

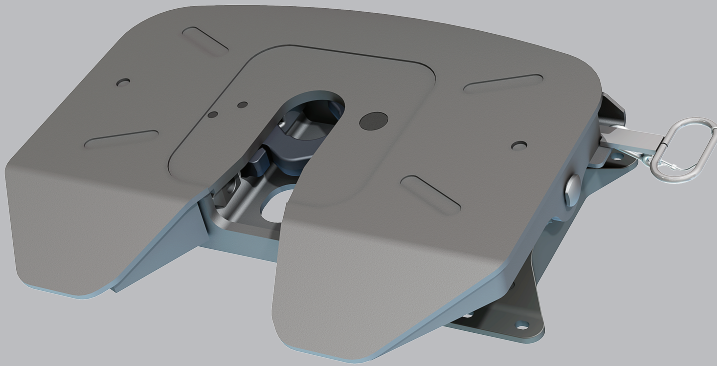
用户手册 Owner's Manual

FW28 系列鞍座

操作、维护和故障排除程序；保修信息

FW28 Series Fifth Wheel

Operation, Maintenance and Troubleshooting
Procedures; Warranty Information



中文

English

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简介

本手册提供正确操作和维护华兰德 FW28 系列鞍座所需的信息。

注： 如需获取华兰德更换组件，请拨打 +86.592.6388.891 联系赛夫-华兰德 客服。

注释、注意和警告

操作或使用华兰德 FW28 系列鞍座之前，您应该首先阅读并理解本手册中展示的全部程序。

重要提示： 请将本手册存放在安全的地方，以供日后查阅。

执行本手册中所述的维护和维修程序时，必须使用适当的工具。

通读本手册，您会发现“注”、“重要提示”、“注意”和“警告”等词，后跟实用的产品信息。为使您更好地理解本手册，这些词的定义如下：

注： 提供额外信息，有助于准确、轻松地执行程序。

重要提示： 提供额外信息，如不遵循，可能无法充分利用产品性能。

注意 不含安全提醒标志时，表示如不避免该潜在危险情况，可能会造成财产损失。

注意 表示如不避免该潜在危险情况，可能会导致轻微或中度人身伤害。

警告 表示如不避免该潜在危险情况，可能会导致严重人员伤亡。

1. 型号识别

鞍座的序列号标签位于鞍座顶板的解锁把手一侧，并且位置靠近挂接坡板 (图1)。

标签上列出了部件号和序列号 (图2)。

2. 标贴要求

标贴 XL-FW20005DC-zh-CN (图3) 和用户手册一起装在塑料袋中，必须将它贴在鞍座附近，方便操作员查看。请按图示粘贴标贴 (图4)。

注： 确保粘贴表面没有油液和润滑脂。
粘贴标贴前，先进行清洁和干燥。

最终用户有责任定期检查标贴，确保其洁净且内容清晰可辨。如果标贴遗失、脱落、损坏或难以辨识，请立即拨打 +86.592.6388.891 联系赛夫-荷兰德客服，以安排更换。

图1

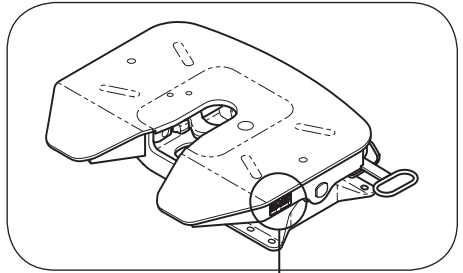


图2

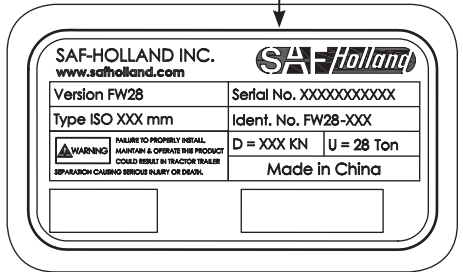


图3

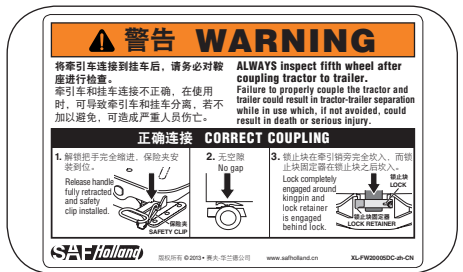
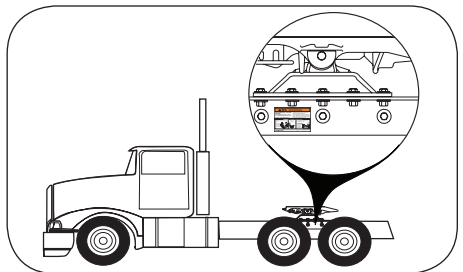


图4



3. 一般安全说明

请阅读并遵守本手册中所有“警告”和“注意”下的危险警示信息。这些信息有助于防止发生严重人身伤害和/或部件损坏。

鞍座的全部安装和维护工作都必须由训练有素的技术人员使用适当的工具并遵循安全操作程序来完成。

重要提示： 开始操作鞍座之前，您必须仔细确认鞍座已经正确安装到车辆上。



警告

如果鞍座安装不当，可能会导致牵引车和挂车分离；如不可避免，可能会造成严重人员伤亡。

如需了解正确的安装程序，请参阅赛夫-华兰德安装手册 XL-FW10008BM-zh-CN（可通过访问www.safholland.cn 在互联网上获取）。



警告

如不遵守这些说明中包含的所有操作程序，可能会引发危险或潜在危险；若不加以避免，可能会造成严重人员伤亡。

这些说明仅适用于鞍座的正确操作。出于必要性、谨慎原因考虑和/或依照法律要求，用户手册中还列出了其他针对拖车和挂车的重要的检查、检视和程序。

只能使用赛夫-华兰德原装零配件。

您可以访问 www.safholland.cn，查找供应赛夫-华兰德原装零配件的赛夫-华兰德技术支持地点，或者拨打 +86.592.6388.891 联系我们的客服。

本手册的更新内容将根据需要发布到我们的网站上，网址为 www.safholland.cn。

4. 鞍座的正确使用

1. 与 ISO 4086 中定义的标准 90 mm 牵引销一起用于牵引挂车，前提是该牵引销工况良好，且牢固地安装或锁定在挂车上。
2. 运输货物，不超过鞍座最大能力：D 值为 190 千牛，垂直载荷为 28 吨。
3. 中等载重应用。

重要提示： 赛夫-华兰德定义的鞍座“中等载重应用”是指越野（碎石或砂砾路面）应用低于 10%，且在公路（维护得当的混凝土路或柏油路）上平行驶。

4. www.safholland.cn 上提供的赛夫-华兰德资料中所建议的用途。

5. 鞍座的错误使用

1. 与非 ISO 4086 标准 90 mm 牵引销一起使用，如牵引销弯曲、尺寸或大小不当、无法确保安装符合 ISO 4086，或牵引销安装在翘曲的挂车支承板上，或上部连接器和鞍座润滑板不支持符合 ISO 4086 标准的 90 mm 牵引销安装尺寸。请参阅赛夫-华兰德服务公告 XL-SB004-01（通过访问www.safholland.cn在互联网上获取），了解有关鞍座润滑板的更多信息。

警告

如果未使用符合 ISO 4086 标准的 90 mm 牵引销进行连接，可能会导致连接错误，造成牵引车和挂车分离；如不可避免此情况，可能会造成严重人员伤亡。

2. 损害或影响鞍座正常使用的拖车行驶。
3. 连接举升装置。
4. 运输载荷超过额定牵引能力。
5. www.safholland.cn 上提供的赛夫-华兰德资料中未建议的任何应用。

