

# ELECTRIC START KIT KIT PN 2871708



## Application:

1997 and 1998 Polaris Indy XLT LTD

**NOTE:** Dealer installation is recommended.

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	1012727-067
1	Battery	4140006
4	Nylon Locking Nut #10-24	7541925
2	Screw, 5/8"	7512027
1	Starter Motor Assembly 2 Cyl	2410062
1	9" Starter Cable (Battery Cable/Solenoid)	4010091
1	15" Battery Cable (Battery/Starter Bracket)	4010113
1	17" Battery Cable (Solenoid/Starter)	4010112
1	Cable Insulator (Red)	5410346
7	Cable Ties	7080138
1	Ignition Switch Assembly	2410010
1	Ignition Switch Nut	7543101
1	Circuit Breaker	2434008
1	Rectifier	4060104
1	Single Circuit Housing	4020140
4	Battery Pad	5810290
3	Washer 5/16"	7555734
1	Clutch Assembly	1321734
1	Bushing (open/close)	7080399
1	Starter Harness	2460512
2	Bolt 10-24 x 1 with Sims Washer	7512031
1	Edge Trim (Black #10)	8360012-06
1	Heat Sink	5210650
1	Nylon Locking Nut 1/4-20	7512124
1	Bolt 1/4-20 x 5/8"	7512113
2	Hook D	5224468
1	Battery Strap Hold Down	5410424
2	Rivet 3/16" (.251-.357)	7621418
2	Rivet 3/16" (.376-.500)	7621467
1	8.5" Jumper Wire (Solenoid/Battery)	4010108
1	Kit - Battery Bolt	2200361
1	Battery Vent Tube	5432077
1	Instructions	9913965

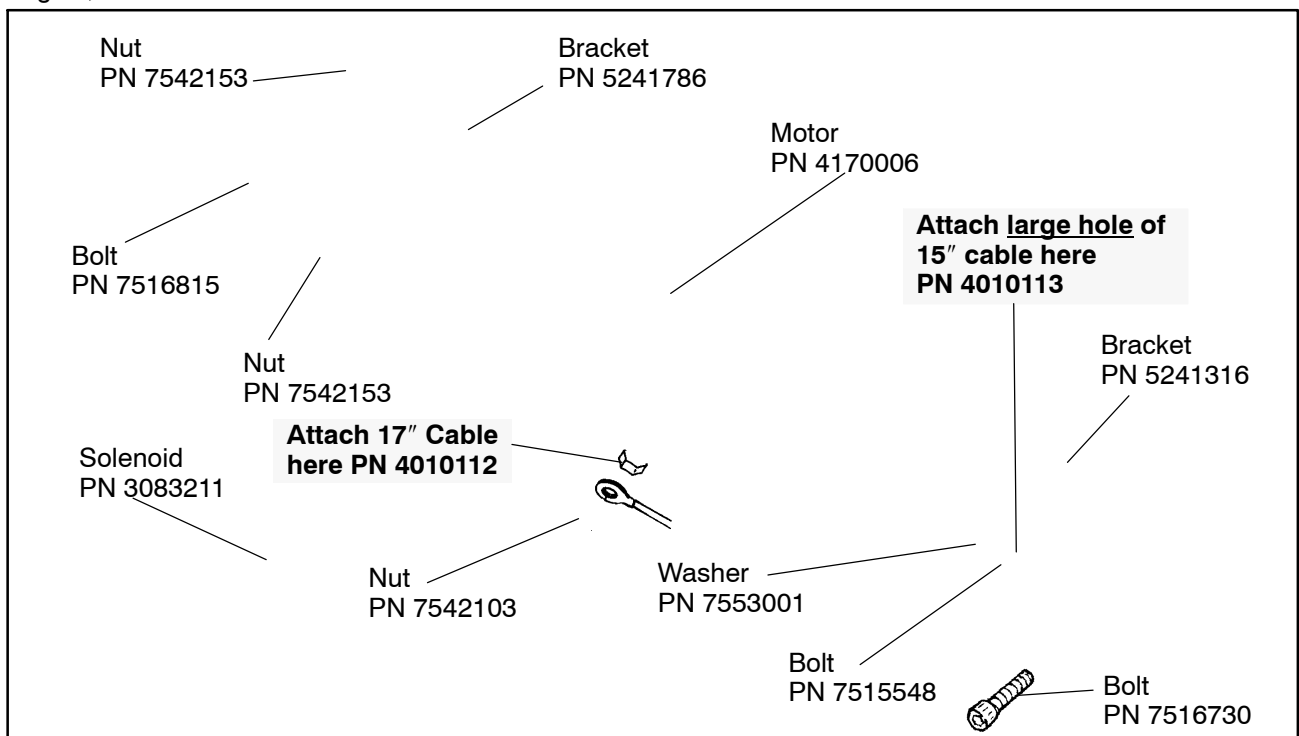
## You will need to supply:

5/16" Socket (8 mm)	Clutch Puller (PN 2870506)
12 mm Socket	Strap Wrench (PN 2870336)
10 mm Wrench	1/8" Allen Wrench (3 mm)
12 mm Wrench	3/8" Combination Wrench (10 mm)
1/2" Wrench (13 mm)	Torque Wrench
Petroleum Jelly	Battery Hydrometer (PN 2870836)
Large Phillips Screwdriver	Center Punch
Side Cutter	Electrolyte

**IMPORTANT:** Perform all items correctly and completely.

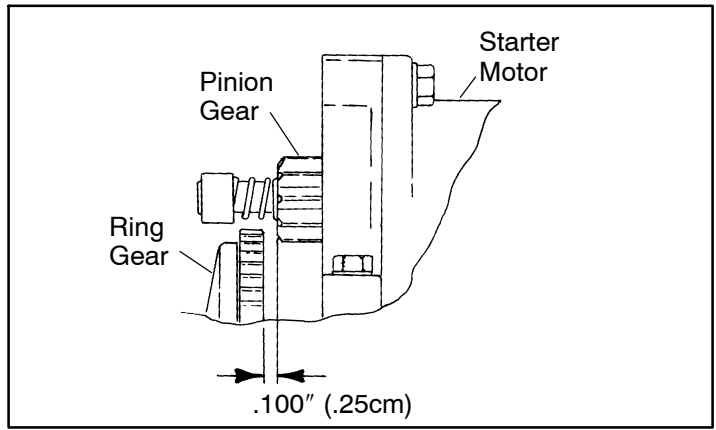
## INSTALLATION INSTRUCTIONS

1. Remove vent plug from vent fitting of battery (PN 4140006).
2. Fill battery with electrolyte to upper level marks on case. **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. Remove four screws securing left side panel and save for reassembly.
10. Unscrew hood latch by hand and lift off left side panel.
11. Open clutch guard and remove drive belt and drive clutch.
12. Remove spring and weights from drive clutch. See Master Repair Manual for instructions.
13. Install spring and weights removed in previous step into new clutch assembly (PN 1321734) and set aside.
14. Locate starter/solenoid cable (PN 4010112) from the kit. With the starter set stud facing down, attach the end with the red insulator cap to the stud on the starter. Secure with nylok nut (PN 7542103). Pull insulator cap over nut.
15. Attach front starter bracket (PN 5241316) to engine crankcase using allen head bolts (PN 7516730). Finger-tighten, do not torque.
16. Attach rear starter bracket (PN 5241786) to starter using nuts (PN 7542153). Make sure cable is pointing down and away from engine.
17. Slide pinnion gear side into starter bracket on engine.
18. Attach starter with rear bracket to engine crankcase using bolts (PN 7516815). Finger-tighten, do not torque.
19. Attach large hole end of 15" battery cable (PN 4010113) to front of starter bracket and starter using washer and bolt (PN 7553001 and PN 7515548) from kit. Install lower bolt and washer to fasten starter to starter bracket. Tighten bolts securely.
20. Loosely install new drive clutch assembly to engine.
21. 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.

