

# Service Manual

## Interchangeable Lens for Digital Camera

Model No. **H-PS14042PP**

**H-PS14042E**

**H-PS14042GK**

Colour

Vol.1

(S).....Silver Type

(K).....Black Type

**LUMIX**



**POWER  
O.I.S.**

**HD**



### **WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

© Panasonic Corporation 2011 Unauthorized copying and distribution is a violation of law.

# 1 Service Navigation

## 1.1 Introduction

This service manual contains technical information, which allow service personnel's to understand and service this model.

Please place orders using the parts list and not the drawing reference numbers.

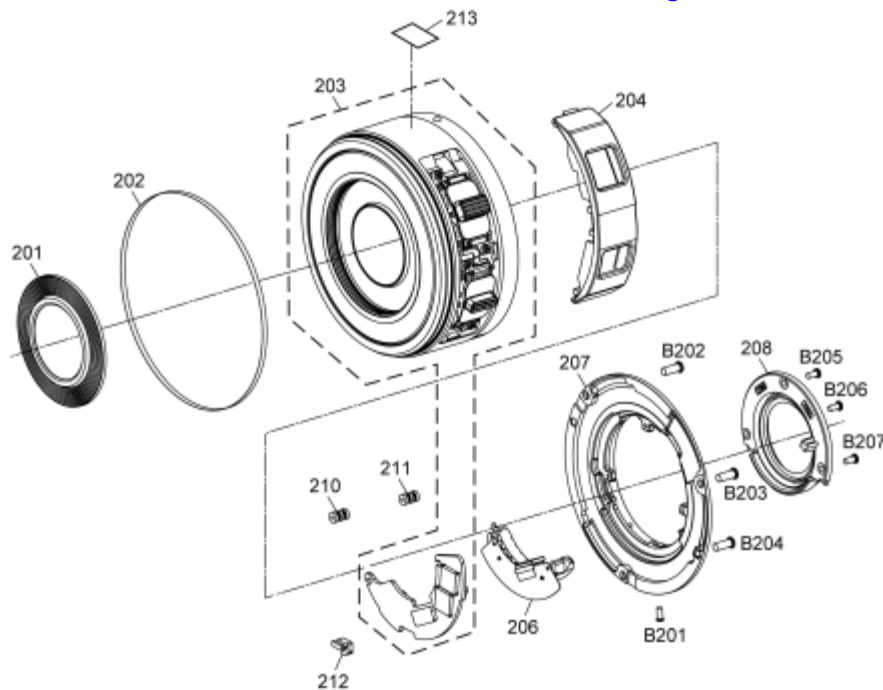
If the circuit is changed or modified, the information will be followed by supplement service manual.

## 1.2 Important Notice

### 1.2.1 About LENS MAIN BLOCK UNIT (Ref. 203)

1. This Service Manual does not contain the repair service information for "LENS MAIN BLOCK UNIT"(Ref.203), because it requires special facilities and equipment.
2. The "LENS MAIN BLOCK UNIT"(Ref.203) performance must be confirmed.
3. In case of the "LENS MAIN BLOCK UNIT"(Ref.203) defects, contact to the service department of sales company.

Fig. 1-1



4. No adjustment is required when replacing the part mentioned on Fig. 1-1. But, when tighten the concerned screws, apply proper torque mentioned on "5. Disassembly and Assembly Instructions" section.

# 2 Specifications

## INTERCHANGEABLE LENS FOR DIGITAL CAMERA "LUMIX G X VARIO PZ 14–42 mm/F3.5–5.6 ASPH./POWER O.I.S."

<b>Focal length</b>	f=14 mm to 42 mm (35 mm film camera equivalent: 28 mm to 84 mm)
<b>Aperture type</b>	7 diaphragm blades/circular aperture diaphragm
<b>Aperture range</b>	F3.5 (Wide) to F5.6 (Tele)
<b>Minimum aperture value</b>	F22
<b>Lens construction</b>	9 elements in 8 groups (4 aspherical lenses, 2 ED Lens)
<b>Nano surface coating</b>	Yes
<b>In focus distance</b>	0.2 m (0.66 feet) (Wide to focal length 20 mm) to ∞(from the focus distance reference line), 0.3 m (0.99 feet) (focal length 21 mm to Tele) to ∞(from the focus distance reference line)
<b>Maximum image magnification</b>	0.17× (35 mm film camera equivalent: 0.34×)
<b>Optical image stabilizer</b>	Available
<b>[O.I.S.] switch</b>	None (Setting of the [STABILIZER] is done in [REC] mode menu by LUMIX digital cameras.)
<b>Mount</b>	"Micro Four Thirds Mount"
<b>Angle of view</b>	75° (Wide) to 29° (Tele)
<b>Filter diameter</b>	37 mm (1.46 inch)
<b>Max. diameter</b>	Approx. 61 mm (2.40 inch)
<b>Overall length</b>	Approx. 26.8 mm (1.06 inch) (from the tip of the lens to the base side of the lens mount when the lens barrel is recessed)
<b>Mass (Weight)</b>	Approx. 95 g (0.21 lb)

# 3 Operating Instructions

## 3.1 Before Use

### (Information for Your Safety )

Keep the unit as far away as possible from electromagnetic equipment (such as microwave ovens, TVs, video games, radio transmitters, high-voltage lines etc.).

- Do not use the camera near cell phones because doing so may result in noise adversely affecting the pictures and sound.
- If the camera is adversely affected by electromagnetic equipment and stops functioning properly, turn the camera off and remove the battery and/or the connected AC adaptor. Then reinsert the battery and/or reconnect the AC adaptor and turn the camera on.

