



Illustrated Parts Catalogue

Illustrated Parts Catalogue Woodward Diesel Systems

**Perkins Engines (formerly Perkins Dorman)
Pumps & Injectors**

Manual 55180

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:

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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Perkins Engines (formerly Perkins Dorman)

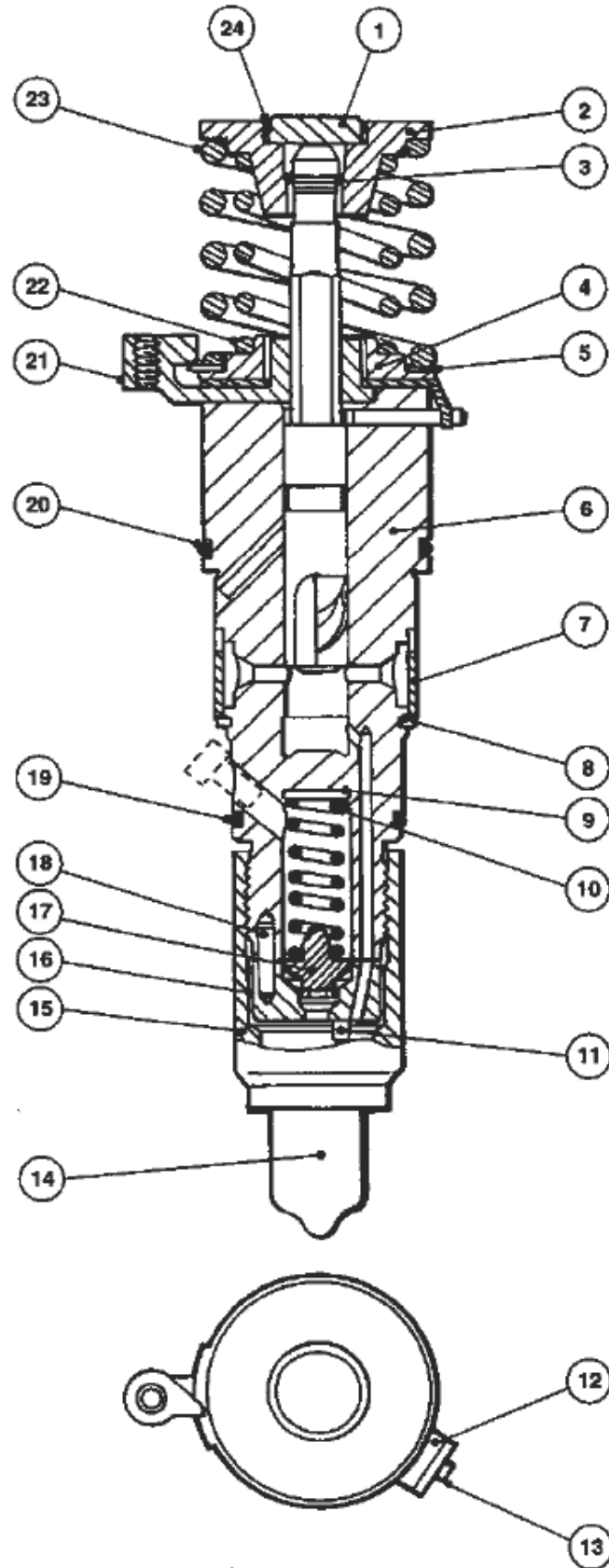
Pump	Injector	Engine Ref.
—	97/4T	SeaKing 6, 8, & 12
—	97/9T	8SETCA1, 8SETCA2, 12SETCA2, 16SETCA2
—	97/10T	SeaKing 12 & 16
—	97/12T	6SET, 6SETCA1, 6SETCA3, 6SETCR, 6SETCR3, 8SETCA, 8SETCR2, 8SETCA1, 8SETCA2, 12SETCA2, 12SETCA (Original), 12SETCA1, 12SETCR2, 12SETCR (Original), 12SETCW, 12SETCW2, 12SETCA, 12SETCR, 16SETCA, 16SETCA1, 16SETCA2, 16SETCR, 16SETCR2, 16SETCW, 16SETCW1, 16SETCW2
—	97/19T	6SET, 6SETCA1, 6SETCA3, 6SETCR, 6SETCR3, 8SETCA, 8SETCR2, 8SETCA1, 8SETCA2, 12SETCA2, 12SETCA (ORIGINAL), 12SETCA1, 12SETCR2, 12SETCR (ORIGINAL), 12SETCW, 12SETCW2, 12SETCA, 12SETCR, 16SETCA, 16SETCA1, 16SETCA2, 16SETCR, 16SETCR2, 16SETCW, 16SETCW1, 16SETCW2
—	97/20T	4000 Series
—	97/25T	1800 Applications
—	97/27T	1500 Applications
—	97/28T	1500 Applications
—	97/30T	1800 Applications

97/4T Unit Injector for Perkins Engines:

- **SeaKing 6, 8, & 12**

(April 2005, Issue #3)

