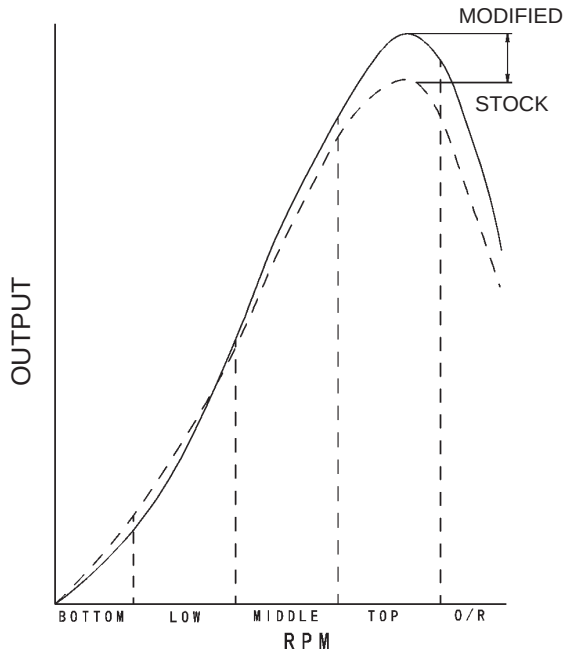
RACE TUNING INFORMATION

Subject

The following modifications increase and extend the power range, 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 modification increases midrange and high speed power while retaining low speed power.

- Shorten the cylinder height by removing 0.2 mm from the top surface (see illustrations).

o The resulting surface finish must be as smooth as the original to insure that the head gasket will not leak.

o The 0.2 mm cut off the cylinder top surface raises the compression ratio as shown in the table when the original 0.25 mm thick cylinder head gasket is installed.

Compression Ratio Model

Model	Stock	Modified
KX85-A1	9.2	9.8

Cylinder Ports:

- Measure the levels of the ports and grind the top of the ports to match the measurement in the figure (see illustration).

- Grind the shaded areas in the exhaust, intake and scavenging ports as shown in the illustrations.

- Polish the surfaces of the exhaust, scavenging, and intake passages, especially near the port into the cylinder, with emery cloth to allow smoother gas flow.

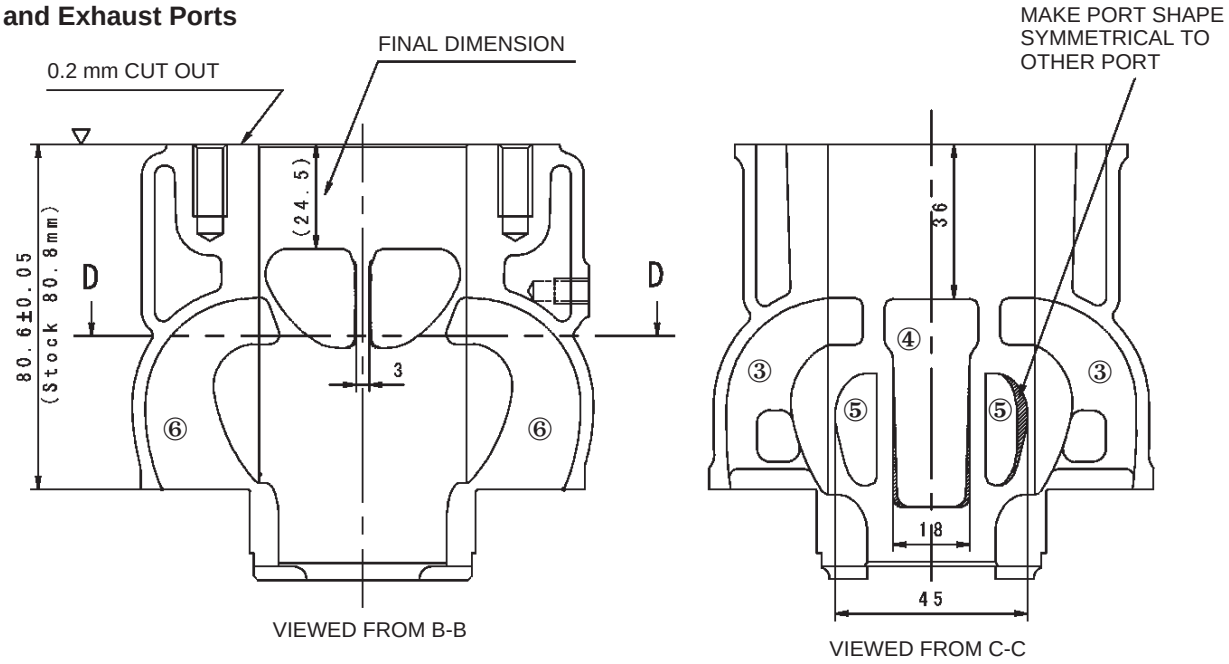
CAUTION

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.

