

Installation, Maintenance and Service Manual Power Cord

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Section 1 Installation Procedure

Power supply group w/switch	Mast height	Maximum fork height
2522180	less than 83	190
2522203	84 to 101	240
2522204	102 to 120	320

Power supply includes (1) flat, low profile switch. Each power supply can accept two switches.

Consult factory for group part numbers with additional flat switches or for knob-style, round switches.

Table 1-1 Power supply/switch groups

1.1 General

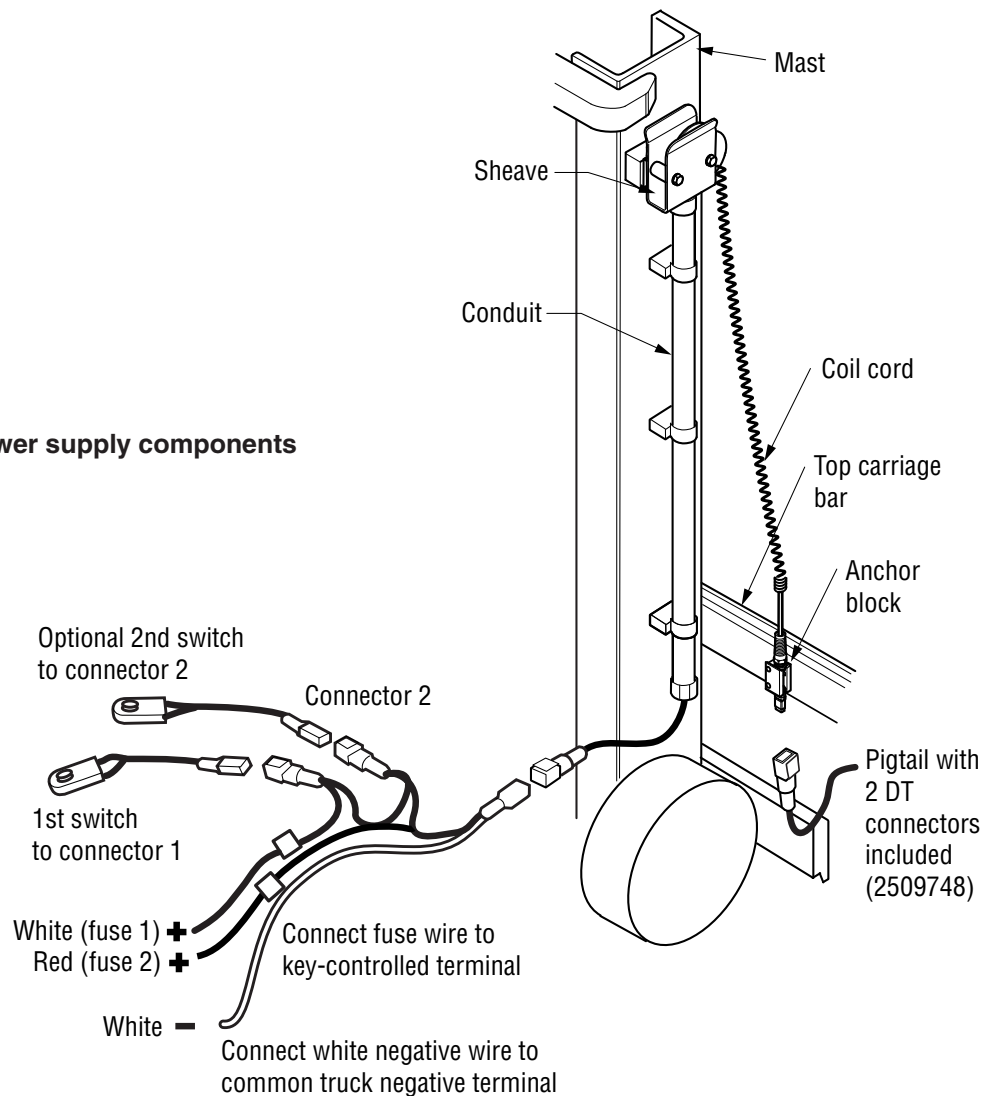
This manual is intended to show how to install a power cord on an existing fork lift truck with attachment.

