

Hazard	Operational Situation	Operational Mode	Exposure	Controllability	Severity	ASIL	Functional Safety Goal
Proper distance is not being kept at all within platoon	Driving on highway	Disbanding platoon	E2	C2	S3	A	Vehicles in a disbanding platoon shall always keep proper distance between them when on the highway
Vehicles in platoon keep too much distance	Driving on highway	Disbanding platoon	E2	C2	S0	QM	Vehicles in a disbanding platoon shall always keep a small enough distance between them when on the highway
Vehicles in platoon do not keep enough distance	Driving on highway	Disbanding platoon	E2	C2	S3	A	Vehicles in a disbanding platoon shall always keep a large enough distance between them when on the highway
Not all vehicles in platoon are keeping proper distance	Driving on highway	Disbanding platoon	E2	C2	S3	A	All vehicles in a disbanding platoon shall always keep proper distance between them when on the highway
Platoon does not keep proper distance to surrounding vehicles	Driving on highway	Disbanding platoon	E2	C2	S3	A	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is disbanding on the highway
Platoon keeps too much distance to surrounding vehicles	Driving on highway	Disbanding platoon	E2	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon is disbanding on the highway
Platoon gets too close to surrounding vehicles	Driving on highway	Disbanding platoon	E2	C2	S3	A	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon is disbanding on the highway
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Driving on highway	Disbanding platoon	E2	C2	S3	A	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is disbanding on the highway
Proper distance is not being kept at all within platoon	Transition between highways	Disbanding platoon	E2	C2	S3	A	Vehicles in a disbanding platoon shall always keep proper distance between them when on a transition between highways
Vehicles in platoon keep too much distance	Transition between highways	Disbanding platoon	E2	C2	S0	QM	Vehicles in a disbanding platoon shall always keep a small enough distance between them when on a transition between highways
Vehicles in platoon do not keep enough distance	Transition between highways	Disbanding platoon	E2	C2	S3	A	Vehicles in a disbanding platoon shall always keep a large enough distance between them when on a transition between highways
Not all vehicles in platoon are keeping proper distance	Transition between highways	Disbanding platoon	E2	C2	S3	A	All vehicles in a disbanding platoon shall always keep proper distance between them when on a transition between highways
Platoon does not keep proper distance to surrounding vehicles	Transition between highways	Disbanding platoon	E2	C2	S3	A	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is disbanding on a transition between highways
Platoon keeps too much distance to surrounding vehicles	Transition between highways	Disbanding platoon	E2	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon is disbanding on a transition between highways
Platoon gets too close to surrounding vehicles	Transition between highways	Disbanding platoon	E2	C2	S3	A	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon is disbanding on a transition between highways
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Transition between highways	Disbanding platoon	E2	C2	S3	A	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is disbanding on a transition between highways
Proper distance is not being kept at all within platoon	Driving on highway	Forming platoon	E2	C2	S3	A	Vehicles in a forming platoon shall always keep proper distance between them when on the highway
Vehicles in platoon keep too much distance	Driving on highway	Forming platoon	E2	C2	S0	QM	Vehicles in a forming platoon shall always keep a small enough distance between them when on the highway
Vehicles in platoon do not keep enough distance	Driving on highway	Forming platoon	E2	C2	S3	A	Vehicles in a forming platoon shall always keep a large enough distance between them when on the highway
Not all vehicles in platoon are keeping proper distance	Driving on highway	Forming platoon	E2	C2	S3	A	All vehicles in a forming platoon shall always keep proper distance between them when on the highway
Platoon does not make place for a vehicle wants to join	Driving on highway	Forming platoon	E2	C2	S3	A	Vehicles in a platoon shall make place for a vehicle that wants to join the platoon when the platoon is forming on the highway
Platoon makes too much space for a vehicle to join	Driving on highway	Forming platoon	E2	C0	S0	QM	Vehicles in a platoon shall make a small enough place for a vehicle that wants to join the platoon when the platoon is forming on the highway

Hazard	Operational Situation	Operational Mode	Exposure	Controllability	Severity	ASIL	Functional Safety Goal
Platoon does not make enough space for vehicle to join	Driving on highway	Forming platoon	E2	C2	S3	A	Vehicles in a platoon shall make a large enough place for a vehicle that wants to join the platoon when the platoon is forming on the highway
Only some of the vehicles make place for a vehicle to join (but not all of the vehicles that need to make place)	Driving on highway	Forming platoon	E2	C2	S3	A	All vehicles in a platoon that are close to a joining vehicle shall make place for that vehicle when the platoon is forming on the highway
Platoon decreases inter-vehicle distance while a vehicle wants to join	Driving on highway	Forming platoon	E2	C2	S3	A	Vehicles in a platoon shall not decrease their inter-vehicle distance when a vehicle wants to join the platoon when the platoon is forming on the highway
Platoon breaks up when vehicle wants to join	Driving on highway	Forming platoon	E0	C2	S0	QM	A platoon shall not be disbanded when a vehicle wants to join while the platoon is forming on the highway
Platoon does not keep proper distance to surrounding vehicles	Driving on highway	Forming platoon	E2	C2	S3	A	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is forming on the highway
