



NIKKOR

NIKKOR Z 40mm f/2

NIKKOR Z 40mm f/2 SE

Repair Manual

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Introduction

Important Information

- For purposes of this Repair Manual, “Nikon” means Nikon Corporation, and all direct and indirect affiliated companies, including without limitation, Nikon Inc.
- This Repair Manual is solely intended for Nikon products imported into and sold in the United States by Nikon Inc.
- This Repair Manual includes technical instructions for replacing Nikon parts for the above-mentioned product (the “Product”) and is intended for individuals with the knowledge, experience, and tools required to repair electronic devices. Read this entire Repair Manual first. If you are not comfortable performing the repairs as instructed in this Repair Manual, do not proceed.
- Please note that, if you repair the Product on your own, we will not provide customer support or assistance regarding this Repair Manual or how to repair the Product. Please note that any incorrect repair may affect the Product’s limited warranty and/or cause an increase in the fee if you request service from an authorized Nikon service center if you have repaired the Product on your own.
This Repair Manual is subject to revision without notice.
- Failure to follow the repair instructions or to use appropriate Nikon parts or tools may cause fire or other safety issues and lead to personal injury or death.
Failure to follow the repair instructions or to use appropriate parts or tools may damage the Product or other property, or compromise the Product’s functionality or water resistance (if applicable).
- NIKON SHALL NOT BE LIABLE FOR ANY DAMAGES, INJURIES OR OTHER LIABILITIES TO THE PRODUCT, OR ANY PERSON, OR PROPERTY THAT OCCURS AS A RESULT OF REPAIRS, DIAGNOSIS, MAINTENANCE, OR MODIFICATIONS PERFORMED BY YOU OR AN UNAUTHORIZED REPAIR PROVIDER, INCLUDING BUT NOT LIMITED TO, ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, ANY LOSS OF DATA, PRIVACY OR PROFITS, OR ANY INABILITY TO USE, OR REDUCED FUNCTIONALITY OF, THE PRODUCT.

Notations used in this Repair Manual

In this guide, important information is indicated by the following icons.



WARNING

This indicates that improper use by ignoring the contents described herein can result in potential death or serious injury.



CAUTION

This indicates that improper use by ignoring the contents described herein can result in potential injury or material loss.

IMPORTANT

This symbol indicates important information in this manual.

About the illustrations used

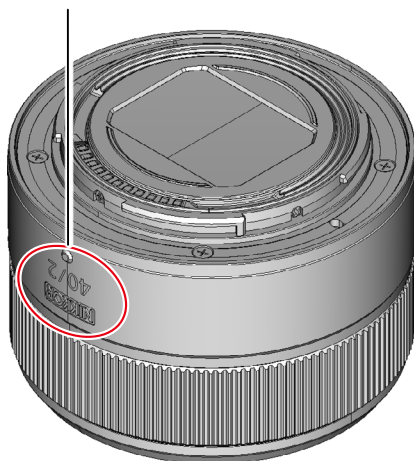
The disassembly and assembly procedures in this manual are described using illustrations of the NIKKOR Z 40mm f/2.

The actual shape of this lens may differ from that of the NIKKOR Z 40mm f/2 SE.

Product identification information

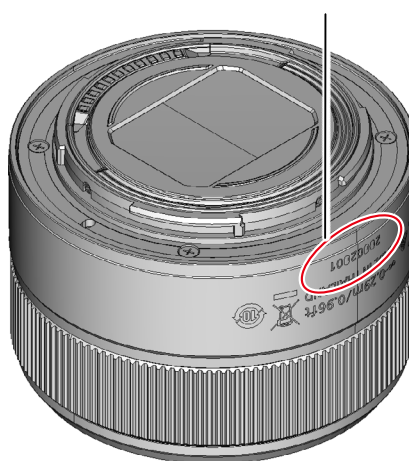
The NIKKOR Z 40mm f/2 or NIKKOR Z 40mm f/2 SE serial number is written on the opposite side of the Product name as illustrated below.

Product name



Product name side

Serial number



Serial number side



CAUTION

- The serial number may be required when you contact Nikon with regards to the Product. Make sure you do not lose the serial numbered part of the Product.

Read this first

- No part of this Repair Manual may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form, by any means, without Nikon's prior written permission.
- Illustrations shown in this Repair Manual may differ from the actual Product.
- Nikon is not responsible for any errors this Repair Manual may contain.
- The appearance, specifications, and capabilities of this Product and parts are subject to change without notice.

About controls for radio interference

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 - (1) This device may not cause harmful interference, and
 - (2) This device must accept any interference received, including interference that may cause unwanted operations.
- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules and to EU EMC directive. These limits are designed to provide reasonable protection against harmful interference from residential installations. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may interfere with radio communications. However, there is no guarantee that interference will not occur at a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by implementing one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the distance between the equipment and receiver.
 - Consult the dealer or an experienced radio/TV technician for help.

Safety precautions

Strictly observe the guidelines contained in this Repair Manual in order to use this Product safely, and to prevent possible injury or property damage to you and others. Be sure to understand the contents thoroughly in order to correctly use the Product.

General safety precautions

Always observe the following general safety precautions.

- If you disassemble or repair the Product, it may involve risks of electric shock, Product damage, fire, and/or personal injury, or other hazards. Be careful when disassembling or repairing the Product as described in this Repair Manual.
- If you disassemble or repair the Product, the flange back or the back focus may shift, which may affect the focus when shooting. Check the focus position before disassembling or repairing the Product. Then, ensure that the focus position has not changed after re-assembling the Product. If the focus changes after re-assembling the Product, we recommend that you disassemble and repair the Product again.
- If the Product is dropped or has been subjected to impact due to dropping, or weight or stress has been placed on it, the camera and lens attachment parts may become deformed, which will prevent the Product from being able to be attached and will cause problems when shooting. In such cases, accurate adjustments and repair will be required and it is recommended that you contact Nikon for service repairs.
- If the Product contains a lithium-ion battery, then inappropriate use, transportation, recycling, reuse, or disposal of the lithium-ion battery may cause a fire, explosion, or other damage or injury. Lithium-ion batteries should be handled in accordance with local laws, rules, and regulations. Do not heat, create holes in, disassemble, or incinerate the Product or the lithium-ion battery. Do not leave the Product or the lithium-ion battery in direct sunlight or other hot places for long periods of time, and do not charge the Product in such an environment as doing so may damage the lithium-ion battery or cause it to melt, which may cause a fire, explosion, or other damage or injury.
- Do not dispose of your old Product or its lithium-ion battery (if any) and the replaced parts in your household trash or recycling bin. When disposing of the lithium-ion battery, follow your local area laws, rules, and regulations.

