## 

[一．第三方上传维修车辆信息 6](#_Toc61945257)

## [二．第三方上传维修记录 7](#_Toc61945258)

## 做成两份手动上传，一份车辆上传，一份维修记录上传

上传车辆信息： 以上次上传程序界面为例：添加两个字段，一个是obd通讯接口“无”“有”可选框，一个是添加行驶证照片的按钮；

上传维修记录，满足已结算的条件才能上传，就是DT\_OM\_GD.IS\_SETTLE=1

## 接口说明

所有json 对应的字段都必须传过来，如果没有值就传空值

所有内部json对象都用string传值.例子如下

接口地址

[www.xtaowu.com](http://www.xtaowu.com)测试环境

<https://carlife.shanghaiqixiu.org>生产环境

{

"sign":"d6eb120462d321e3168ddde2f6bc53a9",

"timestamp":"1608628369",

"image":"http://",

"nonce":"xineksdf",

"companyIdentity":"企业统一社会信用代码" 91310112132259241T 在配置文件中读取

"entrustRepair":"托修方", MT\_KH. CUST\_NM 客户表.客户名称

"licensePlate":"车牌号", MT\_CL. CAR\_NO MT\_CL.KH\_ID=MT\_KH.KH\_ID

"vehicleType":"车型", MT\_CX.CAR\_TYPE MT\_CL.CX\_ID=MT\_CX.CX\_ID

"engineNum":"发动机号", MT\_CL.ENGINE\_NO

"contractNum":"合同编号", DT\_OM\_GD. REPAIR\_CONTRACT\_NO

"chassisNum":"底盘号", MT\_CL. CAR\_BODY\_NO

"incomingDate": "2020-12-20", DT\_OM\_GD(工单表) 字段：IN\_DT

"faultDiagnosis":"{\"information\":\"故障信息\",\"desc\":\"故障描述\",\"evaluate\":\"评价\"}", 故障信息:DT\_OM\_JJJC.ERROR\_DESP 故障描述：DT\_OM\_JJJC.CAR\_INFO

"axleBrakingRatio":"{ \"axle1\": {\"result\":\"结果\", \"limit\":\"限值\",\"evaluate\": \"评价\" },\"axle2\": {\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\": \"评价\",\"axle3\": {\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\": \"评价\",\"axle4\": {\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\": \"评价\",\"axle5\": {\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\": \"评价\",\"axle6\": {\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\": \"评价\" }}",

"brakingUnbalanceRate":"{ \"axle1\": {\"result\":\"结果\", \"limit\":\"限值\",\"evaluate\": \"评价\" },\"axle2\": {\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\": \"评价\",\"axle3\": {\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\": \"评价\",\"axle4\": {\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\": \"评价\",\"axle5\": {\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\": \"评价\",\"axle6\": {\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\": \"评价\" }}",

"vehicle":"{\"vehicleBrakingRate\":{\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\":\"评价\"},\"parkingBrakeRate\":{\"result\":\"结果\",\"limit\":\"限值\",\"evaluate\":\"评价\"} }",

"initialSpeed":"{\"brakingDistance\":{ \"result\":\"结果\",\"limit\":\"限值\",\"evaluate\":\"评价\" },\"mfdd\":{ \"result\":\"结果\",\"limit\":\"限值\",\"evaluate\":\"评价\" },\"brakingStability\":{ \"result\":\"结果\",\"limit\":\"限值\",\"evaluate\": \"评价\" }}",

"gasolineCar":"{\"excessAirRatio\":{\"measured\":\"实测值\",\"limit\":\"限值\"},\"idleSpeedCo\":{\"measured\":\"实测值\",\"limit\":\"限值\"},\"idleSpeedHc\":{ \"measured\":\"实测值\",\"limit\":\"限值\"},\"highIdleSpeedCo\":{\"measured\":\"实测值\",\"limit\":\"限值\"},\"highIdleSpeedHc\":{ \"measured\":\"实测值\",\"limit\":\"限值\"},\"evaluate\":\"评价\" }",