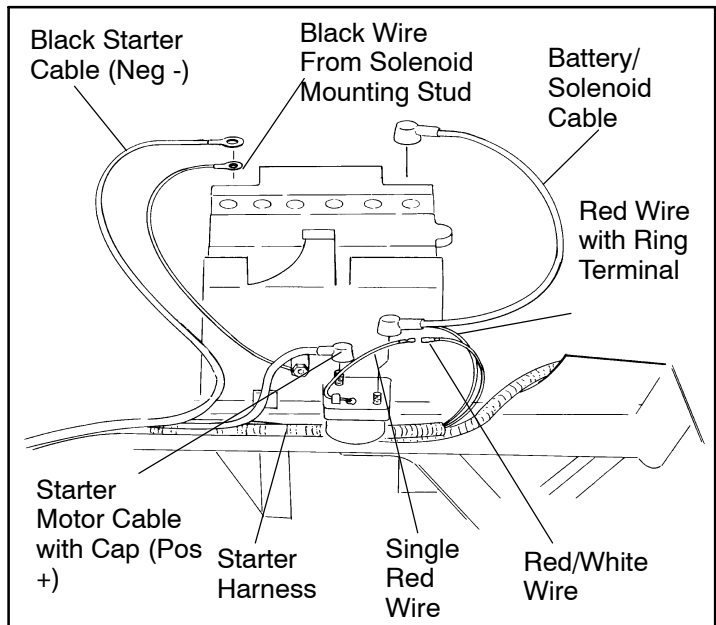


Steps 15. - 19.

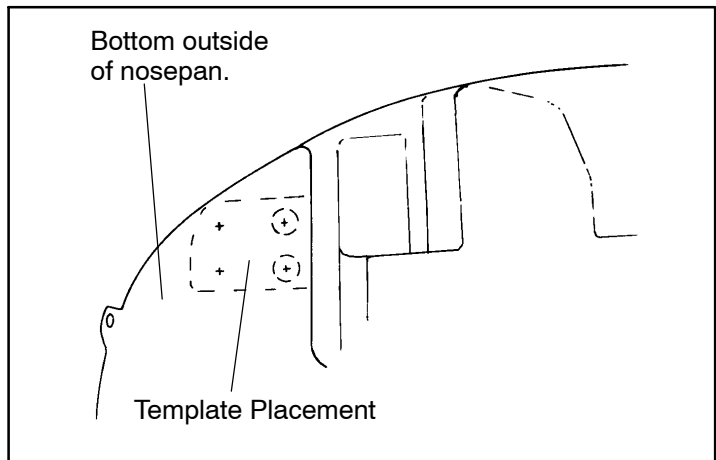
22. Position starter motor so there is no less than .100" (.25 cm) clearance between clutch ring gear and starter motor pinion gear.
23. Remove clutch.
24. Tighten front starter bracket to crankcase securely using allen wrench.
25. Tighten rear starter bracket to crankcase to 55 in. lbs.
26. Install clutch and torque to 45 ft. lbs.
27. Check 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 Master Repair Manual for additional instructions.
28. Reinstall drive belt and close clutch guard.
29. Remove plastic plug from lower left hand corner of pan. Run battery vent line through the channel of left hood support brace, through hole and secure with snap bushing (PN 7080399).
30. Attach battery pads (PN 5810290) using two on bottom and two on back of battery box.
31. Attach solenoid (PN 3083211) on screws (PN 7512027) to back side of battery box and black jumper wire (PN 4010108) on rear most screw with #10-24 nuts (PN 7541925).
32. Set battery box into front left hand corner of belly pan, hooking bracket on back of box over pan support. Push box back as far as possible.
33. Using chalk, or a similar marking device, mark the two mounting holes on the right side of the battery box.
34. Remove battery box and drill the two 7/32" holes.
35. Locate the template from the kit and position it on the bottom outside of the noespan, making sure to align the holes previously drilled. Use the center punch to mark the two remaining holes on the left side of the belly pan and drill.
36. Set battery box back into place. Secure from the underside of the snowmobile using two rivets (PN 7621467) and two rivets (PN 7621418).
37. Install battery (PN 4140006) into battery box with terminals towards left side of machine.
38. Attach battery vent line to vent fitting on battery. Cut off excess under machine and by battery. **NOTE:** Make sure vent line is not kinked.
39. Slide red insulator cap (PN 5410346) over solenoid end of cable.
40. Remove one nut and washer from rear stud of solenoid. Attach other end of starter/solenoid cable (PN 4010112) installed in step 14. to stud and fasten with nut and washer.



