

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
	Y-6KG98010	R.H. Indicator Unit
* 1	Y-6KG98070	R.H. Indicator Unit for SL-M410-T
	Y-6KG98020	L.H. Indicator Unit
2	Y-6GA98030	Cable Adjusting Bolt Unit
2	Y-6KG44000	R.H. Inner Hole Cap
* 3	Y-6KG66000	L.H. Inner Hole Cap
4	Y-6KG98050	R.H. Main Lever Cover & Fixing Screw (M3 x 4)
4	Y-6KG98060	L.H. Main Lever Cover & Fixing Screw (M3 x 4)
5	Y-89B 13510	Clamp Bolt (M6 x 14.8)

SHIMANO

0510-2436A

A WARNING

"Maintenance interval depends on the usage and riding circumstances. Clean regularly the chain with an appropriate chaincleaner. Never use alkali based or acid based solvents such as rust cleaners. If those solvent be used chain might break and cause serious injury."

Use the reinforced connecting pin only for connecting the narrow type of chain There are two different types of reinforced connecting pins available. Be sure to check the table below before selecting which pin to use. If connecting pins other than reinforced connecting pins are used, or if a reinforced connecting pin or tool which is not suitable for the type of chain is used, sufficient connection force may not be obtained, which could cause the chain to break or fall off.

Chain	Reinforced connecting pin	Chain tool
9-speed super narrow chain such as CN-7701 / CN-HG93	Silver	TL-CN32/TL-CN27
8-/7-/6-speed narrow chain such as CN-HG50 / CN-HG40	Black	TL-CN32/TL-CN27

If it is necessary to adjust the length of the chain due to a change in the number of sprocket teeth, make the cut at some other place than the place where the

chain has been joined using a reinforced connecting pin or an end pin. The chain will be damaged if it is cut at a place where it has been joined with a

reinforced connecting pin or an end pin Be careful not to let the cuffs of your clothes get caught in the chain while riding. otherwise you may fall off the bicycle

Check that the tension of the chain is correct and that the chain is not damaged. If the tension is too weak or the chain is damaged, the chain should be replaced. If this is not done, the chain may break and cause serious injury.

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- It is important to periodically check the tightening torques for the crank arms and pedals. After riding approximately 100 km (60 miles), re-check the tightening torques. If the tightening torques are too weak, the crank arms or pedals may come off and the bicycle may fall over, and serious injury may occur as a result.
- Check that there are no cracks in the crank arms before riding the bicycle. If there are one of the crank arm may break and you may fall off the bicycle. Obtain and read the service instructions carefully prior to installing the parts.
- Loose, worn or damaged parts may cause the bicycle to fall over and serious injury may occur as a result. 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.

Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

If the chain is on the smallest or intermediate chainring, there is the danger of injury from the tips of the teeth on the largest chainring.

Note

- In addition, if pedaling performance does not feel normal, check this once more Before riding the bicycle, check that there is no play or looseness in the connection.
- Also, be sure to retighten the crank arms and pedals at periodic intervals When installing the pedals, apply a small amount of grease to the threads to prevent the pedals from sticking. Use a torque wrench to securely tighten the pedals. Tightening torque: 35 - 55 N·m (305 - 479 in. lbs.). The right-hand crank arm has a

right-hand thread, and the left-hand crank arm has a left-hand thread

Do not wash the bottom bracket with high-pressure jets of water

- If you feel any looseness in the bottom bracket axle, the bottom bracket should be replaced.
- If gear shifting operations do not feel smooth, wash 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. You should periodically wash the chainrings in a neutral detergent and then lubricate
- them again. In addition, cleaning the chain with neutral detergent and lubricating it can be a effective way of extending the useful life of the chainrings and the chain.

The cuffs of your clothing may get dirty from the chain while riding. If the chain keeps coming off the chainrings during use, replace the chainrings and the chain

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

Apply grease to the bottom bracket before



installing it. For smooth operation, use the specified outer casing and the

bottom bracket cable guide. 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.
- When installing the top route type, choose a frame that has three
- outer casing holders as shown in the illustration at right. · Use an outer casing which still has some length to spare even

when the handlebars are turned all the way to both sides. Furthermore, check that the shifting lever does not touch the bicycle frame when the handlebars are turned all the

Grease the inner cable and the inside of the outer casing before use to ensure that

they slide properly Operation of the levers related to gear shifting should be made only when the front

chainwheel is turning. Parts are not guaranteed against natural wear or deterioration resulting from normal

