

# **N5 분해 및 주요 부품 AS 매뉴얼**

## **N5 Disassembly and Parts Repair Manual**

**고객지원팀-20161031**  
**Customer Support Team - 20161031**

# ■ 목차 Contents

- 0. 수리에 필요한 공구 Repair Tools
- 1. N5 분해 N5 Disassembly
- 2. Main PCB 교체 Replacement of Main PCB
- 3. 모터 교체 Replacement of Motor
- 4. 장력조정 Tension Adjustment
- 5. 리모컨 힌지 커버 교체 Replacement of Remote Control  
Hinge Cover
- 6. 체인 교체 **Chain Replacement**

# 0. 수리에 필요한 공구류 Repair Tools



8 / 12 /13mm 스패너  
8 / 12 /13mm spanners (wrenches)



장력 게이지 (푸쉬풀 게이지)  
Tension gauge (push-pull gauge)



십자드라이버  
Phillips screwdriver



테스터기  
Tester



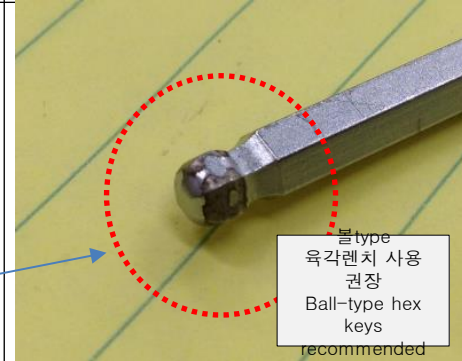
전동드라이버  
Power tool (drill)



바이스 플라이어  
Locking pliers



2.5 / 3 / 4mm 육각렌치  
2.5 / 3 / 4mm hex keys



볼type  
육각렌치 사용  
권장  
Ball-type hex  
keys  
recommended

## 1-1. N5 분해 - 본체 Bottom 볼트 제거

### N5 Disassembly - Remove Bolts from Bottom of Main Unit



빨간 표시된 부위 총 14개의 볼트를 풀어준다  
Remove the 14 bolts from the areas circled in red

## 1-2. N5 분해 – 보조체 Bottom 볼트 제거

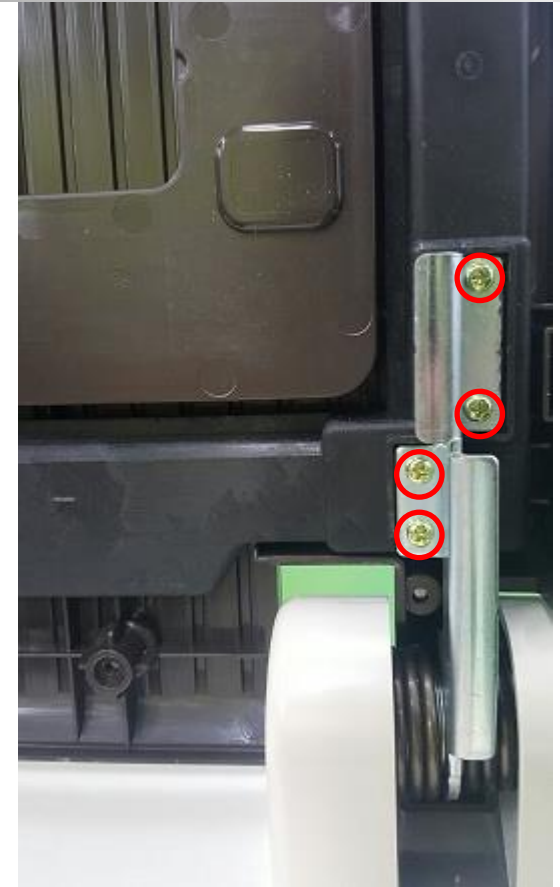
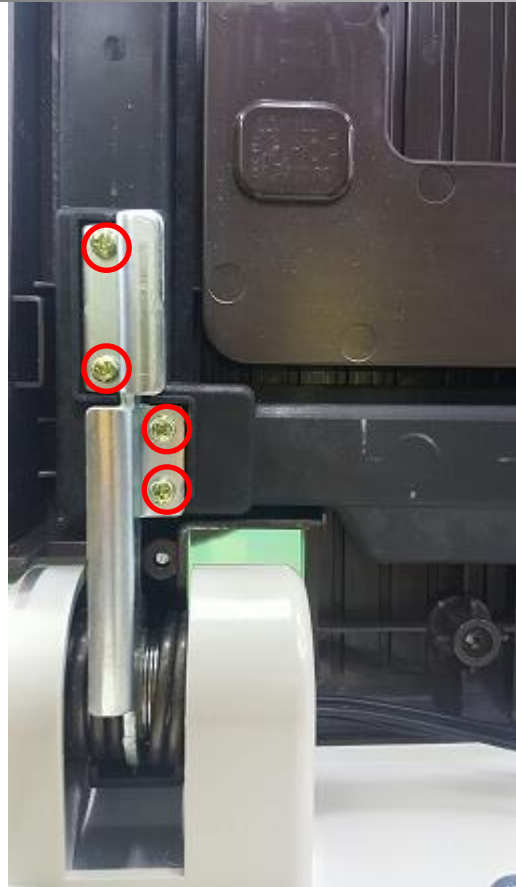
### N5 Disassembly - Remove Bolts from Bottom of Auxiliary Unit



