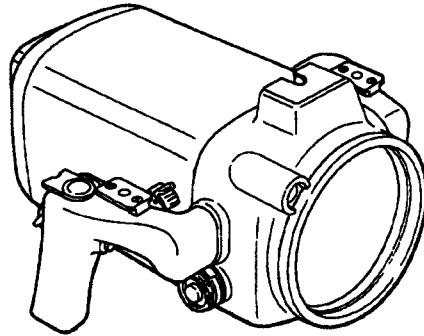


MPK-TRV3

SERVICE MANUAL

*US Model
Canadian Model
AEP Model*



Handycam

Difference Manual

This service manual only lists the differences with MPK-TRA2.
When repairing, please use it together with the MPK-TRA2/TRA2K
service manual. (9-973-576-11)

Differences portion

- BASE ASSY, CAMERA
- There are no differences for accessories and packing materials and they are all listed.

MARINE PACK

SONY®



Specifications

Compatible video camera recorder
See page 3.

Material

Aluminum alloy, glass, plastic, lead

Waterproofing

O-ring, 2 buckles

Usable depth

Up to 246 feet (75 meters)

Underwater microphone

Condenser microphone (monaural)

Controllable function

Power on/off, recording start/stop, auto focus on/off, power zooming

Dimensions

Approx. 13 ³/₈ × 8 × 12 ⁷/₈ in. (w/h/d)
(337 × 201 × 327 mm)

Mass

Approx. 17 lb 10 oz (8 kg)

Supplied accessories

Adaptor A (1)/B (1)/C (1)

Mounting screw plate (1)

O-rings (2)

Grease (1)

Accessory belt (1)

Color filter (1)

Viewfinder adaptor (1)

Recommended accessories

Underwater video light HVL-ML20

Carrying case LCH-M40

Design and specifications are subject to change without notice.

US, Canadian model

Features

- The MPK-TRV3 marine pack allows the following 8 mm video camera recorders to be used underwater.

CCD-TR44/TR54/TR57*/TR64/TR66/TR67*/TR74/TR78/TR84/TR86*/TR87*/TR88/TR94/
TR96*/TR98/TR99/TR200*/TR300*/TR500*/TR514/TR555*/TR614/TR710*/TR714/
TR814/TR910*/TR916*/TR917*/TR930*/TR940*/TR2300*/TR3000*/TR3300*/TR3400*/
TRV11/TRV12/TRV15*/TRV21/TRV22/TRV25*/TRV30/TRV32*/TRV33/TRV40/TRV41*/
TRV52*/TRV53*/TRV62*/TRV65*/TRV70/TRV72*/TRV75*/TRV81*/TRV82*/TRV85*/
TRV93*/TRV95*/TRV99*/TRV101*/TRV112/TRV212/TRV215*/TRV312*/TRV512*/
TRV615*/TRV715*/TRV815*

- Recording at a depth of 246 feet (75 meters) is possible.

- The following operation can be performed underwater.

- Power on/off
- Auto focusing on/off (models marked with *)
- Recording start/stop
- Power zooming

AEP model

Features

- The MPK-TRV3 marine pack allows the following 8 mm video camera recorders to be used underwater.

CCD-TR1*/TR3*/TR8*/TR311*/TR330/TR403/TR413*/TR414*/TR420/TR440/TR490/TR506*/
TR507*/TR555*/TR590/TR910*/TR940*/TR2200*/TR2300*/TR3000*/TR3300*/TR1E*/
TR3E*/TR8E*/TR18E*/TR311E*/TR330E/TR340E/TR401E/TR402E/TR410E/TR411E*/
TR412E*/TR420E/TR440E/TR490E/TR501E*/TR502E*/TR503E*/TR506E*/TR510E*/
TR511E*/TR512E*/TR520E/TR555E*/TR590E/TR610E*/TR620E*/TR640E*/TR710E*/
TR720E*/TR730E*/TR740E*/TR760E*/TR810E*/TR820E*/TR825E*/TR840E*/TR845E*/
TR910E*/TR920E*/TR1100E*/TR2200E*/TR2300E*/TR3000E*/TR3100E*/TR3200E*/
TR3300E*/TR3400E*

TRV11/TRV12/TRV15*/TRV21/TRV25*/TRV30/TRV31*/TRV34*/TRV35*/TRV40/TRV41*/
TRV44*/TRV51*/TRV65*/TRV70/TRV75*/TRV91*/TRV94*/TRV95*/TRV101*/TRV3E*/
TRV10E/TRV11E*/TRV12E/TRV13E*/TRV14E*/TRV15E*/TRV21E*/TRV23E*/TRV24E*/
TRV30E/TRV31E*/TRV35E*/TRV40E/TRV41E*/TRV44E*/TRV45E*/TRV51E*/TRV54E*/
TRV55E*/TRV56E*/TRV60E/TRV61E*/TRV64E*/TRV65E*/TRV69E*/TRV70E/TRV81E*/
TRV89E*/TRV91E*/TRV94E*/TRV95E*/TRV99E*/TRV101E*/TRV300E*

- Recording at a depth of 75 meters (246 feet) is possible.

- The following operation can be performed underwater.

- Power on/off
- Auto focusing on/off (models marked with *)
- Recording start/stop
- Power zooming

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We recommend you use a **wide-conversion lens** (not supplied) when using the marine pack.



This mark indicates that this product is a genuine accessory for Sony video products. When purchasing Sony video products, Sony recommends that you purchase accessories with this "GENUINE VIDEO ACCESSORIES" mark.

3-EN

SECTION 1 GENERAL

This section is extracted from
instruction manual.

Precautions

- Take care not to expose the equipment to salty air. Do not drip water on the equipment.
- Do not open the marine pack while at sea or at the seaside. Preparations such as installing and checking the equipment should be made in a place with low humidity and no salty air.
- When a video camera recorder is used near the sea for a long time, we recommend that it is checked periodically by a Sony dealer.
- If the equipment becomes wet, take it immediately to the nearest Sony dealer for preventive maintenance.