"dieselVehicle":"{\"opticalAbsorptionCoefficient\":{ \"first\":\"1\",\"second\":\"2\",\"third\":\"3\",\"average\":\"平均值\",\"limit\":\"限值\"},\"smokeIntensity\":{ \"first\":\"1\",\"second\":\"2\",\"third\":\"3\",\"average\":\"平均值\",\"limit\":\"限值\"},\"evaluate\":\"评价\" }",

"conclusion": 0,

"inspector":"质量检查员", DT\_OM\_GD. qualityChecker

"entrustRepairOpinion": 1

}

## MD5说明

* 参数

| **参数** | **值** |
| --- | --- |
| nonce | 随机数（每次请求自己随便生成一个，不要重复，不能超过32位） |
| timestamp | 当前时间戳（时间戳到秒） |
| companyIdentity | 企业身份标识（找相关人员要） |
| secretKey | 企业MD5加密key（找相关人员要） |
| sign | MD5签名（根据上面的参数MD5生成） |

* 规则

MD5签名 = MD5（企业MD5加密key|companyIdentity=企业身份标识&nonce=随机数&timestamp=时间戳）

* 示例

sign = MD5（secretKey|companyIdentity=014582238P&nonce=54321&timestamp=1608890828）

* 参考代码

package com.ctl.common.utils;

import cn.hutool.crypto.digest.MD5;

import lombok.extern.slf4j.Slf4j;

import java.util.Map;

import java.util.TreeMap;

/\*\*

\* @description: 验签工具类

\* @author: CaoQing

\* @date: 2020/12/26 20:21

\*/

@Slf4j

public class SignUtils {

/\*\*

\* @Author :CaoQing

\* @Description: Params 参数加签

\* @param :

\* @Date : 2020/12/26 20:21

\*/

public static String sign(Map<String, Object> params, String pws) {

if(params ==null){

return MD5.create().digestHex(pws + "|");

}

Map<String, Object> temp = new TreeMap<>(params); // 对参数进行排序

// 拼接参数

StringBuilder sb = new StringBuilder();

for (String key :temp.keySet()) {

sb.append(key).append("=").append(temp.get(key)).append("&");

}

String content = sb.deleteCharAt(sb.length() - 1).toString(); // 去掉最后一个 &

String sign = MD5.create().digestHex(pws + "|" + content); // 使用 MD5 计算签名字符串

return sign;

}

}

## 一．第三方上传维修车辆信息

1. /repair/car/upload

* 请求方式post
* 该接口需要MD5签名
* 请求参数

{

"sign":"MD5签名",

"nonce":"随机数",

"timestamp":"时间戳",

"companyIdentity":"企业身份",91310112132259241T 在配置文件中读取

"incomingInspectionId":"检查单编号",这几个都可以测试用20201222106036 20201222106037 20201222106038 20201222106039

"licensePlate":"车牌号", MT\_CL. CAR\_NO

"vin":"车辆识别号", MT\_CL.VIN\_CODE

"vehicleType":"车型", MT\_CX.CAR\_TYPE

"engineNum":"发动机号", MT\_CL.ENGINE\_NO

"vehicleOwner":"机动车所有人", MT\_KH. CUST\_NM

"entrustRepair":"托修方", MT\_KH. CUST\_NM

"contact":"联系人",MT\_KH.LINKMAN

"contactDetails":"联系方式",MT\_KH.TEL1

"obd":"有无obd通讯接口： 0 无 1 有", 显示在上传程序上，上传时让客户自己选择，默认为无

"carType":"车辆类型", MT\_CL.CAR\_OIL 0,1,2,3,4,5的值分别代表 轻型汽油车，重型汽油车，柴油车，其它车，LPG燃料车，CNG燃料车