Platoon keeps too much distance to surrounding vehicles	Driving on highway	Forming platoon	E2	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon is forming on the highway
Platoon gets too close to surrounding vehicles	Driving on highway	Forming platoon	E2	C2	S3	A	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon is forming on the highway
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Driving on highway	Forming platoon	E2	C2	S3	A	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is forming on the highway
Proper distance is not being kept at all within platoon	Transition between highways	Forming platoon	E2	C2	S3	A	Vehicles in a forming platoon shall always keep proper distance between them when on a transition between highways
Vehicles in platoon keep too much distance	Transition between highways	Forming platoon	E2	C2	S0	QM	Vehicles in a forming platoon shall always keep a small enough distance between them when on a transition between highways
Vehicles in platoon do not keep enough distance	Transition between highways	Forming platoon	E2	C2	S3	A	Vehicles in a forming platoon shall always keep a large enough distance between them when on a transition between highways
Not all vehicles in platoon are keeping proper distance	Transition between highways	Forming platoon	E2	C2	S3	A	All vehicles in a forming platoon shall always keep proper distance between them when on a transition between highways
Platoon does not make place for a vehicle wants to join	Transition between highways	Forming platoon	E2	C2	S3	A	Vehicles in a platoon shall make place for a vehicle that wants to join the platoon when the platoon is forming on a transition between highways
Platoon makes too much space for a vehicle to join	Transition between highways	Forming platoon	E2	C0	S0	QM	Vehicles in a platoon shall make a small enough place for a vehicle that wants to join the platoon when the platoon is forming on a transition between highways
Platoon does not make enough space for vehicle to join	Transition between highways	Forming platoon	E2	C2	S3	A	Vehicles in a platoon shall make a large enough place for a vehicle that wants to join the platoon when the platoon is forming on a transition between highways
Only some of the vehicles make place for a vehicle to join (but not all of the vehicles that need to make place)	Transition between highways	Forming platoon	E2	C2	S3	A	All vehicles in a platoon that are close to a joining vehicle shall make place for that vehicle when the platoon is forming on a transition between highways
Platoon decreases inter-vehicle distance while a vehicle wants to join	Transition between highways	Forming platoon	E2	C2	S3	A	Vehicles in a platoon shall not decrease their inter-vehicle distance when a vehicle wants to join the platoon when the platoon is forming on a transition between highways
Platoon breaks up when vehicle wants to join	Transition between highways	Forming platoon	E2	C2	S0	QM	A platoon shall not be disbanded when a vehicle wants to join while the platoon is forming on a transition between highways
Platoon does not keep proper distance to surrounding vehicles	Transition between highways	Forming platoon	E2	C2	S3	A	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is forming on a transition between highways
Platoon keeps too much distance to surrounding vehicles	Transition between highways	Forming platoon	E2	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon is forming on a transition between highways

Hazard	Operational Situation	Operational Mode	Exposure	Controllability	Severity	ASIL	Functional Safety Goal
Platoon gets too close to surrounding vehicles	Transition between highways	Forming platoon	E2	C2	S3	A	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon is forming on a transition between highways
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Transition between highways	Forming platoon	E2	C2	S3	A	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is forming on a transition between highways
Proper distance is not being kept at all within platoon	Driving on highway	Growing platoon	E4	C3	S3	D	Vehicles in a platoon shall always keep proper distance between them when a vehicle joins their platoon on the highway
Vehicles in platoon keep too much distance	Driving on highway	Growing platoon	E4	C3	S0	QM	Vehicles in a platoon shall always keep a small enough distance between them when a vehicle joins their platoon on the highway
Vehicles in platoon do not keep enough distance	Driving on highway	Growing platoon	E4	C3	S3	D	Vehicles in a platoon shall always keep a large enough distance between them when a vehicle joins their platoon on the highway
Not all vehicles in platoon are keeping proper distance	Driving on highway	Growing platoon	E4	C3	S3	D	All vehicles in a platoon shall always keep proper distance between them when a vehicle joins their platoon on the highway
Platoon does not make place for a vehicle wants to join	Driving on highway	Growing platoon	E4	C2	S3	C	Vehicles in a platoon shall make place for a vehicle that wants to join the platoon when the platoon is growing on the highway
Platoon makes too much space for a vehicle to join	Driving on highway	Growing platoon	E4	C0	S0	QM	Vehicles in a platoon shall make a small enough place for a vehicle that wants to join the platoon when the platoon is growing on the highway
Platoon does not make enough space for vehicle to join	Driving on highway	Growing platoon	E4	C2	S3	C	Vehicles in a platoon shall make a large enough place for a vehicle that wants to join the platoon when the platoon is growing on the highway
Only some of the vehicles make place for a vehicle to join (but not all of the vehicles that need to make place)	Driving on highway	Growing platoon	E4	C2	S3	C	All vehicles in a platoon that are close to a joining vehicle shall make place for that vehicle when the platoon is growing on the highway