6. 连接准备

1. 进行连接之前，您必须检查鞍座和安装。执行和确认如下事项：
 - 紧固松动的紧固件。
 - 更换遗失的紧固件。
 - 维修/更换遗失、破裂或有其他形式损坏的部件。
 - 如果润滑脂沟槽中积聚了大量碎屑，则将其清理干净。
 - 视需要润滑鞍座与挂车的接触表面。
 - 检查鞍座的机械结构。润滑干燥或生锈的组件。
 - 确保鞍座处于合适的位置，可向牵引车合理分配重量。关于鞍座的正确定位，请访问 www.safholland.cn，参考赛夫-华兰德文档 XL-FW10008BM-zh-CN。
2. 确保连接区域平坦、水平，并且没有人员和障碍物。

3. 将鞍座的坡板向下倾斜 (图5)。
4. 确保锁止块打开 (图6)。如果锁止块闭合, 则:
 - a. 取出鞍座解锁把手接口孔中的保险夹 (图7)。
 - b. 握紧并直直地拔出解锁把手, 使锁止块打开。
 - c. 将把手凹口卡到鞍座上 (图8)。
 - d. 使用 90 mm 管子或杠杆手动打开锁爪。
 - e. 目视检查鞍座锁孔, 确保锁止块完全打开、无积雪或任何碎屑, 从而确保鞍座已准备好连接牵引销 (图6)。
5. 检查确认牵引销没有被锁销或其他安全装置所阻挡。

警告 连接前未取下牵引锁销, 可导致连接不当, 若不加以避免, 可造成严重伤亡。

6. 检查牵引销是否过度磨损和损坏 (使用华兰德销规 TF-0110), 并检查支承板弯曲情况 (见赛夫·华兰德服务公告 XL-SB020 和 XL-SB033)。

图5

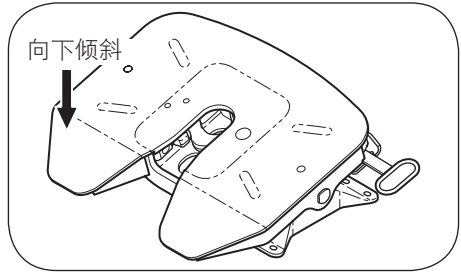


图6

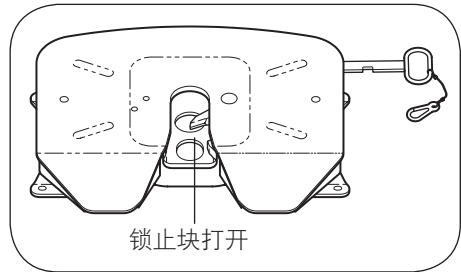


图7

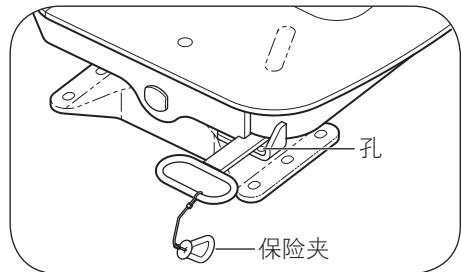
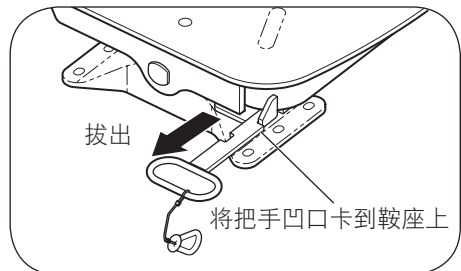


图8



7. 连接程序

1. 在挂车轮子下放置垫块。
2. 调整牵引车位置，使鞍座的中心与牵引销对齐 (图9)。
3. 驾驶牵引车直线、缓慢倒向挂车。在牵引车即将接触到挂车时停车 (图10)。
4. 启用牵引车驻车制动。挂空挡后下车。
5. 调节挂车高度，使鞍座能够抬起挂车。挂车应在鞍座支架销后 100-150 mm 处接触鞍座 (图11)。

注： 要正确操作支撑装置，请遵循支撑装置制造商发布的说明。

重要提示： 如果挂车过高，牵引销将无法与锁爪正确连接。

6. 再次上车，缓慢倒向挂车，使牵引销卡入鞍座。

警告

未在适当高度完成与挂车的连接可能会导致连接错误，从而造成牵引车和挂车分离；如不可避免此情况，可能会造成严重人员伤亡。

7. 下车连接空气管路和电气线路。
8. 升高支腿，直至垫板刚好高出地面。
9. 再次上车并执行牵引测试作为初步检查，方法为锁定挂车制动器并利用牵引车向前牵引，以确保不会出现牵引车和挂车分离的情况 (图12)。
10. 启用牵引车驻车制动。

图9

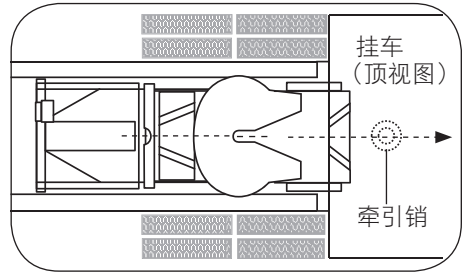


图10

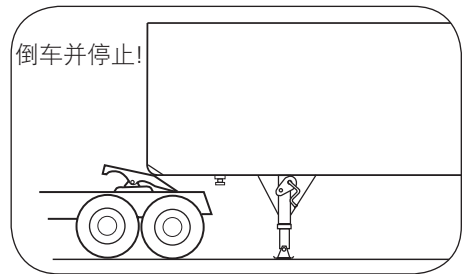


图11

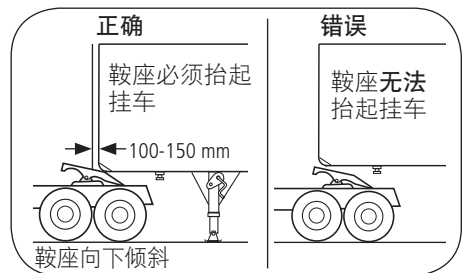
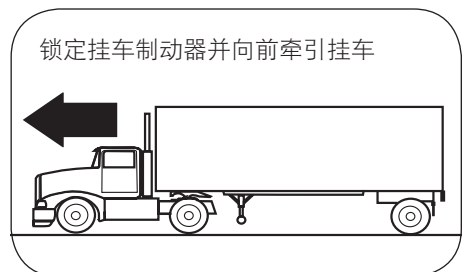


图12



11. 下车进行以下目视检查，以确保锁止块闭合 (图13)。
 - a. 解锁把手完全缩回。
 - b. 在挂车上部连接板和鞍座之间不得有空隙。
 - c. 锁止块围绕牵引销完全闭合。
 - d. 锁止块固定器塞在锁止块之后。
12. 安装保险夹 (图14)。
13. 如果您未实现正确连接，请重复上述连接程序。

警告 未能正确连接牵引车和挂车可能会导致牵引车和挂车分离；如不可避免此情况，可能会造成严重人员伤亡。

重要提示： 切勿使用任何无法正常使用的鞍座。

警告 如果故障鞍座没有修好就直接使用，可能会导致牵引车和挂车分离；如不可避免此情况，可能会造成严重人员伤亡。

14. 将支腿从地面完全收回，然后固定手摇曲柄 (图15)。

注： 要正确操作支撑装置，请遵循支撑装置制造商发布的说明。

15. 移除车轮垫块并继续进行行车前检查。

图13

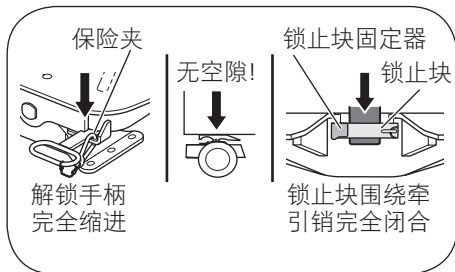


图14

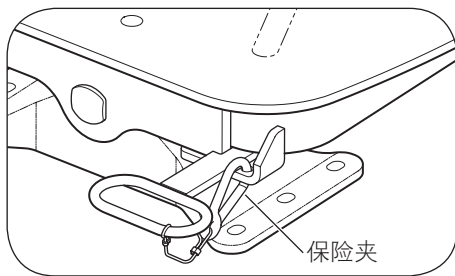
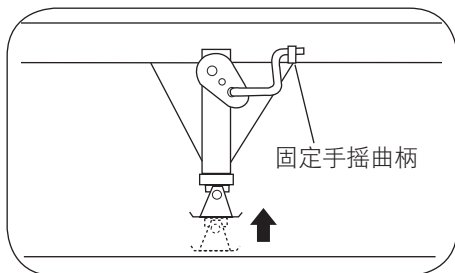


