

1979

ACTION LIST

HONDA 500/550/750 & KAWASAKI 650/900/1000 PRODUCTS
as of January 1, 1979

As we go to print, many new products are being developed and tested. Be sure you have the latest '**ACTION LIST**' for up to date product information.

1979

ACTION Hours

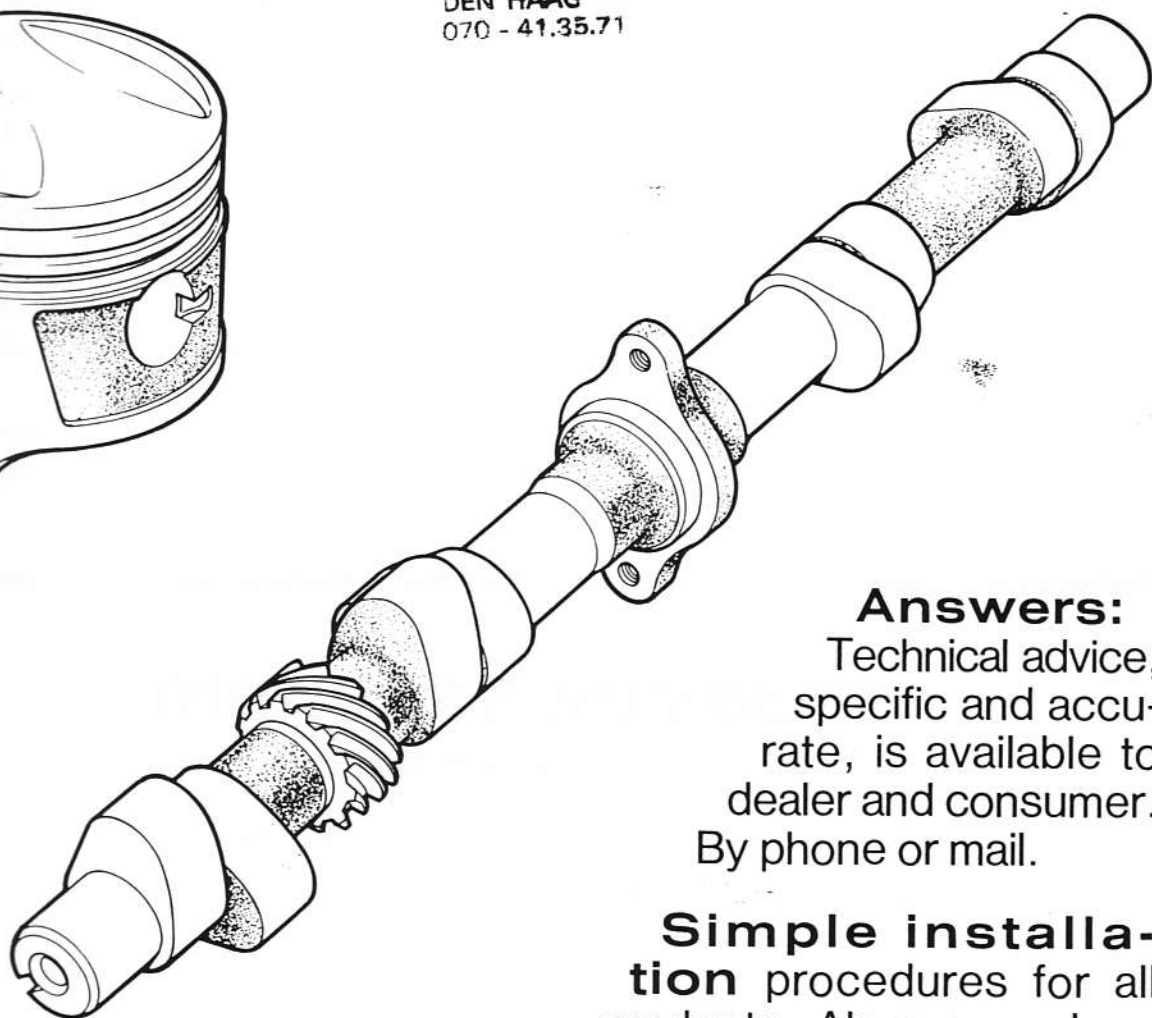
HONDA 500/550/750 & KAWASAKI 650/900/1000 PRODUCTS
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Reliable, proven products, carefully developed and thoroughly tested.

NEMOTO

FYNJEKADE 9
DEN HAAG
070 - 41.35.71



Answers:

Technical advice, specific and accurate, is available to dealer and consumer. By phone or mail.

Simple installation procedures for all products. Always as close to stock service or overhaul as possible.

Service: We will install, service and/or repair anything we sell.

Replacement parts are in stock or readily available for everything we sell.

Large inventory for best possible service. Over 90% of our orders are shipped "same day"!

Name & reputation developed over the past nine years. Your best assurance of complete satisfaction.

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OUR PART NUMBERS

FOR BEST SERVICE, PLEASE USE THEM

GROUP #		ITEM #
<u>00</u>	—	<u>000</u>

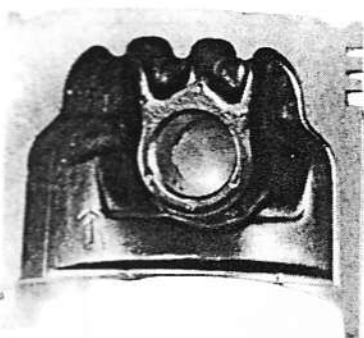
CB750 HONDA SPECIAL NOTE:

PLEASE BE SURE YOU'RE ORDERING THE
CORRECT PART. FOR FURTHER INFORMATION
REFER TO PAGE 48.

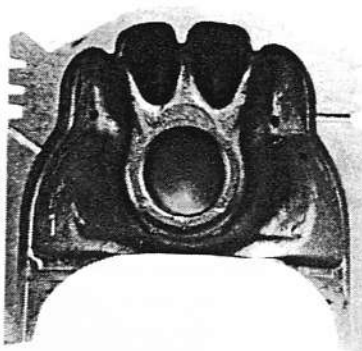
ACTION FOURS

MOTO
SPYNEKADE 9
DEN HAAG
070 - 413371

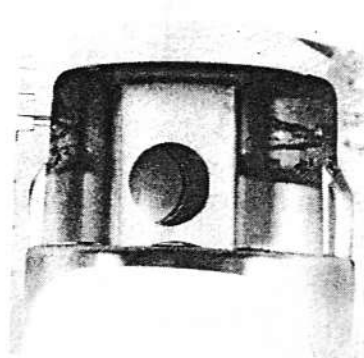
BIG BORE PISTON KITS



TYPICAL 'CHEAP' PISTON



ACTION FOURS' DESIGN



TYPICAL FORGED PISTON

We sell only permanent mold, cast pistons. This type of piston is used in all modern Japanese "muscle bikes" — and with good reason. High silicon content and extremely precise casting and machining provide pistons which are strong and stable. This dimensional stability gives best possible ring sealing and life. Special three piece molds give lightest weight for lower stress.

Our pistons are made in Japan. Most are made by the same company that supplies Genuine Honda and Kawasaki pistons. It's rare to find over .01mm (4/10,000 inch) variation in skirt diameter!

Expensive? not really. Considering the precision and service life, we are proud of our prices. When inflation is considered, they are as much as 30% lower than in 1971!

No "Extra Big" Kits. We have found that excess oversize becomes a matter of diminishing returns. Costs increase radically while the customer does not receive the additional performance he might expect. Any given design has practical limits.

No special head gasket. We have found that the stock (genuine) head gaskets are the most reliable. Thus all our designs allow their use. No need to hope that a special gasket is available when you need it, either! Just head for your local dealer.

BIG BORE KITS, CONT'D.

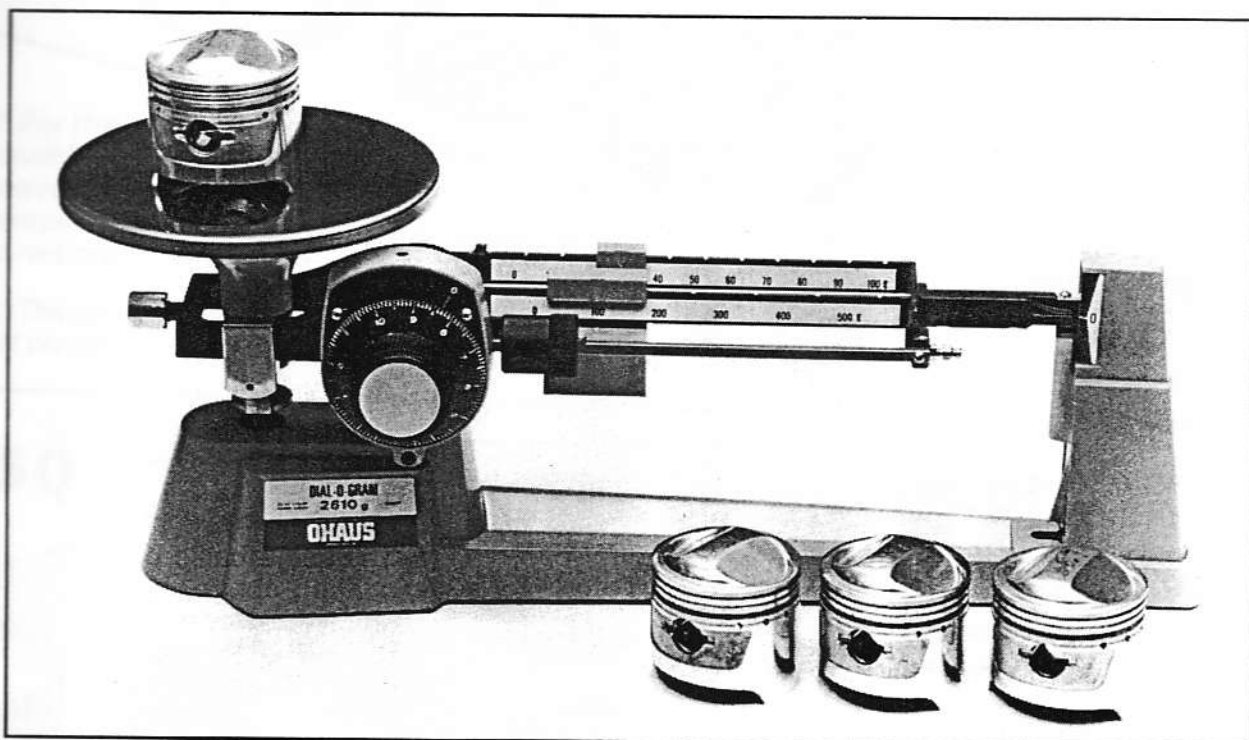
We use Genuine parts wherever possible. Rings, pins and clips are all genuine Honda or Kawasaki parts chosen from models with higher piston speeds and cylinder loadings. No need for "trick" (hard to get, expensive, etc.) rings or pins with our strong, stable, permanent mold pistons.

We balance our pistons (weight match) to within 1 gram or less. Engine balance is unaffected by excess weight or variation.

Valve reliefs are extra large to provide clearance with the hottest cams — even if cam timing is varied for special applications. “Drop-in” cam installation is insured.

Special machining such as combustion chamber reshaping or hand grinding clearance is not required.

ALL ACTION FOURS BIG BORE KITS SHOULD BE USED WITH PROPERLY DESIGNED HIGH PERFORMANCE CAMS. THE EXTRA DISPLACEMENT AND COMPRESSION DEMANDS LONGER DURATION CAMS FOR BEST RELIABILITY AS WELL AS MAXIMUM PERFORMANCE. REFER TO OUR "ENGINE PACKAGES" SECTION.



PISTON KIT — OVERHAUL PARTS

[illegible]

CB750 BIG BORE KITS

Our best selling and most famous product — and with good reason! These piston kits have become a standard for performance and reliability since their introduction in 1971.



10.5 - 1 compression ratio provides a major increase in performance while being compatible with available gasoline.

While intended for long-life street use, these kits are durable enough for the most extreme racing applications.

811cc Kit: For the longest possible life. Retains greater sleeve thickness for the best extreme temperature reliability (road racing, for example) and re-bore capability. Cases of 50,000 mile + use are numerous!

PART #01-101

836cc Kit: The largest size practical without resleeving. For those who want the greatest possible performance consistent with long term reliability.

PART #01-102

CB750



'F-2' BIG BORE KITS

The same basic pistons as described above, but with dome shape/displacement designed for F-2 (factory large valve) heads (ONLY!).

811cc Kit: PART #01-103

836cc Kit: PART #01-104

836 FULL COMP BIG BORE KIT

For Drag Racing or other such use. Provides extremely high power output from very low RPM. Gets those radically cammed motors off the line quickly. **NOT FOR STREET OR OTHER SUSTAINED USE ON GASOLINE.** Extra high compression will promote destructive detonation in sustained use.

(Not available for F-2 models) PART #01-105

Kits are furnished complete with pistons, pins, rings, clips and installation instructions. Special gaskets are *not* required.



CB500/550 BIG BORE KITS

570cc Kit: The largest practical over-bore for CB500's. 11 - 1 compression ratio allows amazing H.P. gains and is entirely compatible with available gasoline. Designed primarily for CB500's, the 570 kit may be used in CB550's with a very slight decrease in compression ratio due to greater chamber volume. As with all our bore kits, generous valve reliefs are provided.

590cc Kit: For CB550's. 11 - 1 compression ratio for the same amazing gain our 570's have been noted for since 1972. Designed primarily for use in CB550's, resleeving and slight relief of crankcase is required on CB500's. Slightly higher compression also results.



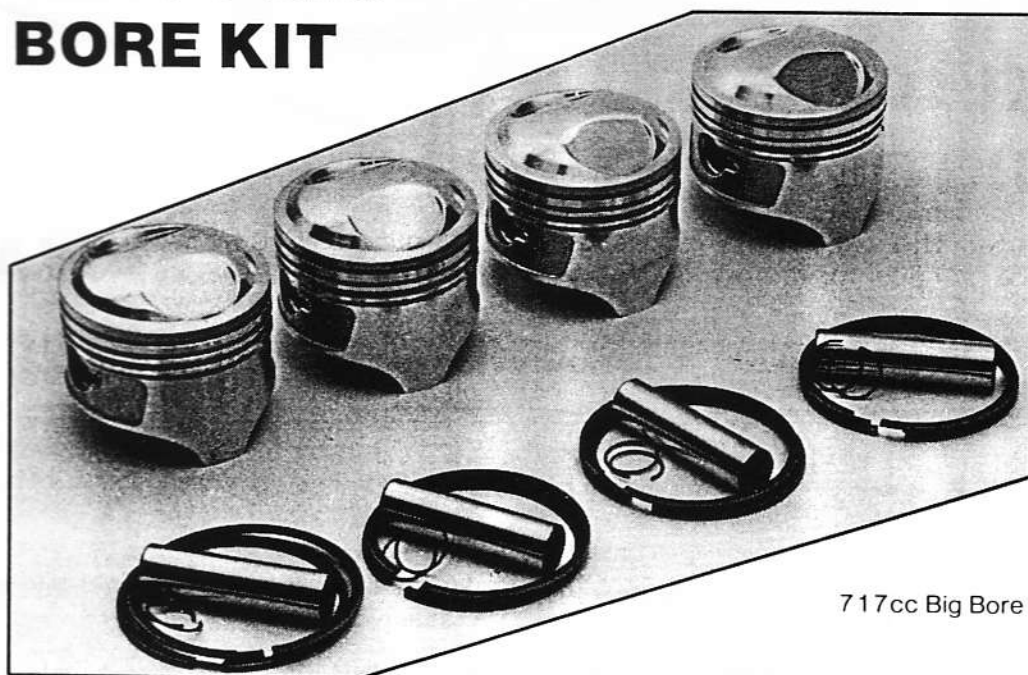
570cc Big Bore Kit

PART #01-107

590cc Big Bore Kit

PART #01-108

KZ650 BIG BORE KIT



717cc Kit: The largest practical bore-in kit for KZ650's. Thoroughly tested under the most extreme conditions. 10.5 - 1 compression brings this excellent machine to life and will put it in competition with any production "Superbike." Generous valve reliefs are provided for use with high performance cams.

717cc Big Bore Kit

PART #01-109

Kits are furnished complete with pistons, pins, rings, clips and installation instructions. Special gaskets *are not* required.

KAWASAKI 900 BIG BORE KIT

1015cc Big Bore Piston Kit: Designed for street and strip use. Also popular for "Superbike Production" Road Racing. 10.5-1 compression ratio is excellent for use with available "pump premium." A very stable piston which provides exceptional life even in the most extreme use.

NOTE: these pistons are the same bore size as stock KZ1000 pistons. Thus they may be used with good condition cylinders for an economical (no boring) high compression application in KZ1000's.

PART #01-110



KAWASAKI 1000 BIG BORE KIT

1075cc Big Bore Piston Kit: The same highly regarded design as our 1015cc kit listed above. The largest "bore-in" size practical for factory 1015's. An all-new mold is used to keep piston weight to a minimum.

PART #01-111

1075cc SLEEVES

Special sleeves allow 903cc models to use our 1075cc bore kit for the greatest practical displacement increase. While castings vary, crankcase machining is usually *not* required.

Set of Four

PART #64-207

Replacements, Each

PART #64-107

* All kits complete with no special gaskets as per pages 4 & 5.



CONNECTING RODS

Rod breakage is an established possibility in CB750's. The probability is small enough to justify the use of "top end only" engine kits for milder street and strip use. Really hard use and any form of regular competition demands the use of special rods. Little imagination is required to visualize the havoc a broken rod can cause.

Detonation is the prime cause of rod breakage. Any modified motorcycle is prone to occasional detonation. Special rods simply provide an extra safety margin. They do not allow the use of "competition only" pistons on the street since they do not prevent the extreme

loads caused by detonation. Ultra-high compression will cause other types of failure (piston destruction, spun rod bearings, etc.).

Heat-treated, forged steel rods are the best choice, as well as being inexpensive. There is no concern with fatigue factors, no need to drill or "pin" bearings. Rotating/reciprocating weight factors remain constant too.

Thorough Testing: Laboratory (see photo) road and track has been performed to assure strength and durability.

HEAT-TREATED FORGED STEEL RODS

Not a rework.

NO core deposit or exchange required.

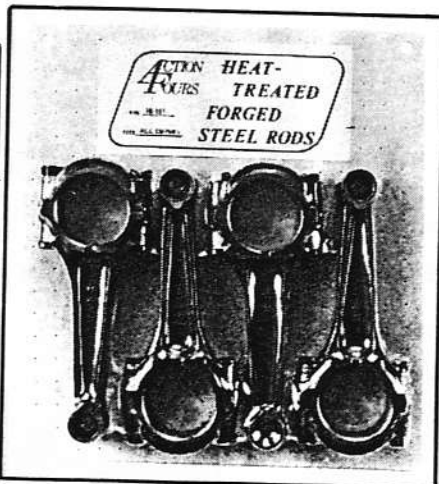
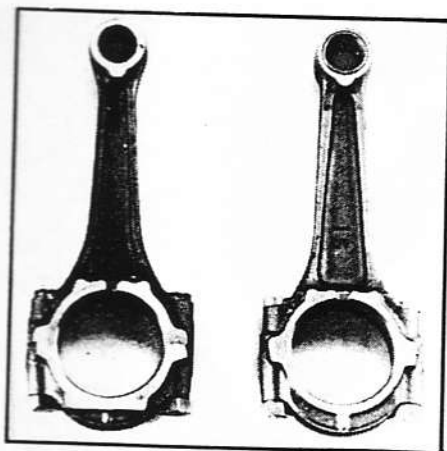
A heat-treated steel forging similar in weight and precision in the stock rod, but *112% stronger* in compression loading.



Recommended for all high performance CB750's and a "must" for racing and "extreme use" applications. Included in Stage II and III Engine Packages.

Installs easily, exactly like a stock rod. All sets are weight matched to within 1% (or better) to maintain proper engine balance. Piston pin bore is bushed to prevent galling under high loads.

STOCK ACTION FOURS



In spite of their reasonable cost, *thousands* of sets in use prove that you can't buy a stronger, more reliable rod! —Beware of imitations—

Set of Four

PART #16-101

Replacement Rod
Each (give wt. in grams)

PART #17-101

New Bolts/Nuts, Set of 8
(For overhaul use)

PART #17-102

VALVE SPRINGS

NEMOTO

FYNJEKADE 9

DEN HAAG

070 - 4115.71

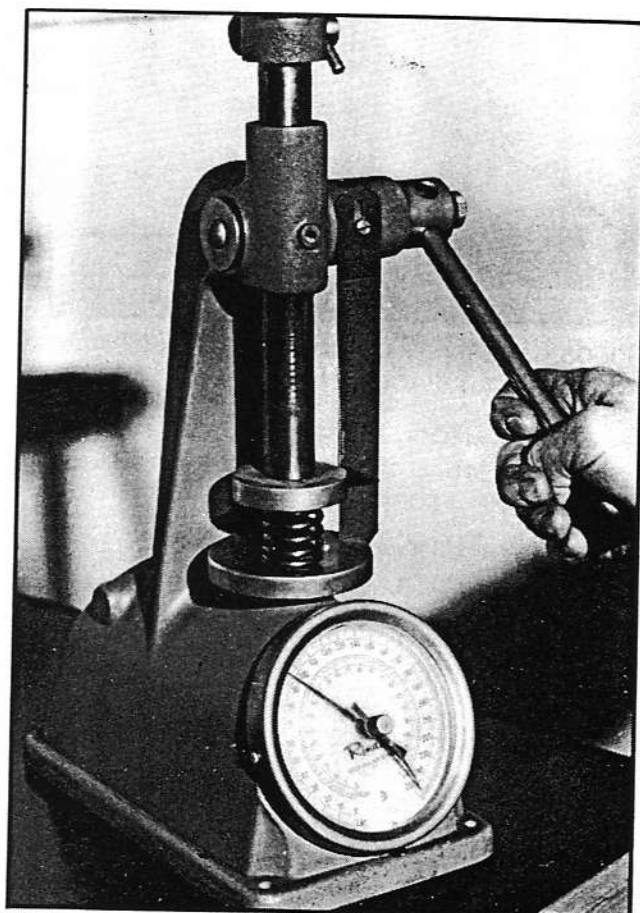
Our spring sets are expensive because we use only titanium retainers. Titanium is lighter than steel, but up to 3 times as strong as aluminum. Titanium retainers assure against problems with sinking, pulling, breakage or erosion.

