

NEWS HKS COMMUNIQUE



NEW RELEASE

- GT SUPERCHARGER SYSTEM GTS7040L Pro kit For ZN6/ZC6
ZN6(86)/ZC6(BRZ) P1
- CAPACITY UPGRADE KIT for FA20 FA20 P2
- V CAMSHAFT INTAKE & EXHAUST FA20 P2

NEW LINE-UP

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- S-TYPE OIL COOLER KIT for 86/BRZ ZN6(86)/ZC6(BRZ) P4
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INFORMATION

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with New GT Supercharger System Pro(12001-AT009) P8
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TOPICS

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EVENT INFORMATION

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GT SUPERCHARGER SYSTEM GTS7040L Pro kit For ZN6/ZC6 ZN6(86)/ZC6(BRZ)

FR sports car "86 & BRZ" was launched in tremendous popularity of ecologically-friendly cars. HKS has been released various tuning parts for "86 & BRZ." Among HKS' 86 & BRZ parts, the supercharger kit has been redesigned and become a more powerful kit!!

The efficiency improved by layout change of piping around the throttle and utilizing a bigger size intercooler.

Compared to stock, 35% higher output and 45% higher torque are achieved. Fuel Upgrade Kit for higher engine output is also released for engine output of over 300PS.

For the owners of the conventional Supercharger kit, Intercooler Upgrade Kit is available to convert the existing kit to new version.

Features

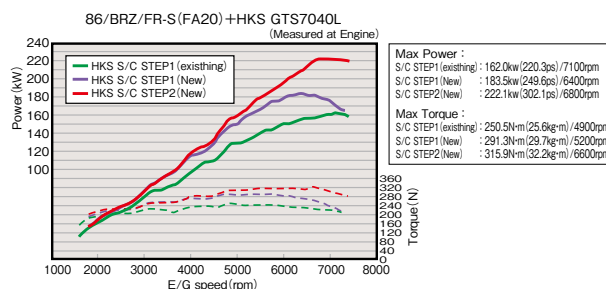
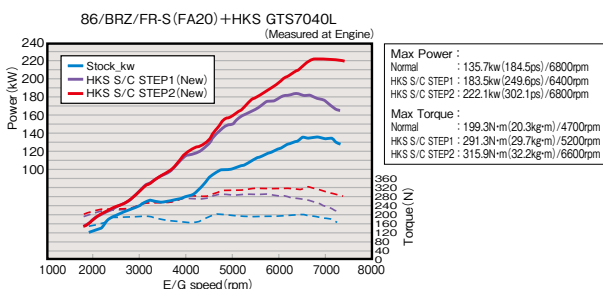
- Using the stock air cleaner enables sound isolation of the supercharger; the quietness is dramatically improved.
- Each HKS GT S/C SYSTEM is a vehicle-specific design. All parts necessary for installation are included. (An engine management system is required separately.)
- Free to select the engine management tool. (For JDM vehicles, Flash Editor including the data for this Supercharger Kit is available for easy data rewriting.

Performance

	Power	Torque
HKS GT S/C STEP2 (S/C Pro + Fuel up + Flash Editor)	302PS	32.2kg-m
HKS GT S/C STEP1 (S/C Pro + Flash Editor)	249PS	29.7kg-m
Conventional Kit + Flash Editor	220PS	25.6kg-m
Normal	184PS	20.3kg-m



*These data were the results of in-house test. The results may vary depending on the weather, measuring equipment, etc. (Test Vehicle: 86 (ZN6) MT)



KIT PARTS

	GT S/C Pro	I/C UP	Fuel UP
Supercharger Assy	○	×	×
S/C Traction Parts	○	○	×
S/C Install Bracket	○	○	×
Suction Pipe	○	○	×
Intercooler ASSY	○	○	×
Intercooler Pipe	○	○	×
Bracket, etc	○	○	×
Injector	×	×	○
Restrictor	φ39mm	φ39mm	φ43mm



GT S/C SYSTEM



Flash Editor



Fuel UPGRADE kit

Notice for Installation

- It is recommended to use with the engine oil cooler and engine oil which high temperature viscosity is more than 40.
- Minor modification of the bumper reinforcement and radiator support.
- Required installation time is about 8 hours.

GT SUPERCHARGER PRO KIT

Vehicle	Model	Engine	Model Year	Code No.	Remark
86/BRZ	ZN6/ZC6	FA20	12/04~	12001-AT009	ECU setting by a setting tool is required.

INTERCOOLER UPGRADE KIT

Vehicle	Model	Engine	Model Year	Code No.	Remark
86/BRZ	ZN6/ZC6	FA20	12/04~	13001-AT007	Some factory parts such as an air cleaner are required.

FUEL UPGRADE KIT

Vehicle	Model	Engine	Model Year	Code No.	Remark
86/BRZ	ZN6/ZC6	FA20	12/04~	14007-AT001	Date for this kit must be obtained by actual vehicle's setting.

FLASH EDITOR

Vehicle	Model	Engine	Model Year	Code No.	Remark
86/BRZ	ZN6/ZC6	FA20	12/04~	42015-AT001	Available only for JDM vehicle.

CAPACITY UPGRADE KIT for FA20 FA20

Capacity Upgrade Kit developed by taking advantage of knowledge and experience acquired through D1 drift and time attack at Tsukuba Circuit.

This kit was designed exclusively for the FA20 engine by meticulous analysis and experiment. HKS delivers this kit with "Made in Japan" quality.

High performance specifications withstanding 550(ps)·50(kgf·m)!

This kit is for people want to upgrade all the way including the engine internals.

Features

POINT① PISTON KIT

- Carefully selected specially forged raw materials used.
- Replacing the gasket enables both NA and turbo-charged engine users to use this kit.
- In order to cope with the demands of high outputs, strength analysis and tests have allowed optimisation of compression ratio for flexibility of setup and high boost use.
- Piston crown had 3D design in consideration of stock direct injection system.
- Stock pistons skirts overhang from the block during bottom of travel. Short height pistons have revised potential issues in this area.
- Friction, weight and other design properties to suit the needs of short height pistons.

