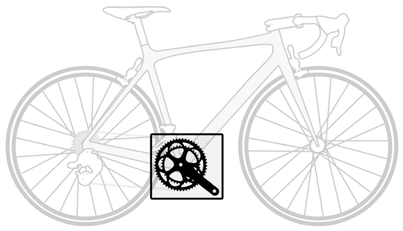

Tools	Safety Glasses	2, 8, 10 mm hex wrenches	Calipers	Flat Blade Screwdriver	Rubber Mallet	Torque Wrench	GXP BB Tool	Park Tool™ HHP-2 Headset Press	SRAM BB30 Bearing Installation Toolkit	Grease
Werkzeug	Augenschutz	Inbusschlüssel 2, 8, 10 mm	Schiebelehre	Schlitzschraubendreher	Gummihammer	Drehmomentschlüssel	GXP BB-Werkzeug	Park Tool™ HHP-2 Steuersatz-Einpresswerkzeug	SRAM BB30 Lagermontage-Werkzeugsatz	Schmierfett
Herramientas	Gafas de seguridad	Llaves Allen de 2, 8 y 10 mm	Pinzas	Destornillador de cabeza plana	Macillo de cabeza de plástico	Llave dinamométrica	Herramienta GXP BB	Prensa para direcciones Park Tool™ HHP-2	Kit de herramientas de instalación de rodamientos SRAM BB30	Grasa
Outils	Lunettes de sécurité	Clés Allen de 2, 8 et 10 mm	Étriers	Tournevis à tête plate	Mailloche en caoutchouc	Clé dynamométrique	Démonte-pédalier GXP BB	Outil pour jeu de direction Park Tool™ HHP-2	Kit d'installation de roulements SRAM BB30	Graisse
Strumenti	Occhiali di protezione	Chiavi esagonali da 2, 8 e 10 mm	Pinze	Cacciavite a lama piatta	Mazzuolo in gomma	Chiave torsiometrica	Strumento GXP BB	Pressa per serie sterzo Park Tool™ HHP-2	Kit di strumenti per l'installazione del cuscinetto SRAM BB30	Grasso
Gereedschap	Veiligheidsbril	2, 8 en 10 mm inbussleutels	Remsetten	Platte schroevendraaier	Rubberen Hamer	Momentsleutel	GXP BB gereedschap	Park Tool™ HHP-2 balhoofdpers	SRAM BB30 montagegereedschap voor lager	Smeer
Ferramentas	Óculos de protecção	Chaves sextavadas de 2, 8 e 10 mm	Craveira	Chave de fendas	Malho de borracha	Chave dinamométrica	Ferramenta GXP BB	Park Tool™ HHP-2 Prensa para montar rolamentos	Kit de Ferramentas SRAM BB30 para instalação de rolamentos	Massa lubrificante
ツール	ゴーグル	2 mm、8 mm および 10 mm の六角レンチ	キャリパー	マイナスドライバー	ゴム製のマレット（槌）	トルクレンチ	GXP BB ツール	Park Tool™ HHP-2 ヘッドセット・プレス	SRAM BB30 ベアリング取り付けツールキット	グリス
工具	防护镜	2 mm、8 mm 和 10 mm 六角扳手	卡尺	一字螺丝刀	橡皮锤	扭矩扳手	GXP BB 工具	Park Tool™ HHP-2 车头碗组压力机	SRAM BB30 轴承安装工具组	润滑脂

Grease · Schmierfett · Grasa · Graisse · Grasso · Smeer · Massa lubrificante · グリス · 润滑

Measure · Messen · Medir · Mesurer · Misurare · Meten · Medir · 計測 · 测量

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Install · Einbauen · Instalación · Installer · Installare · Monteren · Instalar · 取り付け · 安装

Torque · Drehmoment · Par · Serrer au couple approprié · Coppia · Aandraaien · Momento de torção · 締め付け · 扭紧

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Hex Wrench · Inbusschlüssel · Llave Allen · Clé Allen · Chiave esagonale

Inbussleutel · Chave sextavada · ヘクサレンチ · 六角扳手

Clockwise · Im Uhrzeigersinn · Sentido horario · Dans le sens des aiguilles d'une montre · Senso orario

Met de klok mee · No sentido dos ponteiros do relógio · 右方向 · 顺时针

Counter-Clockwise · Gegen den Uhrzeigersinn · Sentido antihorario · Dans le sens inverse des aiguilles d'une montre · Senso antiorario

Tegen de klok in · No sentido contrário ao dos ponteiros do relógio · 左方向 · 逆时针

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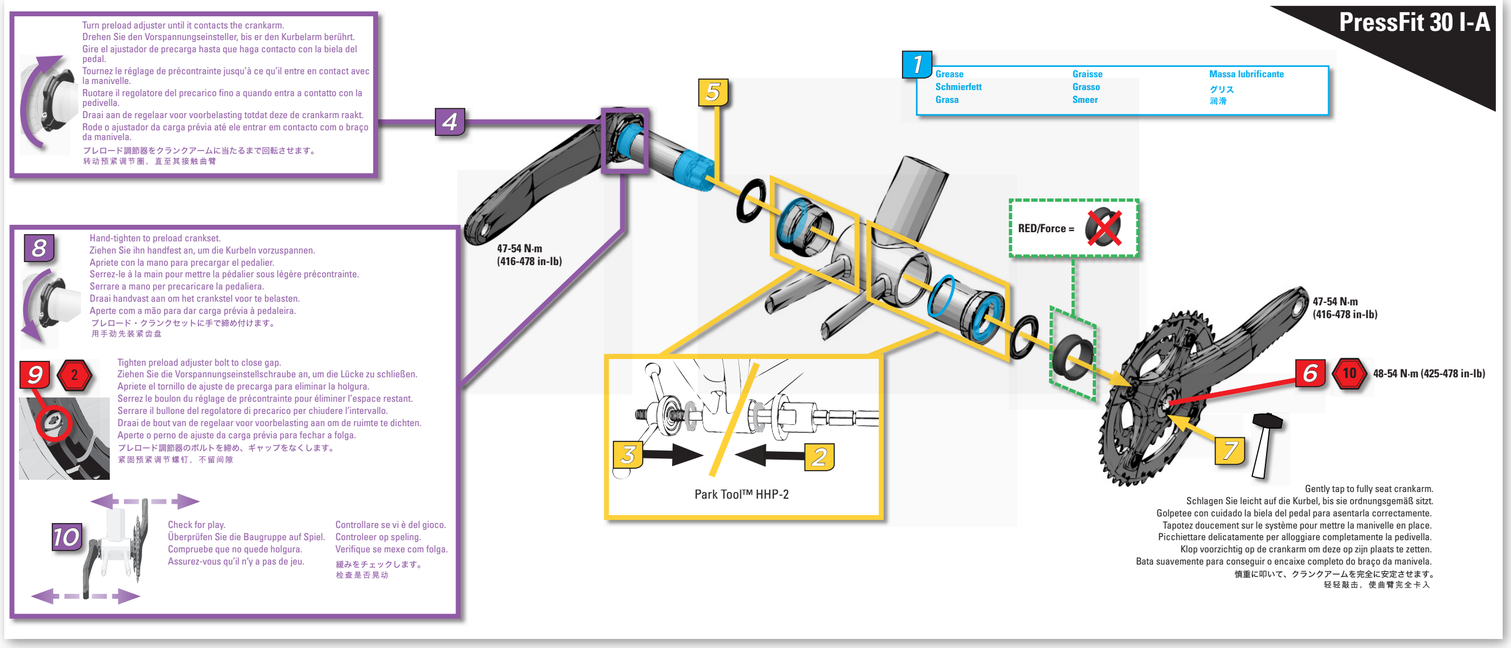
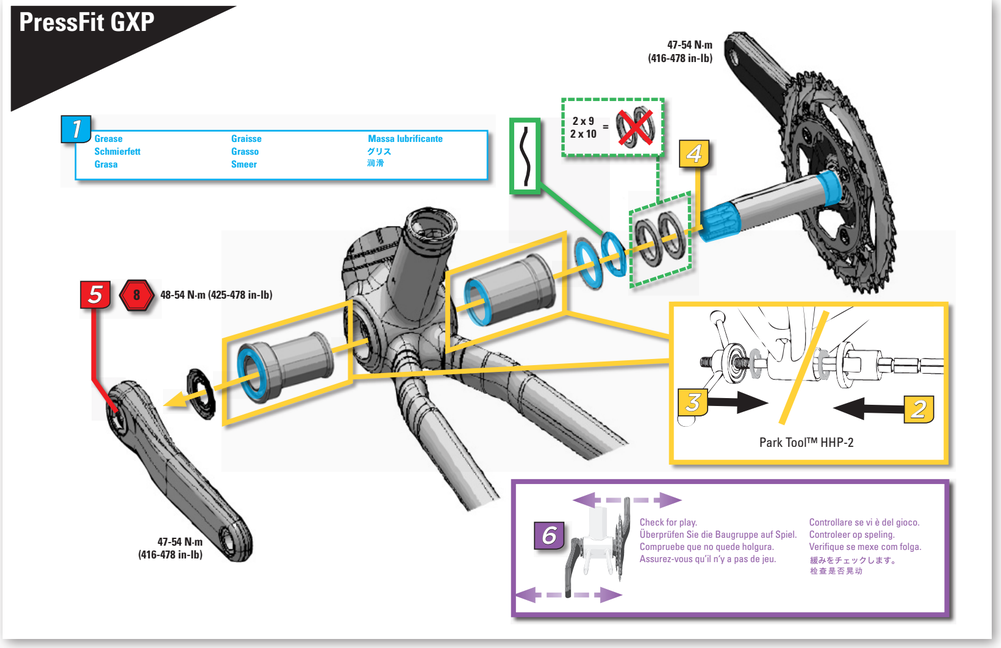
Bottom Bracket Shell Specifications	Spezifikationen für Tretlagergehäuse	Especificaciones de la caja de pedalier	Caractéristiques du boitier de pédalier	Specifiche dell'involucro del movimento centrale	Specificaties trapashuls	Especificações do invólucro do eixo pedaleiro	ボトムブラケット・シェルの仕様	中轴罩规格
PressFit 30 I-A - [ϕ 46 mm x 68 mm]	**PressFit GXP** - [ϕ 41 mm x 86.5 mm]	**BB30 I-A** - [ϕ 42 mm x 68 mm]	**BB30** - [ϕ 42 mm x 68 mm]	**GXP** - [BSA = ϕ 1.37 in x 24TPI x 68 mm] [IT = ϕ 36 mm x 24TPI x 68 mm]	**PF30 BB79** - [ϕ 46 mm x 79 mm]			

