



BACK TO BASICS WORKSHOP

—

NO SHORTCUTS



BACK TO BASICS WORKSHOP

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**THIS TECHNICAL DOCUMENT
IS ONLY FOR IN HOUSE USE
FOR SCOTT SPORTS SA.
IT IS NOT INTENDED OR
PERMITTED TO BE SPREAD
TO THE MARKET. PLEASE
FOLLOW THIS ADVICE.
THANK YOU!**

NO SHORTCUTS

“No Shortcuts” defines the SCOTT spirit of doing things the right way, for the right reasons.

If you're like us, you say what you say, do what you do, ride where you ride because you love it.

GENERAL INFORMATION

Welcome to the SCOTT Technical Services Back to Basics Workshop

This Training program is designed to provide professional bicycle mechanics with the necessary information to perform basic bike repairs efficiently, fast and at a repeatable high quality level.

The combination of knowledge, competence and efficiency will be a real asset to your skills in terms of improved customer relation and less repeating problems.

This advanced level course has been designed to improve the mechanics core knowledge and skills in specific areas.

The focus is set on basic tool usage as well as on proper warranty claim handling to ensure a fast timesaving and trouble-free process every time.

None the less time and practice are still required to become an expert. Practice makes perfect.

During the Back to Basic Workshop you will be shown the following:

- Basic mechanical skills that are applied in every day repairs/claiming process
- Correct use of tools and equipment in order to perform quality repairs every time
- Showing how to correctly claim a warranty issue fast and trouble free
- Introducing to service and maintenance schedule to ensure total quality management

SAFETY INSTRUCTIONS

SAFETY FIRST!

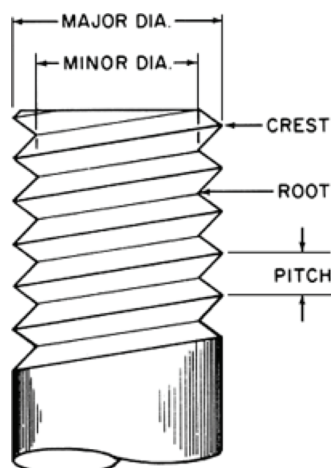
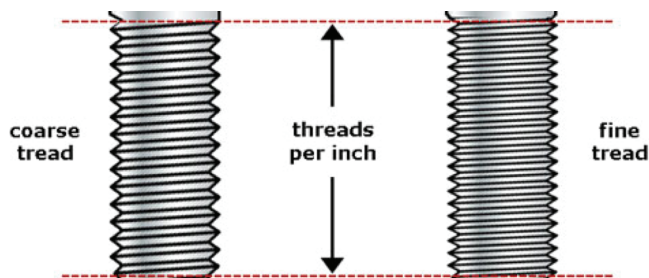
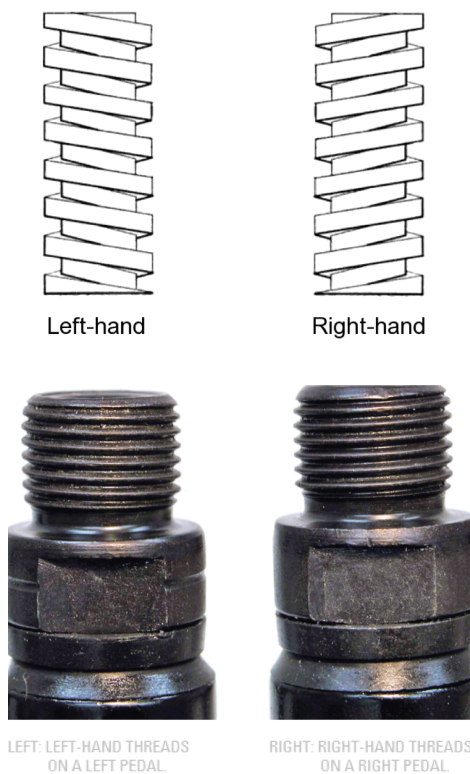
We care about YOU. Please, always wear your safety glasses and protective gloves when servicing SCOTT products. Protect yourself! Wear your safety gear!



BASIC INFORMATION

THREAD IDENTIFICATION KNOWLEDGE

The standard is a **RIGHT** hand oriented thread, but make sure you can easily identify the difference between left and right hand oriented thread. Best example: pedal threads.



THREAD STANDARDS - BICYCLES

The **ISO metric screw threads** are the world-wide most commonly used type of general-purpose screw thread.

The **BSC British Standard Cycle (BSC/BSA)** is a British **Imperial** (") screw thread standard. The thread runs at 60 degrees and comes as 24 threads per inch.

The "Gold" Standard of threaded Bottom Brackets, ISO/English or BSC (British Standard Cycle), is a good example for the combination of left and right thread orientations in one component.



THREAD CUTTING

When a thread becomes damaged, there are sometimes options for repair. Typically, when an internal thread becomes damaged, it is damaged at end of the threads, not the middle.

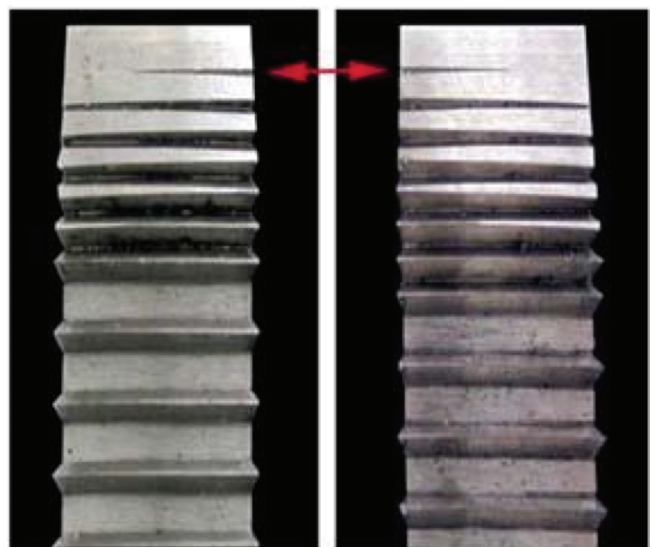
If only minor damage has occurred, it may be possible to re-tap the thread. This assumes that enough undamaged thread is remaining to allow proper tightness.

As a practical test, after tapping the thread, slightly over-torque from the recommended specification. If the thread is weakened, it will strip and not pass this test. If it does not strip, the thread is adequate, and should survive the use.

Shown below is a classic **pedal** or **derailleur** hanger tap.



Shown below is a **bottom bracket** thread cutter.



Right-hand thread
Non-drive side

Left-hand thread
Drive side

GENERAL ADVICE WHEN CUTTING THREADS

- 1 Choose the right size or tool that is appropriate for the size of the bolt or the hole you want to thread.
- 2 Place the tap into the special wrench and tighten it in or use only cleaned special tools.
- 3 Place the cutting end of the tap centered over the hole and turn slowly.
- 4 Use an appropriate amount of cutting oil to lubricate the tap.
- 5 As with the die, once the tap is started, make a slight reverse turn every 360°.
- 6 Clean the new tread from any cutting oil and remaining metal splinter.

THREAD PREPARATION

The primary form of thread preparation is lubrication. The use of special lubricants prevents corrosion and seizing of the screwed connection and notably reduces the time required and the costs involved to loosen these connections, for example during the inspection.

There are several differing types of thread preparation and there uses. We want to give you a quick overview.

Type	Use
oil	Generally used on threads of either small diameter or fine thread pitch.
grease	Generally used on threads of larger diameter or courser thread pitch. Its advantage over oil is durability under exposure to moisture and less of a tendency to evaporate.
Anti-seize	A Grease-based compound which contains metal particles, which neutralize rust/corrosion. MUST be used where there are two dissimilar metals in contact, which causes galvanic corrosion(very aggressive/destructive)

THREAD LOCKER

A thread locker is an **anaerobic adhesive** used on threaded metals that cures at room temperature in the absence of air. The adhesive completely fills the gaps between mating threads to lock and seal the threaded assembly. There are several different useful thread lockers. How to use thread lock correctly:

- 1 Shake the screw lock thoroughly.
- 2 Clean the screw as well as the thread with degreasing agent and remove leftovers from the old screw lock.
- 3 For a M10 x 1 screw, a single drop that actually finds its way into the thread appears to be the perfect amount.
- 4 The Allen key is to be pushed into the screw completely in order to prevent the screw head from being damaged.
- 5 Tighten the screw entirely as prescribed in the manual and do not wait for the screw lock to start drying.
- 6 After this, do not twist the screw any further, as the screw lock is to cure entirely.



IMPORTANT

Screw lock is to be applied after every undoing of a screw. The system connection is not safe in case a screw has been twisted only a little bit.

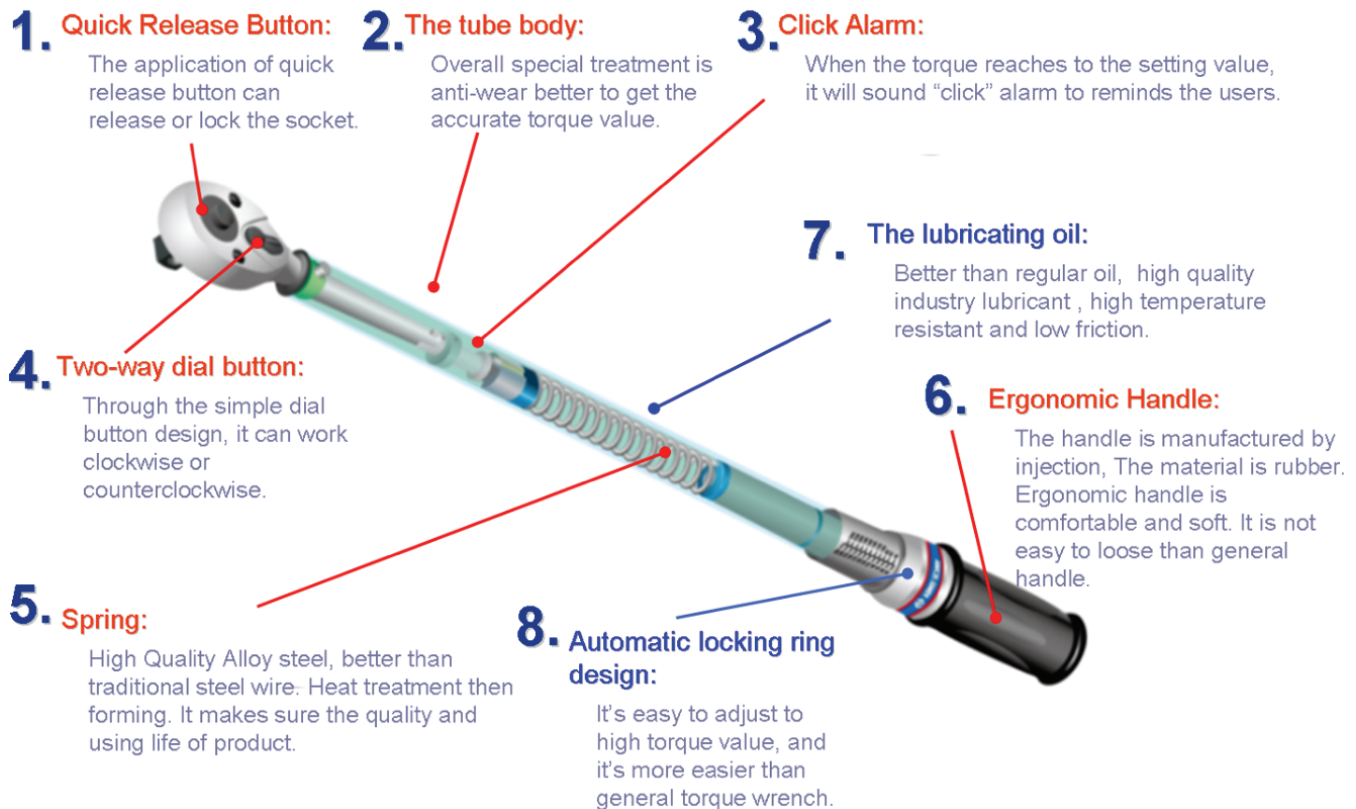
Always undo screws with heat, particularly in case you have applied green screw lock. Heating the thread with a soldering iron works better than with a hot air blower as the latter might harm the surface of the frame or component respectively.

Heat the electric soldering iron - Touch the top of the screw with the help of a little bit of fluid and you will know when the screw has reached the 100 degree Celsius mark - Undo the screw quickly thereafter.

01 TOOLS

TORQUE WRENCHES

A torque wrench is a tool used to apply precisely a specific torque (rotational force) to a fastener such as a nut or bolt. It should **NEVER** be used to lose bolts/nuts. It will damage the torque wrench and it has to be recalibrated or replaced. How a torque wrench is built up is shown below.



Care and maintenance for your Torque Wrench:

- 1** Regular Maintenance -> keep your tools clean and use it only for its **specific** purpose
- 2** Regular Recalibration -> **at least** once a year you have to recalibrate all your torque wrenches used regularly
- 3** Permanently Nulling after each job -> otherwise it won't be an accurate tool (too much tension on spring)

How to use a Torque Wrench correctly:

- 1** Make sure you use the Torque Wrench only at its handle area to apply the right amount of torque. Otherwise the lever arm will be shortened or enlarged and the torque wrench won't work correctly.
- 2** Pre-tighten the screws with a standard T-Handle and finish them with the TW.
- 3** Do the tightening of the bolt slow and steady to not overtighten it accidentally after reaching the right amount of torque.
- 4** **AGAIN! NEVER USE A TORQUE WRENCH TO OPEN A CLOSED SREW OR NUT - IT WILL DAMAGE THE TW!**

TORQUE WRENCHES - EXAMPLES WE PREFER

WÜRTH



TOPEAK



PARK TOOL

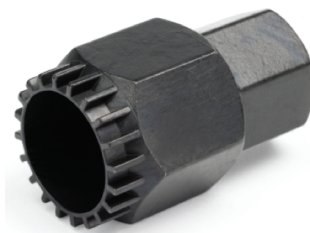
Preset Torques Wrenches (different torques preset 4/5/6Nm)



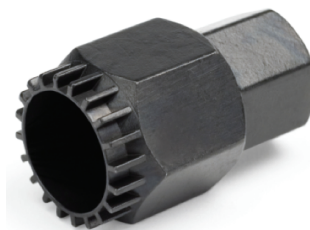
BOTTOM BRACKET

Threaded Bottom Brackets / Tools:

SQUARE TAPER



OCTALINK



HOLLOWTECH 2 THREADED



Non Threaded Bottom Bracket / Tools

HOLLOWTECH 2 PRESS FIT

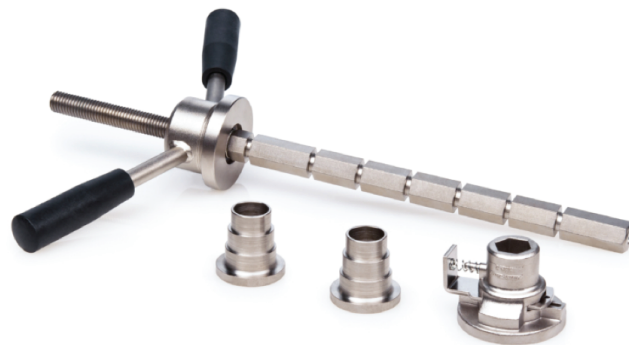


UNIVERSAL BOTTOM BRACKET PRESS FOR EVERY PRESS FIT BOTTOM BRACKET SOLUTION



HEAD SET INSTALLATION

HEAD SET INSTALLATION / TOOL (could be used for press in certain bottom brackets as well)



HEAD SET CUP INSTALLATION (FOR BIKES WITH ZS AND EC HEADSETS)

- 1** Determine the acceptability of the press fit between the headset cup and the head tube. Use a caliper, measure the outside diameter (OD) of pressed portion of headset cup. Next, measure the inside diameter (ID) of the frame head tube. Due to possibility of ID being out of round, measure in at least two places and average the dimensions. Subtract inside diameter from outside diameter to determine amount of pressing interference. Normal interference is between 0.1mm - 0.2mm. If the press fit is more than 0.2mm, damage to frame and/or tool may occur. In this case, it is recommended to ream the head tube or find a headset with different press interference. If the difference is between 0.0 - 0.1mm, a Loctite-type adhesive is recommended. If the difference is negative, a different headset is recommended. Check with headset manufacturer for interference specifications unique to their headset.
- 2** Optional cup guides are used to maintain cup alignment while pressing. Cup guides fit most 1-inch and 1-1/8 inch standard headset cups. Before using cup guide, insert guide into cup. If guide appears to jam or is a tight fit, DO NOT use cup guides for that particular headset cup. Simply press using threaded press plate and sliding press plate (to insure alignment when not using cup guides, pressing one cup at a time is recommended). Use care when pressing aluminum head cups; pressure on the outer rim of the cups may result in damage. Note: Do not use cup guides if guides press on any pre-installed cup-bearing unit (ex. Chris King® headsets).
- 3** Assemble Headset press and headset parts as seen in Figure 1. Apply grease on to the frame and cups.
- 4** Turn handles clockwise slowly and inspect the alignment of cups as they enter head tube. Press cups until fully seated into head tube. No gaps should remain after installing process.

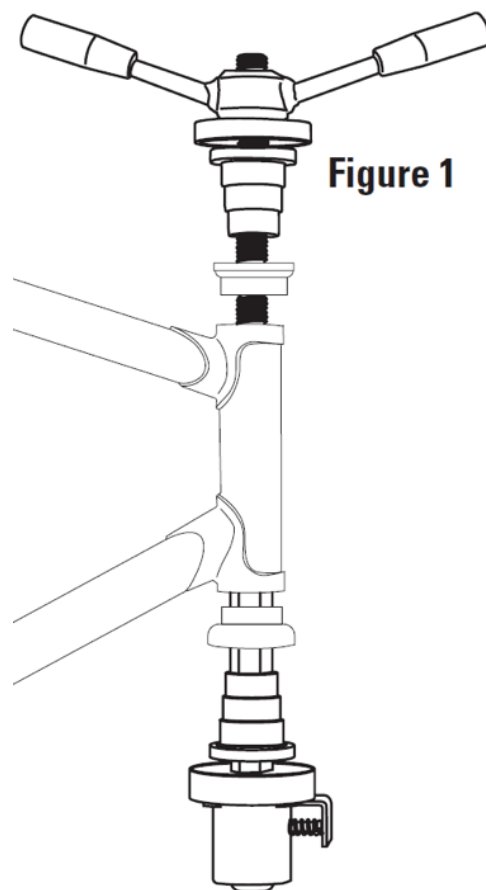
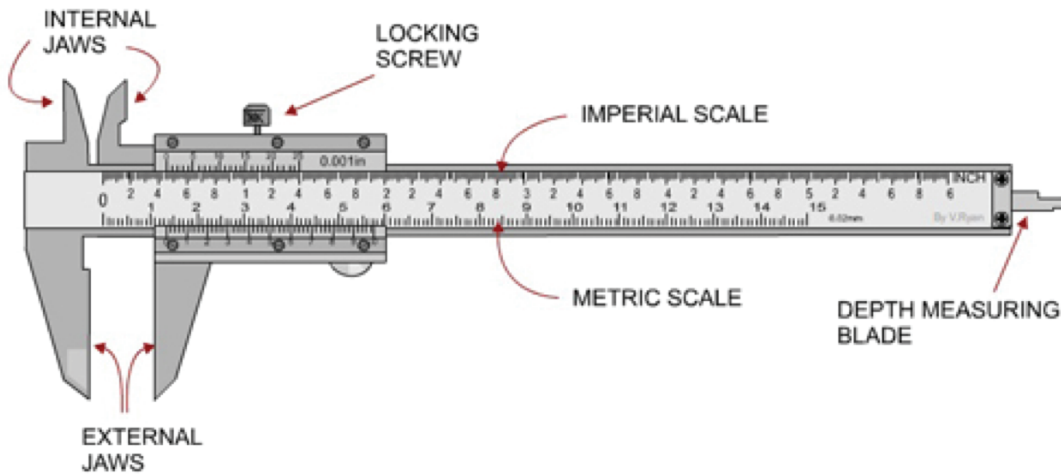


Figure 1

MEASUREMENT

SLIDING CALIPER



Description:

A measuring instrument consisting of an L-shaped frame with a linear scale along its longer arm and an L-shaped sliding attachment with a Vernier, used to read directly the dimension of an object represented by the separation between the inner or outer edges of the two shorter arms.

Likewise micrometer screw gauge, the Vernier Caliper is used to take the measurement that are accurate to within 0.001 of an inch or 0.02 of a millimeter or in other words its used to make very accurate measurements which cannot be accurately measured from a meter scale.

