










































Turn Signal/Horn Kit 9204

<p>Before you begin</p>	<p>STOP! THIS KIT IS DESIGNED SPECIFICALLY FOR</p> <ul style="list-style-type: none"> • ARCTIC CAT PROWLER PRO, 2019 and newer, • TRACKER OFF ROAD 800SX, all years. <p>IF YOUR VEHICLE IS NOT ONE OF THESE MODELS, DO NOT PROCEED. Contact Ryco Motorsports or your local dealer for the correct kit.</p>											
<p>Digital Copy</p>	 <p>Scan to access a digital copy of these instructions.</p> <p>HINT: The text and photos can then be enlarged digitally if needed.</p>											
<p>Where do I start?</p>	<p>Please read and follow the instructions.</p> <p>If you are a guy and, like most of us, feel you can install this without taking the time to read the instructions, then you should ask your significant other to read them to you. I put a lot of effort into creating the instructions, and I feel bad when no one reads them. Answers to all your questions should be covered in the installation instructions. We've included a lot of photos for those of you who are visual and don't enjoy words.</p>											
<p>What tools do I need?</p>	<ul style="list-style-type: none"> • 9/32" and 3/4" diameter drill bit NOTE: A 3/4" stepped bit works well. • 10 mm or 5/16" socket/nut driver or flat blade screwdriver • Loctite Threadlocker Blue 242 • Pliers or flat blade screwdriver • Phillips screwdriver • 10 mm wrench • center punch • drill motor   											
<p>What's in the box?</p>	<p>Let's become familiar with the items you will be installing on your vehicle, listed in order.</p> <table border="1" data-bbox="310 989 1528 1898"> <tr> <td data-bbox="310 989 716 1272"> <p>TURN SIGNAL/HORN SWITCH</p>  <p>The connectors interface with the various kit components.</p> </td> <td data-bbox="716 989 1122 1272"> <p>FLAT WASHER/SPACER</p>  </td> <td data-bbox="1122 989 1528 1272"> <p>CABLE TIES</p>  </td> </tr> <tr> <td data-bbox="310 1272 716 1587"> <p>SELF-CANCELING FLASHER RELAY</p>  <ul style="list-style-type: none"> - 3 pin connector - No marking tape </td> <td data-bbox="716 1272 1122 1587"> <p>PLASTIC SPACER</p>  </td> <td data-bbox="1122 1272 1528 1587"> <p>RYCO POWER, GROUND & FUSE HARNESS</p>  <ul style="list-style-type: none"> - 4 pin connector - GREEN marking tape </td> </tr> <tr> <td data-bbox="310 1587 716 1898"> <p>HORN</p>  </td> <td data-bbox="716 1587 1122 1898"> <p>PARALLEL TAP</p>  </td> <td data-bbox="1122 1587 1528 1898"> <p>BRAKE SWITCH INTERFACE</p>  <ul style="list-style-type: none"> - 2 pin connector NOTE: Only one pin is used. - No marking tape </td> </tr> </table>			<p>TURN SIGNAL/HORN SWITCH</p>  <p>The connectors interface with the various kit components.</p>	<p>FLAT WASHER/SPACER</p> 	<p>CABLE TIES</p> 	<p>SELF-CANCELING FLASHER RELAY</p>  <ul style="list-style-type: none"> - 3 pin connector - No marking tape 	<p>PLASTIC SPACER</p> 	<p>RYCO POWER, GROUND & FUSE HARNESS</p>  <ul style="list-style-type: none"> - 4 pin connector - GREEN marking tape 	<p>HORN</p> 	<p>PARALLEL TAP</p> 	<p>BRAKE SWITCH INTERFACE</p>  <ul style="list-style-type: none"> - 2 pin connector NOTE: Only one pin is used. - No marking tape
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	<p>FRONT TURN SIGNAL HARNESS</p>  <ul style="list-style-type: none"> - 4 pin connector - RED marking tape 	<p>REAR TURN SIGNAL HARNESS</p>  <ul style="list-style-type: none"> - 3 pin connector - RED marking tape 	<p>DASH MOUNTED INDICATOR HARNESS</p>  <ul style="list-style-type: none"> - 3 pin connector - BLUE marking tape
	<p>PLATE HOLDER</p> 	<p>LICENSE PLATE LIGHT</p> 	<p>SAE ADAPTER</p> 
<p>Installation Steps</p>	<p>NOTE: Where possible run new cables alongside the existing wires, and use existing cable ties/anchors where practical.</p> <p>IMPORTANT: Ensure that the wiring and installed hardware do not contact moving components or hot surfaces.</p>		
<p>1. Verify Brake Lights</p>	<ul style="list-style-type: none"> • With the engine running, step on the brake pedal, and verify that the brake lights function correctly. <ul style="list-style-type: none"> ○ If yes, turn off the engine and then continue to Step 2. ○ If no, adjust the vehicle brake switch until the brake lights function, and then turn off the engine and continue to Step 2. 		
<p>2. Mount the TURN SIGNAL/HORN SWITCH</p>	<p>NOTE: The TURN SIGNAL/HORN SWITCH should NOT have any of the components installed on the harness until after the switch is installed, and the switch harness is routed behind the dash.</p>   <ul style="list-style-type: none"> • Ensure the ignition key is in the "OFF" position, and the key is removed. • Using the tilt feature, tilt the steering wheel to the upper most position. • Remove and retain the barrel screw and machine screw on the existing tilt wheel mechanism. • Rotate the tilt cylinder lever 180 degrees so it is operated using the right hand instead of the left. • Remove the two screws holding the steering support bracket, discard the bracket and retain the two screws for re-use. • Install the TURN SIGNAL/HORN SWITCH with the new steering support bracket re-using the existing two screws <p>NOTE: Use of Loctite Threadlocker Blue 242 or equivalent on the machine screw thread is recommended.</p> <ul style="list-style-type: none"> • Position the tilt cylinder in the bracket, re-install the barrel screw, add the FLAT WASHER/SPACER and re-install the machine screw. 		



