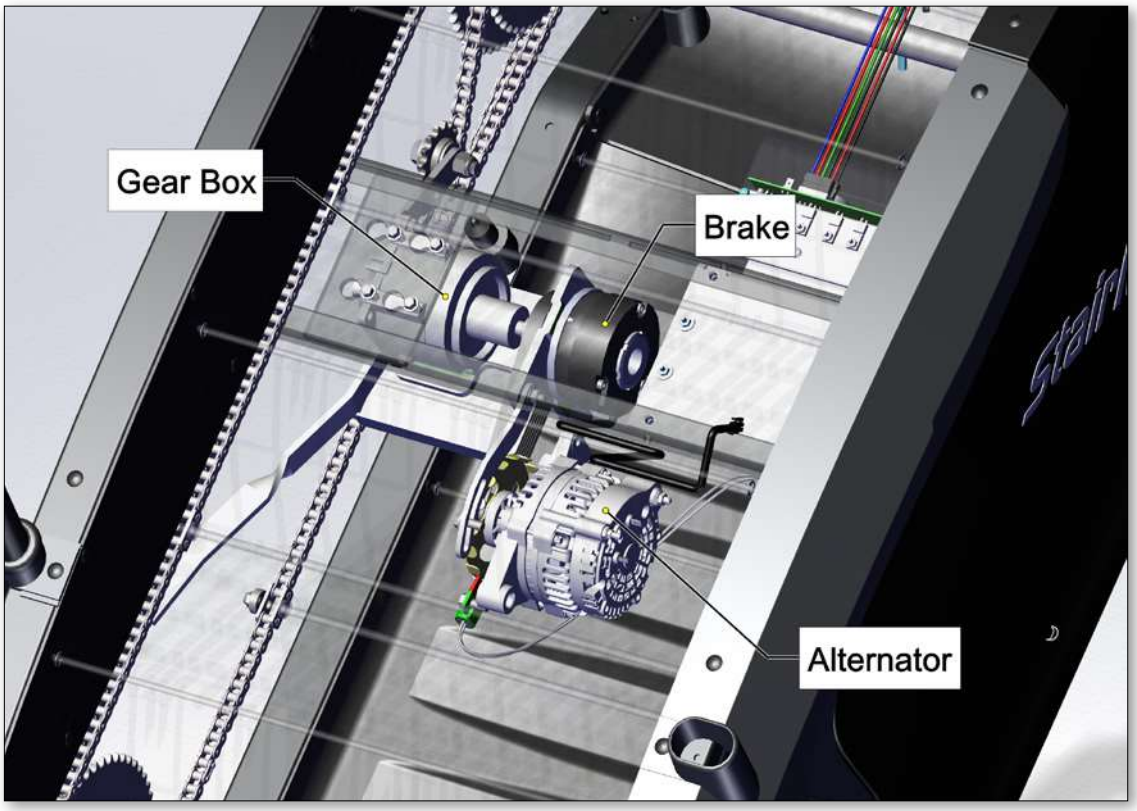
PART IDENTIFICATION & THEORY



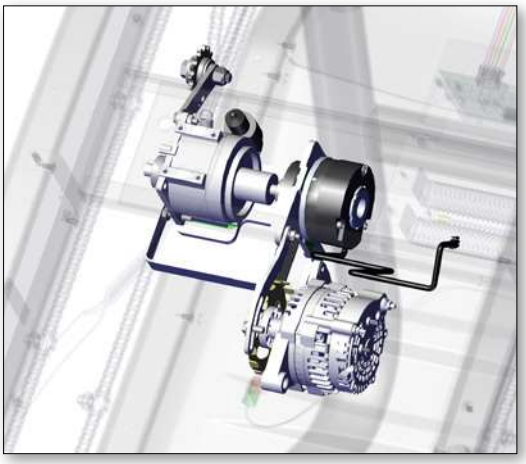
Resistance is applied to the steps of the machine by use of an alternator. 12VDC power from the lower board is fed into the alternator to control the amount of resistance it applies. The resistance system (alternator) connects the gearing system, or gear box of the machine via a poly-V belt.

