



东风乘用车

# E70整车介绍





东风乘用车

# Introduction to E70 Vehicle





- 1、能说出E70与传统内燃机汽车之间各系统的差异
- 2、了解E70的车辆识别信息
- 3、了解E70的车辆配置情况
- 4、能正确的拖车牵引和车辆救援
- 5、掌握E70电动车维修安全规范注意事项
- 6、熟练掌握车辆各种功能的使用



1. Know the difference between the E70 and the traditional internal combustion engine vehicles
2. Understand the vehicle identification information of E70
3. Understand the vehicle configuration of E70
4. Be able to correctly do towing and vehicle rescue
5. Master the safety specifications and precautions for service of E70 electric vehicles
6. Proficient in the application of various functions of the vehicle



# 一、E70电动汽车特点概述

## 与传统内燃机车型对比

	传统内燃机车型	E70
动力系统	供油系统、发动机及控制系统	动力电池系统、电动机及控制系统
变速器系统	变速器（MT/AT/CVT/DSG）	减速器（主减速器+差速器）
制动系统	发动机真空助力	电子真空泵助力
空调系统	机械压缩机、暖水加热	电子压缩机、PTC加热（电热丝加热水）
发电系统	机械发电机	DC-DC转换器（降压器）
车身系统	相似	
转向系统	相似（EPS电子助力）	
电器系统	相似（12V低压）	
车桥悬架系统	相似	

# I. Overview of E70 electric vehicle features



## Compared with traditional internal combustion engine models

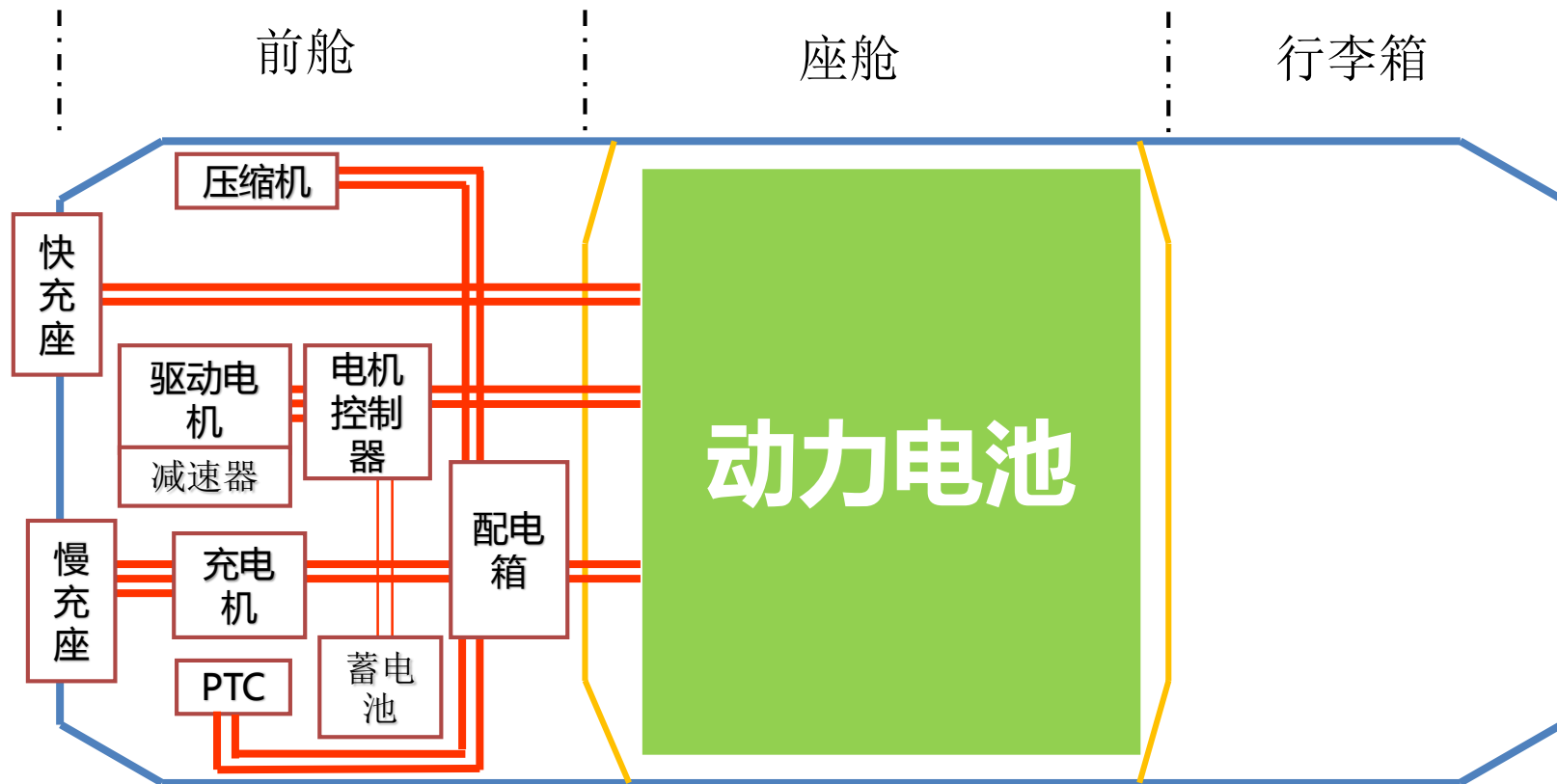
	Traditional internal combustion engine models	E70
Power system	Fuel supply system, engine and control system	Traction battery system, motor and control system
Transmission system	Transmission (MT/AT/CVT/DSG)	Reducer (final drive + differential )
Braking system	Engine vacuum booster	Electric vacuum pump booster
AC System	Mechanical compressor, water heater	Electronic compressor, PTC heater (heating water via heating wire)
Power generation system	Mechanical generator	DC-DC converter (step-down transformer)
Body system	Similar	
Steering System	Similar (EPS)	
Electrical system	Similar (12V low voltage)	
Axle and suspension systems	Similar	

