



121-207

**2009-12 Ski-Doo XR 1200 4-Tec  
0-3000ft Clutch Kit with Ski-Doo TRA Primary**

**SPI Header and Muffler Combo**

**Parts included in Clutch Kit:**

1 Drive Spring: Gray (121-149)  
3 Ramps: 433 (121-131)  
1 Adjustable Pin Kit: Heavy (121-140)  
1 Helix: (SPI-19)  
1 Driven Spring: (121-161)

**Setting:**

Ramp Position: # 2  
Pin Weight: 22.3  
Operating RPM: 8300-8350  
Secondary Spring Tension: Center

**SPI Header Only**

**Parts included in Clutch Kit:**

1 Drive Spring: Gray (121-149)  
3 Ramps: 433 (121-131)  
1 Adjustable Pin Kit: Heavy (121-140)  
1 Helix: (SPI-19)  
1 Driven Spring:(121-161)

**Setting:**

Ramp Position: # 3  
Pin Weight: 22.3  
Operating RPM: 8300-8350  
Secondary Spring Tension: Center

**Stock Exhaust**

**Parts included in Clutch Kit:**

1 Drive Spring: Gray (121-149)  
3 Ramps: 433 (121-131)  
1 Adjustable Pin Kit: Heavy (121-140)  
1 Helix: (SPI-19)  
1 Driven Spring: (121-161)

**Setting:**

Ramp Position: # 3  
Pin Weight: 20.5  
Operating RPM: 8200-8300  
Secondary Spring Tension: Center

**SPI Header and Muffler Combo (Renegade)**

**Parts included in Clutch Kit:**

1 Drive Spring: Gray (121-149)  
3 Ramps: 433 (121-131)  
1 Adjustable Pin Kit: Heavy (121-140)  
1 Helix: (SPI-19)  
1 Driven Spring: (121-161)

**Setting:**

Ramp Position: # 4-5  
Pin Weight: 20.5  
Operating RPM: 8300-8350  
Secondary Spring Tension: Center

**QRS clutch kit install.**

1. Remove the rubber chain case cover and the bolt the top drive sprocket.
  2. On the clutch side unbolt and remove the half-moon keeper that retains the jack-shaft bearing to the chassis bearing support.
  3. Place a screw driver or similar device in the bolt hole of the jack-shaft from the chain case side and tap the entire jack-shaft out. Have someone hold and lightly pull from the clutch side to completely remove the clutch and shaft assembly.
  4. Use the Straightline helix and spring compressor to compress the helix. You may have to use light heat and an impact driver to remove the 4 bolts from the helix.
  5. Install the new SPI helix with the shallow cut of the helix into the rollers.
  6. Use lock tight on the helix bolts and torque the bolts to factory specifications.
  7. When installing the helix, there is multiple ways to install to proper tension. The skidoo 1200 has multiple secondary clutch holes and they have changed drastically over the year. The spring tension required can be achieved by finding the correct hole in the base and in the helix. After placing the spring into the clutch base, install the helix. The proper wind is 1.5" of tension to bolting the helix in.
  8. The end result is that when the helix is bolted into that the clutch, that the spring is wound the 1.5 inches.
  9. Then, using lock tight install the three bolts to secure the cover to the helix.
  10. Re-install the clutch and jack-shaft into the chassis in the reverse order that it was removed. (Be sure not to drop the spacer behind the top sprocket.)
  11. Bolt top gear back on the jack-shaft and install the rubber chain case cover.
  12. Re-install half moon bearing keeper to the support.
  13. Remove primary clutch and install new spring, ramps, and adjustable pin kit to proper specifications.
  14. **RPM's under acceleration will be 8000-8300 peak rpm will be 8300-8350. It is not uncommon under acceleration to hit the rev limiter.**
- This is a trail kit and designed to for all around use. If sled is under-revving at wide-open throttle, remove setscrews to achieve the proper rpm. If this sled is over-revving install 1 gram at a time until your desired rpm is achieved.
  - **When changing the bottom drive sprocket to a 41 tooth; set the ramp position to #3.**

# STRAIGHTLINE PERFORMANCE

## BOM

Quantity	Item #	Descriptions	In Box
1	121-149	Primary Spring Gray 200-320lbs	
3	121-131	433 Ramps	
1	121-140	Heavy Pin Kit	
1	SPI-19	SPI-19 Helix	
1	121-161	Secondary Spring Black	
1		Sticker	

Checked and Packaged By

Technical questions please email [tech@straightlineperformance.com](mailto:tech@straightlineperformance.com)



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