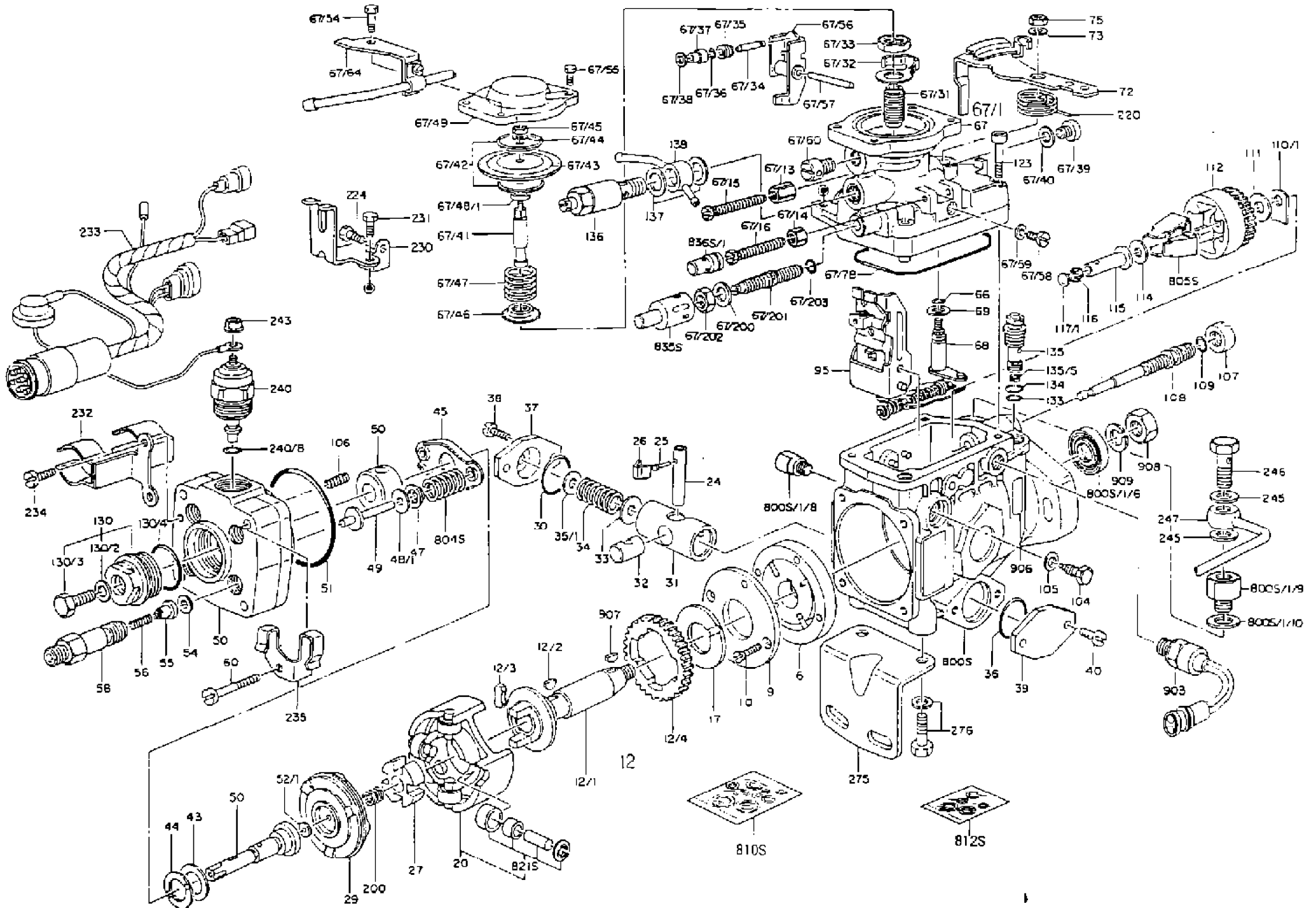


**ZEXEL
COMPONENTS**

Date: 10.07.12
Time: 19:17:27

+ INJECTION-PUMP ASSEMBLY	104740-3541	9 460 610 096	
Manufacturer No.:	MD077643		
- FUEL-INJECTION PUMP	104640-3271	9 461 610 638	NP-VE4/10F2100RNP258
- NAMEPLATE	146637-9000	9 461 611 084	
- PULSE GENERATOR	479771-0520	9 461 619 928	
-			
-			
- NOZZLE AND HOLDER ASSY.	105148-1012	9 430 610 399	0012
Nozzle and Holder:	MD074540		
Open Pre:MPa(Kgf/cm2):	11.8{120}		
- NOZZLE-HOLDER	105078-0012	9 430 615 121	
- NOZZLE	105007-1000	9 432 610 006	NP-DN15PDN100



