



SERVICE BULLETIN No.1110

Circulate to listed addressees

COACH MODEL	: T2145, S2145 and C2045
BULLETIN TYPE	: Service Information
MANUAL & SECTION	: Maintenance Manual: Chapter 11 - Body and accessories Spare Parts Manual: Section 732709 - Doors: accessories
PARTS BOOK REVISION	: Yes
DATE	: September 12th, 2002
SUBJECT	: Door locks – Just-One-Key
TERMS & CONDITIONS	: No claims will be accepted with reference to this Bulletin.

APPLICATION:

The service information subject of this Bulletin is applicable to T2100, S2100 and C2045 units equipped with door lock assemblies VH 10722096, VH 10722097, VH 10722098, VH 10722099 and VH 10722100. Refer to the chart below for cut-in references.

Model	Engine	VIN
T2145	Cummins	44254 →
	Detroit Diesel	44566 →
C2045	Cummins	45306 → exc. 45325 and 45331
	Detroit Diesel	45763 → exc. 45766
S2145	Cummins	42226 →
	Detroit Diesel	42226 →

DESCRIPTION:

This Bulletin explains the Just-One-Key (JOK) door lock system used on the above mentioned coaches. The step-by step instructions which show how to change the tumbler and tumbler insert on Van Hool door lock assemblies are also included.

Service personnel: please read, initial and circulate.

Service Manager	Parts Manager	Warranty Administrator	Workshop Foreman	Service Technician

PARTS:

For relevant part numbers, refer to the updated pages from the T2100 and C2045 Spare Parts Manuals, which have been attached to this Bulletin.

INTRODUCTION TO JUST-ONE-KEY LOCKS:

1. What does JOK mean?

JOK means "Just-One-Key": All coach doors can be locked/unlocked with a single key, including the parcel rack doors.

2. On which units has JOK been introduced?

JOK has been factory installed on all T2100 and C2045 units.

Two systems have been used:

- Old system: Type 1 door handles with non-removable tumbler insert (see below).
- New system: Type 2 and 3 door handles with removable tumbler inserts (see below).

3. Tumblers and tumbler inserts, conversions:

- **Type 1:**

Tumbler insert cannot be removed from handle.
Entire handle needs to be replaced when changing lock.
Once installed, there is no means to remove the tumbler from the insert.

Identification:

Tumbler insert is black coated.

Part #:

These door handles will be no longer offered as service replacements.

- **Type 2:**

Tumbler insert can be removed from handle.
Two-slotted tumbler insert allows removal of the key only when door is locked.
Once installed, there is no means to remove the tumbler from the insert.

Application:

This type of lock is used on pneumatically operated door handles only i.e. the luggage compartment doors. These doors can be locked/unlocked either one by one manually

using a key, or simultaneously by using the parking brake (central locking).

Identification:

Tumbler insert is nickel-plated. When key is turned to the horizontal position in the lock, the key CANNOT be removed.

Part #:

Refer to the updated pages from the T2100 and C2045 Spare Parts Manuals, which have been attached to this Bulletin.

- **Type 3:**

Tumbler insert can be removed from handle.
Four-slotted tumbler insert allows key to be removed in open and closed position.
Once installed, there is no means to remove the tumbler from the insert.

Application:

This type of lock is used on manually operated door handles only i.e. entrance door, fuel filler door, sliding door, lift door, engine service doors and parcel rack doors.

Identification:

Tumbler insert is nickel-plated. When key is turned to the horizontal position in the lock, the key can be removed.

Part #:

Refer to the updated pages from the T2100 and C2045 Spare Parts Manuals, which have been attached to this Bulletin.

NOTE 1:

When a four-slotted insert is being used on pneumatically operated door handles, the pneumatic function is lost.

NOTE 2:

In production, inserts are being installed according to the requested mode of operation of the locks. Tumblers are being installed at the end of the production line and are identical for one coach.

NOTE 3:

On a number of coaches a mix of Type 1 and Type 2 locks have been installed in production because 4 slotted inserts were not available.

NOTE 4:

A procedure to change tumbler inserts is provided in this Service Bulletin.

PROCEDURE:

1. General:

- The time required to remove and install a door lock assembly, and change a tumbler and tumbler insert is 20 minutes.

2. Preparations:

- Read the entire procedure before beginning to work.