图15



8. 分离程序

1. 调整牵引车和挂车的位置，使其呈一条直线停靠在坚实、水平且没有障碍物和人员的地面上。
2. 启用挂车制动。
3. 将牵引车缓慢倒车至紧挨挂车，以便释放鞍座锁止块上的压力。
4. 启用牵引车驻车制动。
5. 下车并在挂车轮子下安放垫块。
6. 降低支撑装置，直至垫板刚好接触到地面 (图16)。

注： 要正确转移鞍座上的挂车重量，请遵循支撑装置制造商发布的说明。切勿升起挂车使其离开鞍座。

7. 从挂车上断开空气管路和电气线路，并将它们固定到牵引车。
8. a. 取出鞍座解锁把手接口孔中的保险夹 (图17)。
- b. 握紧把手。直直地拔出解锁把手，使锁止块打开。
- c. 将把手凹口卡到鞍座上 (图18)。
9. 解除牵引车驻车制动并缓慢驶离挂车。

图16

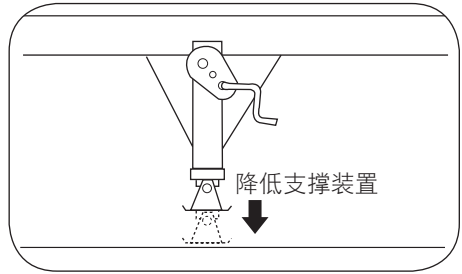


图17

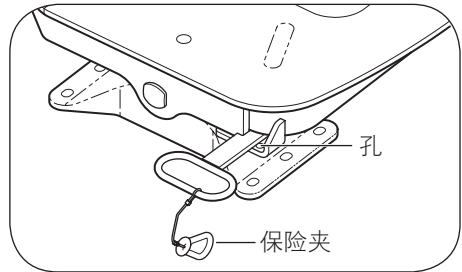
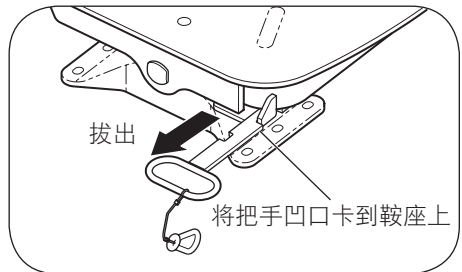


图18



9. 鞍座维护

重要提示： 所有维护工作都必须由训练有素的技术人员使用适当的工具并遵循安全操作程序来完成。

重要提示： 所有维护工作都必须在牵引车与挂车分离之后进行。

警告 如果鞍座维护不当，可能会导致牵引车和挂车分离；如不可避免，可能会造成严重人员伤亡。

注： 维护时不需要拆卸鞍座顶板，但进行维修时可能需要拆卸顶板。

10. 顶板拆卸

1. 拆下鞍座顶板两侧的支架销固定夹 (图19)。
2. 使用撬杠将支架固定销从鞍座顶板中撬出 (图20)。
3. 使用提升能力达到 500 磅 (227 千克) 的提升设备，将顶板从安装底座上拆除。将鞍座放置于平坦洁净的工作区域内。

注： 遵循提升设备制造商发布的说明，正确操作提升设备。

图19

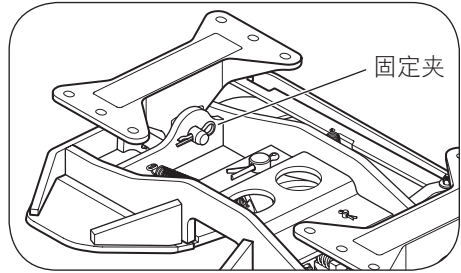
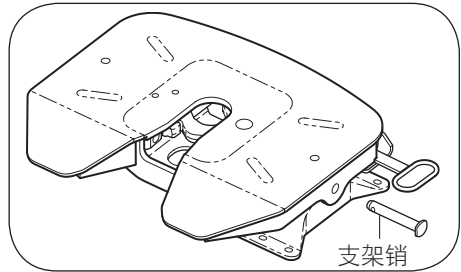


图20



11. 鞍座润滑

重要提示： 要实现 FW28 系列鞍座的最长使用寿命，就必须对鞍座进行润滑。请按照列出的时间间隔执行以下程序。

- 每周或每4,000公里检查鞍座与挂车的接触表面，选择更加频繁的一个 (图21)。
- 每周或每4,000公里检查鞍座与牵引销的接触表面，以及鞍座前端的锁止块，选择更加频繁的一个(图22)。
- 在挂车与鞍座的所有接触表面保持一层大约 1-3 mm 厚的润滑膜。
- 如果润滑脂沟槽中积聚了大量碎屑，则将其清理干净。
- 使用防水型锂基润滑脂进行润滑。
- 对于锁止机构，最少每三(3)个月或每行驶48000公里润滑一次 (图22)。
- 最少每三(3)个月或每行驶 48000公里使用位于鞍座下方的油嘴润滑一次鞍座顶板和支架接触表面 (图23)。
- 对于锁止机构，每六(6)个月或每行驶96000公里彻底清洁并重新润滑一次。

重要提示： 如果在冬天的冰雪气候条件下使用鞍座，则除上述常规润滑外，还应在每年春天和秋天进行润滑，以确保达到最佳使用条件。

图21

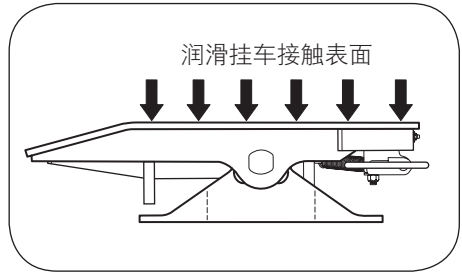


图22

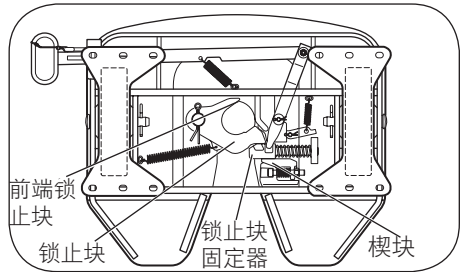
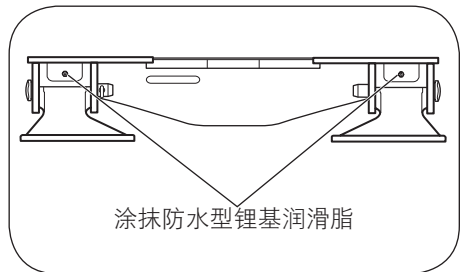


图23



正确的润滑方法

1. 清除鞍座与挂车的所有接触和锁止机构表面上的旧润滑脂和碎屑。
2. 使用防水锂基润滑脂给锁止块、锁止块固定器和楔块涂抹一层约 1-2 mm 厚的润滑膜 (图24)。
3. 使用轻油润滑所有活动零件和机械轴心点。
4. 使用防水锂基润滑脂给鞍座与挂车的所有接触表面新涂抹一层 1-3 mm 厚的膜 (图25)。
5. 使用位于鞍座下方的油嘴，润滑鞍座顶板和支架接触表面 (图26)。

