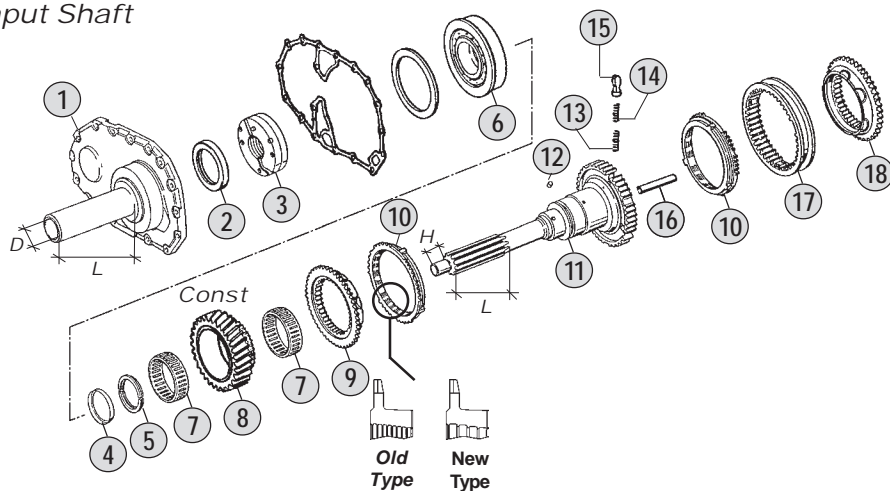


Adattabile a : **VOLVO**
 Suitable To :