I. Drive System

Engine Kit

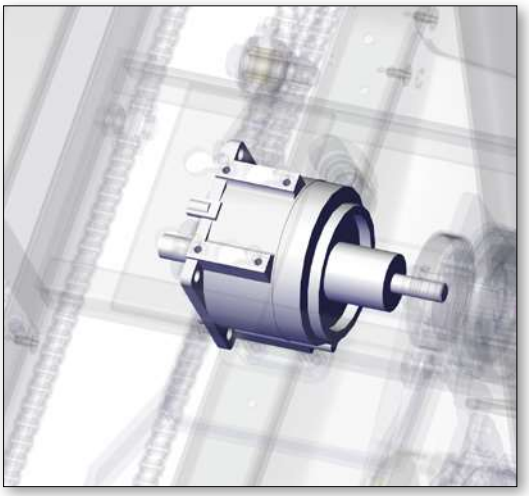
Part Number: 711-3510-KT

Consists of pre-calibrated gearbox, brake and alternator



Gearbox

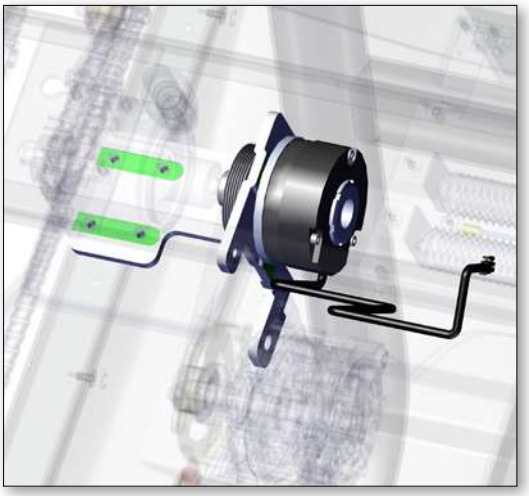
Part Number: 711-3334



Brake Kit

Part Number: 260-0958-KT

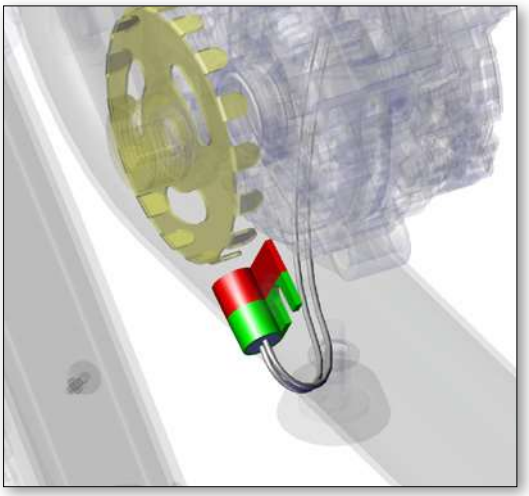
Diagram



Speed Sensor

Part Number: 140-3501

- LCB Connection: J1



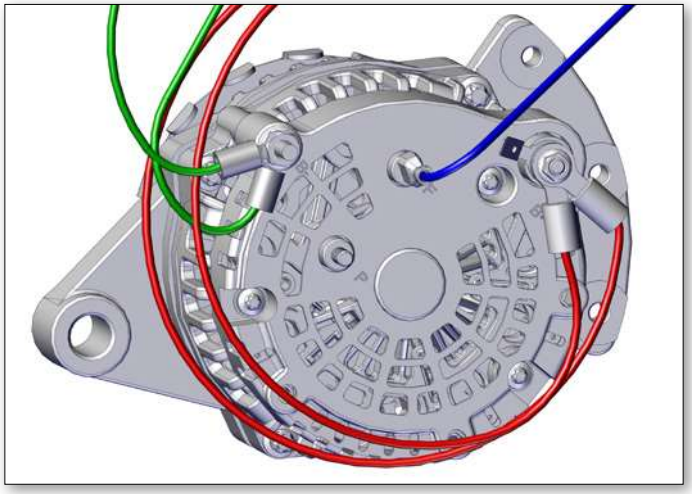
Alternator Assembly

Part Number: 711-3361

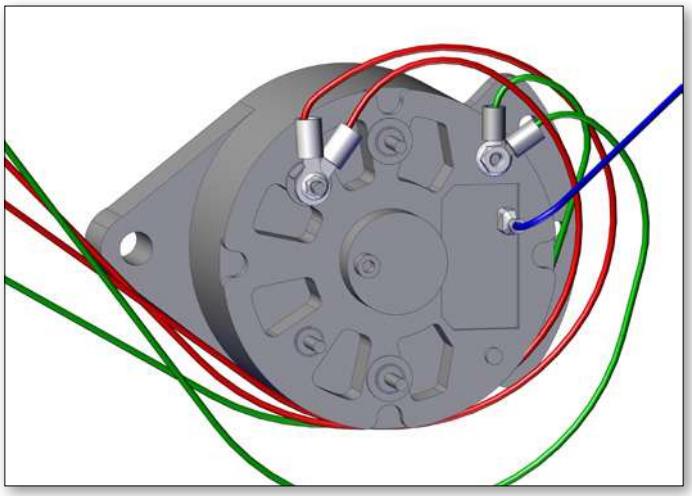
- +3 Volts control input supplied to LCB
- +12 Volts supplied from LCB
- Provides resistance to the unit

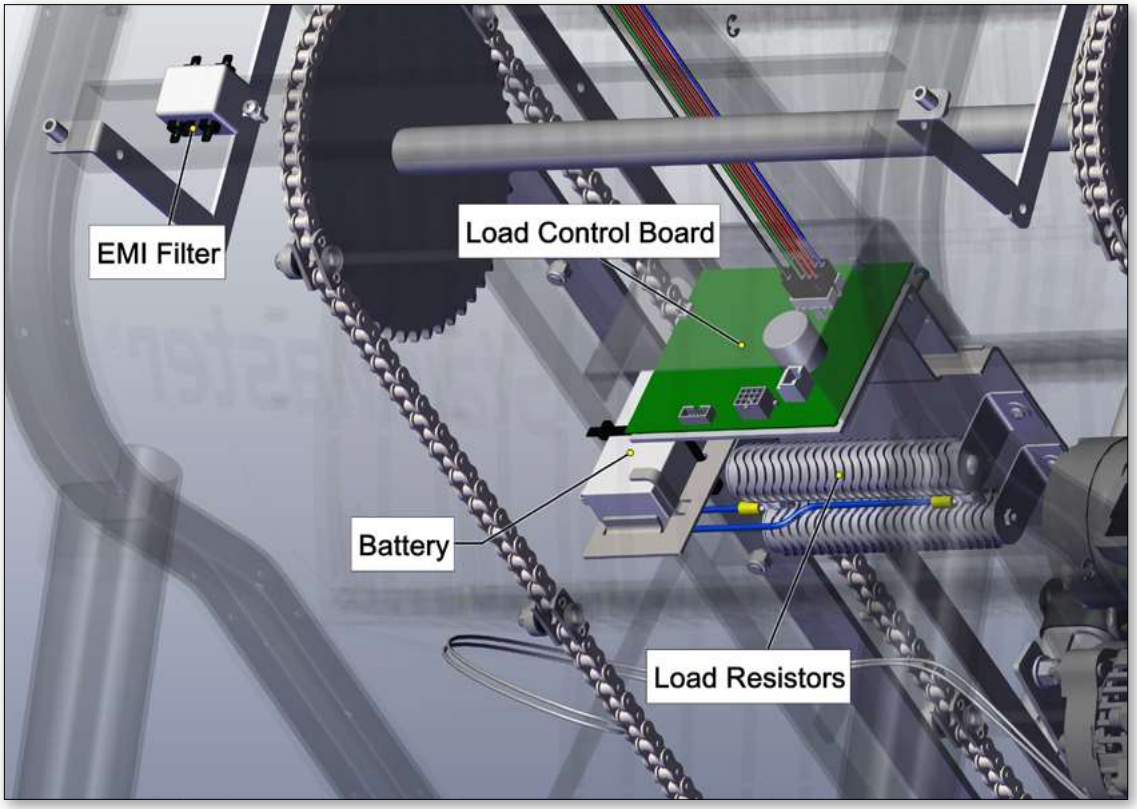
- Assembly may include alternator 260-0952 or SM22900. Wiring for both using harness 711-3351 is below.