3. To remove a tumbler and tumbler insert from a door lock assembly:

- 1) Remove the door lock assembly from the coach, and put it face down on a soft and clean working surface.
- 2) Undo the screw indicated in 1, Figure 1. Remove the screw and plain washer.
- 3) Take note of the installation of the upper cam (see 2, Figure 1). Remove the upper cam.

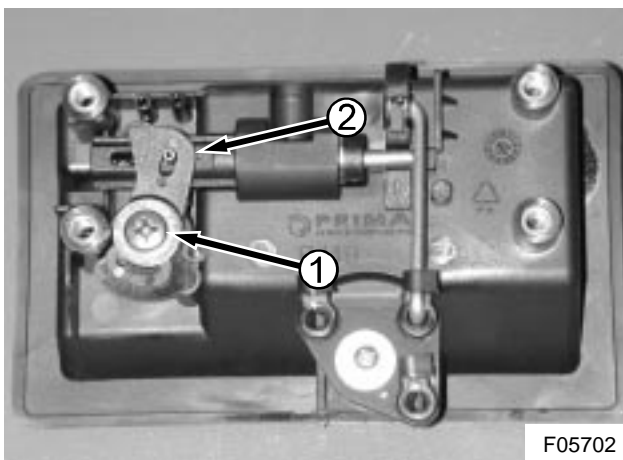


Figure 1: Door lock assembly complete

- 4) Take note of the installation of the lower cam (see Figure 2). Remove the lower cam. Take care not to lose the ball and spring underneath this cam.

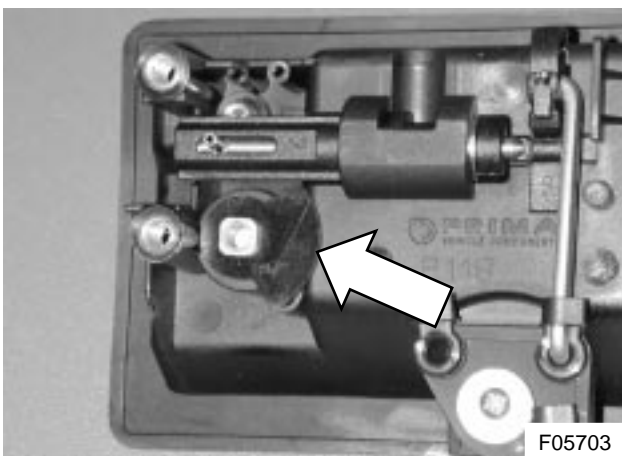


Figure 2: Lower cam

- 5) Remove the ball and spring (see Figure 3).

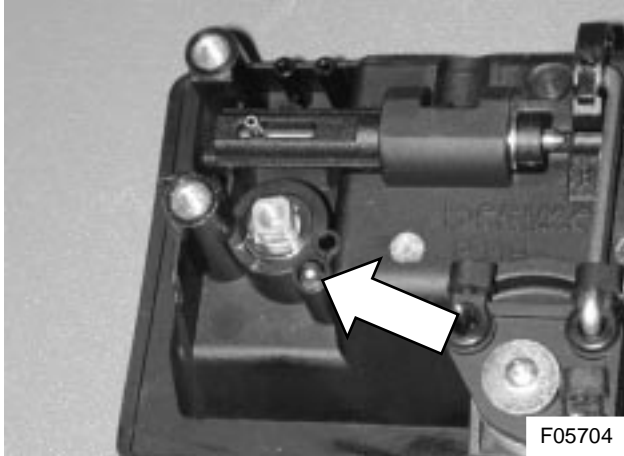


Figure 3: Location of ball and spring

- 6) Press the tumbler and tumbler insert out of the housing through the front (see Figures 4 and 5).

