

Tr	Function ID	Tr	Function Loss Description	Function Loss Phase	Corresponding Hazard(s) in FHA	Tr	Assigned Classification	Verification Method	Review	Status	Date	Tr	Comments
1.1	Flight controls, <b>Total Loss</b>		Start	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
1.1	Flight controls, <b>Partial Loss</b>		Start	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
1.1	Flight controls, <b>Total Loss</b>		Search	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
1.1	Flight controls, <b>Partial Loss</b>		Search	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
1.1	Flight controls, <b>Total Loss</b>		Subject Found	One agent lost, No effect unless subject underneath				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
1.1	Flight controls, <b>Partial Loss</b>		Subject Found	Agent buffer zone increased				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
1.1	Flight controls, <b>Total Loss</b>		Return	One agent lost				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
1.1	Flight controls, <b>Partial Loss</b>		Return	Agent buffer zone increased				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
2.1	Communicate correct healthstatus, <b>Total Loss</b>		Start	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
2.1	Communicate correct healthstatus, <b>Partial Loss</b>		Start	Delayed task distribution, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
2.1	Communicate correct healthstatus, <b>Total Loss</b>		Search	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
2.1	Communicate correct healthstatus, <b>Partial Loss</b>		Search	Delayed task distribution, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
2.1	Communicate correct healthstatus, <b>Total Loss</b>		Subject Found	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
2.1	Communicate correct healthstatus, <b>Partial Loss</b>		Subject Found	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
2.1	Communicate correct healthstatus, <b>Total Loss</b>		Return	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
2.1	Communicate correct healthstatus, <b>Partial Loss</b>		Return	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
2.2	Communicate correct position, <b>Total Loss</b>		Start	Degraded search capacity, one agent lost, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
2.2	Communicate correct position, <b>Partial Loss</b>		Start	Agent buffer zone increased, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	

T <sub>F</sub>	Function ID	T <sub>F</sub>	Function Loss Description	Function Loss Phase	Corresponding Hazard(s) in FHA	T <sub>F</sub>	Assigned Classification	Verification Method	👤 Reviewer	⌚ Status	📅 Date	T <sub>F</sub>	Comments
2.2	Communicate correct position, <b>Total Loss</b>		Search	Degraded search capacity, one agent lost, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.2	Communicate correct position, <b>Partial Loss</b>		Search	Agent buffer zone increased, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.2	Communicate correct position, <b>Total Loss</b>		Subject Found	Decreased search area, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.2	Communicate correct position, <b>Partial Loss</b>		Subject Found	Delayed subject position, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.2	Communicate correct position, <b>Total Loss</b>		Return	One agent lost				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.2	Communicate correct position, <b>Partial Loss</b>		Return	Agent buffer zone increased				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.3	Communicate correctly with agents in area, <b>Total Loss</b>		Start	Degraded search capacity, one agent lost, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.3	Communicate correctly with agents in area, <b>Partial Loss</b>		Start	Delayed task distribution, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.3	Communicate correctly with agents in area, <b>Total Loss</b>		Search	Degraded search capacity, one agent lost, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.3	Communicate correctly with agents in area, <b>Partial Loss</b>		Search	Delayed task distribution, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.3	Communicate correctly with agents in area, <b>Total Loss</b>		Subject Found	Degraded search capacity, one agent lost, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.3	Communicate correctly with agents in area, <b>Partial Loss</b>		Subject Found	Delayed subject position, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.3	Communicate correctly with agents in area, <b>Total Loss</b>		Return	One agent lost				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.3	Communicate correctly with agents in area, <b>Partial Loss</b>		Return	Agent buffer zone increased				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.4	Communicate correct search status, <b>Total Loss</b>		Start	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments

Tr	Function ID	Tr	Function Loss Description	Function Loss Phase	Corresponding Hazard(s) in FHA	Tr	Assigned Classification	Verification Method	👤 Reviewer	⌚ Status	📅 Date	Tr	Comments
2.4	Communicate correct search status, <b>Partial Loss</b>		Start	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.4	Communicate correct search status, <b>Total Loss</b>		Search	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.4	Communicate correct search status, <b>Partial Loss</b>		Search	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.4	Communicate correct search status, <b>Total Loss</b>		Subject Found	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.4	Communicate correct search status, <b>Partial Loss</b>		Subject Found	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.4	Communicate correct search status, <b>Total Loss</b>		Return	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.4	Communicate correct search status, <b>Partial Loss</b>		Return	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.5	Communicate correct energy status, <b>Total Loss</b>		Start	One agent lost, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.5	Communicate correct energy status, <b>Partial Loss</b>		Start	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.5	Communicate correct energy status, <b>Total Loss</b>		Search	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.5	Communicate correct energy status, <b>Partial Loss</b>		Search	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.5	Communicate correct energy status, <b>Total Loss</b>		Subject Found	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.5	Communicate correct energy status, <b>Partial Loss</b>		Subject Found	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.5	Communicate correct energy status, <b>Total Loss</b>		Return	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
2.5	Communicate correct energy status, <b>Partial Loss</b>		Return	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
3.1	Search using RGB camera, <b>Total Loss</b>		Start	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments

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3.1	Search using RGB camera, <b>Partial Loss</b>		Start	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Camera considered a total loss – partial failures not applicable.
3.1	Search using RGB camera, <b>Total Loss</b>		Search	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
3.1	Search using RGB camera, <b>Partial Loss</b>		Search	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Camera considered a total loss – partial failures not applicable.
3.1	Search using RGB camera, <b>Total Loss</b>		Subject Found	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
3.1	Search using RGB camera, <b>Partial Loss</b>		Subject Found	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Camera considered a total loss – partial failures not applicable.
3.1	Search using RGB camera, <b>Total Loss</b>		Return	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
3.1	Search using RGB camera, <b>Partial Loss</b>		Return	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Camera considered a total loss – partial failures not applicable.
3.2	Search using Infrared (IR), <b>Total Loss</b>		Start	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
3.2	Search using Infrared (IR), <b>Partial Loss</b>		Start	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		IR considered a total loss – partial failures not applicable.
3.2	Search using Infrared (IR), <b>Total Loss</b>		Search	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
3.2	Search using Infrared (IR), <b>Partial Loss</b>		Search	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		IR considered a total loss – partial failures not applicable.
3.2	Search using Infrared (IR), <b>Total Loss</b>		Subject Found	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	
3.2	Search using Infrared (IR), <b>Partial Loss</b>		Subject Found	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		IR considered a total loss – partial failures not applicable.
3.2	Search using Infrared (IR), <b>Total Loss</b>		Return	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025	Comments	

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3.2	Search using Infrared (IR), <b>Partial Loss</b>		Return	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		IR considered a total loss – partial failures not applicable.
3.3	Search using Ultrasonic (US), <b>Total Loss</b>		Start	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
3.3	Search using Ultrasonic (US), <b>Partial Loss</b>		Start	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		US considered a total loss – partial failures not applicable.
3.3	Search using Ultrasonic (US), <b>Total Loss</b>		Search	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
3.3	Search using Ultrasonic (US), <b>Partial Loss</b>		Search	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		US considered a total loss – partial failures not applicable.
3.3	Search using Ultrasonic (US), <b>Total Loss</b>		Subject Found	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
3.3	Search using Ultrasonic (US), <b>Partial Loss</b>		Subject Found	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		US considered a total loss – partial failures not applicable.
3.3	Search using Ultrasonic (US), <b>Total Loss</b>		Return	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
3.3	Search using Ultrasonic (US), <b>Partial Loss</b>		Return	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		US considered a total loss – partial failures not applicable.
3.4	Search using Lidar, <b>Total Loss</b>		Start	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
3.4	Search using Lidar, <b>Partial Loss</b>		Start	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Lidar considered a total loss – partial failures not applicable.
3.4	Search using Lidar, <b>Total Loss</b>		Search	Degraded search capacity, Delayed rescue				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
3.4	Search using Lidar, <b>Partial Loss</b>		Search	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Lidar considered a total loss – partial failures not applicable.
3.4	Search using Lidar, <b>Total Loss</b>		Subject Found	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
3.4	Search using Lidar, <b>Partial Loss</b>		Subject Found	-			☒	Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Lidar considered a total loss – partial failures not applicable.

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3.4	Search using Lidar, <b>Total Loss</b>		Return	No effect				Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
3.4	Search using Lidar, <b>Partial Loss</b>		Return	-		☒		Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Lidar considered a total loss – partial failures not applicable.
4.1	Search area distribution, <b>Total Loss</b>	Start	Degraded search capacity, Delayed rescue					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.1	Search area distribution, <b>Partial Loss</b>	Start	Delayed task distribution, Delayed rescue					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.1	Search area distribution, <b>Total Loss</b>	Search	Degraded search capacity, Delayed rescue					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.1	Search area distribution, <b>Partial Loss</b>	Search	Delayed task distribution, Delayed rescue					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.1	Search area distribution, <b>Total Loss</b>	Subject Found	No effect					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.1	Search area distribution, <b>Partial Loss</b>	Subject Found	No effect					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.1	Search area distribution, <b>Total Loss</b>	Return	No effect					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.1	Search area distribution, <b>Partial Loss</b>	Return	No effect					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.2	Task allocation, <b>Total Loss</b>	Start	Degraded search capacity, one agent lost, Delayed rescue					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.2	Task allocation, <b>Partial Loss</b>	Start	Delayed task distribution, Delayed rescue					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.2	Task allocation, <b>Total Loss</b>	Search	Degraded search capacity, one agent lost, Delayed rescue					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.2	Task allocation, <b>Partial Loss</b>	Search	Delayed task distribution, Delayed rescue					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.2	Task allocation, <b>Total Loss</b>	Subject Found	One agent lost					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.2	Task allocation, <b>Partial Loss</b>	Subject Found	Delayed task distribution					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.2	Task allocation, <b>Total Loss</b>	Return	One agent lost, agent buffer zone increased					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments
4.2	Task allocation, <b>Partial Loss</b>	Return	Delayed task distribution					Traceability analysis Function Loss → FHA Table	Emily Zainali	Completed	10/17/2025		Comments