These power supply groups provide three conductors to supply two circuits for solenoid control. Individual wires are 20AWG and are rated for 5 amps.

NOTICE

This power supply kit is intended to be installed by a qualified person or technician.

Figure 1-1 Power supply components



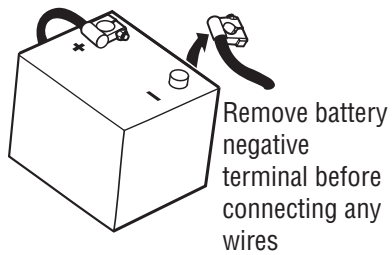


Figure 1-2 Disconnect battery

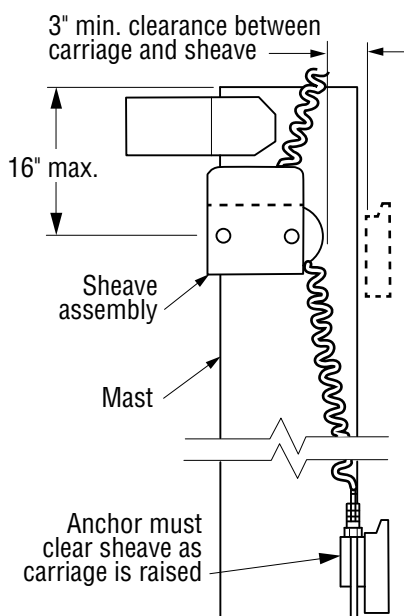


Figure 1-3 Temporary mounting

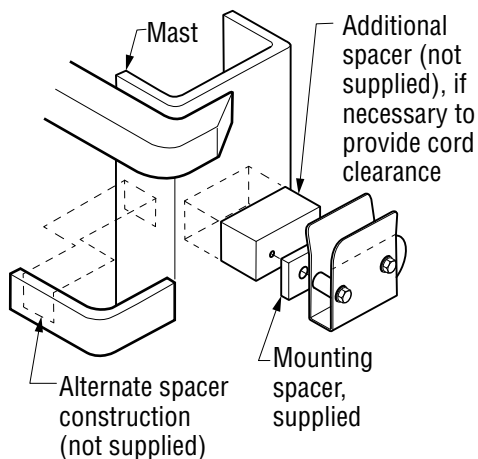


Figure 1-4 Sheave spacer mounting

1.2 Sheave installation

1. Disconnect the cable from the lift truck's negative battery terminal before connecting any wires.
2. Locate the sheave assembly as high as possible and as far back from the carriage as possible. Make sure the power cord can travel vertically, clear of obstructions. Be sure the power cord will not interfere with the upper crossmember when the carriage is raised as high as it will go. See Fig. 1-3.
3. Select and mark a temporary mounting location for the mounting spacer on the side of the mast channel. See Fig. 1-3.
4. If the sheave must be moved away from the mast to provide cord clearance, an additional spacer may be added. Temporarily clamp the spacer in position. See Fig. 1-4.
5. Weld the mounting spacer in position and install the sheave assembly in place.

1.3 Anchor installation

1. Power cord anchor will be mounted on the top carriage bar. To properly position the anchor, make an installation guide out of cardboard or plastic using the pattern shown See Figure 1-5.
2. Insert the installation guide into the sheave bracket, see Figure 1-6.

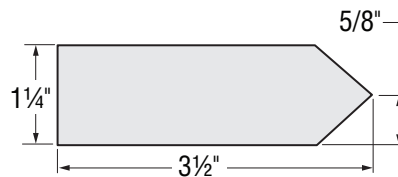


Figure 1-5 Installation guide pattern (illustration not to scale)

