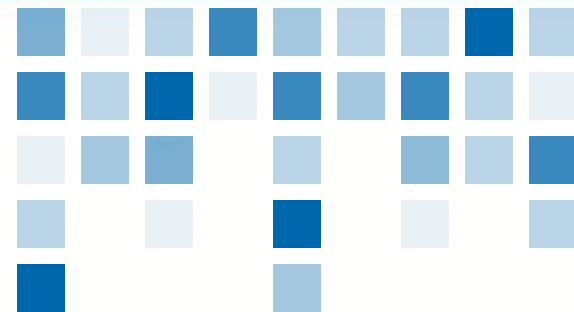
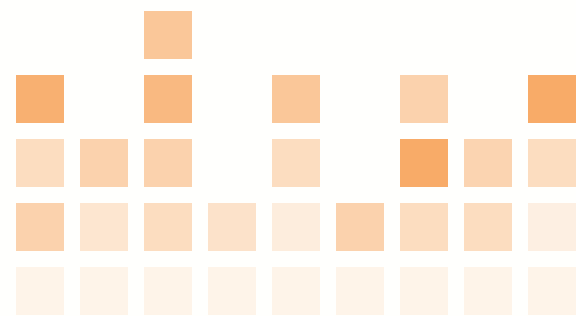




H3000系列牵引车维修保养说明

海外技术服务部



一、汽车的保养

Vehicle maintenance

(一) 保养类别

Maintenance classification

根据汽车的不同用途和使用条件，以及预期的年行驶里程，将汽车的保养制度分为三类。

According to the different working conditions and anticipated running mileage of the truck, the maintenance classification is separated into 3 types:

I 类：使用条件恶劣(气候严寒或酷热，含尘量高，短距离运输，越野使用)或汽车年行驶里程不到 2万(公里)。

Class I: Bad working conditions (such as extremely hot or cold, dusty environment, short distance transport, off-road diving) or the annual mileage is less than 20, 000 km.

II 类：短、中距离运输，年行驶里程不到6万(公里)。

Class II: Short or medium distance transport. Annual mileage is no more than 60,000km.

III类：远距离运输，年行驶里程超过6万(公里)。

Class III: Long distance transport. Annual mileage is over 60,000km.

(二) 例行检查和保养的间隔里程

The interval mileage of routine inspection and maintenance

各类使用条件的汽车例行检查和保养的间隔里程见表1

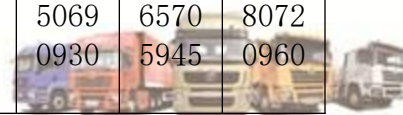
The interval mileage of routine inspection and maintenance for vehicles in various conditions, are as shown in table 1.



表1 Table1

单位: 1000m(公里) unit: 1000m

类别 Category	例行检查 Routine inspection	一级保养 First-class maintenance	例行检查 Routine inspection	二级保养 Second-class maintenance	例行检查 Routine inspection	一级保养 First-class maintenance	例行检查 Routine inspection	三级保养 Third-class maintenance	例行检查 Routine inspection	一级保养 First-class maintenance	例行检查 Routine inspection	二级保养 Second-class maintenance	例行检查 Routine inspection	一级保养 First-class maintenance	例行检查 Routine inspection	四级保养 Fourth-class maintenance
I	5851 6524 5	1090 1702 50	1595 1752 55	2010 0180 260	2510 5185 265	3011 0190 270	3511 5195 275	4012 0200 280	4512 5205 285	5013 0210 290	5513 5215 295	6014 0220 300	6514 5225 305	7015 0230 310	7515 5235 315	8016 0240 320
II	1017 0330 490	2018 0340 500	3019 0350 510	4020 0360 520	5021 0370 530	6022 0380 540	7023 0390 550	8024 0400 560	9025 0410 570	1002 6042 0580	1102 7043 0590	1202 8044 0600	1302 9045 0610	1403 0046 0620	1503 1047 0630	1603 2048 0640
III	1525 5495 735	3027 0510 750	4528 5525 765	6030 0540 780	7531 5555 795	9033 0570 810	1053 4558 5825	1203 6060 0840	1353 7561 5855	1503 9063 0870	1654 0564 5885	1804 2066 0900	1954 3567 5915	2104 5069 0930	2354 6570 5945	2404 8072 0960



(三) 总成换油间隔里程

Oil draining periods for assemblies

1. 正常使用条件见表2

Oil draining periods for assemblies in normal use conditions

2. 在恶劣使用条件下的发动机换油间隔里程见表3

Under the condition of bad use of engine oil change interval mileage are shown in table 3.

恶劣使用条件分三种情况: Bad conditions of use in three conditions:

(1) 热带或寒带气候(温度经常高于+30℃或低于-10℃)

Tropical or frigid climate (the temperature often higher than + 30 °C or below 10 °C)

(2) 使用含硫量0.5-1.0%的燃油

Use the fuel with the sulfur content between 0.5% and 1.0%.

(3) 使用含硫量1.0-1.5%的燃油

Use the fuel with the sulfur content between 1.0% and 1.5%.



表2 table2

●换油标记 oil change mark

类 别Category	发动机 Engine	变速器分动器 Transmission transfer case	前、后桥Front and rear axle	附 注Remarks
第一次检查First-time inspection	●	●	●	行驶2000-4000kmAfter running 2000 to 4000km
例行检查Routine inspection	●			
一级保养First-class maintenance	●			
二级保养Second-class maintenance	●	●	●	
三级保养Third-class maintenance	●	●	●	
四级保养Fourth-class maintenance	●	●	●	



表3 table3

使用条件Operating condition	类 别category	增压发动机Supercharged engine
恶劣条件（1）Execrable condition （1）	I II III	每隔5000kmEvery 5000km
恶劣条件（2）Execrable condition （2）	I II III	5000km5000km10000km
恶劣条件（3）Execrable condition （3）	I II III	5000km
恶劣条件（1+2）Execrable condition （1+2）	I II III	5000km
恶劣条件（1+3）Execrable condition （1+3）	I II III	2500km



(四) 保养作业要点

Keys of maintenance operation

1 日常保养项目

Daily maintenance items:

(1) 检查手制动和脚制动

Check hand brake and pedal brake;

(2) 检查照明、信号系统及各种指示灯工作情况 (机油压力、贮气筒压力、空滤器保养示灯、充电指示灯等)

Check working status of lighting and signal system and all kinds of indication lamps (such as oil pressure, air storage reservoir pressure, air filter service indication lamp, charging indication lamp and etc.);

(3) 检查刮水器和风挡玻璃洗涤器清洗瓶的液面

Check wiper and liquid level of windscreen washer cylinder;

(4) 检查轮胎气压与状态

Check tyre air pressure and status;

(5) 检查发动机机油、冷却液和燃油液面

Check levels of engine oil, coolant and fuel;

(6) 检查制动防冻液泵充液量和各种工作油、液的容量

Check volume of brake and anti-freezing fluid and capacity of all kinds of working oil and fluid;

(7) 排除贮气筒中的水

Drain water out of air storage reservoir.

2 各级保养项目 (表4)

All levels maintenance items (table 4)



表4-1●保养内容，包括换油、检查、调整

Table 4-1 maintenance items include change oil, checks and adjustment.

发动机 Engine	第一次检查First-time inspection	例行检查Routine inspection	一级保养First-class maintenance	二级保养Second-class maintenance	三级保养Third-class maintenance	四级保养Fourth-class maintenance
更换发动机油（每年至少一次） Change engine oil (at least once per year)	●	●	●	●	●	●
更换机油滤清器或滤芯Change oil filter or filter element	●	每次更换发动机油时Every time when change engine oil				
检查调整气门间隙Inspect and adjust the valve clearance	●		●	●	●	●
检查喷油咀开启压力Inspect the opening pressure of oil nozzle					●	●
更换燃油滤清器或滤芯Replace fuel filter or filter element			●	●	●	●
清洗燃油泵粗滤器Clean fuel pump coarse filter			●	●	●	●
检查冷却液容量并加足Inspect coolant volume and fill it up	●	●	●	●	●	●
更换冷却度Replace coolant	每隔24个月 Every two years					
紧固冷却管路管夹Fasten cooling tube clip	●					
紧固进气管路软管和凸缘连接件Fasten intake pipe hose and flange connector	●		●	●	●	●
检查空滤器保养指示灯Inspect indicator lamp for air filter maintenance			●	●	●	●
清洁空滤器的集尘杯Clean the dust collector of air filter		●	●	●	●	●
清洁空滤器主滤芯Clean main element of air filter	当指示灯亮时When indicator lamp is on					
更换空滤器主滤芯Replace main element of air filter	当主滤芯损坏时When the main filter element is damaged					



表4-2 Table4-2

发 动 机Engine	第一次检 查First-time inspection	例行检查 Routine inspection	一级保养First- class maintenance	二级保养 Second-class maintenance	三级保养Third- class maintenance	四级保养 Fourth-class maintenance
更换空滤器安全滤芯Replace the safety air filter element	清洗5次主滤芯以后After the main filter element has been cleaned for five times					
检查紧固三角皮带Inspect and fasten V- belt	●	●	●	●	●	●
检查增压器轴承间隙Inspect the bearing clearance of booster					●	●
检查喷油泵Inspect injection pump						●
检查调整离合器的行程和钢丝绳状况 inspect and adjust clutch travel and wires condition	●	●	●	●	●	●
调整怠速转速Adjust idle speed	●					
变 速 器Transmission						
检查变速器油面Inspect transmission oil level			●			
更换变速器润滑油（每年至少一次） Change transmission lubricant (at least once per year)	●			●	●	●
清洗空气滤清器滤芯（富勒变速器） Clean air filter element (Fuller Transmission)				●	●	●
更换变速器通气装置Replace ventilation device of transmission				●	●	●



