# ДОРАБОТКА : HYDRACTIVE SUSPENSION REGULATION

*ПОДВЕСКА ГИДРОАКТИВНАЯ*

Касается автомобиля : XANTIA с гидрактивной подвеской (with or without SC.CAR).
Применение, начина с номера OPR: 8155.

**ПРИМЕЧАНИЕ** : SC.CAR : Система Citroën активного управления поперечными колебаниями.

Change in supplies to the hydractive suspension regulators (switching from "firm" state to "soft" state and vice versa) :

- Fitting of new hydractive suspension regulators
- Discontinuation of the hydraulic pipes between the suspension regulators and the anti-sinking valves

## 1. Описание

The drawings in this document contain indices :

- индекс a = Элемент передней подвески
- индекс b = Rear suspension unit

### 1.1. Старая конструкция : Презентация

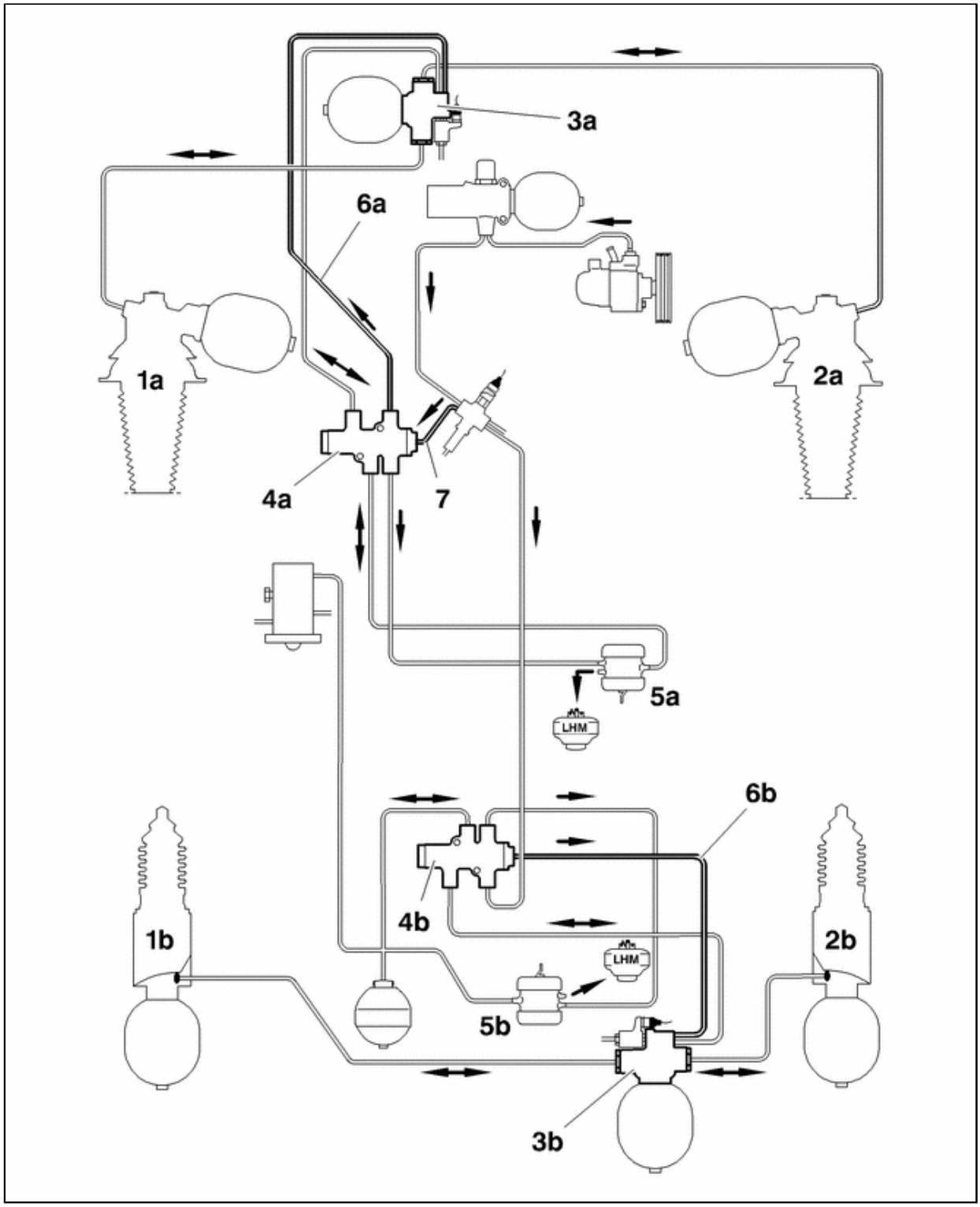


Рисунок : B3BP13QP

(1a) L.H. front suspension unit.
(1b) L.H. rear suspension unit.
(2a) R.H. front suspension unit.
(2b) R.H. rear suspension unit.
(3a) Front suspension regulator.
(3b) Rear suspension regulator.
(4a) Anti-sinking valve (передние).
(4b) Anti-sinking valve (задние).