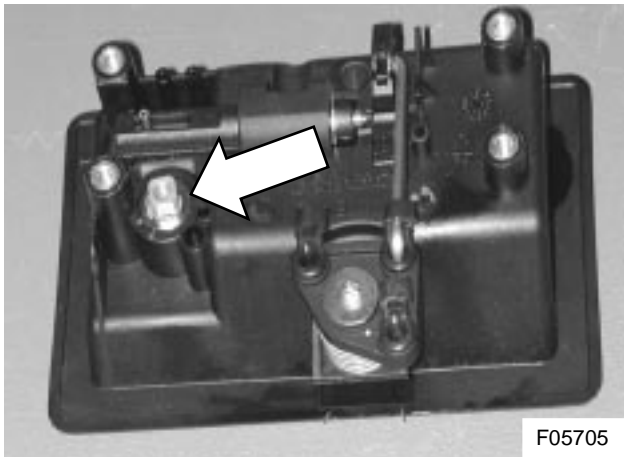


Figure 4: Cam drive, tumbler and insert

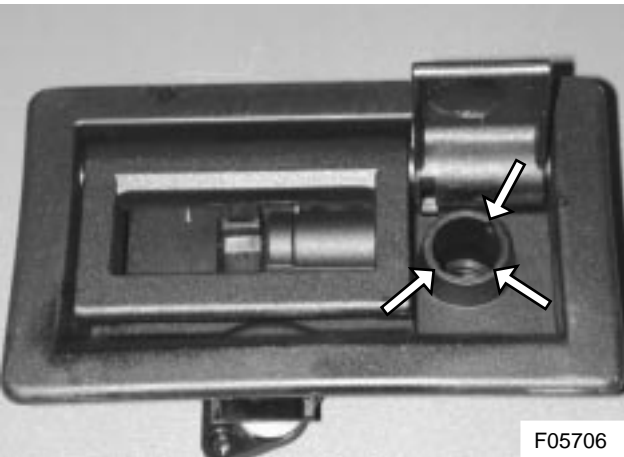


Figure 5: Front view of door handle assembly with lock barrel and insert removed. Note position of three insert locating slots.

4. To install a tumbler and tumbler insert in a door lock assembly:

- 1) Push the new tumbler insert into the lock assembly until a clicking sound is heard. Make sure that the insert is positioned correctly and that the offset locating cams match the three slots in the housing (see Figures 6 and 7).

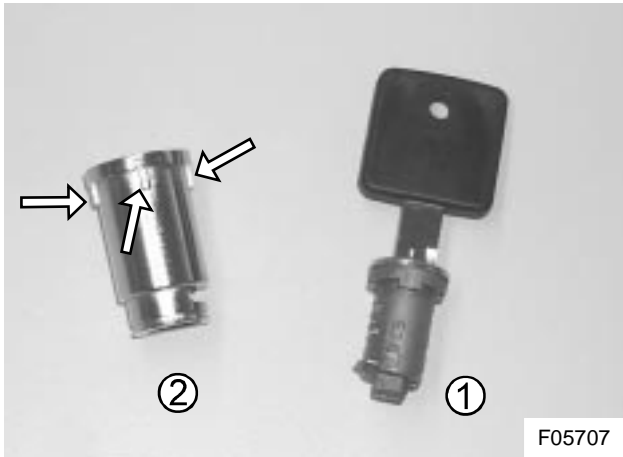


Figure 6: Tumbler and key (1) and tumbler insert (2). Note three offset cams.

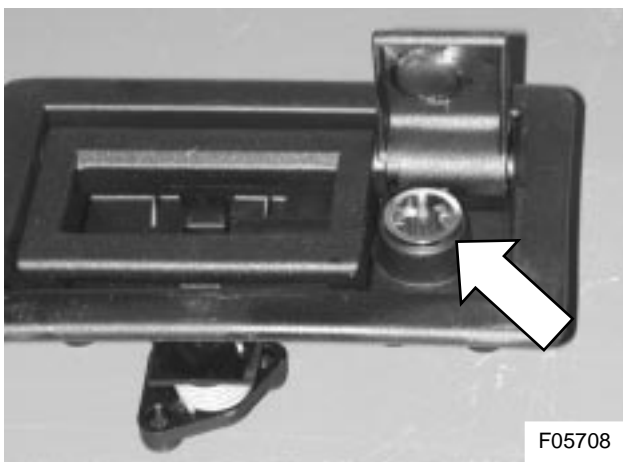


Figure 7: Door handle assembly with door lock tumbler insert installed

2) Insert the cam drive (see Figure 8).



Figure 8: Cam drive installation

3) Check that the tumbler fits the slots in the insert (two and four slot inserts available – see Figure 9).
 Install the (new) tumbler (see Figure 10), pushing the springloaded lip on the barrel against the beveled slot.

