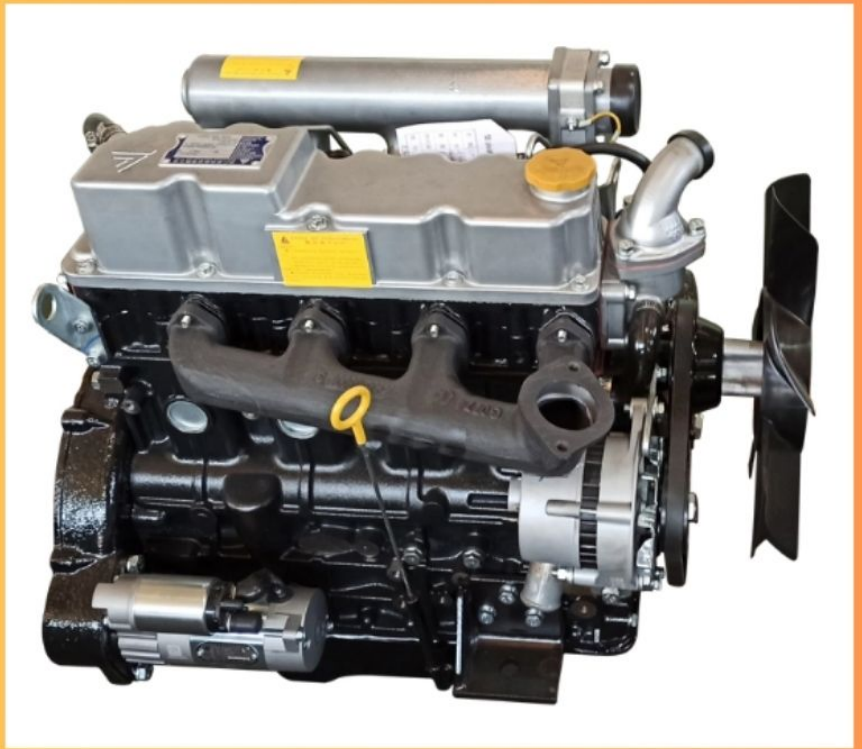




# Xinchai Diesel Engine Parts Manual

## Xinchai A490BPG, C490BPG Diesel Engine For HELI Hangcha JAC Forklift 2-3T

This catalog is published to offer convenience to customers. It includes all parts of the Xinchai engine model A490BPG and C490BPG. It is requested to provide the following information if you need the parts of these forklift diesel engines:

1. The model of the engine and the serial number;
2. The part number indicated in this catalog;
3. The name and quantity of the part required.

Please read the Xinchai engine parts manual carefully. And then give us the right part numbers of the components. We will try our best to provide you with the correct forklift engine accessories at a good price.



Anhui Leading Forklift Parts Co., Ltd.  
[www.leadingforkliftparts.com](http://www.leadingforkliftparts.com)  
[www.youtube.com/@leadingforkliftparts](http://www.youtube.com/@leadingforkliftparts)

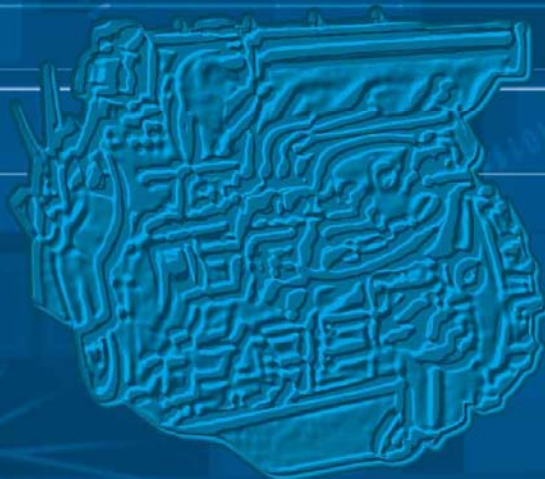


**A490BPG C490BPG**

# **柴油机零件图册**

Parts Catalogue For **A490BPG C490BPG** Diesel Engine

**浙江新柴股份有限公司**  
ZHEJIANG XINCHAI CO., LTD



# 前 言

本目录印制的目的是为了便于用户使用,它包括了 A490BPG、C490BPG 柴油机所有零件。

当用户需要订购 A490BPG、C490BPG 柴油机零件时,必需注明以下内容:

1. 用户发动机型号及系列号。
2. 所需零件在目录中的部件号。
3. 所需零件的名称和数量。

本目录中的零件均根据 2002 年设计而编制。之后的设计更新会在再版中反映。

2008 年 1 月

## PREFACE

This catalogue is published with the aim of offering convenience to the customers. It includes all parts of the engine model A490BPG, C490BPG.

On placing orders for the parts of A490BPG, C490BPG engine the customers are requested to offer the following notes:

1. The model of your engine and its serial number.
2. The part number indicated in this catalogue.
3. The name and quantity of the part required.

Drawing of the parts in this catalogue are made according to the design in 2002. Further changes of the design will be reflected in the next edition.

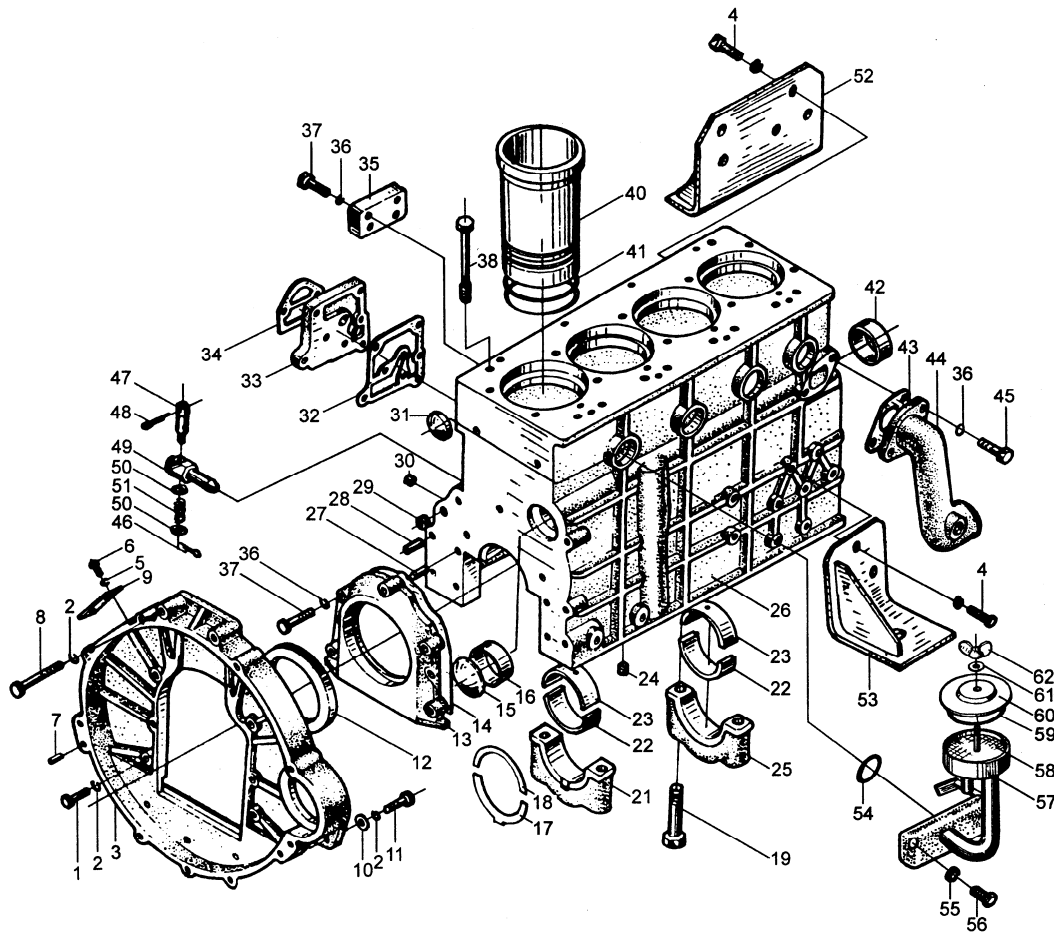
January/2008

# 目 录

## Contents

|                    |                                                           |    |
|--------------------|-----------------------------------------------------------|----|
| 机体飞轮壳总成            | Cylinder block flywheel housing assembly                  | 2  |
| 气缸盖及配气机构           | Cylinder head and gas exchanging system assembly          | 6  |
| 油底壳总成              | Oil sump assembly                                         | 10 |
| 活塞连杆总成             | Piston connecting rod assembly                            | 12 |
| 曲轴飞轮总成             | Crankshaft flywheel assembly                              | 14 |
| 正时齿轮传动系总成          | Timing gear train assembly                                | 16 |
| 气缸盖罩总成             | Cylinder head cover assembly                              | 20 |
| 机油泵、机油管路总成         | Oil pump and oil pipe assembly                            | 22 |
| 冷却水泵、风扇部件          | Cooling water pump and fan assembly                       | 24 |
| 燃油供油系统             | Fuel supply system assembly                               | 26 |
| 机油滤清器、起动电机及充电发电机总成 | Oil filter、starting motor and charging generator assembly | 28 |

