

ELECTRIC START KIT KIT P/N 2873876



Application

2002 Polaris EDGE Models with 500-600 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.

This kit includes:

<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	4010107
1	11" Starter Cable (Black)	4010114
1	Small Insulator Cable (Red)	5410346
2	Cable Tie	7080138
2	Bushing 1.00 x 1.25 x .060	7556509
1	Drive Clutch Assembly	1321932-SP
1	Circuit Breaker	2434008
1	Rectifier	4010196
1	Battery Strap	5410424
2	D Hook	5224468
6	Battery Pad	5810508
1	Battery Bolt Kit	2200361
1	Battery Vent Tube	5432077
1	Cable, Solenoid/Battery 8.5"	4010108
2	Nut, 1/4-20 Nylok	7542122
2	Nut, 1/4-20 Plain	7542105
2	1/4" Lock Washer	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	Solenoid	4010930
2	Washer	7555734
1	Battery Fill Instructions	9913265
1	Instructions	9917264

[Starter Assembly (P/N 2410242) Includes:]

2	..... Flat Washer	7555843
3	..... Screw	7516823
1	..... 1/4-20 Nut	7542105
2	..... Flanged Nut	7542153
2	..... Lock Washer	7552603
1	..... 1/4" lock washer	7552801
2	..... Screw	7512492
2	..... Screw	7517322
1	..... Rear Bracket	5244250
1	..... Front Bracket	5245467
1	..... Motor	4170006

You will need to supply:

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

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

INSTALLATION INSTRUCTIONS

1. Remove vent plug from vent fitting of battery (PN 4140006).
2. Fill 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 battery aside and allow it to cool and stabilize for 1/2 hour.
4. Add electrolyte to bring 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 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 specific gravity of each cell with a hydrometer to assure each has a reading of 1.270 or higher.
7. Lift hood.
8. Release springs holding muffler and remove muffler.
9. Open clutch guard and remove drive belt and drive clutch.
10. Remove spring and weights from drive clutch. See Snowmobile Service Manual Chapter 7 for instructions.
11. Install spring and weights removed in step 10 into clutch assembly (PN 1321932-SP) from kit.

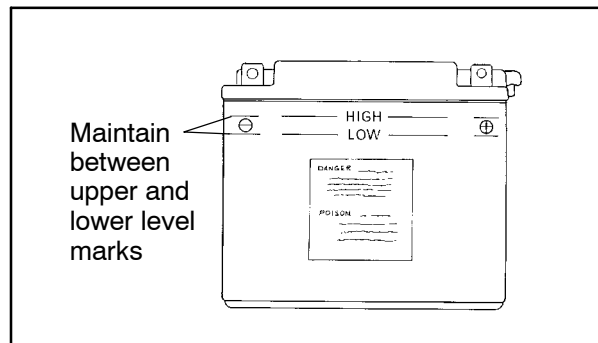
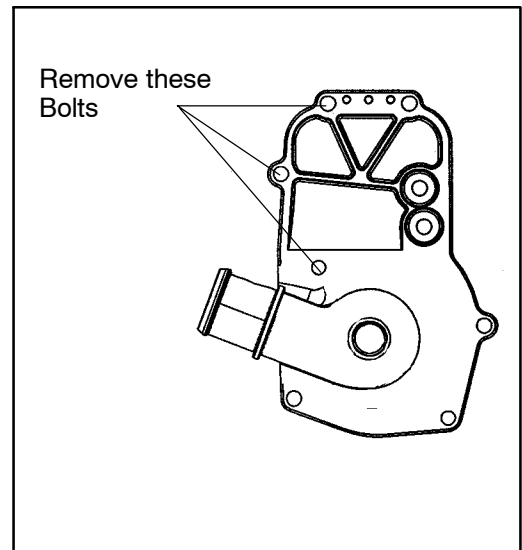
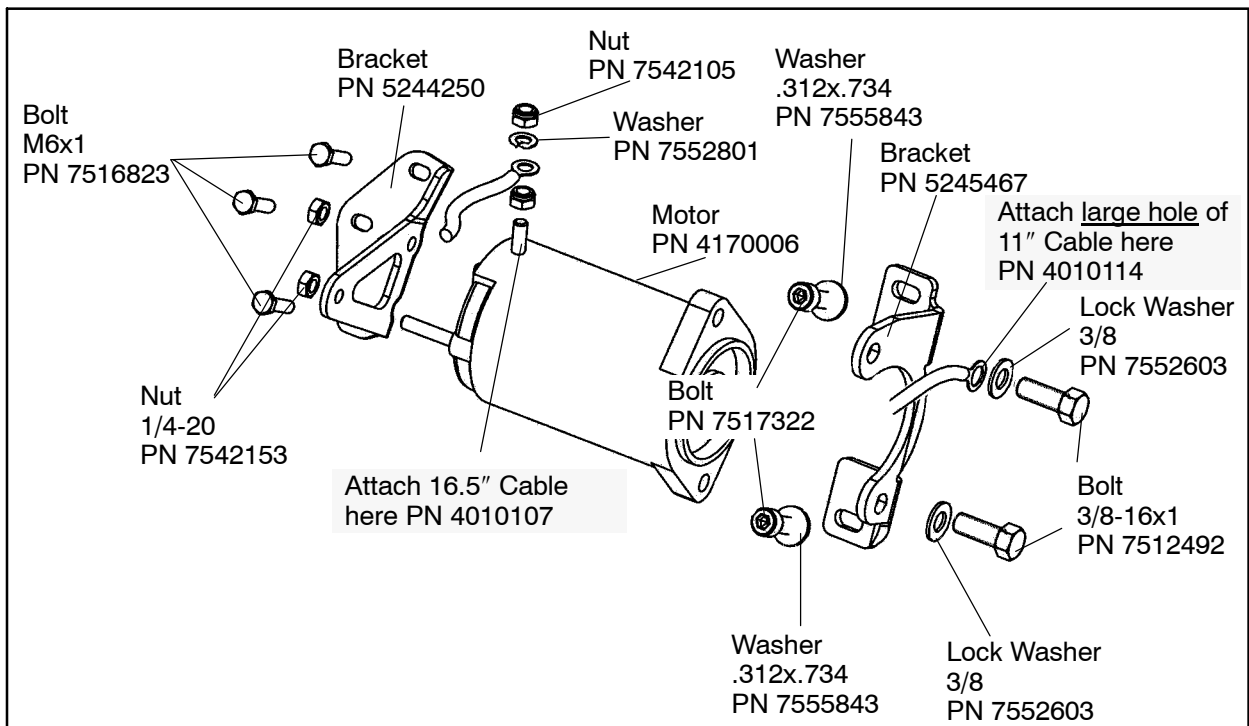


