

ROUTE LIST: SERVICE PARTS SALES
PLEASE RETURN TO SERVICE LIBRARY

Inside!
■ KX screamer details!

A special issue for some special product

Dear K-Tech News Subscriber:

This Special Edition of K-Tech News rushes you up-to-the-minute technical information on Kawasaki's new 1992 KX line, and gives you a peek at some of the other returning models.

Many changes have been made to the KX machinery and we wanted you to have this information as soon as possible. Thus this bonus issue instead of making you wait for the Fall issue of K-Tech News (which will be mailed in October). The next issue, by the way, will commemorate KMC's 25th Anniversary

with a special look back at some milestone products.

Meanwhile, read on to learn about the new longer-stroke engines, the new frames and the new brakes on production KX125s and KX250s. Also, be sure to check out the KX model quick-reference features and change lists, and the huge "spec chart."

We hope you enjoy this special edition of *K-Tech News*.

Regards,
Don Church
Manager, Service Training and
Communications Dept.



FEATURES

1992 KX80/125/250/500 Features List

ENGINE	KX80	KX125	KX250	KX500
Fresh Air Intake System				✓
Crescent Slide Carburetor				✓
Flat Crown Piston		✓		
Dome Piston	✓		✓	✓
Piston Pin Boss Hard Anodizing	✓	✓	✓	✓
Single Piston Ring (t=1.0mm)		✓		
Two Piston Rings	✓		✓	✓
Steel Piston Ring(s)	✓	✓	✓	✓
Barrel Finished Con-Rod				✓
Crankcase Reed Valve		✓		
Carbon Fiber Reed Valve		✓	✓	
Aluminum Clutch Plates	✓	✓		✓
Steel Clutch Plates			✓	
Paper Base Compound Friction Plates		✓	✓	✓
Parallel-Flow Cooling System		✓	✓	
Slant Electrode Spark Plug	✓	✓	✓	
Digital CDI	✓	✓	✓	
FRAME				
Perimeter Frame	✓	✓	✓	
Inverted Front Fork	T2	✓	✓	✓
TCV Front Fork	R2			
Dual Front Axle Clamps		✓	✓	✓
Dual Box Section Swingarm		✓	✓	✓
1-pc Cast-Alum. Crosspipe Swingarm		✓	✓	
Double Crosspipe Swingarm		✓	✓	
Low Expansion Rear Brake Hose		✓	✓	✓
Hollow Type Swingarm Pivot Shaft	Solid	✓	✓	✓
Hollow Type Front and Rear Axle	Solid	✓	✓	✓
Stepped Type Pin Drive Chain			✓	✓
Hollow Type Front and Rear Rim	Solid	✓	Solid	Solid

K-TECH NEWS

Special 1991
Vol. 4 Extra
1991 Kawasaki Motors
Corp., U.S.A. (KMC).
All rights reserved.

K-Tech News Staff

Publisher
Kawasaki Tech Services

Publications Manager
Don Church

Executive Editor
Gary Herzog

Special Issue Editor
Ray St. John

Production
Nickless Communications

Published by Kawasaki.
All suggestions become
the property of KMC.
Sending a service sugges-
tion gives KMC permission
to publish and/or use it with-
out further consideration.

What's new for '92? KX125-J1 boasts a new engine

What's new for '92? The new engine for the all-conquering KX125-J1, which boasts a longer stroke and smaller bore, a new guillotine-type KIPS main exhaust port valve, and new radiators the same size as the KX250's. A new fuel tank almost disappears under a longer seat and larger radiator shrouds. The frame is stiffer, but no heavier, with a larger dia-

meter down tube. The front brake has a full-floating disc. the unwary. The new engine makes just as much horsepower as the '91 version, and it's easier to ride—the best of both worlds.