表4-3 Table4-3

前桥Front axle	第一次检 查 First-time inspection	例行检查 Routine inspection	一级保养 First-class maintenance	二级保养 Second-class maintenance	三级保养 Third-class maintenance	四级保养 Fourth-class maintenance
检查主减速器和轮边减速器油面Check oil level of main reductor and wheel reductor			●			
更换主减速器和轮边减速器润滑油（每年至少一次） Change lubricant of main reductor and wheel reductor (at least once per year)	●			●	●	●
清洁前驱动桥通气装置Clean ventilation device of front drive axle			●	●	●	●
检查调整非驱动前桥滚锥轴承间隙Inspect and adjust taper roller bearing clearance of non-driving front axle	第一次2级保养进行Carrying out when implementing the second-class maintenance for the first time.					
更换轮毂润滑脂（非驱动前桥）隙Change lubricant of wheel hub (non-driven front axle)					●	●
后 桥Rear axle						
检查主减速器和轮边减速器油面隙Check oil level of main reductor and wheel reductor		●				



更换主减速器和轮边减速器润滑油（每年至少一次） Change lubricant of main reductor and wheel reductor (at least once per year)	●			●	●	●
清洁通气装置Clean ventilation device			●	●	●	●
检查调整轮毂滚锥轴承间隙Inspect and adjust taper roller bearing clearance	第一次2级保养时进行Carrying out when implementing the second-class maintenance for the first time.					
检查平衡轴轴承油面更换平衡轴润滑油Check balance shaft bearing oil level Replace balance shaft lubricating oil	●		●	●	●	●
传 动 轴Transmission shaft						
重新紧固传动轴螺栓Refasten bolt of transmission shaft	●					
目检传动轴的连接和磨损Inspect the connection and abrasion of transmission shaft with eyes				●	●	●



驾 驶 室Cab	第一次检查First-time inspection	例行检查Routine inspection	一级保养First-class maintenance	二级保养Second-class maintenance	三级保养third-class maintenance	四级保养fourth-class maintenance
检查刮水器的动作Inspect the operation of wiper.	●	●	●	●	●	●
重新紧固驾驶室锁紧手柄Refasten cab lock handle	●			●	●	●
重新紧固发动机罩Refasten engine hood	●					
检查驾驶室翻转手油泵油面Inspect oil level of hand pump for tilt cab				●	●	●
检查举升柱塞的调整情况Inspect the adjustment condition of lifting plunger	●		●	●	●	●
底 盘Chassis						
检查牵引钩的固定和动作Inspect fixation and operation of towing hook	●		●	●	●	●
重新紧固横梁螺栓Refasten bolt of cross member	●					
紧固前、后钢板弹簧骑马螺栓和支架Refasten U-bolt and bracket for front and rear leaf spring	●			●	●	●
检查备胎的固定机钩Inspect fixing device of spare tyre				●	●	●
检查调整钢板弹簧侧挡板间隙Inspect and adjust side fender clearance of leaf spring				●	●	●
检查车轮螺母的固定Inspect the fixing of the wheel nuts	●			●	●	●
检查蓄电池的固定Inspect the fixing of storage battery				●	●	●
检查燃油箱的固定Inspect the fixing of fuel tank				●	●	●



表4-5 Table4-5

制 动 系 Brake system	第一次检 查 First-time inspection	例行检查 Routine inspection	一级保养 First-class maintenance	二级保养 Second-class maintenance	三级保养 Third-class maintenance	四级保养 Fourth-class maintenance
贮气筒放水 Drain water for air tank	●	●	●	●	●	●
检查气压系统密封性（气压表检查） Inspect leak tightness for the air-pressure system (by air-pressure gauge)	●		●	●	●	●
清洗油水分离器中的调压阀滤网查） Clean regulator valve filter in oil water separator				●	●	●
检查制动摩擦片厚度，调整制动器间隙 Inspect the thickness brake friction disk, and adjust brake clearance				●	●	●
清洁车轮制动器 Clean wheel brake					●	●
检查制动管路和软管易擦伤的部位 Inspect the easy-abraded part in the brake pipeline and hose	●			●	●	●
检查制动室的功能 Inspect function of brake chamber			●	●	●	●
检查脚制动、手制动和排气制动的效能（在试车时进行） Inspect the efficiency of foot/hand/exhaust brake (implementation at the test run time)	●		●	●	●	●



表4-6 Table4-6

电气Electric	第一次检查First-time inspection	例行检查Routine inspection	一级保养First-class maintenance	二级保养Second-class maintenance	三级保养Third-class maintenance	四级保养Fourth-class maintenance
检查电气系统（信号灯、前照灯、示宽灯、刮水器、暖风和通气装置）的工作情况Inspect performance of electric system (signal lamp, headlamp, width lamp, wiper, heater, ventilator)	●	●	●	●	●	●
检查蓄电池电解液的液面和比重以及蓄电池各单元的电压Inspect electrolyte level and proportion and unit voltage of storage battery	●		●	●	●	●
检查蓄电池接线柱的固定电极涂滑脂Inspect consistent grease at electrode of battery post	●		●	●	●	●
检查电子转速表、转速的正确性滑脂-Inspect electronic tachometer and its correct rotating speed	●	●	●	●	●	●
转向系Steering system						
更换转向机油系Change steering oil	●					



检查转向油罐油面高度Inspect the level of steering oil reservoir	●		●	●	●	●
更换转向油罐的油滤器Replace oil filter of steering oil reservoir					●	●
检查转向系统的功能Inspect performance of the steering system					●	●
检查转向杆件间隙Inspect clearance of steering rod				●	●	●
检查转向杆件的螺栓、接头和锁紧件- Inspect bolt, tie-in and fastener of steering rod	●					
整 年Complete vehicle						
短途试车（包括制动试验） Short distance test run(include brake test)	●		●	●	●	●
目检泄漏状况括制动试验） Inspect leakage with eyes	●	●	●	●	●	●
检查、紧固车箱固定情况Inspect and fasten truck bed	●	●	●	●	●	●



表4-7 Table4-7

润 滑Lubrication	第一次检 查First-time inspection	例行检查 Routine inspection	一级保养First- class maintenance	二级保养 Second-class maintenance	三级保养 Third-class maintenance	四级保养 Fourth-class maintenance
水泵Water pump	●	●	●	●	●	●
离合器分离轴Clutch release shaft	●	●	●	●	●	●
离合器踏板轴Clutch pedal shaft	●	●	●	●	●	●
离合器分离轴承Clutch release bearing	●	●	●	●	●	●
离合器摇臂Clutch release rocker arm	●	每4周至少一次At least once every 4 weeks				
万向节和传动轴中间支承Universal joint and intermediate support of transmission shaft	●	●	●	●	●	●
转向主销 前轴Steering kingpin, front axle	●		●	●	●	●
钢板弹簧销Leaf spring pin	●	每4周至少一次At least once every 4 weeks				
更换斯太尔平衡轴润滑油（每半年至少一 次） Replace steyr balance shaft lubricating oil (at least one time at every half a year	●		●	●	●	●
平衡悬架钢板弹簧档板（6×4、6×6和 8×4）间隙检查Balance suspension steel plate spring fender clearance inspection	●	●	●	●	●	●



减振器下支架The lower bracket of shock absorber	●	●	●	●	●	●
变速器换档杆支座Transmission shift lever supporter	●	●	●	●	●	●
制动凸轮轴及制动臂Brake cam-shaft and brake arm	●	●	●	●	●	●
牵引钩Towing hook	●	●	●	●	●	●
鞍座Fifth wheel	●	●	●	●	●	●
驾驶室车门铰链Cab door hinge			●	●	●	●
按计划对驾驶室重新进行防锈处理Apply anti-rust treatment once again as per plan	每隔12个月一次Once every 1 year					

注：在工地使用的汽车每周一次，清洗后的汽车应给所有润滑点重新加润滑脂。

Note: carry out inspection or maintenance once every a week for vehicles in construction site, and add consistent grease to each lubricating hole for vehicles after cleaning.



