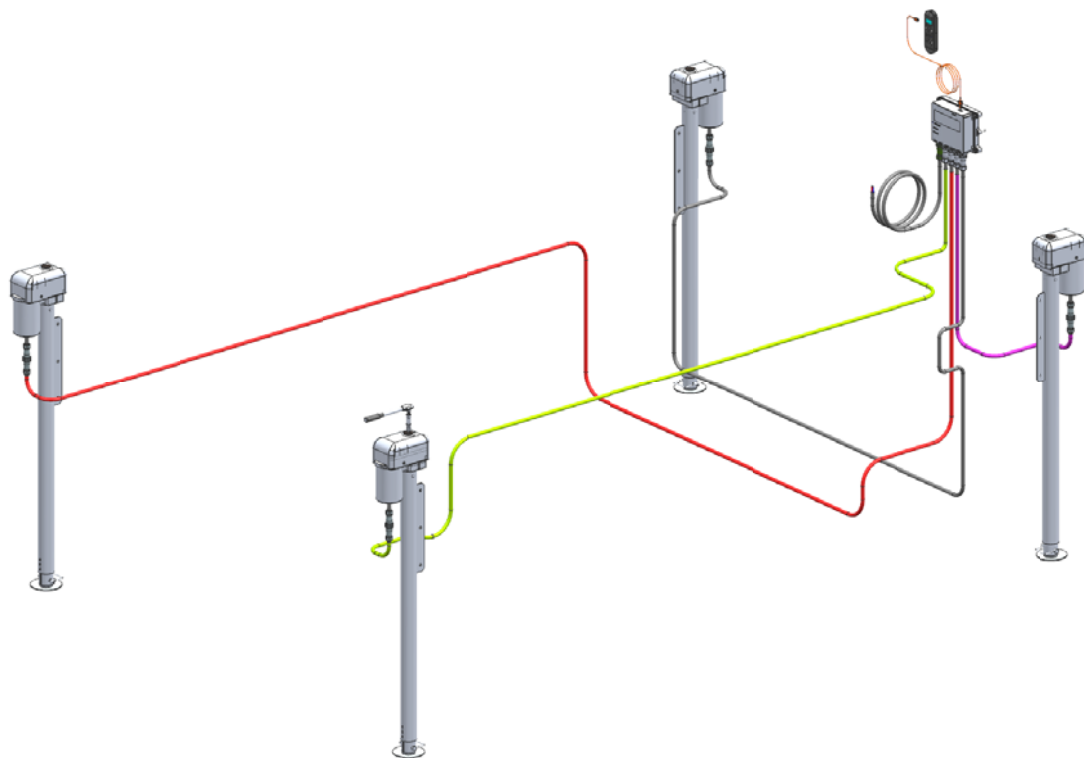


遥控电动支腿举升装置（见下图）：



一、安全须知：Security informations

- 1、在装载或者卸载车厢的时候请勿使用该举升装置；
1.Please do not use this system when loading or unloading camper.
- 2、请不要使车厢前低后高；
2.Always be sure that the front of the camper is never lower than the rear.
- 3、经常检查设备，确保所有需紧密连接零部件的和电器设备不从车身脱离；
3.Always check to be sure that all tie-down devices and electronics are not disconnected from the camper body.
- 4、大风天气请不要装载车辆；
4.Please do not load the camper on a strong windy weather.
- 5、请把车厢部分安置在平地上。
5.Please park the camper on level ground.

二、工作参数：Parameter

- 1、额定工作电压：DC12V； Working Voltage:DC12V;
- 2、单腿额定负载：3500lbs； single leg capacity:3500lbs;
- 3、单腿额定行程：31 inch； Stroke:31 inch;
- 4、装置额定负载：2t。 System capacity:2T