260-0952 Alternator Wiring
- Blue to F
- Red to B+
- Green to B-



SM22900 Alternator Wiring
- Blue to FLD (BRN)
- Red to B+
- Green to GND





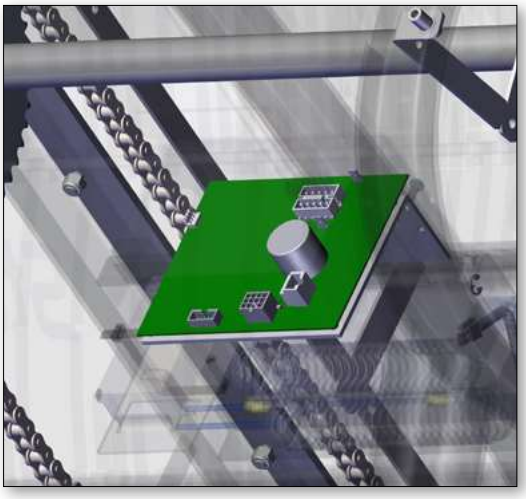
Power enters the system through a power converter brick plugged into the wall. It runs through an EMI filter into the LCB where it is distributed to the rest of the system based on console signals. The LCB is also connected to a pair of load resistors. The 6VDC battery on the 8G provides momentary power to the unit during startup and is recharged by the alternator.

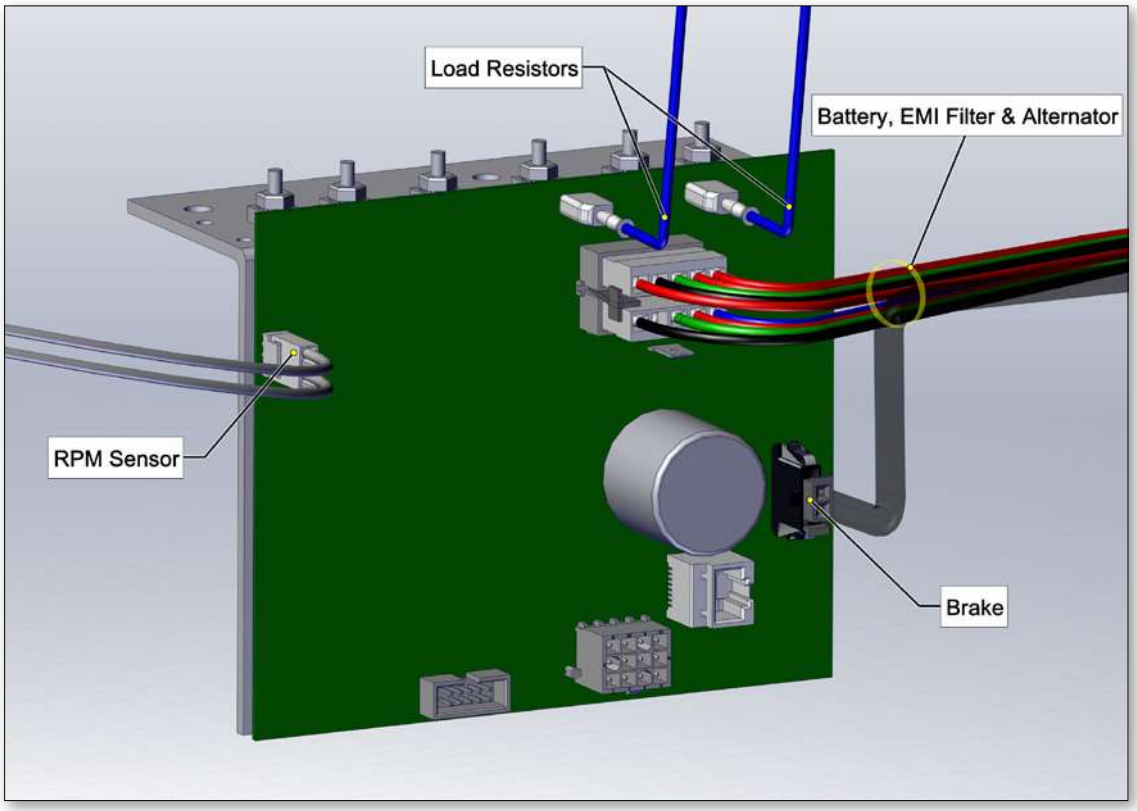
II. Power System

Load Control Board (LCB)

Part Number: 711-3461

Callouts





Connection Detail (Electrical)