Platoon decreases inter-vehicle distance while a vehicle wants to join	Driving on highway	Growing platoon	E4	C2	S3	C	Vehicles in a platoon shall not decrease their inter-vehicle distance when a vehicle wants to join the platoon when the platoon is growing on the highway
Platoon breaks up when vehicle wants to join	Driving on highway	Growing platoon	E4	C2	S0	QM	A platoon shall not be disbanded when a vehicle wants to join while the platoon is growing on the highway
Platoon does not keep proper distance to surrounding vehicles	Driving on highway	Growing platoon	E4	C2	S3	C	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is growing on the highway
Platoon keeps too much distance to surrounding vehicles	Driving on highway	Growing platoon	E4	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon is growing on the highway
Platoon gets too close to surrounding vehicles	Driving on highway	Growing platoon	E4	C2	S3	C	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon is growing on the highway
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Driving on highway	Growing platoon	E4	C2	S3	C	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is growing on the highway
Proper distance is not being kept at all within platoon	Transition between highways	Growing platoon	E2	C3	S3	B	Vehicles in a platoon shall always keep proper distance between them when a vehicle joins their platoon on a transition between highways
Vehicles in platoon keep too much distance	Transition between highways	Growing platoon	E2	C3	S0	QM	Vehicles in a platoon shall always keep a small enough distance between them when a vehicle joins their platoon on a transition between highways
Vehicles in platoon do not keep enough distance	Transition between highways	Growing platoon	E2	C3	S3	B	Vehicles in a platoon shall always keep a large enough distance between them when a vehicle joins their platoon on a transition between highways
Not all vehicles in platoon are keeping proper distance	Transition between highways	Growing platoon	E2	C3	S3	B	All vehicles in a platoon shall always keep proper distance between them when a vehicle joins their platoon on a transition between highways
Platoon does not make place for a vehicle wants to join	Transition between highways	Growing platoon	E2	C2	S3	A	Vehicles in a platoon shall make place for a vehicle that wants to join the platoon when the platoon is growing on a transition between highways

Hazard	Operational Situation	Operational Mode	Exposure	Controllability	Severity	ASIL	Functional Safety Goal
Platoon makes too much space for a vehicle to join	Transition between highways	Growing platoon	E2	C0	S0	QM	Vehicles in a platoon shall make a small enough place for a vehicle that wants to join the platoon when the platoon is growing on a transition between highways
Platoon does not make enough space for vehicle to join	Transition between highways	Growing platoon	E2	C2	S3	A	Vehicles in a platoon shall make a large enough place for a vehicle that wants to join the platoon when the platoon is growing on a transition between highways
Only some of the vehicles make place for a vehicle to join (but not all of the vehicles that need to make place)	Transition between highways	Growing platoon	E2	C2	S3	A	All vehicles in a platoon that are close to a joining vehicle shall make place for that vehicle when the platoon is growing on a transition between highways
Platoon decreases inter-vehicle distance while a vehicle wants to join	Transition between highways	Growing platoon	E2	C2	S3	A	Vehicles in a platoon shall not decrease their inter-vehicle distance when a vehicle wants to join the platoon when the platoon is growing on a transition between highways
Platoon breaks up when vehicle wants to join	Transition between highways	Growing platoon	E2	C2	S0	QM	A platoon shall not be disbanded when a vehicle wants to join while the platoon is growing on a transition between highways
Platoon does not keep proper distance to surrounding vehicles	Transition between highways	Growing platoon	E2	C2	S3	A	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is growing on a transition between highways
Platoon keeps too much distance to surrounding vehicles	Transition between highways	Growing platoon	E2	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon is growing on a transition between highways
Platoon gets too close to surrounding vehicles	Transition between highways	Growing platoon	E2	C2	S3	A	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon is growing on a transition between highways
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Transition between highways	Growing platoon	E2	C2	S3	A	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is growing on a transition between highways
Proper distance is not being kept at all within platoon	Driving on highway	Merging with other platoon	E3	C3	S3	C	Vehicles in a platoon shall always keep proper distance between them when their platoon merges with another platoon on the highway
Vehicles in platoon keep too much distance	Driving on highway	Merging with other platoon	E3	C3	S0	QM	Vehicles in a platoon shall always keep a small enough distance between them when their platoon merges with another platoon on the highway
Vehicles in platoon do not keep enough distance	Driving on highway	Merging with other platoon	E3	C3	S3	C	Vehicles in a platoon shall always keep a large enough distance between them when their platoon merges with another platoon on the highway
Not all vehicles in platoon are keeping proper distance	Driving on highway	Merging with other platoon	E3	C3	S3	C	All vehicles in a platoon shall always keep proper distance between them when their platoon merges with another platoon on the highway
Platoon does not make place for a vehicle wants to join	Driving on highway	Merging with other platoon	E3	C3	S3	C	Vehicles in a platoon shall make place for a vehicle that wants to join the platoon when the platoon merges with another platoon on the highway