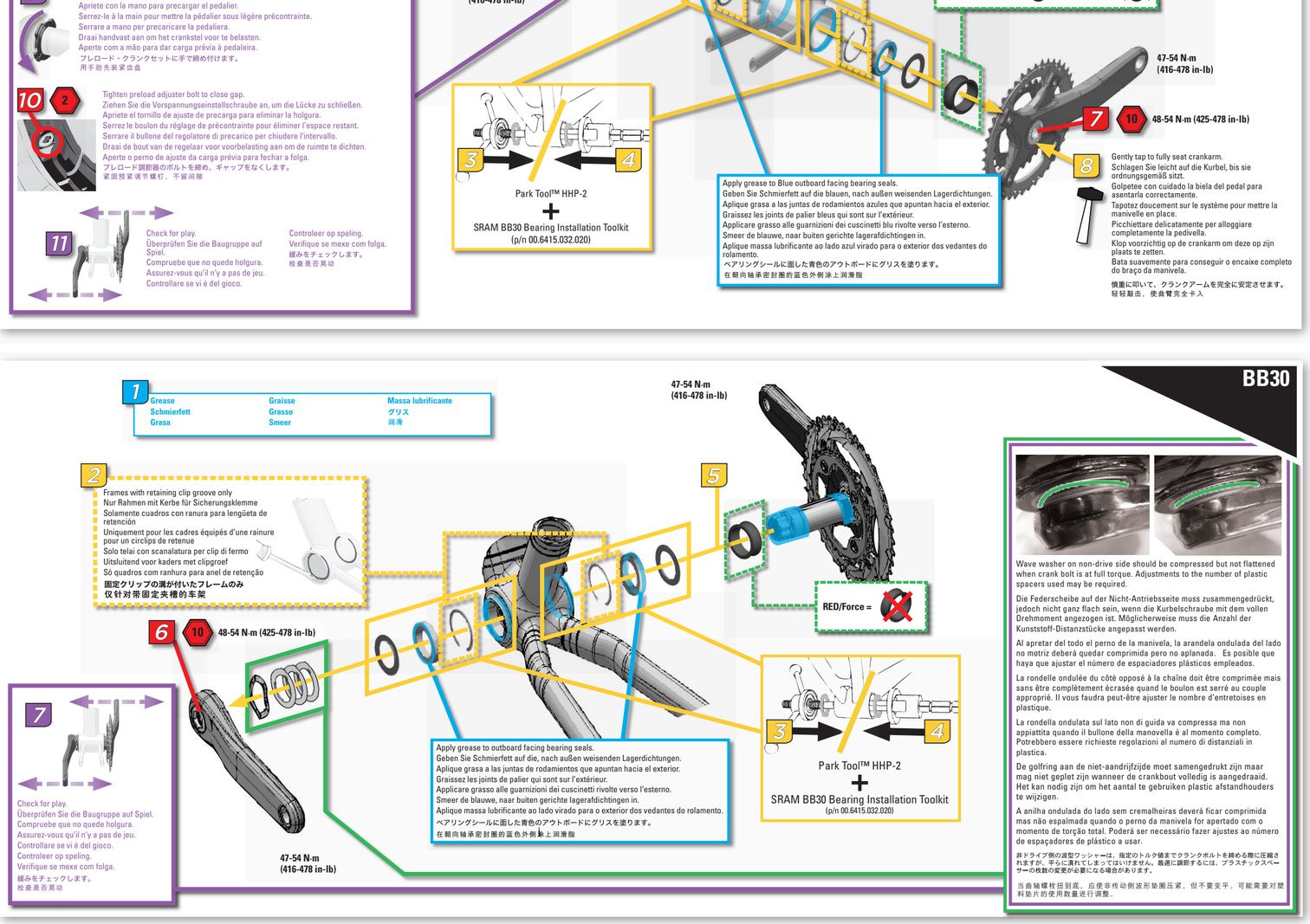
PressFit 30 I-A



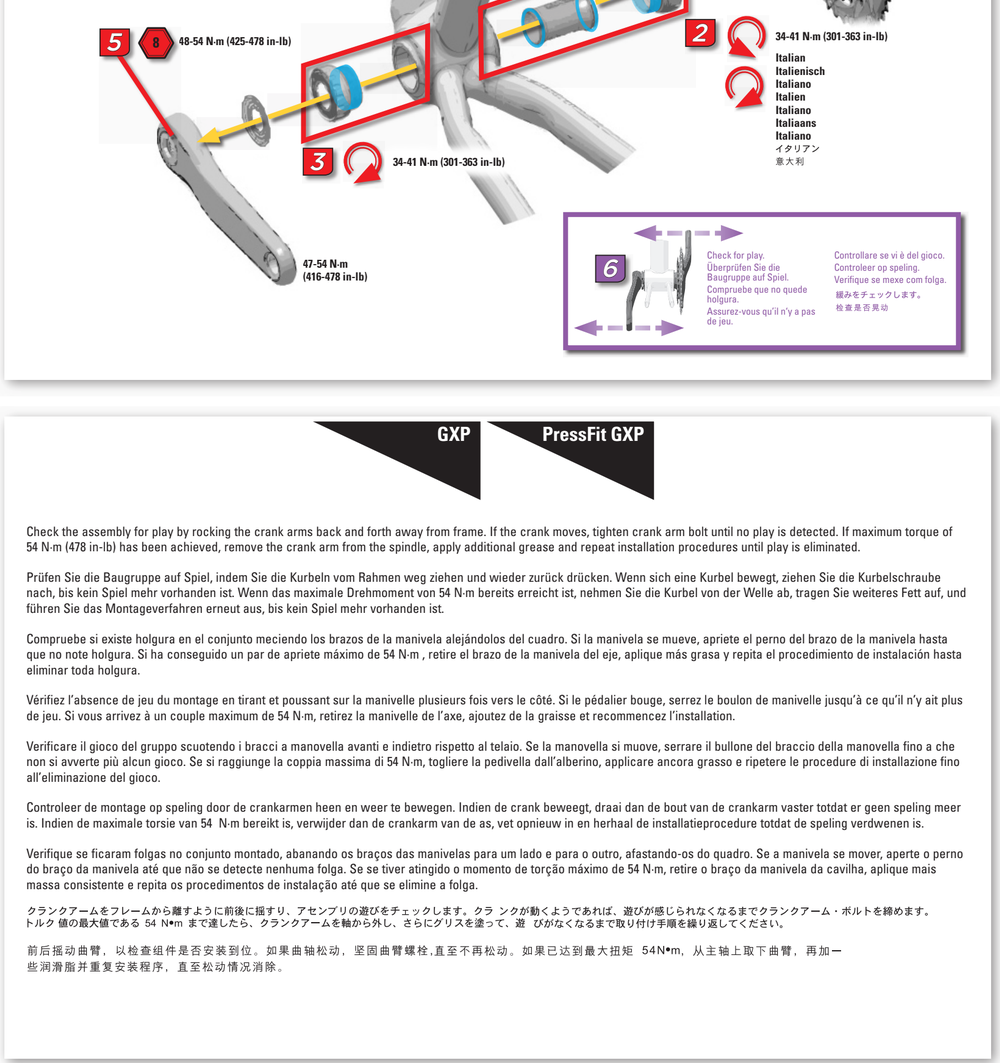
PressFit GXP



BB30 I-A



GXP



BB30

Wave washer on non-drive side should be compressed but not flattened when crank bolt is at full torque. Adjustments to the number of plastic spacers used may be required.

Die Federscheibe auf der Nicht-Antriebsseite muss zusammengedrückt, jedoch nicht ganz flach sein, wenn die Kurbelschraube mit dem vollen Drehmoment angezogen ist. Möglicherweise muss die Anzahl der Kunststoff-Distanzstücke angepasst werden.

Al apretar del todo el perno de la manivela, la arandela ondulada del lado no motriz deberá quedar comprimida pero no aplanada. Es posible que haya que ajustar el número de espaciadores plásticos empleados.

La rondelle ondulée du côté opposé à la chaîne doit être comprimée mais sans être complètement écrasée quand le boulon est serré au couple approprié. Il vous faudra peut-être ajuster le nombre d'entretoises en plastique.

La rondella ondulata sul lato non di guida va compressa ma non appiattita quando il bullone della manovella è al momento completo. Potrebbero essere richieste regolazioni al numero di distanziali in plastica.

De golfring aan de niet-aandrijfzijde moet samengedrukt zijn maar mag niet geplet zijn wanneer de crankbout volledig is aangedraaid. Het kan nodig zijn om het aantal te gebruiken plastic afstandhouders te wijzigen.

A anilha ondulada do lado sem cremalheiras deverá ficar comprimida mas não espalmada quando o perno da manivela for apertado com o momento de torção total. Poderá ser necessário fazer ajustes ao número de espaçadores de plástico a usar.

非ドライブ側の波型ワッシャーは、指定のトルク値までクランクボルトを締める際に圧縮されますが、平らに潰れてしまってはいけません。最適に調節するには、プラスチックスペーサーの枚数の変更が必要になる場合があります。

当曲轴螺栓扭到底，应使非传动侧波形垫圈压紧，但不要变平。可能需要对塑料垫片的使用数量进行调整。

GXP　PressFit GXP

Check the assembly for play by rocking the crank arms back and forth away from frame. If the crank moves, tighten crank arm bolt until no play is detected. If maximum torque of 54 N-m (478 in-lb) has been achieved, remove the crank arm from the spindle, apply additional grease and repeat installation procedures until play is eliminated.

