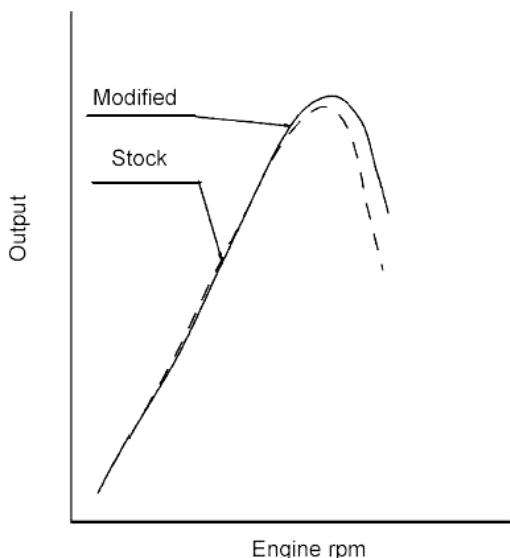


RACE TUNING INFORMATION

Subject

The following modifications increase and extend the powerband, and improve throttle response making the vehicle more competitive for the experienced racer.



CAUTION

Kawasaki cannot accept any responsibility for the results of the modifications described in this bulletin.

Whenever the power output of an engine is increased, the reliability and durability of the engine decrease. This is especially true of competition engines, which are highly stressed even in stock form.

For best results, engine modifications should be made by an experienced engine tuner.

Modification Procedures

Cylinder:

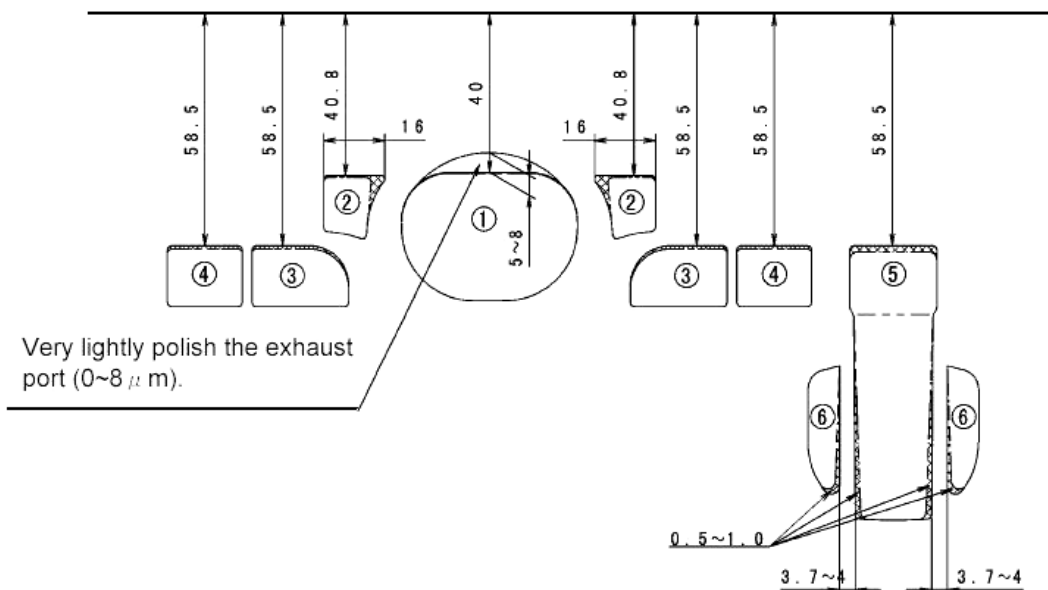
The following modifications increase midrange and high speed power.

Grind and smooth the dotted areas in the intake, exhaust, and scavenging ports (the areas in each port near the cylinder bore in particular).

Chamfer the exhaust port and sub-exhaust ports.

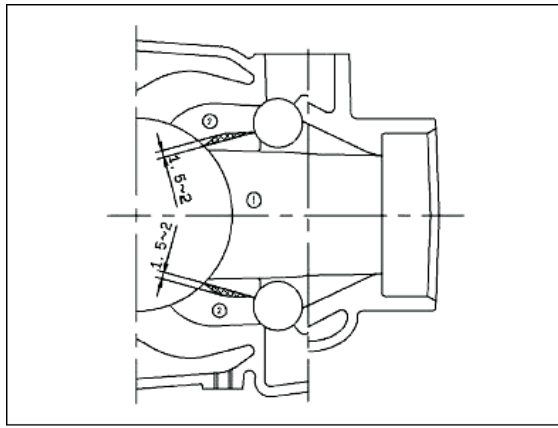
Chamfer the intake port.

Adjust the scavenging port timing.

