

SHOWA

GP Series **A-KIT** for KTM

Front Fork & Rear Cushion



Owner's Manual

⚠ Read this manual carefully before operating this A-KIT.

No. T634000-OME1

Introduction

Thank you very much for purchasing SHOWA A-KIT Front Fork and Rear Cushion.

A-KIT is the suspension kit that has the best performance and durability exclusively for racing. The know-how gained at the AMA Supercross Championship, the world's best motocross world championship, and the Dakar Rally is utilized.

Installation of the A-KIT, handling, and tuning are described in this Owner's Manual.

Please read this manual carefully, and follow the described instructions.

Please note that installation, handling, and tuning must be conducted in a dealership or installation shop where there are technicians with special knowledge and skills. Make sure to change the spring, dust seal, and oil seal at a dealership or store specializing in installation.

This product is dedicated for race, so it is not covered by warranty. It is not covered by warranty if it is used outside of a race or on a vehicle outside a race circuit. Please use safely by complying with this manual or other manual attached to motorcycle. Please contact a dealer for details.

Handling this product properly

In this manual, items that need you to comply to prevent injuries on the user and other people and property damage, in addition to the correct installation are shown with the following "Symbols". Please understand what each "Symbol" means, and read this manual.

	It is the safety warning symbol. This symbol is used to call your attention when there is a danger for personal injury. Comply with the safety items specified after this symbol to prevent injury and accident that may cause death.
 WARNING	The symbol represents a content that if mishandled, "it may cause death or serious injury".
 CAUTION	The symbol represents a content that if mishandled, "it may cause injury or property damage".
Note	It describes points to pay attention, and focus when conducting service.

Explanation of Icons Used in this Manual

In this manual, the following icons are displayed in illustrations for inspection and disassembling service to proceed smoothly.

Icon	Explanation
	Specify the tightening torque.
	It shows the press fitting part. Press fit using an adequate adapter.
	It shows a part to clamp. To prevent deformation of a part, always clamp on the specified part.
 a	A location to apply Liquid O-Ring #400.
	Replace with a new part.

Safety Caution

Caution When Installing

 WARNING	<p>Special knowledge is required to replace Front Fork and Rear Cushion. If someone without special knowledge performed installation, and the installation was improper, it may cause damage on the motorcycle and accident. Please make sure that replacement is conducted in a dealership or installation shop where there are technicians with special knowledge and skills.</p>
	<p>If the product is installed on a modified motorcycle, it may cause function and performance deterioration. Install this product only on a motorcycle with genuine parts of its manufacturer.</p>

 CAUTION	<p>This product is a precision machine part. Deformation and dent from a drop, hammer, and shock may cause function and performance deterioration. When handling and installing the product, do not drop, hammer, and apply shock.</p>
	<p>If only one person handles the product, there may be a case that a motorcycle and parts cannot be held by himself/herself. Make sure 2 or more people work when removing and installing the product.</p>
	<p>When installing to a motorcycle, comply with the items described in the Service Manual provided by the motorcycle's manufacturer.</p>

Caution when Using

 WARNING	<p>High-pressure nitrogen gas is filled in this product. When disassembling and refilling nitrogen gas, the product may burst causing serious injury. If exposed to flames and you puncture a hole, this product may burst causing serious injury. Replacement and discarding must be done by a specified dealership or installation shop.</p>
---	--

 CAUTION	<p>There are recommended inspection items for this product to maintain its performance. If not inspected and defects are ignored, it may cause function and performance deterioration. When using, make sure to perform the inspection items described in this manual.</p>
	<p>Always use the oils specified by SHOWA. When unspecified oils are used, it may cause function and performance deterioration.</p>

Contents

Overview of Front Fork 1

Product Features	1
List of Specification	2
Recommended Inspection Items	2
Tuning Method	2
• Adjusting atmospheric pressure ...	2
• Adjusting the compression	3
• Adjusting the rebound	4
Available Option Parts	4

Installation Method of Front Fork (Replacement from Standard Specification)..... 5

Measuring Vehicle Height Before Replacement.....	5
Installation.....	5
Measuring Vehicle Height After Replacement.....	6

Replacement Method of Spring on Front Fork 7

Removal.....	7
• Removing the cushion S/COMP	7
• Discharging operation fork oil inside the outer tube.....	7
• Removing the spring	8
Installation.....	10
• Assembling the spring	10
• Attaching the center bolt COMP .	10

Replacement Method of Dust Seal and Oil Seal 14

Removal.....	14
• Removing the dust seal and stopper ring	14
• Removing the slide pipe.....	14
Installation.....	15
• Assembling the slide pipe COMP	15

- Inserting the slide pipe COMP into
the outer tube

Troubleshooting of Front Fork 17

Overview of Rear Cushion..... 18

Product Features	18
List of Specification	19
Recommended Inspection Items	19
Tuning Method	19
• Adjusting the high speed side compression.....	19
• Adjusting the low speed side compression.....	20
• Adjusting the rebound damping force	20
• Adjusting the spring installation length	21
Available Option Parts	21

Installation of Rear Cushion (Replacement from Standard Specification)..... 22

Measuring Vehicle Height Before Replacement.....	22
Installation.....	22
Measuring Vehicle Height After Replacement.....	22