Prüfen Sie die Baugruppe auf Spiel, indem Sie die Kurbeln vom Rahmen weg ziehen und wieder zurück drücken. Wenn sich eine Kurbel bewegt, ziehen Sie die Kurbelschraube nach, bis kein Spiel mehr vorhanden ist. Wenn das maximale Drehmoment von 54 N-m bereits erreicht ist, nehmen Sie die Kurbel von der Welle ab, tragen Sie weiteres Fett auf, und führen Sie das Montageverfahren erneut aus, bis kein Spiel mehr vorhanden ist.

Compruebe si existe holgura en el conjunto meciendo los brazos de la manivela alejándolos del cuadro. Si la manivela se mueve, apriete el perno del brazo de la manivela hasta que no note holgura. Si ha conseguido un par de apriete máximo de 54 N-m , retire el brazo de la manivela del eje, aplique más grasa y repita el procedimiento de instalación hasta eliminar toda holgura.

Vérifiez l'absence de jeu du montage en tirant et poussant sur la manivelle plusieurs fois vers le côté. Si le pédalier bouge, serrez le boulon de manivelle jusqu'à ce qu'il n'y ait plus de jeu. Si vous arrivez à un couple maximum de 54 N-m, retirez la manivelle de l'axe, ajoutez de la graisse et recommencez l'installation.

Verificare il gioco del gruppo scuotendo i bracci a manovella avanti e indietro rispetto al telaio. Se la manovella si muove, serrare il bullone del braccio della manovella fino a che non si avverte più alcun gioco. Se si raggiunge la coppia massima di 54 N-m, togliere la pedivella dall'alberino, applicare ancora grasso e ripetere le procedure di installazione fino all'eliminazione del gioco.

Controleer de montage op speling door de crankarmen heen en weer te bewegen. Indien de crank beweegt, draai dan de bout van de crankarm vaster totdat er geen speling meer is. Indien de maximale torsie van 54 N-m bereikt is, verwijder dan de crankarm van de as, vet opnieuw in en herhaal de installatieprocedure totdat de speling verdwenen is.

Verifique se ficaram folgas no conjunto montado, abanando os braços das manivelas para um lado e para o outro, afastando-os do quadro. Se a manivela se mover, aperte o perno do braço da manivela até que não se detecte nenhuma folga. Se se tiver atingido o momento de torção máximo de 54 N-m, retire o braço da manivela da cavilha, aplique mais massa consistente e repita os procedimentos de instalação até que se elimine a folga.

クランクアームをフレームから離すように前後に揺すり、アセンブリの遊びをチェックします。クラ ンクが動くようであれば、遊びが感じられなくなるまでクランクアーム・ボルトを締めます。トルク 値の最大値である 54 N•m まで達したら、クランクアームを軸から外し、さらにグリスを塗って、遊 びがなくなるまで取り付け手順を繰り返してください。

前后摇动曲臂，以检查组件是否安装到位。如果曲轴松动，坚固曲臂螺栓,直至不再松动。如果已达到最大扭矩 54N•m，从主轴上取下曲臂，再加一些润滑脂并重复安装程序，直至松动情况消除。

MAINTENANCE

ATTENTION
Road bottom bracket components are not interchangeable with mountain bike bottom bracket components. Bottom bracket drive side cup shields are not interchangeable with non-drive side cup shields. Ceramic bearings require regular maintenance. Use only water and a mild soap to clean the crankset and bottom bracket. Do not use a pressure washer. See maintenance instructions below:

- Remove the crank arms according to the manufacturer's instructions.
- Remove External Shield - Item 1
  Using your fingers, remove both the drive side and non-drive side External Shield
  Drive side GXP only: using the end of a flat head screwdriver in the slot (Item 1a), carefully pry the External Shield off the drive side bearing.
- Remove Gutter Seal - Item 2
  If your bottom bracket has a Gutter Seal, use a pick or a small flat head screwdriver to carefully pry along the inside edge of the Gutter Seal to remove it from the drive and/or non-drive side cups.
- Remove Cartridge Bearing Seal - Item 3
  Using a pick or a small flat head screwdriver, carefully pry along the inside edge of the Cartridge Bearing Seal to remove it from both the drive side and non-drive side cups.
- Load SKF LGHP 2 grease into a syringe. Apply grease onto and between the ball bearings; ensure they are completely covered. Rotate the bearing to flush out old grease then repeat the grease application.
- Install Cartridge Bearing Seal - Item 3
  Carefully press the Cartridge Bearing Seal back onto the appropriate bearing by hand; making sure you do not bend or deform the seal. Ensure the seal lip is fully seated into the groove of the bearing race. Apply grease to the outer face of the Cartridge Bearing Seal.
- Install Gutter Seal - Item 2
  If your bottom bracket has a Gutter Seal, carefully press it back into the appropriate cup by hand; making sure you do not to bend or deform the seal. Ensure the seal is fully seated in the cup groove. Apply grease to the outer face of the Gutter Seal.
- Install External Shield - Item 1
  Carefully install the External Shield back onto the appropriate bearing by hand, making sure not to bend or deform the seal.
- Wipe off any excess grease with a clean cloth.
- Re-install the crankarms according to the manufacturer's instructions.

WARTUNG

ACHTUNG
Innenlagerkomponenten für Rennräder und Innenlagerkomponenten für Mountainbikes sind nicht austauschbar. Lagerschalen für die Antriebsseite und Lagerschalen für die Nicht-Antriebsseite sind ebenfalls nicht austauschbar. Keramiklager müssen regelmäßig gewartet werden. Verwenden Sie nur Wasser und eine milde Seife, um die Kurbelgarnitur und das Innenlager zu reinigen. Verwenden Sie keinen Hochdruckreiniger. Beachten Sie die nachstehende Wartungsanleitung:

- Entfernen Sie die Kurbelarme gemäß den Anweisungen des Herstellers.
- Entfernen Sie die äußere Lagerschale – Pos. 1
  Entfernen Sie mit den Fingern die äußere Lagerschale auf der Antriebsseite und auf der Nicht-Antriebsseite.
  Nur GXP-Lager auf der Antriebsseite: Führen Sie einen Schlitzschraubenzieher in den Schlitz (Pos. 1a) ein und hebeln Sie die äußere Lagerschale vorsichtig aus dem Lager auf der Antriebsseite.
- Profildichtung entfernen – Pos. 2
  Wenn Ihr Innenlager mit einer Profildichtung versehen ist, hebeln Sie mit einem Dorn oder einem kleinen Schlitzschraubenzieher die Innenkante der Profildichtung vorsichtig heraus, um sie aus der Lagerschale auf der Antriebsseite und auf der Nicht-Antriebsseite zu entfernen.
- Patronenlagerdichtung entfernen – Pos. 3
  Hebeln Sie mit einem Dorn oder einem kleinen Schlitzschraubenzieher die Innenkante der Patronenlagerdichtung vorsichtig heraus, um sie aus der Lagerschale auf der Antriebsseite und auf der Nicht-Antriebsseite zu entfernen.
- Geben Sie SKF LGHP 2-Fett in eine Spritze. Tragen Sie Schmierfett auf und zwischen den Kugellagern auf. Achten Sie darauf, die Kugellager vollständig mit Fett zu bedecken. Drehen Sie das Lager, um altes Fett herauszudrücken, und tragen Sie erneut Schmierfett auf.
- Patronenlagerdichtung einbauen – Pos. 3
  Drücken Sie die Patronenlagerdichtung vorsichtig mit der Hand wieder auf das entsprechende Lager; achten Sie darauf, die Dichtung nicht zu verbiegen oder zu verformen. Stellen Sie sicher, dass die Dichtlippe vollständig in der Kerbe der Lagerlauffläche sitzt.
- Tragen Sie Schmierfett auf die äußere Seite der Patronenlagerdichtung auf.
- Profildichtung einbauen – Pos. 2
  Wenn Ihr Innenlager mit einer Profildichtung versehen ist, drücken Sie sie vorsichtig mit der Hand wieder in die entsprechende Lagerschale; achten Sie darauf, die Dichtung nicht zu verbiegen oder zu verformen. Stellen Sie sicher, dass die Dichtung vollständig in der Kerbe der Lagerschale sitzt. Tragen Sie Fett auf die Außenseite der Profildichtung auf.
- Äußere Lagerschale einbauen – Pos. 1
  Bauen Sie die äußere Lagerschale vorsichtig mit der Hand wieder in das entsprechende Lager ein; achten Sie darauf, die Dichtung nicht zu verbiegen oder zu verformen.
- Wischen Sie überschüssiges Fett mit einem sauberen Tuch ab.
- Bauen Sie die Kurbelarme gemäß den Anweisungen des Herstellers wieder ein.

MANTENIMIENTO

ATENCIÓN
Los componentes de los ejes de pedalier para carretera no son intercambiables con los de los ejes de pedalier para bicicletas de montaña. Las cazoletas del lado motriz del eje de pedalier no son intercambiables con las del lado no motriz. Los rodamientos cerámicos requieren un mantenimiento periódico. Para limpiar el conjunto de pedalier y el eje de pedalier, utilice únicamente agua y jabón. No utilice máquinas de lavado a presión. Consulte las instrucciones de mantenimiento siguientes:

- Quitar las bielas de los pedales siguiendo las instrucciones del fabricante.
- Quitar la cazoleta exterior – Paso 1
  Con los dedos, retire la cazoleta exterior tanto del lado motriz como del no motriz. Sólo para el lado motriz del GXP: insertando en la ranura la punta de un destornillador plano (paso 1a) y haciendo palanca con él con cuidado, extraiga la cazoleta exterior del rodamiento del lado motriz.
- Quitar la junta estriada – Paso 2
  Si el eje de pedalier de su bicicleta lleva una junta estriada, utilice un punzón o la punta de un destornillador pequeño de cabeza plana para hacer palanca con cuidado a lo largo del lado interior de dicha junta, para extraerla de las cazoletas de los lados motriz y/o no motriz.
- Quitar la junta del rodamiento del cartucho – Paso 3
  Utilizando un punzón o la punta de un destornillador pequeño de cabeza plana, haga palanca con cuidado a lo largo del lado interior de la junta del rodamiento del cartucho para extraerla de las cazoletas de los lados motriz y/o no motriz.
- Rellenar una jeringuilla con grasa SKF LGHP 2. Aplique grasa sobre los cojinetes de bolas y entre ellos, asegurándose de que queden completamente cubiertos. Haga girar el cojinete para que salga toda la grasa usada, y repita la operación de engrase.
- Instalar la junta del cojinete del cartucho – Paso 3
  Presione con cuidado con la mano sobre la junta de cojinete del cartucho para volver a colocarla sobre el cojinete correspondiente, con cuidado de no doblar ni deformar la junta. Asegúrese de que el labio de la junta quede completamente asentado en la ranura del anillo de rodadura del cojinete. Aplique grasa a la cara exterior de la junta del cojinete del cartucho.
- Instalar la junta acanalada - Paso 2
  Si su eje de pedalier lleva una junta acanalada, presione con cuidado con la mano para volver a colocarla en la cazoleta correspondiente, asegurándose de no doblar o deformar la junta. Asegúrese de que la junta quede totalmente asentada en la ranura de la cazoleta. Aplique grasa a la cara exterior de la junta acanalada.
- Instalar cazoleta exterior – Paso 1
  Vuelva a colocar con cuidado con la mano la cazoleta exterior sobre el cojinete correspondiente, con cuidado de no doblar ni deformar la junta.
- Limpie la grasa sobrante con un paño limpio.
- Vuelva a colocar las bielas de los pedales siguiendo las instrucciones del fabricante.

