



**Illustrated Parts Catalogue**

**Illustrated Parts Catalogue  
Woodward Diesel Systems**

**Rolls-Royce Power Eng. (formerly Ulstein Bergen)  
Pumps & Injectors**

**Manual 55182**

## General

This Illustrated Parts Catalog (IPC) is designed to assist customers in identifying spare parts for the most common applications of Woodward equipment.

We recognize that there may be instances where engines of identical type have, at times, been fitted with fuel injection equipment which differs from that listed. It is important, therefore, to quote the type-code of the equipment in use when ordering replacement parts.

A number in parenthesis indicates quantity per unit of more than one.

An item number with suffix "ND" indicates item Not Drawn, and suffix "AR" indicates As Required.

Part numbers of other manufacturers are included for cross reference purposes only.

It is Woodward policy to update the information contained in this catalog periodically and to re-issue to Distributors and Operators as appropriate.

This IPC contains the spare part and sub assembly level of breakdown consistent with the overhaul and maintenance policy recommended by Woodward Diesel Systems.

If you have a need for additional or change information to be included in this IPC or for other applications to be added please contact Woodward Customer Services Department. Your requirements will be considered at the next revision point.

Woodward Diesel Systems strive to achieve the maximum accuracy of the information provided within this document, no liability can be accepted by Woodward for damage, loss or injury caused by any errors in the information within this IPC.

To guarantee the safety, performance, and reliability of the equipment, only genuine Woodward spares must be used during rework.

## References

These publications are available at [www.woodward.com/publications](http://www.woodward.com/publications):

**55142**—Diesel Engine Fuel Pump Supersession List

**55143**—Diesel Engine Fuel Pump Application List

**55151**—Fuel Injection Equipment Introductory Manual

**55152**—Practical Aspects of Fuel Injection Equipment

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## Rolls-Royce Power Engineering (formerly Ulstein Bergen)

<b>Pump</b>	<b>Injector</b>	<b>Engine Ref.</b>
FCCAB180B0584	99/388	KV (uncooled pistons)
FCCAB180B0584	99/389	KV (light fuel, cooled pistons)
FCCAB180B0584	99/367	KV, LD (heavy fuel)
FCCAB180B0584	99/391	LD (cooled pistons)
FCCAB180B0584	99/388	LS (uncooled pistons)
FCCAB200B0584	—	KV, LD (heavy fuel, cooled pistons)
FCCAB200B0584	99/416	L (uprated)
FCCAB200B0584	99/437	L (uprated, heavy fuel)
FCCAB200B0584	—	LD (cooled pistons)
FCCAB200B0584	—	LS (uncooled pistons)
FCVAB200B0764	99/367	KV (uprated, heavy fuel)
FCVAB200C0857	99/367	KV (uprated, heavy fuel)
FCVAB200C0857	99/389	KV (uprated, light fuel)
FCVAB200C0857	99/450	KV (uprated, light fuel)
FCVAB220C0908	—	KV

## FCCAB180B0584 Fuel Injection Pump for Rolls-Royce Engines:

KV (uncooled pistons)

KV (light fuel, cooled pistons)

KV, LD (heavy fuel)

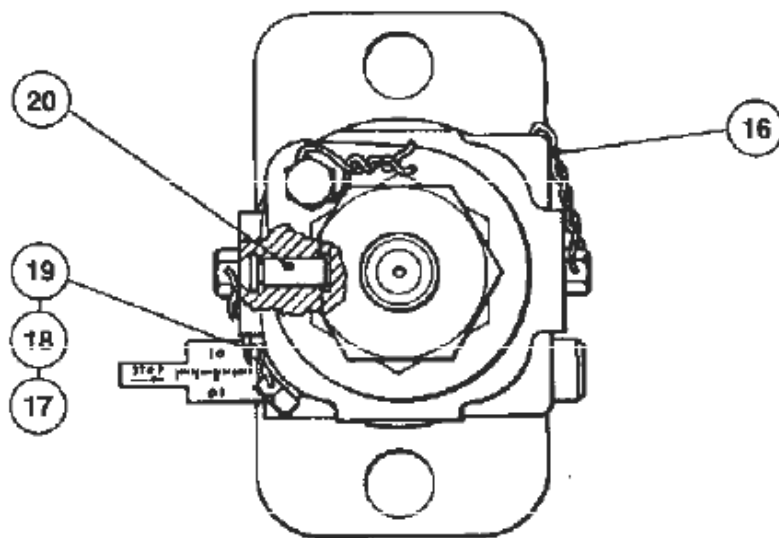
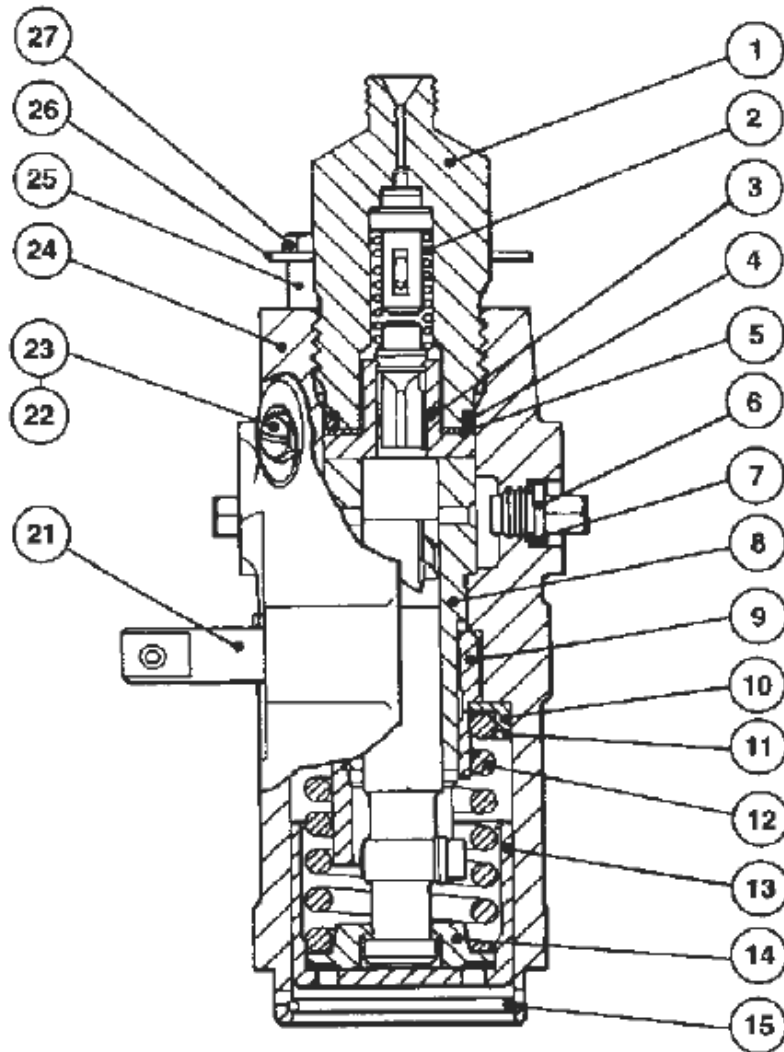
LD (cooled pistons)

LS (uncooled pistons)

(January 1997, Issue #3)

