

**ZEXEL
COMPONENTS**

Date:07.08.09
Time:03:32:56

+ INJECTION-PUMP ASSEMBLY	104760-4300	9 460 611 259
Manufacturer No.:	1670050N00	
- FUEL-INJECTION PUMP	104660-4300	9 461 618 104
- NAMEPLATE	146952-8300	9 461 618 207
-		
-		
- NOZZLE AND HOLDER ASSY.	105148-1121	9 430 613 538 0050 B
Nozzle and Holder:	16600-43G03	
Open Pre:MPa(Kgf/cm2):	9.8{100}	
- NOZZLE-HOLDER	105078-0050	9 430 615 042
- NOZZLE	105007-1130	9 432 610 077 NP-DN0PDN113

ZEXEL
PRODUCT INFORMATION

Date: 07.08.09
Time: 03:33:46

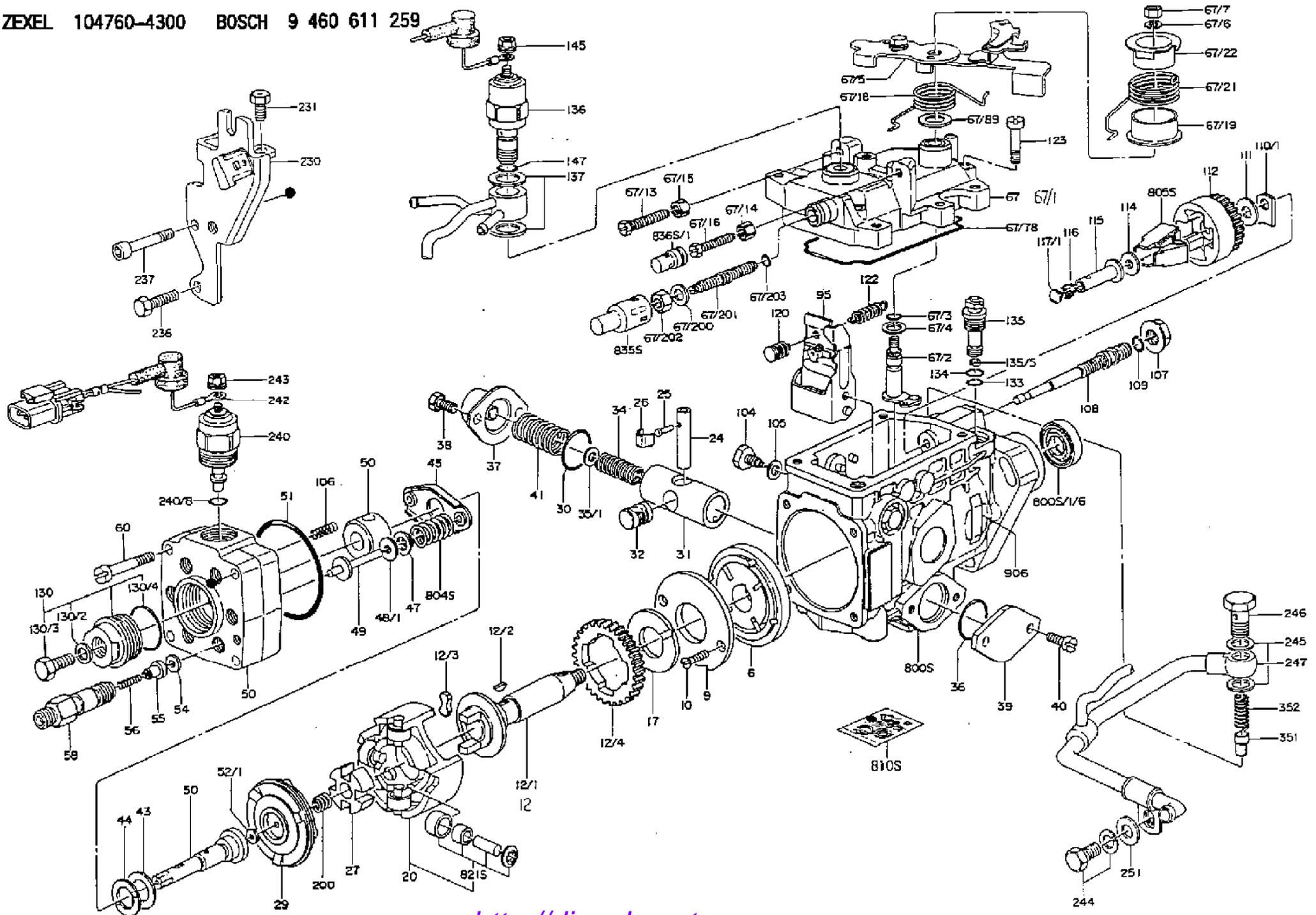
INJECTION-PUMP ASSEMBLY

1670050N00

ZEXEL No.	104760-4300
BOSCH No.	9 460 611 259

Microfiche Position:	PDC-083 G-1 ... G-4
Engine type:	TD42
Manufacturers:	NISSAN-D

