

Description:	Quantum® Hardcoated Polycarbonate, 6mm UTV Windshield, Full Size Wash'N'Wipe	Model:	BRP Commander
Part Number:	N30402	Installation Time:	60 min.

Thank you for purchasing a National Cycle product. Read these instructions carefully and thoroughly before beginning work. Dealers, if installing this windshield for a customer, please give them this manual. It contains information needed to properly maintain and use this product.



Attention: Special notes and cautionary measures which can prevent damage to the accessory or vehicle.



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

PREPARATION

This Kit has been carefully packed and inspected at the factory. Report any missing part directly to National Cycle, Inc. along with the Bag No. and Date on outside of Windshield Carton.

Carefully unpack the windshield, sort the parts, and make sure you have everything required to complete the installation.

TOOL LIST

T25 Torx Wrench

Flat Blade Screwdriver

#2 or #3 Phillips Screw Driver or Phillips Bit for Drill

7/16" Wrench or Driver

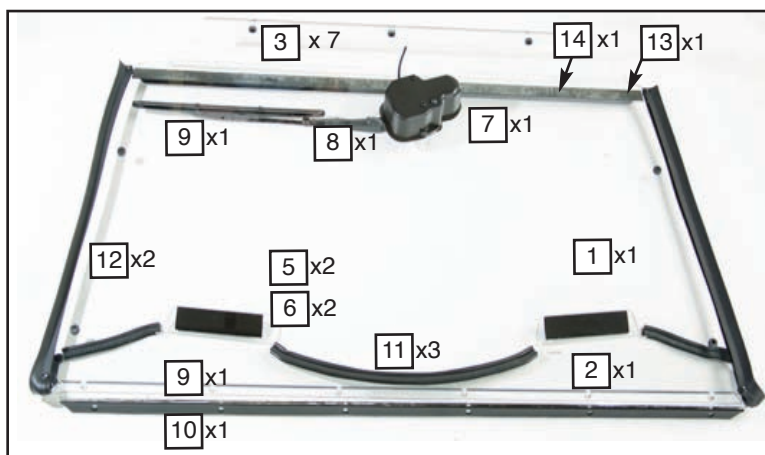
Scribe or Marker

X-Acto® Knife, or similar

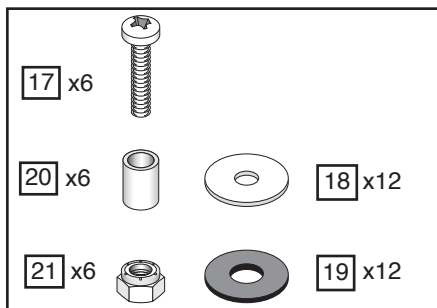
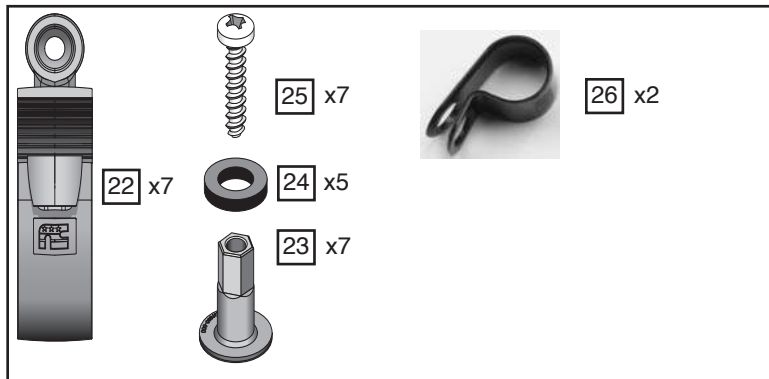
Wire Cutters

Power Drill with 3/4" (19mm) hole saw, or similar

Small Drill Bit (1/8") (3mm) for pilot hole



Parts Installed on Two-Part Windscreen				Tools Required
Item	Part No.	Description	Qty.	Notes and Tools
1	20-290408-000	Windscreen, Upper Section	1	Grommets Installed
2	20-290455-000	Windscreen, Lower Section	1	Grommets and Velcro Fastener Installed
3	44-447159-000	Grommets for Windshield	7	Installed on Windscreen
4	44-447167-000	Grommet Wiper Hole	1	Installed on Windscreen, Not Pictured
5	77-771157-000	Marine Grade Velcro, Hook	2	Installed on Windscreen
6	77-771158-000	Marine Grade Velcro, Loop	2	Installed on Windscreen
7	80-875150-000	Motor Assembly	1	Installed on Windscreen
8	80-875153-000	Arm, Wiper Assembly, 14" 350mm	1	Replacement Arm Part No. is N30911
9	80-875155-000	Blade, Wiper Assembly, 16" (400mm)	1	Replacement Blade Part No. is N30901
10	44-447004-000	Foam Tape, 1/8 x 1" W	1	Installed on Windscreen
11	44-448681-000	Seal Rubber	3	Installed on Windscreen
12	44-448520-000	Trim Flap	2	Installed on Windscreen
13	75-766781-000	Gasket, Gutter	1	Installed on Windscreen
14	37-373669-000	Channel, Gutter	1	Installed on Windscreen
PARTS IN KIT				
15	44-442523-000	Reservoir & Pump Assembly	1	Page 2
16	80-830326-000	Wire Harness and Switch	1	With Grommet and Switch, Page 3
PARTS LIST CONTINUES ON NEXT PAGE				

BAG#1144**BAG#1203****BAG#1142**

Keep this page as a reference guide during the assembly process.