**Item**

<b>No.</b>	<b>Part Name</b>	<b>Woodward No.</b>	<b>Rolls-Royce No.</b>
	Fuel Pump	FCCAB180B0584	4301-0020
1	Delivery valve holder	6/154	4353-21
2	Spring-delivery valve	6/121	4360-20
3	Delivery valve & seat assembly	21/125B	
4	Seal-O-ring	372/20	
5	Seal-high pressure	6/120	4350-52
6	Spill plug (2)	6/464	
7	Washer-spill plug (2)	113/27	
8	Element assembly	6/110C	4365-31
9	Control sleeve	6/576	
10	Spring plate-upper	7022/232	4354-0012
11	Circlip-upper	25/25	4350-54
12	Spring-plunger	6/109	4360-19
13	Tappet	6/106	4368-09
14	Spring plate-lower	6/107	4354-11
15	Circlip-lower	6/105	4350-0055
16	Locking-wire (AR)	18SWG	
17	Shims-pointer (1AR)	106/1A-E	
18	Screw-pointer	297/203	
19	Pointer-control rod	3/2A	
20	Dowel-barrel locating	6/125	4351-49
21	Control rod assembly	6/312	4362-26
22	Washer-vent screw	113/75	
23	Screw-vent	3/262	4351-47
24	Pump-housing	6/311	
25	Collar-locking plate	25/22	
26	Locking plate	6/126	
27	Bolt-locking plate	25/21	



FCCAB180B0584 Fuel Injection Pump

## FCCAB200B0584 Fuel Injection Pump for Rolls-Royce Engines:

**KV, LD (heavy fuel, cooled pistons)**

**L (uprated)**

**L (uprated, heavy fuel)**

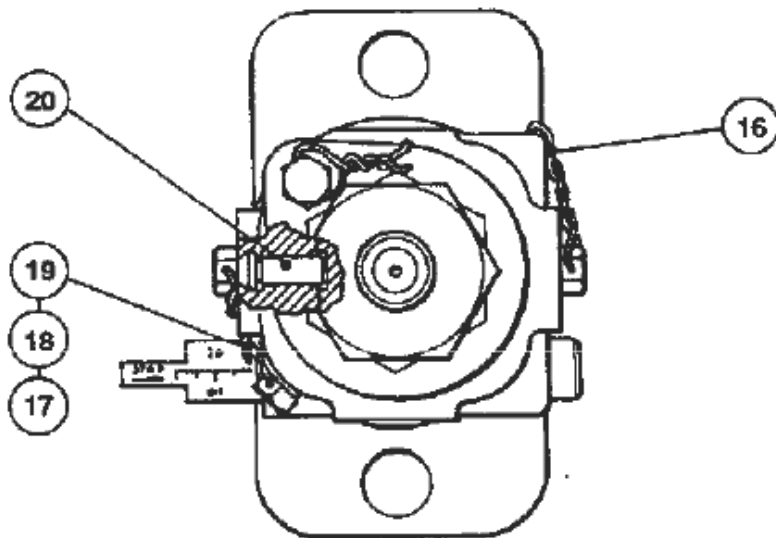
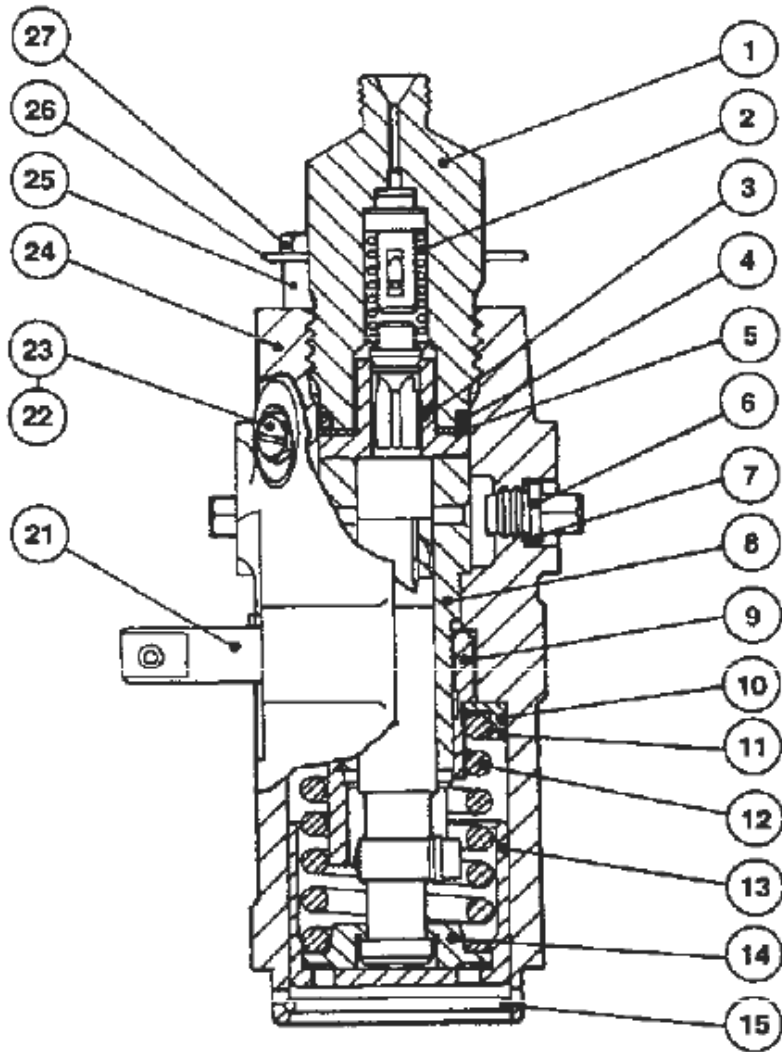
**LD (cooled pistons)**

**LS (uncooled pistons)**

(April 1995, Issue #2)

**Item**

<b>No.</b>	<b>Part Name</b>	<b>Woodward No.</b>	<b>Rolls-Royce No.</b>
	Fuel Pump	FCCAB200B0584	
1	Delivery valve holder	6/154	4353-21
2	Spring-delivery valve	6/121	4360-20
3	Delivery valve & seat assembly	21/125B	
4	Seal-O-ring	372/20	
5	Seal-high pressure	6/120	4350-52
6	Spill plug (2)	6/464	
7	Washer-spill plug (2)	113/27	
8	Element assembly	6/110E	
9	Control sleeve	6/576	
10	Spring plate-upper	7022/232	4354-0012
11	Circlip-upper	25/25	4350-54
12	Spring-plunger	6/109	4360-19
13	Tappet	6/106	4368-09
14	Spring plate-lower	6/107	4354-11
15	Circlip-lower	6/105	4350-0055
16	Locking-wire (AR)	18SWG	
17	Shims-pointer (1AR)	106/1A-E	
18	Screw-pointer	297/203	
19	Pointer-control rod	3/2A	
20	Dowel-barrel locating	6/125	4351-49
21	Control rod assembly	6/312	4362-26
22	Washer-vent screw	113/75	
23	Screw-vent	3/262	4351-47
24	Pump-housing	6/311	
25	Collar-locking plate	25/22	
26	Locking plate	6/126	
27	Bolt-locking plate	25/21	