ZEXEL 104760-4300 BOSCH 9 460 611 259



<http://dieselmater.ucoz.ru>

104760-4300 9 460 611 259 1670050N00 INJECTION-PUMP ASSEMBLY

Product: 104760-4300 9 460 611 259 1670050N00 INJECTION-PUMP ASSEMBLY

Item	ZEXEL No.	BOSCH No.	Info	Piece	Designation
1/6	146601-0900	9 461 614 046		1	PACKING RING
6	146100-0420	9 461 612 063		1	SUPPLY PUMP
9	146103-0100	9 461 611 411		1	COVER
10	139104-0000	9 411 610 049		2	FLAT-HEAD SCREW
12	146200-0020	9 461 610 101		1	# DRIVE SHAFT
12/1	146200-0000	9 461 610 100		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	146210-2720	9 461 614 372		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	146221-0920	9 461 614 163		1	CAM PLATE
30	146600-0800	9 461 610 421		1	O-RING
31	146311-6220	9 461 613 468		1	PUMP PLUNGER
32	146301-0000	9 461 610 138		1	SLIDING PIECE
34	146312-3200	9 461 615 351	A	1	COMPRESSION SPRING
34B	146312-1800	9 461 612 066	A	1	COMPRESSION SPRING
34C	146312-2900	9 461 613 671	A	1	COMPRESSION SPRING
35/1	146690-3200	9 461 612 011	A	1	SHIM:D11.5&9.4T0.1
35/1	146690-3300	9 461 612 012	A	1	SHIM:D11.5&9.4T0.2
35/1	146690-3400	9 461 612 013	A	1	SHIM:D11.5&9.4T0.25
35/1	146690-3500	9 461 612 014	A	1	SHIM:D11.5&9.4T1.0
35/1	146690-4100	9 461 612 015	A	1	SHIM:D11.5&9.4T2
35/1	146690-4200	9 461 612 278	A	1	SHIM:D11.5&9.4T0.5
35/1	146690-4300	9 461 612 279	A	1	SHIM:D11.5&9.4T0.75
36	146600-0800	9 461 610 421		1	O-RING
37	146310-4020	9 461 616 691		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
41	146312-1900	9 461 612 005		1	COMPRESSION SPRING
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	146234-0020	9 461 610 129		2	GUIDE PIN
50	146405-1920	9 461 614 375		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		6	GASKET:D12&6.4T1.00
55	146430-0320	9 413 610 009		6	DELIVERY-VALVE ASSEMBLY
56	146432-0000	9 461 610 238		6	COMPRESSION SPRING
58	146440-0220	9 461 610 241		6	FITTING
60	139106-0100	9 411 610 051		3	FLAT-HEAD SCREW
67	146501-8420	9 461 618 121		1	# GOVERNOR COVER
67/1	146508-7721	9 461 613 258		1	GOVERNOR COVER
67/2	146515-3620	9 461 614 377		1	CONTROL SHAFT
67/3	146600-0100	9 461 610 414		1	O-RING
67/4	139310-0200	9 411 610 065		1	PLAIN WASHER
67/5	146537-6120	9 461 613 267		1	CONTROL LEVER
67/6	014110-6440	9 442 610 020		1	LOCKING WASHER
67/7	013020-6040	9 442 610 010		1	UNION NUT:M6P1H5
67/13	146621-1700	9 461 610 503		1	UNION NUT
67/14	146621-1700	9 461 610 503		1	UNION NUT
67/15	146526-3400	9 461 611 163		1	BLEEDER SCREW
67/16	146526-3400	9 461 611 163		1	BLEEDER SCREW