For maximum performance we highly recommend Shimano lubricants and intenance products

For any questions regarding methods of installation, adjustment, maintenance or operation, please contact a professional bicycle dealer

Front Drive System

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

Series	Alivio
Rapidfire Plus	ST-M410 / SL-M410
Duter casing	OT-SP40
ront derailleur	FD-M413 / FD-M412 / FD-M410 / FD-M410-E
ront chainwheel	FC-M416 / FC-M415 / FC-M411 / FC-M410
Bottom bracket	BB-UN26 / BB-UN26-E
Chain	CN-HG50 / CN-HG40
Bottom bracket cable guide	SM-SP17 / SM-BT17 / SM-SP18 / SM-BT18



Front Derailleur		X = Availab
Model number	FD-M413 / FD-M412 / FD-M410	FD-M410-E
Normal type	X	Х
Top route type	X	Х
Front chainwheel tooth difference	20T	20T
Min. difference between top and intermediate	10T	10T
Front derailleur installation band diameter	S, M, L	S, M, L
Chainstay angle (α)	63°- 66°, 66°- 69°	63°- 69°
Applicable chain line	47.5 / 50 mm	50 mm
Installation band diameters: S (28.6 mm), M (31.8 mm), L (34.9 mm)		Chainstay angle



Model number	FC-M416 / FC-M415 / FC-M411 / FC-M410	
Chainwheel tooth combination	42T-32T-22T / 48T-38T-28T	
Bolt circle diameter	104 mm / 64 mm	
Crank arm length	170 mm, 175 mm	
Pedal thread dimensions	BC 9/16" X 20 T.P.I. (English thread)	

Bottom Bracket

Model number	BB-UN26-E		BB-UN26	
Stamped marking	LL123	LL113	LL123	LL113
Spindle length	123 mm	113 mm	123 mm	113 mm
Chain line	50.0 mm	50.0 mm	50.0 mm	50.0 mm
Thread dimensions	BC 1.37" X 24 T.P.I. (68, 73 mm)	BC 1.37" X 24 T.P.I. (73 mm) M 36 X 24 T.P.I. (70 mm)	BC 1.37" X 24 T.P.I. (68, 73 mm) M 36 X 24 T.P.I. (70 mm)	

Gear shifting operation

Both lever (A) and lever (B) always return to the initial position when they are released after shifting. When operating one of the levers, always be sure to turn the crank arm at the same time

ever (A) initial position

To shift from a small chainring to a larger chainring (Lever A)

When lever (A) is pressed once, there is a shift of one step from a small chainring to a larger chainring. Example from intermediate chainring to largest chainring.

To shift from a large chainring to a smaller chainring (Lever B)

When lever (B) is pressed once there is a shift of one ster from a large chainring to a smaller chainring. Example from largest chainring to intermediate chainring.

Installation of the Front Derailleur, Bottom Bracket and Front Chainwheel

< FD-M410-E >

SI-6KFFB-002

Use the special tools (TL-UN74-S and TL-UN66) to install the bottom bracket (1) and the front derailleur so that they face as shown in the illustration. If the bottom bracket shell width is 68 mm, insert a space (2.5 mm) as shown in the illustration when installing the front derailleur Install the adapter (2), and then use an 8 mm Allen key to install the front chainwheel.



35 - 50 N·m {305 - 435 in. lbs.}

< FD-M413 / FD-M412 / FD-M410 > Install using the special tool TL-UN74-S / TL-UN66 First install the main body, then the adapte



Use an 8 mm Allen key to install the front chainwheel



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







Chain length

Add 2 links (with the chain on both the largest sprocket and the largest chainring)







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1. Low adjustment

Chain position

and the chain is 0 - 0.5 mm.

2. Connecting and securing the inner cable Operate lever (B) two times or more, and check on the indicator that the lever is at the lowest position. Then remove the inner hole cover and connect the inner cable.

Inner hole cover

Install the inner hole cover by turning it as shown in the illustration until it stops Do not turn it any further than this, otherwise it may damage the screw thread.

Inserting the inner cable Insert the inner cable into the outer casing from the end with the marking on it. Apply grease from the end with the marking in order to maintain cable operating

efficiency.

Cutting the outer casing When cutting the outer casing, cut the opposite end 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

Attach the same outer end cap to the cut end of the outer casing.



Use a 5 mm Allen key to tighten the wire fixing bolt.

end cap. < FD-M412/M410/M410-F >









SL-M410





First remove the Pro-Set alignment block.