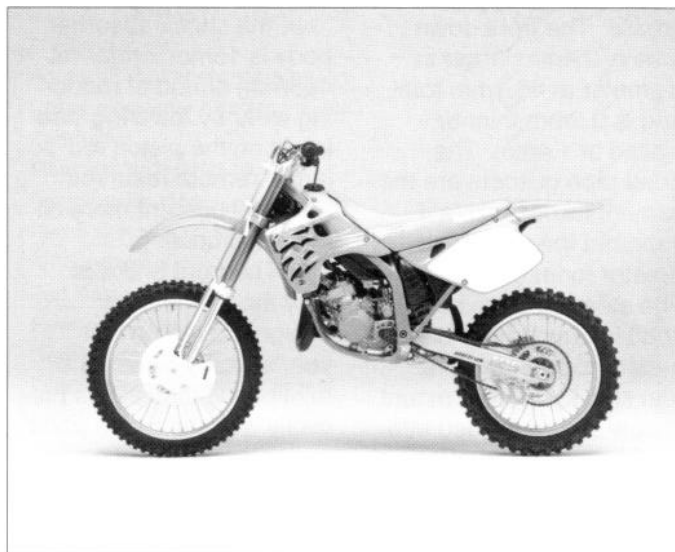
The J1's engine also features a new flat-topped piston which runs cooler and shortens flame travel for increased combustion efficiency. It is sealed by a single, steel, 1mm-thick piston ring, and has specially plated skirts for long

Paper-based friction material and aluminum plates insure smooth operation under extreme conditions. The clutch housing wall is thicker for extra strength, and the dampers are shaped differently to better absorb the shock of upshifts. The clutch cover is larger, increasing oil capacity around the clutch which aids clutch cooling.

The airbox is also larger for '92, particularly on the clean side of the filter element for crisp throttle response, and has no rotary shutters. It feeds a bigger Keihin PWK36 carburetor. The air cleaner element is larger also, with more dust capacity than last year.

The frame is stiffer than the '91 model's, with

CONTINUED ON PAGE 4



meter down tube. The front brake has a full-floating disc.

Whoa! Let's take these one at a time.

First, the new engine: Stroke has been increased 3.9mm to 54.5mm and bore reduced 2mm to 54.0mm for a return to the almost square dimensions of the classic One-Two-Five. The main exhaust port Kawasaki Integrated Power Valve System (KIPS) valve is now guillotine-type which controls the port timing more closely.

The result of these changes is improved low-end power and a fatter midrange—a power band with fewer surprises for

wear. The new cylinder head matches the contour of the piston crown. A longer connecting rod on a new crank needed to accommodate the new bore/stroke ratio rounds out the list of new parts.

The 125's cooling capacity has been increased 9.2 percent with the adoption of KX250 radiators plumbed in parallel. The radiator shrouds are larger, too. These plus the longer seat almost hide the fuel tank, allowing the rider unparalleled freedom of motion.

The clutch is beefed-up to handle the new engine's extra torque.

TECHNICALITIES



...and for a few more creature comforts, (ABOVE) the '92 KDX 250 and (RIGHT) '92 KDX 200.



What's new for '92? KX250-J1 is proven under fire

What's new for '92? Well, the new KX250-J1 sports many of the changes featured on its 125cc sibling—changes that have been proven under fire on the '91 works racing bikes.

The new 250's engine has a smaller bore and longer stroke for improved low end and mid-range power; the new numbers are 66.4mm by 72.0mm. The 2mm change in stroke has smoothed the

power band, making the KX250 easier to ride and giving its rider more freedom to concentrate on a race-winning strategy.

Elsewhere on the changes list, note that the piston skirts are now specially coated for increased wear resistance. The clutch diameter is up 7mm to 145mm to match the torque increase, while the number of clutch springs

ger muffler cuts noise and improves exhaust flow.

Like the KX125, the 250's frame is more rigid this year. It has the same extra-strength gusseting at the steering head, although the caster angle increases one-half degree (to 26°) on the 250. The steering stem head shaft is 3mm larger also (at 28mm). The down tube is the same as the 125's, but

KX125: New engine and more

CONTINUED FROM PAGE 3

an insignificant weight increase. The front down tube is 2.4mm larger in diameter at 45.1 mm total, and is 0.2mm thinner walled at 1.4mm. The head-pipe gussets are the same thickness as last year, but the overall size is greater for extra rigidity. The steering-stem head shaft is 3mm larger diameter, now 28mm. The rear shock absorber mount is now a tube welded into the frame instead of an aluminum casting bolted in. Two cross-tubes provide additional stiffening in this area of the frame. The swingarm pivot bolt is 2mm larger at 17mm in diameter. Wall thickness remains the same.