Item			
No.	Part Name	Woodward No.	Perkins No.
	Injector	97/4T	
1	Insert-spring plate	20/211	
2	Spring plate-upper	20/210	
3	Circlip lower	124/69	
4	Spring plate-lower	20/216	
5	Retainer lower spring plate	20/215	
6	Housing element assembly R.H.	20/200CD	
7	Spill baffle	20/207	
8	Circlip (spill baffle)	124/66	
9	Shims-adjusting (1AR)	7169/310CA-CP	
10	Spring injector	52/329	
11	Dowel (2)	51/415A	
12	Retaining spring	20/206	
13	Timing pin	20/205	
14	Nozzle assembly	H155T30H837P4	
15	Nozzle nut	52/318	
16	Transfer block	20/212	
17	Thrust cap	52/461	
18	Dowel (2)	52/440	
19	Seal-O-ring	372/58	
20	Seal-O-ring	372/59	
21	Control sleeve	20/214	
22	Spring plunger-inner	20/209B	
23	Spring plunger-outer	20/209A	
24	Seal-O-ring	372/60	



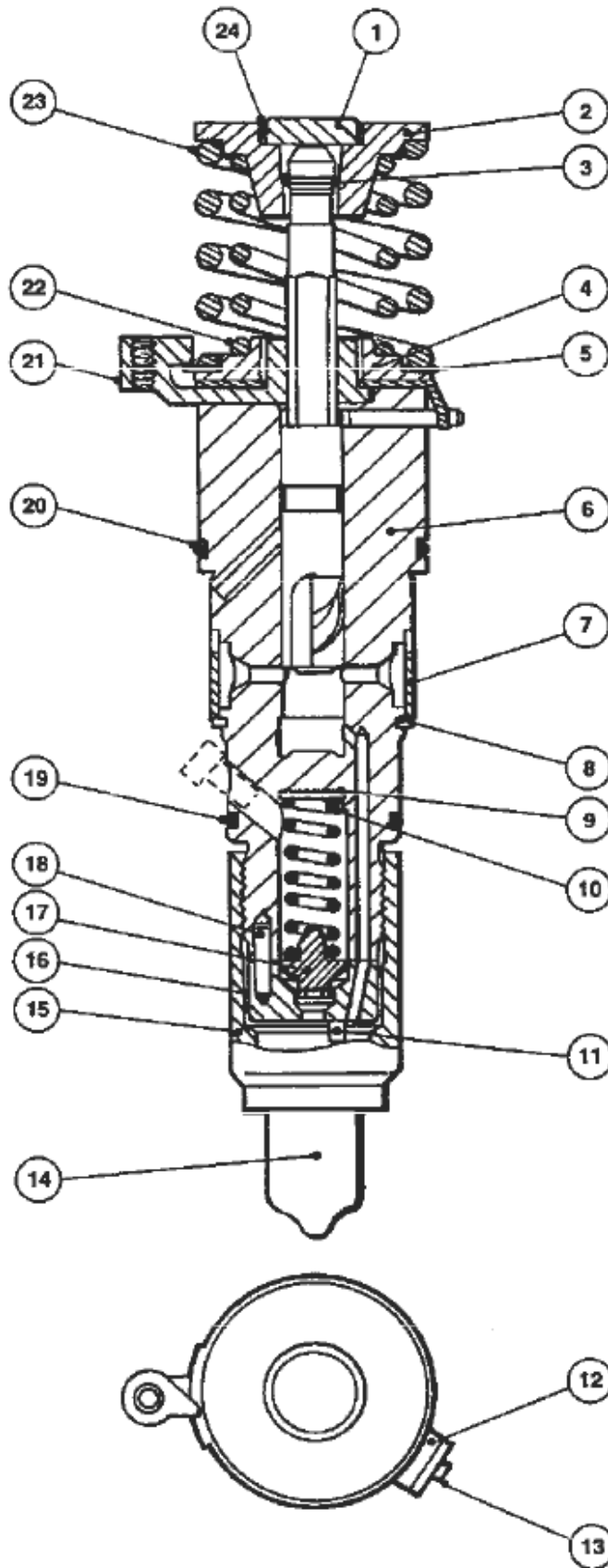
97/4T Unit Injector

97/9T Unit Injector for Perkins Engines:

- 8SETCA1, 8SETCA2, 12SETCA2, 16SETCA2 (1000 & 1200 rpm)

(April 2005, Issue #3)

Item			
No.	Part Name	Woodward No.	Perkins No.
	Injector	97/9T	
1	Insert-spring plate	20/211	
2	Spring plate-upper	20/210	
3	Circlip lower	124/69	
4	Spring plate-lower	20/216	
5	Retainer lower spring plate	20/215	
6	Housing element assembly R.H.	20/200CE	
7	Spill baffle	20/207	
8	Circlip (spill baffle)	124/66	
9	Shims-adjusting (1AR)	7169/310CA-CP	
10	Spring injector	52/329	
11	Dowel (2)	51/415A	
12	Retaining spring	20/206	
13	Timing pin	20/205	
14	Nozzle assembly	H155T26H837P4	
15	Nozzle nut	52/318	
16	Transfer block	20/212	
17	Thrust cap	52/461	
18	Dowel (2)	52/440	
19	Seal-O-ring	372/58	
20	Seal-O-ring	372/59	
21	Control sleeve	20/214	
22	Spring plunger-inner	20/209B	
23	Spring plunger-outer	20/209A	
24	Seal-O-ring	372/60	



