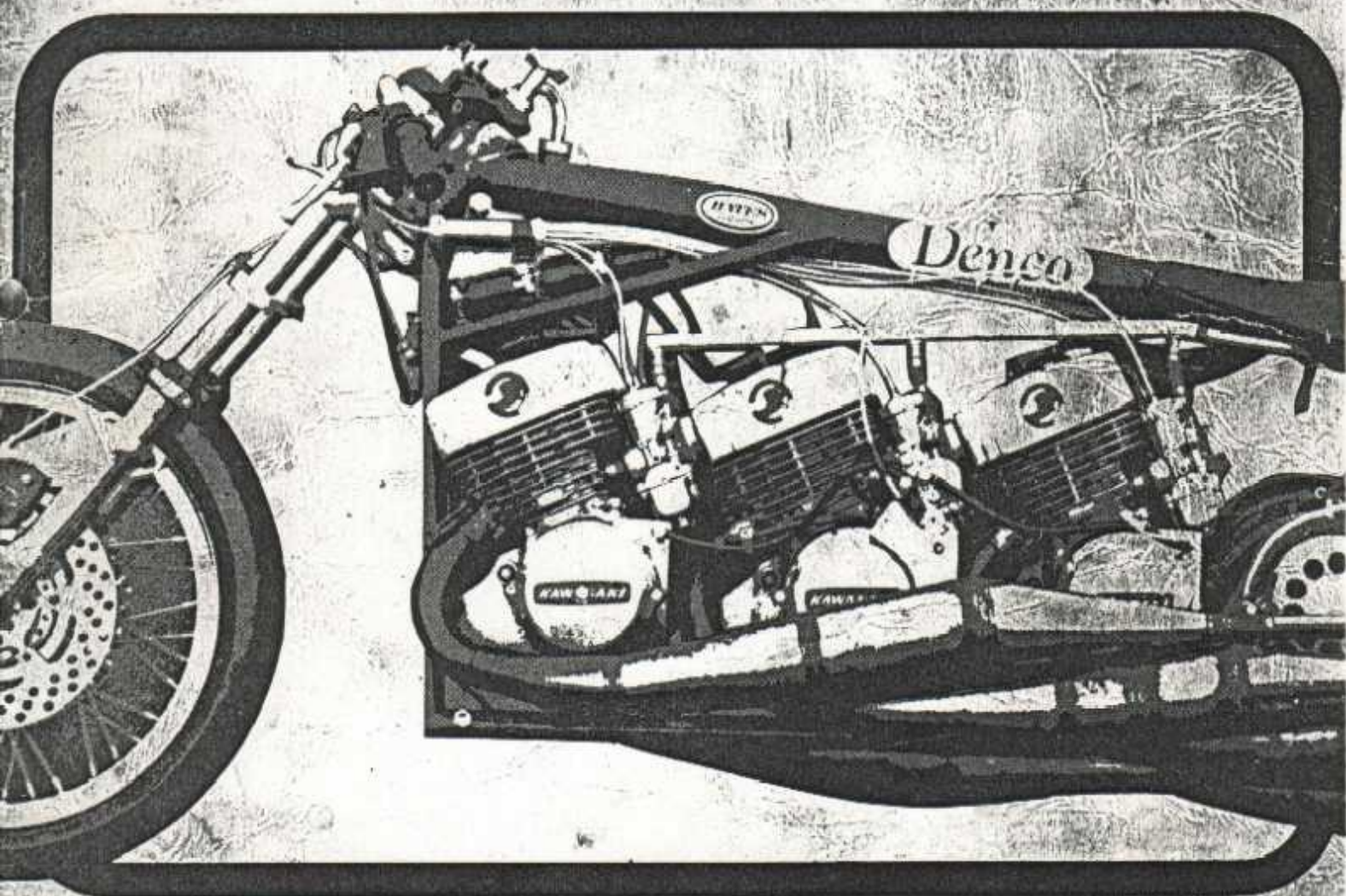


\$2.00

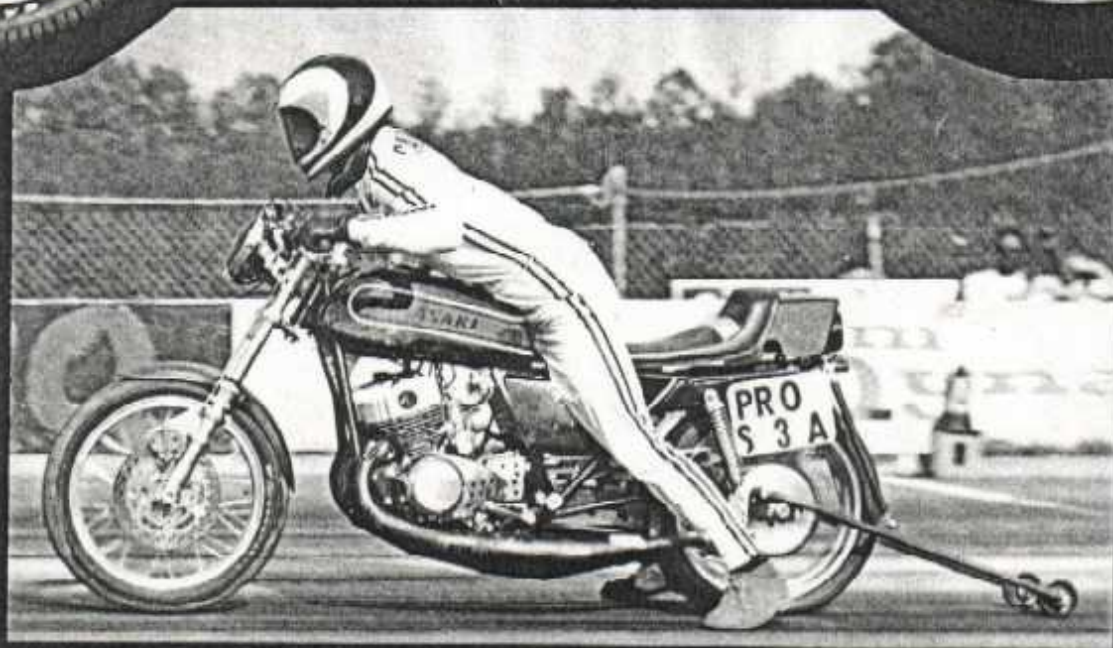
DENCO KAWASAKI PERFORMANCE PRODUCTS



4480E ENTERPRISE, FREMONT, CA. 94538

Denso

DENCO TWO-STROKE PERFORMANCE PARTS



Denco SQM Silenced Expansion Chambers

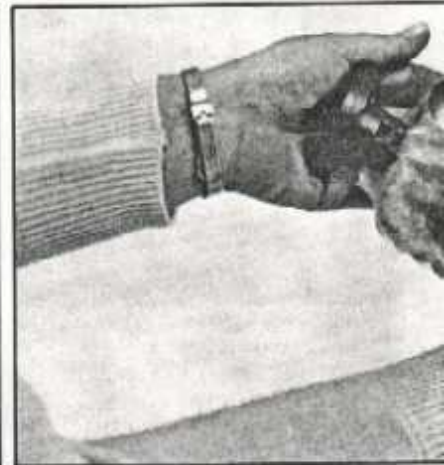
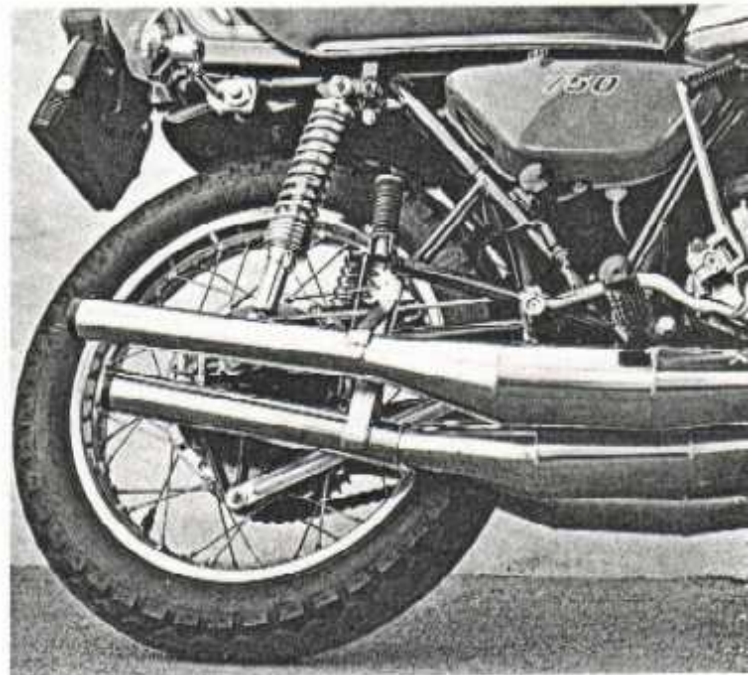
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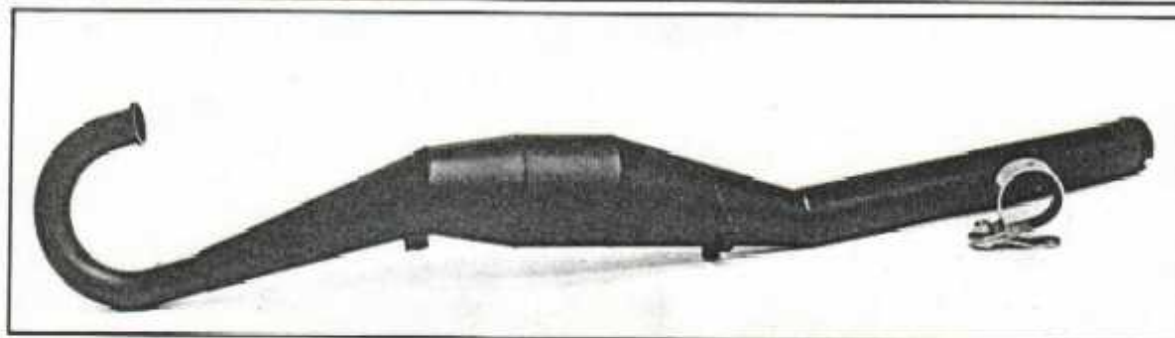
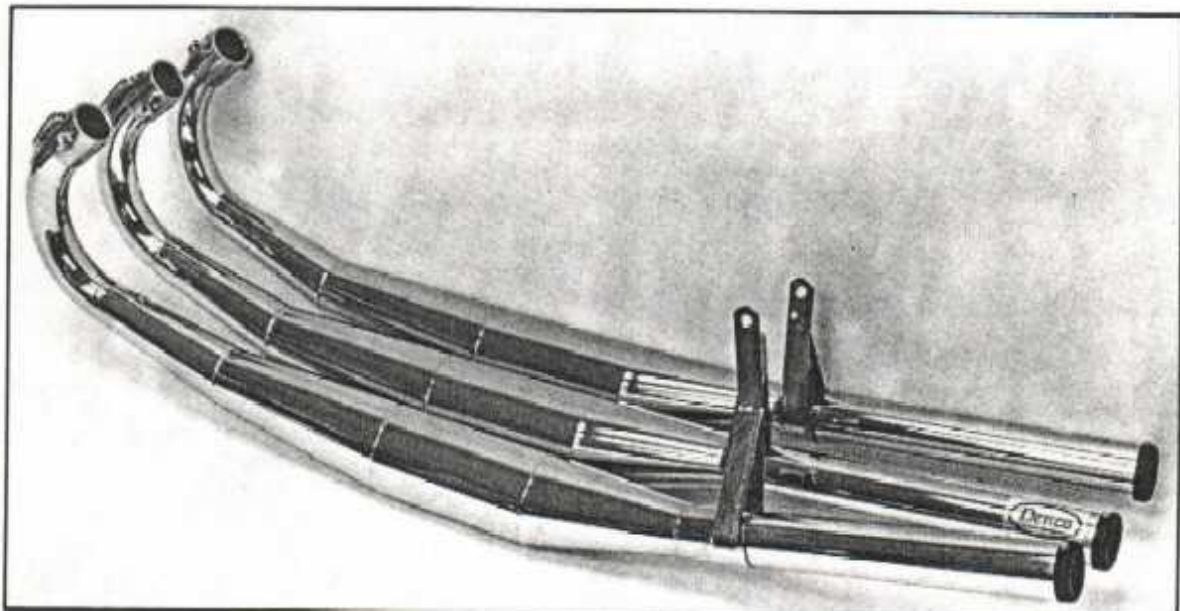
Among racers of two stroke motorcycles there is no doubt that Denco is the absolute leader in exhaust system technology. Denco expansion chambers hold more world and national records than all other brands put together and back up that reputation with a full line of silenced street high performance exhaust systems. Careful computer design and engineering expertise in the field of acoustics make our pipes more than just a "seat of the pants" performance gain. Dragstrip records and numerous national cycle magazine tests prove the power increases of Denco chambers beyond the shadow of a doubt. Our pipes also feature:

- ★ Complete heliarc welding for crack free long life
- ★ Four cone chamber design for widest powerband
- ★ Nearly 20 lb. weight reduction over stockers
- ★ Slip joint mounting flange with spring retainer — pipes can be removed in less than a minute for cleaning
- ★ Super quiet, racy tone repackable 14½" muffler
- ★ Exclusive Denco solid mount brackets
- ★ Incredible gas mileage increases — up to 48 mpg reported by customers with otherwise stock H2's
- ★ Precise fit and simple bolt on installation
- ★ Heat proof black finish; also available chrome

All chambers are shipped complete with adapter flanges, all mounting hardware and springs, and jetting recommendations. Replacement muffler cores are also available separately.

	BLACK	CHROME
750 H2	01-1	01-1C
500 H1/KH500	01-3	01-3C
400 S3/KH400	01-5	01-5C
350 S2	01-4	01-4C
250 S1 /KH250		
90 MC1, MC1M	01-6	



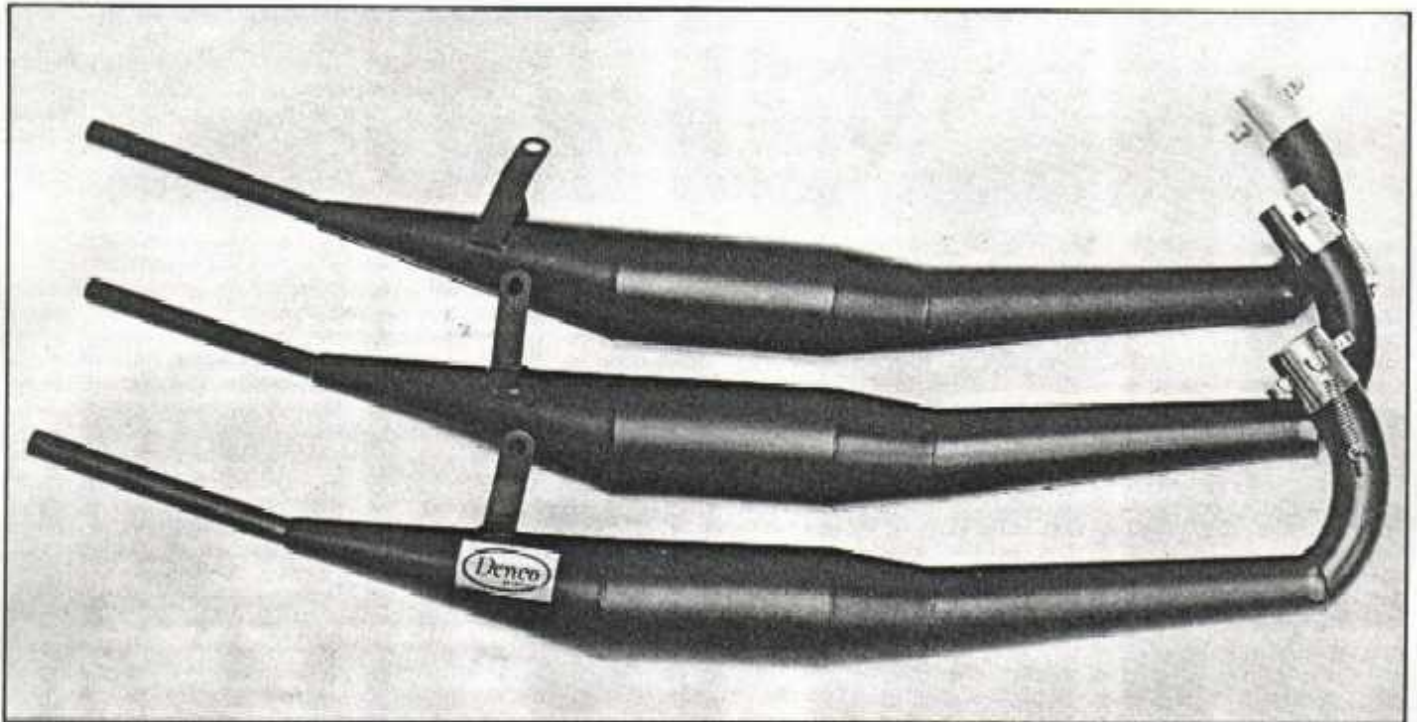


MC1, MC1M chambers



Denco Racing Expansion Chambers

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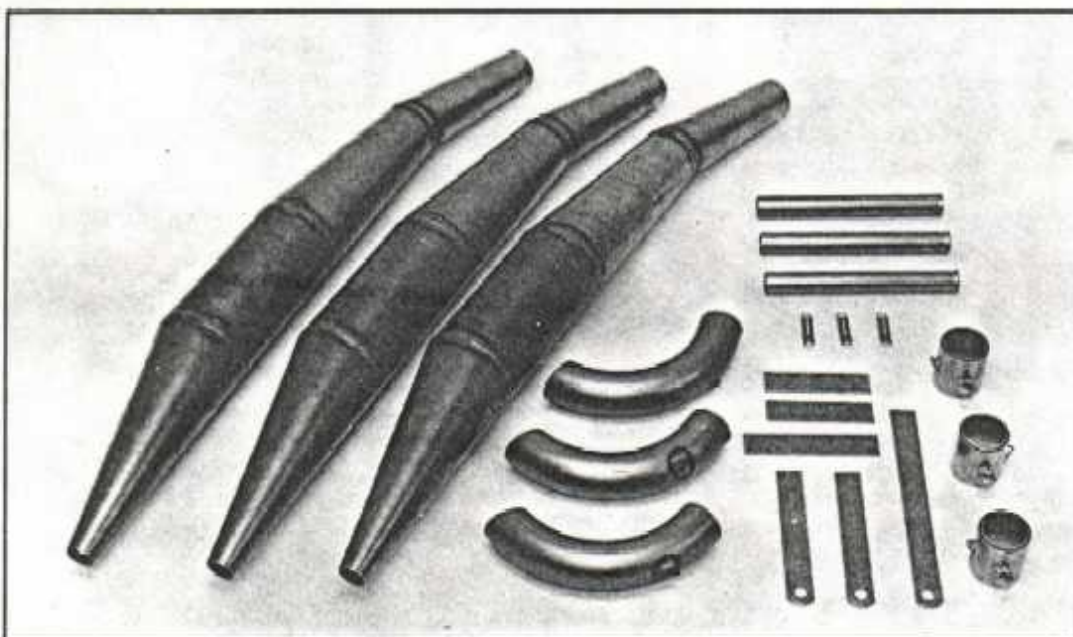


