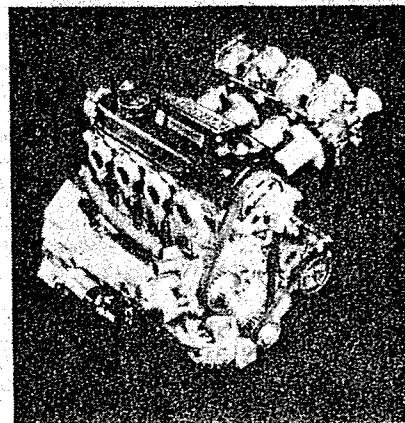




MUGEN CIVIC COMPLETE CAR



MS-3 Complete Engine

MS-1 HIGH PERFORMANCE PARTS FOR HONDA CIVIC 1200

MS-1 high performance parts are intended for normal road as well as competition use, but are not recommended to use against traffic and smog control. Manufacturers and exporters carry no responsibility for any of such violations. No claim shall be accepted.

ORD.NR.	PARTS NR.	COMMODITY
MS1-1	14111-MS1-0000	CAMSHAFT A TYPE 1mm high lifted cam allows smooth performance for sport ride.
MS1-2	14112-MS1-9600	CAMSHAFT B TYPE 2mm high lift. This cam gives excellent high speed driving performance. Also adequate profile for rally use.
MS1-3	14211-MF318-0010	DRIVEN PULLEY This mechanically handsome driven pulley allows quick and accurate valve timing tune. Definitely good to use with A or B type cam.
MS1-4	14700-MS1-9200	VALVE SET In & Ex 4pcs each Same top-diameter as standard valves but much lightened, inlet-valve weighs 8gs and exhaust 16gs, allows smoother rotation ascent particularly at higher RPM.
MS1-5	14760-MS1-0000	VALVE SPRING SET In & Ex 8pcs each Intended for use with A or B type cam and MS1-4 for higher HP and RPM. Valve springs alone certainly relieve the worry of valve surge at higher RPM. Super high tension steel realized intensity 30% up.
MS1-6	18000-MS1-0000	EXHAUST MANIFOLD KIT Include all necessary mounting wear. 4+2 type well designed manifold increases 20% of output in combination with other necessary modification.
MS1-7	12300-MS1-0000	ALUMINUM CYLINDER HEAD COVER KIT Include aluminum cap, nuts, wire guide and packing. Fabulous designers of Mugen offer with confidence this beautiful item, same one equipped on MS-2 & 3 complete engines.
MS1-8	13100-MS1-0000	72mm PISTON KIT 1238cc Kit includes 4 lightweight pistons, 8 rings, 4 pins and 8 clips. With 37.5 ~ 39.5cc combustion chamber capacity produce proper compression ratio (9.5:1~10.5:1). Instruction for necessary modification to cylinder head or GL BASE MUGEN CYLINDER HEAD is available on request.

