4th Level	5th Level	Description
Reprocessing	–	The folder for Reprocessing record.
Function	Air Purge	The folder for air purge record.
	Alcohol Flush	The folder for alcohol flush record.
	Alcohol Line Disinfection	The folder for alcohol line disinfection record.
	ALT Self-Check	The folder for ALT self-check record.
	Detergent Line Disinfection	The folder for detergent line disinfection record.
	Heat LCG	The folder for heat LCG record.
	Leaking Scope Decontamination	The folder for leaking scope decontamination record.
	Leak Test	The folder for auto and manual leak test record.
	Maintenance	The folder for periodic maintenance and repair record.
	Mix LCG	The folder for Mix LCG record.
	MRC Check Result	The folder for MRC check result record.
	Portable Memory	The folder for portable memory record.
	Rinse	The folder for rinse record.
	Self Disinfection	The folder for self disinfection record.
	WaterLine Disinfection	The folder for water line disinfection record.
Error	–	The folder for error record.
ReplacementOf ConsumableItems	Replace Air Filter	The folder for replace air filter record.
	Replace Detergent	The folder for replace detergent record.
	Replace Gas Filter (lid)	The folder for replace gas filter (lid) record.
	Replace Gas Filter (tank)	The folder for replace gas filter (tank) record.
	Replace LCG	The folder for replace LCG record.
	Replace Water Filter	The folder for replace water filter record.

Table 11.3

5th level (Reprocessing) & 6th level (the others): Output range

The “ALL” folder is created when the data of all records are saved.
The “SetMonth” folder is created when the record data is saved by selecting a month.
The “SetPeriod” folder is created when the record data is saved by selecting a period.
The “Differential” folder is created when the record data that has not been output to the portable memory is saved.

(b) File type

The record data in the CSV (Comma-Separated Values) format is saved.

(c) File names

The files are named based on the range selected when data is saved in the portable memory, the type of record, etc.

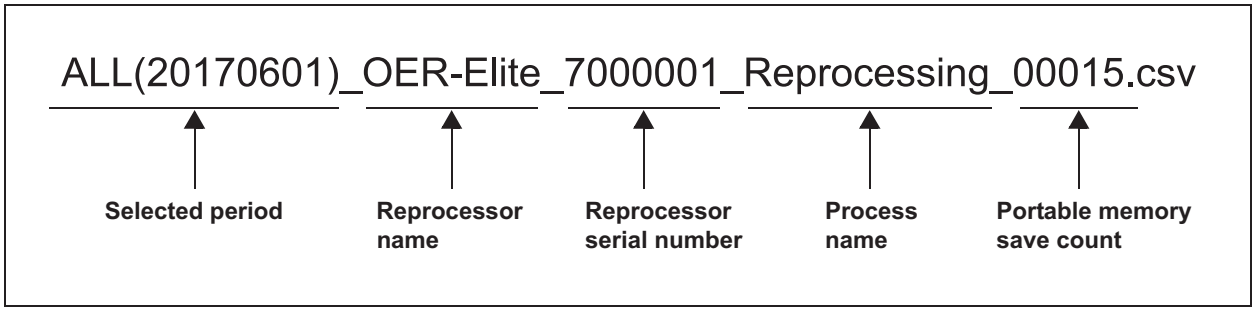


Figure 11.18 Example

Items constituting the file names

Item	Description	
Selected period	This item indicates the output mode selected when downloading the records.	
	ALL (20170601)	ALL data output setting. The figures inside the parentheses indicate the date of downloading.
	20170501 – 20170615	Selected period (when more than one day is specified)
	20170501	Selected period (when one day is specified)
	201706	Selected month (displayed according to the date display format setting)
	Diff (20170601)	Data not output to portable memory
Reprocessor name	OER-Elite	
Reprocessor serial number	1234567	
Data type	Type of the saved records. Displayed record names	
	Reprocessing	Reprocessing record
	LeakTest	Leak test record
	ReplaceLCG	Disinfectant replacement record
	MRCCheckResult	MRC check result record
	HeatLCG	Heat LCG record
	MixLCG	Mix LCG record
	ReplaceWaterFilter	Water filter replacement record
	ReplaceAirFilter	Air filter replacement record
	ReplaceGasFilter(lid)	Gas filter (lid) replacement record
	ReplaceGasFilter(tank)	Gas filter (tank) replacement record
	ReplaceDetergent	Detergent replacement record
	WaterLineDisinfection	Water line disinfection record
	AlcoholLineDisinfection	Alcohol line disinfection record
	DetergentLineDisinfection	Detergent line disinfection record
	Rinse	Rinse record
	AirPurge	Air purge record
	AlcoholFlush	Alcohol flush record
	SelfDisinfection	Self disinfection record
	PortableMemory	USB memory output record
	Error	Error record
	ALTSelf-Check	Auto Leak Test Self-check record
	LeakingScopeDecontamination	Leaking scope decontamination record
	Maintenance	Periodic Maintenance and repair records
Portable memory save count	Total number of portable memory saving operations in 5 digits. Range: 00001 to 65535. The count after 65535 becomes 00001.	

Table 11.4

NOTE

If the same filename is already there in the folder, a number is appended to the end of the filename of the new file (Example: 2120_02-01_1700_OER-Elite_2700000_Reprocessing_00010(2).csv). This number is appended to prevent the edited file in the PC from being overwritten.

(d) Information in each file

Each file is saved in a portable memory in the CSV format.
Every file is composed of the header, data and footer sections. The header and footer sections are common to all record data. The data section varies depending on the data type.
For detail of record data, refer to Figure 11.19. There is no color in each column of record data.

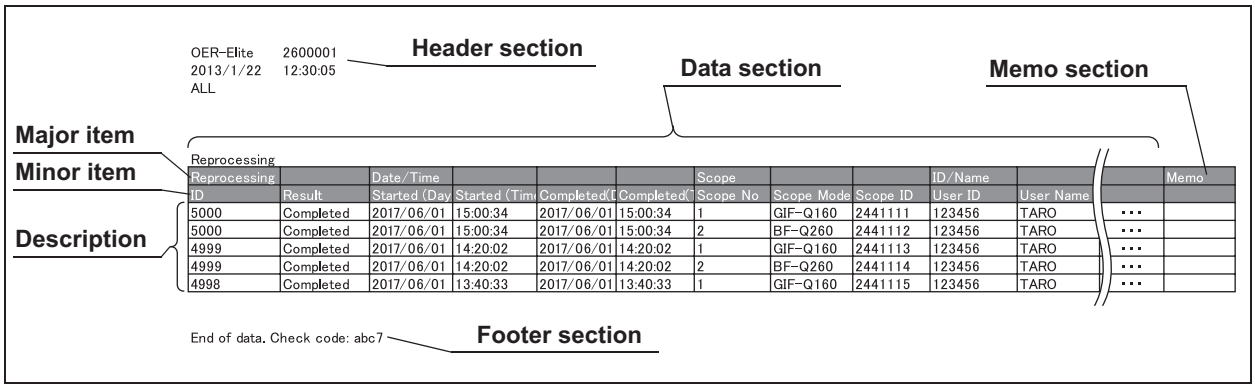


Figure 11.19

Header section

Line No.	Information	Example
1	Reprocessor name	OER-Elite
	Reprocessor serial number	1234567
2	File output date	06/01/2017
	File output time	9:00:30 PM
3	Output mode	All
		Set period
		Set month
		Differential: Blank.
4	Output range	Blank (When output mode is All)
		2017/05/01 – 2017/05/31 (When output mode is Set period and more than one day is specified)
		2017/05/01 (When output mode is Set period and one day is specified)
		2017/05 (When output mode is Set month)
5 – 7	Blanks	
8	Process name	Reprocessing
		Leak Test
		Replace LCG
		MRC Check Result
		Heat LCG
		Mix LCG
		Replace Water Filter
		Replace Air Filter
		Replace Gas Filter (lid)
		Replace Gas Filter (tank)
		Replace Detergent
		Water Line Disinfection
		Alcohol Line Disinfection
		Detergent Line Disinfection
		Rinse
		Air Purge
		Alcohol Flush
		Self Disinfection & Water Sampling
		Portable Memory
		Error
		ALT Self-Check
		Leaking Scope Decontamination
		Maintenance

Table 11.5

Data section

- **Reprocessing records**

Major item	Minor item	Description	Examples
Reprocessing	Record #	Record number	5000, 4999, 4998, …
	Reprocess Result	Results of reprocessing	Completed E XXX (in case of error)
Date/Time	Started (Day)	Reprocessing start date	06/01/2017
	Started (Time)	Reprocessing start time	15:30:30
	Completed (Day)	Reprocessing completion date	06/01/2017
	Completed (Time)	Reprocessing completion time	16:00:30
ID/Name	Scope No	Endoscope number	1 (First endoscope) 2 (Second endoscope)
	Scope Model	Model number of endoscope	GIF-H190 Master (Master card input) – (Not input)
	Scope ID	Endoscope serial number	12800542 – (Not input)
	User ID	ID number of user installing the endoscope(s)	12345678 – (Not input)
	User Name	Name of user installing the endoscope(s)	User Master (Master card input) – (Not input)
	Physician ID	ID number of physician	– (Not input) 12345678
	Physician Name	Name of physician	– (Not input) Physician
	Patient ID	ID number of patient	– (Not input) 12345678
	Patient Name	Name of patient	***** – (Not input) Patient
	Procedure ID	ID number of procedure	– (Not input) 0123456
	Procedure Name	Name of procedure	– (Not input) ERCP
	User3 ID	ID number of user removing the endoscope(s)	– (Not input) 1
	User3 Name	Name of user removing the endoscope(s)	– (Not input) User

Major item	Minor item	Description	Examples
Program Info.	Cln time	Cleaning time (minutes)	3
	Dis Time	Disinfection time (minutes)	7
	ALT	Auto leak test setting	ON OFF
	Heat LCG	Heat LCG setting	ON
	Alcohol Flush	Alcohol flush setting	ON
	Channel Monitor	Channel Monitoring setting	Full Partial
	Program No.	Program number	1, 2, 3, 4
Check	Leak Test (Sink)	Input result of leak test before manual cleaning	– (Not input) Pass Fail
	Manual Cleaning	Input result of manual cleaning	– (Not input) Done
Function Result	Leak Test Result	Result of leak test during the reprocessing	Pass Fail
LCG Info.	Expiry	Expiry of disinfectant solution	08/30
	Lot #	Lot number of the disinfectant solution	AA123
	MRC Check Result	Result of MRC check	– (Not input) Fail Pass
	Temp	Disinfectant solution temperature	20
	Cycle #	Usage count of the disinfectant solution	– (Not input) 1
	Days	Number of days that have elapsed since preparation of the disinfectant solution	– (Not input) 1
Detergent Info.	Expiry	Expiry of the detergent solution	– (Not input) 09/15
	Lot #	Lot number of the detergent solution	– (Not input) DD1234
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
	Total Count	Total number of reprocessing processes performed	1
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.6

- **Leak test records**

Major item	Minor item	Description	Examples
Leak Test	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of leak test	Complete E XXX (in case of error)
	Option	Method of leak test	Auto (Auto leak test) Manual (Manual leak test)
Date/Time	Started (Day)	Start date of leak test	2017/06/01
	Started (Time)	Start time of leak test	15:30:30
	Completed (Day)	Completion date of leak test	2017/06/01
	Completed (Time)	Completion time of leak test	15:45:10
ID/Name	Scope No	Endoscope number	1 (First endoscope) 2 (Second endoscope)
	Scope Model	Model number of endoscope	GIF-H190 Master (Master card input) – (Not input)
	Scope ID	Endoscope serial number	12800542 – (Not input)
	User ID	ID number of user installing the endoscope(s)	1 – (Not input)
	User Name	Name of user installing the endoscope(s)	1 Master (Master card input) – (Not input)
Function Result	Leak Test Result	Result of leak test	Pass Fail – (in case of error)
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
	Total Leak Test #	Total number of performing leak test	10
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.7

- **LCG replacement records**

Major item	Minor item	Description	Examples
Replace LCG	Record #	Record number	5000, 4999, 4998, …
Date/Time	Loaded (Day)	Completion date of preparation of disinfectant solution	06/01/2017
	Loaded (Time)	Completion time of preparation of disinfectant solution	08:45:30
	Drained (Day)	Completion date of discharge of disinfectant solution	06/05/2017
	Drained (Time)	Completion time of draining disinfectant solution	17:30:30
ID/Name (Load LCG)	User ID	ID number of user who prepared disinfectant solution	– (Not input) 1
	User Name	Name of user who prepared disinfectant solution	– (Not input) User
ID/Name (Drain LCG)	User ID	ID of user who drained disinfectant solution	– (Not input) 1
	User Name	Name of user who drained disinfectant solution	– (Not input) User
Option		Method that discharged the disinfectant solution	Drain Collect
LCG Info.	Cycle #	Usage count of the disinfectant solution	– (Not input) 20
	Days	Number of days that have elapsed since preparation of the disinfectant solution	– (Not input) 5
	Lot #	Lot number of disinfectant solution	– (Not input) 123456789
	Expiry	Expiration date of disinfectant solution	– (Not input) 2013/09
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.8

MRC Check records

Major item	Minor item	Description	Examples
MRC Check Result	Record #	Record number	5000, 4999, 4998, …
Date/Time	Completed (Day)	Completion date of MRC check	06/01/2017
	Completed (Time)	Completion time of MRC check	14:00:30
ID/Name	User ID	ID number of user who performed MRC check	– (Not input) 1
	User Name	Name of user who performed MRC check	– (Not input) User
LCG Info.	Expiry	Expiration date of disinfectant solution	– (Not input) 09/2013
	Lot #	Lot number of disinfectant solution	– (Not input) 123456789
	MRC Check Result	Result of MRC check	Fail Pass
	Temp	Disinfectant solution temperature	– (Not input) 20
	Cycle #	Disinfectant cycle count	– (Not input) 1
	Days	Disinfectant day count	– (Not input) 5
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.9

Heat LCG records

Major item	Minor item	Description	Examples
Heat LCG	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of Heat LCG	Complete E XXX (in case of error)
	Option	Method of Heat LCG	Manual Timer
Date/Time	Started (Day)	Start date of Heat LCG	06/01/2017
	Started (Time)	Start time of Heat LCG	08:30:30
	Completed (Day)	Completion date of Heat LCG	06/01/2017
	Completed (Time)	Completion time of Heat LCG	10:00:30
ID/Name	User ID	ID number of user performed Heat LCG	– (Not input) 1
	User Name	Name of user performed Heat LCG	– (Not input) User
Timer Info.	Setting Date	Setting date of Heat LCG	– 06/01/2017 (In case Heat LCG Timer)
	Setting Time	Setting time of Heat LCG	– 10:00 (In case Heat LCG Timer)
LCG Info.	Temp	Disinfectant solution temperature	20
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.10

Mix LCG records

Major item	Minor item	Description	Examples
Mix LCG	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of mix LCG	Complete E XXX (in case of error)
Date/Time	Started (Day)	Start date of mix LCG	06/01/2017
	Started (Time)	Start time of mix LCG	15:30:30
	Completed (Day)	Completion date of mix LCG	06/01/2017
	Completed (Time)	Completion time of mix LCG	15:45:10
ID/Name	User ID	ID number of user performed mix LCG	– (Not input) 1
	User Name	ID number of user performed mix LCG	– (Not input) User
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.11

Water filter replacement records

Major item	Minor item	Description	Examples
Replace Water Filter	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of Water filter replacement	Complete E XXX (in case of error)
Date/Time	Started (Day)	Start date of Water filter replacement	06/01/2017
	Started (Time)	Start time of Water filter replacement	08:30:00
	Replaced (Day)	Completion date of Water filter replacement	06/01/2017
	Replaced (Time)	Completion time of Water filter replacement	09:15:30
ID/Name	User ID	ID number of user who replaced water filter	– (Not input) 1
	User Name	Name of user who replaced water filter	– (Not input) User
Filter Info.	Lot #	Lot number of water filter	– (Not input) 2017/05
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.12

Air filter replacement records

Major item	Minor item	Description	Examples
Replace Air Filter	Record #	Record number	5000, 4999, 4998, …
Date/Time	Replaced (Day)	Completion date of air filter replacement	06/01/2017
	Replaced (Time)	Completion time of air filter replacement	11:30:45
ID/Name	User ID	ID number of user who replaced air filter	– (Not input) 1
	User Name	Name of user who replaced air filter	– (Not input) User
Filter Info.	Lot #	Lot number of air filter	– (Not input) 987654321
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.13

Gas filter (lid) replacement records

Major item	Minor item	Description	Examples
Replace Gas Filter (lid)	Record #	Record number	5000, 4999, 4998, …
Date/Time	Replaced (Day)	Completion date of gas filter replacement	06/01/2017
	Replaced (Time)	Completion time of gas filter replacement	12:15:30
ID/Name	User ID	ID number of user who replaced gas filter	– (Not input) 1
	User Name	Name of user who replaced gas filter	– (Not input) User
Filter Info.	Lot #	Lot number of gas filter	– (Not input) 2017/05
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.14

Gas filter (tank) replacement records

Major item	Minor item	Description	Examples
Replace Gas Filter (tank)	Record #	Record number	5000, 4999, 4998, …
Date/Time	Replaced (Day)	Completion date of gas filter replacement	06/01/2017
	Replaced (Time)	Completion time of gas filter replacement	15:30:30
ID/Name	User ID	ID number of user who replaced gas filter	– (Not input) 1
	User Name	Name of user who replaced gas filter	– (Not input) User
Filter Info.	Lot #	Lot number of gas filter	– (Not input) 2017/05
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.15

Detergent replacement records

Major item	Minor item	Description	Examples
Replace Detergent	Record #	Record number	5000, 4999, 4998, …
Date/Time	Replaced (Day)	Completion date of detergent replacement	06/01/2017
	Replaced (Time)	Completion time of detergent replacement	09:15:30
ID/Name	User ID	ID number of user who replaced detergent	– (Not input) 1
	User Name	Name of user who replaced detergent	– (Not input) User
Detergent info.	Expiry	Expiration date of detergent	– (Not input) 09/2017
	Lot #	Lot number of detergent	– (Not input) 0987654321
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.16

Water line disinfection records

Major item	Minor item	Description	Examples
Water Line Disinfection	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of water line disinfection	Complete E XXX (in case of error)
Date/Time	Started (Day)	Start date of water line disinfection	06/01/2017
	Started (Time)	Start time of water line disinfection	08:30:30
	Completed (Day)	Completion date of water line disinfection	06/01/2017
	Completed (Time)	Completion time of water line disinfection	10:00:30
ID/Name	User ID	ID number of user performed water line disinfection	– (Not input) 1
	User Name	Name of user performed water line disinfection	– (Not input) User
LCG Info.	Expiry	Expiration date of disinfectant solution	– (Not input) 09/2013
	Lot #	Lot number of disinfectant solution	– (Not input) 123456789
	MRC Check Result	Result of MRC check	– (Not input) Fail Pass
	Temp	Disinfectant solution temperature	– (Not input) 20
	Cycle #	Disinfectant cycle count	– (Not input) 1
	Days	Disinfectant day count	– (Not input) 5
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.17

Alcohol line disinfection records

Major item	Minor item	Description	Examples
Alcohol Line Disinfection	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of alcohol line disinfection	Complete E XXX (in case of error)
Date/Time	Started (Day)	Start date of alcohol line disinfection	06/01/2017
	Started (Time)	Start time of alcohol line disinfection	08:30:30
	Completed (Day)	Completion date of alcohol line disinfection	06/01/2017
	Completed (Time)	Completion time of alcohol line disinfection	10:00:30
ID/Name	User ID	ID number of user performed alcohol line disinfection	– (Not input) 1
	User Name	Name of user performed alcohol line disinfection	– (Not input) User
Program	Dis Time	Disinfection time	– (Not input) 10
LCG Info.	MRC Check Result	Result of MRC check	– (Not input) Fail Pass
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.18

Detergent line disinfection records

Major item	Minor item	Description	Examples
Detergent Line Disinfection	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of detergent line disinfection	Complete E XXX (in case of error)
Date/Time	Started (Day)	Start date of detergent line disinfection	06/01/2017
	Started (Time)	Start time of detergent line disinfection	08:30:30
	Completed (Day)	Completion date of detergent line disinfection	06/01/2017
	Completed (Time)	Completion time of detergent line disinfection	10:00:30
ID/Name	User ID	ID number of user performed detergent line disinfection	– (Not input) 1
	User Name	Name of user performed detergent line disinfection	– (Not input) User
Program	Dis Time	Disinfection time	– (Not input) 10
LCG Info.	MRC Check Result	Result of MRC check	– (Not input) Fail Pass
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.19

Rinse records

Major item	Minor item	Description	Examples
Rinse	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of rinse	Complete E XXX (in case of error)
Date/Time	Started (Day)	Start date of rinse	06/01/2017
	Started (Time)	Start time of rinse	08:30:30
	Completed (Day)	Completion date of rinse	06/01/2017
	Completed (Time)	Completion time of rinse	10:00:30
ID/Name	User ID	ID number of user performed rinse	– (Not input) 1
	User Name	Name of user performed rinse	– (Not input) User
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.20

Air purge records

Major item	Minor item	Description	Examples
Air Purge	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of air purge	Complete E XXX (in case of error)
Date/Time	Started (Day)	Start date of air purge	06/01/2017
	Started (Time)	Start time of air purge	08:30:30
	Completed (Day)	Completion date of air purge	06/01/2017
	Completed (Time)	Completion time of air purge	10:00:30
ID/Name	User ID	ID number of user performed air purge	– (Not input) 1
	User Name	Name of user performed air purge	– (Not input) User
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.21

Alcohol flush records

Major item	Minor item	Description	Examples
Alcohol flush	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of alcohol flush	Complete E XXX (in case of error)
Date/Time	Started (Day)	Start date of alcohol flush	06/01/2017
	Started (Time)	Start time of alcohol flush	08:30:30
	Completed (Day)	Completion date of alcohol flush	06/01/2017
	Completed (Time)	Completion time of alcohol flush	10:00:30
ID/Name	User ID	ID number of user performed alcohol flush	– (Not input) 1
	User Name	Name of user performed alcohol flush	– (Not input) User
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.22

Self disinfection and water sampling records

Major item	Minor item	Description	Examples
Self Disinfection & Water Sampling	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of self-disinfection and water sampling	Complete E XXX (in case of error)
	Water Sampling	Whether water sampling was performed or not.	– (Not input) Done
Date/Time	Started (Day)	Start date of self-disinfection	06/01/2017
	Started (Time)	Start time of self-disinfection	08:30:30
	Completed (Day)	Completion date of self-disinfection	06/01/2017
	Completed (Time)	Completion time of self-disinfection	10:00:30
ID/Name	User ID	ID number of user performed self-disinfection	– (Not input) 1
	User Name	Name of user performed self-disinfection	– (Not input) User
LCG Info.	Expiry	Expiration date of disinfectant solution	– (Not input) 09/2013
	Lot #	Lot number of disinfectant solution	– (Not input) 123456789
	MRC Check Result	Result of MRC check	– (Not input) Fail Pass
	Temp	Disinfectant solution temperature	– (Not input) 20
	Cycle #	Disinfectant cycle count	– (Not input) 1
	Days	Disinfectant day count	– (Not input) 5
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.23

Portable memory records

Major item	Minor item	Description	Examples
Portable Memory	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of portable memory output	Complete E XXX (in case of error)
Date/Time	Started (Day)	Start date of portable memory output	06/01/2017
	Started (Time)	Start time of portable memory output	08:30:30
	Completed (Day)	Completion date of portable memory output	06/01/2017
	Completed (Time)	Completion time of portable memory output	10:00:30
ID/Name	User ID	ID number of user performed portable memory output	– (Not input) 1
	User Name	Name of user performed portable memory output	– (Not input) User
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.24

Error records

Major item	Minor item	Description	Examples
Error	Record #	Record number	5000, 4999, 4998, …
	Error code	Error code of error	– (Not input) EXXX (in case of error)
Date/Time	Started (Day)	Start date of rinse	06/01/2017
	Started (Time)	Start time of rinse	08:30:30
	Canceled (Day)	Date of occurrence of error	06/01/2017
	Canceled (Time)	Time of occurrence of error	10:00:30
ID/Name	Scope No	Endoscope number	1 (First endoscope) 2 (Second endoscope)
	Scope Model	Model number of endoscope	GIF-H190 – (Not input)
	Scope ID	Endoscope serial number	12800542 – (Not input)
	User ID	ID number of user installing the endoscope(s)	– (Not input) 1
	User Name	Name of user installing the endoscope(s)	– (Not input) User
	Physician ID	ID number of physician	– (Not input) 1
	Physician Name	Name of physician	– (Not input) Doctor
	Patient ID	ID number of patient	– (Not input) 1
	Patient Name	Name of patient	– (Not input) Patient
	Procedure ID	ID number of procedure	– (Not input) 0123456
	Procedure Name	Name of procedure	– (Not input) ERCP
	User3 Name	Name of user removing the endoscope(s)	– (Not input) User
	User3 ID	ID number of user removing the endoscope(s)	– (Not input) 1

Major item	Minor item	Description	Examples
Program Info.	Cln time	Cleaning time (min.)	3
	Dis Time	Disinfection time (min.)	7
	ALT	Auto leak test setting	– (Not input) ON OFF
	Heat LCG	Heat LCG setting	– (Not input) ON OFF
	Alcohol Flush	Alcohol flush setting	– (Not input) ON OFF
	Channel Monitor	Channel Monitoring setting	– (Not input) Full, Partial
	Program No.	Program number	– (Not input) 1, 2, 3, 4
Check	Leak Test (Sink)	Input result of leak test before manual cleaning	– (Not input) Pass Fail
	Manual Cleaning	Input result of manual cleaning	– Done
Function Result	Leak Test Result	Result of leak test during the reprocessing	– (Not input) Fail Pass
LCG Info.	Expiry	Expiration date of disinfectant solution	– (Not input) 2017/05
	Lot #	Lot number of disinfectant solution	– (Not input) 123456789
	MRC Check Result	Result of MRC check	– (Not input) Fail Pass
	Temp	Disinfectant solution temperature	– (Not input) 20
	Cycle #	Disinfectant cycle count	– (Not input) 1
	Days	Disinfectant day count	– (Not input) 1
Detergent Info.	Expiry	Expiry of the detergent solution	– (Not input) 09/15
	Lot #	Lot number of the detergent solution	– (Not input) DD1234

Major item	Minor item	Description	Examples
ErrorDetails	Process Name	Process in which error is generated	Cleaning, Heat LCG, etc.
	Process No.	Number associated with the process (number is hexadecimal)	– (Not input) 0001, 0002
	Process Time	Elapsed time of the process	– (Not input) 00:03:00
	Error Information 1 – 38	Error value 1 – 38	– (Not input) Pass Fail On Off No Connect Connect Unknown Flow Side Water Side Moving Actual measurement value of each error(e.g., decimal place from first to third)
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
	Total Count	Total accumulated of reprocessing process count	4000
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.25

Periodic Maintenance and Repair

Major item	Minor item	Description	Examples
Maintenance	Record #	Record number	5000, 4999, 4998, …
Date/Time	Working (Day)	Working date of Maintenance	06/01/2017
	Working (Time)	Working start time of Maintenance	8:30:30
Service Program	Type	Detail for working	Periodic Maintenance Repair
	Person	Working person name	– (Not input), Person name
	Scheduled PM Cycle	Next Periodic Maintenance date	25000
	Scheduled PM Date	Number of Periodic Maintenance	06/01/2018
	Maintenance Total Count	Number of Periodic Maintenance	0
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
	Total Count	Total number of reprocessing processes performed	1
Parts Operation Count/Time	Water Supply Valve	Water Supply Valve count	1
	Channel Valve A1	Channel Valve A1 count	1
	Channel Valve B1	Channel Valve B1 count	1
	Channel Valve C1	Channel Valve C1 count	1
	Channel Valve D1	Channel Valve D1 count	1
	Channel Valve A2	Channel Valve A2 count	1
	Channel Valve B2	Channel Valve B2 count	1
	Channel Valve C2	Channel Valve C2 count	1
	Channel Valve D2	Channel Valve D2 count	1
	Bypass Valve	Bypass Valve count	1
	Adjust Valve	Adjust Valve count	1
	Relief Shutoff Valve	Relief Shutoff Valve count	1
	Pump Valve	Pump Valve count	1
	ALT Valve (Front)	ALT Valve (Front) count	1
	ALT Valve (Back)	ALT Valve (Back) count	1
	Drain Valve	Drain Valve count	1
	Collection Valve	Collection Valve count	1
	Three Port Valve	Three Port Valve count	1
	Alcohol Valve	Alcohol Valve count	1
	Channel Pump	Channel Pump count	1
	Channel Pump	Channel Pump time (min)	1

