



“Setting the World’s
Performance Standards”

743 E. Iona Road, Idaho Falls, ID 83401, (208) 529-0244 Fax (208) 529-9000

ATTENTION DEALER

PLEASE PROVIDE YOUR CUSTOMER WITH
THE INSTALLATION AND INSTRUCTION
DATA THAT IS SUPPLIED IN THIS PACKET
FOR THIS PRODUCT.

Before you begin, please read the following:

The information contained in the instruction sheet supplied with this product is intended to provide complete setup and tuning specifications needed to have successful installation. It also acts as a reference guide for future tuning for altitude and temperature differentials. Varying from these standards can reduce performance and/or dependability.

If you are experiencing difficulty after completely following the setup instructions, SLP technical assistance is available online at the SLP website:

www.startinglineproducts.com
or by phone at 208-524-3397

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Stage 4 Kit for Polaris 800:

2015-18 Rush, Switchback,
2016-18 RMK, Pro-RMK, Switchback Assault & RMK Assault

Congratulations! You have just purchased one of the best modifications available for your snowmobile. Please follow the recommendations below for the best results from this modification.

Customer Name and ID # _____

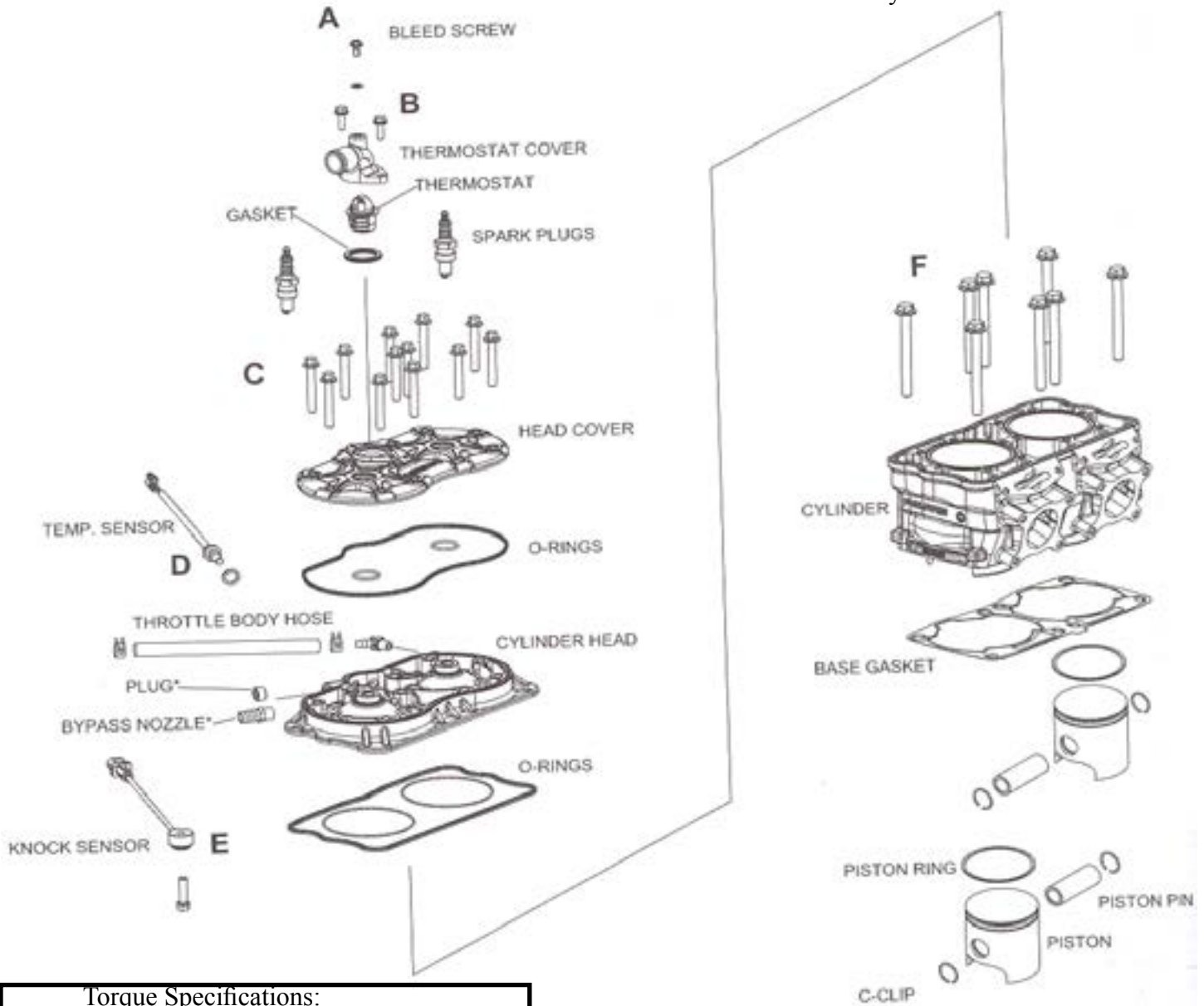
Porting Serial # _____

Parts Required for Stage 4 Kit

- SLP Single Pipe (Part #09-866 for 2015-17 models, Part# 09-801 for 2018 models)