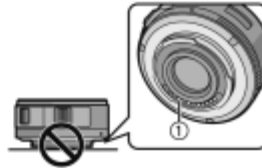
The lens can be used with a digital camera compatible with the lens mount standard for the "Micro Four Thirds™ System".

- It cannot be mounted on the Four Thirds™ mount specification camera.
- The digital camera illustrations in this owner's manual show DMC-GF3 as an example.
- The appearance and specifications of products described in this manual may differ from the actual products you have purchased due to later enhancements.
- Micro Four Thirds™ and Micro Four Thirds Logo marks are trademarks or registered trademarks of Olympus Imaging Corporation, in Japan, the United States, the European Union and other countries.
- Four Thirds™ and Four Thirds Logo marks are trademarks or registered trademarks of Olympus Imaging Corporation, in Japan, the United States, the European Union and other countries.
- G MICRO SYSTEM is a lens exchange type digital camera system of LUMIX based on a Micro Four Thirds System standard.
- Other names of systems and products mentioned in these instructions are usually the registered trademarks or trademarks of the manufacturers who developed the system or product concerned.

### Precautions

#### ■ Lens Care

- Sand and dust can damage the lens. Make sure that no sand or dust gets inside the lens or the terminals when using the lens on a beach, etc.
- This lens is not waterproof. If drops of water get onto the lens, wipe the lens with a dry cloth.
- Do not press the lens with excessive force.
- When there is dirt (water, oil, and fingerprints, etc.) on the surface of the lens, the picture may be affected. Lightly wipe the surface of the lens with a soft, dry cloth before and after taking pictures.
- Do not place the lens mount facing downwards. Do not allow the lens contact points ① to become dirty.



#### ■ About Condensation (Fogging of the Lens)

- Condensation occurs when there are differences in temperature and humidity as described below. Condensation can cause the lens to become dirty and lead to mold and malfunctioning, so exercise caution in the following situations:
  - When the camera is brought indoors from outside during cold weather
  - When the camera is brought into an air-conditioned car
  - When cold air from an air conditioner is directly blown onto the lens
  - In humid places
- Put the camera into a plastic bag to allow it to acclimatize to the surrounding temperature in order to prevent condensation. If condensation occurs, turn the power off and leave it for about two hours. Once the camera acclimatizes to the surrounding temperature the condensation will go away naturally.

### Troubleshooting

**A sound is heard when the camera is turned on or off.**

- This is the sound of lens or aperture movement and is not a malfunction.

**When this lens is attached to digital camera, stabilizer function cannot be turned off or stabilizer function does not work.**

- The Optical Image Stabilizer function of this lens only works correctly with supported cameras.
  - When older Panasonic digital cameras (DMC-GF1, DMC-GH1, DMC-G1) are used, [STABILIZER] in the [REC] mode menu cannot be set to [OFF]. It is recommended to update the firmware of the digital camera at the following website.  
<http://panasonic.jp/support/global/cs/dsc/download/>
  - When using this lens with another make of digital cameras, the Optical Image Stabilizer function will not work. (As of September 2011)  
For details, contact the respective company.

## 3.2 Cautions For Use

**Take care not to drop or knock the lens. Also take care not to put a lot of pressure on the lens.**

- Take care not to drop the bag that you inserted the lens in as it may damage the lens. The camera may stop operating normally and pictures may no longer be recorded.

**When using pesticides and other volatile substances around the camera make sure that they do not get onto the lens.**

- If such substances get onto the lens they can damage the exterior case or cause the paint to peel.

**Do not carry the unit when it is still attached to the camera body.**

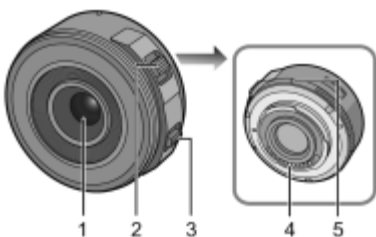
- Under no circumstances should the unit be stored in any of the following locations since doing so may cause problems in operation or malfunctioning.
  - In direct sunlight or on a beach in summer
  - In locations with high temperatures and humidity levels or where the changes in temperature and humidity are acute
  - In locations with high concentrations of sand, dust or dirt
  - Where there is fire
  - Near heaters, air conditioners or humidifiers
  - Where water may make the unit wet
  - Where there is vibration
  - Inside a vehicle
- Refer also to the owner's manual of the digital camera.
- When the unit is not going to be used for a prolonged period, we recommend storing with a desiccant (silica gel). Failure to do so may result in performance failure caused by mold, etc. It is recommended that you check the unit's operation prior to use.
- Do not leave the lens in contact with rubber or plastic products for extended periods of time.
- Do not touch the lens contact point. Doing so can cause failure of the unit.
- Do not disassemble or alter the unit.

**Do not use benzine, thinner, alcohol or other similar cleaning agents to clean the lens glass or exterior cabinet.**

- Using solvents can damage the lens or cause the paint to peel.
- Wipe off any dust or fingerprints with a soft, dry cloth.
- Do not use a household detergent or a chemically treated cloth.

## 3.3 Components

# Names and Functions of Components



1 Lens surface

2 Zoom lever

3 Focus lever

4 Contact points

5 Lens fitting mark

Move the zoom lever to the [T] (Tele side) or [W] (Wide side).

[T]: To make subjects appear closer use (Tele)

[W]: To make subjects appear further away use (Wide)

• The zoom speed varies depending on the range over which the zoom lever is moved. Zoom speed will be slower than normal when recording a motion picture.




Move the Focus lever to the **A** or **E**.

**A**: Focus on the subject close by

**E**: Focus on the subject far away

• Speed to focus will change depending on the amount moved.