Product: 104740-3541 9 460 610 096 MD077643 INJECTION-PUMP ASSEMBLY

Item	ZEXEL No.	BOSCH No.	Info	Piece	Designation
1/6	146601-0700	9 461 615 373		1	PACKING RING
1/8	146616-4700	9 461 610 486		1	ADAPTOR
1/9	146616-5600	9 461 610 898		1	ADAPTOR
1/10	139512-0500	9 411 611 625		1	GASKET
6	146100-0120	9 461 610 089		1	SUPPLY PUMP
9	146103-0000	9 461 610 090		1	COVER
10	139104-0000	9 411 610 049		2	FLAT-HEAD SCREW
12	146200-0320	9 461 610 105		1	# DRIVE SHAFT
12/1	146200-0300	9 461 610 104		1	DRIVE SHAFT
12/2	146201-0000	9 461 610 107		1	WOODRUFF KEY
12/3	146202-0100	9 461 610 109		2	DAMPER
12/4	146203-0000	9 461 610 110		1	TOOTHED GEAR
17	146204-0000	9 461 610 111		1	PLAIN WASHER
20	146210-0120	9 461 610 115		1	ROLLER SET
24	146303-0000	9 461 610 147		1	BEARING PIN
25	146304-0000	9 461 610 148		1	BEARING PIN
26	146305-0000	9 461 610 149		1	CLAMPING BAND
27	146205-0000	9 461 610 112		1	SLOTTED WASHER
29	146220-2120	9 461 614 976		1	CAM PLATE
30	146600-0800	9 461 610 421		1	O-RING
31	146300-2000	9 461 610 696		1	PUMP PLUNGER
32	146301-0000	9 461 610 138		1	SLIDING PIECE
33	146603-0700	9 461 610 447		1	SHIM:D17.5&7.5T0.60
34	146302-3500	9 461 611 739	A	1	COMPRESSION SPRING
34B	146302-0300	9 461 610 142	A	1	COMPRESSION SPRING:K=2.80KG/MM
35/1	146603-0700	9 461 610 447	B	0	SHIM:D17.5&7.5T0.60
35/1	146603-0800	9 461 610 448	B	0	SHIM:D17.5&7.5T0.70
35/1	146603-0900	9 461 610 449	B	0	SHIM:D17.5&7.5T0.90
35/1	146603-1000	9 461 610 450	B	0	SHIM:D17.5&7.5T1.00
35/1	146603-1100	9 461 610 451	B	0	SHIM:D17.5&7.5T1.20
35/1	146603-3600	9 461 610 452	B	0	SHIM:D17.5&7.5T2.40
36	146600-0800	9 461 610 421		1	O-RING
37	146310-0000	9 461 610 150		1	COVER
38	146620-5000	9 461 612 038		2	BLEEDER SCREW
39	146310-0100	9 461 610 151		1	COVER
40	146620-5000	9 461 612 038		2	BLEEDER SCREW
43	146230-0000	9 461 610 123		1	SHIM
44	146230-0100	9 461 610 124		1	PLAIN WASHER
45	146231-0001	9 461 614 270		1	SLOTTED WASHER
47	146233-0000	9 461 610 128		2	SLOTTED WASHER
48/1	146603-0000	9 461 610 440	A	1	SHIM:D17.0&5.2T0.50
48/1	146603-0100	9 461 610 441	A	1	SHIM:D17.0&5.2T0.80
48/1	146603-0200	9 461 610 442	A	1	SHIM:D17.0&5.2T1.00
48/1	146603-0300	9 461 610 443	A	1	SHIM:D17.0&5.2T1.20
48/1	146603-0400	9 461 610 444	A	1	SHIM:D17.0&5.2T1.50
48/1	146603-0500	9 461 610 445	A	1	SHIM:D17.0&5.2T1.80
48/1	146603-0600	9 461 610 446	A	1	SHIM:D17.0&5.2T2.00
48/1	146690-1400	9 461 611 329	A	1	SHIM:D17&5.2T0.9
48/1	146690-1500	9 461 611 330	A	1	SHIM:D17&5.2T1.1
48/1	146690-1600	9 461 611 331	A	1	SHIM:D17&5.2T1.3
48/1	146690-1700	9 461 611 332	A	1	SHIM:D17&5.2T1.4
48/1	146690-1800	9 461 611 333	A	1	SHIM:D17&5.2T1.6
48/1	146690-1900	9 461 611 334	A	1	SHIM:D17&5.2T1.7
48/1	146690-5800	9 461 619 110	A	1	SHIM
48/1	146690-5900	9 461 619 111	A	1	SHIM
48/1	146690-6000	9 461 619 112	A	1	SHIM
48/1	146690-6100	9 461 619 113	A	1	SHIM
48/1	146690-6200	9 461 619 114	A	1	SHIM
48/1	146690-6300	9 461 619 115	A	1	SHIM
48/1	146690-6400	9 461 619 116	A	1	SHIM
48/1	146690-6500	9 461 619 117	A	1	SHIM
48/1	146690-6600	9 461 619 118	A	1	SHIM
48/1	146690-6700	9 461 619 119	A	1	SHIM