Stock springs are fine with a stock cam. But as valves are opened faster, farther and at greater RPM's, they no longer can provide the control necessary. Of course, some "hot" cams would coil bind if used with stock springs.

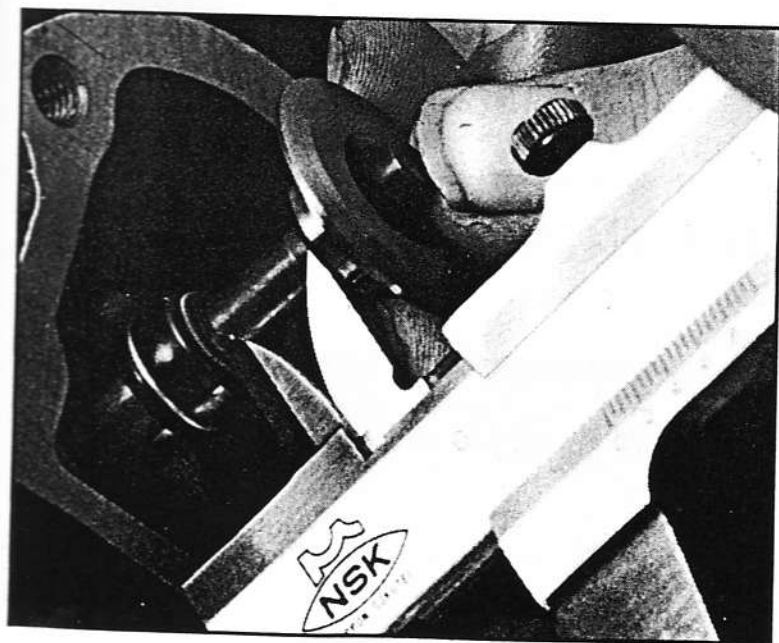
Valve train wear is not increased. Proper design and application is employed rather than extreme (power robbing) pressure.

Spring shims are simple but critical parts. Ours are designed to fit *under* the spring seat. This prevents erosion, to preclude oil contamination and pressure loss.

Valve train function and redline depend on more than just spring pressure. Cam profiles, valve train weight and recording (tachometer) accuracy are all important factors.



Insist on proper function and absolute reliability; specify **ACTION FOURS!**



Clearances must be considered (see photo). Our retainers never extend below the bottom of the keeper; thus, valve guide and stem seal clearance is never reduced.

Generous valve lift is allowed for. All our spring sets will handle well over the maximum lift of any cam we provide.

Careful heat-set and shot peen give our spring sets unlimited overhaul life. No need to worry about "sag" or breakage.



RACING VALVE SPRING SETS

Precise and strong titanium retainers.

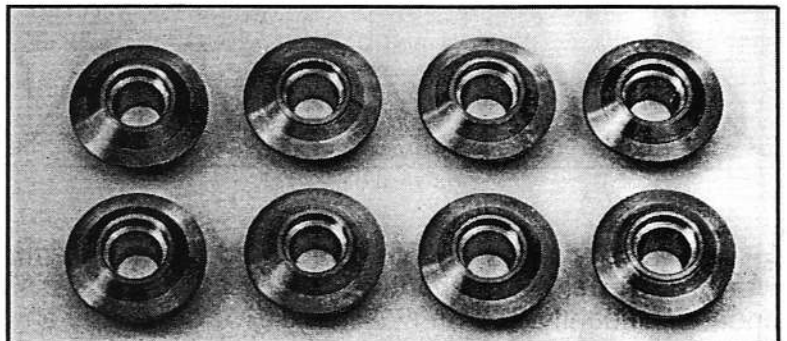
Chrome silicon steel springs, heat-set, shot peened and counter wound* for maximum reliability and complete high RPM valve control.

Close-fitting under-the-seat shims* and complete instructions for proper assembly. No machine work or adaptation required. Use stock keepers.

CB500/550* (single rate inner, dual rate outer spring. Not counter-wound. Uses stock Honda seat/shim.)	PART #10-101
CB750 All models thru 1977 EXCEPT F-2	PART #10-102
CB750 F-2 & 1978 K	PART #10-103
Due to some failures of stock components, this set is recommended for use in all CB750 F-2 (large valve head) models. Stock or "hot" cams.	
KAWASAKI 900 & 1000	PART #10-103
KZ650	PART #10-105
With retainers as shown below to use stock KZ650 under-the-follower shims. May also be used in 903-1015 models with KZ650 shims and followers.	

TITANIUM RETAINER SETS

Our same light and strong titanium retainers used with valve spring sets listed above will fit most Stock, Engle, Norris (dual type only), R.C., MTC, ATP and A.P.E. Valve Springs. Sets of eight.



CB500/550	PART #11-101
CB750 thru 1977, except F-2	PART #11-102
CB750 F-2 & 1978 K	PART #11-103
KAWASAKI 900 & 1000 MODELS	PART #11-103
KAWASAKI 650 (and 903 - 1015 Kaw with 650 shims & followers)	PART #11-105

Valve Spring Shims — as included above. All models except CB500/550. Set of 10 — PART #11-302

KAWASAKI MODIFIED CAM FOLLOWERS

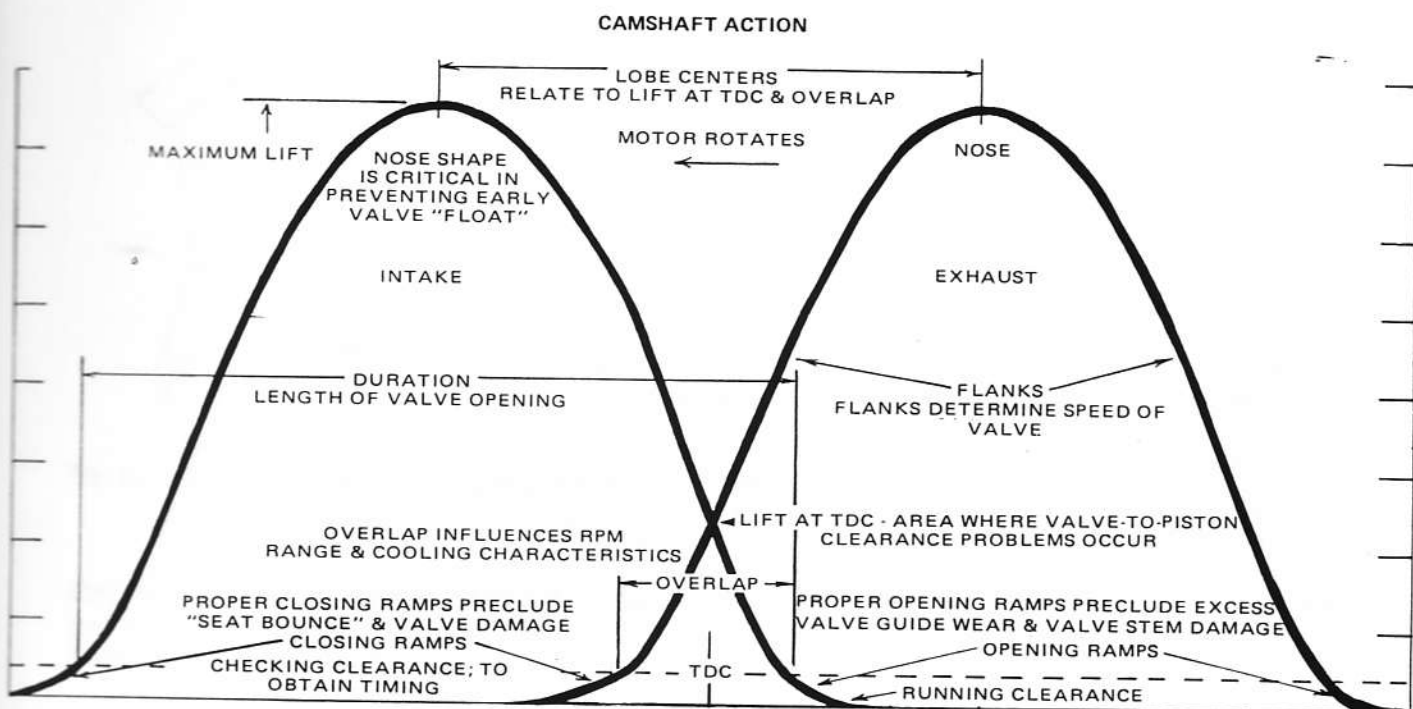
For all 903-1015 models. May be used with any cam to prevent the possibility of shim loss and consequent head damage. Sold on an exchange basis. (A core charge will be added if 8 acceptable, stock followers are not received with your order).

Set of 8 — PART #12-101

For best results, buy Cam and Springs together as a kit or as part of a complete Engine Package.

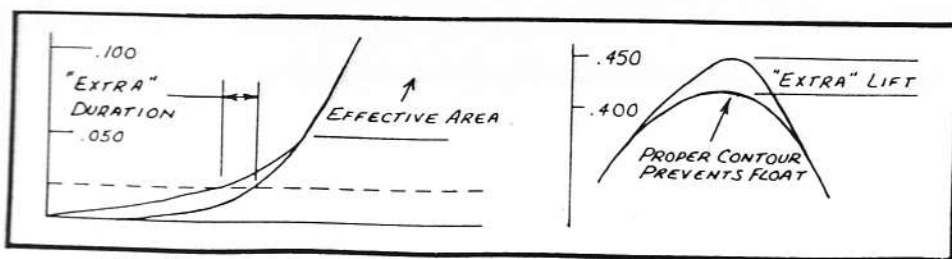
CAMSHAFTS

We use new, cast billets exclusively. Regrinds are cheaper, but there is not enough material to obtain an efficient profile and adequate base circle dimensions.



Stock pistons cannot be used with any cams we sell. You would not get your money's worth. A proper profile that would give safe valve-to-piston clearance would not increase performance significantly. A cam that would give clearance and increased performance could not have a safe profile. Notching stock pistons is not of much value either, since a hot cammed, low compression motor is a very poor performer.

Lift and duration figures are real. The drawing below shows how "extra" lift and duration may be added to no advantage. Buying the "biggest number" without regard to proven results is a fool's game.



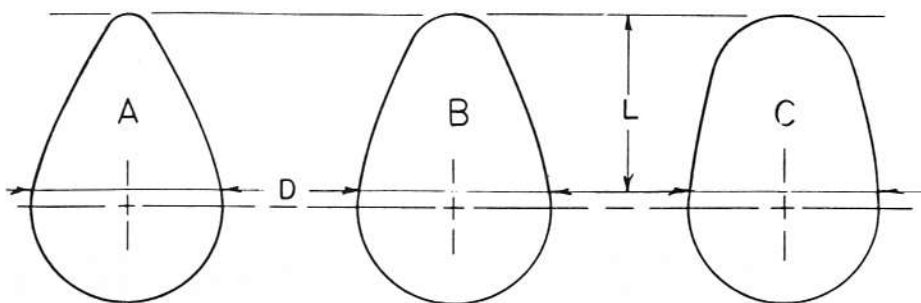
**THE
"NUMBERS
GAME"**

CAMSHAFTS

CON'T.

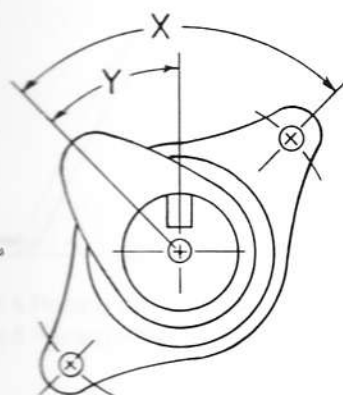
Are the cams at the right the same?

They are by the "Numbers"!



Cams A, B and C above all have the same lift (shown at "L") and duration (shown at "D"). Yet they are obviously very different. If cam B is correct in design, then cam A would give good "low end" but less H.P. and float the valves more easily. Cam C would have plenty of "top end", but would exhibit a narrow power band and open the valves too rapidly for good reliability.

No degreasing-in is required if stock components (tensioner, cam chain, etc.) in good condition are used. All our cams are indexed from the sprocket mounting rather than the drive slot. This insures far greater accuracy for "drop-in" installation.



Most cams are located for grinding from the keyway as shown at "Y". The same arrangement is used on Kawasaki cams but is removed after grinding. All our cams are located from the mounting bolt holes, as shown at "X". Since the *bolt holes determine the cam location*, "spot-on" timing results. The keyway becomes your "which tooth" indicator only. Of course, this applies to standard components in good condition only. Milling the head or cylinder, or using non-standard or badly worn parts will affect actual timing.

Is $\pm 11^\circ$ ("1/2 Tooth") good enough for you?

Big valves cannot be used in most cases. As overlap increases, valves come closer together. In our experience, an unrestricted profile will do more for performance than oversize valves. More latitude for cam timing variations are possible with stock valve sizes, too.

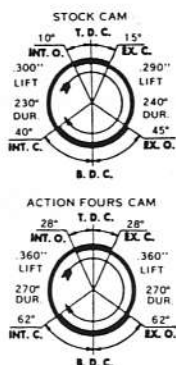
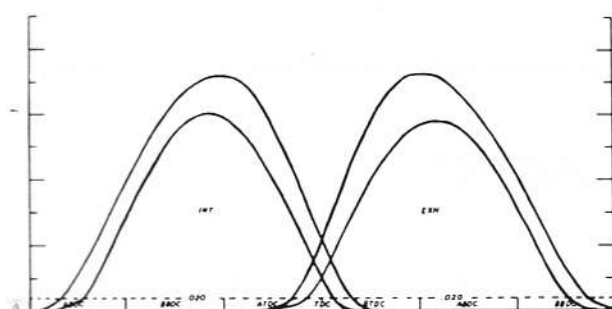
Carefully designed and tested profiles prevent excess stress and premature float. Extreme, power-robbing valve spring pressure is not required.

To test for adequate valve to piston clearance with any cam, rotate the nearest cylinder slowly to the overlap (exhaust closing, intake opening) position. Rotate the motor slowly, stopping every few degrees, from 35° BTDC to TDC (top dead center). Each time you stop, depress the exhaust valve follower (a padded screwdriver works well) until the valve contacts the piston. The point at which the valve moves the least is your minimum clearance and it may now be measured. In no case should it be less than 1mm (.040"). Reverse the procedure (TDC to 35° ATDC) to check intake valve clearance. Advancing the cam (forward in relation to motor rotation) will increase exhaust and reduce intake clearance. Retarding the cam has the opposite effect.

CB750 'SS' SERIES CAMSHAFTS

Our own profile designs, produced for us by K-H Cams. These exclusive designs and high sales volume allow us to furnish precisely ground, new billet cams attractively priced. Complete instructions and break-in lube included with all cams.

'SS-1' GRIND



Cam & Racing Valve Spring Set Models Thru '77 except F-2
 Cam & Racing Valve Spring Set F-2, 78 K & A Models

Our biggest seller.

High 11, low 12 second ¼ mile times (used with our 811cc Bore Kits), yet as smooth and tractable as a stock machine! This is definitely the cam for those riders who are worried about "hot" cams.

May be used with stock valve springs for economical applications. Of course, we recommend a complete Racing Valve Spring Set for an even wider margin of over-rev protection.

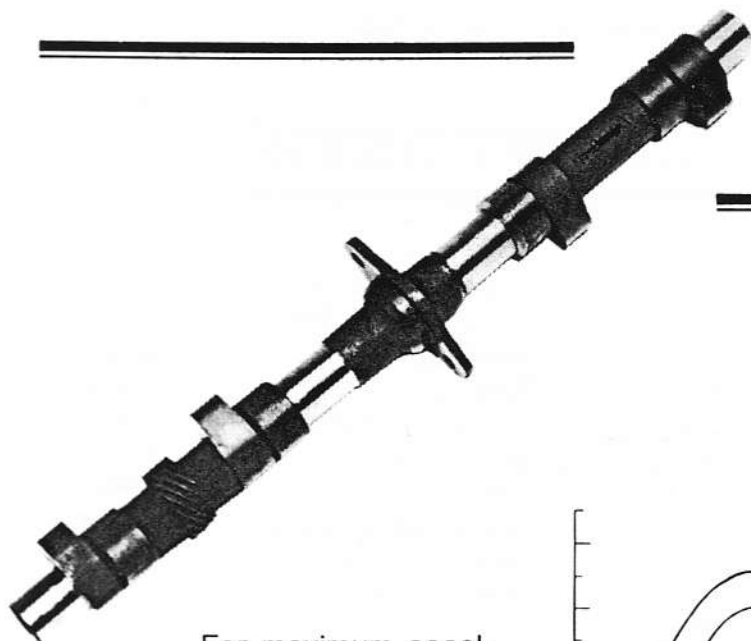
Camshaft Only

PART #19-101

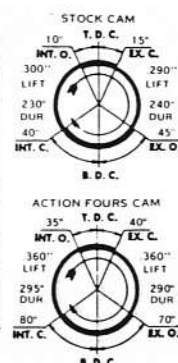
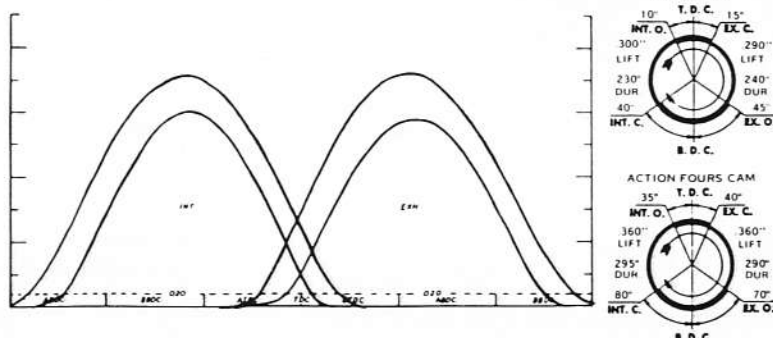
PART #20-101

PART #20-201

Note: The SS-1 may be safely used in F-2 (large valve head) models, without valve modification. All other grinds may also be used, but valve-to-valve clearance should be checked.



'SS-2A' GRIND



For maximum acceleration. Preferred by those who are serious about Drag Racing, yet need a certain degree of tractability. Best power from 6,500 up. Racing Valve Spring Set is recommended.

Camshaft Only

Cam & Racing Valve Spring Set Models thru '77 except F-2

Cam & Racing Valve Spring Set F-2, 78 K & A Models

PART #19-102

PART #20-102

PART #20-202

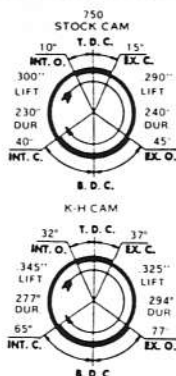
For the best performance and reliability use these cams with Action Fours high compression Big Bore Kits.

CB750 K-H CAMSHAFTS

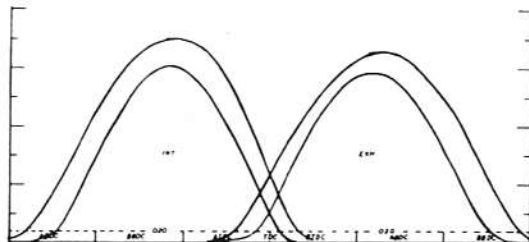
Kenny Harmon's 35 years of cam design and grinding experience are manifest in these excellent profiles. 750 Honda cams from K-H have become an industry standard for quality and performance. All cams are precisely indexed for "spot-on" timing.

A famous grind. Excellent for riders who desire a major H.P. increase, but insist on a wide range of use. Well balanced with reasonable idle and "low-end" and a major increase in acceleration. Long exhaust duration allows for sustained high speed cruising without excess combustion chamber temperature.

May be used with stock springs if desired. For greatest reliability our Racing Valve Spring Set is recommended.



'D' GRIND



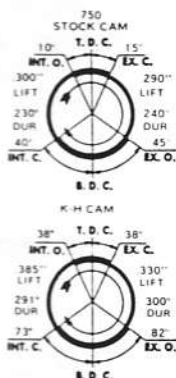
Camshaft Only

Cam & Racing Valve Spring Set Models thru '77 except F-2
Cam & Racing Valve Spring Set F-2, 78 K & A Models

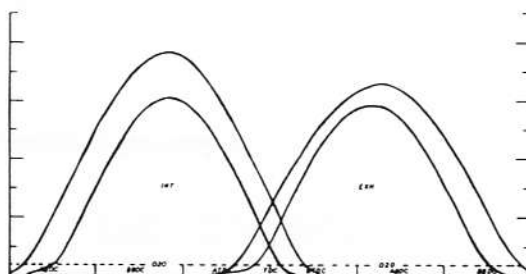
PART #19-103

PART #20-103

PART #20-203



'F' GRIND



Camshaft Only

Cam & Racing Valve Spring Set Models thru '77 except F-2
Cam & Racing Valve Spring Set F-2, 78 K & A models

For the greatest H.P. possible, consistent with sustained use. Extra long exhaust duration and substantial intake area provide record setting H.P. as well as efficient temperature control.