## 3.3.1 Accessories

 VFC4460	 VYF3443	 VFC4605
---	--	--

1 Lens Storage Bag

2 Lens Cap

3 Lens Rear Cap

(The lens rear cap and lens cap are attached to the interchangeable lens at the time of purchase.)

## 3.3.2 Attaching/Detaching the Lens

## Attaching/Detaching the Lens

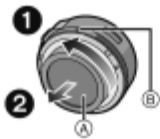
- Refer also to the camera's owner's manual for attaching and detaching the lens.

### ■ Attaching the Lens

- Check that the camera is turned off.

#### 1 Turn the lens rear cap to detach it.

(A): Lens Rear Cap



#### 2 Align the lens fitting marks (B) (red marks) on the camera body and the lens and then rotate the lens in the direction of the arrow until it clicks.

- Do not press the lens release button (C) when you attach a lens.
- Do not try to attach the lens when holding it at an angle to the camera body as the lens mount may get scratched.
- Check that the lens is attached correctly.



### ■ Detaching the Lens

- To protect the lens, turn off the power of the digital camera and confirm that the lens barrel is recessed.

While pressing on the lens release button (D), rotate the lens toward the arrow until it stops and then remove.

- Attach the lens rear cap so that the lens contact point does not get scratched.
- Attach the body cap to the camera so no dirt or dust will get inside the main unit.



### ■ Attaching and Detaching the Lens Cap

Pinch the lens cap as shown in the figure to attach or detach.

- Be careful not to lose the lens cap.



### ■ Attaching Filters

- Attach or detach the filter when the lens barrel is recessed.
- Vignetting may occur if using 2 or more MC protectors (optional: DMW-LMCH37), PL filters (optional: DMW-LPL37) or ND filters (optional: DMW-LND37), or if using thick protectors and/or filters.
- The filter may become impossible to remove if excessively tightened, so please refrain from tightening it too strongly.
- It is possible to attach the lens cap with the filter already attached.
- You cannot attach a conversion lens or adaptor to this lens. (As of September 2011) A filter may be used, but attaching any other element may cause damage to the lens.



# 3 Operating Instructions

## 3.1 Before Use

### (Information for Your Safety )

Keep the unit as far away as possible from electromagnetic equipment (such as microwave ovens, TVs, video games, radio transmitters, high-voltage lines etc.).

- Do not use the camera near cell phones because doing so may result in noise adversely affecting the pictures and sound.
- If the camera is adversely affected by electromagnetic equipment and stops functioning properly, turn the camera off and remove the battery and/or the connected AC adaptor. Then reinsert the battery and/or reconnect the AC adaptor and turn the camera on.

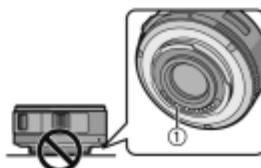
The lens can be used with a digital camera compatible with the lens mount standard for the "Micro Four Thirds™ System".

- It cannot be mounted on the Four Thirds™ mount specification camera.
- The digital camera illustrations in this owner's manual show DMC-GF3 as an example.
- The appearance and specifications of products described in this manual may differ from the actual products you have purchased due to later enhancements.
- Micro Four Thirds™ and Micro Four Thirds Logo marks are trademarks or registered trademarks of Olympus Imaging Corporation, in Japan, the United States, the European Union and other countries.
- Four Thirds™ and Four Thirds Logo marks are trademarks or registered trademarks of Olympus Imaging Corporation, in Japan, the United States, the European Union and other countries.
- G MICRO SYSTEM is a lens exchange type digital camera system of LUMIX based on a Micro Four Thirds System standard.
- Other names of systems and products mentioned in these instructions are usually the registered trademarks or trademarks of the manufacturers who developed the system or product concerned.

### Precautions

#### ■ Lens Care

- Sand and dust can damage the lens. Make sure that no sand or dust gets inside the lens or the terminals when using the lens on a beach, etc.
- This lens is not waterproof. If drops of water get onto the lens, wipe the lens with a dry cloth.
- Do not press the lens with excessive force.
- When there is dirt (water, oil, and fingerprints, etc.) on the surface of the lens, the picture may be affected. Lightly wipe the surface of the lens with a soft, dry cloth before and after taking pictures.
- Do not place the lens mount facing downwards. Do not allow the lens contact points ① to become dirty.



#### ■ About Condensation (Fogging of the Lens)

- Condensation occurs when there are differences in temperature and humidity as described below. Condensation can cause the lens to become dirty and lead to mold and malfunctioning, so exercise caution in the following situations:
  - When the camera is brought indoors from outside during cold weather
  - When the camera is brought into an air-conditioned car
  - When cold air from an air conditioner is directly blown onto the lens
  - In humid places
- Put the camera into a plastic bag to allow it to acclimatize to the surrounding temperature in order to prevent condensation. If condensation occurs, turn the power off and leave it for about two hours. Once the camera acclimatizes to the surrounding temperature the condensation will go away naturally.

### Troubleshooting

**A sound is heard when the camera is turned on or off.**

- This is the sound of lens or aperture movement and is not a malfunction.

**When this lens is attached to digital camera, stabilizer function cannot be turned off or stabilizer function does not work.**

- The Optical Image Stabilizer function of this lens only works correctly with supported cameras.
  - When older Panasonic digital cameras (DMC-GF1, DMC-GH1, DMC-G1) are used, [STABILIZER] in the [REC] mode menu cannot be set to [OFF]. It is recommended to update the firmware of the digital camera at the following website.  
<http://panasonic.jp/support/global/cs/dsc/download/>
  - When using this lens with another make of digital cameras, the Optical Image Stabilizer function will not work. (As of September 2011)  
For details, contact the respective company.