(5a) Front height corector.
(5b) Rear height corrector.
(6a) Hydraulic supply pipe of the front suspension regulator (switching from "firm" state to "soft" state and vice versa).
(6b) Hydraulic supply pipe of the rear suspension regulator (switching from "firm" state to "soft" state and vice versa).
(7) Main hydraulic supply pipe of the front anti-sinking valve.
The above diagram shows the hydraulic circuit of the hydractive suspension with the anti-sinking device :

- The suspension regulator ( 3a) is supplied by the hydraulic pipe (6a)
- The suspension regulator (3b) is supplied by the hydraulic pipe (6b)
- The hydraulic pipe (7) supplies the front anti-sinking valve (4a) at its end

Features of a hydractive suspension hydraulic circuit without anti-sinking device :

- The anti-sinking valves ( 4a) and (4b) are not fitted
- The hydraulic pipe (6a) connects the regulator (3a) to a 3-way connector of the hydraulic supply located on the front sub-frame (с левой стороны)
- The hydraulic pipe (6b) connects the regulator (3b) to a 3-way connector of the hydraulic supply located on the rear sub-frame ( с правой стороны)

## 1.2. Старая конструкция : Принцип работы

Layout of the front and rear circuit regulation shown with ignition off ("firm" state).

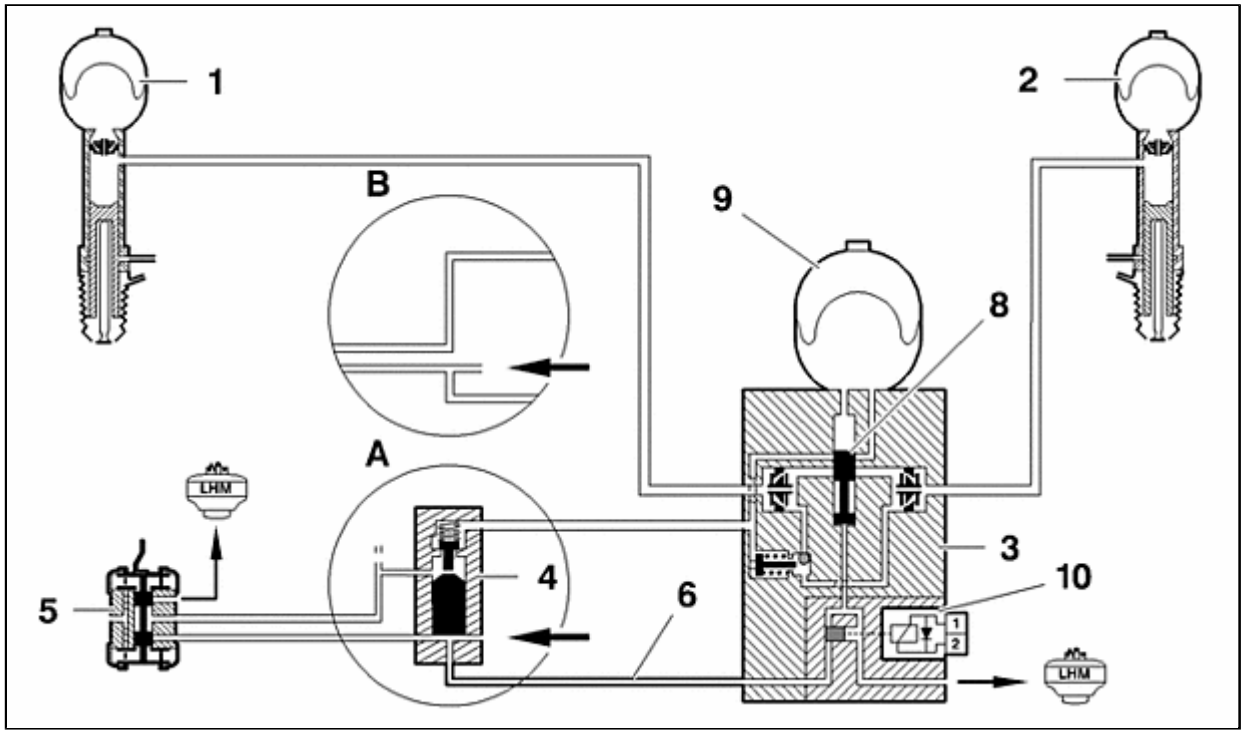


Рисунок : B3BP13RD

A - Assembly with anti-sinking valve.
B - Assembly without anti-sinking valve.
(1) Left hand suspension component.
(2) Right hand suspension component.
(3) Регулятор гидрактивной подвески.
(4) Anti-sinking valve.
(5) Height corrector.
(6) Hydraulic supply pipe of the suspension regulator.

