



Heavy duty machines

Catalogue

Update 06/2022

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**OEM CODES AND PARTS NUMBERS ARE
GIVEN FOR REFERENCE PURPOSE ONLY**

ABBREVIATIONS

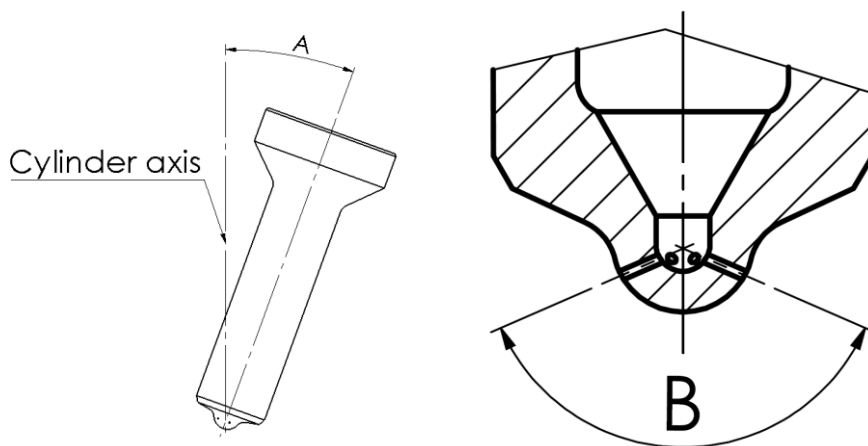
- Holes

In this section are reported the information about how many micro holes there are and their diameter, in this following way: <N.microholes> x <Diameter microholes>

- Angles

In this section are reported the information related to nozzle and micro holes angular position

Engine Angles	Spray Angle
A	B





1 Caterpillar Nozzles, Kits and Spare parts

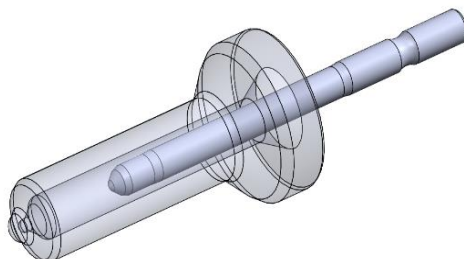
Suitable for

CAT® C7 - C9 - C10 - C13 - C15 - 3406E – 3516E

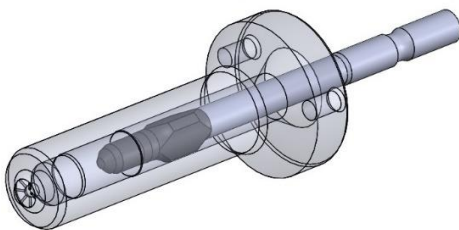
Perkins® 3176C

[4]

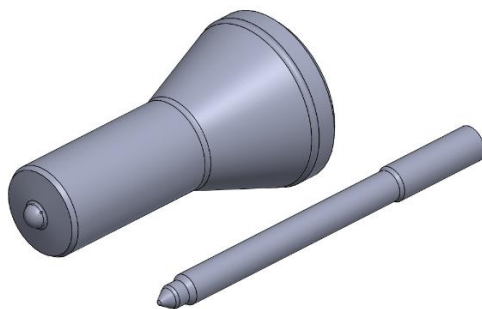
Caterpillar Nozzles



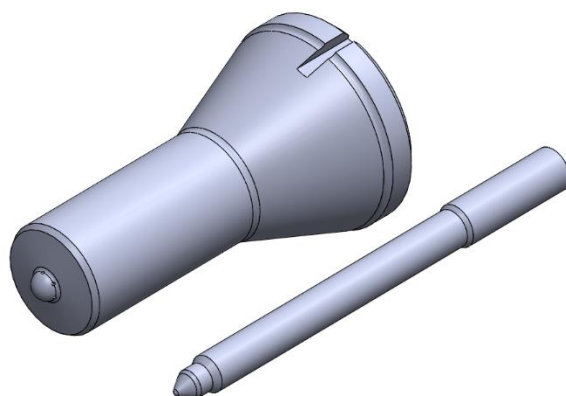
FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C800T	15°	132°	10R-4763=387-9428 10R-7225=387-9427 263-8218 20R-8066	015T396554 221F426554	C7	6 x 0,160
C800U	15°	132°	10R-4761=387-9430	315T426203	C7	6 x 0,140
C800V	0°	127°		099S423176		5 x 0,215
C800W	0°	127°	10R-7222=387-9433 10R-4764=387-9438 254-4339 20R-8064	330T418062	C7	5 x 0,210
			10R-7223=293-4073=387-9432 10R-7222=387-9433 10R-4764=387-9438	329T413176	C9	
C800X	0°	127°		264F413249		5 x 0,185
C800Z	0°	127°40'		123408062		5 x 0,225
C801G	15°	132°	10R-4762=387-9429	266F425162	C7	6 x 0,150



FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C800E	0°	129°	10R-7224=236-0962 235-2888	055T420553	C9	6 x 0,165



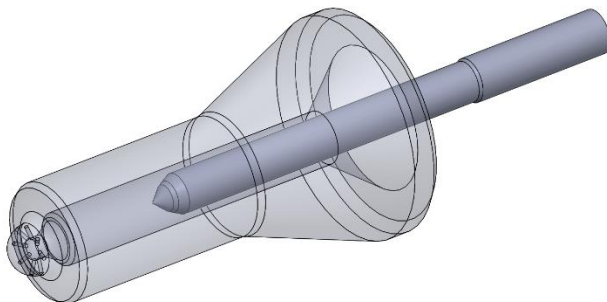
FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C800A	0°	130°			3406E	6 x 0,220
C800F	0°	130°			3516E	6 x 0,295
C801B	0°	148°	10R-0725=212-3464		C10 3176C	8 x 0,200



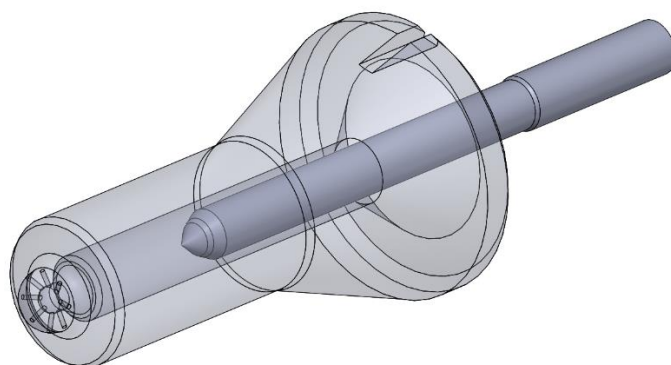
FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C800G	0°	130°	10R-2772=253-0618 CH10948(Perkins)		3406E 2806	6 x 0,275
C800GA	0°	130°	10R-2772=253-0618 CH10948(Perkins)		3406E 2806	6 x 0,260
C800P	0°	130°			18L	6 x 0,290
C800Y	0°	130°	10R-8501=211-3023 10R-8501=191-3003 10R-8501=0R-9257 10R-2781=118-9030 10R-2781=0R-4894		C15, C13 3406E C16	6 x 0,215
C800J	0°	130°	10R-3264=253-0615		3406E	6 x 0,225
C800N	0°	132°		145T909108		6 x 0,160
C801E	0°	130°	CH12082(Perkins)		C15 3176C C10	6 x 0,240
C801F	0°	132°	200-1117 CH12071(Perkins) 10R-8988=295-9085	257F709083	3406E	6 x 0,320

FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C801H	0°	130°	276-8307=10R-7231 CH10948 (Perkins)		C18 C32 Perkins	6 x 0,280
C801J	0°	140°	10R-0725=212-3464		C10 3176C	8 x 0,195
C801N	0°	127°		009T703484		6 x 0,220
C801R	0°	126°	20R-2284=374-0750	152S703437 3437-N2	365C	6 x 0,225
C801P	0°	130°	20R-2285=374-0751	191T710635		6 x 0,195
C801V	0°	131°	20R-0055=317-5278	323T709108		6 x 0,165
C801T	0°	130°30'				6 x 0,300
C802G	0°	131°	10R-0955=211-3025	234T733665	C15	6 x 0,250
C802N	0°	130°	10R-0956=211-3022		3406E	6 x 0,200
C802P	0°	130°	10R-0957=211-3023		3406E C15-C16	6 x 0,215
C802R	0°	131°	10R-0958=211-3024		3406E	6 x 0,230
C802M	0°	130°	10R-0963=212-3463	053F803444	C10	6 x 0,180

