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MOTORPAL OEM MATERIALS FITTED ON ČKD HOŘOVICE

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PV2B7P310g-	335	990.0335	Element	EB7PG	60410-33
			D/Valve		60041-03
PV3B7P110g-	376	990.0376	Element	EB7PG	60410-33
			D/Valve		60041-03
PV3B7P110g-	377	990.0377	Element	EB7PG	60410-33
			D/Valve		60041-03
PV4B7P310g-	1443	990.1443	Element	EB7PG	60410-33
			D/Valve		60041-03
PV4B7P310g-	1445	990.1445	Element	EB7PG	60410-33
			D/Valve		60041-03
PV6B7P110g-	1658	990.1658	Element	EB7PG	60410-33
			D/Valve		60041-03
PV6B7P110g-	1659	990.1659	Element	EB7PG	60410-33
			D/Valve		60041-03

Various other components for these injection pumps can be offered upon request

MOTORPAL MATERIALS FOR DEUTZ 912, 913, 1011

Kind	MOTORPAL Ref.	DEUTZ Ref.	Other Ref.	DEUTZ Engines	Notes
Injector	9904523	04178021	0 432 191 623	DEUTZ B/F1011F	
Injector	9904555	04231554	0 432 191 582	DEUTZ FL912, 913	Deutz Algeria
Nozzle	DLLA144P527	04178015	0 433 171 390	DEUTZ B/F1011F	used on 9904523
Nozzle	DLLA147P658	04231556	0 433 171 478	DEUTZ FL912, 913	used on 9904555
Timing device	990.1453	04235718		DEUTZ 912	
Timing device	990.1454	04235692		DEUTZ 912	
Timing device	990.1455	04235801		DEUTZ 912	

MOTORPAL OEM MATERIALS FITTED ON ANDORIA

(Engines 4C90, 4CT90, 4CT90WSW)

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M7P1e-	3073	990.3073	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-23
PP4M7P1e-	3083	990.3083	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-23
PP4M7P1e-	3097	990.3097	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-23
PP4M7P1e- <u>Obsolete - Only spare parts</u>	3134	990.3134	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-23
PP4M7P1g-	3175	990.3175	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-23
PP4M7P1g-	3176	990.3176	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-23
PP4M7P1g- <u>Utilized mainly by DAEWOO LUBLIN</u>	3497	990.3497	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-23

MOTORPAL FUEL INJECTION UNIT FOR ANDORIA

60503-23

Composed of element 60403-08 and d/valve 60042-56

MOTORPAL FEED PUMP FOR ANDORIA

CD3M3552

990.3552

MOTORPAL NOZZLES FOR ANDORIA

DN0SD256A

DN0SD297A

MOTORPAL OTHER D/VALVE FOR ANDORIA

60042-62

MOTORPAL OEM MATERIALS FITTED ON ANDORIA - AUTOSAN

(Engines 4CT107/A7 - 6CT107/A7 - 6CT107-3/14)

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M10P1i-	3503	990.3503	Element	EM10Pi-62	60403-62
			D/Valve		60042-95
			D/Valve		60042-97
			Fuel inj.unit		60503-62
PP6M10P1i-	3502	990.3502	Element	EM10Pi-62	60403-62
			D/Valve		60042-95
			D/Valve		60042-97
			Fuel inj.unit		60503-62
PP6M10P1i-	3547	990.3547	Element	EM10Pi-48	60403-48
			D/Valve		60042-97
			Fuel inj.unit		60503-79

MOTORPAL FUEL INJECTION UNIT FOR ANDORIA - AUTOSAN

60503-62

60503-79

Composed of element 60403-48 and d/valve 60042-97

MOTORPAL FEED PUMP FOR ANDORIA - AUTOSAN

CD5M3565

990.3565

MOTORPAL OEM MATERIALS FITTED ON AVIA

(D712.01, ..03, ..11, ..18)

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M7P1e-	2490	990.2490	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-08
			Feed pump		CD2M2293
PP4M7P1e-	2491	990.2491	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-08
			Feed pump		CD2M2293
PP4M7P1e-	2496	990.2496	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-08
			Feed pump		CD2M2294
PP4M7P1e-	2497	990.2497	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-08
			Feed pump		CD2M2294
PP4M7P1e-	2498	990.2498	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-08
			Feed pump		CD2M2294
PP4M7P1e-	2499	990.2499	Element	EM7PE	60403-08
			D/Valve		60042-56
			Fuel inj.unit		60503-08
			Feed pump		CD2M2294

MOTORPAL FUEL INJECTION UNITS FOR AVIA

60503-08

Composed of element 60403-08 and d/valve 60042-56

MOTORPAL INJECTORS AND NOZZLES FOR AVIA

VA76S453-2699	990.2699	Nozzle	DOP18S160-1425
VA77S453-2630	990.2630	Nozzle	DOP18S160-1425

MOTORPAL OTHER ELEMENT FOR AVIA

EM7PC 60403-11

MOTORPAL OTHER D/VALVE FOR AVIA

60042-51

**MOTORPAL INJECTION PUMPS FOR MMZ - MTZ - VMTZ - ALTAJSKIJ ZÁVOD CHARKOVSKIJ ZÁVOD
AGRO - BELGO - URAL.Z - MMZ (MINSKIJ MOTORNYJ ZAVOD = MINSK MOTOR PLANT)**