# 一、E70电动汽车特点概述



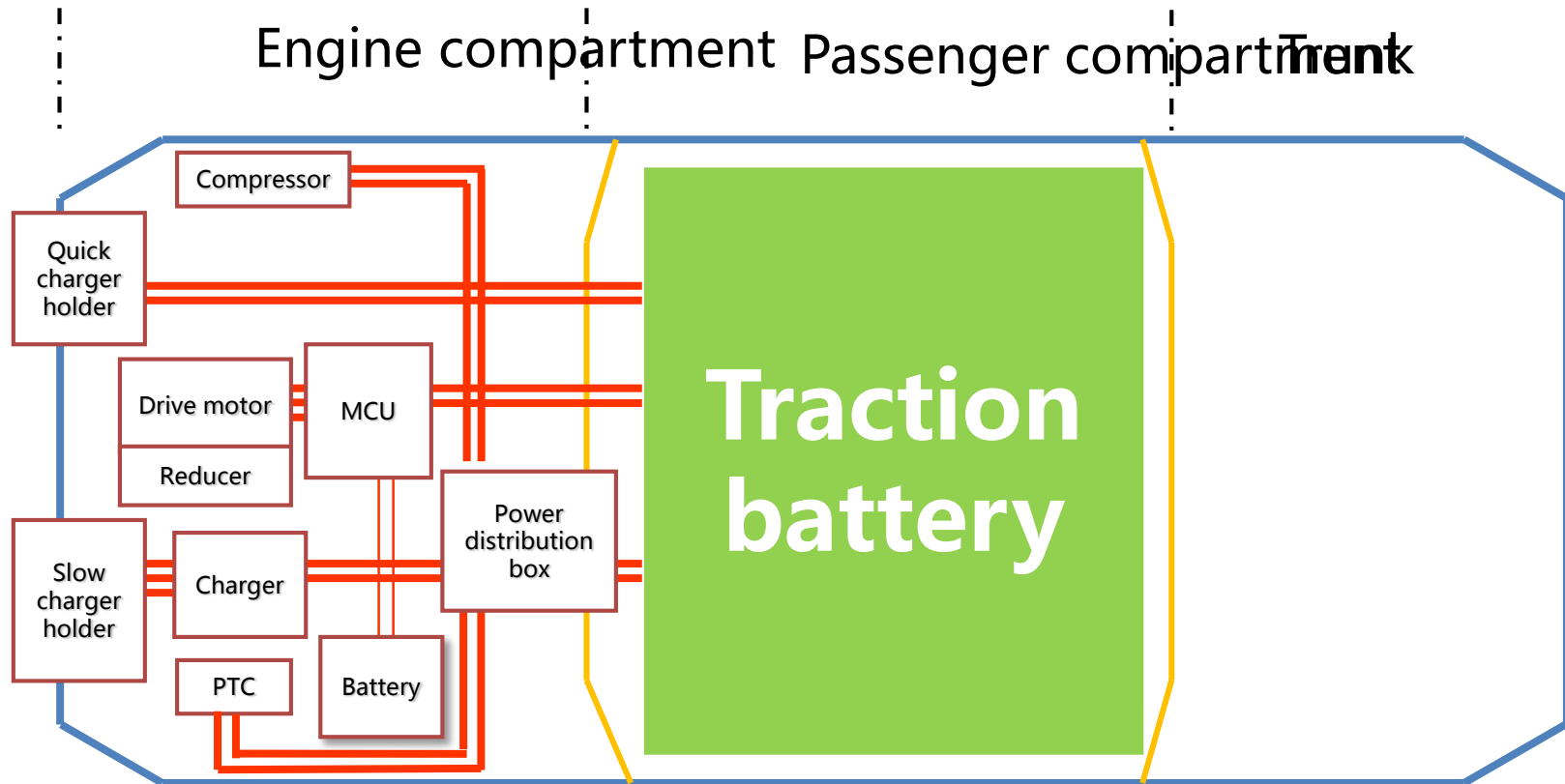
东风乘用车

## 动力总成及高压件布置





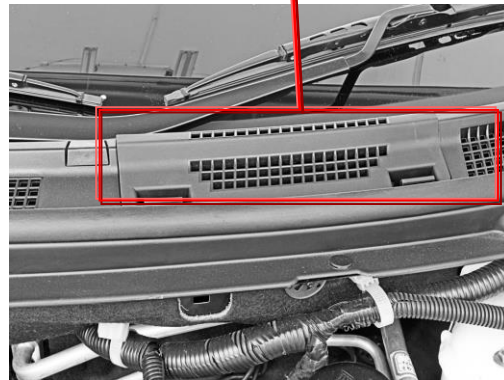
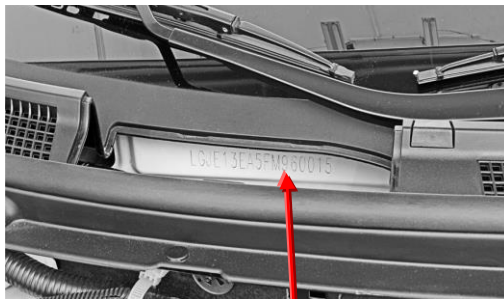
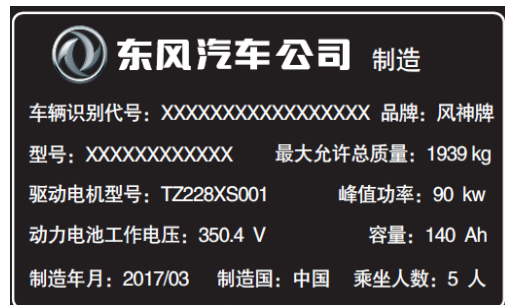
## Powertrain and high voltage parts layout





## 二、识别信息

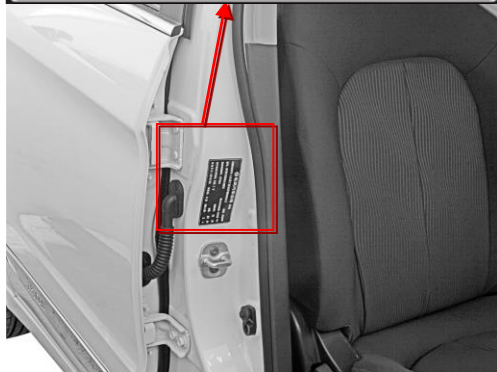
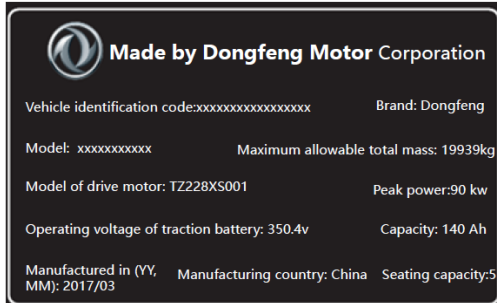
### 车辆识别码



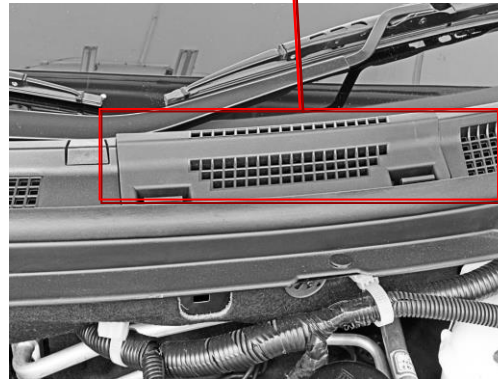
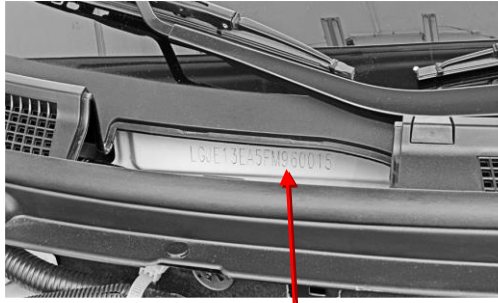
## II. Identification information



### Vehicle identification number



The product nameplate is fixed on the side of the B-pillar of the front passenger's door, and the VIN can be read after the door is opened.