MAINTENANCE

ATTENTION
Il n'est pas possible d'utiliser de manière interchangeable les composants des boitiers de pédalier de vélo de route avec les boitiers de pédalier de VTT, ou vice versa. Les protections des cuvettes du boitier de pédalier du côté de la chaîne ne peuvent pas être échangés avec celles du côté opposé à la chaîne. Il faut entretenir régulièrement les roulements à billes en céramique. N'utiliser que de l'eau et un détergeant doux pour nettoyer le pédalier et le boitier de pédalier. Ne pas utiliser de nettoyeur haute-pression. Veuillez consulter les instructions d'entretien ci-dessous :

- Déposez les manivelles selon les instructions du fabricant.
- Déposez la protection externe - élément 1
  Avec les doigts, déposez les protections externes des deux côtés Côté de la chaîne, GXP uniquement : insérez l'extrémité d'un tournevis à tête plate dans la fente (élément 1a), et en faisant levier avec précaution, déposez la protection externe du côté de la chaîne.
- Déposez le joint de cuvette - élément 2
  Si le boitier de pédalier utilise un joint de cuvette, faites levier avec précaution avec une pointe ou un petit tournevis à tête plate le long de la bordure interne du joint pour le déposer des cuvettes droite et/ou gauche.
- Déposez les joints de l'axe de pédalier - élément 3
  Faites levier avec précaution avec une pointe ou un petit tournevis à tête plate le long du bord interne du joint pour le déposer des cuvettes droite et gauche.
- Remplir une seringue de graisse SKF LGHP 2. Recouvrez les roulements de graisse et mettez de la graisse entre les billes. Veillez à ce qu'elles soient complètement couvertes. Faites tourner les roulements pour purger la graisse usée et répétez l'application de graisse.
- Installez les joints de l'axe de pédalier - élément 3
  Remettez en place à la main et avec précaution le joint de l'axe de pédalier sur le roulement approprié. Veillez à ne pas tordre ou déformer le joint. Vérifiez que les lèvres du joint sont bien insérées dans la fente de la cage du roulement. Appliquez de la graisse sur la surface externe du joint de l'axe de pédalier.
- Installez le joint de cuvette - élément 2
  Si le boitier de pédalier utilise un joint de cuvette, remettez en place à la main et avec précaution le joint dans la cuvette approprié. Veillez à ne pas tordre ou déformer le joint. Vérifiez que le joint est bien inséré dans la fente de la cuvette. Appliquez de la graisse sur la surface externe du joint de la cuvette.
- Installez la protection externe - élément 1
  Remettez en place à la main et avec précaution la protection externe sur le roulement approprié. Veillez à ne pas tordre ou déformer le joint.
- Nettoyer tout débordement de graisse avec un chiffon propre.
- Remonter les manivelles selon les instructions du fabricant.

MANUTENZIONE

ATTENZIONE
I componenti del movimento centrale da strada non sono interscambiabili con i componenti del movimento centrale della mountain bike. Le protezioni della coppetta lato di guida del movimento centrale non sono interscambiabili con le protezioni della coppetta lato non di guida. I cuscinetti in ceramica richiedono una manutenzione regolare. Utilizzare solo acqua e un detergente delicato per pulire la pedaliera e il movimento centrale. Non utilizzare un pulitore a pressione. Vedere le istruzioni di manutenzione indicate di seguito:

- Rimuovere i bracci della manovella secondo le istruzioni del costruttore.
- Rimuovere la protezione esterna - Oggetto 1
  Con le dita, rimuovere la protezione esterna sia sul lato di guida sia sul lato non di guida. Solo per il GXP lato di guida: mediante l'estremità di un cacciavite a lama piatta inserita nella fessura (Oggetto 1a), estrarre delicatamente la protezione esterna del cuscinetto lato di guida.
- Rimuovere la guarnizione a mastice - Oggetto 2
  Se il movimento centrale è dotato di una guarnizione a mastice, utilizzare un dente o un cacciavite a lama piatta di piccole dimensioni per far leva lungo il bordo interno della guarnizione a mastice e rimuoverla dalle coppette lato di guida e/o lato non di guida.
- Rimuovere la guarnizione del cuscinetto a cartuccia - Oggetto 3
  Con un dente o un cacciavite a lama piatta di piccole dimensioni, far leva lungo il bordo interno della guarnizione del cuscinetto a cartuccia per rimuoverla dalle coppette lato di guida e lato di non guida.
- Caricare grasso SKF LGHP 2 in una siringa. Applicare grasso sopra e tra i cuscinetti a sfera; accertarsi che siano completamente coperti. Ruotare il cuscinetto per far uscire il grasso vecchio, quindi ripetere l'applicazione di grasso.
- Installare la guarnizione del cuscinetto a cartuccia - Oggetto 3
  Spingere delicatamente e con la mano la guarnizione del cuscinetto a cartuccia nuovamente sul cuscinetto appropriato, prestando attenzione a non piegare o deformare la guarnizione. Accertarsi che il bordo della guarnizione sia completamente alloggiato nella scanalatura del cono del cuscinetto. Applicare grasso sulla superficie esterna della guarnizione del cuscinetto a cartuccia.
- Installare la guarnizione a mastice - Oggetto 2
  Se il movimento centrale è dotato di una guarnizione a mastice, spingerla delicatamente nella coppetta appropriata con la mano, prestando attenzione a non piegare o deformare la guarnizione. Accertarsi che la guarnizione sia completamente alloggiata nella scanalatura della coppetta. Applicare grasso sulla superficie esterna della guarnizione a mastice.
- Installare la protezione esterna - Oggetto 1
  Reinstallare con cura la protezione esterna sul cuscinetto appropriato con la mano, prestando attenzione a non piegare o deformare la guarnizione.
- Rimuovere l'eventuale grasso in eccesso strofinando con un panno pulito.
- Reinstallare i bracci della manovella secondo le istruzioni del costruttore.

ONDERHOUD

OPGELET
Trapascomponenten voor wegfietsen zijn niet onderling verwisselbaar met trapascomponenten voor mountainbikes. Trapashulzen aan aandrijfzijde zijn niet onderling verwisselbaar met hulzen aan niet-aandrijfzijde. Keramische lagers vergen regelmatig onderhoud. Gebruik uitsluitend water en milde zeep om het crankstel en de trapas te reinigen. Gebruik geen hogedrukreiniger. Zie onderstaande onderhoudsinstructies:

- Verwijder de crankarmen volgens de instructies van de fabrikant.
- De externe bescherming verwijderen - Item 1
  Verwijder zowel de externe bescherming aan aandrijfzijde als aan niet-aandrijfzijde met behulp van uw vingers Alleen GXP aan aandrijfzijde: Haal de externe bescherming voorzichtig uit de lager aan aandrijfzijde door het uiteinde van een platte schroevendraaier in de gleuf (Item 1a) te steken.
- De gootafdichting verwijderen - Item 2
  Als uw trapas voorzien is van een gootafdichting, gebruik een puntig voorwerp of een smalle platte schroevendraaier om voorzichtig op de binnenrand van de gootafdichting te drukken zodat u deze van de doppen aan aandrijfzijde en/of niet-aandrijfzijde kunt afhalen.
- De cartridge lagerafdichting verwijderen - Item 3
  Gebruik een puntig voorwerp of een smalle platte schroevendraaier om voorzichtig op de binnenrand van de cartridge lagerafdichting te drukken zodat u deze van de doppen aan aandrijfzijde en/of niet-aandrijfzijde kunt afhalen.
- Vul een spuit met SKF LGHP 2 smeer. Breng smeer aan op en tussen de ballagers; zorg dat deze volledig bedekt zijn. Draai de lager om het oude smeer uit te spoelen en breng dan opnieuw smeer aan.
- De cartridge lagerafdichting installeren - Item 3
  Druk de cartridge lagerafdichting voorzichtig met de hand terug op de juiste lager; zorg dat u de afdichting niet buigt of vervormt. Zorg dat de afdichtingslip volledig in de groef van het loopvlak van de lager is geplaatst. Breng smeer aan op de buitenkant van de cartridge lagerafdichting.
- De gootafdichting installeren - Item 2
  Als uw trapas voorzien is van een gootafdichting, druk deze voorzichtig met de hand terug op de juiste dop; zorg dat u de afdichting niet buigt of vervormt. Zorg dat de afdichting volledig in de groef van de dop is geplaatst. Breng smeer aan op de buitenkant van de gootafdichting.
- Externe bescherming installeren - Item 1
  Installeer de externe bescherming met de hand voorzichtig terug op de juiste lager; zorg dat u de afdichting niet buigt of vervormt.
- Veeg eventueel overtollig smeer af met een schone doek.
- Installeer de crankarmen terug volgens de instructies van de fabrikant.