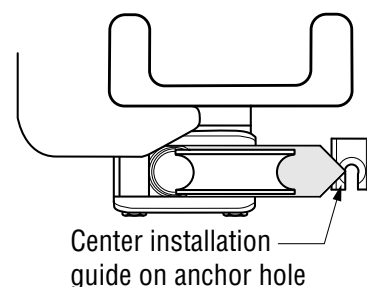


Figure 1-6 Installation guide placement

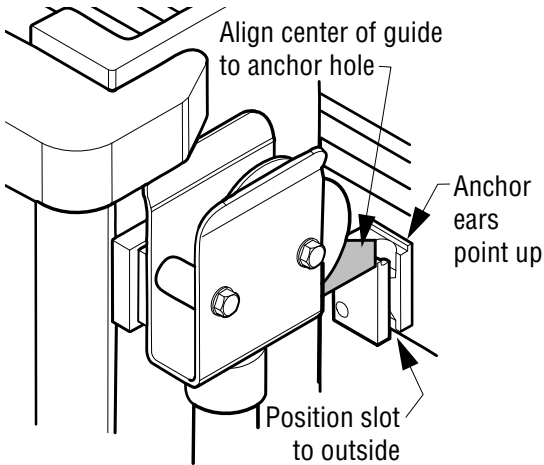


Figure 1-7 Mark anchor position

3. Raise the carriage bar to be near the sheave and position anchor hole in line with the guide. Align center of guide to anchor hole. Position slot to outside.
4. Mark anchor position. See Figure 1-7. Make sure to position the slot in the anchor to the outside of the attachment. The ears on the anchor should be facing upward.
5. Weld or bolt anchor to carriage bar. For best performance, mount conduit as straight and vertical as possible with minimal bends. Mark location of mounting pads and weld or secure in place. Bolt clamps to pads to secure conduit. See Figure 1-8.
6. Drop string or wire through the conduit from the top and attach to end of the power cord. Pull cable through conduit until strain relief is at the lower end of conduit. Tie or restrain upper end of the power cord to prevent it from retracting into the conduit. Push threaded portion of lower strain relief into lower end of conduit. The last coil of the cord should be centered in the strain relief adaptor recess.
7. Loosen strain relief nut and slide upwards to allow wire insertion. Insert wire into anchor through slot and raise connector up into pocket. See Figure 1-9.
8. Hold cord with connector in pocket, slide strain relief down with hex aligned to slot. Tighten nut by hand to lock wire in anchor. See Figure 1-10.

