

Spartan Motors



Chassis, Inc.

1000 Reynolds Road ♦ Charlotte MI 48813

CSB99-1201

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November, 1999

CAMPAIGN SERVICE BULLETIN

SUBJECT: Fire Truck Cab Tilt Release Function

APPLIES TO:

All Fire Truck Chassis Models Manufactured with a Cab Tilt System between July 16, 1998 and August 1, 1999.

CONDITION:

Cab May Drop Rapidly and Lock In a Partially Lowered Position, When The Manual Relief Valve is Activated

CAUSE:

Missing Orifice In the Hand Pump Circuit

CORRECTION:

Install Missing Orifice

SERVICE PROCEDURE:

Test manual cab drop function of the cab tilt system. Check circuit for presence of the flow control orifice. Contact Spartan Motors and install orifice set screw if necessary.

PART LIST:

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	991201	Kit-Tilt Pump Retrofit

Kit # 991201 Contains:

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	17001	Tilt Pump Set Screw Orifice

Step by step instructions:

1. Park vehicle on a level surface allowing suitable clearance for the cab to be fully tilted.
2. Set park brake and chock wheels.

Technical bulletins are intended for use by professional technicians only. They are written to inform these technicians of a condition that may occur on a vehicle, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and training to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition.

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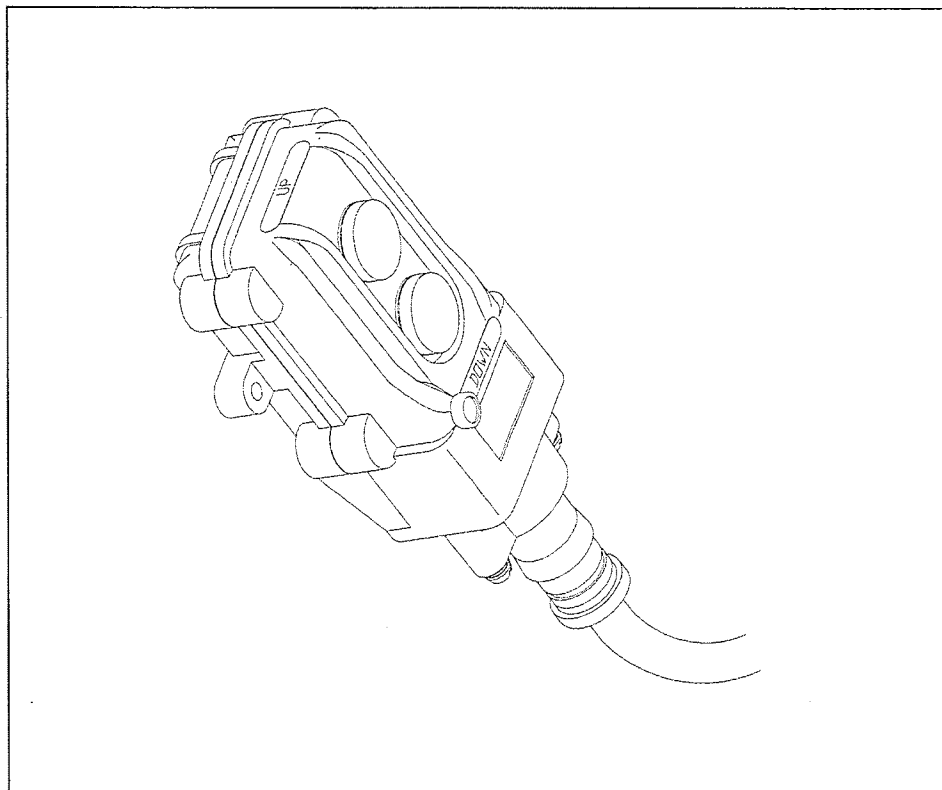
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3. Depending on the installed apparatus/equipment, make necessary preparations to cycle (raise/lower the cab) the cab tilt system.
 - 3A. No personnel or loose equipment should remain in cab during tilt system operations. The cab tilt system is designed to tilt the cab structure only! Additional loads may cause system failure.
 - 3B. Cab doors must be securely closed prior to tilt operations.
 - 3C. Master electrical switch must be in the 'ON' position.
 - 3D. Ignition switch must be in the 'OFF' position.
 - 3E. All personnel must remain clear of the cab at all times during tilt system operation.
4. Refer to FIG. 2-1. Locate the remote pendant; depress and hold the 'UP' button to raise cab by activating the tilt system.



