

ELECTRIC START KIT

KIT P/N 2873877



POLARIS
The Way Out.

Application

2002 Polaris EDGE Models with 800 Domestic Engines

Before you begin, read these instructions and check to be sure all parts and tools are accounted for.

Please retain these installation instructions for future reference and parts ordering information.

The contents of this kit include:

<u>Qty.</u>	<u>Part Description</u>	<u>Part No.</u>
1	Battery Box (Black)	1013679-067
1	Battery	4140006
1	Cable (Battery/Solenoid)	2460393
2	Nylon locking nuts, #10-24	7541925
1	16.5" Starter Cable (Black) ...	4010107
1	11" Starter Cable (Black)	4010114
1	<i>*Starter Assembly</i>	2410249
1	Magnetic Switch (Solenoid) ...	4010930
1	Small Insulator Cable (Red) ...	5410346
2	Cable Tie	7080138
2	Bushing 1.00" x 1.25" x .060" ..	7556509
1	Drive Clutch Assembly	1321909
1	Circuit Breaker	2434008
1	Rectifier	4010196
1	Battery Strap	5410424
2	"D" Hook	5224468
6	Battery Pad	5810508
1	Short Battery Bolt Kit	2200361
1	Battery Vent Tube	5432077
1	Cable, Solenoid/Battery 10" ...	4010108
2	Nut, 1/4-20 Nylok	7542122
2	Washer, .344" x .875"	7555734
2	Nut, 1/4-20	7542105
2	Lockwasher	7552801
2	Bolt, 10-24 x 3/4"	7511930
1	Rivet, 3/16"	7621467
1	Washer, .219" x .50"	7558201
1	Stud Plate	1013385
1	Battery Fill Instructions	9913265
1	Instructions	9917265

***Starter Assembly (P/N 2410249) Includes:**

1	Starter Motor	4170006
1	Rear Starter Bracket	5245780
1	Front Starter Bracket	5245781
2	Screw, 3/8-16x1"	7512492
4	Screw, M8x1.25x20	7517957
1	Nut, 1/4-20	7542105
2	1/4-20 Flanged Nut	7542153
2	3/8" Spring Lock Washer	7552603
1	1/4" Spring Lock Washer	7552801

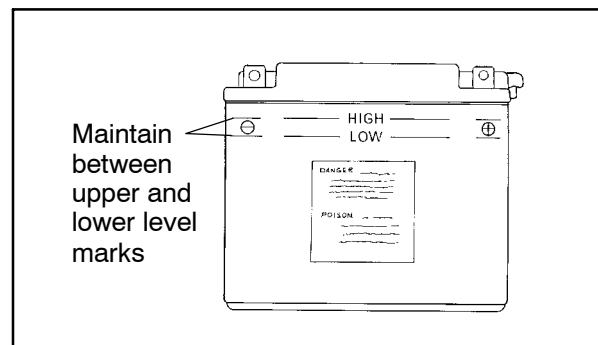
You will need to supply:

5/16" Socket (8 mm)	Clutch Puller (PN 2870506)	Drill
7/16" Wrench	Strap Wrench (PN 2870336)	3/16" Drill Bit
10 mm Wrench	1/8" Allen Wrench (3 mm)	3/8" Socket
7/16" Socket	3/8" Combination Wrench (10 mm)	Rivet Gun
9/16" Socket	T25 Torx Wrench	Side Cutter
Petroleum Jelly	Battery Hydrometer (PN 2870836)	Large Phillips Screwdriver
	6mm Allen Wrench	

IMPORTANT: For your safety, and to ensure a satisfactory installation, perform all installation steps correctly in the sequence shown.

