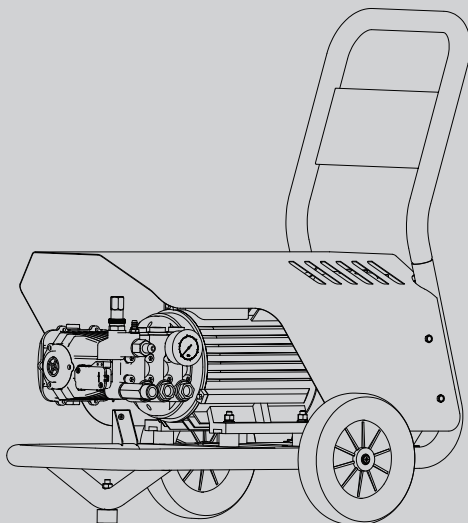
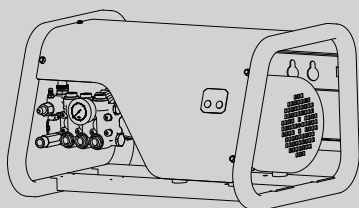




壁挂清洗机 (220V/380V) / 推车式清洗机 (220V/380V)
1PH Car Wash Machine/3PH 380V Car Wash Machine

AE3103/AE3103-3/AE3104/AE3104-3



使用说明书 \ User's Manual



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第一章 安全注意事项

- 使用本机前必须仔细阅读本说明书。
- 使用前必须先接地线，电源接地必须安全可靠。
- 在进行清洗作业时，可能会产生气溶胶，吸入气溶胶会对人体有害，雇主有义务进行危害评估，以便根据待清洁的表面和环境确定防止吸入气溶胶的防护措施，如戴 FFP2 级以上的口罩、绝缘手套、穿绝缘鞋（用户自备）。
- 警告：高压水流使用不当会有危险，不得将水流直接对准人群、电气设备或牲畜及清洗机本体喷射高压水流，以免造成伤害。手一定要握住水枪以防反冲力危险。
- 警告：不要在没有穿防护服装的人群中使用本清洗机。
- 严禁泵内未加机油时，开车运转或试运转。
- 严禁儿童及未培训人员使用操作，以免发生危险。
- 对清洗机作维修保养前，必须先切断电源。
- 如果供电线路或清洗机的重要部件（如调节阀、高压软管、喷枪）发生故障，禁止使用水泵。
- 为确保清洗机的使用安全，要使用制造厂提供或指定的备件。
- 清洗机必须放置在干燥的地方，不能有雨水侵入，为防漏电做好安全措施。
- 禁止用湿手插、拔电线插头；禁止用拖拉电线的方式拔电线插头或移动机器。
- 应防止电线接触热源、油脂和锋利物品，勿将电线置于路面，以免电线损坏发生危险。
- 本机使用常温清水，进水温度不得超过 60°C。禁止在 0°C 或更低的环境下使用。禁止使用酒精、汽油、盐酸等易燃、易腐蚀液体作为清洗介质。
- 通常情况下，本机工作压力出厂时已调定，请用户不要随意自行调节。
- 用户必须按本说明书使用本机，否则可能造成人身伤亡事故。

第二章 使用高压清洗机时的注意事项

- 电源应符合铭牌要求有专业人安装并应符合 FB/T16895 的要求。
- 供给电源应有漏电过载保护装置其规格应该符合电机铭牌要求。
- 漏电保护器应定期检查性能是否可靠（1 个月 1 次）。
- 经常检查电机线是否完好。
- 用 500V 兆欧表检测引线与机壳的绝缘电阻应大于 20 兆欧。
- 电缆长度一般不超过 5 米。
- 电缆线从控制电器到清洗机之间必须用单独的电缆。
- 3kw-4 极三相电机应配 4 芯 1.5mm 电缆，2.2kw 单相电机工作电压不得低于 198V，线径不得小于 4mm。
- 清洗机必须可靠接地。
- 使用前必须核对本机供给电源，输电线路承载电流应不小于 16A，必须安装漏电保护装置，并装有熔断器。电源电压分为单相 220V AC 频率 50Hz，三相 380V AC 频率 50Hz。当电源电压变化超过额定电压的 ±10% 时，请勿使用本机。电源连接应由专业人员进行。

* 壁挂清洗机需要确认固定螺栓的单颗承重 ≥40KG

第三章 规格及附件

型号	功率	电压	最大压力	额定压力	转速	流量	重量
AE3103	2.2Kw	220V	11Mpa	6-11Mpa	1440r/min	12L/min	41Kg
AE3104	2.2Kw	220V	11Mpa	6-11Mpa	1440r/min	12L/min	45Kg

第四章 操作说明

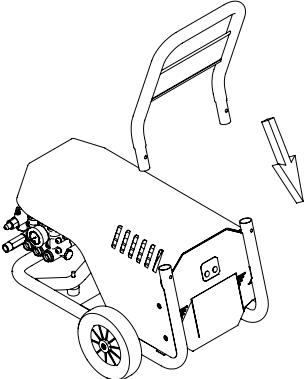
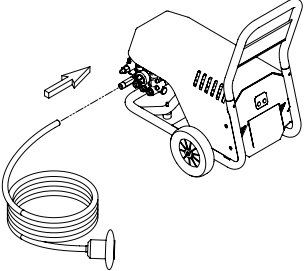
安装、加油

- 打开包装箱，去除包装类物品，将机具水平放置于地面，将推把安装至机具。
- 检查机油容量，更换运输塞为油尺。
- 连接电源线，电源的连接应由专业人员进行，并符合 GB/T16895 的要求。
- 安装护罩。
- 将过滤网与进水胶管一端连接，用喉箍锁紧。不装过滤网不得使用水泵。
- 在机器进水管头部装密封垫、进水管接头及锁紧螺母，进水胶管另一端与进水管接头连接，用喉箍锁紧，进水管连接清洁的水源。
- 将喷枪与出水高压管连接好（暂不与泵出口连接）。
- 打开点击开关，待出水口水流强有力喷出后，关闭电机，连接高压管。（目的是为了空气可以尽快排出，否则先开启电机后，柱塞就开始运动，而水没有及时进入泵腔的话，使柱塞与密封圈干摩擦很容易损坏密封圈，导致水泵漏水。）

使用

- 先打开喷枪开关，再启动电机，即可开始清洗工作。
- 当进行喷射清洗时，若需改变清洗位置或物件而暂停喷洗，只要关闭喷枪，泵压会迅速下降到很低的压力，再次打开喷枪开关，即可继续进行清洗。由于水在关枪时在泵腔内循环，很容易发热，温度过高就会损坏密封圈，因此在未断电源关枪工作时，以不超过 2 分钟为宜。
- 出水胶管在工作时，会不断的拖拉、移动，最好不要使它盘旋、或缠绕打结，应保持接近直线和大圆弧的状态，这样可使泵的压力至喷嘴出水处压力损失小，从而达到较高的效率。
- 压力调节：清洗作业时，清洗机的压力以不超过额定压力为宜，泵的升压调节，必须在开枪喷射时，方可调节压力，必需使用本公司压力表。
- 停止喷射清洗工作时，必须先关闭电动机，再关闭喷枪。若超过 2 分钟不使用，请关闭电源后再关闭高压枪，卸放高压系统压力。
- 使用过程中应注意水泵运转有无异常声响。
- 注意：霜冻将损坏未将水完全排空的清洗机，请将设备存放在不会受冻的地方。