Repair-specific precautions and warnings

- As for the Product powered on by the power switch, before disassembling the Product, ensure that the Product is powered off and that the battery has been removed.
- As a safety measure, we recommend that you wear protective eyewear when disassembling or reassembling the Product.
- Always check the following points before and while disassembling the Product.
 - Wear an anti-static wrist strap.
 - The work area is appropriately grounded, and an environment in which electrostatic discharge (ESD) has been provided with safety measures is ensured.
- Before starting work, check that you are following the general guidelines and ESD compliance steps. For details, refer to "Before disassembling the Product" on page 10.
- When removing any parts from the Product, place all the attached parts and screws away from the work area to prevent the Product and parts from being damaged or lost.

Safety policy and procedure

- All Product safety issues must be managed according to the following points.

If any of the following conditions are visible, stop repairing the Product and contact Nikon's customer service at www.nikonproductsupport.com.

 - There are burnt or melted components or traces on the outside of the Product, or other heat-related damage (including scorching on charging terminals or other connection terminals).
 - The Product has burnt or has melted parts or traces of burning on the inside, or has been damaged due to overheating.
 - Products that appear to have problems such as having been forcibly detached or disassembled for reasons other than misuse by the user or unauthorized repair (those that have been damaged by being subjected to impact due to dropping, those that have evidence of tampering, or those with damage or separation caused by dilatation of the battery).
 - Plastic parts with sharp edges that may pose an injury risk to the user.
- When contacting Nikon's customer service, please have the following information ready to enable us to check the situation:
 - Model, model number, and serial number of the affected Nikon Product and any third-party product used together with the Nikon Product, if any.
 - Description of the damage found.
 - Clear photos that show the damage.

Disclaimer of warranties and limitation of damages

- All the information, descriptions, materials, and products provided on or in connection with this Repair Manual are provided by Nikon on an "as-is basis" and "in the form that can only be provided if possible" unless otherwise expressly specified in writing by Nikon. With respect to the information, descriptions, materials, and products included in this Repair Manual, that accompany this Repair Manual, or that are provided to users in some way, Nikon makes no, and hereby disclaims all, representations, unless expressly specified in writing. You hereby expressly agree that your use of the information, descriptions, materials, and products included in this Repair Manual or that accompany this Repair Manual are at the user's sole responsibility. If you do not agree with the foregoing, do not use this Repair Manual.
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SOME STATES DO NOT ALLOW (A) LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR (B) THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

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Service Tools

This section shows the tools used to repair products. The standard service tools are commercially available and can be purchased from third party retailers. Nikon hereby disclaims all responsibility and liability for any tools or other items purchased from third party retailers.

Nikon service tools

- Cleaning stick (EIZ0163)
- Lubricant (FG-600T)
- Lubricant (MDF-400T)
- Lubricant (OS-30MHP)

Standard service tools

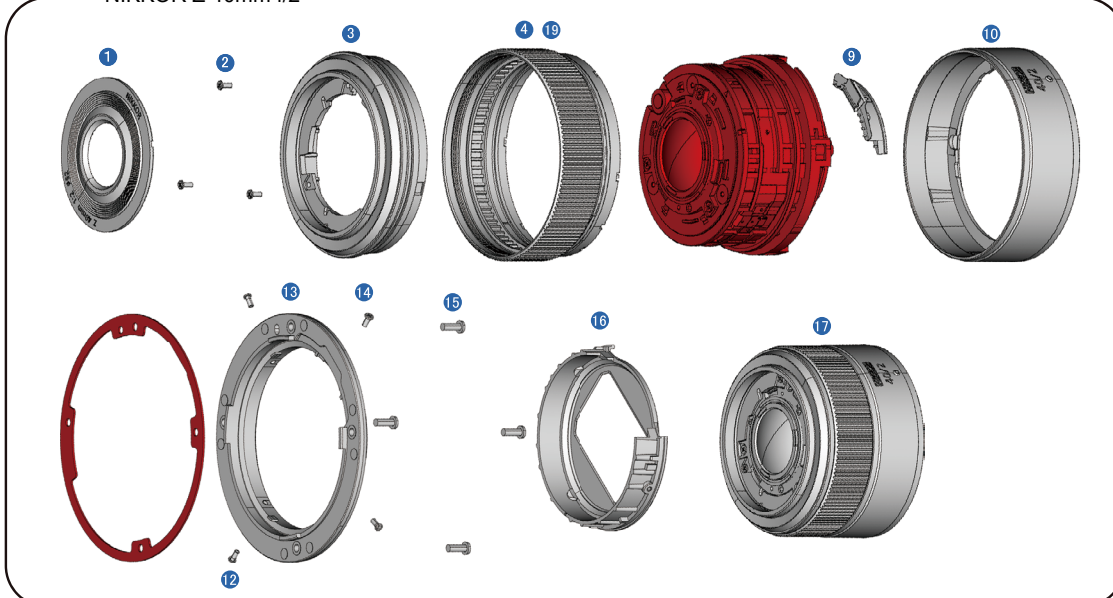
- Electrostatic discharge (ESD) mat
- Anti-ESD wrist strap (1 M Ω resistance)
- Anti-ESD gloves
- Protective eyewear
- Isopropyl alcohol
- Isopropyl alcohol dispenser bottle
- Anti-ESD tweezers
- Phillips screwdriver (2.0 mm)
- Small flathead screwdriver
- Small pry bar (plastic)
- Torque screwdriver (Use a product with a torque range of 0.06 N•m to 0.2 N•m.)
- Brush for lubricant
- Front cap (LC-52B)
- Rear cap (LF-N1)

Illustrated Service Parts List

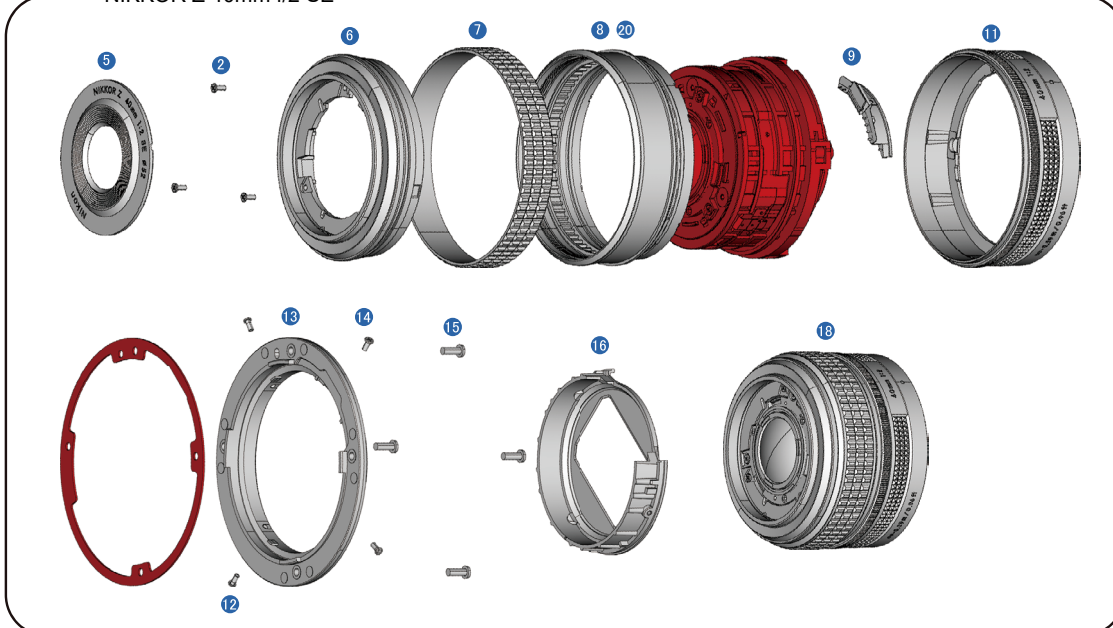
IMPORTANT

- The parts marked in red in the illustration cannot be replaced individually as replacement will affect the optical performance. If you need to replace these parts, use the No.17 LENS UNIT (143K0) or No.18 LENS UNIT (143KY).
- When disassembling and reassembling the Product, be careful not to damage or lose the parts.

