



## 2024 Indy Matryx Cross Country Factory 600 ICE Racing settings

All part numbers listed are Polaris part numbers unless otherwise noted.

**Fuel:** Use non-ethanol 91 octane premium pump gas, select 91-NON-fuel curve on vehicles digital dash display

**Oil Injection:** Use Polaris VES-Extreme synthetic 2-cycle oil (#2883733 -quart) or (#2883732 -gallon)

**Clutching Spec:** 10-64 weights (stock), 165/310 primary spring (#7045965), 160/240 secondary spring (stock), 44-degree straight helix (custom order from Venom) and #3212338 belt (stock). Target RPM is 8400 to 8500

**Optional Clutching parts:** 150/290 primary spring (stock), 155/222 secondary spring (#7043063)

\*Order the below clutch Helix from Venom Products, [www.venomproducts.com](http://www.venomproducts.com)

**The Secondary clutch requires "Big Roller" Helix's.**

Straight 44 Non-reverse/Straight 46 Non-reverse Twin Trax Helix

*\*A non-Reverse Helix is highly recommended for ICE Racing*

**Gearing:** 22 tooth top gear (Stock), 41 tooth bottom gear (Stock)

**At some racetracks taller gearing will deliver improved performance/speed.** Use 21 tooth top gear (#3221097) with 38 tooth bottom gear (#05-776-Wahl Brothers Racing Part #) and 68P Chain (#3221112)

**Controls:** replace the stock kill switch with the push button below  
1-4010311 – push button kill switch

**Tracks:** Camso 136" Cobra (#5413655\*Stock) or Camso 136 Ripsaw1 (#2839969)

**Traction Products:** Contact Stud Boy Traction products at [www.studboytraction.com](http://www.studboytraction.com) . (176 stud's minimum are recommended for ice racing)

**Sway Bar:** .562" sway bar (#0617006 \*order from Race Dept.)

**Brakes:** Custom Heated angled brake lever for stealth 88 master cylinder (#0818040 \*Order from Race Dept)



**Front torque arm:** Drill a new hole in the limiter straps to shorten the front arm travel length. Measuring from the top of the bump stop on the rail to the bottom of the torque arm the distance should be 1.625"

**RTA tunnel mount enclosure:** Install enclosure to inside of tunnel at RTA mount. Refer to separate tech tip on this part. Part must be ordered directly from Polaris Race Dept. (#0818039 – Tunnel enclosure kit)

**Suspension Springs:**

**IFS:** 125lbs/in coil over spring 10" x 2.25" I.D. (7045096-458)

**Front track:** 125lb/in coil over spring 6" x 2.25" I.D. (#00818033 \*order from Race Dept.)

\*Optional softer FT spring: 80lb/in coil over spring 6" x 2.25" I.D. (#0617003 \*order from Race Dept.)

**Rear track:** 18lb/degree torsion springs at 95-degree preload. (Stock)

\*Optional softer rear torsion springs are available:

#7046150-329 – LH 16lb@87 degree and #7046151-329 – RH 16lb@87 degree

**Suspension spring preloads:**

**IFS Springs:** .500" preload on IFS springs

**FT Spring:** .125" to .250" preload on front track spring

**RT Springs:** Medium/Medium on torsion spring preload blocks

**Rear coupling blocks:** High position

**Skis:** Order skis from USI at [www.usi-skis.com](http://www.usi-skis.com)

USI X2 triple threat stage 1 ski (#X2)

USI 301 high performance mount shoe (#po1-hpb)

or

Order skis from C&A Pro at [www.caproskis.net](http://www.caproskis.net)

XPT ski (#0420) (\*XPT skis are stock)

Mounting kit (#76000224)

**Venting:** Permitted Cross Country Factory 600 Venting: Additional venting is allowed on the 2024 Indy Cross Country sled. You must follow the Polaris Racing templates/directions exactly! No deviations will be allowed. To download the venting templates and directions visit the Polaris Snowmobile Racing website at <https://snowmobiles.polaris.com/en-us/team-polaris/racer-resources/>. Go to the **Cross-Country** section.



**Data Acquisition:** Order SnoPro Kompact from Precision Auto Research ([www.precisionautoresearch.com](http://www.precisionautoresearch.com))

**Rules:** for the rules pertaining to this class go to the International Snowmobile Racing website, [www.isrracing.org](http://www.isrracing.org)

The suspension settings listed above are the starting point. Adjust suspension calibrations to course/ice conditions to maximize the vehicles handling.

The Polaris Race Dept. has service manuals available for the MY24 Cross Country sled (#9941198). Contact Scott Wilczek at [Scott.Wilczek@polaris.com](mailto:Scott.Wilczek@polaris.com) to order.