1. 开箱	<ol style="list-style-type: none"> 1. 开箱后，检查确认所有部件是否齐全、完好。 2 使用说明书、质量保修卡等文件资料请妥善保管。 3. 拆除紧固件，把机器从包装箱中取出。
2. 加油	<p>取下罩壳 M10 螺丝，旋下液泵箱体上面的油塞 M17，注入机油（春、秋、冬季为柴机油 15W-40，夏季为柴机油 20W-50）至油窗 1/2 位置（约 450ml），然后旋紧油塞，装上罩壳。</p>
3. 安装推把 (推车型)	<p>从塑料袋取出推把，检查是否损坏，确认完好后用如下图 (1) 将其插入在机架后面的槽钢上。</p> 
4. 进、出水管 的安装	<ol style="list-style-type: none"> 1. 将进水管的一端接头与泵头下端的进水口连接并旋紧，另一端套在自来水龙头或置于水池中（注：置于水池中时，必须连接过滤器）；如下图 (2)  <ol style="list-style-type: none"> 2. 将出水管的一端连接于泵头出水口用工具拧紧，启动机器待空气排尽后再与喷枪进水口连接并用工具拧紧。
5. 清洗作业	<ol style="list-style-type: none"> 1. 检查各连接处螺母螺钉是否有松动。 2. 将机具移至作业地点并认真查看水源、电源是否符合安全要求。（注：电源要有良好接地且装有漏电保护器）。 3. 将调压旋钮逆时针旋松。 4. 先通水源，后通电源。压力调整需在泵内腔排尽空气，喷枪有水柱喷出 1 分钟后进行，逆时针旋转为压力下调，顺时针旋转为压力上调。压力调整必须在喷射状态下进行。工作压力最高不得超过额定压力。 5. 喷枪喷出的水柱有扇形和柱形多种形式，扇形水柱适用于大面积污垢的表面清洗，柱形水柱则适用于污垢严重的部位清洗。 6. 更换喷头即可变换水柱形式，变换形式须在关枪状态下进行。

第五章 保养及检查

- 新机使用 20 小时必须更换机油，放油时可先开机运转 2-3 分钟，顺时针旋掉放油螺栓 M21 放尽机油并用柴油清洗箱体内部（若配备），清洗洁净后按操作说明 2 加入机油（约 450ml），并用油尺检查油位，加注机油至油镜中部。
- 每 100 小时换油一次。如下图（3）图（4）

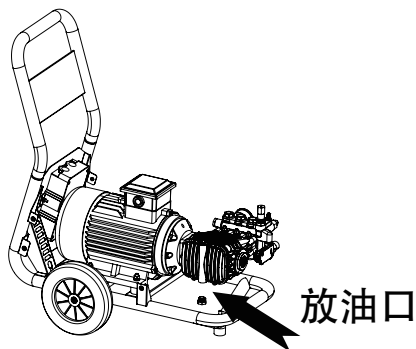


图 (3)

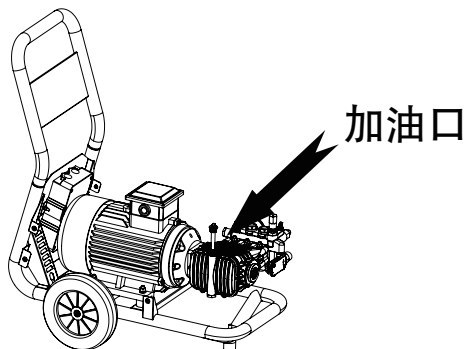


图 (4)

- 应定期用油尺检查机油，应保持在油尺刻线以上，如有其它液体进入油轴箱内应及时换油。（约 450ml）
- 应定期检查各连接、紧固部位螺钉有无松动，如有松动应立即拧紧。
- 进水管要保持清洁畅通，水源要清洁，在进水管处要安装过滤网，以防止水中泥沙等杂质进入泵内，造成泵内密封件、进出水阀的阀面损坏。
- 要定期清洗过滤网以防止过滤网堵塞导致进水不畅，保持过滤网的通畅。
- 冬季使用清洗机后和长期不用时要将泵内剩水排干净。方法是进水管离开供水系统，用吹尘枪吹出泵内液体，同时拆下高压管排尽管内剩水。

保养间隔	零部件	步骤	参考
每个工作日	过滤器	检查滤芯	保持清洁
	泵	检查油位	不能缺油
每工作 50 小时	泵与动力装置连接	检查	要连接完好
	泵	检查安装	不能有松动
	管道有接头	检查	不能有松动
每工作 100 小时	油箱	更换油	保养
	泵	换油	保养