48/1	146690-6800	9 461 619 120	A	1	SHIM
48/1	146690-6900	9 461 619 121	A	1	SHIM
48/1	146690-7000	9 461 619 122	A	1	SHIM
48/1	146690-7100	9 461 619 123	A	1	SHIM
48/1	146690-7200	9 461 615 908	A	1	SHIM
48/1	146690-7300	9 461 615 909	A	1	SHIM
48/1	146690-7400	9 461 615 910	A	1	SHIM
48/1	146690-7500	9 461 615 911	A	1	SHIM
48/1	146690-7800	9 461 619 124	A	1	SHIM
49	146234-0500	9 461 623 539		2	GUIDE PIN
50	146400-2220	9 461 610 167		1	HYDRAULIC HEAD
51	146600-0000	9 461 610 413		1	O-RING
52/1	146420-0000	9 461 610 177	A	1	SHIM:D9.5&3.0T1.90
52/1	146420-0100	9 461 610 178	A	1	SHIM:D9.5&3.0T1.92
52/1	146420-0200	9 461 610 179	A	1	SHIM:D9.5&3.0T1.94
52/1	146420-0300	9 461 610 180	A	1	SHIM:D9.5&3.0T1.96
52/1	146420-0400	9 461 610 181	A	1	SHIM:D9.5&3.0T1.98
52/1	146420-0500	9 461 610 182	A	1	SHIM:D9.5&3.0T2.00
52/1	146420-0600	9 461 610 183	A	1	SHIM:D9.5&3.0T2.02
52/1	146420-0700	9 461 610 184	A	1	SHIM:D9.5&3.0T2.04
52/1	146420-0800	9 461 610 185	A	1	SHIM:D9.5&3.0T2.06
52/1	146420-0900	9 461 610 186	A	1	SHIM:D9.5&3.0T2.08
52/1	146420-1000	9 461 610 187	A	1	SHIM:D9.5&3.0T2.10
52/1	146420-1100	9 461 610 188	A	1	SHIM:D9.5&3.0T2.12
52/1	146420-1200	9 461 610 189	A	1	SHIM:D9.5&3.0T2.14
52/1	146420-1300	9 461 610 190	A	1	SHIM:D9.5&3.0T2.16
52/1	146420-1400	9 461 610 191	A	1	SHIM:D9.5&3.0T2.18
52/1	146420-1500	9 461 610 192	A	1	SHIM:D9.5&3.0T2.20
52/1	146420-1600	9 461 610 193	A	1	SHIM:D9.5&3.0T2.22
52/1	146420-1700	9 461 610 194	A	1	SHIM:D9.5&3.0T2.24
52/1	146420-1800	9 461 610 195	A	1	SHIM:D9.5&3.0T2.26
52/1	146420-1900	9 461 610 196	A	1	SHIM:D9.5&3.0T2.28
52/1	146420-2000	9 461 610 197	A	1	SHIM:D9.5&3.0T2.30
52/1	146420-2100	9 461 610 198	A	1	SHIM:D9.5&3.0T2.32
52/1	146420-2200	9 461 610 199	A	1	SHIM:D9.5&3.0T2.34
52/1	146420-2300	9 461 610 200	A	1	SHIM:D9.5&3.0T2.36
52/1	146420-2400	9 461 610 201	A	1	SHIM:D9.5&3.0T2.38
52/1	146420-2500	9 461 610 202	A	1	SHIM:D9.5&3.0T2.40
52/1	146420-2600	9 461 610 203	A	1	SHIM:D9.5&3.0T2.42
52/1	146420-2700	9 461 610 204	A	1	SHIM:D9.5&3.0T2.44
52/1	146420-2800	9 461 610 205	A	1	SHIM:D9.5&3.0T2.46
52/1	146420-2900	9 461 610 206	A	1	SHIM:D9.5&3.0T2.48
52/1	146420-3000	9 461 610 207	A	1	SHIM:D9.5&3.0T2.50
52/1	146420-3100	9 461 610 208	A	1	SHIM:D9.5&3.0T2.52
52/1	146420-3200	9 461 610 209	A	1	SHIM:D9.5&3.0T2.54
52/1	146420-3300	9 461 610 210	A	1	SHIM:D9.5&3.0T2.56
52/1	146420-3400	9 461 610 211	A	1	SHIM:D9.5&3.0T2.58
52/1	146420-3500	9 461 610 212	A	1	SHIM:D9.5&3.0T2.60
52/1	146420-3600	9 461 610 213	A	1	SHIM:D9.5&3.0T2.62
52/1	146420-3700	9 461 610 214	A	1	SHIM:D9.5&3.0T2.64
52/1	146420-3800	9 461 610 215	A	1	SHIM:D9.5&3.0T2.66
52/1	146420-3900	9 461 610 216	A	1	SHIM:D9.5&3.0T2.68
52/1	146420-4000	9 461 610 217	A	1	SHIM:D9.5&3.0T2.70
52/1	146420-4100	9 461 610 218	A	1	SHIM:D9.5&3.0T2.72
52/1	146420-4200	9 461 610 219	A	1	SHIM:D9.5&3.0T2.74
52/1	146420-4300	9 461 610 220	A	1	SHIM:D9.5&3.0T2.76
52/1	146420-4400	9 461 610 221	A	1	SHIM:D9.5&3.0T2.78
52/1	146420-4500	9 461 610 222	A	1	SHIM:D9.5&3.0T2.80
52/1	146420-4600	9 461 610 223	A	1	SHIM:D9.5&3.0T2.82
52/1	146420-4700	9 461 610 224	A	1	SHIM:D9.5&3.0T2.84
52/1	146420-4800	9 461 610 225	A	1	SHIM:D9.5&3.0T2.86
52/1	146420-4900	9 461 610 226	A	1	SHIM:D9.5&3.0T2.88
52/1	146420-5000	9 461 610 227	A	1	SHIM:D9.5&3.0T2.90
52/1	146420-5100	9 461 610 228	A	1	SHIM:D9.5&3.0T1.74
52/1	146420-5200	9 461 610 229	A	1	SHIM:D9.5&3.0T1.76
52/1	146420-5300	9 461 610 230	A	1	SHIM:D9.5&3.0T1.78
52/1	146420-5400	9 461 610 231	A	1	SHIM:D9.5&3.0T1.80
52/1	146420-5500	9 461 610 232	A	1	SHIM:D9.5&3.0T1.82
52/1	146420-5600	9 461 610 233	A	1	SHIM:D9.5&3.0T1.84

