

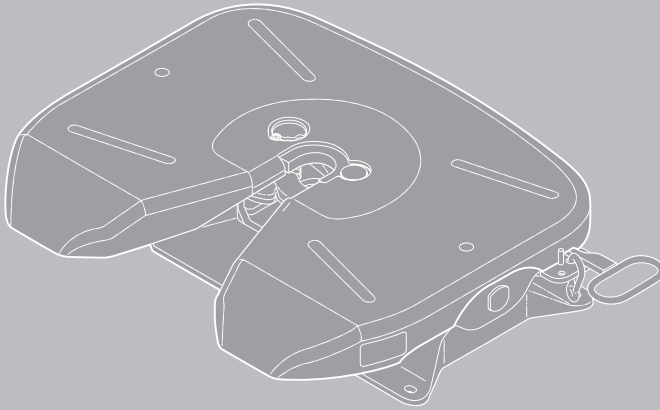
用户手册 Owner's Manual

FW20 系列鞍座

操作、维护和故障排除程序；保修信息

FW20 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 FW20 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 FW20 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，可能会导致死亡或严重人身伤害。

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-FW20008DC-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： 粘贴标贴之前，确保将要粘贴的表面没有油液和润滑脂。

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-华兰德客服，以安排更换标贴。

图1

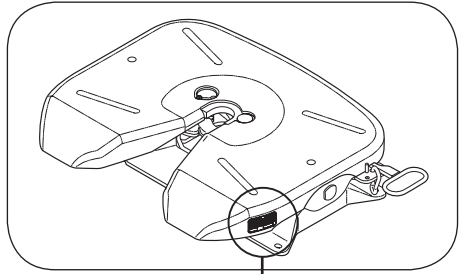


图2

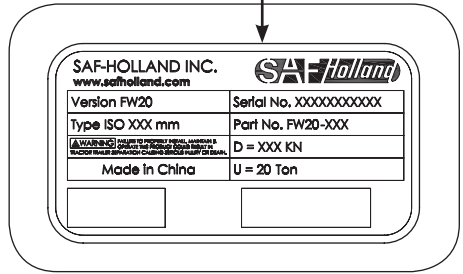


图3

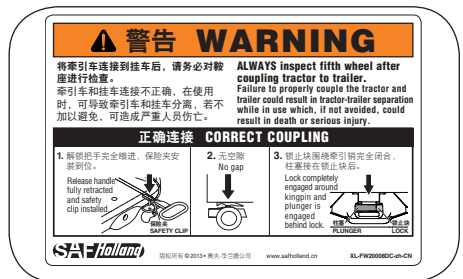
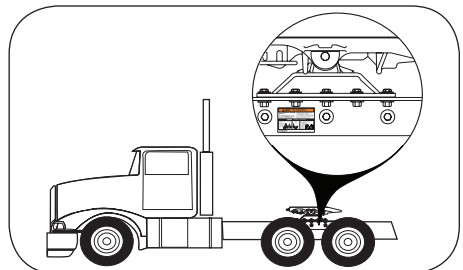


图4



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 337:1981 中定义的标准 50 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 150 千牛，垂直载荷为 20 吨。
3. 中等载重应用。

重要提示： 赛夫-华兰德定义的“中等载重应用”是指越野应用低于 10%。

重要提示： 赛夫-华兰德定义的“越野”是指牵引车-挂车行驶在未经铺设、高低不平或非常劣质的路面上。未包括在公共道路系统中的路面均属于此范畴。

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 337:1981 标准 50 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 337:1981，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 337:1981 标准的 50 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 337:1981 标准的 50 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. 网站 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. 向后滑动解锁把手, 并将它拔出到底 (图8)。
 - c. 将把手凹口挂到鞍座顶板上。
 - d. 目视检查鞍座开口, 确保锁止块完全打开, 可以插入牵引销 (图6)。

注: 如果锁止块未完全打开, 请进行如下检查:

- a. 保险夹已从解锁把手中取出。
- b. 解锁把手已拉动到“打开”位置。

7. 连接程序

1. 在挂车车轮下放置垫块。

图5

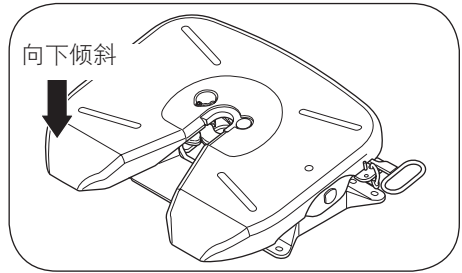


图6

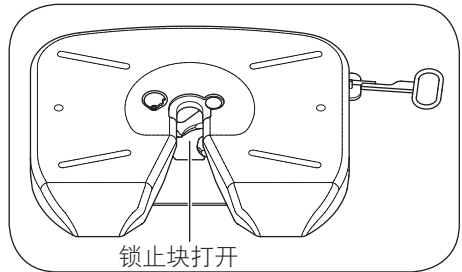
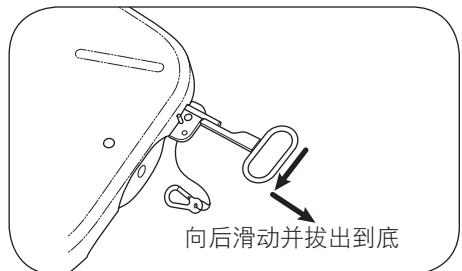


图7



图8



- 调整牵引车位置，使鞍座的中心与牵引销对齐 (图9)。
- 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)。
- 启用牵引车驻车制动。将车置于空挡。离开驾驶室，检查确认鞍座与牵引销正确对齐。
- 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，牵引销将无法与锁止块开口正确连接。