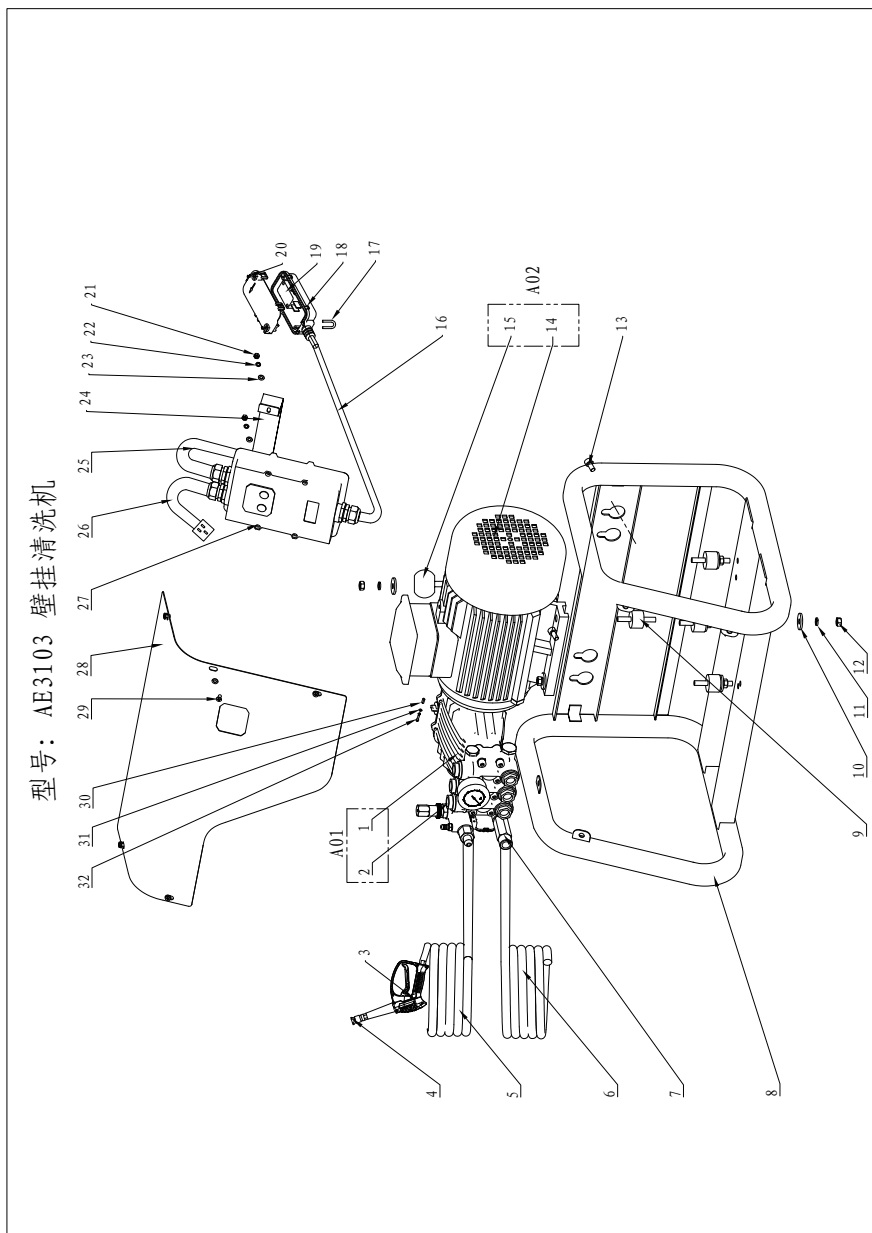
第六章 修理

机器故障处理必须由经培训且具有专业经验的技术人员才能作业

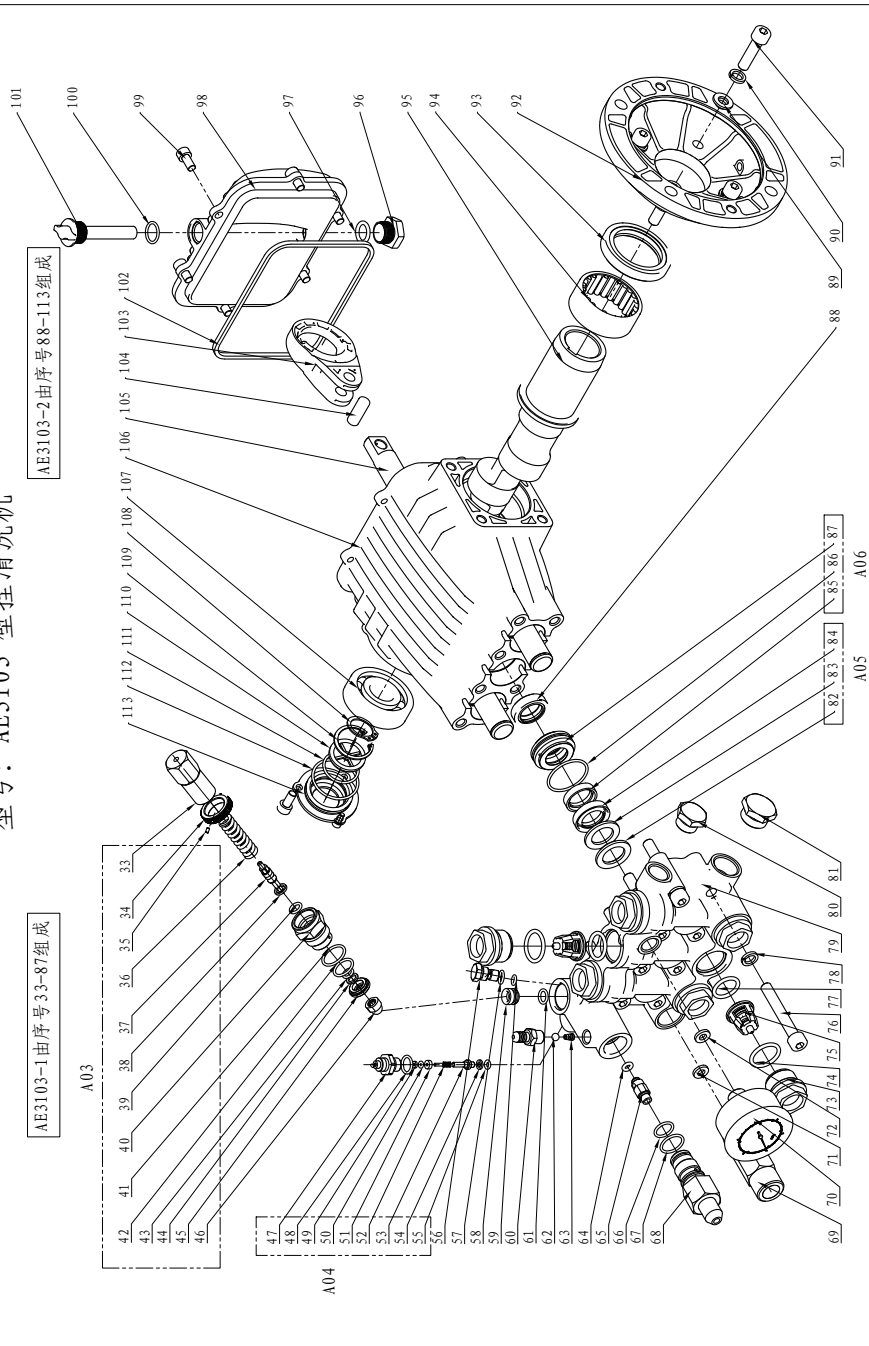
故障现象及排除方法		
故障现象	原因及现象	排除故障方法
泵在运转时不出水	供水有问题	1 打开供水阀 2 确认供水管路是否畅通 3 进水压力过小 4 安装增压泵 5 勿让空气进入进水管路
泵的压力达不到额定工作压力	1 泵内有空气 2 进水流量不足 3 进出水扣单向阀磨损 4 调压阀座磨损 5 密封件磨损 6 喷嘴不合适磨损	1 紧固进水管路 2 更换大尺寸的进水管路 3 排除管路扭结情况 4 提高过滤器高量或清洁滤芯 5 提高转速至额定转速 6 更换单向阀 7 更换高压阀 8 更换密封件 9 更换喷嘴
泵的压力不稳	1 进出水口单向阀磨损 2 单向阀有异物堵塞 3 系统内有空气 4 密封件磨损	1 更换单向阀 2 清洁单向阀 3 紧固进水管接头 4 更换密封件
管路振动	1 单向阀堵塞 2 调压阀故障 3 调压阀回水排放管路太小 4 压力缓冲器无压力 5 泵吸入空气	1 更换单向阀 2 更换高压阀 3 更换大尺寸的回水排放管 4 设置合适的膨胀压力 5 紧固进水管
压力下降	1 喷嘴磨损 2 近处水口单向阀磨损 3 单向阀有异物堵塞 4 调压阀座损坏 5 密封件磨损	1 更换喷嘴 2 更换单向阀 3 清洁单向阀 4 更换调压阀座 5 更换密封件

故障现象	原因及现象	排除故障方法
泵噪音大连杆磨损	1 系统吸入空气	1 紧固进出水处接头
	2 进出口单向阀弹簧损坏	2 更换单向阀弹簧
	3 单向阀有异物堵塞	3 清洁单向阀
	4 轴承磨损	4 更换轴承
	5 进水温度过高	5 降低进水温度
泵温度过高	1 泵运行压力过高	1 减低压力至额定压力
	2 驱动皮带过紧	2 恢复正常的皮带张力
	3 滑轮和驱动联轴器没有校准	3 重新校准

第七章 爆炸图



型号: AE3103 壁挂清洗机



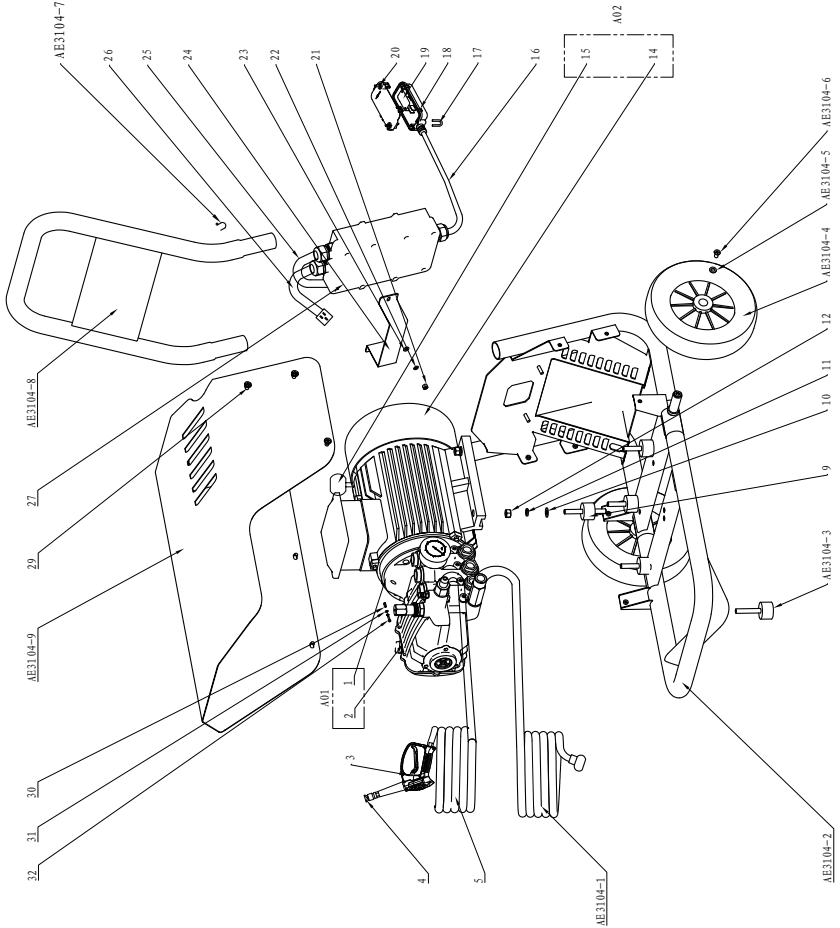
配件编号	品名	数量 / 台	备注
PAE3103-A01	单泵总成	1	
PAE3103-A02	电动机总成	1	
PAE3103-A03	调压阀组件	1	易损件
PAE3103-A04	针阀组件	1	易损件
PAE3103-A05	主水封组件	3	
PAE3103-A06	密封圈座组件	3	
PAE3103-1	铜泵头组件	1	
PAE3103-2	曲轴箱组件	1	
PAE3103-3	水枪	1	易损件
PAE3103-4	枪嘴	4	易损件
PAE3103-5	出水管	1	易损件
PAE3103-6	进水管	1	
PAE3103-7	喉箍	2	
PAE3103-8	机架	1	
PAE3103-9	减震垫	4	
PAE3103-10	大垫片	8	
PAE3103-11	弹簧垫圈	12	
PAE3103-12	六角螺母	8	
PAE3103-13	膨胀螺丝	2	
PAE3103-14	单项电容启动电动机	1	
PAE3103-15	电容	1	
PAE3103-16	微动开关连接线	1	
PAE3103-17	U型销	1	
PAE3103-18	开关盒	1	
PAE3103-19	微动开关	1	
PAE3103-20	自攻螺丝	2	
PAE3103-21	六角螺母	2	
PAE3103-22	弹簧垫圈	2	
PAE3103-23	平垫圈	2	
PAE3103-24	控制器抱箍	1	
PAE3103-25	电动机连接线	1	
PAE3103-26	电源线	1	
PAE3103-27	单项智能电机控制器	1	
PAE3103-28	罩壳	1	