MS1-9	12251-MS2-0000	CARBON GASKET, CYLINDER HEAD Intended to put up with high compression. No more blowing.
MS1-10	51000-MR1-0000	MR-1 RALLY SUSPENSION KIT Consists of 4 dampers, 4 coil springs and 2 knuckles. Reinforced damper has 20mm longer stroke, requires special knuckle to set proper camber and to prevent slipping out. A little slenderer stabilizer is recommended for rally use. MR-2 GAS TYPE DAMPER is provided for serious Civics exceeding 90HP.
MS1-11	41210-MS-S	LIMITED SLIP DIFFERENTIAL S-KIT W/SPL BOLTS Produce better road-holding performance on mud, snow, etc. On public road this item requires high driving technic due to special character of front-wheel-drive vehicle.
MS1-12	00001-MS1-0000	FRONT SKIRT
MS1-13	00002-MS1-0000	REAR WING Handsome aerodynamical devices increase gas-mileage, top speed, handling performance and looks.
MS1-14	51310-MS1-0000	FRONT STABILIZER KIT 16mm of stiffness is designed to reduce body roll and increase transitional stability. Minimum order 5sets.
MS1-15	50800-MS1-0000	ENGINE MOUNT KIT Firmly compounded engine mountrubber prevents engine from wind-up phenomenon at quick acceleration. M/M order 5sets.
MS1-16	18200-MS-1-0000	EXHAUST PIPE KIT W/BRACKETS Tuned length and diameters, 2+1 type fits MS1-6, rotational firing order. M/M order 5sets.
MS1-17	15400-MS1-0000	OIL FILTER & CASE KIT Intended to cover all conditions even for extremely high oil pressure before engine gets warmed up. Handsome aluminum case has 12 fins for better cooling. Easy to change oil filter. Good for normal road as well as competition use. Applicable to standard & CVCC Civic 1200, 1500 and Accord. M/M order 10sets.
MS1-18	15461-551-315	SPARE OIL FILTER
MS1-19	17000-MS1-0000	AIR CLEANER KIT
MS1-20	16000-MS1-0000	CV4 CARBURETOR KIT W/IN-MANIFOLD & THERMOSTAT SET
MS1-21	30000-MS1-0000	SPL DISTRIBUTOR DRIVE KIT Utilize a huge air cleaner to cover four Keihin CV carburetors and 90° distributor drive for carburetor clearance. M/M order 10sets each.
MS1-22	45000-MS1-0000	FRONT DISC BRAKE KIT Powerful disc brake is ideal for sport ride and limited competition event. M/M order 5sets.
MS1-23	45022-MS1-0000	SPARE BRAKE PAD. 1pc. No other ones really work.
MS1-24	FERODO	FRICTION DISC, CLUTCH For rally and street use. Reinforced friction disc.

ACCORD

MA1-1	14112-MSA-0000	SPL SPORT CAMSHAFT Applicable to street use or even to limited rally and speed events.
MA1-2	15400-MS1-0000	OIL FILTER & CASE KIT Intended to cover all conditions even for extremely high oil pressure before engine gets warmed up. Handsome aluminum case has 12 fins for better cooling. Easy to change oil filter. Good for street as well as competition use.

CIVIC 1500

MS5-1	14112-MS375-0000	SPL SPORT CAMSHAFT Applicable to street use or even to limited rally and speed event.
MS5-2	15400-MS1-0000	OIL FILTER & CASE KIT Same model as MA1-2 for Accord use.

