Power supply 电源供电(12)
Signal input 信号输入
Signal output 信号输出
GND

Indicate: efi cable components used in the wire line and the main cable wire, although part color is the same, but not between conduction, the only connection is that two eight hole plastic parts 注明：电喷电缆部件所用的导线与主电缆部件的导线虽然线色相同，但是两者之间只导通，唯一的连接是这两个八孔塑件

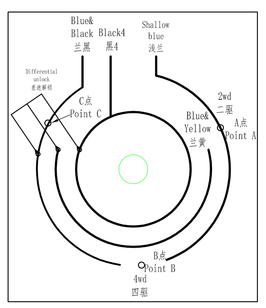
Acquisition speed signals and reverse, when the speed is more than 40 km/h, Or when the engine speed is greater than 4800 RPM, speed limiter to the ECU Square wave signal, the control of ignition and fuel injection
采集车速信号和倒档信号，当车速大于40Km/h，或发动机转速大于4800rpm时，限速器向ECU发出方波信号,几几几几，控制点火和喷油

Power steering controller 助力转向控制器
Control module 控制模块
Analog/digital conversion 模拟量/数字量转换
Motor driver module 电机驱动模块
The power steering motor 助力转向电机
ECU interface ECU接口 (J1, Black)
ECU interface ECU接口 (J1, Gray)

Speed limiter 限速器

Voltage regulator rectifier 调压整流器
Hoist the controller 卷扬机控制器
Hoist motor 卷扬机电机
Relay combination 继电器组合
The four-wheel drive controller 二四驱控制器
Front axle transfer 前桥分动器
Fuel pump parts 燃油泵部件
Documents show combination 档案组合
Flasher unit 闪光器部件
Parking switch 驻车开关
Light switch 照明开关
Turn signal switch 转向灯转换开关
Emergency light switch 应急灯开关
brake switch 制动开关
buzzer 蜂鸣器
Speed Sensor 速度传感器
Combination instrument parts 组合仪表部件
Black connector combination instrument 组合仪表黑色连接器
Combination instrument gray connector 组合仪表灰色连接器

由于前桥分动器内部结构和部型开关结构的限制，导致要完成二驱到四驱、四驱到差速的电路逻辑非常的复杂，要完成一个功能的转换，需要多个继电器同时工作，对电路的检测，带来了很大的麻烦。整个系统用了六个继电器，两个舱型开关，但请客户放心，我们用的继电器质量是非常好的，如果外部电路不短路，几乎不会存在继电器坏的现象。
如果二四驱、差速功能出来问题，请先检查相关的电源保险是否烧毁，相关的连接器是否接好，开关是否接触良好；如果这些都没有问题，在更换二四驱控制器、继电器组合，如果将上述都检测了一遍，还没有找到问题，在更换前桥分动器，进行检测。
Front axle transfer due to the internal structure and the limitation of the ship type switch structure, causes to complete the two drive to four-wheel drive,
Four-wheel drive to differential circuit logic is very complex, to complete a conversion function, need more after
Electrical work at the same time, to detect circuit, a lot of trouble.
The whole system with six following
Electric appliances, two ship type switch. But please rest assured customers, we use the relay quality is very good.
If you don't short circuit external circuit, almost no relay bad phenomenon.
If two raider, differential function problem, please check whether the power of the relevant insurance burned, related
Whether the connector is connected and the switch contact is good; If these are not problems, in the change of m
Drive controller, relay, if all the above test again, haven't find the problem, the more
In front axle thansfer, for testing.



开关状态
二四驱开关：二驱：橙红-白绿 接通
四驱：橙红-白黑 接通
浅兰-兰红1 接通
差速开关：差速锁时：兰黑-兰绿 接通
差速解锁时：黑-橙红 接通
Switch state
Two all-wheel-drive switch: two displacement:
palm red - white green through
All-wheel-drive:
palm red - white black
Light blue - blue red 1 through
Differential switch: Differential lock:
Black - blue green connected
When differential unlock:
black - orange through