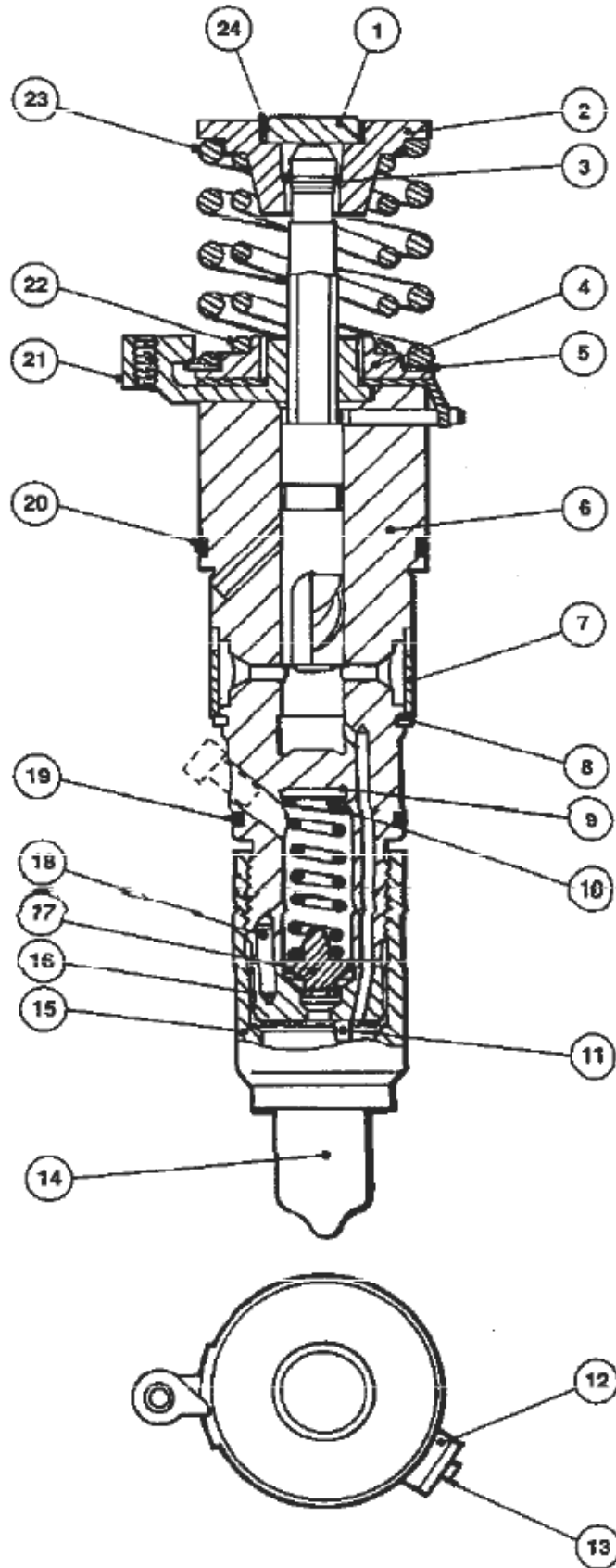
97/9T Unit Injector

97/10T Unit Injector for Perkins Engines:

- **SeaKing 12 & 16**

(April 2005, Issue #3)

Item			
No.	Part Name	Woodward No.	Perkins No.
	Injector	97/10T	
1	Insert-spring plate	20/211	
2	Spring plate-upper	20/210	
3	Circlip lower	124/69	
4	Spring plate-lower	20/216	
5	Retainer lower spring plate	20/215	
6	Housing element assembly R.H.	20/200CD	
7	Spill baffle	20/207	
8	Circlip (spill baffle)	124/66	
9	Shims-adjusting (1AR)	7169/310CA-CP	
10	Spring injector	52/329	
11	Dowel (2)	51/415A	
12	Retaining spring	20/206	
13	Timing pin	20/205	
14	Nozzle assembly	H155T28H925P4	
15	Nozzle nut	52/318	
16	Transfer block	20/212	
17	Thrust cap	52/461	
18	Dowel (2)	52/440	
19	Seal-O-ring	372/58	
20	Seal-O-ring	372/59	
21	Control sleeve	20/214	
22	Spring plunger-inner	20/209B	
23	Spring plunger-outer	20/209A	
24	Seal-O-ring	372/60	