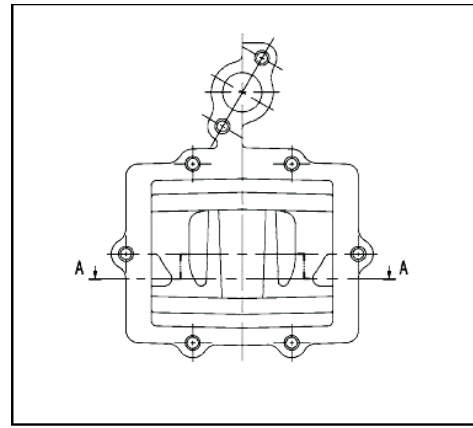
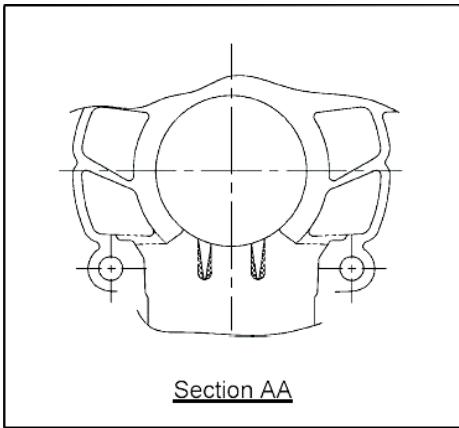
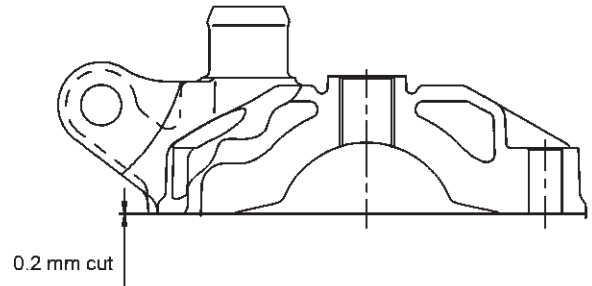


- 1. EXHAUST PORT
- 2. SUB-EXHAUST PORTS
- 3. SCAVENGING PORTS
- 4. SUB-SCAVENGE PORTS
- 5. INTAKE PORT
- 6. SUB-INTAKE PORTS

RACING



- 1. EXHAUST PORT
- 2. SUB-EXHAUST PORT



CAUTION

Maintain the original shape of the ports, and chamfer the sharp edges to prevent ring damage.

Removing more material than specified may result in a loss of power.

Cylinder Head

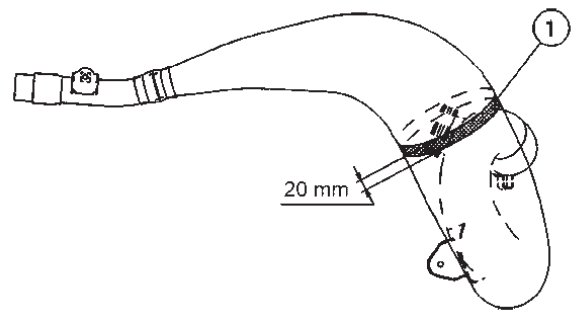
- o Cut 0.2 mm from the gasket surface of the cylinder head to raise the compression ratio.

Combination Chart for Compression Ratio

Cylinder Head	Head Gasket	Compression Ratio
0.2mm cut from gasket surface	T=0.26 (P/N 11004-1240)	e=9.0

Exhaust Pipe

Cut the pipe at the area shown to remove 20 mm from the length of the head pipe to improve high-speed power and extend the power range.



NOTE:

- o It may be necessary to reposition the pipe bracket. Remove the fuel tank and the carburetor and fit the pipe on the motorcycle and tack weld the pipe joint.

⚠ WARNING

Welding produces sparks and could cause a fire. Remove the fuel tank and the carburetor prior to welding.

Flywheel Magneto Rotor (Optional Parts)

Four (4) optional rotors are available. The standard flywheel can be substituted with one of those in the chart to better suit track conditions.

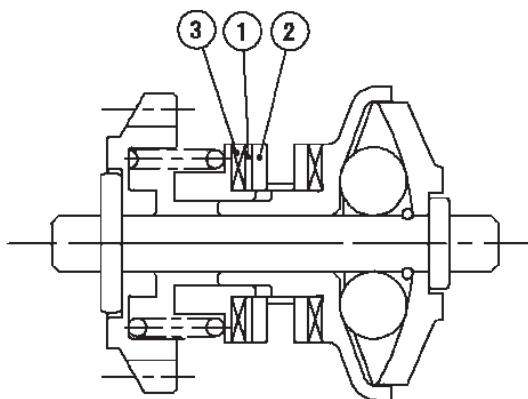
Select one of them according to the table.

Table of Inertia Moment

Part Number	Inertia Moment (kg·cm ²)	Racing Conditions
21007-1425	4.0 (STD)	Increase in throttle response ↑
21007-1424	4.5	
21007-1429	4.9	
21007-1426	5.3	
21007-1427	5.6	↓ Increase in rear wheel traction
21007-1428	5.9	

Governor

Add a 1mm spacer (P/N 92026-1590) to the governor as shown. This helps make low-to-midrange speed transition smooth.



1. 92926-1238, SPACER (OPTION), t = 1.0mm
2. 92026-1501, SPACER (STD), t = 2.0mm
3. 92046-1252, BEARING, NEEDLE

Spark Plug:

Use the recommended racing spark plug.