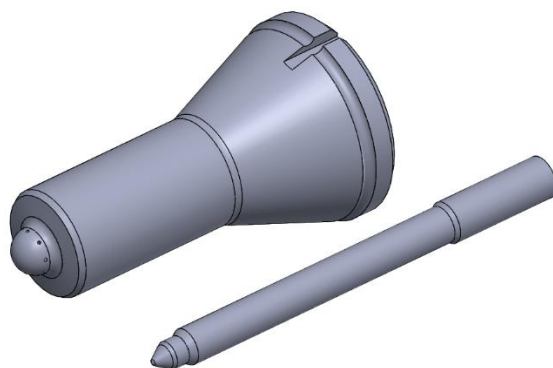
FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C802S	0°	130°	10R-3262=249-0713		C13 C11	6 x 0,310
C802F	0°	147°	10R0967	119F723412		6 x 0,165
C802T	0°	125°		291F705909		6 x 0,270
C802V	0°	130°	211-3022 249-0713 10R-2782 10R-3262		C13 C11	6 x 0,225
C802W	0°	129°	350-7555=20R-0056	105T901245	C12	6 x 0,180
C803B	0°	136°		349S738803		7 x 0,220



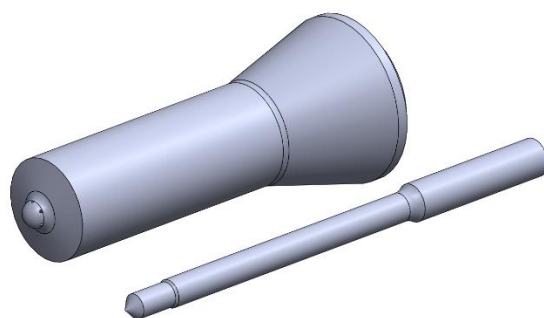
FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C800H	0°	160°			3516B/E 3500B 3508B 3512B	8 x 0,290
C800R	0°	150°		265F503538		10 x 0,255
C800S	0°	150°	250-1300 229-0169		3500	10 x 0,310



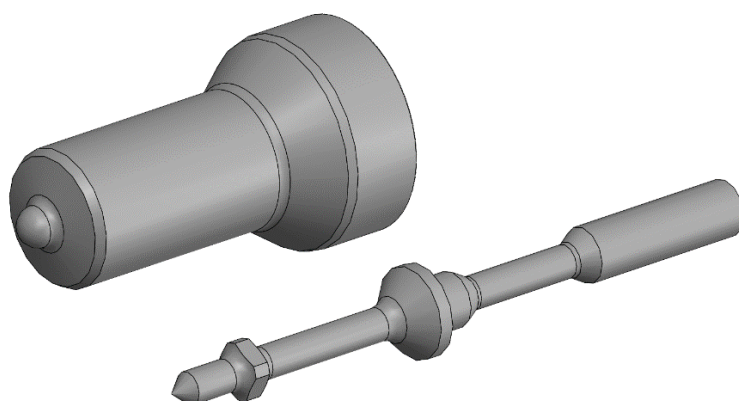
FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C800C	0°	160°	10R-1290=250-1311 20R-0849=392-0211 20R-1275=386-1766 392-0214	136F009455 229F400162	3516E	8 x 0,295
C800D	0°	160°	20R-0849=166-6006 20R-1270=148-5759		3516E	8 x 0,300
C800DA	0°	160°				
C800DB	0°	160°				
C800L	0°	156°		007T509455 006S509455	3516E	8 x 0,310
C801S	0°	140°	20R-1266=386-1754 20R-1266=392-0202 20R-1279=392-0218 20R-1279=386-1770		3500B 3508B 3521B 3516B/E	7 x 0,305
C801U	0°	135°		194F007746		7 x 0,295
C802X	0°	145°		215T377545		8 x 0,300



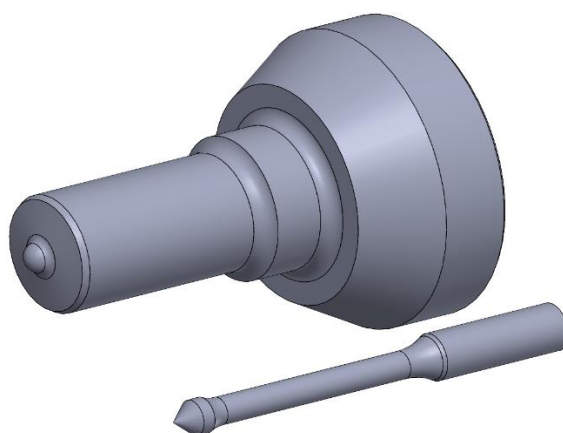
FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C802H	0°	124°	10R-1273=249-0709		C15	6 x 0,205
C802J	0°	125°	10R-1000=229-5919		C15	6 x 0,215
C802L	0°	130°	10R-2977=249-0708		C13	6 x 0,195



FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C800B	0°	137°			3116	6 x 0,225
C801A	0°	155°20'	0R-8475=127-8207	7E-0506	C15	6 x 0,220
C802U	0°	136°				6 x 0,155
C802Z	0°	135°	0R-8461=127-8222	4P-1733		6 x 0,190

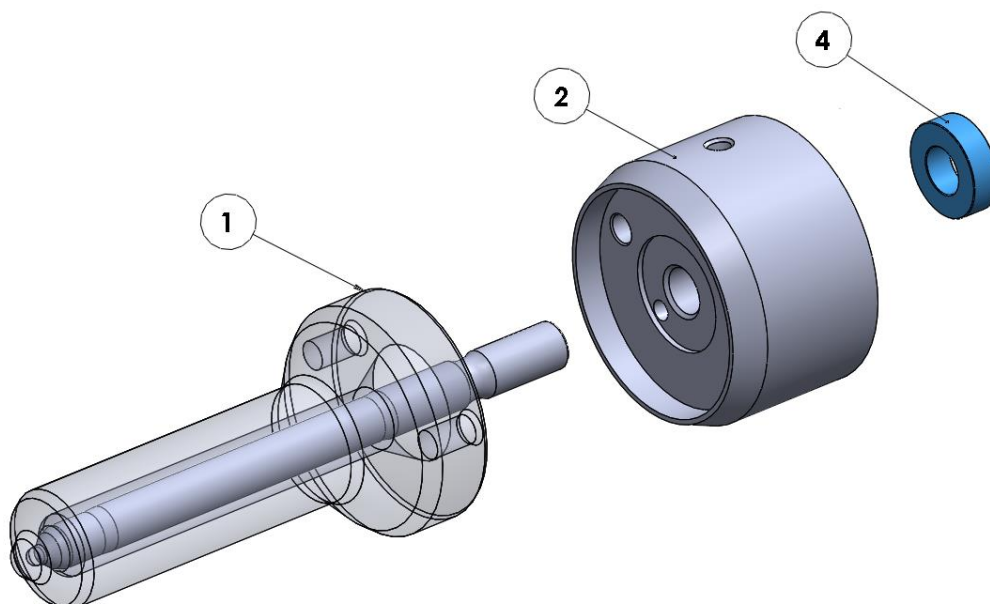


FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C700A	0°	129°30'	331-5895 =10R-8998		C175-16 793F 797F	5 x 0,375



FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Stamping	Engines	Holes
C710A	0°	131°		13817241		6 x 0,200

