



**N41421 Peacemakers Exhaust for Harley-Davidson Dyna Series 1995-05.**

Please read these instructions carefully and thoroughly before beginning work.

Before installing accessory, carefully consider whether one possesses the necessary technical skills and workshop tools to complete the installation properly. Otherwise, any Motorcycle Retailer will be glad to install this accessory.

Dealers, if installing the Exhaust for a customer please give him this manual. It contains the instructional and reference material needed to properly maintain and use this product.

At time of purchase report any missing parts directly to National Cycle, Inc. The following information is necessary: BAG NUMBER on outside of plastic fastener bag and DATE STAMP located on the warranty card.

Thank you.

The following symbols are used in these instructions:



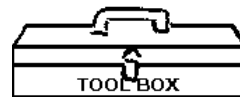
Special notes and cautionary measures.



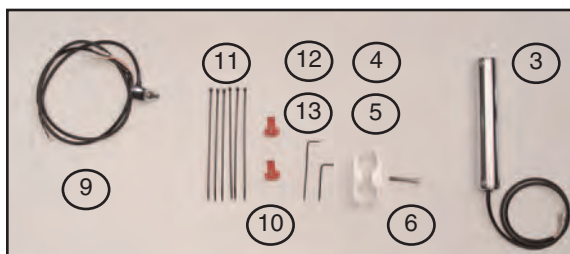
Tips for facilitation of operation, control and adjustment, as well as maintenance work.

**PARTS LIST**

Index	Description	Part No.	Qty.
1	Muffler, Rear	80-884121-000	1
2	Muffler, Front	80-884122-000	1
3	Linear Actuator Motor	80-874500-000	1
<b>Bag 711</b>			
4	Clamp, Toenail, C-Bore	30-390202-000	1
5	Clamp, Toenail, Tapped	30-390203-000	1
6	CSHS, 1/4-20 x 1 1/2"	51-515413-000	1
<b>Bag 718</b>			
7	Bracket, Support Cable	37-373790-000	1
8	Cable Ties	44-448725-000	2
<b>Bag 739</b>			
9	Wire Harness, Switch	80-831421-000	1
10	U-Connector, Scotchlok	80-850002-000	1
11	Cable Ties	44-448725-000	9
12	Hex Key 3/32"	59-515130-000	1
13	Hex Key 5/64"	59-515132-000	1
	Warranty Card (not shown)	10-118420-000	1



- 1/2" Box End Wrench
- 9/16" Box End Wrench
- Phillips Screwdriver
- Flat Head Screwdriver
- Hex Keys, 5/16 and 3/32 (included)
- T27 Torx
- Pliers
- Wire Cutters (for cable ties)
- Electrical Tape



Handle Cables with Care. Do Not Kink while Unpacking.



When installation is complete, wipe all thumb prints from Chrome Exhaust before starting motorcycle or they will permanently mark surface.



Right and Left side of Motorcycle is determined while sitting on the bike.



All parts removed from Motorcycle will be re-used unless otherwise noted.

## PREPARATION

1. Wait for stock exhaust to cool down before beginning installation.
2. Position the motorcycle securely on a work stand or on its side stand.
3. Remove the two stock heat shield covers. (**Flat Head Screwdriver**)



The exhaust *hanger bracket* must be removed before exhaust canisters can be removed from header pipes.

4. Remove exhaust hanger bracket. (**1/2" Box End Wrench**) **Figure 1.**
5. Loosen the two muffler clamps. (**9/16" Box End Wrench or Socket**) **Figure 2.**
6. Pull the rear and the front mufflers off. Remove muffler clamps. Stock mufflers will not be re-used.
7. Remove seat. (**Phillips Screwdriver**)
8. Remove the front and rear bolts holding gas tank. It is not necessary to remove tank, use wood block to prop tank. (**1/2" Box End Wrench**) **Figure 3.**

