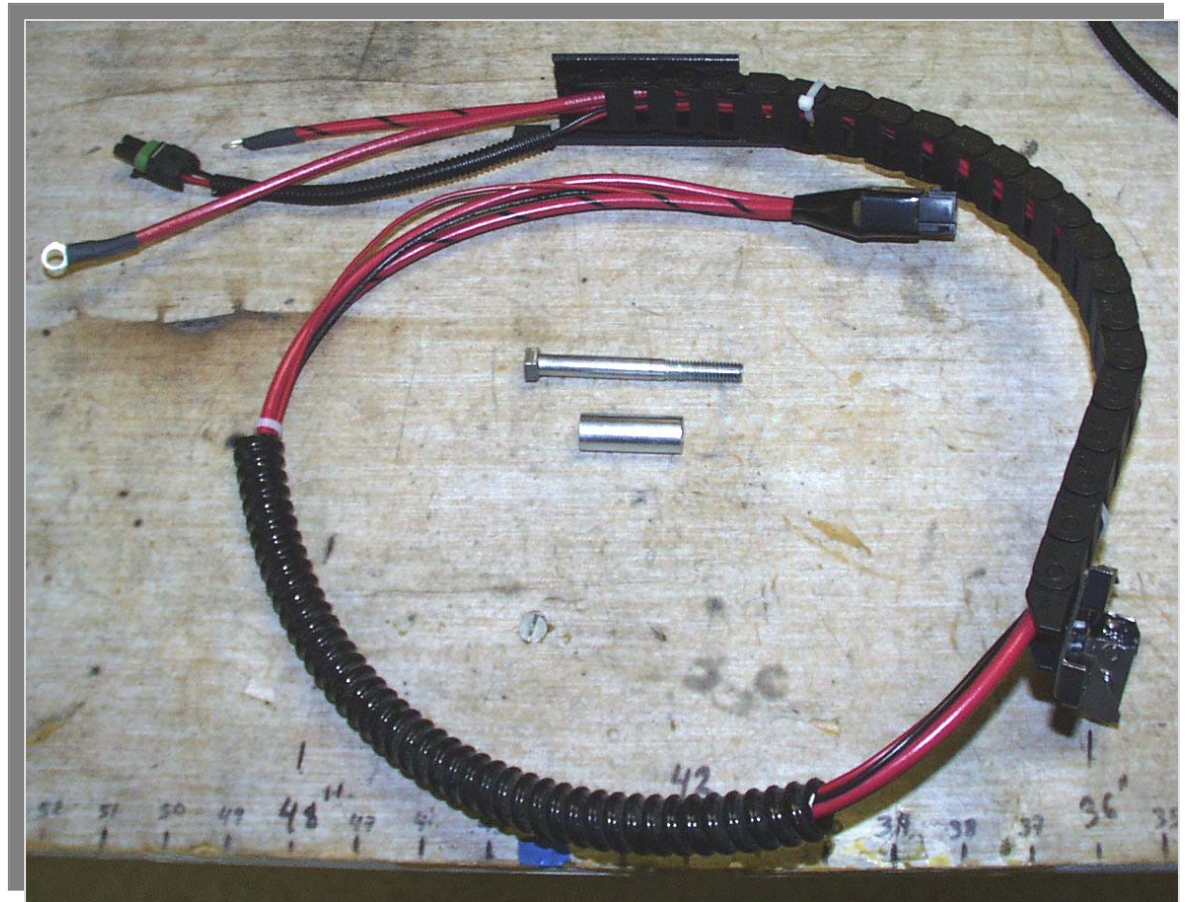


MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions
DOCUMENTED BY: Brett Sprietler / Tom Prehm
PAGE NUMBER: 1
DATE: 2/18/04
AUTHORIZED BY: Jesse Mondigo 03/02/04

K-281992
SCV Cable Guide
Kit
Field Installation
Instructions 999028
Pages 1-24

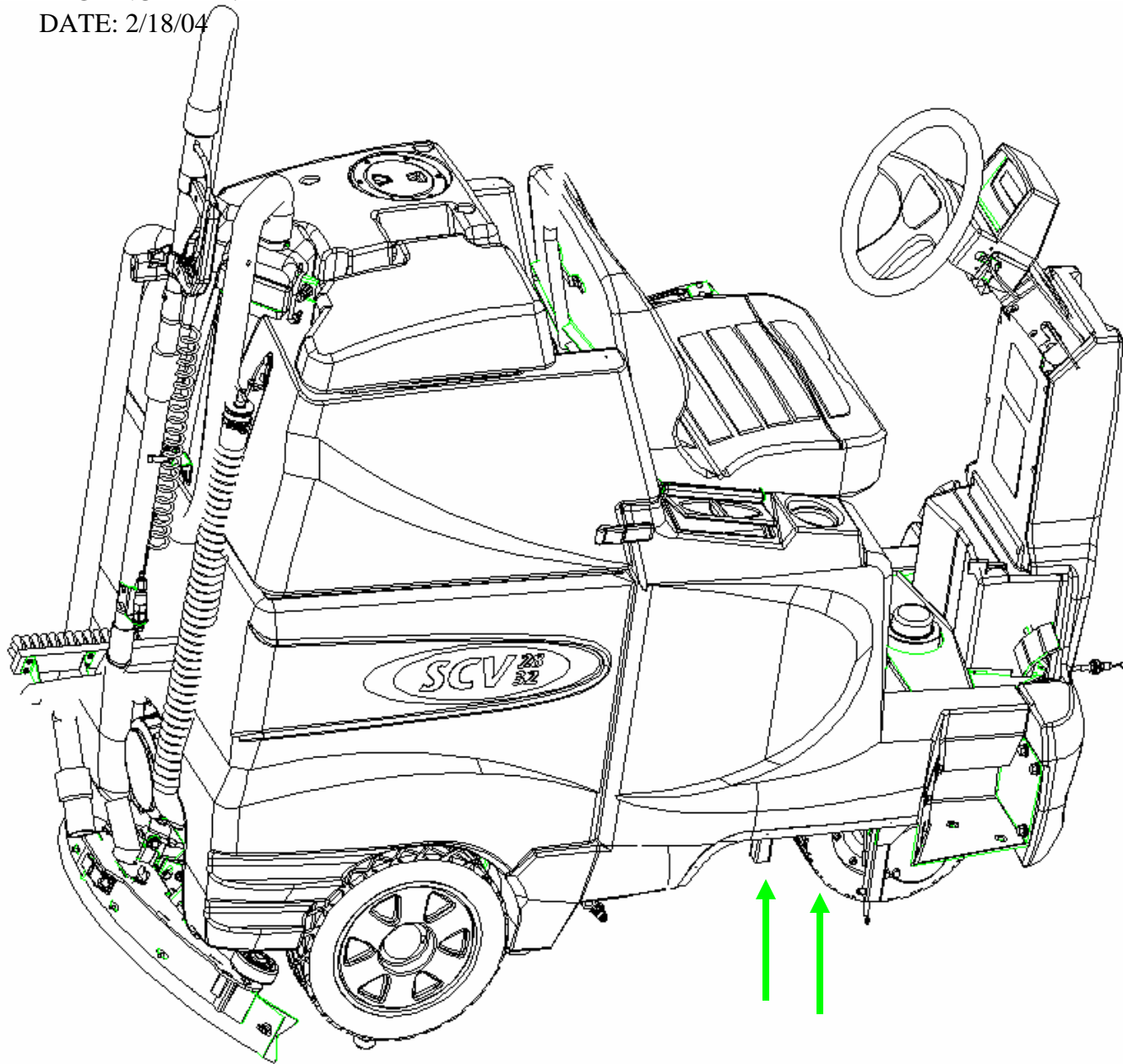


MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions

DOCUMENTED BY: Brett Sprietler / Tom Prehm

PAGE NUMBER: 2

DATE: 2/18/04



The majority of the work necessary to install the new K-281992 SCV Cable Guide Kit will be done in the front of the unit- underneath the steering column & the floor panel where the operator's feet rest - and adjacent to the Drive Motor Wheel.

Note: Reference the SCV P&I Manual during installation of the K-281992 SCV Cable Guide Kit for questions regarding hardware, component orientation and/or location.

Do not discard any hardware throughout this process. The majority of the hardware will need to be re-used.

You will need the following tools to install the SCV Cable Guide Kit:

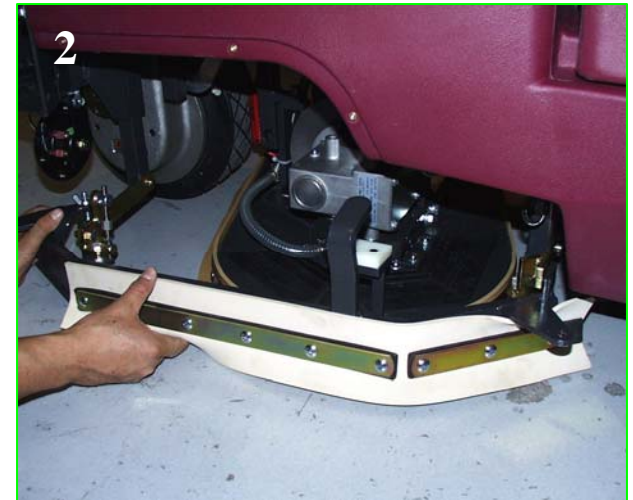
- Drill
- Phillips Screwdriver / bit
- 9/16” Wrench
- Side Cutters
- Drill w/ 7/16” Socket
- 7/16” Wrench
- 1/4” Allen Wrench
- Ratchet Wrench
- 7/16” Socket
- 1/2” Wrench
- 9/16” Socket
- Floor Jack w/ Stands

Before installation of the *SCV Cable Guide Kit (K-281992)* you must first remove the...

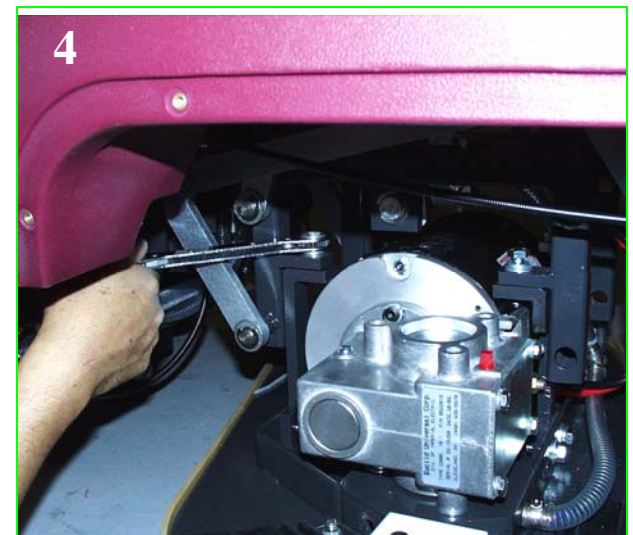
1. Brush Deck Covers &...
2. Side Squeegees from the unit.