The best choice for Road Racing and other "top end" applications. Best power 7-11,000 RPM.

May be used on the street or for drag racing with very low gearing.

Should be used *only* with Racing Valve Spring Set.

PART #19-104

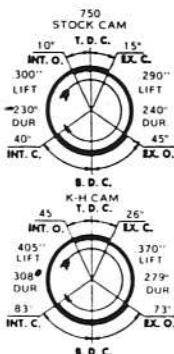
PART #20-104

PART #20-204

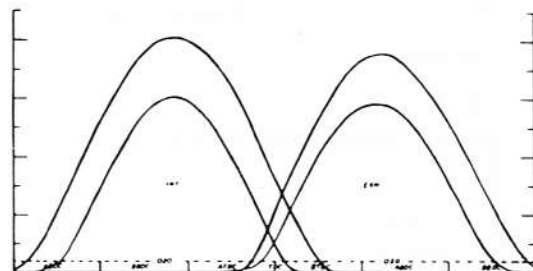
The ultimate **DRAG RACING ONLY** Cam. **ABSOLUTELY NOT FOR STREET USE.**

Extreme valve lift is combined with over 300° intake and "short" exhaust timing to get off the line hard and accelerate to high RPM.

No compromises in profile design whatever. This cam is not suitable for any sustained use. Should only be used with complete Racing Valve Spring Set.



'SUPER F' GRIND



Camshaft Only

Cam & Racing Valve Spring Set models thru '77 except F-2
Cam & Racing Valve Spring Set F-2, 78 K & A Models

PART #19-105

PART #20-105

PART #20-205

For the best performance and reliability use these cams with Action Fours high compression Big Bore Kits.

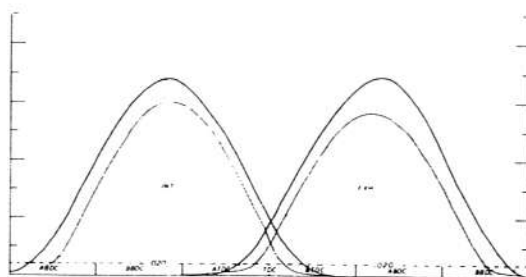
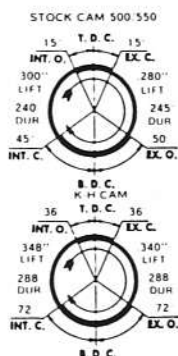
CB500/550 K-H CAMSHAFTS

Long experience and a high level of skill are brought to bear on the limitations imposed by CB500/550 valve train design. The results are little short of amazing. Superbike performance levels are readily obtained from these excellent machines. Knowledge is the key, with K-H cams and Action Fours cooperating closely to obtain the most from Honda's "Light-Heavyweight" champ.

For regular street use. The DS grind (use with 570 or 590 kit) provides a substantial and wide range H.P. increase. Power band is still quite wide with a smooth idle. This cam powers many 12 second, street driven 500's — and takes the rider to work daily!

May be used with stock springs for economy. For widest possible safety margin, Action Fours Racing Valve Spring Set is recommended, however.

'DS' GRIND



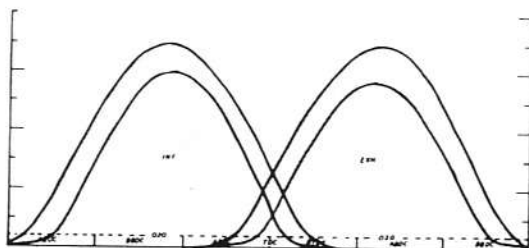
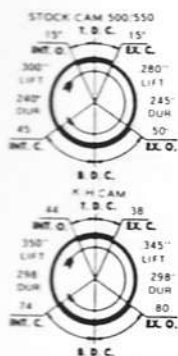
Camshaft Only

PART #19-106

Cam & Racing Valve Spring Set

PART #20-106

'DE' GRIND



The record setter. Used to obtain the maximum possible H.P. output for Drag Racing or any other "all out" application. Carefully designed profile allows sustained use such as Road Racing or even street riding. Best power is 7,500 to 11,000+ however. Poor idle and low speed tractability are evident. Machines using this cam should have very low gearing. Action Fours Racing Valve Spring Set is required for proper operation.

Camshaft Only

PART #19-107

Cam & Racing Valve Spring Set

PART #20-107

NOTE:

To prevent possible cam failure in CB500 & 550 models, the latest cylinder head cover should be employed. Only 550K models, engine #1083641 and subsequent and 550F models, engine #1133172 and subsequent have this cover.

To be sure, look under the breather cover at your head cover. The latest cover has devices for locking the rocker shafts in position. These appear as four studs projecting upward, locked by hex nuts.

A fix kit, consisting of the new cover, new shafts and the locking devices is available as Honda #12300-390-305. Rocker arms, #14431-324-000 should be separately obtained and replaced as required if any doubt as to their condition exists.

Do not try to "second guess" this modification; if you do not have it, you need it. We strongly recommend against any attempt to modify or fix earlier covers.

Dealers may obtain further information by referring to SL 500/550 #8, dated 8/11/76.

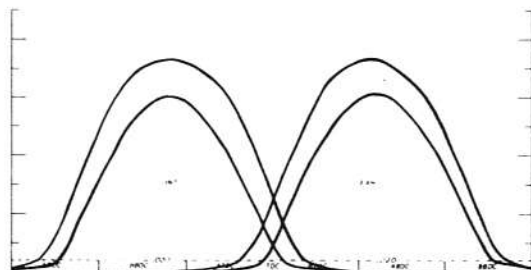
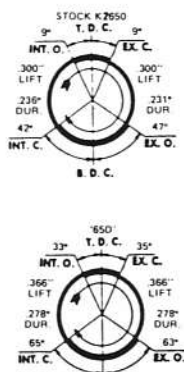
For the best performance and reliability use these cams with Action Fours high compression Big Bore Kits.

KZ650 K-H CAMSHAFTS

The same care and design excellence exhibited in the larger Kawasaki DOHC motor will be found in these excellent profiles.

'65D' GRIND

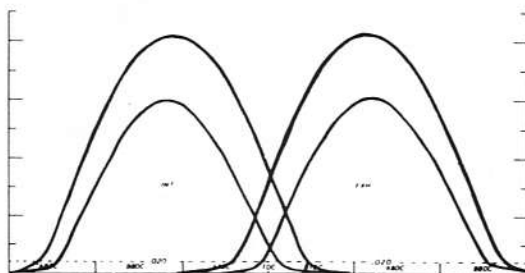
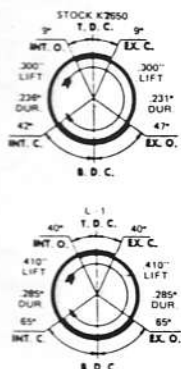
For high performance street, street/touring and street/strip use. A substantial but broad range power increase with good idle and low speed tractability. May be used with stock valve springs for greatest economy. However Action Fours Racing Valve Spring Set is recommended to provide greatest over-rev protection.



Camshafts Only
Cams & Racing Valve Spring Set

PART #19-108
PART #20-108

'L-1' GRIND



For the greatest possible H.P. increase. The same profile made famous in the 903 is employed and results in an even "hotter" cam in this smaller displacement machine. Best employed for serious racing applications. Profile allows sustained use such as Road Racing or "extra hot" street use. Should be used only with Action Fours Racing Valve Spring Set.

Camshafts Only
Cams & Racing Valve Spring Set

PART #19-109
PART #20-109

For the best performance and reliability use these cams with Action Fours high compression Big Bore Kits.

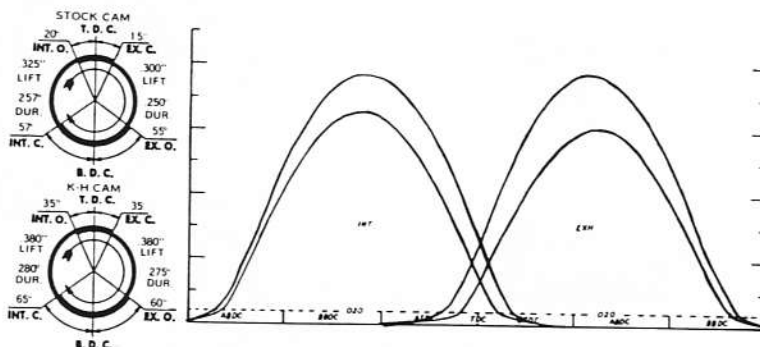
KAWASAKI 900/1000 K-H CAMSHAFTS

Thousands of fast, reliable "Z's" are the best possible advertisement for these fine camshafts. Special attention is paid to profile design to minimize the possibility of shim problems. Base circle dimensions are accurately controlled to prevent serviceability problems.

NOTE: Some Kawasaki publications (and magazine coverage) show stock cam duration of 280°. This is true only in that the checking clearance is much smaller than normal. Thus at the same checking clearance specified for "hot" cams, stock Kawasaki cams will show about 30° less (250°) duration.

'K-D' GRIND

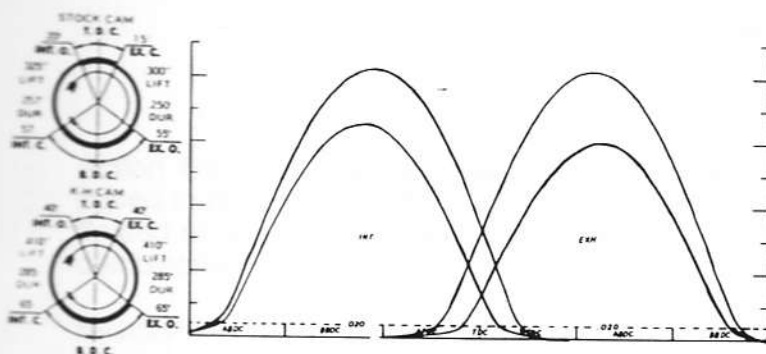
Fast and smooth. The best possible choice for most "everyday" machines. No "cammyness". No need to use special followers. 650 type retainer spring set, though not required, is listed so that subsequent cam change can quickly be made.



Camshafts
Cams & Racing Valve Spring Set
Cams & Racing Valve Spring Set
(to use 650 type followers & shims)

PART #19-110
PART #20-110
PART #20-210

'L-1' GRIND



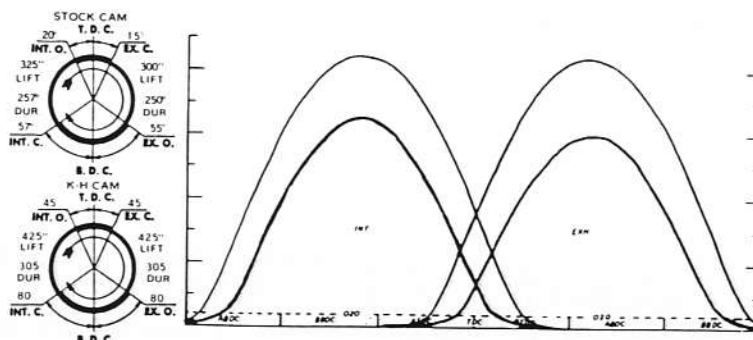
Camshafts
Cams & Racing Valve Spring Set
Cams & Racing Valve Spring Set
(to use 650 type followers & shims)

Famous for exceptional performance. Carefully designed profile gives excellent power output and is suitable for sustained operation. Streetable, but best power range is from 6,500 up. Little possibility of follower problem. However, for extreme use or with ported (expensive) head assemblies, modified or 650 type followers should be considered.

PART #19-111
PART #20-111
PART #20-211

'B-3A' GRIND

For pure competition use only. Profile is OK for Road Racing or other sustained use as well as serious drag machines. Long duration/overlap may (depending on installed timing and valve seated depth) require trimming of valve head diameters. Extra care in installation and subsequent maintenance is required to prevent valve to valve contact. Not for use with oversize valves. Modified or 650 type followers are advised.

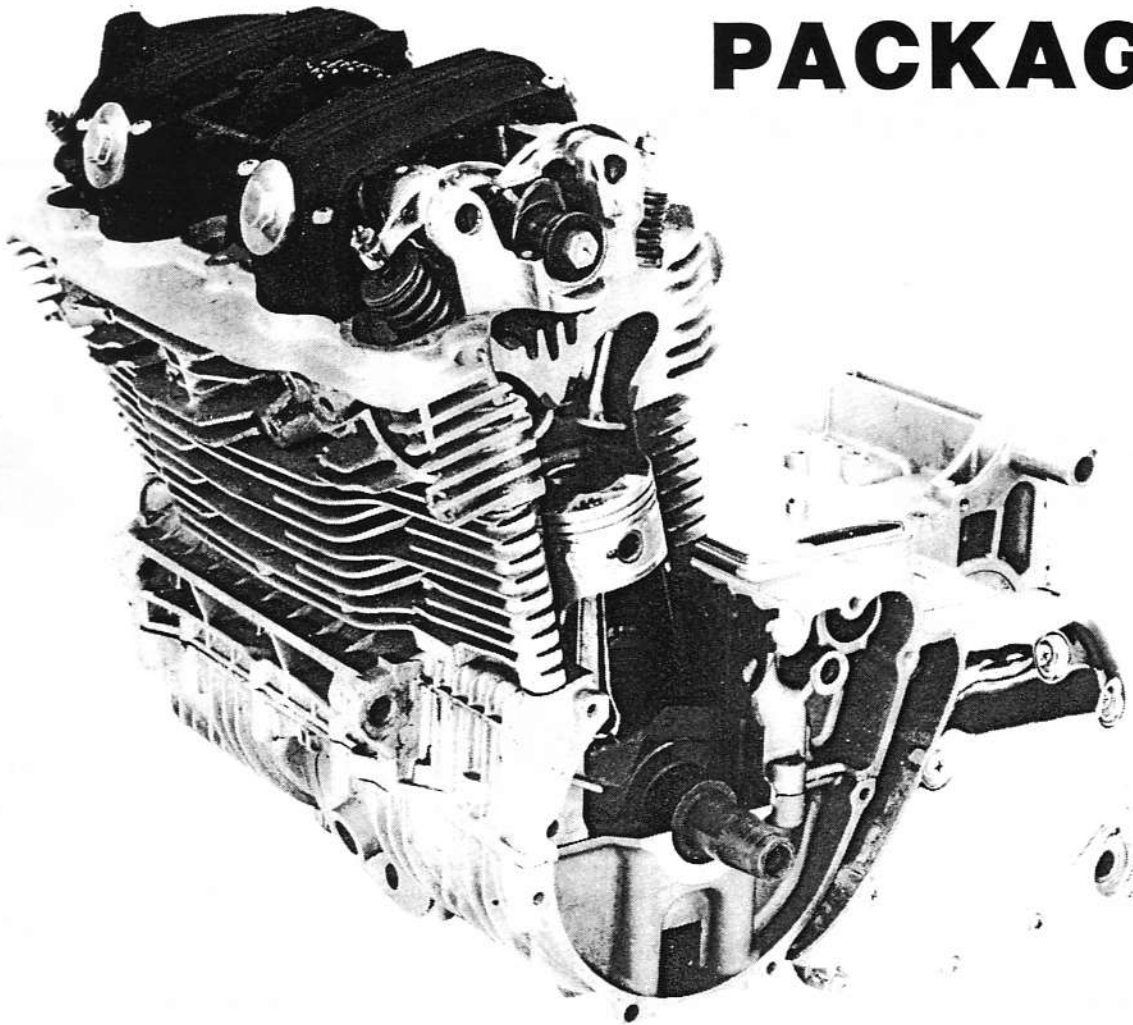


Camshafts
Cams & Racing Valve Spring Set
Cams & Racing Valve Spring Set
(to use 650 type followers & shims)

PART #19-112
PART #20-112
PART #20-212

For the best performance and reliability use these cams with Action Fours high compression Big Bore Kits.

ENGINE PACKAGES



Action Fours engine packages are proven and recommended combinations of our products, priced to promote the "do-it-right" approach. Since the best of products can fail or perform poorly if used or applied indiscriminately, we make every effort to describe and promote these proven combinations.

Stage I: Our most economical combination. Designed for the large number of riders who want more, but are not constantly "on it." Maintenance of smooth and tractable performance is a prime consideration, in addition to the obvious desire for substantial power increase.

Stage II: The same and/or "hotter" combinations designed for those who want the most from their "streetable" machines — and plan to make use of it! Our racing valve spring set is included for maximum reliability. Forged rods also on CB750 packages.

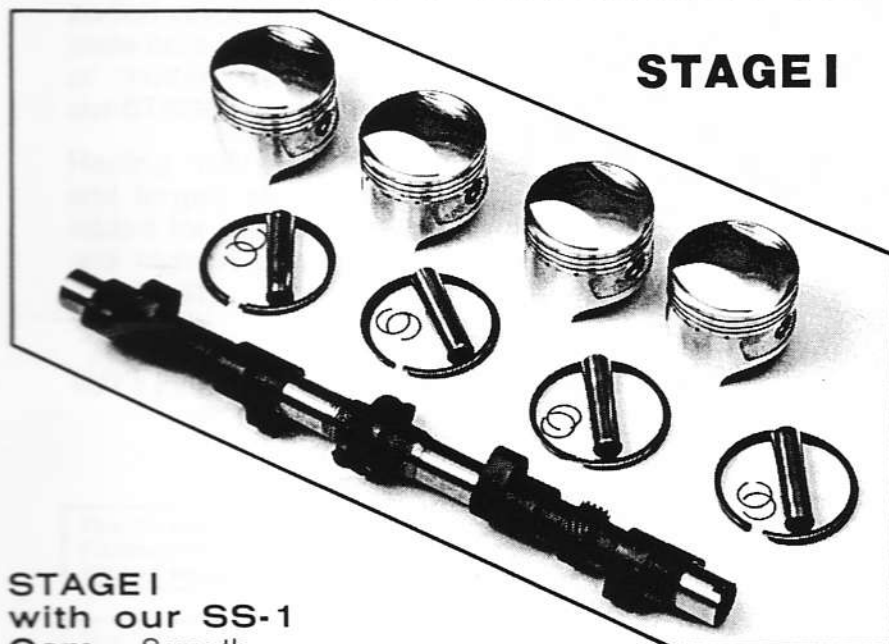
Stage III: For racing use. Greatest possible output consistent with applications described.

Octane Ratings can be very confusing. While it is true that the 103+ octane "super-premium" blends have disappeared, 100 octane is still with us. The EPA gas pump octane number is Research Octane # (higher) plus Motor Octane # (lower) divided by 2. So this "EPA" 93, 94 or 95 octane premium is fine for use with any of our recommended engine packages. And this premium gas will remain available for the foreseeable future.

All packages may be easily installed. Procedures are the same as stock engine overhaul.

CB750 ENGINE PACKAGES

STAGE I



Give your 750 the performance of the 1000cc+ Superbikes at a reasonable cost. Smooth, tractible combinations that exhibit very good reliability for those who are not constantly "on it."

STAGE I
with our **SS-1**
Cam — Smooth
and Fast:

COMPONENTS

ORDER

	811 Big Bore Kit	SS-1 Camshaft	Engine Package Part #
All except F-2 F-2 Models*	01-101 01-103	19-101 19-101	21-301 21-401
	836 Big Bore Kit	SS-1 Camshaft	Engine Package Part #
All except F-2 F-2 Models*	01-102 01-104	19-101 19-101	21-302 21-402

STAGE I with K-H 'D' Cam — High H.P. Open Road Performance:

COMPONENTS

ORDER

	811 Big Bore Kit	K-H 'D' Camshaft	Engine Package Part #
All except F-2 F-2 Models*	01-101 01-103	19-103 19-103	21-303 21-403
	836 Big Bore Kit	K-H 'D' Camshaft	Engine Package Part #
All except F-2 F-2 Models*	01-102 01-104	19-103 19-103	21-304 21-404

F-2 (Factory Large Valve Head) MODELS: The addition of Titanium Retainers (#11-103) or Complete Racing Valve Spring Set (#10-103) is recommended, if not already installed. Also, any valves exhibiting signs of wear (shiny area) near the keeper groove should be replaced.

DRAG PACKAGE

Our special, ultra-high compression (12-1) Big Bore Kit and the fabulous K-H "Super F" are teamed up to provide record setting 1/4 mile performance. Not for street use — not even a "little bit". Cylinder head porting is recommended to get the most out of this package. Not available for F-2 motors (factory large valve head).