Replacement Method of Spring on Rear Cushion..... 23

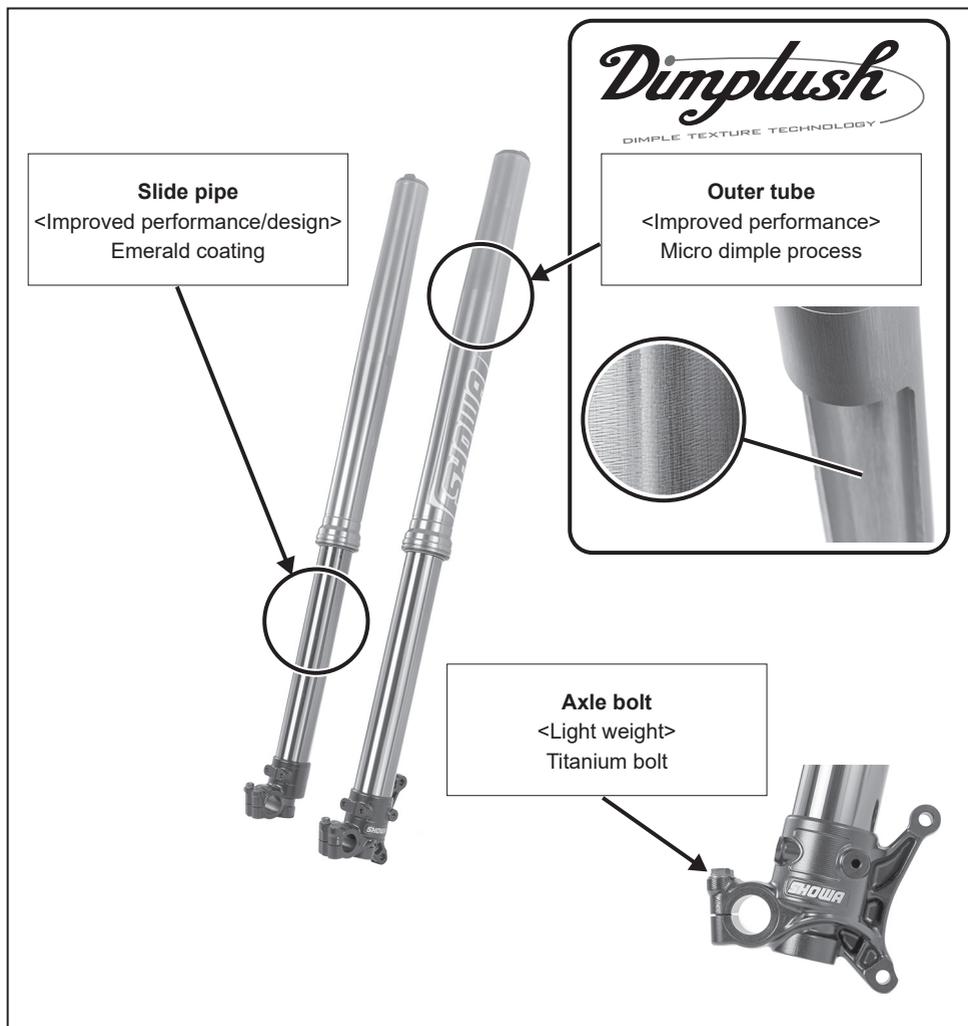
Removal.....	23
• Removing the spring	23
Installation.....	23
• Attaching the spring.....	23

Troubleshooting of Rear Cushion 25

Overview of Front Fork

Product Features

The A-KIT front fork for KTM vehicles feedbacks the suspension technology verified in AMA and MXGP. "Dimplush", the cutting-edge technology, is applied to the outer tube to improve performance. Also, "Emerald Coating" is applied to the slide pipe to improve performance and design. Furthermore, titanium bolts are adopted for axle bolts to reduce weight.



Overview of Front Fork

List of Specification

Spring	Rate (N/mm)	4.8
Operation oil	Type of oil	A15-00
	Oil amount inside damper	243 cc
	Oil amount for outer tube	320 cc
Damping force	Compression	Max -20 clicks
	Rebound	Max -20 clicks

Recommended Inspection Items

	Before riding	Semi-annually	Annually
Check appearance abnormality, fallen bolts, cracks, and distortion	✓	✓	✓
Operation check of front fork	✓	✓	✓
Oil leakage of front fork	✓	✓	✓

Tuning Method

● Adjusting atmospheric pressure

1. Set the inner pressure of the right and left front forks to atmospheric pressure while placing the vehicle in a vertical position and floating the front tire.
2. Completely loosen the plug bolt ①.
3. Attach the plug bolt, and tighten with the specified torque.

Tightening torque: 1.3 N•m



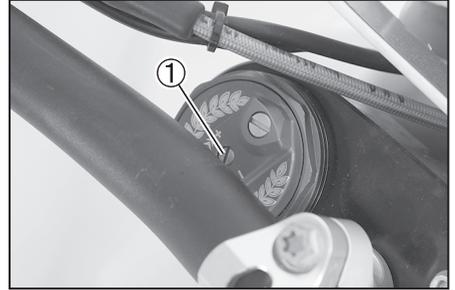
Overview of Front Fork

● Adjusting the compression

1. Turn the compression adjuster ① clockwise until it stops (the strongest position).
2. Turn one click at a time counterclockwise. The standard position is 20 clicks.
3. Turn clockwise from the standard position to make stronger, and counterclockwise to make weaker.

 CAUTION

Do not turn further from the strongest position and weakest position. It can cause damage of front fork.



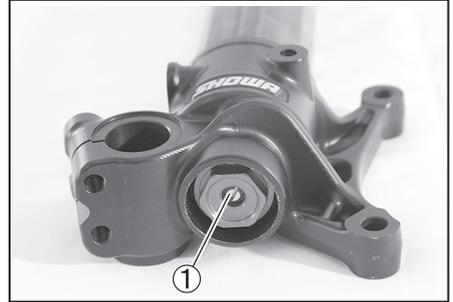
[Note]

- Adjust so that right and left are on the same position.
- Always start adjusting from the strongest position.
- 32 clicks (8 clicks/rotation) or more can be adjusted from the weakest position to the strongest position.
- Make sure to stop the compression adjuster on the click position.

Overview of Front Fork

● Adjusting the rebound

1. Turn the rebound adjuster ① of the center bolt COMP clockwise until it stops (the strongest position).
2. Turn one click at a time counterclockwise. The standard position is 20 clicks.
3. Turn clockwise from the standard position to make stronger, and counterclockwise to make weaker.



⚠ CAUTION

Do not turn further from the strongest position and weakest position. It can cause damage of front fork.

[Note]

- Adjust so that right and left are on the same position.
- Always start adjusting from the strongest position.
- 32 clicks (8 clicks/rotation) or more can be adjusted from the weakest position to the strongest position.
- Make sure to stop the rebound adjuster on the click position.

Available Option Parts

To widen the vehicle height tuning and setting change, a spring for replacement is available as the optional part. For purchasing, contact the specified dealership.