3. Turn the keyswitch to the “On” position. Depress the ‘down’ pressure button on the control panel **for 10 seconds** to lower the Scrubdeck Assembly to the floor. ***When lowering the Scrubdeck, ensure that you DO NOT lift the machine’s front drive tire off the floor. Once the Scrubdeck is lowered to the floor, turn the Keyswitch to the off position before proceeding.***

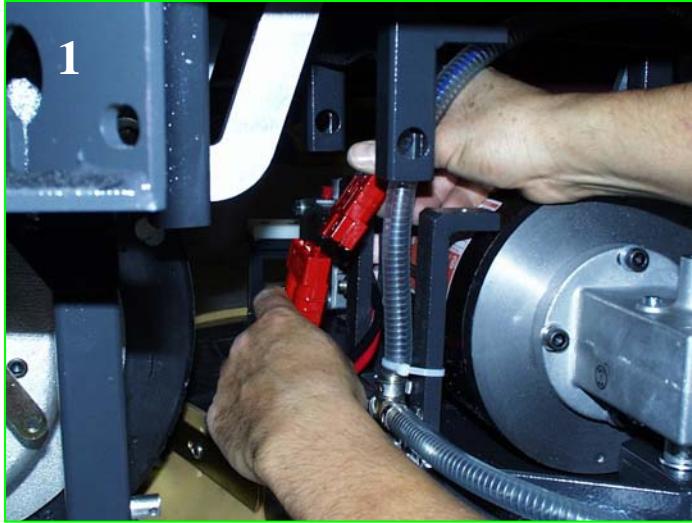


Remove the pins & pull the Side Squeegees off. Set aside.



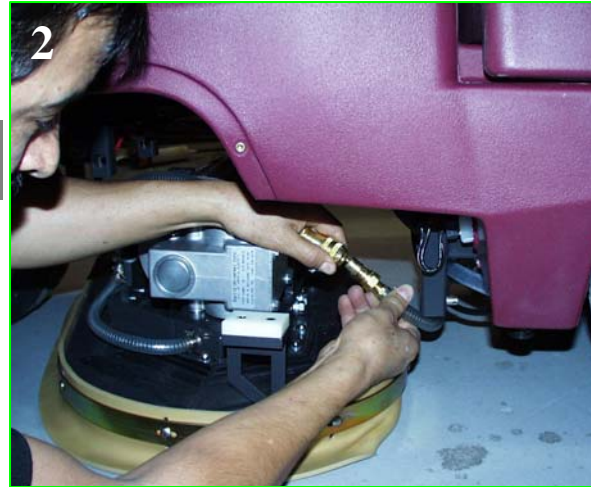
4. Remove the (4 each) Bolts, Helical Washers & Flat Washers that secure the Scrubdeck to the Lift Weldments.

Remove the Scrubdeck Assembly



1. Cut the (2) Cable Ties (828062) that secure the Pump Assembly hose to the frame. Disconnect the 'Brush' Connectors from the Electrical Panel & Scrubdeck Assy.
2. Disconnect the quick connect coupling from the Scrubdeck and Pump Assembly.
3. Slide the Scrubdeck Assembly out from underneath the unit. Set aside.

Note: The Disk Scrubdeck Assembly is shown here. The procedure for removal of the Cylindrical Scrubdeck Assembly is practically identical.



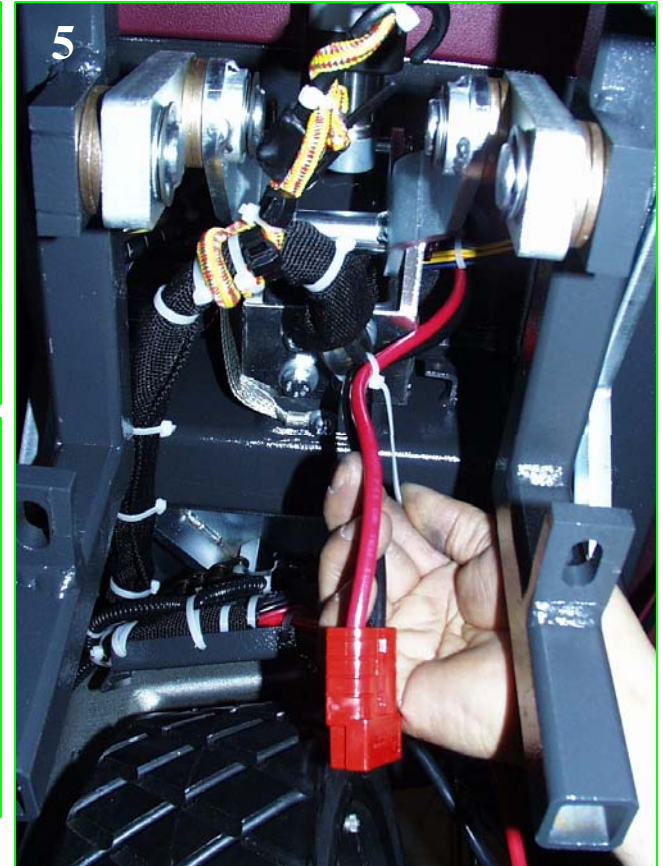
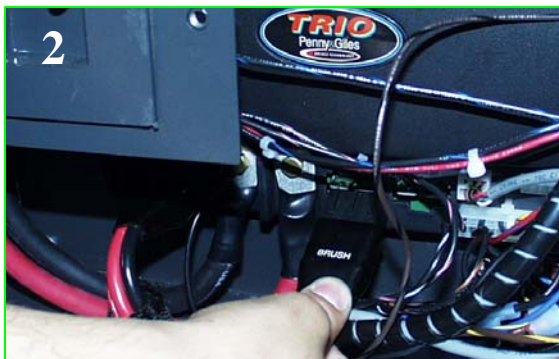
4. Disconnect the machine's electrical panel cable connector from the battery pack's cable connector before proceeding!!

5. Remove the hardware that secures the Electrical Panel cover & open it. Set hardware aside.



6. Cut the cable tie that secures the Torroid Shield. Spread the Torroid Shield apart & remove it from the Traction Wire Harness. Set aside.

Remove the Original Front Drive Assembly Wire Harness



1. Cut the Large Cable tie that secures the Traction & Brush Cables to the Electrical Panel Wire Attachment Bracket.

2. Disconnect the Trio Cable 'Brush' connector from the TRIO Controller Board.

3. Disconnect the Trio Cable 'Traction' connector from the TRIO Controller Board.

4. Push the connectors back down thru the hole shown – to the bottom of the unit.

5. On the underside of the unit, cut the Cable tie(s) that secure the 'Brush' Cable to the "P-Clip" & to the underside of the Mainframe. Set the Brush Cable Assembly aside for now.

Note: Installation of the New Wire Harness will be easier if you can safely elevate the unit w/Floor Jack & Jack Stands before attempting to work underneath the Scrubber.

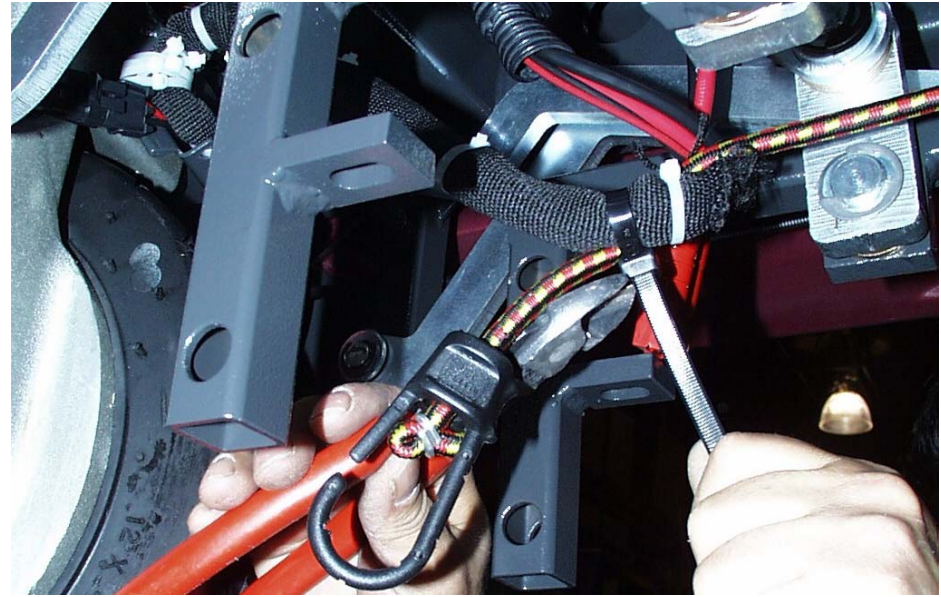
MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions

DOCUMENTED BY: Brett Sprietler / Tom Prehm

PAGE NUMBER: 6

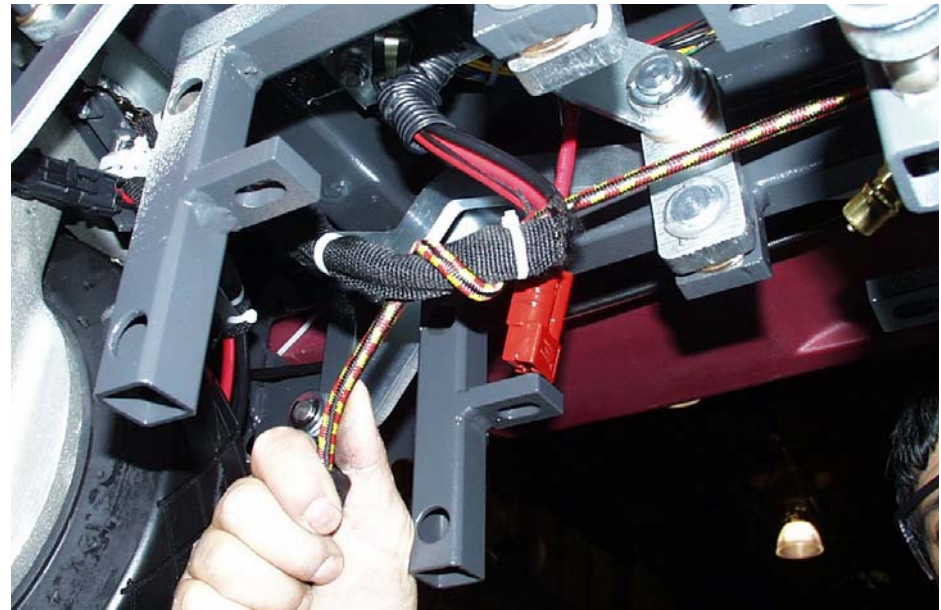
DATE: 2/18/04

Remove the Original Front Drive Assembly Wire Harness

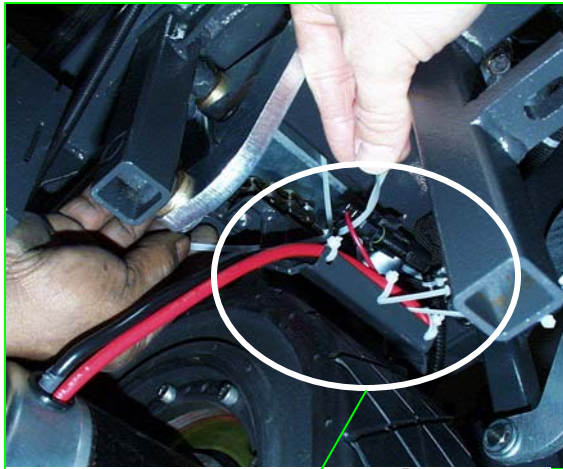


Cut the Cable ties that secure the Bungee Cord around the original Front Drive Assembly Wire Harness – on the underside of the machine. Remove the Bungee Cord from around the original Front Drive Assembly Wire Harness. Cut the Large Black Cable Tie that secures the Front Drive Assembly Wire Harness to the “P-Clip”.

