limit switch is tripped.
4. Active Sensing Technology™ activated.
5. Overcurrent protection tripped.

Back UP / DOWN Function 626 (-001 /-002)

This illustration shows only the components that affect the Back UP / DOWN function. Refer to the following page for a detailed description of Back UP / DOWN operation.



MA104231

Back UP / DOWN Function 626 (-001 /-002)

Power to Foot / Hand Control

Line voltage (115 VAC) is supplied thru two primary fuses located at the table base.

The 115 VAC is sent thru the Passive PFC board to the Motor Control PC board.

The Motor Control PC board reduces the voltage to 3.3 VDC which is supplied to the foot / hand control.

Fuse F1 on the Motor Control PC board protects the transformer on the board and the electronics supplied by the transformer.

Back Up Operation

When the Back Up function is activated, the foot / hand control sends a command to the Motor Control PC Board.

The Motor Control PC board supplies the correct voltage to the Back actuator motor.

Fuse F2 on the Motor Control PC board protects the Back actuator motor.

The actuator motor runs and raises the Back section.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Back Up limit switch is tripped.
4. Overcurrent protection tripped.

Back Down Operation

When the Back Down function is activated, the foot / hand control sends a command to the Motor Control PC board.

The Motor Control PC board supplies the correct voltage to the Back actuator motor.

Fuse F2 on the Motor Control PC board protects the Back actuator motor.

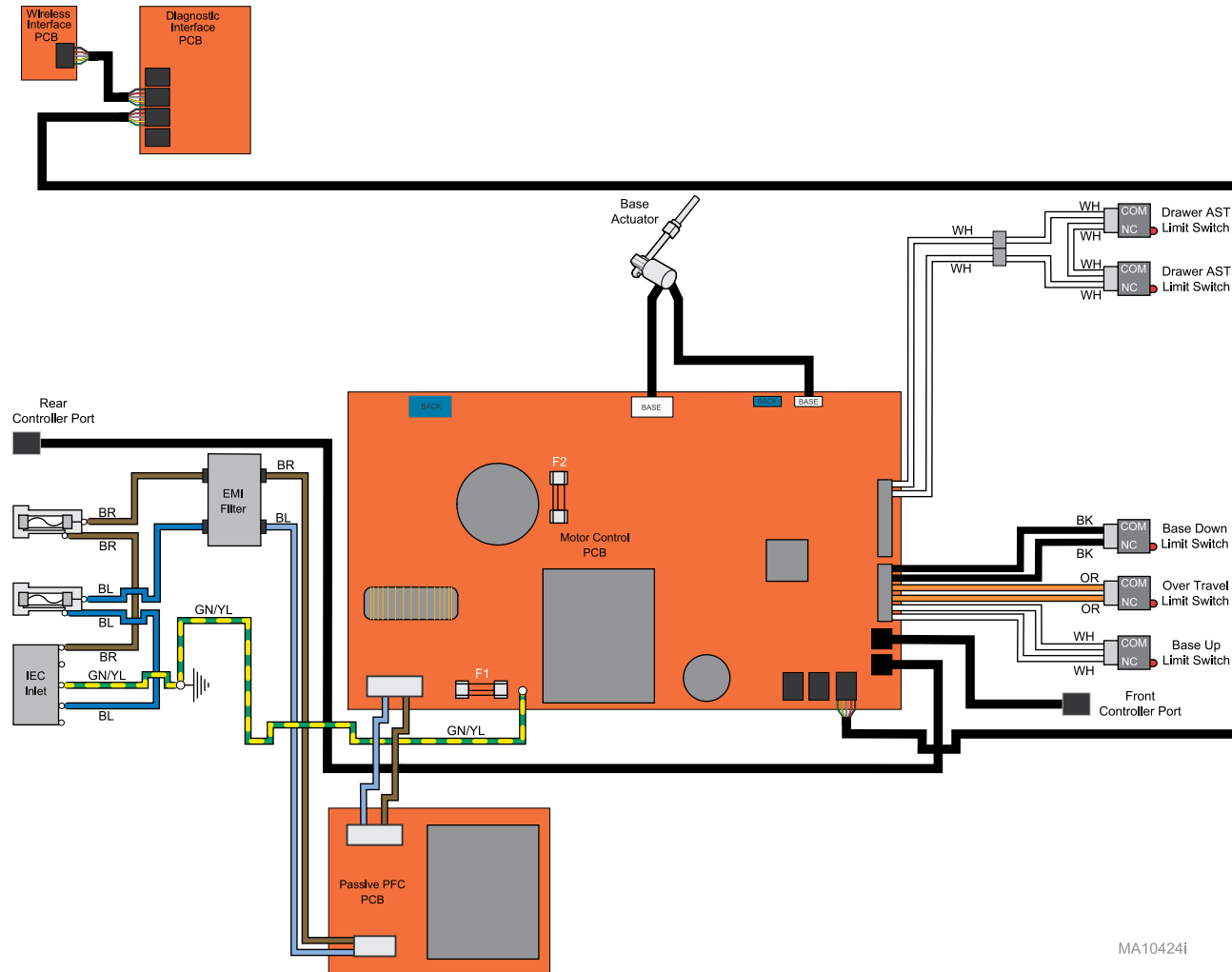
The actuator motor runs and lowers the Back section.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Back Down limit switch is tripped.
4. Overcurrent protection tripped.