The riding position has been improved by narrowing the machine below the seat and lowering the fuel tank so the seat can extend all the way to the fuel cap (fuel capacity remains the same). The body parts fit flush together so the rider can move about easily. A pulley at the twist grip end yields smoother throttle action.

The front suspension remains the same as last year (except for minor damping changes), with

16-way damping adjustment for both compression and rebound. At the rear, the shock absorber body is 15mm longer (at 465mm) aimed at reducing wear by lowering side loads on the piston rod. A larger remote reservoir holds 10 percent more oil for better cooling.

The front brake is now the full-floating design proven on last year's works bikes. The full-floating disc aligns precisely with the brake pads under the severest conditions without squealing. The pads wear evenly and last longer because disc-to-pad alignment is assured even if the forks should flex under the incredible loads imposed on them in competition.

The pad material has been changed to sintered metal for linear brake response. At low application pressures, the brakes respond evenly and smoothly. The front brake caliper is slightly heavier and more rigid to match the increased stopping power while the rear brake has been improved by changing the leverage ratio and the pad material.

That's about it for the terrific '92 KX125. Good hunting! □



has dropped from six to five for a lighter feel. The 250 keeps its steel clutch plates. As on the 125, a larger clutch cover increases the volume of oil circulating around the clutch for better cooling.

The 250 also gets the slant electrode spark plug now found on the KX125, and the magneto now has two charging coils instead of one for higher ignition voltages.

The larger air cleaner contributes to overall power and the larger element has more dust-holding capacity so you won't lose as much power between cleanings. The lar-

ger bottom frame tubes are larger as well. They are now 28.6mm in diameter, up from 25.4mm, with wall thickness reduced to 1.4mm from 1.6mm. The 250 also has a welded-in shock mount with extra cross tubes and a longer shock absorber with larger reservoir.

Other frame, suspension, and brake changes are as on the '92 KX125-J1 although suspension damping and spring rates remain unique to each model.

What's new for '92? More of the same in motocross: winning! Watch the track near you for more on Kawasaki '92. □

What's new for '92? KX80-R2/T2 has more top end

What's new for '92? The diminutive but potent KX80, with engine improvements spreading the power over a broader range this year, boasts a power curve extending to higher revs than before.

The top-end improvement comes from the re-addition of boost ports, back after having been dropped for one year. Other changes, including

ness is unchanged at 2.5mm. The fork spring is slightly softer at 0.52 kg/mm, down from 0.56. Dust boots are now standard.

The "Big Wheel" (-T2) KX80 gets a new upside down fork with 36mm diameter tubes featuring a 1.75mm wall thickness. Spring damping is now handled by leaf-type valves instead of the simple orifices found on last year's



an increased compression ratio (up from 8.8:1 to 9.4:1), serve to keep the bottom end strong and actually fatten the mid-range.

Elsewhere, a slant electrode spark plug, like the KX125's, offers greater durability under race conditions. New ignition system components including flywheel magnets and coil send more voltage to the plug. And the muffler silencer body is aluminum instead of steel.

The standard (-R2) version KX80 gets a new front fork, with larger diameter inner tubes—38mm now, up from 36, though the tube wall thick-

ness is unchanged at 2.5mm. The fork spring is slightly softer at 0.52 kg/mm, down from 0.56. Dust boots are now standard.

ness is unchanged at 2.5mm. The fork spring is slightly softer at 0.52 kg/mm, down from 0.56. Dust boots are now standard. Both KX80s have a larger diameter front disc brake, up 20mm to 220mm overall which increases the swept area by over 20 percent. □



ABOVE) "Big Wheel" KX80-T2; (TOP) KX80-R2.

TECHNICALITIES

What's new for '92? KX changes a highlight!

Changes to the world-beater KX line of off-road motorcycles were atop the "highlights list" at a late-summer preview of 1992 Kawasaki models. The extensively revised KX machinery which feature numerous engine, frame and suspension improvements, was on display at several Kawasaki-sponsored events in July and August, and won rave reviews.

On the pages of this K-Tech News special issue, an in-depth look at what all the fuss was about.

