

# 4G63 TURBO ECLIPSE & TALON - TWIN CAM

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

# Mitsubishi / Dsm

## New Improved Cam Core Technology

Description	Part Number	Advertised Duration		Duration @ .006"		Duration @ .050"		Gross Lift 1.7 / 1.7		Rec Kit
		Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
<b>FACTORY OEM SPECS (Eclipse 4G63 USDM)</b>	<b>Stock</b>	256	256	181° Lobe 198° Valve	172° 189°	174° Lobe 190° Valve	165° 181°	.366" inches 9.29 mm	.343" 8.71	
	<b>264</b>	264	264	240° Lobe 256° Valve	240° 256°	187° Lobe 203° Valve	186° 202°	.393" inches 9.98 mm	.374" 9.50	
	<b>272</b>	272	272	249° Lobe 264° Valve	249° 264°	195° Lobe 211° Valve	195° 211°	.399" inches 10.13 mm	.379" 9.62	
<b>STAGE 1 <i>New</i></b> Street use and more aggressive turbo and nitrous. Slight lobe at idle. RPM Range: Idle to 7500+	<b>64412-2</b>	264	264	242° Lobe 258° Valve	242° 258°	188° Lobe 204° Valve	188° 204°	.391" inches 9.93 mm	.372" 9.45	<b>Stock</b>
<b>STAGE 2</b> Specs derived from the popular 264 Intake / 272 Exhaust combination. RPM Range: Idle to 7750.	<b>64416-2</b>	264	272	249° Lobe 265° Valve	249° 265°	188° Lobe 204° Valve	196° 212°	.398" inches 10.11 mm	.378" 9.60	<b>84175 84175S</b>
<b>STAGE 2</b> Most popular profile for street/strip. Excellent all purpose turbo. RPM Range: 1000 to 8000.	<b>64413-2</b>	272	272	254° Lobe 270° Valve	249° 265°	195° Lobe 211° Valve	196° 212°	.393" inches 9.98 mm	.379" 9.63	<b>84175 84175S</b>
<b>STAGE 3 - 3/4 Race</b> Recommended for strip and some street. Lobe at idle. Requires #84175. RPM Range: 1100 to 8250+	<b>64414-2</b>	280	280	258° Lobe 275° Valve	258° 275°	196° Lobe 213° Valve	198° 215°	.411" inches 10.44 mm	.391" 9.93	<b>84175 84175S</b>
<b>STAGE 4 - Full Race</b> Not for the inexperienced tuner. Race only. RPM Range: 1200 to 8500+	<b>64415-2</b>	288	288	260° Lobe 278° Valve	256° 274°	200° Lobe 218° Valve	196° 216°	.425" inches 10.80 mm	.416" 10.57	<b>84175 84175S</b>
<b>CUSTOM GROUND 4G63 CAMS</b> - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	<b>00064-2</b>	<i>Refer to page 7 for camshaft recommendation form</i>								

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

### ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
<b>84175</b>	68190-16	87095-16	15% more pressure than factory spring.
<b>84175S</b>	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.

#### ADJUSTABLE SPROCKETS

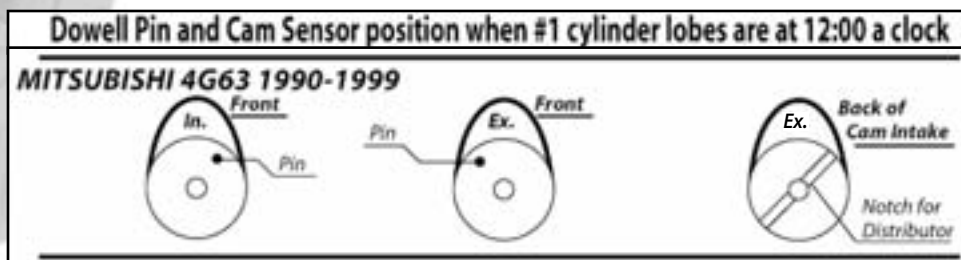
Crower's new cam sprockets are made from premium 6061-T6 billet aluminum and incorporate a four bolt ARP® fastening system to prevent the slippage found in other brands. For the ultimate tuner, Crower sprockets feature 5/16" diameter, 12 point ARP® fasteners with a hardened washer to prevent galling and stripping. The lightweight design reduces unwanted harmonics which could cause valve train failure. Specify #86054M (sold separately).

