



PERFORMANCE PARTS

**VALVES
SPRINGS
COMPONENTS
PISTONS
HEAD GASKETS
RODS**

2026





PASSION FOR PERFORMANCE

Supertech is the premier performance solution for anyone serious about high quality performance parts.

For those who have experienced true performance, there is no substitute. Our pursuit of performance isn't just limited to the products we produce, the exhilaration of a flat-out apex, or the numbing vibration of a 1,000hp engine. For us, performance is measured in precision, reliability, and consistency. For more than 20 years Supertech has consistently manufactured performance for the automotive enthusiast.



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ENGINEERED WITH PRECISION

Our performance valves are crafted starting with a singular piece forging. In this phase, the valve's head undergoes a meticulous two-step forging process to maintain optimal material grain flow. This forged piece is subsequently precision-machined using CNC technology in multiple stages, ensuring exact final dimensions.

We then subject the valve to another heat treatment to alleviate stress. Depending on its specific use, it receives a nitride hardening treatment or another coating process. In the final steps, the valve is ground once more and undergoes our exclusive Super-finishing process, guaranteeing each valve is impeccable, and dimensions are precise.

ENGINE VALVE MANUFACTURING

With more than three decades of expertise behind us, every Supertech Performance valve is a fusion of tradition and innovation. Utilizing state-of-the-art tools like ultrasonic assessments, x-rays, laser precision measurements, and advanced Finite Element Analysis (FEA), Supertech proudly offers some of the market's premier performance products.

Our dedication exceeds industry norms. By conducting thorough tests and partnering with top-tier engine builders, we continually enhance our offerings. All this drives Supertech's esteemed reputation for unmatched flow rates, durability, and excellence.



VALVE MATERIALS

We manufacture our racing valves using only the highest quality materials available. We have spent countless hours studying these different materials and your applications to create just the right valve. Because of thermal fatigue, the proper choice of material will greatly determine the valve's performance and reliability. Supertech relentlessly tests new materials to provide valves with unsurpassed fatigue resistance. Below, you will find a list of materials that we use in the production of our valves.

"WE MANUFACTURE OUR RACING VALVES USING ONLY THE HIGHEST QUALITY MATERIALS AVAILABLE."



STAINLESS STEEL VALVES

Our intake valves are made exclusively from the highest grade of steel available – enhanced versions of EV8 (21-4N) – that has the strength to withstand just about any application.

For greater strength at higher temperatures, we make our exhaust valves from EV16 (21-8N) or EV8-Nb/w.

For applications that require hardening in certain areas (such as the tips and or the seats), we weld hard metal alloys to the valve for increased durability.

BENEFITS OF BLACK NITRIDE

Black Nitride coated valves have harder surfaces and smoother finishes, providing less friction and a longer life.

This hardening treatment has been steadily growing in popularity over the last several years.



SODIUM FILLED VALVES

Supertech's sodium-filled valves, made of Inconel/Nimonic alloy, deliver a significant reduction in valve-head temperatures required for today's modern turbo engines.

A cooler valve improves the material strength and durability while allowing the tuner more flexibility and a wider range of spark timing advances. Combine that with an average weight reduction of 10%, and there isn't a cooler valve on the market.

INCONEL 75I / NIMONIC 80A



TITANIUM VALVES & COATINGS

For high RPM applications Supertech offers a ONE PIECE FORGED titanium valve, made from high temperature alloys such as Ti 6-2-4-2.

YELLOW TITANIUM NITRIDE - TIN

Decrease valve wear for high-performance applications with TIN. The entire valve (stem, tip, and valve seat) is thinly coated with yellow titanium nitride by Physical Vapor Deposition (PVD), creating a very hard, frictionless protective coating. This thin coating is much harder than Molybdenum coating (equivalent to 85Rc).

We have tested this coating with successful engine builders worldwide and have found it works very well with the Manganese Bronze valve guides for engines with bucket-type tappets, where there is no need for a welded or pressed tip, eliminating the risk of breakage.



CHROME NITRIDE - CRN

This silver colored coating similar to TIN, also applied by PVD, works better with factory steel guides.



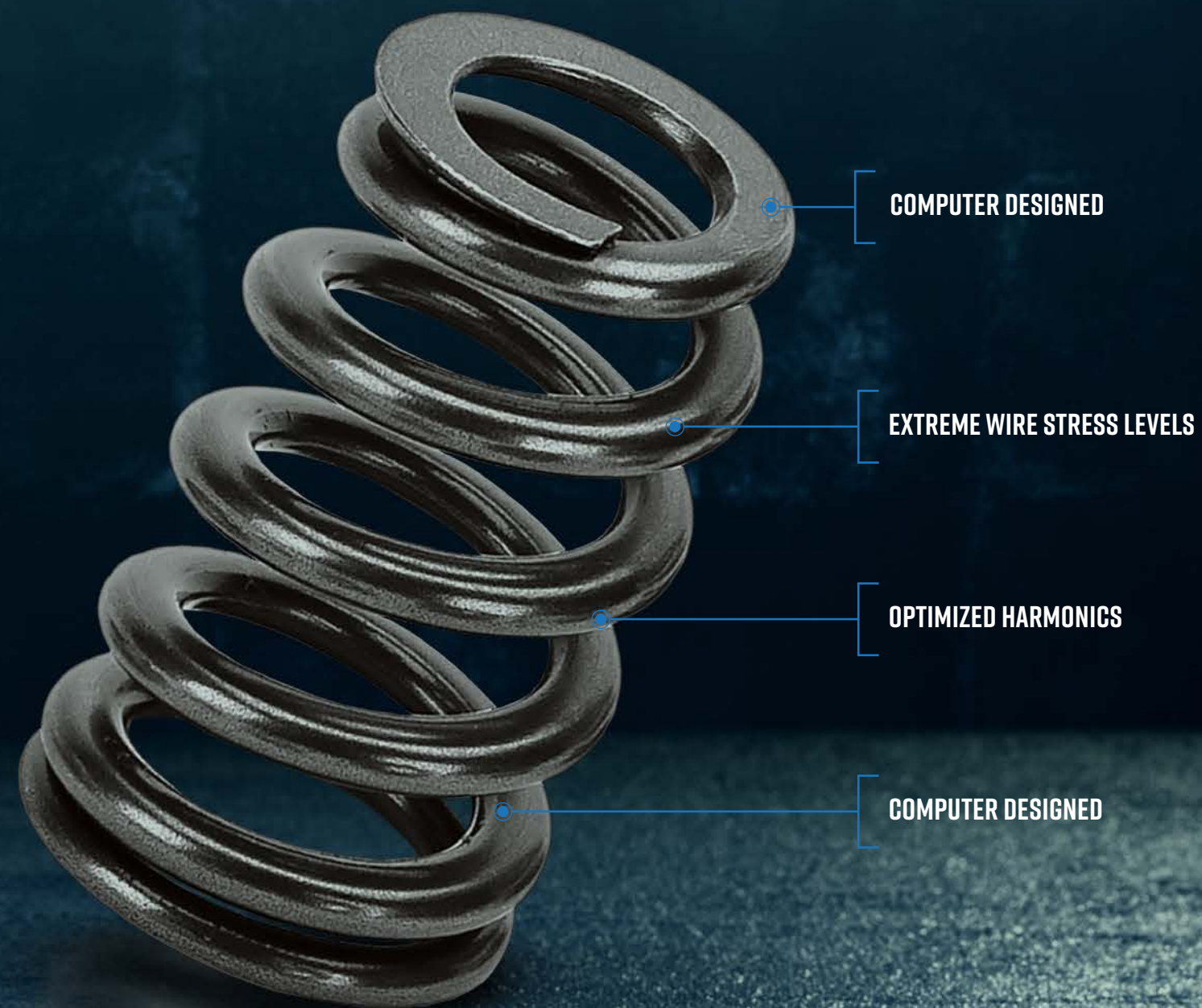
VALVE SPRINGS

Our valve springs are computer-designed for long durability under extreme conditions.

There is more to the design and manufacturing of valve springs than achieving pressure and lift. Superior design makes a big difference in valve spring operation and your confidence that they will perform under any condition.

- Our valve springs are designed to ensure that wire stress levels do not surpass the limits of stress defined in the diagrams of fatigue.
- We use superior materials to manufacture valve springs. For most of our applications, we use wire made from Superclean Chrome Silicon Vanadium alloy. Vanadium increases the tensile strength and improves the life of the spring. High-stress spring applications often call for Chrome Silicon Vanadium Molybdenum+Ni to reach a higher tensile strength and achieve more durability for the application.
- We measure the natural harmonics of the springs to make sure they are away from the normal engine operation, and we confirm the inner and outer springs counter each other for good control of the valve train operation.
- We include a gas nitriding process before shot peening that helps improve the fatigue life of the spring.

BEEHIVE SPRINGS are also available for some applications. These springs offer a lower alternative mass and a lower variable natural frequency rate.



PERFORMANCE COMPONENTS

RETAINERS

Supertech offers CNC machined retainers from high strength and hardened aerospace certified titanium alloy. Designed to add strength while offering weight reduction, all of our titanium retainers are finished to precise tolerances.

For certain applications, we also offer retainers in high strength and hardness Aluminum alloy, as well as chrome molly steel.

These retainers work best when paired with our high quality valve springs.



VALVE GUIDES

Our valve guides are precision machined to exact tolerances from high quality Manganese Bronze material or Copper alloy. These guides in conjunction with our low friction black nitride valves provide an unsurpassed solution for high performance and sustained durability.

We also offer copper alloy for exhaust valve guides for high powered engines that require a higher thermal coefficient



LASH CAPS

Supertech intake valve seals are made from a high quality rubber compound, while our exhaust application features a special high temperature compound for improved durability.



VALVE SEALS

Supertech intake valve seals are made from a high quality rubber compound, while our exhaust application features a special hi temperature compound for improved durability.



BUCKET TYPE CAM FOLLOWERS

Supertech buckets are designed using the latest CATIA CAD software along with Finite Element Analysis (FEA) to ensure the utmost performance and durability under the most demanding racing conditions. Utilizing these methods to analyze the stresses associated with the off centered application of loads enables us to maximize the strength of our buckets while reducing weight.

Supertech ensures that each and every part is manufactured using only the highest quality materials, strict tolerances, and high quality coatings. The end result is an undeniable improvement in durability and performance that cannot be compared in any sense with less expensive, extruded, or factory supplied lifters.

- WPC treatment or DLC coatings are available upon request.



“SUPERTech LIFTERS ARE REAL RACING LIFTERS, AND SHOULD BE THE ONLY CHOICE FOR YOUR RACING ENGINE.”

AEROSPACE CERTIFIED CHROME-MOLYBDENUM-VANADIUM

CNC MACHINED FROM HEAT TREATED BILLET

LIFTERS ARE NITRIDED AND POLISHED FOR DURABILITY

LOW SURFACE ROUGHNESS FOR LOWER FRICTION

PERFORMANCE PISTONS

Supertech has more than 40 Years of experience in the design and manufacturing of racing pistons. Utilizing the latest CAD software and Finite Element Analysis (FEA), Supertech combines experience and creativity to provide you with the best parts for your application.



MANUFACTURING

Our pistons are manufactured from extruded high silicon, enhanced 4032 alloy (with additional Cu, Ni & Mg) featuring low thermal expansion, excellent wear resistance, and higher thermal conductivity. Normally aspirated or high boost turbo pressure applications are available.

We use a 2 or 3 step forging process (depending on the application) which yields the finest structural grain orientating the fibers in the same direction as the stresses. This is done to insure greater stress resistance and improved durability. Additionally, we provide several heat treatments to the piston with a high tensile strength and evenly distributed hardness.

The pistons are then subjected to several machining steps by specially designed CNC machines. We use special diamond tools for dimensional precision, perpendicularity and to ensure flatness of the ring grooves. All Supertech pistons feature contact reduction grooves and hones & reamed pin bores for precise fit.

Wrist pins are constructed of cold extruded chrome molly steel for high strength.

PISTON SURFACE FINISH

Finally our "phosphate dry lubricant" coating is applied to protect the rings against "micro welding" and enhance lubrication on the skirt / cylinder area. Piston rings are manufactured in Japan with the latest technology for high performance applications.

PERFORMANCE HEAD GASKETS

LASER CUT

STRESS RELIEVED

LASER CUT



PRECISION MANUFACTURED

The MLS Gaskets are laser cut to avoid formation of burrs, made in stainless steel, with an array of carefully designed gas stoppers embossments, stress relieved and uniformly coated with a series of polymer mixtures, for improved sealing properties under extreme conditions, and in less than perfect surface conditions on any type of block and cylinder head materials. The shape and stress relieving of the embossment is critical to avoid cracks.

For certain high horse power applications a Fire Ring style gasket may be available depending on the application. It is made from steel core covered with a blend of fibers and NBR rubber as a binder and separated stainless steel ring (Cut-ring or Fire ring) (Does Not require machining) for best sealing around the cylinder bore. A Silicone base bead is also applied to critical areas to improve sealing around water and oil passages.

PERFORMANCE CONNECTING RODS

Our newly developed rods are manufactured from a high tensile strength 4340 alloy. Offering excellent wear and fatigue resistance in optimal conditions. All of our rods feature an H-beam design and come with ARP 2000 bolts capable of achieving a clamp load of 220,000 psi. Our rods are rated for 150hp/Cylinder. For more horsepower, we suggest upgrading to the ARP625+ bolts capable of achieving 280,000 Psi and rated for 250hp/Cylinder.

All Rods are designed in house, using the latest cad and FEA software to ensure the highest quality rods on the market.



S14



S38



BMW S14 16v / S38 24v										
E30 M3 87-91	INTAKE VALVE			PART NUMBER	EXHAUST VALVE			PART NUMBER		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel		
	37.00mm (std)	6.98mm	123.00mm	BMIVN-1006-L	32.00mm(std)	6.95mm	125.00mm	BMEVI-1006-L		
	38mm (+1.0)		121.40 mm (std)	BMIVN-1008	32.5mm (+.5)		123.70 mm (std)	BMEVN-1009		
	38.50mm(+1.5mm)		121.40 mm (std)	BMIVN-1009	32.5mm (+.5)		126.10 mm	BMEVN-1009-L		
	38.50mm(+1.5mm)		123.80 mm	BMIVN-1009-L	33.00 mm (+1.0)		126.10 mm	BMEVN-1010-L		
	39.00mm (+2.0)		121.40 mm (std)	BMIVN-1010	33.00 mm (+1.0)		123.70 mm (std)	BMEVN-1010		
	39.00mm (+2.0)		123.80 mm	BMIVN-1010-L	33.00 mm (+1.0)		123.70 mm (std)	BMEVI-1010		
SPRING KITS										
VALVE SPRINGS	OUTER SPRING		INNER SPRING		PRESSURE (lbs@mm)		MAX NET LIFT	COIL BIND	RATE	PART NUMBER
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-H1005D-S14	29.65	21.85	20.50	15.50	90 @ 35.5	205 @ 10	14.80	20.70	11.50	RET-BMS14-T1 + SEAT-H1002-S14
SPRK-H1022D-S14	29.00	21.80	21.00	15.50	110 @ 37.6	220 @ 10	15.60	22.00	11.20	RET-H70/T1 + SEAT-H1002-S14
SPRK-H1005D-S38	29.65	21.85	20.50	15.50	90 @ 35.5	205 @ 10	14.80	20.70	11.50	RET-BMS14-T1 + SEAT-H1002-S14
SPRK-H1022D-S38	29.00	21.80	21.00	15.50	110 @ 37.6	220 @ 10	15.60	22.00	11.20	RET-H70/T1 + SEAT-H1002-S14

ENGINE COMPONENTS	
VALVE GUIDES	FOR INTAKE AND EXHAUST GDE-BMS14-7 (Standard and Oversize OD available)
CAM FOLLOWERS	CF-37.5/3.1+ (+Shims) TO BE USED WITH LONG VALVES (No Lash Caps are necessary)
CAM FOLLOWERS	CF-37.5/5.65+ (+Shims) TO BE USED WITH SHORT VALVES
CAM FOLLOWERS	CF-37.5/3.1 or CF-37.5/4.5 TO BE USED WITH LONG VALVES + 7mm LASH CAPS
CAM FOLLOWERS	CF-38/3.1+ Oversized
CAM FOLLOWERS	Some S38 Euro version use 35mm cam followers
VALVE LOCKS	Some S38 Euro version use 35mm cam followers
VALVE SEALS	INTAKE: VS-VW7-I EXHAUST: VS-VW7-E

HEAD GASKET			
MLS / COOPER	GASKET BORE (mm)	THICKNESS (mm)	PART NUMBER
Cooper Ring	95mm	2mm	HG-BMW-S14-95-2TC

M20 B25



BMW M20 B25 2.5L 12v / M70 V12 24v								
E30/E34 325/525 '77-'92	INTAKE VALVE			PART NUMBER	EXHAUST VALVE			PART NUMBER
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided
	42mm (std)	6.97mm	102.50mm	BMIVN-1084	36mm (std)	6.95mm	102.50mm	BMEVN-1084
	43mm (+1)			BMIVN-1085	37mm (+1)			BMEVI-1085

SPRING KITS										
VALVE SPRINGS	OUTER SPRING		INNER SPRING		PRESSURE (lbs@mm)		MAX NET LIFT	COIL BIND	RATE	PART NUMBER
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-H1005D-M20 (12v)	29.65	21.85	20.50	15.50	89 @ 35.5	192 @ 10	14.80	20.70	11.50	RET-H70-T1 + SEAT-H1002D-M20
SPRK-H1005D-M70 (24v)	29.65	21.85	20.50	15.50	89 @ 35.5	192 @ 10	14.80	20.70	11.50	RET-H70-T1 + SEAT-H1002D-M20

ENGINE COMPONENTS	
VALVE LOCKS	KPR-VW7-T (Triple groove)

S42



M42



M50



S50



S52



M52



M54



BMW S42 / M42 / M50 / S50 / S52 / M52 / M54								
	INTAKE VALVE			PART NUMBER	EXHAUST VALVE			PART NUMBER
1.8 /2.5 lts (16V)/	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	33.00mm (std)	5.97mm	106.10mm	BMIVN-1030	30.50mm (std)	5.95mm	105.65	BMEVN-1030
	33.00mm(std)		106.10mm	BMIVN-1030S	30.50mm (std)		105.65	BMEVN-1030S
	34.00mm (+1.0)		106.10mm	BMIVN-1031S *	30.50mm (std)		105.65	BMEVI-1030S
E36 '90-'98 / 2.8-3.0 lts (24v)				31.50mm (+1.0)	105.65		BMEVN-1031S	
				31.50mm (+1.0)	105.65	BMEVI-1031S		

SPRING KITS										
VALVE SPRINGS	OUTER SPRING		INNER SPRING		PRESSURE (lbs@mm)		MAX NET LIFT	COIL BIND	RATE	PART NUMBER
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-H100DR-BM	30.20	22.20	22.20	16.80	67 @ 35.70	192 @ 10	13.50	18.50	12.90	RET-K20A2/T2 + SEAT-BM60 (x24)
SPRK-H1000D-BM	29.65	21.85	20.50	15.50	80 @ 35.70	195 @ 10	12.70	20.70	11.50	RET-K20A2/T2 + SEAT-BM60 (x24)
SPRK-H1005D-BM	29.65	21.85	20.50	15.50	94 @ 35.70	209 @ 10	12.50	20.70	11.50	RET-K20A2/T2 + SEAT-BM60 (x24)

ENGINE COMPONENTS			
CAM FOLLOWERS	CF-33/14	CF-35/14.7LC (M42)	
VALVE SEALS	INTAKE: VS-VBM6-I		EXHAUST: VS-VBM6-E
VALVE GUIDES	FOR INTAKE AND EXHAUST GDE-BMW-M50-EI		
VALVE LOCKS	* KPR-VW6-T (triple groove) / KPR-6S/7 (single groove)		

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
BMW S52 B32 / E36 M3	87mm	0.60mm	-12	11:1	36	31mm	89.60mm R	5.315"	22mm	306	A/N	GNH8700	P6-BM87-N12
BMW S52 B32 / E36 M3	87mm	0.60mm	-25	8.5:1	36	31mm	89.60mm R	5.315"	22mm	306	T/N	GNH8700	P6-BM87-N25

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
BMW S52 B32 / E36 M3	Forged 4340 Alloy	H Beam	135mm	22mm Full Float	21.90mm	48mm	21.90mm	543	CR-BMM52-H135

HEAD GASKET				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
BMW M50	Cooper Ring	84.50mm	2mm	HG-BMW-M50-84.5-12T
BMW M50	Cooper Ring	85.50mm	2mm	HG-BMW-M50-85.5-12T
BMW M50	Cooper Ring	86mm	2mm	HG-BMW-M50-86-1.6T
BMW M50	Cooper Ring	86mm	2mm	HG-BMW-M50-86-2T
BMW M52	Cooper Ring	86mm	1.50mm	HG-BMW-M52-86-1.5T
BMW M52	Cooper Ring	87.60mm	1.50mm	HG-BMW-M52-87.6-1.5T
BMW BMW S50/B30 S52/B32 EURO Models Only	Cooper Ring	87.10mm	1.80mm	HG-BMW-S50EURO-87.1-1.8T
BMW S50 / S52	Cooper Ring	87mm	2mm	HG-BMW-S50-87-2T

S42



BMW S42 2.0L								
	INTAKE VALVE			PART NUMBER	EXHAUST VALVE			PART NUMBER
BMW E36 S42 2.0L 16v	Head Diam	Stem. Diam	Length	Titanium	Head Diam	Stem. Diam	Length	Titanium
	35.00mm	4.98mm	110.6mm	BMIVT-1060SM	30.60mm	4.97mm	110.3	BMEVT-1060SM

\$50B30 EURO



BMW S50 B30 EURO VERSION								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
E36 M3 3.0lts 1992-1995	Head Diam	Stem. Diam	Length	Titanium	Head Diam	Stem. Diam	Length	Titanium
	34.00mm (std)	6.97mm	119.75	BMIVN-1036	30.60mm (std)	6.96mm	121.2	BMEVI-1036

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-H1005D-S50-B30E	29.65	21.85	20.50	15.50	90 @ 35.75	205 @ 10	14.80	20.70	11.50	RET-BMS14-T1 + SEAT-OEM
SPRK-H1022D-S50-B30E	29.00	21.80	21.00	15.50	105 @ 38	211 @ 10	16.00	22.00	11.20	RET-H70/T1 + SEAT-OEM

ENGINE COMPONENTS		
VALVE LOCKS	KPR-VW7-T (Triple groove)	
VALVE SEALS	INTAKE: VS-VW7-I	EXHAUST: VS-VW7-E
CAM FOLLOWERS	CF-37.5/ 6.5	

HEAD GASKET				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
BMW BMW S50/B30 S50/B32 EURO Models Only	Cooper Ring	87.10mm	1.80mm	HG-BMW-S50EURO-87.1-1.8T

\$50B32 EURO



BMW S50 B32 EURO VERSION								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
E36 M3 3.2lts 1995 - 2000	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.00mm (std)	5.97mm	119.75mm	BMIVN-1037	30.60mm (std)	5.96mm	121.3mm	BMEVN-1037
	35.65mm (+.65)	5.97mm	121.30mm (overize)	BMIVN-1033SL	31mm (+0.40)	5.96mm	122.8mm (overize)	BMEVI-1030PSL

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-H1000D-BM-B32E	29.65	21.85	20.50	15.50	73 @ 36.3	189 @ 10	15.50	20.70	11.50	RET-K20A2/T2 + SEAT-BM80 (x24) *
SPRK-H1005D-BM-B32E	29.65	21.85	20.50	15.50	85 @ 36.3	202 @ 10	16.20	20.70	11.50	RET-K20A2/T2 + SEAT-BM80 (x24) *

ENGINE COMPONENTS		
RETAINERS	* Optional steel retainer RET-HBK/ST	
VALVE SEALS	INTAKE: VS-VBM6-I	EXHAUST: VS-VBM6-E
VALVE LOCKS	* KPR-VW6-T (triple groove) / KPR-6S/7 (single groove)	

HEAD GASKET				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
BMW BMW S50/B30 S50/B32 EURO Models Only	Cooper Ring	87.10mm	1.80mm	HG-BMW-S50EURO-87.1-1.8T

\$54



BMW S54 24v 3.2 Lts										
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number		
M3 E46 / 2001 +	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel		
	35.00mm (std)	5.97mm	117.38mm	BMIVN-1040	30.50mm (std)	5.95mm	118.85	BMEVN-1040		
	35.00mm (std)			BMIVN-1040S	30.50mm (std)			BMEVI-1040S		
	36.00mm (+1.0)			BMIVN-1045S	30.50mm (std)			BMEVI-1040HS-CSL		
					31.50mm (+1.0)			BMEVI-1045S		
NOTE: Oversized valves are not recommended to be used with VANOS due to risk of clipping valves										
SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm		Part Number
SPRK-2521-2BM-T1	26.40	19.30	19.30	14.50	82 @ 41	186 @ 10	14.50	24.50	10.00	RET-BM2521/T1 + SEAT-BMSS4 (optional Steel Ret)
SPRK-HM1007BE-S54 (Beehive)	28.00	18.80	24.20	14.50	76 @ 39	204 @ 10	14.00	22.8	12.8	RET-BM2521/T1-BE + SEAT-BMSS4-BE (2mm)

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-VBM6-I	EXHAUST: VS-VBM6-E
VALVE LOCKS	KPR-VW6-T (triple groove) / KPR-6S/7 (single groove)	
VALVE GUIDE	GDE-BMW-S54-EI (intake+exhaust)	

PISTONS														
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
BMW S54 B32 E46M3	87.50mm	0.50mm	-6.6	12.5:1	33	32mm	91mm	R	5.315"	21mm	306	A/N	GNH8750	P6-BMS5487.5-CR12.5

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE(mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
BMW S54 B32 E46M3	Forged 4340 Alloy	H Beam	139mm	21mm Full Float	19.90mm	53mm	19.9mm	532	CR-BMSS4-H139

HEAD GASKET				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
BMW S54	Cooper Ring	87.50mm	1.20mm	HG-BMW-S54-87.5-1.2TC
BMW S54	Cooper Ring	88mm	1.20mm	HG-BMW-S54-88-1.2TC

BMW S54 24v 3.2 Lts (to be used with Lash Caps - No OEM shims)								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
M3 E46 / 2001 +	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.00mm (std)	5.97mm	117.50mm	BMIVN-1040S-LC	30.50mm (std)	5.95mm	119.10mm	BMEVI-1040S-LC

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	lbs./mm	Part Number	
SPRK-2521-2BM-T1S-LC	26.40	19.30	19.30	14.50	82 @ 41	186 @ 10	15.50	25.50	10.00	RET-BM2521/T1S-LC + SEAT-BMSS4

ENGINE COMPONENTS														
LASH CAPS	LC-60-thickness													
VALVE LOCKS	KPR-6S/7 (single groove)													
LASH CAPS	LC-60-(insert thickness)													

N53



BMW N53 3.0L 24v								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
206 - 2013 F10/F11 - E60/E61/E90	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	31.9mm (std)	4.96mm	106.7mm	BMIVN-1054S-1	29mm (std)	5.95mm	114.9mm	BMEVI-1053S

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-FEZ0N54-BE (Conical)	24.4	17.6	21	14.2	75 @ 36.5	155 @ 10	12	23.2	8	RET-BMNS4-Ti (5mm) / RET-BMNS4-TE (6mm).
SPRK-FEZ0N54-BE-2 (Conical)	24.4	17.6	21	14.2	90 @ 36.5	176 @ 10	12	23.2	8.6	RET-BMNS4-Ti (5mm) / RET-BMNS4-TE (6mm).

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VSI-BM50	EXHAUST: VSI-BM60-E
VALVE LOCKS	INTAKE VALVE: KPR-5.0/7S (single groove)	EXHAUST VALVE: KPR-6S/7 (single groove)

N54



BMW N54 Turbo 3.0L 24v								
BMW 335i E92 2007+	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Sodium Filled - Inconel
	31.40mm (std)	4.96mm	106.7mm	BMIVN-1054S	28mm (std)	5.95mm	114.9mm	BMEVI-1054S-HS
	31.9mm(+0.5mm)			BMIVN-1054S-1	28.50m (+0.5mm)			BMEVI-1054S-HS-1

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-FE20N54-BE (Conical)	24.4	17.6	21	14.2	75 @ 36.5	155 @ 10	12	23.2	8	RET-BMN54-Ti (5mm) / RET-BMN54-TE (6mm).
SPRK-FE20N54-BE-2 (Conical)	24.4	17.6	21	14.2	90 @ 36.5	176 @ 10	12	23.2	7.25	RET-BMN54-Ti (5mm) / RET-BMN54-TE (6mm).

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VSI-BM50	EXHAUST: VSI-BM60-E
VALVE LOCKS	INTAKE VALVE: KPR-5.0/7S (single groove)	EXHAUST VALVE: KPR-6S/7 (single groove)

HEAD GASKET				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
BMW N54	Cooper Ring	86mm	1mm	HG-BMW-N54-86-1.5T

N55



S55 TURBO



BMW N55/S55 Turbo 3.0L 24v								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
BMW 335i E92 2007+	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Sodium Filled
	32mm (std)	4.97mm	104.9mm	BMIVN-1055S	28mm (std)	5.96mm	112.9	BMEVI-1055S-HS

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-FE20N54-BE (Conical)	24.4	17.6	21	14.2	75 @ 36.5	155 @ 10	12	23.2	8	RET-BMN54-Ti (5mm) / RET-BMN54-TE (6mm).
SPRK-FE20N54-BE-2 (Conical)	24.4	17.6	21	14.2	90 @ 36.5	176 @ 10	12	23.2	8.6	RET-BMN54-Ti (5mm) / RET-BMN54-TE (6mm).

