

2012 REPAIR v/s REPLACEMENT GUIDE

BODY AND PAINT

Version 01

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Ia. Engine Hood Panel

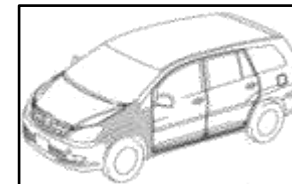






DAMAGE PHOTO	DAMAGE DESCRIPTION	REPAIR	REPLACE (CUT)	REPLACE (ASSY)	REMARKS (If Any)
	<ul style="list-style-type: none"> - Damage is on Outer Panel - Damage is not on press line 	✓	NA	×	
	<ul style="list-style-type: none"> - Damage is on press line but with no Kink damage 	✓	NA	×	
	<ul style="list-style-type: none"> - Reinforcement /inner panel is damaged - Damage is all across panel. 	×	NA	✓	Check for reinforcement damage(Hood Lock), if it is damaged then replace
	<ul style="list-style-type: none"> - Kink damage (Sharp bend) 	×	NA	✓	

NOTE: *If repair cost of damage more than the 70% of replacement cost then panel can be replaced.*

(Photos are only for reference)

Ib. Front Fender Panel

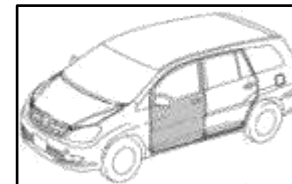






DAMAGE PHOTO	DAMAGE DESCRIPTION	REPAIR	REPLACE (CUT)	REPLACE (ASSY)	REMARKS (If Any)
	<ul style="list-style-type: none"> - 1/3rd of area of panel is damaged - Damage is not on press line 	✓	NA	×	
	<ul style="list-style-type: none"> - Damage is on press line but with no kink damage 	✓	NA	×	
	<ul style="list-style-type: none"> - Damage is all across the panel 	×	NA	✓	
	<ul style="list-style-type: none"> - Kink damage (Sharp bend) 	×	NA	✓	

NOTE: *If repair cost of damage more than the 70% of replacement cost then panel can be replaced.*

(Photos are only for reference)

Ic. Front Door/Rear Door Panel

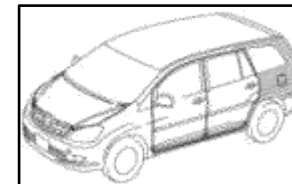






DAMAGE PHOTO	DAMAGE DESCRIPTION	REPAIR	REPLACE (CUT)	REPLACE (ASSY)	REMARKS (If Any)
	<ul style="list-style-type: none"> - 1/3rd of area of panel is damaged - Damage is not on press line 	✓	×	×	
	<ul style="list-style-type: none"> - Damage is on press line but with no kink damage 	✓	×	×	
	<ul style="list-style-type: none"> - Damage is all across the panel 	×	✓	✓	Only applicable if door skin of particular vehicle is available as Serviceparts as per the Body Repair Manual.
	<ul style="list-style-type: none"> - Kink damage (<i>Sharp bend</i>) - Door Impact beam (Reinforcement) is damaged. 	×	×	✓	

NOTE: *If repair cost of damage more than the 70% of replacement cost then panel can be replaced.*

(Photos are only for reference)

Id. Quarter Panel

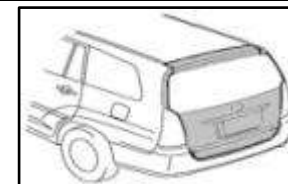


DAMAGE PHOTO	DAMAGE DESCRIPTION	REPAIR	REPLACE (CUT)	REPLACE (ASSY)	REMARKS (If Any)
	<ul style="list-style-type: none"> - 1/3rd of area of panel is damaged - Damage is not on press line 	✓	×	×	
	<ul style="list-style-type: none"> - Damage is on press line but with no kink damage 	✓	×	×	
	<ul style="list-style-type: none"> - Damage is all across the panel 	×	✓	✓	Replacement of panel as CUT or ASSY should be as mentioned in Body Repair Manual of particular vehicle.
	<ul style="list-style-type: none"> - Kink damage (Sharp bend) 	×	✓	✓	Replacement of panel as CUT or ASSY should be as mentioned in Body Repair Manual of particular vehicle.