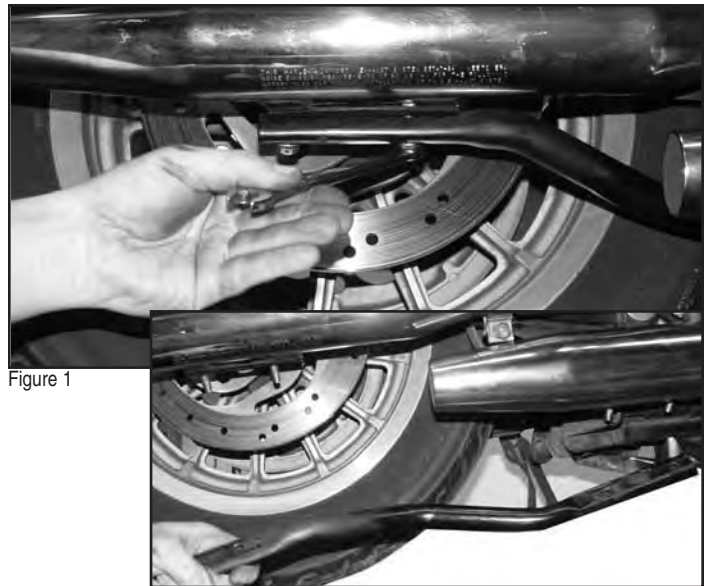


Figure 1

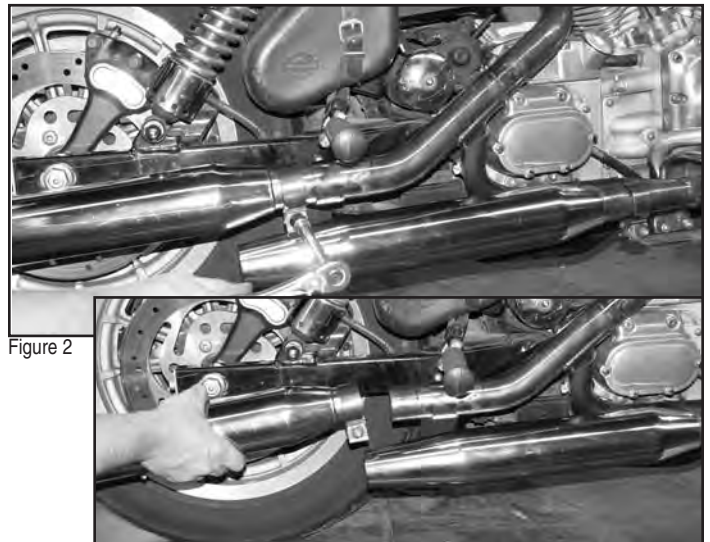


Figure 2



Figure 3



Do not remove cable from muffler. Do not damage or kink cable.

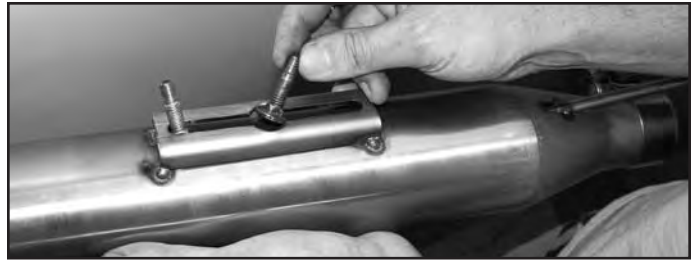


Figure 4

## INSTALLATION

1. Slide bolts removed from hanger bracket into track on Peacemakers front exhaust. **Figure 4.**



When installation is complete check that the Diverter Cable does not come in contact with pipe or clamp.

2. Install Front Muffler / Route Cable. **Figure 5, 6 and 7.**

Install stock muffler clamp to Muffler with clamp nut facing down and out.

Route Diverter Cable to **OUTSIDE** of foot rest bracket.

Extend cable forward, do not kink.

3. Install Rear Muffler / Route Cable. **Figure 7.**

Install stock muffler clamp to Muffler with clamp nut up and in.

Route cable to **INSIDE** of foot rest bracket.

Extend cable forward, do not kink.