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VSI-BM50	EXHAUST: VSI-BM60-E
VALVE LOCKS	INTAKE VALVE: KPR-5.0/7S (single groove)	EXHAUST VALVE: KPR-6S/7 (single groove)

PISTONS														
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
BMW N55 / S55	84mm	Standard	-10.4	10:1	37	32.40mm	89.60mm	X	144.35mm	22mm		T	GNH8750	P6-BMN55-84-T

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
BMW N55 / S55	Forged 4340 Alloy	H Beam	144.35mm	22mm Full Float	20.88mm	53.60mm	20.88mm		CR-BMN55-H144.35

S63



BMW V8 S63 32v 4.4L Turbo								
BMW M5 / X6M 2011 +	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Sodium Filled
	33.15mm (std)	5.96mm	93.7mm	BMIVN-1063S (one grv)	29mm (std)	5.94mm	106mm	BMEVI-1063S-HS

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-BMS63B (Conical)	24.4	17.6	21	14.2	84 @ 35.7 (Exh)	165 @ 10 (Exh)	11.2 (Exh)	23	8.2	RET-BMN54-TE + VSI-EC60-E
					82 @ 36 (Int)	162 @ 10 (Int)	11.5 (Int)			

ENGINE COMPONENTS	
VALVE SEALS	VSI-EC60-E
VALVE LOCKS	KPR-6S/7 (single groove)

S65



S85



BMW S65 V8 4.0L 32v / S85 V10 5.0L 40v								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
BMW E90/92/93 / E60/61/63/64 2005-2011	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.4mm (std)	4.97mm	111.75mm	BMIVN-1065	30.5mm	4.95mm	110.2mm	BMEVI-1065

SPRING KITS										
VALVE SPRINGS	Spring Base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-BMS65-BE1	26.5	18.7	21.6	13.8	77 @ 40.1	180 @ 10	12.2	27	10.3	OEM RETAINER (Optional RET-BMS65-BE1) / OEM seat

ENGINE COMPONENTS	
VALVE SEALS	OEM
VALVE LOCKS	OEM Single groove locks

B38



B48



B58



BMW B38 / B48 / B58								
BMW 2015+ Turbo (3/4/6 cylinder)	INTAKE VALVE			Part Number	EXHAUST VALVE		Part Number	
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Sodium Filled
	30.10 (std)	4.96mm	99.50mm	MCIVN-1400T	28.5mm(std)	5.95mm	100.1mm	MCEVN-1400T
	31.10 (+1)			MCIVN-1401S	28.5mm(std)			MCEVI-1400S
					28.5mm(std)			MCEVI-1400s-HS
					29.5mm (+1)			MCEVI-1401S-HS

SPRING KITS										
VALVE SPRINGS	Spring Base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-MCB48 (16v)	24.40	17.60	21.00	14.20	80 @36mm	160 @ 10mm	11.5mm	23.00	8.00	SPR-FE20BE + RET-BMB48/TE + RET-BMB48/TI
SPRK-MCB48-2 (16v)	24.40	17.60	21.00	14.20	98 @36mm	184 @ 10mm	11.5mm	23.20	8.60	SPR-FE20BE-2 + RET-BMB48/TE + RET-BMB48/TI
SPRK-MCB58 (24v)	24.40	17.60	21.00	14.20	80 @36mm	160 @ 10mm	11.5mm	23.00	8.00	SPR-FE20BE + RET-BMB48/TE + RET-BMB48/TI
SPRK-MCB58-2 (24v)	24.40	17.60	21.00	14.20	98 @36mm	184 @ 10mm	11.5mm	23.20	8.60	SPR-FE20BE-2 + RET-BMB48/TE + RET-BMB48/TI

ENGINE COMPONENTS		
VALVE GUIDES	GDE-BMB48-1	GDE-BMB48-E6
VALVE SEALS	INTAKE: VSI-BM50-I	EXHAUST: VSI-BM60-E
SINGLE GRV VALVE LOCKS	INTAKE: KPR-5.0/7S (can use Factory retainer and spring)	EXHAUST: KPR-6S/7 (can use factory retainer and spring)

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
BMW B58	Cooper Ring	84.5mm	1mm	HG-BMW-B58-2-84.5-1T



PISTONS														
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
BMW MINI B58 3.0L 24V	82mm	STD	STD	10.2:1	36	33.20mm	94.60mm	X	148.30mm	22mm	298	T/N	GNH8200	P4-MINB48-82-CR10.2
BMW MINI B58 3.0L 24V	82mm	STD	STD	11:1	36	33.20mm	94.60mm	X	148.30mm	22mm	298	T/N	GNH8200	P4-MINB48-82-CR11
BMW MINI B58 3.0L 24V	82.50mm	0.50mm+	STD	11:1	36	33.20mm	94.60mm	X	148.30mm	22mm	305	T/N	GNH8200	P4-MINB48-825-CR11

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER (mm)	PE BORE(mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
BMW MINI B48 2.0L 16v	Forged 4340 Alloy	H Beam	148.30mm	22mm Full Float	21mm	53.66mm	23.90mm	527.3	CR-MINB48-H148.3
BMW MINI B48 2.0L 16v	Forged 4340 Alloy	I Beam	148.30mm	22mm Full Float	21mm	53.66mm	23.90mm	527.3	CR-MINB58-1148.3

250 V12



275 V12



FERRARI 250 / 275 V12 24v								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Ferrari 250 / 275 (1954 - 1968)	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	38.00mm	7.98mm	97mm	FEIVN-380897	32.50mm	7.98mm	95.20mm	FEEVN-325895
ENGINE COMPONENTS								
VALVE GUIDES	INTAKE AND EXHAUST: GDE-FE275							

330 V12



FERRARI 330 V12 24v								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Ferrari 330 V12 24v (1963 - 1968)	Head Diam	Stem. Diam	Length	Chrome coating	Head Diam	Stem. Diam	Length	Chrome coating
	42.00mm	7.98mm	98.10mm	FEIVC-330-209	37.40mm	7.97mm	98.10mm	FEEVC-330-209

328 V8



FERRARI 328 V8 32v								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Ferrari 328 GTB/GTS V8 32v (1985 - 1989)	Head Diam	Stem. Diam	Length	Chrome coating	Head Diam	Stem. Diam	Length	Chrome coating
	28.90mm	6.98mm	101.30mm	FEIVN-328-T	25.90mm	6.97mm	103.6mm	FEEVI-328-T

TESTAROSSA



FERRARI TESTAROSSA 12 Cyl - 48v							
	INTAKE VALVE			Part Number	EXHAUST VALVE		
Ferrari Testarossa (1984 - 1991)	Head Diam	Stem. Diam	Length	Chrome coating	Head Diam	Stem. Diam	Length
	28.50mm	6.97mm	108.40mm	FEIVN-2870	25.50mm	6.96mm	109.70mm
							FEEVI-2570

355 V8



360 V8



FERRARI 355/360 5-valve V8							
	INTAKE VALVE			Part Number	EXHAUST VALVE		
FERRARI 355/360 5-valve V8 1994 - 2005	Head Diam	Stem. Diam	Length	Chrome coating	Head Diam	Stem. Diam	Length
	26.5mm	5.96mm	98.3mm	FEIVN-2500	28.5mm	5.96mm	100.40mm
							FEEVN-2500
ENGINE COMPONENTS							
VALVE GUIDES	INTAKE AND EXHAUST: GDE-FIA2500						

F136 V8



FERRARI & Maserati F136 Engine V8 32v / V12 48v								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Ferrari 430-458 / Maserati / A1GP 2000-2011	Head Diam	Stem. Diam	Length	Chrome coating	Head Diam	Stem. Diam	Length	Chrome coating
	37.80mm	5.970mm	97.85mm	FEIVC-F136	31.00mm	5.96mm	97.70mm	FEEVC-F136
SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)	Max lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	lbs./mm
SPRK-TS1015 - F136	27.50	20.00	20.00	15.20	72 @ 34.7	193 @ 10	13.50	12.10
								RET-NRB60/TS-2 (OEM SEAT)
ENGINE COMPONENTS								
CAM FOLLOWERS	CF-35/16.7LC to be use with Lash Caps (7mm) installed on the CF inner post.							



Fiat 500								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Fiat 500	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Sodium Filled- INCONEL
	28.6mm (+1.7)	5.98mm	95.2mm	FIAIVN-2860T	25mm (+2.6)	5.98mm	94.6mm	FIAEVI-2560T-HS

ZETEC DOHC



FORD ZETEC 2.0 Lts DOHC								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Focus	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	32.00mm (std)	6.035mm	97.10mm	FIVN-1035	28.00mm (std)	6.012mm	96.70mm	FEVN-1035
	33.00mm (+1.0)			FIVN-1037	29.00mm (+1.0)			FEVN-1037
	34.00mm (+2.0)			FIVN-1038	30.00mm (+2.0)			FEVI-1038
ENGINE COMPONENTS								
KEEPERS	KPR-6FZ-7							

PISTONS														
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
FORD ZETEC 2.0L	85mm	0.07mm	-9	8.7:1	48	29.50mm	3.465mm	R	5.48	20mm	302	T/N	GNH8500	P4-FZ85-N9
FORD ZETEC 2.0L	85mm	0.07mm	3.5	10.6:1	48	29.50mm	3.465mm	X	5.48	20mm	283	A/N	GNH8500	P4-FZ85-P3
FORD ZETEC 2.0L SVT	85mm	0.07mm	-9	9.5:1	42	29.50mm	3.465mm	R	5.48	20mm	302	T/N	GNH8500	P4-FZ85-N9
FORD ZETEC 2.0L SVT	85mm	0.07mm	3.5	11.9:1	42	29.50mm	3.465mm	X	5.48	20mm	283	A/N	GNH8500	P4-FZ85-P3
Note: Gasket 0.70mm / Deck Clearance 0.50mm														

DURATEC 2.0L



DURATEC 2.3L



DURATEC 2.5L



FORD Duratec / MAZDA MZR 2.0 - 2.3 - 2.5 lts								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Focus / Mazda 3	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.00mm (std) Dish	5.48 mm	103.40mm (std)	MAIVN-2301D	30.00mm (std) Dish	5.48mm	104.70 mm (std)	MAEVN-2301D
					30.00mm (std) Dish			FEVI-2501F-HS
	35.00mm (std) Flat			MAIVN-2301F	30.00mm (std) Flat			MAEVN-2301F
	36.00mm (+1.0) dish			MAIVN-2304D	30.00mm (std) Flat			MAEVI-2301D
	36.00mm (+1.0) Flat			MAIVN-2304F	31.00mm (+1.0)Flat			MAEVN-2304F
	36.75mm (+1.75)			MAIVN-2306	31.00mm (+1.0) Dish			MAEVI-2304D
	37.50mm (+2.5)Dish			MAIVN-2308D	31.00mm (+1.0) dish			MAEVI-2304
								MAEVI-2306
						32.00mm (+2.0) Dish		
				31.00mm (+1.0) Dish	5.95mm	105.9mm (+1.2mm)	MAEVI-2304-6MM	

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS/DUR-D5	27.50	20.00	SINGLE		55 @ 35.00	150 @ 10	14.30	20.70	9.60	RET-TSS.5/T1+Factory Seat+SEAT-DUR1
SPR-TS/DUR-D2	27.50	20.00	20.00	15.20	70 @ 36.20	190 @ 10	13.00	20.70	12.10	RET-TSS.5/T1+Factory Seat+SEAT-DUR2
SPR-TS/DUR-D1	27.50	20.00	20.00	15.20	83 @ 35.00	208 @ 10	12.50	20.70	12.10	RET-TSS.5/T1+Factory Seat+SEAT-DUR1
SPR-FE20BE (Conical)	24.30	17.50	21.20	14.40	67 @ 37.9	144 @ 10	12.80	23.20	7.70	Use with OEM RETAINER + OEM SEAT
SPR-FE20BE -2 (Conical)	24.00	17.20	21.00	14.20	78 @ 37.9	164 @ 10	12.00	23.00	8.60	Use with OEM RETAINER + OEM SEAT
SPR-TS/DUR-BE0 (Beehive)	27.70	19.70	23.20	15.20	60 @ 35.5	164 @ 10	13.00	21.80	10.40	RET-TSS.5/T1F-BE + Factory Seat + SEAT-DUR1
SPR-TS/DUR-BE1 (Beehive)	27.70	19.70	23.20	15.20	70 @ 35.5	197 @ 10	12.50	21.80	12.70	RET-TSS.5/T1F-BE + Factory Seat + SEAT-DUR1
SPR-TS/DUR-BE2 (Beehive)	27.70	19.70	23.20	15.20	80 @ 34.8	206 @ 10	11.75	21.80	12.70	RET-TSS.5/T1F-BE + Factory Seat + SEAT-DUR1 + SS3025

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VSI-D5.5E (same as OEM)	
VALVE KEEPERS	OEM or KPR-5.5/7A-ST	
VALVE GUIDES	INTAKE AND EXHAUST: GDE-DUR16	
CAM FOLLOWERS	CF-31/2.5+ (+ shims / to be use with 1mm shorter valves)	
EXHAUST: VSI-D5.5E (same as OEM).		

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
FORD Duratec 2.0L / 2.3L / 2.5L	87.50mm	Standard	-6	9.7:1 / 10.9:1	42	28.50mm	83.1/94/100mm X	6.094"	21mm	300	A/N	GNH8750	P4-DU875-N6
FORD Duratec 2.0L / 2.3L / 2.5L	87.50mm	Standard	-2	10.4:1 / 11.6:1	42	28.50mm	83.1/94/100mm X	6.094"	21mm	300	A/N	GNH8750	P4-DU875-N2
FORD Duratec 2.0L / 2.3L / 2.5L	87.50mm	Standard	1.5	11.2:1 / 12.5:1	42	28.50mm	83.1/94/100mm X	6.094"	21mm	303	A/N	GNH8750	P4-DU875-P1
FORD Duratec 2.0L / 2.3L / 2.5L	87.50mm	Standard	6.1	12.2:1 / 13.6:1	42	28.50mm	83.1/94/100mm X	6.094"	21mm	295	A/N	GNH8750	P4-DU875-P7
FORD Duratec 2.0L / 2.3L / 2.5L	87.50mm	Standard	-20	8:1 / 9:1	42	28.50mm	83.1/94/100mm X	6.094"	21mm	277	T/N	GNH8750	P4-DU875-N20
FORD Duratec 2.0L / 2.3L / 2.5L	88mm	0.50mm +	-20	8:1 / 9:1	33	28.50mm	83.1/94/100mm X	6.094"	21mm	283	T/N	GNH8800	P4-DU880-N20
FORD Duratec 2.0L / 2.3L / 2.5L	88mm	0.50mm +	-6	9.8:1 / 11:1	33	28.50mm	83.1/94/100mm X	6.094"	21mm	303	T/A/N	GNH8800	P4-DU88-N6
FORD Duratec 2.0L / 2.3L / 2.5L	88mm	0.50mm +	-2	10.5 / 11.6:1	33	28.50mm	83.1/94/100mm X	6.094"	21mm	303	A/N	GNH8800	P4-DU88-N2
FORD Duratec 2.0L / 2.3L / 2.5L	88mm	0.50mm +	1	11.3:1 / 12.5:1	33	28.50mm	83.1/94/100mm X	6.094"	21mm	308	A/N	GNH8800	P4-DU88-P1
FORD Duratec 2.0L / 2.3L / 2.5L	88mm	0.50mm +	6.1	12.4:1 / 13.7:1	33	28.50mm	83.1/94/100mm X	6.094"	21mm	303	A/N	GNH8800	P4-DU88-P7
FORD Duratec 2.0L / 2.3L / 2.5L	88.50mm	1mm	-7	9.8:1 / 11:1	33	28.50mm	83.1/94/100mm X	6.094"	21mm	303	T/A/N	GNH8850	P4-DU8850-N7
FORD Duratec 2.0L / 2.3L / 2.5L	88.50mm	1mm	1	11.3:1 / 12.5:1	33	28.50mm	83.1/94/100mm X	6.094"	21mm	308	A/N	GNH8850	P4-DU8850-P1
FORD Duratec 2.0L / 2.3L / 2.5L	89mm	1.50m	-20	8.2 / 9.2 / 9.8:1	33	28.50mm	83.1/94/100mm X	6.094"	21mm	303	T/A/N	GNH8900	P4-DU89-N20
FORD Duratec 2.0L / 2.3L / 2.5L	89mm	1.50m	-7	9.8 / 12.8 / 9.7	33	28.50mm	83.1/94/100mm X	6.094"	21mm	303	T/A/N	GNH8900	P4-DU89-N7
FORD Duratec 2.0L / 2.3L / 2.5L	89mm	1.50m	0.5	9.8 / 11 / 11.7	33	28.50mm	83.1/94/100mm X	6.094"	21mm	303	A/N	GNH8900	P4-DU89-P1
FORD Duratec 2.0L / 2.3L / 2.5L	89.50mm	2mm	-20	8.3 / 9.3 / 9.8	33	28.50mm	83.1/94/100mm X	6.094"	21mm	330	T/A/N	GNH8950	P4-DU8950-N20
FORD Duratec 2.0L / 2.3L / 2.5L	89.50mm	2mm	-7	9.9 / 11.1 / 11.8	33	28.50mm	83.1/94/100mm X	6.094"	21mm	330	T/A/N	GNH8950	P4-DU8950-N7
FORD Duratec 2.0L / 2.3L / 2.5L	89.50mm	2mm	-2	10.7 / 12 / 12.7	33	28.50mm	83.1/94/100mm X	6.094"	21mm	330	T/A/N	GNH8950	P4-DU8950-N20
FORD Duratec 2.0L / 2.3L / 2.5L	90mm	2.5mm	-2	10.8 / 12.2 / 13	33	28.50mm	83.1/94/100mm X	6.094"	21mm	330	A/N	GNH9000	P4-DU90-N2
FORD Duratec 2.0L / 2.3L / 2.5L	90mm	2.5mm	-2	12.6:1	33	27mm	97mm	6.094"	21mm	309	A/N	GNH9000	P4-DU900-N2Z
FORD Duratec 2.0L / 2.3L / 2.5L	91mm	3.5mm	-2	11 / 12.3 / 13.1	33	28.50mm	83.1/94/100mm X	6.094"	21mm	324	A/N	GNH9100	P4-DU91-N2

RODS									
ENGINE	MATERIAL		CENTER TO CENTER (mm)	PE BORE(mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
FORD Duratec 2.0L	Forged 4340 Alloy		146.25mm	21mm Full Float	18.90mm Straight	50.03mm	21.80mm	541.8	CR-FDUR20-H146.25
FORD Duratec 2.3L	Forged 4340 Alloy		154.80mm	21mm Full Float	18.90mm Straight	50.03mm	21.82mm	552.9	CR-FDUR23-H154.8

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
FORD Duratec 2.0L / 2.3L	MLS	89mm	.75mm	HG-FDUR23-89-075T
FORD Duratec 2.0L / 2.3L	MLS	89mm	1mm	HG-FDUR23-89-1T
FORD Duratec 2.0L / 2.3L	MLS	91mm	.75mm	HG-FDUR23-91-075T
FORD Duratec 2.0L / 2.3L	MLS	91mm	1mm	HG-FDUR23-91-1T
FORD Duratec 2.5L	MLS	91mm	.75mm	HG-FDUR25-91-0.75 T
FORD Duratec 2.5L	MLS	91mm	1mm	HG-FDUR25-91-1 T

DURATEC 3.0L



FORD Duratec 3.0L V6 24v								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Taurus-Mondeo-Noble-Aston Martin AM11	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35mm (std)	5.98mm	114.5mm	FIVN-1050T	30mm (std)	5.97mm	115.45mm	FEVI-1050T

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-FXR6-BE1	26.5	19.5	23.6	16.5	77 @ 40	160 @ 10	12mm	23	8.1	Use with OEM RETAINER + OEM SEAT
SPR-FXR6-BE2	26.5	19.5	23.6	16.5	84 @ 40	170 @ 10	13.3mm	25	8.5	Use with OEM RETAINER + OEM SEAT
SPR-FCO-BE1	25	17.65	20.3	13.25	89 @ 40.5	181 @ 10	13.2	25	9.5	RET-FCO-BE + OEM SEAT
SPR-FCO-BE2	26	17.8	21.25	13.25	115 @ 40.5	240 @ 10	13.2	25.3	12.5	RET-FCO-BE + OEM SEAT

ENGINE COMPONENTS	
CAM FOLLOWER	OEM ROCKER ARMS
VALVE SEALS	OEM
KEEPERS	OEM

MK 2.5RS



FORD FOCUS MK2 RS 2.5 / Volvo 5 Cyl 20v								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Focus MK2 RS 2.5/ Mondeo ST/ Volvo 5 Cyl	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	31mm (std)	5.96mm	104.3mm	FIVN-1045T	27mm (std)	5.95mm	103.3mm	FEVI-1045T
	32mm (+1)			FIVN-1046T	28mm (+1)			FEVI-1046T

SPRING KITS										
VALVE SPRINGS	Spring Base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-TS1012-BE-5C (Beehive)	27.70	19.70	23.20	15.20	80 @ 33.5	180 @ 10	11.70	21.50	10.50	RET-TSS.5/T1F-BE + Factory Seat
SPRK-TS1015-BE-5C (Beehive)	27.70	19.70	23.20	15.20	85 @ 33.5	212 @ 10	11.10	21.80	12.70	RET-TSS.5/T1F-BE + Factory Seat

ENGINE COMPONENTS		
CAM FOLLOWER	CF-31/2.5+ (shims) requires to cut the valve length by aprox 1.65mm	
VALVE SEALS	VSI-FECO-I	VSI-FECO-E
KEEPERS	OEM or KPR-6S-7	
BLOCK GUARD	BG-FV5CYL	



ECOBOOST 1.6L

ECOBOOST 1.5L



SCAN ME



SCAN ME

FORD 1.5-1.6L ECOBOOST DI								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Ford Fiesta - Fusion	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Inconel
	30.10mm (std)	4.96mm	98.8mm	FIVN-2401D	24.9mm (std)	4.95mm	99.65	FEVI-2401F-HS (Sodium filled)

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-FE56BE (single beehive)	23.30	16.80	18.80	12.30	57 @34.4	155 @ 10	12.20	22.20	9.80	RET-MCS6/T1(OEM seal) - Optional shim S5-B202

ENGINE COMPONENTS	
CAM FOLLOWER	CF-28/2.9+ (shims) requires to cut the valve length by 1.65mm
VALVE SEALS	USE OEM
KEEPERS	KPR-5.Q/7S

PISTONS														
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
FORD ECOBOOST 1.6L	79mm	Standard	-5.4	10:1 (Standard)		28.65mm	81.40mm	X	134mm	21mm	275	T/N	GNH7900	P4-FECO16-79-NSH13
FORD ECOBOOST 1.6L	79.50mm	0.50mm+	-5.4	10:1 (Standard)		28.65mm	81.40mm	X	134mm	21mm	281	T/N	GNH7950	P4-FECO16-795-NSH13
Note: OEM Gasket 0.50mm														

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
FORD Duratec 1.6L	Forged 4340 Alloy	H Beam	134.02mm	21mm Full Float	18.89mm Tapered	47.04mm	20.82mm	461.9	CR-FECO16-H134

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
FORD Duratec 1.6L	MLS	80mm	1mm	HG-FECO16-80-1T

ECOBOOST 2.0L



SCAN ME

FORD Ecoboost 2.0L DI								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
2015 Focus/ Fusion L4-2.0L Turbo	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Inconel - Sodium Filled
	32.5mm (std)	5.47mm	103.3mm	FIVN-2501D	28mm (std)	5.45mm	104.6mm	FEVI-2500F-HS

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-FE20BE (Conical)	24.00	17.20	21.00	14.20	72 @ 37.2	150 @ 10	12.00	23.00	7.80	Use with OEM RETAINER + OEM SEAT
SPR-FE20BE -2 (Conical)	24.00	17.20	21.00	14.20	84 @ 37.2	170 @ 10	12.00	23.20	8.60	Use with OEM RETAINER + OEM SEAT
SPR-TS1012-FE2	27.50	20.00	20.00	15.20	77 @ 34.30	173 @ 10	13.00	20.00	9.60	RET-TS55-T1+SEAT-DUR1 + OEM SEAL
SPR-TS1015-FE2	27.50	20.00	20.00	15.20	84 @ 34.30	205 @ 10	13.00	20.70	12.10	RET-TS55-T1+SEAT-DUR1 + OEM SEAL

ENGINE COMPONENTS				
CAM FOLLOWER	CF-31/2.5+ (shims) requires to cut the valve length by aprox 1.65mm			
VALVE SEALS	VSI-FECO-I			VSI-FECO-E
KEEPERS	OEM or KPR-5.5/7A-ST			
VALVE GUIDE	GDE-FECO20 (Intale & Exhaust)			

							PISTONS							
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
FORD ECOBOOST 2.0L	87.50mm	Standard	-7	9.5:1 (Std)		32.75mm	83.10mm	X	155.90mm	22.50mm	364	T/N	GNH8750	P4-FECO20-875-N7H13
FORD ECOBOOST 2.0L	88mm	0.50mm+	-7	9.5:1 (Std)		32.75mm	83.10mm	X	155.90mm	22.50mm	368	T/N	GNH8800	P4-FECO20-88-N7H13
Note: OEM Gasket 0.71mm														

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
FORD ECOBOOST 2.0L	Forged 4340 Alloy	H Beam	155.87mm	22.5mm Full Float	21.82mm Tapered	55.03mm	21.82mm	552	CR-FECO20-H155.9

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
FORD ECOBOOST 2.0L	MLS	89mm	1.2mm	HG-FECO20-89-1.2T

ECOBOOST 2.3L



SCAN ME

FORD EcoBoost 2.3L DI								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
2015 Ford Mustang/ Focus L4-2.3L Turbo	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Inconel
	32.5mm (std)	5.47mm	103.3mm	FIVN-2501D	30mm (std)	5.45mm	104.7	FEVI-2501F-HS (Sodium Filled)
	33.5mm (+1)	5.47mm	103.3mm	FIVN-2502D	31mm (+1)	5.45mm	104.7	FEVI-2502F-HS (Sodium Filled)

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-FE20BE (Conical)	24.00	17.20	21.00	14.20	72 @ 37.2	150 @ 10	12.00	23.00	7.80	Use with OEM RETAINER + OEM SEAT
SPR-FE20BE -2 (Conical)	24.00	17.20	21.00	14.20	83 @ 37.2	155 @ 10	12.00	23.00	7.25	Use with OEM RETAINER + OEM SEAT
SPR-TS1012-FE2	27.50	20.00	20.00	15.20	77 @ 34.30	173 @ 10	13.00	20.00	9.60	RET-TS55-T1+SEAT-DUR1 + OEM SEAL
SPR-TS1015-FE2	27.50	20.00	20.00	15.20	84 @ 34.30	205 @ 10	13.00	20.70	12.10	RET-TS55-T1+SEAT-DUR1 + OEM SEAL

ENGINE COMPONENTS		
CAM FOLLOWER	CF-31/2.5+ (shims) requires to cut the valve length by aprox 1.65mm	
VALVE SEALS	VSI-FECO-I	VSI-FECO-E
KEEPERS	OEM or KPR-5.5/7A-ST	
VALVE GUIDE	GDE-FECO20 (Intale & Exhaust)	
BLOCK GUARD	BG-FECO2.3	

							PISTONS								
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE		SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
FORD ECOBOOST 3.2L	87.50mm	Standard	-6.3	9.5:1 (Std)	53	32.75mm	94mm		X	149.30mm	22.50mm	360	T/N	GNH8700	P4-FECO23-875-N6H13
FORD ECOBOOST 3.2L	88mm	0.50mm+	-6.3	9.5:1 (Std)	53	32.75mm	94mm		X	149.30mm	22.50mm	366	T/N	GNH8800	P4-FECO23-88-N6H13
Note: OEM Gasket 0.71mm															

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
FORD ECOBOOST 3.2L	Forged 4340 Alloy	H Beam	149.30mm	22.5mm Full Float	21.82mm Tapered	55.03mm	21.82mm	533.8	CR-FECO23-H149.3

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
FORD ECOBOOST 3.2L	MLS	89mm	1.3mm	HG-FECO23-1.3T

ECOBOOST 3.5L



SCAN ME

FORD EcoBoost 3.5L 24v - 6cyl (Twin Turbo) 2010 - 2016 - 1st Gen								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Ford F150 / Taurus SHO/ Lincoln MKS	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Inconel
	36.9 (std)	5.47mm	97.7mm	FIVN-3501D	31mm (std)	5.46mm	95.30mm	FEVI-3501F-HS (Sodium Filled)

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-FE20BE-24 (Conical)	24.00	17.20	21.00	14.20	72 @ 37.2	150 @ 10	12.00	23.00	7.70	Use with OEM RETAINER + OEM SEAT
SPR-FE20BE -2-24 (Conical)	24.00	17.20	21.00	14.20	83 @ 37.2	155 @ 10	12.00	23.00	7.25	Use with OEM RETAINER + OEM SEAT

ENGINE COMPONENTS	
CAM FOLLOWER	5 Thicknesses to choose from: CF-32/3.10 ; CF-32/3.25 ; CF-32/3.35 ; CF-32/3.55 ; CF-32/3.70
VALVE SEALS	OEM
KEEPERS	OEM or KPR-5.5/7A-ST



COYOTE 5.0 GEN2



FORD COYOTE 5.0L 32v 2nd GEN 2015 - 2017								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Ford Mustang 2015 - 2017	Head Diam	Stem. Diam	Length		Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	37.3mm (std)	5.98	119.90mm	FIVN-5020T	32.00mm (+0.25)	5.95mm	108.6mm	FEVN-5021T
	38.00mm (+0.7)			FIVN-5022T	33.00mm (+1.25)			FEVI-5024S
	39.00mm (+1.7)			FIVC-5024S				
	For Single groove valves use Locks KPR-6T-ST + Retainer RET-FCO-BE							

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-FCO-BE1 (Beehive)	25.10	17.60	20.60	13.10	91lbs @ 40mm	189lbs @ 10mm	13.20	25.00	9.80	OEM (or RET-FCO-BE for Single groove valves)
SPR-FCO-BE2 (Beehive)	26.20	18.00	21.30	13.10	122lbs @ 40mm	250 lbs @ 10mm	13.20	25.30	12.80	OEM (or RET-FCO-BE for Single groove valves)

ENGINE COMPONENTS	
VALVE STEM SEAL	VSI-FCO50V
VALVE GUIDE	GDE-FCO50

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
FORD COYOTE 5.0L (Gen 2 -2015+)	MLS	95.4mm	1mm	-FCO50-95.4-1TL (left side) HG-FCO50-95.4-1TR (Right si

COYOTE 5.0 GEN3



FORD COYOTE 5.0L 3rd Gen								
For Mustang 2018 - 2021	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length		Head Diam	Stem. Diam	Length	Black Nitrided
	37.6mm (std)	5.98mm	120.6mm	FIVN-5026T	32mm (std)	5.95mm	109.6mm	FEVN-5026T

BARRA



FORD BARRA Australia								
Ford Falcon XR6 Australia	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length		Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35mm (std)	5.98	122.85mm	FFIVN-1050T (triple grv)	32mm (std)	5.97mm	105.80mm	FFEVN-1050T (triple groove)
	35mm (std)			FFIVN-1050S (single grv)	32mm (std)			FFEVN-1050S (Single groove)
	35.5mm (+0.5)			FFIVN-1051T (triple grv)	33mm (+1)			FFEVI-1052S (single groove)
	36mm (+1)			FFIVN-1052S (single grv)	34mm (+2)			FFEVI-1054S (single groove)
	For Single groove valves use Locks KPR-6T-ST							

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-FXR6-BE1	26.4	19.50	23.60	16.00	83lbs @ 39.3mm	167lbs @ 11mm	11.40	23mm	8.00	RET-FXR6-T1 (Single or Trple groove)
SPRK-FXR6-BE2	26.4	19.50	23.60	16.00	90lbs @ 39.3mm	206 lbs @ 13.1mm	13.10	25mm	8.50	RET-FXR6-T1 (Single or Trple groove)