MANUTENÇÃO

ATENÇÃO
Os componentes do eixo pedaleiro das bicicletas de estrada não são intercambiáveis com os componentes do eixo pedaleiro das bicicletas de montanha. As tampas das caixas de rolamentos do eixo pedaleiro do lado com cremalheiras não são intercambiáveis com as tampas das caixas de rolamentos do eixo pedaleiro do lado sem cremalheiras. As chumaceiras cerâmicas exigem uma manutenção regular. Use só água e um sabão suave para limpar a pedaleira e o eixo pedaleiro. Não utilize uma lavadora de água sob pressão. Consulte as instruções de manutenção abaixo:

- Retire os braços de manivela de acordo com as instruções do fabricante.
- Retire a tampa exterior - Item 1
  Usando os dedos, retire tanto a tampa exterior do lado com cremalheiras como a do lado sem cremalheiras. Só para o caso do GXP do lado com cremalheiras: colocando a ponta achatada de uma chave de parafusos na fenda (Item 1a), cuidadosamente mova a tampa externa para fora da chumaceira do lado com cremalheiras.
- Retire o vedante da canaleta - Item 2
  Se o seu eixo pedaleiro tiver um vedante de canaleta, use um punção ou uma pequena chave de parafusos achatada para cuidadosamente fazer força ao longo do bordo de dentro do vedante de canaleta para o retirar das caixas de rolamentos do lado com cremalheiras e do lado sem cremalheiras.
- Retire o vedante do rolamento de cartucho - Item 3
  Usando um punção ou uma pequena chave de parafusos achatada faça força cuidadosamente ao longo do bordo de dentro do vedante de canaleta para o retirar das caixas de rolamentos do lado com cremalheiras e do lado sem cremalheiras.
- Carregue uma seringa com massa lubrificante SKF LGHP 2. Aplique massa lubrificante nos rolamentos de esferas e entre eles; assegure-se de que fiquem completamento recobertos. Rode o rolamento para empurrar para fora a massa lubrificante velha e depois repita a aplicação de massa lubrificante.
- Instale o vedante do rolamento de cartucho - Item 3
  Cuidadosamente carregue no vedante do rolamento de cartucho para o fazer voltar com a mão para o rolamento apropriado; assegure-se de que não dobra nem deforma o vedante. Assegure-se de que o lábio do vedante fica totalmente assente na canaleta da pista do rolamento. Aplique massa lubrificante à face externa do vedante do rolamento de cartucho.
- Instale o vedante da canaleta - Item 2
  Se o seu eixo pedaleiro tiver um vedante de canaleta, cuidadosamente carregue nele com a mão para o fazer regressar para dentro da caixa de rolamentos apropriada; assegure-se de que não dobra nem deforma o vedante. Assegure-se de que o vedante esteja completamente assente na ranhura da caixa de rolamentos. Aplique massa lubrificante à face externa do vedante da canaleta.
- Instale a tampa exterior - Item 1
  Cuidadosamente instale com a mão a tampa exterior no rolamento apropriado; assegure-se de que não dobra nem deforma o vedante.
- Limpe o excesso de massa lubrificante com um pano limpo.
- Volte a instalar os braços de manivela de acordo com as instruções do fabricante.

メンテナンス

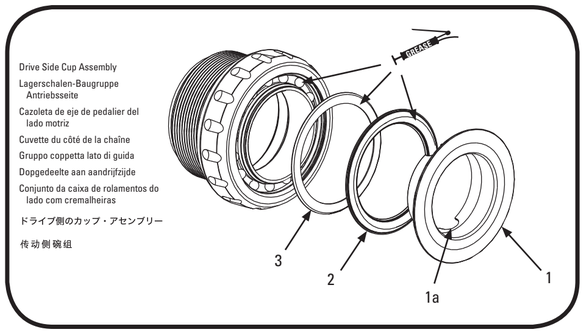
注意
Road のボトムブラケット・コンポーネントは、マウンテンバイクのボトムブラケット・コンポーネントと交換することはできません。ボトムブラケットのドライブ側のカップシールドは、非ドライブ側のカップシールドと交換することはできません。セラミック・ベアリングは定期的にメンテナンスを行う必要があります。水と弱い石鹸のみを使用して、クランクセットとボトムブラケットを洗浄します。勢いよく水をかけないでください。下記のメンテナンス手順に従ってください：

- メーカーの使用説明書に従って、クランクアームを取り外します。
- 外部シールドの取り外し - アイテム 1
  ドライブ側と非ドライブ側の両方の外部シールドを、指で取り外します。
  ドライブ側の GXP のみ：スロット内でマイナスドライバーの端を使用して（アイテム 1a）、ドライブ側のベアリングから慎重に外部シールドをこじ開けて取り外します。
- ガッタースールの取り外し - アイテム 2
  ボトムブラケットにガッタースールがある場合は、ピックまたは小型のマイナスドライバーを使用して、ガッタースール内側の端を慎重にこじ開け、ドライブ側および / または非ドライブ側のカップから、ガッタースールを取り外します。
- カートリッジ・ベアリングシールの取り外し - アイテム 3
  ピックまたは小型のマイナスドライバーを使用して、カートリッジ・ベアリングシール内側の端を慎重にこじ開け、ドライブ側および非ドライブ側のカップから、カートリッジ・ベアリングシールを取り外します。
- SKF LGHP 2 グリスを注入器に注入します。ボールベアリングの上および間にグリスを塗り、ベアリングがグリスで完全に覆われるようにします。ベアリングを回して古いグリスを取り去り、再び新しいグリスを塗布します。
- カートリッジ・ベアリングシールの取り付け - アイテム 3
  カートリッジ・ベアリングシールを慎重に手で押して、適切なベアリングに取り付けます。この際、シールを曲げたり変形させたりしないように注意してください。シールの縁がベアリングレースの溝に完全に収まっていることを確認します。カートリッジ・ベアリングシールの外側表面にグリスを塗ります。
- ガッタースールの取り付け - アイテム 2
  ボトムブラケットにガッタースールがある場合は、ガッタースールを慎重に手で押して、適切なカップに取り付けます。この際、シールを曲げたり変形させたりしないように注意してください。シールがカップの溝に完全に収まっていることを確認します。ガッタースールの外側表面にグリスを塗ります。
- 外部シールドの取り付け - アイテム 1
  外部シールドを手で慎重に、適切なベアリングに取り付けます。この際、シールを曲げたり変形させたりしないように注意してください。
- 余分なグリスをきれいな布で拭き取ります。
- メーカーの説明書に従って、クランクアームを再び取り付けます。

维护

注意事项
公路自行车与山地自行车的中轴组件不能互换。中轴传动侧与非传动侧的碗盖不能互换。陶瓷轴承需定期维护。仅使用水和温性肥皂清洗齿盘和中轴。切勿使用高压清洗器。参照下面的维护说明：

- 按照制造商的说明取下曲臂。
- 取下外盖 – 物件 1
  用手指取下传动侧和非传动侧的外盖。
  仅针对传动侧 GXP：将平头螺丝刀的头放在槽口（物件 1a）内，小心地从传动侧轴承上撬下外盖。
- 取下槽密封圈 – 物件 2
  如果您的中轴配一个槽密封圈，则用尖勾针或小平头螺丝刀小心地撬动槽密封圈的内边缘，将其从传动侧和 / 或非传动侧碗中取下。
- 取下卡盘轴承密封圈 – 物件 3
  用尖勾针或小平头螺丝刀小心地撬动卡盘轴承密封圈的内边缘，将其从传动侧和非传动侧碗中取下。
- 将 SKF LGHP 2 润滑脂装入注油针筒。在滚珠轴承上方和中间涂上润滑脂，确保全面涂抹。转动轴承挤出旧润滑脂，然后再涂一次润滑脂。
- 安装卡盘轴承密封圈 – 物件 3
  用手小心地将卡盘轴承密封圈按回相应的轴承上；确保不让密封圈弯曲或变形。确保密封圈边缘完全嵌入轴承座圈的凹槽中。
  在卡盘轴承密封圈朝外的一面涂上润滑脂。
- 安装槽密封圈 – 物件 2
  如果您的中轴配一个槽密封圈，则用手小心地将其按回相应的轴承中；确保不让密封圈弯曲或变形。确保密封圈全部嵌入碗槽中。在槽密封圈朝外的一面涂上润滑脂。
- 安装外盖 – 物件 1
  用手小心地将外盖装回相应的轴承上；确保不让密封圈弯曲或变形。
- 用干净的布擦去所有多余的润滑脂。
- 根据厂家的说明重新安装曲臂。



Service Intervals
Road Bikes: 100hrs use in dry conditions.
Mountain Bikes: 50hrs use in dry conditions.
Re-grease bearings immediately following any significant exposure to water (heavy rain; water crossings).

Wartungs-Intervalle
Straßen-Fahrräder: 100 h Fahrt bei trockenen Bedingungen.
Mountainbikes: 50 h Fahrt bei trockenen Bedingungen.
Lager nach intensivem Kontakt mit Nässe sofort nachfetten (Radfahren bei starkem Regen, Wasserläufe).

Intervalos De Mantenimiento
Bicicletas de carretera: 100 horas de uso en condiciones secas.
Bicicletas de montaña: 50 horas de uso en condiciones secas.
Vuelva a engrasar los rodamientos inmediatamente después de cualquier exposición significativa al agua (por ejemplo, tras circular bajo lluvia intensa o atravesar vías de agua).

Fréquence D'entretien
Vélos de route : toutes les 100 heures d'utilisation par temps sec.
VTT : toutes les 50 heures d'utilisation par temps sec.
Graisser immédiatement les roulements à billes après qu'ils ont été exposés à l'eau, par exemple s'il pleut fort ou si vous traversez des rivières.