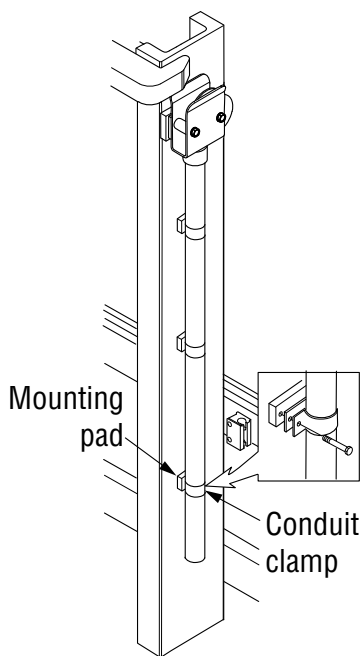


Figure 1-8 Conduit mounting

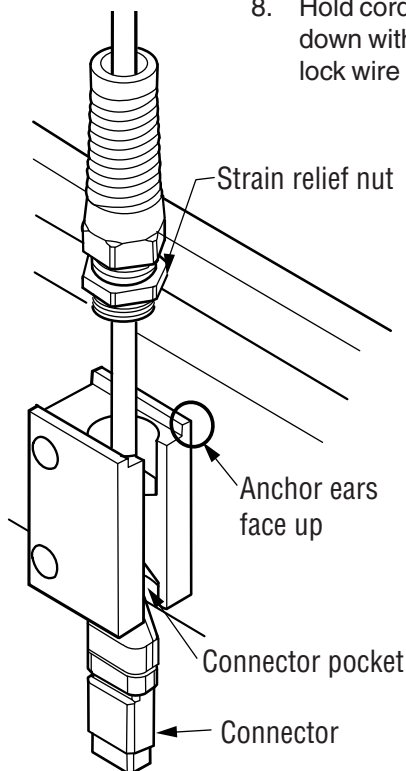


Figure 1-9 Cord and anchor

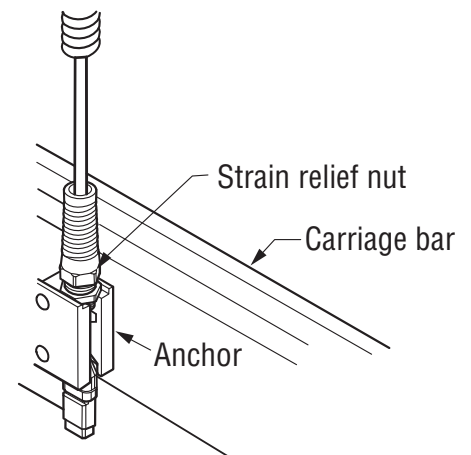


Figure 1-10 Anchoring power cord

1.4 Control handle switch, flat switch type

1. Remove the knob on the control handle, if possible. Position the switch in a comfortable position, depending on whether it is to be operated by thumb or finger. Use double-sided tape under the switch to hold it in position.
2. Place shrink tubing over the switch to hold it in position. Use the smallest shrink tubing that will fit over the switch and handle. Use a heat gun to shrink the tubing, securing the cable to the control handle.
3. Route and tie the wire where it connects to the power wire assembly.

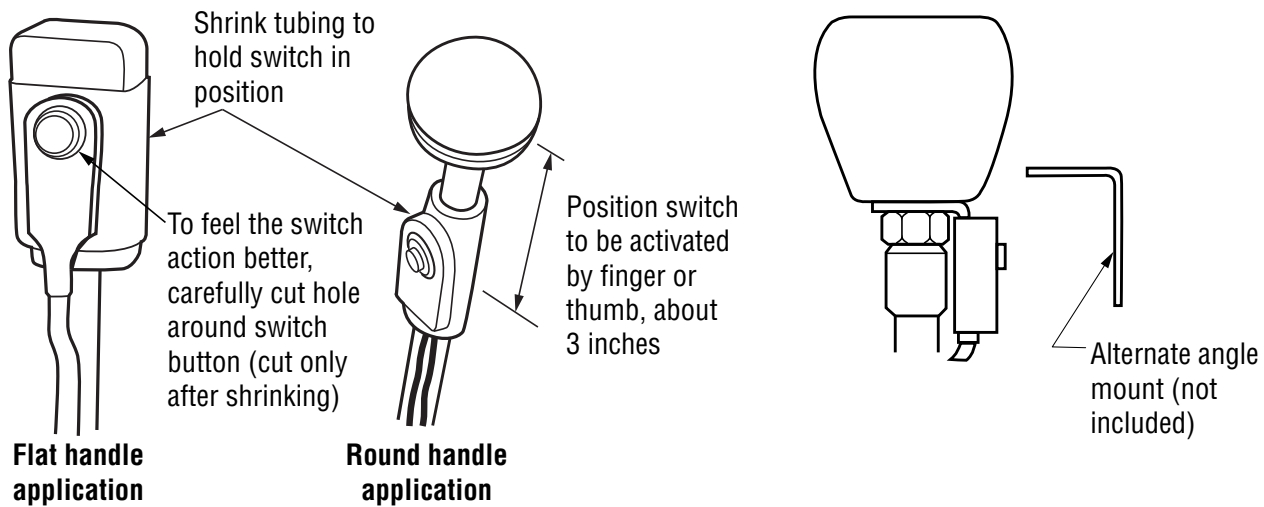


Figure 1-11 Control switch mounting

1.5 Wiring connections

1. To reconnect the wiring, connect the positive black wire before fuse to a key controlled (+) power terminal. Connect the negative (-) white wire to a common ground or negative terminal. Connect a single switch to connector "1" and a second switch to connector "2". Route main power supply wire to connect to connector of wire going over mast.
2. Connect the pigtail wire supplied to the lift truck attachment. Secure the pigtail to prevent abrasion, damage or pinching when raising, lowering, or sideshifting.
3. Reconnect the battery cable to the negative battery terminal.
4. Test the electrical functions for proper operation. Raise and lower the mast to check the coil cable for proper alignment, extension and retraction.
5. Spray the power cord, roller and inside of conduit with a Teflon or silicon based dry film lubricant such as Liquid Wrench Silicone Spray lubricant to reduce wear on the power cord and provide a smoother operation. Relube as noted above every 3 months.