(8) Slide valve of the suspension regulator.
(9) Sphere of the suspension regulator.
(10) Electrovalve of the suspension regulator.
The slide valve ( 8) of the suspension regulator (3) is held by the pressure from the sphere (9).
When the electrovalve ( 10) is energised by the suspension ECU :

- The slide valve (8) moves under the action of the pressure acting in the hydraulic pipe (6)
- The suspension components (1) and (2) are connected with the sphere (9) of the suspension regulator
- The suspension is in the "soft" state

## 1.3. Новая конструкция : Презентация

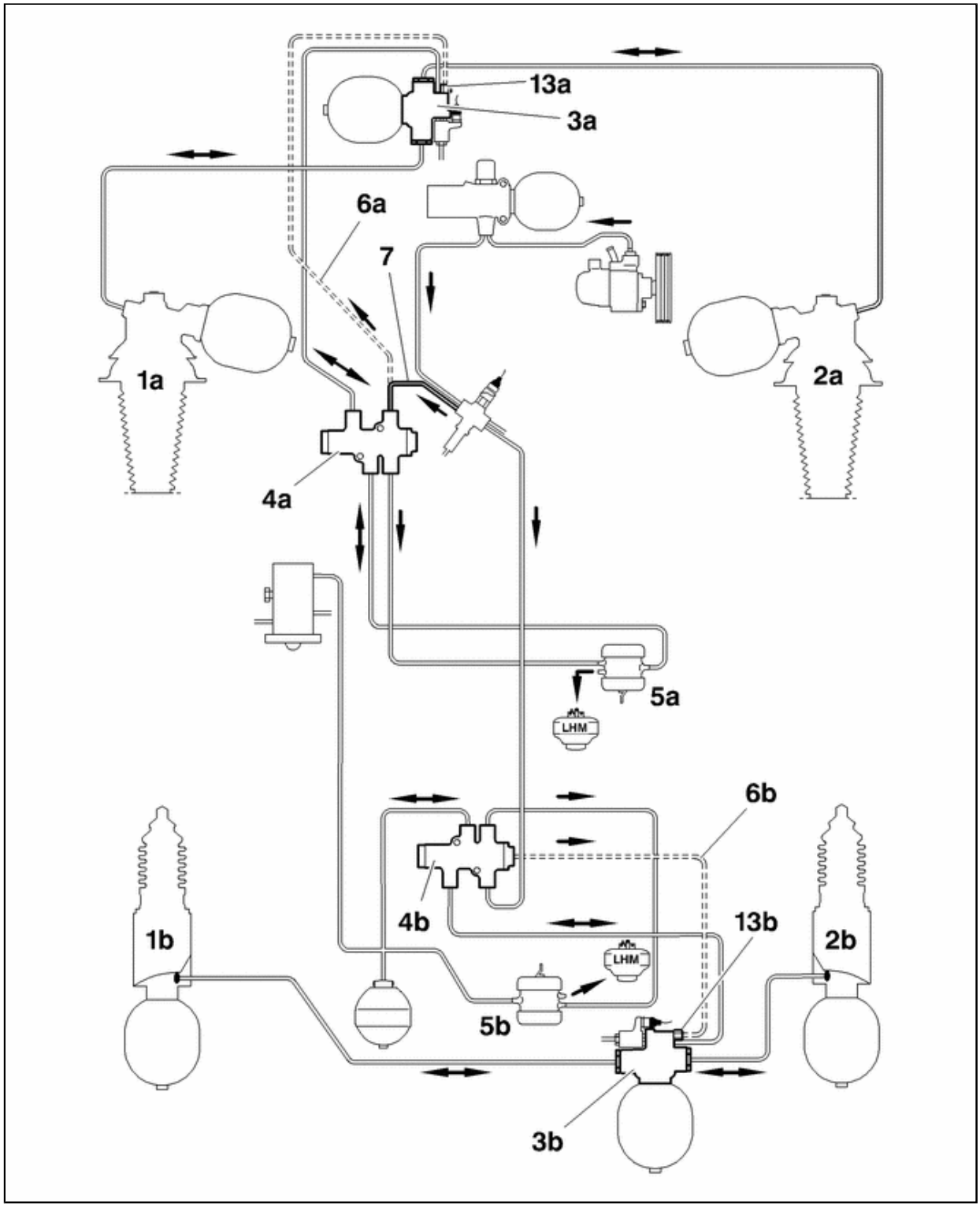


Рисунок : B3BP13SP

(1a) L.H. front suspension unit.
(1b) L.H. rear suspension unit.
(2a) R.H. front suspension unit.
(2b) R.H. rear suspension unit.
(3a) Front suspension regulator.
(3b) Rear suspension regulator.
(4a) Anti-sinking valve (передние).
(4b) Anti-sinking valve (задние).