Rate (N/mm)	Specification
5.0	Hard
4.8	Standard
4.6	Soft

Installation Method of Front Fork (Replacement from Standard Specification)



WARNING

Please make sure that installation is conducted in a dealership or installation shop where there are technicians with special knowledge and skills.

When replacing the front fork, conduct tuning of the motorcycle posture with the following ways.

Measuring Vehicle Height Before Replacement

1. While placing a motorcycle on the ground, measure the distance from the axle shaft of the front wheel to the top bridge, and record the value.
2. Measure above while a rider is on the motorcycle, and record the value.
3. Measure above by jacking up the motorcycle and the front wheel is dropped completely, and record the value.

Installation

1. Remove the front fork of the vehicle.

[Note]

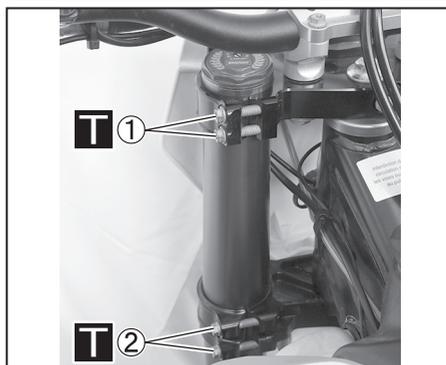
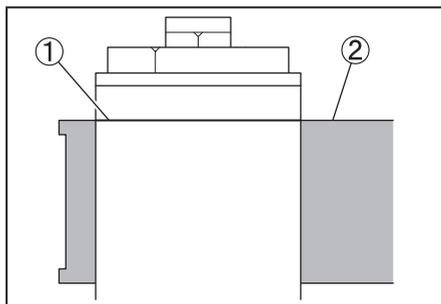
For the removing method of the front fork, refer to the service manual of the vehicle manufacturer.

2. Attach the A-KIT front fork to the vehicle.
 - Attach by matching the groove ① of A-KIT front fork to the upper end ② of the upper triple clamp.
3. Tighten the screw ① on the right and left upper triple clamp with the specified torque.

Tightening torque: 17 N•m

4. Tighten the screw ② on the right and left lower triple clamp with the specified torque.

Tightening torque: 12 N•m



Installation Method of Front Fork (Replacement from Standard Specification)

5. Attach the fork cover on the right and left.

[Note]

For the installation method of the fork cover, refer to the service manual of the vehicle manufacturer.



6. Attach the front wheel ①, brake caliper ②, and brake hose ③.

[Note]

For the installation method of the front wheel, brake caliper, and brake hose, refer to the service manual of the vehicle manufacturer.



7. Tighten the screw ④ of the axle holder with the specified torque.

Tightening torque: 20 N•m

Measuring Vehicle Height After Replacement

 WARNING	<p>After replacement, the caster angle of the front fork is changed from the pre-replacement state. If ridden in this condition, it is very dangerous because the motorcycle behavior may be unstable and the brake performance may change. Before riding, make sure to tune the motorcycle posture.</p>
 CAUTION	<p>When setting problems are not solved, contact your nearest dealership that handles SHOWA products.</p>

Replacement Method of Spring on Front Fork

Removal

● Removing the cushion S/COMP

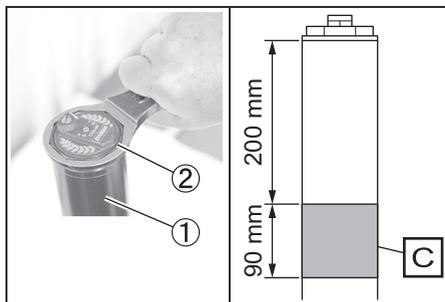
1. Record the current position of the compression adjuster ① and rebound adjuster ②.
2. Turn the compression adjuster and rebound adjuster counterclockwise, and set to the weakest position.
3. Before disassembling the front fork, clean the fork (especially the slide pipe sliding part and center bolt peripheral area).



4. Clamp the outer tube ① on the [C] part, and remove the cushion S/COMP ② using the special tool.

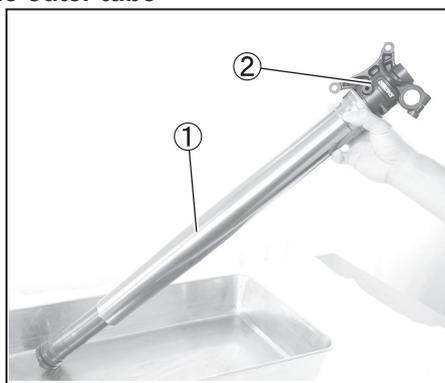
[Note]

Special tool: Lock nut wrench, 50 mm



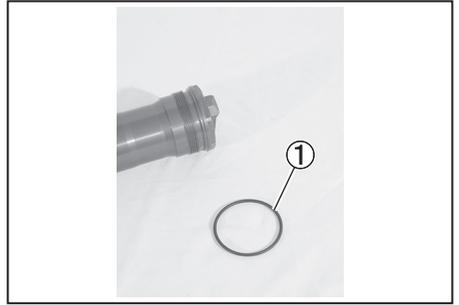
● Discharging operation fork oil inside the outer tube

1. Lower the outer tube slowly until the dust seal of the outer tube ① touches the axle holder ②.
2. Slowly extend and retract the outer tube ① for several times to discharge the oil inside the outer tube.



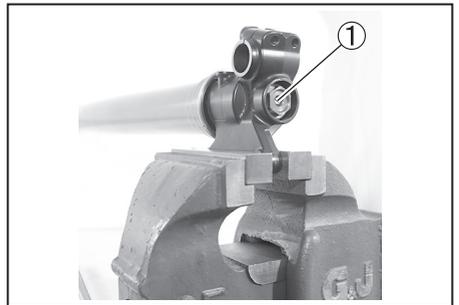
Replacement Method of Spring on Front Fork

3. Remove the O-ring ① from the cushion S/COMP.



● Removing the spring

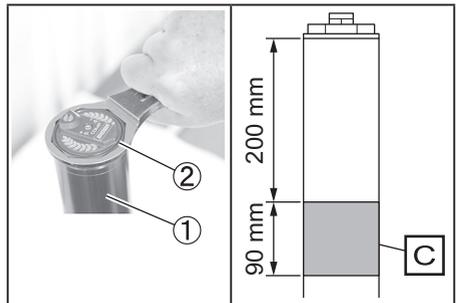
1. Protect the axle holder part with the waste cloth, and fix with a vice.
2. Loosen the center bolt ①.