We recommend that you use battery packs with a large capacity. However, in some cases battery packs NP-99/4500/P930/P950 cannot be attached to the video camera recorder.

- If you open and join the front and rear shells in a place with high temperature and high humidity, moisture condensation may occur when you put the marine pack in the water, causing the front glass to fog.
- The waterproof integrity of the marine pack is maintained by the O-ring, and the groove and surface where it touches. Be especially careful not to damage or deform that area. For details, see "Note on the O-ring" (page 18).
- Do not leave the marine pack under direct sunlight for a long period of time, otherwise the temperature in the marine pack may rise and the equipment inside may be damaged. If you cannot avoid leaving the marine pack under direct sunlight, be sure to cover the marine pack with a towel or other protection.
- Do not throw the marine pack into the water. Lower it gently into the water.
- Whenever you pick up the marine pack, handle the grip. If the underwater video light (not supplied) is attached to the marine pack, do not handle the underwater video light's arm.

- Check that the equipment operates correctly and there is no water leak at a depth of about 3 feet (one meter) before you dive deeper.
- Be sure to follow the safety rules for diving, such as diving period and depth.
- Remove the bubbles from the outside of the front glass.

Sony does not accept liability for damage to the video camera recorder, battery, etc. in the marine pack or for the loss of prerecorded material if water leak caused by incorrect operation occurs.

After recording in the sea, submerge the marine pack with the buckles tightly fastened in fresh water for a while to remove the sea water. Then rinse it with fresh water and wipe it with a soft cloth.

- Every time you use the marine pack and the video camera recorder underwater, clean the video camera recorder and the inside of the marine pack with a dry soft cloth. Do not use any type of solvent, such as alcohol or benzene for cleaning, as this may damage the finish.
- If water comes between the rear shell and the rubber part, remove the rubber and clean it with a dry soft cloth.



EN

- Coat the O-ring slightly with the supplied grease, and put it in the groove correctly. Join the front and rear shells then put in a cool place without fastening the buckles.
- Prevent dust from collecting on the O-ring.
- Avoid storing the marine pack in a cold, very hot or humid place, or together with naphthalene or camphor, as these conditions might damage the unit.

On transportation

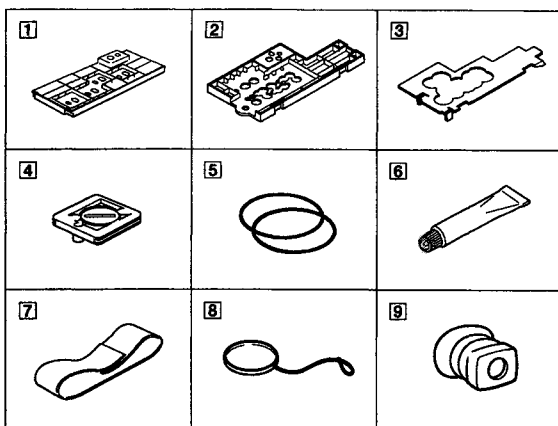
- When transporting the marine pack, be sure to remove the video camera recorder from the marine pack.
- When transporting the marine pack by air or by car, use a marine pack carrying case (not supplied).

4-EN

5-EN

Checking supplied accessories

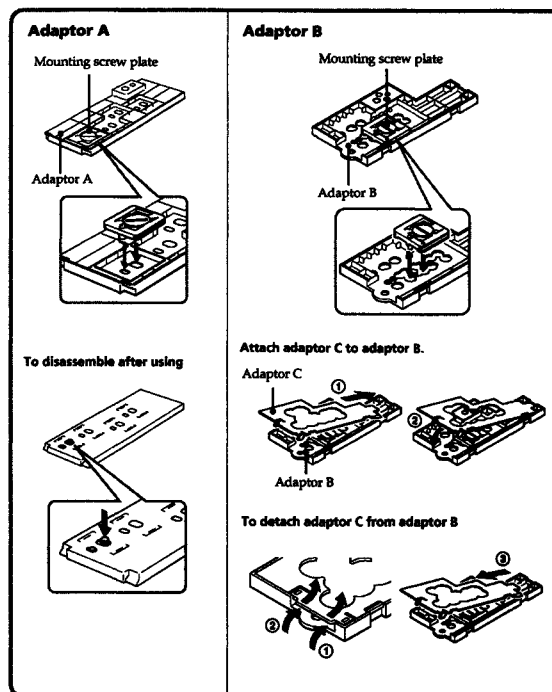
Check that the following accessories are supplied with your marine pack.



- Adaptor A (1)
- Adaptor B (1)
- Adaptor C (1)
- Mounting screw plate (1)
- O-rings (2)
- Grease (1)
- Accessory belt (1)
- Color filter (1)
- Viewfinder adaptor (1)

Preparing

Attaching the mounting screw plate to the adaptor



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8-EN

US, Canadian model

Preparing

The adaptor and the position of the mounting screw plate depend on the video camera model. See the following page when attaching the adaptor and mounting screw plate. Check the position for the video camera recorder you use.

TRV30/TRV40/TRV70	A1	A2
TR44/TR54/TR64/TR66/TR74/TR78/TR84/TR88/TR94/TR98/TR99/TR154/TR614/TR714/TR814	A3	
TR200/TR300/TR500	B1	B3
TR86/TR96/TR916/TRV11/TRV12/TRV21/TRV22/TRV32/TRV33/TRV52/TRV53/TRV112/TRV212/TRV312/TRV512	B2	B5
TRV62/TRV72/TRV82	B2	B9
TR3000	B3	B6
TR555	B3	B7
TRV101	B3	—
TR710/TR910	B4	B6
TR2300/TR3300/TR3400/TRV41/TRV81	B4	B7
TR930	B5	B8
TR57/TR67/TR87/TR917/TR940/TRV15/TRV25/TRV65/TRV75/TRV85/TRV93/TRV215/TRV615/TRV715/TRV815	B5	B12
TRV95/TRV99	B8	B9

A, B — adaptor to be used.
1, 2, 3... — corresponding number on the adaptor.