配件编号	品名	数量 / 台	备注
PAE3103-29	外六角螺钉	5	
PAE3103-30	平键	1	
PAE3103-31	平垫圈	4	
PAE3103-32	外六角螺钉	4	
PAE3103-33	调压帽	1	
PAE3103-34	调压锁定螺母	1	
PAE3103-35	紧定螺钉	1	
PAE3103-36	调压弹簧	1	
PAE3103-37	调压阀杆	1	
PAE3103-38	垫片	1	
PAE3103-39	O 型圈	1	
PAE3103-40	调压固定座	1	
PAE3103-41	O 型圈	1	
PAE3103-42	O 型圈	1	
PAE3103-43	O 型圈	1	
PAE3103-44	挡圈	1	
PAE3103-45	调压固定垫	1	
PAE3103-46	调压球头	1	
PAE3103-47	阀座	1	
PAE3103-48	O 型圈	1	
PAE3103-49	垫圈 A	1	
PAE3103-50	O 型圈	1	
PAE3103-51	垫片	1	
PAE3103-52	阀杆弹簧	1	
PAE3103-53	阀芯	1	
PAE3103-54	垫圈 B	1	
PAE3103-55	O 型圈	1	
PAE3103-56	易启动阀阀头	1	
PAE3103-57	O 型圈	1	
PAE3103-58	调压阀座	1	易损件
PAE3103-59	O 型圈	1	
PAE3103-60	混药接头	1	
PAE3103-61	O 型圈	1	
PAE3103-62	钢球	1	

配件编号	品名	数量 / 台	备注
PAE3103-63	混药弹簧	1	
PAE3103-64	O 型圈	1	
PAE3103-65	单向阀芯	1	易损件
PAE3103-66	O 型圈	1	
PAE3103-67	O 型圈	1	
PAE3103-68	出水接头	1	
PAE3103-69	进水管接头	1	
PAE3103-70	压力表	1	
PAE3103-71	塔形过滤网	1	
PAE3103-72	压力表垫片	1	
PAE3103-73	进出水阀门头	6	
PAE3103-74	O 型圈	6	
PAE3103-75	进出水阀组件	6	易损件
PAE3103-76	内六角螺钉	8	
PAE3103-77	O 型圈	6	
PAE3103-78	弹簧垫圈	12	
PAE3103-79	泵体	1	
PAE3103-80	高压闷头	1	
PAE3103-81	低压闷头	1	
PAE3103-82	底座	3	
PAE3103-83	主密封圈	3	
PAE3103-84	垫片	3	
PAE3103-85	副密封圈	3	易损件
PAE3103-86	O 型圈	3	
PAE3103-87	密封圈座	3	
PAE3103-88	往复油封	3	
PAE3103-89	平垫圈	4	
PAE3103-90	弹簧垫圈	12	
PAE3103-91	内六角螺钉	4	
PAE3103-92	连接法兰	1	
PAE3103-93	旋转油封	1	
PAE3103-94	滚针轴承	1	
PAE3103-95	偏心轴	1	
PAE3103-96	放油塞	1	

配件编号	品名	数量 / 台	备注
PAE3103-97	O 型圈	1	
PAE3103-98	后盖	1	
PAE3103-99	内六角螺钉	9	
PAE3103-100	O 型圈	1	
PAE3103-101	油尺	1	
PAE3103-102	O 型圈	1	
PAE3103-103	连杆	3	
PAE3103-104	柱塞销	3	
PAE3103-105	陶瓷柱塞	3	
PAE3103-106	箱体	1	
PAE3103-107	深沟球轴承	1	
PAE3103-108	轴用挡圈 /20	1	
PAE3103-109	轴用挡圈 /40	1	
PAE3103-110	油窗	1	
PAE3103-111	O 型圈	1	
PAE3103-112	O 型圈	1	
PAE3103-113	油窗端盖	1	

型号: AE3104 推车清洗机



配件编号	品名	数量 / 台	备注
PAE3103-A01	单泵总成	1	
PAE3103-A02	电动机总成	1	
PAE3103-A03	调压阀组件	1	易损件
PAE3103-A04	针阀组件	1	易损件
PAE3103-A05	主水封组件	3	
PAE3103-A06	密封圈座组件	3	
PAE3104-1	进水管组件	1	易损件
PAE3104-2	机架	1	
PAE3104-3	支撑脚	1	
PAE3104-4	轮子	2	
PAE3104-5	大垫片	2	
PAE3104-6	外六角螺钉	4	
PAE3104-7	推把固定卡	2	
PAE3104-8	推把	1	
PAE3104-9	罩壳	1	
PAE3103-1	铜泵头组件	1	
PAE3103-2	曲轴箱组件	1	
PAE3103-3	水枪	1	易损件
PAE3103-4	枪嘴	4	易损件
PAE3103-5	出水管	1	易损件
PAE3103-9	减震垫	4	
PAE3103-10	大垫片	8	
PAE3103-11	弹簧垫圈	12	
PAE3103-12	六角螺母	8	
PAE3103-14	单项电容启动电动机	1	
PAE3103-15	电容	1	
PAE3103-16	微动开关连接线	1	
PAE3103-17	U型销	1	
PAE3103-18	开关盒	1	
PAE3103-19	微动开关	1	
PAE3103-20	自攻螺丝	2	
PAE3103-21	六角螺母	2	
PAE3103-22	弹簧垫圈	2	
PAE3103-23	平垫圈	2	

配件编号	品名	数量 / 台	备注
PAE3103-24	控制器抱箍	1	
PAE3103-25	电动机连接线	1	
PAE3103-26	电源线	1	
PAE3103-27	单项智能电机控制器	1	
PAE3103-29	外六角螺钉	5	
PAE3103-30	平键	1	
PAE3103-31	平垫圈	4	
PAE3103-32	外六角螺钉	4	
PAE3103-33	调压帽	1	
PAE3103-34	调压锁定螺母	1	
PAE3103-35	紧定螺钉	1	
PAE3103-36	调压弹簧	1	
PAE3103-37	调压阀杆	1	
PAE3103-38	垫片	1	
PAE3103-39	O 型圈	1	
PAE3103-40	调压固定座	1	
PAE3103-41	O 型圈	1	
PAE3103-42	O 型圈	1	
PAE3103-43	O 型圈	1	
PAE3103-44	挡圈	1	
PAE3103-45	调压固定垫	1	
PAE3103-46	调压球头	1	
PAE3103-47	阀座	1	
PAE3103-48	O 型圈	1	
PAE3103-49	垫圈 A	1	
PAE3103-50	O 型圈	1	
PAE3103-51	垫片	1	
PAE3103-52	阀杆弹簧	1	
PAE3103-53	阀芯	1	
PAE3103-54	垫圈 B	1	
PAE3103-55	O 型圈	1	
PAE3103-56	易启动阀闷头	1	
PAE3103-57	O 型圈	1	
PAE3103-58	调压阀座	1	易损件