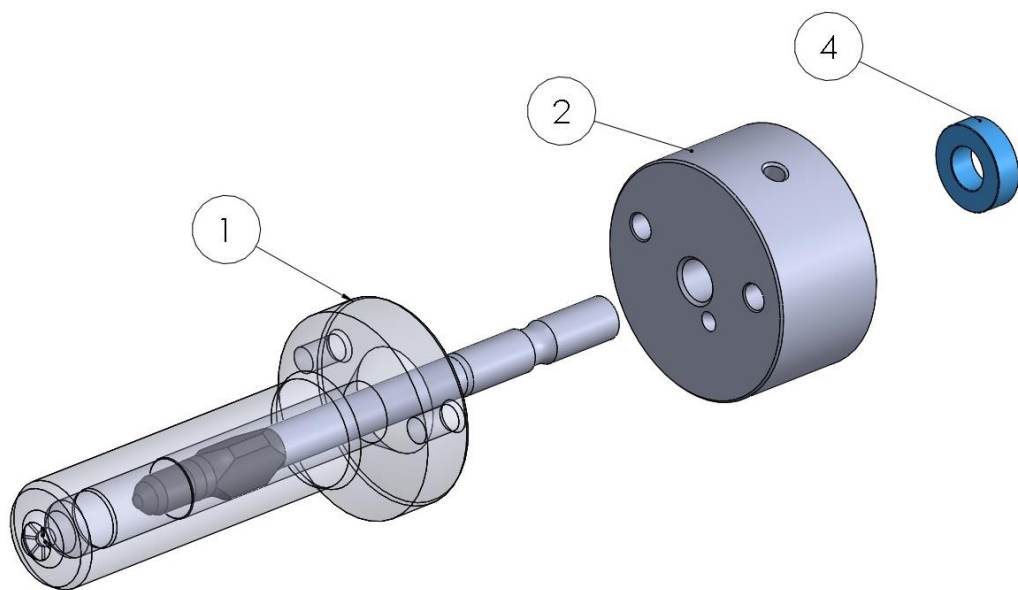
Caterpillar Nozzle kits



N. Part	Description	FIRAD code
1		FIRAD Nozzle
2	Bush	MCBU002
4	Gasket	MCGA001

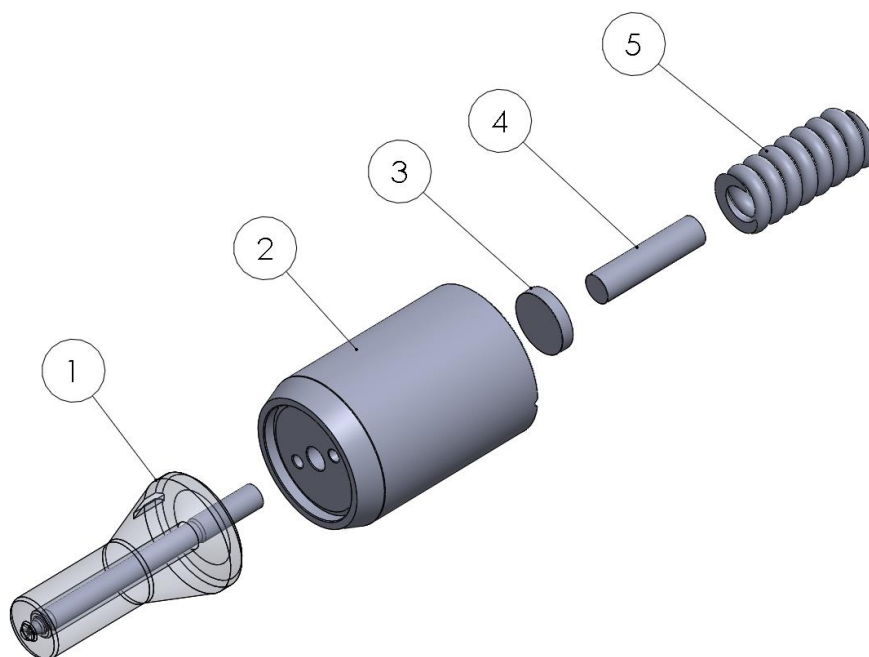
FIRAD code kit	Firad Nozzle	CAT® Injector Part Number	Engine
FD00800T	C800T	10R-4763=387-9428 10R-7225=387-9427 263-8218	C7
FD00800U	C800U	10R-4761=387-9430	C7
FD00800W	C800W	10R-7222=387-9433 10R-4764=387-9438 254-4339	C7/C9
FD00801G	C801G	10R-4762=387-9429	C7

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N. Part	Description	FIRAD code
1		FIRAD Nozzle
2	Bush	MCBU003
4	Gasket	MCGA001

FIRAD code kit	Firad Nozzle	CAT® Injector Part Number	Engine
FD00800E	C800E	10R-7224=236-0962 235-2888	C9



N. Part	Description	FIRAD code
1		FIRAD Nozzle
2	Bush	MCBU001
3	Shim	MCSH001-220
4	Pin	MCPN001-19210
5	Spring	MCSP001

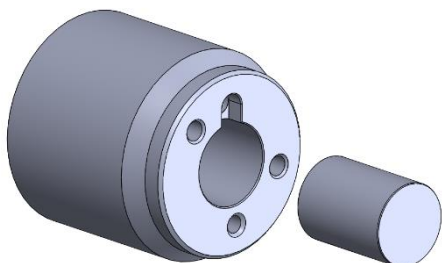
FIRAD code kit	Firad Bush	Firad Nozzle	CAT® Injector Part Number	Engine
FD150955	MCBU001-E	C802G	10R-0955=211-3025	C15
FD151273	MCBU001-D	C802H	10R-1273=249-0709	C15
FD155919	MCBU001-D	C802J	10R-1000=229-5919	C15
FD132977	MCBU001-C	C802L	10R-2977=249-0708	C13

[18]

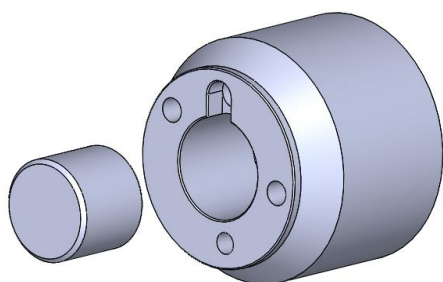
FIRAD code kit	Firad Bush	Firad Nozzle	CAT® Injector Part Number	Engine
FD00800G	MCBU001-E	C800G	10R-2772=253-0618 CH10948(Perkins)	3406E 2806
FD00800C	MCBU001-F	C800C	10R-1290=250-1311 20R-0849=392-0211	3516E
FD00800J	MCBU001-D	C800J	10R-3264=253-0615	3406E
FD00802S	MCBU001-C	C802S	10R-3262=249-0713	C13 C11
FD00801P	MCBU001-D	C801P	20R-2285=374-0751	6015B
FD102772	MCBU001-D	C800G	10R-2772=253-0618	C15 C18
FD00800D	MCBU001-F	C800D	20R-0849=166-6006	5230B 5130B
FD00801F	MCBU001-E	C801F	10R-8988=295-9085	C18 C32
FD00801R	MCBU001-D	C801R	20R-2284	3406E C15 C16
FD00801P	MCBU001-D	C801P	20R-2285=374-0751	
FD00800Y	MCBU001-E	C800Y	10R-8501=211-3023	C15, C13 3406E C16
FD00800A	MCBU001-E	C800A		

FIRAD code kit	Firad Bush	Firad Nozzle	CAT® Injector Part Number	Engine
FD0CJ800	MCBU001-C	C800J	10R-3264=253-0615	3406E
FD00801E	MCBU001-D	C801E	CH12082(Perkins)	C15 3176C C10
FD0CA800	MCBU001-C	C800A		
FD00802W	MCBU001-D	C802W	350-7555=20R-0056	C12

Caterpillar plunger valve kits

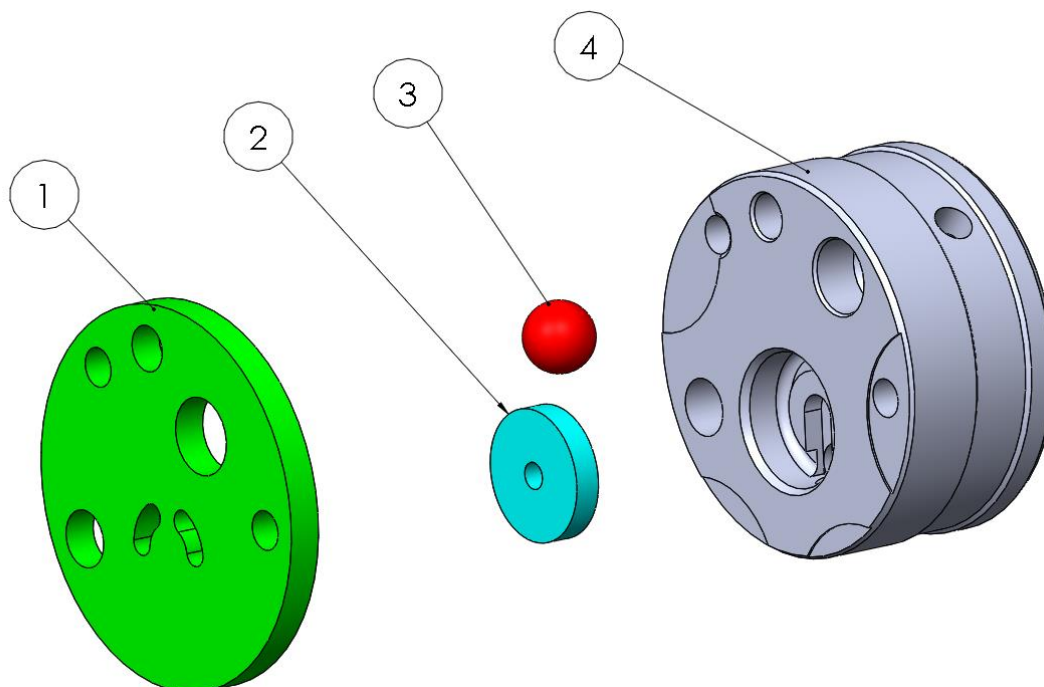


FIRAD code	Engine
FDK00003	C7



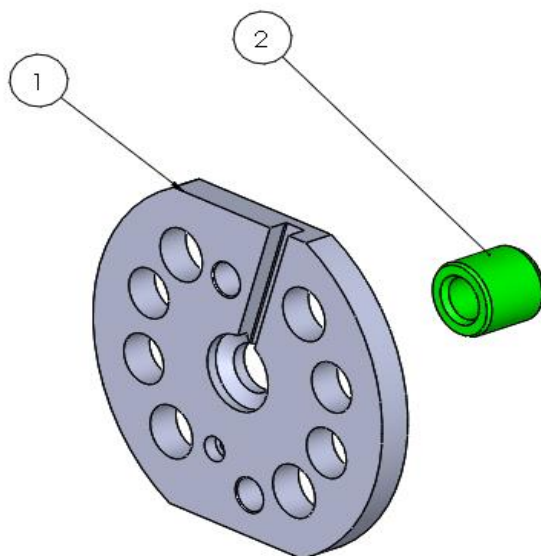
FIRAD code	Engine
FDK00002	C9

Caterpillar one way valve kits



FIRAD Code	N. Part	FIRAD code	Engine
FDK00001	1	MCSA002	C9
	2	MCSA004	
	3	MCBA001	
	4	MCSA001	
FDK00005	1	MCSA005	C7
	2	MCSA004	
	3	MCBA001	
	4	MCSA006	