67/18	146587-8000	9 461 611 476		1	COILED SPRING
67/19	146541-3000	9 461 610 319		1	BUSHING
67/21	146587-9900	9 461 612 101		1	COILED SPRING
67/22	146541-3100	9 461 610 320		1	SLOTTED WASHER
67/78	146600-4400	9 461 615 663		1	SEAL RING
67/89	146541-4900	9 461 610 829		1	PLAIN WASHER:D20&10T0.5
67/200	139308-0300	9 411 610 063		1	PLAIN WASHER
67/201	146545-3400	9 461 612 181	A	1	THREADED PIN:L53.00
67/201B	146545-3500	9 461 612 182	A	1	THREADED PIN:L55.00
67/201C	146545-3600	9 461 612 183	A	1	THREADED PIN:L57.00
67/202	139208-0900	9 411 610 627		1	UNION NUT
67/203	146600-1200	9 461 610 424		1	O-RING
95	146551-9820	9 461 613 677		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	146570-0420	9 461 610 347		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	146575-6600	9 461 617 817		1	SLIDING SLEEVE
116	146576-0200	9 461 610 851		1	CAP
117/1	146577-1800	9 461 610 383	A	1	PLUG:L2.10
117/1	146577-1900	9 461 610 384	A	1	PLUG:L2.30
117/1	146577-2000	9 461 610 385	A	1	PLUG:L2.50
117/1	146577-2100	9 461 610 386	A	1	PLUG:L2.70
117/1	146577-2200	9 461 610 387	A	1	PLUG:L2.90
117/1	146577-2300	9 461 610 388	A	1	PLUG:L3.10
117/1	146577-2400	9 461 610 389	A	1	PLUG:L3.30
117/1	146577-2500	9 461 610 390	A	1	PLUG:L3.50
117/1	146577-2600	9 461 610 391	A	1	PLUG:L3.70
117/1	146577-2700	9 461 610 392	A	1	PLUG:L3.90
117/1	146577-2800	9 461 610 393	A	1	PLUG:L4.10
117/1	146577-2900	9 461 610 394	A	1	PLUG:L4.30
117/1	146577-3000	9 461 610 395	A	1	PLUG:L4.50
117/1	146577-3100	9 461 610 396	A	1	PLUG:L4.70
117/1	146577-3200	9 461 610 397	A	1	PLUG:L4.90
117/1	146577-3300	9 461 610 398	A	1	PLUG:L5.10
117/1	146577-6700	9 461 611 309	A	1	PLUG:L2.2
117/1	146577-6800	9 461 611 310	A	1	PLUG:L2.4
117/1	146577-6900	9 461 611 311	A	1	PLUG:L2.6
117/1	146577-7000	9 461 611 312	A	1	PLUG:L2.8
117/1	146577-7100	9 461 611 313	A	1	PLUG:L3.0
117/1	146577-7200	9 461 611 314	A	1	PLUG:L3.2
117/1	146577-7300	9 461 611 315	A	1	PLUG:L3.4
117/1	146577-7400	9 461 611 316	A	1	PLUG:L3.6
117/1	146577-7500	9 461 611 317	A	1	PLUG:L3.8
117/1	146577-7600	9 461 611 318	A	1	PLUG:L4.0
117/1	146577-7700	9 461 611 319	A	1	PLUG:L4.2
117/1	146577-7800	9 461 611 320	A	1	PLUG:L4.4
117/1	146577-7900	9 461 611 321	A	1	PLUG:L4.6
117/1	146577-8000	9 461 611 322	A	1	PLUG:L4.8
117/1	146577-8100	9 461 611 323	A	1	PLUG:L5.0
117/1	146877-0000	9 461 613 553	A	1	PLUG:L5.2
117/1	146877-0100	9 461 613 554	A	1	PLUG:L5.3
117/1	146877-0200	9 461 613 555	A	1	PLUG:L5.4
117/1	146877-0300	9 461 613 556	A	1	PLUG:L5.5
117/1	146877-4700	9 461 616 284	A	1	PLUG