POINT② CONNECTING ROD

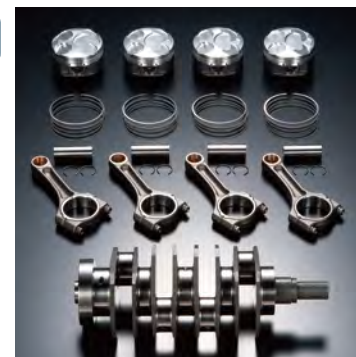
- Specific connecting rods have been designed to suit the longer stroke.
- With no engine modifications, a special size crank pin has been set requiring new bearings.
- *The crank metals (Nissan RB26 & SR) must be purchased separately.
- High strength I beam design and revised connecting rod bolt size.

POINT③ CRANKSHAFT STROKE 90.0mm

- Made from HKS special forged material.
- Perfect pin journal size was selected by meticulous analysis and experiment for extended stroke.
- Carefully designed weights balance the engine for maximum efficiency.

POINT④ Stock Bore Compatible 86.0mm

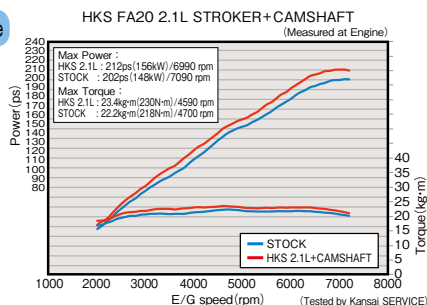
- In order to maintain the engine block strength, the stock bore size is maintained meaning there is no need for cylinder liners.
- Reduces the cost of installation as liners, bore & hone and block facing processes are unnecessary.



NEW RELEASE

		Stock	HKS 2.1L
PISTON	Bore Dia. mm	86	86
	Displacement cc	1998.2	2091.2
	Comp. Ratio	G/K 0.5mm 12.10	12.40
		G/K 0.6mm 12.00	12.30
		G/K 0.7mm 11.90	12.10
		G/K 1.0mm 11.50	11.80
CON'ROD	Boring·Honing	—	N/N
	Remarks	Cast D.Ignition	Forged D.Ignition
	Big End Dia.	53	51 (RB&SR)
	Bolt Size	M9.5	M8
CRANKSHAFT	Remarks	Split I-beam	Split I-beam
	Stroke mm	86.00	90.00
	Main Journal Dia.	68	68
	Pin Journal Dia.	50	48
	Remarks	Forged	Forged

Performance



TEST VEHICLE	
Vehicle	BRZ (ZC6)
Engine	FA20
Transmission	6MT
PARTS SPECIFICATIONS	
Suction	HKS Premium Suction
Exhaust Manifold	Kansai Service Original
Front Pipe	Kansai Service Original
Muffler	HKS Hi-Power SPEC-L
I/J	Stock
Fuel Pump	Stock
CPU	Kansai Service Original
Other	Big Throttle

2.1L kit + Camshaft were tested on Kansai Service's demo car with NA engine.

This graph shows before & after installation.

Upgrading the capacity exceeds the stock engine power in whole power range.

Power increase continues to the high rpm range by using the camshaft together with 2.1L Kit.

Test supported by Kansai Service.

Product	Engine	Capacity	Type	Boring/Honing·Modification	Full Flow Modification	Code No.	Remarks
TOYOTA/SUBARU							
FA20 2.1L KIT	FA20	2091.2cc	φ86.0-22	Not Required	Not Required	21004-AT002	F.Piston Kit + I-beam Con'rod + Ring + Pin
FORGED PISTON KIT	FA20	-	φ86.0-22	Not Required	Not Required	21003-AT003	F.Piston Kit + Ring + Pin
I-BEAM CON'ROD	FA20	-	φ22 Pin	Not Required	Not Required	23004-AT001	Forged I-beam
FORGED CRANKSHAFT	FA20	-	90mm	Not Required	Not Required	23006-AT002	Stroke 90mm

V CAMSHAFT INTAKE & EXHAUST FA20

Camshaft Kit developed by taking advantage of knowledge and experience acquired through D1 drift and time attack at Tsukuba Circuit.

Both NA and turbo-charged engine users can use this camshaft set.

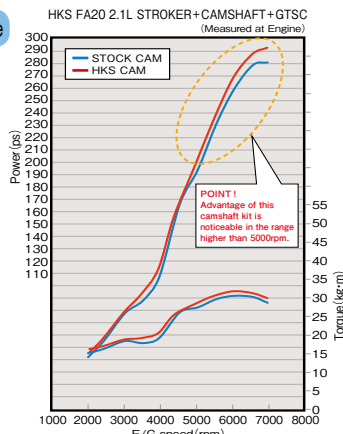
Overwhelming power increase can be felt in the high rpm range.

Using the capacity upgrade kit together is recommended to achieve optimum performance and keep proper valve clearance.

Features

- High acceleration and pick-up camshafts were completed by prudent analysis of the stock rocker structure.
- Cam lobe for the direct injection pump is available so the camshaft can be used the same way as the stock.
- The valve timing is the knock phase based on the stock, so, there is no need for complicated installation.
- Since the stock valve piston clearance is narrow, this camshaft kit was developed to be used with the capacity upgrade kit, and the piston recess was redesigned to enable a 0.7mm lift-up without replacing the springs.