Modelli Cambio/ Gearbox Models
16S190/1

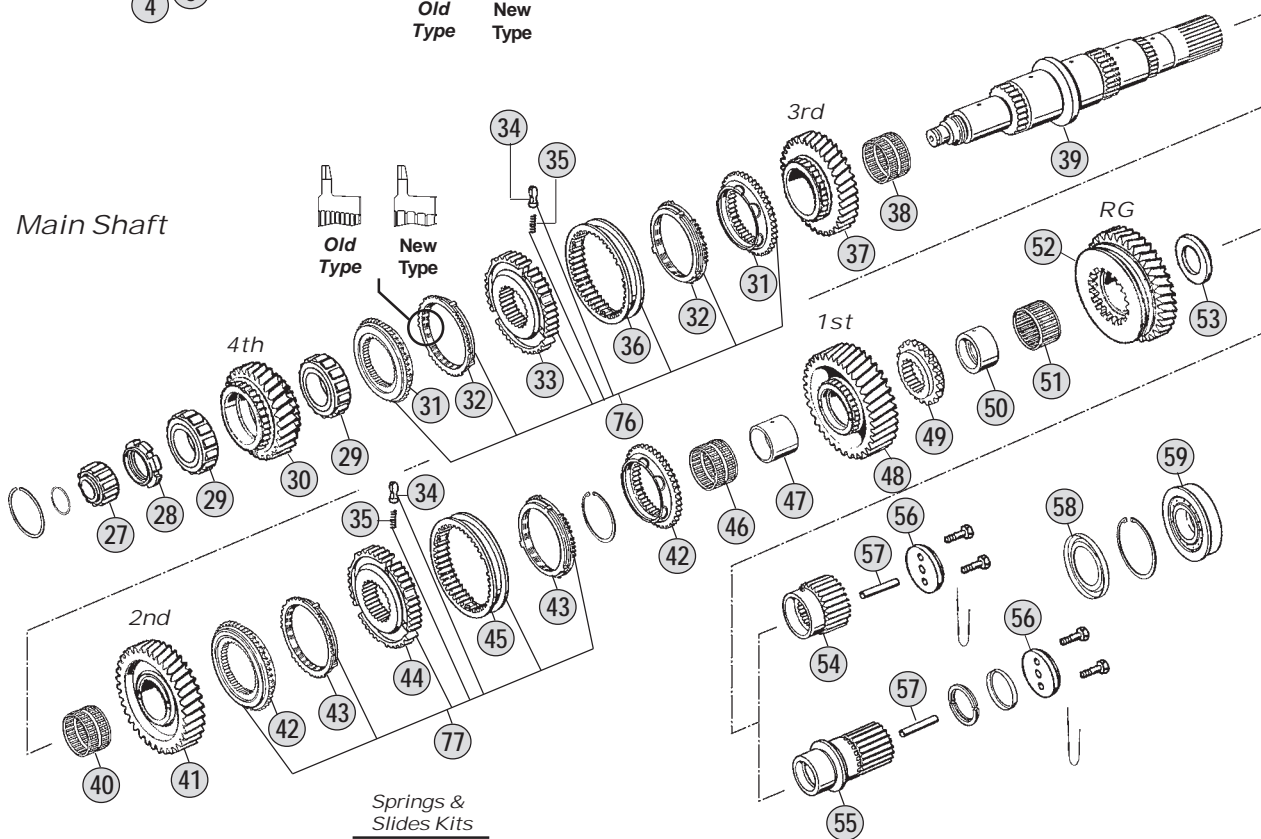
Input Shaft



Springs & Slides Kits

x 3	x 6	x 9
x 3	x 6	x 9
x 3	x 6	x 9
Kit 70	Kit 71	Kit 72

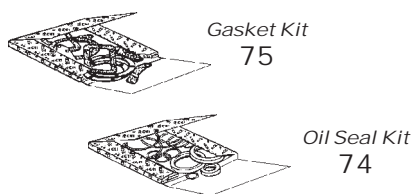
Main Shaft



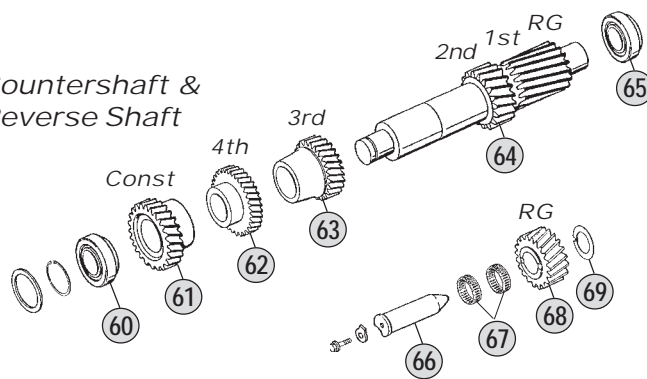
Springs & Slides Kits

x 3
x 3
Kit 73

Kits



Countershaft & Reverse Shaft



Models

16S190/1 A :-- B : 11,46 - 0,85 C : 13,68 - 1,00 D : 14,29 - 0,82 E : 17,06 - 1,00



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Fig.	CEI no.	O.E.M. Reference		Description	Q.ty	Note	16S190/1					
		ZF no.	VOLVO no.									
1	128.261	1297 302 082	1526687	Front Cover	1	L=190-D=66	●					
2	139.754	0734 310 386	1526688	Oil Seal 55x75x8	1		●					
3	280.348	1295 202 041	1526685	Oil Pump	1		●					
4	169.754	0730 061 816	1526683	Lock Ring	1		●					
4	169.755	0730 062 579		Lock Ring S.4,20 mm	1		●					
5	269.621	0730 103 244	1526673	Split Ring T.4,30 mm	1	(3)	●					
5	269.622	0730 103 935	1526682	Split Ring T.3,80 mm	1	(3)	●					
5	269.623	0730 105 156		Split Ring T.4,00 mm	1	(4)	●					
5	269.624	0730 105 154		Split Ring T.3,80 mm	1	(4)	●					
6	130.305	0750 118 131	1526672	Bearing 80x150x27,50	1		●					
7	137.153	0735 320 896	1662581	Needle Cage 88x96x29	2		●					
8	145.466	1297 302 177		Constant Gear 30 T	1	B	●					
8	145.406	1297 302 176	1662513	Constant Gear 28 T	1	C	●					
8	145.405	1297 302 250		Constant Gear 29 T	1	D	●					
8	145.407	1297 302 241		Constant Gear 26 T	1	E	●					
9	109.072	1295 304 278	1527438	Synchronizer Cone	1		●					
10	119.084	1295 304 004	1526697	Synchronizer Ring	2	Old Type	●					
10	119.175	1304 304 686		Synchronizer Ring	2	New Type	●					
11	102.540	1297 202 054	1662583	Input Shaft 57 T	1		●					
12	171.084	0635 470 012	1526684	Needle D.7x7	1		●					
