

PRESS INFORMATION

June, 2015



2016 NEW MODEL



Product concept

"Elevate the Winning Balance"

To deliver a higher level of performance, the RM-Z250 continues to evolve for 2016 and beyond, while maintaining the great balance of the current model.

Engineering target of 2016 model

- Performance upgrades derived straight from factory race bike:
 - Upgraded Suzuki Holeshot Assist Control (S-HAC)
 - > KYB PSF2 front fork.
- Engine performance:
 - > Wider range of power delivery.
 - > Reduce engine brake.
 - > Improve engine starting.
 - Increase durability and reliability.
- · Handling performance:
 - > Increase cornering performance.
 - > Maintain the nimble handling.
 - > Reduce the overall weight.
 - Increase absorption feeling.
- Comply with AMA sound control:
 - Meeting new sound rule without sacrificing performance. (Only for US spec)

Suzuki Holeshot Assist Control (S-HAC)

Suzuki Holeshot Assist Control (S-HAC) is a selectable launch mode system derived straight from factory race bike. S-HAC helps rider in launching from starting gate for an early lead. It was introduced in 2014 with RM-Z450, now it is standard equipment on RM-Z250 with more advanced, detailed control.



S-HAC switch and indicator light (located on the left handlebar)

The basic idea of Suzuki Holeshot Assist Control (S-HAC) is as follows;

- 1. It changes ignition map for quicker launch. (Only in launch sequence)
- 2. It is selectable from two different modes to suit to different conditions.
- 3. New three-stage control for more detailed control.



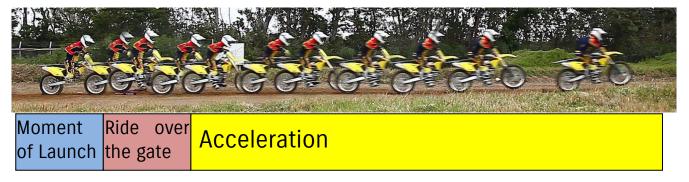


Clement Desalle

James Stewart

We developed this technology together with top racers in US and Europe.

The S-HAC has new three-stage control for 2016. Through our intensive research and development, we found there are three different actions in the launching sequence.



In the moment of launch, ride over the starting gate, and acceleration, each sequence is different; which requires different engine characteristic for quicker launch. Therefore, we set different maps for each sequence.

- > S-HAC has two selectable modes so riders can choose the best option for the starting conditions.
- ➤ For hard surfaces or slippery conditions at the starting gate, choose A-Mode. In this setting, Holeshot Assist Control alters ignition timing in moment of launch and ride over the gate to reduce wheel slip and to deliver smooth launch, and it advances ignition in the acceleration sequence for stronger acceleration. Then one of three conditions will return the ignition to normal operation: after 6 seconds from start; when you shift to fourth gear; or when the throttle is closed (whichever happens first).
- ➤ When conditions at the starting gate provide better traction, and a more aggressive launch is needed, choose B-Mode. For these conditions, Holeshot Assist Control advances ignition timing to allow increased throttle response and stronger acceleration off the line. But level of ignition advance is optimized for each three sequence. The system returns the normal ignition map by same conditions of A-mode.
- ➤ You can turn the Holeshot Assist Control system off when no holeshot assistance is desired.
- ➤ To select the mode, hold down the S-HAC switch on the left handlebar for more than 0.7 second, the indicator light starts slow flashing. Then release the button, the map is set for A-Mode.
- ➤ To select B-mode, hold down switch for more than 1.8 second, the indicator light starts fast flashing. Then release the button, the map is set in B-mode.

Engine performance upgrade

To upgrade engine performance, more than 80 engine internal parts are redesigned for the 2016 model. The yellow highlighted parts in the below image are new for 2016.



1. Piston, piston pin and piston ring

- Piston is now shot-peening surface treatment for greater durability. Piston shape and materials are unchanged.
- Piston pin is now DLC (Diamond Like Carbon) coating, for less friction and greater durability.
- Piston ring now uses L-shaped type ring. It increases sealing performance and reduces blow-by gas.
- These changes contribute to increase durability and wider range of power.