COMPONENTS

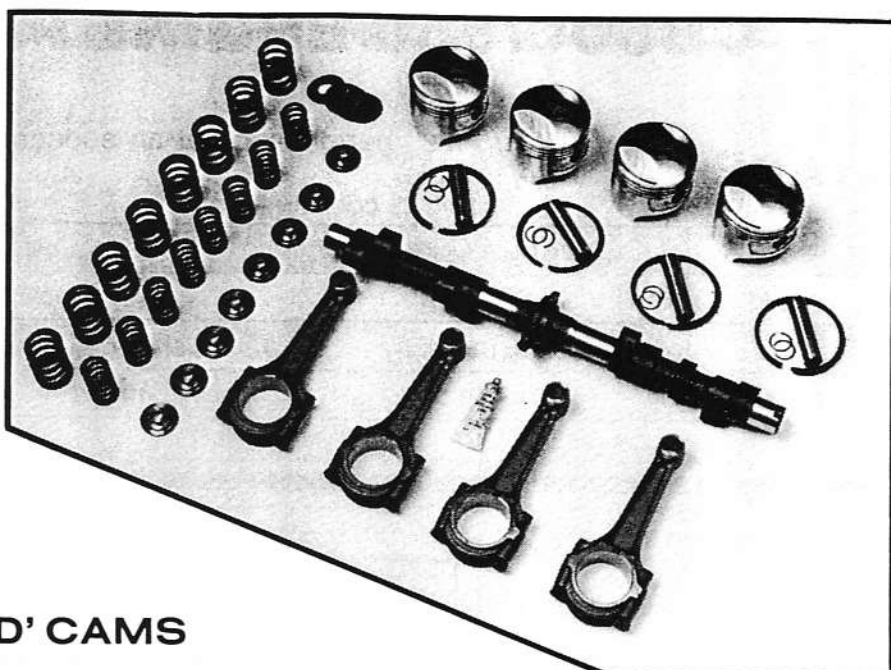
ORDER

	836 Bore Kit (12-1)	K-H "Super F" Camshaft	Racing Valve Spring Set	Forged Steel H-T Rods	Drag Package Part #
Thru '77 except F-2	01-105	19-105	10-102	16-101	21-331
'78 K&A Models	01-105	19-105	10-103	16-101	21-831

STAGE II

For smooth, tractable high performance engines. The same bore kits and the same or "hotter" cam grinds as our STAGE I packages.

Racing valve spring set and forged steel rods are added for the hardest use and highest possible level of reliability.



WITH SS-1 AND K-H'D CAMS

COMPONENTS					ORDER
	811 Bore Kit	SS- 1 Cam	Racing V.S. Set	Forged Steel Rods	Pkg. Part #
Thru '77 except F-2 F-2 Models Only '78 K&A Models	01-101	19-101	10-102	16-101	21-311
	01-103	19-101	10-103	16-101	21-411
	01-101	19-101	10-103	16-101	21-811
	836 Bore Kit	SS- 1 Cam	Racing V.S. Set	Forged Steel Rods	Pkg. Part #
Thru '77 except F-2 F-2 Models Only '78 K&A Models	01-102	19-101	10-102	16-101	21-312
	01-104	19-101	10-103	16-101	21-412
	01-102	19-101	10-103	16-101	21-812
	811 Bore Kit	K-H D Cam	Racing V.S. Set	Forged Steel Rods	Pkg. Part #
Thru '77 except F-2 F-2 Models Only '78 K&A Models	01-101	19-103	10-102	16-101	21-313
	01-103	19-103	10-103	16-101	21-413
	01-101	19-103	10-103	16-101	21-813
	836 Bore Kit	K-H D Cam	Racing V.S. Set	Forged Steel Rods	Pkg. Part #
Thru '77 except F-2 F-2 Models Only '78 K&A Models	01-102	19-103	10-102	16-101	21-314
	01-104	19-103	10-103	16-101	21-414
	01-102	19-103	10-103	16-101	21-814

With SS-2A Cam For those who want the maximum "Streetable" acceleration possible.

COMPONENTS					ORDER
	811 Bore Kit	SS-2A Cam	Racing V.S. Set	Forged Steel Rods	Pkg. Part #
Thru '77 except F-2 F-2 Models Only '78 K&A Models	01-101	19-102	10-102	16-101	21-315
	01-103	19-102	10-103	16-101	21-415
	01-101	19-102	10-103	16-101	21-815
	836 Bore Kit	SS-2A Cam	Racing V.S. Set	Forged Steel Rods	Pkg. Part #
Thru '77 except F-2 F-2 Models Only '78 K&A Models	01-102	19-102	10-102	16-101	21-316
	01-104	19-102	10-103	16-101	21-416
	01-102	19-102	10-103	16-101	21-816

STAGE III

For Road Racing and other sustained high H.P. output applications. Especially good in lightweight machines. "Hot" K-H 'F' Cam

COMPONENTS					ORDER
	811 Bore Kit	K-H F Cam	Racing V.S. Set	Forged Steel Rods	Pkg. Part #
Thru '77 except F-2 F-2 Models Only '78 K&A Models	01-101	19-104	10-102	16-101	21-321
	01-103	19-104	10-103	16-101	21-421
	01-101	19-104	10-103	16-101	21-821
	836 Bore Kit	K-H F Cam	Racing V.S. Set	Forged Steel Rods	Pkg. Part #
Thru '77 except F-2 F-2 Models Only '78 K&A Models	01-102	19-104	10-102	16-101	21-322
	01-104	19-104	10-103	16-101	21-422
	01-102	19-104	10-103	16-101	21-822

CB500/550 ENGINE PACKAGES

STAGE I

"750 Plus" performance at an economical price. Smooth, tractible and very reliable.

COMPONENTS			ORDER
	570 Big Bore Kit	K-H DS Camshaft	Engine Package Part #
CB500	01-107	19-106	21-101
	590 Big Bore Kit	K-H DS Camshaft	Engine Package Part #
CB550	01-108	19-106	21-201

STAGE II

The over-rev protection of our Racing Valve Spring Set for week-end drag or road Racers.



COMPONENTS				ORDER
	570 Big Bore Kit	K-H DS Camshaft	Racing Valve Spring Set	Engine Package Part #
CB500	01-107	19-106	10-101	21-111
	590 Big Bore Kit	K-H DS Camshaft	Racing Valve Spring Set	Engine Package Part #
CB550	01-108	19-106	10-101	21-211

STAGE III

With the maximum output DE Camshaft. For serious racing use.

COMPONENTS				ORDER
	570 Big Bore Kit	K-H DE Camshaft	Racing Valve Spring Set	Engine Package Part #
CB500	01-107	19-107	10-101	21-121
	590 Big Bore Kit	K-H DE Camshaft	Racing Valve Spring Set	Engine Package Part #
CB550	01-108	19-107	10-101	21-221

KAWASAKI 650 ENGINE PACKAGES

STAGE I

KZ1000 performance from this trim machine. Good idle and a wide power band.

COMPONENTS		ORDER
717 Big Bore Kit	K-H 65D Camshaft	Engine Package Part #
01-109	19-108	21-501

STAGE II

Adding the extra protection of a racing valve spring set. A good choice for combined street and racing use.

COMPONENTS			ORDER
717 Big Bore Kit	K-H 65D Camshaft	Racing Valve Spring Set	Engine Package Part #
01-109	19-108	10-105	21-511



STAGE III

For the greatest output. Suitable for road- or drag-racing.

COMPONENTS			ORDER
717 Big Bore Kit	K-H L-1 Camshaft	Racing Valve Spring Set	Engine Package Part #
01-109	19-109	10-105	21-521

KAWASAKI 900 & 1000 ENGINE PACKAGES

All 903cc (66mm bore) and 1015cc (70mm bore) Models To Date

1015cc Kits: Our popular "bore-in" piston set intended for 903cc models may also be used in factory 1015cc (70mm bore) models. No boring is required; selective fitting and/or light honing only required.

1075cc Kits: Includes our 1075cc "bore-in" piston set for factory 1015cc (70mm bore) models. These packages may also be installed in 903cc models, without crankcase modification, by installing our Special Sleeve Set.

Set of Four Sleeves — **PART #64-207**

STAGE I

Keep up with the new Honda Six without sacrificing smooth, wide range power — or your budget! Totally reliable.

COMPONENTS		ORDER
1015 Big Bore Kit	K-H KD Camshafts	Engine Package Part #
01-110	19-110	21-601
1075 Big Bore Kit	K-H KD Camshafts	Engine Package Part #
01-111	19-110	21-701

STAGE II

For serious, hard use. The street driven race bike or the "raced regularly" street machine will want the performance/reliability level of our STAGE II Packages.

With KD grind camshafts — for smooth performance but capable of the hardest possible operation:

COMPONENTS			ORDER
1015 Big Bore Kit	K-H KD Camshafts	Racing Valve Spring Set	Engine Package Part #
01-110	19-110	10-103	21-611
1075 Big Bore Kit	K-H KD Camshafts	Racing Valve Spring Set	Engine Package Part #
01-111	19-110	10-103	21-711

With L-1 grind camshafts — for victory circle performance from a "streetable" package:

COMPONENTS			ORDER
1015 Big Bore Kit	K-H L-1 Camshafts	Racing Valve Spring Set	Engine Package Part #
01-110	19-111	10-103	21-612
1075 Big Bore Kit	K-H L-1 Camshafts	Racing Valve Spring Set	Engine Package Part #
01-111	19-111	10-103	21-712



STAGE III

The power output for winning performance with unmatched reliability.

With L-1 Camshafts and special valve train components. For winning performance with an "all season long" engine:

COMPONENTS				ORDER
1015 Big Bore Kit	K-H L-1 Camshafts	Racing Valve Spring Set	Modified Cam Followers*	Engine Pkg. Part #
01-110	19-111	10-103	12-101	21-621
1075 Big Bore Kit	K-H L-1 Camshafts	Racing Valve Spring Set	Modified Cam Followers*	Engine Pkg. Part #
01-111	19-111	10-103	12-101	21-721
1015 Big Bore Kit	K-H L-1 Camshafts	KZ650 Type** Racing Valve Spring Set		Engine Pkg. Part #
01-110	19-111	10 - 105		21-622
1075 Big Bore Kit	K-H L-1 Camshafts	KZ650 Type** Racing Valve Spring Set		Engine Pkg. Part #
01-111	19-111	10 - 105		21-722

With radical B-3A Camshafts and special valve train components. Record level performance for carefully assembled and closely maintained motors:

COMPONENTS				ORDER
1015 Big Bore Kit	K-H B-3A Cams	Racing Valve Spring Set	Modified Cam Followers*	Engine Pkg. Part #
01-110	19-112	10-103	12-101	21-623
1075 Big Bore Kit	K-H B-3A Cams	Racing Valve Spring Set	Modified Cam Followers*	Engine Pkg. Part #
01-111	19-112	10-103	12-101	21-723
1015 Big Bore Kit	K-H B-3A Cams	KZ650 Type** Racing Valve Spring Set		Engine Pkg. Part #
01-110	19-112	10-105		21-624
1075 Big Bore Kit	K-H B-3A Cams	KZ650 Type** Racing Valve Spring Set		Engine Pkg. Part #
01-111	19-112	10-105		21-724

* Modified Cam Followers included; a refundable core deposit charge will be made if stock followers are not received with order.

** Use KZ650 type followers and shims.

SERVICE

We believe that no high performance product is better than the service available for it. For this reason (as well as for testing and development) we maintain a superbly equipped and staffed Service Department.

All listed labor is available to both Dealers and consumers. For those dealers providing any of the work listed, we suggest the use of this section as your "flat-rate" guide.

OPERATION "PART" NUMBERS

The first two numbers describe the type of operation performed:

96 — Outside (Non-Hourly) Labor. Plating, Porting, Etc.	} Last 3 digits indicate flat-rate Examples: {	95-187 = 18.7 Hours
95 — Complete Engine Building		94-026 = 2.6 Hours
94 — Labor Services		93-005 = 0.5 Hour
93 — Tuning, "Bolt-On" Installation		

We reserve the right to make additional charges based on actual (extra) time required due to damaged parts or non-standard arrangements ("blown-up," crashed, "safety bars", no centerstand and etc.).

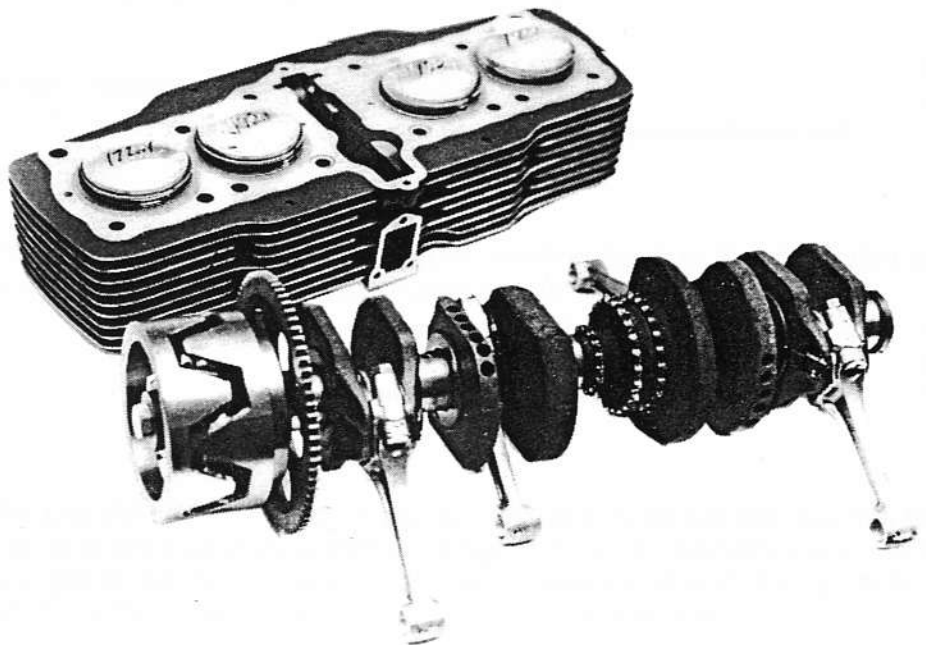
ENGINE BUILDING

Labor only. Disassembled motors not accepted.

TOP END

(Engine Only)

Includes all labor normally associated with a top end overhaul. Disassemble entire top end, inspect/replace all parts as required. Bore and hone cylinder assembly for new pistons, complete valve job including decarbonize combustion chamber and ports, bead blast head gasket surfaces, and install valve springs at correct assembled height. Install new gaskets and O-rings, replace seals as required. Install new billet cam, clearance head/cam holders if required. Reassemble to strict specifications. Top end service is the minimum installation labor for all packages (except CB750 Stage II and III) and general top end overhaul.



IN FRAME: To "drive in-drive out" your motorcycle with top end work. Remove/replace exhaust system, carburetors, etc. Set timing, synch carbs, rejet as required, road test (if safe and legal).

CB500/550	95-107
CB750	95-112*
KZ650	95-120
KZ900/KZ1000	95-116*

All jobs: Deduct if Bore & Hone is not required. . . . 2.0

All Models (except CB750) 95-045

ENGINE BUILDING CON'T.

COMPLETE ENGINE

(Engine Only)

Includes all listed Top End labor *plus* all operations associated with a lower end overhaul. Includes such work as (depending on model): Refit/replace connecting rods and bearings as required. Disassemble, inspect/replace clutch components as required; install new primary drive chain(s) and tensioner; inspect/overhaul or replace primary damper as required. Disassemble/inspect/replace all transmission gears, bearings, bushings, spacers, circlips and shafts as required. Inspect/replace oil pump as required. Check kick and electric starter mechanisms.

Required to install Stage II, III & Drag CB750 Engine Packages. Recommended on all high mileage/hard run/poor or questionably maintained/or racing machines, especially Stage III applications.

REMOVE/REPLACE SERVICE: With complete engine overhaul (and CB750 top end or complete). Remove and replace engine plus all associated labor. Set timing, adjust carbs, jetting, etc. Road test (if safe and legal).

CB500/550	95-182
*CB750	95-187
KZ650	95-195
*KZ900/KZ1000	95-172
All jobs: Deduct if Bore & Hone is not required.	2.0
Top End or Complete Engine	95-060

*Add for Trim Valves (if required) 0.9

ADDED COMPRESSION: Sleeves are removed and bottom of cylinder is milled (rather than top to prevent sleeve flange failure) 1.0mm (.040") to increase compression from 10.5 to approx. 12 - 1 for DRAG RACING ONLY. Sleeves and dowel pins are shortened, cam chain slider slightly modified and cam timing is completely reset to correct specification. All clearances are rechecked. Not performed on Honda models due to clearance problems.

Based on addition to other Engine Building	KZ900 & KZ1000	95-066
	KZ650	95-069
	Perform above on assembled Motor ADD	1.0

BOTTOM END OVERHAUL: As described in Engine Building Section, but customer brings/picks up bottom end assembly only. No disassembled units accepted.

Honda 500/550 & 750	95-075
Kawasaki KZ650	95-075
Kawasaki KZ900 & KZ1000	95-056

BREAK-IN SERVICE: Our Engine Packages really do not need to be babied, but this service is offered for those owners who want all details settled. Engine is run-in, performance and jetting resolved and short service (fresh oil, filter, cam chain, valve clearances and timing rechecked) performed. With complete motorcycle only. Unsafe machines will be refused.

NEMOTO
FYNJEKADE 9
DEN HAAG
070 - 41.35.71

All Models, Street Legal	95-035
Add for guaranteed ¼ times (arrange in advance)	4.0
All Models, Competition (or not street legal)	95-050
Add for guaranteed ¼ times (arrange in advance)	2.5



LABOR SERVICES

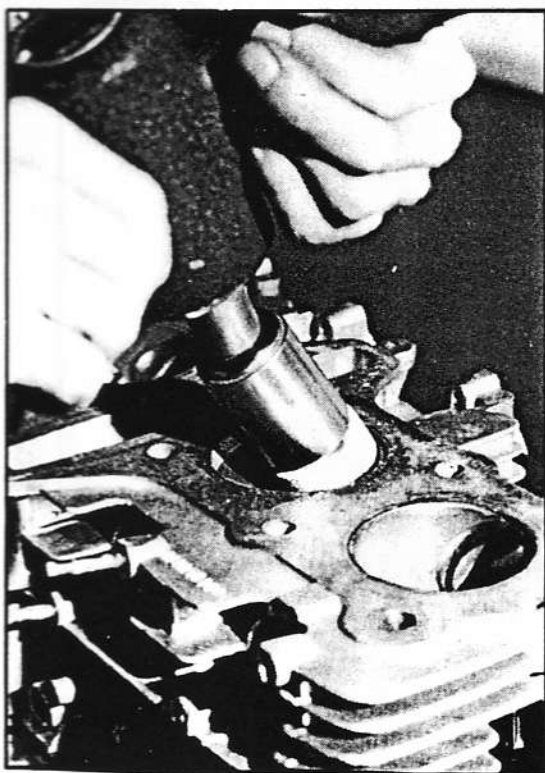
Special labor services, performed on your parts/parts assemblies. For all models unless otherwise noted.

(I) = Included in *appropriate* Engine Building Services

(A) = Add to Engine Building if desired or required

BORING: Your cylinder assembly is cleaned, gasket surfaces are glass bead blasted. Cylinder is bored, honed to size and finished for best ring seating and life. Ring end gap is checked, rings are installed and piston/cylinder bore combinations are clearly numbered.

Complete Assembly	94-026(I)
Set-up & 1 Hole	94-010(A)
2nd & 3rd Hole, Each, Add	0.6(A)



VALVE JOB: Cylinder head assembly is disassembled and cleaned. Ports and combustion chambers are glass bead blasted to remove all carbon. Head gasket surface is glass bead blasted for best sealing. Valves and valve seats are re-ground. Guide condition is checked (replacement labor extra cost is required); new seals are installed. Spring/retainer condition is checked and springs are installed at correct assembled height.

All Models	94-039(I)
All Models/Replace Valve Guide, Add for Each	0.2(A)
DOHC Kawasakis/Fit Shims/Grind Stems for Correct Clearance (followers & cams must be furnished). Add	0.7(I)

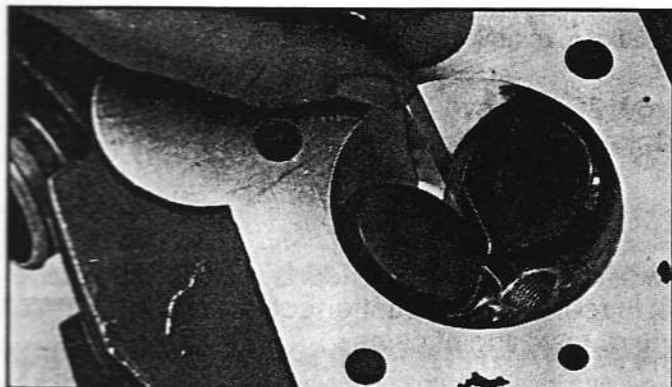
PISTON / CYLINDER RECONDITIONING: Pistons are masked and domes are glass bead blasted. Varnish and residue is cleaned out of ring lands. Pistons are measured and checked against bore sizes. Cylinders are refinished/re-sized and bore sizes checked and noted. New rings are end gapped and installed on pistons. Gasket surfaces are glass bead blasted.

Stock or Action Fours Pistons only,
All Models

94-015(I)

LABOR SERVICES CON'T.

CLEARANCE HEAD/CAM HOLDERS: Head or cam holders are carefully trimmed for cam lobe clearance if required. Heads are best done with valve job.