NOTE: *If repair cost of damage more than the 70% of replacement cost then panel can be replaced.*

(Photos are only for reference)

Ie. Luggage Compartment Door/Back Door

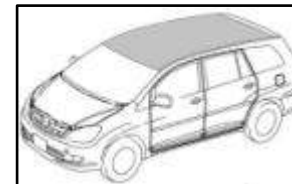


DAMAGE PHOTO	DAMAGE DESCRIPTION	REPAIR	REPLACE (CUT)	REPLACE (ASSY)	REMARKS (If Any)
	<ul style="list-style-type: none"> - 1/3rd of area of panel is damaged - Damage is not on press line 	✓	NA	×	
	<ul style="list-style-type: none"> - Damage is on press line but with no kink damage. 	✓	NA	×	
	<ul style="list-style-type: none"> - Damage is all across the panel. - Damage is on reinforcement panel. 	×	NA	✓	If door lock hemmed portion is damaged from inside then replace the panel.
	<ul style="list-style-type: none"> - Kink damage (Sharp bend) 	×	NA	✓	

NOTE: *If repair cost of damage more than the 70% of replacement cost then panel can be replaced.*

(Photos are only for reference)

If. Roof Panel

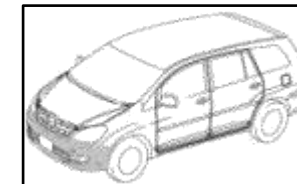






DAMAGE PHOTO	DAMAGE DESCRIPTION	REPAIR	REPLACE (CUT)	REPLACE (ASSY)	REMARKS (If Any)
	<ul style="list-style-type: none"> - 1/3rd of area of panel is damaged - Damage is not on press line 	✓	NA	×	
	<ul style="list-style-type: none"> - Damage is on press line but with no kink damage 	✓	NA	×	
	<ul style="list-style-type: none"> - Reinforcement panel is damaged - Damage is all across the panel. 	×	NA	✓	
	<ul style="list-style-type: none"> - Kink damage (Sharp bend) 	×	NA	✓	

NOTE: *If repair cost of damage more than the 70% of replacement cost then panel can be replaced.*

(Photos are only for reference)

Ila. Front Bumper







DAMAGE PHOTO	DAMAGE DESCRIPTION	REPAIR	REPLACE (CUT)	REPLACE (ASSY)	REMARKS (If Any)
	<ul style="list-style-type: none"> - Deformation repair for the damage length of approx. 21 cm or more. 	✓	NA	×	
	<ul style="list-style-type: none"> - Scratch/Crack Repair of damage area up to approx. 21~35cm 	✓	NA	×	Applicable only for painted bumper. For non-painted bumper, it has to be replaced.
	<ul style="list-style-type: none"> - Deformation or scratch repair for the damage area spread all the across the part. 	×	NA	✓	
	<ul style="list-style-type: none"> - Kink damage (<i>Sharp bend</i>) - Crack repair of length more than 35cm - Tabs damaged or broken 	×	NA	✓	

NOTE: *If repair cost of damage more than the 70% of replacement cost then panel can be replaced.*

(Photos are only for reference)

Iib. Rear Bumper






DAMAGE PHOTO	DAMAGE DESCRIPTION	REPAIR	REPLACE (CUT)	REPLACE (ASSY)	REMARKS (If Any)
	<ul style="list-style-type: none"> - Deformation repair for the damage length of approx. 21 cm or more. 	✓	NA	×	
	<ul style="list-style-type: none"> - Scratch/Crack Repair of damage area up to approx. 21~35cm 	✓	NA	×	Applicable only for painted bumper. For non-painted bumper, it has to be replaced.
	<ul style="list-style-type: none"> - Deformation or scratch repair for the damage area spread all the across the part 	×	NA	✓	Applicable only for painted bumper. For non-painted bumper, it has to be replaced.
	<ul style="list-style-type: none"> - Kink damage (<i>Sharp bend</i>) - Crack repair of length more than 30cm - More than 2~3 tabs damaged or broken 	×	NA	✓	Applicable only for painted bumper. For non-painted bumper, it has to be replaced.

NOTE: If repair cost of damage more than the 70% of replacement cost then panel can be replaced.