Major item	Minor item	Description	Examples
Parts Operation Count/Time	Disinfectant Solution Pump	Disinfectant Solution Pump count	1
	Disinfectant Solution Pump	Disinfectant Solution Pump time (min)	1
	Drain Pump	Drain Pump count	1
	Drain Pump	Drain Pump time (min)	1
	Circulation Pump	Circulation Pump count	1
	Circulation Pump	Circulation Pump time (min)	1
	Alcohol Pump	Alcohol Pump count	1
	Alcohol Pump	Alcohol Pump time (min)	1
	Alkali Detergent Pump	Alkali Detergent Pump count	1
	Alkali Detergent Pump	Alkali Detergent Pump time (min)	1
	Compressor	Compressor count	1
	Compressor	Compressor time (min)	1
	Ultrasonic Transducer	Ultrasonic Transducer count	1
	Ultrasonic Transducer	Ultrasonic Transducer time (min)	1
	Basin Heater	Basin Heater count	1
	Basin Heater	Basin Heater time (min)	1
	Tank Heater	Tank Heater count	1
	Tank Heater	Tank Heater time (min)	1
	Solenoid Lock for Lid	Solenoid Lock for Lid count	1
	Solenoid Lock for Cassette	Solenoid Lock for Cassette count	1
	Print	Print count	1
	Start Button	Start Button count	1
	Stop Button	Stop Button count	1
	Heat LCG Timer Button	Heat LCG Timer Button count	1
	Touch Screen Operation	Touch Screen Operation count	1
	ALT Function	ALT Function count	1
	MLT Function	MLT Function count	1
	MLT Function	MLT Function time (min)	1
	ALT Self-Check	ALT Self-Check count	1
	LCD Backlight	LCD Backlight time (min)	1
	Battery Working	Battery Working Days	1
	Barcode Scan	Barcode Scan count	1

Major item	Minor item	Description	Examples
Parts Replacement	Water Supply Valve	With or without replacement for water supply valve	0, 1
	Channel Valve 1	With or without replacement for Channel Valve 1	0, 1
	Channel Valve 2	With or without replacement for Channel Valve 2	0, 1
	Bypass Valve	With or without replacement for Bypass Valve	0, 1
	Adjust Valve	With or without replacement for Adjust Valve	0, 1
	Relief Shutoff Valve	With or without replacement for Relief Shutoff Valve	0, 1
	Pump Valve	With or without replacement for Pump Valve	0, 1
	ALT Valve (Front)	With or without replacement for ALT Valve (Front)	0, 1
	ALT Valve (Back)	With or without replacement for ALT Valve (Back)	0, 1
	Switching Valve	With or without replacement for Switching Valve	0, 1
	Three Port Valve	With or without replacement for Three Port Valve	0, 1
	Alcohol Valve	With or without replacement for Alcohol Valve	0, 1
	Channel Pump	With or without replacement for Channel Pump	0, 1
	Disinfectant Solution Pump	With or without replacement for Disinfectant Solution Pump	0, 1
	Drain Pump	With or without replacement for Drain Pump	0, 1
	Circulation Pump	With or without replacement for Circulation Pump	0, 1
	Alcohol Pump	With or without replacement for Alcohol Pump	0, 1
	Alkali Detergent Pump	With or without replacement for Alkali Detergent Pump	0, 1
	Compressor	With or without replacement for Compressor	0, 1
	Ultrasonic Transducer	With or without replacement for Ultrasonic Transducer	0, 1
	Basin Heater	With or without replacement for Basin Heater	0, 1
	Tank Heater	With or without replacement for Tank Heater	0, 1
	Solenoid Lock for Lid	With or without replacement for Solenoid Lock for Lid	0, 1
	Solenoid Lock for Cassette	With or without replacement for Solenoid Lock for Cassette	0, 1
	Printer	With or without replacement for Printer	0, 1

Major item	Minor item	Description	Examples
Parts Replacement	Panel Switch	With or without replacement for Panel Switch	0, 1
	Touch Screen	With or without replacement for Touch Screen	0, 1
	ALT	With or without replacement for ALT	0, 1
	LCD	With or without replacement for LCD	0, 1
	Battery	With or without replacement for Battery	0, 1
	Barcode Scanner	With or without replacement for Barcode Scanner	0, 1

Table 11.26

ALT self check records

Major item	Minor item	Description	Examples
ALT Self-Check	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of ALT self check	Complete E XXX (in case of error)
	Option	“Periodic (Auto)” or “Manual” is represented	Periodic (Auto), Manual
	Atmospheric Pressure	Atmospheric pressure during ALT self check	– (Not input) 101.3 kPa
Date/Time	Started (Day)	Start date of ALT self check	06/01/2017
	Started (Time)	Start time of ALT self check	08:30:30
	Completed (Day)	Completion date of ALT self check	06/01/2017
	Completed (Time)	Completion time of ALT self check	10:00:30
ID/Name	User ID	ID number of user performed ALT self check	– (Not input) 1
	User Name	Name of user performed ALT self check	– (Not input) User
Function Result	Self-Check Result	Result of ALT self check	– (Not input) Pass Fail
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.27

Leaking scope decontamination records

Major item	Minor item	Description	Examples
Leaking Scope Decontamination	Record #	Record number	5000, 4999, 4998, …
	Process Result	Result of leaking scope decontamination	Complete E XXX (in case of error)
Date/Time	Started (Day)	Start date of leaking scope decontamination	06/01/2017
	Started (Time)	Start time of leaking scope decontamination	08:30:30
	Completed (Day)	Completion date of leaking scope decontamination	06/01/2017
	Completed (Time)	Completion time of leaking scope decontamination	10:00:30
ID/Name	Scope Model	Model number of endoscope.	GIF-H190 Master (Master card input) – (Not input)
	Scope ID	Endoscope serial number	12800542 – (Not input)
	User ID	ID number of user performed portable memory output	– (Not input) 1
	User Name	Name of user performed portable memory output	– (Not input) User
	Physician ID	ID number of physician	– (Not input) 1
	Physician Name	Name of physician	– (Not input) Physician
	Patient ID	ID number of patient	– (Not input) 1
	Patient Name	Name of patient	– (Not input) Patient
	Procedure ID	ID number of procedure	– (Not input) 0123456
	Procedure Name	Name of procedure	– (Not input) ERCP
	User 2 Name	Name of user removing the endoscope	– (Not input) User
	User 2 ID	ID number of user removing the endoscope	– (Not input) 1
Check	Leak Test (Sink)	Input result of leak test before manual cleaning	– (Not input) Pass Fail
	Manual Cleaning	Input result of manual cleaning	– (Not input) Done

Major item	Minor item	Description	Examples
LCG Info.	Expiry	Expiration date of disinfectant solution	– (Not input) 07/01/2017
	Lot #	Lot number of disinfectant solution	– (Not input) 123456789
	MRC Check Result	Result of MRC check	– (Not input) Fail Pass
	Temp	Disinfectant solution temperature	– (Not input) 20
	Cycle #	Disinfectant cycle count	– (Not input) 1
	Days	Disinfectant day count	– (Not input) 1
AER Info.	Model Name	Reprocessor name	OER-Elite
	Serial No.	Reprocessor serial number	1234567
	Total Count	Total accumulated of reprocessing process count	4000
Memo		Memorandum (Free input by user)	– (Not input) Free input by user

Table 11.28

❍ Managing records on PC

CAUTION

The reprocessing data copied and saved in the “BackUp” folder in the PC becomes the master data. Do not alter the master data.

NOTE

- For the operating environment of the portable memory, see the instructions provided with it. To manage the record at the facility the use of a PC installed with application software such as spreadsheet software that enables editing of a CSV file is recommended.
- If a file exists in the “Work” folder in the portable memory from which data is downloaded, a number is appended to the end of the filename (Example: 2120_02-01_1700_OER-Elite_2700000_Reprocessing_00010(2).csv). This number is appended to prevent the edited file in the PC from being overwritten.
- After transferring data in the PC, delete the “OER-Elite” folder in the portable memory. Otherwise, there would be a possibility that a file having a name identical to a file already existing in the “Work” folder in the PC is saved with the same name except for the number appended to the end of the filename.

(a) Copying data in PC

When saving data in a PC for the backup purpose

1. Attach the portable memory containing record data to the PC.
2. Copy the “OER-Elite” folder in the portable memory to the PC.

NOTE

If a message confirming overwriting of a folder or file is displayed when you attempt to copy data in the PC, select “Overwrite” in any case.

3. After completion of the copying, remove the portable memory from the PC.

NOTE

Also, refer to the instruction manual for the PC.

(b) Managing the record data

To manage the record data, use the record data in the “Work” folder copied to the PC. The record data should be managed according to the purpose of application of data.

Example of record management (Reference)

The records can be managed as shown in the following example.

NOTE

The following example uses Microsoft Excel for managing the CSV files. The management tool can be selected from the desired application software including statistical software according to the purpose and application of data.

1. Open the “Work” folder copied to the PC.
2. Open the file to be edited, check the header and data sections, and enter desired information in the edit section.
3. When the entry completes, save the edited file. Do not need rename file name.

NOTE

When editing a CSV file using application software such as statistical software, there is a risk that the operation above cannot save the edited data. It is therefore recommended to save the edited data in the dedicated file format of the software in use.

11.4 Printing records

The records of the following processes can be printed with the MAJ-1937 printer included in the optional MAJ-2144 printer set.

- Reprocessing process: The record of reprocessing process, including errors.
- Leak test processes (auto, manual): The record of auto and manual leak tests performed on the reprocessor.
- Leaking scope decontamination process: The record of leaking scope decontamination process.

CAUTION

Pay attention to handle the portable memory and printed paper that include patient information exported from the OER-Elite.

NOTE

Printing records is also possible on the record details screens. Refer to the record details in 11.2 Log display for the details.

■ Printing

This section is defined method for printing of daily basis. For other printing method, refer to page 232.

1. Turn this reprocessor and the printer ON.
2. Press the “Log” button on the Menu screen.

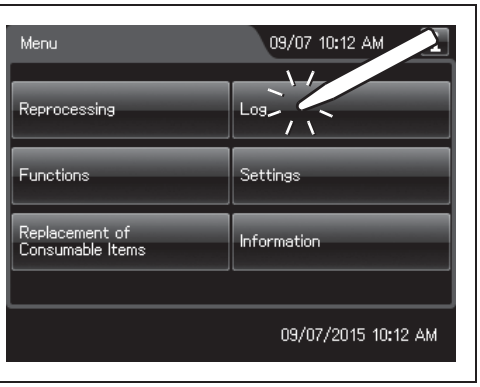


Figure 11.20

3 Press the “Printout” button.

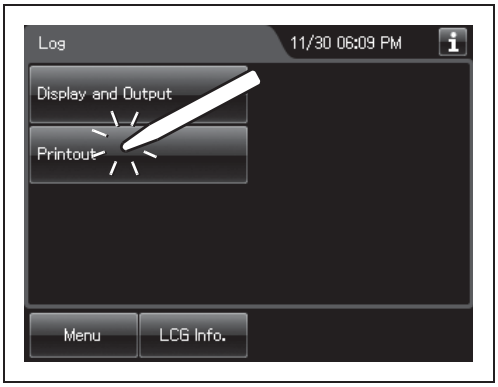
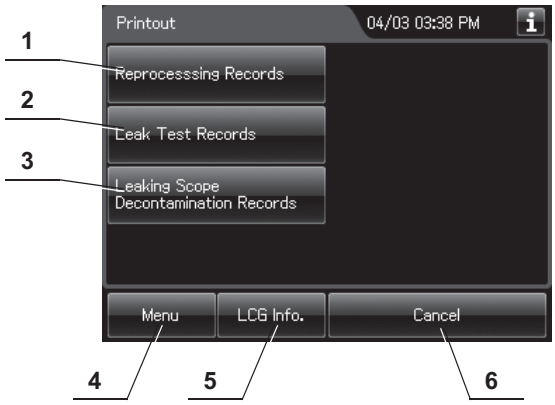


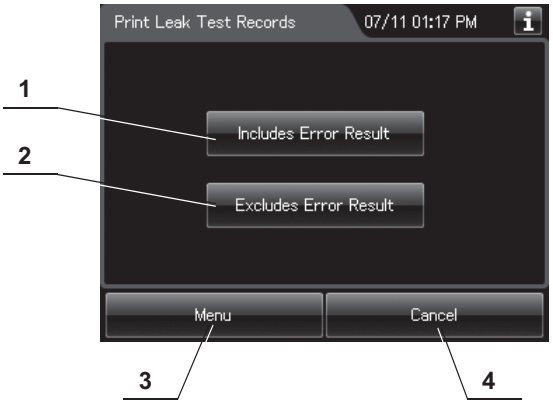
Figure 11.21

4 Select the record to be printed.



No.	Button	Description
1	Reprocessing Records	Prints the records of the reprocessing processes.
2	Leak Test Records	Prints the records of the leak tests.
3	Leaking Scope Decontamination Records	Prints the records of the leaking scope decontamination.
4	Menu	Returns to the Menu screen.
5	LCG info.	Opens the disinfectant information screen.
6	Cancel	Returns to the previous screen.

5 Select whether or not the error records are to be printed.



No.	Button	Description
1	Include error results	Records are printed including error records.
2	Excludes error results	Records are printed without error records. (Only the records of successfully completed operations are printed.)
3	Menu	Returns to the menu.
4	Return	Returns to the previous screen.

6 Set the date of the records to be printed by pressing the “+” or “–” button.

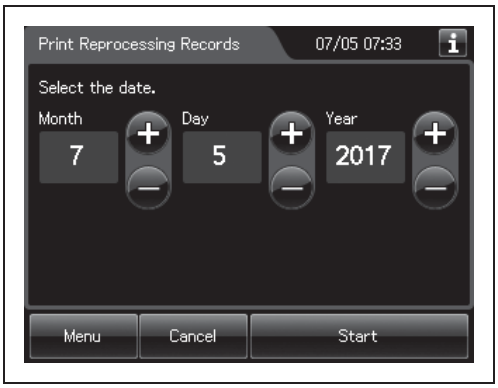


Figure 11.22

7 Press the “Start” button. Printing starts and the touch screen displays the progress.

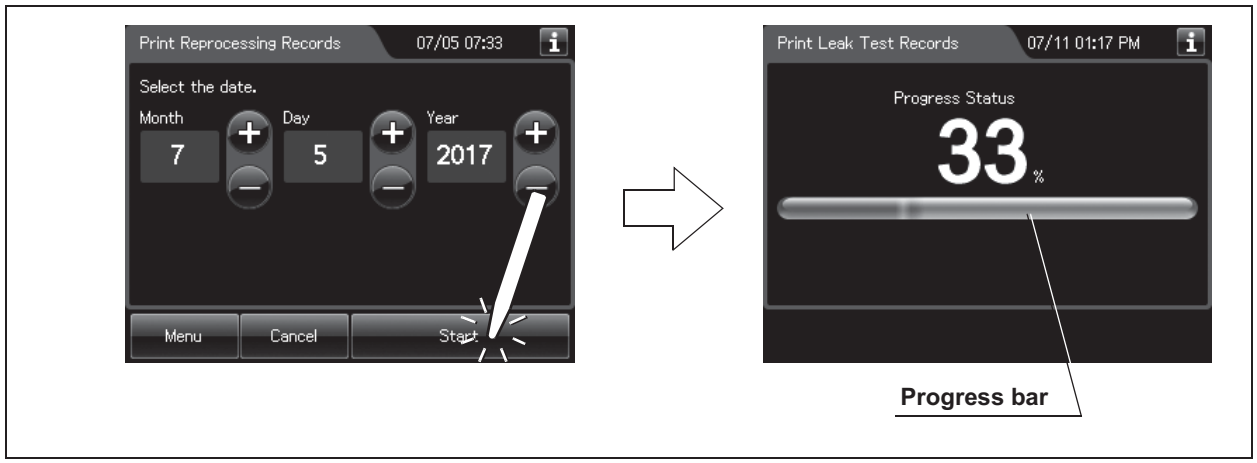


Figure 11.23

8 When the printing completes, the following screen appears. Press the “OK” button.

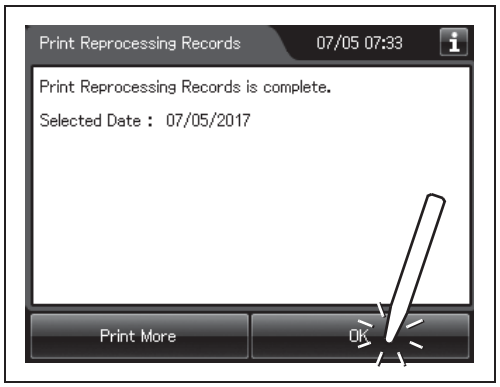


Figure 11.24

NOTE

- Characters “PRINT END” are printed at the end of each print session. If they are not printed, not all the records of the selected period are printed out. Restart printing from the beginning.
- Records are printed according to the time.

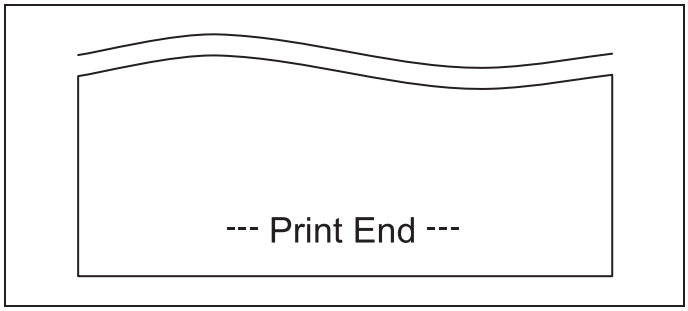


Figure 11.25

■ *Print format*

❍ Reprocessing – Normal (Separate)

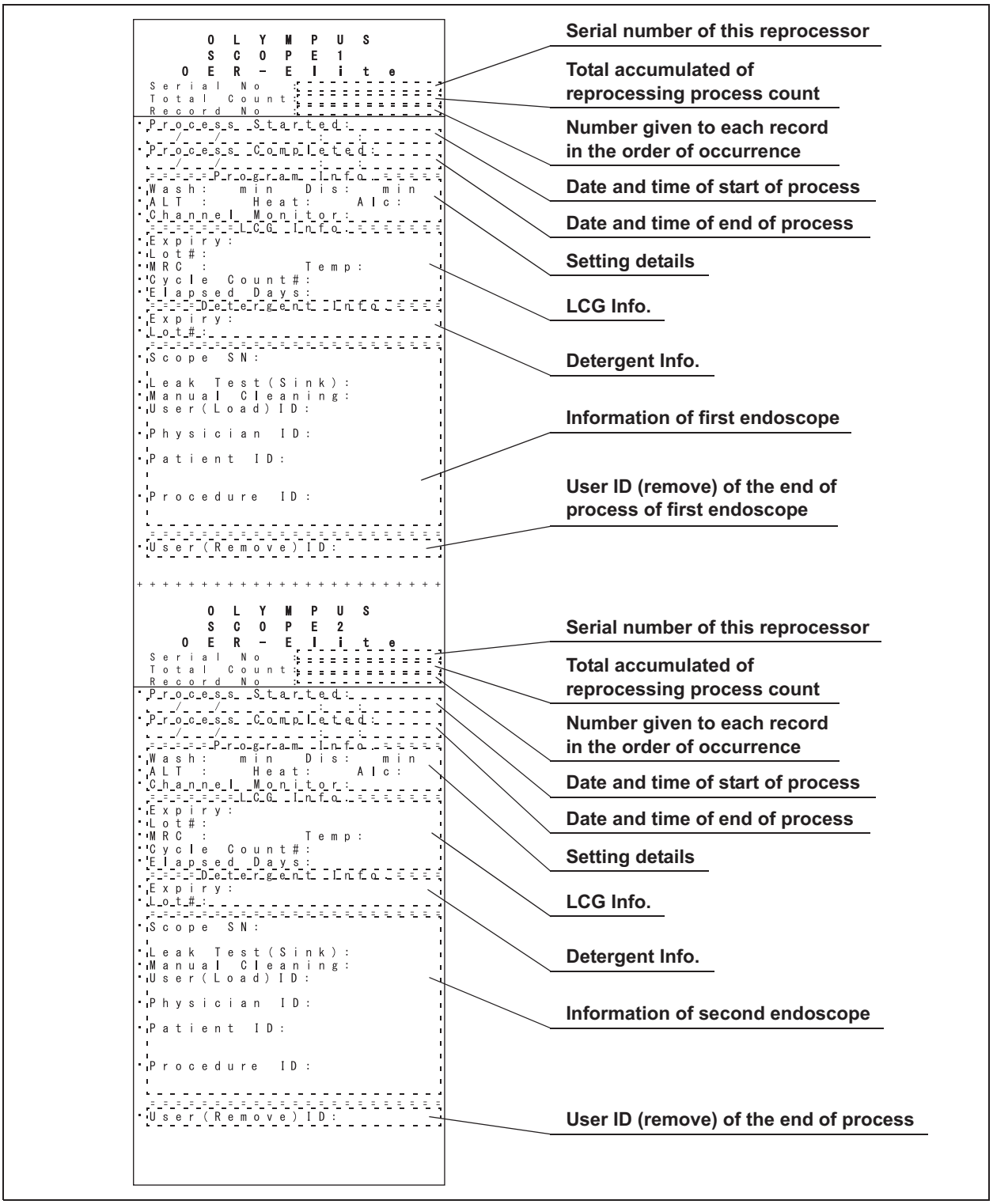


Figure 11.26

❍ Reprocessing – Normal (Combine)

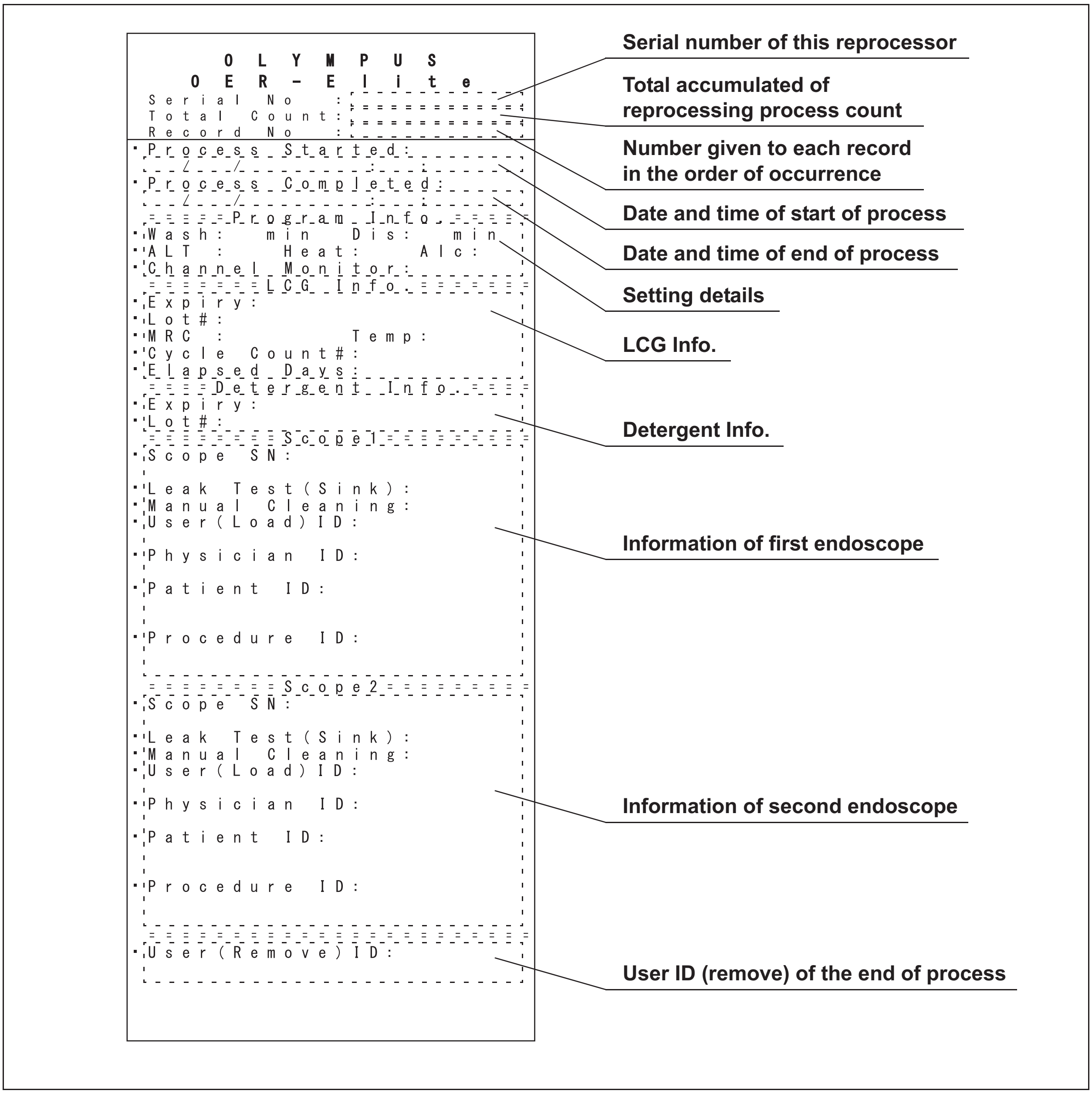


Figure 11.27

Reprocessing – Error (Separate)

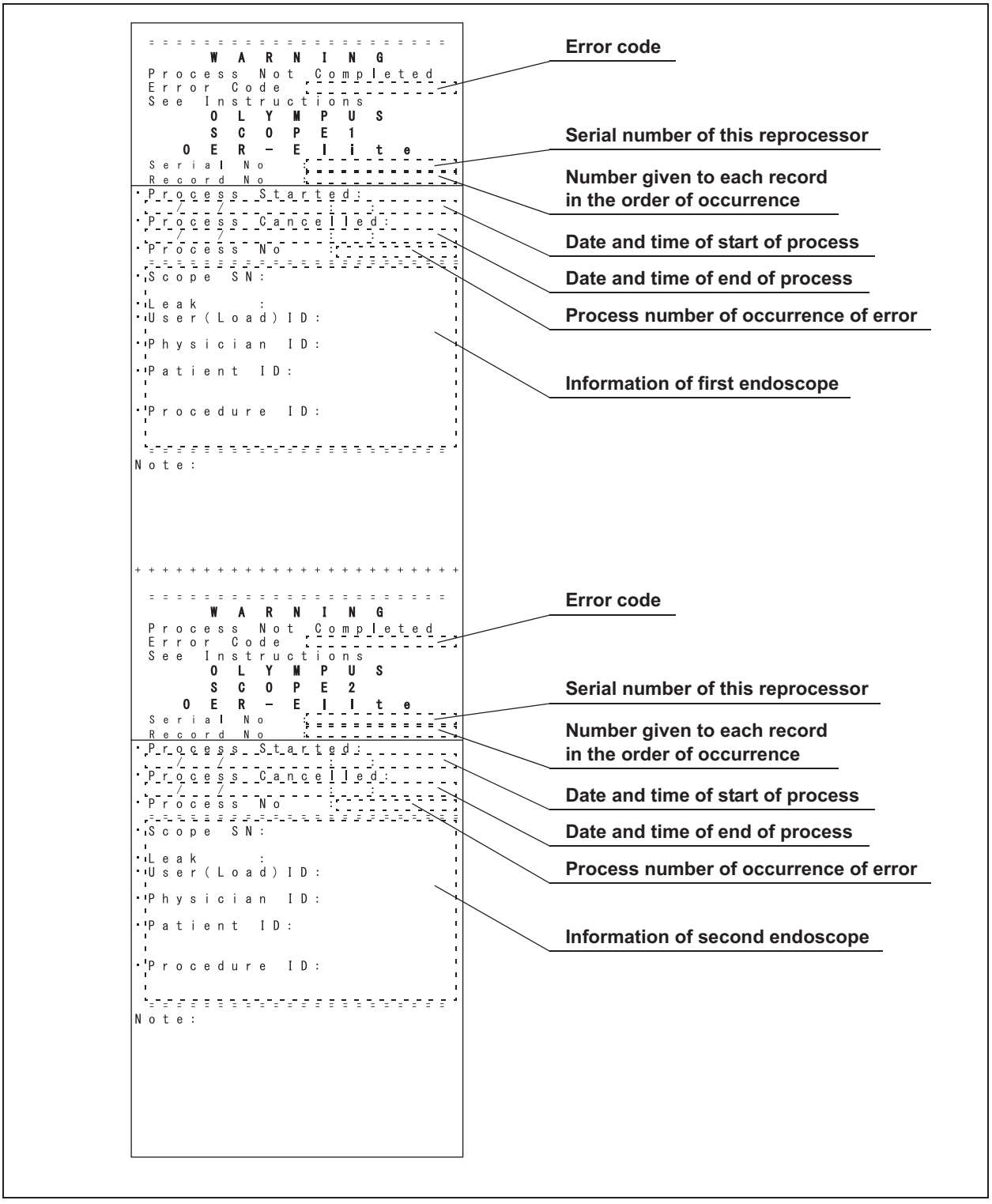


Figure 11.28

Reprocessing – Error (Combine)