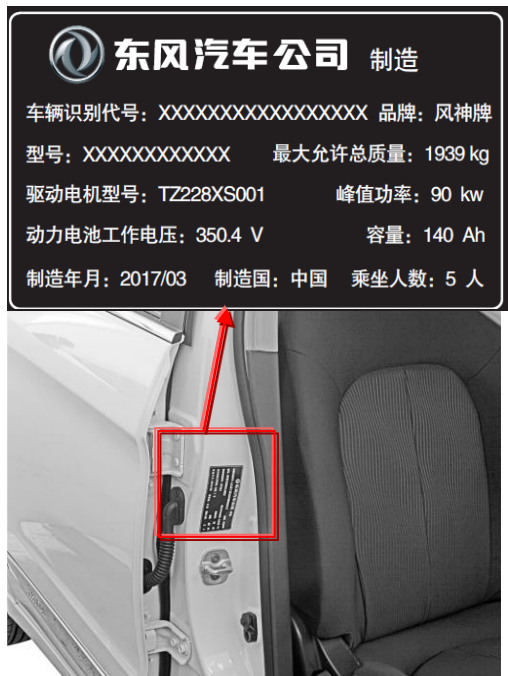
The VIN is printed on the front cross member of engine compartment and can be read after the engine hood is opened.



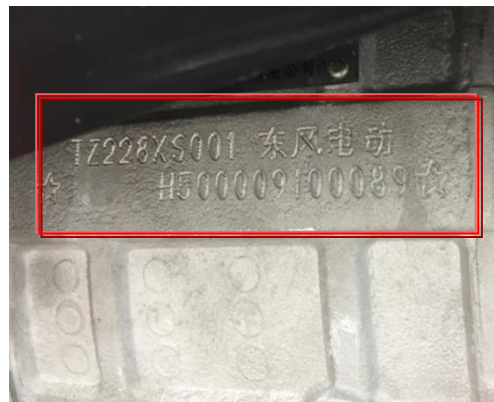
This VIN is fixed at the left front part of the instrument panel, and can be read through the front windshield outside the vehicle.

## 二、识别信息

### 电机识别码



产品标牌固定在副驾驶  
车门B柱侧面，打开车门  
可读取电机型号




车辆下方，电机壳体上  
，可读取电机型号及识  
别码



## II. Identification information

### Motor identification number

 <b>Made by Dongfeng Motor Corporation</b>	
Vehicle identification code:xxxxxxxxxxxxxx	Brand: Dongfeng
Model: xxxxxxxxxx	Maximum allowable total mass: 19939kg
Model of drive motor: TZ228XS001	Peak power:90 kw
Operating voltage of traction battery: 350.4v	Capacity: 140 Ah
Manufactured in (YY, MM): 2017/03	Manufacturing country: China Seating capacity:5



The product nameplate is fixed on the side of the B-pillar of the front passenger' s door, and the motor model can be read after the door is opened.



The motor model and identification number can be read on the motor housing under the vehicle.

## 二、识别信息



东风乘用车

### 保养标签



打开前舱盖，前舱盖背面有空调保养标签



主驾驶门打开，B柱侧面有轮胎保养标签



## II. Identification information



东风乘用车

### Maintenance label



The AC maintenance label is located on the back of the engine hood, and can be seen after the engine hood is opened.



The tire maintenance label is located on the side of the B-pillar, and can be seen after the driver's door is opened.

# 三、配置及性能参数



东风乘用车

车型		E70	
		E0级	
		出租车	私家车
基本参数	长/宽/高 ( mm )	4680/1720/1530	
	轴距 ( mm )	2700	
	整备质量(kg)	1564	
	车轮	205/50 R17轮胎，铝合金轮辋 ( 配置备胎，型号T125/80R17 )	
	最小离地间隙 ( mm )	120	
动力系统配置及参数	续航里程 ( km )	401	
	最高车速 ( km/h )	145	
	驱动方式	前置前驱	
	电机类型	永磁同步电机	
	最大爬坡度 ( % )	20	
	动力电池类型	三元锂离子电池	
	电池热管理	完整版电池热管理 ( 充电/行车/静置工况 )	
	电池能量 ( kwh )	50.8	
	充电电缆	无	便携慢充线 ( 带缆上控制盒 )
	慢充时间 ( h )	6-8 ( 0%-100%SOC )	
	快充时间 ( h )	0.5 ( 0%-80%SOC )	

# III. Configuration and performance parameters



Model		E70	
		E0 class	
		Taxi	Private car
Basic parameters	L/ W/ H (mm)	4680/1720/1530	
	Wheelbase (mm)	2700	
	Kerb weight (kg)	1564	
	Wheel	205/50 R17 tires, aluminium alloy rim (Provided with spare tires, model: T125/80R17)	
	Min. ground clearance (mm)	120	
Configuration and parameters of power system	Driving range (km)	401	
	Max. vehicle speed	145	
	Drive mode	Front-engine, Front-wheel drive	
	Type of motor	Permanent magnet synchronous motor	
	Max. gradability (%)	20	
	Type of traction battery	Ternary lithium ion battery	
	Battery thermal management	Complete battery thermal management (charging/driving/static conditions)	
	Battery energy capacity (kwh)	50.8	
	Charging cable	None	Portable slow charger lead (with in-cable control box)
	Time of slow charging (h)	6-8 ( 0%-100%SOC )	
	Time of quick charging (h)	0.5 (0%-80%SOC )	