- SLP Performance Edition Porting (Labor Operation #15-8030)
- SLP Metal Exhaust Gasket (Part #090-985)
- SLP Power Dome™ Billet Heads
 - 2015-17 models (Part # 12-419) for 0-6000’, (Part #12-420) for 6000’+
 - 2018 models (Part # 12-426) for 0-6000’, (Part #12-427) for 6000’+
- SLP Clutch Kit (Depending on Elevation)
- SLP Torque Arm
 - 2015-17 All models, 2018 Rush and Switchback (Part #23-69 non-electric start, #23-71 electric start)
 - 2018 RMK and SKS (Part #23-72 for non-electric start and electric start models)
- SLP Internal Y-Pipe Coating (Labor Operation #15-8011)
- Bully Dog GT Module (Part #70-514) with SLP Stage 4 mapping. This is a flash programmer, map install must be performed before use. (See BullyDog/SLP instruction)

Important Note: If the Bully Dog GT Module is not purchased directly from SLP it must be sent to SLP for mapping and will require an additional charge. Please inquire for more information.

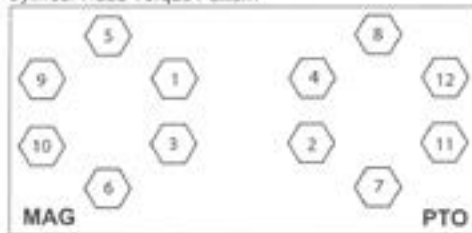
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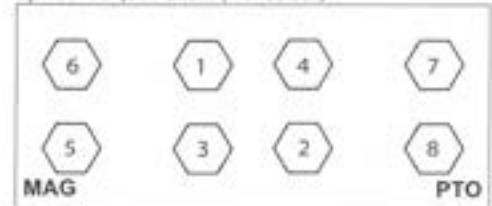
Torque Specifications:

- A = 70 In.Lbs. (8 Nm)
- B = 9 Ft. Lbs. (12 Nm) - Apply Loctite 242
- C = 25 Ft. Lbs. (34 Nm) - Apply Loctite 242
- D = 18 Ft. Lbs. (24 Nm) - Apply Pipe Sealant
- E = 168 In. Lbs. (19 Nm) - Clean and Dry
- F = 42 Ft. Lbs. (57 Nm)

Cylinder Head Torque Pattern



Cylinder Torque Pattern (Monoblock)