Step 22.

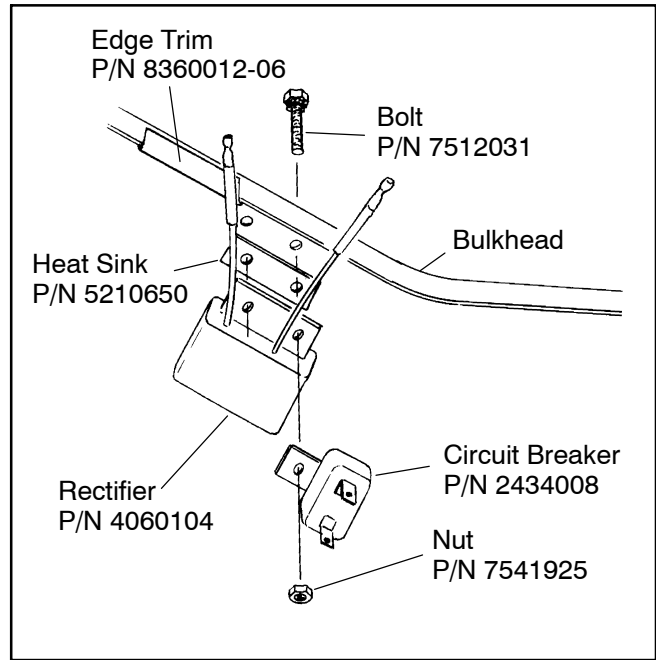


Steps 31., 39. and 40.

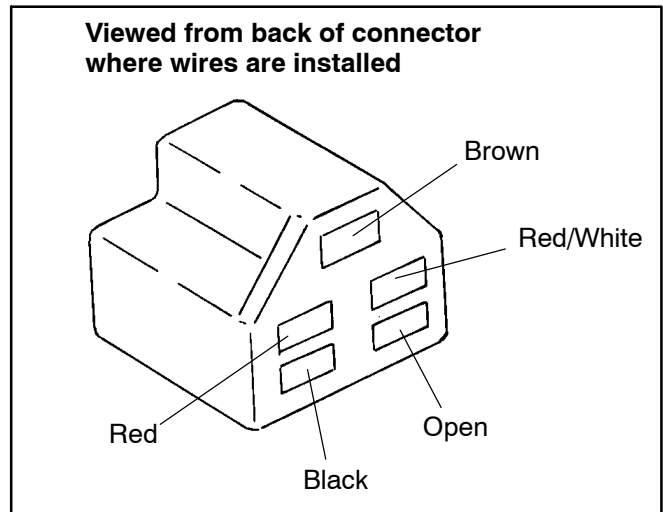
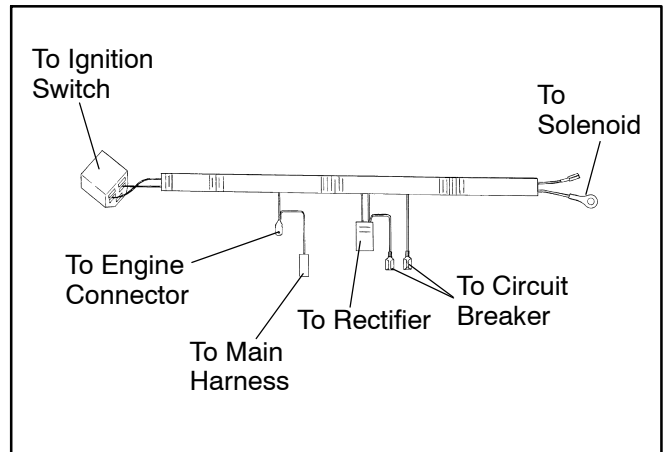


Step 35.

