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JB 11/15/24 JM

743 East Iona Road, Idaho Falls, ID 83401, (208) 529-0244

# SLP PicNc’R Single Pipe Set for Polaris 2019-25 850 Axys/ Matryx - Rush, XCR, Switchback, Switchback Assault, VR1, & Indy Models P/N 09-8023

## Parts List:

- |                                     |   |                             |
|-------------------------------------|---|-----------------------------|
| 1 - Single Pipe (#090-8152)         | 1 - Silencer (#090-8083)                | 1 - Y-Pipe (#090-80221)     |
| 1 - Instruction Sheet (#015-098023) | 1 - Square Heat Barrier (#093-0243)     | 1 - Grafoil Seal (#090-968) |
| 1 - Anti-Seize Packet (#090-0146)   | 2 - Reflective Heat Tape, 30” (#090-31) | 2 - Cable Tie (#090-45)     |
| 1 - Signal Modifier (#090-39)       | 1 - EGT Probe Eliminator Plug (#090-38) | 1 - Spring Clip (#090-697)  |
| 1 - Flange Gasket (#090-969)        | 1 - Belly Pan Silicone Seal (#091-4095) | 1 - SLP Sticker (#60-60)    |
| 2 - Cooker Spring (#090-49)         |   |                             |

## Recommended Tools:

- |   |                                |                                     |
|---|--------------------------------|-------------------------------------|
| 17” Spring Hook Tool (#20-322)                    | T-40 Torx Bit                  | 13mm Socket                         |
| 12” Spring Hook Tool (#20-210)                    | 2 Small Flat Head Screwdrivers | 3/8” Drive Short Ratchet            |
| 6mm x 5” Long Ball End Allen Socket (SLP #20-221) | 17mm Crow’s Foot               | Razor Blade or Gasket Scraper       |
| 3/8” Drive Ratchet                                | Torque Wrench                  | U-Joint Swivel                      |
|   | Ultra-Black Silicone (#090-24) | 6” Extension for 3/8” Drive Ratchet |
|   | 13mm End Wrench                |                                     |

## Installation Instructions:

1. Remove side panels and hood.

2. Unplug the silencer EGT probe from the wiring harness. Remove stock silencer. Retain springs for use during install (set aside stock silencer and silencer EGT probe).

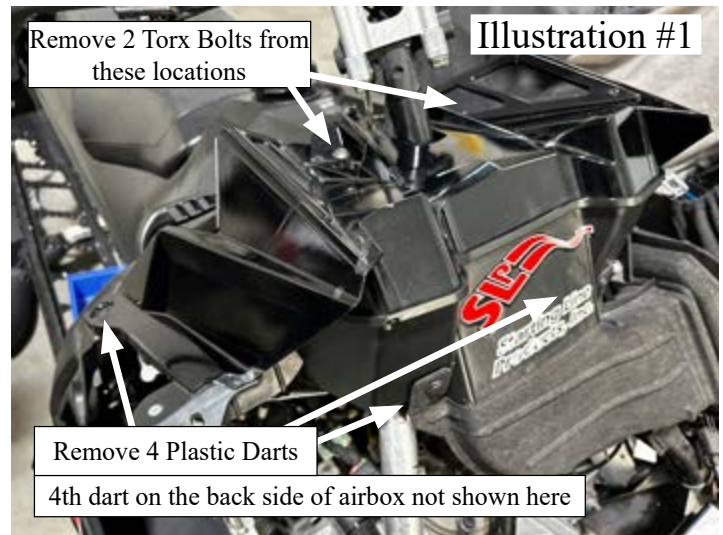
*Note: Not necessary to remove EGT probe from silencer as stock silencer and EGT probe will not be reused.*

3. Unplug pipe EGT probe from wiring harness. Using a 17mm end wrench or crow’s foot, remove EGT probe from stock pipe. Remove stock pipe. Retain pipe EGT probe, pipe-to-silencer grafoil seal and springs (set aside stock pipe and stock y-pipe-to-pipe grafoil seal).

