

# Ultimate Challenge Kit Recoil Unit assembly procedure

We would like to go over the assembly and adjustment procedures of our Recoil Unit which is our sister product to our Professional Challenge Kit. There are significant details that require considerable precision therefore please proceed with the work carefully.

## • Lubricating the Recoil Weight

**Application of Grease to the Recoil Weight**  
It is effective to use something like a Bamboo Skewer to apply.

First apply a thin amount of grease to the Rack Gear area, next the side of the rod that contacts the Recoil Pulley Gear Stand, and finally the sliding hole area where the Rack Gear Rod operates. The basic rule of thumb is to never apply too much grease.

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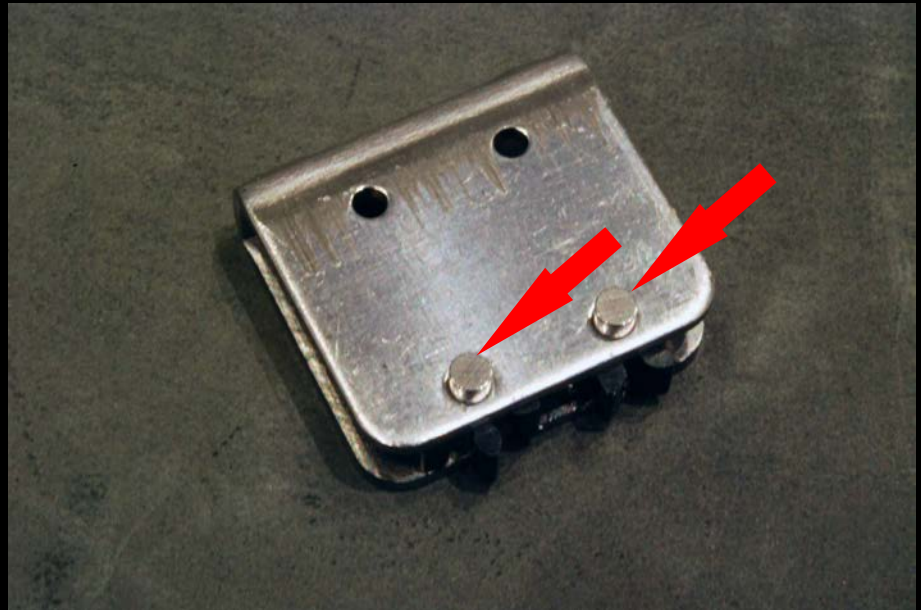


## • Assembly of the Recoil Pulley Gear Stand

Open the package that contains the parts, measure the width of the Recoil Pulley Gear Stand. After installing the Recoil Pulley Gear, the width should not go beyond 7mm, in the event that it does go slightly beyond that prepare the Recoil Pulley Shaft by using pliers and slightly close the hole area. The target dimensions are between 6.95~6.98mm. In the event that the hole is closed off too much, it will be difficult to install the Recoil Gear Shaft, or the Gear may not turn smoothly, therefore please take caution on this procedure.



Please refer to the picture, by incorporating the two Recoil Pulley Gears onto the Recoil Pulley Gear Shaft, it can be installed onto the Recoil Pulley Gear Stand. Do not force the shaft, please use a plastic hammer when assembling.



Affix the two Recoil Pulley Gear Stand Spacers with the two Spring Pins. Please be sure to sink the Spring Pin below the surface of the Pulley Gear Stand.

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#### • Rack Gear Rod Assembly

Using the picture as reference, install the Rack Gear Rod into the Recoil Pulley Gear Stand Assembly (that was assembled in the previous paragraph).

Please apply a thin layer of grease to the Rack Gear prior to assembly.

Please refer to the picture, install the two parts onto the Recoil Weight.

Please be careful regarding the distance between the Recoil Pulley Gear Stand and the Recoil Weight.

Tapping the tip of the Rack Gear with a plastic hammer will cause the rear area of the Rack Gear Rod to protrude out of the Recoil Weight bumper.

Please confirm that the Rack Gear Rod





Please be careful regarding the distance between the Recoil Pulley Gear Stand and the Recoil Weight.

Tapping the tip of the Rack Gear with a plastic hammer will cause the rear area of the Rack Gear Rod to protrude out of the Recoil Weight bumper.

Please confirm that the Rack Gear Rod operates smoothly.



- Assembly of the Recoil Weight Cap

Installation of the Recoil Weight Cap requires the 4 Plate Cap Screws.

Please use a thread locking adhesive to the screws.

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- Assembly of the Stock Tube

Assemble the Recoil Weight Assembly onto the Stock Tube.

Align the two Recoil Pulley Gear Stand fixed screws onto the screw holes, with the Rack Gear Rod pulled to the fullest extent, insert the whole assembly into the Stock Tube.

Where the two fixed screws and the screw holes align secure the Recoil Pulley Gear Stand with those two screws. Please remember to use thread locking adhesive to the screws.

In the event that the Recoil Pulley Gear Stand fixed screws were to ever come loose, serious damage may occur, please take extra caution against that from happening.





