

GEARS SHOCK ABSORBER No,1/3	APPLICATION : ADV160 (KF54)
CODE : 520-1461100	
REMARK : ●FREE LENGTH 396mm (same as stock) ●Sold in pairs ●ADJUSTABLE RANGE : -3~+4mm	

Thank you for purchasing Kitaco product. Read and understand the instruction before installing.

ATTENTION (MUST READ)

- This instruction sheet is for the instruction for stock condition.
 - Please ask authorized mechanic for assembling and setting. Ask a specialist at specialty shop if you do not understand the role of the surrounding parts.
 - We are not responsible for violation of law or damages and accidents caused by assembling mistake and improper setting.
 - After installation, steering stability has changed, compared to the stock rear shock. Please ride safely.
 - Refer to the manufacturer service manual when installation.
 - Bolts and nuts may get loosen by engine vibration. Make sure not to loosen any bolts and nuts before driving.
 - Do not modify the way which is not listed or it will cause damage and trouble.
- ※Metal/resin products get discolored/rust for ages as well as how to use. Please understand when using.

PACKING LIST		
NAME	CODE	QTY
Gears REAR SHOCK ADV160	-	2
HOOK WRENCH for Gears	-	1
BOLT LOWER SIDE		2

FUNCTION · ADJUST

⚠ THE GAS DISPOSAL VALVE

ATTENTION! PROHIBITION OF DISASSEMBLE AND MODIFICATION (DON'T TOUCH)
Unable to change the oil amount and gas pressure of this product. Do not touch the gas disposal hexagon valve of the upper body. Once loosen hexagon valve, the gas coming out and unable to use again because of the deterioration of shock performance. We are not going to encapsulate the gas.

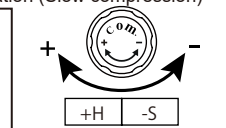
ATTENTION! HOW TO DISPOSAL
The high pressure gas is encapsulated in this shock.
Extract gas by gas disposal valve and do a scrap processing when disposal. If dispose without extract the gas, it may cause of explosion. Dispose this rear shock is dangerous, please ask to the maintenance shop, dismantler, etc

DAMPING FORCE ADJUSTMENT (PRESSURE SIDE) DIAL (14 STEPS)
[USING OUT OF ADJUSTMENT RANGE IS PROHIBITED]
+ : Slower sedimentation (High compression) / - : Faster sedimentation (Slow compression)

PRELOAD ADJUSTMENT (NON-STEP)
Adjust the position of spring seat by hook wrench, etc

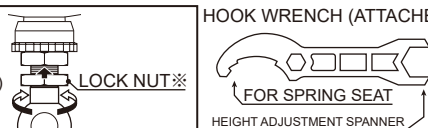
↑ SOFT

↓ HARD



REBOUND ADJUSTMENT (STRETCH SIDE) DIAL (14 STEPS)
[USING OUT OF ADJUSTMENT RANGE IS PROHIBITED]
+ : Slow down the rebound speed (slower return) / - : Speed up the rebound speed (faster return)

VEHICLE HEIGHT ADJUSTMENT (NON-STEP)
Allowable adjusting range [USING OUT OF ADJUSTMENT RANGE IS PROHIBITED]
• From basic OEM height ± (depending on models)
• Turn lower side (screw part) to adjust the height.
※ After adjustment, fix with lock nut



HOOK WRENCH (ATTACHED)

FOR SPRING SEAT

HEIGHT ADJUSTMENT SPANNER

Turn LOGO to outside.

UP

ATTENTION! Use attached bolt.

HOW TO ADJUST EACH PARTS



- ※ Please park safe place when adjusting.
- ※ Clean the dust and water from adjustment place before adjusting.
- ※ Too much re-tightening the adjustment dial may cause of hard wear and oil leak.

■ PRELOAD ADJUSTMENT (INITIAL)

- Adjust spring compression while initial condition for matches rider and luggage weight.

- Use hexagon and attached specified wrench when adjusting preload.

※ Must to set up with tire floated.

- 1) Loosen set screw on the side of preload adjust seat by hexagon wrench.

- 2) Apply silicone lubricant spray for protect body screw part. Must to clean up after adjustment.

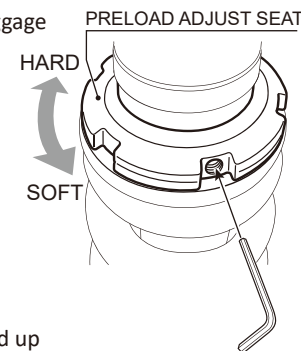
- 3) Adjust with specified wrench to turn preload adjust seat. Turn to the right to make it hard, and turn to the left to make it soft.

- 4) Finally, tighten set screw lightly (0.2~0.3kgf·m) to lock.

※ Be careful of breaking screw part by over tightening.

※ The shrinkage amount while riding that compared to the one while jacked up is called sag. Around 1/3 of all stroke is roughly estimated.