*Note: For easiest removal of y-pipe-to-pipe springs, use SLP Spring Hook Tools (#20-210 and 20-322). Remove lower y-pipe springs by going in from the silencer side.*

4. Remove the upper intake panel. Start by using two small screwdrivers to remove the 4 darts on the intake. Next, using a ratchet and the T-40 Torx bit, remove the two Torx bolts. Set the panel, darts and bolts to the side to be reinstalled later (see Illustration #1).

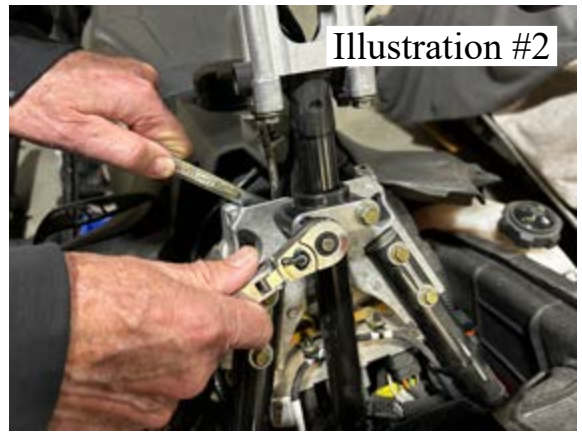
5. Remove the upper steering column bushing from the steering column by using the 13mm end wrench and 13mm socket (see Illustration #2). Remove this bushing and set to the side to be reinstalled later.



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6. Turn the sled's handlebars full right to create more space in the chassis for the rest of this step. Using a ratchet, 6" extension, u-joint swivel and SLP 6mm ball end Allen (#20-221), remove the bolts on the stock y-pipe. Rest the stock y-pipe in the bottom of the sled's chassis on the PTO side to keep it out of the way for the moment. Then, using the 3/8" ratchet and 13mm socket, unbolt the steering column from the frame of the chassis and shift it to the MAG side of the sled, opening the chassis up to easily remove the stock y-pipe (see Illustration #3). Remove Stock y-pipe from the chassis. Retain y-pipe bolts for use during installation.



7. **AXYS Models Only:** Using a T40 torx and a 13mm end wrench, remove the recoil roller. **This will not be reinstalled.** (see Illustration #4) **WARNING: Failure to remove recoil roller will cause recoil rope to melt.**

8. Install provided heat tape on the inside of the belly pan from the silencer outlet forward up the back side of the bellypan shock tower (see Illustration #5).

**Note:** Make sure the rubber isolator remains on the lower bulkhead silencer mounting location. (see Illustration #5).

9. Install provided square self adhesive heat blanket (#093-0243) on left front inside of belly pan (see illustration #6).

10. **MATRYX Models only:** Remove foam from top inside of right hand side panel and install provided heat tape (see illustration #7)