- 1 Always make sure that the surface you measure is clean
- 2 Use the Caliper only for measuring, not as a tool for anything else
- 3 Make sure that the caliper jaws are always in the right angle to the object which is measured
- 4 Measure always twice or better three times to recheck your measuring result

We recommend a digital Caliper. It is easier and faster to use. **But always make sure that you first zero your caliper before measuring any component. It only takes seconds.**



WÜRTH DIGITAL VERNIER CALIPER

CHAIN MEASUREMENT TOOL

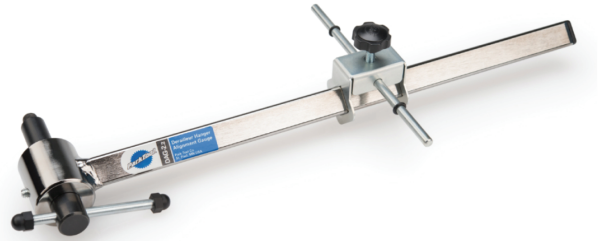
A worn chain shifts poorly and wears sprockets at an accelerated rate. The tool is a “go/no-go” Gauge designed to accurately indicate when a chain reaches 75% wear (0.075mm per link chain wear), the points at which most manufacturers suggest replacement.

- 1 Always make sure that you measure several points in the chain
- 2 Let the tool fall into the chain. Don't push it with pressure into the chain.
- 3 Replace any chain that reached the 0,075mm chain wear



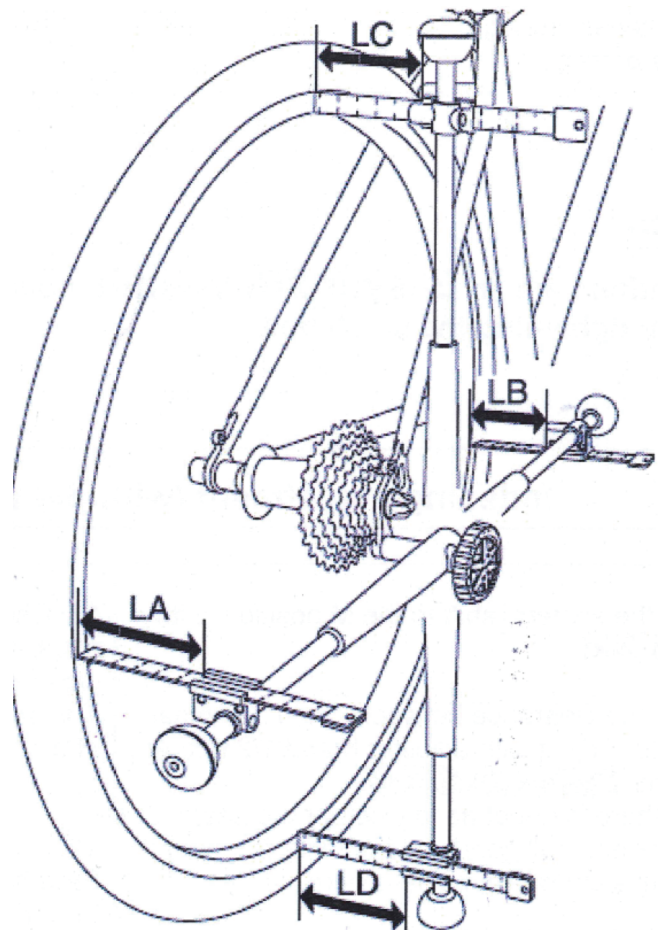
DERAILLEUR HANGER ALIGNMENT TOOL

Proper alignment of a bike's derailleur hanger is important for reliable shifting. If a derailleur hanger is bent, when a bike is crashed or dropped on its side it is important to align it afterward. Always check the RDH even when shifting on a bike isn't as good as it could be. Even if there are no crash signs on the bike. Remember: you cannot bent an aluminum RDH several times. Every bending weakens the RDH. If there are any doubts or visible cracks always replace the RDH with a new one.



HOW TO ALIGN A REAR DERAILLEUR

- 1 Install wheel in frame. Make sure rim is correctly centered in frame.
- 2 Remove derailleur from derailleur hanger.
- 3 Thread inside shaft into derailleur mounting hole.
- 4 Loosen knob and move sliding bracket and indicator so tip of indicator contacts outside edge of rim (position LA). Tighten knob.
- 5 Move sliding bracket so indicator is clear of rim. Then rotate tool 180 degrees to position LB.
- 6 Move sliding bracket and indicator to outside edge of rim. If tip of indicator is within 4mm of outside the edge of rim, the hanger is aligned horizontally. If tip of indicator is 4mm or more away from rim, or if indicator presses against rim, the hanger is misaligned. Move sliding bracket and indicator so they are clear of rim. Then use weldment as a lever to bend hanger into alignment horizontally. Repeat checking and bending between positions A and C until clearance is less than 4mm.
- 7 After achieving correct horizontal alignment, keep indicator in same position and rotate to position LC. If clearance between outer edge of rim and tip of indicator is less than 4mm, rotate tool to position LD. If clearance is greater than 4mm, or if indicator presses against rim at position B or D, use weldment as a lever to align hanger vertically.
- 8 With properly aligned hanger, tip of indicator should just contact outer edge of rim at one position and have no more than 4mm clearance at any of the other positions. Check and align all four positions until this is accomplished.



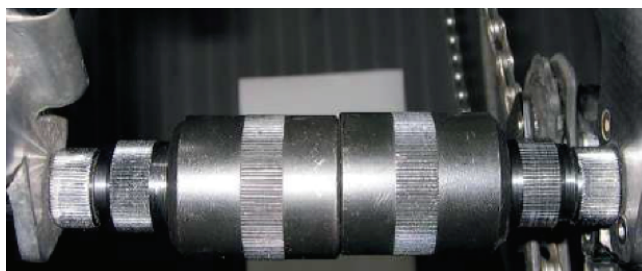
REAR / FORK DROPOUT ALIGNMENT TOOL

The Dropout Alignment Tool is needed when it comes to check the parallelism of the fork or rear dropouts.

When checking the alignment of carbon frames it is not about realigning them, it is more about checking the accuracy of the production. If a carbon dropout is misaligned or damaged it is not possible to repair it with the alignment tool. Only used for metal frames. Please make sure you always sent us pictures from dropouts, frame or fork, with proper aligned tools and without optical contortion.



Installation Example of the frame dropout measurement



Installation example of the fork dropout measurement



FRAME ALIGNMENT GAUGE

Misalignment of a bike frame's rear triangle can cause handling issues, chain misalignment, shifting problems and wheel installation difficulties as well as rear axle braking. To prevent any of those issues make sure that the rear and front triangle is perfectly aligned.



INSTALLATION EXAMPLE OF A REAR TRIANGLE GAUGE

- 1** Remove the rear wheel from the bike. Place the TRG on the frame's left side head tube and seat tube, avoiding contact with lugs, welds, cable stops, cables, etc.
Adjust the knob as needed until the indicator pointer contacts the left rear dropout and the TRG has three points of contact with the frame.
- 2** Without changing the position of the indicator, place the TRG on the right side of the frame and note the result:
 - a** If the TRG has the same three points of contact with the head tube, seat tube and dropout of the frame, the rear triangle is aligned.
 - b** If the TRG contacts the head tube and dropout but there is a gap between the TRG and the seat tube, the rear triangle is right of center and out of alignment.
 - c** If the TRG contacts the head tube and seat tube but there is a gap between the TRG indicator and the right dropout, the rear triangle is left of center and out of alignment



CHAIN TOOLS

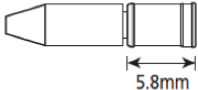

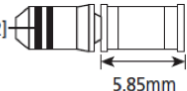
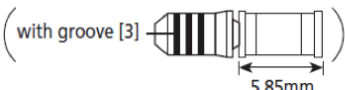
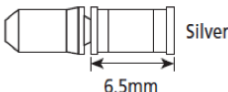
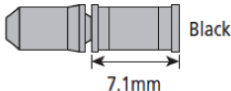


Chain Tool for pinned connected Chains



Chain Tool for lock connected Chains

Overview Chain Pins Shimano

Chain	Reinforced connecting pin / QUICK-LINK	Tool
11-speed CN-9000/6800 CN-HG900-11/HG700-11/HG600-11		TL-CN34 TL-CN28
All 11-speed chains		TL-CN10
For MTB/Trekking/E-BIKE 10-speed super narrow chain CN-M981/HG95/HG75/HG54/E6090-10 etc. (CN-M980/HG94/HG74 EOL)	with groove [2] 	TL-CN34 TL-CN33 TL-CN32 TL-CN28 TL-CN27
For ROAD double crank 10-speed super narrow chain CN-7901/6701/5701/4601 etc.	(with groove [3] 	
For ROAD triple crank 10-speed super narrow chain CN-7801/6600/5600 etc.		
9-speed super narrow chain CN-YM81/7701/HG93/E6070-9 etc.	 Silver	
8/7/6-speed narrow chain CN-HG50/HG40 etc.	 Black	

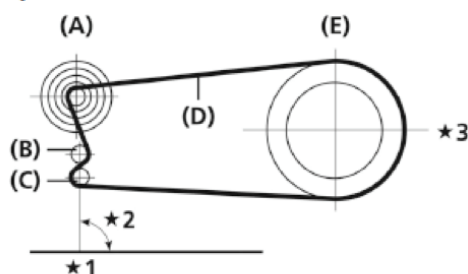
CHAIN LENGTH – DETERMINATION

To determine the right chain length there are several kind of ways. Shown below is the most common way to do so. It depends on whether your riding 1x 2x 3x Front Chainring setup, the biggest sprocket in the back and if your connecting it to a hardtail or a full suspension bike.

■ Rear derailleur for ROAD

Procedures for adjusting chain length vary by rear derailleur type.

Using sprockets 27T and smaller

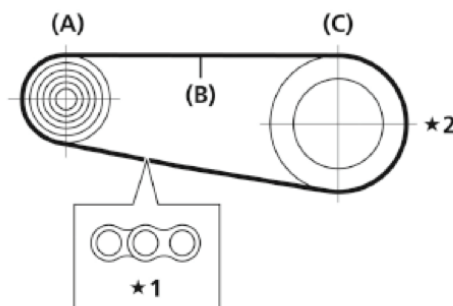


- ★1 Right angle to the ground
- ★2 90°
- ★3 Front double

- (A) Smallest sprocket
- (B) Guide pulley
- (C) Tension pulley
- (D) Chain
- (E) Largest chainring

Using sprockets 28T and larger

1. Add 2 links. (With the chain engaged with the largest sprocket and the largest chainring)

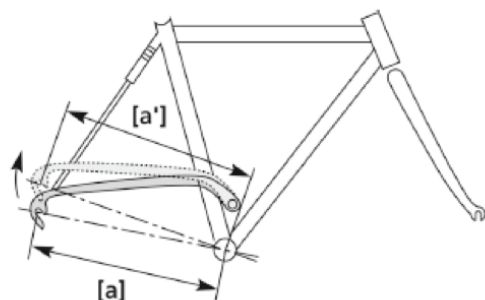


- ★1 +2 links
- ★2 Front double

- (A) Largest sprocket
- (B) Chain
- (C) Largest chainring

■ Rear derailleur for MTB/Trekking

The length of [a] will vary depending on the movement of the rear suspension. Consequently, an excessive load may be placed on the drive system if the chain length is too short. The rear suspension operates and stops when dimension [a] is at its greatest extension.



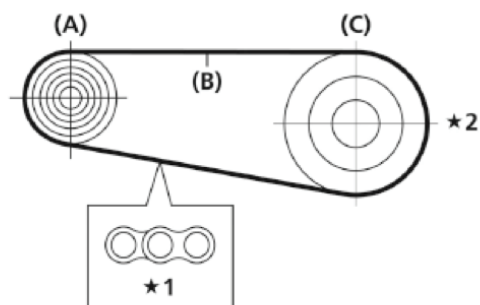
For triple/double front chainrings

1. Mount the chain on to the largest sprocket and the largest chainring.
Next, add 2 links to set the length of the chain.

For single front chainrings

1. Set the chain on the largest sprocket and the front chainring.

Next, add 2 links to set the length of the chain.



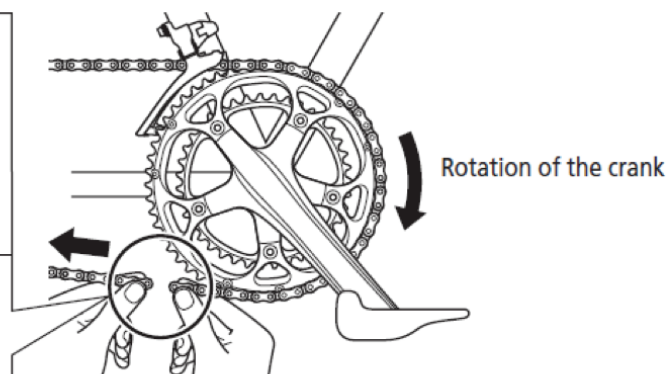
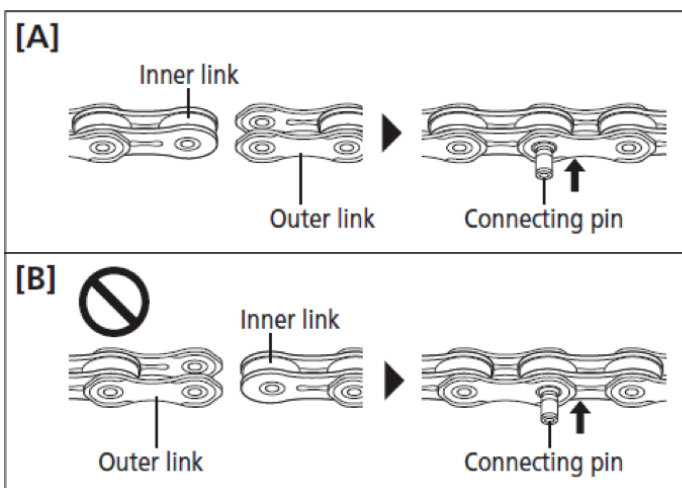
★1 +2 links

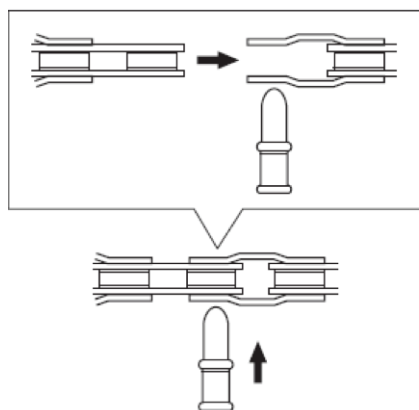
★2 Single/Double/Triple front chainrings

(A) Largest sprocket

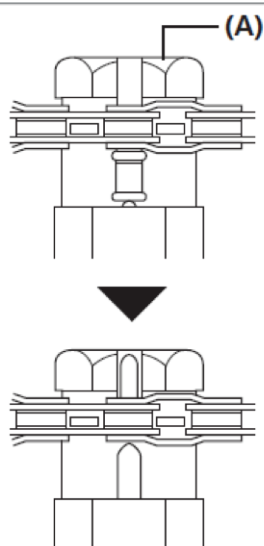
(B) Chain

(C) Largest chainring

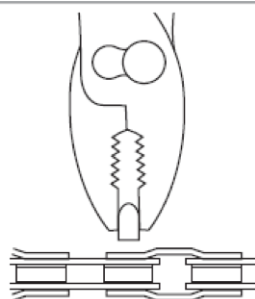




Insert the connecting pin.



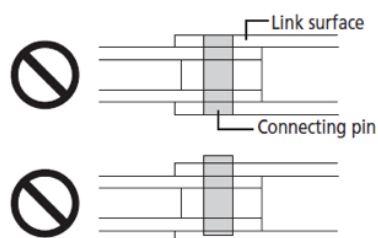
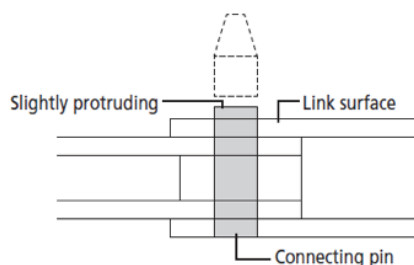
Press in the connecting pin using a chain tool.



Break off the excess portion of the connecting pin.

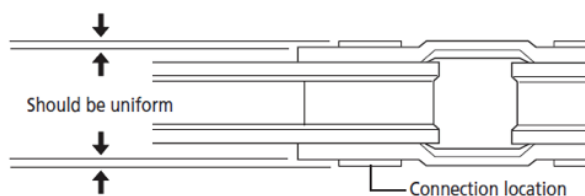
■ 11/10-speed chain (ampoule pin type)

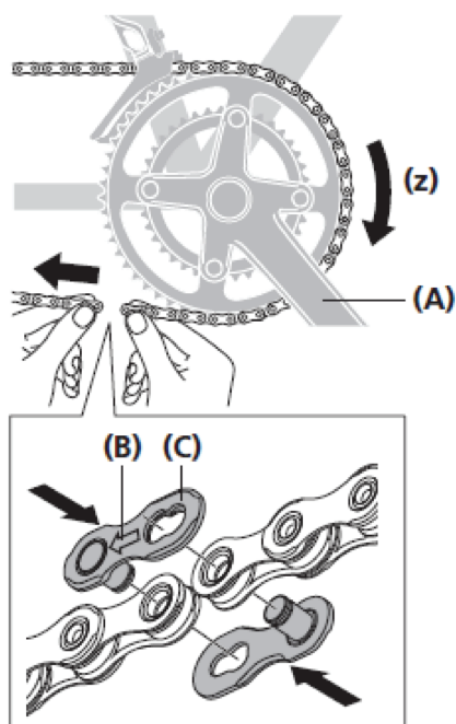
- After adjustment, make sure that the connecting pin is as shown in the illustration by running your finger over it. (The pin will protrude slightly after the break off pin is removed)



■ 9/8/7/6-speed chain

- Be sure to check that the connecting pin protrudes equally from both sides of the chain after it has been joined.

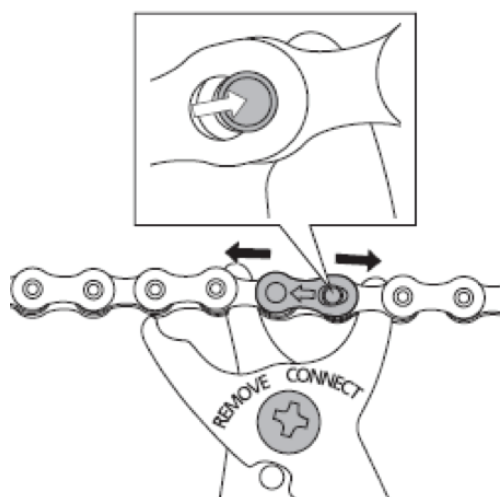




Insert the pins of the QUICK-LINKs into the spaces in the inner link from both sides as shown in the illustration.

When using SM-CN900-11, be sure to install it so that the arrow on the surface faces in the direction of rotation of the crank when viewed from the front.

(z) Rotation of the crank



Use Shimano original tool TL-CN10 to slide the pins and insert them firmly.

CHAIN INSTALLATION

1. Ensure there is no swarf on either end of the chain to be joined (**indication push-out direction**)
 2. Ensure the join is on the leading hole outer plate
 3. Push the new pin in via the same direction as the removed pin (**never against the swarf**)
 4. Push the pin in with the chain tool until the head sits almost flush with the chain and “clicks” into place
 5. Break off the excess pin and make sure the link moves freely.
Note; If the joined link does not move freely gently bend the link against its direction of travel, back and forth.
- If the pin does not seat (due to swarf or debris in the joint) you will need to remove the pins on either side of the joint and replace 2 links and 2 pins.

- 1 Always check that you install the right pin model to the right chain
- 2 Always use a proper tool that is not worn out
- 3 A little amount of oil onto the pin before installing helps the pin to slide into the chain
- 4 Break the excess portion of the connecting pin. Otherwise it damages the RD
- 5 Check before connecting if the chain has a recommended chain running direction
- 6 If using a chain lock make sure that the arrow on the lock points backwards and is securely locked

SCOTT SPORTS uses KMC, Shimano and SRAM Chains on our SCOTT Bikes. Please make sure that you follow the instructions of each Company properly to maintain a perfect function.

