

UNIVERSAL LUMBAR INSTALLATION INSTRUCTIONS



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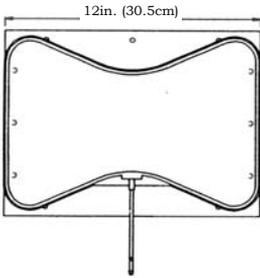
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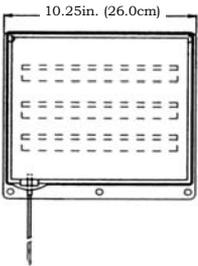
PARTS LIST

BLADDER	SWITCH	PUMP/POUCH	HARNESS	HDW PKG
250-02038 Standard	250-02054	250-02047	250-02046	250-02044
250-02042 Front Mount				

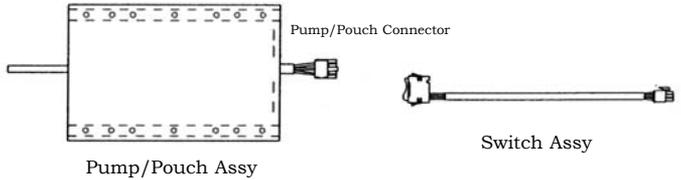
PARTS DIAGRAM



Standard Bladder Assy
(250-1453 KIT)



Front Bladder Assy
(250-1454 KIT)

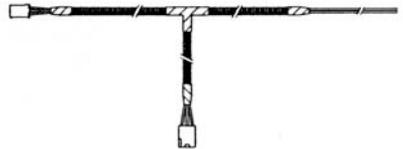


Pump/Pouch Assy

Switch Assy



Fused Harness



Main Harness

HELPFUL HINTS

1. BEFORE STARTING INSTALLATION:

Familiarize yourself with the installation instructions and lumbar seating system components (switch, harness, pouch and bladder)

NOTE: FOR EASE OF INSTALLATION, YOU MAY REMOVE THE SEAT FROM THE VEHICLE. IF THIS STEP IS PERFORMED, YOU MUST ENSURE THAT ON RE-INSTALLATION, THE SEAT IS TORQUED ACCORDING TO THE MANUFACTURER'S SPECIFICATION.

2. AIR BAG AND ANTI-THEFT RADIO:

- a. If vehicle is equipped with an ANTI-THEFT RADIO, the radio code must be written down prior to disconnecting battery cable. The code must be re-entered when the negative battery cable is re-installed.
- b. If vehicle is equipped with an AIR BAG, it is advisable to disconnect negative battery cable for 3 minutes.

!WARNING!

DO NOT TAP OR SOLDER TO ANY AIRBAG CIRCUITS(YELLOW TAPE, TUBING, AND CONNECTORS WILL INDICATE AIRBAG CIRCUITS)

3. REMOVAL OF NEGATIVE BATTERY CABLE:

Disconnect the negative battery cable before installing lumbar system components as a safety precaution.

FIGURE A

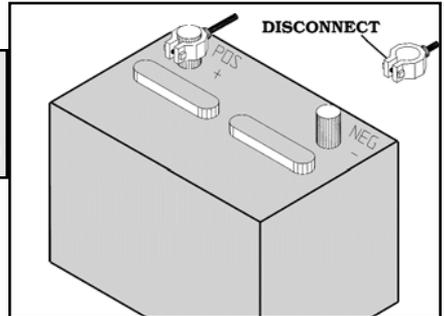


FIGURE A

4. ACCESSORY POWER:

When installing the special terminal into fuse panel of vehicle. Use as shown in **FIGURE B**.

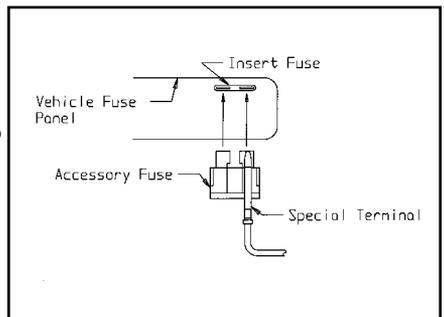


FIGURE B

INSTALLATION

BLADDER INSTALLATION

NOTE: BLADDER PERFORMANCE DEPENDS GREATLY ON POSITIONING AND HOW WELL THE BLADDER IS SECURED IN PLACE.

