Aeroprakt Ltd

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AEROPRAKT

SERVICE BULLETIN

No. SB A32-09

REPLACEMENT OF THE CONTROL SECTORS IN THE ROLL CONTROL SYSTEM OF A32 AND A32L AIRCRAFT WITH CENTRAL STICK

Repeating symbols:

Please, pay attention to the following symbols throughout this document marking important information.

▲ **WARNING:** Identifies an instruction, which if not followed may cause serious injury or even death.

■ **CAUTION:** Denotes an instruction, which if not followed, may cause severe damage.

◆ **NOTE:** Information useful for better handling.

Release date: **07.07.2020**

Effective date: **07.07.2020**

Completion date:

Superseded notice: **none**

Model: **A32 and A32L**

Serial number(s) affected: **A32 aircraft serial No. from 035 to and including 113**

A32L aircraft serial No. from 001 to and including 025

1) Planning information

1.1) Aircraft affected

A32 serial No. from 035 to and including 113;
A32L aircraft serial No. from 001 to and including 025.

1.2) Reason

It was found out that there was a certain deviation in shape of some parts of the roll control system. The tightening torque of the bolts attaching the control sectors affect their free movement.

1.3) Subject

Control sectors of the roll control system with central stick.

1.4) Compliance

Compliance with this Service Bulletin is mandatory for all affected aircraft for flight safety reasons!

1.5) Approval

The technical content of this Service Bulletin has been approved by Aeroprakt.

1.6) Manpower

Estimated work: modification according to the paragraph 3 can be done within 2 or 2.5 hours.

1.7) Mass data

Mass change – insignificant: +20 g.

1.8) Revision of other documents

None.

1.9) Spare parts

A set of new parts is supplied by local dealer.

2) Spare parts information

2.1) Spare parts price

The kit including: sector assemblies, right and left (1 of each), AN4H17A bolts (2 pcs.), is supplied free of charge to local dealers.

2.2) Special tools / primer

The tools necessary for replacement of the control sectors: cruciform screwdriver, 3/8" wrenches, 7/16" wrench, wire cutters, pliers, hand drill, ⌀2.0 mm drill bit, wire twister.

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3) Accomplishment / Instructions

3.1) Ensuring access to area "I" of the work (fig. 1).

3.1.1 Remove the soft cover of the stick.

3.1.2. Remove the handles from the levers protruding from the horizontal panel of the instrument compartment base.

3.1.3 Undo the screws and remove the horizontal panel of the instrument compartment base and the forward protecting panel between the pilot seats.

3.1.4 Undo the screws and remove the side panels of the instrument compartment base. Additionally remove the plastic clamps attaching Bowden cables, electric cables and Pitot and static tubing.

◆ **Note:** the side panels may be removed in turn for replacing in turn the right and left control sectors.

3.2) Removing the old control sectors

3.2.1 Relieve the tension of the control cables of the roll control system. For that remove the safety wire from one of the system turnbuckles and undo its barrel (see fig. 2). It is not recommended to disconnect the turnbuckle completely.

◆ **Note:** to simplify the following procedure of the control cable tension and the system adjusting it is recommended to measure the characteristic length "L" of the turnbuckle before undoing it. As well as mark the exact position of one of the flaperons while the other is fixed aligned with the wing tip.

3.2.2 Remove the split pins from the "P" pins (see fig. 6) and disconnect the cables from the cardan.

3.2.3 Undo AN4-17A bolts (see fig.7) and remove the old control sectors DR (right) and DL (left) with "S" spacers.

3.2.4 Undo the bolts fixing the cables and release the cables.

3.3) Installation of new control sectors

3.3.1 Drill ⌀2mm holes for safety wire (see fig. 4) on both sides of the additional supports of the control sectors. Remove the chips.

3.3.2 Fix the control cables on the new control sectors (No. 1R and 1L) using the cleats as shown on fig. 5. (right-hand shown, left-hand – mirror view).

3.3.3 Install the control sectors (No. 1R and 1L) in their place (see fig. 3 and fig. 6). During the installation the cable guards must keep the control cables in the groves of the respective control sectors.

3.3.4 Fix the control sectors with AN4-17A bolts (No. 2) and tighten the bolts with 10 N·m (7.4 lb·ft) torque.

3.3.5 Connect the cables to the cardan using the "P" pins (see fig. 6). Lock the pins with split pins.

3.3.6 Lock the bolts No. 2 with safety wire through the holes in their heads and ⌀2mm holes in the additional supports of the control sectors (see fig. 3 and fig. 6).

