

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (1/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
8PC1,10PC1 12PC1	105100-5600 [1-15300-108-0]	105031-3830 (31-3830,-)	105015-5180 (NP-DLLA160SN518)	-	0.06	11.8 {120}	38.3 ~ 39.0 {391 ~ 398}	-	0.28	KBL2.1-S
8PC1-T	105100-5610 [1-15300-109-0]	105031-3840 (31-3840,-)	105015-4760 (NP-DLLA154S364N476)	-	0.06	11.8 {120}	38.3 ~ 39.0 {391 ~ 398}	-	0.35	KBL2.1-S
8PC1,10PC1 2PC1	105100-5660 [1-15300-117-1]	105031-3830 (31-3830,B)	105015-5180 (NP-DLLA160SN518)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.28	KBL2.1-S
8PC1T	105100-5670 [1-15300-118-1]	105031-3840 (31-3840,B)	105015-4760 (NP-DLLA154S364N476)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.35	KBL2.1-S
8PC1,10PC1 12PC1	105100-7000 [1-15300-138-0]	105031-3830 (31-3830,H)	105015-5770 (NP-DLLA160SN577)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.28	KBL2.1-S
8PC1,10PC1 12PC1	105100-7001 [1-15300-138-1]	105031-3830 (31-3830,H)	105015-6250 (NP-DLLA154SN625)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.28	KBL2.1-S
8PC1,10PC1 12PC1	105100-7002 [1-15300-138-1]	105031-3831 (31-3831,H)	105015-6250 (NP-DLLA154SN625)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.28	KBL2.1-S
10PC1	105100-7003 [1-15300-138-2]	105031-4831 (31-4831,K)	105015-6250 (NP-DLLA154SN625)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.28	KBL2.1-S
8PC1T	105100-7010 [1-15300-141-0]	105031-3840 (31-3840,H)	105015-5780 (NP-DLLA154SN578)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.35	KBL2.1-S
8PC1T	105100-7011 [1-15300-141-0]	105031-3841 (31-3841,H)	105015-5780 (NP-DLLA154SN578)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.35	KBL2.1-S
8PC1T	105100-7012 [1-15300-141-1]	105031-3842 (31-3842,H)	105015-5780 (NP-DLLA154SN578)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.35	KBL2.1-S
6SD1-TC 6SA1-MTC	105100-7170 [1-15300-149-0]	105031-4800 (31-4800,-)	105015-6610 (NP-DLLA154SN661)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.4	KBL2.1-S
6SD1TC	105100-7171 [1-15300-149-1]	105031-4801 (31-4801,2X)	105015-6610 (NP-DLLA154SN661)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.4	KBL2.1-S
8PC1,10PC1 12PC1	105100-7190 [1-15300-163-0]	105031-4830 (31-4830,-)	105015-6650 (NP-DLLA154SN665)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.31	KBL2.1-S
8PC1,10PC1 12PC1	105100-7191 [1-15300-163-1]	105031-4830 (31-4830,-)	105015-6651 (NP-DLLA154SN665)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.31	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (2/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
10PC1	105100-7192 [1-15300-163-2]	105031-4831 (31-4831,E)	105015-6651 (NP-DLLA154SN665)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.31	KBL2.1-S
6SD1TC	105100-7220 [1-15300-179-0]	105031-4870 (31-4870,-)	105015-6670 (NP-DLLA154SN667)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.4	KBL2.1-S
6SD1-T	105100-7221 [1-15300-179-1]	105031-4801 (31-4801,2N)	105015-6670 (NP-DLLA154SN667)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.4	KBL2.1-S
6BG1-MTC	105100-7250 [1-15300-164-0]	105030-3170 (30-3170,-)	105015-6820 (NP-DLLA150SN682)	-	0.08	15.7 {160}	31.0 ~ 31.7 {316 ~ 323}	-	0.2	KBL2.1-S
6BG1-MTC	105100-7280 [1-15300-191-0]	105030-3170 (30-3170,A)	105015-6950 (NP-DLLA150SN695)	-	0.08	15.7 {160}	31.0 ~ 31.7 {316 ~ 323}	-	0.2	KBL2.1-S
6BG1-MTC	105100-7281 [1-15300-191-1]	105030-3231 (30-3231,2G)	105015-6950 (NP-DLLA150SN695)	-	0.08	15.7 {160}	31.0 ~ 31.7 {316 ~ 323}	-	0.2	KBL2.1-S
6SD1	105100-7310 [1-15300-194-0]	105031-4870 (31-4870,E)	105015-7030 (NP-DLLA147SN703)	-	0.08	17.7 {180}	28.0 ~ 28.7 {286 ~ 293}	-	0.4	KBL2.1-S
6SD1X	105100-7311 [1-15300-194-1]	105031-4801 (31-4801,2Y)	105015-7030 (NP-DLLA147SN703)	-	0.08	17.7 {180}	28.0 ~ 28.7 {286 ~ 293}	-	0.4	KBL2.1-S
6RB1-MTC	105100-7330 [1-15300-187-1]	105031-4970 (31-4970,-)	105015-7050 (NP-DLLA150SN705)	-	0.08	13.7 {140}	27.4 ~ 28.0 {279 ~ 286}	-	0.4	KBL2.1-S
6RB1-MTC	105100-7331 [1-15300-187-2]	105030-4341 (30-4341,B)	105015-7050 (NP-DLLA150SN705)	-	0.08	13.7 {140}	27.4 ~ 28.0 {279 ~ 286}	-	0.4	KBL2.1-S
6SA1-MTC	105100-7380 [1-15300-195-0]	105031-4800 (31-4800,C)	105015-7030 (NP-DLLA147SN703)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.4	KBL2.1-S
6SA1-MTC	105100-7381 [1-15300-195-1]	105031-4801 (31-4801,2T)	105015-7030 (NP-DLLA147SN703)	-	0.08	15.7 {160}	28.0 ~ 28.7 {286 ~ 293}	-	0.4	KBL2.1-S
6BG1-MTC	105100-7620 [1-15300-227-0]	105030-3230 (30-3230,-)	105015-7710 (NP-DLLA156SN771)	-	0.08	15.7 {160}	30.3 ~ 31.0 {309 ~ 316}	-	0.2	KBL2.1-S
6BG1-MTC	105100-7621 [1-15300-227-1]	105030-3231 (30-3231,2M)	105015-7710 (NP-DLLA156SN771)	-	0.08	15.7 {160}	30.3 ~ 31.0 {309 ~ 316}	-	0.2	KBL2.1-S
6SD1-MTC	105100-7640 [1-15300-201-0]	105031-4800 (31-4800,F)	105015-7760 (NP-DLLA149SN776)	-	0.08	17.7 {180}	27.4 ~ 28.0 {279 ~ 286}	-	0.4	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (3/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6SD1-MTC	105100-7680 [1-15300-206-0]	105031-4870 (31-4870,N)	105015-7830 (NP-DLLA149SN783)	-	0.08	17.7 {180}	27.4 ~ 28.0 {279 ~ 286}	-	0.4	KBL2.1-S
6SD1-MTC	105100-7681 [1-15300-206-1]	105031-4801 (31-4801,2S)	105015-7830 (NP-DLLA149SN783)	-	0.08	17.7 {180}	27.4 ~ 28.0 {279 ~ 286}	-	0.4	KBL2.1-S
6SD1-TC1,3	105100-7800 [1-15300-218-0]	105031-4870 (31-4870,X)	105015-8100 (NP-DLLA149SN810)	-	0.08	17.7 {180}	27.4 ~ 28.0 {279 ~ 286}	-	0.4	KBL2.1-S
6SD1-TC1,3	105100-7801 [1-15300-218-1]	105031-4801 (31-4801,3C)	105015-8100 (NP-DLLA149SN810)	-	0.08	17.7 {180}	27.4 ~ 28.0 {279 ~ 286}	-	0.4	KBL2.1-S
8PD1	105100-7850 [1-15300-204-0]	105031-4830 (31-4830,A)	105015-8200 (NP-DLLA156SN820)	-	0.08	15.7 {160}	27.4 ~ 28.0 {279 ~ 286}	-	0.4	KBL2.1-S
8PD1	105100-7851 [1-15300-204-1]	105031-4831 (31-4831,A)	105015-8200 (NP-DLLA156SN820)	-	0.08	15.7 {160}	27.4 ~ 28.0 {279 ~ 286}	-	0.4	KBL2.1-S
6QB2	105101-7050 [1-15300-259-0]	105030-3300 (30-3300,-)	105015-8610 (NP-DLLA154SN861)	-	0.08	15.7 {160}	23.7 ~ 24.5 {242 ~ 250}	-	0.3	KBL2.1-S
6QB2	105101-7051 [1-15300-259-1]	105030-3301 (30-3301,H)	105015-8610 (NP-DLLA154SN861)	-	0.08	15.7 {160}	23.7 ~ 24.5 {242 ~ 250}	-	0.3	KBL2.1-S
6RB2	105101-7060 [1-15300-260-0]	105030-4340 (30-4340,-)	105015-8620 (NP-DLLA150SN862)	-	0.08	15.7 {160}	30.3 ~ 31.0 {309 ~ 316}	-	0.4	KBL2.1-S
6RB2	105101-7061 [1-15300-260-1]	105030-4341 (30-4341,-)	105015-8620 (NP-DLLA150SN862)	-	0.08	15.7 {160}	30.3 ~ 31.0 {309 ~ 316}	-	0.4	KBL2.1-S
6RB2	105101-7150 [1-15300-269-0]	105030-4340 (30-4340,A)	105015-8700 (NP-DLLA150SN870)	-	0.08	15.7 {160}	30.3 ~ 31.0 {309 ~ 316}	-	0.4	KBL2.1-S
6RB2	105101-7151 [1-15300-269-1]	105030-4341 (30-4341,A)	105015-8700 (NP-DLLA150SN870)	-	0.08	15.7 {160}	30.3 ~ 31.0 {309 ~ 316}	-	0.4	KBL2.1-S
6WA1	105101-7380 [1-15300-285-0]	105030-3460 (30-3460,-)	105015-9080 (NP-DLLA156SN908)	-	0.08	17.7 {180}	30.3 ~ 31.0 {309 ~ 316}	-	0.4	KBL2.1-S
6WA1-TCN	105101-7381 [1-15300-285-1]	105030-3461 (30-3461,-)	105015-9080 (NP-DLLA156SN908)	-	0.08	17.7 {180}	30.3 ~ 31.0 {309 ~ 316}	-	0.4	KBL2.1-S
12PD1-MTC	105101-7430 [1-15300-294-0]	105031-4830 (31-4830,C)	105015-8990 (NP-DLLA144SN899)	-	0.08	17.2 {175}	27.4 ~ 28.1 {279 ~ 286}	-	0.4	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (4/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
12PD1-MTC	105101-7431 [1-15300-294-1]	105031-4831 (31-4831,C)	105015-8990 (NP-DLLA144SN899)	-	0.08	17.2 {175}	27.4 ~ 28.1 {279 ~ 286}	-	0.4	KBL2.1-S
6WA1	105101-7440 [1-15300-295-0]	105030-3460 (30-3460,A)	105015-9190 (NP-DLLA156SN919)	-	0.08	17.7 {180}	32.5 ~ 33.1 {331 ~ 338}	-	0.4	KBL2.1-S
6WA1-TCN	105101-7441 [1-15300-295-1]	105030-3461 (30-3461,A)	105015-9190 (NP-DLLA156SN919)	-	0.08	17.7 {180}	32.7 ~ 33.1 {331 ~ 338}	-	0.4	KBL2.1-S
6WA1	105101-7442 [1-15300-351-0]	105030-3462 (30-3462,A)	105015-9190 (NP-DLLA156SN919)	-	0.08	17.7 {180}	32.7 ~ 33.1 {331 ~ 338}	-	0.4	KBL2.1-S
6BG1-MTC	105101-7460 [1-15300-307-0]	105030-3230 (30-3230,C)	105015-9140 (NP-DLLA149SN914)	-	0.08	18.1 {185}	30.3 ~ 31.0 {309 ~ 316}	-	0.4	KBL2.1-S
6BG1-MTC	105101-7461 [1-15300-307-1]	105030-3230 (30-3230,C)	105015-9140 (NP-DLLA149SN914)	-	0.11	18.1 {185}	29.4 ~ 30.1 {300 ~ 307}	-	0.4	KBL2.1-S
6BG1-MTC	105101-7462 [1-15300-307-2]	105030-3230 (30-3230,M)	105015-9140 (NP-DLLA149SN914)	-	0.11	18.1 {185}	29.4 ~ 30.1 {300 ~ 307}	-	0.4	KBL2.1-S
6BG1-MTC	105101-7463 [1-15300-307-3]	105030-3231 (30-3231,M)	105015-9140 (NP-DLLA149SN914)	-	0.11	18.1 {185}	29.4 ~ 30.1 {300 ~ 307}	-	0.4	KBL2.1-S
12PD1S	105101-7560 [1-15300-317-0]	105031-4830 (31-4830,F)	105015-9500 (NP-DLLA151SN950)	-	0.08	15.7 {160}	27.4 ~ 28.1 {279 ~ 286}	-	0.4	KBL2.1-S
12PD1S	105101-7561 [1-15300-317-1]	105031-4831 (31-4831,F)	105015-9500 (NP-DLLA151SN950)	-	0.08	15.7 {160}	27.4 ~ 28.1 {279 ~ 286}	-	0.4	KBL2.1-S
10PE1	105101-7620 [1-15300-314-0]	105030-3540 (30-3540,R)	105015-9720 (NP-DLLA154SN972)	-	0.08	18.1 {185}	27.4 ~ 28.1 {279 ~ 286}	-	0.3	KBL2.1-S
6HE1-TCN	105101-7710 [8-94394-213-0]	105030-4610 (30-4610,-)	105025-0050 (NP-DLLA152SM005)	-	0.08	18.1 {185}	27.4 ~ 28.0 {279 ~ 286}	-	0.3	KBL2.1-S
6HE1-D	105101-7730 [8-94394-491-0]	105030-4610 (30-4610,A)	105025-0070 (NP-DLLA153SM007)	-	0.08	18.1 {185}	27.4 ~ 28.1 {279 ~ 286}	-	0.3	KBL2.1-S
6HE1-D	105101-7740 [8-94393-335-1]	105030-4610 (30-4610,B)	105025-0080 (NP-DLLA156SM008)	-	0.08	16.2 {165}	22.2 ~ 22.8 {226 ~ 233}	-	0.3	KBL2.1-S
10PE1-S	105101-7750 [1-15300-328-0]	105030-3540 (30-3540,U)	105025-0090 (NP-DLLA154SM009)	-	0.08	15.7 {160}	27.4 ~ 28.1 {279 ~ 286}	-	0.3	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (5/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6RB1TC	105101-7760 [1-15300-327-0]	105030-4341 (30-4341,C)	105015-9190 (NP-DLLA156SN919)	-	0.08	17.7 {180}	32.7 ~ 33.1 {331 ~ 338}	-	0.4	KBL2.1-S
6HH1	105101-7860 [8-94395-696-0]	105030-4650 (30-4650,-)	105025-0080 (NP-DLLA156SM008)	-	0.08	16.2 {165}	22.2 ~ 22.8 {226 ~ 233}	-	0.3	KBL2.1-S
6HH1	105101-7861 [8-94395-696-1]	105030-4650 (30-4650,L)	105025-0080 (NP-DLLA156SM008)	-	0.08	16.2 {165}	22.2 ~ 22.8 {226 ~ 233}	-	0.3	KBL2.1-S
6HH1	105101-7862 [8-94395-696-2]	105030-4651 (30-4651,L)	105025-0080 (NP-DLLA156SM008)	-	0.08	16.2 {165}	22.2 ~ 22.8 {226 ~ 233}	-	0.3	KBL2.1-S
6HH1	105101-7863 [8-94395-696-3]	105030-4651 (30-4651,L)	105025-0080 (NP-DLLA156SM008)	-	0.08	16.2 {165}	22.2 ~ 22.8 {226 ~ 233}	-	0.3	KBL2.1-S
6HH1	105101-7870 [8-94395-697-0]	105030-4660 (30-4660,-)	105025-0050 (NP-DLLA152SM005)	-	0.08	18.1 {185}	27.4 ~ 28.0 {279 ~ 286}	-	0.3	KBL2.1-S
6HH1TC	105101-7871 [8-94390-049-0]	105030-4660 (30-4660,-)	105025-0051 (NP-DLLA152SM005)	-	0.08	18.1 {185}	27.4 ~ 28.0 {279 ~ 286}	-	0.3	KBL2.1-S
6HH1TC	105101-7872 (8-94390-049-1]	105030-4660 (30-4660,H)	105025-0051 (NP-DLLA152SM005)	-	0.08	18.1 {185}	27.4 ~ 28.0 {279 ~ 286}	-	0.3	KBL2.1-S
6SD1TC	105101-7980 [1-15300-332-0]	105031-4801 (31-4801,3D)	105025-0700 (NP-DLLA152SM070)	-	0.08	17.7 {180}	27.4 ~ 28.0 {279 ~ 286}	-	0.4	KBL2.1-S
6HH1	105101-8200 [8-94390-892-0]	105030-4650 (30-4650,C)	105025-1500 (NP-DLLA154SM150)	-	0.08	16.2 {165}	22.2 ~ 22.9 {226 ~ 233}	-	0.25	KBL2.1-S
6HH1	105101-8201 [8-94390-892-1]	105030-4650 (30-4650,C)	105025-1500 (NP-DLLA154SM150)	-	0.08	16.2 {165}	22.2 ~ 22.9 {226 ~ 233}	-	0.25	KBL2.1-S
6HH1	105101-8202 [8-94390-892-2]	105030-4651 (30-4651,C)	105025-1500 (NP-DLLA154SM150)	-	0.08	16.2 {165}	22.2 ~ 22.9 {226 ~ 233}	-	0.25	KBL2.1-S
6HH1	105101-8203 [8-94390-892-3]	105030-4651 (30-4651,C)	105025-1500 (NP-DLLA154SM150)	-	0.08	16.2 {165}	22.2 ~ 22.9 {226 ~ 233}	-	0.25	KBL2.1-S
10PE1-S	105101-8390 [1-15300-368-0]	105030-3540 (30-3540,G)	105025-2000 (NP-DLLA156SM200)	-	0.08	15.7 {160}	27.4 ~ 28.1 {279 ~ 286}	-	0.3	KBL2.1-S
8PE1-S	105101-8440 [1-15300-373-0]	105030-3540 (30-3540,E)	105025-2130 (NP-DLLA156SM213)	-	0.08	15.7 {160}	27.4 ~ 28.1 {279 ~ 286}	-	0.3	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (6/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
4JB1CDT	105108-7000 [8-94474-389-1]	105038-2000 (38-2000,-)	105017-0440 (NP-DLLA150PN044)	-	0.08	16.6 {170}	27.9 ~ 28.5 {284 ~ 291}	-	0.22	KBL2.1-P
6SD1MTC	105110-7090 [1-15300-320-0]	105041-4040 (41-4040,R)	105015-9560 (NP-DLLA150SN956)	105019-0290	0.08	18.1 {185}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.32	KBL2.4-S
6SD1MTC	105110-7091 [1-15300-320-0]	105041-4041 (41-4041,R)	105015-9560 (NP-DLLA150SN956)	105019-0290	0.08	18.1 {185}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.32	KBL2.4-S
12PE1-S	105110-7210 [1-15300-309-0]	105041-3060 (41-3060,G)	105015-9720 (NP-DLLA154SN972)	105019-2080	0.08	15.7 {160}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
12PE1-S	105110-7211 [1-15300-309-0]	105041-3061 (41-3061,G)	105015-9720 (NP-DLLA154SN972)	105019-2080	0.08	15.7 {160}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HE1TC	105110-7530 [8-94390-519-0]	105041-4140 (41-4140,-)	105025-1040 (NP-DLLA152SM104)	105019-0760	0.04	15.7 {160}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.32	KBL2.4-S
6HE1TC	105110-7531 [8-94390-519-1]	105041-4140 (41-4140,-)	105025-1040 (NP-DLLA152SM104)	105019-0760	0.04	15.7 {160}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HE1TC	105110-7532 [8-94390-519-1]	105041-4141 (41-4141,-)	105025-1040 (NP-DLLA152SM104)	105019-0760	0.04	15.7 {160}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
12PD1S	105110-7560 [1-15300-336-0]	105041-4150 (41-4150,2)	105025-1300 (NP-DLLA150SM130)	105019-0770	0.08	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
10TD1	105110-7561 [1-15300-336-1]	105041-4150 (41-4150,A)	105025-2010 (NP-DLLA150SM201)	105019-2150	0.08	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
10TD1	105110-7562 [1-15300-401-0]	105041-4151 (41-4151,C)	105025-2010 (NP-DLLA150SM201)	105019-2150	0.08	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
10TD1	105110-7563 [1-15300-401-0]	105041-4152 (41-4152,C)	105025-2010 (NP-DLLA150SM201)	105019-2150	0.08	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6SD1TC	105110-7580 [1-15300-359-0]	105041-4160 (41-4160,3E)	105025-1320 (NP-DLLA146SM132)	105019-0790	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6SD1TC	105110-7581 [1-15300-359-0]	105041-4161 (41-4161,3E)	105025-1320 (NP-DLLA146SM132)	105019-0790	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6SD1TC	105110-7730 [1-15300-369-0]	105041-4160 (41-4160,B)	105025-2090 (NP-DLLA144SM209)	105019-2180	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (7/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6SD1TC	105110-7731 [1-15300-369-0]	105041-4161 (41-4161,B)	105025-2090 (NP-DLLA144SM209)	105019-2180	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6HH1-C/N	105110-7740 [8-94391-291-2]	105041-2080 (41-2080,-)	105025-2100 (NP-DLLA157SM210)	105019-2190	0.05	16.2 {165}	-	20.6 ~ 21.6 {210 ~ 220} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HL1-S/N	105110-7741 [8-94391-291-3]	105041-2081 (41-2081,-)	105025-2100 (NP-DLLA157SM210)	105019-2190	0.05	16.2 {165}	-	20.6 ~ 21.6 {210 ~ 220} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HL1-S/N	105110-7742 [8-94391-291-4]	105041-2081 (41-2081,-)	105025-2100 (NP-DLLA157SM210)	105019-2190	0.05	16.2 {165}	-	20.6 ~ 21.6 {210 ~ 220} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HL1-S/N	105110-7743 [8-94391-291-4]	105041-2082 (41-2082,-)	105025-2100 (NP-DLLA157SM210)	105019-2190	0.05	16.2 {165}	-	20.6 ~ 21.6 {210 ~ 220} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HH1S	105110-7750 [8-94390-795-2]	105041-2080 (41-2080,A)	105025-2110 (NP-DLLA153SM211)	105019-2200	0.05	18.1 {185}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HH1	105110-7751 [8-94390-795-3]	105041-2130 (41-2130,A)	105025-2110 (NP-DLLA153SM211)	105019-2200	0.05	18.1 {185}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HH1	105110-7752 [8-94390-795-4]	105041-2130 (41-2130,A)	105025-2110 (NP-DLLA153SM211)	105019-2200	0.05	18.1 {185}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HH1	105110-7753 [8-94390-795-4]	105041-2131 (41-2131,A)	105025-2110 (NP-DLLA153SM211)	105019-2200	0.05	18.1 {185}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HH1	105110-7760 [8-94392-233-0]	105041-2080 (41-2080,B)	105025-2150 (NP-DLLA153SM215)	105019-2210	0.05	18.1 {185}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HH1	105110-7761 [8-94392-233-1]	105041-2130 (41-2130,B)	105025-2150 (NP-DLLA153SM215)	105019-2210	0.05	18.1 {185}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HH1	105110-7762 [8-94392-233-2]	105041-2130 (41-2130,B)	105025-2150 (NP-DLLA153SM215)	105019-2210	0.05	18.1 {185}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HH1	105110-7763 [8-94392-233-2]	105041-2131 (41-2131,B)	105025-2150 (NP-DLLA153SM215)	105019-2210	0.05	18.1 {185}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HH1	105110-7790 [8-94392-579-0]	105041-2110 (41-2110,-)	105025-1500 (NP-DLLA154SM150)	105019-2280	0.06	16.2 {165}	-	18.6 ~ 19.6 {190 ~ 200} [Actual pre-lift+0.05]	0.25	KBL2.4-S
6HH1	105110-7791 [8-94392-579-1]	105041-2110 (41-2110,-)	105025-1500 (NP-DLLA154SM150)	105019-2280	0.06	16.2 {165}	-	18.6 ~ 19.6 {190 ~ 200} [Actual pre-lift+0.05]	0.25	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (8/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6HH1	105110-7792 [8-94392-579-1]	105041-2111 (41-2111,-)	105025-1500 (NP-DLLA154SM150)	105019-2280	0.06	16.2 {165}	-	18.6 ~ 19.6 {190 ~ 200} [Actual pre-lift+0.05]	0.25	KBL2.4-S
6WG1TC	105110-7800 [1-15300-371-0]	105041-3160 (41-3160,G)	105025-2490 (NP-DLLA156SM249)	105019-2300	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6WG1TC	105110-7801 [1-15300-371-1]	105041-3161 (41-3161,G)	105025-2490 (NP-DLLA156SM249)	105019-2300	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6WG1TC	105110-7802 [1-15300-371-2]	105041-3162 (41-3162,G)	105025-2860 (NP-DLLA156SM286)	105019-2301	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.32	KBL2.4-S
6WG1TC	105110-7803 [1-15300-371-3]	105041-3163 (41-3163,G)	105025-2860 (NP-DLLA156SM286)	105019-2301	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.32	KBL2.4-S
6WG1TC	105110-7804 [1-15300-371-4]	105041-3163 (41-3163,J)	105025-3940 (NP-DLLA156SM394)	105019-2302	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.32	KBL2.4-S
6WF1TC	105110-7810 [1-15300-372-0]	105041-3160 (41-3160,H)	105025-2500 (NP-DLLA156SM250)	105019-2310	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6WF1TC	105110-7811 [1-15300-372-1]	105041-3161 (41-3161,H)	105025-2500 (NP-DLLA156SM250)	105019-2310	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6WF1TC	105110-7812 [1-15300-372-2]	105041-3162 (41-3162,H)	105025-2870 (NP-DLLA156SM287)	105019-2311	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6WF1TC	105110-7813 [1-15300-372-3]	105041-3163 (41-3163,H)	105025-2870 (NP-DLLA156SM287)	105019-2311	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6WF1TC	105110-7814 [1-15300-372-4]	105041-3163 (41-3163,K)	105025-3950 (NP-DLLA156SM395)	105019-2312	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8TD1	105110-7830 [1-15300-345-0]	105041-4270 (41-4270,B)	105025-2550 (NP-DLLA150SM255)	105019-2330	0.08	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
PE	105110-7880 [1-15300-379-0]	105041-3060 (41-3060,H)	105025-2630 (NP-DLLA156SM263)	105019-2380	0.06	15.7 {160}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
PE	105110-7881 [1-15300-379-1]	105041-3060 (41-3060,J)	105025-2630 (NP-DLLA156SM263)	105019-2380	0.06	15.7 {160}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
PE	105110-7882 [1-15300-379-2]	105041-3061 (41-3061,J)	105025-2630 (NP-DLLA156SM263)	105019-2380	0.06	15.7 {160}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (9/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6HK1TC	105110-8030 [8-94392-058-0]	105041-2081 (41-2081,E)	105025-3070 (NP-DLLA142SM307)	105019-2560	0.05	15.7 {160}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6HK1TC	105110-8031 [8-94392-058-1]	105041-2081 (41-2081,E)	105025-3070 (NP-DLLA142SM307)	105019-2560	0.05	15.7 {160}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6HK1TC	105110-8032 [8-94392-058-1]	105041-2082 (41-2082,E)	105025-3070 (NP-DLLA142SM307)	105019-2560	0.05	15.7 {160}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6HH1	105110-8050 [8-97600-813-0]	105041-2130 (41-2130,C)	105025-2110 (NP-DLLA153SM211)	105019-2200	0.05	18.1 {185}	-	22.6 ~ 24.1 {230 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HH1	105110-8051 [8-97600-813-1]	105041-2130 (41-2130,C)	105025-2110 (NP-DLLA153SM211)	105019-2200	0.05	18.1 {185}	-	22.6 ~ 24.1 {230 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HH1	105110-8052 [8-97600-813-1]	105041-2131 (41-2131,C)	105025-2110 (NP-DLLA153SM211)	105019-2200	0.05	18.1 {185}	-	22.6 ~ 24.1 {230 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6HK1TC	105110-8110 [1-15300-389-0]	105041-2081 (41-2081,G)	105025-3270 (NP-DLLA147SM327)	105019-2660	0.05	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6HK1TC	105110-8111 [1-15300-389-1]	105041-2081 (41-2081,G)	105025-3270 (NP-DLLA147SM327)	105019-2660	0.05	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6HK1TC	105110-8112 [1-15300-389-1]	105041-2082 (41-2082,G)	105025-3270 (NP-DLLA147SM327)	105019-2660	0.05	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
8TD1	105110-8130 [1-15300-402-0]	105041-4320 (41-4320,E)	105025-2550 (NP-DLLA150SM255)	105019-2330	0.08	17.7 {180}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
8TD1	105110-8131 [1-15300-402-1]	105041-4321 (41-4321,E)	105025-2550 (NP-DLLA150SM255)	105019-2330	0.08	17.7 {180}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6HK1T	105110-8140 [1-15300-404-0]	105041-2081 (41-2081,H)	105025-3380 (NP-DLLA151SM338)	105019-2680	0.05	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6HK1T	105110-8141 [1-15300-404-0]	105041-2082 (41-2082,H)	105025-3380 (NP-DLLA151SM338)	105019-2680	0.05	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6SD1XQB	105110-8170 [1-15300-393-0]	105041-4340 (41-4340,-)	105025-3450 (NP-DLLA148SM345)	105019-2700	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6SD1XQB	105110-8171 [1-15300-393-1]	105041-4340 (41-4340,A)	105025-3640 (NP-DLLA146SM364)	105019-2701	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (10/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6SD1XQB	105110-8172 [1-15300-393-2]	105041-4341 (41-4341,A)	105025-3640 (NP-DLLA146SM364)	105019-2701	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6WG1XQA	105110-8180 [1-15300-392-0]	105041-4360 (41-4360,-)	105025-3490 (NP-DLLA156SM349)	105019-2710	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6WG1XQA	105110-8181 [1-15300-392-1]	105041-4361 (41-4361,A)	105025-3490 (NP-DLLA156SM349)	105019-2710	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6WG1XQA	105110-8182 [1-15300-392-2]	105041-4361 (41-4361,B)	105025-3490 (NP-DLLA156SM349)	105019-2710	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6HK1TQC	105110-8190 [1-15300-414-0]	105041-2081 (41-2081,J)	105025-3570 (NP-DLLA145SM357)	105019-2720	0.05	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6HK1TQC	105110-8191 [1-15300-414-0]	105041-2082 (41-2082,J)	105025-3570 (NP-DLLA145SM357)	105019-2720	0.05	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6WG1TQA	105110-8200 [1-15300-413-0]	105041-4370 (41-4370,-)	105025-3280 (NP-DLLA156SM328)	105019-2730	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6WG1TQA	105110-8201 [1-15300-413-0]	105041-4371 (41-4371,-)	105025-3280 (NP-DLLA156SM328)	105019-2730	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6HK1TQC	105110-8210 [1-15300-418-0]	105041-2081 (41-2081,K)	105025-3610 (NP-DLLA141SM361)	105019-2750	0.05	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6HK1TQC	105110-8211 [1-15300-418-0]	105041-2082 (41-2082,K)	105025-3610 (NP-DLLA141SM361)	105019-2750	0.05	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6WG1TQC	105110-8220 [1-15300-417-0]	105041-4360 (41-4360,F)	105025-3620 (NP-DLLA152SM362)	105019-2760	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6WG1TQC	105110-8221 [1-15300-417-0]	105041-4361 (41-4361,F)	105025-3620 (NP-DLLA152SM362)	105019-2760	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6SD1TQG-01	105110-8250 [1-15300-423-0]	105041-4341 (41-4341,B)	105025-3800 (NP-DLLA147SM380)	105019-2790	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6SD1-TC	105110-8260 [1-15300-424-0]	105041-4400 (41-4400,-)	105025-3870 (NP-DLLA145SM387)	105019-2800	0.06	17.7 {180}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6BG1RJ	105110-8280 [1-15300-425-0]	105041-4410 (41-4410,A)	105025-3230 (NP-DLLA150SM323)	105019-2820	0.08	14.7 {150}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (11/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6WG1TC	105110-8290 [1-15300-426-0]	105041-3220 (41-3220,A)	105025-3940 (NP-DLLA156SM394)	105019-2302	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.32	KBL2.4-S
6WF1TC	105110-8300 [1-15300-427-0]	105041-3220 (41-3220,B)	105025-3950 (NP-DLLA156SM395)	105019-2312	0.06	17.7 {180}	-	23.1 ~ 24.1 {235 ~ 245} [Actual pre-lift+0.05]	0.30	KBL2.4-S
6HK1TC	105110-8310 [1-15300-428-0]	105041-2082 (41-2082,M)	105025-4030 (NP-DLLA141SM403)	105019-2840	0.05	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6BG1RD	105110-8330 [1-15300-429-0]	105041-4410 (41-4410,B)	105025-3230 (NP-DLLA150SM323)	105019-2820	0.08	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6BG1TRW	105110-8340 [1-15300-432-0]	105041-4410 (41-4410,C)	105025-3460 (NP-DLLA141SM346)	105019-2880	0.08	15.7 {160}	-	23.1 ~ 24.1 {236 ~ 246} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6BG1TRW	105110-8341 [1-15300-432-1]	105041-4410 (41-4410,E)	105025-3030 (NP-DLLA150SM303)	105019-2900	0.08	16.7 {170}	-	20.6 ~ 21.6 {210 ~ 220} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6HK1NA	105110-8360 [8-98065-394-0]	105041-2082 (41-2082,N)	105025-4550 (NP-DLLA155SM455)	105019-2950	0.05	18.1 {185}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.4	KBL2.4-S
4JB1CDT	105118-7000 [8-94474-389-2]	105048-2030 (48-2030,-)	105017-0500 (NP-DLLA150PN050)	-	0.10	16.7 {170}	27.9 ~ 28.5 {284 ~ 291}	-	0.22	KBL2.1-P
4JB1CDT	105118-7001 [8-94474-389-3]	105048-2030 (48-2030,C)	105017-0441 (NP-DLLA150PN044)	-	0.10	16.7 {170}	26.6 ~ 27.3 {271 ~ 278}	-	0.22	KBL2.1-P
4JB1CDT	105118-7002 [8-94474-389-4]	105048-2031 (48-2031,C)	105017-0441 (NP-DLLA150PN044)	-	0.10	16.7 {170}	26.6 ~ 27.3 {271 ~ 278}	-	0.22	KBL2.1-P
4JB1-TC	105118-7040 [8-94328-090-1]	105048-2090 (48-2090,A)	105017-0820 (NP-DSLA154PN082)	-	0.14	16.7 {170}	21.7 ~ 22.3 {221 ~ 227}	-	0.3	KBL2.1-P
4JB1-TC	105118-7041 [8-94328-090-2]	105048-2090 (48-2090,-)	105017-0820 (NP-DSAL154PN082)	-	0.14	16.7 {170}	21.7 ~ 22.3 {221 ~ 227}	-	0.3	KBL2.1-P
4JB1-TC	105118-7042 [8-94328-090-3]	105048-2031 (48-2031,H)	105017-0820 (NP-DSLA154PN082)	-	0.14	16.7 {170}	21.7 ~ 22.3 {221 ~ 227}	-	0.3	KBL2.1-P
4JB1CI	105118-7100 [8-97018-945-0]	105048-2110 (48-2110,-)	105017-1140 (NP-DSLA154PN114)	-	0.14	16.7 {170}	21.7 ~ 22.3 {221 ~ 227}	-	0.3	KBL2.1-P
4JB1CI	105118-7101 [8-97018-945-1]	105048-2031 (48-2031,J)	105017-1140 (NP-DSLA154PN114)	-	0.14	16.7 {170}	21.7 ~ 22.3 {221 ~ 227}	-	0.3	KBL2.1-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (12/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6BG1	105118-7110 [1-15300-279-0]	105048-3720 (48-3720,-)	105017-0400 (NP-DLLA154PN040)	105019-1010	0.08	16.2 {165}	-	19.2 ~ 20.7 {196 ~ 211} [Actual pre-lift+0.05]	0.22	KBL2.4-P
6BG1	105118-7111 [1-15300-279-1]	105048-3721 (48-3721,-)	105017-0400 (NP-DLLA154PN040)	105019-1010	0.08	16.2 {165}	-	19.2 ~ 20.7 {196 ~ 211} [Actual pre-lift+0.05]	0.22	KBL2.4-P
6BG1	105118-7112 [1-15300-279-1]	105048-3722 (48-3722,-)	105017-0400 (NP-DLLA154PN040)	105019-1010	0.08	16.2 {165}	-	19.2 ~ 20.7 {196 ~ 211} [Actual pre-lift+0.05]	0.22	KBL2.4-P
6BG1	105118-7113 [1-15300-279-2]	105048-3723 (48-3723,-)	105017-0400 (NP-DLLA154PN040)	105019-1010	0.08	16.2 {165}	-	19.2 ~ 20.7 {196 ~ 211} [Actual pre-lift+0.05]	0.22	KBL2.4-P