(5a) Front height corector.
(5b) Rear height corrector.
(6a) Hydraulic supply pipe of the front suspension regulator (switching from "firm" state to "soft" state and vice versa).
(6b) Hydraulic supply pipe of the rear suspension regulator (switching from "firm" state to "soft" state and vice versa).
(7) Main hydraulic supply pipe of the front anti-sinking valve.
(13a) Bleed screw on the front suspension regulator.
(13b) Bleed screw on the rear suspension regulator.
Features of the new assembly :

- Discontinuation of hydraulic pipes ( 6a) and (6b), their functions are incorporated into the suspension regulators (3a) and (3b)
- The hydraulic pipe (7) supplies the front anti-sinking valve (4a) through a side orifice (instead of at its end)

Новые детали :

- Hydractive suspension regulators ( 3a) and (3b)
- Anti-sinking valves (4a) and (4b) (fitting of a plug on the end of the valves)
- Main hydraulic supply pipe (7) of the front anti-sinking valve (4a)

## 1.4. Новая конструкция : Принцип работы

Layout of the front and rear circuit regulation shown with ignition off ("firm" state).

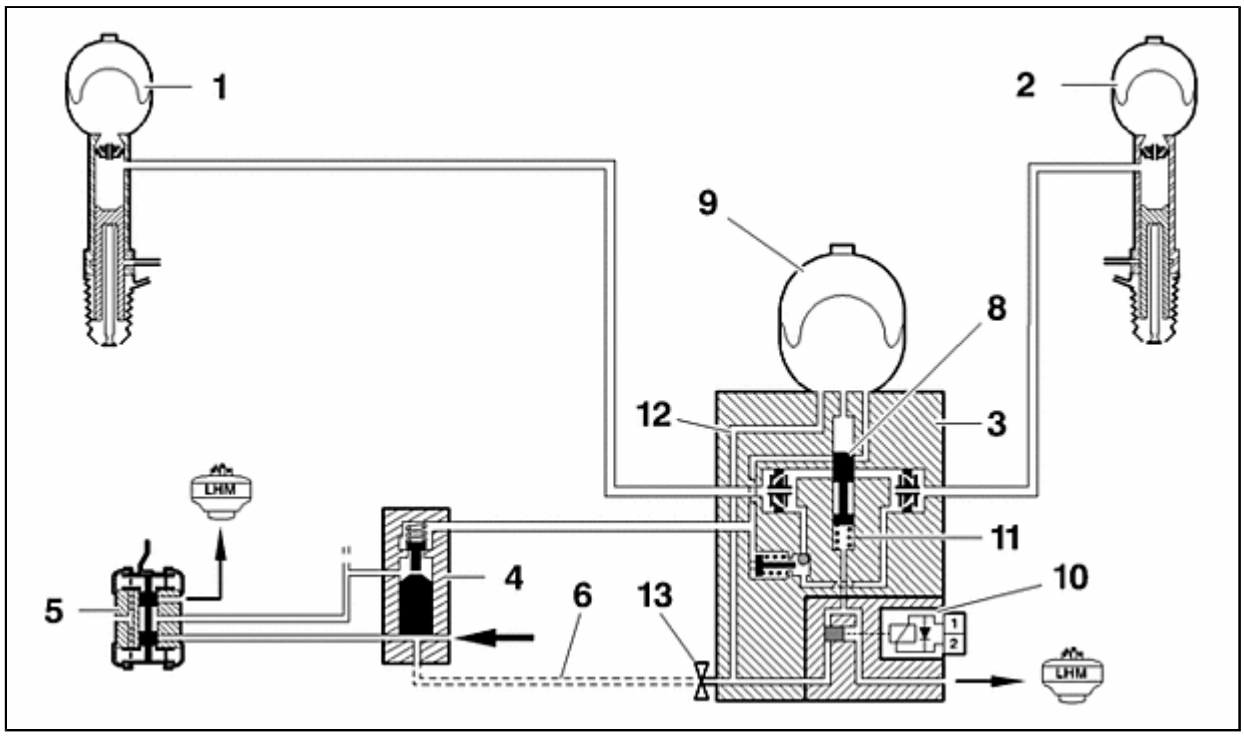


Рисунок : B3BP13TD

(1) Left hand suspension component.
(2) Right hand suspension component.
(3) Регулятор гидрактивной подвески.
(4) Anti-sinking valve.
(5) Height corrector.
(6) Hydraulic pipe discontinued.
(8) Slide valve of the suspension regulator.

(9) Sphere of the suspension regulator.
(10) Electrovalve of the suspension regulator.
(11) Spring inside the suspension regulator.
(12) Supply pipe inside the suspension regulator.
(13) штуцеров для прокачки .
The slide valve ( 8) of the suspension regulator (3) is held by the pressure from the sphere (9).
When the electrovalve ( 10) is energised by the suspension ECU :

- The slide valve (8) moves due to the pressure supplied by the suspension sphere (9) (through the internal supply pipe (12), combined with the action of the spring (11))
- The suspension components (1) and (2) are connected with the sphere (9) of the suspension regulator
- The suspension is in the "soft" state