Base UP / DOWN Function 626 (-003 /-004)

This illustration shows only the components that affect the Base UP / DOWN function. Refer to the following page for a detailed description of Base UP / DOWN operation.



Base UP / DOWN Function 626 (-003 /-004)

Power to Foot / Hand Control

Line voltage (115 VAC) is supplied thru two primary fuses located at the table base.

The 115 VAC is sent thru the Passive PFC board to the Motor Control PC board. The Motor Control PC board reduces the voltage to 12 VDC which is supplied thru the Diagnostic Interface PC board to the Wireless Interface PC board. The Wireless Interface PC board transmits a signal to the foot / hand controls.

Fuse F1 on the Motor Control PC board protects the transformer on the board and the electronics supplied by the transformer.

Base Up Operation

When the Base Up function is activated, the foot / hand control transmits a signal to the Wireless Interface PC board.

That command is sent thru the Diagnostic Interface PC board to the Motor Control PC Board. The Motor Control PC board supplies the correct voltage to the Base actuator motor.

Fuse F2 on the Motor Control PC board protects the Base actuator motor.

The actuator motor runs and raises the table.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Base Up limit switch is tripped.
4. Overtravel limit switch is tripped.
5. Overcurrent protection tripped.

Base Down Operation

When the Base Down function is activated, the foot / hand control transmits a signal to the Wireless Interface PC board.

That command is sent thru the Diagnostic Interface PC board to the Motor Control PC Board. The Motor Control PC board supplies the correct voltage to the Base actuator motor.

Fuse F2 on the Motor Control PC board protects the Base actuator motor.

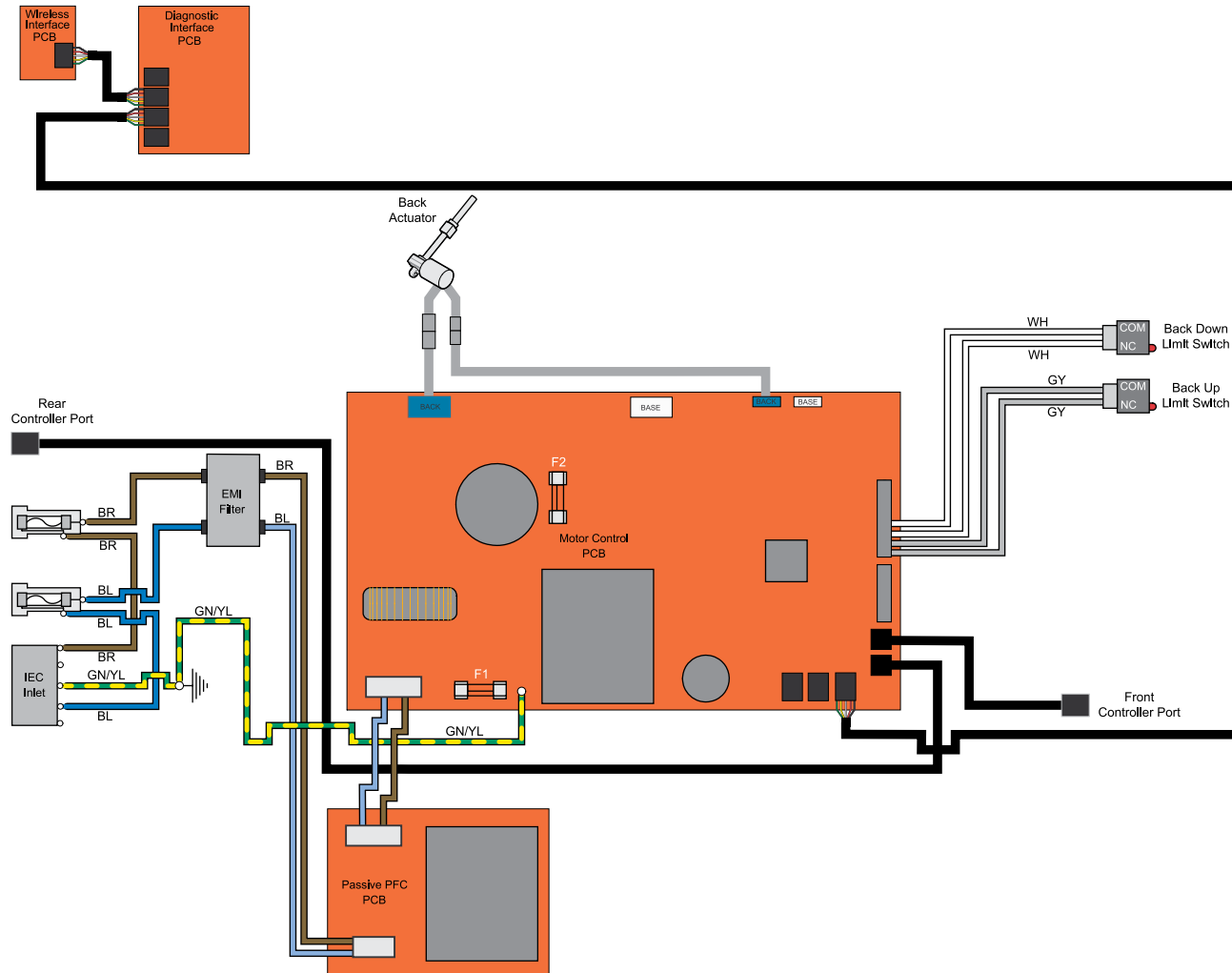
The actuator motor runs and lowers the table.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Base Down limit switch is tripped.
4. Active Sensing Technology™ activated.
5. Overcurrent protection tripped.