Performance



[PRODUCT SPECIFICATIONS]

	STOCK		HKS	
	INTAKE	EXHAUST	INTAKE	EXHAUST
Cam Duration (°)	255	252	260	266
Valve Lift (mm)	11.00	11.00	11.70	11.70
Clearance (mm)	0.13±0.03	0.24±0.03	0.13±0.03	0.24±0.03
Valve Timing Most Advanced Angle (°)	82	81	82	81
Valve Timing Most Retarded Angle (°)	150	135	150	135
VVT Variable Angle (°)	68	54	68	54
Spring Replacement	—	—	X	X
Cam Type	Roller Rocker	Roller Rocker	Roller Rocker	Roller Rocker
High Press. Pump Cam Lobe	○	—	○	—

Max Power :
HKS CAM : 292ps (214kW) / 6950rpm
STOCK CAM : 280ps (206kW) / 6960rpm
Max Torque :
HKS CAM : 31.9kg·m (313N·m) / 6012rpm
STOCK CAM : 30.7kg·m (301N·m) / 6045rpm

[KIT PARTS]

- Intake Camshaft Set (1 for each right Bank & left Bank)
- Exhaust Camshaft Set (1 for each right Bank & left Bank)

[SPECIFICATIONS FOR TEST]

PARTS	SPECIFICATIONS
Engine	HKS 2.1L KIT
Restrictor	φ41mm
S/C	HKS GTS7040L
I/C	HKS S/C KIT
I/J	HKS Fuel UPGRADE KIT
CPU	HKS Flash Editor + F-con

*Test data were measured in HKS' engine bench.

[NOTICE FOR INSTALLATION]

- To keep adequate valve clearance, use HKS' piston together.
- Settings of fuel, ignition, valve timing are required.
- Check if the valve clearance is adequate.
- Refer to the factory service manual for installation.

Product	Engine	INTAKE SIDE			EXHAUST SIDE			Code No.	Remarks
		Duration	Valve Lift	Designed Valve Timing	Duration	Valve Lift	Designed Valve Timing		
TOYOTA/SUBARU									
V CAMSHAFT INTAKE & EXHAUST	FA20	260°	11.7	82°~150°	266°	11.7	81°~135°	22002-AT005	HKS Capacity Upgrade Kit (21004-AT002) is required.

NEW LINE-UP

OB-LINK TYPE-FA20

Special OB-LINK exclusively designed for 86/BRZ based on TYPE-001.



Connection

Just like OB-LINK TYPE-001, connecting the OBDII connector to OB-LINK main unit enables data extraction from a vehicle. Information is indicated on a tablet or smart phone through Bluetooth.

Special Functions Available Only for Type-FA20

There are special functions available only for OB-LINK TYPE-FA20.

- **Coupler-on Device** TYPE-001 requires initial setup, but TYPE-FA20 has preset data. Just connect the unit to the OBDII connector and complete Bluetooth pairing with a smart phone/tablet PC before use.
- **More Data Extractable** Addition to the data extractable by OB-LINK TYPE-001, the following performance-oriented data can be indicated:
 ・Engine Load ・Battery Voltage ・Fuel Pressure ・CAT Temperature ・EGT Sensor ・Outside Air Temperature ・Left/right G ・Front/rear G
 ・Yaw rate ・Brake (tread)
- **Customizable Car Carte Display** The screen image of Car Carte can be changed to the vehicle a user owns.

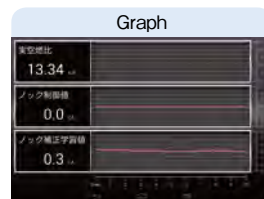
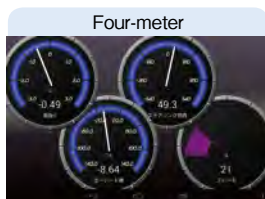


Carscope FA20 to indicate the vehicle info. such as meters, logger, etc through OB-LINK.

- *Download Carscope FA20 from App Store (iOS) / Google play (Android).
- *Carscope FA20 is not compatible with OB-LINK TYPE-001.

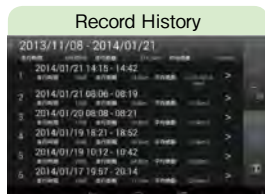
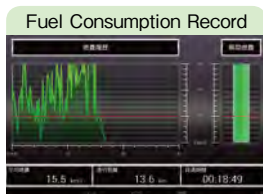
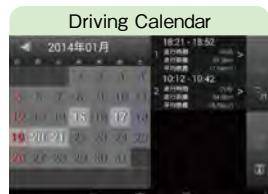
Real-time Meter

Select one from 5 types of meter indication. The warning and peak-hold functions are available.



Logger

A new memory function is added to the OB-LINK main unit. Presetting the data items and sampling time stores the date on the memory of the OB-LINK without starting app.



Fault Diagnosis

Once fault is found, an engine warning icon appears.



Vehicle Maintenance

Request of parts maintenance and periodical check-up appears.



Option App.

LogManager : Presetting the data items and sampling time automatically stores the date on the memory of the OB-LINK.



Items OB-LINK TYPE-001 & TYPE-FA20 obtain
 ・Speed ・Intake air volume ・E/G oil temp. ・E/G RPM ・Intake air temp.
 ・Water temp. ・Throttle 1/2 ・Gear Position ・Ignition timing
 ・Error code ・AF correction ・Intake manifold pressure
 ・Calmative driving distance ・AF learning value ・Steering angle・Brake (tread)
 ・E/G load ・Battery Voltage ・Fuel Press ・CAT Temp. ・EGT sensor
 ・Outside air temp ・Left/Right G ・Front/Rear G ・Yaw rate

Sampling	Memory time
100ms	139min.
200ms	278min.
500ms	695min.
1sec	23hours
5sec	116hours
10sec	232hours

Navigation Compatible

Using Clarion Smart Access enables CarscopePlus to be indicated on the navigation monitor. Also, operation of CarscopePlus from the navigation monitor is possible. (Smart Access requires a specific navigation system and HDMI cable.)
 ☆Please check HKS' website for more details.