ECOTEC LSJ 2.0 / 2.2 / 2.4



GM ECOTEC LSJ 2.0 / 2.2 / 2.4 lts								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Cavalier / Cobalt / Solstice / Opel / Vauxhall	Head Diam	Stem. Diam	Length		Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.10mm	5.97mm	102.05mm	GIVN-0010	30.10mm	5.96mm	101.30mm	GEVN-0010
	35.60 (+0.5) mm			GIVN-0012S	30.60 (+0.5) mm			GEVI-0012S

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1012/EC	27.50	20.00	20.00	15.20	75 @ 33.90	193 @ 12.5	13.00	20.00	9.60	RET-TSS.5/T1F+ OEM SEAT + SEAT-EC1015 (inner spr) **
SPR-TS1015/EC	27.50	20.00	20.00	15.20	85 @ 33.90	236 @ 12.5	13.00	20.00	12.10	RET-TSS.5/T1F+ OEM SEAT + SEAT-EC1015 (inner spr) **
SPR-EC3025D	26.60	19.60	19.40	14.20	76 @ 34.60	217 @ 12.5	15.60	19.00	11.30	RET-EC3020/T1 + SEAT-EC3020 (Requires new smaller seal)
SPR-EC3027D	26.60	19.60	19.60	14.20	94 @ 34.60	232 @ 12.5	13.90	20.70	11.10	RET-EC3020/T1 + SEAT-EC3020 (Requires new smaller seal)

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-EC60-SM / Use VALVE SEAL: VS-T6SM	EXHAUST: GDE-EC60-SM / Use VALVE SEAL: VS-T6SM
VALVE LOCKS	KPR-6S/7 (single groove valves)	
VALVE SEALS	VSI-EC60V / Intake & Exhaust / Top Hat OEM style	

VORTEC 4 / 5/ 6 CYL



GM VORTEC 4 / 5 / 6 Cyl								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
2002 - 2006	Head Diam	Stem. Diam	Length		Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	39mm (+2mm)	5.97mm	105.30mm (single groove)	GIVN-3920S	34mm(+3.5mm)	5.96mm	107.9mm(single groove)	GEVI-3435S

F20C



F22C



HONDA S2000 / F20C / F22C								
S2000	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length		Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	36.00mm (std)	5.48mm	109.85mm	HIVN-1030D	31.00mm(std)	5.45mm	108.80mm	HEVN-1030D
	36.00mm (std)			HIVN-1030F	31.00mm(std)			HEVN-1030F
	36.50mm (+0.5)			HIVN-1033D	31.00mm(std)			HEVI-1030D
	36.50mm (+0.5)			HIVN-1033F	31.50mm(+0.5)			HEVN-1033F
	37.00mm(+1.0)			HIVN-1035D	31.50mm(+0.5)			HEVI-1033D
					32.00mm(+1.0)			HEVI-1035D

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H1019D	30.00	21.80	21.30	15.60	97 @ 40.4	275 @ 12	16.00	22.70	14.80	RET-K20A2/T2 + SEAT-H1020DS
SPR-H1021D	30.00	21.80	21.30	15.50	95 @ 40.4	261 @ 12	15.30	22.70	13.90	RET-K20A2/T2 + SEAT-H1020DS
SPR-H1022D	30.00	21.80	21.00	15.50	80 @ 40.40	215 @ 12	18.30	22.00	11.20	RET-K20A2/T2 + SEAT-H1020DS
SPR-M1007D/K2	28.10	20.00	20.00	15.20	82 @ 39.80	238 @ 12	15.10	24.70	13.00	RET-K20A3/T1 + SEAT-HKA3
BEEHIVE SPR-H1007BE-1	28.00	18.80	24.20	14.50	75 @ 39.0	230 @ 12	16.20	22.80	12.70	RET-H55BE-T1 + SEAT-HKBE1
BEEHIVE SPR-H1007BE-2	28.00	18.80	24.20	14.50	90 @ 37.8	248 @ 12	15.00	22.80	12.70	RET-H55BE-T1 + SEAT-HKBE2

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-HS255-I	EXHAUST: GDE-HS255-E
VALVE LOCK	KPR-5.5/7A-ST	
VALVE SEALS	INTAKE: VS-H55-I	EXHAUST: VS-H55-E
BLOCK GUARD	BG-S2000	
TITANIUM VALVES	PLEASE CALL	

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
HONDA S2000	MLS	89mm	.85mm	HG-HS2000-89-0.85T



HONDA K20 / K24 2.0lts / 2.4 lts DOHC VTEC								
RSX-S / TSX/ CIVIC-SI	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.00mm(std) Dish	5.48mm	108.85mm	HIVN-1020D	5.45mm	108.65mm		HEVN-1020D
	35.00mm(std) Flat			HIVN-1020F				HEVN-1020F
	35.5mm(+0.5)Dish			HIVN-1021D				HEVI-1020D
	35.5mm(+0.5)Flat			HIVN-1021F				HEVI-1020D-6
	36.0mm(+1.0)Dish			HIVN-1022D	5.45mm	108.80mm		HEVN-1021F
	36.0mm(+1.0)Flat			HIVN-1022F				HEVI-1021D
	36.5mm(+1.5)Flat			HIVN-1022.5F				HEVN-1030D
	37.00mm(+2.0)Flat			HIVN-1023F				HEVN-1030F
	37.00mm(+2.0)Dish			HIVN-1023D				HEVI-1030D
				31.50mm(+1.5)				HEVN-1033F
				31.50mm(+1.5)				HEVI-1033D

SPRING KITS										
VALVE SPRINGS	Spring base		Spring Top		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H1019D (K20A2/Z1)	30.00	21.80	21.30	15.60	97 @ 40.4	275 @ 12	16.00	22.70	14.80	RET-K20A2/T2 + SEAT-H1020DS
SPR-H1021D (K20A2/Z1)	30.00	21.80	21.30	15.50	95 @ 40.4	261 @ 12	15.30	22.70	13.90	RET-K20A2/T2 + SEAT-H1020DS
SPR-H1022D (K20A2/Z1)	30.00	21.80	21.00	15.50	80 @ 40.4	215 @ 12	18.30	22.00	11.20	RET-K20A2/T2 + SEAT-H1020DS
SPR-M1007D/K2 (K20A3/2/Z1)	28.10	20.00	20.00	15.20	82 @ 39.60	238 @ 12	15.10	24.70	13.00	RET-K20A3/T1 + SEAT-HKA3
BEEHIVE SPR-H1007BE-1 (K20A3/2/Z1)	28.00	18.80	24.20	14.50	75 @ 38.8	230 @ 12	16.20	22.80	12.70	RET-H55BE-T1 + SEAT-HKBE1
BEEHIVE SPR-H1007BE-2 (K20A3/2/Z1)	28.00	18.80	24.20	14.50	90 @ 37.6	248 @ 12	15.00	22.80	12.70	RET-H55BE-T1 + SEAT-HKBE2

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-HK55-I	EXHAUST: GDE-HK55-E (GDE-HK55-E-6MM for 6mm stem)
VALVE SEALS	INTAKE: VS-H55-I	EXHAUST: VS-H55-E (VS-T56E for 6mm stem)
VALVE LOCK	KPR-S.5/7A-ST	
VALVE LOCK	KPR-S.5/7A-LG (0.45" longer)	
BLOCK GUARD	BG-K20 / BG-K24	
TITANIUM VALVES	PLEASE CALL	
ROCKER ARMS	K-ROCKERS	

HONDA K20 / K24 TITANIUM VALVES								
RSX-S / TSX	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	TITANIUM	Head Diam	Stem. Diam	Length	TITANIUM
	36.00mm(+1) Dish	5.48mm	106.95mm (-1.9)	HIVT-1022F	5.45mm			HEVT-1020F
	36.5mm (+1.5) Flat			HIVT-1022.5F				HEVT-1022F
	37mm (+2) Flat			HIVT-1023F				
	37mm (+2) Flat			HIVT-1023F-50				
	37.5mm (+2.5) Dish			HIVT-1024				
	38mm (+3) Dish			HIVT-1025				

SPRING KITS FOR TITANIUM VALVES										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H1000D	29.65	21.85	20.50	15.50	60 @ 37.0	203 @ 12.5	16.30	20.70	11.50	RET-K20A2/T2 + SEAT-H1020DS
SPR-H1005D	29.65	21.85	20.50	15.50	73 @ 37.0	213 @ 12.5	16.30	20.70	11.50	RET-K20A2/T2 + SEAT-H1020DS
SPR-H100DR	30.20	22.20	22.20	16.80	78 @ 34.0	234 @ 12.5	15.50	18.50	12.50	RET-K20A2/T2 + SS-3011-3+ SEAT-H1020DS
SPR-3073-2034	29.65	21.85	21.30	15.50	84 @ 37.7	236 @ 12.5	16.20	21.50	12.20	RET-H1000/T2 + SEAT-H1021TF
SPR-H1022D/K20Ti	30.00	21.80	21.00	15.50	88 @ 39	228 @ 12.5	17.8	21.2	11.2	RET-AUSVE/T1 + SEAT-H1021TF

PISTONS K20														
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
HONDA K20A2	86.00mm	Std (+0.02mm)	-6	9:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	307	A/N/T	GNH8600	P4-HK86-N6
HONDA K20A2	86.00mm	Std (+0.02mm)	6.5	11.2:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	304	A/N	GNH8600	P4-HK86-P6
HONDA K20A2	86.00mm	Std (+0.02mm)	8	11.6:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	306	A/N	GNH8600	P4-HK86-P8
HONDA K20A2	86.00mm	Std (+0.02mm)	11	12:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	314	A/N	GNH8600	P4-HK86-P11
HONDA K20A2	86.00 mm	STD	11.4	12.5:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	296	A/N	GNH8600	P4-HK86-P15
HONDA K20A2	86.50 mm	0.50 mm +	-6	9:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	281	A/N/T	GNH8650	P4-HK8650-N6
HONDA K20A2	86.50mm	0.50mm +	6.5	11.2:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	306	A/N	GNH8650	P4-HK865-P6
HONDA K20A2	86.50mm	0.50mm +	8	11.6:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	308	A/N	GNH-8650	P4-HK8650-P8
HONDA K20A2	86.50 mm	0.50 mm +	11	12:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	316	A/N	GNH8650	P4-HK8650-P11
HONDA K20A2	86.50mm	0.50 mm +	11.4	12.5:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	309	A/N	GNH8650	P4-HK8650-P15
HONDA K20A2	87.00mm	1mm +	8	11.5:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	322	A/N	GNH8700	P4-HK87-P8
HONDA K20A2	87.00mm	1mm +	11.4	12.5:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	325	A/N	GNH8700	P4-HK87-P15
HONDA K20A2	87.50mm	1.5mm +	11.4	12.5:1	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm	343	A/N	GNH8750	P4-HK875-P15

Note: (+ 0.7 w / K20A3 head) (Gasket 0.030" - Deck height: 0.002") | K series piston accepts 36.5mm Intake and 31.5mm Exhaust valves

PISTONS K24														
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
HONDA / ACURA K24A2 w/ K20 Head	87mm	Std	-0.5	11.5:1	50.7	1.181" (30mm)	3.386"	X	5.984"	22mm	277	A/N	GNH8700	P4-HK87-N0
HONDA / ACURA K24A2 w/ K20 Head	87mm	Std	4.5	12.5:1	50.7	1.181" (30mm)	3.386"	X	5.984"	22mm	308	A/N	GNH8700	P4-HK87-P4
HONDA / ACURA K24A2 w/ K20 Head	87mm	Std	8	13.2:1	50.7	1.181" (30mm)	3.386"	X	5.984"	22mm	322	A/N	GNH8700	P4-HK87-P8
HONDA / ACURA K24A2 w/ K20 Head	87.00mm	Std	11.4	14.4:1	50.7	1.181" (30mm)	3.386"	X	5.984"	22mm	325	A/N	GNH8700	P4-HK87-P15
HONDA / ACURA K24A2 w/ K20 Head	87.50mm	0.50mm +	-0.5	11.5:1	50.7	1.181" (30mm)	3.386"	X	5.984"	22mm	280	A/N	GNH8750	P4-HK875-N0
HONDA / ACURA K24A2 w/ K20 Head	87.50mm	0.50mm +	4	12.5:1	50.7	1.181" (30mm)	3.386"	X	5.984"	22mm	315	A/N	GNH8750	P4-HK875-P4
HONDA / ACURA K24A2 w/ K20 Head	87.50mm	0.50mm +	11.4	14.4:1	50.7	1.181" (30mm)	3.386"	X	5.984"	22mm	325	A/N	GNH8750	P4-HK875-P15
HONDA / ACURA K24A2 w/ K20 Head	88mm	1mm +	4	12.5:1	50.7	1.181" (30mm)	3.386"	X	5.984"	22mm	317	A/N	GNH8800	P4-HK88-P4
HONDA / ACURA K24A2 w/ K20 Head	89mm	2mm +	4	12.5:1	50.7	1.181" (30mm)	3.386"	X	5.984"	22mm	325	A/N	GNH8900	P4-HK89-P4

Note: (For K24 head -0.6:1) (Gasket 0.030" - Deck height: 0.002") | K series piston accepts 36.5mm Intake and 31.5mm Exhaust valves

RODS K20								
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	PART NUMBER
HONDA K20A2	Forged 4340 Alloy	H Beam	139mm	22mm Full Float	19.80mm Tapered	51.00mm	19.80mm	515.9
HONDA / ACURA K24A2 w/ K20 Head	Forged 4340 Alloy	H Beam	152mm	22mm Full Float	19.80mm Tapered	51.00mm	19.80mm	536.6

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
HONDA K20A2	MLS	87mm	.85mm	HG-HK87-0.85T
HONDA K20A2	MLS	88.50mm	.85mm	HG-HK85-0.85T
HONDA K20A2	MLS	89.50mm	.85mm	HG-HK89-5-0.85T



HONDA K24Z3 / Z7 - 2.0lts / 2.4 lts DOHC VTEC								
2012 Civic - CR-V	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	36.0mm(std)Dish	5.48mm	108.85mm	HIVN-1022D	5.45mm	108.80mm		HEVN-1030D
	36.0mm(std)Flat			HIVN-1022F				HEVN-1030F
	36.5mm(+0.5)Flat			HIVN-1022.5F				HEVI-1030D
	37.00mm(+1.0)Flat			HIVN-1023F				HEVN-1033F
								HEVI-1033D
								HEVI-1035D

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H1000D-Z7	29.65	21.85	20.50	15.50	67 @ 36.4	210 @ 12.5	15.70	20.70	11.50	RET-K24Z7/T1 + SEAT-H1020DS + KPR-S.5-7A-ST
SPR-H1005D-Z7	29.65	21.85	20.50	15.50	80 @ 36.4	220 @ 12.5	15.70	20.70	11.50	RET-K24Z7/T1 + SE



HONDA B16A / B17A / B18C 1.6 / 1.7 / 1.8 DOHC VTEC								
GSR / Acura Integra	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	33.00mm(std) Flat	5.48mm	102.5mm	HIVN-200F	28.00mm(std) Flat	5.45mm	102.50mm	HEVN-200F
	33.00mm(std) Flat			HIVN-100F	28.00mm(std) Flat			HEVN-100F
	33.00mm(std) Dish			HIVN-1000	28.00(std) Dish			HEVN-1000
	33.5mm(+0.5) Dish			HIVN-1000D	28.5mm(+0.5) Flat			HEVN-1001F
	33.5mm(+0.5) Flat			HIVN-1000F	28.5mm(+0.5) Dish			HEVN-1001D
	34.00mm(+1.0) Dish			HIVN-1001	29.00mm(+1.0) D or F			HEVN-1001-2F
	34.00mm(+1.0) Flat			HIVN-1001F	28.00mm (std) Dish			HEVI-1000
					28.5mm(+0.5) Dish			HEVI-1001
			29.00mm(+1) Dish	HEVI-1001-2				
				SODIUM FILLED INCONEL VALVES				
				28mm (std)	6.00mm (5.5mm tip)	102.50mm	HEVI-1000-HS-6	

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-H200DR	30.20	22.20	22.20	16.80	100 @ 33.5	222 @ 10	13.50	18.50	12.20
SPR-H100DR (turbo /hi lift/ race)	30.20	22.20	22.20	16.80	85 @ 33.5	210 @ 10	15.00	18.50	12.50
SPR-H1002D (street performance)	29.05	21.85	20.50	15.50	70 @ 33.5	170 @ 10	14.00	19.50	10.00
SPR-H1002D-BE (Beehive)	29.10	21.30	23.00	15.65	72 @ 33.5	170 @ 10	13.00	19.00	9.70
								RET-H55BE-T1-B + SEAT-TS15/L5-IN	

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-HB55-I (STD) / GDE-HB55-I-OS1 (+.001" Oversize)	EXHAUST: GDE-HB55-E (STD) / GDE-HB55-E-OS1 (+.001" Oversize)
VALVE SEALS	INTAKE: VS-H5.5I	EXHAUST: VS-H5.5E
VALVE LOCK	KPR-5.5/7A-ST	
VALVE LOCK	KPR-5.5/7A-LG (0.045" Longer)	
BLOCK GUARD	BG-B16	
VTEC TITANIUM LOCKING PIN	LP-HB (7 grams weight reduction)	
LOSS MOTION ASSEMBLY	LM-HB (beehive spring)	

PISTONS														
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
HONDA / ACURA B16A DOHC VTEC	81mm (81.02mm)	Std	5.9	10.5:1	42.7	1.181" (30mm)	3.047"	I X	5.290"	21mm	285	A/N	GNH8100	P4-H81-P6
HONDA / ACURA B16A DOHC VTEC	81mm (81.02mm)	Std	7	11:1	42.7	1.181" (30mm)	3.047"	I X	5.290"	21mm	246	A/N	GNH8100	P4-H81-P7
HONDA / ACURA B16A DOHC VTEC	81mm (81.02mm)	Std	-2.5	9:1	42.7	1.181" (30mm)	3.047"	I R	5.290"	21mm	302	T/N	GNH8100	P4-H81-N2R
HONDA / ACURA B16A DOHC VTEC	81.50 mm	0.50mm +	5.9	10.5:1	42.7	1.181" (30mm)	3.047"	I X	5.290"	21mm	261	A/N	GNH8150	P4-H815-P6
HONDA / ACURA B16A DOHC VTEC	81.5mm	0.50mm +	7	11:1	42.7	1.181" (30mm)	3.047"	I X	5.290"	21mm	250	T/N	GNH-8150	P4-H815-P7
HONDA / ACURA B16A DOHC VTEC	81.50mm	0.50mm +	-2.5	9.0:1	42.7	1.181" (30mm)	3.047"	I X	5.290"	21mm	235	T/N	GNH8150	P4-H815-N2
HONDA / ACURA B16A DOHC VTEC	82.00mm	1mm+	-2.5	9.0:1	42.7	1.181" (30mm)	3.047"	I X	5.290"	21mm	250	T/N	GNH8200	P4-H82-N2
HONDA / ACURA B16A DOHC VTEC	82.00mm	1mm+	5.7	10.6:1	42.7	1.181" (30mm)	3.047"	I X	5.290"	21mm	290	T/N	GNH8200	P4-H82-P6
HONDA / ACURA B16A DOHC VTEC	82.00mm	1mm+	7	11.1:1	42.7	1.181" (30mm)	3.047"	I X	5.290"	21mm	257	T/N	GNH8200	P4-H82-P7
HONDA / ACURA B16A DOHC VTEC	83.00mm	2mm+	5.7	10.6:1	42.7	1.181" (30mm)	3.047"	I X	5.290"	21mm	300	T/N	GNH8300	P4-H83-P6
HONDA / ACURA B16A DOHC VTEC	84.00mm	3mm+	-10.3	8.6:1	42.7	1.181" (30mm)	3.047"	I R	5.290"	21mm	295	T/N	GNH8400	P4-H84-N10R
HONDA / ACURA B16A DOHC VTEC	84.00mm	3mm+	-2.5	9.5:1	42.7	1.181" (30mm)	3.047"	I R	5.290"	21mm	295	T/N	GNH8400	P4-H84-N2R
HONDA / ACURA B16A DOHC VTEC	84.00mm	3mm+	1.4	10.2:1	42.7	1.181" (30mm)	3.047"	I X	5.290"	21mm	285	A/N	GNH8400	P4-H84-P1
HONDA / ACURA B16A DOHC VTEC	84.00mm	3mm+	5.5	11.2:1	42.7	1.181" (30mm)	3.047"	I X	5.290"	21mm	310	A/N	GNH8400	P4-H84-P5
HONDA / ACURA B16A DOHC VTEC	84.50mm	3.5mm+	-2.5	9.6:1	42.7	1.181" (30mm)	3.047"	I R	5.290"	21mm	295	T/N	GNH8450	P4-H845-N2R
HONDA / ACURA B16A DOHC VTEC	85.00mm	4mm+	-2.5	9.7:1	42.7	1.181" (30mm)	3.047"	I R	5.290"	21mm	295	T/N	GNH8500	P4-H85-N2R
HON / AC B18C1 DOHC VTEC GSR	81mm (81.02mm)	Std	-2.5	10.1:1	41.5	1.181" (30mm)	3.433"	I R	5.429"	21mm	302	T/N	GNH8100	P4-H81-N2R
HON / AC B18C1 DOHC VTEC GSR	81mm (81.02mm)	Std	5.9	11.9:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	246	A/N	GNH8100	P4-H81-P6
HON / AC B18C1 DOHC VTEC GSR	81mm (81.02mm)	Std.	7	12.4:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	241	A/N	GNH8100	P4-H81-P7
HON / AC B18C1 DOHC VTEC GSR	81.50 mm	0.50mm +	5.9	11.9:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	261	A/N	GNH8150	P4-H815-P6
HON / AC B18C1 DOHC VTEC GSR	81.5mm	0.50mm +	7	12.4:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	250	T/N	GNH-8150	P4-H815-P7
HON / AC B18C1 DOHC VTEC GSR	81.50mm	0.50mm +	-2.5	10.1:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	235	A/N	GNH8150	P4-H815-N2
HON / AC B18C1 DOHC VTEC GSR	82.00mm	1mm+	-2.5	10.1:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	250	T/N	GNH820	P4-H82-N2
HON / AC B18C1 DOHC VTEC GSR	82.00mm	1mm+	5.9	12:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	290	A/N	GNH8200	P4-H82-P6
HON / AC B18C1 DOHC VTEC GSR	82.00mm	1mm+	7	12.5:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	257	A/N	GNH8200	P4-H82-P7
HON / AC B18C1 DOHC VTEC GSR	83.00mm	2mm+	5.9	12:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	300	A/N	GNH8300	P4-H83-P6
HON / AC B18C1 DOHC VTEC GSR	84.00mm	3mm+	-10.3	9.5:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	295	T/N	GNH8400	P4-H84-N10R
HON / AC B18C1 DOHC VTEC GSR	84.00mm	3mm+	-2.5	10.8:1	41.5	1.181" (30mm)	3.433"	I R	5.429"	21mm	295	T/N	GNH8400	P4-H84-N2R
HON / AC B18C1 DOHC VTEC GSR	84.00mm	3mm+	1.4	11.6:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	285	A/N	GNH8400	P4-H84-P1
HON / AC B18C1 DOHC VTEC GSR	84.00mm	3mm+	5.5	12.8:1	41.5	1.181" (30mm)	3.433"	I X	5.429"	21mm	310	A/N	GNH8400	P4-H84-P5
HON / AC B18C1 DOHC VTEC GSR	84.50mm	3.5mm+	-2.5	11:1	41.5	1.181" (30mm)	3.433"	I R	5.429"	21mm	295	T/N	GNH8450	P4-H845-N2R
HON / AC B18C1 DOHC VTEC GSR	85.00mm	4mm+	-2.5	11.1:1	41.5	1.181" (30mm)	3.433"	I R	5.429"	21mm	295	T/N	GNH8500	P4-H85-N2R
HON / AC B18C5 VTEC Integ Type R	81mm (81.02mm)	Std.	-2.5	9.9:1	42.7	1.181" (30mm)	3.433"	I R	5.429"	21mm	302	T/N	GNH8100	P4-H81-N2R
HON / AC B18C5 VTEC Integ Type R	81mm (81.02mm)	Std.	5.9	11.6:1	42.7	1.181" (30mm)	3.433"	I X	5.429"	21mm	246	A/N	GNH8100	P4-H81-P6
HON / AC B18C5 VTEC Integ Type R	81mm (81.02mm)	Std.	7	12.1:1	42.7	1.181" (30mm)	3.433"	I X	5.429"	21mm	241	A/N	GNH8100	P4-H81-P7
HON / AC B18C5 VTEC Integ Type R	81.50 mm	0.50mm +	5.9	11.6:1	42.7	1.181" (30mm)	3.433"	I X	5.429"	21mm	261	A/N	GNH8150	P4-H815-P6
HON / AC B18C5 VTEC Integ Type R	81.5mm	0.50mm +	7	12.1:1	42.7	1.181" (30mm)	3.433"	I X	5.429"	21mm	250	T/N	GNH-8150	P4-H815-P7
HON / AC B18C5 VTEC Integ Type R	81.50mm	0.50mm +	-2.5	9.9:1	42.7	1.181" (30mm)	3.433"	I X	5.429"	21mm	235	A/N/T	GNH8150	P4-H815-N2
HON / AC B18C5 VTEC Integ Type R	82.00mm	1mm+	-2.5	9.9:1	42.7	1.181" (30mm)	3.433"	I X	5.429"	21mm	250	T/N	GNH8200	P4-H82-N2
HON / AC B18C5 VTEC Integ Type R	82.00mm	1mm+	5.9	11.8:1	42.7	1.181" (30mm)	3.433"	I X	5.429"	21mm	290	A/N	GNH8200	P4-H82-P6
HON / AC B18C5 VTEC Integ Type R	82.00mm	1mm+	7	12.4:1	42.7	1.181" (30mm)	3.433"	I X	5.429"	21mm	257	A/N	GNH8200	P4-H82-P7
HON / AC B18C5 VTEC Integ Type R	83.00mm	2mm+	5.9	12.1:1	42.7	1.181" (30mm)	3.433"	I X	5.429"	21mm	300	A/N	GNH8300	P4-H83-P6
HON / AC B18C5 VTEC Integ Type R	84.00mm	3mm+	-10.3	9.2:1	42.7	1.181" (30mm)	3.433"	I R	5.429"	21mm	290	T/N	GNH8400	P4-H84-N10R
HON / AC B18C5 VTEC Integ Type R	84.00mm	3mm+	-2.5	10.6:1	42.7	1.181" (30mm)	3.433"	I R	5.429"	21mm	290	T/N	GNH8400	P4-H84-N2R
HON / AC B18C5 VTEC Integ Type R	84.00mm	3mm+	1.4	11.3:1	42.7	1.181" (30mm)	3.433"	I X/R	5.394"	21mm	275 / 317	A/N	GNH8400	P4-H84-P1 / R
HON / AC B18C5 VTEC Integ Type R	84.00mm	3mm+	5.5	12.5:1	42.7	1.181" (30mm)	3.433"	I X	5.429"	21mm	319	A/N	GNH8400	P4-H84-P5
HON / AC B18C5 VTEC Integ Type R	84.50mm	3.5mm+	-2.5	10.7:1	42.7	1.181" (30mm)	3.433"	I R	5.429"	21mm	290	T/N	GNH8450	P4-H845-N2R
HON / AC B18C5 VTEC Integ Type R	85.00mm	4mm+	-2.5	10.8:1	42.7	1.181" (30mm)	3.433"	I R	5.429"	21mm	290	T/N	GNH8500	P4-H85-N2R

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
HONDA B16A	Forged 4340 Alloy	H Beam	134.40mm	21mm Full Float	22.90mm Tapered	48.00mm	23.75mm	533	CR-HB16A-H134.4
HONDA B18C	Forged 4340 Alloy	H Beam	138mm	21mm Full Float	22.90mm Tapered	48.00mm	21.80mm	523.7	CR-HB18C-H138

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
HONDA B16A / B18C VTEC	MLS	82mm	.85mm	HG-HB16A-82-085T
HONDA B16A / B18C VTEC	MLS	83mm	.85mm	HG-HB16A-83-085T
HONDA B16A / B18C VTEC	MLS	84mm	.85mm	HG-HB16A-84-085T
HONDA B16A / B18C VTEC	MLS	85mm	.85mm	HG-HB16A-85-085T



B18A



B18B



B20



HONDA B18A / B18B / B20 - 1.8/2.0lts DOHC Non-VTEC / LS								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
Acura Integra LS/ CRV 92-03	31.00mm(std)	6.57mm	105.40mm	HIVN-1004-0	28.00mm(std)	6.55mm	105.80mm	HEVN-1004-0
	31.5mm(+0.5)			HIVN-1004	28.5mm(+0.5)			HEVN-1004

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)	Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	lbs./mm
SPR-TS1015/LS	27.50	20.00	20.00	15.50	77 @ 34.5	211 @ 11	13.80	12.10
SPR-TS2081/LS	27.50	20.00	SINGLE	54 @ 34.5	152 @ 11	13.80	20.70	9.60

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-H66-I	EXHAUST: GDE-H66-E
VALVE SEALS	INTAKE: VS-H6.6-I	EXHAUST: VS-H6.6-E
VALVE LOCK	KPR-6.6/LS	
BLOCK GUARD	BG-B20	

