"Setting the World's Performance Standards"

SLP Single Pipe Set for 2004 Arctic Cat ZR 900

P.N. 09-904CP

Kit Contents:

2 1/4" Flat Washer	2 Large Head Rivets
2 1/4" Nylock Nuts	2 Rivet Washers
1 Stem Vibro Support	1 Medium Sping
1 pc 30" Reflective Heat Tape	2 Spring Tabs

Read instructions carefully and completely before attempting installation.

1- Remove stock pipe, silencer and Y-pipe. (Retain stock mounting hardware for pipe installation.)
NOTE: This pipe will use the stock Y-pipe.

2- The diffuser ring in the end of the Y-pipe will need to be removed. Grind the 4 small welds at the exit end of the Y-pipe and use a hacksaw blade to cut a horizontal line in the ring so it can be removed (see illustration #1)**.** Reinstall the stock Y-pipe.

3- Remove stock silencer bracket from the bulkhead located above brake assembly (this bracket will not be used in installation).

4- Measure from the rear edge of the silencer outlet hole back 4 3/8" and 1/2" out from the belly pan brake guard. Mark this location and drill a 3/16" hole. Rivet one sping tab provided into place in the 4 o'clock position (see Illustration #2).

5- Install the other spring tab provided in the outside corner of the concave area in front of the silencer outlet hole in the 2 o'clock position (see Illustration #2).

6- Remove the stock vibro support from the silencer support bracket located in front of the brake assembly. Install SLP vibro support into the large hole in the support bracket secure with the 1/4" flat washer, 5/16" flat washer and 1/4" nylock nut.
NOTE: The 1/4" flat washer will center the vibro-insulator on the support bracket (see Illustration #3).

7- Set the SLP single pipe into place. Looking under the pipe, locate the areas around the mag shock tower that are closest to the pipe and silencer. Remove the pipe and cover the shock tower with reflective heat tape in those areas closest to the pipe and silencer.

8- Install SLP single pipe using stock gaskets and springs.

Note: Check tightness of pipe clamps approximately every 100 miles for the first 300 miles then periodically after that.

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 judged 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.

Air Box Recommendation: SLP recommends the use of an SLP High Flow Outside Draw Airbox Conversion Kit. This effectively transforms your stock intake and system will allow more cold air to reach the engine which translates into an increase in horsepower. This system also is less likely to plug when riding in deep snow.

Spark Plug Recommendation: BR9EYA

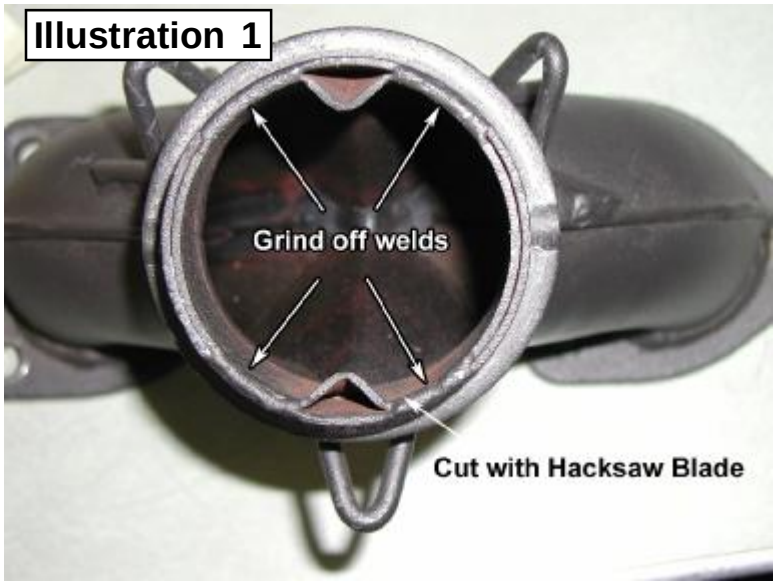
Illustration 1
Grind off welds
Cut with Hacksaw Blade

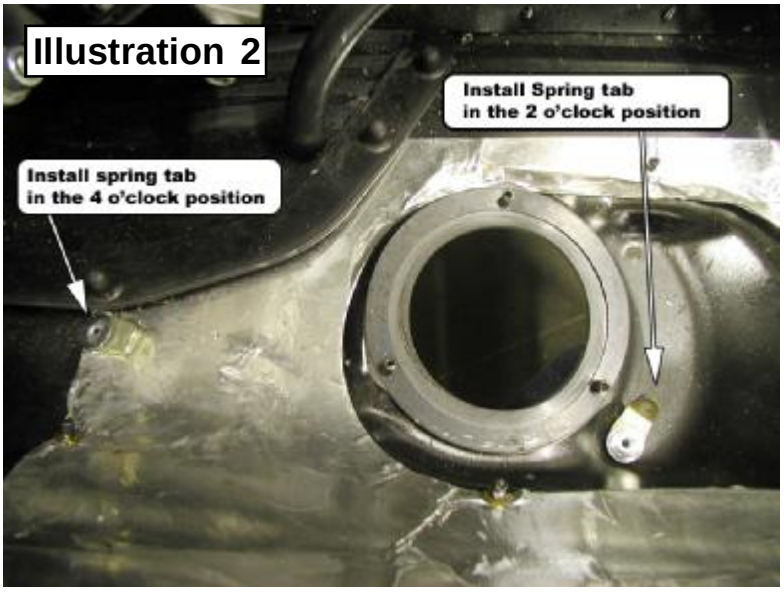
Illustration 2
Install Spring tab
in the 2 o'clock position
Install spring tab
in the 4 o'clock position


Illustration 3

FUEL REQUIREMENT: Minimum 91 Octane fuel

Important! Fuels containing ethanol or alcohol based fuel compounds will require larger main jets, usually 2 sizes larger than the SLP jetting chart. Jet Needle must be raised one "E" clip position.