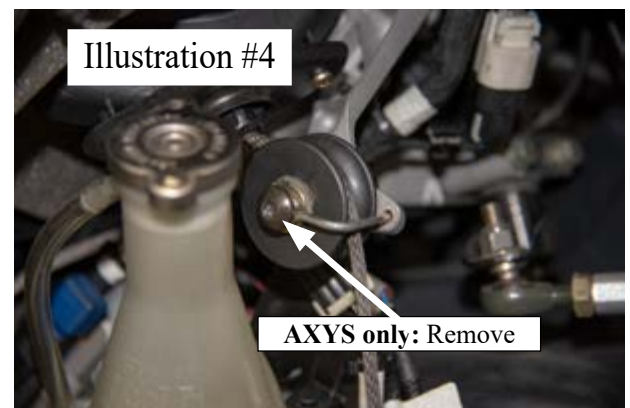
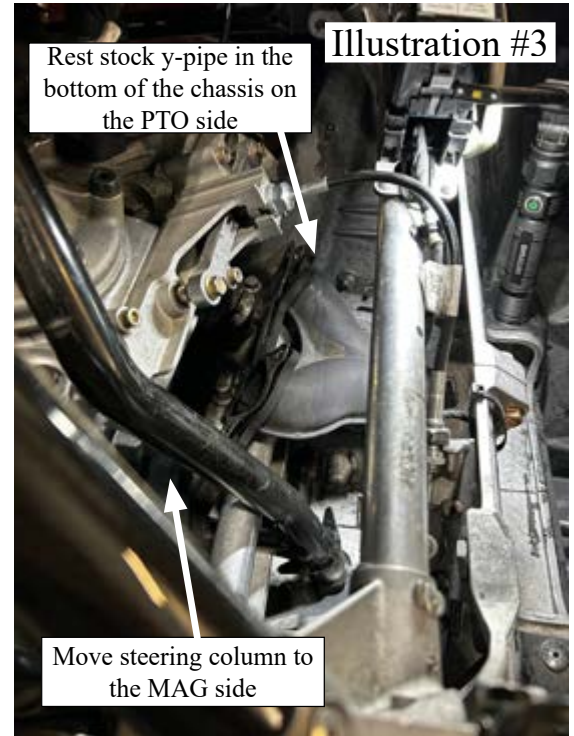
11. Using a razor blade or gasket scraper, remove all remaining gasket material from cylinder to y-pipe mating surface.

12. Using provided exhaust flange gasket (#090-969), install SLP y-pipe with stock y-pipe bolts. Begin by resting the SLP y-pipe in the bottom of the chassis on the PTO side of the sled, then move the steering column back into place and bolt it back to the frame. Using a torque wrench and 13mm socket, torque to **20 ft/lbs**. Next, replace the upper steering post mount bushing and torque the bolts to **20 ft/lbs**. Align the flange gasket and SLP y-pipe to the exhaust ports and bolt into place using torque wrench and 6mm x 5" ball end Allen (#20-221). Torque y-pipe bolts to **22 ft/lbs**.

13. Turn the handlebars full left and right and visually check clearance between steering column and SLP y-pipe. If there is less than 0.030" clearance between y-pipe and steering column, please contact SLP before proceeding with installation.

14. Reinstall the upper intake panel that was removed in step #4, making sure the intake panel is engaged properly into the intake tube. Secure using T-40 Torx bolts and 4 plastic darts removed previously (see illustration #1).

15. Install OEM Vibro insulator to pipe bracket located on the bottom of the pipe (see illustration #8).



16. Install provided Grafoil Seal (#090-968) onto the y-pipe, making sure that the alignment notches are lined up. Apply Permatex® UltraBlack® (SLP#090-24) or Loctite® RTV Silicone 598™ to Grafoil Seal notches.

17. Install SLP Pipe using stock silver colored springs removed from stock y-pipe.

*Note: For easiest installation of y-pipe to pipe springs, use SLP Spring Hook Tools (#20-210 and 20-322). Install lower y-pipe springs by going in from the silencer side.*

18. Install EGT probe in pipe with provided anti-seize (#090-0146) on threads and torque to **22 ft-lbs** with 17 mm crow's foot and torque wrench.

*Note: Adding anti-seize to the probe threads will make removing the probe easier in the future.*

19. Plug provided signal modifier (#090-39) into stock wiring harness. Plug stock pipe EGT probe into signal modifier and using a provided cable tie (#090-45) secure signal modifier to wiring harness (see illustration #9).