13	156.037	0732 040 385	6635322	Outer Spring De.6x34	3		●					
14	156.036	0732 040 386	6635323	Inner Spring De.3x34	3		●					
15	160.116	1240 304 278	6635324	Pressure Piece	3		●					
16	188.211	0730 062 323		Oil Plug	1		●					
17	154.097	1295 304 002	1526696	Sliding Sleeve	1		●					
18	109.072	1295 304 278	1527438	Synchronizer Cone	1		●					
27	137.113	0750 118 038	1662534	Roller Cage 35x68x27,50	1		●					
28	187.412	0737 502 092	1526746	Grooved Nut M60x1,5	1		●					
29	137.157	0750 118 220	1662532	Roller Cage D.63x97,5x37,50	2		●					
30	146.384	1297 304 267		Gear 4th Speed 28 T	1	B	●					
30	146.318	1297 304 260	1662533	Gear 4th Speed 30 T	1	C	●					
30	146.315	1297 304 318		Gear 4th Speed 26 T	1	D	●					
30	146.294	1297 304 413		Gear 4th Speed 29 T	1	E	●					
31	109.114	1297 304 369		Synchronizer Cone	2		●					
32	119.119	1297 304 402	3097026	Synchronizer Ring	2	Old Type	●					
32	119.167	1297 304 484	1662711	Synchronizer Ring	2	New Type	●					
33	157.140	1297 304 446		Synchronizer Hub	1		●					
34	160.189	1297 304 436	20853449	Pressure Piece	3		●					
35	156.140	0732 040 409	20853453	Spring De.6,5x23,50	3		●					
36	154.135	1310 304 202	3097061	Sliding Sleeve	1		●					
37	145.470	1297 304 266		Gear 3rd Speed 32 T	1	BD	●					
37	145.450	1297 304 261	1662530	Gear 3rd Speed 34 T	1	C	●					
37	145.377	1297 304 414		Gear 3rd Speed 34 T	1	E	●					
38	137.112	0735 320 451	1662531	Needle Cage 82x90x60	1		●					
39	103.132	1297 304 181	1662519	Main Shaft	1	BC	●					

Notes

- (3) To be coupled together with Fig. 4 - 0730 061 816
 (4) To be coupled together with Fig. 4 - 0730 062 579

Date

04 / 2012

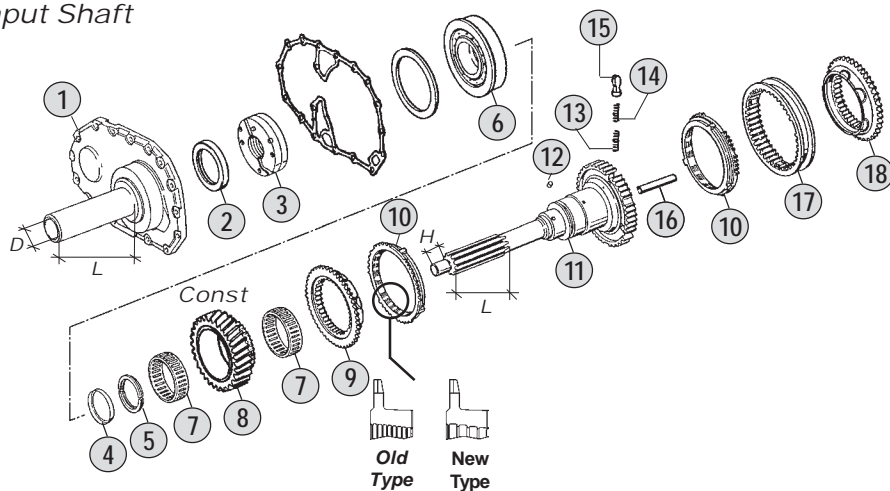
Table

240/A

Adattabile a : **VOLVO**
 Suitable To :