ENGINE-CHANGES	KX125	KX250
Bore and stroke	✓	✓
Rotary air shutter eliminated	✓	✓
Larger air cleaner element and duct	✓	✓
Carburetor	✓	
Slant electrode spark plug		✓
Compression ratio	✓	✓
Piston skirt NCC coat		✓
KIPS system	✓	
Port timing	✓	✓
Flywheel effect	✓	✓
Generator coil		✓
Friction plate diameter enlarged		✓
Clutch spring		✓
Clutch plate material	✓	
Friction plate material	✓	
Clutch damper characteristic	✓	
Clutch housing	✓	
Clutch cover	✓	✓
Clutch shift fork	✓	
3rd, 4th, 5th gear dog		✓
Radiator	✓	
Exhaust pipe	✓	
Silencer	✓	✓
FRAME CHANGES		
Frame, gussets and crosspipe	✓	✓
Down tube	✓	✓
Lower tube		✓
Rear shock absorber mount method	✓	✓
Caster angle		✓
Riding position	✓	✓
Rear fender and side cover	✓	✓
Front Disc brake	✓	✓
Front brake caliper and pad material	✓	✓
Rear brake pedal ratio and pad material	✓	✓
Rear brake insulator	✓	✓
Throttle action	✓	✓
Steering shaft diameter	✓	✓
Rear shock absorber	✓	✓
Swingarm and pivot shaft	✓	✓

1992 KX Specifications

All information contained in this publication is based on the latest product information available at the time of publication. Kawasaki Motors Corp., U.S.A. accepts no liability for any inaccuracies or emissions in his publication, although every possible care has been taken to make it as complete and accurate as possible. Specifications subject to change without notice.

ENGINE	KX60-B8	KX80-R2	KX80-T2
Type	2-stroke Single	2-stroke Single	2-stroke Single
Displacement	60cc	82cc	82cc
Bore x Stroke	43.0 x 41.6mm	48.0 x 45.8mm	48.0 x 45.8mm
Compression Ratio	8.4:1	9.4:1	9.4:1
Carburetion	Mikuni VM24SS	Keihin PE26	Keihin PE26
Induction	4-petal reed valve	2-petal reed valve	2-petal reed valve
Ignition	CDI	Electric CDI (digital)	Electric CDI (digital)
Starting System	Primary kick	Primary kick	Primary Kick
Cooling	Liquid	Liquid	Liquid
Lubrication	Pre-mix (32:1)	Pre-mix (32:1)	Pre-mix (32:1)
Engine Oil	2-stroke racing oil	2-stroke racing oil	2-stroke racing oil
Spark Plug	B9EG (U.S.)	R6254K-105 (U.S.)	R6254K-105 (U.S.)
Valve Timing: Inlet	Full open	Full open	Full open
Valve Timing: Exhaust	Open: 92° BBDC; Close 92° ABDC	Open: 93.5° BBDC; Close 93.5° ABDC	Open: 93.5° BBDC; Close 93.5° ABDC
Scavenging	Open: 62.5° BBDC; Close 62.5° ABDC	Open: 63° BBDC; Close 63° ABDC	Open: 63° BBDC; Close 63° ABDC