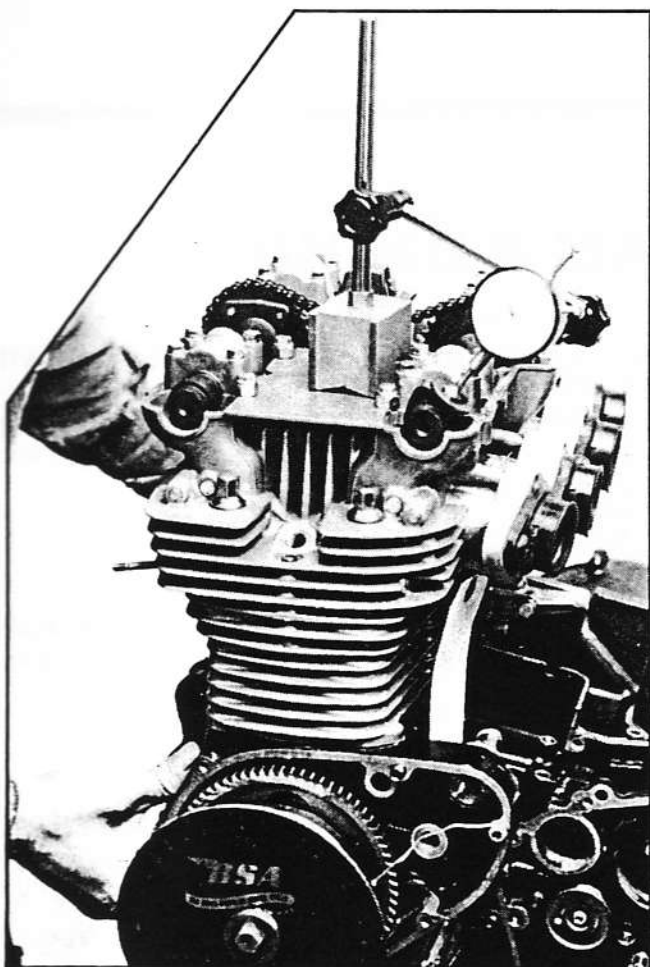
CB500/550	94-004(I)
CB750 (Holders, Pair)	94-006(I)
DOHC Kawasaki Models	94-009(I)

TRIM VALVES: To increase overlap clearance. Diameter is reduced by .5mm (.020") and interface angle is added to edge of valve face. Increases overlap clearance by approximately 1.2mm (.047"). Recommended on all CB750 F-2 installations (except SS-1 cam) and Kawasaki 903/1015 with B-3A cam. Best to perform this modification in conjunction with a valve job.

All Models: Set of 8 Valves	94-009(A)
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REFIT RODS: Bearing journal size and condition is checked and new bearings (if required) are installed in rods. Rods are carefully fitted and pre-lubed.

Honda Models & Kawasaki KZ650	94-012(I)
Polish bearing journals to remove minor scoring. With rod refit only (so size relationship can be maintained). ADD	1.0(A)



UNDERCUT GEARS: Mating gear dogs are undercut to prevent popping out of gear under high load. Required only where a history of this problem exists.

All Models, per gear set	94-015(A)
All Models, entire trans. assy.	94-065(A)

CHECK CAM TIMING: Check and record opening and closing figures at specified checking clearances from an accurate TDC. Performed on complete engine only.

SOHC Models	94-012(A)
DOHC Models	94-020(A)

CHANGE CAM TIMING: Check figures as above and change timing as desired. Includes checking for adequate valve to piston and valve to valve (DOHC Models) clearance. Performed on complete engine only.

SOHC Models	94-030(A)
DOHC Models*	94-040(A)

*Included with "added compression" engine building option.

LABOR SERVICES CON'T.

SLEEVE REPLACEMENT: Damaged or worn out cylinder sleeve is removed, sleeve bore is cleaned and measured, new sleeve is shrink fitted. Resurfacing (if required) and boring is not included.

All Models, Set-up & 1 Sleeve	94-006(A)
Each Additional Sleeve, Add	0.3(A)

NOTE: We reserve the right to add up to .5 hours for special labor to remove badly damaged sleeves.

1075 SLEEVE FITTING: For installation of #64-207 Sleeve Set in 903 cylinder assemblies. Old sleeves are removed, cylinder block is bored, new sleeves are shrink fitted. Resurfacing (if required) and boring for pistons is not included.

Kawasaki 903 Only	94-021(A)
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RESURFACE HEAD OR CYLINDER: Gasket surface is remachined to restore flat surface. Often required after resleeving. Minimum material is removed for least effect on cam timing. We will advise you if enough material is removed to require re-timing of cams.

All Models: Head or Cylinder	94-009(A)
Disassemble (only) Cyl. Head if required, Add	0.2(1)
Dis/Reassemble Cyl. Head if required, Add	0.5(1)

TUNING & MAINTENANCE

MINOR TUNE-UP: Check compression, set valve clearances, cam chain tension, ignition dwell and timing, replace point plate assembly if required. Check ignition advance unit, replace if required. Check carb synch (adjustment on Major Tune-Up only), set idle mixture. Service air filter; install fresh spark plugs.

Honda 500, 550 & 750	93-016
KZ650	93-021
KZ900, KZ1000	93-018

MAJOR TUNE-UP: As above plus check/set float levels, resynch carbs, clean fuel strainer, retorque head (Kawasaki only), thorough road test (if safe and legal).

Honda 500, 550 & 750	93-029
KZ650	93-034
KZ900, KZ1000	93-031

REMETER CARBS: Change needle position, main jetting, pilot jet and idle mixture adjustment as required for velocity stacks or K & N filters. *With Major Tune-Up only.*

CB500, 550	93-018
CB750	93-017
KZ650, KZ900, KZ1000	93-015

MAINTENANCE SERVICE: Change oil; replace filter; check brakes, spokes, tires. Adjust clutch, lube swing arm and cables; service battery. *With Minor or Major Tune-Up only.*

All Models	93-006
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"BOLT-ON" INSTALLATIONS

INSTALL LOCKHART OIL COOLER

(Either Type)

Honda 500/550/750*

93-006

Kawasaki 900/1000

93-008

Kawasaki 650

93-007

* For Relocate Horn If Required, Add

0.5

INSTALL LOCKHART BP-180

ALL MODELS

Add To Existing Installation

93-005

ALL MODELS

With Cooler and/or Hose Installation

93-003

INSTALL STAINLESS STEEL HOSE & FITTINGS (w/o BP-180)

ALL MODELS

Add To Existing Installation

93-005

With Installation of Cooler, Add

0.3

INSTALL NEW CHAIN (Includes Rivet Link Installation)

ALL MODELS

93-004

INSTALL NEW FRONT OR REAR SPROCKET

ALL MODELS

93-006

INSTALL FINAL DRIVE KIT (Includes install new chain, both sprockets & rivet link)

ALL MODELS

93-008

Any of the operations listed above can be performed at less or no extra time with "Drive-In/Drive-Out" Engine Building. Ask for exact quote when you bring your machine in.

INSTALL CLUTCH (No charge with "Complete Engine" Engine Building)

ALL MODELS

93-007

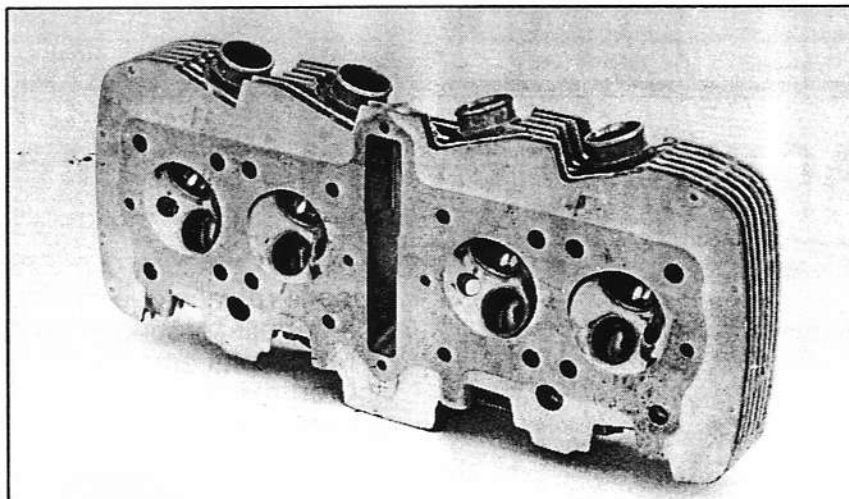
For Install New Cable, Add

0.2

OUTSIDE LABOR

CHROME PLATING: All removable covers. Excellent quality work. With Engine Building only. Outside, non-hourly labor.

PART #96-101



CYLINDER HEAD PORTING: "Outside labor". Performed by Branch Flowmetrics, an acknowledged leader in the field. Ports are completely reshaped for best flow/flow balance. Every head is flow-tested. Your head (no exchange). Allow 3 weeks. Order Valve Job separately if desired, or add to Engine Building if complete motor is furnished.

PART #96-201

'ACCU-CARB' VACUUM GAUGE SETS

NOW AVAILABLE IN 4 AND 6 GAUGE UNITS!

Superb quality instruments for the professional mechanic or serious enthusiast. Not to be confused with the many "cheapo" units available.

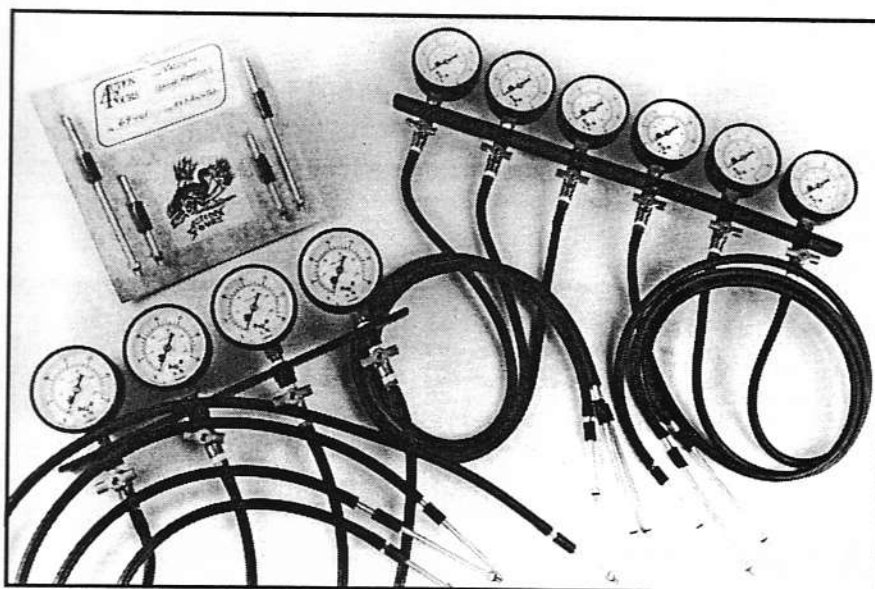
- Glass faced, metal cased gauges now calibrated in Inch and Metric.
- Calibratable — with new twist-off faces for faster adjustment.
- Strong manifold with holes at each end for easy hanging or mounting.
- Precise needle valve dampening and thick, supple neophrene hoses.
- Precise, strong adaptors for fast installation and lifetime reliability.

Four gauge set	68-101
Six gauge set	68-102

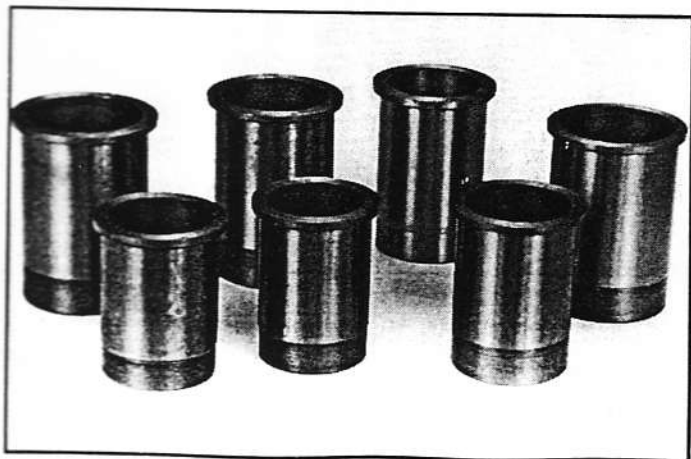
ADAPTORS: As furnished with gauge sets listed above.

	Set of Four (as shown)	69-101
For CBX, 4 "long", 2 "short" (not shown)	Set of Six	69-102

Short Adaptors, each	69-201
Long Adaptors, each	69-202



REPLACEMENT CYLINDER SLEEVES



Use to replace original equipment. Precisely centerless ground to insure concentricity. Free of pits and voids. Finished to correct outer diameter for easy installation. Instructions included. Sold "each."

CB500 Honda	PART #64-101
CB550 Honda	PART #64-102
CB750 Honda	PART #64-103
Z-1, KZ900 Kawasaki	PART #64-104
KZ1000 Kawasaki	PART #64-105
KZ650 Kawasaki	PART #64-106
Action Fours 1075	PART #64-107

SMOOTH BORES!

Bolt on more H.P. Named for their excellent design, these carburetors offer proven, hassle free performance. A 'must' for racing and an excellent addition to most street driven machines.

Best results will be obtained by adding these carbs to already modified machines. However, even stock machines with suitable gearing and exhaust systems will benefit.

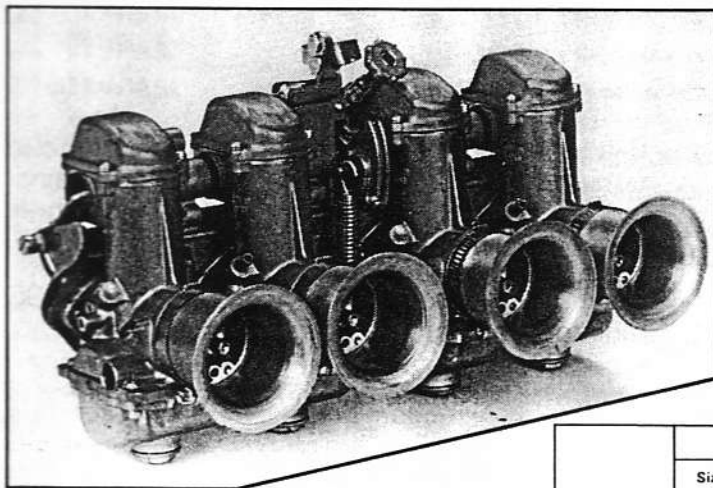
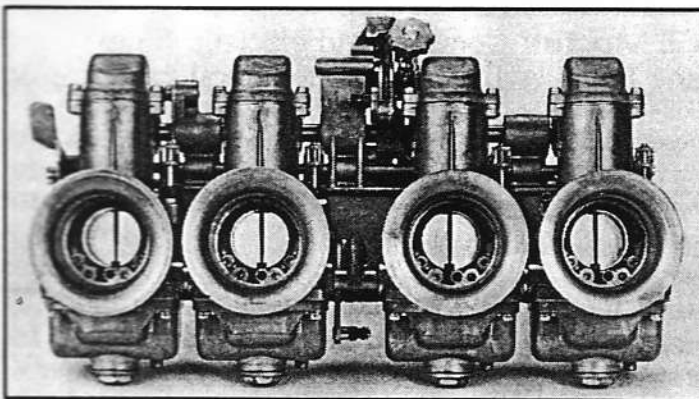
The "standard" specs are recommended for almost all street driven machines. Of course, our service department will be happy to advise users and/or provide carbs set up for almost any possible use.

— "STANDARD" (A-2) SPECS —

Main Jet: #115 Jet Needle: 5DL-31
Air Jet: 0.9 Throttle Valve: 1.5
Needle Jet: 0-6 Pilot Jet: 17.5

"Standard" (VM 29/A-2) Set **PART #62-101**

Special (Specify) Sets **PART #62-100**



NEMOTO
FYNJEKADE 9
DEN HAAG
070 - 41.36.71

ACCESSORIES

ADAPTORS: Required to use smooth bores on CB750. New rubber manifolds replace existing units. Set of Four **PART #62-110**

VELOCITY STACKS: For lowmileage racing use. 3 lengths for tuning flexibility. Shorter for high RPM range H.P.; longer for lower.

30MM Set of Four **PART #62-130**
50MM Set of Four **PART #62-150**
70MM Set of Four **PART #62-170**

AIR FILTERS: Non-restrictive K & N air filters for street and road racing or any sustained use. Highly recommended.

All models
(MFG #RC-112/4) Set of four **PART #86-106**

Z-1 models thru '75. Special tapered design fits under stock side covers.

(MFG #RC-107) Set of Four **PART #86-105**

TUNING PARTS

⊕ = "STANDARD" (VM 29/A-2) #62-101

	MAIN JET		AIR JET		THROTTLE VALVE		PILOT JET	
	Size	Part #	Size	Part #	Size	Part #	Size	Part #
LEAN ↓ RICH	112.5	63-112	1.0	63-210	2.5	63-525	15	63-615
	115 [⊕]	63-115	0.9 [⊕]	63-209	2.0	63-520	17.5 [⊕]	63-617
	117.5	63-117	0.8	63-208	1.5 [⊕]	63-515	20	63-620
	120	63-120	NEEDLE JET		JET NEEDLE		25	63-625
	122.5	63-122	Size	Part #	Size	Part #	30	63-630
	125	63-125	0.4	63-304	5DL31 [⊕]	63-401		
	127.5	63-127	0.6 [⊕]	63-306	5L-1	63-402		
	130	63-130	0.8	63-308				
	& ETC.							

In addition to Tuning Parts, we carry a good stock of repair/replacement parts. Complete, illustrated list on request.

We service what we sell!

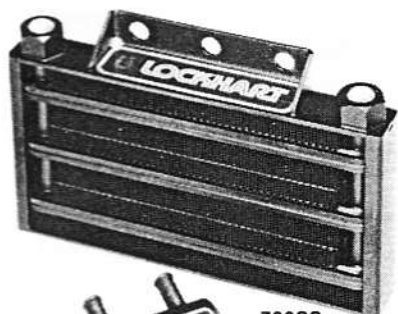
LOCKHART



500 COOLER
(HONDA FOURS)

OIL COOLERS BYPASS VALVES COOLER SYSTEMS

*To protect expensive engine components, Lockhart coolers offer ingenious design features as well as unmatched quality. Internal as well as external finning for maximum efficiency with minimum bulk. Tough, long lasting epoxy black finish gives best heat dissipation. External fins are well protected to avoid damage and maintain the best appearance. Dip-brazed construction is leak-proof and durable under the most severe conditions. Every unit tested to 150 PSI. All coolers come complete with radiator, adaptor(s), high test hose, clamps, fittings, sealing tape, mounting hardware and installation instructions.



700SS
RADIATOR



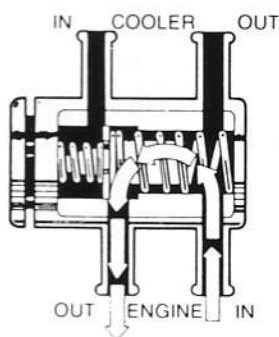
BP-180
BY PASS VALVE

500 (Standard) Model: Compact and efficient. An excellent addition to any Four. Will reduce oil temperature by up to 40°F.

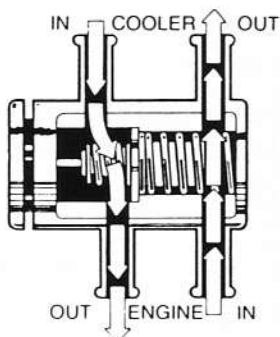
Honda 500/550 & 750 (thru '78 including F-2)	PART #55-101
Kawasaki 903 & 1015 models	PART #55-201
Kawasaki 650	PART #55-301
Replacement (500) Radiator only	PART #56-101

700SS Model: 50% greater cooling capacity to conquer the dangerous oil temperatures of extreme use. Will reduce oil temperature by up to 60°F. Should be used with BP-180 for best safety and efficiency.

Honda 500/550 & 750 (Thru '78 including F-2)	PART #55-102
Kawasaki 903 & 1015 models	PART #55-202
Kawasaki 650	PART #55-302
Replacement (700SS) Radiator Only	PART #56-102



COLD (Below 165°F)
BP-180 plunger blocks cold oil and returns it to the engine.



HOT (Above 180°F)
Plunger opens, allowing warm oil to flow through cooler.

BP-180 allows faster warm-ups for cooler equipped motors. Provides protection against over-cooling for wide range use and highly seasonal climates.

Especially appropriate for use with the 700SS radiator, this unit may be used to good advantage with any existing oil cooler. Comes complete with hardware and installation instructions.