However, in the event that the screws are over tightened, the Recoil Pulley Gear Stand may warp its shape. The goal is to aim for around the 9 O'clock position.

When the assembly is completed in the correct position, the tip of the Rack Gear Rod should be facing the same direction as the edge of the Stock Tube face. Please confirm when proceeding with this step.



#### • Lubrication

At our production plant, our final lubricant used in the assembly process uses a fluorine based spray type lubricant. (cf. photo)

Substitute versions are possible as long as they are low in viscosity in a spray type oil.

For periodic upkeep, we recommend applying it at the edge of the Stock Tube after air is released from the tube.

Set the Stock Tube Set Plate with the Stock Tube Nut, then set the Stock Tube onto the Lower Receiver.

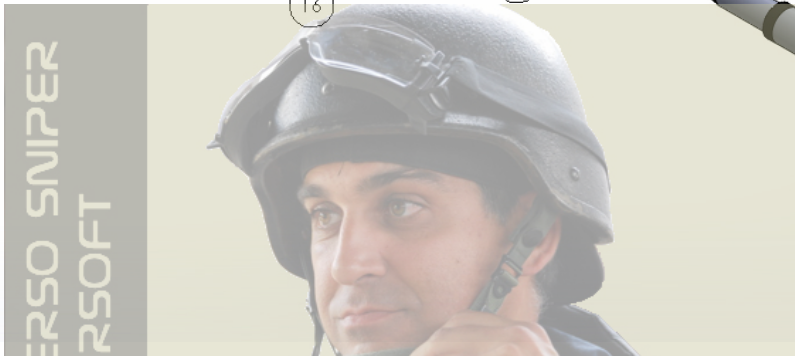
Insert the Recoil Spring, then the Stock Tube Cap, finally tighten the Stock Tube Nut.

Because of the strong tension of the Recoil Spring, please take caution while proceeding with this step.

This concludes the assembly procedures.



# P.T.W. Recoil Model Technical Illustration



|     |                |                             |  |
|-----|----------------|-----------------------------|--|
| 1   | NM16-CU03-RM   | リコイルモデル専用ピストンアッセンブリー        | Recoil Model exclusive piston assembly                       |
| 2   | NM16-RM005     | プッシュロッド ピストン用               | Push Rod for Piston  |
| 3   | NM16-CU06-RM   | リコイルモデル専用スプリングガイドアッセンブリー    | Recoil Model exclusive spring guide assembly                 |
| 4   | NM16-RM003     | リコイルモデル専用ストックチューブキャップ       | Recoil Model exclusive stock tube cap                        |
| 5   | NM16-RM006     | ラックギアロッド                    | Ruck Gear Rod  |
| 6   | NM16-RM001     | リコイルプーリーギアスタンド              | Recoil Pulley Gear Stand                                     |
| 6-1 | NM16-RM002     | リコイルプーリーギア(2個セット)           | Recoil Pulley Gear(Set of 2)                                 |
| 6-2 | NM16-RM016     | リコイルプーリーギアシャフト(2個セット)       | Recoil Pulley Gear Shaft(Set of 2)                           |
| 6-3 | NM16-RM019     | リコイルプーリーギアスタンドスペーサー(SPピン付き) | Recoil Pulley Gear Stand Spacer(include SP-Pin)              |
| 7   | NM16-RM020     | リコイルプーリーギアスタンド固定ビス (2本セット)  | Fixed Screw for Recoil Pulley Gear Stand (set of 2)          |
| 8   | NM16-RM021     | バッファースプリング                  | Buffer Spring  |
| 9   | NM16-RM011     | リコイルウェイト                    | Recoil Weight assembly                                       |
| 9-1 | NM16-RM010     | リコイルウェイトキャップ                | Recoil Weight Cap  |
| 10  | NM16-SST001-RM | リコイルモデル専用ストックチューブ           | Recoil Model exclusive stock tube                            |
| 11  | NM16-SST018-RM | リコイルモデル専用ストックセットプレート        | Recoil Model exclusive stock set plate                       |
| 12  | NM16-EL007-RM  | マイクロスイッチデバイス (コネクタ-B付属)     | Micro Switch Device (with connector B)                       |
| 13  | NM16-AC002-RM  | バッテリーインマガジン (専用バッテリー付属)     | Magazine with a built in battery (include exclusive battery) |
| 14  | NM16-LR001-RM  | リコイルモデル専用ロアーレシーバー           | Recoil Model exclusive lower receiver                        |
| 15  | NM16-GB001-RM  | リコイルモデル専用ギアBOXケース R         | Gear Box R-side exclusive for Recoil Model                   |
| 16  | NM16-GB002-RM  | リコイルモデル専用ギアBOXケース L         | Gear Box L-side exclusive for Recoil Model                   |
| 17  | NM16-LR011-RM  | リコイルモデル専用ボルトストップ            | Recoil Model exclusive bolt stop                             |
| 19  | NM16-EL008-RM  | リコイルモデル専用コントロールケーブル         | Recoil Model exclusive control cable                         |