- 缓慢倒车至挂车，使牵引销插入鞍座。

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。

- 连接空气管路和电气线路。
- 升高支腿，直至垫板刚好高出地面。
- 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)。
- 启用牵引车驻车制动。

图9

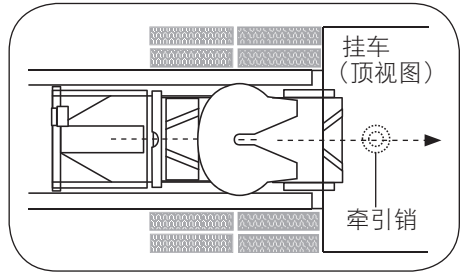


图10

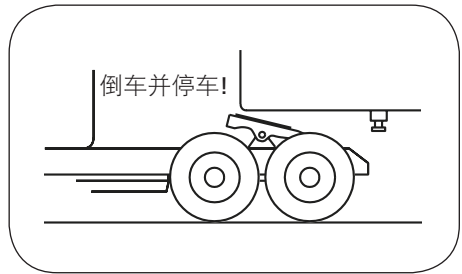


图11

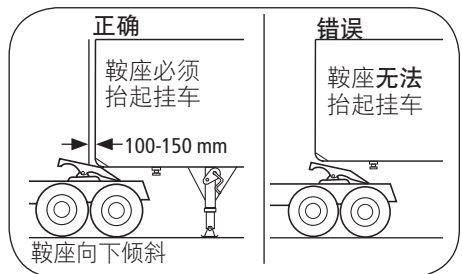
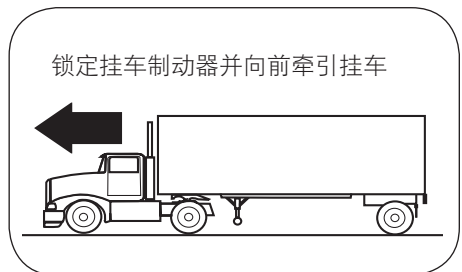


图12



11. 离开驾驶室，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，锁止凹口位于裙板之后。
 - b. 在挂车上部连接板和鞍座之间不得有空隙。
 - c. 锁止块围绕开口完全闭合。
 - d. 柱塞塞在锁止块之后。
12. 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。

13. 将保险夹重新装入鞍座解锁把手的接口孔内 (图14)。
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. 移开车轮垫块，继续进行出发前的检视。

图13

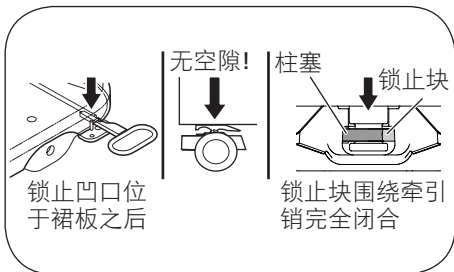


图14

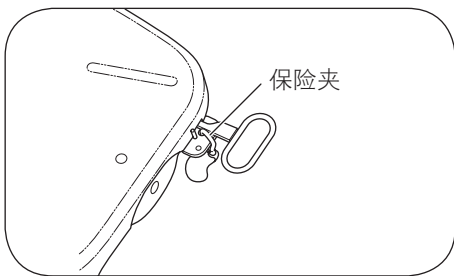
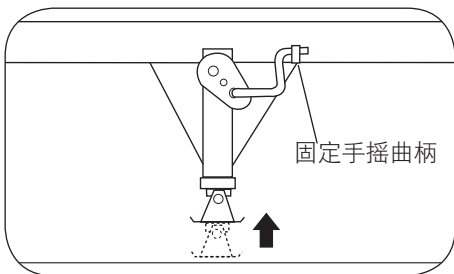


图15



8. 分离程序

1. 将笔直相连的牵引车和挂车停在坚实、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. 离开驾驶室，在挂车轮下放置垫块。
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. 向后滑动解锁把手，并将它拔出到底 (图18)。
- c. 将把手凹口挂到鞍座顶板上。
9. 解除牵引车停车制动器，缓慢驶离挂车。

图16

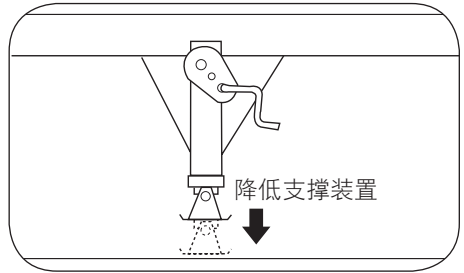


图17

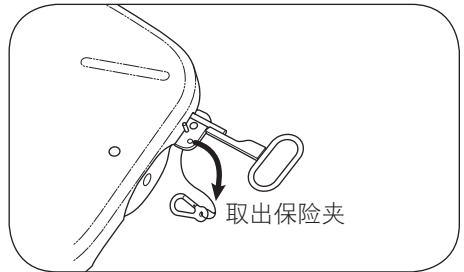
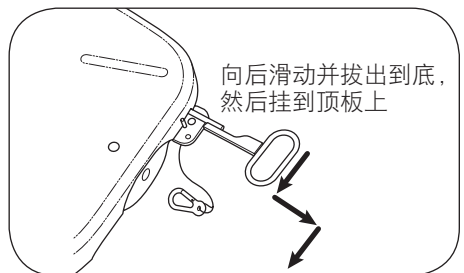


图18



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。将顶板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