41. Locate two holes on right side of bulkhead just behind recoil housing. Install heat sink (PN 5210650), rectifier (PN 4060104) and circuit breaker (PN 2434008) as shown in illustration using two 10-24 x 1" bolts (PN 7512031) and two 10-24 nuts (PN 7541925). **NOTE:** Make sure the red/white wire does not get pinched behind the circuit breaker.
42. Install edge trim (PN 8360012-06) to frame behind circuit breaker as illustrated.
43. Disconnect engine wire junction box in front of chaincase.
44. Remove single yellow wire from motor wire junction box on main wire harness side, by sliding a small blade in from front of motor connector when removed. Bend metal tabs out.
45. Install black plastic terminal connector (PN 4020140) onto yellow wire from step 44.
46. Route starter harness (PN 2460512) following existing main wire harness past motor junction box.
47. Using yellow wire from new wiring harness, insert connector at point of "V" into opening in engine wire junction box left open in step 44.
48. Plug opposite end of yellow "V" connector into yellow wire removed from motor wire junction box in step 44.
49. Plug bullet terminal end of yellow wire into yellow rectifier lead.
50. Plug bullet terminal end of red wire into red rectifier lead.
51. Connect red wire to circuit breaker.
52. Reconnect engine wire junction box.
53. From backside of dash, unplug wires attached to ignition switch.
54. Remove nut from front side of ignition switch and pull switch out through back of dash.
55. Making sure notches in dash and grooves in ignition switch line up, insert new ignition switch (PN 2410010) from backside of panel.
56. Install ignition switch nut (PN 7543101) onto key side of ignition switch. **NOTE:** The amount that the ignition switch sticks out of the dash can be changed by adjusting the nut and lockwasher on the back side of the dash.
57. Strip heat shrink from wires removed in step 53.
58. Bend metal tabs out on both wires.
59. Plug black wire into magneto terminal of five wire connector.
60. Plug brown wire into ground terminal of five wire connector.

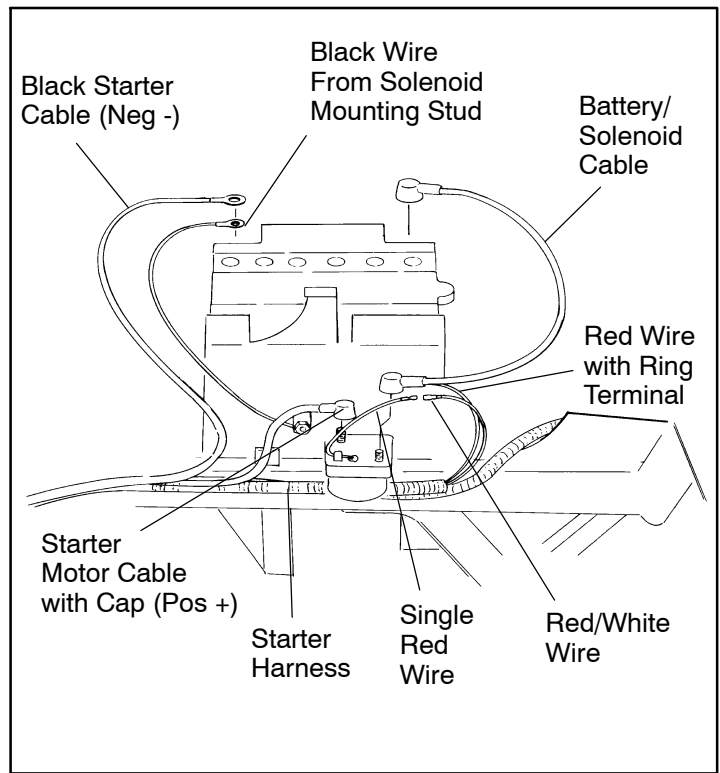


Steps 41. - 42.



Steps 59. and 60.