Parts Bags		Tools Required		
Item	Part No.	Description	Qty.	Notes and Tools
Bag#1144				Parts to attach upper and lower screens
17	55-563145-000	Screw, Phillips, 1/4-20 x 1.25"	6	#2 or #3 Phillips Screw Driver
18	49-490491-000	Washer, Flat, .265 x .875 x .062"	12	
19	75-762021-000	Washer, Rubber, 7/8 OD x 3/8 ID	12	
20	34-346056-000	Spacer, .375 x .277 x .53"	6	
21	42-423242-000	Nut, Nylon Insert, 1/4-20	6	7/16" Wrench
Bag#1203				Parts to mount Windshield
22	44-449372-000	Clamp, Wraparound	7	
23	44-449380-000	Retaining Pin	7	
24	49-490355-000	Washer, Spacing, Black	5	
25	55-563131-000	Screw, Phillips, #12 x 1.25", SS	7	Phillips Screw Driver
26	44-448705-000	Clamp, Cable	2	
Bag#1142				Parts to mount Fluid Reservoir
27	37-373687-000	Bracket	1	
28	55-550260-000	Screw, Phillips, #12 x .75	3	Phillips Screw Driver
29	44-448829-000	Bumper, Rubber	4	
30	44-448760-000	Tie, Wire 14" Nylon,	7	Wire Cutters

PARTS LIST, WIRE HARNESS

WIRE HARNESS

16 x1

d. Motor Connector and
Fluid Hose
Installs to Motor

c. Pump Switch for Wash
Mounts to Dash Inside Cab

a. Battery Connections Black-
Negative, Red-Positive

e. Grommet, Seals
3/4" Hole

b. Pump Connector and Fluid Hose
Installs to Fluid Reservoir/Pump

STEP BY STEP INDEX

ID PARTS PAGE 1-3

PREPARE VEHICLE FOR WIRING..... PAGE 4-6

Loosen Center Switch Console

Remove and Drill Duct (for one mount point of fluid reservoir)

Drill Passway in Hood

START WITH WIRE HARNESS IN DRIVERS FOOT WELL..... PAGE 7

INSTALL SWITCH TERMINUS C..... PAGE 7

ROUTE TERMINUS d THROUGH HOOD PAGE 8

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PREPARE THE VEHICLE FOR WIRING

 Note, the Pump Switch will mount to the additional Accessory Port provided in Console Switch Panel

1. Loosen the 2 Pins (f) and 2 Screws (g) holding the Center Switch Console Cover in place. **Figure 1 and 2 (Small Flat Blade Screwdriver, T25 Torx)**
2. Open Glove Box. **Figure 3**
3. Separate Console Cover from dash. **Figure 3, a-b**
4. Remove the top cover from the extra accessory outlet. **Figure 4**



Figure 1

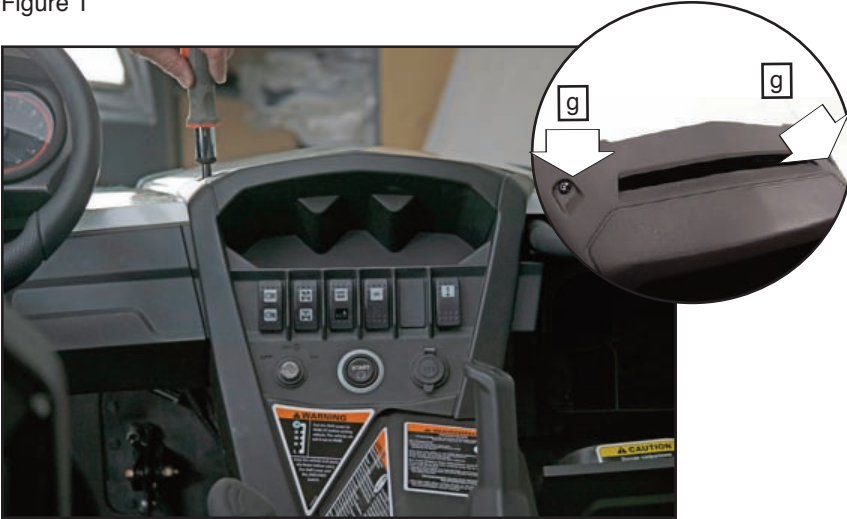


Figure 2



Figure 3



3a



3b



Figure 4

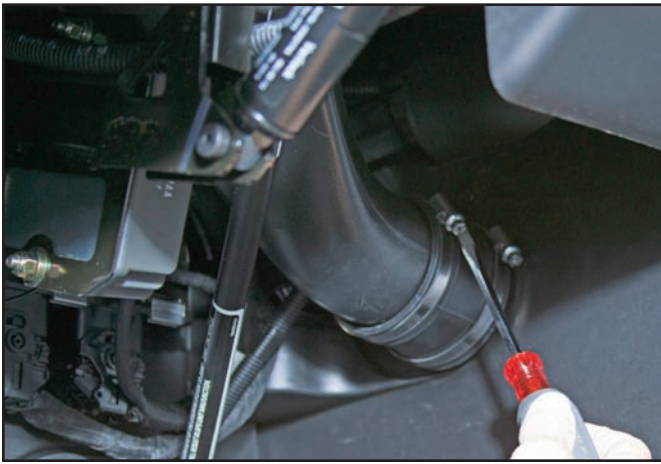


Figure 5

PREPARE THE VEHICLE FOR WIRING

5. Loosen the 2 hose clamps from Clutch Vent Pipe.
(Flat Blade Screw Driver) **Figure 5**



Figure 6

6. Slide left side Dash Outer Corner Panel rearwards
and off vehicle. **Figure 6**



Figure 7

7. Remove Air Duct Filter from side panel of vehicle.
Figure 7



Figure 8


8. Push the Rubber Boot flange into the car body under
the dash. **Figure 8**

PREPARE THE VEHICLE FOR WIRING

9. Remove Vent Pipe with Rubber Boot from Vehicle.
Figure 9

DRILL SMALL HOLE FOR FLUID RESERVOIR BRACKET

10. Place Vent Pipe on firm surface as oriented in Figure 10 and Illustration D. Drill a 1/16 or 3/32 (2mm) hole in duct as shown in Illustration E. **(Power Drill with 3/32" (2mm) drill bit) Figure 10 and Illustration E**

 **Remove any debris that gets inside the Vent Assembly.**

CUTTING THE PASSWAY 3/4" HOLE

11. On the hood of the vehicle on the driver's side, measure a point 3/4" (19mm) from the frame cutout on driver's side (left) of vehicle. Mark that location. This hole should be located near the Left Frame Bar. **(Scribe or Marker) Figure 11 and Illustration F**

12. Insert a step drill bit into your drill as shown (or 3/4 hole saw) and drill a 3/4" (19mm) hole in the body cover at the location marked. **(Power Drill with 3/4" (19mm) hole saw, or similar) Figure 11 and Illustration F**