(五)燃料、润滑油和加注量 Fuel, lubrication and filling volume

名 称Name	牌 号Brand	总 成Assembly	用量（升） Dosage (L)
柴油 夏季凝点<0℃冬季凝点<-20℃ Solidifying point of diesel oil in summer <0℃Solidifying point in winter <-20℃	G B 2 5 2 优级品 0 号轻柴油 G B 2 5 2 优级品— 2 0 号轻柴油 G B 2 5 2 excellent grade No.0 light diesel oil G B 2 5 2 excellent grade No.-20 light diesel oil	发动机engine	按油箱容 量By tank capacity
发动机机油Engine oil	冬季CF-4 5W/30 winter CF-4 5W/30 夏季 CF-4 5W/40 Summer CF-4 5W/40	WP6系列发动机WP6 series engine WP7系列发动机WP7 series engine WP10系列发动机WP10 series engine WP12系列发动机WP12 series engine 康明斯系列发动机Commins series engine	20242427以油尺为准Based on dipstick
齿轮油Gear oil	冬季80W/90GL-5重负荷车辆齿轮油Winter: 80W/90GL-5gear oil for heavy duty vehicle 夏季85W/90GL-5重负荷车辆齿轮油 Summer: 85W/90GL-5 gear oil for heavy duty vehicle	变速器 Transmission	按变速器体积As transmission dimension
		STR冲焊桥Punching and welding axle 中桥主减速器Middle axle main reducer 后桥主减速器Rear axle main reducer 轮边减速器（每边）Wheel reductor (every side)	8.362
		STR铸造桥casting axle 中桥主减速器Middle axle main reductor 后桥主减速器Rear axle main reductor 轮边减速器（每边）Wheel reductor(every side)	12.38.32.8
		MAN双级桥Dual-classed axle 中桥主减速器Middle axle main reductor 后桥主减速器Rear axle main reductor 轮边减速器（每边）Wheel reductor(every side)	16133.5



		TGX桥 axle中桥主减速器 Middle axle main reductor后桥 主减速器Rear axle main reductor轮边减速器（每边） Wheel reductor(every side)	16123.5
		MAN单级HD425single-classed 中桥主减速器Middle axle main reductor后桥主减速器 Rear axle main reductor轮边减 速器（每边） Wheel reductor(every side)	1411.51.1
		MAN单级HD469 single- classed 中桥主减速器Middle axle main reductor后桥主减速 器Rear axle main reductor轮边 减速器（每边） Wheel reductor(every side)	1411.51.1
		MAN单级HD485 single- classed主减速器Main reductor 轮边减速器（每边） Wheel reductor(every side)	14.31.1
		平衡轴支座（每个） Balance shaft bearing(each)	1.6
		转向助力装置Steering power assisting device	3.7
液压油Hydraulic oil	L-HV32低温液压油low-temperature hydraulic oilGB11118.1-94	驾驶室翻转油Cab tilting oil	0.34
长效防冻防蚀冷却液（冬夏季 常年使用）Permanent anti- freezing anticorrosion coolant (it can be used all year round)	重负荷四季长效防冻防蚀冷却液Heavy- duty permanent anti-freezing anticorrosion coolant	冷却系cooling system	40L



锂基润滑脂Lithium base lubrication grease	2#锂基润滑脂ithium base lubrication grease (GB/T5671-2014)	前轴轮毂Front shaft wheel hub	按需as required
		底盘部分Part of chassis	按需as required
		水 泵Pump	120克g
		合器分离装置Clutch release device	按需as required

潍柴动力专用机油： Special engine oil for Weichai power

类别 Category	专用标准号special standard No.	推荐适应的主要机型及规格Main recommended applicable engine type and specification
潍柴系列国三、国四排放柴油机油Weichai series National III, IV emission diesel engine	WP—E3 (CF—4)	蓝擎系列；超大吨位重卡； WP10系列发动机 Landking series: super tonnage heavy truck; WP10 series engine
重负荷车辆齿轮油Heavy duty truck gear oil	GL—5	规格： 85W/90 80W/90Specification:85W/90 80W/90

	JFL318	JFL-336	JFL-345
适应选用最低气温Lowest applicable optional temperature	-10℃	-26℃	-35℃

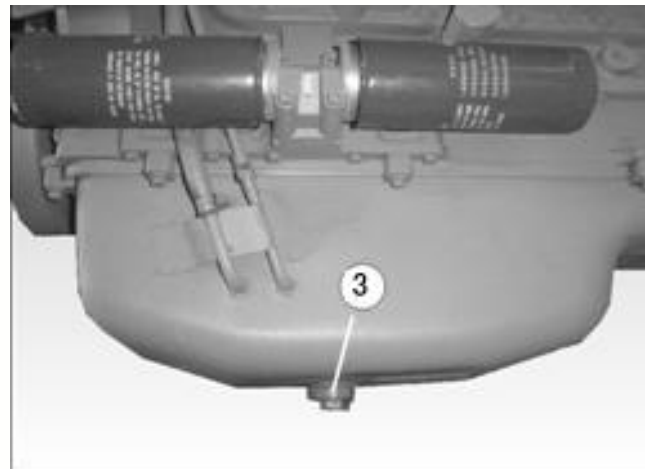


1. 换发动机机油 Change engine oil

更换发动机油时要在热状态时进行将旧油放出时应注意检查机油颜色是否正常和有无异物，以便发现故障隐患。待油放尽后拧紧清除杂物的放油螺栓，更换新机油滤清器芯，将新机油注入发动机到油尺上限。为防止在没有润滑油的情况下启动发动机，应使用排气制动器或使高压油泵处于断油位时按动起动按钮，空运转一会儿后，再启动发动机，并低速运转。检查机油滤清器有无渗漏，停机五分钟后，检查并补充机油油面到油尺上限。

Engine oil shall be changed in a hot status. While draining original engine oil, please inspect whether color of engine oil is normal and whether there is foreign substance in order to find out incipient faults. After draining oil completely, screw up the drain bolt which is used to eliminate foreign substance, change engine filter core, and fill new engine oil to the upper limit of oil dipstick. In order to avoid starting of engine without lubrication oil, you should use exhaust brake or press the starting button of high pressure oil pump when it is in position of fuel stop and make it run idly a short while, then start engine oil filter, and five minutes later after engine is stopped, inspect oil level and add engine oil to the upper limit of oil dipstick.

- ② 发动机机油加油口 Engine oil filling port
- ③ 放油塞 Drain plug
- ⑤ 油尺 Dipstick



2. 换机油滤芯

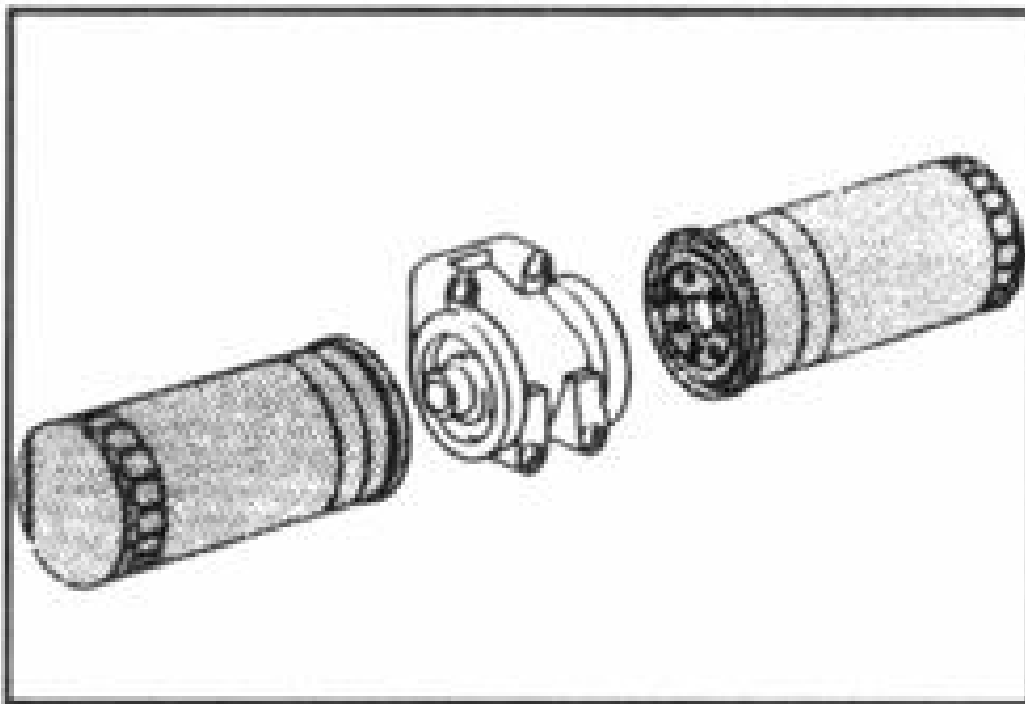
Replace oil filter element

两个关联的机油滤清器的滤芯要同时更换。在密封垫上涂上一层薄薄的油，并且只能用手固紧滤清器。

The element of two associated engine oil filters shall be changed at the same time. Coat a thin layer of oil on the seal, and the filter can be only tightened manually.

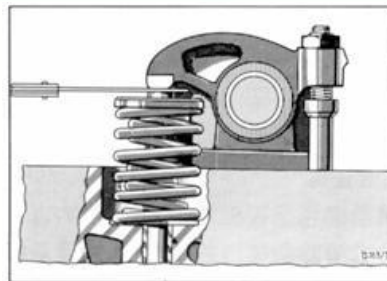
旋转式机油滤芯配件号：61000070005

The assembly number of rotary engine oil filter element: 61000070005.



3. 调整气门间隙

Adjusting air valve clearance



冷发动机的气门间隙

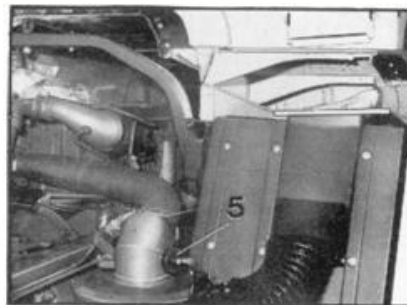
Air valve clearance for cold engine:

进气门: 0.3毫米Inlet valve:

0.3mm

排气门: 0.4毫米Outlet valve:

0.4mm



燃油滤清器应同时更换两个滤芯

Both filter elements should be replaced at the same time.



清洗燃油粗滤器每天打开排液塞，将杂质排出。

Clean fuel preliminary filter, open drain plug everyday and drain the impurities.

