# TEIN SUPER STREET DRIVING MASTER DAMPER

## RX-7 93-96

TEIN Height Adjustable Shock Absorber Installation Instructions.

Thank you for purchasing a set of TEIN shock absorbers (the "product").
This product complies with JASO automobile standards. This product is designed for **OFF ROAD USE ONLY**.
The product may only be installed in race vehicles, show vehicles and other specially configured vehicles intended for off-road use.
**THE PRODUCT MAY NOT BE INSTALLED IN VEHICLES DRIVEN ON PUBLIC ROADS.**
The shock absorber's damping force and spring rate (spring hardness) differ from factory standard suspension.
All shock absorbers may be completely disassembled so that changes to damping force and stroke settings (i.e., short stroke suspension) can be made.
Disassembly also provides easy access for overhaul, repair, and maintenance.
However, any disassembly of the shock absorber or any portion of the shock absorber must be performed only by TEIN.
TEIN should be contacted for information as to the scope of disassembly services required, related labor costs, and time necessary to complete any disassembly work.
The contact information for TEIN's Downey California office is:

**TEIN U.S.A., INC.**
9798 Firestone Blvd. Downey, CA 90241
Phone (562) 861-9161 / Fax (562) 861-9171
URL: http://www.tein.com / E-mail: sales@tein.com

TEIN assumes no responsibility for any accident, injuries, death or damage which may be related to disassembly of the product performed by non-TEIN personnel.

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## ⚠WARNING

- The removal of brake parts requires specialized skills. Therefore, **INSTALLATION OF THIS PRODUCT SHOULD BE DONE ONLY BY LICENSED MECHANICS.**
- This document is copyrighted and the printing of this document in part or in full, is prohibited by law.

## ⚠CAUTION

- This product has been developed according to the specifications of Japanese law.
- When using the OEM mounts, use the parts noted with part numbers on our assembly instructions.
- Do not install this product in vehicles other than those specified by this manual. Doing so may result in damage to the vehicle or to the product.
- TEIN assumes no responsibility for damage, accidents, injuries or death resulting from the improper installation, assembly, misuse, and/or modification of the product.

## ! NOTE

- Please read these Instructions before installation.
- Before installing this product, verify that all necessary parts have been included.
- Note that product design improvements and changes may be made without notice.

## ⚠CAUTION- READ PRIOR TO INSTALLATION

**Please ensure that all components of the TEIN damper kit are tightened before installation. Items that require tightening are: nut or pillow upper nut, seat locks, bracket locks (if applicable), camber plate bolts (if applicable), stabilizer link (if applicable), and/or any other parts. Torque specifications are listed in the installation section of this manual. Please tighten upper mount and lower bracket mounting bolts to OEM specifications, which can be found in any vehicle service manual.**

## Important Product Information

### ⚠ WARNING

- This product contains highly compressed gas. Do not disassemble or expose to flames. Doing so may result in the cracking or explosion of the product. **DO NOT INSTALL THE PRODUCT IF IT HAS BEEN DISASSEMBLED IN ANY WAY.**
- This product has been designed to withstand the stresses of off road driving. Therefore, the product should not be modified in any way.

### ⚠ CAUTION

- If an impact wrench is used in the removal and installation of the upper mount, loads may be placed on the nut inside the shock absorber which may cause loosening or otherwise damage the product.
  **AN IMPACT WRENCH SHOULD NOT BE USED DURING INSTALLATION** unless absolutely necessary. However, if it is imperative that an impact wrench be used, make sure to conduct the operation at **LOW** torque, and **MAKE SURE THAT THE MAIN ROD DOES NOT TURN.**
  TEIN assumes no responsibility for loose internal nuts caused by improper impact wrench use.
- When removing or tightening the top nut, **DO NOT CLAMP THE PISTON ROD AND THE THREADED SECTION OF THE PISTON ROD** with any tool which might cause scratching.
- Do not expose this product to shock (for example, physically dropping the product).
- If the rod is scratched, the oil seal may become damaged which may create oil leak defects.
- To increase the durability and performance of the product, the outer diameter of the product is often much larger than the OEM suspension.
  Some vehicle suspensions do not include a dust cover boot due to lack of installation space.
  Where no dust cover boot has been included, we recommend periodically cleaning the surface of the rod, and inspecting the suspension regularly to help extend performance.
- Beware that dirt and grit on the damper rod may cause scratches.

