

2025-02 – ExTe Com90 Load Securement

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Summary

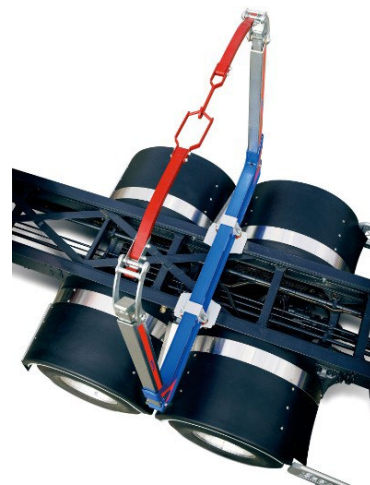
ExTe Com90 is a load securement device for the transportation of logs or poles. The system is designed with hydraulic bunks and stakes that have lashing arms and hooks that attach across the top of loads, applying a constant downward pressure on the load. This inspection bulletin provides information on the ExTe Com90 system to understand the system functionality and confirm that loads are properly secured during inspection.

Background

The ExTe Com90 load securement system, designed by ExTe and first implemented in Sweden, is now in use in North America. The ExTe Com90 load securement system meets and exceeds the commodity-specific load securement requirements of Title 49 Code of Federal Regulations 393.116. In the logging industry, the most common driver injury stems from exiting vehicles and applying log wrappers. This system is designed to eliminate such injuries while providing adequate load securement.

Feature(s) Information

The system uses hydraulic pressure created from a pump mounted to the vehicle. During operation, the system adjusts pressure and instantly removes slack when logs settle during transit. The self-tightening lashing arms keep the load together even if the hydraulic pressure fails. All aspects of the securement system are monitored from inside the cab of the truck and alarms notify the driver of any failures. There is also a remote control that may be used inside or outside of the truck to operate the securement system.



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Com90 CCPilot

The system status is monitored using a device called the CCPilot (see Figure 1). Additionally, the CCPilot is the mechanism the driver uses to apply downward force to the load. The CCPilot also has an alarm to notify the driver of any system errors detected.

The CCPilot screen depicts each bunk and stake. Green or red boxes are displayed for each pair of stakes. Green boxes confirm the pressure is correct (1,200 kg) and red boxes indicate a low-pressure warning. Due to this system being Swedish, it measures pressure in kilograms. There are additional warning alerts for the following: low pressure (force below 1,200 kg), pump timeout and low oil level. The “Low-pressure alert” is activated when the pressure falls below the set alarm limit if there is equipment damage or a sudden load shift. An alert of “Force below 1,200 kg” means it is time to re-tension the load. The “Pump timeout” alert means the hydraulic pump has not been able to build up the expected pressure within a given time to prevent overheating the hydraulics. “Low oil level” means the oil level is critically low and close to damaging the pump. See Figure 2 for the CCPilot warnings display.

