



# SERVICE BULLETIN



July 2018

Subject: **High Altitude / Sea Level Specifications**

No.

**2019-2**

YEAR	MODEL
2019	All Ski-Doo

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# GENERAL INFORMATION

## Previous Model Year Vehicles

This bulletin supplies all the information required to modify current year vehicles for high altitude and/or sea level riding.

MODEL YEAR	LATEST REVISION OF BULLETIN NO.
2019	2019-2
2018	2018-5
2017	2017-2
2016	2016-5
2015	2015-5
2014	2014-4

NOTE: Throughout this entire document, shaded areas give factory settings (that could apply through different altitudes) while N/A stands for "not applicable".

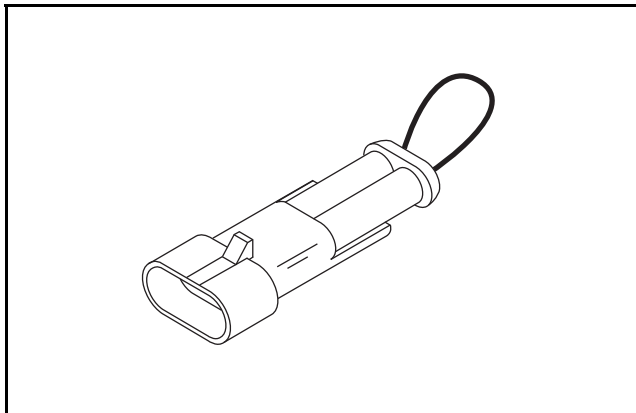
**NOTICE** The following modifications and adjustments apply for high altitude operation as well as sea level operation.

PARTS AND LABOR COST ARE NOT COVERED BY BRP LIMITED WARRANTY.

## Reverse Connector

The reverse connector (P/N 515174700) is used at 1 800 m (6,000 ft) altitude and higher for all FAN cooled models with electronic reverse device. To use Reverse Connector proceed as follows:

1. Unplug existing sea level cap from the ECM.
2. Plug-in the reverse connector.



REVERSE CONNECTOR

## Table Format

The shaded portions of the table indicate factory settings.

ALTITUDE	
Parts to be modified	Recommended Adjustment

## Sea Level Calibration Kit

When the high altitude calibration must be modified to sea level calibration on Freeride™ and Summit™ models (146" and up), the following kit may be used. This kit include all required parts to set-up the vehicle.

MODEL	PART NUMBER
Summit 600R E-TEC	
146" and 154"	860201906
Freeride and Summit 850 E-TEC	
146", 154", 165", and 175"	860201905

## Kit Description

SEA LEVEL CALIBRATION KIT (P/N 860201905)			
DESCRIPTION		PART NUMBER	QTY
Drive pulley	Ramp 990	417224326	3
	Weight	417224507	3
	Pivot 38 mm / 16,7 g	417224222	3
	Spring (Blue/Yellow)	417224015	1
	M14 Conical spring washer	250200144	1
Driven pulley	Spring (Black)	417127039	1

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<b>SEA LEVEL CALIBRATION KIT (P/N 860201906)</b>			
<b>DESCRIPTION</b>		<b>PART NUMBER</b>	<b>QTY</b>
Drive pulley	Ramp 951	417224038	3
	M14 Conical spring washer	250200144	1
Driven pulley	Spring (Black)	417127039	1

# EXPEDITION® SPORT 550F / TUNDRA™ SPORT 550F / TUNDRA LT 550F

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Red/Yellow (P/N 417 223748)	Red/Green (P/N 417 223750)	Red/Red (P/N 417 223745)	Red/Yellow (P/N 417 223748)	Red/Orange (P/N 417 223749)	Red/Green (P/N 417 223750)
Ramp	700 (P/N 417223557)		734 (P/N 417223676)			
Ramp quantity	6					
Engagement RPM ± 100	2600					
Maximum RPM ± 100	6800					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Brown (P/N 417127061)					
Spring tension Kg ± 0.7 (lb ± 1.5)	N/A					
Cam angle (degrees)	44° (P/N 417127011)					

## Carburation

**NOTICE** These adjustments are guidelines only. Specific adjustments vary with temperature, altitude and snow condition. Always observe spark plug condition for proper jetting.

		SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)	
Main jet	MAG	190	180	170	160	140	130	1
	PTO	200	190					1
Jet needle		6BFY46						2
MAG needle position		3		2				—
PTO needle position		4		2				
Slide cut-away		2.5						2
Pilot jet		35		45		55		2
MAG mixture screw		1.25						—
PTO mixture screw		1		1.25				
Valve seat		1.2						2
Needle jet		P-8 (159)				P-6 (159)		2
Float level (± 1 mm)		23.9						—
Idle RPM (± 200)		1650						—
Idle throttle valve position (± 0.1 mm)		1.6		1.8	2	2.2	2.4	—