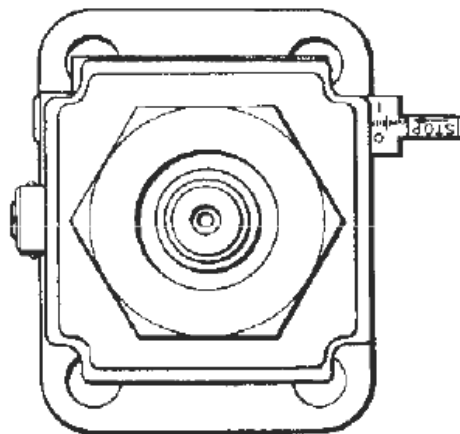
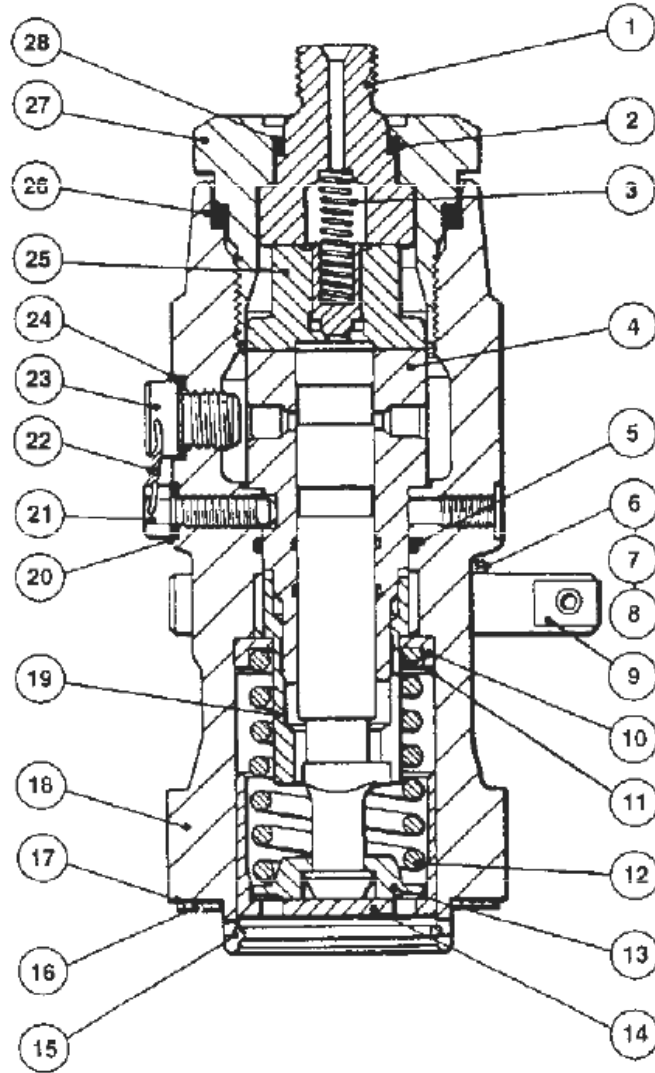
FCCAB200B0584 Fuel Injection Pump

**FCVAB200B0764 Fuel Injection Pump  
for Rolls-Royce KV Engine (uprated, heavy fuel)**

(July 2000, Issue #5)

<b>Item No.</b>	<b>Part Name</b>	<b>Woodward No.</b>	<b>Rolls-Royce No.</b>
	Fuel Pump	FCVAB200B0764	
1	Delivery valve holder	36/38	
2	Seal-O-ring	372/15	
3	Spring-delivery valve	36/34	
4	Element assembly L.H.	36/112E	
5	Seal-O-ring	372/18	
6	Pointer-control rod	3/2A	
7	Screw-pointer	297/204	
8	Shims-pointer (AR)	106/1A-E	
9	Control rod assembly	36/51	
10	Spring plate-upper	7022/232	4354-0012
11	Circlip-upper	25/25	4350-54
12	Spring-plunger	36/31	
13	Spring plate-lower	6/107	4354-11
14	Tappet	6/289	
15	Circlip-lower	6/105	4350-0055
16	Shim plate-pump housing	36/47	
17	Shims-pump housing (3 AR)	36/48	
18	Pump-housing	36/45	
19	Control sleeve	36/138	
20	Washer-locating screw (2)	NW5/22	
21	Screw-barrel locating	36/27	
22	Locking-wire (AR)	18SWG	
23	Spill plug (2)	21/201	
24	Washer-spill plug (2)	113/62	
25	Delivery valve & seat assembly	36/54B	
26	Seal-O-ring	372/36	
27	Retaining nut	36/56	
28	Washer-O-ring	106/116	
29ND	Tucker rivets (2)	369/1	





FCVAB200B0764 Fuel Injection Pump

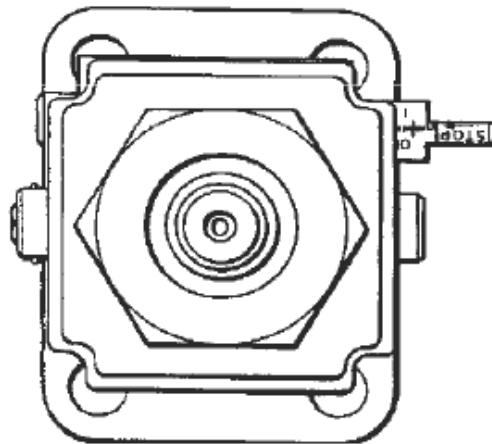
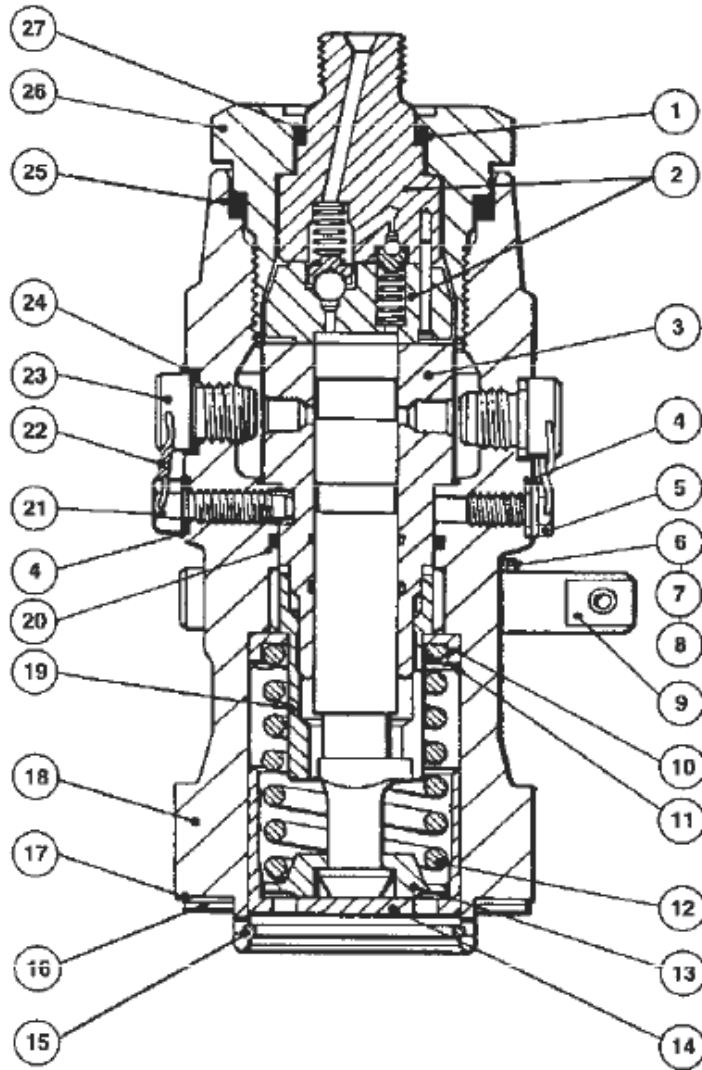
## FCVAB200C0857 Fuel Injection Pump for Rolls-Royce Engines:

**KV (uprated, heavy fuel)**

**KV (uprated, light fuel)**

(July 2000, Issue #4)

Item			
No.	Part Name	Woodward No.	Rolls-Royce No.
	Fuel Pump	FCVAB200C0857	
1	Seal-O-ring	372/15	
2	PUDV assembly	36/179AG	
3	Element assembly L.H.	36/112E	
4	Washer-locating screw (2)	NW5/22	
5	Blanking plug	119/5081	
6	Pointer-control rod	3/2A	
7	Screw-pointer	297/204	
8	Shims-pointer (AR)	106/1A-E	
9	Control rod assembly	36/51	
10	Spring plate-upper	7022/232	4354-0012
11	Circlip-upper	25/25	4350-54
12	Spring-plunger	36/31	
13	Spring plate-lower	6/107	4354-11
14	Tappet	6/289	
15	Circlip-lower	6/105	4350-0055
16	Shim plate-pump housing	36/199	
17	Shims-pump housing (3 AR)	36/48	
18	Pump-housing	36/45	
19	Control sleeve	36/138	
20	Seal-O-ring	372/18	
21	Screw-barrel locating	36/27	
22	Locking-wire (AR)	18SWG	
23	Spill plug (2)	21/201	
24	Washer-spill plug (2)	113/62	
25	Seal-O-ring	372/36	
26	Retaining nut	36/56	
27	Washer-O-ring	106/116	
28ND	Blanking plug	119/12	
29ND	Tucker rivets (2)	369/1	

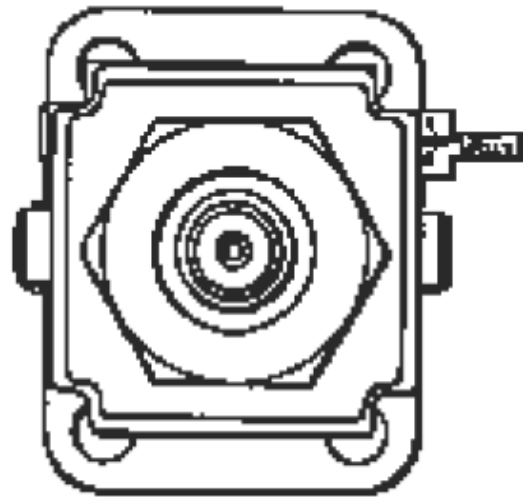
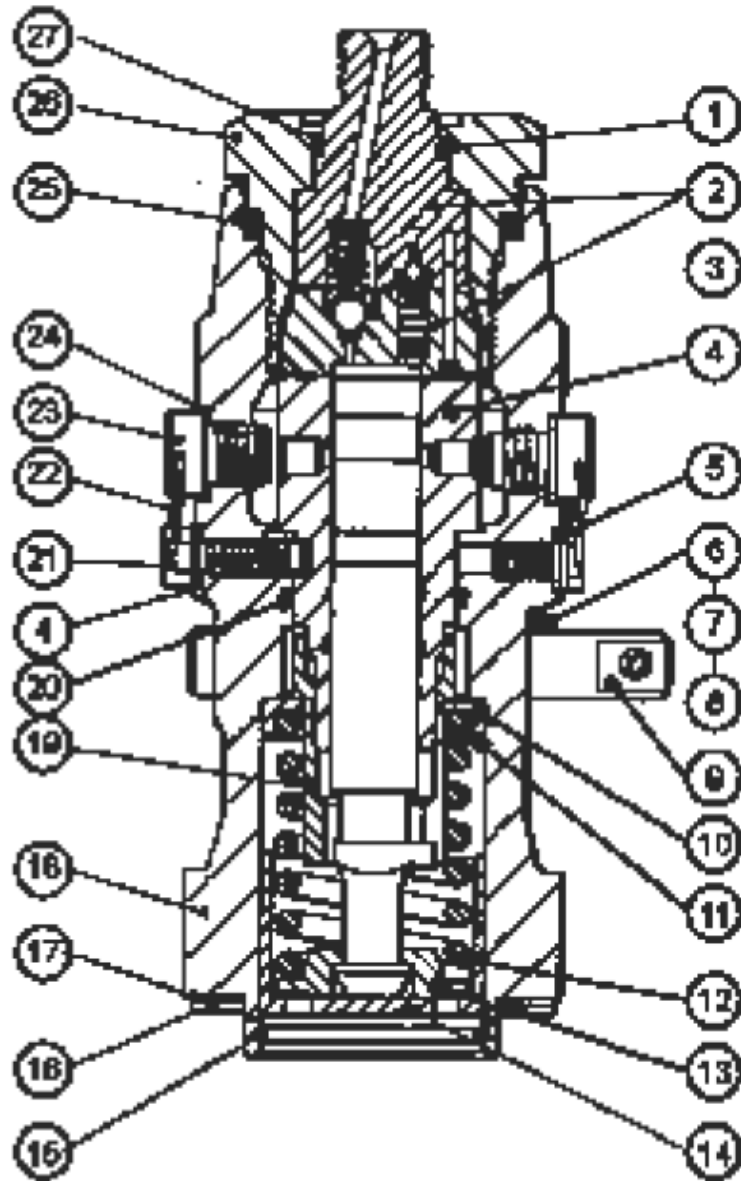


FCVAB200C0857 Fuel Injection Pump

## FCVAB220C0908 Fuel Injection Pump for Rolls-Royce KV Engine

(January 2003, Issue #3)