BP-180 **# 57-101**

— COMPONENTS —

*Buy A
Complete
System &
Save!*

500 (STD.)
MODEL &
BP-180

Honda 500/550/750 (#55-101)	
Kawasaki 903 & 1015 (#55-201)	+ #57-101
Kawasaki 650 (#55-301)	

PART #58-101
PART #58-201
PART #58-301

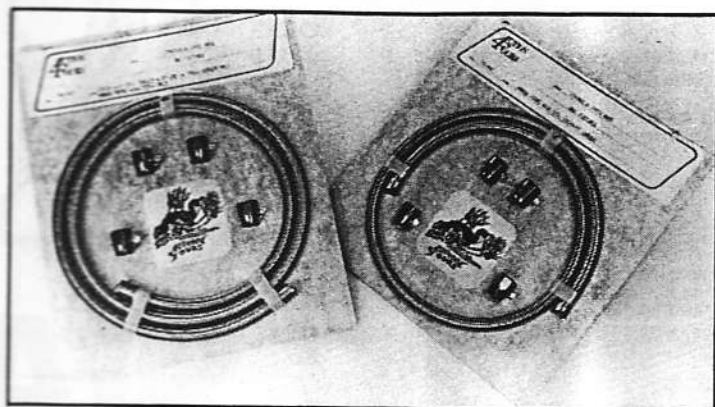
700 SS
MODEL &
BP-180

Honda 500/550/750 (#55-102)	
Kawasaki 903 & 1015 (#55-202)	+ #57-101
Kawasaki 650 (#55-302)	

PART #58-102
PART #58-202
PART #58-302

NOTE: We do not stock or sell chrome radiator models. We do, however, stock a wide variety of replacement parts for Lockhart coolers. **We Service What We Sell!**

STAINLESS STEEL HOSE & FITTINGS

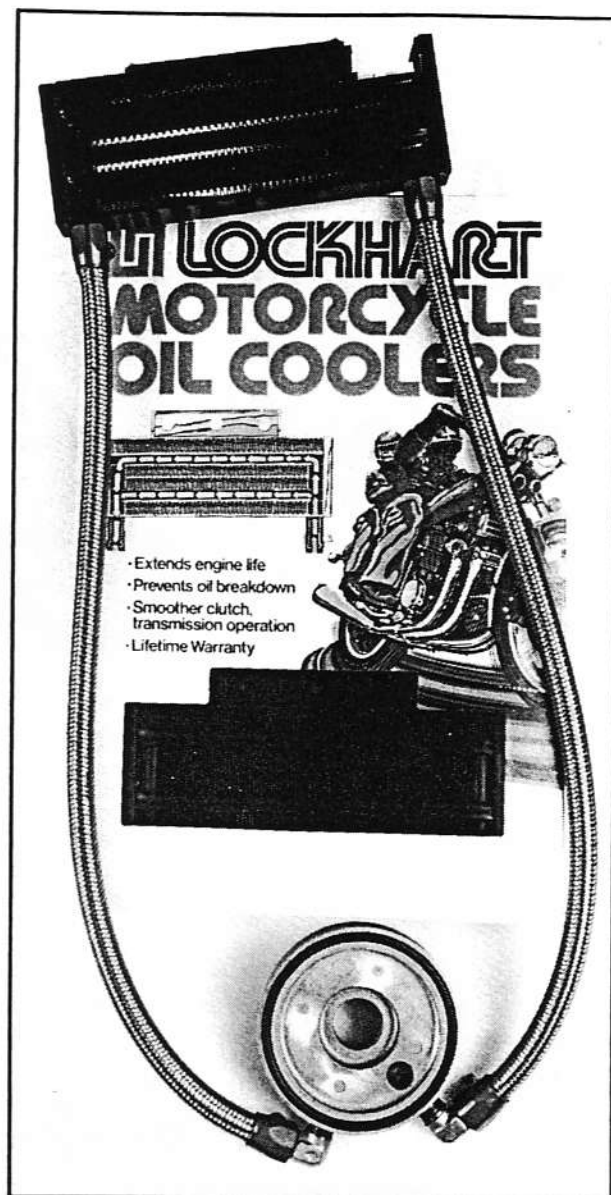


Durable and beautiful stainless steel sheathed hose and fitting sets for motorcycle oil cooler applications.

These sets use a conventional (and replaceable) hose clamp contained within an aircraft fitting type cover.

Especially designed for use with Lockhart oil coolers, these sets may be installed anywhere 5/16" or 3/8" inside diameter hose is used. Illustrated instructions are included for simple installation.

Each set includes hose (length/application as described) and four fittings. Fittings may be purchased separately in sets of four to install BP-180 Bypass Valve or to clean-up existing installations.



LOCKHART APPLICATIONS

HONDA 500/550/750		KAWASAKI 903 & 1015		KAWASAKI 650		HOSE LENGTH IN INCHES	ORDER
500 (STD) COOLER	700SS COOLER	500 (STD) COOLER	700SS COOLER	500 (STD) COOLER	700SS COOLER		PART #
NO BP-180						40	59-040
*with BP-180				NO BP-180		50	59-050
	NO BP-180			*with BP-180	NO BP-180	60	59-060
	*with BP-180				*with BP-180	70	59-070
		NO BP-180	*with OR NO BP-180			80	59-080
		*with BP-180				90	59-090

To order special length sets (hose & 4 fittings) use **PART #59 + (length in inches)**
(i.e. #59 - 120 = 120 inches and 4 fittings)

* Four extra fittings required to install BP-180. Set of 4 Fittings **PART #60-101**
Hose only (no fittings) **PART #61 + (length in inches)**

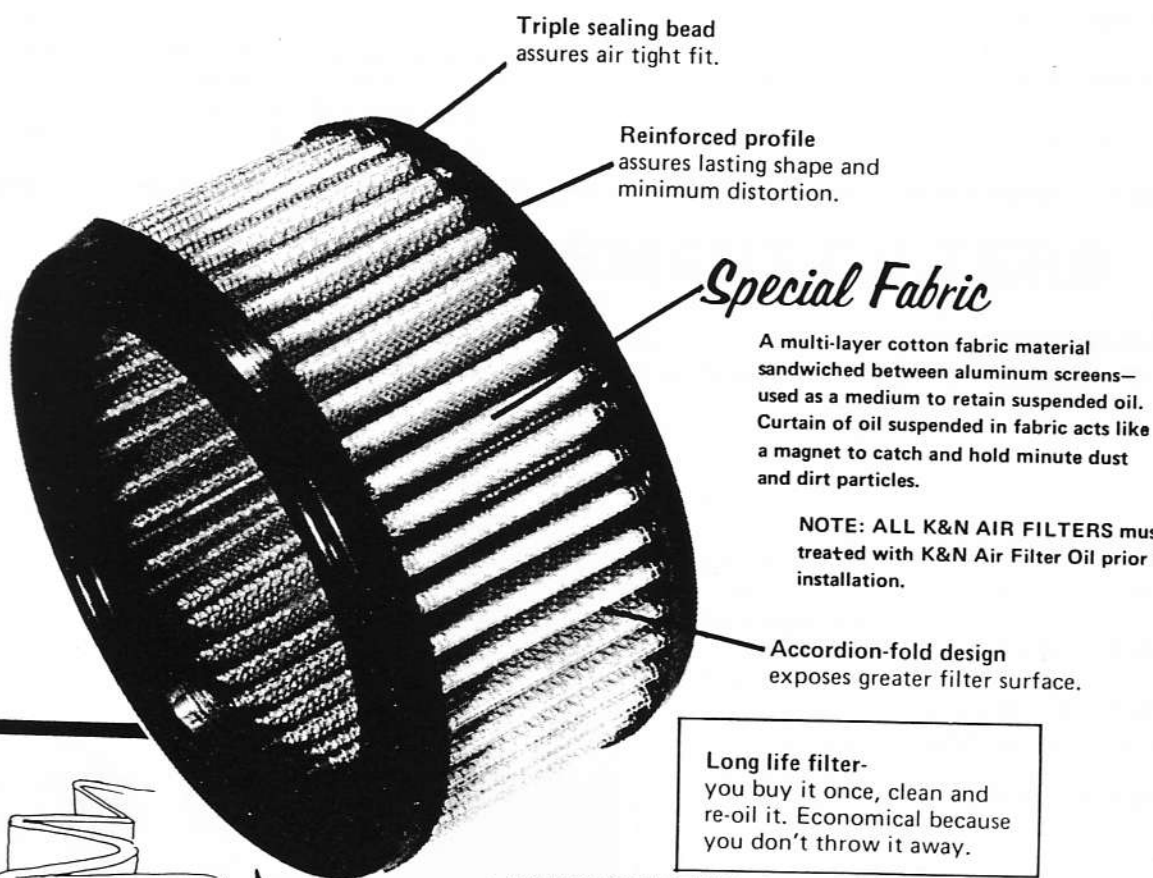
K&N[®]

HI-PERFORMANCE AIR FILTERS

• UNRESTRICTED AIR FLOW

• BEST FILTRATION

• ECONOMICAL



Triple sealing bead
assures air tight fit.

Reinforced profile
assures lasting shape and
minimum distortion.

Special Fabric

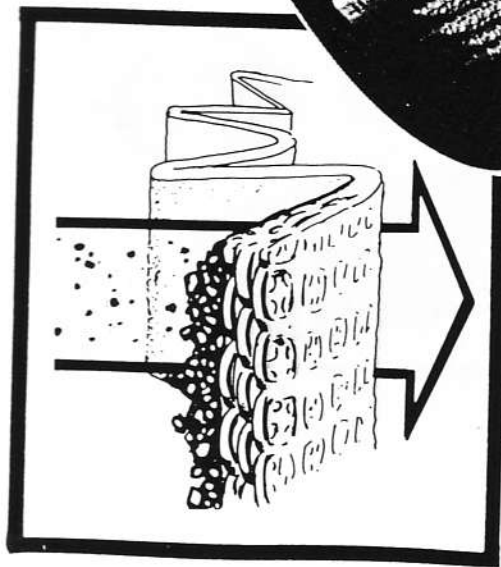
A multi-layer cotton fabric material
sandwiched between aluminum screens—
used as a medium to retain suspended oil.
Curtain of oil suspended in fabric acts like
a magnet to catch and hold minute dust
and dirt particles.

**NOTE: ALL K&N AIR FILTERS must be
treated with K&N Air Filter Oil prior to
installation.**

Accordion-fold design
exposes greater filter surface.

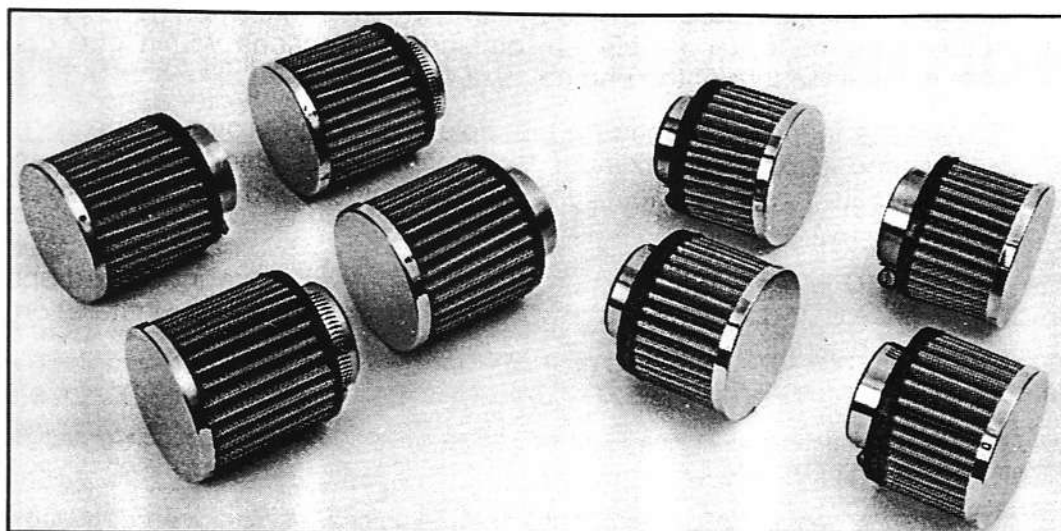
Long life filter—
you buy it once, clean and
re-oil it. Economical because
you don't throw it away.

- **NON-RESTRICTING**—Dust and dirt will not clog the filter element, because foreign matter remains on the outside of the element.
- **FREE-FLOWING**—Despite the outer layer of dust and dirt, there is adequate air flow between the particles.
- **UNAFFECTED BY MOISTURE**—Moisture will not clog the oil-saturated element. Completely wet, the filter will allow the engine to breathe.
- **MINIMUM SERVICE**—Because the dirt particles that build up on the outside of the element actually aid in the filtering action, cleaning is recommended only when extremely heavy deposits have built up.
- **NOT AFFECTED BY SMOG & POLLUTION CONTROL DEVICES.** Oil breather blow-by is absorbed in the fabric without ill effect.



K & N INDIVIDUAL FILTERS

Compact, individual filters mount directly onto the end of each carb for light clean appearance as well as excellent flow and engine protection. All models feature chrome end-caps.



CB 500 & 550 (except 77 & 78K)	K & N RC-84/4	PART #86-101
CB550 (77 & 78K)	K & N RC-88/4	PART #86-102
CB750 (except 77 & 78) AND		
Kawasaki 650	K & N RC-87/4	PART #86-103
CB750 (77 & 78)	K & N RC-89/4	PART #86-104
Kawasaki 900 AND		
Mikuni 'Smooth-Bores' <i>Special tapered design fits under stock sidecovers (Thru '75)</i>	K & N RC-107/4	PART #86-105
Kawasaki 900 & 1000 (76 & later) AND		
Mikuni 'Smooth-Bores'	K & N RC-112/4	PART #86-106

K & N REPLACEMENT FILTERS

Fit in place of original equipment filters. Far less restrictive for better performance. Keeps intake noise low. With occasional service these economical units will last the life of the machine.



CB750		
(all thru '78)	K & N HA-10	PART #85-101
CB500 & 550		
(all thru '78)	K & N R-83	PART #85-102
Kawasaki 900		
(thru '75)	K & N KA-80	PART #85-103
Kawasaki 900 & 1000		
('76 thru '78)	K & N RU-162	PART #85-104
(Fits in place of sound supressor, under seat)		
Kawasaki 650		
(thru '78)	K & N KA-120	PART #85-105

OIL & CLEANER

Filter Oil, 8 oz. Squeeze Bottle		
K & N KNFO-8 Each		PART #87-101
K & N KNFO-8C Cs. 12		PART #87-102
Cleaner and Degreaser, 32 oz. Spray Bottle		
K & N KNCD-32 Each		PART #87-103
K & N KNCD-32C Cs. 12		PART #87-104

MARTEK 440 ELECTRONIC IGNITION

The Martek 440 is a fully transistorized ignition. It replaces the stock points, condensers, and point cam with an optically triggered electronic system which is extremely precise and reliable. Special circuit techniques made it possible to combine all functions within one compact unit which fits inside the point enclosure of the engine.

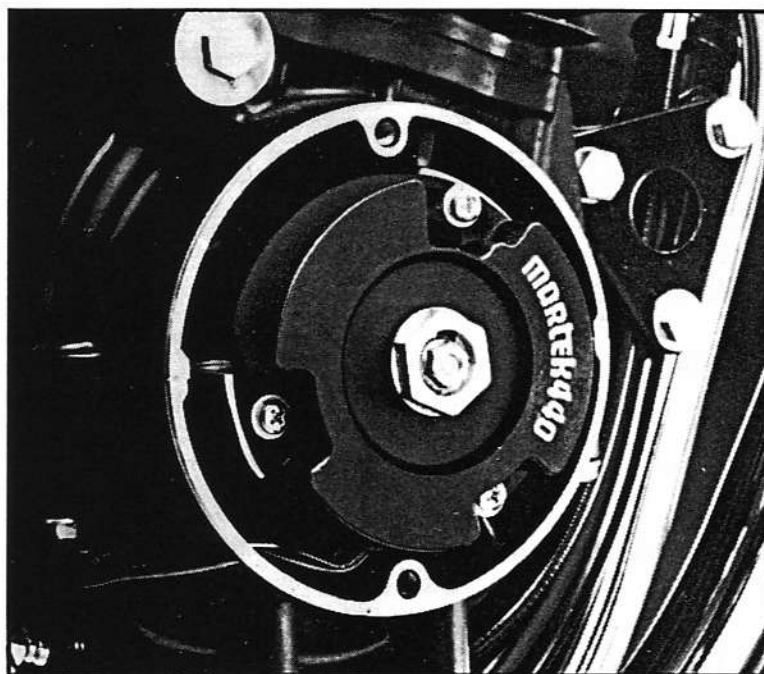
The Martek 440 uses the inductive discharge principle which has proven to be so rugged and dependable. It is designed to achieve maximum performance when used with your stock battery and coils. All of the materials and components are rated for powers and temperatures much higher than will ever be encountered in actual operation.

Above all, the Martek 440 is a performance product, designed to give increased spark energy and dead-on timing. Racers and non-racers alike will appreciate the easy installation and completely maintenance-free operation.

There are two completely independent ignition systems inside each 440 housing. In each ignition, there is an infrared light emitting diode (LED), which is always on when the ignition switch (key) is on. Opposite it, and separated by about $\frac{1}{8}$ inch, is a light sensitive detector transistor (DET). These are seen as two pairs of small glass lenses in the channel where the spinner rotates. The detector transistors are connected to biasing networks and additional stages of amplification; and, finally, to the power switching transistor circuits which control the current to the spark coils.

When light from the LED is allowed to shine on the DET, it turns off the amplifiers and stops flow of current to the coil. When light is interrupted and not allowed to shine on the DET, then current to the coil is turned on. This is infrared (long wavelength) light and is not visible. Most of the time, light from the LED to the DET is blocked by the spinner and current is turned on charging the coil. However, when the small hole in the rim of the spinner passes by a LED-DET pair and lets light through, the coil current is momentarily interrupted, causing a spark to occur.

The spark timing difference between firing of the 1 - 4 and 2 - 3 cylinders is precisely 180 degrees and never varies. The BTDC timing is set when the ignition is installed, and that also never varies. This precision, and perfect timing, is possible because the optical triggering point does not vary with wear, age, voltage level, or any other quantity which may change with time. Good idle and low-speed performance is assured by using the stock advance mechanism.



Since there are no mechanical limitations with the Martek 440, there is a significant increase in coil charging time over the stock points system. As a result, the high RPM spark energy with the Martek 440 is almost doubled.

Once installed, the 440 requires no adjustments, lubrication, or further maintenance. There are no magnets to fly off or deteriorate, no mechanical limitations to coil energy and no adjustments to shift or maintain. Each unit comes with illustrated instructions and can be installed in just a few minutes.

Honda 500/550 }
Honda 750 }
Kawasaki 650 }

PART #80-101

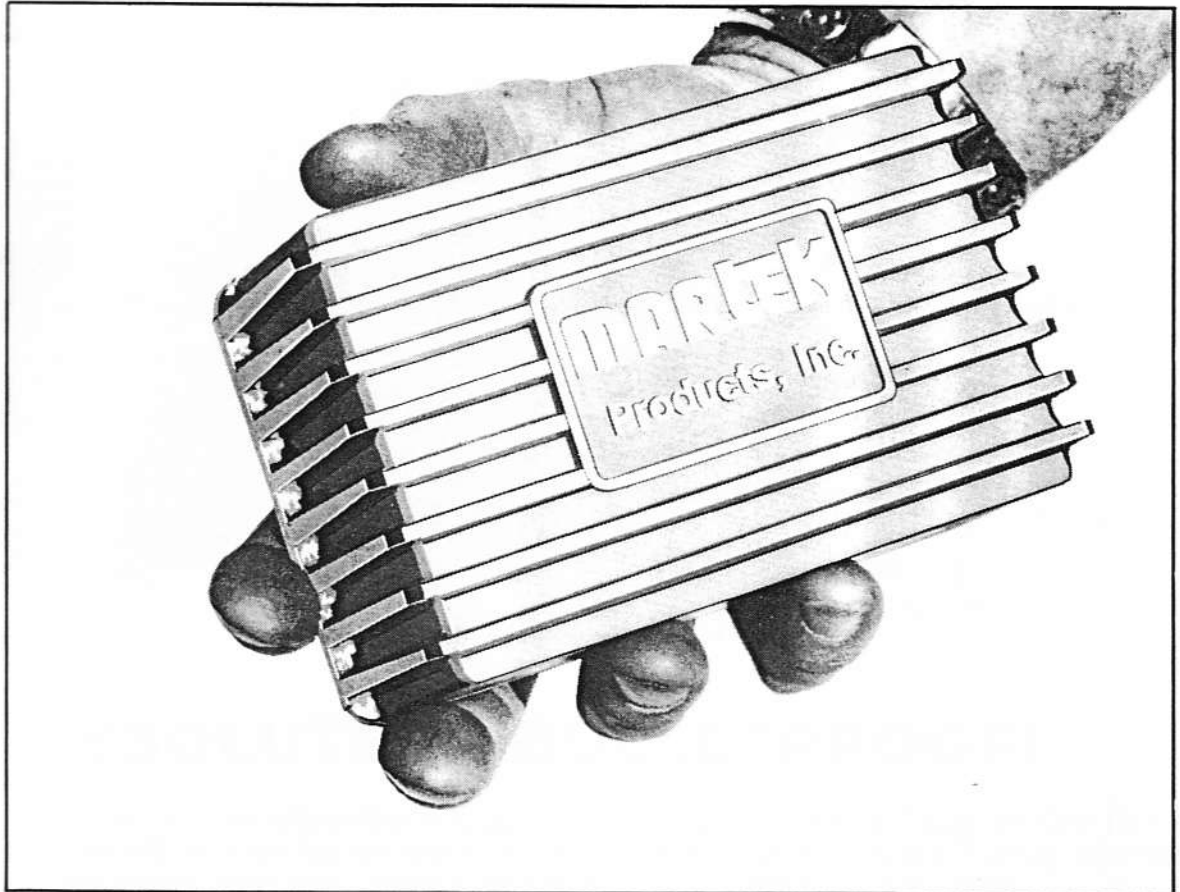
Kawasaki 903 & 1015 Models

PART #80-102

MARTEK 880 CDI IGNITION

NOW — CDI Power With 440 System Precision

The 880 is a hybrid CDI ignition designed for use with the Martek 440 electronic ignition. Complimenting the precise timing and other benefits of the 440, the 880 superimposes a burst of **TRIPLE** the spark energy!