Main Data Cable

Part Number: 711-3494

- LCB Connection: P1

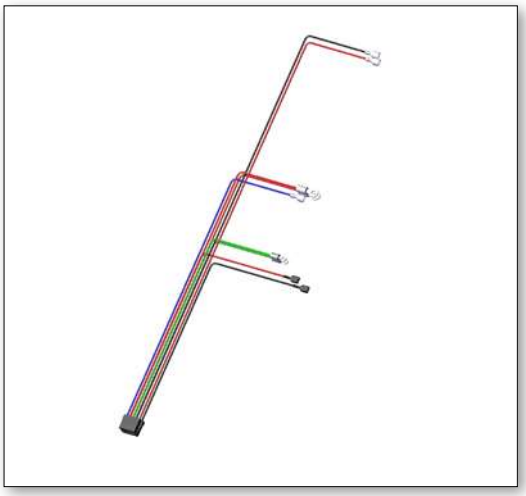
Pinout with Diagram

Alternator/EMI/Battery Cable

Part Number: 711-3351

- LCB Connection: J2

Pinout with Diagram



Power Input Cable

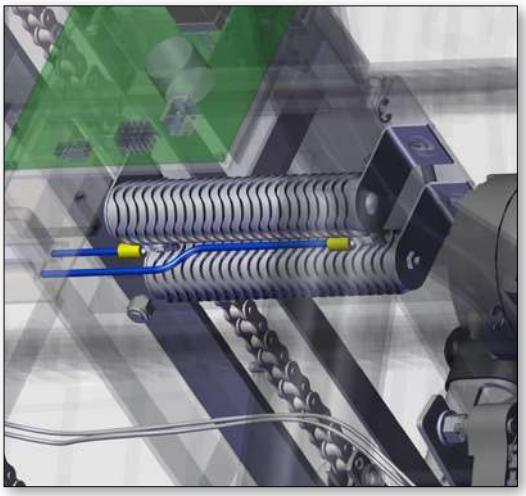
Part Number: 711-3495

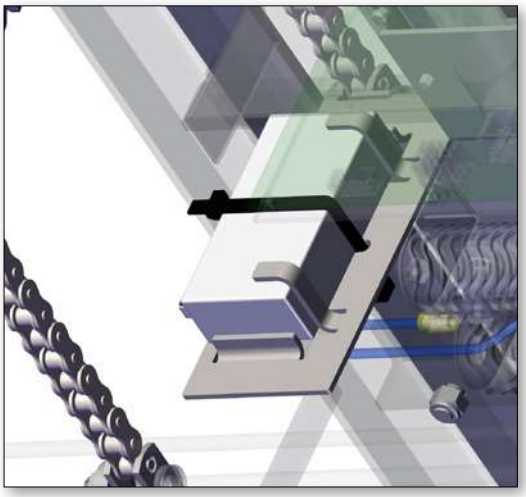
Pinout with Diagram

Load Resistors

Part Number: 711-3242

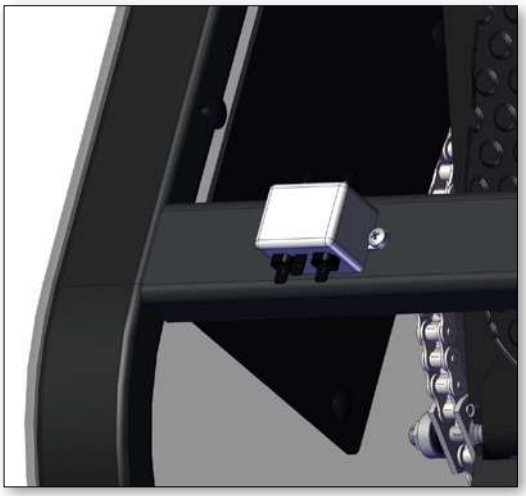
- LCB Connection: R1





Battery

Part Number: 580-0275 (Order PN 800-3102)

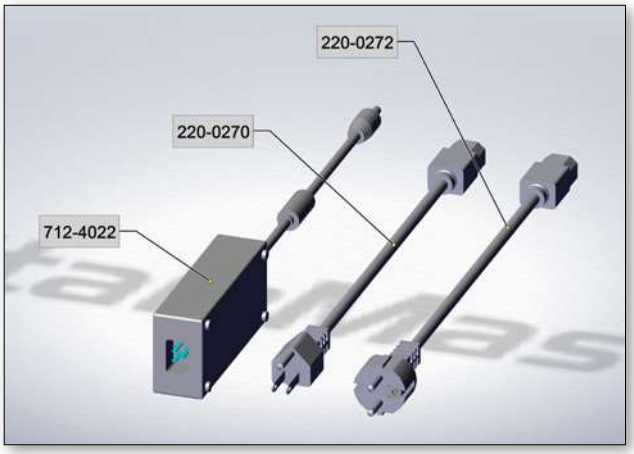


EMI Filter

Part Number: 440-0282

Power Supply

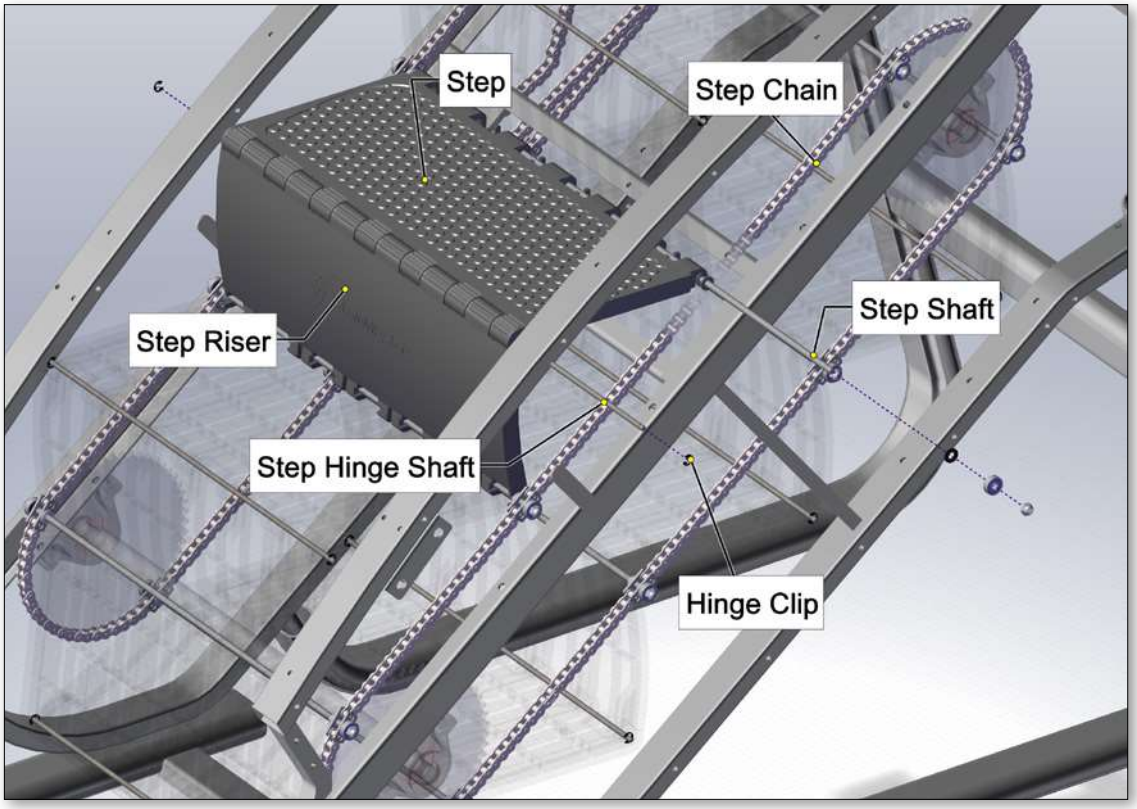
The external power supply is supplied with the unit and plugs into a standard 115 volt, 15 amp outlet, or a 220-240 volt 50Hz, 10 amp outlet. All major voltage plugs are available. The power supply converts the voltage and sends it to the 8G via a wire to the power inlet. The power inlet is located on the inside lower right leg of the machine.