Notes

- You should use the wide conversion lens VCL-0637H (not supplied) for the CCD-TRV95/TRV99 video camera recorder.
- The CCD-TRV101 video camera recorder cannot be fitted with a wide conversion lens.
- When you attach a wide conversion lens to the CCD-TRV11/TRV12/TRV21/TRV22/TRV33/TRV41/TRV81/TRV112/TRV212 video camera recorders, you cannot attach the viewfinder adaptor.
- When you attach a wide conversion lens to the CCD-TRV11/TRV12/TRV21/TRV22/TRV33/TRV112/TRV212 video camera recorders, you cannot attach Sony battery NP-99/4500.
- When you attach a wide conversion lens to the CCD-TR2300/TR3300/TR3400/TRV95/TRV99 video camera recorders, you cannot attach Sony battery NP-P930/P950.

EN

7-EN

AEP model

Preparing

The adaptor and the position of the mounting screw plate depend on the video camera model. See the following page when attaching the adaptor and mounting screw plate. Check the position for the video camera recorder you use.

TRV30/TRV40/TRV70/TRV30E/TRV40E/TRV60E/TRV70E	A1	A2
TR330/TR403/TR420/TR440/TR490/TR590/TR330E/TR340E/TR401E/TR402E/TR410E/TR420E/TR440E/TR490E/TR510E/TR520E/TR590E	A3	
TR1/TR3/TR8/TR1E/TR3E/TR8E/TR18E	B1	B3
TR506/TR507/TR501E/TR502E/TR503E/TR506E/TR620E/TR720E/TR740E/TRV11/TRV12/TRV21/TRV34/TRV44/TRV10E/TRV11E/TRV12E/TRV14E/TRV21E/TRV24E/TRV44E	B2	B5
TRV94/TRV94E/TRV56E/TRV94E	B2	B9
TR3000/TR3000E	B3	B6
TR555/TR555E	B3	B7
TRV101/TRV101E	B3	—
TR910/TR610E/TR710E/TR760E/TR810E/TR910E	B4	B6
TR2200/TR2300/TR3300/TR2200E/TR2300E/TR3100E/TR3300E/TR3400E/TRV31/TRV41/TRV51/TRV91/TRV31E/TRV41E/TRV51E/TRV61E/TRV81E/TRV91E	B4	B7
TRV64E/TRV820E/TRV825E/TRV920E	B5	B8
TR1100E/TR3200E/TRV300E	B5	B9
TR311/TR413/TR414/TR940/TR311E/TR411E/TR511E/TR512E/TR640E/TR730E/TR840E/TR845E/TRV15/TRV25/TRV35/TRV65/TRV75/TRV3E/TRV13E/TRV15E/TRV23E/TRV35E/TRV45E/TRV55E/TRV65E/TRV69E/TR412E	B5	B12
TRV95/TRV89E/TRV95E/TRV99E	B8	B9

A, B — adaptor to be used.
1, 2, 3... — corresponding number on the adaptor.

Notes

- You should use the wide conversion lens VCL-0637H (not supplied) for the CCD-TRV95/TRV89E/TRV95E/TRV99E video camera recorder.
- The CCD-TRV101/TRV101E video camera recorder cannot be fitted with a wide conversion lens.
- When you attach a wide conversion lens to the CCD-TR820E/TR825E/TR1100E/TR2200/TR2200E/TR3100E/TR3200E/TRV10E/TRV11/TRV11E/TRV12/TRV12E/TRV21/TRV21E/TRV31/TRV31E/TRV41/TRV41E/TRV51/TRV51E/TRV61E/TRV81E/TRV91/TRV91E/TRV300E video camera recorders, you cannot attach the viewfinder adaptor.

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(1) Remove the lens cap, shoulder strap, filter, etc., from the video camera recorder.

(2) Attach a charged battery pack and insert a video cassette.

(3) Attach the wide conversion lens (not supplied).

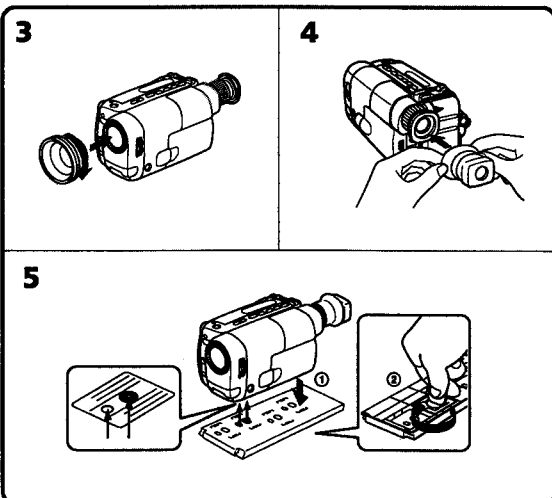
By attaching the wide conversion lens, the shooting coverage becomes wider, and the subject size becomes smaller.

(4) Attach the Viewfinder adaptor.

If the viewfinder adaptor is loose when it is attached, bend the eyecup of the camcorder and attach it again.

(5) When using adaptor A, attach it to the video camera recorder.

Check that the position of the mounting screw plate is correct (See pages 7). When using adaptor B, skip this step.



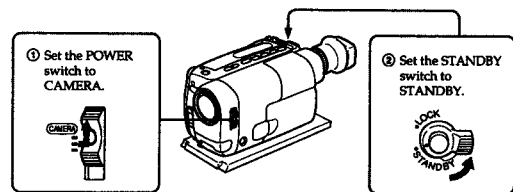
EN

9-EN

Preparing

(6) Adjust the video camera recorder.

Refer to the operation manual of your video camera recorder.



The following adjustments are needed when your video camera recorder has the corresponding function.

Refer to the operation manual of the video camera recorder for details.

White balance	Normally set to * (outdoor). Set to ☼ (indoor) for night diving.
Shutter speed	Set where no indicator appears.
Program AE	Set where no indicator appears.
Brightness	Turn off the indicator.