PISTONS														
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
HON / AC B18A/B Integ LS Non-VTEC	81mm (81.02mm)	Std.	-2.5	9.6:1	45	1.181" (30mm)	3.504"	R	5.394"	21mm	302	T/N	GNH8100	P4-H81-N2R
HON / AC B18A/B Integ LS Non-VTEC	81mm (81.02mm)	Std.	5.9	11.4:1	45	1.181" (30mm)	3.504"	X	5.394"	21mm	246	A/N	GNH8100	P4-H81-P6
HON / AC B18A/B Integ LS Non-VTEC	81mm (81.02mm)	Std.	7.5	12:1	45	1.181" (30mm)	3.504"	X	5.394"	21mm	241	A/N	GNH8100	P4-H81-P7
HON / AC B18A/B Integ LS Non-VTEC	81.50 mm	0.50mm +	5.9	11.4:1	45	1.181" (30mm)	3.504"	X	5.394"	21mm	261	A/N	GNH8150	P4-H815-P6
HON / AC B18A/B Integ LS Non-VTEC	81.5mm	0.50mm +	7.5	12.1:1	45	1.181" (30mm)	3.504"	X	5.394"	21mm	250	T/N	GNH-8150	P4-H815-P7
HON / AC B18A/B Integ LS Non-VTEC	81.50mm	0.50mm +	-2.5	9.6:1	45	1.181" (30mm)	3.504"	X	5.394"	21mm	235	A/N/T	GNH8150	P4-H815-N2
HON / AC B18A/B Integ LS Non-VTEC	82.00mm	1mm+	-2.5	9.6:1	45	1.181" (30mm)	3.504"	X	5.394"	21mm	250	T/N	GNH820	P4-H82-N2
HON / AC B18A/B Integ LS Non-VTEC	82.00mm	1mm+	5.9	11.5:1	45	1.181" (30mm)	3.504"	X	5.394"	21mm	290	A/N	GNH8200	P4-H82-P6
HON / AC B18A/B Integ LS Non-VTEC	82.00mm	1mm+	7.5	12.2:1	45	1.181" (30mm)	3.504"	X	5.394"	21mm	257	A/N	GNH8200	P4-H82-P7
HON / AC B18A/B Integ LS Non-VTEC	83.00mm	2mm+	5.9	11.5:1	45	1.181" (30mm)	3.504"	X	5.394"	21mm	300	A/N	GNH8300	P4-H83-P6
HON / AC B18A/B Integ LS Non-VTEC	84.00mm	3mm+	-10.3	9.1:1	45	1.181" (30mm)	3.504"	R	5.394"	21mm	290	T/N	GNH8400	P4-H84-N10R
HON / AC B18A/B Integ LS Non-VTEC	84.00mm	3mm+	-2.5	10.3:1	45	1.181" (30mm)	3.504"	R	5.394"	21mm	290	T/N	GNH8400	P4-H84-N2R
HON / AC B18A/B Integ LS Non-VTEC	84.00mm	3mm+	1.4	11:1	45	1.181" (30mm)	3.504"	X/R	5.394"	21mm	275 / 317	A/N	GNH8400	P4-H84-P1/ R
HON / AC B18A/B Integ LS Non-VTEC	84.00mm	3mm+	5.5	11.9:1	45	1.181" (30mm)	3.504"	X	5.394"	21mm	319	A/N	GNH8400	P4-H84-P5
HON / AC B18A/B Integ LS Non-VTEC	84.50mm	3.5mm+	-2.5	10.4:1	45	1.181" (30mm)	3.504"	R	5.394"	21mm	290	T/N	GNH8450	P4-H845-N2R
HON / AC B18A/B Integ LS Non-VTEC	85.00mm	4mm+	-2.5	10.5:1	45	1.181" (30mm)	3.504"	R	5.394"	21mm	290	T/N	GNH8500	P4-H85-N2R
HON / AC B20 with B16A Head	84.00mm	Std.	-10.3	9.5:1	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm	295	A/N/T	GNH8400	P4-H84-N10R
HON / AC B20 with B16A Head	84.00mm	Std.	-2.5	10.8:1	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm	295	A/N/T	GNH8400	P4-H84-N2R
HON / AC B20 with B16A Head	84.00mm	Std.	1.4	11.5:1	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm	285	A/N	GNH8400	P4-H84-P1
HON / AC B20 with B16A Head	84.00mm	Std.	5.5	12.5:1	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm	310	A/N	GNH8400	P4-H84-P5
HON / AC B20 with B16A Head	84.50mm	0.5mm +	-10.3	9.5:1	42.7	1.181" (30mm)	3.504"	X/R	5.394"	21mm	290	A/N/T	GNH8450	P4-H845-N10R
HON / AC B20 with B16A Head	84.50mm	0.5mm +	-2.5	10.9:1	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm	290	A/N/T	GNH8450	P4-H845-N2R
HON / AC B20 with B16A Head	84.50mm	0.5mm +	1.4	11.5:1	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm	306	A/N	GNH8450	P4-H845-P1
HON / AC B20 with B16A Head	84.50mm	0.5mm +	5.5	12.5:1	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm	310	A/N	GNH8450	P4-H845-P5
HON / AC B20 with B16A Head	85.00mm	1 mm +	-10.3	9.5:1	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm	275	A/N/T	GNH8500	P4-H85-N10R
HON / AC B20 with B16A Head	85.00mm	1 mm +	-2.5	11.0:1	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm	275	A/N/T	GNH8500	P4-H85-N2R
HON / AC B20 with B16A Head	85.00mm	1 mm +	1.4	11.5:1	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm	318	A/N	GNH8500	P4-H85-P1
HON / AC B20 with B16A Head	85.00mm	1 mm +	5.5	12.5:1	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm	318	A/N	GNH8500	P4-H85-P5
HON / AC B20 with B16A Head	85.00mm	1 mm +	8	13.5:1	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm	322	A/N	GNH8500	P4-H85-P8
HON / AC B20 with B16A Head	86.00mm	2mm+	1.4	11.5:1	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm	318	A/N	GNH8600	P4-H86-P1
HON / AC B20 with B16A Head	86.00mm	2 mm+	4.5	12.7:1	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm	290	A/N	GNH8600	P4-H86-P4
HON / AC B20 with B16A Head	86.00mm	2 mm +	8	13.5:1	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm	322	A/N	GNH8600	P4-H86-P8
HON / AC B20 with B16A Head	86.50mm	2.50 mm +	8	13.5:1	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm	322	A/N	GNH8650	P4-H8650-P8

RODS								
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT
HONDA B20B B18A/B	Forged 4340 Alloy	H Beam	137mm	21mm Full Float	22.60mm Tapered	48.00mm	23.70mm	520.6
PART NUMBER								
CR-HB20B-H137								

HEAD GASKETS			
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)
HONDA B18A/B VTEC	MLS	82mm	.85mm
HONDA B18A/B VTEC	MLS	83mm	.85mm
HONDA B18A/B VTEC	MLS	84mm	.85mm
HONDA B18A/B VTEC	MLS	85mm	.85mm
HONDA B20B4/Z2	MLS	85mm	.85mm

ZC DOHC



D16A9 DOHC



HONDA ZC / D16A1 / D16A9 DOHC								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Integra 88-89	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	30.5mm(+0.5)	6.57mm	105.40mm	HIVN-1005	27.5mm(+0.5)	6.55mm	104.60mm	HEVN-1005

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)	Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	lbs./mm
SPR-EC30275 - ZC	26.60	19.60	SINGLE		65 @ 33.8	135 @ 10	11.60	7.00

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-H6.6-I	EXHAUST: VS-H6.6-E
VALVE LOCK	KPR-6.6/LS	
BLOCK GUARD	BG-162C / BG-D16A1	

F22A



HONDA F22A 2.2 Its SOHC Non-VTEC								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Accord - Prelude 92-96	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.00mm(+1) Dish	5.48mm	112.00mm	HIVN-F22A-1	30.00mm(+1)	5.45mm	123.50mm	HEVN-F22A-BM
	37.00mm(+3) Flat			HIVN-F22A-BM				

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)	Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	lbs./mm
SPRK-F22AB	23.70	16.20	SINGLE Intake		74 @ 41	171 @ 10.0	12.70	9.90
	23.70	16.20	SINGLE exhaust		74 @ 41	171 @ 10.0	12.70	9.90

H22A VTEC



HONDA H22A 2.2 Its VTEC								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Prelude 93-00	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.00mm(std) Dish	5.48mm	106.85mm	HIVN-1006D	30.00mm(std) Dish	5.45mm	106.45mm	HEVN-1006D
	35.00mm(std) Flat			HIVN-1006F	30.00mm(std) Dish			HEVN-1006F
	35.5mm(+0.5)			HIVN-1007	30.0mm(std) Flat			HEVI-1006F
	36.00mm(+1.0)			HIVN-1008	30.5mm(+0.5)			HEVN-1007
	37.00mm(+2.0)			HIVC-1009	31.00mm(+1.0)			HEVI-1008

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)	Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	lbs./mm
SPR-H1000D	29.65	21.85	20.50	15.50	80 @ 35.5	223 @ 12.5	14.80	11.50
SPR-H1005D	29.65	21.85	20.50	15.50	93 @ 35.5	239 @ 12.5	14.80	11.50

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-HB55-I (STD) / GDE-HB55-I-OS1 (+.001" Oversize)	EXHAUST: GDE-HB55-E (STD) / GDE-HB55-E-OS1 (+.001" Oversize)
VALVE SEALS	INTAKE: VS-H5.5-I	EXHAUST: VS-H5.5-E
VALVE LOCK	KPR-5.5/7A-ST	
BLOCK GUARD	BG-H22A	



H23A DOHC NON VTEC



HONDA H23A DOHC Non-VTEC							
H23	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	35.00mm (+1.0)	6.58mm	103.50mm	HIVN-1042D	30.00mm (+1.0)	6.54mm	102.70mm

ENGINE COMPONENTS	
VALVE SPRINGS	PLEASE CALL
VALVE GUIDES	INTAKE: GDE-H66-I EXHAUST: GDE-H66-E

NSX C32B



HONDA / ACURA NSX 3.2 Its 24V DOHC							
	INTAKE VALVE			EXHAUST VALVE			Part Number
Acura NSX C32B	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	36.00mm (std)	5.48mm	112.15mm	HIVN-NSX/C1	30.00mm(std)	5.45mm	111.00mm
	37.00MM (+1)			HIVN-NSX/ 2			
							HEVI-NSX/C1

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-H1000D-NSX	29.70	21.90	20.50	15.50	67 @ 36.4	205 @ 12	15.70	20.70	11.50
SPR-H1005D-NSX	29.65	21.85	20.50	15.50	80 @ 36.4	234 @ 12	15.70	20.70	11.50

ENGINE COMPONENTS	
VALVE GUIDES	INTAKE: GDE-HNSX-I EXHAUST: GDE-HNSX-E
VALVE SEALS	INTAKE: VS-H5.5-I EXHAUST: VS-H5.5E
VALVE LOCK	KPR-5.5/7A-ST

J32



J30



HONDA / ACURA J30 / J32 - V6 SOHC VTEC							
F23A1- J30 - J32 - J35A	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	34.00mm	5.48mm	114.7mm	HIVN-3234	28.00mm	5.45mm	117.70mm

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-H1003S-J32	23.70	16.20	SINGLE		62 @ 42	161 @ 10.0	12.30	27.60	9.90

ENGINE COMPONENTS	
VALVE LOCK	KPR-5.5/7A-ST

J35 SOHC VTEC



HONDA / ACURA J35 - V6 SOHC VTEC							
F23A1- J30 - J32 - J35A	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	36.00mm	5.48mm	116.9	HIVN-3536	30.00mm	5.45mm	114.2

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-H1003S-J32	23.70	16.20	SINGLE		62 @ 42	161 @ 10.0	12.30	27.60	9.90

ENGINE COMPONENTS	
VALVE LOCK	KPR-5.5/7A-ST

LEA



HONDA CR-Z 1.5L LEA/ L15A 4 cyl. 16v							
Honda Fit / Hybrid CR-Z 2011	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	28.00 (std)	5.48mm	118.85	HIVN-1050	23.00mm(std)	5.46mm	117.55mm

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D.(mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-H2416	24.00	16.50	SINGLE		Int: 61@40.20	164@10	15.3	24.90	9.90	RET-H2416 + SEAT-A2416-IN
					Exh:56@40.60	160@10	15.8			RET-H2416 + SEAT-A2416-EX

ENGINE COMPONENTS	
VALVE SEALS	INTAKE: VS-H5.5I EXHAUST: VS-H5.5E
VALVE LOCK	Factory 6 degree Keepers

R18 SOHC I-VTEC



HONDA R18A SOHC I-VTEC							
Civic / 2006+	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	32.00mm (std)	5.48mm	116.7	HIVN-1018	26.00mm(std)	5.45mm	115.95mm
					27.00mm (+1)		HEVI-1102

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-H1003S-R18	23.70	16.30	SINGLE		68 @ 41.15	167 @ 10	14.20	27.30	9.90

ENGINE COMPONENTS	
VALVE SEALS	INTAKE: VS-H5.5I EXHAUST: VS-H5.5E

G4KF



THETA L4



Hyundai Genesis 2.0L 16v Turbo G4KF Theta L4							
Hyundai Sonata 2010 / Genesis coupe 2010	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	35.00mm (std)	5.47mm	113.25mm	MIVN-1017	29.00mm (std)	5.46mm	105.9mm
	36.00mm (+1.0)			MIVN-1019	30.00mm (+1)		MEVI-1017

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-HY1015-S	27.50	20.00	SINGLE		57 @ 34.8	144 @ 10	14.50	20.70	7.00
SPR-HY1012-D	27.50	20.00	20.00	15.20	75 @ 34.50	170 @ 10	14.50	20.00	9.60
SPR-HY1015-2	27.50	20.00	20.00	15.20	75 @ 35.30	196 @ 10	14.50	20.70	12.10
SPR-HY1015-3	27.50	20.00	20.00	15.20	85 @ 34.50	211 @ 10	13.80	20.70	12.10
SPR-M1012/EX1-BE (Beehive)	27.70	19.70	23.20	15.20	77 @ 34.5	192 @ 11.5	13.00	21.50	10.00

ENGINE COMPONENTS	
VALVE GUIDES	INTAKE: GDE-MEVOX-OS (oversized) EXHAUST: GDE-MEVOX-OS (oversized)
VALVE SEALS	INTAKE & EXHAUST: VSI-M5.5V



GENESIS 3.8L



Hyundai Genesis 3.8L 24v										
SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-H1002D-HY	29.05	21.85	20.50	15.50	76 @ 34.30	184 @ 10	13.00	19.50	10.00	RET-K20A2/T2 + VS1-D5.5E + SEAT-DUR/1 + SS-3043

DELTA



Lancia Delta Integrale 2.0 16v Turbo / Alfa Romeo 155 Q4 16v Turbo								
1988 - 1995	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length		Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	34.40mm (std)	6.98mm	128.80mm	LIVN-1001	28.4mm	6.97mm	125.5mm	LEVI-1001

B6 DOHC



MAZDA MIATA 1.6 Its DOHC B6								
Miata / MX 5 90-93	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	31.00mm (Std)	5.96mm	105.35mm	MAIVN-1100(hi flo)	5.94mm	105.35mm	105.35mm	MAEVN-1100
	32.00mm (+1.0)			MAIVN-1102 (hi flo)				MAEVN-1102
	31.00mm (Std)			MAIVN-1100-2 (Std Flow)				

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-MM165	27.50	20.00	SINGLE	15.20	65 @ 33.6	158 @ 10	12.90	20.70	9.40	RET-TS60/MA2 + SEAT-TS/MA18I
SPR-MM16D2	27.50	20.00			74 @ 35	195 @ 10	14.30	20.70	12.10	RET-TS60/MA2 + SEAT-TS/MA18E

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-TSGI	
CAM FOLLOWERS	CF-30/16LC	To be use with 5.5mm Lash Caps installed on the CF inner post.
VALVE GUIDE	INTAKE & EXHAUST: GDE-MA16-IE	
EXHAUST: VS-TSGE		

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	PISTON PART NUMBER
MAZDA Miata 1.6 It B6 DOHC	78.50mm	0.5mm+	-11	8.8:1	36	32mm	3.287"	I R	5.236"	20mm	353	T/N	P4-MA7850-N10
MAZDA Miata 1.6 It B6 DOHC	79mm	1mm+	-11	8.8:1	36	32mm	3.287"	I R	5.236"	20mm	260	T/N	P4-MA790-N10
MAZDA Miata 1.6 It B6 DOHC	79mm	1mm+	-1	10.6:1	36	32mm	3.287"	I R	5.236"	20mm	258	T/N	P4-MA790-N1

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
MAZDA Miata 1.6 / 1.8L	Forged 4340 Alloy	H Beam	133mm	20mm Full Float	21.85mm Straight	48.00mm	21.85mm	531.9	CR-MMX5-H133
Note: (Gasket + Deck height 0.043")									

1.8 MIATA BP



MAZDA MIATA 1.8 lts DOHC "BP" / Ford Escort GT									
Miata / MX 5 Protégé 90-05 Ford Escort GT 91-96	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number	
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel	
	33.00mm(std)	5.97mm	102mm	MAIVN-1204 (hi flo)	28.00mm (std)	5.94mm	102mm	MAEVN-1204	
	33.00mm(std)			MAIVN-1208(std flo)	28.00mm (std)			MAEVI-1204	
	34.00mm(+1.0)			MAIVN-1206(hi flo)	29.00mm (+1.0)			MAEVN-1206	
					29.00mm (+1.0)			MAEVI-1206	

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-MM18S	27.50	20.00	SINGLE		63 @ 33.6	157 @ 10	12.90	20.70	9.40	RET-TS60/MA2 + (16) SEAT-TS/MA18I (use '96 + Cotters)
SPR-1012-M18D	27.50	20.00	20.00	15.20	75 @ 33.6	170 @ 10	12.90	20.00	9.60	RET-TS60/MA2 + (16) SEAT-TS/MA18I (use '96 + Cotters)
SPR-MM18D	27.50	20.00	20.00	15.20	85 @ 33.6	205 @ 10	12.90	20.70	12.10	RET-TS60/MA2 + (16) SEAT-TS/MA18I (use '96 + Cotters)

ENGINE COMPONENTS			
VALVE SEALS	INTAKE: VS-TS6I		EXHAUST: VS-TS6E
CAM FOLLOWERS	CF-30/16LC	To be use with 5.5mm Lash Caps installed on the CF inner post.	
VALVE GUIDE	INTAKE: GDE-MA18-I		EXHAUST: GDE-MA18-E

PISTONS																
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER		
MAZDA Miata 1.8 Its / "BP" Engine	83.50mm	0.5mm+	-4	8.6:1	50	1.201" (30.5mm)	3.346"	I R	5.236"	20mm	293	T/N	GNH8350	P4-MA8350-N4		
MAZDA Miata 1.8 Its / "BP" Engine	83.50mm	0.5mm+	2.5	9.5:1	50	1.201" (30.5mm)	3.346"	I R	5.236"	20mm	311	T/N	GNH8350	P4-MA8350-P2		
MAZDA Miata 1.8 Its / "BP" Engine	83.50mm	0.5mm+	10.5	11:1	50	1.201" (30.5mm)	3.346"	I R	5.236"	20mm	320	A/N	GNH8350	P4-MA8350-P10		
MAZDA Miata 1.8 Its / "BP" Engine	84mm	1 mm+	-4	8.7:1	50	1.201" (30.5mm)	3.346"	I R	5.236"	20mm	296	T/N	GNH8400	P4-MA84-N4		
MAZDA Miata 1.8 Its / "BP" Engine	84mm	1 mm+	-4	9:1	50	1.208" (30.7mm)	3.346"	I R	5.236"	20mm	317	T/N	GNH8400	P4-MA84-CR9		
MAZDA Miata 1.8 Its / "BP" Engine	84mm	1 mm+	2.5	9.5:1	50	1.201" (30.5mm)	3.346"	I R	5.236"	20mm	317	T/N	GNH8400	P4-MA84-P2		
MAZDA Miata 1.8 Its / "BP" Engine	84mm	1 mm+	10.5	11:1	50	1.201" (30.5mm)	3.346"	I R	5.236"	20mm	CALL	A/N	GNH8400	P4-MA84-P10		
MAZDA Miata 1.8 Its / "BP" Engine	85mm	2 mm+	-3.5	9:1	50	1.201" (30.5mm)	3.346"	I R	5.236"	20mm	CALL	T/N	GMH8500	P4-MA85-N3		
MAZDA Miata 1.8 Its / "BP" Engine	85mm	2 mm+	10	11:1	50	1.201" (30.5mm)	3.346"	I R	5.236"	20mm	CALL	A/N	GNH8500	P4-MA85-P10		
MAZDA Miata 1.8 Its / "BP" Engine	83.50mm	2.5mm+	-3.5	9:1	50	1.201" (30.5mm)	3.346"	I R	5.236"	20mm	CALL	T/N	SWM31071-2	P4-MA855-N3		
MAZDA Miata 1.8 Its / "BP" Engine	85.50mm	2.5mm+	8.8	11:1	50	1.201" (30.5mm)	3.346"	I R	5.236"	20mm	CALL	A/N	GNH8550	P4-MA855-P8		
MAZDA Miata MX5 Skyactive 2.0L	83.50mm	STD	15	13:1	std	.996" (25.3mm)	3.590"	I X	5.236"	21mm	CALL	T/N	GNH8350	P4-MX835-ND2		

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
MAZDA Miata 1.6 / 1.8L	Forged 4340 Alloy	H Beam	133mm	20mm Full Float	21.85mm Straight	48.00mm	21.85mm	531.9	CR-MMX5-H133

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
MAZDA Miata 1.8 Its / "BP"	MLS	85mm	1mm	HG-MM18BP-85-1T

PROBE



PROTEGE



MAZDA PROTÉGÉ / MX6 2.0Its FS / Ford Probe								
Protégé / MX6 626 (1993-2003)	INTAKE VALVE			Part Number		EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided		Head Diam	Stem. Diam	Length
	32.50mm (+1)	5.97mm	89.9mm	MAIVN-2002		28.6mm(+1)	5.96mm	89.9
				MAEVI-2002		28.6mm(+1)		

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-MP20S	25.00	18.00	SINGLE		58 @ 34.8	142 @ 11	13.80	21.00	7.60	RET-2500/T1 + Factory seat
SPR-TC25D/MP	25.00	18.00	18.00	13.00	85 @ 34.8	223 @ 11	13.80	21.00/ 17.00	12.60	RET-2500/T1 + Spring base SS-3012 + Oil Seal VS-T65M (requires some machining of guide)

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-TS6I / For Dual Spring Smaller diam.: VS-T65M (requires machining of guide tip)	EXHAUST: VS-TS6E / For Dual Spring Smaller diam.: VS-T65M (requires machining of guide tip)
VALVE GUIDE	INTAKE: GDE-MA20FS to be used w/ VS-T65M	EXHAUST: GDE-MA20FS to be used w/ VS-T65M
CAM FOLLOWERS	OEM shim on top (aprox 17mm thick) (optional CF-30/15.SLC+LC-55)	

DURATEC 2.0L



SCAN ME

DURATEC 2.3L



SCAN ME

DURATEC 2.5L



SCAN ME

MAZDA MZR / FORD Duratec 2.0 - 2.3 - 2.5 lts								
	INTAKE VALVE			EXHAUST VALVE				Part Number
Focus / Mazda 3	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.00mm (std) Flat	5.48 mm	103.40mm (std)	MAIVN-2301F or D	30.00mm (std) Dish	5.48mm	104.70 mm	MAEYN-2301D
	36.00mm (+1.0) dish			MAIVN-2304D	30.00mm (std) Flat			MAEYN-2301F
	36.00mm (+1.0) Flat			MAIVN-2304F	31.00mm (+1.0)Flat			MAEYN-2304F
	37.50mm (+2.5) Dish			MAIVN-2308D	31.00mm (+1.0) dish			MAEVI-2304 *
					32.00mm (+2.0) dish			MAEVI-2306 *
Mazdaspeed 3 (Turbo) 6mm stem	35.00mm (std) Dish	5.97mm (5.5mm tip)	103.40mm	MAIVN-2301D-6MM	30.00mm(Std) Dish	5.97mm (5.5mm tip)		MAEVI-2301D-6MM
36.00mm (+1.0) dish	MAIVN-2304D-6MM (chrmm)			31.00mm (+1.0) Dish	MAEVI-2304D-6MM			

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-TS/DUR-D5	27.50	20.00	SINGLE		55 @ 35.00	150 @ 10	14.30	20.70	9.60
SPR-TS/DUR-D2	27.50	20.00	20.00	15.20	70 @ 36.20	190 @ 10	13.00	20.70	12.10
SPR-TS/DUR-D1	27.50	20.00	20.00	15.20	83 @ 35.00	208 @ 10	12.50	20.70	12.10
SPR-FE20BE (Conical)	24.30	17.50	21.20	14.40	67 @ 37.9	144 @ 10	12.80	23.20	7.70
SPR-FE20BE -2 (Conical)	24.00	17.20	21.00	14.20	78 @ 37.9	150 @ 10	12.00	23.00	7.25
SPR-TS/DUR-BE0 (Beehive)	27.70	19.70	23.20	15.20	60 @ 35.5	164 @ 10	13.00	21.80	10.40
SPR-TS/DUR-BE1 (Beehive)	27.70	19.70	23.20	15.20	70 @ 35.5	197 @ 10	12.50	21.80	12.70
SPR-TS/DUR-BE2 (Beehive)	27.70	19.70	23.20	15.20	82 @ 34.5	209 @ 10	11.75	21.80	12.70

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VSI-D5.5E	EXHAUST: VSI-D5.5E
VALVE KEEPERS	OEM or KPR-5.5/7A-ST	
VALVE GUIDES (5.5mm)	INTAKE AND EXHAUST: GDE-DUR16 for 5.5mm valves only.	
VALVE GUIDES (6mm)	INTAKE AND EXHAUST: GDE-DUR16-6MM for 6mm valves only - Use factory valve stem seal	
CAM FOLLOWERS	CF-31/2.5+ (+ shims / to be use with 1mm shorter valves)	

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
FORD DURATEC 2.0L	Forged 4340 Alloy	H Beam	146.25mm	21mm Full Float	18.90mm Straight	50.03mm	21.80mm	541.8	CR-FDUR20-H146.25
FORD DURATEC 2.3L	Forged 4340 Alloy	H Beam	154.80mm	21mm Full Float	18.90mm Straight	53.03mm	21.82mm	552.9	CR-FDUR23-H154.8
MAZDASPEED MZR 2.3L	Forged 4340 Alloy	H Beam	150.70mm	22.50mm Full Float	21.82mm Straight	50.02mm	21.82mm	580.9	CR-MZR23T-H150.7

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
Mazda MZR 2.0/2.3L	MLS	89mm	0.55mm	HG-MMZR20-89-0.55T
Mazda MZR 2.0/2.3L	MLS	89mm	0.75mm	HG-MMZR20-89-0.75T
Mazda MZR 2.0/2.3L	MLS	89mm	1mm	HG-MMZR20-89-1.00T
Mazda MZR 2.0/2.3L	MLS	89mm	1.30mm	HG-MMZR20-89-1.3T
Mazda MZR 2.0/2.3L	MLS	90mm	0.75mm	HG-MMZR20-90-0.75T

R53



SCAN ME



MINI COOPER R53 W11 2002-2007 + 1.6 lts								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Mini Cooper S R53 (Tritec engine)	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	30.20mm (STD)	5.94mm	109.58mm	MCIVN-1004T	23.20mm (STD)	5.92mm	118.37mm	MCEVN-1004T
	30.70mm (+0.5)			MCIVN-1005S	24.20mm (+1.0)			MCEVI-1007FS
	32.0mm (+1.8)			MCIVN-1008T	25.2mm (+2.3)			MCEVN-1010FT
	32.0mm (+1.8)			MCIVN-1008S *	25.2mm (+2.3)			MCEVN-1010FS
	SINGLE GROOVE VALVES CAN NOT BE USE WITH OEM RETAINERS			TO USE OEM SPRINGS USE OUR RET-MCS3-ST	25.50mm (+2.3)			MCEVI-1010FS
				27.00mm (+3.8)	MCEVI-1012S			

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-TS1015/MC (Triple groove)	27.50	20.00	20.00	15.20	76 @ 34.8	198 @ 10	14.00	20.70	12.10
SPR-TS1015/MC-2 (single groove)	27.50	20.00	20.00	15.20	76 @34.8	198 @ 10	14.00	20.70	12.10
SPR-EC3025D/MC (single groove only)	26.60	19.60	19.40	14.20	70 @ 34.2	202 @ 10	14.10	20.70	12.80
SPR-EC3027D/MC (1 groove only) DR	26.60	19.60	19.40	14.20	95 @ 34.2	202 @ 10	14.10	20.70	11.30
SPR-HM1007BE/MC (triple groove va	28.00	18.80	24.20	14.20	75 @ 39	203 @ 10	16.20	22.80	12.80
SPR-HM1007BE/MC2 (single groove	28.00	18.80	24.20	14.20	75 @ 39	203 @ 10	16.20	22.80	12.80

ENGINE COMPONENTS									
VALVE GUIDE	GDE-MIN-R53 (in & Ex)								
VALVE SEALS	INTAKE: VSI-M6E					EXHAUST : VSI-M6E			

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER
MINI COOPER R53 1.6L 16v Turbo	77.50mm	0.50mm+	STD -1	8.3:1	33	26.50mm	85.8mm	R	STD	21mm	211	T/N	GNH7750
MINI COOPER R53 1.6L 16v Turbo	78mm	1mm+	STD -1	8.3:1	33	26.50mm	85.8mm	R	STD	21mm	215	T/N	GNH7800

R56 N14 JCW



SCAN ME

R56 N14 S



SCAN ME

R56 N18 JCW



SCAN ME

R56 N18 S



SCAN ME

MINI COOPER R56 2007-2012 - PRINCE ENGINE 1.6L (Peugeot EP6 207GT/308GT/408 - Citroen C4/ DS3 w/ THP150 /175 engine)									
Mini Cooper N14 R56 / JCW	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number	
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel	
	28.8mm (std)	4.96mm	105.80mm	MCIVN-1200S	26.2mm	4.95mm (sodium filled)	110.15mm	MCEVI-1200-HS	
	29.8mm (+1mm)			MCIVN-1201S	27.00 (+0.8mm)			MCEVI-1202-HS	
	30mm (1.2mm)			5.5mm tapered tip	MCIVN-1205-S.5	27.00 (+0.8mm)		5.5mm Tapped tip	MCEVI-1202S
Mini Cooper N18 R56 JCW 2011+	29.8mm (std)	4.96mm		95.00mm	MCIVN-1301S	26.2mm		4.95mm (sodium filled)	MCEVI-1200-HS

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-MC56BE (single beehive)	23.50	16.50	19.30	12.30	70 @33.6	163 @10	11.40	22.20	9.70

ENGINE COMPONENTS									
VALVE GUIDES	INTAKE AND EXHAUST: GDE-MIN-R56-STD / GDE-MIN-R56-OS (+0.038mm - .0015")								
VALVE SEALS	INTAKE & EXHAUST: VSI-MIN-R56								
VALVE LOCKS	KPR-5.0-7S								

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER
MINI COOPER R56 N18 1.6L 16v Turb	77mm	STD	STD	10.5:1	37.60	28.70mm	85.8mm	X	5.454"	20mm	260	T/N	GNH7700
MINI COOPER R56 N18 1.6L 16v Turb	77.50mm	0.50mm +	STD	10.5:1	37.60	28.70mm	85.8mm	X	5.454"	20mm	264	T/N	GNH7750
MINI COOPER R56 N18 JCW 1.6L 16v	77mm	STD	STD	10	37.60	27.50mm	85.8mm	X	5.454"	20mm	245	T/N	GNH7700
MINI COOPER R56 N18 JCW 1.6L 16v	77.50mm	0.50mm +	STD	10	37.60	27.50mm	85.8mm	X	5.454"	20mm	251	T/N	GNH7750
MINI COOPER R56 N14/N18 1.6L 16v	77mm	STD	S.5-	9.5:1	37.60	28.50mm	85.8mm	X	5.454"	20mm	259	T/N	GNH7700
MINI COOPER R56 N14/N18 1.6L 16v	77.50mm	0.50mm +	S.5-	9.5:1	37.60	28.50mm	85.8mm	X	5.454"	20mm	264	T/N	GNH7750

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
MINI COOPER R56	Forged 4340 Alloy	H Beam	138.54mm	20mm Full Float	20mm	48mm	20.88mm	472	CR-MINR56-H138.54

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
MINI COOPER R56	MLS	78.50mm	0.90mm	HG-MCR56-78-0.9T

B48



SCAN ME

MINI COOPER/ BMW B48 2.0L									
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number	
MINI Cooper 2015+ Turbo	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam		Stem. Diam	Length	Black Nitrided / Inconel
	30.10 (std)	4.96mm	99.50mm	MCIVN-1400T	28.5mm(std)		5.95mm (sodium filled)	100.1mm	MCEVI-1400T
	30.10 (stds)			28.5mm(std)		MCEVI-1400S			
	31.10 (+1)			28.5mm(std)		MCEVI-1400S-HS			
				29.50 (+1)		MCEVI-1401S-HS			



4G63



MITSUBISHI 4G63 2.0 Lts DOHC TURBO								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Eclipse / Talon Lancer EVO	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	34.00mm (std)	6.57mm	109.6mm	MIVN-1007	30.5mm (std)	6.54mm	109.6mm	MEVN-1007
	34.5mm (+0.5)			MIVN-1008	31.00mm (+0.5)			MEVN-1008
	35.00mm (+1)			MIVN-1009	31.5mm(+1.0)			MEVN-1009
	36.00mm(+2.0)			MIVN-1010	30.5mm (std)			MEVI-1007
				31.00mm (+0.5)			MEVI-1008	
				31.5mm(+1.0)			MEVI-1009	
				32.5mm(+2.0)			MEVI-1010	
				31.5mm (+1.0)	6.54mm (Sodium Filled)	109.6mm	MEVI-1009-HS	

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-M1007S	28.10	20.00	SINGLE		76 @ 39.6	200 @ 11.5	14.90	24.70	10.50	RET-M65/T1 + Factory seat
SPR-M1005D	28.10	20.00	20.00	15.20	80 @39.6	200 @ 11.5	16.00	23.50	10.50	RET-M65/T1 + SEAT-M1007D + valve seal VS-H6.6 *
SPR-M1007D	28.10	20.00	20.00	15.20	92 @39.6	235 @ 11.5	14.90	24.70	12.50	RET-M65/T1 + SEAT-M1007D + valve seal VS-H6.6 *
SPR-M1007D-2	28.10	20.00	20.00	15.20	100 @ 39	243 @ 11.5	14.30	24.70	12.50	RET-M65/TSTD + SEAT-M1007D+ valve seal VS-H6.6 *
SPR-M1007D-3	28.10	20.00	20.00	15.20	110 @ 38.1	253 @ 11.5	13.40	24.70	12.50	RET-M65/TSTD + SEAT-M1007D/FP+ valve seal VS-H6.6 *
BEEHIVE SPR-M1007BE-1	28.00	18.80	24.20	14.50	80 @ 38.6	230 @ 11.5	15.30	22.80	12.80	RET-M65-TBE + SEAT-M65BE-1
BEEHIVE SPR-M1007BE-2	28.00	18.80	24.20	14.50	98 @ 37.2	248 @ 11.5	14.00	22.80	12.80	RET-M65-TBE + SEAT-M65BE-2

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-MI66-I (+0.03mm/ .001")	EXHAUST: GDE-MI66-E (+0.03mm/ .001")
VALVE GUIDES	INTAKE: GDE-MI66-STI (standard size)	EXHAUST: GDE-MI66-STE (Standard size)
STEEL RETAINER	RET-M65 / ST	
VALVE SEALS	INTAKE: VS-H6.6-I (reduced OD diameter)	EXHAUST: VS-H6.6-E (reduced OD diameter)
VALVE SEALS	INTAKE: VS-M6.6-I	EXHAUST: VS-M6.6-E
* Some 1st Gen castings may need to use a different seat locator SEAT-M1006D due to a taller valve guide boss.		