三、产品组件：System component

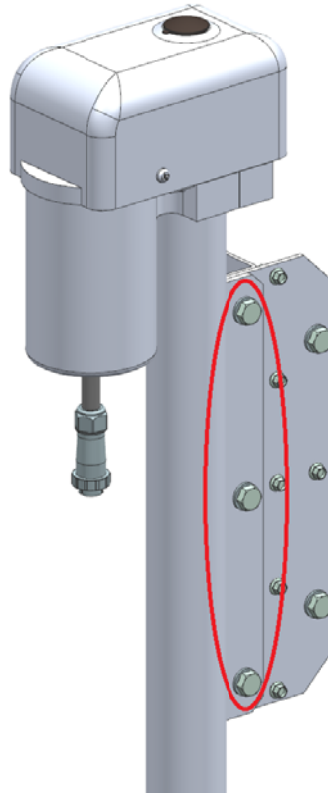
序号 item	组件 component	数量 qty	备注 note
1	电动支腿 leg	4	
2	支腿线缆（带 5 芯航空插头） Cables(including 5way connector)	4	长度有不同
3	电源线缆（带 2 芯航空插头） Cables(including 2way connector)	1	
4	带绝缘护套端子 3.5-10 insulated sheath terminal 3.5-10	2	选配
5	主控制盒 controller	1	
6	十字沉头自攻螺钉 ST5.5-19 F 型 Cross countersunk head self tapping screw ST5.5-19 F type	2	
7	遥控器 Remote	1	
8	AAA 电池 AAA Battery	3	整体塑封绝缘包装
9	USB 数据线 USD Cable	1	
10	3/8 英寸方头棘轮扳手 3/8inch Square head ratchet wrench	2	
11	3/8 英寸方孔转 11mm 内六角孔套筒	2	
12	3/8×16-1 3/8 外六角法兰螺栓 3/8*16-13/8 Outer hexagon flange bolt	3	选配
13	3/8 尼龙嵌件锁紧螺母 3/8 Nylon insert lock nut	3	选配
14	3/8 平垫圈 3/8 flat washer	3	选配
15	3 型安装板 3Type mounting plate	4	选配
16	备用遥控器 Back-up remote	1	选配
17	备用 AAA 电池 Back-up Battery	3	选配

四、产品安装：System Assembling

4.1 安装支腿：Leg assembling

四只电动支腿，分别使用 3/8×16-1 3/8 外六角螺栓、3/8 尼龙嵌件锁紧螺母、3/8 平垫圈紧固件组合，安装固定到车架安装板上，见下图；

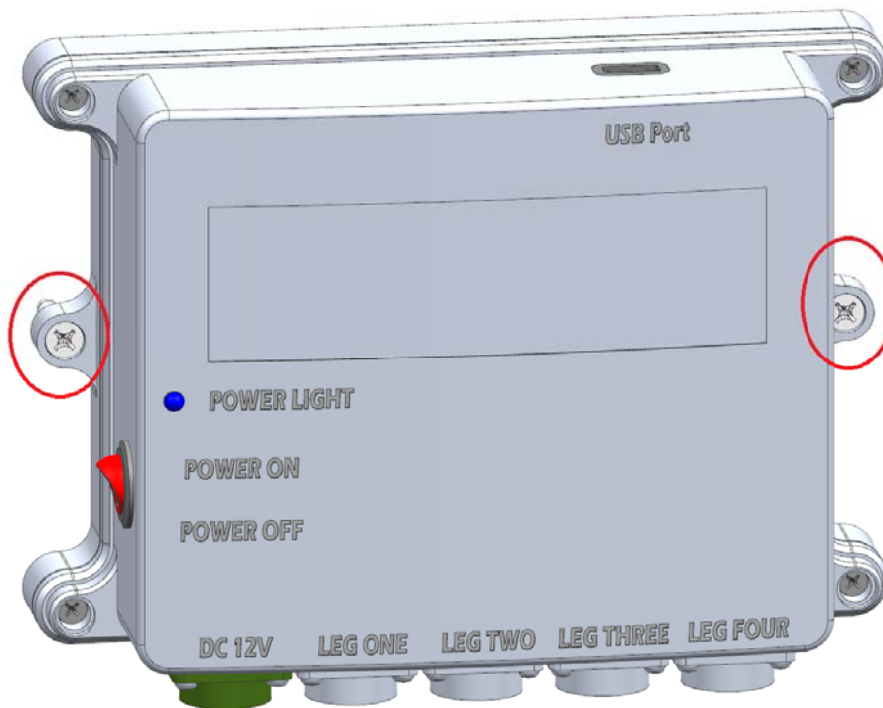
Assembled four electric legs by 3/8*16-13/8 Outer hexagon flange bolt,3/8 Nylon insert lock nut,3/8 flat washer on the mounting plates of camper.See below picture