02 BOTTOM BRACKET

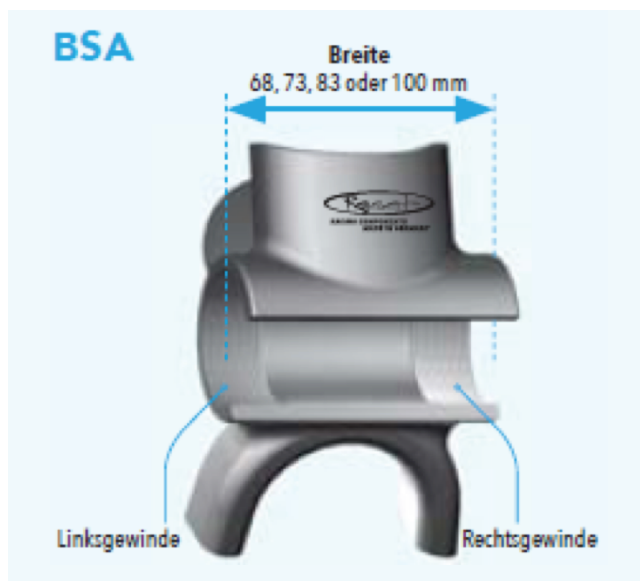
OVERVIEW OF BOTTOM BRACKET TYPES SCOTT USES

Threaded Bottom Bracket - BSA threading

(Used in e.g. Big Jon, Aspect, Speedster)

- Shell width: 68mm (ROAD) or 73/83mm (MTB/DH) 100mm (FATBIKE)
- Shell threads: BSA 1.37 in x 24 TPI (Threads per inch)
- Drive side cup is **left-hand** thread
- Non-drive side cup is **right-hand** thread
- Gold Standard of threaded Bottom Brackets

- 1 In this kind of Bottom Bracket Shell you can install any BSA designed Bottom Bracket (depending on the purpose)
- 2 You can install whether a **Square**, **Octalink** or **Hollowtech 2** Bottom Bracket Shell to the BB.
- 3 Always make sure that the threads of the frame are clean and well cut so the BB shells can slide in easy.
- 4 Make sure that there is no paint on the contact surface of the bottom bracket and the frame shell.



Pressed In Bottom Bracket 30mm - PF30

(Used only in SCOTT & Scale Spark RC 2010)

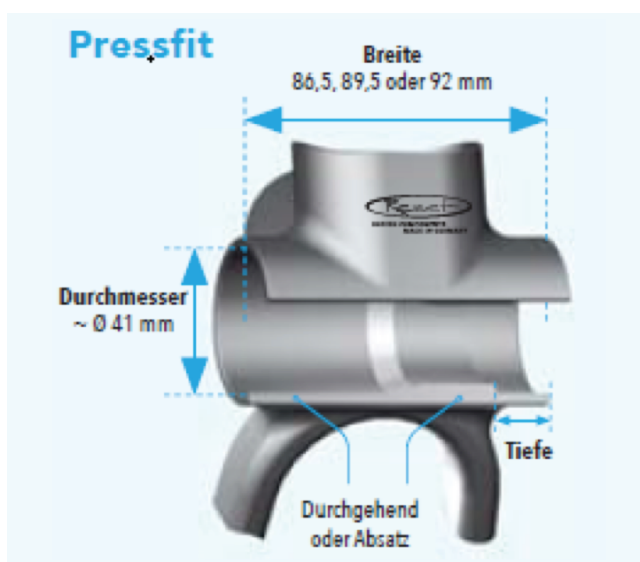
- The key difference with Press Fit 30 is how the bearings are fitted into the frame. Bearings are housed in nylon cups which will be pressed into the frames bottom bracket shell. This bottom bracket is designed for 30mm spindle cranksets.
- Frames will need a 46mm inner-diameter bottom bracket shell to accommodate this system. Press Fit 30 for road will require a 68mm wide shell while Press Fit 30 for MTB will require a 73mm wide shell.
- Designed by SRAM® as an improvement of classic BB30



Pressed in Bottom Bracket 24mm Shimano and SRAM crank

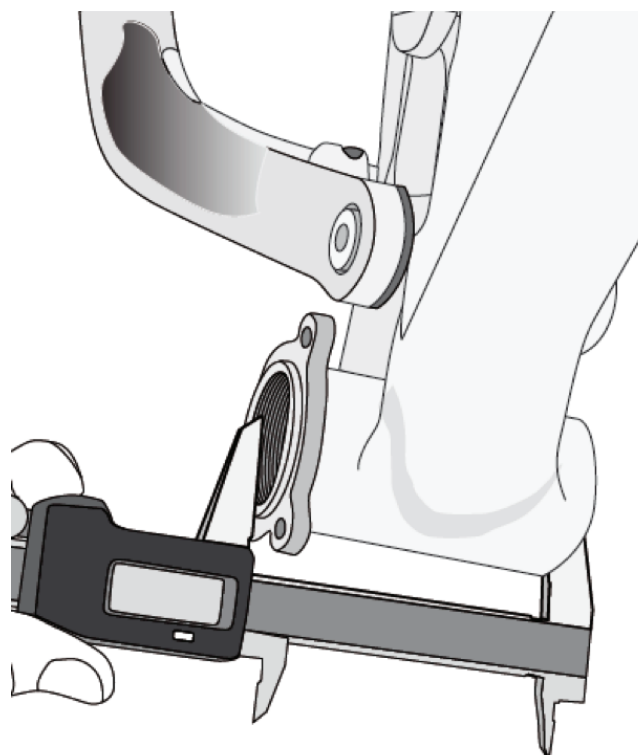
Used in every SCOTT Carbon Frame and a lot of SCOTT Aluminum Frames - Road and MTB

- The bearings and their locations in space are identical to those of conventional threaded bottom brackets; only they're mounted in small composite cups before being pressed into the frame.
- A wider bottom bracket shell that doesn't otherwise affect crank width (Q-Factor), plus lighter weight compared with threaded alloy cups.
- "We can create frames with a wider bottom bracket shell, thus adding stiffness to the entire structure as the adjoining tubes can also be wider. It's also lighter than a threaded BB because we've removed the alloy material that held the bearings outside the shell and it costs less to do a press-fit bottom bracket."



CORRECT MEASUREMENT OF BB SHELLS

- 1 Only a Vernier caliper can afford the amount of precision that is required to measure any dimension on the BB shell, independent of the BB-Standard.
- 2 Please make sure that you always measure with a zeroed Vernier caliper to avoid any failure measurements.
- 3 Please use only the way shown below to measure the BB shell width as well as the inner diameter



BSA THREAD
PRESS FIT

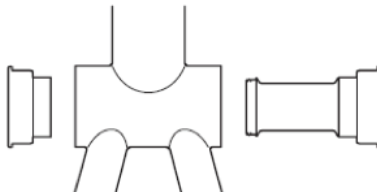
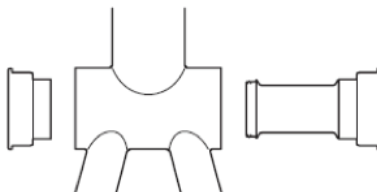

68 / 73 / 83 / 100 mm
86,5 / 89,5 / 92 mm

INSTALLATION

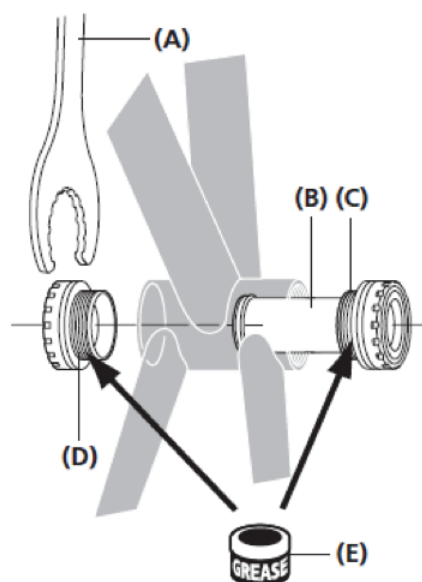
INSTALLATION ADVICE BOTTOM BRACKET - THREADED

68mm	73mm
83mm	
	<p>NOTE</p> <p>When installing the recommended ROAD bottom bracket, a spacer is not needed.</p>

INSTALLATION ADVICE BOTTOM BRACKET - PRESS FIT




ROAD	Bottom bracket shell with 86.5mm width	<ul style="list-style-type: none"> • Use for a bottom bracket shell width of 86.5mm. The 2.5mm spacer is not necessary. • Use the inner cover. 	
MTB	Bottom bracket shell with 92mm width	<ul style="list-style-type: none"> • The 2.5mm spacer is not needed for a bottom bracket shell width of 92mm. • Use the inner cover. 	
	Bottom bracket shell with 89.5mm width	<ul style="list-style-type: none"> • For a bottom bracket shell width of 89.5mm, insert the 2.5mm spacer into the right hand side (between the frame and the right hand adapter). • Use the inner cover. 	

THREADED BOTTOM BRACKET INSTALLATION



Grease the left and right hand adapters and use the Shimano original tool to install the right hand adapter of the bottom bracket, the inner cover and the left hand adapter of the bottom bracket.

- (A) TL-FC24
- (B) Inner cover
- (C) Right hand adapter (counterclockwise thread)
- (D) Left hand adapter (clockwise thread)
- (E) Apply grease: Premium grease (Y-04110000)

Tightening torque	
  	35 - 50 N·m

NOTE

TL-FC24 is tightened by combining with TL-FC32/FC36.

Recommended Grease Use

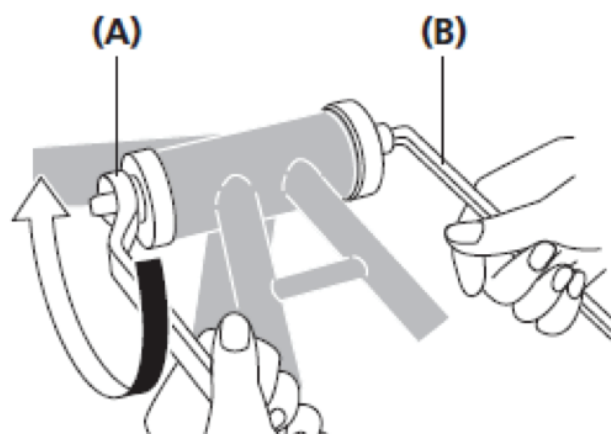


NON-THREADED BOTTOM BRACKET INSTALLATION

1		<p>Insert the bottom bracket into the bottom bracket shell.</p>
2		<p>Insert the Shimano original tool into the bottom bracket.</p>



3



Press fit the bottom bracket by tightening with a spanner while making sure that the contact surface of the bottom bracket stays parallel to the contact surface of the bottom bracket shell.

4

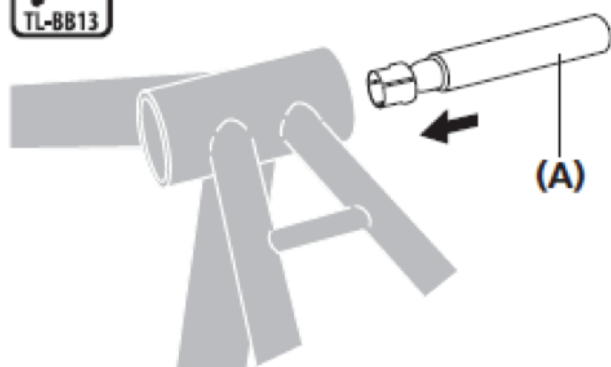


Check to confirm that there is no gap between the bottom bracket and the bottom bracket shell.

REMOVING PRESS FIT BOTTOM BRACKETS

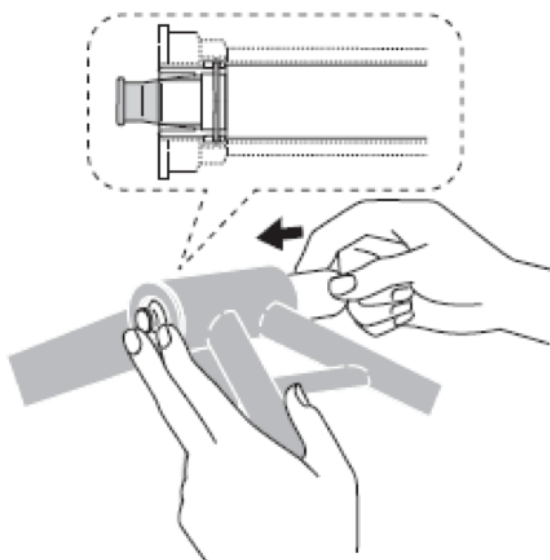


1



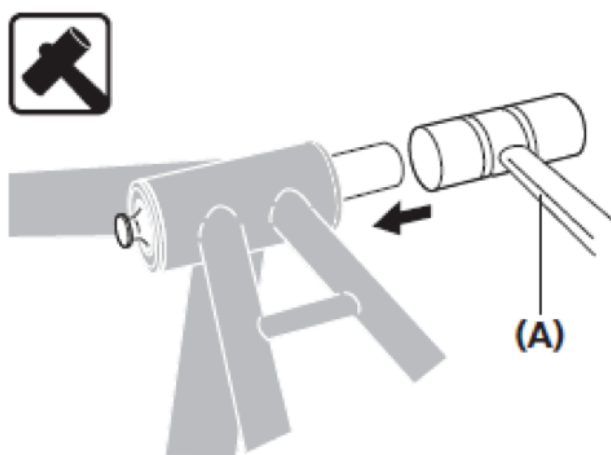
Insert the Shimano original tool into the bottom bracket.

2



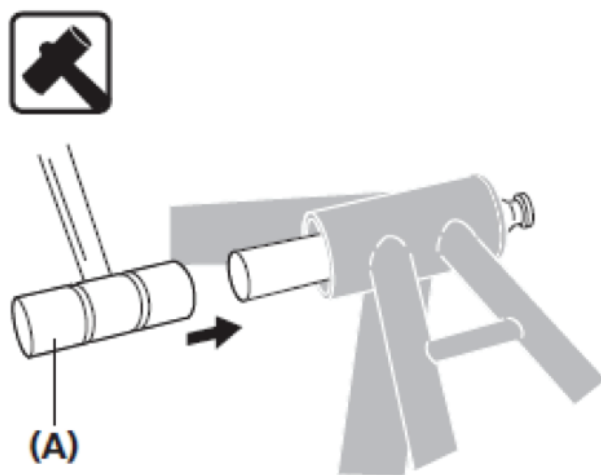
As shown in the illustration, hold down the flap with your fingers and push it in from the opposite side. (When pushed in, the flap opens.)

3



Tap the Shimano original tool with a plastic mallet until the end of the bottom bracket is ejected.

4



Tap the opposite end of the bottom bracket in the same way and remove it.

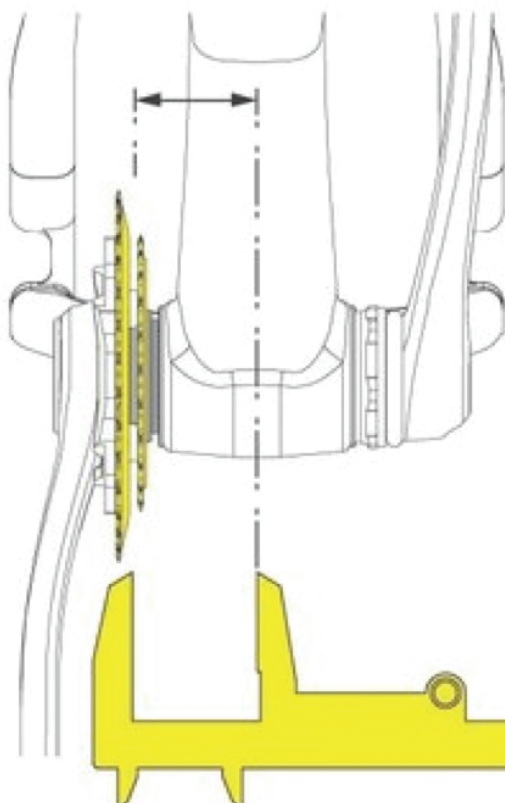
CHAIN LINES

Chain line is measured from the centerline of the frame to the center of the chain rings or rear cogs.

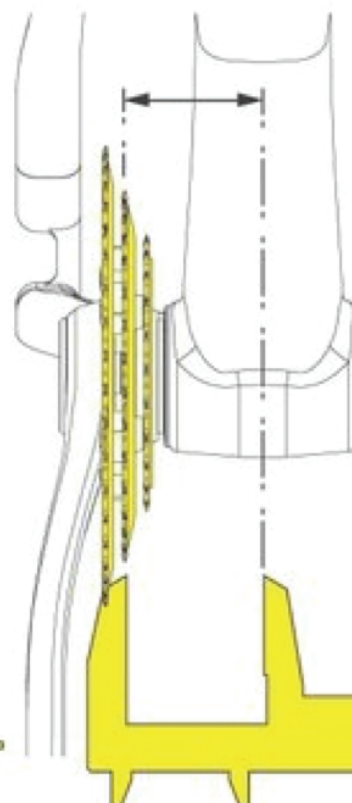
Especially with the new Boost Standard the chain line becomes again an important issue.

Example of a Classic Front Chain line

DOUBLE RINGCHAINLINE



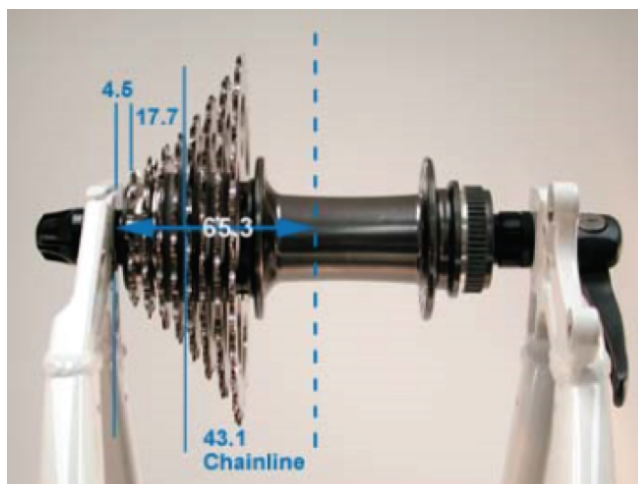
TRIPLE RINGCHAINLINE



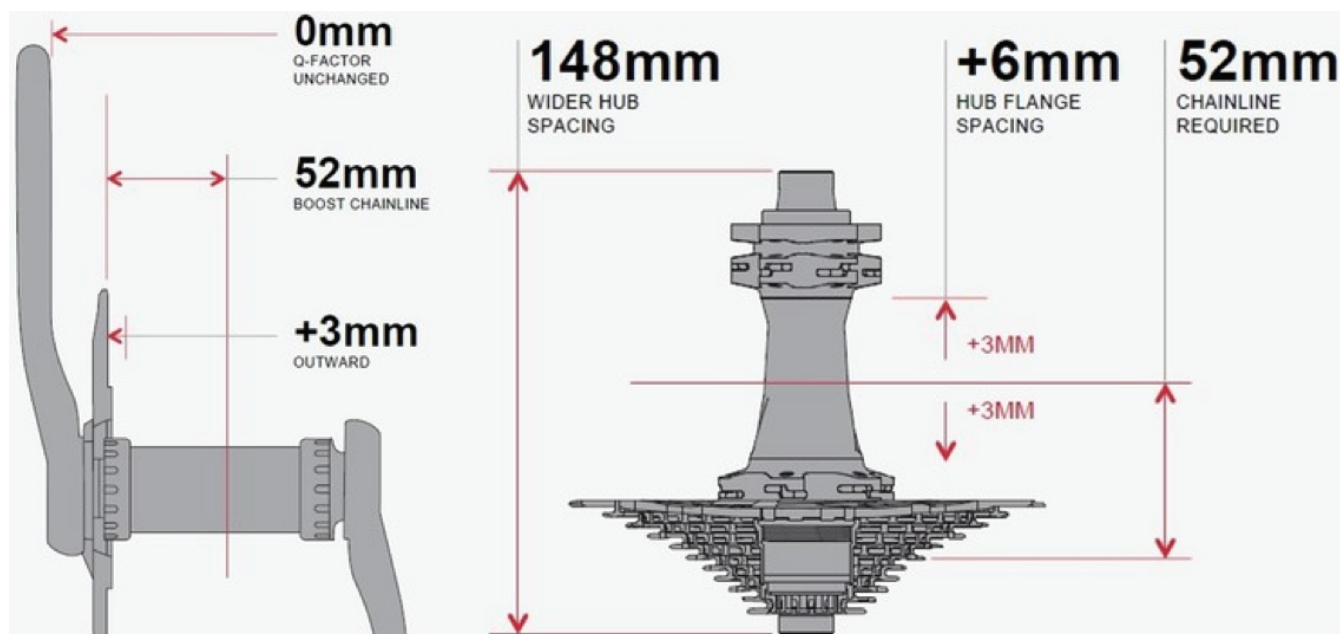
In the case of triple chain wheel sets, measure to the middle chain ring. In the case of doubles, measure to the halfway point between the two rings.