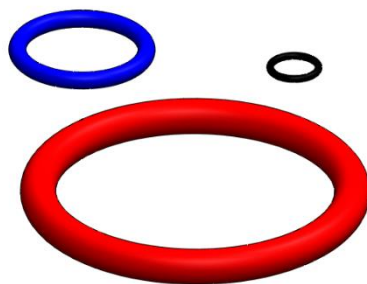
Caterpillar exhaust valve kit



N. Part	FIRAD code
1	MCPL001
2	MCSS001

FIRAD code	Engine
FDK00004	C9

External Seal Kit



FIRAD code	CAT® Injector Part Number	Engines
MCESK001	249-0713=10R-3262 253-0618=10R-2772 374-0751=20R-2285 20R-2284 276-8307=10R7231 295-9085=10R8988	3116
MCESK002	166-6006=20R-0849 148-5759=20R-1270	C15



FIRAD code	Engines
MCESK003	C9



FIRAD code	Engines
MCESK004	C9



FIRAD code	Engines
MCESK005	C9



FIRAD code	Engines
MCESK006	C9

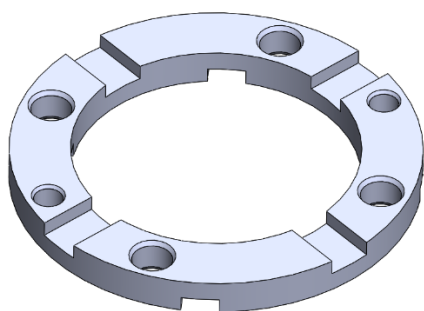


FIRAD code	Engines
MCESK007	3500



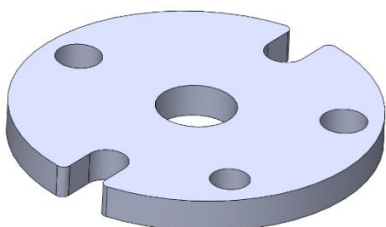
FIRAD code	Engines
MCESK008	3516

Caterpillar spare parts



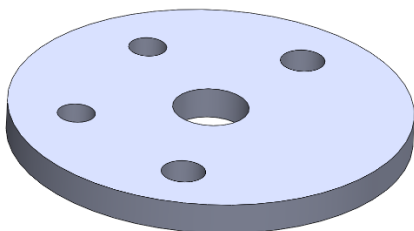
Solenoid spacer

FIRAD code	Thickness	Engine
MCSL001-288	2,88 mm	C9 – C7
MCSL001-290	2,90 mm	C9 – C7
MCSL001-292	2,92 mm	C9 – C7
MCSL001-294	2,94 mm	C9 – C7
MCSL001-296	2,96 mm	C9 – C7

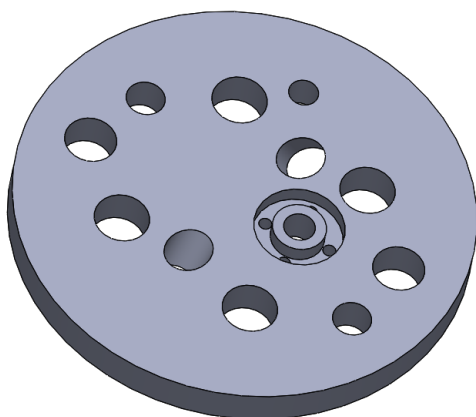


Plate

FIRAD code	Engine
MCSA003	C9



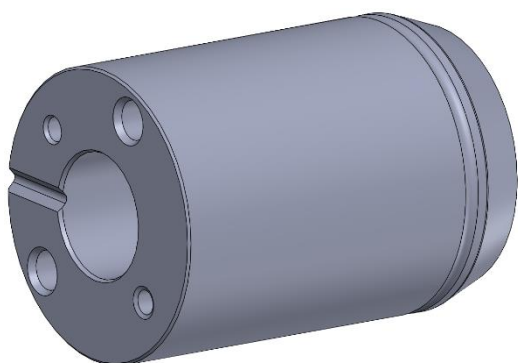
FIRAD code	Engine
MCSA007	C7



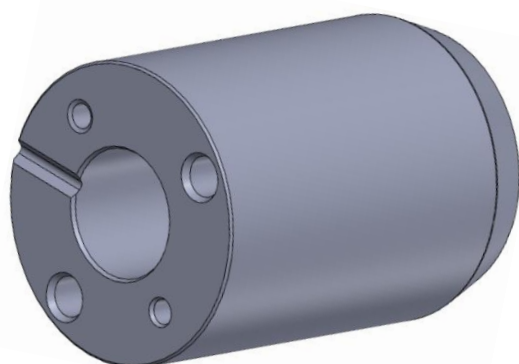
Hydraulic flow control plate

FIRAD code	Engine
MCPL002	C7

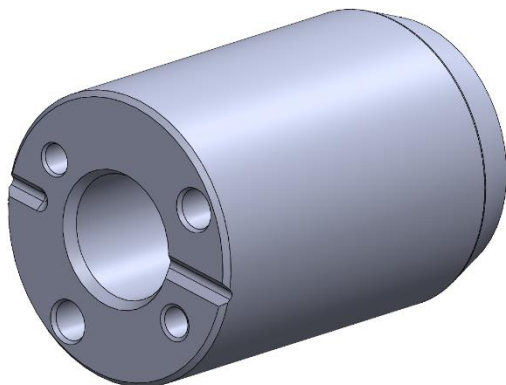
Caterpillar Bush



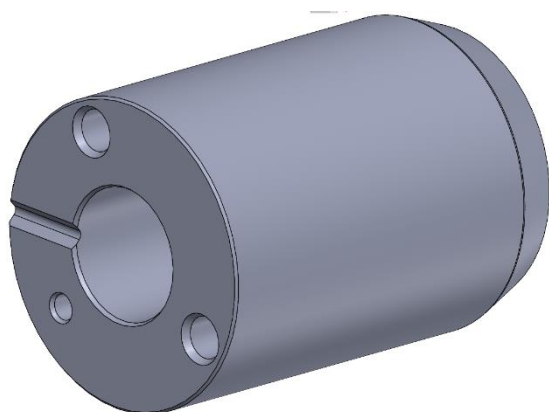
FIRAD code	Engine
MCBU001-B	3406E
	2806
	3516E
	C13 – C15
Description: 1 drain, 4 holes, with outer ring	



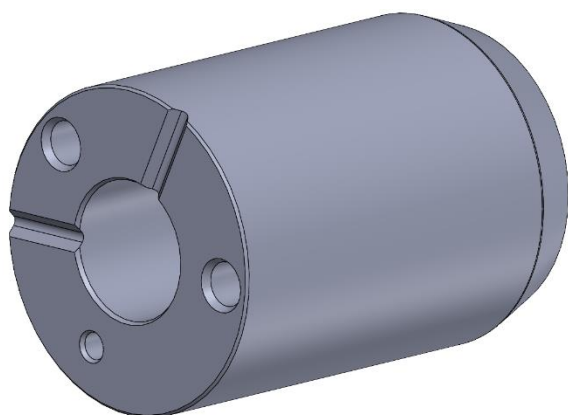
FIRAD code	Engine
MCBU001-C	3406E
	2806
	3516E
	C13 – C15
Description: 1 drain, 4 holes	



FIRAD code	Engine
MCBU001-D	3406E
	2806
	3516E
	C13 – C15
Description: 2 drains, 4 holes	

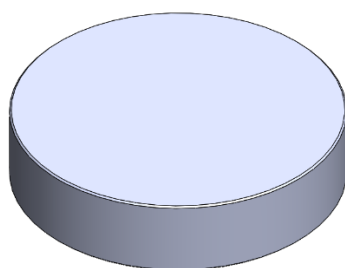


FIRAD code	Engine
MCBU001-E	3406E
	2806
	3516E
	C13 – C15
Description: 1 drain, 3 holes	



FIRAD code	Engine
MCBU001-F	3406E
	2806
	3516E
	C13 – C15
Description: 2 drain, 3 holes	

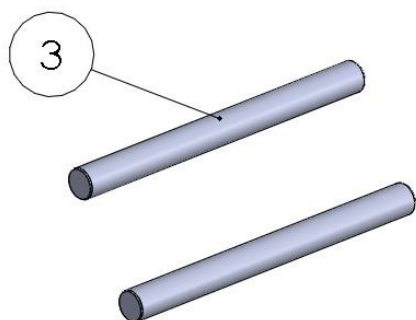
[30]