## 2. Идентификация

### 2.1. Регулятор гидрактивной подвески

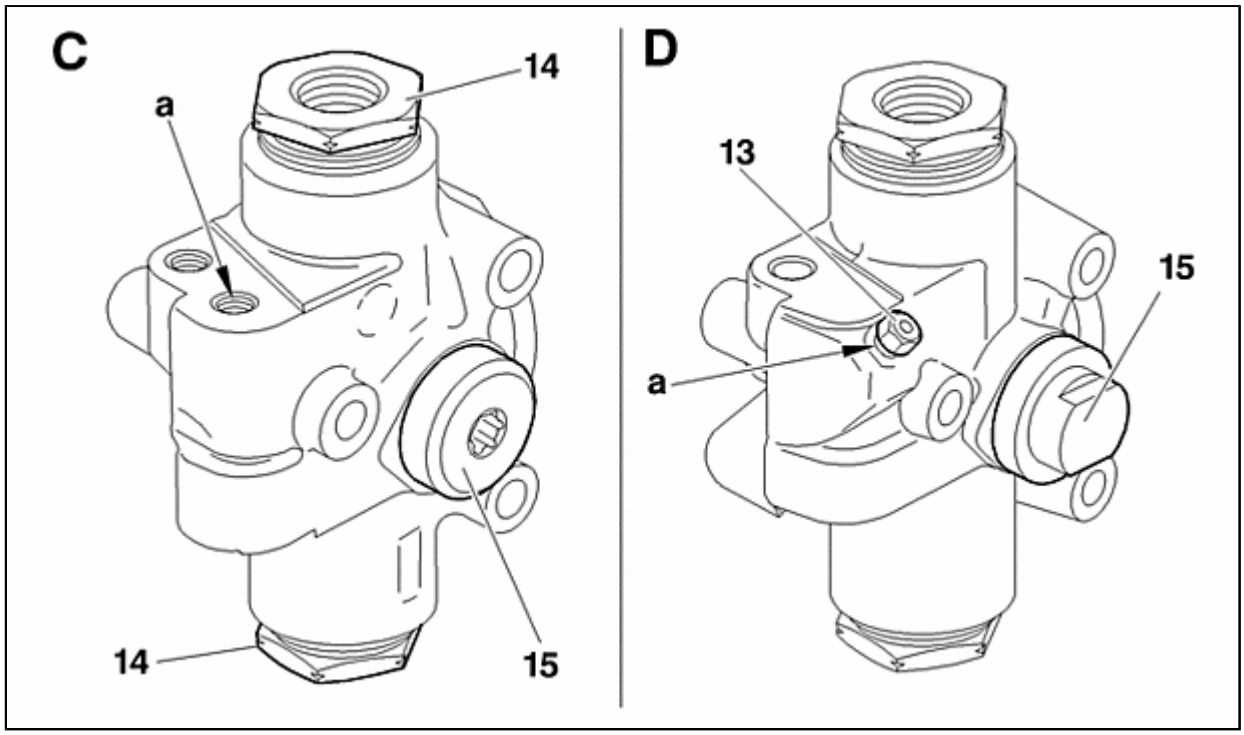


Рисунок : B3BP13UD

C - Б/у деталь :

- The plug (15) is not shouldered
- The orifice "a" receives the hydraulic supply pipe of the suspension regulator
- The hexagonal part of the union nuts (14) contains notches, on the regulators designed to receive the new CITROEN hydraulic union

D - Роль каждого элемента системы :

- The plug (15) contains a shoulder to house the spring in the regulator
- The orifice "a" is moved and blanked by a bleed screw (13)

Application of the new CITROEN hydraulic union : С номера OPR 8053 (see specific evolution note).