Easy installation and unequalled reliability Assured by the proven design excellence of Martek.

No Special Coils. Special CDI Coils are not required. Use stock (about 4 ohm) or "after market" (3-4 ohm) coils.

Increased H.P. and gas mileage Made possible by the ability to ignite a much wider "Mixture range."

Better starting and spark plug life "Cold-blooded" characteristics are reduced or eliminated. Plug condition is less critical.

Martek 880 — for use with all 440 systems

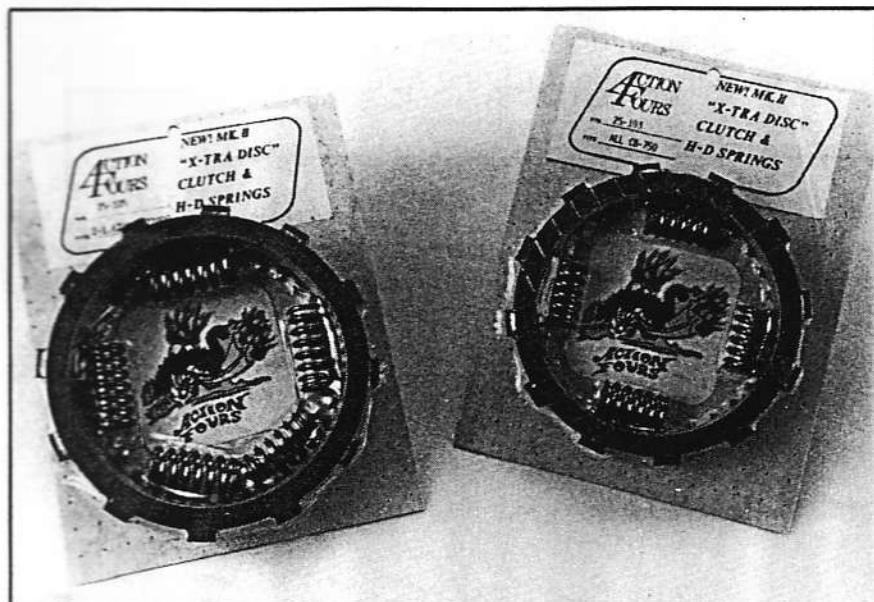
PART #80-201

(may also be used with Martek 1000 for GL 1000 and Harley, Yamaha and BMW models)

**BUY BOTH
AND SAVE**

MODEL	COMPONENTS		ORDER PART #.
	440	880	
Honda 500/550/750	80-101	80-201	80-301
Kawasaki 650			
Kawasaki 900/1000	80-102	80-201	80-302

"X-TRA DISC" MARK II CLUTCHES



- NON-CORK
- NO SWELL
- NO DRAG
- NO FADE
- SMOOTH ENGAGEMENT
- NO EXTRA PARTS REQUIRED
- SIMPLE INSTALLATION
- BETTER SHIFTING

ABSOLUTELY BULLETPROOF!

An entirely new type of material bonded to tough, heat treated steel plates. Tough enough for fuel dragsters and smooth enough for everyday street use. Each clutch includes 1 more disc than stock, extra metal clutch plate, heavy-duty clutch springs and installation instructions.

NEMOTO
FYNJEKADE 9
DEN HAAG
070 - 41.35.71

CB500
CB550
CB750 (ALL thru 78)
Kawasaki 900 & 1000
Kawasaki 650
GL1000 Honda

PART #25-101
PART #25-102
PART #25-103
PART #25-105
PART #25-106
PART #25-107

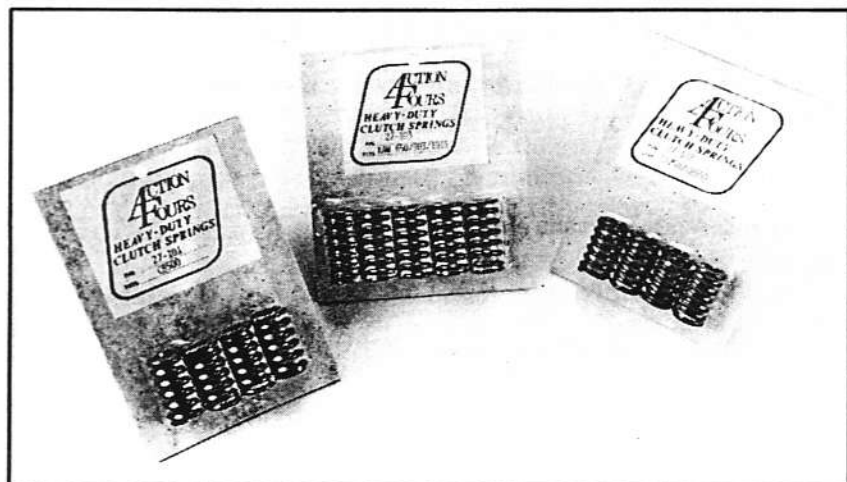
CB750 "C" Model: uses 9 friction discs & 2 extra metal plates for even more precise "off-the-line" control. For professional level drag racing. (For street, use #25-103 above)

PART #25-104

HEAVY-DUTY CLUTCH SPRINGS

Improves clutch action and shifting by reducing slippage and consequent swelling. The budget way to improve stock or "Brand X" clutch action. Complete set of springs (4, 5 or 6).

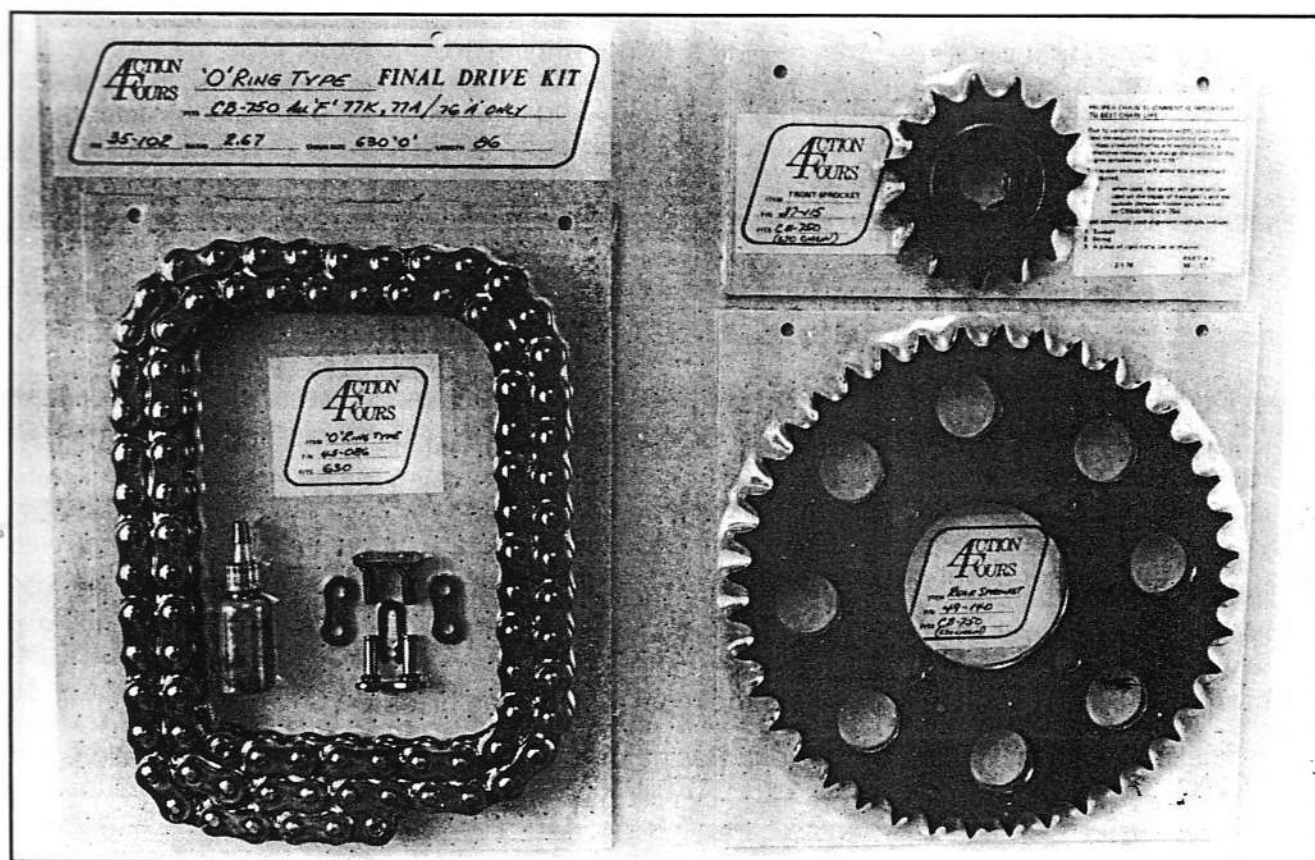
CB500 Honda PART #27-101
CB750 & CB550 PART #27-102
Kawasaki 650/903/1015 (all models to date) PART #27-103



FINAL DRIVE

"Fours", especially CB750's, are very hard on chains. Relatively small front sprocket diameter, high horsepower, large gear reductions and poor sprocket accuracy are all factors.

To increase chain life make sure all controllable factors are as favorable as possible. Accurately cut sprockets, proper lubrication and tension, and correct chain alignment are all critical.



Your chain is worn out when it has "stretched" (worn) to a 3% longer dimension. This will usually be 3 - 4 "marks" — less than half of the total adjustment travel.

The best chain is what suits your riding and budget and gives sufficient strength for your hardest use. There really are no "bad" chains — just misapplications.

Steel, aluminum or nylon sprockets? In our opinion, sprocket material is unimportant compared to manufacturing accuracy. Every sprocket we sell is hand checked for proper chain fit before we place it in stock. Nylon runs slightly more quietly than metal and gives somewhat better chain life. Aluminum alloy sprockets are the most popular and will hold up under more extreme conditions. Steel is reserved for the far higher loads imposed on front sprockets.

Greater Mass = Greater Wear. 16" rear wheel/tire conversions are heavier, and since the weight is at the outside diameter, a greater "flywheel effect" results. Shock loading increases and far shorter chain life as well as increased chance of breakage result. Use a strong drive kit if you must run a 16" wheel.

Solid wheel hubs kill chains (and some internal engine parts). All the machines for which we list drive kits feature rear wheel "dampers". Do not use any wheel which does not retain stock dampers or provide some other form of dampening.

WE OFFER TWO TYPES OF DRIVE CHAIN:

CONVENTIONAL — EXTRA STRENGTH

530H — $\frac{5}{8}$ " PITCH — 7,500 LB. TEST

630A — $\frac{3}{4}$ " PITCH — 10,800 LB. TEST

For the greatest possible strength. Those who prefer a conventional chain will find H and A series chains to have an excellent combination of strength and life at a reasonable price.

Life Range: 530H = 4,000 - 8,000 miles/630 A = 5,000 - 10,000 miles (As with any conventional chain, life will be very poor without regular, careful lubrication.)

Strength: Our strongest — Best choice for Drag Racing.

Application: Drag Racing and other high shock loading use. Good for economical touring too, if lubed regularly.

SEALED LUBE O-RING

530"O" — $\frac{5}{8}$ " PITCH — 6,200 LB. TEST

630"O" — $\frac{3}{4}$ " PITCH — 8,500 LB. TEST

O-ring chains, with lifetime lube sealed inside. As used on most new "Super-bikes". **ACTION FOURS PLUS FEATURE:** Not supplied endless! No need to remove the swing-arm to install. O-rings, master links and an applicator bottle of lube are supplied to allow different sprocket sizes and easier installation. O-ring chain requires only occasional, light external lubrication. Higher initial cost is more than offset by fabulous mileage.

Life Range: 530"O" = 8,000 - 15,000 miles/630"O" = 10,000 - 20,000 miles

Strength: Very Good. OK for all but the most radical drag bikes.

Application: Long distance touring, Road Racing or any hard use, high mileage application.

CB500/550 (all models)

APPLICATION	DRIVE RATIO	FRONT SPROCKET	CHAIN LENGTH	REAR SPROCKET	TYPE CHAIN		TYPE REAR SPROCKET	
					530 "H"	530 "O"	ALLOY REAR SPROCKET	NYLON REAR SPROCKET
Very "tall", close to stock CB500. Poor acceleration. Very low highway RPM.	2.06	18	100	37	31	32	151	251
"Tall" gearing, stock ratio CB550. Good for lightly loaded touring. Best MPG.	2.17	18	102	39	31	32	152	252
	2.18	17	100	37	31	32	153	253
	2.22	18	102	40	31	32	154	---
Lower gearing. Best for hot street and heavily loaded touring. Excellent acceleration.	2.29	17	102	39	31	32	155	255
	2.33	18	104	42	31	32	156	---
	2.35	17	102	40	31	32	157	---
Best possible acceleration. Drag Racing.	2.47	17	104	42	31	32	158	---

TO ORDER: (1) Read across for ratio (2) Two digit # for type of chain (3) Three digit # for type of sprocket.

CB750 630 — CHAIN

APPLICATION	DRIVE RATIO	FRONT SPROCKET	CHAIN LENGTH	REAR SPROCKET	MODEL			TYPE CHAIN		TYPE REAR SPROCKET	
					PRE K-1 THRU K-6	ALL "F" 75-78 77 & 78 K & A	76A ONLY	630 "A"	630 "O"	ALLOY REAR SPROCKET	NYLON REAR SPROCKET
Stock ratio K-1 to K-6 Very "tall". Poor acceleration, keeps RPM low. OK for lightly loaded touring and quietest possible operation.	2.67	15	84	40	X			34	35	101	201
		15	86	40		X	X	34	35	102	202
Stock ratio pre K-1 and '75 & 76F & '77K Models. Fair acceleration while RPM is low, even at high cruising speeds. An excellent "compromise" ratio for those who are concerned about gas mileage.	2.80	15	86	42	X	X		34	35	103	203
		15	88	42			X	34	35	104	204
	2.86	14	84	40	X			34	35	105	205
		14	86	40		X	X	34	35	106	206
	2.87	15	86	43	X			34	35	107	207
		15	88	43		X	X	34	35	108	208
	2.93	15	86	44	X			34	35	109	209
		15	88	44		X	X	34	35	110	210
	3.00	14	86	42	X	X		34	35	111	211
		14	88	42			X	34	35	112	212
	3.07	15	88	45	X	X		34	35	113	---
		14	86	43	X			34	35	114	214
	3.14	14	88	43		X	X	34	35	115	215
		14	86	44	X			34	35	116	216
Maximum acceleration for drag Racing. Best power for trailers or extreme high altitude (8,000 ft. +) use.	3.21	14	88	44		X	X	34	35	117	217
		14	88	45	X	X		34	35	118	---

CB750 530 CHAIN

APPLICATION	DRIVE RATIO	FRONT SPROCKET	CHAIN LENGTH	REAR SPROCKET	MODEL			TYPE CHAIN		TYPE REAR SPROCKET	
					PRE K-1 THRU K-6	ALL "F" 75-78 77 & 78 K & A	76A ONLY	530 "H"	530 "O"	ALLOY REAR SPROCKET	NYLON REAR SPROCKET
Stock ratio K-1 to K-6 very "tall". Poor acceleration, keeps RPM low. OK for lightly loaded touring and quietest possible operation.	2.67	18	100	48	X			31	32	101	201
		18	102	48		X		31	32	102	202
		18	104	48			X	31	32	103	203
	2.78	18	102	50	X			31	32	104	204
		18	104	50		X	X	31	32	105	205
		17	100	48	X			31	32	106	206
	2.82	17	102	48		X		31	32	107	207
		17	104	48			X	31	32	108	208
		18	102	52	X			31	32	109	---
	2.89	18	104	52		X		31	32	110	---
		18	106	52			X	31	32	111	---
		17	102	50	X			31	32	112	212
	2.94	17	104	50		X	X	31	32	113	213
		17	102	52	X			31	32	114	---
		17	104	52		X		31	32	115	---
Stock gearing, F-2 Models. Best "hot street" gearing. Can still cruise OK at high touring speeds. Best for heavily loaded touring and steady 55. Use for modified machines with 9,500 or over "redline".	3.06	17	106	52			X	31	32	116	---

TO ORDER: (1) Read across for ratio (2) Two digit # for type of chain (3) Three digit # for type of rear sprocket.

Each Kit includes: Front sprocket; sprocket spacer; drive chain; rear sprocket; conventional master link (except 630"A"); rivet master link (permanent staking type). "O" Series also includes O-rings and applicator lubricant bottle.

KZ650

EXCEPT 1978-79
CUSTOM & SR MODELS

APPLICATION

	DRIVE RATIO	FRONT SPROCKET	CHAIN LENGTH	REAR SPROCKET	TYPE CHAIN		TYPE REAR SPROCKET	
					530"H"	530"O"	ALLOY REAR SPROCKET	NYLON REAR SPROCKET
Taller than stock. Lightly loaded touring. Best MPG. Quietest operation.	2.47	17	102	42	31	32	301	401
	2.59	17	104	44	31	32	302	402
Stock gearing; best for most touring.	2.63	16	102	42	31	32	303	403
"Hot Street" Good acceleration. OK for highway use & heavily loaded touring.	2.71	17	106	46	31	32	304	---
	2.75	16	104	44	31	32	305	405
Low gearing. Drag Racing and "best acceleration use".	2.88	16	106	46	31	32	306	---

KAWASAKI 900 MODELS

(EXCEPT 900 LTD)

APPLICATION

	DRIVE RATIO	FRONT SPROCKET	CHAIN LENGTH	REAR SPROCKET	TYPE CHAIN		TYPE REAR SPROCKET	
					630"A"	630"O"	ALLOY REAR SPROCKET	NYLON REAR SPROCKET
Very "tall". Very poor acceleration. Low- est RPM & engine noise. Special purpose.	2.19	16	92	35	34	35	301	401
Stock ratio, tall. Best for high speed lightly loaded touring. Poor acceleration. Best MPG	2.31	16	94	37	34	35	302	402
	2.33	15	92	35	34	35	303	403
High performance for street/touring. Good acceleration. Best heavily loaded touring. Good MPG. Drag bikes using 1st to 4th.	2.44	16	94	39	34	35	304	404
	2.47	15	94	37	34	35	305	405
	2.50	14	92	35	34	35	306	406
	2.50	16	96	40	34	35	307	---
"Hot street". Very good acceleration. OK for highway use.	2.60	15	94	39	34	35	308	408
	2.63	16	96	42	34	35	309	---
	2.64	14	94	37	34	35	310	410
	2.67	15	96	40	34	35	311	---
Maximum acceleration. Drag racing using all 5 gears.	2.79	14	94	39	34	NOT	312	412
	2.80	15	96	42	34	RECOM-	313	---
	2.86	14	96	40	34	MENDED	314	---
	3.00	14	96	42	34		315	---

TO ORDER: (1) Read across for ratio (2) Two digit # for type of chain (3) Three digit # for type of rear sprocket.

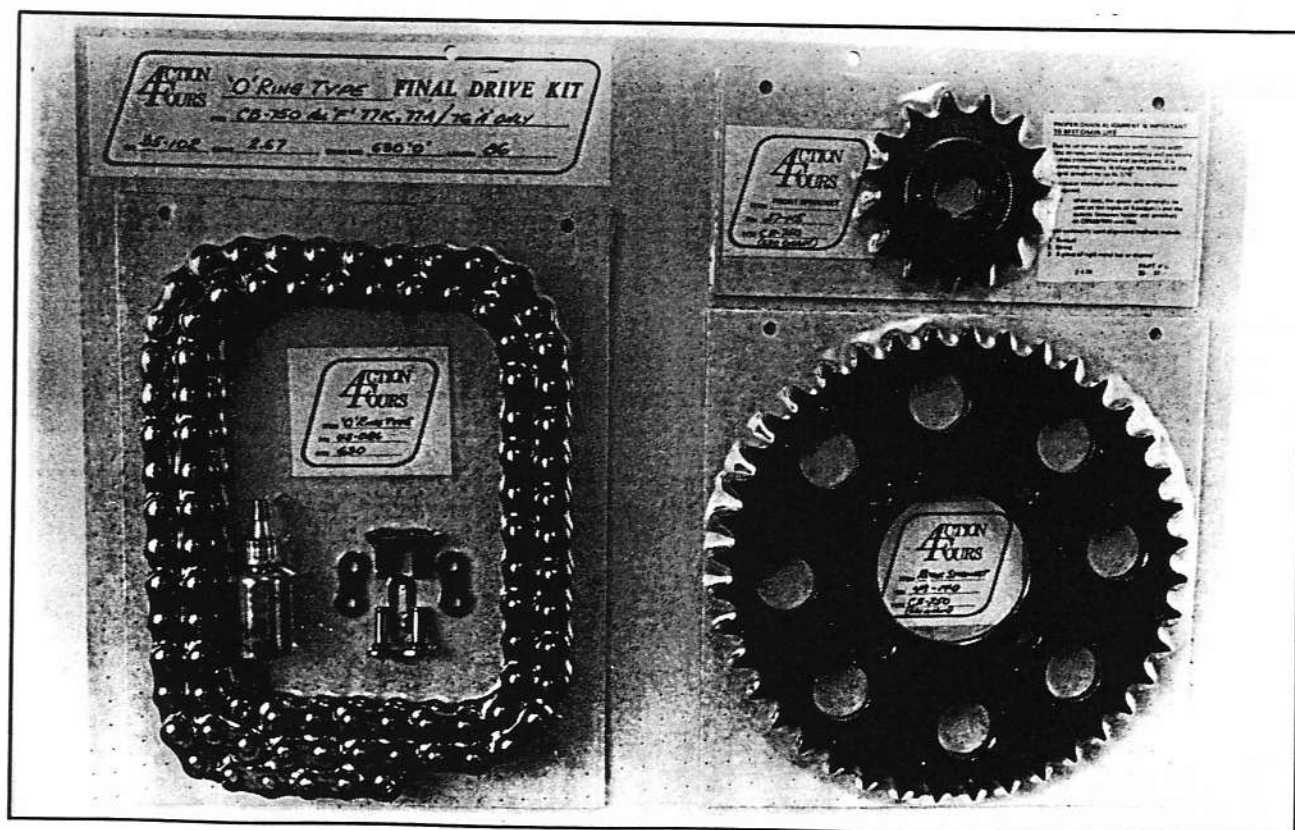
Each Kit includes: Front sprocket; sprocket spacer; drive chain; rear sprocket; conventional master link (except 630"A"); rivet master link (permanent staking type). "O" Series also includes O-rings and applicator lubricant bottle.