Shim

Outer diameter: 10 mm

FIRAD code	Thickness	Engine
MCSH001-210	2,10 mm	C13 - C15 - 3406E
MCSH001-215	2,15 mm	C13 - C15 - 3406E
MCSH001-220	2,20 mm	C13 - C15 - 3406E
MCSH001-225	2,25 mm	C13 - C15 - 3406E
MCSH001-230	2,30 mm	C13 - C15 - 3406E
MCSH001-235	2,35 mm	C13 - C15 - 3406E
MCSH001-240	2,40 mm	C13 - C15 - 3406E
MCSH001-245	2,45 mm	C13 - C15 - 3406E
MCSH001-250	2,50 mm	C13 - C15 - 3406E
MCSH001-255	2,55 mm	C13 - C15 - 3406E
MCSH001-260	2,60 mm	C13 - C15 - 3406E



N. Part	Description	FIRAD code
3	Nozzle Reference pin for C7-C9	MCCPN001

C7-C9 Nozzle Reference pin



2 Navistar Nozzles and Kits

Suitable for

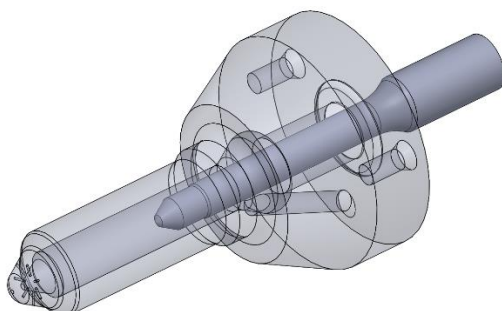
Navistar® HEUI engines

Ford® Powerstroke 7.3

Caterpillar® 3126 HEUI – 3408 - 3412

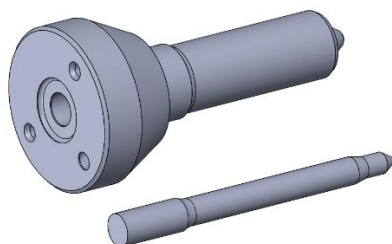
[33]

Navistar Nozzles

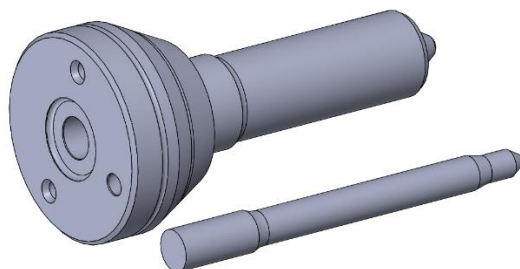


FIRAD code	Engine Angle	Spray Angle	OEM Part Number	Ford Injector	Navistar Injector	Holes
NS0AA F	7°30'	152°	AP63800AA	F81Z9E527DRM F4TZ9VE527AA RM F7TZ9E527ARM	1822800C95 1816187C3 1822801C98 1822801C99 1821836C3	7 x 0,165
NS9BE F	10°	142°	AP63809BE		1829838C94 1829926C2 1829839C93 1829839C94 1829837C2	5 x 0,220
NS1BI F	10°30'	145°	AP63811BI		1830740C92 1830560C2 1830561C92 1830562C2 1830741C92 1830741C93	6 x 0,170
NS2BJ F	10°30'	145°	AP63812BJ		1830570C92 1830571C2 1830572C92 & 93 1830573C2	6 x 0,190
NS5BK F	6°	146°	DPE41026/31			6 x 0,225
NS6BN F	9°	148°	8991056		1830691C1 1830692C91 1830693C1 1830694C91	6 x 0,205

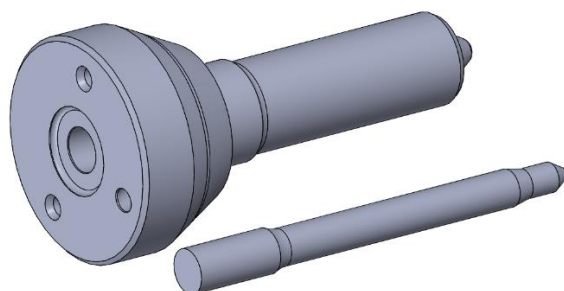
FIRAD code	Engine Angle	Spray Angle	OEM Part Number	Ford Injector	Navistar Injector	Holes
					2593597C91	
NS7BD F	11°	146°	8991055			5 x 0,235
NS3BC F	10°	142°	8991035			5 x 0,220



FIRAD code	Engine Angle	Spray Angle	OEM Part Number	CAT® Injector Part Number	CAT® Reman Injector Part Number	Engine	Holes
CN900B	16°30'	140°	DPE41026/32 (6-16)	141-7837 155-1819 169-7408 171-9704 171-9710 173-9272 173-9379 173-9380 188-1320 196-4229 222-5972 178-6342	0R-9350 0R-9348 10R-1257	3126E 3126B 3126	6 x 0,165
CN900C	16°30'	140°	DPE41026/32 (6-17)	173-4059 173-4061 173-9267 173-9268 196-1401 222-5963 222-5967 177-4754 177-4752	0R-9349 10R-1262 10R-0782 10R-9237	3126 3126E 3126B	6 x 0,175
CN900E	16°30'	140°	(6-175)	222-5966	10R-0781	3126E 3126B	6 x 0,175

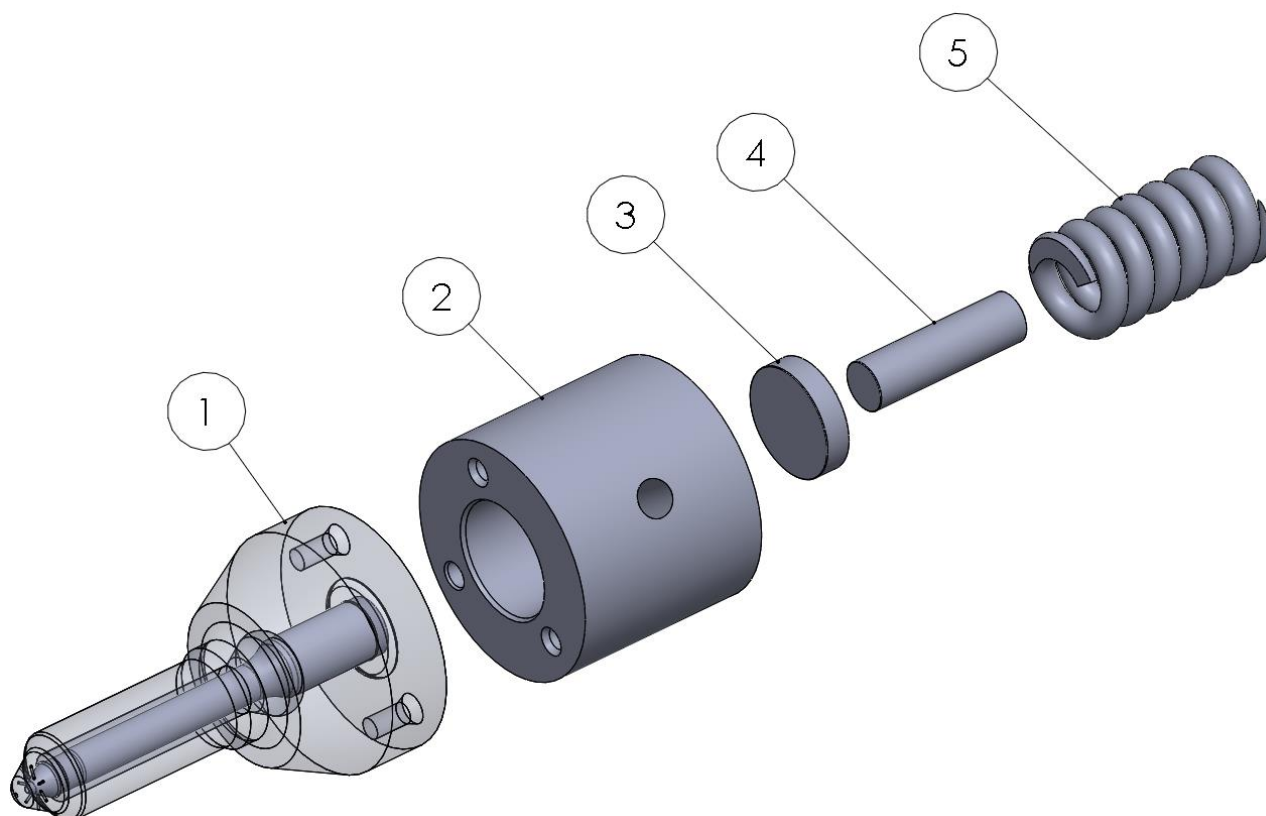


FIRAD code	Engine Angle	Spray Angle	OEM Part Number	CAT® Injector Part Number	CAT® Reman Injector Part Number	Engine	Holes
CN900A	0°	140°		174-7526 174-7527 232-1175	20R-0758	651E 657E	6 x 0,255
CN900H	0°	132°		232-1170			6 x 0,260