빨간 표시된 부위 총 13개의 볼트를 풀어준다  
Remove the 13 bolts from the areas circled  
in red

### 1-3. N5 분해 - 보조체 Top, Bottom 분리

N5 Disassembly – Separate Top and Bottom from Auxiliary Unit



보조부 열선 연결 케이블 분리

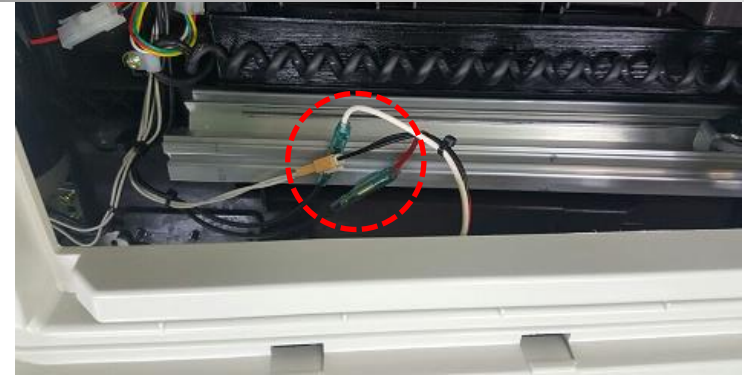
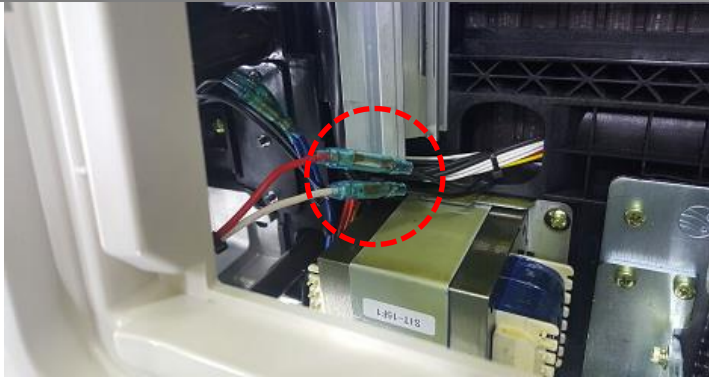
Remove the connecting cables for the hot wires of

Bottom과 연결된 볼트 8개를 풀어준다  
Remove the 8 bolts connected to the bottom.

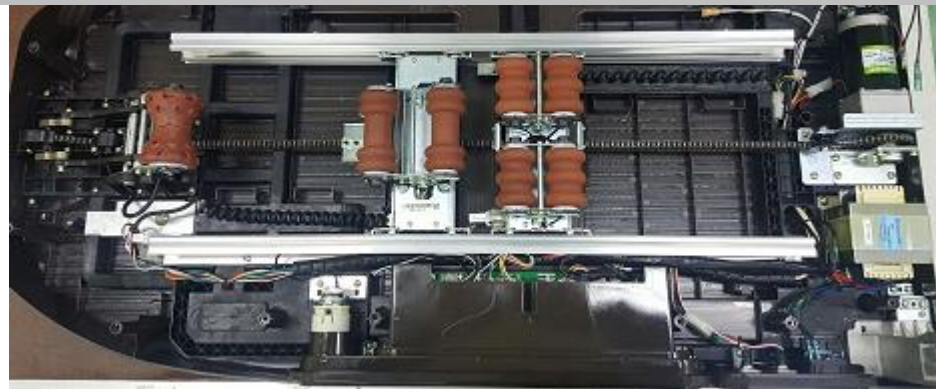


## 1-4. N5 분해 - 본체 Top 분리

### N5 Disassembly – Separate Top from Main Unit



본체 Top을 살짝 들어 표시된 연결 케이블을 분리한다  
Lift the top of the main unit slightly and separate  
the connecting cables indicated above



본체 Top 사출을 분리 완료  
Complete separation of the  
top part of the main unit

## 2. Main PCB 교체 Main PCB Replacement



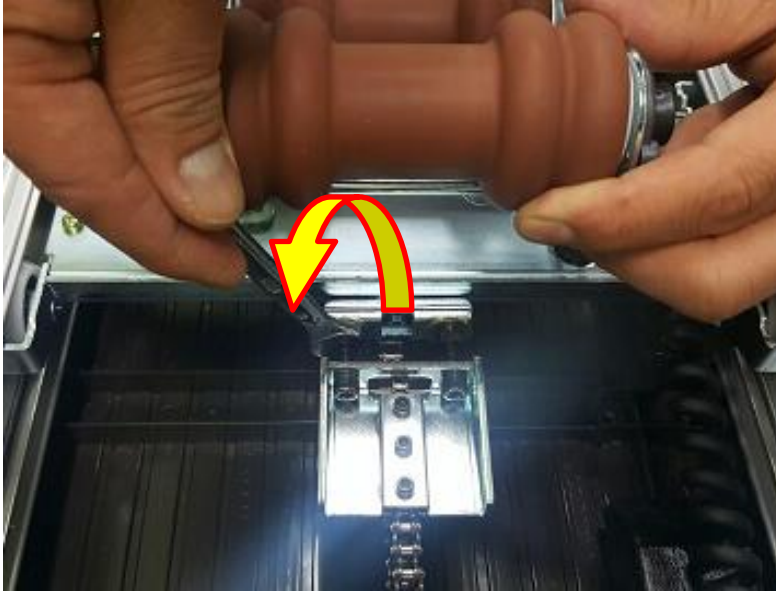
리모컨 안쪽 PCB커버의 표시부에 볼트를 풀어준다  
Remove the bolts indicated above, from the PCB cover inside the remote control.



PCB 커버를 꺼낸 후 모든 커넥터를 분리하여 Main PCB를 교체한다  
After taking off the PCB cover, disconnect all the connectors and replace the main PCB.