6BG1	105118-7114 [1-15300-279-2]	105048-3883 (48-3883,Y)	105017-3270 (NP-DLLA154PN327)	105019-1490	0.08	16.2 {165}	-	19.2 ~ 20.7 {196 ~ 211} [Actual pre-lift+0.05]	0.22	KBL2.4-P
6HE1-S	105118-7120 [8-94393-326-0]	105048-3720 (48-3720,Z)	105017-1090 (NP-DLLA161PN109)	105019-1000	0.08	16.2 {165}	-	19.2 ~ 20.7 {196 ~ 211} [Actual pre-lift+0.05]	0.22	KBL2.4-P
6HE1-S	105118-7121 [8-94393-326-1]	105048-3721 (48-3721,Z)	105017-1090 (NP-DLLA161PN109)	105019-1000	0.08	16.2 {165}	-	19.2 ~ 20.7 {196 ~ 211} [Actual pre-lift+0.05]	0.22	KBL2.4-P
6HE1	105118-7122 [8-94393-326-1]	105048-3722 (48-3722,Z)	105017-1090 (NP-DLLA161PN109)	105019-1000	0.08	16.2 {165}	-	19.2 ~ 20.7 {196 ~ 211} [Actual pre-lift+0.05]	0.22	KBL2.4-P
6HE1	105118-7123 [8-94393-326-2]	105048-3723 (48-3723,Z)	105017-1090 (NP-DLLA161PN109)	105019-1000	0.08	16.2 {165}	-	19.2 ~ 20.7 {196 ~ 211} [Actual pre-lift+0.05]	0.22	KBL2.4-P
6HE1-S	105118-7124 [8-94393-326-2]	105048-3883 (48-3883,Z)	105017-3280 (NP-DLLA161PN328)	105019-1500	0.08	16.2 {165}	-	19.2 ~ 20.7 {196 ~ 211} [Actual pre-lift+0.05]	0.22	KBL2.4-P
4HE1T	105118-7160 [8-97078-928-0]	105048-3830 (48-3830,-)	105017-1470 (NP-DLLA154PN147)	105019-1030	0.10	17.7 {180}	-	22.7 ~ 23.7 {231 ~ 241} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HE1T	105118-7161 [8-97114-315-0]	105048-3831 (48-3831,-)	105017-1470 (NP-DLLA154PN147)	105019-1030	0.10	17.7 {180}	-	22.7 ~ 23.7 {231 ~ 241} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HE1T	105118-7162 [8-97114-315-1]	105048-3831 (48-3831,-)	105017-1470 (NP-DLLA154PN147)	105019-1030	0.10	17.7 {180}	-	22.7 ~ 23.7 {231 ~ 241} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HE1T	105118-7163 [8-97114-315-1]	105048-3831 (48-3831,-)	105017-1470 (NP-DLLA154PN147)	105019-1030	0.10	17.7 {180}	-	22.7 ~ 23.7 {231 ~ 241} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HE1T	105118-7164 [8-97114-315-2]	105048-3832 (48-3832,-)	105017-3190 (NP-DLLA154PN319)	105019-1420	0.10	17.7 {180}	-	22.7 ~ 23.7 {231 ~ 241} [Actual pre-lift+0.05]	0.3	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (13/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6HE1T	105118-7180 [8-94394-906-0]	105048-3880 (48-3880,-)	105017-1380 (NP-DLLA157PN138)	105019-1020	0.07	18.1 {185}	-	23.1 ~ 24.1 {236 ~ 246} [Actual pre-lift+0.05]	0.3	KBL2.4-P
6HE1TC	105118-7181 [8-94394-906-0]	105048-3881 (48-3881,-)	105017-1380 (NP-DLLA157PN138)	105019-1020	0.07	18.1 {185}	-	23.1 ~ 24.1 {236 ~ 246} [Actual pre-lift+0.05]	0.3	KBL2.4-P
6HE1TC	105118-7182 [8-94394-906-1]	105048-3882 (48-3882,-)	105017-1380 (NP-DLLA157PN138)	105019-1020	0.07	18.1 {185}	-	23.1 ~ 24.1 {236 ~ 246} [Actual pre-lift+0.05]	0.3	KBL2.4-P
6HE1TC	105118-7183 [8-94394-906-1]	105048-3883 (48-3883,-)	105017-3290 (NP-DLLA157PN329)	105019-1510	0.07	18.1 {185}	-	23.1 ~ 24.1 {236 ~ 246} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HE1T	105118-7230 [8-97115-503-0]	105048-3830 (48-3830,A)	105017-1840 (NP-DLLA152PN184)	105019-1070	0.10	17.7 {180}	-	22.7 ~ 23.7 {231 ~ 241} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HE1T	105118-7231 [8-97115-503-0]	105048-3831 (48-3831,A)	105017-1840 (NP-DLLA152PN184)	105019-1070	0.10	17.7 {180}	-	22.7 ~ 23.7 {231 ~ 241} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HE1T	105118-7232 [8-97115-503-1]	105048-3831 (48-3831,A)	105017-1840 (NP-DLLA152PN184)	105019-1070	0.10	17.7 {180}	-	22.7 ~ 23.7 {231 ~ 241} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HE1-T	105118-7233 [8-97115-503-2]	105048-3832 (48-3832,A)	105017-3200 (NP-DLLA152PN320)	105019-1430	0.10	17.7 {180}	-	22.7 ~ 23.7 {231 ~ 241} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HG1T	105118-7340 [8-97200-570-0]	105048-3831 (48-3831,H)	105017-2310 (NP-DLLA149PN231)	105019-1160	0.04	18.1 {185}	-	22.1 ~ 23.0 {225 ~ 235} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4JB1-TC	105118-7371 [8-97192-333-1]	105048-2200 (48-2200,-)	105017-2380 (NP-DLLA145PN238)	105019-1260	0.04	19.5 {199}	-	27.5 ~ 28.4 {280 ~ 290} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4JB1-TC	105118-7372 [8-97192-333-2]	105048-2201 (48-2201,-)	105017-2380 (NP-DLLA145PN238)	105019-1260	0.04	19.5 {199}	-	27.5 ~ 28.5 {280 ~ 291} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4JB1-TC	105118-7373 [8-97382-945-0]	105048-2201 (48-2201,-)	105017-2380 (NP-DLLA145PN238)	105019-1260	0.04	19.5 {199}	-	27.5 ~ 28.5 {280 ~ 291} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4HG1-T	105118-7460 [5-86702-647-0]	105048-4280 (48-4280,-)	105017-2310 (NP-DLLA149PN231)	105019-1170	0.04	18.1 {185}	-	22.1 ~ 23.0 {225 ~ 235} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HG1-T	105118-7470 [5-86702-648-0]	105048-3832 (48-3832,E)	105017-3220 (NP-DLLA146PN322)	105019-1440	0.04	18.1 {185}	-	22.1 ~ 23.0 {225 ~ 235} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HG1-T	105118-7480 [5-86702-649-0]	105048-3832 (48-3832,B)	105017-3230 (NP-DLLA147PN323)	105019-1450	0.04	18.1 {185}	-	22.1 ~ 23.0 {225 ~ 235} [Actual pre-lift+0.05]	0.3	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (14/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
4HF1	105118-7491 [8-97209-832-1]	105048-4300 (48-4300,-)	105017-2320 (NP-DLLA152PN232)	-	0.04	18.0 {184}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HG1	105118-7501 [8-97209-833-3]	105048-4300 (48-4300,C)	105017-2640 (NP-DLLA152PN264)	-	0.04	18.0 {184}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HG1-T	105118-7530 [5-86705-240-0]	105048-3832 (48-3832,C)	105017-3240 (NP-DLLA142PN324)	105019-1460	0.04	18.1 {185}	-	22.1 ~ 23.0 {225 ~ 235} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HG1-T	105118-7540 [8-97200-570-1]	105048-4280 (48-4280,E)	105017-2500 (NP-DLLA143PN250)	105019-1210	0.04	18.1 {185}	-	22.1 ~ 23.0 {225 ~ 235} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HG1-T	105118-7541 [8-97200-570-2]	105048-4280 (48-4280,F)	105017-2650 (NP-DLLA143PN265)	105019-1211	0.04	18.1 {185}	-	22.1 ~ 23.0 {225 ~ 235} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HG1-T	105118-7542 [8-97200-570-3]	105048-3832 (48-3832,F)	105017-3250 (NP-DLLA143PN325)	105019-1470	0.04	18.1 {185}	-	22.1 ~ 23.0 {225 ~ 235} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HK1	105118-7551 [8-97209-863-1]	105048-4300 (48-4300,B)	105017-2520 (NP-DLLA147PN252)	105019-1600	0.04	18.0 {184}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4JA1L	105118-7720 [8-97217-642-0]	105048-2230 (48-2230,A)	105017-2700 (NP-DLLA154PN270)	105019-1540	0.04	19.1 {195}	-	26.0 ~ 27.0 {265 ~ 275} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4JA1L	105118-7721 [8-97217-642-0]	105048-2231 (48-2231,A)	105017-2700 (NP-DLLA154PN270)	105019-1540	0.04	19.1 {195}	-	26.0 ~ 27.0 {265 ~ 275} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4JA1L	105118-7722 [8-97382-946-0]	105048-2231 (48-2231,A)	105017-2700 (NP-DLLA154PN270)	105019-1540	0.04	19.1 {195}	-	26.0 ~ 27.0 {265 ~ 275} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4HF1	105118-7800 [8-97224-388-0]	105048-4300 (48-4300,E)	105017-2740 (NP-DLLA152PN274)	105019-1700	0.04	18.0 {184}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HG1	105118-7810 [8-97224-389-0]	105048-4300 (48-4300,F)	105017-2750 (NP-DLLA152PN275)	105019-1710	0.04	18.0 {184}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HG1	105118-7901 [8-97226-680-1]	105048-4300 (48-4300,L)	105017-2770 (NP-DLLA149PN277)	105019-1760	0.05	18.0 {184}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HF1	105118-7950 [8-97235-539-0]	105048-4300 (48-4300,H)	105017-2320 (NP-DLLA152PN232)	105019-1770	0.05	18.0 {184}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4HG1	105118-7960 [8-97235-540-0]	105048-4300 (48-4300,J)	105017-2640 (NP-DLLA152PN264)	105019-1780	0.05	18.0 {184}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISUZU (15/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
4HK1	105118-7970 [8-97235-541-0]	105048-4300 (48-4300,K)	105017-2520 (NP-DLLA147PN252)	105019-1790	0.055	18.0 {184}	-	23.0 ~ 24.0 {235 ~ 245} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4JG1	105118-8290 [8-97327-244-0]	105048-2300 (48-2300,-)	105017-2940 (NP-DLLA141PN294)	105019-1350	0.04	19.1 {195}	-	26.0 ~ 27.0 {265 ~ 275} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4JG1	105118-8291 [8-97388-738-0]	105048-2300 (48-2300,-)	105017-2940 (NP-DLLA141PN294)	105019-1350	0.04	19.1 {195}	-	26.0 ~ 27.0 {265 ~ 275} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4LE2,3LD2	105118-8340 [8-97351-986-0]	105048-2250 (48-2250,E)	105017-3420 (NP-DLLA152PN342)	105019-1890	0.06	16.7 {170}	-	26.0 ~ 27.0 {265 ~ 275} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4HG1-T	105118-8400 [8-97367-553-0]	105048-3832 (48-3832,G or H)	105017-3250 (NP-DLLA143PN325)	105019-1470	0.04	18.1 {185}	-	22.1 ~ 23.0 {225 ~ 235} [Actual pre-lift+0.05]	0.3	KBL2.4-P
4LE2X	105118-8480 [8-98030-570-0]	105048-2250 (48-2250,F)	105017-3750 (NP-DLLA152PN375)	105019-1950	0.06	16.7 {170}	-	26.0 ~ 27.0 {265 ~ 275} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4LE2X	105118-8481 [8-98030-570-1]	105048-2250 (48-2250,F)	105017-3750 (NP-DLLA152PN375)	105019-1950	0.06	16.7 {170}	-	26.0 ~ 27.0 {265 ~ 275} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4LE2X	105118-8540 [8-98092-821-0]	105048-2250 (48-2250,G)	105017-3810 (NP-DLLA152PN381)	105019-1960	0.06	16.7 {170}	-	26.0 ~ 27.0 {265 ~ 275} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4LE2X	105118-8541 [8-98092-821-1]	105048-2250 (48-2250,G)	105017-3810 (NP-DLLA152PN381)	105019-1960	0.06	16.7 {170}	-	26.0 ~ 27.0 {265 ~ 275} [Actual pre-lift+0.05]	0.25	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR NISSAN DIESEL (1/9)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
PE6T-III	105100-6410 [16600 96512]	105031-4630 (31-4630,A9)	105015-5800 (NP-DLLA143SN580)	-	0.08	17.7 {180}	28.7 ~ 29.3 {293 ~ 299}	-	0.35	KBL2.1-S
FD33T	105100-7030 [16600 90063]	105031-4610 (31-4610,-)	105015-5030 (NP-DLLA154SN503)	-	0.08	15.7 {160}	31.0 ~ 31.7 {316 ~ 323}	-	0.25	KBL2.1-S
PE6T-III	105100-7120 [16600-96513]	105031-4630 (31-4630,C1)	105015-6320 (NP-DLLA143SN632)	-	0.08	17.7 {180}	28.7 ~ 29.3 {293 ~ 299}	-	0.35	KBL2.1-S
PE6T-III	105100-7130 [16600 96514]	105031-4630 (31-4630,C2)	105015-6340 (NP-DLLA140SN634)	-	0.08	17.7 {180}	28.7~29.3 {293 ~ 299}	-	0.35	KBL2.1-S
RE8	105100-7140 [16600 97062]	105031-4790 (31-4790,B2)	105015-5450 (NP-DLLA148SN545)	-	0.15	14.7 {150}	28.2 ~ 29.0 {288 ~ 296}	-	0.3	KBL2.1-S
PE6	105100-7200 [16600 96516]	105031-4630 (31-4630,D)	105015-5290 (NP-DLLA152SN529)	-	0.1	14.7 {150}	24.2 ~ 24.9 {247 ~ 254}	-	0.25	KBL2.1-S
RF8 RF10	105100-7210 [16600 97063]	105031-4790 (31-4790,B5)	105015-6690 (NP-DLLA155SN669)	-	0.15	14.7 {150}	23.6 ~ 24.2 {241 ~ 247}	-	0.31	KBL2.1-S
RF8 RF10	105100-7240 [16600 97064]	105031-4790 (31-4790,B6)	105015-6810 (NP-DLLA152SN681)	-	0.08	14.7 {150}	25.3 ~ 25.9 {258 ~ 264}	-	0.37	KBL2.1-S
RE8 RE10	105100-7270 [16600 97066]	105031-4790 (31-4790,B7)	105015-6930 (NP-DLLA148SN693)	-	0.08	14.7 {150}	22.8 ~ 23.4 {233 ~ 239}	-	0.3	KBL2.1-S
GD6TA	105100-7410 [16600 Z0002]	105030-4090 (30-4090,G3)	105015-7240 (NP-DLLA149SN724)	-	0.08	17.7 {180}	26.5 ~ 27.1 {270 ~ 276}	-	0.4	KBL2.1-S
PF6T	105100-7450 [16600 96519]	105031-4630 (31-4630,FT)	105015-7330 (NP-DLLA146SN733)	-	0.08	17.7 {180}	26.5 ~ 27.1 {270 ~ 276}	-	0.35	KBL2.1-S
PF6TA	105100-7460 [16600 96560]	105031-4630 (31-4630,FA)	105015-7340 (NP-DLLA149SN734)	-	0.08	17.7 {180}	26.5 ~ 27.1 {270 ~ 276}	-	0.35	KBL2.1-S
PF6TB	105100-7470 [16600 96561]	105031-4630 (31-4630,FB)	105015-7350 (NP-DLLA143SN735)	-	0.08	17.7 {180}	26.5 ~ 27.1 {270 ~ 276}	-	0.4	KBL2.1-S
FE6TA	105100-7500 [16600 Z5571]	105030-4140 (30-4140,A)	105015-7430 (NP-DLLA155SN743)	-	0.12	17.7 {180}	24.3 ~ 24.9 {248 ~ 254}	-	0.3	KBL2.1-S
PE6H	105100-7540 [16600 96562]	105031-4630 (31-4630,C5)	105015-7490 (NP-DLLA153SN749)	-	0.08	14.7 {150}	22.8 ~ 23.4 {233 ~ 239}	-	0.3	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR NISSAN DIESEL (2/9)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
GD6TA	105100-7560 [16600 Z0003]	105030-4090 (30-4090,G4)	105015-7560 (NP-DLLA148SN756)	-	0.08	17.7 {180}	26.5 ~ 27.1 {270 ~ 276}	-	0.4	KBL2.1-S
RF8	105100-7610 [16600 97069]	105031-4790 (31-4790,B9)	105015-6810 (NP-DLLA152SN681)	-	0.13	17.7 {180}	24.1 ~ 24.7 {246 ~ 252}	-	0.37	KBL2.1-S
PE6H	105100-7670 [16600 96564]	105031-4630 (31-4630,C7)	105015-7810 (NP-DLLA150SN781)	-	0.08	14.7 {150}	22.8 ~ 23.4 {233 ~ 239}	-	0.35	KBL2.1-S
RF	105100-7700 [16600 97070]	105031-4790 (31-4790,E1)	105015-6810 (NP-DLLA152SN681)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.37	KBL2.1-S
RE8,10	105100-7710 [16600 97072]	105030-4190 (30-4190,E3)	105015-7880 (NP-DLLA155SN788)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.31	KBL2.1-S
RF8,10	105100-7720 [16600 97071]	105030-4190 (30-4190,E2)	105015-7890 (NP-DLLA155SN789)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.37	KBL2.1-S
PF6T	105100-7770 [16600 96565]	105030-4210 (30-4210,F1)	105015-8030 (NP-DLLA143SN803)	-	0.08	17.7 {180}	26.5 ~ 27.1 {270 ~ 276}	-	0.37	KBL2.1-S
PF6TA	105100-7780 [16600 96566]	105030-4210 (30-4210,F2)	105015-8040 (NP-DLLA149SN804)	-	0.08	17.7 {180}	26.5 ~ 27.1 {270 ~ 276}	-	0.37	KBL2.1-S
PF6TB	105100-7790 [16600 96567]	105030-4210 (30-4210,F3)	105015-8050 (NP-DLLA143SN805)	-	0.08	17.7 {180}	26.5 ~ 27.1 {270 ~ 276}	-	0.42	KBL2.1-S
FM6TA06	105100-7810 [16600 Z5575]	105030-4140 (30-4140,A1)	105015-8150 (NP-DLLA155SN815)	-	0.08	16.7 {170}	24.8 ~ 25.4 {253 ~ 259}	-	0.4	KBL2.1-S
NF6TA	105100-7820 [16600 95500]	105030-4190 (30-4190,N1)	105015-8160 (NP-DLLA157SN816)	-	0.08	17.7 {180}	26.5 ~ 27.1 {270 ~ 276}	-	0.35	KBL2.1-S
PF6	105100-7830 [16600 96568]	105030-4210 (30-4210,F4)	105015-8170 (NP-DLLA151SN817)	-	0.08	14.7 {150}	22.8 ~ 23.4 {233 ~ 239}	-	0.33	KBL2.1-S
PF6T	105100-7930 [16600 96569]	105030-4210 (30-4210,F5)	105015-8400 (NP-DLLA150SN840)	-	0.1	17.7 {180}	28.2 ~ 28.8 {288 ~ 294}	-	0.38	KBL2.1-S
PF6TB	105100-7940 [16600 96571]	105030-4210 (30-4210,F7)	105015-8410 (NP-DLLA148SN841)	-	0.1	17.7 {180}	28.2 ~ 28.8 {288 ~ 294}	-	0.36	KBL2.1-S
PF6H	105100-7950 [16600 96572]	105030-4210 (30-4210,F8)	105015-8420 (NP-DLLA153SN842)	-	0.08	14.7 {150}	22.8 ~ 23.4 {233 ~ 239}	-	0.33	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR NISSAN DIESEL (3/9)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
PF6T	105101-7030 [16600 96573]	105030-4210 (30-4210,F9)	105015-8540 (NP-DLLA150SN854)	-	0.10	17.7 {180}	28.2 ~ 28.8 {288 ~ 294}	-	0.36	KBL2.1-S
RE8	105101-7040 [16600 97073]	105030-4190 (30-4190,E4)	105015-8580 (NP-DLLA155SN858)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.31	KBL2.1-S
FE6TA	105101-7070 [16600 Z5603]	105030-4380 (30-4380,A3)	105015-8680 (NP-DLLA150SN868)	-	0.12	16.7 {170}	24.3 ~ 24.9 {248 ~ 254}	-	0.30	KBL2.1-S
FE6TA	105101-7120 [16600 Z5578]	105030-4140 (30-4140,A3)	105015-8680 (NP-DLLA150SN868)	-	0.12	16.7 {170}	24.3 ~ 24.9 {248 ~ 254}	-	0.30	KBL2.1-S
PF6	105101-7170 [16600 96574]	105030-4210 (30-4210,H1)	105015-8420 (NP-DLLA153SN842)	-	0.11	14.7 {150}	22.2 ~ 22.8 {226 ~ 232}	-	0.33	KBL2.1-S
D384X	105101-7210 [16600 96576]	105030-4210 (30-4210,H3)	105015-8840 (NP-DLLA143SN884)	-	0.08	17.7 {180}	28.7 ~ 29.4 {293 ~ 300}	-	0.40	KBL2.1-S
NE6TA	105101-7230 [16600 95016]	105030-4390 (30-4390,-)	105015-8870 (NP-DLLA140SN887)	-	0.12	16.7 {170}	24.3 ~ 24.9 {248 ~ 254}	-	0.30	KBL2.1-S
NE6TA	105101-7231 [16600 95017]	105030-4390 (30-4390,K)	105015-8870 (NP-DLLA140SN887)	-	0.12	16.7 {170}	24.3 ~ 24.9 {248 ~ 254}	-	0.30	KBL2.1-S
FE6TA	105101-7240 [16600 Z5604]	105030-4140 (30-4140,C)	105015-8880 (NP-DLLA145SN888)	-	0.12	16.7 {170}	24.3 ~ 24.9 {248 ~ 254}	-	0.30	KBL2.1-S
FE6TA	105101-7250 [16600 Z5605]	105030-4140 (30-4140,E)	105015-8910 (NP-DLLA145SN891)	-	0.13	16.7 {170}	24.3 ~ 24.9 {248 ~ 254}	-	0.30	KBL2.1-S
RF8	105101-7590 [16600 97101]	105030-4190 (30-4190,E9)	105015-9550 (NP-DLLA155SN955)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.40	KBL2.1-S
RF8	105101-7591 [16600-97101]	105030-4190 (30-4190,E9)	105015-9551 (NP-DLLA155SN955)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.40	KBL2.1-S
FE6TA	105101-7630 [16600 Z5610]	105030-4140 (30-4140,F)	105015-9600 (NP-DLLA150SN960)	-	0.13	16.7 {170}	24.1 ~ 24.8 {246 ~ 253}	-	0.3	KBL2.1-S
PF6TA	105101-7780 [16600-96607]	105030-4210 (30-4210,F6)	105015-8430 (NP-DLLA150SN843)	-	0.10	17.7 {180}	29.0 ~ 29.6 {296 ~ 302}	-	0.38	KBL2.1-S
PF6TA	105101-7930 [16600-96609]	105030-4210 (30-4210,H9)	105015-8770 (NP-DLLA150SN877)	-	0.10	17.7 {180}	29.0 ~ 29.6 {296 ~ 302}	-	0.37	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR NISSAN DIESEL (4/9)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
FE6TA	105101-7990 [16600-Z5664]	105030-4140 (30-4140,E2)	105015-8680 (NP-DLLA150SN868)	-	0.12	16.7 {170}	21.9 ~ 22.6 {223 ~ 230}	-	0.3	KBL2.1-S
FE6A	105101-8170 [16600-Z5669]	105030-4810 (30-4810,E7)	105025-1360 (NP-DLSLA155SM136)	-	0.08	16.7 {170}	22.8 ~ 23.4 {233 ~ 239}	-	0.3	KBL2.1-S
FE6TA	105101-8250 [16600-Z5670]	105030-4830 (30-4830,E8)	105025-1510 (NP-DLLA155SM151)	-	0.09	16.7 {170}	22.7 ~ 23.2 {231 ~ 237}	-	0.35	KBL2.1-S
FM6TA16	105101-8590 [16600-Z5716]	105030-4140 (30-4140,A7)	105025-3120 (NP-DLLA155SM312)	-	0.08	16.7 {170}	24.8 ~ 25.4 {253 ~ 259}	-	0.4	KBL2.1-S
RG8	105110-7040 [16600 97078]	105041-4020 (41-4020,E6)	105015-9240 (NP-DLLA152SN924)	105019-0240	0.07	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.37	KBL2.4-S
RF8TA	105110-7070 [16600 97079]	105041-4020 (41-4020,E7)	105015-9250 (NP-DLLA152SN925)	105019-0250	0.07	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.40	KBL2.4-S
RF8	105110-7131 [16600-97102]	105041-4020 (41-4020,J1)	105015-9611 (NP-DLLA160SN961)	105019-0451	0.07	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.35	KBL2.4-S
RF6	105110-7132 [16600-97114]	105041-4020 (41-4020,U1)	105015-9612 (NP-DLLA160SN961)	105019-0451	0.06	15.7 {160}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.35	KBL2.4-S
PF6T	105110-7152 [16600 96604]	105041-4060 (41-4060,H6)	105015-9632 (NP-DLLA161SN963)	105019-0471	0.06	18.6 {190}	-	23.6 ~ 24.6 {240 ~ 250} [Actual pre-lift+0.05]	0.40	KBL2.4-S
RH8	105110-7193 [16600 97116]	105041-3051 (41-3051,J9)	105025-0460 (NP-DLLA158SM046)	105019-0590	0.06	15.7 {160}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.40	KBL2.4-S
RH8	105110-7194 [16600-97117]	105041-3051 (41-3051,U3)	105025-0730 (NP-DLLA158SM073)	105019-0591	0.06	15.7 {160}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.40	KBL2.4-S
RG8	105110-7282 [16600 97115]	105041-4020 (41-4020,U2)	105025-0022 (NP-DLLA160SM002)	105019-0461	0.06	15.7 {160}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.35	KBL2.4-S
RE	105110-7290 [16600-97108]	105041-4020 (41-4020,E4)	105015-8580 (NP-DLLA155SN858)	105019-0630	0.07	17.7 {180}	-	22.6 ~ 23.5 {230 ~ 240} [Actual pre-lift+0.05]	0.40	KBL2.4-S
RF	105110-7300 [16600-97109]	105041-4020 (41-4020,E9)	105015-9550 (NP-DLLA155SN955)	105019-0640	0.07	17.7 {180}	-	22.6 ~ 23.5 {230 ~ 240} [Actual pre-lift+0.05]	0.40	KBL2.4-S
NF6T	105110-7312 [16600 95505]	105041-4020 (41-4020,N5)	105025-0032 (NP-DLLA156SM003)	105019-0481	0.06	18.6 {190}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.30	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR NISSAN DIESEL (5/9)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
RF8TA	105110-7442 [16600-97112]	105041-4020 (41-4020,J8)	105025-0192 (NP-DLLA156SM019)	105019-0600	0.06	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.40	KBL2.4-S
RG8	105110-7630 [16600-97119]	105041-4180 (41-4180,U5)	105025-1530 (NP-DLLA160SM153)	105019-0900	0.06	15.7 {160}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.35	KBL2.4-S
NF6TA	105110-7640 [16600-95506]	105041-4180 (41-4180,N6)	105025-1540 (NP-DLLA156SM154)	105019-0910	0.06	18.6 {190}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.30	KBL2.4-S
RH8,10	105110-7650 [16600-97160]	105041-3150 (41-3150,U6)	105025-0730 (NP-DLLA158SM073)	105019-0591	0.06	15.7 {160}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.40	KBL2.4-S
RH8,10	105110-7651 [16600-97160]	105041-3150 (41-3150,U6)	105025-0730 (NP-DLLA158SM073)	105019-0591	0.06	15.7 {160}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.40	KBL2.4-S
RH8F	105110-7660 [16600-97161]	105041-3150 (41-3150,U7)	105025-1550 (NP-DLLA158SM155)	105019-0920	0.06	15.7 {160}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.35	KBL2.4-S
RH8F	105110-7661 [16600-97161]	105041-3150 (41-3150,U7A)	105025-1550 (NP-DLLA158SM155)	105019-0920	0.06	15.7 {160}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.35	KBL2.4-S
RH8F	105110-7662 [16600-97161]	105041-3150 (41-3150,U7A)	105025-1550 (NP-DLLA158SM155)	105019-0920	0.06	15.7 {160}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.35	KBL2.4-S
PF6TA	105110-7670 [16600-96611]	105041-4190 (41-4190,K2)	105015-9632 (NP-DLLA161SN963)	105019-0471	0.06	18.6 {190}	-	23.6 ~ 24.6 {240 ~ 250} [Actual pre-lift+0.05]	0.40	KBL2.4-S
RF8	105110-7680 [16600-97118]	105041-4180 (41-4180,U4)	105025-1630 (NP-DLLA160SM163)	105019-0950	0.06	15.7 {160}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.35	KBL2.4-S
FE6TA	105110-7690 [16600-Z5672]	105041-4200 (41-4200,E9)	105025-1670 (NP-DLLA145SM167)	105019-0960	0.06	16.7 {170}	-	20.6 ~ 21.6 {210 ~ 220} [Actual pre-lift+0.05]	0.35	KBL2.4-S
RF8TA	105110-7700 [16600-97163]	105041-4180 (41-4180,U9)	105025-1840 (NP-DLLA156SM184)	105019-2000	0.06	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.40	KBL2.4-S
PF6TA	105110-7720 [16600-96614]	105041-4190 (41-4190,K5)	105015-9632 (NP-DLLA161SN963)	105019-0471	0.06	17.7 {180}	-	23.6 ~ 24.6 {240 ~ 250} [Actual pre-lift+0.05]	0.40	KBL2.4-S
PF6TB	105110-7770 [16600-Z5677]	105041-4200 (41-4200,F8)	105025-2190 (NP-DLLA145SM219)	105019-2230	0.06	16.7 {170}	-	20.6 ~ 21.6 {210 ~ 220} [Actual pre-lift+0.05]	0.35	KBL2.4-S
RG8	105110-7840 [16600-97167]	105041-4280 (41-4280,V4)	105025-2560 (NP-DLLA160SM256)	105019-2340	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.35	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR NISSAN DIESEL (6/9)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
RH8E,8	105110-7851 [16600-97168]	105041-3180 (41-3180,V5B)	105025-2580 (NP-DLLA158SM258)	105019-2350	0.06	13.7 {140}	-	17.7 ~ 18.7 {180 ~ 190} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8F	105110-7861 [16600-97169]	105041-3190 (41-3190,V6C)	105025-2590 (NP-DLLA158SM259)	105019-2360	0.06	13.7 {140}	-	17.7 ~ 18.7 {180 ~ 190} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RG8	105110-7870 [16600-97170]	105041-4280 (41-4280,V7)	105025-2610 (NP-DLLA155SM261)	105019-2370	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.35	KBL2.4-S
RH8F	105110-7901 [16600-97176]	105041-3180 (41-3180,X4C)	105025-2690 (NP-DLLA158SM269)	105019-2390	0.06	13.7 {140}	-	17.7 ~ 18.7 {180 ~ 190} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RG8	105110-7910 [16600-97175]	105041-4280 (41-4280,X3)	105025-2740 (NP-DLLA155SM274)	105019-2400	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.35	KBL2.4-S
RH8E,8	105110-7950 [16600-97173]	105041-3180 (41-3180,X1B)	105025-2580 (NP-DLLA158SM258)	105019-2350	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8E,8	105110-7951 [16600-97173]	105041-3180 (41-3180,X1B)	105025-2580 (NP-DLLA158SM258)	105019-2350	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8F	105110-7960 [16600-97174]	105041-3180 (41-3180,X2C)	105025-2830 (NP-DLLA158SM283)	105019-2440	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH10E	105110-7961 [16600-97174]	105041-3180 (41-3180,X2E)	105025-2830 (NP-DLLA158SM283)	105019-2440	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH10E	105110-7962 [16600-97174]	105041-3180 (41-3180,X2E)	105025-2830 (NP-DLLA158SM283)	105019-2440	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
PF6HTA	105110-7970 [16600-96617]	105041-4310 (41-4310,K9)	105025-2940 (NP-DLLA160SM294)	105019-2480	0.06	17.7 {180}	-	21.6 ~ 22.6 {220 ~ 230} [Actual pre-lift+0.05]	0.4	KBL2.4-S
PF6HTA	105110-7980 [16600-96618]	105041-4310 (41-4310,L0)	105025-2960 (NP-DLLA155SM296)	105019-2510	0.06	17.7 {180}	-	21.6 ~ 22.6 {220 ~ 230} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8	105110-7990 [16600-97177]	105041-3150 (41-3150,X5D)	105025-3000 (NP-DLLA158SM300)	105019-2530	0.06	15.7 {160}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8	105110-7991 [16600-97177]	105041-3150 (41-3150,X5D)	105025-3000 (NP-DLLA158SM300)	105019-2530	0.06	15.7 {160}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8F	105110-8000 [16600-97179]	105041-3180 (41-3180,X7C)	105025-2690 (NP-DLLA158SM269)	105019-2390	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR NISSAN DIESEL (7/9)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
RH8F	105110-8001 [16600-97179]	105041-3180 (41-3180,X7C)	105025-2690 (NP-DLLA158SM269)	105019-2390	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH10	105110-8010 [16600-97178]	105041-3180 (41-3180,X6E)	105025-3050 (NP-DLLA155SM305)	105019-2540	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH10	105110-8011 [16600-97178]	105041-3180 (41-3180,X6E)	105025-3050 (NP-DLLA155SM305)	105019-2540	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
PF6HTA	105110-8020 [---]	105041-4190 (41-4190,L1)	105025-2170 (NP-DLLA160SM217)	105019-2550	0.06	17.7 {180}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8E,8	105110-8060 [16600-97200]	105041-3180 (41-3180,X8B)	105025-3170 (NP-DLLA156SM317)	105019-2590	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8E,8	105110-8061 [16600-97200]	105041-3180 (41-3180,X8B)	105025-3170 (NP-DLLA156SM317)	105019-2590	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8E,8	105110-8062 [16600-ND000]	105041-3180 (41-3180,Y2B)	105025-3740 (NP-DLLA156SM374)	105019-2591	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8F	105110-8070 [16600-97201]	105041-3180 (41-3180,X9C)	105025-3180 (NP-DLLA156SM318)	105019-2600	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8F	105110-8071 [16600-97201]	105041-3180 (41-3180,X9C)	105025-3180 (NP-DLLA156SM318)	105019-2600	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH8F	105110-8072 [16600-ND001]	105041-3180 (41-3180,Y3C)	105025-3750 (NP-DLLA156SM375)	105019-2601	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH10E,10F	105110-8090 [16600-97202]	105041-3180 (41-3180,Y1E)	105025-3240 (NP-DLLA155SM324)	105019-2640	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH10E,10F	105110-8091 [16600-97202]	105041-3180 (41-3180,Y1E)	105025-3240 (NP-DLLA155SM324)	105019-2640	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
RH10E,10F	105110-8092 [16600-ND002]	105041-3180 (41-3180,Y4E)	105025-3760 (NP-DLLA155SM376)	105019-2641	0.06	15.7 {160}	-	19.6 ~ 20.6 {200 ~ 210} [Actual pre-lift+0.05]	0.4	KBL2.4-S
PF6HTA,TB	105110-8100 [16600-96662]	105041-4310 (41-4310,L4)	105025-3260 (NP-DLLA155SM326)	105019-2650	0.06	17.7 {180}	-	21.6 ~ 22.6 {220 ~ 230} [Actual pre-lift+0.05]	0.4	KBL2.4-S
BD30	105118-7210 [16600-7T400]	105048-4010 (48-4010,-)	105017-1800 (NP-DLLA157PN180)	105019-1140	0.08	14.2 {145}	11.4 ~ 12.4 ⁴ {116 ~ 126}	-	0.25	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR NISSAN DIESEL (8/9)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
MD92	105118-7251 [16600-Z6003]	105048-4020 (48-4020,M3)	105017-1760 (NP-DLLA162PN176)	105019-1090	0.06	17.7 {180}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.28	KBL2.4-P
MD92	105118-7252 [16600-Z6003]	105048-4020 (48-4020,M4)	105017-1760 (NP-DLLA162PN176)	105019-1090	0.06	16.7 {170}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.28	KBL2.4-P
FE6E	105118-7262 [16600-Z5663]	105048-3970 (48-3970,E1)	105017-1980 (NP-DLLA155PN198)	105019-1080	0.06	17.7 {180}	-	21.7 ~ 22.7 {221 ~ 231} [Actual pre-lift+0.05]	0.28	KBL2.4-P
MD92	105118-7290 [16600-Z6004]	105048-4020 (48-4020,M5)	105017-2160 (NP-DLLA162PN216)	105019-1110	0.06	16.7 {170}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.28	KBL2.4-P