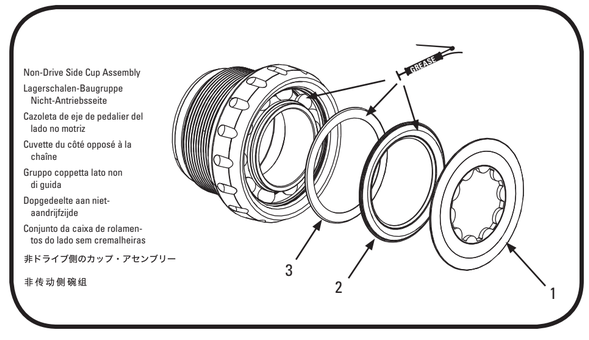
Intervalli Di Manutenzione
Bicicletta da strada: 100 ore di utilizzo in condizioni asciutte.
Mountain bike: 50 ore di utilizzo in condizioni asciutte.
Reingrassare i cuscinetti immediatamente dopo una significativa esposizione all'acqua (pioggia battente; attraversamento di corsi d'acqua).

Periodiek Onderhoud
Fietsen voor weggebruik: 100 uur gebruik onder droge omstandigheden.
Mountainbikes: 50 uur gebruik onder droge omstandigheden.
Smeer de lagers weer in met vet direct nadat de fiets is blootgesteld aan een aanzienlijke hoeveelheid water (zware regen; water doorkruisen).

Intervalos De Manutenção
Bicicletas de estrada: 100 horas de uso em condições secas.
Bicicletas de montanha: 50 horas de uso em condições secas.
Volte a lubrificar os rolamentos e chumaceiras imediatamente após qualquer contacto significativo com água (chuva forte, travessias a vau).

メンテナンス・サービスの実施頻度
ロードバイク：乾燥した状況下での使用 100 時間ごと。
マウンテンバイク：乾燥した状況下での使用 50 時間ごと。
著しく水分にさらされた場合（豪雨での走行や水溜り内の横切りなど）は、使用後すぐにベアリングにグリスを塗ってください。

保养间隔
公路自行车：干燥状况下每骑行 100 小时保养一次。
山地自行车：干燥状况下每骑行 50 小时保养一次。
大量遇水（暴雨，穿越水域）后立即重新润滑轴承。



SRAM LLC WARRANTY

Extent of Limited Warranty

SRAM warrants its products to be free from defects in materials or workmanship for a period of two years after original purchase. For complete warranty information please visit our website at www.sram.com.

GEWÄHRLEISTUNG DER SRAM LLC

Garantieumfang

SRAM garantiert vom Erstkaufdatum an für zwei Jahre, dass das Produkt frei von Mängeln in Material oder Verarbeitung ist. Ausführliche Informationen zur Garantie finden Sie auf unserer Website unter www.sram.com

GARANTÍA DE SRAM LLC

Alcance de la garantía limitada: SRAM garantiza durante un período de dos años a partir de la fecha de compra original que sus productos carecen de defectos de materiales o de fabricación. Puede encontrar toda la información acerca de la garantía en nuestra web, www.sram.com.

GARANTIE DE SRAM LLC

Portée de la garantie limitée : SRAM garantit que ses produits sont exempts de défauts de matières premières ou de vices de fabrication pour une durée de deux ans à compter de la date d'achat originale. Vous trouverez tous les détails concernant la garantie en visitant notre site Internet à l'adresse : www.sram.com.

GARANZIA DI SRAM LLC

Portata della garanzia limitata: SRAM garantisce i propri prodotti per un periodo di due anni dalla data originale di acquisto per ogni difetto di materiali o di lavorazione. Per informazioni complete sulla garanzia visitare il nostro sito Web all'indirizzo www.sram.com.

SRAM LLC GARANTIE

Omvang van de beperkte garantie SRAM garandeert dat zijn producten voor een periode van twee jaar na de oorspronkelijke aanschafdatum vrij van defecten in materialen of vakmanschap zijn. Voor de volledige informatie over onze garantie, bezoek onze website op www.sram.com.

GARANTIA DA SRAM LLC

Âmbito da Garantia Limitada:
SRAM garante os seus produtos quanto à não existência de defeitos de materiais nem de mão de obra, pelo prazo de dois anos a contar da data da compra original. Para obter informações completas de garantia, por favor visite o nosso website em www.sram.com.

SRAM LLC の保証規定

制限的保障の範囲
SRAM 社（以下当社）では、本製品のお買い 上げの日から 2 年間、材質あるいは製作技術が原因となる損傷や故障がないことを保証い たします。保障に関する完全な情報は、www.sram.com をご参照ください。

SRAM LLC 质保

有限质保的范围
SRAM 保证其产品在最初购买之后的两年内 在材质和工艺方面无瑕疵。
完整的质保信息，请访问我们的网站 www.sram.com。

QUARQ

Power Meter User Manual

95-6118-008-000 Rev A

Statement of Compliance for FCC and Industry Canada:
Quarq Technology / SRAM LLC.
Model#: 0808
FCC ID: C9O-MERC1
IC: 10161A-MERC1

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

Operation is subject to the following two conditions:
1 This device may not cause harmful interference, and
2 this device must accept any interference received, including interference that may cause undesired operation.

This product meets the applicable Industry Canada technical specifications.
Le présent matériel est conforme aux specifications techniques applicables d'Industrie Canada.

The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met.

Warning: Any changes or modifications not expressively approved by SRAM could void the user's authority to operate this equipment.

Statement of RoHS Compliance
SRAM LLC. certifies that this product and its packaging are in compliance with European Union Directive 2002/95/EC on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronics Equipment, commonly known as RoHS.

ANT+(TM) Product Certification

This product is ANT+ certified and complies with the bicycle power ANT+ Device Profile. For a complete listing of ANT+ Certified Products and their specific interoperability, please visit www.thisisant.com.

This publication includes trademarks and registered trademarks of SRAM LLC designated by the symbols ™ and ®, respectively.

Product names used in this publication may be trademarks or registered trademarks of others.

SRAM LLC WARRANTY

EXTENT OF LIMITED WARRANTY

Except as otherwise set forth herein, SRAM warrants its products to be free from defects in materials or workmanship for a period of two years after original purchase. This warranty only applies to the original owner and is not transferable. Claims under this warranty must be made through the retailer where the bicycle or the SRAM component was purchased. Original proof of purchase is required. **Except as described herein, SRAM makes no other warranties, guaranties, or representations of any type (express or implied), and all warranties (including any implied warranties of reasonable care, merchantibility, or fitness for a particular purpose) are hereby disclaimed.**

LOCAL LAW

This warranty statement gives the customer specific legal rights. The customer may also have other rights which vary from state to state (USA), from province to province (Canada), and from country to country elsewhere in the world.

To the extent that this warranty statement is inconsistent with the local law, this warranty shall be deemed modified to be consistent with such law, under such local law, certain disclaimers and limitations of this warranty statement may apply to the customer. For example, some states in the United States of America, as well as some governments outside of the United States (including provinces in Canada) may:

a. Preclude the disclaimers and limitations of this warranty statement from limiting the statutory rights of the consumer (e.g. United Kingdom).

b. Otherwise restrict the ability of a manufacturer to enforce such disclaimers or limitations.

For Australian customers:
This SRAM limited warranty is provided in Australia by SRAM LLC, 133 North Kingsbury, 4th floor, Chicago, Illinois, 60642, USA. To make a warranty claim please contact the retailer from whom you purchased this SRAM product. Alternatively, you may make a claim by contacting SRAM Australia, 6 Marco Court, Rowville 3178, Australia. For valid claims SRAM will, at its option, either repair or replace your SRAM product. Any expenses incurred in making the warranty claim are your responsibility. The benefits given by this warranty are additional to other rights and remedies that you may have under laws relating to our products. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

LIMITATIONS OF LIABILITY

To the extent allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event shall SRAM or its third party suppliers be liable for direct, indirect, special, incidental, or consequential damages.

LIMITATIONS OF WARRANTY

This warranty does not apply to products that have been incorrectly installed and/or adjusted according to the respective SRAM user manual. The SRAM user manuals can be found online at sram.com, rockshox.com, avidbike.com, truvativ.com, or zipp.com.

This warranty does not apply to damage to the product caused by a crash, impact, abuse of the product, non-compliance with manufacturers specifications of usage or any other circumstances in which the product has been subjected to forces or loads beyond its design.

This warranty does not apply when the product has been modified, including, but not limited to any attempt to open or repair any electronic and electronic related components, including the motor, controller, battery packs, wiring harnesses, switches, and chargers.

This warranty does not apply when the serial number or production code has been deliberately altered, defaced or removed.

This warranty does not apply to normal wear and tear. Wear and tear parts are subject to damage as a result of normal use, failure to service according to SRAM recommendations and/or riding or installation in conditions or applications other than recommended.

Wear and tear parts are identified as:

- Dust seals
- Bushings
- Air sealing o-rings
- Glide rings
- Rubber moving parts
- Foam rings
- Rear shock mounting hardware and main seals
- Upper tubes (stanchions)
- Stripped threads/bolts (aluminium, titanium, magnesium or steel)
- Brake sleeves
- Brake pads
- Chains
- Sprockets
- Cassettes
- Shifter and brake cables (inner and outer)
- Handlebar grips
- Shifter grips
- Jockey wheels
- Disc brake rotors
- Wheel braking surfaces
- Bottomout pads
- Bearings
- Bearing races
- Pawls
- Transmission gears
- Spokes
- Free hubs
- Aero bar pads
- Corrosion
- Tools
- Motors
- Batteries

Notwithstanding anything else set forth herein, this warranty is limited to one year for all electronic and electronic related components including motors, controllers, battery packs, wiring harnesses, switches, and chargers. The battery pack and charger warranty does not include damage from power surges, use of improper charger, improper maintenance, or such other misuse.

This warranty shall not cover damages caused by the use of parts of different manufacturers.

This warranty shall not cover damages caused by the use of parts that are not compatible, suitable and/or authorised by SRAM for use with SRAM components.

This warranty shall not cover damages resulting from commercial (rental) use.