Product	Code No.	Remarks
OB-LINK TYPE-FA20	44009-AK003	OB-LINK requires a smart phone/tablet PC, etc. and app. Android 2.33/iOS 6.1 or newer

S-TYPE OIL COOLER KIT for 86/BRZ

Install to Inner side of Fender

ZN6(86)/ZC6(BRZ)

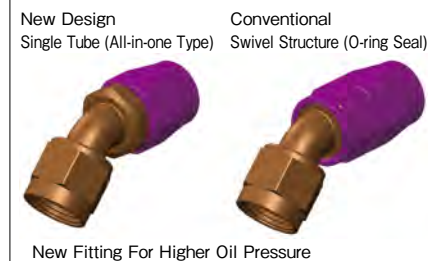
New type of HKS Oil Cooler Kit for 86/BRZ is released.

This new kit is able to install to the inner side of the fender!!

Recommended for vehicles tuned with GT Superchargers or upgrade turbines, and circuit use that requires precise oil temperature maintenance.

Features

- Newly designed single tube type fitting. Engine dyno tests and experience from D1 racing found that the oil pressure of the FA20 engine is extremely high compared to most conventional mass-produced engines. (Max oil pressure: over 12kgf/cm²) New single tube fitting withstanding the high oil pressure was designed and included in this kit.
- Installing the core to the inner side of the fender enables a vehicle tuned with GT Supercharger to install a front mount type intercooler kit. Also, a special air guide is included to provide higher cooling performance; this kit is also recommended for NA vehicles who enjoy circuit driving.
- Special spacer and center bolt are included so the kit parts do not come in contact with the brim on the oil filter installation position when installing the oil cooler attachment.



Kit Parts

- The following parts are included :
 - Oil Cooler Core
 - S-type Attachment
 - Center Bolt
 - Banjo
 - Banjo Bolt
 - Bracket
 - Air guide
 - Oil Cooler Hose
 - Accessory Parts



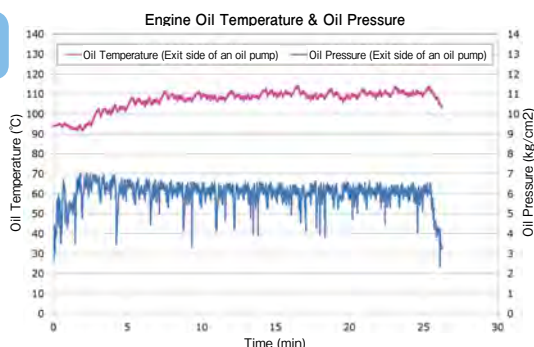
Fitting & Attachment



Kit installed to the inner side of the core fender.

The characteristics of oil temp. and the water temp.

*This is the result of the test HKS conducted.
The result may vary depending on the test conditions.



Test Data

Test Vehicle : TOYOTA 86

Specifications : GT Supercharger System Pro Step2
(300ps spec)

Super Manifold R-Spec / Legamax Sports S-tail

Test Course : Fuji International Speedway Racing Course

Weather : Sunny Temperature : 12°C

The circuit driving by 86/BRZ with GT Supercharger which engine output was increased to 300ps was done under conditions that was very difficult to maintain the oil temperature. However, the oil temperature of this vehicle with this oil cooler kit was maintained around 110°C through the 25 min test drive without any trouble.

Vehicle	Model	Engine	Year	Core Size WxHxD·Row	Core Location	Type	Hose Size	AL Air Guide	Code No.	Remarks
86 BRZ	ZN6 ZC6	FA20	12/3~	200x200x32 15-row	Inside of right fender	S-TYPE	#10	Yes	15004-AT011	Compatible with GT Supercharger System Pro Kit. Compatibility to BRZ w/ AT not confirmed. Modifications of radiator support and resin cover are required.

Premium Suction

Features

Replacing the stock rubber suction hose with the buffed finish Aluminum pipe and Super Hybrid Filter improves the inhalation efficiency. This kit was designed to maintain the stability for a daily use without effect on the stock control.



Left : Stock Suction Pipe vs..
HKS Suction Pipe

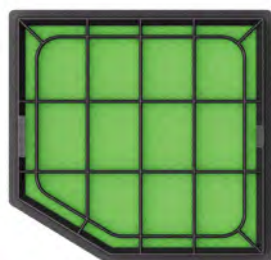
Compared to the stock rubber suction hose and resin suction pipe, HKS' cast aluminum pipe was designed exclusively for this applications to ensure the intake air path's section area. Smoother air intake can be provided.



Vehicle	Model	Engine	Model Year	Code No.	Remarks
CX-5 ATENZA SEDAN ATENZA WAGON AXELA SPORTS	LDA-KE2#W LDA-GJ2FP LDA-GJ2FW LDA-BM2FS	SH-VPTS SH-VPTR SH-VPTR SH-VPTR	12/2~ 12/11~ 12/11~ 14/1~	70018-AZ001	

SUPER HYBRID FILTER

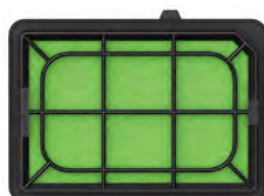
These "Super Hybrid Filter" suits a new model.



