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Scalpel<sup>™</sup> - "Frog" Rear Shock Link

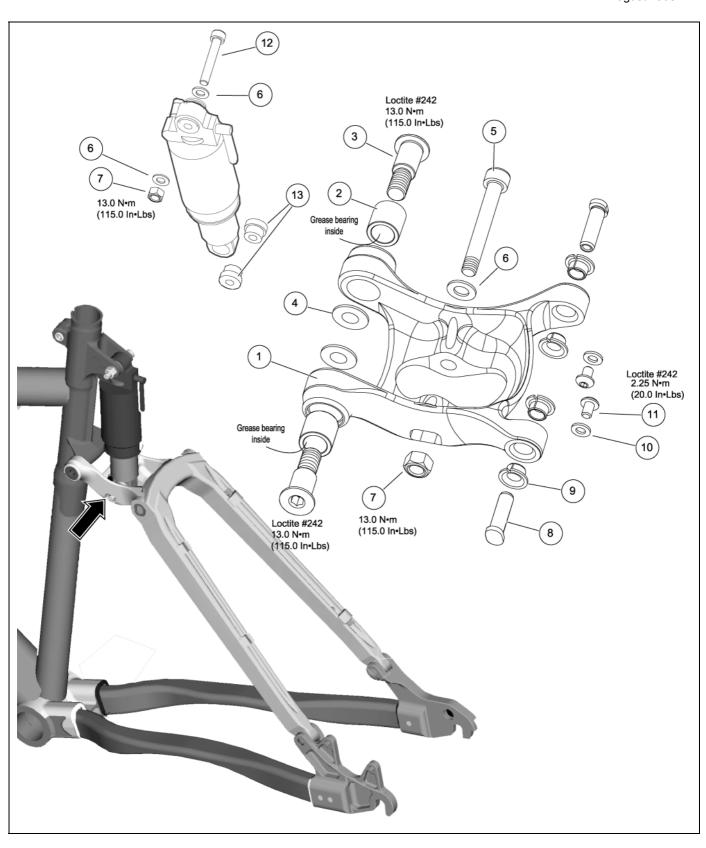
**Publication Title** 

## Tech Notes

Publication No.

### TN002.PDF

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#### Information

- 1. The one-piece "Frog" link is a forged rear shock link design compatible with Scalpel aluminum or composite seatstays. It is shown in the graphic above with a composite seatstay.
- 2. The one-piece shock link assembly received its nickname from its frog-like appearance. When turned upside down on a table, it looks much like a frog. Early model Scalpels using the 3-piece design link system and aluminum seatstays can be upgraded to the "Frog" link.
- 3. The acetate washers item (4) fitted between the front part of the link and the seattube mounting point should be inspected often for damage or wear. Neglect can result in excessive play detected in the seatstay assembly. Replace them with new ones when necessary.
- 4. The inside of the link pivot bearings (2) should be greased regularly.

**CAUTION:** Pressure washing can force dirt and water into the link bearings which will result in rapid damage. Don't pressure wash.

- 5. When installing the pivot bolts (3), be sure to use Loctite #242 on the bolt threads. Apply a high quality bike grease to the inner pivot bearing (2) in the link. Take care to not contaminate the bearings during installation of the bolts. Make sure the washers (4) are in place.
- 6. The T-shafts (8) are Teflon coated and should not be lubricated. If any creaking or noise is detected either the Tshafts or link bushing may be damaged.

**CAUTION:** Do not apply grease or other lubricants to the T-shafts. Grease or lubricants can collect contaminants resulting in damage and accelerated wear of the parts. Always install the parts clean and dry.

- 7. The flange bushings (9) are a press fit into the bonded seatstay inserts. They can be removed to install replacements. To remove, carefully locate the punch and drive out. These flange bushings should be inspected often and replaced when necessary. The seatstay inserts are bonded in place during manufacture and are non-removable.
- The T-shaft screws (11) should be checked for tightness periodically. Loose screws can result in play detected in the seatstay. When installing the screws, be sure to apply Loctite #242 to the threads and tighten to 2.25 N·m (20.0 In•Lbs).

**CAUTION:** Do not over-tighten the T-shaft screws. Over-tightening will result in damage to the flange bushings

9. Notice that the lower shock bushings (13) are thicker that the upper shock bushings. The thicker bushings won't fit in the upper shock seattube mounts.

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#### Parts

The following table is for reference only.

REF	QTY	BPCS	DESC	
1	1	113789	Link	
2	2	112679	Bearing	
3	2	112502	Pivot bolt	
4	2	114668	WASHER, Acetal, .551x.394x.04	
5	1	114707	SCREW,M6x1.0x45mm, SHCS	
6	3	1352R	WASHER,12.50Dx6.5IDx1.6MMTHKSS	
7	1	1352S	Lock nut (nyloc)	
8	2	112636	NUT,T-Shaft,for Scalpel	
9	4	112677	BUSHING,Flanged,6mmIDx5.5mmL	
10	2	103218	SCREW,M4x.7x8mmSOCHEADCAP,SS	
11	2	113032	WASHER,SS,.162IDx.308ODx.040	
12	1	114876	Bolt,M6x1x37 SOC CAP	
13	2	114708	BUSHING,FOX,SCALPEL	

### **Replacement/Renewal Kits**

The following replacement parts and kits are available only through an authorized Cannondale Dealer.

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KIT #	REF(QTY)	DESCRIPTION	
			This kit is a complete link with lower shock mounting hardware and
	1, 2(2), 3(2), 4(2), 5,6,7,		bushings for compatible Fox rear
KF070/	9(4), 13(2),	Kit, Link Frog,Scalpel	shock
		Kit, Washers-Teflon, Pivot	
KF068/	4(10)	Lin	
	2(2), 3(2), 4(2), 8(4), 9(8),	Kit, Rebuild HW - Links,	
KF043/	10(4), 11(4)	Scalp	
		Kit, Shock Mnt. HWare -	
KF044/	12, 6(2), 7	Upper	
		Kit, Screws/washers,10 -	
KF056/	10(10), 11(10)	Scalp	
		Kit, Rebuild Scalpel seat	
KF035/	10(4), 8(4), 9(8), 11 (4)	stay	

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