MITSUBISHI 4G63 2.0 Lts DOHC TURBO / TITANIUM VALVES								
Eclipse / Eagle Talon Lancer EVO	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	
	36.00mm (+2)	6.57mm	108.1mm	MIVT-1010	32.00mm (+1.5)	6.54mm	108.1mm	MEVT-1009
NOTE: Needs to be used with steel Lash Caps p/n: LC-55-1.5-OD								

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1012/MI1	27.50	20.00	20.00	15.20	55 @ 36.40	151 @ 10	16.40	20.00	9.60	RET-M65/T1 +SEAT-M1007D/FP
SPR-TS1012/MI2	27.50	20.00	20.00	15.20	64 @ 35.65	160 @ 10	15.65	20.00	9.60	RET-M65/STD +SEAT-M1007D/FP
SPR-TS1015/MI3	27.50	20.00	20.00	15.20	65 @ 36.40	186 @ 10	15.70	20.70	12.10	RET-M65/T1 +SEAT-M1007D/FP
SPR-TS1015/MI4	27.50	20.00	20.00	15.20	74 @ 35.65	191 @ 10	14.95	20.70	12.10	RET-M65/STD +SEAT-M1007D/FP

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	I SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER
MITSUBISHI 4G63 1st Generation	85.50mm	0.50mm+	-9.5	9:1	47	35mm	3.465"	I R	149.98mm	21mm	299	T	GNH8550
MITSUBISHI 4G63 2nd Generation	85mm	STD	-15	8.3:1	47	35mm	3.465"	I R	149.98mm	22mm	295	T/N	GNH8550
MITSUBISHI 4G63 2nd Generation	85mm	STD	-10	9:1	47	35mm	3.465"	I R	149.98mm	22mm	300	T/N	GNH8550
MITSUBISHI 4G63 2nd Generation	85.50mm	0.50mm+	-10	9:1	47	35mm	3.465"	I R	149.98mm	22mm	303	T/N	GNH8550
MITSUBISHI 4G63 2nd Generation	85.50mm	0.50mm+	-15	8.3:1	47	35mm	3.465"	I R	149.98mm	22mm	299	T/N	GNH8550
MITSUBISHI 4G63 2nd Generation	86mm	1mm+	-15	8.3:1	47	35mm	3.465"	I R	149.98mm	22mm	318	T/N	GNH8550
MITSUBISHI 4G63 2nd Gen/ STROKE	85.50mm	0.50mm+	-20.5	8.6:1	47	35mm	100mm	I R	149.98mm	22mm	303	T/N	GNH8550

RODS								
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	PART NUMBER
MITSUBISHI 4G63	Forged 4340 Alloy	H Beam	150mm	20mm Full Float	26.36mm	48mm	26.36mm	CR-MI4G63-H150

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
MITSUBISHI 4G63 Evo 4-8	MLS	86.30mm	1.3mm	HG-MI4G63-86.3-1.3T
MITSUBISHI 4G63 Evo 4-8	MLS	86.30mm	1mm	HG-MI4G63-86.3-1T
MITSUBISHI 4G63 Evo 9	MLS	87.50mm	1mm	HG-MI4G63-9-86.3-1T

4B11 DOHC TURBO



MITSUBISHI 4B11 - 2.0 Lts DOHC TURBO							
EVO X 2007-2016	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	35.00mm (std)	5.47mm	113.25mm	MIVN-1017	29.00mm (std)	5.46mm	105.9mm
	36.00mm (+1.0)			MIVN-1019	30.00mm (+1)		

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-M1015/EX-S	27.50	20.00	SINGLE		57 @ 34.8	144 @ 10	14.50	20.70	7.00	RET-TSS.5/T1 + Factory Seat+SEAT-M1015-2
SPR-M1012/EX1-BE (Beehive)	27.70	19.70	23.20	15.20	77 @ 34.5	192 @ 11.5	13.00	21.50	10.00	RET-TSS.5/EX-BE + Factory Seat + SEAT-M1015-2
SPR-M1012/EX1	27.50	20.00	20.00	15.20	75 @ 34.50	185 @ 11.5	14.50	20.00	9.60	RET-TSS5/T1EX + Factory Seat+SEAT-M1015-2
SPR-M1012/EX2	27.50	20.00	20.00	15.20	75 @ 35.30	215 @ 11.5	14.50	20.70	12.10	RET-TSS5/T1EX + Factory Seat+SEAT-M1015-1
SPR-M1015/EX3	27.50	20.00	20.00	15.20	85 @ 34.50	228 @ 11.5	13.80	20.70	12.10	RET-TSS5/T1EX + Factory Seat+SEAT-M1015-2

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-MEVOX-OS (oversized)	EXHAUST: GDE-MEVOX-OS (oversized)
VALVE GUIDES	INTAKE - GDE-MEVOX	EXHAUST - GDE-MEVOX
VALVE SEALS	INTAKE & EXHAUST: VSI-M5.5V	
CAM FOLLOWER	5 Thicknesses to choose from: CF-32/3.10 ; CF-32/3.25 ; CF-32/3.35 ; CF-32/3.55 ; CF-32/3.70	

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	I SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER
MITSUBISHI EVO X / 4B11T	86mm	STD	4.6-	9:1	49	33.30mm	86mm	I R	143.75mm	23mm	335	T/N	GNH8600
MITSUBISHI EVO X / 4B11T	86.50mm	0.50mm+	4.6-	9:1	49	33.30mm	86mm	I R	143.75mm	23mm	342	T/N	GNH8650

HEAD GASKETS													
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER									
MITSUBISHI 4B11	MLS	87.50mm	1mm	HG-MI4B11-87.5-1T									

420A



MITSUBISHI 420A							
420A	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	35.00mm(std)	5.96mm	111.70mm	MIVN-1420	30.70mm(std)	5.95mm	110.0mm

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRT-TS1015/NE	27.50	20.00	20.00	15.20	84 @ 34.6	202 @ 24.6	13.90	20.70	12.10	RET-M60/T1 + OEM SEAT+SEAT-EC1015

ENGINE COMPONENTS										
VALVE SEALS	INTAKE: VSI-M6E					EXHAUST: VSI-M6E				

6G72 DOHC



MITSUBISHI 6G72 3.0 lts V6 DOHC 24v							
3000 GT 91-98	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	35.5mm (0.5)	6.57mm	106.35mm	MIVN-1011	31.00mm (+0.5)	6.54mm	105.5
	36.00mm (1.0)			MIVN-1012	31.00mm (+0.5)		
					31.5mm(+1.0)		

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6G72 V6 SOHC



MITSUBISHI 6G72 3.0 Its V6 SOHC 24v / Eclipse 00-05 Montero 95-03

ENGINE COMPONENTS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-M2521/T1	26.40	19.30	19.30mm	14.50mm	75 @ 41.36	178 @ 10	16.60	24.70	10.00
					RET-M2521/T1 + SEAT-TS-SUB4				

SR20DE



SR20DET



NISSAN SR20 DE / DET 2.0 Lts DOHC							
SX / NX Sentra / G20 91-98	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	34.15mm (std)	5.97mm	101.40mm	NIVN-1005	30.65mm(+0.5)	5.94mm (DE)	102.40mm
	34.65mm (+0.5)			NIVN-1006			
91-98	35.15mm (+1.0)			NIVN-1007	30.15mm(std)	6.94 mm (DET)	102.40mm
					31.15(+1.0)		

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-H10215/SR20	30.00	21.80	SINGLE		68 @ 40.5	160 @ 10.0	15.00	22.70	9.30
SPR-H1022D/SR20	30.00	21.80	20.50	15.50	90 @ 40.5	202 @ 10.0	16.00	19.50	11.20
SPR-H1021D/SR20	30.00	21.80	21.30	15.50	106 @ 40.5	238 @ 10.0	15.50	25.00	13.20
					RET-NSR20/T1 + Factory Seat				
					X20/T1 + SEAT-SR20/G + SEAT-H/N240				
					Keep OEM Seat				
					X20/T1 + SEAT-SR20/G + SEAT-H/N240				
					Keep OEM Seat				

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-NSR6-I	EXHAUST: GDE-NSR6-E
		EXHAUST: GDE-NSR6-ET (7mm to 6mm Guide conversion - Use Seal VS-N6E)
		EXHAUST: GDE-NSR7-ET (Use Seal VS-N7E)
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E for the DE / VS-N7E for the DET
VALVE LOCK	KPR-6N-6-ST	

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	PISTON PART NUMBER
NISSAN SR20DET	86.50mm	0.50mm +	10 -	9:1	46	32mm	3.386"	I R	5.366"	22mm	303	T/N	GNH8650
NISSAN SR20DET	87mm	1mm +	10 -	9:1	46	32mm	3.386"	I R	5.366"	22mm	306	T/N	GNH8700
NISSAN SR20DET	87.50mm	1mm +	10 -	9:1	46	32mm	3.386"	I R	5.366"	22mm	307	T/N	GNH8750

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
NISSAN SR20DET	Forged 4340 Alloy	H Beam	136.25mm	22mm Full Float	23.60mm	51mm	22.75mm	550.3	CR-NSR20-H136.5

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
NISSAN SR20 VVL (w/ 1 Oil Hole)	MLS	87.50mm	1mm	HG-NSR20-87.5-1T-VVL
NISSAN SR20 FWD (No Extra Oil Hole)	MLS	88.50mm	0.85mm	HG-NSR20-88.5-0.85T-FWD
NISSAN SR20 RWD (W/ 2 Oil Hole)	MLS	88.50mm	1mm	HG-NSR20-88.5-1T-RWD

SR20 VE P12 DOHC



NISSAN SR20 VE 2.0 Lts DOHC (P11 - 6mm valve stem)							
SR20-VE P11	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	34.15mm(std)	5.97mm	99.70mm	NIVN-1005-VE	29.15mm(std)	5.97mm	100.5mm
	35.15mm(+1)			NIVN-1007-VE			
	36.00mm(+1.85)			NIVC-1008-VE	31.50mm(+2.35)		

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-2035-2022	30.00	21.80	20.50	15.50	83 @ 37.5	180 @ 10	17.40	17.4/ 19	9.40
SPR-H1022D-VE	30.00	21.80	20.50	15.50	115 @ 37.5	227 @ 10	15.70	19.5 / 15.7	11.20
SPR-H1021D-VE	30.00	21.80	21.30	15.50	138 @ 37.5	270 @ 10	13.50	22.7/ 19.5	13.20
					RET-NSR20/T1 (+ Factory Seat not included)				
					RET-NSR20/T1 (+ Factory Seat not included)				

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-NSR6-I	EXHAUST: GDE-NSR6-E
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
VALVE LOCK	KPR-6N-6-ST	
INNER SPRING SEAT LOCATOR	SEAT-SR20/6	

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	PISTON PART NUMBER
NISSAN SR20VE	86.50mm	0.50mm +	10 -	9.5:1	42	32mm	3.386"	I R	5.366"	22mm	303	T/N	GNH8650
NISSAN SR20VE	87mm	1mm +	10 -	9.6:1	42	32mm	3.386"	I R	5.366"	22mm	306	T/N	GNH8700
NISSAN SR20VE	87.50mm	1.5mm +	10 -	9.7:1	42	32mm	3.386"	I R	5.366"	22mm	307	T/N	GNH8750



SR20 VE P12 DOHC



NISSAN SR20 VE 2.0 Lts DOHC (P12 - 5.5mm valve stem)							
SR20-VE P12	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	35.15mm(+1)	5.47mm	99.7mm	NIVC-1007-VE-5.5	31.15mm(+2)	5.46mm	100.5mm
					NEVI-1007-VE-5.5		

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-2035-2022-P12	30.00	21.80	20.50	15.50	83 @ 37.5	180 @ 10	17.40	17.4/ 19	9.40
SPR-H1022D-P12	30.00	21.80	20.50	15.50	115 @ 37.5	227 @ 10	15.70	19.5 / 15.7	11.20
SPR-H1021D-P12	30.00	21.80	21.30	15.50	138 @ 37.5	270 @ 10	13.50	22.7/ 19.5	13.20
					RET-NSR20VE-T55 (+ Factory Seat not included)				
					RET-NSR20VE-T55 (+ Factory Seat not included)				

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-NSR55-I	EXHAUST: GDE-NSR55-E
VALVE SEALS	INTAKE & EXHAUST: VS-N5.5-E	
VALVE LOCK	OEM	
INNER SPRING SEAT LOCATOR	SEAT-SR20/6	

RNN14



SR20DET



NISSAN Pulsar GTI-R / RNN14 SR20DET							
Nissan Pulsar GTI-R	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	35.15mm (+1)	5.97mm	102.10mm	NIVN-1007GTIR	31.15mm(+1)	6.94mm	103mm
					NEVI-1007-7GTIR		

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-H1005D/GTIR	29.65	21.85	20.50	15.50	75 @ 38.5	190 @ 10	17 *(12mm)	20.70	11.50
					RET-NSR20/T1 + OEM seat				

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N7E
VALVE LOCK	KPR-6N-6-ST	

Note: Retainer will hit the guide at aprox 12.1mm of lift (hit the seal at 10.6mm)

280Z L28



NISSAN L28 / 280Z							
280Z 1975-1978	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	44mm (std)	7.96mm	116.65	NIVN-4405	35mm(std)	7.95mm	117.35
					Black Nitrided / Inconel		
					NEVN-3580		

VG30D DOHC



NISSAN 300 - VG30D 3.0 Its DOHC							
300 ZX 90-96	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	34.5mm(+0.5)	5.97mm	103.15mm	NIVN-1017	30.0mm(+0.5)	5.97mm	103.70mm
					Black Nitrided / Inconel		
					NEVI-1017		

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1015/2	27.50	20.00	20.00	15.20	84 @ 35	202 @ 10	12.00	20.70	12.70	RET-NVG1015/T1+ SEAT-TS1015
SPR-TS1012/2	27.50	20.00	20.00	15.20	74 @ 35	192 @ 10	12.00	20.70	12.70	RET-NVG1015/T1+ SEAT-TS1015
SPR-TS1012-BE-NCA (BEEHIVE)	27.50	19.70	23.20	15.20	75 @ 34.25	178 @ 10	12.75	21.50	10.00	RET-NVG15-75BE + OEM SHIM
SPR-TS1015-BE-NCA (BEEHIVE)	27.50	19.70	23.20	15.20	82 @ 34.25	212 @ 10	12.45	21.80	12.70	RET-NVG15-75BE + OEM SHIM

KA24DE DOHC



NISSAN 240 - KA24DE 2.4 lts DOHC								
240 SX / Altima 91- 99	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	36.60mm (std)	6.97mm	101.32mm	NIVN-1009	31.8mm (+0.5)	6.94mm	99.00mm	NEVN-1010
	37.10mm(+0.5)			NIVN-1010	32.00mm (+0.7)			NEVI-1011

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H1000D/240	29.65	21.85	20.50	15.50	96 @ 34.85	240 @ 11.80	14.00	20.70	12.80	RET-H70/T1 + SEAT-H/N240
SPR-H1000R/240	30.20	22.20	22.20	16.80	84 @ 34.85	225 @ 11.80	14.20	20.50	12.00	RET-H70/T1 + SEAT-H/N240
SPR-H1002D/240	29.05	21.85	20.50	15.50	73 @ 34.85	225 @ 11.80	15.30	19.50	10.00	RET-H70/T1 + SEAT-H/N240

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N7E	EXHAUST: VS-N7E
VALVE GUIDES	INTAKE & EXHAUST: GDE-NKA24-7-EI	
CAM FOLLOWERS	CF-34/ 3.5+ (+ shims 1.5mm to 2.7mm thick)	

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
NISSAN 240 SX	89mm	STD	-11	10.5:1	46	34mm	3.780" R	6.496"	21mm	395	A/N/T	GNH8900	P4-MI1-8550-N9
NISSAN 240 SX	89.50mm	0.50mm +	-29	8.4:1	46	34mm	3.780" R	6.496"	22mm	395	T/N	GNH8950	P4-MI2-85-N15
NISSAN 240 SX	89.50mm	0.50mm +	-27	8.6:1	46	34mm	3.780" R	6.496"	22mm	395	T/N	GNH8950	P4-MI2-85-N9
NISSAN 240 SX	89.50mm	0.50mm +	-23	9:1	46	34mm	3.780" R	6.496"	22mm	389	T/N	GNH8950	P4-MI2-8550-N9
NISSAN 240 SX	89.50mm	0.50mm +	-11	10.5:1	46	34mm	3.780" R	6.496"	22mm	389	A/N/T	GNH8950	P4-MI2-8550-N15
NISSAN 240 SX	90mm	1mm+	-27	8.6:1	46	34mm	3.780" R	6.496"	22mm	CALL	T/N	GNH9000	P4-MI2-86-N15

RB20 DOHC HYDRAULIC LIFTER



NISSAN SKYLINE RB20 24v DOHC / HYDRAULIC LIFTER								
Skyline RB20 DET 6Cyl 24v	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	31.10mm (+1.0)	5.97mm	90.7mm	NIVN-1042	27.50mm (+1.0)	5.94mm	89.90mm	NEVI-1042

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-2081/RB20	27.50	20.00	SINGLE		70 @ 32.8	156 @ 9	12.10	20.70	9.60	RET-NVG1015/T1 + SEAT SS-2820-2.2

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
CAM FOLLOWERS	Factory Hydraulic Cam Follower	
VALVE LOCK	KPR-6N-6-ST	
VALVE GUIDES	INTAKE: GDE-NSR6-I	
	EXHAUST: GDE-NSR6-E	

RB20 DOHC SOLID LIFTER CONV



NISSAN SKYLINE RB20 24v DOHC / SOLID LIFTER CONVERSION								
Skyline RB20 DET 6Cyl 24v	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	31.10mm (+1.0)	5.97mm	107.5mm	NIVN-1042-SL	27.50mm (+1.0)	5.94mm	106.7mm	NEVI-1042-SL

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-M1005/RB20	28.00	20.00	20.00	15.20	84 @ 39.50	197 @ 11	16.00	23.50	10.30	RET-NVG1015/T1+SEAT-RB25-E (24)

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
CAM FOLLOWERS	For standard Base Circle: CF-31/2.5+ SHIMS / For reduced Base Circle CF-31/3.28+ SHIM	
VALVE LOCK	KPR-6N-6-ST	
VALVE GUIDES	INTAKE: GDE-NSR6-I	
	EXHAUST: GDE-NSR6-E	

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
NISSAN RB20 2.0 lts	78.50mm	0.50mm +	-1.3	8.5:1		32mm	2.744" R	4.783"	21mm	277	T/N	GNH7850	P6-RB20/78.5-CR8.5
NISSAN RB20 2.0 lts	79mm	1mm +	-1.3	8.5:1		32mm	2.744" R	4.783"	22mm	285	T/N	GNH7900	P6-RB20/79-CR8.5



RB25 DOHC HYDRAULIC LIFTER



NISSAN SKYLINE RB25 24v DOHC / HYDRAULIC LIFTER / Does NOT fit NEO Cylinder heads								
Skyline RB25 DET 6Cyl 24v 92-01	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.15mm (+1.0)	5.97mm	86.75mm	NIVN-1052	30.65mm (+1.0)	5.94mm	89.00mm	NEVI-1052

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-10125/RB25	27.50	20.00	SINGLE		78 @ 30.6	143 @ 9	10.60	20.00	7.30	RET-NVG1015/T1 + Intake OE seat+ Exhaust SS-2820-E+OE
SPR-2081/RB25	27.50	20.00	SINGLE		85 @ 30.6	171 @ 9	9.90	20.70	9.60	RET-NVG1015/T1 + Intake OE seat+ Exhaust SS-2820-E+OE

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
CAM FOLLOWERS	Factory Hydraulic Cam Follower	
VALVE LOCK	KPR-6N-6-ST	
VALVE GUIDES	INTAKE: GDE-NSR6-I	
	EXHAUST: GDE-NSR6-E	

RB25 DOHC SOLID LIFTER CONV



NISSAN SKYLINE RB25 24v DOHC / SOLID LIFTER CONVERSION / Does NOT fit NEO Cylinder heads								
Skyline RB25 DET 6Cyl 24v 92-01	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.15mm (+1.0)	5.97mm	103.55mm	NIVN-1052-SL (tip 11.5mm)	30.65mm (+1.0)	5.94mm	105.8mm (tip 11.5mm)	NEVI-1052-SL

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-TS1015/RB25	27.50	20.00	20.00	15.20	83 @ 35.00	216 @ 11	14.30	20.70	12.10	RET-NVG1015/T1+ SEAT-RB25-(12)+SEAT-RB25-E(12)

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
CAM FOLLOWERS	For standard Base Circle: CF-31/2.5+ SHIMS / For reduced Base Circle CF-31/3.28+ SHIM	
VALVE LOCK	KPR-6N-6-ST	
VALVE GUIDES	INTAKE: GDE-NSR6-I	
	EXHAUST: GDE-NSR6-E	

RB25 DOHC SOLID LIFTER



NISSAN SKYLINE RB25 24v DOHC NEO (Solid Factory Lifter)								
Skyline RB25 DET 6Cyl 24v 1998- 2002	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.15mm (+1.0)	5.97mm	104.15mm (tip 7.5mm)	NIVN-1052-NEO	30.65mm (+1.0)	5.96mm	97.6mm (tip 4.5mm)	NEVI-1052-NEO

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-M1007BE-RB25N	28.00	18.80	24.20	14.50	78 @ 38.7	200 @ 10	15.30	22.80	12.80	RET-N55/TBE + SEAT-SS3030

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
LOCKS	Factory 5.5mm Locks (Tip tapered to 5.5mm)	
CAM FOLLOWERS	Use Factory cam followers	
VALVE GUIDES	INTAKE: GDE-NSR6-I	
	EXHAUST: GDE-NSR6-E	

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
NISSAN RB25	86.50mm	0.50mm +	15.5	9:1	64	31.50mm	2.822" R	4.783"	21mm	349	T/N	GNH8650	P6-RB25/86.5-CR9



RB26 DOHC



NISSAN SKYLINE RB26 24v DOHC								
Skyline RB26 DET 6Cyl/24v 92-01	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	34.65mm (std)	5.97mm	102.3mm	NIVN-1030	30.15mm (std)	6.94mm	101.2mm	NEVI-1030/7
	34.65mm (std)		103.80mm (tip+1.5mm)	NIVN-1030-L	30.15mm (std)		102.7mm (tip+1.5mm)	NEVI-1030/7-L
	35.65mm (+1.0)		102.3mm	NIVN-1032	31.15mm (+1.0)		101.2mm	NEVI-1032/7
	35.65mm (+1.0)		103.80mm (tip+1.5mm)	NIVN-1032-L	31.15mm (+1.0)		102.7mm (tip+1.5mm)	NEVI-1032/7-L
					31.15mm (+1.0)		101.2mm	NEVI-1032/7-HS (Sodium Filled)

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	Part Number
SPR-M1005S/RB	28.10	20.00	SINGLE		62 @ 39.9	176 @ 11	16	RET-NRB60/TS + factory seat + SS-3025
SPR-M1007S/RB	28.10	20.00	SINGLE		70 @ 40.7	188 @ 11	16.00	RET-NRB60/TS + factory seat (opt. spring shim SS-3025)
SPR-M1007D/RB	28.10	20.00	20.00	15.20	In: 92@40.7 Ex: 82 @40.7	In: 232 @11 Ex: 222 @11	15.30	RET-NRB60/TS + OEM seat + SEAT-TS1015 (Int) + SEAT-TS1015/2
SPR-TS1015/RB26	27.50	20.00	20.00	15.20	92 @ 33	225 @ 11	12.30	RET-NRB60/TS + SEAT-RB26/TS9 (no Factory seat)

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-NSR6-I	EXHAUST: GDE-NSR7-ET
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N7E
CAM FOLLOWERS	CF-31/2.78 or CF-31/3.0(STD) or CF-31/3.78 or CF-31/4.20 for reground cams or CF-31 / 3.28+, CF-31/4.80+ (+ Supertech Shims / require our Retainer RET-NRB60/TS-2 / NO OE SHIMS)	
VALVE LOCK	KPR-6N-6-ST	

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER
NISSAN RB26	86.50mm	0.50mm +	15.5	8.5:1	70	30mm	2.901"	I R	4.783"	21mm	347	T/N	GNH8650
NISSAN RB26	87mm	1mm +	15.5	8.5:1	70	30mm	2.901"	I R	4.783"	21mm	355	T/N	GNH8700

RODS							
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER (mm)	PE BORE(mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)
NISSAN RB26	Forged 4340 Alloy	H Beam	121.50mm	21mm Full Float	22.86mm	51mm	21.80mm

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
NISSAN RB26	MLS	87.50mm	1.2mm	HG-NTB48-102.5-1.2T
NISSAN RB26	MLS	87.50mm	0.90mm	HG-NTB48-102.5-0.9T

VK56DE



NISSAN 350Z / Titan 5.6Its V8 / ARMADA VK56DE								
VQ35DE/ VQ40DE 6cyl 24v / VK 56 V8 32v	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	37.15mm (std)	5.96mm	96.6mm	NIVN-1025	30.50mm (-0.8)	5.97mm	95.0mm (+1)	NEVI-1023F
	38.15mm(+1.0)			NIVN-1028	31.35mm (std)			NEVI-1025F
	38.15mm (+1.0)		99.10mm	NIVN-1028L(+2.5)	32.35mm (+1.0)		94.0mm	NEVN-1028
					32.35mm (+1.0)			NEVI-1028F
					33.35mm (+2)			NEVI-1029F-V2

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	Part Number
SPR-TS2081/N35	27.50	20.00	SINGLE		55 @ 35	150 @ 10	14.50	RET-TS5.5/T6 + Factory seat
SPR-TS1012/N35	27.50	20.00	20.00	15.20	58 @ 36	153 @ 10	16.00	RET-TS5.5/T8 + SEAT-TS1015 + Factory seat
SPR-TS1012/N35-32	27.50	20.00	20.00	15.20	58 @ 36	153 @ 10	16.00	RET-TS5.5/T8 + SEAT-TS1015 + Factory seat
SPR-TS1015/N35	27.50	20.00	20.00	15.20	82 @ 35	202 @ 10	14.50	RET-TS5.5/T6 + SEAT-TS1015 + Factory seat
SPR-TS1015/N352	27.50	20.00	20.00	15.20	70 @ 36	187 @ 10	15.50	RET-TS5.5/T8 + SEAT-TS1015 + Factory seat

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-NGE
VALVE GUIDE	INTAKE EXHAUST: GDE-NVQ35	
CAM FOLLOWERS	CF-34/ 6.5+ (+ shims)	
BLOCK GUARD	BG-VQ35DET	

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER
NISSAN 350Z VQ35	95.50mm	STD	-10	8.7:1	57	29.60mm	3.205"	I R	5.677"	22mm	370	T/N	SWN30131-0
NISSAN 350Z VQ35	96mm	.50mm +	-10	8.8:1	57	29.60mm	3.205"	I R	5.677"	22mm	370	T/N	SWN30131-2