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3.4) Final work

3.4.1 Adjust cable tension and check position of the flaperons. The tension force is 21 kg (46 lb).

3.4.2 After adjusting cable tension check the control system for easy and smooth movement, for absence of jamming or control sectors touching the cable guards or other structural elements. The cables may not contact the sectors outside their regular circular portions.

3.4.3 Lock the turnbuckles used for releasing/adjusting the control cable tension (see fig. 2).

3.4.4 Re-assemble the instrument compartment base after securing with plastic clamps the Bowden cables, electric cables and Pitot and static tubing. Install the lever handles and put the fabric cover of the control stick back.

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4) Appendix

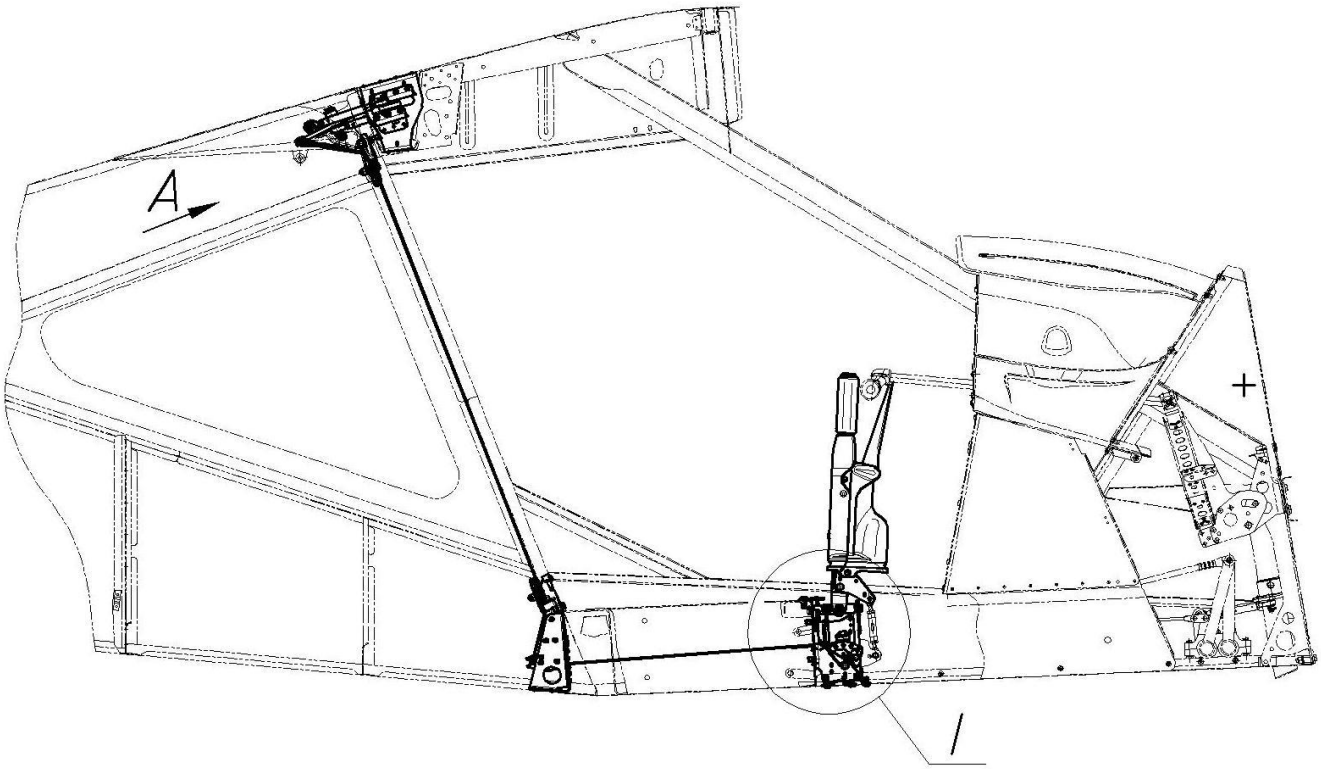

Fig. 1

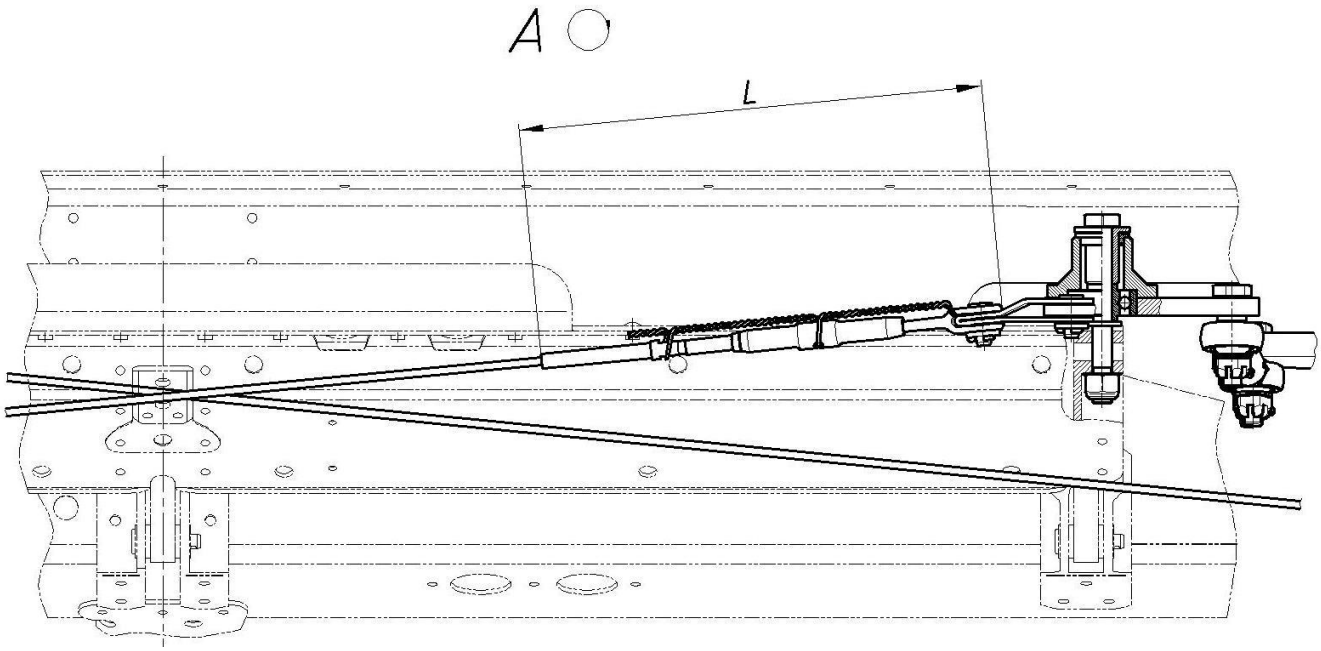

Fig. 2

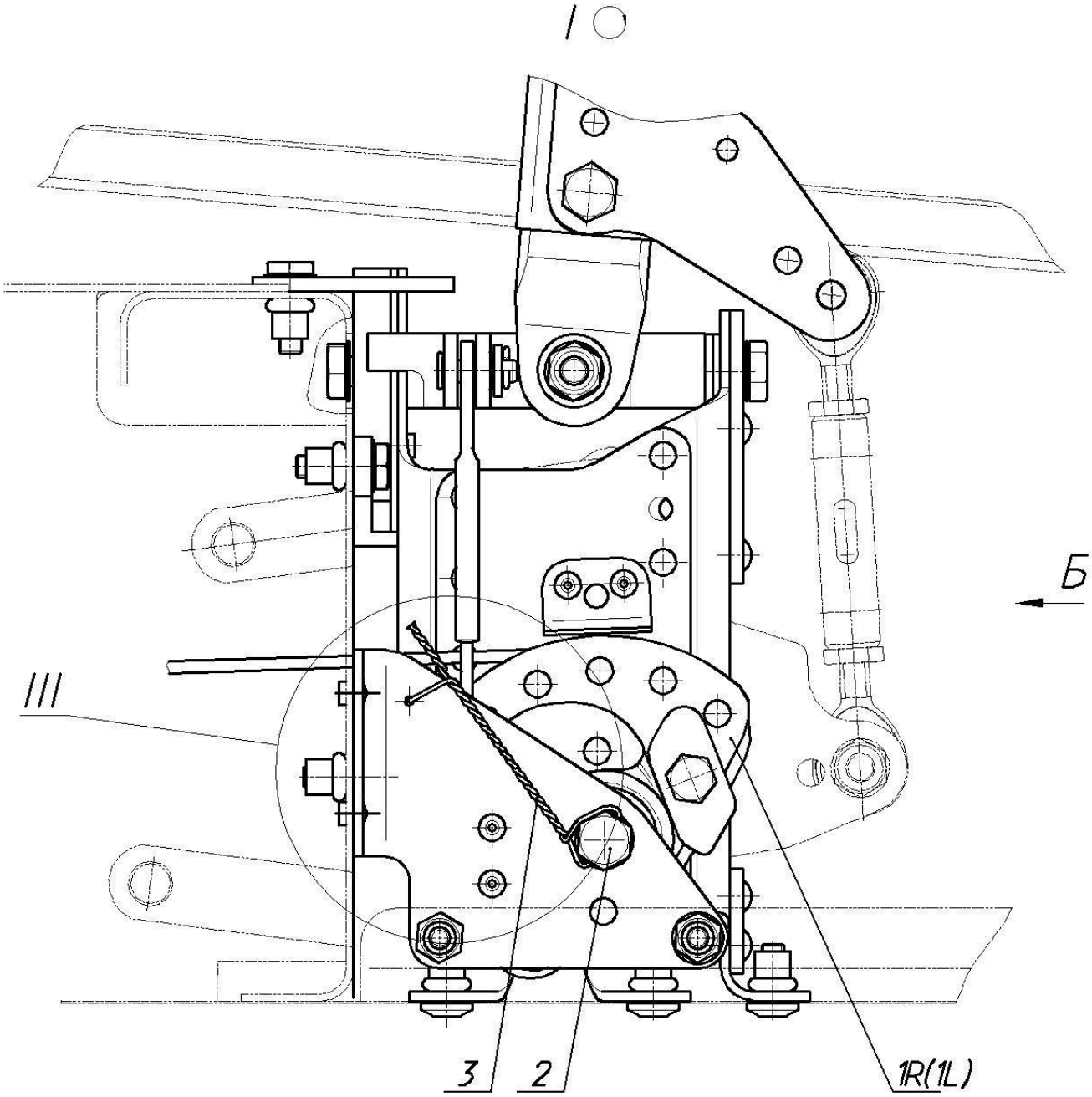

Fig. 3

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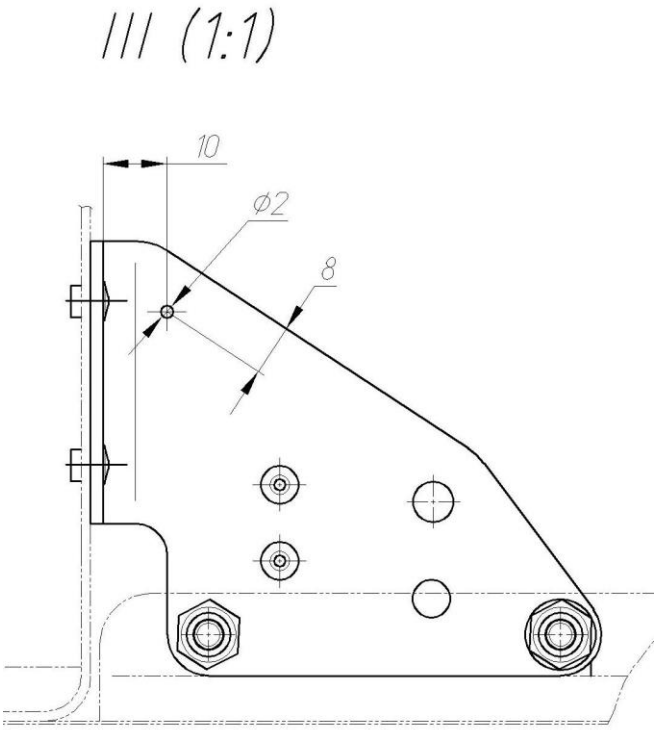