**SOME MMZ ENGINES WITH MOTORPAL INJECTION PUMP ARE FITTED ON
FITTED ON BELARUS/MTZ -MMZ/PAZ - MMZ/GAZ - MMZ-AMK**

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP3M10P1f-	4609	990.4609	Element	EM10Pf-31	60403-31
			D/Valve		60042-69
			Fuel inj.unit		60503-03
			Feed pump		CD3M3554
PP3M10P3f-	4278	990.4278	Element	EM10Pf-31	60403-31
			D/Valve		60042-69
			Fuel inj.unit		60503-03
			Feed pump		CD3M3554
PP3M10P3f-	4281	990.4281	Element	EM10Pf-31	60403-31
			D/Valve		60042-69
			Fuel inj.unit		60503-03
			Feed pump		CD3M3554
PP3M10P3f-	4282	990.4282	Element	EM10Pf-31	60403-31
			D/Valve		60042-69
			Fuel inj.unit		60503-03
			Feed pump		CD3M3554
PP3M10P3f-	4610	990.4610	Element	EM10Pf-31	60403-31
			D/Valve		60042-69
			Fuel inj.unit		60503-03
			Feed pump		CD3M3554
PP4M9P1g-	4269	990.4269	Element	EM10Pe	60403-43
			D/Valve		60042-58
			Fuel inj.unit		60503-94
			Feed pump		CD3M3554
PP4M9P1g-	4270	990.4270	Element	EM10Pe	60403-43
			D/Valve		60042-58
			Fuel inj.unit		60503-94
			Feed pump		CD3M3554
PP4M10P1f-	3431	990.3431	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	3439	990.3439	Element	EM10Pf-37	60403-37
			D/Valve		60042-62
			Fuel inj.unit		60503-44
			Feed pump		CD3M3554
PP4M10P1f-	3451	990.3451	Element	EM10Pf-37	60403-37
			D/Valve		60042-62
			Fuel inj.unit		60503-44
			Feed pump		CD3M3554

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M10P1f-	3457	990.3457	Element	EM10Pf-37	60403-37
			D/Valve		60042-62
			Fuel inj.unit		60503-44
			Feed pump		CD3M3554
PP4M10P1f-	3470	990.3470	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	3475	990.3475	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	3477	990.3477	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	3477G	990.3477G	Element	EM10Pe	60403-43
			D/Valve		60042-58
			Fuel inj.unit		60503-94
			Feed pump		CD3M3554
PP4M10P1f-	3478	990.3478	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	3478G	990.3478G	Element	EM10Pe	60403-43
			D/Valve		60042-58
			Fuel inj.unit		60503-94
			Feed pump		CD3M3554
PP4M10P1f-	3479	990.3479	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	3480	990.3480	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	3480G	990.3480G	Element	EM10Pe	60403-43
			D/Valve		60042-58
			Fuel inj.unit		60503-94
			Feed pump		CD3M3554
PP4M10P1f-	3481	990.3481	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M10P1f-	4204	990.4204	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4205	990.4205	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4218	990.4218	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4221	990.4221	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4223	990.4223	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4224	990.4224	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4225	990.4225	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4226	990.4226	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4227	990.4227	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4228	990.4228	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4240	990.4240	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M10P1f-	4244	990.4244	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4255	990.4255	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4267	990.4267	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4284	990.4284	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4285	990.4285	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4286	990.4286	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4290	990.4290	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4292	990.4292	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4601	990.4601	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4604	990.4604	Element	EM10Pf-31	60403-31
			D/Valve		60042-69
			Fuel inj.unit		60503-03
			Feed pump		CD3M3554
PP4M10P1f-	4605G	990.4605G	Element	EM10Pe	60403-43
			D/Valve		60042-58
			Fuel inj.unit		60503-94
			Feed pump		CD3M3554

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M10P1f-	4618	990.4618	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1i-	3527	990.3527	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	3530	990.3530	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	3532	990.3532	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	3701	990.3701	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	3703	990.3703	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	3704	990.3704	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	3705	990.3705	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4336	990.4336	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4339	990.4339	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4340	990.4340	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M10P1i-	4342	990.4342	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4343	990.4343	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4344	990.4344	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4358	990.4358	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4360	990.4360	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4361	990.4361	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4362	990.4362	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4363	990.4363	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4364	990.4364	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4365	990.4365	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4376	990.4376	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M10P1i-	4393	990.4393	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4412	990.4412	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4413	990.4413	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10P1i-	4414	990.4414	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP4M10U1f-	3436	990.3436	Element	EM10Uf-57	60403-57
			D/Valve		60042-62
			Fuel inj.unit		60503-59
			Feed pump		CD3M3554
PP4M10U1f-	3440	990.3440	Element	EM10Uf-57	60403-57
			D/Valve		60042-62
			Fuel inj.unit		60503-59
			Feed pump		CD3M3554
PP4M10U1f-	3482	990.3482	Element	EM10Uf-57	60403-57
			D/Valve		60042-62
			Fuel inj.unit		60503-59
			Feed pump		CD3M3554
PP4M10U1f-	3483	990.3483	Element	EM10Uf-57	60403-57
			D/Valve		60042-62
			Fuel inj.unit		60503-59
			Feed pump		CD3M3554
PP4M10U1f-	3483G	990.3483G	Element	EM10Pe	60403-43
			D/Valve		60042-58
			Fuel inj.unit		60503-94
			Feed pump		CD3M3554
PP4M10U1f-	3485	990.3485	Element	EM10Uf-57	60403-57
			D/Valve		60042-62
			Fuel inj.unit		60503-59
			Feed pump		CD3M3554
PP4M10U1f-	3486	990.3486	Element	EM10Uf-57	60403-57
			D/Valve		60042-62
			Fuel inj.unit		60503-59
			Feed pump		CD3M3554