Platoon makes too much space for a vehicle to join	Driving on highway	Merging with other platoon	E3	C3	S0	QM	Vehicles in a platoon shall make a small enough place for a vehicle that wants to join the platoon when the platoon merges with another platoon on the highway
Platoon does not make enough space for vehicle to join	Driving on highway	Merging with other platoon	E3	C3	S3	C	Vehicles in a platoon shall make a large enough place for a vehicle that wants to join the platoon when the platoon merges with another platoon on the highway
Only some of the vehicles make place for a vehicle to join (but not all of the vehicles that need to make place)	Driving on highway	Merging with other platoon	E3	C3	S3	C	All vehicles in a platoon that are close to a joining vehicle shall make place for that vehicle when the platoon merges with another platoon on the highway
Platoon decreases inter-vehicle distance while a vehicle wants to join	Driving on highway	Merging with other platoon	E3	C3	S3	C	Vehicles in a platoon shall not decrease their inter-vehicle distance when a vehicle wants to join the platoon when the platoon merges with another platoon on the highway

Hazard	Operational Situation	Operational Mode	Exposure	Controllability	Severity	ASIL	Functional Safety Goal
Platoon breaks up when vehicle wants to join	Driving on highway	Merging with other platoon	E3	C3	S0	QM	A platoon shall not be disbanded when a vehicle wants to join while the platoon merges with another platoon on the highway
Platoon does not merge with other platoon when this is desired	Driving on highway	Merging with other platoon	E3	C3	S0	QM	A platoon shall always actually merge with another platoon when this is desired while on the highway
Platoon merges with more than one platoon while it should only be merging with one	Driving on highway	Merging with other platoon	E3	C3	S3	C	A platoon shall always merge with only one other platoon while on the highway
Only part of the platoon merges with another platoon while full merging is desired	Driving on highway	Merging with other platoon	E3	C3	S3	C	A platoon shall always completely merge with another platoon during the merging process on the highway
Other platoon merges with this platoon while the reverse is desired (similar of not same?)	Driving on highway	Merging with other platoon	E3	C3	S3	C	Merger and mergee roles shall be properly conformed to between two platoons while they merge on the highway
Leading vehicle is not changed while this is desired	Driving on highway	Merging with other platoon	E3	C2	S0	QM	The leader of a platoon shall always be changed while the platoon merges with another platoon on the highway
Multiple leading vehicles are assigned while only one vehicle should be assigned	Driving on highway	Merging with other platoon	E3	C2	S3	B	A platoon shall always have one leader during and after merging with another platoon on the highway
No leading vehicle is assigned when the leader leaves	Driving on highway	Merging with other platoon	E3	C3	S3	C	A platoon shall always have exactly one new leader when the platoon merges with another platoon on the highway
Platoon breaks up when the leading vehicle is changed	Driving on highway	Merging with other platoon	E3	C2	S0	QM	A platoon shall not break up while the leading vehicle is being changed while the platoon merges with another platoon on the highway
Platoon does not keep proper distance to surrounding vehicles	Driving on highway	Merging with other platoon	E3	C3	S3	C	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon merges with another platoon on the highway
Platoon keeps too much distance to surrounding vehicles	Driving on highway	Merging with other platoon	E3	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon merges with another platoon on the highway
Platoon gets too close to surrounding vehicles	Driving on highway	Merging with other platoon	E3	C3	S3	C	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon merges with another platoon on the highway
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Driving on highway	Merging with other platoon	E3	C3	S3	C	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon merges with another platoon on the highway
Proper distance is not being kept at all within platoon	Transition between highways	Merging with other platoon	E1	C3	S3	A	Vehicles in a platoon shall always keep proper distance between them when their platoon merges with another platoon on a transition between highways
Vehicles in platoon keep too much distance	Transition between highways	Merging with other platoon	E1	C3	S0	QM	Vehicles in a platoon shall always keep a small enough distance between them when their platoon merges with another platoon on a transition between highways
Vehicles in platoon do not keep enough distance	Transition between highways	Merging with other platoon	E1	C3	S3	A	Vehicles in a platoon shall always keep a large enough distance between them when their platoon merges with another platoon on a transition between highways
Not all vehicles in platoon are keeping proper distance	Transition between highways	Merging with other platoon	E1	C3	S3	A	All vehicles in a platoon shall always keep proper distance between them when their platoon merges with another platoon on a transition between highways
Platoon does not make place for a vehicle wants to join	Transition between highways	Merging with other platoon	E1	C3	S3	A	Vehicles in a platoon shall make place for a vehicle that wants to join the platoon when the platoon merges with another platoon on a transition between highways
Platoon makes too much space for a vehicle to join	Transition between highways	Merging with other platoon	E1	C3	S0	QM	Vehicles in a platoon shall make a small enough place for a vehicle that wants to join the platoon when the platoon merges with another platoon on a transition between highways

Hazard	Operational Situation	Operational Mode	Exposure	Controllability	Severity	ASIL	Functional Safety Goal