重要提示： 如果在鞍座的正常使用寿命期间锁止机构运作不畅（即连接、分离或拔出解锁把手有问题，请清洁并润滑锁止机构）(图24)。

图24

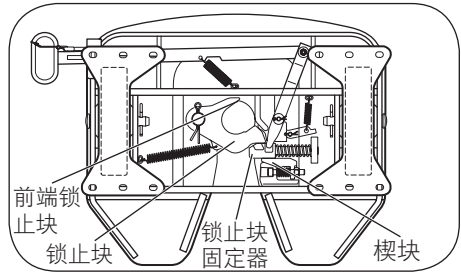


图25

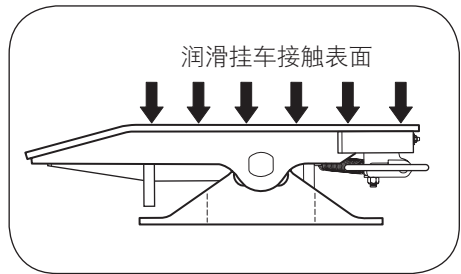
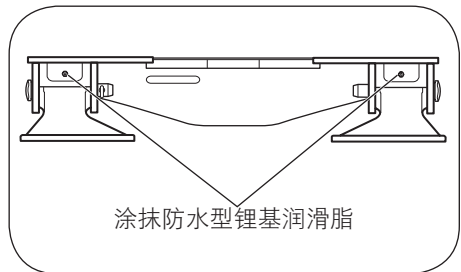


图26



12. 鞍座调节

至少每行驶 96000 公里应调节一次鞍座，或者，如果在行车期间注意到牵引销和鞍座之间过度移动，也应进行调节。

重要提示： 牵引车和挂车之间过度移动可能会影响车辆的驾驶。

警告

如果鞍座调节不当，可能会导致车辆失控；如不可避免，可能会造成严重人员伤亡。

注： 为了实现正确的调节，赛夫-华兰德建议使用零件号为 TF-TLN-1500 的华兰德锁止测试器。

以下步骤描述了正确的鞍座调节方法。

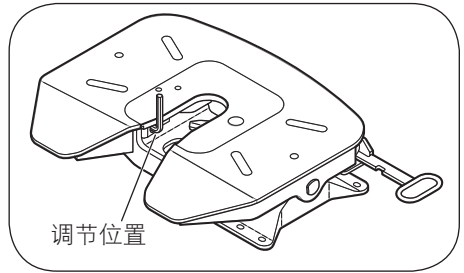
1. 如果鞍座已锁定，则取出保险夹并拔出解锁把手，解锁鞍座。
2. 将锁止测试器插入鞍座并按本手册中的连接说明进行连接。
3. 使用 14 mm 通用扳手 (图27) 或内六角套筒组合，顺时针方向旋紧调整螺钉。
4. 现在，通过逆时针旋转 1-1/2 圈将调整螺钉旋松，以消除部件间的残余应力。
5. 将鞍座的连接和分离重复几次，以确认调节正确。如果鞍座出现过度移动，重复步骤 1-3。

重要提示： 使用鞍座之前，您必须确认鞍座能够正常使用。

警告

如果没有确认，可能会导致牵引车和挂车分离；如不可避免，可能会造成严重人员伤亡。

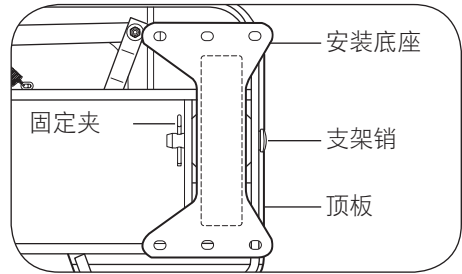
图27



13. 顶板安装

1. 使用提升能力达到 500 磅 (227 千克) 的提升设备，将鞍座顶板安装到其安装底座上。
2. 重新将支架销穿过鞍座和安装底座，并用支架销固定夹固定 (图28)。

图28



14. 故障排除

难以连接到挂车：

✓	可能原因	解决办法
	尝试连接时速度过快。	按照第7节的程序进行连接。
	挂车可能过高；牵引销不能正确进入锁止块。	根据制造商的说明降低挂车高度。
	锁止块闭合。	从鞍座解锁把手接口孔中取出保险夹。完全拔出解锁把手。使用撬杠撬开锁止块。
	累积的锈迹或尘垢影响锁止块操作。	彻底清洁鞍座，按照第11节的程序重新进行润滑。
	锁止块被调节得过紧。	按照第12节的程序检查锁止块调节。
	锁止块可能已损坏。	必须使用相应的维修套件重装鞍座。
	解锁把手损坏、弯曲。	使用相应的维修套件更换解锁把手。
	牵引销弯曲、上部连接器损坏或“润滑板”使用不当可能影响了锁止块的移动。	根据华兰德服务公告 XL-SB020 中的详细描述，检查牵引销和上部连接板。视需要进行维修/更换。拆除任何安装不当或错误指定的润滑板。请参阅华兰德服务公告 XL-SB004-01，了解润滑板的警告信息。

难以与挂车分离：

✓	可能原因	解决办法
	牵引车可能向锁止块施加了压力。	锁定挂车制动，将牵引车倒车至紧挨牵引销，以便释放鞍座锁止块上的压力。启用驻车制动，然后拔出解锁把手。
	辅助锁止块未松开。	从鞍座解锁把手接口孔中取出保险夹。
	累积的锈迹或尘垢影响锁止块操作。	彻底清洁鞍座，按照第11节的程序重新进行润滑。
	锁止块被调节得过紧。	按照第12节的程序检查锁止块调节。
	解锁时，解锁把手不能保持拔出状态或者必须用手拉着。	必须使用相应的维修套件重装鞍座。
	解锁系统的零件缺失或损坏。	必须使用相应的维修套件重装鞍座。
	开口区域的顶板弯曲/损坏，限制了移动。	必须更换整块鞍座顶板。
	牵引销弯曲、上部连接器损坏或“润滑板”使用不当可能影响了锁止块的移动。	根据华兰德服务公告 XL-SB020 中的详细描述，检查牵引销和上部连接板。视需要进行维修/更换。拆除任何安装不当或错误指定的润滑板。请参阅华兰德服务公告 XL-SB004-01，了解润滑板的警告信息。

鞍座与牵引销之间过度移动:

✓	可能原因	解决办法
	鞍座锁止块需要调节。	按照第 12 节的程序操作。
	无法进一步调节鞍座。	必须使用相应的维修套件重装鞍座。
	牵引销松动。	维修挂车。
	牵引销磨损。	请使用华兰德 TF-0110，检查牵引销是否过度磨损。如有必要，则进行更换。

转向或停止困难:

✓	可能原因	解决办法
	鞍座顶部表面缺乏润滑。	使用高压锂基润滑脂润滑鞍座板的顶部。按照第 11 节中建议的润滑程序进行操作。
	挂车上部连接板翘曲。	检查确认上部连接板平坦，如有必要则进行更换。请参阅华兰德服务公告 XL-SB020。

15. 重装和更换套件

重装和更换套件	零件号
重装套件—标准右手解锁把手	RK-280-A



SAF-HOLLAND Group

注

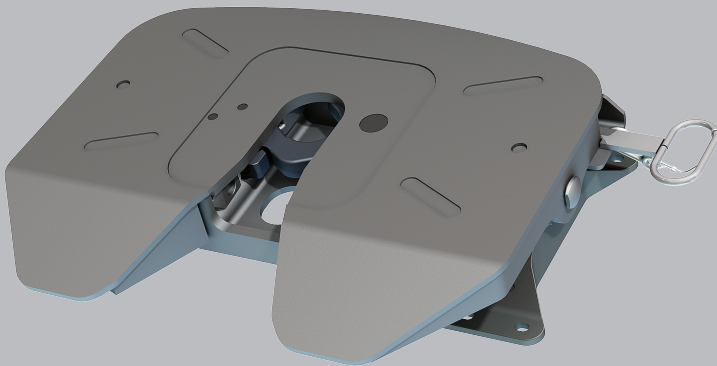
中文



Owner's Manual

FW28 Series Fifth Wheel

Operation, Maintenance and Troubleshooting
Procedures; Warranty Information



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Introduction

This manual provides the information necessary for the proper operation and maintenance of HOLLAND® FW28 series fifth wheels.