117/1	146877-4800	9 461 616 285	A	1	PLUG
117/1	146877-4900	9 461 616 286	A	1	PLUG
117/1	146877-5000	9 461 616 287	A	1	PLUG
120	146579-6520	9 461 614 384		1	RETAINING PIN
122	146580-1000	9 461 613 456		1	GOVERNOR SPRING
123	139106-0200	9 411 610 052		4	FLAT-HEAD 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	146110-0620	9 461 612 311		1	# CONTROL VALVE
135/5	146114-0000	9 461 610 094		1	SPRING WASHER
136	146650-3920	9 461 612 133		1	PULLING ELECTROMAGNET
137	139514-0200	9 411 610 080		2	GASKET
145	146621-1000	9 461 611 665		1	UNION NUT
147	146600-5000	9 461 618 321		1	O-RING
200	146206-0100	9 461 610 113		1	COILED SPRING
230	146925-2720	9 461 615 016		1	BRACKET
231	139006-4600	9 411 610 667		1	BLEEDER SCREW
236	139006-4800	9 411 610 556		1	BLEEDER SCREW
237	146620-0200	9 461 610 497		1	HEX-SOCKET-HEAD CAP SCREW
240	146650-0720	9 461 610 530		1	# PULLING ELECTROMAGNET
240/8	146600-1700	9 461 610 427		1	O-RING
242	146658-6420	9 461 613 329		1	WIRE
243	146621-1000	9 461 611 665		1	UNION NUT
244	020118-1440	9 442 610 672		1	BLEEDER SCREW
245	139512-0500	9 411 611 625		2	GASKET
246	027412-2440	9 442 610 048		1	EYE BOLT
247	146665-2120	9 461 616 206		1	PIPE
251	014010-8140	9 442 610 015		1	PLAIN WASHER:D18&8.5T1.6
351	146125-0101	9 461 613 603		1	FILTER
352	146125-0200	9 461 611 413		1	COILED SPRING
800S	146019-8820	9 461 613 668		1	PUMP HOUSING
800S/1/6	146601-0900	9 461 614 046		0	
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
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

906	146952-8300 9 461 618 207	1	NAMEPLATE
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ZEXEL
PRODUCT INFORMATION

Date: 07.08.09
Time: 03:38:01

INJECTION-PUMP ASSEMBLY

ZEXEL No. 104760-4300
BOSCH No. 9 460 611 259

Microfiche Position:
Engine Type: TD42
Manufacturer: NISSAN DIESEL

ZEXEL Ass'y No.	104760-4300
Bosch Ass'y No.	9 460 611 259
Bosch Typecode	
Engine Type	TD42
Manufacturer	NISSAN DIESEL
Edition date	17.03.04 (1)

1 Adjustment conditions

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
	Test oil		ISO4113orSAEJ967 d				
			1404 Test oil				
P	Test Oil Temperature	degC	45	45	50		
	Nozzle		105780-0000				
	Bosch type code		NP-DN12SD12T				
	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	1000	1000	1000		
S	Average injection quantity	mm3/st.	51.7	51.2	52.2		
S	Difference in delivery	mm3/st.	3.5		3.5		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2300	2300	2300		
C	Average injection quantity	mm3/st.	16.7	14.2	19.2		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2100	2100	2100		
C	Average injection quantity	mm3/st.	44.1	39.6	48.6		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2000	2000	2000		
C	Average injection quantity	mm3/st.	45	42.9	47.1		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Average injection quantity	mm3/st.	51.2	50.2	52.2		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	600	600	600		
C	Average injection quantity	mm3/st.	52.9	50.9	54.9		

2.2 Governing

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2300	2300	2300		
S	Average injection quantity	mm3/st.	16.7	14.7	18.7		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2500	2500	2500		
C	Average injection quantity	mm3/st.	5		5		

2.3 Idle

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	350	350	350		
S	Average injection quantity	mm3/st.	8.8	6.8	10.8		
S	Difference in delivery	mm3/st.	2		2		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	350	350	350		
C	Average injection quantity	mm3/st.	8.8	6.3	11.3		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	450	450	450		
C	Average injection quantity	mm ³ /st.	5		5		

2.4 Start

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	100	100	100		
S	Average injection quantity	mm ³ /st.	65	50	80		
P	Basic		*				

2.5 Stop

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	350	350	350		
C	Average injection quantity	mm ³ /st.	0	0	0		
	Remarks						
Magnet OFF at idling position							