# 机体飞轮壳总成 Cylinder block flywheel housing assembly



# 机体飞轮壳总成 Cylinder block flywheel housing assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name       |                         | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|-------------------|-------------------------|------------|---------------|
| 1         | GB/T5782—2000   | 六角头螺栓<br>M12×32   | Bolt M12×32             | 8          |               |
| 2         | GB/T93—1987     | 弹簧垫圈 12           | Spring washer 12        | 10         |               |
| 3         | 490B—13001A     | 飞轮壳               | Flywheel housing        | 1          |               |
| 4         | GB/T5783—2000   | 六角头螺栓<br>M10×25   | Bolt M10×25             | 8          |               |
| 5         | GB/T93—1987     | 弹簧垫圈 6            | Spring washer           | 2          |               |
| 6         | GB/T67—2000     | 开槽盘头螺钉<br>M6×10   | Screw M6×10             | 2          |               |
| 7         | GB/T120—2000    | 内螺纹园柱销<br>A10×25  | Pin A10×25              | 2          |               |
| 8         | GB/T5782—2000   | 六角头螺栓<br>M12×45   | Bolt M12×45             | 2          |               |
| 9         | 490B—13003      | 观察孔盖板             | Cover,inspection hole   | 1          |               |
| 10        | GB/T848—1985    | 小垫圈 12            | Washer 12               | 8          |               |
| 11        | GB/T5782—2000   | 六角头螺栓<br>M12×30   | Bolt M12×30             | 2          |               |
| 12        |                 | 油封王<br>100×125×12 | Oil seal 100×125×12     | 1          |               |
| 13        | 490B—01024A     | 后油封座              | Oil seal seat           | 1          |               |
| 14        | 490B—01025      | 后油封座垫片            | Gasket                  | 1          |               |
| 15        | 490B—01009      | 堵塞 58             | Plug                    | 1          |               |
| 16        | 490B—01008      | 后凸轮轴衬套            | Bushing                 | 1          |               |
| 17        | 490B—01022      | 下止推片              | Lower thrust bushing    | 2          |               |
| *         | 495B—01022A     | 下止推片              | Lower thrust bushing    | 2          | * C490BPG     |
| 18        | 490B—01026      | 上止推片              | Upper thrust bushing    | 2          |               |
| *         | 495B—01026A     | 上止推片              | Upper thrust bushing    | 2          | * C490BPG     |
| 19        | 490B—01019A     | 主轴承螺栓             | Bolt                    | 10         |               |
| 21        | 490B—01023      | 后主轴承盖             | Rear main bearing cover | 1          |               |
| *         | 495B—01023A     | 后主轴承盖             | Rear main bearing cover | 1          | * C490BPG     |

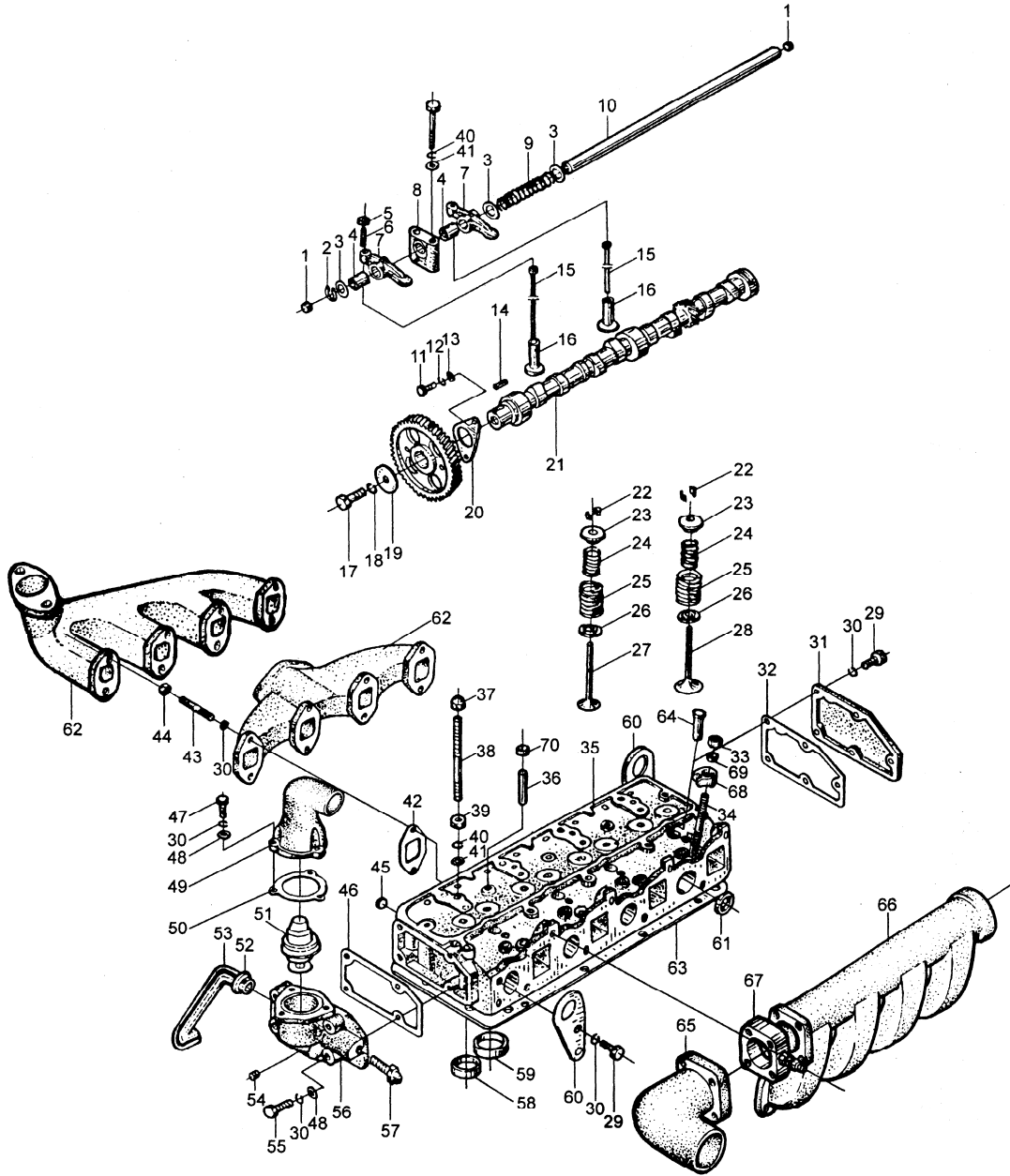
# 机体飞轮壳总成 Cylinder block flywheel housing assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name                             | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|-----------------------------------------|------------|---------------|
| 22        | 490B-01033      | 主轴瓦下瓦 Lower half, ain bearing           | 5          |               |
| *         | 495B-01033A     | 主轴瓦下瓦 Lower half, ain bearing           | 5          | * C490BPG     |
| 23        | 490B-01034      | 主轴瓦上瓦 Upper half, main bearing          | 5          |               |
| *         | 495B-01034A     | 主轴瓦上瓦 Upper half, main bearing          | 5          | * C490BPG     |
| 24        | 490B-01027      | 堵塞 Plug                                 | 1          |               |
| 25        | 490B-01032      | 主轴承盖 Main bearing cover                 | 4          |               |
| *         | 495B-01032A     | 主轴承盖 Main bearing cover                 | 4          | * C490BPG     |
| 26        | 490B-01001      | 机体 Cylinder body                        | 1          |               |
| *         | B490B-01001     | 机体 Cylinder body                        | 1          | * C490BPG     |
| 27        | GB/T119-2-2000  | 圆柱销 B8×20 Pin B8×20                     | 2          |               |
| 28        | GB/T119-2-2000  | 圆柱销 B10×24 Pin B10×24                   | 2          |               |
| 29        | 490B-01080      | 碗形塞片 15 Plug 15                         | 2          |               |
| 30        | 490B-01029      | 螺塞 R $\frac{1}{8}$ Plug R $\frac{1}{8}$ | 6          |               |
| 31        | 490B-01079      | 碗形塞片 40 Plug 40                         | 4          |               |
| 32        | 490B-01071      | 机油滤座垫片 Gasket                           | 1          |               |
| 33        | 490B-01072      | 机油滤座垫板 Oil filter back plate            | 1          |               |
| 34        | 490B-01073      | 机油滤清器垫片 Gasket                          | 1          |               |
| 35        | 490B-01076B     | 柴油滤清器垫板 Fuel filter back plate          | 1          |               |
| 36        | GB/T93-1987     | 弹簧垫圈 10 Spring washer 10                | 15         |               |
| 37        | GB/T5783-2000   | 六角头螺栓 M10×22 Bolt M10×22                | 2          |               |
| 38        | 490B-01002A     | 气缸盖螺栓(甲) Bolt                           | 14         |               |
|           | 490B-01003A     | 气缸盖螺栓(乙) Bolt                           | 4          |               |
| 40        | 490B-01005      | 气缸套 Cylinder liner                      | 4          |               |
| *         | B490B-01005     | 气缸套 Cylinder liner                      | 4          | * C490BPG     |
| 41        | 490B-01006      | 气缸套水封圈 Water seal ring                  | 8          |               |

机体飞轮壳总成 Cylinder block flywheel housing assembly

| 序号<br>No. | 代 号<br>Part No.  | 名 称<br>Name                         | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|------------------|-------------------------------------|------------|---------------|
| 42        | 490B-01007       | 凸轮轴衬套 Camshaft bushing              | 2          |               |
| 43        | 490B-01012       | 进水管垫片 Gasket                        | 1          |               |
| 44        | 490B-01011(合力)   | 进水管 Water pipe                      | 1          |               |
|           | 490B-01011-3(斗山) | 进水管 Water pipe                      | 1          |               |
| 45        | GB/T5783-2000    | 六角头螺栓 M8×25 Bolt M8×25              |            |               |
| 46        | GB/T91-2000      | 开口销 1×12 Pin 1×12                   | 1          |               |
| 47        | 485-01103        | 放水阀阀芯 Drain cock core               | 1          |               |
| 48        | 485-01101        | 放水阀手柄 Drain cock handle             | 1          |               |
| 49        | 485-01102        | 阀体 Cock body                        | 1          |               |
| 50        | GB/T97.1-1985    | 垫圈 Washer                           | 2          |               |
| 51        | 485-01104        | 弹簧 Spring                           | 1          |               |
| 52        | 490BPG-15200-8   | 前支架(左) Front bracket(left)          | 1          |               |
| 53        | 490BPG-15100-8   | 前支架(右) Front bracket(right)         | 1          |               |
| 54        | 490B-34009       | O型密封圈 O-ring                        | 1          |               |
| 55        | GB/T93-1987      | 弹簧垫圈 8 Spring washer 8              | 4          |               |
| 56        | GB/T5783-2000    | 六角头螺栓 M8×16 Bolt M8×16              | 2          |               |
| 57        | 495B-34006       | 呼吸器下体 Lower body air intake device  | 1          |               |
| 58        | JB3616.1-84      | 滤网 Filter net                       | 1          |               |
| 59        | 490B-34008       | 橡胶密封圈 Rubber seal ring              | 1          |               |
| 60        | 490B-34005       | 呼吸器上盖 Upper cover air intake device | 1          |               |
| 61        | GB/T97.1-1985    | 平垫圈 6-140HV Washer 6-140HV          | 1          |               |
| 62        | GB/T62-1988      | 蝶形螺母 M6 Nut M6                      | 1          |               |