INSTALLATION INSTRUCTIONS

1. Remove the vent plug from the vent fitting of battery (PN 4140006).
2. Fill the battery with electrolyte to upper level marks on case. See Ill. 1. **WARNING:** Battery electrolyte contains sulfuric acid and is poisonous! Serious burns can result from contact with the skin, eyes or clothing.
3. Set the battery aside and allow it to cool and stabilize for 1/2 hour.
4. Add electrolyte to bring the level back to upper level mark on case. **NOTE:** This is the last time that electrolyte should be added. If the level becomes low after this point, add only distilled water.
5. Charge the battery at 1/3 of its amp/hr rating for up to two hours. **NOTE:** This charge rate is to be used only on new batteries during the first-time charge. After this charge, they should be charged at the normal 1/10 of amp/hr charge rate.
6. Check the specific gravity of each cell with a hydrometer to assure each has a reading of 1.270 or higher.
7. Lift the hood.
8. Release the springs holding the muffler. Remove the muffler and exhaust manifold.
9. Open the clutch guard and remove the drive belt and drive clutch.
10. Remove the spring and weights from the drive clutch. See Snowmobile Service Manual Chapter 7 for instructions.
11. Install the spring and weights removed in step 10 into the clutch assembly (PN 1321909) from the kit.



Ill. 1

12. Remove the airbox and set aside for reassembly.
13. Remove the front engine mount nuts and the rear engine mount tower bolts and set them aside for reassembly. Lift the engine enough to clear the front engine mount studs and rotate the engine counter-clockwise to allow enough room to tighten the front starter mounting bracket bolts.
14. Install the front starter motor bracket to the engine using bolt (PN 7517957). Torque bolts to 55 in. lbs. (6.2 Nm.)
15. Set the engine back in place by rotating it clockwise. Replace the fasteners removed in step 13. and torque the bolts to 35 ft. lbs. (47.5 Nm.)