FIRAD code	Engine Angle	Spray Angle	OEM Part Number	CAT® Injector Part Number	CAT® Reman Injector Part Number	Engine	Holes
CN900D	0°	130°		198-6877 204-2467	20R-4147	3412E	6 x 0,260
CN900G	0°	140°		174-7526 174-7527	20R-0758	651E 657E	6 x 0,250

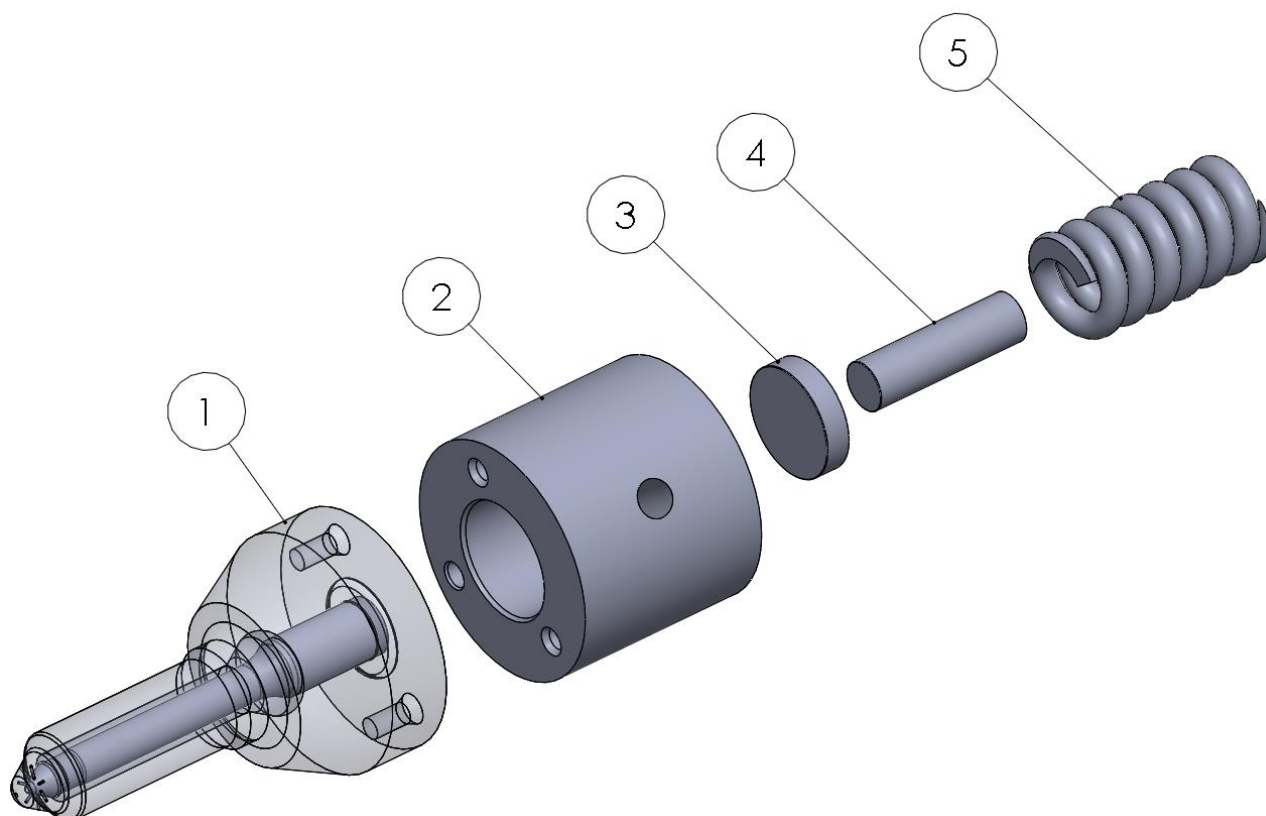
Navistar Nozzle kits



N. Part	Decription	FIRAD Code
1		FIRAD Nozzle
2	Bush	MCBU004
3	Shim	MCSH002-207
4	Pin	MCPN002-1385
5	Spring	MCSP002

FIRAD code	Firad Nozzle	OEM Part Number	Ford Injector	Navistar Injector
FD0000AA	NS0AA F	AP63800AA	F81Z9E527DRM F4TZ9VE527AARM F7TZ9E527ARM	1822800C95 1816187C3 1822801C98 1822801C99 1821836C3
FD0000BE	NS9BE F	AP63809BE		1829838C94 1829926C2 1829839C93 1829839C94 1829837C2
FD0000BI	NS1BI F	AP63811BI		1830740C92 1830560C2 1830561C92 1830562C2 1830741C92 1830741C93
FD0000BJ	NS2BJ F	AP63812BJ		1830570C92 1830571C2 1830572C92 & 93 1830573C2
FD000BK	NS5BK F	DPE41026/31		
FD0000BN	NS6BN F	8991056		1830691C1 1830692C91 1830693C1 1830694C91 2593597C91
FD0000BD	NS7BD F	8991055		
FD0000BC	NS3BC F	8991035		

Cat Navistar Nozzle kits



N. Part	Decription	FIRAD Code
1		FIRAD Nozzle
2	Bush	MCBU004
3	Shim	MCSH002-207
4	Pin	MCPN002-1385
5	Spring	MCSP002

[40]

FIRAD code	Firad Nozzle	OEM Part Number	CAT® Injector Part Number	CAT® Reman Injector Part Number	Engine
FD00900B	CN900B	DPE41026/32 (6-16)	141-7837 155-1819 169-7408 171-9704 171-9710 173-9272 173-9379 173-9380 188-1320 196-4229 222-5972 178-6342	OR-9350 OR-9348 10R-1257	3126E 3126B 3126
FD00900C	CN900C	DPE41026/32 (6-17)	173-4059 173-4061 173-9267 173-9268 196-1401 222-5963 222-5967 177-4754 177-4752	OR-9349 10R-1262 10R-0782 10R-9237	3126 3126E 3126B
FD00900E	CN900E	(6-175)	222-5966	10R-0781	3126E 3126B
FD00900A	CN900A		174-7526 174-7527 232-1175	20R-0758	651E 657E
FD00900H	CN900H		232-1170		
FD00900D	CN900D		198-6877 204-2467	20R-4147	3412E
FD00900G	CN900G		174-7526 174-7527	20R-0758	651E 657E



3 Cummins Nozzles

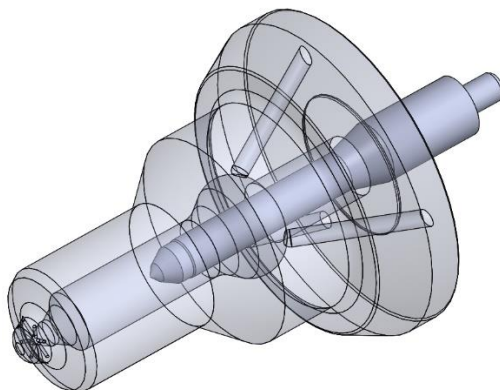
Suitable for

Cummins[®] M11, N14, L10, QSK, ISC, ISL, QSL, QSC engines

Scania XPI engine

[42]

Cummins Nozzles



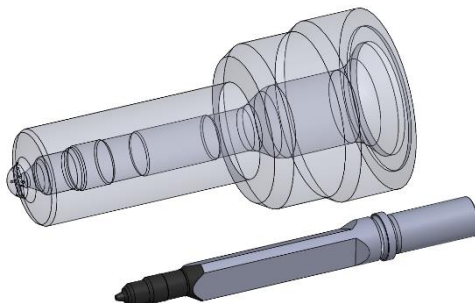
FIRAD code	Engine Angle	Spray Angle	Stamping	Injector Part Number	Engine	Holes
108/CFD	0°	150°	26107	3070629 3070739 3071534 3073995 3081314 3081315 3081317 3652516 3652541 3652542	N14 L10	8 x 0,215
109/CFD	0°	148°	26108	3084589 3087557 3411752	M11	8 x 0,170
110/CFD	0°	153°	26109	3083846 3087733 3087560 3411759	N14	8 x 0,200
111/CFD	0°	153°	26113	3411755	M11	8 x 0,160
112/CFD	0°	153°	26114	3411758	M11	8 x 0,215