## Cylinder head and gas exchanging system assembly



气缸盖及配气机构 Cylinder head and gas exchanging  
system assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name                                       | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|---------------------------------------------------|------------|---------------|
| 1         | 490B-03018      | 碗形塞片 12 Plug 12                                   | 2          |               |
| 2         | GB/T894-1-1986  | 挡圈 20 Snap ring 20                                | 2          |               |
| 3         | GB/T848-1985    | 垫圈 20 Washer 20                                   | 8          |               |
| 4         | 490B-03212A     | 气门摇臂衬套 Valve rocker arm bushing                   | 8          |               |
| 5         | GB/T6171-2000   | 螺母 M8×1 Nut M8×1                                  | 8          |               |
| 6         | 490B-03201      | 气门间隙调整螺钉 Adjusting screw for valve clearance      | 8          |               |
| 7         | 490B-03211A     | 气门摇臂 Valve rocker arm                             | 8          |               |
| 8         | 490B-03202      | 气门摇臂轴支座 Seat                                      | 4          |               |
| 9         | 490B-03203      | 气门摇臂轴弹簧 Spring                                    | 3          |               |
| 10        | 490B-03204      | 气门摇臂轴 Shaft                                       | 1          |               |
| 11        | GB/T5783-2000   | 螺栓 M8×18 Bolt M8×18                               | 9          |               |
| 12        | GB/T93-1987     | 弹簧垫圈 8 Spring washer                              | 17         |               |
| 13        | GB/T97-1-1985   | 平垫圈 8 Washer 8                                    | 2          |               |
| 14        | GB/T1096-1979   | 平键 C8×32 Key C8×32                                | 1          |               |
| 15        | 490B-06003      | 气门推杆 Push rod                                     | 8          |               |
| *         | B490B-06003     | 气门推杆 Push rod                                     | 8          | * C490BPG 型专用 |
| 16        | 490B-06002      | 气门挺柱 Push tappet                                  | 8          |               |
| 17        | GB/T5782-2000   | 螺栓 M12×45 Bolt M12×45                             | 1          |               |
| 18        | GB/T93-1987     | 弹簧垫圈 12 Spring washer 12                          | 1          |               |
| 19        | 490B-02011      | 凸轮轴正时齿轮压板 Stopping plate for camshaft timing gear | 1          |               |
| 20        | 490B-02008      | 凸轮轴止推板 Thrust plate for camshaft                  | 1          |               |
| 21        | 495B-06001      | 凸轮轴 Camshaft                                      | 1          |               |
| 22        | 490B-03006      | 气门锁夹 Split valve retainer                         | 16         |               |
| 23        | 490B-03007      | 气门弹簧上座 Valve spring seat, upper                   | 8          |               |

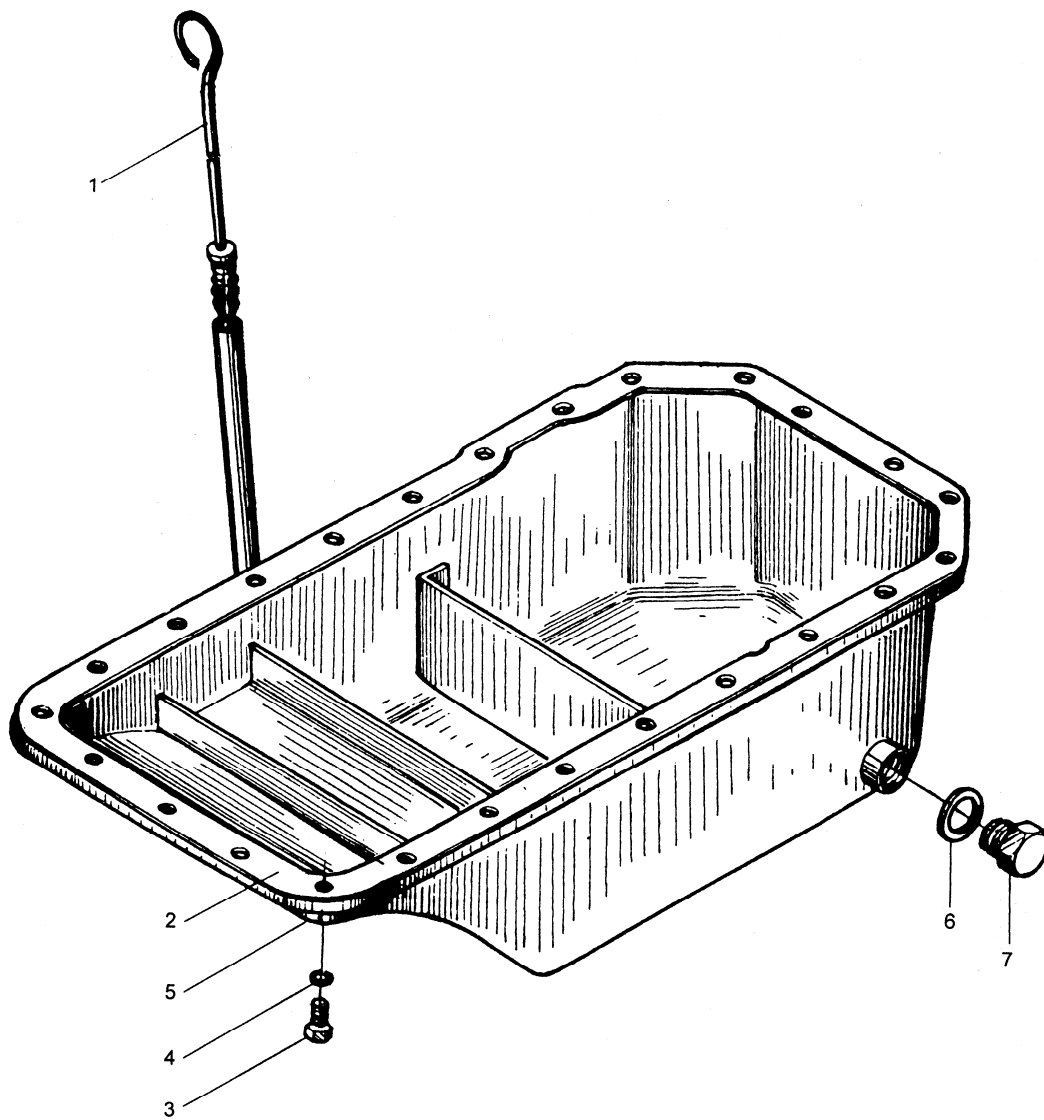
气缸盖及配气机构    Cylinder head and gas exchanging  
system assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name                           | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|---------------------------------------|------------|---------------|
| 24        | 490B-03005      | 气门内弹簧      Valve spring, inner        | 8          |               |
| 25        | 490B-03004      | 气门外弹簧      Valve spring, outer        | 8          |               |
| 26        | 490B-03011      | 气门弹簧下座      Lower seat, valve spring  | 8          |               |
| 27        | 490B-03015      | 排气门      Exhaust valve                | 4          |               |
| 28        | 490B-03014      | 进气门      Intake valve                 | 4          |               |
| 29        | GB/T5783-2000   | 螺栓 M8×20      Bolt M8×20              | 4          |               |
| 30        | GB/T93-1987     | 弹簧垫圈 8      Spring washer 8           | 17         |               |
| 31        | 490B-03012      | 后端盖      Rear cover                   | 1          |               |
| 32        | 490B-03013      | 后端盖垫片      Gasket                     | 1          |               |
| 33        | GB/T56-1988     | 螺母 M10      Nut M10                   | 4          |               |
| 34        | GB/T899-1988    | 双头螺柱<br>M10×50      Stud M10×50       | 4          |               |
| 35        | A490B-03101     | 气缸盖      Cylinder head                | 1          |               |
| 36        | 490B-03102      | 气门导管      Valve guide                 | 8          |               |
| 37        | GB/T923-1988    | 盖形螺母 M8      Nut M8                   | 4          |               |
| 38        | A498B-03001     | 气门摇臂支座螺柱      Bolt                    | 4          |               |
| 39        | GB/T6170-2000   | 螺母 M10      Nut M10                   | 4          |               |
| 40        | GB/T93-1987     | 弹簧垫圈 10      Spring washer 10         | 4          |               |
| 41        | GB/T97.1-1985   | 平垫圈 10      Washer 10                 | 4          |               |
| 42        | 490B-03003      | 排气管衬垫      Gasket                     | 4          |               |
| 43        | GB/T899-1988    | 双头螺柱<br>AM8-M8×25      Stud AM8-M8×25 | 8          |               |
| 44        | GB/T6170-2000   | 螺母 M8      Nut M8                     | 8          |               |
| 45        | 490B-03103      | 堵塞      Plug                          | 1          |               |
| 46        | 490B-43005      | 节温器壳垫片      Thermostat gasket         | 1          |               |
| 47        | GB/T5783-2000   | 螺栓 M8×25      Bolt M8×25              | 3          |               |