Illustration 1

12. Locate starter/solenoid cable (PN 4010107). Attach the end without the red insulator cap to the stud on the starter motor and fasten with nut (PN 7542103).
13. Attach rear starter bracket (PN 5244250) to starter using nuts (PN 7542153) **NOTE:** The stud must be pointed up.
14. Remove the coolant bottle cap to release pressure in the cooling system.
15. Using the illustration for reference, remove the three coolant housing cover bolts that are on the mag side.
16. Install the front starter bracket to the crankcase with the bolts approximately in the center of the slot on the bracket. Tighten the bolts to 14-16 ft. lbs.
17. To test fit, place the starter in position against the front bracket. Loosely put the drive clutch on the engine and check the clearance. The clearance should be .100" between the clutch ring gear and the starter pinion gear. If adjustments are necessary, additional clearance can be achieved by adjusting the bolt position in the slots on the front bracket.



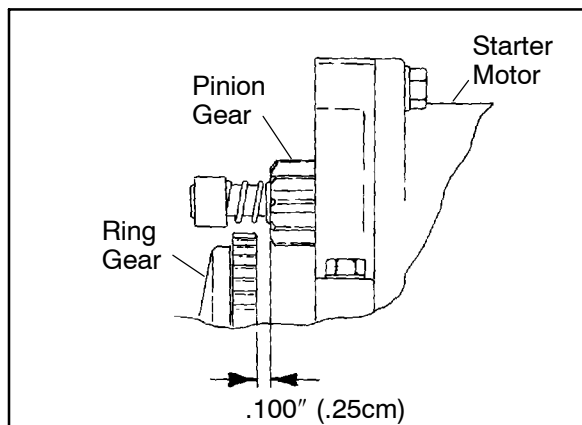
Step 15.