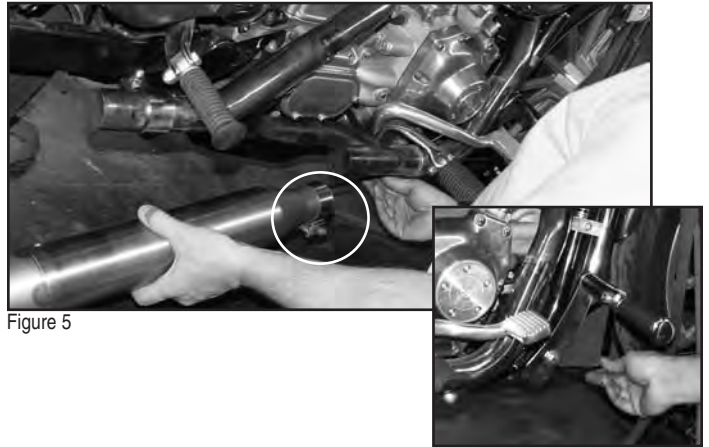


Figure 5



Figure 6

Front Muffler Cable locates **OUTSIDE** of Foot Rest Bracket

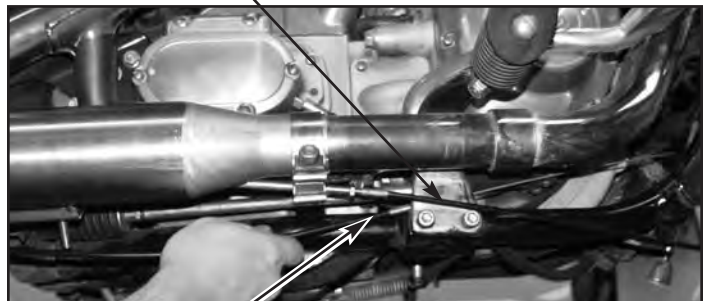


Figure 7

Rear Muffler Cable locates **INSIDE** of Foot Rest Bracket





**Do not skip step 4. Installation of the Cable Hanger Bracket is necessary to avoid any possible contact of Cable with Hot Exhaust.**

4. At front muffler location, position Cable Hanger Bracket (7) to inside of exhaust bracket. Finger tighten with stock nuts. **Figure 8.**

5. At rear muffler location, use stock nuts and finger tighten rear muffler to exhaust bracket.

6. Maneuver Mufflers into position with exhaust bracket. When parts are in alignment, tighten all fasteners in the following order:

Nuts on bracket (**1/2" Wrench**)

Muffler clamps (**9/16" Wrench**)

7. Secure Actuator Cable to Cable Hanger with two Cable Ties. **Figure 9 and 10.**

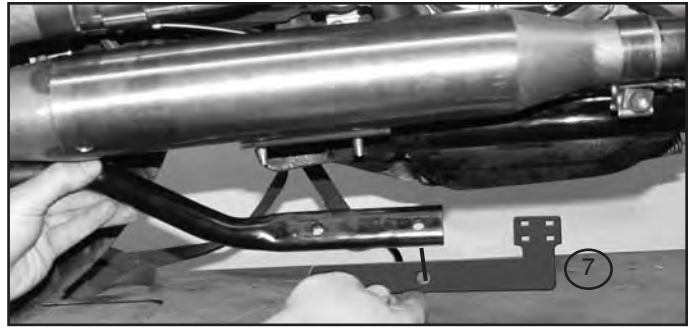


Figure 8

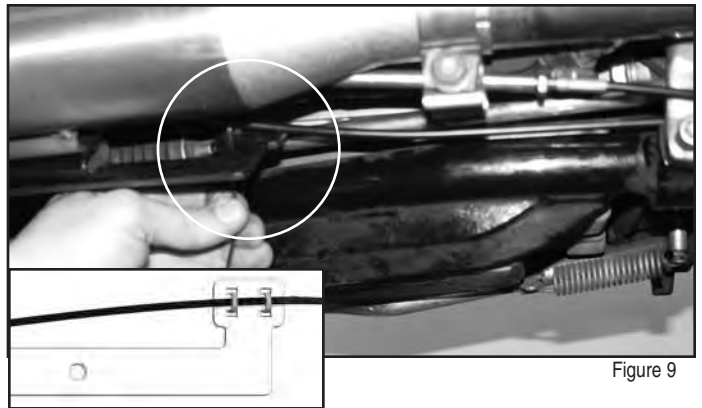


Figure 9

Hanger Bracket  
Holds Cables  
Away From  
Muffler

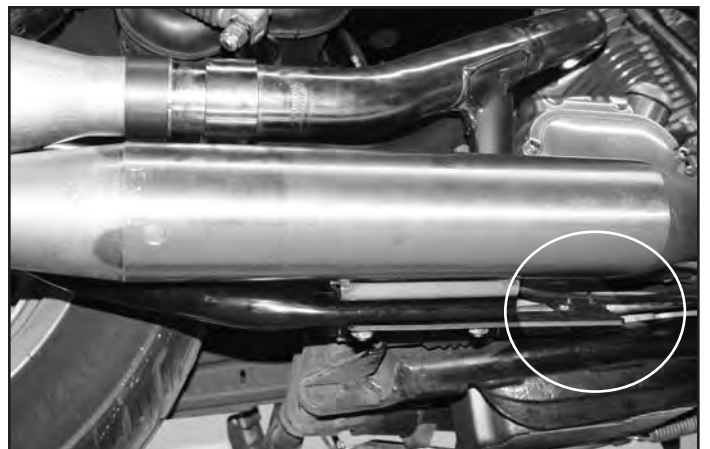


Figure 10

## THE LINEAR ACTUATOR DRIVE



About the operation of this unique patent pending design: The electrical drive is separate from the linear mechanical mechanism. The Cable coming from each Peacemakers Muffler is made up of a Wire inserted into a Cable Sheath (Illustration A.) For proper operation, the wire end of the Cable needs to be inserted fully into the Wire Guide Assembly (Figure 14) before, during Preloading and while Set Screws are being tightened. Please follow the instruction below.