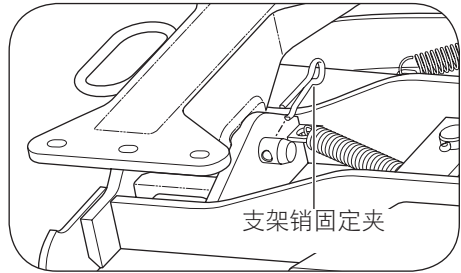
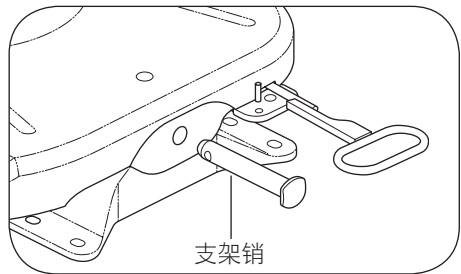


图20



11. 鞍座润滑

重要提示： 要实现FW20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。
- 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 4.8 万公里润滑一次。(有关润滑点，请参阅第 11.A 节的步骤 2 和 3。)
- 最少每三 (3) 个月或每行驶 4.8 万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22)。
- 对于锁止机构，每六 (6) 个月或每行驶9.6 万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，还应在春天进行润滑，以确保达到最佳使用条件。

图21

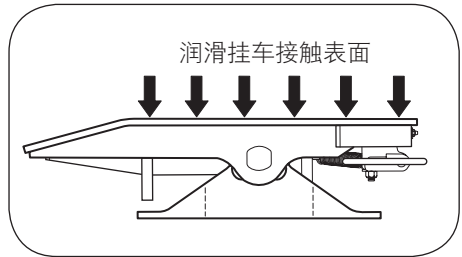
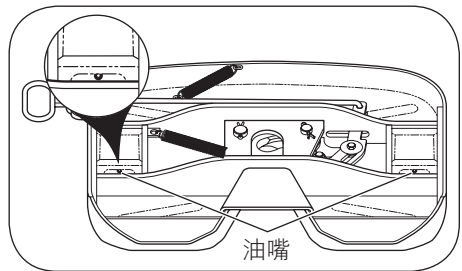


图22



11.A 正确的润滑方法

1. 清除鞍座与挂车的所有接触表面上的旧润滑脂和碎屑。涂抹防水锂基润滑脂给鞍座与挂车的所有接触表面约 1-3 mm 厚 (图23)。
2. 使用防水锂基润滑脂约1至 2 mm 厚, 润滑 (A) 回转锁与挂钩的接触区域以及 (B) 凸轮轨道 (图24)。
3. 使用轻油润滑 (C) 钩销和 (D) 解锁把手枢轴 (图24)。
4. 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25)。

11.B 根据需要进行润滑

- 保持鞍座与挂车接触表面的润滑。使用防水型锂基润滑脂。如果润滑脂沟槽中积聚了大量碎屑, 则将其清理干净 (图23)。
- 如果在鞍座的正常使用寿命期间遇到操作困难的情况 (即连接、分离或拔出解锁把手出现问题), 请清洁并润滑锁止机构 (图24)。

图 23

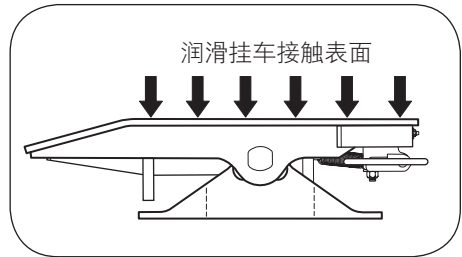


图 24

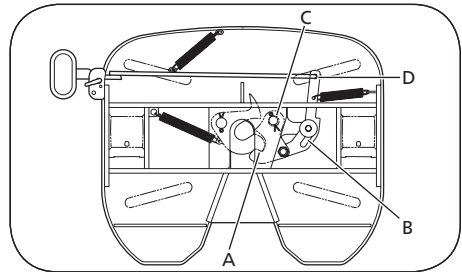
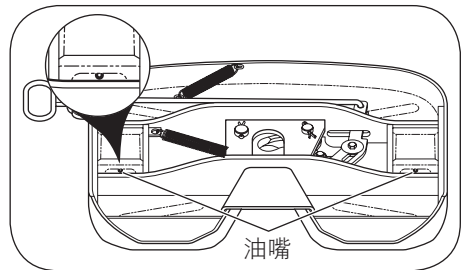


图25



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，您可以从本地华兰德经销商处购买该测试器。

1. 如果鞍座已锁止，则取出保险夹 (图26)，向后滑动解锁把手并将其拔出到底 (图27)。
2. 将锁止测试器设定在鞍座顶板上。
3. 要锁止鞍座，顺时针旋转锁止测试器上的手柄，直到锁止块围绕牵引销闭合 (图28)。
4. 在闭合的锁止块中前后滑动锁止测试器，检查锁止块与牵引销之间的空隙状况。确保此工具始终平放，并完全挨着鞍座顶板。使用针规测量空隙。如果空隙超过 0.080"，则调节锁止机构 (图29)。