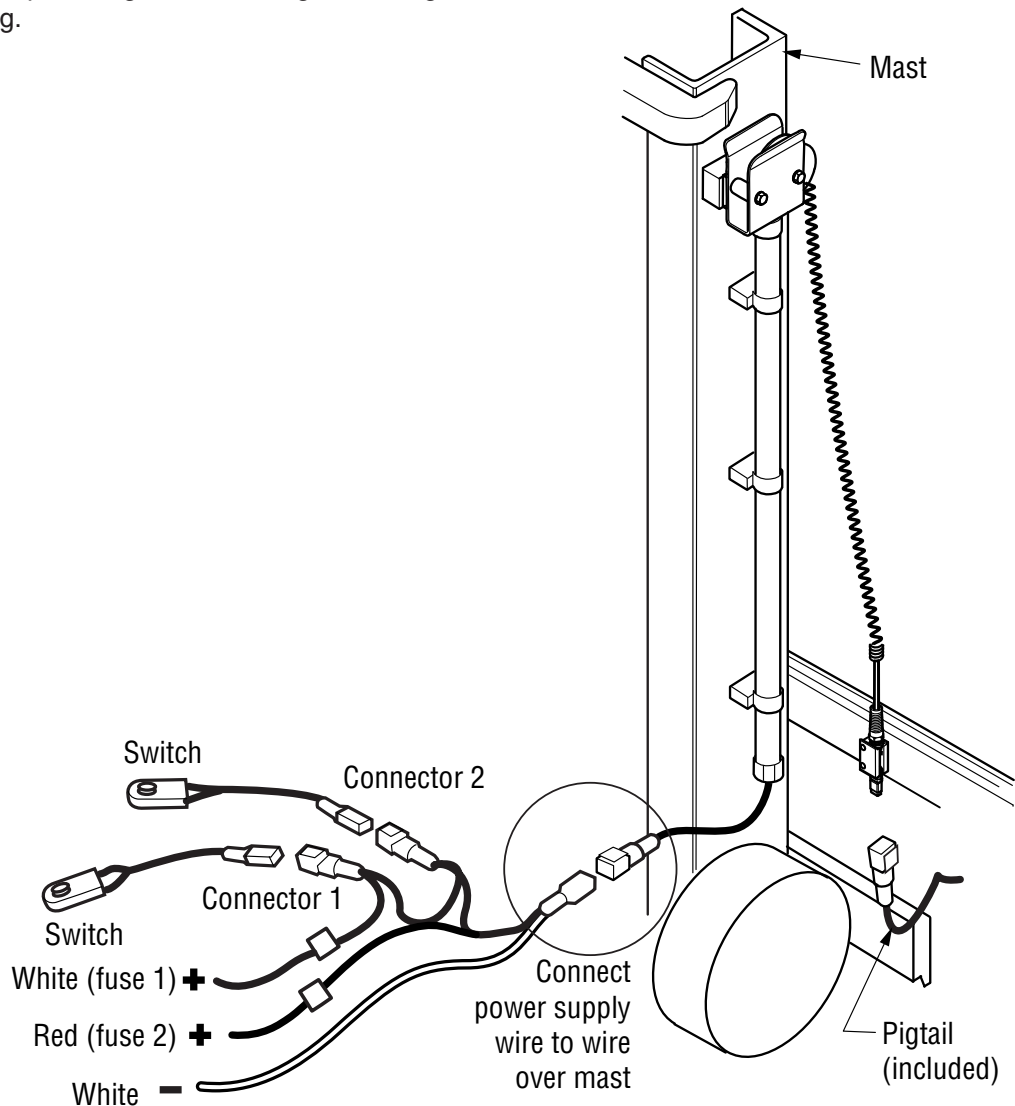


Figure 1-12 Attaching wires

6. For applications wanting to operate a 12-volt attachment on a 24- to 48-volt electric truck, use one of the following options:
- Change the attachment coil to one of the appropriate voltage (preferred).
 - Use a DC-DC voltage converter. On trucks with regenerative braking, also add a voltage filter as shown in Fig. 1-14, below. Consult factory for availability.