## Main Jet Chart

		SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
-40°C (-40°F)	MAG	200	190	180	170	150	140
	PTO	210	200				
-30°C (-22°F)	MAG	195	185	175	165	145	135
	PTO	205	195				
-20°C (-4°F)	MAG	190	180	170	160	140	130
	PTO	200	190				
-10°C (14°F)	MAG	185	175	165	155	135	125
	PTO	195	185				
0°C (32°F)	MAG	180	170	160	150	130	120
	PTO	190	180				
10°C (50°F)	MAG	175	165	155	145	125	115
	PTO	185	175				
20°C (68°F)	MAG	170	160	150	140	120	110
	PTO	180	170				

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## Additional Information

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Reverse connector		(P/N 515174800)			(P/N 515174700) Connect to ECM	



# SKANDIC™ WT 550F

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Red/Yellow (P/N 417 223748)	Red/Green (P/N 417 223750)	Red/Red (P/N 417 223745)	Red/Yellow (P/N 417 223748)	Red/Orange (P/N 417 223749)	Red/Green (P/N 417 223750)
Ramp	700 (P/N 417223557)		734 (P/N 417223676)			
Ramp quantity	6					
Engagement RPM ± 100	2600					
Maximum RPM ± 100	6800					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	White2 (P/N 417127243)					
Spring tension Kg ± 0.7 (lb ± 1.5)	7.0 kgf - 6.4 kgf (15.4 lbf - 14.1 lbf)					
Cam angle (degrees)	47° - 44° (P/N 417127460)					

# Carburation

**NOTICE** These adjustments are guidelines only. Specific adjustments vary with temperature, altitude and snow condition. Always observe spark plug condition for proper jetting.

		SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)	
Main jet	MAG	190	180	170	160	150	140	1
	PTO	200						1
Jet needle		6BFY46						2
MAG needle position	3	2			1			—
PTO needle position	4							
Slide cut-away		2.0						2
Pilot jet		35	40					2
MAG mixture screw		2.5			2			—
PTO mixture screw		1						
Valve seat		1.2						2
Needle jet		P-8 (159)						2
Float level (± 1 mm)		23.9						—
Idle RPM (± 200)		1650						—
Idle throttle valve position (± 0.1 mm)		1.5	1.7	1.8	2	2.1	2.2	—

## Main Jet Chart

		SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
-40°C (-40°F)	MAG	210	200	190	180	170	160
	PTO						
-30°C (-22°F)	MAG	200	190	180	170	160	150
	PTO						
-20°C (-4°F)	MAG	190	180	170	160	150	140
	PTO						
-10°C (14°F)	MAG	180	170	160	150	140	130
	PTO						
0°C (32°F)	MAG	170	160	150	140	130	120
	PTO						
10°C (50°F)	MAG	160	150	140	130	120	110
	PTO						
20°C (68°F)	MAG	150	140	130	120	110	100
	PTO						

# MX Z™ SPORT 600

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Purple/Purple (P/N 414817900)			Pink/Purple (P/N 414754200)		
Ramp	412 (P/N 417222515)					
Calibration Screw Position	3	4	5	4	5	6
Pin	Short solid 32 mm/16,75 g (P/N 417004308)			Short no thread 32 mm/9,9 g (P/N 417004309)		
Engagement RPM $\pm$ 100	3800			3900	4100	
Maximum RPM $\pm$ 100	8100					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	42° (P/N 417127012)					

## Carburation

**NOTICE** These adjustments are guidelines only. Specific adjustments vary with temperature, altitude and snow condition. Always observe spark plug condition for proper jetting.

		SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)	
Main jet	MAG	390	370	350	330	300	280	1
	PTO							1
Jet needle		9CEY2-58						2
Needle position		2						—
Slide cut-away		2.0						2
Pilot jet		17.5						2
Mixture screw		1.5			2			—
Valve seat		1.5						2
Needle jet		P-0M						2
Float level (± 1 mm)		N/A						—
Idle RPM (± 200)		1600						—
Idle throttle valve position (± 0.1 mm)		1.5	1.6	1.7	1.8	1.9		—

## Main Jet Chart

		SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
-40°C (-40°F)	MAG	410	390	370	350	320	300
	PTO						
-30°C (-22°F)	MAG	400	380	360	340	310	290
	PTO						
-20°C (-4°F)	MAG	390	370	350	330	300	280
	PTO						
-10°C (14°F)	MAG	380	360	340	320	290	270
	PTO						
0°C (32°F)	MAG	370	350	330	310	280	260
	PTO						
10°C (50°F)	MAG	360	340	320	300	270	250
	PTO						
20°C (68°F)	MAG	350	330	310	290	260	240
	PTO						

# RENEGADE™ SPORT 600

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Purple (P/N 414817900)			Pink/Purple (P/N 414754200)		
Ramp	412 (P/N 417222515)					
Calibration Screw Position	3	4	5	4	5	6
Pin	Short solid 32 mm/16,75 g (P/N 417004308)			Short no thread 32 mm/9,9 g (P/N 417004309)		
Engagement RPM $\pm$ 100	3400			4100		
Maximum RPM $\pm$ 100	8100					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	42° (P/N 417127012)					

## Carburation

**NOTICE** These adjustments are guidelines only. Specific adjustments vary with temperature, altitude and snow condition. Always observe spark plug condition for proper jetting.

		SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)	
Main jet	MAG	390	370	350	330	300	280	1
	PTO							1
Jet needle		9CEY2-58						2
Needle position		2						—
Slide cut-away		2.0						2
Pilot jet		17.5						2
Mixture screw		1.5			2			—
Valve seat		1.5						2
Needle jet		P-0M						2
Float level (± 1 mm)		N/A						—
Idle RPM (± 200)		1600						—
Idle throttle valve position (± 0.1 mm)		1.5	1.6	1.7	1.8	1.9		—

## Main Jet Chart

		SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
-40°C (-40°F)	MAG	410	390	370	350	320	300
	PTO						
-30°C (-22°F)	MAG	400	380	360	340	310	290
	PTO						
-20°C (-4°F)	MAG	390	370	350	330	300	280
	PTO						
-10°C (14°F)	MAG	380	360	340	320	290	270
	PTO						
0°C (32°F)	MAG	370	350	330	310	280	260
	PTO						
10°C (50°F)	MAG	360	340	320	300	270	250
	PTO						
20°C (68°F)	MAG	350	330	310	290	260	240
	PTO						

# SUMMIT™ SPORT 146" 600

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Pink (P/N 414916300)		Green/Pink (P/N 414756900)			
Ramp	417 (P/N 417222552)					
Calibration Screw Position	3	4	2	3	4	5
Pin	Short solid 32 mm/16,75 g (P/N 417004308)		Short threaded 32 mm/10,88 g (P/N 417222477) 1 x set screw 20 mm (P/N 206262099)		Short threaded 32 mm/10,88 g (P/N 417222477)	
Engagement RPM ± 100	3400		4100			
Maximum RPM ± 100	8100					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)					
Spring tension Kg ± 0.7 (lb ± 1.5)	N/A					
Cam angle (degrees)	43° - 47° (P/N 417127133)					

## Carburation

**NOTICE** These adjustments are guidelines only. Specific adjustments vary with temperature, altitude and snow condition. Always observe spark plug condition for proper jetting.

		SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)	
Main jet	MAG	390	370	350	330	300	280	1
	PTO							1
Jet needle		9CEY2-58						2
Needle position		2						—
Slide cut-away		2.0						2
Pilot jet		17.5						2
Mixture screw		1.5			2			—
Valve seat		1.5						2
Needle jet		P-0M						2
Float level (± 1 mm)		N/A						—
Idle RPM (± 200)		1600						—
Idle throttle valve position (± 0.1 mm)		1.5	1.6	1.7	1.8	1.9		—

## Main Jet Chart

		SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
-40°C (-40°F)	MAG	410	390	370	350	320	300
	PTO						
-30°C (-22°F)	MAG	400	380	360	340	310	290
	PTO						
-20°C (-4°F)	MAG	390	370	350	330	300	280
	PTO						
-10°C (14°F)	MAG	380	360	340	320	290	270
	PTO						
0°C (32°F)	MAG	370	350	330	310	280	260
	PTO						
10°C (50°F)	MAG	360	340	320	300	270	250
	PTO						
20°C (68°F)	MAG	350	330	310	290	260	240
	PTO						



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## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap		4		3		2

# EXPEDITION LE 600 HO E-TEC® / EXPEDITION SE 600 HO E-TEC

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Yellow/Red (P/N 414993000)					
Ramp	600 (P/N 417222444)					
Calibration Screw Position	2	3	4	2	3	4
Pin	Long solid 35.75 mm/18,8 g (P/N 417222594)			Short threaded 32 mm/10,88 g (P/N 417222477) 1 X set screw 16 mm (P/N 206261699)		
Engagement RPM ± 100	3000					
Maximum RPM ± 100	8100					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	White 2 (P/N 417127243)					
Spring tension Kg ± 0.7 (lb ± 1.5)	7.5 kgf - 6.8 kgf (16.5 lbf - 15 lbf)					
Cam angle (degrees)	40° (P/N 417127411)					

# SKANDIC WT 600 HO E-TEC / SKANDIC SWT 600 HO E-TEC

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Yellow/Red (P/N 414993000)					
Ramp	600 (P/N 417222444)					
Calibration Screw Position	2	3	4	2	3	4
Pin	Long solid 35.75 mm/18,8 g (P/N 417222594)			Short threaded 32 mm/10,88 g (P/N 417222477)		
Engagement RPM $\pm$ 100	3000					
Maximum RPM $\pm$ 100	8100					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	White 2 (P/N 417127243)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	7.5 kgf - 6.8 kgf (16.5 lbf - 15 lbf)					
Cam angle (degrees)	41° - 45° (P/N 417127459)					

# GRAND TOURING LE 600R E-TEC

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Yellow/Blue (P/N 417224172)			Blue/Purple (P/N 417224168)		
Ramp	995 (P/N 417224450)			967 (P/N 417224225)		
Calibration Screw Position	3	4	5	3	4	5
Pivot	33 mm/15,2 g (P/N 417224221)			26 mm/13,1 g (P/N 417224220)		
Engagement RPM $\pm$ 100	3400			3800		
Maximum RPM $\pm$ 100	8100					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Green (P/N 417127137)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	44° (P/N 417127367)			43° - 47° (P/N 417127371)		