2. Reduced Crank inertia, increased Magneto inertia

- Crankshaft inertia weight is reduced (crank web diameter is reduced by 0.5mm) to reduce friction from oil agitation.
- Magneto rotor inertia weight is increased to hold balance from reduced crank weight.
- ➤ These changes contribute to reduced engine braking force.





3. Redesigned camshafts, intake valve

- > Both intake and exhaust camshafts are changed for wider range of engine performance.
- ➤ Intake valves are redesigned to increase compression ratio and increase intake efficiency. Compression ratio is increased from 13.5:1 to 13.75:1.
- ➤ These changes contribute to wider range of power and smoother power delivery.



Intake camshaft

Intake valves (Old and New)

4. Redesigned decompression system

- > Decompression system is redesigned for more precise operation.
- Working angle is smaller than the previous model.
- > Return spring is relocated for precise operation.





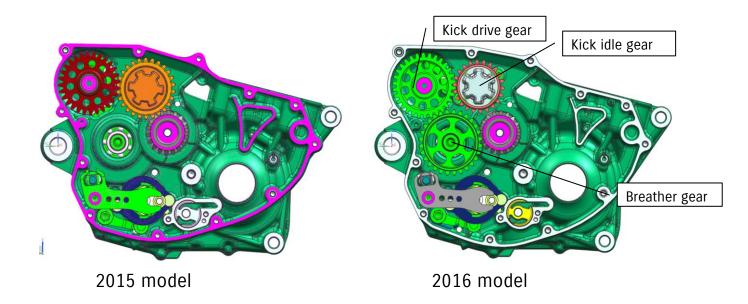
2015 model

2016 model

As a result, decompression system works more precisely and more efficient decompression is enabled and hot starter system has been removed.

5. Redesigned kick drive gear, breather gear, kick idle gear

- ➤ Kick drive gear is larger than the previous model, this increases the crankshaft rotating efficiency.
- Kick idle gear is relocated and a breather gear is added for more efficient starting.



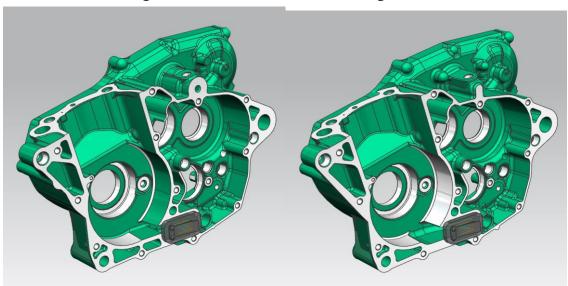
6. Redesigned Cam chain tensioner/adjuster

- Cam chain tensioner is now teflon-coated to reduce friction and increase durability.
- > New tensioner adjuster provides more adjustability.



7. Redesigned Crank case

- ➤ Lower part of right crankcase is redesigned for greater oil lubrication.
- Crank case reed valve is thinner than previous model for better oil circulation.
- > Both changes contributes to reduce engine brake force.



2015 model

2016 model

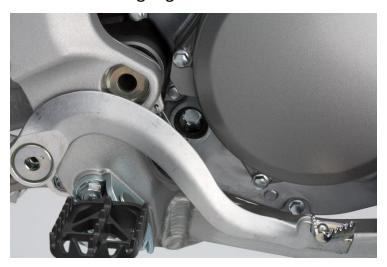
8. Throttle valve idle-set angle

- ➤ Throttle valve idle-set angle is increased from 0.6 degree to 1.1 degree.
- > This change contributes to reduce engine brake.



9. New clutch cover

> Oil level gauge window is added for easier maintenance.