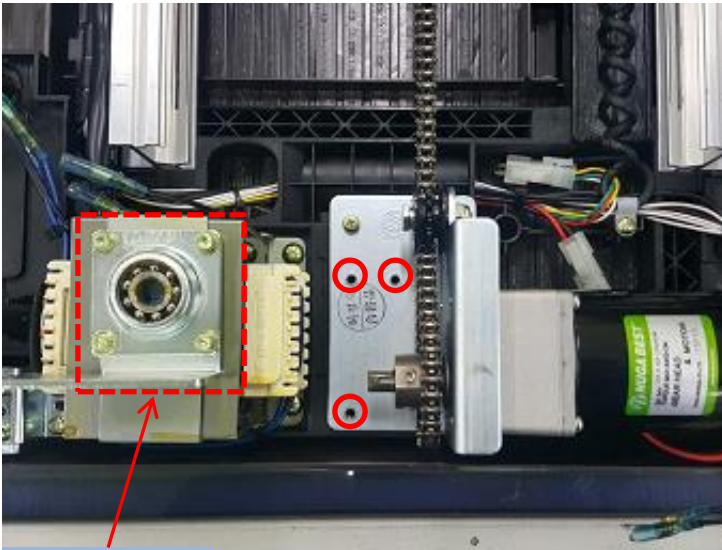
### 3-1. 모터 교체 Motor Replacement



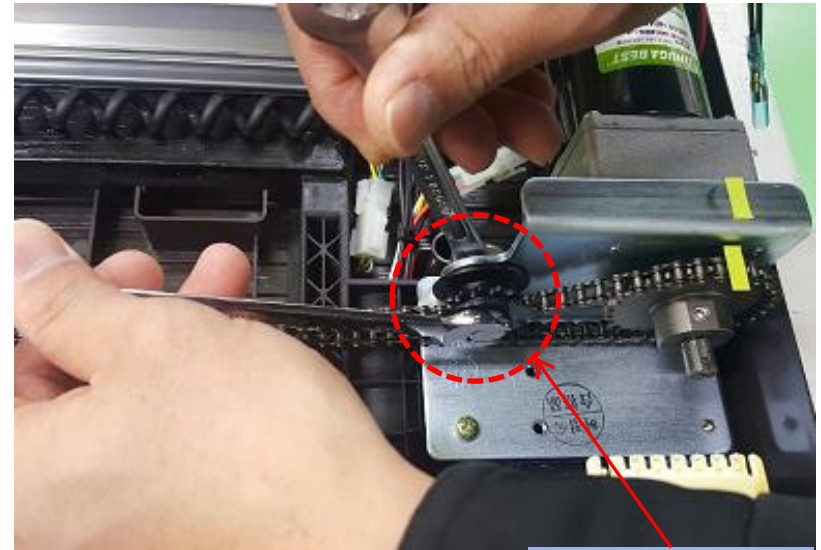
1. 8mm 스패너로 장력 고정 너트를 풀어준다  
Loosen the tension nut using an 8mm spanner.

2. 4mm 육각 랜치로 장력 볼트를 최대한 풀어준다  
Loosen the tension nut, as much as possible, using a 4mm hex key.

## 3-2. 모터 교체 Motor Replacement



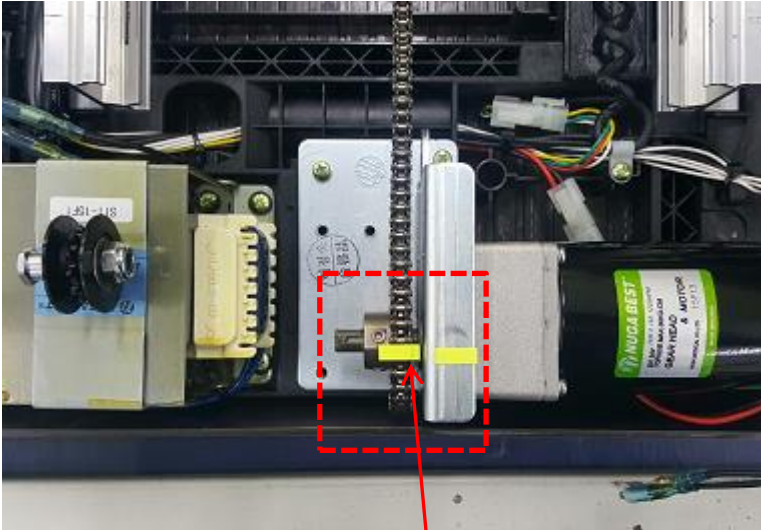
모터베어링



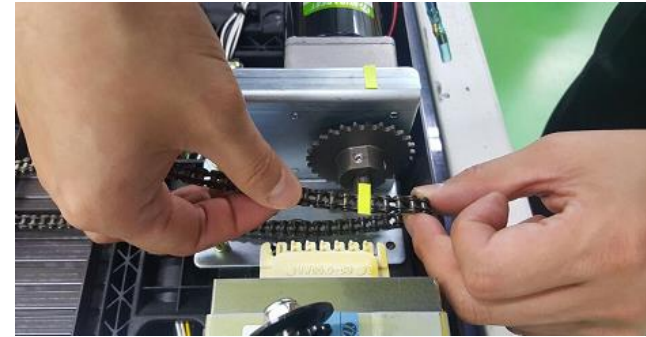
체인가이드 롤러

1. 모터 브라켓의 볼트 3개를 풀어 모터 베어링을 분리한다  
Remove the 3 bolts from the motor bracket to separate the motor bearing.
2. 12, 13mm 스패너로 체인가이드 롤러를 분리한다  
Remove the chain guide roller using 12mm and 13mm spanners.

### 3-3. 모터 교체 Motor Replacement

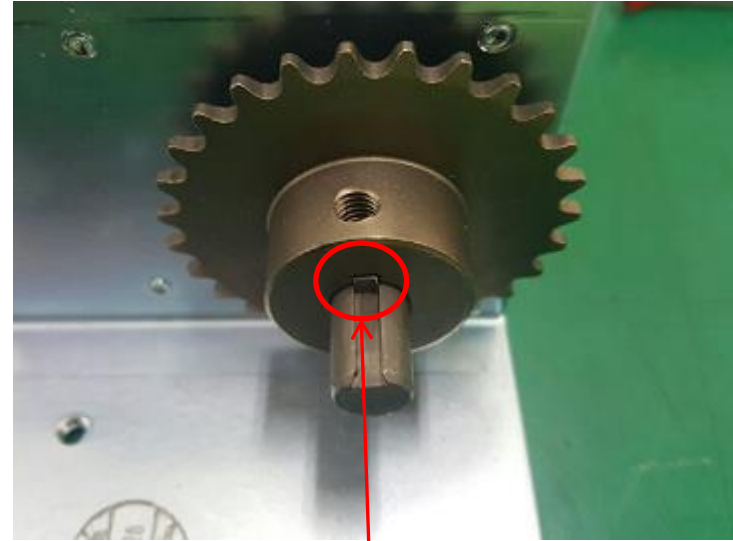
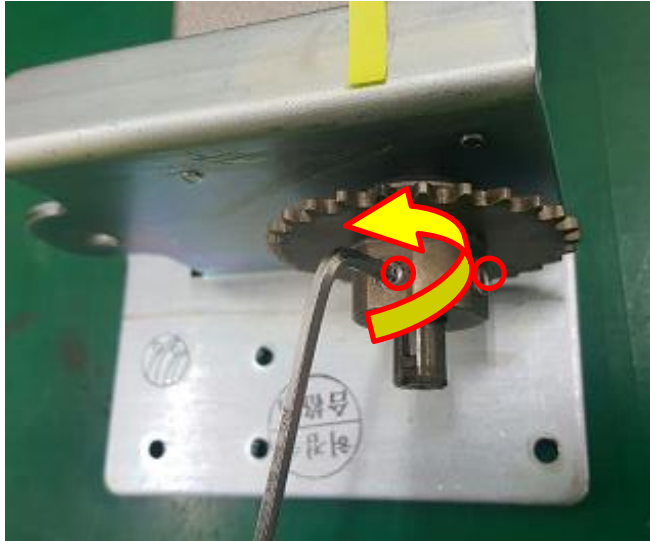