Notes

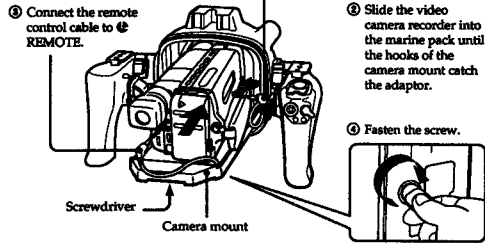
- On some video camera recorder models, you cannot adjust the focus with the button on the marine pack. Set the focus to auto focus mode (see page 3).
- When the viewfinder adaptor is attached to the viewfinder of your video camera recorder, you get a wide view of what appears in the viewfinder screen. However, the view may be distorted depending on the viewing angle.

10-EN

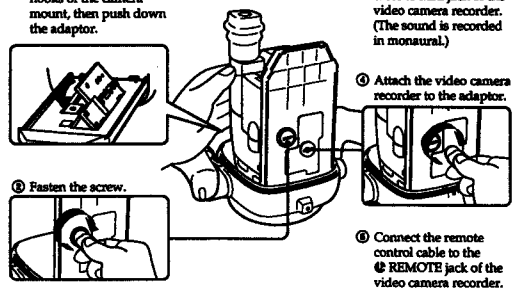
Preparing

- (1) Attach the video camera recorder to the marine pack.
Check the position of the adaptor (See page 7).

When using adaptor A

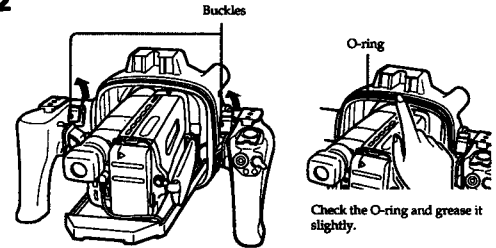
- ① Connect the microphone cable to MIC.
(The sound is recorded in monaural.)
 - ② Connect the remote control cable to REMOTE.
 - ③ Slide the video camera recorder into the marine pack until the hooks of the camera mount catch the adaptor.
 - ④ Fasten the screw.
- 

When using adaptor B

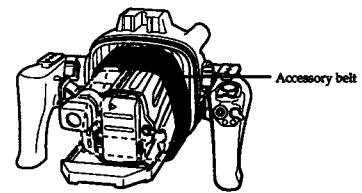
- ① Align the right side of the adaptor with the hooks of the camera mount, then push down the adaptor.
 - ② Connect the microphone cable to MIC jack of the video camera recorder.
(The sound is recorded in monaural.)
 - ③ Attach the video camera recorder to the adaptor.
 - ④ Connect the remote control cable to the REMOTE jack of the video camera recorder.
 - ⑤ Fasten the screw.
- 

EN

2



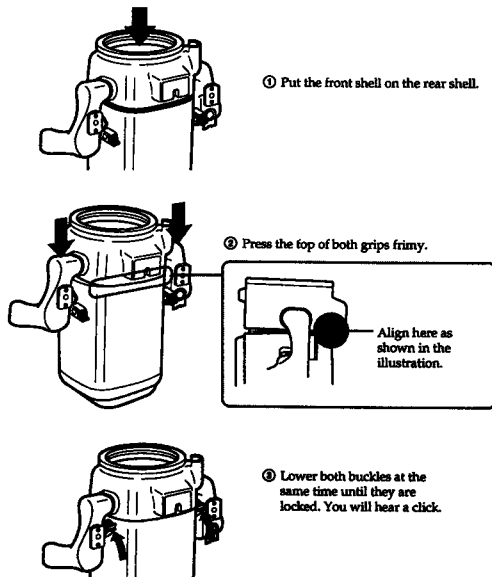
3



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12-EN

- (4) Attach the front shell to the rear shell.



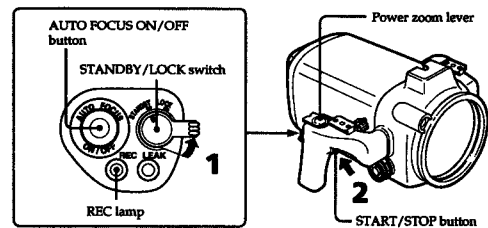
EN

Now you ready for underwater recording.
Set the STANDBY/LOCK switch of the marine pack to LOCK.
If you set it to STANDBY, the battery may be used up before recording.

Recording

Check that the equipment operates correctly and that there is no water leak at a depth of about 3 feet (one meter) before you dive deeper.

- (1) Set the STANDBY/LOCK switch to STANDBY.
- (2) Press START/STOP button to start recording.
The REC lamp (red) lights up during recording.



To stop recording

Press the START/STOP button.

To zoom

Slide the power zoom lever towards T for telephoto (subject appears closer) or W for wide-angle (subject appears further away). The zooming speed can be changed on some video camera recorder models from a slow speed to faster by sliding the zooming lever a little more.



When you set the power zoom lever to the full wide-angle position (macro), specks or bubbles on the front glass may come into focus. In this case, slide the power zoom lever a little towards T and return towards W.

To keep a subject in focus

After you focus on a subject, press AUTO FOCUS ON/OFF button to set the video camera recorder to manual focus mode.

Even if fish swim between the video camera recorder and the subject, you can still keep the subject in focus.

Note

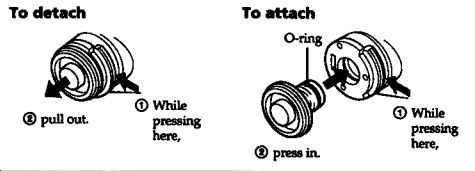
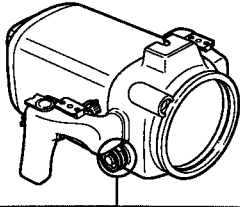
On some video camera recorder models, the AUTO FOCUS ON/OFF button is not operative.
Set the video camera recorder to auto focus mode (see page 3).

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To attach/detach the lid of the video cable connector

A video cable connector is provided so that video equipment can be connected to the marine pack in the future. When you reattach the lid, grease the O-ring of the lid before inserting it into the connector.



Note
Do not remove the lid underwater.

If water happens to leak in, the LEAK lamp (yellow) flashes.