Back UP / DOWN Function 626 (-003 /-004)

This illustration shows only the components that affect the Back UP / DOWN function. Refer to the following page for a detailed description of Back UP / DOWN operation.



MA10425i

Back UP / DOWN Function 626 (-003 /-004)

Power to Foot / Hand Control

Line voltage (115 VAC) is supplied thru two primary fuses located at the table base.

The 115 VAC is sent thru the Passive PFC board to the Motor Control PC board. The Motor Control PC board reduces the voltage to 12 VDC which is supplied thru the Diagnostic Interface PC board to the Wireless Interface PC board. The Wireless Interface PC board transmits a signal to the foot / hand controls.

Fuse F1 on the Motor Control PC board protects the transformer on the board and the electronics supplied by the transformer.

Back Up Operation

When the Back Up function is activated, the foot / hand control transmits a signal to the Wireless Interface PC board.

That command is sent thru the Diagnostic Interface PC board to the Motor Control PC Board. The Motor Control PC board supplies the correct voltage to the Back actuator motor.

Fuse F2 on the Motor Control PC board protects the Back actuator motor.

The actuator motor runs and raises the Back section.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Back Up limit switch is tripped.
4. Overcurrent protection tripped.

Back Down Operation

When the Back Down function is activated, the foot / hand control transmits a signal to the Wireless Interface PC board.

That command is sent thru the Diagnostic Interface PC board to the Motor Control PC Board. The Motor Control PC board supplies the correct voltage to the Back actuator motor.

Fuse F2 on the Motor Control PC board protects the Back actuator motor.

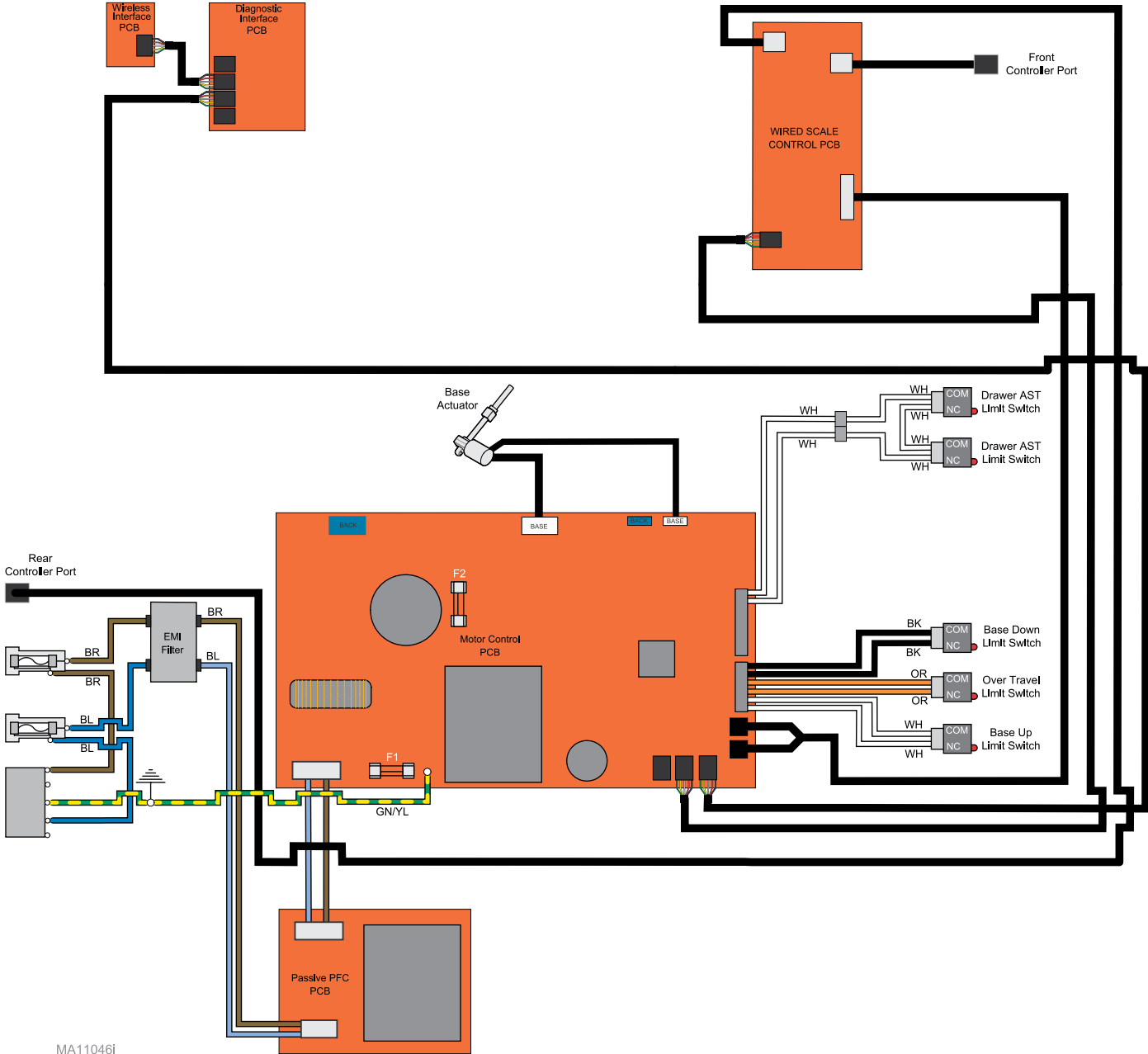
The actuator motor runs and lowers the Back section.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Back Down limit switch is tripped.
4. Overcurrent protection tripped.