### ACCESSORIES

Part No.	Description
<b>86054M</b>	Adjustable Cam Sprocket (1 only). All black. 2 required
<b>97420I-8</b>	Stainless steel valves - 34 mm head dia (8 only int)
<b>97420E-8</b>	Stainless steel valves - 30.5 mm head dia (8 only exh)
<b>97421I-8</b>	Stainless steel valves - 34.5 mm head dia (8 only int)
<b>97421E-8</b>	Stainless steel valves - 31 mm head dia (8 only exh)
<b>97422I-8</b>	Stainless steel valves - 35 mm head dia (8 only int)
<b>97422E-8</b>	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.



## 4G63 TURBO EVOLUTION VIII - TWIN CAM

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

### New Improved Cam Core Technology

Description	Part Number	Advertised Duration		Duration @ .006"		Duration @ .050"		Gross Lift 1.7 / 1.7		Rec
		Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
<b>FACTORY OEM SPECS (2004 Evolution VIII USDM)</b>	<b>Stock</b>	256	256	236° Lobe 252° Valve	232° 248°	182° Lobe 198° Valve	178° 194°	.386" inches 9.80 mm	.367" 9.32	
	<b>264</b>	264	264	234° Lobe 250° Valve	232° 248°	184° Lobe 200° Valve	182° 198°	.416" inches 10.56 mm	.393" 9.98	
	<b>272</b>	272	272	241° Lobe 258° Valve	240° 257°	191° Lobe 208° Valve	190° 206°	.415" inches 10.54 mm	.393" 9.98	
	<b>280</b>	280	280	251° Lobe 267° Valve	250° 266°	200° Lobe 216° Valve	200° 216°	.415" inches 10.54 mm	.393" 9.98	
<b>STAGE 1</b> Street use, plug and play, no cylinder head work or spring kit required. RPM Range: Idle to 7500+	<b>64431-2</b>	264	264	239° Lobe 256° Valve	236° 252°	186° Lobe 203° Valve	184° 202°	.413" inches 10.50 mm	.391" 9.93	<b>84175</b> <b>84175S</b>
<b>STAGE 2</b> Combination of the popular HKS 264 intake/272 exhaust cam setup. RPM Range: Idle to 7750.	<b>64432-2</b>	264	272	239° Lobe 256° Valve	242° 258°	185° Lobe 202° Valve	192° 208°	.415" inches 10.54 mm	.396" 10.00	<b>84175</b> <b>84175S</b>
<b>STAGE 3 - 3/4 Race</b> Most popular profile. Slight lobe at idle, added valve lift requires #84175. RPM Range: 1000 to 8000.	<b>64433-2</b>	272	272	256° Lobe 272° Valve	250° 266°	200° Lobe 216° Valve	192° 208°	.425" inches 10.80 mm	.408" 10.36	<b>84175</b> <b>84175S</b>
<b>STAGE 4 - Race Profile</b> Race only. Not for the inexperienced tuner. Requires spring kit #84175. RPM Range: 1100 to 8250+	<b>64434-2</b>	280	280	270° Lobe 286° Valve	260° 266°	214° Lobe 230° Valve	200° 216°	.450" inches 11.43 mm	.425" 10.80	<b>84175</b> <b>84175S</b>
<b>CUSTOM GROUND EVO VIII CAMS</b> - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	<b>00068-2</b>	<i>Refer to page 7 for camshaft recommendation form</i>								

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

### ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
<b>84175</b>	68190-16	87095-16	15% more pressure than factory spring.
<b>84175S</b>	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.

#### 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
<b>97420I-8</b>	Stainless steel valves - 34 mm head dia (8 only int)
<b>97420E-8</b>	Stainless steel valves - 30.5 mm head dia (8 only exh)
<b>97421I-8</b>	Stainless steel valves - 34.5 mm head dia (8 only int)
<b>97421E-8</b>	Stainless steel valves - 31 mm head dia (8 only exh)
<b>97422I-8</b>	Stainless steel valves - 35 mm head dia (8 only int)
<b>97422E-8</b>	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.



# 420A MITSUBISHI ECLIPSE NON-TURBO - Twin Cam (Front Exhaust)



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

## New Improved Cam Core Technology

Description	Part Number	Advertised Duration		Duration @ .050"		Lobe Lift		Gross Lift 1.75 / 1.75		Rec Kit
		Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
<b>FACTORY OEM SPECS (Eclipse Non-Turbo)</b>	<b>Stock</b>	222°	220°	172°	168°	.185"	.157"	.324"	.275"	<b>Stock</b>
<b>STAGE 1</b> Aggressive street use and nitrous. Slight lobe at idle. Kit #84176 req. RPM Range: 1500 to 7000+	<b>64461-2</b>	234°	238°	184°	184°	.200"	.176"	.350"	.308"	<b>84176 84176S</b>
<b>STAGE 2 - Forced Induction Special</b> Designed specifically for Turbo/Supercharger appl. Springs required. RPM Range: 1500 to 7200+	<b>64462T-2</b>	238°	236°	187°	184°	.234"	.230"	.409"	.403"	<b>84176 84176S</b>
<b>STAGE 2 - 3/4 Race</b> Most popular profile for the street/strip. Lobe at idle. #84176 required. RPM Range: 2000 to 7200+	<b>64462-2</b>	241°	241°	196°	194°	.222"	.204"	.388"	.357"	<b>84176 84176S</b>
<b>STAGE 3 - Full Race</b> Recommended for drag race use. Heavy engine mods required. RPM Range: 2200 to 7500+	<b>64463-2</b>	254°	250°	205°	200°	.254"	.250"	.444"	.437"	<b>84176 84176S</b>
<b>CUSTOM GROUND 420A CAMS</b> - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	<b>00069-2</b>	<i>Refer to page 7 for camshaft recommendation form</i>								

### ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
<b>84176</b>	68190-16	87084-16	15% more pressure than factory spring
<b>84176S</b>	68190-16	87095S-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.

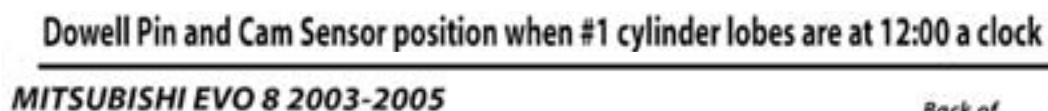
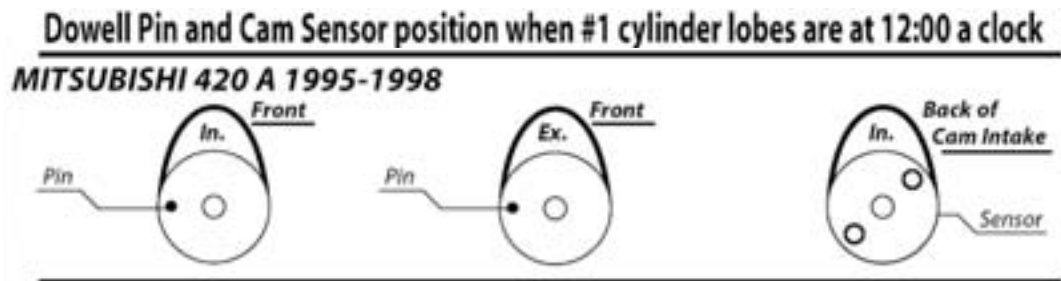
### ACCESSORIES

Part No.	Description
<b>86054N</b>	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.



## DODGE NEON - TWIN CAM (Rear Exhaust)

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.

### New Improved Cam Core Technology

Description	Part Number	Advertised Duration		Duration @ .050"		Lobe Lift		Gross Lift 1.75 / 1.75		Rec Kit
		Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
<b>FACTORY OEM SPECS (Neon 2.0L)</b>	<b>Stock</b>	222°	222°	174°	172°	.198"	.180"	.347"	.315"	<b>Stock</b>
<b>STAGE 1</b> Works with stock valve springs and retainers. Daily driver, mild idle. RPM Range: Idle to 6700+	<b>64450N-2</b>	234°	234°	184°	184°	.200"	.200"	.350"	.350"	<b>Stock</b>
<b>STAGE 2</b> Aggressive street use and nitrous. Slight lope at idle. Springs req. RPM Range: 1500 to 7000+	<b>64451N-2</b>	241°	241°	196°	196°	.230"	.230"	.403"	.403"	<b>84176</b>
<b>STAGE 2 - Forced Induction Special</b> Designed specifically for Turbo/Supercharger appl. Springs required. RPM Range: 1500 to 7000+	<b>64454N-2</b>	238°	238°	188°	188°	.230"	.220"	.403"	.385"	<b>84176</b>
<b>STAGE 3 - 3/4 Race</b> Most popular profile for the street/strip. Springs/retainers mandatory. RPM Range: 2000 to 7200+	<b>64452N-2</b>	248°	248°	200°	200°	.234"	.234"	.410"	.410"	<b>84176</b>
<b>STAGE 4 - Full Race</b> Recommended for drag race use. Springs, ECU mods required. RPM Range: 2200 to 7500+	<b>64453N-2</b>	254°	254°	216°	216°	.265"	.265"	.463"	.463"	<b>84176</b>
<b>CUSTOM GROUND NEON CAMS</b> - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	<b>00076-2</b>	<i>Refer to page 7 for camshaft recommendation form</i>								

## SRT-4 & PT CRUISER - Twin Cam (Rear Exhaust)

<b>STAGE 1</b> Works with stock valve springs and retainers. Daily driver, mild idle. RPM Range: Idle to 6700+	<b>64475-2</b>	249°	254°	210°	203°	.410"	.393"	.234"	.226"	<b>84176</b>
<b>STAGE 2</b> Aggressive street use and nitrous. Slight lope at idle. Springs req. RPM Range: 1500 to 7000+	<b>64476-2</b>	267°	249°	218°	210°	.210"	.245"	.425"	.410"	<b>84176</b>
<b>STAGE 3 - 3/4 Race</b> Most popular profile for the street/strip. Springs/retainers mandatory. RPM Range: 2000 to 7200+	<b>64477-2</b>	279°	271°	230°	222°	.260"	.249"	.449"	.433"	<b>84176</b>

### ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
<b>84176</b>	68190-16	87084-16	15% more pressure than factory spring

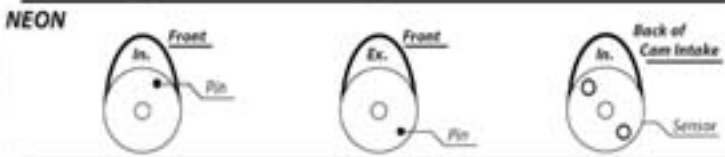
Spring pressure:

68190-16 Seat: 1.500" @ 88 lbs / Nose: 1.100" @ 195 lbs / Coil bind: 0.920"

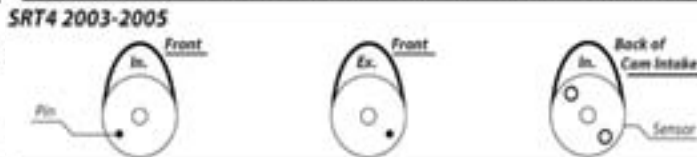
(No machine work required).

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

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



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



### REMEMBER!

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

**Note:** When ordering make sure to specify car model. PT Cruiser cam sensor differs from the SRT4 cam sensor.