4.2 安装主控制盒: **Controller assembling**

借用主控制盒上, 两个直径 5.5 的安装孔, 在车架墙板适当位置, 用记号笔标记出点位, 预钻出直径 4.5 的自攻螺丝底孔, 使用 2 颗十字沉头自攻螺钉 ST5.5-19 F 型, 把主控制盒安装固定到墙板上, 见下图。

Mark the right position on the camper wall by two $\phi 5.5$ mounting holes on of the controller and drill $\phi 4.5$ holes. Fix the controller on the camper wall by two ST5.5-19 F type cross countersunk head self tapping screw. See below picture.



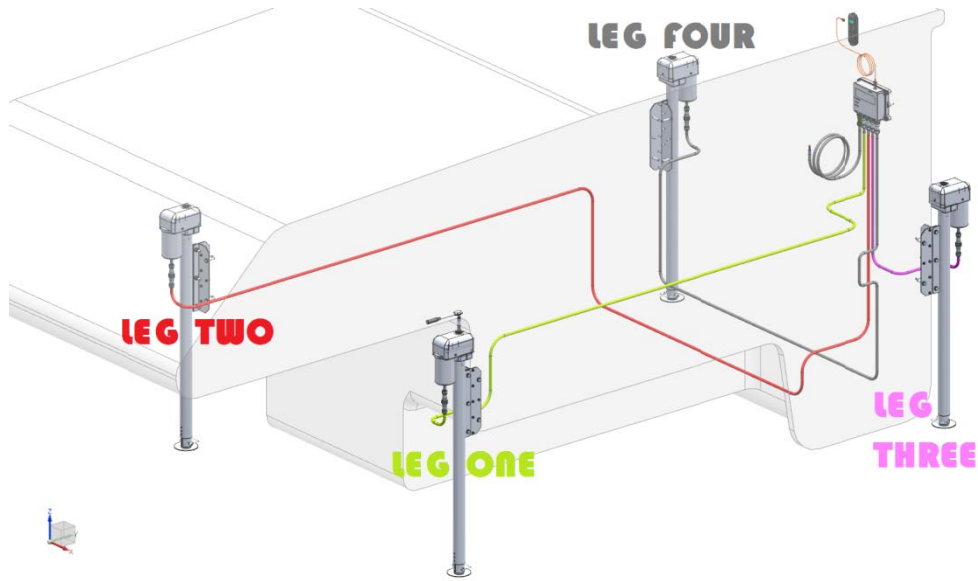
4.3 支腿线缆布线、接线：Leg wiring

支腿线缆的规格、参数、内部接线等均相同，只是线缆长度有别。连接位于主控制盒远端的支腿时，应挑选长支腿线缆，靠主控制盒近的支腿，挑选短的支腿线缆。

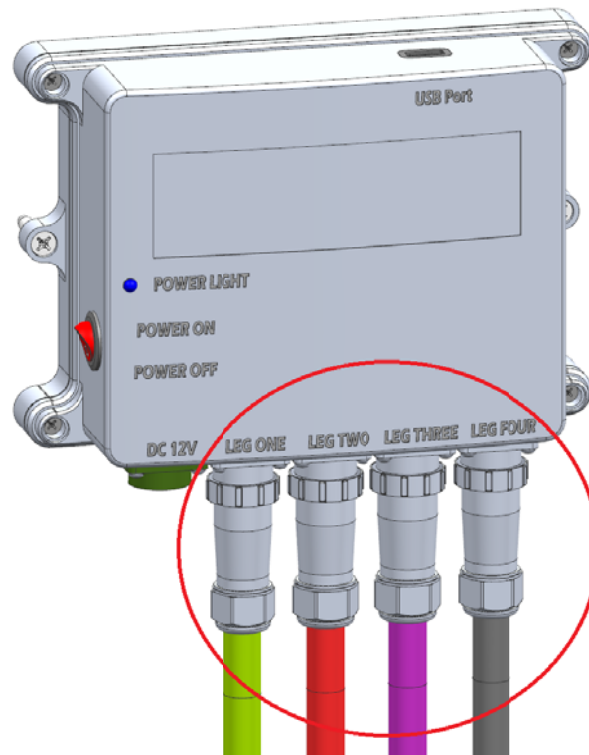
All the specification and internal wiring of the leg cables are same except the cable length. Have the longer cables to connect the legs far away from the controller and have the shorter cables to connect the legs near the controller.