## 3.2 Cautions For Use



**Take care not to drop or knock the lens. Also take care not to put a lot of pressure on the lens.**

- Take care not to drop the bag that you inserted the lens in as it may damage the lens. The camera may stop operating normally and pictures may no longer be recorded.

**When using pesticides and other volatile substances around the camera make sure that they do not get onto the lens.**

- If such substances get onto the lens they can damage the exterior case or cause the paint to peel.

**Do not carry the unit when it is still attached to the camera body.**

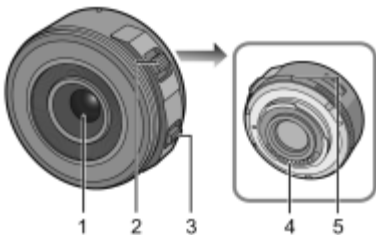
- Under no circumstances should the unit be stored in any of the following locations since doing so may cause problems in operation or malfunctioning.
  - In direct sunlight or on a beach in summer
  - In locations with high temperatures and humidity levels or where the changes in temperature and humidity are acute
  - In locations with high concentrations of sand, dust or dirt
  - Where there is fire
  - Near heaters, air conditioners or humidifiers
  - Where water may make the unit wet
  - Where there is vibration
  - Inside a vehicle
- Refer also to the owner's manual of the digital camera.
- When the unit is not going to be used for a prolonged period, we recommend storing with a desiccant (silica gel). Failure to do so may result in performance failure caused by mold, etc. It is recommended that you check the unit's operation prior to use.
- Do not leave the lens in contact with rubber or plastic products for extended periods of time.
- Do not touch the lens contact point. Doing so can cause failure of the unit.
- Do not disassemble or alter the unit.

**Do not use benzine, thinner, alcohol or other similar cleaning agents to clean the lens glass or exterior cabinet.**

- Using solvents can damage the lens or cause the paint to peel.
- Wipe off any dust or fingerprints with a soft, dry cloth.
- Do not use a household detergent or a chemically treated cloth.

## 3.3 Components

# Names and Functions of Components



1 Lens surface

2 Zoom lever

3 Focus lever

4 Contact points

5 Lens fitting mark

Move the zoom lever to the [T] (Tele side) or [W] (Wide side).

[T]: To make subjects appear closer use (Tele)

[W]: To make subjects appear further away use (Wide)

• The zoom speed varies depending on the range over which the zoom lever is moved. Zoom speed will be slower than normal when recording a motion picture.




Move the Focus lever to the **A** or **E**.

**A**: Focus on the subject close by

**E**: Focus on the subject far away

• Speed to focus will change depending on the amount moved.

## 3.3.1 Accessories

 VFC4460	 VYF3443	 VFC4605
---	--	--

1 Lens Storage Bag

2 Lens Cap

3 Lens Rear Cap

(The lens rear cap and lens cap are attached to the interchangeable lens at the time of purchase.)

## 3.3.2 Attaching/Detaching the Lens

## Attaching/Detaching the Lens

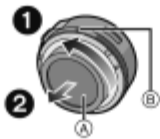
- Refer also to the camera's owner's manual for attaching and detaching the lens.

### ■ Attaching the Lens

- Check that the camera is turned off.

#### 1 Turn the lens rear cap to detach it.

(A): Lens Rear Cap



#### 2 Align the lens fitting marks (B) (red marks) on the camera body and the lens and then rotate the lens in the direction of the arrow until it clicks.

- Do not press the lens release button (C) when you attach a lens.
- Do not try to attach the lens when holding it at an angle to the camera body as the lens mount may get scratched.
- Check that the lens is attached correctly.



### ■ Detaching the Lens

- To protect the lens, turn off the power of the digital camera and confirm that the lens barrel is recessed.

While pressing on the lens release button (D), rotate the lens toward the arrow until it stops and then remove.

- Attach the lens rear cap so that the lens contact point does not get scratched.
- Attach the body cap to the camera so no dirt or dust will get inside the main unit.



### ■ Attaching and Detaching the Lens Cap

Pinch the lens cap as shown in the figure to attach or detach.

- Be careful not to lose the lens cap.



### ■ Attaching Filters

- Attach or detach the filter when the lens barrel is recessed.
- Vignetting may occur if using 2 or more MC protectors (optional: DMW-LMCH37), PL filters (optional: DMW-LPL37) or ND filters (optional: DMW-LND37), or if using thick protectors and/or filters.
- The filter may become impossible to remove if excessively tightened, so please refrain from tightening it too strongly.
- It is possible to attach the lens cap with the filter already attached.
- You cannot attach a conversion lens or adaptor to this lens. (As of September 2011) A filter may be used, but attaching any other element may cause damage to the lens.

# 3 Operating Instructions

## 3.1 Before Use

### (Information for Your Safety )

Keep the unit as far away as possible from electromagnetic equipment (such as microwave ovens, TVs, video games, radio transmitters, high-voltage lines etc.).

- Do not use the camera near cell phones because doing so may result in noise adversely affecting the pictures and sound.
- If the camera is adversely affected by electromagnetic equipment and stops functioning properly, turn the camera off and remove the battery and/or the connected AC adaptor. Then reinsert the battery and/or reconnect the AC adaptor and turn the camera on.

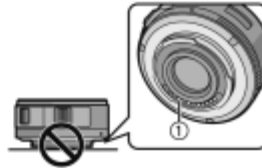
The lens can be used with a digital camera compatible with the lens mount standard for the "Micro Four Thirds™ System".