MS-2 COMPETITION PARTS FOR HONDA CIVIC 1200

ORD. NR.	PARTS NR.	COMMODITY
MS2-1	12200-MS2-0000	CYLINDER HEAD KIT Includes valves and valve springs. Intended for use with MS2 piston kit for adequate compression ratio.
MS2-2	12100-MS2-0000	SPARE CYLINDER HEAD ASSY
MS2-3	14700-MS2-0000	SPARE VALVE SET IN & EX 4pcs each.
MS2-4	14760-MS-2-0000	SPARE VALVE SPRING SET IN & EX 8pcs each.
MS2-5	14111-MS2-0000	CAMSHAFT Intended for use on MS2 or equivalent engine. Supreme results in group-2 competition. Used with MS2-6 to work off 100 percent. Inapplicable on normal road. Valve timing $\frac{25}{55} \frac{25}{55}$ 1mm lifted.
MS2-6	14211-MF318-0010	DRIVEN PULLEY Indispensable for quick and accurate valve timing tune in race.
MS2-7	12251-MS2-0000	CARBON GASKET, CYLINDER HEAD Intended to put up with high compression. No more blowing.
MS2-8	13200-MF318-0000	CON-ROD KIT W/SPL BOLTS & NUTS Exceptionally good for severe race. On every overhaul followings are available for replacement
MS2-9	13213-MF318-0000	SPL BOLT
MS2-10	13214-MF318-0000	SPL NUT
MS2-11	13211~13217-634-960	CON-ROD BEARING KIT (8pcs)
MS2-12	13321~13327-MF318-0031	MAIN BEARING KIT (8pcs) Available in 7 sizes. Please indicate the measurements of crank pin and main journal part (measured by micro-meter). Distributors are requested to carry full range of the sizes.
MS2-13	13100-MS2-0000	73mm PISTON KIT Highest quality forged pistons (4) rings (8) pins (4) clips (8) Kit consists of following parts
MS2-14	13101-MS2-0000	73mm PISTON. pc Stock cylinder head cannot be used without bore-up to 73mm. Combination with MS2 tuned cylinder head is recommended.
MS2-15	13121-MF318-0000	PISTON TOP RING
MS2-16	13141-MF318-0000	PISTON OIL RING
MS2-17	13111-MS1-0020	PISTON PIN
MS2-18	94601-17000	PISTON PIN CLIP
MS2-19	13310-MF318-0100	8-WEIGHT CRANKSHAFT Offers better durability and silky turn of power unit.
MS2-20	16100-MF318-0000	CR-4 CARBURETOR KIT
MS2-21	17000-MS2-0000	INTAKE MANIFOLD KIT W/THERMOSTAT KIT
MS2-22	30000-MS1-0000	SPL DISTRIBUTOR DRIVE KIT Honda racers cannot have existed without Keihin CR carburetors. Require 90° distributor drive for carburetor clearance.
MS2-23	R001-002-2000	SPARE MAIN JET No.130 No.135 No.145 No.150
MS2-24	18100-MS2-0000	EXHAUST KIT 4-2-1 efficient ex-manifold + ex-pipe really works with CR carburetors. Include all necessary mounting wear.
MS2-25	13811-MS2-0000	DRIVE PULLEY, AC GENERATOR Unnecessary for sprint race due to battery ignition. Lowered reduction ratio to increase durability of generator. For rally and endurance race use.
MS2-26	30700-MS2-0000	PLUG CAPS+HIGH TENSION CODE KIT
MS2-27	22000-MS2-0000	SPL RACING CLUTCH KIT Include friction disc and flywheel set. Definitely live with high power and RPM.
MS2-28	22200-MF318-0000	SPARE FRICTION DISC