图26

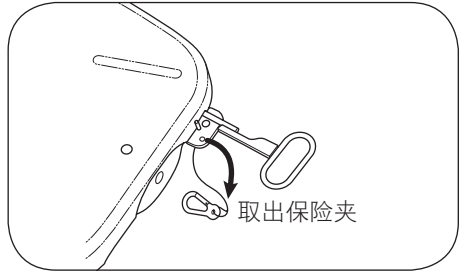


图27

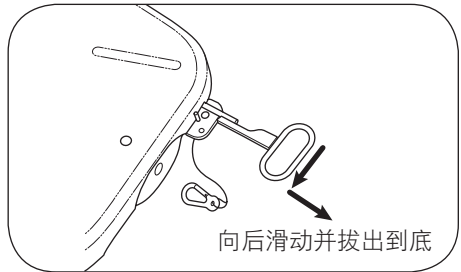


图28

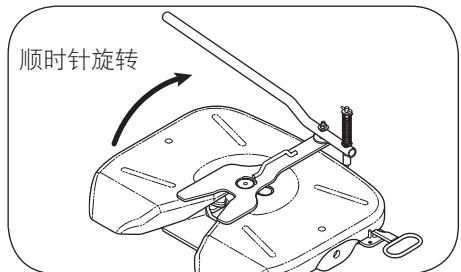
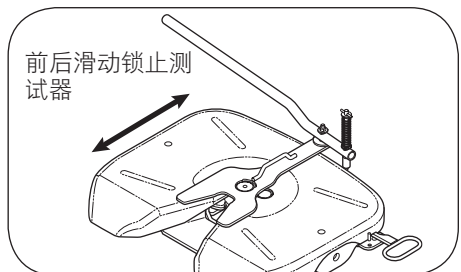


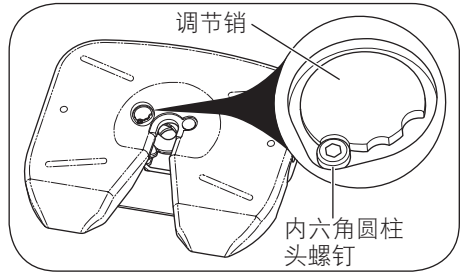
图29



- 要调节锁止块，旋开内六角圆柱头螺钉，直到螺钉完全脱离调节销；然后逆时针旋转调节销，直到下一个凹口与内六角圆柱头螺钉对齐。重新紧固内六角圆柱头螺钉。一次仅调节一个凹口 (图30)。

注： 如果无法拆除该螺钉，则拆除调节销底部的开口销，然后将调节销提起并旋转到下一个凹口。重新安装开口销，使销脚张开 20° 以上。

图30



- 通过使用锁止测试器多次锁止和解锁鞍座，确认调节正确。（检查确认鞍座锁止正确 (图31)。
- 左右旋转锁止测试器，确保锁止块不会过紧。锁止块不应夹紧牵引销，因此工具应能自由旋转 (图32)。
- 将锁止测试器的J形钩从压铸的前方裙板松开，然后通过前后滑动锁止测试器和使用针规测量空隙，重新检查空隙 (图32)。空隙最小应为 0.040"。如果空隙仍然超过 0.080"，请重复此程序并再调节一个凹口。

图31

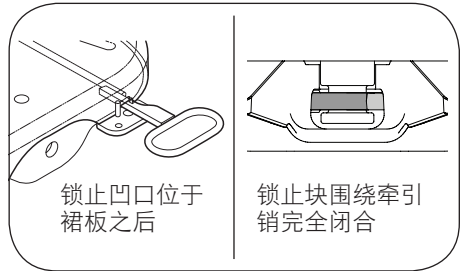
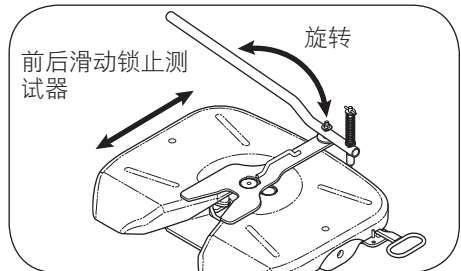


图32



9. 要解锁测试器，请向下推按锁止测试器，并旋转鞍座下面的“J”形挂钩，然后拉回手柄。

注： 如果调节销位于最后一个（第三个）凹口上时锁止块中仍存在过大空隙，那么应使用合适的赛夫-华兰德维修套件重装该鞍座。

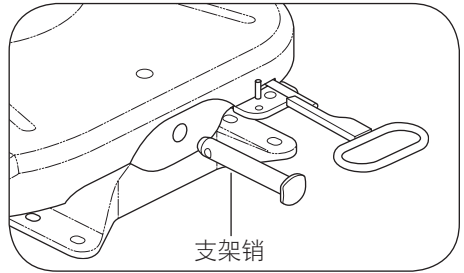
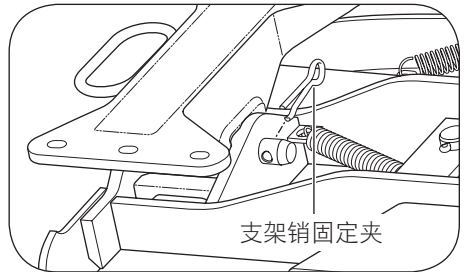
重要提示： 使用鞍座之前，您必须确认鞍座能够正常使用。


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，可能会造成人员伤亡或死亡。

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. 将支架销穿过鞍座铸件和安装底座，然后安装支架销固定夹进行紧固（图33 和 34）。

图33

图34


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。尽量拔出解锁把手。锁止块将旋开。
	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。	锁定挂车制动器，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。设定制动器，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。
	解锁把手未彻底拔出，且没有挂在顶板的凹口上。	向前滑动解锁把手，然后拉出把手并向前滑动，再将其挂到顶板的凹口上。
	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。	请参阅荷兰德 TF-0110，了解可接受的牵引销磨损程度。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 节中所述的建议润滑程序。
	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。请参阅荷兰德服务公告 XL-SB020。