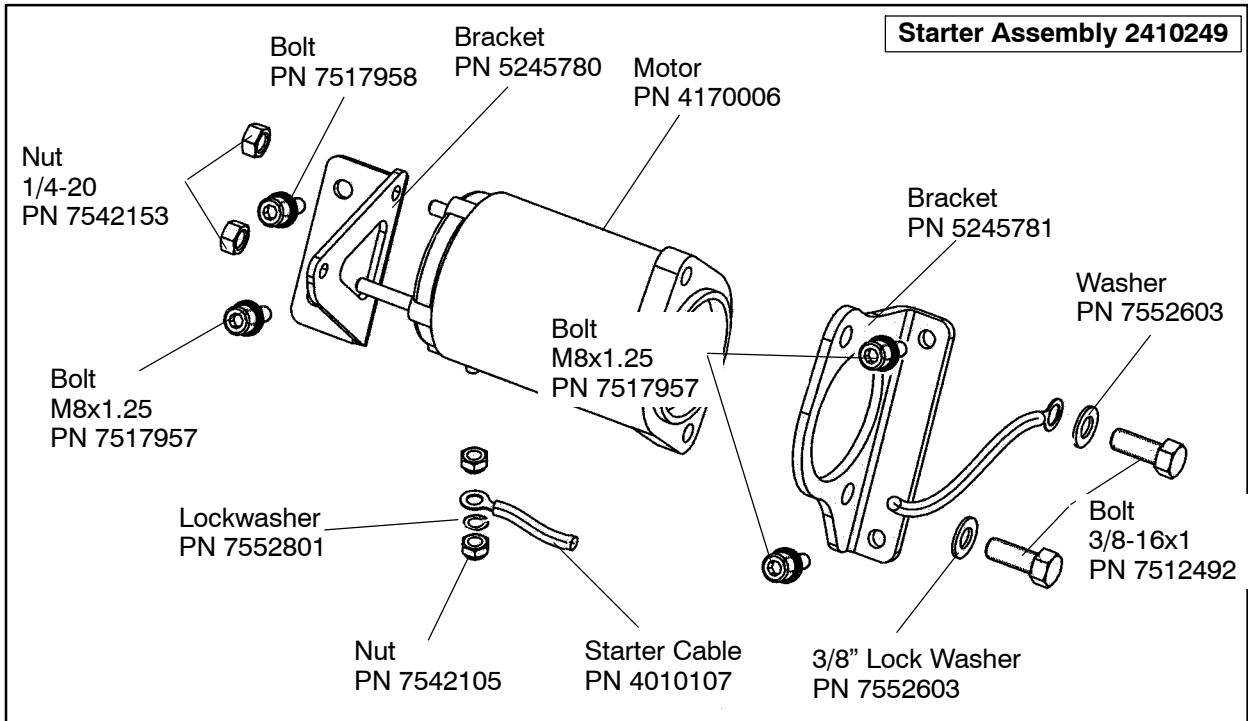


Illustration 2

16. Replace the airbox.
17. Locate the starter/solenoid cable (PN 4010107). Attach the end without an insulator cap to the stud and secure with nut (PN 7542105) and lockwasher (PN 7552801).
18. With the starter cable stud pointed down, attach the rear starter bracket using nuts (PN 7542153).
19. Position the starter motor into the front starter bracket installed in step 14. Secure the starter motor to the bracket using bolts (PN 7512492) and lock washers (PN 7552603).
20. Install the large hole end of the ground cable (PN 4010114) to the top hole in the starter bracket at the same time as installing the starter motor.
21. Secure the rear starter bracket to the engine using bolts (PN 7517957).
22. Loosely install the drive clutch. Check for a minimum of 1/4" clearance between the ring gear and the bulkhead. If there is not 1/4" clearance, the bulkhead may be tapped with a soft face hammer until the proper clearance is reached. Install the drive clutch and torque to 50 ft. lbs. (67.8 Nm.)

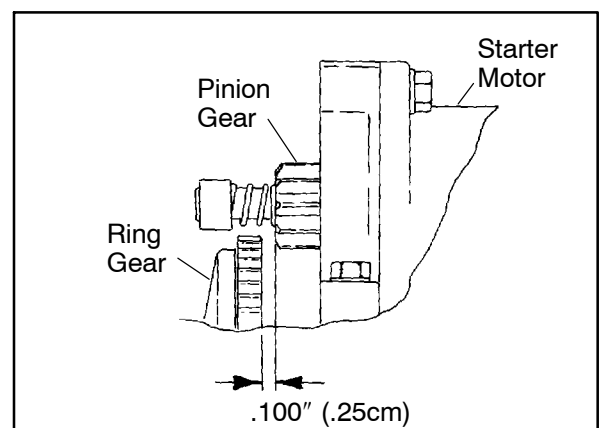
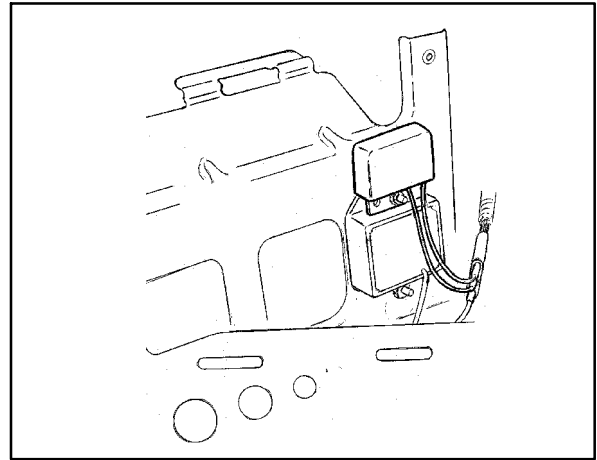
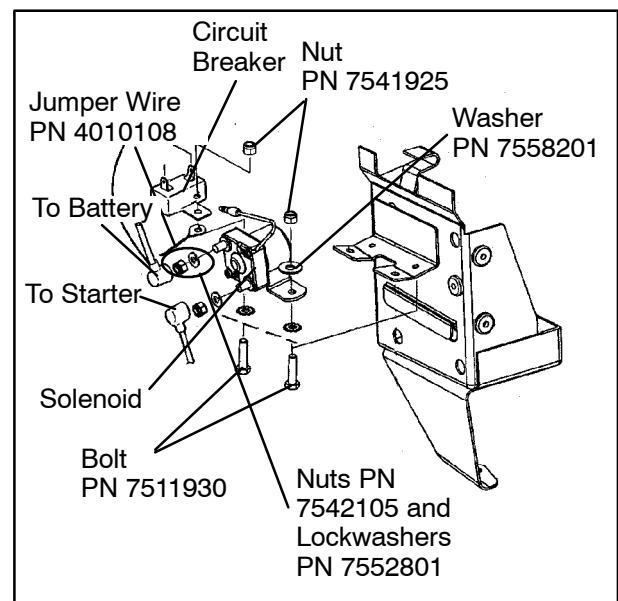


