2027 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 with Polaris Anti-Static fuel treatment, 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 #3212369 belt (stock). Target RPM is 8300 to 8400

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
The Non-Reverse Helix is highly recommended for ICE Racing

Gearing: 22 tooth top gear (Stock), 41 tooth bottom gear (Stock)
At some race tracks taller gearing will deliver improved performance/speed. Use 23 tooth top gear (#3221099) with 40 tooth bottom gear (#3225060).

Controls: Order the #RR-001-SGL Race Rubber from www.race-rubber.com and install over the kill switch knob

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). ****14" Carbides are now allowed***

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

Brakes: Custom heated angled brake lever for stealth 88 master cylinder (#0818067 *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 rear torsion springs are available:
#7046419-329 – LH 20lb@95 degree and #7046420-329 – RH 20lb@95 degree
#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

Spindle to Ski Spacers: The MY27 CC sled has adjustable ski width spacers. Widening the ski stance can increase corner stability on the ice. Move one of the spacers to the outside of the spindle (not both). The ISR carbide to carbide width limit is **43.5"**

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.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 2027 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)**

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

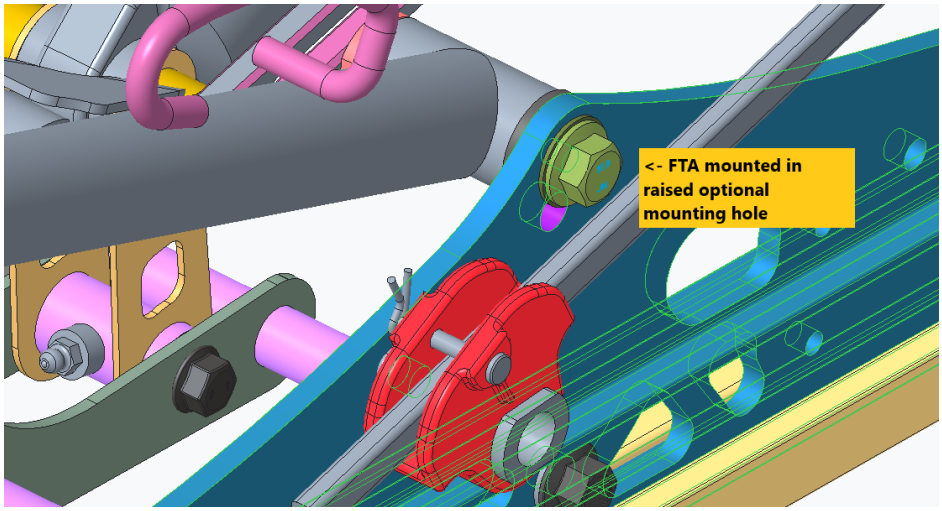
The suspension settings listed above are the starting point. Adjust suspension calibrations to course/ice conditions to maximize the vehicles handling.

The Polaris Race Dept. has service manuals available for the MY27 Cross Country sled (#9942459). Contact Scott Wilczek at 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

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

*The MY27 CC sled has a raised optional Front Torque Arm mounting hole in the rail. As seen in the below picture with the FTA installed in the raised optional mounting hole. This raised position will change how the vehicle reacts to throttle input. The vehicle will not lift the skis as much/transfer back in this setting. This raised optional position may require you to adjust the limiter strap to a longer setting to find the desired amount of ski pressure and vehicle balance.



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

Shock part number: 7046562/7046563
Oil side spacer: Total height of 2.300" (must be rebound adjustable shaft compatible! Available from Polaris Race Dept #0818042- shock internal spacer 2.1") use the stock .200" and race dept 2.100" to equal 2.300"
Piston: Gold 6 port, .052" bleed hole (drill out stock piston bleed to .052")
IFP height: 2.0"
Nitrogen PSI: **200**
Jounce bumper: Replace stock .750" long jounce bumper with # WER-2620020 - .400" long
Shock Extended length: 15.300"
Compression clickers: Low speed: 6 clicks out from stiff, High speed: 5 clicks out from stiff
Rebound clicker: 8 out from slow

Compression	**Rebound**
1.550 x 8	1.300 x 12
1.550 x 8	1.200 x 10
.900 x 12	1.000 x 10
1.450 x 8	.700 x 8
1.300 x 8	.600 x 15
1.200 x 10	.750 x .065 washer (x3)
1.100 x 10	
.900 x 8	
.800 x 8	torque shim stack nut to 15ft/lbs.
.700 x 15	
1.500 x .120 plate	

*.400" long jounce can be purchased from Walker Evans Racing (https://walkerevansracing.com/)
Part Number #WER-2620020

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

Shock part number: 7046564
Oil side spacer: 2.100” (must be rebound adjustable shaft compatible! Available from Polaris Race Dept #0818042- shock internal spacer 2.1”)
Piston: Gold 6 port, .073” bleed hole
IFP height: 1.750”
Nitrogen PSI: **150**
Jounce bumper: STK .400”
Compression clickers: Low speed: 8 clicks out from stiff, High speed: 7 clicks out from stiff
Rebound clicker: 5 out from slow

Compression	**Rebound**
1.550 x 8	1.300 x 8
1.000 x 8	.700 x 8
1.550 x 8	1.200 x 8
1.200 x 8	1.100 x 12
1.450 x 8	.900 x 10
1.200 x 8	.700 x 8
1.000 x 8	.600 x 15
.900 x 8	.750 x .065 washer (x3)
.800 x 8	
.600 x 15	
1.000 x 15	torque shim stack nut to 15ft/lbs.
1.500 x .125 plate	

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

Shock part number: 7046565
Oil side spacer: Total height of 2.600" (must be rebound adjustable shaft compatible! Available from Polaris Race Dept #0818066- shock internal spacer 2.6") ***Remove the stock .100" oil side spacer***
Piston: Gold 6 port, .042" bleed hole (Drill out stock piston bleed to .042")
IFP height: 2.0"
Nitrogen PSI: **200**
Shock Extended length: 16.550"
Compression clickers: Low speed: 6 clicks out from stiff, High speed: 5 clicks out from stiff
Rebound clicker: 1 out from slow

Compression	**Rebound**
1.550 x 10	1.300 x 10
1.550 x 12(***Ring Shim***)	1.200 x 8
1.300 x 6	1.100 x 8
1.550 x 10	.900 x 10
1.550 x 10	.700 x 10
1.500 x 8	.600 x 15
1.300 x 8	.750 x .060 washer (x2) or (x3)
1.200 x 6	
.900 x 6	torque shim stack nut to 15ft/lbs
.700 x 8	
.600 x 15	
.600 x 15	
1.500 x .125 plate	

*1.550 x 12 ***Ring shim*** can be purchased from Walker Evans Racing (https://walkerevansracing.com/)
Part Number #WER-1800060



		Practice	Heat 1	Heat 2	Final
Details	Date				
	Location				
	Driver				
	Sled				
	Class				
	Ambient temp F°				
	Density Alt				
	Track condition				
Engine	ECU Curve				
	Gauge setting	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				

Comments

Practice Comments:

Heat 1 Comments:

Heat 2 Comments:

Final Comments:

2027 Indy Matryx Cross Country 600

Relocate the chain case vent hose

The Polaris Race Dept recommends relocating the chain case vent hose as shown in the below picture. Ensure the hose is secured with two zip ties and the end of the hose is behind the lower rear section on the engine.