Base UP / DOWN Function 626 (-005 /-006)

This illustration shows only the components that affect the Base UP / DOWN function. Refer to the following page for a detailed description of Base UP / DOWN operation.



MA11046i

Base UP / DOWN Function 626 (-005 /-006)

Power to Foot / Hand Control

Line voltage (115 VAC) is supplied thru two primary fuses located at the table base.

The 115 VAC is sent thru the Passive PFC board to the Motor Control PC board.

The Motor Control PC board reduces the voltage to 3.3 VDC which is supplied thru the Wired Scale Control PC board to the foot / hand control.

Fuse F1 on the Motor Control PC board protects the transformer on the board and the electronics supplied by the transformer.

Base Up Operation

When the Base Up function is activated, the foot / hand control sends a command thru the Wired Scale Control PC board to the Motor Control PC Board.

The Motor Control PC board supplies the correct voltage to the Base actuator motor.

Fuse F2 on the Motor Control PC board protects the Base actuator motor.

The actuator motor runs and raises the table.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Base Up limit switch is tripped.
4. Overtravel limit switch is tripped.
5. Overcurrent protection tripped.

Base Down Operation

When the Base Down function is activated, the foot / hand control sends a command thru the Wired Scale Control PC board to the Motor Control PC board.

The Motor Control PC board supplies the correct voltage to the Base actuator motor.

Fuse F2 on the Motor Control PC board protects the Base actuator motor.

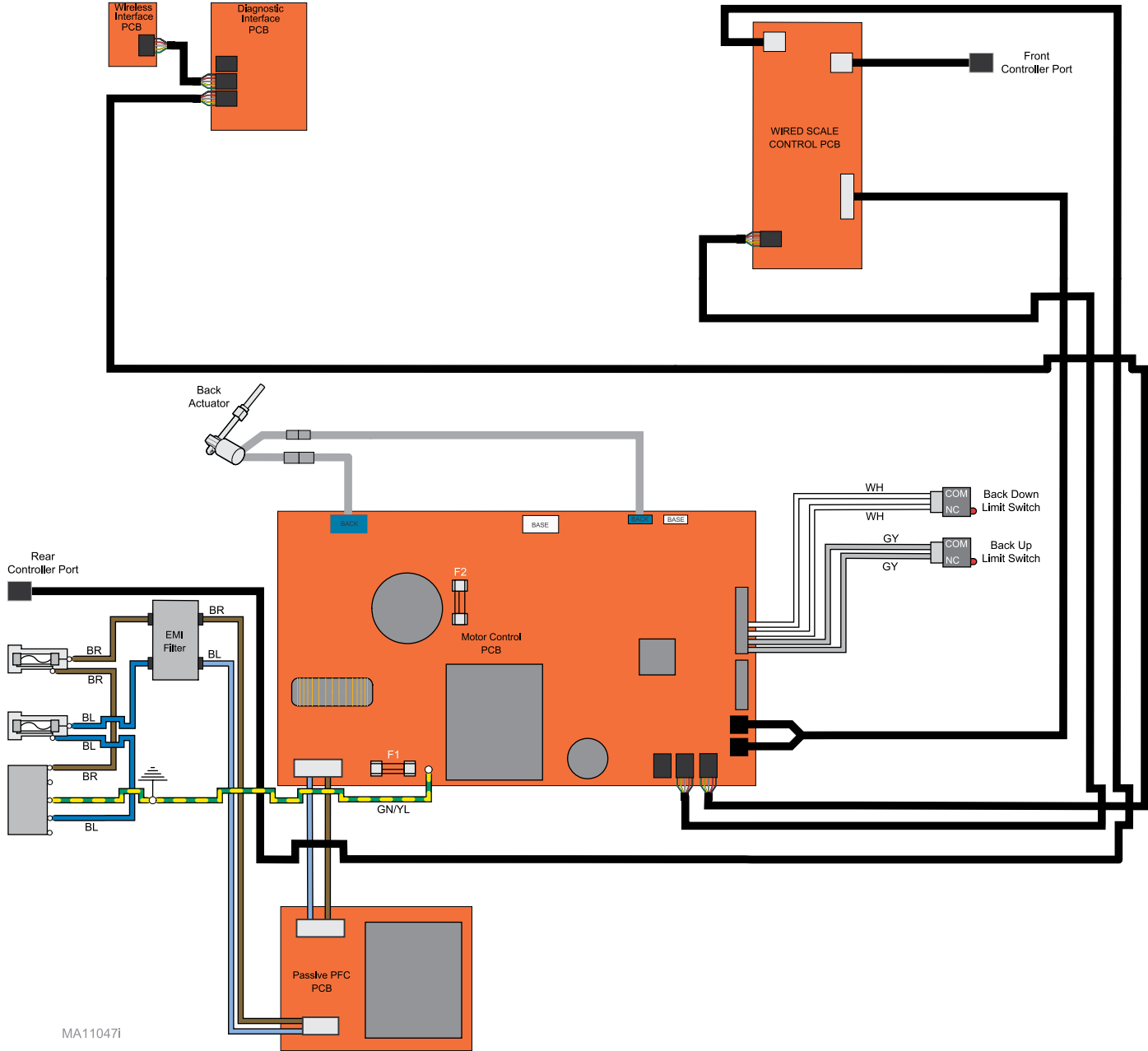
The actuator motor runs and lowers the table.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Base Down limit switch is tripped.
4. Active Sensing Technology™ activated.
5. Overcurrent protection tripped.