70017-AT024



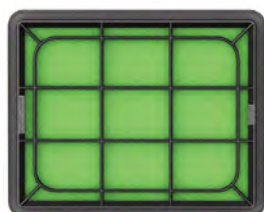
70017-AN008



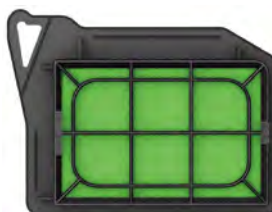
70017-AH016



70017-AZ008



70017-AZ009



70017-AS005

Vehicle	Model	Engine	Year	Genuine P/N	Code No.
GS450h.GS300h. GS350.GS250	GWL10.AWL10.GRL10. GRL11.GRL15	2GR-FXE.4AR-FSE 2GR-FSE.4GR-FSE	11/12～	17801-31170	70017-AT024
LEXUS IS300h.IS350. IS250	AVE30.GSE30.GSE31.GSE35	2AR-FSE.2GR-FSE.4GR-FSE	13/5～		
CROWN	AWS210.GRS21#	2AR-FSE.2GR-FSE.4GR-FSE	13/1～		
	GRS20#	2GR-FSE.3GR-FSE.4GR-FSE	08/2～12/12		
CROWN MAJESTA	GWS214	2GR-FXE	13/9～		
MARK X	GRX130.GRX133.GRX135	2GR-FSE.4GR-FSE	09/10～	17801-31100/ 17801-31170	70017-AN008
DAYZ	B21W	3B20 TURBO/NA	13/6～	16546-6A00B	
DAYZ ROOX	B21A	3B20 TURBO/NA	14/2～		
MOCO	MG33S	R06A TURBO	11/2～	16546-4A00H	70017-AS005
LAFESTA Highway Star	CWFFWN	PE-VPS	13/2～	16456-HA00C	70017-AZ008
eK CUSTOM	B11W	3B20 TURBO/NA	13/6～	1500A600	70017-AN008
eK WAGON	B11W	3B20	13/6～		
eK SPACE	B11A	3B20 TURBO/NA	14/2～		
FIT	GK3・GK4・GK5・GK6 GP5	L13B・L15B LEB-H1	13/9～	17220-5R0-008	70017-AH016
VEZEL	RU1・RU2 RU3・RU4	L15B LEB-H1	13/12～		
AXELA	BMEFS	PE-VPR	13/11～	PE07-13-3A0A	70017-AZ008
	BLFFP・BLFFW	PE-VPS	11/9～		
ATENZA	GJ5FP・GJ5FW GJEFP・GJEFW	PY-VPR/PE-VPR	12/11～		
CX-5	KE5FW・KE5AW KEEFW・KEEAW	PY-VPS/PE-VPS	12/2～		
PREMACY	CWFFW	PE-VPS	13/1～		
BIANTE	CCFFW	PE-VPS	13/5～	SH01-13-3A0A	70017-AZ009
AXELA	BM2FS	SH-VPTR	13/11～		
ATENZA	GJ2FP・GJ2FW	SH-VPTR	12/11～		
CX-5	KE2FW・KE2AW	SH-VPTS	12/2～	1A12-13-Z40	70017-AS005
FLAIR	MJ34S	R06A TURBO	12/10～		
FLAIR CROSSOVER	MS31S	R06A TURBO	14/1～		
FLAIR WAGON	MM32S	R06A TURBO	13/4～	13780-50M50	
MR WAGON	MF33S	R06A TURBO	11/1～		
WAGON R	MH34S	R06A TURBO	12/9～		
HUSTLER	MR31S	R06A TURBO	13/12～		
SPACIA	MK32S	R06A TURBO	13/3～		

AXELA (LDA-BM2FS)

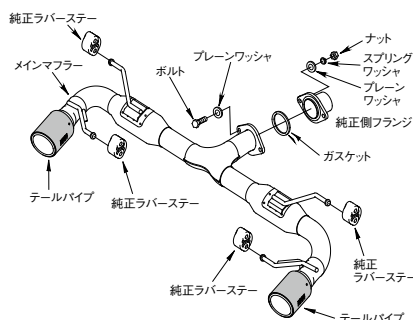
Touring SPEC-L



- VehicleAXELA
- Model LDA-BM2FS
- Engine SH-VPTR
- Model Year ... 13/11~

Type of Muffler	C-1 (Carbon)
Main Material	SUS304
Diameter of Tip	φ94 L&R
Diameter of Mid Pipe	φ60 (*2)
Exhaust Noise	Stock 75dB (★55dB)
Level	HKS 77dB (★55dB)
Vehicle's Height with Exhaust System (*3)	Height 172mm Measured Position Main pipe Remarks

構成図



Code No. **31019-AZ007**

JQR No. JQR20141072



HKS

YouTube Movie

Remarks

Weight:4.8kg(SPEC-L)/9.8kg(stock)



LEGAMAX Premium

Applicable to New Regulation enforced as of April, 2010

VEZEL HYBRID (DAA-RU3)

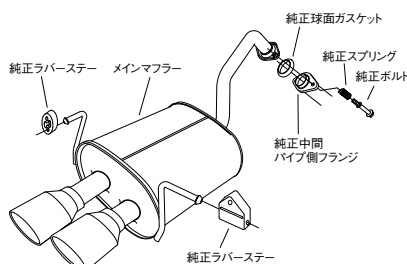
LEGAMAX Premium



- VehicleVEZEL HYBRID
- Model DAA-RU3
- Engine LEB-H1
- Model Year ... 13/12~

Type of Muffler	OC-1
Main Material	SUS304 (*1)
Diameter of Tip	87 OVAL×2
Diameter of Mid Pipe	φ42.7 (*2)
Exhaust Noise	Stock 82dB (★60dB)
Level	HKS 87dB (★62dB)
Vehicle's Height with Exhaust System (*3)	Height 240mm Measured Position Main silencer Remarks

構成図



Code No. **32018-AH031**

JQR No. JQR10141113



Normal

HKS

YouTube Movie

Remarks

Not fits to 4WD



XV/XV HYBRID (GP7/GPE)

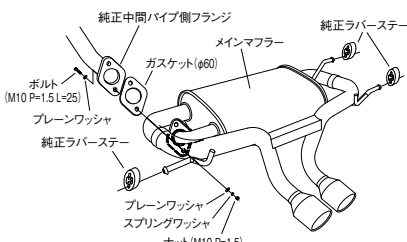
LEGAMAX Premium



- VehicleXV/XV HYBRID
- Model GP7/GPE
- Engine FB20/FB20-MA1
- Model Year ... GP7:12/10~ GPE:13/6~