NIKKOR Z 40mm f/2



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No.	Item code	Parts name	Q'ty
1	134VX	COVER RING UNIT	1
2	6A-17040FA	SCREW	4
3	133RK	FILTER RING UNIT	1
4	134W7	MF RING UNIT	1
5	13G47	COVER RING UNIT	1
6	13G24	FILTER RING	1
7	135XW	RUBBER RING	1
8	136XX	CONTROL RING UNIT	1
9	128UJ	CONTACT UNIT	1
10	137TN	NAME RING UNIT	1
11	13P1C	NAME RING UNIT	1
12	12L6S	SCREW	3
13	12J8K	MOUNT	1
14	119KA	SCREW	1
15	1K010-820	SCREW	4
16	133RV	REAR COVER RING	1
17	143K0	LENS UNIT	1
18	143KY	LENS UNIT	1
19	142TL	MF RING UNIT	1
20	13T4F	CONTROL RING UNIT	1

Parts Removal and Replacement Procedures

Before disassembling the Product

IMPORTANT

- As for the Product powered on by the power switch, before disassembling the Product, be sure to check that the Product is powered off and that the battery has been removed.
- Check that all the lens, camera, and accessories attached to the Product are removed before disassembling the Product.
- Always cover the workbench's surface with a soft, non-scratch material suitable for ESD protection.
- Frequently clean the surfaces you use to work and keep them free of debris/abrasive particles.
- Always follow the work steps described in each process section.

During the repair process

IMPORTANT

- If there is this kind of indication, apply the specified grease or adhesive using a small brush.
Example: MDF-1173S AX-125
- If there is a specified torque, use an appropriate torque driver for tightening screws.
Example: 0.1 N•m
- If each part is shown with a circled number, perform the work in the order indicated by the numbers.
Example: ① ② ③ (Work in the order of ① to ③)
- Do not pinch the FPC or cord when assembling.
- Be careful not to damage or lose the parts.