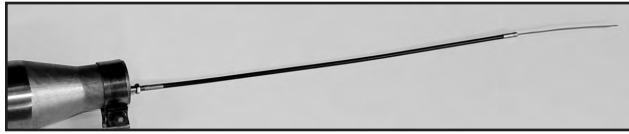
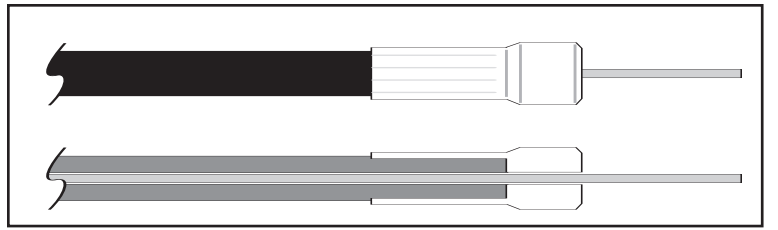


Illustration A.



### Installation of Cable into the Wire Guide Assembly of the Linear Actuator Drive.

1. Remove Actuator Guide from Housing. (**3/32" Hex Key Wrench**) **Figure 12**
2. Loosen the 2 Set Screws at each location (b) and (c). (**3/32" and 5/64" Allen Wrench**) **Figure 11**

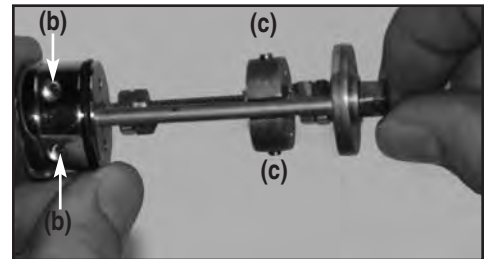


Figure 12

3. From bottom of Actuator Wire Guide Assembly gently insert wire end of cable until Ferrule of Sheath is fully inserted into Drive End Cap and Wire is guided through Position Nut. **Tighten Set Screw (b).** (**3/32" Hex Key Wrench**) **Figure 13 and 14**

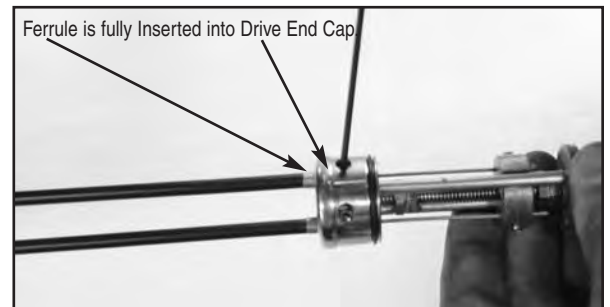



Figure 13


### Wire Guide Assembly



Figure 14

## Preload Cable and Install Actuator Drive into Housing

 When correctly installed there will be proper inner Wire to Cable Sheath geometry and the Wire ends will be through the Position Nut as shown in Figure 16.

 When preloading Cable be sure to hold the linear Actuator Drive up next to the frame tube before tightening the 2 set screws (c) against the Wire to ensure proper preload on the Diverter Valves.

3. Rotate Drive Screw with Nut (a) clockwise to stop. Mark top of nut (Grease Pencil) then rotate ONE revolution counter clockwise. **Figure 15**

4. Before tightening Set Screws (c) it may be necessary to pull gently on wire of cable so Wire is exposed slightly. **Figure 16**

5. Tighten Set Screws (c). (**5/64" Allen Wrench**) **Figure 16**

6. Install Actuator Cover. If necessary use a small amount of lubricant on "O" ring. **Figure 17.**

Use a straight twisting motion until engagement takes place. The acme hex on end of Drive Unit (male) engages into female inside Housing.