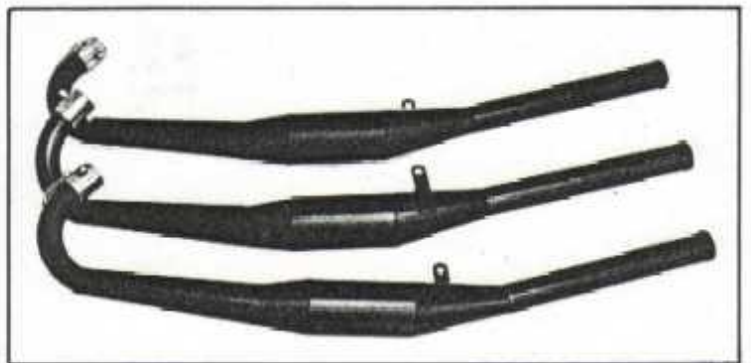
The most widely used racing chambers for Kawasaki triples: virtually all quarter mile records held by two stroke Kawasakis use our famous "Killer" pipes. These chambers produce the absolute highest horsepower level of any expansion chamber made and are the only proper finish for any all out racing motor. Supplied as finished welded chambers for stock frames or as "Killer Kits"; kits are complete with welded cones and pre-cut head pipes, stingers and brackets waiting only to

be fitted to your frame and welded together. The perfect answer for dragsters and road racers. All Killer pipes sold in heat proof black only (unwelded kits are unpainted). Not recommended for stock motors.

KILLER RACING CHAMBERS

	KIT	WELDED
500 H1/KH500	01-500KK	01-500KW
750 H2	01-750KK	01-750KW





LP Silenced Expansion Chambers

For the racer who must have every bit of power possible from his stock class type racer, Denco offers a special Limited Production expansion chamber. These pipes have slightly revised cone angles and positioning for peak high RPM power level — available in black, silenced form only.

LP EXPANSION	500 H1/KH500	01-500LP
CHAMBERS	750 H2	01-750LP

Denco Exhaust Tuners

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One of the very simplest power boosters around for riders of the smaller displacement Kawasaki triples, the Denco Tuners bolt in to replace the stock exhaust baffles in minutes. They decrease back pressure and improve low and mid range HP with almost no increase in sound level — excellent for touring enthusiasts.

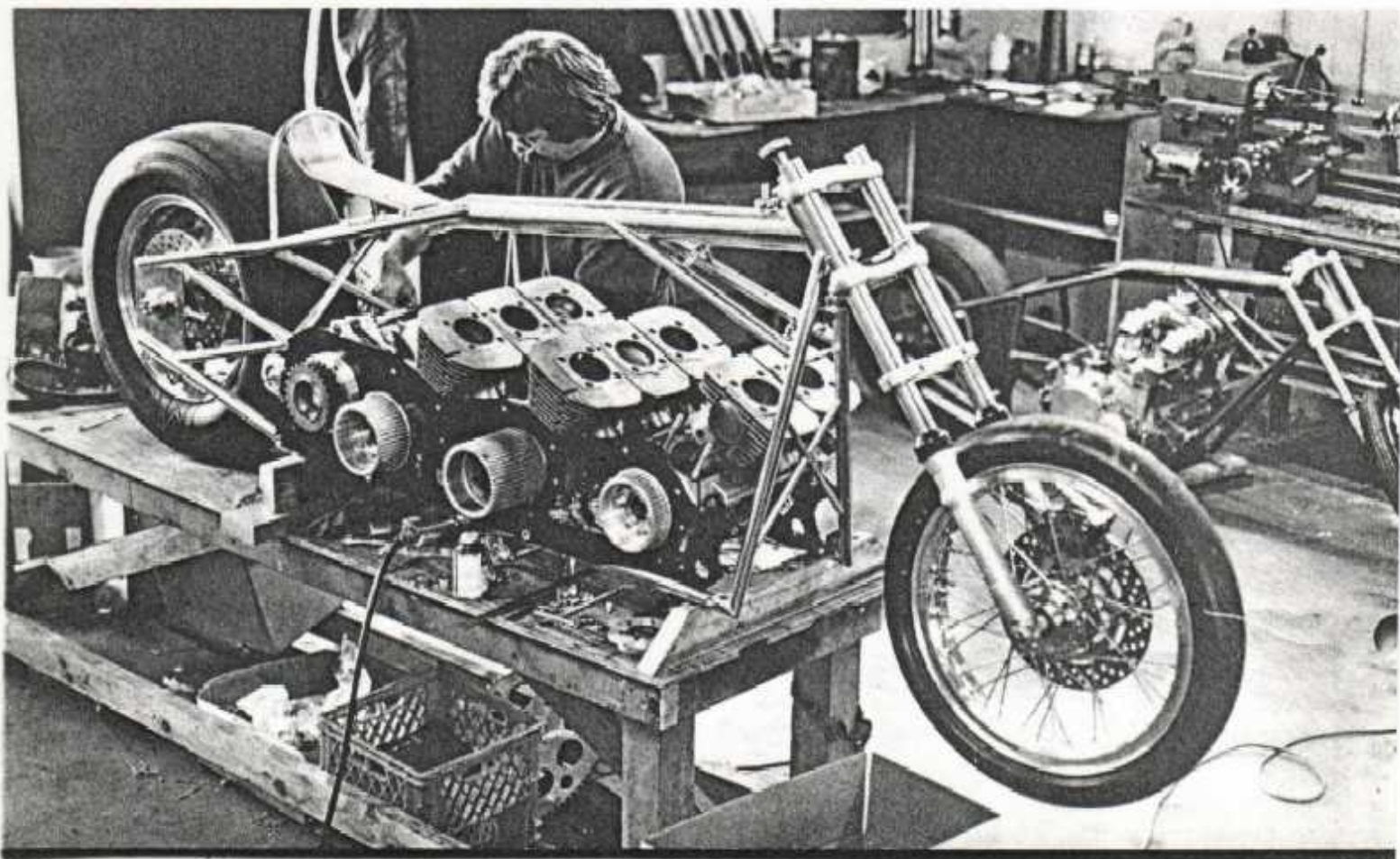
DENCO TUNERS (72-75 H1, all S3 to 75) 02-2