配件编号	品名	数量 / 台	备注
PAE3103-59	O 型圈	1	
PAE3103-60	混药接头	1	
PAE3103-61	O 型圈	1	
PAE3103-62	钢球	1	
PAE3103-63	混药弹簧	1	
PAE3103-64	O 型圈	1	
PAE3103-65	单向阀芯	1	易损件
PAE3103-66	O 型圈	1	
PAE3103-67	O 型圈	1	
PAE3103-68	出水接头	1	
PAE3103-69	进水管接头	1	
PAE3103-70	压力表	1	
PAE3103-71	塔形过滤网	1	
PAE3103-72	压力表垫片	1	
PAE3103-73	进出水阀门头	6	
PAE3103-74	O 型圈	6	
PAE3103-75	进出水阀组件	6	
PAE3103-76	内六角螺钉	8	
PAE3103-77	O 型圈	6	
PAE3103-78	弹簧垫圈	12	
PAE3103-79	泵体	1	
PAE3103-80	高压闷头	1	
PAE3103-81	低压闷头	1	
PAE3103-82	底座	3	
PAE3103-83	主密封圈	3	
PAE3103-84	垫片	3	
PAE3103-85	副密封圈	3	易损件
PAE3103-86	O 型圈	3	
PAE3103-87	密封圈座	3	
PAE3103-88	往复油封	3	
PAE3103-89	平垫圈	4	
PAE3103-90	弹簧垫圈	12	
PAE3103-91	内六角螺钉	4	
PAE3103-92	连接法兰	1	



配件编号	品名	数量 / 台	备注
PAE3103-93	旋转油封	1	
PAE3103-94	滚针轴承	1	
PAE3103-95	偏心轴	1	
PAE3103-96	放油塞	1	
PAE3103-97	O 型圈	1	
PAE3103-98	后盖	1	
PAE3103-99	内六角螺钉	9	
PAE3103-100	O 型圈	1	
PAE3103-101	油尺	1	
PAE3103-102	O 型圈	1	
PAE3103-103	连杆	3	
PAE3103-104	柱塞销	3	
PAE3103-105	陶瓷柱塞	3	
PAE3103-106	箱体	1	
PAE3103-107	深沟球轴承	1	
PAE3103-108	轴用挡圈 /20	1	
PAE3103-109	轴用挡圈 /40	1	
PAE3103-110	油窗	1	
PAE3103-111	O 型圈	1	
PAE3103-112	O 型圈	1	
PAE3103-113	油窗端盖	1	



Chapter I Safety precautions

- Read the instruction carefully before use the machine.
- The grounding cable must be grounded before use. The grounding of the power supply must be safe and reliable.
- Wear insulation gloves and shoes (provided by the user) when washing. Always keep your hand on the water gun to prevent recoil.
- Warning: Improper use of high pressure water may be dangerous; do not direct the high pressure water flow at people, electrical equipment or the wash machine itself, so as to avoid injury.
- Warning: Do not use this wash machine in people without protective clothing.
- When no oil is added to the pump, it is forbidden to start it for running or test running.
- Children and untrained personnel are forbidden to use it to avoid danger.
- Cut off the power supply first before maintaining the wash machine.
- If the power supply line or important components of the wash machine (such as the pressure regulating valve, high-pressure hose, and spray gun) are faulty, do not use the water pump.
- To ensure the safety of the wash machine, use the original spare parts provided or specified by the manufacturer.
- The cleaning machine must be placed in a dry place without rain intrusion; safety measures must be taken to avoid electric leakage.
- Do not plug or unplug the electric wire with wet hands; Do not pull wires to unplug or move machines.
- Keep the wire away from heat, grease and sharp objects. Do not place the wire on the road to avoid the danger due to wire damage.
- The machine uses clean water at room temperature, and the inlet water temperature shall not exceed 60°C . Do not use it at 0°C or lower. It is forbidden to use alcohol, gasoline, hydrochloric acid and other flammable and corrosive liquids as cleaning media.
- Under normal circumstances, the working pressure of the machine has been set when leaving the factory. Please do not adjust it by yourself.
- Users must use the machine according to this instruction. Otherwise, they will bear all the consequences.

Chapter II Precautions on High-pressure Car Wash Machine

- The power supply shall meet the requirements of the nameplate, be professionally installed, and shall meet the requirements of FB/T16895.
- The power supply shall have leakage and overload protection devices, whose specifications shall meet the requirements of the motor nameplate.
- Leakage protection should be checked regularly to see whether the performance is reliable (once a month).
- Always check whether the motor wire is intact.
- Use 500V megohm meter to test the insulation resistance between the lead and the housing, which should be greater than 20 megohm.
- The cable length is generally not more than 10 meters.
- Separate cables must be used between the control appliances and the wash machine.
- The 3KW-4 pole three-phase motor shall be equipped with a 4-core 1.5mm² cable, and the 2.8KW-2 pole single-phase motor shall be equipped with a 3-core 2.5mm² cable. 2. The 2KW-2 pole single-phase motor shall be equipped with three-core 2mm² cable.
- The wash machine should be reliably grounded.

Chapter III Specifications and Accessories

Model	Power	Voltage	Allowable pressure	Rated pressure	Speed	Flow	Gross weight
AE3103	2.2Kw	220V	11Mpa	6-11Mpa	1440r/min	12L/min	41Kg
AE3104	2.2Kw	220V	11Mpa	6-11Mpa	1440r/min	12L/min	45Kg



Chapter IV Operation instructions

Installation and oiling

- Unpack, remove the packing items, place the machine horizontally on the ground, and install the handle grip onto the machine.
- Check the oil capacity and replace the transport plug with dipstick.
- Connect the power cable. The power supply should be connected by professional personnel and meet the requirements of GB/T16895.
- Install protective cover.
- Connect the air filter to one end of the water inlet hose and lock it with a hose clamp. Do not use water pump without filter.
- Install a sealing pad, inlet pipe connector and lock nut at the head of the inlet pipe of the machine. Connect the other end of the inlet hose to the inlet pipe connector and lock it with a hose clamp. The inlet pipe is connected to clean water source.
- Connect the spray gun with the outlet high pressure pipe (not connected with the pump outlet).
- Turn on the tap switch, and turn off the motor and connect the high pressure pipe when the water flow from the outlet is strongly ejected. (In this way, the air can escape as quickly as possible. Otherwise, if opening the motor first, the plunger will start to move, and the water does not enter the pump chamber in time, the plunger and the sealing ring will produce dry friction, which is likely to damage the sealing ring, resulting in water leakage and insufficient pressure.)

Usage

- First turn on the spray gun switch, and then start the motor for washing.
- When spray washing is carried out, if the washing position or object needs to be changed and the spray washing is suspended, the pump pressure will quickly drop to a very low pressure as long as the spray gun is turned off, and the spray gun switch can be turned on again to continue the washing. Because the water circulates in the pump chamber when closing the gun, it is easy to get hot, and the sealing ring will be damaged if the temperature is too high, so the turn-off time shall not be more than 2 minutes.
- When the water hose is working, it will constantly be dragged and moved. It is better not to make it hover or knot. It should be kept close to a straight line and a big arc, so that the pressure loss from the pump to the nozzle outlet is small for high efficiency.
- Pressure adjustment: When cleaning, the pressure of the wash machine should not exceed the rated pressure. Pump boosting adjustment must be done when starting the gun for injection, and the pressure gauge of SATA must be adopted.
- To stop spray cleaning, first turn off the motor and then turn off the spray gun.
- Check whether the pump is running abnormally during operation.

Chapter V Maintenance and Inspection

- After 50 hours of use, the oil must be changed. When discharging oil, it can be started up and run for 2-3 minutes, unscrew the discharging screw and drain the oil, and clean the inside of the box with diesel oil. After cleaning, add oil, and check oil level with dipstick, which shall be in the middle of the tick mark. Change the oil every 200 hours with 15W-40 engine oil.
- Oil should be regularly checked with dipstick, which should be kept above the dipstick tick mark; if any other liquid enters the oil shaft box, the oil should be timely changed.
- Check regularly whether the screws at the connection and fastening parts are loose, and tighten them immediately if they are loose.
- The water inlet pipe should be kept clean and smooth, the water source should be clean, and the filter screen should be installed at the water inlet pipe to prevent impurities such as sediment in the water from entering the pump, causing damage to the valve face of the pump seal and water valve.
- Clean the filter regularly to prevent the filter from blocking the water. Keeping the filter water smooth, the pump pressure will be normal and stable.
- After the use of cleaning machine in winter and long-term use, the remaining water in the pump should be discharged. The method is to remove the water inlet pipe from the water supply system, start up and run for about 1 minute, and remove the high-pressure rubber hose to drain the remaining water.