52/1	146420-5700	9 461 610 234	A	1	SHIM:D9.5&3.0T1.86
52/1	146420-5800	9 461 610 235	A	1	SHIM:D9.5&3.0T1.88
54	146433-0100	9 461 610 239		4	GASKET:D12&6.4T1.00
55	146430-0320	9 413 610 009		4	DELIVERY-VALVE ASSEMBLY
56	146432-0000	9 461 610 238		4	COMPRESSION SPRING
58	146440-0320	9 461 610 242		4	FITTING
60	139106-0100	9 411 610 051		4	FLAT-HEAD SCREW
66	146600-0100	9 461 610 414		1	O-RING
67	146700-2421	9 461 614 236		1	# MANIFOLD-PRESSURE COMP.
67/1	146508-0021	9 461 612 380		1	GOVERNOR COVER
67/13	146621-1700	9 461 610 503		1	UNION NUT
67/14	146621-1800	9 461 610 504		1	UNION NUT
67/15	146526-3000	9 461 611 439		1	BLEEDER SCREW
67/16	146526-3500	9 461 611 278		1	BLEEDER SCREW
67/31	146710-0800	9 461 611 236		1	BUSHING
67/32	146711-0000	9 461 610 554		1	PLATE
67/33	139218-0400	9 411 610 060		1	UNION NUT
67/34	146712-0700	9 461 611 031		1	BEARING PIN
67/35	146621-0300	9 461 610 502		1	UNION NUT
67/36	146600-1400	9 461 610 426		1	O-RING
67/37	146710-0100	9 461 610 553		1	BUSHING
67/38	139506-0200	9 411 610 073		1	GASKET:D8.9&6.8T1.00
67/39	146620-0300	9 461 610 498		1	CAPSULE
67/40	026512-1540	9 442 610 044		1	GASKET:D15.4&12.2T1.50
67/41	146713-4100	9 461 615 286		1	ADJUSTING PIN
67/42	146714-0000	9 461 610 558		2	PLATE
67/43	146715-0000	9 461 610 559		1	DIAPHRAGM
67/44	139306-0100	9 411 610 061		1	LOCKING WASHER
67/45	013030-6040	9 442 610 012		1	UNION NUT:M6P1H3.6
67/46	146716-0000	9 461 610 560		1	UNION NUT
67/47	146717-0400	9 461 610 562		1	COILED SPRING
67/48/1	146720-0000	9 461 610 563	A	1	SPACER BUSHING:L3.7
67/48/1	146720-0100	9 461 610 564	A	1	SPACER BUSHING:L3.9
67/48/1	146720-0200	9 461 610 565	A	1	SPACER BUSHING:L4.1
67/48/1	146720-0300	9 461 610 566	A	1	SPACER BUSHING:L4.3
67/48/1	146720-0400	9 461 610 567	A	1	SPACER BUSHING:L4.5
67/48/1	146720-0500	9 461 610 568	A	1	SPACER BUSHING:L4.7
67/48/1	146720-0600	9 461 610 569	A	1	SPACER BUSHING:L4.9
67/48/1	146720-0700	9 461 610 570	A	1	SPACER BUSHING:L5.1
67/48/1	146720-0800	9 461 610 571	A	1	SPACER BUSHING:L5.3
67/48/1	146720-0900	9 461 610 572	A	1	SPACER BUSHING:L2.7
67/48/1	146720-1000	9 461 610 573	A	1	SPACER BUSHING:L2.9
67/48/1	146720-1100	9 461 610 574	A	1	SPACER BUSHING:L3.1
67/48/1	146720-1200	9 461 610 575	A	1	SPACER BUSHING:L3.3
67/48/1	146720-1300	9 461 610 576	A	1	SPACER BUSHING:L3.5
67/48/1	146720-1400	9 461 610 577	A	1	SPACER BUSHING:L2.8
67/48/1	146720-1500	9 461 610 578	A	1	SPACER BUSHING:L3.0
67/48/1	146720-1600	9 461 610 579	A	1	SPACER BUSHING:L3.2
67/48/1	146720-1700	9 461 610 580	A	1	SPACER BUSHING:L3.4
67/48/1	146720-1800	9 461 610 581	A	1	SPACER BUSHING:L3.6
67/48/1	146720-1900	9 461 610 582	A	1	SPACER BUSHING:L3.8
67/48/1	146720-2000	9 461 610 583	A	1	SPACER BUSHING:L4.0
67/48/1	146720-2100	9 461 610 584	A	1	SPACER BUSHING:L4.2
67/48/1	146720-2200	9 461 610 585	A	1	SPACER BUSHING:L4.4
67/48/1	146720-2300	9 461 610 586	A	1	SPACER BUSHING:L4.6
67/48/1	146720-2400	9 461 610 587	A	1	SPACER BUSHING:L4.8
67/48/1	146720-2500	9 461 610 588	A	1	SPACER BUSHING:L5.0
67/48/1	146720-2600	9 461 610 589	A	1	SPACER BUSHING:L5.2
67/48/1	146720-2700	9 461 610 590	A	1	SPACER BUSHING:L5.4
67/48/1	146720-2800	9 461 610 591	A	1	SPACER BUSHING:L5.5
67/48/1	146720-2900	9 461 610 592	A	1	SPACER BUSHING:L5.6
67/48/1	146720-4500	9 461 611 033	A	1	SPACER BUSHING:L1.8
67/48/1	146720-4600	9 461 611 034	A	1	SPACER BUSHING:L1.9
67/48/1	146720-4700	9 461 611 035	A	1	SPACER BUSHING:L2.0
67/48/1	146720-4800	9 461 611 036	A	1	SPACER BUSHING:L2.1
67/48/1	146720-4900	9 461 611 037	A	1	SPACER BUSHING:L2.2
67/48/1	146720-5000	9 461 611 038	A	1	SPACER BUSHING:L2.3
67/48/1	146720-5100	9 461 611 039	A	1	SPACER BUSHING:L2.4
67/48/1	146720-5200	9 461 611 040	A	1	SPACER BUSHING:L2.5