NOTE: For HOLLAND® replacement components contact SAF-HOLLAND® Customer Service at +86.592.6388.891.

Notes, Cautions, and Warnings

You MUST read and understand all of the procedures presented in this manual before operating or starting work on any HOLLAND® FW28 Series fifth wheel.

IMPORTANT: Keep this manual in a safe location for future reference.

Proper tools MUST be used to perform the maintenance and repair procedures described in this manual.

Throughout this manual, you will notice the terms “NOTE,” “IMPORTANT,” “CAUTION,” and “WARNING” followed by useful product information. So that you may better understand the manual, those terms are defined as follows:

NOTE: Includes additional information to enable accurate and easy performance of procedures.

IMPORTANT: Includes additional information that if not followed could lead to hindered product performance.

CAUTION Used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, could result in property damage.

CAUTION Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

1. Model Identification

Fifth wheel serial tags are located on the release handle side of the fifth wheel top plate and positioned near the pickup ramps (**Figure 1**).

The part number and serial number are listed on the tag (**Figure 2**).

2. Decal Requirements

Decal XL-FW20005DC-zh-CN (**Figure 3**) enclosed in the plastic bag with the Owner's Manual, **MUST** be installed near the fifth wheel and easily viewed by the operator. Position the decal as illustrated (**Figure 4**).

NOTE: Make sure surface is free of oil and grease. Clean and dry before applying decal.

It is the responsibility of the end user to periodically inspect the decal and ensure that it is clean and completely legible. If the label is missing, loose, damaged or difficult to read, contact SAF-HOLLAND® Customer Service at +86.592.6388.891 to order replacements immediately.

Figure 1

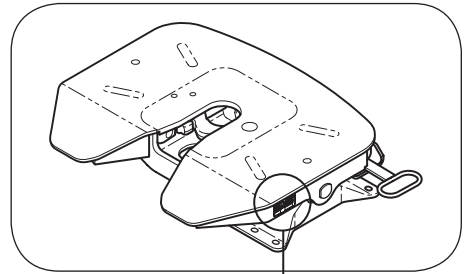


Figure 2

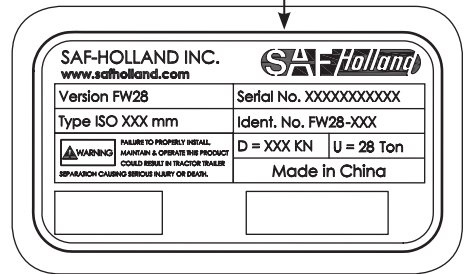


Figure 3

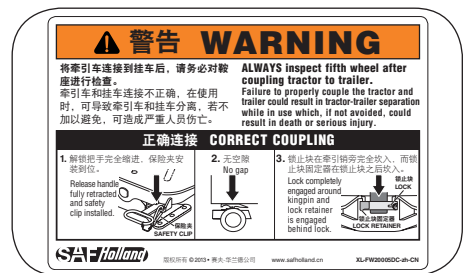
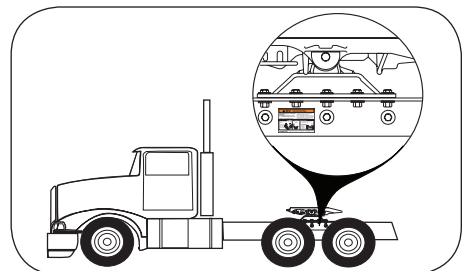


Figure 4



3. General Safety Instructions

Read and observe all Warning and Caution hazard alert messages in this manual. They provide information that can help prevent serious personal injury, damage to components, or both.

All fifth wheel installation and maintenance **MUST** be performed by a properly trained technician using proper tools and safe procedures.

IMPORTANT: Prior to operation of the fifth wheel, you must be thoroughly satisfied that the fifth wheel has been appropriately installed on the vehicle.

⚠ WARNING Failure to properly install the fifth wheel could result in tractor-trailer separation which, if not avoided, could result in death or serious injury.

For proper installation procedures, refer to SAF-HOLLAND® Installation Manual XL-FW10008BM-zh-CN (available on the Internet at www.safholland.cn).

⚠ WARNING Failure to follow all the operating procedures contained in these instructions could result in a hazardous condition or cause a hazardous condition to develop which, if not avoided, could result in death or serious injury.

These instructions apply to the proper operation of your fifth wheel only. There are other important checks, inspections, and procedures listed in the Owner's Manuals for your tractor and trailer that are necessary, prudent, and/or required by law.

Only SAF-HOLLAND® Original Parts should be used.

A list of SAF-HOLLAND® technical support locations that supply SAF-HOLLAND® Original Parts can be found on the Internet at www.safholland.cn or contact Customer Service at +86.592.6388.891.

Updates to this manual will be published as necessary on the Internet at www.safholland.cn.

4. Fifth Wheel Intended Use

1. Pulling trailers with standard 90 mm kingpin as defined in ISO 4086, which are in good condition and securely mounted or locked in position in the trailer.
2. Transporting loads that are within the maximum fifth wheel rated capacities: 190 kN D-Value, 28 tonne vertical load.
3. In moderate duty applications.
2. Tow-away operations which damage or interfere with the proper operation of the fifth wheel.
3. The attachment of lifting devices.
4. The transport of loads in excess of rated capacity.
5. Applications other than those recommended in SAF-HOLLAND® literature available on the Internet at www.safholland.cn.

IMPORTANT: SAF-HOLLAND® definition of moderate duty fifth wheel applications is less than 10% off-road (gravel or crushed rock roads) with balance on-road (maintained concrete or asphalt roads).

4. As recommended in SAF-HOLLAND® literature available on the Internet at www.safholland.cn.

5. Fifth Wheel Non-Intended Use

1. Operating with a non-ISO 4086 compliant 90 mm kingpin, such as kingpins which are bent, improper size or dimensions, not secured to maintain ISO 4086 configuration, or which are installed in warped trailer bolster plates, or upper coupler and fifth wheel lube plates that do not maintain the ISO 4086 90 mm kingpin dimensions. Refer to SAF-HOLLAND® Service Bulletin XL-SB004-01 (available on the Internet at www.safholland.cn) for more information on fifth wheel lube plates.

⚠ WARNING Failure to couple with a ISO 4086 compliant standard 90 mm kingpin could result in improper coupling, allowing tractor-trailer separation, which if not avoided, could result in death or serious injury.

6. Coupling Preparation

1. Prior to coupling, you **MUST** inspect the fifth wheel and mounting. Perform and verify the following:
 - Tighten loose fasteners.
 - Replace missing fasteners.
 - Repair/replace missing, cracked or otherwise damaged components.
 - Clean grease grooves if a large amount of debris is present.
 - Lubricate fifth wheel-to-trailer contact surfaces, if needed.
 - Inspect fifth wheel mechanism. Lubricate dry or rusty components.
 - Make sure fifth wheel is in appropriate position for weight distribution on the tractor. For proper positioning of the fifth wheel, refer to SAF-HOLLAND® publication XL-FW10008BM-zh-CN available on the Internet at www.safholland.cn.
2. Make sure coupling area is flat, level, and clear of persons and obstacles.