20. Install stock pipe-to-silencer grafoil seal onto the end of pipe.

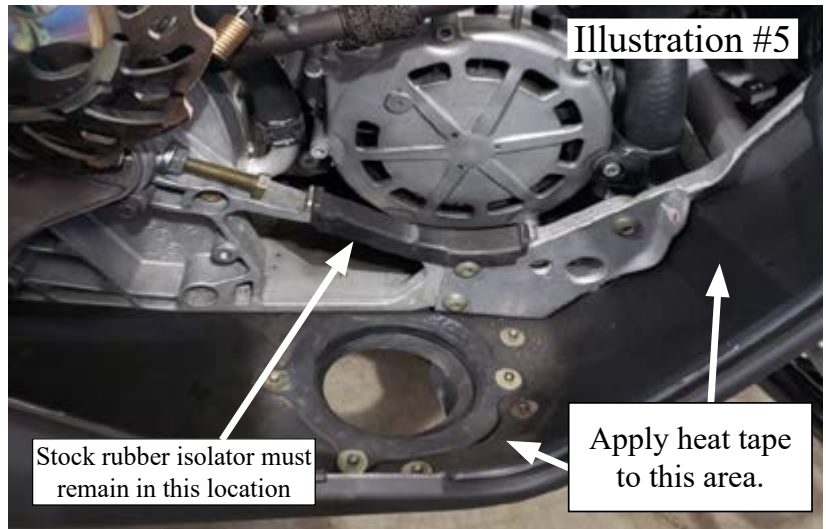
21. Plug the supplied silencer EGT probe eliminator plug (#090-38) into the stock silencer EGT probe connector in the wiring harness and secure in place using supplied cable tie (#090-45)(see illustration #10).

22. Remove the front upper bolt on the bulkhead. Slide the supplied spring tab (#090-697) onto the bolt and reinstall with the spring tab pointing in the 11 o'clock position. (see Illustration #11)

23. Install SLP Silicone Outlet Ring (#091-4095) onto the silencer outlet with rounded edge down (see illustration #12) and install silencer in sled making sure the stock rubber isolator is in place under the silencer bracket (see illustration #5). Spring the pipe to the silencer using stock gold colored springs. Spring the front side of the silencer to the spring hook installed on the bulkhead in step #18 with stock gold colored spring. Spring the rear of the silencer to the bulkhead brace using the stock longer gold colored spring (see illustration #13).

*Note: After silencer is installed, check above and under the sled to make sure SLP outlet seal and stock rubber seal are properly placed. Apply a high temp silicone sealer such as Permatex® UltraBlack® (SLP#090-24) or Loctite® RTV Silicone 598™ to glue silicone outlet ring to silencer.*

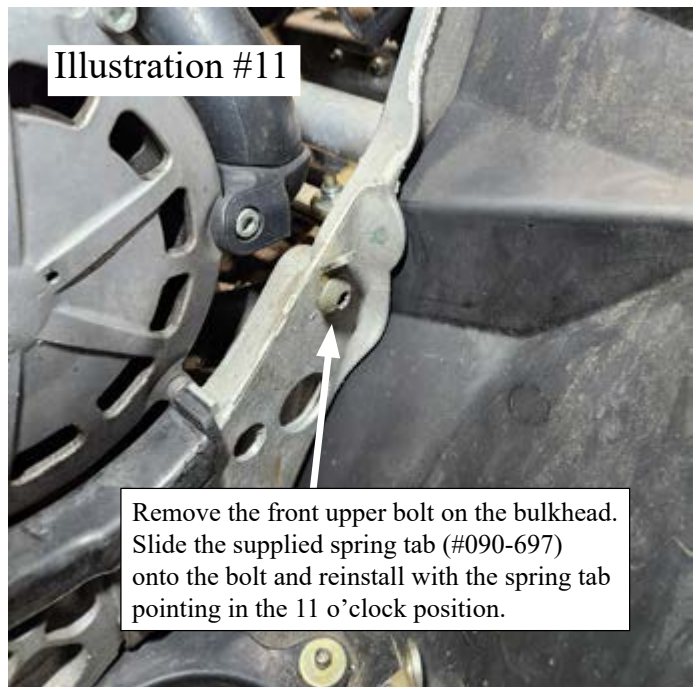
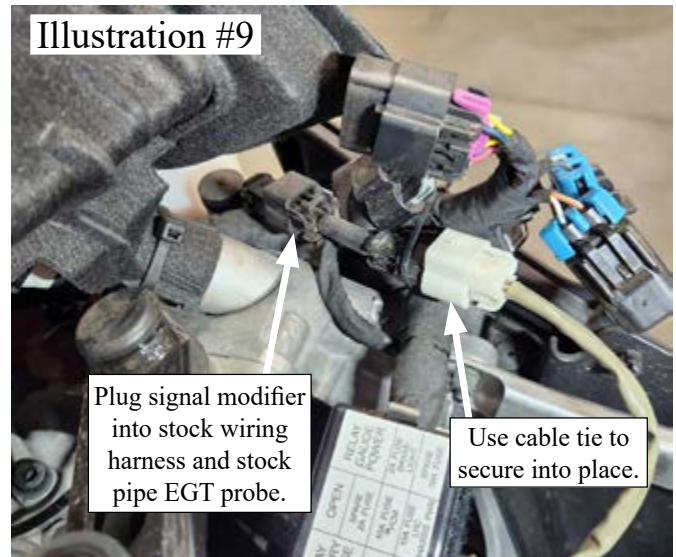
24. Place the cooker on top of the mount plate with the cooker latch facing outward for easy cooker access. You will see 4 small spring alignment tabs on the SLP mount plate. Pull the provided cooker mount springs (#090-49) into place so hook end of spring rests in between teeth of alignment tabs and over both the cooker base and the silencer mounting plate (see Illustration #14).