Ball Bearing Clutch Pusher for H1, H2



Clutch pushrod welding is a common occurrence in all kinds of high RPM Kawasaki race motors; this device eliminates the stock metal to metal friction point and also uses a magnesium bearing cap that won't gall on the aluminum clutch cap. No modifications necessary, simply replaces stock pusher.

H1, H2 BALL BEARING CLUTCH PUSHER 16-1



Denco H2 792cc Racing Pistons

DENCO

4480E ENTERPRISE, FREMONT, CA. 94538

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By far the most widely used piston among all configurations of Kawasaki world and national record holders, these high density forged pistons are machined for Denco's exclusive .032" tool steel compression rings. The top ring is pinned at the back for vastly improved end gap cooling and the bottom ring pin is moved 2mm from stock position to allow for wider exhaust ports without "snagging" problems. This bore size allows the use of stock head gaskets; set includes pistons, rings and connecting rod thrust spacers. Also available in .005" oversize for rehones and rebuilds.

792cc PISTON AND RING SET

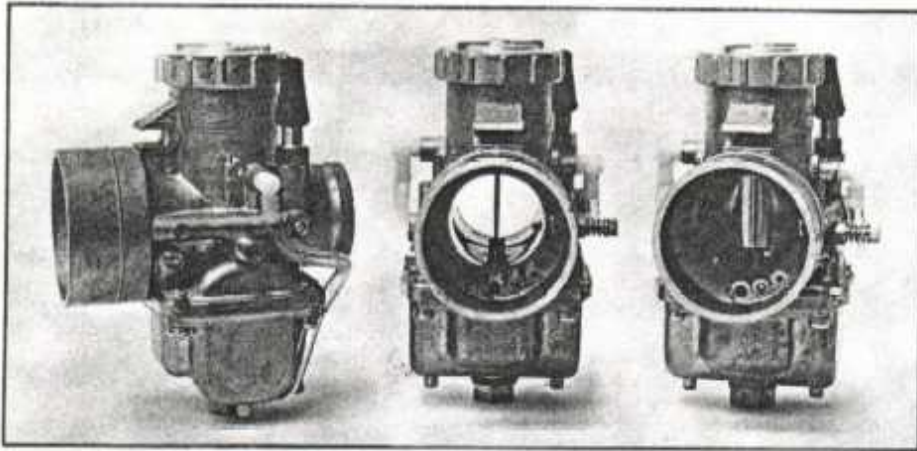
04-1

RING SET ONLY

04-1R

Denco-Mikuni GP Two Stroke Carburetors

24

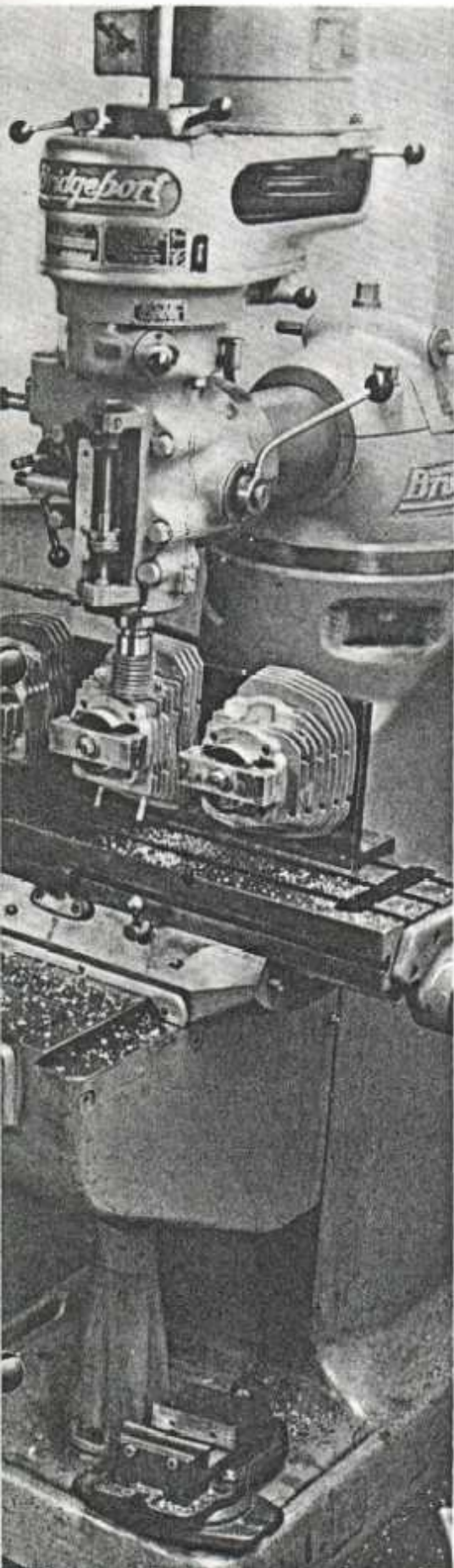


Denco-Mikuni 38mm Racing Carburetors

Mikuni 38mm GP carbs are pure race, all out competition units as used on our 141hp Pro Cobra and 149hp Ultra Cobra 792cc race motors. These carburetors require extensive intake port and cylinder modification including welding and remachining the back of the 750 barrels. They are the ultimate 2 stroke racing fuel delivery system and come specially metered for the application. Denco can also perform the machine work necessary to mate these carbs to your cylinders at extra cost.