Modelli Cambio/ Gearbox Models
16S190/1

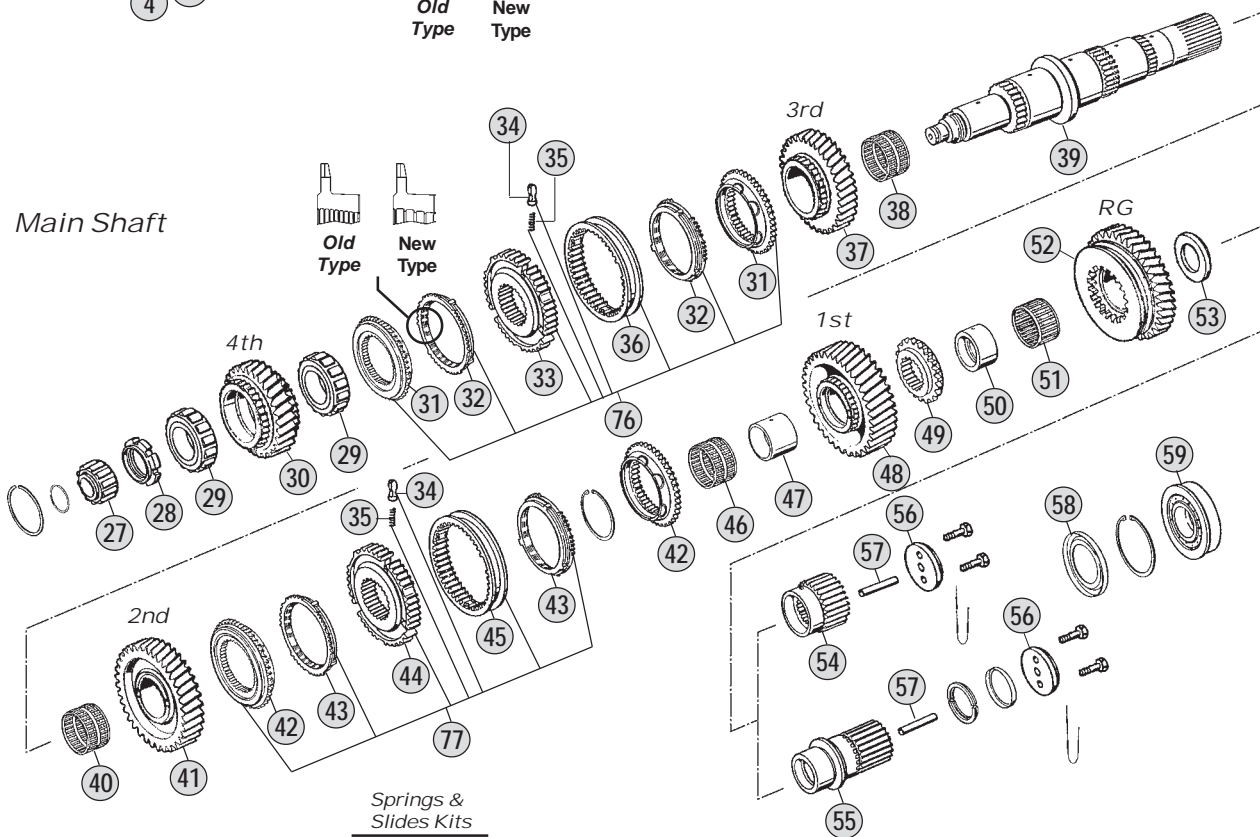
Input Shaft



Springs & Slides Kits

x 3	x 6	x 9
x 3	x 6	x 9
x 3	x 6	x 9
Kit 70	Kit 71	Kit 72

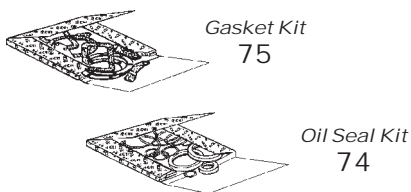
Main Shaft



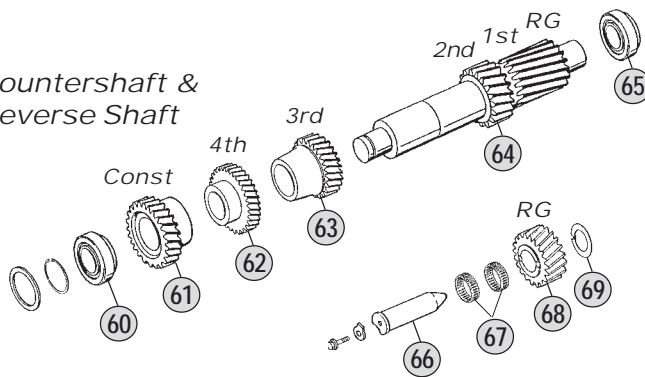
Springs & Slides Kits

x 3
x 3
Kit 73

Kits



Countershaft & Reverse Shaft



Models

16S190/1 A :-- B : 11,46 - 0,85 C : 13,68 - 1,00 D : 14,29 - 0,82 E : 17,06 - 1,00



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Fig.	CEI no.	O.E.M. Reference		Description	Q.ty	Note	16S190/1					
		ZF no.	VOLVO no.									
39	103.098	1297 304 193		Main Shaft	1	DE	●					
40	137.109	0735 320 452	1662520	Needle Cage 82x90x55	1		●					
41	145.500	1297 304 269		Gear 2nd Speed 37 T	1	BD	●					
41	145.375	1297 304 442	1662521	Gear 2nd Speed 38 T	1	CE	●					
42	109.113	1297 304 371		Synchronizer cone	2		●					
43	119.122	1297 304 401		Synchronizer Ring	2	Old Type	●					
43	119.166	1297 304 485	3096856	Synchronizer Ring	2	New Type	●					
44	157.139	1297 304 445		Synchronizer Hub	1		●					
45	154.136	1297 304 450		Sliding Sleeve	1		●					
46	137.110	0735 320 487	1662523	Needle Cage 82x90x68	1		●					
47	117.246	1297 304 035	1662522	Inner Bush	1		●					
48	145.507	1297 304 270		Gear 1st Speed 44 T	1	BD	●					
48	145.376	1297 304 441	1662524	Gear 1st Speed 47 T	1	CE	●					
49	109.178	1297 304 154	1662525	Synchronizer Cone	1		●					
50	117.318	1297 304 034	1662526	Bush	1	BC	●					
51	137.111	0735 320 486	1662527	Needle Cage 78x86x44	1		●					
52	147.109	1297 304 149		Reverse Gear 39 T	1	BD	●					
52	147.140	1297 304 148	1662528	Reverse Gear 38 T	1	CE	●					
53	169.757	1297 304 381	1662529	Thrust Washer	1	BC	●					
54	157.177	1297 304 187	1662539	Sun Gear 27 T	1	BC	●					
55	157.198	1297 304 439		Sun Gear 24 T	1	DE	●					
56	188.076	1272 304 021	1527325	Stop Washer	1		●					
57	189.671	0730 061 842	1526762	Oil Tube	1		●					
58	139.923	1297 301 004	1662580	Oil Collector	1		●					
59	130.702	0750 118 006	1662502	Bearing 65x140x33	1	BC	●					
59	130.703	0750 118 180		Bearing 80x140x33	1	DE	●					
60	130.242	0750 117 010	1526724	Bearing 50,80x100x35	1		●					
61	146.383	1297 303 074		Constant Gear 31 T	1	B	●					
61	146.322	1297 303 066	1662517	Constant Gear 34 T	1	C	●					
61	146.319	1297 303 098		Constant Gear 32 T	1	D	●					
61	146.321	1297 303 086		Constant Gear 35 T	1	E	●					
62	146.382	1297 303 072		Gear 4th Speed 34 T	1	B	●					
62	146.381	1297 303 065	1662518	Gear 4th Speed 31 T	1	C	●					
62	146.415	1297 303 097		Gear 4th Speed 35 T	1	D	●					
62	146.416	1297 303 123		Gear 4th Speed 32 T	1	E	●					
63	146.357	1297 303 073		Gear 3rd Speed 28 T	1	BD	●					
63	146.421	1297 303 067	1662516	Gear 3rd Speed 25 T	1	C	●					
63	146.422	1297 303 132		Gear 3rd Speed 26 T	1	E	●					
64	105.092	1297 303 075		Countershaft 19/23 T	1	BD	●					
64	105.093	1297 303 140	1662514	Countershaft 17/20 T	1	CE	●					
65	130.308	0750 117 009	1662515	Bearing 49,2x103,1x43,6	1		●					
66	107.108	1295 305 056	1662509	Reverse Gear Pin	1		●					
67	137.007	0750 115 011	1526667	Needle Cage 45x53x21	2		●					
68	147.133	1295 305 051		Reverse Gear 21 T	1	BD	●					
68	147.094	1295 305 052	1527321	Reverse Gear 24 T	1	CE	●					

Notes

- (3) To be coupled together with Fig. 4 - 0730 061 816
 (4) To be coupled together with Fig. 4 - 0730 062 579

Date

04 / 2012

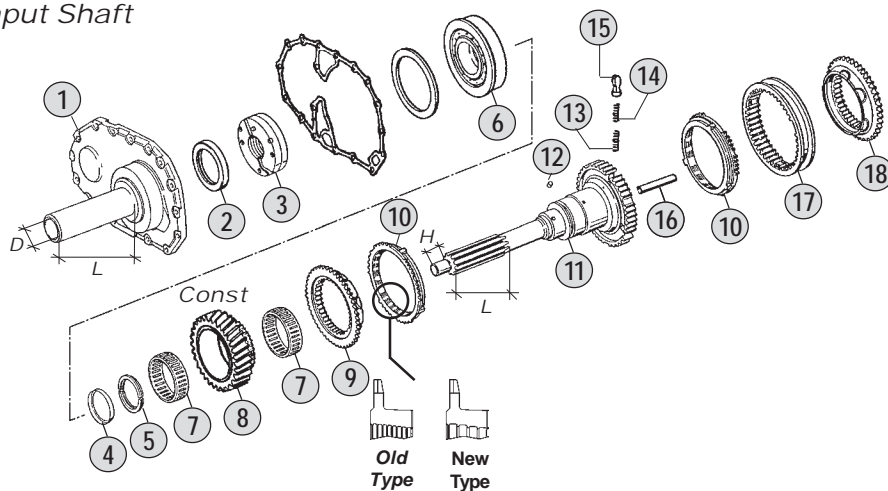
Table

240/A

Adattabile a : **VOLVO**
 Suitable To :