CAUTION: Once the tumbler has been installed, it can no longer be removed from the insert

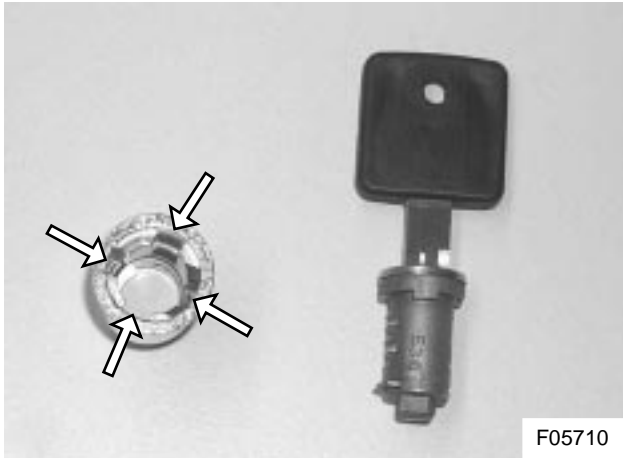


Figure 9: Four slotted insert and accompanying tumbler and key



Figure 10: Tumbler fitted

- 4) Turn the lock assembly upside down and refit the spring (see Figure 11).



Figure 11: Spring installation

5) Refit the ball (see Figure 12).

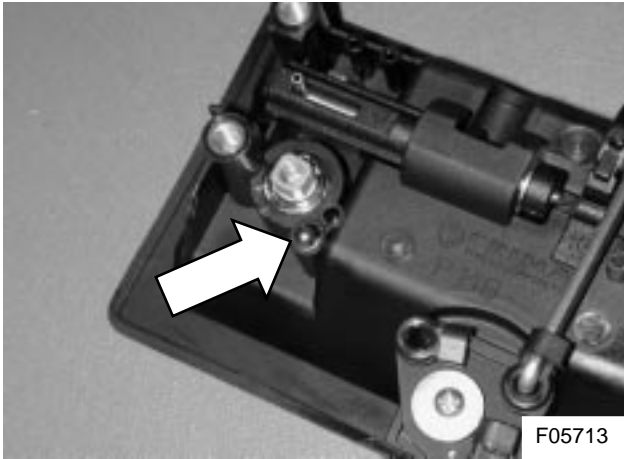


Figure 12: Ball installation

6) Reinstall the lower cam (see Figure 13).

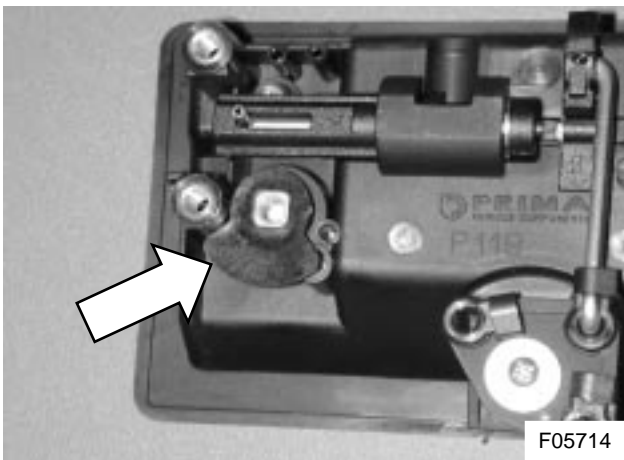


Figure 13: Lower cam installation on cam drive

7) Reinstall the upper cam (see Figure 14).

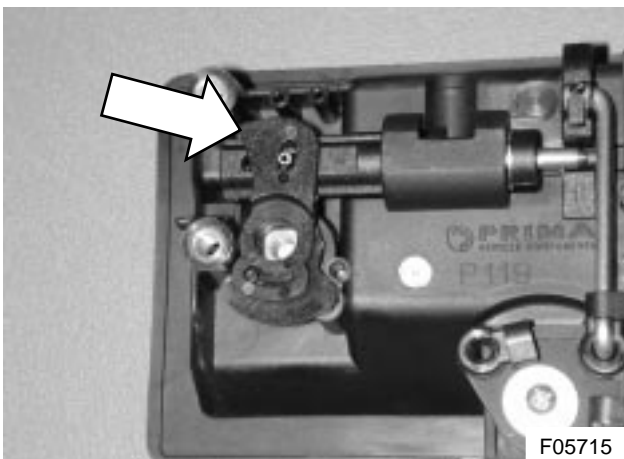


Figure 14: Upper cam installation on cam drive

8) Refit the washer and screw. Secure hand tight (see Figure 15).