VQ37VHR



NISSAN 370Z / V6-3.7L (VQ37VHR)								
Nissan VQ37VHR (24v)	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	37.7mm (+1.0)	5.97mm (5mm tip)	100.2mm	NIVN-1038	31.4mm (+1.0)	5.96mm (5mm tip)	94.7mm	NEVI-1038F

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	Part Number
SPRK-N370Z-1	(INTAKE)	28.00	18.80	24.20	14.50	70 @ 39.4	197 @ 10	RET-HM1007BE + RET-HSSBE-T1 + KPR-S.5/7A-ST (use OEM Shim)
	(EXHAUST)	27.70	19.70	23.20	15.20	60 @ 36.5	186 @ 10	RET-TSS.5/T1F-BE + RET-TSS.5/T1F-BE + KPR-S.5/7A-ST (use OEM Shim)

ENGINE COMPONENTS		
CAM FOLLOWERS	CF-34/ 6.5+ (+ shims)	
VALVE GUIDES	INTAKE: GDE-NSR6-I	EXHAUST: GDE-NSR6-E
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
KEEPERS	KPR-S.5-7A-ST	

CA18 DET



NISSAN CA18 DET								
CA18 DET	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	34.15mm (std)	5.97mm	88.9mm	NIVN-1001	28.15mm (std)	5.95mm	89.30mm	NEVI-1001
	35.15mm (+1mm)			NIVN-1002	29.15mm (+1mm)			NEVI-1002

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	Part Number
SPR-TS2081/NCA	27.50	20.00	SINGLE		55 @ 35	150 @ 10	13.50	RET-NVG1015/T1+OEM Seat+ Seat SS-3025
SPR-TS1012/NCA	27.50	20.00	20.00	15.20	73 @ 35	175 @ 10	15.00	RET-NVG1015/T1+OEM Seat+inner SEAT-1015/2 (optional)
SPR-TS1015/NCA	27.50	20.00	20.00	15.20	82 @ 35	207 @ 10	14.30	RET-NVG1015/T1+OEM Seat+inner SEAT-1015/2 (optional)
SPR-TS1012-BE-NCA (BEEHIVE)	27.50	19.70	23.20	15.20	75 @ 34.25	178 @10	12.75	RET-NVG15-75BE + OEM SHIM
SPR-TS1015-BE-NCA (BEEHIVE)	27.50	19.70	23.20	15.20	82 @34.25	212 @10	12.45	RET-NVG15-75BE + OEM SHIM

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
VALVE LOCK	KPR-6N-6-ST	
VALVE GUIDES	INTAKE: GDE-NSR6-I	EXHAUST: GDE-NSR6-E

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER
NISSAN CA18DET	83.50mm	.50mm +	0.90-	8.5:1	53	30mm	3.291"	I R	5.236"	20mm	292	T/N	GNH8350
NISSAN CA18DET	84mm	1mm +	0.90-	8.5:1	53	30mm	3.291"	I R	5.236"	20mm	296	T/N	GNH8400

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
NISSAN CA18DET	MLS	85mm	1.3mm	HG-NCA18-85-1.3T

TB48



NISSAN PATROL I6 / TB48 (24v)								
TB48DE	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided
	39.50mm (+1)	6.97mm (6mm tip)	100.10mm	NIVN-3970F	34.30mm (+1)	6.95mm (6mm tip)	98.30mm	NEVN-3370F
	40.00mm (+1.5)			NIVN-4070D / Flat	34.80mm (+1.5)			NEVN-3470F
	40.5mm (+2mm)			NIVT-4170F (Titanium)	35.00mm (+1.7)			NEVT-3475F (Titanium)
					35.2mm (+2)			NEVT-3570F (Titanium)

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	Part Number
SPRK-H1022S-TB48	30.0	21.8	SINGLE		55 @ 39	121 @ 10	17.0	RET-H60/T1 + SEAT-TB1020D
SPRK-M1005S-TB48	28.0	20.0	SINGLE		78 @ 38.5	180 @ 10	15.0	RET-OEM + factory seat (opt. spring shim SS-3025)
SPRK-H1021S-TB48	30.0	21.8	SINGLE		77 @ 39	167 @ 10	17.0	RET-H60/T1 + SEAT-TB1020D
SPRK-M1007S-TB48	28.1	20.0	SINGLE		88 @ 38.5	192 @ 10	14.5	RET-OEM + factory seat (opt. spring shim SS-3025)
SPRK-H1020+2024	30.0	21.8	20.20	15.50	102 @ 39	221 @ 10	16.0	RET-H60/T1 + SEAT-TB1020D

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N7I	EXHAUST: VS-N7E
CAM FOLLOWERS	CF 34/3.5+	



HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
NISSAN TB48	MLS	102.50mm	1.2mm	HG-NRB26-87-5-1.2T
NISSAN TB48	MLS	102.50mm	1.2mm	HG-NRB26-87-5-1.5T

HR15DE



NISSAN HR15DE - 1.5L 16v							
Nissan Tisa/Cuber/ Juke	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	31.15mm (std)	4.95mm	103.5mm (+1)	NIVN-1003L	25.40mm (std)	4.96mm	102.8mm (+1)

VR30DETT



NISSAN VR30DDTT 3.0 Its V6 DOHC							
Nissan Z 2022+ / Infinity Q50	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	33.5mm	5.47mm	101.6mm	NIVN-1070	28.5mm	5.46mm	97.50mm

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-FM46-BE-2	27.30	19.10	24.50	16.30	80 @ 37	217 @10	12.70	22.80	13.70

ENGINE COMPONENTS		
VALVE SEALS	INTAKE & EXHAUST: VS-N5.5-E	
VALVE LOCK	Factory Locks	

VR38DETT



NISSAN VR38DETT 3.8L V6 24v								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Nissan GT-R 2007- '11	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	37.15mm (Std)	5.96mm	95.00mm	NIVN-1060	32.15mm(Std)	5.95mm	92.00mm	NEVI-1060
	38.15mm (+1)		95.00mm	NIVN-1062	33.15mm (+1)		92.00mm	NEVI-1062
	38.15mm (+1)		94.65mm (-0.35mm)	NIVN-1062-S	33.15mm (+1)		91.70mm (-0.3mm)	NEVI-1062-S
					SODIUM FILLED EXHAUST VALVE			
					33.15mm (+1)	5.95mm (hollow)	92.00mm	NEVI-1062-HS

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPRK-TS1012/GTR Intake	27.50	20.00	20.00	15.20	62 @ 35.65	162 @ 10	15.65	20.00	10.50
SPRK-TS1012/GTR Exhaust					80 @ 34.4	182 @ 10	14.00		
SPRK-TS1015/GTR Intake					66 @ 35.65	187 @ 10	14.95		
SPRK-TS1015/ GTR Exhaust					85 @ 34.4	206 @ 10	14.00		
SPRK-TS1012/GTR-BE Intake (Beehive)	27.70	19.70	23.20	15.20	65 @ 35.7	165 @ 10	12.50	21.5	10
SPRK-TS1012/GTR-BE Exhaust (Beehive)	27.70	19.70	23.20	15.20	78 @ 34.6	178 @ 10	11.50		

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
VALVE GUIDES	INTAKE: GDE-NVR38-I-OS1 (.002" oversize)	EXHAUST: GDE NVR38-E-OS1 (.002" oversize)
CAM FOLLOWERS	CF-34/ 6.5+ (+ shims) (Minimum shim thickness to use on the Exhaust is 1.6mm). CANNOT BE USED WITH FACTORY RETAINERS (EXHAUST RETAINER).	

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
NISSAN VR38 GTR	MLS	100.50mm	0.95mm	HG-NVR38-100.5-0.95T-L (Left Side)
NISSAN VR38 GTR	MLS	100.50mm	0.95mm	HG-NVR38-100.5-0.95T-R (Right Side)
NISSAN VR38 GTR	Cooper Ring	100.50mm	1mm	HG-NVR38-100.5-1TC-L (Left Side)
NISSAN VR38 GTR	Cooper Ring	100.50mm	1mm	HG-NVR38-100.5-1TC-R (Right Side)

NISSAN VR38 GTR



C20LET



C20XE



OPEL / VAUXHALL C20XE - C20LET engine							
Calibra/Vectra/ Astra '88-96	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length		Head Diam	Stem. Diam	Length
	34mm (+1)	6.96mm	105mm	GIVN-3303F	30mm (+1)	6.95mm	105mm

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-TS1012-C20	27.50	20.00	20.00	15.20	80 @ 33.50	188 @ 10	13.90	19.60	11.80
SPR-H1002-C20	29.05	21.85	20.50	15.50	70 @ 34	177 @ 10	14.50	19.50	10.00
SPR-H1001D-C20	29.35	21.85	20.5	15.5	80 @ 34	200 @ 10	14.00	20.00	11.00

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-N7E	EXHAUST: VS-N7E
NOTE	Please advise cylinder head using due to variation in Guide OD in order to supply the correct spring seat locator (Kolbensmidt 11mm: H1020DS / Coscast 12.8mm: H1020D8)	
KEEPERS	KPR-VW7-T	
CAM FOLLOWER	CF-32/15-LC6	

Z20LET



LEH-X20XE



OPEL / VAUXHALL / GM Ecotec Z20LET / LEH - X20XE							
Opel Astra / Speedster/ Zafira	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	32.00mm (std)	5.96mm	102.15mm	GIVN-3311S	29.00mm (std)	5.95mm	92.3mm
	32.5mm (+0.5)			GIVN-3312S	29.5mm (+0.5)		
	33.0mm (+1)			GIVN-3313S	30.0mm (+1)		

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-TS1015-Z20	27.50	20.00	20.00	15.20	75 @ 35.10	195 @ 10	14.40	20.70	12.10
SPR-TS1012-Z20	27.50	20.00	20.00	15.20	64 @ 35.10	180 @ 10	15.10	20.00	9.60

ENGINE COMPONENTS		
CAM FOLLOWER	CF-32/15-LC6	
VALVE SEALS	INTAKE: VS-VBM6-I	EXHAUST: VS-VBM6-E
KEEPERS	KPR-65/7	

A18XER



Z16



Z18LER



OPEL Z16 / Z18 LER/ A18XER							
Opel Corsa VXR / Vauxhal	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	31.3mm	4.96mm	118.38mm	GIVN-3320S	27.50mm	4.95mm	113.15mm

Note: Use with Valve Locks KPR-50/75

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-MC56BE (single beehive)	23.30	16.80	18.80	12.30	62 @34.6	150 @10	11.40	22.20	9.70
SPR-TS1012-Z18	27.50	20.00	20.00	15.20	63 @ 34.3	167 @ 10	14.00	20.00	10.40

ENGINE COMPONENTS		
CAM FOLLOWER	5 Thicknesses to choose from: CF-32/3.10 ; CF-32/3.25 ; CF-32/3.35 ; CF-32/3.55 ; CF-32/3.70	
VALVE GUIDE	GDE-OP50	
VALVE SEAL	VSI-GM50-E INTAKE + EXHAUST	
VALVE LOCK	KPR-5.0-75	

TU5J4



TU5JP4



EW10J4



EW10J4S



GROUP A



XU10J4



XU10J4S



PEUGEOT								
Peu 106-206-306-307 / Citroen Saxo 16v- TU5J4 96-03	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	28.75mm	5.96mm	104.40mm	PEIVN-28065	24.50mm	5.96mm	104.40mm	PEEVI-28066
	29.75mm (+1)			PEIVN-29368	24.50mm			PEEVN-28604
Peugeot 206 TU5JP4	31.30mm	5.96mm	103.80mm	PEIVN-28603	24.50mm			PEEVN-28604
					25.50(+1)mm			PEEVN-28606
Peugeot 205 GTI Group A	41.50mm	7.97mm	108.00mm	PEIVN-70032				
Peugeot 206 / 306 EW10J4 '09+	33.30mm	5.98mm	106.20mm	PEIVN-28594	29.00mm	5.97mm	103.35mm	PEEVN-28595
Peugeot 206/307 EW10J4S	35.00mm	5.97mm	106.10mm	PEIVN-28704	31.00mm	5.95mm	102.85mm	PEEVN-28705
Peugeot 306 S16 XU10J4 '96-'03	34.60mm	6.98mm	106.40mm	PEIVN-28055F	29.60mm	6.96mm	104.90mm	PEEVN-28056F
					29.60mm	6.96mm	104.90mm	PEEVI-28056F
Peugeot 306 XU10J4RS 96-'03	34.10mm	5.97mm	106.50mm	PEIVN-28692	30.80mm	5.96mm	105.30mm	PEEVN-28693

PRINCE



PRINCE EP6



PRINCE ENGINE (Peugeot EP6 207GT/308GTi/408 - Citroen C4/ DS3 w/ THP150 /175 engine)								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	28.8mm	4.96mm	105.80mm	MCIVN-12005 (1 grve)	26.2mm	4.95mm (sodium filled)	110.15mm	MCEVI-1200-HS
	29.8mm (+1mm)			MCIVN-12015 (1 grve)	27.0mm (+0.8)			MCEVI-1202-HS
	Single groove valves - Use Lock p/n: KPR-50/75							

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-MC56BE (single beehive)	23.30	16.80	18.80	12.30	65 @33.6	163 @10	11.40	22.20	9.80	OEM RETAINER + OEM SEAT

ENGINE COMPONENTS	
VALVE GUIDES	INTAKE AND EXHAUST: GDE-MIN-R56-STD

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER
PEUGEOT 207 GTI 1.6L 16v Turbo 2007+	77mm	1mm +	STD	10.5:1		28.70mm	85.80mm	R		20mm	262	T/N	GNH7700
PEUGEOT 207 GTI 1.6L 16v Turbo 2007+	77.50mm	.50mm +	STD	10.5:1		28.70mm	85.80mm	R		20mm	267	T/N	GNH7750
													P4-MIN56-77-5-CR10.5

F4R RS



RENAULT F4R RS 2.0LTS 16V								
Renault Clio RS 2.0lts '93 - '13	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	33.5mm	5.47mm	110.05mm	RIVN-28337-2	29.00mm	5.44mm	108.9mm	REVI-28338F-2
	35mm (+1.5)			RIVN-28337-4	30.00mm (+1)			REVN-28338F-3
					30.00mm (+1)			REVI-28338F-3

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-TS1012/F4R	27.50	20.00	20.00	15.20	73@34 / 80@33.4	168 @10	13.30	20.70	9.60	RET-TS55/TSR + SEAT-F4R-IN (OEM seal)
SPRK-TS1015/F4R	27.50	20.00	20.00	15.20	89@34 / 96@33.4	204 @ 10	13.30	20.70	12.10	RET-TS55/TSR + SEAT-F4R-IN (OEM seal)

ENGINE COMPONENTS	
VALVE SEALS	USE OEM SEAL OR VSI-D5.5E



F4RT 2.0 LTS



RENAULT Megane F4RT 2.0LTS 16V								
Renault Megane 250 / 265	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	32.30mm	5.47mm	110mm	RIVN-28337-1	29.00mm	5.97mm (tip 5.5mm)	108.9mm	REVI-28338FS-2-6
	33.5mm (+1.2)			RIVN-28337-2	30.00mm (+1)			REVI-28338FS-3-6
NOTE	INTAKE VALVES USE OEM SINGLE GROOVE KEEPERS			EXHAUST VALVE USE SUPORTECH SINGLE GROOVE KEEPERS (KPR-65/7)				

F7R CLIO WILLIAMS



RENAULT CLIO F7R Clio Williams 2.0L								
Renault Clio 91 - '99	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	33mm (+0.8)	6.97mm	108.90mm	RIVN-28069	28.45mm(std)	6.97mm	110.1mm	REVN-28070

EJ20 TURBO DOHC



EJ25 TURBO DOHC



SUBARU EJ20 / EJ25 WRX / STI Turbo DOHC								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
Impreza WRX / STI	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	36mm (std)	5.96mm	104.35mm (std)	SIVN-1010	32.00mm(std)	5.96mm	104.7mm (std)	SEVN-1010
	36.50mm(+0.5)		104.35mm (std)	SIVN-1012	32.00mm(std)		104.7mm (std)	SEVI-1010
	36.50mm(+0.5)		103.85mm	SIVN-1012-2	32.50mm (+0.5)		104.20 (-0.5)mm	SEVN-1012-2
	37.00mm (+1)		104.35mm (std)	SIVN-1014	32.50mm (+0.5)		104.7mm (std)	SEVI-1012
	37.00mm (+1)		103.85mm	SIVN-1014-2	32.50mm (+0.5)		104.20 (-0.5)mm	SEVI-1012-2
					33.00mm(+1.0)		104.20 (-0.5)mm	SEVN-1014-2
				33.00mm(+1.0)	104.7mm (std)		SEVI-1014	
				33.00mm(+1.0)	104.20 (-0.5)mm		SEVI-1014-2	
	SODIUM FILLED INCONEL VALVES							
					32.00mm(std)	5.95mm	104.7mm (std)	SEVI-1010-HS
					33.00mm (+1.0)	(Sodium filled)		SEVI-1014-HS

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1015/SU3	27.50	20.00	20.00	15.20	64 @ 35.6	199 @ 11.5	15.30	20.70	12.10	RET-TS60/WRX1 + SEAT-TS/SUB3 (no OEM)
SPR-TS1015/SU1	27.50	20.00	20.00	15.20	70 @ 35	209 @ 11.5	14.80	20.70	12.10	RET-TS60/WRX1 + SEAT-TS/SUB (no OEM)
SPR-TS1015/SU4	27.50	20.00	20.00	15.20	82 @ 33.8	220 @ 11.5	13.50	20.70	12.10	RET-TS60/WRX1 + SEAT-TS/SUB4 (no OEM)
SPR-TS1015/IN-SU4 (Drag only)	27.50	20.00	20.00	14.20	100 @ 33.8	273 @ 11.5	13.50	20.70	14.90	RET-TS60IN2/WRX1 + SEAT-TS/SUB4 (no OEM)
SPR-TS1015-BE/SU3 (BEEHIVE)	27.70	19.70	23.20	15.20	65 @ 35.6	211 @ 11.5	14.20	21.80	12.70	RET-TS60/WRX-BE + SEAT-TS/SUB3 (no OEM)
SPR-TS1015-BE/SU1 (BEEHIVE)	27.70	19.70	23.20	15.20	70 @ 35	217 @ 11.5	12.50	21.80	12.70	RET-TS60/WRX-BE + SEAT-TS/SUB (no OEM)
SPR-TS1015-BE/SU4 (BEEHIVE)	27.70	19.70	23.20	15.20	85 @ 33.4	234 @ 11.5	11.50	21.80	12.70	RET-TS60/WRX-BE + SEAT-TS/SUB4 (no OEM)

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-SUEJ6-I	EXHAUST: GDE-SUEJ6-E
VALVE SEALS	INTAKE: VS-TS6I	EXHAUST: VS-TS6E
CAM FOLLOWERS	CF-35/2.7+ or CF-35/3.7+ (+ Shims 1.5mm to 3.2mm thick) Both Versions of retainers for over the bucket and under the bucket shims are available (RET-TS60/STI)	
STEEL RETAINER	STEEL RETAINER AVAILABLE RET-TS60-WRX-ST	
SHIM UNDER BUCKET RETAINER	RET-TS60/STI	
KEEPERS	KPR-6T-ST	

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER
SUBARU WRX STI EJ25 2004	99.50mm	STD	-1	10.5:1	56	30.70mm	3.110"	R	5.137"	23mm	390	T/N	SWF-20068
SUBARU WRX STI EJ25 2004	99.50mm	STD	-20.5	8.2:1	56	30.70mm	3.110"	R	5.137"	23mm	390	T/N	SWF-20068
SUBARU WRX STI EJ25 2004	100mm	0.5mm +	-20.5	8.2:1	56	30.70mm	3.110"	R	5.137"	23mm	400	T/N	SWF-20068-2
SUBARU WRX EJ20 / Spec C crown st	92mm	STD	-5	8.3:1	49	31.50mm	2.952"	R	5.137"	23mm	380	T/N	SWF-20060-0
SUBARU WRX EJ20 / Spec C crown st	92.50mm	0.5mm +	-5	8.4:1	49	31.50mm	2.952"	R	5.137"	23mm	390	T/N	SWF-20060-2
SUBARU WRX EJ20 / Spec C crown st	93mm	1mm+	-5	8.5:1	49	31.50mm	2.952"	R	5.137"	23mm	400	T/N	SWN30115-0
Notes: SUBARU WRX STI EJ25 2004 (gasket: 0.60mm / Piston deck height: 0.38mm) SUBARU WRX EJ20 / Spec C crown style (gasket: 0.60mm / Piston deck height: 1.48mm)													



HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
SUBARU EJ20	Cooper Ring	93.50mm	1.20mm	HG-SUEJ20-93.5-1.2T
SUBARU EJ20	MLS	94mm	1mm	HG-SUEJ20-94-1T
SUBARU EJ20	MLS	94mm	1.30mm	HG-SUEJ20-94-1.3T
SUBARU EJ20	Cooper Ring	95mm	1.20mm	HG-SUEJ20-95-1.2TBB
SUBARU EJ235	Cooper Ring	95mm	1.20mm	HG-SUEJ235-99-1.2TBB
SUBARU EJ25	MLS	100mm	1.30mm	HG-SUEJ25-100-1.3T
SUBARU EJ25	MLS	101mm	0.95mm	HG-SUEJ25-101-0.95T
SUBARU EJ25	MLS	101.30mm	1mm	HG-SUEJ25-101.3-1.T
SUBARU EJ25	Cooper Ring	101.30mm	1.2mm	HG-SUEJ25-101.3-1.T
SUBARU EJ25	Cooper Ring	101.30mm	1.2mm	HG-SUEJ25-101.3-1.2TBB
SUBARU EJ25	Cooper Ring	101.30mm	1.2mm	HG-SUEJ25-101.3-1.2TC

EJ25 NON TURBO DOHC



EJ25 NON TURBO SOHC



SUBARU EJ25 Non Turbo DOHC							
EJ25 Non Turbo DOHC 99-05	INTAKE VALVE		Part Number	EXHAUST VALVE		Part Number	
	36.00mm (std)	5.96mm	SIVN-1016	32.00mm(std)	5.96 mm	106.2mm (std)	SEVN-1016
	37.00mm(+1.0)		SIVN-1015	32.00mm(std)		106.2mm (std)	SEVI-1016
				33.00mm(+1.0)		108.35mm (oversize)	SEVI-1015
				33.00mm(+1.0)		108.35mm (oversize)	SEVN-1015

SUBARU EJ25 Non Turbo SOHC							
EJ25 Non Turbo SOHC 99-05	INTAKE VALVE		Part Number	EXHAUST VALVE		Part Number	
	37.00mm (+1.0)	5.96mm	SIVN-1025	33.00mm(+1.5)	5.96 mm	121.70mm	SEVI-1016

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	lbs./mm	Part Number
SPR-TS1015/SU5	27.50	20.00	20.00	15.20	70 @ 35.5	209 @ 11.5	13.80	20.70	RET-TS60/WRK1 + SEAT-TS/SUB-5 (no OEM)

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-TS6I	EXHAUST: VS-TS6E
CAM FOLLOWERS	CF-35/2.7+ or CF-35/3.7+ (+ Shims 1.5mm to 3.2mm thick) / RET-TS60/STI available for Under the Bucket Shim (IDM)	
KEEPERS	KPR-6T-ST	

EZ30 H6 (1ST GEN)



EZ30 H6 (2ND GEN)



SUBARU EZ30 H6 24v							
EZ30 H6 (1st Gen)	INTAKE VALVE		Part Number	EXHAUST VALVE		Part Number	
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	35mm(std)	5.48mm	103.4mm	SIVN-2301F	30.5mm(std)	5.45mm	103.25mm
	36mm(+1.0)			SIVN-2304D	31.00mm(+0.5)		
					31.5mm(+1.0)		
EZ30 w/AVCS (2nd Gen)	35mm(std)	5.48mm	99.8mm	SIVN-1043	30.5mm(std)		105.25mm
					31.50mm(+1.0)		
							SEVI-1045D

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number

EZ30 H6cyl.(1st Gen)									
SPR-TS1015/SU6	27.50	20.00	20.00	15.20	63 @ 36.10	184 @ 10	15.20	20.70	RET-TS5.5/T1 + SEAT-TS/SUB
EZ30 H6cyl W/ AVCS Variable intake lift (2nd Gen)									
SPRK-SUEZ30-W	29.10	21.90	20.50	15.50	85 @ 31.9	195 @ 11	12.40	19.50	10.00
	27.50	20.00	20.00	15.20	65 @ 35	193 @ 11	14.30	20.70	12.10

ENGINE COMPONENTS	
CAM FOLLOWERS (1st Gen)	CF-34/2.5+ or CF-34/3.5+ (+ Shims 1.5mm to 2.7mm thick)
CAM FOLLOWERS (2nd Gen)	Diam 33mm
VALVE SEALS	VS-SU5.5-EI (Intake + Exhaust)

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	PISTON PART NUMBER
SUBARU H6 EZ30	89.20mm	STD	-18	8.5:1	42	30.30mm	3.149"	I R	STD	22mm	321	T/N	P6-SU8920-N18
SUBARU H6 EZ30	89.50mm	0.3	-15	0.4	42	30.30mm	3.149"	I R	STD	22mm	321	T/N	P6-SU8950-N15

Notes: (gasket: 0.60mm / Piston deck height: 0.38mm)

EG33 H6



SUBARU EG33 H6 24v								
SVX 3.3lts	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	36mm (std)	5.96mm	90.10mm (tip 4.3mm)	SIVN-1080	32mm(std)	5.96mm	90.9mm (tip 4.3mm)	SEVI-1080

FA20



Subaru BRZ FA20 / TOYOTA SCION FR-S							
Toyota GT86 / Scion FRS/ Subaru BRZ	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	35.00 (std)	5.46mm	103.3mm	SIVN-1050	29.00mm (std)	5.45mm	95.15mm

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-1002-BRZ	29.05	21.85	20.50	15.50	74 @ 33.5	174 @ 10	14.00	19.50	10.00	RET-H1000-BRZ + SEAT-H1002D-BRZ
SPRK-100-BRZ	30.20	22.20	22.20	16.80	87 @ 33.5	212 @ 10	15.00	18.50	12.50	RET-H1000-BRZ + SEAT-H1002D-BRZ
SPRK-200-BRZ	30.20	22.20	22.20	16.80	100 @ 33.5	222 @ 10	13.50	20.00	12.20	RET-H1000-BRZ + SEAT-H1002D-BRZ
SPRK-H1002BRZ-BE (Beehive)	29.10	21.30	23.00	15.65	72 @ 33.5	170 @ 10	13.00	19.00	9.70	RET-H55BE-BRZ + SEAT-H1002D-BRZ-2

ENGINE COMPONENTS		
VALVE SEALS	VS-SU5.5-EI (INTAKE & EXHAUST)	
VALVE GUIDES	INTAKE: GDE-TFRSS5-I	EXHAUST: GDE-TFRSS5-E

FA20F (DIT)



SUBARU WRX 2015 FA20F (DIT)							
SUBARU WRX 2015 FA20F (DITurbo)	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	34.00 (std)	5.46mm	105.00mm	SIVN-1049-2	29.00mm (std)	5.45mm	97.7mm

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-1002-BRZ	29.05	21.85	20.50	15.50	74 @ 33.5	174 @ 10	14.00	19.50	10.00	RET-H1000-BRZ + SEAT-H1002D-BRZ
SPRK-100-BRZ	30.20	22.20	22.20	16.80	87 @ 33.5	212 @ 10	15.00	18.50	12.50	RET-H1000-BRZ + SEAT-H1002D-BRZ
SPRK-H1002BRZ-BE (Beehive)	29.10	21.30	23.00	15.65	72 @ 33.5	170 @ 10	13.00	19.00	9.70	RET-H55BE-BRZ + SEAT-H1002D-BRZ-2

ENGINE COMPONENTS		
VALVE SEALS	VS-SU5.5-EI (INTAKE & EXHAUST)	
VALVE GUIDES	INTAKE: GDE-TFRSS5-I	EXHAUST: GDE-TFRSS5-E

BRZ FA20



SUBARU BRZ / GR86 FA24D							
Subaru BRZ /GR86 2022+	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length

4AGE 16v



TOYOTA 4AGE 16v								
Atlantic / Corolla	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	30.50mm (std)	5.98mm	99.60mm	TIVN-1019	25.50mm (std)	5.97mm	99.75mm	TEVN-1019
	32.00mm (+1.5)			TIVN-1020	27.50mm (+2.0)			TEVN-1020

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-TC25D	25.00	18.00	18.00	13.00	73 @ 35.4	202 @ 10.5	14.40	21.00/ 17.00	12.60
SPR-TC25 S	25.00	18.00	SINGLE		55 @ 35.4	130 @ 10.5	14.40	21.00	7.60

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-T4AG-SM + VS-T6SM	
VALVE SEALS	INTAKE: VS-TS6I	EXHAUST: GDE-T4AG-SM + VS-T6SM
CAM FOLLOWERS	CF-28/3.65+	EXHAUST: VS-TS6E
KEEPERS	KPR-GT-ST	

PISTONS												
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP
TOYOTA 4AGE 16v 18mm Pin	81.50mm	0.50mm	3.1	11:1	35	30.70mm	3.031"	X	4.803"	18mm	260	A/N
TOYOTA 4AGE 16v 18mm Pin	82mm	1mm+	3.1	11:1	35	30.70mm	3.031"	X	4.803"	18mm	265	A/N
TOYOTA 4AGE 16v 20mm Pin	81mm	STD	3.1	11:1	35	30.50mm	3.031"	X	4.803"	20mm	260	A/N
TOYOTA 4AGE 16v 20mm Pin	81.50mm	0.50mm	3.1	11:1	35	30.50mm	3.031"	X	4.803"	20mm	265	A/N
TOYOTA 4AGE 16v 20mm Pin	82mm	1mm+	3.1	11:1	35	30.50mm	3.031"	X	4.803"	20mm	265	A/N

Notes: TOYOTA 4AGE 16v 18mm Pin (Gasket 0.8mm - Deck Height: 0.7mm) | TOYOTA 4AGE 16v 20mm Pin (Gasket 1.2mm - Deck Height: 0)

HEAD GASKETS			
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)
TOYOTA 4AGE	MLS	83mm	1mm
TOYOTA 4AGE	MLS	83mm	1.30mm

4AGE 20v



TOYOTA 4AGE 20v SILVER TOP or BLACK TOP								
Corolla	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	26.5mm (std)	4.98mm	98.6mm	TIVN-1017 (12)	27.00mm(+1.0)	4.97mm	108.40mm	TEVN-1018 (8)
	27.5mm (+1.0)		98.6mm	TIVN-1018 (12)				

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-A2095-ST (silver top)	20.60	14.40	SINGLE		54 @ 36.6	123 @ 10.5	13.60	23.00	6.70
SPR-A2095-BT (Black Top)	20.60	14.40	SINGLE		54 @ 36.6	123 @ 10.5	13.60	23.00	6.70