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- Remove the fasteners holding the dash cover and remove the cover.
- Route the **TURN SIGNAL/HORN SWITCH** harness to the left side of the steering column as shown.
- Remove some of the lower dash plastic with a file or similar to creating a small "U" shaped opening in the lower dash with enough room for the **TURN SIGNAL/HORN SWITCH** harness to pass without damaging the harness.
- Using the tilt feature, tilt the steering wheel to the upper most position and then to the lower most position to determine the slack needed in the **TURN SIGNAL/HORN SWITCH** harness.
- Route the harness behind the dash towards the center of the vehicle.



IMPORTANT: Ensure that the wiring and installed hardware do not contact moving components or hot surfaces.

- Secure the **TURN SIGNAL/HORN SWITCH** harness with **CABLE TIES**.

3. Connect Components to the TURN SIGNAL/HORN SWITCH Harness

IMPORTANT: When connecting the components match the color of the marking tape by the connectors (e.g., **RED** marking tape to **RED** marking tape, **GREEN** to **GREEN**, **BLUE** to **BLUE**), rather than match the color of the connectors or the wires.

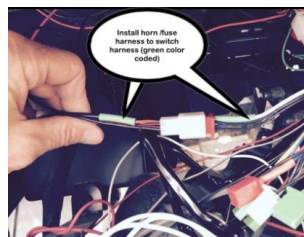
NOTE: When connecting a component harness to the TURN SIGNAL/HORN SWITCH harness, check that the pins are straight, not bent. The connectors should interface very easily; if there is resistance, it is likely due to a bent pin.

Connect the following to the **TURN SIGNAL/HORN SWITCH** harness:

- **SELF-CANCELING FLASHER RELAY** (3 pin connector with NO marking tape),
- **RYCO POWER, GROUND & HORN HARNESS** (4 pin **GREEN** marking), and
- **DASH MOUNTED INDICATOR HARNESS** (3 pin **BLUE** marking).



