

New Improved Cam Core Technology

Description	Part Number	Advised Duration		Duration @ .006"		Duration @ .050"		Gross Lift 1.7 / 1.7		Suitable Component Kit
		Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
FACTORY OEM SPECS (Eclipse 4G63 USDM)	Stock	256°	256°	181° Lobe 198° Valve	172° 189°	174° Lobe 190° Valve	165° 181°	.366" inches .343" 9.29 mm 8.71		
	264	264°	264°	240° Lobe 256° Valve	240° 256°	187° Lobe 203° Valve	186° 202°	.393" inches .374" 9.98 mm 9.50		
	272	272°	272°	249° Lobe 264° Valve	249° 264°	195° Lobe 211° Valve	195° 211°	.399" inches .379" 10.13 mm 9.62		
STAGE 1 Street use and more aggressive turbo and nitrous. Slight lope at idle. RPM Range: Idle - 7500+	64412-2	264°	264°	242° Lobe 258° Valve	242° 258°	188° Lobe 204° Valve	188° 204°	.391" inches .372" 9.93 mm 9.45		Stock
STAGE 2 Specs derived from the popular 264 Intake / 272 Exhaust combination. RPM Range: Idle - 7750	64416-2	264°	272°	249° Lobe 265° Valve	249° 265°	188° Lobe 204° Valve	196° 212°	.398" inches .378" 10.11 mm 9.60		84175 84175S
STAGE 2 Most popular profile for street/strip. Excellent all purpose turbo. RPM Range: 1000 - 8000	64413-2	272°	272°	254° Lobe 270° Valve	249° 265°	195° Lobe 211° Valve	196° 212°	.393" inches .379" 9.98 mm 9.63		84175 84175S
STAGE 3 - Race Recommended for strip and some street. Lope at idle. Requires #84175. RPM Range: 1100 - 8250+	64414-2	280°	280°	258° Lobe 275° Valve	258° 275°	196° Lobe 213° Valve	198° 215°	.411" inches .391" 10.44 mm 9.93		84175 84175S
STAGE 4 - Full Race Not for the inexperienced tuner. Race only. RPM Range: 1200 - 8500+	64415-2	288°	288°	260° Lobe 278° Valve	256° 274°	200° Lobe 218° Valve	196° 216°	.425" inches .416" 10.80 mm 10.57		84175 84175S
CUSTOM GROUND 4G63 CAMS Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	00064-2	Refer to www.crower.com for camshaft recommendation								

If running a non-turbo 4G63 engine, the above cams are compatible for use.

Note: These cams use .000" intake (cold), .000" exhaust valve lash (cold).

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84175	68190-16	87095-16	15% more pressure than factory spring.
84175S	68190-16	87095S-16	Steel Retainer for Daily Street Use.

Spring pressure:

68190-16 Seat: 1.550" @ 74 lbs / Nose: 1.050" @ 210 lbs / Coil bind: 0.900" (No machine work required).

Note: Crower titanium retainers weigh 7 grams vs. 14.5 grams stock.

REMEMBER!

When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

ACCESSORIES

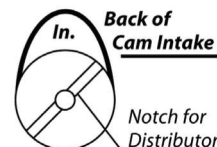
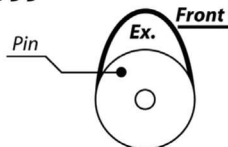
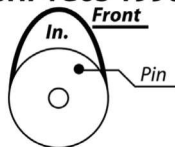
Part No.	Description
97420I-8	Stainless steel valves - 34 mm head dia (8 only int)
97420E-8	Stainless steel valves - 30.5 mm head dia (8 only exh)
97421I-8	Stainless steel valves - 34.5 mm head dia (8 only int)
97421E-8	Stainless steel valves - 31 mm head dia (8 only exh)
97422I-8	Stainless steel valves - 35 mm head dia (8 only int)
97422E-8	Stainless steel valves - 31.5 mm head dia (8 only int)

Note: When ordering valves, be sure to specify one set int and one set exh.

Note: When ordering sprockets, be sure to specify two.

Dowell Pin and Cam Sensor position when #1 cylinder lobes are at 12:00 a clock

MITSUBISHI 4G63 1990-1999



4G63 TURBO EVOLUTION VIII

Mitsubishi/Evolution

New Improved Cam Core Technology

Description	Part Number	Advertised Duration		Duration @ .006"		Duration @ .050"		Gross Lift 1.7 / 1.7		Suitable Component Kit
		Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
FACTORY OEM SPECS (2004 Evolution VIII USDM)	Stock	256°	256°	236° Lobe 252° Valve	232° Lobe 248° Valve	182° Lobe 198° Valve	178° Lobe 194° Valve	.386" inches 9.80 mm	.367" inches 9.32 mm	
	264	264°	264°	234° Lobe 250° Valve	232° Lobe 248° Valve	184° Lobe 200° Valve	182° Lobe 198° Valve	.416" inches 10.56 mm	.393" inches 9.98 mm	
	272	272°	272°	241° Lobe 258° Valve	240° Lobe 257° Valve	191° Lobe 208° Valve	190° Lobe 206° Valve	.415" inches 10.54 mm	.393" inches 9.98 mm	
	280	280°	280°	251° Lobe 267° Valve	250° Lobe 266° Valve	200° Lobe 216° Valve	200° Lobe 216° Valve	.415" inches 10.54 mm	.393" inches 9.98 mm	
STAGE 1 Street use, plug and play, no cylinder head work or spring kit required. RPM Range: Idle - 7500+	64431-2	264°	264°	239° Lobe 256° Valve	236° Lobe 252° Valve	186° Lobe 203° Valve	184° Lobe 202° Valve	.413" inches 10.50 mm	.391" inches 9.93 mm	84175 84175S
STAGE 2 Combination of the popular HKS 264 intake/272 exhaust cam setup. RPM Range: Idle - 7750	64432-2	264°	272°	239° Lobe 256° Valve	242° Lobe 258° Valve	185° Lobe 202° Valve	192° Lobe 208° Valve	.415" inches 10.54 mm	.396" inches 10.00 mm	84175 84175S
STAGE 3 - Race Most popular profile. Slight lobe at idle, added valve lift requires #84175. RPM Range: 1000 - 8000	64433-2	272°	272°	256° Lobe 272° Valve	250° Lobe 266° Valve	200° Lobe 216° Valve	192° Lobe 208° Valve	.425" inches 10.80 mm	.408" inches 10.36 mm	84175 84175S
STAGE 4 - Race Profile Race only. Not for the inexperienced tuner. Requires spring kit #84175. RPM Range: 1100 - 8250+	64434-2	280°	280°	270° Lobe 286° Valve	260° Lobe 266° Valve	214° Lobe 230° Valve	200° Lobe 216° Valve	.450" inches 11.43 mm	.425" inches 10.80 mm	84175 84175S
CUSTOM GROUND 4G63 CAMS Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	00068-2	Refer to www.crower.com for camshaft recommendation								

Note: These cams use .000" intake (cold), .000" exhaust valve lash (cold).

These cams are not compatible for use on 4G63 Turbo Eclipse or Talon applications.

ENGINEERED COMPONENT KITS

Part No.	Spring	Retainers	Remarks
84175	68190-16	87095-16	15% more pressure than factory spring.
84175S	68190-16	87095S-16	Steel Retainer for Daily Street Use.

Spring pressure:

68190-16 Seat: 1.550" @ 74 lbs / Nose: 1.050" @ 210 lbs / Coil bind: 0.900" (No machine work required).

Note: Crower titanium retainers weigh 7 grams vs. 14.5 grams stock.

REMEMBER!

When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

MAXI-LITE BILLET RODS

Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet. (See pages 186-188)

STEEL BILLET RODS

Premium steel billet connecting rods designed for high boost applications are available for the 4G63 Evo and 2nd Gen Eclipse (#B93762B-4) as well as the 1st Gen Eclipse 4G63 (#B93761B-4). Includes aluminum-bronze bushings and rod bolts rated to 220,000 p.s.i. for ultimate clamping ability. Other Mitsubishi applications include the 3000GT/Stealth VR-4 (#B93763B-6) and the Lancer 4G94 (#B93764B-4).



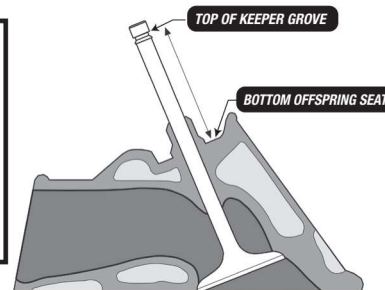
ACCESSORIES

Part No.	Description
97420I-8	Stainless steel valves - 34 mm head dia (8 only int)
97420E-8	Stainless steel valves - 30.5 mm head dia (8 only exh)
97421I-8	Stainless steel valves - 34.5 mm head dia (8 only int)
97421E-8	Stainless steel valves - 31 mm head dia (8 only exh)
97422I-8	Stainless steel valves - 35 mm head dia (8 only int)
97422E-8	Stainless steel valves - 31.5 mm head dia (8 only exh)

Note: When ordering valves, be sure to specify one set int and one set exh.

Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper groove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement. See Page 148



Note: If heads have been extensively modified (machined spring pockets, longer valves, etc.) contact Crower for proper spring, keeper, cup and retainer recommendations. Have your keeper/seat measurement available.

TWIN CAM - (FRONT EXHAUST)

Description	Part Number	Advertised Duration		Duration @ .050"		Lobe Lift		Gross Lift 1.75 / 1.75		Suitable Component Kit
		Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
FACTORY OEM SPECS (Eclipse Non Turbo)	Stock	222°	220°	172°	168°	.185"	.157"	.324"	.275"	Stock
STAGE 1 Aggressive street use and nitrous. Slight lobe at idle. Kit #84176 required. RPM Range: 1500 - 7000+	64461-2	234°	238°	184°	184°	.200"	.176"	.350"	.308"	84176 84176S
STAGE 2 Designed specifically for Turbo/Supercharger application. Springs required. RPM Range: 1500 - 7200+	64462T-2	238°	236°	187°	184°	.234"	.230"	.409"	.403"	84176 84176S
STAGE 2 - Race Most popular profile for the street/strip. Lobe at idle. Kit #84176 required. RPM Range: 2000 - 7200+	64462-2	241°	241°	196°	194°	.222"	.204"	.388"	.357"	84176 84176S
STAGE 3 - Full Race Recommended for drag race use. Heavy engine mods required. RPM Range: 2200 - 7500+	64463-2	254°	250°	205°	200°	.254"	.250"	.444"	.437"	84176 84176S
CUSTOM GROUND 4G63 CAMS Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	00069-2	Refer to www.crower.com for camshaft recommendation								

Note: These cams use .000" intake and exhaust valve lash (cold).

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84176	68190-16	87084-16	15% more pressure than factory spring
84176S	68190-16	87084S-16	Steel Retainer for Daily Street Use.

Spring pressure:

68190-16 Seat: 1.500" @ 88 lbs / Nose: 1.100" @ 195 lbs / Coil bind: 0.920" (No machine work required).

Note: Crower titanium retainers weigh 7 grams vs. 12.5 grams stock.

ACCESSORIES

Part No.	Description
86054N	420A Adjustable Cam Sprockets (1 only)

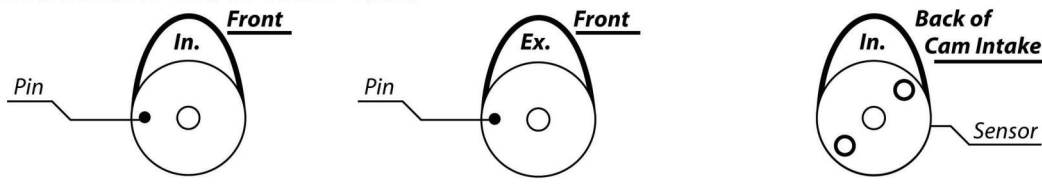
Note: When ordering sprockets, be sure to specify two.

REMEMBER!

When installing new camshaft please remember that the contact surface of the follower must be free of wear/ smooth surface.

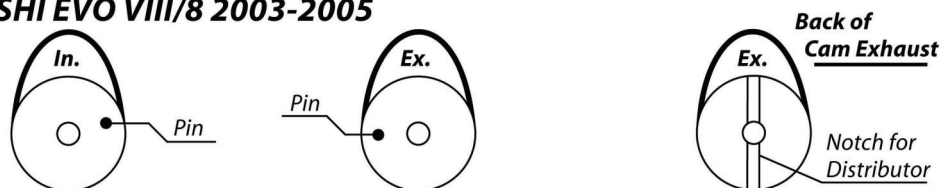
Dowell Pin and Cam Sensor position when #1 cylinder lobes are at 12:00 a clock

MITSUBISHI 420 A 1995-1998



Dowell Pin and Cam Sensor position when #1 cylinder lobes are at 12:00 a clock

MITSUBISHI EVO VIII/8 2003-2005



DODGE NEON TWIN CAM (REAR EXHAUST)



New Improved Cam Core Technology

Description	Part Number	Advertised Duration		Duration @ .050"		Lobe Lift		Gross Lift 1.75 / 1.75		Suitable Component Kit
		Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
FACTORY OEM SPECS (Neon 2.0L)	Stock	222°	222°	174°	172°	.198"	.180"	.347"	.315"	Stock
STAGE 1 Works with stock valve springs and retainers. Daily driver, mild idle. RPM Range: Idle - 6700+	64450N-2	234°	234°	184°	184°	.200"	.200"	.350"	.350"	Stock
STAGE 2 Aggressive street use and nitrous. Slight lope at idle. Springs required. RPM Range: 1500 - 7000+	64451N-2	241°	241°	196°	196°	.230"	.230"	.403"	.403"	84176
STAGE 2 - Forced Induction Special Designed specifically for Turbo/Supercharger application. Springs required. RPM Range: 1500 - 7000+	64454N-2	238°	238°	188°	188°	.230"	.220"	.403"	.385"	84176
STAGE 3 - Full Race Recommended for drag race use. Heavy engine mods required. RPM Range: 2000 - 7200+	64452N-2	248°	248°	200°	200°	.234"	.234"	.410"	.410"	84176
STAGE 4 - Full Race Recommended for drag race use. Springs, ECU mods required. RPM Range: 2200 - 7500+	64453N-2	254°	254°	216°	216°	.265"	.265"	.463"	.463"	84176
CUSTOM GROUND NEON CAMS Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	00076-2	Refer to www.crower.com for camshaft recommendation								

Note: These cams use .000" intake and exhaust valve lash (cold).

Note: Cam specs are taken at the cam lobe. Specs at the valve will be higher.

SRT-4 - TWIN CAM (REAR EXHAUST)

S = SRT-4 P = PT CRUISER

STAGE 1 Works with stock valve springs and retainers. Daily driver, mild idle. RPM Range: Idle - 6700+	64475P-2 64475S-2	266°	260°	210°	203°	.240"	.230"	.420"	.403"	84176
STAGE 2 Aggressive street use and nitrous. Slight lope at idle. Springs required. RPM Range: 1500 - 7000+	64476P-2 64476S-2	274°	266°	218°	210°	.250"	.240"	.438"	.420"	84176
STAGE 3 - Race Most popular profile for the street/strip. Springs/retainers mandatory. RPM Range: 2000 - 7200+	64477P-2 64477S-2	284°	277°	232°	223°	.265"	.254"	.464"	.445"	84176
CUSTOM GROUND SRT-4, PT CRUISER CAMS Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	00077P-2 00077S-2	Refer to www.crower.com for camshaft recommendation								

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84176	68190-16	87084-16	15% more pressure than factory spring
84176S	68190-16	87084S-16	Chromoly retainers for street use

Spring pressure:

68190-16 Seat: 1.500" @ 88 lbs / Nose: 1.100" @ 195 lbs / Coil bind: 0.920" (No machine work required).

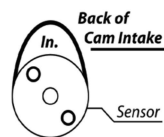
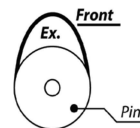
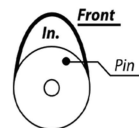
Note: Crower titanium retainers weight 7 grams vs. 12.5 grams stock.

REMEMBER!

When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

Dowell Pin and Cam Sensor position when #1 cylinder lobes are at 12:00 a clock

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Dowell Pin and Cam Sensor position when #1 cylinder lobes are at 12:00 a clock

SRT4 2003-2005