3. Tilt ramps of fifth wheel downward (**Figure 5**).
4. Make sure lock is open (**Figure 6**). If lock is closed:
 - a. Remove the safety clip from the fifth wheel release handle interface hole (**Figure 7**).
 - b. Grip handle securely and pull the release handle straight out to disengage lock.
 - c. Hook handle notch on fifth wheel (**Figure 8**).
 - d. Use a 90 mm pipe, or lever bar to manually open the lock jaw.
 - e. Visually inspect fifth wheel throat to ensure locks are completely open, free of snow or any debris, and the fifth wheel is ready to accept kingpin (**Figure 6**).
5. Verify that kingpin is not obstructed by a kingpin lock or other security device.

⚠ WARNING Failure to remove kingpin lock prior to coupling may result in improper coupling which, if not avoided, could result in death or serious injury.

6. Inspect kingpin for excessive wear and damage (use HOLLAND® Kingpin Gage tool TF-0110) along with bolster plate bow (Refer to SAF-HOLLAND® Service Bulletins XL-SB020 and XL-SB033).

Figure 5

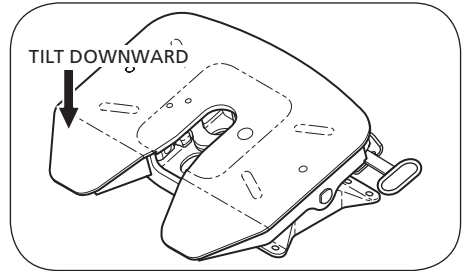


Figure 6

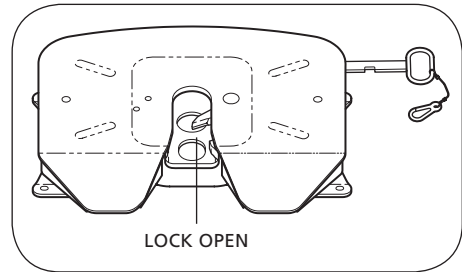


Figure 7

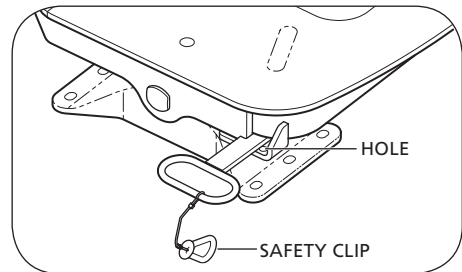
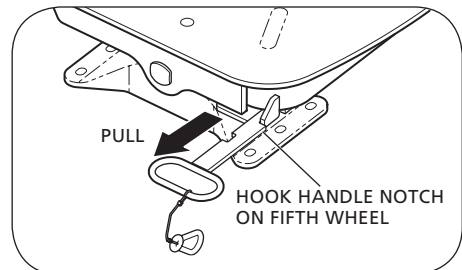


Figure 8



7. Coupling Procedures

1. Chock trailer wheels.
2. Position the tractor so the center of the fifth wheel is aligned with the kingpin (**Figure 9**).
3. Traveling in a straight line, slowly back tractor to trailer. STOP the tractor before making contact with the trailer (**Figure 10**).
4. Set tractor parking brake. Place vehicle in neutral and exit cab.
5. Adjust trailer height so that fifth wheel will lift trailer. Trailer should contact fifth wheel 100-150 mm behind fifth wheel bracket pin (**Figure 11**).

NOTE: For proper operation of landing gear, follow the instructions published by the landing gear manufacturer.

IMPORTANT: If trailer is too high the kingpin will not properly connect with the lock jaw.

6. Re-enter cab and slowly back into the trailer, engaging kingpin in the fifth wheel.

⚠ WARNING Failure to couple with the trailer at the proper height could result in improper coupling, allowing tractor and trailer separation, which if not avoided, could result in death or serious injury.

7. Exit cab and connect the air and electrical lines.
8. Raise the landing gear legs until the pads are just above the ground.
9. Re-enter the cab and perform a pull test as an INITIAL CHECK by locking the trailer brakes and pulling forward with the tractor to make sure that tractor-trailer separation does not occur (**Figure 12**).
10. Set the tractor parking brake.

Figure 9

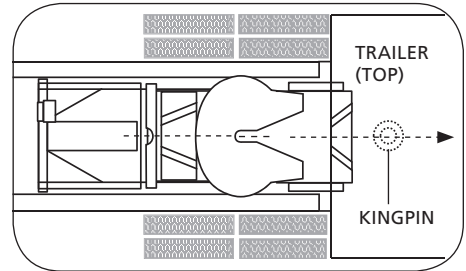


Figure 10

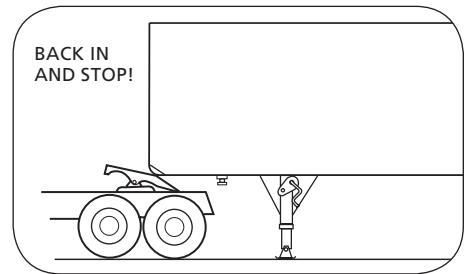


Figure 11

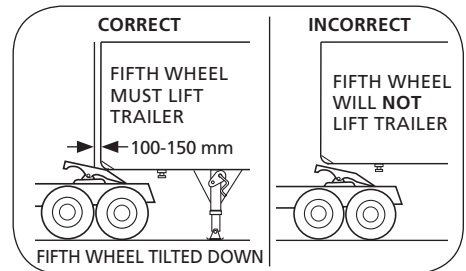
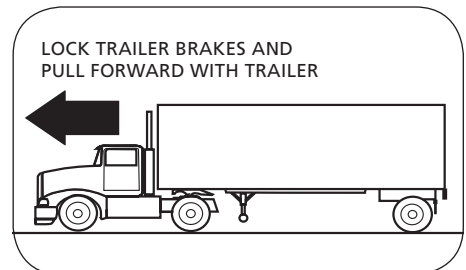


Figure 12



11. Exit the cab and visually inspect for the following to ensure that the lock is closed (**Figure 13**).
 - a. Release handle fully retracted.
 - b. No gap is permissible between the trailer upper coupler plate and the fifth wheel.
 - c. Lock completely closed around kingpin.
 - d. Lock retainer is engaged behind lock.
12. Install safety clip (**Figure 14**).
13. If you DO NOT achieve a proper couple, repeat the coupling procedure.

⚠ WARNING Failure to properly couple the tractor and trailer could result in tractor-trailer separation while in use which, if not avoided, could result in death or serious injury.

IMPORTANT: DO NOT use any fifth wheel that fails to operate properly.

⚠ WARNING Failure to repair a malfunctioning fifth wheel before use could result in tractor-trailer separation which, if not avoided, could result in death or serious injury.

14. Fully retract the landing gear legs off the ground and secure the crank handle (**Figure 15**).

NOTE: For proper operation of landing gear, follow the instructions published by the landing gear manufacturer.

15. Remove the wheel chocks and continue with the pre-trip inspection.

Figure 13

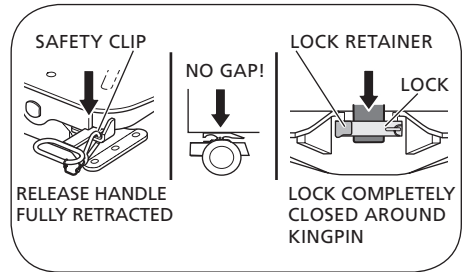


Figure 14

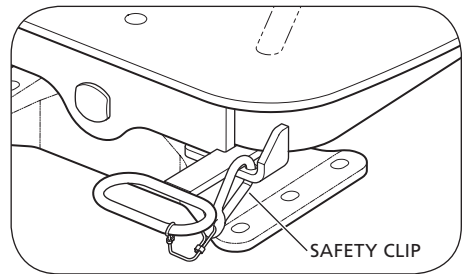
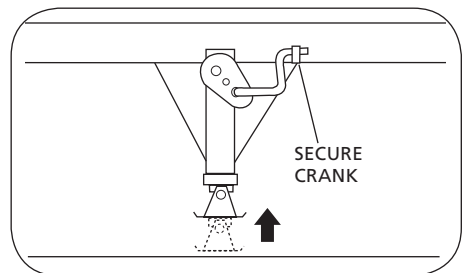


Figure 15



8. Uncoupling Procedures

1. Position the tractor and trailer, in straight alignment, on firm, level ground clear of obstacles and persons.
2. Set the trailer brakes.
3. Slowly back the tractor tightly against the trailer to relieve pressure on the fifth wheel locks.
4. Set the tractor parking brake.
5. Exit the cab and chock the trailer wheels.
6. Lower the landing gear until the pads just touch the ground (**Figure 16**).