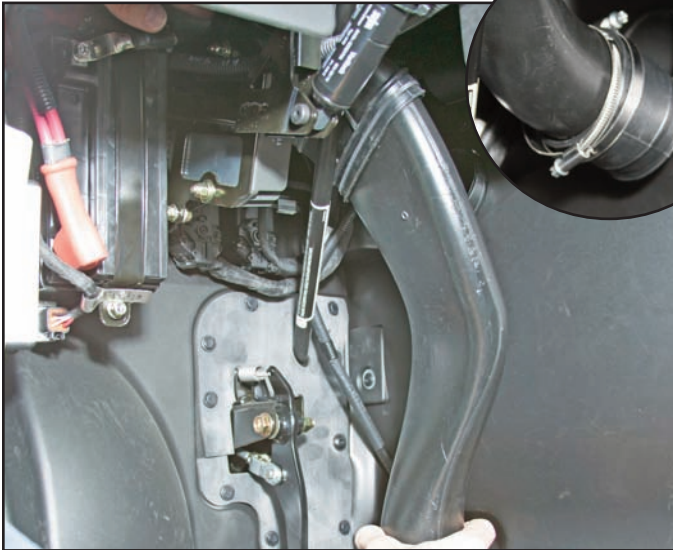


Figure 9

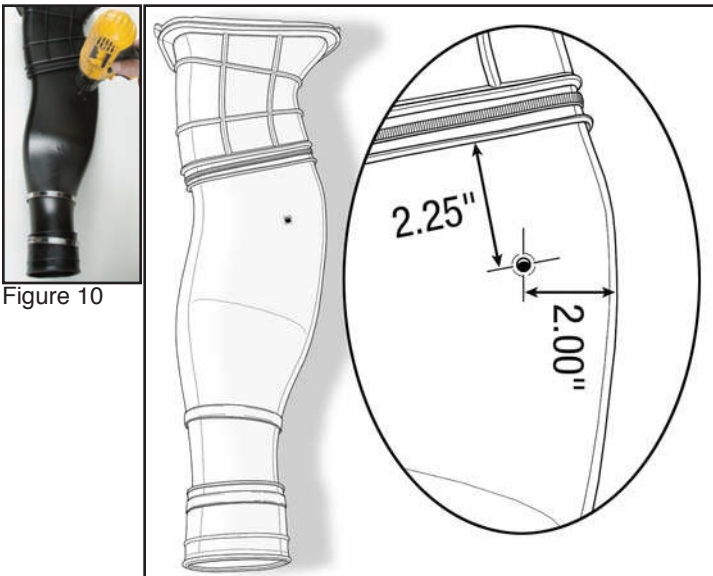


Illustration E

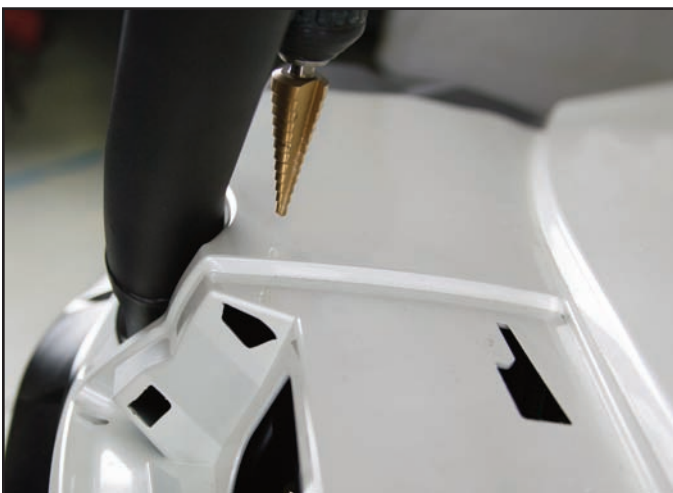


Figure 11

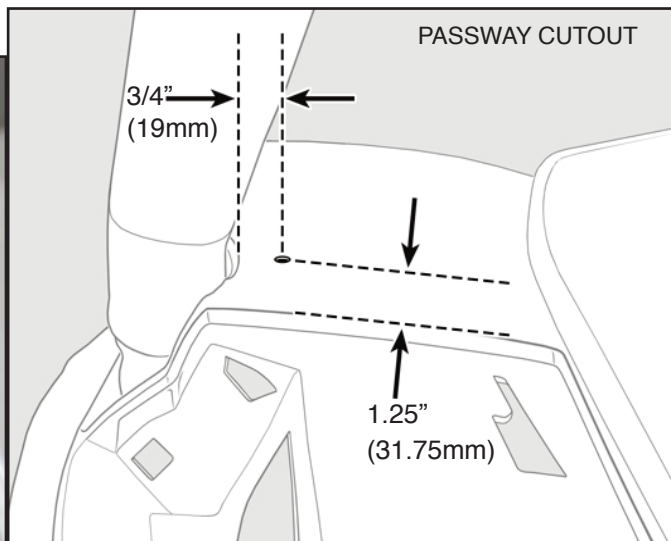


Illustration F

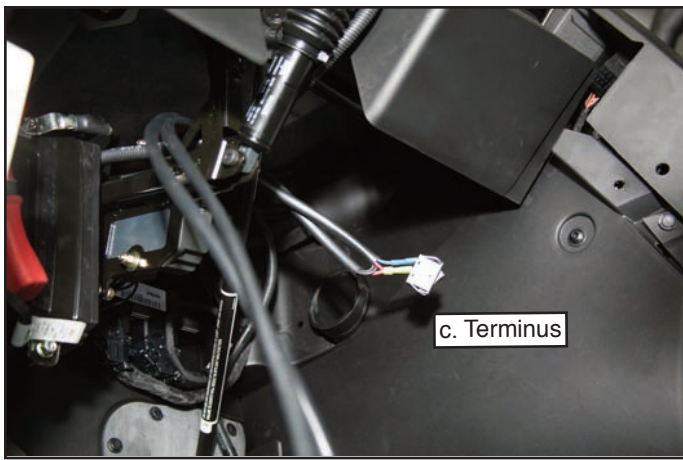


Figure 12

WIRE HARNESS INSTALLATION ROCKER SWITCH TO DASH

1. Place Wire Harness (16) in left foot well under the battery.
2. Locate the section of Wire Harness (c) that terminates in the Two-Way Rocker Switch. Temporarily remove the Rocker Switch. **Figure 12**
3. Route the Wire Harness Section (c) over the steering column and through opening into switch panel bay area, behind the round support pipe (towards the front of vehicle.) Feed the (a) end of the harness over the steering column and set it on the right side driver's floor.