In such a case, remove the marine pack from the water as soon as possible, keeping it horizontal. Be sure to surface following the safety rules for diving. Dry the marine pack with a soft cloth and then open it.

To switch off the lamp, disconnect the remote control cable.

Check the cause of the leak.

If the video camera recorder is wet, take it to the nearest Sony dealer immediately.



LEAK lamp (yellow)

Removing the camcorder

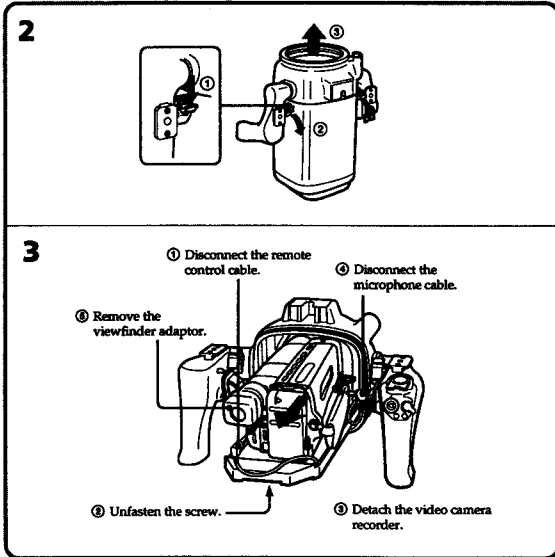
Before opening the marine pack, rinse it with fresh water and dry with a soft cloth.

Note

When you open the marine pack, follow this procedure to prevent the video camera recorder from getting wet.

- Dry the marine pack well.
- Wipe off any water between the front and rear shells with a towel.
- Make sure you are dry. Take care that no water drips from your diving suit.

- (1) Remove the accessories.
- (2) Open the marine pack. Unfasten both buckles and remove the front shell.
- (3) Take the video camera recorder out of the front shell.

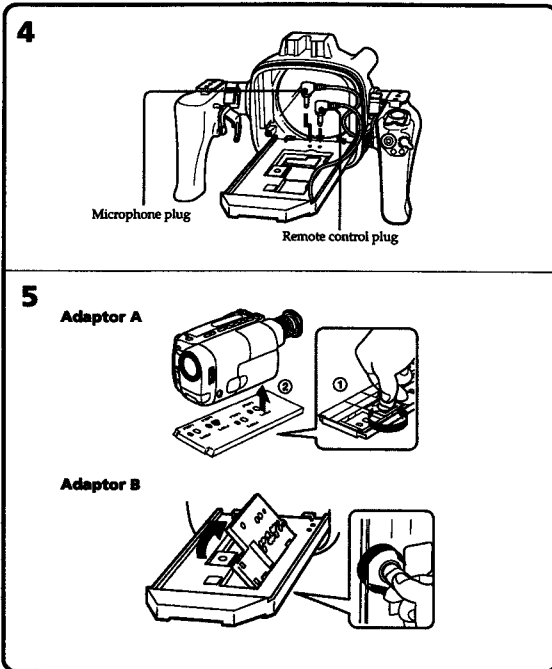


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15-EN

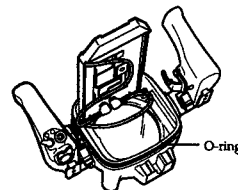
16-EN

- (4) Insert the remote control plug and the microphone plug where they were.
- (5) Remove the adaptor.



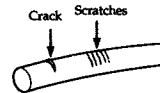
Note on the O-ring

The O-ring assures the waterproof function of the marine pack. To maintain waterproof integrity, use it correctly. Incorrect handling may cause water to leak in.



Check that there are no scratches or cracks

Scratches or cracks on the O-ring may cause water to leak in. If the O-ring is damaged in this way, replace it with a new one. Do not remove the O-ring from the groove with a metal tool or a tool with a sharp point.



Remove any dust, sand or hair from the O-ring

Make sure there is no dust, sand or hair on the O-ring, in the groove, or on the surface of the marine pack where the O-ring touches. If there is, clean them completely, or the O-ring and the surface of the marine pack may be damaged and water may leak in.

Grease the O-ring

The grease protects the O-ring from wear.

Check that there are no cracks or dust on the O-ring, then grease it using your finger. While greasing, double check that there are no cracks or dust.

Never use cloth or paper to apply grease because the fibers may cling.

Do not use any type of grease other than the supplied one, or it may damage the O-ring.

If you run out of silicone grease (2-115-921-01) you can purchase it from your nearest Sony Service Center.

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18-EN

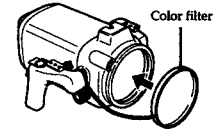
Underwater recording

Recording underwater is different from recording on land because it is affected by the clarity and depth of the water and the light conditions. The following are hints for good recording underwater.

Color characteristic underwater

Water absorbs light, especially red light, so that objects in deep water or in the distance are seen as bluish. The color of objects is affected by the clarity of the water.

To record the subject with nearly actual color, use the color filter.



Best time for recording

The best recording time is about from 10:00 a.m. to 2:00 p.m. When the sun is its highest, optimum results can be obtained.

Subject size underwater

Since the refractive index underwater is higher than that in air, an object appears 1/4 more closer, and therefore larger. This phenomenon affects the lens on the video camera recorder as well as the human eye. Using a **wide-conversion lens** (not supplied) is recommended.

Camera work on slow and stable motion

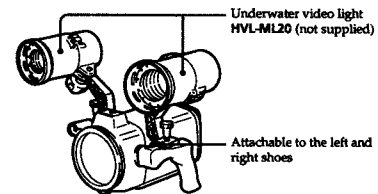
When recording, keep your body stable.

An unstable shot will be magnified on the TV screen. Move the video camera recorder as slowly as possible. As most of the object underwater move, you can record a good programme without moving the video camera recorder.

Underwater video light

In deep water or under rocks where direct sunlight does not reach, recording with an underwater video light is recommended.

To record at night, use a powerful underwater video light.



Do not twist the O-ring

Put the O-ring in the groove evenly. Never twist it.