Illustration 3

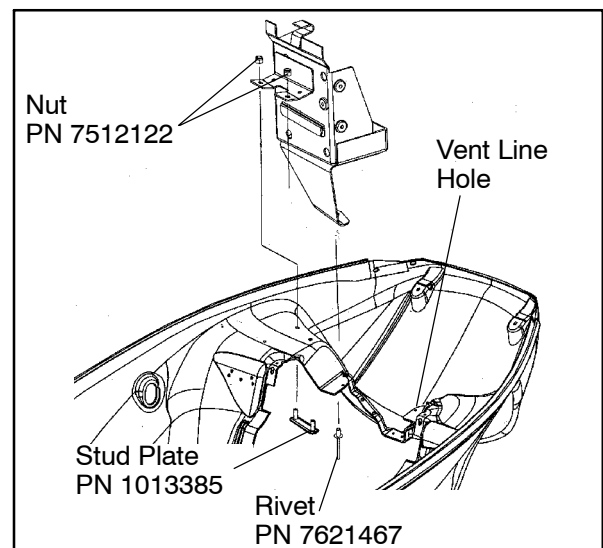
23. Check driven clutch offset and use bushing (PN 7556509) to adjust it if needed. **NOTE:** Clutch offset with ring gear installed is 1" (2.54 cm). Add washers (PN 7555734) to clutch bolt as required. See Snowmobile Service Manual for additional instructions.
24. Reinstall the drive belt and close the clutch guard.
25. Remove the nut from the top bolt securing the voltage regulator to the chassis. Mount the rectifier (PN 4010196) to this bolt and reinstall the nut.
26. Using the illustration for reference, install the solenoid and circuit breaker to the battery box. Insert one end of the 10" jumper wire (PN 4010108) between the circuit breaker mounting tab and the solenoid.
27. Insert the battery pads (PN 5810508) into battery box; two on left side, two on bottom, one on front side and one on right side.
28. Remove the two plugs covering the holes in the left shock tower and discard. Take the stud plate (PN 1013385) from the kit and insert it from the bottom side. Set the battery box over the studs and secure with nuts (PN 7512122). From the bottom of the pan, line up the hole in the pan with the hole in the battery box and secure with rivet (PN 7621467).
29. Install the cable from the starter to the solenoid.
30. Install the 7" battery cable (PN 2460393) to the other stud of the solenoid.
31. Install the small red wire from the solenoid to the battery side of the circuit breaker.
32. Connect the bullet terminal from the main wire harness to the bullet connector on the solenoid.
33. Connect the spade connector on the main wire harness to the open connector on the circuit breaker.
34. Install the battery with the terminals toward the left hand side.
35. Connect the red battery cable to the positive terminal.
36. Connect the ground cable and the other end of jumper wire (PN 4010108) to the battery and tighten. **CAUTION:** To avoid the possibility of explosion, always connect the black ground cable last. When removing the battery, remove the black ground cable first.
37. Attach D hooks (PN 6224468) to the battery strap (PN 5410424).
38. Attach the battery hold down strap to the tabs provided on the battery box.
39. Locate the drain hole on the left side of bulkhead and remove the plug for the battery vent line. Insert the tube so that 1/8" of the tube sticks out through the pan. **NOTE:** If installing this kit on a unit with a skid plate, remove the skid plate, hold the skid plate in place and drill for the vent line. Set skid plate aside.



Step 25.



Step 26.



Step 28.

40. Install one end of the battery vent tube into the stand pipe and the other end through the drain hole in the bulkhead. Install open/close bushing (PN 7080399) from bottom of bulkhead. *(If the unit has a skid plate, reinstall it now. Leave 1/8" (.3 cm) of vent tube protruding through the skid plate.)* Cut any excess vent tubing which may hang below the bulkhead.
CAUTION: Check the vent tube to be sure it is open and not kinked or pinched. A kinked or pinched vent tube will allow battery gases to accumulate, which could result in an explosion.
41. Reinstall the muffler and exhaust manifold removed in step 8.
42. Insert the key and test the electric start. If the starter does not function, re-check wire connections and routing.