## Before/After Installation

### ⚠ WARNING

The installer assumes all liability for proper installation of the product.
Please read these instructions carefully before beginning installation.

### ⚠ CAUTION

- The upper mount used with this suspension must be a TEIN upper mount or OEM top mount. Upper mounts made by other manufacturers may not properly fit the suspension.
- **TEIN TAKES NO RESPONSIBILITY FOR ANY DAMAGE TO THE SUSPENSION OR ACCIDENTS RESULTING FROM THE COMBINATION OF THIS PRODUCT WITH PRODUCTS MADE BY OTHER MANUFACTURERS.**
- Installer should wear work gloves when installing the product to avoid injury.
- **PLEASE CHECK YOUR LOCAL MOTOR VEHICLE LAWS AND REGULATIONS REGARDING INSTALLED HEIGHT ADJUSTABLE SUSPENSION (E.G. MINIMUM RIDE HEIGHT, MINIMUM HEADLIGHT CENTER HEIGHT).**
- TEIN takes no responsibility for any violations of vehicle codes, rules, laws or regulations.
- Upon installation, avoid rough handling and drive slowly.
- Be sure to check product for loosening and oil leaks.
- Periodically re-tighten all parts at the specified torque values.
- After the proper height has been determined, the alignment should be adjusted with an alignment tester.
- The vehicle should be taken to an alignment shop or for reference values, see vehicle manufacture service manual.

## Shock Absorber Removal

### ⚠ CAUTION

- Use a spring compressor to compress the spring in order to remove the top lock nut.
- Make sure that the spring is compressed and not in contact with the spring seat and top spring seat before removing the top nut.
- When loosening the spring compressor, loosen the spring evenly and carefully remove the coil from the shock absorber.
- **DO NOT RE-USE THE PISTON ROD TOP LOCK NUT.**

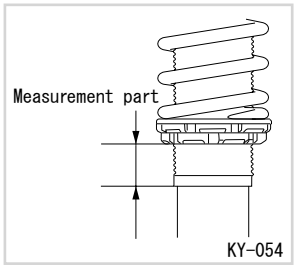
## Installation of the Shock Absorber

### ⚠ CAUTION

- (Applies only to adjustable model) The adjustable damper uses a hollow piston rod. To prevent damage to the piston rod, please be **VERY CAREFUL** in the application of torque and usage of impact wrenches.
- (Applies only to adjustable model) Make sure that no tools interfere with the adjustment dial on top of the piston when tightening the nut.
- (Applies only to adjustable model) When the product is manufactured by TEIN, the adjustment dial is automatically set at a full clockwise position. However, after installation is complete, using the hex wrench included with the Product, please confirm that the dial is adjusted to a full clockwise position. From this full clockwise position, use the hex wrench to adjust the dial counter-clockwise for sixteen audible clicks. Avoid further tightening as damage to the damper may result.
- Lowering the vehicle with the lower spring seat at the lowest setting may result in damage to the vehicle.
- Please see the assembly diagram (Page 8 and 9) for the torque values of the piston rod lock nut.

## Adjustment of Ride Height

After Installation of the Shock absorber




1. After installing the shock absorber on the vehicle, measure the area marked in the Figure, and adjust to match the reference values shown.

| Reference Value | |
|---|---|
| Front | 1.2 inch ( 30 mm) |
| Rear | 1.2 inch ( 30 mm) |

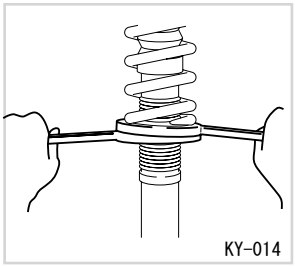
※1inch=25.4mm,
1mm=0.039inch

### ⚠ CAUTION

- **THIS IS THE REFERENCE VALUE TO BE USED WITH THE STANDARD RATE SPRINGS.** (Springs included with this product). It has a **90 mm ROAD CLEARANCE.**

### ! NOTE

- Lubricant is used on the product body threads to prevent rust after being manufactured. This lubricant is not oil leaking from the product.




2. After adjusting to the appropriate height, use the adjustment wrench included with the Product to lock the lower spring seat.
   When servicing, hold the lower spring seat with the wrench, and screw the seatlock upwards, tightening about 1/8 ( 45° ) turns from where the lower spring seat and seatlock meet.