700UTV-7 前桥二四驱、差速功能检测方法
开关在二驱时，按下差速解锁开关，电机无动作，必须在四驱时，才能进入差速解锁状态。
二驱时：橙红-白绿，S2动作，橙红与S3的线圈连接；此时按下差速解锁按钮，橙红-黑，K6动作，黑-蓝，绿色，在第二驱时，兰黑未接地，则K1不动作，棕黑未GND，黑黄色未GND，则电机不动作。
二驱-四驱：橙红与白绿断开，白绿悬空，S2断开。
四驱时：橙红-白黑，S1动作，兰黑与兰黄断开。
浅兰-兰红，在二驱向四驱过渡过程中，浅兰未GND，则K3动作，黑黄得+12V电，电机转动，到点时，浅兰悬空，K3断开，黑黄接地，电机停止转动，前桥进入四驱状态。
按下差速解锁开关：兰黑与兰绿断开，黑-橙红。
黑-橙红，S4动作，兰黄与浅兰通，此时二四驱开关处于四驱状态，浅兰与兰红是导通的，则兰黄与兰红通；在B点时，兰黄为GND，则K3动作，电机转动，至C点时，兰黄悬空，K3断开，黑黄接地，电机停止转动，前桥进入差速解锁状态。
按二四驱开关，开关处于二驱状态，差速开关处于差速解锁状态（橙红-黑），直接由差速解锁进入二驱状态：
橙红-白绿，S2动作，橙红与S3的线圈通，S3动作，兰黑与兰绿通，（此时处于差速解锁状态，兰黑为GND）K1动作，棕黑得+12V电，电机转动到B点；
二驱时，白黑悬空，S1复位，GND-兰黄-兰黑-兰绿，则K1动作，电机继续转动，到A点，兰黄悬空，电机停止转动，前桥处于二驱状态。
差速解锁向差速锁过渡：黑与橙红断开，兰黑-兰绿，兰黑此时为GND，则K1动作，棕黑得+12V，电机转动到B点，兰黑悬空，电机停止转动，前桥进入四驱状态。
四驱向二驱过渡：橙红与白黑断开，S1复位，兰黑-兰黑；浅兰与兰红断开。
橙红-白绿，S2动作，橙红与S3线圈连接（此时差速开关处于锁前状态，橙红与黑通，为GND），则S3动作，兰黑与兰绿通；S1继电器中，兰黑与兰黄也连接（兰黄为GND）则兰绿为GDN，K1动作，棕黑得+12V电，电机转动到A点，兰黄悬空，电机停止转动，前桥处于二驱状态。

700 utv - 7 two all-wheel-drive front axle, differential detection method
The switch in the drive, press the differential unlock switch, motor, no action must be in 4 x4, can enter into differential unlocked.
Two drives: palm red - white and green, S2, orange with S3 coil connection: The differential unlock button, orange - black,
K6, dark - blue, green, but in the second drive, blue black off ground, K1 is action, brown and black GND, black and yellow
No GND, the motor is not action.
All-wheel drive and four-wheel drive: brown and white green disconnect, white, green, impending, S2 disconnect.
All-wheel-drive: palm red - white and black, S1 movement, the black and blue yellow disconnect.
Shallow blue - blue red, in the second displacement in the process of transition to a four-wheel drive, shallow blue GND, the K3 action, dark yellow + 12 v battery,
Motor rotation, to point B, the shallow blue impending, K3 disconnect, dark yellow earth, motor stop running, Front axle into
All-wheel-drive.
Press the differential unlock switch: black and blue green disconnect, black - orange.
Black - orange, S4 movements, with yellow light LanTong, when two all-wheel-drive all-wheel-drive switch, light blue and blue red is
Conduction, with yellow LanGongTong: At point B, yellow to GND, the K3 action, motor rotation, to point C,
Huang hung, K3 disconnect, dark yellow earth, motor stop running, front axle into differential unlocked.
According to two all-wheel-drive switch, switch in the second displacement state, differential switch in the differential unlock state (orange - black), directly by the differential
Unlock into two drive state:
Palm red - white and green, S2 action, orange with S3 coil tong, S3, with dark blue green, (at this point in the poor
Unlocked, blue black GND) as K1, brown and black + 12 v battery, motor rotation to point B;
Two drives, white black dangling, S1 reset, GND - blue yellow blue black - blue green, the K1 action, motor continue to roll, to
Point A, orchid huang hung up, the motor stopped spinning, front axle in the second displacement state.
Differential unlock the transition to a differential lock: black and orange disconnect. LAN dark - blue, green, blue black at this point to GND, the K1 action, brown and black + 12 v,
Motor rotation to point B, blue black dangling, motor stop running, into a state front axle all-wheel-drive.
Four-wheel drive to the second drive too much; Brown and white black disconnect, S1 restoration, blue yellow and blue black; Light blue and blue red disconnect,
Palm red - white and green, orange S2, and S3 coil connection (lock gear differential switch at this time, the red orange,
To GND), then the S3, with dark blue green tong: S1 in the relay, with dark blue yellow also connection (blue yellow to GND)
It is GDN blue-green, K1, brown and black + 12 v battery, motor rotation to point A, huang hung up, motor stop running,
Front axle in the second displacement state.

0.5mm²----0.05
1.25mm²----0.15
2.0mm²----2.0
3.0mm²----3.0
8.0mm²----4.0
14mm²----7.0

标记	处数	更改文件号	签字	日期
设 计				
审 核				
标准检查				
批 准				

HS700UTV-7
整车电器原理图
所属装配号
图样标记 数量 重量 比例
S A
共 页 第 页
重庆环松科技工业有限公司