Piston Clearance	0.030 - 0.040mm	0.056 - 0.066mm	0.056 - 0.066mm
Cylinder Pressure	11.0 kg/cm ² @ kick 5 times	12.0 kg/cm ² @ kick 5 times	12.0 kg/cm ² @ kick 5 times
DRIVETRAIN			
Transmission	6-speed	6-speed	6-speed
Transmission Oil Capacity	0.6 litres	0.7 litres	0.7 litres
Primary Drive/Final Drive	Gear/Chain	Gear/Chain	Gear/Chain
Primary Reduction Ratio	3.500 (77/22)	3.400 (68/20)	3.400 (68/20)
Gear Ratios: 1st	2.846 (37/13)	2.538 (33/13)	2.538 (33/13)
2nd	2.125 (34/16)	1.875 (30/16)	1.875 (30/16)
3rd	1.722 (31/18)	1.500 (27/18)	1.500 (27/18)
4th	1.428 (30/21)	1.250 (25/20)	1.250 (25/20)
5th	1.217 (28/23)	1.090 (24/22)	1.090 (24/22)
6th	1.083 (26/24)	0.956 (22/23)	0.956 (22/23)
Final Reduction Ratio	3.384 (44/13)	3.769 (49/13)	4.153 (54/13)
Overall Drive Ratio	12.833 @ top gear	12.258 @ top gear	13.509 @ top gear
Clutch	Wet, multi-disc	Wet, multi-disc	Wet, multi-disc
FRAME			
Type	Single cradle, high-tensile steel	Perimeter, high-tensile steel	Perimeter, high-tensile steel
Suspension: Front	30mm telescopic fork	38mm telescopic fork	36mm upside-down fork
Suspension: Rear	Uni-Trak with gas shock, adjustable preload	Bottom Link Uni-Trak w/ adjustable preload; 4-way compression/16-way rebound damping	Bottom Link Uni-Trak w/ adjustable preload; 4-way compression/16-way rebound damping
Wheel Travel: Front/Rear	200mm/200mm	275mm/275mm	275mm/275mm
Tire: Front	601100-14 Dunlop K195	70/100-17 40M	701100-1942M
Tire: Rear	80/100-12 Dunlop K195	90/100-14 49M	901100-1652M
Caster (rake)	28°	27°	27°
Trail	65mm	89mm	103mm
BRAKES			
Front	Drum, 90 x 20mm	Single disc, 190mm (effect. diam.)	Single disc, 190mm (effect. diam.)
Rear	Drum, 90 x 20mm	Single disc, 150mm (effect. diam.)	Single disc, 150mm (effect. diam.)
DIMENSIONS			
Overall Length	1,560mm	1,810mm	1,895mm
Overall Width	705mm	745mm	745mm
Overall Height	915mm	1,050mm	1,080mm
Wheelbase	1,080mm	1,250mm	1,280mm
Ground Clearance	250mm	345mm	375mm
Seat Height	710mm	840mm	870mm
Dry Weight	50.5kg	63.5kg	66.5 kg
Curb Weight: Front/Rear	26.0 kg/27.5kg	33.5kg/34.5kg	34.5 kg/36.5kg
Fuel Capacity	3.5 litres	5.5 litres	5.5 litres
PERFORMANCE			
Maximum Power	15 ps @ 12,000 rpm	26.2 ps @ 12,000rpm	26.2 ps @ 12,000rpm
Maximum Torque	0.92 kg/m @ 10,500 rpm	1.62 kg/m @ 11,000rpm	1.62 kg/m @ 11,000rpm