7. Align holes at bottom and install Screws. (**3/32" Allen**)

8. Install Actuator using two-piece clamp and bolt from bag. **Leave loose.** (**3/16" Allen Wrench**) **Figure 18**

9. Rotate Actuator as shown in **figure 18** for proper clearance of front fender. Tighten Clamp Screw.

10. Route Wire Harness from Actuator Case upward and secure at top of down tube with Cable Tie. **Figure 19**

First Rotate Clockwise to Stop



Figure 15

Then rotate ONE revolution counter clockwise. Preload is Complete

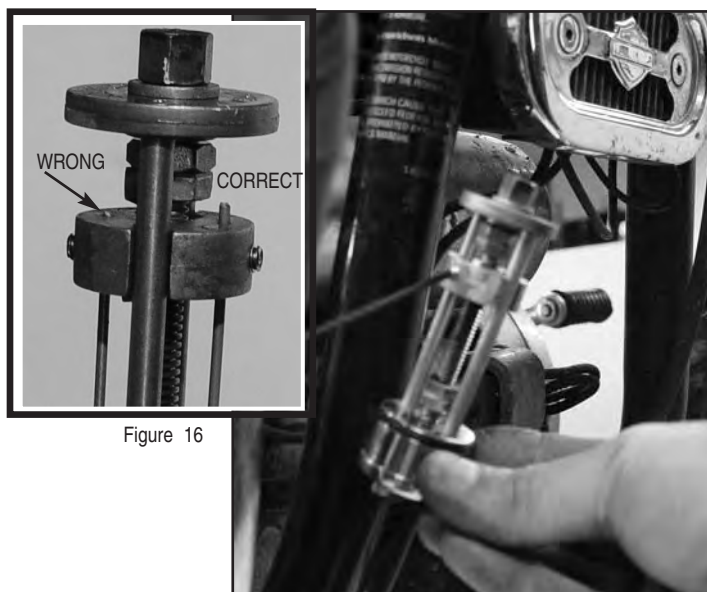


Figure 16

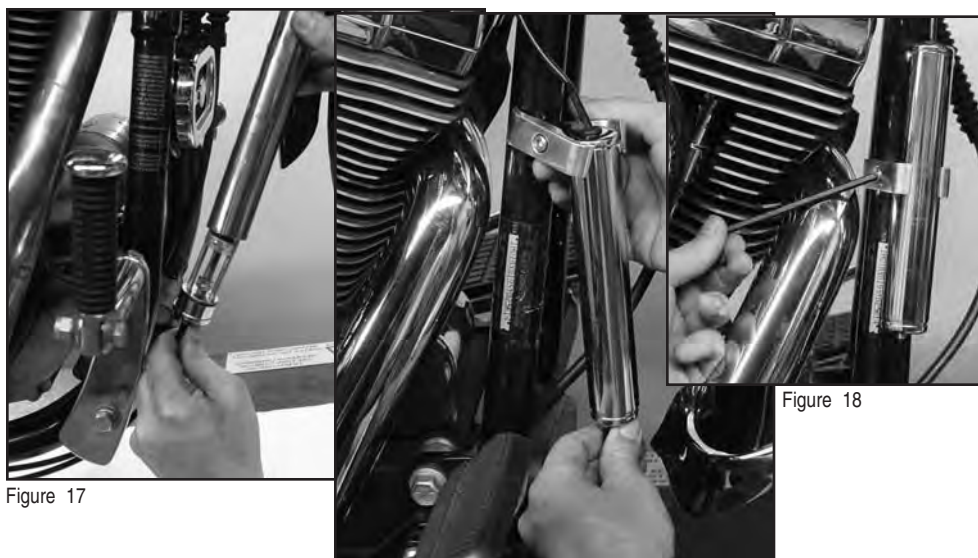


Figure 17

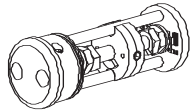
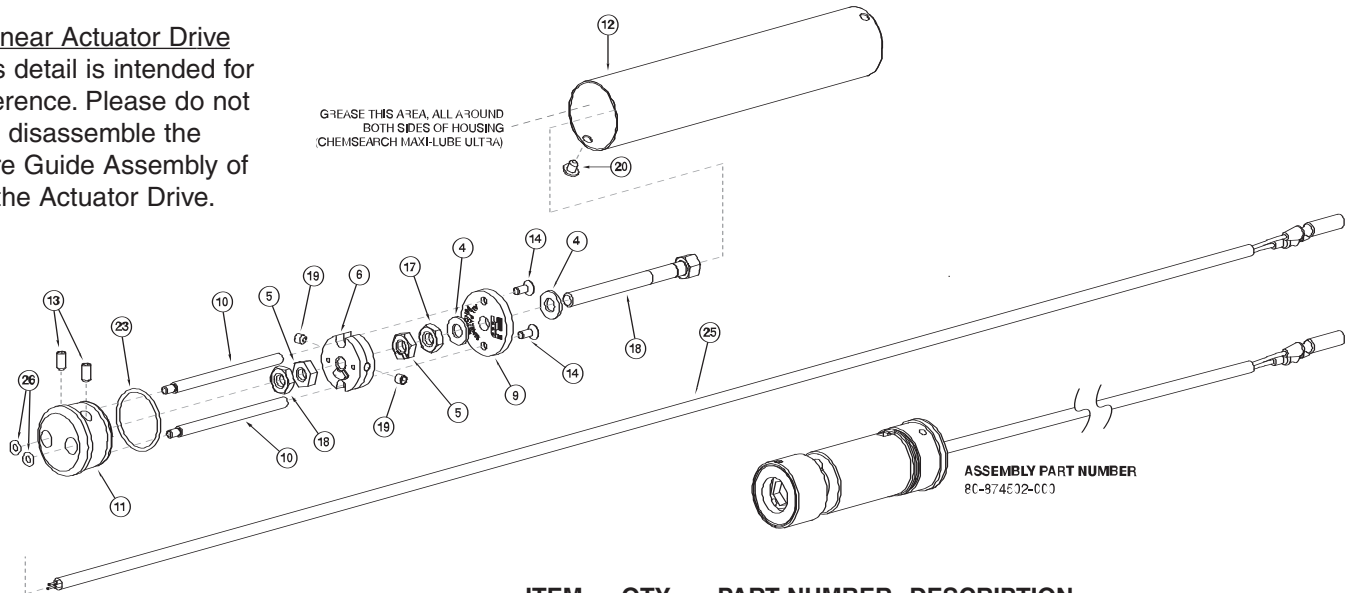
Figure 18



