

Indicating Subject (Human)

(1) Not Providing (forgetting the operation)

(HC1) Considering that no indication is required (lack of knowledge)

(HC2) Knowing the indication but having forgotten it (too busy, lack of training, or ill health)

(HC3) Thinking that the indications are given (lack of training, inadequate confirmation procedure)

(HC4) Overlooking the indication and feedback and executing nothing

(2) Providing causes hazard (failure)

(HC5) Mistaking the indication (lack of knowledge, lack of training)

(HC6) Being delayed by having forgotten or taking time (lack of training, ill health)

(HC7) Misunderstanding the indication (misinterpreting) (lack of training)

(HC8) Giving the instructions to an incorrect person (lack of knowledge, lack of training)

(HC9) Executing incorrect operation with the feedback misunderstood

(HC10) Giving the instructions without confirming

(5) Instructions (Operation: switches, keyboard, etc.)

(A1) The instructions cannot be transmitted (trouble).

(A2) The instructions are delayed (trouble).

(A3) Faulty instructions are included.

Indicated Subject (Machine)

(3) Omission Error

(MP1) The instructions have been given but not accepted (trouble).

(4) Commission Error

(MP2) The instructions cannot be executed as instructed or execution is delayed (trouble or inadequate algorithm).

(MP3) The instructions cannot be executed, because they are faulty.

Examples of Bad Circumstances

Why the light emitted cannot be recognized:

- Low visibility from snow, rain, or fog
- Strong backlight
- Rail tracks overly curved
- Tunnel ahead
- Obstacles (such as fallen trees ahead)
- Inappropriate equipment (such as sunglasses)
- Inaudible, because of noise

(6) Feedback (images, lights and sounds)

(F1) The feedback is not transmitted. (interrupted with bad circumstances, inadequate instruction)

(F2) The feedback is delayed.

(F3) Incorrect feedback