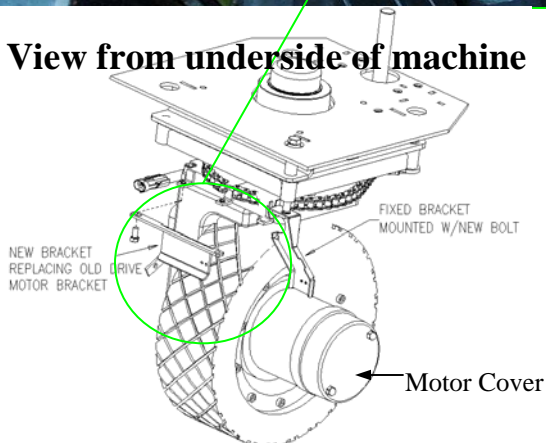
You may discard the bungee cord.



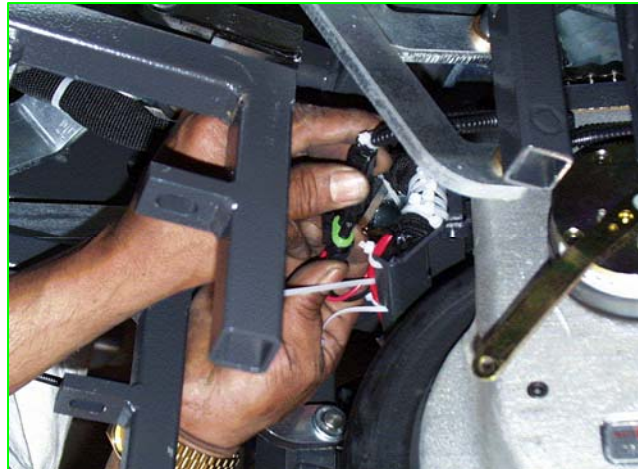
Remove the Original Front Drive Assembly Wire Harness



View from underside of machine



1. Cut the Cable Ties that secure the Front Drive Wire Harness to the Front Drive Assembly Wire Mounting Bracket –located underneath the machine, just above the Front Drive wheel.

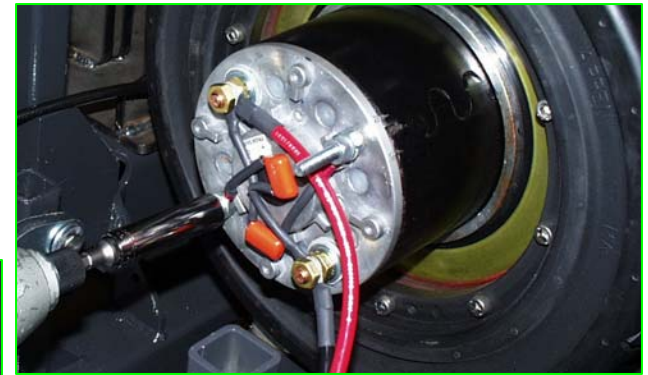


2. Disconnect the Electro-Magnetic Brake Harness Packard Connectors.

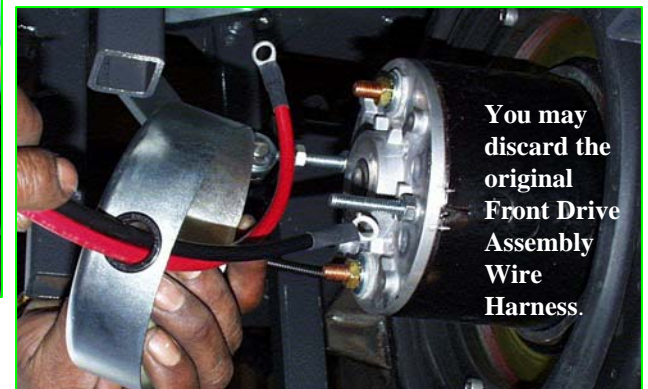


3. Remove the Motor Cover & place aside.

Note: The Motor Cover shown here is an earlier (metal) version. Your machine will probably have a black plastic Motor Cover.

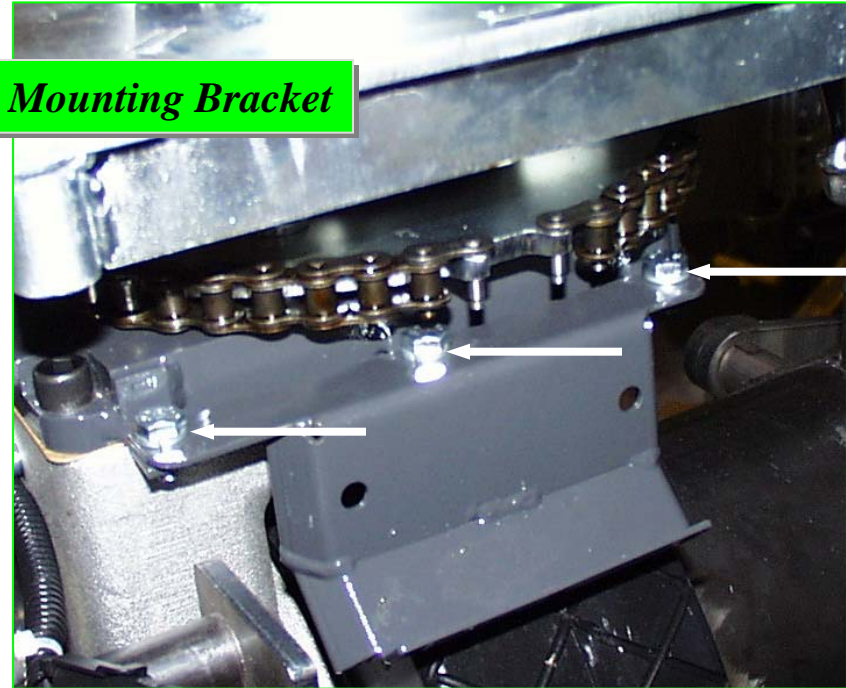
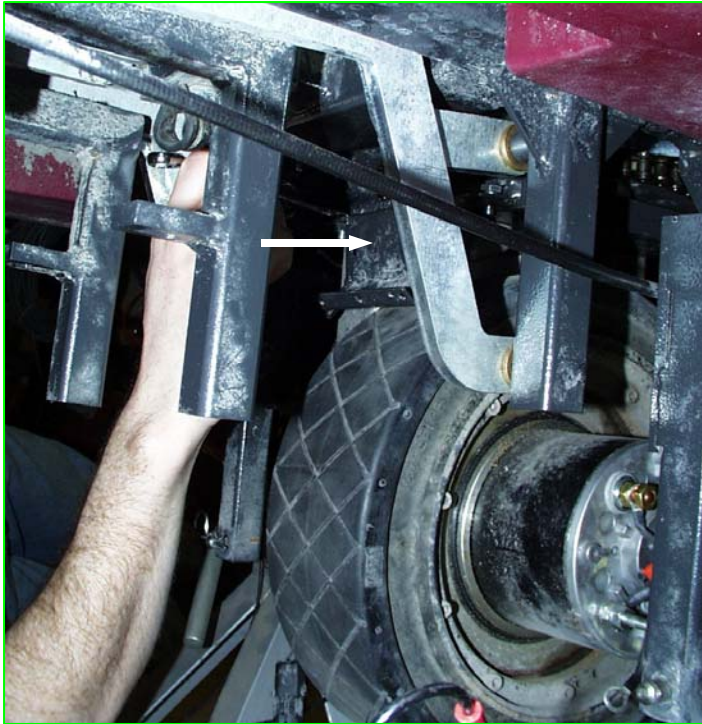


4. Remove the nuts that secure the 2 Capacitors & 2 Cables to the Drive Motor studs (hold the nuts behind the terminals to prevent the studs from spinning). Remove the Capacitors from the Drive Motor's terminals, and remove the opposite legs of the capacitors from the motor cover mounting studs. Remove & discard the Red & Black Cables from the Drive Motor's terminals. *Set the Capacitors & hardware aside. You'll need these later.*

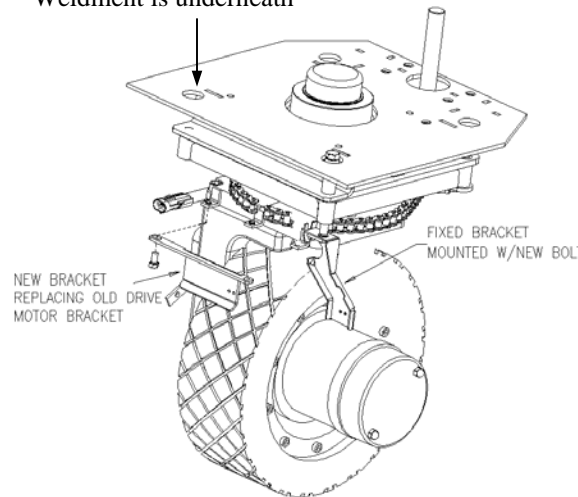


5. Slip the cables back out of the Motor Cover.

Remove the Original Front Drive Assembly Wire Mounting Bracket



Front Drive Mount Weldment – Spindle
Weldment is underneath



Next, you will remove the original Front Drive Assembly Wire Mounting Bracket- located underneath the machine, & over the Front Drive Assembly wheel -

Loosen & remove the hardware that secures the original Front Drive Assembly Wire Mounting Bracket to the Front Drive Spindle Weldment.

Remove the Wire Mounting Bracket. **You may discard the bracket.**

MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions

DOCUMENTED BY: Brett Sprietler / Tom Prehm

PAGE NUMBER: 9

DATE: 2/18/04

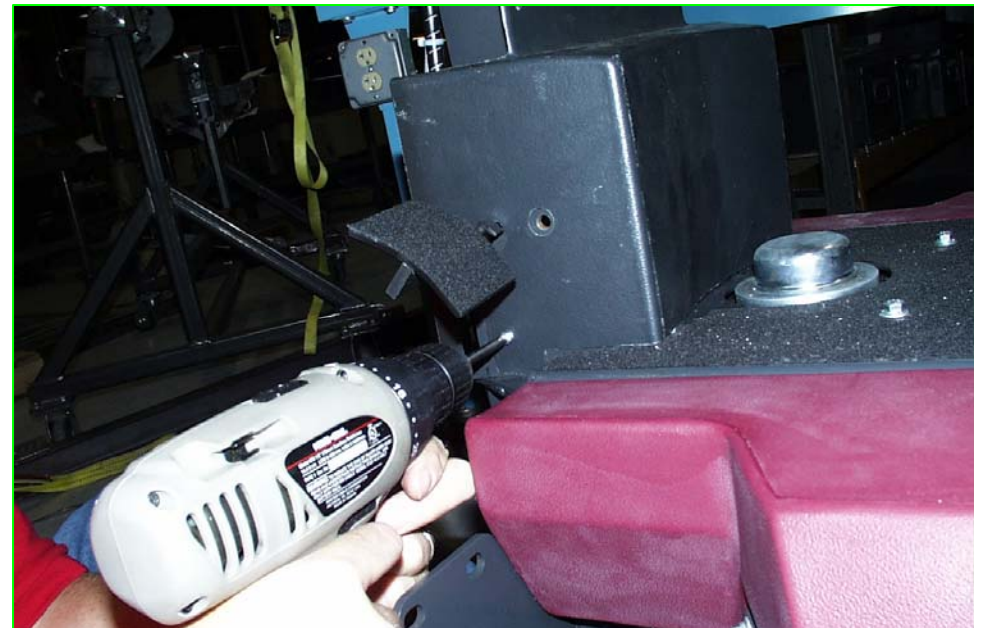


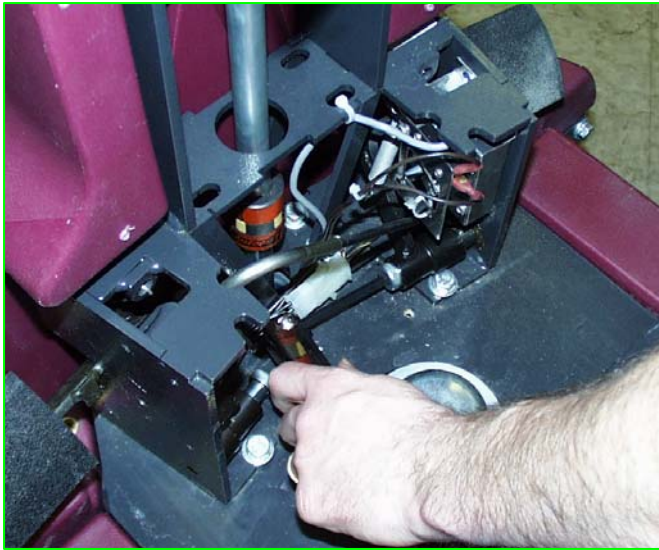
Remove the Parking Brake Handle from the left side of the lower Steering Column Weldment by loosening & removing the shoulder bolt shown. Set aside.