FE6E	105118-7300 [16600-Z5667]	105048-4070 (48-4070,E5)	105017-1980 (NP-DLLA155PN198)	105019-1080	0.06	17.7 {180}	-	21.7 ~ 22.7 {221 ~ 231} [Actual pre-lift+0.05]	0.28	KBL2.4-P
FE6E	105118-7301 [16600-Z5667]	105048-4071 (48-4071,E5)	105017-1980 (NP-DLLA155PN198)	105019-1080	0.06	17.7 {180}	-	21.7 ~ 22.7 {221 ~ 231} [Actual pre-lift+0.05]	0.28	KBL2.4-P
MD92	105118-7310 [16600-Z6005]	105048-4080 (48-4080,M6)	105017-2160 (NP-DLLA162PN216)	105019-1110	0.06	16.7 {170}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.28	KBL2.4-P
MD92	105118-7311 [16600-Z6005]	105048-4081 (48-4081,M6)	105017-2160 (NP-DLLA162PN216)	105019-1110	0.06	16.7 {170}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.28	KBL2.4-P
FE6A	105118-7400 [16600-Z5700]	105048-4180 (48-4180,G2)	105017-9080 (NP-DSLA155PN908)	105019-1560	0.06	15.7 {160}	-	21.7 ~ 22.7 {221 ~ 231} [Actual pre-lift+0.05]	0.35	KBL2.4-P
FE6E	105118-7410 [16600-Z5701]	105048-4190 (48-4190,G3)	105017-2390 (NP-DLLA155PN239)	105019-1570	0.06	15.7 {160}	-	21.7 ~ 22.7 {221 ~ 231} [Actual pre-lift+0.05]	0.30	KBL2.4-P
FE6ET1	105118-7420 [16600-Z5702]	105048-4190 (48-4190,G4)	105017-2400 (NP-DLLA155PN240)	105019-1580	0.06	16.7 {170}	-	20.7 ~ 21.7 {211 ~ 221} [Actual pre-lift+0.05]	0.30	KBL2.4-P
MD92	105118-7430 [16600-Z6006]	105048-4200 (48-4200,M7)	105017-2410 (NP-DLLA155PN241)	105019-1590	0.06	14.7 {150}	-	18.6 ~ 19.6 {190 ~ 200} [Actual pre-lift+0.05]	0.30	KBL2.4-P
FE6TI	105118-7570 [16600-Z5704]	105048-4190 (48-4190,H0)	105017-9090 (NP-DSLA150PN909)	105019-1610	0.06	16.7 {170}	-	20.7 ~ 21.7 {211 ~ 221} [Actual pre-lift+0.05]	0.35	KBL2.4-P
FE6A	105118-7580 [16600-Z5706]	105048-4180 (48-4180,H1)	105017-9100 (NP-DSLA155PN910)	105019-1620	0.06	14.7 {150}	-	18.7 ~ 19.7 {191 ~ 201} [Actual pre-lift+0.05]	0.35	KBL2.4-P
FE6F	105118-7590 [16600-Z5707]	105048-4190 (48-4190,H2)	105017-2560 (NP-DLLA155PN256)	105019-1630	0.06	14.7 {150}	-	18.7 ~ 19.7 {191 ~ 201} [Actual pre-lift+0.05]	0.3	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR NISSAN DIESEL (9/9)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
FE6TA	105118-7600 [16600-Z5708]	105048-4190 (48-4190,H3)	105017-9110 (NP-DSLA150PN911)	105019-1640	0.06	16.7 {170}	-	20.7 ~ 21.7 {211 ~ 221} [Actual pre-lift+0.05]	0.35	KBL2.4-P
MD92	105118-7610 [16600-Z6007]	105048-4200 (48-4200,M8)	105017-2570 (NP-DLLA155PN257)	105019-1650	0.06	14.7 {150}	-	18.7 ~ 19.7 {191 ~ 201} [Actual pre-lift+0.05]	0.3	KBL2.4-P
FE6A	105118-7680 [16600-Z5710]	105048-4350 (48-4350,H5)	105017-9100 (NP-DSLA155PN910)	105019-1660	0.06	14.7 {150}	-	18.7 ~ 19.7 {191 ~ 201} [Actual pre-lift+0.05]	0.35	KBL2.4-P
FE6F	105118-7690 [16600-Z5711]	105048-4360 (48-4360,H6)	105017-2560 (NP-DLLA155PN256)	105019-1670	0.06	14.7 {150}	-	18.7 ~ 19.7 {191 ~ 201} [Actual pre-lift+0.05]	0.3	KBL2.4-P
FE6TA	105118-7700 [16600-Z5712]	105048-4360 (48-4360,H7)	105017-9160 (NP-DSLA155PN916)	105019-1680	0.06	16.7 {170}	-	20.7 ~ 21.7 {211 ~ 221} [Actual pre-lift+0.05]	0.35	KBL2.4-P
MD92	105118-7710 [16600-Z6008]	105048-4370 (48-4370,M9)	105017-2710 (NP-DLLA155PN271)	105019-1690	0.06	14.7 {150}	-	18.7 ~ 19.7 {191 ~ 201} [Actual pre-lift+0.05]	0.3	KBL2.4-P
FE6TI	105118-7850 [16600-Z5714]	105048-4360 (48-4360,H9)	105017-9180 (NP-DSLA152PN918)	105019-1720	0.06	16.7 {170}	-	20.7 ~ 21.7 {211 ~ 221} [Actual pre-lift+0.05]	0.35	KBL2.4-P
FD46TA	105118-7860 [16600-31D01]	105048-4400 (48-4400,A0)	105017-9190 (NP-DSLA147PN919)	105019-1730	0.06	16.7 {170}	11.6 ~ 12.6 ⁴ {118 ~ 128}	-	0.32	KBL2.4-P
FE6F	105118-7870 [16600-Z5713]	105048-4360 (48-4360,H8)	105017-2810 (NP-DLLA150PN281)	105019-1740	0.06	14.7 {150}	-	18.7 ~ 19.7 {191 ~ 201} [Actual pre-lift+0.05]	0.3	KBL2.4-P
FE6F	105118-7871 [16600-Z5713]	105048-4360 (48-4360,H8)	105017-3520 (NP-DLLA150PN352)	105019-1820	0.06	14.7 {150}	-	18.7 ~ 19.7 {191 ~ 201} [Actual pre-lift+0.05]	0.3	KBL2.4-P
FE6A	105118-7890 [16600-Z5715]	105048-4350 (48-4350,K0)	105017-9200 (NP-DSLA153PN920)	105019-1750	0.06	14.7 {150}	-	18.7 ~ 19.7 {191 ~ 201} [Actual pre-lift+0.05]	0.35	KBL2.4-P
FE6TA, TB	105118-8140 [16600-Z5761]	105048-4360 (48-4360,K2)	105017-9290 (NP-DSLA152PN929)	105019-1870	0.06	16.7 {170}	-	20.7 ~ 21.7 {211 ~ 221} [Actual pre-lift+0.05]	0.5	KBL2.4-P
FE6	105118-8330 [16600-4K001]	105048-4350 (48-4350,K3)	105017-9340 (NP-DSLA153PN934)	105019-1520	0.06	14.7 {150}	-	18.7~19.7 {191 ~ 201} [Actual pre-lift+0.05]	0.3	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR MITSUBISHI (1/11)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
8DC9, 81	105100-5530 [ME066390]	105031-4500 (31-4500,A)	105015-5070 (NP-DLLA160S325N507)	-	0.1	17.7 {180}	34.4 ~ 35.0 {351 ~ 358}	-	0.3	KBL2.1-S
8DC82, 8DC91 8DC10	105100-5570 [ME066435]	105031-4500 (31-4500,C)	105015-5070 (NP-DLLA160S325N507)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.3	KBL2.1-S
6D22T0 6D22T1	105100-5720 [ME056275]	105031-4530 (31-4530,J)	105015-5330 (NP-DLLA154SN533)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.35	KBL2.1-S
6D22T	105100-5730 [ME056276]	105031-4530 (31-4530,L)	105015-5340 (NP-DLLA150SN534)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.4	KBL2.1-S
6D22	105100-5820 [ME056329]	105031-4530 (31-4530,U)	105015-5390 (NP-DLLA160SN539)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.35	KBL2.1-S
8DC9T	105100-5830 [ME066499]	105031-4500 (31-4500,T)	105015-5440 (NP-DLLA157SN544)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.35	KBL2.1-S
6D22T	105100-5880 [ME056357]	105031-4530 (31-4530,X)	105015-5480 (NP-DLLA150SN548)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.4	KBL2.1-S
8DC9T	105100-5890 [ME066565]	105031-4500 (31-4500,Y)	105015-5510 (NP-DLLA157SN551)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.35	KBL2.1-S
6D22T	105100-7110 [ME056473]	105031-4530 (31-4530,M)	105015-6150 (NP-DLLA150SN615)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.4	KBL2.1-S
8DC11	105100-7150 [ME060110]	105031-4500 (31-4500,Q)	105015-6580 (NP-DLLA160SN658)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.35	KBL2.1-S
6D22T0 6D22T1	105100-7230 [ME056542]	105031-4530 (31-4530,B)	105015-6710 (NP-DLLA160SN671)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.35	KBL2.1-S
6D22TC	105100-7340 [ME050807]	105031-4530 (31-4530,S)	105015-6370 (NP-DLLA150SN637)	-	0.08	17.7 {180}	25.3 ~ 25.9 {258 ~ 264}	-	0.4	KBL2.1-S
6D22T0 6D22T1	105100-7400 [ME6H6029]	105030-4080 (30-4080,BB)	105015-6710 (NP-DLLA160SN671)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.35	KBL2.1-S
6D16WT	105100-7420 [ME047446]	105030-4110 (30-4110,V)	105015-7230 (NP-DLLA150SN723)	-	0.08	17.7 {180}	25.3 ~ 25.9 {258 ~ 264}	-	0.3	KBL2.1-S
8DC82, 8DC91 8DC10	105100-7430 [ME066435]	105031-4500 (31-4500,C)	105015-7310 (NP-DLLA160SN731)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.3	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR MITSUBISHI (2/11)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
8DC8	105100-7431 [ME066435]	105030-4980 (30-4980,C)	105015-7310 (NP-DLLA160SN731)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.3	KBL2.1-S
8DC11	105100-7440 [ME6H6045B]	105031-4500 (31-4500,Q4)	105015-7320 (NP-DLLA160SN732)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.35	KBL2.1-S
6D16 6D14T	105100-7510 [ME076087]	105030-4110 (30-4110,K)	105015-7440 (NP-DLLA160SN744)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.3	KBL2.1-S
6D15T2	105100-7520 [ME076088]	105030-4110 (30-4110,L)	105015-7450 (NP-DLLA155SN745)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.3	KBL2.1-S
6D14T	105100-7550 [ME076205]	105030-4110 (30-4110,G)	105015-7550 (NP-DLLA155SN755)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.3	KBL2.1-S
6D14T	105100-7580 [ME076089]	105030-4110 (30-4110,T)	105015-7610 (NP-DLLA150SN761)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.3	KBL2.1-S
6D22	105100-7630 [ME7H6043]	105031-4530 (31-4530,U4)	105015-7800 (NP-DLLA155SN780)	-	0.1	17.7 {180}	23.8 ~ 24.4 {243 ~ 249}	-	0.35	KBL2.1-S
8DC9T0	105100-7650 [ME7H6028]	105031-4500 (31-4500,YY)	105015-7770 (NP-DLLA157SN777)	-	0.1	17.7 {180}	24.2 ~ 24.8 {247 ~ 253}	-	0.35	KBL2.1-S
6D22T7	105100-7660 [ME056731]	105031-4530 (31-4530,F)	105015-7790 (NP-DLLA150SN779)	-	0.1	17.7 {180}	24.2 ~ 24.8 {247 ~ 253}	-	0.4	KBL2.1-S
6D22T7	105100-7661 [ME056731]	105041-4420 (41-4420,F)	105015-7790 (NP-DLLA150SN779)	-	0.1	17.7 {180}	24.2 ~ 24.8 {247 ~ 253}	-	0.4	KBL2.1-S
6D22T2	105100-7730 [ME056804]	105031-4530 (31-4530,G)	105015-6150 (NP-DLLA150SN615)	-	0.12	17.7 {180}	27.4 ~ 27.9 {279 ~ 285}	-	0.4	KBL2.1-S
6D22T7	105100-7740 [ME056805]	105031-4530 (31-4530,P)	105015-7790 (NP-DLLA150SN779)	-	0.12	17.7 {180}	27.4 ~ 27.9 {279 ~ 285}	-	0.4	KBL2.1-S
6D16	105100-7760 [ME076465]	105030-4110 (30-4110,C)	105015-6170 (NP-DLLA157SN617)	-	0.1	17.7 {180}	24.2 ~ 24.8 {247 ~ 253}	-	0.3	KBL2.1-S
E57X	105100-7860 [ME120371]	105030-4250 (30-4250,F)	105015-8220 (NP-DLLA160SN822)	-	0.08	17.7 {180}	28.3 ~ 28.9 {289 ~ 295}	-	0.4	KBL2.1-S
6D40T	105100-7861 [ME120371]	105030-4250 (30-4250,F)	105015-8221 (NP-DLLA160SN822)	-	0.08	17.7 {180}	28.3 ~ 28.9 {289 ~ 295}	-	0.4	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR MITSUBISHI (3/11)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6D22	105100-7870 [ME056817]	105031-4530 (31-4530,K)	105015-8230 (NP-DLLA163SN823)	-	0.08	17.7 {180}	24.7 ~ 25.3 {252 ~ 258}	-	0.3	KBL2.1-S
6D22T2	105100-7880 [ME056818]	105031-4530 (31-4530,R)	105015-7790 (NP-DLLA150SN779)	-	0.08	17.7 {180}	28.3 ~ 28.9 {289 ~ 295}	-	0.4	KBL2.1-S
8DC9, 10	105100-7890 [ME091246]	105031-4500 (31-4500,H)	105015-8270 (NP-DLLA160SN827)	-	0.1	17.7 {180}	26.2 ~ 26.9 {267 ~ 274}	-	0.3	KBL2.1-S
8DC11	105100-7900 [ME091247]	105031-4500 (31-4500,L)	105015-8280 (NP-DLLA160SN828)	-	0.1	17.7 {180}	26.2 ~ 26.9 {267 ~ 274}	-	0.35	KBL2.1-S
6D22	105100-7910 [ME056837]	105031-4530 (31-4530,N)	105015-8310 (NP-DLLA163SN831)	-	0.08	17.7 {180}	30.7 ~ 31.3 {313 ~ 319}	-	0.3	KBL2.1-S
6D22T2, 6	105100-7920 [ME056838]	105031-4530 (31-4530,V)	105015-8320 (NP-DLLA150SN832)	-	0.08	17.7 {180}	28.3 ~ 28.9 {289 ~ 295}	-	0.4	KBL2.1-S
8DC10	105100-7960 [ME091275]	105031-4500 (31-4500,N)	105015-8440 (NP-DLLA160SN844)	-	0.1	17.7 {180}	26.2 ~ 26.9 {267 ~ 274}	-	0.35	KBL2.1-S
8DC11	105100-7970 [ME091276]	105031-4500 (31-4500,R)	105015-8450 (NP-DLLA160SN845)	-	0.1	17.7 {180}	26.2 ~ 26.9 {267 ~ 274}	-	0.35	KBL2.1-S
8DC11	105100-7971 [ME091276]	105030-4510 (30-4510,R)	105015-9440 (NP-DLLA157SN944)	-	0.1	17.7 {180}	26.2 ~ 26.9 {267 ~ 274}	-	0.35	KBL2.1-S
6D15T2	105100-7990 [ME076565]	105030-4290 (30-4290,1A)	105015-8470 (NP-DLLA154SN847)	-	0.1	17.7 {180}	24.2 ~ 24.8 {247 ~ 253}	-	0.3	KBL2.1-S
6D16	105101-7000 [ME076566]	105030-4290 (30-4290,2A)	105015-8480 (NP-DLLA157SN848)	-	0.08	17.7 {180}	28.3 ~ 28.9 {289 ~ 295}	-	0.3	KBL2.1-S
8DC9T2	105101-7010 [ME091308]	105031-4500 (31-4500,S)	105015-8500 (NP-DLLA160SN850)	-	0.1	17.7 {180}	26.2 ~ 26.9 {267 ~ 274}	-	0.4	KBL2.1-S
6D40T	105101-7020 [ME120517]	105030-4250 (30-4250,X)	105015-8510 (NP-DLLA160SN851)	-	0.08	17.7 {180}	28.3 ~ 28.9 {289 ~ 295}	-	0.4	KBL2.1-S
6D40T1	105101-7090 [ME120606]	105030-4370 (30-4370,0)	105015-8220 (NP-DLLA160SN822)	-	0.08	17.7 {180}	28.3 ~ 28.9 {289 ~ 295}	-	0.4	KBL2.1-S
6D40T1	105101-7091 [ME120606]	105030-4371 (30-4371,0)	105015-8221 (NP-DLLA160SN822)	-	0.08	17.7 {180}	30.5 ~ 31.3 {313 ~ 319}	-	0.4	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR MITSUBISHI (4/11)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6D15T2	105101-7130 [ME076614]	105030-4290 (30-4290,1B)	105015-8470 (NP-DLLA154SN847)	-	0.08	16.7 {170}	24.7 ~ 25.3 {252 ~ 258}	-	0.3	KBL2.1-S
6D16	105101-7140 [ME076615]	105030-4290 (30-4290,2B)	105015-8480 (NP-DLLA157SN848)	-	0.08	15.7 {160}	24.7 ~ 25.3 {252 ~ 258}	-	0.3	KBL2.1-S
6D17	105101-7291 [ME076742]	105030-3420 (30-3420,2E)	105015-8930 (NP-DLLA160SN893)	105019-0080	0.06	15.7 {160}	-	21.6 ~ 22.6 {220 ~ 230} [Actual pre-lift+0.05]	0.3	KBL2.3-S
8M20	105101-7310 [ME160284]	105030-4250 (30-4250,6)	105015-8950 (NP-DLLA160SN895)	-	0.12	17.7 {180}	29.6 ~ 30.3 {302 ~ 309}	-	0.4	KBL2.1-S
8M20	105101-7410 [ME160666]	105030-4450 (30-4450,3)	105015-8950 (NP-DLLA160SN895)	-	0.12	17.7 {180}	29.6 ~ 30.3 {302 ~ 309}	-	0.4	KBL2.1-S
8M20, 20D	105101-7411 [ME160666]	105030-4451 (30-4451,3)	105015-9400 (NP-DLLA157SN940)	-	0.12	17.7 {180}	29.6 ~ 30.3 {302 ~ 309}	-	0.4	KBL2.1-S
6D40T1, T2	105101-7420 [ME120897]	105030-4460 (30-4460,4)	105015-8220 (NP-DLLA160SN822)	-	0.08	17.7 {180}	28.3 ~ 28.9 {289 ~ 295}	-	0.4	KBL2.1-S
6D40T1	105101-7421 [ME120897]	105030-4461 (30-4461,4)	105015-8221 (NP-DLLA160SN822)	-	0.08	17.7 {180}	30.5 ~ 31.3 {313 ~ 319}	-	0.4	KBL2.1-S
8DC11	105101-7520 [ME092857]	105031-4500 (31-4500,5)	105015-9440 (NP-DLLA157SN944)	-	0.1	17.7 {180}	26.2 ~ 26.9 {267 ~ 274}	-	0.35	KBL2.1-S
6D16T	105101-7530 [ME047328]	105030-4290 (30-4290,5C)	105015-6230 (NP-DLLA150SN623)	-	0.08	16.7 {170}	24.7 ~ 25.3 {252 ~ 258}	-	0.30	KBL2.1-S
8M20	105101-7600 [ME161080]	105030-4451 (30-4451,-)	105015-9400 (NP-DLLA157SN940)	-	0.1	17.7 {180}	29.6 ~ 30.3 {302 ~ 309}	-	0.4	KBL2.1-S
8M20I	105101-7610 [ME3H6015]	105030-4451 (30-4451,-)	105015-9400 (NP-DLLA157SN940)	-	0.08 ~ 0.10	17.7 {180}	29.6 ~ 30.3 {302 ~ 309}	-	0.40	KBL2.1-S
8DC11	105101-7640 [ME093276]	105030-4510 (30-4510,9)	105015-9800 (NP-DLLA157SN980)	-	0.1	17.7 {180}	26.2 ~ 26.9 {267 ~ 274}	-	0.35	KBL2.1-S
6D22T3	105101-7690 [ME150862]	105030-4580 (30-4580,Z)	105015-9870 (NP-DLLA150SN987)	-	0.12	17.7 {180}	27.4 ~ 28.0 {279 ~ 285}	-	0.4	KBL2.1-S
8DC9T	105101-8150 [ME098757]	105031-4500 (31-4500,6D)	105025-1220 (NP-DLLA150SM122)	-	0.1	17.7 {180}	26.2 ~ 26.9 {267 ~ 274}	-	0.4	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR MITSUBISHI (5/11)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6D15T2	105110-7050 [ME076953]	105041-3020 (41-3020,1D)	105015-9150 (NP-DLLA160SN915)	105019-0220	0.08	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D15T3	105110-7051 [ME076953]	105041-3030 (41-3030,1D)	105015-9150 (NP-DLLA160SN915)	105019-0220	0.08	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D15T3	105110-7052 [ME076953]	105041-3030 (41-3030,1D)	105015-9151 (NP-DLLA160SN915)	105019-0220	0.08	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D15T3	105110-7053 [ME076953]	105041-3031 (41-3031,1D)	105015-9151 (NP-DLLA160SN915)	105019-0220	0.08	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16	105110-7060 [ME076952]	105041-3020 (41-3020,2G)	105015-8930 (NP-DLLA160SN893)	105019-0230	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16, 17	105110-7061 [ME076952]	105041-3030 (41-3030,2G)	105015-8930 (NP-DLLA160SN893)	105019-0230	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16, 17	105110-7062 [ME076952]	105041-3031 (41-3031,2G)	105015-8930 (NP-DLLA160SN893)	105019-0230	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D22T6	105110-7080 [ME150479]	105041-4030 (41-4030,6)	105015-9540 (NP-DLLA150SN954)	105019-0320	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6D22T6	105110-7081 [ME150479]	105041-4130 (41-4130,6)	105015-9540 (NP-DLLA150SN954)	105019-0320	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6D22T6	105110-7082 [ME150479]	105041-4131 (41-4131,6)	105015-9540 (NP-DLLA150SN954)	105019-0320	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6D17	105110-7182 [ME075761]	105041-3030 (41-3030,2L)	105025-0510 (NP-DLLA157SM051)	105019-0371	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D17-2	105110-7183 [ME075761]	105041-3031 (41-3031,2L)	105025-0510 (NP-DLLA157SM051)	105019-0371	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D22T2	105110-7250 [ME150945]	105041-4080 (41-4080,2A)	105015-9900 (NP-DLLA154SN990)	105019-0420	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D22T2	105110-7251 [ME150945]	105041-4110 (41-4110,2A)	105015-9900 (NP-DLLA154SN990)	105019-0420	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D22T2	105110-7252 [ME150945]	105041-4111 (41-4111,2A)	105015-9900 (NP-DLLA154SN990)	105019-0420	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR MITSUBISHI (6/11)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
8DC9T	105110-7330 [ME093528]	105041-4050 (41-4050,6A)	105025-0060 (NP-DLLA154SM006)	105019-0510	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8DC9T	105110-7331 [ME093528]	105041-4120 (41-4120,6A)	105025-0060 (NP-DLLA154SM006)	105019-0510	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8DC9T	105110-7332 [ME093528]	105041-4120 (41-4120,6A)	105025-0060 (NP-DLLA154SM006)	105019-0510	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8DC9T2	105110-7333 [ME093528]	105041-4121 (41-4121,6A)	105025-0060 (NP-DLLA154SM006)	105019-0510	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D40T1	105110-7340 [ME121324]	105041-4100 (41-4100,E)	105025-0100 (NP-DLLA160SM010)	105019-0400	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D40T1	105110-7341 [ME121324]	105041-4101 (41-4101,E)	105025-0100 (NP-DLLA160SM010)	105019-0400	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D40T	105110-7350 [ME121325]	105041-4100 (41-4100,F)	105025-0110 (NP-DLLA160SM011)	105019-0410	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D40T3	105110-7351 [ME121325]	105041-4101 (41-4101,F)	105025-0110 (NP-DLLA160SM011)	105019-0410	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16T, 6D17	105110-7360 [ME075583]	105041-3110 (41-3110,W)	105025-0040 (NP-DLLA160SM004)	105019-0340	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
E81XT1	105110-7370 [ME151161]	105041-4110 (41-4110,2B)	105025-0160 (NP-DLLA157SM016)	105019-0330	0.07	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
E81XT1	105110-7371 [ME151161]	105041-4111 (41-4111,2B)	105025-0160 (NP-DLLA157SM016)	105019-0330	0.07	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8DC9, 11	105110-7381 [ME093732]	105041-4120 (41-4120,5A)	105025-0250 (NP-DLLA154SM025)	105019-0350	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8DC9, 11	105110-7382 [ME093732]	105041-4121 (41-4121,5A)	105025-0250 (NP-DLLA154SM025)	105019-0350	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8M20	105110-7390 [ME161933]	105041-4100 (41-4100,A)	105025-0210 (NP-DLLA160SM021)	105019-0380	0.06	15.7 {160}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8M20	105110-7391 [ME161933]	105041-4101 (41-4101,A)	105025-0210 (NP-DLLA160SM021)	105019-0380	0.06	15.7 {160}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR MITSUBISHI (7/11)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
8M21	105110-7400 [ME161934]	105041-4100 (41-4100,D)	105025-0210 (NP-DLLA160SM021)	105019-0500	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8M21	105110-7401 [ME161934]	105041-4101 (41-4101,D)	105025-0210 (NP-DLLA160SM021)	105019-0500	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
E81X	105110-7410 [ME151252]	105041-4110 (41-4110,1A)	105025-0230 (NP-DLLA157SM023)	105019-0430	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
E81X	105110-7411 [ME151252]	105041-4111 (41-4111,1A)	105025-0230 (NP-DLLA157SM023)	105019-0430	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16T	105110-7420 [ME075659]	105041-3120 (41-3120,5G)	105015-9880 (NP-DLLA145SN988)	105019-0650	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-S
6D16T	105110-7430 [ME075660]	105041-3120 (41-3120,5H)	105015-9890 (NP-DLLA145SN989)	105019-0660	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-S
8DC9	105110-7450 [ME093733]	105041-4120 (41-4120,5B)	105025-0250 (NP-DLLA154SM025)	105019-0620	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8DC9	105110-7451 [ME093733]	105041-4121 (41-4121,5B)	105025-0250 (NP-DLLA154SM025)	105019-0620	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16	105110-7460 [ME075788]	105041-3030 (41-3030,2J)	105025-0540 (NP-DLLA157SM054)	105019-0361	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16	105110-7461 [ME075788]	105041-3031 (41-3031,2J)	105025-0540 (NP-DLLA157SM054)	105019-0361	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D24T	105110-7480 [ME158082]	105041-4130 (41-4130,2D)	105025-0560 (NP-DLLA160SM056)	105019-2090	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6D24T	105110-7481 [ME158082]	105041-4131 (41-4131,2D)	105025-0560 (NP-DLLA160SM056)	105019-2090	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6D24T	105110-7490 [ME158153]	105041-4130 (41-4130,2E)	105025-0810 (NP-DLLA157SM081)	105019-2100	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6D24T	105110-7491 [ME158153]	105041-4131 (41-4131,2E)	105025-0810 (NP-DLLA157SM081)	105019-2100	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.4	KBL2.4-S
8DC9	105110-7500 [ME094539]	105041-4120 (41-4120,D7)	105025-1030 (NP-DLLA151SM103)	105019-2110	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR MITSUBISHI (8/11)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
8DC9	105110-7502 [ME094539]	105041-4121 (41-4121,D7)	105025-1030 (NP-DLLA151SM103)	105019-2110	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D24	105110-7510 [ME158200]	105041-4130 (41-4130,1B)	105025-1070 (NP-DLLA157SM107)	105019-0680	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D24	105110-7511 [ME158200]	105041-4131 (41-4131,1B)	105025-1070 (NP-DLLA157SM107)	105019-0680	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16 6D16T	105110-7520 [ME072745]	105041-3030 (41-3030,5I)	105025-1160 (NP-DLLA150SM116)	105019-0690	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16 6D16T	105110-7521 [ME072745]	105041-3030 (41-3030,5M)	105025-1160 (NP-DLLA150SM116)	105019-0690	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16 6D16T	105110-7522 [ME072745]	105041-3031 (41-3031,5M)	105025-1160 (NP-DLLA150SM116)	105019-0690	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D24T	105110-7550 [ME158263]	105041-4130 (41-4130,2F)	105025-1190 (NP-DLLA154SM119)	105019-0700	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6D24T	105110-7551 [ME158263]	105041-4131 (41-4131,2F)	105025-1190 (NP-DLLA154SM119)	105019-0700	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.4	KBL2.4-S
6D24	105110-7570 [ME152406]	105041-4110 (41-4110,1C)	105025-1310 (NP-DLLA157SM131)	105019-0780	0.07	17.7 {180}	-	25.6 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D24	105110-7571 [ME152406]	105041-4111 (41-4111,1C)	105025-1310 (NP-DLLA157SM131)	105019-0780	0.07	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16	105110-7590 [ME072662]	105041-3030 (41-3030,2M)	105025-1330 (NP-DLLA154SM133)	105019-0800	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D16	105110-7591 [ME072662]	105041-3031 (41-3031,2M)	105025-1330 (NP-DLLA154SM133)	105019-0800	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8DC11	105110-7600 [ME094846]	105041-4120 (41-4120,5D)	105025-1370 (NP-DLLA157SM137)	105019-0820	0.10	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.4-S
8DC11	105110-7601 [ME094846]	105041-4121 (41-4121,5D)	105025-1370 (NP-DLLA157SM137)	105019-0820	0.10	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.4-S
8DC9T2	105110-7610 [ME094936]	105041-4120 (41-4120,6E)	105025-1440 (NP-DLLA148SM144)	105019-0830	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR MITSUBISHI (9/11)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
8DC9T2	105110-7611 [ME094936]	105041-4121 (41-4121,6E)	105025-1440 (NP-DLLA148SM144)	105019-0830	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.4-S
8DC11	105110-7710 [ME095125]	105041-4120 (41-4120,6D)	105025-1860 (NP-DLLA151SM186)	105019-2010	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8DC11	105110-7711 [ME095125]	105041-4120 (41-4120,6H)	105025-1860 (NP-DLLA151SM186)	105019-2010	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8DC11	105110-7712 [ME095125]	105041-4121 (41-4121,6H)	105025-1860 (NP-DLLA151SM186)	105019-2010	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6M61	105110-7780 [ME131608]	105041-2100 (41-2100,U)	105025-2220 (NP-DLLA160SM222)	105019-2240	0.04	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6M61	105110-7781 [ME131608]	105041-2101 (41-2101,U)	105025-2220 (NP-DLLA160SM222)	105019-2240	0.04	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6M61	105110-7782 [ME131980]	105041-2102 (41-2102,W)	105025-2540 (NP-DLLA160SM254)	105019-2320	0.04	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6M61	105110-7820 [ME131983]	105041-2120 (41-2120,V)	105025-2510 (NP-DLLA157SM251)	105019-2290	0.04	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6M61	105110-7821 [ME131983]	105041-2120 (41-2120,A)	105025-2510 (NP-DLLA157SM251)	105019-2290	0.04	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6M61	105110-7890 [ME132604]	105041-2120 (41-2120,T)	105025-2540 (NP-DLLA160SM254)	105019-2320	0.04	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6M61	105110-7891 [ME132604]	105041-2120 (41-2120,B)	105025-2540 (NP-DLLA160SM254)	105019-2320	0.04	15.7 {160}	-	22.6 ~ 23.5 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
8M21	105110-7920 [ME164355]	105041-4290 (41-4290,G)	105025-2800 (NP-DLLA157SM280)	105019-2410	0.10	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.35	KBL2.4-S
8DC11	105110-7930 [ME095654]	105041-4300 (41-4300,5E)	105025-2810 (NP-DLLA154SM281)	105019-2420	0.12	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.35	KBL2.4-S
8DC11	105110-7931 [ME095654]	105041-4301 (41-4301,5E)	105025-2810 (NP-DLLA154SM281)	105019-2420	0.12	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.35	KBL2.4-S
6M70	105110-8040 [ME180464]	105041-3200 (41-3200,A)	105025-3090 (NP-DLLA160SM309)	105019-2570	0.10	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR MITSUBISHI (10/11)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6M70	105110-8041 [ME180464]	105041-3200 (41-3200,B)	105025-3090 (NP-DLLA160SM309)	105019-2570	0.10	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6M61-1	105110-8080 [ME300050]	105041-2120 (41-2120,S)	105025-3210 (NP-DLLA154SM321)	105019-2630	0.04	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6M61-1	105110-8081 [ME300050]	105041-2120 (41-2120,C)	105025-3210 (NP-DLLA154SM321)	105019-2630	0.04	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D24TL	105110-8120 [ME440089]	105041-4110 (41-4110,P)	105025-3290 (NP-DLLA151SM329)	105019-2670	0.07	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D24TL	105110-8121 [ME440089]	105041-4110 (41-4110,2J)	105025-3290 (NP-DLLA151SM329)	105019-2670	0.07	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6D24TL	105110-8122 [ME440089]	105041-4111 (41-4111,2J)	105025-3290 (NP-DLLA151SM329)	105019-2670	0.07	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6M61	105110-8270 [ME300637]	105041-2120 (41-2120,R)	105025-3890 (NP-DLLA157SM389)	105019-2810	0.04	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
6M61	105110-8271 [ME300637]	105041-2120 (41-2120,E)	105025-3890 (NP-DLLA157SM389)	105019-2810	0.04	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-S
4D34T	105118-7200 [ME015236]	105048-3920 (48-3920,-)	105017-1221 (NP-DLLA146PN122)	105019-1130	0.075	17.7 {180}	17.6 ~ 18.6 ⁴ {180 ~ 190}	-	0.29	KBL2.4-P
4D34T	105118-7201 [ME015236]	105048-3920 (48-3920,-)	105017-1221 (NP-DLLA146PN122)	105019-1130	0.075	17.7 {180}	17.6 ~ 18.6 ⁴ {180 ~ 190}	-	0.29	KBL2.4-P
4D33	105118-7820 [ME215091]	105048-4310 (48-4310,91)	105017-2780 (NP-DLLA157PN278)	105019-1230	0.08	15.7 {160}	14.8 ~ 15.8 ⁵ {151 ~ 161}	-	0.25	KBL2.4-P
4D33	105118-7821 [ME215091]	105048-4310 (48-4310,91)	105017-2780 (NP-DLLA157PN278)	105019-1230	0.08	15.7 {160}	14.8 ~ 15.8 ⁵ {151 ~ 161}	-	0.25	KBL2.4-P
4M41TC	105118-7831 [ME203961]	105048-4410 (48-4410,61)	105017-2830 (NP-DLLA148PN283)	105019-1240	0.06	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4M41TC	105118-7832 [ME203961]	105048-4410 (48-4410,61)	105017-2830 (NP-DLLA148PN283)	105019-1240	0.06	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4M41TC	105118-7833 [ME203961]	105048-4410 (48-4410,61)	105017-2830 (NP-DLLA148PN283)	105019-1240	0.06	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)



TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR MITSUBISHI (11/11)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
4M41TC	105118-7834 [ME203961]	105048-4411 (48-4411,61)	105017-2830 (NP-DLLA148PN283)	105019-1240	0.06	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4M42	105118-8020 [ME190861]	105048-4440 (48-4440,72)	105017-2961 (NP-DLLA146PN296)	105019-1310	0.06	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4M42	105118-8021 [ME191379]	105048-4441 (48-4441,73)	105017-2961 (NP-DLLA146PN296)	105019-1310	0.06	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4M42	105118-8022 [ME191379]	105048-4441 (48-4441,73)	105017-2961 (NP-DLLA146PN296)	105019-1310	0.06	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4M42	105118-8050 [ME190299]	105048-4410 (48-4410,99)	105017-2920 (NP-DLLA150PN292)	105019-1280	0.06	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4M42	105118-8051 [ME190299]	105048-4410 (48-4410,99)	105017-2920 (NP-DLLA150PN292)	105019-1280	0.06	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-P
4M42	105118-8100 [ME190694]	105048-4410 (48-4410,71)	105017-2960 (NP-DLLA146PN296)	105019-1300	0.06	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

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TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (1/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
EF750	105100-5810 [23600-1600A]	105031-7140 (31-7140,-)	105015-5410 (NP-DLLA150SN541)	-	0.2	13.7 {140}	24.3 ~ 25.0 {248 ~ 255}	-	0.39	KBL2.1-S
EF750	105100-5920 [23600-1601A]	105031-7140 (31-7140,C)	105015-5540 (NP-DLLA150SN554)	-	0.1	13.7 {140}	26.9 ~ 27.6 {274 ~ 281}	-	0.39	KBL2.1-S
EK100	105100-5930 [---]	105031-7150 (31-7150,E)	105015-5550 (NP-DLLA150SN555)	-	0.15	13.7 {140}	25.6 ~ 26.3 {261 ~ 268}	-	0.39	KBL2.1-S
EF750T	105100-6070 [23600-1650A]	105031-7160 (31-7160,-)	105015-4700 (NP-DLLA150S424N470)	-	0.08	13.7 {140}	27.4 ~ 28.0 {279 ~ 286}	-	0.39	KBL2.1-S
EP100	105100-6080 [23600-1640A]	105031-4580 (31-4580,A)	105015-4920 (NP-DLLA150S345N492)	-	0.08	13.7 {140}	27.4 ~ 28.0 {279 ~ 286}	-	0.35	KBL2.1-S
EV700	105100-7020 [23600-1670A]	105031-5440 (31-5440,-)	105015-4520 (NP-DLLA150S394N452)	-	0.2	13.7 {140}	24.3 ~ 25.0 {248 ~ 255}	-	0.4	KBL2.1-S
EF750	105100-7040 [23600-1602A]	105031-7140 (31-7140,E)	105015-4700 (NP-DLLA150S424N470)	-	0.11	14.7 {150}	26.6 ~ 27.3 {271 ~ 278}	-	0.39	KBL2.1-S
EK100	105100-7050 [23600-1621B]	105031-7150 (31-7150,F)	105015-5550 (NP-DLLA150SN555)	-	0.14	14.7 {150}	25.8 ~ 26.5 {263 ~ 270}	-	0.39	KBL2.1-S
EP100	105100-7060 [23600-1641A]	105031-4580 (31-4580,B)	105015-4920 (NP-DLLA150S345N492)	-	0.11	16.7 {170}	26.6 ~ 27.3 {271 ~ 278}	-	0.35	KBL2.1-S
EF750T	105100-7070 [23600-1651A]	105031-7160 (31-7160,D)	105015-4700 (NP-DLLA150S424N470)	-	0.11	15.7 {160}	26.6 ~ 27.3 {271 ~ 278}	-	0.39	KBL2.1-S
EV700	105100-7080 [23600-1671A]	105031-5440 (31-5440,A)	105015-6050 (NP-DLLA150SN605)	-	0.11	14.7 {150}	26.6 ~ 27.3 {271 ~ 278}	-	0.39	KBL2.1-S
EV700	105100-7081 [23600-1672A]	105031-5440 (31-5440,H)	105015-7300 (NP-DLLA150SN730)	-	0.11	14.7 {150}	26.6 ~ 27.3 {271 ~ 278}	-	0.39	KBL2.1-S
EP100	105100-7090 [23600-1642A]	105031-4580 (31-4580,C)	105015-6120 (NP-DLLA138SN612)	-	0.12	16.7 {170}	28.9 ~ 29.6 {295 ~ 302}	-	0.39	KBL2.1-S
EP-1	105100-7091 [23600-1643A]	105031-4580 (31-4580,J)	105015-7420 (NP-DLLA150SN742)	-	0.12	16.7 {170}	28.9 ~ 29.6 {295 ~ 302}	-	0.39	KBL2.1-S
EK200	105100-7100 [23600-1690A]	105031-7170 (31-7170,-)	105015-5550 (NP-DLLA150SN555)	-	0.11	14.7 {150}	26.6 ~ 27.3 {271 ~ 278}	-	0.39	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (2/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
EK200	105100-7160 [23600-1720A]	105031-7180 (31-7180,-)	105015-5550 (NP-DLLA150SN555)	-	0.11	14.7 {150}	26.6 ~ 27.3 {271 ~ 278}	-	0.39	KBL2.1-S
EP20	105100-7260 [23600-1740A]	105031-4890 (31-4890,-)	105015-6860 (NP-DLLA138SN686)	-	0.12	16.7 {170}	34.2 ~ 34.9 {349 ~ 356}	-	0.39	KBL2.1-S
EP2	105100-7261 [23600-1741A]	105031-4890 (31-4890,B)	105015-7590 (NP-DLLA134SN759)	-	0.12	16.7 {170}	34.2 ~ 34.9 {349 ~ 356}	-	0.39	KBL2.1-S
K13C	105100-7290 [23600-1750A]	105031-7190 (31-7190,-)	105015-7020 (NP-DLLA150SN702)	-	0.12	16.7 {170}	29.0 ~ 29.6 {296 ~ 302}	-	0.39	KBL2.1-S
H07C	105100-7300 [23600-0199A]	105031-4960 (31-4960,-)	105015-6870 (NP-DLLA155SN687)	-	0.08	14.7 {150}	22.5 ~ 23.0 {229 ~ 235}	-	0.25	KBL2.1-S
EF750T	105100-7320 [23600-1790A]	105031-7160 (31-7160,H)	105015-7040 (NP-DLLA150SN704)	-	0.11	15.7 {160}	26.6 ~ 27.3 {271 ~ 278}	-	0.39	KBL2.1-S
K13C	105100-7350 [23600-1751A]	105031-7200 (31-7200,-)	105015-7020 (NP-DLLA150SN702)	-	0.12	16.7 {170}	29.0 ~ 29.6 {296 ~ 302}	-	0.39	KBL2.1-S
H07C	105100-7360 [23600-1820A]	105031-4980 (31-4980,-)	105015-6870 (NP-DLLA155SN687)	-	0.08	13.7 {140}	22.5 ~ 23.0 {229 ~ 235}	-	0.25	KBL2.1-S
H07C	105100-7361 [23600-1821A]	105030-4120 (30-4120,-)	105015-7270 (NP-DLLA155SN727)	-	0.08	14.2 {145}	22.9 ~ 23.6 {234 ~ 241}	-	0.25	KBL2.1-S
W06E	105100-7390 [23600-1840A]	105030-4040 (30-4040,-)	105015-7150 (NP-DLLA160SN715)	-	0.08	14.7 {150}	24.7 ~ 25.4 {252 ~ 259}	-	0.25	KBL2.1-S
W06E	105100-7391 [23600-1841A]	105030-4041 (30-4041,-)	105015-7200 (NP-DLLA160SN720)	-	0.08	14.7 {150}	24.7 ~ 25.4 {252 ~ 259}	-	0.25	KBL2.1-S
V21C V22C	105100-7480 [23600-1910A]	105031-7200 (31-7200,G)	105015-7390 (NP-DLLA150SN739)	-	0.11	14.7 {150}	26.6 ~ 27.3 {271 ~ 278}	-	0.39	KBL2.1-S
W06E	105100-7490 [23600-1930A]	105030-4130 (30-4130,-)	105015-7410 (NP-DLLA157SN741)	-	0.1	16.2 {165}	24.4 ~ 25.1 {249 ~ 256}	-	0.25	KBL2.1-S
W06E	105100-7530 [23600-1842A]	105030-4150 (30-4150,-)	105015-7470 (NP-DLLA160SN747)	-	-	21.6 {220}	-	-	0.25	KBL2.1-S
W06E	105100-7570 [23600-1843A]	105030-4160 (30-4160,-)	105015-7580 (NP-DLLA150SN758)	-	0.08	14.7 {150}	24.8 ~ 25.4 {253 ~ 259}	-	0.25	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (3/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
F17C	105100-7590 [23600-1990A]	105031-6120 (31-6120,-)	105015-7620 (NP-DLLA150SN762)	-	0.11	17.7 {180}	30.5 ~ 31.2 {311 ~ 318}	-	0.39	KBL2.1-S
F17C	105100-7591 [23600-1991A]	105031-6120 (31-6120,-)	105015-7620 (NP-DLLA150SN762)	-	0.08	17.7 {180}	30.7 ~ 31.3 {313 ~ 319}	-	0.39	KBL2.1-S
F17C	105100-7592 [23600-1991B]	105031-6120 (31-6120,-)	105015-7620 (NP-DLLA150SN762)	-	0.11	17.7 {180}	29.9 ~ 30.5 {305 ~ 311}	-	0.39	KBL2.1-S
F17C	105100-7593 [23600-1992A]	105031-6120 (31-6120,-)	105015-7620 (NP-DLLA150SN762)	-	0.08	17.7 {180}	30.7 ~ 31.3 {313 ~ 319}	-	0.39	KBL2.1-S
H07C-E	105100-7600 [23600-2000A]	105030-4120 (30-4120,G)	105015-7640 (NP-DLLA145SN764)	-	0.08	14.2 {145}	22.9 ~ 23.6 {234 ~ 241}	-	0.25	KBL2.1-S
W06E	105100-7690 [23600-2060A]	105030-4170 (30-4170,-)	105015-7580 (NP-DLLA150SN758)	-	-	21.6 {220}	-	-	0.25	KBL2.1-S
H07C	105100-7750 [23600-1822A]	105030-4200 (30-4200,-)	105015-8020 (NP-DLLA150SN802)	-	0.08	14.2 {145}	22.4 ~ 22.9 {228 ~ 234}	-	0.25	KBL2.1-S
H07D-A	105100-7840 [23600-2120A]	105030-4240 (30-4240,-)	105015-8180 (NP-DLLA150SN818)	-	0.1	19.6 {200}	30.1 ~ 30.7 {307 ~ 313}	-	0.3	KBL2.1-S
W06E	105100-7980 [23600-2170A]	105030-4170 (30-4170,E)	105015-8460 (NP-DLLA150SN846)	-	-	21.6 {220}	-	-	0.25	KBL2.1-S
P09C-TA	105101-7080 [23600-2210A]	105030-3320 (30-3320,-)	105015-8660 (NP-DLLA150SN866)	105019-0020	0.11	16.7 {170}	-	27.9 ~ 28.9 {285 ~ 295} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P09C-TA	105101-7081 [23600-2211A]	105030-3330 (30-3330,-)	105015-8660 (NP-DLLA150SN866)	105019-0020	0.11	16.7 {170}	-	27.9 ~ 28.9 {285 ~ 295} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-7100 [23600-2220A]	105031-7220 (31-7220,-)	105015-8670 (NP-DLLA150SN867)	105019-0030	0.10	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-7101 [23600-2221A]	105031-7240 (31-7240,-)	105015-8670 (NP-DLLA150SN867)	105019-0030	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-7102 [23600-2221A]	105031-7241 (31-7241,-)	105015-8670 (NP-DLLA150SN867)	105019-0030	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17C	105101-7110 [23600-2230A]	105031-6120 (31-6120,G)	105015-7620 (NP-DLLA150SN762)	-	0.11	17.7 {180}	29.9 ~ 30.5 {305 ~ 311}	-	0.39	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (4/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
F17E	105101-7160 [23600-2240A]	105031-7230 (31-7230,-)	105015-7620 (NP-DLLA150SN762)	105019-0010	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17E	105101-7161 [23600-2240B]	105031-7230 (31-7230,V)	105015-7620 (NP-DLLA150SN762)	105019-0010	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C	105101-7180 [23600-2250A]	105030-3340 (30-3340,-)	105015-8710 (NP-DLLA150SN871)	-	0.09	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C	105101-7181 [23600-2251A]	105030-3340 (30-3340,-)	105015-8710 (NP-DLLA150SN871)	105019-0040	0.065	15.7 {160}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C	105101-7182 [23600-2251B]	105030-3480 (30-3480,B)	105015-8710 (NP-DLLA150SN871)	105019-0040	0.065	15.7 {160}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C-A	105101-7183 [23600-2252A]	105030-3482 (30-3482,B)	105015-8710 (NP-DLLA150SN871)	105019-0040	0.065	15.7 {160}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13C-TD	105101-7190 [23600-2260A]	105031-7250 (31-7250,-)	105015-7020 (NP-DLLA150SN702)	105019-0000	0.09	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13C-TD	105101-7191 [23600-2260A]	105031-7251 (31-7251,-)	105015-7020 (NP-DLLA150SN702)	105019-0000	0.09	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17D-TA	105101-7200 [23600-2270A]	105031-7260 (31-7260,-)	105015-8740 (NP-DLLA150SN874)	105019-0050	0.09	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17D-TA	105101-7201 [23600-2271A]	105031-7260 (31-7260,A)	105015-8740 (NP-DLLA150SN874)	105019-0050	0.07	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17D-TA	105101-7202 [23600-2271A]	105031-7230 (31-7230,A)	105015-8740 (NP-DLLA150SN874)	105019-0050	0.07	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P09B-Ti	105101-7220 [23600-2280A]	105030-3370 (30-3370,-)	105015-8550 (NP-DLLA150SN855)	105019-0060	0.08	17.7 {180}	-	22.0 ~ 23.0 {225 ~ 235} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P09B-Ti	105101-7221 [23600-2281A]	105030-3370 (30-3370,A)	105015-8550 (NP-DLLA150SN855)	105019-0060	0.08	17.7 {180}	-	23.7 ~ 24.7 {242 ~ 252} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C	105101-7260 [23600-2310A]	105030-3400 (30-3400,-)	105015-8710 (NP-DLLA150SN871)	105019-0040	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C	105101-7261 [23600-2310B]	105030-3401 (30-3401,-)	105015-8710 (NP-DLLA150SN871)	105019-0040	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (5/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
F20C-A	105101-7262 [23600-2311A]	105030-3402 (30-3402,-)	105015-8710 (NP-DLLA150SN871)	105019-0040	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C-A	105101-7263 [23600-2311A]	105030-3481 (30-3481,F)	105015-8710 (NP-DLLA150SN871)	105019-0040	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
V22D	105101-7270 [23600-2300A]	105031-7270 (31-7270,-)	105015-8920 (NP-DLLA150SN892)	105019-0070	0.06	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
V22D	105101-7271 [23600-2300A]	105031-7230 (31-7230,-)	105015-8920 (NP-DLLA150SN892)	105019-0070	0.06	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17C	105101-7280 [23600-2320A]	105031-7230 (31-7230,K)	105015-7620 (NP-DLLA150SN762)	105019-0010	0.09	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17C	105101-7281 [23600-2320B]	105031-7230 (31-7230,U)	105015-7620 (NP-DLLA150SN762)	105019-0010	0.09	17.7 {180}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13U	105101-7300 [23600-2350A]	105031-7240 (31-7240,-)	105015-8670 (NP-DLLA150SN867)	105019-0300	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13U	105101-7301 [23600-2350B]	105031-7241 (31-7241,X)	105015-8670 (NP-DLLA150SN867)	105019-0300	0.085	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C-B	105101-7320 [23600-2440A]	105030-3470 (30-3470,-)	105015-9110 (NP-DLLA156SN911)	105019-0090	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17E-B	105101-7330 [23600-2430A]	105031-7280 (31-7280,H)	105015-9020 (NP-DLLA150SN902)	105019-0100	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17E-B	105101-7331 [23600-2430B]	105031-7230 (31-7230,R)	105015-9020 (NP-DLLA150SN902)	105019-0100	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17E-B	105101-7332 [23600-2430C]	105031-7230 (31-7230,G)	105015-9020 (NP-DLLA150SN902)	105019-0100	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
YF67,68	105101-7340 [23600-2390A]	105030-3450 (30-3450,-)	105015-9040 (NP-DLLA150SN904)	105019-0130	0.07	16.7 {170}	-	28.4 ~ 29.4 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P-3 P-4	105101-7341 [23600-2391A]	105030-3451 (30-3451,A)	105015-9040 (NP-DLLA150SN904)	105019-0130	0.07	16.7 {170}	-	28.4 ~ 29.4 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P-3 P-4	105101-7342 [23600-2391B]	105030-3330 (30-3330,Y)	105015-9040 (NP-DLLA150SN904)	105019-0130	0.07	16.7 {170}	-	28.4 ~ 29.4 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (6/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
H07D	105101-7350 [23600-2400A]	105030-4430 (30-4430,-)	105015-8590 (NP-DLLA150SN859)	-	0.08	17.7 {180}	26.9 ~ 27.5 {274 ~ 280}	-	0.25	KBL2.1-S
YF44	105101-7360 [23600-2410A]	105030-3340 (30-3340,T)	105015-9050 (NP-DLLA160SN905)	105019-0120	0.09	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K-3 K-4	105101-7362 [23600-2412A]	105030-3481 (30-3481,-)	105015-9130 (NP-DLLA155SN913)	105019-0160	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K-3 K-4	105101-7363 [23600-2412B]	105030-3481 (30-3481,L)	105015-9130 (NP-DLLA155SN913)	105019-0160	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K-3 K-4	105101-7364 [23600-2412C]	105030-3481 (30-3481,L)	105015-9130 (NP-DLLA155SN913)	105019-0160	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K-3 K-4	105101-7365 [23600-2412D]	105030-3482 (30-3482,L)	105015-9130 (NP-DLLA155SN913)	105019-0161	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K-3 K-4	105101-7366 [23600-2412E]	105030-3482 (30-3482,241)	105015-9130 (NP-DLLA155SN913)	105019-0161	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
V22 V22D-B	105101-7370 [23600-2450A]	105031-7290 (31-7290,F)	105015-9060 (NP-DLLA150SN906)	105019-0140	0.06	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
V22D	105101-7371 [23600-2450B]	105031-7270 (31-7270,F)	105015-9060 (NP-DLLA150SN906)	105019-0140	0.06	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
V22D	105101-7372 [23600-2450B]	105031-7230 (31-7230,B)	105015-9060 (NP-DLLA150SN906)	105019-0140	0.06	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D-B	105101-7400 [23600-2470A]	105031-7300 (31-7300,-)	105015-9120 (NP-DLLA150SN912)	105019-0150	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D-B	105101-7401 [23600-2470B]	105031-7240 (31-7240,L)	105015-9120 (NP-DLLA150SN912)	105019-0150	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D-B	105101-7402 [23600-2470C]	105031-7241 (31-7241,S)	105015-9120 (NP-DLLA150SN912)	105019-0150	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D-B	105101-7403 [23600-2470D]	105031-7241 (31-7241,247)	105015-9120 (NP-DLLA150SN912)	105019-0150	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C-B	105101-7450 [23600-2480A]	105030-3470 (30-3470,C)	105015-9210 (NP-DLLA156SN921)	105019-0171	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~270} [Actual pre-lift+0.05]	0.39	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (7/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
F20C-B V25C-C	105101-7451 [23600-2480B]	105030-3471 (30-3471,C)	105015-9210 (NP-DLLA156SN921)	105019-0171	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C-B	105101-7452 [23600-2480C]	105030-3472 (30-3472,C)	105015-9210 (NP-DLLA156SN921)	105019-0171	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C-B	105101-7453 [23600-2480D]	105030-3473 (30-3473,C)	105015-9210 (NP-DLLA156SN921)	105019-0171	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C-B	105101-7454 [23600-2480D]	105030-3473 (30-3473,A)	105015-9210 (NP-DLLA156SN921)	105019-0171	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C-B	105101-7455 [23600-2480E]	105030-3474 (30-3474,A)	105015-9210 (NP-DLLA156SN921)	105019-0171	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
V25C-B	105101-7470 [23600-2510A]	105030-3500 (30-3500,-)	105015-9280 (NP-DLLA156SN928)	105019-0180	0.065	15.7 {160}	-	25.5 ~ 26.5 {260 ~270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-7480 [23600-2520A]	105031-7240 (31-7240,S)	105015-9290 (NP-DLLA150SN929)	105019-0190	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-7481 [23600-2520B]	105031-7370 (31-7370,-)	105015-9290 (NP-DLLA150SN929)	105019-0190	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-7482 [23600-2520C]	105031-7241 (31-7241,P)	105015-9290 (NP-DLLA150SN929)	105019-0190	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-7483 [23600-2520D]	105031-7241 (31-7241,252)	105015-9290 (NP-DLLA150SN929)	105019-0190	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
W06D-TI	105101-7490 [23600-2530A]	105031-7310 (31-7310,-)	105015-9330 (NP-DLLA150SN933)	105019-0270	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
FT-2	105101-7500 [23600-2540A]	105030-3510 (30-3510,-)	105015-9350 (NP-DLLA155SN935)	105019-0200	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
FT-2	105101-7501 [23600-2540B]	105030-3511 (30-3511,-)	105015-9350 (NP-DLLA155SN935)	105019-0200	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
FT-2	105101-7502 [23600-2540B]	105030-3620 (30-3620,B)	105015-9350 (NP-DLLA155SN935)	105019-0200	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-7510 [23600-2550A]	105031-7320 (31-7320,-)	105015-9380 (NP-DLLA150SN938)	105019-0210	0.09	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (8/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
K13D	105101-7511 [23600-2550B]	105031-7320 (31-7320,A)	105015-9380 (NP-DLLA150SN938)	105019-0210	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-7512 [23600-2550C]	105031-7241 (31-7241,R)	105015-9380 (NP-DLLA150SN938)	105019-0210	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-7513 [23600-2550D]	105031-7241 (31-7241,255)	105015-9380 (NP-DLLA150SN938)	105019-0210	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P09C	105101-7580 [23600-2610A]	105030-3530 (30-3530,-)	105015-9530 (NP-DLLA150SN953)	105019-0260	0.07	16.7 {170}	-	28.4 ~ 29.4 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P09C	105101-7581 [23600-2610B]	105030-3530 (30-3530,M)	105015-9530 (NP-DLLA150SN953)	105019-0260	0.07	16.7 {170}	-	28.4 ~ 29.4 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P09C	105101-7582 [23600-2610B]	105030-3531 (30-3531,M)	105015-9530 (NP-DLLA150SN953)	105019-0260	0.07	16.7 {170}	-	28.4 ~ 29.4 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
J-2	105101-7700 [23600-2660A]	105030-3570 (30-3570,-)	105015-9970 (NP-DLLA157SN997)	105019-0310	0.09	16.7 {170}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
J-2	105101-7701 [23600-2661A]	105030-3570 (30-3570,H)	105025-0140 (NP-DLLA157SM014)	105019-0311	0.09	16.7 {170}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
J-2	105101-7702 [23600-2662A]	105030-3570 (30-3570,F)	105025-0220 (NP-DLLA157SM022)	105019-0312	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
J-2	105101-7703 [23600-2663A]	105030-3600 (30-3600,-)	105025-0270 (NP-DLLA157SM027)	105019-0313	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
J-2	105101-7704 [23600-2663B]	105030-3600 (30-3600,A)	105025-0360 (NP-DLLA157SM036)	105019-0314	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
J-2	105101-7705 [23600-2663C]	105030-3601 (30-3601,-)	105025-0360 (NP-DLLA157SM036)	105019-0314	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
F17E	105101-7720 [23600-2720A]	105031-7230 (31-7230,T)	105015-7620 (NP-DLLA150SN762)	105019-0520	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17E	105101-7721 [23600-2720B]	105031-7230 (31-7230,W)	105015-7620 (NP-DLLA150SN762)	105019-0520	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17D-C	105101-7770 [23600-2730A]	105031-7330 (31-7330,-)	105025-0150 (NP-DLLA153SM015)	105019-0530	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (9/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
F17D-1	105101-7771 [23600-2731A]	105031-7331 (31-7331,-)	105025-0150 (NP-DLLA153SM015)	105019-0530	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17D-1	105101-7772 [23600-2731B]	105031-7331 (31-7331,F)	105025-0150 (NP-DLLA153SM015)	105019-0530	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17D-1	105101-7773 [23600-2731B]	105031-7332 (31-7332,F)	105025-0150 (NP-DLLA153SM015)	105019-0530	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C	105101-7790 [23600-2740A]	105030-3580 (30-3580,-)	105025-0170 (NP-DLLA152SM017)	105019-0540	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C-E	105101-7791 [23600-2741A]	105030-3580 (30-3580,A)	105025-0430 (NP-DLLA152SM043)	105019-0541	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C	105101-7792 [23600-2741B]	105030-3580 (30-3580,J)	105025-0430 (NP-DLLA152SM043)	105019-0541	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C	105101-7793 [23600-2741B]	105030-3581 (30-3581,J)	105025-0430 (NP-DLLA152SM043)	105019-0541	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F-III	105101-7800 [23600-2750A]	105030-3590 (30-3590,-)	105025-0180 (NP-DLLA150SM018)	105019-0550	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F-III	105101-7801 [23600-2750A]	105030-3590 (30-3590,C)	105025-0180 (NP-DLLA150SM018)	105019-0550	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F-III	105101-7802 [23600-2750A]	105030-3591 (30-3591,C)	105025-0180 (NP-DLLA150SM018)	105019-0550	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P-5,P-6	105101-7880 [23600-2770A]	105030-3530 (30-3530,C)	105025-0340 (NP-DLLA150SM034)	105019-0440	0.09	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P-III,P-IV	105101-7881 [23600-2770B]	105030-3530 (30-3530,K)	105025-0340 (NP-DLLA150SM034)	105019-0440	0.09	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P-III,P-IV	105101-7882 [23600-2770B]	105030-3531 (30-3531,K)	105025-0340 (NP-DLLA150SM034)	105019-0440	0.09	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K-3,K-4	105101-7890 [23600-2780A]	105030-3610 (30-3610,-)	105025-0380 (NP-DLLA155SM038)	105019-0390	0.09	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
X-III,K-IV	105101-7891 [23600-2781A]	105030-3611 (30-3611,E)	105025-0620 (NP-DLLA155SM062)	105019-0391	0.09	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (10/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
K-3,K-4	105101-7892 [23600-2781A]	105030-3612 (30-3612,E)	105025-0620 (NP-DLLA155SM062)	105019-0391	0.09	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
M10U-D	105101-7900 [23600-2790A]	105030-4680 (30-4680,-)	105025-0400 (NP-DLLA150SM040)	105019-0560	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
M10U-D	105101-7901 [23600-2791A]	105030-4680 (30-4680,A)	105025-0450 (NP-DLLA155SM045)	105019-0561	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
M10U-D	105101-7902 [23600-2791A]	105030-4681 (30-4681,A)	105025-0450 (NP-DLLA155SM045)	105019-0561	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
M10U-D	105101-7903 [23600-2792A]	105030-4682 (30-4682,A)	105025-0450 (NP-DLLA155SM045)	105019-0561	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
M10U-D	105101-7904 [23600-2792B]	105030-4682 (30-4682,279)	105025-0450 (NP-DLLA155SM045)	105019-0561	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13U-B	105101-7910 [23600-2800A]	105031-7360 (31-7360,E)	105025-0410 (NP-DLLA150SM041)	105019-0570	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D,U	105101-7911 [23600-2800A]	105031-7361 (31-7361,E)	105025-0410 (NP-DLLA150SM041)	105019-0570	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D,U	105101-7912 [23600-2800B]	105031-7362 (31-7362,N)	105025-0410 (NP-DLLA150SM041)	105019-0570	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D,U	105101-7913 [23600-2800B]	105031-7363 (31-7363,N)	105025-0410 (NP-DLLA150SM041)	105019-0570	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
FT-2	105101-7940 [23600-2810A]	105030-3620 (30-3620,D)	105025-0520 (NP-DLLA155SM052)	105019-0580	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
FT-2	105101-7941 [23600-2810A]	105030-3620 (30-3620,D)	105025-0520 (NP-DLLA155SM052)	105019-0580	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
FT-2	105101-7942 [23600-2811A]	105030-3630 (30-3630,D)	105025-0520 (NP-DLLA155SM052)	105019-0580	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
FT-2	105101-7943 [23600-2811A]	105030-3631 (30-3631,D)	105025-0520 (NP-DLLA155SM052)	105019-0580	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
JT-3	105101-7950 [23600-2840A]	105030-3601 (30-3601,A)	105025-0590 (NP-DLLA155SM059)	105019-0610	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~240} [Actual pre-lift+0.05]	0.30	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (11/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
P11C-TE	105101-8070 [23600-2890A]	105030-3531 (30-3531,Z)	105025-1050 (NP-DLLA150SM105)	105019-0670	0.09	16.7 {170}	-	28.4 ~ 29.4 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P11C-TE	105101-8071 [23600-2890B]	105030-3531 (30-3531,289)	105025-1050 (NP-DLLA150SM105)	105019-0670	0.09	16.7 {170}	-	28.4 ~ 29.4 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
H07D	105101-8080 [23600-2900A]	105030-4790 (30-4790,-)	105025-1060 (NP-DLLA155SM106)	105019-0750	0.08	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.3-S
P10C-TI	105101-8091 [23600-2882A]	105030-3531 (30-3531,H)	105025-1720 (NP-DLLA150SM172)	105019-0990	0.08	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-8120 [23600-2950A]	105031-7363 (31-7363,I)	105025-1210 (NP-DLLA150SM121)	105019-0710	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C	105101-8130 [23600-2910A]	105030-3581 (30-3581,T)	105025-1230 (NP-DLLA152SM123)	105019-0720	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13C-TM,TN	105101-8140 [23600-2960A]	105030-3670 (30-3670,A2)	105025-1240 (NP-DLLA155SM124)	105019-0730	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13C-TM,TN	105101-8141 [23600-2961A]	105030-3670 (30-3670,A3)	105025-1350 (NP-DLLA155SM135)	105019-0731	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13C-TM,TN	105101-8142 [23600-2962A]	105030-3670 (30-3670,A4)	105025-1570 (NP-DLLA155SM157)	105019-0940	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13C-TM,TN	105101-8143 [23600-2962B]	105030-3670 (30-3670,296)	105025-1570 (NP-DLLA155SM157)	105019-0940	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
J-2	105101-8160 [23600-2980A]	105030-3700 (30-3700,-)	105025-0360 (NP-DLLA157SM036)	105019-0810	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
YJ60	105101-8180 [23600-3080A]	105030-3531 (30-3531,80)	105025-1760 (NP-DLLA150SM176)	105019-0980	0.09	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
YJ60	105101-8181 [23600-3080B]	105030-3531 (30-3531,308)	105025-1760 (NP-DLLA150SM176)	105019-0980	0.09	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K-4	105101-8190 [23600-2990A]	105030-3670 (30-3670,E)	105025-1470 (NP-DLLA155SM147)	105019-0840	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
YJ39	105101-8191 [23600-2991A]	105030-3670 (30-3670,E1)	105025-0340 (NP-DLLA150SM034)	105019-0850	0.09	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (12/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
YJ36,37	105101-8210 [23600-3000A]	105030-3710 (30-3710,-)	105025-0340 (NP-DLLA150SM034)	105019-0850	0.09	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P-3,P-4	105101-8211 [23600-3001A]	105030-3711 (30-3711,K)	105025-0340 (NP-DLLA150SM034)	105019-0850	0.09	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P-3,P-4	105101-8212 [23600-3001B]	105030-3711 (30-3711,300)	105025-0340 (NP-DLLA150SM034)	105019-0850	0.09	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17D-C	105101-8220 [23600-3020A]	105031-7390 (31-7390,F)	105025-0150 (NP-DLLA153SM015)	105019-0860	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F-2	105101-8230 [23600-3030A]	105030-3720 (30-3720,-)	105025-0430 (NP-DLLA152SM043)	105019-0870	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F-3	105101-8240 [23600-3040A]	105030-3730 (30-3730,C)	105025-0180 (NP-DLLA150SM018)	105019-0880	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K-3,K-4	105101-8260 [23600-3060A]	105030-3612 (30-3612,L1)	105025-1560 (NP-DLLA155SM156)	105019-0930	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K-3,K-4	105101-8261 [23600-3060B]	105030-3612 (30-3612,306)	105025-1560 (NP-DLLA155SM156)	105019-0930	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
H07C-T	105101-8300 [23600-3110A]	105030-4850 (30-4850,-)	105025-1700 (NP-DLLA150SM170)	105019-0970	0.07	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.3-S
H07C-T	105101-8301 [23600-3111A]	105030-4850 (30-4850,A)	105025-1700 (NP-DLLA150SM170)	105019-0970	0.07	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.3-S
P10C-TI	105101-8310 [23600-3140A]	105030-3531 (30-3531,P)	105025-1880 (NP-DLLA158SM188)	105019-2040	0.08	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P10C-TI	105101-8311 [23600-3140B]	105030-3531 (30-3531,314)	105025-1880 (NP-DLLA158SM188)	105019-2040	0.08	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P10C-TI	105101-8320 [23600-3150A]	105030-3531 (30-3531,T)	105025-1890 (NP-DLLA158SM189)	105019-2050	0.08	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P10C-TI	105101-8321 [23600-3150B]	105030-3531 (30-3531,315)	105025-1890 (NP-DLLA158SM189)	105019-2050	0.08	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13D	105101-8330 [23600-3050A]	105031-7410 (31-7410,N)	105025-0410 (NP-DLLA150SM041)	105019-2020	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (13/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
K13D	105101-8331 [23600-3050B]	105031-7410 (31-7410,305)	105025-0410 (NP-DLLA150SM041)	105019-2020	0.07	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F17DTI	105101-8340 [23600-3190A]	105030-3631 (30-3631,B)	105025-1920 (NP-DLLA155SM192)	105019-2030	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C-E	105101-8350 [23600-2742A]	105030-3581 (30-3581,J)	105025-1910 (NP-DLLA152SM191)	105019-2070	0.065 (±0.015mm)	14.7 {150}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F20C-E	105101-8360 [23600-3031A]	105030-3720 (30-3720,J)	105025-1910 (NP-DLLA152SM191)	105019-2060	0.065	14.7 {150}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.39	KBL2.3-S
J08C-TT	105101-8370 [23600-3220A]	105030-3700 (30-3700,A)	105025-1930 (NP-DLLA155SM193)	105019-2120	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
J08C	105101-8380 [23600-3230A]	105030-3700 (30-3700,BA)	105025-1970 (NP-DLLA157SM197A)	105019-2130	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
J08C	105101-8381 [23600-3231A]	105030-3700 (30-3700,E)	105025-1970 (NP-DLLA157SM197A)	105019-2130	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
J08C	105101-8382 [23600-3232A]	105030-3700 (30-3700,H)	105025-1971 (NP-DLLA157SM197B)	105019-2131	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
J08C	105101-8383 [23600-3233A]	105030-3700 (30-3700,J)	105025-2730 (NP-DLLA157SM273)	105019-2132	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
J08C	105101-8384 [23600-3233B]	105030-3700 (30-3700,J)	105025-2730 (NP-DLLA157SM273)	105019-2132	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.3-S
FT-II	105101-8400 [23600-3160A]	105030-3740 (30-3740,D)	105025-0520 (NP-DLLA155SM052)	105019-2140	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
YJ85	105101-8410 [23600-3250A]	105030-3531 (30-3531,50)	105025-2050 (NP-DLLA153SM205)	105019-2160	0.09	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
J08C-T	105101-8420 [23600-3221A]	105030-3700 (30-3700,C)	105025-1940 (NP-DLLA155SM194)	105019-2170	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
J08C-T	105101-8421 [23600-3222A]	105030-3700 (30-3700,F)	105025-1940 (NP-DLLA155SM194)	105019-2170	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
J08C-T	105101-8422 [23600-3222B]	105030-3700 (30-3700,F)	105025-1940 (NP-DLLA155SM194)	105019-2170	0.07	17.7 {180}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (14/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
P11C	105101-8450 [23600-3270A]	105030-3750 (30-3750,Z)	105025-1050 (NP-DLLA150SM105)	105019-2220	0.09	16.7 {170}	-	28.4 ~ 29.4 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P11C	105101-8451 [23600-3270B]	105030-3750 (30-3750,327)	105025-1050 (NP-DLLA150SM105)	105019-2220	0.09	16.7 {170}	-	28.4 ~ 29.4 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
J08C	105101-8470 [23600-3290A]	105030-3700 (30-3700,G)	105025-1770 (NP-DLLA157SM177)	105019-2260	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.3-S
P11C	105101-8480 [23600-2181A]	105030-3711 (30-3711,3)	105025-2330 (NP-DLLA150SM233)	105019-2270	0.07	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P11C	105101-8481 [23600-2181B]	105030-3711 (30-3711,218)	105025-2330 (NP-DLLA150SM233)	105019-2270	0.07	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13C-T	105101-8510 [23600-3370A]	105031-7420 (31-7420,-)	105015-7020 (NP-DLLA150SN702)	105019-2430	0.065	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P11B-TI	105101-8540 [23600-3350A]	105030-3531 (30-3531,A)	105025-2920 (NP-DLLA150SM292)	105019-2460	0.08	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P11B-TI	105101-8541 [23600-3350B]	105030-3531 (30-3531,335)	105025-2920 (NP-DLLA150SM292)	105019-2460	0.08	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P11B-TI	105101-8550 [23600-3360A]	105030-3531 (30-3531,B)	105025-2930 (NP-DLLA150SM293)	105019-2470	0.08	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P11B-TI	105101-8551 [23600-3360B]	105030-3531 (30-3531,336)	105025-2930 (NP-DLLA150SM293)	105019-2470	0.08	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F21C	105101-8560 [23600-3341A]	105030-3730 (30-3730,2)	105025-2950 (NP-DLLA156SM295)	105019-2500	0.065	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
F21C	105101-8561 [23600-3342A]	105030-3730 (30-3730,2)	105025-2950 (NP-DLLA156SM295)	105019-2500	0.065	14.7 {150}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13C-UA,UB	105101-8570 [23600-3380A]	105030-3760 (30-3760,-)	105025-2970 (NP-DLLA155SM297)	105019-2520	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
P11C	105101-8580 [23600-2181C]	105030-3711 (30-3711,218)	105025-3100 (NP-DLLA150SM310)	105019-2580	0.07	16.7 {170}	-	28.5 ~ 29.5 {290 ~ 300} [Actual pre-lift+0.05]	0.39	KBL2.3-S
J08C-T	105101-8600 [23600-3410A]	105030-3700 (30-3700,K)	105025-3190 (NP-DLLA157SM319)	105019-2610	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HINO (15/15)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
J08C-T	105101-8601 [23600-3411A]	105030-3700 (30-3700,P)	105025-4380 (NP-DLLA157SM438)	105019-2611	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.3-S
W04D	105101-8610 [23600-3420A]	105031-7310 (31-7310,A)	105025-3200 (NP-DLLA155SM320)	105019-2620	0.065	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.3-S
P11B-TI	105101-8630 [23600-3440A]	105030-3711 (30-3711,344)	105025-3580 (NP-DLLA152SM358)	105019-2740	0.08	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K-III,K-IV	105101-8640 [23600-3500A]	105030-3790 (30-3790,-)	105025-3690 (NP-DLLA152SM369)	105019-2770	0.09	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
W04D-T	105101-8650 [23600-3490A]	105031-7430 (31-7430,-)	105025-3700 (NP-DLLA150SM370)	105019-2780	0.065	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.3-S
W04D-T	105101-8660 [23600-3570A]	105031-7310 (31-7310,B)	105025-3930 (NP-DLLA155SM393)	105019-2830	0.065	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.3-S
J08C-T	105101-8670 [23600-3580A]	105030-3700 (30-3700,L)	105025-4100 (NP-DLLA157SM410)	105019-2860	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.3-S
J08C-T	105101-8671 [23600-3581A]	105030-3700 (30-3700,N)	105025-4370 (NP-DLLA157SM437)	105019-2861	0.07	16.7 {170}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.3-S
W04D-TI	105101-8680 [23600-3590A]	105031-7430 (31-7430,C)	105025-4120 (NP-DLLA150SM412)	105019-2870	0.065	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.25	KBL2.3-S
P11B-TI	105101-8690 [23600-3610A]	105030-3711 (30-3711,361)	105025-4140 (NP-DLLA152SM414)	105019-2890	0.08	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13C-TI	105101-8710 [23600-3620A]	105030-3800 (30-3800,-)	105025-4270 (NP-DLLA155SM427)	105019-2930	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S
K13C-TI	105101-8711 [23600-3621A]	105030-3760 (30-3760,A)	105025-4270 (NP-DLLA155SM427)	105019-2930	0.07	16.7 {170}	-	24.5 ~ 25.5 {250 ~ 260} [Actual pre-lift+0.05]	0.39	KBL2.3-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)



TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR FUJI HEAVY INDUSTRY (1/1)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
DY41	105118-7090 [228-63202-00]	105048-2100 (48-2100,-)	105017-1060 (NP-DLLA150PN106)	-	0.05	16.7 {170}	26.1 ~ 27.4 {266 ~ 279}	-	0.18	KBL2.2-P
DW46	105118-7380 [272-63201-00]	105048-4210 (48-4210,-)	105017-2420 (NP-DLLA150PN242)	105019-1550	0.05	16.7 {170}	16.4 ~ 17.4 ⁴ {167 ~ 177}	-	0.18	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR KUBOTA (1/5)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
F5000,5400	105100-7370 [15707-53001]	105031-4990 (31-4990,-)	105015-7140 (NP-DLLA141SN714)	-	0.08	15.7 {160}	25.4 ~ 26.1 {259 ~ 266}	-	0.25	KBL2.1-S
F5802-TE	105101-8430 [1G411-53001]	105031-4990 (31-4990,K)	105025-2120 (NP-DLLA150SM212)	-	0.08	16.7 {170}	25.4 ~ 26.1 {259 ~ 266}	-	0.25	KBL2.1-S
F5802-G,-T	105101-8620 [16554-53001]	105031-4990 (31-4990,L)	105025-3500 (NP-DLLA140SM350)	-	0.08	16.7 {170}	25.5 ~ 26.2 {260 ~ 267}	-	0.25	KBL2.1-S
V2203-DI	105118-7632 [1G911-53003]	105048-2220 (48-2220,B1)	105017-2630 (NP-DLLA145PN263)	105019-1370	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-DI	105118-7633 [1G911-53003]	105048-2221 (48-2221,B1)	105017-2630 (NP-DLLA145PN263)	105019-1370	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-DI	105118-7634 [1G911-53004]	105048-2222 (48-2222,B1)	105017-2630 (NP-DLLA145PN263)	105019-1370	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-DI	105118-7635 [1G911-53005]	105048-2223 (48-2223,B1)	105017-2630 (NP-DLLA145PN263)	105019-1370	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-MDI V2403-MDI	105118-8010 [1G790-53002]	105048-2220 (48-2220,T)	105017-2900 (NP-DLLA140PN290)	105019-1380	0.065 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-MDI V2403-MDI	105118-8011 [1G790-53002]	105048-2221 (48-2221,T)	105017-2900 (NP-DLLA140PN290)	105019-1380	0.065 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-MDI V2403-MDI	105118-8012 [1G790-53003]	105048-2222 (48-2222,T)	105017-2900 (NP-DLLA140PN290)	105019-1380	0.065 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-MDI V2403-MDI	105118-8013 [1G790-53004]	105048-2223 (48-2223,T)	105017-2900 (NP-DLLA140PN290)	105019-1380	0.065 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1503-MDI-T	105118-8190 [1G730-53001]	105048-2220 (48-2220,J)	105017-3020 (NP-DLLA140PN302)	105019-1390	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1503-MDI-T	105118-8191 [1G730-53001]	105048-2221 (48-2221,J)	105017-3020 (NP-DLLA140PN302)	105019-1390	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1503-MDI-T	105118-8192 [1G730-53002]	105048-2222 (48-2222,J)	105017-3020 (NP-DLLA140PN302)	105019-1390	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1503-MDI-T	105118-8193 [1G730-53003]	105048-2223 (48-2223,J)	105017-3020 (NP-DLLA140PN302)	105019-1390	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR KUBOTA (2/5)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
D1503-MDI	105118-8200 [1G720-53001]	105048-2220 (48-2220,L)	105017-3030 (NP-DLLA140PN303)	105019-1400	0.065 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1503-MDI	105118-8201 [1G720-53001]	105048-2221 (48-2221,L)	105017-3030 (NP-DLLA140PN303)	105019-1400	0.065 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1503-MDI	105118-8202 [1G720-53002]	105048-2222 (48-2222,L)	105017-3030 (NP-DLLA140PN303)	105019-1400	0.065 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1503-MDI	105118-8203 [1G720-53003]	105048-2223 (48-2223,L)	105017-3030 (NP-DLLA140PN303)	105019-1400	0.065 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
F5802-TE2	105118-8350 [1G414-53001]	105048-4520 (48-4520,A)	105017-3440 (NP-DLLA150PN344)	105019-1530	0.06	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.3	KBL2.4-P
F5802-TE2	105118-8351 [1G414-53001]	105048-4520 (48-4520,A)	105017-3440 (NP-DLLA150PN344)	105019-1530	0.06 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.3	KBL2.4-P
F5802-TE2	105118-8352 [1G414-53002]	105048-4520 (48-4520,B)	105017-3440 (NP-DLLA150PN344)	105019-1530	0.14 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.3	KBL2.4-P
F5802-TE2	105118-8353 [1G414-53003]	105048-4521 (48-4521,B)	105017-3440 (NP-DLLA150PN344)	105019-1530	0.14 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.3	KBL2.4-P
V2203-DI	105118-8360 [1G918-53001]	105048-2221 (48-2221,A1)	105017-3480 (NP-DLLA140PN348)	105019-1800	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-DI	105118-8361 [1G918-53001]	105048-2221 (48-2221,A8)	105017-3640 (NP-DLLA140PN364)	105019-1800	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-DI	105118-8362 [1G918-53002]	105048-2222 (48-2222,A8)	105017-3640 (NP-DLLA140PN364)	105019-1800	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-DI	105118-8363 [1G918-53003]	105048-2223 (48-2223,A8)	105017-3640 (NP-DLLA140PN364)	105019-1800	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-MDI	105118-8370 [1G796-53001]	105048-2221 (48-2221,A2)	105017-3490 (NP-DLLA145PN349)	105019-1810	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-MDI	105118-8371 [1G796-53002]	105048-2221 (48-2221,A5)	105017-3570 (NP-DLLA145PN357)	105019-1810	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203-MDI	105118-8372 [1G796-53003]	105048-2222 (48-2222,A5)	105017-3570 (NP-DLLA145PN357)	105019-1810	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR KUBOTA (3/5)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
V2203-MDI	105118-8373 [1G796-53004]	105048-2223 (48-2223,A5)	105017-3570 (NP-DLLA145PN357)	105019-1810	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2403-MDI	105118-8380 [1G861-53001]	105048-2221 (48-2221,A3)	105017-3030 (NP-DLLA140PN303)	105019-1400	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2403-MDI	105118-8381 [1G861-53002]	105048-2221 (48-2221,A6)	105017-3580 (NP-DLLA140PN358)	105019-1400	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2403-MDI	105118-8382 [1G861-53003]	105048-2222 (48-2222,A6)	105017-3580 (NP-DLLA140PN358)	105019-1400	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2403-MDI	105118-8383 [1G861-53004]	105048-2223 (48-2223,A6)	105017-3580 (NP-DLLA140PN358)	105019-1400	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
03-DI	105118-8410 [1G924-53001]	105048-2221 (48-2221,A4)	105017-3560 (NP-DLLA140PN356)	105019-1830	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.3	KBL2.4-P
03-DI	105118-8411 [1G924-53002]	105048-2221 (48-2221,A4)	105017-3590 (NP-DLLA140PN359)	105019-1830	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.3	KBL2.4-P
03-DI	105118-8412 [1G924-53003]	105048-2222 (48-2222,A4)	105017-3590 (NP-DLLA140PN359)	105019-1830	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.3	KBL2.4-P
03-DI	105118-8413 [1G924-53004]	105048-2223 (48-2223,A4)	105017-3590 (NP-DLLA140PN359)	105019-1830	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.3	KBL2.4-P
D1503-MDI	105118-8430 [1G173-53001]	105048-2221 (48-2221,A9)	105017-3650 (NP-DLLA145PN365)	105019-1840	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1503-MDI	105118-8431 [1G173-53002]	105048-2222 (48-2222,A9)	105017-3650 (NP-DLLA145PN365)	105019-1840	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1503-MDI	105118-8432 [1G173-53003]	105048-2223 (48-2223,A9)	105017-3650 (NP-DLLA145PN365)	105019-1840	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
03-DI	105118-8450 [1G919-53001]	105048-2222 (48-2222,A7)	105017-3670 (NP-DLLA140PN367)	105019-1880	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
03-DI	105118-8451 [1G919-53002]	105048-2223 (48-2223,A7)	105017-3670 (NP-DLLA140PN367)	105019-1880	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1803-V2403	105118-8490 [1G852-53001]	105048-2222 (48-2222,C1)	105017-3760 (NP-DLLA140PN376)	105019-1900	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR KUBOTA (4/5)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
D1803-V240 3	105118-8491 [1G852-53002]	105048-2223 (48-2223,C1)	105017-3760 (NP-DLLA140PN376)	105019-1900	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1803-V240 3	105118-8500 [1G855-53001]	105048-2222 (48-2222,E1)	105017-3770 (NP-DLLA140PN377)	105019-1910	0.07 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D1803-V240 3	105118-8501 [1G855-53002]	105048-2223 (48-2223,E1)	105017-3770 (NP-DLLA140PN377)	105019-1910	0.07 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2403	105118-8510 [-]	105048-2222 (48-2222,G1)	105017-3780 (NP-DLLA140PN378)	105019-1920	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.30	KBL2.4-P
V2403	105118-8511 [1G491-53002]	105048-2223 (48-2223,G1)	105017-3780 (NP-DLLA140PN378)	105019-1920	0.075 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.30	KBL2.4-P
D2203-D180 3	105118-8520 [1G484-53001]	105048-2222 (48-2222,H1)	105017-3790 (NP-DLLA140PN379)	105019-1930	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
D2203-D180 3	105118-8521 [1G484-53002]	105048-2223 (48-2223,H1)	105017-3790 (NP-DLLA140PN379)	105019-1930	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203	105118-8530 [1G450-53001]	105048-2222 (48-2222,J1)	105017-3800 (NP-DLLA140PN380)	105019-1940	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2203	105118-8531 [1G450-53002]	105048-2223 (48-2223,J1)	105017-3800 (NP-DLLA140PN380)	105019-1940	0.05 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.25	KBL2.4-P
V2607-DI-TE 3B	105118-8550 [1J700-53001]	105048-2330 (48-2330,A)	105017-3820 (NP-DLLA145PN382)	105019-1970	0.08 (±0.01mm)	18.6 {190}	-	22.6 ~ 23.6 {230 ~ 241} [Actual pre-lift+0.05]	0.27	KBL2.4-P
V2607-DI-TE 3B	105118-8551 [1J700-53002]	105048-2331 (48-2331,A)	105017-3820 (NP-DLLA145PN382)	105019-1970	0.08 (±0.01)	18.6 {190}	-	22.6 ~ 23.6 {230 ~ 241} [Actual pre-lift+0.05]	0.27	KBL2.4-P
V2607-DI-E3 B	105118-8560 [1J701-53001]	105048-2330 (48-2330,B)	105017-3830 (NP-DLLA150PN383)	105019-1980	0.05 (±0.01mm)	18.6 {190}	-	22.6 ~ 23.6 {230 ~ 241} [Actual pre-lift+0.05]	0.27	KBL2.4-P
V2607-D1-E3 B	105118-8561 [1J701-53002]	105048-2331 (48-2331,B)	105017-3830 (NP-DLLA150PN383)	105019-1980	0.05 (±0.01mm)	18.6 {190}	-	22.6 ~ 23.6 {230 ~ 241} [Actual pre-lift+0.05]	0.27	KBL2.4-P
V3307-D1-T-E3BB	105118-8570 [1G777-53001]	105048-4560 (48-4560,N)	105017-3840 (NP-DLLA145PN384)	105019-1990	0.08 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.27	KBL2.4-P
V3307-D1-T-E3BB	105118-8580 [1G750-53001]	105048-4560 (48-4560,P)	105017-3850 (NP-DLLA145PN385)	105019-3000	0.08 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.27	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)



TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR KUBOTA (5/5)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
V3007-D1-T-E3BB	105118-8590 [1G776-53001]	105048-4560 (48-4560,R)	105017-3860 (NP-DLLA150PN386)	105019-3010	0.08 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.27	KBL2.4-P
V2607-D1-E3-BH-1	105118-8610 [1J730-53001]	105048-2330 (48-2330,C)	105017-3940 (NP-DLLA155PN394)	105019-3030	0.065 (±0.01mm)	18.6 {190}	-	22.6 ~ 23.6 {230 ~ 241} [Actual pre-lift+0.05]	0.27	KBL2.4-P
V2607-D1-E3-BH-1	105118-8611 [1J730-53002]	105048-2331 (48-2331,C)	105019-3030 (NP-DLLA155PN394)	105019-3030	0.065 (±0.01mm)	18.6 {190}	-	22.6 ~ 23.6 {230 ~ 241} [Actual pre-lift+0.05]	0.27	KBL2.4-P
V3307-D1-T-E2-BH	105118-8620 [1G768-53001]	105048-4560 (48-4560,T)	105017-3950 (NP-DLLA150PN395)	105019-3040	0.08 (±0.01mm)	18.6 {190}	-	23.6 ~ 24.6 {241 ~ 251} [Actual pre-lift+0.05]	0.27	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