Platoon does not make enough space for vehicle to join	Transition between highways	Merging with other platoon	E1	C3	S3	A	Vehicles in a platoon shall make a large enough place for a vehicle that wants to join the platoon when the platoon merges with another platoon on a transition between highways
Only some of the vehicles make place for a vehicle to join (but not all of the vehicles that need to make place)	Transition between highways	Merging with other platoon	E1	C3	S3	A	All vehicles in a platoon that are close to a joining vehicle shall make place for that vehicle when the platoon merges with another platoon on a transition between highways
Platoon decreases inter-vehicle distance while a vehicle wants to join	Transition between highways	Merging with other platoon	E1	C3	S3	A	Vehicles in a platoon shall not decrease their inter-vehicle distance when a vehicle wants to join the platoon when the platoon merges with another platoon on a transition between highways
Platoon breaks up when vehicle wants to join	Transition between highways	Merging with other platoon	E1	C3	S0	QM	A platoon shall not be disbanded when a vehicle wants to join while the platoon merges with another platoon on a transition between highways
Platoon does not merge with other platoon when this is desired	Transition between highways	Merging with other platoon	E1	C3	S0	QM	A platoon shall always actually merge with another platoon when this is desired while on a transition between highways
Platoon merges with more than one platoon while it should only be merging with one	Transition between highways	Merging with other platoon	E1	C3	S3	A	A platoon shall always merge with only one other platoon while on a transition between highways
Only part of the platoon merges with another platoon while full merging is desired	Transition between highways	Merging with other platoon	E1	C3	S3	A	A platoon shall always completely merge with another platoon during the merging process on a transition between highways
Other platoon merges with this platoon while the reverse is desired (similar of not same?)	Transition between highways	Merging with other platoon	E1	C3	S3	A	Merger and mergee roles shall be properly conformed to between two platoons while the merge on a transition between highways
Leading vehicle is not changed while this is desired	Transition between highways	Merging with other platoon	E1	C2	S0	QM	The leader of a platoon shall always be changed while the platoon merges with another platoon on a transition between highways
Multiple leading vehicles are assigned while only one vehicle should be assigned	Transition between highways	Merging with other platoon	E1	C2	S3	QM	A platoon shall always have one leader during and after merging with another platoon on a transition between highways
No leading vehicle is assigned when the leader leaves	Transition between highways	Merging with other platoon	E1	C3	S3	A	A platoon shall always have exactly one new leader when the platoon merges with another platoon on a transition between highways
Platoon breaks up when the leading vehicle is changed	Transition between highways	Merging with other platoon	E1	C2	S0	QM	A platoon shall not break up while the leading vehicle is being changed while the platoon merges with another platoon on a transition between highways
Platoon does not keep proper distance to surrounding vehicles	Transition between highways	Merging with other platoon	E1	C3	S3	A	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon merges with another platoon on a transition between highways
Platoon keeps too much distance to surrounding vehicles	Transition between highways	Merging with other platoon	E1	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon merges with another platoon on a transition between highways
Platoon gets too close to surrounding vehicles	Transition between highways	Merging with other platoon	E1	C3	S3	A	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon merges with another platoon on a transition between highways
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Transition between highways	Merging with other platoon	E1	C3	S3	A	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon merges with another platoon on a transition between highways
Proper distance is not being kept at all within platoon	Driving on highway	Platooning	E4	C3	S3	D	Vehicles in a platoon shall always keep proper distance between them when platooning on the highway
Vehicles in platoon keep too much distance	Driving on highway	Platooning	E4	C3	S0	QM	Vehicles in a platoon shall always keep a small enough distance between them when platooning on the highway
Vehicles in platoon do not keep enough distance	Driving on highway	Platooning	E4	C3	S3	D	Vehicles in a platoon shall always keep a large enough distance between them when platooning on the highway
Not all vehicles in platoon are keeping proper distance	Driving on highway	Platooning	E4	C3	S3	D	All vehicles in a platoon shall always keep proper distance between them when platooning on the highway



Hazard	Operational Situation	Operational Mode	Exposure	Controllability	Severity	ASIL	Functional Safety Goal
Platoon does not make place for a vehicle wants to join	Driving on highway	Platooning	E4	C2	S3	C	Vehicles in a platoon shall make place for a vehicle that wants to join the platoon on the highway
Platoon makes too much space for a vehicle to join	Driving on highway	Platooning	E4	C0	S0	QM	Vehicles in a platoon shall make a small enough place for a vehicle that wants to join the platoon on the highway
Platoon does not make enough space for vehicle to join	Driving on highway	Platooning	E4	C2	S3	C	Vehicles in a platoon shall make a large enough place for a vehicle that wants to join the platoon on the highway
Only some of the vehicles make place for a vehicle to join (but not all of the vehicles that need to make place)	Driving on highway	Platooning	E4	C2	S3	C	All vehicles in a platoon that are close to a joining vehicle shall make place for that vehicle on the highway