Modelli Cambio/ Gearbox Models
16S190/1

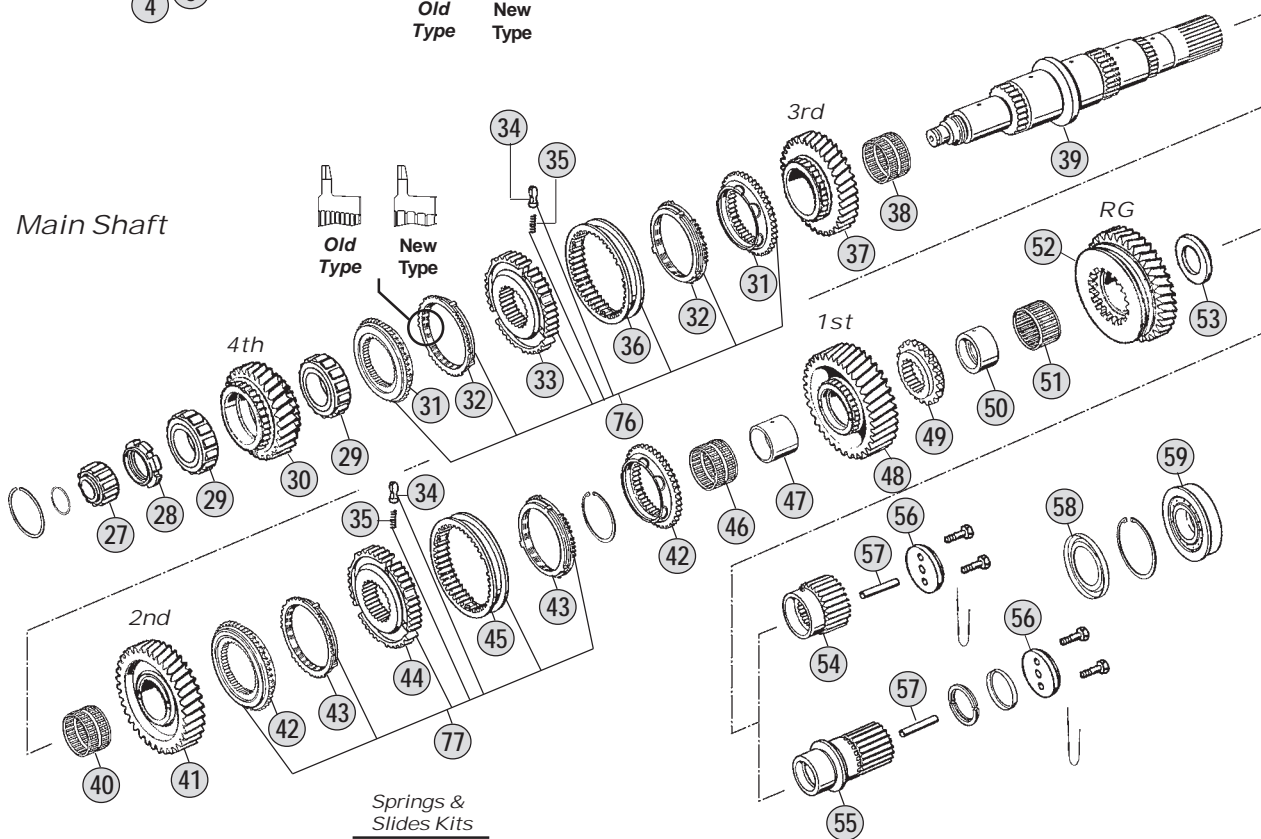
Input Shaft



Springs & Slides Kits

x 3	x 6	x 9
x 3	x 6	x 9
x 3	x 6	x 9
Kit 70	Kit 71	Kit 72

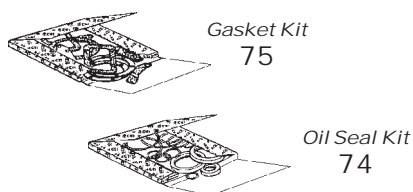
Main Shaft



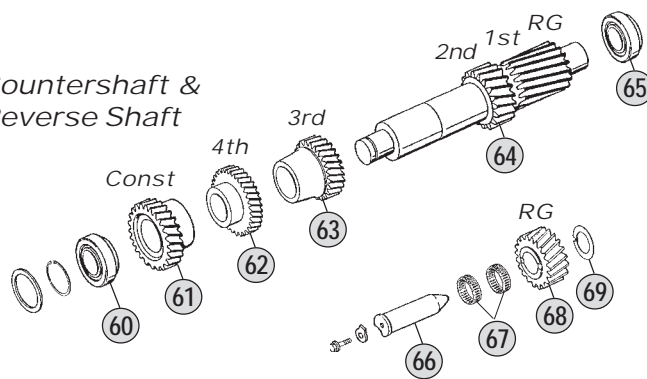
Springs & Slides Kits

x 3
x 3
Kit 73

Kits



Countershaft & Reverse Shaft



Models

16S190/1 A :-- B : 11,46 - 0,85 C : 13,68 - 1,00 D : 14,29 - 0,82 E : 17,06 - 1,00



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O.E.M. Reference

Fig.	CEI no.	O.E.M. Reference		Description	Q.ty	Note					
		ZF no.	VOLVO no.				76ST90/1				
69	169.234	0730 150 064	6635283	<i>Thrust Washer</i>	1		●				
70	198.339	1268 298 938		<i>Spring Slide Set</i>	1		●				
71	198.564	CEI 198564		<i>Spring Slide Set</i>	1		●				
72	198.842	1295 298 933	CEI 198842	<i>Spring Slide Set</i>	1		●				
73	198.843	CEI 198843		<i>Spring Slide Set</i>	1		●				
74	198.428	1295 298 960	CEI 198428	<i>Oil Seal Ring Kit</i>	1		●				
75	198.427	1295 298 915	CEI 198427	<i>Gasket Kit</i>	1		●				
76	298.324	1297 298 963		<i>Synchro Kit</i>	1		●				
77	298.321	1297 298 957		<i>Synchro Kit</i>	1		●				