- It cannot be mounted on the Four Thirds™ mount specification camera.
- The digital camera illustrations in this owner's manual show DMC-GF3 as an example.
- The appearance and specifications of products described in this manual may differ from the actual products you have purchased due to later enhancements.
- Micro Four Thirds™ and Micro Four Thirds Logo marks are trademarks or registered trademarks of Olympus Imaging Corporation, in Japan, the United States, the European Union and other countries.
- Four Thirds™ and Four Thirds Logo marks are trademarks or registered trademarks of Olympus Imaging Corporation, in Japan, the United States, the European Union and other countries.
- G MICRO SYSTEM is a lens exchange type digital camera system of LUMIX based on a Micro Four Thirds System standard.
- Other names of systems and products mentioned in these instructions are usually the registered trademarks or trademarks of the manufacturers who developed the system or product concerned.

### Precautions

#### ■ Lens Care

- Sand and dust can damage the lens. Make sure that no sand or dust gets inside the lens or the terminals when using the lens on a beach, etc.
- This lens is not waterproof. If drops of water get onto the lens, wipe the lens with a dry cloth.
- Do not press the lens with excessive force.
- When there is dirt (water, oil, and fingerprints, etc.) on the surface of the lens, the picture may be affected. Lightly wipe the surface of the lens with a soft, dry cloth before and after taking pictures.
- Do not place the lens mount facing downwards. Do not allow the lens contact points ① to become dirty.



#### ■ About Condensation (Fogging of the Lens)

- Condensation occurs when there are differences in temperature and humidity as described below. Condensation can cause the lens to become dirty and lead to mold and malfunctioning, so exercise caution in the following situations:
  - When the camera is brought indoors from outside during cold weather
  - When the camera is brought into an air-conditioned car
  - When cold air from an air conditioner is directly blown onto the lens
  - In humid places
- Put the camera into a plastic bag to allow it to acclimatize to the surrounding temperature in order to prevent condensation. If condensation occurs, turn the power off and leave it for about two hours. Once the camera acclimatizes to the surrounding temperature the condensation will go away naturally.

### Troubleshooting

**A sound is heard when the camera is turned on or off.**

- This is the sound of lens or aperture movement and is not a malfunction.

**When this lens is attached to digital camera, stabilizer function cannot be turned off or stabilizer function does not work.**

- The Optical Image Stabilizer function of this lens only works correctly with supported cameras.
  - When older Panasonic digital cameras (DMC-GF1, DMC-GH1, DMC-G1) are used, [STABILIZER] in the [REC] mode menu cannot be set to [OFF]. It is recommended to update the firmware of the digital camera at the following website.  
<http://panasonic.jp/support/global/cs/dsc/download/>
  - When using this lens with another make of digital cameras, the Optical Image Stabilizer function will not work. (As of September 2011)  
For details, contact the respective company.

## 3.2 Cautions For Use

**Take care not to drop or knock the lens. Also take care not to put a lot of pressure on the lens.**

- Take care not to drop the bag that you inserted the lens in as it may damage the lens. The camera may stop operating normally and pictures may no longer be recorded.

**When using pesticides and other volatile substances around the camera make sure that they do not get onto the lens.**

- If such substances get onto the lens they can damage the exterior case or cause the paint to peel.

**Do not carry the unit when it is still attached to the camera body.**

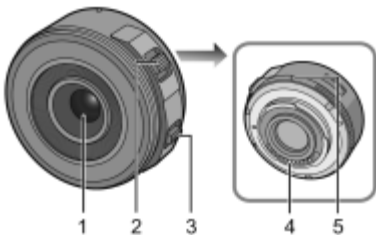
- Under no circumstances should the unit be stored in any of the following locations since doing so may cause problems in operation or malfunctioning.
  - In direct sunlight or on a beach in summer
  - In locations with high temperatures and humidity levels or where the changes in temperature and humidity are acute
  - In locations with high concentrations of sand, dust or dirt
  - Where there is fire
  - Near heaters, air conditioners or humidifiers
  - Where water may make the unit wet
  - Where there is vibration
  - Inside a vehicle
- Refer also to the owner's manual of the digital camera.
- When the unit is not going to be used for a prolonged period, we recommend storing with a desiccant (silica gel). Failure to do so may result in performance failure caused by mold, etc. It is recommended that you check the unit's operation prior to use.
- Do not leave the lens in contact with rubber or plastic products for extended periods of time.
- Do not touch the lens contact point. Doing so can cause failure of the unit.
- Do not disassemble or alter the unit.

**Do not use benzine, thinner, alcohol or other similar cleaning agents to clean the lens glass or exterior cabinet.**

- Using solvents can damage the lens or cause the paint to peel.
- Wipe off any dust or fingerprints with a soft, dry cloth.
- Do not use a household detergent or a chemically treated cloth.

## 3.3 Components

# Names and Functions of Components



1 Lens surface

2 Zoom lever

3 Focus lever

4 Contact points

5 Lens fitting mark

Move the zoom lever to the [T] (Tele side) or [W] (Wide side).

[T]: To make subjects appear closer use (Tele)

[W]: To make subjects appear further away use (Wide)

• The zoom speed varies depending on the range over which the zoom lever is moved. Zoom speed will be slower than normal when recording a motion picture.

Move the Focus lever to the **A** or **E**.


**A**: Focus on the subject close by

**E**: Focus on the subject far away

• Speed to focus will change depending on the amount moved.


## 3.3.1 Accessories

1




VFC4460

2



VYF3443

3



VFC4605

1 Lens Storage Bag

2 Lens Cap

3 Lens Rear Cap

(The lens rear cap and lens cap are attached to the interchangeable lens at the time of purchase.)

## 3.3.2 Attaching/Detaching the Lens

## Attaching/Detaching the Lens

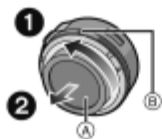
- Refer also to the camera's owner's manual for attaching and detaching the lens.

### ■ Attaching the Lens

- Check that the camera is turned off.