This step is necessary in order to remove the Floor Panel Weldment – which must be removed in order to access a bolt underneath it.



Loosen & remove the (4) Screws that secure the Bottom Steering Column Cover to the Front Bumper Assembly & to the Steering Weldment. Save the hardware. Remove the Bottom Steering Column Cover & place aside.



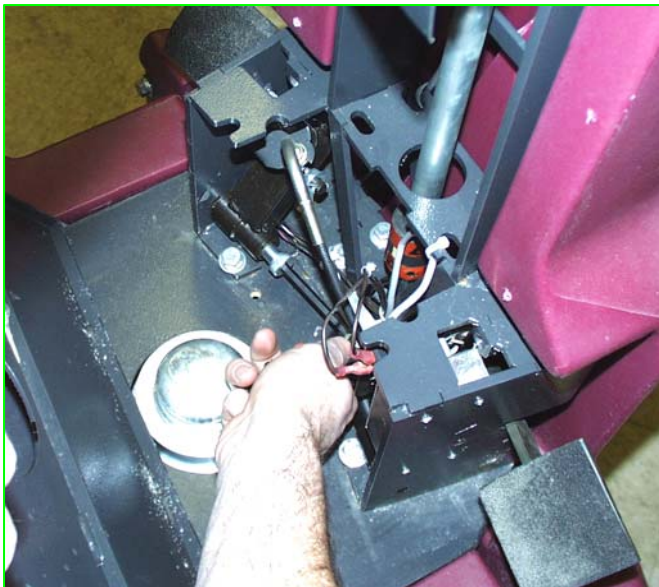


This step is necessary in order to remove the Floor Panel Weldment – which must be removed in order to access a bolt underneath it.

1. Next, loosen & remove the shoulder bolts that secure the Accelerator & Brake Pedals to the Steering Assembly weldment.

It is **not necessary** to disconnect the Springs, nor is it necessary to completely remove the **pedals** from the Steering Assembly- just place them up & out of the way of the Floor Panel Weldment – which must be removed next.

2. Remove the hardware that secures the Floor Panel Weldment. **Save the hardware.**



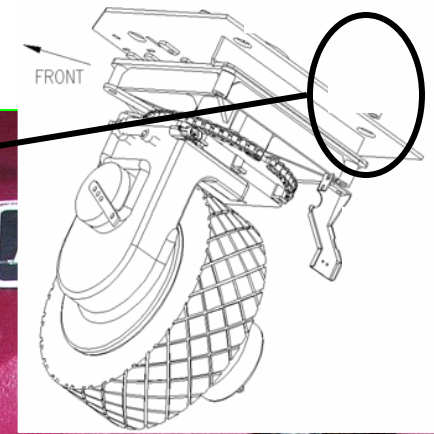
3. Lift the Floor Panel Weldment off of the Mainframe & place aside.

MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions

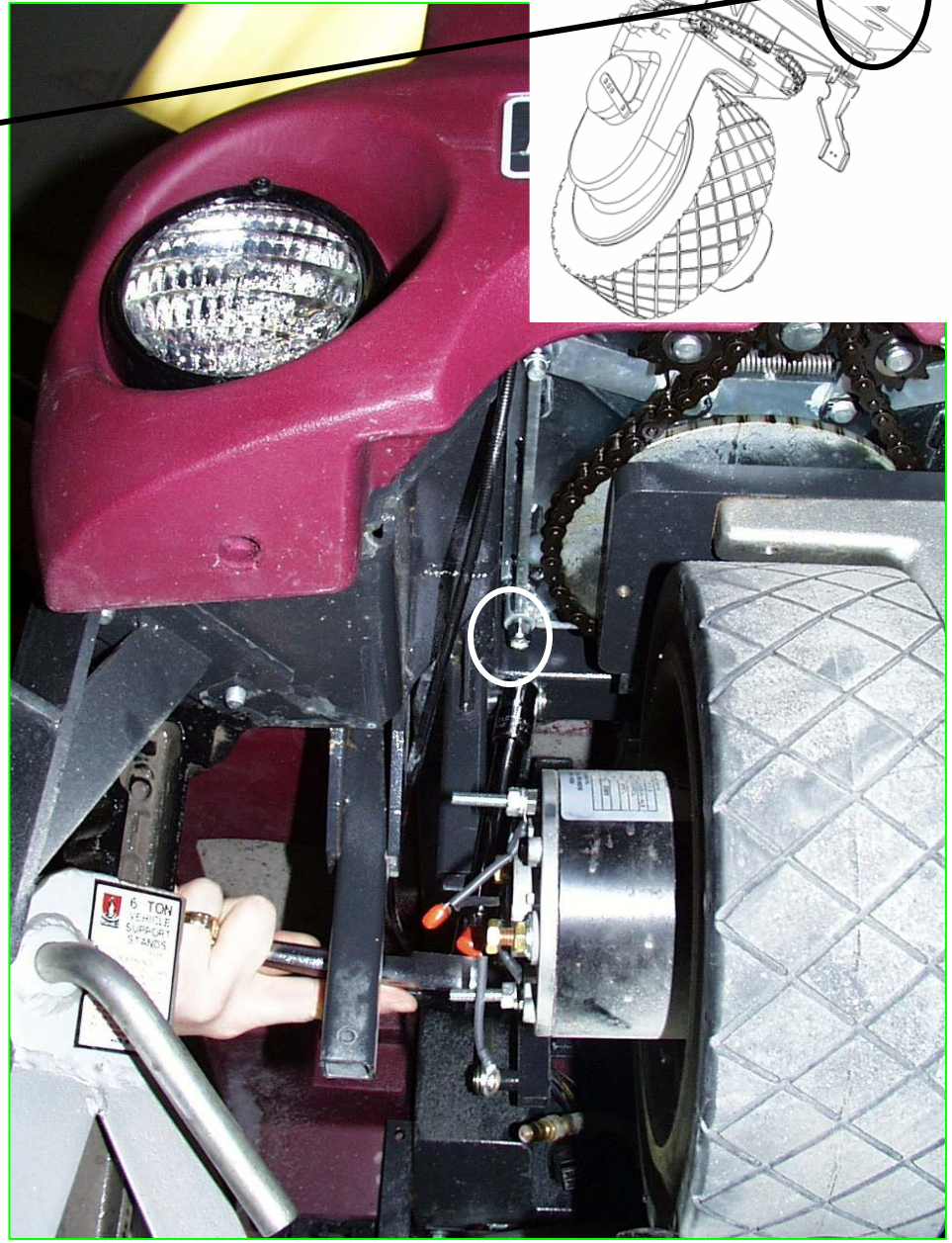
DOCUMENTED BY: Brett Sprietler / Tom Prehm

PAGE NUMBER: 11

DATE: 2/18/04



See next page for further clarification



Next, you must loosen & remove the **right/rear** Carriage Bolt & Nyloc Nut indicated.

MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions
DOCUMENTED BY: Brett Sprietler / Tom Prehm
PAGE NUMBER: 12
DATE: 2/18/04

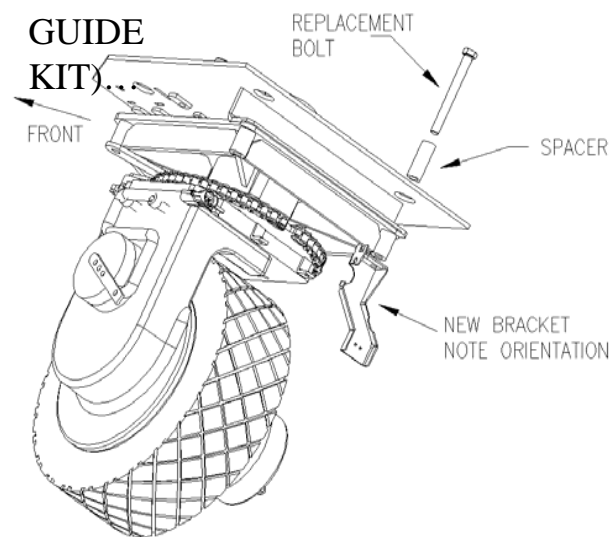
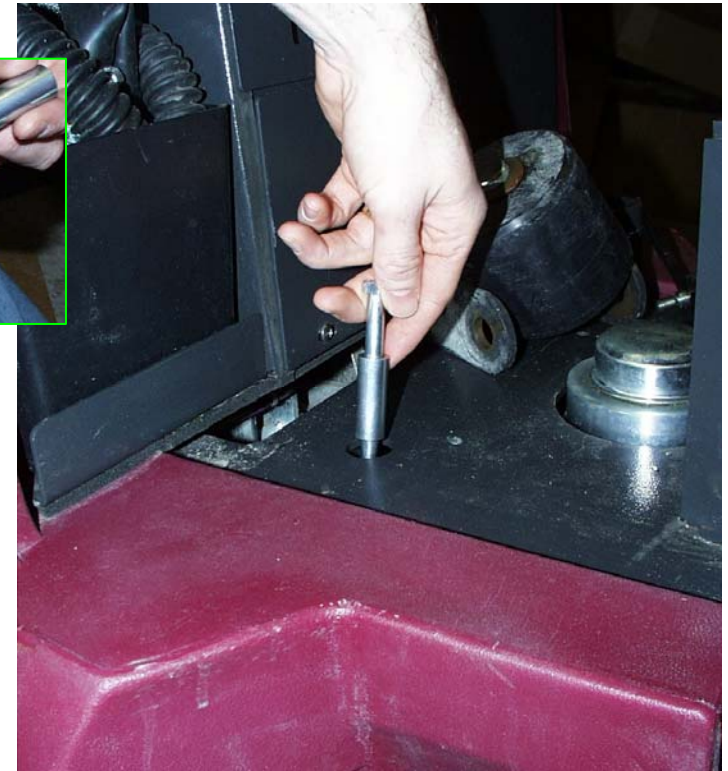


1. Once the Nut is loosened & removed, remove the Carriage Bolt.

Note: You may discard this carriage bolt only.



2. Insert BOLT (713051) into the BUSHING-YOKE (260125) (supplied with the K-281992 SCV CABLE GUIDE KIT)...



...& insert the Bolt/Bushing into the hole shown - in the floor of the mainframe (thru the same hole from which the carriage bolt was just removed).