Fig. 4

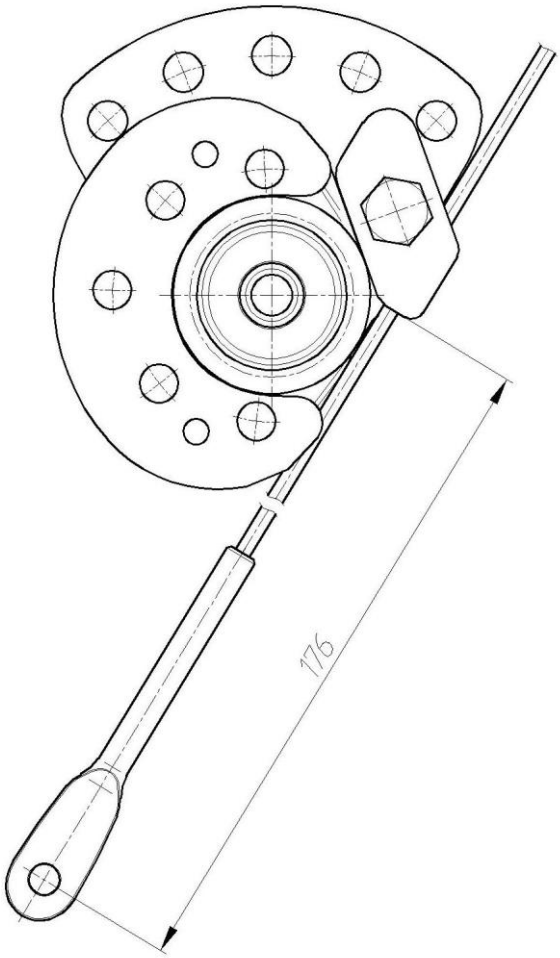

Fig. 5

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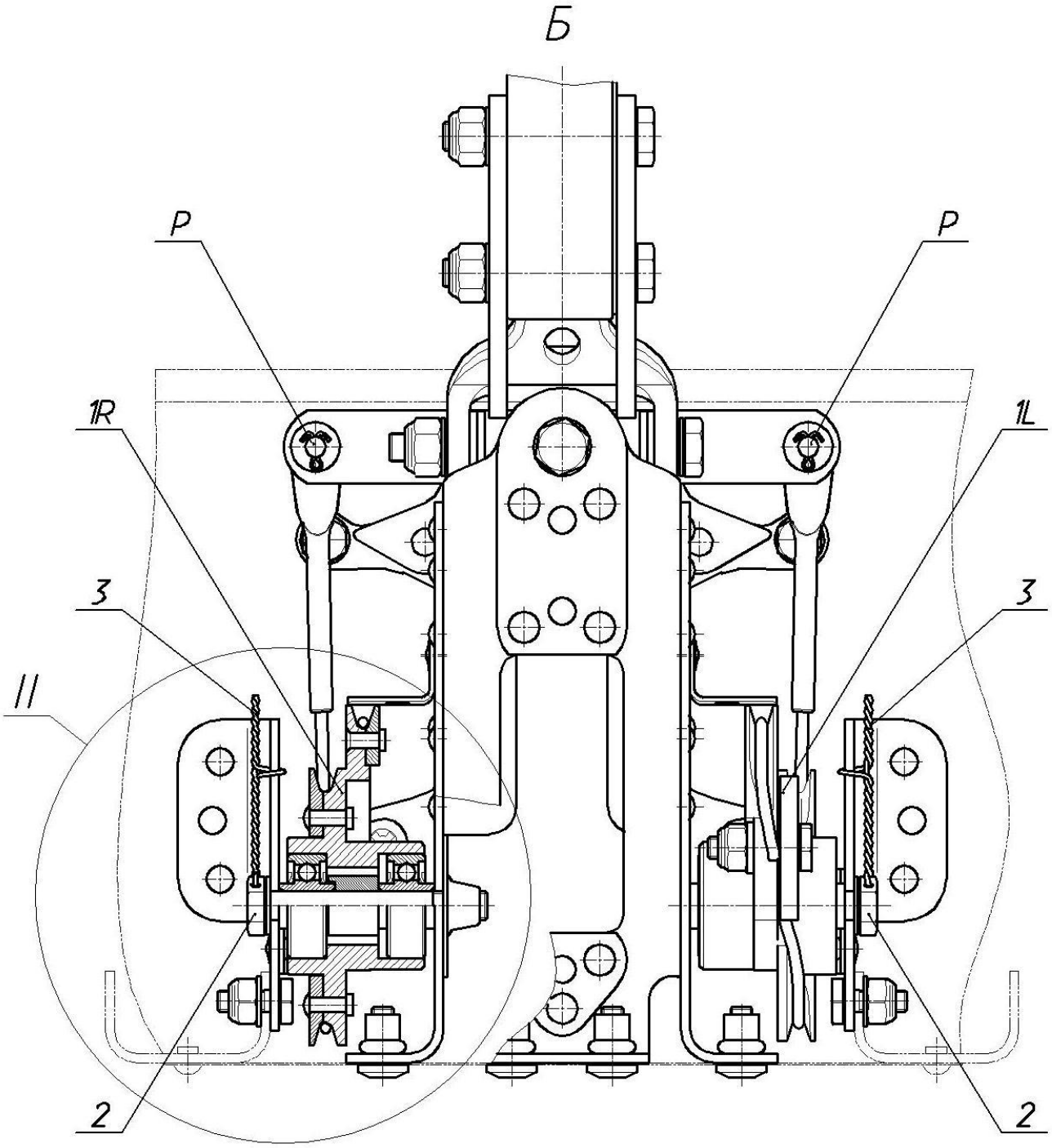