#### 1 Turn the lens rear cap to detach it.

(A): Lens Rear Cap



#### 2 Align the lens fitting marks (B) (red marks) on the camera body and the lens and then rotate the lens in the direction of the arrow until it clicks.

- Do not press the lens release button (C) when you attach a lens.
- Do not try to attach the lens when holding it at an angle to the camera body as the lens mount may get scratched.
- Check that the lens is attached correctly.



### ■ Detaching the Lens

- To protect the lens, turn off the power of the digital camera and confirm that the lens barrel is recessed.

While pressing on the lens release button (D), rotate the lens toward the arrow until it stops and then remove.

- Attach the lens rear cap so that the lens contact point does not get scratched.
- Attach the body cap to the camera so no dirt or dust will get inside the main unit.



### ■ Attaching and Detaching the Lens Cap

Pinch the lens cap as shown in the figure to attach or detach.

- Be careful not to lose the lens cap.



### ■ Attaching Filters




- Attach or detach the filter when the lens barrel is recessed.
- Vignetting may occur if using 2 or more MC protectors (optional: DMW-LMCH37), PL filters (optional: DMW-LPL37) or ND filters (optional: DMW-LND37), or if using thick protectors and/or filters.
- The filter may become impossible to remove if excessively tightened, so please refrain from tightening it too strongly.
- It is possible to attach the lens cap with the filter already attached.
- You cannot attach a conversion lens or adaptor to this lens. (As of September 2011) A filter may be used, but attaching any other element may cause damage to the lens.



# 4 Service Fixture & Tools

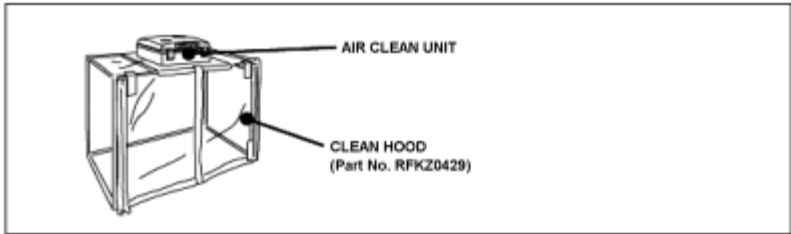
## 4.1 Service Fixture and Tools

The following Service Fixture and Tools are used for checking and servicing this unit.

Lens Cleaning Kit (BK) VFK1900BK	TORQUE DRIVER RFKZ0456	DRIVER VFK1390
 * Only supplied as 10 set/box.	 Spec.:2-30cN・m (Equiv.0.2-3kgf/cm)	

## 4.2 Clean Box

- The repair quality is considered, and it is recommended working in the environment of satisfied clean level less than class 10,000 (Federal Standard 209D).



# 5 Disassembly and Assembly Instructions

## 5.1 Outline

Proceed disassemble and assemble, by referring the following table Fig. 5-1.

### Important:

1. It is recommended dealing with Clean box, to keep maintaining the dustproof environment.  
(Refer to “4.2. Clean Box” section of this service manual for details.)
2. To minimize the possibilities/risk of getting the dust/dirt on the lens surface, keep covering the lens unit with lens caps (front & rear), other than necessary cases.
3. Do not touch the surface of the lens glasses with your fingers.
4. Blow off the dust on the surface of the lens with a blower brush.
5. Use lens cleaning KIT (BK)(VFK1900BK).

### NOTE:

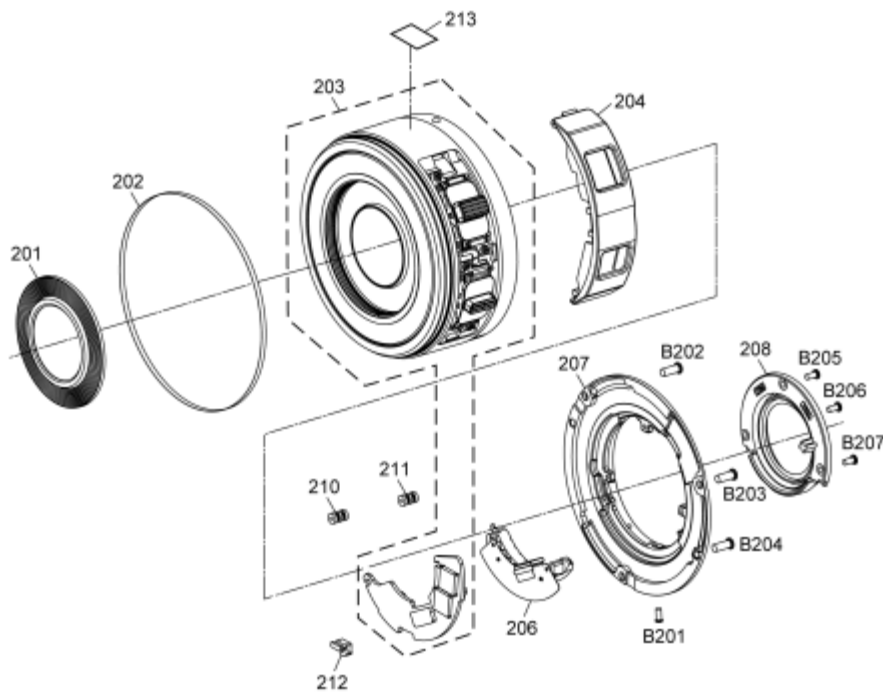
1. When tightening screws, use a torque driver (RFKZ0456) with specified torque mentioned in each step.

### Caution :

Keep covering the lens unit with Lens caps (front & rear), other than necessary cases.