67/48/1	146720-5300	9 461 611 041	A	1	SPACER BUSHING:L2.6
67/48/1	146725-2500	9 461 614 256	A	1	SPACER BUSHING:L5.7
67/48/1	146725-2600	9 461 614 257	A	1	SPACER BUSHING:L5.8
67/48/1	146725-2700	9 461 614 258	A	1	SPACER BUSHING:L5.9
67/48/1	146725-2800	9 461 614 259	A	1	SPACER BUSHING:L6.0
67/48/1	146725-2900	9 461 614 260	A	1	SPACER BUSHING:L6.1
67/48/1	146725-3000	9 461 614 261	A	1	SPACER BUSHING:L6.2
67/48/1	146725-3100	9 461 614 262	A	1	SPACER BUSHING:L6.3
67/48/1	146725-3200	9 461 614 263	A	1	SPACER BUSHING:L6.4
67/48/1	146725-3300	9 461 614 264	A	1	SPACER BUSHING:L6.5
67/48/1	146725-3400	9 461 614 265	A	1	SPACER BUSHING:L6.6
67/48/1	146725-3500	9 461 614 266	A	1	SPACER BUSHING:L6.7
67/48/1	146725-3600	9 461 614 267	A	1	SPACER BUSHING:L6.8
67/48/1	146725-3700	9 461 614 268	A	1	SPACER BUSHING:L6.9
67/48/1	146725-3800	9 461 614 269	A	1	SPACER BUSHING:L7.0
67/48/1	146725-3900	9 461 617 846	A	1	SPACER BUSHING:L7.1
67/48/1	146725-4000	9 461 617 847	A	1	SPACER BUSHING:L7.2
67/48/1	146725-4100	9 461 617 848	A	1	SPACER BUSHING:L7.3
67/48/1	146725-4200	9 461 617 849	A	1	SPACER BUSHING:L7.4
67/48/1	146725-4300	9 461 617 850	A	1	SPACER BUSHING:L7.5
67/49	146721-0820	9 461 611 043		1	COVER
67/54	020006-1440	9 411 617 055		3	BLEEDER SCREW:M6P1L14
67/55	020006-1440	9 411 617 055		1	BLEEDER SCREW:M6P1L14
67/56	146723-0020	9 461 610 595		1	CONTROL LEVER
67/57	146712-0100	9 461 610 556		1	BEARING PIN
67/58	146620-0600	9 461 610 500		2	CAPSULE
67/59	026506-1040	9 421 617 011		2	GASKET:D9.9&6.2T1
67/60	146724-0020	9 461 610 596		1	AIR FILTER
67/64	146926-5520	9 461 613 565		1	BRACKET
67/78	146600-4400	9 461 615 663		1	SEAL RING
67/200	139308-0300	9 411 610 063		1	PLAIN WASHER
67/201	146545-0300	9 461 610 321	A	1	THREADED PIN:L53.00
67/201B	146545-0400	9 461 610 322	A	1	THREADED PIN:L55.00
67/201C	146545-0500	9 461 610 323	A	1	THREADED PIN:L57.00
67/202	139208-0100	9 411 610 058		1	UNION NUT
67/203	146600-1200	9 461 610 424		1	O-RING
68	146510-5520	9 461 610 788		1	CONTROL SHAFT
69	139310-0200	9 411 610 065		1	PLAIN WASHER
72	146531-6720	9 461 610 294	A	1	CONTROL LEVER
72B	146531-6820	9 461 610 295	A	1	CONTROL LEVER
73	014110-6440	9 442 610 020		1	LOCKING WASHER
75	013020-6040	9 442 610 010		1	UNION NUT:M6P1H5
95	146551-0720	9 461 610 336		1	FULCRUM LEVER
104	146568-0000	9 461 610 342		2	SLOTTED SPRING PIN
105	026508-1140	0 986 613 069		2	GASKET:D11.4&8.2T1
106	146588-0500	9 461 611 663		2	COILED SPRING
107	146569-0300	9 461 612 031		1	UNION NUT
108	146570-0100	9 461 610 346		1	GOVERNOR SHAFT
109	146600-0400	9 461 610 417		1	O-RING
110/1	146571-0000	9 461 610 348	A	1	SHIM:D20.2&8.3T1.05
110/1	146571-0100	9 461 610 349	A	1	SHIM:D20.2&8.3T1.25
110/1	146571-0200	9 461 610 350	A	1	SHIM:D20.2&8.3T1.45
110/1	146571-0300	9 461 610 351	A	1	SHIM:D20.2&8.3T1.65
110/1	146571-0400	9 461 610 352	A	1	SHIM:D20.2&8.3T1.85
110/1	146571-0500	9 461 610 353	A	1	SHIM:D20.2&8.3T1.15
110/1	146571-0600	9 461 610 354	A	1	SHIM:D20.2&8.3T1.35
110/1	146571-0700	9 461 610 355	A	1	SHIM:D20.2&8.3T1.55
110/1	146571-0800	9 461 610 356	A	1	SHIM:D20.2&8.3T1.75
111	146602-0600	9 461 610 437		1	PLAIN WASHER:D20&8.4T1.40
112	146572-0020	9 461 610 357		1	FLYWEIGHT ASSEMBLY
114	146602-0500	9 461 610 436		1	PLAIN WASHER:D17&6.4T1.60
115	146975-2700	9 461 616 025		1	SLIDING SLEEVE
116	146576-0000	9 461 610 364		1	SEALING CAP
117/1	146577-0000	9 461 610 365	A	1	PLUG:L1.70
117/1	146577-0100	9 461 610 366	A	1	PLUG:L1.90
117/1	146577-0200	9 461 610 367	A	1	PLUG:L2.10
117/1	146577-0300	9 461 610 368	A	1	PLUG:L2.30
117/1	146577-0400	9 461 610 369	A	1	PLUG:L2.50
117/1	146577-0500	9 461 610 370	A	1	PLUG:L2.70