Do not pinch the O-ring with the marine pack

When jointing the front and rear shells, take care not to pinch the O-ring between them. If this happens, not only will the O-ring be damaged, but water may leak in.

Storage

Put the supplied spare O-rings in the original carton and store it in a cool place.

- Do not expose the O-ring to direct sunlight.
- Do not place a heavy object on the O-ring.
- Do not fold the O-ring.

Useful life of the O-ring

Depending upon the maintenance and the length of use, we recommend changing the O-ring every one or two years.

The O-ring (3-952-928-01) can be replaced at your nearest Sony Service Center.

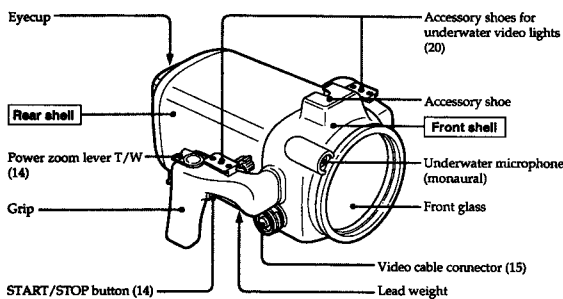
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19-EN

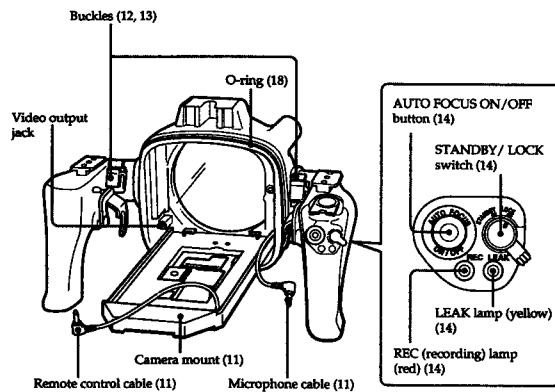
20-EN

Labeling parts and controls

- For the use of each part or control, see the pages indicated in parenthesis.



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21-EN

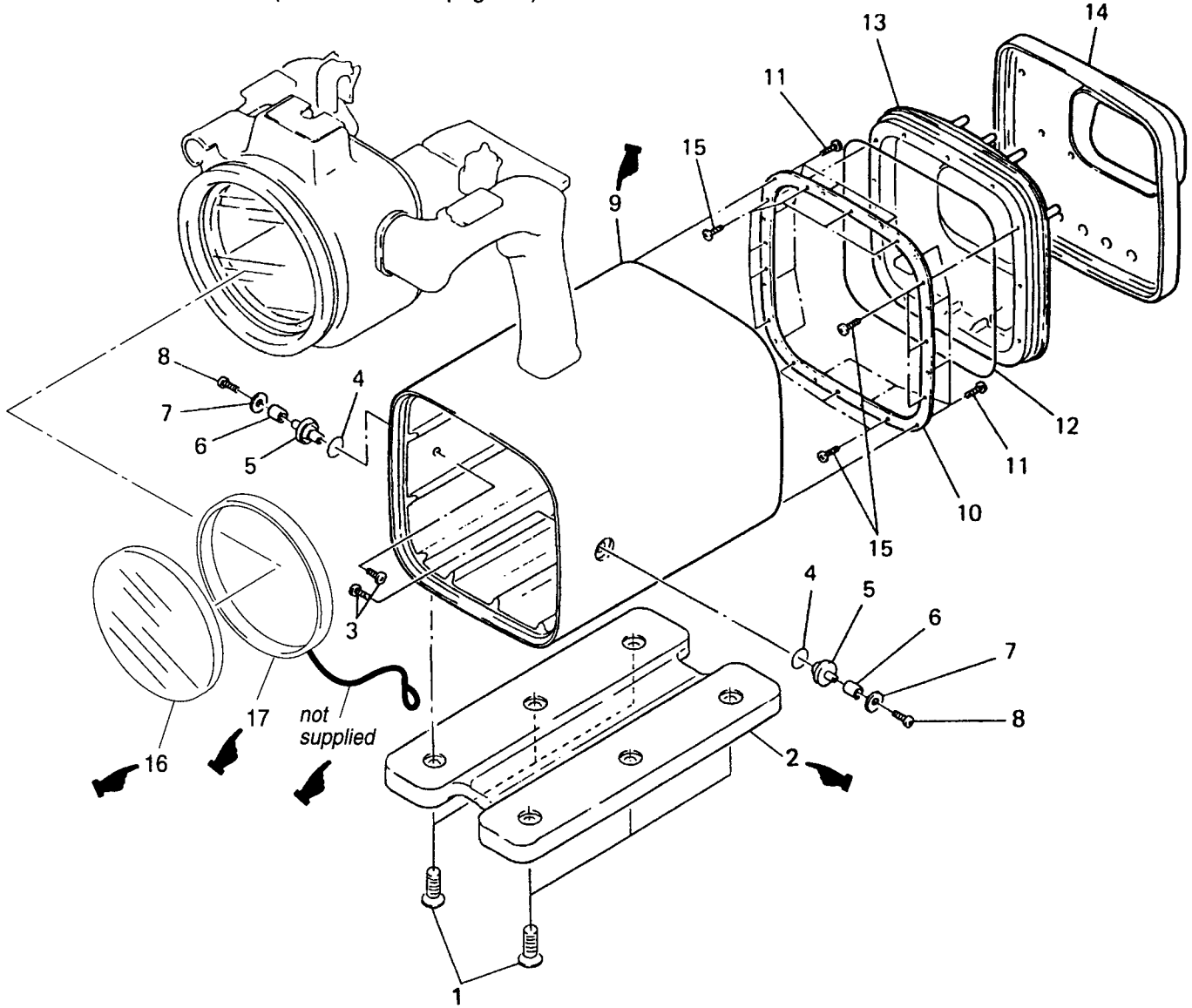
SECTION 3
EXPLODED VIEWS

NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

Differences portion

3-1. MAIN SECTION-1 (Service manual page 17)