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Notes

- (3) To be coupled together with Fig. 4 - 0730 061 816
- (4) To be coupled together with Fig. 4 - 0730 062 579

Date

04 / 2012

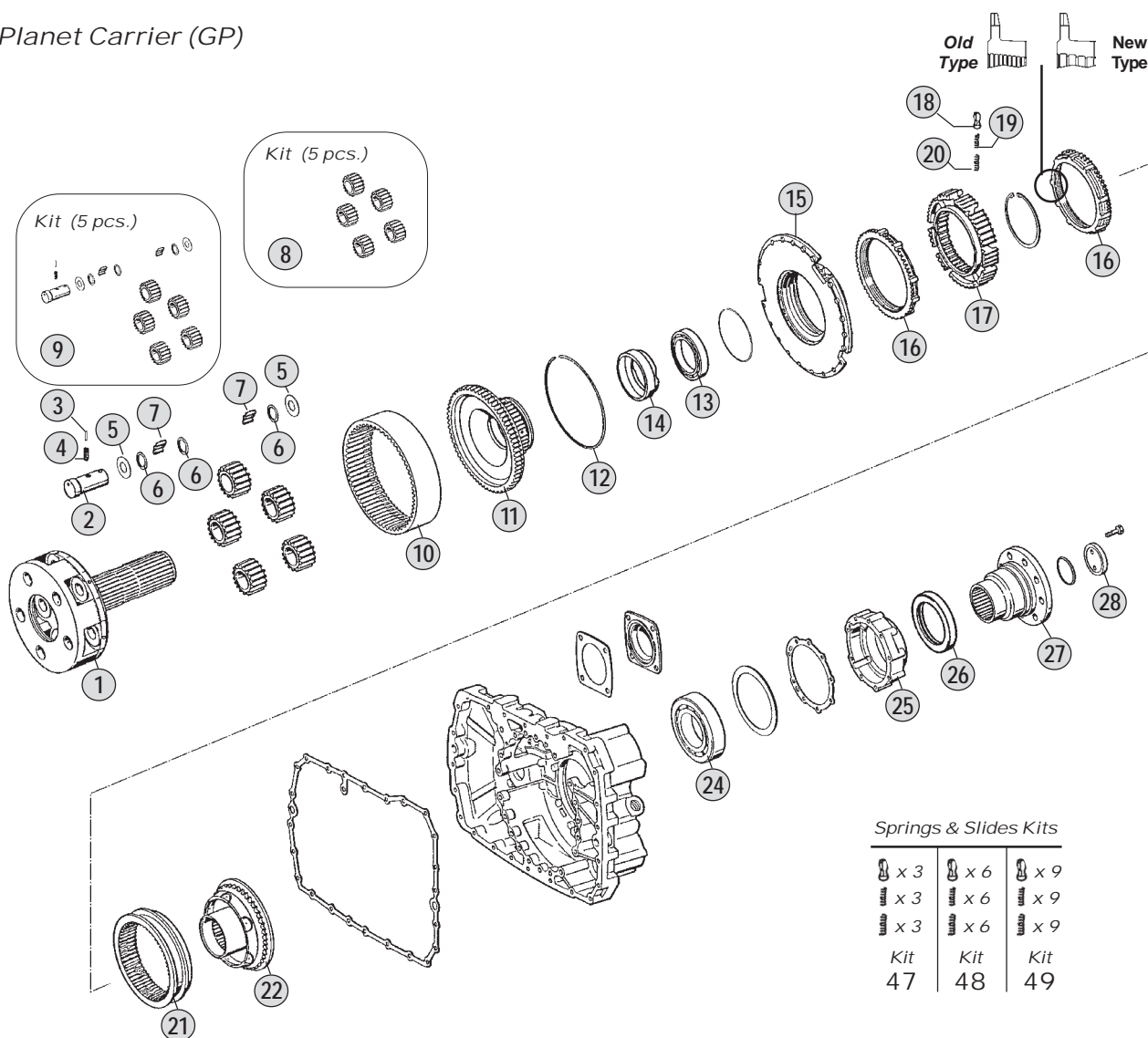
Table

240/A

Adattabile a : **VOLVO**
 Suitable To :

Modelli Cambio/ Gearbox Models
16S190/1

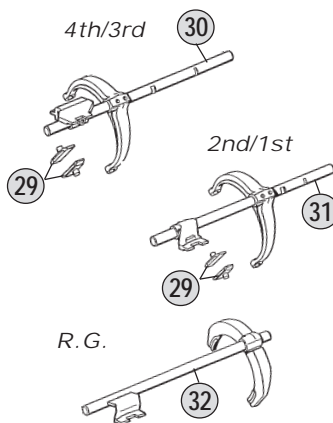
Planet Carrier (GP)



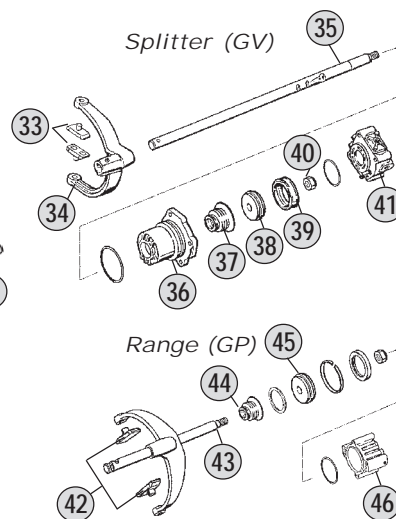
Springs & Slides Kits

x 3	x 6	x 9
x 3	x 6	x 9
x 3	x 6	x 9
Kit 47	Kit 48	Kit 49

Shifting Forks



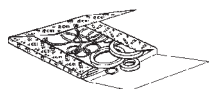
Splitter (GV)