Platoon decreases inter-vehicle distance while a vehicle wants to join	Driving on highway	Platooning	E4	C2	S3	C	Vehicles in a platoon shall not decrease their inter-vehicle distance when a vehicle wants to join the platoon on the highway
Platoon breaks up when vehicle wants to join	Driving on highway	Platooning	E4	C1	S0	QM	A platoon shall not be disbanded when a vehicle wants to join while platooning on the highway
Leading vehicle is not changed while this is desired	Driving on highway	Platooning	E4	C1	S0	QM	The leader of a platoon shall always be changed when this is desired while platooning on the highway
Multiple leading vehicles are assigned while only one vehicle should be assigned	Driving on highway	Platooning	E4	C2	S3	C	A platoon shall always have at most one leader while platooning on the highway
No leading vehicle is assigned when the leader leaves	Driving on highway	Platooning	E4	C3	S3	D	A platoon shall always have exactly one new leader when its current leader leaves while platooning on the highway
Platoon breaks up when the leading vehicle is changed	Driving on highway	Platooning	E4	C2	S0	QM	A platoon shall not break up while the leading vehicle is being changed while platooning on the highway
Platoon does not keep proper distance to surrounding vehicles	Driving on highway	Platooning	E4	C2	S3	C	A platoon shall always keep proper distance to vehicles surrounding the platoon while platooning on the highway
Platoon keeps too much distance to surrounding vehicles	Driving on highway	Platooning	E4	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while platooning on the highway
Platoon gets too close to surrounding vehicles	Driving on highway	Platooning	E4	C2	S3	C	A platoon shall always keep large enough distance to vehicles surrounding the platoon while platooning on the highway
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Driving on highway	Platooning	E4	C2	S3	C	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while platooning on the highway
Proper distance is not being kept at all within platoon	Transition between highways	Platooning	E3	C3	S3	C	Vehicles in a platoon shall always keep proper distance between them when platooning on a transition between highways
Vehicles in platoon keep too much distance	Transition between highways	Platooning	E3	C3	S0	QM	Vehicles in a platoon shall always keep a small enough distance between them when platooning on a transition between highways
Vehicles in platoon do not keep enough distance	Transition between highways	Platooning	E3	C3	S3	C	Vehicles in a platoon shall always keep a large enough distance between them when platooning on a transition between highways
Not all vehicles in platoon are keeping proper distance	Transition between highways	Platooning	E3	C3	S3	C	All vehicles in a platoon shall always keep proper distance between them when platooning on a transition between highways
Platoon does not make place for a vehicle wants to join	Transition between highways	Platooning	E3	C2	S3	B	Vehicles in a platoon shall make place for a vehicle that wants to join the platoon on a transition between highways
Platoon makes too much space for a vehicle to join	Transition between highways	Platooning	E3	C0	S0	QM	Vehicles in a platoon shall make a small enough place for a vehicle that wants to join the platoon on a transition between highways
Platoon does not make enough space for vehicle to join	Transition between highways	Platooning	E3	C2	S3	B	Vehicles in a platoon shall make a large enough place for a vehicle that wants to join the platoon on a transition between highways
Only some of the vehicles make place for a vehicle to join (but not all of the vehicles that need to make place)	Transition between highways	Platooning	E3	C2	S3	B	All vehicles in a platoon that are close to a joining vehicle shall make place for that vehicle on a transition between highways
Platoon decreases inter-vehicle distance while a vehicle wants to join	Transition between highways	Platooning	E3	C2	S3	B	Vehicles in a platoon shall not decrease their inter-vehicle distance when a vehicle wants to join the platoon on a transition between highways

Hazard	Operational Situation	Operational Mode	Exposure	Controllability	Severity	ASIL	Functional Safety Goal
Platoon breaks up when vehicle wants to join	Transition between highways	Platooning	E3	C1	S0	QM	A platoon shall not be disbanded when a vehicle wants to join while platooning on a transition between highways
Leading vehicle is not changed while this is desired	Transition between highways	Platooning	E3	C1	S0	QM	The leader of a platoon shall always be changed when this is desired while platooning on a transition between highways
Multiple leading vehicles are assigned while only one vehicle should be assigned	Transition between highways	Platooning	E3	C2	S3	B	A platoon shall always have at most one leader while platooning on a transition between highways
No leading vehicle is assigned when the leader leaves	Transition between highways	Platooning	E3	C3	S3	C	A platoon shall always have exactly one new leader when its current leader leaves while platooning on a transition between highways
Platoon breaks up when the leading vehicle is changed	Transition between highways	Platooning	E3	C2	S0	QM	A platoon shall not break up while the leading vehicle is being changed while platooning on a transition between highways
Platoon does not keep proper distance to surrounding vehicles	Transition between highways	Platooning	E3	C2	S3	B	A platoon shall always keep proper distance to vehicles surrounding the platoon while platooning on a transition between highways
Platoon keeps too much distance to surrounding vehicles	Transition between highways	Platooning	E3	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while platooning on a transition between highways