NOTE: For proper operation and ability to transfer trailer weight from the fifth wheel, follow the landing gear manufacturer's published instructions. **DO NOT** raise trailer off of the fifth wheel.

7. Disconnect the air and electrical lines from the trailer and secure to tractor.
8.
 - a. Remove the safety clip from the fifth wheel release handle interface hole (**Figure 17**).
 - b. Grip handle securely and pull the release handle straight out to disengage lock.
 - c. Hook handle notch on fifth wheel (**Figure 18**).
9. Release the tractor parking brake and slowly pull away from the trailer.

Figure 16

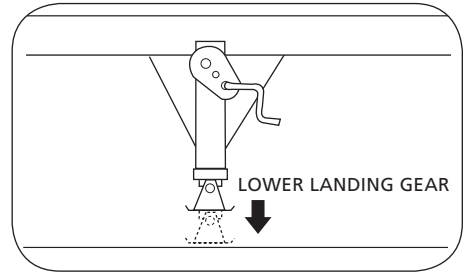


Figure 17

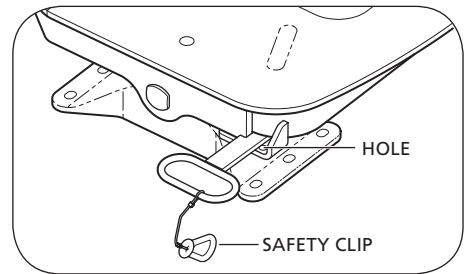
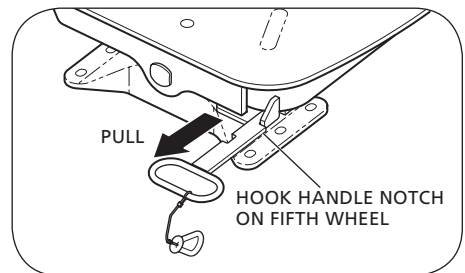


Figure 18



9. Fifth Wheel Maintenance

IMPORTANT: All maintenance **MUST** be performed by a properly trained technician using proper tools and safe procedures.

IMPORTANT: All maintenance **MUST** be performed while the tractor is uncoupled from the trailer.

⚠ WARNING Failure to properly maintain your fifth wheel could result in tractor-trailer separation which, if not avoided, could result in death or serious injury.

NOTE: Removal of the fifth wheel top plate is not required for maintenance but may be required when performing repairs.

10. Top Plate Removal

1. Remove bracket pin retention clips from both sides of fifth wheel top plate (**Figure 19**).
2. Using a pry bar, pull bracket retention pins out of fifth wheel top plate (**Figure 20**).
3. Using a lifting device capable of lifting 500 lbs. (227 kg), remove the top plate from the mounting base. Place fifth wheel on a flat, clean working area.

NOTE: Follow instructions published by lifting device manufacturer for proper operation of lifting device.

Figure 19

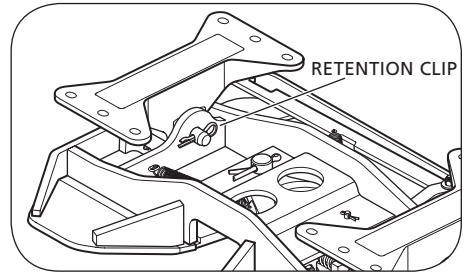
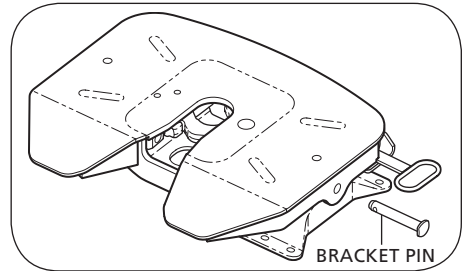


Figure 20



11. Fifth Wheel Lubrication

IMPORTANT: Fifth wheel lubrication is necessary to get the maximum service life from your FW28 series fifth wheel. Perform the following procedures at the intervals listed.

- Check the fifth wheel-to-trailer contact surfaces weekly or at 4,000 km, whichever is more frequent (**Figure 21**).
- Inspect the fifth wheel to kingpin contact surfaces, the fifth wheel front lock weekly or at 4,000 km, whichever is more frequent (**Figure 22**).
- Maintain a film of lubrication approximately 1 to 3 mm thick on all trailer to fifth wheel contact surfaces.
- Clean grease grooves if a large amount of debris is present.
- Lubricate using a water-resistant lithium-based grease.
- Lubricate the locking mechanism every three (3) months or 48,000 km at a minimum (**Figure 22**).
- Using grease fittings located under the fifth wheel, lubricate the fifth wheel top plate and bracket contact surfaces every three (3) months or 48,000 km at a minimum (**Figure 23**).
- Thoroughly clean and re-lubricate the locking mechanism every six (6) months or 96,000 km.

IMPORTANT: If your fifth wheel operates in snowy or icy winter conditions, lubrication should be performed every fall and spring in addition to routine lubrication (as noted above) to ensure optimum operation.

Figure 21

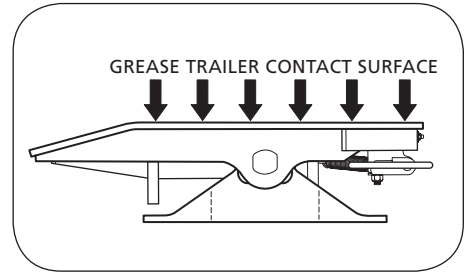


Figure 22

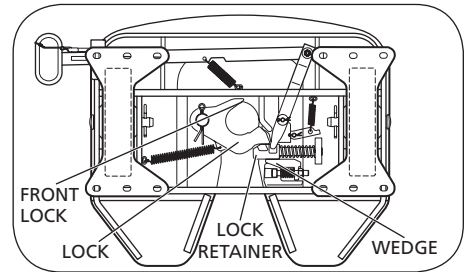
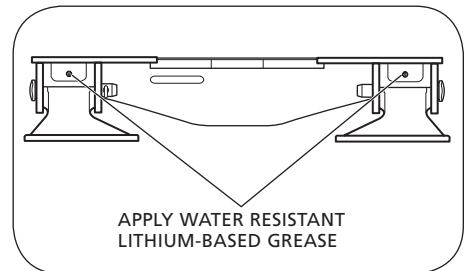


Figure 23



Proper Lubrication Method

1. Remove the old grease and debris from all fifth wheel-to-trailer contact and locking mechanism surfaces.
2. Using a water-resistant lithium-based grease, apply a film of lubrication approximately 1 to 2 mm thick to the lock, lock retainer, and wedge (**Figure 24**).
3. Using a light oil, lubricate all moving parts and mechanical pivot points.
4. Using a water-resistant lithium-based grease, apply a new film 1 to 3 mm thick to all fifth wheel-to-trailer contact surfaces (**Figure 25**).
5. Using grease fittings located on the underside of the fifth wheel, lubricate the fifth wheel top plate and bracket contact surfaces (**Figure 26**).

IMPORTANT: Clean and lubricate locking mechanism if operational difficulties arise during the service life of your fifth wheel (i.e. problems with coupling, uncoupling, or pulling the release handle) (**Figure 24**).