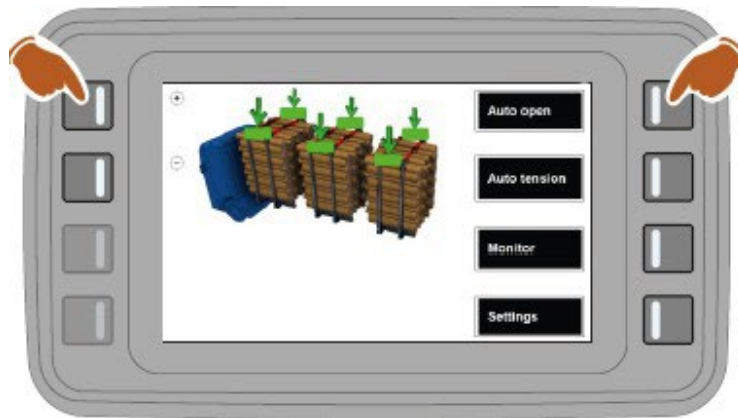


Figure 1

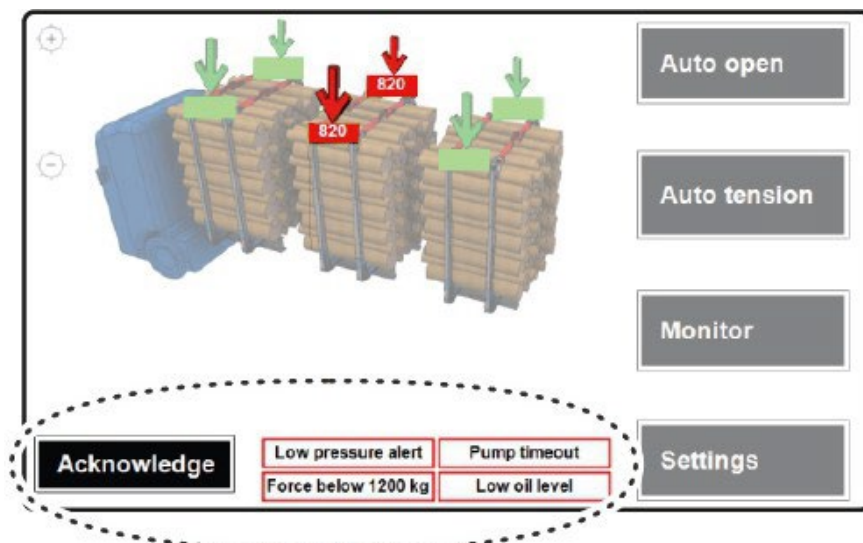


Figure 2

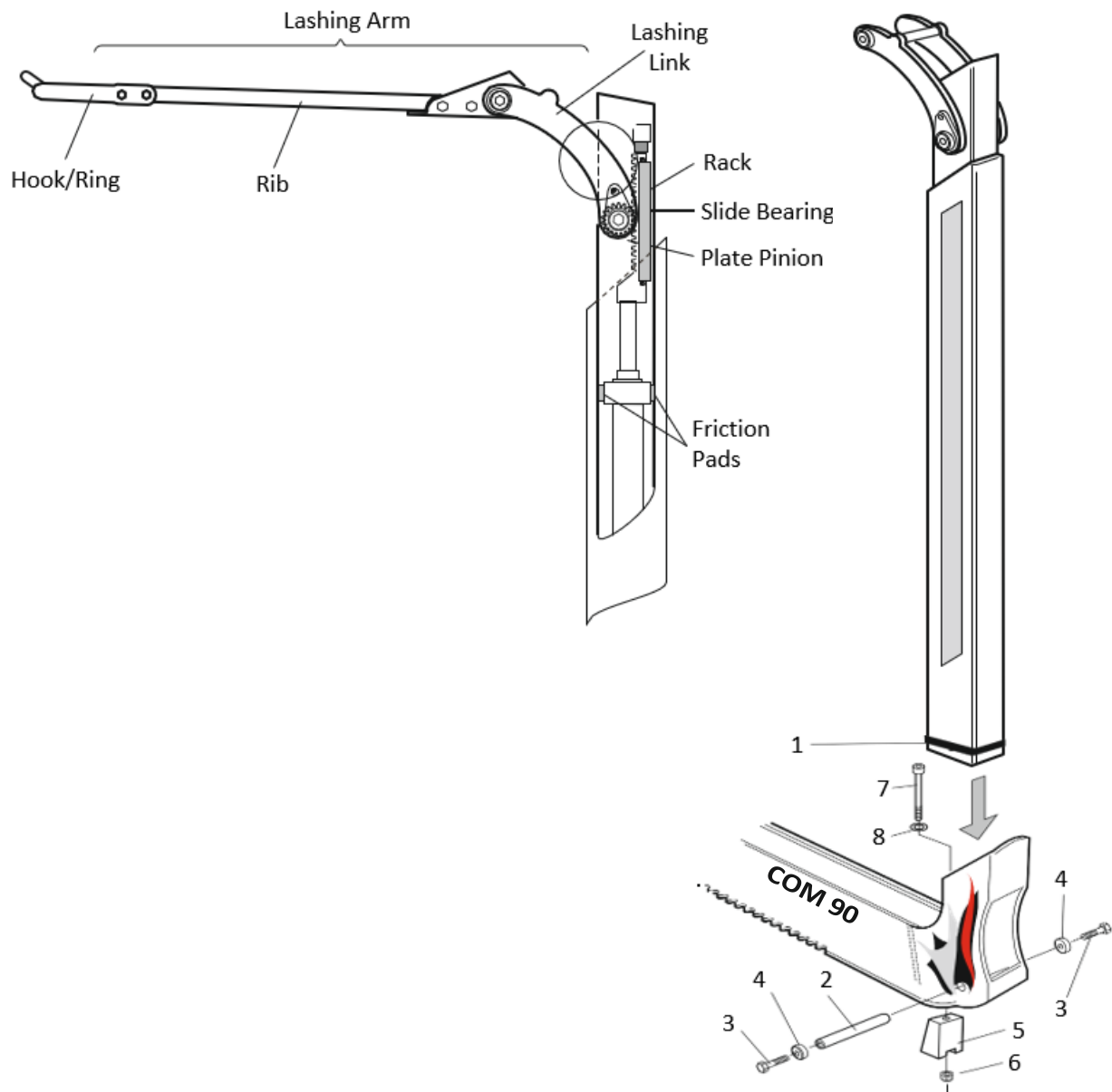
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Bolster, Stakes and Lashing