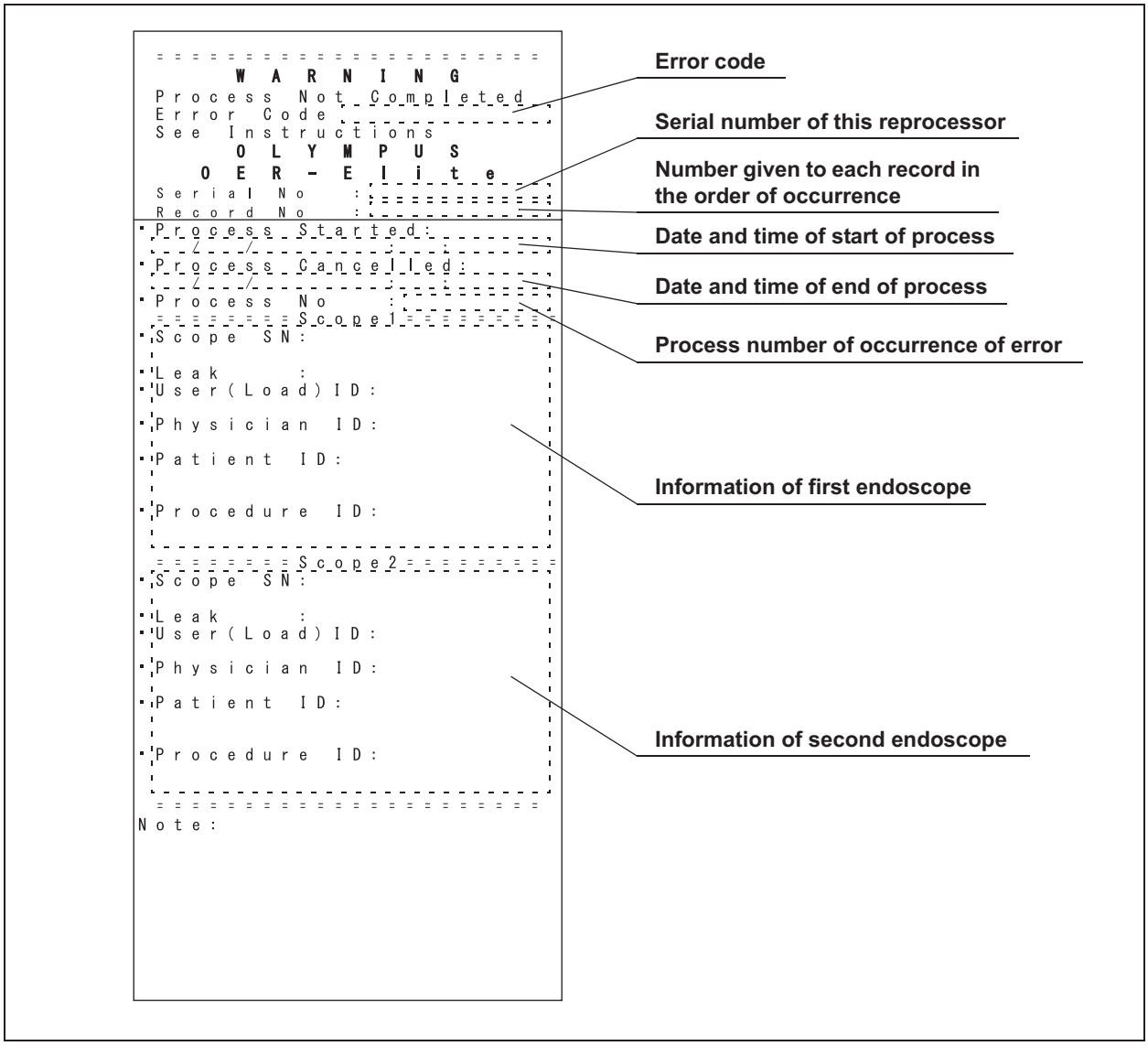


Figure 11.29

Leak test – Normal (Separate)

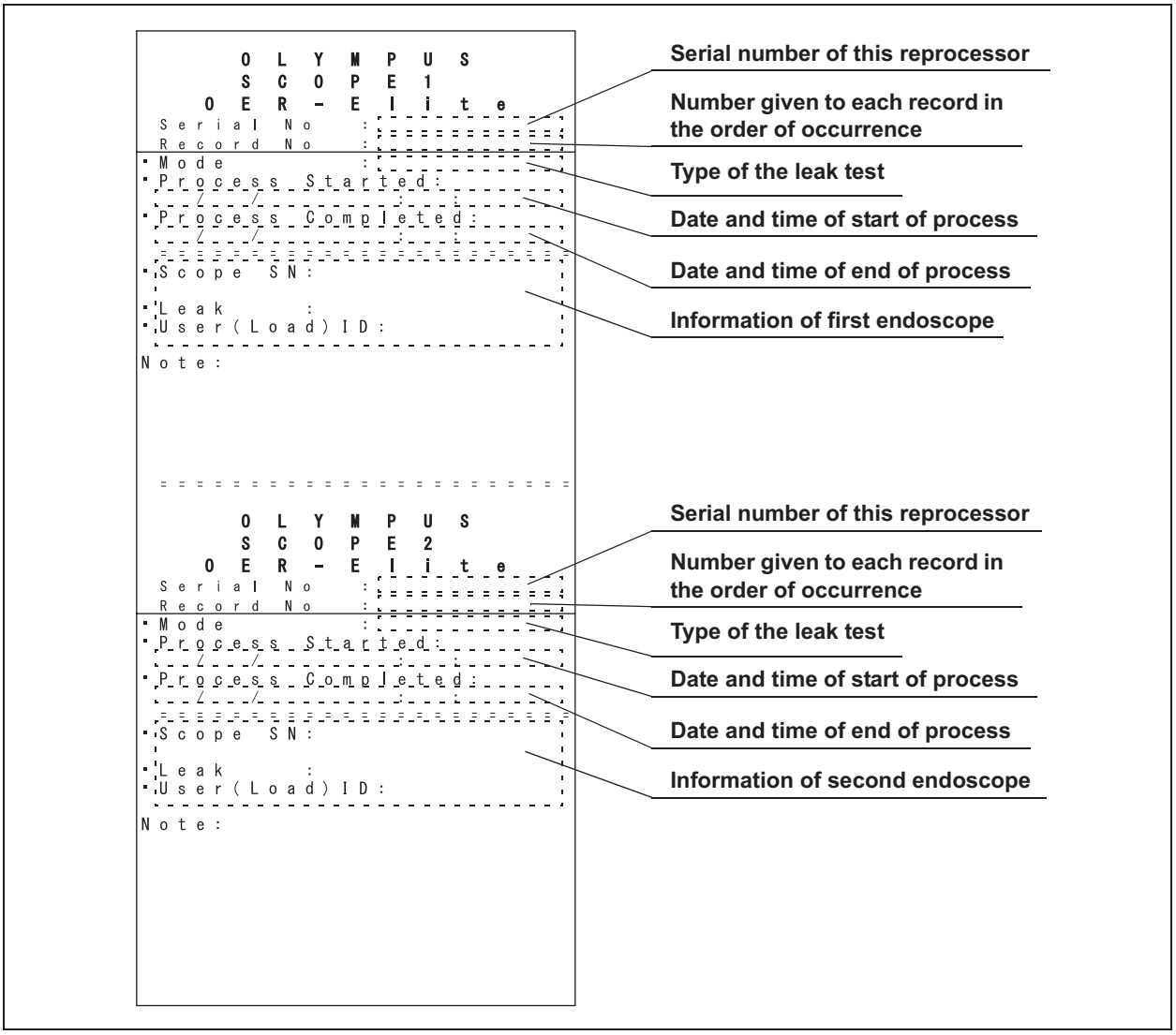


Figure 11.30

Leak test – Normal (Combine)

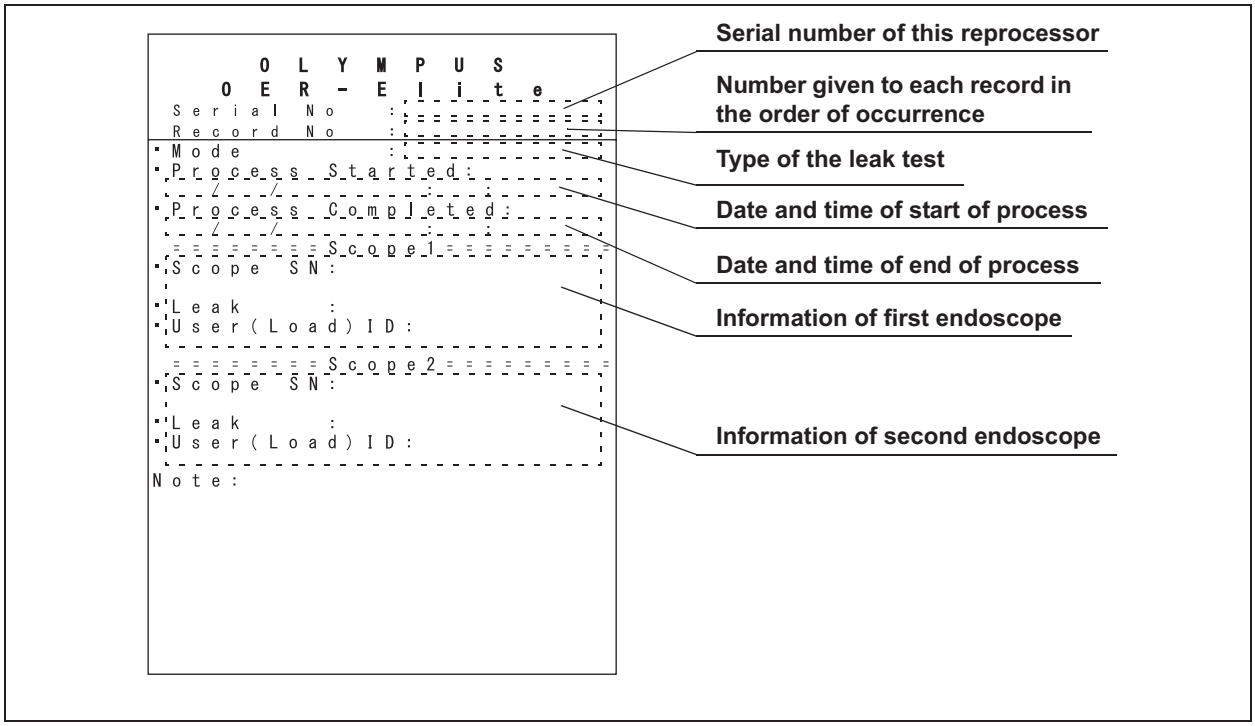


Figure 11.31

Leak test – Error (Separate)

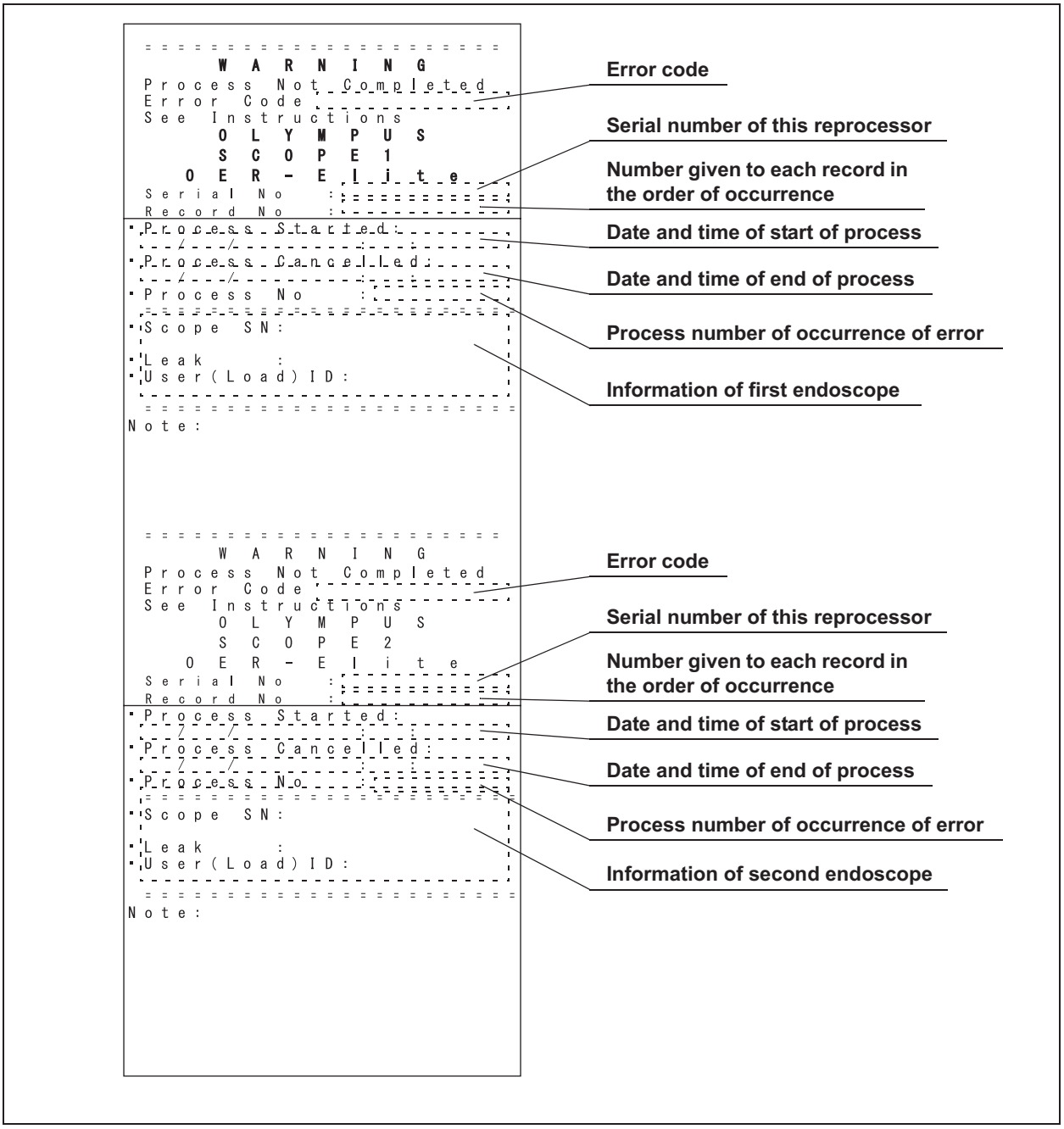


Figure 11.32

Leak test – Error (Combine)

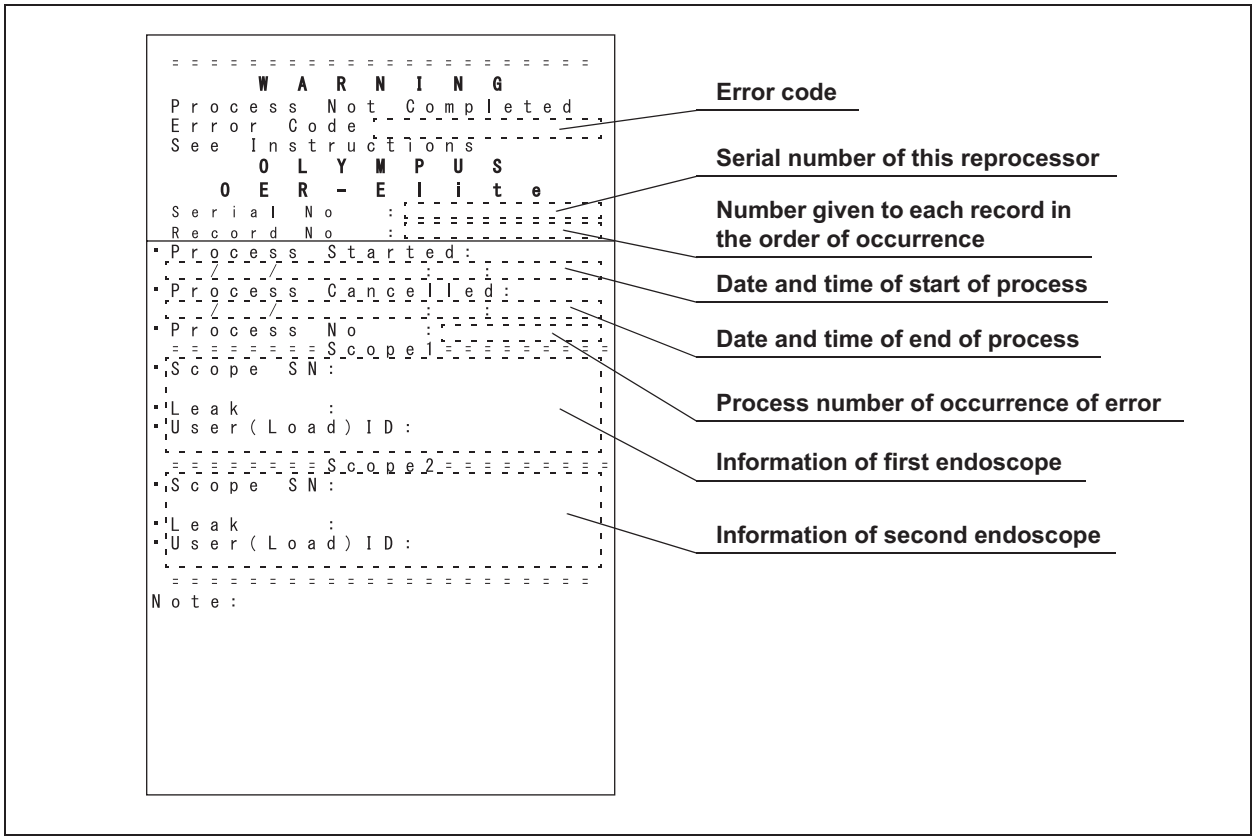


Figure 11.33

Leaking scope decontamination – Normal

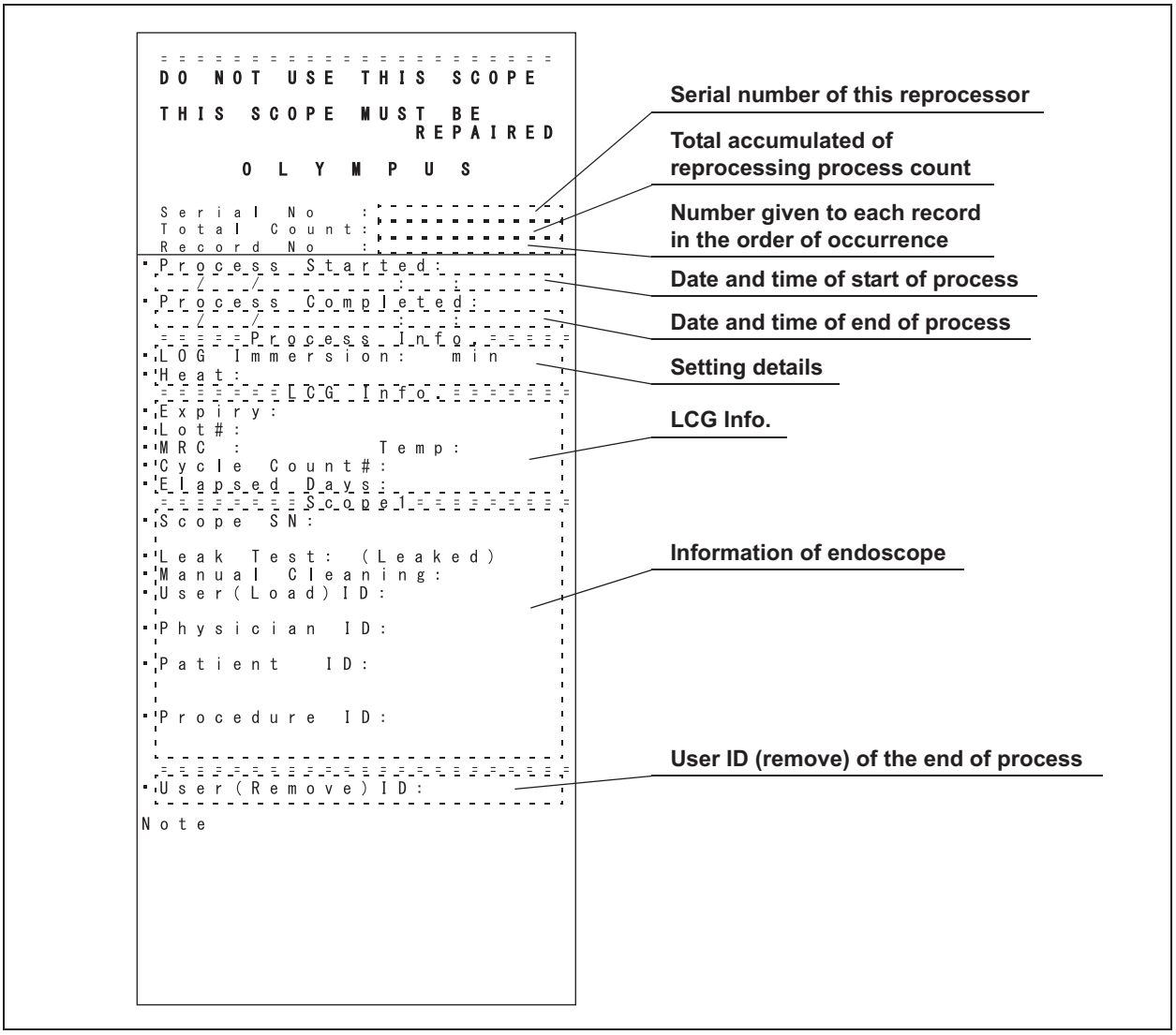


Figure 11.34

Leaking scope decontamination – Error

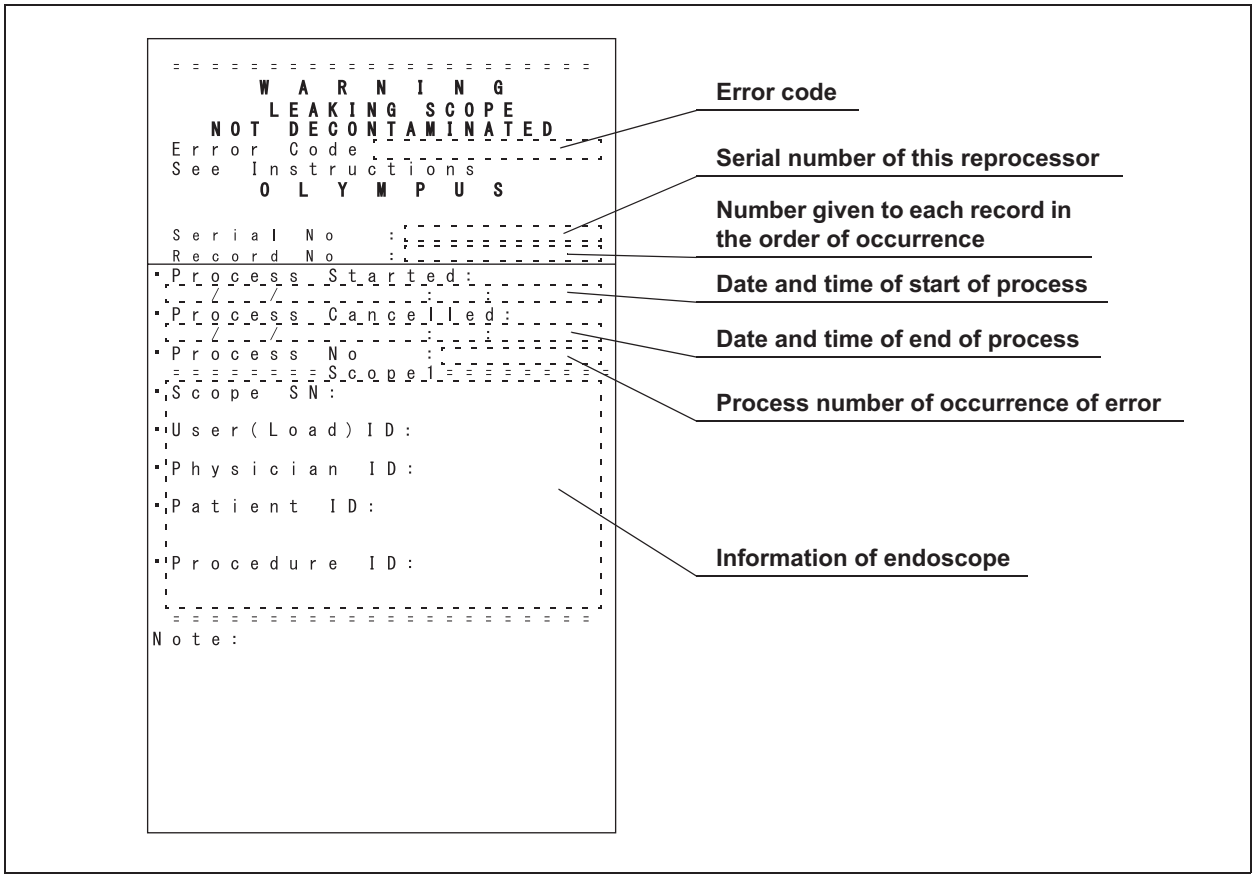


Figure 11.35

Chapter 12 Information Menu Screen

12.1 RFID data check

This function is to check the RFID data of Scope, User, and Physician.

WARNING

If electromagnetic interference is caused by the radio wave radiated from the RFID reader of this reprocessor, immediately move the interfered device apart from the RFID reader or turn the reprocessor OFF. If you still do not feel well, consult a physician. The radio wave radiated from the RFID reader of this reprocessor may cause malfunction of medical devices such as a pacemaker or other electronic equipment.

CAUTION

An electromagnetic interference with other devices may shorten the communications distance of the designated ID tag and cause signals to become unreadable. Try to take mitigation measures such as keeping the affecting device away from this reprocessor.

1 Press the “Information” button on the Menu screen.

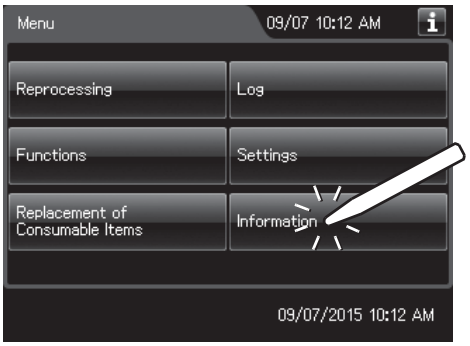


Figure 12.1

2 Press the “RFID Information” button on the Information menu.

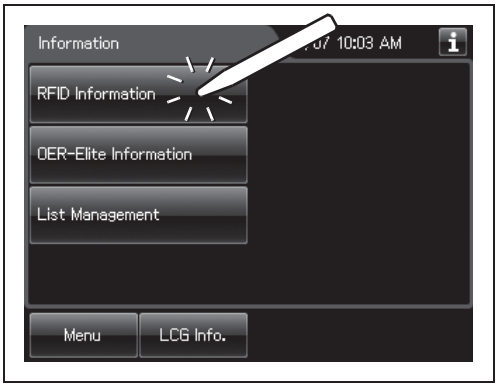


Figure 12.2

3 Hold the internal ID endoscope connector, the external ID tag of endoscope, the user ID card, or the physician ID card to the RFID reader of the reprocessor, and scan the tag with the reader until a short beep sounds.