"vehicleClassCode":"车辆分类代号", MT\_CL.CAR\_SYMBOL

"drivingLicenseImg":"行驶证照片", 显示在上传程序上，上传时让客户自己选择照片

"color":"黑色",MT\_CL.CAR\_COLOR

"brand":"丰田" MT\_CC.VENDOR MT\_CL.CC\_ID=MT\_CC.CC\_ID

}

请求示例

{

"sign":"e530fdae802e1390c09b4de0229d6c42",

"nonce":"987654321",

"timestamp":"1608890828",

"companyIdentity": "91310113074582238P",

"incomingInspectionId":"20201222105974",

"licensePlate":"鄂B1H369",

"vin":"H369",

"vehicleType":"轻型普通货车",

"engineNum":"A2417000071",

"vehicleOwner":"机动车所有人",

"entrustRepair":"刘海军",

"contact":"联系人",

"contactDetails":"18594201847",

"obd":1,

"carType":"bmz",

"vehicleClassCode":"车辆分类代号",

"drivingLicenseImg":"/img/b.jpg",

"color":"黑色",

"brand":"丰田"

}

* 返回结果

{

"code":0,

"message":"success",

"data" : null

}

## 二．第三方上传维修记录

1. /repair/order/upload

* 请求方式post
* 该接口需要MD5签名
* 请求参数

{ ------ ------以上海聚焦为例------------------

只有结算(DT\_OM\_GD.IS\_SETTLE=1)才能上传DT\_OM\_GD.GD\_ID=DT\_OM\_BXXM.GD\_ID=DT\_OM\_JJJC.GD\_ID= DT\_FM\_QTFYMX.GD\_ID

"sign":"MD5签名",

"nonce":"随机数",

"timestamp":"时间戳",

"companyIdentity":"企业身份", 91310112132259241T 在配置文件中读取

"incomingInspectionId": "检查单编号", 这几个都可以测试用20201222106036 20201222106037 20201222106038 20201222106039

"deliveryDate": "送修日期 yyyy-MM-dd", DT\_OM\_GD(工单表) 字段：IN\_DT

"repairMileage": "送修里程", DT\_OM\_JJJC(交接检查表) 字段：MILES

"settlementDate": "结算日期 yyyy-MM-dd", DT\_OM\_GD(工单表) 字段：SETTLE\_DT

"settlementSeq": "结算编号", DT\_OM\_GD(工单表) 字段：GD\_SN

"repairItems": { // 维修项目 json字符串

"subtotal": "小计",

"items": [

{

"itemSeq": "序号1",

"itemName": "维修项目名称1", DT\_OM\_BXXM(保修项目表) 字段：PRJ\_NM

"settlementTime": "结算工时", DT\_OM\_BXXM(保修项目表) 字段：MAN\_HOUR

"workHoursUnitPrice": "工时单价", DT\_OM\_BXXM(保修项目表) 字段：UNIT\_PRICE

"workHoursFee": "工时费用" 结算工时×工时单价

},

{

"itemSeq": "序号2", -----------同上------------

"itemName": "维修项目名称2",

"settlementTime": "结算工时",

"workHoursUnitPrice": "工时单价",

"workHoursFee": "工时费用"

}

]

},

"repairParts": { // 维修配件 json字符串

"subtotal": "小计",

"parts": [

{

"partSeq": "序号1",

"partName": "维修配件名称1", DT\_EM\_LJML(零件目录表) 字段：PART\_NM

"partBrand": "配件品牌", DT\_EM\_LJML(零件目录表) 字段：location

"partNo": "零件号", DT\_EM\_LJML(零件目录表) 字段：ORIGINAL\_FACTORY\_ID

"productSeq": "产品序列号", DT\_EM\_LJML(零件目录表) 字段：SELF\_NO

"partUnitPrice": "配件单价", DT\_EM\_CKLJ(出库零件表) 字段： SELLING\_PRICE

"partUnitNumber": "配件数量", DT\_EM\_CKLJ(出库零件表) 字段：QTY

"partMoney": "金额", 配件单价\*配件数量

"oneselfPart": "是否为托修方自备配件" DT\_EM\_CKLJ(出库零件表) 字段：YG\_ID 判断YG\_ID是否是数字999，如果是为自带，反之为自带