MS2-29	15400-MS2-0000	OIL STRAINER & COOLING KIT W/O OIL RADIATOR Include SPL oil filter case, filter set, oil joint SPL bolts, hose joints, oil hose, oil filter base shell, oil radiator bolts and oil adapter bolt.
MS2-30	15461-551-315	SPARE OIL FILTER
MS2-31	15100-MS2-0000	SPL OIL PUMP KIT
MS2-32	16702-MS2-0000	FUEL PUMP COVER Block-off plate after removing mechanical fuel pump for electric fuel pump.
MS2-33	14000-MS2-0000	WATER PUMP & TIMING BELT ADJUSTER KIT Kit consists of following parts.
MS2-34	14400-MS2-0000	SPARE TIMING BELT
MS2-35	14500-MS2-0001	SPARE TIMING BELT ADJUSTER A
MS2-36	14510-MS2-0000	SPARE TIMING BELT ADJUSTER B
MS2-37	19200-MS2-0000	SPARE WATER PUMP
MS2-38	45000-MS2-0000	FRONT DISC BRAKE KIT Recommended to use with MS2-45. Kit consists of following parts.
MS2-39	45251-MS2-0000	SPARE DISC PLATE L+R SET
MS2-40	45210-MS2-0000	SPARE CALIPER ASSY R
MS2-41	45230-MS2-0000	SPARE CALIPER ASSY L
MS2-42	45022-MS2-0000	SPARE DISC BRAKE PAD 1pc.
MS2-43	51211-MS2-0000	SPARE KNUCKLE R
MS2-44	51216-MS2-0000	SPARE KNUCKLE L
MS2-45	50000-MS2-0000	MS2 SUSPENSION KIT Require either camber adjustment or use with MS2-43/44 knuckles R&L. Include 4 dampers, 4 coil springs, lower arms R&L, 2 lower arms, 2 radius rods, 2 radius rod yokes and 2 stabilizer springs. Damper & coil, spring kit or stabilizer alone is available on following order numbers.
MS2-46	51600-MS2-0000	DAMPER & COIL SPRING KIT
MS2-47	51300-MS2-0000	FRONT STABILIZER 18mm
MS2-48	52300-MS2-0000	REAR STABILIZER 16mm
MS2-49	50800-MS3-0000	ENGINE MOUNT KIT
MS2-50	74000-MS2-0000	ACRYL WINDOW KIT FOR 2-DOORS MODEL
MS2-51		FIBERGLASS BONNETT
MS2-52		FIBERGLASS TRUNK
MS2-53	67201-MS2-0000	FRONT WINDOW, REINFORCED GLASS Where laminated glass is not obtainable.
MS2-54	61000-MS2-0000	OVERFENDER KIT
MS2-55	00003-MS2-0000	FRONT SKIRT
MS2-56	00004-MS2-0000	REAR WING KIT Require concurrent use of these aerodynamically tested devices for better effect. Shortened by 4secs at Suzuka Circuit-6km.
MS2-57	53040-MS3-0000	STEERING GEAR BOX L or R drive. Gear ratio 15:1, please indicate L or R in order form.
MS2-58	41200-MS-R	LIMITED SLIP DIFFERENTIAL R-KIT W/SPL BOLTS Intended for serious race use only
MS2-59		NGK SPARK PLUGS "RACING" Wide range type. B-10-EV or B-9-EV, B-8-EV
MS2-60	51000-MR2-0000	MR2 RALLY SUSPENSION KIT Include 4 gas-type dampers and 4 coil springs set. Recommend to use together with RALLY KNUCKLE L & R SET.
MS2-61	51210-MR1-0000	RALLY KNUCKLE L & R SET

FIA HOMOLOGATION (Nos. 5531, 5531 2/2V, 5531 1/1V) has been made on Honda Civic 1200 model in Group-1. Some parts are allowed to be changed or modified within Mugen MS-1 range or with some of MS-2 parts for Group-1 entry. Please refer to FIA regulation Appendix "J" and consult with each organizer. MS-2 modification is included in Group-2. MS-3 has been homologated by JAF to run in Group-2. Honda Civic homologation paper is available at ¥2,000.

Prices are subject to change without notice. No claim shall be accepted.

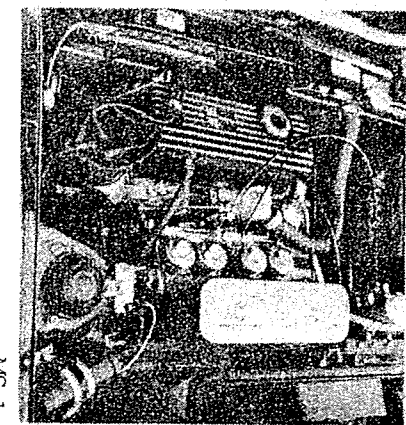


MUGEN ENGINE DATA

4 CYLINDER INLINE - SOHC 4 STROKE - WATER COOLING

	<u>MS-1 Complete engine</u>	<u>MS-2 complete engine</u>	<u>MS-3 complete engine</u>
Bore x stroke, mm/in.	72 x 76/2.83 x 2.99	73 x 76/2.87 x 2.99	73 x 76/2.87 x 2.99
Displacement, cc/cu.in.	1238/75.6	1276/78	1276/78
Compression ratio	10.0:1	10.5:1	11.0:1
Bhp/rpm	85-90/6500-7000	125-130/8000	140-145/8000
Torque, kg-m/rpm	10-10.7/4500-5000	12.8/6800	13.8/7000
Maximum rpm	7500	8500	8500
Carburetion	4Keihin CV	4 Keihin CR35	4 Keihin CR35
Lubrication system	Wet sump	Wet sump	Dry sump
Exhaust system	4-2-1	4-2-1	4 into 1
Clutch	STD + Ferodo	Single dry plate	Single dry plate
Cylinder Head	Honda Civic	Honda Civic	Mugen Original