Kits



Gasket Kit
51



Oil Seal Kit
50

Models

16S190/1 A :-- B : 11,46 - 0,85 C : 13,68 - 1,00 D : 14,29 - 0,82 E : 17,06 - 1,00

Fig.	CEI no.	O.E.M. Reference		Description	Q.ty	Note	16S190/1					
		ZF no.	VOLVO no.									
1	190.396	1297 232 039	1662584	Planetary Carrier	1	BC	●					
1	190.395	1297 232 045		Planetary Carrier	1	DE	●					
2	107.163	1297 332 109	1662558	Planet Shaft	5		●					
3	160.191	0631 329 017	1699048	Lock Pin 3x24	5		●					
4	160.192	0631 329 050	1699047	Lock Pin 5x24	5		●					
5	169.753	0501 306 212	1662556	Thrust Washer 29x64x1,5	10		●					
6	169.410	0730 103 846	1526833	Spacer Ring 29x39x1,00	15		●					
7	171.045	0750 119 143	1662557	Needle D.10x16,80	120		●					
8	198.803	1297 232 023	1662555	Planetary Gear Set (5 pcs)	1	BC	●					
8	198.810	1297 232 024		Planetary Gear Set (5 pcs)	1	DE	●					
9	198.704	1297 298 912		Planetary Gear Set	1	BC	●					
9	298.807	1297 298 919		Planetary Gear Set	1	DE	●					
10	123.217	1297 332 080	1662568	Crown Gear 83 T	1	BC	●					
10	123.208	1295 332 086		Crown Gear 86 T	1	DE	●					
11	150.138	1297 332 017	1662559	Carrier Hub 83 T	1	BC	●					
11	150.137	1297 332 035		Carrier Hub 86 T	1	DE	●					
12	111.129	0730 505 055	1526845	Locking Wire	1	BC	●					
12	111.198	0730 505 056		Locking Wire	1	DE	●					
13	130.310	0750 116 165	1662561	Bearing 80x110x16	1		●					
14	119.255	1297 332 122	1662560	Intermediate Ring	1		●					
15	198.358	1296 233 006	1527360	Synchronizer Cone	1		●					
16	119.085	1296 333 022		Synchronizer Ring	2	Old Type	●					
16	119.172	1296 333 045	1527458	Synchronizer Ring	2	New Type	●					
17	157.113	1296 333 002	1526457	Synchronizer Hub	1		●					
18	160.116	1240 304 278	6635324	Pressure Piece	9		●					
19	156.036	0732 040 386	6635323	Inner Spring De.3x34	9		●					
20	156.037	0732 040 385	6635322	Outer Spring De.6x34	9		●					
21	154.098	1296 333 023	1527459	Sliding Sleeve	1		●					
22	198.374	1313 233 001	1662575	Synchronizer Cone (38 Spl.)	1		●					
24	130.245	0750 116 394	19499	Bearing D.90x160x30	1		●					
25	128.260	1296 301 067	1526826	Cover	1		●					
25	128.098	1315 301 220	1662553	Cover	1		●					
26	139.878	0750 111 341	1526828	Oil Seal 105x130x12	1		●					
27	197.162	1297 338 010	1672060	Output Flange D.180	1		●					
27	197.236	1297 338 051	1662570	Output Flange D.204	1		●					
28	188.077	1295 332 051	6889862	Stop Washer	1		●					
29	141.163	1297 306 120	3094007	Slide	2		●					
30	298.813	1297 206 103		Complete Fork	1		●					
31	298.819	1297 206 106		Complete Fork	1		●					
32	298.824	1297 206 174		Complete Fork	1		●					
33	141.068	1295 306 132	1662543	Bronze Slide	2		●					
34	141.086	1313 312 002	1662550	Shift Yoke	1		●					
35	149.268	1297 312 008	1662549	Selector Rod	1		●					
36	132.046	1296 312 042	1526816	Cylinder	1		●					
37	139.331	0750 112 034	1526817	Cap Collar 25x38x14,2	1		●					

Notes

- (3) To be coupled together with Fig. 4 - 0730 061 816
(4) To be coupled together with Fig. 4 - 0730 062 579