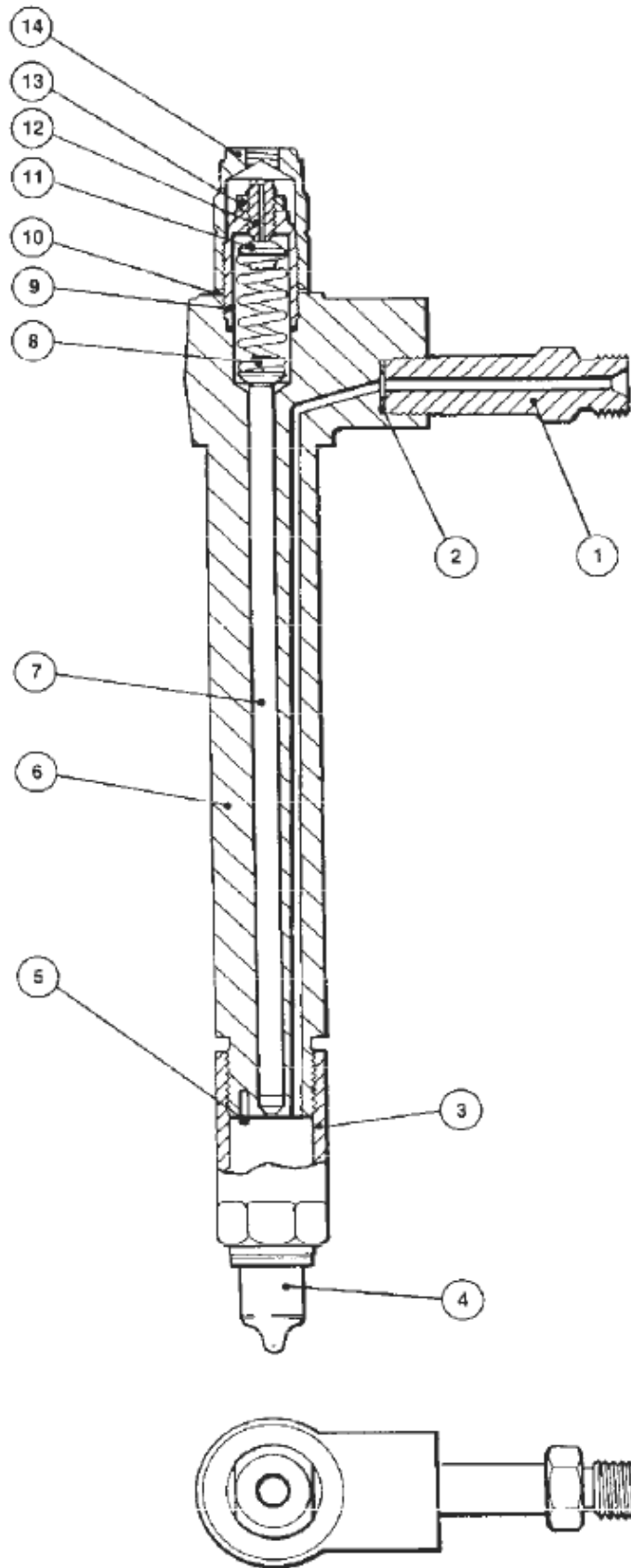
Item No.	B.L. No.	Part Name	Qty	Woodward No.	Rolls-Royce No.
		Fuel Pump		FCVAB220C0908	
1	60	Seal-O-ring		372/15	
2	35	PUDV assembly		36/179AG	
3	5	Element assembly L.H.		36/215F	
4	11	Washer-locating screw	2	NW5/22	
5	63	Blanking plug		119/5081	
6	20	Pointer-control rod		3/2A	
7	21	Screw-pointer		297/203	
8	24	Shims-pointer	AR	106/1A-E	
9	14	Control rod assembly		36/51	
10	29	Spring plate-upper		7022/232	4354-0012
11	30	Circlip-upper		25/25	4350-54
12	31	Spring-plunger		36/31	
13	32	Spring plate-lower		6/107	4354-11
14	33	Tappet		6/289	
15	34	Circlip-lower		6/105	4350-0055
16	3	Shim plate-pump housing		36/199	
17	4	Shims-pump housing	3 AR	36/48	
18	2	Pump-housing		36/45	
19	26	Control sleeve		36/203	
20	9	Seal-O-ring		372/18	
21	10	Screw-barrel locating		36/27	
22	28	Locking-wire	AR	18SWG	
23	12	Spill plug	2	21/201	
24	13	Washer-spill plug	2	113/62	
25	59	Seal-O-ring		372/36	
26	47	Retaining nut		36/56	
27	61	Washer-O-ring		106/116	
28 ND	58	Blanking plug		119/12	
29 ND	62	Tucker rivets	2	369/1	



FCVAB220C0908 Fuel Injection Pump

**99/367 Injector**  
**for Rolls-Royce KV Engines (uprated, heavy fuel)**  
 (September 1997, Issue #4)

<b>Item</b>			
<b>No.</b>	<b>Part Name</b>	<b>Woodward No.</b>	<b>Rolls-Royce No.</b>
	Injector	99/367	4320-0035
1	Inlet connector	52/382	4353-22
2	Washer-inlet connector	106/83	4350-0062
3	Nozzle nut	52/383	4352-25
4	Nozzle assembly	HL150T38H663P7	
5	Dowels (2)	51/415A	
6	Nozzle holder body	52/380	
7	Spindle assembly	52/75P	
8	Spring-injector	52/259	4360-21
9	Spring housing	52/114	4352-22
10	Washer	113/9	
11	Spring plate-upper	51/173	4354-13
12	Screw-adjusting	51/242	4351-51
13	Locknut-adjusting screw	112/5011	4352-24
14	Cap nut	52/368	4352-23