ENGINE COMPONENTS		
VALVE GUIDES	INTAKE: GDE-T20V-I (12)	
VALVE SEALS	VS-TY5E	EXHAUST: GDE-T20V-E (8)

7MGTE



TOYOTA 7MGTE 3.0Its 24v								
Supra 86-92	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	32mm (Std)	5.98mm	98.10mm	TIVC-1006	27.50mm(Std)	5.97mm	98.20mm	TEVC-1006
	32.5mm (+0.50)	5.98mm	98.10mm	TIVN-1007	28.00mm(+0.5)	5.97mm	98.20mm	TEVI-1007

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-TC25D/24	25.00	18.00	18.00	13.00	67 @36	200 @ 10.5	14.40	21.00/ 17.00	12.60
SPR-TC25 S/24	25.00	18.00	SINGLE		51 @36	131 @ 10.5	14.40	21.00	7.60

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-TS6-I	
CAM FOLLOWERS	CF-28/3.65+	EXHAUST: VS-TS6-E
VALVE GUIDES	INTAKE & EXHAUST for smaller diameter Oil Seal: GDE-T4AGE-SM (required for Dual Spring) and stem oil seal VS-T6SM	
KEEPERS	KPR-GT-ST	



2JZ-GE



2JZ-GTE DOHC



TOYOTA SUPRA 2JZ-GE / GTE 3.0 lts 24v DOHC								
Supra 94-98	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	33.50mm (std)	5.98mm	98.55mm	TIVN-1014	29.00mm(std)	5.97mm	99.10mm	TEVI-1014 *
	34.50mm(+1)			TIVN-1016	30.00mm(+1)			TEVN-1016
					30.00mm(+1)			TEVI-1016 *
					SODIUM FILLED INCONEL EXHAUST VALVES			
					30.00mm (+1)	5.97mm	99.10mm	TEVI-1016-HS

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-2081-SP	27.50	20.00	SINGLE		60 @ 33.60	165 @ 11	12.90	20.70	9.60
SPR-TS1012	27.50	20.00	20.00	15.20	80 @ 33.60	185 @ 11	13.60	20.00	9.60
SPR-TS1012-BE (BEEHIVE)	27.70	19.70	23.20	15.20	82 @ 33.6	196 @ 11	11.70	21.80	10.40
SPR-TS1015	27.50	20.00	20.00	15.20	91 @ 33.60	224 @ 11	12.90	20.70	12.10
SPR-TS1015-BE (BEEHIVE)	27.70	19.70	23.20	15.20	90 @ 33.60	230 @ 11	11.10	21.80	12.70
SPR-TS1009 (Drag only)	27.50	20.00	20.00	14.20	118 @ 33.60	277 @ 11	12.10	20.7/19.5	14.50

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-TS6-I	
CAM FOLLOWERS	CF-31/ 3.28+ (+ shims 1.5mm to 3.2mm thick)	EXHAUST: VS-TS6-E
VALVE GUIDES	INTAKE: GDE-T2JZ-I	EXHAUST: GDE-T2JZ-E
KEEPERS	KPR-GT-ST	

PISTONS												
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP
TOYOTA 2JZ-GE	86mm	STD	-7.2	9.5:1		34mm	3.385"	R		22mm		T/N
TOYOTA 2JZ-GE	86.50mm	0.50mm+	-7.2	9.5:1		34mm	3.385"	R		22mm		T/N
TOYOTA 2JZ-GE	87mm	1mm+	-7.2	9.5:1		34mm	3.385"	R		22mm		T/N

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
TOYOTA 2JZ	MLS	87mm	1.30mm	HG-T2JZ-87-1.5T
TOYOTA 2JZ	Cooper Ring	87mm	1.60mm	HG-T2JZ-87-1.6TC
TOYOTA 2JZ	MLS	87.7mm	1.50mm	HG-T2JZ-87.7-1.5T

1JZGTE 3.0LTS



TOYOTA SUPRA 1JZ-GE / GTE 3.0 Its 24v DOHC								
Supra 94-98	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	32.00mm	5.94mm	97.50mm	TIVN-1008	30.00mm	5.97mm	98.10mm	TEVI-1008
	33.00mm (+1)			TIVN-1009 (+1)	31.00mm(+1)			TEVI-1009

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-2081-SP	27.50	20.00	SINGLE		60 @ 33.60	165 @ 11	12.90	20.70	9.60
SPR-TS1012-BE (BEEHIVE)	27.70	19.70	23.20	15.20	82 @ 33.6	196 @ 11	11.70	21.80	10.40
SPR-TS1015-BE (BEEHIVE)	27.70	19.70	23.20	15.20	91 @ 33.60	230 @ 11	11.10	21.80	12.70

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-TS6-I	
CAM FOLLOWERS	CF-31/ 3.28+ (+ shims 1.5mm to 3.2mm thick)	EXHAUST: VS-TS6-E
TITANIUM VALVES	PLEASE CALL	
KEEPERS	KPR-GT-ST	

B58B30



TOYOTA SUPRA B58B /3.0lt 24V DOHC								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
BMW 2015+ Turbo	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	30.10 (std)	4.96mm	99.50 Triple groove	TIVN-1058T	28.5mm(std)	5.95mm	100.1mm Triple groove	TEVI-1058T
			99.50mm Single groove	TIVN-1058			100.1mm Single groove	TEVI-1058
				31.10 (+1)				TIVN-1058-1

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPRK-MCB58	24.40	17.60	21.00	14.20	80 @36mm	160 @ 10mm	11.5mm	23.00	8.00
SPRK-MCB58-2	24.40	17.60	21.00	14.20	98 @36mm	184 @ 10mm	11.5mm	23.20	8.60

ENGINE COMPONENTS		
VALVE GUIDES	GDE-BMB48-I	GDE-BMB48-E6
VALVE SEALS	INTAKE: VSI-8M50-I	EXHAUST: VSI-8M60-E
SINGLE GROOVE VALVE LOCKS	INTAKE KPR-5.0/75 (can use Factory retainer and spring)	
	EXHAUST: KPR-65/7 (can use factory retainer and spring)	

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
BMW B58	Cooper Ring	84.5mm	1mm	HG-BMW-B58-2-84.5-1T

PISTONS												
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC%	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP
BMW MINI B58 3.0L 24V	82mm	STD	STD	10.2:1	36	33.20mm	94.60mm	X	148.30mm	22mm	298	T/N
BMW MINI B58 3.0L 24V	82mm	STD	STD	11:1	36	33.20mm	94.60mm	X	148.30mm	22mm	298	T/N
BMW MINI B58 3.0L 24V	82.50mm	0.50mm+	STD	11:1	36	33.20mm	94.60mm	X	148.30mm	22mm	305	T/N

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
BMW MINI B58 3.0L 24V	Forged 4340 Alloy	H Beam	148.30mm	22mm Full Float	21mm	53.66mm	23.90mm	527.3	CR-MINB48-H148.3
BMW MINI B58 3.0L 24V	Forged 4340 Alloy	I Beam	148.30mm	22mm Full Float	21mm	53.66mm	23.90mm	527.3	CR-MINB58-I148.3

2TC



3TC



TOYOTA 2TC / 3TC								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided
	44.00mm(+3.0)	8mm	110. mm	TIVN-1063	39.00mm(+3.0)	8mm	110.00mm	TEVN-1063

4E-FTE



STARLET GT



TOYOTA STARLET GT / 4E-FTE								
Toyota Starlet GT	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	29.50mm	5.97mm	93.30mm	TIVN-0174	25.50mm	5.97mm	93.3	TEVI-0175

3SGTE



TOYOTA 3SGTE 2.0Its DOHC										
Celica / MR2 Turbo 90-95	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel		
	34.00mm(+0.5)	5.98mm	100.50mm	TIVN-1011	29.50mm(+0.5)	5.97mm	99.50mm	TEVN-1011		
	34.50mm(+1.0)			TIVN-1012	30.00mm(+1.0)		99.50mm	TEVC-1012		
					30.00mm(+1.0)		99.10mm	TEVI-1016		
					SODIUM FILLED INCONEL EXHAUST VALVES					
30.00mm (+1.0)					5.97mm	99.10mm	TEVI-1016-HS			

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)		mm	lbs./mm	Part Number
SPR-2081/MR	27.5	20	SINGLE		59 @ 34.75	175 @ 12	13.25	20.7	9.6	RET-TS60/MA2 (or RET-TS60/MA2R) + SS-3025+ OE seat
SPR-TS1015/MR	27.50	20.00	20.00	15.20	77 @ 35.50	222 @ 12	14.00	20.70	12.10	RET-TS60/T1B Req. Flatening of valve guide boss +SEAT-TS1015-1 + OE SEAT RET-TS60/MA2R: Shim Under Bucket version

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-TS6-I	EXHAUST: VS-TS6-E
VALVE GUIDES	GDE-T3SGT-EI (Intake & Exhaust)	
CAM FOLLOWERS	CF-31/ 3.28+ (+ shims 1.5mm to 2.7mm thick)	
KEEPERS	KPR-6T-ST	

1ZZ-FE



TOYOTA 1ZZ-FE								
Celica GT/ Matrix '00+	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	32.00mm (std)	5.48mm	88.67mm	TIVN-1021	27.50mm (std)	5.46mm	88.74mm	TEVN-1021

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-TS2081/TC	27.50	20.00	SINGLE		60 @ 33.6	165 @ 11	12.90	20.70	9.60
SPR-TS1015/TC	27.50	20.00	20.00	15.20	81 @ 34	214 @ 11	13.30	20.70	12.10
					RET-TSS.5/TC-S + SEAT-TS/TC				
					RET-TSS.5/TC + SEAT-TS/TC				

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-TS.5-I	EXHAUST: VS-TS.5-E
CAM FOLLOWERS	CF-31/ 3.28+ (+ shims at least 2.20mm minimum thick)	

2ZZ-GE



TOYOTA 2ZZ-GE								
Celica GTS 00+ Lotus Elise	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	34.00mm (std)	5.48mm	111.45mm	TIVN-1031	29.00mm(Std)	5.46mm	111.65mm	TEVN-1031
	34.00mm (std)			TIVN-1031F	29.00mm(Std)			TEVN-1031F

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-A2416-T2Z	24.00	16.50	SINGLE		73 @ 38.50	178 @ 10	12.50	24.90	10.50	RET-T2Z/T2 (use OEM seat)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-TS.5-I	EXHAUST: VS-TS.5-E
BLOCK GUARD	BG-T2ZZ	

2AZ-FE



TOYOTA SCION TC 2AZ-FE								
Scion tc	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	34.00mm (std)	5.48mm	101.85mm	TIVN-1035	29.50mm(std)	5.46mm	101.20mm	TEVI-1035
	35.00mm (+1)			TIVN-1037	30.50mm(+1)			TEVI-1037

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-TS2081/TC	27.50	20.00	SINGLE		58 @ 34	157 @ 11	12.50	20.70	9.00
SPR-TS1015/TC	27.50	20.00	20.00	15.20	81 @ 34	226 @ 12	12.50	20.70	12.10
					RET-TSS.5/TC-S + SEAT-TS/TC				
					RET-TSS.5/TC + SEAT-TS/TC				

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-TSS5-I	EXHAUST: GDE-TSS5-E
VALVE SEALS	INTAKE: VS-TS.5-I	EXHAUST: VS-TS.5-E
CAM FOLLOWERS	CF-31/ 2.5+ (+ shims 1.5mm to 3.5mm thick)	

2RZ-FE



3RZ-FE



TOYOTA TACOMA 2RZ-FE / 3RZ-FE 16v								
Tacoma Pick Up 1995-2004	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	37.5mm (std)	5.97	103.6	TIVN-1045	30.5mm(std)	5.96mm	103.60mm	TEVN-1045
	38.5 mm(+1.0)			TIVN-1047	31.5mm(+1)			TEVI-1047
	39.5mm (+2)			TIVN-1048	32.5mm(+2.0)			TEVI-1048

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number
SPR-EC3025/2RZ	26.60	19.60	19.40	14.20	77 @ 35.6	205 @ 10	13.80	21.80	RET-EC3020/T6P + SEAT-3020-2RZ (+ OEM shim)
SPR-EC3027/2RZ	26.60	19.60	19.60	14.20	108 @ 35.6	225 @ 10	13.40	22.20	RET-EC3020/T6P + SEAT-3020-2RZ (+OEM shim)

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-TS6I	EXHAUST: VS-TS6E
CAM FOLLOWERS	CF-31/ 3.28+ (+ shims 1.5mm to 3.2mm thick)	
KEEPERS	KPR-6T-ST	

2TR-FE



TOYOTA TACOMA 2TR-FE 16v								
Tacoma 2010 2.7L VVT-I	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	37.5mm (std)	5.47	106.3	TIVN-2045	31.5mm(std)	5.47mm	103.60mm	TEVN-2045
	38.5 mm(+1.0)			TIVN-2047	32.5mm(+1)			TEVI-2047

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number
SPR-TU24	24.50	17.90	SINGLE		76 @ 35.8	126 @ 10	12.00	23.00	RET-OEM + Spring baseOEM
SPRK-EC3025/2TR	26.60	19.60	19.40	14.20	65 @ 37	193 @ 10	11.70	21.80	RET-EC3020/T55 + SEAT-3020-2RZ (+ OEM shim)
SPRK-EC3027/2TR	26.60	19.60	19.60	14.20	85 @ 37	203 @ 10	11.50	22.20	RET-EC3020/T55 + SEAT-3020-2RZ (+OEM shim)

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-T5.5I	EXHAUST: VS-T5.5E

5VZ-FE DOHC



TOYOTA V6 5VZ-FE DOHC								
Tacoma / Tundra	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	34.00mm (std)	5.97mm	95.15mm	TIVN-1040	27.50mm(Std)	5.96mm	94.9mm	TEVN-1040

ENGINE COMPONENTS	
KEEPERS	KPR-6T-ST

1FZ-FE 16



TOYOTA 1FZ-FE i6 24v / 4.5lt DOHC								
Landcruiser	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided
	39.50mm (+1.5)	6.97mm	98.80mm	TIVN-1083F / Dish	33.50mm (+1.5)	6.97mm	98.10mm	TEVN-1083F
	39.50mm (+1.5)	6.97mm	98.80mm	TIVT-1083F (Titanium)	33.50mm (+1.5)	6.97mm	98.10mm	TEVT-1083F (Titanium)

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number
SPR-H1002D/1FZ	29.10	21.85	20.50	15.50	50 @ 36.20	160 @ 11	14.00	19.50	RET-H70/T1 + SEAT-H/N240 + OEM
SPR-H100DR/1FZ	30.20	22.20	22.20	16.80	65 @ 36.20	197 @ 11	15.50	20.50	RET-H70/T1 + SEAT-H/N240 + OEM
SPR-H1000D/1FZ	29.65	21.85	20.50	15.50	82 @ 36.20	208 @ 11	15.50	20.70	RET-H70/T1 + SEAT-H/N240+ OEM
SPR-H1005D/1FZ	29.65	21.85	20.50	15.50	100 @ 36.20	226 @ 11	14.70	21.50	RET-H70/T1 + SEAT-H/N240+ OEM

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-T7E	EXHAUST: VS-T7E
CAM FOLLOWERS	CF-34/ 3.5+ (+ shims 1.5mm to 3.2mm thick)	

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
TOYOTA 1FZ	MLS	103mm	1.15mm	HG-T1FZ-103-1.15T

2UZ-FE



3UZ-FE V8



TOYOTA 1UZ-FE / 2UZ-FE / 3UZ-FE with VVTI V8 32v							
Landcruiser/ Lexus Tundra 1998-2009	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	36.00mm (+1.5)	5.48mm	95.05mm	TIVN-1093D	30.50mm (+1.5)	5.47mm	95.1

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number
SPR-TU24	24.50	17.90	SINGLE		80 @ 35	130 @ 10	12.00	23.00	RET-TU24/T1 (OEM style shim under the bucket)

ENGINE COMPONENTS		
VALVE SEALS	VS-T5.5I	VS-T5.5E
CAM FOLLOWERS	CF-31/ 3.28+ shim 2.15mm thick (Lash can be adjusted with 8mm bucket shims or OEM 11mm shims)	

3UR-FE V8



TOYOTA 3UR-FE V8 32v							
2007 - 2018 Land Cruiser Lexus/ Tundra	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	38.00mm	5.47mm	105.85mm	TIVN-1056D	32.00mm	5.47mm	110.45mm
	39.00mm (+1)		106.10mm	TIVN-3039F	33.00mm (+1)		110.60mm

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number
SPRK-EC3025D-3UR	26.60	19.60	19.40	14.20	62 @ 37.8	193 @ 10	13.90	21.80	RET-EC3020/T55 + SEAT-F4R-3UR (+ OEM shim)
SPRK-EC3027D-3UR	26.60	19.60	19.60	14.20	82 @ 37.8	200 @ 10	14.70	22.20	RET-EC3020/T55 + SEAT-F4R-3UR (+OEM shim)

ENGINE COMPONENTS		
VALVE SEALS	VS-SU5.5-EI (Intake + Exhaust)	
KEEPERS	Factory Keepers (KPR-5.5/7A-ST lowers Inst Height in 0.5mm)	
VALVE GUIDES	INTAKE: GDE-TFR555-I	EXHAUST: GDE-TFR555-E

2GR-FE



TOYOTA 2GR-FE V6 24v							
2007 - 2018 Land Cruiser Lexus/ Tundra	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	38.00mm	5.47mm	106.10mm	TIVN-1056D	32.00mm	5.47mm	110.60mm
	39.00mm (+1)		106.10mm	TIVN-3039F	33.00mm (+1)		110.60mm

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number
SPRK-EC3025D-2GR	26.60	19.60	19.40	14.20	62 @ 37.8	193 @ 10	13.90	21.80	RET-EC3020/T55 + SEAT-F4R-3UR (+ OEM shim)
SPRK-EC3027D-2GR	26.60	19.60	19.60	14.20	82 @ 37.8	200 @ 10	14.70	22.20	RET-EC3020/T55 + SEAT-F4R-3UR (+OEM shim)

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-T5.5-I	EXHAUST: VS-T5.5-E
KEEPERS	Factory Keepers (KPR-5.5/7A-ST lowers Inst Height in 0.5mm)	
VALVE GUIDES	INTAKE: GDE-TS55-I	EXHAUST: GDE-TS55-E



1GR-FE BUCKET VERSION



TOYOTA 1GR-FE / 4.0 lts V6 24v								
FJ / Land Cruiser/ Tundra /2003 - 2010 (bucket version)	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided
	37.50mm (+1mm)	5.47mm	107.00mm	TIVN-1052F	30.50mm (+1)	5.46mm	105.90mm	TEVN-1052F
	38.00mm (+1.5mm)			TIVN-1053F				

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)			Seat	Open (lift)	mm	mm	Part Number
SPR-TS1012/T1GR	27.50	20.00	20.00	15.20	61 @ 35.20	173 @ 10	15.00	20.00	RET-K20A3/T1+ SEAT-TS/1GR
SPR-TS1015/T1GR	27.50	20.00	20.00	15.20	71 @ 35.20	198 @ 10	14.30	20.70	RET-K20A3/T1+ SEAT-TS/1GR
SPRK-FM46-1GR-BE1	27.30	19.10	24.50	16.30	92 @ 36.4	222 @ 10	14.40	22.80	RET-A2416-T1 (OEM Seat)
SPRK-FM46-1GR-BE2	27.30	19.10	24.50	16.30	103 @ 35.3	237 @ 10	13.20	22.80	RET-A2416-N2 (OEM Seat)

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-TS.5-I	EXHAUST: VS-TS.5-E
CAM FOLLOWERS	CF-31/ 3.28+ (SHIM under)	
VALVE GUIDES	INTAKE: GDE-TSS5-I	EXHAUST: GDE-TSS5-E

1AR-FE



TOYOTA 1AR-FE 4 Cyl. 2.7L (Venza)									
SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number
SPRK-EC3027D-1AR	26.60	19.60	19.60	14.20	74 @ 38.6	185 @ 10	15.30	20.70	RET-EC3020/T1 (use OEM seat)

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-TS.5-I	EXHAUST: VS-TS.5-E

FR-S 4U-GSE



BRZ FA20



TOYOTA SCION FR-S 4U-GSE/ Subaru BRZ (FA20)								
Toyota GT86 / Scion FRs/ Subaru BRZ	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	35.00 (std)	5.46mm	103.3mm	SiVN-1050	29.00mm (std)	5.45mm	95.15mm	SEVI-1050
	35.00 (std)		105.00mm	SiVN-1050-2	29.00mm (std)		97.7mm	SEVI-1050-2
GT86 / Scion FRs 2014+ (longer valves)	36.00 (+1)		105.00mm	SiVN-1052-2	30.00mm (+1)		97.7mm	SEVI-1052-2

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number
SPRK-1002-BRZ	29.05	21.85	20.50	15.50	74 @ 33.5	174 @ 10	14.00	19.50	RET-H1000-BRZ + SEAT-H1002D-BRZ
SPRK-100-BRZ	30.20	22.20	22.20	16.80	87 @ 33.5	212 @ 10	15.00	18.50	RET-H1000-BRZ + SEAT-H1002D-BRZ
SPRK-200-BRZ	30.20	22.20	22.20	16.80	100 @ 33.5	222 @ 10	13.50	20.00	RET-H1000-BRZ + SEAT-H1002D-BRZ
SPRK-H1002BRZ-BE (Beehive)	29.10	21.30	23.00	15.65	72 @ 33.5	170 @ 10	13.00	19.00	RET-H55BE-BRZ + SEAT-H1002D-BRZ-2

ENGINE COMPONENTS		
VALVE SEALS	VS-SUS.5-EI (Intake + Exhaust)	
VALVE GUIDES	INTAKE: GDE-TFRS55-I	EXHAUST: GDE-TFRS55-E

PISTONS												
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP
TOYOTA FRs /SUBARU BRZ 16v	86mm	STD	-0.2	12.5:1		32.50mm	3.38"	X	5.093"	22mm	343	A/N
TOYOTA FRs /SUBARU BRZ 16v	86mm	STD	-15.5	9.5:1		32.50mm	3.38"	X	5.093"	22mm	339	A/N
Notes: (Gasket 0.5mm - Deck height 0.2mm)												

RODS												
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER			
TOYOTA FRs/ BRZ	Forged 4340 Alloy	H Beam	129.38mm	22mm Full Float	21.40mm	53mm	21.40mm	533.9	CR-FA20-H129.3			

G16E-GR



YARIS



COROLLA GR



TOYOTA G16E-GR / Yaris / Corolla GR - 3Cyl.						
Yaris - Corolla GTS	INTAKE VALVE			Part Number	EXHAUST VALVE	
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam
	32.80mm (std)	5.468mm	113.60mm	TIVN-2033	32.00mm(Std)	5.465mm

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number
SPRK-TY2613-BE1	26.3	20.80	20.80	13.00	90 @ 42.6	174 @ 10	12	28.5	RET-TY5.5-T1 - OEM SEAT+ Exh Seat SS-2618-2.3
SPR-FCO-BE1	26.2	18.00	21.30	13.00	71 @ 42.6	169 @ 10	17	25	RET-TY5.5-T1 - OEM SEAT+ Exh Seat SS-2618-2.3
SPR-FCO-BE2	26.2	18.00	21.30	13.00	90 @ 42.6	212 @ 10	17	25.6	RET-TY5.5-T1 - OEM SEAT+ Exh Seat SS-2618-2.3

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-TS.5-I	EXHAUST: VS-TS.5-E
LASH CAPS	OEM (7mm OD)	
GUIDE	GDE-TSS5-EI-L	

2.8LTS VR6 12V



VW 2.8 lts VR6 12v							
Jetta/ GTI/ Passatt VR6 92-99	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	39.00mm (std)	6.97mm	105.95mm	VWIVN-1007	34.20mm (std)	6.95mm	106.95mm
	41.00mm(+2.0)			VWIVN-1010	36.00mm (+1.8)		

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number
SPR-V2093/4-12	30.40	23.20	21.90	16.50	77 @ 33.00	229 @ 12	14.30	18.70 / 15.3	RET-021 (tripple Groove) / Factory seats

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-VW7-I	EXHAUST: VS-VW7-E
CAM FOLLOWERS	CF-35/14.7LC (for std base circle) or CF-35/16.7LC (for reground cams). To be use with Lash Caps (7mm) installed on the CF inner post.	
KEEPERS	Triple Groove: KPR-VW7-T	

1.8T



2.7T



VW 1.8T AEB / 2.7T APB 5v/cyl								
VW / Audi / SEAT	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	26.90mm (std)	5.96mm	105.10mm	AIVN-1103	29.90mm (std)	5.94mm	103.90mm	AEVN-1103
	26.90mm (std)			AIVN-1103S	29.90mm (std)			AEVI-1103
	27.90mm(+1.0)			AIVN-1106S	29.90mm (std)			AEVI-1103S
				30.90mm (+1)	AEVI-1106S			
					SODIUM FILLED VALVES			
					29.90mm (std)	5.94mm	103.90mm	AEVI-1103S-HS
					30.90mm(+1) (Sodium Filled)			AEVI-1106S-HS

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	Part Number
SPR-A2095 (intake)	20.60	14.40	SINGLE		60 @ 36.6	133 @ 11	13.60	23.00	RET-AUSV/T12 (12) (optional shim SS-3004)
SPR-H1002D/AU(exhaust)	29.10	21.90	20.50	15.50	80 @ 33.2	200 @ 11	13.70	19.50	RET-AUSVE/T1+ SEAT-H1000 (8) (optional shim SS-3042)
SPR-H100DR/AU (Exhaust Optional)	30.20	22.20	22.20	16.80	91 @ 33.2	228 @ 11	14.70	18.50	RET-AUSVE/T1+ SEAT-H1000 (8)

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-VBM6-I	EXHAUST: VS-VBM6-E
CAM FOLLOWERS	INTAKE: CF-24/15	EXHAUST: CF-33.5/15.5
VALVE GUIDE	GDE-AU18T (oversized available also) for Intake & Exhaust	
KEEPERS	Single groove: KPR-65/75 - Triple Groove: KPR-VW6-T	

RODS												
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE(mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER			
VW	Forged 4340 Alloy	H Beam	144mm	20mm Full Float	24.90mm Straight	50.61mm	24.90mm	565	CR-VW144-20			



1.8 LTS



2.0 LTS



PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
VW - AUDI 1.8T 20v	81mm	STD	-4	9.3:1	44	32.70mm	86.40mm R	144mm	20mm	280	T/N	GNH8100	P4-VW18T81-N4
VW - AUDI 1.8T 20v	81.50mm	0.50mm	-4	9.3:1	44	32.70mm	86.40mm R	144mm	20mm	285	T/N	GNH8150	P4-VW18T815-N4
VW - AUDI 1.8T 20v	82mm	1mm	-4	9.3:1	44	32.70mm	86.40mm R	144mm	20mm	292	T/N	GNH8200	P4-VW18T82-N4
VW - AUDI 1.8T 20v	82.50mm	1.50mm	-4	9.3:1	44	32.70mm	86.40mm R	144mm	20mm	292	T/N	GNH8250	P4-VW18T8250-N4
VW - AUDI 1.8T 20v	83mm	2mm	-4	9.3:1	44	32.70mm	86.40mm R	144mm	20mm	292	T/N	GNH8300	P4-VW18T83-N4
VW - AUDI 1.8T 20v	83.50mm	2mm	-8.4	9.3:1	44	32.70mm	86.40mm R	144mm	20mm	292	T/N	GNH8300	P4-VW18T83-N8

Notes: (Gasket 1.2mm - Deck heigh: 0)

RODS								
ENGINE	MATERIAL	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
VW	Forged 4340 Alloy	159mm	21mm Full Float	24.90mm Straight	50.61mm	24.90mm	628.5	CR-VW159-21

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
AUDI 18T 20v	MLS	83mm	1.40mm	HG-VW18T-83-1.4T

R8 V8



BHF



BHK



Audi V8 40v 4.2L (BHF / BHK)								
Audi A8 / S4 / RS6 03 - 08	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	27.90mm(+1.0)	5.96mm	96.55mm	AIVN-12065	30.90mm (+1)	5.94mm	94.80mm	AEEV-12065

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPRK-AUD14.2T	20.60	14.40	SINGLE		58 @ 36.6	133 @11	11.00	23.00	6.70
	29.10	21.90	20.50	15.50	75 @ 33.7	180 @ 10.5	12.00	19.50	10.00

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-VBM6-I	EXHAUST: VS-VBM6-E
KEEPERS	KPR-65/7	
NOTES	Single groove valves to be used with keepers KPR-65/75	

1.8 LTS



2.0 LTS



2.2LT 5 CYCL



VW 1.8 / 2.0Lts 16v / 2.2 lts 5 cyl. 20v							
Golf/ Jetta/ GTI / GLI (KR 7A - 9A ABF)	INTAKE VALVE			Part Number	EXHAUST VALVE		
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length
	32.00mm(std)	6.97mm	95.50mm	VWIVN-1034F	27.00mm (std ABF)	6.94mm	98.20mm
	32.00mm(std)			VWIVN-1034	28.00mm (std -KR/9A)		
	32.50mm (+0.5)			VWIVN-1035	28.00mm (std -KR/9A)		
	34.00mm (+2)			VWIVN-1038	28.50mm(+0.5)		
					28.50mm(+0.5)		
					29.50 mm (+1.5)		
					SODIUM FILLED VALVES		
					28.50mm(+0.5)	6.96mm (Sodium F.)	98.20mm

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-V2093/4-16	30.40	23.20	21.90	16.50	82 @ 31.70	224 @ 11.5	13.00	18.70mm	12.50
SPR-V2093/4-20	30.40	23.20	21.90	16.50	82 @ 31.70	224 @ 11.5	13.00	18.70mm	12.50

ENGINE COMPONENTS		
VALVE SEALS	INTAKE: VS-VW7-1	EXHAUST: VS-VW7-E
VALVE GUIDES	GDE-VW8V-7A	
CAM FOLLOWERS	CF-35/14.7LC (for std base circle) or CF-35/16.7LC (for reground cams). To be use with Lash Caps (7mm) installed on the CF inner post.	
KEEPERS	Single Groove: KPR-VW7-5	

VW 1.8 / 2.0Lts 8v

Golf / Jetta Passatt Beetle 85-03	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	40.00mm(std)	6.97mm	91.60mm	VWIVN-1014	33.00mm(std)	6.94mm	90.95mm	VVEVN-1014
	41.00mm(+1.0)		92.20mm	VWIVN-1017	33.50mm (+0.5)		91.55mm	VVEVI-1015
	42.00mm (+2)			VWIVN-1019	34.00mm(+1.0)			VWVEVN-1017
	40.00mm(std)		98.60mm	VWIVN-1024	35.00mm (+2mm)		98.40mm	VWVEVN-1019
	41.00mm(+1.0)			VWIVN-1027	33.00mm(std)			VWVEVN-1024
	42.00mm (+2)			VWIVN-1029	34.00mm(+1.0)			VWVEVN-1027
					35.00mm (+2mm)			VWVEVN-1029