117/1	146577-0600	9 461 610 371	A	1	PLUG:L2.90
117/1	146577-0700	9 461 610 372	A	1	PLUG:L3.10
117/1	146577-0800	9 461 610 373	A	1	PLUG:L3.30
117/1	146577-0900	9 461 610 374	A	1	PLUG:L3.50
117/1	146577-1000	9 461 610 375	A	1	PLUG:L3.70
117/1	146577-1100	9 461 610 376	A	1	PLUG:L3.90
117/1	146577-1200	9 461 610 377	A	1	PLUG:L4.10
117/1	146577-1300	9 461 610 378	A	1	PLUG:L4.30
117/1	146577-1400	9 461 610 379	A	1	PLUG:L4.50
117/1	146577-1500	9 461 610 380	A	1	PLUG:L4.70
117/1	146577-1600	9 461 610 381	A	1	PLUG:L4.90
117/1	146577-1700	9 461 610 382	A	1	PLUG:L5.10
117/1	146577-5000	9 461 611 384	A	1	PLUG:L1.8
117/1	146577-5100	9 461 611 385	A	1	PLUG:L2.0
117/1	146577-5200	9 461 611 386	A	1	PLUG:L2.2
117/1	146577-5300	9 461 611 387	A	1	PLUG:L2.4
117/1	146577-5400	9 461 611 388	A	1	PLUG:L2.6
117/1	146577-5500	9 461 611 389	A	1	PLUG:L2.8
117/1	146577-5600	9 461 611 390	A	1	PLUG:L3.0
117/1	146577-5700	9 461 611 391	A	1	PLUG:L3.2
117/1	146577-5800	9 461 611 392	A	1	PLUG:L3.4
117/1	146577-5900	9 461 611 393	A	1	PLUG:L3.6
117/1	146577-6000	9 461 611 394	A	1	PLUG:L3.8
117/1	146577-6100	9 461 611 395	A	1	PLUG:L4.0
117/1	146577-6200	9 461 611 396	A	1	PLUG:L4.2
117/1	146577-6300	9 461 611 397	A	1	PLUG:L4.4
117/1	146577-6400	9 461 611 398	A	1	PLUG:L4.6
117/1	146577-6500	9 461 611 399	A	1	PLUG:L4.8
117/1	146577-6600	9 461 611 400	A	1	PLUG:L5.0
117/1	146877-0400	9 461 615 002	A	1	PLUG
117/1	146877-0500	9 461 615 003	A	1	PLUG
117/1	146877-0600	9 461 615 004	A	1	PLUG
117/1	146877-0700	9 461 615 005	A	1	PLUG
117/1	146877-4300	9 461 616 280	A	1	PLUG
117/1	146877-4400	9 461 616 281	A	1	PLUG
117/1	146877-4500	9 461 616 282	A	1	PLUG
117/1	146877-4600	9 461 616 283	A	1	PLUG
123	146620-0500	9 461 610 499		4	HEX-SOCKET-HEAD CAP SCREW
130	146421-0020	9 461 610 236		1	# CAPSULE
130/2	026508-1140	0 986 613 069		1	GASKET:D11.4&8.2T1
130/3	146422-0000	9 461 610 237		1	BLEEDER SCREW
130/4	146600-0500	9 461 610 418		1	O-RING
133	146600-0600	9 461 610 419		1	O-RING
134	146600-0700	9 461 610 420		1	O-RING
135	146110-0220	9 461 610 091		1	# CONTROL VALVE
135/5	146114-0000	9 461 610 094		1	SPRING WASHER
136	146120-0020	9 461 610 095		1	OVER FLOW VALVE
137	139512-0500	9 411 611 625		2	GASKET
138	146609-3221	9 461 614 787		1	INLET UNION
200	146206-0100	9 461 610 113		1	COILED SPRING
220	146587-1500	9 461 610 407		1	COILED SPRING
224	139106-0400	9 411 610 054		1	FLAT-HEAD SCREW:M6P1.0H12
230	146613-2500	9 461 610 474		1	BRACKET
231	139106-0400	9 411 610 054		1	FLAT-HEAD SCREW:M6P1.0H12
232	146659-0020	9 461 610 540		1	CLAMPING BAND
233	146658-9020	9 461 613 517		1	WIRE
234	139106-0500	9 411 610 055		1	FLAT-HEAD SCREW:M6P1.0H25
235	146659-0600	9 461 610 541		1	CLAMPING BAND
240	146650-1220	9 461 610 533		1	# PULLING ELECTROMAGNET
240/8	146600-1700	9 461 610 427		1	O-RING
243	146621-1000	9 461 611 665		1	UNION NUT
245	139512-0500	9 411 611 625		2	GASKET
246	027412-2440	9 442 610 048		1	EYE BOLT
247	146609-7320	9 461 610 460		1	INLET UNION
275	146612-0900	9 461 610 469		1	BRACKET
276	010010-1640	9 442 610 001		2	BLEEDER SCREW:M10P1.5L16 4T
800S	146009-4920	9 461 610 087		1	# PUMP HOUSING
800S/1/6	146601-0700	9 461 615 373		1	PACKING RING
800S/1/8	146616-4700	9 461 610 486		1	ADAPTOR