### ⚠ CAUTION

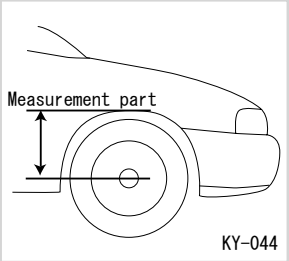
- Please make sure that the spring seat lock is locked after the ride height is adjusted.
- Gravel or dirt may have adhered to the adjustment tube.
- The threads of the seat lock and lower spring seat may become damaged, and cause the seat lock to stick if gravel and dirt are not cleaned before adjustment.

### ! NOTE

- If the parts do not screw smoothly, use a lubricant. To prevent the sticking of the seat lock and spring seat, it is recommended that the pieces be periodically maintained.

### ⚠ CAUTION

- **AFTER RIDE HEIGHT ADJUSTMENT, CONFIRM THAT SPRING SEAT IS LOCKED. FAILURE TO LOCK SPRING SEAT MAY RESULT IN DAMAGE TO THE VEHICLE.**




3. After installing the tires, measure the distance from the wheel center and the fender edge as shown in the Figure, and confirm that it corresponds to the reference value shown below.

| Reference Value | |
|---|---|
| Front | 12.8 inch ( 325 mm) |
| Rear | 12.8 inch ( 325 mm) |

## ⚠ CAUTION

- **THIS IS THE REFERENCE VALUE TO BE USED WITH THE STANDARD RATE SPRINGS.** (Springs included with this product). It has a **90mm ROAD CLEARANCE.**

## ⚠ CAUTION

- **THE FIGURE ABOVE MAY VARY DEPENDING UPON VEHICLE WEIGHT, MODEL, AND OPTIONS.**

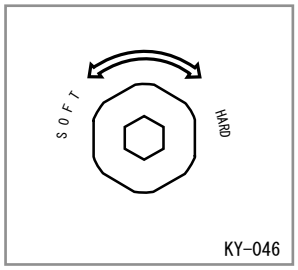
## ⚠ CAUTION

The lowering of the ride height correlates to the spring rate.

- Depending on the spring rate, the ride height may not drop as easily.
- If the spring rate is changed, readjust the ride height.
- When using a spring rate lower than the standard spring rate, the spring seat may require adjustment.

## Damping Force Adjustment After Installation (Applies to Adjustable model only)

When shipped from the manufacturer, the adjustment knob was set at the hardest setting (fully clockwise). Confirm that the adjustment knob (located at the top of the piston rod) has not been moved from this position.




1. Use the included wrench (HEX wrench) to turn the adjustment knob on top of the piston rod to the hardest setting (full clockwise).

2. From the full clockwise position, turn the adjustment knob counterclockwise until the "Standard Values" listed below are reached.

### ⚠ CAUTION

- DO NOT turn knob past the last position.
- Turning the knob past its limit will result in damage to the damper.

If the knob comes to a stop at a half way point, turn back slightly until it clicks into place.

| Standard Value | |
|---|---|
| Front | Turn back 8 clicks (from hardest setting) |
| Rear | Turn back 8 clicks (from hardest setting) |

### ⚠ CAUTION

- USE ONLY LEVELS 1-16. Exceeding level 16 may damage the damper.
- If the springs used are harder than the standard set, adjust at a harder setting.
  Drive at the standard setting, and adjust as necessary to the best setting.

### ! NOTE

- According to the driving setting (i.e., race track) certain vehicles may require uneven damping force on the left and right sides of the vehicle.
- If the front and rear balance is not proper, adjust either the rear or the front pair of dampers only.

### ⚠ CAUTION

Some vehicle models require the removal of interior parts for adjustment.