Back UP / DOWN Function 626 (-005 /-006)

This illustration shows only the components that affect the Back UP / DOWN function. Refer to the following page for a detailed description of Back UP / DOWN operation.



MA110471

Back UP / DOWN Function 626 (-005 /-006)

Power to Foot / Hand Control

Line voltage (115 VAC) is supplied thru two primary fuses located at the table base.

The 115 VAC is sent thru the Passive PFC board to the Motor Control PC board.

The Motor Control PC board reduces the voltage to 3.3 VDC which is supplied thru the Wired Scale Control PC board to the foot / hand control.

Fuse F1 on the Motor Control PC board protects the transformer on the board and the electronics supplied by the transformer.

Back Up Operation

When the Back Up function is activated, the foot / hand control sends a command thru the Wired Scale Control PC board to the Motor Control PC Board.

The Motor Control PC board supplies the correct voltage to the Back actuator motor.

Fuse F2 on the Motor Control PC board protects the Back actuator motor.

The actuator motor runs and raises the Back section.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Back Up limit switch is tripped.
4. Overcurrent protection tripped.

Back Down Operation

When the Back Down function is activated, the foot / hand control sends a command thru the Wired Scale Control PC board to the Motor Control PC Board.

The Motor Control PC board supplies the correct voltage to the Back actuator motor.

Fuse F2 on the Motor Control PC board protects the Back actuator motor.

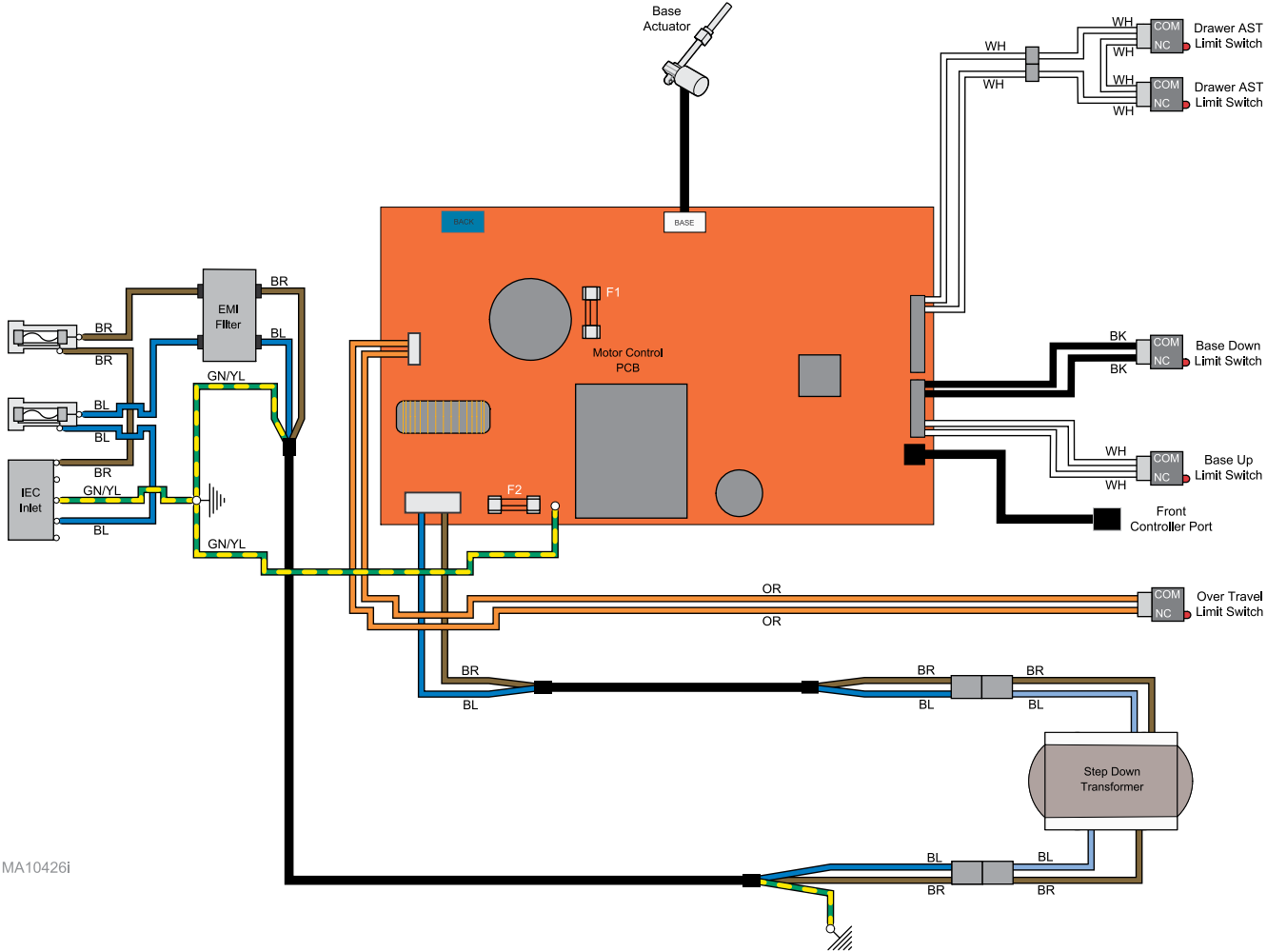
The actuator motor runs and lowers the Back section.