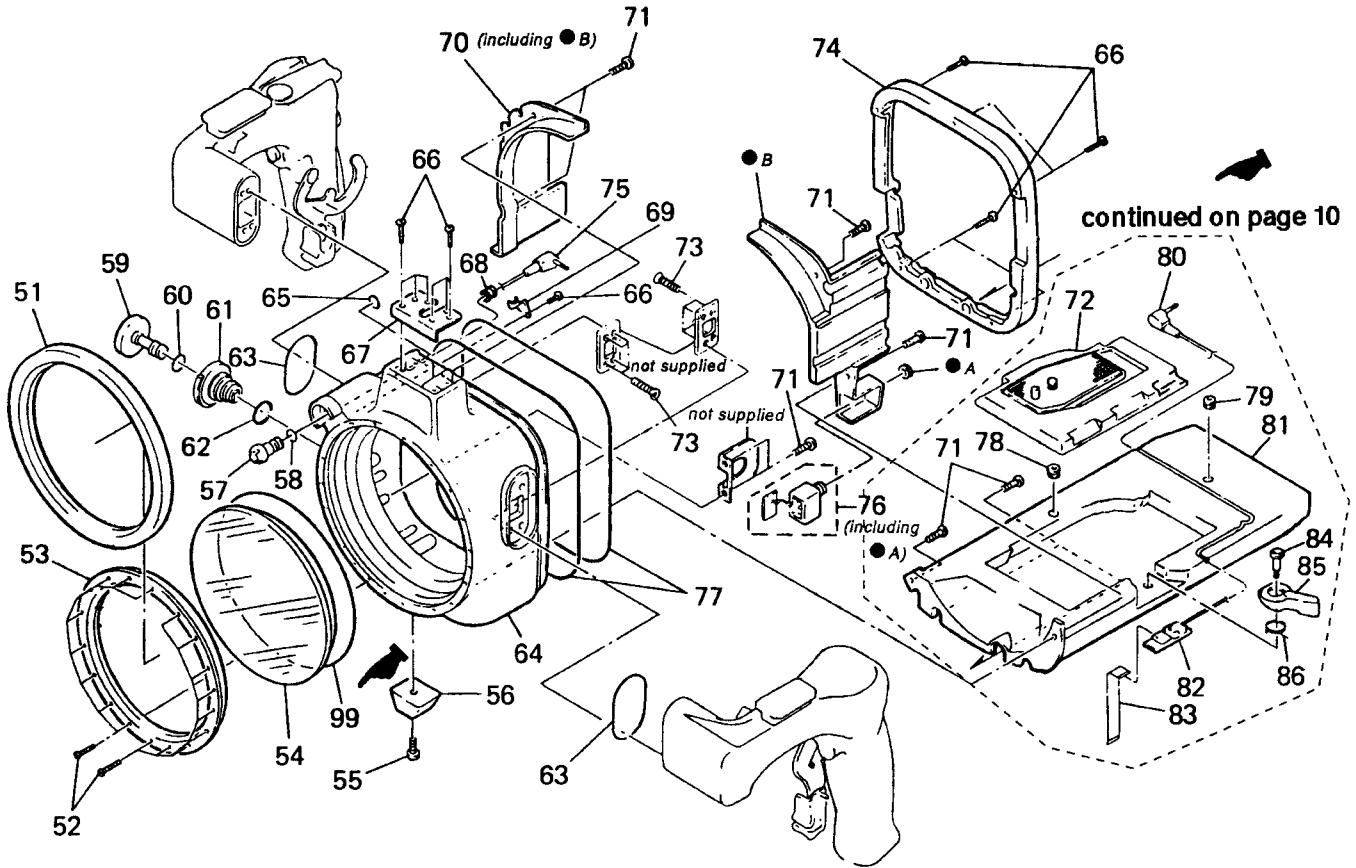


NOTE : The MPK-TRV3 has no balance weight assembly so this is being deleted from the disassembly drawing.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-950-861-01	SCREW (M4X6)		* 10	3-952-920-01	PLATE, FIXED, REAR COVER	
* 2	3-970-239-01	WEIGHT		11	3-950-857-01	SCREW (M2X5)	
3	3-951-373-01	SCREW (M5X6), PLUS (BV)		12	3-952-928-01	RING (GS-165), O	
4	3-950-858-01	RING (P-9), O		13	3-952-917-01	COVER, REAR	
5	3-950-859-01	PIN, LOCK		14	3-952-918-01	PROTECTOR, REAR	
6	3-952-626-01	COLLAR, LOCK PIN		15	2-115-925-01	SCREW (2) (M2X5), TAPPING	
7	3-952-627-01	WASHER		16	3-970-241-01	FILTER	
8	3-952-629-01	SCREW (M3X5)		17	3-966-023-01	FRAME, FILTER	
9	3-970-240-01	PIPE, MIDWAY					