NOTE: The 2 pin connector with NO color marking labeled "BRAKE INTERFACE HARNESS" is NOT used.



NOTE: Do NOT connect the front or rear turn signal harness to the TURN SIGNAL/HORN SWITCH at this time.

- Secure the **TURN SIGNAL/HORN SWITCH** harness to a cross member using a **CABLE TIE**.

Self-Canceling Flasher Relay Feature: The SELF-CANCELING FLASHER RELAY has a timing circuit that will cancel the turn signals after a few minutes. The timer is reset whenever the turn signal switch is returned to the center/off position.

NOTE: The SELF-CANCELING FLASHER RELAY can be bundled and secured with a **CABLE TIE** to the TURN SIGNAL/HORN SWITCH harness.



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4. Install the HORN

IMPORTANT: Do not attempt to adjust the HORN or remove the center mounting nut that attaches the HORN to the horn mounting bracket.

- Install the **HORN** in the existing hole on the driver side hood support bracket, using the provided fastener.
- Install the **PLASTIC SPACER** between the horn and the vehicle support bracket.
- Route the **RYCO POWER, GROUND & HORN HARNESS** to the **HORN**.
- Install the two flat spade connectors to the **HORN** terminals.

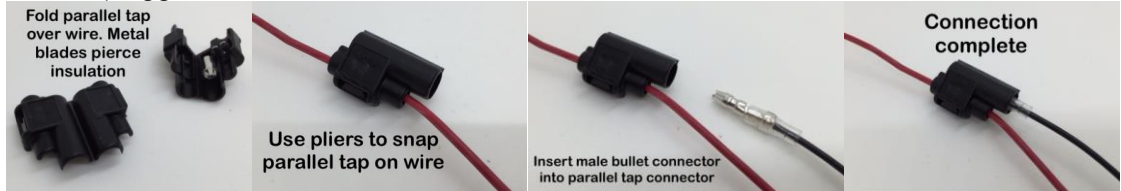


NOTE: Either connector can be installed on either HORN terminal.

5. Install the BRAKE SWITCH INTERFACE

How to Install a PARALLEL TAP: The wire colors may not match your application but are for illustration.

NOTE: Check the orientation of the PARALLEL TAP connectors to ensure access for the male connector, prior to seating the PARALLEL TAP connector with pliers. If applicable, the connector can be unplugged to allow easier access.



- Carefully expose the **ORANGE** and **RED** wires leading to the vehicle brake switch.

HINT: It is easier to expose the wires if the 2 pin connector is temporarily unplugged.

- Install a **PARALLEL TAP** on the **RED** brake switch wire identified, and then reconnect the 2 pin connector, if applicable.
- Route the **BRAKE SWITCH INTERFACE** from the **TURN SIGNAL/SWITCH HARNESS**, and plug the **BRAKE SWITCH INTERFACE RED** harness to the **PARALLEL TAP** connector on the **RED** brake switch wire.



6. Install the FRONT TURN SIGNAL HARNESS

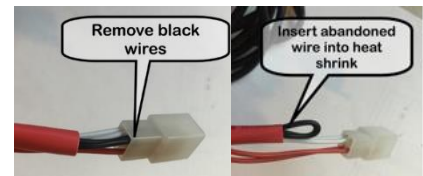
Front Turn Signal Running Lights Feature: The front turn signal LEDs are running lights, and illuminate at 60% intensity when the vehicle ignition is on, and then flash at full intensity when the turn signals are activated.

If you wish to disable the running light feature,

- On the **FRONT TURN SIGNAL HARNESS** remove the **BLACK** wire in the 4 position connector.

NOTE: Use a very fine flat blade screwdriver or similar tool to depress the metal tab on the pin joining the two black wires.

- Push the pin out of the 4 position connector, and tuck the pin into the red heat shrink or tape it out of the way.