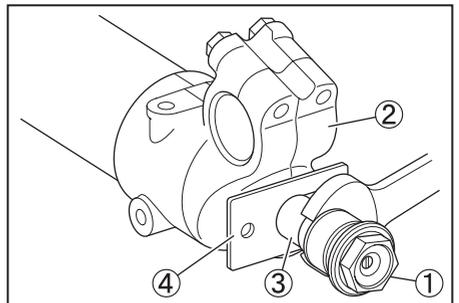
3. Clamp the outer tube ① on the [C] part, and attach the cushion S/COMP ② temporarily using the special tool.

[Note]

Special tool: Lock nut wrench, 50 mm



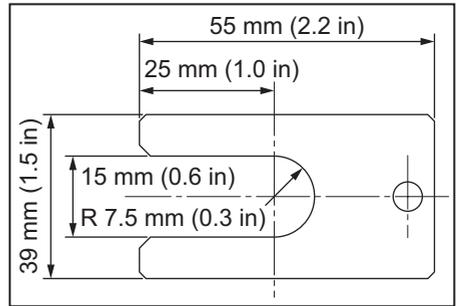
4. Push the outer tube, and push out the center bolt ① from the axle holder ②.
5. Maintain in the condition that the outer tube is pushed, and attach the stopper plate ④ between the axle holder and lock nut ③.
6. Loosen the lock nut, and remove the center bolt COMP.



Replacement Method of Spring on Front Fork

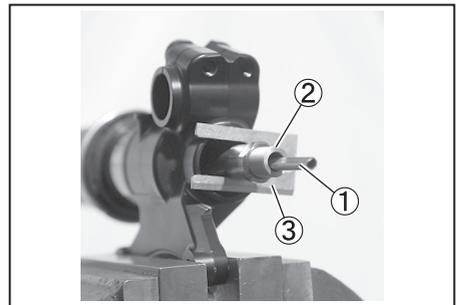
[Note]

See the figure, and make a 2.0 mm thick stopper plate.



7. Remove the push rod ① from the piston rod COMP ②. Maintain in the position that the outer tube is pushed, and remove the stopper plate ③.

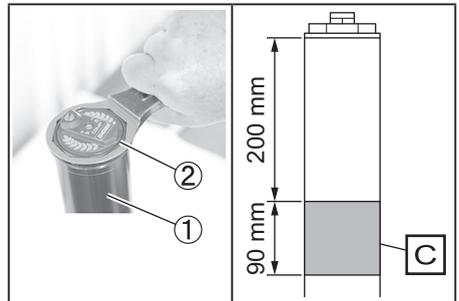
Remove the front fork ASSY from the vice.



CAUTION

When removing the stopper plate, the cushion S/COMP pops out by the spring's reaction force. While holding the cushion S/COMP to the direction of the axle holder, remove the stopper plate.

8. Clamp the outer tube ① on the [C] part, and remove the cushion S/COMP ② using the special tool.



9. Remove the spring from the front fork ASSY.

Replacement Method of Spring on Front Fork

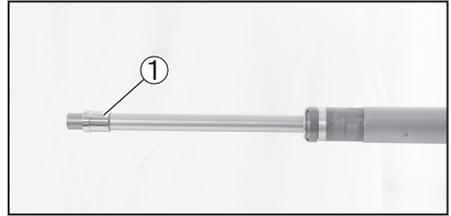
Installation

● Assembling the spring

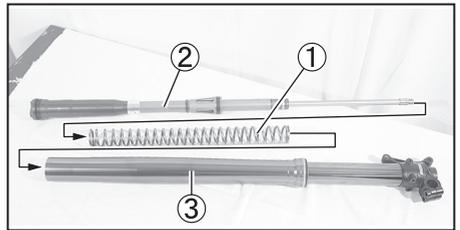
1. Check the seat of the lock nut ① at the end of the piston rod of damper COMP.

[Note]

Wipe off the oil attached on the damper COMP.



2. Remove the operation fork oil attached on the spring ① and damper COMP ②.
3. Attach the spring on the damper COMP, and insert to the front fork ASSY ③.



4. Using the special tool, temporarily tighten the cushion S/COMP ① to the outer tube ②.

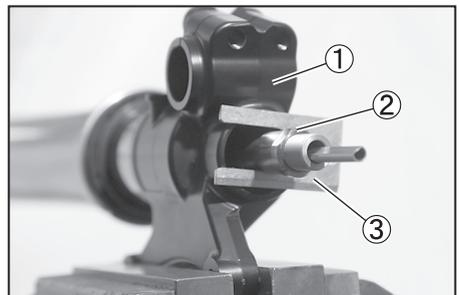
[Note]

Special tool: Lock nut wrench, 50 mm ③



● Attaching the center bolt COMP

1. Protect the axle holder with the waste cloth, and fix with a vice.
2. Push the outer tube, and push out the lock nut ② from the axle holder ①.
3. Maintain in the condition that the outer tube is pushed, and fix between the axle holder and lock nut with the stopper plate ③ made during disassembly.

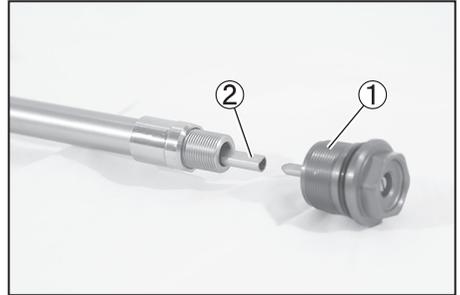


Replacement Method of Spring on Front Fork

4. Insert the center bolt COMP ① to the push rod ② by matching to the D shape of the push rod.

[Note]

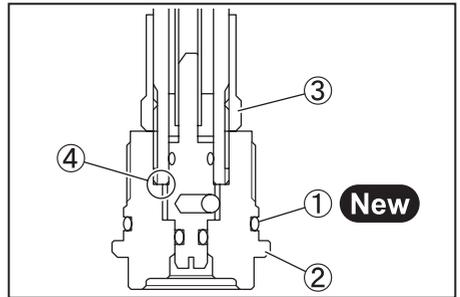
Match with the cross section D shape of the push rod.