스프라켓 상사점 표시  
Top dead point of the  
sprocket



1. 체인 스프라켓 상사점에 사진과 같이 표시를 해준다  
Mark the top dead point of the chain sprocket as shown in the photograph above.
2. 모터에서 체인을 분리한다  
Remove the chain from the motor.
3. 모터를 분리한다  
Remove the motor.

### 3-4. 모터 교체 Motor Replacement

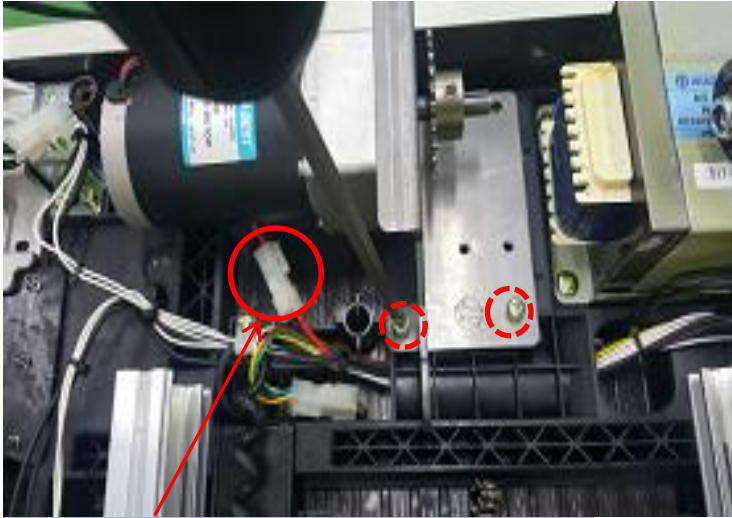


모터키와 스프라켓 끝선 맞추기  
Alignment of the ends of the  
motor key and sprocket

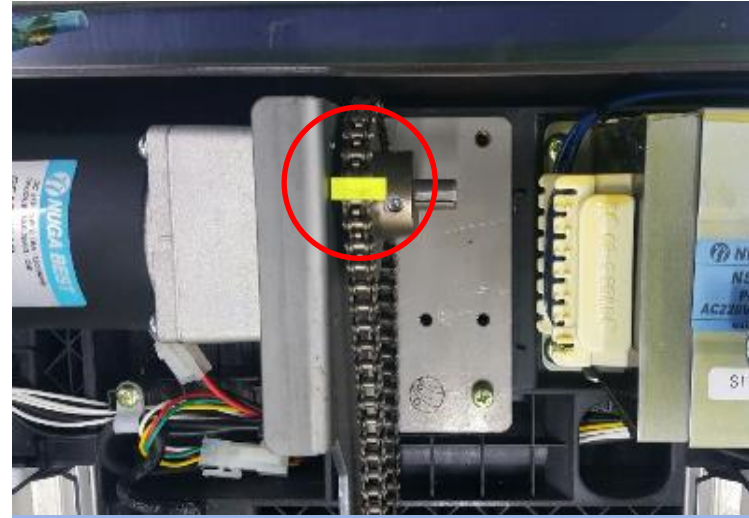
1. 3mm 육각랜치로 무두 볼드를 풀어 준다  
Remove all the headless bolts using a 3mm hex key.
2. 모터 교체 후 스프라켓을 재조립 한다  
Place in the new motor and reassemble the sprocket.
3. 모터키 끝선에 스프라켓 끝을 맞춰 볼트를 체결한다  
Fasten the bolts by aligning the ends of the motor key and sprocket.



### 3-5. 모터 교체 Motor Replacement



모터 컨넥터 체결  
Connect the motor connector



표시부분이 상사점에 오도록 걸어준다  
Hang the chain so that the marked area comes up to the top dead point.

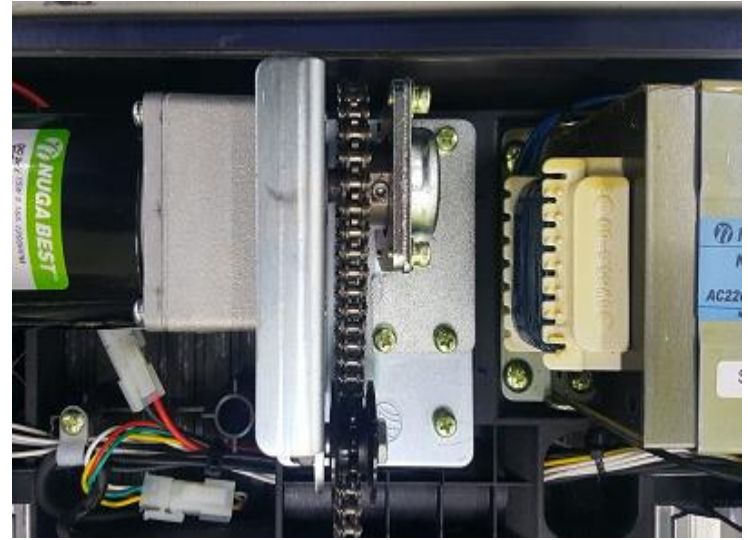
1. 모터를 조립 후 컨넥터를 체결한다  
After assembling the motor, connect the connector.
2. 스프라켓에 체인을 걸어준다  
Hang the chain on the sprocket.
3. 체인의 표시부분이 스프라켓 상사점에 오게 걸어준다  
Make sure the marked area on the chain is at the top dead point of the sprocket.