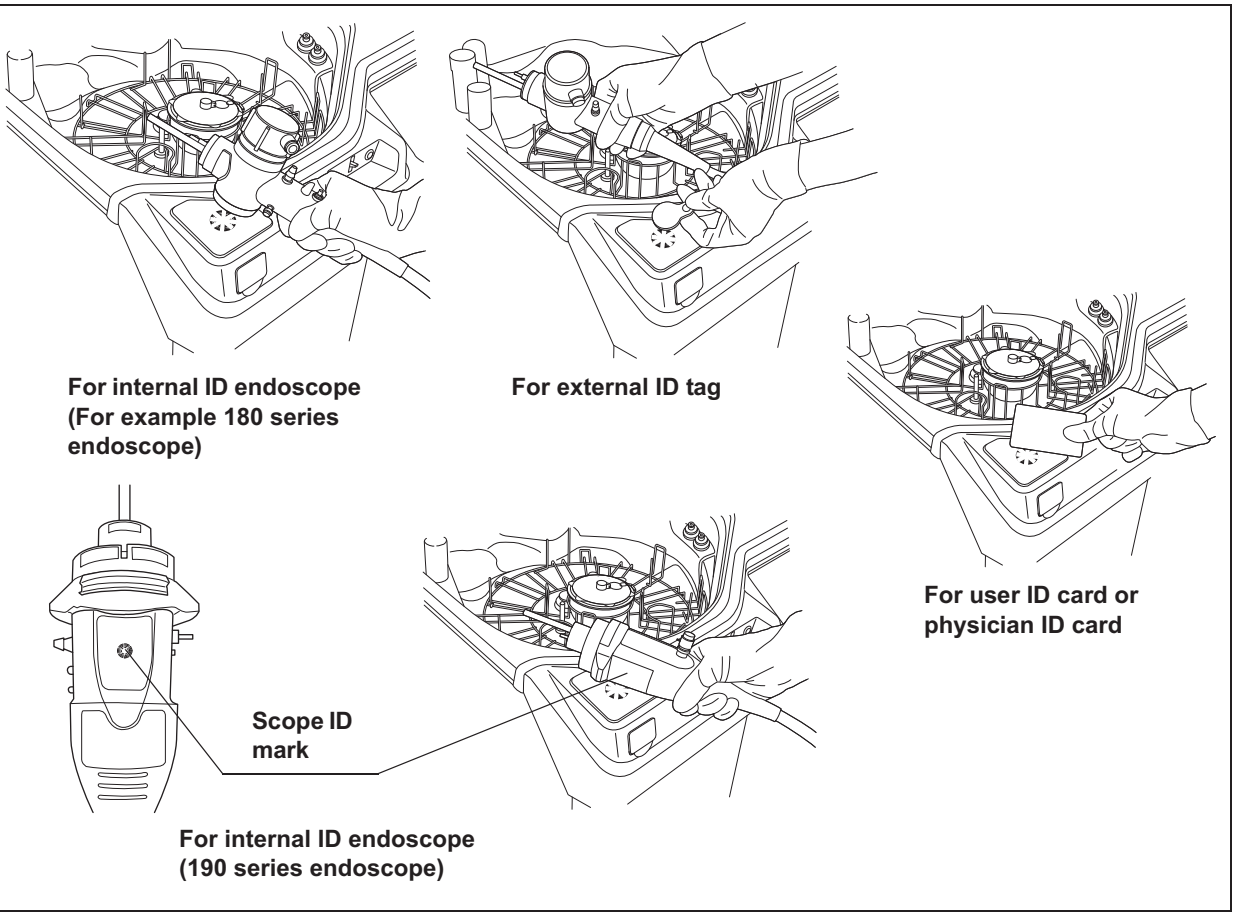


Figure 12.3

4 The touch screen displays the RFID data.

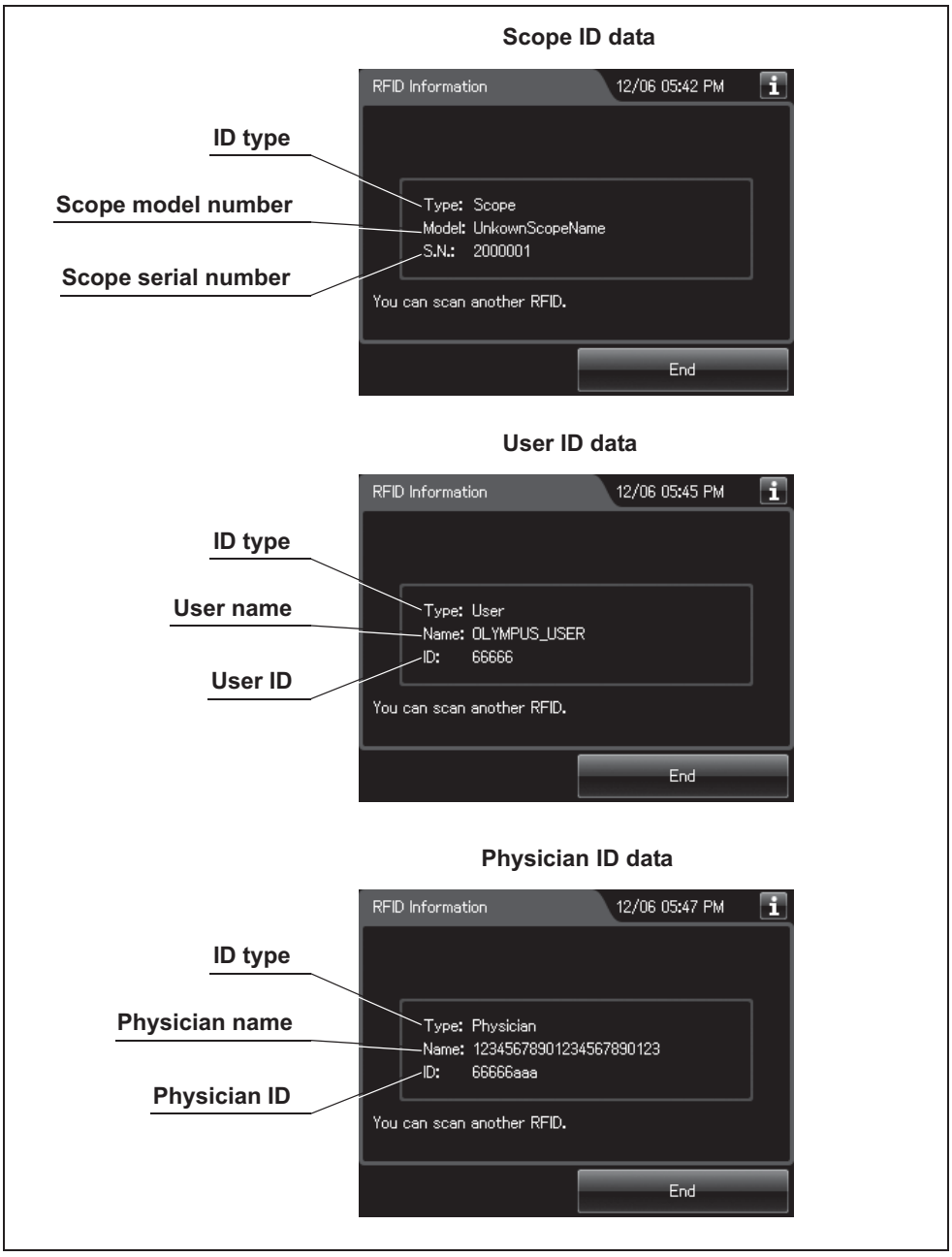


Figure 12.4

5 Repeat Step 4 to remove current display information if check another RFID data.

6 Press the “End” button to go back to the Information menu.

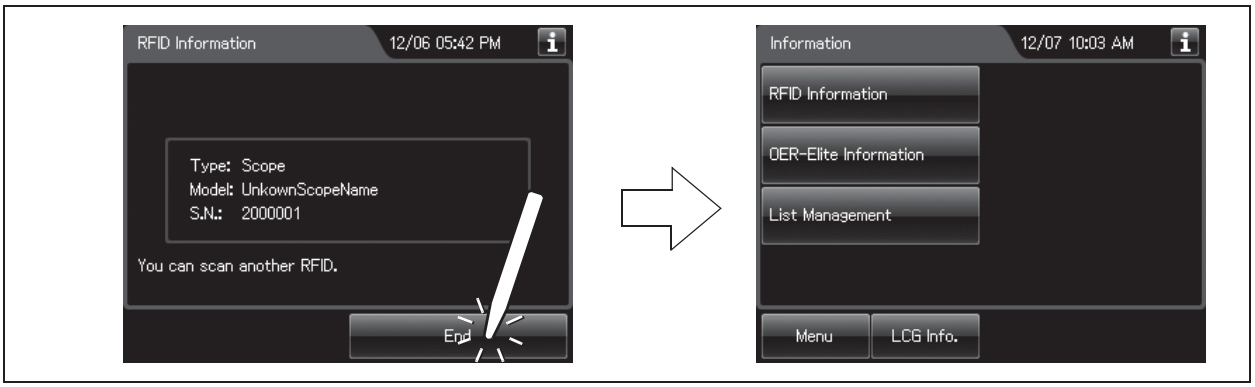


Figure 12.5

12.2 Reprocessor information check

This function is used to check the information on the reprocessor.

1 Press the “Information” button on the Menu screen.

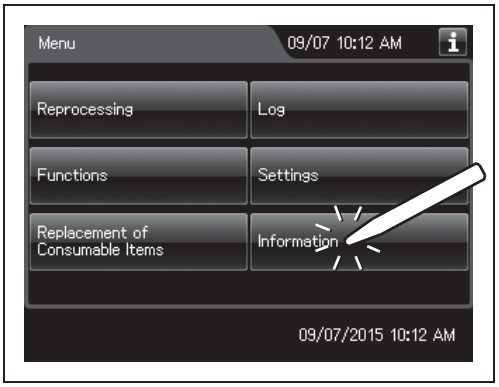


Figure 12.6

2 Press the “OER-Elite Information” button on the Information menu.

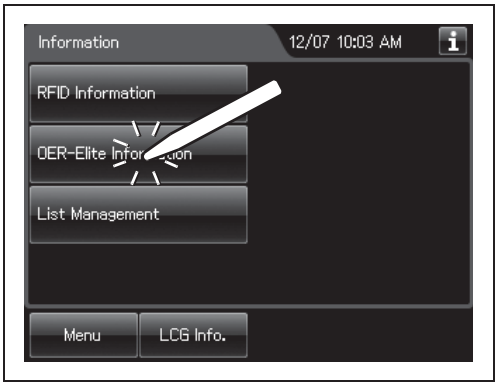
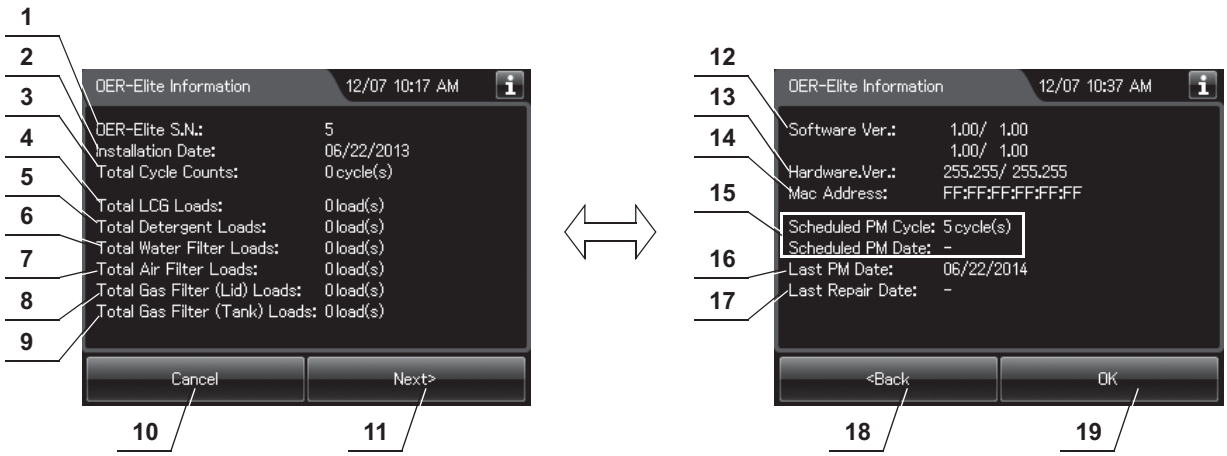


Figure 12.7

3 The touch screen displays the OER-Elite Information.



No.	Item/Button	Description
1	Body number	Body number of the reprocessor.
2	Installation Date	Date of installation of the reprocessor.
3	Total Cycle Counts	Total count of reprocessing cycles performed on the reprocessor.
4	Total LCG Loads	Total count of loading disinfectant solution on the reprocessor.
5	Total Detergent Loads	Total count of loading detergent solution on the reprocessor.
6	Total Water Filter Loads	Total count of loading water filter on the reprocessor.
7	Total Air Filter Loads	Total count of loading air filter on the reprocessor.
8	Total Gas Filter (Lid) Loads	Total count of loading gas filter on the lid on the reprocessor.
9	Total Gas Filter (Tank) Loads	Total count of loading gas filter on the tank on the reprocessor.
10	Cancel button	Returns to information menu screen.
11	Next button	Goes to the next information screen.
12	Software version	Version number of the software used in the reprocessor.
13	Hardware version	Version number of the hardware used with the reprocessor.
14	MAC address	MAC address of the reprocessor.
15	Scheduled PM Cycles/Date	Information of the next periodic maintenance.
16	Last PM Date	Date of the last periodic maintenance.
17	Last Repair Date	Date of the last repair.
18	Back button	Goes to the previous information screen.
19	OK button	Returns to information menu screen.

4 Press the “Cancel” button or “OK” button to go back to the information menu screen.

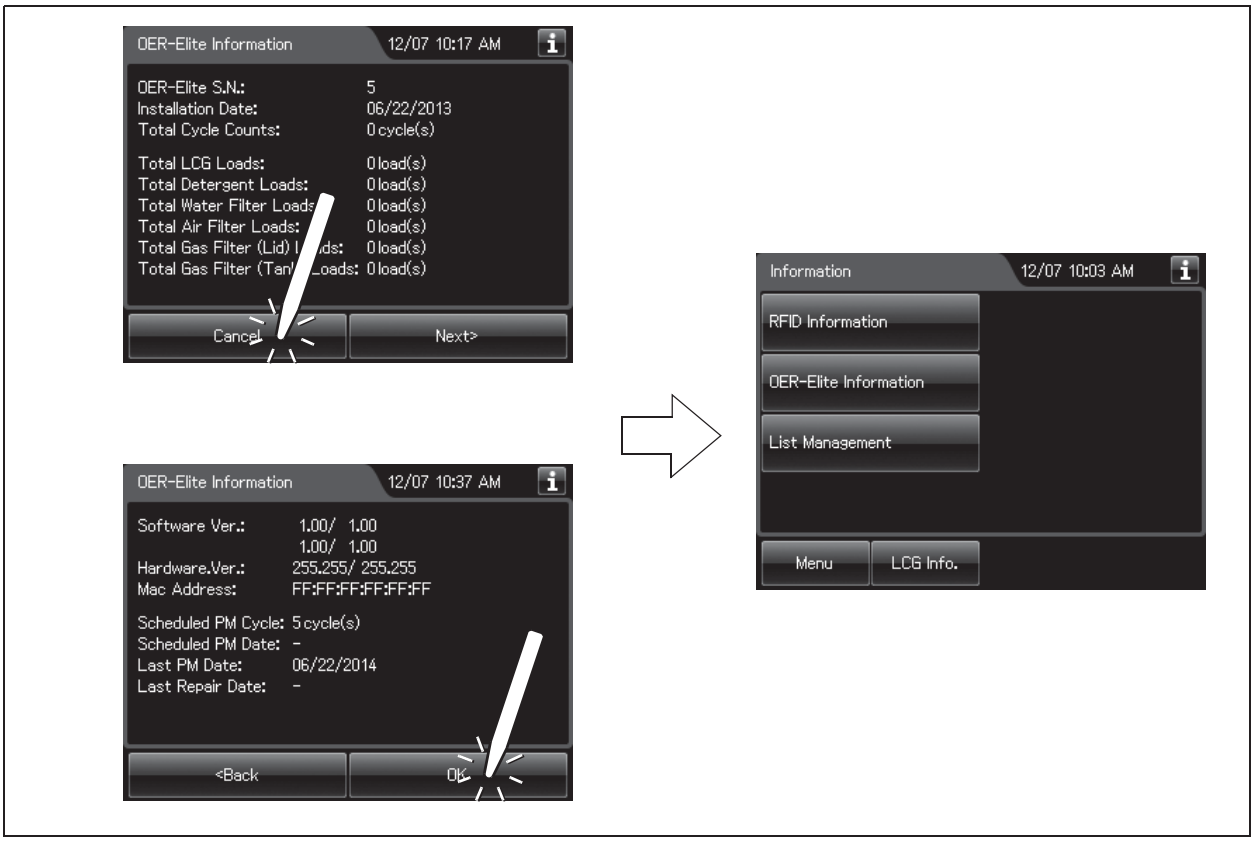


Figure 12.8

12.3 List management

This section is to edit the ID list. The IDs edited here can be used in the step “(b) Recalling the pre-registered ID” on page 54.

NOTE

The ID list contains the following IDs

- Scope ID
- User ID
- Physician ID
- Procedure ID

1 Press the “Information” button on the Menu screen.

2 Press the “List Management” button.

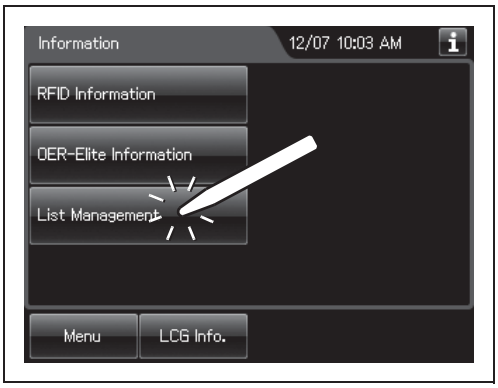


Figure 12.9

3 After selecting the ID list to edit, the ID list appears.

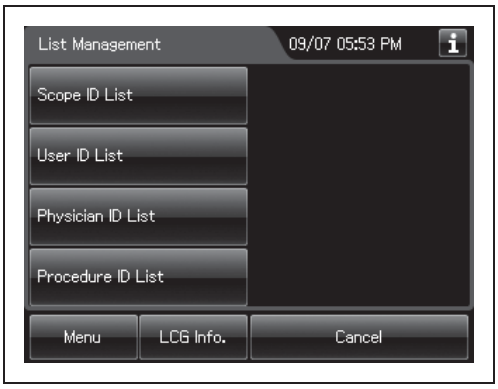
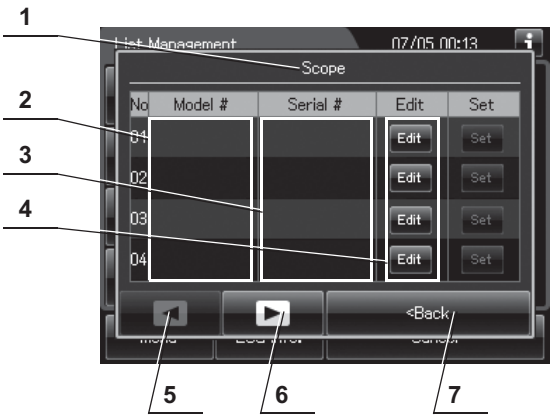


Figure 12.10

4 On the ID select screen, press the “Edit” button to be input. The ID input screen (software keyboard) will appear.

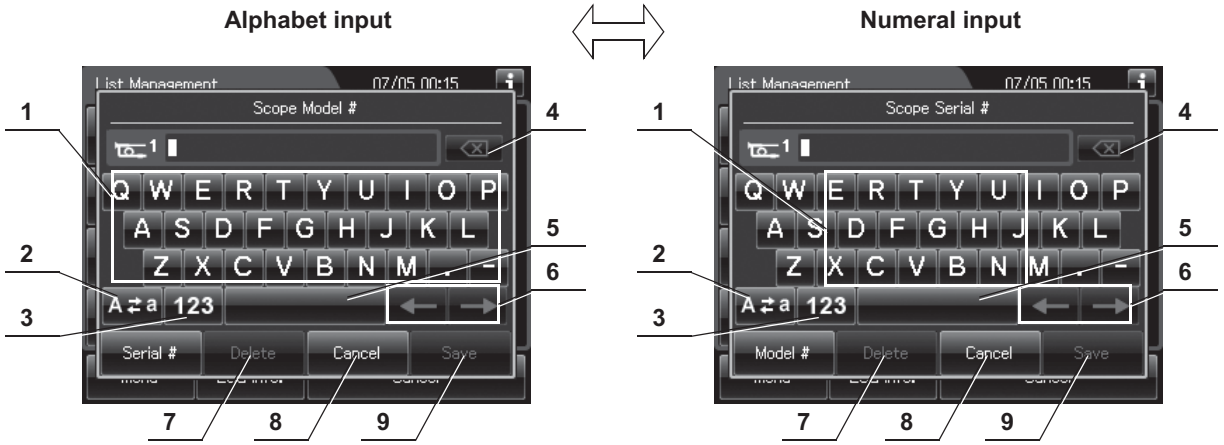
NOTE

Fifty IDs can be registered for each ID type.



No.	Item/Button	Description
1	ID type	Type of the currently edited ID.
2	Model # or Name	Scope ID list: Displays the model numbers of the endoscopes. User ID list: Displays the user names. Physician ID list: Displays the physician names. Procedure ID list: Displays the procedure names.
3	Serial # or ID	Scope ID list: Displays the serial numbers of the endoscopes. User ID list: Displays the ID number of users. Physician ID list: Displays the ID number of physicians. Procedure ID list: Displays the ID number of procedures.
4	Edit buttons	Press one of the buttons to open the ID information edit screen.
5	Previous page button	Press to go to the next page. When there is no further page to go forward to, the button turns gray and becomes unavailable.
6	Next page button	Press to return to the next page. When there is no further page to turn back to, the button turns gray and becomes unavailable.
7	Back	Press to close the ID select screen.

5 Enter the name on the software keyboard displayed on the touch screen.



No.	Button	Note
1	Alphabet/ Numeral key	Enter an alphabet or a numeral.
2	Uppercase/ Lowercase	Press “Uppercase/lowercase” button to switch alphabet character on the soft keyboard between uppercase characters and lowercase characters.
3	Numeric/ Alphabetic	Press “Numeric or Alphabetic” button to switch the input mode between a numeral and the alphabet.
4	Backspace	Press the “Backspace” button to delete the left character of a cursor. When a cursor is on the left edge, this button turns gray and becomes unavailable.
5	Space	Press the “Space” button to insert a space character.
6	Cursor move	Press the “Cursor move” button to move the cursor left or right.
7	Delete	Press the “Delete” button to delete about all information.
8	Cancel	Return to the previous screen without saving the setting value.
9	Save	Return to the previous screen and save the entered value.

6 Press the “Save” button to save the selected setting.

7 Press the “Back” button.

Chapter 13 Troubleshooting and Repair

WARNING

If the reprocessing process is interrupted, the endoscopes will not be properly reprocessed. In this case, reprocessing in the OER-Elite should be started again from the beginning.

If any irregularity is detected during an inspection or if the reprocessor is clearly malfunctioning, do not use it. Contact Olympus for repair.
Some malfunctions may be corrected by referring to the Section 13.2, “Troubleshooting guide”. If the problem cannot be resolved by the described remedial action, do not use the reprocessor and contact Olympus.

13.1 Emergency stop and automatic processing after stopping

The OER-Elite can be stopped at any time during operation by pressing the STOP button on the main control panel. The touch screen will display error code [E000] at this time. When the reprocessor is stopped, it identifies the situation in which it was stopped and automatically performs the required operations (including draining of the reprocessing basin), to return the unit to an idle state.

WARNING

- When a process is interrupted, be sure to execute it again from the beginning. An endoscope that has not been subjected to a complete, error-free process is not safe for patient use. Otherwise, the endoscope reprocessing may be insufficient.
- If the process is stopped because of a problem with the reprocessor, contact Olympus.

CAUTION

Do not press the power switch OFF during operation. Otherwise, fluid will remain in the reprocessing basin without automatic draining and Air Purge, and the reprocessor may malfunction.

❍ Treatment after automatic processing has completed

Remove the cause of the reprocessor stoppage, and start the process again from the beginning.

13.2 Troubleshooting guide

WARNING

- Before handling the disinfectant solution, read the cautions carefully and use it as instructed. It is especially important to know what to do if the disinfectant solution comes in contact with your skin and eyes.
- When handling the disinfectant solution, wear personal protective equipment to prevent any disinfectant from getting on your skin and eyes or being inhaled. Avoid direct physical contact and inhalation of vapors. If any disinfectant solution gets in your eyes, immediately rinse with a large amount of fresh water and then consult a medical specialist. Personal protective equipment, such as eyewear, face mask, moisture-resistant clothing, and chemical-resistant gloves that fit properly and are long enough so that your skin and eyes is not exposed. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.
- Do not put your hand behind the disinfectant solution bottle drawer. Irritation of skin due to contact with concentrated disinfectant solution, injury by touching a projection, or malfunction of this reprocessor may result.
- In the event, in case the process stops and fluid remains in the reprocessing basin due to a power failure or malfunction, keep the lid closed and do not contact with fluid in the basin. Also, do not put the fluid close to fire. Otherwise, adverse physical effects caused by inhalation of disinfectant vapor or physical contact with chemicals, or fire hazard from the residual alcohol may occur.

WARNING

- When using disinfectant solution and alcohol, Olympus recommends the use of gas filters and operating this reprocessor in a well-ventilated area.
  - Wear a face mask, gloves, and protective clothes to minimize aspiration and skin contact.
  - Wear goggles for eye protection.

  Refer to the following association's guidelines related to ventilation:

  SGNA (Society of Gastroenterology Nurses and Associates)
  ASGE (American Society of Gastroenterological Endoscopy)
  APIC (Association for Professionals of Infection Control and Epidemiology)
  AORN (Association of Preoperative Registered Nurses)
  ASTM (American Society for Testing and Materials)
  OSHA (Occupational Safety and Health Administration)
  ACGIH (American Conference of Governmental Industrial Hygienists)
  NIOSH (National Institute for Occupational Safety and Health)
  AIA (American Institute of Architects)

  If the person operating the reprocessor exhibits an allergic reaction or symptoms, no matter how slight, they should discontinue the task they are performing and vacate the room.
- In the event, in case the process stops and fluid remains in the reprocessing basin due to a power failure or malfunction, keep the lid closed and do not contact with fluid in the basin. Also, do not put the fluid close to fire. Otherwise, adverse physical effects caused by inhalation of disinfectant vapor or physical contact with chemicals, or fire hazard from the residual alcohol may occur.

CAUTION

- If a rinse is performed while an error is actively being displayed and disinfectant solution is still in the reprocessing basin, the rinse process will drain the disinfectant out of the reprocessor. To prevent this, refer to "❍ Error codes and remedial actions" on page 602 for instructions for collecting the disinfectant.
- Do not press the power switch OFF when an error code is displayed. Doing so may result in malfunction. The reprocessor will automatically start a process to address the error code. (The error code will blink during automatic processing.) After the error code starts blinking, follow the instructions in "Error codes and remedial actions" below.

NOTE

To complete the process properly, some process cannot be stopped with STOP button.