(Photos are only for reference)

Iic. Outer Rear View Mirror



DAMAGE PHOTO	DAMAGE DESCRIPTION	REPAIR	REPLACE (CUT-P/H)	REPLACE (ASSY)	REMARKS (If Any)
	- Scratch repair for the damage length of approx. 21 cm or less.	✓	NA	×	
	- Deformation or scratch repair for the damage area spread all the across the part	✓	NA	✓	
	- If hinge is broken or part is cracked.	×	NA	✓	

NOTE: *If repair cost of damage more than the 70% of replacement cost then panel can be replaced.*

(Photos are only for reference)

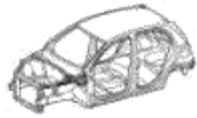

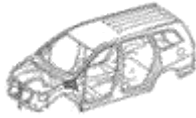
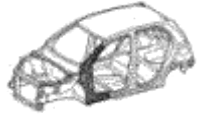
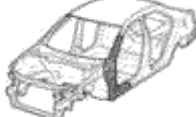
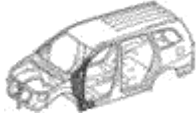






IIIa. Internal Panel – Body Parts

SL. NO.	PART NAME	TYPE OF VEHICLES			DAMAGE DESCRIPTION	REPAIR	REPLACE	REPLACE	REPLACE	REPLACE
		HATCHBACK	SEDAN	MUV/SUV			CUT-P	CUT-H	CUT	ASSY
1	Radiator Support				Light damage that can be repaired by hammering and pulling.	✓	NA	NA	NA	✗
					Damage is more than half of the panel or kink damage	✗	NA	NA	NA	✓
2	Front Cross Member				Light damage that can be repaired by hammering and pulling.	✓	NA	NA	NA	✗
					Damage is more than half of the panel or kink damage	✗	NA	NA	NA	✓
3	Front Fender Apron				Damage affects only the front portion and a cut open repair is not needed.	✓	NA	NA	NA	✗
					Damage affects the suspension tower or a cut open repair is needed	✗	NA	NA	NA	✓
4	Front Side member			NA	Damage affects only the front portion and a cut open repair is not needed.	✓	✗	✗	NA	✗
					Damage affects only the front portion and a cut open repair is needed	✗	✓	✗	NA	✗
					Damage affects to the center of the part and a cut open repair is needed	✗	✗	✓	NA	✓

NOTE: Please note that replacement method of each part may vary from vehicle type, so please refer BODY REPAIR MANUAL of particular vehicle. Also the all of the part may not be applicable of for all type of vehicles.

(Photos are only for reference)


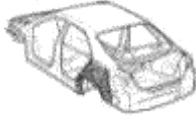




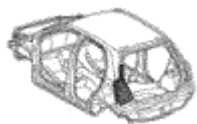




IIIa. Internal Panel – Body Parts

SL. NO.	PART NAME	TYPE OF VEHICLES			DAMAGE DESCRIPTION	REPAIR	REPLACE	REPLACE	REPLACE	REPLACE
		HATCHBACK	SEDAN	MUV/SUV			CUT-P	CUT-H	CUT	ASSY
5	Cowl Top Side Panel				Damage affects hood hinge and front fender apron and a cut open repair is not needed.	✓	NA	NA	NA	✗
					Damage extends over a wide area or a cut open repair is needed	✗	NA	NA	NA	✓
6	Front Body Pillar				Partial damage that can be repaired by hammering and pulling.	✓	NA	NA	✗	NA
					Damage extends over a wide area or a cut open repair is needed	✗	NA	NA	✓	NA
7	Center Body Pillar				Partial damage that can be repaired by hammering and pulling.	✓	NA	NA	✗	NA
					Damage extends over a wide area or a cut open repair is needed	✗	NA	NA	✓	NA
8	Rocker Outer Panel				Light damage that can be repaired by hammering and pulling.	✓	✗	✗	✗	NA
					Damage affects the front portion of panel and a cut open repair is needed.	✗	✓	✗	✗	NA
					Damage is more than half of the panel or kink damage	✗	✗	✓	✓	NA

NOTE: Please note that replacement method of each part may vary from vehicle type, so please refer BODY REPAIR MANUAL of particular vehicle. Also the all of the part may not be applicable of for all type of vehicles.