Next, set so that the clearance between the chain guide inner plate









Cut off the excess length of inner cable and then install the inner



4. Adjustment of the intermediate chainring

When carrying out adjustment, set the chain to the largest sprocket, and at the front, set the chain to the intermediate chainring. Adjust using the outer casing adjustment barrel so that the clearance between the chain guide inner plate and the chain is 0 - 0.5 mm.



5. Troubleshooting chart

After completion of steps 1 - 4, move the shifting lever to check the shifting. (This also applies if shifting becomes difficult during use.)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 chainring to the largest chainring.	Loosen the top adjustment screw counterclockwise (about 1/8 turn).
If shifting is difficult from the intermediate chainring to the smallest chainring.	Loosen the low adjustment screw counterclockwise (about 1/4 turn).
If there is interference between the chain and the front derailleur inner plate at the largest chainring.	Tighten the top adjustment screw clockwise (about 1/8 turn).
If there is interference between the chain and the front derailleur outer plate at the largest chainring.	Loosen the top adjustment screw counterclockwise (about 1/8 turn).
If the intermediate chainring is skipped when shifting from the largest chainring.	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 chainring 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 1/2 turn).

This service instruction explains how to use and maintain the Shimano bicycle parts which have been used on your new bicycle. For any questions regarding your bicycle or other matters which are not related to Shimano parts, please contact the place of purchase or the bicycle manufacturer.

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Service Instructions in further languages are available at :

http://techdocs.shimano.com

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General Safety Information

A WARNING

• Check that the wheels are fastened securely before riding the bicycle. If the wheels are loose in any way, they may come off the bicycle and serious injury may result.

• Use neutral detergent to clean the chain. Do not use alkali-based or acid based detergent such as rust cleaners as it may result in damage and/or failure of the chain.

Use the reinforced connecting pin only for connecting the narrow type of chain.

• There are two different types of reinforced connecting pins available. Be sure to check the table below before selecting which pin to use. If connecting pins other than reinforced connecting pins are used, or if a reinforced connecting pin or tool which is not suitable for the type of chain is used, sufficient connection force may not be obtained, which could cause the chain to break or fall off



• If it is necessary to adjust the length of the chain due to a change in the number of sprocket teeth, make the cut at some other place than

the place where the chain has been joined using a reinforced connecting pin or an end pin. The chain will be damaged if it is cut at a place where it has been joined with a reinforced connecting pin or

an end pin

• Check that the tension of the chain is correct and that the chain is not damaged. If the tension is too weak or the chain is damaged, the chain should be replaced. If this is not done, the chain may break and cause serious injury.

• 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. • Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

Note

• If gear shifting operations do not feel smooth, wash 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

- You should periodically clean the derailleur and lubricate all moving parts (mechanism and pulleys). . If gear shifting adjustment cannot be carried out, check the degree of parallelism at the rear end of the bicycle. Also check if the cable is lubricated and if the outer casing is too long or too short.
- If you hear abnormal noise as a result of looseness in a pulley, you should replace the pulley. • If the wheel becomes stiff and difficult to turn, you should lubricate it with grease.

Do not apply any oil to the inside of the hub, otherwise the grease will come out.

• You should periodically wash the sprockets in a neutral detergent and then lubricate them again. In addition, cleaning the chain with neutral detergent and lubricating it can be a effective way of extending the useful life of the sprockets and the chain.

• If the chain keeps coming off the sprockets during use, replace the sprockets and the chain • Always be sure to use the sprocket set bearing the same group marks. Never

use in combination with a sprocket bearing a different group mark. Use a frame with internal cable routing is strongly discouraged as it has

Technical Service Instructions

tendencies to impair the SIS shifting function due to its high cable resistance. • Use an outer casing which still has some length to spare even when the handlebars are turned all the way to both sides. Furthermore, check that the shifting lever does not touch the bicycle frame when the handlebars are turned

all the way. Grease the inner cable and the inside of the outer casing before use to ensure that they slide properly.

 For smooth operation, use the specified outer casing and the bottom bracket cable guide. • Operation of the levers related to gear shifting should be made only when the front chainwheel is

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.