5. Apply grease on a new O-ring (1), and attach on the center bolt (2).
6. While matching the center bolt with the D shape of the push rod, tighten and insert to the end as shown in (4).

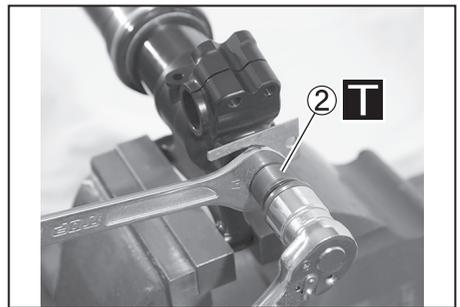
[Note]

Tighten and insert the rod pipe to the end of the center bolt (4).



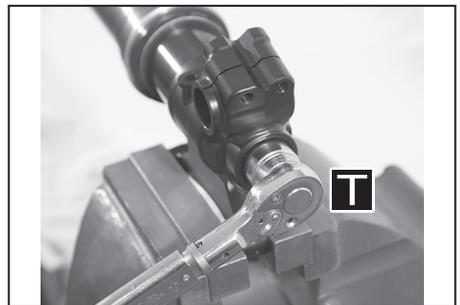
7. Tighten the lock nut (3) with your hand until it touches the center bolt (2).
8. Hold the lock nut, and tighten the center bolt with the specified torque.

Tightening torque: 28 N•m



9. Maintain in the condition that the outer tube is pushed, remove the stopper plate.
10. Tighten the center bolt to the axle holder with the specified torque.

Tightening torque: 69 N•m

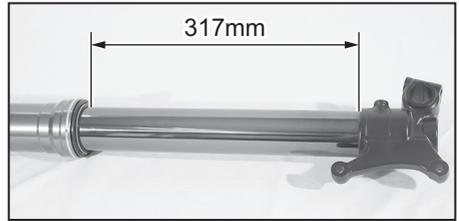


Replacement Method of Spring on Front Fork

11. Remove the front fork ASSY from the vice.
12. Measure the distance between the axle holder part and outer tube, and check it is within the standard value.

[Note]

Standard: 317 mm



13. Using the special tool, remove the cushion S/COMP ① from the outer tube ②.

[Note]

Special tool: Lock nut wrench, 50 mm ③



14. Pour operation fork oil into inside of the fork tube.

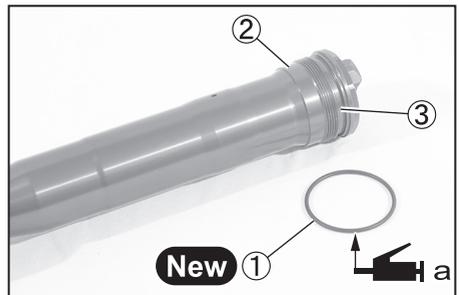
[Note]

Operation fork oil: A15-00

Standard oil amount: 320 cm³



15. Apply grease on a new O-ring ①, and attach to the groove part ③ of the damper COMP ②.



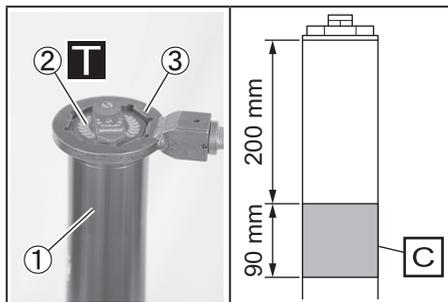
Replacement Method of Spring on Front Fork

16. Slowly pull up the outer tube ①, fix the clamp part [C], insert the damper COMP ② into the outer tube and tighten with the specified torque using the special tool.

Tightening torque: 76 N•m

[Note]

Special tool: Lock nut wrench, 50 mm ③



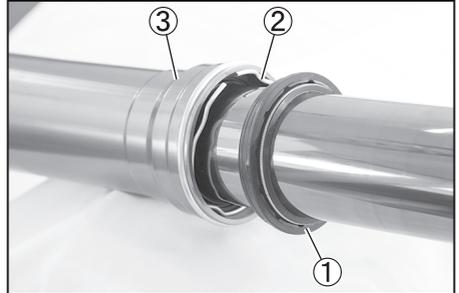
Replacement Method of Dust Seal and Oil Seal

Removal

For removing procedures, see “● Removing the cushion S/COMP” (Page 7), “● Discharging operation fork oil inside the outer tube” (Page 7), and “● Removing the spring” (Page 8).

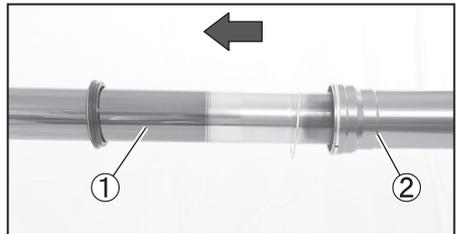
● Removing the dust seal and stopper ring

1. Remove the dust seal ① and stopper ring ② from the outer tube ③.

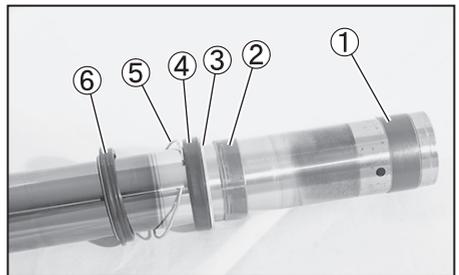


● Removing the slide pipe

1. Repeat the action to apply the slide pipe ① several times, and remove the slide pipe from the outer tube ②.



2. While opening the split surface of the slide bush ① with a flathead screwdriver, remove the slide bush.
3. Remove the guide bush ②, the backup ring ③, the oil seal ④, the stopper ring ⑤, the dust seal ⑥.