KAWASAKI 1000 MODELS

APPLICATION	DRIVE RATIO	FRONT SPROCKET	CHAIN LENGTH	REAR SPROCKET	TYPE CHAIN		TYPE REAR SPROCKET	
					630"A"	630"O"	ALLOY REAR SPROCKET	NYLON REAR SPROCKET
Very tall. Lowest RPM. Quietest operation. Very poor acceleration. Stock ratio.	2.06	16	92	33	34	35	351	451
	2.19	16	92	35	34	35	352	452
	2.20	15	92	33	34	35	353	453
Tall gearing, poor acceleration. Best for high speed, lightly loaded touring. Best MPG.	2.31	16	94	37	34	35	354	454
	2.33	15	92	35	34	35	355	455
	2.36	14	92	33	34	35	356	456
High performance street/touring. Good acceleration. Best heavily loaded touring. Good MPG. Drag bikes using 1st to 4th.	2.44	16	94	39	34	35	357	---
	2.47	15	94	37	34	35	358	458
	2.50	14	92	35	34	35	359	459
	2.50	16	96	40	34	35	360	---
"Hot street". Very good acceleration. OK for highway use.	2.60	15	94	39	34	35	361	---
	2.63	16	96	42	34	35	362	---
	2.64	14	94	37	34	35	363	463
	2.67	15	96	40	34	35	364	---
Maximum acceleration. Drag racing using all 5 gears.	2.79	14	94	39	34	NOT	365	---
	2.80	15	96	42	34	RECOM-	366	---
	2.86	14	96	40	34	MEENDED	367	---
	3.00	14	96	42	34		368	---

TO ORDER: (1) Read across for ratio (2) Two digit # for type of chain (3) Three digit # for type of rear sprocket.

Each Kit includes: Front sprocket; sprocket spacer; drive chain; rear sprocket; conventional master link (except 630 "A"); rivet master link (permanent staking type). "O" Series also includes O-rings and applicator lubricant bottle.



REAR SPROCKETS

Attractive black anodize finish and lightening holes (most sizes).

Alloy: Precisely machined from high strength, aircraft grade aluminum alloy.

Nylon (Plastic): Manufactured from Dupont Zytel® the toughest engineering plastic available. Up to 5 times the shock resistance of other plastic sprockets. Attractive black color (most sizes) will not chip, peel or fade.

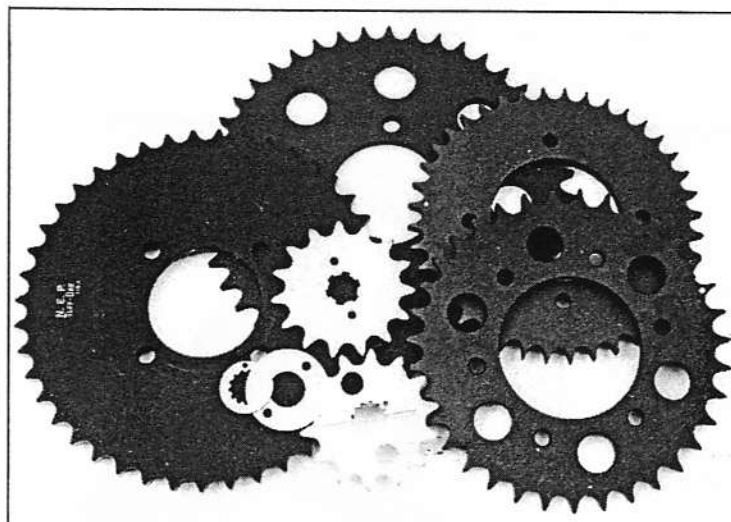
All sprockets are checked for proper chain fit before acceptance.

530

# of Teeth	500/550 HONDA		750 HONDA		650 KAWASAKI	
	Nylon	Alloy	Nylon	Alloy	Nylon	Alloy
37	46-037	47-037			EXCEPT 1978 CUSTOM & SR MODELS	
39	46-039	47-039				
40		47-040				
42		47-042				
44						
46					46-242	47-242
48			46-148	47-148	46-244	47-244
50			46-150	47-150		47-246
52				47-152		

630

# of Teeth	750 HONDA		Z-1/KZ900		KZ1000/1000LTD/Z-1R	
	Nylon	Alloy	Nylon	Alloy	Nylon	Alloy
33					48-433	49-433
35			48-335	49-335	48-435	49-435
37			48-337	49-337	48-437	49-437
39			48-339	49-339		49-439
40	48-140	49-140		49-340		49-440
42	48-142	49-142		49-342		49-442
43	48-143	49-143				
44	48-144	49-144				
45		49-145				



FRONT SPROCKETS

Precisely machined, hardened steel front sprockets. Every sprocket is checked for proper chain fit before acceptance.

Includes front sprocket, alignment spacer and instructions.

MODEL	# OF TEETH	CHAIN SIZE	PART #
Honda 500/550	17	530	36-117
Honda 500/550	18	530	36-118
Kawasaki 650	16	530	36-016
Kawasaki 650	17	530	36-017
Honda 750	17	530	36-117
Honda 750	18	530	36-118
Honda 750	14	630	37-114
Honda 750	15	630	37-115
Kawasaki 903 & 1015	14	630	37-014
Kawasaki 903 & 1015	15	630	37-015
Kawasaki 903 & 1015	16	630	37-016

NOTE: We strongly recommend against the use of smaller front sprocket sizes than those listed above.

REPLACEMENT CHAINS

For replacement use. Every chain includes: 1 conventional master link (except 630A), 1 riveting type master link and operating instructions. "O" chain also includes O-rings and lubricant.

530 CHAIN

We stock a huge amount of drive chain.

Large quantities and special lengths are seldom a problem.

Pitch Length	PART NUMBERS	
	Conventional, Extra Strength 'H' Series	O-Ring Type 'O' Series
100	41-100	42-100
102	41-102	42-102
104	41-104	42-104
106	41-106	42-106
Clip Master Link	51-041	51-042
Rivet Master Link	50-041	50-042

630 CHAIN

50' and 100' Reels are available (links included) for Dealer Use.

Pitch Length	PART NUMBERS	
	Conventional, Extra Strength 'A' Series	O-Ring Type 'O' Series
84	44-084	45-084
86	44-086	45-086
88	44-088	45-088
90	44-090	45-090
92	44-092	45-092
94	44-094	45-094
96	44-096	45-096
Clip Master Link	None Available	51-045
Rivet Master Link	50-044	50-045



CHAIN BREAKER

Tough and versatile. Will handle all drive chains $\frac{1}{2}$ ", $\frac{5}{8}$ " and $\frac{3}{4}$ " pitch.

- Specially hardened punch-pin pushes link all the way through.
- Large, plastic covered ratchet handle for easy, fast and comfortable operation.
- Replacement parts are readily available.

Chain Breaker

PART #52-102

Spare Punch Pin & Clip
Ratchet Handle Ass'y
Body
Clamp Screw
Guide Nut

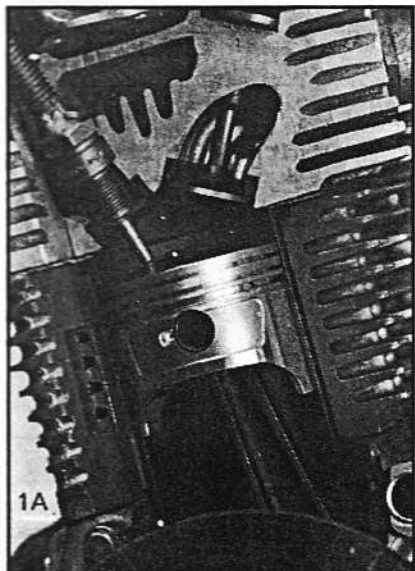
PART #52-103
PART #52-104
PART #52-105
PART #52-106
PART #52-107

CAM TIMING

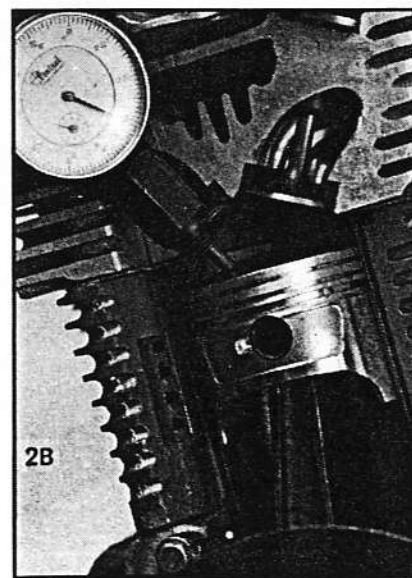
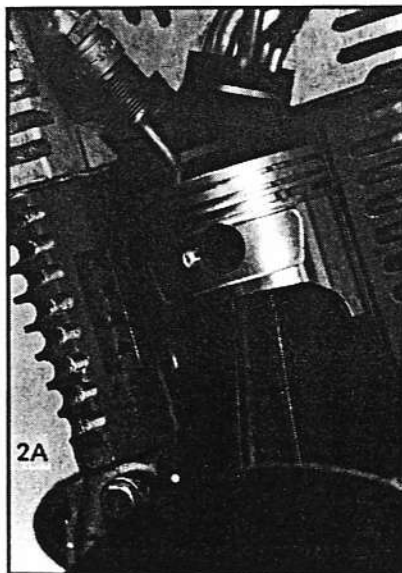
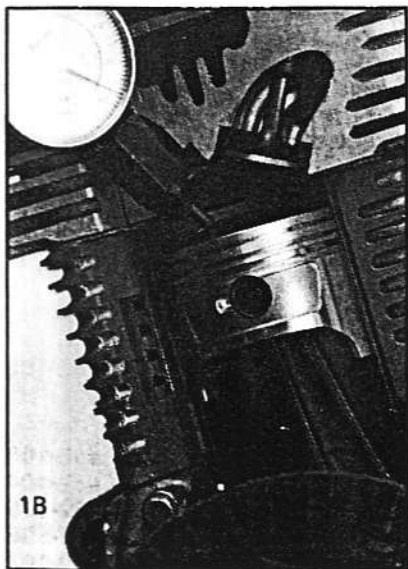
When you purchase a cam from Action Fours, you can be confident that the timing will be correct and that it will be a good choice for the applications described. Still, if you have had to mill your head or cylinder or wish to try some changes to suit your exact application, it will be necessary to check your cam timing. Also, we invite you to do so if only to check our accuracy or that of our competitors.

You will need:

Degree Wheel (360° protractor) — we suggest a 6" minimum diameter • **Dial Indicator** — ½" or 12.5mm minimum travel • **Dial Indicator Adaptor** — goes in spark plug hole to allow indicator to be used for finding TDC; *or in lieu of Dial Indicator Adaptor, Piston Stop* — to thread into spark plug hole and stop piston. May be made from an old spark plug • **Pointer** — heavy wire such as welding rod or a coat hanger. To be used as "Read timing" indication above the degree wheel. Wire allows bending for quick "zeroing" • **Magnetic Base** — to hold dial indicator where desired. • **Adaptor Plate** — steel plate that may be bolted to head to allow the use of the magnetic base.



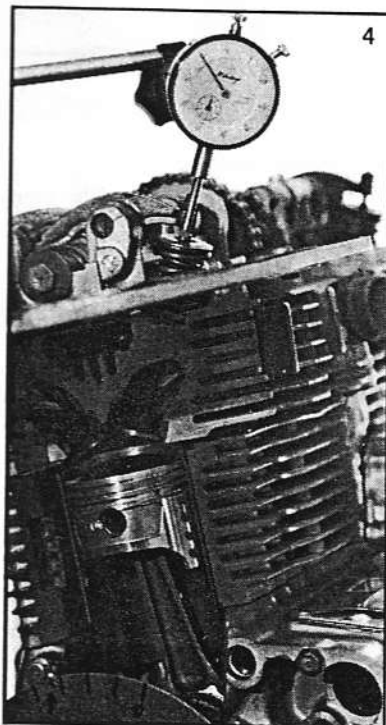
1. Set your motor at approximate TDC (Top Dead Center — piston at the top of stroke) via the 'T' mark on the advance assembly. The cylinder you wish to check should be on the compression/power stroke (both valves closed).
2. Bolt your degree wheel on (usually to the alternator rotor) and bolt your pointer to some convenient point on the crankcase. Move the wheel (but not the motor) and/or the pointer to indicate TDC. Be sure you have locked the degree wheel firmly in place. Small changes may now be made by bending the pointer.
3. You are now ready to determine an exact TDC. **This is the most often overlooked part of cam timing.** Near TDC the piston will only move a small distance for many degrees of crank rotation. Thus for accuracy, you must find TDC indirectly.
4. Install your dial indicator or piston stop in the spark plug hole after rotating the motor backwards to about 50° before TDC. Now slowly rotate the motor forward to the stop or to some specific point (i.e. 40° before, @ .100" on indicator). Record the degree figure at the stop or at the dial indicator reading. See Photos 1A/1B.



5. Now rotate the motor backwards to the stop or the same dial indicator reading. (See Photos 2A/2B). If the degree figure is the same, (i.e. 40° BTDC — 40° ATDC at the stop or 40° BTDC @ .100" — 40° ATDC @ .100") your pointer will show an exact TDC. If, for example, you show 40° BTDC, 36° ATDC you should move the pointer to 38° . In any event, "splitting the difference" between the readings and moving the pointer that amount will give you exact TDC.

NOTE: Always move the motor slowly and carefully to avoid possible damage. On KZ650's the indicator or stop may interfere with the valves — check carefully. In many cases a dial indicator would bind. Thus, a piston stop (carefully used) is preferred.

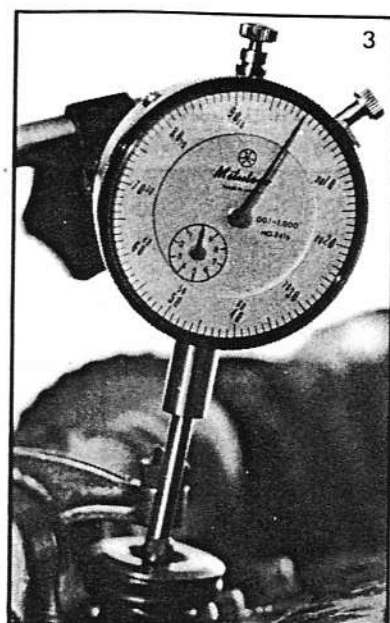
6. After removing the piston stop or dial indicator, install the adaptor plate, magnetic base and dial indicator. For accuracy, the stem *must* be parallel to the valve stem (See Photo #3). Set zero valve clearance (follower or rocker tight against cam base circle) and set your indicator to zero. You are now ready to record cam timing.



7. Rotate the motor forward until you show .020" (.5mm) or whatever checking clearance is specified (all cams from Action Fours use a .020" (.5mm) checking clearance. Any "comparison" of other cams should be done at that dimension). Record the opening figure shown (See Photo #4 — 33° BTDC is shown).
8. Continue rotating the motor, *slowly* until you are at .020" (.5mm) again. Record your closing figure.
9. Continue turning the motor until after the indicator stops recording (cam base circle). If the indicator did not return to, or very near "zero" something is not correct. Repeat steps 6 thru 9.

You may graph the opening/lift for a complete profile diagram if you wish, but in most cases the timing figures will provide enough information for planning.

Always recheck valve-to-piston clearance after making a change.



CHANGES

Cam timing changes should be for correction to standard specs or for small deviation and testing only. If it is necessary to make major changes to obtain best performance, then the cam grind or combination of internal parts is probably not correct for the application.

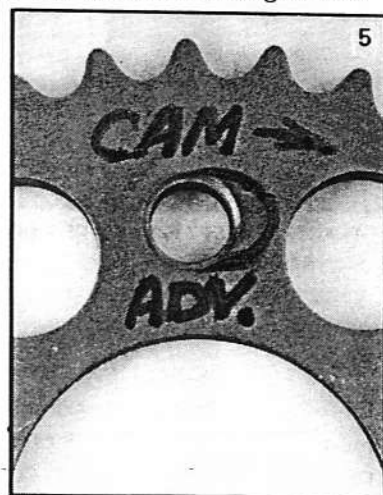
The changes listed below are for "fine tuning" engine operating characteristics only. Too great a change will simply put the best operating range outside the motor's design characteristic and result in an *overall* loss in performance.

CHANGE

- Advance Cam(s)
- Retard Cam(s)
- Less Overlap
- (Advance Exhaust and/or Retard Intake)
- More Overlap
- (Advance Intake and/or Retard Exhaust)

CHARACTERISTICS

- Lowers "best H.P.-RPM" range.
- Raises "best H.P.-RPM" range.
- More low end torque — less H.P. Broader, lower power curve.
- More H.P., less low end torque. Narrower, higher power curve.



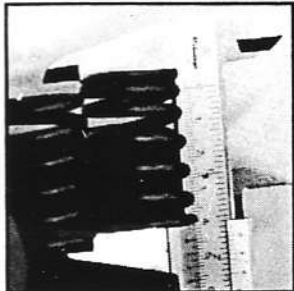
CB750 MODEL IDENTIFICATION:

1. THRU '77 except F-2

2. F-2 Models only

3. 78K&A models

The following information is presented *only* to assure correct selection of our internal engine parts and answer a few common questions. Many other variations exist. If you have further questions, please contact our Service Department.



Much heavier, dual rate valve springs are used in F-2 models only to increase red line. This extra red line "compensates" for the much lower gearing *which accounts for most* of the improvement in 1/4 mile times. The final gearing is 15% lower than K-1 through K-6 models!

The valve stem keeper groove has been changed. F-2 models share this design with 78K&A models, even though valve sizes are different.



THRU '77
EXCEPT F-2

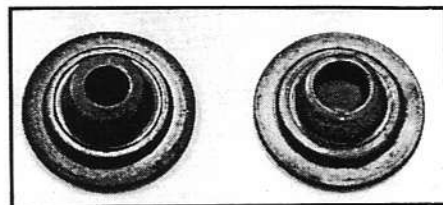
F-2 MODELS
78K&A MODELS



THRU '77 EXCEPT F-2

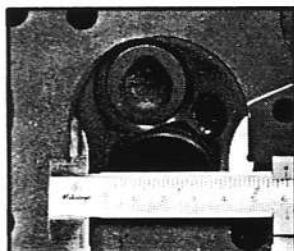
F-2 and 78K&A MODELS

Stamped steel retainers are used on all models. Both F-2 models as well as 78K&A models have the larger keeper bore as shown. On F-2 models with their heavier springs, retainers often fail. Also, keepers seem to "work" against the valve stems, leading to valve failures. In either case, severe engine damage can occur. Replace retainers (or complete Spring Set) and valves when you have any F-2 apart.



THRU '77
EXCEPT F-2

F-2 MODELS
78K&A MODELS



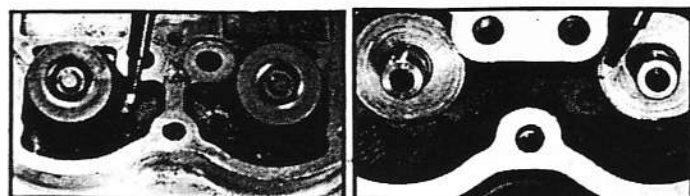
THRU '77 EXCEPT F-2
AND 78K&A



F-2 MODELS ONLY

The F-2 combustion chamber is larger and deeper (18% greater volume) to accommodate the larger valves. These larger valves are shorter due to the necessarily deeper seating. When "hot" cams are used, valve-to-valve clearance should be checked. Contact our Service Department for further information.

The F-2 piston has a larger dome than previous models because of the increased chamber size. (In fact, the *actual* compression is somewhat higher than any previous model.)




The oil returns have been changed on the F-2 models. Only the outer stud bore returns oil on F-2 models. Thus heads are not interchangeable with other models.

USE THIS HANDY POCKET FOR
THE LATEST 'ACTION LIST'
(PRICE LIST & NEW PRODUCTS)

NEMOTO

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DEN HAAG
070 - 41.35.71



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1. Please, order by Part Number.
2. Give 'Action List' Number.