### 3-6. 모터 교체 Motor Replacement



체인 가이드 롤러 조립  
Assemble the chain guide roller

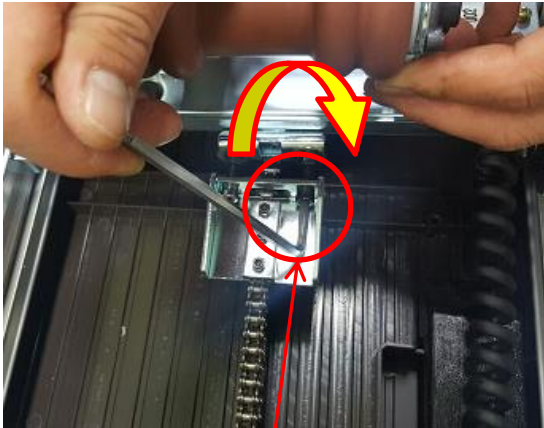


모터베어링 조립  
Assemble the motor bearing

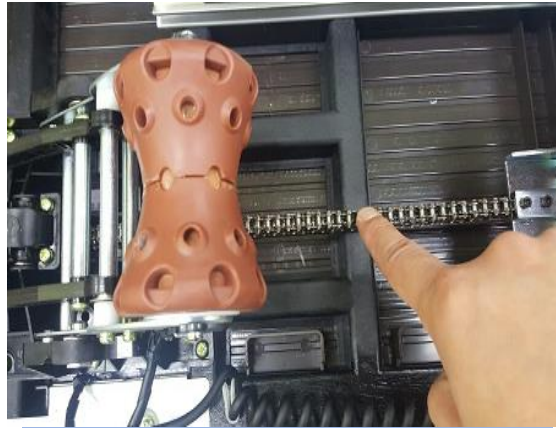
1. 체인가이드 롤러를 조립한다  
Assemble the chain guide roller.

2. 모터 베어링을 조립한다  
Assemble the motor bearing.

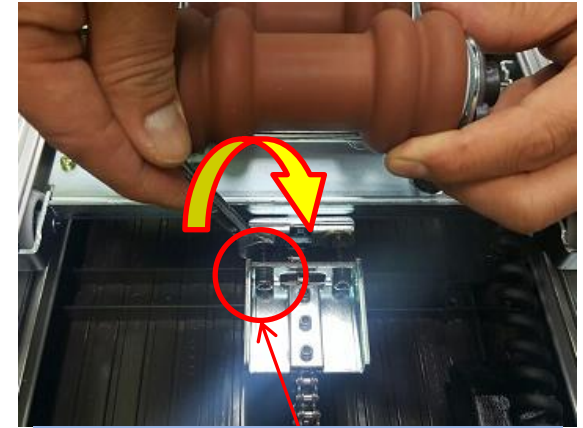
## 4. 장력조정 Tension Adjustment



장력볼트를 조여준다  
Tighten the tension bolt



체인 장력 측정  
Measure the tension in the chain



장력 고정 너트 체결  
Tighten the tension nuts

1. 장력볼트를 시계방향으로 조여준다  
Tighten the tension bolts (twist clockwise).
2. 검지손가락으로 눌렀을때 체인이 출렁이지 않을 정도(장력게이지 2.2kgf)  
The chain should not sway up and down when you press it down with your index finger (tension gauge: 2.2kgf).
3. 장력 고정 너트를 시계방향으로 조여 고정시킨다  
Fix the tension nuts in place by tightening them in a clockwise direction.

## 5-1. 리모컨 힌지 커버 교체 -리모콘 분해

### Replacement of Remote Control Hinge Cover –Opening of the Remote Control



①  
리모컨 아랫부분을  
돌려 풋니다 Twist  
Loosen the lower  
part of the remote  
control. Twist



②  
아랫부분부터  
힘을 가하여  
케이스를 분리합니다  
Remove the case by  
applying force from the  
bottom.