Replacement Method of Dust Seal and Oil Seal

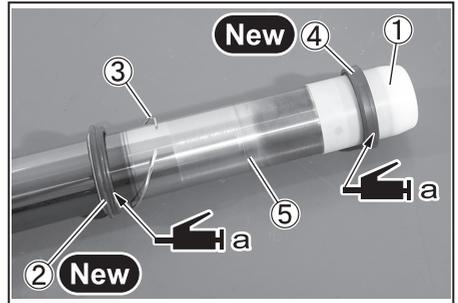
Installation

● Assembling the slide pipe COMP

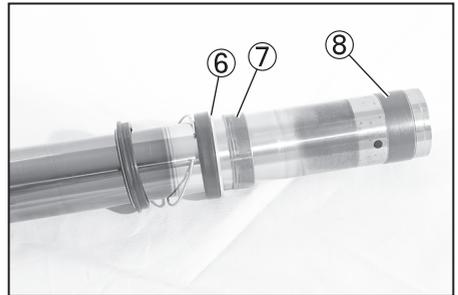
1. To protect the lip part of the seal, attach the jig ① on the slide pipe.
2. Apply grease to the lip part of a new dust seal ② and oil seal ④.
3. Attach the dust seal ②, stopper ring ③, and oil seal ④ on the slide pipe ⑤.

[Note]

Face the mark surface to the dust seal side, and attach the oil seal to the slide pipe.

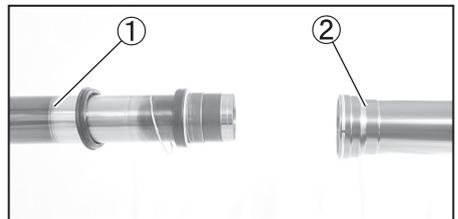


4. Remove the jig ①, and attach the seal spacer ⑥, guide bush ⑦, and slide bush ⑧.



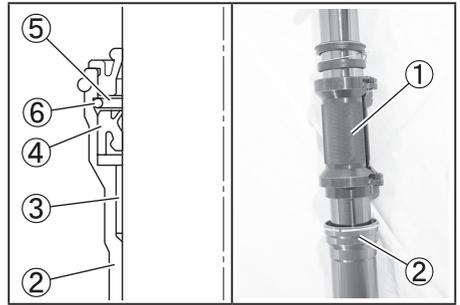
● Inserting the slide pipe COMP into the outer tube

1. Insert the slide pipe COMP ① into the outer tube ②.



Replacement Method of Dust Seal and Oil Seal

2. Using a fork seal screwdriver (a commercial product) ①, drive the guide bush ③ and oil seal ④ into the outer tube ② in the order.
3. Drive in the oil seal ④ to the position that the stopper ring groove is visible.
4. Attach the stopper ring ⑤ firmly to the stopper ring groove ⑥ of the outer tube.
5. Using a fork seal screwdriver (a commercial product), press fit the dust seal ⑦ to the outer tube.



Troubleshooting of Front Fork

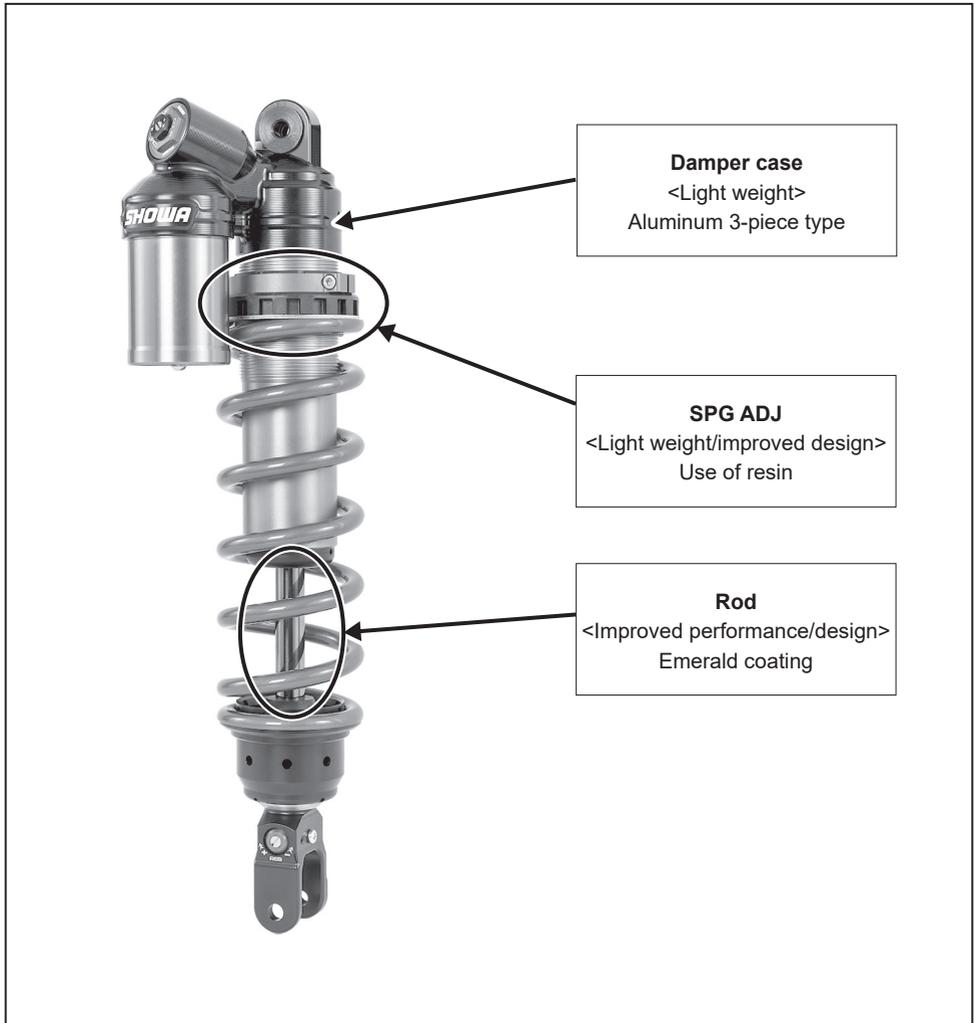
Symptom	Cause	Measures
The suspension operation is soft.	Inadequate damping force tuning.	Tune suspension.
	Viscosity of operation fork oil is low	Replace oil (SHOWA genuine oil).
	The amount of operation fork oil is low	Adjust the oil amount.
	Settling of the spring.	Replace spring.
The suspension operation is hard.	Bent slide pipe.	Stop using immediately, and check at the dealership or installation shop.
	Viscosity of the operation fork oil is high	Replace oil (SHOWA genuine oil).
	The amount of operation fork oil is high	Adjust the oil amount.
Noise in the front fork.	Damage.	Stop using immediately, and check at the dealership or installation shop.