Actuator motor runs until:

1. Foot / Hand control button is released.
2. Stop button is pressed.
3. Back Down limit switch is tripped.
4. Overcurrent protection tripped.

Base UP / DOWN Function 627 (-011)

This illustration shows only the components that affect the Base UP / DOWN function. Refer to the following page for a detailed description of Base UP / DOWN operation.



Base UP / DOWN Function 627 (-011)

Power to Foot / Hand Control

Line voltage (230 VAC) is supplied thru two primary fuses located at the table base to a Step Down transformer that reduces the line voltage to 115 VAC before it reaches to Motor Control PC board.

The 115 VAC is sent to the Motor Control PC board. The Motor Control PC board reduces the voltage to 3.3 VDC which is supplied to the foot control

Fuse F2 on the Motor Control PC board protects the transformer on the board and the electronics supplied by the transformer.

Base Up Operation

When the Base Up function is activated, the foot control sends a command to the Motor Control PC Board.

The Motor Control PC board supplies the correct voltage to the Base actuator motor.

Fuse F1 on the Motor Control PC board protects the Base actuator motor.

The actuator motor runs and raises the table.

Actuator motor runs until:

1. Foot control button is released.
2. Base Up limit switch is tripped.
3. Overtravel limit switch is tripped.
4. Overcurrent protection tripped.

Base Down Operation

When the Base Down function is activated, the foot control sends a command to the Motor Control PC board.

The Motor Control PC board supplies the correct voltage to the Base actuator motor.

Fuse F1 on the Motor Control PC board protects the Base actuator motor.

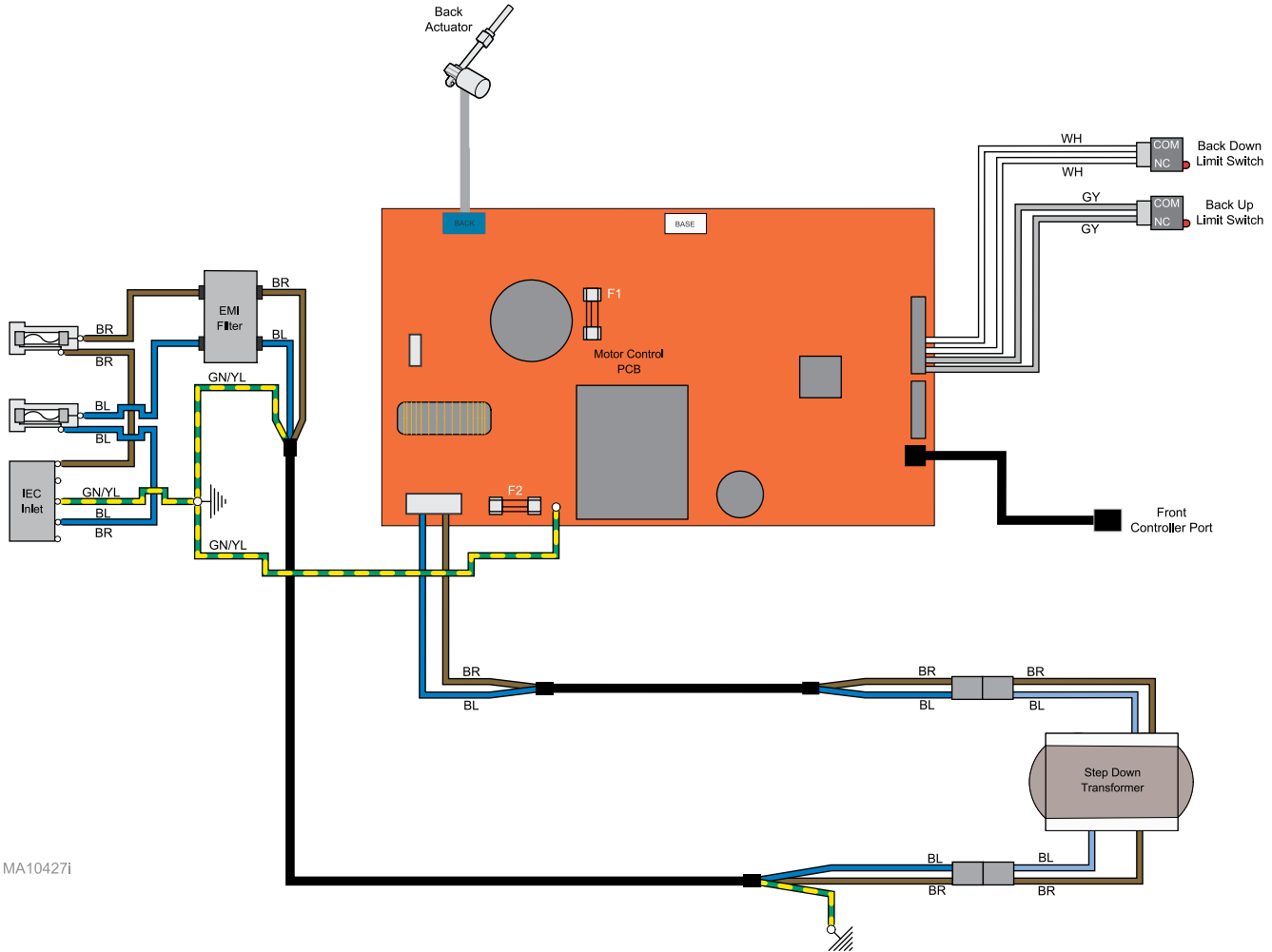
The actuator motor runs and lowers the table.