每次保养时，都要清洗滤芯。

Clean filter element in every maintenance.

将手油门置于停止供油位置，用手油泵↓泵油，直至从排气螺塞1流出的油中无气泡为止。将喷嘴架处的油管松开，将手油门置于全开位置，操作起动机，直至喷出的油中无气泡为止。

The hand accelerator ↓ should be placed at the position of stopping supply oil. Pump oil with a hand oil pump until there is no air bubble in the oil flowed out from the exhaust screw plug I. Loosen the oil pipe near the spray nozzle, put hand accelerator to full open position, and operate starter till there is no air bubble in the sprayed oil.



4.空滤器保养指示灯检查

Inspect air filter maintenance indicator

将驾驶室翻转，在发动机运转情况下，短时间地盖住进气口，空滤器保养指示灯应立即亮。

Tilt cab, and cover inlet port for a short period of time while engine is running, in this case, the air filter maintenance indicator shall be lighted at once.

5. 堵塞报警指示器

Blockng alarm indicator

注意Caution

不能单纯依靠堵塞报警指示灯来判定空滤器是否阻塞，应根据使用情况不定期的拆盖检查。

Determine whether the filter has been blocked only by blocking alarm lamp is incredible, the filter should be disassembled and inspected non-periodically according to its service condition.



6. 空滤器的保养

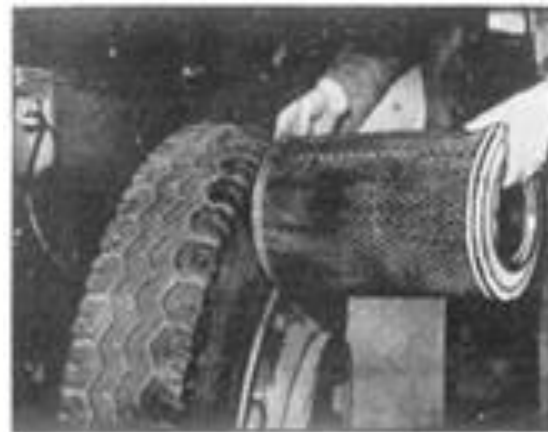
Air filter maintenance

若空滤器阻塞报警灯点亮，应擦净集尘装置，清除滤芯上的尘土。

While air filter maintenance indicator is lighted, you shall clean dust collector and clean the dust on the element.

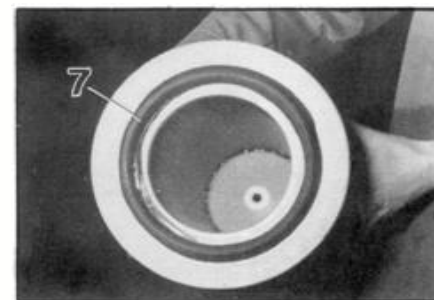
严禁将滤芯的一端在汽车轮胎上轻敲，以抖掉里面的尘土。这种方法不能将灰尘清除干净。

Knock on end of filter element on tyre to shake away the inside dusts. But this method can't clean the dust completely.



以压力不高于5巴的干燥压缩空气，沿斜角交叉方向吹净滤芯内、外表面。最好由内向外吹。

Blast the internal and external surfaces of filter element along the direction oblique angle with dry compressed air of which the pressure shall not be less than 5 bars. From inside to outside would be better.



检查滤芯有无损坏。将一个工作灯放入滤芯里，从外面检查有无裂缝、穿孔或其它损坏。

Inspect whether filter element is damaged. Place a working lamp inside the filter element, and inspect from outside whether there is any cracks, holes or other damages.

注 意

Caution:

严禁使用有裂缝和穿孔的滤芯，否则将导致发动机异常磨损。

Filter element with any crack or hole is strictly inhibited to use, otherwise, abnormal wear of engine will be caused.

检查密封圈7。若密封圈已损坏或滤芯有任何其它的损坏时一定要更换。

Inspect seal 7. If seal is damaged or filter element has any damaging, they shall be changed.

装入滤芯时应将中心螺栓上的螺母拧紧。

After element is fixed, the nut of central bolt should be tightened.



7. 安全滤芯

Safety filter element

安全滤芯2只能换不能清洗。在主滤芯1每清理5次或损坏后，或每两年要更换一次安全滤芯。若在主滤芯刚清理后指示灯马上又亮，则应更换安全滤芯。

Safety filter element II only can be replaced but can't be cleaned with water. When main filter element I has been cleaned for five times or it is damaged, or after an interval of two years, the safety filter element shall be replaced. If indicator has been cleaned, then safety filter element should be replaced.



安装顺序

Sequence of installation

①将安全滤芯插入空滤器壳里，用大六角螺母固紧。Put safety filter element into the housing of air filter, and tighten it with large hexagon nuts.

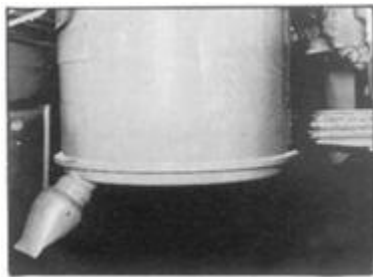


主滤芯配件号：1109ZB1（WP10发动机）、A610（WP12发动机）

Main filter element fitting number: 1109ZB1（WP10 engine）， A610（WP12 engine）

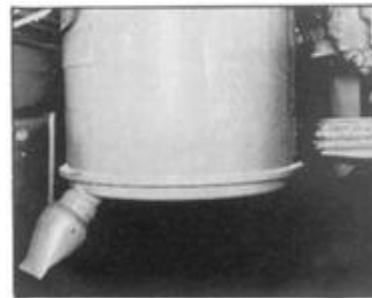
安全滤芯配件号：SET2-AM（WP10发动机）、SET2（WP12发动机） Safety filter element fitting number: SET2-AM（WP10 engine）， SET2（WP12 engine）

②将主滤芯插入空滤器壳里，用小六角螺母紧固。Put safety filter element into the shell of air filter, and tighten it with small hexagon nuts.



③装上有排尘阀的盖子（其口一定要朝后或朝下），并用手紧固蝶形螺母。

Cover it with a cap (Its opening shall be upward or downward) which has a dust exhausting valve, tighten butterfly nuts with hand.



8. 手动调整分离轴承间隙式的离合器调整。

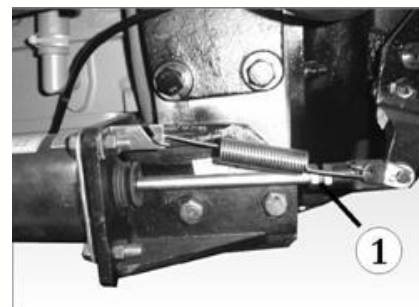
Manual adjustment of clutch

在①处进行推杆长度的调整，保证离合器踏板自由行程在22~29mm之间。

Adjust the length of push-rod at position ①, ensure the free pedal travel between 22cm and 29cm.

如果采用免调式离合器时，无需调整此处。

If the clutch can not be adjusted, omit it.



9. 变速器油面检查及换油

Inspection of oil level of transmission and oil changing

1-油面检查与加油螺塞

The oil level check and refuel screw plug

2-放油螺塞（从变速器底部看）

Drain screw plug (see from the bottom of transmission)

富勒变速器空滤器

Air filter of Fuller transmission

清洗空气滤清器中的滤芯1，并用压缩空气吹干。若滤清器有损坏，则一定要更换。The element I in the air filter should be cleaned and dried with compressed air. The filter should be replaced if it is damaged.



10. 检查后驱动桥的油面

Check oil level of rear drive axle

1-加油螺塞

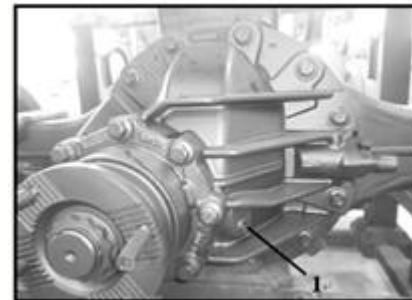
Refuel screw plug

2-放油螺塞（桥包底部）

Drain screw plug (at the bottom of axle case)

3-油面

Oil level



11. 检查中桥的油面

Check oil level of middle axle

1- 加油螺塞

2- Refuel screw plug

2-放油螺塞（桥包底部）

Drain screw plug (at the bottom of axle case)

轮边减速器Wheel reductor

1-加油螺塞1- Refuel screw plug

2-放油螺塞2- Drain screw plug

3-油面oil level

换油（热油时）Oil changing （when oil is warmed）

转动轮毂，使放油螺塞2转到下方。放出轮边减速器中的油，

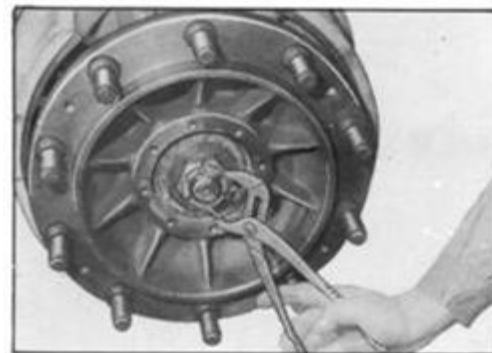
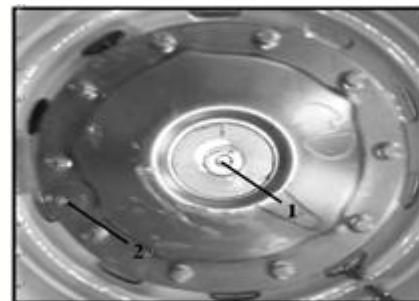
然后仍在此位置上由1处加油。再将轮毂转到图示位置，让多余的油

流出。 Drain oil in wheel reductor from position 2 and fill oil from position 1. then turn the hub to the diagram position and drain excessive fuel.