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M10U1f-	3486G	990.3486G	Element	EM10Pe	60403-43
			D/Valve		60042-58
			Fuel inj.unit		60503-94
			Feed pump		CD3M3554
PP4M10U1f-	3487	990.3487	Element	EM10Uf-57	60403-57
			D/Valve		60042-62
			Fuel inj.unit		60503-59
			Feed pump		CD3M3554
PP4M10U1f-	3488	990.3488	Element	EM10Uf-57	60403-57
			D/Valve		60042-62
			Fuel inj.unit		60503-59
			Feed pump		CD3M3554
PP4M10U1f-	3488G	990.3488G	Element	EM10Pe	60403-43
			D/Valve		60042-58
			Fuel inj.unit		60503-94
			Feed pump		CD3M3554
PP4M10U1f-	4233	990.4233	Element	EM10Uf-57	60403-57
			D/Valve		60042-62
			Fuel inj.unit		60503-59
			Feed pump		CD3M3554
PP4M10U1f-	4283G	990.4283G	Element	EM10Pe	60403-43
			D/Valve		60042-58
			Fuel inj.unit		60503-94
			Feed pump		CD3M3554
PP4M10U1i-	3793	990.3793	Element	EM10Ui-75	60403-75
			D/Valve		60042-97
			Fuel inj.unit		60503-01
			Feed pump		CD4M3569
PP4M10U1i-	3794	990.3794	Element	EM10Ui-75	60403-75
			D/Valve		60042-97
			Fuel inj.unit		60503-01
			Feed pump		CD4M3569
PP4M10U1i-	3795	990.3795	Element	EM10Ui-75	60403-75
			D/Valve		60042-97
			Fuel inj.unit		60503-01
			Feed pump		CD4M3569
PP4M10U1i-	3796	990.3796	Element	EM10Ui-75	60403-75
			D/Valve		60042-97
			Fuel inj.unit		60503-01
			Feed pump		CD4M3569
PP4M10U1i-	4377	990.4377	Element	EM10Ui-75	60403-75
			D/Valve		60042-97
			Fuel inj.unit		60503-01
			Feed pump		CD4M3569

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP6M10P1f-	3462	990.3462	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	3476	990.3476	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	3491	990.3491	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	3492	990.3492	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	3493	990.3493	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4200	990.4200	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4203	990.4203	Element	EM10Pf-31	60403-31
			D/Valve		60042-62
			Fuel inj.unit		60503-04
			Feed pump		CD3M3554
PP6M10P1f-	4219	990.4219	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP6M10P1f-	4220	990.4220	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP6M10P1f-	4222	990.4222	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4231	990.4231	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP6M10P1f-	4234	990.4234	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4234	990.4234	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4236	990.4236	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4241	990.4241	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4243	990.4243	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4245	990.4245	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4248	990.4248	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4260	990.4260	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP6M10P1f-	4287	990.4287	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP6M10P1f-	4291	990.4291	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4293	990.4293	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP6M10P1f-	4294	990.4294	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4295	990.4295	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4296	990.4296	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4297	990.4297	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4298	990.4298	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4299	990.4299	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4606	990.4606	Element	EM10Pf-31	60403-31
			D/Valve		60042-62
			Fuel inj.unit		60503-04
			Feed pump		CD3M3554
PP6M10P1f-	4612	990.4612	Element	EM10Pf-31	60403-31
			D/Valve		60042-62
			Fuel inj.unit		60503-04
			Feed pump		CD3M3554
PP6M10P1i-	3535	990.3535	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	3707	990.3707	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	3708	990.3708	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP6M10P1i-	3709	990.3709	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	3710	990.3710	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	3711	990.3711	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	3712	990.3712	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	3754	990.3754	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4301	990.4301	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4320	990.4320	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4321	990.4321	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4322	990.4322	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4323	990.4323	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4324	990.4324	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP6M10P1i-	4325	990.4325	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4326	990.4326	Element	EM10Pi-68	60403-68
			D/Valve		60042-97
			Fuel inj.unit		60503-82
			Feed pump		CD4M3569
PP6M10P1i-	4330	990.4330	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4341	990.4341	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4345	990.4345	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4353	990.4353	Element	EM10P-61	60403-61
			D/Valve		60042-97
			Fuel inj.unit		60503-76
			Feed pump		CD4M3569
PP6M10P1i-	4354	990.4354	Element	EM10P-61	60403-61
			D/Valve		60042-97
			Fuel inj.unit		60503-76
			Feed pump		CD4M3569
PP6M10P1i-	4359	990.4359	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4399	990.4399	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4415	990.4415	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569
PP6M10P1i-	4416	990.4416	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump		CD4M3569

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP6M10P1i-	4418	990.4418	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump	CD4M3569	990.3569
PP6M10P1i-	4439	990.4439	Element	EM10Pi-71	60403-71
			D/Valve		60042-97
			Fuel inj.unit		60503-89
			Feed pump	CD4M3569	990.3569
PP6M10U1f-	3489	990.3489	Element	EM10Uf-57	60403-57
			D/Valve		60042-62
			Fuel inj.unit		60503-60
			Feed pump	CD3M3554	990.3554

MOTORPAL FUEL INJECTION UNITS FOR MMZ

60503-01	Composed of element 60403-75 + d/valve 60042-97 + other components
60503-03	Composed of element 60403-31 + d/valve 60042-69 + other components
60503-04	Composed of element 60403-31 + d/valve 60042-62 + other components
60503-44	Composed of element 60403-37 + d/valve 60042-62 + other components
60503-54	Composed of element 60403-41 + d/valve 60042-62 + other components
60503-55	Composed of element 60403-41 + d/valve 60042-62 + other components
60503-59	Composed of element 60403-57 + d/valve 60042-62 + other components
60503-60	Composed of element 60403-57 + d/valve 60042-62 + other components
60503-76	Composed of element 60403-61 + d/valve 60042-97 + other components
60503-82	Composed of element 60403-68 + d/valve 60042-97 + other components
60503-89	Composed of element 60403-71 + d/valve 60042-97 + other components
60503-94	Composed of element 60403-43 + d/valve 60042-58 + other components

MOTORPAL INJECTORS AND NOZZLES FOR MMZ

VA70P360-2981	990.2981	Nozzle DOP146P525-3510
VA70P360-2983	990.2983	Nozzle DOP140P527-3823
VA148P360-2984	990.2984	Nozzle DOP150P537-3808
VA70P360-2994	990.2994	Nozzle DOP140P529-3824
VA70P360-2995	990.2995	Nozzle DOP140P533-3825
VA70P360-2996	990.2996	Nozzle DOP140P528-3826
VA70P360-2997	990.2997	Nozzle DOP122P533-3827
VA70P360-2998	990.2998	Nozzle DOP146P426-3503