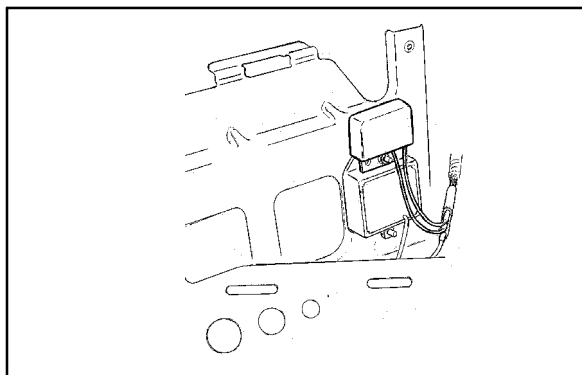
III. 2

Starter Assembly 2410242

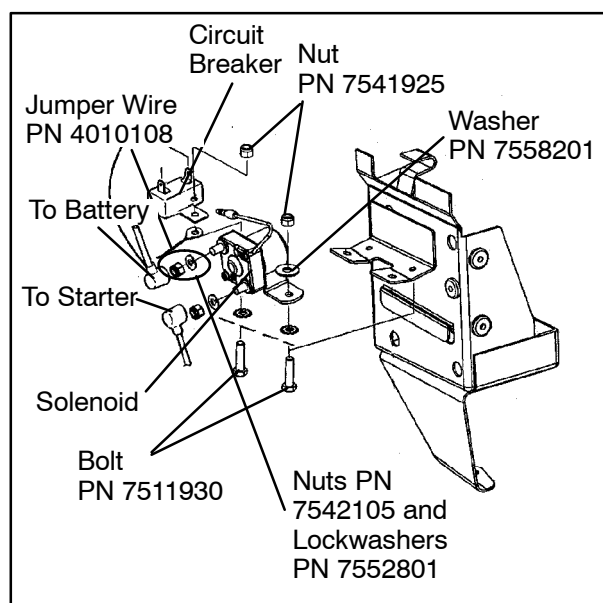
18. Check for a minimum of 1/4" (.64 cm) clearance between clutch ring gear and bulkhead. Also check to see if ring gear clears at forward end. If additional clearance is needed, bulkhead may be tapped inward with a soft face hammer. **NOTE:** A minimum of 1/4" (.64 cm) clearance is required. When high torque loads are placed on the engine, the rear of the clutch will move closer to the bulkhead.
19. When the clearance is correct, attach the starter motor and rear bracket to the crankcase using bolts (PN 7516823) but do not tighten it down.
20. Tighten the starter to the front bracket using bolts (PN 7512492) and lock washers (PN 7552603). Torque to 19-26 ft. lbs. Attach the 11" cable to the top bolt using the large hole end of the cable.
21. Tighten the back bracket bolts with the three bolts supplied with the kit. Torque to 9 ft. lbs.
22. Torque drive clutch to 45 ft. lbs.
23. Check driven clutch offset and adjust 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 drive belt and close clutch guard.
25. Remove nut from top bolt securing 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.
27. Insert battery pads (PN 5810508) into battery box; two on left side, two on bottom, one on front side and one on right side.



Step 17.

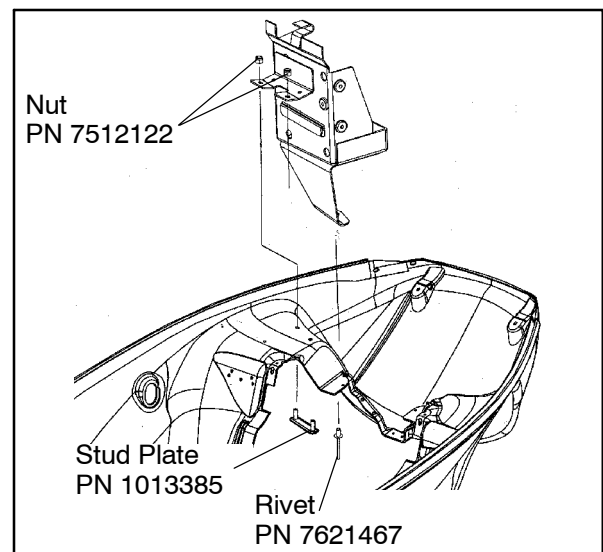


Step 25.



Step 26.

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. Connect the cable from the starter stud to the bottom solenoid stud.
30. Install the 7" battery cable (PN 2460393) to the other stud of the solenoid, using one PN 7542105 Nut and one PN 7552801 Lock Washer.
31. Install the small red wire from the solenoid to the battery side of the circuit breaker, using one PN 7542105 Nut and one PN 7552801 Lock Washer..
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 using the hardware provided in the battery bolt kit.
36. Connect the ground cable from the front bracket 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. Using a cable ties supplied with the kit, secure the battery cables coming from the starter to the wire harness in front of the clutch guard.
38. Attach D hooks (PN 6224468) to battery strap (PN 5410424).
39. Attach the battery hold down strap to the tabs provided on the battery box.
40. Install one end of battery vent tube into the stand pipe on the battery and the other end through the drain hole in the bulkhead. *Leave 1/8" (.3 cm) of vent tube protruding through the pan.* 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 muffler.
42. Insert key and test electric start. If starter does not function, re-check wire connections and routing.



Step 28.