MIKUNI 38mm RACING CARBS FOR H2 07-8



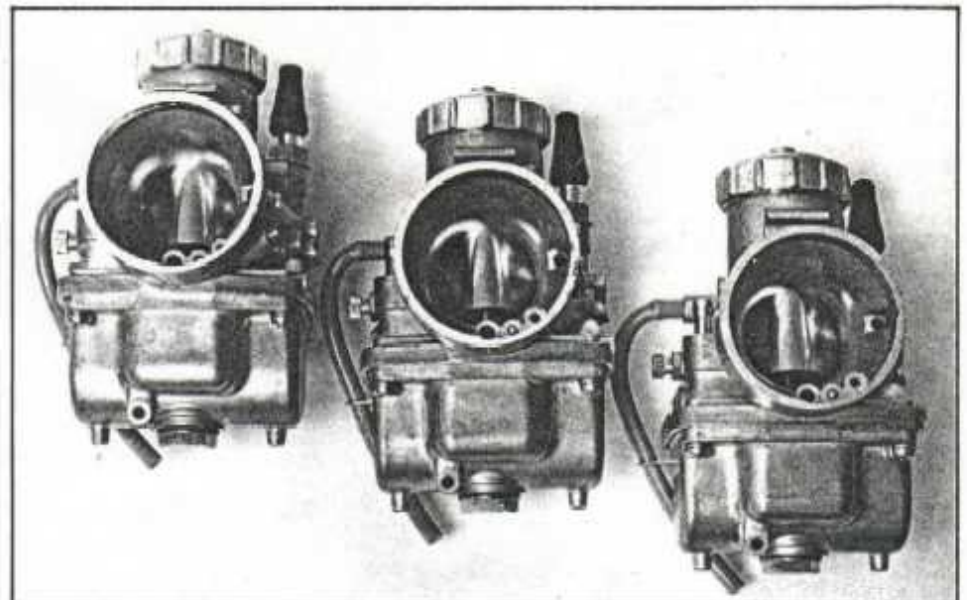


Denco-Mikuni 34mm Carburetors

Following a close second to Denco expansion chambers in terms of horsepower per dollar spent, the Mikuni GP carbs offer a fantastic performance gain for a relatively small investment. The 34mm series carbs are fully streetable with full idle systems and vacuum tap on the right side carb so that the stock gas tank petcock arrangement is retained, i.e., vacuum demand gas supply and normal "reserve" position. These carbs are special Denco items custom metered for each application (not stock Mikuni replacements) and use the factory late model float bowl oil tap on 74-75 H's. They are a bolt on installation (require #14-1 adapter manifolds for H1 but still no machine work) and use stock throttle and starter cable controls.

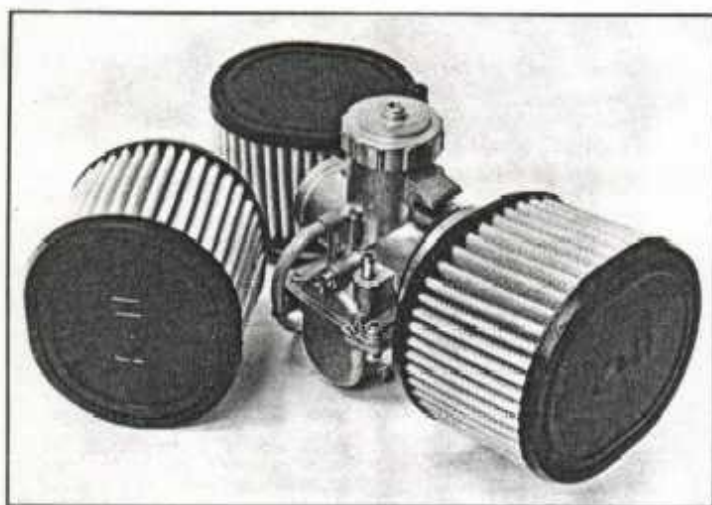
DENCO-MIKUNI 34mm CARBURETORS

H2	72-73	STREET & RACE	07-3
H2	74-75	STREET & RACE	07-4
H1	69-76	RACE	07-5



Denco-Mikuni GP Two Stroke Carburetors

26

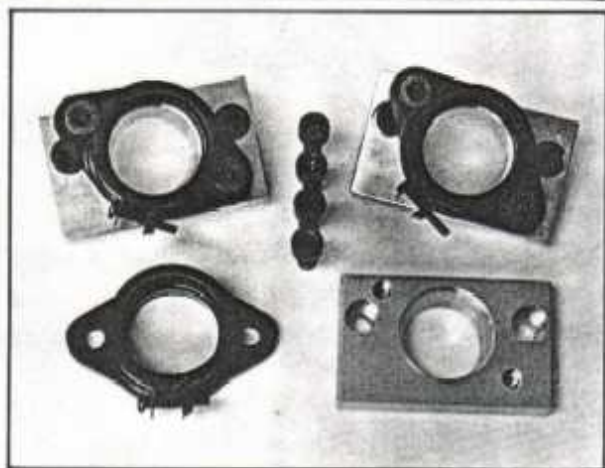


Denco K&N Air Filters

Based on actual drag strip test results K&N and Denco have developed the only non-restrictive air filter for Kawasaki triples. These oval section filters will protect your engine from ingesting harmful grit and will prolong piston and ring life immensely — a must for the street.