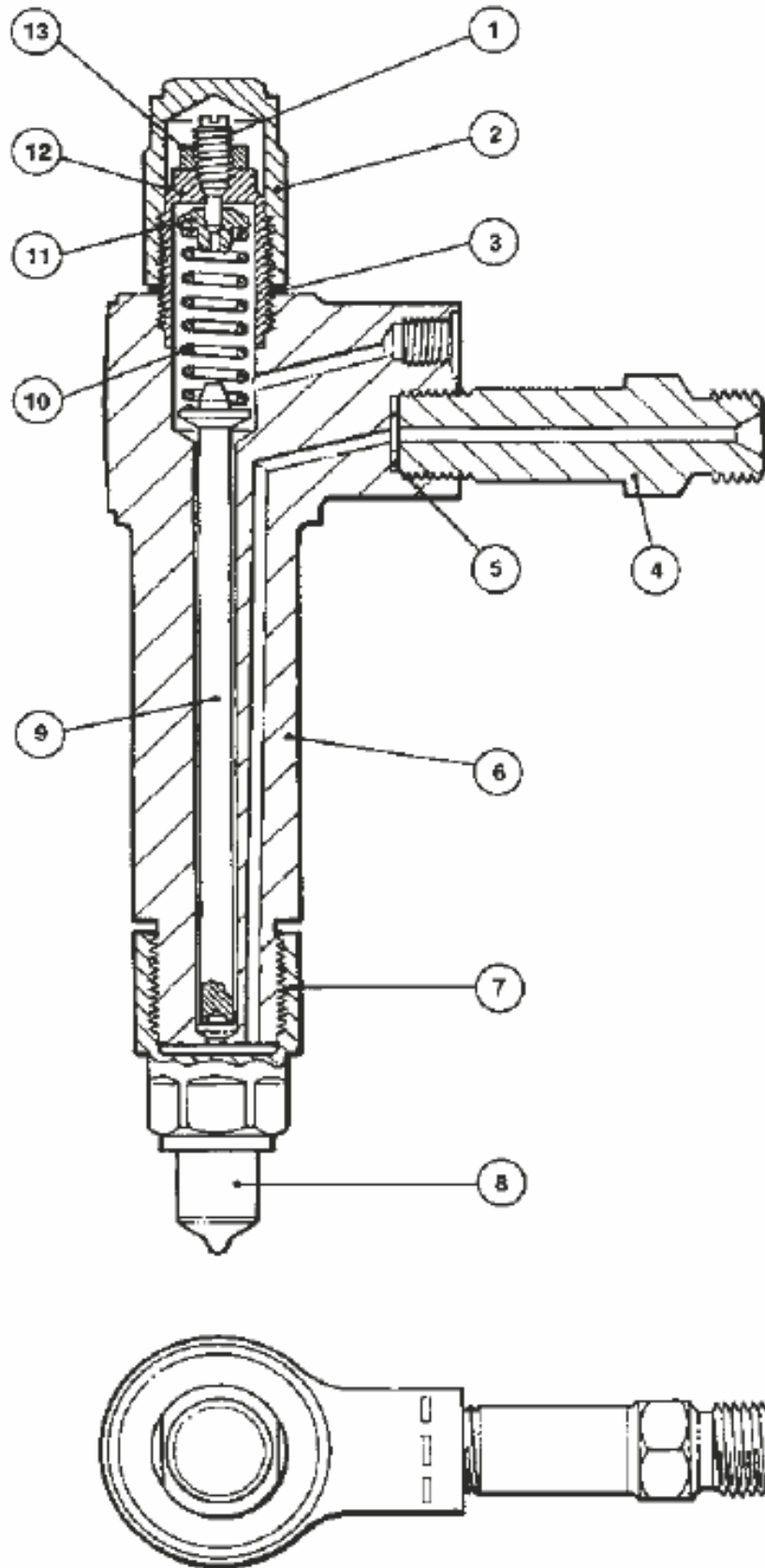


99/367 Injector

**99/388 Injector**  
**for Rolls-Royce KV & LS Engines (uncooled pistons)**  
(January 1997, Issue #3)

<b>Item No.</b>	<b>Part Name</b>	<b>Woodward No.</b>	<b>Rolls-Royce No.</b>
	Injector	99/388	
1	Screw-adjusting	51/91	4351-0052
2	Cap nut	52/386	
3	Washer	113/9	
4	Inlet connector	52/382	4353-22
5	Washer-inlet connector	106/83	4350-0062
6	Nozzle holder body	52/399B	
7	Nozzle nut	52/351	
8	Nozzle assembly	H140T38H531P7	
9	Spindle assembly	52/75H	
10	Spring-injector	52/454	
11	Spring plate-upper	51/173	4354-13
12	Spring housing	52/114	4352-22
13	Locknut-adjusting screw	112/5011	4352-24





99/388 Injector

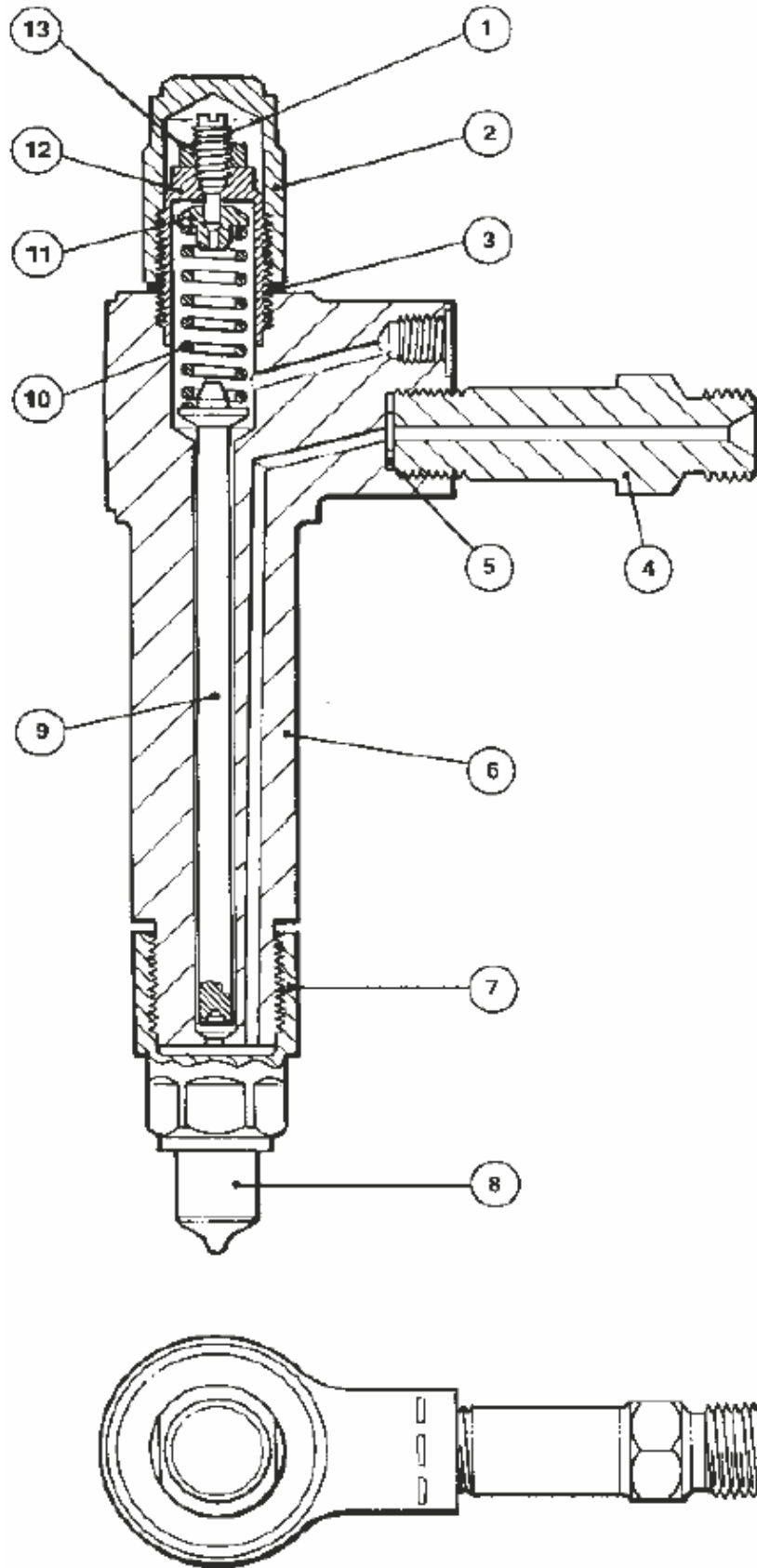
## 99/389 Injector for Rolls-Royce Engines:

**KV (light fuel, cooled pistons)**

**KV (uprated, light fuel)**

(April 1995, Issue #2)

<b>Item No.</b>	<b>Part Name</b>	<b>Woodward No.</b>	<b>Rolls-Royce No.</b>
	Injector	99/389	4320-0040
1	Screw-adjusting	51/91	4351-0052
2	Cap nut	52/386	
3	Washer	113/9	
4	Inlet connector	52/382	4353-22
5	Washer-inlet connector	106/83	4350-0062
6	Nozzle holder body	52/399A	
7	Nozzle nut	52/351	
8	Nozzle assembly	H150T38H833P7	
9	Spindle assembly	52/75K	
10	Spring-injector	52/454	
11	Spring plate-upper	51/173	4354-13
12	Spring housing	52/114	4352-22
13	Locknut-adjusting screw	112/5011	4352-24

