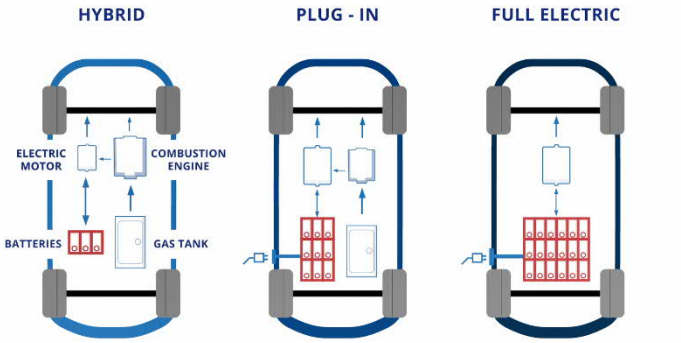
LESONAL®

Electric / Hybrid Vehicles

Technical Bulletin 05/03/2021 L8.01.07

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 transitioning 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.



CONSIDERATIONS

These guidelines 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 must 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 specific 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

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

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Internal battery temperature should be lower than 30°C 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 80°C for no longer than 60 minutes, some vehicle manufacturers state maximum 60°C, consult relevant vehicle manufacturer for further information

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

Always protect all high-voltage components from direct infra red radiation when IR drying.

PRODUCTS

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

Primer - Surfacer		
		**2K PU Primer 488**
30°C	Dry to sand	1.5 hours
60°C	Dry to sand	30 minutes
IR drying Medium wave	Dry to sand	(Low) + (High) power (6) + (10) minutes

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Topcoat				
		2K Topcoat MM320 2K Hardener 728C		
20ºC	Dust dry	30 minutes		
	Dry to handle	3.5 hours		
60ºC	Dust dry	5-10 minutes		
	Dry to handle	20-25 minutes		
IR drying Medium wave	Dry to handle	(Low) + (High) power (5) + (10) minutes		
Clearcoat				
		2K Xpress Clearcoat 261 2K Hardener 728C	2K Clearcoat 288HS 2K Hardener 728C	HG Clearcoat 211-C
20ºC	Dust dry	15 minutes	20 minutes	8 minutes
	Dry to handle	7 hours	5 hours	2 hours
30ºC	Dust dry	13 minutes	-	6 minutes
	Dry to handle	4 hours	-	2 hours
60ºC	Dust dry	6 minutes	5 minutes	5 minutes
	Dry to handle	25 minutes	30 minutes	20 minutes
IR drying Medium wave	Dry to handle	(Low) + (High) power (4) + (8) minutes	(Low) + (High) power (4) + (8) minutes	(Low) + (High) power (4) + (8) minutes

*** For "short wave" IR drying times refer to Infrared curing TDS.**

Additional Information

Electric vehicle definitons:

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

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