### ! NOTE

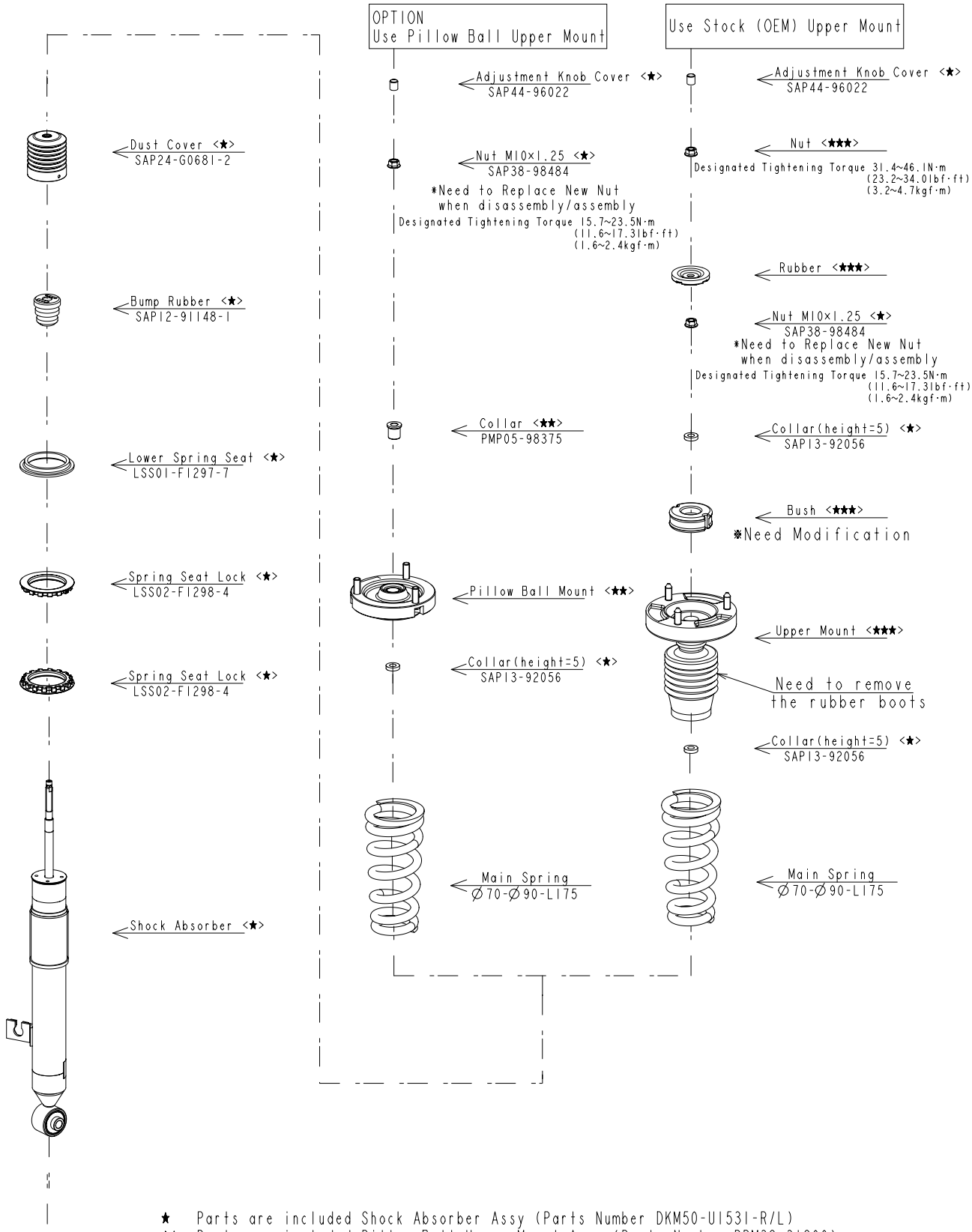
- You may wish to remove interior parts while setting the damping force.
- A hole may be made in the interior for the adjustment knob.
- For the protection of the adjustment knob, the add cap (rubber cap) should be used to cover the knob.

## Important Notice

1. All TEIN products are off-road use (including racing) and show purposes only.
2. TEIN products should not be used in vehicles driven on public roads.
3. TEIN takes no responsibility for parts which are prohibited by local laws.
4. The installation of this product on vehicles running on public roads may be dangerous, and may violate local laws.
5. Purchaser takes full responsibility for proper part installation.
6. All parts should be installed by a properly licensed mechanic.
7. TEIN takes no responsibility for damage, injuries, or death caused directly or indirectly by this product.
8. TEIN will not take any responsibility for errors and/or omission in these installation instructions.