REMOTE PENDANT

FIG. 2-1

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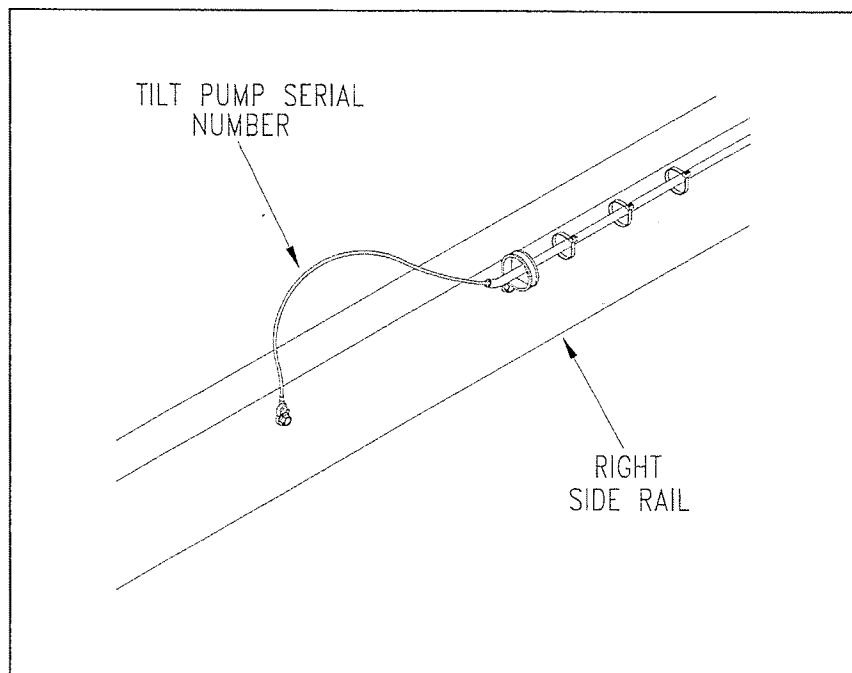
5. Raise cab until the safety support channel (located beneath the right side of the cab) clears the tilt cylinder housing allowing the automatic engagement of the support to the piston rod.

5A. After engagement of the safety support, release the 'UP' button on the pendant.

TEST MANUAL CAB DROP CIRCUIT

6. Refer to FIG. 3-1. Locate the safety support release cable along the right side rail rearward of the cab.

Note: Check and ensure all instructions/cautions are maintained from step #3 before releasing and lowering cab.



SAFETY SUPPORT RELEASE CABLE

FIG. 3-1

7. Pull safety support release cable to disengage the safety support mechanism.

Note: Cab may need to be raised slightly to remove the load from the safety support before it will disengage.

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8. Refer to FIG. 6-1. Begin the process of manually lowering the cab by turning the T-handle counter clockwise.

8A. If the cab drops abruptly and in an uncontrolled manner, proceed to step #9.

Note: A secondary safety feature is designed into the cab tilt system to keep the cab from dropping completely at an accelerated rate.

Velocity fuses will be activated if the cab drops too quickly. The fuses can be reset by re-energizing the 'UP' button on the pendant; ensure the T-handle is fully seated prior to activating the pendant. The velocity fuses will continue to function each time excessive cab drop rate is recognized.

8B. If the cab drops slowly in a controlled manner, continue lowering until the cab safety locks engage. Proceed to step #10.

9. Lower the cab using the remote pendant (if cab had dropped abruptly as described in #8A); depress and hold the 'DOWN' button until cab locks engage.

9A. Refer to FIG, 6-1. Remove the T-handle and check ball. Insert a magnetic tool into the port opening to locate and remove the check ball (resembles a stainless steel ball bearing).

9B. Using a #2 metric hex key wrench, locate orifice set screw inside of the tilt pump assembly.

9B.1 If orifice set screw is not installed, proceed to step #10.

9C. Remove the orifice set screw and inspect/clean debris from orifice.

9D. Reinstall orifice set screw (fully seat), check ball, and T-handle (fully seat).

Note: Ensure there are no burrs in the port opening.

9E. Repeat steps #3 through #8 to validate the proper manual cab drop operation, then proceed to step #10.

10. Refer to FIG. 7-1. Locate the label on the lower portion of the tilt pump assembly and record the serial # of the pump.

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11. Contact Spartan Motors Customer Service Assistance Center (1-800-543-5008) and provide the pump serial # along with the sales order # of the vehicle to the Customer Service Representative.

Note: When reporting the pump and vehicle information, it is important to provide the Customer Representative with the result of the tilt system inspection in steps #8 and #9.