### 2.2. Anti-sinking valve

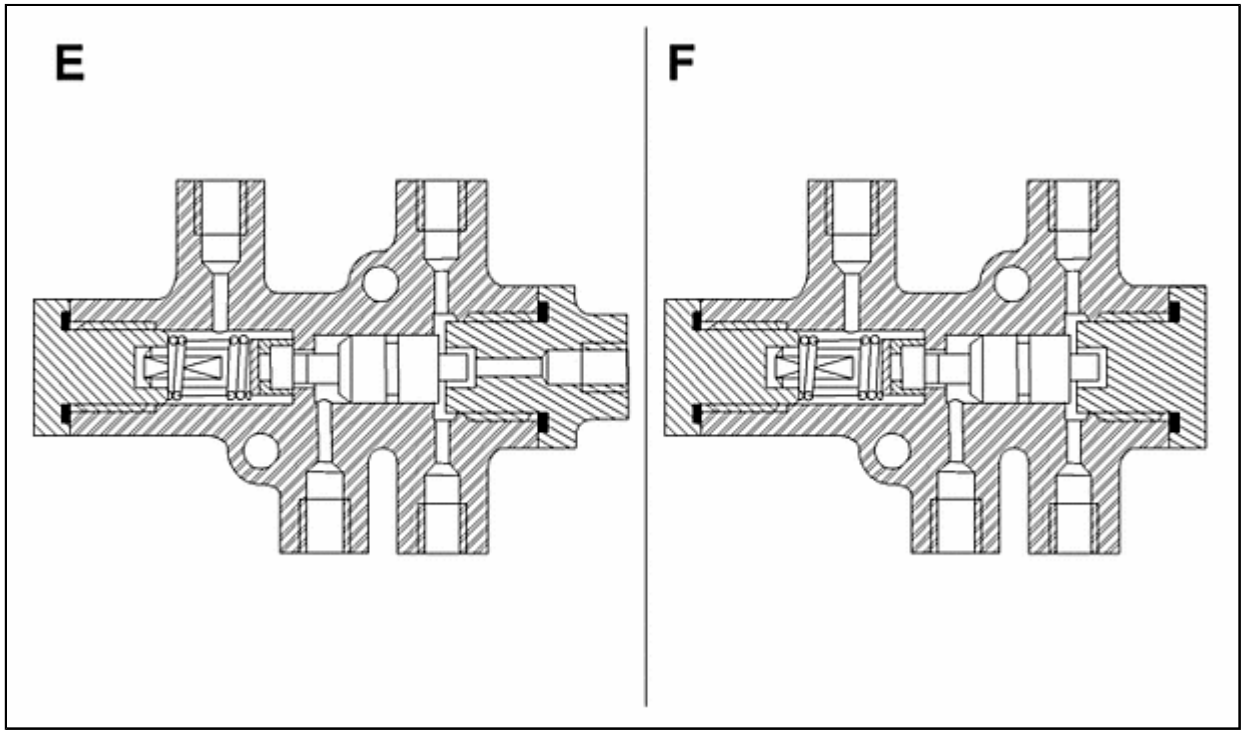


Рисунок : B3BP13VD

E - Б/у деталь.
F - Роль каждого элемента системы : The anti-sinking valve contains a plug on its 2 ends.

## 3. Запасные части

Служба запасных частей продает как новые, так и старые детали :

- Anti-sinking valve
- Hydraulic pipes

The suspension regulator is only available with an internal supply hose (once stocks of the old part have been exhausted).
The following variations of hydractive suspension regulator exist :

- Compatible with the ISO hydraulic union
- Compatible with the new CITROEN hydraulic union

Additional parts to blank the orifice of the anti-sinking valve :

- штуцеров для прокачки : Референс P.R 1210 06
- Защитный чехол : Референс P.R 2088 15

## 4. Работа

The circuit must be depressurised before working on the front or rear suspension circuit.

### 4.1. Depressurising the suspension

| Перечень работ (engine running, vehicle on the ground) | | |
|---|---|---|
| Порядок | Выполните следующие операции | Последовательность |

| | | |
|---|---|---|
| работ | | |
| 1 | Start the engine, pressure regulating bleed screw of the pressure regulator tight | The SC/MAC valves are activated |
| | | The solenoid valves of the hydractive regulators are activated |
| 2 | Set the height control to the low position | Depressurise the following components |
| | | The 4 spheres of the suspension components |
| | | The 2 spheres of the hydractive suspension regulators |
| | | SC/MAC storage battery (задние) |
| 3 | Остановить двигатель | - |
| 4 | Отвернуть на один оборот спускной вентиль включателя-выключателя | The storage battery of the circuit-breaker is depressurized |

SC/MAC : anti-sink suspension system.

## 4.2. Replacing a suspension regulator

Существует 3 типа монтажа.

| До номера OPR 8052 | Между № OPR 8053 и 8154 | С номера OPR 8155 |
|---|---|---|
| Suspension regulator with external pipework | Suspension regulator with external pipework | Suspension regulator with internal pipework |
| Compatible with the ISO hydraulic union | Compatible with the new CITROEN hydraulic union (see specific evolution note) | |

Замена : The suspension regulator is only available with an internal supply hose (once stocks of the old part have been exhausted).
Автомобили, выпущенные с завода до № OPR 8052 : A suspension regulator with internal pipework suited to the ISO hydraulic union is available from the Replacement Parts Division.

| Adjustment to be made for fitting the new regulator | | |
|---|---|---|
| До номера OPR 8052 | Между № OPR 8053 и 8154 | С номера OPR 8155 |
| Suspension regulator with internal pipework | Suspension regulator with internal pipework | Suspension regulator with internal pipework |
| Compatible with the ISO hydraulic union | Compatible with the new CITROEN hydraulic union | |
| Вид : Replacing a suspension regulator | Вид : Replacing a suspension regulator | Начальный монтаж |

## 4.3. Replacing a suspension regulator : Replacing a suspension regulator (передние)

Касается автомобиля : XANTIA (до № OPR 8154).