Error codes and remedial actions

1 If the reprocessor detects irregularity, buzzer beeps for three seconds and the error code will be displayed on the touch screen. While the touch screen displays the following screen, the reprocessor executes the automatic processing.

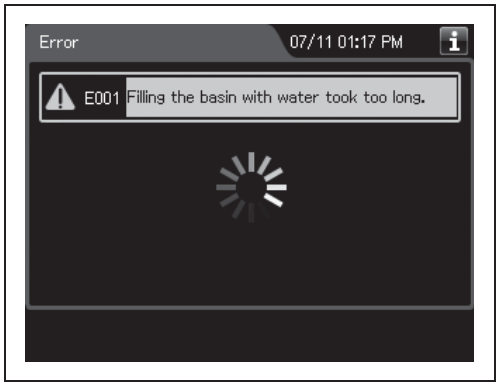
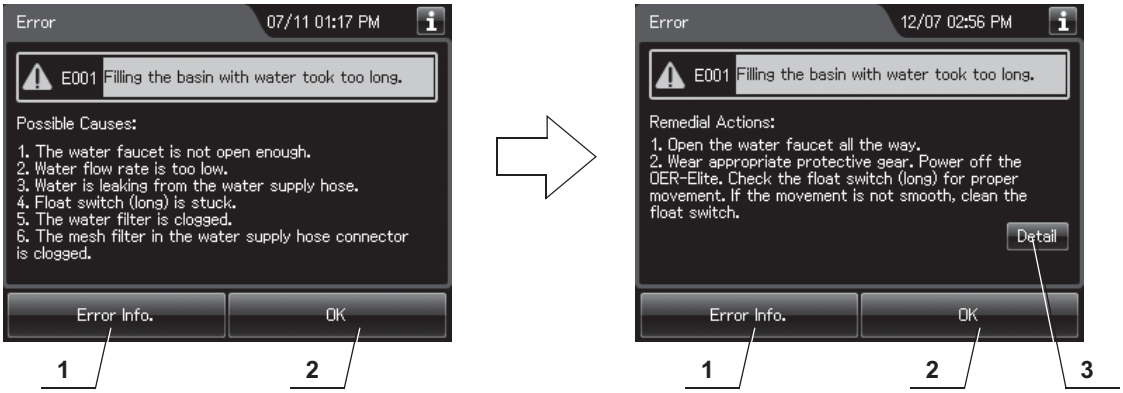


Figure 13.1

2 When the automatic processing is completed, the buzzer beeps for three second and the touch screen displays the possible cause or the remedial action. The error code remains on the touch screen and the buzzer beeps intermittently until the error code is cleared. If the touch screen displays possible causes, press the “OK” button to display the remedial actions.

Possible causes screen **Remedial action screen**



No.	Button	Description
1	Error Info.	Press to display the error info screen.
2	OK	Press to go to the next screen.
3	Detail	Press to display the details of remedial actions.

3 Perform remedial actions according to the instruction described in the table on page 605 through 613 or the instructions displayed on the touch screen.

4 Press the “OK” button.

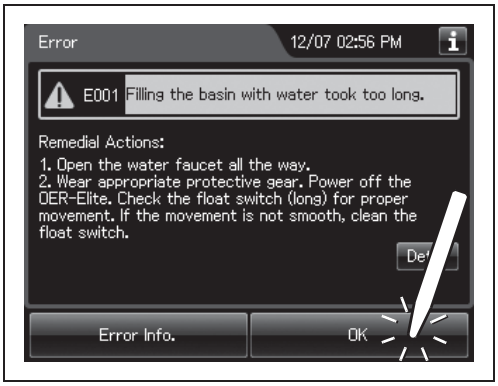
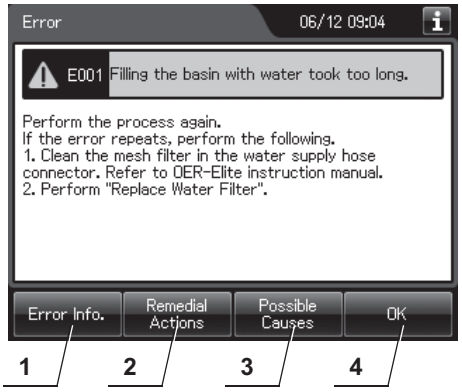


Figure 13.2

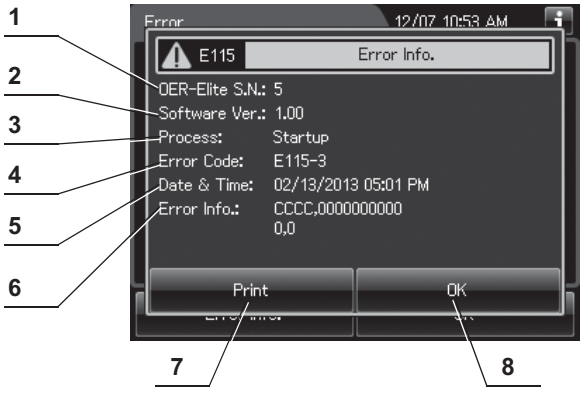
5 Read the instructions displayed on the touch screen and conduct the processes. Then Press the “OK” button to clear the error code.



No.	Button	Description
1	Error Info.	Press to display the error info screen.
2	Remedial Actions	Press to display the remedial actions.
3	Possible Causes	Press to display the possible causes.
4	OK	Press to clear the error.

NOTE

For the error info screen, see the following figure.



No.	Item/Button	Description
1	Serial number	Serial number of the reprocessor.
2	Software Ver.	Version number of the software used in the reprocessor.
3	Process	Process in which error is generated.
4	Error Code	Error code of error.
5	Date & Time	Date and time of occurrence of error.
6	Error Info.	Information required for contacting Olympus.
7	Print button	Press to print information of the error.
8	OK button	Press to close the error info screen.

Error code	Problem	Possible causes	Remedial actions
E000	Process was interrupted.	Stop button was pressed during the process.	Perform the process again.
E001	Filling the basin with water took too long (water supply time is beyond maximum setting).	• The water faucet is not open enough. • Water flow rate is too low. • Water is leaking from the water supply hose. • Float switch (long) is stuck. • The water filter is clogged. • The mesh filter in the water supply hose connector is clogged.	1 Perform the following. – Open the water faucet all the way. – Check if water is leaking from the water supply hose. – Power off the OER-Elite and check the float switch (long) for a proper movement. If not, clean that. 2 Perform the process again. If the error repeats, perform the following. – Replace the water filter. →Refer to Section 8.4, “Replacing the water filter (MAJ-824 or MAJ-2318)”. – Clean the mesh filter in the water supply hose connection port. →Refer to Section 9.7, “Cleaning the mesh filter in the water supply hose connector”.
E002	Cleaning fluid is not discharged.	• Drain hose is improperly installed. • Drain port mesh filter in basin is clogged.	1 Check the drain hose for proper installation. (Height of the drain hose should be less than 60 cm.) 2 Wait until the fluid in the basin drained completely. 3 Wear appropriate protective gear and clean the drain port mesh filter basin. →Refer to Section 10.3, “Cleaning the mesh filters”. 4 Close the lid by pushing until it clicks and perform the air purge to remove water. →Refer to Section 7.6, “Air purge”. 5 Perform “Rinse”. →Refer to Section 7.5, “Rinse”. 6 Perform the process again.
E004	Cleaning fluid decreases during the cleaning process.	Internal problem with the reprocessor.	Contact Olympus.
E005	Basin fluid level is too high.	Irregularity in the fluid level sensor.	1 Close the water faucet. 2 Contact Olympus.
E006	Fluid level sensor malfunctions.	Float switch (short) or float switch (long) is stuck.	1 Clean the float switches. →Refer to Section 10.4, “Cleaning the float switches”. 2 Perform “Rinse”.→Refer to Section 7.5, “Rinse”. 3 Perform the process again.

Error code	Problem	Possible causes	Remedial actions
E007	Fluid level sensor malfunctions.	Float switch (short) is stuck.	1 Clean the float switches. →Refer to Section 10.4, “Cleaning the float switches”. 2 Perform “Rinse”. →Refer to Section 7.5, “Rinse”. 3 Perform the process again.
E008	Inappropriate water temperature.	Water temperature is too high.	Check the water temperature is in the range of 5 – 28 °C (41 – 82 °F.)
E011	There is too much LCG in the disinfectant solution tank.	• Irregularity in the drain hose. • Clogging of the drain port of the reprocessing basin.	• Close the lid if it is open. Automatic Processing will start after the lid is closed. • Perform the following. 1 Check the drain hose for proper installation (height of the drain hose should be less than 60 cm.) 2 Wear appropriate protective gear and clean the mesh filter in the drain port of the basin. →Refer to Section 10.3, “Cleaning the mesh filters”. 3 Perform “Rinse”. →Refer to Section 7.5, “Rinse”. 4 Perform MRC check. →Refer to Section 4.3, “MRC check setting”. 5 Perform the process again.
E012	There is insufficient amount of LCG in the disinfectant solution tank.	Blockage of the ventilation openings on the gas filter case (lid).	1 Check that the ventilation openings on the gas filter case (lid) are not blocked. 2 Perform “Drain LCG”. →Refer to Section 8.2, “Replacing the disinfectant solution”. 3 Perform “Load LCG”. →Refer to Section 8.2, “Replacing the disinfectant solution”. 4 Perform the process again.
E013	Basin exists a rinse water.	• Drain hose is improperly installed. • Drain port mesh filter in basin is clogged.	1 Check the drain hose for proper installation. (Height of the drain hose should be less than 60 cm.) 2 Wait until the fluid is drained completely. 3 Wear appropriate protective gear and clean the drain port mesh filter in basin. 4 Perform “Rinse”. →Refer to Section 7.5, “Rinse”. 5 If the quantity of LCG in the disinfectant solution tank is not sufficient, perform “Drain LCG”, then “Load LCG”. →Refer to Section 8.2, “Replacing the disinfectant solution”. 6 Perform the process again.

Error code	Problem	Possible causes	Remedial actions
E014	LCG cannot be returned to the tank.	• Blockage of the ventilation openings on the gas filter case (lid). • Drain port mesh filter in basin is clogged.	1 Check that the ventilation openings on the gas filter case (lid) are not blocked. 2 Wait until the fluid in the basin collected completely. 3 Wear appropriate protective gear and clean the drain port mesh filter in basin. 4 Perform “Rinse”. →Refer to Section 7.5, “Rinse”. 5 If the quantity of LCG in the disinfectant solution tank is not sufficient, perform “Drain LCG”, then “Load LCG”. →Refer to Section 8.2, “Replacing the disinfectant solution”. 6 Perform the process again.
E015	Fluid level sensor malfunctions.	Float switch (short) is stuck.	1 Power off the OER-Elite. Wear appropriate protective gear and check the float switch (short) for proper function. If not clean, clean the fluid level sensor”. 2 Perform “Rinse”. →Refer to Section 7.5, “Rinse”. 3 Perform the process again.
E016	It takes too long to fill the basin with LCG.	Internal problem with the reprocessor.	Contact Olympus.
E017	LCG cannot be heated.	Internal problem with the reprocessor.	Contact Olympus.
E018	Temperature sensor malfunctions.	Internal problem with the reprocessor.	Contact Olympus.
E019	LCG temperature out of range.	Internal problem with the reprocessor.	1 Power off the OER-Elite. 2 Contact Olympus.
E020	Heat LCG Timer could not be executed.	• OER-Elite was powered off. • Power loss.	Perform “Heat LCG”. →Refer to Section 7.2, “Heat LCG”.
E021	Insufficient air purge pressure.	• Air filter is not installed properly. • Air filter is clogged.	1 Check if the air filter is firmly attached. 2 If the air filter is firmly attached, the air filter may be clogged. Perform “Replacing the air filter”. →Refer to Section 8.5, “Replacing the air filter (MAJ-823)”. 3 Perform the air purge. →Refer to Section 7.6, “Air purge”. 4 Perform the process again.
E022	Insufficient fluid pressure.	The circulation port mesh filter in basin is clogged.	1 Wear appropriate protective gear and clean the circulation port mesh filter in basin. →Refer to Section 10.3, “Cleaning the mesh filters”. 2 Perform the process again.

Error code	Problem	Possible causes	Remedial actions
E023	Excessive fluid pressure.	Internal problem with the reprocessor.	Contact Olympus.
E024	Channel Monitor Error	• Connecting tubes are not connected. • Leak test air tube is not connected. • Endoscope's suction channel is clogged. • Unnecessary connecting tubes are connected to connectors in the reprocessing basin.	Take optimum remedial actions as described in "■ When the error code [E024] is displayed during the reprocessing process" on page 614.
E026	Insufficient fluid flow rate.	The circulation port mesh filter in basin is clogged.	1 Wear appropriate protective gear and clean the circulation port mesh filter in basin. →Refer to Section 10.3, "Cleaning the mesh filters". 2 Perform the process again.
E027	Internal valves malfunction.	Internal problem with the reprocessor.	Contact Olympus.
E031	The lid is open.	Internal problem with the reprocessor.	Contact Olympus.
E041	The power was lost during the process.	• Power loss. • OER-Elite was powered off.	1 Check that the power cord is connected firmly. 2 Perform the process again. Note: Do not power off the OER-Elite during the process.
E051	Fluid leakage inside the OER-Elite.	Internal problem with the reprocessor.	1 Close the water faucet. 2 Turn the power off. 3 Disconnect the power cord from the outlet. 4 Contact Olympus.
E052	Fluid leakage inside the OER-Elite.	Internal problem with the reprocessor.	1 Close the water faucet. 2 Turn the power off. 3 Disconnect the power cord from the outlet. 4 Check the O-ring of leak test connector is firmly attached. 5 Contact Olympus.
E061	Ultrasonic cleaning is not functioning.	Irregularity in the ultrasonic oscillator.	Contact Olympus.
E071	Abnormalities with the disinfectant bottle drawer sensor.	Internal problem with the reprocessor.	Contact Olympus. If the odor of disinfectant solution increases, wear appropriate personal protective reprocessor.

Error code	Problem	Possible causes	Remedial actions
E072	LCG in the tank cannot be discharged.	• Disinfectant collection hose is improperly connected. • Drain port mesh filter in basin is clogged. • Drain hose is improperly installed.	• When draining through the disinfectant collection hose is selected 1 Check the disinfectant collection hose for proper connection. 2 Perform “Drain LCG” again. →Refer to Section 8.2, “Replacing the disinfectant solution”. • When draining through the drain hose is selected. 1 Check the drain hose for proper installation. (Height of the drain hose should be less than 60 cm.) 2 Wait until the fluid in the basin drained completely. 3 Wear appropriate protective gear and clean the drain port mesh filter in basin. →Refer to Section 10.3, “Cleaning the mesh filters”. 4 Perform “Drain LCG” again. →Refer to Section 8.2, “Replacing the disinfectant solution”.
E073	Water supply irregularity during the Load LCG process.	• The water faucet is not open enough. • Drain port mesh filter in basin is clogged. • Water flow rate is too low. • Water is leaking from the water supply hose. • The water filter is clogged. • The mesh filter in the water supply hose connector is clogged.	1 Open the water faucet all the way. 2 Wear appropriate protective gear and clean the drain port mesh filter in basin. 3 Check if water is leaking from the water supply hose. 4 Close the lid by pushing until it clicks and restart “Load LCG” according to the guide on the touch screen.
E074	LCG in the cassette bottles is not supplied to the disinfectant solution tank.	Internal problem with the reprocessor.	Contact Olympus.

Error code	Problem	Possible causes	Remedial actions
E075	Water supply irregularity during the Load LCG process.	• The water faucet is not open enough. • Drain port mesh filter in basin is clogged. • Water flow rate is too low. • Water is leaking from the water supply hose. • The water filter is clogged. • The mesh filter in the water supply hose connector is clogged.	1 Open the water faucet all the way. 2 Wear appropriate protective gear and clean the drain port mesh filter in basin. 3 Check if water is leaking from the water supply hose. 4 Close the lid by pushing until it clicks and restart “Load LCG” according to the guide on the touch screen.
E076	Irregularity of the fluid level sensor in the disinfectant solution tank.	Internal problem with the reprocessor.	Contact Olympus.
E077	Incomplete positioning of the disinfectant bottle drawer.	Disinfectant bottle drawer is not completely closed.	Ensure that the disinfectant bottle drawer is completely closed.
E078	Cassette bottles are empty.	Empty cassette bottles were installed.	Perform the “Load LCG” with new cassette bottles.
E081	The process cannot be properly controlled.	Irregularity in the valve inside the reprocessor.	Contact Olympus.
E082	Internal irregularity in the OER-Elite.	Irregularity in the electrical circuitry inside the reprocessor.	Contact Olympus.
E083	The process cannot be properly controlled.	Irregularity in the electrical circuitry inside the reprocessor.	Contact Olympus.
E084	Malfunction of the RFID reader.	Irregularity in the electrical circuitry inside reprocessor.	Contact Olympus. To continue using the OER-Elite, and manually input the ID information via the touch screen. RFID will be disabled.
E086	Internal irregularity in the OER-Elite.	Irregularity in the pump inside the reprocessor.	Contact Olympus.
E087	Internal irregularity in the OER-Elite.	Irregularity in the flow sensor inside the reprocessor.	Contact Olympus.
E088	Insufficient fluid flow.	The circulation port mesh filter in the basin is clogged.	1 Wear appropriate protective gear and clean the circulation port mesh filter in basin. →Refer to Section 10.3, “Cleaning the mesh filters”. 2 Perform the process again.

Error code	Problem	Possible causes	Remedial actions
E089	Internal irregularity in the OER-Elite.	Irregularity in the electrical circuitry inside the reprocessor.	Contact Olympus.
E092	Manual leak test time has been exceeded.	Manual leak test time of 10 minutes has been exceeded.	Perform manual leak test again.
E093	Alcohol cannot be supplied during the process.	Clogging of the alcohol piping.	Refer to Section 7.14, “Alcohol flush”.
E094	Date cannot be printed.	• Printer is not properly connected to the OER-Elite. • Printer paper roll has run out. • Malfunction of printer.	1 If the printer paper runs out, replace the printer paper roll. 2 If the paper cover is open, close the cover. 3 Check the power LED of the printer lights up. If not, press power button on the operational panel of the printer to ON. 4 Check the interface cable is connected properly. 5 Print the data again.
E095	Detergent cannot be supplied during the process.	Clogging of the detergent piping.	• Refer to “❍ If the message screen “Message 093” is displayed again after replacing the detergent tank and restarting the reprocessing process:” on page 638.
E111	Internal irregularity in the OER-Elite.	Internal problem with the reprocessor.	Contact Olympus.
E112	ALT Self-Check Error	Leak test air tube was connected during the ALT Self-Check.	1 Confirm the leak test air tube is not connected. 2 Perform “ALT Self-Check” again. →Refer to Section 7.13, “Self-check of auto leak test”.

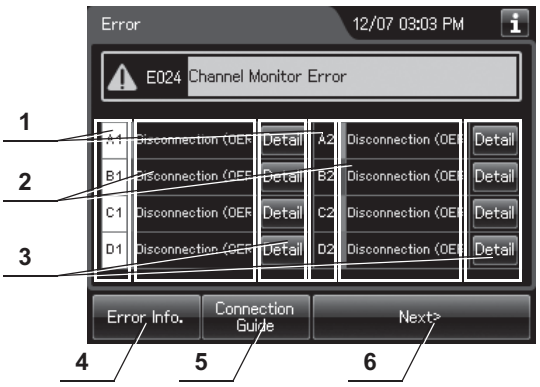
Error code	Problem	Possible causes	Remedial actions
E114	Leak detected during ALT process.	• There is a leak within the endoscope. • Leak test air tube is broken.	When the ALT is incorporated in the beginning of the reprocessing process: 1 If warm water was used in manual cleaning, the auto leak test may be erroneous because the temperature of endoscope(s) may change drastically after the manual cleaning. If the auto leak test is to be performed at the start of reprocessing, begin the reprocessing after the endoscope temperature has returned to the room temperature. Wait more than 15 minutes after manual cleaning for the endoscope temperature to return to room temperature. 2 If warm water was not used in manual cleaning, perform the following. – Identify the endoscope with leak from the scope IDs displayed on the touch screen. – Start the process again for the non-leaking endoscope. – Be sure to perform “Leaking Scope Decontamination” with the leaking endoscope before returning for repair. When the ALT is incorporated in the end of the reprocessing process: 1 Identify the endoscope with leak from the scope IDs displayed on the touch screen. 2 Remove the leaking endoscope from the OER-Elite, then start the process again for the non-leaking endoscope. 3 Return the leaking endoscope for repair.

Error code	Problem	Possible causes	Remedial actions
E115	Leak test air pressure is low.	• Irregularities of leak test air tube. • Irregularities of the O-ring of the leak test connector. • Excessive leak exists within the endoscope.	Perform the manual leak test to check if the endoscope or the leak test air tube leaks. – If a leak point exists on the leak test air tube, replace it with new one and retry the process. – If a leak point exists between the connector of the leak test air tube and the leak test connector (E1 or E2), or between the metallic connector and the venting connector of the endoscope, contact Olympus. – If a leak point exists on the outer surface, stop it with a piece of tape and perform the leaking scope decontamination. After it, send the scope for servicing. If a leak cannot be reduced by taping and this error occurs, contact Olympus. – If the leak point exists in a position where taping is impossible, do not execute this process but contact Olympus.
E117	Excessive leak test air pressure.	Internal problem with the reprocessor.	1 Contact Olympus. 2 If you wish to continue reprocessing, disable the ALT function.
E118	Cannot release the pressure of endoscope.	Internal problem with the reprocessor.	Contact Olympus.
E119	Auto leak test system malfunction.	Irregularity in the electrical circuitry inside the reprocessor.	1 Contact Olympus. 2 If you wish to continue reprocessing, disable the ALT function.
E124	Auto leak test system malfunction.	Irregularity in the electrical circuitry inside the reprocessor.	1 Contact Olympus. 2 If you wish to continue reprocessing, disable the ALT function.
E131	Portable memory was disconnected.	Portable memory was disconnected while the data was exported.	Re-insert the portable memory and export data again.
E132	Cannot write to portable memory.	• Improper connection of the portable memory. • Abnormalities of the portable memory.	Use another portable memory and export data again.
E134	Portable memory port malfunction.	Irregularity in the electrical circuitry inside the reprocessor.	Contact Olympus.

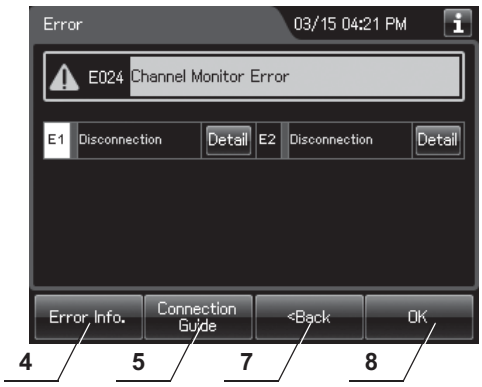
■ *When the error code [E024] is displayed during the reprocessing process*

If an error such as clogging of an endoscope channel or connection irregularity of the connecting tube or leak test air tubes occurs during the process, the error code [E024] is displayed on the touch screen and the reprocessor will stop the process. After the auto processing, the touch screen displays the following screen.

1st page



2nd page



No.	Item/Button	Description
1	Connector	Show Connector in the reprocessing basin.
2	Detection result	Displays a detection result if any irregularity is detected to a connector. Blank cell means that there are not any irregularities with the connector.
3	Detail button	Press to display the remedial actions of a connector that detected an irregularity. The button is unavailable if there are not any irregularities with the connector.
4	Error Info. button	Press to display the error information.
5	Connection Guide button	Press to display the connection guide screen. For detail, refer to "❍ Connection guide of first endoscope" on page 179, "❍ Connection guide of second endoscope" on page 206.
6	Next button	Press to display the next screen.
7	Back button	Press to return to the first page.
8	OK button	Press to go to the next page.

1 Step on the foot pedal to open the lid.

2 According to the detection result displayed on the touch screen, corrects as follows.

Detection Result	Remedial actions
Disconnection (OER-Elite side)	1 Check the connecting tube is not kinked. 2 Check the connectivity between the connecting tube and OER-Elite. 3 Remove the endoscope and perform manual cleaning. Refer to “Reprocessing manual” of the endoscope for details.
Blocked Channel	1 Check the correct connecting tube is used. 2 Check the connecting tube is connected to the correct connector in the basin. 3 Check the connecting tube is not kinked. 4 Remove the endoscope and perform manual cleaning. Refer to “Reprocessing manual” of the endoscope for details.
Wrong connection	1 Disconnect the connecting tube and confirm the correct connecting tube is used.
Disconnection (Scope side)	1 Check the correct connecting tube is used. 2 Check the connecting tube is connected to the correct connector in the basin. 3 Check the connectivity between the connecting tube and the endoscope. 4 Check the connectivity between the leak test air tube and the OER-Elite.

Table 13.1

NOTE

If the Detail button is pressed, the remedial actions can be displayed on the touch screen.

3 Press the “Next” button on the first page to display the second page.

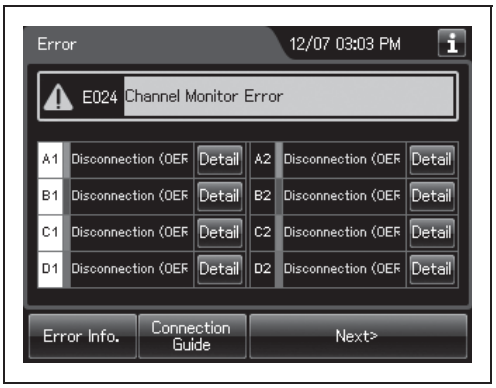


Figure 13.3

4 According to the detection result displayed on the touch screen, corrects as Step 2.

5 Press the “OK” button on the second page.

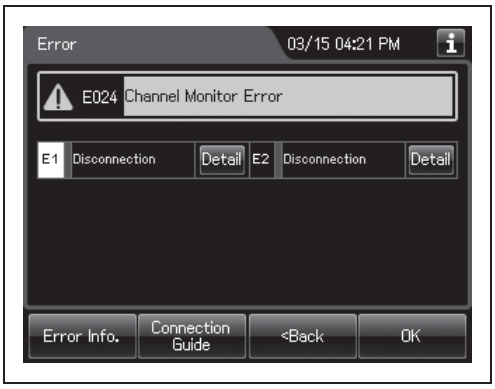


Figure 13.4

6 Press the “OK” button to finish remedial actions. If the endoscope will be removed from the reprocessing basin, select “Yes” button and press “OK”. Then, the IDs for this scope will be deleted.

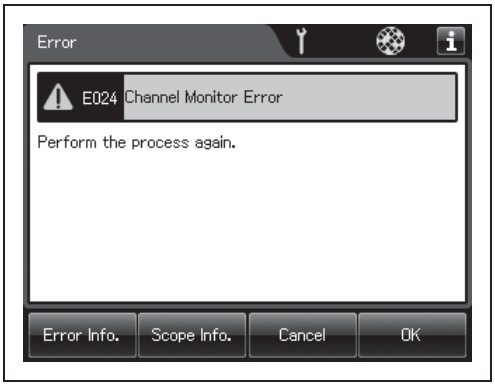


Figure 13.5

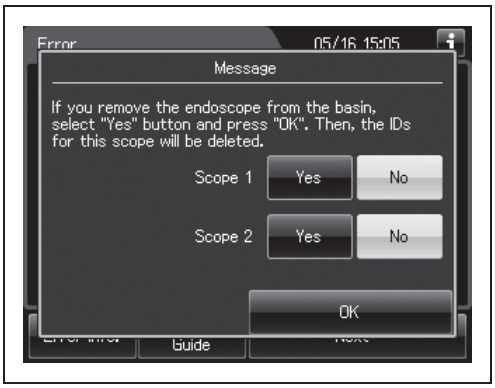


Figure 13.6

7 Start the reprocessing process and rinse from the beginning.

■ *When any leaks are detected*

When the error code [E114] or [E115] is displayed on the touch screen, the result of auto leak test is “Leaked”, or any leaks are detected during manual leak test, perform following.