Concerned parts		screws				
Part name	Ref. No.	Ref. No.	Colour	Length (mm)	Order	Torque value
Shading frame	208	B205	Black	3.0 mm	1	10±1.0N·cm
		B206	Black	3.0 mm	2	10±1.0N·cm
		B207	Black	3.0 mm	3	10±1.0N·cm
L mount unit	207	B202	Silver	5.0 mm	1	20±1.2N·cm
		B203	Silver	5.0 mm	3	20±1.2N·cm
		B204	Silver	5.0 mm	2	20±1.2N·cm
Mount contact unit	206	B201	Silver	3.0 mm	1	8±1.0N·cm

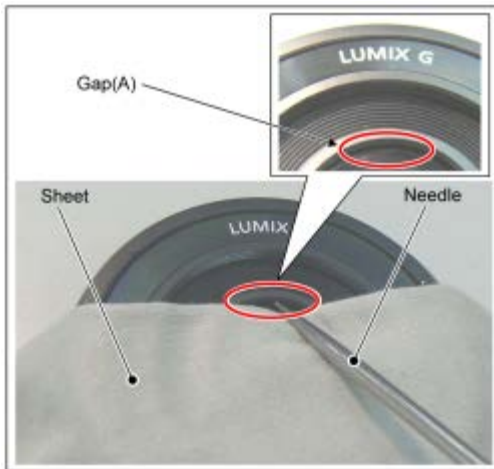
Fig. 5-1



## 5.2 Precautions for Disassembly and Assembly

### 5.2.1 Removal of the Decoring

1. Decoring is stuck on the lens(1).
2. Put the sheet so that the lens glass is fully covered.
3. Insert the needle to Gap (A) (between the Decoring and lens glass), and peel off the Decoring gently.



### 5.2.2 Installation of the Decoring

1. Align the hole of Decoring and the character "LUMIX G", and then stick them.
  - Use new Decoring. (Do not use the one which is removed.)After installing the Decoring, press the Decoring with your finger.



# 6 Maintenance

## 6.1 Notice in external cleaning

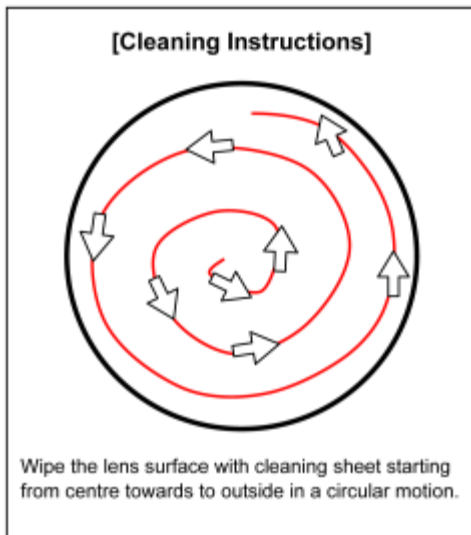
### 6.1.1 Dust / Dirt on the outer casing part (s)

1. Blow off the dust first, then sweep out the dust from narrower spaces with soft cleaning brush.
2. Wipe up fingerprint and/or dirt on the Outer casing part with the dry fuzz-free cloth.

### 6.1.2 Dust / Dirt on the Lens Glasses

Define the location of the dust/dirt first, whether it is outside lens surface or not.

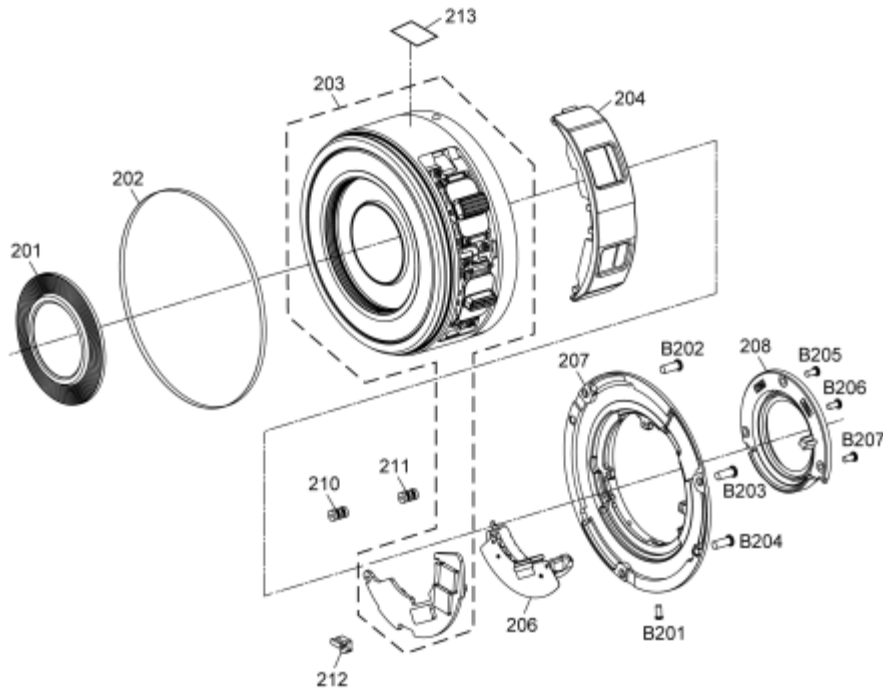
1. When it is outside surface of the lens:
  - When the dust and/or dirt gets on the outer side surface of the Lens glasses, order the following procedures.
    1. Blow off the dust on the Lens glass surface with the Blower, gently. (Do not Blow too strongly.)
    2. Wipe out the dirt on the lens glass surface with Lens cleaning KIT(BK) (VFK1900BK) if necessary.  
(Consult the Instruction sheet which is included in the Lens cleaning KIT(BK) in details.)