### 三、配置及性能参数



东风乘用车

车型		E70	
		E0级	
		出租车	私家车
底盘配置	变速器	固定速比减速器	
	悬架配置	前部麦弗逊悬架，带横向稳定杆，后部扭力梁半独立悬架	
	行车制动	前后盘式制动	
	驻车制动	EPB电子手刹系统	
	制动辅助系统	ABS+EBD	ABS+EBD+ESC
	转向系统	齿轮齿条式转向器，配EPS电子转向助力系统	
灯光配置	日间行车灯	无	LED
	前后位置灯	LED灯	
	前大灯	卤素灯（带手动高度调节功能，大灯未关蜂鸣警告功能）	
	转向灯	卤素灯，后视镜带侧转向灯	
	前雾灯	卤素灯	
	后雾灯	卤素灯，单侧	
	倒车灯	卤素灯	
	制动灯	卤素灯，带高位制动灯	
	牌照灯	卤素灯	
	LOGO灯	卤素灯（前部）	卤素灯（前后）
	车内顶灯	卤素灯，带门控和延时功能	

# III. Configuration and performance parameters



Model		E70	
		E0 class	
		Taxi	Private car
Configuration of chassis	Transmission	Reducer with fixed ratio	
	Configuration of suspension	Front MacPherson suspension with stabilizer bar, rear torsion beam semi-independent suspension	
	Service brake	Front and rear disc brakes	
	Parking brake	EPB	
	BAS	ABS+EBD	ABS+EBD+ESC
	Steering System	Rack and pinion steering gear with EPS	
Configuration of light system	Daytime running light	None	LED
	Front and rear position lamps	LED lamp	
	Headlamp	Halogen lamp (with manual leveling, headlamp ON buzzer warning function)	
	Cornering Light	Halogen lamp, exterior rearview mirrors with side turn signal lamps	
	Front fog lamp	Halogen lamp	
	Rear fog lamp	Halogen lamp, on one side	
	Back-up light	Halogen lamp	
	Brake light	Halogen lamp, with high-mounted brake lamp	
	License plate lamp	Halogen lamp	
	LOGO lamp	Halogen lamp (front)	Halogen lamps (front and rear)
	Ceiling lamp	Halogen lamp, with door control and delay functions	

### 三、配置及性能参数



东风乘用车

车型		E70	
		E0级	
		出租车	私家车
音响娱乐	扬声器	2个	
	视听装备	收音机+MP3播放 + USB/AUX接口	
舒适配置	方向盘	PU方向盘，手动上下调节	
	行车喇叭	高音电喇叭	
	换档杆	电子换档杆	
	组合仪表	内置7英寸TFT屏+2侧断码屏	
	座椅	织物座椅，主副驾手动六向可调，带中央扶手	皮质座椅，主副驾手动六向可调，带中央扶手
	车窗	电动车窗，主驾带一件升降防夹手功能	
	天窗	无	电动天窗
	后风窗玻璃	电加热除霜	
	后视镜	电动外后视镜、手动防炫目内后视镜	
	门锁	遥控中央门锁	
	空调	自动空调	
	雨刮	电动前雨刮（带点动、间歇、低速、高速、喷水功能，间歇时间可调）	
	钥匙	遥控钥匙+机械钥匙+机械点火锁	智能钥匙系统+按钮式一键启动

### III. Configuration and performance parameters



东风乘用车

Model		E70	
		E0 class	
		Taxi	Private car
Audio Infotainment	Speaker	2	
	A/V system	Radio+MP3 player + USB/AUX interface	
Comfort configuration	Steering wheel	PU steering wheel, manual up-and-down adjustment	
	Driving horn	Electric tweeter	
	Shift lever	Electronic shift lever	
	Instrument cluster	Built-in 7-inch TFT screen + difference screens on 2 sides	
	Seats	Fabric seat, driver' s and front passenger' s manual six-way adjustable, with central armrest	Leather seat, driver' s and front passenger' s manual six-way adjustable, with central armrest
	Windows	Electric windows, driver' s window with one-key control and anti-pinch function	
	Sunroof	None	Power sunroof
	Rear windshield	Electric heater & defroster	
	Rearview mirror	Electric exterior rearview mirrors, manual anti-glare interior rearview mirrors	
	Door lock	Remote central locking	
	AC	Automatic AC	
	Wiper	Electric front wiper (with inching, intermittent, low speed, high speed, water spray function, intermittent time adjustable)	
	Key	Remote key + mechanical key + mechanical ignition lock	PEPS + start-stop button

### 三、配置及性能参数



东风乘用车

车型		E70	
		E0级	
		出租车	私家车
驾驶辅助	倒车雷达	后部雷达	
	倒车可视系统	无	后部倒车影像
安全配置	安全带	主副驾驶预紧式安全带，主驾驶未系提醒，后排三点式安全带	
	安全气囊	2个（主副驾驶正面气囊）	
	儿童安全	ISO Fix儿童座椅固定装置+后排儿童安全锁	
	高压监控保护	电池管理系统（BMS）	
	信息监控	远程监控系统（TU）	
	胎压-胎温检测	直接式胎压检测系统（TPMS）	
	低速报警	低速提醒系统（AVAS）	

### III. Configuration and performance parameters



东风乘用车

Model		E70	
		E0 class	
		Taxi	Private car
Driving assist	Reversing Radar	Rear radar	
	Reversing camera system	None	Rear reversing camera
Safety configuration	Seat belt	Driver' s and front passenger' s pre-tensioned seat belts, driver' s seat belt unfastened reminder, rear seat belts (3x3 point)	
	Airbag	2 airbags (driver's and front passenger' s frontal airbags)	
	Child safety	ISO Fix child seat anchorages + rear child safety lock	
	High voltage monitoring and protection	Battery management system (BMS)	
	Information monitoring	Remote terminal monitoring unit (TU)	
	Tire pressure - tire temperature detection	Direct tire pressure monitoring system (TPMS)	
	Low speed alarm	Acoustic vehicle alerting system (AVAS)	