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-V2091/4	30.40	23.20	21.90	16.50	80 @ 33	192 @ 10	14.00	18.70	11.20
SPR-V1107 (dual)	31.10	23.10	23.10	17.40	92 @ 39.75	200 @ 10	15.00	22.00	11.17

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-VW8V-7A (8mm to 7mm valve conversion)	EXHAUST: GDE-VW8V-7A (8mm to 7mm valve conversion)
VALVE SEALS	INTAKE: VS-VW7-I	EXHAUST: VS-VW7-E
KEEPERS	Triple Groove: KPR-VW7-T	

PISTONS													
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
VW 1.8 / 2.0Lts 8v	93mm	2mm	-21.70	8.5:1	30	32.30mm	86.40mm R	144mm	20mm	303 / 98	T/N	MA70860	P4-VW83-3230-N22
VW 1.8 / 2.0Lts 8v	83mm	2mm	-21	8.5:1	30	32.50mm	86.40mm R	144mm	20mm	300 /83	T/N	GNH8300	P4-VW83-3255-N21
VW 1.8 / 2.0Lts 8v	83.50mm	1mm	-14.5	10:1	30	30.80mm	86.40mm R	144mm	21mm		T/N	GNH8350	P4-VW835-N14
VW 1.8 / 2.0Lts 8v	83.50mm	1mm	-26	8.7:1	30	30.80mm	86.40mm R	144mm	21mm		T/N	GNH8350	P4-VW835-N26

VR6 R32



VW VR6 - R32 24v / 3.6L 24v

Golf GTI 3.2Its	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	33.15mm (std)	5.97mm	136.40mm (std)	VWIVN-10445L (6)	30.15mm (std)	5.96mm	136.10mm (std)	VVEVI-10445L (6)
	33.15mm (std)		102.5mm (std)	VWIVN-10445S (6)	30.15mm (std)		102.2mm (std)	VVEVI-10445S (6)

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-TC25D/VR6 (2.8L /3.2L)	25.00	18.00	18.00	13.00	80 @ 36.00	205 @ 10	13.90mm	21 / 17	12.60
SPR-TC25D/VR6-36 (3.6L)	25.00	18.00	18.00	13.00	76 @ 36.4	200 @ 10	13.90mm	21 / 17	12.60

ENGINE COMPONENTS

KEEPERS	KPR-65/7
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EA113



EA888



VW - AUDI 2.0T/2.5T FSI EA113 / EA888 - V6 3.0T EA839

VW / AUDI / SEAT	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	33.85mm (std)	5.98mm	103.9mm	VWIVN-1002T (triple grv)	28.00mm (std)	5.96mm	101.80mm	VWVEVI-1002T (Triple groove)
	34.85mm (+1mm)			VWIVN-1002S (+locks)	29.00mm (+1)			VWVEVI-1002S
				VWIVN-1004S (+locks)	30.00mm (+2)			VWVEVI-1004S
								VWVEVI-1006S
					SODIUM FILLED VALVES			
					28.00mm(Std)	5.96mm (Sodium Filled)	101.80mm	VWVEVI-1002S-HS

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)			Seat	Open (lift)	mm	mm	lbs./mm
SPRK-A2416-N2	24.00	16.50	Intake	Exhaust	73 @ 37.40	178 @ 10	12.50	24.00	10.50
					85 @ 36	190 @ 10	11.00		
SPRK-A2416-BE1	24 (Bottom)	12.7 (Top)	Intake	Exhaust	73 @ 37.40	173 @ 10	11.00	23.50	8.00
					84 @ 36	164 @ 10	10.00		
SPRK-A2416-BE2 (Drag - Beehive)	24 (Bottom)	12.7 (Top)	Intake	Exhaust	91 @ 37.40	189 @ 10	11.00	23.00	9.80
					105 @ 36	202 @ 10	10.00		

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-VBM6-I	EXHAUST: VS-VBM6-E
KEEPERS	KPR-65/7	
VALVE GUIDE	GDE-AU18T (oversized available also) for Intake & Exhaust	



R8



R8 V10



PISTONS														
ENGINE	BORE	OVERSIZE	VOL	COMP RATIO	HEAD CC's	COMP HEIGHT	STROKE	SKIRT STYLE	ROD LENGTH	PIN DIAM	WEIGHT	APP	RING PART NUMBER	PISTON PART NUMBER
VW 2.0T FSI 16v	82.50mm	STD	-12.5	9:1	45	29.60mm	92.80mm	R	144mm	20mm	302	T/N	GNH8250	P4-VW20T825-N13-H13
VW 2.0T FSI 16v	83mm	0.5mm	-13	9:1	45	29.60mm	92.80mm	R	144mm	20mm	308	T/N	GNH8300	P4-VW20T83-N13-H13
VW 2.0T FSI 16v STROKER 95.5mm	82.50mm	STD	-14	9:1	45	28.25mm	95.50mm	R	144mm	20mm	288	T/N	GNH8250	P4-VW20T825-N14ST
VW 2.0T FSI 16v STROKER 95.5mm	83mm	0.5mm	-14	9:1	45	28.25mm	95.50mm	R	144mm	20mm	295	T/N	GNH8300	P4-VW20T83-N14ST
VW 2.0T FSI 16v EA888 GEN III - 23m	82.50mm	STD	-7.3	9.6:1	45	29.60mm	95.50mm	R	144mm	20mm	302	T/N	GNH8250	P4-VW20T825-G3-N7
VW 2.0T FSI 16v EA888 GEN III - 23m	83mm	0.5mm	-7.3	9:1	45	29.60mm	95.50mm	R	144mm	20mm	308	T/N	GNH8300	P4-VW20T83-G3-N7

RODS									
ENGINE	MATERIAL	DESIGN	CENTER TO CENTER	PE BORE (mm)	PE WIDTH (mm)	BE BORE (mm)	BE WIDTH (mm)	WEIGHT	PART NUMBER
VW/ AUDI TFSI	Forged 4340 Alloy	H Beam	144mm	21mm Full Float	24.90mm Straight	50.61mm	24.90mm	602.5	CR-VW144-21
VW/ AUDI TFSI / Gen III	Forged 4340 Alloy	H Beam	144mm	23mm Full Float	21.90mm Straight	50.61mm	21.90mm	602.5	CR-VW144-23

HEAD GASKETS				
ENGINE	MLS / COOPER	Gasket Bore (mm)	THICKNESS (mm)	PART NUMBER
VW/ AUDI TFSI	MLS	84mm	0.85mm	HG-VW20TFSI-84-085T

2.5 TFSI



5CYCL



VW 2.5L 5 cyl (20v Naturally Aspirated) - The 2.5TFSI (TTRS-RS3 DAZA) use the same Intake valve as the 2.0TFSI								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
VW Jetta - Rabbit 2005 +	Head Diam	Stem. Diam	Length	Black Nitrided	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	32.35mm (std)	5.98mm	103.9mm	N / A	28.00mm (std)	5.96mm	101.80mm	VWVEI-1002S
	33.00mm (+0.65)			29.00mm (+1)	VWVEI-1004S			
				VWIVN-1001S	30.00mm (+2)			VWVEI-1006S
	33.85mm (+1.5 & Turbo)			VWIVN-1002S	SODIUM FILLED VALVES			
				28.00mm(Std)	5.96mm (Sodium Filled)	101.80mm	VWVEI-1002S-HS	

POWERSPORTS

OFF ROAD

STREET

SXS

WATERCRAFT





HONDA CRF250R 2004-2007 / CRF250X 2004-2013										
HONDA CRF250 04-07	INTAKE VALVE				Part Number	EXHAUST VALVE			Part Number	
	Head Diam	Stem. Diam	Length		Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel	
	31.00mm	4.95mm	83.37mm		HIVN-CRF250	26.00mm	4.95mm	82.25mm	HEVN-CRF250-07	
	31.00mm <th>HIVT-CRF250</th>				HIVT-CRF250					
SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H3058	19.00mm	13.00mm	SINGLE		30lbs @34.0mm	115 @ 10	15.30	19.00mm	8.50	OEM RETAINER + OEM SEAT
ENGINE COMPONENTS										
CAM FOLLOWERS	CF-22.5/3.0 / CF-22.5/3.0-DLC (DLC coated) / CF-24.5/3.0 (OVERSIZED)									

HONDA CRF250R 2008-2009								
HONDA CRF250R 2008-2009	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided / Inconel
	31.00mm	4.98	83.31mm	HIVN-CRF250-08 HIVT-CRF250-08	26.00mm	4.45mm	82.25mm	HEVN-CRF250-08F (flat)
ENGINE COMPONENTS								
CAM FOLLOWERS	CF-22.5/3.0 / CF-22.5/3.0-DLC (DLC coated) / CF-24.5/3.0 (OVERSIZED)							

HONDA CRF250- 2010/2017											
HONDA CRF250- 2010	INTAKE VALVE			Part Number		EXHAUST VALVE			Part Number		
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium		Head Diam	Stem. Diam	Length	Black Nitrided /Titanium		
	30.50mm	4.98mm	89mm	HIVN-CFR250-10		25.00mm	4.47	84.23	HEVN-CRF250-10		
	30.50mm	4.98mm	89mm	HIVT-CFR250-10		25.00mm	4.97(+.5)	84.23	HEVT-CRF250-10		
	31.50mm(+1- 50 deg)	4.98mm	89mm	HIVT-CRF250-10-50-1		26.00mm(+1)	4.97(+.5)	84.23	HEVT-CRF250-10-50-1		
SPRING KITS											
VALVE SPRINGS		Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number		O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H3060		19.00mm	13.00mm	SINGLE		49lbs @ 36.2mm	135 @ 10	13.20	23.00mm	8.60	OEN RETAINER + OEM SEAT
ENGINE COMPONENTS											
CAM FOLLOWERS		CF-22.5/3.0 / CF-22.5/3.0-DLC (DLC coated) / CF-24.5/3.0 (OVERSIZED)									

HONDA CRF250- 2018								
HONDA CRF250- 2018	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	30.50mm	4.98mm	89mm	HIVT-CRF250-18	25.00mm	4.97mm	84.1	HEVT-CRF250-18

HONDA CRF450 2002-2008										
HONDA CRF450 '02-'08	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number		
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium		
	36.00mm	5.47mm	84.7mm	HIVN-CRF450	31.00mm	4.96mm	84.28mm	HEVN-CRF450		
				HIVT-CRF450	31.00mm	4.96mm	84.28mm	HEVT-CRF450F		
SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H450	23.50mm	16.50mm	SINGLE		45lbs @ 35.75	155 @ 10	12.75	23mm	11.00	OEM RETAINER + OEM SEAT
ENGINE COMPONENTS										
CAM FOLLOWERS	CF-26/3.0 / CF-26/3.0-DLC (DLC coated) / CF-28-3.0 (OVERSIZED)									

HONDA CRF450 2009-2012										
HONDA CRF450 - 09	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number		
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium		
	36.00mm	4.97mm	78.7mm	HIVT-CF450-09	30.00mm	4.96mm	80.51mm	HEVN-CRF450-09		
SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H450-09	23.50mm	16.50mm	SINGLE		53lbs @ 34.10	141 @ 10	12.10	22mm	8.80	OEM RETAINER
ENGINE COMPONENTS										
CAM FOLLOWERS	CF-26/3.0 / CF-26/3.0-DLC (DLC coated) / CF-28/3.0									

HONDA CRF450X 2005-2013								
HONDA CRF450 -13	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	35.00mm	5.48mm	84.6mm	HIVN-CRF450X				

KAWASAKI 250F 2003-2013								
KX-250F	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	31.00mm	4.48mm	79.24mm	KWIVT-KX250F	25.00mm	4.46mm	79mm	KWEVT-KX250F
	31.00mm		79.24mm	KWIVT-KX250F-50	25.00mm	4.46mm	79mm	KWEVT-KX250F-50
	31.00mm		79.24mm	KWIVN-KX250F				

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	Part Number
SPR-KX250I	22.80mm	16.20mm	SINGLE		33lbs @ 33.5	105 @ 26.50	16.00	OEM RETAINER + OEM SEAT
SPR-KX250E	20.7mm	14.1mm	SINGLE		45 @ 33.50	163 @ 24.30	11.50	OEM RETAINER + OEM SEAT

ENGINE COMPONENTS								
CAM FOLLOWERS	CF-24.5/3.0 CF-24.5/3.0DLC (DLC-Coating) / CF-26.5/2.7							

KAWASAKI 250F 2017								
KX-250F	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	31.00mm	4.48mm	88.25	KWIVT-KX250F-17	25.00mm	4.46mm	80.4	KWEVT-KX250F-17

KAWASAKI 450 2006-2008								
KX-450F	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	36.00mm	5.47mm	83.31mm	KWIVT-KX450F-08	31.00mm	5.46mm	82.04mm	KWEVT-KX450F-08

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	Part Number
SPR-KX450	25.60mm	19mm	19.0mm	14.0mm	60lbs 31.50	150 @ 24.50	14.00	OEM RETAINER + OEM SEAT
CAM FOLLOWERS	CF-28/3.0 CF-28/3.0DLC (DLC-Coating)							

KAWASAKI 450 2009-2013								
KX-450F	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	36.00mm	5.47mm	78.23mm	KWIVT-KX450F-13	31.00mm	5.46mm	76.96	KWEVT-KX450F-13
	36.00mm	5.47mm	78.23mm	KWIVT-KX450F-13-50F	31.00mm	5.46mm	76.96	KWEVT-KX450F-13-50F
	37.00mm(+1)	5.47mm	78.23mm	KWIVT-KX450F-13-50F-1	31.50mm(+0.5)	5.46mm	76.96	KWEVT-KX450F-13-50-05

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	Part Number
SPR-KX450	25.60mm	19mm	19.0mm	14.0mm	60lbs 31.50	150 @ 24.50	14.00	OEM RETAINER + OEM SEAT

ENGINE COMPONENTS								
CAM FOLLOWERS	CF-28/3.0 CF-28/3.0DLC (DLC-Coating)							

KAWASAKI Ninja ZX12 / Watercraft 1.5L								
Kawasaki 1.5L	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	37.50mm	4.98mm	97.60mm	KWIVN-3340	28.30mm	4.95mm	97.90mm	KWEVI-2830T

KTM 250SX-F 2005-2012								
KTM-250	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	30.90mm	4.95mm	99.40mm	KTIVT-250SX-08	26.70mm	4.96mm	92.90mm	KTEVT-250SX-12
	30.90mm		99.40mm	KTIVN-250SX	26.70mm	4.96mm	92.90mm	KTEVN-250SX

SPRING KITS								
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	Part Number
SPR-KTM250-05	25.5mm	18.3mm	21.8mm	14.00mm	95lbs @34.3	170 @ 24.3	12.60	OEM RETAINER + OEM SEAT



KTM 250SX-F - 2012 -2017										
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number		
KTM 250SX-F	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium		
	32.50mm	4.97mm	96mm	KTIVT-250SX-17	26.50mm	4.98mm	98.5	KTEVT-250SX-17		
SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-KTM250-08	20.8mm	14.2mm	SINGLE		58lbs @ 34.3	160 @ 24.3	13.80	20.5mm	10.20	OEM RETAINER + OEM SEAT

KTM 450 2002-20012								
KTM-450	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	40.25mm	5.98mm	87.90mm	KTIVN-450SX-12	31.70mm	5.98mm	89.70mm	KTEVT-450SX12

KTM 450 2013-2017								
KTM-450	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	40.00mm	5.98mm	93.70mm	KTIVN-450SX-17	33.10mm	5.98mm	92.85mm	KTEVT-450SX-17

SUZUKI RM-Z250 2004-2006								
RM-Z250	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	31.00mm	4.46mm	79.24mm	SZIVT-250-06	25.00mm	4.46mm	79.24mm	SZEVN-250-06

SUZUKI RM-Z250 2007-2013								
RM-Z250	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	31.00mm	4.48mm	80.64mm	SZIVT-250-13	25.00mm	4.47mm	80.90mm	SZEVN-250-13

SUZUKI RM-Z450 2005-2007								
RM-Z450	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	36.00mm	4.97mm	82.42mm	SZIVT-450-07	29.00mm	4.96mm	81.28mm	SZEVN-450-07

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-RM450 (int)	25.00mm	17.7mm	SINGLE		34lbs @ 29.5	96 @ 22.50	12.50	15.00mm	10.60
SPR-RM450E (exh)	23.20mm	17.0mm	SINGLE		34lbs @ 29.5	96 @ 22.50	14.50	15.00mm	8.90

SUZUKI RM -Z450 2008-2012								
RM-Z450	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	36.00mm	5.47mm	81.95mm	SZIVT-450-12	29.00mm	5.46mm	81.00mm	SZEVN-LT450
	36.00mm		81.95mm	SZIVN-LT450				

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-RM450 (int)	25.00mm	17.7mm	SINGLE		34lbs @ 29.5	96 @ 22.50	12.50	15.00mm	10.60
SPR-RM450E (exh)	23.20mm	17.0mm	SINGLE		34lbs @ 29.5	96 @ 22.50	14.50	15.00mm	8.90

YAMAHA 250F 2001- 2013								
YZ-250F	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	23.00m	3.98mm	78.60mm	YIVT-YZ250-1	24.50mm	4.46mm	77.97	YEVT-250
	23.00m	3.98mm	80.15mm	YIVT-YZ250-2				

YAMAHA 250F 2015								
YZ-250F	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	31.00mm	4.98mm	83.60mm	YIVT-YZ250/15-50	25.00mm	4.46mm	82.40mm	YEVT-YZ250-15-50
	32.00mm(+1)	4.98mm	83.60mm	YIVT-YZ250/15-50-1	26.00mm(+1)	4.46mm	82.40mm	YEVT-YZ250-15-50-1

YAMAHA 250F 2001- 2013								
YZ-250F	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	23.00m	3.98mm	78.60mm	YIVT-YZ250-1	24.50mm	4.46mm	77.97	YEVT-250
	23.00m	3.98mm	80.15mm	YIVT-YZ250-2				

YAMAHA 250F 2015								
YZ-250F	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	31.00mm	4.98mm	83.60mm	YIVT-YZ250/15-50	25.00mm	4.46mm	82.40mm	YEVT-YZ250-15-50
	32.00mm(+1)	4.98mm	83.60mm	YIVT-YZ250/15-50-1	26.00mm(+1)	4.46mm	82.40mm	YEVT-YZ250-15-50-1

YAMAHA 250F 2019								
YZ-250F	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	31.00mm	4.98mm	82.95mm	YIVT-YZ250-19	25.00mm	4.46mm	82.40mm	YEVT-YZ250-15

YAMAHA 450F 2003 -2010								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
YZ-450F	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	27.00mm	4.48mm	76.30mm	YIVT-YZ450-1	28.00mm	4.95mm	75.10mm	YEVN-YZ450
	27.00mm		77.2mm	YIVT-YZ450-2				
	27.00mm	4.48mm	76.30mm	YIVN-YZ450-1				
	27.00mm		77.2mm	YIVN-YZ450-2				

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-YZ450	19.7mm	14.10mm	SINGLE		45 @ 27	85 @ 20	9.50	17.50mm	5.70

YAMAHA 450F - 2010 - 2013								
YZ-450F	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	36.00mm	5.48mm	83.80mm	YIVN-YZ450F-10	30.00mm	5.47mm	86.00mm	YEVN-YZ450F
	36.00mm			YIVT-YZ450F-10				

SPRING KITS									
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm
SPR-YZ450-10I (int)	22.8mm	15.3mm	SINGLE		75lbs @ 34.80	215 @ 24.80	11.80	23.00mm	14.00
SPR-YZ450-10E (exh)	19.50mm	13.50mm	SINGLE		50 @ 30.80	130 @ 20.8	11.30	19.50	8.00

YAMAHA 450F 2017								
YZ-450F	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	37mm	5.48mm	89.95	YIVT-YZ450-17	30.50mm	5.47	80.65	YEVT-YZ450-17

YAMAHA YZF-R6								
YZF-R6	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	27.00mm	4.47mm	94.50mm	YIVT-YZF-R6	23.00mm	4.46mm	95mm	YEVY-YZF-R6

KAWASAKI 1.5L Watercraft 16v / Ninja ZX12								
Kawasaki 1.5L	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Titanium	Head Diam	Stem. Diam	Length	Black Nitrided /Titanium
	33.50mm	4.98mm	97.60mm	KWIVN-3340	28.30mm	4.95mm	97.90mm	KWEVI-2830T (turbo)
	34.50mm (+1)			KWIVN-3450			KWEVN-2830	
							98.40mm	KWEVI-2930
					29.30 mm (+1)			

ENGINE COMPONENTS	
VALVE STEM SEAL	VS-KAS-NS
VALVE GUIDE	GDE-KAWA-5.0 (Intake & Exhaust)

SEADOO 4TEC 12v RXP RXT / ROTAX 1503 / 1630										
SEADOO 4TEC RXP RXT	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number		
	Head Diam	Stem. Diam	Length	Black Nitrided/ Chrome	Head Diam	Stem. Diam	Length	Black Nitrided /Inconel		
	38.00mm	5.96mm	90.25	SEAIVN-3860T	31.00mm	5.95mm	90.70mm	SEAEVN-3160T		
	38.00mm			SEAIVC-3860S				SEAEVI-3160S		
	39.00mm (+1)			SEAIVC-3960S				SEAEVI-3260S		

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-EC3025D-SE	26.60mm	19.60mm	19.60mm	14.20mm	85lbs @34.10	198 @ 10	15.00	19mm	11.30	RET-EC3020/SE + OEM SEAT
SPRK-EC3027D-SE	26.60mm	19.60mm	19.60mm	14.20mm	103lbs @ 34.10	214 @10	13.30	20.7mm	11.30	RET-EC3020/SE + OEM SEAT

ENGINE COMPONENTS	
Ti Retainer for OEM Spring	RET-SEADOO
Keepers	VALVES WITH SINGLE GROOVE REQUIRE SINGLE GROOVE KEEPERS KPR-6S/7 -- VALVES WITH TRIPLE GROOVE USE OEM LOCKS OR KPR-VW6T

Rotax ACE 900 / SEADOO SPARK 900 2014-2019 / CAN-AM Maverick X3 Turbo 2018-2019 (3 Cyl - 12v)										
Rotax ACE 900 CAN-AM	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number		
	Head Diam	Stem. Diam	Length	Black Nitrided/ Chrome	Head Diam	Stem. Diam	Length	Black Nitrided /Inconel		
	29.00mm	4.96mm	84.38mm	SEAIVC-2950	25.00mm	4.96mm	84.91mm	SEAEVI-2550		
	30.00mm (+1)			SEAIVC-3050				SEAEVI-2650		

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-ACE900T1 (Beehive)	24.6mm	17.6mm	19.5mm	12.5mm	56lbs @ 29mm	160lbs @ 9.7mm	9.7mm	18.5mm	10.80	RET-SEA900-ST1 (for hydraulic or solid Cam Follower)

ENGINE COMPONENTS	
Ti Retainer for OEM Spring	RET-SEA900-OE (for OEM Hydraulic Cam Follower)
CAM FOLLOWER (Solid)	CF-28.36/16.25 - Can be used with shims 9.5mm diam on retainer
Keepers	Factory

YAMAHA FZR/SVHO 1800 16v WATERCRAFT								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Chrome	Head Diam	Stem. Diam	Length	Black Nitrided /Inconel
	34.00mm (std)	5.48mm	90.80mm	YIVN-FZR34	29.00 (std)	5.47mm	89.95mm	YEVY-FZR29
	35.00mm (+1)			YIVN-FZR35	30.00 (+1)			YEVY-FZR30

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-EC3025D- FZR	26.60	19.60	19.40	14.20	75 @ 34.7	198 @ 10	13.80	19.00	12.30	RET-YA3020 + SEAT-YA3020
SPR-EC3027S-FZR	26.60	19.60	SINGLE		58 @ 34.7	143 @ 10	14.00	20.70	8.50	RET-YA3020 +SEAT-YA3020

ENGINE COMPONENTS	
CAM FOLLOWER	CF-30/3.3



YAMAHA YXZ1000R (side by side) and TR1 1050cc (jetski) / Textron Wildcat XX 2019								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Chrome	Head Diam	Stem. Diam	Length	Black Nitrided /Inconel
	31mm (std)	4.45mm	88.85mm	YIVN-YXZ1000R	26.00mm (std)	4.45mm	87.95mm	YEVN-YXZ1000R
	31mm (std)			YIVT-YXZ1000R	26.00mm (std)			YEVY-YXZ1000R
					27.00mm (+1)			YEVY-YXZ1000R-1

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-YXZ1000-1	21.45	15.25	SINGLE		47lbs @ 34.7mm	145lbs @ 10mm	11.30	23mm	8.90	RET-YXZ1000 (OEM Seat)

ENGINE COMPONENTS	
CAM FOLLOWER	For Conversion to Shim inside the Bucket: CF-26.5/3.0+7.5. Requires machining of OEM retainer.
VALVE STEM SEAL	VS-YXZ4.5E
VALVE GUIDE	GDE-YXZ-4.5E (Intake & Exhaust)

POLARIS 900 / XP900 (8v - 2 Cyl)								
Polaris 900 2013 - 2016 XP900 (2011 - 2012)	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Chrome	Head Diam	Stem. Diam	Length	Black Nitrided /Inconel
	34.5mm	5.47mm	95.70mm	POLIVN-3450	32.40mm	5.45mm	96.60mm	POLEVN-3240
	37.8mm			POLIVN-3780				

SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1012-POL	27.50	20.00	20.00	15.20	68 @ 34.3	171 @ 10	15.00	20.00	10.40	RET-TS55-POL + SEAT-TSL5-1FL (no OEM seat)

ENGINE COMPONENTS	
CAM FOLLOWER	CF-31.15/2.50
VALVE GUIDES	GDE-POL55-LC + VS-Y5.5E

POLARIS RZR XP1000 (8v-2 Cyl)								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Chrome	Head Diam	Stem. Diam	Length	Black Nitrided /Inconel
	37.80mm (std)	5.48mm	95.80mm	POLIVN-3780	29.20mm (std)	5.46mm	96.60mm	POLEVN-2920
	38.80mm (+1)			POLIVN-3880	29.20mm (std)			POLEVI-2920
					30.20mm (+1)			POLEVI-3020
					33.00mm (+3.8)			POLEVI-3300

ENGINE COMPONENTS	
CAM FOLLOWER	CF-31.15/2.50
VALVE GUIDES	GDE-POL55-LC + VS-Y5.5E

POLARIS RANGER RZR-800--XP-700 --SPORTMAN-800TTV										
SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H100DR-POL	29.7	21.9	21.9	16.9	67 @ 35.50	190 @ 10	17	18	12.35	RET-H100-POL + SEAT-H100-POL + OEM seat

ENGINE COMPONENTS	
CAM FOLLOWER	

POLARIS RZR XP1000 (8v-2 Cyl)								
	INTAKE VALVE			Part Number	EXHAUST VALVE			Part Number
	Head Diam	Stem. Diam	Length	Black Nitrided/ Chrome	Head Diam	Stem. Diam	Length	Black Nitrided /Inconel
	37.80mm (std)	5.48mm	95.80mm	POLIVN-3780	29.20mm (std)	5.46mm	96.60mm	POLEVN-2920
	38.80mm (+1)			POLIVN-3880	29.20mm (std)			POLEVI-2920
					30.20mm (+1)			POLEVI-3020
					33.00mm (+3.8)			POLEVI-3300

ENGINE COMPONENTS	
CAM FOLLOWER	CF-31.15/2.50
VALVE GUIDES	GDE-POL55-LC + VS-Y5.5E

POLARIS RANGER RZR-800--XP-700 --SPORTMAN-800TTV										
SPRING KITS										
VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H100DR-POL	29.7	21.9	21.9	16.9	67 @ 35.50	190 @ 10	17	18	12.35	RET-H100-POL + SEAT-H100-POL + OEM seat

ENGINE COMPONENTS	
CAM FOLLOWER	

APPAREL



BAR

Made from ultra-soft ring-spun cotton. Supertech artwork is soft hand screen printed with special foil application. This shirt is tag less and is sized perfectly for people that want to win.

- ST-Bar-S
- ST-Bar-M
- ST-Bar-L
- ST-Bar-XL
- ST-Bar-2XL



TONE

Made from ultra-soft ring-spun cotton. Supertech artwork is soft hand screen printed with special foil application. This shirt is tag less and is sized perfectly for people that want to win.

- Tshirt-Tone-S
- Tshirt-Tone-M
- Tshirt-Tone-L
- Tshirt-Tone-XL
- Tshirt-Tone-2XL



CAMO ZIP

A feather lightweight water resistant full zip jacket with mesh interior pockets! This tech fabric feels soft and breathable against your skin!

- CamoZio-S
- CamoZio-M
- CamoZio-L
- CamoZio-XL
- CamoZio-2XL



PATCH MADE

Built for performance and style, this waterproof trucker hat keeps you dry and comfortable in any condition. Featuring a durable water-resistant shell, breathable mesh back panels, and an adjustable snap closure, it combines all-weather protection with a classic fit.

- BarHat-OS

WARRANTY DISCLAIMER

Due to the specialized nature of these parts, they are sold as-is without any express or implied warranty, including but not limited to warranties of merchantability or fitness for a particular purpose.

Under no circumstances shall Supertech Performance be held liable for any special, incidental, or consequential damages. This includes, but is not limited to, damage or loss of property or equipment, loss of profits or revenue, the cost of purchased or replacement goods, or any claims from customers resulting from the sale, installation, or use of these parts.

Supertech Performance's sole obligation is limited to addressing products determined to be defective in either workmanship or materials. Any such claim will only be considered after an inspection is performed by Supertech Performance. This Limited Warranty applies exclusively to the original purchaser and covers only the repair or replacement of the defective product, at our discretion.

RETURN AUTHORIZATION

To initiate a return, all merchandise must first be approved by a Supertech Performance representative. Returns will only be accepted if they include a copy of the original invoice, along with a detailed description of the reason for the return. Without this documentation, the return cannot be processed.

Conditions for Return:

- **Authorization:** Obtain a Return Merchandise Authorization (RMA) by contacting customer service. Include the RMA number, original invoice, and return reason with the shipment.
- **Time Limit:** Returns must be initiated within **30 days** of the invoice date.
- **Restocking Fee:** A **15% restocking fee** applies to all eligible returns.

Non-Returnable Items:

- **Custom Orders:** Any custom-made or machined parts made to customer specifications are non-returnable, and all sales are final.

Return Guidelines:

- Items must be in **new, unused condition** with original packaging. The customer is responsible for return shipping unless Supertech Performance made an error.
- **Damaged or Defective Items:** Report any damaged or defective products within 48 hours of receipt.

Refund Process:

- Once your return is received and inspected, Supertech Performance will process your refund. Refunds will be issued in the original form of payment within 7-10 business days, minus the restocking fee if applicable.



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