61. Connect five wire connector to back of ignition switch.
62. Using the opposite end of the wire harness, slide red wire that has mounting hole on the end through red insulator cover found on red battery solenoid cable (PN 4010091). **NOTE:** A coating of petroleum jelly will aid in installation.
63. Remove one nut and washer from front stud on solenoid. Attach red battery/solenoid cable (PN 4010091) and wire installed in step 62. to solenoid, fastening with nut and washer.
64. Plug red wire at end of wire harness into bullet end of red wire coming out of solenoid.
65. Assemble "D" hooks (PN 5224468) to battery strap (PN 5410424). Secure battery in box by hooking battery hold down strap to tabs on bottom back and top front of battery box.
66. Connect red battery/solenoid cable (PN 4010091) from step 63. to positive battery post and cover connection with red insulator cap.
67. Attach other end of cable (PN 4010108) and cable (PN 4010113) from starter motor bracket to negative (-) battery post using the bolts from the kit (PN 2200361).
68. Secure new wire harness (PN 2460512) to existing wire harness with cable ties (PN 7080138). **NOTE:** Wire harness should not rub on starter rope behind the chaincase or interfere with steering tie rods. **NOTE:** Make sure the speedometer cable is not secured with the wire harness. Do not pinch the battery vent line.
69. Reinstall muffler.
70. Reinstall side panel. Close hood.
71. Insert key and test electric start. If starter doesn't function, re-check wiring.

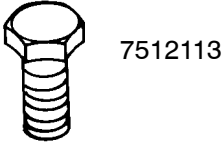


Instructions PN 9913965 Rev 04 3/98

Printed in U.S.A.

Use the following guide to help identify fasteners included with this kit. Parts are drawn to scale.

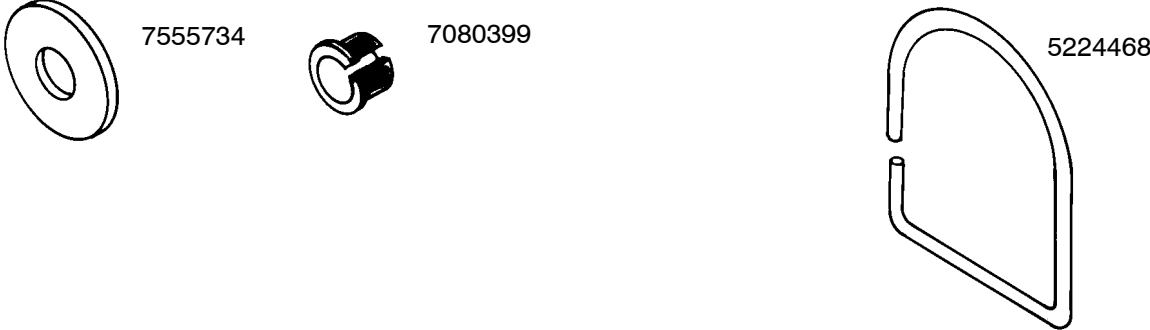
**Bolts and Screws:**



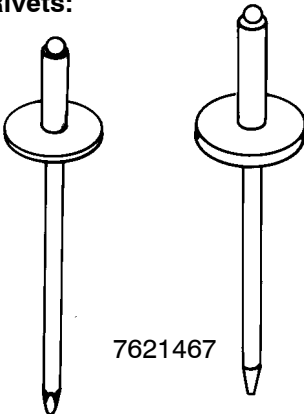
**Nuts:**



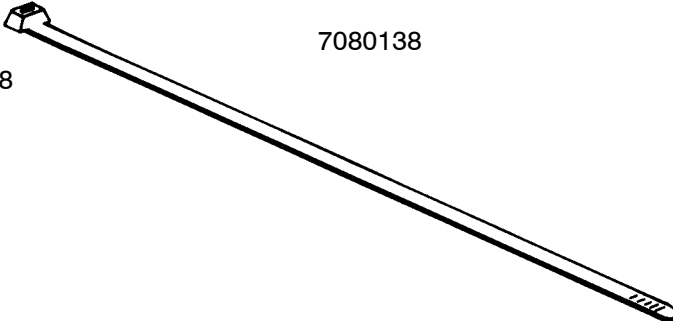
**Washers:**



**Rivets:**



**Cable Ties:**





Mount template to outside of pan in this area.

Cut along dashed line

Align with holes

Mark with Center Punch

Line up with  
Radius in Pan