## 四、车辆举升位置



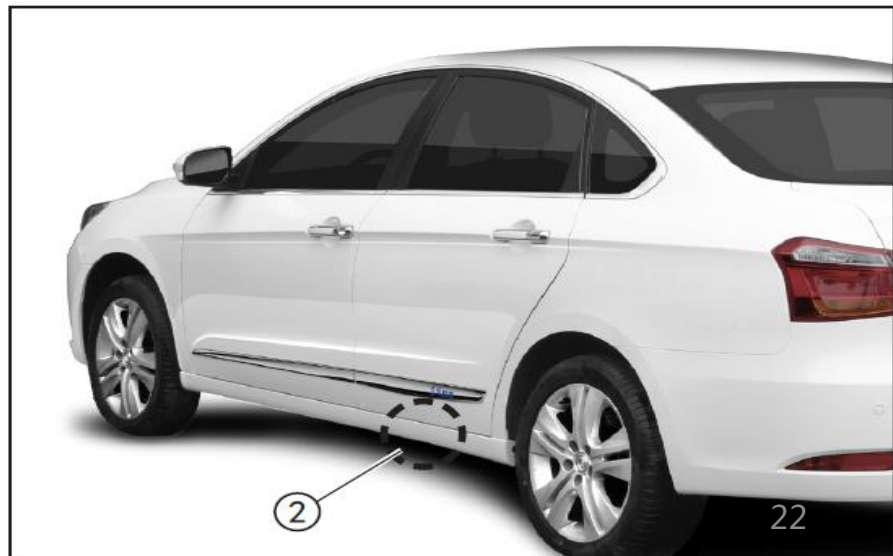
东风乘用车

### 双柱举升器

- 安全支撑点和举升点（1）（前）

#### ⚠ 警告

- 使用千斤顶时请将车辆停在水平路面上。确认不会损坏车辆下面的管路、线路等。
- 当车辆只用千斤顶支住时，切勿钻入车下。必须钻入车下时，应使用安全支架支住车辆。
- 在着地车轮的前后放置车轮垫块。
- 举升车辆时，应尽量打开举升臂，并使车辆前后两端保持平衡。
- 放置举升臂时，不要使其与制动管路、制动拉索和边梁扰流板接触。
- 安全支架点和举升点（2）（后）。





## IV. Vehicle lift position

### Twin post lift

- Safety strut supporting point and jacking point (1) (front)



#### WARNING

- When using the jack, please park the vehicle on level surface. Make sure pipes, tubes and the like on the underbody will not be damaged.
- Never work under the vehicle when the vehicle is supported only by the jack. When it is necessary to work under the vehicle, safety strut must be used for supporting.
- Wheel chocks should be placed in front of and behind the wheels that touch the ground.
- When lifting the vehicle, the lifting arm should be extended as much as possible, and balance should be maintained at both front and rear ends of the vehicle.
- Place the lifting arm without any interference with brake pipeline, brake cable, or side member spoiler.
- Safety strut supporting point and jacking point (2) (rear)





# 五、拖车牵引及车辆救援



东风乘用车

## 牵引

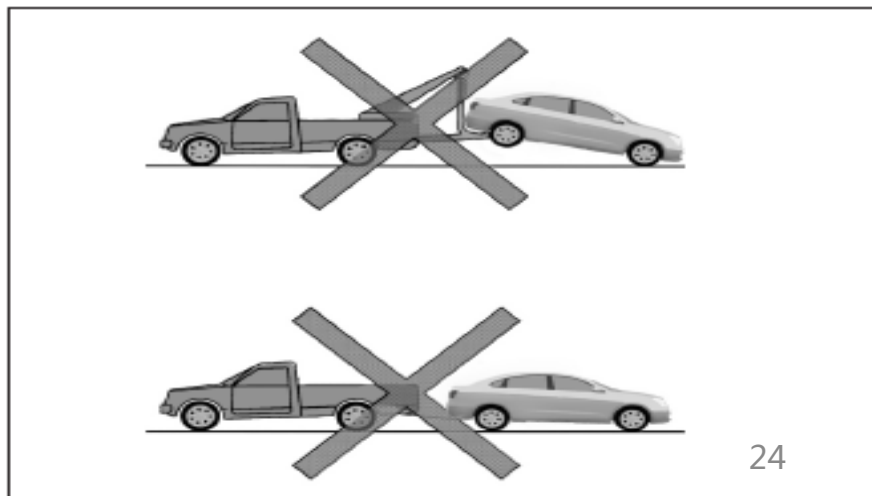
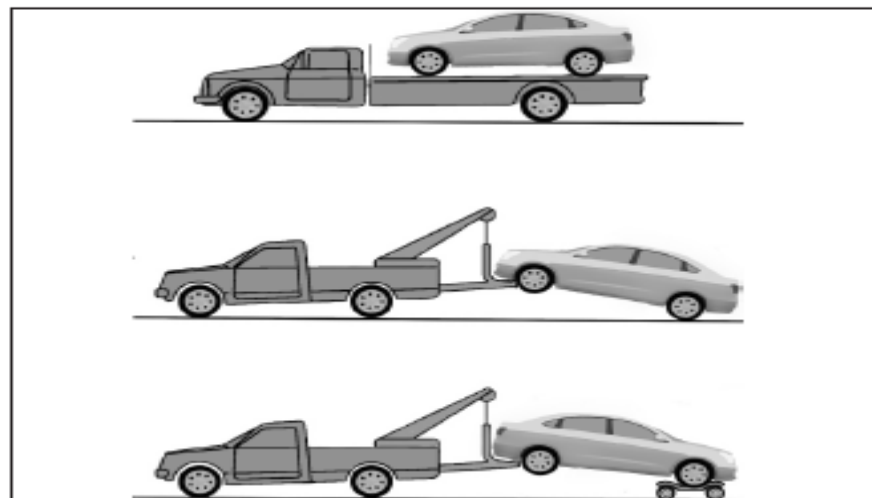
### 拖车牵引

#### ⚠ 注 意

- 该车装有减速器，牵引车辆时必须让驱动（前）轮离开地面。
- 必须按照适用的交通法律法规进行牵引操作。
- 必须使用正确的牵引装置，避免在牵引过程中损坏车辆。牵引工作必须符合牵引装置制造商的牵引步骤手册的规定。
- 牵引前，一定要接安全链条。
- 牵引时，确认变速器、转向系和传动系工作状态良好。如果其中任何一个系统损坏，必须使用小台车。