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- Determine the locations of the front LEDs as desired.
- HINT:** 1¼" - 1½" spacing between the LEDs works well.
- Mark the locations using a center punch, ensuring there is adequate room on the back side of the panel prior to drilling.



NOTE: Use of a step drill is recommended.

- Drill three ¾" diameter holes for each set of front turn signal LEDs.
- Connect the **FRONT TURN SIGNAL HARNESS** 4 pin connector to the **TURN SIGNAL/HORN SWITCH** harness, matching the **RED** marking tape.
- Route the **FRONT TURN SIGNAL HARNESS** triple LEDs to the front corners of the vehicle.

NOTE: The tags on the FRONT TURN SIGNAL HARNESS are marked "L" for the driver's side, and "R" for the passenger side.

HINT: A little warmth and moisture helps to slip everything together.

- Slide the rubber flange gaskets that are on the LEDs back onto the wires.
- Slip the LED through the ¾" diameter hole, fold the flange gasket and push it through the hole.
- Install the flange gasket into the hole, with the flange of the gasket towards the front of the vehicle. Insert the LED into the flange gasket with a gentle pulling and rocking motion, to seat the LED into the gasket.
- Rotate the LEDs within the gasket as necessary to orient them in the same relative position.



7. Install the REAR TURN SIGNAL HARNESS

- Connect the **REAR TURN SIGNAL HARNESS** to the 3 pin connector on the **TURN SIGNAL/HORN SWITCH** harness, matching the **RED** color coded marking tape.

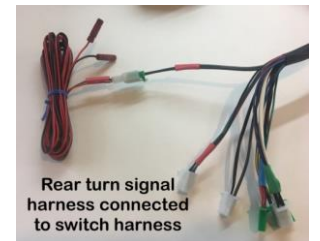
NOTE: Only the two outside pins of the REAR TURN SIGNAL HARNESS 3 pin connector are used. The rear turn signal circuit utilizes the existing vehicle ground.

- Route the **REAR TURN SIGNAL HARNESS** cable alongside the existing wires, where practical, to the rear of the vehicle.
- Secure with **CABLE TIES**.

NOTE: Ensure the wiring does not contact moving components or hot surfaces.

NOTE: You **MUST** cut the vehicle **RED** wires, and connect to the **RED** and **BLACK** wires on the REAR TURN SIGNAL HARNESS. If you "tee" or splice into the wires, rather than cut the wires, it will not function properly.

- At the driver side taillight assembly, cut the vehicle **RED** wire approximately 2 inches in front of the taillight connector.
- Abandon the cut vehicle **RED** wire **coming from the front of the vehicle**, and tuck into the protective sleeve and/or wrap with electrical tape.
- At the passenger side taillight assembly, unplug the taillight connector.
- Expose only the **RED** wire for approximately 2 inches.
- Cut the vehicle **RED** wire approximately 2 inches in front of the connector.