CUT A RECTANGULAR HOLE IN THE EMPTY SWITCH BAY.

4. Check the size of Pump Switch against the Switch Bay. Scribe or draw a 17/32" x 1 1/8" (13.5mm x 28.5mm) guide.
5. Using a drill, drill some holes in the plastic cover to serve as starting holes for cutting. Then use your X-Acto knife to cut out the cover's face to the edges shown.

Inset h, Figure 13

6. Thread the Wire End (c) through the hole. **Inset i, Figure 13**

7. Reattach the Two-Way Rocker Switch to the two Nylon Pin Connectors (polarity doesn't matter) and then push the Rocker Switch into the outlet hole.

Inset j, Figure 3

8. Completed dash panel Rocker Switch should appear as shown.

Figure 13

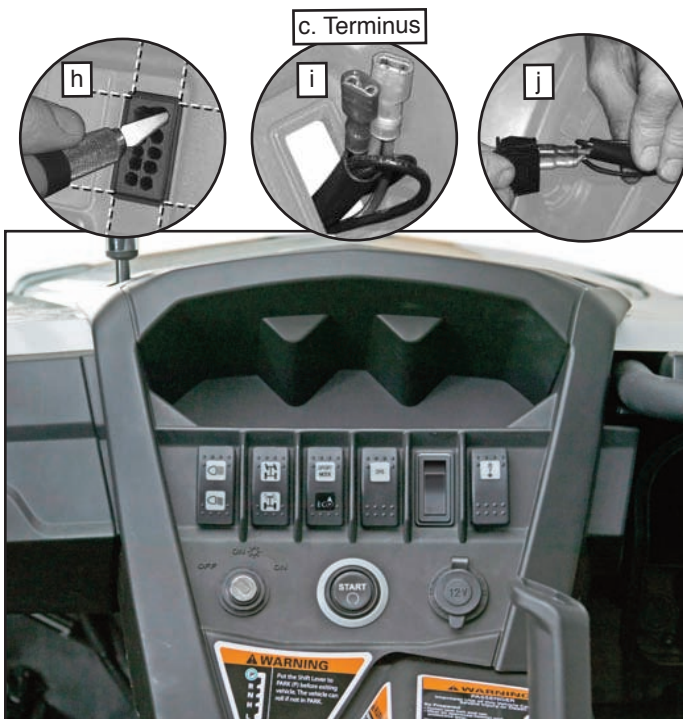



Figure 13

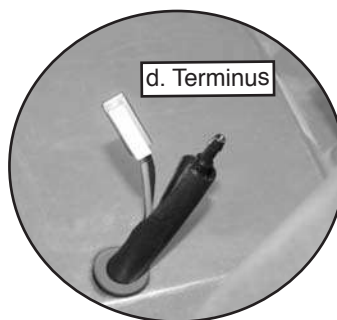


Figure 14

WIRE HARNESS INSTALLATION ROUTE TERMINUS (d) TO OUTSIDE OF VEHICLE

1. From Left foot well, route Terminus (d), through access hole drilled in hood. Figure 14

 Pull about 55" (139cm) of harness length so that Terminus d follows frame to center top where Wiper Motor will be located.



WINDSHIELD INSTALLATION

ATTACH UPPER AND LOWER SHIELD TOGETHER


 Carefully lay Windshield on a flat, smooth surface and line up mounting holes between the upper and lower shields.

1. Assemble six hardware sets using the Panhead Machine Screw (17), Flat Zinc Washer (18), Rubber Washer (19) and Windshield Spacer (20).

Illustration A

2. Insert the assembled components into each of the mounting holes where the lower edge of the Windshields Upper Section meets the top edge of the Windshields Lower Section. Make sure the Windshield Spacers do not come loose and fall out. **Illustration A**

3. From the bottom of the two edges, assemble a Rubber Washer (19), Flat Zinc Washer (18), and Nylon Insert Nut (21), and tighten the Nuts finger-tight for now.

 The Spacers (20) should fit through the Rubber Washers (19) and up against the metal washers (18).

4. Make certain the Upper and Lower Windshields are flush with each other and the side edges are in line.

5. Tighten the 6 Screws (17) and Nuts (21) securely. **(Phillips Screw Driver) Figure 15**

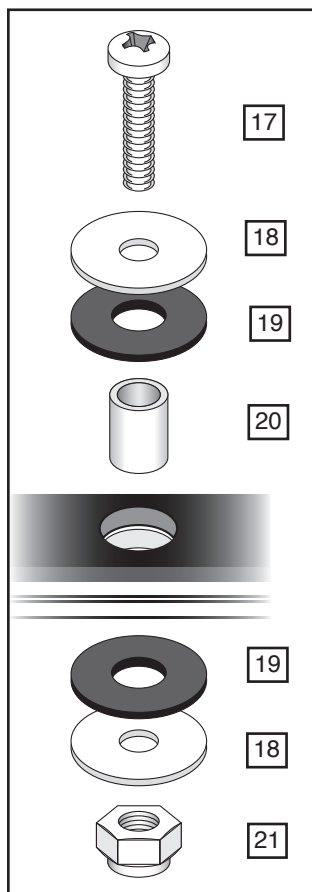


Illustration A



Figure 15

WINDSHIELD INSTALLATION

INSTALL CLAMPS AND SHIELD

6. Snap 3 Wraparound Clamps (22) on the top frame of the vehicle. Orient the top clamps with male half (with embossed part number) toward the front of the vehicle. **Figure 16 and Illustration B and D**

CABLE CLAMP SECURES WIRE HARNESS

7. Snap the 2 Cable Clamps (26) around the Wire Harness in approximate locations. **Figure 16 and Illustration D**



Read these helpful tips for a smooth installation:

Place fasteners within reach of assembling clamps.

Note location of Cable Clamp (26) at *center* and *left* clamp assembly.

Note that in *upper right* Clamp assembly, a Spacing Washer (24) goes between Grommet (3) and Retainer Pin (23).