Specifications

Gears

Rear Derailleur		
Model number	RD-M410	
Gears	8	
Total capacity	43T	
Largest sprocket	34T	
Smallest sprocket	11T	
Front chainwheel tooth difference	20T	
Applicable front chainwheel (chainring tooth configuration)	FC-M416 / FC-M415 / FC-M411 / FC-M410 (42T-32T-22T / 48T-38T-28T)	

Cassette sprocket tooth combination

	Group name	Tooth combination
	an	11, 13, 15, 17, 20, 23, 26, 30T
	ao	11, 13, 15, 17, 20, 23, 26, 34T
	aw	11, 13, 15, 18, 21, 24, 28, 32T
		ST-M410 / SL-M410

Model number Gears

Rapidfire Plus

ecting Pir

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Freehub		
Model number	FH-MC18 / FH-RM40-8	
Sprockets	8	
No. of spoke holes	36 / 32	

Gear shifting operation

Both lever (A) and lever (B) always return to the initial position when they are released after shifting. When operating one of the levers, always be sure to turn the crank arm at the same time

To shift from a small sprocket to a larger To shift from a large sprocket to a sprocket (Lever A)



smaller sprocket (Lever B) To shift one step only, press lever (A) to the (1) Press lever (B) once to shift one step from a larger to a smaller sprocket.



2. Connecting and securing the inner cable Operate lever (B) 7 times or more, and check on the indicator that the lever is at the highest position. Then remove the inner hole cover and . connect the inner cable

SL-M410

SL-M410

	able	5
Inner c	Inner	T hole

Install the inner hole cover by turning it as shown in the illustration until it stops. Do not turn it any further than this, otherwise it may damage the screw thread.

the illustration.

Inserting the inner cable Insert the inner cable into the outer casing from the end with the marking on it. Apply grease from the end with the marking in order to maintain cable operating efficiency.



Cutting the outer casing When cutting the outer casing, cut the opposite end 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

Attach the same outer end cap to the cut end of the outer casing.



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

Cut off the excess length of inner cable and then install the inner end cap.









Installation of the sprockets

For each sprocket, the surface that has the group mark should face outward and be positioned so that the triangle (▲) mark on each sprocket and the A part (where the groove width is wide) of the freewheel body are The groove is wide aligned.



For installation of the HG sprockets, use the special tool (TL-LR15) to tighten the lock ring.

Tightening torque: 30 - 50 N·m {261 - 434 in. lbs.}

To replace the HG sprockets, use the special tool (TL-LR15) and TL-SR21 to remove the lock ring.

which have been used on your new bicycle. For any questions regarding your bicycle or other matters which are not related to Shimano parts, please contact the place of purchase or the bicycle manufacturer.

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General Safety Information

Check that the wheels are fastened securely before riding the bicycle. If the wheels are loose in any way, they may come off the bicycle and serious injury may result.

Use neutral detergent to clean the chain. Do not use alkali-based or acid based detergent such as rust cleaners as it may result in damage and/or failure of the chain.

Use the reinforced connecting pin only for connecting the narrow type of chain

 There are two different types of reinforced connecting pins available. Be sure to check the table below before selecting which pin to use. If connecting pins other than reinforced connecting pins are used, or if a reinforced connecting pin or tool which is not suitable for the type of chain is used, sufficient connection force may not be obtained, which could cause the chain to break or fall off.



If it is necessary to adjust the length of the chain due to a change in

the number of sprocket teeth, make the cut at some other place than the place where the chain has been joined using a reinforced connecting pin or an end pin. The chain will be damaged if it is cut at a place where it has been joined with a reinforced connecting pin or



Reinforced Connecting P

an end pin. Check that the tension of the chain is correct and that the chain is not damaged. If the tension is too weak or the chain is damaged, the chain should be replaced. If this is not done, the chain may break and cause serious injury.

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.
 Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

Note

Adjust the RD-M530 reverse spring type rear derailleur from the low side.

 If gear shifting operations do not feel smooth, wash 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.

You should periodically clean the derailleur and lubricate all moving parts (mechanism and pulleys) If gear shifting adjustment cannot be carried out, check the degree of parallelism at the rear end of the bicycle. Also check if the cable is lubricated and if the outer casing is too long or too short.

If you hear abnormal noise as a result of looseness in a pulley, you should replace the pulley.
 If the wheel becomes stiff and difficult to turn, you should lubricate it with grease.

. Do not apply any oil to the inside of the hub, otherwise the grease will come out.

 You should periodically wash the sprockets in a neutral detergent and then lubricate them again. In addition, cleaning the chain with neutral detergent and lubricating it can be a effective way of extending the useful life of the sprockets and the chain

If the chain keeps coming off the sprockets during use, replace the sprockets and the chain. Always be sure to use the sprocket set bearing the same group marks. Never use in combination with a sprocket bearing a different group mark.