Figure 15: Securing the cam drive screw

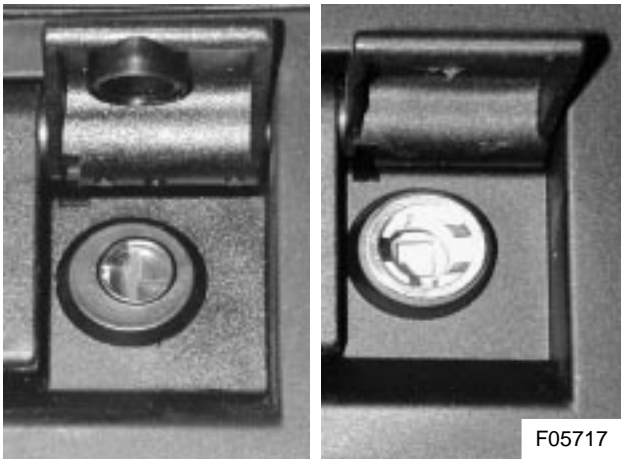


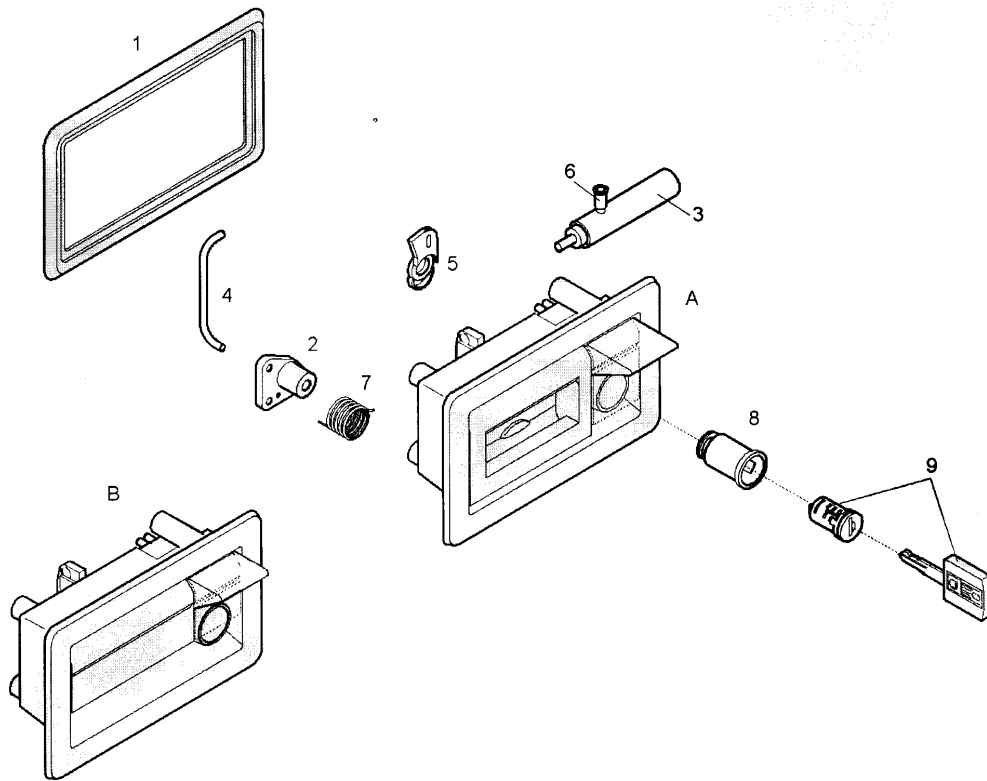
Figure 16: Old tumbler insert (left) and new tumbler insert (right – without tumbler)

Procedure complete.

SERVICE INFORMATION:

Service Bulletins are issued to supplement or supersede information in the Van Hool manuals. Note Service Bulletin number, date and subject on the register at the end of the relevant chapter(s). File Service Bulletin separately for future reference.