气缸盖及配气机构 Cylinder head and gas exchanging  
system assembly

| 序号<br>No. | 代 号<br>Part No.  | 名 称<br>Name                        | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|------------------|------------------------------------|------------|---------------|
| 48        | GB/T97·1—1985    | 垫圈 8 Washer 8                      | 7          |               |
| 49        | 490B—43001       | 节温器盖 Thermostat cover              | 1          |               |
| 50        | 490B—43003       | 节温器盖垫片 Thermostat cover gasket     | 1          |               |
| 51        | 490B—43002       | 节温器 Thermostat                     | 1          |               |
| 52        | 490B—01074       | 接管 Pipe                            | 1          |               |
| 53        | 490B—43007       | 小循环水管 Water pipe                   | 1          |               |
| 54        | 490B—43008       | 螺塞 NPT3/8 Plug NPT3/8              | 1          |               |
| 55        | GB/T5782—2000    | 螺栓 M8×35 Bolt M8×35                | 4          |               |
| 56        | 490B—43101—1     | 节温器壳 Thermostat housing            | 1          |               |
| 57        | 490B—43009       | 水温感应塞 Water temperature transducer | 1          |               |
| 58        | 490B—03108       | 排气门座 Exhaust valve seat            | 4          |               |
| 59        | 490B—03107       | 进气门座 Intake valve seat             | 4          |               |
| 60        | 490B—03009A      | 吊耳 Hoisting bracket                | 1          |               |
| 61        | 490B—01078       | 碗形塞片 30 Pulg 30                    | 4          |               |
| 62        | 490B-08001(TCM)  | 排气管 Exhaust pipe                   | 1          |               |
|           | 490B-08001-3(斗山) | 排气管 Exhaust pipe                   | 1          |               |
| 63        | 490B—01004       | 气缸盖衬垫 Gasket                       | 1          |               |
| 64        | A490B—03109      | 喷油器铜套 Copper sleeve                | 4          |               |
| 65        | 490B—09003—11    | 进气接管 Connecting pipe               | 1          |               |
| 66        | 490B—09002       | 进气管 Intake pipe                    | 1          |               |
| 67        | 490B—54000       | 空气加热器 Air heater                   | 1          |               |
| 68        | A490B—03016      | 喷油器压板 Press plate                  | 4          |               |
| 69        | GB/T849—1988     | 球型垫圈 M10 Washer M10                | 4          |               |
| 70        | 498—03016        | 气门导管油封 Oil seal                    | 8          |               |

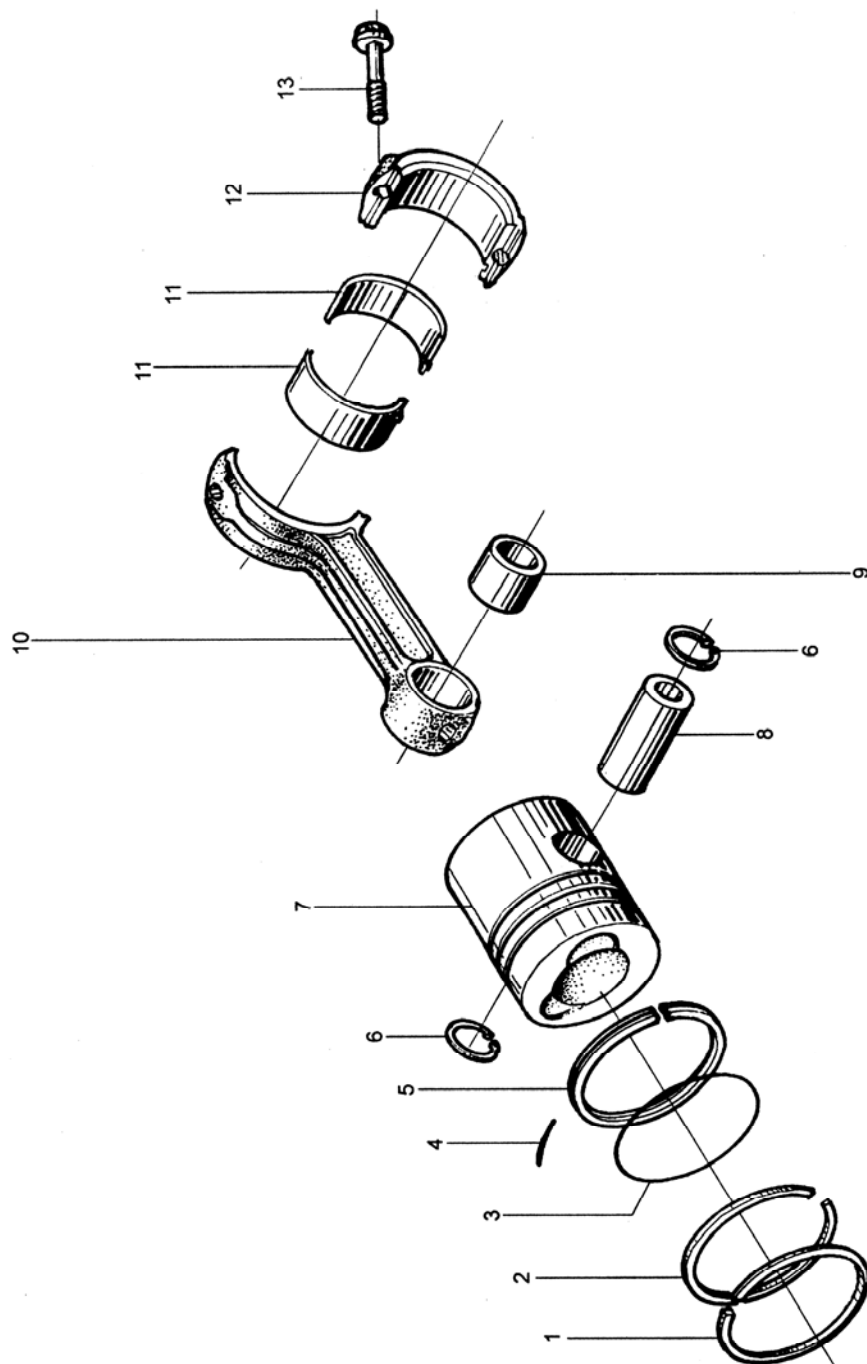
油底壳总成 Oil sump assembly



# 油底壳总成 Oil sump assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name            | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|------------------------|------------|---------------|
| 1         | 490B—07200      | 机油标尺部件 Oil dipstick    | 1          |               |
| 2         | 490B—07002      | 油底壳垫片 Oil sump gasket  | 1          |               |
| 3         | GB/T5783—2000   | 六角头螺栓 M8×16 Bolt M8×16 | 28         |               |
| 4         | GB/T93—1987     | 弹簧垫圈 8 Spring washer 8 | 28         |               |
| 5         | 490B—07100      | 油底壳焊接部件 Oil sump       | 1          |               |
| 6         | JB982—77        | 组合密封垫圈 20 Seal ring 20 | 1          |               |
| 7         | JB2343—79       | 六角头磁性螺塞 Magnetic plug  | 1          |               |