Maintenance interval	Parts	Steps	Reference
Each workday	Filter	Check the filter element	Keep clean
	Pump	Check oil level	Oil must be sufficient
Every 50 hours of work	Pump and power unit connection	Inspection	The connection shall be intact
	Pump	Installation check	It cannot be loose
	Pipe with joint	Inspection	It cannot be loose
	Oil box	Change oil	Maintenance
Every 200 hours of work	Pump	Change oil	Maintenance
Each year	Machine	Keep clean	Keep it away from corrosive liquids

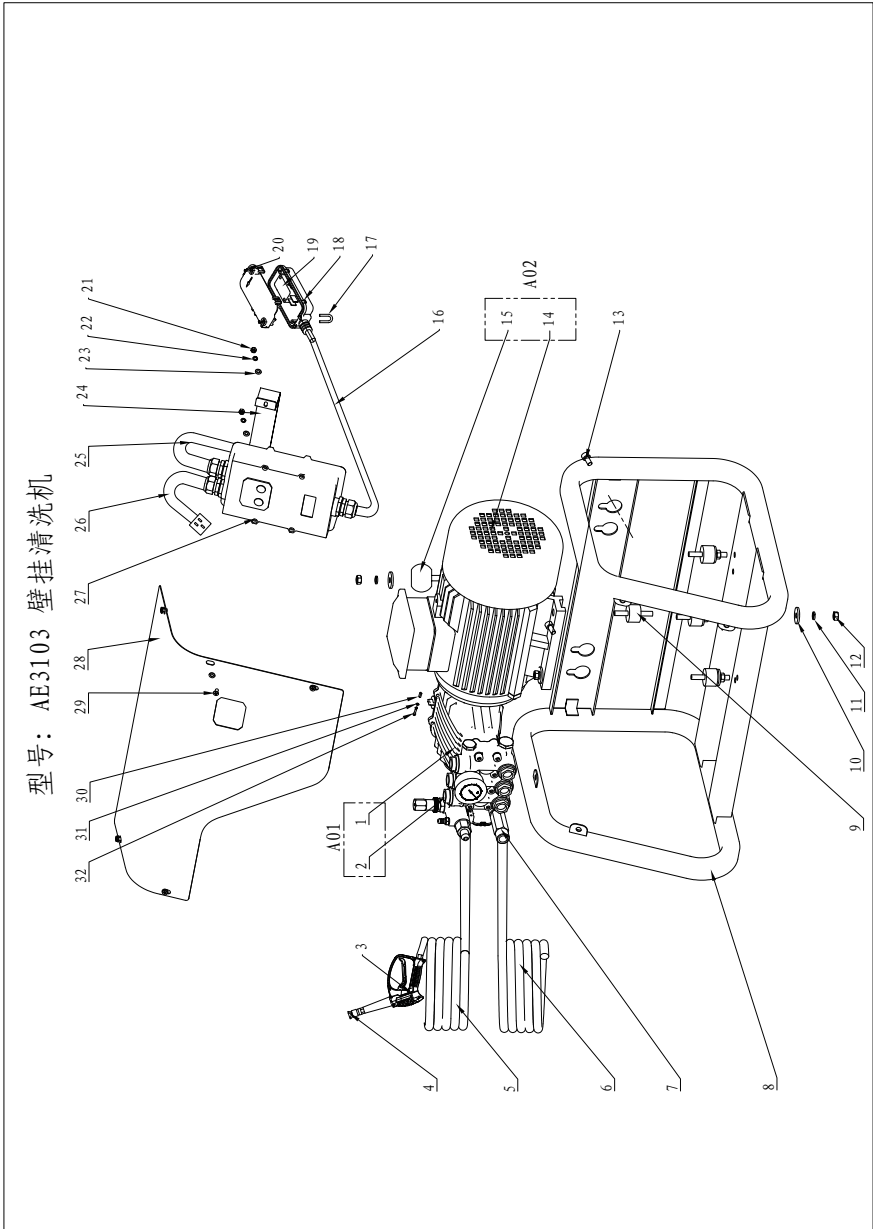
Chapter VI Repair

Machine fault must be handled by trained and experienced technicians

Failures and troubleshooting		
Failures	Causes	Solutions
No water comes out when the pump is in operation	Water supply failure	1 Open water supply valve 2 Check whether the water supply line is smooth 3 The inlet water pressure is too low 4 Install the booster pump 5 Keep air out of the intake pipe
The pump pressure is not up to the rated working pressure	1 There is air in pump 2 Insufficient inlet flow 3 Inlet/outlet check valve wear 4 Pressure regulating seat wear 5 Wear of seals 6 The nozzle is not fit or worn	1 Tighten the water inlet pipe 2 Replace with a large-size water inlet pipe 3 Eliminate pipe kinks 4 Raise the filter height or clean the filter element 5 Increase speed to rated speed 6 Replace the check valve 7 Replace the high pressure valve 8 Replace seals 9 Replace the nozzle
The pressure of the pump is unstable	1 Inlet/outlet check valve wear 2 The check valve is blocked by a foreign body 3 There is air in the system 4 Wear of seals	1 Replace the check valve 2 Clean the check valve 3 Tighten the water inlet pipe connector 4 Replace seals
Pipeline vibration	1 The check valve is blocked 2 The pressure regulating valve is faulty 3 Return water discharge line of pressure regulating valve is too small 4 There is no pressure on the pressure buffer 5 Air in pump	1 Replace the check valve 2 Replace the high pressure valve 3 Replace with larger backwater drain 4 Set the appropriate expansion pressure 5 Tighten the inlet pipe

Failures	Causes	Solutions
Pressure drop	<ol style="list-style-type: none"> 1 Nozzle wear 2 Inlet/outlet check valve wear 3 The check valve is blocked by a foreign body 4 Pressure regulating seat damage 5 Wear of seals 	<ol style="list-style-type: none"> 1 Replace the nozzle 2 Replace the check valve 3 Clean the check valve 4 Replace the high pressure valve seat 5 Replace seals
Pump noise, rod wear	<ol style="list-style-type: none"> 1 Air in system 2 Inlet/outlet check valve spring damaged 3 The check valve is blocked by a foreign body 4 Bearing wear 5 The inlet water temperature is too high 	<ol style="list-style-type: none"> 1 Tighten the inlet/outlet joint 2 Replace the check valve spring 3 Clean the check valve 4 Change the bearing 5 Lower the inlet water temperature
Pump temperature is too high	<ol style="list-style-type: none"> 1 The pump operating pressure is too high 2 Drive belt is too tight 3 Pulleys and drive couplings are not calibrated 	<ol style="list-style-type: none"> 1 Reduce pressure to rated pressure 2 Restore normal belt tension 3 Recalibrate