Part Number: 712-4022

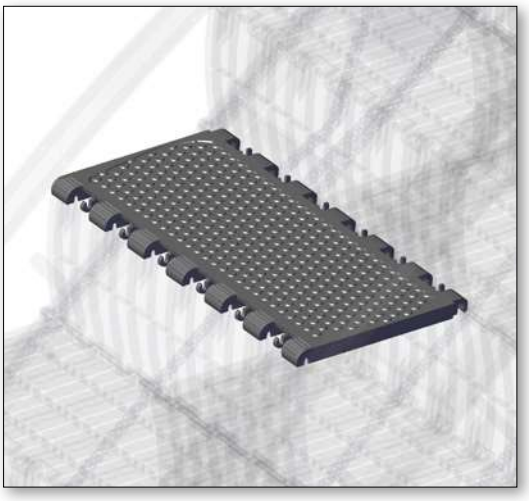
Power Supply Replacement Cables

NEMA 5-15 (US Default)	220-0270
CEE 7/7	220-0272
AS/NZS 3112	050-0231
NEMA 6-15	050-0233
BS1363	050-0235



The steps on the 8G are a composite plastic step with a rubber tread built into step top. The step top and kick plate are held together and to the step chains by step hinges, threaded step shafts, nylon spacers, bearings, washers, and bolts. As the steps rotate, bearings in the step shaft hardware ride down the rails on bearing plates. These bearing plates need to be greased with white lithium, or marine grease.

III. Step Hardware

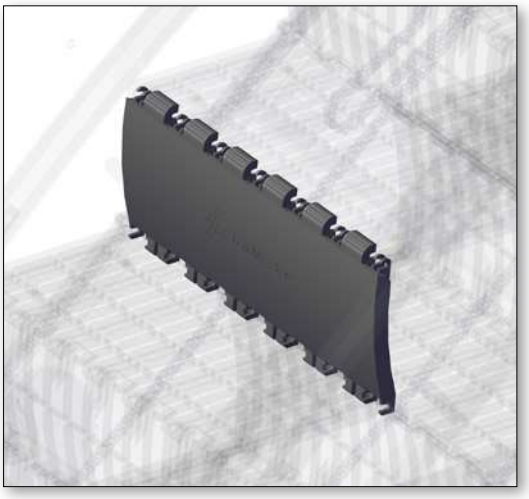


Step

Part Number: 711-3299

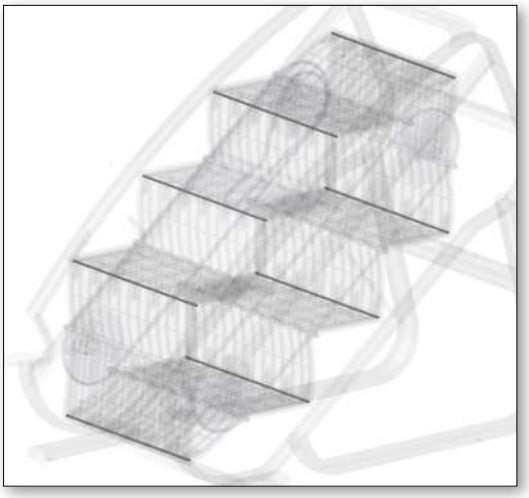
Step Riser

Part Number: 050-0032



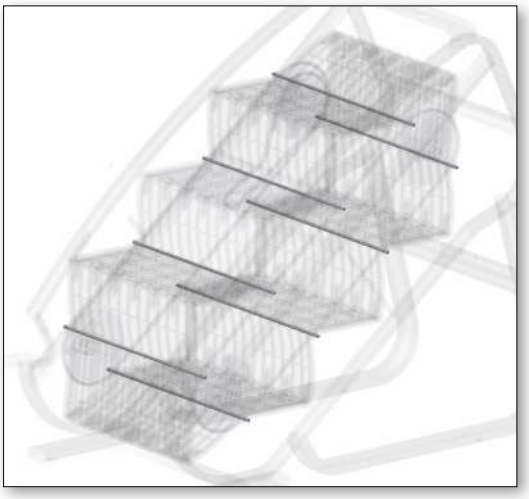
Step Hinge Shaft

Part Number: 711-3326



Step Shaft

Part Number: 711-3327



Hinge Clip

Part Number: 140-3256

Inner Washer (2 per group)

