

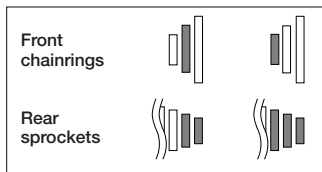
General Safety Information

WARNING

- Obtain and read the service instructions carefully prior to installing the parts. Loose, worn, or damaged parts may cause injury to the rider. We strongly recommend only using genuine Shimano replacement parts.
- Obtain and read the service instructions carefully prior to installing the parts. If adjustments are not carried out correctly, the chain may come off and this may cause you to fall off the bicycle which could result in serious injury.
- Be careful not to let the cuffs of your clothes get caught in the chain while riding, otherwise you may fall off the bicycle.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

Note

- If gear shifting operations cannot be carried out smoothly, clean the derailleur and lubricate all moving parts.
- If the amount of looseness in the links is so great that adjustment is not possible, you should replace the derailleur.
- When the chain is in the position shown in the illustration, the chain may contact the front chainrings or front derailleur and generate noise. If the noise is a problem, shift the chain onto the next-larger rear sprocket or the one after.



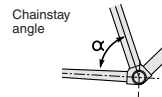
- For smooth operation, use the specified outer casing and the bottom bracket cable guide.
- Grease the inner cable and the inside of the outer casing before use to ensure that they slide properly.
- This front derailleur is for triple front chainwheel use only. It cannot be used with the double front chainwheel, as the shifting points do not match.
- For the chain, be sure to use only the Shimano super-narrow type of chain. The wide type of chain cannot be used.
- Parts are not guaranteed against natural wear or deterioration resulting from normal use.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.
- For any questions regarding methods of installation, adjustment, maintenance or operation, please contact a professional bicycle dealer.

In order to realize the best performance, we recommend that the following combination be used.

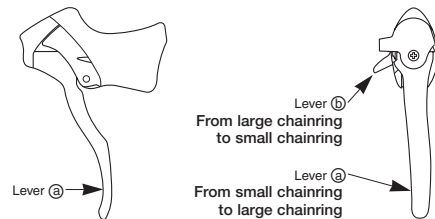
Series	SORA
Shifting lever	ST-3400
Outer casing	SIS-SP41
Gears	27
Front derailleur	FD-3403
Front chainwheel	FC-3403
Rear derailleur	RD-3400-GS
Freehub	FH-3300
Cassette sprocket	CS-HG50-9
Chain	CN-HG53
Bottom bracket cable guide	SM-SP17

Specifications

Type	Band type / Brazed on type
Front chainwheel tooth difference	20 teeth or less
Min. difference between top and intermediate	11T
Front derailleur installation band diameter	S (ø28.6mm), M (ø31.8mm), L (ø34.9mm)
Chainstay angle (α)	63° - 66°
Chain line	45mm

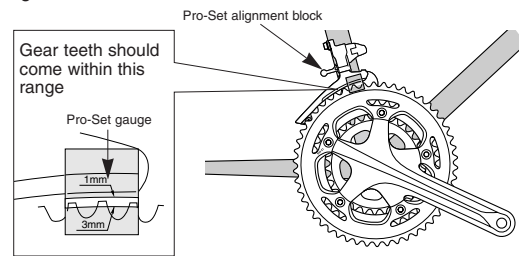


Front shifting (ST-3400)

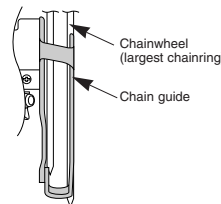


Installation of the front derailleur

Adjust and then install the front derailleur as shown in the illustration. Do not remove the Pro-Set alignment block at this time.



The level section of the chain guide outer plate should be directly above and parallel to the largest chaining. Secure using a 5mm Allen key.



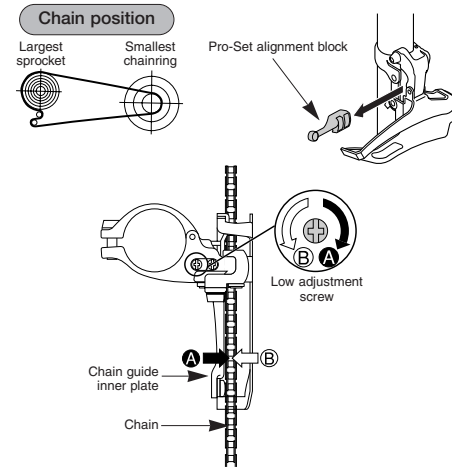
Tightening torque: 5 - 7 N·m {44 - 60 in. lbs.}

SIS adjustment

Be sure to follow the sequence described below.

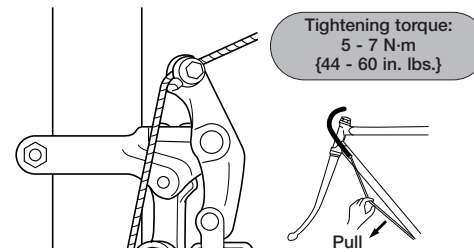
1. Low adjustment

First remove the Pro-Set alignment block. Next, set so that the clearance between the chain guide inner plate and the chain is 0 - 0.5mm.