STEP 1:

To detach the seat cover apply one of the following steps:

- A. **J-Clips:** Insert panel puller into channel (in the seam on bottom edge of seat back) and pull the other side of the seam over the channel to release.
- B. **Zipper:** Unzip as necessary.
- C. **Hog-Ring:** Requires Hog-ring pliers and replacement rings. Cut existing rings to remove.
- D. **Removable Pocket:** Held in with push-pins or screws. Usually removed from bottom edge of seat back.
- E. **Rigid back:** Remove screws from bottom edge of seat back.

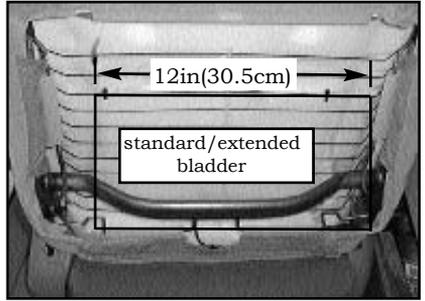


FIGURE 1

STEP 2:

To expose the seat cushion apply the following steps:

- A. Turn the seat cover inside-out as you roll it up.
- B. Working from the rear, detach the front of the seat cover from the frame. It will be held in place by Velcro, Springs, Hog-rings or Tie-bar (visible from bottom edge)

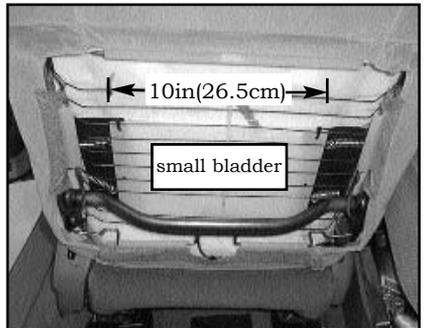


FIGURE 2

STEP 3:

- A. If the seat has spring support it will use a rear mounted bladder. There are three sizes:
 - 1) Standard 250-02038 12in. (30.5cm) or more
 - 2) Extended 250-02039 12in. (30.5cm) or more
 - 3) Small 250-02041 10.5in. (26.5cm) or more
- B. If the seat is molded plastic or foam without any support it will require a front mounted bladder (250-02042)

STEP 4:

To mount the bladder:

- A. **STANDARD/EXTENDED/SMALL BLADDER (FIGURES 1 & 2)** Insert bladder between springs and seat back cushion (inflatable bag toward cushion and tube down). route tube to the right and guide tube next to seat hinge and exit under seat. Make sure tube routes inside of the seat hinges, not around the outside. Use tie straps to secure bladder back to seat springs.
- B. **FRONT BLADDER: (FIGURE 3)**

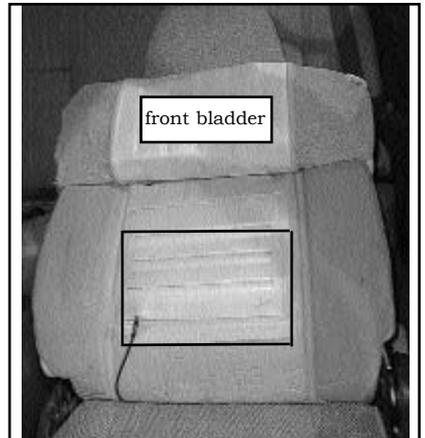


FIGURE 3

Use double sided tape and/or cable ties to secure bladder back to cushion.

INSTALLATION

BLADDER INSTALLATION

NOTE: Tube should be routed away from seat track. Avoid kinking bladder tube or rubbing tube against sharp edges. Inflatable bladder must not contact seat springs.

!CAUTION!

Do not apply any external air sources to inflate bladder other than manufacturer supplied.

PUMP/POUCH INSTALLATION

1. Connect bladder tube to rubber hose coming out of pouch.
2. Mount pouch under seat and secure to seat using cable ties or ratchet fasteners where appropriate. **FIGURE 4**
3. Secure bladder tube and pouch rubber hose with cable ties to prevent them from moving.

NOTE: Do not add holes to pouch, use existing holes only. Damage can occur to enclosed components and void warranty.