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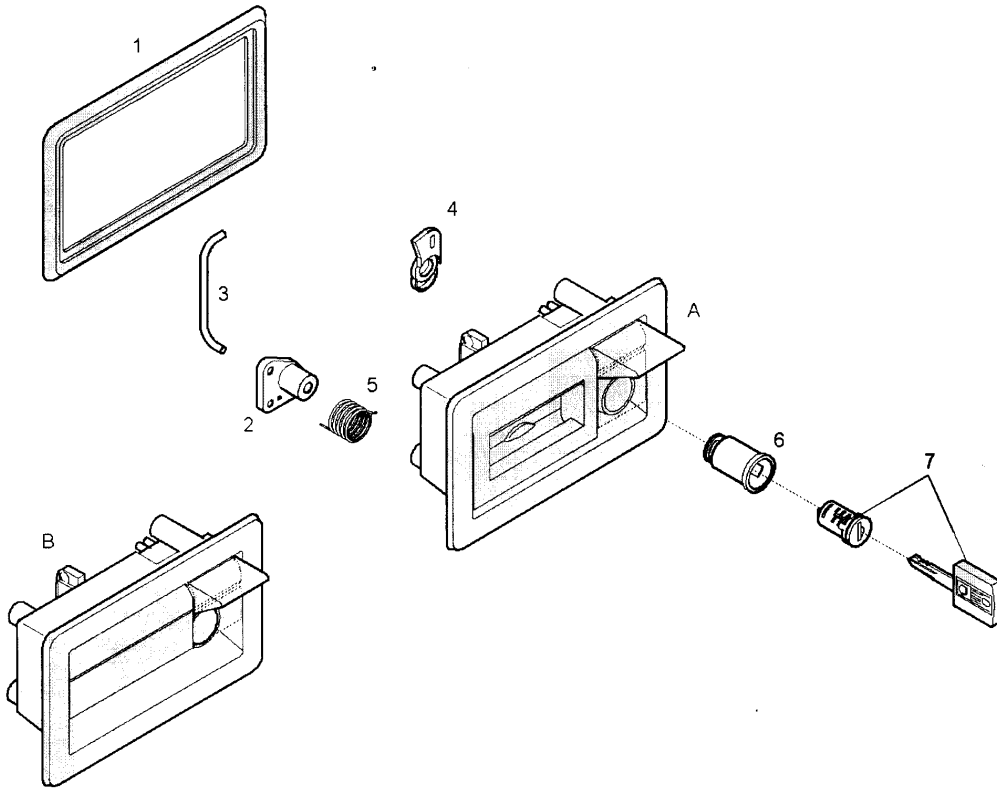
Pos.	Q.	Ref.N°	Description	Denominación	Spec.
A	#	10722096	Lock	Cerradura	
B	#	10722098	Lock	Cerradura	
1	*1	10678821	Seal	Junta estanqueidad	
2	*1	10678817	Cam	Leva	
3	*1	10646921	Cylinder	Cilindro	
4	*1	10685001	Bar	Barra	
5	*1	10652072	Clamp	Grapa	
6	*1	10646922	Fitting	Racor	
7	*1	10678819	Spring	Muelle	
8	*1	10751081	Housing	Caja	
9	*1	NST	Lock + key	Cerradura + llave	



Flaps: accessories
Trampillas: accesorios

2001-05-04

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Pos.	Q.	Ref.N°	Description	Denominación	Spec.
A	#	10722097	Lock	Cerradura	
B	#	10722099	Lock	Cerradura	
1	*1	10678821	Seal	Junta estanqueidad	
2	*1	10678817	Cam	Leva	
3	*1	10685001	Bar	Barra	
4	*1	10652072	Clamp	Grapa	
5	*1	10678819	Spring	Muelle	
6	*1	10754731	Housing	Caja	
7	*1	NST	Lock + key	Cerradura + llave	