800S/1/9	146616-5600	9 461 610 898		1	ADAPTOR
800S/1/10	139512-0500	9 411 611 625		1	GASKET
804S	146232-0320	9 461 610 127		1	COMPRESSION SPRING
805S	146574-0120	9 461 610 358		1	PARTS SET
810S	146600-1120	9 461 610 423		1	REPAIR SET
812S	146600-1920	9 461 610 429		1	PARTS SET
821S	146210-5720	9 461 616 128		1	ROLLER SET
835S	146598-1000	9 461 612 195		1	CAP
836S/1	146598-0600	9 461 612 191	A	1	CAP:L18
836S/1	146598-0700	9 461 612 192	A	1	CAP:L21
836S/1	146598-0800	9 461 612 193	A	1	CAP:L24
836S/1	146598-0900	9 461 612 194	A	1	CAP:L27
903	479771-0520	9 461 619 928		1	PULSE GENERATOR
906	146637-9000	9 461 611 084		1	NAMEPLATE
907	025804-1610	9 442 610 040	C	1	WOODRUFF KEY
908	013121-4140	9 411 617 077	C	1	UNION NUT:M14P1.5H11
909	029321-4050	9 442 610 119	C	1	LOCKING WASHER

ZEXEL Ass'y No.	104740-3541
Bosch Ass'y No.	9 460 610 096
Bosch Typecode	
Engine Type	4D55
Manufacturer	MITSUBISHI
Edition date	08.10.04

1 Adjustment conditions

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
	(Note)		1988/11/01 (1)				
		For Japan: year/month/day (change sequence)					
	Test oil		ISO4113orSAEJ967 d				
		1404 Test oil					
P	Test oil temperature	degC	45	45	50		
	Nozzle		105000-2010				
	Bosch type code		NP-DN12SD12TT				
	Nozzle holder		105780-2080				
P	Opening pressure	MPa	14.7	14.7	15.19		
P	Opening pressure	kgf/cm2	150	150	155		
P	Injection pipe	mm	2-6-840				
		Inside diameter - outside diameter - length (mm)					
P	Transfer pump pressure	kPa	20	20	20		
P	Transfer pump pressure	kgf/cm2	0.2	0.2	0.2		
	Direction of rotation (viewed from drive side)		R				
		Right					