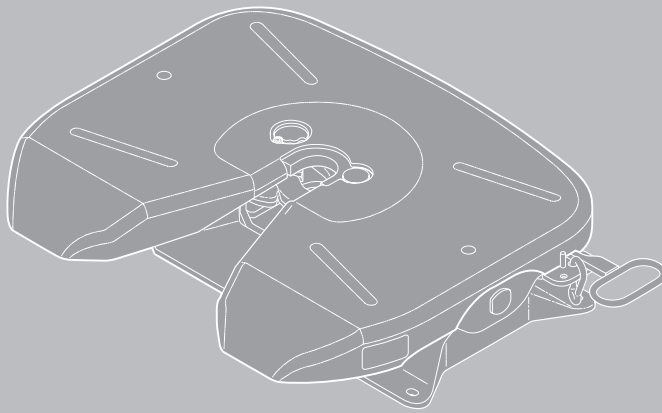
15. 重装和更换套件

重装和更换套件	零件号
重装套件—标准右手解锁把手	RK-200-A

Owner's Manual

FW20 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® FW20 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-FW20008DC-zh-CN (**Figure 3**) enclosed in 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 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

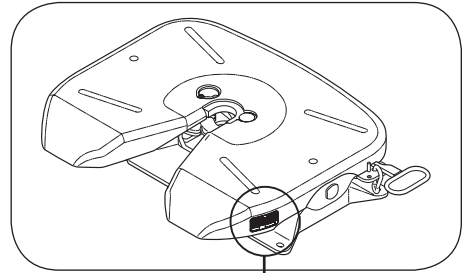


Figure 2

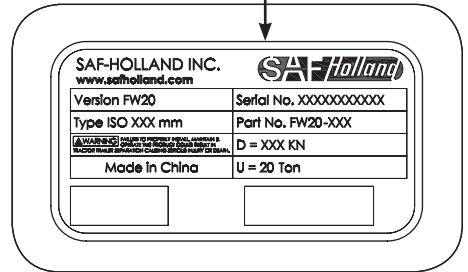


Figure 3

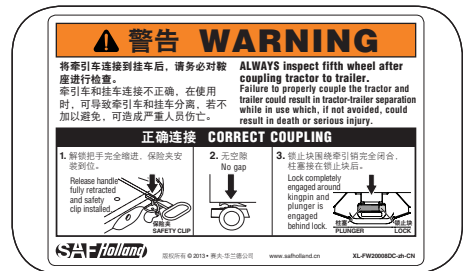
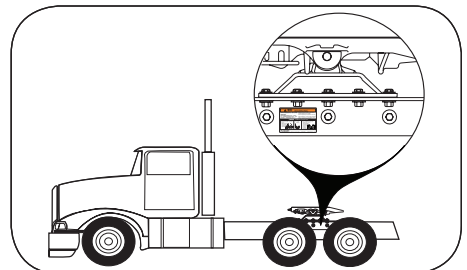


Figure 4



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 50 mm kingpin as defined in ISO 337:1981, 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: 150 kN D-Value 20 tonne Vertical Load.
3. In moderate duty applications.

IMPORTANT: SAF-HOLLAND® definition of moderate duty applications is less than 10% off-road use.

IMPORTANT: SAF-HOLLAND® definition of off-road refers to terrain on which a tractor-trailer operates which is unpaved and rough, or ungraded. Any terrain not considered part of the public highway system falls under this heading.

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 337:1981 compliant 50 mm kingpin, such as kingpins which are bent, improper size or dimensions, not secured to maintain ISO 337:1981 configuration, or which are installed in warped trailer bolster plates, or upper coupler and fifth wheel lube plates that do not maintain the ISO 337:1981 50 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 337:1981 compliant standard 50 mm kingpin could result in improper coupling, allowing tractor-trailer separation, which if not avoided, could result in death or serious injury.

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.

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 the fifth wheel is in the appropriate position for weight distribution on the tractor. For proper positioning of the fifth wheel, refer to the 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 holes (**Figure 7**).
 - b. Slide release handle rearward and pull all the way out (**Figure 8**).
 - c. Hook handle notch on fifth wheel top plate.
 - d. Visually inspect fifth wheel throat to ensure locks are completely open and ready to accept kingpin (**Figure 6**).

NOTE: If lock is not completely open check the following:

- a. Safety clip is removed from release handle.
- b. Release handle is extended to the "open" position.

Figure 5

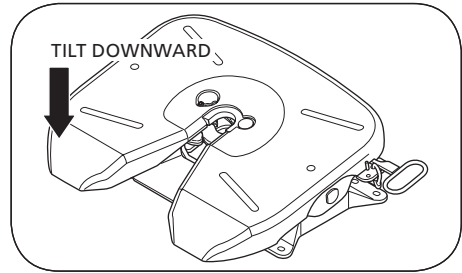


Figure 6

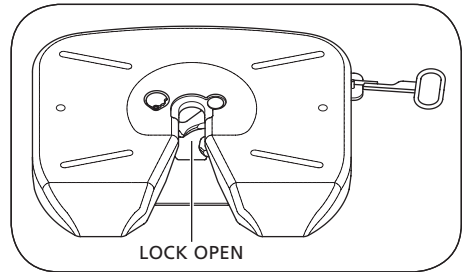


Figure 7

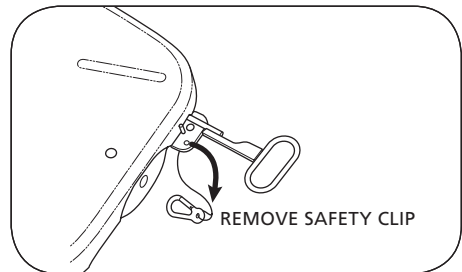
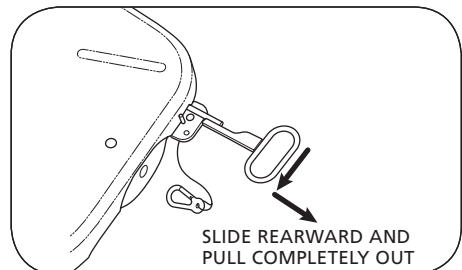