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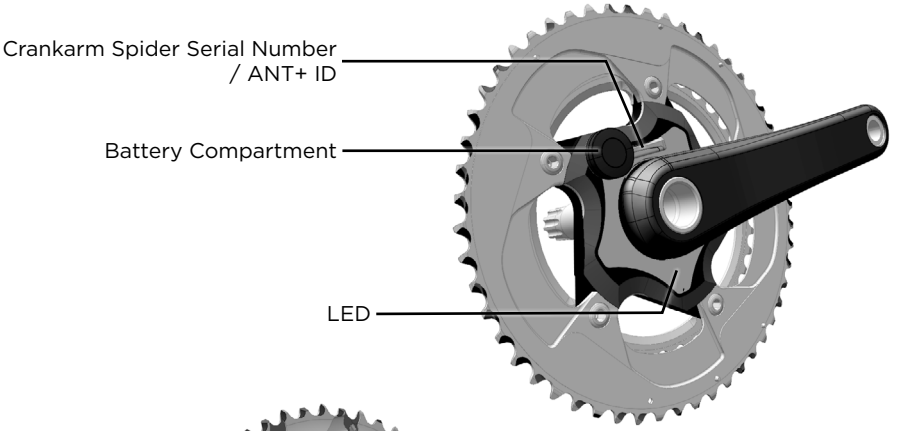
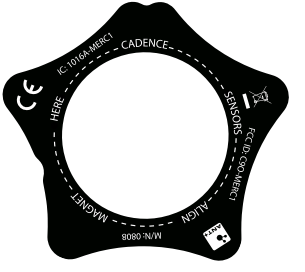
POWER METER ANATOMY





Cadence Sensor Ring Label

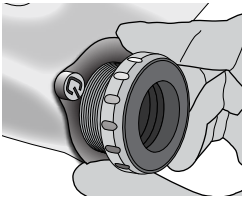
INSTALLATION

MAGNET INSTALLATION

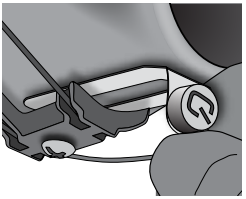
The included magnet must be installed for the power meter to function. There are three ways to install the magnet: BB Cup Mount, Cable Guide Mount, and Adhesive Putty. **Please choose the one mounting option most appropriate for your frame.**

When properly installed, the magnet should be in line with the cadence sensors and within 2-8 mm of the sensor ring. If necessary, magnets may be stacked to achieve the proper distance to the sensor. Do not allow the magnet to contact the power meter.

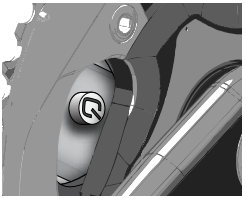
It is easier to install the magnet when the cranks are not installed on the frame.



BB Cup Mount



Cable Guide Mount

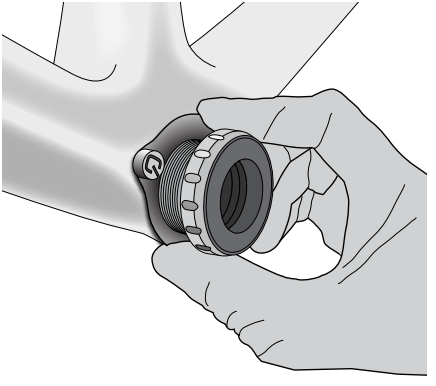


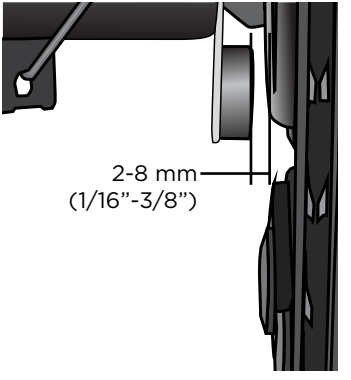
Adhesive Putty

BB CUP MOUNT INSTALLATION

The BB Cup Mount is only compatible with threaded bottom brackets. It does not work with frames that have bearings pressed into the bottom bracket (BB30, PF30, etc.). Frames using threaded bottom bracket adapters (ie. SRAM GXP30 BB Adapter) may use the BB Cup Mount if the mount is installed onto the threaded drive side bottom bracket cup.

1. If necessary, remove the existing cranks and bottom bracket.
2. Slide the BB Cup Mount over the threads of the drive side bearing cup with the magnet facing away from the frame.
3. Hold the magnet at the 9 o'clock position while the bottom bracket is tightened to the manufacturer's recommended torque.
4. Confirm the magnet is within 2-8 mm (1/16"-3/8") of the sensor.



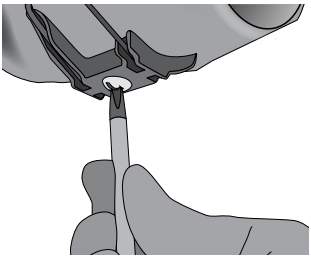


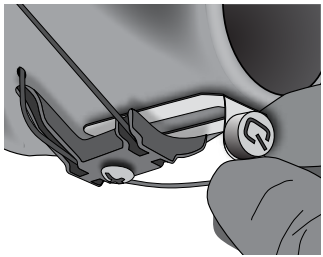
CABLE GUIDE MOUNT INSTALLATION

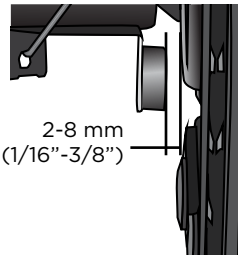
The Cable Guide Mount should only be used when the cable guide is fastened with a screw. If the cable guide is fastened with a rivet, use the Bottom Bracket Cup Mount or Adhesive Putty instead.

Installation Notes: Do not allow the magnet to contact the power meter. When properly installed, the magnet should be in line with the cadence sensors and within 2-8 mm (1/16”-3/8”) of the sensors.

1. Remove the existing cranks.
2. Loosen the cable guide screw. It may be helpful to shift the front derailleur to the small chainring position, and the rear derailleur to the smallest cog. This will reduce the cable tension, and make it easier to slide the cable guide mount under the cable guide.
3. Slide the mount under the cable guide. The guide can be installed with the magnet pointed down (as illustrated) or up.
4. Reinstall the cranks.
5. Tighten the cable guide screw.
6. Confirm the magnet is within 2-8 mm (1/16”-3/8”) of the sensor.





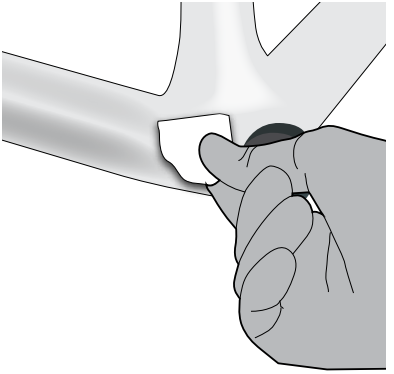


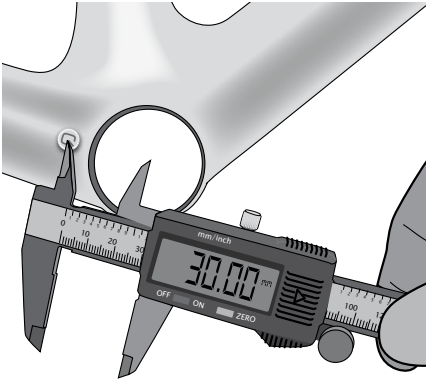
ADHESIVE PUTTY INSTALLATION

The included adhesive putty will permanently attach the magnet to your frame. Other ***non-permanent*** *attachment options include: hot glue, some epoxies, electrical tape, or similar adhesives.*

Installation Notes: Do not allow the magnet to contact the power meter. When properly installed, the magnet should be in line with the cadence sensors and within 2-8 mm (1/16”-3/8”) of the sensors. Depending on your frame, you may need to stack magnets to achieve this distance.

1. Remove the existing cranks.
2. Use the included sandpaper to gently scuff the frame where the magnet will be mounted. The center of the magnet should be positioned between 27.5 mm and 30 mm (1” - 1 1/8”) from the center of the bottom bracket.
3. Clean the frame with the included alcohol pad prior to attaching the magnet.
4. Knead both colors of adhesive putty with your fingers until you have one consistent color.
5. Place a 6 mm (1/4”) diameter ball of putty on the back of the magnet, and then press the magnet onto the frame.
6. Use a toothpick to carefully remove any excess putty before it dries. The putty will set up in about 10 minutes, and will cure in 1 hour.
7. Reinstall the cranks.
8. Confirm the magnet is within 2-8 mm (1/16”-3/8”) of the sensor.





CRANK INSTALLATION

Install the crankset and bottom bracket assembly onto your bike according to the manufacturer's instructions.

Once the crankset has been installed, the power meter must not contact the frame or any other components. Please contact Quarq customer service with any frame compatibility questions. An updated list of compatible frames is available at Quarq.com.

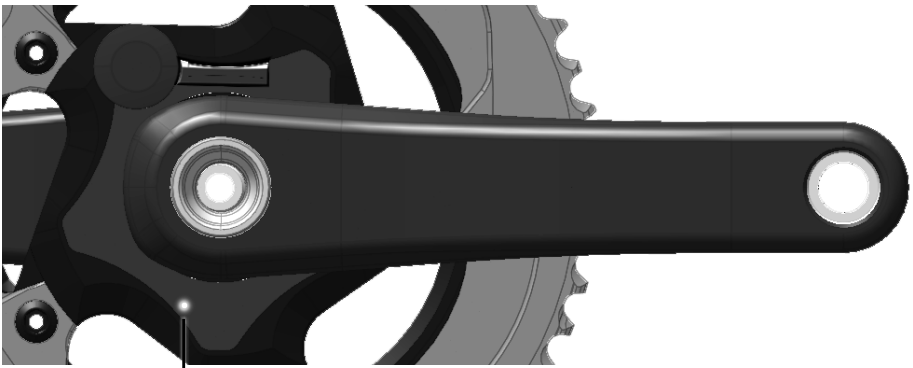
SET UP

LED FUNCTIONALITY

The LED provides useful information about the operating condition of the power meter. See the 'Self-Test' in the Troubleshooting section for more LED information.

The LED will flash:

- twice when battery is inserted
- once when waking
- once when finished zeroing (calibration)
- once when entering the sleep state



PAIRING

Before pairing your power meter to a computer, make sure you are at least 10 meters (30 feet) from any other ANT+™ device. This will keep you from accidentally pairing to another person's ANT+ device.