注意：轮边装配轮毂轴承单元时，不用加换润滑油，50万公里免维护。

Note: Do not fill lubricant, if install the wheel hub bearing unit.

Maintenance free for 500000km.



清洗桥的通气装置。

Clean the ventilation device of axle.

将所有的前、后驱动桥轮毂上的通气孔螺塞拧下，并用压缩空气吹净。

Unscrew the vent screw which is on the wheel hub of all front and rear drive axle, and blow up it by compressed air.



12. 刚性前轴

Rigid front shaft

更换轮毂中的润滑脂。

Change lubricating grease in wheel hub.

摩擦片厚度检查

Inspect thickness of friction plate

制动蹄的摩擦片在磨损最严重处的最小厚度不得小于6毫米。

The Min. thickness of the part of shoe where is most seriously damaged shall not be less than 6 mm.



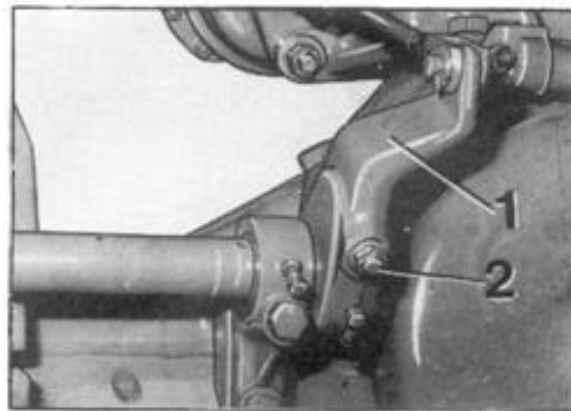
当蹄鼓间隙不满足0.7~1.2mm的要求时，就必须对制动间隙进行调整：
It is necessary to adjust the brake clearance, if the clearance is not meet requirements that the clearance range is 0.7 to 1.2mm.

(1) 驱动轮制动器间隙的调整：在制动缸行程（活塞杆行程）超过30mm时就要对制动器进行调整。

调整方法：向里旋动间隙调节臂上的螺钉，直至车轮锁死，再把调节螺钉往后退2.5圈。

1. Adjustment of clearance of drive wheel brake:

Clearance adjustment of drive wheel brake: when drive wheel bake cylinder stroke (piston rod stroke) is greater than 30 mm, the brake shall be adjusted.
Method of adjustment: screw inward the screw in clearance adjusting arm until the wheel is locked, then screw backward for two and half circles.



(2) .前轴制动器间隙调整:

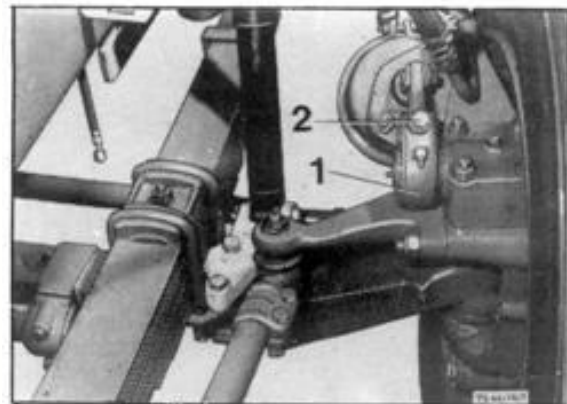
Clearance adjustment of front shaft brake:

旋动蜗杆轴端六角螺栓2，直至车轮锁死，再返旋，听到三次响声即可。

Rotate hexagonal bolt II on the worm shaft end till the wheel is locked up, and then rotate backward again until it sounds thrice.

注：制动间隙自动调整臂在正常情况下，不需要手动调节制动间隙。

Note: it is not need to manually adjust brake clearance, if brake clearance automatic adjustment arm under normal condition.



13. 液压转向系统检查油面

Check oil level of hydraulic steering system

(1) 在发动机停止运转的情况下，油面应高于图中刻度3（最低油位刻线）以上10~20mm（油罐带观测孔时液位应在观测孔上沿），在发动机运转的情况下，油面至少要达到刻度3处（油罐带观测孔时液位应不低于观测孔下沿）。液面不足时应立即加油，加油时，启动发动机并使其保持在低速稳定运转，随着向储油罐补充新油的同时，将方向从一个极端打到另一个极端反复进行，直到回油明显没有空气为止。熄灭发动机，将储油罐油面加至上述要求位置，将盖密封（油液应该在MIN和MAX之间）。

When engine is not operating, the oil level should be 1-2 cm above the mark III showed in the Figure, when engine is operating, the oil level should reach the mark III at least. If the oil level is not high enough, oil should be filled at once. In the process of oil filling, start engine and keep it run stably with a lower speed, and while filling new oil to oil reservoir, rotate steering wheel from one terminal to the other terminal repeatedly till there is no air in the returning oil. Switch off engine, fill oil till oil level of oil reservoir reaches at the required position, and seal the cap.



(2) 转向油罐

Steering oil reservoir

在更换油滤器时，不要让油滴到油罐之外，不要让油污杂物进入油罐，以免造成油路堵塞。

When replacing oil filter, oil shall not be dripped outside the oil reservoir, and oil stain is not allowed to come into oil reservoir in order to avoid blocking oil pipeline.

液压油滤芯配件号61100080079。

Filter element number of hydraulic oil filter element: 61100080079.

14. 水泵轴承润滑 Lubrication of water pump bearing

将水泵的润滑脂帽往下拧一圈润滑离合器分离轴润滑离合器分离轴右边及左边的轴承。

Screw grease cap of water pump downward one circle. Lubrication of clutch release shaft

Lubricate the bearings at right and left side of clutch release shaft Lubricating steerin



15. 悬架骑马螺栓复紧保养

Refastening maintenance of suspension U-bolt

车辆行驶前必须保证前、后钢板弹簧U形螺栓的真正拧紧，才能避免钢板弹簧的早期非正常损坏。

In order to avoid that the leaf spring may be damaged under the early abnormal condition. The U-bolt of the front and rear leaf spring should be tightened before vehicle drives.

1) 新车磨合期开始，即应该按使用说明书规定的力矩数值，拧紧前后U形螺栓螺母。

1)when the new vehicle in the start of runing-in period, the bolt and nut of key parts for front and rear suspension system should be tigtened according to required torque values in the operating instruction manual.

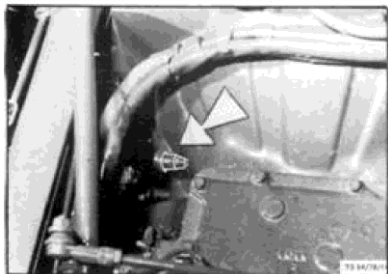
2) 在新车磨合后，重载开始使用时，应在满载状态下，按规定力矩数值，再次拧紧前后U形螺栓螺母，并需在每间隔200~300km左右行驶里程后，再重复拧紧2~3次，才能真正把前后U形螺栓螺母拧紧。

After the new vehicle in the running-in period, the bolt and nut of key parts for front and rear suspension should be tightened again according to required torque values under the full load condition. Repeatedly tighten 2 ~ 3 times after each interval about 200 ~ 300 km. this can be ensures the U-bolt and U-nut for front and rear suspension tightened.

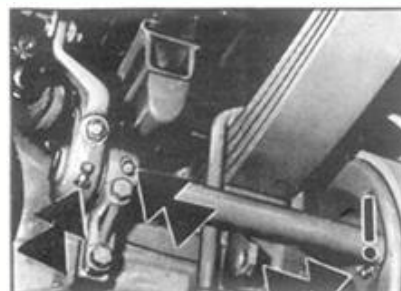
3) 汽车在每行驶8000~10000km时，应在满载状态下，再按规定力矩数值要求，拧紧前后U形螺栓螺母一次。

Tighten the front and rear U-bolt and U-nut according to the required torque values under the full load condition, when the vehicle drives in every 8000 ~ 10000 km.





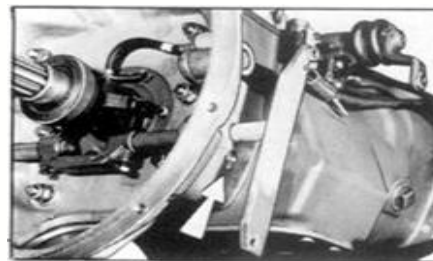
润滑转向节主销及制动臂制动凸轮轴
Lubricating steering main pin and brake arm brake camshaft



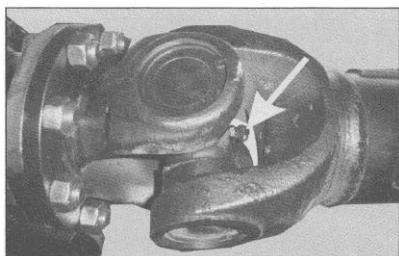
润滑后桥制动臂和凸轮轴
Lubricating rear axle brake arm and camshaft



润滑离合器分离轴承 Lubrication of clutch release shaft



装富勒变速器
Install with Fuller transmission.