**MX Z™ TNT 600R E-TEC /**  
**MX Z BLIZZARD™ 600R E-TEC /**  
**MX Z X™ 600R E-TEC /**  
**MX Z X-RS™ 600R E-TEC /**  
**RENEGADE™ ADRENALINE™ 600R E-TEC /**  
**RENEGADE ENDURO 600R E-TEC /**  
**RENEGADE X 600R E-TEC**

**Drive Pulley**

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Blue (P/N 417224013)			Purple/Purple (P/N 417224166)		
Ramp	995 (P/N 417224450)			967 (P/N 417224225)		
Calibration Screw Position	3	4	5	3	4	5
Pivot	33 mm/15,2 g (P/N 417224221)			26 mm/13,1 g (P/N 417224220)		
Engagement RPM ± 100	3500			4000		
Maximum RPM ± 100	8100					

**Driven Pulley**

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Green (P/N 417127137)					
Spring tension Kg ± 0.7 (lb ± 1.5)	N/A					
Cam angle (degrees)	44° (P/N 417127367)			43° - 47° (P/N 417127371)		

# BACKCOUNTRY 600R E-TEC

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Purple (P/N 417224168)					
Ramp	951 (P/N 417224036)			997 (P/N 417224430)		
Calibration Screw Position	4	5	6	3	4	5
Pivot	33 mm/15,2 g (P/N 417224221)					
Engagement RPM $\pm$ 100	3400					
Maximum RPM $\pm$ 100	8100					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)			Blue (P/N 417127118)		
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	46-42° (P/N 417127715)					

# TUNDRA Xtreme 600 HO E-TEC

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Red/Orange (P/N 415015200)			Blue/Green (P/N 414817700)		
Ramp	417 (P/N 417222552)					
Calibration Screw Position	3	4	5	3	4	5
Pin	Short threaded 32 mm/10,88 g (P/N 417222477) 1 x set screw/16 mm (P/N 206261699)			Short threaded 32 mm/10,88 g (P/N 417222477)		
Engagement RPM $\pm$ 100	2800			3800		
Maximum RPM $\pm$ 100	8100					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	44° - 42° (P/N 417126973)			41° - 45° (P/N 417127105)		

## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap	3					
Rear suspension extension	Locked			Free		

# SUMMIT SP 146" AND 154" 600R E-TEC (CAN/USA)

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Purple (P/N 417224168)					
Ramp	967 (P/N 417224225)			997 (P/N 417224430)		
Calibration Screw Position	4	5	6	3	4	5
Pivot	33 mm/15,2 g (P/N 417224221)					
Engagement RPM $\pm$ 100	3400					
Maximum RPM $\pm$ 100	8100					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)			Blue (P/N 417127118)		
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	46-42 (P/N 417127715)					

## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap		4		3		2

## Sea Level Calibration Kit

MODEL	PART NUMBER
146"	860201906



# SUMMIT SP 146" AND 154" 600R E-TEC (EUROPE)

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Purple (P/N 417224168)					
Ramp	951 (P/N 417224036)			997 (P/N 417224430)		
Calibration Screw Position	4	5	6	3	4	5
Pivot	33 mm/15,2 g (P/N 417224221)					
Engagement RPM $\pm$ 100	3400					
Maximum RPM $\pm$ 100	8100					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)			Blue (P/N 417127118)		
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	46° - 42° (P/N 417127715)					

## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap		4		3		2



# EXPEDITION Xtreme 800R E-TEC (CAN / USA)

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Violet/Blue (P/N 415034900)		Blue/Pink (P/N 414916300)			
Ramp	450 (P/N 417224238)					
Calibration Screw Position	2	3	2	3	4	5
Pin	Long solid 35.75 mm/18.8 g (P/N 417222594)		Long threaded 35.75 mm/12.4 g (P/N 417222595) 1 set screw/12 mm (P/N 206261299)			
Engagement RPM $\pm$ 100	3800		3900	4000		4100
Maximum RPM $\pm$ 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	40° (P/N 417127411)					

# EXPEDITION Xtreme 800R E-TEC (EUROPE)

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Yellow/Green (P/N 414742100)		Blue/Pink (P/N 414916300)			
Ramp	413 (P/N 417222508)					
Calibration Screw Position	2	3	2	3	4	5
Pin	Long solid 35.75 mm/18.8 g (P/N 417222594)		Long threaded 35.75 mm/12.4 g (P/N 417222595) 1 set screw/12 mm (P/N 206261299)			
Engagement RPM $\pm$ 100	3800		3900	4000		4100
Maximum RPM $\pm$ 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	40° (P/N 417127411)					

# FREERIDE 137" 850 E-TEC

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Yellow/Blue (P/N 417224172)		Purple/White (P/N 417224167)			
Ramp	968 (P/N 417224227)		965 (P/N 417224141)			
Calibration Screw Position	3	4	3	4	5	
Pivot	33 mm/15,2 g (P/N 417224221)					26 mm/13,1 g (P/N 417224220)
Engagement RPM $\pm$ 100	2900		3800			
Maximum RPM $\pm$ 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Green (P/N 417127137)		Blue (P/N 417127118)			
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	44°-42° (P/N 417127325)		42°-38° XTI (P/N 417127564)			

## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap		4		3		2

## Chaincase Gears

1.75" PROFILE TRACK						
	Sea level 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Upper gear	23 (P/N 504091000)					
Lower gear	45 (P/N 504152593)					
Chain	108 (P/N 504152631)					

2.25" PROFILE TRACK						
	Sea level 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Upper gear	21 (P/N 504096200)					
Lower gear	45 (P/N 504152593)					
Chain	112 (P/N 504153268)					

# FREERIDE 146" 850 E-TEC SEA-LEVEL / SUMMIT 146" 850 E-TEC SEA-LEVEL

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Yellow (P/N 417224015)		Blue/Purple (P/N 417224168)			
Ramp	990 (P/N 417224326)		965 (P/N 417224141)			
Calibration Screw Position	4	5	3	4	5	
Pivot	38 mm/ 16,7g (P/N 417224222) + 9 mm (P/N 417224507)		33 mm/15,2 g (P/N 417224221)		26 mm/13,1 g (P/N 417224220)	
Engagement RPM ± 100	3300		3800			
Maximum RPM ± 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)		Blue (P/N 417127118)			
Spring tension Kg ± 0.7 (lb ± 1.5)	N/A					
Cam angle (degrees)	42°-38° XTI (P/N 417127564)					

## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap		4		3		2

## Chaincase Gears

146" MODELS						
	Sea level 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Upper gear	21 (P/N 504096200)					
Lower gear	49 (P/N 504152581)					
Chain	114 (P/N 504153393)					

# FREERIDE 154" AND 165" 850 E-TEC SEA-LEVEL / SUMMIT 154" AND 165" 850 E-TEC SEA-LEVEL

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Yellow (P/N 417224015)		Blue/Purple (P/N 417224168)			
Ramp	990 (P/N 417224326)		965 (P/N 417224141)			
Calibration Screw Position	4	5	3	4	5	
Pivot	38 mm/16,7 g (P/N 417224222) + 9 mm (P/N 417224507)		33 mm/15,2 g (P/N 417224221)		26 mm/13,1 g (P/N 417224220)	
Engagement RPM ± 100	3300		3800			
Maximum RPM ± 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)		Blue (P/N 417127118)			
Spring tension Kg ± 0.7 (lb ± 1.5)	N/A					
Cam angle (degrees)	40° XTI (P/N 417127532)					

## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap		4		3		2

## Chaincase Gears

FREERIDE 154" HILLCLIMB EDITION (EUROPE)						
	Sea level 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Upper gear	21 (P/N 504096200)					
Lower gear	49 (P/N 504152581)					
Chain	114 (P/N 504153393)					



154" MODELS						
	Sea level 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M FT
Upper gear	21 (P/N 504096200)					
Lower gear	51 (P/N 504152971)					
Chain	116 (P/N 504153397)					

165" MODELS						
	Sea level 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M FT
Upper gear	21 (P/N 504096200)					
Lower gear	53 (P/N 504153778)					
Chain	116 (P/N 504153397)					

# SUMMIT 175" 850 E-TEC SEA-LEVEL

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Yellow (P/N 417224015)		Purple/White (P/N 417224167)			
Ramp	990 (P/N 417224326)		965 (P/N 417224141)			
Calibration Screw Position	4	5	3	4	5	
Pivot	38 mm/16,7 g (P/N 417224222) + 9 mm (P/N 417224507)		33 mm/15,2 g (P/N 417224221)		26 mm/13,1 g (P/N 417224220)	
Engagement RPM ± 100	3300		4100			
Maximum RPM ± 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)		Blue (P/N 417127118)			
Spring tension Kg ± 0.7 (lb ± 1.5)	N/A					
Cam angle (degrees)	40° XTI (P/N 417127532)					

## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap		4		3		2

## Chaincase Gears

175" MODELS						
	Sea level 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M FT
Upper gear	21 (P/N 504096200)					
Lower gear	53 (P/N 504153778)					
Chain	116 (P/N 504153397)					

# FREERIDE 146" 850 E-TEC HIGH ALTITUDE / SUMMIT 146" 850 E-TEC HIGH ALTITUDE

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Yellow (P/N 417224015)		Blue/Purple (P/N 417224168)			
Ramp	990 (P/N 417224326)		965 (P/N 417224141)			
Calibration Screw Position	4	5	3	4	5	
Pivot	38 mm/ 16,7g (P/N 417224222) + 9 mm (P/N 417224507)		33 mm/15,2 g (P/N 417224221)		26 mm/13,1 g (P/N 417224220)	
Engagement RPM ± 100	3300		3800			
Maximum RPM ± 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)		Blue (P/N 417127118)			
Spring tension Kg ± 0.7 (lb ± 1.5)	N/A					
Cam angle (degrees)	42°-38° XTI (P/N 417127564)					

## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap		4		3		2

## Chaincase Gears

146" MODELS						
	Sea level 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Upper gear	21 (P/N 504096200)					
Lower gear	49 (P/N 504152581)					
Chain	114 (P/N 504153393)					

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## Sea Level Calibration Kit