DENCO K&N AIR FILTERS

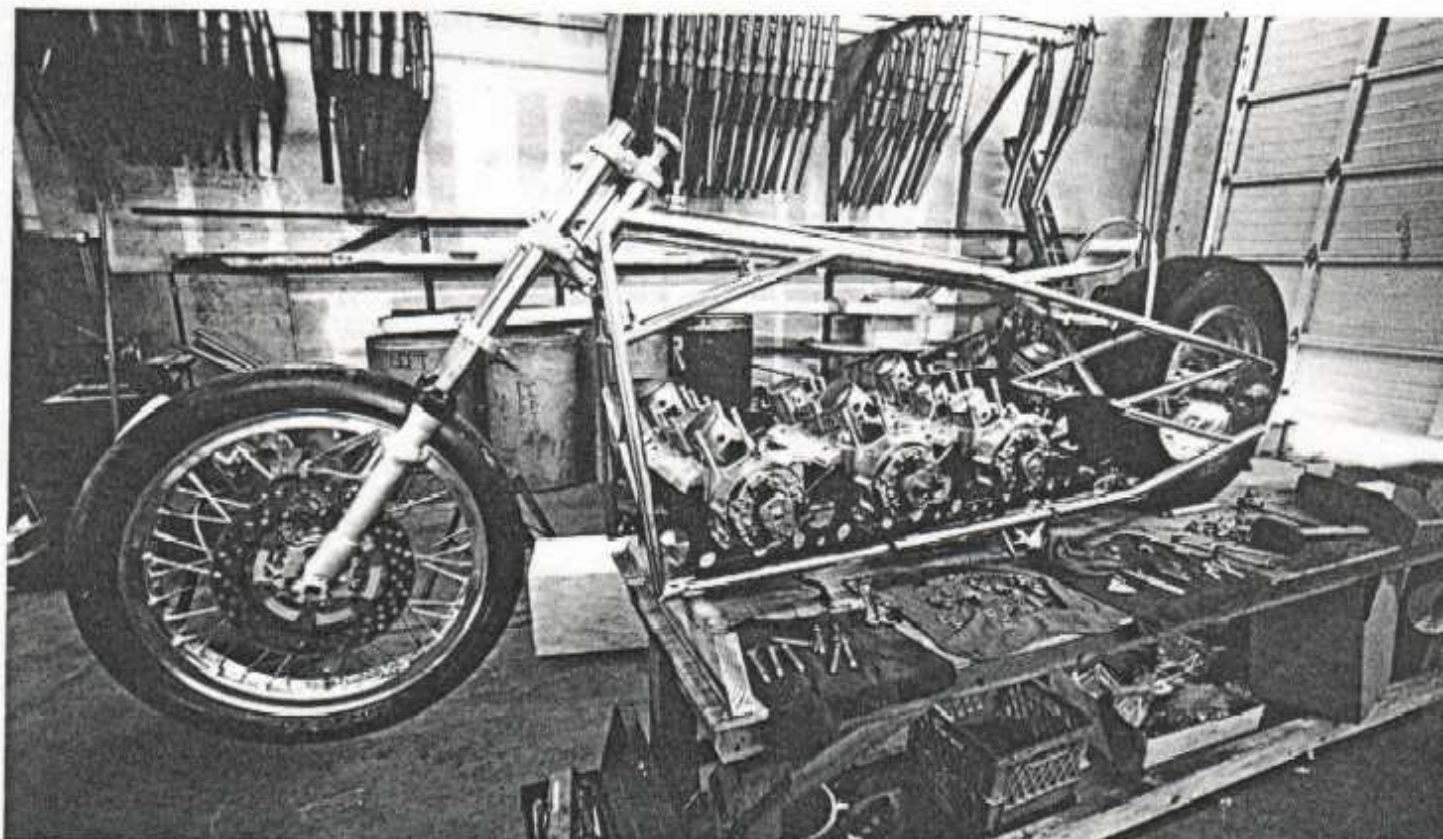
H1, H2 WITH STOCK CARBS	15-1
H2 WITH 34mm MIKUNIS	15-3



H1 34mm Adapter Manifold

Aluminum adapter plates and rubber manifolds allow direct bolt on of 34mm Mikuni carbs to H1 cylinders. All needed bolts and clamps included. Three per set.