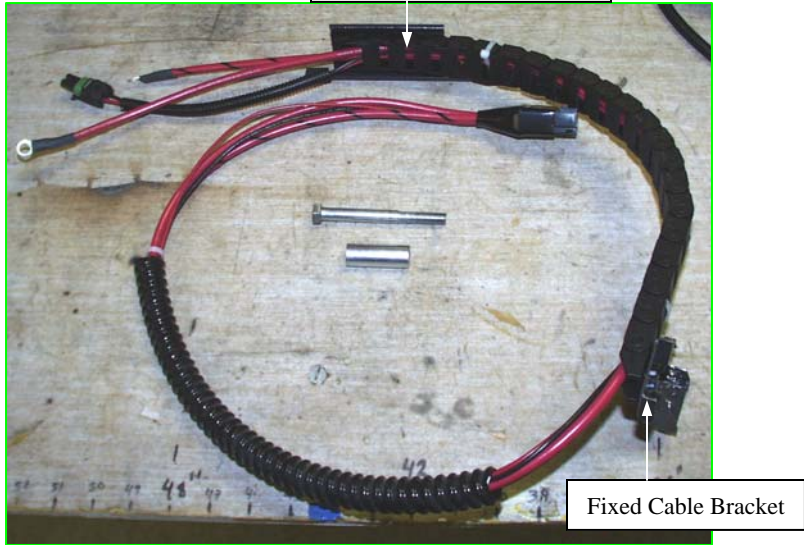
MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions

DOCUMENTED BY: Brett Sprietler / Tom Prehm

PAGE NUMBER: 13

DATE: 2/18/04

Drive Motor Cable bracket



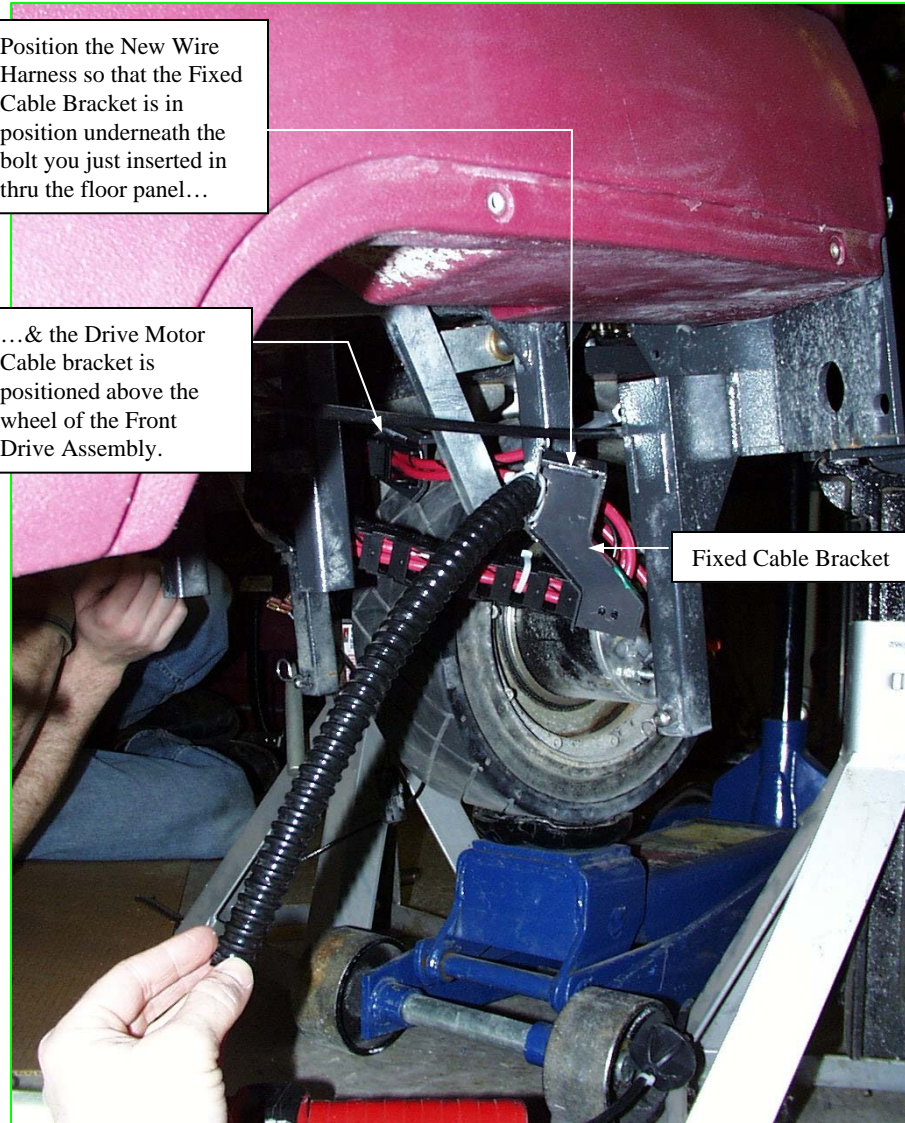
Fixed Cable Bracket

View from underside of machine

Position the New Wire Harness so that the Fixed Cable Bracket is in position underneath the bolt you just inserted in thru the floor panel...

...& the Drive Motor Cable bracket is positioned above the wheel of the Front Drive Assembly.

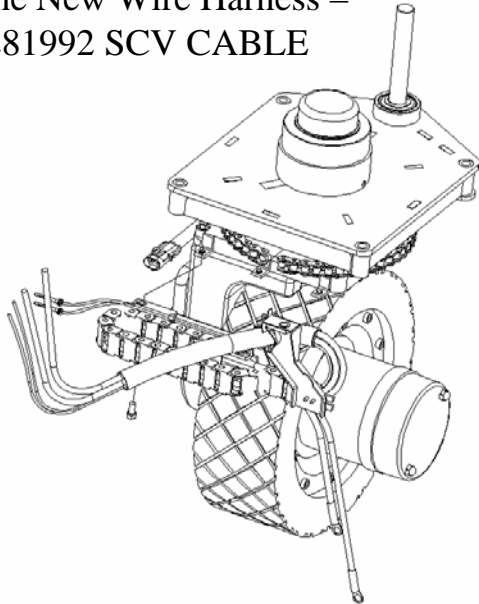
Fixed Cable Bracket



Position the New Wire Harness – supplied with the K-281992 SCV CABLE GUIDE KIT -underneath the machine.

Next, you will need the New Wire Harness – supplied with the K-281992 SCV CABLE GUIDE KIT.

Orient the New Wire Harness as shown in the diagram on the right & position it underneath the machine.



MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions

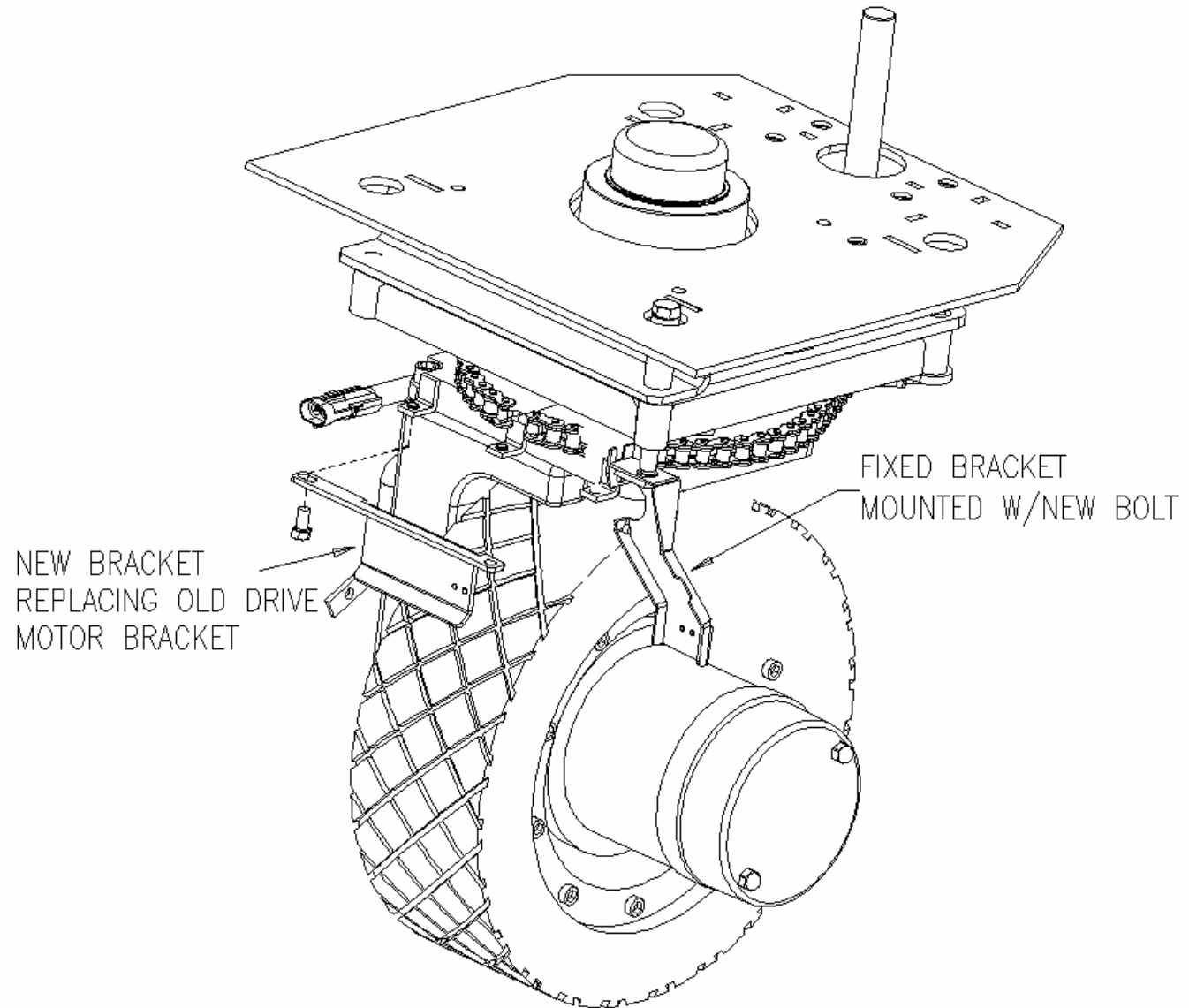
DOCUMENTED BY: Brett Sprietler / Tom Prehm

PAGE NUMBER: 14

DATE: 2/18/04

You will install the New Wire Harness with the Brackets oriented as shown in the diagram on the right... & mounted to the Drive Motor Spindle Weldment in the positions shown.

Note: The brackets appear here to be separate components- but the Cable Guide segments & the wire harness are not shown here only to illustrate the positions of the brackets relative to the Front Drive Assembly & where they will be mounted.



MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions
DOCUMENTED BY: Brett Sprietler / Tom Prehm
PAGE NUMBER: 15
DATE: 2/18/04

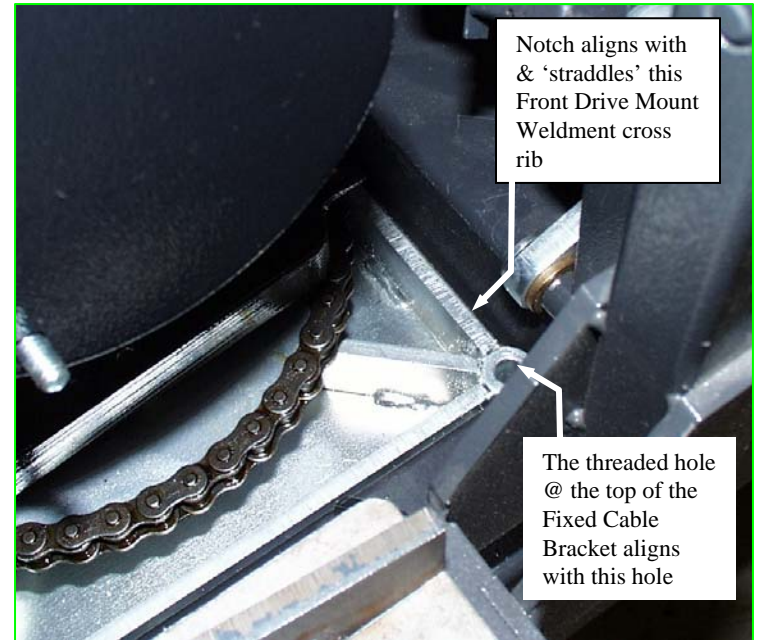


View from underside of machine

We recommend that you position the bracket underneath the spindle weldment mounting tabs & start the bolts from the underside

First, secure the Drive Motor Cable Bracket –to the Drive Motor Spindle Weldment (2 places)- with the original hardware - (2 each) Bolts (711202), Helical Washers (711544), & Flat Washers (711577).