Overview of Rear Cushion

Product Features

The A-KIT rear cushion for KTM vehicles feedbacks the suspension technology verified in AMA and MXGP as well as the front fork.

By using the aluminum 3-piece type for the damper case, it reduces its weight. In addition, SPG ADJ is made of resin to reduce weight and improve design. Furthermore, "Emerald Coating" is applied to the rod to improve performance and design.



Overview of Rear Cushion

List of Specification

Spring	Rate (N/mm)	46
Operation oil	Type of oil	SS25
	Damper oil amount	392 cc
Gas filling pressure	kPa	900
Rod size	φ	18
Damping force	Low speed compression	Max -20 clicks
	High speed compression	Max -2-5/6 clicks
	Rebound	Max -20 clicks

Recommended Inspection Items

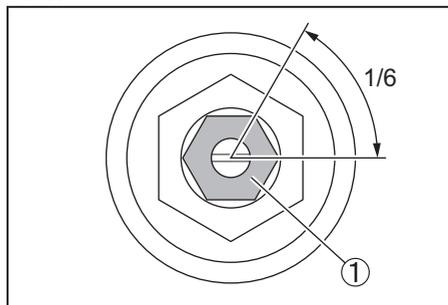
	Before riding	Semi-annually	Annually
Check appearance abnormality, fallen bolts, cracks, and distortion	✓	✓	✓
Operation check of rear cushion	✓	✓	✓
Oil leakage of rear cushion	✓	✓	✓

Tuning Method

● Adjusting the high speed side compression

1. Turn the adjuster ① clockwise until it stops (the strongest position).
2. Place the standard position. Turn the adjuster -2 turns and -5/6 turns counterclockwise from the strongest position.

 CAUTION	<p>Do not turn further from the strongest position and weakest position. It can cause damage of rear cushion.</p>
---	--



[Note]

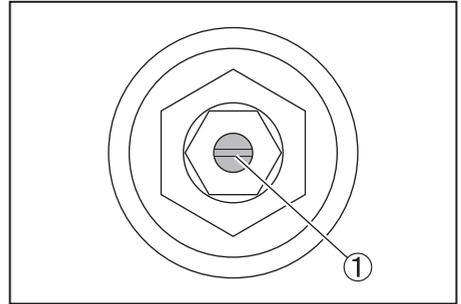
- Turn clockwise to make stronger, and counterclockwise to make weaker.
- Perform adjustment 1/6 turns at a time.
- Always start adjusting from the strongest position.

Overview of Rear Cushion

● Adjusting the low speed side compression

1. Turn the adjuster ① clockwise until it stops (the strongest position).
2. Place the standard position. Turn counterclockwise from the strongest position. Match with 20 clicks.

 CAUTION	Do not turn further from the strongest position and weakest position. It can cause damage of rear cushion.
---	---



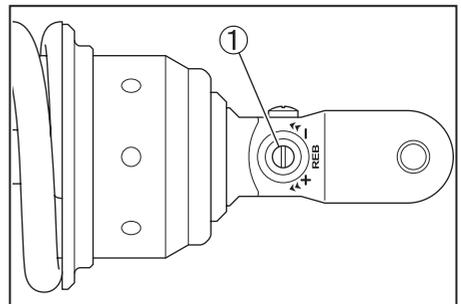
[Note]

- Turn clockwise to make stronger, and counterclockwise to make weaker.
- Always start adjusting from the strongest position.
- 30 clicks (8 clicks/rotation) or more can be adjusted from the weakest position to the strongest position.
- Make sure to stop the adjuster on the click position.

● Adjusting the rebound damping force

1. Turn the adjuster ① clockwise until it stops (the strongest position).
2. Place the standard position. Turn counterclockwise from the strongest position. The standard position is 20 clicks from the strongest position.

 CAUTION	Do not turn further from the strongest position and weakest position. It can cause damage of rear cushion.
---	---



Overview of Rear Cushion

[Note]

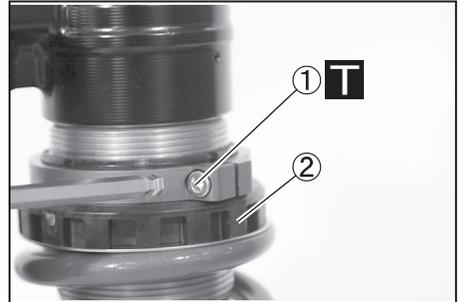
- Turn clockwise to make stronger, and counterclockwise to make weaker.
- Always start adjusting from the strongest position.
- 30 clicks (8 clicks/rotation) or more can be adjusted from the weakest position to the strongest position.
- Make sure to stop the adjuster on the click position.

● Adjusting the spring installation length

1. Loosen the bolt ① of the band with a hexagonal wrench (4 mm).
2. Turn SPG ADJ ②, and adjust the spring installation length.

[Note]

- Spring installation length standard: 243 mm
- For a standard spring, the spring installation length changes 2.0 mm with one rotation of SPG ADJ.



3. After adjusting, tighten the bolt ① with the specified torque.

Tightening torque: 5 N•m

Available Option Parts

To widen the vehicle height tuning and setting change, springs for replacement are available as the optional part. For purchasing, contact the specified dealership or installation shop.