Part Number: 731-0294

Outer Washer

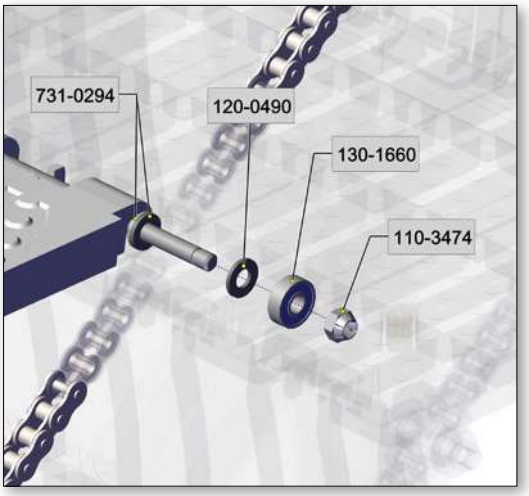
Part Number: 120-0490

Bearing

Part Number: 130-1660

Nut

Part Number: 110-3474

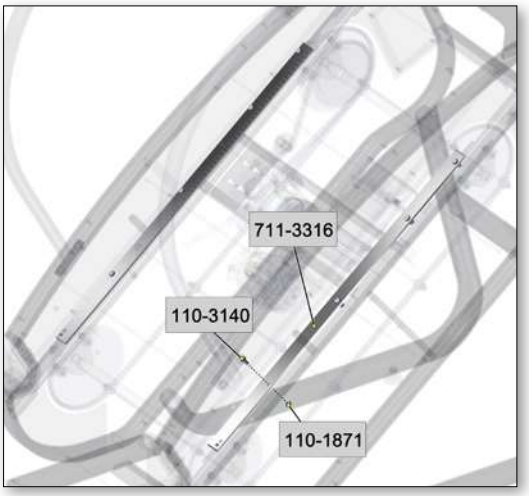


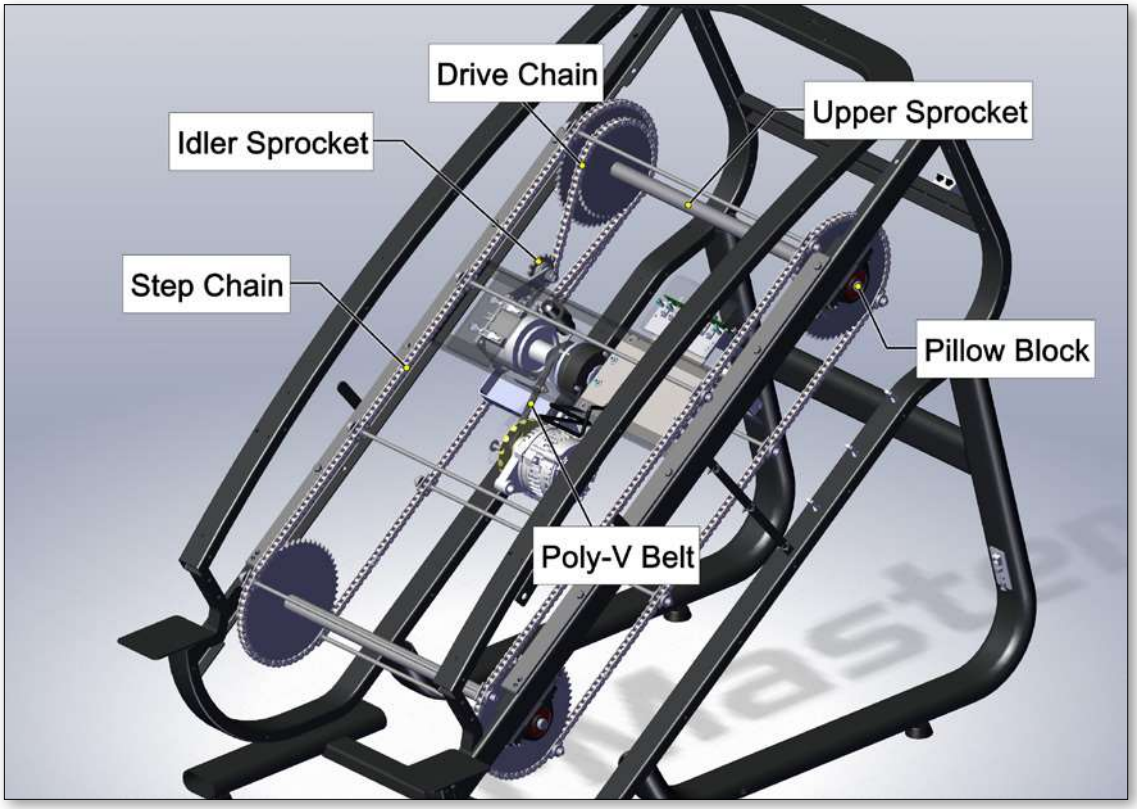
Bearing Plate

Part Number: 711-3316

Hardware

- Screw
  Part: 110-3140
- Nut
  Part: 110-1871





The upper sprocket has an inner sprocket that connects the drive chain to the gear box sprocket. There is an idler arm and sprocket on the gear box to assist with keeping tension on the drive chain. The upper and lower sprockets are held to the chassis of the machine by pillow block bearings and connect the left-side and right-side step chains. Pillow blocks can be adjusted on the frame to ensure alignment from upper to lower sprockets and for tensioning the step chains.

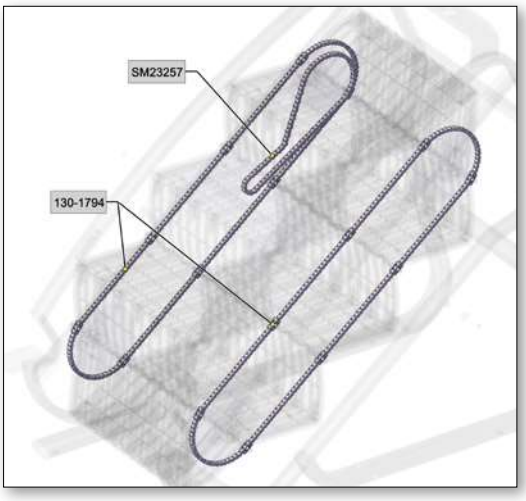
IV. Drive System Hardware

Step Chain (2 per unit)

