



SUPRA 2JZ-GTE FACTORY TURBO 6 CYL TWIN CAM (93-98)

New Improved Cam Core Technology

Description	Part Number	Advertised Duration		Duration @ .010"		Duration @ .050"		Gross Lift		Suitable Component Kit
		Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
FACTORY OEM SPECS (2JZGTE)	Stock	248°	248°	276°	204°	200°	204°	.338" inches .346"	8.58 mm 8.79	Stock
	264	264°	264°	281°	281°	222°	222°	.364" inches .364"	9.24 mm 9.24	Stock
	272	272°	272°	287°	318°	229°	231°	.374" inches .380"	9.50 mm 9.65	84168 84168S
STAGE 1 - Daily Driver Street use and more aggressive turbo and nitrous. Slight lobe at idle. RPM Power Range: Idle - 7500+	61401-2	264°	264°	289°	289°	218°	218°	.375" inches .375"	9.52 mm 9.52	84168 84168S
STAGE 2 - Race Street/Strip package. Lobe at idle, extended rpms. Kit #84168 required. RPM Power Range: 1000 - 8500+	61402-2	272°	272°	276°	278°	230°	232°	.406" inches .415"	10.31 mm 10.54	84168 84168S
STAGE 2 - Race Hot street, similar to HKS 272 specs. Kit #84168 required. RPM Power Range: 1000 - 8500+	61402A-2	272°	272°	310°	310°	228°	230°	.372" inches .372"	9.45 mm 9.45	84168 84168S
STAGE 3 - Full Drag Race Limited street with rough idle. Shim under bucket may be required. RPM Power Range: 1250 - 9000+	61403-2	280°	280°	278°	280°	232°	234°	.415" inches .425"	10.54 mm 10.80	84168 84168S
CUSTOM GROUND 2JZGTE CAMS Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles also available. See specs listed below.	00072-2	Refer to www.crower.com for camshaft recommendation								

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

Note: The above cores will not fit the non-turbo 2JZ cylinder head. No cores available at time of publication.

Note: 1JZ Cams available, call Crowder.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84168	68195-24	87085-24	Titanium Retainer
84168S	68195-24	87085S-24	Steel Retainer

Spring pressure:

68195-24 Seat: 1.325" @ 82 lbs / Nose: 0.980" @ 166 lbs /
Coil bind: 0.860" (No machine work required).

BILLET STROKER KITS

Crowder offers stroker kits for the 2JZGTE that feature a 4340 steel billet crankshaft, 4340 steel billet rods and custom pistons, pins, rings and locks.
94mm stroke x 87mm bore = 3.4L...big horsepower!

REMEMBER!

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

H-BEAM RODS

Crowder also has H-Beam design rods.

ACCESSORIES

Part No.	Description
860540T	Adjustable Cam Sprocket (1 only). All black. 2 required
97440I-12	Stainless steel valves - 33.6 mm head dia (12 only int)
97440E-12	Stainless steel valves - 29 mm head dia (12 only exh)
97441I-12	Stainless steel valves - 34.6 mm head dia (12 only int)
97441E-12	Stainless steel valves - 30 mm head dia (12 only exh)

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



Custom Order CRANKS & RODS

New Improved Cam Core Technology

Description	Part Number	Lobe Sep.	Advised Duration		Duration @ .050"		Gross Lift		Suitable Component Kit
			Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
TOYOTA COROLLA (2000)	Stock	114°	256°	246°	204°	195°	.379"	.346"	Stock
STAGE 1 Street use with emphasis on bottom end and mid range power. Works with stock springs up to factory rev limiter. RPM Power Range: Idle - 7000+	61451-2	114°	264°	264°	214°	202°	.379"	.367"	Stock
STAGE 2 - Forced Induction Designed specifically for turbo or supercharger applications. Low duration, high lift profile. Power Range: Idle - 8000+	61451T-2	114°	272°	272°	215°	212°	.396"	.379"	84199
STAGE 2 - Race Designed for street/strip applications in normally aspirated engines. RPM Power Range: 1000 - 7800+	61452-2	112°	272°	272°	222°	219°	.396"	.396"	84199
STAGE 3 - Full Race Drag Race and radical Street/Strip. RPM Power Range: 1100 - 8000+	61453-2	112°	280°	280°	228°	219°	.415"	.396"	84199
CUSTOM GRIND Crower can custom grind cams to your desired specs, also proprietary profiles available upon request.	00085-2	Refer to www.crower.com for camshaft recommendation							

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

Duration figures are taken at the lobe.

Spring pressure:

68160-16 Seat: 1.310" @ 39 lbs / Nose: 0.880" @ 97 lbs / Coil bind: 0.810" (No machine work required).

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 (See Page 204-209)

Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.



STEEL BILLET RODS

100% made in the USA from premium steel billet material, Crower offers two styles of rods for the Toyota 1zz engine. Crower's premium standard steel billet rod (#B93751B-4) is designed for boosted applications in excess of 12 psi or over 100 HP shot of nitrous. Also available in a Maxi-Lite all motor design (ML93751B-4) for added weight reduction and quicker throttle response.

New Improved Cam Core Technology

Description	Part Number	Lobe Sep.	Advised Duration @ .050"	Intake	Exhaust	Duration @ .050"	Intake	Exhaust	Gross Lift 1.5 / 1.5	Intake	Exhaust	Suitable Component Kit
CARBURETOR - STAGE 1 10:1 compression, low to mid-range torque. Heavy vehicle. RPM Range: 2200 - 6200+	61800	108°	270°	276°	216°	220°	.430"	.430"	Stock			
CARBURETOR - STAGE 2 10:1+ compression, header, intake manifold, carb mods. RPM Range: 3000 - 7000+	61801	108°	286°	290°	226°	236°	.429"	.443"	Stock			
CARBURETOR - STAGE 3 11:1+ compression, header, big single, or dual carbs. RPM Range: 3400 - 7200+	61803	108°	290°	298°	236°	240°	.443"	.417"	68218-8			
CARBURETOR - STAGE 4 (Race) 12:1+ compression, header, big single, or dual carbs, porting, etc... RPM Range: 4200 - 8000+	61804*	106°	298°	304°	248°	254°	.489"	.504"	68218-8			
CARBURETOR - STAGE 5 (Full Race) Professionally prepared, purpose built, race only engine. RPM Range: 5000 - 8500+	61805	106°	308°	308°	264°	264°	.566"	.566"	68218-8			
EFI - STAGE 1 Excellent stock replacement cam. No other modifications required, straight forward remove and replace. RPM Range: 1500 - 5500+	61802	114°	252°	260°	204°	210°	.420"	.438"	Stock			
EFI - STAGE 2 Street/Strip profile and all purpose daily driver. Headers, performance exhaust recommended. RPM Range: 2000 - 7000+	61807	114°	270°	276°	216°	220°	.430"	.430"	Stock			
EFI - STAGE 3 (Race) Excellent for turbo and nitrous for street/strip applications. Wide center for top end performance. RPM Range: 2500 - 7000+	61808	114°	280°	280°	226°	226°	.445"	.445"	68218-8			
EFI - STAGE 4 (Full Race) Mostly strip, not for daily driver. Very rough idle, aftermarket valve springs, ECU mods required. RPM Range: 3000 - 7500+	61809	114°	290°	298°	236°	240°	.443"	.417"	68218-8			
CUSTOM GROUND SOLID Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	00128	Refer to www.crower.com for camshaft recommendation										

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

REMEMBER!

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

STEEL BILLET RODS

100% made in the USA from premium steel billet material. Crower's premium standard steel billet rod (#B93755B-4) is designed for boosted applications in excess of 12 psi or over 100 HP shot of nitrous. Also available in a Maxi-Lite all motor design (ML93755B-4) for added weight reduction and quicker throttle response.

MAXI-LITE BILLET RODS

Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.



1FZ-FE 4.5L LANDCRUISER



Description	Part Number	Lobe Sep.	Advised Duration		Duration @ .050"		Lobe Lift		Suitable Component Kit
STAGE 1 Street use with emphasis on bottom end and mid range power.	61481-2	112°	266°	271°	218°	222°	.401"	.401"	84182 84182S
STAGE 1 Designed for street/strip applications in normally aspirated engines.	61482-2	112°	270°	280°	219°	227°	.397"	.415"	84182 84182S
STAGE 2 Street/Strip package. Perfect for all-motor use.	61483-2	112°	274°	288°	222°	230°	.401"	.425"	84182 84182S
STAGE 2 - Race Drag Race and radical Street/Strip	61484-2	112°	292°	300°	229°	237°	.415"	.426"	84182 84182S
STAGE 4 - Full Race Excellent high torque and mid-range power	61485-2	112°	300°	308°	237°	245°	.436"	.458"	84182 84182S
STAGE 5 - Full Race All out, all motor drag profile. Not for the inexperienced tuner	61486-2	112°	308°	314°	245°	253°	.458"	.480"	84182 84182S
CUSTOM GROUND SOLID Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	00049-2	Refer to www.crower.com for camshaft recommendation							

ENGINEERED COMPONENT KITS

Part No	Spring	Retainers	Remarks
84182	68183-24	87098-24	Titanium retainers.
84182S	68183-24	87098S-24	Steel retainers



CROWER CAM BREAK-IN PROCEDURE



This applies to all hydraulic and solid lifter camshafts using higher than stock spring pressure:

- Do not use block restrictors in the oil galleries.
This severely limits oil flow to the cam, lifters and overhead.
- Break-in cam and lifters with low pressure springs only. Do not exceed 235 lbs open pressure.
- During break-in run engine for 35 to 45 minutes and vary rpm from 2000 to 3000.
- For break-in procedure Crower recommends 10W/30 motor oil. Heavier weight oils do not cold flow.
- Do not use synthetic oils during break-in period.
- For further information, please refer to the Crower Installation booklet that accompanies the camshaft.
- Use ZDD Plus Additive P/N 86092

Crower Recommends ZDDPlus for all Flat Tappet Cams

ZDDPlus™ contains 42,700 ppm of phosphorus and 57,300 ppm of zinc. When a 4-ounce bottle of ZDDPlus™ is added to 5 quarts of oil, it is diluted 41:1, which contributes 1047 ppm of phosphorus and 1397ppm of zinc to whatever the oil may or may not already contain.
Part #86092 - 4oz Bottle of ZDDPlus & Paste



1FZ-FE 4.5L LANDCRUISER (TURBO)

Description	Part Number	Lobe Sep.	Advised Duration		Duration @ .050"		Lobe Lift		Suitable Component Kit
			Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
STAGE 1 Fair idle. Good bottom end profile with mid-range power. Emphasis on torque.	61481T-2	114°	271°	266°	222°	218°	.401"	.401"	84182 84182S
STAGE 1 Street use and more aggressive turbo and nitrous. Slight lobe at idle. RPM Range: Idle to 7500+	61482T-2	114°	280°	270°	227°	219°	.415"	.397"	84182 84182S
STAGE 2 Excellent for turbo and nitrous for street/strip applications. Wide center for top end performance. RPM range 2600 to 7200+	61483T-2	114°	288°	274°	230°	222°	.425"	.401"	84182 84182S
STAGE 4 - Full Race Race turbo (30+ lbs of boost minimum). Also works well with NOS. RPM Range: 2600 to 7200+	61484T-2	114°	300°	292°	237°	229°	.426"	.415"	84182 84182S
STAGE 4 - Full Race Race turbo (30+ lbs of boost minimum). Also works well with NOS. RPM Range: 2600 to 7200+	61485T-2	114°	308°	300°	245°	237°	.458"	.436"	84182 84182S
STAGE 5 - Full Race Performance built, race oriented application. Not for the inexperienced tuner. Top end insanity. RPM Range: 3000 to 8000+	61486T-2	114°	314°	308°	253°	245°	.480"	.458"	84182 84182S
CUSTOM GROUND SOLID Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	00049-2	Refer to www.crower.com for camshaft recommendation							

ENGINEERED COMPONENT KITS

Part. No	Spring	Retainers	Remarks
84182	68183-24	87098-24	Titanium retainers.
84182S	68183-24	87098S-24	Steel retainers

Connecting Rods Available See Rod Section

Crowder Recommends ZDDPlus for all Flat Tappet Cams

ZDDPlus™ contains 42,700 ppm of phosphorus and 57,300 ppm of zinc. When a 4-ounce bottle of ZDDPlus™ is added to 5 quarts of oil, it is diluted 41:1, which contributes 1047 ppm of phosphorus and 1397ppm of zinc to whatever the oil may or may not already contain.

Part #86092 - 4oz Bottle of ZDDPlus & Paste

**DON'T SEE YOUR
FAVORITE PART # ?
IT MAY STILL BE AVAILABLE
CALL THE CROWDER
TECH. DEPT FOR INFO.**