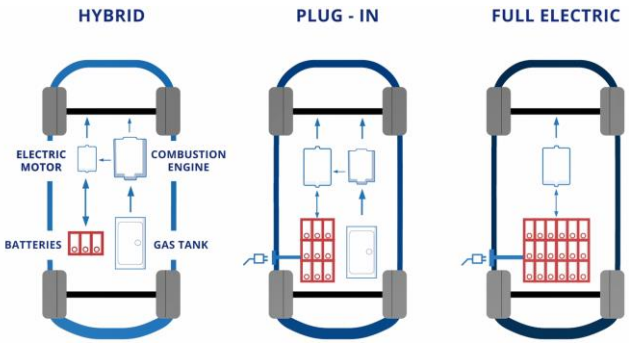
Electric / Hybrid Vehicles

FOR PROFESSIONAL USE ONLY

Description

The growth of electric and hybrid electric vehicles continues to increase in the automotive sector, which is also being driven by the introduction of government legislation. Vehicle manufacturers are transistioning away from internal combustion engines fuelled by diesel and petrol to meet the demands from legislation but also consumer demands. As repairers begin to see more of these type of vehicles being damaged and subsequently repaired, precautions have to be considered to execute an effective repair without causing damage to the electrical components.

YouTube Video Link: Sikkens - Hybrid and Electric Vehicle Repairs



Considerations

These guidleines are generic and detailed information on the make and model should be acquired from the relevant OEM to ensure safe repair at all times so as to prevent damage and or injury.

Risk assessment has to be conducted by the repairer to ensure all requirements are met for their equipment, environment and the type of vehicle being repaired to ensure a safe repair

Carry out pre and post diagnostics and note all error codes prior to carrying out any type of repair, reset and or make the vehicle owner aware of any relevant error codes that could cause an issue with the repair

Always check with the particular OEM and Model for repair methods – this is the ultimate guideline(s)

Some vehicle manufacturers may give advice to remove the main battery prior to any repair or drying cycle

Technicians should make all electric and high voltage systems safe to work before entering the bodyshop and or paintshop, consult relevant OEM for further information

Internal battery temperature should be lower than 30ºC before entering the spraybooth and or drying cycle, consult relevant vehicle manufacturer for further information

Some vehicles require a minimum charge of 45% in the battery before drying to ensure the vehicle will run after drying, consult relevant vehicle manufacturer for further information

Some vehicles the battery charge is not applicable as it will charge once the engine has been started, consult relevant vehicle manufacturer for further information

Keys should be removed and ignition switched off to prevent any cooling systems for the battery systems being initiated during the repair or drying cycle

Recommendation on drying temperature is not to exceed 80ºC for no longer than 60 minutes, some vehicle manufacturers state maximum 60ºC, consult relevant vehicle manufacturer for further information

IRT guidelines is 18kw for no longer than 18 minutes, consult relevant vehicle manufacturer for further information

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Products

Select the products from the below list that suit best your conditions and type of repair

Bodyfiller

		**Polykit IV**
20ºC	Dry to sand	15 – 20 minutes
IRT	Dry to sand	6 – 8 minutes

		**Autosurfacer UV**
20ºC	Dry to sand	5 minutes*
	Dry to handle	

*** Requires continuous exposure with UV lamp – different types of lamp can reduce the overall drying time**

Primer surfacer

		**Colorbuild Plus Hardener Sanding**	**Colorbuild Plus P25 Hardener**	**Multi Use Filler Excel P25 Hardener**
20ºC	Dry to sand	90 minutes	3 hours	3 hours
40ºC	Dry to sand	45 minutes	90 minutes	90 minutes
60ºC	Dry to sand	30 minutes	30 minutes	30 minutes
IRT	Dry to sand	8 -12 minutes	8 - 12 minutes	8 - 12 minutes

Clearcoat

		**Autoclear LV Superior Fast Accelerator**	**Autoclear LV Superior Medium Accelerator**	**Autoclear LV Superior Fast**	**Autoclear LV Superior Medium**
20ºC	Dust dry	50 minutes	50 minutes	60 minutes	90 minutes
	Dry to handle	3 hours	3 hours	6 hours	7 hours
50ºC	Dust dry	7 minutes	10 minutes	10 minutes	20 minutes
	Dry to handle	20 minutes	25 minutes	30 minutes	50 minutes
60ºC	Dust dry	4 minutes	6 minutes	7 minutes	10 minutes
	Dry to handle	12 minutes	15 minutes	15 minutes	25 minutes
IRT	Dry to handle	4 + 8 minutes	4 + 8 minutes	4 + 8 minutes	4 + 8 minutes

Clearcoat

		**Autoclear Aerodry Fast Hardener**	**Autoclear Aerodry Standard Hardener**
20ºC	Dust dry	15 – 25 minutes	20 – 30 minutes
	Dry to handle	35 – 55 minutes	40 – 60 minutes
40ºC	Dust dry	5 – 15 minutes	15 – 35 minutes
	Dry to handle	15 – 20 minutes	30 – 55 minutes
60ºC	Dust dry	x	x
	Dry to handle	5 minutes	5 minutes
IRT	Dry to handle	2 + 6 minutes	2 + 6 minutes

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Clearcoat			
		Autoclear Plus HS P25 Hardener	**Autoclear Xcel P25 Hardener**
20ºC	Dust dry	45 minutes	20 minutes
	Dry to handle	6 hours	4.5 hours
60ºC	Dust dry	5 minutes	5 minutes
	Dry to handle	35 minutes	30 minutes
IRT	Dry to handle	4 + 8 minutes	4 + 8 minutes

Topcoat					
		Autocryl LV Plus Accelerator	**Autocryl LV Plus Thinner**	**Autocryl Plus P25 Hardener Plus Accelerator 2**	**Autocryl Plus P25 Hardener**
20ºC	Dust dry	75 minutes	90 minutes	15 minutes	15 minutes
	Dry to handle	3.5 hours	5 hours	4 hours	10 hours
60ºC	Dust dry	10 minutes	15 minutes	5 minutes	5 minutes
	Dry to handle	20 minutes	30 minutes	15 minutes	25 minutes
IRT	Dry to handle	4 + 8 minutes	4 + 8 minutes	4 + 8 minutes	4 + 8 minutes

Additional Information

Electric vehicle definitons:

BEV	Battery Electric Vehicle
EV	Electric Vehicle
HEV	Hybrid Electric Vehicle
PHEV	Plug-in Hybrid Electric Vehicle
MHEV	Mild Hybrid Electric Vehicle

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