支腿线缆两端的航空插头不同。各线缆的支腿一侧航空插头端，是匹配支腿航插接口的，分别把四条线缆的这一端，布线延伸到四条支腿处，并把航插旋紧安装到支腿各自的航空插头接口上；各线缆的主控制盒一侧的航空插头端，统一预留在主控制盒处，并按照主控制盒上的 1 到 4 号支腿标记，配对拧紧安装到主控制盒相应的航插接口上。

The specification of connectors on the two ends of the cable are different. One end of the cable is connected to the leg and assembled tightly. The other one end of the cable is connected to the controller and assembled tightly. Four legs are connected to the controller according to the mark of 1 to 4 by four cables.



上图：各支腿的布线图(左侧为车头方向) Leg layout(the left side is the head of vehicle)



上图：主控制盒 1 到 4 号支腿的接线图 Wiring from leg1 to leg4 on controller

4.4 电源线缆接线：Power wiring

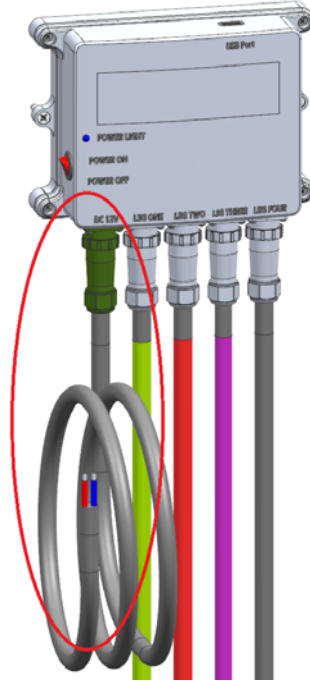
电源线缆的绿色航空插头，拧紧安装到主控制盒标记着 DC12V 的电源航插接口上，线缆另一端内部的红色 12 号 UL 线，为正极，压接上带绝缘护套的端子（规格：3.5-10）后，把此端子用车载电瓶自带紧固件，锁紧到电瓶电源正极：DC12V 上。

Tightening the green connector on the power line to the DC12V connector of the controller. In the other end of power cable, the red UL #12 line is positive terminal, tapping the insulated sheath terminal 3.5-10 on the end and connecting it on the positive terminal of

battery by fasteners.

蓝色 12 号 UL 线，为负极，同样压接上端子后，把端子接到车架负极，或者电瓶电源负极上，见下图。

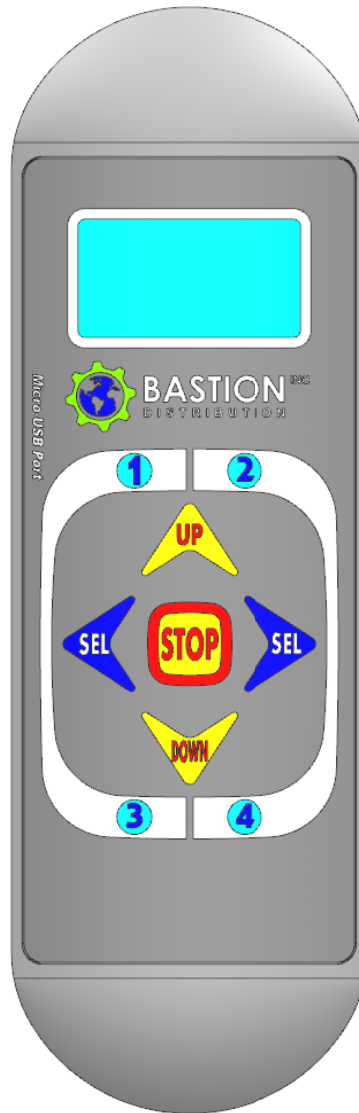
Tapping the insulated sheath terminal 3.5-10 on the end of the blue line(#12 UL) and connecting it to the negative terminal of battery. See below picture