#### ⚠ 注 意

- 切勿四轮着地牵引车辆，因为这样将严重损坏昂贵的电机控制器及电机



# V. Towing and vehicle rescue



东风乘用车

## Towing

### Towing



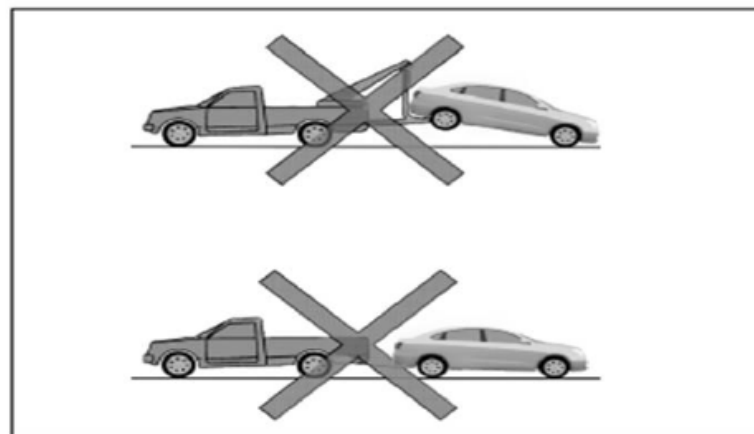
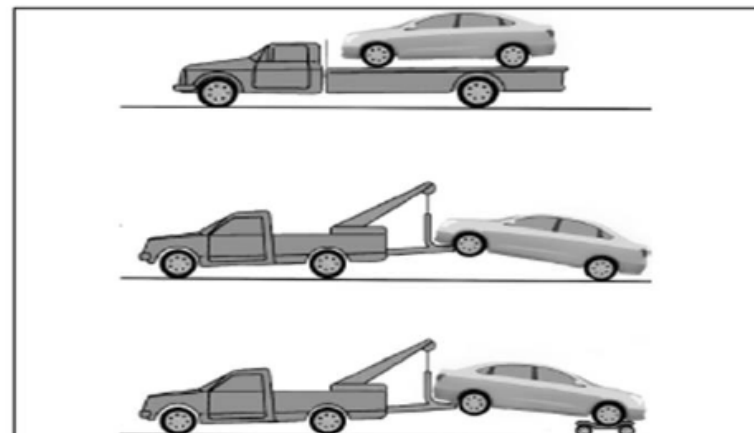
#### CAUTION

- For vehicle equipped with reducer, always let the driving (front) wheels off the ground for towing.
- Always follow the applicable traffic laws and regulation during towing.
- Correct towing devices must be used to avoid damage to the vehicle during the towing process. Towing operation must be in accordance with the provisions in the towing manual provided by the towing device manufacturer. Safety chains must be attached before towing the vehicle.
- Safety chains must be attached before towing the vehicle.
- Be sure the transmission, steering system and drivetrain are in good working conditions. When any one of the above systems is damaged, it is a must to use a trolley.



#### CAUTION

- Be sure not to tow a vehicle with all four wheels grounded. Otherwise, the expensive **MCU and motor** might be damaged.



# 五、拖车牵引及车辆救援



东风乘用车

## 车辆救援

### 1. 前部

- 必须使用专用（本车配备）的牵引钩（1），否则可能会损坏车身。
- 牵引钩仅用来救助陷在沙、雪、泥等中的车辆。请勿仅使用牵引钩进行长距离牵引。
- 受困被救助时，牵引钩将承受极大的力。应朝车辆正前正后方向拉动钢丝绳。请勿与牵引钩成一定的角度拉车辆。
- 人员远离受困车辆。

#### ⚠ 警告

- 请勿让轮胎高速空转，否则可能会爆胎并引起严重的伤害，并且汽车的零件也会过热而损坏。
- 用车轮螺栓扳手将可拆卸式牵引钩安装牢固。

### 2. 后部（无牵引钩）

- 后部制造工艺钩（2）不能作为牵引钩使用，否则有可能严重损坏车身结构，造成昂贵的维修费用。





## Vehicle rescue

### 1. Front

- Always use special towing hook (1) (provided in China). Otherwise, the vehicle body might get damaged.
- The towing hook is only applicable for rescuing a vehicle trapped in sand, snow, mud, etc. Thus, do not use it for long distance towing.
- The towing hook will bear great forces while the trapped vehicle is rescued. Thus, please pull the towing cable toward right front/rear of the vehicle. Do not pull the vehicle at an certain angle to the towing hook.
- Personnel should keep away from the trapped vehicle.



### WARNING

- Do not let the tires spin at high speed, or the tire might burst, causing serious injury, while the vehicle parts will also overheat and damage.
- Use the wheel nut wrench to fix the detachable towing hook securely.

### 2. Rear (without towing hook)

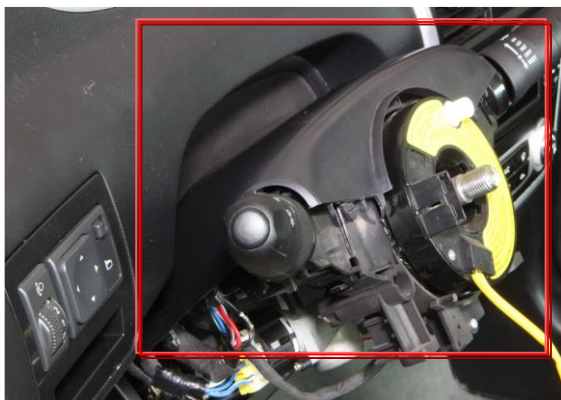
- The machining hook (2) at the rear must not be used as the towing hook; or the vehicle body may be seriously damaged, resulting in expensive service cost.



# 六、电动车维修安全规范注意事项

## 安全注意事项

- E70纯电动轿车上的用电设备有低压用电部件与高压用电部件，低压用电部件包括：仪表、音响、灯光、喇叭、蜂鸣器和鼓风机等；高压用电部件包括：**驱动电机、电机控制器及DC-DC总成、高压电池组、高压配电箱、车载充电机、空调压缩机、空调暖风机（PTC）、快慢充电座等。**
- 高压用电设备额定电压：**350.4V**
- **高压部件上贴有高压警告标签，整车橙色线束均为高压线，**请注意警告标签上的内容要求。为了避免触电伤害，禁止随意触碰高压部件、高压电缆及其连接头。



低压



高压



# VI. Safety specifications and precautions for service of electric vehicles

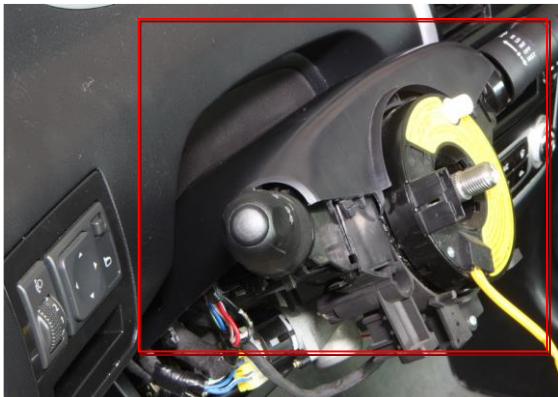


## Safety precautions

- The electrical devices of the E70 pure electric vehicle include low voltage electrical components and high voltage electrical components. Low voltage electrical components include instruments, A/V system, lamps, horns, buzzers and blower; **high voltage electrical components include drive motor, MCU and DC-DC assembly, high voltage battery pack, high voltage distribution box, OBC, AC compressor, AC heater (PTC), quick and slow charger holders.**

Rated voltage of high voltage electrical devices: **350.4V**

- High voltage warning labels are attached to the high voltage components.** The orange wire harnesses of the vehicle are high voltage wires. Please pay attention to the requirements on the warning labels. To avoid electric shock, it is forbidden to touch high voltage components, high voltage cables and their connectors at will.