润滑万向节
Lubrication of universal joint



16. 更换前大灯灯泡 Replace of headlight

- 使用专用钥匙（↑）向上拔弹片，即可打开大灯灯座。向前翻转前大灯灯座。
- 按住锁止机构，并取下前大灯灯罩。

Use special key to pull up the leaf spring, and the headlamp holder can be opened. Tilt headlamp holder forward. Press locking latching mechanism and remove the lamshade of headlamp.

- 将线缆插头从灯座拔出。

Pull out the cable plug from lamp holder.

- 将电灯座的弹簧接头臆压在一起并向下折叠起来。

Press spring joint of light holder and folded it downward.

- 取下已坏的灯泡。

Take off the damaged bulb.

- 换上新卤素灯泡，将锁止凸舌卡在反光镜的凹槽里。

Replace it with a new halogen bulb. Fix the spring structur

- 将弹簧夹抬起

Lift the spring clip

- 一起压弹簧接头，使其卡住锁止凸舌

Press spring joint, and make it blocked.

- 将线缆插头插回灯座

Insert cable plug to holder

- 装回前大灯保护罩

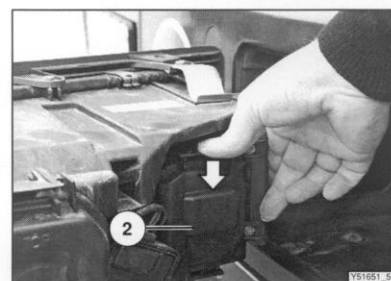
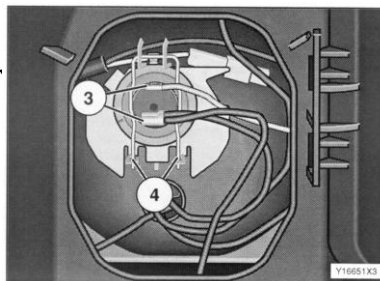
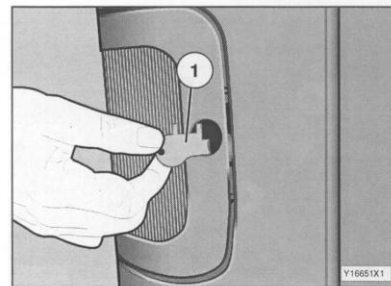
Install protection cover of headlamps

- 盖上前大灯灯座 cover the headlamp holder.
- 检查前大灯的调整情况。如有必要，可再次调整

Check adjustment conditions of headlamp. If necessary, and adjusted it again.

说明：远光和近光的灯泡是相同的，因此如果没有多余的灯泡，也可暂时用远光灯泡来代替近光灯泡。

Note: the bulbs of high beam and dipped beam are the same. If there is no excessive bulb, the dipped beam is replaced to use high beam bulb.



17. 更换侧边灯灯泡

Replace the bulb of sidelights

- 按下灯座（→），旋转并取下灯座，将其从后部拿出部拿出

Press and rotate the lamp holder to take it off from back.

- 换上新灯泡Mount a new bulb
- 以相反的顺序安装灯座Mount the lamp holder in an opposite sequence

更换仪表或检测指示灯Replace instruments or check indicator lights

按以下步骤更换出故障的仪表或指示灯Replace the broken-down instruments or indicator light according to the following steps:

·关闭蓄电池控制开关，或断开蓄电池Turn off the control switch of the storage battery or disconnect the storage battery

- 拧下螺钉，从仪表板顶部取下仪表盖Remove the bolt, and take off the instruments panel.

- 从仪表盘出故障部分取下螺钉Remove the bolt from the place where fault has been checked out
- 向上振摇这部分仪表板，将其从后部提出来Shake this part of the dashboard upward to pick it up from back.

- 排除故障Remove of fault

按相反的顺序，重新安装这一部分。Re-mount this part in an opposite sequence.



二、灯泡一览表 Bulbs list

灯具名称Name of bulbs		灯泡型号Type of bulbs	灯泡功率Power of bulbs	单车数量Quantity for single vehicle
近光灯Dipped beam lamp		H1	70W	2
远光灯Driving beam lamp		H7	70W	2
前位置灯Front sidelight		W5W	5W	2
前雾灯Front fog light		H3	70W	2
前转向灯Front turn lamp		P21W	21W	2
侧转向灯Side turn lamp		P21W	21W	2
示高灯Height lamp		R10W	10W	2
后组合Rear combination灯	转向灯Turn lamp	P21W	21W	2
	位置灯Position lamp	R5W	5W	2
	后示廓灯Rear side indicator	R5W	5W	2
	制动灯Brake lamp	P21W	21W	2
	倒车灯Back-up	P21W	21W	2
	后雾灯rear fog light	P21W	21W	2
	侧位置灯sidelights	R10W	10W	2
室内照明灯Indoor floodlight		R10W、P21W	10W、21W	4
信号灯Signal lamp		1. 2W-BAX10D	1. 2W	32



三、传感器及保险 Sensors and fuses

- A101 控制单元Control unit
火焰预热冷起动系统，白烟减少装置Cold starting system by flame preheating, white-smoke reduction device
- A106 吹风机控制Blower control 加热和空调Heating and air conditioning
- A156 右侧主视镜Main sight glass on right
- A157 左侧主视镜Main sight glass on left
- A251 左侧广角视镜Wide-angle sight glass on left
- A252 右侧广角视镜Wide-angle sight glass on right
- B100 火焰预热冷起动Cold starting system by flame preheating
系统的温度传感器/白烟减少装置Temperature sensor / white-smoke reduction device
- B101 制动回路 I 储气筒压力传感器Brake circuit I air tank pressure sensor
- B102 制动回路 II 气筒压力传感器Brake circuit II air tank pressure sensor
- B103 燃油液位高度传感器Fuel level height sensor
- B104 油压传感器Oil pressure sensor
- B105 冷却液温度传感器Liquid coolant temperature sensor
- B109 驻车制动开关检测灯Parking brake switch inspection lamp
- B110 行驶记录仪传感器Traveling data recorder sensor
- E102 左侧倒车灯Backup lamp on left
- E103 右侧倒车灯Backup lamp on right
- E108 右侧驻车灯Parking lamp on right
- E109 左侧驻车灯Parking lamp on left
- E110 前大灯近光，右侧Low beam light of head-light, right
- E111 前大灯近光，左侧Low beam light of head-light, left
- E112 前大灯远光，右侧High beam light of headlight, right
- E113 前大灯远光，左侧High beam light of headlight, left
- E114 车前信号灯，右侧Front signal lamp, right



- E115 车前信号灯, 左侧Front signal lamp, left
- E116 车后信号灯, 右侧Rear signal lamp, right
- E117 车后信号类, 左侧Rear signal lamp, left
- E118 尾灯、左侧Tail lamp, left
- E119 尾灯、右侧Tail lamp, right
- E122 雾灯, 右侧Fog lamp, right
- E123 雾灯, 左侧Fog lamp, left
- E124 后雾灯, 右侧Rear fog, right
- E125 后雾灯, 左侧Rear fog, left
- E127 车内照明, 左侧Inside lighting, left
- E128 车内照明, 右侧Inside lighting, right
- E150 门灯, 右侧Door lamp, right
- E162 门灯, 左侧Door lamp, left
- E177 烟灰缸照明, 左侧Ashtray lighting, left
- E178 烟灰缸照明, 右侧Ashtray lighting, right
- E190 铺位照明Berth lighting
- E204 铺位照明Berth lighting
- F106 火焰预热冷起动系统的熔断保险丝Fuse for cold starting system of flame pre-heating
- F107 保险丝, 气动喇叭, 空气干燥器Fuse, air horn, air drier
- F108 保险丝, 监视器系统 (仪表显示, 检测灯) Fuse, monitor system (instruments display, inspection lamp)
- F109 保险丝, 制动灯, 倒车灯, 驻车制动Fuse, brake lamp, backup lamp, parking brake
- F110 保险丝, 发动机熄火 Fuse, engine flameout
- F112 保险丝, 风挡清洗器和刮刷系统Fuse, windshield cleaner, wiper system
- F113 保险丝, 转向指示灯Fuse, direction indicator lamp
- F117 保险丝, 驻车灯和尾灯, 左侧Fuse, parking lamp, tail lamp, left