Type of Muffler	C-1
Main Material	SUS304 (*1)
Diameter of Tip	φ76.3×2
Diameter of Mid Pipe	φ50.8 (*2)
Exhaust Noise	Stock 75 (GP7)/76 (GPE) dB (★55 (GP7)/53 (GPE) dB)
Level	HKS 83 (GP7)/83 (GP7) dB (★56 (GP7)/55 (GPE) dB)
Vehicle's Height with Exhaust System (*3)	Height 260mm Measured Position Tip Remarks

構成図



Code No. **32018-AF012**

JQR No. JQR10141071



Normal

HKS

YouTube Movie

Remarks



*1 : Main material in the component figure. □ SUS304/ High quality stainless steel. ■ SUH409/ Stainless steel commonly used for stock exhaust.
 *2 : About center pipe. Diameter of center pipe is the portion that has the largest diameter. (Excluding silencer and tip.) It is the condition with stock suspension.
 *3 : Minimum road clearance between HKS muffler (Any parts included in the kit) and road surface. Therefore, it may be different from actual road clearance of the vehicle.
 The data is basically the condition with stock suspension. However, please understand that some items have data with low down spring or ride height adjustable suspension kit.
 Caution : Hook, bracket, stay may be changed without prior notice. ★ Exhaust noise level at idle.

HIPERMAX MAXIV SP

GDB(E-G) (IMPREZA)

Sports type suspension design based on MAX IV GT for high-grip radial tires which can also be used on circuit.

Features

- Damper specification was brought to completion through actual driving tests which were conducted to find the best setting for street and circuit driving with high grip tires.
- Damping force was set to priorities driving and handling but stroke restriction due to over dampening was reduced as much as possible. Taught handling which also has compliant and supple feel allow for maximum road holding.
- The rear adjustment cable enables the damping force adjustment without going under the vehicle.

Vehicle / Model

IMPREZA / GDB(E-G)

Product

HIPERMAX MAXIV SP

1 Application

Vehicle	Model	Engine	Model Year
IMPREZA	GDB(E-G)	EJ20	04/6~07/5
Spring rate N/mm (kgf/mm)	Spring Height (mm)	Default ride height Range (High-Low)	Code No.
F=118 (12) R=98 (10)	F=170 R=220	F=-54 (0~-99) R=-32 (0~-99)	80250-AF002
Upper Mount	Upper Mount change	Spring rate change	Remarks
F=Pillow R=Pillow	Not Available	F=Available R=Available	

2 Vehicle image with product

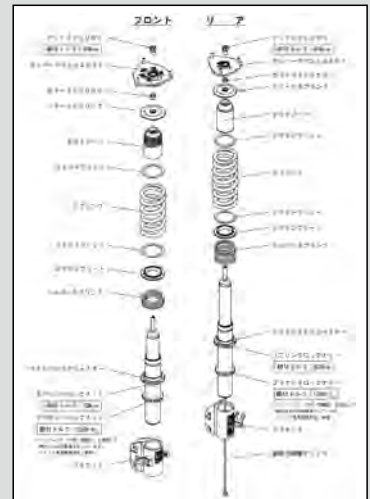


Product	Code No.	JAN Code
FULL KIT	80250-AF002	4957266 320853

■ The following suspension sets are available: Front Full Set, Rear Full Set, Front Damper Set, Rear Damper Set, Rear Ride Height Adjuster Assembly, and Rear Spring Set. (Contact your dealer for availability.)
 ■ Some dampers' spring rate change service is available. See the application chart for availability.

3 DAMPER COMPONENTS

* It may be changed without prior notice.



HIPERMAX S-style C

GG2W(OUTLANDER PHEV)

Basic model of S-STYLE that has simple structure with beautiful style for the comfortable ride.

Features

- To utilize the characteristics of SUV, this damper is designed to be more stylish than a stock rather than just being extremely low-stance. Lowering the vehicle's height provides stable drive feeling without floating feeling which is caused by its high center of gravity.
- The ride quality of street drive is maintained as per stock, but the driving stability performance in high speed range was enhanced.
- It is recommended to increase the spring rate or rear compression stroke amount when loading a heavy load onto the rear baggage room.

Vehicle / Model

OUTLANDER PHEV / GG2W

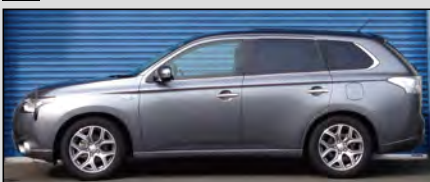
Product

HIPERMAX S-style C

1 Application

Vehicle	Model	Engine	Model Year
OUTLANDER PHEV	GG2W	4B11	12/12~
Spring rate N/mm (kgf/mm)	Spring Height (mm)	Default ride height Range (High-Low)	Code No.
F=59 (6) R=49 (5)	F=250 (Barrel) R=220 (Barrel)	F=-28 (0~-73) R=-38 (-24~-87)	80110-AM102
Upper Mount	Upper Mount change	Spring rate change	Remarks
F=Rubber R=Stock	N/A	F=Available R=Available	Only compatible with PHEV

2 Vehicle image with product

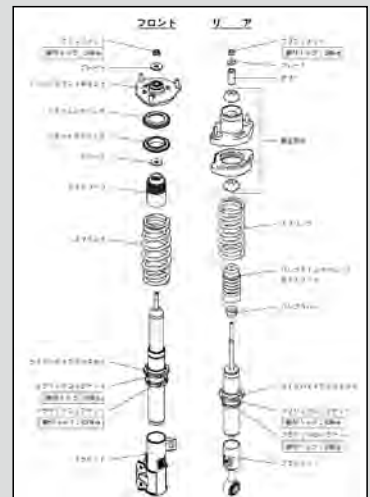
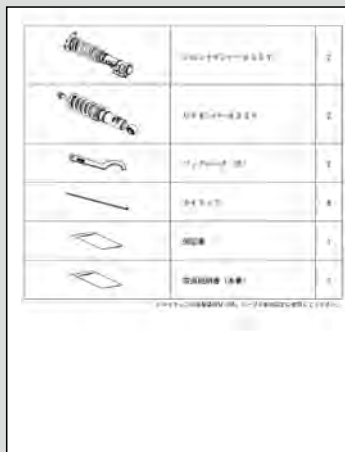


Product	Code No.	JAN Code
FULL KIT	80110-AM102	4957266 330609

■ The following suspension sets are available: Front Full Set, Rear Full Set, Front Damper Set, Rear Damper Set, Rear Ride Height Adjuster Assembly, and Rear Spring Set. (Contact your dealer for availability.)
 ■ Some dampers' spring rate change service is available. See the application chart for availability.