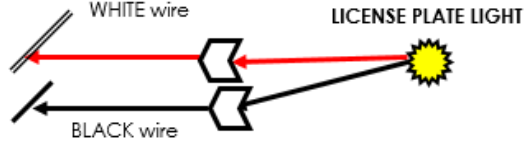



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	<ul style="list-style-type: none"> Abandon the cut vehicle RED wire coming from the front of the vehicle, and tuck into the protective sleeve and/or wrap with electrical tape. <div data-bbox="326 275 781 302" data-label="Section-Header">How to Use the Solderless Connectors:</div> <ul style="list-style-type: none"> Unscrew the solderless connector end piece, and slip it over the wire of the component to connect. Start to screw the end piece back in place, and push the wire of the component being connected, so it is seated in the solderless connector. Tighten the end pieces. <div data-bbox="1312 275 1495 453" data-label="Image"></div> <ul style="list-style-type: none"> Connect the REAR TURN SIGNAL HARNESS and vehicle taillight wires, using the red solderless connectors: Attach the REAR TURN SIGNAL HARNESS RED wire to the driver side vehicle RED taillight wire, using the solderless connector. Attach the REAR TURN SIGNAL HARNESS BLACK wire to the passenger side vehicle RED taillight wire, using the solderless connector. <p>NOTE: If you connect the REAR TURN SIGNAL HARNESS wires to the RED wires coming from the front of the vehicle, the rear turn signals and brake lights will not function.</p> <p>NOTE: Ensure the wiring does not contact moving components or hot surfaces.</p>
<p>8. Install the DASH MOUNTED INDICATOR HARNESS</p>	<ul style="list-style-type: none"> Mark the desired locations in the dash for the two DASH MOUNTED INDICATOR HARNESS LED lights, where they are visible to the driver. Drill two 9/32" mounting holes in the dash for the indicator lights. <p>HINT: A little warmth and moisture help when installing the grommets, and again when installing the LEDs into the grommets.</p> <p>NOTE: Carefully insert the DASH MOUNTED INDICATOR HARNESS LEDs into the grommets to prevent damage to the wires and resistor.</p> <ul style="list-style-type: none"> Seat the rubber grommets into the drilled holes, and then carefully push the LEDs into the grommets from the rear, until the LED is flush or slightly protruding. <div data-bbox="1187 835 1507 1079" data-label="Image"></div>
<p>9. Install the LICENSE PLATE LIGHT and PLATE HOLDER</p>	<ul style="list-style-type: none"> Using the PLATE HOLDER as a guide, mark the location of the two mounting holes. Drill two pilot holes in the metal tube under the bed to mount the PLATE HOLDER. Using the SELF-TAPPING SCREWS provided, secure the PLATE HOLDER to the frame of the vehicle. <p>IMPORTANT: DO NOT overtighten the nut on the LICENSE PLATE LIGHT. The LICENSE PLATE LIGHT body is aluminum, and the threads can be stripped quite easily.</p> <p>EXPLANATION: The LICENSE PLATE LIGHT is installed in the single hole where the light will shine down on the license plate.</p> <p>NOTE: Mount the license plate, when available, using the provided FLANGE BOLTS and LOCK NUTS.</p> <ul style="list-style-type: none"> Before tightening, orient the LICENSE PLATE LIGHT so it shines on the PLATE HOLDER. Mount the LICENSE PLATE LIGHT using the provided FLANGE NUT. Before tightening, orient the LICENSE PLATE LIGHT so it shines on the PLATE HOLDER. Mount the LICENSE PLATE LIGHT using the provided FLANGE NUT. Locate the 3 wires leading to the vehicle taillight/brake light assembly. <div data-bbox="1187 1262 1507 1505" data-label="Image"></div>