The notched tab @ the top of the Fixed Cable Bracket is placed so that the notch aligns with & ‘straddles’ the Front Drive Mount Weldment cross rib indicated. Also, the threaded hole @ the top of the Fixed Cable Bracket aligns with the hole indicated. The BOLT (713051) should be protruding thru. Start the Bolt into the threaded hole.



Notch aligns with & ‘straddles’ this Front Drive Mount Weldment cross rib

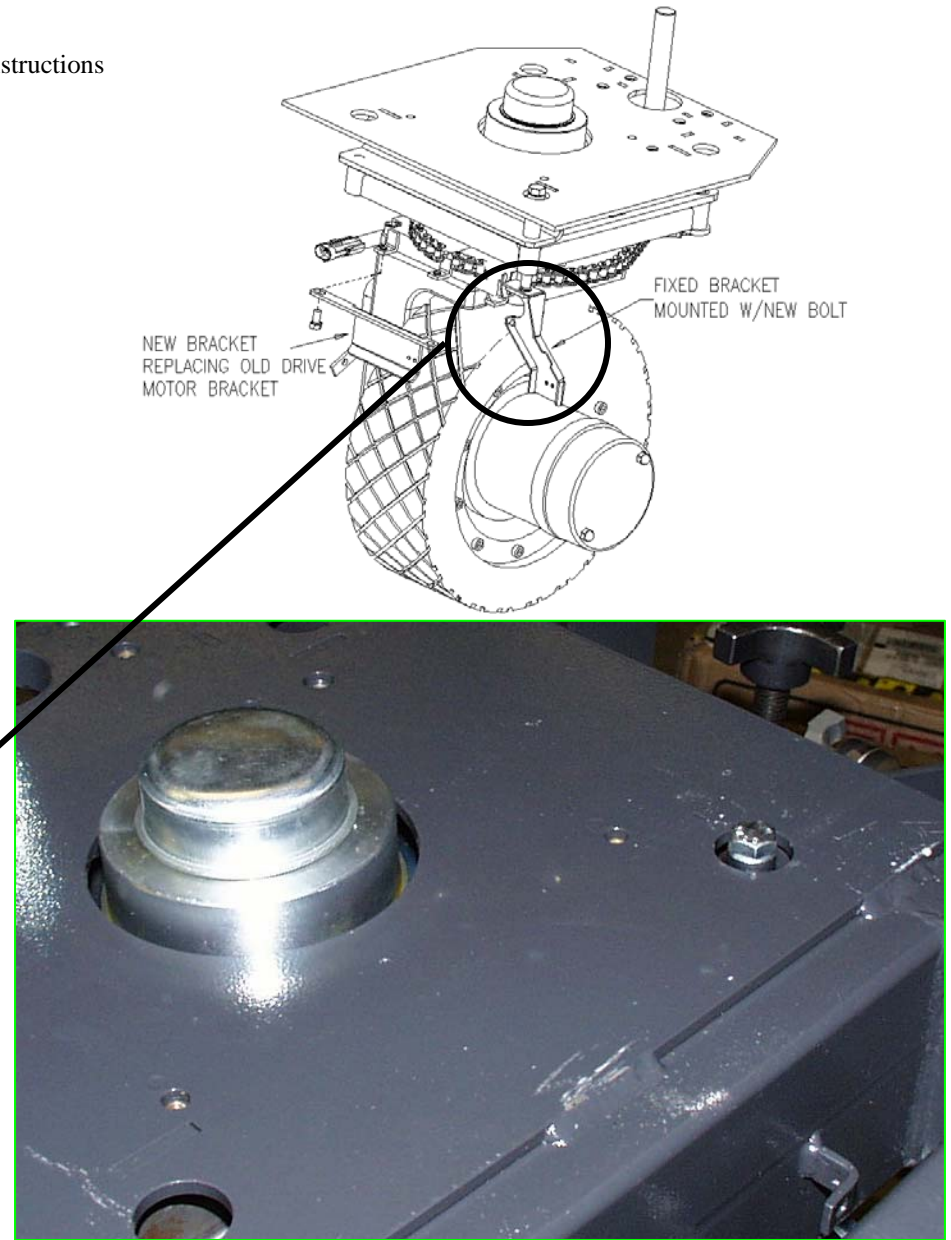
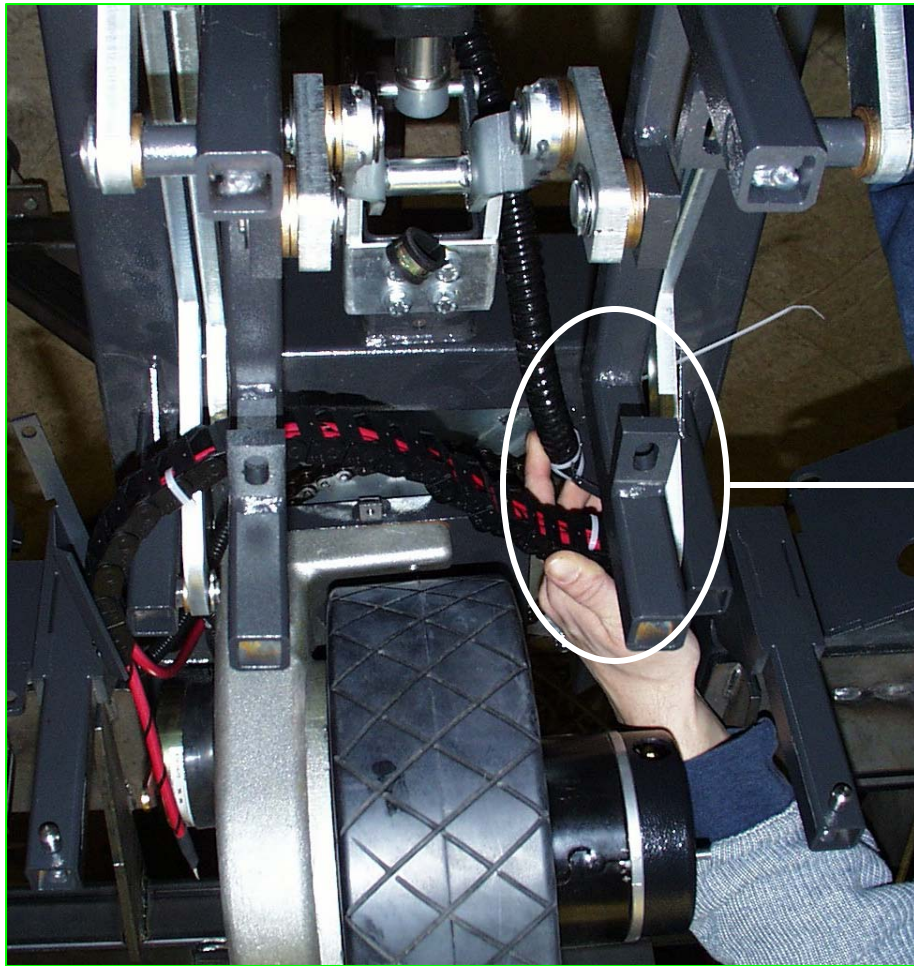
The threaded hole @ the top of the Fixed Cable Bracket aligns with this hole



notched tab

MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions
DOCUMENTED BY: Brett Sprietler / Tom Prehm
PAGE NUMBER: 16
DATE: 2/18/04

View from underside of machine



After the Fixed Cable Bracket is in position...

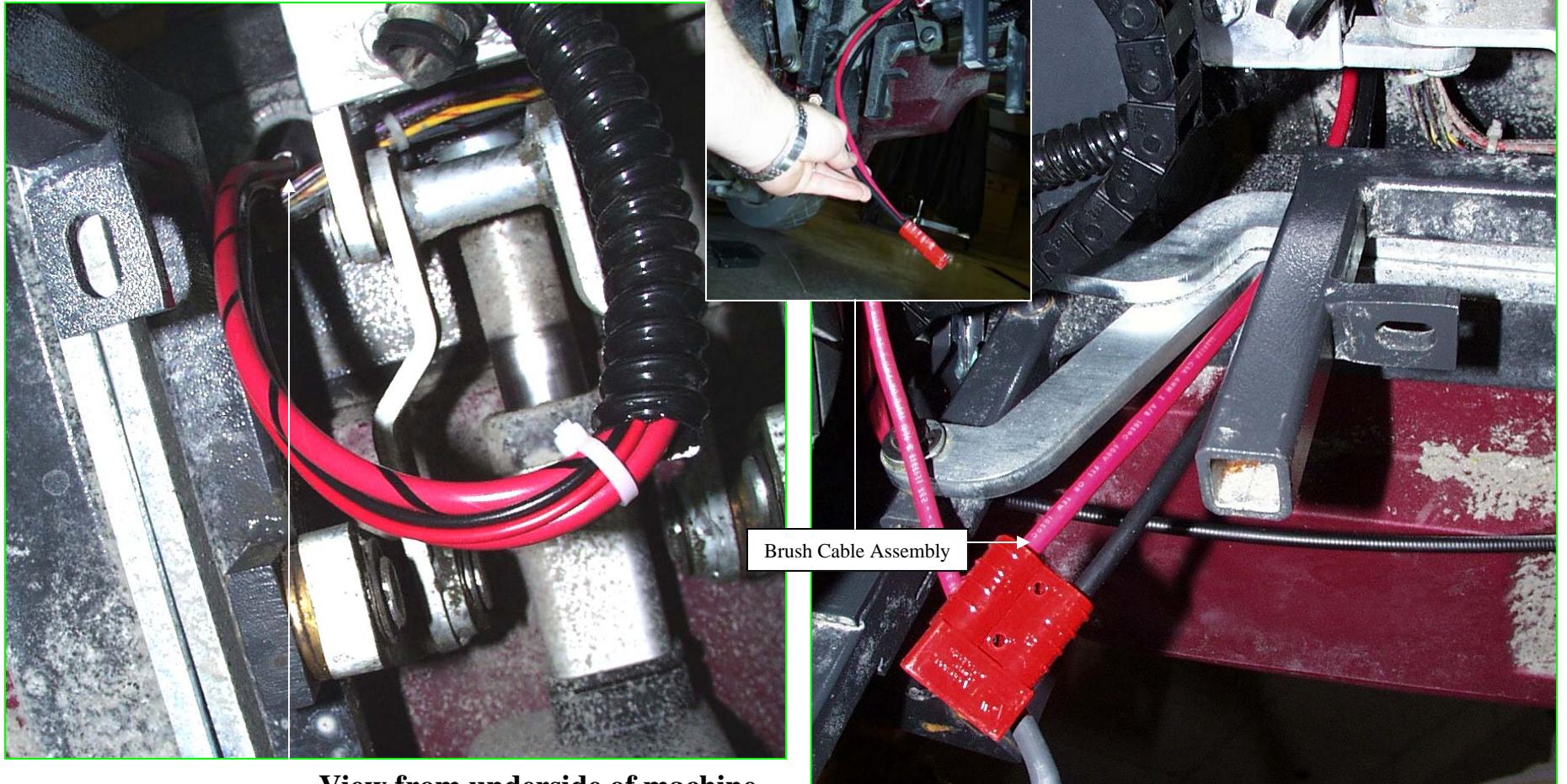
...tighten the Bolt protruding thru from the top surface of the Mainframe. The Bracket should pull up snug against the Front Drive Mount Weldment.

MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions

DOCUMENTED BY: Brett Sprietler / Tom Prehm

PAGE NUMBER: 17

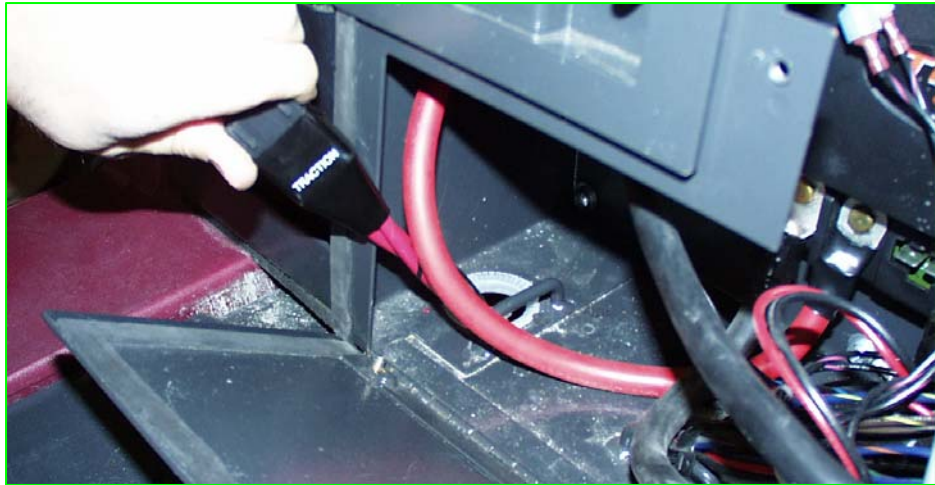
DATE: 2/18/04



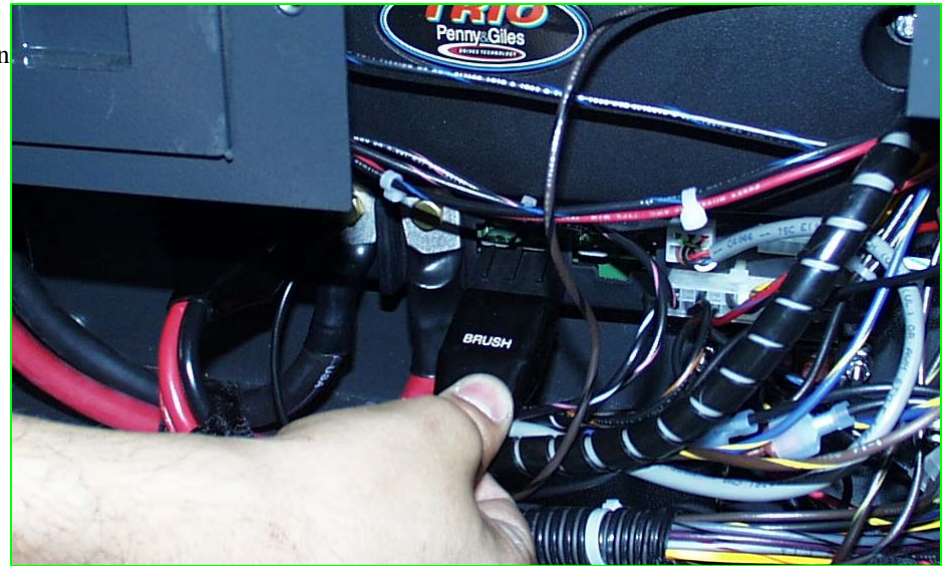
View from underside of machine

Route the New Wire Harness' connector marked "Traction" up through the Hole shown –up into the Electrical Panel in the front of the Solution Tank (a plastic serrated Grommet surrounds the edge of this hole). Route the Connector marked "Brush" (on the end of the Brush Cable Assembly) up thru the same hole.

MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instruction
DOCUMENTED BY: Brett Sprietler / Tom Prehm
PAGE NUMBER: 18
DATE: 2/18/04



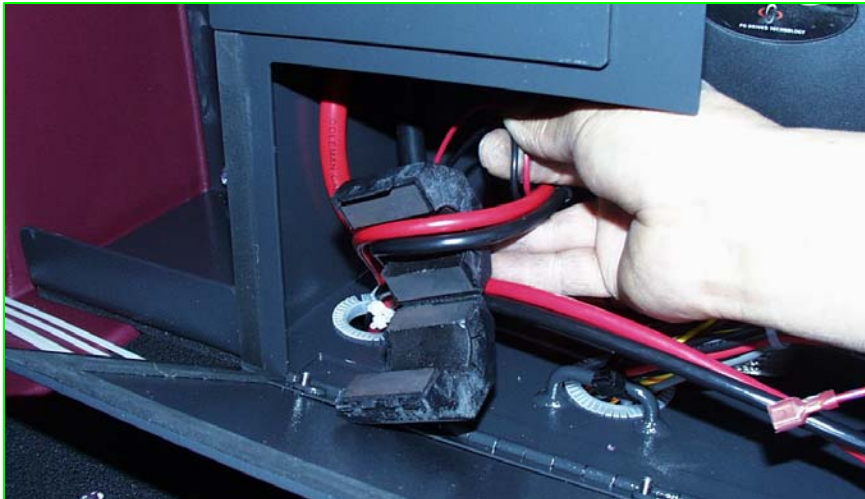
Pull the “Traction” & “Brush” connectors thru the hole shown in the Electrical Panel.



Re-connect the Trio Cable ‘Brush’ connector to the TRIO Controller Board. Re-connect the Trio Cable ‘Traction’ connector to the TRIO Controller Board.



Use a large black cable tie (361218) to secure the Traction Harness Cables & Brush Harness Cables to the Electrical Panel Wire Attachment Bracket.



Re-place the Torroid Shield (744017) around only the 2 larger Red & Red w/Black Stripe Traction Wire Harness Cables, as shown.

Secure with a Large Cable Tie (828062). Check the wire & cable connections for accuracy & to ensure that no connections were pulled loose.



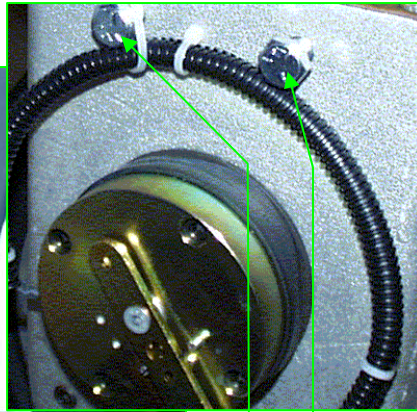
Reposition the Electrical Cover Panel in front of the Electrical Panel & secure with the original hardware. Tighten the Screws

MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions

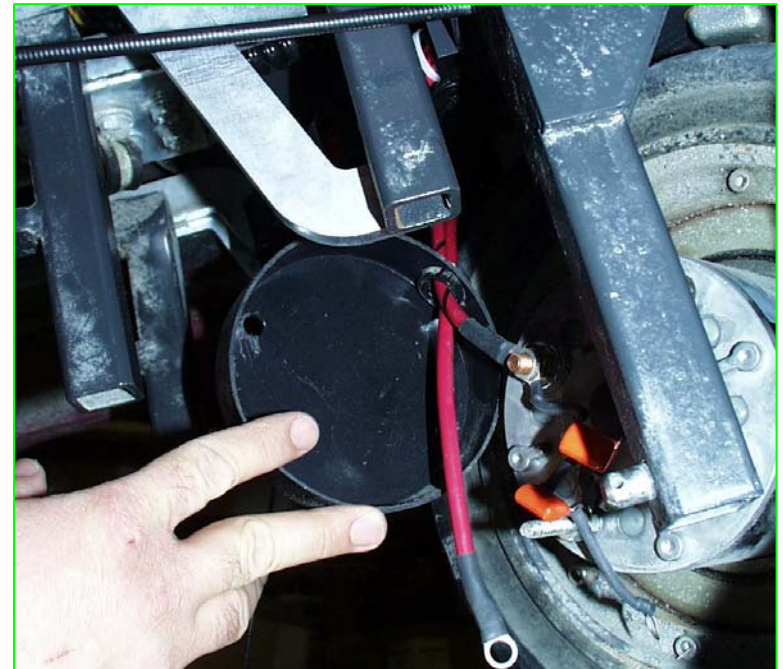
DOCUMENTED BY: Brett Sprietler / Tom Prehm

PAGE NUMBER: 20

DATE: 2/18/04



Cable tie the Electro-magnetic brake wire harness to the front drive assembly as shown.



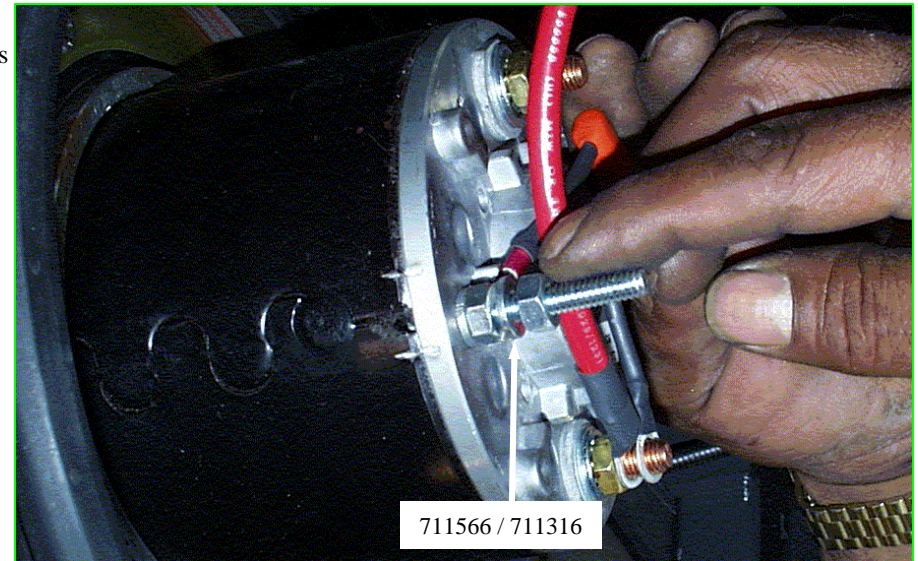
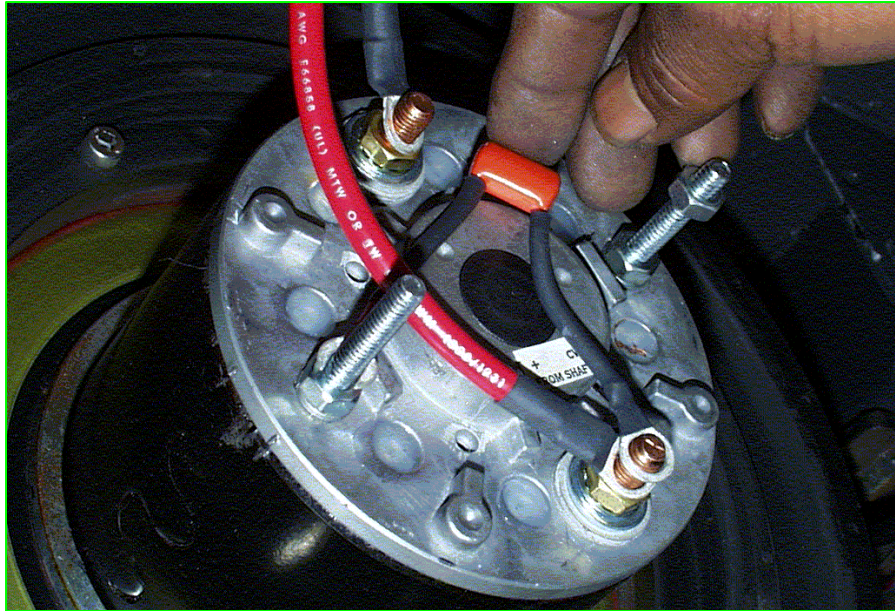
Use a Large Cable Tie (828062) to secure the Brush Cable Assembly to the P-Clip on the underside of the unit.