Disassembly / assembly Process - 800 cfi cylinder Head / Cylinder / Pistons

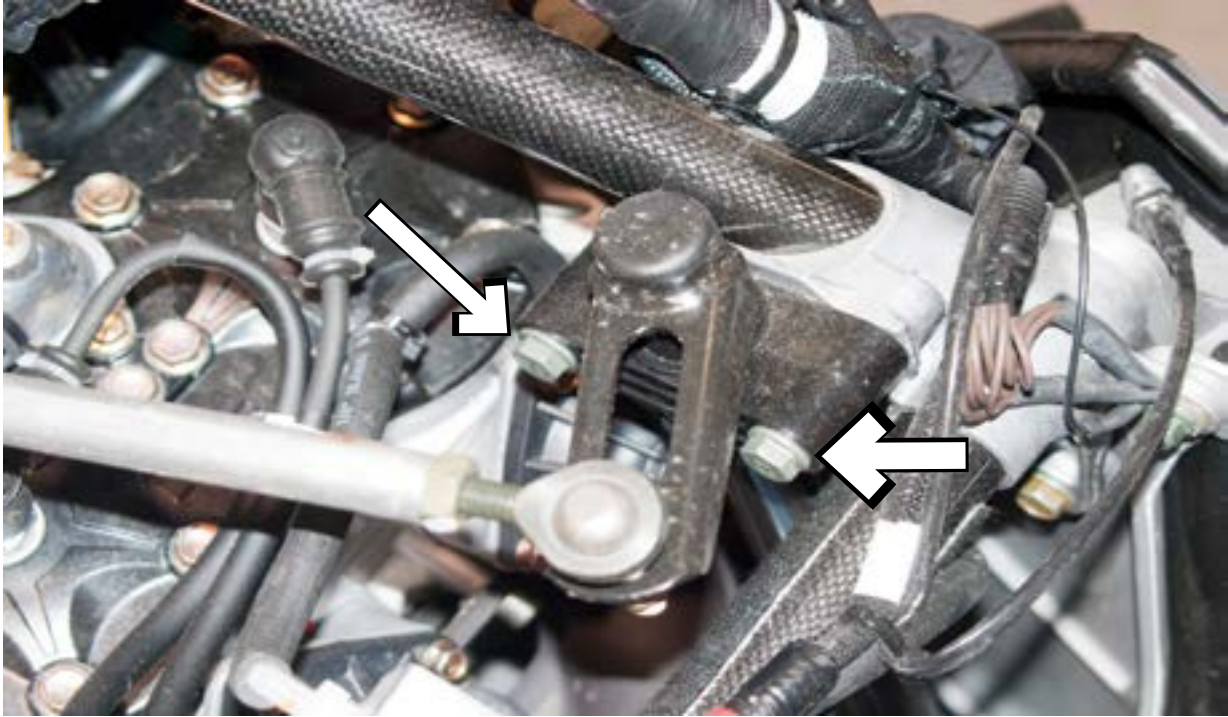
1. Remove the coolant from the engine using a syphon, wet/dry vac, or drain pan.
Note: SLP LiquidVac part #20-148 works extremely well for extracting coolant.
2. Remove the air box, exhaust pipe and resonator from the engine compartment.
3. Remove the high tension wires and spark plugs from the cylinder head.
4. Remove the thermostat housing outlet cooling hose from the housing.
5. Loosen all, then remove all head cover fasteners. Clean the fastener threads to remove any thread locking residue.
6. Inspect the head cover and cylinder head o-rings and replace if necessary.
7. Measure cylinder flatness.
8. If only the cylinder is going to be removed, remove the fuel rail and fuel injectors from cylinder. See “CFI Fuel Rail/Injector(s) Removal/Installation” on page 4.24 in the Polaris Service Manual.
9. Remove upper steering bushing from steering assembly (see illustration #1). Then remove exhaust valve assemblies.
10. Loosen all, then remove the cylinder bolts. Clean the bolt threads to remove any thread locking residue.
11. Carefully pull the cylinder upwards taking care not to drop the pistons and rods abruptly against the crankcase.
12. Remove the cylinder base gasket. Use a gasket scraper to clean the gasket residue from the crankcase and cylinder base.
13. Inspect the cylinder walls. Nicasil cylinders can only be lightly honed. Damage that cannot be removed with a light hone requires cylinder replacement or re-chromed.
14. Inspect the crankcase and cylinder mating surface for warping.
15. The assembly process is the reverse of disassembly.
16. Always use new gaskets and o-rings during assembly. Liberally coat the inside of each cylinder bore and the outside of each piston with Redline Full Synthetic Racing Oil.
17. When installing a piston into a cylinder, verify each piston ring opening is located at each piston ring locating pin. Squeeze the top ring, then carefully slide the cylinder over the compressed ring. Do the same with the bottom ring.

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18. Follow the torque specification and torque sequences located on page 2 when tightening fasteners.
Note: Do not over torque head knock sensor.

19. Install SLP Pipe Set (Part# 09-866 or 09-801) per pipe instructions, EXCEPT the EGT resistor (Part# 090-32) will not be installed.

Illustration #1, Remove upper support bushing.



Warning: When riding at Elevations below 3000', it is required to use Lucas brand octane boost mixed with 91 octane pump fuel.