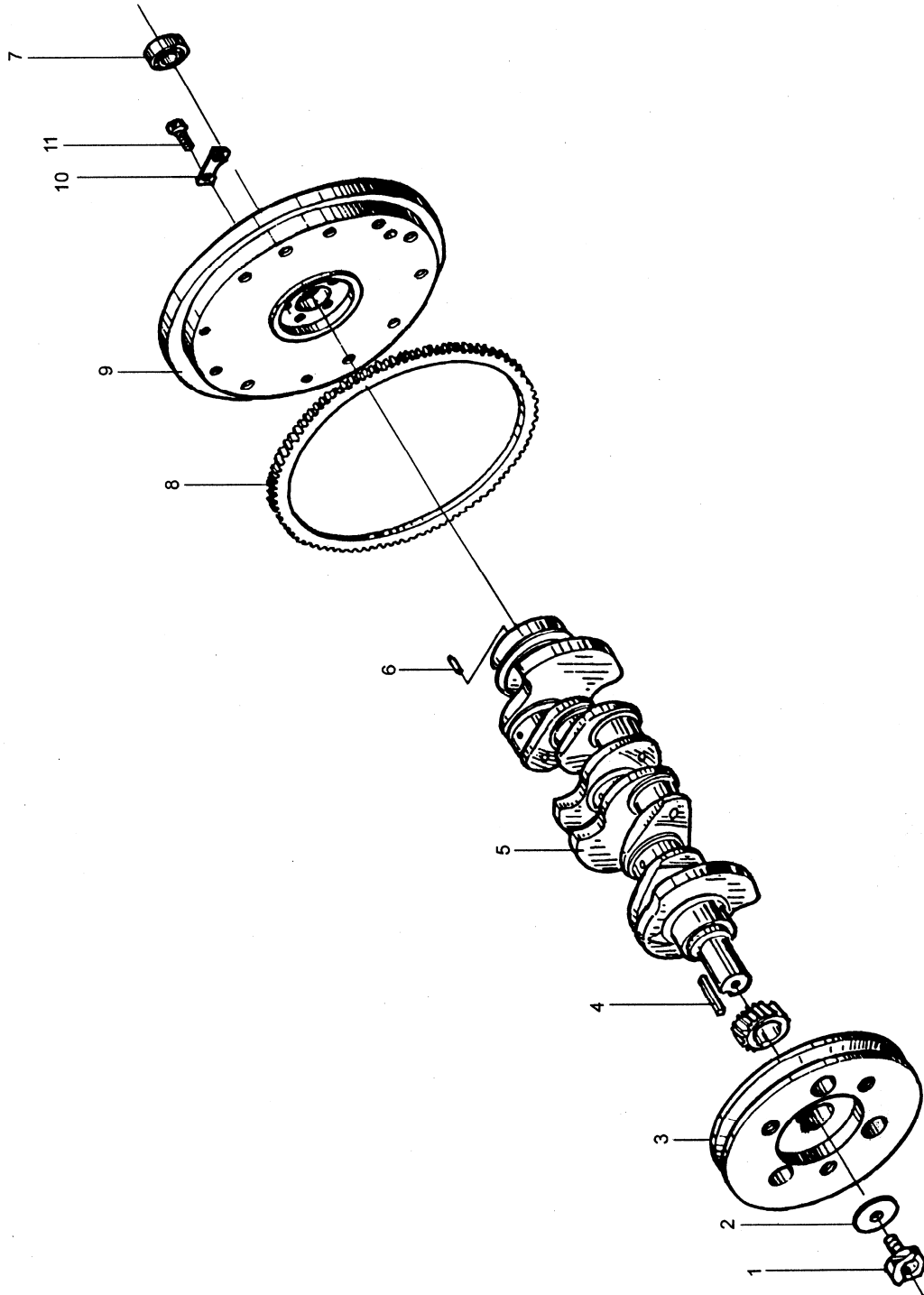
# 活塞连杆总成 Piston connecting rod assembly



# 活塞连杆总成 Piston connecting rod assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name                    | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|--------------------------------|------------|---------------|
| 1         | 490B-04002      | 第一道气环 Compression ring(top)    | 4          | * C490BPG 型专用 |
| 2         | 490B-04003      | 第二道气环 Compression ring(second) | 4          |               |
| 3         | 490B-04102      | 螺旋撑簧 Spiral expansion spring   | 4          |               |
| 4         | 490B-04103      | 销 Pin                          | 4          |               |
| 5         | 490B-04101      | 油环环体 Oil ring body             | 4          |               |
| 6         | 490B-04013      | 挡圈(活塞销挡圈) Snap ring            | 8          |               |
| 7         | A490B-04001     | 活塞 Piston                      | 4          |               |
| *         | XC4D27-04001    | 活塞 Piston                      | 4          |               |
| 8         | 490B-04004      | 活塞销 Piston pin                 | 4          |               |
| 9         | 490B-04005      | 连杆衬套 Connecting rod bush       | 4          |               |
| 10        | 490B-04201      | 连杆 Connecting rod              | 4          |               |
| 11        | 490B-04007A     | 连杆轴瓦 Connecting rod bearing    | 8          |               |
| 12        | 490B-04202      | 连杆盖 Connecting rod cap         | 4          |               |
| 13        | 490B-04009B     | 连杆螺栓 Connecting rod bolt       | 8          |               |

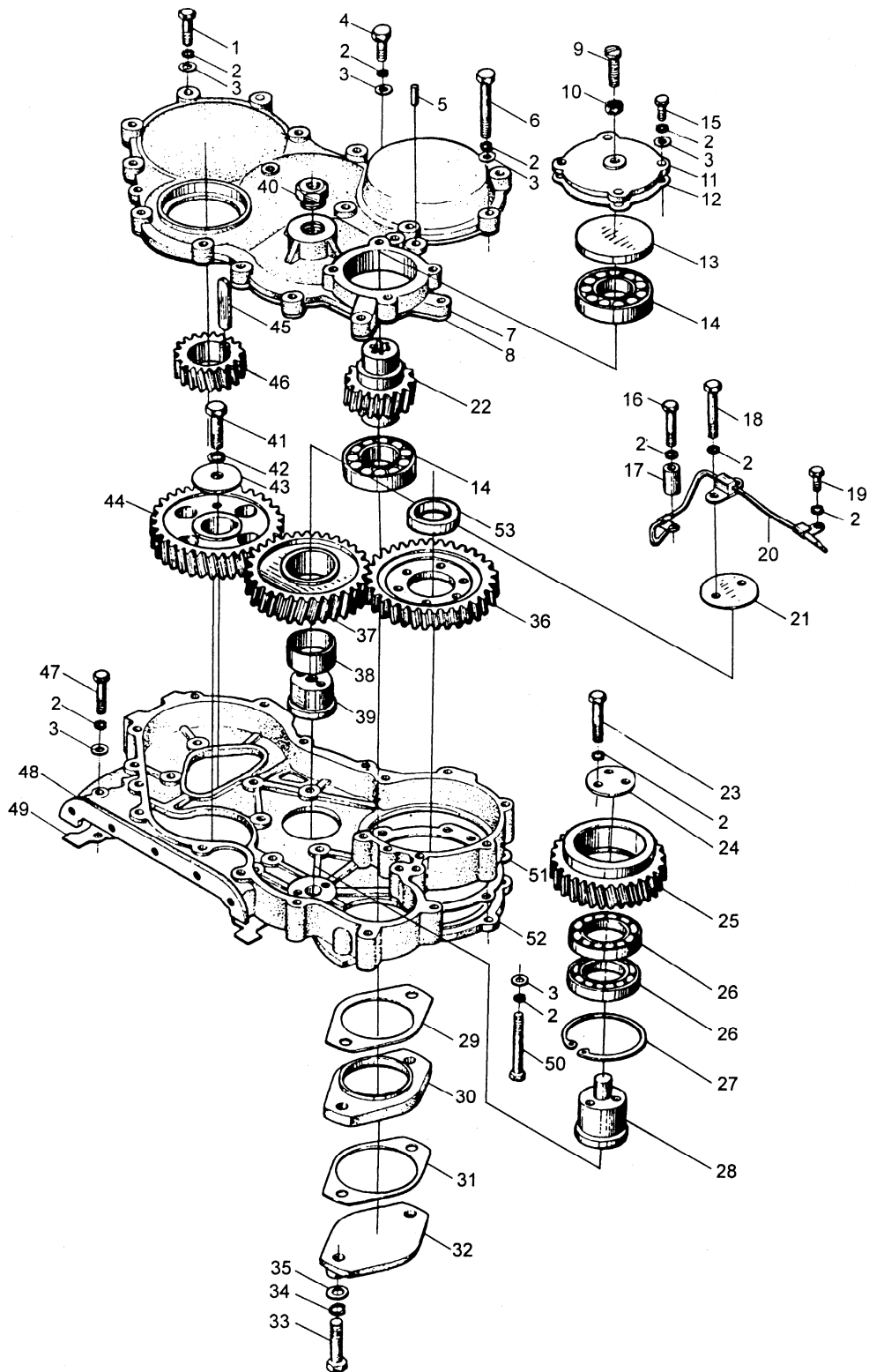
曲轴飞轮总成 Crankshaft flywheel assembly



# 曲轴飞轮总成 Crankshaft flywheel assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name                 | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|-----------------------------|------------|---------------|
| 1         | 490B-05008      | 起动爪 Starting pawl           | 1          | * C490BPG 型专用 |
| 2         | 490B-05007      | 起动爪垫圈 Washer, starting pawl | 1          |               |
| 3         | 490B-05006-1    | 曲轴 V 带轮 V-belt              | 1          |               |
| 4         | GB1096-1979     | 键 C12×63 Key C12×63         | 1          |               |
| 5         | 490B-05004D     | 曲轴 Crankshaft               | 1          |               |
| *         | B490B-05004     | 曲轴 Crankshaft               | 1          |               |
| 6         | GB/T119·2-2000  | 圆柱销 B10×24 Pin B10×24       | 1          |               |
| 7         | GB/T278-1989    | 轴承 6302-2Z Bearing 6302-2Z  | 1          |               |
| 8         | 490B-05102      | 飞轮齿圈 Flywheel ring gear     | 1          |               |
| 9         | 490B-05101-7    | 飞轮 Flywheel                 | 1          |               |
| 10        | 490B-05001-1    | 飞轮螺栓保险片 Safe plate          | 3          |               |
| 11        | 490BT-05002     | 飞轮螺栓 Flywheel bolt          | 6          |               |

# 正时齿轮传动系总成 Timing gear train assembly



# 正时齿轮传动系总成 Timing gear train assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name               | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|---------------------------|------------|---------------|
| 1         | GB/T5782-2000   | 螺栓 M8×30 Bolt M8×30       | 2          |               |
| 2         | GB/T859-1987    | 垫圈 8 Washer 8             | 33         |               |
| 3         | GB/T849-1987    | 垫圈 8 Washer 8             | 36         |               |
| 4         | GB/T5782-2000   | 螺栓 M8×25 Bolt M8×25       | 8          |               |
| 5         | GB1192-2000     | 圆柱销 B8×20 Pin B8×20       | 2          |               |
| 6         | GB/T5782-2000   | 螺栓 M8×70 Bolt M8×70       | 8          |               |
| 7         | 490BPG-16001    | 正时齿轮室盖 Cover              | 1          |               |
| 8         | 490BPG-16002    | 正时齿轮室盖垫片 Gasket           | 1          |               |
| 9         | 490BPG-82014    | 调整螺钉 Adjusting screw      | 1          |               |
| 10        | GB/T6171-2000   | 螺母 M8×1 Nut M8×1          | 1          |               |
| 11        | 490BPG-82008    | 液压泵轴承盖 Bearing cover      | 1          |               |
| 12        | 490BPG-82009    | 轴承盖垫片 Gasket              | 1          |               |
| 13        | 490BPG-82001    | 压板 End plate              | 1          |               |
| 14        | GB/T297-1994    | 轴承 30207 Bearing 30207    | 2          |               |
| 15        | GB/T5782-2000   | 螺栓 M8×20 Bolt M8×20       | 4          |               |
| 16        | GB/T5782-2000   | 螺栓 M8×40 Bolt M8×40       | 2          |               |
| 17        | 490BPG-82003    | 厚垫圈 Washer                | 1          |               |
| 18        | GB/T5782-2000   | 螺栓 M8×60 Bolt M8×60       | 2          |               |
| 19        | GB/T5782-2000   | 螺栓 M8×15 Bolt M8×15       | 1          |               |
| 20        | 490BPG-02100    | 喷油管焊接部件 Oil pipe          | 1          |               |
| 21        | 490B-02012-1    | 惰齿轮轴压板 End plate          | 1          |               |
| 22        | 490BPG-82007    | 液压泵齿轮 Hydraulic pump gear | 1          |               |
| 23        | GB/T5782-2000   | 螺栓 M8×50 Bolt M8×50       | 3          |               |
| 24        | 490BPG-82006    | 过桥齿轮轴承挡板 Snap plate       | 1          |               |