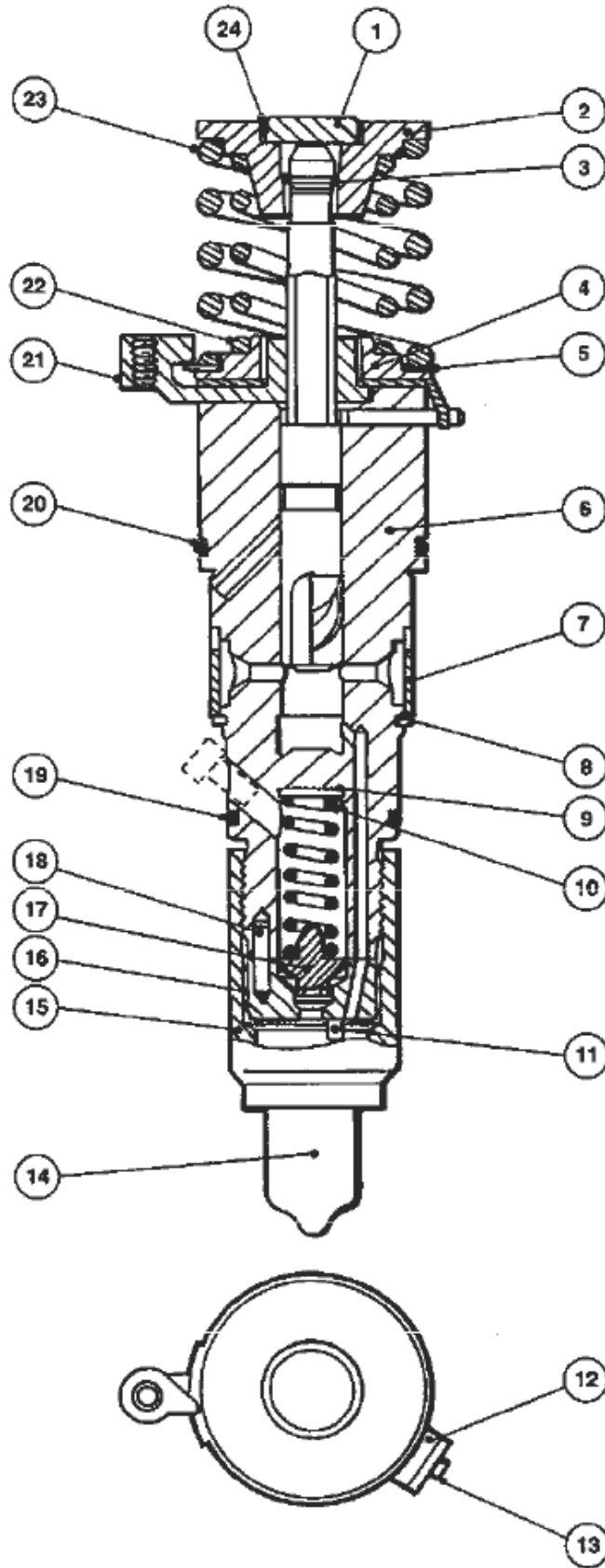
97/10T Unit Injector

97/12T Unit Injector for Perkins Engines:

- 6SET, 6SETCA1, 6SETCA3, 6SETCR, 6SETCR3, 8SETCA, 8SETCR2
- 8SETCA1, 8SETCA2, 12SETCA2, 16SETCA2 (1500 & 1800 rpm)
- 12SETCA (Original), 12SETCA1, 12SETCR2, 12SETCR (Original), 12SETCW, 12SETCW2 (all speeds)
- 12SETCA, 12SETCR ('new look' engines at 1500 rpm)
- 16SETCA, 16SETCA1, 16SETCR, 16SETCR2, 16SETCW, 16SETCW1, 16SETCW2 (all speeds)

(April 2005, Issue #3)

Item			
No.	Part Name	Woodward No.	Perkins No.
	Injector	97/12T	
1	Insert-spring plate	20/211	
2	Spring plate-upper	20/210	
3	Circlip lower	124/69	
4	Spring plate-lower	20/216	
5	Retainer lower spring plate	20/215	
6	Housing element assembly R.H.	20/200CE	
7	Spill baffle	20/207	
8	Circlip (spill baffle)	124/66	
9	Shims-adjusting (1AR)	7169/310CA-CP	
10	Spring injector	52/329	
11	Dowel (2)	51/415A	
12	Retaining spring	20/206	
13	Timing pin	20/205	
14	Nozzle assembly	H155T30H837P4	
15	Nozzle nut	52/318	
16	Transfer block	20/212	
17	Thrust cap	52/461	
18	Dowel (2)	52/440	
19	Seal-O-ring	372/58	
20	Seal-O-ring	372/59	
21	Control sleeve	20/214	
22	Spring plunger-inner	20/209B	
23	Spring plunger-outer	20/209A	
24	Seal-O-ring	372/60	



97/12T Unit Injector

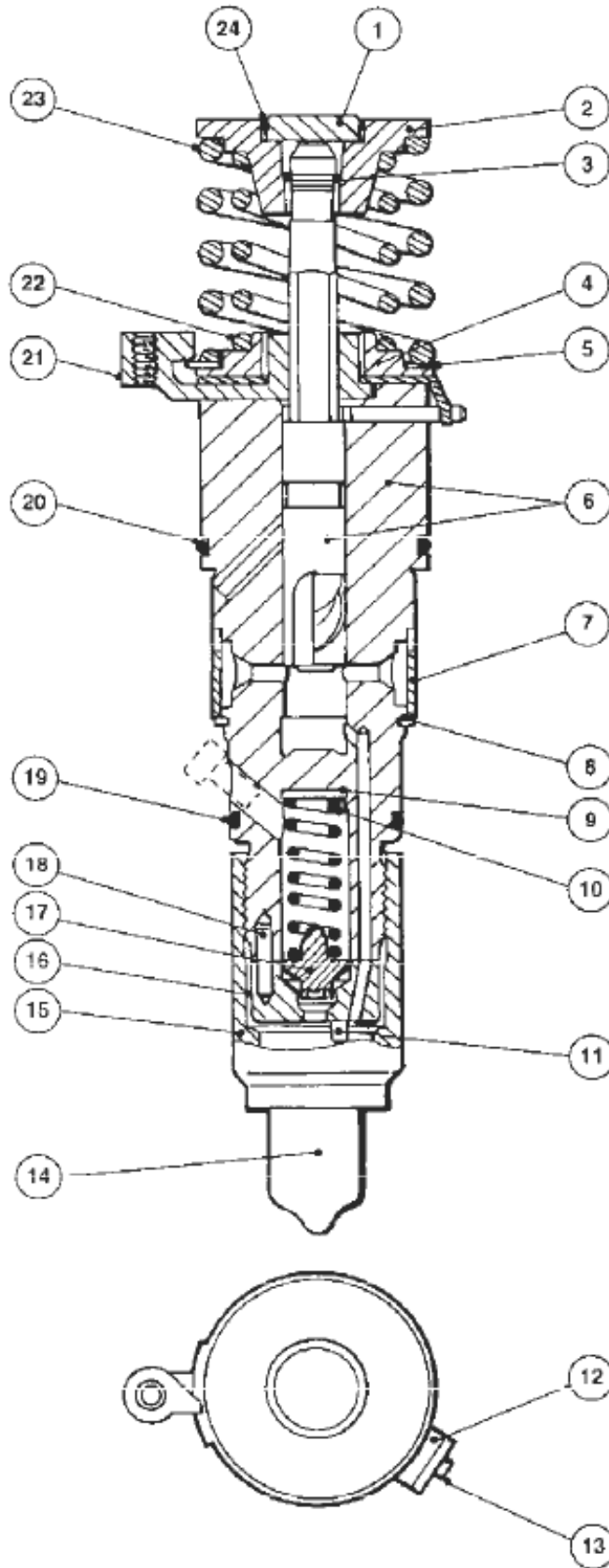
97/19T Unit Injector for Perkins Engines:

- 6SET, 6SETCA1, 6SETCA3, 6SETCR, 6SETCR3
- 8SETCA, 8SETCR2 (all speeds)
- 8SETCA1, 8SETCA2, 12SETCA2, 16SETCA2 (1500 & 1800 rpm)
- 12SETCA (ORIGINAL), 12SETCA1, 12SETCR2, 12SETCR (ORIGINAL), 12SETCW, 12SETCW2 (all speeds)
- 12SETCA, 12SETCR ('new look' engines at 1500 rpm)
- 16SETCA, 16SETCA1, 16SETCR, 16SETCR2, 16SETCW, 16SETCW1, 16SETCW2 (all speeds)

(April 2005, Issue #4)

Item

No.	Part Name	Woodward No.	Perkins No.
	Injector	97/19T	
1	Insert-spring plate	20/211	
2	Spring plate-upper	20/210	
3	Circlip lower	124/69	
4	Spring plate-lower	20/216	
5	Retainer lower spring plate	20/215	
6	Housing element assembly R.H.	20/200CE	
7	Spill baffle	20/207	
8	Circlip (spill baffle)	124/66	
9	Shims-adjusting (1AR)	7169/310CA-CP	
10	Spring injector	52/329	
11	Dowel (2)	51/415A	
12	Retaining spring	20/206	
13	Timing pin	20/205	
14	Nozzle assembly	H155T30H925P4	
15	Nozzle nut	52/318	
16	Transfer block	20/212	
17	Thrust cap	52/461	
18	Dowel (2)	52/440	
19	Seal-O-ring	372/58	
20	Seal-O-ring	372/59	
21	Control sleeve	20/214	
22	Spring plunger-inner	20/209B	
23	Spring plunger-outer	20/209A	
24	Seal-O-ring	372/60	



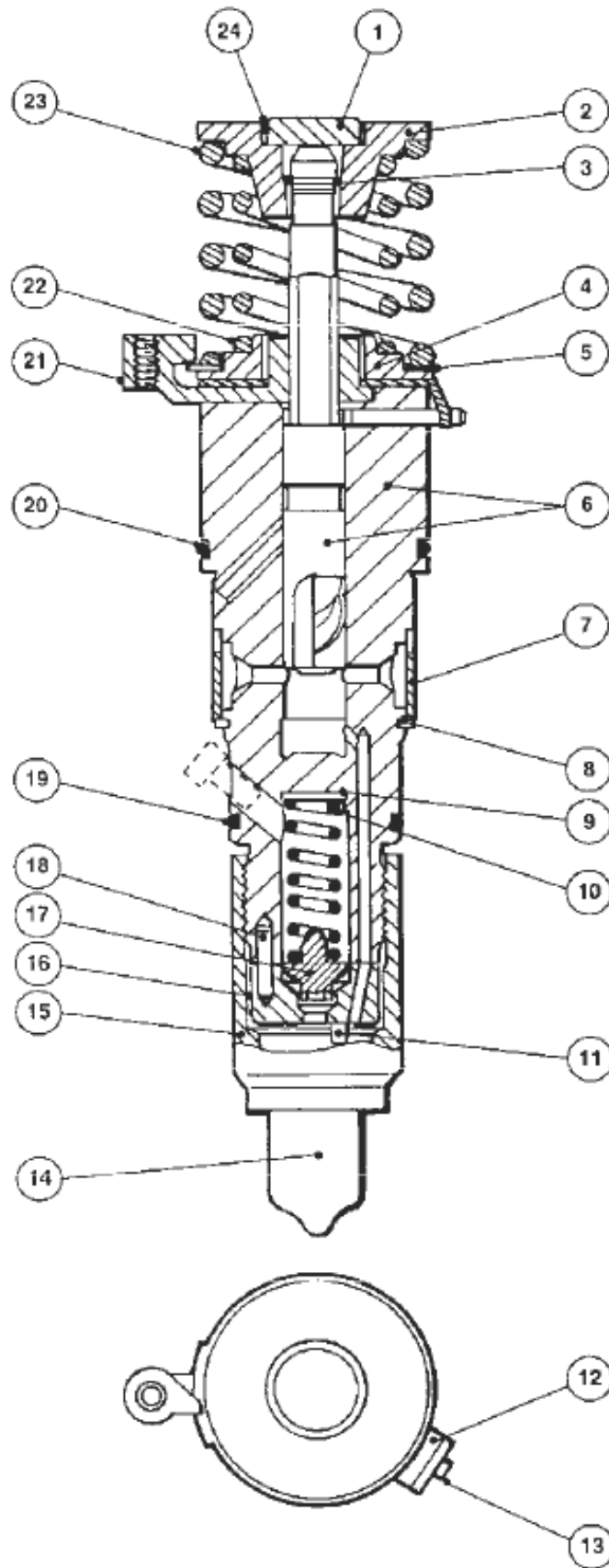
97/19T Unit Injector

97/20T Unit Injector for Perkins Engines:

4000 Series

(January 2003, Issue #6)

Item No.	Part Name	Woodward No.	Perkins No.
	Injector	97/20T	
1	Insert-spring plate	20/211	
2	Spring plate-upper	20/322	
3	Circlip lower	20/309	
4	Spring plate-lower	20/216	
5	Retainer lower spring plate	20/215	
6	Element assembly R.H.	20/302EA	
7	Spill baffle	20/207	
8	Circlip (spill baffle)	124/66	
9	Shims-adjusting (1AR)	7169/310CA-CP	
10	Spring injector	52/329	
11	Dowel (2)	51/415A	
12	Retaining spring	20/206	
13	Timing pin	20/306	
14	Nozzle assembly	H155T30H837P4	
15	Nozzle nut	52/318	
16	Transfer block	20/212	
17	Thrust cap	52/461	
18	Dowel (2)	52/440	
19	Seal-O-ring	372/58	
20	Seal-O-ring	372/59	
21	Control sleeve	20/214	
22	Spring plunger-inner	20/320B	
23	Spring plunger-outer	20/320A	
24	Seal-O-ring	372/60	



97/20T Unit Injector

97/25T Unit Injector for Perkins Engines:

1800 Applications

(April 2005, Issue #7)

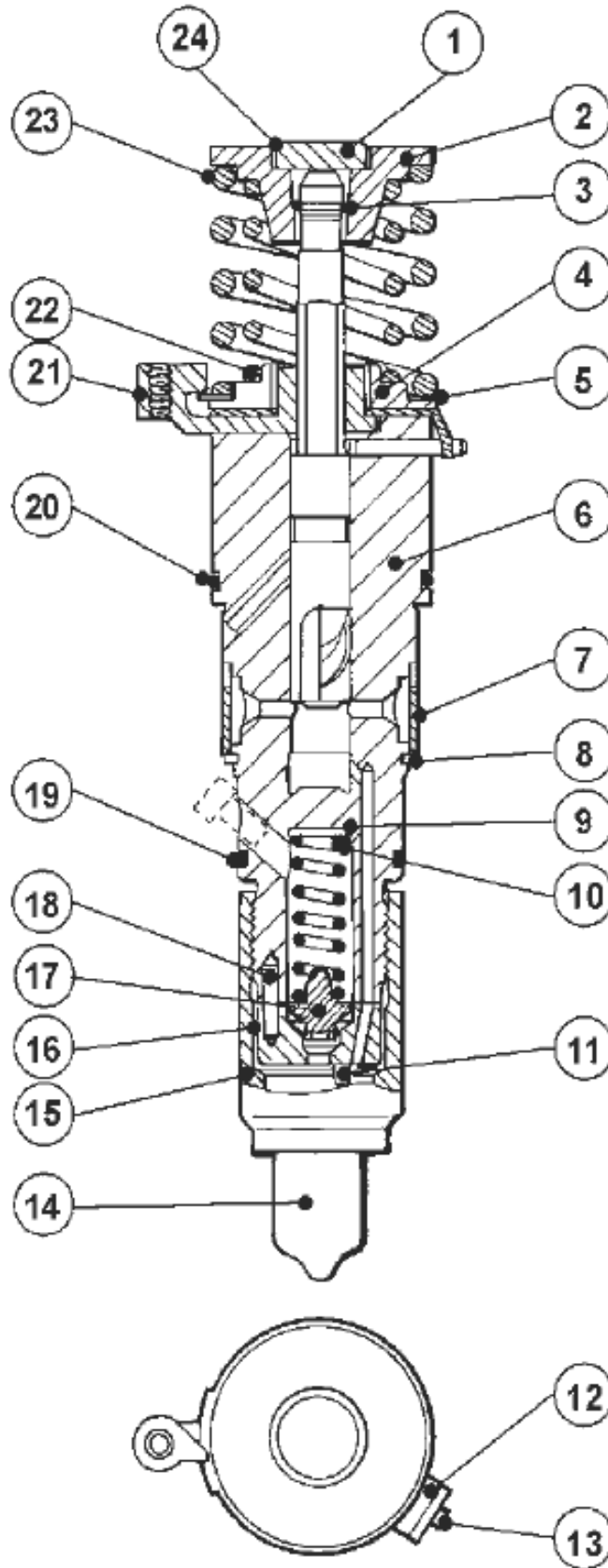
Item No.	Part Name	Woodward No.	Perkins No.
	Injector	97/25T	
1	Insert-spring plate	20/211	
2	Spring plate-upper	20/322	
3	Circlip lower	20/309	
4	Spring plate-lower	20/216	
5	Retainer lower spring plate	20/215	
6	Housing element assembly R.H.	20/200CE	
7	Spill baffle	20/207	
8	Circlip (spill baffle)	124/66	
9	Shims-adjusting (1AR)	7169/310CA-CP	
10	Spring injector	52/329	
11	Dowel (2)	51/415A	
12	Retaining spring	20/206	
13	Timing pin	20/205	
14	Nozzle assembly	H155T30H837P4	
15	Nozzle nut	52/318	
16	Transfer block	20/212	
17	Thrust cap	52/461	
18	Dowel (2)	52/440	
19	Seal-O-ring	372/58	
20	Seal-O-ring	372/59	
21	Control sleeve	20/214	
22	Spring plunger-inner	20/320B	
23	Spring plunger-outer	20/320A	
24	Seal-O-ring	372/60	