Actuator motor runs until:

1. Foot control button is released.
2. Base Down limit switch is tripped.
3. Active Sensing Technology™ activated.
4. Overcurrent protection tripped.

Back UP / DOWN Function 627 (-011)

This illustration shows only the components that affect the Back UP / DOWN function. Refer to the following page for a detailed description of Back UP / DOWN operation.



MA10427i

Back UP / DOWN Function 627 (-011)

Power to Foot / Hand Control

Line voltage (230 VAC) is supplied thru two primary fuses located at the table base to a Step Down transformer that reduces the line voltage to 115 VAC before it reaches to Motor Control PC board.

The 115 VAC is sent to the Motor Control PC board. The Motor Control PC board reduces the voltage to 3.3 VDC which is supplied to the foot control

Fuse F2 on the Motor Control PC board protects the transformer on the board and the electronics supplied by the transformer.

Back Up Operation

When the Back Up function is activated, the foot control sends a command to the Motor Control PC Board.

The Motor Control PC board supplies the correct voltage to the Back actuator motor.

Fuse F1 on the Motor Control PC board protects the Back actuator motor.

The actuator motor runs and raises the table.

Actuator motor runs until:

1. Foot control button is released.
2. Back Up limit switch is tripped.
3. Overtravel limit switch is tripped.
3. Overcurrent protection tripped.

Back Down Operation

When the Back Down function is activated, the foot control sends a command to the Motor Control PC board.

The Motor Control PC board supplies the correct voltage to the Back actuator motor.

Fuse F1 on the Motor Control PC board protects the Back actuator motor.

The actuator motor runs and lowers the table.

Actuator motor runs until:

1. Foot control button is released.
2. Back Down limit switch is tripped.
3. Active Sensing Technology™ activated.
4. Overcurrent protection tripped.

Table Receptacles 626 (-001 /-002)

This illustration shows only the components that affect the table receptacles. A detailed description of current flow during this function also appears below.

Table Receptacles

Line voltage (115 VAC) is supplied directly to the receptacles thru two inlet fuses, isolation transformer, and circuit breakers. [Voltage bypasses the PC Boards].

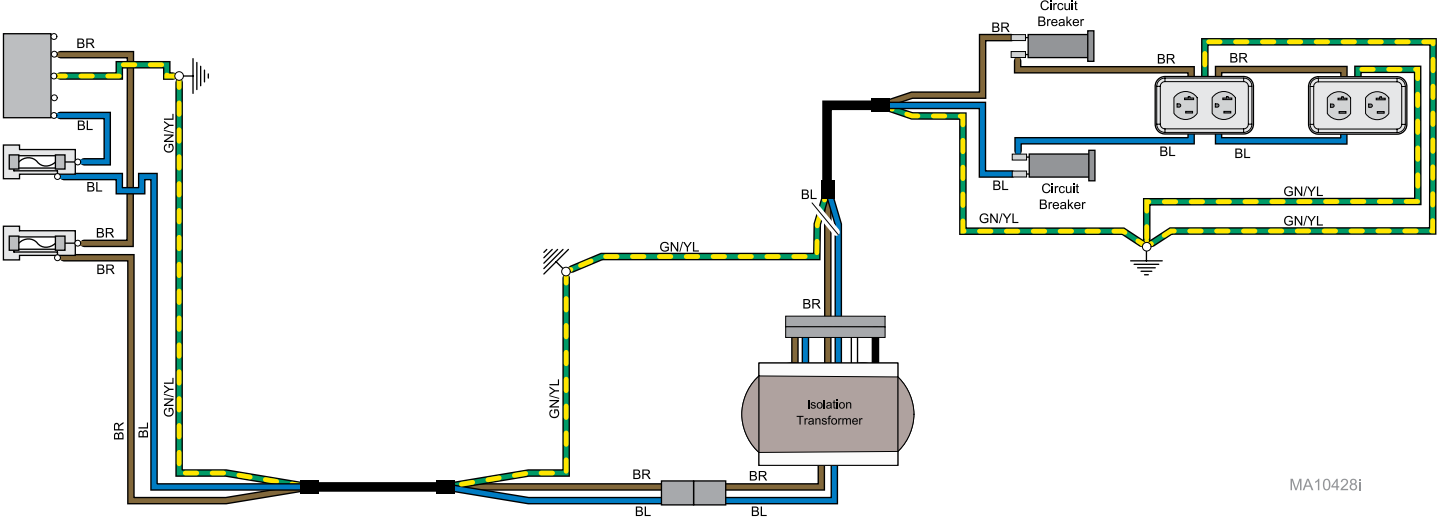
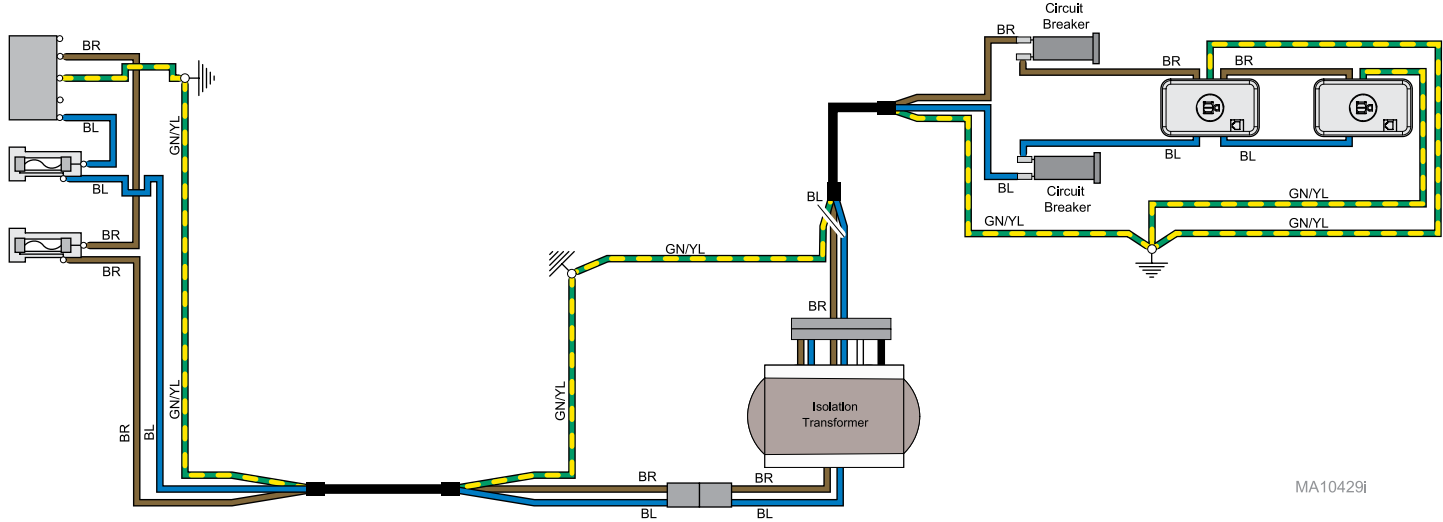