Date

04 / 2012

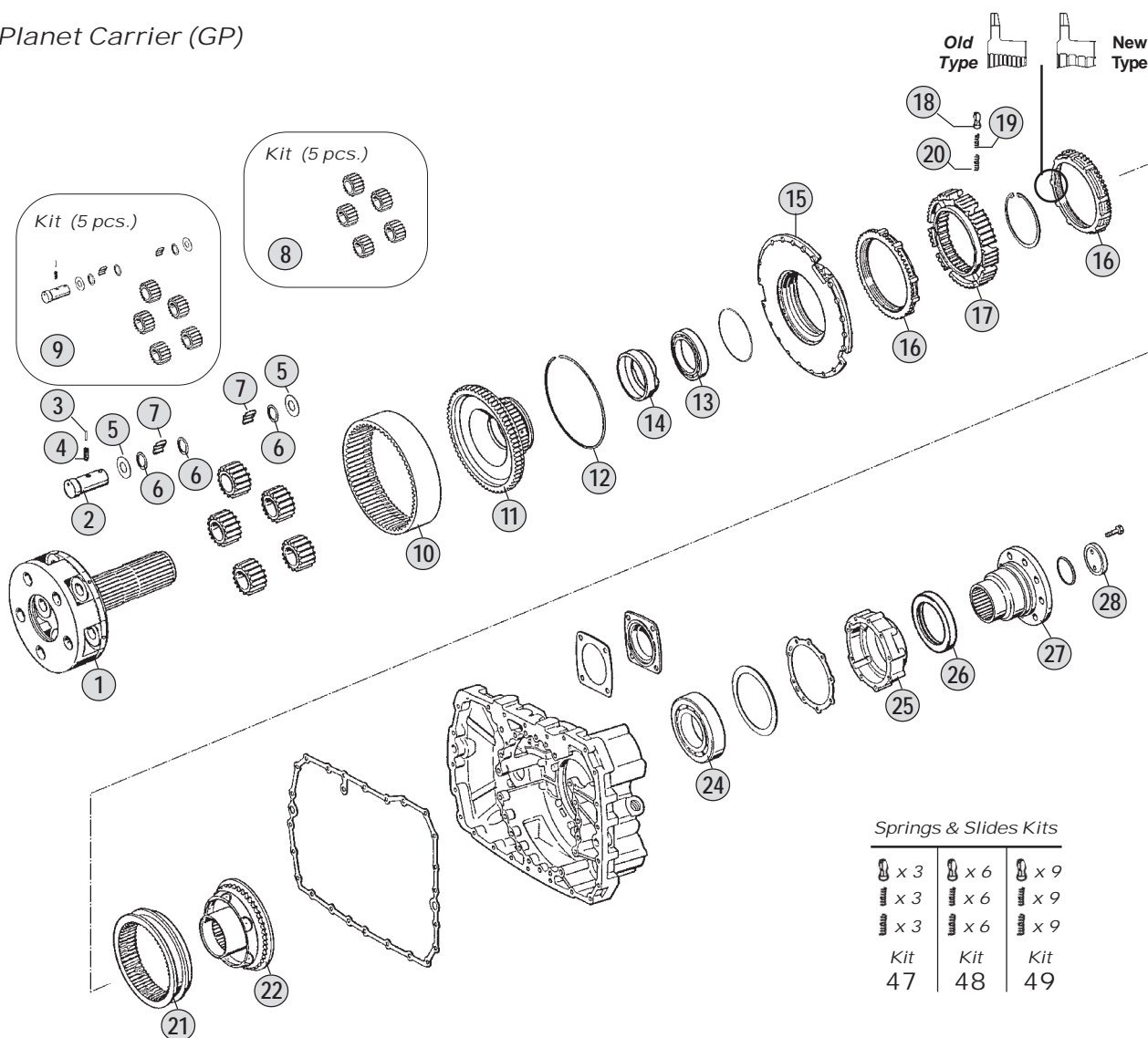
Table

240/B

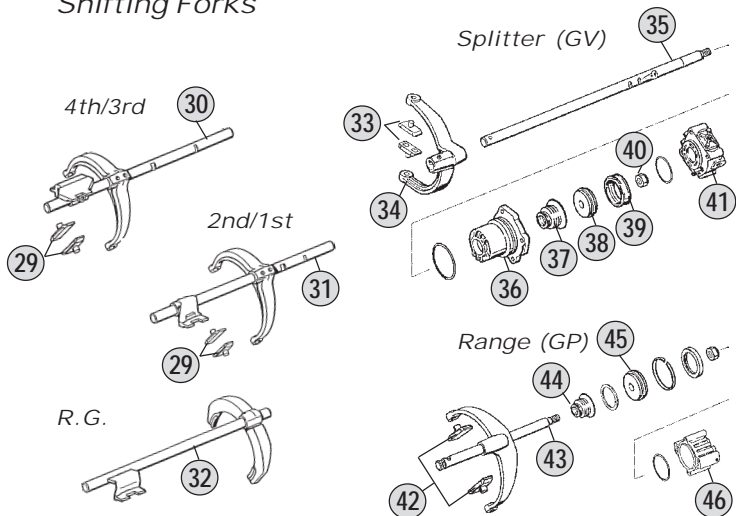
Adattabile a : **VOLVO**
 Suitable To :

Modelli Cambio/ Gearbox Models
16S190/1

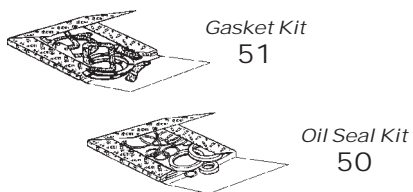
Planet Carrier (GP)



Shifting Forks



Kits



Models

16S190/1 A :-- B : 11,46 - 0,85 C : 13,68 - 1,00 D : 14,29 - 0,82 E : 17,06 - 1,00

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Fig.	O.E.M. Reference		Description	Q.ty	Note	16S190/1						
	CEI no.	ZF no.				VOLVO no.						
38	189.421	1296 312 053	1526818	Piston	1		●					
39	139.912	0750 112 089	1527355	Ring 53x63x16,2	1		●					
40	287.091	0737 300 037		Nut	1		●					
41	132.084	0750 132 032	1662551	Cylinder	1		●					
41	132.085	0750 132 033		Cylinder	1		●					
42	141.085	1296 334 004	1526864	Bronze Slide	2		●					
43	149.171	1312 234 002	1662403	Fork Lever	1		●					
44	139.331	0750 112 034	1526817	Cap Collar 25x38x14,2	1		●					
45	189.422	1296 334 039	1527462	Piston	1		●					
46	132.047	0750 132 027	1527363	Cylinder	1		●					
47	198.339	1268 298 938		Spring Slide Set	1		●					
48	198.564	CEI 198564		Spring Slide Set	1		●					
49	198.842	1295 298 933	CEI 198842	Spring Slide Set	1		●					
50	198.428	1295 298 960	CEI 198428	Oil Seal Ring Kit	1		●					
51	198.427	1295 298 915	CEI 198427	Gasket Kit	1		●					

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Notes

(3) To be coupled together with Fig. 4 - 0730 061 816
 (4) To be coupled together with Fig. 4 - 0730 062 579

Date

04 / 2012

Table