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	<ul style="list-style-type: none"> • Install a PARALLEL TAP connector on the vehicle taillight/brake light assembly BLACK and WHITE/RED wires, referring to “How to Install a PARALLEL TAP” in Step 5 as needed. • Route the LICENSE PLATE LIGHT wires to the PARALLEL TAP connectors on the white/red and black wires. • Connect the LICENSE PLATE LIGHT RED wire to the WHITE/RED wire. • Connect the LICENSE PLATE LIGHT BLACK wire to the BLACK wire. 
<p>10. Connect to the Main Power</p>	<ul style="list-style-type: none"> • Ensure the ignition key is in the “OFF” position, and the key is removed. <p>IMPORTANT: The LEDs and SELF-CANCELING FLASHER RELAY are polarity sensitive. The RYCO POWER, GROUND & HORN HARNESS RED fused wire MUST be connected to the 12 volt DC (positive side), and the BLACK ground wire must be connected to the vehicle ground wire. If this is not done correctly, the horn will work, but the turn signals will not function.</p> <p>WARNING: Damage to the SELF-CANCELING FLASHER RELAY may occur if the wires are installed backwards.</p> <ul style="list-style-type: none"> • Install the SAE ADAPTER to the vehicle multiple SAE plug located under the dash cover. <p>NOTE: There are additional SAE connectors in the engine tunnel area and towards the rear of the vehicle, but you will use the SAE connector located under the front hood near the firewall.</p>  <ul style="list-style-type: none"> • Route the RYCO POWER, GROUND & HORN HARNESS from the TURN SIGNAL/HORN SWITCH toward the center of the vehicle. • Connect the RYCO POWER, GROUND & HORN HARNESS RED fused wire to the PARALLEL TAP on the SAE ADAPTER RED wire. • Connect the RYCO POWER, GROUND & HORN HARNESS BLACK ground wire to the PARALLEL TAP connector on the SAE ADAPTER BLACK wire.
<p>11. Test</p>	<ul style="list-style-type: none"> • Double check all the connectors. • Turn the ignition key to the “ON” position. • Verify that the turn signals, four-way flasher, horn, brake, and license plate light work correctly. • Refer to the Troubleshooting Guide at the end of this document. <div style="border: 1px solid black; padding: 5px;"> <p>Four-Way Flasher Feature: With either the key on or the engine running, pull the red lever on the TURN SIGNAL/HORN SWITCH to activate all four turn signal lights. To deactivate the four-way flashers move the TURN SIGNAL/HORN SWITCH black lever either direction.</p> <p>NOTE: The SELF-CANCELING FLASHER RELAY feature means the four-way flasher will time out after a few minutes. If the four-way flasher feature is used regularly, contact Ryco Motorsports for a different flasher relay without the self-canceling feature.</p> </div>
<p>12. Done</p>	<p>IMPORTANT: Ensure that the wiring and installed hardware do not contact moving components or hot surfaces.</p> <ul style="list-style-type: none"> • Once all the cabling is in place and functionality is verified, double check the routing, and secure with CABLE TIES. • Bundle any extra cable length and secure with the CABLE TIES. • Reinstall the dash, panels and covers.



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Troubleshooting Guide							
Does It Work Correctly?	Front Turn Signals	Indicator Lights	Horn	Brake Lights	Rear Turn Signals	License Plate Light	Resolution
Scenario 1	✓	✓	✓	✓	✓	✓	Go riding!
Scenario 2	✓	✓	✓	No	✓	✓	BRAKE SWITCH INTERFACE is not installed correctly. Refer to Step 5.
Scenario 3	✓	✓	✓	No	No	✓	The REAR TURN SIGNAL HARNESS RED and BLACK wires were connected to the wrong ends of the cut vehicle wires. Refer to Step 7.
Scenario 4	✓	✓	✓	✓	✓	No	Ensure that the LICENSE PLATE LIGHT RED power and BLACK ground wires are connected correctly (i.e. cables are not reversed). Refer to Step 8.
Scenario 5	No	No	✓	No	No	No	Ensure that the RYCO POWER, GROUND & HORN HARNESS RED main power and BLACK ground wires are connected correctly (i.e., the cables are not reversed). Refer to Step 9.
Scenario 6	No	No	No	✓	✓	No	Ensure that the RYCO POWER, GROUND & HORN HARNESS BLACK ground wire is connected to a good ground. Refer to Step 9.
Scenario 7	No	No	✓	✓	No	✓	If the turn signal lights illuminate but do not flash then the SELF-CANCELING FLASHER RELAY is damaged or defective. Contact Ryco Motorsports by email or phone, provide your shipping address, and we will send you a replacement SELF-CANCELING FLASHER RELAY , at no charge, to correct the problem.
Scenario 8	No	No	No	✓	No	✓	If the vehicle blows a fuse when the key is turned on, check for a bent pin on the connection between the RYCO POWER, GROUND & HORN HARNESS and the TURN SIGNAL/HORN SWITCH harness.
Scenario 9	If a set of lights does not work, check for a bent pin on the connection between the light harness and the TURN SIGNAL/HORN SWITCH harness.						