Included parts:



MS-1

4 CV carburetors	4 CR35 carburetors	4 CR35 carburetors
Air cleaner	16pcs spare main jets	16pcs spare main jets
Exhaust manifold	Ex-manifold set	Ex-manifold set
Exhaust pipe	Ex-pipe set	Ex-pipe set
STD clutch + Ferodo	Oil-cooler piping set	Racing clutch & flywheel set
Main spec list	Racing clutch & flywheel	1 set racing spark plugs
Maintenance manual	1 set running spark plugs	1 set racing spark plugs
w/o oil radiator	1 set racing spark plugs	Main spec list
w/o ACG & starter motor	1 set spare belts	Maintenance manual
	Main spec list	Oil tank drawing
	Maintenance manual	w/o oil radiator
	Oil-cooler piping instruction	w/o ACG, starter motor
	w/o oil radiator	
	w/o ACG, starter motor	

RALLY

MS-1 Order numbers MS1-1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or MS2-60 for serious rally, MS1-11, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, and MS2-26, 57, 59 are applicable for rally use. Please consult with each organizer for proper choice of above parts in order to meet modification rule in your class.

MS-2 MS-2 complete engine for rally use requires belt cover and air cleaner to fit each course condition. MS1-2 camshaft and twin-carburetors can occasionally be more effective. RS TYPE TWIN CARBURETOR KIT is available on request. Usually in rally RPM better not be raised upto maximum, keep it about 1000/rpm down. Recommended exhaust system is MS2-24 to be modified to meet exhaust noise regulation. Other applicable parts are MS1-11, 22, 23 and MS2-26, 27, 28, 49, 50, 51, 52, 53, 57, 59, 60.

MUGEN COMPLETE CAR MS-2-MS-3

Layout	Front engine/front drive
Body: Honda Civic 1200 2-door model	
Front window	Reinforced laminated glass
Rear, door, quarter windows.....	Plastic
Bonnett & trunk	Fiberglass
Overfenders	Fiberglass
Rear wing & front skirt.....	Fiberglass
F & R bumpers	Fiberglass
Transmission	Dog type 5-speed
Gear ratios: 5th.....	1.00
4th.....	1.14
3rd.....	1.42
2nd.....	1.82
1st.....	2.54
Reverse.....	2.97
Final drive ratio.....	4.06
Differential.....	Racing type limited slip
Suspension	Mugen SPL formula type
Brake system.....	Front disc/rear drum
Steering gearbox.....	Mugen SPL 15:1 gear ratio
Anti sway bar	4-point
Engine mount	Mugen SPL
Fuel tank.....	40-litre safety rubber tank w/aluminum container
Oil tank.....	8-litre aluminum tank
Oil-cooler set	Mugen SPL
Radiator.....	CIVIC 1500
Steering wheel	Mugen SPL 360mm
Seats.....	SPL
Seat belt	5-point
Instrumentation.....	Mugen SPL fiberglass instrument panel with tachometer 12000rpm oil temp meter 110°c, water temp meter 150°c oil pressure meter 10kg/cu.cm., gauges and switches
Wheels	Mugen SPL magnesium 13×9J
Tyres: Front.....	Slic 225/515-13
Rear.....	Slic 180/515-13

MUGEN CO., LTD. -Builders of competition power units

Hirotohi Honda	-President Son of Dr. Soichiro Honda, well known industrial designer and racing car builder
Nobuhiko Kawamoto	-Chief Design Advisor Chief designer of Honda R&D Co., Ltd. Wako Centre
Masao Kimura	-Chief Engineer Formally with Honda Racing Service Centre Co., Ltd. Well known builder of seven different racing cars.
Yoshio Nakamura	-Adviser Formally manager of Honda Formula-1 Racing Team.

SHIKANO

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