Low



High

# 六、电动车维修安全规范注意事项

## 1、安全措施



符号	名称
A	防护眼镜
B	绝缘手套
C	绝缘胶鞋
D	绝缘胶垫

安全防护用品：

- 维修人员操作前必须根据具体情况，戴防护眼镜以防止电解液溅入眼中；戴绝缘手套、绝缘胶鞋；在维修区域垫上绝缘胶垫等。
- 绝缘手套（需准备防高压电工手套以及防电池电解液酸碱性两种手套）、绝缘胶鞋、绝缘胶垫等，其耐压等级必须大于需要测量的最高电压。

- 使用前必须检查绝缘手套、绝缘胶鞋等防护用品，保证其无破损、漏洞和裂纹等，确保防护用品完好无损。
- 使用前必须检查绝缘手套、绝缘胶鞋等防护用品，保证内外表面洁净、干燥，不能带水进行操作，确保安全。

# VI. Safety specifications and precautions for service of electric vehicles



东风乘用车

## 1. Safety precautions



Symbol	Name
A	Safety goggles
B	Insulated gloves
C	Insulated rubber shoes
D	Insulated rubber pads

PPE:

- Service personnel must wear safety goggles to prevent electrolyte splashing into the eyes depending on the specific conditions; wear insulating gloves, insulating rubber shoes; put insulation rubber pads in the maintenance area.
- The dielectric strength of insulating gloves (prepare anti-high voltage electrician gloves and anti-battery electrolyte acid and alkaline gloves), insulating rubber shoes, insulating rubber pads, etc., must be greater than the highest voltage to be measured.

- Insulating gloves, insulating rubber shoes and other protective equipment must be inspected before use to ensure that they are free from damage, holes and cracks, and that the protective equipment is intact.

- Insulating gloves, insulating rubber shoes and other protective equipment must be inspected before use to ensure that the inner and outer surfaces are clean and dry, and can not be operated with water to ensure safety.





# 六、电动车维修安全规范注意事项

## 2、维修场地及操作要求

### • 维修场地要求：

- 在维修作业前请采用**安全隔离措施**（使用警戒栏隔离），并**树立高压警示牌**，以警示不相关人员远离该区域，避免发生安全事故。
- 维修场地指定位置必须配备**二氧化碳灭火器或（磷酸铵盐类）干粉灭火器**，严禁用水剂灭火器。
- 安装专用的交流电路和电源插座**。如果给电动车充电时没有使用专用线路，可能影响线路上其他设备的正常工作。
- 保持工作环境干净且通风良好，远离易燃物。

### • 维修操作要求：

- 在维修高压部件前，**断开维修开关（后排地板中部）**，并使用**专用堵盖防护安装口**。



维修开关及  
防护堵盖

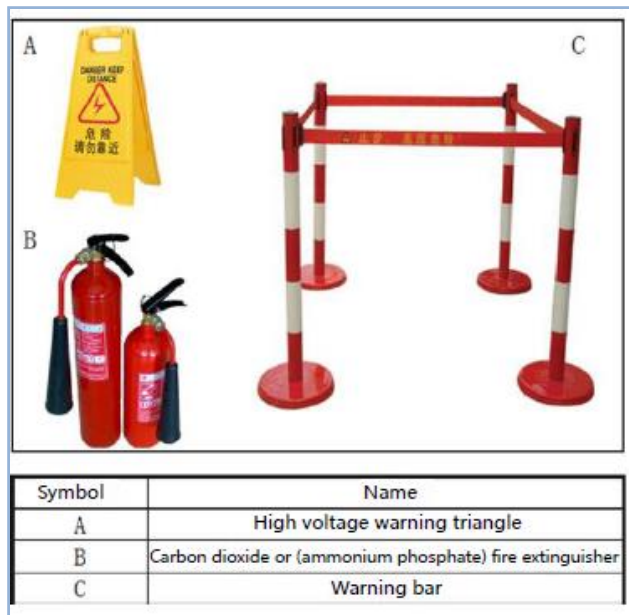


符号	名称
A	高压警示牌
B	二氧化碳或（磷酸铵盐类）灭火器
C	警戒栏

# VI. Safety specifications and precautions for service of electric vehicles



## 2. Service site and operation requirements



- Service site requirements:

- Take safety isolation measures (isolating by the warning bar) before service, and set up high voltage warning signs to alert relevant personnel to be far away from the area and to avoid safety accidents;
- The designated location of the maintenance site **must be provided with the carbon dioxide fire extinguisher or (ammonium phosphate) dry powder fire extinguisher.**
- **Dedicated AC circuits and power outlets must be installed.** If you do not use a dedicated line when charging an electric vehicle, it may affect the normal operation of other equipment on the line.
- Keep the service site well ventilated and away from combustibles.

- Service operation requirements:

- Disconnect the service switch (middle of the rear floor) and protect the mounting port with a special plug before servicing the high voltage components.



Service switch and protective plug

# 六、电动车维修安全规范注意事项



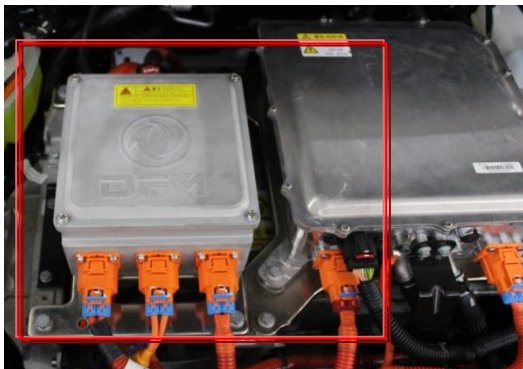
## 3、高压安全维修操作规范

### 高压部件识别：

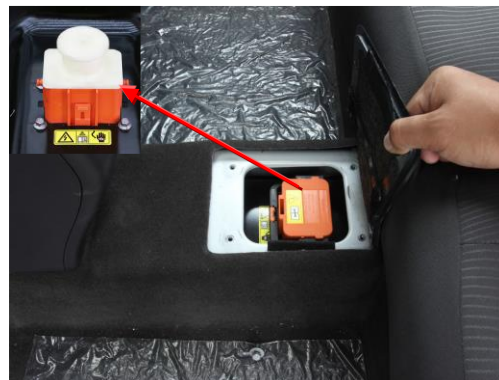
- 高压部件上贴有高压警告标签，整车橙色线束均为高压线。
- 高压零部件：驱动电机、电机控制器及DC-DC总成、高压电池组、高压配电箱、车载充电机、空调压缩机、空调暖风机（PTC）、快慢充电座等。