Differences portion

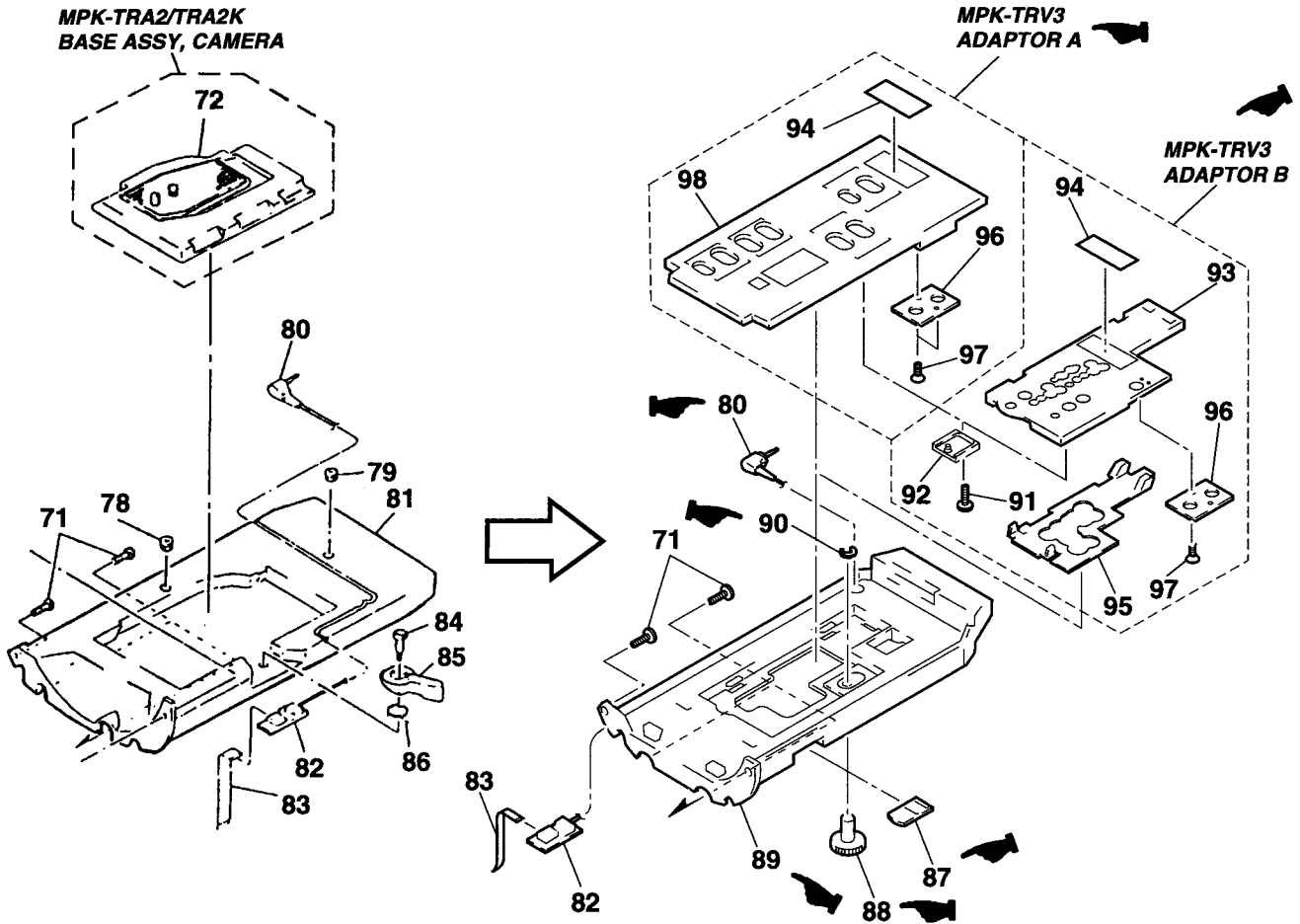
3-2. MAIN SECTION-2 (Service manual page 18)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-952-932-01	PROTECTOR, FRONT		65	3-950-846-01	RING (P-7), O	
52	2-115-925-21	SCREW (M2X8)		66	2-115-925-01	SCREW (2) (M2X5), TAPPING	
53	3-952-930-01	RETAINER, FRONT GLASS		* 67	3-952-924-01	SHOE, ACCESSORY	
54	3-952-931-01	GLASS, FRONT		68	3-950-869-01	BUSHING, RUBBER	
55	3-952-934-01	SCREW (M3X12) (B TIGHT)		* 69	3-952-927-01	PLATE, FIXED, MICROPHONE	
* 56	3-952-933-01	PROTECTOR		* 70	3-952-925-11	COVER, FRONT CASE INNER (including ●B)	
57	X-3942-405-1	MICROPHONE ASSY, UNDERWATER		71	2-186-307-01	SCREW (M3X8)	
58	3-950-907-01	RING (S-8), O		73	3-950-849-01	SCREW (M4X16)	
59	3-951-375-01	CAP, CONNECTOR		* 74	3-952-929-01	RING, REINFORCEMENT	
60	3-950-888-01	RING (P-11), O		75	1-696-932-51	CORD, CONNECTION (MIC)	
61	X-3942-407-1	TERMINAL ASSY, OUTER		76	1-951-214-21	HARNESS, VIDEO RELAY (including ●A)	
62	3-950-847-01	RING (P-20), O		77	3-952-928-01	RING (GS-165), O	
63	3-950-844-01	RING (JASO2031), O		99	3-950-845-01	RING (G135), O	
64	3-952-923-01	CASE, FRONT					

Differences portion

3-2. MAIN SECTION-2 (Service manual page 18)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
71	2-186-307-01	SCREW (M3X8)		91	3-960-767-01	SCREW, CAMERA FITTING	
80	1-696-933-61	CORD, CONNECTION (LANC)		92	3-960-030-01	BASE, SLIDE	
* 82	1-646-724-11	LM-44 BOARD		93	3-970-235-03	BASE (B)	
83	1-696-021-31	WIRE (LEAK SENSOR)		* 94	3-971-661-01	SHEET, PROTECTION A	
87	3-953-086-01	BRACKET		95	3-970-236-03	COVER, BASE	
* 88	3-970-217-01	SCREW, CAMERA FITTING		96	2-115-831-01	SCREW	
89	3-970-238-02	BASE, MAIN		97	3-951-814-01	SCREW (2.6X10) (TYPE2), +K	
90	2-391-512-00	RING (5), RETAINING, E TYPE		98	3-970-233-01	BASE (A)	

ELECTRICAL PARTS LIST

(Service manual page 21)

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS *****			3-862-538-41	MANUAL, INSTRUCTION (ARABIC, RUSSIAN, CHINESE) (AEP)	
	2-115-921-01	GREASE			3-952-928-01	RING (GS-165), O	
	3-862-538-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (US, Canadian)		*	3-953-232-01	CUSHION (UPPER)	
	3-862-538-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP)		*	3-953-233-01	CUSHION (LOWER)	
	3-862-538-31	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)		*	3-964-841-01	BELT, CAMERA FIXED	
					3-966-023-01	FRAME, FILTER	
					3-970-241-01	FILTER	
					3-970-247-01	RUBBER, FITTING	
					X-3946-239-1	ADAPTOR ASSY, EVF	