NOTE

- When the error code [E114] is displayed, leak detected during ALT process at the reprocessing process.
- When the error code [E115] is displayed, leak test air pressure is low.
- When these errors frequently occur, perform self-check of auto leak test. For detail, refer to Section 7.13, “Self-check of auto leak test”.

❍ Workflow when the error code [E114] is displayed, or the result of auto leak test is “Leaked”

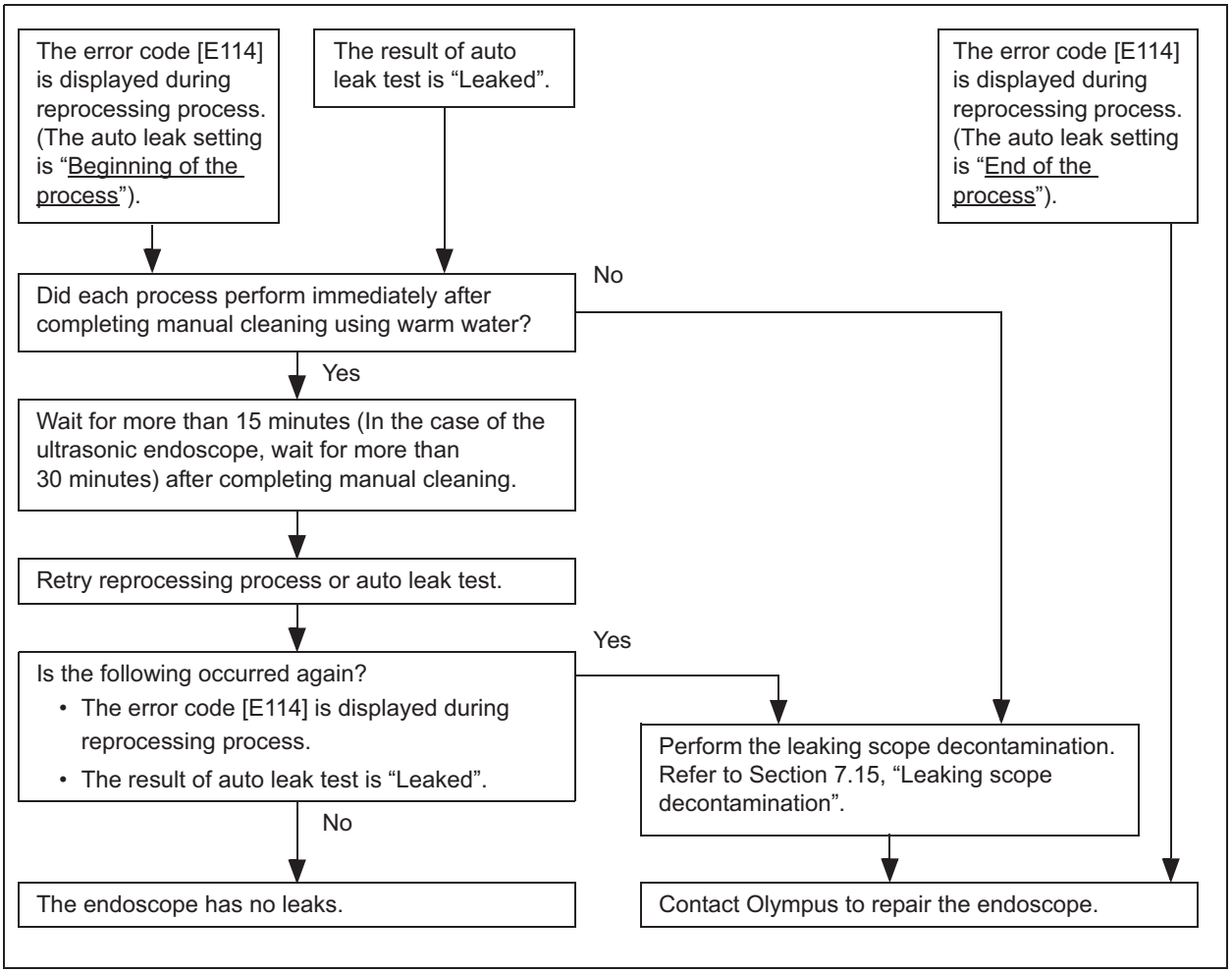


Figure 13.7

❍ Workflow when the error code [E115] is displayed

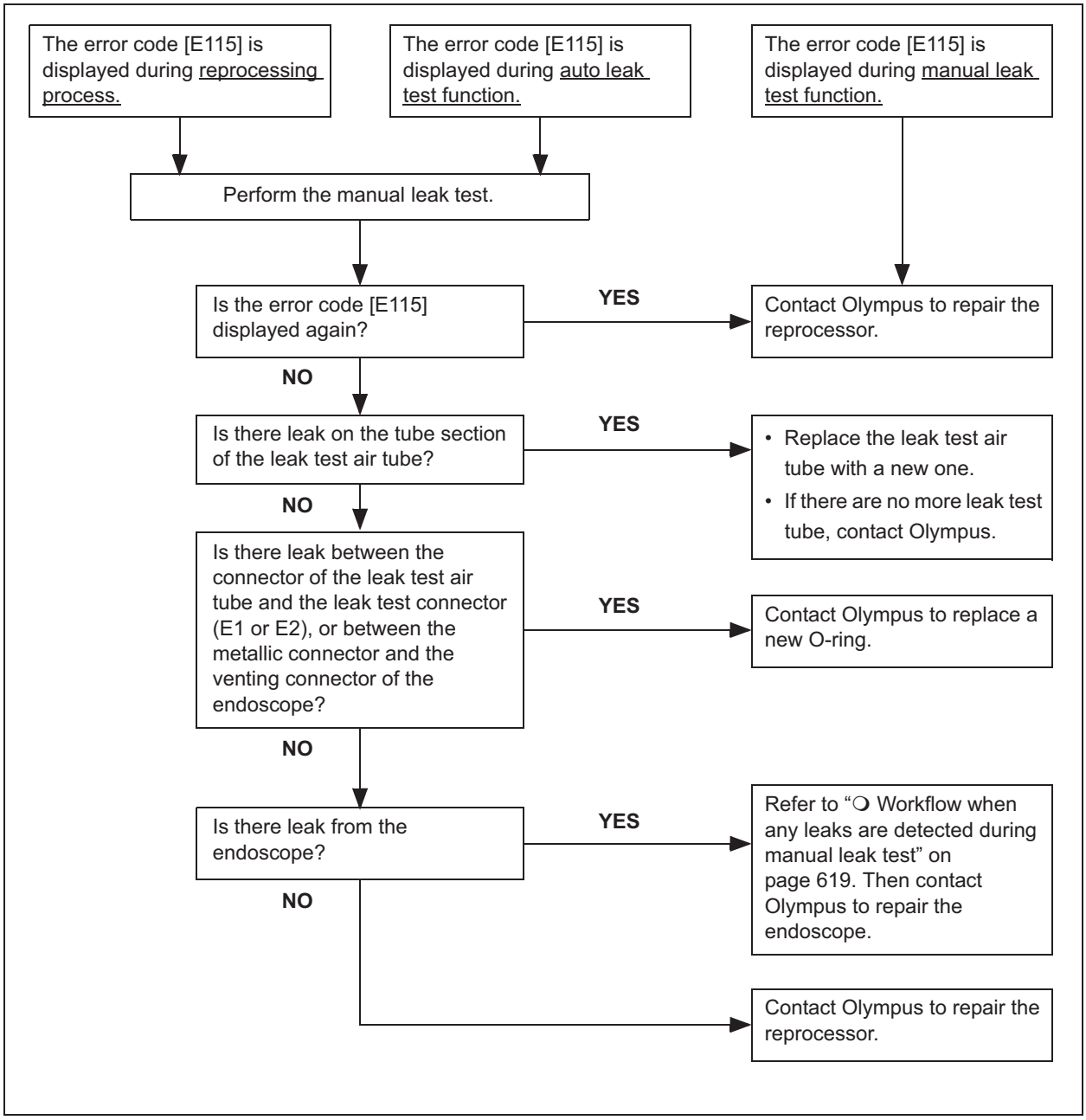


Figure 13.8

❍ Workflow when any leaks are detected during manual leak test

1. Perform the leaking scope decontamination. For the detail, refer to Section 7.15, “Leaking scope decontamination”.
2. If the leaking scope decontamination is completed without errors, contact Olympus to repair the endoscope.
   If any errors occur, perform manual decontamination for leaking endoscope below. Then, contact Olympus to repair the endoscope.

❍ Manual decontamination for leaking endoscope

(a) Manual cleaning for leaking endoscope

1. For a leak detected in the covering of the insertion tube, bending section, or universal cord, dry the leaking area thoroughly and wipe with alcohol. Tape over the location of the leak with a piece of electrical tape or other waterproof tape prior to immersing in detergent solution. Wrap the tape tightly. For leaks detected in other locations (e.g., internal channel), proceed with the instructions provided below.
2. Fill a basin with detergent solution at the temperature and concentration recommended by the detergent manufacturer. Use a basin that is at least 40 cm by 40 cm (16” by 16”) in size and deep enough to allow the endoscope to be completely immersed.
3. Insert the leakage tester connector into the output socket of the maintenance unit such as MU-1 or the light source and turn the maintenance unit or the light source ON. Set the light source’s airflow regulator switch to “HIGH” or “3”.
4. Connect the leakage tester’s connector cap to the venting connector of the water-resistant cap.
5. Immerse the endoscope in the detergent solution.
6. Perform manual cleaning according to the instructions provided in the reprocessing manual. Minimize unnecessary flexion of the insertion tube and universal cord during cleaning.

(b) Sterilization for leaking endoscope

Following manual cleaning, the preferred method of rendering a leaking endoscope safe to handle is ethylene oxide sterilization. Ethylene oxide sterilization should be performed according to the instruction provided in the reprocessing manual. If electrical tape was applied to a leak detected in the endoscope's external surface, remove the tape and wipe with 70% ethyl or isopropyl alcohol prior to ethylene oxide sterilization. If ethylene oxide sterilization is not possible, perform high-level disinfection according to the instructions provided below.

(c) High-level disinfection for leaking endoscope

1. Fill a basin with disinfectant solution at the temperature and concentration recommended by the disinfectant manufacturer. Use a basin that is at least 40 cm by 40 cm (16" by 16") in size and deep enough to allow the endoscope to be completely immersed.
2. Insert the leakage tester connector into the output socket of the maintenance unit or the light source and turn the maintenance unit or the light source ON. Set the light source's airflow regulator switch to "HIGH" or "3".
3. Connect the leakage tester's connector cap to the venting connector of the water-resistant cap.
4. Immerse the endoscope in the disinfectant solution.
5. Perform high-level disinfection according to the instructions provided in the reprocessing manual. Minimize unnecessary flexion of the insertion tube and universal cord during reprocessing.

WARNING

This process is intended to treat the endoscope with water leak before sending it for servicing. It does not guarantee the reprocessing of the endoscope and its accessories after this process. After completing this process, do not use the endoscope and its accessories in examination but send it for servicing.

Message, caution, and warning screens

1 If the reprocessor requires operator action, the buzzer beeps and the message screen will be displayed on the touch screen.

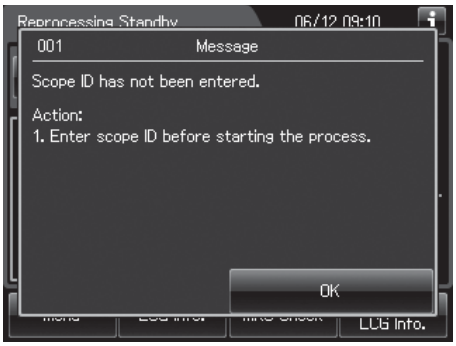


Figure 13.9

2 Perform remedial actions according to the instruction described in the table below or the instructions displayed on the touch screen.

3 Press the “OK” button to resume a process.

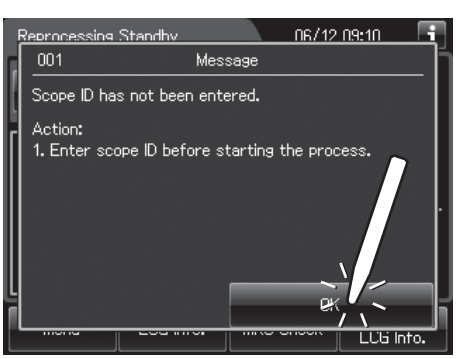


Figure 13.10

NOTE

- The button for resuming a process varies based on message screens displayed on the touch screen.
- The message cannot record to logs.

No.	Message	Remedial actions
Message 001	Scope ID has not been entered.	Enter scope ID before starting the process.
Message 002	User ID has been entered.	Enter user ID before starting the process.
Message 003	OER-Elite cannot accept more than two user IDs per reprocessing cycle.	1 Verify the entered user ID information is correct. 2 Delete the incorrect user information. Re-enter user ID.
Message 004	ID entry for 1st endoscope has not been completed.	Before entering the 2nd endoscope ID, enter the remaining IDs for the 1st endoscope.
Message 005	User ID Setting has not been activated.	To enter user ID, go to Menu screen, then change the User ID Setting.
Message 005	Patient ID Setting has not been activated.	To enter patient ID, go to Menu screen, then change the Patient ID Setting.
Message 005	Physician ID Setting has not been activated.	To enter physician ID, go to Menu screen, then change the Physician ID Setting.
Message 006	OER-Elite cannot accept more than two Scope IDs per reprocessing cycle.	1 Verify the entered scope ID information is correct. 2 Delete the incorrect scope information. Re-enter scope ID.
Message 008	Scope ID master has been entered. Channel Monitoring, auto leak testing and Connection Guide will be disabled.	Refer to the “List of compatible Endoscopes/Connecting Tubes <OER-Elite>” to confirm the correct connecting tubes for this endoscope.
Message 009	Scope ID has been entered from the touch screen. Channel monitoring, auto leak testing and connection guide will be disabled.	Refer to the “List of compatible Endoscopes/Connecting Tubes <OER-Elite>” to confirm the correct connecting tubes for this endoscope.
Message 010, 011	This endoscope is incompatible for auto leak testing. Auto leak testing will be disabled.	No additional action is required.
Message 014	Patient ID has not been entered.	Enter patient ID before starting the process.
Message 015	Physician ID has not been entered.	Enter physician ID before starting the process.
Message 016	OER-Elite cannot accept more than two patient IDs per reprocessing cycle.	1 Verify the entered patient ID information is correct. 2 Delete the incorrect patient information. Re-enter patient ID.
Message 017	OER-Elite cannot accept more than two physician IDs per reprocessing cycle.	1 Verify the entered physician ID information is correct. 2 Delete the incorrect physician information. Re-enter physician ID.
Message 018	Malfunction of the RFID reader.	1 Manually input the ID information via the touch screen. 2 Contact Olympus.
Message 019	Procedure ID has not been entered.	Enter procedure ID before starting the process.
Message 020	This endoscope is incompatible for channel connectivity monitoring.Channel connectivity monitoring will be disabled.	No additional action is required.

No.	Message	Remedial actions
Message 021	This endoscope is incompatible for channel blockage monitoring.Channel blockage monitoring will be disabled.	No additional action is required.
Message 022	This endoscope is incompatible for channel monitoring. Channel monitoring will be disabled.	No additional action is required.
Message 023	Refer to the Message 008	Refer to the Message 008.
Message 024	Scope ID of endoscope that cannot be reprocessed simultaneously has been entered. OER-Elite cannot accept more than one User ID per reprocessing cycle.	1 Verify the entered user ID information is correct. 2 Delete the incorrect user information. Re-enter user ID.
Message 025	This endoscope combination is incompatible for auto leak testing.	Perform “Auto Leak Test” separately for second scope.
Message 031	LCG cycle count/usage exceeds the set value.	Perform MRC check before performing the process.
Message 032	There is no LCG in the disinfectant solution tank.	Perform “Load LCG”.
Message 034	Load LCG cannot be performed with LCG in the disinfectant solution tank.	Perform “Drain LCG”, then “Load LCG”.
Message 035	Drain LCG cannot be performed with no LCG in the disinfectant solution tank.	No additional action is required.
Message 036	An invalid set time for Heat LCG Timer has been entered.	1 Enter a minimum time of at least 2.5 hours. 2 Enter a date of less than 5 days.
Message 037	The LCG temperature is already above the specified temperature.	No additional action is required.
Message 038	Cannot activate the Heat LCG Timer. System clock battery low.	Contact Olympus.
Message 047	More than 1 hour has passed since the MRC check result has been entered.	Perform MRC check again and enter the result.
Message 048	MRC check result has not been entered.	Perform MRC check again and enter the result.
Message 050	There is no LCG in the disinfectant solution tank.	Perform “Load LCG” before MRC check.
Message 061	Portable memory is full, cannot Export data.	Insert portable memory that has sufficient capacity. At least 100MB capacity is necessary.
Message 062	No record exists for the selected period.	Confirm the dates for the period selected.
Message 070	The lid is open.	Close the lid to perform the process.
Message 071	Cannot drain LCG through the disinfectant collection hose with the lid closed.	1 Verify the collection method selected is correct. 2 Follow the prompts on the OER-Elite.
Message 080	Time for periodic maintenance.	The time for regularly scheduled maintenance is near. Contact Olympus to perform the maintenance.
Message 081	Water filter usage exceeds the set value.	Perform “Replace Water Filter”.
Message 081	Air filter usage exceeds the set value.	Perform “Replace Air Filter”.

No.	Message	Remedial actions
Message 081	Gas filter usage exceeds the set value.	Perform “Replace Gas Filter on the Lid” or perform “Replace Gas Filter on the Tank”.
Message 082	The OER-Elite has not been used for more than 14 days.	Perform “Self-Disinfection” and “Water Line Disinfection”.
Message 083	ALT Self-check failed.	Contact Olympus. To continue reprocessing, choose a program with the ALT Setting disabled. (Program 3 or 4)
Message 086	“Leak” has been selected as a manual leak test result.	1 Close the lid by pushing until it clicks. The water will automatically be discharged from the basin. 2 Perform “Leaking Scope Decontamination”.
Message 087	Alcohol cannot be supplied.	1 Confirm the amount of alcohol in the alcohol tank. If no alcohol is remaining, replenish the alcohol. 2 Confirm the alcohol tubing is not bent and press “Restart”. 3 To cancel the process, press “Stop”. Refer to Section 5.9, “Inspecting and replenishing alcohol”.
Message 088	Fluid cannot be drained from the alcohol line.	1 Confirm the nozzle of the cap is out of the beaker. 2 Confirm the alcohol tubing is not bent and press “Restart”. 3 To cancel the process, press “Stop”.
Message 088	Fluid cannot be drained from the detergent line.	1 Confirm the nozzle of the cap is out of the beaker. 2 Confirm the detergent tubing is not bent and press “Restart”. 3 To cancel the process, press “Stop”.
Message 089	Fluid cannot be supplied from the alcohol line.	1 Confirm the nozzle of the cap is in the beaker. 2 Confirm the alcohol tubing is not bent and press “Restart”. 3 To cancel the process, press “Stop”.
Message 089	Fluid cannot be supplied from the detergent line.	1 Confirm the nozzle of the cap is in the beaker. 2 Confirm the detergent tubing is not bent and press “Restart”. 3 To cancel the process, press “Stop”.
Message 091	To enable the mode setting, turn the power off and boot with service mode.	No additional action is required.
Message 093	Detergent cannot be supplied.	1 Confirm the amount of detergent in the detergent tank. If no detergent is remaining, replace a new detergent tank. 2 Confirm the detergent tube is not bent and press “Restart”. 3 To cancel the process, press “Stop”. Refer to Section 8.3, “Replacing the detergent tank”.
Message 095	An invalid time has been entered.	Set the time within following range. Range: 1/1/2012 00:00 – 12/31/2087 23:59

No.	Message	Remedial actions
Message 100	Leak test air tube for scope 1 has not been connected within 5 minutes.	1 Enter scope ID for scope 1 again. 2 Within 5 minutes, connect the leak test air tube for scope 1 to the E1 connector.
Message 101	Leak test air tube has been connected to the endoscope before entering scope ID.	1 Disconnect the leak test air tube from the connector. 2 Enter scope ID for scope 1 again. 3 Connect the leak test air tube for scope 1 to the E1 connector.
Message 102	Program has been changed and OER-Elite cannot detect the proper connection of leak test air tube.	1 Disconnect the leak test air tube from the connector. 2 Press “OK”.
Message 110	Process interrupted before rinse. Chemical may remain in the basin.	1 Press “Rinse” to continue now. 2 Press “OK” to perform “Rinse” later.
Message 120	Detergent cycle count/usage exceeds the set value.	Perform “Replace Detergent”.
Message 132	An invalid date has been entered.	Set the expiration date properly.
Warning 026	This endoscope requires special procedures for reprocessing in the OER-Elite.	Before reprocessing the endoscope in the OER-Elite, thoroughly review and follow the procedures described in the respective endoscope reprocessing manual or the OER-Elite Instructions – Operation Manual. Otherwise, reprocessing may be insufficient.
Warning 096	“ALT Self-Check” has not been performed.	1 Press “ALT Self-Check” to continue now. 2 Press “OK” to perform ALT Self-Check later.
Warning 121	Detergent has expired based on its shelf life expiration date.	Perform “Replace Detergent”.
Caution 007	Incompatible combination of endoscope.	Refer to the “List of compatible Endoscopes/Connecting Tubes <OER-Elite>” to confirm the applicable combination of endoscopes.
Caution 013	This endoscope is incompatible with OER-Elite.	1 Reprocess this endoscope using another method. 2 For a list of compatible endoscopes, refer to the “List of compatible Endoscopes/Connecting Tubes <OER-Elite>”.
Caution 033	LCG has expired based on its shelf life expiration date.	Perform “Drain LCG”, then “Load LCG”.
Caution 039	Load LCG has not been completed properly.	Perform “Drain LCG”, then “Load LCG”.
Caution 040	“Fail” has been entered as an MRC check result, cannot perform the process.	Perform “Drain LCG”, then “Load LCG”.
Caution 041	“Mix LCG” has not been performed.	1 Press “Mix LCG” to continue now. 2 Press “OK” to perform Mix LCG later.
Caution 046	More than 4 hours has passed since the last cycle. To ensure accurate MRC testing, perform “Mix LCG”.	1 Press “Mix LCG” to continue now. 2 Press “OK” to perform Mix LCG later.
Caution 084	System clock battery has run out.	Contact Olympus.

No.	Message	Remedial actions
Caution 085	System clock battery low.	1 Contact Olympus. 2 To continue using the OER-Elite, make sure the system clock indicates the actual current date and time. If not, perform “Date and Time setting” and set the current date and time. The system clock will function until OER-Elite is powered off.
Caution 092	“No” has been selected as the result of manual cleaning and leak test for scope 1.	1 Perform leak test and manual cleaning before starting reprocessing. 2 If a leak has been detected, perform “Leaking Scope Decontamination”.
Caution 092	“No” has been selected as the result of manual cleaning for scope 1.	Perform manual cleaning before starting reprocessing.
Caution 092	“No” has been selected as the result of leak test for scope 1.	1 Perform leak test before starting reprocessing. 2 If a leak has been detected, perform “Leaking Scope Decontamination”.
Caution 092	“Pass” has been selected as the result of leak test. “No” has been selected as the result of manual cleaning.	Perform manual cleaning before starting reprocessing. (Do not use leaking scope decontamination for this endoscope)
Caution 092	“Pass” has been selected as the result of leak test.	Perform reprocessing. (Do not use leaking scope decontamination for this endoscope.)
Caution 094	Water Line Disinfection has not been completed after replacing the water filter.	Perform “Water Line Disinfection”.

■ *When the message screen “Message 087” is displayed*

If alcohol has run out and the message screen “Message 087” is displayed, the reprocessor will stop the process. In this case, you can restart the process from the “alcohol flush” by implementing the following procedure.

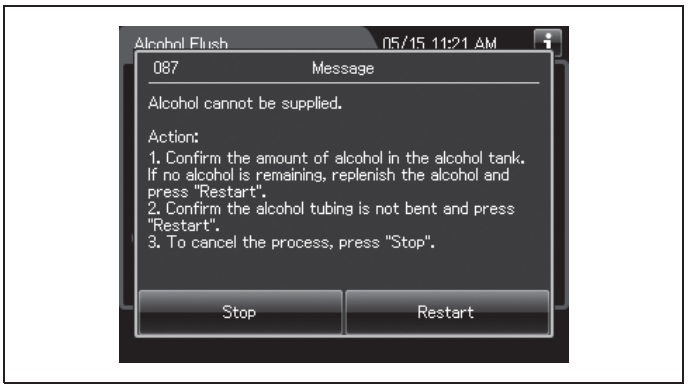


Figure 13.11

NOTE

- The reprocessing process can be restarted from the “alcohol flush” if the “Restart” button is pressed in Message 087. In that case, the reprocessing record is recorded as normal.
- The lid will remain locked until the message screen is cleared, and you cannot access the reprocessing basin even after pressing the foot pedal. If you want to interrupt the reprocessing process, press STOP button and follow the procedure described in Section 13.1, “Emergency stop and automatic processing after stopping”.

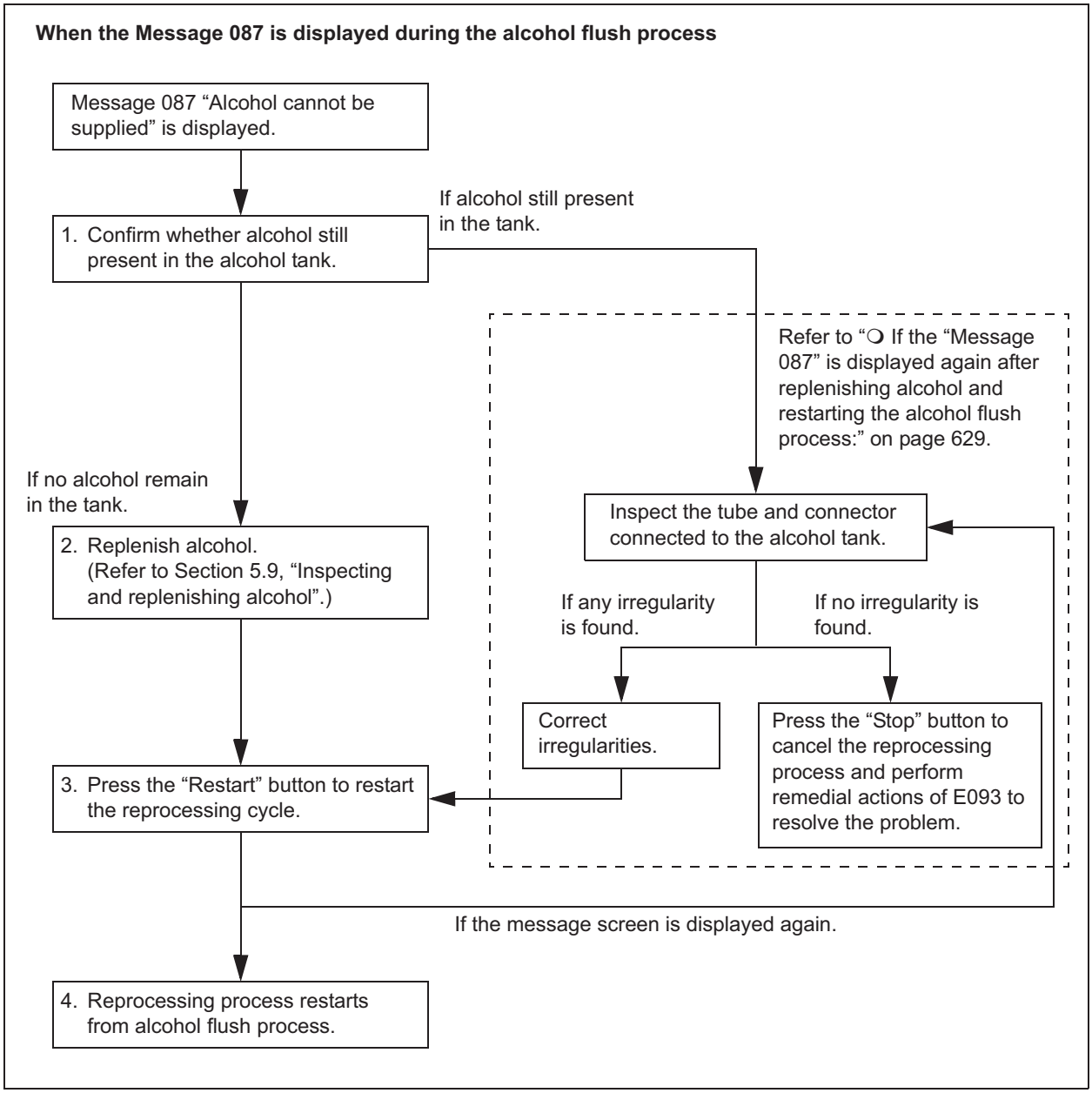


Figure 13.12

WARNING

- The alcohol used with the reprocessor must be 70% ethyl alcohol or 70% isopropyl alcohol. Using any other kind of alcohol may result in malfunction of the reprocessor or the endoscope, difficulty drying the endoscope, fire hazard, or a hazard due to toxic vapor emitted from the alcohol.
- Alcohol is flammable and should be handled with extra care.
- Remove the alcohol in the alcohol tank and replace it with new alcohol at least once a week. Otherwise, the alcohol in the alcohol tank may degrade.
- Before handling the alcohol, read the cautions carefully and use it as instructed.