},

{

"partSeq": "序号2", -------同上--------

"partName": "维修配件名称2",

"partBrand": "配件品牌",

"partNo": "零件号",

"productSeq": "产品序列号",

"partUnitPrice": "配件单价",

"partUnitNumber": "配件数量",

"partMoney": "金额",

"oneselfPart": "是否为托修方自备配件"

}

]

},

"otherFee":[ // 其他费用 json字符串

{

"otherFeeSeq": "其他费用序号1",

"project": "项目1", DT\_FM\_QTFYMX. FEE\_NM

"otherFeeMoney": "金额" DT\_FM\_QTFYMX. AMOUNT

},

{

"otherFeeSeq": "其他费用序号2",-------同上-----

"project": "项目2",

"otherFeeMoney": "金额"

}

],

"total": "总费用（含优惠）",

总费用=(工时费+材料费+施救服务费+车辆牵引费+外加工费+其它费用）-(工时折扣费+材料折扣费+施救服务折扣费+车辆牵引折扣费+外加工折扣费+其它折扣费用)

总费用字段都在DT\_OM\_GD表中

总费用=(MAN\_HOUR\_FEE+PART\_FEE+OUT\_PROCESS+PULL\_CAR\_FEE+IN\_AND\_OUT+OTHER\_FEE)-( MAN\_HOUR\_DISCOUNT+PART\_DISCOUNT+AGENT\_DISCOUNT+DRAW\_DISCOUNT+wjgzk+qtfzk)

"oldPartDisposal":"旧件处理，1：旧件已确认，由托修方收回，2：旧件已确认，由承修方收回，3：无旧件" DT\_OM\_GD. Badpart

}

* 请求示例

{

"sign":"e530fdae802e1390c09b4de0229d6c42",

"nonce":"987654321",

"timestamp":"1608890828",

"companyIdentity": "91310113074582238P",

"incomingInspectionId": "20201222105974",

"deliveryDate": "2020-02-02",

"repairMileage": 20,

"settlementDate": "2020-02-02",

"settlementSeq": "结算编号",

"repairItems": "{ \"subtotal\": \"222.22\", \"items\": [ { \"itemSeq\": \"1\", \"itemName\": \"维修项目名称1\", \"settlementTime\": \"123\", \"workHoursUnitPrice\": \"123\", \"workHoursFee\": \"123\" }, { \"itemSeq\": \"2\", \"itemName\": \"维修项目名称2\", \"settlementTime\": \"123\", \"workHoursUnitPrice\": \"123\", \"workHoursFee\": \"123\" } ] }",

"repairParts": "{ \"subtotal\": \"567.44\", \"parts\": [ { \"partSeq\": \"1\", \"partName\": \"维修配件名称1\", \"partBrand\": \"配件品牌\", \"partNo\": \"零件号\", \"productSeq\": \"产品序列号\", \"partUnitPrice\": \"1\", \"partUnitNumber\": \"22\", \"partMoney\": \"2345\", \"oneselfPart\": \"1\" }, { \"partSeq\": \"2\", \"partName\": \"维修配件名称2\", \"partBrand\": \"配件品牌\", \"partNo\": \"零件号\", \"productSeq\": \"产品序列号\", \"partUnitPrice\": \"11\", \"partUnitNumber\": \"11\", \"partMoney\": \"222\", \"oneselfPart\": \"1\" } ] }",

"otherFee":"[ { \"otherFeeSeq\": \"1\", \"project\": \"项目2\", \"otherFeeMoney\": \"222\" }, { \"otherFeeSeq\": \"2\", \"project\": \"项目2\", \"otherFeeMoney\": \"3333\" } ]",

"total": 222.22,

"oldPartDisposal":1

}

* 返回结果

{

"code":0,

"message":"success",

"data" : null

}