Note the hex shape of Retainer Pin (23), and male half of Clamp (22).

Start Machine Screws (25) but do not tighten.

The lower screen section (tabs with Velcro), should be touching the hood of the vehicle.

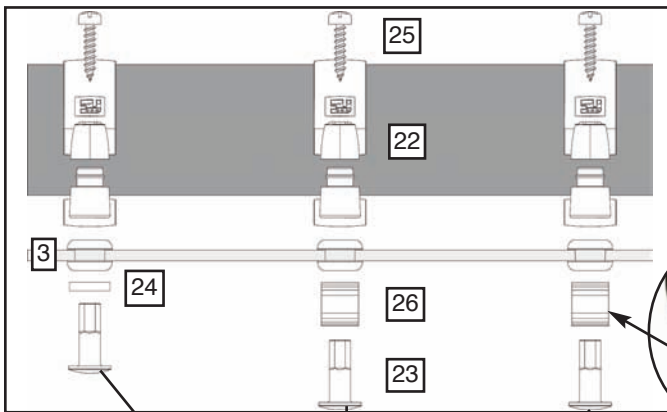


Illustration D



Figure 16

Illustration B

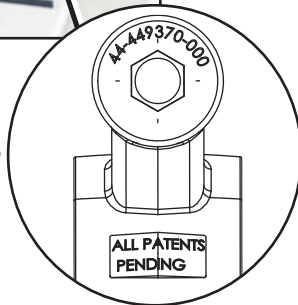


Figure 17

7. Place Windshield on hood. **Figure 17**

8. Using Screws (25) install top Clamp (22) assembly, but do not fully tighten. (**Phillips Screwdriver or Power Drill on low setting**) **Figure 18 and Illustration D**



Figure 18



Figure 19

WINDSHIELD INSTALLATION

9. Snap the remaining 4 Wraparound Clamps (22) on the frame of the vehicle. Orient the clamps so that the male half (with embossed part number) is toward the front of the vehicle.

 **Note the position of the Spacer Washer (24) in Illustration C**

10. Tuck Wire Harness between Clamps and Windshield. **Figure 19**

11. Install Clamp hardware, positioning Spacer Washer (24) between Clamp and Windshield as shown in Illustration C. Do not fully tighten. **(Phillips Screw Driver or Power Drill on low setting)** **Figure 20 and Illustration C**

12. Check the alignment and position of the windshield and make sure it is even and symmetrical.

13. Remove the adhesive backing from the Velcro loop material and then press the windshield tab firmly onto the hood of the vehicle. **Figure 21**

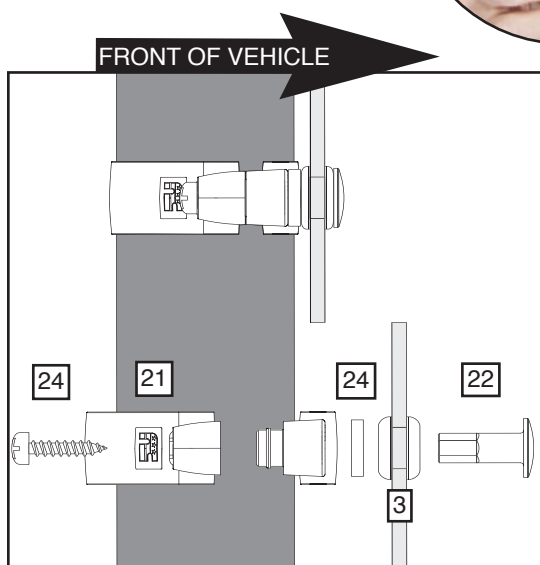


Illustration C



Figure 20



Figure 21

WIRE HARNESS INSTALLATION FINALIZE CONNECTIONS TO WIPER

1. Check that the Wiper Arm Fluid Hose is threaded through the Grommet in windshield. If it is not, do this now. **Figure 22**

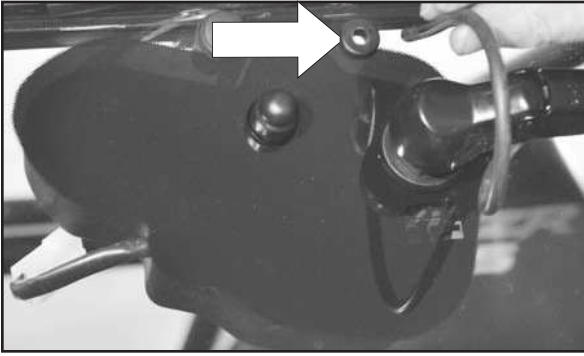


Figure 22

2. Connect the Wiper Motor Power and Fluid Hose. **Figure 23**

 **A little moisture on the Fluid Hose end will make them join easier.**

3. The arrow on the fluid check valve must point towards the wiper arm, not towards the fluid reservoir. **Figure 23 and Inset**

4. Tuck Motor Connector behind Motor assembly.

5. Completed Windshield Wiper Motor installation should appear as shown in **Figure 23**

6. Locate the Grommet on the wire harness (e) and fit it to the 3/4" (19mm) hole cut in the dash.

7. Adjust the slack in the Harness for a neat and unobtrusive fit.

FINAL TIGHTENING

8. Securely tighten the Machine Screws (25) in all Wrap-around Clamps (22). (**Phillips Screw Driver or Power Drill on low setting**)