To pair the power meter with an ANT+ computer, first spin the crank backwards 2-3 times to wake the power meter and begin broadcasting ANT+ messages. *The power meter will shut off after about 10 minutes of inactivity.*

Follow the pairing instructions specific to your ANT+ computer.

GARMIN® EDGE® 800

To pair the power meter:

Click the Power button → tap the Dumbbell icon  **→ Rescan**

"Power Meter Detected" will flash up on your screen when the units are paired.

GARMIN EDGE 500

To pair the power meter:

Menu → Settings → Bike Settings → Bike 1 → ANT+Power → Rescan

"Power Meter Detected" will flash up on your screen when the units are paired.

GARMIN FORERUNNER® 310XT & 910XT WATCH

*Your watch must be in bike mode in order to pair and zero your power meter (press and hold the **Mode** button).*

To pair the power meter:

Mode → Bike Settings → Bike 1 → Ant+Power → Restart Scan

"Power Meter Detected" will appear on your screen when the units are paired.

ZEROING

The power meter must be zeroed to compensate for environmental changes. The power meter can be zeroed two ways: **Auto Zero** and **Manual Zero**.

When to perform the Zero procedure

For best results, you should perform the **Manual Zero** procedure before you start each ride. The **Auto Zero** procedure can be performed instead of a **Manual Zero** or if your computer cannot send a "Calibrate" command; if the temperature changes greatly during your ride; or if you feel that you are getting inaccurate data.

Manual Zero

The Manual Zero procedure should be performed before every ride with the rider off the bike and with the drive-side crank arm at 6 o'clock.

The power meter may be zeroed manually by sending the "Calibrate" command from an ANT+™ compatible bike computer. The power meter will return the Zero Offset value (or "Current Calibration" on some computers) to the computer; however, not all ANT+ computers will display the value. The Zero Offset is typically between +/- 1000. Some units will always have a Zero Offset value outside of this range without any impact on performance. What is more important is that the pre- and post-ride Zero Offset values are within 50 points of each other. If the pre- and post-ride Zero Offset values frequently vary by more than 50, or if day-to-day values vary widely, please call Quarq customer service.

When performing the **Manual Zero** procedure, put the drive side crank arm in the 6 o'clock position, keeping the cranks stationary with no force on the pedals. Follow the pairing instructions specific to your ANT+ computer to send the "Calibrate" command. The LED will flash one time when zeroing is complete.

GARMIN® EDGE® 800

Click the Power button → tap the Dumbbell icon  **→ Calibrate**

GARMIN EDGE 500

Menu → Settings → Bike Settings → Bike 1 → ANT+Power → Calibrate

GARMIN FORERUNNER® 310XT & 910XT WATCH

Mode → Bike Settings → Bike 1 → Ant+Power → Calibrate

Auto Zero

Spin the crank backwards for 4-5 complete revolutions. The LED will flash one time when zeroing is complete. The computer will not display the Zero Offset value. The **Auto Zero** procedure may be performed while coasting with the rider on the bike, stopped using one or both feet, or by hand with the rider off of the bike.

Zero Offset Stabilization

With a new power meter or newly installed chainrings, the zero offset takes 2-3 rides to stabilize. During this time you should perform the Manual Zero procedure regularly to ensure accurate power readings. Short, hard efforts in both chainrings on your first ride will speed up stabilization.

CHAINRING INSTALLATION

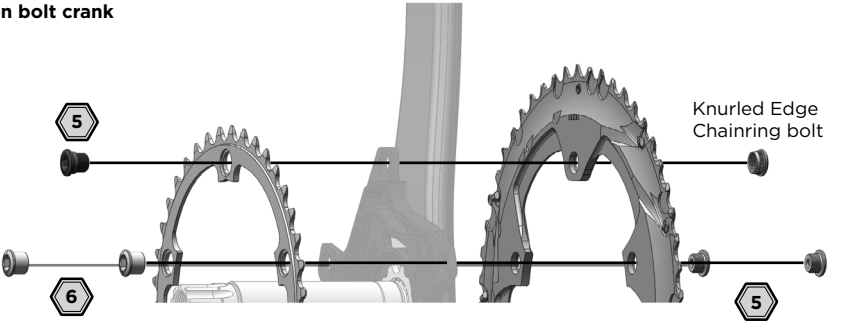
If you are replacing worn rings with a new pair of the same model, or replacing with SRAM Red TT chainrings, re-calibration is not required.

Your zero offset values will be different than those you have previously noted.

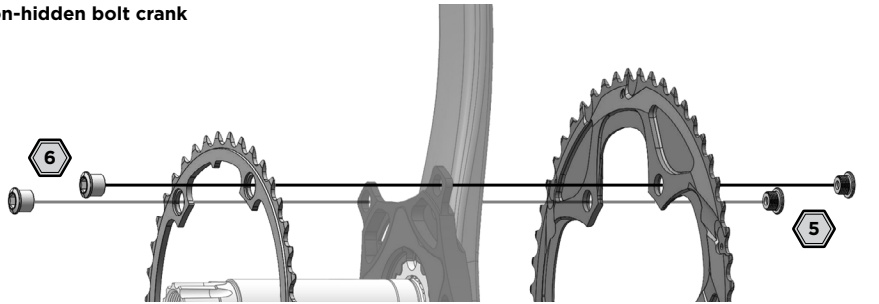
When installing chainrings you must align the chainring tabs so they are in line with the crankarm.

Tighten the chainring bolts according to the manufacturer's instruction. Tighten SRAM steel chainring bolts to 10 N•m (88.5 in-lb).

Hidden bolt crank

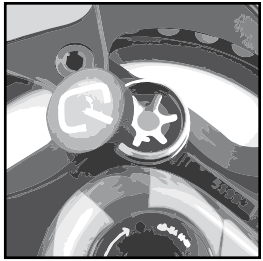


Non-hidden bolt crank



MAINTENANCE AND CARE

BATTERY INFORMATION



- The power meter is powered by a CR2032 coin cell battery.
- The battery can be replaced without any special tools. To replace the battery, unthread the lid counter-clockwise. Do not use any tools to pry it open. The battery should be installed with the "+" facing out. Reinstall and hand tighten the battery cover after the battery is replaced.
- The power meter automatically switches on when the crankarms are rotated, and shuts off after about 10 minutes of inactivity. Under normal operating conditions the battery will last for about 300 hours of riding.
- The power meter will send a warning when the battery is low. However, not all ANT+™ computers will display the message.
- The power meter retains its sensor ID throughout battery changes and will remain properly paired with your computer.

BATTERY CARE

- The battery must be installed correctly ("+" out) and have sufficient charge.
- Periodically check the battery compartment to make sure the battery contact is free of corrosion and moisture.

CLEANING

The power meter is very durable; however, periodic cleaning is recommended. Use a rag to wipe debris from the power meter, crankarms, magnet, and chainrings. Brush the power meter, crankarms, magnet, and chainrings with clean or soapy water, then rinse with clean water and let air dry. Do not use harsh chemicals and do not use a high-pressure washer.

TROUBLESHOOTING

Performing a Self-Test can quickly diagnose problems with the Power Meter.

Perform a Self-Test by back-pedaling several times, and then observe the LED.

- No flash: Dead battery, or magnet not installed.
- 1 flash: Self check pass. Head unit paired.
- 2 flashes: Self check pass. No head unit paired.
- 3 flashes: Self check Fail. Reed switch Failure.
- 4 flashes: Self check Fail. Bad Strain Gauge.

Power Meter does not pair with the computer

- Check the battery. The battery must be installed correctly ("+" out) and have sufficient charge. Make sure the battery contact is free of corrosion.
- Check the magnet position. Confirm the magnet is within 2-8 mm (1/16"-3/8") of the sensor. The magnet should be installed according to the instructions on pages 8-10. Once the cadence sensors have been activated, the power meter will begin transmitting messages and is ready to be paired.
- Make sure the proper pairing technique has been followed for your bike computer. The pairing process will vary by manufacturer. Refer to your bike computer's instruction manual.
- If you are using a Garmin® bike computer with ANT+™ heart rate enabled, calibration will often be faster when you are wearing the heart rate monitor/strap. Turn off the ANT+ HRM function if you are not using a heart rate strap.
- Check with Quarq for the recommended firmware version for your Garmin computer. Follow the instructions specific to your ANT+™ computer to check the installed firmware version.

GARMIN EDGE® 800

Menu → Settings → About Edge

GARMIN EDGE 500

Menu → Settings → About Edge

*To view the menu, you must press and hold the **Menu** button until the menu pops up.*

GARMIN FORERUNNER® 310XT & 910XT WATCH

Mode → Settings → About Forerunner

Cadence, but no power

- Check the magnet position. The magnet should be installed according to the instructions on pages 8-10. Zero the power meter using Auto Zero or Manual Zero as described on pages 12-13.
- Remove any separate cadence or speed sensors.

Unusually high or low power values

1. Perform the Manual Zero as described on page 13.
2. If the Manual Zero is outside +/- 1000, check pre- and post- ride Zero Offset values.
3. If the pre- and post-ride Zero Offset values differ by more than 50 points, it may be necessary to contact Customer Support. *Keeping a record of the Zero Offset values will be helpful when contacting Customer Support.*

- Remove third party cadence sensors. The power meter delivers both power and cadence data to the bike computer.
- Inspect and clean the chainrings and power meter, including the chainring mounting tabs. Re-assemble according to the instructions on page 14.

Manual Zero (Calibration) Fails

- When performing the Manual Zero procedure, make sure that the drive side crank arm is at the 6 o'clock position, there is no weight on the pedals, and the cranks are stationary.
- If you are using a Garmin® bike computer with ANT+™ heart rate enabled, calibration will often be faster when you are wearing the heart rate monitor/strap. Turn off the ANT+ HRM function if you are not using a heart rate strap.

Wireless Signal Disconnections

- Check the magnet position. The magnet should be installed within 2-8 mm (1/16"-3/8") of the sensors, according to the instructions on pages 8-10.
- Make sure the magnet is clean and free of debris.
- Check and replace the battery in the power meter and/or bike computer.
- Make sure there is no moisture in the battery compartment.

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