Carburetor Tuning Note: Carb tuning specifications included in this section are a base line and should be adjusted as needed for your atmosphere. SLP recommends that you monitor piston wash to verify jetting. Exhaust gas temperature guages can also be used as a tuning aid, but due to differences in guages, probes, probe position as well as many other engine variables you must first establish a relationship between piston wash and exhaust gas temperature.

Jetting for 2004 Arctic Cat 900 ZR w/SLP Single Pipe and Stock Air Box

	Temperature			
	-40 to -20°F (-40 to -29°C)	-20 to 0°F (-29 to -18°C)	0 to 20°F (-18 to -7°C)	20 to 40°F (-7 to 4°C)
Altitude	PTO/MAG	PTO/MAG	PTO/MAG	PTO/MAG
0' (0m)	480/490	470/480	460/470	450/460
2000' (610m)	450/460	440/450	430/440	420/430
4000' (1219m)	430/440	420/430	410/420	400/410
6000' (1829m)	410/420	400/410	390/400	380/390
8000' (2438m)	390/400	380/390	370/380	360/370
10,000' (3048m)	380/390	370/380	360/370	350/360
+12,000' (+3658m)	360/370	350/360	340/350	330/340

Note: If shelf is removed from airbox or if using an SLP Air Intake Kit, increase main jet one size from chart

Altitude	Pilot Screw	Pilot Jet	Needle Jet	Jet Needle
0-3000' (0-915m)	1 ½ Turns	45	Fixed	9DFH9-59-4
3-5000' (915-1524m)	2 ½ Turns	45	Fixed	9DFH9-59-4
5-9000' (1524-2743m)	2 ½ Turns	50	Fixed	9DFH9-59-3
+9000' (+2743m)	2 ½ Turns	50	Fixed	9DFH9-59-2

Arctic Cat 900 Mountain Cat with SLP Single Pipe and SLP Air Box using BoonDocker™ Performance Control Box

Important Note: The following information is given as a guideline only. The fuel map listed was attained using an Arctic Cat 900 Mountain Cat with SLP Single Pipe and SLP air box. Fuel used was premium 91 octane non oxygenated.

SLP recommends that you start at a richer setting than what is listed below and lean down as needed for best performance using plug color and piston wash as a guideline. Exhaust temperature gauges can also be used as a tuning aid, but due to differences in gauges, probes, probe position as well as many other engine variables you must first establish a relationship between plug color / piston wash and exhaust gas temperature.

Fuel: Minimum 91 octane pump fuel. Fuels containing ethanol or oxygen carrying additives will require more fuel than non oxygen carrying fuels.

Fuel Map for Arctic Cat 900 Mountain Cat

RPM	Low	Mid	High	Trim
3000	03	00	00	00
5000	00	-10	-13	-03
6700	00	-09	-16	02
7800	00	15	23	01

Clutching for 2004 Arctic Cat 900 ZR w/SLP Single Pipe Using 6 Tower Drive Clutch (6 bolts in clutch cap) and Stock Secondary Clutch

ALTITUDE		DRIVE		DRIVEN	
		Spring	Cam Arms	Torque Bracket	Spring
METERS (FEET)	0-900 (0-3000)	Arctic Cat Purple #0646-155	#40-97* 74 g 3 gram rivet in outer hole 2 gram rivet in inner hole	50/36 0648-694	Red/White 0648-693
	9-1800 (3-6000)	Arctic Cat Purple #0646-155	SLP MTX #40-97 74 g 3 gram rivet in outer hole	50/36 0648-694	Red/White 0648-693
	18-2700 (6-9000)	SLP Black/Silver 40-66	Arctic Cat 75 gram 0746-629	50/36 0648-694	Red/White 0648-693
	27-3700 (9-12000)	SLP Black/Silver 40-66	Arctic Cat 73 gram 0746-716	50/36 0648-694	Red/White 0648-693

* Clutch spyder must be reshimmed for proper belt to sheave clearance (.020" belt to sheeve clearance).

Running RPM 7600-7900

Caring for your ceramic coated pipes and/or silencer:

Ceramic Coating is an aluminum matrix 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, wipe the ceramic coated parts of the exhaust system down with brake cleaner. 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.

Periodically polish your ceramic coated pipes and/or silencer after each washing with an aluminum polish such as Mothers, Maas or Blue Magic aluminum polish that can be found at any automotive parts store. Do not use any acidic cleaners! For stubborn stains use fine 000 steel wool, then use a soft cloth with polish. Failure to maintain your ceramic coated pipes or silencer can result in damage to the ceramic coating for which there is no warranty coverage. A little care will insure that your pipes and/or silencer will continue looking like new for many years.

Note: In areas of the ceramic coated system where skin temperatures exceed 1300 degrees F, it is normal for the coating to turn dull gray. These areas should also be washed and polished periodically.