### 检修高压系统：

- 检修高压系统时，起动开关必须处于“OFF”档，并拔出维修开关，由专职监护人员保管，并确保在维修过程中不会有人将其重新安装，同时使用专用堵盖防护安装口。
- 在车辆上电前，注意确认是否还有人员在进行高压维修操作，避免发生危险。



高压件及  
高压线束



维修开关及  
防护堵盖



## VI. Safety specifications and precautions for service of electric vehicles

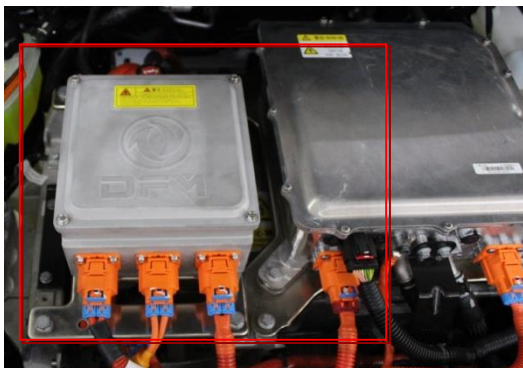
### 3. Specification for high voltage safety service

#### Identification of high voltage components:

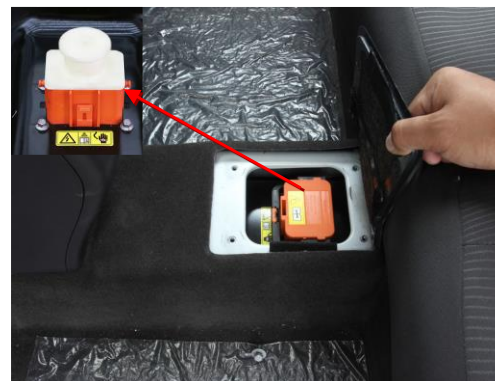
- High voltage warning labels are attached to the high voltage components. The orange wire harnesses of the vehicle are high voltage wires.
- High voltage components: drive motor, MCU and DC-DC assembly, high voltage battery pack, high voltage distribution box, OBC, AC compressor, AC heater (PTC), quick and slow charger holders.

#### Overhaul of high voltage system:

- When overhauling the high voltage system, the starting switch must be turned to the "OFF" position, and the service switch should be removed and kept by the full-time monitor, and it will be ensured that no one will reinstall the service switch during the service process, and the special plug will be used to protect the mounting port.
- Before the vehicle is powered on, be sure to check if there are still personnel performing high voltage service operations to avoid danger.



High voltage parts and high voltage wire harness



Service switch and protective plug

## 六、电动车维修安全规范注意事项



东风乘用车

### 3、高压安全维修操作规范

#### 万用表测量：

- 在**断开维修开关5 分钟后**，检修高压系统前应使用万用表测量整车高压回路，确保无电。
- 确定方法：**拔下维修开关5 分钟后**，测量动力电池和车身之间的电压来初步判断是否漏电，若检测到电压大于等于50V，应立即停止操作，检查判断漏电部位。
- 使用万用表测量高压时，需注意选择正确量程，检测用**万用表精度不低于0.5 级**，要求具有直流电压测量档位，量程范围不小于或等于500V，并遵守“**单手操作**”原则。
- 所使用的万用表一根表笔线上配备绝缘鳄鱼夹（要求耐压为3kV，过电流能力大于5A），测量时先把鳄鱼夹夹到电路的一个端子，然后用另一只表笔接到需测量端子测量读数。每次测量时只能用一只手握住表笔；测量过程中，严禁触摸表笔金属部分。



万用表





## VI. Safety specifications and precautions for service of electric vehicles

### 3. Specification for high voltage safety service

#### Multimeter measurement:

- 5 min later after the service switch is disconnected, use a multimeter to measure the high voltage circuit of the vehicle before servicing the high voltage system to ensure no power.
- Determination method: 5 min later after the service switch is removed, measure the voltage between the traction battery and the vehicle body to determine whether there is leakage. If the voltage is greater than or equal to 50V, stop the operation immediately and check the leaking area.
- When using a multimeter to measure high voltage, it is necessary to select the correct range. The testing multimeter shall have an accuracy of not lower than 0.5, as well as a DC voltage measurement range not less than or equal to 500V. Follow "One-hand operation" principle.
- The multimeter used is equipped with an insulated crocodile clip on one of the probe leads (withstand voltage of 3kV and overcurrent above 5A). When measuring, first clip the crocodile clip to one terminal of the circuit, and then use another probe lead to receive the measurement reading of the terminal to be measured. Only hold the probe lead with one hand for each measurement; do not touch the metal part of the probe lead during the measurement.



Multimeter

# 六、电动车维修安全规范注意事项



## 3、高压安全维修操作规范

### 检修动力电池：

- 在检修有**电解液泄漏可能的动力电池**时，需佩戴**防护眼镜**，以防止电解液溅入眼中。
- 断开维修开关**并不能保证动力电池完全安全**，当需要检修动力电池部分时，使用专用堵盖保护动力电池高压线束插口，避免触电。



动力电池线束插口堵盖

### 发生异常、事故和火灾：

- 操作人员应立即**关闭钥匙切断高压回路**，若起火则应立即使用灭火器扑救，优先使用**二氧化碳灭火器**，其次使用**干粉灭火器**，**严禁用水剂灭火器**。



二氧化碳或干粉灭火器

## VI. Safety specifications and precautions for service of electric vehicles



### 3. Specification for high voltage safety service

#### Overhaul of traction battery:

- Wear safety goggles **when overhauling the traction battery** that may leak electrolyte to **prevent electrolyte** from splashing into your eyes.
- Disconnecting the service switch does **not guarantee that the traction battery is completely safe**. When it is necessary to overhaul the traction battery part, use a special plug to protect the high voltage wire harness socket of the traction battery to avoid electric shock.



Traction battery wire harness socket plug

#### Abnormalities, accidents and fires:

- The operator should immediately **turn off the key to cut off the high voltage circuit**. If it is on fire, use a fire extinguisher to fight the fire immediately. **Use a carbon dioxide fire extinguisher first, and then use a dry powder fire extinguisher. Do not use a water fire extinguisher.**



Carbon dioxide or dry powder fire extinguisher



- 1、车辆结构的初步认知，相关差异件的位置布置与认识。
- 2、高压件维修操作安全注意事项相关操作。
- 3、车辆各项功能的操纵和使用。



1. Initial cognition of the vehicle structure, the location and understanding of the relevant differential parts.
2. Safety precautions for service of high voltage parts.
3. Operation and use of various functions of the vehicle.