MODEL	PART NUMBER
146"	860201905

# FREERIDE 154" AND 165" 850 E-TEC HIGH ALTITUDE / SUMMIT 154" AND 165" 850R E-TEC HIGH ALTITUDE

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Yellow (P/N 417224015)		Blue/Purple (P/N 417224168)			
Ramp	990 (P/N 417224326)		965 (P/N 417224141)			
Calibration Screw Position	4	5	3	4	5	
Pivot	38 mm/ 16,7g (P/N 417224222) + 9 mm (P/N 417224507)		33 mm/15,2 g (P/N 417224221)		26 mm/13,1 g (P/N 417224220)	
Engagement RPM ± 100	3300		3800			
Maximum RPM ± 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)		Blue (P/N 417127118)			
Spring tension Kg ± 0.7 (lb ± 1.5)	N/A					
Cam angle (degrees)	40° XTI (P/N 417127532)					

## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap		4		3		2

## Chaincase Gears

FREERIDE 154" HILLCLIMB EDITION (CAN/USA)						
	Sea level 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Upper gear	21 (P/N 504096200)					
Lower gear	49 (P/N 504152581)					
Chain	114 (P/N 504153393)					

154" MODELS (EXCEPT HILLCLIMB EDITION)						
SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)	
Upper gear	21 (P/N 504096200)					
Lower gear	51 (P/N 504152971)					
Chain	116 (P/N 504153397)					

165" MODELS						
SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)	
Upper gear	21 (P/N 504096200)					
Lower gear	53 (P/N 504153778)					
Chain	116 (P/N 504153397)					

### Sea Level Calibration Kit

MODEL	PART NUMBER
154" and 165"	860201905

### Summit 154" and 165" 850 E-TEC Gear Ratio and Application

NOTE: Summit are built for deep snow conditions and should never be used in marginal or hard pack snow conditions. Going to higher ratios could lead to reduced belt life and track delamination.

GEAR RATIO	APPLICATION	PRO'S	CON'S
21/51	Best all around gear ratio	Reference	116 km/h max speed. Rev limiter can turn on
21/53	Deep snow	Better belt life	111 km/h max speed. Rev limiter can turn on

# SUMMIT 175" 850R E-TEC HIGH ALTITUDE

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Yellow (P/N 417224015)		Purple/White (P/N 417224167)			
Ramp	990 (P/N 417224326)		965 (P/N 417224141)			
Calibration Screw Position	4	5	3	4	5	
Pivot	38 mm/ 16,7g (P/N 417224222) + 9 mm (P/N 417224507)		33 mm/15,2 g (P/N 417224221)		26 mm/13,1 g (P/N 417224220)	
Engagement RPM ± 100	3300		4100			
Maximum RPM ± 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)		Blue (P/N 417127118)			
Spring tension Kg ± 0.7 (lb ± 1.5)	N/A					
Cam angle (degrees)	40° XTI (P/N 417127532)					

## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap		4		3		2

## Chaincase Gears

175" MODELS						
	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Upper gear	21 (P/N 504096200)					
Lower gear	53 (P/N 504153778)					
Chain	116 (P/N 504153397)					

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## Sea Level Calibration Kit

MODEL	PART NUMBER
175"	860201905



# MX Z TNT 850 E-TEC / MX Z BLIZZARD 850 E-TEC / MX Z X 850 E-TEC

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Blue (P/N 417224013)		Purple/Blue (P/N 417224165)			
Ramp	968 (P/N 417224227)		967 (P/N 417224225)			
Calibration Screw Position	3	4	2	3	4	5
Pivot	33 mm/15,2 g (P/N 417224221)		38 mm/ 16,7g (P/N 417224222)			
Engagement RPM ± 100	3200		4000			
Maximum RPM ± 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Green (P/N 417127137)					
Spring tension Kg ± 0.7 (lb ± 1.5)	N/A					
Cam angle (degrees)	45° - 42° (P/N 417127534)					

# MX Z X-RS 850 E-TEC

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Blue (P/N 417224013)		Purple/Yellow (P/N 417224164)			
Ramp	968 (P/N 417224227)		967 (P/N 417224225)			
Calibration Screw Position	3	4	2	3	4	5
Pivot	33 mm/15,2 g (P/N 417224221)		38 mm/ 16,7g (P/N 417224222)			
Engagement RPM $\pm$ 100	3200		4000			
Maximum RPM $\pm$ 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Green (P/N 417127137)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	45° - 42° (P/N 417127534)		42° (P/N 417127372)			

# RENEGADE ADRENALINE 850 E-TEC / RENEGADE X 850 E-TEC / RENEGADE X-RS 850 E-TEC / RENEGADE ENDURO 850 E-TEC

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Yellow/Blue (P/N 417224172)		Yellow/Yellow (P/N 417224171)			
Ramp	968 (P/N 417224227)		967 (P/N 417224225)			
Calibration Screw Position	3	4	2	3	4	5
Pivot	33 mm/18.8 g (P/N 417224221)		38 mm/ 16,7g (P/N 417224222)			
Engagement RPM $\pm$ 100	2900		3400			
Maximum RPM $\pm$ 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Green (P/N 417127137)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	N/A					
Cam angle (degrees)	44° - 42° (P/N 417126325)					