Reference Pages for Replacement Procedures by Major Parts

FILTER RING UNIT

Disassembly	P.12
Assembly	P.17 - P.18

MOUNT

Disassembly	P.13
Assembly	P.16

CONTACT UNIT

Disassembly	P.13 - P.14
Assembly	P.15 - P.16

LENS UNIT

Disassembly	P.12 - P.13
Assembly	P.16, P.18

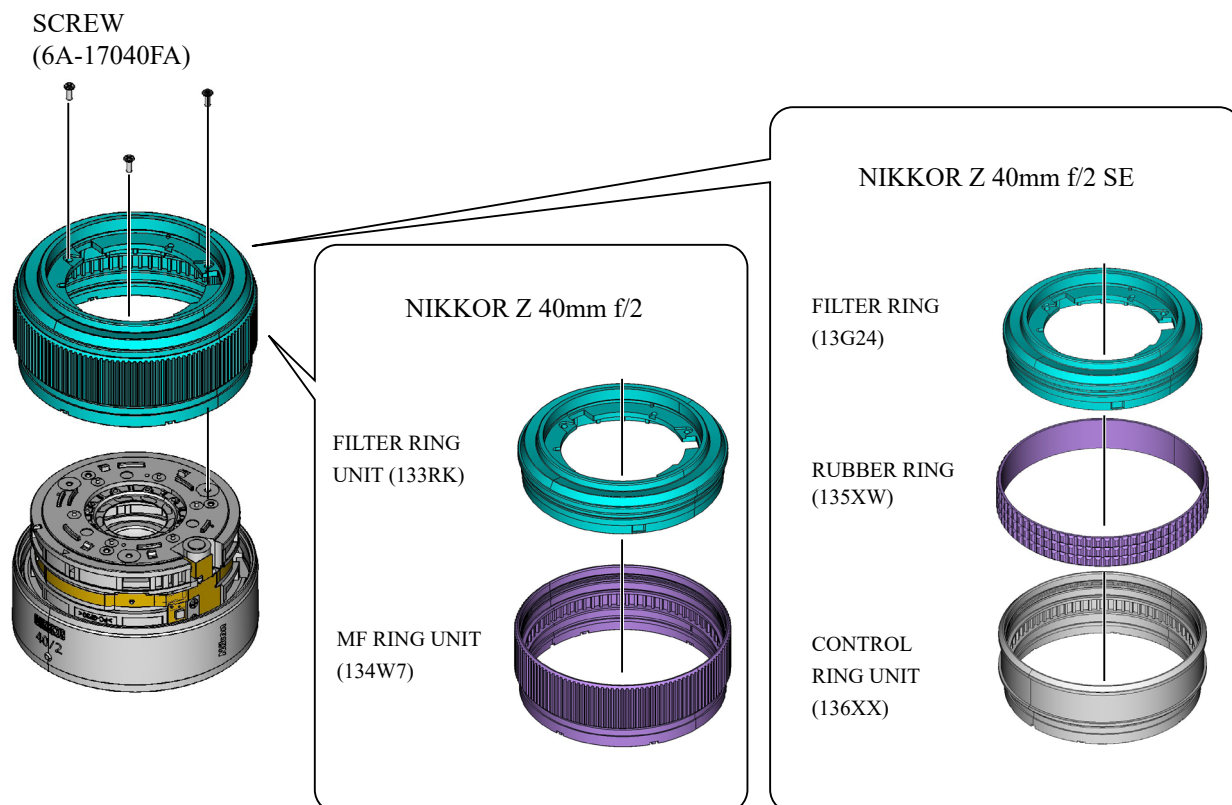
Disassembly

COVER RING UNIT

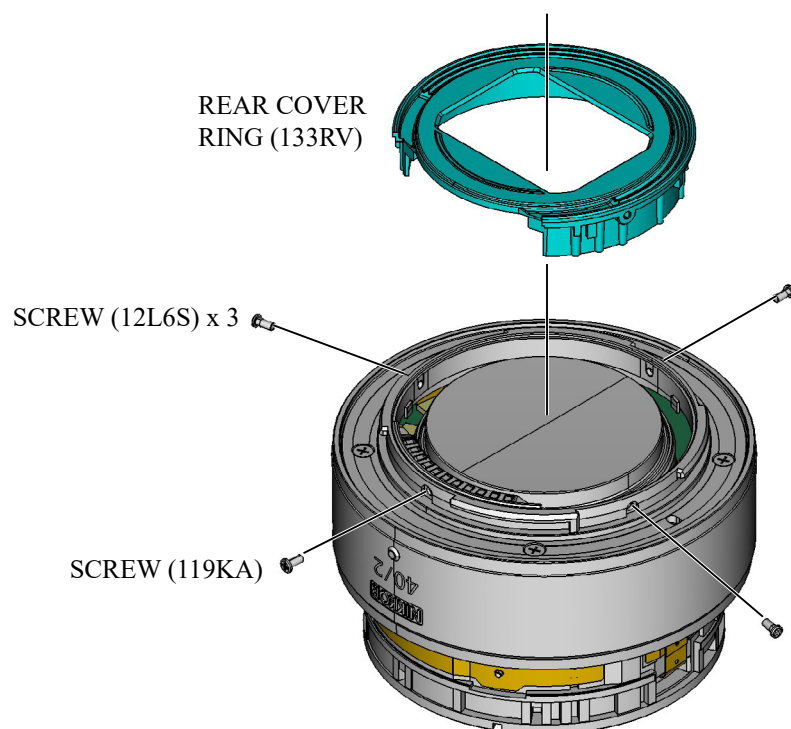


- Insert a small flathead screwdriver or plastic pry bar into the gap between the COVER RING UNIT and the LENS UNIT, and lift the COVER RING UNIT, being careful not to damage the lens.
- If it is difficult to peel it off, apply isopropyl alcohol into the gap around the outer periphery.