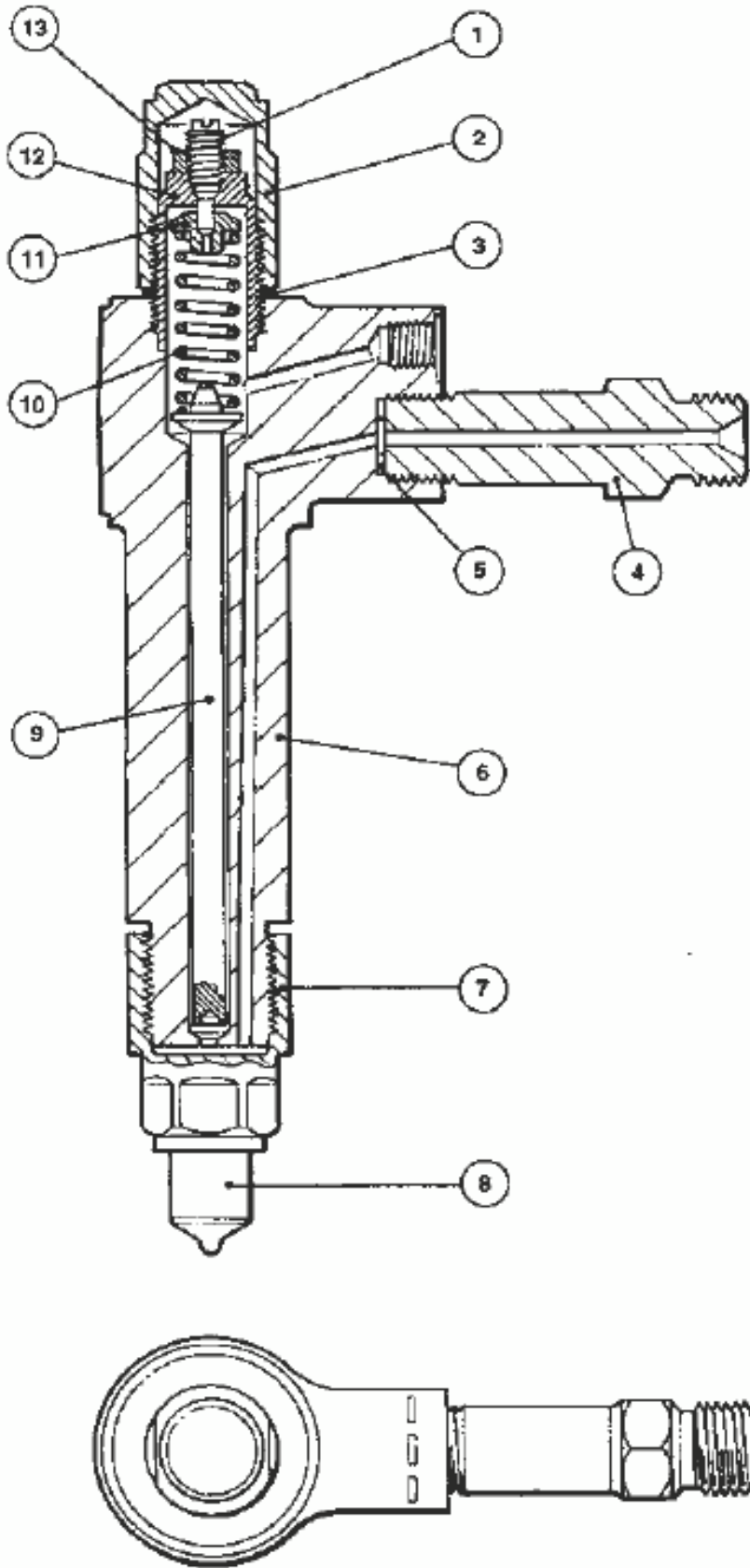


99/389 Injector

**99/391 Injector**  
**for Rolls-Royce LD Engine (cooled pistons)**

(April 1995, Issue #2)

<b>Item No.</b>	<b>Part Name</b>	<b>Woodward No.</b>	<b>Rolls-Royce No.</b>
	Injector	99/391	
1	Screw-adjusting	51/91	4351-0052
2	Cap nut	52/386	
3	Washer	113/9	
4	Inlet connector	52/382	4353-22
5	Washer-inlet connector	106/83	4350-0062
6	Nozzle holder body	52/399B	
7	Nozzle nut	52/351	
8	Nozzle assembly	H150T38H833P7	
9	Spindle assembly	52/75H	
10	Spring-injector	52/454	
11	Spring plate-upper	51/173	4354-13
12	Spring housing	52/114	4352-22
13	Locknut-adjusting screw	112/5011	4352-24

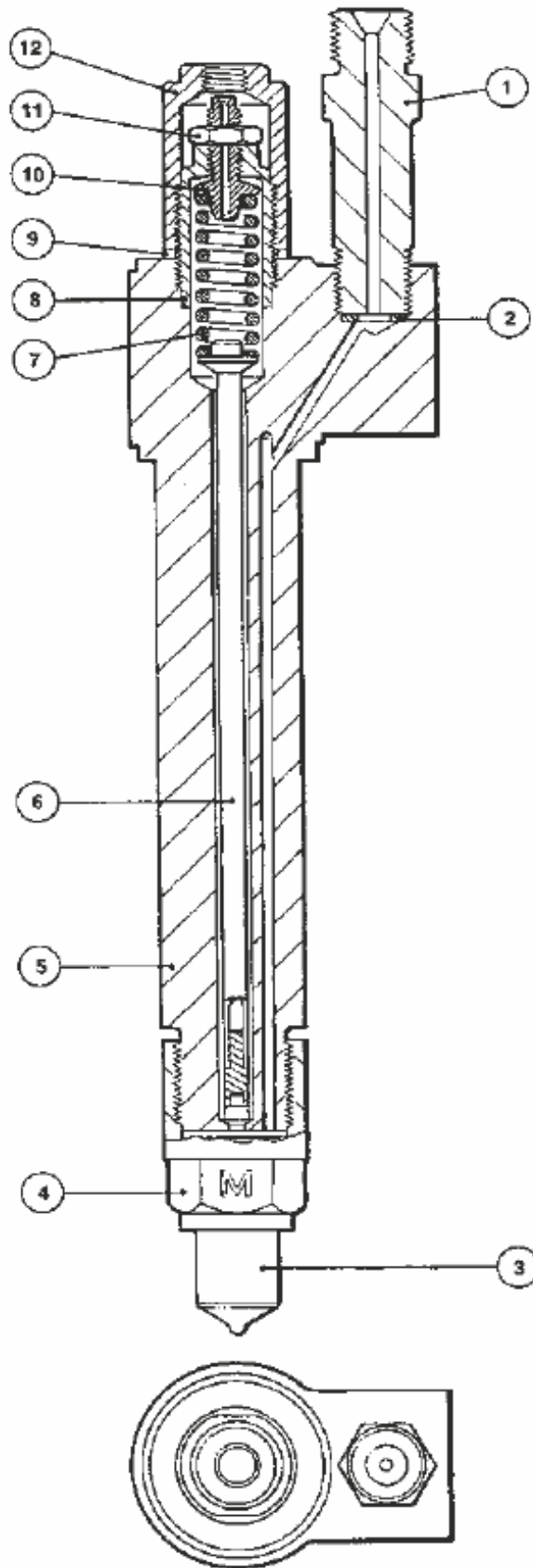


99/391 Injector

## 99/416 Injector for Rolls-Royce L Engine (uprated)

(April 1995, Issue #2)

<b>Item No.</b>	<b>Part Name</b>	<b>Woodward No.</b>	<b>Rolls-Royce No.</b>
	Injector	99/416	
1	Inlet connector	52/382	4353-22
2	Washer-inlet connector	106/83	4350-0062
3	Nozzle assembly	H150T38H833P7	
4	Nozzle nut	52/351	
5	Nozzle holder body	52/121H	
6	Spindle assembly	52/206H	
7	Spring-injector	52/454	
8	Spring housing	52/114	4352-22
9	Washer	113/9	
10	Screw-adjusting	52/409	
11	Locknut-adjusting screw	112/5011	4352-24
12	Cap nut	52/368	4352-23