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	250	250	250		
C	Average injection quantity	mm ³ /st.	5		5		
	Remarks						
Magnet OFF at full-load position							

2.6 Overflow

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Overflow quantity	cm ³ /min	399	270	528		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Overflow quantity	cm ³ /min	450	318	582		
	Remarks						
Without an O-ring							

2.7 Pump chamber Pressure

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
S	Pressure WITH S/T ON	kPa	500	461	539		
S	Pressure WITH S/T ON	kgf/cm ²	5.1	4.7	5.5		
S	Pressure with S/T OFF	kPa	323.5	304	343		
S	Pressure with S/T OFF	kgf/cm ²	3.3	3.1	3.5		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Pressure WITH S/T ON	kPa	500	461	539		
C	Pressure WITH S/T ON	kgf/cm ²	5.1	4.7	5.5		
C	Pressure with S/T OFF	kPa	323.5	304	343		
C	Pressure with S/T OFF	kgf/cm ²	3.3	3.1	3.5		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1600	1600	1600		
C	Pressure WITH S/T ON	kPa	686	637	735		
C	Pressure WITH S/T ON	kgf/cm ²	7	6.5	7.5		
C	Pressure with S/T OFF	kPa	519.5	490	549		
C	Pressure with S/T OFF	kgf/cm ²	5.3	5	5.6		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1800	1800	1800		
C	Pressure with S/T OFF	kPa	568.5	539	598		
C	Pressure with S/T OFF	kgf/cm ²	5.8	5.5	6.1		

2.8 Timer

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
S	Timer stroke with S/T ON	mm	3.8	3.4	4.2		
S	Timer stroke with S/T OFF	mm	3.8	3.3	4.3		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Timer stroke with S/T ON	mm	3.8	3.3	4.3		
C	Timer stroke with S/T OFF	mm	1.6	1.3	1.9		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
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P	Pump speed	r/min	1800	1800	1800		
C	Timer stroke with S/T OFF	mm	5.5	4.9	6.1		
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2200	2200	2200		
C	Timer stroke with S/T OFF	mm	7.3	6.8	7.8		

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 Compensator**2.10.1 Load-Timer adjustment**

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1200	1200	1200		
S	Average injection quantity	mm ³ /st.	22	21.5	22.5		
S	Timer stroke variation dT	mm	0.2	0	0.4		
P	Basic		*				

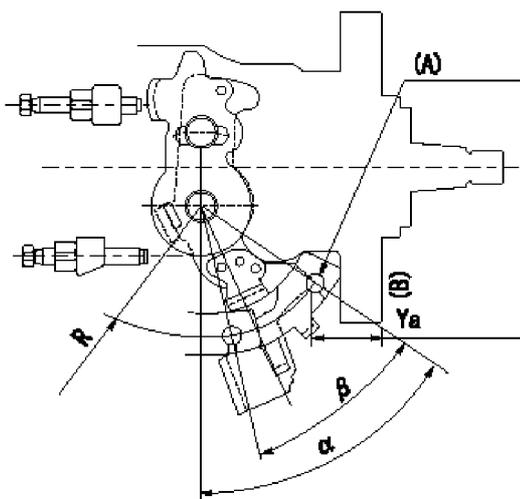
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1200	1200	1200		
C	Average injection quantity	mm ³ /st.	22	21	23		
C	Timer stroke variation dT	mm	0.3	0	0.6		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1200	1200	1200		
C	Average injection quantity	mm ³ /st.	15	13.5	16.5		
C	Timer stroke variation dT	mm	0.3	0	0.6		

2.11 Additional device adjustment**2.11.1 Additional device 1**

Name	CONTROL LEVER ANGLE
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Ya=25.4~27.5mm
R=53mm
Alpha=53.5~57.5deg
Beta=35~45deg



Ya=25.4~27.5mm
R=53mm

Control lever angle measurement
1. Measure dimension Ya between the end of the lever and the flange face.
2. Measure the lever angle from the pin hole R (plate).
(A) = lever angle and lever reaction force measuring position

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	6.64	6.54	6.74		
S	MS dimension	mm	1	0.9	1.1		
S	Control lever angle alpha	deg.	55.5	53.5	57.5		
S	Control lever angle beta	deg.	40	35	45		