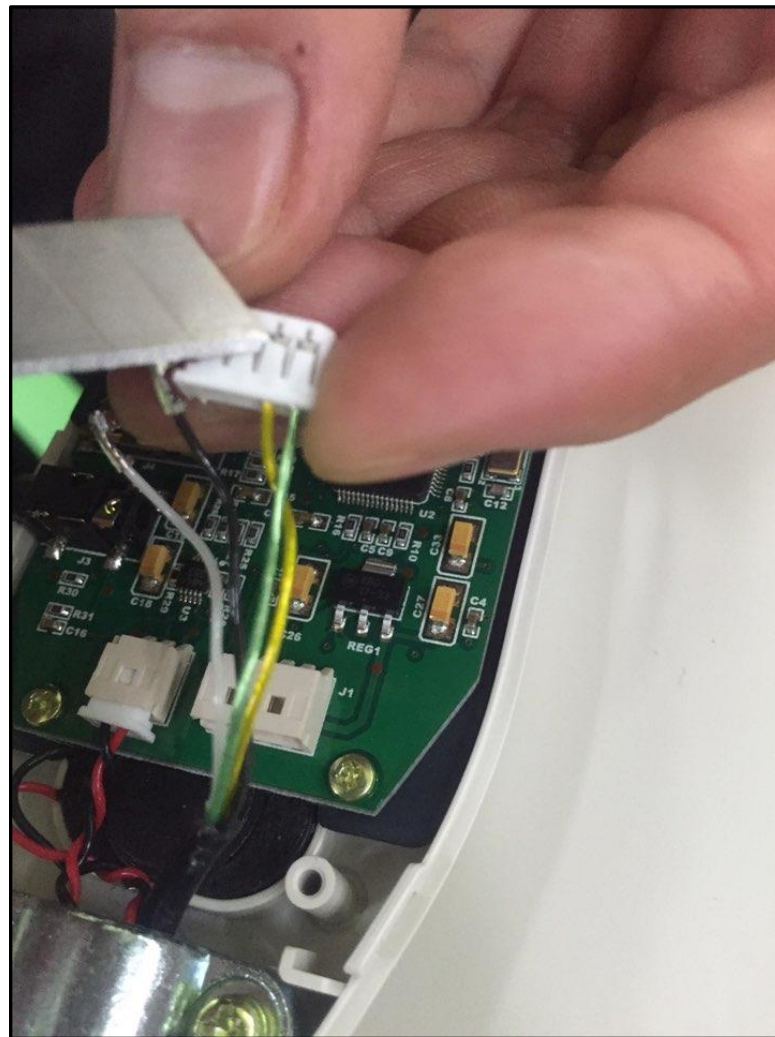
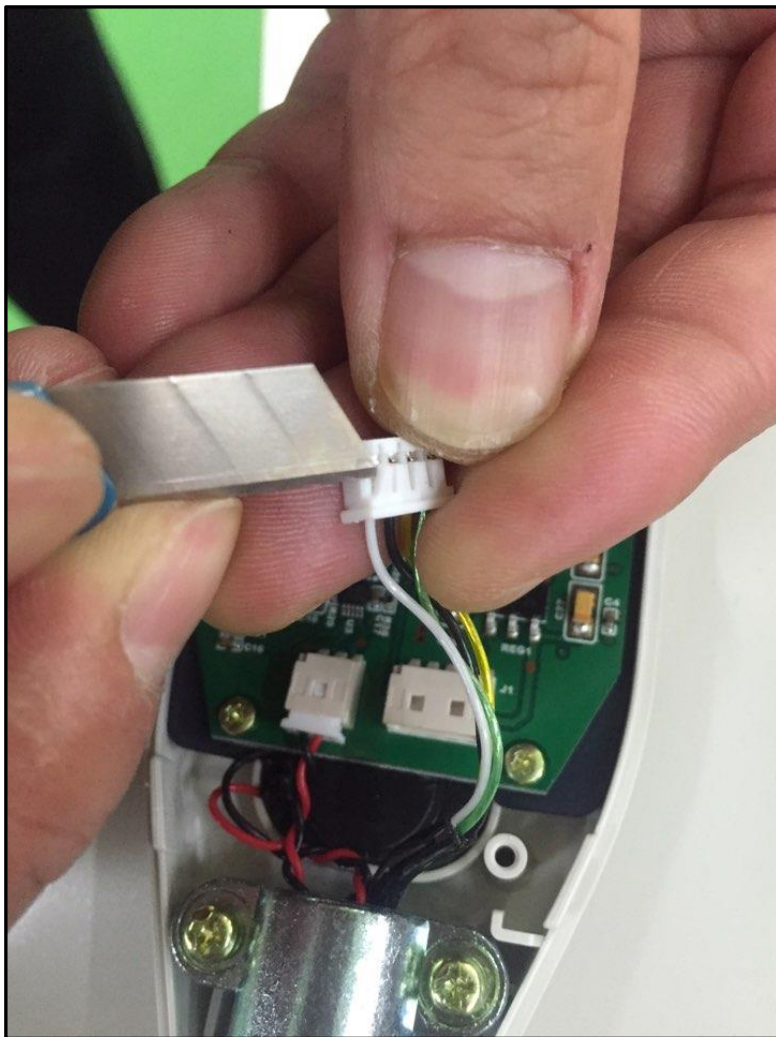
③  
리모컨 PCB에서 케이블 컨넥터를 분리합니다  
Disconnect the cable connector from the  
remote control PCB.





## 5-2. 리모컨 힌지 커버 교체 – 케이블 컨넥터 분리

### Replacement of Remote Control Hinge Cover – Disconnecting the Cable Connector



컨넥터를 칼로 살짝 벌려 케이블을 분리 합니다. (파손에 주의 할 것)

Remove the cable by opening the connector using a razor (Be careful not to cause damage).

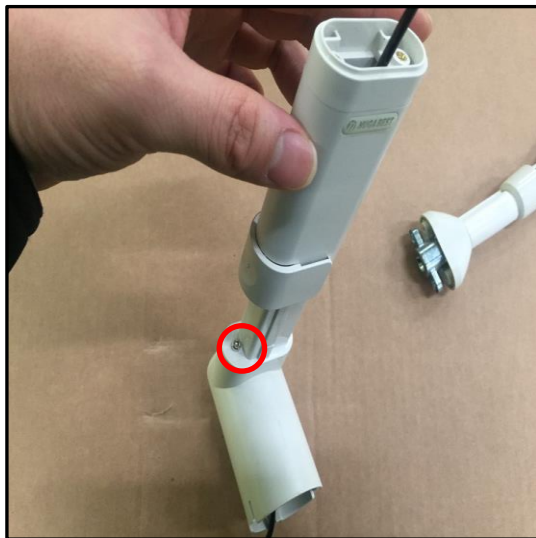
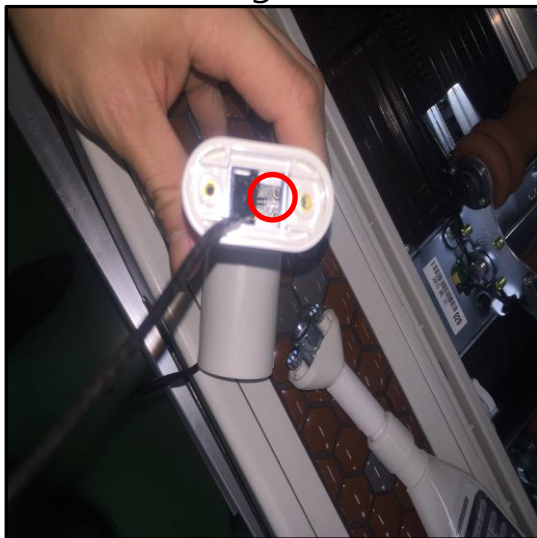
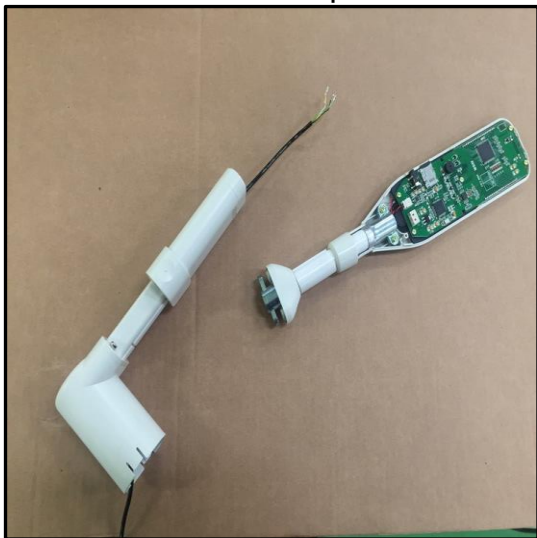
## 5-3. 리모컨 힌지 커버 교체 – 리모컨 해체