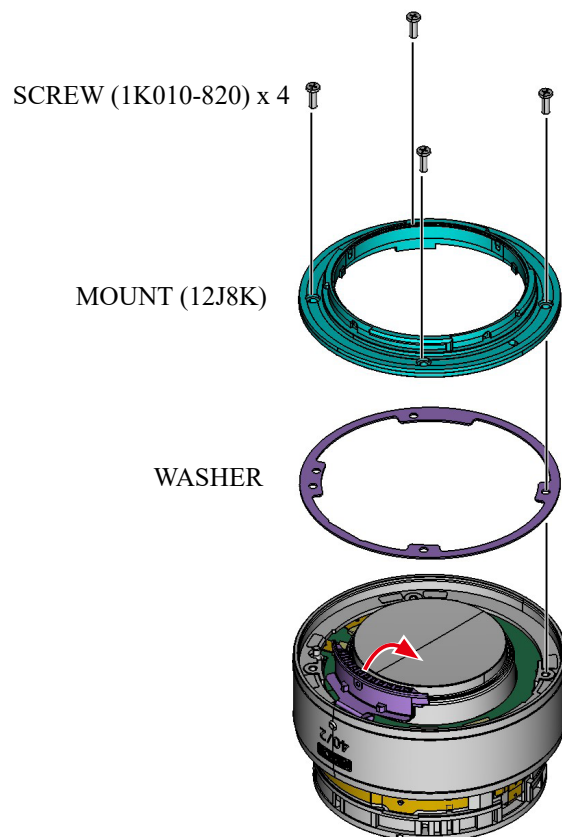
FILTER RING



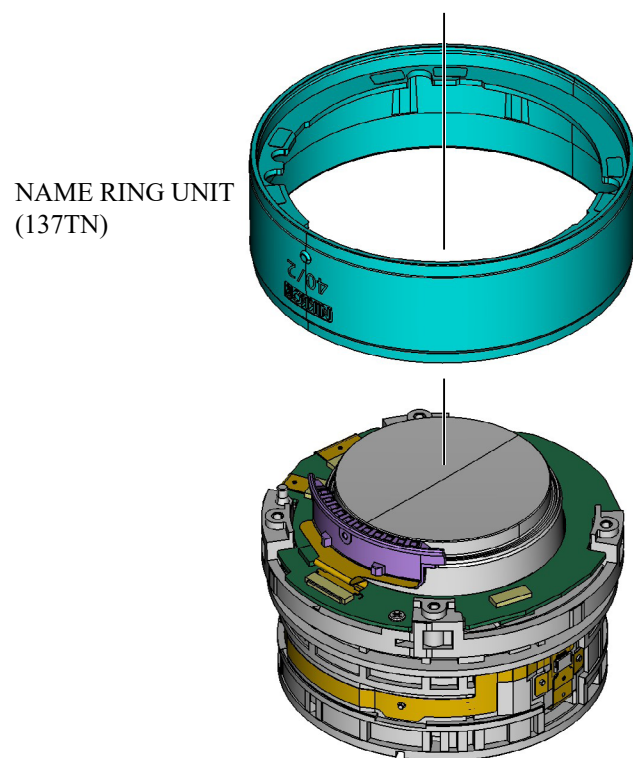
REAR COVER RING



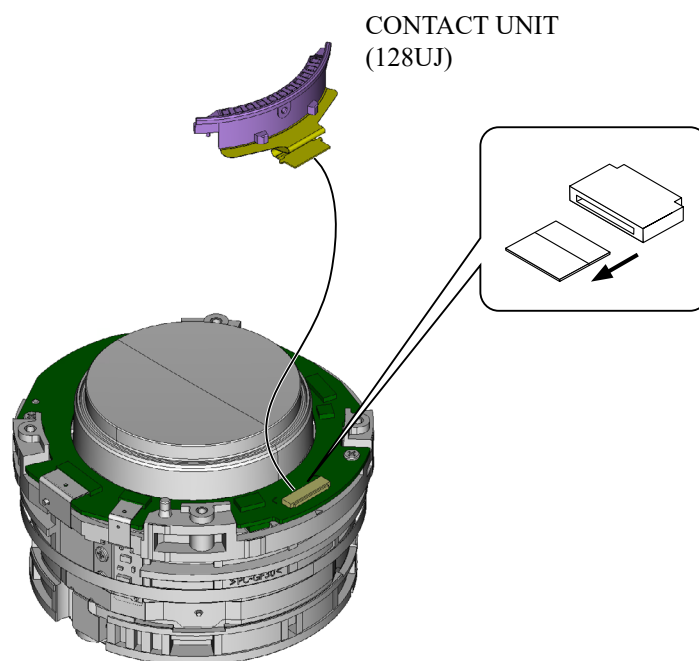
MOUNT



NAME RING UNIT

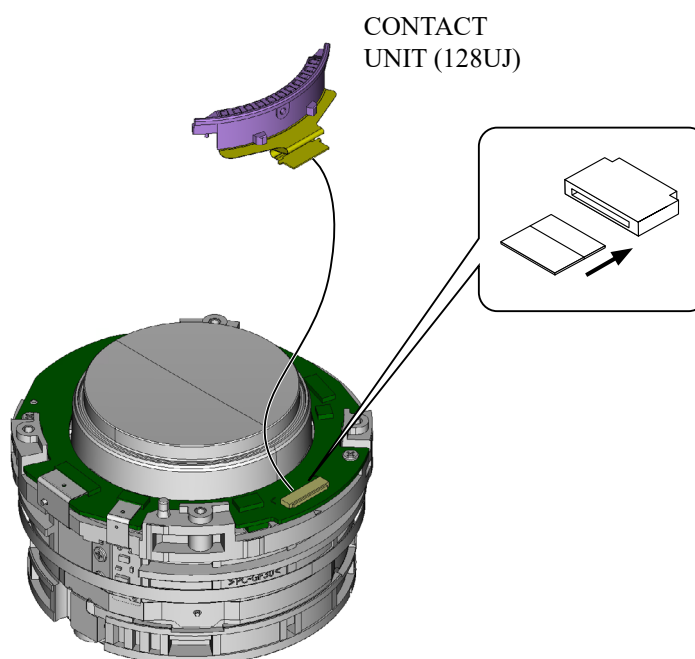


CONTACT UNIT



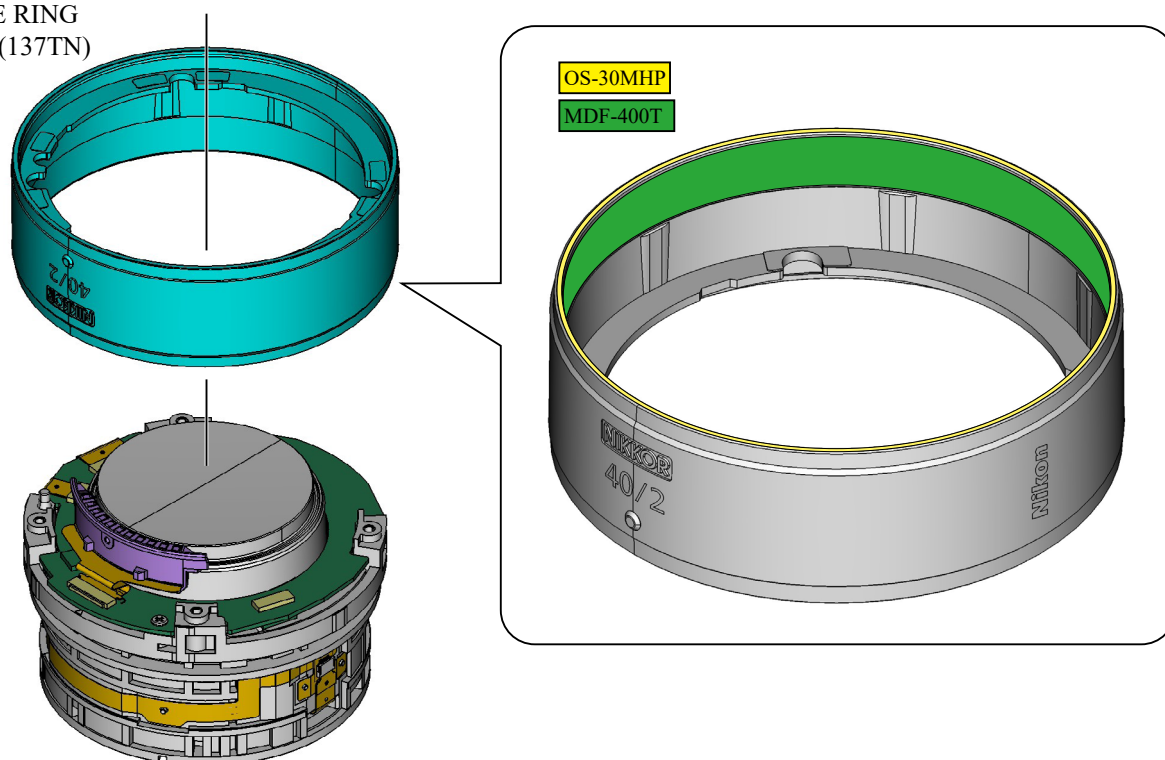
Assembly

CONTACT UNIT

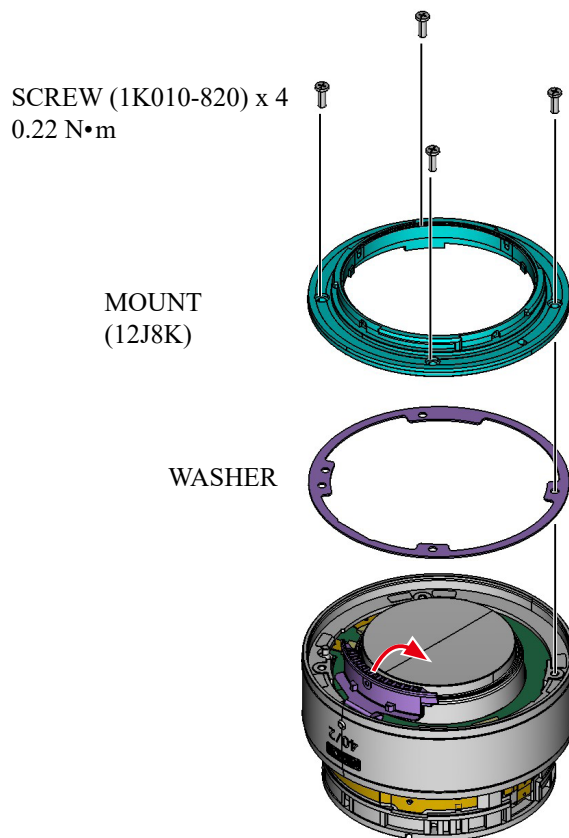


NAME RING UNIT

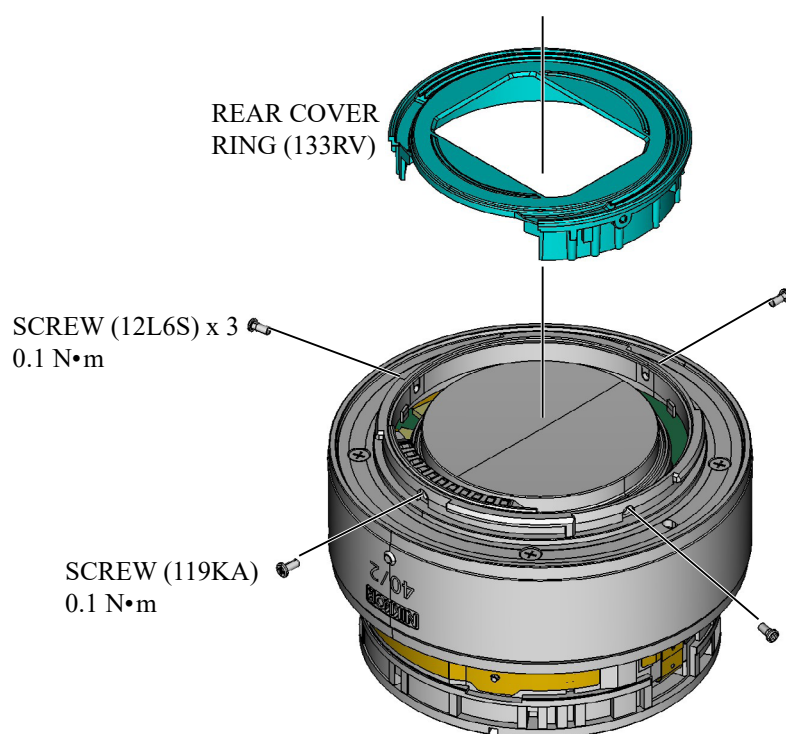
NAME RING UNIT (137TN)