3 DAMPER COMPONENTS

* It may be changed without prior notice.



STOPPER TYPE HEAD GASKET

ZN6-ZC6(86•BRZ)

New 1.0mm thickness gasket is released as an additional item to the existing 0.5mm & 0.7mm thick bore stopper type metal head gaskets for the FA20 engine of 86 & BRZ.

This gasket provides higher bore sealing durability than a stock.

Use with HKS Capacity Upgrade Kit to provide optimum performance of the supercharger kit.

Compression Ratio

Displacement	Gasket	Thickness (mm)	Compression Ratio
Stock	Stock	0.6	12.5
	HKS	0.5	12.6
	HKS	0.7	12.4
HKS	HKS	0.5	12.4
	HKS	0.7	12.1
	HKS	1.0	11.7

Features

POINT① Maintain a high seal with high pressure!

All three types are endurable against high engine output. Stopper structure of the bore seal is designed to be a separated type so it prevents leakage even under high gas-pressure at high engine output.

POINT② Compression Ratio for an NA engine is increased!

The t0.5 type (SC installable) for an NA engine was designed to increase the compression ratio compared to a stock gasket as well as seal durability. Also, it is thinner than a stock. It is the best to use for one make race with an NA engine.

POINT③ 600ps D1 spec (t=0.7mm) is produced for a supercharged engine!

The t0.7 type (SC installable) utilizes a stopper higher than the t0.5 type to provide higher bore seal durability. It is designed to be withstanding the 600ps engine power. Compression ratio reduction at the stock displacement is only t0.7 so high heat efficiency can be maintained.

POINT④ 600ps (t=1.0mm) is produced for HKS Capacity Upgrade Kit!

The t1.0 type (SC installable) is designed to use with Capacity Upgrade and utilizes a stopper higher than the t0.7 type to provide higher bore seal durability. Use the t1.0 type to adjust the compression ratio of Capacity Upgrade Kit; setting range can be wider.

POINT⑤ Contact surface pressure is improved!

Special coating was applied on the head and cylinder side to improve sealing performance when tightening the bolts.



Product	Engine	Type	Spec	Compression Ratio	Power Capacity	Code No.	Remarks
t0.5 Gasket	FA20	t0.5 for NA	φ89.5-t0.5	ε=12.6(+0.1)	300ps	23001-AT002	LH x 1/RH x 1-"NA 0.5" marked. (S/C installable)
t0.7 Gasket	FA20	t0.7 for S/C	φ89.5-t0.7	ε=12.4(-0.1)	600ps	23001-AT003	LH x 1/RH x 1-"CP 0.7" marked.
t1.0 Gasket	FA20	t1.0 for S/C	φ89.5-t1.0	ε=11.7(-0.8)	600ps	23001-AT004	LH x 1/RH x 1-"89510" marked.

*The compression ratio for t0.5 and 0.7 type above was figured out based on the stock piston, and for t1.0 type, it is based on HKS piston kit.

INFORMATION

Application

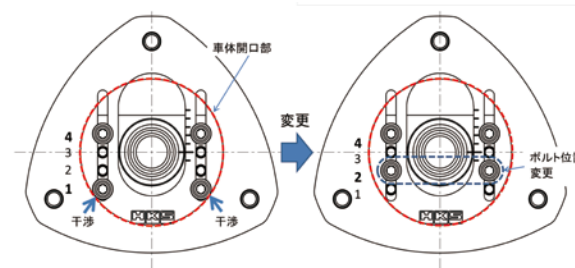
Use of Flash Editor for 86•BRZ (42015-AT001) with New GT Supercharger System Pro(12001-AT009)

New data (HKS S/C DATA2) for GT Supercharger System Pro (12001-AT009) is added to Flash Editor for 86 & BRZ. The version of Flash Editor is upgraded to 2.15.

It is required to upgrade Flash Editor Initialization tool to use Flash Editor version 2.14 or older with GT Supercharger System Pro. Contact your dealer if necessary.

Adjustable Pillow Upper Mount for S-style for Step Wgn(80120-AH208/RG1·80120-AH209/RK1)

The camber adjusting bolt of adjustable pillow upper mount included with S-style X(80120-AH208/RG1·80120-AH209/RK1) may come in contact with the vehicle. In this case, relocate 2 bolts on the side of HKS logo as shown the diagram on the right.



Incompatibility of Exhaust System for Delica D:2 with Dual Jet Engine (DBA-MB15S/K12B 13/12~)

Cool Style (32024-AS002) for Delica D:2 with Dual Jet Engine (DBA-MB15S/K12B 13/12~) is not certified due to the engine specification change.

Vehicle	Classification	Model	Engine	Model Year	Muffler Style	Code No.	Remarks
Delica D:2	DBA-	MB15S	K12B	11/1~	CoolStyle	32024-AS002	Not compatible with Grade S (13/12-), AS, G (Dual Jet Engine Model), and 4WD

Incompatibility of Exhaust System for N-ONE(DBA-JG1/S07A(NA) 14/5~)

Cool Style (31028-AH003) for N-ONE(DBA-JG1/S07A(NA) 14/5~) is not certified due to the engine specification change.