2. Connection and securing of cable

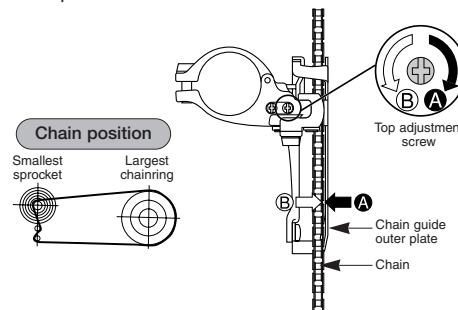
While pulling the inner cable, tighten the wire fixing bolt with a 5 mm allen key to secure the cable.



After taking up the initial slack in the cable, re-secure to the front derailleur as shown in the illustration.

3. Top adjustment

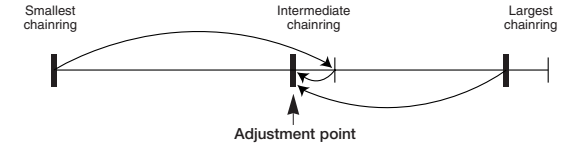
Set so that the clearance between the chain guide outer plate and the chain is 0 - 0.5 mm.



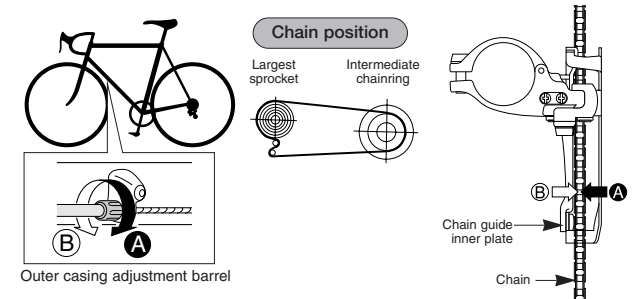
4. Cable adjustment using the intermediate chaining

When making the cable adjustment, place the chain on the largest sprocket for the rear and the middle chaining for the front.

Note: There are 2 derailleur positions for the intermediate chaining. When making the cable adjustment, make sure that the derailleur is in the inner side (toward small chaining) of the two positions. Locate the derailleur to this position by shifting from the largest to the intermediate chaining (recommended) or by shifting from the small to the intermediate chaining, then gently press lever (b) until a small click is felt (to position the derailleur to the inner side of the intermediate chaining).

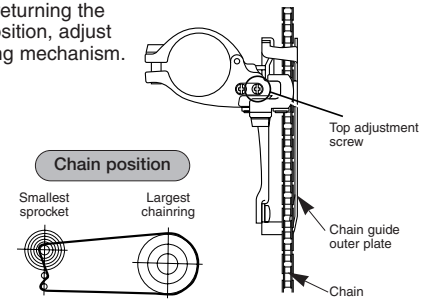


Adjust the cable tension by using the outer adjustment barrel so that the clearance between the chain guide inner plate and the chain is 0 - 0.5 mm.



5. Trimming mechanism adjustment and checking

While turning the crank arm, gently operate lever (b) and check that the front derailleur moves slightly toward the smallest chaining. If the front derailleur moves by a large amount and the chain is set onto the smallest chaining at this time, loosen the top adjustment bolt by 1/8th of a turn. Then, after returning the chain to its original position, adjust and check the trimming mechanism.



6. Troubleshooting chart

After completion of steps 1 - 5, move the shifting lever to check the shifting. (This also applies if shifting becomes difficult during use.)

If the chain falls to the crank side	Tighten the top adjustment screw clockwise (about 1/4 turn).
If shifting is difficult from the intermediate chaining to the largest chaining	Loosen the top adjustment screw counterclockwise (about 1/8 turn).
If shifting is difficult from the intermediate chaining to the smallest chaining	Loosen the low adjustment screw counterclockwise (about 1/8 turn).
If there is interference between the chain and the front derailleur outer plate at the largest chaining	Loosen the top adjustment screw counterclockwise (about 1/8 turn).
If the intermediate chaining is skipped when shifting from the largest chaining	Loosen the outer casing adjustment barrel counterclockwise (1 or 2 turns).
If there is interference between the chain and front derailleur inner plate when the rear sprocket is shifted to the largest sprocket when the chainwheel is at the intermediate chaining position.	Tighten the outer casing adjustment barrel clockwise (1 or 2 turns).
If the chain falls to the bottom bracket side.	Tighten the low adjustment screw clockwise (about 1/8 turn).
If there is interference between the chain and the front derailleur inner plate when the chain is on the smallest chaining and the largest sprocket	Loosen the low adjustment screw counterclockwise (about 1/8 turn).

Be sure to read these service instructions in conjunction with the service instructions for the ST-3400 before use.

Technical Service Instructions SI-5GS0A-001

FD-3403

Front derailleur

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