Example of a Classic Rear Chain Line

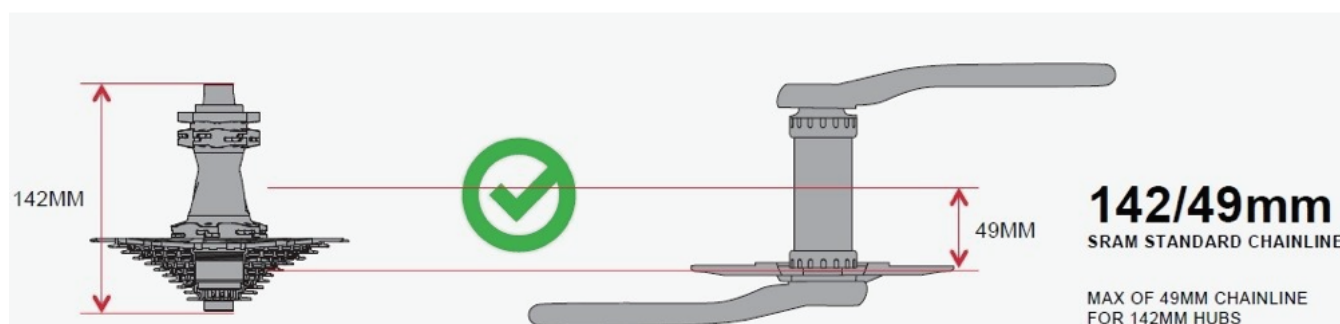
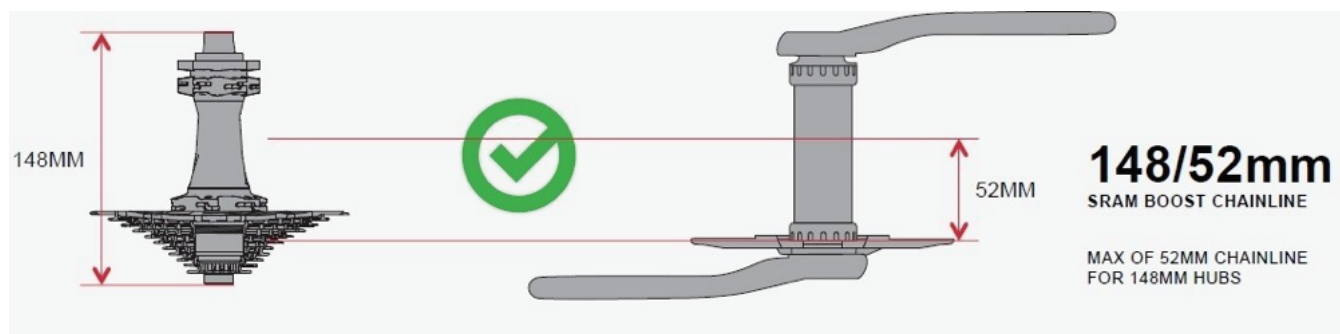
- 1 To determine the rear cogs chain line, use the formula:
 $(\text{Hub width} \div 2) - (\text{Cassette width} \div 2) - \text{Gap to frame} = \text{Chain line of Rear Cogs}$
- 2 The bike center line is in the middle of the hub, so the center line is a 65.3mm from each locknut. The cogset middle is then:
 $(130.6 \div 2) - (35.4 \div 2) - 4.5 = 43.1\text{mm}$



Boost Chain Line Overview (USED IN Scale 3, Spark (not 760/960)



Boost Chain Line Compared to Classic Chain Line



Benefit of Boost 148

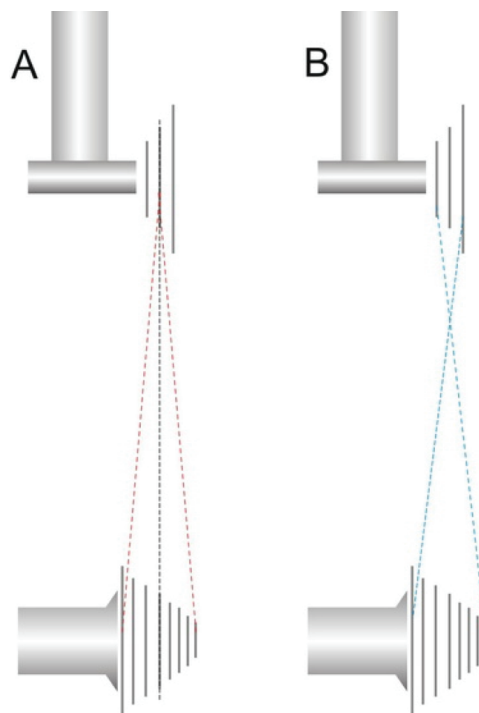
A wider axle means that the spacing between your hub's flanges can be increased. By increasing the width of the hub flanges you can improve the bracing angles of the spokes in the wheelbuild. Ultimately you can build a stronger, stiffer, and ultimately more efficient wheel through nearly the same spoke tensions r/l. In addition some bike frames with the boost treatment will be capable of accommodating plus size tires.

CHAIN LINE OVERVIEW

MTB Single Crank		Road Bike	
1x12 / 2x12 / 1x11 / 2x11	49 mm	Double	43.5 mm
2x10	49.5 mm	Triple	46 mm
3x10	51 mm		
Boost in general	52 mm		
DH 1x 150mm spacing	55 / 58 mm		
Fat Bike 1x 2x	66.5 mm		

The picture on the left shows the effective chain line.

Bicycle chains are quite flexible, and will work well at various other than perfectly straight setups. Cross-chaining is primarily an issue when the chain hits the front rings. As a simple rule, if a gear combination causes a rubbing problem, avoid that gear.



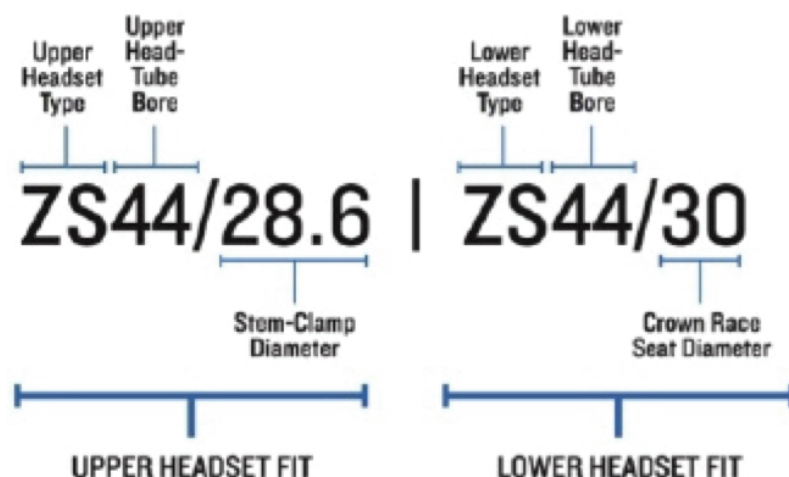
03 HEADSET STANDARDS

OVERVIEW OF STANDARDS

S.H.I.S WHAT IS IT?

The Standardized Headset Identification System (S.H.I.S.) creates a common language for describing modern bicycle headsets. The system provides comprehensive and scalable headset fitment information in a standardized format; making it easy to communicate headset requirements based on frame and fork interfaces.

The SHIS terminology consists of a two-letter code followed by numbers referring to the sizing in the frame or fork. Below in the figure is the SHIS terms for a particular headset with descriptions of what the terms mean.



BEARING LOCATION / CUP TYPES

Standardized Headset Identification System [S.H.I.S.]

Frame Fitment



EC (External Cup)



ZS (ZeroStack)



IS (Integrated)

HEAD-TUBES FOR PRESS-FIT CUPS

Head-Tube Bore	S.H.I.S. Name
30.10 - 30.05	30
33.95 - 33.90	34
36.95 - 36.90	37
41.40 - 41.35	41
44.00 - 43.95	44
49.61 - 49.57	49
55.95 - 55.90	56

HEAD-TUBES FOR INTEGRATED SYSTEMS

Head-Tube Bore	S.H.I.S. Name
38.15 - 38.25	IS38
41.1 - 41.2	IS41
41.95 - 42.05	IS42
47.00 - 47.10	IS47
49.10 - 49.20	IS49
52.05 - 52.15	IS52

EC (External Cup) PRESS-FIT

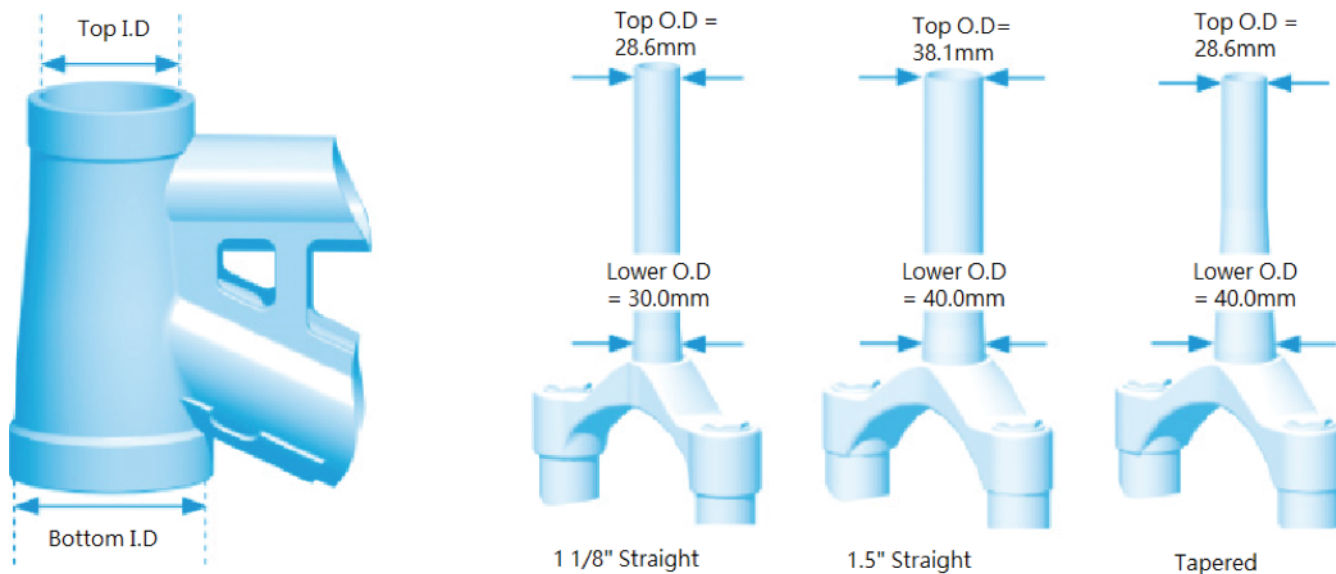
Bearings contained within cups that are located outside of the frame.

ZS (Zero Stack) PRESS-FIT

Bearings contained within pressed-in cups where the cup and bearings rest inside the frame.

IS (Integrated) NO-TOOL

Bearings that fit directly into a bonded or machined interface that is integrated into the frame.



Bore Diameter-upper stack

The upper stack two-letter code is followed directly by a number representing the bore diameter (inside diameter) of the intended frame. This code is in two digits, with no decimal used.

Column Diameter (at top of column)

The upper stack bore SHIS is the second number representing the top of the steering column diameter. The SHIS column diameter code will use a decimal number. If it is a threaded column the diameter will be followed by a dash mark and the thread frequency designation, such as in tpi.

Bore Diameter—Lower stack

The lower stack begins with the two-letter code seen above and is followed directly by a number representing the bore diameter (inside diameter) of the intended frame.

Crown Race

The lower bore SHIS is the second number representing the fork crown race inside diameter.

Stack Height

There may also be listed at the option of headset manufacturer for either upper or lower SHIS numbers the letter "H," followed the stack height in millimeters. Example is shown here.



THREADLESS HEADSET

This kind of alignment can be used for any thread less headset, doesn't matter what cup types are used or how different they may be.



HEAD SET ALIGNMENT

- 1 Remove bolt and top cap to inspect steering column. Lubricate adjusting bolt and reinstall cap and bolt by hand only. **Do not tighten.**
- 2 Loosen stem bolt(s) that secure stem to the steering column. Lubricate these bolts if they are dry. **NOTE: Do not lubricate inside stem or on steering column surface.**
- 3 Wiggle the stem side to side to see that it is loose. If the stem is jammed or rusted frozen to the steering column, no adjustment can be made.
- 4 Align stem straight to wheel and gently secure the top bolt. Stop when any resistance is felt.
- 5 Tighten stem bolt(s).
- 6 Check for play by pulling back and forth on fork. Turn the handlebars in different directions while checking for play. There may be play at this early setting. Use care when grabbing suspension forks, because the legs may have play. Grab upper portion of fork.
- 7 To adjust bearings, **loosen stem bolt(s).**
- 8 Turn adjusting bolt in center cap only 1/8th turns clockwise.
- 9 Secure stem bolts, check for play again.
- 10 Repeat adjustments as above until play disappears. Remember to loosen stem bolts before turning adjusting bolt in cap.
- 11 Check alignment of stem and tighten stem binder bolts fully to recommended torque.

TROUBLE SHOOTING

Bearing surfaces are made from hardened steel. The surfaces are cut typically by grinding. Round ball bearings roll on the curved surface of the cup and cone. Even the highest quality bearing surfaces will have slight grinding marks. Bearing surface smoothness will vary between manufacturers and between models. Some bearings system will simply feel smoother because they are smoother. This is why it is difficult to adjust by using a subjective feeling of smoothness. Generally, adjust bearings for the loosest setting that has no knocking or play, regardless of this relative smoothness.

Play in the Headset but no smooth turning...? USE MICROSPACERS!

If everything else is correctly mounted, cups, bearing, top cap, crown race, maybe the micro spacer can bring the smoothness back in the game.

Sometimes the top cap touches slightly the steering tube. In that case an alignment is not possible. Put micro spacers underneath the top cap until top cap and frame won't touch each other after the correct setup for the headset is found.



OVERVIEW S.H.I.S SYSTEM

Legacy Names	SHIS	Cup OD	Bore ID
External Cup-beyond headtube			
1" JIS pressed cup	EC29	30	29.8-29.9
1" Pro pressed cup	EC30	30.2	30.0-30.15
1" BMX standard (old)	EC33	32.8	32.6-32.7
1-1/8" pressed cup	EC34	34	33.8-33.95
1-1/4" pressed cup	EC37	37	36.8-36.95
External Cup in the 44 standard	EC44	44.1	43.90-43.95
1.5" pressed cup	EC49	49.7	49.55-49.6
1.5" pressed cup -lower only	EC56	56	55.9-55.95

Semi-intgtd, internal, ZS	SHIS	Cup OD	Bore ID
Bearing level or below hd-tube			
1" semi-integrated	ZS41	41.5	41.35-41.4
1-1/8" semi-integrated	ZS44	44.1	43.90-43.95
1-1/2" semi-integrated	ZS49	49.7	49.57-49.61
1-1/2" semi-integrated (rare)	ZS55	55	54.90-54.95
1-1/2" semi-integrated	ZS56	56	55.90-55.95

Integrated	SHIS	Bearing OD	Bore ID
Bearing stop built into frame			
1" IS (cane creek)	IS38	38	38.15-38.25
1-1/8" IS (cane creek)	IS41	41	41.10-41.20
1-1/8" Italian (hiddenset)	IS42	41.8	41.95-42.05
1-1/4" integrated- lower only	IS47	47	47.05-47.1
1-3/8" IS (lower only)	IS49	49	49.1-49.2
1-1/2" IS (lower only)	IS52	52	52.1-52.15

Steering Column Top	SHIS	OD
Legacy names		
1" french threaded	25.0-1.0	25.0-1.0
1" threaded	25.4-24tpi	25.4-24tpi
1" threadless	25.4	25.4
1-1/8" threaded	28.6-26tpi	28.6-26tpi
1-1/8" threadless	28.6	28.6
1-1/4" threaded	31.8-26tpi	31.8-26tpi
1-1/4" threadless	31.8	31.8
1-1/2" threadless	38.1	38.1

Fork Race Standards	SHIS	Fork Seat	Crown Race
Legacy Names		OD	ID
1" Japanese Ind Stnd (JIS)	27	27.1	27
1" Pro or ""euro"" stnd	26	26.5	26.4
1-1/8" thread or threadless	30	30.1	30
1-1/4" thread or threadless	33	33.1	33
1-3/8" integrated race	none	not applicable	na
1-1/2" with pressed races	40	39.8	39.7

04 FORK ASSEMBLY

GENERAL INFORMATION

The most important point for all carbon steering columns on all SCOTT Bikes is the fact that it is **not allowed to put no spacer under the stem so that the stem touches the top cap**.



GOOD:

5mm above and
5mm underneath

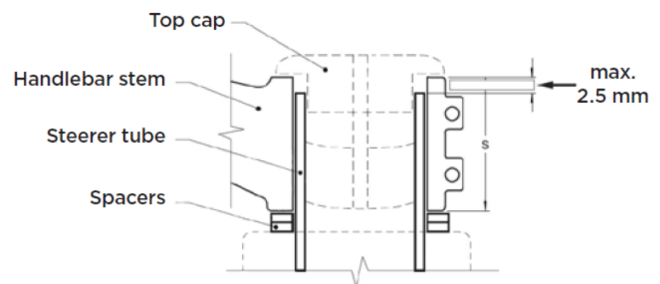


BAD:

0mm above and
0mm underneath

Another important point:

Please make sure that there is no more than 2.5 mm between the top of the stem clamp and the top of the steerer tube as shown on the illustration below. There should be as much clamping surface for the stem as possible. **Please make sure that you follow that advice while cutting the fork shaft.**



FORK SHAFT CUTTING ADVICE

The steering column on new forks typically comes longer than required. The column is then cut for the size according to the particular bike it is to be installed in. There are two basic methods for determining steering column length. The first method is to take appropriate measurements and determine the length mathematically. Another, more common and daily used method in workshops is to install the fork without cutting it and then measure the amount necessary to cut. The fork is then removed (sometimes not really necessary), cut, and reinstalled. In either case, use care as cutting a steering column too short can be an expensive mistake.

If the headset is already installed, the best technique to determine steering column length is to assemble the steering column into the head tube with bearings in place, and assemble stem and spacers on top. Scribe fork at top of stem. Remove fork and cut 2,5 mm below scribe line.

Recommended Tools



Cutting Procedure

- 1 Determine correct length of steering column. Mark column using marker or scribe.
- 2 Place fork inside tool. Loosely secure handle.
- 3 Move saw guide opening over mark on column.
- 4 Secure tool handle and place saw in vise.
- 5 Cut through column. (**NOTE: Cut with pressure only in forward direction. Do not apply excessive pressure on blade.**)
- 6 Loosen handle and move column to slightly protrude past cover plate.
- 7 Use flat file to finish end of column. The fastest way to finish the job is to use the internal and external deburrer from Würth®. Inside and outside is perfectly deflashed within seconds.

Attention with Carbon Fiber Forks:

For carbon fiber steering column, a finer 32 TPI blade rather than a 24 TPI, is recommended. To minimize dust from the carbon, keep the blade wet. Nonetheless make sure you wear a mask while cutting carbon. There are also special blades used to cut carbon fiber. Usually they are thicker. This is why we recommend the SG-7.2 Saw Guide. It allows using both blades without changing the tool. To finish the job **NEVER** use the deburrer. You will damage the fork. Use always fine sandpaper.

INSTALLING THE HEADSET CONE - RECOMMENDED TOOLS

Crown Race Setting Tool 1" 11/8"

The fork crown race must be pressed to the fork crown. Determine acceptability of press fit as described above. Place greased race on greased fork crown and select most compatible CRS-1 insert. Place tool and insert over fork. Use a hammer and strike on top of tool until race fully seats. The sound will change as it seats. Inspect sides of race 360° for seating.



Crown Race Setting Tool 1 1/4" 1 1/2"

Same procedure as explained above.



Point of installing process, before hammering the race on the fork crown.

Don't forget to grease the race as well as the fork crown to avoid damaging the parts and avoid cold forging of the components (high pressure, same material, room temperature, highly grade materials with big interfacing areas).



STAR NUT / EXPANDER INSTALLATION

To adjust the headset you need a counter part for the top cap screw. These are the star nuts (aluminum or steel shaft) or expansion plugs (for carbon shaft).