FIRAD code	Engine Angle	Spray Angle	Stamping	Injector Part Number	Engine	Holes
113/CFD	0°	149°	26115	3095086 3609796 3087788	N14	8 x 0,235
114/CFD	0°	146°	26116	3088178	N14	8 x 0,230
115/CFD	0°	150°	26117	3073996 3081318 3652540	L10	8 x 0,180
116/CFD	0°	159°	26122	3411753 3095040	M11	8 x 0,190
117/CFD	0°	153°	26126	3411385 3411767	N14	8 x 0,230
128/CFD	0°	152°	26127	3411381 3411691 3411765	N14	8 x 0,195
129/CFD	0°	154°	26135	3411761	N14	8 x 0,210
130/CFD	0°	142°	26137	3411766	N14	8 x 0,210
131/CFD	0°	140°	4061854 FSP	4061851	M11	8 x 0,205
132/CFD	0°	140°	4026225 FSP	4026222	M11	8 x 0,220
133/CFD	0°	130°	4903475	4903472	M11	6 x 0,215
134/CFD	0°	154°	3609855 FSP	3411760	N14	8 x 0,230
135/CFD	0°	131°	4903322 FSP	4903319	M11	6 x 0,220

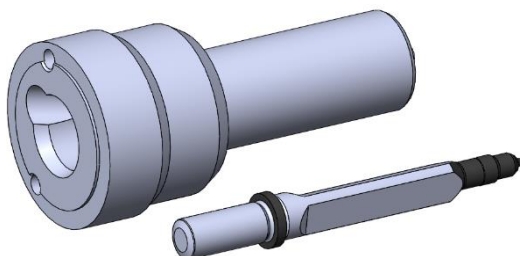
[44]

FIRAD code	Engine Angle	Spray Angle	Stamping	Injector Part Number	Engine	Holes
150/CFD	0°	154°	M-3095729			8 x 0,215
151/CFD	0°	131°			N14	6 x 0,180
152/CFD	0°	152°	FSP 4307798			6 x 0,255

Cummins QSK Nozzles

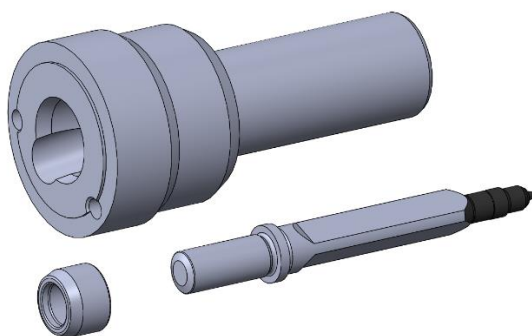


FIRAD code	Engine Angle	Spray Angle	Cummins® Part Number	Bosch® OEM Part Number	Stamping	Engines	Holes
QKFDA 00BD	0°	148°	2867147	F00B J00 000 F00B J00 001 Y 431 K05 392	F00BD00000	QSK	6 x 0,265
QKFDA 00BD3	0°	139°	4964170	F00B L0J 019 F00B L0J 020 0 986 435 612 Y 431 K05 420	F00BD00003	QSK 19	6 x 0,270



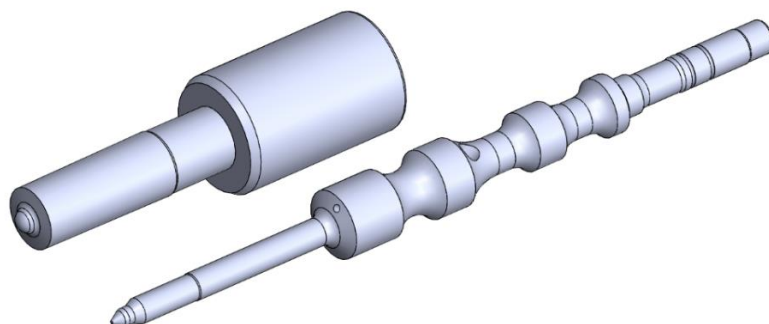
FIRAD code	Engine Angle	Spray Angle	L'Orange® Part Number	Bosch® OEM Part Number	Stamping	Engines	Holes
QKFDA 00265671	0°	149°			B 433265671	QSK	6 x 0,260
QKFDA 00BD4	0°	131°	X51107500005 X51107500011	F00B L0J 004 F00B L0J 005 F00B L0J 011 F00B L0J 012	F00BD00004	MTU	8 x 0,270

				Y 431 K05 350 Y 431 K05 351 Y 431 K05 210			
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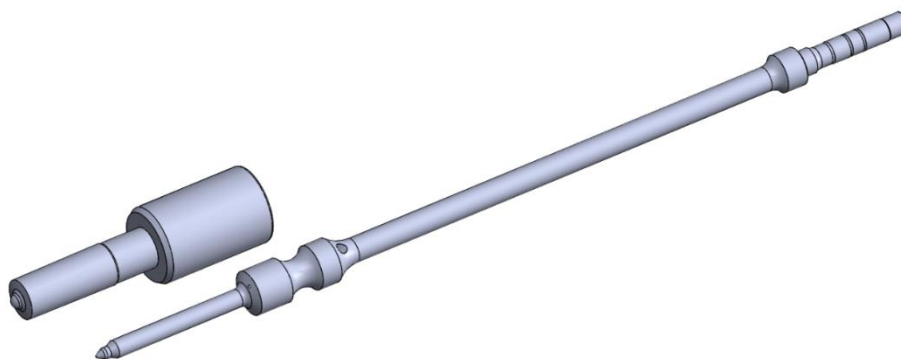


FIRAD code	Engine Angle	Spray Angle	Cummins® Part Number	Bosch® OEM Part Number	Stamping	Engines	Holes
QKFDA 00265191	0°	145°		Y 431 K05 194 Y 431 K05 298	B 433265191	Iveco Vector	8 x 0,245

Cummins ISC, ISL, QSL, QSC, ISX, Scania XPI Nozzles

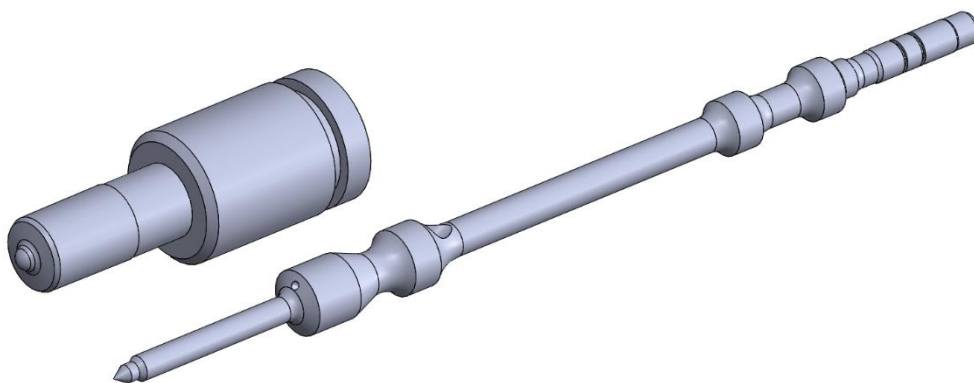


FIRAD code	Engine Angle	Spray Angle	OE Injector Part Number	Stamping	Engines	Holes
145P4928562	0°	145°	2872127 4954927	P4928562	ISC, ISL, QSL, QSC	7 x 0,180

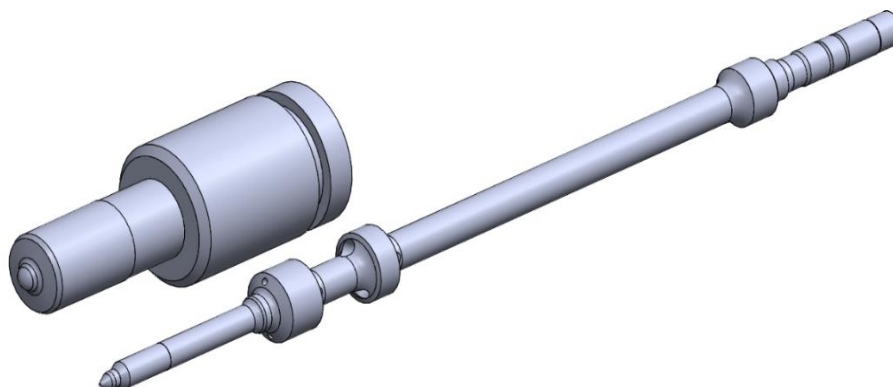


FIRAD code	Engine Angle	Spray Angle	OE Injector Part Number	Stamping	Engines	Holes
146P4307083	0°	146°		P4307083FSW	ISX	8 x 0,190
145P5461846	0°	145°		P5461846FSW	ISX	8 x 0,175

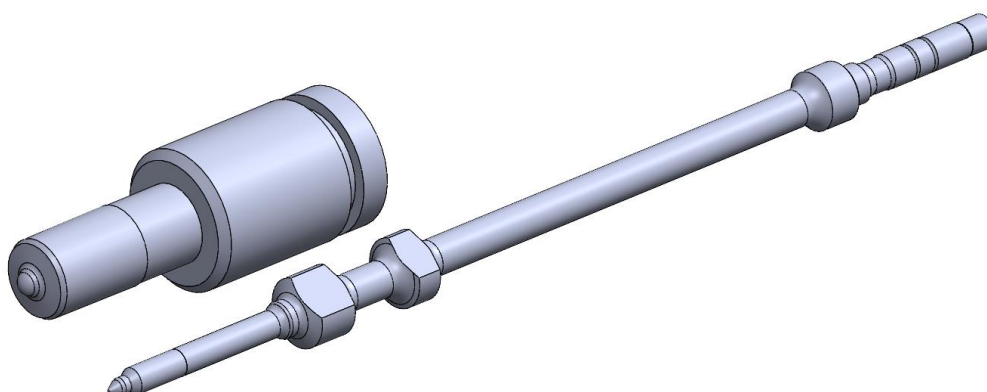
[48]