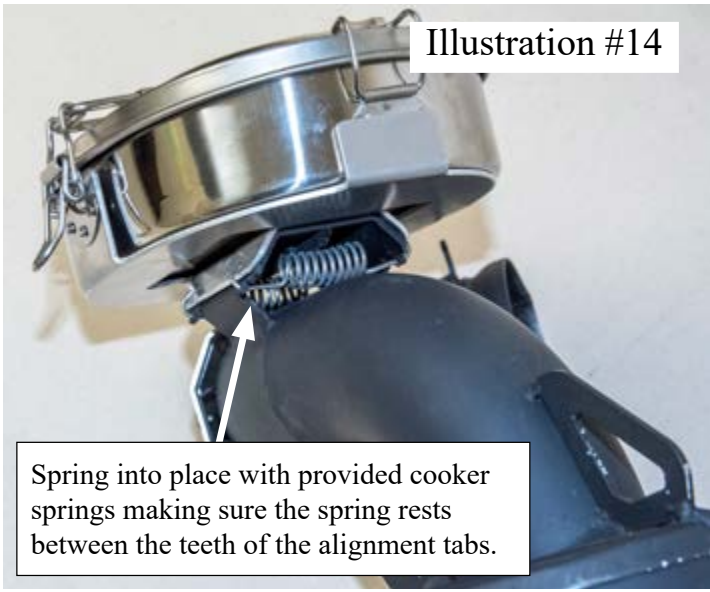
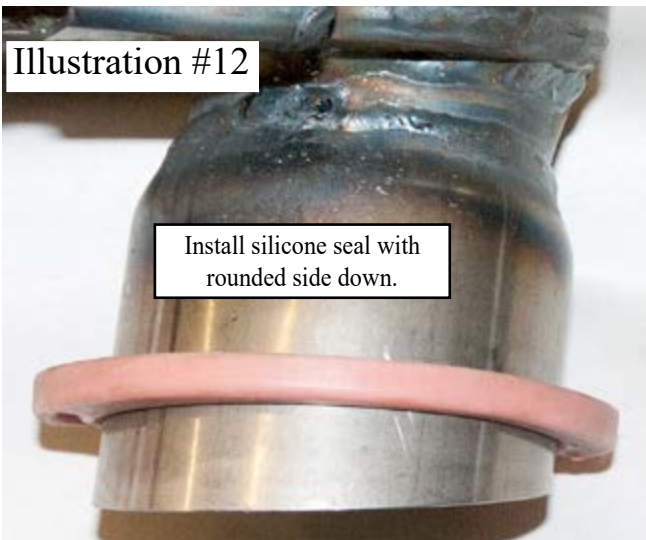


25. Check the clearance between the side panel and the exhaust silencer. Due to chassis variation, some sleds will need the foam removed from the top inside of right hand side panel and install provided heat tape and others will not (see illustration #15).