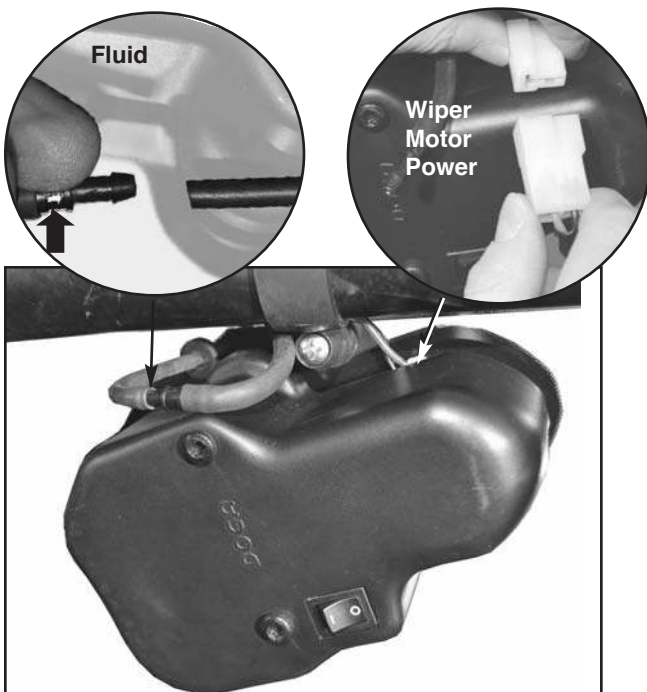


Figure 23

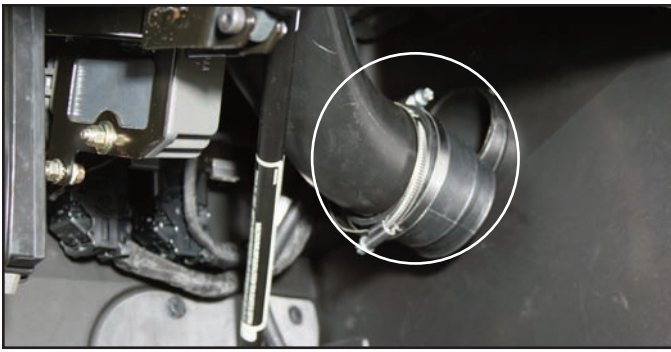


Figure 24



Figure 25

REPLACE VENT PIPE ASSEMBLY

1. Replace the Vent Pipe Assembly in reverse order. Be sure the rubber adapter with the 2 hose clamps fully engages with the parts it is connecting. **Figure 24**
2. Insert the Air Duct Filter into side panel of vehicle. **Figure 25**
3. Reinstall the left side Dash Outer Corner Panel.
4. Locate the pump connector and fluid hose end (b) of the Wiring Harness and place it on the footwell floor under the battery. This will provide extra slack to allow the tank to be removed for filling.
5. Coil all extra Harness sections above and behind the Clutch Vent Pipe Assembly. **Figure 26**

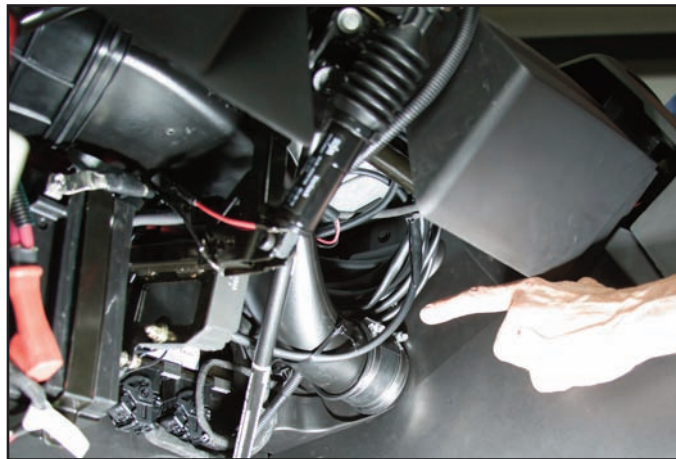


Figure 26

WIRE HARNESS INSTALLATION BATTERY TERMINUS

 Verify the switch on the Wiper Motor is in the off position.

1. Locate the Battery Terminus (a) on the Wiring Harness. Loosen the negative terminal nut of the vehicle's battery with a Phillips screwdriver or an adjustable wrench. Slip the Brass Open Ring Connector under the negative terminal nut and tighten securely. Repeat for the positive terminal.