Platoon gets too close to surrounding vehicles	Transition between highways	Platooning	E3	C2	S3	B	A platoon shall always keep large enough distance to vehicles surrounding the platoon while platooning on a transition between highways
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Transition between highways	Platooning	E3	C2	S3	B	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while platooning on a transition between highways
Proper distance is not being kept at all within platoon	Driving on highway	Shrinking platoon	E4	C3	S3	D	Vehicles in a platoon shall always keep proper distance between them when a vehicle leaves their platoon on the highway
Vehicles in platoon keep too much distance	Driving on highway	Shrinking platoon	E4	C3	S0	QM	Vehicles in a platoon shall always keep a small enough distance between them when a vehicle leaves their platoon on the highway
Vehicles in platoon do not keep enough distance	Driving on highway	Shrinking platoon	E4	C3	S3	D	Vehicles in a platoon shall always keep a large enough distance between them when a vehicle leaves their platoon on the highway
Not all vehicles in platoon are keeping proper distance	Driving on highway	Shrinking platoon	E4	C3	S3	D	All vehicles in a platoon shall always keep proper distance between them when a vehicle leaves their platoon on the highway
Platoon does not keep proper distance to surrounding vehicles	Driving on highway	Shrinking platoon	E4	C2	S3	C	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is shrinking on the highway
Platoon keeps too much distance to surrounding vehicles	Driving on highway	Shrinking platoon	E4	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon is shrinking on the highway
Platoon gets too close to surrounding vehicles	Driving on highway	Shrinking platoon	E4	C2	S3	C	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon is shrinking on the highway
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Driving on highway	Shrinking platoon	E4	C2	S3	C	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is shrinking on the highway
Proper distance is not being kept at all within platoon	Transition between highways	Shrinking platoon	E2	C3	S3	B	Vehicles in a platoon shall always keep proper distance between them when a vehicle leaves their platoon on a transition between highways
Vehicles in platoon keep too much distance	Transition between highways	Shrinking platoon	E2	C3	S0	QM	Vehicles in a platoon shall always keep a small enough distance between them when a vehicle leaves their platoon on a transition between highways
Vehicles in platoon do not keep enough distance	Transition between highways	Shrinking platoon	E2	C3	S3	B	Vehicles in a platoon shall always keep a large enough distance between them when a vehicle leaves their platoon on a transition between highways
Not all vehicles in platoon are keeping proper distance	Transition between highways	Shrinking platoon	E2	C3	S3	B	All vehicles in a platoon shall always keep proper distance between them when a vehicle leaves their platoon on a transition between highways



Hazard	Operational Situation	Operational Mode	Exposure	Controllability	Severity	ASIL	Functional Safety Goal
Platoon does not keep proper distance to surrounding vehicles	Transition between highways	Shrinking platoon	E2	C2	S3	A	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is shrinking on a transition between highways
Platoon keeps too much distance to surrounding vehicles	Transition between highways	Shrinking platoon	E2	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon is shrinking on a transition between highways
Platoon gets too close to surrounding vehicles	Transition between highways	Shrinking platoon	E2	C2	S3	A	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon is shrinking on a transition between highways
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Transition between highways	Shrinking platoon	E2	C2	S3	A	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon is shrinking on a transition between highways
Proper distance is not being kept at all within platoon	Driving on highway	Splitting into two platoons	E3	C3	S3	C	Vehicles in a platoon shall always keep proper distance between them when their platoon splits into two platoons on the highway
Vehicles in platoon keep too much distance	Driving on highway	Splitting into two platoons	E3	C3	S0	QM	Vehicles in a platoon shall always keep a small enough distance between them when their platoon splits into two platoons on the highway
Vehicles in platoon do not keep enough distance	Driving on highway	Splitting into two platoons	E3	C3	S3	C	Vehicles in a platoon shall always keep a large enough distance between them when their platoon splits into two platoons on the highway
Not all vehicles in platoon are keeping proper distance	Driving on highway	Splitting into two platoons	E3	C3	S3	C	All vehicles in a platoon shall always keep proper distance between them when their platoon splits into two platoons on the highway
The platoon does not split when a split is desired	Driving on highway	Splitting into two platoons	E3	C3	S0	QM	A platoon shall always actually split into two platoons when this is desired while on the highway
Platoon splits into more than two platoons	Driving on highway	Splitting into two platoons	E3	C3	S3	C	A platoon shall always split into exactly two other platoons when splitting on the highway
The platoon splits and merges into another platoon while only a split is desired	Driving on highway	Splitting into two platoons	E3	C3	S3	C	A platoon shall never merge with another platoon while splitting on the highway
After the split less than two platoons remain since the resulting platoons contain less than two vehicles	Driving on highway	Splitting into two platoons	E3	C2	S3	B	A platoon shall always split into exactly two other platoons when splitting on the highway
Leading vehicle is not changed while this is desired	Driving on highway	Splitting into two platoons	E3	C3	S0	QM	The leader of a platoon shall always be changed when the platoon splits into two platoons on the highway