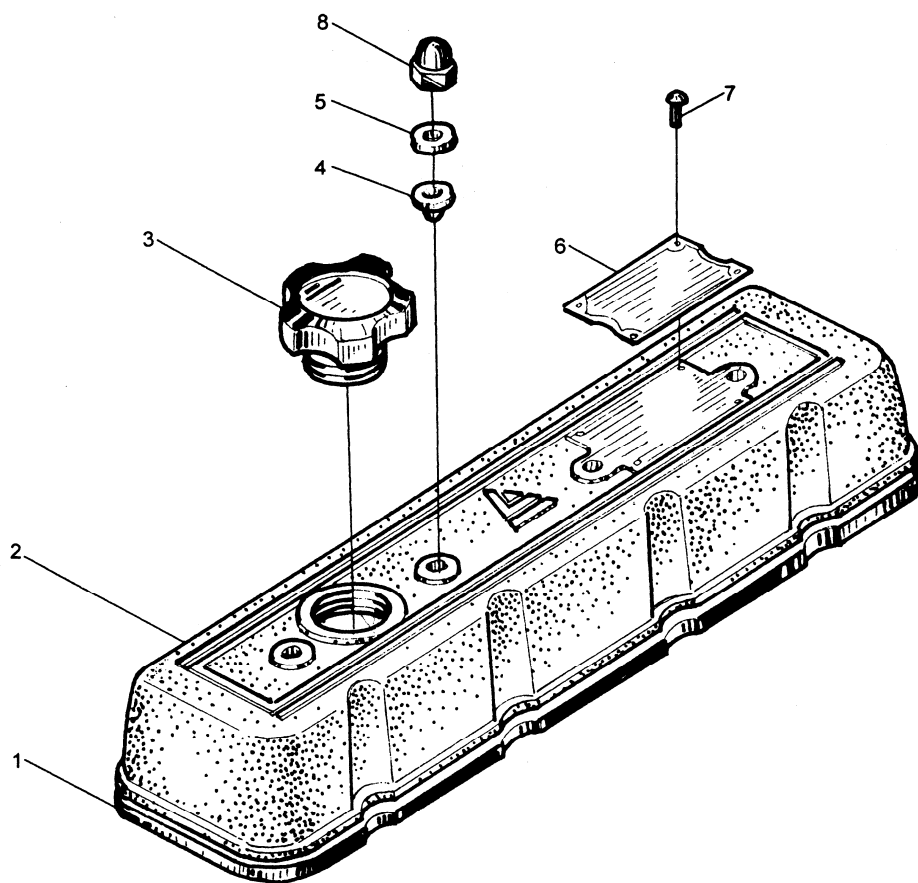
# 正时齿轮传动系总成 Timing gear train assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name                   | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|-------------------------------|------------|---------------|
| 25        | 490BPG—82004    | 过桥齿轮 Bridge gear              | 1          |               |
| 26        | GB/T276—1994    | 轴承 6009 Bearing 6009          | 2          |               |
| 27        | GB/T893·1—1986  | 挡圈 75 Snap ring 75            | 1          |               |
| 28        | 490BPG—82005    | 过桥齿轮轴 Gear shaft              | 1          |               |
| 29        | 490BPG—82010    | 联接板垫片 Gasket                  | 1          |               |
| 30        | 490BPG—82011    | 联接板 Connecting plate          | 1          |               |
| 31        | 490BPG—82012    | 液压泵垫片 Gasket                  | 1          |               |
| 32        | 490BPG—82013    | 端盖 End cover                  | 1          |               |
| 33        | GB21—76         | 小六角头螺栓 M10×45 Bolt M10×45     | 2          |               |
| 34        | GB/T859—1987    | 垫圈 10 Washer 10               | 8          |               |
| 35        | GB/T849—1987    | 垫圈 10 Washer 10               | 8          |               |
| 36        | 490BPG—02003    | 喷油泵正时齿轮 Pump timing gear      | 1          |               |
| 37        | 490BPG—02006    | 正时惰齿轮 Timing idle gear        | 1          |               |
| 38        | 490B—02005      | 正时惰齿轮衬套 Bushing               | 1          |               |
| 39        | 490B—02004      | 惰齿轮轴 Idle gear shaft          | 1          |               |
| 40        | 490BPG—82002    | 拆装螺塞 Screw                    | 1          |               |
| 41        | GB/T5782—2000   | 六角头螺栓 M12×45 Bolt M12×45      | 1          |               |
| 42        | GB/T859—1987    | 轻型弹簧垫圈 12 Spring washer 12    | 1          |               |
| 43        | 490B—02011      | 凸轮轴正时齿轮压板 End cover           | 1          |               |
| 44        | 490BPG—02009    | 凸轮轴正时齿轮 Camshaft timing gear  | 1          |               |
| 45        | GB/T1096—1979   | 键 C12×63 Key C12×63           | 1          |               |
| 46        | 490BPG—02007    | 曲轴正时齿轮 Crankshaft timing gear | 1          |               |
| 47        | GB/T5782—2000   | 螺栓 M8×45 Bolt M8×45           | 1          |               |
| 48        | 490BPG—16003    | 正时齿轮室 Timing gear housing     | 1          |               |

正时齿轮传动系总成 Timing gear train assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name               | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|---------------------------|------------|---------------|
| 49        | 490BPG-16009-1  | 正时齿轮室垫片 Gasket            | 1          |               |
| 50        | GB/T5782-2000   | 螺栓 M8×75 Bolt M8×75       | 2          |               |
| 51        | 490B-16008      | 喷油泵联接法兰垫片 Gasket          | 1          |               |
| 52        | 490B-16004-1    | 喷油泵联接法兰 Connecting flange | 1          |               |
| 53        | 495B-02105      | 喷油泵正时齿轮轴套 Axle sleeve     | 1          |               |

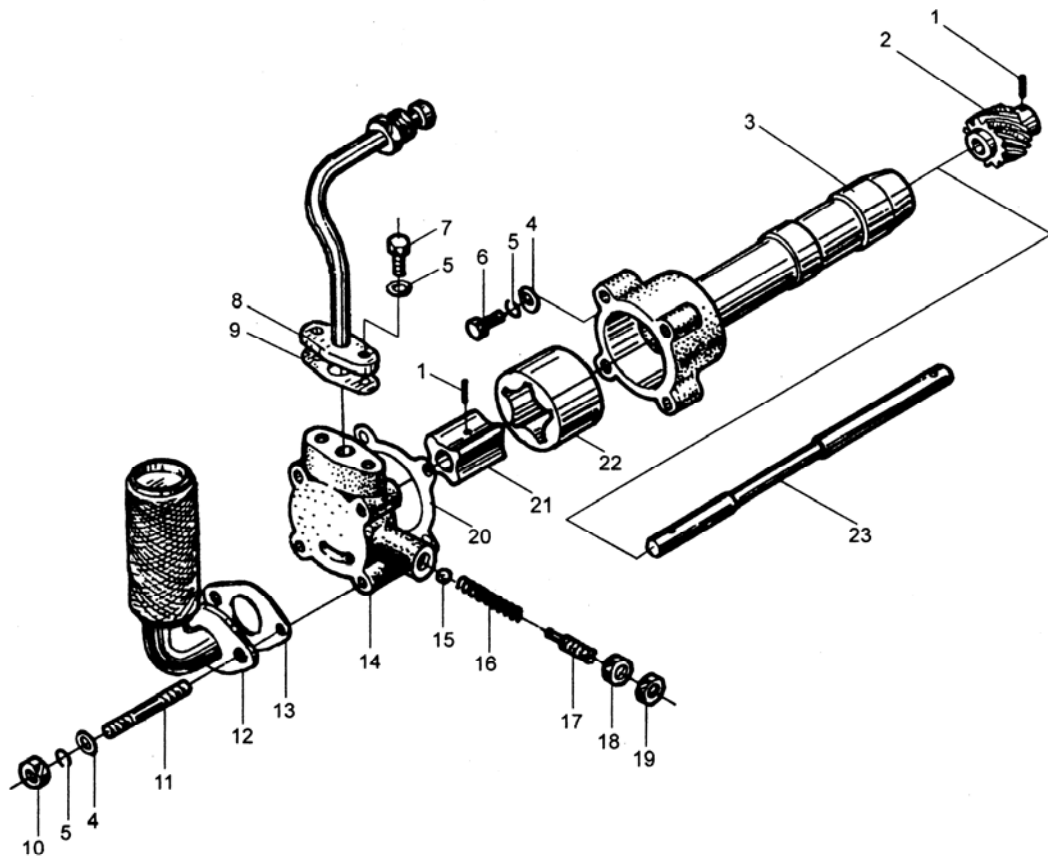
气缸盖罩总成 Cylinder head cover assembly



气缸盖罩总成 Cylinder head cover assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name                    | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|--------------------------------|------------|---------------|
| 1         | A498B-11002     | 气缸盖罩橡胶垫 Rubber pad             | 1          |               |
| 2         | A498B-11001     | 气缸盖罩 Cylinder head cover       | 1          |               |
| 3         | 490B-11013B     | 加油口盖垫圈 Cap gasket              | 1          |               |
| 4         | A498B-11003     | 橡胶隔离套 Rubber isolation bushing | 4          |               |
| 5         | A498B-11004     | 垫圈 Washer                      | 4          |               |
| 6         | A498B-11005     | 铭牌 Nameplate                   | 1          |               |
| 7         | GB/T827-1986    | 铭牌铆钉 2×5 Rivet 2×5             | 4          |               |
| 8         | GB/T923-1988    | 盖形螺母 M8 Nut M8                 | 4          |               |