The logs or poles are secured to the vehicle using bunks, stakes and lashing arms. The stakes include a hydraulic cylinder that applies downward pressure to the load once the lashing arms are attached together using the hook on one arm and ring on the other. The cylinder inside the stake is held in place by a locking element, which is similar to a wedge with a bolt (see Figure 3 – Items 5, 6, 7, 8).

The stake is held in place by a pin and bolts on the corner of the bolster (see Figure 3 – Items 2, 3, 4)

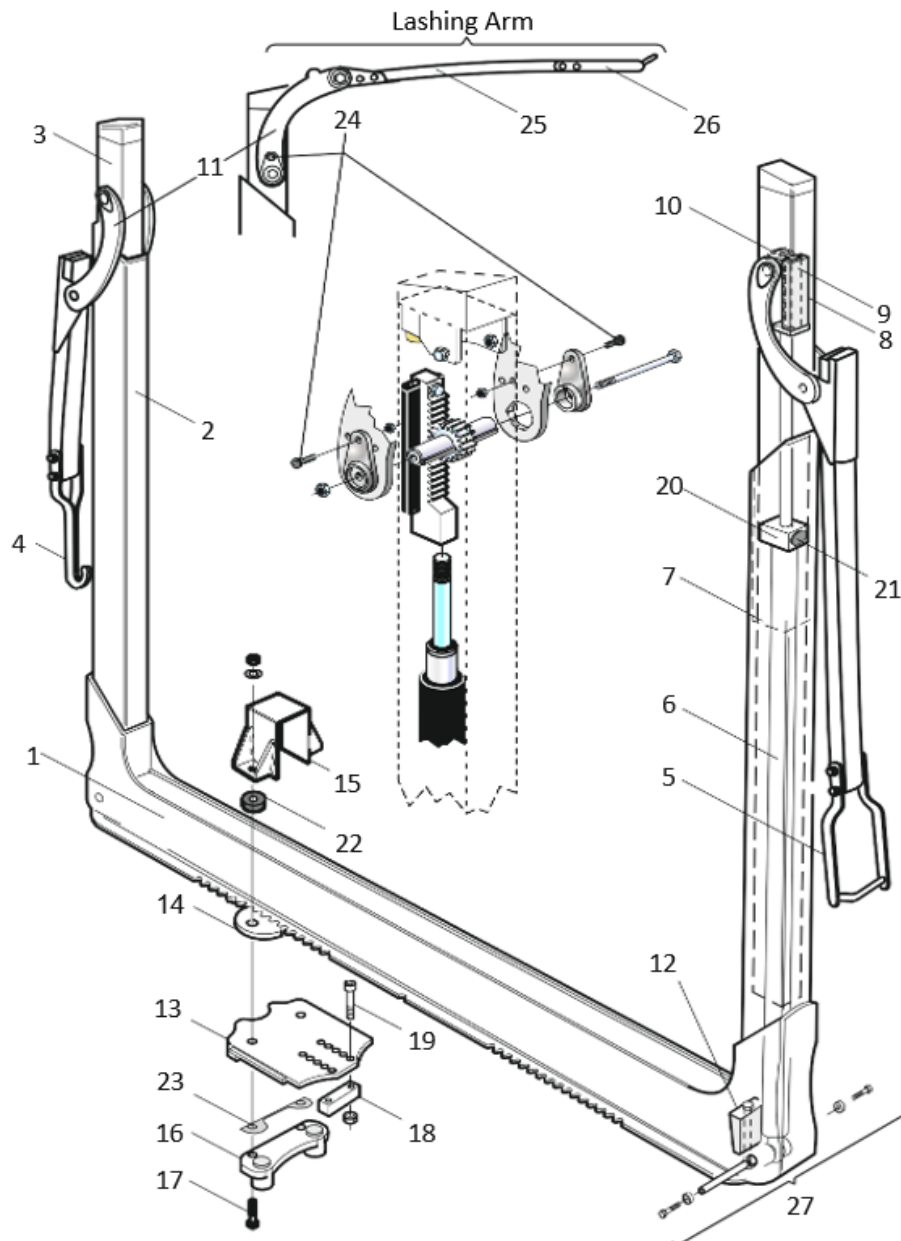
Figure 3 (image below)