※ Yet insure the 5mm of the sag when it is empty.



■ VEHICLE HEIGHT ADJUSTMENT

- Please do this adjustment if the vehicle height is different from stock condition after preload adjustment.

- Vehicle height adjustment function is able to ± (plus/minus) from basic stock length (depending on models).

- Please do adjustment with the shock is removed from vehicle.

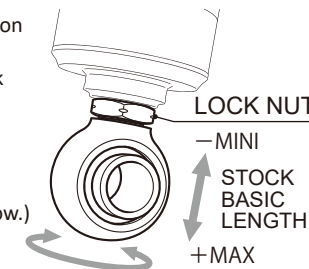
- 1) Loosen lock nut by turning to the left.

- 2) Turn pillow ball part to the left to raise and right to lower the height.

※ Do not use out of the adjustment range. (Follow the adjustment range below.)

- 3) Tighten lock nut to install to vehicle.

※ Lock nut for height adjustment might get loosen by vibration, etc. Please tighten additionally regularly.



■ STRETCH SIDE REBOUND ADJUSTMENT 14 STEPS

- Make the speed of stretching (rebound) suspension slower when riding.

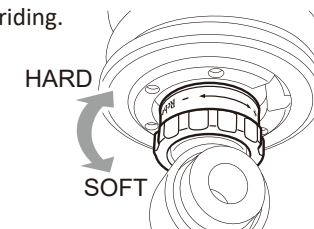
- Adjust with dial or minus driver.

※ The rotating direction is different depending on the models.

Please check main unit indication.

- Turn to the (+) direction for harder rebound (the speed of stretch side is slower).

- Turn to the (-) direction for softer rebound (the speed of stretch side is faster).



AFTER INSTALLATION

- After installation, oil come out a little on the shaft, but it is not oil leaking. It is grease that applied when manufacturing. If there is too much, wipe it off with soft cloth.

- Make sure not to loosen any bolts and nuts regularly.

- If it is loosen, tighten to specified torque.

- ADJUSTMENT RANGE (in case of ADV160) : -3~+4mm (stock basic length : 0)

AFTER MAINTENANCE



- Due to the structural principle of suspension, wear and oil deterioration progress in proportion to use. It is able to use longer with original performance for proper overhaul by specialist.
- Please ask to Kitaco when overhauling.

GEARS SHOCK ABSORBER No,2/3	APPLICATION : ADV160 (KF54)
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HOW TO INSTALL

- ※When installing, vehicle might be unstable, recommend to do with 2people.
- ※If there is a hard degradation like a blem, fatigue and wear etc on the reuse parts, please change to new ones.

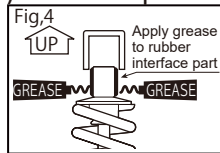
- 1) Stable vehicle by maintenance stand, etc.
- 2) Remove muffler and air cleaner installation bolt, etc in need referring to below.

REMOVING / INSTALLING OUTER COWLS

- ① Remove outer cowls as grab rail, luggage box, rear center/ side cover, etc.
- ※②③ are required in case of difficult to operate because of tools are interface, etc when installing/removing rear shock upper/lower mounting bolt. If tools do not interface, continue to CHANGING REAR SHOCK 3).
- ② Loosen muffler fixing bolt (flange/silencer point) to avoid muffler (not remove) to make space for removing/installing rear shock.
- ③ Remove air cleaner fixing bolt to avoid air cleaner (not remove) to make space for removing/installing rear shock.

CHANGING REAR SHOCK

- 3) R side shock removing
- ① Remove right (R side) rear shock under side (lower mount) bolt. (Stable with a little bit lifting rear tire ease to remove bolt.)
- ② Tilt R side rear shock lower mount part to back side for removing.
- ③ Same way to remove upper side (upper holder) bolt.
- 4) Install rear shock in the reverse order of removal. (In case of unable to insert upper holder to vehicle side, apply silicone grease, etc to rear shock upper rubber part to install. Refer to Fig4.)



- ※For lower side, please use attached bolt.
- ※Tighten upper/lower mount bolt (nut) with specified torque.
- 5) Remove L side shock lower bolt and then upper bolt as same as R side.
- ① Finally, install L side rear shock.
- ※Tighten upper/lower mounting bolt with specified torque.

○UPPER/LOWER BOLT :

UPPER BOLT : 39N·m (3.9kgf·m)

LOWER BOLT : 20~22N·m (2.0~2.2kgf·m)

- 4) Adjust each parts and make sure not to loosen any parts before riding.