Figure 19

### Linear Actuator Drive

This detail is intended for reference. Please do not disassemble the Wire Guide Assembly of the Actuator Drive.

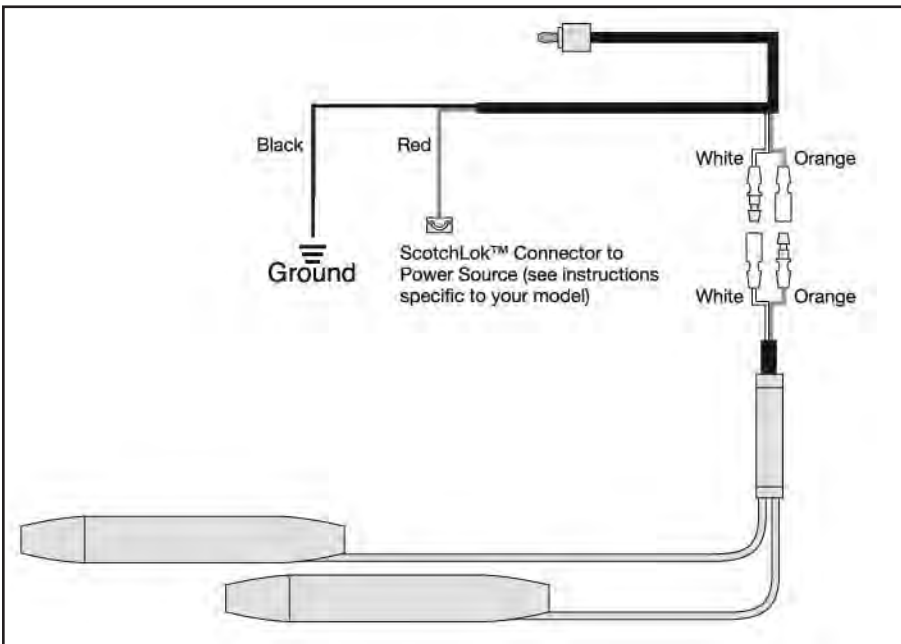


ASSEMBLY PART NUMBER  
80-874E01-033

ASSEMBLY PART NUMBER  
80-874E02-000

ITEM	QTY.	PART NUMBER	DESCRIPTION
4	2	49-490501-000	WASHER, THRUST, OILITE
5	2	70-740535-000	TRAVEL STOP
6	1	70-740530-000	POSITION NUT
9	1	70-740525-000	RETAINER PLATE
10	2	34-349110-000	GUIDE, POSITION NUT
11	1	70-740510-000	DRIVE END CAP
12	1	34-342650-000	CHROME LINEAR ACTUATOR HOUSING
13	2	51-515031-000	SET SCREW, 8-32 x 5/16
14	2	51-514523-000	6-32 SET SCREW
16	1	70-740515-000	MOTOR END CAP
17	2	42-450220-000	HEX NUT, 1/4-20, ACME, 5/32
18	2	34-349120-000	DRIVE SCREW, WITH NUT
19	2	51-515030-000	SET SCREW, 8-32 x 3/16
20	3	51-516005-000	CS, BUT. SOC., 8-32 x 3/16
25	1	80-830390-000	MOTOR WIRE HARNESS
26	2	44-443220-000	O-RING, BUNA, ID 5/32, OD 9/32, T 1/16

### Wiring Diagram for Reference





## Install Switch

11. Remove screw from left control. Position Switch and re-install Screw. **(T27 Torx)** **Figure 20.**

12. Route and secure Switch Harness. Follow wiring down handlebar over neck to come out on motorcycles left side to join Cable from Actuator Motor. **Figure 21.**