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Description of Bunks

The drawing shows a Com90 complete bunk with its different components.



- | | | |
|------------------------|----------------------|--------------------|
| 1. Bolster | 10. Pinion | 19. Screw with nut |
| 2. Lower stake | 11. Lashing arm | 20. Brake housing |
| 3. Upper stake | 12. Locking element | 21. Friction pads |
| 4. Hook-rib | 13. Mounting plate | 22. Rubber puck |
| 5. Ring-rib | 14. Securing plate | 23. Shim |
| 6. Hydraulic cylinder | 15. Clamp | 24. Break pin |
| 7. Sliding sleeve | 16. Fastening plate | 25. Rib |
| 8. Slide bearing plate | 17. Screw with nut | 26. Hook/ring |
| 9. Rack | 18. Inner frame stop | 27. Locking pin |

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Inspection Guidance

Step 1: When inspecting the ExTe Com90 system, start by inspecting the CCPilot. Ensure there are no red boxes pictured above any bunks indicating insufficient pressure. Check for warnings to see if there is a failure in the system. Any red boxes or warnings indicate the load is not secured and a commodity-specific violation of 393.116 and an out-of-service condition are present.

Step 2: Inspect the bunks. Check the stakes, bolsters and lashing arms for cracks. **Do not ask the driver to release the lashing arms for inspection.** Check bolts for looseness and whether any are missing. Check underneath the bottom corner of the bolster for the wedge-and-bolt locking element. If the bolt or wedge are missing, there is nothing keeping the cylinder secure within the stake, and the load is not secured. If the pin and bolts on the corner of the bolster are loose or missing, the load is not secured. If there are any cracks in the bunk, the load is not secure.

Step 3: Inspect the hydraulic hoses and connections for leaking hydraulic fluid. Dry fluid residue on the outside is normal, but if fluid is actively leaking and dripping onto the ground, record the appropriate violation (396.5(b)). Inspect the CCPilot for a "Low oil level" warning. If there is a warning, refer back to Step 1 for the correct action.

Step 4: Examine the lashing arms and load. **Do not climb on top of the vehicle to inspect the lashing arms.** While standing on the ground, attempt to see if there are any bunks that are not in contact with any logs or poles. It is normal for the lashing arms to only touch some of the logs or poles. As long as there is contact with at least one log or pole, it is acceptable. However, if there are any bunks not in contact with at least one log or pole, the load is not secure because there is no pressure on the logs or poles.

Step 5: Record violations and refer to the North American Standard Out-of-Service Criteria to determine whether the vehicle is out of service. If the load has additional load securement devices, such as wrappers or other tiedowns (attached per the commodity-specific requirements), refer to 393.116 to determine if the additional securement devices meet the requirements.

Example: If the system has malfunctioned but the driver has taken appropriate action by securing the load with a correct number of wrappers or tiedowns as per 393.116, no violation shall be recorded for the ineffective ExTe Com90 system.