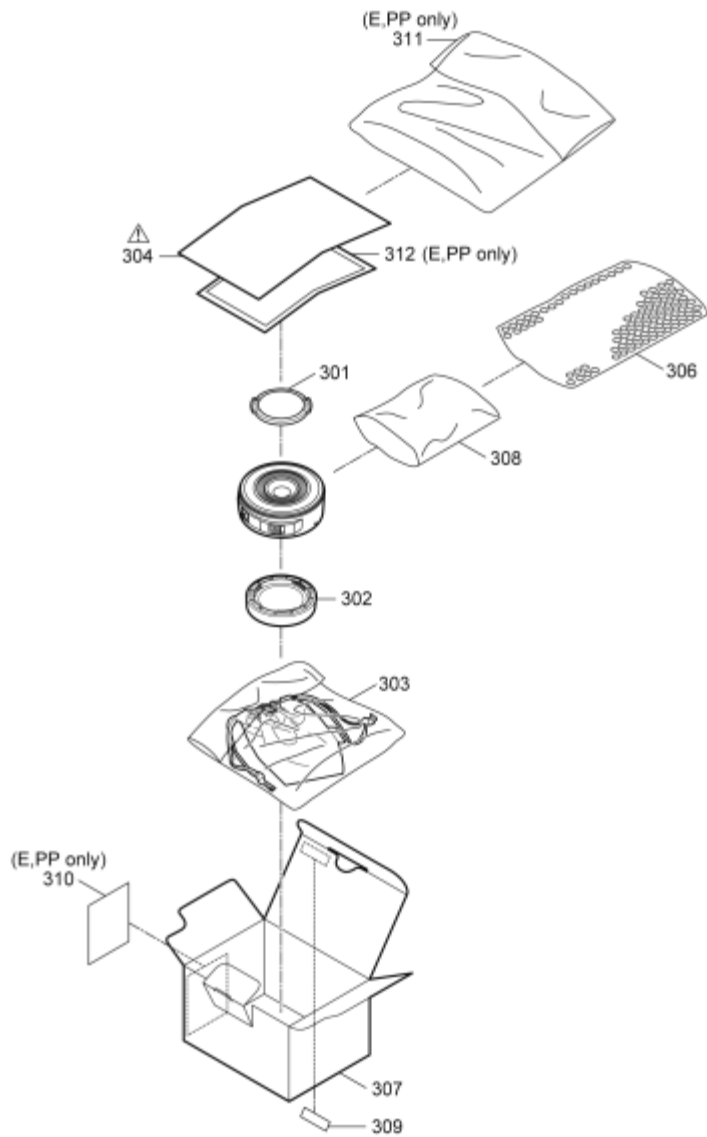
# 7 Exploded View and Replacement Parts List

## 7.1 Exploded View

### 7.1.1 Frame & Casing Section




### 7.1.2 Packing Parts & Accessories Section



## 7.2 Replacement Parts List

### 7.2.1 Mechanical Replacement Parts List

Notes: 1.\* Be sure to make your orders of replacement parts according to this list.

2. IMPORTANT SAFETY NOTICE  
Components identified with the mark  have the special characteristics for safety.  
When replacing any of these components, use only the same type.

3. The marking(RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

4. Supply of CD-ROM, in accordance with license protection, is allowable as replacement parts only for customers who accidentally damaged or lost their own.

#### 7.2.1.1 Frame & Casing Section Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	201	VGH5246	DECORING	1	
	202	VGQ0X41	SILVER RING TAPE	1	
	203	-----	LENS MAIN BLOCK	1	(Not



			UNIT		Supplied)
	204	VGQ0X42	LEVER COVER	1	
	206	VEJ2327	MOUNT CONTACT UNIT	1	
	207	VXQ2135	L MOUNT UNIT	1	
	208	VDW2321	SHADING FRAME	1	
	210	VMG2007	FLOATING RUBBER	1	
	211	VMG2007	FLOATING RUBBER	1	
	212	VMT2208	PCB CUSHION	1	
	213	VQL1V24	WEEE LABEL	1	E
	213	VQL1W22	TEN YEARS LABEL	1	GK
	B201	VHD2298	SCREW	1	
	B202	VHD2299	SCREW	1	
	B203	VHD2299	SCREW	1	
	B204	VHD2299	SCREW	1	
	B205	VHD2246	SCREW	1	
	B206	VHD2246	SCREW	1	
	B207	VHD2246	SCREW	1	

### 7.2.1.2 Packing Parts & Accessories

#### Section Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	301	VYF3443	LENS CAP FRONT	1	
	302	VFC4605	LENS REAR CAP	1	
	303	VFC4460	LENS STORAGE BAG	1	
	304	VQT3S52	OPERATING INSTUCTIONS	1	E
	304	VQT3S53	OPERATING INSTUCTIONS	1	GK
	304	VQT3S51	OPERATING INSTUCTIONS	1	PP
	306	VPF1328	AIR-CAP BAG	1	
	307	VPK5103	PACKING CASE	1	E,PP
	307	VPK5104	PACKING CASE	1	GK
	308	VPF1371	LENS BAG (POLYETHYLENE)	1	
	309	VQL2N16	COLOR LABEL	1	E-S
	309	VQL2B48	COLOR LABEL	1	GKS
	309	VQL2P53	COLOR LABEL	1	PPK
	309	VQL2N07	COLOR LABEL	1	PPS
	310	VQL2N98	CARTON LABEL	1	E-S

	310	VQL2N95	CARTON LABEL	1	PPK
	310	VQL2N97	CARTON LABEL	1	PPS
	311	VPF1230	BAG, POLYETHYLENE	1	E,PP
	312	VQL2N81	OPERATING LABEL	1	E,PP