VANHOOL

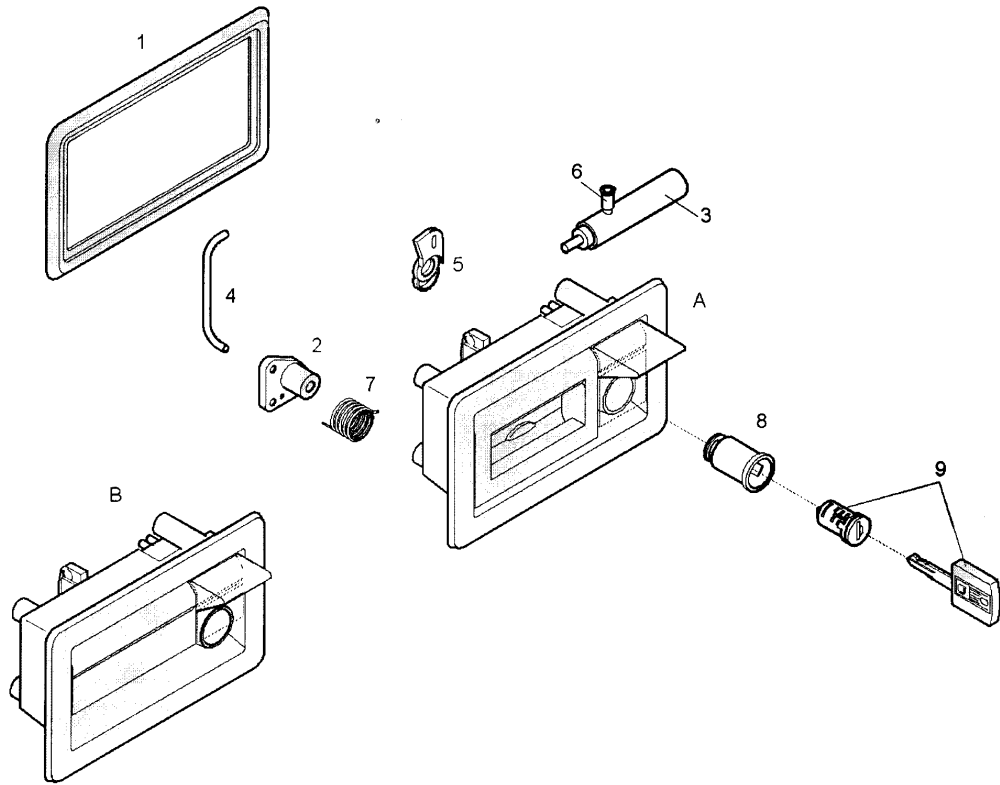
Flaps: accessories

Trampillas: accesorios

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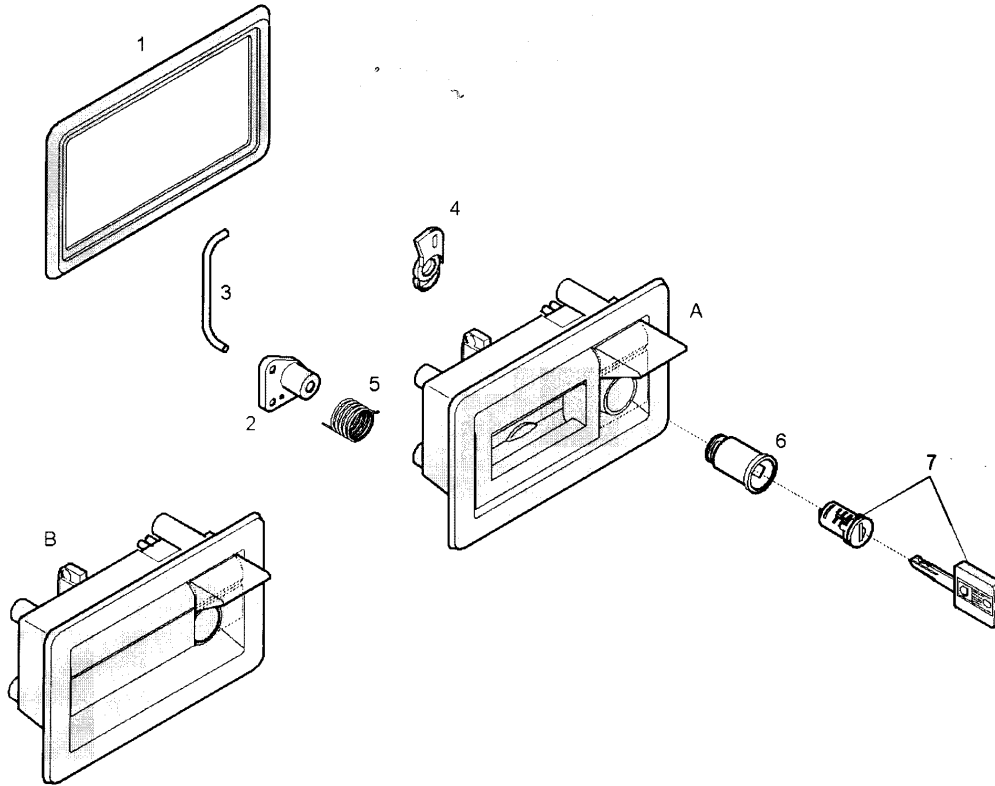
Pos.	Q.	Ref.N°	Description	Denominación	Spec.
A	#	10722096	Lock	Cerradura	
B	#	10722098	Lock	Cerradura	
1	*1	10678821	Seal	Junta estanqueidad	
2	*1	10678817	Cam	Leva	
3	*1	10646921	Cylinder	Cilindro	
4	*1	10685001	Bar	Barra	
5	*1	10652072	Clamp	Grapa	
6	*1	10646922	Fitting	Racor	
7	*1	10678819	Spring	Muelle	
8	*1	10751081	Housing	Caja	
9	*1	NST	Lock + key	Cerradura + llave	



