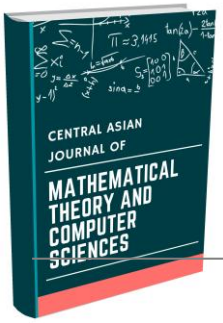

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MAINTENANCE FEATURES OF THE TIRE PRESSURE REGULATION SYSTEM

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Abstract

The tire pressure control system significantly increases the vehicle's flotation on loose sand and salt marshes.

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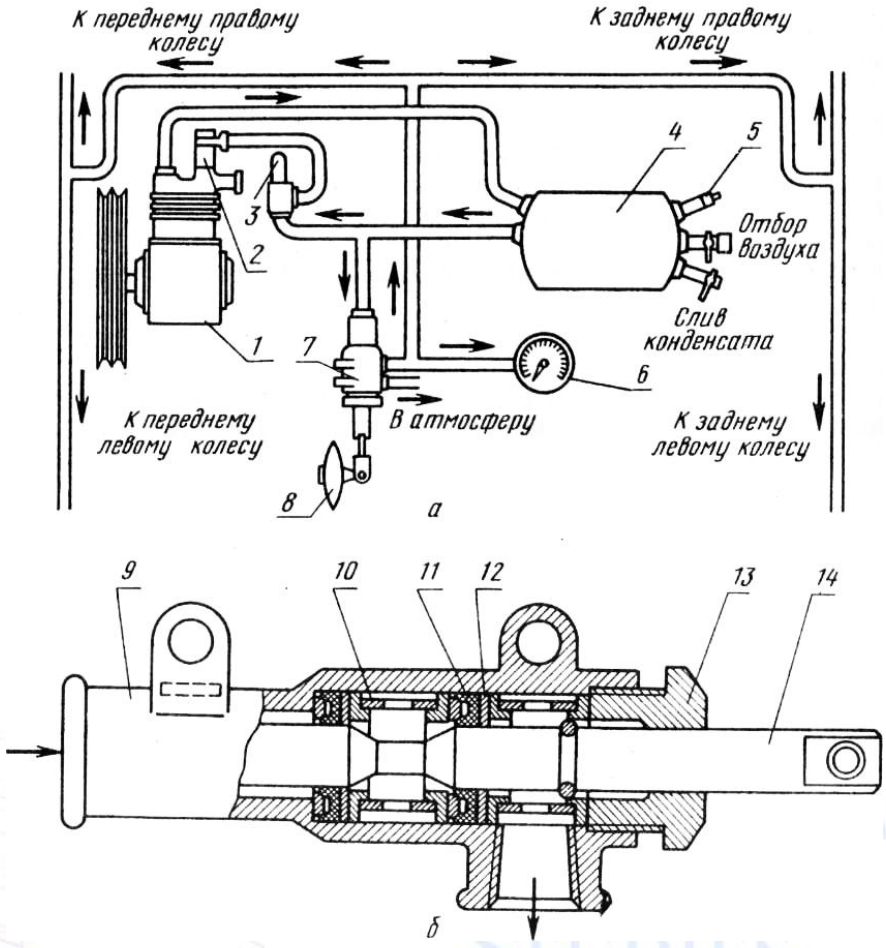
The tire pressure control system must be periodically inspected and, if necessary, eliminate the detected malfunctions. So, if a decrease in air pressure is detected during control inspections before going on a flight or during daily maintenance, then it is necessary to check the system for leaks.

At the beginning, they check the correct operation of the check valve, for this they increase the pressure in the pneumatic brake drive system to 6-7 N / cm2, close all the valves on the tire valve block and move the lever of the central control valve to the position of air release from the system. When the check valve is adjusted, the release of air from the pneumatic brake system to the atmosphere stops at a pressure of 4.5 N/cm2. For normal operation of the check valve, it must be adjusted with an adjusting screw. When the screw is screwed in, the pressure increases, and when it is screwed out, it decreases.

Then check the pressure in the section of the system from the control valve to the block of tire valves. To do this, tightly close all the valves of the tire valve block and within 20-30 seconds check on the pressure gauge if there is any air leakage in the system. If the position of the pressure gauge pointer does not change, then there is no leak.

Tire leaks are determined by ear or by bubbles and air appearing at the joints on which the soap solution is applied. Leakage of connections is eliminated by tightening them or replacing their individual parts. AK-20 glue is used to eliminate leaks in threaded connections of fittings.

The pressure may drop due to a loose fit of the exhaust valve. To check, it is necessary to tightly close the holes for the air outlet from the valve to the atmosphere. If the air leak has stopped, then the valve seat is loose. This usually happens from the fact that the drive rods of the control valve lever are incorrectly adjusted. When the intake valve is loose, the pressure will increase, which is also associated with improper adjustment of the rods.



Rice. 1. Car tire pressure regulation system:

a - scheme of the system; b - pressure control valve; 1 - compressor; 2 - unloading device; 4 - pressure regulator; 4 - air balloon; 5 - safety valve; 6— manometer; 7 - pressure control valve; 8 - handle; 9 - body; 10 - spacer sleeve; 11 - cuff; 12 - support washer; 18 - nut; 14 - spool

Having eliminated the detected malfunctions, they begin to check the sections of the system from the block of tire cranes to the shut-off valves of the wheels. These valves are tightly closed, and the valves of the tire valve block are sequentially opened. The tightness of each air communication checks for 40-50 seconds. If the pressure gauge pointer shows a decrease in pressure, the air leakage is eliminated in the same way as in the system section from the control valve to the tire valve block.

However, it also happens that all external connections are tight, but air passes through the air supply sealing heads. To verify this, remove the axle shaft flange (front axle) or axle shaft (rear axle) and determine the location of the leak by ear. If an air leak is detected, replace the seals.

In case of minor leaks, i.e., when normal pressure is maintained in the tires with the help of a compressor, it is advisable to eliminate the defect in the conditions of a motor transport enterprise.

The complete tightness of the system is checked within the time limits established for TO-1. To do this, the tires are cooled to the ambient temperature, the pressure is raised to the maximum and, having put the control valve lever in the middle position, all the valves of the tire and wheel valve block are opened. For twelve hours, the air pressure drop in the tires should not exceed 1 N/cm2.

During TO-1, they also check the gap between the control valve lever, inlet and outlet valves, which should be within 0.5 mm. If the gaps are more or less than 0.5 mm, then they are adjusted by changing the length of the drive rod.

At TO-2, in addition to the listed works, all pipelines and hoses are purged. To do this, close all wheel valves, disconnect the upper ends of the tubes and drain the condensate from the air cylinders. Then, in the pneumatic brake drive system, the pressure is raised to 7 N/cm2 and, alternately opening the valves of the tire valve block, purge each branch of the pipelines.

The most critical and hard-to-reach node of the control system is the air supply heads. Their performance depends on the correct installation, as well as on whether the rubbing surfaces of the gland seals and covers are lubricated. When the heads are mounted on the trunnion, the working surface of the cuffs is carefully coated with grease 1-13 or 1-13c.

Before installing the head, fill the cavity between the head and the nuts with which the hub bearings are adjusted with grease. After installing the head, the lubricant is applied to the protruding end of the pin and the outer surface of the head.

Proper maintenance of the tire pressure control system greatly improves vehicle flotation.

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