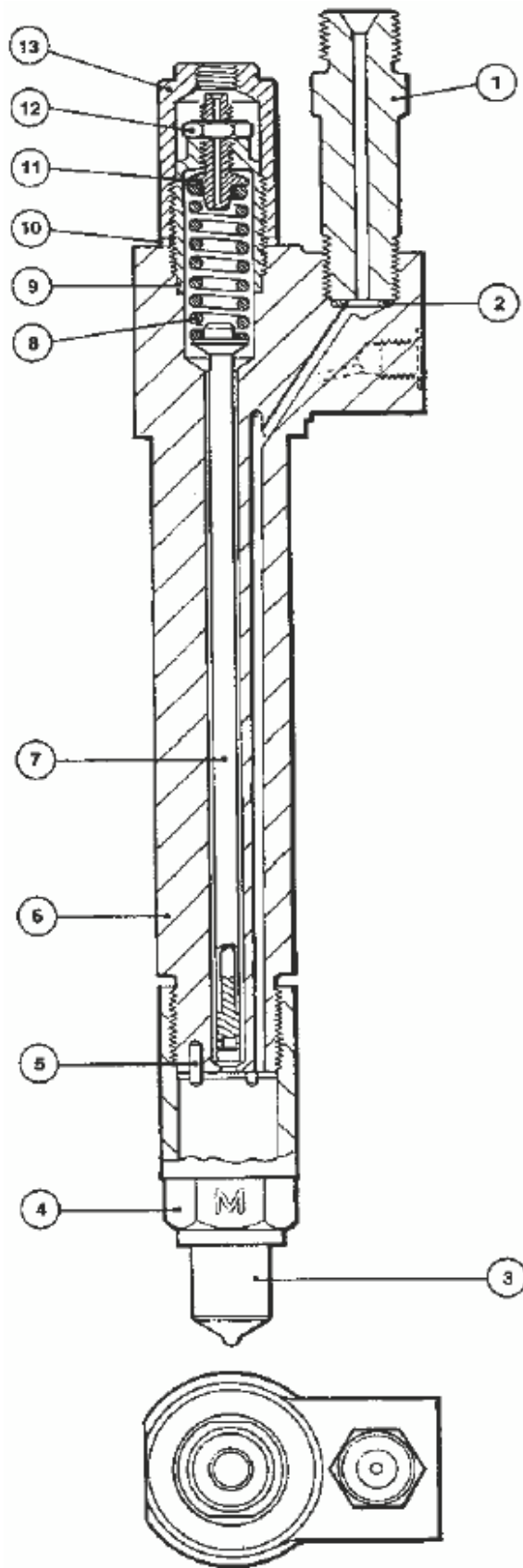
99/416 Injector

**99/437 Injector**  
**for Rolls-Royce L Engine (uprated, heavy fuel)**

(April 1995, Issue #2)

<b>Item No.</b>	<b>Part Name</b>	<b>Woodward No.</b>	<b>Rolls-Royce No.</b>
	Injector	99/437	
1	Inlet connector	52/382	4353-22
2	Washer-inlet connector	106/83	4350-0062
3	Nozzle assembly	HL150T38H663P7	
4	Nozzle nut	52/383	4352-25
5	Dowel-holder body (2)	51/415A	
6	Nozzle holder body	52/511	
7	Spindle assembly	52/206G	
8	Spring-injector	52/454	
9	Spring housing	52/114	4352-22
10	Washer	113/9	
11	Screw-adjusting	52/409	
12	Locknut-adjusting screw	112/5011	4352-24
13	Cap nut	52/368	4352-23



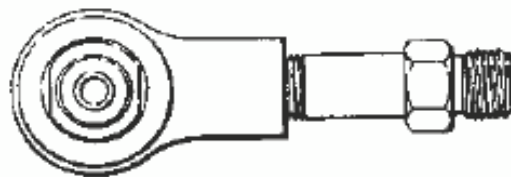
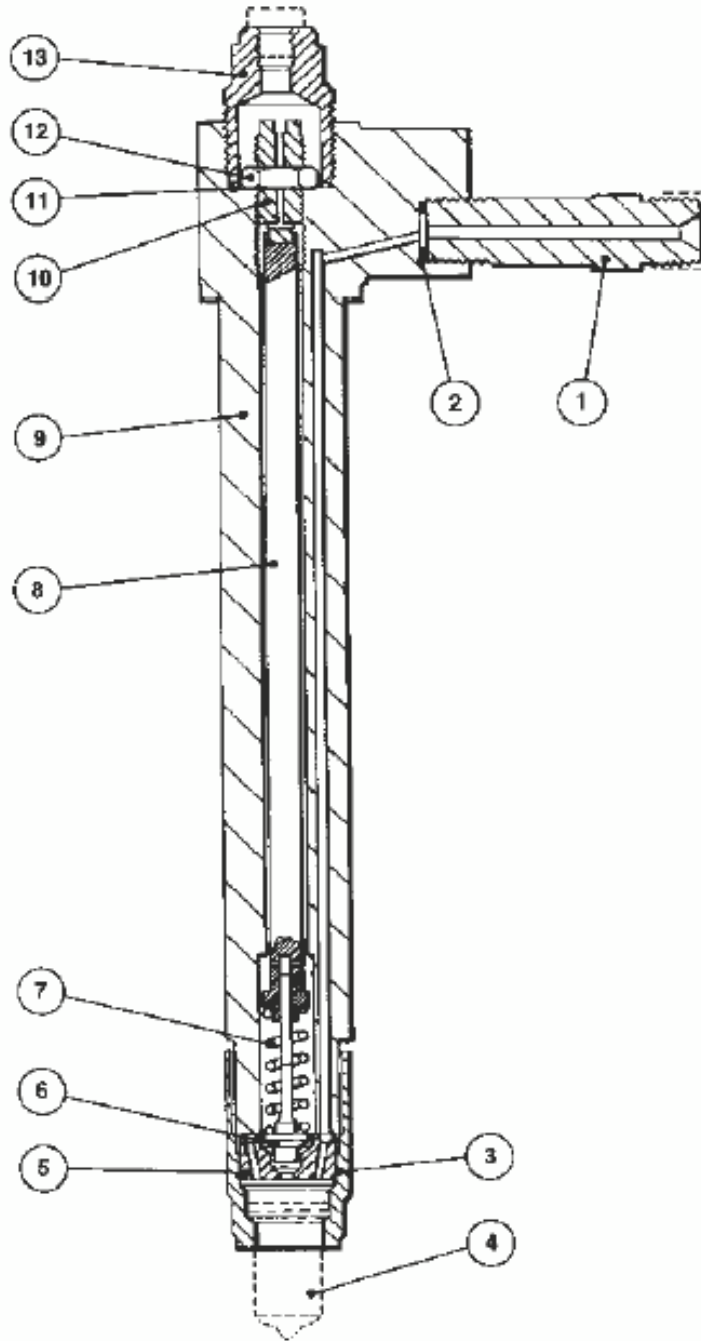


99/437 Injector

**99/450 Injector**  
**for Rolls-Royce KV Engine (uprated, light fuel)**

(January 1997, Issue #3)

<b>Item No.</b>	<b>Part Name</b>	<b>Woodward No.</b>	<b>Rolls-Royce No.</b>
	Injector	99/450	
1	Inlet connector	52/382	4353-22
2	Washer-inlet connector	106/83	4350-0062
3	Nozzle nut	52/318	
4	Nozzle assembly	H150T38H810P7	
5	Transfer block	52/313	
6	Thrust cap	52/315	
7	Spring-injector	52/329	
8	Spindle-one piece	52/314G	
9	Nozzle holder body	52/542	
10	Screw-adjusting	52/332	
11	Washer	NW5/59	
12	Locknut-adjusting screw	112/28	
13	Cap nut	52/544	



99/450 Injector

**We appreciate your comments about the content of our publications.**

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**Please include the manual number from the front cover of this publication.**



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