STAR NUT INSTALLATION

The star-nut outer diameter is slightly bigger than the inside diameter of the fork column. This allows the flanges to bite into the fork walls and hold it tight. This also is the reason why it has to be hammered in.

- 1 Thread the star-nut onto the threaded stud inside. The convex surface will face outward of the tool, and face the steering column.
- 2 Place the tool over the top of the steering column. The inner mandrel will rise upward and the outer housing is slid over the column. Hold the tool straight and in line with the steering column
- 3 Strike the top of the tool with a hammer to drive in the star-nut.
- 4 Continue driving the nut until the driver meets the outer portion of the tool. Unthread the handle from the fork. The nut is installed.

End Result of installed Star Nut

Please check for correct installation: if a top cap can be installed with a screw and sit's flush on the top end of the shaft without any heavy resistance of the screw while installing – than the star nut is perfectly straight.



Classic Star Nut



Expander for Carbon Forks

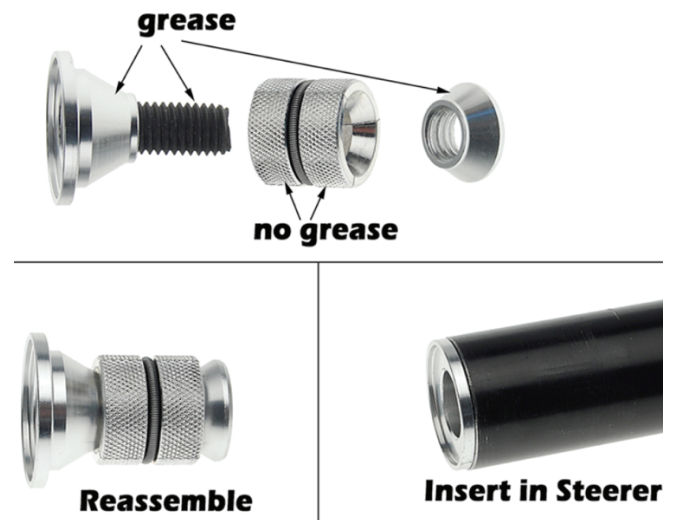


CARBON EXPANDER INSTALLATION

Another option for threadless headsets is the “expansion plug” system. These insert inside the steering column and then expand and jam against the inside walls. This system is especially popular with the carbon steering columns.

A typical expansion plug system consists of an expandable sleeve. There is a cone at the top and bottom, and a hollow bolt passes through the sleeve. As this expansion bolt is tightened, it draws together the two cones and this expands the sleeve. As with most all threaded fasteners, grease or oil the threads. The headset adjusting cap and bolt then fit into the top of the expansion plug. Apply some Carbon Grease to the contact areas between expander and shaft.

Structure and end result of installed Expander



Make sure that you don't over torque the system.

Check for flush installation, no gaps between expander and end of shaft.

We recommend always using expanders with a big clamping surface. They stress the shaft a lot less and the position of the spacers isn't that crucial.

Even if they are a bit heavier, security always comes first.



05 STEM INSTALLATION

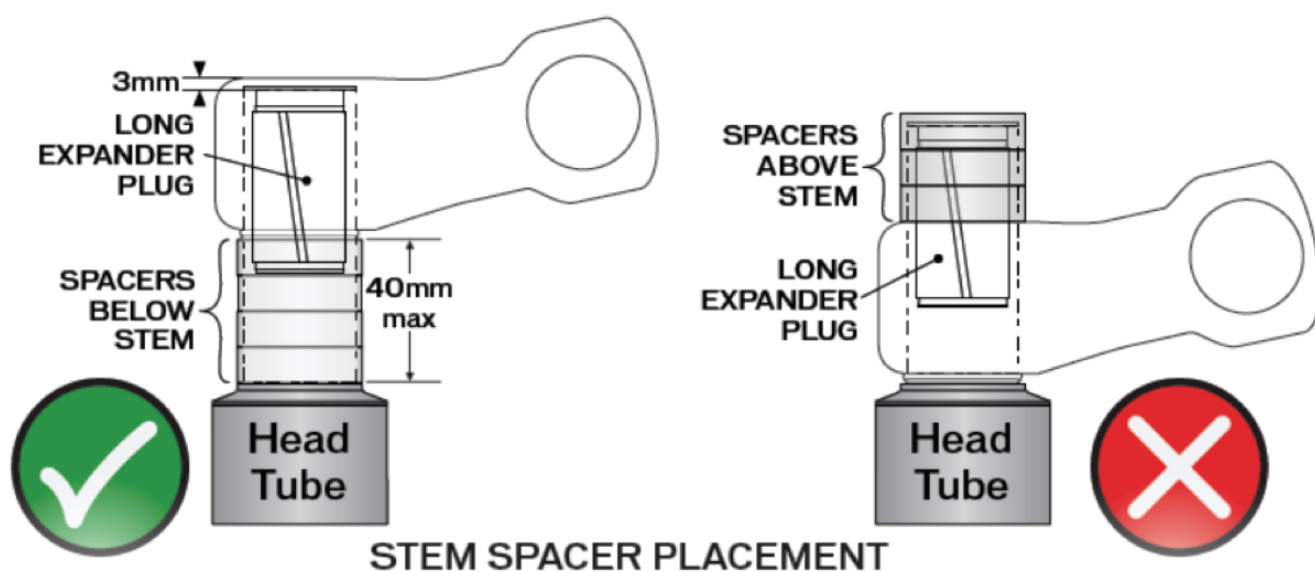
SCOTT REQUIREMENTS

After installing the headset, cutting the fork shaft, installing the headset cone on the fork crone and the expander or star nut, it comes to the assembling of the stem.

Please make sure you choose a stem that has no sharp edges on the clamping surface that could harm a carbon shaft. Snapped shafts are the most dangerous failure while cycling.

The drawing below shows the way a stem **should** be mounted and how it's **not supposed** to be mounted.

If you want to run the stem lower, please cut the shaft, or use a super long expander. The shaft should be strengthened from the inside against the pressurization of the stem from the outside. If that doesn't takes place the shaft could be squeezed on the point where the lower stem bolt clamps the shaft. Due to safety issues we strongly recommend to cut the shaft that at the most only a 5mm spacer sits on top of the stem.



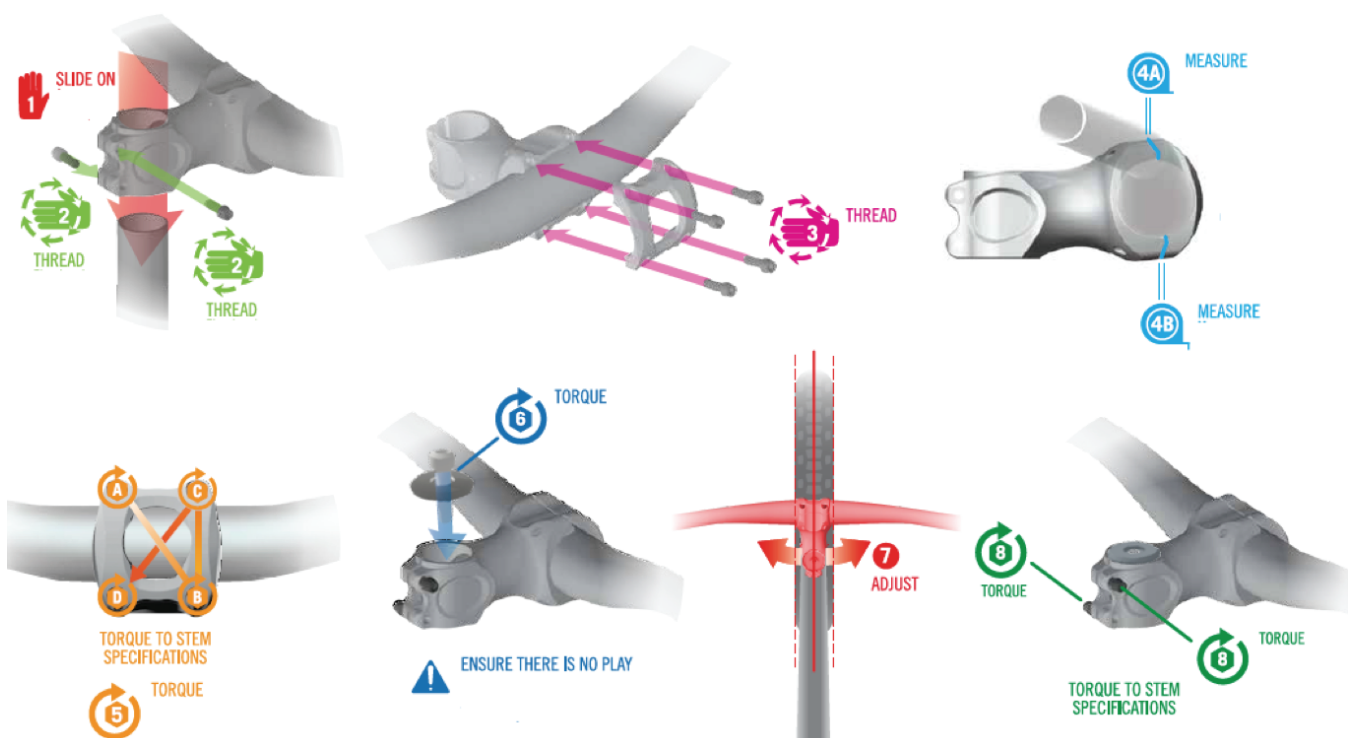
Example of a snapped shaft due to wrongly installed spacers.



The shaft was left uncut and all necessary spacer were put on top of the stem with a standard expander installed in the shaft. The shaft snapped exactly at the transition of stem and top cap. Please prevent that through a correctly mounted stem an expander.

STEM INSTALLATION

- 1 Remove all screws and the frontplate from the stem – Grease them or thread lock them – depends on the manufacturer
- 2 Apply Carbon Grease to the stem as well as to the shaft
- 3 Place your recommended spacer on to the shaft
- 4 Slide the stem on to the fork shaft
- 5 Remember the rules how many spacers on top or below are required (now the shaft is already cut to the needed length)
- 6 Attach the handlebar to the stem, carbon grease the handlebar as well
- 7 Install the frontplate and tighten the screws equally (some manufacturer recommend an equal gap between the top and bottom screws, some want to have them closed top or bottom)
- 8 Adjust your handlebar, tighten the screws of the frontplate to the lower torque settings of the two parts as shown below (ideally stem and handlebar brand are the same – best possible fit)
- 9 A – B – C – D; always only 180° and then changing the bolt until correct torque is reached
- 10 Install the top cap and follow the rules of chapter 3.2 to adjust headset
- 11 Adjust the stem centric to your centerline of the bike
- 12 Close the stem bolts to the recommended torque setting equally and always change the bolt after a 180° turn to ensure proper torque assignment



06 DRIVE TRAIN SETUP

ROAD BIKE FRONT DERAILLEUR

There are two different ways to attach a Front Derailleur (shortened to FD) to the bicycle. Braze - On and Band - Clamp. Band Clamps come in different diameters.

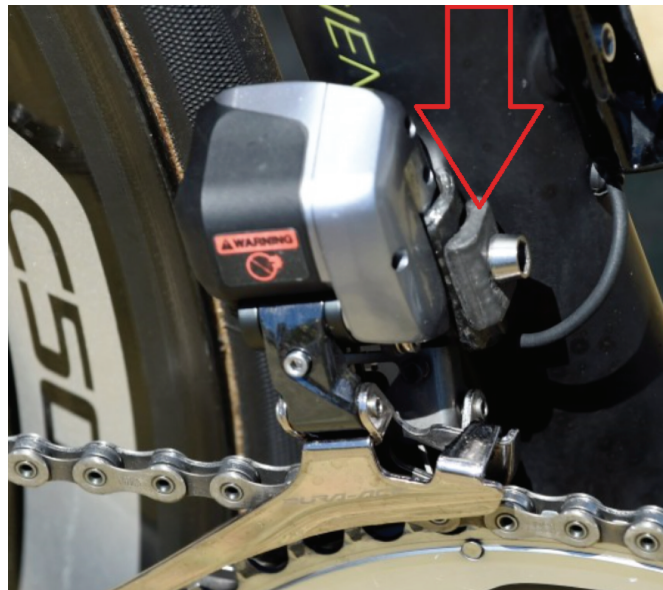
Important on all our Bike Models with a carbon braze on mount. **It has to be used** our special carbon plate, not the one that comes with the derailleur, to equally apply pressure on the components. Shown below.

Please apply carbon grease between the components, especially when it comes to electronic shifting components that supply a higher shifting power to ensure permanent proper alignment.



Braze-on

Band-clamp



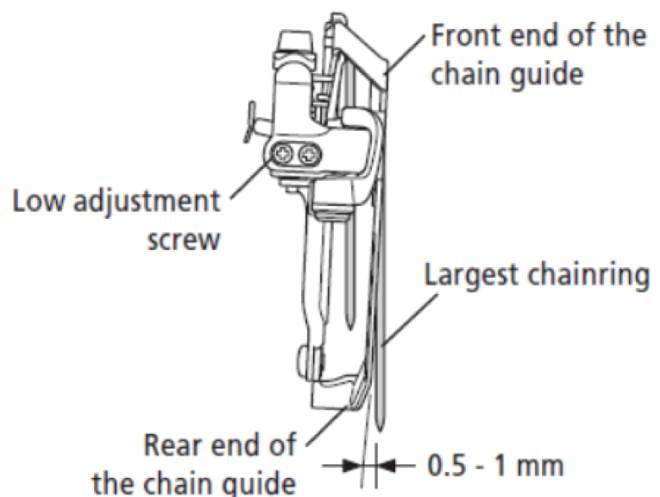
ADJUSTING FRONT DERAILLEUR – ROAD

Please take note of the fact that SRAM differs from Shimano when it comes to the alignment of their shifting systems. Always make sure to follow the guidelines of the manufacturer.

The adjustment is basically done over the actual mounting of the FD (side alignment), the both limit screws (cage end position settings) and the cable tension (fine adjustment).

POSITIONING THE FD

- 1 Adjusting the FD with the clamp bolt that there is a gap of 1-3 mm between the outer chain guide and the biggest chain ring. Set in that height the backup plate. Don't fully torque the clamp bolt.
- 2 Adjust, with the low adjustment screw, the outer chain plate parallel to the biggest chain ring.
- 3 Depending on the type and brand of FD it is required whether to install it parallel to the biggest outer chain ring or with an up to 1mm inside turn.
- 4 Screw in the supporting screw until the outer plate is parallel to the biggest chain ring.
- 5 When these 4 steps are done the FD is positioned correctly.



CONNECTING FD TO THE SHIFT CABLE

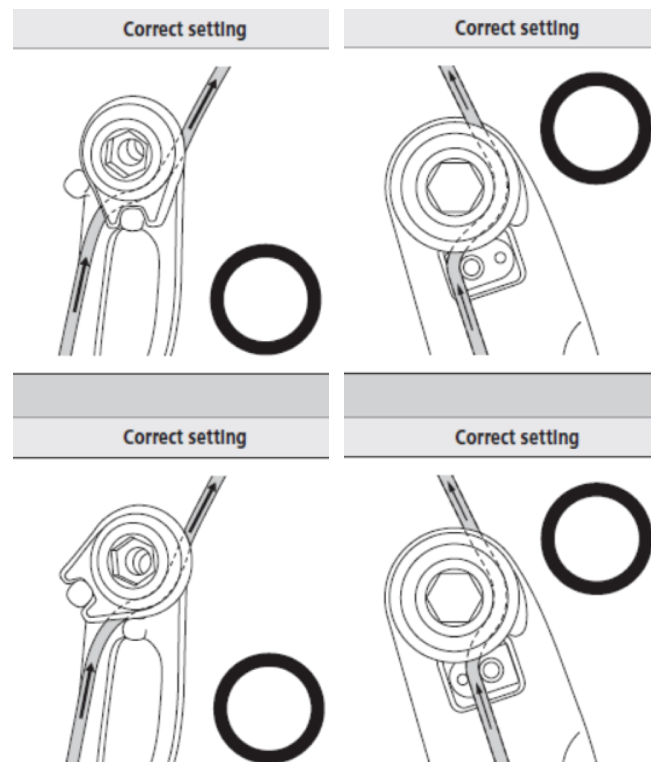
Make sure that you attach the cable always to the given cavity.

In some cases a so called converter can be turned on and off depending on the geometry of the bike. To measure that certain tools are available. Example on next page on the bottom.

Usually for the FD a cable adjuster should be installed. Therewith, and the trim function, you make sure that you have nearly zero rubbing of the chain in any gear.

Install the shift cable while the lower screw sets the outer plate parallel to the biggest chain ring. With that you can easily raise the tension without using the cable adjuster.

While adjusting the lower settings to 0-0,5 distances to the inner plate you will recognize the rise in tension.



SPECIFIC BRAND ADJUSTMENTS

We want to call your attention to the issue that Shimano® changed the design of FD in the last three product circles three times and therewith the way of adjustment. Please always make sure that you follow the right guidelines.

Shown here are some useful links to the three different settings of FD of the last three product circles.

<http://si.shimano.com/#seriesList/16/43> FD-7900 (former Edition)

<http://si.shimano.com/#seriesList/16/42> FD-9000 (actual Edition)

<http://si.shimano.com/#seriesList/16/120> FD-9100 (2017 Edition)

<http://www.parktool.com/blog/repair-help/front-derailleur-adjustment> (General advice)

Of course SRAM® also has his guidelines to adjust the FD. They use the so called YAW® Technology.

<https://www.sram.com/service/sram/3,378> SRAM Red/E-Tap

TROUBLESHOOTING

Ways to identify shifting problems

If the adjustment is done and still something isn't working check the chart below to determine the solution

If the chain falls to the crank side.	Turn the top adjustment bolt counterclockwise.
If shifting is difficult from the smallest chainring to the largest chainring.	Turn the top adjustment bolt clockwise.
If shifting is difficult from the largest chainring to the smallest chainring.	Turn the top adjustment bolt counterclockwise.
If the chain falls to the bottom bracket side.	Turn the low adjustment bolt clockwise.

Examples for Tools recommend for actual Shimano FD alignment



MTB FRONT DERAILLEURS

Please take note of the fact that SRAM differs from Shimano when it comes to the alignment of their shifting systems. Always make sure to follow the guidelines of the manufacturer.

The adjustment is basically done over the actual mounting of the FD (side alignment), the both limit screws (cage end position settings) and the cable tension (fine adjustment). On D and E-Type FD a side alignment is no longer necessary because the alignment

When it comes to FD on the MTB there are several possibilities to attach the FD to a frame.

Quick Overview of attaching possibilities:

- High Direct Mount (D-Type)
- Low Direct Mount (E-Type)
- High Clamp
- Low Clamp

All these Types of attaching possibilities come in **3x** and **2x** options as well as **standard swing** or **side swing** (only for Shimano®).

To discuss or show all the different ways to connect a FD MTB it would go beyond the scope of this workshop.

Shown below, depending on the FD that is equipped, is a wonderful overview of all the different ways to setup the FD correctly:

<http://si.shimano.com/#seriesList/1>

Shimano FD Adjustment Overview

Please click on [FD- DM-FD0003-05](#) to become every necessary information for the correct alignment of every type of front derailleur.

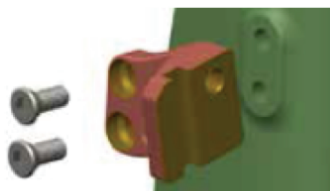
On the actual SCOTT Carbon Bikes we use mostly E-Type (High Direct Mount) and D-Type (Low Direct Mount) Derailleur. On the good value bikes band clamp models are still common.

For each bike there comes a different hanger plate, if a bike is not specked with a FD, please find the right hanger plate in your TECHBOOK. You can directly copy the number into your B2B and have the item pictured.

As an example:

new Spark FD Mount

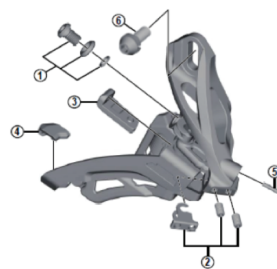
Part 254087 :
Front derailleur mount
Spark MY17



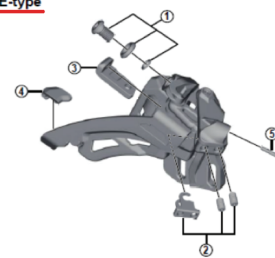
Only use a High direct mount side swing front derailleur.