Part Number: 130-1794

Drive Chain

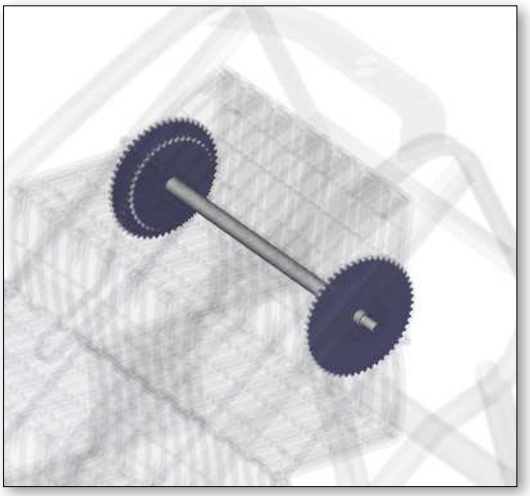
Part Number: SM23257



Upper Sprocket

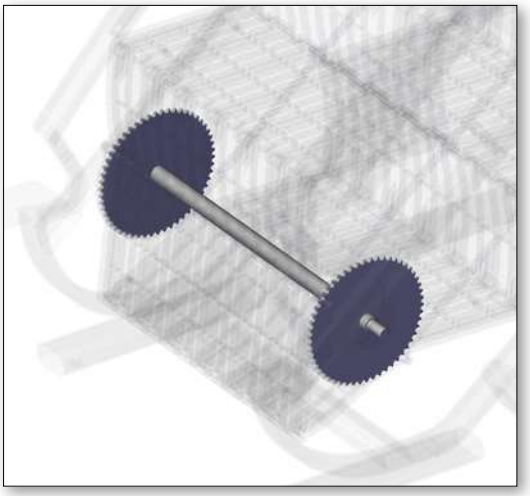
Part Number: 711-3313

- Connects to the Gearbox via the Drive Chain on the inner sprocket



Lower Sprocket

Part Number: 711-3314



Poly-V Belt

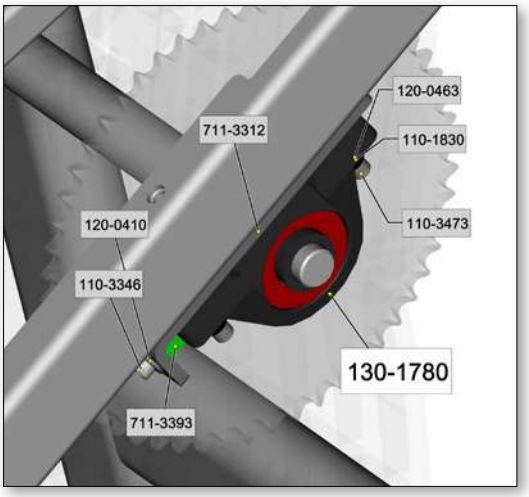
Part Number: 130-1784

Pillowblock Bearing

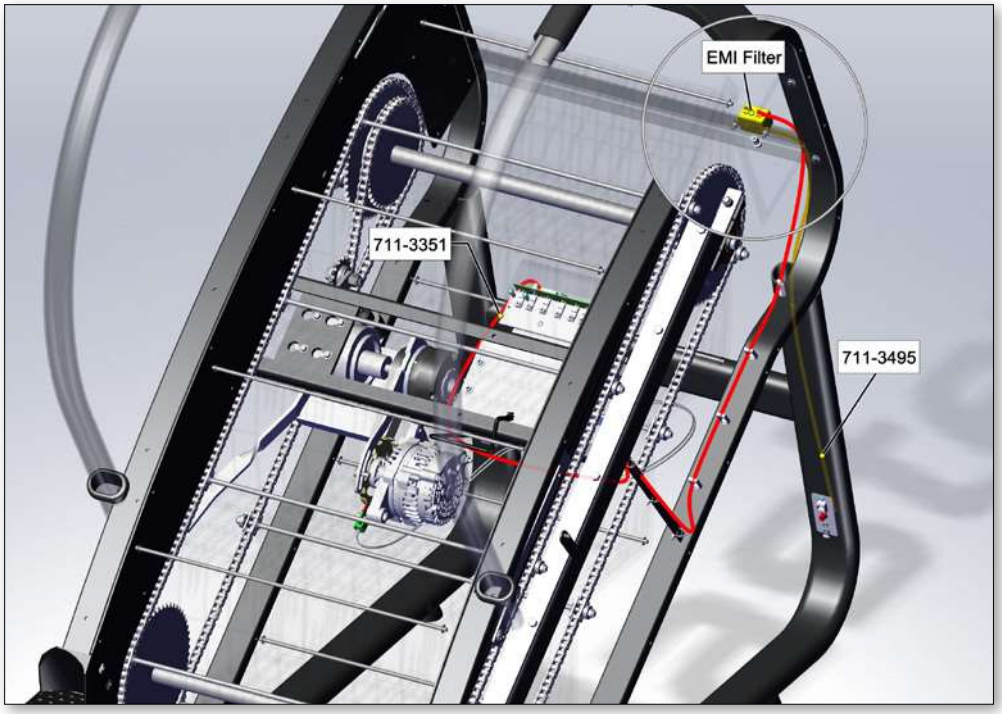
Part Number: 130-1780

Hardware (Clockwise from Bearing)

- Pillow Block Limiter
  Part: 711-3393
- Adjustment Screw
  Part: 110-2150
- Washer
  Part: 120-0410
- Adjustment Plate
  Part: 711-3312
- Washer
  Part: 120-0463
- Nut
  Part: 110-1830
- Bolt
  Part: 110-3473



WIRING AND POWER FLOW



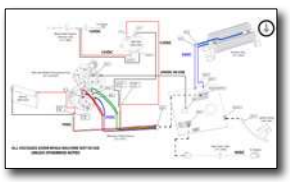
Power wiring from external power supply to LCB

The 8G uses a power brick to step down the wall voltage from 110/220 to 12V nominal. The 8G does not require a dedicated or 20A circuit, although a grounded outlet is required.

Click on an icon to open the diagram in a new window. Click the ⓘ button in the upper right to close the new view and return to the service manual.

Note: these buttons will not work in a browser window. **Right click > Save As** *or click the* ⬇ *button in your browser to save this manual to your PC.*