### Replacement of Remote Control Hinge Cover – Remote Control Disassembly



① 볼트 마개를 빼고 드라이버로 볼트를 풉니다

Remove the bolt caps and unscrew the bolts using a screwdriver.



② 리모콘을 들어내고 거치대 내부 깊숙한 곳에 렌치 볼트를 풉니다

Remove the remote control and loosen the wrench bolts found deep inside the rack.

③ 리모콘 슬라이드를 올리고 거치대 하단 렌치 볼트를 풉니다



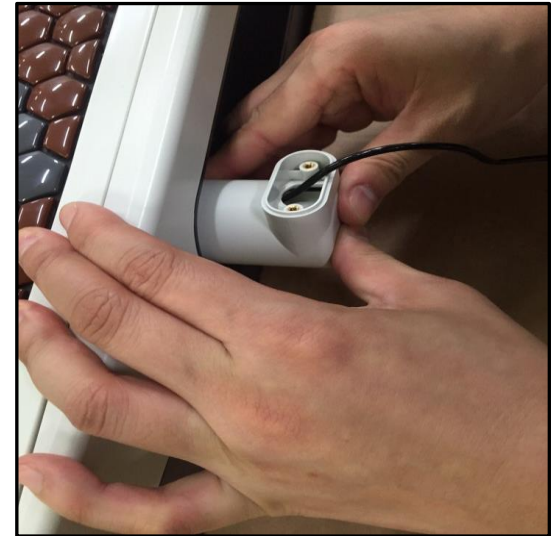
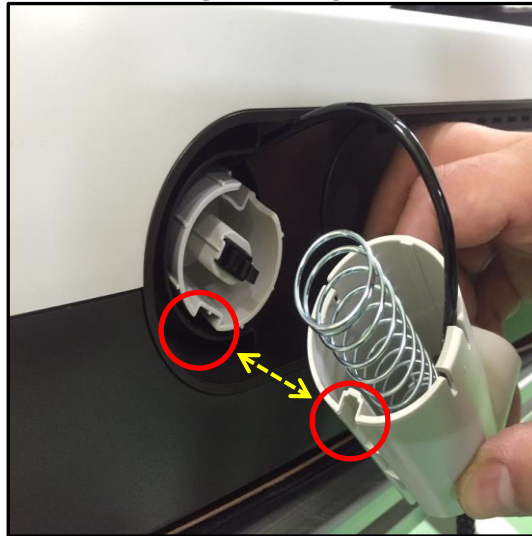
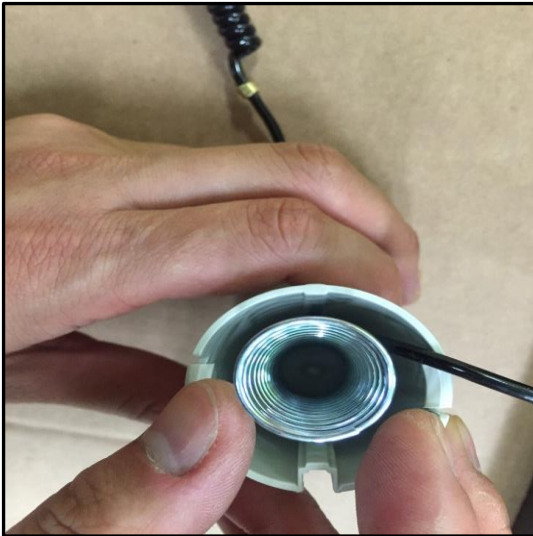
## 5-4. 리모컨 힌지 커버 교체 – 힌지 커버 교체

### Replacement of Remote Control Hinge Cover – Replacement of Hinge Cover



① 사출에 고정된 케이블을 빼고 파손된 힌지 커버를 새 것으로 교체 합니다

Take off the fixed cable, and replace the damaged hinge cover with a new one.