(Phillips Screwdriver) Figure 27

2. Replace the boot securely over the positive terminals and exposed ends of wires.

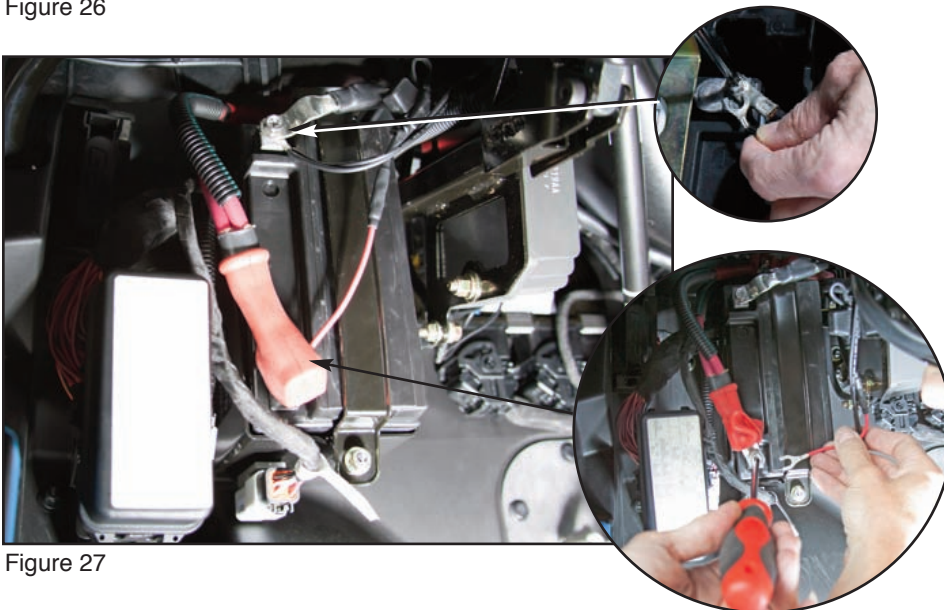


Figure 27

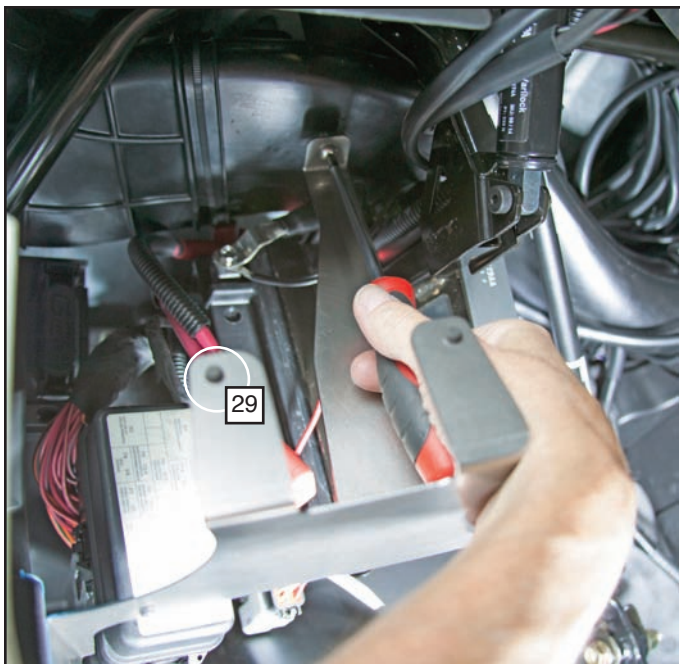


Figure 28

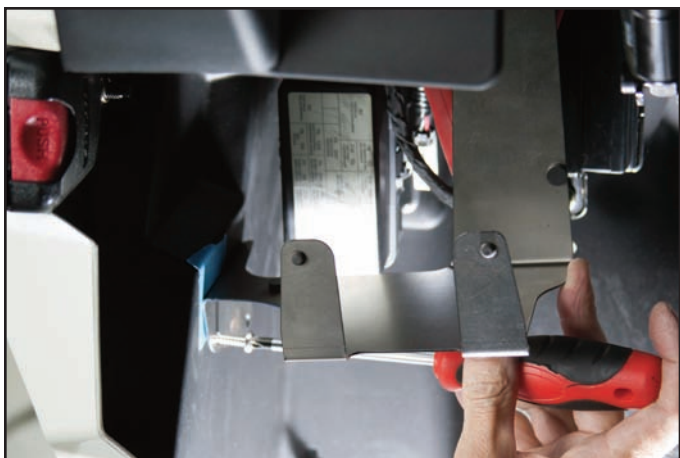


Figure 29



Figure 30

MOUNT RESERVOIR/PUMP BRACKET

1. From the inside of the Bracket (27) install 1 Bumper (29) into each of the 4 holes. The small ends of the Bumpers (29) will face towards the outside of the bracket. **Figure 28**
2. Use 1 Phillip Screw (28) to attach the Reservoir Bracket to the Clutch Vent access hole drilled in Figure 10. **(Phillips Screwdriver) Figure 28**
3. Position the Reservoir Bracket so the Reservoir will be level, and mark hole positions for screws in the interior side panel. **Figure 29 and 30**
4. Use 2 Phillip Screws (23) to attach the Reservoir Bracket to the side wall of the vehicle. **(Phillips Screwdriver) Figure 29 and 30**

WIRE HARNESS INSTALLATION- PUMP CONNECTOR AND FLUID HOSE

1. Take Pump Quick Connector section (b) of the Wire Harness and locate the terminus of the Rubber Hose and the Large Nylon 2-Pin Electrical Quick-Connector with red and black wires. **Figure 31**
2. Take the Quick-Connector section and fold it against the Rubber Hose section. Secure the two sheaths with a Zip-Tie (30) and trim the excess. **(Wire Cutters) Figure 31**

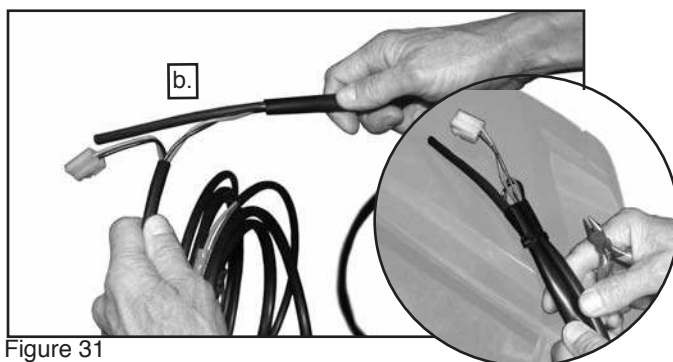


Figure 31



Figure 32



Figure 33

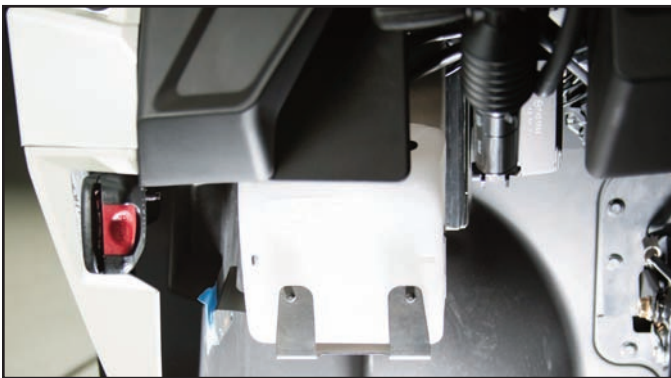


Figure 34

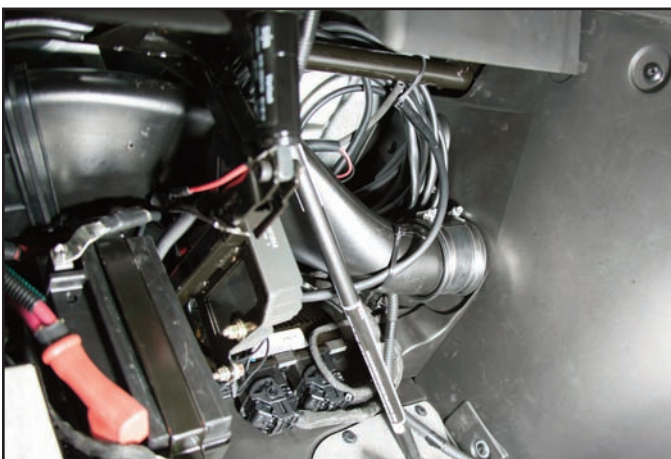


Figure 35

3. Connect the Rubber Hose to the bottom of the Reservoir's Electrical Pump.

Figure 32

4. Push the Nylon Quick-Connector onto the two pins on top of the Reservoir's Electrical Pump.

Figure 33

5. Place the Reservoir (14) in bracket (22) **Figure 34**
Organize the harness coils neatly in place:

1. With enough slack to remove the reservoir for Filling.
2. So the Harness is out of the way for operation of the vehicle.