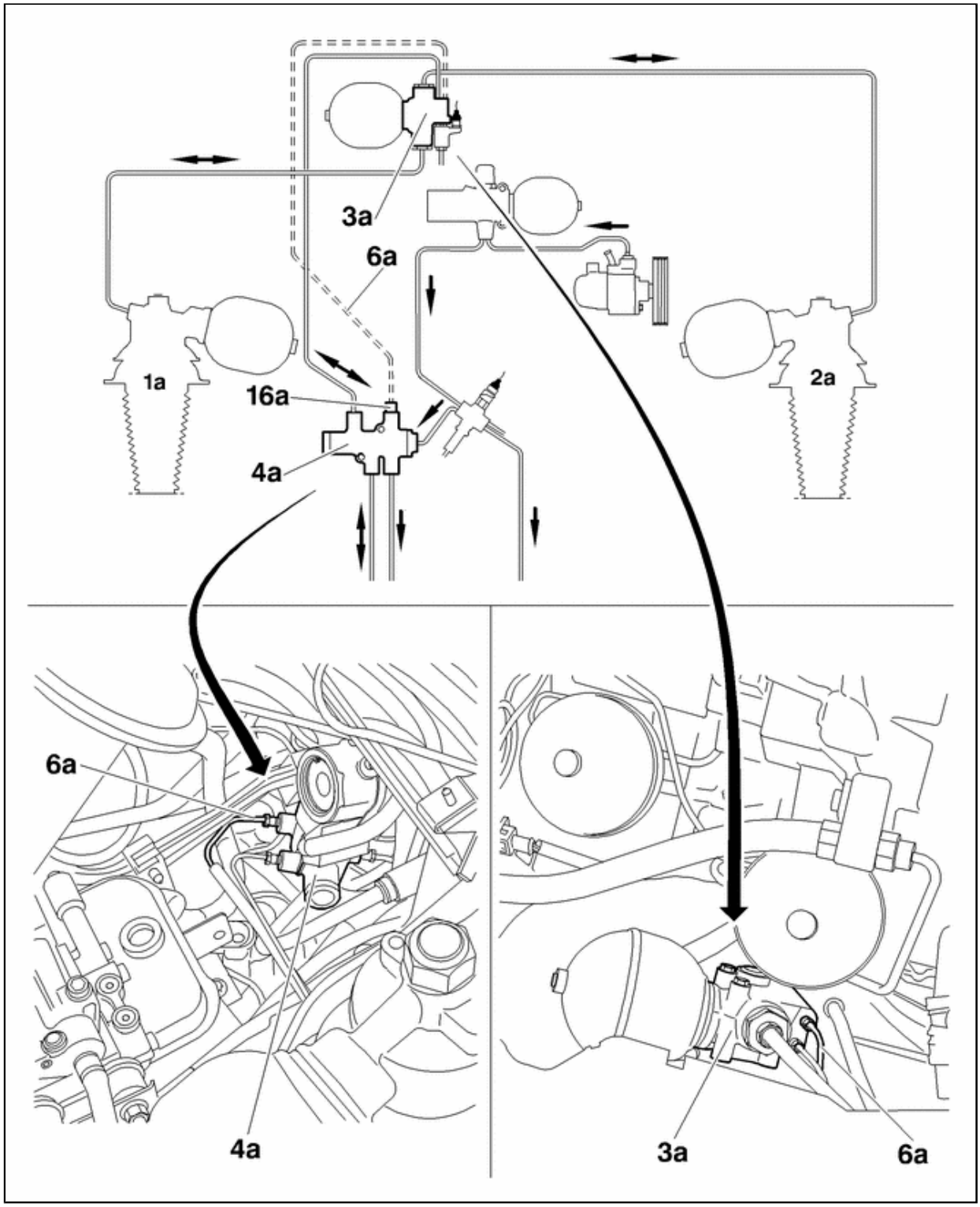


Рисунок : B3BP13WP

The above diagram shows the hydraulic circuit of the hydractive suspension with the anti-sinking device.
Features of a hydractive suspension hydraulic circuit without anti-sinking device : The hydraulic pipe (6a) connects the regulator (3a) to a 3-way connector of the hydraulic supply located on the front sub-frame (с левой стороны).
Выполняемые операции :

- Depressurising the suspension
- Disconnect and remove the hydraulic pipe ( 6a) by cutting it into sections
- Remove the seal in the orifice of the anti-sinking valve (4a) (or in the 3-way connector for a device

without anti-sinking)
- Insert a bleed screw (16a) into the anti-sinking valve (4a) (or into the 3-way connector for a device without anti-sinking)
- Fit the new suspension regulator (3a)
- Check the level of the hydraulic system

**ОБЯЗАТЕЛЬНО** : Check the union is sealed by varying the height of the vehicle, engine running.

**ВНИМАНИЕ** : The following variations of the new suspension regulator exist : Compatible with the ISO hydraulic union (до № OPR 8052). Compatible with the new CITROEN hydraulic union (начиная с N° OPR 8053).

## 4.4. Replacing a suspension regulator (задние)

Касается автомобиля : XANTIA (до № OPR 8154).