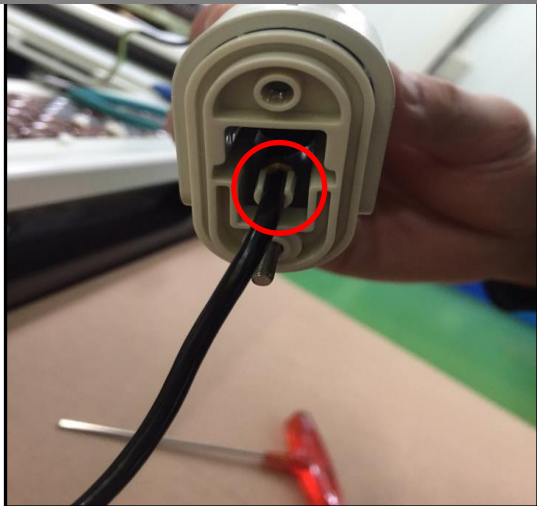


② 스프링을 넣고 사출 이음새에 맞춰 조립 합니다

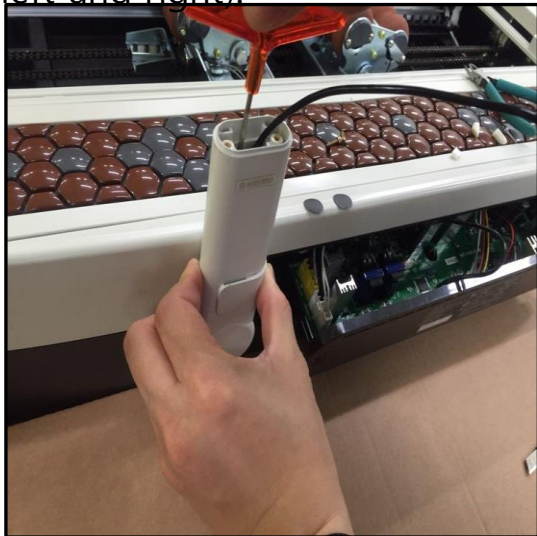
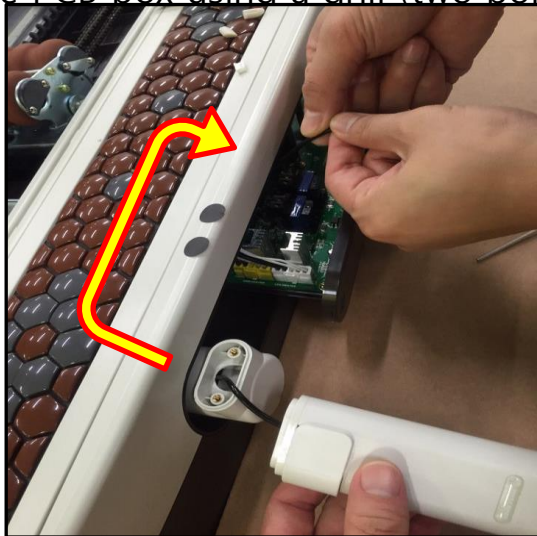
Insert the spring and assemble by ensuring that the grooves are aligned properly.

## 5-5. 리모컨 힌지 커버 교체 – 리모컨 조립

### Replacement of Remote Control Hinge Cover – Remote Control Assembly



① 케이블을 사출에 고정시키고 PCB 박스를 드라이버로 열어주세요 (좌우 볼트 2개)  
Fix the cable in place, and open the PCB box using a drill (two bolts: left and right).



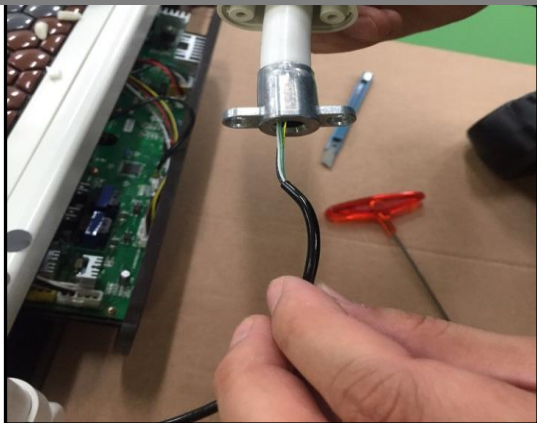
② PCB에서 밖으로 나온 리모컨 케이블을 그림과 같이 안쪽방향으로 서서히 당기며  
리모컨 거치대를 조립합니다

Slowly pull the remote control from the PCB toward the inside, as shown in the picture, and



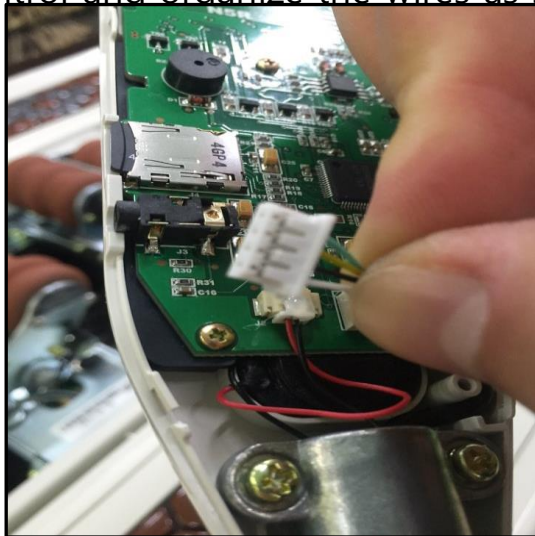
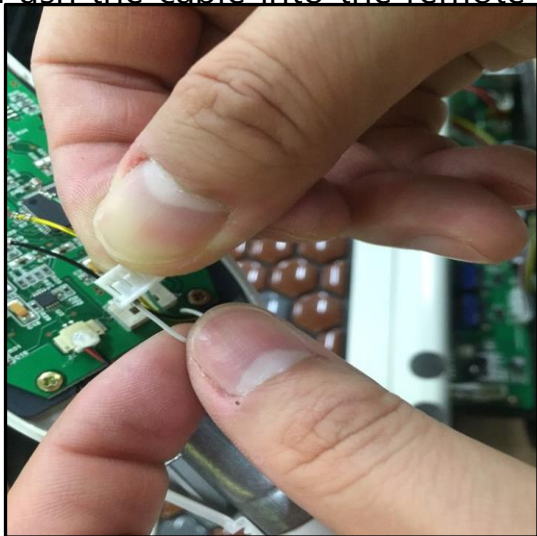
## 5-6. 리모컨 힌지 커버 교체 - 리모컨 조립2

### Replacement of Remote Control Hinge Cover - Remote Control Assembly



① 케이블을 리모컨으로 밀어 넣고 그림과 같이 선을 정리 합니다

Push the cable into the remote control and organize the wires as shown in the picture.



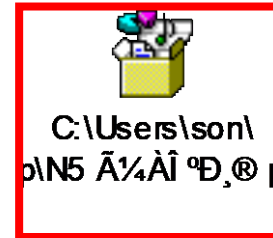
② 케이블 핀을 컨넥터에 넣고 조립 (배선 순서 백,흑,황,녹)

Put the cable pin into the connector and assemble (wiring order: white, black, yellow, green)

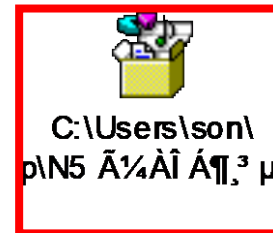
③ 리모컨 사출을 재조립.

## 6. 체인 교체 Chain Replacement

1. 체인 분리 동영상 click-----→



2. 체인 조립 동영상 1 click-----→



3. 체인 조립 동영상 2 click-----→