1 Inspect the alcohol tank. If alcohol is still present in the alcohol tank, go to the procedure of "❍ If the "Message 087" is displayed again after replenishing alcohol and restarting the alcohol flush process:" on page 629 described in this section.

2 Replenish alcohol into the alcohol tank as described in Section 5.9, "Inspecting and replenishing alcohol".

3 Press Restart button on the touch screen to restart the reprocessing process.

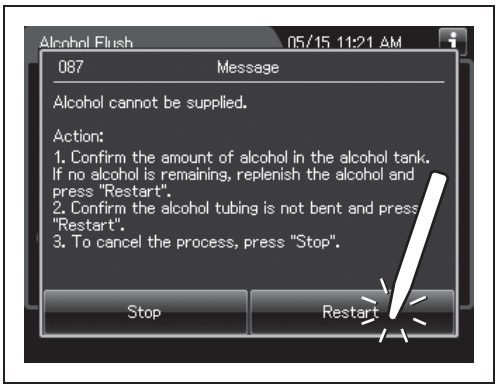


Figure 13.13

4 Reprocessing process restarts from alcohol flush process.

❍ If the "Message 087" is displayed again after replenishing alcohol and restarting the alcohol flush process:

When message screen "Alcohol cannot be supplied" is displayed again after restarting the reprocessing process, check that there is no irregularity regarding the following points.

- The tube connected to the alcohol tank is not kinked.
- The connector of alcohol tank is attached firmly.

If any irregularity is found by inspection, correct these points and press the "Restart" button on the touch screen to restart the alcohol flush process.
If no irregularity is found during an inspection or the message screen is displayed again, internal problem with the reprocessor may be suspected. In this case, follow the procedure below.

WARNING

- The alcohol used with the reprocessor must be 70% ethyl alcohol or 70% isopropyl alcohol. Using any other kind of alcohol may result in malfunction of the reprocessor or the endoscope, difficulty drying the endoscope, fire hazard, or a hazard due to toxic vapor emitted from the alcohol.
- Alcohol is flammable and should be handled with extra care.
- Remove the alcohol in the alcohol tank and replace it with new alcohol at least once a week. Otherwise, the alcohol in the alcohol tank may degrade.
- Before handling the alcohol, read the cautions carefully and use it as instructed.

(a) Required items

Check	Required items
	Syringe
	Tube

Table 13.2

(b) Remedial actions

1 Press the “Stop” button on the touch screen to cancel the reprocessing process.

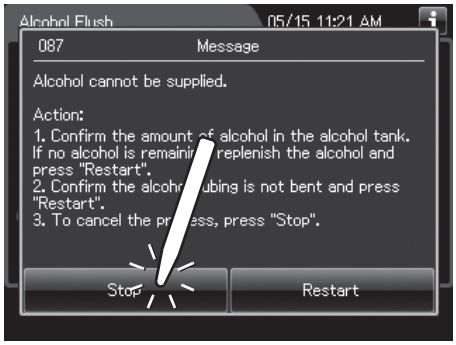


Figure 13.14

2 The touch screen displays the error code [E093]. Press the “OK” button. Then, troubleshooting guide is displayed on the touch screen.

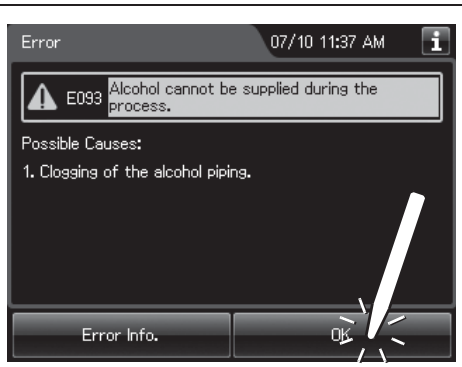


Figure 13.15

3 Connect the provided syringe and tube. For detail, refer the detail button on E093 on the touch screen.

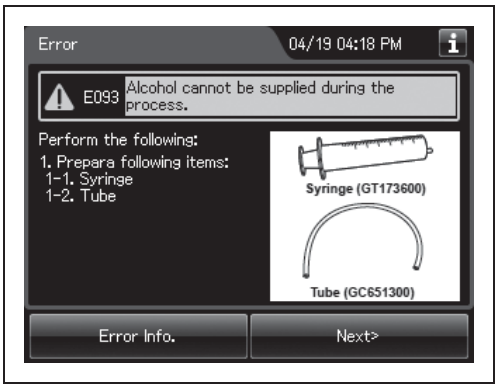


Figure 13.16

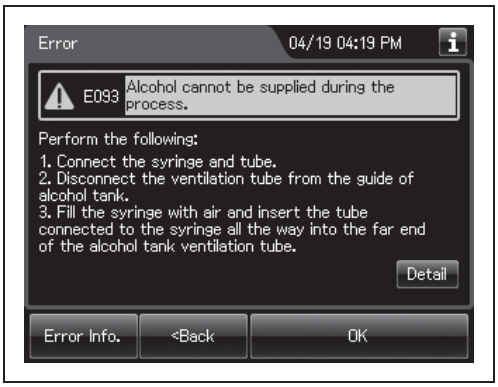


Figure 13.17

4 Disconnect the ventilation tube from the guide of the alcohol tank.

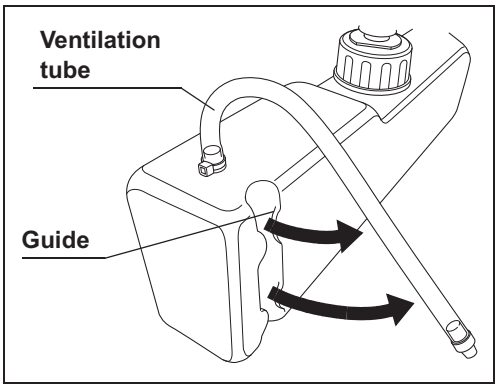


Figure 13.18

5 Fill the syringe with air and insert the tube connected to the syringe all the way into the far end of the alcohol tank ventilation tube.

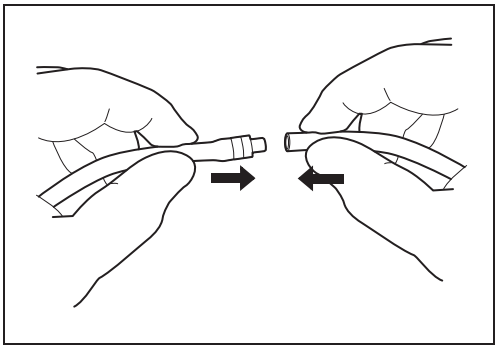


Figure 13.19

6 Press the “OK” button repeatedly until error screen is closed.

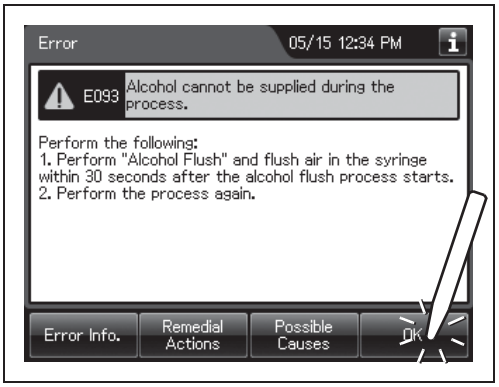


Figure 13.20

7 Go to the Function menu. Press the “Alcohol Flush” button on the second page.

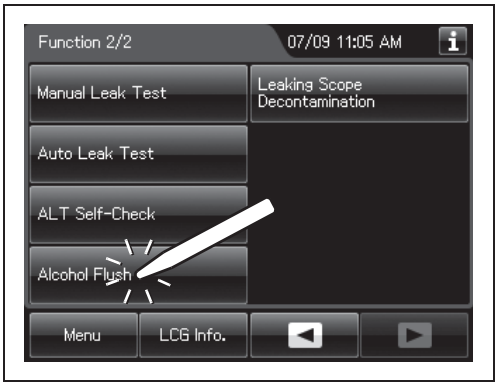


Figure 13.21

8 Enter the operator's user ID. For entering ID, refer to Section 3.6, “Entering ID” (If applicable).

NOTE

The input of the user ID can be omitted by modifying the “User ID Setting”. For details, refer to Section 4.5, “User ID Setting”.

9 Press the “Start” button on the touch screen. Flush air in the syringe within 30 seconds.

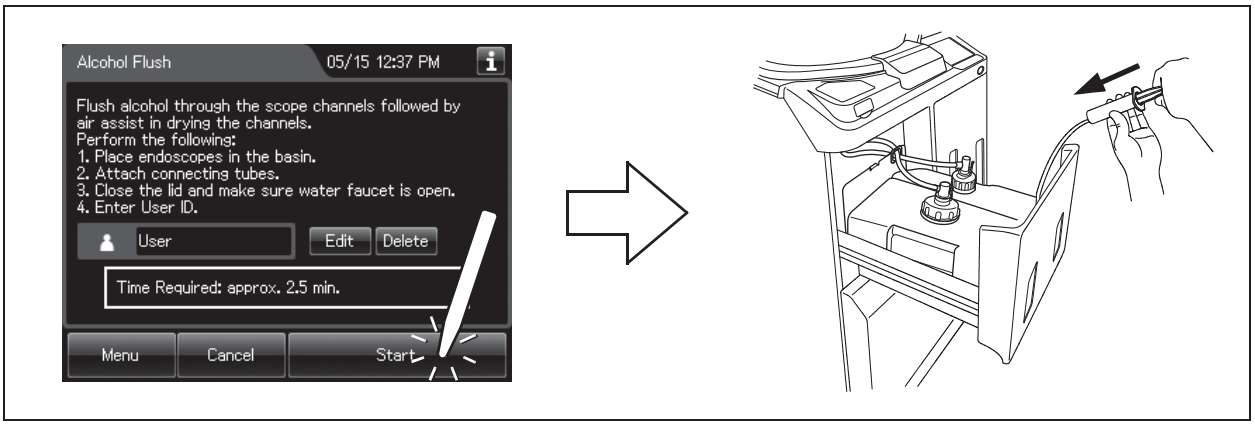


Figure 13.22

10 Press the “Stop” button to stop the alcohol flush. Then, error code E000 is displayed on the touch screen. After confirming that, disconnect the syringe's tube from the ventilation tube.

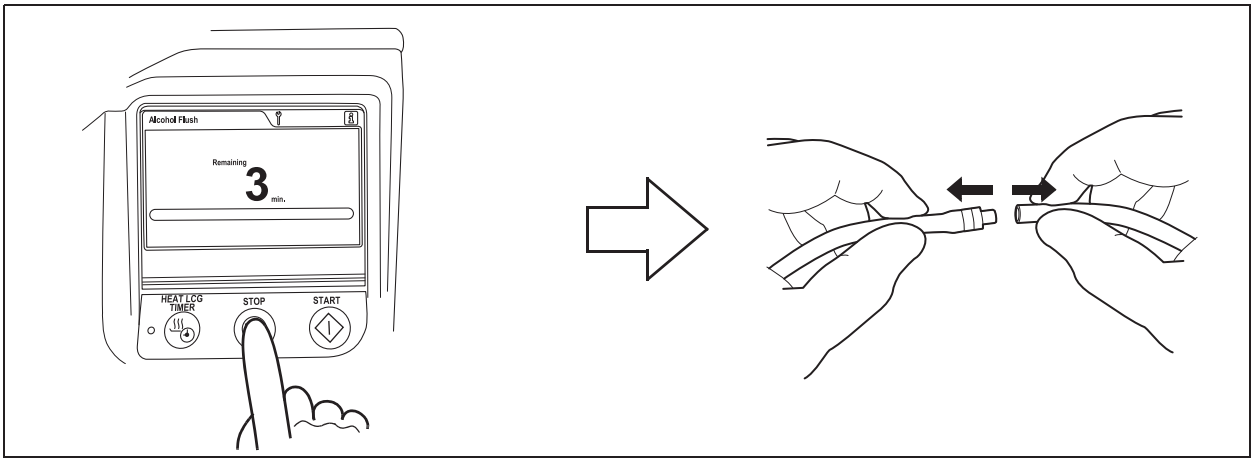


Figure 13.23

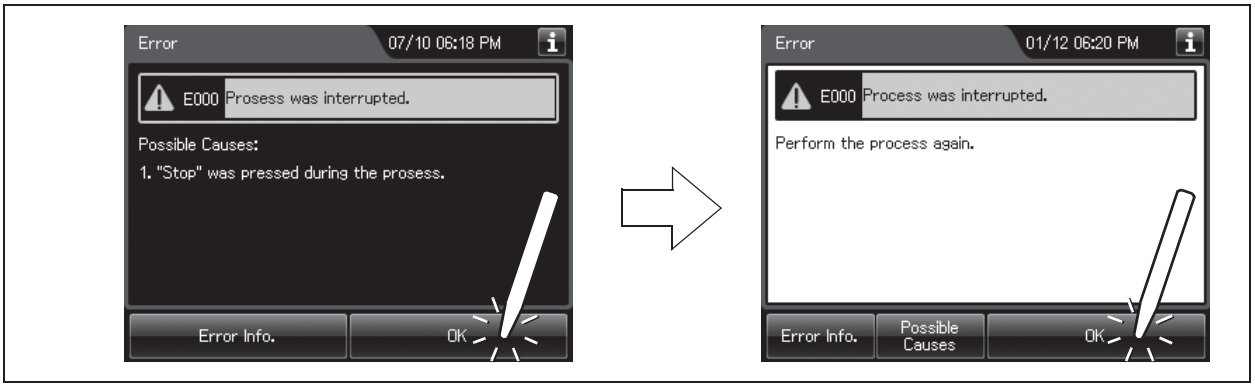


Figure 13.24

11 Disconnect the tube from the cap on the alcohol tank, remove the tank from the detergent/alcohol drawer and insert the ventilation tube into the guide.

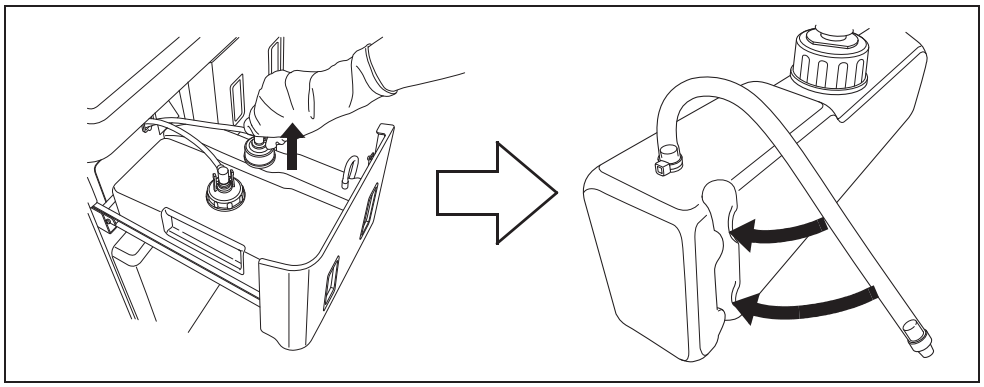


Figure 13.25

12 Carefully pour the 70% ethyl alcohol or 70% isopropyl alcohol into the alcohol tank until it is level with the line inside the tank. If any alcohol is spilled from the tank, wipe it with a clean cloth. Replace the cap on the alcohol tank, making sure that it is tight.

NOTE

When the alcohol tank is filled to the line, it will hold about 1 L (33 ounces) of alcohol (enough for about 20 alcohol flushes).

13 After confirming that alcohol has not spilled from the alcohol tank and there is enough alcohol remaining in the alcohol tank, place the alcohol tank in the detergent/alcohol drawer and connect the tube that is designed to be connected to the cap of the alcohol tank.

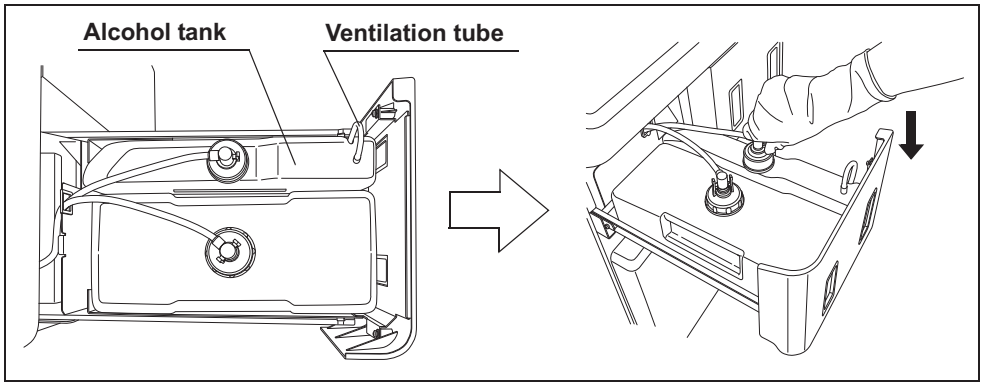


Figure 13.26

14 Close the detergent/alcohol drawer. Rinse the syringe and tube with running water, dry them completely, and store in a clean place.

15 Perform the “alcohol flush” again from the beginning.

16 If alcohol flush is successfully completed, the problem is resolved and alcohol flush was performed with the endoscopes. If the “Message 087” is displayed again, the reprocessor component malfunction is suspected. In this case, do not use the reprocessor and contact Olympus. Remove endoscope(s) from the basin and perform alcohol flush again by another method.

■ *When the “Message 093” is displayed*

If detergent has run out and the message screen “Detergent cannot be supplied” is displayed, the reprocessor will stop the process. In this case, reprocessing can be restarted by implementing the following procedure.

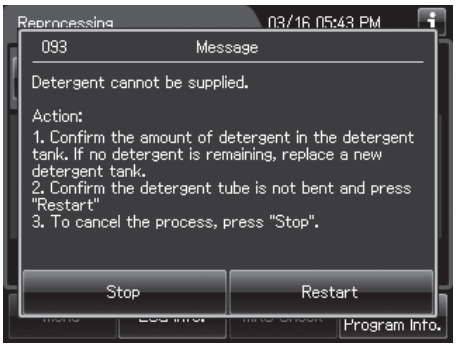


Figure 13.27

NOTE

- The reprocessing process can be restarted only when the message screen “Detergent cannot be supplied during the process” is displayed.
- The lid will remain locked until the error is cleared, and you cannot access the reprocessing basin even after pressing the foot pedal. If you want to interrupt the reprocessing process, press the “Stop” button and follow the procedure described in Section 13.1, “Emergency stop and automatic processing after stopping”.

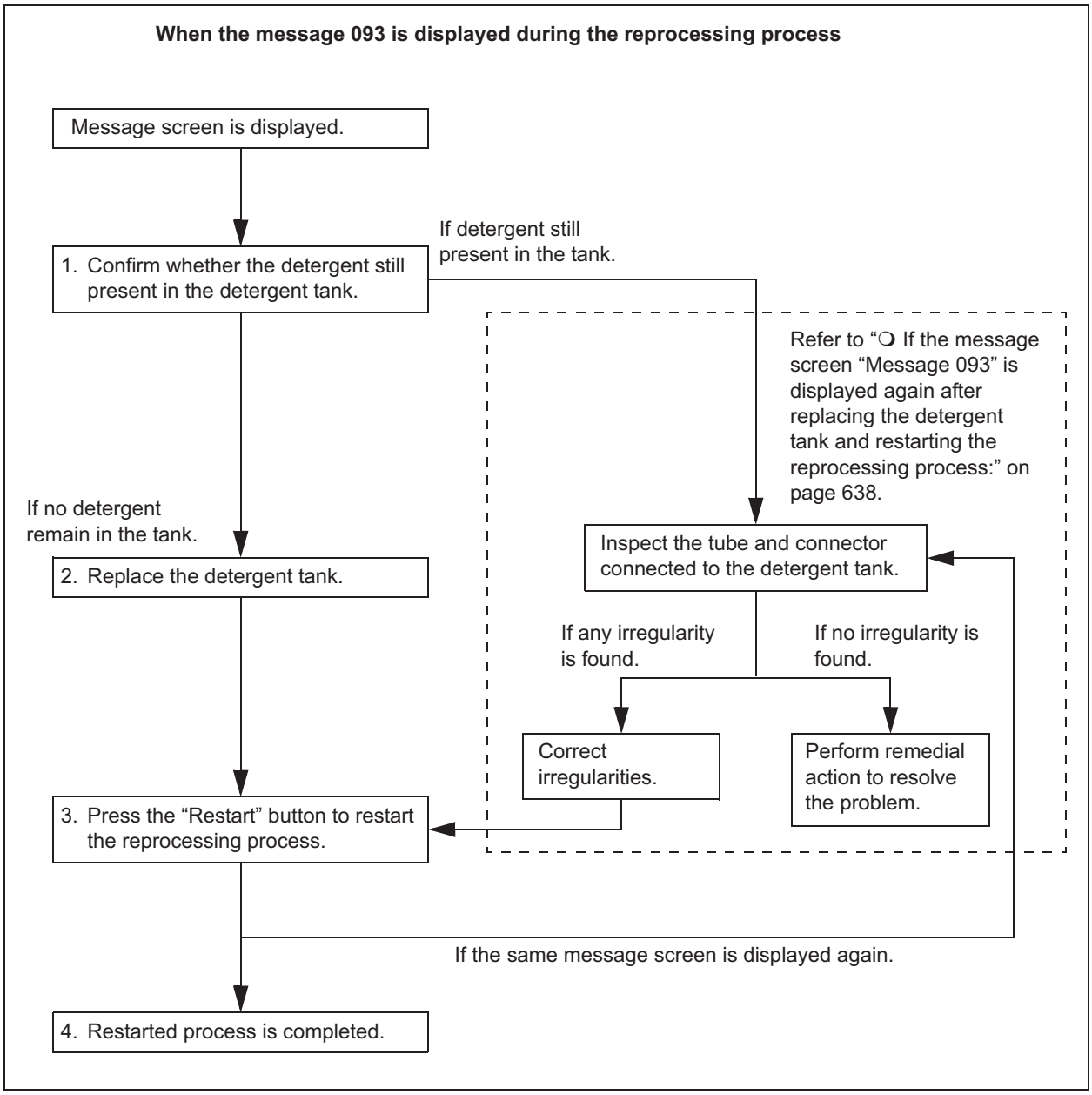


Figure 13.28

WARNING

- Before handling the detergent, read the cautions carefully and use it as instructed. It is especially important to know what to do if the detergent solution comes in contact with your skin and eyes.
- When handling the detergent, always wear appropriate personal protective equipment, such as eyewear, face mask, moisture-resistant clothing, and chemical-resistant gloves that fit properly and are long enough so that your skin and eyes is not exposed. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.

1 Inspect the detergent tank. If detergent is still present in the detergent tank, go to the procedure of "❍ If the message screen "Message 093" is displayed again after replacing the detergent tank and restarting the reprocessing process:" on page 638 described in this section.

2 Replace the detergent tank as described in Section 5.8, "Inspecting the remaining detergent".

3 Enter the operator's user ID. For the detailed procedure, refer Section 3.6, "Entering ID" (If applicable). Then, press the "Restart" button to restart the process.

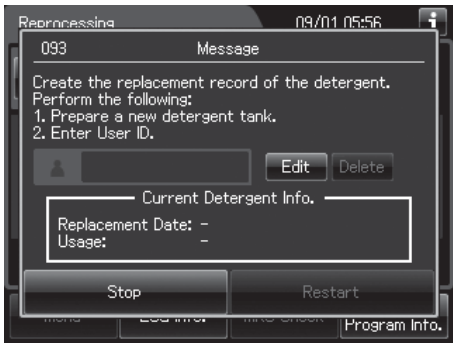


Figure 13.29

NOTE

- The input of the user ID can be omitted by modifying the user ID input setting. For details, refer to Section 4.5, "User ID Setting".
- When the "Delete" button is pressed, the entered ID is deleted.
- When the detergent lot and shelf-life management setting are activated, the touch screen displays the lot entry screen or shelf-life entry screen. For details, refer to "❍ When entering the lot number of detergent and shelf life:" on page 372.

If the message screen “Message 093” is displayed again after replacing the detergent tank and restarting the reprocessing process:

When the message screen “Detergent cannot be supplied” is displayed again after restarting the process, check that there is no irregularity regarding the following points.

- The tube connected to the detergent tank is not kinked.
- The connector of detergent tank is attached firmly.

If any irregularity is found by inspection, correct these points and press start button to restart the process.
If no irregularity is found during an inspection or the “Detergent cannot be supplied” is displayed again, internal problem with the reprocessor may be suspected. In this case, follow the procedure below.

WARNING

- Before handling the detergent, read the cautions carefully and use it as instructed. It is especially important to know what to do if the detergent solution comes in contact with your skin and eyes.
- When handling the detergent, always wear appropriate personal protective equipment, such as eyewear, face mask, moisture-resistant clothing, and chemical-resistant gloves that fit properly and are long enough so that your skin and eyes is not exposed. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.

NOTE

Detergent replacement indicator is turned off when running a reprocessing program after performing 1 to 11 below to fill detergent in the detergent supply piping.

(a) Required items

Check	Required items
	Syringe
	Tube

Table 13.3

(b) Remedial actions

1 Press the “Stop” button.

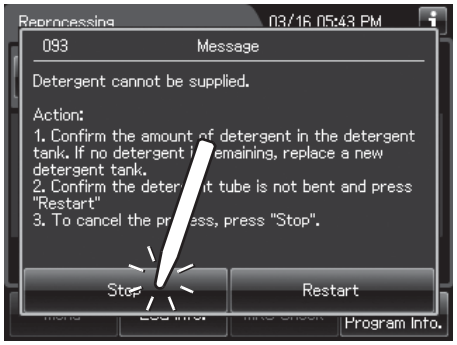


Figure 13.30

2 The touch screen displays the error code [E095]. Press the “OK” button. Then, troubleshooting guide is displayed on the touch screen.