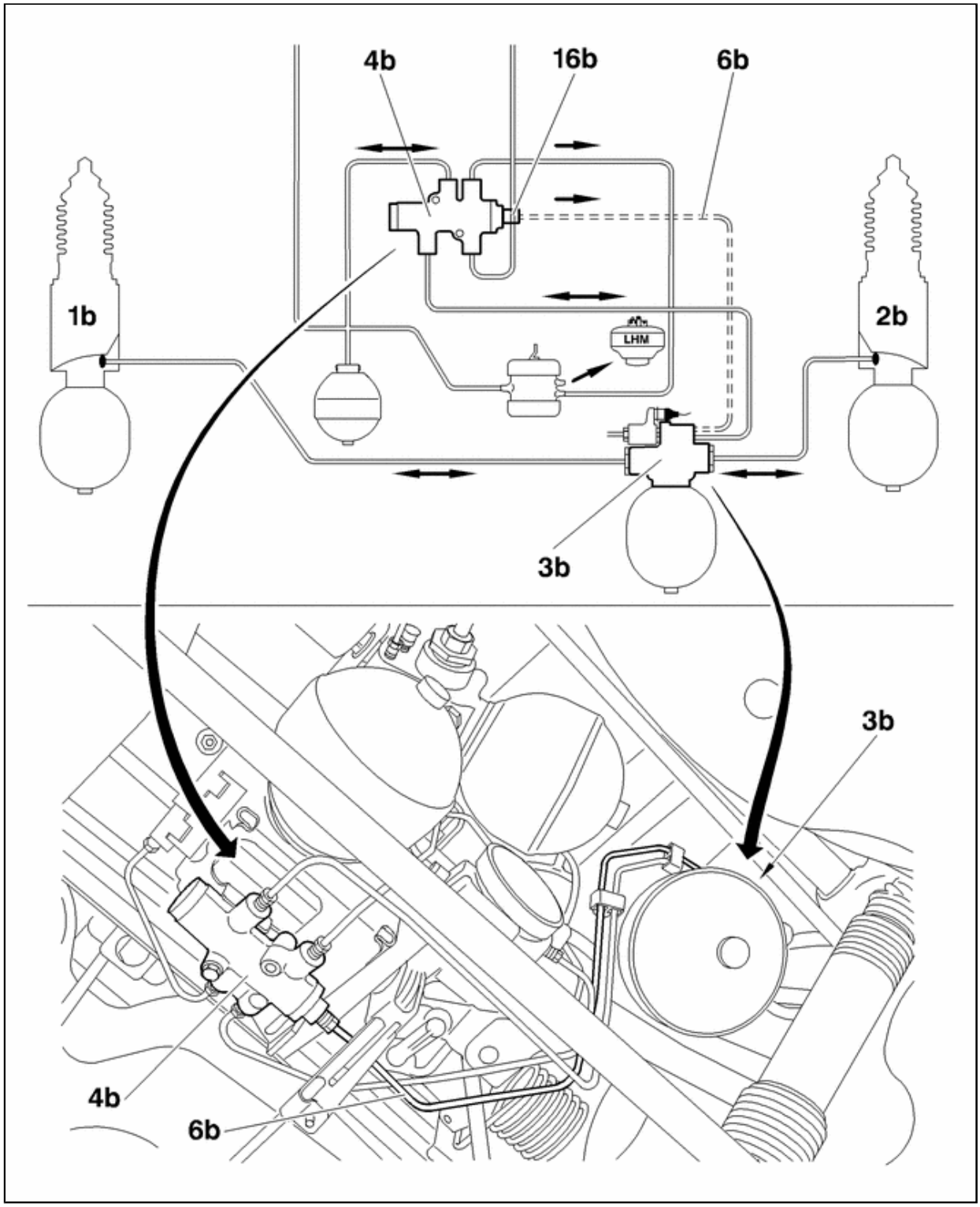


Рисунок : B3BP13XP

The above diagram shows the hydraulic circuit of the hydractive suspension with the anti-sinking device.
Features of a hydractive suspension hydraulic circuit without anti-sinking device : The hydraulic pipe (6b) connects the regulator (3b) to a 3-way connector of the hydraulic supply located on the rear sub-frame (с левой стороны).
Выполняемые операции :

- Depressurising the suspension
- Disconnect and remove the hydraulic pipe ( 6b) by cutting it into sections
- Remove the seal in the orifice of the anti-sinking valve (4b) (or in the 3-way connector for a device

without anti-sinking)
- Insert a bleed screw (16b) into the anti-sinking valve (4b) (or into the 3-way connector for a device without anti-sinking)
- Fit the new suspension regulator (3b)
- Check the level of the hydraulic system

**ОБЯЗАТЕЛЬНО** : Check the union is sealed by varying the height of the vehicle, engine running.

**ВНИМАНИЕ** : The following variations of the new suspension regulator exist : Compatible with the ISO hydraulic union (до № OPR 8052). Compatible with the new CITROEN hydraulic union (начиная с N° OPR 8053).