Figure 8



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 in neutral. Exit cab and verify proper fifth wheel to kingpin alignment.
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. 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. Connect the air and electrical lines.
8. Raise the landing gear legs until the pads are just above the ground.
9. 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

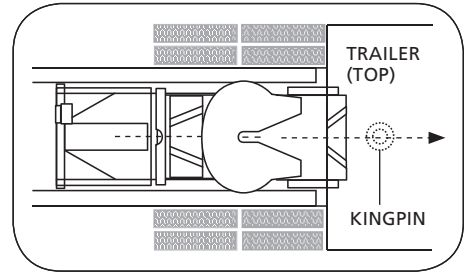


Figure 10

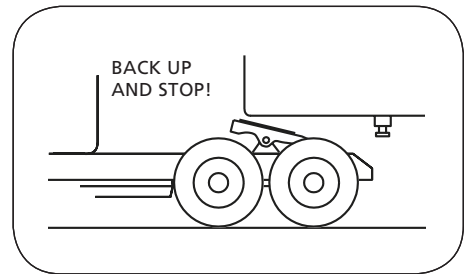


Figure 11

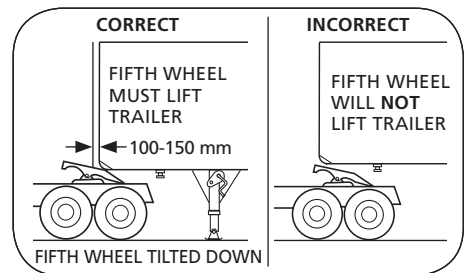
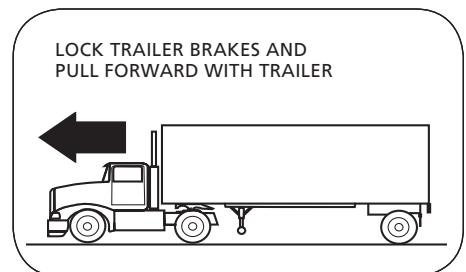


Figure 12



11. Exit the cab and visually inspect for the following to ensure that the lock is closed (**Figure 13**).
 - a. Release handle fully retracted with lock notch behind skirt.
 - 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. 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.

13. Reinstall safety clip into the fifth wheel release handle interface (**Figure 14**).
14. Fully retract the landing gear 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

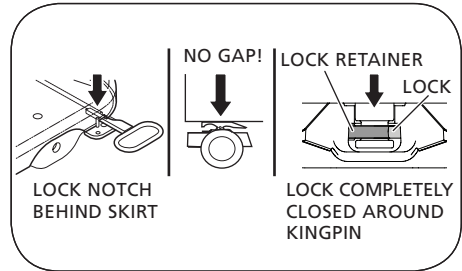


Figure 14

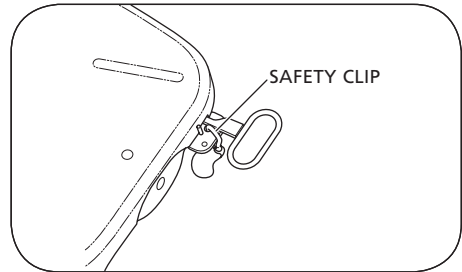
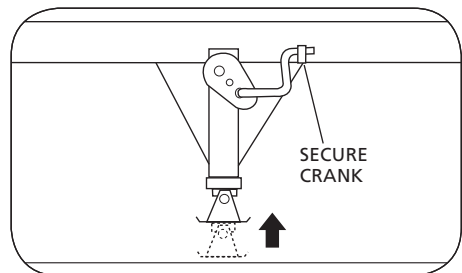


Figure 15



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 hand interface holes (**Figure 17**).
 - b. Slide the release handle rearward, pull all the way out (**Figure 18**).
 - c. Hook handle notch on fifth wheel top plate.
9. Release the tractor parking brake and slowly pull away from the trailer.

Figure 16

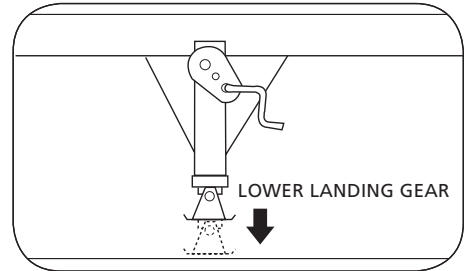


Figure 17

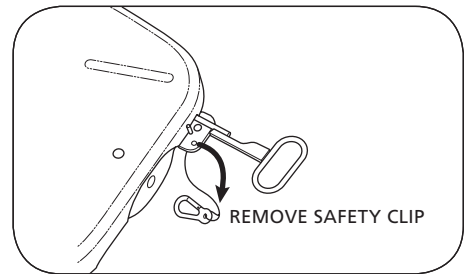
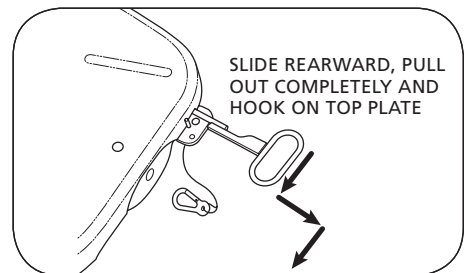


Figure 18



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 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 top plate on a flat, clean working area.