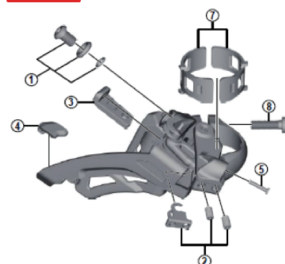
D-type



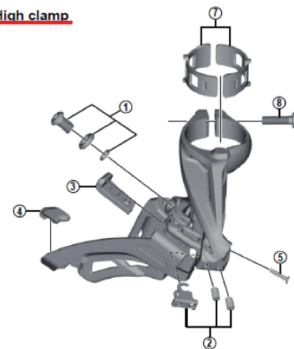
E-type



Low clamp

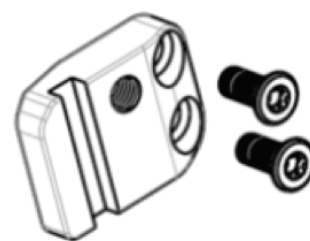


High clamp



Scale FD Mount

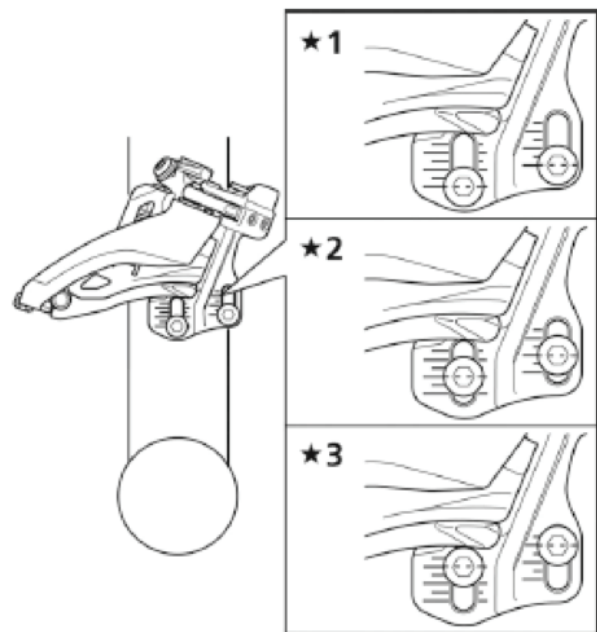
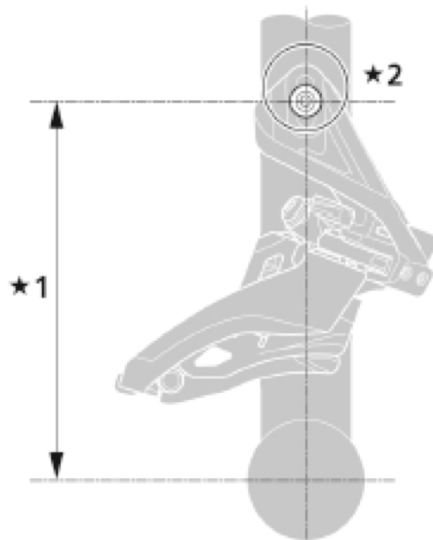
Part 254088:
Front derailleur mount
Scale MY17



Only use a high direct mount side swing unit.



The specific height of the direct mount could be also figured out without a attached crank. Depending on the biggest chain ring size there are certain specific pre settings that will work. With a standard band type it is easier to set the right height with a mounted crank. Again between 1-3mm is recommended.



- ★1 Largest chainring 38T
- ★2 Largest chainring 36T
- ★3 Largest chainring 34T

REAR DERAILLEUR - ROAD

There is only one way to attach the Rear Derailleur (shortened to RD) to the frame. The RD Hanger.

The Rear Derailleur has always the thread diameter of 10mm x 1mm

The RD of the Brands Shimano and Sram do use the same thread so you don't have to change the RDH if you change your shifting components.

With Disc Brakes entering the Road Bike sector, thru axles get common here as well. So for the Addict CX/ Gravel, Solace Disc, Speedster Disc and Addict Road there are specific RDH for thru axles. Shimano will offer a direct mount road version for thru axles in the nearby future.

But the way to attach it to the frame is still the same.

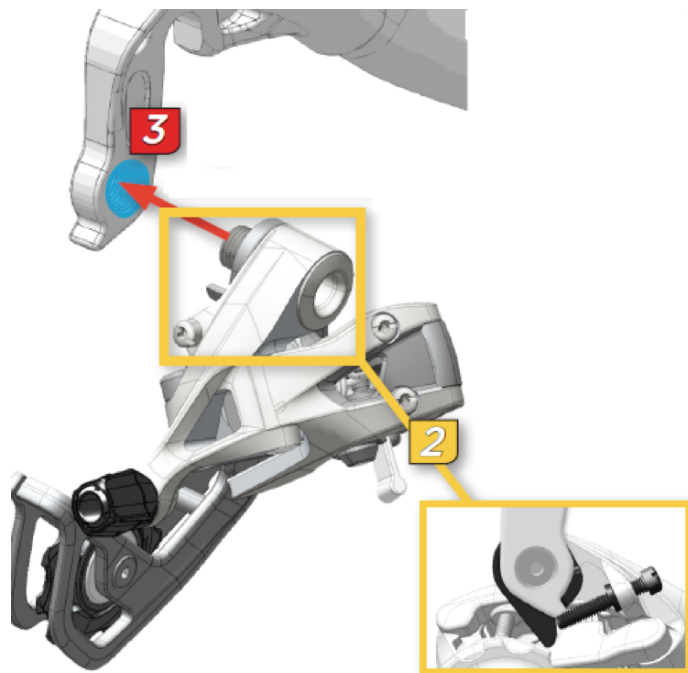
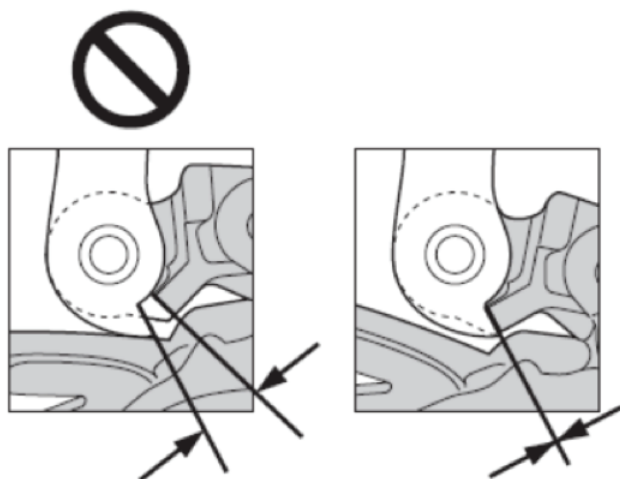


REAR DERAILLEUR ATTACHING / ALIGNMENT

Attaching: Make sure the RDH is mounted properly.
Grease the thread of the RDH or RD **IF THERE IS NO
THREAD LOCK ON THE RD THREAD!!!**

Apply the right amount of torque given to the
recommendations of the manufacturer.

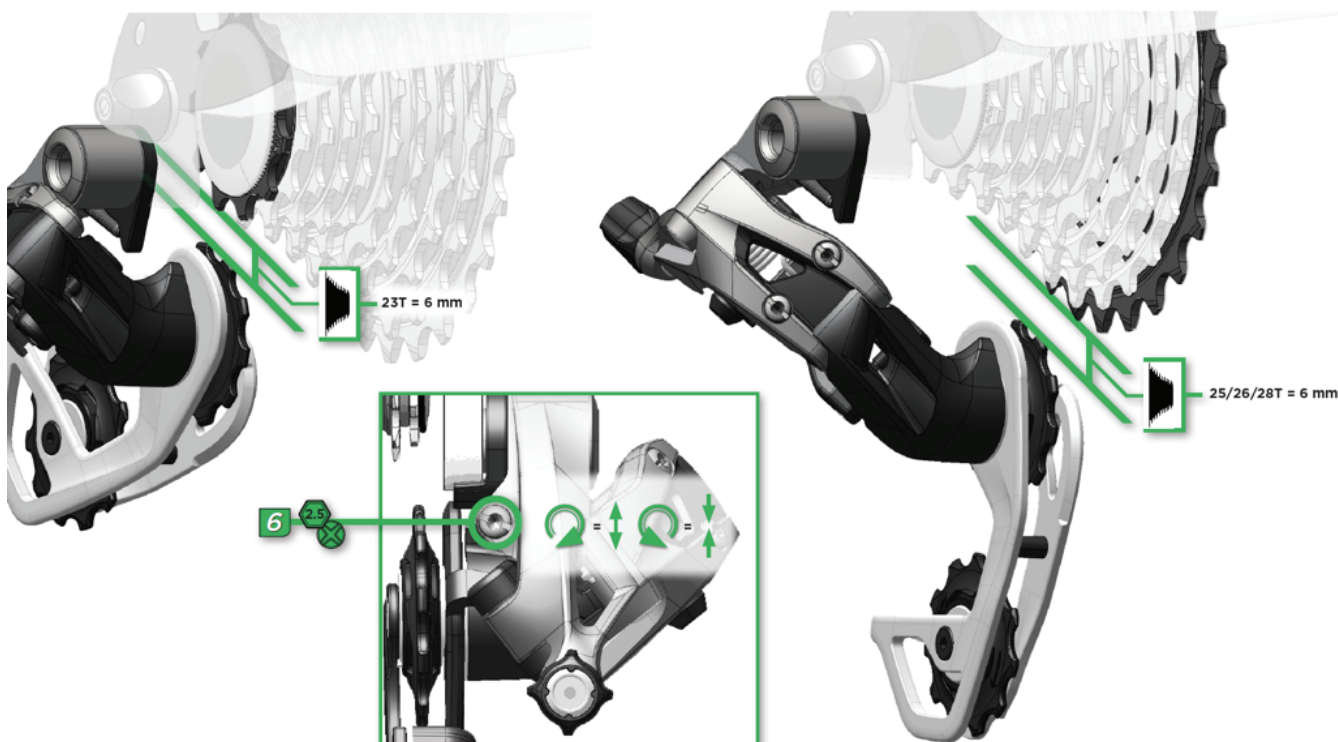
Attention: the B-Tension Adjust Bolt (or plate by SRAM)
has to sit flush on the nose of the RDH. Otherwise a
proper alignment is not possible.



BASE ALIGNMENT OF LIMIT SCREWS

B Screw always comes first.

It depends on your biggest sprocket on the cassette
and the length of your RD cage



After that the L and H stops are going be adjusted

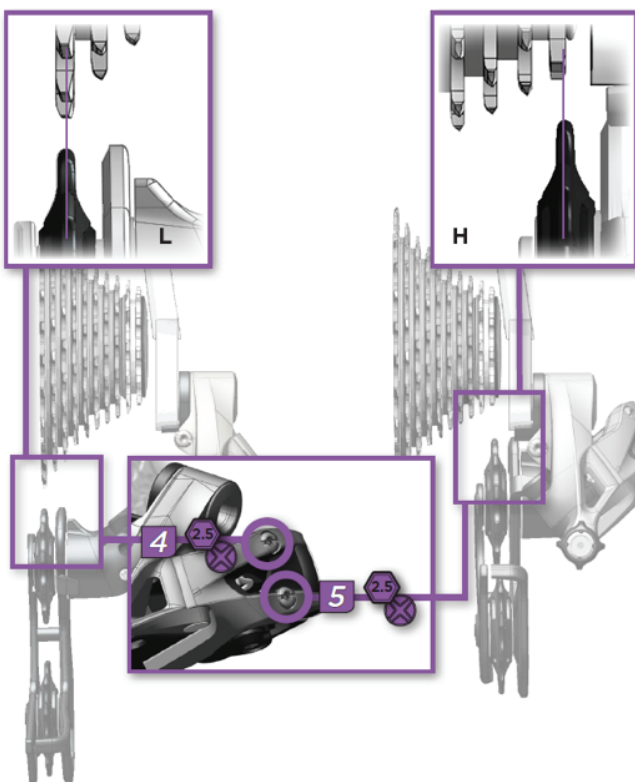
The L stop should be perfectly aligned under the biggest sprocket. This is necessary to avoid that the chain slips between sprockets and spokes. This would cause a huge damage to the components.

The H stop should be slightly outcentered to the frame to ensure proper down shifting. But don't overdo that and check after chain installation multiple times if the chain doesn't tend to fall between smallest sprocket and frame.

Shimano and Sram both advise you to do so.

Please make sure that a RD behaves different when shifted with or without pressure. A test ride after proper workstand alignment is always wise.

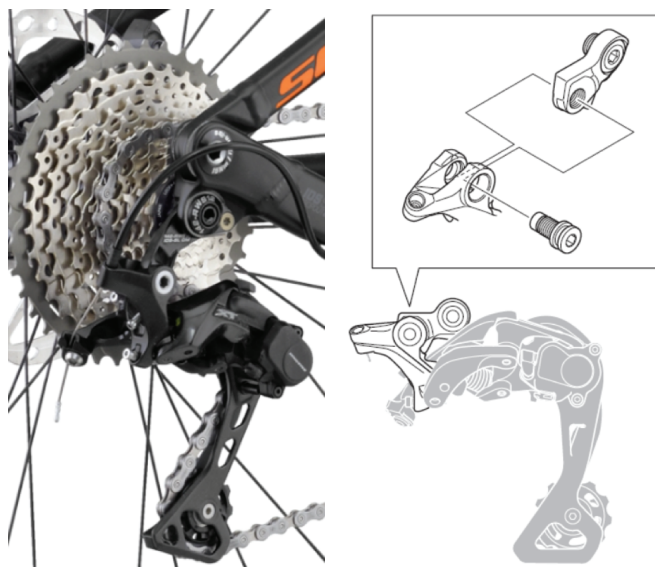
The fine adjustment is done over the cable adjustment barrel.



REAR DERAILLEUR – MTB – CLUTCH MECHANISM

There is only one way to attach the Rear Derailleur (shortened to RD) to the frame. The RD Hanger.

Shimano in specific is offering a so called direct mount RDH. We offer that on Genius, Spark, Scale Bikes.



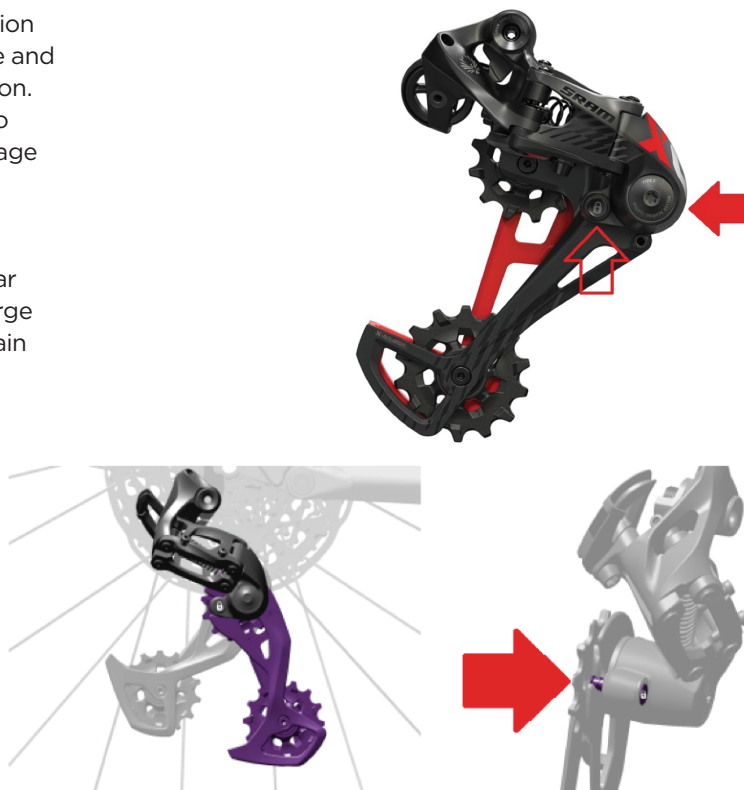
A nowadays standard for MTB RD is that they use a clutch mechanism to increase the chain tension.

Shimano is using the „shadow plus“ adjustable, on/off clutch systems. To remove the rear wheel you have to switch the lever to the off position. Shown here.



Sram is using a „Roller Bearing Clutch“ in combination with the „cage lock“ system, that derailleur bounce and chain slap are eliminated without sacrificing precision. You can't turn it on/off, it is a permanent system. To dismount the rear wheel you have to activate the cage lock. Shown below on the Eagle RD.

Interesting as well is the upper pulley that moved far to the back. For quicker, more exact shifting, the large upper pulley offset design maintains a constant chain gap across all gears.



To unlock the system just swing the locked cage slightly to the front and the lock will automatically unlock. Note: never forget after dis-assembling a wheel to do so.

Base Alignment MTB RD

As with the RD Road it is the same process, from B -> L -> H -> cable tension to fine tune the RD Function.

- 1 Check that the shifting cable sits in the RD cable guide and is routed as prescribed
- 2 Make sure the cable sits in the groove of the cable fixing bolt (bolt plate as well has a direction)
- 3 Check that the cable housing has the right length and is cutted properly
- 4 Adjust Stops BEFORE cable attaching
- 5 Turn out the cable adjusters 4 clicks to reduce the cable tension if necessary

1X DRIVE TRAIN SETUPS

Sram introduced a couple of years ago there 1x11 drivetrain system. On MTB's and Cyclocross Bikes it is now a well used setup. Shimano and Sram do provide it for the MTB but only Sram offers it for Cyclocross and Triathlon Setups as well.

The System works without a chainguard because of the narrow wide design of it's chaingrings as well as the RD Pulleys that have a narrow wide design.

The rear derailleur's straight parallelogram design limits all movement to the horizontal axis, which makes ghost shifting impossible while also reducing shift force. For quicker, more exact shifting, the large upper pulley offset design maintains a constant chain gap across all gears.

SRAM 1XSETUP CYCLOCROSS

Advantages of the 1x Setup Systems compared to FD Setups

- 1 **Less maintenance:** No FD no chainrings one shifter
- 2 **Less weight:** No FD no chainrings one shifter
- 3 **Less thinking:** No FD no chainrings one shifter
- 4 **Less chainslap:** Short Cage, short chain, clutch mechanism
- 5 **Less chainsuck/drop:** Perfect effective chain angle
- 6 **Better ground clearance:** Slacker geometries welcome smaller chainrings



Always be aware of the fact that you should always run a full drivetrain setup from one supplier to achieve maximum performance AND warranty.

For the MTB cassetts you need a different freewheel body. It is called XD. It is required to put a ten teeth sprocket on. With that technique there is no need for a cassette fixin bolt screw. Every hub manufacturer normal has one in it's xd freehub lineup. Pictured next side.

A standard cassette tool, used for every Shimano and Sram cassette, will do the job to mount the cassette.

Shown the XD Freehub body and XX1 Cassette



Shown the Narrow Wide profile of the chainring (looks equal on the pulleys)



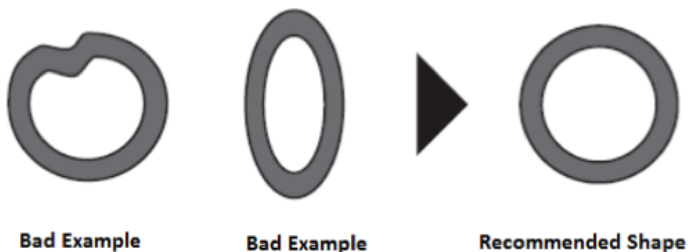
Good overview over all the 1x Features

<https://www.sram.com/sram/mountain/1x-technologies>

HOW TO CUT CABLES / CABLE HOUSING

Cutting the outer casing

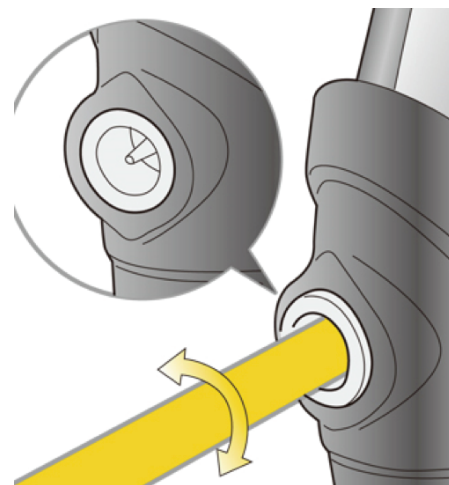
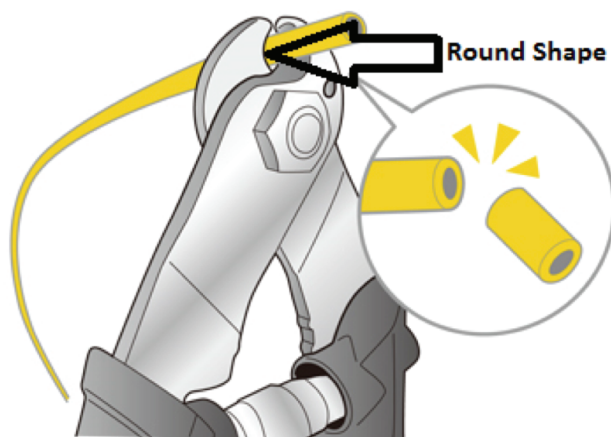
While Cutting the outer casing to it's recommended length please make sure that the end of the housing after cutting looks like on the picture below.