五、产品使用方法：System operation

5.1 遥控器的使用（见下图）：Remote operation

遥控器采用 2.4Ghz 频段，详见附件资料。



a、遥控器的控制面贴上，有 UP（上升）、DOWN（下降）、STOP（停止）三个控制按键，以及向左和向右，两个方向上，循环选择被控支腿的两个 SEL（选择）按键（“select”的简写，中文含义：选择）；

a. There are UP, DOWN, STOP, two SEL buttons (SEL is select for short) on the remote panel.

b、1 到 4，四个 LED 指示灯，分别代表 1 到 4 号支腿；

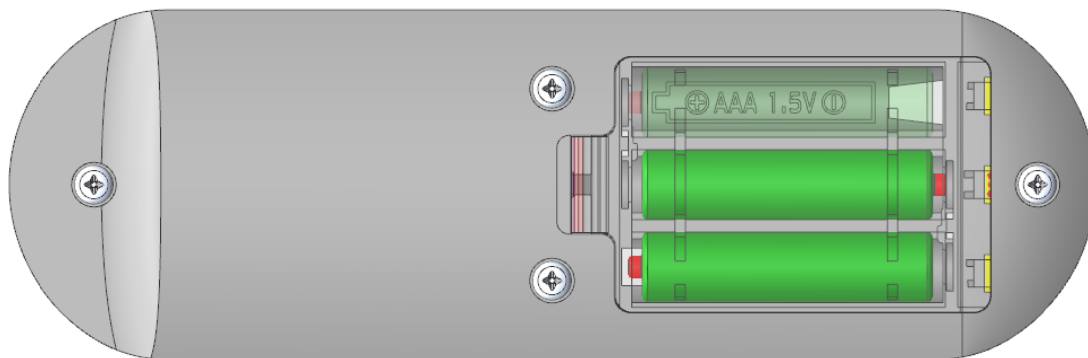
b. No. 1 to 4 are four LED light, indicate leg 1 to leg 4.

c、控制面贴上侧，是带背景光的液晶显示屏，支腿正常工作时，可实时显示电源电压、支腿总电流、各支腿上升或下降的运动状态；

c. There is a LCD with background light on the top of the remote. It can show voltage, current and each leg condition.

d、取出 3 节 AAA 电池，按照电池仓内的正负极标识，把电池安装到遥控器内，见下图；

d. Correctly put three pcs of AAA battery into the back of remote according the sign of positive and negative poles. See below picture.



e、持续按下 STOP 按键，约 2 秒后，唤醒遥控器；

e.Press and hold the STOP button 2S to make the remote work.

f、产品出厂前，遥控器已经通过 USB 数据线，同主控制盒内的主控板，完成密码匹配，具体操作方式，待下文补齐。遥控器与主控制盒为配对使用，遥控器的 Micro-USB 口位置，见下图；

f.The remote has already matched with the controller by USD cable before delivery.The Micro-USB connector please see below picture.



g、在遥控器的电池电量耗尽时，USB 数据线可作为借用车载电瓶电能的供电线，见下图；

G.USB cable can be used to recharge when the remote battery is out of power.



h、遥控器升、降、停止等控制按键数量，简化到了 3 个，为实现对 1 到 4 号腿的单独、点动升降控制，以及四腿联动、持续升降控制，使用了 SEL 选择按键，来循环选择被控制的支腿。按下向左或向右的 SEL 键后，1 到 4 号支腿的 LED 灯，会依次单个点亮，以此，表示此时被控制的支腿，是对应的单个支腿；当 SEL 选择键向左超出 1 号或向右超出 4 号腿时，四个 LED 灯会同时亮起，以此表示此时是四条支腿同时被控制，实现升降、停止动作；

H.Press the left or right SEL button,the LED light of 1 to 4 will be lighted one by one,the lighted one means the corresponding leg is working.Four LED lights are all lighted when press the SEL button in turns,that means four legs can be operated simultaneously.They can be up,down,stop simultaneously.