Flaps: accessories
Trampillas: accesorios

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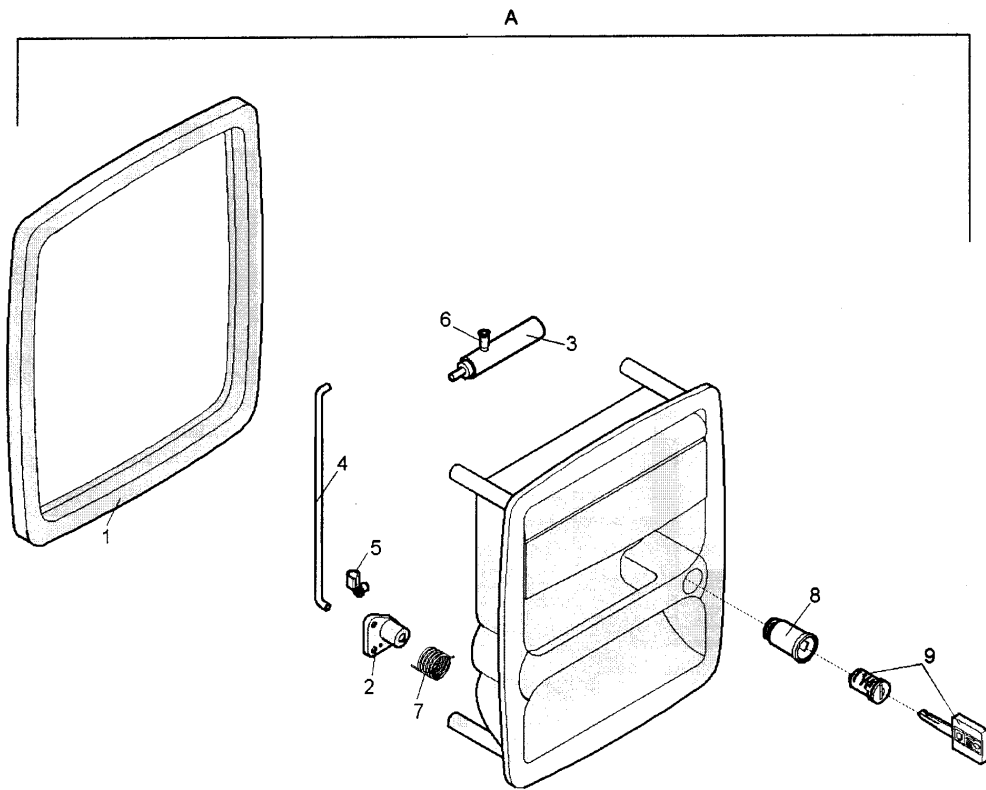
Pos.	Q.	Ref.N°	Description	Denominación	Spec.
A	#	10722097	Lock	Cerradura	
B	#	10722099	Lock	Cerradura	
1	*1	10678821	Seal	Junta estanqueidad	
2	*1	10678817	Cam	Leva	
3	*1	10685001	Bar	Barra	
4	*1	10652072	Clamp	Grapa	
5	*1	10678819	Spring	Muelle	
6	*1	10754731	Housing	Caja	
7	*1	NST	Lock + key	Cerradura + llave	



Flaps: accessories
Trampillas: accesorios

2001-09-03

A 732709-2002



Pos.	Q.	Ref.N°	Description	Denominación	Spec.
A	#	10722100	Lock	Cerradura	
1	*1	NST	Seal	Junta estanqueidad	
2	*1	10678817	Cam	Leva	
3	*1	10646921	Cylinder	Cilindro	
4	*1	NST	Bar	Barra	
5	*3	10652072	Clamp	Grapa	
6	*1	10646922	Fitting	Racor	
7	*1	10678819	Spring	Muelle	
8	*1	10751081	Housing	Caja	
9	*1	NST	Lock + key	Cerradura + llave	



Flaps: accessories
Trampillas: accesorios

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