When cutting the outer casing, cut the end opposite to the end with the marking.

After cutting the outer casing, make the end round so that the inside of the hole has a uniform diameter.

- 1 Always use a proper tool to shorten the housing. Shown below.
- 2 Because of the round shape of the cable cutter you don't squeeze the housing.
- 3 Do always cut fast and with a proper amount of force.
- 4 Even with a proper cable cutter the shape after cutting looks a bit bent.
- 5 Put a shift cable in and pull and push it to control fluent moving.
- 6 If the shift cable is not moving use a spike, normally specific tools have something like that attached. Shown here.



07 Di2 DRIVE TRAIN ADJUSTMENT

Di2 DRIVE TRAIN

Shimano : Dura Ace / Ultegra / XTR / XT / Alfine Di2 Drive Train

The Setup of a Shimano Di2 System is covered by the so called E-Tube Project.

The Installation of the Wires, the battery and most important the setup of the shifting can be managed via the E-Tube Software that is free to download. It is a easy to use, a real plug and play system. The system is availalbe with rim and disc brakes.

Link to free Software Download

<http://e-tubeproject.shimano.com/>

Link to fully Installation Manual

<http://si.shimano.com/#seriesList/46DM-DA0001-09>

A really useful tool for wiring your frame up:

<http://www.parktool.com/product/internal-cable-routing-kit-ir-1-2?category=Brakes>

One important thing we want to make sure is that we recommend to put the original Shimano metal plate or SRAM wedge behind the supporting screw even if our frames supply a huge metal plate on the connecting area of the supporting screw.



08 SRAM RED E-TAP ADJUSTMENT

SRAM RED E-TAP

E-Tap is only available for Road Bikes and only in the Red Group Edition

The Setup of a SRAM RED E-Tap is covered by no programm behind. They provide a dongle to update the system. The rest of the system ist programmed via buttoms on the shifter, FD and RD.

There will be no wires that have to be attached instead of the brake cabels (and mybe the so called blibs for shifting when on the top of the handelbar). It is a total Wireless connection via AIREA. Therewith FD and RD have to have a battery. The system is available with rim and disc brakes.

The Setup of the system:

<https://www.sram.com/service/sram/3>



09 BRAKE OVERVIEW

BRAKE SETUP – DISC BRAKE

Standards for attaching Disc Brake Calipers to the frame

IS 2000

51mm International Standard (or "I.S.") - A disc caliper is attached to the frame/fork with two bolts that are 51mm apart (center to center). The bolts aim at the wheel (Shown adaptor to PM)



Postmount

74mm Post Mount - A disc caliper is attached to the frame/fork with two bolts that are 74mm apart (center to center). The bolts are screwed directly down into the frame/fork - the bolts are parallel to the plane of the wheel.



Flat Mount

Flat Mount – The new Standard that is replacing the PM Standard on disc equipped Road Triathlon and Cyclocross Bikes. Without adapters in the back you can run a 140mm Disc, with at maximum a 160 rotor. In the front you always need an adaptor to run either 140mm or 160mm rotors. The gap center to center on the fork is 70mm, in the rear 34mm.



- 1 Always make sure that the surface area where the caliper is mounted to is nicely faced



- 2 Only use adaptors from the supplier of the brake system
- 3 Never exceed the maximum rotor size of the bike manufacturer
- 4 Never mix braking liquids with each other; that means no DOT mixing with each other (5.1 with 4) or even worse mineral oil brakes run with DOT or the other way around
- 5 Cut the brake housing only with a proper tool and only use original connecting parts
- 6 Always make sure that you proper brake in the brake pads and the rotor to get max. performance
- 7 Bleeding process for Shimano: <https://www.youtube.com/watch?v=T1WT5EkJ9Qs>
- 8 Bleeding process for Sram: <https://www.youtube.com/watch?v=8K4ADjuxEqc>

BRAKE CALIPER – ROAD BIKE –RIM BRAKE

On a Road Bike there are three different ways to mount a brake caliper to the frame.

Disc Brake Flatmount – already explained above

Classic Standard One Center Bolt Mount – Standard for the last decades



Direct Mount Rim Brake – New Standard with a two bolt mount



Installation Advise: <http://si.shimano.com/#seriesList/16> click: [DM-RACBR01-00](#)

10 WARRANTY CLAIM PROCEDURE

THE ONLINE B2B WARRANTY SYSTEM ENSURES A FAST AND EFFICIENT CLAIMS PROCESS BY PROVIDING REAL-TIME 24/7 ACCESS TO THE DATA, PICTURES, AND PROGRESS OF CLAIMS TO ALL THE PARTIES INVOLVED.

Our warranty service and communications are streamlined throughout the claims process.

From the first lodgement of a claim through to the final replacement part delivered to the consumer, each party can track the progress of the claim 24/7.

All members of the supply chain have access to the online claim pictures and data which helps to improve our quality of engineering and production.



IMPORTANT

We will **ONLY** accept warranty claims submitted through our B2B warranty system for:

- **Bike frames**
- **Bike shoes**
- **Helmets**
- **Body protection**

We will **NOT** accept fax, mail or other versions of warranty claims.

For other small parts such as:

- **Accessories**
- **Bike parts (e.g. swingarm repair kits etc.)**
- **Or other bike parts**

Please do **NOT** use the B2B system.

Instead, **please email** your SCOTT team member to deal with these small parts.

LOG YOUR CLAIM:

Enter your SCOTT customer number and password to access our B2B system.

Please visit <https://shop.scott-sports.com/index.html> and refer to the following instructions and screenshots.

CHECK THE PROGRESS OF YOUR CLAIM:

Use the Claim Number generated when your claim was finalized. Access our B2B system to check the progress of your claim, the replacement part you will receive, shipment details, etc in the same way as you would in a regular order on B2B.

DISTRIBUTORS ONLY:

All other items for each category please use the Parts Claims Excel Sheets.

SYNCROS

- For Catalogue Syncros Accessories use the Syncros Excel Claims Sheet
- For Syncros OEM parts (on complete bikes i.e FL2.0 Stems , FL2.5 handlebars & Seatpost, XR2.5 Saddles etc) use the Syncros Excel Claims Sheet

SCOTT SUBSIDIARIES:

- For Catalogue Syncros Parts
- Accessories and OEM parts use ZKL1

BIKE FRAMES

1 Go to:
<https://shop.scott-sports.com/index.html>
 Log in using your user name and password.

The warranty request form can be found via the link in the main navigation located at the top of the page.

Select the appropriate Division and Product group.

2 All fields in the warranty request form must be completed.

Enter the bike's frame number and click the blue button to check the number.

Double check the information is correct.
If the information is not correct please contact us. Do NOT continue to enter the claim!

Select the location and description of the damage from the drop down menus.

Add any additional comments in the box provided, then click the 'Send' button.

3 You must upload all pictures for the claim to be processed.

Picture 1: Clearly shows the damage,
 Picture 2: Shows the frame's serial number,
 Picture 3: Shows the entire bike,
 Picture 4: A copy of consumer's proof of purchase.

We only accept these file formats: **jpg, pdf or doc.**

Click the 'Send' button.



IMPORTANT

It is NOT possible to send a claim without pictures!
The system will reject your claim.

4 Check over all the details to ensure they are correct before you submit your claim.

You can add an alternative email address to send the data, and can also add your own reference.

5 You must read and agree to the terms by clicking on the check box before your claim can be processed.

If there is a Material defect that caused a REAL bodily injury, click YES.
For all other claims, you must click NO.

Click on 'Create claim' to finalize your claim.

SCOTT SPORTS - WARRANTY


1 → 2 → 3 → **4** → 5
Define group Enter infos Upload pictures **Create claim** Claim result

Warranty claim details:
Please check your data before you create a new claim.

Year of sales: 2012
Product description: 221768 Bike Aspect 29 Tour(221768)
Size: 007 M
Serial number: fsfg2423
Damage location: 202 Top tube middle
Damage type: F welding seam defective
Comment:
Your reference:
Additional email:

Submit warranty claim:
To finalize your submission you must agree to the terms outlined below!

☐ * The defective material needs to be destroyed so that it is not any more suitable for common use (this does not concern product liability cases). SCOTT Sports IT shall indemnify and hold harmless SCOTT Sports SA and/or its affiliates from and against any claims by thirds incurred by SCOTT Sports SA and/or its affiliates arising out of any defects and/or damages caused by the defective material. .

 bodily injury / Personenschaden / dommage corporel
☐ Yes
☐ No

Create claim



Making a claim for bodily injury is extremely serious.

ONLY click 'Yes' if a REAL bodily injury was CAUSED BY A MATERIAL DEFECT!

6 A unique Claim number is automatically generated.

Please always use your Claim number for all correspondence regarding your claim.

You will receive a confirmation email showing all relevant information to your claim.

You can track the progress of your claim in 'My Transactions' using your Claim number.

SCOTT SPORTS - WARRANTY

1 → 2 → 3 → 4 → **5**
Define group Enter infos Upload pictures Create claim **Claim result**

Warranty claim details:
Claim number: 000100034089

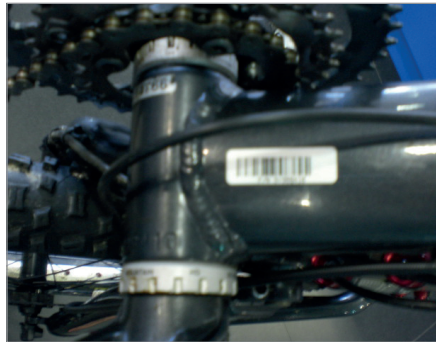
IMAGE QUALITY

- 1 When uploading images to B2B or in direct emails please **ensure the images are in focus and legible**.
- 2 **We cannot help** with the assessment of an issue or problem **if the evidence presented is not of a required standard**.
- 3 **Always include the frame number of the bike** in all direct email enquiries, as this information helps us easily track the problem.

EXAMPLES OF **POOR QUALITY** IMAGES THAT YOU SHOULD **NOT** SEND:

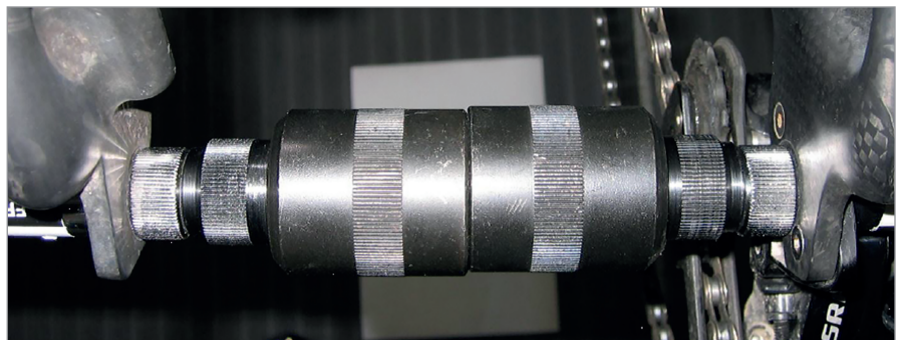


All of the important information is **not in focus**.



Frame Number is **obscured or blurry**.

EXAMPLES OF **GOOD QUALITY** IMAGES THAT WE **REQUIRE** INCLUDING EXCELLENT CLAIM INFORMATION:

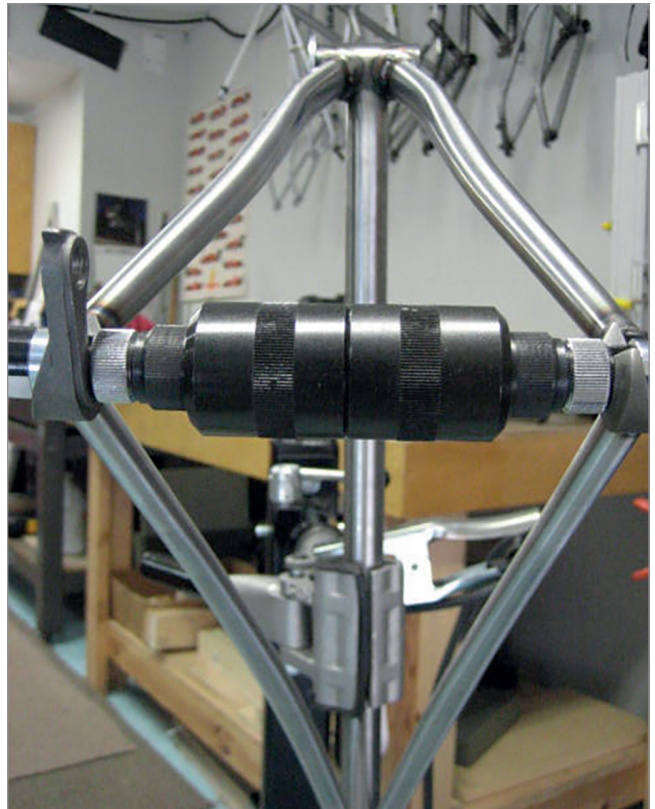


BOTTOM BRACKET/DROPOUT

If you have issues with Bottom Bracket Dimensions or Dropout Alignment please **measure the following along with the overall alignment of the frame**. If this data is collected first the assessment of the problem will

be a lot faster.

These tools can be used on aluminium and carbon frames. A full list of recommended tools will be covered in a separate chapter.



HELMETS

When uploading claims for Helmets, please **also attach an image of the serial number** if possible as we can add this number into the claim when we process it.



PLEASE NOTE THAT WE HAVE AN AGREEMENT WITH THE BELOW COMPANIES/BRANDS FOR WORLDWIDE WARRANTY SUPPORT OF OE PARTS SPEC'D BY SCOTT:

- Shimano
- SRAM
- DT-Swiss
- Ritchey
- Continental Tires
- Schwalbe Tires
- SR SunTour
- Rock Shox (SRAM)
- Fox Racing Shox
- E-13
- Zipp
- Profile
- Bosch
- Brose
- Kenda
- FSA
- Raceface
- Maxxis
- X-Fusion
- Alex Rims
- Formula
- Marzocchi

SUPPLIER AGREEMENT

The national distributor of the defective product will help you or your dealer with warranty support in your country.

Please contact your national distributor directly and include the cleaned defective part along with the proof of purchase to help make the claim process more efficient.

If you have any difficulties with warranty support from a distributor, **please do not hesitate to contact SCOTT for further assistance.**

To help SCOTT follow up on your claim with the distributor **please provide us with as much information as possible:**

- **Detailed information about the part**
- **Digital picture**
- **Name of the contact person at the distributor with whom you are having difficulties.**

ALEX RIMS

You can find your local Alex agent at:
www.alexrims.com/distributors/

If you have any difficulty contacting Alex rims you can contact directly Mr HENDRIK TAFEL with your enquiries on Syncros/Alex Rims

HENDRIK TAFEL
Alexrims European Office
TEL: +49 151 23433124
hendrik.tafel@alexrims.com.tw

NUVINCI

EUROPE AND REST OF WORLD

The Netherlands (Zwolle)
Phone: +31387200711
eu-service@nuvincicycling.com

GERMANY / AUSTRIA

Hermann Hartje KG
Phone: +49 2289 2939 079
de-service@nuvincicycling.com

SWITZERLAND / LIECHTENSTEIN

OFELEC AG
Phone: +41 43 508 55 97
ch-service@nuvincicycling.com

TEKTRO

Please find below the list of TEKTRON service centres.
If you cannot find a service agent in your area please
contact Tina@tektro.com.tw

TEKTRO SERVICE CENTERS:

AUSTRALIA

Adventure Brands
Phone: +61 3 9770 8912
Fax: +61 3 9770 8947
www.adventurebrands.com.au

ARGENTINA

Ferraris S.R.L.
ferraris@fibertel.com.ar

BELGIUM

Buzaglo BV
<http://www.buzaglo.nl/>

BULGARIA

CROSS LTD.
Phone: +35996300715
www.crosscycle.com

CANADA

Cycles Lambert Inc.
Phone: +418 835 1685
Fax: +418 835 5322
www.cycleslambert.com

CHINA

Tektro [wuxi] Technology Co. Ltd
Phone: +86 510 882 62458

Tektro Metal [shenzhen] Co. Ltd
Phone: +86 755 277 35740

CHILE

RAFAEL BURGOS S.A.
Phone: +562 252 00600
www.rburgos.cl

COSTA RICA

Distribuidora De Bicicletas Disdebi S.A.
Phone: +2440-9248, 2431-2610
Fax: +2442-4309
www.disdebisa.com

CZECH REPUBLIC

Universe Agency Sopl s.r.o
Phone: +42 0 244 990 777
Fax: +42 0 244 990 778
www.uniag.biz

DENMARK

Sonder Gaard & Sonner A/S
Phone: +45 8628 1022
Fax: +45 8628 7731
www.bikesond.dk

ECUADOR

Distribuidora itssimo Cia. Ltda.
Phone: +593 2 603 9326
Fax: +593 2 603 9326

FRANCE

Ride On
Phone: +33 [0] 321 640 251
www.rideon.fr/tektro

FINLAND

Tunturi
bike.mail@tunturi.com
www.tunturi.fi/

GERMANY

E. Wiener Bike Parts
Phone: +49 [0] 97 21 / 650-10
Fax: +49 [0] 97 21 / 650-160
www.bike-parts.de

HARTJE

Phone: +49 [0] 42 51 / 811-20
Fax: +49 [0] 42 51 / 811-59
www.hartje.de

Merida & Centurion Germany GMBH

Phone: +49 7159 9459 30
Fax: +49 7159 9459 50
www.centurion.de/de_de

GREECE

G. Theotokis and Sons Co
Phone: +30 231 092 2922
Fax: +30 231 094 2922

HUNGARY

Bikefun
Phone: +36 [1] 278 5213
Fax: +36 [1] 278 5219
www.bikefun.hu

INDIA

Starkenn Sports PVT LTD
Phone: +91-20-67208700
www.starkennbikes.com/Home.aspx

ISRAEL

PEDALIM
Phone: +972 2672 9904
www.pedalim.com

ITALY

B.I.S SRL
Phone: +39 0322 889811
Fax: +39 0322 839390
www.bissrl.it

JAPAN

Aki Corporation Limited
Phone: +81 78 806 0230
www.akiworld.co.jp

KOREA

Comet Bicycle Association
Phone: +82 2 2642 1764
Fax: +82 2 2642 1765
www.cometbicycle.com

MEXICO

Comercializadora Fammex S.A. De C.V.
Phone: +(52) 55 22 69 75
Fax: +(52) 55 42 77 21
www.bicitodo.com

NETHERLANDS / BENELUX

Buzaglo BV
Phone: +31 [0] 365 210 119
Fax: +31 [0] 365 210 105
www.buzaglo.nl

NEW ZEALAND

Marleen Wholesalers Ltd.
Phone: +64 3 348 4150

NORWAY

Bike Pack
Phone: +47 3345 5161
Fax: +47 3345 5314
www.bikepack.no

PHILIPPINES

Hatch motor parts company
Phone: +63 917 537 3612

PORTUGAL

Ague sport
Info@agusport.com
www.aguesport.com

RUSSIA

ALNA-BIKE CO.
Phone: +7 495 755 14 09
Fax: +7 903 124 79 69
www.velobox.ru

SOUTH-AFRICA

Omnico (Pty) Ltd.
Phone: +27 21 691 0110
Fax: +27 21 691 0112
www.omnico.co.za

SWITZERLAND

Biroma ikes and parts
Phone: +41 44 251 18 82
www.biroma.ch/

TURKEY

Asli Bisiklet
Phone: +90 212 527 2563
www.aslibisikley.com

UK

Upgrade Bikes Ltd.
Phone: +44 [0] 1403 711 611
Fax: +44 [0] 1403 710 753
www.upgradebikes.co.uk

UKRAINE

Vksota LLC
Phone: +38 044 417 0440
www.vysota.com.ua

USA

Tektro USA
Phone: +1 877 807 4162
www.tektro-usa.com

Quality Bicycle Products
Phone: +1 888 988 8959
www.qbp.com

11

MAINTENANCE PLAN

The maintenance schedule for a bike can vary somewhat on how often it's ridden and what condition it's in to begin with. Bikes that are ridden often off-road or in bad weather conditions will need more steady maintenance than a bike that is used once per month when it's sunny and dry.