97/27T Unit Injector for Perkins Engines:

1500 Applications

(January 2003, Issue #1)

Item No.	Part Name	Woodward No.	Perkins No.
	Injector	97/27T	
1	Insert-spring plate	20/211	
2	Spring plate-upper	20/322	
3	Circlip lower	20/309	
4	Spring plate-lower	20/216	
5	Retainer lower spring plate	20/215	
6	Housing element assembly R.H.	20/200CE	
7	Spill baffle	20/207	
8	Circlip (spill baffle)	124/66	
9	Shims-adjusting (1AR)	7169/310CA-CP	
10	Spring injector	52/329	
11	Dowel (2)	51/415A	
12	Retaining spring	20/206	
13	Timing pin	20/205	
14	Nozzle assembly	H155T30H837P4	
15	Nozzle nut	52/318	
16	Transfer block	20/212	
17	Thrust cap	52/461	
18	Dowel (2)	52/440	
19	Seal-O-ring	372/58	
20	Seal-O-ring	372/59	
21	Control sleeve	20/214	
22	Spring plunger-inner	20/320B	
23	Spring plunger-outer	20/320A	
24	Seal-O-ring	372/60	



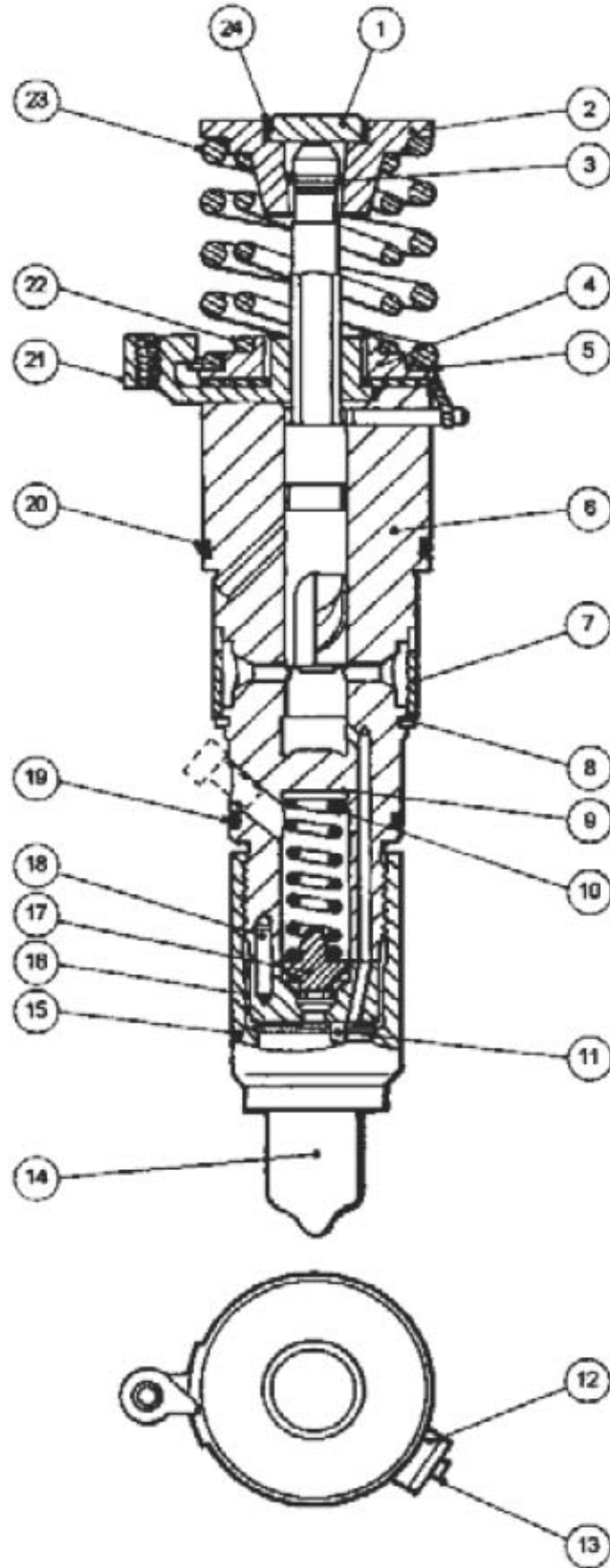
97/27T Unit Injector

97/28T Unit Injector for Perkins Engines:

1500 Applications

(April 2005)