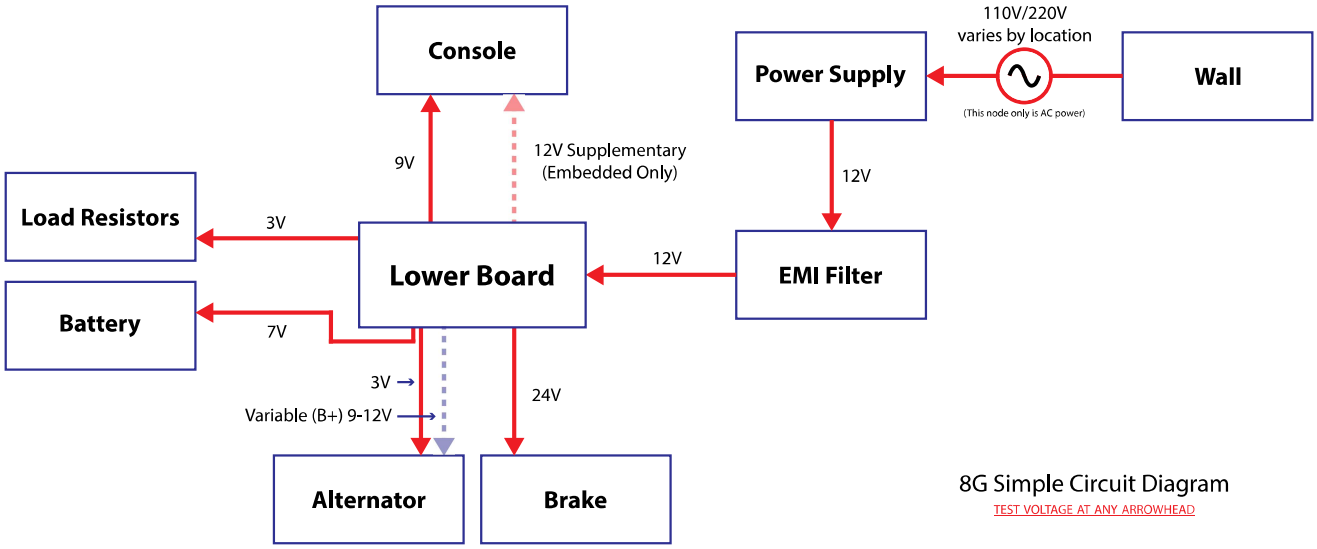
Wiring Diagrams



8G Base Wiring

For additional information about the wiring, signal and power flow on the 8-Series OpenHub consoles, please refer to the OpenHub Service Manual.

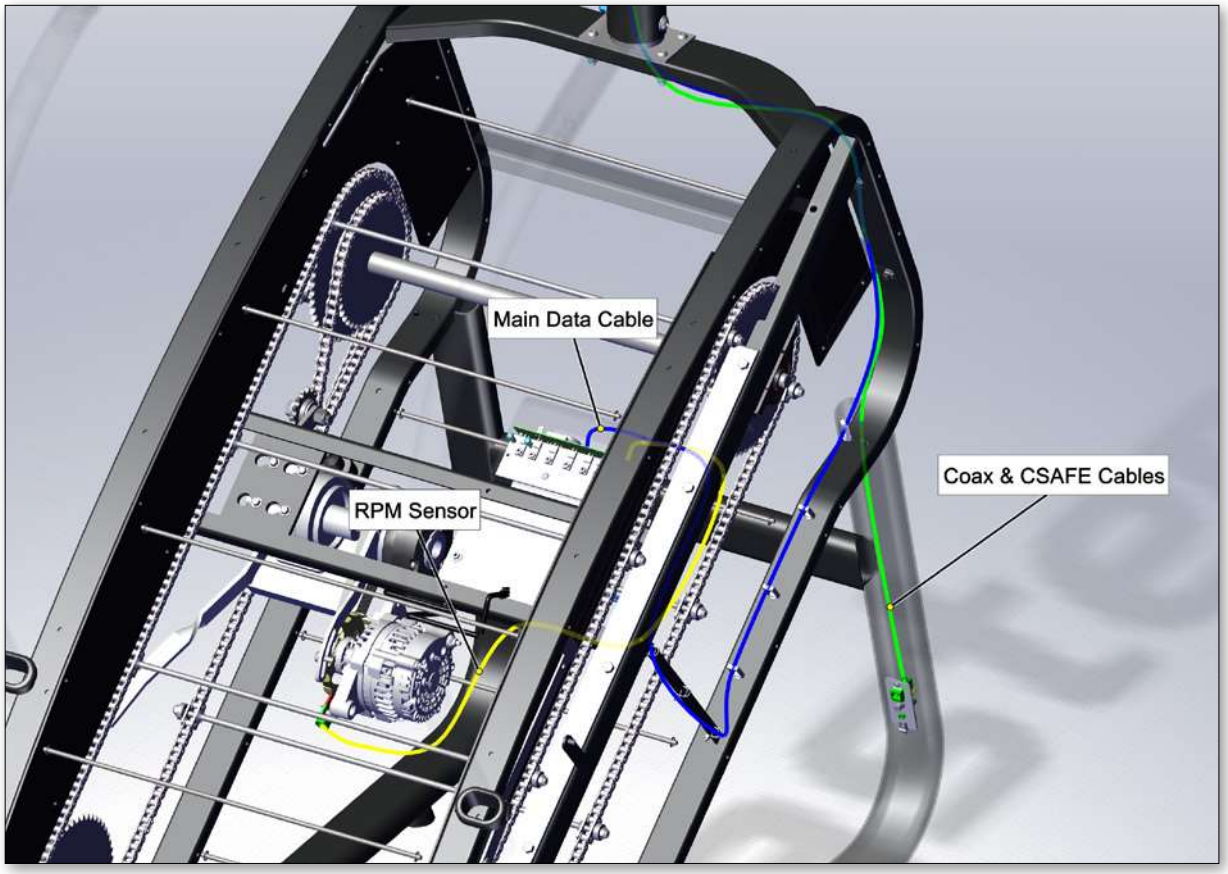
Power Tracing



A power trace tests the voltage at every junction point of electricity on the machine from the wall to the console to validate good power flow and eliminate power as part of routine troubleshooting. Refer to the diagram above for the general flow of a power trace of the 8G. For detailed instructions on how to perform a power trace, see Power Issues on page 48.

SIGNAL FLOW

All TV/Cable signals in the 8G are pass-through signals to the console. Coax cable for TV signals is plugged into the lower right leg of the 8G and connects to an internal coax cable that goes through the head to the console.



The coax cable does not interact with the internal electrical components of the 8G. Other than TV signals, the only other signals passed within the unit are control signals from the LCB to the drive components and the console. See the diagram above.

To troubleshoot a signal within the 8G test the continuity of the wire. If the wire is continuous and signal issues still result, please refer to the OpenHub Service Manual for advanced troubleshooting.