1992 KX Specifications

All information contained in this publication is based on the latest product information available at the time of publication. Kawasaki Motors Corp., U.S.A. accepts no liability for any inaccuracies or omissions in this publication, although every possible care has been taken to make it as complete and accurate as possible. Specifications subject to change without notice.

ENGINE	KX125-J1	KX250-J1	KX500-E4
Type	2-stroke Single	2-stroke Single	S-stroke Single with KIPS
Displacement	124cc	249cc	499cc
Bore x Stroke	54.0 x 54.5mm	66.4 x 72.0mm	86 x 86mm
Compression Ratio	8.8:1 (low speed); 7.8:1 (high speed)	10.9:1 (low speed); 9.3:1 (high speed)	8.3:1 (low speed); 7.4:1 (high speed)
Carburetion	Keihin PWK36	Keihin PWK38	Keihin PWK39
Induction	Crankcase reed valve	Piston reed valve	E-petal reed valve
Ignition	Digital CD	Digital CD	Electronic CD
Starting System	Primary Kick	Primary kick	Primary kick
Cooling	Liquid, twin radiators	Liquid, twin radiators	Liquid
Lubrication	Pre-mix (32:1)	Pre-mix (32:1)	Pre-mix (32:1)
Engine Oil	2-stroke racing oil	2-stroke racing oil	S-stroke racing oil
Spark Plug	R6254K-105 (U.S.)	R6254E-9 (U.S.)	NGK B8EG (U.S.)
Valve Timing: Inlet	Full open	Full open	Full open
Valve Timing: Exhaust	Low speed: Open: 88° BBDC; Close: 88° ABDC High speed: Open: 94.5° BBDC; Close: 94.5° ABDC	Low speed: Open: 80.5° BBDC; Close: 80.5° ABDC High speed: Open: 92.5° BBDC; Close: 92.5° ABDC	Low speed: Open: 83.5° BBDC; Close: 83.5° ABDC High speed: Open: 93.5° BBDC; Close: 93.5° ABDC
Scavenging	Open: 65° BBDC; Close: 65° ABDC	Open: 61° BBDC; Close: 61° ABDC	Open: 60° BBDC; Close: 60° ABDC
Piston Clearance	0.069 - 0.079mm	0.054 - 0.072mm	0.105 - 0.115mm
Cylinder Pressure	11 kg/cm ² (1078 Kpa) @ kick 5 times	12 kg/cm ² (1176 Kpa) @ kick 5 times	10.5 kg/cm ² (1176 Kpa) @ kick 5 times
DRIVETRAIN			
Transmission	6-speed	5-speed	S-speed
Transmission Oil Capacity	0.7 litres	0.85 litres	0.8 litres
Primary Drive/Final Drive	Gear/Chain	Gear/Chain	Gear/Chain
Primary Reduction Ratio	3.5 (56/16)	2.75 (55/120)	2.538 (66/26)
Gear Ratios: 1st	2.142 (30/14)	2.133 (32/15)	2.000 (32/16)
2nd	1.714 (24/14)	1.687 (27/16)	1.444 (26/18)
3rd	1.400 (28/20)	1.389 (25/18)	1.181 (26/22)
4th	1.181 (26/22)	1.136 (25/22)	0.954 (21/22)
5th	1.041 (25/24)	1.000 (24/24)	0.791 (19/24)
6th	0.920 (23/25)	3.500 (49/14)	3.357 (47/14)
Final Reduction Ratio	4.083 (49/12)	-	-
Overall Drive Ratio	13.148 @ top gear	9.625 @ top gear	6.746 @ top gear
Clutch	Wet multi-disc, manual	Wet multi-disc, manual	Wet, multi-disc
FRAME			
Type	High-tensile steel, semi-double cradle with bolt-on aluminum rear section	High-tensile steel, semi-double cradle with bolt-on aluminum rear section	High-tensile steel, semi-double cradle
Suspension: Front	Upside-down cartridge fork; 16-way compression and rebound damping	Upside-down cartridge fork; 16-way compression and rebound damping	43mm upside-down cartridge fork;
Suspension: Rear	Bottom Link Uni-Trak w/ adjustable preload; 16-way compression and rebound damping	Bottom Link Uni-Trak w/ adjustable preload; 16-way compression and rebound damping	Bottom Link Uni-Trak w/ adjustable preload; 16-way compression and rebound damping
Wheel Travel: Front/Rear:	310mm/330mm	310mm/330mm	310mm/330mm
Tire: Front	80/100-21 51M	80/100-21 51M	80/100-21 51M
Tire: Rear	100/90-19 57M	110/90-19 62M	120/90-19 66M
Caster (rake)	25.5°	26°	27°
Trail	105mm	108mm	116mm
BRAKES			
Front	Single full-float, 220mm (effec. diam.), dual-piston	Single full-float, 220mm (effec. diam.), dual-piston	Single disc, 220mm (effec. diam.)
Rear	Single disc, 190mm (effec. diam.)	Single disc, 190mm (effec. diam.)	Single disc, 190mm (effec. diam.)
DIMENSIONS			
Overall Length	2,160mm	2,185mm	2,190mm
Overall Width	815mm	815mm	815mm
Overall Height	1,215mm	1,215mm	1,205mm
Wheelbase	1,470mm	1,490mm	1,490mm
Ground Clearance	395mm	385mm	370mm
Seat Height	950mm	955mm	950mm
Dry Weight	86.5 kg	96.5 kg	100 kg
Curb Weight: Front/Rear:	45.5 kg/48.5kg	50 kg/52kg	52 kg/54kg
Fuel Capacity	8.5 litres	8.5 litres	9.9 litres
PERFORMANCE			
Maximum Power	NA	NA	64.5 ps @ 7,000rpm
Maximum Torque	NA	NA	6.8 kg/m @ 6,000rpm

What's new for '92? Here's a sneak preview. nn



A photo sampling of '92 Kawasaki product (CLOCKWISE FROM ABOVE): EX500-A6; ZG1000-A7: Concours; JL650-A2:SC; ZX600-D3: Ninja; KLF220-A5:Bayou; VN750-A8: Vulcan; and VN1500-A6: Vulcan.