- F118 保险丝, 驻车灯和尾灯, 右侧Fuse, parking lamp, tail lamp, right (standby)
- F119 保险丝, 前大灯近光, 右侧Fuse, Low beam light of headlight, right
- F120 保险丝, 前大灯近光, 左侧Fuse, Low beam light of headlight, left
- F121 保险丝, 前大灯远光, 左侧Fuse, high beam light of headlight, left
- F122 保险丝, 前大灯远光, 右侧Fuse, high beam light of headlight, right
- F124 保险丝, 雾灯和后雾灯Fuse, fog lamp and rear fog lamp
- F125 保险丝, 仪表板照明和开关照明Fuse, dashboard lighting and switch lighting
- F128 保险丝, 车内照明, 阅读灯和门灯, 危险警告灯, 行车记录仪, 收音机Fuse, inside lighting, reading lamp, door lamp, danger warning lamp, vehicle traveling data recorder, recorder
- F133 保险丝, 吹风机电动机, 加热与通风Fuse, blower electric motor, heating and ventilation
- F153 保险丝, 变速箱控制单元 (备用) Fuse, gearbox control unit (standby)
- F156 保险丝, 燃油滤清器加热 (备用) Fuse, fuel filter heating (standby)
- F157 保险丝, 集中润滑系统 (备用) Fuse, centralized lubricating system (standby)
- F158 保险丝, 点烟器Fuse, cigar lighter
- F160 保险丝, 挂车防抱死制动系统 (备用) Fuse, trailer anti-lock braking system (standby)
- F161 保险丝, 防抱死制动系统压1力控制阀 (备用) Fuse, anti-lock braking system pressure control valve (standby)
- F162 保险丝, 防抱死制动系统控制单元 (备用) Fuse, anti-lock braking system control unit (standby)
- F164 保险丝, 电控空气悬架 (备用) Fuse, electro pneumatic suspension (standby)
- F166 保险丝, 后视镜加热器Fuse, rear view mirror heater
- F185 保险丝, 辅助加热器Fuse, auxiliary heater
- G100 蓄电池1 Battery I
- G101 蓄电池2 Battery II
- G102 交流发电机AC generator
- H100 交流发电机检测灯 (充电检测) Inspection lamp of AC generator (check in charging)
- H101 火焰预热冷起动系统的检测灯Inspection lamp for cold starting system by flame preheating
- H102 空气喇叭Air horn
- H108 制动回路 I 和 II 的储气筒压力检测灯Braking circuit I and II air tank pressure inspection lamp



- H109 机油压力的检测灯 Oil pressure inspection lamp
- H110 冷却液温度的检测灯 Liquid coolant temperature inspection lamp
- H111 Central warning light STOP
- H112 制动装置灯, 左侧 Brake device light , left
- H113 制动装置灯, 右侧 Brake device light , right
- H117 驻车制动检测灯 Parking brake inspection lamp
- H118 牵引车转向指示灯的检测灯 Inspection lamp of tractor direction indicator lamp
- H119 挂车转向指示灯的检测灯 Inspection lamp of trailer direction indicator lamp
- H120 车前转向指示灯, 右侧的 Front direction indicator lamp, right
- H121 车前转向指示灯, 左侧的 Front direction indicator lamp, left
- H122 车后转向指示灯, 右侧的 Rear direction indicator lamp, right
- H123 车后转向指示灯, 左侧的 Rear direction indicator lamp, left
- H125 侧转向指示灯, 左侧的 Side direction indicator lamp, left
- H126 侧转向指示灯, 左侧的 Side direction indicator lamp, left
- H129 前大灯远光检测指示灯 Headlights' high beam light inspection indicator lamp
- H149 驾驶室锁的转向指示灯 Direction indicator lamp of cab lock
- H169 气动喇叭2 (用于双音频喇叭) Air horn II (used in dual done multi frequency horn)
- K102 均断某些线路的继电器, 火焰预热塞 Relay for some circuits disconnection, glow plug
- K103 发动机启动的传感器极限值 (1050转/分) Sensor limit value for engine starting (1050 rotation per minute)
- K104 发动机熄火的延时继电器 Time delay relay for engine flameout
- K105 限速系统的限制阀传感器 Limiting valve sensor in speed limiting system
- K106 继电器, 刮水脉冲 Relay, water scraping pulse
- K107 转向指示器和间歇刮水传感器 Direction indicator and intermittent water scraping sensor
- K108 均断某些线路的电源继电器, 转向指示器, 右侧 Power relay for some circuits disconnection, direction indicator, right



- K109 均断某些线路的电源继电器, 转向指示器, 左侧Power relay for some circuits disconnection, direction indicator, left
- K110 控制单元, 转向指示灯Control unit, direction indicator lamp
- K115 继电器, 接线柱58 Relay, binding post 58
- K116 驻车 and 尾灯继电器Parking and tail lamp relay
- K117 继电器, 雾灯Relay, fog lamp
- K118 继电器, 后雾灯 Relay, rear lamp
- K119 继电器, 前大灯近光和远光Relay, high and low beam light of headlight
- K171 继电器, 用电器, 接线柱15Relay, electric appliances, terminal 15
- M100 起动机电动机Starter motor
- M102 刮水器电动机Water scraper motor
- M103 风挡清洗器电动机Windshield cleaner motor
- M116 吹风机电动机
加热与通风Blower-motor, headlights, low beam light adjuster, left
- M117 伺服电动机, 前大灯近光调节器, 左侧Actuating motor, headlights low beam light adjuster, left
- M118 伺服电动机, 前大灯近光调节器, 右侧Actuating motor, headlights low beam light adjuster, right
- P100 行驶记录仪Traveling data recorder
- P101 发动机转速计Engine tachometer
- P102 仪表板显示, 制动回路 I 储气筒压力Dashboard light, brake circuit I air tank pressure
- P103 仪表板显示, 制动回路 II 储气筒压力Dashboard light, brake circuit II air tank pressure
- P104 仪表显示, 燃油油位Dashboard light, fuel level
- P105 仪表显示, 燃油油位Dashboard light, fuel level
- P106 仪表显示, 冷却液温度Dashboard light, liquid coolant temperature
- Q101 转向锁 (点火开关锁) Steering lock (ignition switch lock)
- R100 火焰加热塞1 Flame heating plug I
- R101 火焰加热塞2 Flame heating plug II



- R106 变光开关, 仪表板照明 Dimmer switch, dashboard lighting
- R107 空气干燥器Air drier
- R108 点烟器Cigar lighter
- R109 电位器, 前大灯灯光调节器Potentiometer, headlights/beam light adjuster
- S103 气动喇叭按钮Air horn button
- S104 倒车灯开关Back-up lamp switch
- S105 发动机制动脚踏开关 Engine brake foot pedal switch
- S106 后视镜加热开关 Rearview mirror heating switch
- S108 转向柱组合开关 (转向指示灯, 风挡间歇清洗/刮水前大灯闪光灯)

Steering column combined switch (direction indicator lamp, headlight blinker for intermittent windscreen cleaning/wiping)

- S109 危险警告灯开关Danger warning light switch
- S111 开关, 灯Switch, light
- S113 雾灯、后雾灯开关Fog lamp/rear fog lamp switch
- S149 蓄电池总开关 (机械操作) Master battery switch (mechanical operation)
- S161 传感器开关, 制动灯Sensor switch, brake lamp
- S174 开关, 换挡显示Switch, shift light
- S178 开关, 驾驶室锁Switch, cab lock
- S180 开关, 半档显示Switch, semi-gear light
- S181 车门控制开关, 左侧Door lock switch, left
- S182 车门控制开关, 右侧Door lock switch, right
- S183 开关, 吹风机, 加热与通风Switch, blower, heating and ventilation
- S185 开关, 轮间差速锁检测灯 Switch, inter-wheel differential lock inspection lamp
- S187 开关, 轮间差速检测灯Switch, inter-wheel differential inspection lamp



- S198 开关, 驾驶室锁, 右侧 Switch, cab lock, right
- S199 开关, 驾驶室锁, 左侧 Switch, cab lock, left
- V100 单向离合器二极管, 接线柱1 15 One-way clutch diode, terminal 115
- X129 跨接到中央电气系统 Connect to central electric system
- X148 跨接到中央电气系统 Connect to central electric system
- Y100 电磁阀, 火焰预热冷起动系统 Magnet valve, cold starting system by flam pre-heating
- Y102 电磁阀, 关闭发动机
发动机制动 Magnet valve, engine flameout and engine brake
- Y103 电磁阀, 限速系统 Magnet valve, speed limit system
- Y145 电磁阀, 轮间差速锁 Magnet valve, inter-wheel differential lock