Multiple leading vehicles are assigned while only one vehicle should be assigned	Driving on highway	Splitting into two platoons	E3	C2	S3	B	Both platoons resulting from a platoon split shall have one leader during and after splitting on the highway
No leading vehicle is assigned when the leader leaves	Driving on highway	Splitting into two platoons	E3	C3	S3	C	Both platoons resulting from a platoon split shall have one leader during and after splitting on the highway
Platoon breaks up when the leading vehicle is changed	Driving on highway	Splitting into two platoons	E3	C2	S0	QM	A platoon shall not break up while the leading vehicle is being changed when a platoon splits into two platoons on the highway
Platoon does not keep proper distance to surrounding vehicles	Driving on highway	Splitting into two platoons	E3	C3	S3	C	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon splits into two platoons on the highway
Platoon keeps too much distance to surrounding vehicles	Driving on highway	Splitting into two platoons	E3	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon splits into two platoons on the highway
Platoon gets too close to surrounding vehicles	Driving on highway	Splitting into two platoons	E3	C3	S3	C	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon splits into two platoons on the highway
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Driving on highway	Splitting into two platoons	E3	C3	S3	C	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon splits into two platoons on the highway

Hazard	Operational Situation	Operational Mode	Exposure	Controllability	Severity	ASIL	Functional Safety Goal
Proper distance is not being kept at all within platoon	Transition between highways	Splitting into two platoons	E1	C3	S3	A	Vehicles in a platoon shall always keep proper distance between them when their platoon splits into two platoons on a transition between highways
Vehicles in platoon keep too much distance	Transition between highways	Splitting into two platoons	E1	C3	S0	QM	Vehicles in a platoon shall always keep a small enough distance between them when their platoon splits into two platoons on a transition between highways
Vehicles in platoon do not keep enough distance	Transition between highways	Splitting into two platoons	E1	C3	S3	A	Vehicles in a platoon shall always keep a large enough distance between them when their platoon splits into two platoons on a transition between highways
Not all vehicles in platoon are keeping proper distance	Transition between highways	Splitting into two platoons	E1	C3	S3	A	All vehicles in a platoon shall always keep proper distance between them when their platoon splits into two platoons on a transition between highways
The platoon does not split when a split is desired	Transition between highways	Splitting into two platoons	E1	C3	S0	QM	A platoon shall always actually split into two platoons when this is desired while on a transition between highways
Platoon splits into more than two platoons	Transition between highways	Splitting into two platoons	E1	C3	S3	A	A platoon shall always split into exactly two other platoons when splitting on a transition between highways
The platoon splits and merges into another platoon while only a split is desired	Transition between highways	Splitting into two platoons	E1	C3	S3	A	A platoon shall never merge with another platoon while splitting on a transition between highways
After the split less than two platoons remain since the resulting platoons contain less than two vehicles	Transition between highways	Splitting into two platoons	E1	C2	S3	QM	A platoon shall always split into exactly two other platoons when splitting on a transition between highways
Leading vehicle is not changed while this is desired	Transition between highways	Splitting into two platoons	E1	C3	S0	QM	The leader of a platoon shall always be changed when the platoon splits into two platoons on a transition between highways
Multiple leading vehicles are assigned while only one vehicle should be assigned	Transition between highways	Splitting into two platoons	E1	C2	S3	QM	Both platoons resulting from a platoon split shall have one leader during and after splitting on a transition between highways
No leading vehicle is assigned when the leader leaves	Transition between highways	Splitting into two platoons	E1	C3	S3	A	Both platoons resulting from a platoon split shall have one leader during and after splitting on a transition between highways
Platoon breaks up when the leading vehicle is changed	Transition between highways	Splitting into two platoons	E1	C2	S0	QM	A platoon shall not break up while the leading vehicle is being changed when a platoon splits into two platoons on a transition between highways
Platoon does not keep proper distance to surrounding vehicles	Transition between highways	Splitting into two platoons	E1	C3	S3	A	A platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon splits into two platoons on a transition between highways
Platoon keeps too much distance to surrounding vehicles	Transition between highways	Splitting into two platoons	E1	C1	S0	QM	A platoon shall always keep small enough distance to vehicles surrounding the platoon while the platoon splits into two platoons on a transition between highways
Platoon gets too close to surrounding vehicles	Transition between highways	Splitting into two platoons	E1	C3	S3	A	A platoon shall always keep large enough distance to vehicles surrounding the platoon while the platoon splits into two platoons on a transition between highways
Only some of the vehicles in the platoon keep proper distance to surrounding vehicles	Transition between highways	Splitting into two platoons	E1	C3	S3	A	All vehicles in a platoon shall always keep proper distance to vehicles surrounding the platoon while the platoon splits into two platoons on a transition between highways