Item No.	B.L. No.	Part Name	Qty	Woodward No.
		Injector		97/28T
1	26	Insert-spring plate		G40010263
2	23	Spring plate-upper		G40010264
3	25	Keeper	2	G40010219
4	20	Spring plate-lower		20/216
5	19	Retainer-lower spring plate		20/215
6	5	Element assembly R.H.		G40010262
7	17	Spill baffle		20/207
8	18	Circlip (spill baffle)		124/66
9	42	Shims-adjusting	1AR	7169/310CA-CP
10	40	Spring injector		52/329
11	34	Dowel	2	51/415A
12	12	Retaining spring		20/206
13	11	Timing pin		20/306
14	58	Nozzle assembly		H155T30H925P4
15	49	Nozzle nut		52/318
16	33	Transfer block		20/212
17	37	Thrust cap		52/461
18	35	Dowel	2	52/440
19	15	Seal-O-ring		372/58
20	16	Seal-O-ring		372/59
21	14	Control sleeve		20/214
22	22	Spring plunger-inner		20/209B
23	21	Spring plunger-outer		20/320A
24	27	Seal-O-ring		372/60



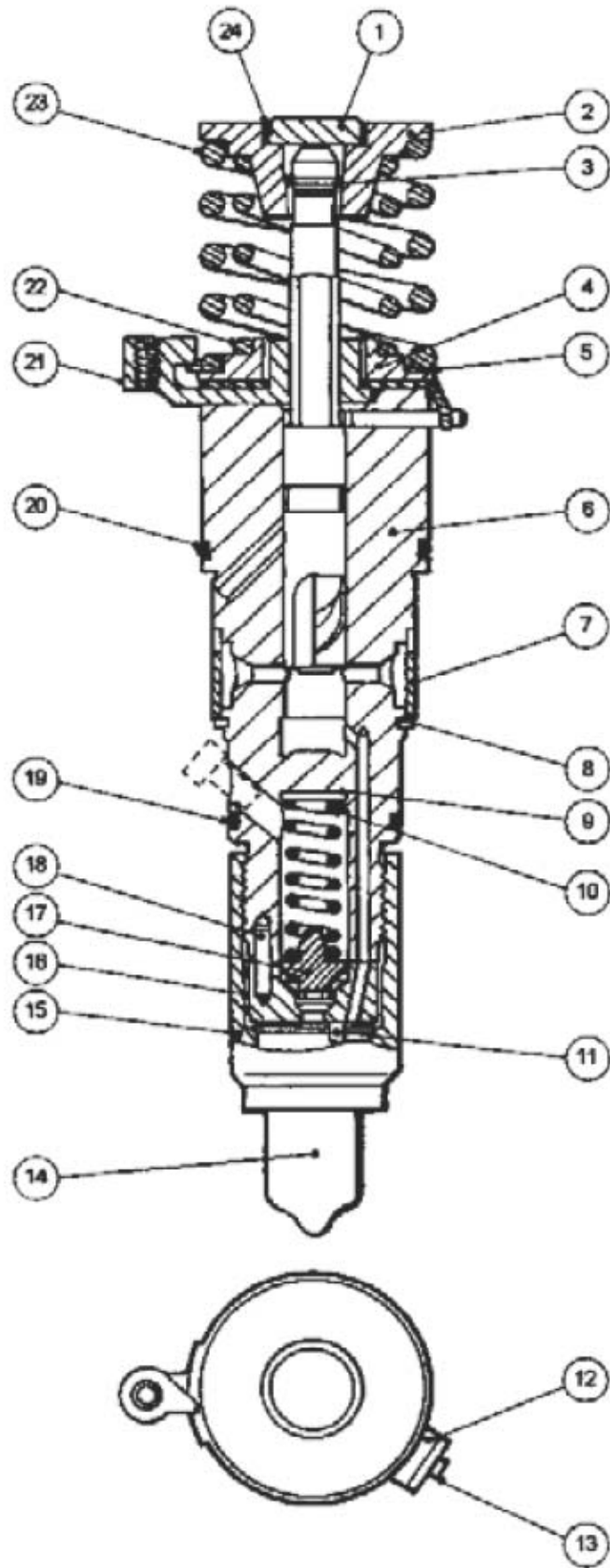
97/28T Unit Injector

97/30T Unit Injector for Perkins Engines:

1800 Applications

(April 2005)

Item No.	B.L. No.	Part Name	Qty	Woodward No.
		Injector		97/30T
1	26	Insert-spring plate		G40010263
2	23	Spring plate-upper		G40010264
3	25	Keeper	2	G40010219
4	20	Spring plate-lower		20/216
5	19	Retainer-lower spring plate		20/215
6	5	Element assembly R.H.		G40010339
7	17	Spill baffle		20/207
8	18	Circlip (spill baffle)		124/66
9	42	Shims-adjusting	1AR	7169/310CA-CP
10	40	Spring injector		52/329
11	34	Dowel	2	51/415A
12	12	Retaining spring		20/206
13	11	Timing pin		20/205
14	58	Nozzle assembly		H155T30H837P4
15	49	Nozzle nut		52/318
16	33	Transfer block		20/212
17	37	Thrust cap		52/461
18	35	Dowel	2	52/440
19	15	Seal-O-ring		372/58
20	16	Seal-O-ring		372/59
21	14	Control sleeve		20/214
22	22	Spring plunger-inner		20/209B
23	21	Spring plunger-outer		20/320A
24	27	Seal-O-ring		372/60



97/30T Unit Injector

We appreciate your comments about the content of our publications.

Send comments to: icinfo@woodward.com

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



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