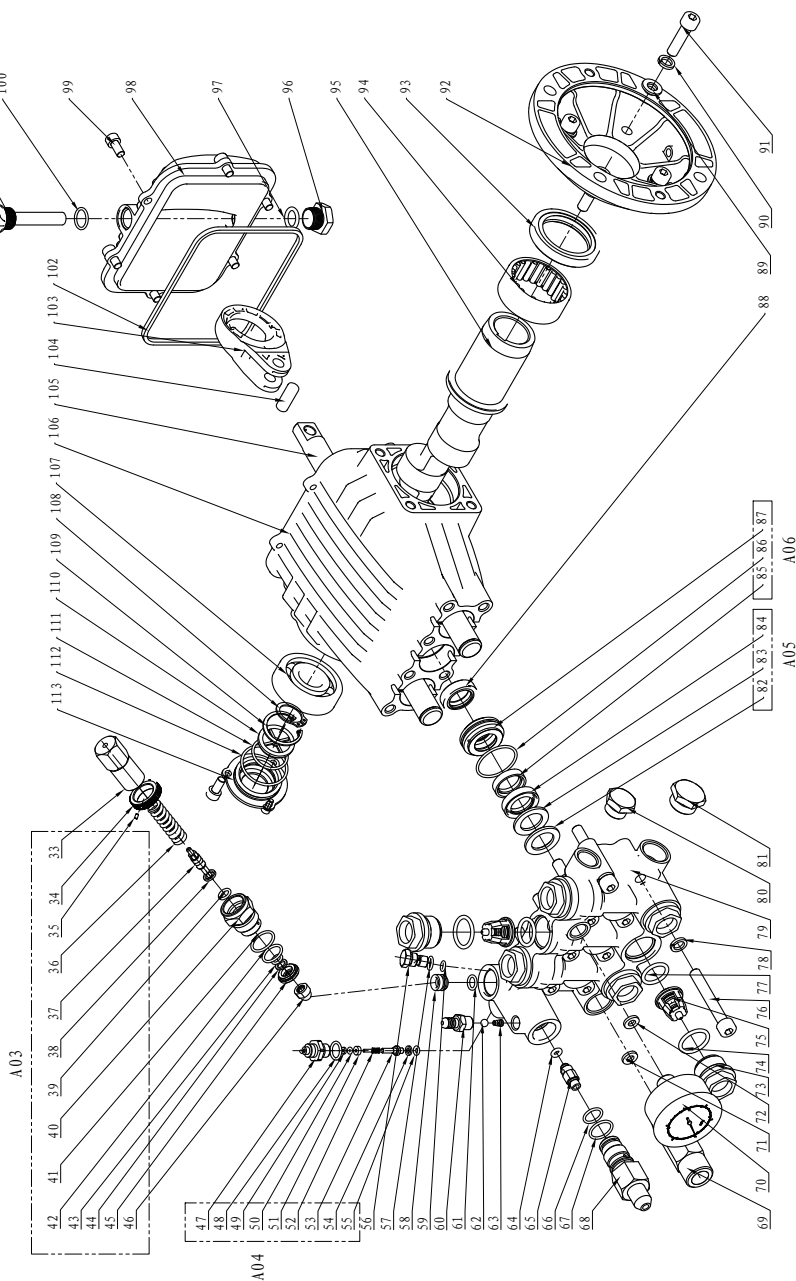
Chapter VII Explosive view



型号: AE3103 壁挂清洗机

AE3103-1 由序号 33-87 组成

AE3103-2 由序号 88-113 组成



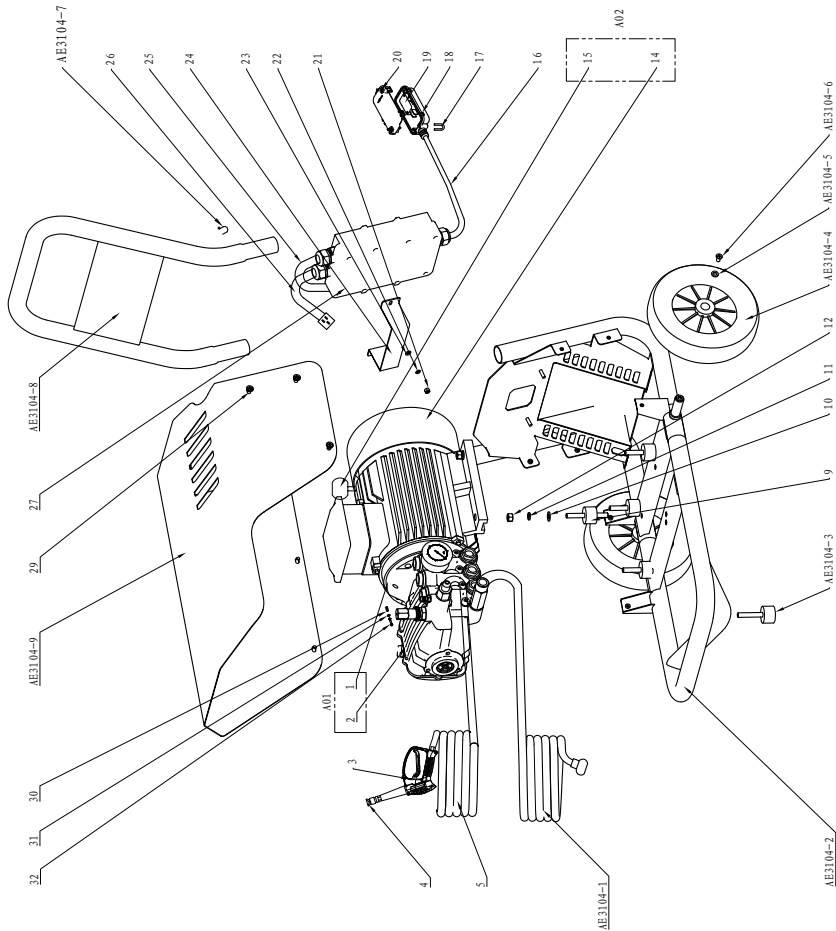
NUMBER	PRODUCT	QUANTITY/UNIT	REMARK
PAE3103-A01	Single pump assembly	1	
PAE3103-A02	Electric motor assembly	1	
PAE3103-A03	Regulator assembly	1	Vulnerable part
PAE3103-A04	Needle valve assembly	1	Vulnerable part
PAE3103-A05	Main water seal assembly	3	
PAE3103-A06	Seal ring seat assembly	3	
PAE3103-1	Copper pumphead assembly	1	
PAE3103-2	Crankcase assembly	1	
PAE3103-3	Gun	1	Vulnerable part
PAE3103-4	Muzzle	4	Vulnerable part
PAE3103-5	Outlet pipe	1	Vulnerable part
PAE3103-6	Inlet pipe	1	
PAE3103-7	Throat clamps	2	
PAE3103-8	Rack	1	
PAE3103-9	Shock absorbing pads	4	
PAE3103-10	Large gasket	8	
PAE3103-11	Spring washers	12	
PAE3103-12	Hex nut	8	
PAE3103-13	Expansion screws	2	
PAE3103-14	A single capacitor starts the motor	1	
PAE3103-15	capacitance	1	
PAE3103-16	Microswitch cable	1	
PAE3103-17	U-pin	1	
PAE3103-18	Switch box	1	
PAE3103-19	Micro switch	1	
PAE3103-20	Self-tapping screws	2	
PAE3103-21	Hex nut	2	
PAE3103-22	Spring washers	2	
PAE3103-23	Flat washers	2	
PAE3103-24	Controller hoop	1	
PAE3103-25	Motor connection wire	1	
PAE3103-26	Power cord	1	
PAE3103-27	Single intelligent motor controller	1	
PAE3103-28	Enclosure	1	

NUMBER	PRODUCT	QUANTITY/UNIT	REMARK
PAE3103-29	Allen screws	5	
PAE3103-30	Flat key	1	
PAE3103-31	Flat washers	4	
PAE3103-32	Allen screws	4	
PAE3103-33	Pressure regulating cap	1	
PAE3103-34	Regulator lock nut	1	
PAE3103-35	Set screws	1	
PAE3103-36	Regulator spring	1	
PAE3103-37	Pressure regulating stem	1	
PAE3103-38	gasket	1	
PAE3103-39	O-rings	1	
PAE3103-40	Pressure regulating mount	1	
PAE3103-41	O-rings	1	
PAE3103-42	O-rings	1	
PAE3103-43	O-rings	1	
PAE3103-44	Retaining rings	1	
PAE3103-45	Pressure regulating fixing pad	1	
PAE3103-46	Pressure regulating ball head	1	
PAE3103-47	Valve seat	1	
PAE3103-48	O-rings	1	
PAE3103-49	Washer A	1	
PAE3103-50	O-rings	1	
PAE3103-51	gasket	1	
PAE3103-52	Stem spring	1	
PAE3103-53	Spool	1	
PAE3103-54	Washer B	1	
PAE3103-55	O-rings	1	
PAE3103-56	start valve stuffer	1	
PAE3103-57	O-rings	1	
PAE3103-58	Pressure regulating valve seat	1	Vulnerable part
PAE3103-59	O-rings	1	
PAE3103-60	Mixtures and fittings	1	
PAE3103-61	O-rings	1	
PAE3103-62	Steel balls	1	