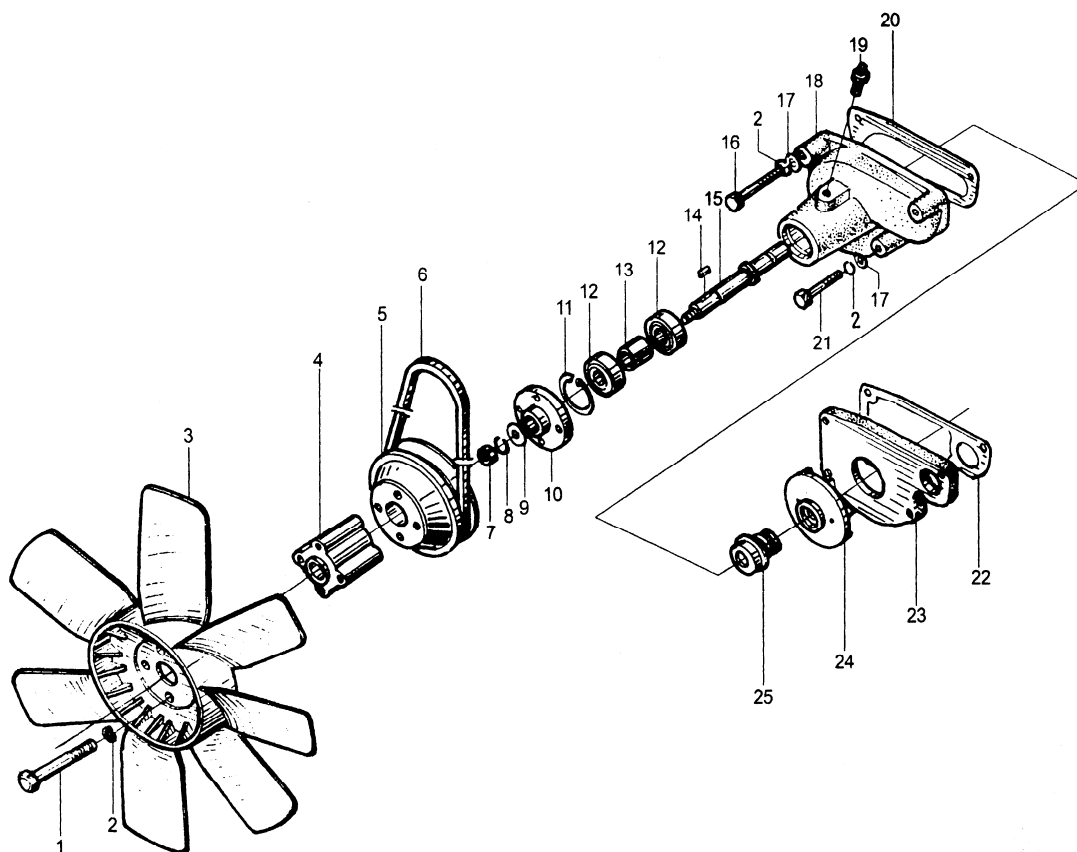
# 机油泵、机油管路总成 Oil pump and oil pipe assembly



# 机油泵、机油管路总成 Oil pump and oil pipe assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name                   | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|-------------------------------|------------|---------------|
| 1         | 490B-31203      | 圆柱销 Pin                       | 2          |               |
| 2         | 490B-31001      | 机油泵传动齿轮 Oil pump driving gear | 1          |               |
| 3         | 490B-31004      | 机油泵泵体 Oil pump housing        | 1          |               |
| 4         | GB/T97.1-1985   | 平垫圈 8 Washer 8                | 5          |               |
| 5         | GB/T93-1987     | 弹簧垫圈 8 Spring washer 8        | 5          |               |
| 6         | GB/T5783-2000   | 六角螺栓 M8×30 Bolt M8×30         | 1          |               |
| 7         | GB/T5783-2000   | 六角螺栓 M8×20 Bolt M8×20         | 2          |               |
| 8         | 490B-33000      | 机油管路总成 Piping assembly        | 1          |               |
| 9         | 490B-33005      | 垫片 Gasket                     | 1          |               |
| 10        | GB/T6170-2000   | 螺母 M8 Nut M8                  | 2          |               |
| 11        | GB/T5782-2000   | 双头螺柱 M8 Stud M8               | 4          |               |
| 12        | 490B-31100A     | 机油集滤器部件 Screen filter         | 1          |               |
| 13        | 490B-31006      | 机油集滤器垫片 Oil filter gasket     | 1          |               |
| 14        | 490B-31005      | 机油泵盖 Cover,oil pump           | 1          |               |
| 15        | GB/T308-1989    | 钢球 10 Steel ball 10           | 1          |               |
| 16        | 490B-31003      | 限压阀弹簧 Spring                  | 1          |               |
| 17        | 490B-31002      | 调压螺钉 Screw                    | 1          |               |
| 18        | GB/T6171-2000   | 六角螺母 M14×1.5 Nut M14×1.5      | 1          |               |
| 19        | GB/T6173-2000   | 小六角较扁螺母 M14×1.5 Nut M14×1.5   | 1          |               |
| 20        | 490B-31007      | 机油泵盖垫片 Cover,oil pump gasket  | 1          |               |
| 21        | 490B-31202      | 内转子 Inner rotor               | 1          |               |
| 22        | 490B-31008      | 外转子 Outer rotor               | 1          |               |
| 23        | 490B-31201      | 机油泵轴 Shaft of oil pump        | 1          |               |

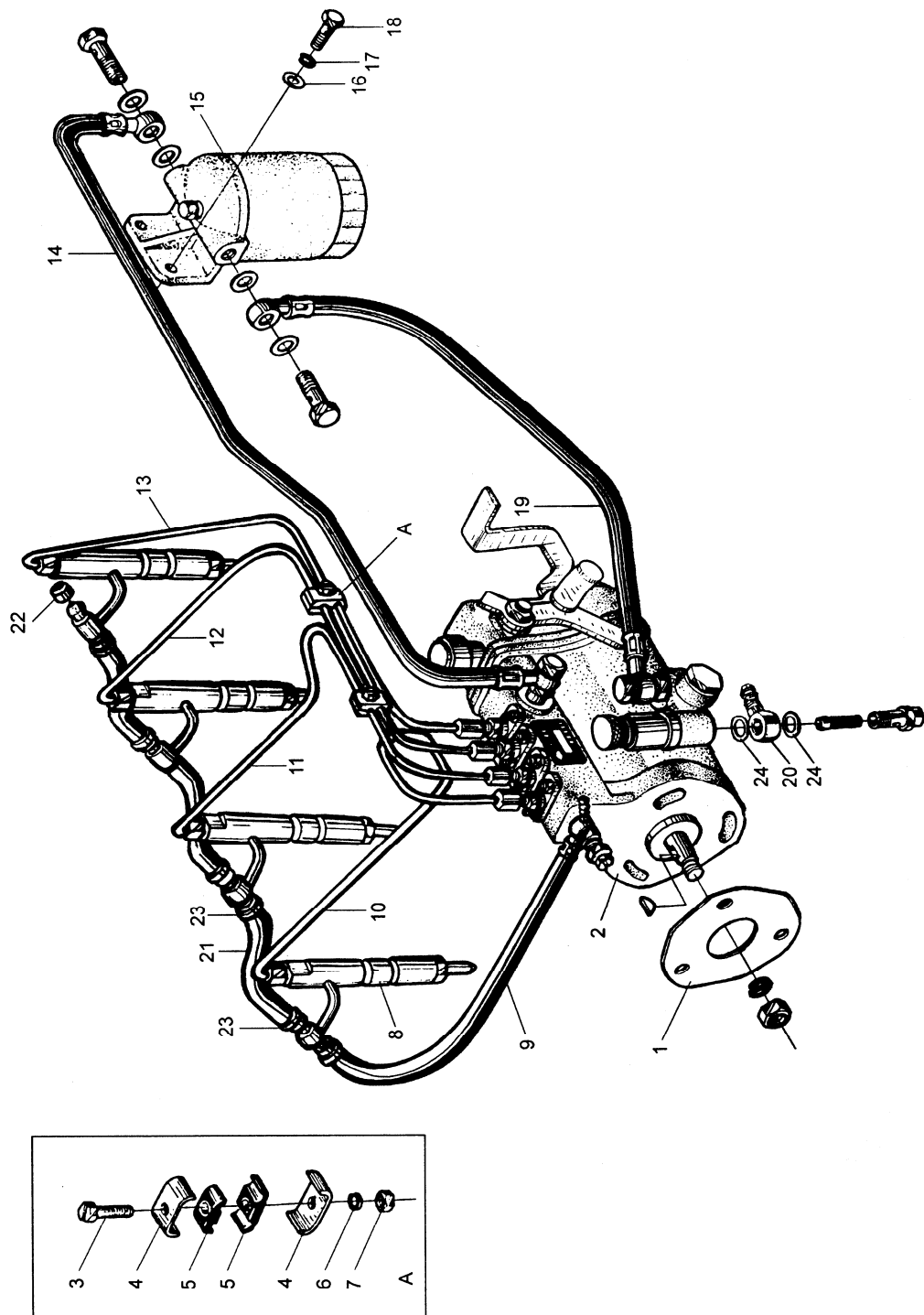
# 冷却水泵、风扇部件 Cooling water pump and fan assembly



