



2023 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 (#7041988), 160/240 secondary spring (stock), 44-degree straight helix (custom order from Venom) and #3212338 belt (stock). Target RPM is 8500 to 8600

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

*Order the below clutch Helix from Venom Products, www.venomproducts.com

The Secondary clutch requires “Big Roller” Helix’s.

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

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

At some racetracks taller gearing will be beneficial. 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 . (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)

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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. (Stock)

Front track: 120lb/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: 13lbs/degree torsion springs at 80-degree preload. (Stock)

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

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.caproksis.net

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

Mounting kit (#76000224)

Venting: Permitted Cross Country Factory 600 Venting: Additional venting is allowed on the 2022 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.

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Data Acquisition: Order SnoPro Compact from Precision Auto Research
(www.precisionautoresearch.com)

Rules: for the rules pertaining to this class go to the International Snowmobile Racing website,
www.isrracing.org

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

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

For any race setup questions contact Ben Hayes at the Polaris Race Dept. 715-355-5157 or Ben.hayes@polaris.com

POLARIS RACING

Indy Cross Country 600 ICE IFS shock settings

Shock part number: 7046016/7046017

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.

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RACING

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.

POLARIS RACING

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

Shock part number: 7046015

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.



Details	Date												
	Location												
	Driver												
	Sled												
	Class												
		Practice			Heat 1			Heat 2			Final		
	Ambient temp F°												
Density Alt													
Track condition													
Engine	ECU Curve												
	Gauge setting	PREM	REG	PREM	REG	PREM	REG	PREM	REG	PREM	REG		
	Fuel Blend												
	Speed MPH												
	Spark plugs & Gap												
	EGT temp F°												
Clutching	Drive Belt												
	Belt length/Width	/			/			/			/		
	Flyweight style												
	Total flyweight												
	Added weight												
	Spider shims												
	Engage/Peak RPM	/			/			/			/		
	Primary spring												
	Secondary spring												
	Helix												
	Top/Bottom gear	/			/			/			/		
	Suspension	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-	R-	H-	L-	R-	H-	L-	R-	H-	L-	R-
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													