# BACKCOUNTRY 850 E-TEC / BACKCOUNTRY X 850 E-TEC / BACKCOUNTRY X-RS 850 E-TEC

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Blue/Yellow (P/N 417224015)		Purple/White (P/N 417224167)			
Ramp	990 (P/N 417224326)		965 (P/N 417224141)			
Calibration Screw Position	4	5	4	5	6	
Pivot	38 mm/16,7 g (P/N 417224222) + 9 mm (P/N 417224507)		33 mm/18.8 g (P/N 417224221)		26 mm/13,1 g (P/N 417224220)	
Engagement RPM ± 100	3300		3800			
Maximum RPM ± 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Black (P/N 417127039)		Blue (P/N 417127118)			
Spring tension Kg ± 0.7 (lb ± 1.5)	N/A					
Cam angle (degrees)	42° - 38° XTI (P/N 417127564)					

## Vehicle Calibration

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Stopper Strap		4		3		2

## Chaincase Gears

WITH 1.6" PROFILE TRACK						
	Sea level 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Upper gear	21 (P/N 504096200)					
Lower gear	45 (P/N 504152593)					
Chain	112 (P/N 504153268)					

WITH 2" PROFILE TRACK						
	Sea level 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M FT
Upper gear	23 (P/N 504091000)					
Lower gear	51 (P/N 504152971)					
Chain	116 (P/N 504153397)					

# TUNDRA SPORT 600 ACE / TUNDRA LT 600 ACE / EXPEDITION SPORT 600 ACE / RENEGADE SPORT 600 ACE

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Red/White (P/N 417 223747)	Red/Red (P/N 417 223745)	Red/Yellow (P/N 417 223748)	Red/White (P/N 417223747)		Red/Red (P/N 417 223745)
Ramp	716 (P/N 417223450)			725 (P/N 417223601)		
Ramp quantity	6					
Engagement RPM $\pm$ 100	2200					
Maximum RPM $\pm$ 100	7250					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Pink 3 (P/N 417127344)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	6.4 kgf (14.1 lbf)					
Cam angle (degrees)	41°-45° (P/N 417127235)					

# GRAND TOURING SPORT 600 ACE /

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Red/Red (P/N 417 223745)	Red/Yellow (P/N 417 223748)	Red/Orange (P/N 417 223749)	Red/White (P/N 417223747)		Red/Red (P/N 417 223745)
Ramp	715 (P/N 417223452)			725 (P/N 417223601)		
Ramp quantity	6					
Engagement RPM $\pm$ 100	2200					
Maximum RPM $\pm$ 100	7250					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Pink 3 (P/N 417127344)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	6.4 kgf (14.1 lbf)					
Cam angle (degrees)	41°-45° (P/N 417127235)					

# SKANDIC WT 600 ACE

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Red/White (P/N 417 223747)	Red/Red (P/N 417 223745)	Red/White (P/N 417 223747)	Red/Red (P/N 417 223745)	Red/Yellow (P/N 417 223748)	Red/Orange (P/N 417 223749)
Ramp	716 (P/N 417223450)		725 (P/N 417223601)			
Ramp quantity	6					
Engagement RPM $\pm$ 100	2200					
Maximum RPM $\pm$ 100	7250					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Pink 3 (P/N 417127344)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	7.5 kgf - 6.8 kgf (16.5 lbf - 15 lbf)					
Cam angle (degrees)	37°-45° (P/N 417127413)					



# EXPEDITION SPORT 900 ACE / GRAND TOURING SPORT 900 ACE / GRAND TOURING LTD 900 ACE / RENEGADE ADRENALINE 900 ACE / RENEGADE ENDURO 900 ACE

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring		Red/Blue (P/N 417224330)				Blue/Purple (P/N 417 224168)
Ramp		826 (P/N 417223675)		895 (P/N 417224256)		
Engagement RPM $\pm$ 100		2200		2400		2600
Maximum RPM $\pm$ 100		7250				

## Driven Pulley

### *Renegade and Grand Touring*

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring		Red/Red (P/N 417127467)				
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)		7.3 kg - 6.6 kg (16.1 lb - 14.6 lb)				
Cam angle (degrees)		44° - 40° (P/N 417127476)				

### *Expedition Sport*

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring		Red/Red (P/N 417127467)				
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)		7.3 kg - 6.6 kg (16.1 lb - 14.6 lb)				
Cam angle (degrees)		40° (P/N 417127709)				

# GRAND TOURING LTD 900 ACE TURBO

## Drive Pulley

NOTE: The factory calibration is suitable for all altitude. The turbocharger compensates for the lack of oxygen at high altitude.

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Red/Blue (P/N 417224330)					
Ramp	880 (P/N 417224291)					
Engagement RPM $\pm$ 100	2200					
Maximum RPM $\pm$ 100	7250					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	White2 (P/N 417127243)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	7.3 kg - 6.6 kg (16.1 lb - 14.6 lb)					
Cam angle (degrees)	46° - 42° (P/N 417127621)					

# RENEGADE X 900 ACE TURBO/ RENEGADE X-RS 900 ACE TURBO/ RENEGADE ADRENALINE 900 ACE TURBO/ RENEGADE ENDURO 900 ACE TURBO

## Drive Pulley

NOTE: The factory calibration is suitable for all altitude. The turbocharger compensates for the lack of oxygen at high altitude.