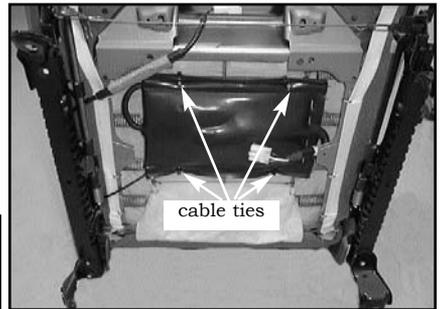


FIGURE 4

SWITCH INSTALLATION

NOTE: Console or seat plastic cuts best at room temperature.

SWITCH INSTALLATION: FIGURES 5 & 6

1. Choose a switch location on a flat surface on the console or the seat side panel.
2. Remove center console or side seat panel as needed.
3. Cut a 1/2" x 1-3/8" hole in the console or the seat side panel using ROSTRA tool (250-1428) or using **TEMPLATE A ON PAGE 6**.
4. Place the bezel from hardware package onto switch.
5. Insert switch through opening and snap in place.

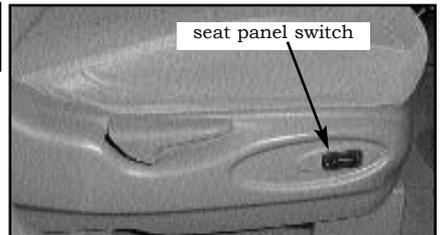


FIGURE 5

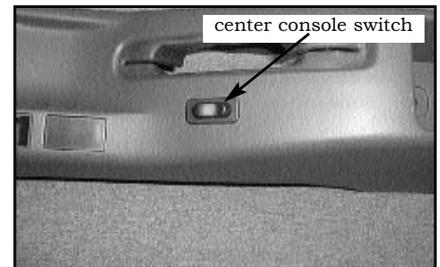
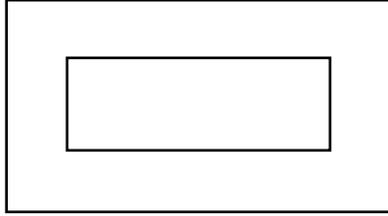


FIGURE 6

INSTALLATION

Switch Template A
(Actual size)



WIRING HARNESS INSTALLATION

SWITCH INSTALLATION: FIGURES 5 & 6

1. Remove side scuff plate and kick panel.
2. Starting at the scuff plate, route three pin pump connector end of harness under carpet to exit through opening under the seat, and connect to pump. For seat mount switch connect three pin switch connector end of harness to switch. (If no carpet opening, create as required.)
3. Route three pin switch connector end of harness under carpet to console and connect to switch (For console mount switch).
4. Wrap foam adhesive around switch connection to prevent rattles.
5. Route red (power) and black (ground) wires along scuff plate, under carpet, toward fuse panel.
6. **FOR POWER**, cut the red wire on the extension harness to desired length and solder **OR** use attached butt splice to fused harness, also solder the other end of fused harness to a positive Accessory fuse (fused 5 Amp or greater) **OR** Insert the red wire with special terminal from fused harness assembly to a +12V Accessory fuse (fused 5 Amp or greater).
FOR GROUND, cut the black wire on the lumbar harness to desired length, install ring terminal supplied and attach to a ground point.

OPERATION AND TROUBLESHOOTING

OPERATION PROCEDURES

OPERATION:

The switch is used to operate the system. If your lumbar system was installed correctly, it should perform as indicated below.

INFLATE/DEFLATE:

To inflate the bladder, depress the high side of switch. The pump motor will continue pumping air until bladder maximum is reached, then overflow will vent out through the pump system.

To deflate bladder, depress the low side of the switch, and with your body weight pressure, the bladder will vent out the air as long as you hold the switch.

OPERATION AND TROUBLESHOOTING

TROUBLESHOOTING

! WARNING !

Using a Test Light may cause damage to the vehicle.