- 11A. You will be advised should a retrofit kit be required; order at this time and proceed to step #12. **DO NOT use the manual release function until the pump has received the retrofit.**

- 11B. If a retrofit is not required, proceed to step #16.

12. With the cab fully seated in the locked position, remove the T-handle from the port in the tilt pump assembly.

Note: Burr(s) may develop at the port opening when removing the T-handle. If this occurs, burr(s) must be eliminated prior to removing the T-handle to avoid damaging the o-ring seal on the T-handle shaft.

13. Insert a magnetic tool into the port opening to locate and remove the check ball (resembles a stainless steel ball bearing).
14. With the check ball removed, use a #2 metric hex key wrench to install the orifice set screw provided; fully seat.
15. Ref to FIG. 6-1. With the orifice set screw in place, reinstall the check ball into the port.
16. Reinstall T-handle into the port until it is fully seated.

Note: Ensure there are no burrs in the port opening.

- 16A. If an orifice set screw has been installed during this bulletin procedure, repeat steps #1 through #8 to validate the proper manual cab drop operation.

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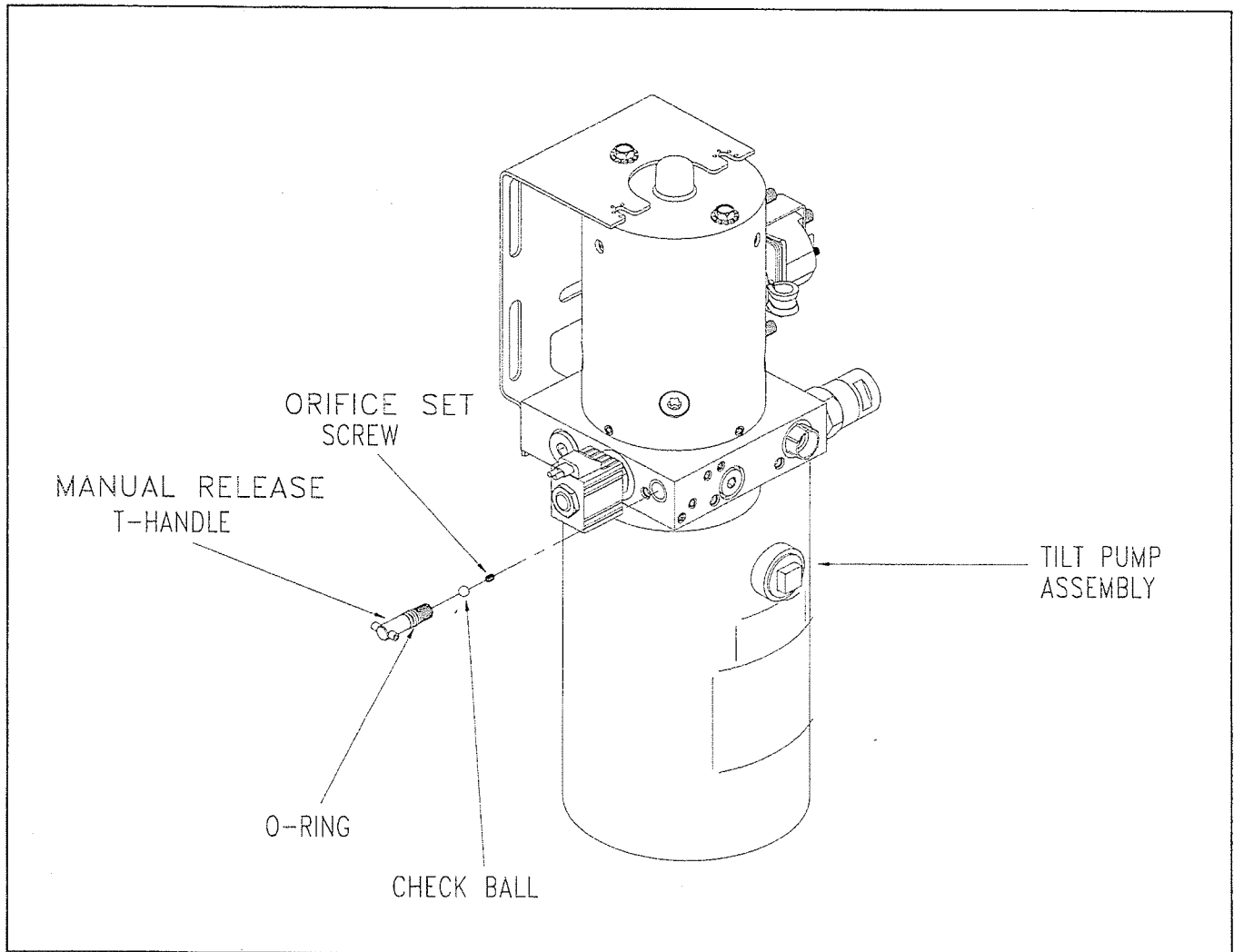