SERVICE

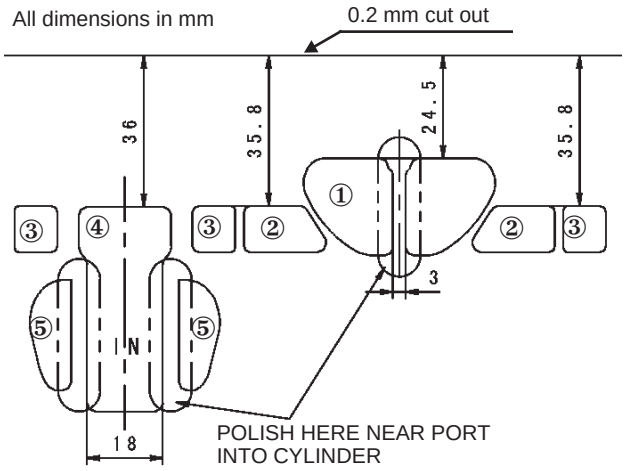
Intake and Exhaust Ports



3. Sub-Scavenging Ports
4. Intake Port
5. Sub-intake Ports
6. Scavenging Passages

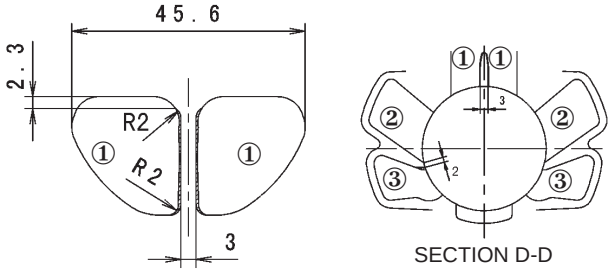
Cylinder Ports

All dimensions in mm



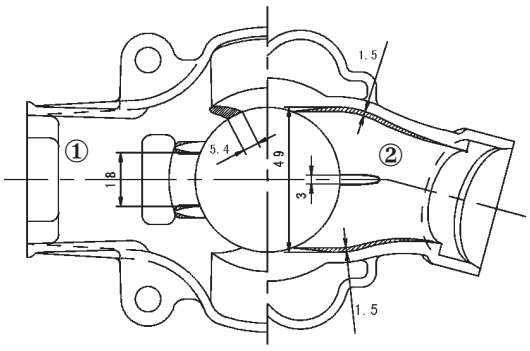
1. Exhaust Port
2. Scavenging Ports
3. Sub-Scavenging Ports
4. Intake Port
5. Sub-Intake Ports

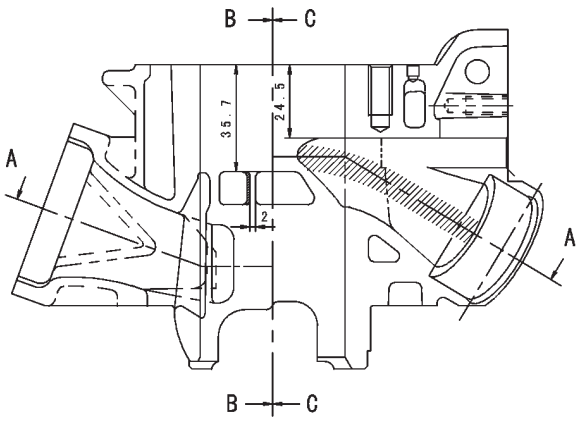
Exhaust and Scavenging Ports



1. Exhaust Port
2. Scavenging Ports
3. Sub-Scavenging Ports

Intake and Exhaust Ports





1. Intake Passage
2. Exhaust Passage

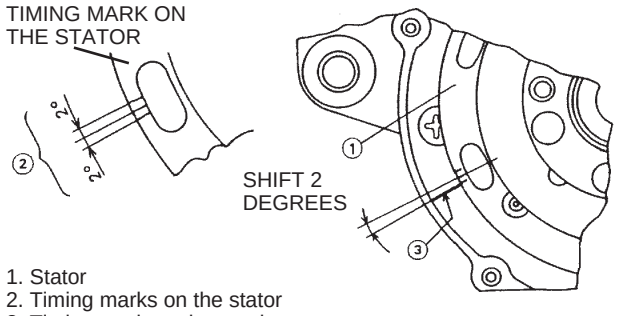
Ignition Timing:

Stock	10° @ 12000 rpm
Modified	8 to12° @ 12000 rpm

- Modify the ignition timing by turning the stator 1 to 2 degrees clockwise (advance) or counterclockwise (retard) as shown. Adjust according to race conditions.

o There are three timing marks on the stator in 2 degree intervals; the stock machine uses the center of the marks. Shifting one mark changes the ignition timing by 2 degrees.