Fig. 6

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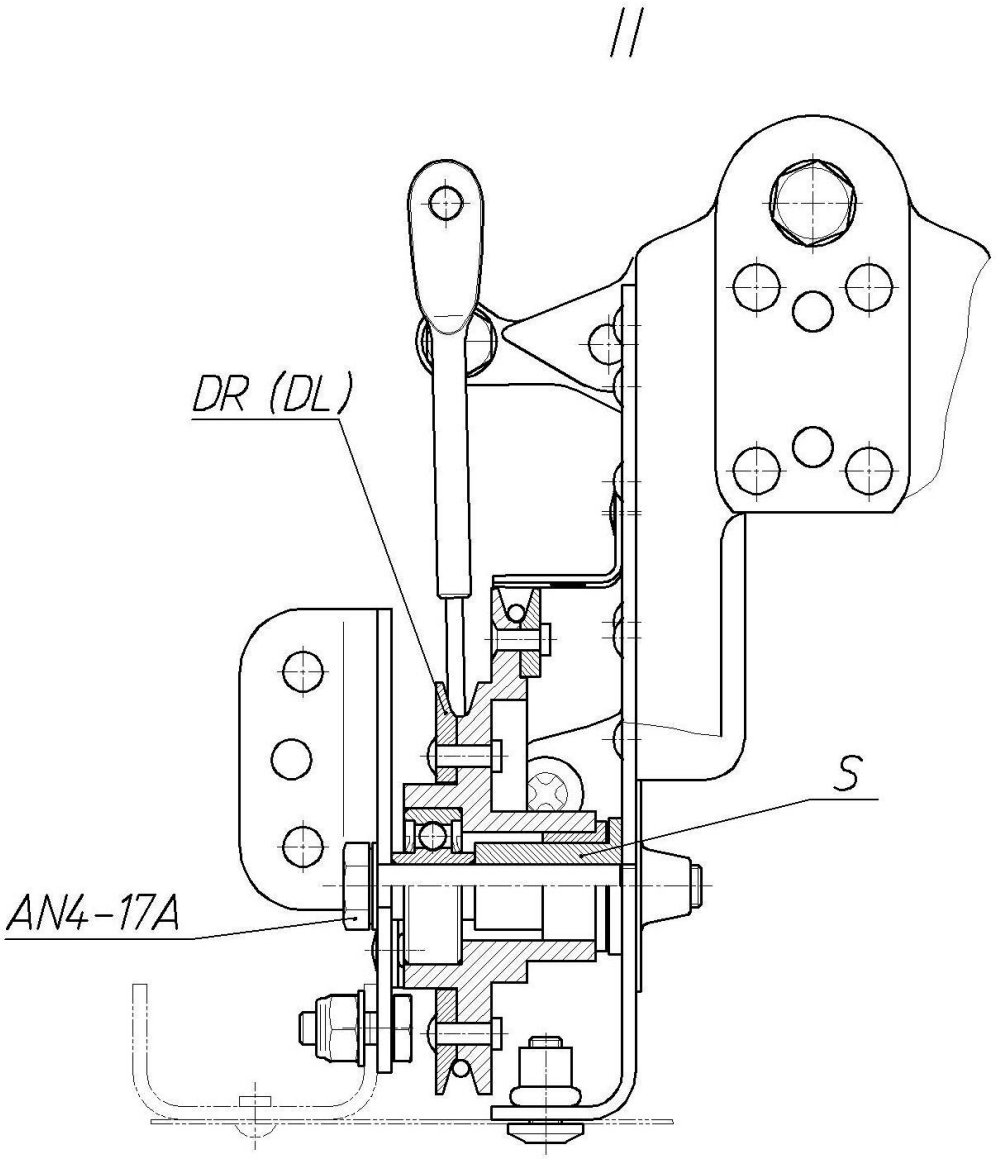

Fig. 7

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