Spark Plug	Part Number
R7376-8 (NGK)	92070-1275

NOTE:

- o Use a fuel with Research Octane Number (RON) 98~100 or higher, to help prevent abnormal combustion caused by the increased compression pressure from this modification.

CAUTION

Use of leaded fuel is illegal in some countries, states or territories. Check local regulations before using leaded fuel.

Optional Carburetor Jet Needle and Throttle Valve Cutaway

The optional carburetor jets for the '03 KX250-M1 are listed on the last page of this bulletin.

Warranty Information

This bulletin is racing support information only, not warranty authorization.

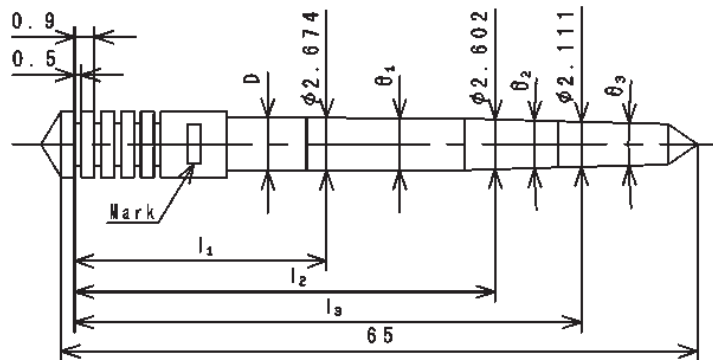
Carburetor Setting and Optional Parts

KX250-M1

1) Setting

Body	MJ	PWJ	JN	CA	SJ	AS	NJ			BPP	POP	BP	PO	ID Mark
							□	Choke Height	Well Dia.					
PWK38S	#165	#50	NAFH-2	#8.0 (2.5X1.0)	#52	2	0 mm	7.45 (With Slit)	φ 3.6	5.0	10.5	φ 0.8	φ 1.5/ φ 0.7	G713A

2) JN Optional Parts



P/No.	KS No.	Mark	D	l ₁	l ₂	l ₃	θ ₁	θ ₂	θ ₃	A/F Condition
16187-1156	N427-ALF00	NALF	φ 2.705	27.15	30.95	46.95	0°45'58"	1°34'40"	3°00"	↑ Rich
16187-1157	N427-ALG00	NALG	φ 2.715	27.15	30.95	46.95	0°45'58"	1°34'40"	3°00"	
16187-1158	N427-ALH00	NALH	φ 2.725	27.15	30.95	46.95	0°45'58"	1°34'40"	3°00"	
16187-0016	N427-ALW00	NALW	φ 2.735	27.15	30.95	46.95	0°45'58"	1°34'40"	3°00"	↓ lean
16187-0017	N427-ALJ00	NALJ	φ 2.745	27.15	30.95	46.95	0°45'58"	1°34'40"	3°00"	
16187-1161	N427-AFF00	NAFF	φ 2.705	27.60	31.40	47.40	0°45'58"	1°34'40"	3°00"	↑ rich
16187-1162	N427-AFG00	NAFG	φ 2.715	27.60	31.40	47.40	0°45'58"	1°34'40"	3°00"	
16187-1163	N427-AFH00	NAFH	φ 2.725	27.60	31.40	47.40	0°45'58"	1°34'40"	3°00"	
16187-0014	N427-AFW00	NAFW	φ 2.735	27.60	31.40	47.40	0°45'58"	1°34'40"	3°00"	(Clip position 2 rd)
16187-0015	N427-AFJ00	NAFJ	φ 2.745	27.60	31.40	47.40	0°45'58"	1°34'40"	3°00"	

* NAL is richer than NAF (0.5 Clip Position).

3) CA Optional Parts

KHI No.	KS No.	Mark	Remark
16025-1217	N502-46G00	# 8(2.5 × 1.0)	STD
16025-1215	N502-46E00	# 6(2.5 × 1.0)	OP
16025-1216	N502-46F00	# 7(2.5 × 1.0)	OP

5) MJ Optional Parts

KHI No.	KS No.	Mark	Remark
92063-1368	99101-357-1600	# 160	OP
92063-1369	99101-357-1620	# 162	OP
92063-1370	99101-357-1650	# 165	STD
92063-1371	99101-357-1680	# 168	OP
92063-1372	99101-357-1700	# 170	OP
92063-1374	99101-357-1750	# 175	OP

4) SJ Optional Parts

KHI No.	KS No.	Mark	Remark
92064-1143	N424-21048	# 48	OP
92064-1144	N424-21050	# 50	OP
92064-1130	N424-21052	# 52	STD
92064-1145	N424-21055	# 55	OP
92064-1146	N424-21058	# 58	OP

6) PWJ Optional Parts

KHI No.	KS No.	Mark	Remark
16159-1060	N424-52045	# 45	OP
16159-1058	N424-52048	# 48	OP
16159-1053	N424-52050	# 50	STD
16159-1055	N424-52052	# 52	OP
16159-1054	N424-52055	# 55	OP