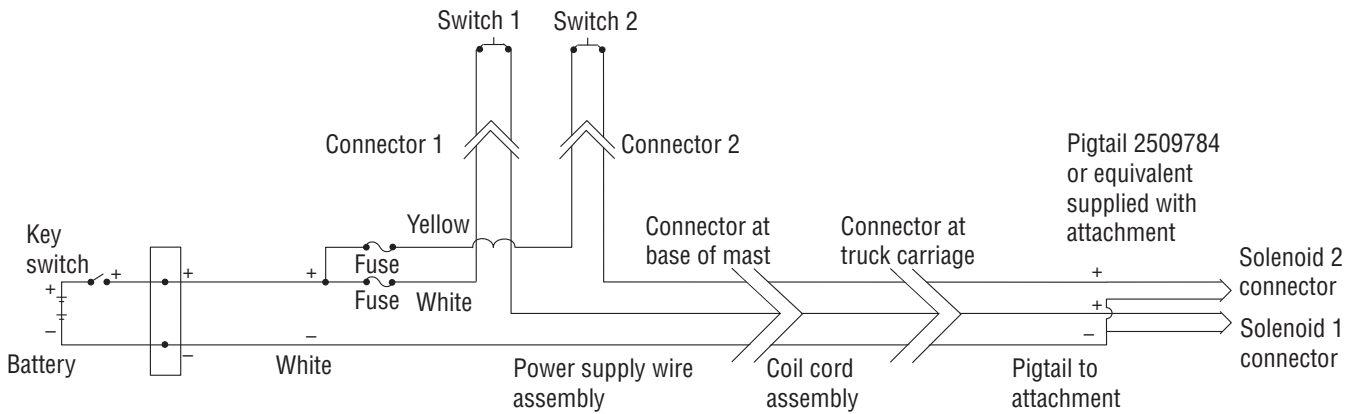


Figure 1-13 12-volt truck installation

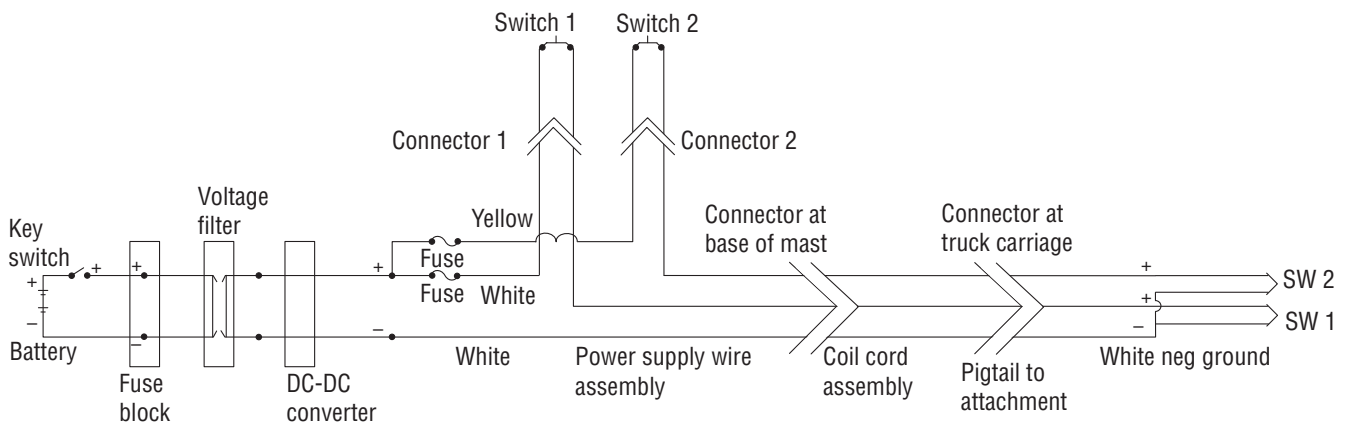


Figure 1-14 24- to 48-volt truck installation