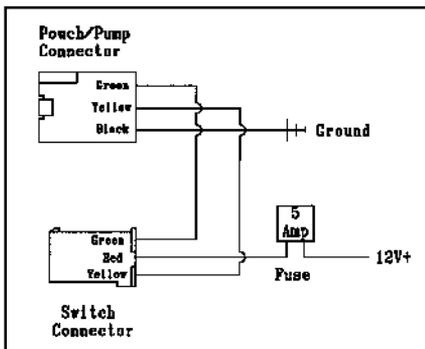
WIRING DIAGRAM

R = Red = Power

Y = Yellow = Valve

B = Black = Ground

GR = Green = Pump



RE-CONNECT NEGATIVE BATTERY CABLE.

1. PUMP OPERATIONAL BUT BLADDER IS NOT INFLATING/DEFLATING:

a. Not inflating:

Disconnect bladder from pump hose. Depress the high side of switch. Check if there is air flow from the pump, approximately 2 psi.

No?- go to 2f.

Yes?- replace bladder

b. Not deflating:

Disconnect bladder from the pump hose. Is air flow coming out of the bladder hose when initially disconnected?

No?- go to 1a.

Yes?- go to 2f.

2. PUMP NOT OPERATIONAL: (See wiring diagram on page 6)

a. Check 5 Amp lumbar Fuse to power system. Replace fuse if needed.

b. Check 12 Volts Accessory vehicle Fuse. Replace fuse if needed.

c. Check harness Ground for continuity.

d. Check Vehicle power point for 12 Volts.

e. Check all connections. (pump & switch connector, special terminal, fuse splice...)

f. Unplug the switch from the harness and check voltage at the harness connection:

* For 12V GR= 0 Volts , R= 12 Volts , Y= 0 Volts. If bad replace harness, If good go to g.

g. Unplug the harness from the pump connector and check harness continuity:

GR at pump to GR at switch= closed circuit

Y at pump to Y at switch= closed circuit

B at pump to vehicle Ground= closed circuit,

If bad replace harness, if good go to 2h.

h. Check switch continuity with switch unplugged at the switch connector:

R to Y no activation= open circuit

low switch side activated= closed circuit

high switch side activated= closed circuit

R to GR no activation= open circuit

low switch side activated= open circuit

high switch side activated= closed circuit

If bad replace switch. If good replace pump/pouch system.

If your system still does not work properly, repeat troubleshooting 1 more time.

WARNING: The information in this manual has been carefully compiled through actual vehicle testing and manufacturers service manual research and to the best of our ability is accurate . However, we do not warrant the accuracy of this information against changes in vehicle design, the use or misuse of this information or typographical errors. It is the responsibility of the installer to verify the proper wire attachments prior to and after the installation of the Lumbar System to assure proper operation. We do not accept any responsibility for damage to the vehicle or injury to its occupants caused by the use of this information. Improper installation and/or connection to the incorrect wires could cause Lumbar System or vehicle malfunction, component damage and/or personal injury for you and/or your passengers.



36 MONTH/36,000 MILE LIMITED WARRANTY

Rostra Precision Controls, Inc. (the Company) warrants to the original retail purchaser of this product that should this product or any part thereof, under normal use and conditions, be proven to have defective material or workmanship within 36 months or 36,000 miles of the original purchase, such defect(s) will be repaired or replaced (at the Company's option) without charge for the parts. This warranty does not apply to batteries or normal wear and tear associated with the Product.

To obtain repair or replacement with the terms of this Warranty, the product is to be delivered with proof of warranty coverage (e.g. dated bill of sale), specification of defect(s), transportation prepaid, to the installing dealer and/or retailer.

This Warranty does not cover costs incurred for the removal or reinstallation of the product, and/or related components, and/or damage to the vehicle's electrical system or components.

This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, misuse, neglect, accident, or customer abuse.

This Warranty is in lieu of all other express warranties or liabilities. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY HERE-UNDER INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY MUST BE BROUGHT WITHIN A PERIOD OF 18 MONTHS FROM DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY THE PURCHASER FOR THE PRODUCT.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

ROSTRA PRECISION CONTROLS INC.

2519 Dana Drive * Laurinburg, NC 28352 * (910) 276-4853

OWNER'S WARRANTY RECORD

(To be completed by selling dealer and retained by customer)

Customer's Name _____

Address _____

Dealer Name _____

Dealer Address _____

City _____ State _____ Zip _____

Date Purchased _____ Date Installed _____ Make & Year of Car _____

Mileage at Installation _____