26. Reinstall hood, side panels, and plug in head light wiring harness.

**Axys Model NOTE:** Check pipe clearance between the pipe and the hood where the lower right hand (if sitting on the snowmobile) hood vent standoff is located. Trim standoff if necessary. Reapply small stock heat barrier mat to the stand-off. If needed, a small dab of Permatex Ultra-Black Silicone can be used to adhere stock heat barrier mat to the hood vent stand-off.





### **Spring Tension Adjustment:**

Spring loop adjustment is suggested for proper spring tension to prevent leakage and wear (low tension), Allow adequate flex (proper tension) and prevent spring breakage (excessive tension). When system is installed, the spring can be inspected for proper tension. The winding spacing at the center of the spring will indicate tension. When proper, the two center windings will have .040" to .050" clearance between them. This is easily tested with a feeler gage. If tension is incorrect, the loop on the pipe or silencer can be bent in the direction needed to increase or decrease tension. Attach a vise grip firmly to the loop and bend.

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### **Caring for your ceramic coated pipes and/or silencer:**

Ceramic Coating is applied to your exhaust system to provide a thermal barrier for more consistent performance. It is a coating which requires little maintenance to keep your pipes and/or silencer looking like new.

Upon completion of new installation, gently wipe the ceramic coated parts of the exhaust system down with water and a mild detergent. This will prevent oils and grease (usually in the form of fingerprints) from burning on and staining the exhaust during first initial startup.

To maintain your ceramic coated system, wash it with soap and water periodically (especially necessary after trailering it to and from your riding area on roads that have been treated with salt and other ice removing chemicals). Salt and other ice removing chemicals will attack and eat away at the ceramic coating. This will result in rust coming through the coating. Typically you will notice this rusting after your snowmobile has set for a period of time without the exhaust system being brought up to running temperature.

### **IMPORTANT:**

**When transporting snowmobile in an open environment (ie. open trailer or on a sled deck) we highly recommend using a cover. This will help keep road salt and other ice removing chemicals off the pipe as it attacks and eats away the coating.**

### **FUEL RECOMMENDATION:**

**It is recommended to use 91 octane fuel with this exhaust system. Please check to ensure that you have selected the proper mode on your gauge for the fuel you are using (ethanol or non-ethanol).**

### **SPARK PLUG RECOMMENDATION:**

**NGK BPR9ES or BPR9EIX**

## Clutching for 2019-25 Polaris 850 Axys/Matryx-Rush, XCR, Switchback, Switchback Assault, VR1, and Indy with SLP Single Pipe Kit

**Important:** The following clutching information has been thoroughly tested and is highly recommended for proper performance and reliability. Primary weights, drive spring, driven spring and helix must be changed according to the chart if applicable for your elevation. Running any combination other than recommended may cause poor, inconsistent performance.

Altitude (feet)	Drive Clutch		Driven Clutch	
	Spring	Clutch Weights	Spring	Helix
<b>0-3000'</b>	TBA	TBA	TBA	TBA
<b>3-6000'</b>	TBA	TBA	TBA	TBA
<b>6-8000'</b>	SLP Blue / Pink 140/340 #40-76	SLP Part# 40-150 (60.7g) 4 Set Screws 1 Lock Set	Red/Black 140/240 SLP #50-6	58-44.36 Stock
<b>8-10,000'</b>	SLP Blue / Pink 140/340 #40-76	SLP Part# 40-150 (60.7g) 3 Set Screws 1 Lock Set	Black/Purple 160/240 SLP #50-55	58-44.36 Stock
<b>10,000'-12,000'</b>	SLP Blue / Pink 140/340 #40-76	SLP# 40-154 (57g) 2 Set Screws 1 Lock Set	Black / Purple 160/240 SLP #50-55	58-44.36 Stock