(Photos are only for reference)

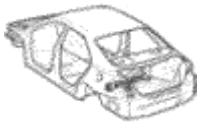



IIIa. Internal Panel – Body Parts

SL. NO.	PART NAME	TYPE OF VEHICLES			DAMAGE DESCRIPTION	REPAIR	REPLACE	REPLACE	REPLACE	REPLACE
		HATCHBACK	SEDAN	MUV/SUV			CUT-P	CUT-H	CUT	ASSY
9	Quarter Wheel Housing				Partial damage that can be repaired by hammering and pulling.	✓	NA	NA	NA	✗
					Damage extends over a wide area or the removal of adjacent part is needed.	✗	NA	NA	NA	✓
10	Body Lower Back Panel				Light damage that can be repaired by hammering and pulling.	✓	NA	NA	NA	✗
					Damage is more than half of the panel or kink damage	✗	NA	NA	NA	✓
11	Back Door Opening Side		NA		Light damage that can be repaired by hammering and pulling.	✓	NA	NA	✗	NA
					Damage is more than half of the panel or kink damage	✗	NA	NA	✓	NA
12	Rear Floor Side Member				Damage to the rear portion or rear member and a cut open repair is not needed.	✓	NA	NA	✗	✗
					Damage to the rear portion and a cut open repair is needed.	✗	NA	NA	✓	✓
					Damage can be observed in the front and rear and extend to the center of part.	✗	NA	NA	✓	✓

NOTE: Please note that replacement method of each part may vary from vehicle type, so please refer BODY REPAIR MANUAL of particular vehicle. Also the all of the part may not be applicable of for all type of vehicles.

(Photos are only for reference)

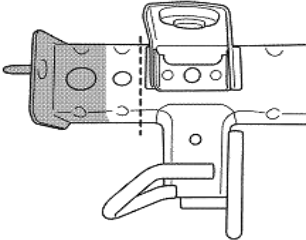
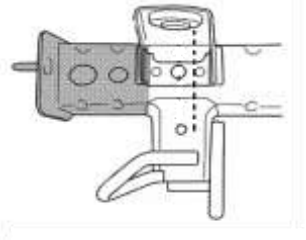
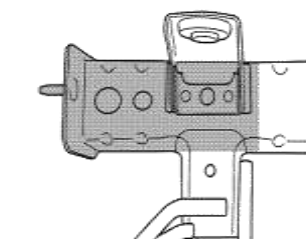
IIIa. Internal Panel – Body Parts

SL. NO.	PART NAME	TYPE OF VEHICLES			DAMAGE DESCRIPTION	REPAIR	REPLACE	REPLACE	REPLACE	REPLACE
		HATCHBACK	SEDAN	MUV/SUV			CUT-P	CUT-H	CUT	ASSY
13	Rear Floor Cross Member	NA		NA	Light damage that can be repaired by hammering and pulling.	✓	NA	NA	NA	✗
					Damage is more than half of the panel or kink damage	✗	NA	NA	NA	✓
14	Rear Floor Pan				Damage is in the simple shape area in rear portion.	✓	NA	NA	NA	✗
					Damage is in the simple shape area	✗	NA	NA	NA	✓
					Damage extends to front area or all of the rear portion	✗	NA	NA	NA	✓

NOTE: Please note that replacement method of each part may vary from vehicle type, so please refer BODY REPAIR MANUAL of particular vehicle. Also the all of the part may not be applicable of for all type of vehicles.

(Photos are only for reference)

IIIb. Internal Panel – Frame/Chassis Parts

SL. NO.	PART NAME	PART PHOTO	DAMAGE DESCRIPTION	REPAIR	REPLACE (CUT-P)	REPLACE (ASSY)
1	Front Side Rail Extension		The crushed portion of the front Frame Side Rail end is to front of the second side rail frame hole.	×	✓	×
			The crushed portion of the front Frame Side is just in front of the Cross Member Sub Assy, Frame Auxiliary, No.1.	×	✓	×
			The crushed portion of the front Frame Side Rail end continues beyond the Cross Member Sub Assy, Frame Auxiliary, No.1.	×	×	✓ (Frame)

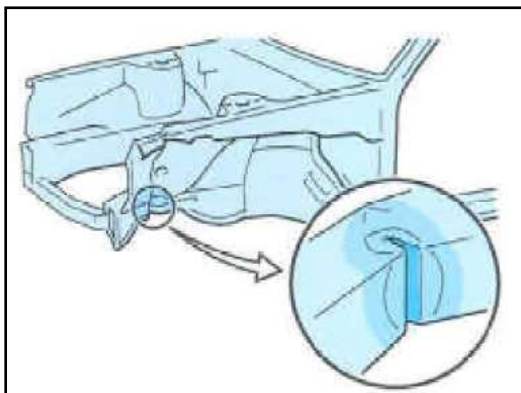
IIIb. Internal Panel – Frame/Chassis Parts