FIRAD code	Engine Angle	Spray Angle	OE Injector Part Number	Reman Injector Part Number	Stamping	Engines	Holes
148P2872320	0°	148°	2031835	575176	P2872320	DC9 DC13 DC16	8 x 0,160
148P2872321	0°	148°	2086663	575177	P2872321	DC9 DC13 DC16	8 x 0,175
148P4954707	0°	148°	1881564		P4954707	DC9 DC13 DC16	8 x 0,160
145P4984850	0°	145°	2872405	5579417	P4984850	ISX 15	8 x 0,185



FIRAD code	Engine Angle	Spray Angle	OE Injector Part Number	Reman Injector Part Number	Stamping	Engines	Holes
146P2897551	0°	146°	2057401	574423	P2897551	DC9 DC13 DC16	9 x 0,185



FIRAD code	Engine Angle	Spray Angle	OE Injector Part Number	Reman Injector Part Number	Stamping	Engines	Holes
146P4384025	0°	146°	4984369		P4384025	DC13	10 x 0,22



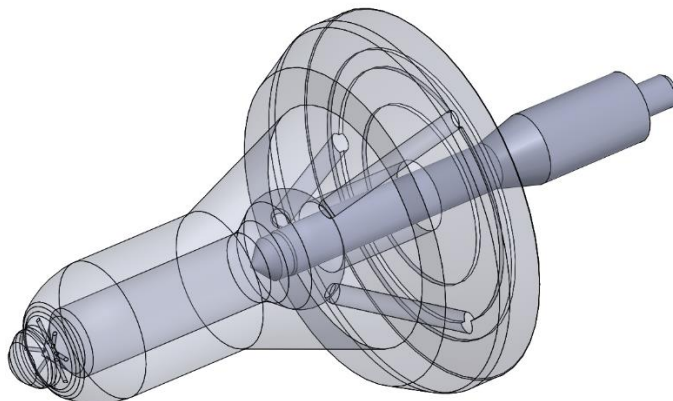
4 Detroit diesel Nozzles

Suitable for

Detroit[®] Diesel 50/60 series

[51]

Detroit Nozzles



FIRAD code	Engine Angle	Spray Angle	Stamping	Injector Part Number	Engine	Holes
018DFD	0°	154°	26211	5235915 5237466	1,27L	8 x 0,200
019DFD	0°	156°	26212	5235580 5236978	11,1L	8 x 0,170
020DFD	0°	157°	26213	5235600 5237320 5237650	11,1L 8,50L	9 x 0,200
021DFD	0°	159°	26214	5235935 5235605	11,1L 12,7L	9 x 0,165
022DFD	0°	161°	26215	5234870 5234940	11,1L 12,7L	9 x 0,200
023DFD	0°	159°	26216	5234795 5234945 5234970 5235695	12,7L 11,1L	9 x 0,210
024DFD	0°	159°	26217	5234785	12,7L	9 x 0,200
025DFD	0°	158°	26218	5234865	11,1L	9 x 0,200

[52]

FIRAD code	Engine Angle	Spray Angle	Stamping	Injector Part Number	Engine	Holes
026DFD	0°	153°	26219			9 x 0,215
027DFD	0°	154°	4991525	5235550 5236977 5235575	8,50L 11,1L	8 x 0,190
028DFD	0°	154°	752-B4-54	5236347 5236980 5237045		8 x 0,215

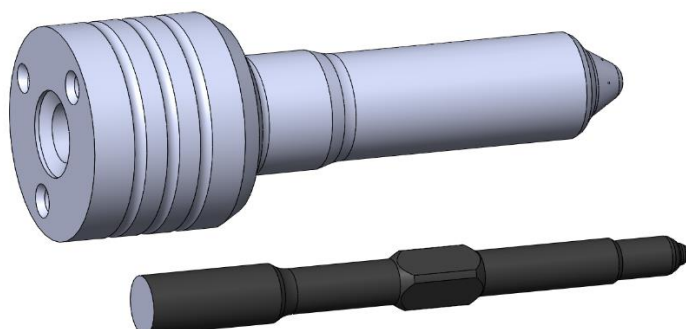


5 Perkins Nozzles

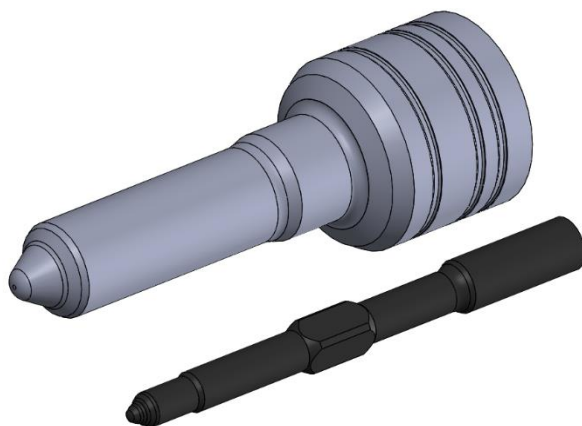
Suitable for
Caterpillar[®] C6.6

[54]

Perkins Nozzles

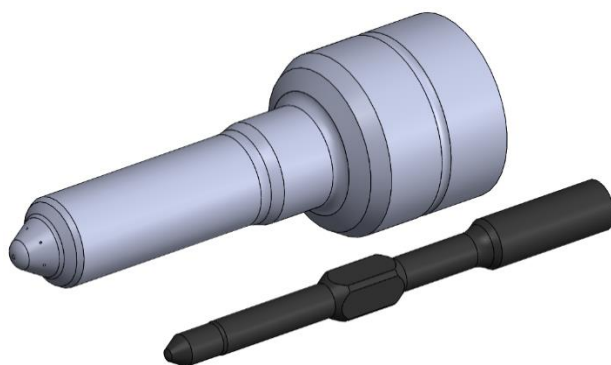


FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Perkins® Injector Part Number	Stamping	Engine	Holes
C500F	0°	126°		2645A745	050F379458	C6.6	6 x 0,135
C500E	0°	130°	10R-7671 320-0677 10R-7938 321-3600 10R-7672 320-0680 306-9380	2645A746 2645A747 2645A753	248T359461	C6.6 C4.4 1104D-E44TA 1106D-E66TA	6 x 0,160
C500H	0°	130°		2645A751	270T799467 102F679467	C6.6	6 x 0,205
C500L	0°	130°	320-0690 10R-7673	2645A749	182E359464 294F389464	C6.6	6 x 0,185



[55]

FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Perkins® Injector Part Number	Stamping	Engine	Holes
C500B	0°	135°	10R-7675 326-4700 095000-3200		239S379092	C6.6	6 x 0,155
C500C	0°	135°				C6.6	6 x 0,150
C500M	0°				211T359095	C6.6	6 x 0,165



FIRAD code	Engine Angle	Spray Angle	CAT® Injector Part Number	Perkins® Injector Part Number	Stamping	Engine	Holes
C500A	0°	130°			206T380694		6 x 0,165
C500D	0°	130°30'					6 x 0,185
C500N	0°	130°		2645A742	157F670259	C6.6	6 x 0,160



6 Siemens Nozzle

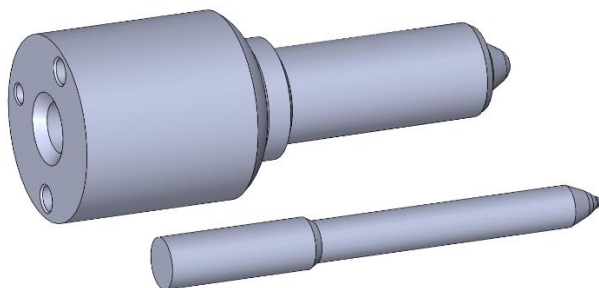
Suitable for

Ford[®] Powerstroke 6.0

Deutz[®] G2.9

[57]

Siemens Nozzles



FIRAD code	Engine Angle	Spray Angle	Stamping	Ford Injector	Navistar Injector	Holes
FD2000	0°	150°	V 0802 P 150	3C3Z-9E527-AE 3C3Z-9E527-ABRM	1843089C91 1845879C91 1843481C94 1843481C95	6 x 0,190
FD3000	0°	144°	V 0803 P 144			7 x 0,195
FD3001	0°	150°	V 0803 P 150		AP66977 1848718C92	7 x 0,170
FD3002	0°	153°	V 805 P 153		AP66918 1848718C92	8 x 0,160