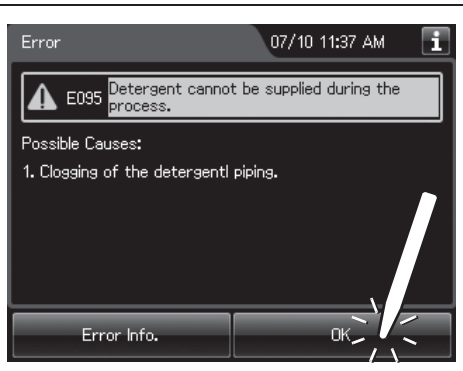


Figure 13.31

3 Step on the foot pedal to open the lid.

4 Prepare the provided syringe and the provided tube.

5 Press the “Next” button.

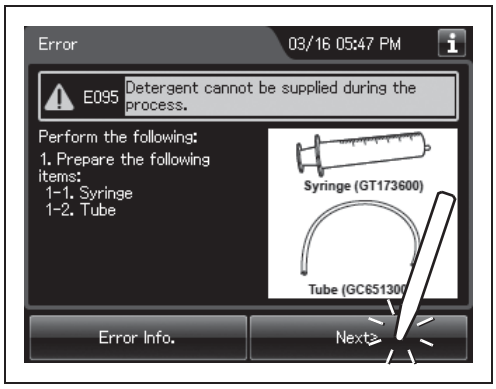


Figure 13.32

6 Connect the provided syringe and tube.

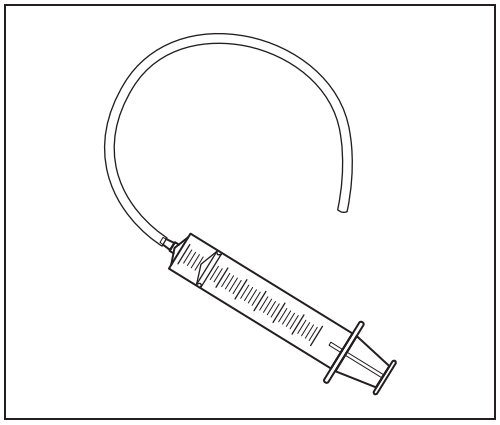


Figure 13.33

7 Connect the tube to the detergent nozzle inside the reprocessing basin and suction it with the syringe until detergent comes out.

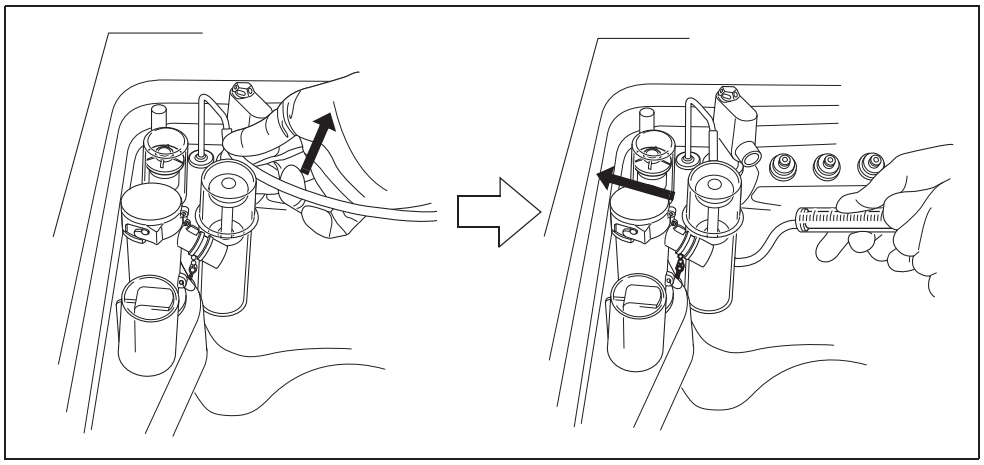


Figure 13.34

8 Pinch the tube at the closest point to the detergent nozzle with your fingers and disconnect the tube from the detergent nozzle.

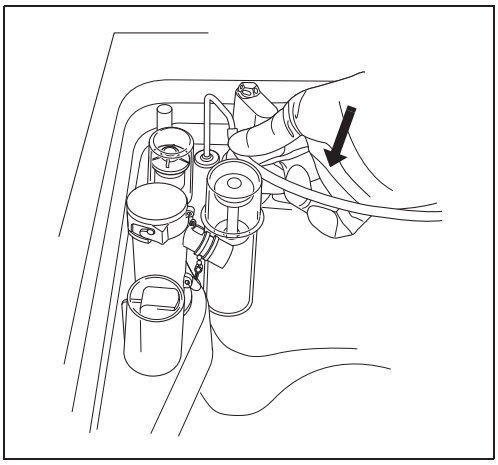


Figure 13.35

9 Rinse the syringe and tube thoroughly in running water, dry them well, and store in a clean place.

10 Press the “OK” button repeatedly until the error screen is closed.

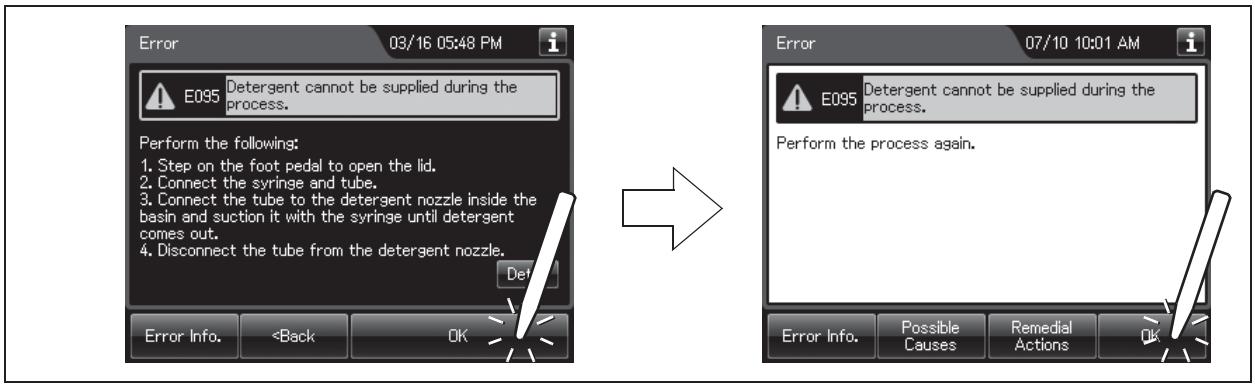


Figure 13.36

11 Start the reprocessing process from the beginning.

12 If the reprocessing process is successfully completed, the problem is resolved and reprocessing process was performed with the endoscopes. If the “Message 093” is displayed again, the reprocessor component malfunction is suspected. In this case, do not use the reprocessor and contact Olympus. Remove endoscope(s) from the basin and perform reprocessing process again by another method.

■ *Other problems and remedial actions*

Problem	Possible causes	Remedial actions
The odor of the disinfectant solution is stronger than expected.	• The gas filter has expired. • Disinfectant solution is leaking.	• Replace the gas filter as described in Section 8.6, “Replacing the gas filter (MAJ-822)”. If the problem persists after replacement, contact Olympus. • Check if disinfectant solution is leaking. If it is, do not use the reprocessor and contact Olympus.
Water leak from the reprocessor.	Improper installation of water filter housing.	Stop the current process and reattach the water filter housing as described in Section 8.4, “Replacing the water filter (MAJ-824 or MAJ-2318)”. However, the STOP button may not work if stopping the water might cause a hazardous situation, for example during disinfectant solution replacement. In this case, close the water faucet, tighten the water filter housing, then open the water faucet again and continue the process. If an error code is displayed, take the appropriate remedial action for that error.
	Irregularity in the lid packing	Inspect the lid packing. →Refer to Section 5.5, “Inspecting the lid and lid packing”. If the lid packing is abnormal, contact Olympus.
	Internal problem with the reprocessor.	Close the water faucet, set the power switch to OFF, disconnect the power cord plug from the wall mains outlet and contact Olympus.
Fluid leak from the disinfectant removal port.	Something is clogging the disinfectant removal port.	Connect the drain connector as described in to Section 3.7, “Checking the MRC level and entering the check result”, push the valve on the connector several times so that the material stuck in the port is removed. If leakage is still detected, attach the rubber cap to the disinfectant solution drain port and contact Olympus.

Problem	Possible causes	Remedial actions
Flow of the water in the reprocessing basin is weaker than before.	Incomplete opening of the water faucet.	Open the water faucet fully.
	Improper installation of water filter.	Reattach the water filter as described in Section 8.4, “Replacing the water filter (MAJ-824 or MAJ-2318)”.
	Clogging of water filter.	Replace the water filter as described in Section 8.4, “Replacing the water filter (MAJ-824 or MAJ-2318)”.
	Clogging of the mesh filter in the water supply hose connector.	Clean the mesh filter as described in Section 9.7, “Cleaning the mesh filter in the water supply hose connector”.
The disinfectant bottle drawer cannot be pulled out.	The disinfectant bottle drawer is locked.	After draining the disinfectant solution from the reprocessor as described in Section 8.2, “Replacing the disinfectant solution”, perform “Load LCG” and unlock the disinfectant bottle drawer.
Connecting tube cannot be connected.	Not using the appropriate connecting tube.	Consult the List Of Compatible Endoscopes/Connecting Tubes <OER-Elite>.
The lid cannot be closed.	The lid is locked.	Step on the foot pedal to unlock the lid.
	Internal components are pressing against the lid.	Check that the lid is not pushed by the fluid level sensor, washing case or endoscope inside the basin. If it is pushed out of position, correct its positioning.
Disinfectant solution remains in the reprocessing basin.	STOP button was pressed during disinfection process to force it to stop.	If an error code is displayed, take the corresponding remedial action. Collect or drain the disinfectant solution and then rinse the basin as described in Section 7.5, “Rinse”. Since the endoscopes may not be properly disinfected, they should be put through the reprocessing process again from the beginning.
Cleaning fluid remains in the reprocessing basin.	STOP button was pressed during cleaning process to force it to stop.	Rinse the basin as described in Section 7.5, “Rinse”. Since the endoscopes may not be properly disinfected, they should be put through the reprocessing process again from the beginning.

Problem	Possible causes	Remedial actions
The touch screen appears to turn off completely during an operation.	• The Heat LCG Timer process started. • Power cord is disconnected from the power outlet. • Circuit breaker is activated. • A power failure has occurred.	• Check that the Heat LCG Timer indicator on the control panel is lit. If it is lit, pressing the touch screen or a button will cause the touch screen to display a screen. • Perform the checks described in Section 5.3, “Inspecting the power activation”. Error code [E041] will be displayed when the reprocessor is turned ON. After checking, release the error code. Note that, however, any button is disabled during collection of the disinfectant solution from the reprocessing basin to the tank.
Power indicator does not light when the reprocessor is turned on.	Power switch is set to ON immediately after it was set to OFF.	Set the power switch to OFF, wait for a few seconds or more and set the power switch to ON again.
Reprocessing operator feels sick during work.	The operator may be allergic to the disinfectant, detergent or alcohol.	Stop doing any reprocessing, move away from the reprocessor and consult a medical specialist.
Disinfectant solution is judged to be ineffective with the test strip.	Expiration of the service life of the disinfectant solution.	Replace the solution as described in Section 8.2, “Replacing the disinfectant solution”.
Bacteria were detected as a result of culture test of a reprocessed endoscope.	• Expiration of service life of filters, degradation of disinfectant solution, etc. • Water supply piping is not disinfected.	Inspect the reprocessor as described in Chapter 5, “Inspection and Preparation Before Use”, preclean the endoscope and put it through the reprocessing process again from the beginning. If bacteria are detected again in the next culture test, contact Olympus.
Bacteria were detected as a result of culture test of rinse water collected from the reprocessor.	• Expiration of service life of filters, degradation of disinfectant solution, etc. • Water supply piping is not disinfected.	Inspect the reprocessor as described in Chapter 5, “Inspection and Preparation Before Use”. If bacteria are detected again in the next culture test, contact Olympus.
Endoscopes were not precleaned before being reprocessed.	–	Inspect the reprocessor as described in Chapter 5, “Inspection and Preparation Before Use”. Then, preclean the endoscopes and reprocess them again from the beginning.
Printed paper is not output from the printer.	• Printer paper roll has run out. • Paper jam.	Take the remedial action by referring to the MAJ-2144 instruction manual for printer.
Abnormal noise from the reprocessor.	Internal problem with the reprocessor.	Contact Olympus.
Non-connected status is displayed (yellow indicator) on the touch screen.	The connection with a network is not established.	Check the connection of the network cable and the network setting of the reprocessor.

Problem	Possible causes	Remedial actions
Auto leak test conducted independently gave the “Leaked” judgment result.	• Water leak of an endoscope. • Irregularity with the leak test air tube. • Endoscope is warm because it was cleaned manually with warm water.	• Check if the endoscope has a water leaking point with manual leak test. If a leak point exists on the outer surface, stop it with a piece of tape and perform the leaking scope decontamination as described in Section 7.15, “Leaking scope decontamination”. After it, return the endoscope to Olympus for servicing. If the leak point exists in a position where taping is impossible, do not execute this process but contact Olympus. • Perform the ALT self-check. If an error is detected, contact Olympus.
Do not know how to return the leaking endoscope to Olympus for servicing.	–	Check the leaking point of the endoscope with manual leak test. If the leak point exists on the outer surface, stop it with a piece of tape and perform the leaking scope decontamination as described in Section 7.15, “Leaking scope decontamination”. After it, return the endoscope to Olympus for servicing. If the leak point exists in a position where taping is impossible, do not execute this process but contact Olympus.
Leaking scope decontamination is performed without attaching connector jigs.	Connection of connector jigs was forgotten.	If the leaking scope decontamination is already completed, return the endoscope to Olympus for servicing. Do not retry leaking scope decontamination, as this may cause excessive water leak inside the endoscope.
Error code [E115] is generated several times during leaking scope decontamination.	Water leak from the endoscope is serious (the leaking hole is big).	Contact Olympus.

13.3 OER-Elite return

Contact Olympus for information about packing and shipping the reprocessor for return. When you return the reprocessor, include a description of the malfunction or damage and how it occurred.

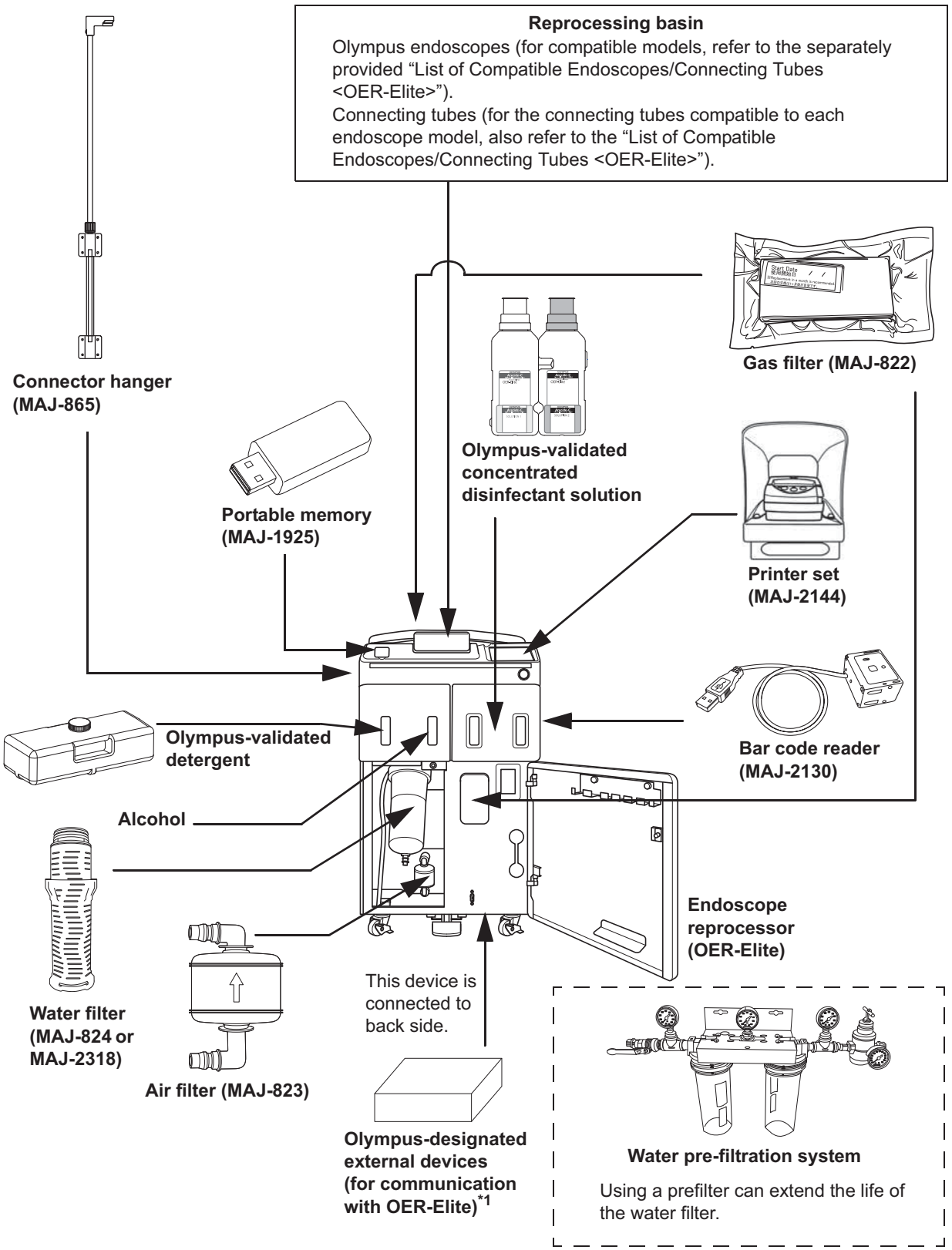
Appendix

System chart

The recommended combinations of equipment and accessories that can be used with this reprocessor are listed below. Some items may not be available in some areas. New products released after the introduction of this reprocessor may also be compatible with this equipment. For further details, contact Olympus.

WARNING

If combinations of equipment other than those shown below are used, Olympus cannot guarantee that the device will perform as expected. Nor can Olympus guarantee the safety of patients and operators. Nor can the durability of the device be guaranteed when nondesignated equipment is used. Any damage resulting from improper combinations will not be serviced or repaired free of charge.



*1 Always use Olympus designated external devices for communication with OER-Elite. If not, Olympus cannot guarantee that the device will perform as expected. For more details on external devices available in your area, contact Olympus.

Specifications

■ Shipping environment

Shipping environment	**Ambient temperatures**	–47 to +60°C (–52 to +140°F)
	Relative humidity	10 – 95%
	Atmospheric pressure	700 – 1060 hPa

■ Operating environment

Operating environment	**Ambient temperatures**	10 – 40°C (50 – 104°F)
	Relative humidity	30 – 85%
	Elevation	3000 meters
	Designed for use	Indoors
	Water supply flow	• Minimum quantity of water supply (from the water supply/circulation nozzle) to complete a reprocessing process: 6 L/min or more • Recommended quantity of water supply (from the water supply/circulation nozzle) to achieve the minimum reprocessing time: 18 L/min
	Water supply pressure	0.1 – 0.5 MPa (include water hammer)
	Water supply temperature	5 – 28°C (41 – 82°F)
	Water type	Potable water, softened water or purified water
	Water hardness	0 – 400 ppm 0 – 150 ppm (Recommended value) *1

*1 The recommended value is in reference to AAMI TIR34: 2014 “Water for the reprocessing of medical devices”.

NOTE

- Purified water is water that has been produced through the methods of either reverse osmosis (RO), deionization (DI), distillation or other methods that meet USP standards to remove impurities.
- When the water supply flow is less than 18 l/min, the reprocessing process time is extended.

■ *Specifications*

Compatible endoscopes		Olympus flexible endoscopes
		(Refer to the “List of Compatible Endoscopes/Connecting Tubes <OER-Elite>” for details)
		Note: The OER-Elite does not sterilize endoscopes. Therefore, after cleaning/disinfecting an endoscope that requires sterilization, always sterilize the endoscope as instructed in its instruction manual.
Number of reprocessed endoscopes		Max. 2 (1 with certain models) (Refer to the “List of Compatible Endoscopes/Connecting Tubes <OER-Elite>” for combinations)
Cleaning method	**Exterior surfaces**	Ultrasonic cleaning, turbulent bath
	Channel interiors	Fluid flushing
	Valves	Ultrasonic cleaning, fluid flushing
Disinfection method	**Exterior surfaces**	Disinfectant solution immersion
	Channel interiors	Disinfectant solution flushing and filling
	Valves	Disinfectant solution immersion
Cleaning time setting		3 minutes
Disinfection time setting		7 minutes
Heat LCG setting		Heating immediately before disinfection process in a reprocessing program. 20°C (68°F) (If the temperature of disinfectant solution is below 20°C, it is heated to 20°C (68°F).) Heating before the start of a reprocessing program. 22°C (72°F) (If the temperature of disinfectant solution is below 20°C, it is heated to 22°C (72°F).) Heating by the timer. 22°C (72°F) (If the temperature of disinfectant solution is below 20°C, it is heated to 22°C (72°F).)
Heat LCG method		Built-in heater in the disinfectant solution tank. 1 Heating before the start of a reprocessing program. 2 Heating by the timer. Built-in heater in the reprocessing basin. 1 Heating immediately before disinfection process in a reprocessing program.
Water discharge method		Forced draining using a pump (The top of the drain hose should be 60 cm or less. A floor drain is recommended.)

Disinfectant solution discharge method		1 Draining through disinfectant collection hose 2 Draining through drain hose
Reprocessing basin capacity		Approximately 17.9 L
Disinfectant solution tank capacity		Approximately 21.1 L
Disinfectant solution		Olympus-validated disinfectant solution (Refer to Section 2.8, “Consumable accessories (Optional)” for Olympus-validated disinfectant solution.)
Detergent		Olympus-validated detergent (Refer to Section 2.8, “Consumable accessories (Optional)” for Olympus-validated disinfectant solution.)
Manual leak test		Visual inspection of bubble during immersion.
Auto leak test		Detects automatically for a pin hole by feeding air into the endoscope and computing a changed air pressure.
Alcohol flush		Automatic flushing/draining using a pump and compressor
Dimensions		500 (W) × 945 (H) × 774 (D) mm
Weight		133 kg (dry condition)
Power supply	**Voltage**	120 V AC
	Frequency	60 Hz
	Rated input	660 VA
	Voltage fluctuation	Within ±10%
	Frequency fluctuation	Within ±1 Hz
	Fuse rating	10 A, 250 V
	Fuse size	ø5 × 20 mm
Ultrasonic wave	**Frequency**	36 ±2 kHz
	Power	100 W
EMC	**Applied standard**	IEC 61326-1: 2012 • CISPR 11 of emission: Group 1, Class B
Electrical safety	**Applied standard**	UL 61010-1: 2012 CSA C22.2 No. 61010-1: 2012 CSA C22.2 No. 61010-2-040: 2016 IEC 61010-1: 2010 IEC 61010-2-040: 2015 • Installation category: II Pollution degree: 2
Radio transmitter	**Compliance**	ISO/IEC 18000-3 (Mode1)
	Center frequency	13.56 MHz
	Modulation	ASK
	Effective radiated power	200 mW±20%

UDI label	Indication	A label required by some countries' regulations regarding identification of medical device also known as Unique Device Identification (UDI). The following information is being coded in the 2-dimensional barcode (GS1 Date Matrix): – (01) 14-digit GS1 Global Trade Item Number; – (11) 6-digit date of manufacture; – (21) 7-digit serial number.

FCC and IC information

This equipment complies with part15 of the FCC rules and the IC RSS210.

FCC ID: S8Q-RU2020

IC: 4763B-RU2020

FCC WARNING

Change or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE

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. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in 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 one or more of the following measures:

– Reorient or relocate the receiving antenna.

– Increase the separation between the equipment and receiver.

– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

– Consult the dealer or an experienced radio/TV technician for help.

EMC information

Guidance and manufacturer's declaration — Electromagnetic emissions

This model is intended for use in the electromagnetic environment specified below. The customer or the user of this model should assure that it is used in such an environment.

Emissions test	Compliance	Electromagnetic environment — Guidance
RF emissions CISPR 11	Group 1	This instrument uses RF (Radio Frequency) energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
Radiated emissions CISPR 11	Class B	This instrument's RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
Main terminal conducted emissions CISPR 11		
Harmonic emissions IEC 61000-3-2	Not applicable	Power supply specification of this instrument is less than 220 VAC, and this instrument is exempt from requirements of IEC 61000-3-2.
Voltage fluctuations/flicker emissions IEC 61000-3-3	Not applicable	Power supply specification of this instrument is less than 220 VAC, and this instrument is exempt from requirements of IEC 61000-3-3.

Guidance and manufacturer's declaration — Electromagnetic immunity

This model is intended for use in the electromagnetic environment specified below. The customer or the user of this model should assure that it is used in such an environment.

Immunity test	IEC 61326-1 test level	Compliance level	Electromagnetic environment — Guidance
Electrostatic discharge (ESD) IEC 61000-4-2	Contact: ±2, ±4 kV Air: ±2, ±4, ±8 kV	Same as left	Floors should be made of wood, concrete, or ceramic tile that hardly produces static. If floors are covered with synthetic material that tends to produce static, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	Same as left	Mains power quality should be that of a typical commercial (original condition feeding the facilities) or hospital environment.
Surge IEC 61000-4-5	Differential mode: ±1 kV Common mode: ±1, ±2 kV	Same as left	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions, and voltage variations on power supply input lines IEC 61000-4-11	0% U_T (100% dip in U_T) for 1 cycle	Same as left	Mains power quality should be that of a typical commercial or hospital environment. If the user of this instrument requires continued operation during power mains interruptions, it is recommended that this instrument be powered from an uninterruptible power supply or a battery.
	40% U_T (60% dip in U_T) for 200 ms		
	70% U_T (30% dip in U_T) for 500 ms		
	0% U_T (100% dip in U_T) for 5 seconds		
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	Same as left	It is recommended to use this instrument by maintaining enough distance from any equipment that operates with high current.
Definition	U_T is the a.c. mains voltage prior to application of the test level.		

Guidance and manufacturer's declaration — Electromagnetic immunity

This model is intended for use in the electromagnetic environment specified below. The customer or the user of this model should assure that it is used in such an environment.

Portable and mobile RF communications equipment should be used no closer to any part of this model, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.

Immunity test	IEC 61326-1 test level	Compliance level	Electromagnetic environment — Guidance
Conducted RF IEC 61000-4-6	3 Vrms (150 kHz – 80 MHz)	3 V (V_1)	Recommended separation distance (V_1=3 according to the compliance level) $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	10V/m (80 MHz – 1 GHz) 3V/m (1.4 GHz – 2 GHz) 1V/m (2 GHz – 2.7 GHz)	10 V/m (E_1) 3 V/m (E_2) 1 V/m (E_3)	Recommended separation distance (E_1=10, E_2=3, E_3=1 according to the compliance level) $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz – 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz – 1 GHz $d = \left[\frac{7}{E_2}\right]\sqrt{P}$ 1.4 GHz – 2 GHz $d = \left[\frac{7}{E_3}\right]\sqrt{P}$ 2 GHz – 2.7 GHz
Definition	Where "P" is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and "d" is the recommended separation distance in meters (m).		

NOTE

- At 80 MHz and 800 MHz, the higher frequency range applies.
- These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.
- Electromagnetic interference may occur in the vicinity of high-frequency electrosurgical equipment and/or other equipment marked with the following symbol:

NOTE

- Field strength from fixed RF transmitters as determined by an electromagnetic site survey[a)] should be less than the compliance level in each frequency range[b)].

  a) Field strength from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which this model is used exceeds the applicable RF compliance level above, this model should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating this model.

  b) Over the frequency range 150 kHz to 80 MHz, field strength should be less than 3 V/m.

Recommended separation distances between portable and mobile RF communications equipment and this model

This model is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of this model can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and this model as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter P (W)	Separation distance according to frequency of transmitter (m) (calculated as V_1=3, E_1=10, E_2=3 and E_3=1)		
	150 kHz – 80 MHz $d = 1.2\sqrt{P}$	80 MHz – 800 MHz $d = 0.35\sqrt{P}$	800 MHz – 1 GHz $d = 0.7\sqrt{P}$
0.01	0.12	0.04	0.07
0.1	0.38	0.12	0.23
1	1.2	0.35	0.70
10	3.8	1.2	2.3
100	12	3.5	7

Rated maximum output power of transmitter P (W)	Separation distance according to frequency of transmitter (m) (calculated as V_1=3, E_1=10, E_2=3 and E_3=1)		
	1.4 GHz – 2 GHz $d = 2.4\sqrt{P}$	2 GHz – 2.7 GHz $d = 7\sqrt{P}$	
0.01	0.24	0.7	
0.1	0.76	2.3	
1	2.4	7	
10	7.6	23	
100	24	70	
Others	For transmitters rated at a maximum output power not listed above, the recommended separation distance ‘d’ in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where ‘p’ is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.		

NOTE

- At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.
- These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

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iconv (Charset Conversion Library) v2.0

(28) Artem Bityuckiy (--enable-newlib-iconv)

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