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

Figure 19

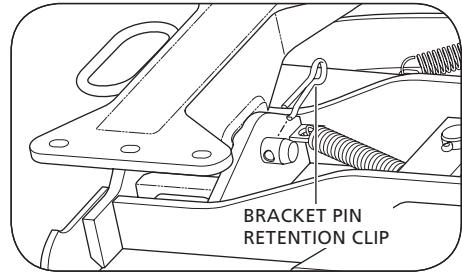
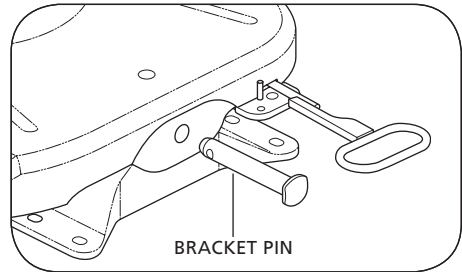


Figure 20



11. Fifth Wheel Lubrication

IMPORTANT: Fifth wheel lubrication is necessary to get the maximum service life from your FW20 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.
- 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. (Refer to steps 2 and 3 in Section 11.A for lubrication points.)
- 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 22**).
- 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 spring in addition to routine lubrication (as noted above) to ensure optimum operation.

Figure 21

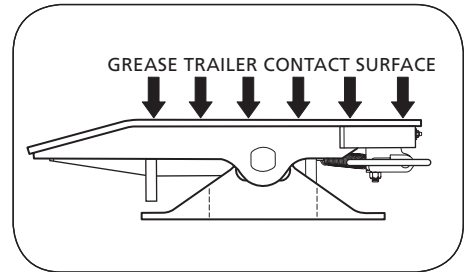
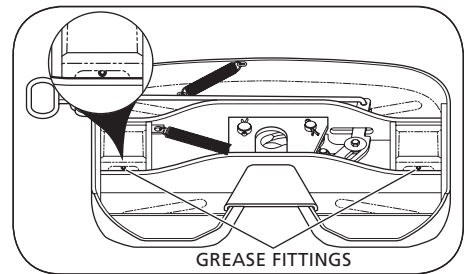


Figure 22



11.A Proper Lubrication Method

1. Remove old grease and debris from all fifth wheel-to-trailer contact surfaces. Apply new water-resistant lithium-based grease approximately 1 to 3 mm thick to all fifth wheel-to-trailer contact surfaces (**Figure 23**).
2. Using water-resistant lithium-based grease approximately 1 to 2 mm thick, lubricate (A) swing lock-to-hook contact areas, and (B) camtrack (**Figure 24**).
3. Using a light oil, lubricate (C) hook pin, and (D) release handle pivot (**Figure 24**).
4. Using grease fittings located on the underside of the fifth wheel, lubricate the fifth wheel top plate and bracket contact surfaces (**Figure 25**).

11.B As-Needed Lubrication

- Maintain lubrication on fifth wheel-to-trailer contact surfaces. Use a water-resistant lithium-based grease. Clean grease grooves if a large amount of debris is present (**Figure 23**).
- 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 23

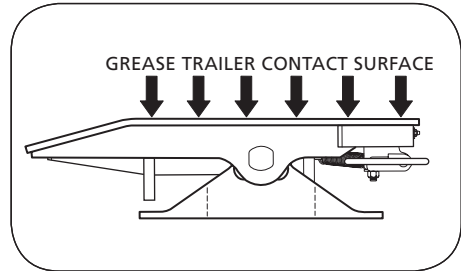


Figure 24

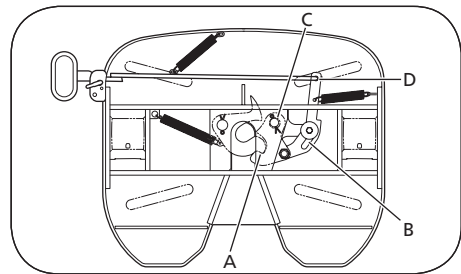
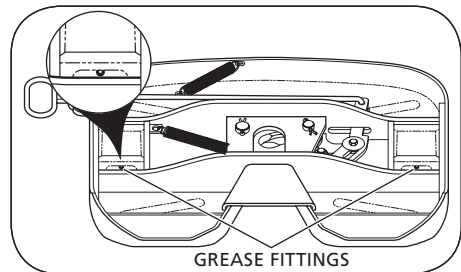


Figure 25



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, available from your local HOLLAND® distributor.

1. If fifth wheel is locked, remove the safety clip (**Figure 26**), slide release handle rearward and pull all the way out (**Figure 27**).
2. Set lock tester on fifth wheel top plate.
3. To lock fifth wheel, rotate handle on lock tester clockwise until the locks close around the kingpin (**Figure 28**).
4. Slide the lock tester forward and backward in the closed lock to check for play between lock and kingpin. Ensure that the tool remains flat with full contact on the fifth wheel top plate. Use pin gage to measure free play. If free play exceeds 0.080" . adjust lock mechanism (**Figure 29**).