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Red/Yellow (P/N 417224329)					
Ramp	873 (P/N 417224303)					
Engagement RPM $\pm$ 100	2200					
Maximum RPM $\pm$ 100	7750					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	White2 (P/N 417127243)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	7.3 kg - 6.6 kg (16.1 lb - 14.6 lb)					
Cam angle (degrees)	47° - 40° (P/N 417127327)					

**SKANDIC WT 900 ACE (CAN/USA) /  
 SKANDIC SWT 900 ACE /  
 EXPEDITION LE 900 ACE (CAN/USA) /  
 EXPEDITION SE 900 ACE**

**Drive Pulley**

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring		Red/Red (P/N 417223745)	Red/White (P/N 417223747)		Yellow/Blue (P/N 417224085)	Yellow/Pink (P/N 417 224084)
Ramp		740 (P/N 417223905)	742 (P/N 417223918)			
Engagement RPM ± 100	2200					
Maximum RPM ± 100	7250					

**Driven Pulley**

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring		Red/Red (P/N 417127467)				
Spring tension Kg ± 0.7 (lb ± 1.5)		7.5 kg - 6.8 kg (16.5 lb - 15 lb)				
Cam angle (degrees)		40° (P/N 417127411)				

# SKANDIC WT 900 ACE (EUR) / EXPEDITION LE 900 ACE (EUR)

## Drive Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring		Red/Orange (P/N 417223749)	Red/White (P/N 417223747)		Yellow/Blue (P/N 417224085)	Yellow/Pink (P/N 417 224084)
Ramp		748 (P/N 417224035)	742 (P/N 417223918)			
Engagement RPM $\pm$ 100	2000					
Maximum RPM $\pm$ 100	7250					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring	Red/Red (P/N 417127467)					
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)	7.0 kg - 6.4 kg (15.4 lb - 14.1 lb)					
Cam angle (degrees)	40° (P/N 417127411)					

# EXPEDITION LE 1200 4-TEC / EXPEDITION SE 1200 4-TEC

## Drive Pulley

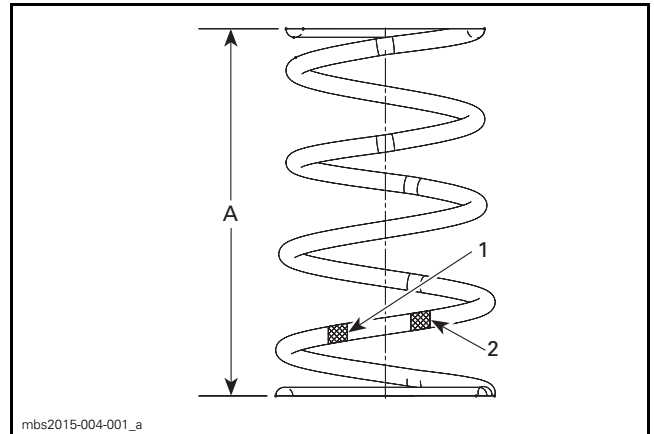
	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring		Yellow/Blue (P/N 417224085)	Red/White (P/N 417 223747)		Yellow/Blue (P/N 417224085)	Yellow/Pink (P/N 417 224084)
Ramp		749 (P/N 417224083)	??750 (P/N 417224105)			
Engagement RPM $\pm$ 100	2200					
Maximum RPM $\pm$ 100	7900					

## Driven Pulley

	SEA LEVEL 0 M (0 FT)	600 M (2000 FT)	1200 M (4000 FT)	1800 M (6000 FT)	2400 M (8000 FT)	3000 M (10000 FT)
Spring		Red/Red (P/N 417127467)				
Spring tension Kg $\pm$ 0.7 (lb $\pm$ 1.5)		7.0 kg - 6.4 kg (15.4 lb - 14.1 lb)				
Cam angle (degrees)		44° - 40 (P/N 417127412)				

# OPTIONAL DRIVE PULLEY SPRING RATES AND SPECIFICATIONS

The springs for TRA pulleys can not be installed on eDrive II or eDrive II LC.



TYPICAL - COLOR CODE

1. 1<sup>st</sup> color
2. 2<sup>nd</sup> color

## eDrive II (900 ACE / 1200 4-TEC) and eDrive II LC (550F / 600 ACE)

SPRING SPECIFICATIONS							
PART NUMBER	WIRE DIA.	FREE LENGHT	LOAD ± 10% WHEN "A" = 60.6 MM		LOAD ± 10% WHEN "A" = 28 MM		COLOR CODE
	MM		N	LBS	N	LBS	
417223745	4.50	97.9	356	80	667	150	Red / Red
417223747	4.30	108.0	356	80	600	135	Red / White
417223748	4.80	87.3	355	80	789	177	Red / Yellow
417223749	4.80	84.3	355	80	845	190	Red / Orange
417223750	5.0	80.5	355	80	934	210	Red / Green
417224084	4.50	105.4	489	110	845	190	Yellow / Pink
417224085	4.30	120.0	446	100	690	155	Yellow / Blue