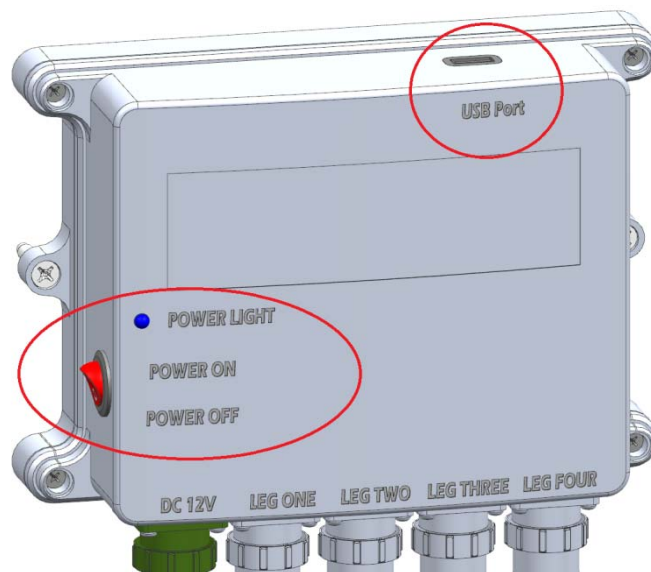
i、特殊的，遥控器对单腿的升、降控制，是点动形式，如果要实现单腿连续升、降动作效果，必须持续按下对应的上升或下降按钮；遥控器对四腿的同升、同降控制，是联动形式，即在四腿模式下，一旦短按一次上升或下降按钮，四条支腿会同时连续上升或下降，此时四条支腿的停止动作，可以通过按下 STOP 按键，实现四腿同步停止动作；

I.Press and hold the UP or DOWN button to make the corresponding leg goes up or down continuously.Select the four legs operate simultaneously,press the UP or DOWN button one time then four legs will go up or down continuously until press the STOP button one time.

j、遥控器按键在几秒内无操作时，会自动进入休眠状态。但四腿同步联动，持续升、降动作时，为确保能及时控制支腿停止，此时遥控器不会自动进入休眠状态，直到四腿同步动作结束。

J.With no input on the remote for several seconds the remote will automatically shut off.But when four legs in operation simultaneously the remote will not be shut off until four legs stop working.

5.2 主控制盒的使用（见下图）：Operation of controller(see below picture)



a、主控制盒左侧为电源的船型开关，以及电源指示灯，当开关的 POWER ON 一侧按下时，举升装置整机上电，开始接收遥控器发出的控制指令，正常工作；当开关的 POWER OFF 一侧按下时，整机断电，主控不再响应遥控的无线操作指令；

A.The switch on the left side of the controller is power rocker switch and light indicator.Press the power button,the system power on,otherwise the system power off.

b、主控制盒右上角为 USB 数据线的接口,用于同遥控器的密码配对(出厂前已经完成),已经遥控器缺点时的备用供电。

B.The connector on the right top corner of the controller is USB connector which be used to passport match and back-up power.

5. 3 遥控器控制支腿托举车体的升降操作: **operation**

a、车厢装载到皮卡货厢上: **loading the camper**

1、操作四腿,使其同步举升起车厢,请保证前后支腿举升高度持平,或前面支腿略微高于后面支腿,避免车厢向前倾覆;

1.Raise the front two jacks and the rear two jacks simultaneously until the camper is level .Always be sure that the front jacks are never lower than the rear jacks.They must be level with,or higher than the rear.

2、持续四腿的举升过程,至车厢高出皮卡的货厢上沿 6 英寸左右,或者超过皮卡车身的最高点;

2.Continue with the above lifting procedure until the camper is approximately 6” above the truck or until it clears the highest point of the truck bed.

3、将皮卡倒车至车厢下,使车头和车厢在同一条线上,以确保不会撞到后方支腿;

3.Cautiously back the truck under the camper,make sure you are aligned so as not to hit or rub camper jacks.