Figure 26

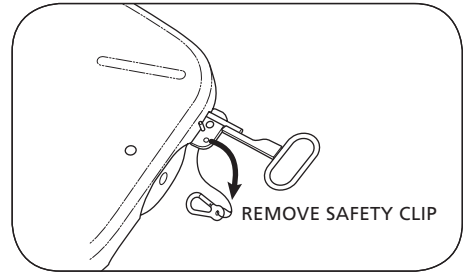


Figure 27

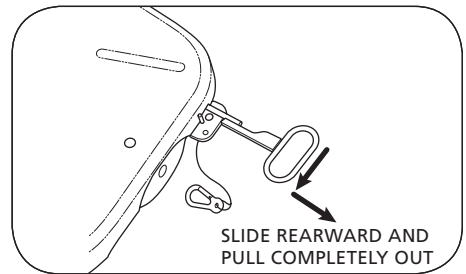


Figure 28

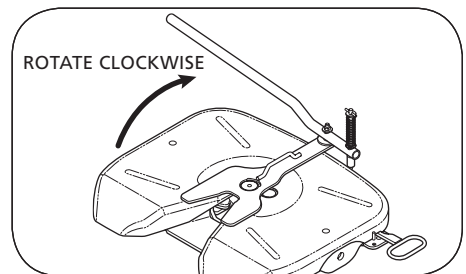
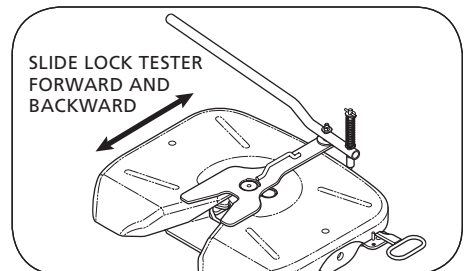


Figure 29



- To adjust lock, unscrew the low head socket cap screw until the head clears the adjusting pin and rotate adjusting pin counter-clockwise until the next notch lines up with the low head socket cap screw. Re-tighten low head socket cap screw. Adjust only one notch at a time (**Figure 30**).

NOTE: If the screw cannot be removed, remove the cotter pin from the bottom of the adjustment pin, then lift and rotate the pin to the next notch. Re-install the cotter pin and spread the pin legs beyond 20°.

- Verify the proper adjustment by locking and unlocking fifth wheel several times with lock tester. (Check that fifth wheel is properly locked (**Figure 31**).
- Rotate lock tester from side-to-side to ensure that lock is not overtightened. Lock should not grip kingpin and the tool should rotate freely (**Figure 32**).
- Disengage lock tester J-hook from front skirt of casting and re-check for free play in lock by sliding lock tester forward and backward using pin gage to measure free play (**Figure 32**). Free play should be 0.040" minimum. If free play still exceeds 0.080", repeat procedure and adjust one more notch.

Figure 30

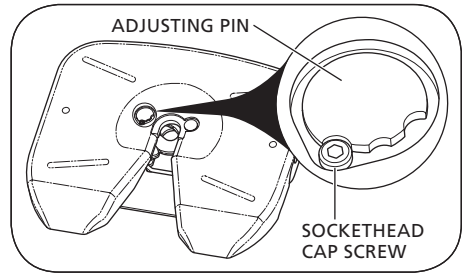


Figure 31

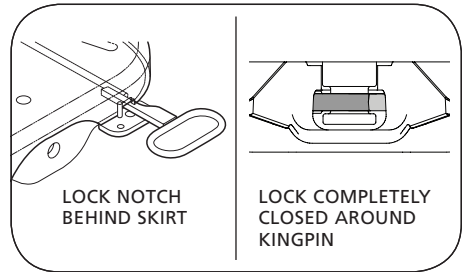
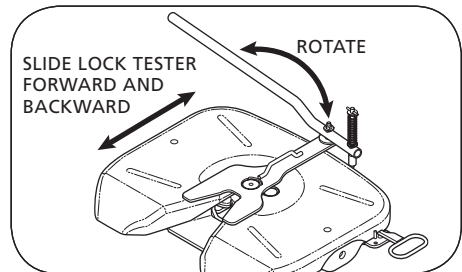


Figure 32



9. To unlock, push down on lock tester, and rotate "J" hook under the fifth wheel, then pull handle back.

NOTE: If there is still excessive free play in the lock with the adjusting pin on the last (third) notch, then the fifth wheel should be rebuilt using the appropriate SAF-HOLLAND® service kit.

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.
3. Install bracket pins through fifth wheel casting and mounting base and secure by installing the bracket pin retention clips (*Figure 33 and 34*).

Figure 33

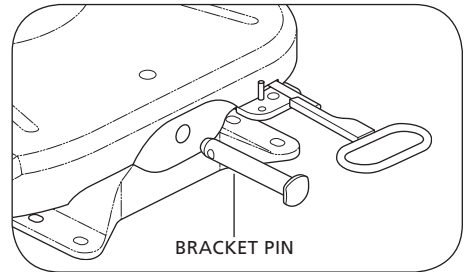
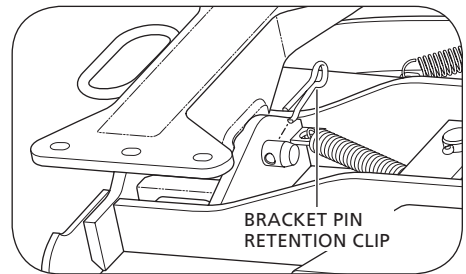


Figure 34



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 out as far as possible. Lock will swing open.
	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 locks are 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.
	The release handle is not pulled out completely and hooked on the notch in the top plate.	Slide the release handle forward, then pull out the handle, slide it forward, and hook it on the notch of the top plate.
	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 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-200-A



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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