NUMBER	PRODUCT	QUANTITY/UNIT	REMARK
PAE3103-63	Mixing spring	1	
PAE3103-64	O-rings	1	
PAE3103-65	Check spool	1	Vulnerable part
PAE3103-66	O-rings	1	
PAE3103-67	O-rings	1	
PAE3103-68	Water outlet fittings	1	
PAE3103-69	Inlet pipe fittings	1	
PAE3103-70	Pressure gauge	1	
PAE3103-71	Tower filter	1	
PAE3103-72	Pressure gauge gasket	1	
PAE3103-73	Inlet and outlet valve stuffer	6	
PAE3103-74	O-rings	6	
PAE3103-75	Inlet and outlet valve assemblies	6	Vulnerable part
PAE3103-76	Allen screws	8	
PAE3103-77	O-rings	6	
PAE3103-78	Spring washers	12	
PAE3103-79	Pump	1	
PAE3103-80	High pressure stuffiness	1	
PAE3103-81	Low pressure stuffiness	1	
PAE3103-82	base	3	
PAE3103-83	Main seal	3	
PAE3103-84	gasket	3	
PAE3103-85	Secondary seal	3	Vulnerable part
PAE3103-86	O-rings	3	
PAE3103-87	Sealing ring seat	3	
PAE3103-88	Reciprocating oil seals	3	
PAE3103-89	Flat washers	4	
PAE3103-90	Spring washers	12	
PAE3103-91	Allen screws	4	
PAE3103-92	Connection flange	1	
PAE3103-93	Rotary oil seal	1	
PAE3103-94	Needle roller bearings	1	
PAE3103-95	Eccentric shaft	1	
PAE3103-96	Oil drain plug	1	

NUMBER	PRODUCT	QUANTITY/UNIT	REMARK
PAE3103-97	O-rings	1	
PAE3103-98	Back cover	1	
PAE3103-99	Allen screws	9	
PAE3103-100	O-rings	1	
PAE3103-101	Oil dipstick	1	
PAE3103-102	O-rings	1	
PAE3103-103	Connecting rod	3	
PAE3103-104	Plunger pins	3	
PAE3103-105	Ceramic plunger	3	
PAE3103-106	Box	1	
PAE3103-107	Deep groove ball bearings	1	
PAE3103-108	Shaft retaining ring/20	1	
PAE3103-109	Shaft retaining ring/40	1	
PAE3103-110	Oil window	1	
PAE3103-111	O-rings	1	
PAE3103-112	O-rings	1	
PAE3103-113	Oil window end cover	1	

型号: AE3104 推车清洗机



NUMBER	PRODUCT	QUANTITY/UNIT	REMARK
PAE3103-A01	Single pump assembly	1	
PAE3103-A02	Electric motor assembly	1	
PAE3103-A03	Regulator assembly	1	Vulnerable part
PAE3103-A04	Needle valve assembly	1	Vulnerable part
PAE3103-A05	Main water seal assembly	3	
PAE3103-A06	Seal ring seat assembly	3	
PAE3104-1	Inlet pipe assembly	1	Vulnerable part
PAE3104-2	Rack	1	
PAE3104-3	Support feet	1	
PAE3104-4	wheel	2	
PAE3104-5	Large gasket	2	
PAE3104-6	Allen screws	4	
PAE3104-7	Push the handle to secure the card	2	
PAE3104-8	Push handle	1	
PAE3104-9	Enclosure	1	
PAE3103-1	Copper pumphead assembly	1	
PAE3103-2	Crankcase assembly	1	
PAE3103-3	Gun	1	Vulnerable part
PAE3103-4	Muzzle	4	Vulnerable part
PAE3103-5	Outlet pipe	1	Vulnerable part
PAE3103-9	Shock absorbing pads	4	
PAE3103-10	Large gasket	8	
PAE3103-11	Spring washers	12	
PAE3103-12	Hex nut	8	
PAE3103-14	A single capacitor starts the motor	1	
PAE3103-15	capacitance	1	
PAE3103-16	Microswitch cable	1	
PAE3103-17	U-pin	1	
PAE3103-18	Switch box	1	
PAE3103-19	Micro switch	1	
PAE3103-20	Self-tapping screws	2	
PAE3103-21	Hex nut	2	
PAE3103-22	Spring washers	2	
PAE3103-23	Flat washers	2	

NUMBER	PRODUCT	QUANTITY/UNIT	REMARK
PAE3103-24	Controller hoop	1	
PAE3103-25	Motor connection wire	1	
PAE3103-26	Power cord	1	
PAE3103-27	Single intelligent motor controller	1	
PAE3103-29	Allen screws	5	
PAE3103-30	Flat key	1	
PAE3103-31	Flat washers	4	
PAE3103-32	Allen screws	4	
PAE3103-33	Pressure regulating cap	1	
PAE3103-34	Regulator lock nut	1	
PAE3103-35	Set screws	1	
PAE3103-36	Regulator spring	1	
PAE3103-37	Pressure regulating stem	1	
PAE3103-38	gasket	1	
PAE3103-39	O-rings	1	
PAE3103-40	Pressure regulating mount	1	
PAE3103-41	O-rings	1	
PAE3103-42	O-rings	1	
PAE3103-43	O-rings	1	
PAE3103-44	Retaining rings	1	
PAE3103-45	Pressure regulating fixing pad	1	
PAE3103-46	Pressure regulating ball head	1	
PAE3103-47	Valve seat	1	
PAE3103-48	O-rings	1	
PAE3103-49	Washer A	1	
PAE3103-50	O-rings	1	
PAE3103-51	gasket	1	
PAE3103-52	Stem spring	1	
PAE3103-53	Spool	1	
PAE3103-54	Washer B	1	
PAE3103-55	O-rings	1	
PAE3103-56	start valve stuffer	1	
PAE3103-57	O-rings	1	
PAE3103-58	Pressure regulating valve seat	1	Vulnerable part

NUMBER	PRODUCT	QUANTITY/UNIT	REMARK
PAE3103-59	O-rings	1	
PAE3103-60	Mixtures and fittings	1	
PAE3103-61	O-rings	1	
PAE3103-62	Steel balls	1	
PAE3103-63	Mixing spring	1	
PAE3103-64	O-rings	1	
PAE3103-65	Check spool	1	Vulnerable part
PAE3103-66	O-rings	1	
PAE3103-67	O-rings	1	
PAE3103-68	Water outlet fittings	1	
PAE3103-69	Inlet pipe fittings	1	
PAE3103-70	Pressure gauge	1	
PAE3103-71	Tower filter	1	
PAE3103-72	Pressure gauge gasket	1	
PAE3103-73	Inlet and outlet valve stuffer	6	
PAE3103-74	O-rings	6	
PAE3103-75	Inlet and outlet valve assemblies	6	
PAE3103-76	Allen screws	8	
PAE3103-77	O-rings	6	
PAE3103-78	Spring washers	12	
PAE3103-79	Pump	1	
PAE3103-80	High pressure stuffiness	1	
PAE3103-81	Low pressure stuffiness	1	
PAE3103-82	base	3	
PAE3103-83	Main seal	3	
PAE3103-84	gasket	3	
PAE3103-85	Secondary seal	3	Vulnerable part
PAE3103-86	O-rings	3	
PAE3103-87	Sealing ring seat	3	
PAE3103-88	Reciprocating oil seals	3	
PAE3103-89	Flat washers	4	
PAE3103-90	Spring washers	12	
PAE3103-91	Allen screws	4	
PAE3103-92	Connection flange	1	



NUMBER	PRODUCT	QUANTITY/UNIT	REMARK
PAE3103-93	Rotary oil seal	1	
PAE3103-94	Needle roller bearings	1	
PAE3103-95	Eccentric shaft	1	
PAE3103-96	Oil drain plug	1	
PAE3103-97	O-rings	1	
PAE3103-98	Back cover	1	
PAE3103-99	Allen screws	9	
PAE3103-100	O-rings	1	
PAE3103-101	Oil dipstick	1	
PAE3103-102	O-rings	1	
PAE3103-103	Connecting rod	3	
PAE3103-104	Plunger pins	3	
PAE3103-105	Ceramic plunger	3	
PAE3103-106	Box	1	
PAE3103-107	Deep groove ball bearings	1	
PAE3103-108	Shaft retaining ring/20	1	
PAE3103-109	Shaft retaining ring/40	1	
PAE3103-110	Oil window	1	
PAE3103-111	O-rings	1	
PAE3103-112	O-rings	1	
PAE3103-113	Oil window end cover	1	

适用型号 / Model: AE3103/AE3103-3/AE3104/AE3104-3

版本号 / Version No: V-AE-310X-2306

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