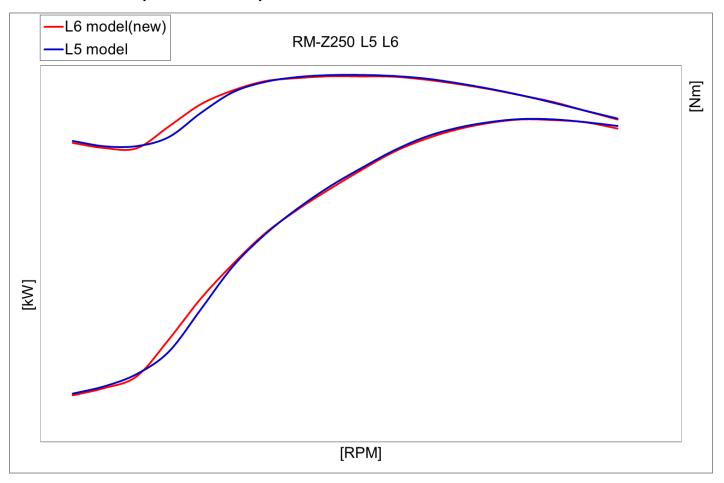


10. Comply with AMA sound control (US spec only)

- > Muffler internal parts are changed to comply with AMA sound control.
- ➤ Exhaust header pipe is extended by 40mm to enhance low-to-mid range.



Power / torque curve comparison



With these engine changes, mid-range power & torque is enhanced while maximum output is maintained. The power delivery is smoother and more linear for easier control.

Engine specification comparison

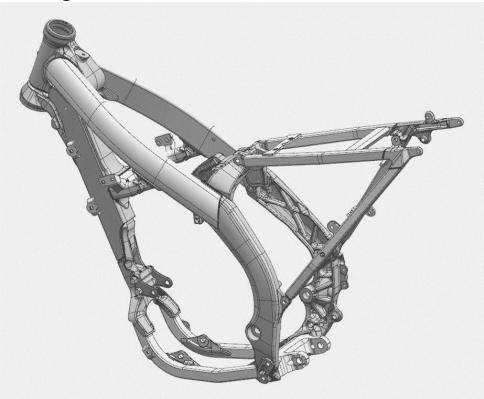
	Bore x Stroke	displacement	Compression ratio	Engine oil capacity
2015	77.0 x 53.6mm	249cm ³	13.5 : 1	1.1L
2016	\	\	13.75 : 1	1.0L

Chassis design target

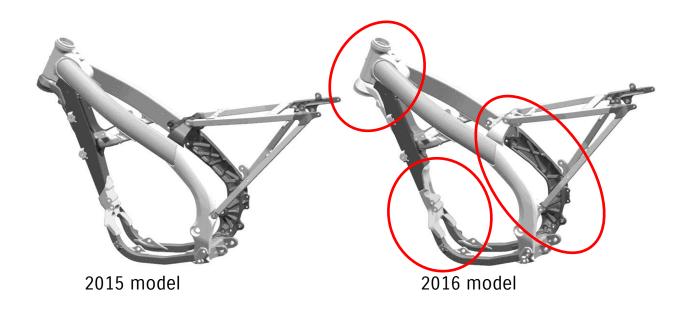
- 1. Increase cornering performance.
- 2. Maintain nimble handling.
- 3. Weight reduction.
- 4. Increase absorption feeling.



Redesigned main frame



- > Steering head pipe is redesigned. (Same length as 450)
- Inside of pivot parts has new rib structure.
- Lower connection part is redesigned.
- > The frame weight is reduced by 2.5% from previous model.
- All these changes are to optimize the chassis rigidity while reducing the weight. All of these changes result in greater cornering performance.



PSF2 front fork





2015 model 2016 model

PSF2 is the latest version of KYB's Pneumatic Spring Fork.

Benefit of PSF2 system

Adjustability

With coil spring, the rider needed to change soft or hard spring depending on rider's weight or skill level. With the new PSF2 fork, the riders don't have to buy any extra springs. Instead riders change spring rate with an air pump to find their desired setting. In addition to spring setting, rebound damping is now 2-way adjustable in high and low speed.