冷却水泵、风扇部件 Cooling water pump and fan assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name              | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|--------------------------|------------|---------------|
| 1         | GB/T5782—2000   | 六角螺栓 M8×70 Bolt M8×70    | 4          |               |
| 2         | GB/T93—1987     | 弹簧垫圈 8 Spring washer 8   | 4          |               |
| 3         | 490B—41100—1    | 风扇部件(Φ380) Fan           | 1          |               |
| 4         | 490B—41003—3    | 风扇垫块 Gasket              | 1          |               |
| 5         | 490B—41002      | 风扇皮带轮 Fan pulley         | 1          |               |
| 6         | 490B—41001      | 风扇胶带 Fan belt            | 1          |               |
| 7         | GB/T6178—2000   | 1 型圆角开槽螺母 M10 Nut M10    | 1          |               |
| 8         | GB/T93—1987     | 弹簧垫圈 10 Spring washer 10 | 1          |               |
| 9         | GB/T97•1—1985   | 平垫圈 10 Washer 10         | 1          |               |
| 10        | 490B—42001      | 风扇皮带轮毂 Fan pulley hub    | 1          |               |
| 11        | 490B—42011      | 挡圈 40 Snap ring 40       | 1          |               |
| 12        | GB/T278—1989    | 轴承 Bearing               | 2          |               |
| 13        | 490B—42003      | 轴承隔圈 Sleeve spacer       | 1          |               |
| 14        | GB/T1099—1979   | 键 5×19 Key 5×19          | 1          |               |
| 15        | 490B—42002      | 水泵轴 Water pump shaft     | 1          |               |
| 16        | GB/T5782—2000   | 螺栓 M8×70 Bolt M8×70      | 1          |               |
| 17        | GB/T97•1—1985   | 垫圈 8 Washer 8            | 4          |               |
| 18        | 490B—42004      | 水泵体 Water pump housing   | 1          |               |
| 19        | GB1152—1989     | 油杯 Oil cup               | 1          |               |
| 20        | 490B—42005      | 水泵体衬垫 Gasket             | 1          |               |
| 21        | GB/T5782—2000   | 六角螺栓 M8×50 Bolt M8×50    | 3          |               |
| 22        | 490B—42011      | 水泵隔板衬垫 Gasket            | 1          |               |
| 23        | 490B—42006      | 水泵隔板 Back plate          | 1          |               |
| 24        | 490B—42008      | 水泵叶轮 Water pump impeller | 1          |               |
| 25        | 490B—42009      | 水封 Water seal            | 1          |               |

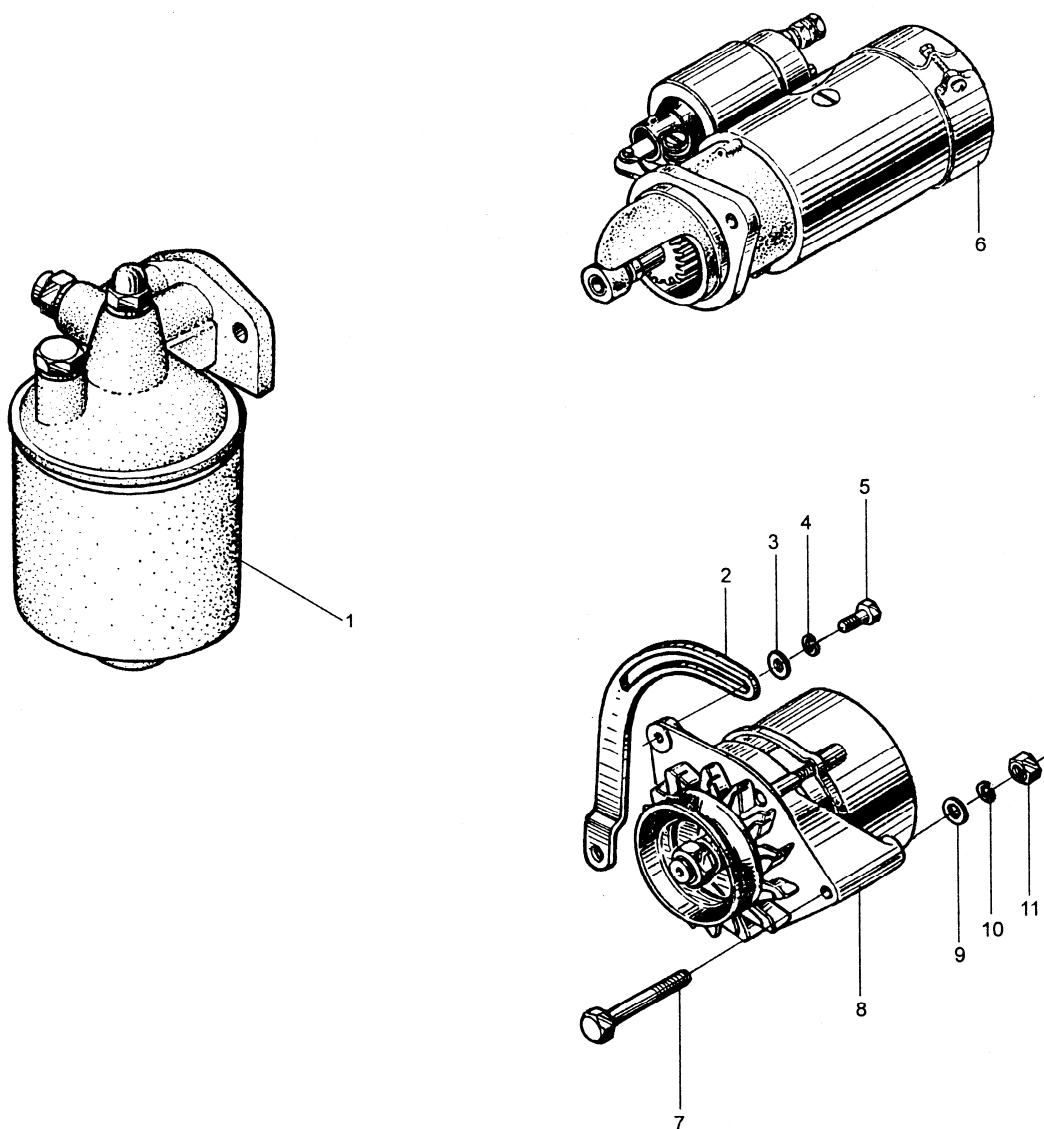
# 燃油供油系统 Fuel supply system assembly



## 燃油供油系统 Fuel supply system assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name                                                      | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|------------------------------------------------------------------|------------|---------------|
| 1         | 490B-21002-1    | 喷油泵法兰垫片 Gasket                                                   | 1          |               |
| 2         | 490B-21001      | 喷油泵 4QT72Z Fuel injection pump                                   | 1          |               |
| 3         | GB/T29·1-1988   | 六角头头部带槽螺栓 Bolt M6×25                                             | 3          |               |
| 4         | 490B-23501      | 卡箍 Clamp                                                         | 6          |               |
| 5         | 490B-23502      | 橡胶垫 Rubber gasket                                                | 6          |               |
| 6         | GB/T93-1987     | 弹簧垫圈 6 Spring washer 6                                           | 3          |               |
| 7         | GB/T6172-2000   | 六角螺母 M6 Nut M6                                                   | 3          |               |
| 8         | A490B-22000     | P 系列油嘴<br>F019103006 Fuel injector                               | 4          |               |
| 9         | A490B-25100-1   | 喷油器回油管部件 Injector leak-off pipe                                  | 1          |               |
| 10        | A490B-23101     | 第一缸高压油管 1st cylinder high pressure fuel tube                     | 1          |               |
| 11        | A490B-23201     | 第二缸高压油管 2nd cylinder high pressure fuel tube                     | 1          |               |
| 12        | A490B-23301     | 第三缸高压油管 3rd cylinder high pressure fuel tube                     | 1          |               |
| 13        | A490B-23401     | 第四缸高压油管 4th cylinder high pressure fuel tube                     | 1          |               |
| 14        | 490B-25200      | 滤清器至喷油泵进油管部件 Fuel supply tube from fuel filter to injection pump | 1          |               |
| 15        | 490B-24000A     | 柴油滤清器 Fuel filter                                                | 1          |               |
| 16        | GB/T97·1-1985   | 平垫圈 8 Washer 8                                                   | 2          |               |
| 17        | GB/T93-1987     | 弹簧垫圈 8 Spring washer 8                                           | 2          |               |
| 18        | GB/T5783-2000   | 螺栓 M8×30 Bolt M8×30                                              | 2          |               |
| 19        | 490B-25300      | 输油泵至滤清器进油管部件 Fuel supply tube from supply pump to fuel filter    | 1          |               |
| 20        | 490B-25401-4    | 输油泵进油接头 Fuel supply pump connector                               | 1          |               |
| 21        | 498B-25002      | 喷油器回油胶管 Sebific duct                                             | 3          |               |
| 22        | 498B-25001      | 喷油器回油防漏帽 Leakproof cap                                           | 1          |               |
| 23        | 498B-25004      | 环箍 Clamp                                                         | 10         |               |
| 24        | A490B-22001     | 铜垫(2mm) Copper pad                                               | 4          |               |

机油滤清器、起动电机及充电发电机总成 Oil filter, starting motor  
and charging generator assembly



机油滤清器、起动电机及充电发电机总成 Oil filter、starting motor  
and charging generator assembly

| 序号<br>No. | 代 号<br>Part No. | 名 称<br>Name |                               | 数量<br>Q'ty | 备 注<br>Remark |
|-----------|-----------------|-------------|-------------------------------|------------|---------------|
| 1         | 490B-32000B     | 机油滤清器       | Oil filter                    | 1          |               |
| 2         | 490B-53001-4    | 发电机撑架       | Adjusting lever for generator | 1          |               |
| 3         | GB/T97.1-1985   | 平垫圈 8       | Washer 8                      | 1          |               |
| 4         | GB/T93-1987     | 弹簧垫圈 8      | Spring washer 8               | 1          |               |
| 5         | GB/T5783-2000   | 螺栓 M8×25    | Bolt M8×25                    | 1          |               |
| 6         | 490B-51000      | 起动电机        | Starting motor                | 1          |               |
| 7         | GB/T5782-2000   | 螺栓 M10×80   | Bolt M10×80                   | 1          |               |
| 8         | 490B-52000      | 交流充电发电机     | Charging generator            | 1          |               |
| 9         | GB/T97.1-1985   | 平垫圈 10      | Washer 10                     | 1          |               |
| 10        | GB/T93-1987     | 弹簧垫圈 10     | Spring washer                 | 1          |               |
| 11        | GB/T6170-2000   | 螺母 10       | Nut 10                        | 1          |               |