Ignition Timing



1. Stator
2. Timing marks on the stator
3. Timing mark on the crankcase

CAUTION

Use a racing fuel with Research Octane Number (RON) 105 or higher, to help prevent abnormal combustion caused by the increased compression pressure from this modification.

Optional Carburetor Jets

The optional carburetor jets for the ’01 KX85-A1 are listed on the last page of this bulletin.

Warranty Information

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

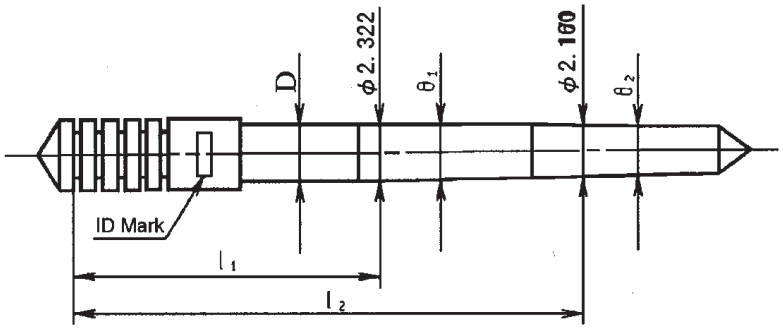
Carburetor Setting and Optional Parts

'01 KX85-A1 and KX100-D1

1) Base Setting

Models	Carb Body Type	MJ	SJ	JN	CA	AS	NJ AB 1	NJ AB 2	NJ AB 3	NJ AB 4	NJ AB 5	BPP	BP	PO	ID Mark
KX85-A1/ B1	PWK28	#140	#45	NAPE-3	#3.5	1 3/8	φ0.6×2	φ0.6×2	-	φ0.6×2	φ0.6×2	4.5	φ0.8	φ0.4	G617A
KX100-D1	PWK28	#138	#45	NAPF-4	#3.5	1 3/8	φ0.6×2	φ0.6×2	-	φ0.6×2	φ0.6×2	4.5	φ0.8	φ0.4	G643A

2) JN Optional Parts



P/No.	ID Mark	D	l_1	l_2	θ_1	θ_2	A/F Condition
16187-1176	NAPC	φ2.375	29.60	34.60	1°34'40"	3°45"	Richer
16187-1177	NAPD	φ2.385	29.60	34.60	1°34'40"	3°45"	
* 16187-1178	NAPE	φ2.395	29.60	34.60	1°34'40"	3°45"	STD (Clip position 3rd)
**16187-1179	NAPF	φ2.405	29.60	34.60	1°34'40"	3°45"	STD (Clip position 4th)
16187-1180	NAPG	φ2.415	29.60	34.60	1°34'40"	3°45"	
16187-1181	NAPH	φ2.425	29.60	34.60	1°34'40"	3°45"	Leaner
16187-1182	NAQC	φ2.375	30.05	35.05	1°34'40"	3°45"	Richer
16187-1183	NAQD	φ2.385	30.05	35.05	1°34'40"	3°45"	
16187-1184	NAQE	φ2.395	30.05	35.05	1°34'40"	3°45"	
16187-1185	NAQF	φ2.405	30.05	35.05	1°34'40"	3°45"	
16187-1186	NAQG	φ2.415	30.05	35.05	1°34'40"	3°45"	
16187-1187	NAQH	φ2.425	30.05	35.05	1°34'40"	3°45"	Leaner

NAP is richer than NAQ (0.5 Clip Position).

3) MJ Optional Parts

P/No.	Number	Remark
92063-1337	#132	OP
-1338	#135	OP
** -1359	#138	STD
* -1360	#140	STD
-1361	#142	OP
-1362	#145	OP
-1363	#148	OP
-1364	#150	OP

NOTE
* Applicable for KX085-A1/B1
** Applicable for KX100-D1

4) SJ Optional Parts

P/No.	Number	Remark
92064-1140	#40	OP
-1141	#42	OP
-1142	#45	STD
-1143	#48	OP
-1144	#50	OP

NOTE :

AB is the Air Bleed : the size of the hole in mm. The position is counted from the upper to the lower.

BPP is the Bypass Pitch : the distance in mm from the center of the main nozzle to the center of the Bypass hole.

BP is the Bypass : the size of the hole in mm.

PO is the Pilot Outlet : The size of the hole into the carburetor throat in mm.