Light weight

Coil spring - the heaviest part of spring fork - is eliminated.

PSF2 is lighter than previous SFF by 1kg.

Increased damper performance

Thanks to no-coil spring design, damper cylinder is enlarged. It results in greater damper response and more stable damper performance.

Low friction

No friction of coil spring means reduced friction. Constant lubrication system

	Front fork	Inner tube	Spring	Compression	Rebound
		Diameter	Adjustability	damping	damping
				adjustable	adjustable
2015	SHOWA SFF	48mm	Preload	Yes	Single
2016	KYB PSF2	48mm	Spring force	Yes	High & Low

New KYB rear shock



- New KYB rear shock features integral adjuster system. That provides easy access to adjusters, rebound damping and compression High & Low speed are adjustable with the integral adjuster.
- In accordance with the suspension change, cushion rod spacers are reshaped for better absorption feeling.

	Rear shock	Inner rod	Spring	Compression	Rebound
	Manufacturer	Diameter	preload	Adjustable	damping
			Adjustable		adjustable
2015	SHOWA	18mm	Yes	High & Low	Yes
2016	KYB	16mm	Yes	High & Low	High & Low

New front brake caliper

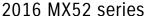


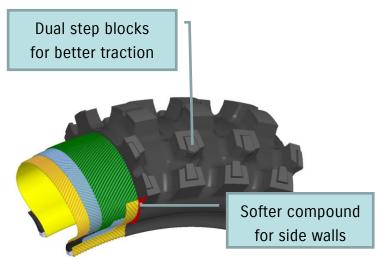
- > Front brake caliper is redesigned to reduced weight.
- New caliper is 10% lighter than the previous one.

New Dunlop tires

- > Tires are changed from Dunlop MX 51 to the latest MX52 series.
- MX52 series are designed with CTCS (Carcass Tension Control System) technology for optimized tire rigidity.
- ➤ For the rear tire, softer compound are used for side walls to achieve better absorption feel.







Rear tire cutaway

Renthal Fatbar®



Renthal Aluminum Fatbar® is standard equipment. It has more strength and less vibration than aluminum straight handlebars.

EXCEL aluminum rims



Excel aluminum rims are made specifically to withstand rugged racing environments, including Supercross, Motocross and off-road conditions.

Rich/Lean couplers



For quick fuel adjustment setting to suit riding condition, two couplers are enclosed. One is for rich and another for lean fuel setting compared to stock setting. Customer can change fuel setting to best suit the riding conditions by just connecting either coupler.

Overall Length		2170 mm (85.4 in)		
Overall width		830 mm (32.7 in)		
Overall height		1270 mm (50.0 in)		
Wheelbase		1475 mm (58.1 in)		
Ground clear	ance	345 mm (13.6 in)		
Seat height		955 mm (37.6 in)		
Curb mass		106.0 kg (234 lbs)		
Engine type		4-stroke, liquid cooled, DOHC		
Bore x stroke		77.0mm x 53.6 mm		
Engine displacement		249cm ³		
Compression ratio		13.75 : 1		
Fuel system		Fuel injection		
Starter system		Primary kick		
Lubrication system		Semi-dry sump		
Transmission		5-speed constant mesh		
Primary reduction ratio		3.315 (63/19)		
Final reduction ratio		3.769 (49/13)		
Suspension	Front	Inverted telescopic, air spring, oil damped		
	Rear	Link type, coil spring, oil damped		
Rake		29° 20′		
Trail		130 mm (5.1 in)		
Brakes	Front	Disc		
	rear	Disc		
Tires	Front	80/100-21 51M, tube type		
	Rear	110/90-19 57M, tube type		
Ignition system		Electronic Ignition (CDI)		
Fuel tank capacity		6.5 L (1.7/1.4 US/Imp gal)		
Oil capacity (Overhaul)		1.0 L (0.24/0.22 US/Imp gal)		