Figure 24

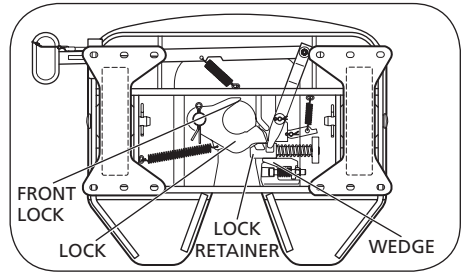


Figure 25

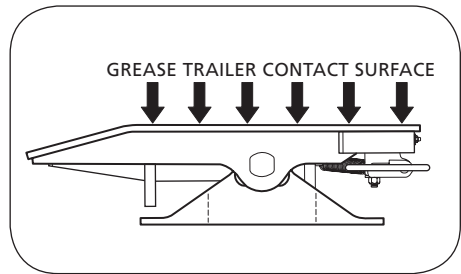
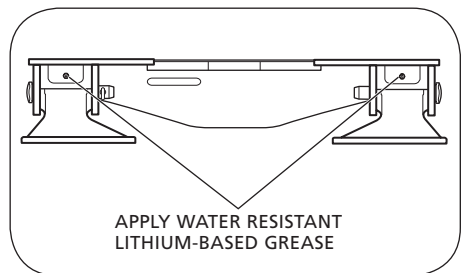


Figure 26



12. Fifth Wheel Adjustment

Fifth wheel adjustment should be performed at a minimum of every 96,000 km or if excessive movement between kingpin and fifth wheel is noticed when driving the vehicle.

IMPORTANT: Excessive movement between the tractor and trailer can effect vehicle handling.

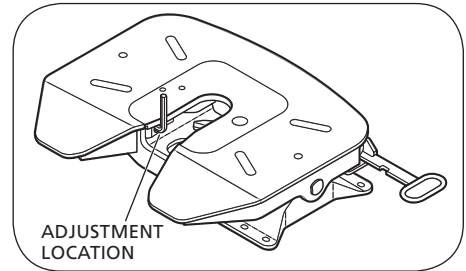
⚠ WARNING Failure to maintain proper fifth wheel adjustment could result in loss of vehicle control which, if not avoided, could result in death or serious injury.

NOTE: To obtain proper adjustment SAF-HOLLAND® recommends use of HOLLAND® lock tester Part No. TF-TLN-1500.

The following steps describe the appropriate method of fifth wheel adjustment.

1. If the fifth wheel is locked, remove the safety clip, pull the release handle, and unlock the fifth wheel.
2. Insert the lock tester into the fifth wheel and couple in accordance with the coupling instructions provided in this manual.
3. Using a 14 mm Allen wrench (**Figure 27**) or an Allen socket combination; Tighten the adjustment screw by turning clockwise until tight.
4. Now loosen the adjustment screw by turning counter-clockwise 1-1/2 turns to remove residual tension between components.

Figure 27



5. Verify that the adjustment is correct by coupling and uncoupling the fifth wheel several times. If the fifth wheel appears to have excessive movement repeat Steps 1-3.

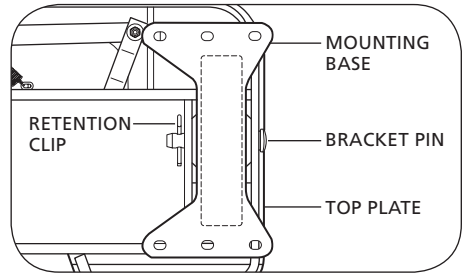
IMPORTANT: Before using your fifth wheel, you **MUST** verify that it is operating properly.

WARNING Failure to verify that fifth wheel is operating properly could result in tractor trailer separation which, if not avoided, could result in serious injury or death.

13. Top Plate Installation

1. Using a lifting device capable of lifting 500 lbs. (227 kg), install the fifth wheel top plate onto its mounting base.
2. Re-install bracket pins through fifth wheel and mounting base and secure by installing the bracket pin retention clips (**Figure 28**).

Figure 28



14. Troubleshooting

Difficult to Couple to Trailer:

✓	Possible Cause	Remedy
	Attempting to couple too fast.	Couple in accordance with the procedure in Section 7.
	The trailer may be too high; the kingpin is not entering the locks properly.	Lower the trailer in accordance with manufacturer's instructions.
	Locks are closed.	Remove the safety clip from the fifth wheel release handle interface holes. Pull the release handle all the way out. Use pry bar and open locks.
	Accumulated rust or grime interfering with the lock operation.	Thoroughly clean the fifth wheel and re-lubricate in accordance with the procedure in Section 11.
	The lock is adjusted too tightly.	Check lock adjustment in accordance with the procedure in Section 12.
	The locks may be damaged.	The fifth wheel MUST be rebuilt using the appropriate service kit.
	Damaged, bent release handle.	Replace release handle using the appropriate service kit.
	Bent kingpin, damaged upper coupler, or improper use of "lube plate" may be interfering with lock movement.	Check the kingpin and upper coupler plate as detailed in HOLLAND® Service Bulletin XL-SB020. Repair/replace as required. Remove any improperly installed or improperly specified lube plates. Refer to HOLLAND® Service Bulletin XL-SB004-01 for lube plate warnings.

Difficult to Uncouple from Trailer:

✓	Possible Cause	Remedy
	The tractor may be putting pressure against locks.	Lock the trailer brakes and back the tractor tightly against the kingpin to relieve the pressure on the fifth wheel lock, set the brakes, then pull the release handle.
	The secondary lock is not released.	Remove the safety clip from the fifth wheel release handle interface holes.
	Accumulated rust or grime interfering with the lock operation.	Thoroughly clean the fifth wheel and re-lubricate in accordance with the procedure in Section 11.
	The lock is adjusted too tightly.	Check lock adjustment according to the procedure in Section 12.
	The release handle will not stay out or must be held out when unlocking.	The fifth wheel MUST be rebuilt using the appropriate service kit.
	Missing or damaged release system parts.	The fifth wheel MUST be rebuilt using the appropriate service kit.
	Top plate bent/damaged at throat area, restricting movement.	The entire fifth wheel top plate MUST be replaced.
	Bent kingpin, damaged upper coupler, or improper use of "lube plate" may be interfering with lock movement.	Check the kingpin and upper coupler plate as detailed in HOLLAND® Service Bulletin XL-SB020. Repair/replace as required. Remove any improperly installed or improperly specified lube plates. Refer to HOLLAND® Service Bulletin XL-SB004-01 for lube plate warnings.

Excessive Movement between Fifth Wheel and Kingpin:

✓	Possible Cause	Remedy
	Fifth wheel lock requires adjustment.	Follow the procedures contained in Section 12.
	Fifth wheel cannot be adjusted further.	The fifth wheel MUST be rebuilt using the appropriate service kit.
	Kingpin is loose.	Repair trailer.
	Kingpin is worn.	Check kingpin for acceptable wear with HOLLAND® TF-0110. Replace kingpin, if necessary.

Hard Steering or Binding:

✓	Possible Cause	Remedy
	Lack of lubrication on fifth wheel top surface.	Lubricate top of fifth wheel plate using a high pressure, lithium-based grease. Follow recommended lubrication schedule as described in Section 11.
	Warped trailer upper coupler plate.	Check upper coupler plate for flatness and replace, if necessary. Refer to HOLLAND® Service Bulletin XL-SB020.

15. Rebuild and Replacement Kits

REBUILD AND REPLACEMENT KITS	PART NUMBER
Rebuild Kit-Standard Right-Hand Release	RK-280-A



SAF-HOLLAND Group



无论是鞍座重装套件还是悬架轴衬维修套件，
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赛夫-华兰德原装零部件经过测试和设计，
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info@safholland.com

赛夫华兰德（厦门）车辆部件有限公司
厦门市海沧区东孚大道1599号
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