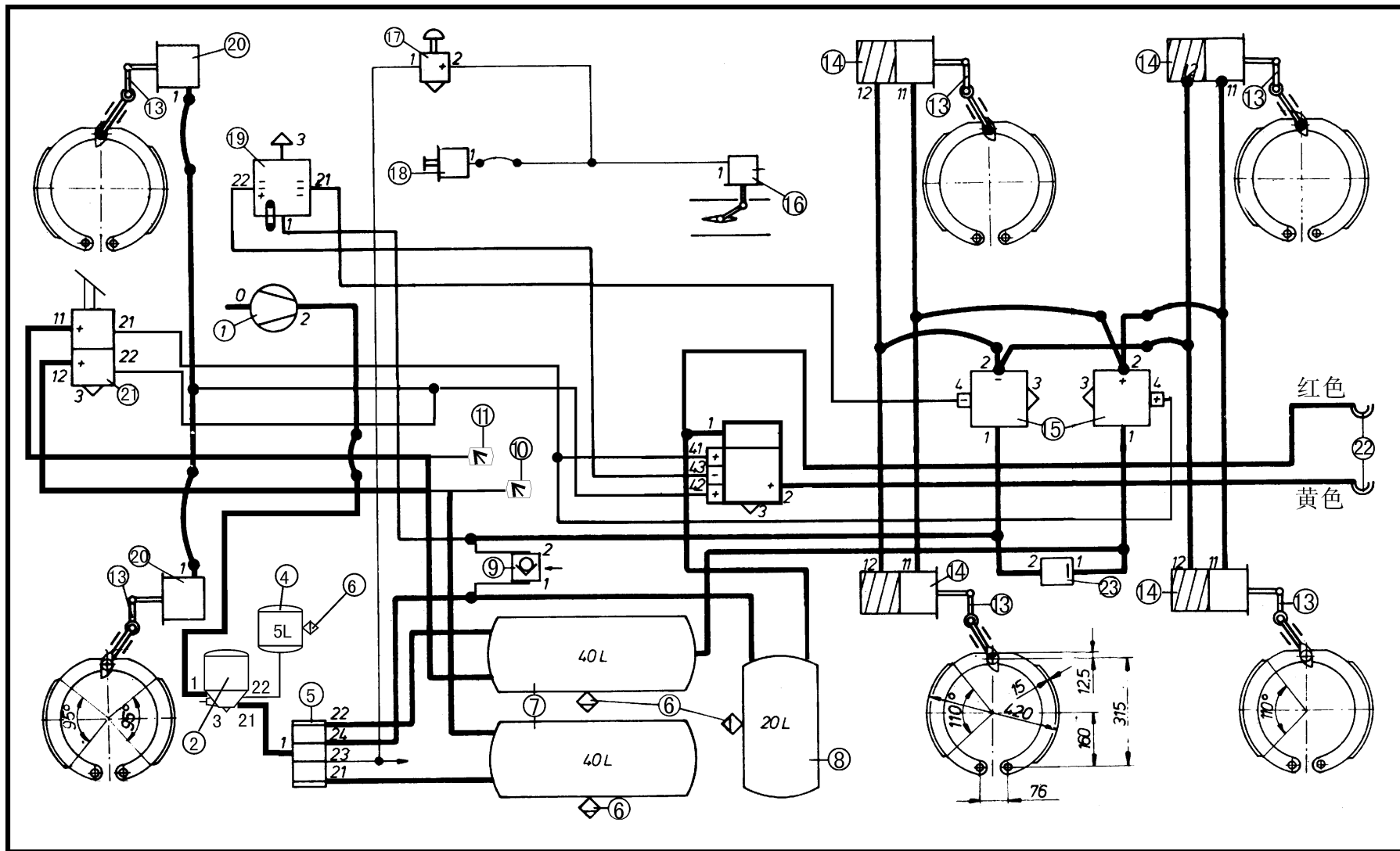
四、制动管路图

VI. Schematic diagram for brake tube

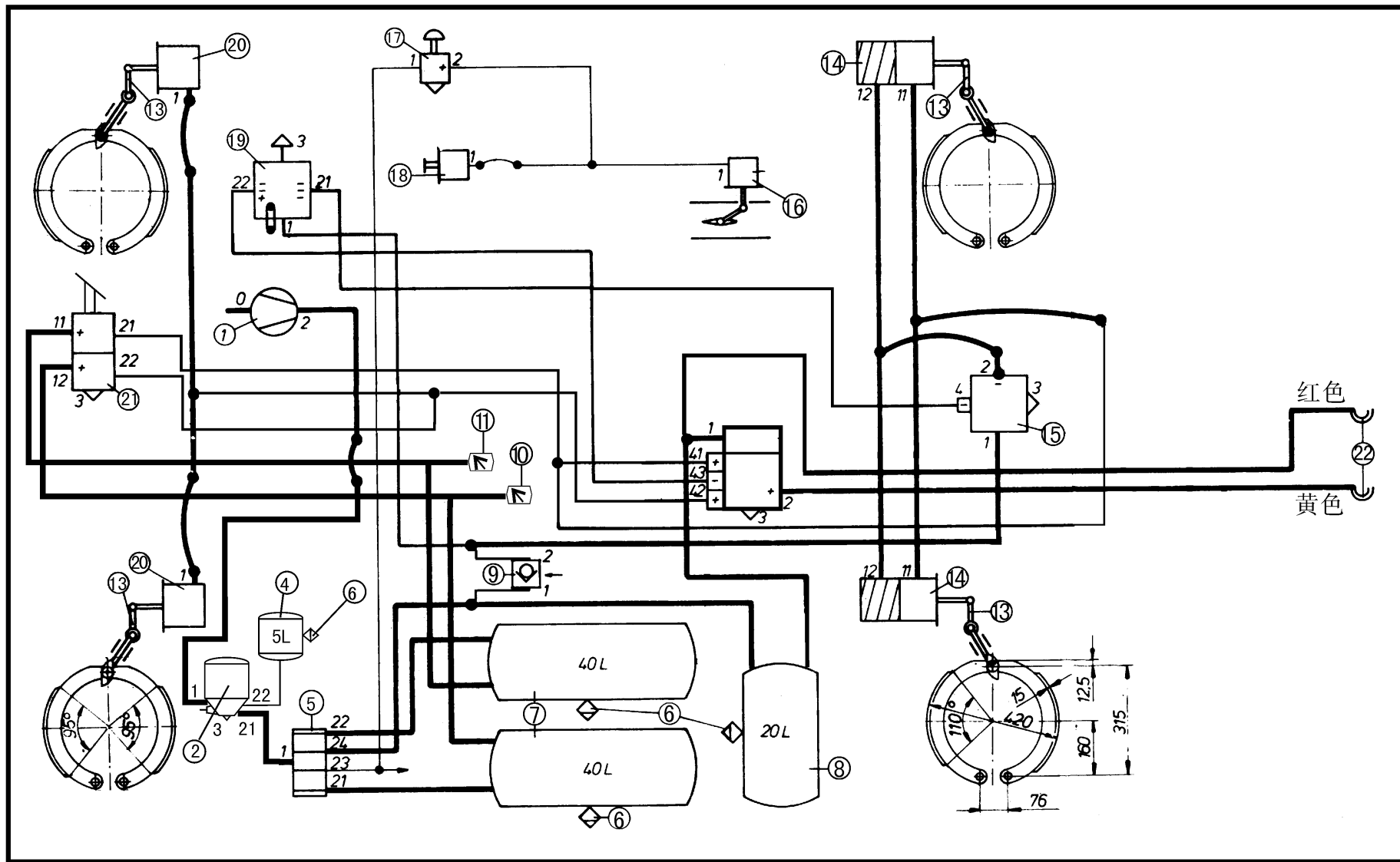
- 1 空压机Air Compressor
- 2 带调压阀的空气干燥器Air dryer with pressure regulator valve
- 4 反冲罐Backwash tank
- 5 四回路保护阀Four-loop protection valve
- 6 放水阀Water drain valve
- 7 储气筒Air cylinder
- 8 储气筒Air cylinder
- 9 单向阀Single check valve
- 10 前轮制动气压表Air pressure gauge for front brake
- 11 (中) 后轮制动气压表Air pressure gauge for (middle) rear brake
- 12 双管路挂车制动控制阀Dual-pipeline trailer control valve
- 13 制动臂Braking arm
- 14 复合式气制动室Compound brake chamber
- 15 继动阀Relay valve
- 16 工作缸Working cylinder
- 17 排气制动操纵阀 Exhaust brake operating valve
- 18 工作缸Working cylinder
- 19 停车制动阀Parking brake valve
- 20 制动气室Brake chamber
- 21 双回路制动气阀Dual-pipeline air brake valve
- 22 挂车制动气路联接器Trailer braking pipeline coupler
- 23 溢流阀Overflow valve



6×4制动系统图



4×2制动系统图



五、轮胎气压Tyre pressure

气压单位unit kpa($\approx 1\text{kg/cm}^2$)

轮胎型号tyre type	额定充气压力kPa rated inflation pressure	轮胎层级 PR ply rating of tyre	额定负荷rated load (单single tyre/ 双胎double tyre) kg
12.00-20	810 $\pm$ 20 (单胎single tyre)、 740 $\pm$ 20 (双胎 double tyre)	18	3750/3350
12.00R20	830 $\pm$ 20	18	3750/3450
11.00-20	910 $\pm$ 20 (单胎single tyre)、 840 $\pm$ 20 (双胎double tyre)	18	3650/3150
11.00R20	930 $\pm$ 20	18	3550/3250
12.00R22.5	830 $\pm$ 20	16	3350/3075
11.00R22.5	830 $\pm$ 20	16	3000/2725
275/70R22.5	830 $\pm$ 20	16	2800/2575
295/80R22.5	830 $\pm$ 20	16	3350/3075
315/80R22.5	830 $\pm$ 20	18	3750/3450
425/65R22.5	760 $\pm$ 20	18	4750



六、允许总质量和轴载质量kg(公斤)

VIII. Authorized Total Mass and Axle- loaded Mass (kg)

驱动形式总质量 total mass和轴载质量and axle-load mass	4×2	6×2	6×4牵引 tractor	6×4自卸 dumper	8×4
前轴额定轴载质量Rated front axle-loaded mass	55007500	5500	5500	7500	5500
中、后桥额定轴载质量Rated axle-loaded mass for middle, rear axle	1150013000	1150013000	1150013000	1300016000	1300016000
汽车最大允许总质量vehicel maximum autohrozed total mass	18000	25000	25000	25000	31000
列车最大允许总质量Max total mass	43000	49000	49000	/	/



六、允许总质量和轴载质量kg(公斤)

VIII. Authorized Total Mass and Axle- loaded Mass (kg)

驱动形式总质量 total mass和轴载质量and axle-load mass	4×2	6×2	6×4牵引 tractor	6×4自卸 dumper	8×4
前轴额定轴载质量Rated front axle-loaded mass	55007500	5500	5500	7500	5500
中、后桥额定轴载质量Rated axle-loaded mass for middle, rear axle	1150013000	1150013000	1150013000	1300016000	1300016000
汽车最大允许总质量vehicel maximum autohrozed total mass	18000	25000	25000	25000	31000
列车最大允许总质量Max total mass	43000	49000	49000	/	/



介 绍 完 毕
谢 谢 大 家

thank you