Rate (N/mm)	Specification
48	Hard
46	Standard (Installation part at factory shipping)
44	Soft

Installation of Rear Cushion (Replacement from Standard Specification)

 WARNING	Please make sure that installation is conducted in a dealership or installation shop where there are technicians with special knowledge and skills.
---	--

When replacing the rear cushion, conduct tuning of the motorcycle posture with the following ways.

Measuring Vehicle Height Before Replacement

1. While placing a motorcycle on the ground, measure the distance from the axle shaft of the rear wheel to the top frame, and record the value.
2. Measure above while a rider is on the motorcycle, and record the value.
3. Measure above by jacking up the motorcycle and the rear wheel is dropped completely, and record the value.

Installation

1. Remove the standard rear cushion on the motorcycle.

[Note]

For the removing method of the rear cushion, refer to the service manual of the motorcycle manufacturer.

2. Attach the A-KIT rear cushion to the motorcycle.

[Note]

- For the installation method of rear cushion, refer to the service manual of the motorcycle manufacturer.
- For the tightening torque of each bolt, refer to the service manual of the motorcycle manufacturer.

Measuring Vehicle Height After Replacement

 WARNING	After replacement, the caster angle of the front fork is changed from the pre-replacement state. If ridden in this condition, it is very dangerous because the motorcycle behavior may be unstable and the brake performance may change. Before riding, make sure to tune the motorcycle posture.
---	--

Measure as before replacement, and adjust the spring preload to be the same value before replacement (see page 24).

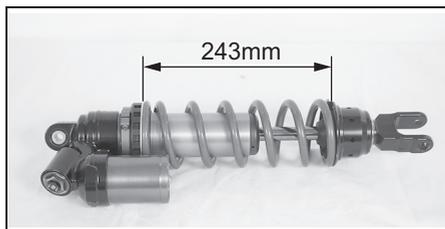
 CAUTION	<ul style="list-style-type: none">• Conduct vehicle height tuning at installation with the spring preload.• If tuning is difficult, contact your nearest dealership or installation shop that handles SHOWA products.
---	--

Replacement Method of Spring on Rear Cushion

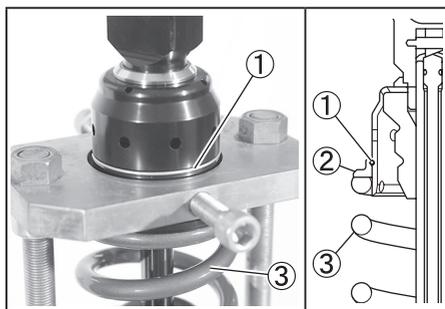
Removal

● Removing the spring

1. Measure and record the spring installation length.



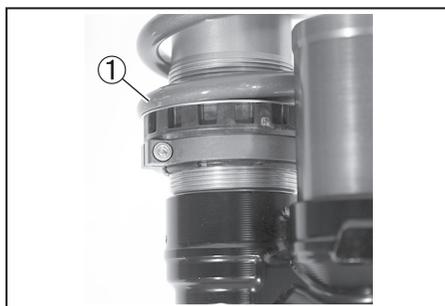
2. Compress the spring ③ with the spring compression tool, and remove the stopper ring B ① and SPG seat B ②.
3. Remove the spring ③.



Installation

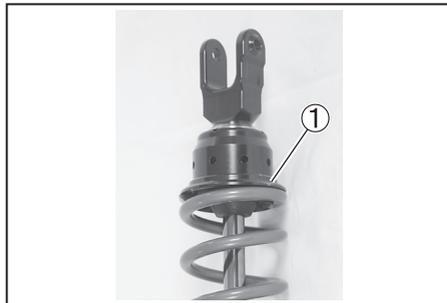
● Attaching the spring

1. Attach the spring ①.



Replacement Method of Spring on Rear Cushion

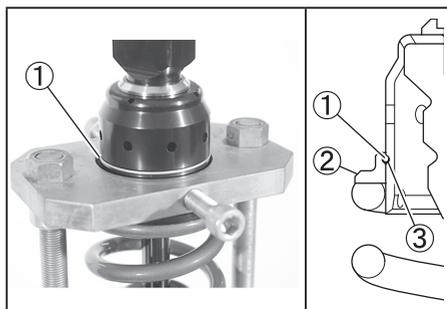
2. Attach the SPG seat B ①.



3. Compress the spring to lower the SPG seat B ②, and attach the stopper ring B ①.

[Note]

After removing the SPG compression, check the stopper ring B ① is completely set on the groove ③ of the SPG seat B ②.



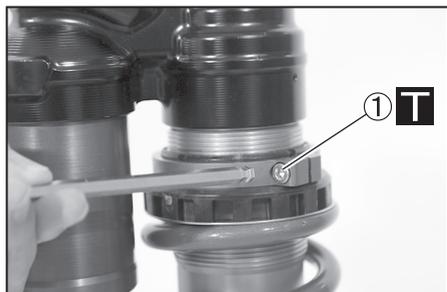
4. Turn the SPG seat to reach the spring length measured and recorded at disassembling or it becomes the spring length specified below. See “● Adjusting the spring installation length” (Page 21).

[Note]

Spring installation length: 243 mm

5. Maintain the band, and tighten the bolt ① with the specified torque.

Tightening torque: 5 N•m



Troubleshooting of Rear Cushion

Symptom	Cause	Measures
The rear cushion is soft.	Inadequate damping force tuning.	Tune suspension.
	The gas filling pressure is low.	Stop using immediately, and check at the dealership or installation shop.
	Settling of the spring.	Replace spring.
The rear cushion is hard.	Bent of the rod.	Stop using immediately, and check at the dealership or installation shop.
	Grease shortage of the cushion bearings.	Stop using immediately, and check at the dealership or installation shop.
	The gas filling pressure is high.	Stop using immediately, and check at the dealership or installation shop.
Noise of the rear cushion.	Damage.	Stop using immediately, and check at the dealership or installation shop.
	Abrasion of the cushion bearings.	Stop using immediately, and check at the dealership or installation shop.

GP Series A-KIT for KTM
Owner's Manual
©SHOWA CORPORATION,
November, 2019, All rights reserved.
Any reprinting or unauthorized
use without the written permission
of SHOWA CORPORATION is
prohibited.
Printed in Japan