MOUNT



REAR COVER RING

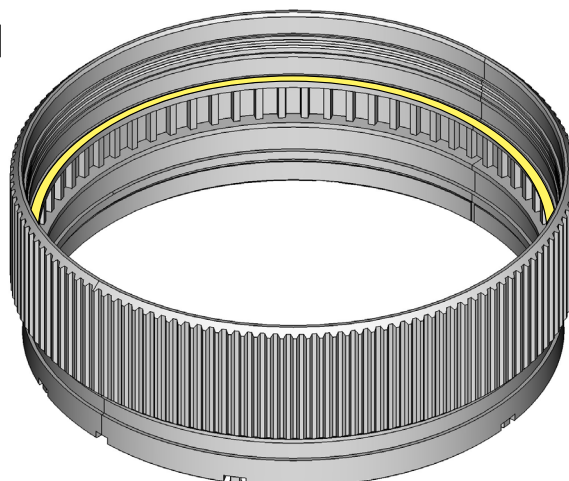
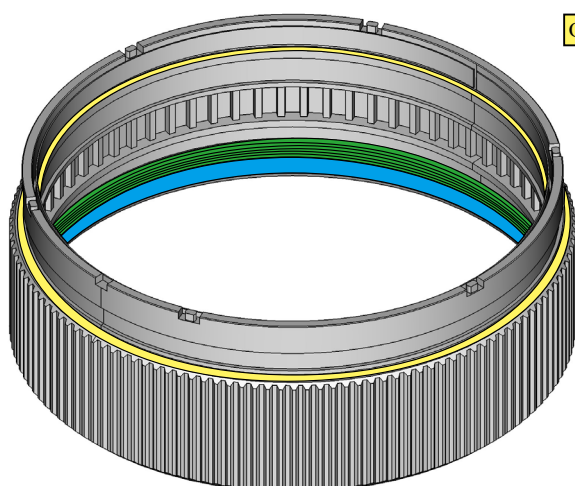


FILTER RING

MDF-400T

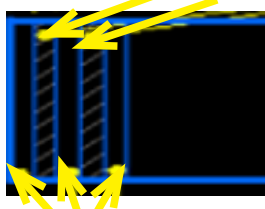
FG-600T

OS-30MHP



- If you replace MF RING UNIT or CONTROL RING UNIT, please select same inside pattern of before replacement part.

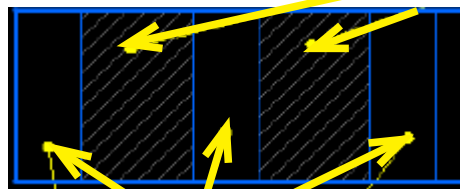
Black printing



Reflective surface

MF RING UNIT(134W7)
or
CONTROL RING UNIT(136XX)