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TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ISEKI (1/1)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
E3CA	105118-7130 [6215-300-013-1A]	105048-2130 (48-2130,-)	105017-1290 (NP-DLLA160PN129)	-	0.06	16.7 {170}	27.8 ~ 29.1 {283 ~ 297}	-	0.2	KBL2.2-P
E4DA	105118-7170 [6215-300-018-0A]	105048-2150 (48-2150,-)	105017-1490 (NP-DLLA160PN149)	105019-1040	0.06	16.7 {170}	-	21.7 ~ 23.2 {221 ~ 236} [Actual pre-lift+0.05]	0.2	KBL2.4-P
E4DA	105118-7171 [6215-300-018-0B]	105048-2151 (48-2151,-)	105017-1490 (NP-DLLA160PN149)	105019-1040	0.06	16.7 {170}	-	21.7 ~ 23.2 {221 ~ 236} [Actual pre-lift+0.05]	0.2	KBL2.4-P
E4DA	105118-7172 [6215-300-018-0D]	105048-2152 (48-2152,-)	105017-1490 (NP-DLLA160PN149)	105019-1040	0.06	16.7 {170}	-	21.7 ~ 23.2 {221 ~ 236} [Actual pre-lift+0.05]	0.2	KBL2.4-P
E4DD-TDA	105118-7240 [6215-300-028-0]	105048-2150 (48-2150,A)	105017-1870 (NP-DLLA160PN187)	105019-1060	0.06	16.7 {170}	-	21.7 ~ 23.2 {221 ~ 236} [Actual pre-lift+0.05]	0.2	KBL2.4-P
E4DD-TDA	105118-7241 [6215-300-028-0A]	105048-2151 (48-2151,A)	105017-1870 (NP-DLLA160PN187)	105019-1060	0.06	16.7 {170}	-	21.7 ~ 23.2 {221 ~ 236} [Actual pre-lift+0.05]	0.2	KBL2.4-P
E4DD-TDA	105118-7242 [6215-300-028-0C]	105048-2152 (48-2152,A)	105017-1870 (NP-DLLA160PN187)	105019-1060	0.06	16.7 {170}	-	21.7 ~ 23.2 {221 ~ 236} [Actual pre-lift+0.05]	0.2	KBL2.4-P
700	105118-7280 [6215-300-029-0F]	105048-2170 (48-2170,-)	105017-2040 (NP-DLLA140PN204)	105019-1100	0.06	18.6 {190}	-	23.6 ~ 25.1 {241 ~ 256} [Actual pre-lift+0.05]	0.26	KBL2.4-P
700	105118-7281 [6215-300-029-0G]	105048-2171 (48-2171,-)	105017-2040 (NP-DLLA140PN204)	105019-1100	0.06	18.6 {190}	-	23.6 ~ 25.1 {241 ~ 256} [Actual pre-lift+0.05]	0.26	KBL2.4-P
704-30T	105118-7560 [6215-300-039]	105048-2171 (48-2171,A)	105017-2540 (NP-DLLA140PN254)	105019-1220	0.06	18.6 {190}	-	23.6 ~ 25.1 {241 ~ 256} [Actual pre-lift+0.05]	0.26	KBL2.4-P
E4DD-TDA	105118-8270 [6215-300-041-0]	105048-2152 (48-2152,B)	105017-3170 (NP-DLLA160PN317)	105019-1340	0.06	16.7 {170}	-	21.7 ~ 23.2 {221 ~ 236} [Actual pre-lift+0.05]	0.32	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)



TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HONDA (1/1)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
ZG3,4	105118-7020 [16410-ZG3-0130]	105048-2080 (48-2080,G3)	105017-0790 (NP-DLLA155PN079)	-	0.055 (±0.01mm)	17.7 {180}	28.7 ~ 30.2 {293 ~ 308}	-	0.2	KBL2.2-P
ZG4	105118-7021 [16410-ZG3-0130]	105048-2081 (48-2081,G3)	105017-0790 (NP-DLLA155PN079)	-	0.055 (±0.01mm)	17.7 {180}	28.6 ~ 30.0 {292 ~ 306}	-	0.2	KBL2.2-P
GD1100,1250	105118-7030 [16410-ZG5-0030]	105048-2080 (48-2080,G5)	105017-0800 (NP-DLLA155PN080)	-	0.055 (±0.01mm)	17.7 {180}	27.1 ~ 28.4 {276 ~ 290}	-	0.2	KBL2.2-P
GD1100,1250	105118-7070 [16410-ZG5-0230]	105048-2080 (48-2080,A)	105017-0930 (NP-DLLA155PN093)	-	0.06 (±0.01mm)	17.7 {180}	27.1 ~ 28.4 {276 ~ 290}	-	0.2	KBL2.2-P
ZG5	105118-7071 [16410-ZG5-0230]	105048-2081 (48-2081,A)	105017-0930 (NP-DLLA155PN093)	-	0.06 (±0.01mm)	17.7 {180}	27.0 ~ 28.3 {275 ~ 289}	-	0.2	KBL2.2-P
ZG3,4	105118-7080 [16410-ZG3-8010-M1]	105048-2080 (48-2080,E3)	105017-1020 (NP-DLLA157PN102)	-	0.055 (±0.01mm)	17.7 {180}	28.6 ~ 29.3 {292 ~ 299}	-	0.2	KBL2.2-P
ZG3,4	105118-7081 [16410-ZG3-8010-M1]	105048-2081 (48-2081,E3)	105017-1020 (NP-DLLA157PN102)	-	0.055 (±0.01mm)	17.7 {180}	28.6 ~ 30.0 {292 ~ 306}	-	0.2	KBL2.2-P
ZJ7,8	105118-7190 [---]	105048-2081 (48-2081,Q)	105017-1570 (NP-DLLA155PN157)	-	0.055 (±0.01mm)	17.7 {180}	28.6 ~ 30.0 {292 ~ 306}	-	0.2	KBL2.2-P
ZG5	105118-7270 [16410-ZG5-0330]	105048-2081 (48-2081,T)	105017-1990 (NP-DLLA155PN199)	-	0.06	17.7 {180}	27.0 ~ 28.3 {275 ~ 289}	-	0.2	KBL2.2-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

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TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR KOMATSU (1/1)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6D105	105101-7540 [6136-12-3400]	105030-4520 (30-4520,-)	105015-5470 (NP-DLLA142S344N547)	-	0.08	17.7 {180}	30.3 ~ 31.0 {309 ~ 316}	-	0.3	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

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TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR DAEWOO (1/1)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
DE12TI	105101-7961 [---]	105030-4711 (30-4711,B)	105025-0660 (NP-DLLA155SM066)	105019-0740	0.09	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.3-S
DE12TI	105101-8460 [---]	105030-4711 (30-4711,C)	105025-2240 (NP-DLLA146SM224)	105019-2250	0.09	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.35	KBL2.3-S
DE12TI	105101-8520 [---]	105030-4711 (30-4711,E)	105025-2850 (NP-DLLA146SM285)	105019-2450	0.09	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.4	KBL2.3-S
DE12TI	105101-8530 [---]	105030-4711 (30-4711,F)	105025-2910 (NP-DLLA146SM291)	105019-2490	0.09	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.4	KBL2.3-S
DE12TIB	105101-8700 [---]	105030-4711 (30-4711,G)	105025-4240 (NP-DLLA146SM424)	105019-2920	0.09	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.4	KBL2.3-S
DE12TIS	105118-8260 [---]	105048-4470 (48-4470,C)	105017-9330 (NP-DSLA147PN933)	105019-1330	0.09	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.05]	0.3	KBL2.4-P

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

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TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR HYUNDAI MOTOR (1/1)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
6D22T	105100-7230 [---]	105031-4530 (31-4530,B)	105015-6710 (NP-DLLA160SN671)	-	0.1	17.7 {180}	24.8 ~ 25.4 {253 ~ 259}	-	0.35	KBL2.1-S
Q-2000	105110-8150 [---]	105041-4350 (41-4350,-)	105025-3430 (NP-DLLA150SM343)	105019-2690	0.06	18.1 {185}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.35	KBL2.4-S
KKTCI	105110-8160	105041-4330 (41-4330,-)	105025-3440 (NP-DLLA148SM344)	-	0.06	15.7 {160}	-	22.6 ~ 23.6 {230 ~ 240} [Actual pre-lift+0.06]	0.4	KBL2.4-S
Q-2000	105110-8240 [33800-83401]	105041-4390 (41-4390,-)	105025-3430 (NP-DLLA150SM343)	105019-2690	0.06	18.1 {185}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.35	KBL2.4-S
Q-2000	105110-8320 [33800-83500]	105041-4390 (41-4390,A)	105025-4070 (NP-DLLA150SM407)	105019-2850	0.06	18.1 {185}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.35	KBL2.4-S
Q-2002	105110-8350 [33800-83450]	105041-4390 (41-4390,B)	105025-4430 (NP-DLLA145SM443)	105019-2940	0.06	18.1 {185}	-	25.5 ~ 26.5 {260 ~ 270} [Actual pre-lift+0.05]	0.35	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

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TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR ASIA (1/1)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
EM100	105101-7550 [---]	105030-4530 (30-4530,-)	105015-9480 (NP-DLLA150SN948)	-	0.11	14.7 {150}	26.0 ~ 26.6 {265 ~ 271}	-	0.35	KBL2.1-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)

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TWO-SPRING NOZZLE HOLDER CALIBRATION DATA

FOR SAM SUNG HEAVY I. (1/1)

Engine model	Nozzle & nozzle holder assembly no.*	Nozzle holder part no. (Stamping mark and discrimination mark)	Nozzle part no. (Stamping mark)	Nozzle service kit no. ¹	Pre-lift (±0.02mm)	First nozzle opening pressure MPa {kgf/cm ² }	Second nozzle opening pressure ² MPa {kgf/cm ² }	Second nozzle opening pressure ³ MPa {kgf/cm ² } [lift mm]	Valve lift (mm)	Nozzle holder type
RG8	105110-7540 [---]	105041-4020 (41-4020,A)	105015-9240 (NP-DLLA152SN924)	105019-2910	0.07	17.7 {180}	-	23.5 ~ 24.5 {240 ~ 250} [Actual pre-lift+0.05]	0.37	KBL2.4-S

Note: * The number in brackets [] is the manufacturer's part number.

Lift is dial gauge lift at confirmation.

1. Use the nozzle service kit for nozzle replacement of KBL2.3-S, KBL2.4-S and KBL2.4-P type nozzle holders. Never replace only the nozzle itself of these types.
2. This is the second nozzle opening pressure adjusted without a cover installed.
3. This is the second nozzle opening pressure adjusted with a cover installed.
4. Adjust using the standard spacer: 157803-4000 (2.4-P)
5. Adjust using the standard spacer: 157803-3900 (improved 2.4-P)