Connect Electro-Magnetic Brake Harness Packard Connector and the New Wire Harness Packard Connector as shown.

Note: The black plastic Motor Cover is shown here. Your unit may have a black plastic motor cover, or a metal motor cover. In either case, the installation is the same. However, if you have the metal cover, make sure the cables are oriented correctly before tightening the nuts (as shown on the next page).

Route the Red & Red/Black cables through the grommet in the side of the Motor Cover.

MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions
DOCUMENTED BY: Brett Sprietler / Tom Prehm
PAGE NUMBER: 21
DATE: 2/18/04



Place the opposite leg of the 2nd capacitor on the open motor cover mounting stud. Secure Capacitors w/ Flat Washer (711566) & Hex Nut (711316). Replace the motor cover onto the mounting studs of the motor, and secure with original hardware.

Connect the New Wire Harness' *red cable* to the *positive (+) terminal* of the Front Drive Motor, as shown. Attach the ring terminal of (1) Capacitor (744016-1) to the *positive (+) terminal* as shown, and the opposite leg of the capacitor to the motor cover mounting stud, as shown. Connect the New Wire Harness *Red/black cable* to the *negative (-) terminal* of the Front Drive Motor. Attach the ring terminal of the 2nd Capacitor (744016-1) to the *negative (-) terminal*. **Secure each cable w/original nut** (hold the nuts behind the terminals to prevent the studs from spinning-otherwise, damage to the drive motor will occur).

Note: the polarity (+/-) of the terminals is stamped into the end of each stud

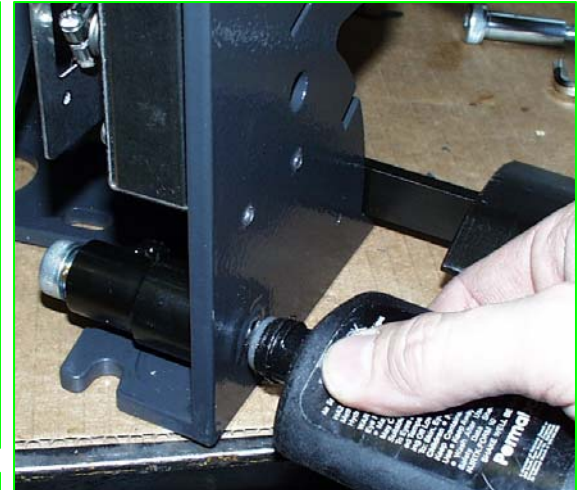
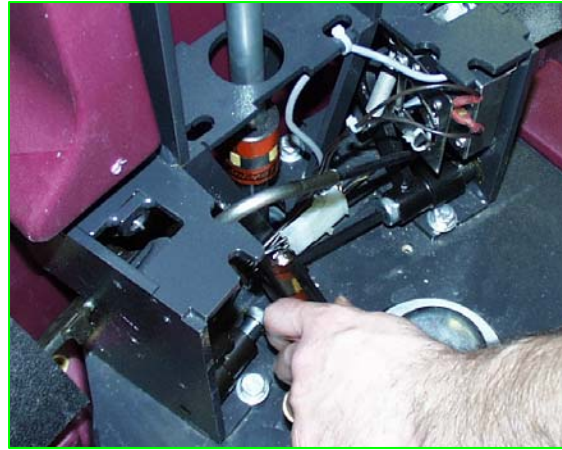


MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions

DOCUMENTED BY: Brett Sprietler / Tom Prehm

PAGE NUMBER: 22

DATE: 2/18/04



Replace the Floor Panel Weldment with the original hardware.

Replace the Accelerator & Brake Pedals & secure with the original hardware.

The Shoulder Bolts must be fully tightened into the lower steering weldment bushing.

Apply Removable loc-tite (000712) inside the hole shown (Accelerator & Brake Pedals), onto the threads of the Shoulder bolts.

MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions

DOCUMENTED BY: Brett Sprietler / Tom Prehm

PAGE NUMBER: 23

DATE: 2/18/04

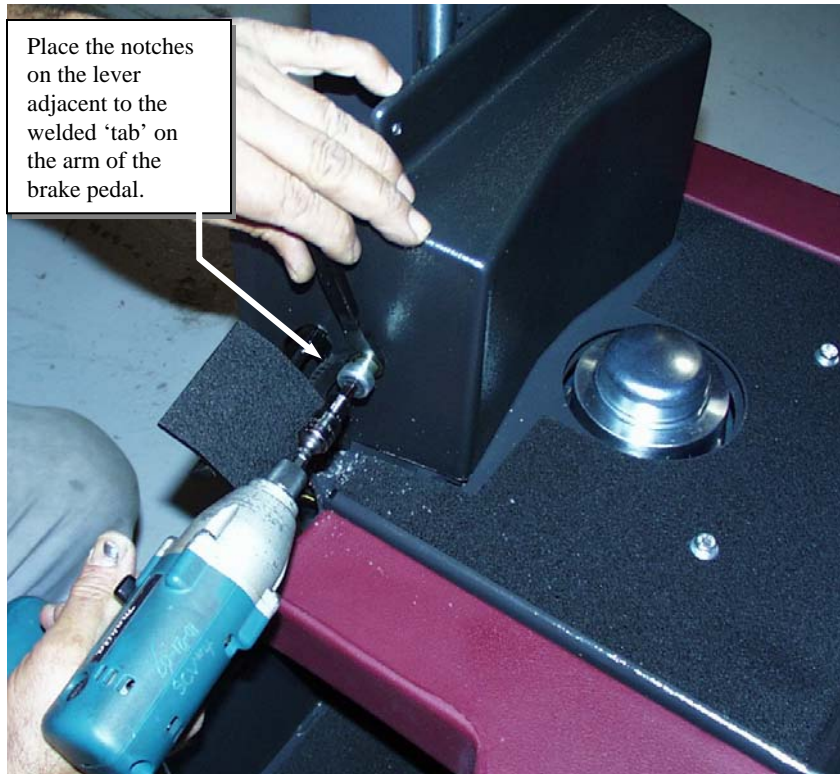


Re-install the Bottom Steering Column Cover (281024) where shown with the original hardware - (4) ST Screws (710556).



Apply axle grease to the shoulder of the Shoulder Bolt (712099PLT).

Secure the Parking Brake Handle (281341) to the left side of the lower Steering Column Weldment with the shoulder bolt...



...threading the bolt thru the hole in the center of the Parking Brake handle & into the threaded hole in the side of the lower steering column.

MODEL(s): 999028 - K-281992 SCV Cable Guide Kit Field Installation Instructions

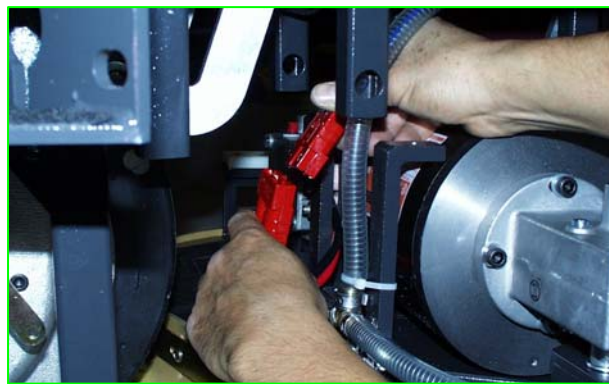
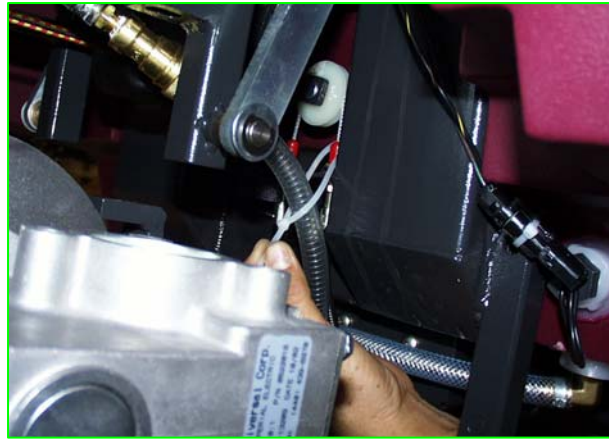
DOCUMENTED BY: Brett Sprietler / Tom Prehm

PAGE NUMBER: 24

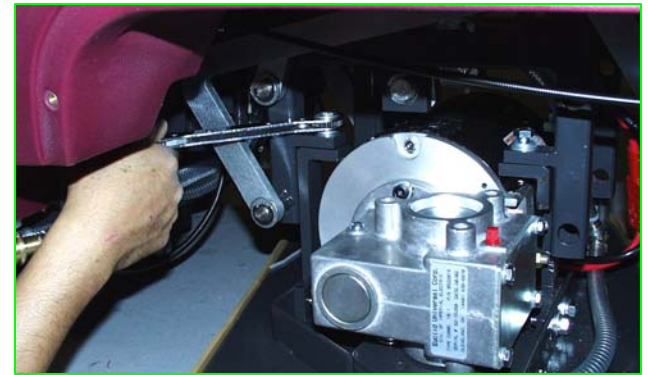
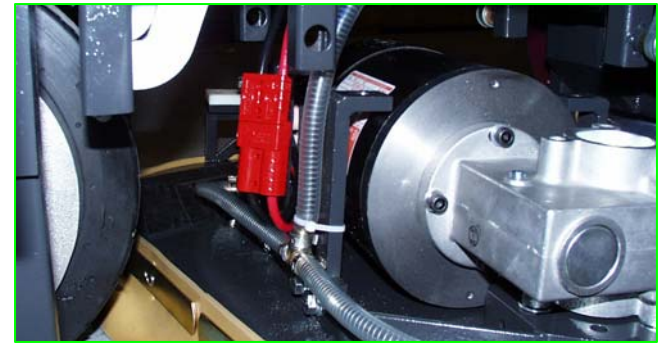
DATE: 2/18/04



1. Replace the Scrubdeck- first, connecting the quick connect coupling from the Scrubdeck to the male coupler from the Pump Assembly.
2. Cable tie the hose around the back of the Rear Brake Cable, as shown, with (2) Large Cable Ties (828062).



3. Connect the Brush Connectors from the Electrical Panel & the Scrubdeck Assembly together.
4. Re-install the (4 each) Bolts (713042), Helical Washers (711546), & Flat Washers (711515) that secure the Scrubdeck to the Lift Weldments.
5. Reconnect the Batteries.
6. Replace the Side Squeegees & Brush Deck Covers.



Make sure that the Brush Deck linkage – wires & Anderson connectors- cannot contact the new wire assembly in the up or down position while rotating the front wheel from side to side. Tie up anything that will interfere with the new wire harness.