4、操作四腿,使其同步降低高度,在快要达到需要的高度前,让前后支腿差不多持平,使车厢整体平稳落在皮卡货厢上。

4.Always drop the rear two jacks and the front two jacks simultaneously to be level.Continue with this procedure until the desired height is reached.Make sure the camper be placed on the truck bed stably.

b、车厢从皮卡货厢上卸载: **Unloading the camper**

1、尽量选择坚固的地面进行车厢的装载和卸载;

1.Choose the firmist ground to load and unload the camper.

2、操作四腿,使其同步举升起车厢,请保证前后支腿举升高度持平,或前面支腿略微高于后面支腿;

2. Raise the front two jacks and the rear two jacks simultaneously until the camper is level .Always be sure that the front jacks are never lower than the rear jacks.They must be level with,or higher than the rear.

3、持续举升的过程,直到车厢大约在皮卡货厢的 5-6 英寸高或者到皮卡车身的最高点;

3.Continue with the above lifting procedure until the camper is approximately 6” above the truck or until it clears the highest point of the truck bed.

4、皮卡驶离车厢,注意不要撞到千斤顶。

4.Drive the truck forward taking care not to hit or rub the camper jacks.

c、车厢降低高度: **Lowering camper**

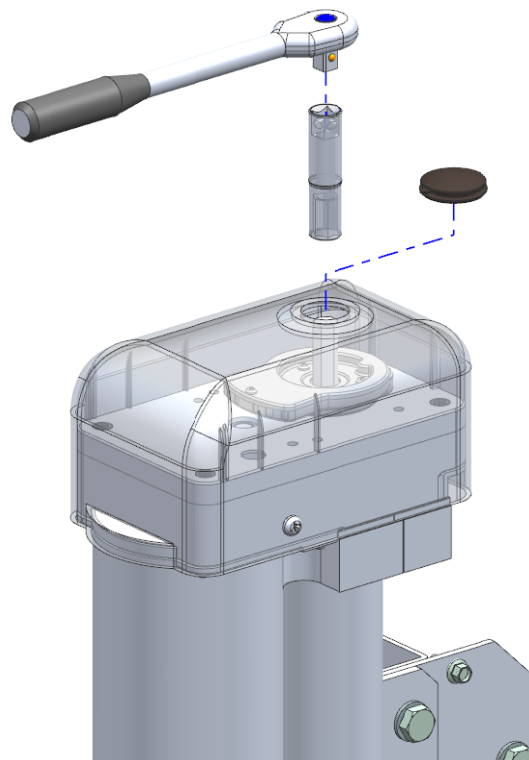
1、操作四腿,使其同步降低高度,在快要达到需要的高度前,让车厢前后部位的高度差不多持平。

Always drop the rear two jacks and the front two jacks simultaneously to be

level. Continue with this procedure until the desired height is reached. Always be sure that the front jacks are never lower than the rear jacks.

5. 4 手动应急撤收支腿的操作方法: **Manual operation for emergency**

手动应急撤收功能组件, 见下图: **The manual operation parts as below**



a、按下棘轮扳手 3/8 方头上方的蓝色按钮, 把 3/8 英寸方孔转 11mm 内六角孔套筒, 安装到扳手上, 松开蓝色按钮, 即组成应急撤收手摇柄;

A. Press the blue button on the top of 3/8 inch Square head ratchet wrench and assemble the socket of 3/8 hexagon socket on the wrench, then loose the blue button. This is the override crank for emergency.

b、取下黑色橡胶密封盖, 把手摇柄套筒, 套接到支腿塑料大罩内的六角手摇出轴上, 调整棘轮扳手的旋向拨动开关到正确方向, 来回扳动扳手, 以此转动支腿六角轴, 从而使得支腿上升、下降, 最终实现应急撤收功能;

B. Remove the black rubber cover on the top of the cover and insert the manual crank handle into the access hole on the top of the jack, engaging the drive screw to make the jacks up and down.

c、支腿撤收完成后, 取下棘轮扳手等组件, 把橡胶密封盖装回原位, 确保密封功能完好。

C. Remove the manual crank handle and replace the rubber cover to seal when the jacks are ready.

5. 4 在汽车驶离前, 四条支腿必须处于完全收回的状态。

Make sure four jacks must be in totally retracted position before driving.

FCC Warning Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- - Reorient or relocate the receiving antenna.
- - Increase the separation between the equipment and receiver.
- - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- - Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.