Please notice that it is appropriate to better take care about a bike and service it regularly instead of using it until a failure occurs that only appears because of the lack of maintenance. Cleaning the bicycle makes it look great, last longer, and improves performance as well as the joy of the ride. Please also indicate your customers to follow our guidelines of our General Owner's Manual. 3+2 Years of warranty only when proper maintenance is proven through filled out maintenance sheets. There you will always find an appropriate SCOTT Service and Maintenance Schedule.

http://assets.scott-sports.com.s3.amazonaws.com/manuals/Manuals%20MY16/General%20Manuals%20MY16/SCOTT_Short_Manual_EN_2015-04-16_CD.pdf

MAINTENANCE PLANS

AFTER EACH RIDE

- 1 Check tire pressure, tire tread condition and wheel alignment
- 2 Quick release parts: check that they are tight and that the wheels are secure
- 3 Squeeze brakes to make sure they're grabbing
- 4 Check brake pad condition (especially after long days with a lots of descents)
- 5 Compress and release bike's suspension to be sure that it's responding properly
- 6 Clean the wipers of your suspension components (fork, rear shock, dropper post)
- 7 Clean and lubricate the drivetrain
- 8 Test Ride and Check of fully functionality after Service

MONTHLY

- 1 Frame & Fork Safety Inspection (Play in Pivots, Shocks, Linkages)
- 2 Drivetrain Component wear inspection as well as Cable and Housing Inspection
- 3 Bearing Wear Inspection (Wheel Bearings/Bottom Bracket/Headset/Pulley Wheels and Pedals)
- 4 Gear Adjust and Tune
- 5 Brake and Brake Pad Check and Adjust
- 6 Drivetrain Clean and Lubrication
- 7 Frame Wipe Down
- 8 Minor Wheel Truing
- 9 Headset and Bottom Bracket Adjust (if necessary)
- 10 Full Bike Bolt Torque Check and Adjustment (remember the rules)
- 11 Test Ride and Check of fully functionality after Service

6-MONTHS

- 1 Frame & Fork Safety Inspection (Play in Pivots, Shocks, Linkages)
- 2 Drivetrain Component wear inspection as well as Cable and Housing Inspection
- 3 Bearing Wear Inspection (Wheel Bearings/Bottom Bracket/Headset/Pulley Wheels and Pedals)
- 4 Gear Adjust and Tune
- 5 Brake and Brake Pad Check and Adjust
- 6 Headset/Bottom Bracket Adjust
- 7 Full Bike Bolt Torque Check and Adjustment (remember the rules)
- 8 Full Drivetrain (RD, CS, CH, CR) disassembly to clean and lubricate properly
- 9 Frame Clean and Polish
- 10 Full Wheel Truing (without tires)
- 11 Air Chamber and Oil Service on Front and Rear Suspension
- 12 Test Ride and Check of fully functionality after Service

12-MONTHS

- 1 Frame & Fork Safety Inspection (Play in Pivots, Shocks, Linkages)
- 2 Drivetrain Component wear inspection as well as Cable and Housing Inspection
- 3 Bearing Wear Inspection (Wheel Bearings/ Bottom Bracket/Headset/Pulley Wheels/Pedals)
- 4 Gear Adjust and Tune
- 5 Brake and Brake Pad Check and Adjust
- 6 Full Bike Bolt Torque Check and Adjustment (remember the rules)
- 7 Frame Clean and Polish / Waxing, Thread Cleaning and Facing (if necessary)
- 8 Component Strip Down to Bare Frame
- 9 Derailleur Hanger Alignment
- 10 Full Wheel Truing and Hub Overhaul
- 11 Headset and Bottom Bracket Overhaul and Adjust
- 12 Inner Cable / Housing / Hydraulic Line Replacement
- 13 Send the Suspension Components to the manufacturer for a complete overhaul
- 14 Test Ride and Check of fully functionality after Service

12

HELPFUL LINKS

HELPFUL LINKS

Tool Companys and Factory Equipment:

<http://www.parktool.com/category/tools/>

<https://eshop.wuerth.de/de/DE/EUR/>

<http://www.topeak.de/products/Tool-Station>

<http://www.pbswissstools.com/>

<https://www.feedbacksports.com/>

<http://www.syntace.com/index.cfm?pid=3&pk=3269>

Reparation Explanation

<http://www.parktool.com/park-tool-school>

<http://www.parktool.com/blog/repair-help>

<https://www.youtube.com/user/RaCoGmbH/videos>

<http://si.shimano.com/>

<https://www.sram.com/service>

<https://www.youtube.com/user/SRAMtech/videos>

<http://www.ridefox.com/help.php?m=bike&ref=topnav>

<https://www.sram.com/de/service/rockshox/all>

Expertise Expert Knowledge

<http://www.zedler.de/en/index.html>

<http://www.trickstuff.de/en/know-how/index.php>

http://www.syntace.com/fileserver/syntace/FILES/drehmo_syntace_4_sprachig464.pdf

<http://batteryuniversity.com/learn/>

13 WORKSHOP TOOLS

Workshop cleanliness and order in the workplace are prerequisites for **QUALITY!**

SCOTT is a brand that develops and offers products with high end and lightweight standards.

This high standard begins with development and production and continues through to the service.

To offer high quality and professional service to our customers it is necessary to have a clean and well equipped workshop. As a branch or an importer, YOU reflect the quality and standards of SCOTT products in the service you provide.

EXAMPLES OF HOW TO SET UP YOUR WORKSHOP

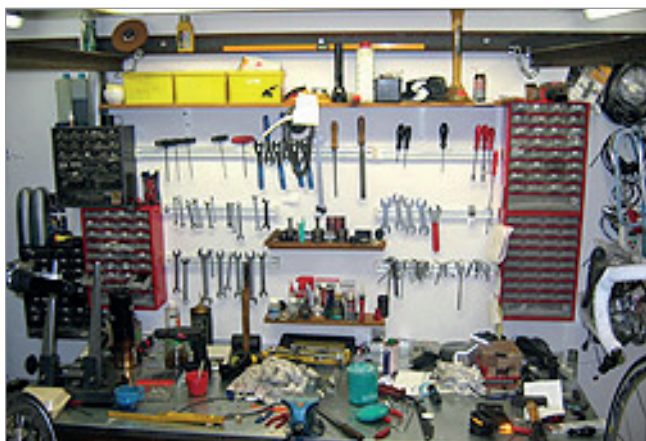
SCOTT ITALIA
























SCOTT GERMANY



EXAMPLES OF WHAT **NOT** TO DO



Listed below are some important special tools we recommend you have in your workshop to check and repair bikes in a professional and uncomplicated way.

Tool	Notes	Brand	Image
HTR-1 Headset Reamer	For all bikes		
FFG-2 D.o. Alignment Gauge Set	For all frames to check the drop out alignment		
FAG-2 Frame Alignment Gauge	For all frames to check the alignment		
WAG-4 Wheel Alignment Gauge	For all wheels		
RT-1 Head Cup Remover	To remove headset cups 1 1/8		
RT-2 Head Cup Remover	To remove Headset Cups 1.5		
DAG-2	To check the RD alignment		
09171	Rivet plier to fix bottle cage rivets		
091714	Adapter for M4 screw for rivet plier		
0917240	M4 Rivet for e.g. bottle cage		
063901	Hand Tap Set, to rework or clean threat		
06571	Tap wrench for hand tap set		



PREPSTATION PRO

Easy moving trolley tool station with 5" wheels and seven tool compartments containing 43 sets of professional shop quality bike tools. Wheel base can be easily pulled out to extend working base for better stability. Push button Lift Handle opens tool trays for quick and easy repairs.

COMPARTMENTS

7 total, includes 5 tool trays and 2 component trays

ADDED FEATURES

5" ball bearing wheels
foldable handle
Optional case cover

MATERIAL

Engineering grade plastic

SIZE L x W x H

38 x 36.2 x 72.1 cm /
15" x 14.2" x 28.4"
(Folded)

TOOLS

43 sets professional tools

38 x 36.2 x 96.5 cm /
15" x 14.2" x 38"
(Open)

TOOL MATERIAL

Chrome vanadium steel / Hardened steel

ART NO.
TPS-05



43 SETS

As an additional service to set up an even higher level of technical service to our customers, we have worked with Würth Tools to propose 3 levels of workshop tool packages available to order for all SCOTT Subsidiaries and distributors.

- Basic package
- Expert package
- Pro package
- Chemical package

Please find below each package detailed with pictures, barcodes and part numbers directly extracted from the Würth catalogue.

Each package has a preset item number in the Würth parts list to simplify the ordering process.

If you wish to order a package please let the QM Team now and we will help to organize on your behalf.

Katalog für Kunden-Nr. 644490 Angebot 113777513 Basic



061312108 VE 10
Quergriff Steckschlüssel
SHRDRH-QUERGRF-AUS6KT-8X200



061341502 VE 1
Schraubendreher Sechskant-Kugelpf
SHRDRH-IN6KT-KUGKPF-SW2X100



0613483015 VE 10
Feinmechaniker Schraubendreher für Inne...
SHRDRH-FEINMECH-IN6KT-KUGKPF-SW1,5X50



06139147 VE 1
Quergriff Innen-TX Satz 7-teilig
SHRDRH-QUERGRF-SORT-INTX-7TLG



071330123 VE 5
Ringmaulschlüssel kurze Form
RGMAULSHSL-ABGEWI-KURZ-SW23



071330125 VE 5
Ringmaulschlüssel kurze Form
RGMAULSHSL-ABGEWI-KURZ-SW25



071330127 VE 5
Ringmaulschlüssel kurze Form
RGMAULSHSL-ABGEWI-KURZ-SW27



071330140 VE 1
Ringmaulschlüssel-Sortiment kurze Form
RGMAULSHSL-SORT-11TLG-SW(8-22)



061312110 VE 10
Quergriff Steckschlüssel
SHRDRH-QUERGRF-AUS6KT-10X230



061343410 VE 1
Schraubendreher TX
SHRDRH-TX10X80



06139136 VE 1
Quergriff Innensechskant mit Kugelpf S...
SHRDRH-QUERGRF-SORT-IN6KT-6TLG



061393225 VE 1
Schraubendreher-Satz
SHRDRH-SORT-PH/SZ-5TLG



071330124 VE 5
Ringmaulschlüssel kurze Form
RGMAULSHSL-ABGEWI-KURZ-SW24



071330126 VE 5
Ringmaulschlüssel kurze Form
RGMAULSHSL-ABGEWI-KURZ-SW26



071330128 VE 5
Ringmaulschlüssel kurze Form
RGMAULSHSL-ABGEWI-KURZ-SW28



071402 85 VE 10
Wasserpumpenzange selbststellend
WAPUZANG-SELBSTJUST-250MM





071403 16 VE 24
Telefon- und Kabelschere
TELSHER-L140MM



071425108 VE 1
Ratschen-Ringmaulschlüssel metrisch, ge...
RATRGMALSHSL-SW8



071425113 VE 10
Ratschen-Ringmaulschlüssel metrisch, ge...
RATRGMALSHSL-SW13



071464 02 VE 1
Metallbügelsäge
METSAB-BGL



071501 569 VE 10
Flachrundzange
FLRDZANG-40GRD-SCHWARZ/ROT-L200MM



071534 96 VE 1
Teleskopmagnet
TSKOPMAGN-(L155-670MM)



071540 100 VE 1
Winkelschraubendreher-Satz Innensechskan...
WNKLSHRDRH-SORT-KUGKPF(1,5-10)-9TLG



071572 54 VE 1
Rückschlagfreier Hammer
SCHONHAM-RUECKSHLGFREI-D40MM



071403 17 VE 12
Arbeitsschere
ARBSHER-L205MM



071425110 VE 10
Ratschen-Ringmaulschlüssel metrisch, ge...
RATRGMALSHSL-SW10



071461 90 VE 1
Werkstatt-Feilen-Satz
WRKSTFEIL-SORT-KFZ-L200MM-5TLG



071471 20 VE 1
Drehmomentschlüssel
DRHMOMSHSL-USK-1/4ZO-(4-20NM)



071506 01 VE 10
Kompakt-Bolzenschneider
BLZSHND-KOMPAKT-L200MM



071537 100 VE 10
Winkelschraubendreher-Satz TX
WNKLSHRDRH-SORT-KUGKPF(TX9-40)-8TLG



071554 00 VE 1
Ein- und Ausdrehwerkzeug
VENTWZG-RFN-AUS-EINDRHWZG-VENTE



071573 50 VE 1
Schlosserhammer mit Stielschutzhülse
SHLOSHAM-HUE-500GR



Katalog für Kunden-Nr. 644490 Angebot 113777518 Expert



0502111 VE 300
Kabelbinder Standard mit Kunststoffzunge...
KBLBA-KST-KSTZNG-SCHWARZ-2,5X100



061323091 VE 1
Vorstecher
VORSTECH-6X100



07120140 VE 1
Umschaltknarre 1/4 Zoll
KNAR-UMSCH-1/4ZO-72ZAEHNE-135MM



0713111108 VE 10
1/4" Steckschlüsseinsatz metrisch
STESHSL-1/4ZO-KURZ-6KT-SW8



0713111113 VE 10
1/4" Steckschlüsseinsatz metrisch
STESHSL-1/4ZO-KURZ-6KT-SW13



0713118104 VE 20
1/4" Verlängerung
VERL-1/4ZO-L100MM



071401 551 VE 10
Kraft-Seitenschneider DIN ISO 5749
KFTSEITSHND-L140MM



071471 19 VE 1
Drehmomentschlüssel 1/4 Zoll-Sechskant
DRHMOMSHSL-ASK-1/4ZO-(1-5NM)



071471 23 VE 1
Drehmomentschlüssel 1/2 Zoll
DRHMOMSHSL-USK-1/2ZO-(40-200NM)



071511310 VE 10
1/4 Zoll-Steckschlüsseinsatz
STESHSL-1/4ZO-INTX-TX10



0502131 VE 100
Kabelbinder Standard mit Kunststoffzunge...
KBLBA-KST-KSTZNG-SCHWARZ-3,6X200



07120120 VE 1
Umschaltknarre 1/2 Zoll
KNAR-UMSCH-1/2ZO-72ZAEHNE-250MM



0713111107 VE 10
1/4" Steckschlüsseinsatz metrisch
STESHSL-1/4ZO-KURZ-6KT-SW7



0713111110 VE 10
1/4" Steckschlüsseinsatz metrisch
STESHSL-1/4ZO-KURZ-6KT-SW10



0713118102 VE 20
1/4" Verlängerung
VERL-1/4ZO-L50MM



0713118401 VE 20
1/4 Zoll Verbindungsteil
VERBTL-(1/4-3/8ZO)



071463 41 VE 1
Splinttreibersatz
SPLTREIB-SORT-6TLG



071471 20 VE 1
Drehmomentschlüssel
DRHMOMSHSL-USK-1/4ZO-(4-20NM)



071491 21 VE 1
Innen- und Aussenfräser
ENTGRATWZG-RO-IN/AUSFRAESER-INOX



071511315 VE 10
1/4 Zoll-Steckschlüsseinsatz
STESHSL-1/4ZO-INTX-TX15





071511504 VE 10
1/4 Zoll Steckschlüsseinsatz
STESHSL-1/4ZO-IN6KT-SW4



0715137100 VE 10
1/2 Zoll Steckschlüsseinsatz metrisch
STESHSL-1/2ZO-IN6KT-SW10-L60MM



0715671001 VE 1
Drehteller
ZB-DREHTELLER-PS-F.HEUER-100MM



071573 50 VE 1
Schlosserhammer mit Stielschutzhülse
SHLOSHAM-HUE-500GR



0893270025 VE 1
Schraubensicherung hochfest
SHRSI-DOS-HOCHFEST-25G



071511506 VE 10
1/4 Zoll Steckschlüsseinsatz
STESHSL-1/4ZO-IN6KT-SW6



071567100 VE 1
Parallel-Schraubstock Heuer
PARASHRBSTOCK-HEUER-100MM



071572 54 VE 1
Rückschlagfreier Hammer
SCHONHAM-RUECKSHLGFREI-D40MM



0893243050 VE 1
Schraubensicherung mittelfest
SHRSI-DOS-MITTELFEST-50G



096513 110 VE 1
1/2 Zoll Steckschlüssel-Sortiment
STESHSL-SORT-1/2ZO-IN6KT-11TLG



Katalog für Kunden-Nr. 644490 Angebot 113777520 PRO



07011600 VE 1
Hochdruckreiniger HDR 160 premium
REINIG-GER-EL-(HDR160-PREMIUM)



07022020 VE 1
Elektronik-Heissluftgebläse HLG 2000
HLUFTGEBLAESE-EL-HLG2000



071492 14 VE 1
Verlängerungsdüse für Ausblaspistole
ZB-VERLDUESE-AUSBLASPIST-ABGEWI-L100MM



071593 07 VE 1
Magnetschiene mit Halterung
MAGNSHN-WZG-KOMPL



0890600109 VE 12
Hautschutzlotion Combi
HAUTSHTZCREME-(COMBI)-100ML



0891503001 VE 1
Pumpsprühflasche
PUMPSPRFLASH-KST-LEER-1000ML



089190051 VE 1
Wandschiene
SPENDSYS-WANDSCHIENE



08931063 VE 12
Haftschmierstoff HHS @ 5000
HAFTSHMIRST-HHS5000-500ML



0893221 VE 12
Silikonspray
SILSPR-500ML



0899511905 VE 1
Augenspülstation
AUGSPUEL-WANDSTATION-500ML



07012290 VE 1
Kompressor K 290-2
KOMPR-EL-K290-2



071492 13 VE 1
Ausblaspistole
AUSBLASPIST-DL



0714938218 VE 1
Schraubendreherhalter
SHRDRHRACK-UNBEST-SCHWARZ-310X100X185MM



0890108715 VE 1
Bremsenreiniger
BREMSREINIG-5LTR



0890600606 VE 12
Handreiniger Super
HNDREINIG-(SUPER)-200ML



08919005 VE 1
Spendersystem SKIN LINE
SPENDSYS-SKIN



089305540 VE 12
Wartungsöl Multi
WARTOEL-MULTI-400ML



089314005 VE 1
Reiniger Industrie-Clean
ETIKENTF-(INDUSTRIE-CLEAN)-KANISTER-5LTI



089947002 VE 100
Einweghandschuh Nitril
SHTZHNDSHH-NITRIL-BLAU-PUDERFREI-L



0899800606 VE 1
Putzpapierständer
ABROLLSTAEND-PUPAP-BODEN-FAHRBAR





0899800900 VE 1
Reinigungstuch Softex/Softex-light
REINIGTUCH-SOFTEX-ROLLE-40X38-500BL



0957311422 VE 1
Werkbank Typ WUG 25
WRKBANK-STA-WUG25-2000-RAL7035



0957366420 VE 1
Kunststoffbox
ZB-KSTBOX-SLSHRNK-B-150X75X36



0960050013 VE 1
Grundplatte Lochplattensystem
GRNDPL-RAL9011-GRAPHITSCHWARZ-457X1486



0960050142 VE 5
U-Halter
HALT-U-40X75MM



0957270201 VE 1
Hocker HA1
DRHSTUHL-VERSTELLBAR



0957366410 VE 1
Kunststoffbox
ZB-KSTBOX-SLSHRNK-A-75X75X36



0960050012 VE 1
Grundplatte Lochplattensystem
GRNDPL-RAL9011-GRAPHITSCHWARZ-457X991MM



0960050101 VE 5
Haltestift
HAK-SCHRAEG-L50MM



Katalog für Kunden-Nr. 644490 Angebot 113777521 Chemical



0890108715 VE 1
Bremsenreiniger
BREMSREINIG-5LTR



0890600606 VE 12
Handreiniger Super
HNDREINIG-(SUPER)-200ML



08931063 VE 12
Haftschmierstoff HHS ® 5000
HAFTSHMIRST-HHS5000-500ML



089322105 VE 1
Silikonspray
SILSPR-5LTR



0890600109 VE 12
Hautschutzlotion Combi
HAUTSHTZCREME-(COMBI)-100ML



089305540 VE 12
Wartungsöl Multi
WARTOEL-MULTI-400ML



089314005 VE 1
Reiniger Industrie-Clean
ETIKENTF-(INDUSTRIE-CLEAN)-KANISTER-5LTF



0899511905 VE 1
Augenspülstation
AUGSPUEL-WANDSTATION-500ML





BACK TO BASICS WORKSHOP



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please check with your local SCOTT retailer for availability.

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SCOTT-SPORTS.COM