Clutching for 2016-18 Polaris 800 Axys

Pro RMK, RMK Assault & SKS with SLP Stage 4 Kit

Important: The following clutching information has been thoroughly tested and is highly recommended for proper performance and reliability. Primary weights, drive spring and driven spring 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			Stock TEAM TSS-04 Driven Clutch		
	Clutch Spring	Shift Weight		Clutch Spring	Driven Helix	
		SLP MTX™	SLP Magnum Force™		Good	Better
0-4000' (0-900m)	SLP Blue / Yellow SLP# 40-71	SLP# 40-83 (68g) 3g rivet inner hole 3g rivet outer hole	SLP# 40-150 (60.7g) 6 Set Screws 1 Lock Set Total: 68.3	Black (Stock)	40 Straight (Stock)	56-40ER.36 SLP# 50-119
4-6000' (900-1525m)	SLP Blue / Pink SLP# 40-76	SLP# 40-83 (68g) 3g rivet inner hole 1g rivet outer hole	SLP# 40-150 (60.7g) 5 Set Screws 1 Lock Set Total: 67.3	Black (Stock)	40 Straight (Stock)	56-40ER.36 SLP# 50-119
6-8000' (1525-2743m)	SLP Blue / Pink SLP# 40-76	SLP# 40-83 (68g) 2g inner hole 3g rivet outer hole	SLP# 40-150 (60.7g) 4 Set Screws 1 Lock Set Total: 66.1g	Black (Stock)	40 Straight (Stock)	56-40ER.36 SLP# 50-119
8-10,000' (2743-3048m)	SLP Blue / Pink SLP# 40-76	SLP# 40-83 (68g) 1g inner hole 3g outer hole	SLP# 40-150 (60.7g) 2 Set Screws 1 Lock Set Total: 63.7g	TEAM Ind. Black / Purple SLP #50-55	40 Straight (Stock)	56-40ER.36 SLP# 50-119
10,000' -12,000' (3048-3658m)	SLP Blue / Pink SLP# 40-76	SLP# 40-83 (68g) inner hole empty 3g outer hole	SLP# 40-150 (60.7g) 1 Set Screw 1 Lock Set Total: 62.5g	TEAM Ind. Gold / Black SLP #50-141	40 Straight (Stock)	56-40ER.36 SLP# 50-119

Note: For 3" tracks it is recommended to run 1g less in the outer hole.

Running RPM 8300-8450

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Clutching for 2015-18 Polaris 800 Axys Switchback Pro S & Pro R with SLP Stage 4 Kit

Important: The following clutching information has been thoroughly tested and is highly recommended for proper performance and reliability. Primary weights, drive spring and driven spring 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			Stock TEAM TSS-04 Driven Clutch	
	Clutch Spring	Shift Weight		Clutch Spring	Driven Helix
		SLP MTX™	SLP Magnum Force™		
0-3000' (0-900m)	SLP Green / Pink SLP# 40-77	SLP# 40-84 (71g) 3g rivet inner hole 2g rivet outer hole	SLP 40-151 (65g) 4 Set Screws 1 Lock Set Total: 68.4g	Black (Stock)	58/44.36 (Stock)
3-6000' (900 1525m)	SLP Green / Pink SLP# 40-77	SLP# 40-84 (68g) 2g rivet inner hole 1g rivet outer hole	SLP# 40-151 (65g) 1 Set Screws 1 Lock Set Total: 66.8g	TEAM Ind. Black/Green SLP Part #50-47	58/44.36 (Stock)
6-8000' (1525-2743m)	SLP Blue / Pink SLP# 40-76	SLP# 40-84 (68g) 1g rivet inner hole 1g rivet outer hole	SLP# 40-150 (61g) 2 Set Screws 1 Lock Set Total: 64g	TEAM Ind. Black/Purple SLP# 50-55	58/44.36 (Stock)

Running RPM 8350-8500

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Oil Recommendation: For best performance and dependability on the 800 be sure to run very high quality oil like Red Line full synthetic Racing oil which is the first choice. The second choice would be the new Polaris “VES Gold Plus” oil that we understand is good. No other oils are recommended.

Octane: Minimum 91 octane pump fuel.

Premium/Ethanol Gauge Setting: Make sure the gauge is set properly for ethanol or non-ethanol fuel. For instructions see the inside of the left side panel.

General Fuel Note: Due to inconsistencies in quality of fuel available today the following are a few tips to prevent issues that may arise due to fuel.

-Make sure the gauge is set properly for ethanol or non-ethanol fuel. For instructions see the inside of the left side panel.

- A good practice and cheap insurance is to add a 1 oz of Lucas Octane Booster to every gallon of fuel. This can be found at most automotive stores.

Other Recommended Parts:

- SLP High Performance Ignition Wire Kit (#37-20)
- Delrin Washer (#50-57)
- Hot Air Elimination Kits (#32-634 Left Side, #32-631 Right Side)