Table Receptacles 626 (-003 /-004 /-005 /-006)

This illustration shows only the components that affect the table receptacles. A detailed description of current flow during this function also appears below.

Table Receptacles

Line voltage (115 VAC) is supplied directly to the receptacles thru two inlet fuses, isolation transformer, and circuit breakers. [Voltage bypasses the PC Boards].



Drawer Heater Operation

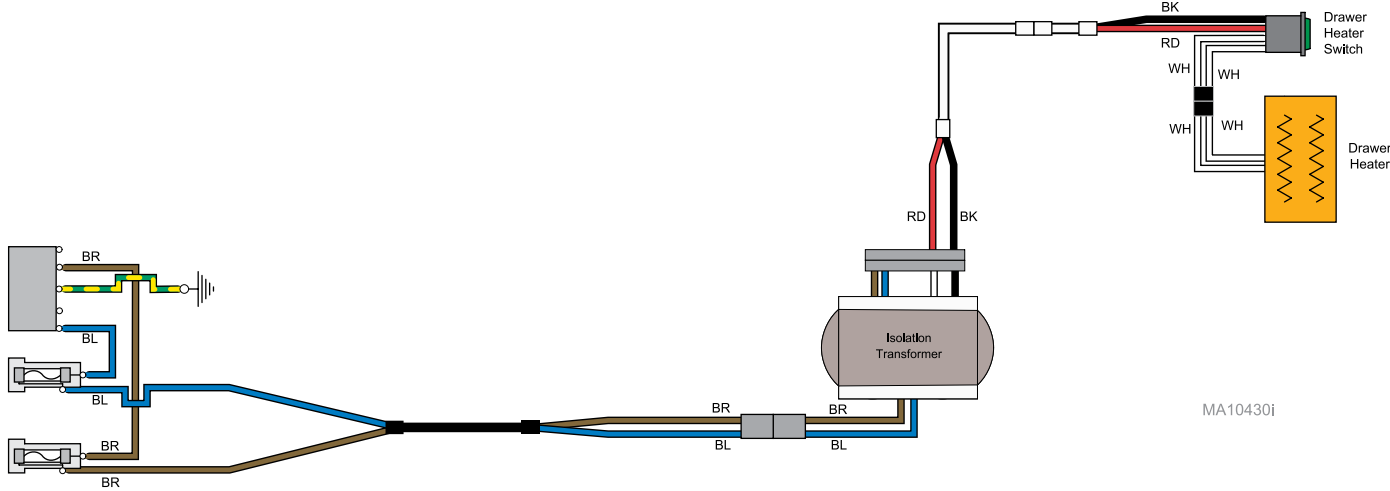
This illustration shows only the components that affect the drawer heater. A detailed description of current flow during this function also appears below.

Drawer Heater

Line voltage (115 VAC) is supplied directly to the Drawer Heater thru two inlet fuses, isolation transformer, and Drawer Heater switch.

[Voltage bypasses the PC Boards]

When the Drawer Heater switch is turned ON, current flows to the heater plate. When the heater plate is energized, it warms the contents of the drawer.





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