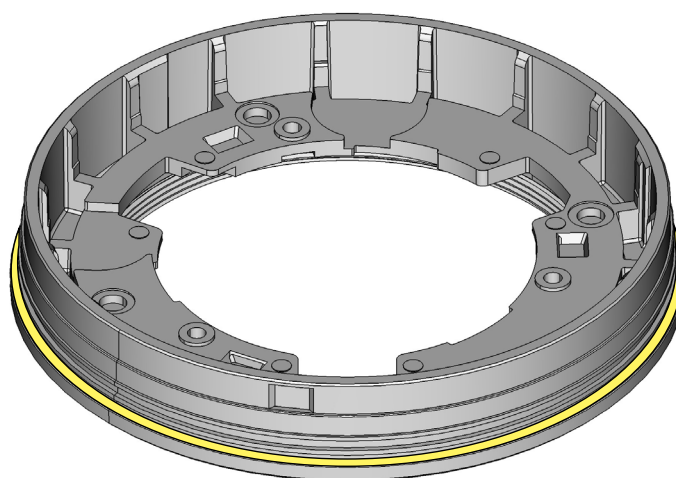
Black printing



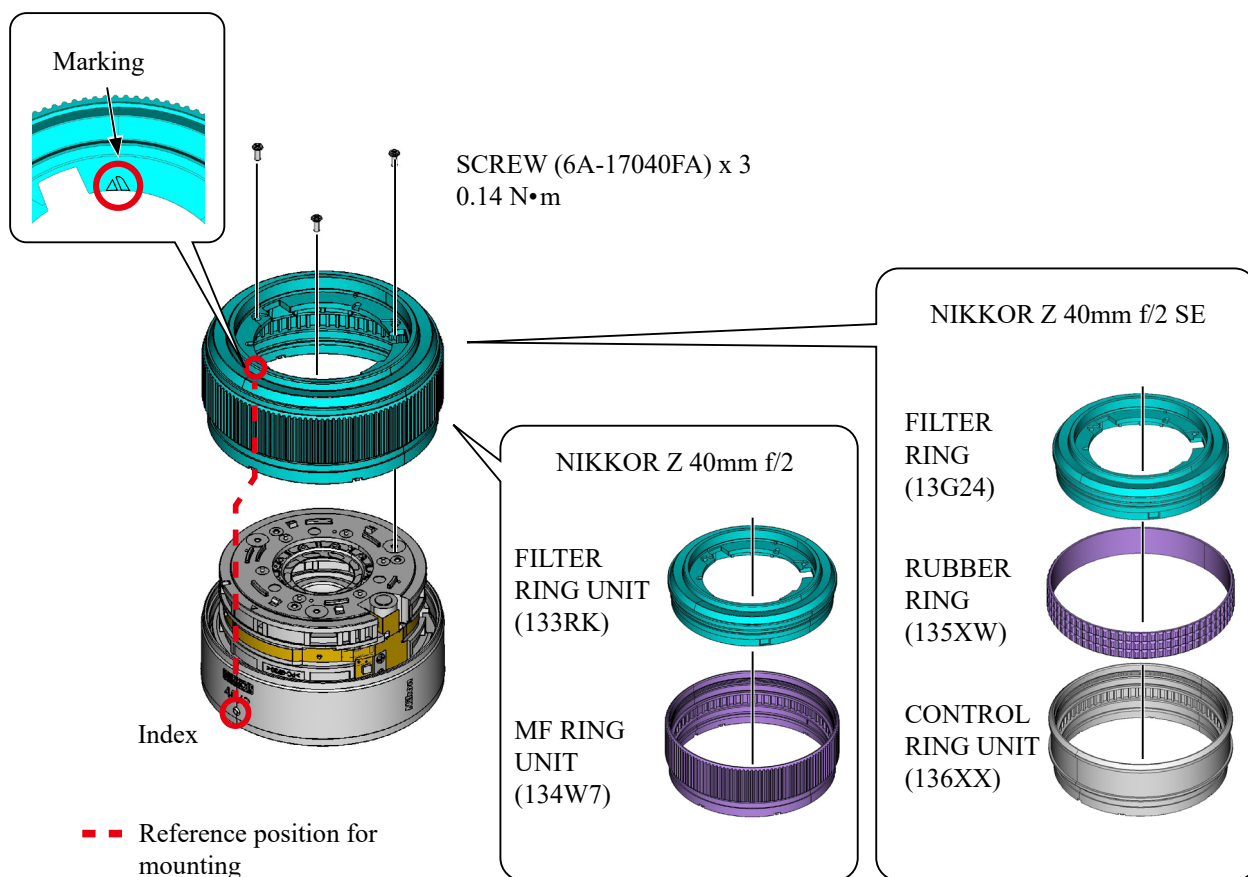
Reflective surface

MF RING UNIT(142TL)
or
CONTROL RING UNIT(13T4F)

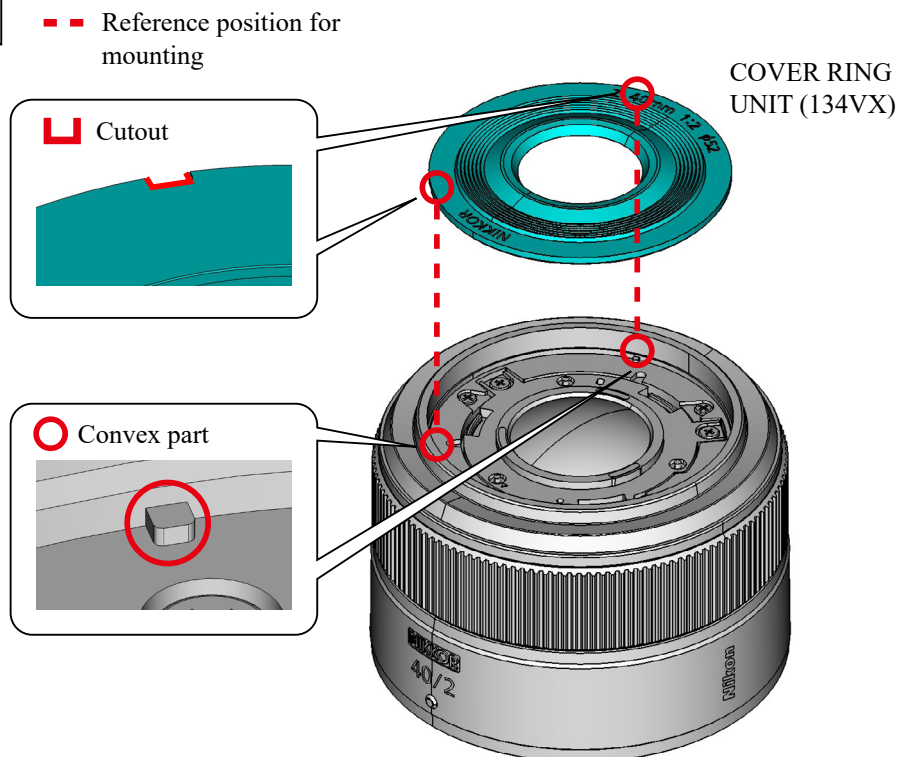
OS-30MHP



FILTER RING UNIT
(133RK)



COVER RING UNIT



IMPORTANT

- When performing repairs that involve disassembly and assembly, conduct the following inspections.
 - AF accuracy inspection (P.19)
 - Control ring inspection (P.23)

AF Accuracy Inspection Process

When performing repairs that involve disassembling and reassembling the mount, check the AF accuracy before and after disassembling.

Tools and parts required:

- Your mirrorless camera
- Tripod
- Indoor lighting (Use the flickerless light.)
- Commercially available focus chart that can measure the focus position
 - Focus charts can be purchased at stores that sell camera-related products or online stores that sell camera-related products.
 - Nikon hereby disclaims all responsibility and liability for any focus charts or other items purchased from third party retailers.

Camera settings

- The AF accuracy is inspected using your own mirrorless camera, so please make sure that there are no abnormalities in the operation of your camera before starting the inspection.
- When performing an inspection, change the camera settings as shown below.
- Be sure to turn OFF "AF Fine Adjustment" as it affects the inspection results.

Set the camera as follows.

For details on the camera settings, refer to the instruction manual of the camera.

Camera settings

- Shooting mode: A mode
- Image quality mode: FINE
- Image size: L
- Aperture: Full open
- ISO sensitivity: 100 to 800 (Automatic sensitivity control OFF)
- White balance: Auto (White priority)
- Picture control: SD (All parameters 0, or clarity 1 or 2)
- AF mode: AF-S
- AF area: Single point AF

- Active D-Lighting: OFF
- Diffraction correction: ON
- Automatic distortion correction: ON
- Vignette control: Standard
- Body VR: OFF
- Exposure delay mode: one to two seconds
- AF fine adjustment: OFF

Shooting environment

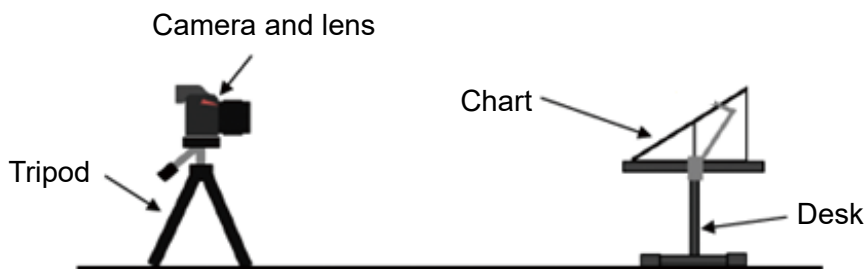
Install the camera/lens and chart, referring to the figure below.

Shoot in a location that meets the following requirements:

- Place that is not affected by vibrations
- Place where the brightness can be ensured under indoor lighting.
(Please use flickerless lights.)

Example of shooting environment

The measurement method that uses a focus chart differs depending on the focus chart you use, so please check the instruction manual for the focus chart you are using.