13. Plug ends of Actuator Motor to Switch Harness, fold and tape. **(Electrical Tape)** **Figure 22.**

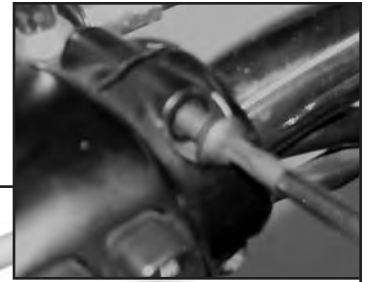


Figure 20



Figure 21



Figure 22





14. Tuck taped portion of wire Harness into frame. Secure with Cable Tie. **Figure 23**

15. Route behind fuel hose. **Figure 24**

16. Route Switch Harness Wire under seat frame. Secure with Cable Tie. **Figure 25.**



Figure 23



Figure 24

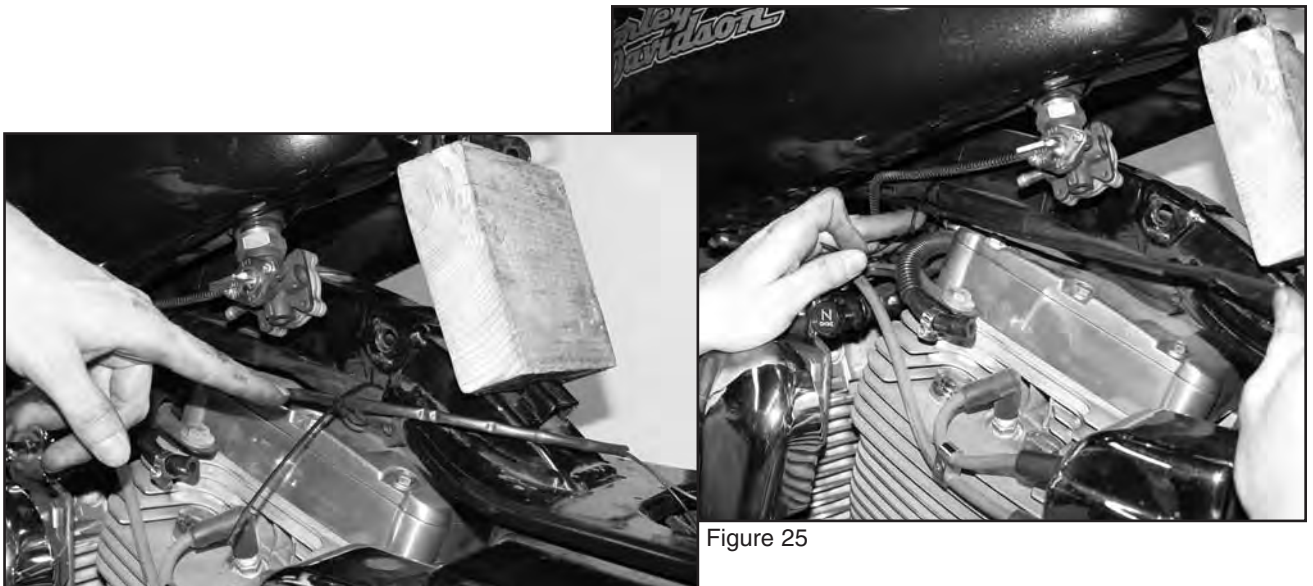




Figure 25

17. Loosen the nut to ground and slip ground connector end of Switch Harness under nut. Retighten nut. (9/16" Wrench)

18. Adjust and tighten the Cable Ties loosely installed earlier. **Cutters**

 To correctly install the Scotchloc Wire Connector cut back on the motorcycles existing wire loom cover to expose the red with gray stripe wire.

 When installation is complete, wipe all thumb prints from Chrome Exhaust before starting motorcycle or they will permanently mark surface.

19. Turn ignition switch to on or start bike. Activate Thumb Switch and listen for Diverter Valve opening and closing. Refer to page eleven if Diverter Valve will not open or close.