COIL WIRE HARNESS

6. Use the Zip-Ties (21) to coil and secure the Wire Harness above the Clutch Vent Pipe. **(Zip-Ties) Figure 35**

7. Do not leave loose Harness anywhere in the vehicle. Once Zip-Tie is tight, clip excess off end. **(Wire Cutters)**

FILL THE FLUID RESERVOIR AND PLACE IN BRACKET

1. Fill the Reservoir (10) with plain water during warm weather and glycol-based automotive windshield washer fluid in freezing weather.

Minimum depth of 1 1/2" -----



2. DO NOT run the pump dry. Minimum amount of fluid to maintain in the Reservoir is:

12 oz. (.35L) or to a depth of 1 1/2" (38mm)

3. Place Reservoir in Bracket (27) **Figure 35**

Please refer to page 15 and 16 for operation, replacement parts and warranty.

Enjoy Your New Wash'n'Wipe™ Windshield!

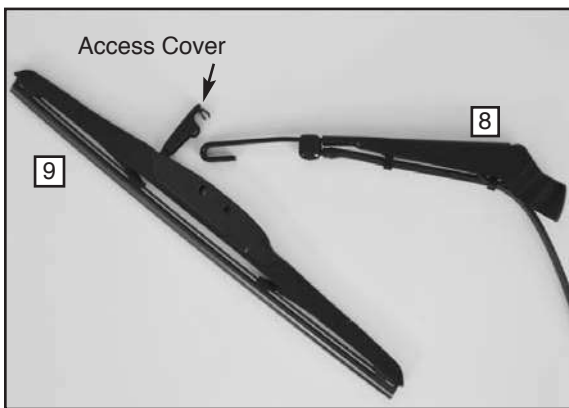


Figure 36



Figure 37



Figure 38



WINDSHIELD WIPER OPERATION



The Wiper is intended for use with the wash cycle or during rain. **DO NOT** Wipe a dry windshield.

DO NOT run the Pump without fluid.

The Wiper Motor has an on/off Rocker Switch as shown. Turn the switch on and verify that the Wiper works as expected.

The dash panel Rocker Switch installed controls the fluid spray. Momentarily hold the Switch in the on position to spray water from the Wiper Arm. It should spray in four separate directions.



The 4 spray jets can be redirected carefully.

WIPER ARM AND BLADE

Your Wash'n"Wipe Windshield is equipped with a quality silicone Wiper Blade. Replacement Wiper Blades are available from your local dealer or by contacting National Cycle.

Replacement Wiper Blade Part Number is N30901

Replacement Wiper Arm Part Number is N30911

REPLACING THE WIPER BLADE AND ARM

Open the small access cover on the Wiper Blade (9) and pull the blade towards the motor end of Wiper Arm (8) to loosen blade. **Figure 36**

Join the end of the Wiper Arm (8) to the Wiper Blade (9). Place the J-hook of the Arm over the Blade's plastic mounting clip until it clicks and locks into place. Close the small access cover.

Figure 36 and 37

Swivel up the mount cover of the Wiper Arm as shown and then mount the Wiper Arm over the Motor's Spindle.

Once the Wiper Arm is on the Spindle, install the Internal Tooth Lock Washer and Small Mounting Nut. Use a torque wrench to tighten the Small Mounting Nut to 16 foot-pounds (22Nm). Then swivel the mount cover of the Wiper Arm back to its closed position.

Figure 38 (Torque Wrench with 13 mm Socket)



CLEANING AND MAINTENANCE

To clean the screen, wash with a clean soft cloth, plenty of warm water and if necessary, a non-abrasive soap such as dishwashing liquid. Flannel or soft chamois make good cleaning cloths. **Paint, glue residue or grease removal:** Moisten cotton with naphtha or turpentine followed by a wash as above.

National Cycle **Shield Wash™** (N1401-01) makes a good daily cleaner and comes with a handy travel size bottle. Shield Wash is safe for all windshields and helmet visors.

Do not clean polycarbonate in hot sun or high temperatures. Do not clean the screen with glass cleaners.

Do not allow brake fluid, alcohol, or strong solvents to contact the screen.

RAIN REPELLENT

Do not use rain protective products made for glass. We recommend National Cycle's **RainZip®** (N1410-01) to help shed water in rainy weather.



National Cycle's UTV Windshield 3-Year Limited Warranty

National Cycle hereby warrants to the original registered owner of a National Cycle polycarbonate windshield for a period of three years from the date of purchase against breakage. This limited warranty is expressly limited to the replacement of the polycarbonate windscreen. This limited warranty does not include scratches, coating failure, cosmetic wear and tear, replacement of hardware, or any consequential damages or expenses including labor cost of installation, removal and/or replacement, inconvenience, inbound or replacement outbound freight expenses (outbound freight must be paid in advance by cc or check) or damage to any other component of the vehicle or any other accessories. Certain chemicals, generally known as acidic hydrocarbons, are known to cause polycarbonate damage and will not be covered under this limited warranty. Please refer to the cleaning instructions supplied with your UTV Windshield.

⚠ WARNING

Never operate your vehicle with loose accessory mounting hardware. Check the hardware for tightness regularly.

UTVs are built with enough frame rigidity to withstand the moderate loads imposed on them by the foreseeable addition of an accessory(ies). If an accessory(ies) adversely affects your vehicle's stability, immediately remove the accessory(ies). Do not operate a vehicle that exhibits unsafe handling traits.

Have experienced service personnel correct any problem before driving with the accessory(ies) installed. For further questions concerning handling problems associated with an accessory(ies), contact your dealer, UTV manufacturer, or accessory manufacturer.

CAUTION: Do not clean polycarbonate in hot sun or high temperatures. Do not clean the screen with glass cleaners. Certain chemicals, generally known as acidic hydrocarbons, are known to cause polycarbonate damage. Do not allow brake fluid, alcohol, or strong solvents to contact the screen.

CAUTION: Do not use rain protective products made for glass. We recommend National Cycle's **RainZip®** (N1410-01) to help shed water in rainy weather.

CAUTION: Always face windshield forward (in direction of travel) while carrying on truck or trailer.

Find out more about windshields & fairings we have.