To order any of the Polaris Parts listed on this sheet contact Scott Wilczek at the Polaris Race Dept. 715-355-3008 or [Scott.Wilczek@polaris.com](mailto:Scott.Wilczek@polaris.com)

For any race setup questions contact Ben Hayes at the Polaris Race Dept. 715-355-5157 or [Ben.hayes@polaris.com](mailto:Ben.hayes@polaris.com)



Indy Cross Country 600 **ICE IFS** shock settings

Shock part number: 7046144/7046145

Oil side spacer: 2.100" (must be rebound adjustable shaft compatible! Available from Polaris Race Dept #0818042- shock internal spacer 2.1")

Piston: Grey 6 port, .052" bleed hole (drill out stock piston bleed to .052")

IFP height: 2.0"

Nitrogen PSI: **200**

Jounce bumper: None, \*Remove jounce

Shock Extended length: 15.200"

Compression clickers: Low speed: 6 clicks out from stiff, High speed: 5 clicks out from stiff

Rebound clicker: 8 out from slow

**Compression**

1.550 x 8

1.550 x 8

.900 x 12

1.450 x 8

1.300 x 8

1.200 x 10

1.100 x 10

.900 x 8

.800 x 8

.700 x 15

1.500 x .120 plate

**Rebound**

1.300 x 12

1.200 x 10

1.000 x 10

.700 x 8

.600 x 15

.750 x .060 (x3)washer

torque shim stack nut to 15ft/lbs.



Indy Cross Country 600 **ICE Front Track** shock settings

Shock part number: 7046014

Oil side spacer: 2.0"

Piston: Grey 6 port, .073" bleed hole

IFP height: 1.750"

Nitrogen PSI: **150**

Jounce bumper: None, \*Remove jounce and plastic scraper

Compression clickers: Low speed: 8 clicks out from stiff, High speed: 7 clicks out from stiff

**Compression**

1.550 x 8  
1.000 x 8  
1.550 x 8  
1.200 x 8  
1.450 x 8  
1.200 x 8  
1.000 x 8  
.900 x 8  
.800 x 8  
.600 x 15  
1.000 x 15  
1.500 x .125 plate

**Rebound**

1.300 x 8  
.700 x 8  
1.100 x 12  
.900 x 10  
.700 x 8  
.600 x 15  
.750 x .060 (x3) washer  
  
torque shim stack nut to 15ft/lbs.



Indy Cross Country 600 **ICE Rear Track** shock settings

Shock part number: 7046147

Oil side spacer: 0

Piston: Grey 6 port, .042" bleed hole (Drill out stock piston bleed to .042")

IFP height: 2.0"

Nitrogen PSI: 200

Shock Extended length: 16.550"

\*Replace stock shaft with (#0818021) custom short shaft (\*must order from Polaris Race Dept.)

Compression clickers: Low speed: 6 clicks out from stiff, High speed: 5 clicks out from stiff

#### **Compression**

1.550 x 10(x6)

1.500 x 8

1.300 x 8

1.200 x 6

.900 x 6

.700 x 8

.600 x 15

.600 x 15

1.500 x .120 plate

#### **Rebound**

1.300 x 10

.900 x 6

1.100 x 8


.900 x 10

.700 x 10

.600 x 15

.750 x .060 washer

torque shim stack nut to 15ft/lbs.

<b>Details</b>	Date														
	Location														
	Driver														
	Sled														
	Class														
	<b>Practice</b>			<b>Heat 1</b>			<b>Heat 2</b>			<b>Final</b>					
	Ambient temp F°														
	Density Alt														
	Track condition														
<b>Engine</b>	ECU Curve														
	Gauge setting			PREM	REG	PREM	REG	PREM	REG	PREM	REG				
	Fuel Blend														
	Speed MPH														
	Spark plugs & Gap														
	EGT temp F°														
<b>Clutching</b>	Drive Belt														
	Belt length/Width			/			/			/					
	Flyweight style														
	Total flyweight														
	Added weight														
	Spider shims														
	Engage/Peak RPM			/			/			/					
	Primary spring														
	Secondary spring														
	Helix														
	Top/Bottom gear			/			/			/					
<b>Suspension</b>	Skis/Toe out			/ "			/ "			/ "			/ "		
	Carbides														
	SwayBar														
	IFS shock valve #														
	Clicker settings			H-	L-	R-	H-	L-	R-	H-	L-	R-	H-	L-	R-
	Spring rate														
	Preload														
	Oil side spacers														
	FT shock valve #														
	Clicker settings			H-	L-		H-	L-		H-	L-		H-	L-	
	Spring rate														
	Preload														
	FT arm height														
	RT shock valve #														
	Clicker settings			H-	L-	R-	H-	L-	R-	H-	L-	R-	H-	L-	R-
	Spring rate														
	Preload			/			/			/			/		
	Oil side spacers														
	Coupling blocks														
	Stud style														
	Stud count														
	Stud pattern														

## Comments

### Practice Comments:

### Heat 1 Comments:

### Heat 2 Comments:

## Final Comments: