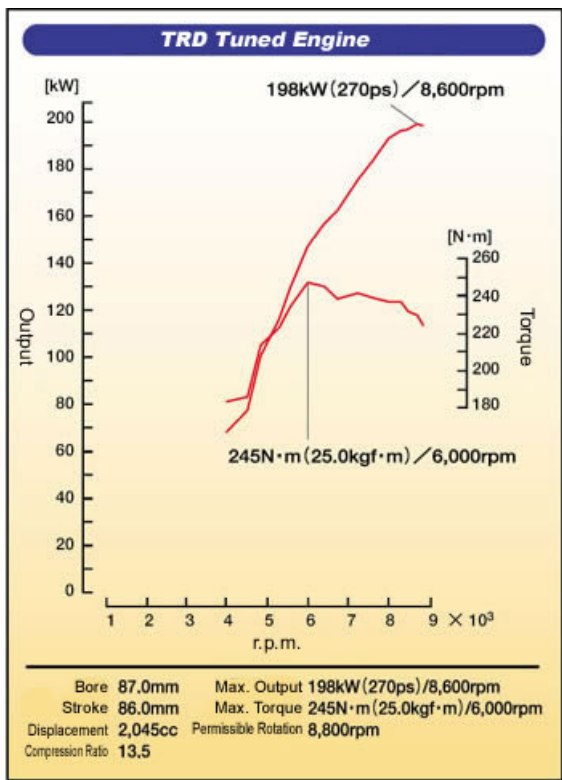
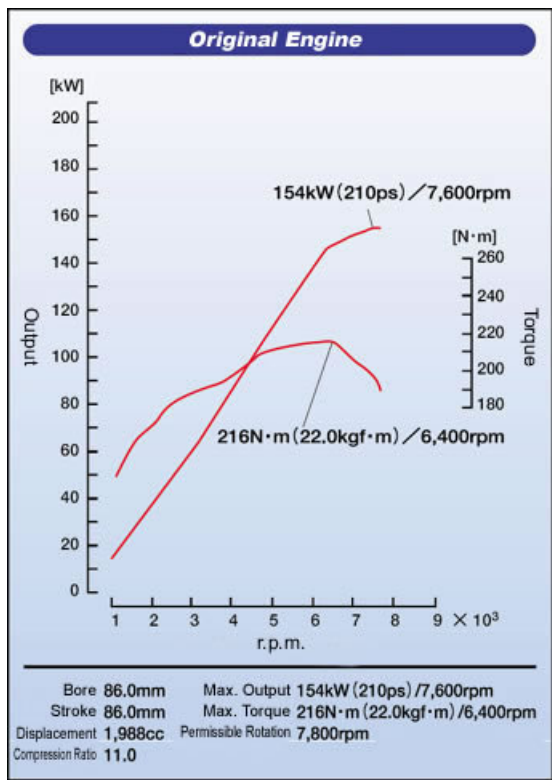




We look to let you modify the advanced racing engine mounted in the JGTC Supra to be an after-market competition engine as well. By achieving excellent handling characteristics while maintaining peak power, you can enjoy quick response along with the powerful acceleration characteristics required for circuit racing. You too can now achieve best-of-breed status.

3S-GE engine power comparison



Note: Above spec (198 kW (270 ps)) is our development value with all parts listed below installed.
[General specifications: independent quad-linked throttle, exhaust manifold, and one-piece center pipe and tailpipe] (This specification differs from the 3S-GE Super-Endurance Series Group N Plus Class specification.)

* All parts listed below are for competition use only. To use the vehicle on public streets, you must install additional parts, change accessories, perform settings, and so on, in order for the vehicle to meet safety standards.

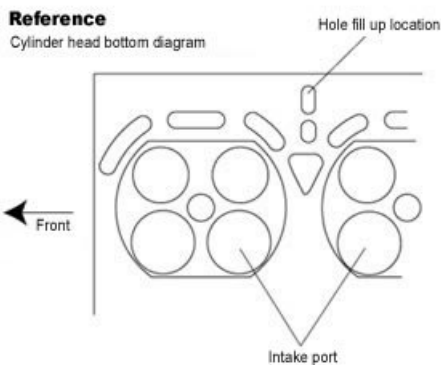
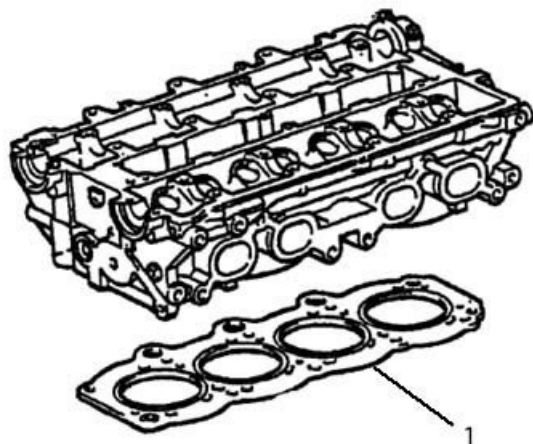
Engine: -3S-GE-; Model type: SXE10 (from Oct. 1998)

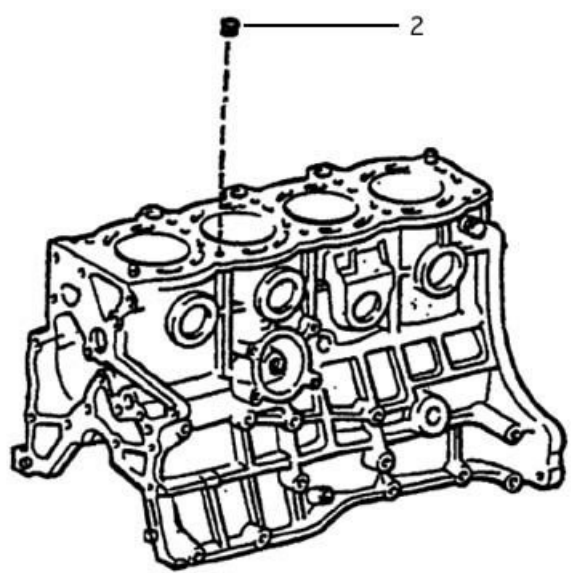
3S-GE engine parts are for Altezza (SXE10) M/T cars only. Cannot be used in 3S-GE engines of other cars.
To install, machining, alterations, grinding, and other operations are required.

Cylinder Head for inoperative VVT-i (CYLINDER HEAD)

No.	Description	Part No.	Code	Qty required/engine	List Price/pce.	Remarks
1	Gasket,cylinder head	11115-TF100	C	1	Discontinued	T = 0.8 metal; improved durability; bore: 86- and 87-mm diameter throughout Requires VVT-i oil control hole on bottom side of cylinder head (see below). Cannot be installed on unmodified engine.
2	Plug	11188-TF100	C	1	150	PT 1/16; For the top of cylinder block and VVT-i oil control hole

Caution: Because the VVT-i restriction function becomes inoperative, set of a camshaft and pulley for the inoperative VVT-i is required.





PISTON & RING

No.	Description	Part No.	Code	Qty required/engine	List Price/pce.	Remarks
1	Piston,w/pin O/S	13101-TF100	C	4	30,000	φ87 Forged type Displacement 2,045cc, Must use with 13201-TF100(con-rod) Must use with above gasket&sylander head at the same time.
2	Piston,w/pin STD size	13101-TF110	C	4	30,000	φ86 Forged type Displacement 1,988cc. Must use with 13201-TF100(con-rod)
3	Ring set,piston O/S	13011-TF100	C	4	4,800	φ87 For 13101-TF100
4	Ring set,piston STD size	13011-TF110	C	4	4,800	φ86 For 13101-TF110

Caution: Honing and boring process is required for cylinder block.

1、2

3、4



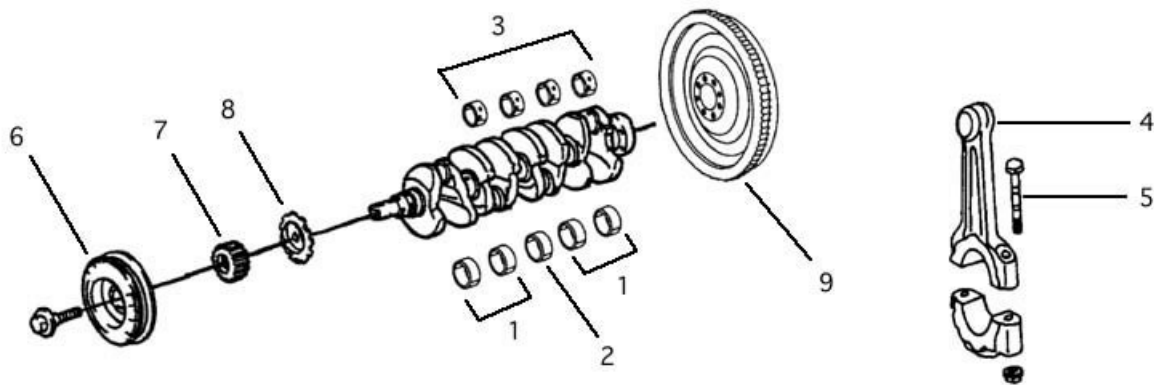
Basic specifications

Piston part No.		13101-TF100	13101-TF110
Piston ring set part No.		13011-TF100	13011-TF110
Piston ring clearance(mm)	Compression 1	0.27-0.37	0.27-0.37
	Compression 2	0.37-0.47	0.37-0.47
	Oil	0.10-0.35	0.10-0.35
Compression ratio(original 11.5)		13.5	13.5

CRANK SHAFT

No.	Description	Part No.	Code	Qty required/engine	List Price/pce.	Remarks
1	Bearing,crankshaft	11711-TF100-01	C	8	Discontinued	(Brown)t=2.0 1.988-1.991
	Bearing,crankshaft	11711-TF100-02	C	8	2.600	(Green)t=2.0 1.991-1.994
	Bearing,crankshaft	11711-TF100-03	C	8	2.600	(Yellow)t=2.0 1.994-1.997
	Bearing,crankshaft	11711-TF100-04	C	8	2.600	(Blue)t=2.0 1.997-2.000
	Bearing,crankshaft	11711-TF100-05	C	8	2.600	(Pink)t=2.0 2.000-2.003
	Bearing,crankshaft	11711-TF100-06	C	8	2.600	(Violet)t=2.0 2.003-2.006
2	Bearing,crankshaft	11721-TF100-01	C	2	Discontinued	(Brown)t=2.0 1.988-1.991
	Bearing,crankshaft	11721-TF100-02	C	2	2.800	(Green)t=2.0 1.991-1.994
	Bearing,crankshaft	11721-TF100-03	C	2	2.800	(Yellow)t=2.0 1.994-1.997
	Bearing,crankshaft	11721-TF100-04	C	2	2.800	(Blue)t=2.0 1.997-2.000
	Bearing,crankshaft	11721-TF100-05	C	2	2.800	(Pink)t=2.0 2.000-2.003
	Bearing,crankshaft	11721-TF100-06	C	2	2.800	(Violet)t=2.0 2.003-2.006

3	Bearing,connecting rod	13281-TF100-01	C	8	Discontinued	(Brown)t=1.5 1.472-1.476	Durability improved type
	Bearing,connecting rod	13281-TF100-02	C	8	2,200	(Green)t=1.5 1.476-1.480	
	Bearing,connecting rod	13281-TF100-03	C	8	2,200	(Yellow)t=1.5 1.480-1.484	
	Bearing,connecting rod	13281-TF100-04	C	8	2,200	(Blue)t=1.5 1.484-1.488	
	Bearing,connecting rod	13281-TF100-05	C	8	2,200	(Pink)t=1.5 1.488-1.492	
	Bearing,connecting rod	13281-TF100-06	C	8	2,200	(Violet)t=1.5 1.492-1.496	
4	Conrod S/A,connecting	13201-TF100	C	4	45,000	Must use with 13101-TF100/110(piston) H cross section,C-C dimention 146mm	
5	Bolt,connecting rod	13265-TF100	C	8	4,500	Must use with above 13201-TF100(connecting rod)	
6	Damper,crankshaft	13407-TF100	C	1	22,500	For adjusting ignition timing Degree added type	
7	Pulley,crankshaft timing	13521-TF100	C	1	4,500	For installing rotor timing	Must use in set
8	Rotor,timing	13594-TF100	C	1	15,000	For all-purpose ECU 12T equal pitch	
9	Flywheel S/A	13451-TF100	C	1	58,000	Weight 6950g Toyota Genuine Flywheel bolt required. (90105-12312 x8pcs.)	



VALVE TRAIN SYSTEM for inoperative VVT-i

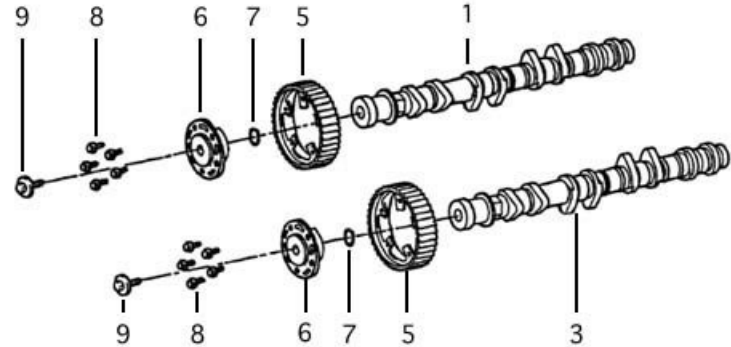
No.	Description	Part No.	Code	Qty required/engine	List Price/pee.	Remarks		
1	Camshaft,intake	13501-TF100	C	1	65,000	Exclusive for inoperative VVT-i	Angle 296° Lifting 13.0	
	Camshaft,intake	13501-TF110	C	1	65,000	Exclusive for inoperative VVT-i	Angle 280° Lifting 12.2	
3	Camshaft,exhaust	13502-TF100	C	1	65,000	Exclusive for inoperative VVT-i	Angle 296° Lifting 12.7	
	Camshaft,exhaust	13502-TF110	C	1	Discontinued	Exclusive for inoperative VVT-i	Angle 280° Lifting 12.0	
5	Pulley,cam shaft timing	13523-TF100	C	2	4,500	Exclusive for inoperative VVT-i	Adjustable type	Must use with above cam shaft
6	Guide,cam shaft timing pulley	13585-TF100	C	2	22,000	Exclusive for inoperative VVT-i		
7	O Ring	13599-TF100	C	2	120	Exclusive for inoperative VVT-i		
8	Bolt,cam shaft timing gear	13576-TF100	C	10	150	Exclusive for inoperative VVT-i		
9	Bolt	91642-81230		2	Toyota Genuine Part	Exclusive for inoperative VVT-i		
10	Spring,compression	10309-TF110	C	16	2,900	Durability improved type,STD size		

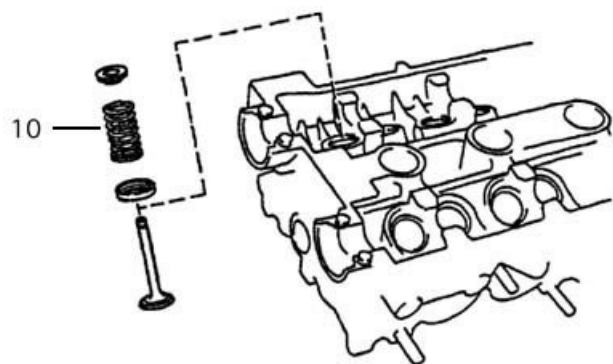
There are two different kinds, one for operative VVT-i and one for inoperative VVT-i. It's required to make enough space on cylinder head for cam operating correctly.

Camshaft For operative VVT-i

No.	Description	Part No.	Code	Qty required/engine	List Price/pc.	Remarks	
2	Camshaft,intake	13501-TF120	C	1	65,000	For operative VVT-i	Angle 296° Lifting 13.0
	Camshaft,intake	13501-TF130	C	1	65,000	For operative VVT-i	Angle 280° Lifting 12.2
4	Camshaft,exhaust	13502-TF120	C	1	65,000	For operative VVT-i	Angle 296° Lifting 12.7
	Camshaft,exhaust	13502-TF130	C	1	65,000	For operative VVT-i	Angle 280° Lifting 12.0

There are two different kinds, one for operative VVT-i and one for inoperative VVT-i. It's required to make enough space on cylinder head for cam operating correctly.



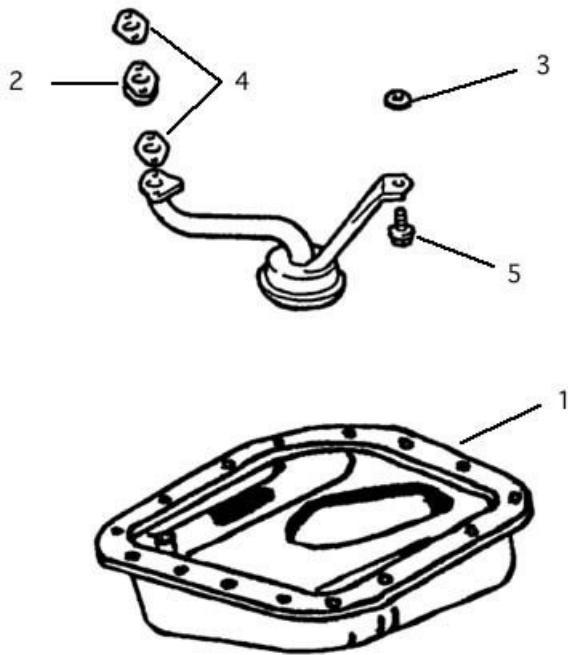


Cam Shaft Specifications

Part No.	Type	Angle	Valve Lifting (mm)	Valve Clearance (mm)(Cooled)	Valve Timing
13501-TF100	Intake	296°	13.05	0.15	ATDC 100°
13501-TF110	Intake	280°	12.25	0.15	ATDC 100°
13502-TF100	Exhaust	296°	12.75	0.25	BTDC 100°
13502-TF110	Exhaust	280°	12.05	0.25	BTDC 100°

LUBRICATION SYSTEM

No.	Description	Part No.	Code	Qty required/engine	List Price/pce.	Remarks
1	Pan,oil No.2	12102-TF100	C	1	10,000	For avoiding oil leaning to one side
2	Spacer,oil strainer No.1	10511-TF100	C	1	3,800	t=4mm
3	Spacer,oil strainer No.2	10512-TF100	C	1	2,000	t=4mm
4	Gasket,oil strainer	15149-88460		2	Toyota Genuine Part	
5	Bolt	91651-60620		1	Toyota Genuine Part	



INTAKE & EXHAUST

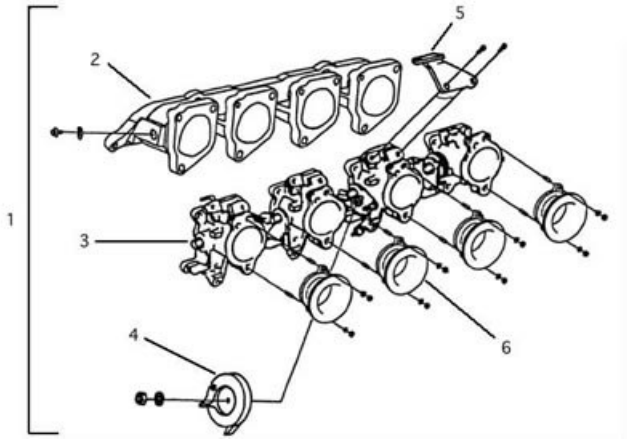
No.	Description	Part No.	Code	Qty required/engine	List Price/pce.	Remarks
1	Throttle body kit ASSY	22201-TF101	E	1	178,000	Quad-set independent throttle Set of below 2-6 ※1

Contents of Kit

No.	Description	Part No.	Code	Qty required/engine	List Price/pce.	Remarks
2	Manifold,intake	17111-TF101	E	1	98,000	
	Bolt	13576-TF110	C	2	150	Intake manifold to cylinder head
3	Body,throttle			1	Toyota Genuine Part	
	Body,throttle No.2			1	Toyota Genuine Part	
	Body,throttle No.3			1	Toyota Genuine Part	
	Body,throttle No.4			1	Toyota Genuine Part	
4	Link,throttle	21473-TF100	C	1	11,000	
5	Bracket,throttle wire	78471-TF100	C	1	7,200	

6	Funnel,air	17115-TF100	C	4	7,600	
---	------------	-------------	---	---	-------	--

※1:As it's required to remove air flow meter, please use E.C.U.that restriction system is re-programmed. We don't produce E.C.U. Please use products on the market.



EXHAUST

No.	Description	Part No.	Code	Qty required/ engine	List Price/ pce.	Remarks		
1	Exhaust manifold	17141-SE100	E	1	148,000	4-2-1 type,Equal length,Separate three pcs. (insert type), Same form as original flange (can connect with original and/or TRD conter pipe) Replacement from original exhaust manifold to original front exhaust pipe. ※2 φ50 at 4 pipes jointed section,φ54 at 2 pipes jointed section,φ60. 5 at single pipe section It's required to extend O2 sensor Exclusively designed for competition		
2	Front exhaust pipe	17411-SE101	Z	1	51,000	Same form as original flange (can connect with original and/or TRD conter pipe)		ALTEZZA One Make Race designated parts Exclusively designed for competition
3	Center pipe	17421-SE100	Z	1	16,000	Must use in set	Front exhaust pipe side:Same form as original flange (can connect with original and/or TRD conter pipe) Tail pipe side:Exclusive flange type for below TRD tail pipe	
4	Tail pipe	17431-SE100	Z	1	40,000		Exclusive flange type for aboveTRD center pipe	

※Toyota Genuine Part, gasket, bolt and etc. are required separately.

※2:Can't install with original and/or TRD front exhaust pipe (17411-SE100) at the same time.