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PUMP ASSEMBLY / COMPONENTS

FIG. 6-1

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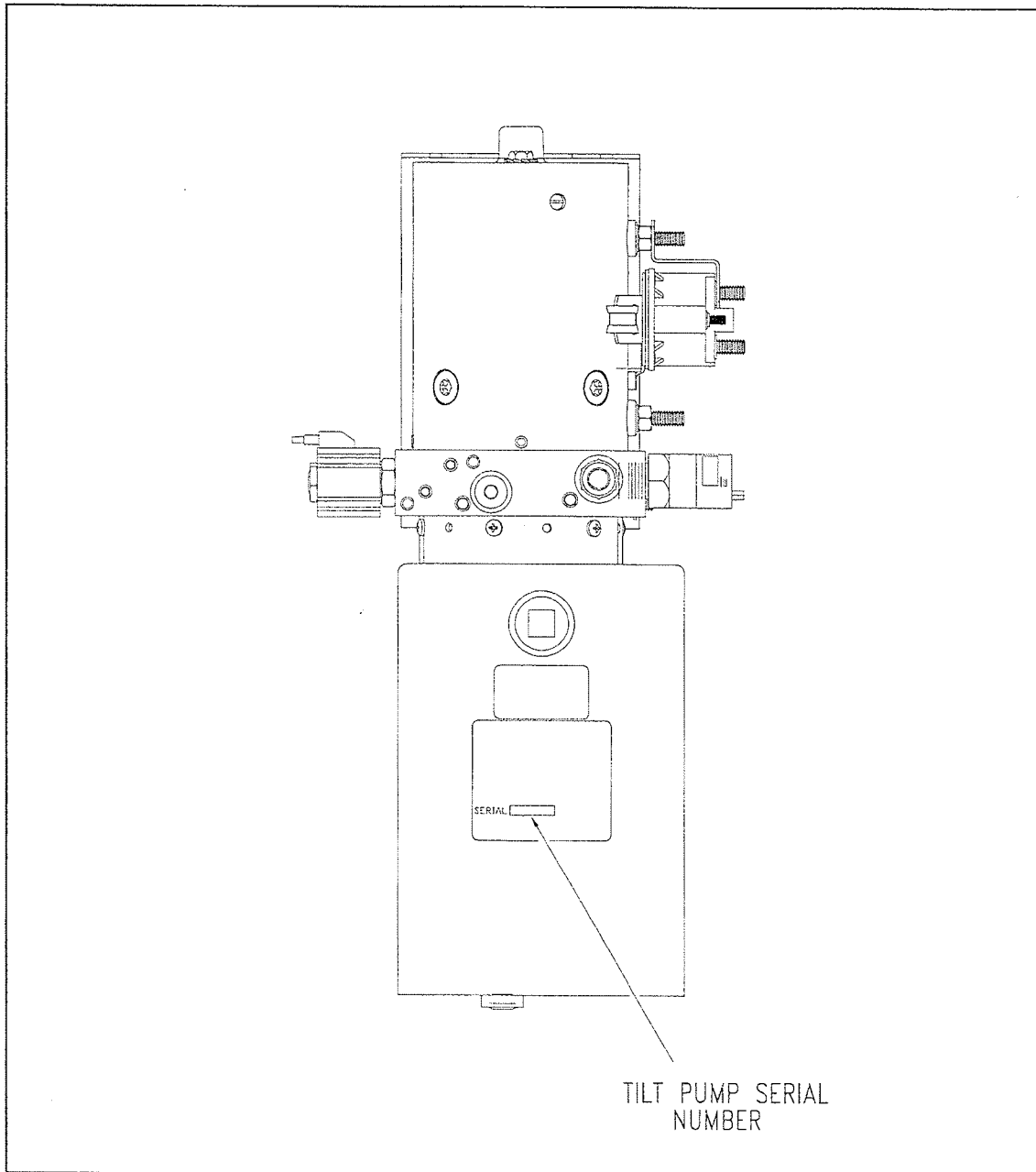


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TILT PUMP – SERIAL NUMBER IDENTIFICATION

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