20. Re-assemble all parts to motorcycle.

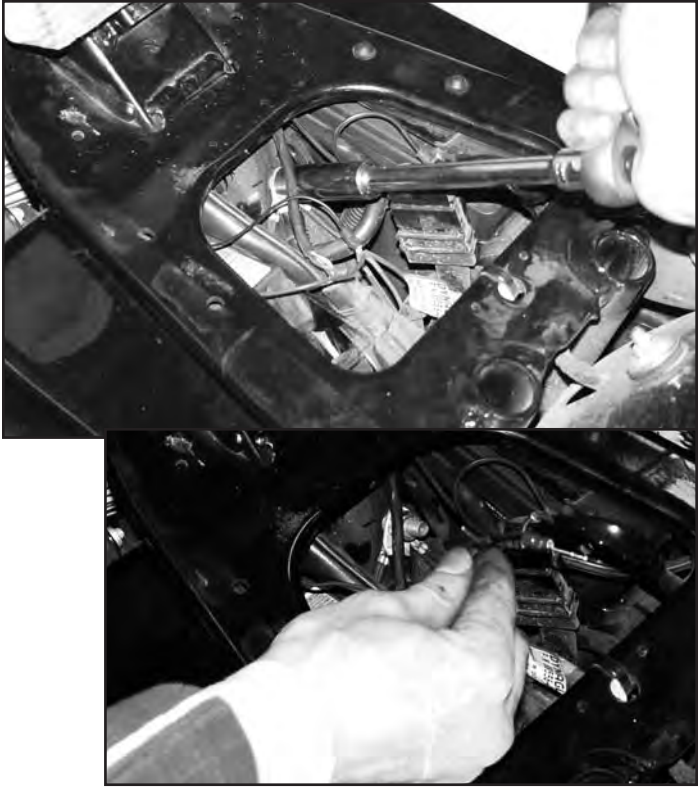




Figure 26

*Enjoy your Peacemakers Exhaust!*

*All patents pending.*

 **MAINTENANCE** Discoloration can be removed from the Exhaust System with a quality metal polish. Be sure to remove all polishing compound residue from the Exhaust System before running the engine.

 **WARNING** If the addition of an accessory(ies) adversely affects your motorcycle's stability immediately remove the accessory(ies). Do Not ride a motorcycle that exhibits unsafe handling traits. Have experienced service personnel correct any problem before riding with the accessory(ies) installed. For further questions concerning handling problems associated with an accessory(ies), contact your dealer, motorcycle manufacturer, or accessory manufacturer. Refer to the warranty card for more information.

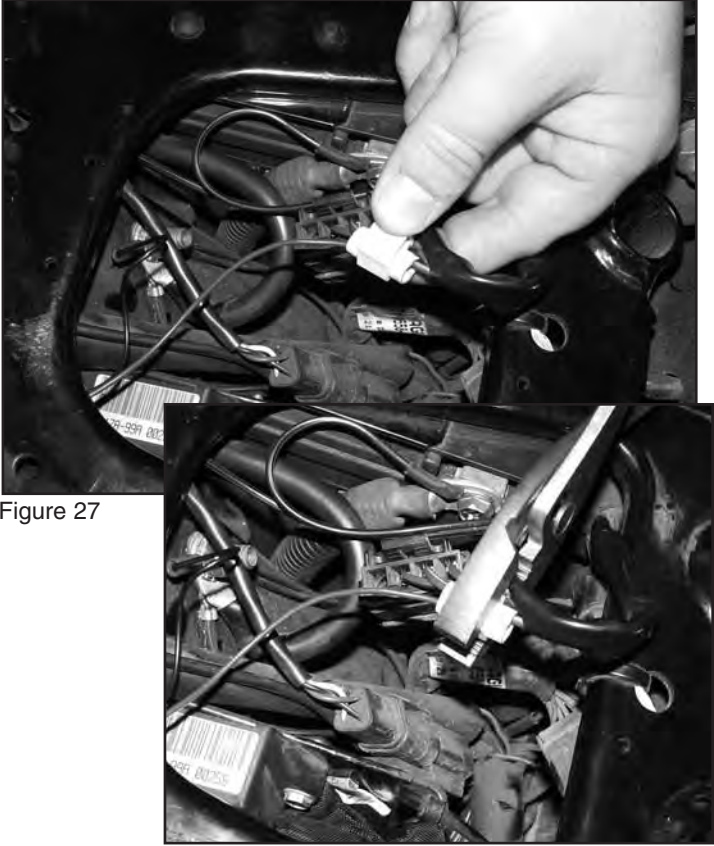


Figure 27

## TROUBLE SHOOTING GUIDE

1. The Diverter Valve will not open or close. Check for power at both sides of bullet plug.

**A. Check for power at ground**

**B. Check for power at Actuator Cable side of bullet**

If you have no power at A. check your battery. Replace or recharge if necessary.

If you have no power at B. check to be certain the Switch Harness connections are fully seated into the Actuator Cable Connections. If you think you have a faulty Switch Harness, call National Cycle Customer Service.

2. The Diverter Valve will not fully close or open.

**A. Check Installation of Muffler Cables into Actuator Motor (page 5 and 6 of installation manual.)  
Preloading the motor is a simple but necessary step.**

**B. Use a flash light and look into end of Mufflers while having someone operate switch. The Linear Actuator Motor works very effectively in opening and closing the Valve.**