2 Adjustment specification**2.1 Full load delivery**

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	600	600	600		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
S	Average injection quantity	mm3/st.	36.2	35.7	36.7		
S	Difference in delivery	mm3/st.	3		3		
P	Basic		*				
	Remarks						
		For Japan: Full					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	750	750	750		
P	Boost pressure	kPa	24	22.7	25.3		
P	Boost pressure	mmHg	180	170	190		
S	Average injection quantity	mm3/st.	43.3	42.8	43.8		
P	Basic		*				
	Remarks						
		For Japan: BCS					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2650	2650	2650		
P	Boost pressure	kPa	69.3	68	70.6		
P	Boost pressure	mmHg	520	510	530		
C	Average injection quantity	mm3/st.	19.6	14.6	24.6		
	Remarks						
		For Japan					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2100	2100	2100		
P	Boost pressure	kPa	69.3	68	70.6		
P	Boost pressure	mmHg	520	510	530		
C	Average injection quantity	mm3/st.	50.8	48.3	53.3		
	Remarks						
		For Japan					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1250	1250	1250		
P	Boost pressure	kPa	69.3	68	70.6		
P	Boost pressure	mmHg	520	510	530		
C	Average injection quantity	mm3/st.	56.3	53.8	58.8		
	Remarks						
		For Japan					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	750	750	750		
P	Boost pressure	kPa	24	22.7	25.3		

C = Check value)

OT = Outside Tolerance (X is set)

P	Boost pressure	mmHg	180	170	190		
C	Average injection quantity	mm ³ /st.	43.3	42.3	44.3		
	Remarks						
For Japan							
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	600	600	600		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Average injection quantity	mm ³ /st.	36.2	35.2	37.2		
	Remarks						
For Japan							

2.2 Governing

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2650	2650	2650		
P	Boost pressure	kPa	69.3	68	70.6		
P	Boost pressure	mmHg	520	510	530		
S	Average injection quantity	mm ³ /st.	19.6	16.6	22.6		
S	Difference in delivery	mm ³ /st.	5.5		5.5		
P	Basic		*				
	Remarks						
For Japan							

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	3050	3050	3050		
P	Boost pressure	kPa	69.3	68	70.6		
P	Boost pressure	mmHg	520	510	530		
C	Average injection quantity	mm ³ /st.	5		5		
	Remarks						
For Japan							

2.3 Idle

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	375	375	375		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
S	Average injection quantity	mm ³ /st.	8	6.5	9.5		
S	Difference in delivery	mm ³ /st.	2		2		
P	Basic		*				
	Remarks						
For Japan							

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	600	600	600		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Average injection quantity	mm ³ /st.	3		3		
	Remarks						
For Japan							

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	375	375	375		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Average injection quantity	mm ³ /st.	8	6	10		
	Remarks						
For Japan							

2.4 Start

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	100	100	100		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
S	Average injection quantity	mm ³ /st.	73	63	83		
P	Basic		*				
	Remarks						
For Japan							

2.5 Stop

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	375	375	375		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Average injection quantity	mm ³ /st.	0	0	0		
	Remarks						
For Japan: Magnet OFF							

2.6 Overflow

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1250	1250	1250		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Overflow quantity	cm ³ /min	420	288	552		
	Remarks						
		For Japan					

2.7 Pump chamber pressure

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1250	1250	1250		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
S	Pressure	kPa	470.5	441	500		
S	Pressure	kgf/cm ²	4.8	4.5	5.1		
P	Basic		*				
	Remarks						
		For Japan					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	600	600	600		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Pressure	kPa	313.5	284	343		
C	Pressure	kgf/cm ²	3.2	2.9	3.5		
	Remarks						
		For Japan					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1250	1250	1250		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Pressure	kPa	470.5	441	500		
C	Pressure	kgf/cm ²	4.8	4.5	5.1		
	Remarks						
		For Japan					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2100	2100	2100		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Pressure	kPa	666.5	637	696		
C	Pressure	kgf/cm ²	6.8	6.5	7.1		
	Remarks						
		For Japan					

2.8 Timer

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1250	1250	1250		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
S	Timer stroke	mm	3.3	3.1	3.5		
P	Basic		*				
	Remarks						
		For Japan					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	750	750	750		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Timer stroke	mm	1.1	0.5	1.7		
	Remarks						
		For Japan					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1250	1250	1250		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Timer stroke	mm	3.3	2.9	3.7		
	Remarks						
		For Japan					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1750	1750	1750		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Timer stroke	mm	5.5	4.9	6.1		

C = Check value)

OT = Outside Tolerance (X is set)

Remarks							
		For Japan					
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2100	2100	2100		
P	Boost pressure	kPa	0	0	0		
P	Boost pressure	mmHg	0	0	0		
C	Timer stroke	mm	7	6.6	7.4		
Remarks		For Japan					

2.9 Magnet

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
C	Max. applied voltage	V	8	8	8		
P	Test voltage	V	13	12	14		

2.10 Additional device adjustment**2.10.1 Additional device 1**

Name	ADJUSTMENT PRECAUTIONS
N1=600r/min N2=750r/min P1=24.0kPa P2=180mmHg P3=93.3kPa P4=700mmHg	Adjustment precautions 1. After adjusting at full injection quantity and speed N1, at speed N2 set the boost pressure to P1 (P2) and adjust the injection quantity using the BCS spring setscrew. 2. At boost pressure of at least P3 (P4), confirm that the injection quantity is as specified.

3 Assembly dimension

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
S	K dimension	mm	3.3	3.2	3.4		
S	KF dimension	mm	5.8	5.7	5.9		
S	MS dimension	mm	1.4	1.3	1.5		
S	BCS stroke	mm	4.4	4.3	4.5		
S	Control lever angle alpha	deg.	59	55	63		
S	Control lever angle beta	deg.	41	36	46		