Vehicle	Classification	Model	Engine	Model Year	Muffler Style	Code No.	Remarks
N-ONE	DBA-	JG1	S07A(NA)	12/11~14/4	CoolStyle	31028-AH003	14/5- Not Certified

Product Compatibility N-ONE(DBA-JG1,2/S07A(TURBO,NA) 14/5~)

Compatibility of the following products to N-ONE(DBA-JG1,2/S07A(TURBO,NA) 14/5MC model has been confirmed.

*Spark plug's application may vary depending on the model year.

Vehicle	Classification	Model	Engine	Model Year	SUPER HYBRID FILTER	SPARK PLUG	HYBRID SPORTS OIL FILTER	Remarks
N-ONE	DBA	JG1,JG2	S07A(TURBO)	14/5~	70017-AH015	M-HL SERIES	52009-AK001	
			S07A(NA)	14/5~	N/A	M-HL SERIES	52009-AK001	

TOPICS

Coming soon!

NEW GT SUPERCHARGER SYSTEM
(TOYOTA ALPHARD/VELLFIRE 3.5L)

HKS GT SUPERCHARGER

EVENT INFORMATION



2014 JAPAN JET SPORTS CHAMPIONSHIP

HKS has participated 2014 Japan Jet Sports Championship again as "Team HKS".

HKS entered the top category "Pro R/A" (Run About) Open class. In this class, the modification range is pretty wide so upgrading the engine internals and auxiliary machineries and boat body are allowed. It's easily assumed that there will be bitter competitions in this class by all entrants with their pride at stake.

Team HKS' machine was designed based on YAMAHA sports model MJ-FZS high powered with the upgraded engine internals and HKS GT SUPERCHARGER (GTS8550). HKS prepares 2 machines; the riders are Mr. Hajime Isahai, who is 2013 champion of Pro R/A Open class, and Mr. Hideyuki Kurahashi, who is 2009 & 2011 champion of Pro SKI class, runners-up of 2012 King's Cup Pro SKI class.

The first round of this season started at the port and harbor area in Nishikinohama Park on April 19 and 20. Mr. Kurahashi finished his debut of Pro R/A Open class in the first place, and Mr. Isahai in second place. Team HKS ran away with other competitors.

The second and third rounds were held in Laguna Beach in Gamagori, Aichi pref. on May 31 and June 1. The conditions of both rounds were tough due to the uneven surface by strong wind. However, the team strength made by the machine potential and technique of our riders won the first and second places of both round. (1st place won by Mr. Isahai, and 2nd place by Mr. Kurahashi.) HKS finished 1-2 finish from 3 rounds in a row from the first round.

"GT Supercharger" is not only for an automobile engine, but it is also exploit its potential for marine sports.

There are 5 more rounds of this championship to end in September. HKS is doing its best to achieve a successful result and will try to live up to your expectation.



Mr.Hajime Isahai



Mr.Hideyuki Kurahashi



HKS determined to entry "World Time Attack Challenge 2014" that will be held in Sydney Motor Sport Park in Australia in October, 2014. HKS will bring 「HKS Racing Performer GT1000+」 that established the best record of time attack in HKS Premium Day in January. After HKS Premium Day, the engine set-up has been done to make a "machine".

「HKS Racing Performer GT1000+」 will make an appearance for time attack in 「Motor GAMES/WTAC JAPAN」 that will be held in Fuji International Speed Way on July 5 and 6. Check it out before leaving to Australia!



HKS Racing Performer GT1000+

MAX OUTPUT	1200PS	INJECTOR	HKS 575cc × 12
MAX TORQUE	130kgf-m	FUEL PUMP	BOSCH × 3
BOOST PRESSURE	2.0kgf/sqcm	INTAKE SYSTEM	HKS Racing
ENGINE	VR38DETT	SURGE TANK	HKS Hi-flow Surge Tank
DISPLACEMENT	4104cc 95.5×95.5mm	SPARK PLUG	HKS Super Fire Racing
COMPRESSION	ε=9.0	OIL COOLER	Stock
PISTON	HKS (4.1L Kit)	INTERCOOLER	HKS R Type GT1000 SPEC
CON'ROD	HKS (4.1L Kit)	SUSPENSION	Hipermax Max IV (R35 FUJI SPEC)
CRANKSHAFT	HKS (4.1L Kit)	TRANSMISSION	HKS GR-6 Transmission Gear Kit
HEAD GASKET	HKS 0.8mm	CLUTCH	HKS GR-6 Clutch Pack
CAMSHAFT	HKS In:270 Ex:278 Lift:11mm	TIRE	YOKOHAMA ADVAN A005
TURBO	GT1000 Full Turbine Kit		290/710-20
EXHAUST MANIFOLD	For GT1000 Full Turbine Kit	WHEEL	YOKOHAMA ADVAN Racing GT
EXHAUST SYSTEM	HKS Racing		F:11J×20 +5 R:11J×20 +5
E.C.U.	HKS F-CON V Pro Ver.4.0	BRAKE (FRONT)	ENDLESS Racing MONO6 400Φ
BOOST CONTROLLER	EVC6	BRAKE (REAR)	ENDLESS Racing MONO6 387Φ
METER	A/F Knock Amp.2	SEAT	BRIDE MAXIS III NOB SPL
OTHER	HKS ATSC	AERO PART	BenSopra (Front Bumper/Front Fender)
GRAPHIC	HKS	WING	HKS Racing



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The applications were confirmed by MAY 2014.

■ Prices shown in this publication are the manufacturer's suggested retail price.

■ Specifications may be changed without prior notice. Printed product images shown in this publication may be different from the actual product.

■ HKS will not be responsible for any damage caused by improper installation and/or installing to other inapplicable vehicles.

■ The product may not be compatible with vehicles even the model and/or engine type are the same as shown in the application chart.

■ Data shown in this publication are based on the in-house data prepared under certain conditions.

NEWS HKS
COMMUNIQUE

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