NZTA

Pump type	Motorpal ref.No.	Motorpal Code	Motorpal Ref.	Motorpal Code	
PP4M9P1g-	4201	990.4201	Element	EM10Pe	60403-43
			D/Valve		60042-58
			Fuel inj.unit		60503-94
			Feed pump	CD3M3554	990.3554

VMTZ (VLADIMIRSKIJ MOTORO-TRAKTORNYI ZAVOD)

Pump type	Motorpal ref.No.	Motorpal Code	Motorpal Ref.	Motorpal Code	
PP2M10P1f-	4246	990.4246	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP2M10P1f-	4249	990.4249	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP2M10P1f-	4250	990.4250	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP2M10P1f-	4251	990.4251	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP3M10P1f-	4209	990.4209	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP3M10P1f-	4210	990.4210	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP3M10P1f-	4238	990.4238	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554

Pump type	Motorpal ref.No.	Motorpal Code	Motorpal Ref.	Motorpal Code	
PP4M10P1f-	4206	990.4206	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP4M10P1f-	4207	990.4207	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP4M10P1f-	4208	990.4208	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP4M10P1f-	4216	990.4216	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP4M10P1f-	4239	990.4239	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP4M10P1f-	4247	990.4247	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554

MOTORPAL FUEL INJECTION UNITS FOR VMTZ

60503-55

Composed of element 60403-41 + d/valve 60042-62
+ other components

MOTORPAL FUEL INJECTORS AND NOZZLES FOR VMTZ

VA96P360-2793	990.2793	Nozzle DOP135P336-3832
VA96P360-2794	990.2794	Nozzle DOP135P338-3833
VA100S950-3035	990.3035	Nozzle DOP135P333-4162

MOTORPAL INJECTORS FOR AGRO

VS100S950-3035	990.3035	Nozzle DOP135S333-4162
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MOTORPAL NOZZLES FOR AGRO

DOP122S531-4167
DOP122S532-4164
DOP122S535-4166
DOP135S333-4162
DOP149S430-4170
DOP154S434-4160
DOP154S435-4159
DOP154S438-4161

AMZ

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M10P1f-	4202	990.4202	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump	CD3M3554	990.3554
PP4M10P1i-	4379	990.4379	Element	EM10Pi-66	60403-66
			D/Valve		60042-93
			Fuel inj.unit		60503-83
			Feed pump	CD4M3569	990.3569
PP4M10P1i-	4380	990.4380	Element	EM10Pi-66	60403-66
			D/Valve		60042-93
			Fuel inj.unit		60503-83
			Feed pump	CD4M3569	990.3569
PP4M10P1i-	4381	990.4381	Element	EM10Pi-66	60403-66
			D/Valve		60042-93
			Fuel inj.unit		60503-83
			Feed pump	CD4M3569	990.3569
PP4M10P1i-	4382	990.4382	Element	EM10Pi-66	60403-66
			D/Valve		60042-93
			Fuel inj.unit		60503-83
			Feed pump	CD4M3569	990.3569
PP4M10P1i-	4383	990.4383	Element	EM10Pi-66	60403-66
			D/Valve		60042-93
			Fuel inj.unit		60503-83
			Feed pump	CD4M3569	990.3569
PP4M10P1i-	4384	990.4384	Element	EM10Pi-66	60403-66
			D/Valve		60042-93
			Fuel inj.unit		60503-83
			Feed pump	CD4M3569	990.3569
PP6M10P1i-	4422	990.4422	Element	EM10Pi-66	60403-66
			D/Valve		60042-93
			Fuel inj.unit		60503-83
			Feed pump	CD4M3569	990.3569
PP6M10P1i-	4423	990.4423	Element	EM10Pi-66	60403-66
			D/Valve		60042-93
			Fuel inj.unit		60503-83
			Feed pump	CD4M3569	990.3569
PP6M10P1i-	4424	990.4424	Element	EM10Pi-66	60403-66
			D/Valve		60042-93
			Fuel inj.unit		60503-83
			Feed pump	CD4M3569	990.3569

BMTZ

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PP4M10P1f-	4214	990.4214	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4215	990.4215	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-55
			Feed pump		CD3M3554
PP4M10P1f-	4271	990.4271	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554
PP6M10P1f-	4232	990.4232	Element	EM10Pf-41	60403-41
			D/Valve		60042-62
			Fuel inj.unit		60503-54
			Feed pump		CD3M3554

MOTORPAL INJECTORS FOR URAL.Z

VA128T903-3002	990.3002
VA128T903-3004	990.3004

MOTORPAL OEM MATERIALS FITTED ON INDIAN ENGINES

(KIRLOSKAR OIL ENGINES - CUMMINS INDIA - GREAVES COTTON)

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code	Original RefNo.
PP6M10K1f-	3196	990.3196	Element	EM10KF-34	60403-34	
			D/Valve		60042-62	
			Fuel inj.unit		60503-41	
			Feed pump	CD3M3552	990.3552	
PP6M10U1f-	3417	990.3417	Element	EM10UF-58	60403-58	
			D/Valve		60042-62	
			Fuel inj.unit		60503-78	
			Feed pump	CD3M3552	990.3552	
PP6M10U1f-	3425	990.3425	Element	EM10UF-58	60403-58	
			D/Valve		60042-62	
			Fuel inj.unit		60503-78	
			Feed pump	CD3M3552	990.3552	
PP6M10P1f-	3511	990.3511	Element	EM10PF-41	60403-41	
			D/Valve		60042-62	
			Fuel inj.unit		60503-64	
			Feed pump	CD3M3550	990.3550	
PP6M10K1f-	3514	990.3514	Element	EM10KF-34	60403-34	
			D/Valve		60042-62	
			Fuel inj.unit		60503-41	
			Feed pump	CD3M3552	990.3552	
PP6M10K1f-	3518	990.3518	Element	EM10KF-34	60403-34	
			D/Valve		60042-62	
			Fuel inj.unit		60503-41	
			Feed pump	CD3M3552	990.3552	
PP4M10P1i-	3738	990.3738	Element	EM10PI-66	60403-66	
			D/Valve		60042-93	
			Fuel inj.unit		60503-83	
			Feed pump	CD4M3569	990.3569	
PP6M10P1i-	3520	990.3520	Element	EM10PI-53	60403-53	
			D/Valve		60042-97	
			Fuel inj.unit		60503-74	
			Feed pump	CD5M3565	990.3565	
PP6M10U1i-	3542	990.3542	Element	EM10UI-65	60403-65	
			D/Valve		60042-93	
			Fuel inj.unit		60503-77	
			Feed pump	CD5M3565	990.3565	
PP6M10U1i-	3543	990.3543	Element	EM10UI-65	60403-65	
			D/Valve		60042-93	
			Fuel inj.unit		60503-77	
			Feed pump	CD5M3565	990.3565	

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code	Original ref.No.	
PP6M10U1i-	3544	990.3544	Element	EM10UI-65	60403-65		
			D/Valve				60042-93
			Fuel inj.unit				60503-77
			Feed pump				CD5M3565
PP6M10U1i-	3549	990.3549	Element	EM10U11-67	60403-67		
			D/Valve				60042-17
			Fuel inj.unit				60503-81
			Feed pump				CD5M3565
PP6M10U1i-	3737	990.3737	Element	EM10U11-67	60403-67		
			D/Valve				60042-17
			Fuel inj.unit				60503-81
			Feed pump				CD5M3565
PP6M10P1i-	3744	990.3744	Element	EM10UI-65	60403-65		
			D/Valve				60042-93
			Fuel inj.unit				60503-77
			Feed pump				CD5M3565
PP6M10P1i-	3745	990.3745	Element	EM10UI-65	60403-65		
			D/Valve				60042-93
			Fuel inj.unit				60503-77
			Feed pump				CD5M3565
PP6M10P1i-	3746	990.3746	Element	EM10UI-65	60403-65		
			D/Valve				60042-93
			Fuel inj.unit				60503-77
			Feed pump				CD5M3565
PP6M10P1i-	3748	990.3748	Element	EM10PI-53	60403-53		
			D/Valve				60042-97
			Fuel inj.unit				60503-85
			Feed pump				CD5M3565
PP6M10U1i-	3752	990.3752	Element	EM10U11-67	60403-67		
			D/Valve				60042-17
			Fuel inj.unit				60503-81
			Feed pump				CD5M3565
PP6M10U1i- KOEL	3763 F6.029.56.0.PR	990.3763	Element	EM10UI-65	60403-65		
			D/Valve				60042-93
			Fuel inj.unit				60503-90
			Feed pump				CD5M3565
PP6M10U1i- KOEL	3764 F6.029.57.0.PR	990.3764	Element	EM10UI-65	60403-65		
			D/Valve				60042-93
			Fuel inj.unit				60503-90
			Feed pump				CD5M3565
PP6M10U1i-	4306	990.4306	Element	EM10UI-65	60403-65		
			D/Valve				60042-93
			Fuel inj.unit				60503-77
			Feed pump				CD5M3565

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code	Original ref.No.
PP6M10U1i-	4307	990.4307	Element	EM10UI-65	60403-65	
			D/Valve		60042-93	
			Fuel inj.unit		60503-77	
			Feed pump	CD5M3565	990.3565	
PP6M10U1i-	4308	990.4308	Element	EM10UI-65	60403-65	
			D/Valve		60042-93	
			Fuel inj.unit		60503-77	
			Feed pump	CD5M3565	990.3565	
PP6M10U1i-	4309	990.4309	Element	EM10U11-67	60403-67	
			D/Valve		60042-17	
			Fuel inj.unit		60503-81	
			Feed pump	CD5M3565	990.3565	
PP6M10U1i-	4310	990.4310	Element	EM10U11-67	60403-67	
			D/Valve		60042-17	
			Fuel inj.unit		60503-81	
			Feed pump	CD5M3565	990.3565	
PP6M10U1i-	4335	990.4335	Element	EM10U11-67	60403-67	
			D/Valve		60042-17	
			Fuel inj.unit		60503-81	
			Feed pump	CD5M3565	990.3565	
PP6M10U1i- KOEL	4348 4H.1549.10.0.00	990.4348	Element	EM10PI-66	60403-66	
			D/Valve		60042-93	
			Fuel inj.unit		60503-97	
			Feed pump	CD4M3594	990.3594	
PP6M10U1i-	4373	990.4373	Element	EM10UI-65	60403-65	
			D/Valve		60042-93	
			Fuel inj.unit		60503-77	
			Gasket kit		45010-06	

MOTORPAL FUEL INJECTION UNITS FOR INDIAN ENGINES

60503-41	60403-34	+ 60042-62 + Other components
60503-64	60403-41	+ 60042-62 + Other components
60503-74	60403-53	+ 60042-97 + Other components °
60503-77	60403-65	+ 60042-93 + Other components *
60503-78	60403-58	+ 60042-62 + Other components
60503-81	60403-67	+ 60042-17 + Other components
60503-83	60403-66	+ 60042-93 + Other components
60503-85	60403-53	+ 60042-97 + Other components °
60503-90	60403-65	+ 60042-93 + Other components *

MOTORPAL NOZZLES AND INJECTORS FOR KIRLOSKAR

DOP130P528-3897	Nozzle
VA889160-2985	990.2985 Injector with nozzle DOP130P528-3897

MOTORPAL INJECTION PUMPS FOR KUKJE

Pump type	Motorpal ref.No.	Motorpal Code	Kukje ref.No.	Motorpal Ref.	Motorpal Code	
PP4M7P1g-	3428	990.3428		Element	EM7PE	60403-08
				D/Valve		60042-99
				Fuel inj.unit		60503-75
PP3M10P1f-	3437	990.3437		Element	EM10PF-31	60403-31
				D/Valve		60042-61
				Fuel inj.unit		60503-72
PP3M10P1f-	3444	990.3444		Element	EM10PF-37	60403-37
				D/Valve		60042-61
				Fuel inj.unit		60503-65
PP3M9P1f-	3473	990.3473		Element	EM9PF-38	60403-38
				D/Valve		60042-61
				Fuel inj.unit		60503-58
PP3M9P1f-	3474	990.3474		Element	EM9PF-38	60403-38
				D/Valve		60042-61
				Fuel inj.unit		60503-58
				Feed pump	CD3M3568	990.3568
PP4M10P1i-	3777	990.3777	EA00000418A	Element	EM10PI-72	60403-72
				D/Valve		60042-17
				Fuel inj.unit		60503-92
PP4M10P1i-	3778	990.3778	HRJ1300100A1	Element	EM10PI-72	60403-72
				D/Valve		60042-17
				Fuel inj.unit		60503-92
PP4M10P1i-	3798	990.3798	EA00000340A	Element	EM10PI-72	60403-72
				D/Valve		60042-17
				Fuel inj.unit		60503-92
				Feed pump	CD4M3569	990.3569
PP4M10P1i-	3799	990.3799	EA00000376A	Element	EM10PI-72	60403-72
				D/Valve		60042-17
				Fuel inj.unit		60503-92
				Feed pump	CD4M3569	990.3569

MOTORPAL FUEL INJECTION UNITS FOR KUKJE

60503-58	Composed of element 60403-38 + d/valve 60042-61
60503-65	Composed of element 60403-37 + d/valve 60042-61
60503-72	Composed of element 60403-31 + d/valve 60042-61
60503-75	Composed of element 60403-08 + d/valve 60042-99
60503-92	Composed of element 60403-72 + d/valve 60042-17

MOTORPAL INJECTORS AND NOZZLES FOR KUKJE

VA105P360-4500	990.4500	Nozzle DOP150P518-3884
VA105P360-4502	990.4502	Nozzle DOP150P618-3882
VA105P360-4504	990.4504	Nozzle DOP150P618-3882
VA105P360-4505	990.4505	Nozzle DOP150P520-3880

MOTORPAL OEM MATERIALS FITTED ON LIAZ

Pump type	Motorpal ref.No.	Motorpal Code		Motorpal Ref.	Motorpal Code
PV6B9P215g-	1627	990.1627	Element	EB9PG	60410-36
			D/Valve		60041-03
			Feed pump	CD1A2298	990.2298
PV6B9P215g-	1628	990.1628	Element	EB9PG	60410-36
			D/Valve		60041-03
			Feed pump	CD1A2298	990.2298
PV6B9P215g-	1630	990.1630	Element	EB9PG	60410-36
			D/Valve		60041-03
			Feed pump	CD1A2298	990.2298
PV6B9P215g-	1631	990.1631	Element	EB9PG	60410-36
			D/Valve		60041-03
			Feed pump	CD1A2298	990.2298
PV6B9P215g-	1632	990.1632	Element	EB9PG	60410-36
			D/Valve		60041-03
			Feed pump	CD1A2298	990.2298
PV6B9P215g-	1633	990.1633	Element	EB9PG	60410-36
			D/Valve		60041-03
			Feed pump	CD1A2298	990.2298
PV6B9P215g-	1636	990.1636	Element	EB9PG	60410-36
			D/Valve		60041-03
			Feed pump	CD1A2298	990.2298
PV6B9P215g-	1645	990.1645	Element	EB9PG	60410-36
			D/Valve		60041-03
			Feed pump	CD1A2298	990.2298
PV6B9P215g-	1646	990.1646	Element	EB9PG	60410-36
			D/Valve		60041-03
			Feed pump	CD1A2298	990.2298
PV6B9P215g-	1660	990.1660	Element	EB9PG	60410-36
			D/Valve		60041-03
			Feed pump	CD1A2298	990.2298
PV6B9P215i-	1693	990.1693	Element	EB9PG-39	60410-39
			Element	EB9PG	60410-36
			D/Valve		60041-03
			Feed pump	CD1A2299	990.2299

Various other components for these injection pumps can be offered upon request

MOTORPAL INJECTION PUMPS FOR MMZ (MINSKIJ MOTORNYJ ZAVOD=MINSK MOTOR PLANT) ENGINES
FITTED AS OEM ON MAZ (MINSKIJ AVTOMOBILNYJ ZAVOD = MINSK AUTOMOTIVE PLANT)

Pump type	Motorpal ref.No.	Motorpal Code	Engine Type		Motorpal Ref.	Motorpal Code
PP4M10P1f-	3451	990.3451	D-245.9	Element	EM10PF-37	60403-37
				D/Valve		60042-62
				Fuel inj.unit		60503-44
				Feed pump	CD3M3554	990.3554
				Gasket kit		45010-02
				Start solenoid		-----
				Stop solenoid		-----
PP4M10P1i-	3527	990.3527	D-245.9E2	Element	EM10PI-68	60403-68
				D/Valve		60042-97
				Fuel inj.unit		60503-82
				Feed pump	CD4M3569	990.3569
				Gasket kit		45010-06
				Start solenoid		37098868
				Stop solenoid		37098341
PP4M10P1i-	3530	990.3530	D-245.7E2	Element	EM10PI-68	60403-68
				D/Valve		60042-97
				Fuel inj.unit		60503-82
				Feed pump	CD4M3569	990.3569
				Gasket kit		45010-06
				Start solenoid		37098274
				Stop solenoid		37098342
PP4M10P1i-	3532	990.3532	D-245.30E2	Element	EM10PI-68	60403-68
				D/Valve		60042-97
				Fuel inj.unit		60503-82
				Feed pump	CD4M3569	990.3569
				Gasket kit		45010-06
				Stop solenoid		-----
				PP4M10P1i-		4360
D/Valve	60042-97					
Fuel inj.unit	60503-82					
Feed pump	CD4M3569	990.3569				
Gasket kit		45010-06				
Start solenoid		37098274				
Stop solenoid		-----				
PP4M10P1i-	4361	990.4361	D-245.7E2	Element	EM10PI-68	60403-68
				D/Valve		60042-97
				Fuel inj.unit		60503-82
				Feed pump	CD4M3569	990.3569
				Gasket kit		45010-06
				Start solenoid		37098274
				Stop solenoid		-----

Pump type	Motorpal ref.No.	Motorpal Code	Engine Type		Motorpal Ref.	Motorpal Code	
PP4M10P1i-	4362	990.4362	D-245.7E2	Element	EM10PI-68	60403-68	
				D/Valve		60042-97	
				Fuel inj.unit		60503-82	
				Feed pump		CD4M3569	990.3569
				Gasket kit			45010-06
				Start solenoid			37098868
				Stop solenoid			-----
PP4M10P1i-	4363	990.4363	D-245.9E2	Element	EM10PI-68	60403-68	
				D/Valve		60042-97	
				Fuel inj.unit		60503-82	
				Feed pump		CD4M3569	990.3569
				Gasket kit			45010-06
				Start solenoid			37098274
				Stop solenoid			-----
PP4M10P1i-	4364	990.4364	D-245.9E2	Element	EM10PI-68	60403-68	
				D/Valve		60042-97	
				Fuel inj.unit		60503-82	
				Feed pump		CD4M3569	990.3569
				Gasket kit			45010-06
				Start solenoid			37098868
				Stop solenoid			-----
PP4M10P1i-	4365	990.4365	D-245.9E2	Element	EM10PI-68	60403-68	
				D/Valve		60042-97	
				Fuel inj.unit		60503-82	
				Feed pump		CD4M3569	990.3569
				Gasket kit			45010-06
				Start solenoid			37098274
				Stop solenoid			37098342
PP4M10U1f-	3440	990.3440	D-245.7	Element	EM10UF-57	60403-57	
				D/Valve		60042-62	
				Fuel inj.unit		60503-59	
				Feed pump		CD3M3554	990.3554
				Gasket kit			45010-02
				Start solenoid			-----
				Stop solenoid			37098342
PP4M10U1f-	4233	990.4233	D-245.9	Element	EM10UF-57	60403-57	
				D/Valve		60042-62	
				Fuel inj.unit		60503-59	
				Feed pump		CD3M3554	990.3554
				Gasket kit			45010-02
				Start solenoid			-----
				Stop solenoid			37098342

Pump type	Motorpal ref.No.	Motorpal Code	Engine Type		Motorpal Ref.	Motorpal Code	
PP6M10P1i-	3535	990.3535	D-260.5E2	Element	EM10PI-71	60403-71	
				D/Valve		60042-97	
				Fuel inj.unit		60503-89	
				Feed pump		CD4M3569	990.3569
				Gasket kit			45010-06
				Start solenoid			37098274
				Stop solenoid			-----
				PP6M10P1i-		3707	9903707
D/Valve	60042-97						
Fuel inj.unit	60503-89						
Feed pump	CD4M3569	990.3569					
Gasket kit		45010-06					
Start solenoid		37098274					
Stop solenoid		-----					
PP6M10P1i-	4325	990.4325	D-260.12E2		Element		
				D/Valve	60042-97		
				Fuel inj.unit	60503-89		
				Feed pump	CD4M3569	990.3569	
				Gasket kit		45010-06	
				Start solenoid		37098868	
				Stop solenoid		-----	
				PP6M10P1i-	4341	990.4341	D-260.4C2
D/Valve	60042-97						
Fuel inj.unit	60503-89						
Feed pump	CD4M3569	990.3569					
Gasket kit		45010-06					
Start solenoid		37098868					
Stop solenoid		37098341					
PP6M10U1f-	3489	990.3489	D-260.5				
				D/Valve	60042-62		
				Fuel inj.unit	60503-60		
				Feed pump	CD3M3554	990.3554	
				Gasket kit		45010-02	
				Start solenoid		-----	
				Stop solenoid		-----	

MOTORPAL FUEL INJECTION UNITS FOR MMZ USED ON MAZ

60503-44	Composed of element 60403-37 + d/valve 60042-62 + other components
60503-59	Composed of element 60403-57 + d/valve 60042-62 + other components
60503-60	Composed of element 60403-57 + d/valve 60042-62 + other components
60503-82	Composed of element 60403-68 + d/valve 60042-97 + other components
60503-89	Composed of element 60403-71 + d/valve 60042-97 + other components

MOTORPAL INJECTORS AND NOZZLES FOR MMZ USED ON MAZ

VA70P360-2994	990.2994	DOP140P529-3824	68038-24
VA70P360-2995	990.2995	DOP140P533-3825	68038-25
VA70P360-2996	990.2996	DOP140P528-3826	68038-26
VA70P360-2997	990.2997	DOP122P533-3827	68038-27

MOTORPAL MATERIALS FITTED ON ŠKODA DIESEL PRAHA AND ČKD HOROVICE - ČKD HRADEC KRÁLOVÉ

Motorpal Ref.	Other Ref.	Application
DO140T630		ČKD HRADEC KRÁLOVÉ
DO140T730		ČKD HRADEC KRÁLOVÉ
DO140T735-4501		ČKD HRADEC KRÁLOVÉ
DO140T835-4507		ČKD HRADEC KRÁLOVÉ
DO140U650-4609		ČKD HRADEC KRÁLOVÉ
DO140U745		ČKD HRADEC KRÁLOVÉ
DO140U935-6202		ŠKODA DIESEL PRAHA
DO140U955-4606		ČKD HRADEC KRÁLOVÉ
DO150S720		ČKD HOROVICE
DO150S825	DL150S894	ČKD HOROVICE
DO150T935-4509		ŠKODA DIESEL PRAHA
DO150T935-4515		ŠKODA DIESEL PRAHA
DO150U842-4603		ČKD HRADEC KRÁLOVÉ ŠKODA DIESEL PRAHA
DO150U845		ŠKODA DIESEL PRAHA
DOH150V965		ČKD HRADEC KRÁLOVÉ
DOH150V970		ČKD HRADEC KRÁLOVÉ