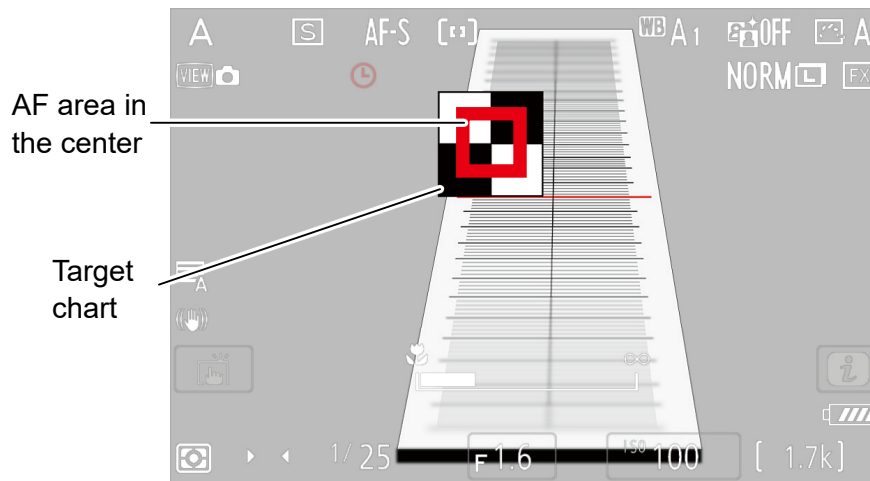
AF accuracy inspection

Follow the steps below to inspect the AF accuracy.

Inspection procedure

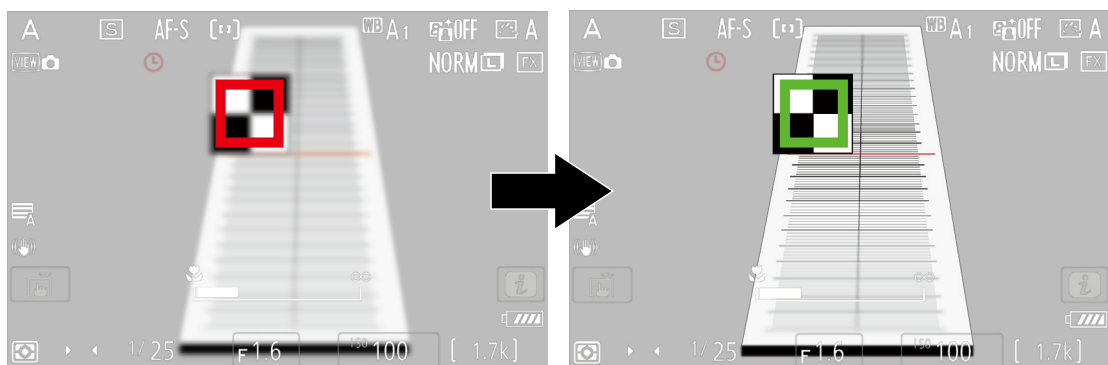
1 Adjust the camera position

1. Adjust the shooting distance so that the entire focus chart is displayed on the screen as shown in the image below.
 - Adjust the position so that the AF area in the center of the camera is aligned with the center of the target chart.



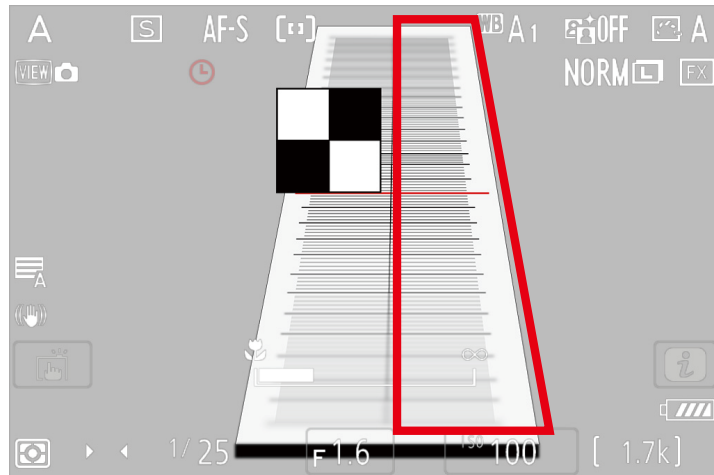
2 Check the focus

1. Turn the lens control ring clockwise viewed from the camera to change the focus to the infinity position.
2. Press the release button halfway and check that the chart is in focus.



3 Shoot the chart

1. Press the release button to shoot the target chart.
2. When checking before disassembling, check the inside of the red frame in the image, and record the focus position.



3. When checking after disassembling, confirm that there is no difference from the focus position recorded before disassembling.



CAUTION

- If the focus position is significantly different from what it was before disassembling, we recommend that you disassemble and repair the Product again.

Control Ring Inspection Process

When performing repairs that involve disassembling or reassembling the mount, inspect the control ring.

Tools and parts required:

- Your mirrorless camera

Control ring inspection

Follow the steps below to perform a control ring inspection.

Inspection procedure

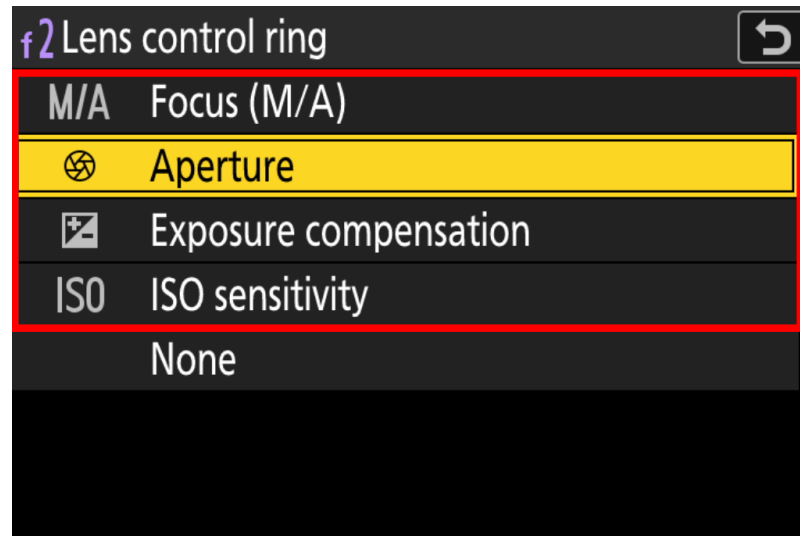
1 Check the functions assigned to the control ring

1. From the camera MENU, select [Custom Menu] - [f Operation] - [f2 Custom controls(shooting)].
 - The setting names may differ depending on the camera model.
2. Check the functions assigned to the control ring.
 - In the example below, confirm that "Aperture" is set.



The setting names may differ depending on the camera model.

- If no function is set on the control ring, set one of the following functions.



The setting names may differ depending on the camera model.

2 Check the operation of the control ring

1. Rotate the lens control ring and check whether the assigned function is working.

- **Focus (M/A):** Check that the focus operation is performed.
- **Aperture:** Set the exposure mode to A mode or M mode, and check that the aperture changes.
- **Exposure compensation:** Check that the exposure compensation changes.
- **ISO sensitivity:** Check that the ISO sensitivity changes.

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