 Use a frame with internal cable routing is strongly discouraged as it has tendencies to impair the SIS shifting function due to its high cable resistance. Use an outer casing which still has some length to spare even when the handlebars are turned all the way to both sides. Furthermore, check that the

shifting lever does not touch the bicycle frame when the handlebars are turned all the way. Grease the inner cable and the inside of the outer casing before use to ensure

Technical Service Instructions

that they slide properly. For smooth operation, use the specified outer casing and the bottom bracket cable guide

• Operation of the levers related to gear shifting should be made only when the front chainwheel is 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.

Specifications

Poor Doraillour

Model number	RD-M530	
Туре	SGS	
Gears	8	
Total capacity	45T	
Largest sprocket	34T	
Smallest sprocket	11T	
Front chainwheel tooth difference	22T	

Cassette sprocket tooth combination

Gears	Group name	Tooth combination
8	an	11, 13, 15, 17, 20, 23, 26, 30T
	ao	11, 13, 15, 17, 20, 23, 26, 34T
	aw	11, 13, 15, 18, 21, 24, 28, 32T

Rapidfire Plus

Model number	ST-M410 / SL-M410
Gears	8

Freehub		
Model number	FH-MC18 / FH-RM40-8	
Gears	8	
No. of spoke holes	36 / 32	

Gear shifting operation

Both lever (A) and lever (B) always return to the initial position when they are released after shifting. When operating one of the levers, always be sure to turn the crank arm at the same time

To shift from a large sprocket to a smaller sprocket (Lever A)

To shift from a small sprocket to a larger sprocket (Lever B) Press lever (B) once to shift one step from a

To shift one step only, press lever (A) to the (1) position. To shift two steps at one time, press smaller to a larger sprocket to the (2) position

Installation of the rear derailleur

let the B-tension adjustment screw come into contact with the dropout tab, otherwise deformation may result. Do not remove the Pro-Set alignment block at this time



illustration until it stops. Do not turn it any further than this, otherwise it may damage the screw thread

Tightening torque : 0.3 - 0.5 N·m {3 - 4 in. lbs.}

Connect the inner cable to the derailleur as shown in the illustration.

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



Connect the cable to the rear derailleur and, after taking up the initial slack in the cable, re-secure to the rear derailleur as shown in the illustration



Installation of the sprockets









SI-0026B

Rear Drive System

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

Series	Alivio
Rapidfire Plus	ST-M410 / SL-M410
Outer casing	SP40
Rear derailleur	RD-M530
Туре	SGS
Freehub	FH-MC18 / FH-RM40-8
Gears	8
Cassette sprocket	CS-HG50-8I
Chain	CN-HG50 / CN-HG40
Bottom bracket cable guide	SM-SP17 / SM-BT17 / SM-SP18 / SM-BT18

TI -I B15

(TL-SB21)

position.

3. Connecting and securing the inner cable Operate lever (B) 7 times or more, and check on the indicator that the lever is at the lowest position. Then remove the inner hole cover and connect the inner cable

Turn the crank arm while pulling the derailleur with your hand to move the derailleur to the top position, and then turn the top adjustment screw to adjust so that the guide pulley is in line with the outer line of the smallest sprocket when looking from the rear. Turn the crank arm to set the derailleur to the low

a Guide nu

Lever (E

Install the inner hole cover by turning it as shown in the











Chain length

Add 2 links (with the chain on both the largest sprocket and the largest chainring)

Installation of the lever







SL-M410

Install the brake lever in a position where it will not obstruct brake operation. Do not use in a combination which causes brake operation to be obstructed.

SIS Adjustment



1. Low adjustment

Turn the low adjustment screw so that the guide pulley moves to a position directly in line with the largest sprocket.

2. Top adjustment

acket spindle tightening torq 8 - 10 N⋅m {70 - 86 in. lbs.}

For each sprocket, the surface that has the group mark should face outward and be positioned so that the triangle (A) mark on each sprocket and the A part (where the groove width is wide) of the freewheel body are aligned.



For installation of the HG sprockets, use the special tool (TL-LR15) to tighten the lock ring.

To replace the HG sprockets, use the special tool (TL-LR15)

Tightening torque: 30 - 50 N·m {261 - 434 in. lbs.}

and TL-SR21 to remove the lock ring.



This service instruction explains how to use and maintain the Shimano bicycle parts which have been used on your new bicycle. For any questions regarding your bicycle or other matters which are not related to Shimano parts, please contact the place of purchase or the bicycle manufacturer.

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