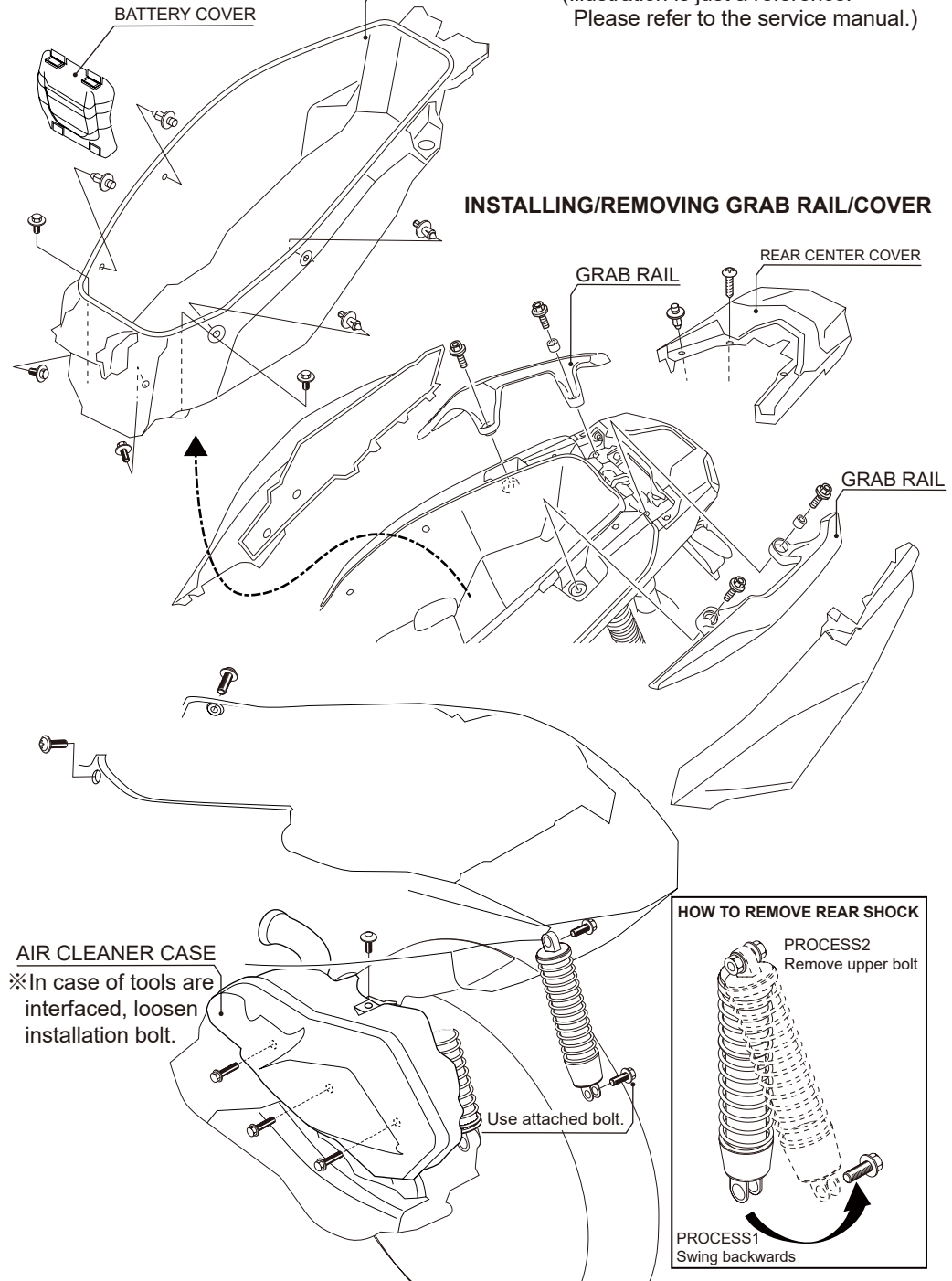
230922 Y-H
3-8-13 NAGATA, HIGASHI-OSAKA,
OSAKA, JAPAN
<http://www.kitaco.co.jp/>

REMOVING / INSTALLING OUTER COWLS

REMOVING/INSTALLING LUGGAGE BOX

LUGGAGE BOX

(Illustration is just a reference.
Please refer to the service manual.)



AIR CLEANER CASE

※In case of tools are interfaced, loosen installation bolt.

Use attached bolt.

HOW TO REMOVE REAR SHOCK

PROCESS2
Remove upper bolt

PROCESS1
Swing backwards

GEARS SHOCK ABSORBER No,3/3

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INITIAL (SHIPPING) SETTING

FIGURE	MODEL	ADV160
-	Type	TWIN FULL ADJUSTABLE
1	OVERALL LENGTH (eye to eye)	396 mm
2	HEIGHT ADJUSTABLE RANGE	-3 ~ +4 mm
3	STROKE	85 mm
-	SPRING RATE	2 Kg/mm
-	SPRING FREE LENGTH	220 mm
4	PRELOAD SET POSITION (SHIPPING)	6 mm
5	SPRING SET LENGTH	210 mm
6	THE NUMBER OF REBOUND ADJUSTER	14 CLICKS
	INITIAL POSITION	7 clicks back from full tightening.
7	THE NUMBER OF COMPRESSION ADJUSTER	14 CLICKS
	INITIAL POSITION	7 clicks back from full tightening.