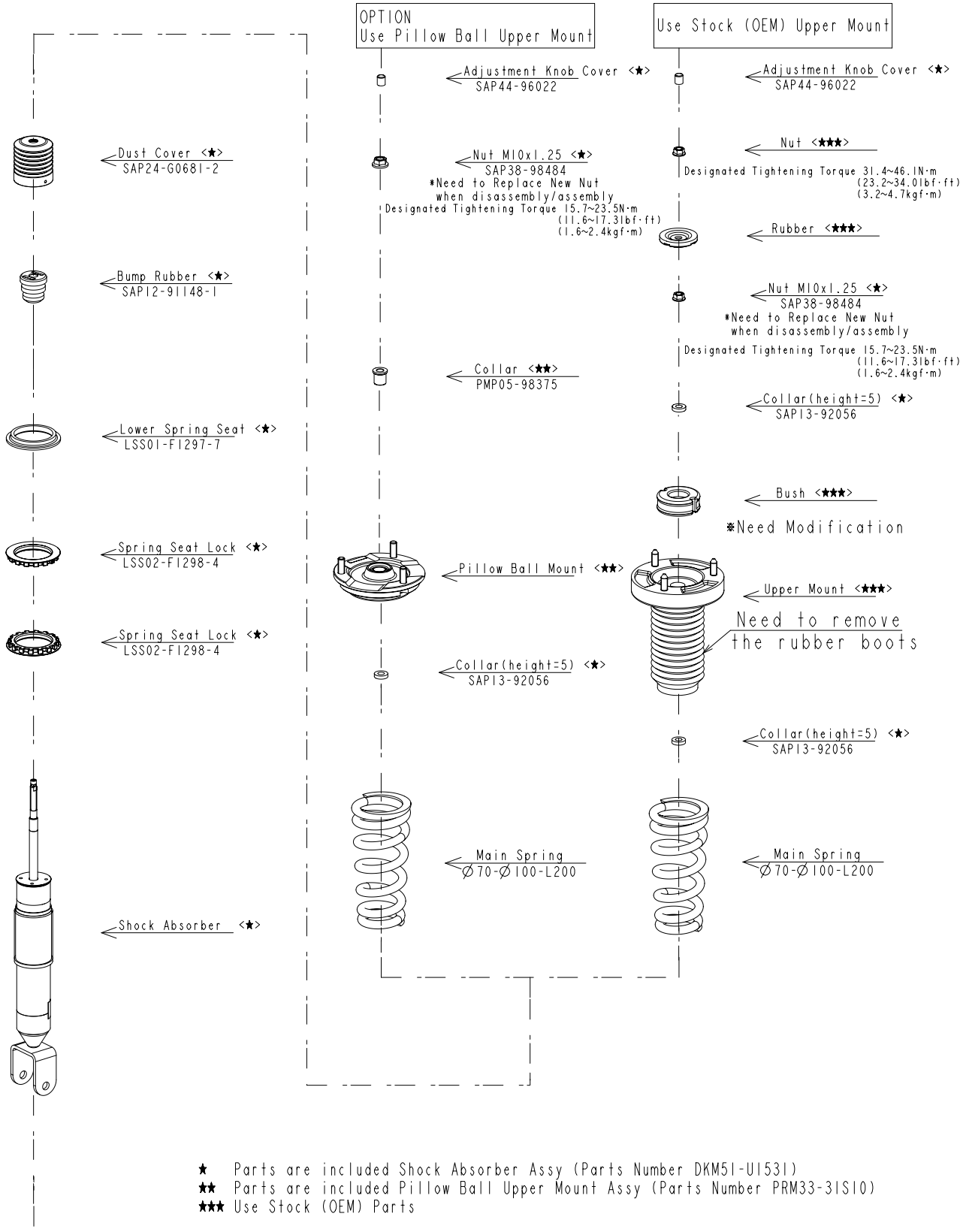
## MEMO

# Assembly Diagram (Front)




★ Parts are included Shock Absorber Assy (Parts Number DKM50-U153I-R/L)
★★ Parts are included Pillow Ball Upper Mount Assy (Parts Number PRM32-3IS90)
★★★ Use Stock (OEM) Parts

# Assembly Diagram (Rear)




★ Parts are included Shock Absorber Assy (Parts Number DKM51-U1531)
★★ Parts are included Pillow Ball Upper Mount Assy (Parts Number PRM33-31S10)
★★★ Use Stock (OEM) Parts