MOTORPAL INJECTION PUMPS FOR TATRA

Pump Type	Motorpal Ref.No.	Motorpal Code	Tatra Ref.	Motorpal Ref.	Motorpal Code	Tatra Ref.
PV4A8P210g-	1760	990.1760	Element	EA8Pg-35	60400-35	
			Element	EA8PI-39	60400-39	
			D/Valve		60041-06	
PV4A8P210g-	1761	990.1761	Element	EA8Pg-35	60400-35	
			Element	EA8PI-39	60400-39	
			D/Valve		60041-06	
PV4A8P210g-	1762	990.1762	Element	EA8Pg-35	60400-35	
			Element	EA8PI-39	60400-39	
			D/Valve		60041-06	
PV4A9P210g-	1763	990.1763	Element	EA9PI-40	60400-40	
			D/Valve		60041-06	
PV8A9K915i-	1544	990.1544	Element	EA9K	60401-06	
			D/Valve		60041-06	
			Feed pump	CD3A-2235	990.2235	
			Feed pump	CR1-2266	990.2266	
PV8A9P10g-	1535	990.1535	Element	EA9Pi-40	60400-40	
			D/Valve		60041-06	
PV8A9P10g-	1536	990.1536	Element	EA9Pi-40	60400-40	
			D/Valve		60041-06	
PV8A9P10g-	1537	990.1537	Element	EA9Pi-40	60400-40	
			D/Valve		60041-06	
PV8A9P10g-	1538	990.1538	Element	EA9Pi-40	60400-40	
			D/Valve		60041-06	
PV8A9P10g-	1539	990.1539	Element	EA9Pi-40	60400-40	
			D/Valve		60041-06	
PV8A9P10g-	1541	990.1541	Element	EA9Pi-40	60400-40	
			D/Valve		60041-06	
PV8A9P10g-	1548	990.1548	Element	EA9Pi-40	60400-40	
			D/Valve		60041-06	
PV8A9P915j-	1483	990.1483	Element	EA9PJ	60400-43	
			D/Valve		60043-16	
			Feed pump	CD6A-2281	990.2281	
PV8A9P915j-	1484	990.1484	Element	EA9PJ	60400-43	
			D/Valve		60043-16	
			Feed pump	CD6A-2281	990.2281	
PV8A9S917j-	1492	990.1492	Element	EA9S	60402-02	
			D/Valve		60043-17	
			Feed pump	CD6A-2281	990.2281	
PV10A9K917i-	1549	990.1549	Element	EA9K-07	60401-07	
			D/Valve		60041-06	
			Feed pump	CD6A-2281	990.2281	
			Feed pump	CR1-2266	990.2266	

MOTORPAL INJECTION PUMPS FOR TATRA

Pump Type	Motorpal Ref.No.	Motorpal Code	Tatra Ref.	Motorpal Ref.	Motorpal Code	Tatra Ref.
PV10A9S917j-	1489	990.1489	Element	EA9S	60402-02	
			D/Valve			60043-17
PV10A9S917j-	1493	990.1493	Feed pump	CD6A-2281	990.2281	
			Element	EA9S	60402-02	
			D/Valve			60043-17
PV10A9S917i-	1494	990.1494	Feed pump	CD6A-2281	990.2281	
			Element	EA9S	60402-02	
			D/Valve			60041-06
PV12A9K917i-	1591	990.1591	Feed pump	CD6A-2281	990.2281	
			Element	EA9S	60402-02	
			D/Valve			60041-06
PV12A9K917i-	1593	990.1593	Feed pump	CD6A-2281	990.2281	
			Element	EA9K	60401-06	
			D/Valve			60041-06
PV12A9S917i-	1597	990.1597	Feed pump	CD6A-2281	990.2281	
			Element	EA9S	60402-02	
			D/Valve			60041-06
PV12A9S917i-	1598	990.1598	Feed pump	CD6A-2281	990.2281	
			Element	EA9S	60402-02	
			D/Valve			60041-06
PV12A9S917j-	3400	990.3400	Feed pump	CD6A-2281	990.2281	
			Element	EA9S	60402-02	
			D/Valve			60043-17
PV12A9S917j-	3401	990.3401	Feed pump	CD6A-2281	990.2281	
			Element	EA9S	60402-02	
			D/Valve			60043-17

MOTORPAL FEED PUMPS FOR TATRA

CD12Z-2226	990.2226
CD3A-2235	990.2235
CD6A-2281	990.2281
CR1-2261	990.2261
CR1-2265	990.2265
CR1-2266	990.2266

MOTORPAL INJECTORS AND NOZZLES FOR TATRA

VA51P490-2980	Nozzle	DLLA140P1098
VA51P490-2987	Nozzle	DLLA140P1098
VA51P490-2982	Nozzle	DLLA145P1182
VA51P490-2986	Nozzle	DLLA145P1182
VA52P490-2993	Nozzle	DLLA145P1715
VA51S443a-2686	Nozzle	DOP132S440-1409
VA51S453a-2689	Nozzle	DOP134S345-4103
VA51S453a-2688	Nozzle	DOP134S440-4102
VA51S490-2700	Nozzle	DOP134S440-4102
VA51S443a-2680	Nozzle	DOP140S345-4368
VA51S443a-2687	Nozzle	DOP140S345-4368
VA53S463a-2605	Nozzle	DOP140S435-39
VA51S443a-2681	Nozzle	DOP140S435-4369
VA53S463a-2641	Nozzle	DOP140S435-83
VA53S463a-2644	Nozzle	DOP140S530-79
VA51S490-2672	Nozzle	DOP140S624-4118
VA51S490-3012	Nozzle	DOP140S625-4152
VA51S490-3010	Nozzle	DOP140S627-4113

MOTORPAL ADVANCE DEVICES FOR TATRA

AM4A5P-1337
AM4A5P-1338
AM4A5P-1339
AM4A5P-1340