SL. NO.	PART NAME	DAMAGE DESCRIPTION	REPAIR	REPLACE (CUT-P)	REPLACE (ASSY)
2	Frame Auxiliary Part (cross member, bracket, etc...)	Damage is visually noticeable	×	NA	✓
3	Any part of the frame.	Damage that can be repaired by hammering and pulling. (* Material bend damage)	✓	NA	×
		Damage that cannot be repaired by hammering and pulling. (* Material Kink damage)	×	NA	✓ (Frame)

*Material Bend Damage –

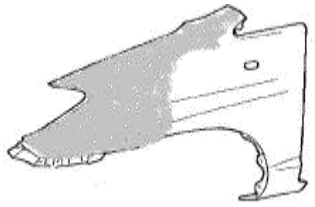
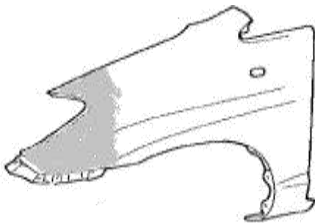
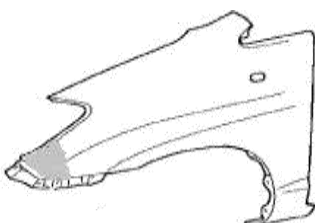
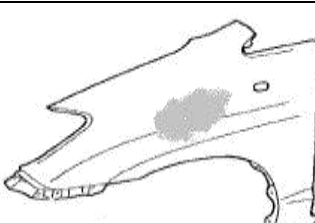
A bend is the state of the material that is deformed continuously and smoothly within a **wide area**. Often, the existence of the damage that cannot be verified by visual inspection alone. Bent material can be reinstated to its original shape through aligning, without leaving a significant permanent deformation.

*Material Kink Damage –

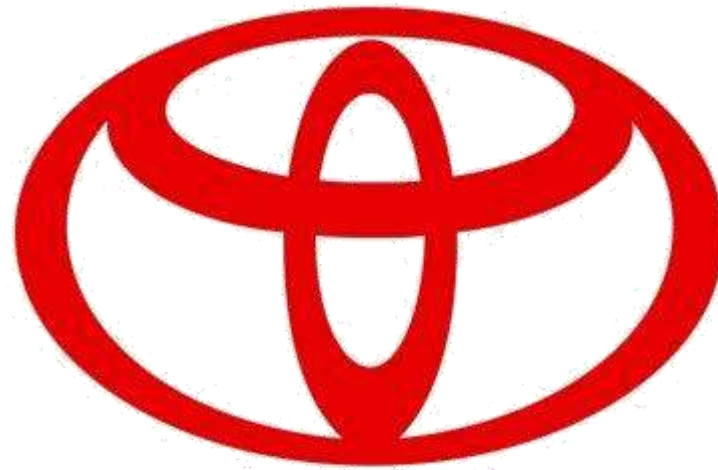


A kink is a state of the material that is sharply crimped within a **small area**. The existence of the damage can be easily verified by visual inspection. Kinked material cannot be reinstated to its original shape through aligning, and could lead to cracks or work hardening through pulling. As a result, the body will not be able to absorb the impact of collision as designed. Since the structure parts were designed to exhibit a 100% performance when they were in original shape, if they are deformed in an accident, or if the deformed parts are repaired or reused, then it will be unable to exhibit the same performance as intended in the design. **Therefore, material in which a KINK is present must be REPLACED.**

IVa. Painting Guide For External Panels

DAMAGE PHOTO	DAMAGE DESCRIPTION	REPAINT (1/1)	REPAINT (1/2)	REPAINT (1/3)	REMARKS (If Any)
	<ul style="list-style-type: none"> - If damage is more than the 1/6th of panel area - Damage is extending all over the panel. 	✓	×	×	
	<ul style="list-style-type: none"> - If damage is approx. 1/6th of panel area and at the corner or edge of the panel 	×	✓	×	NOTE : Damage should be at the corner. Apply clear coat to full panel.
	<ul style="list-style-type: none"> - If damage is approx. 1/9th of panel area and at the corner or edge of the panel 	×	×	✓	NOTE : Damage should be at the corner. Apply clear coat to full panel.
	<ul style="list-style-type: none"> - If damage is at center part of panel. 	✓	×	×	

NOTE: **For Solid color** => In case of **SBP**, Full painting is recommended in all the above case. However in case of **WBP**, 1/2nd and 1/3rd repainting can be done.



TOYOTA