H1 CARBURETOR ADAPTER MANIFOLD	14-1
H1 ADAPTER KIT WITH 34mm CARBS	14-2

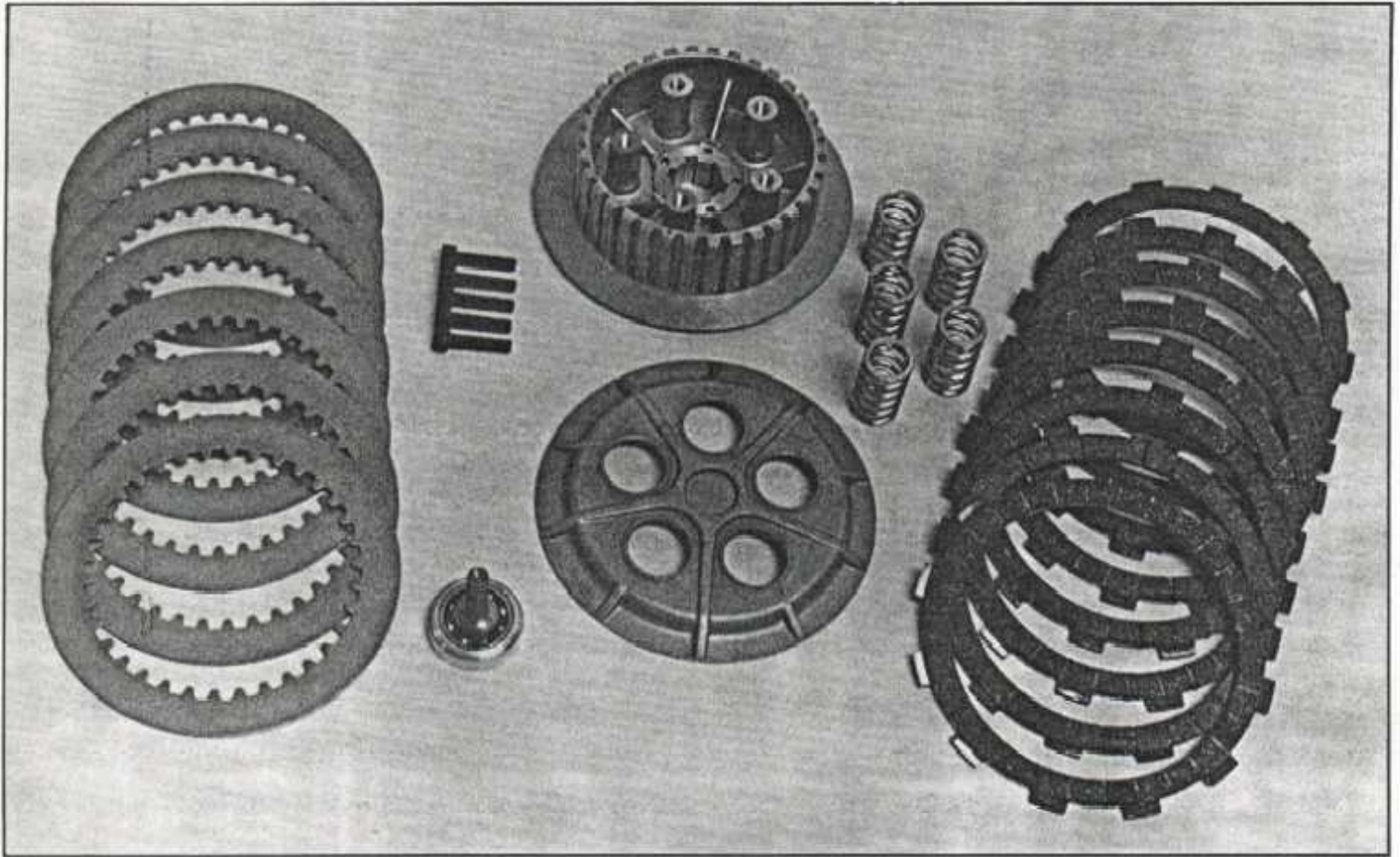


H2 15PlateClutch

DENCO

4480E ENTERPRISE, FREMONT, CA. 94538

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The sure cure for the weak link in the H2's power delivery system, this 15 plate clutch assembly is beefy enough to be standard on our 149hp Ultra Cobra motor. It is by far the strongest clutch available anywhere, and we recommend it for all applications, even the street. This unit includes:

- 8 friction plates
- 7 steel plates
- 1 Denco ball bearing pusher assembly
- 1 set competition clutch springs
- 1 set allen head clutch bolts
- 1 special Denco pressure plate and inner hub

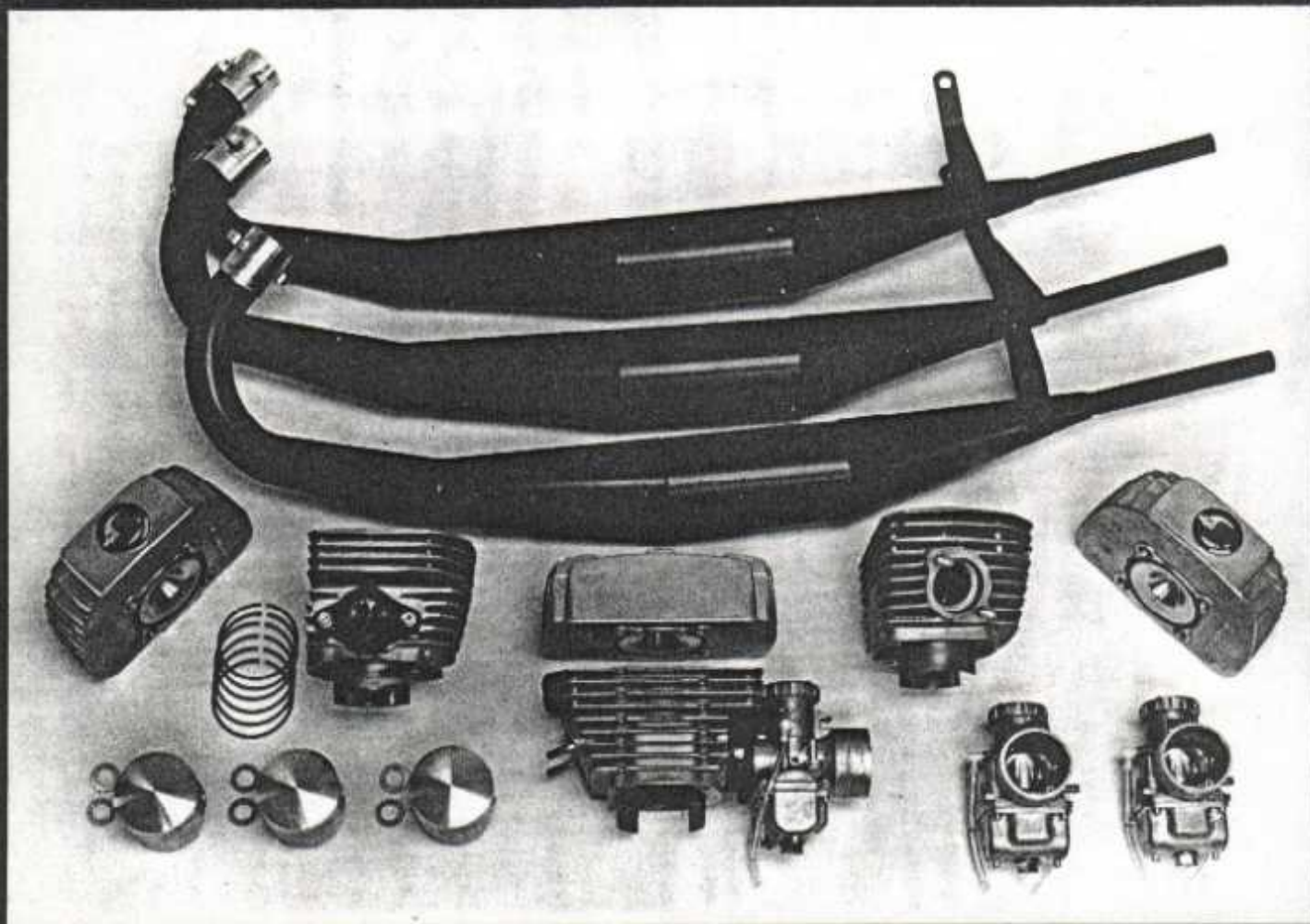
15 PLATE CLUTCH KIT	16-2
FRICITION AND STEEL PLATES ONLY (replacement)	16-3

DENCO TWO-STROKE RACING MOTORS

For the past several years there really hasn't been any other name than Denco when it comes to talking about high performance Kawasaki triples. Denco has powered more record holders and more race winners than all the other racing shops and parts manufacturers ever dreamed of. It would be easy to rest on our laurels and go on to more profitable endeavors, but drag racing is in our blood. We still always want to be quicker and better than everybody else.

Our advice to beginning builders is for your

first modifications to be the exhaust system; our expansion chambers make more horsepower for the money than anything you can bolt on a motorcycle. From there the carburetion is the next biggest per dollar performance gain. Porting should be regarded the final step, the refinement that brings the most out of the now upgraded intake and exhaust systems. Of course you will have to maintain the other powertrain essentials to go along with the engine — it's the exact right combination of motor, clutch and gearing that



Denco H1 532cc Motor Kits

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makes some bikes remarkably faster than the others like it. When in doubt on tuning procedures, consult the experts — either your Kawasaki shop manual or an established Denco racer if possible.

Once again we have revised and updated our line of H series racing motors and in many cases made our products less expensive and easier to buy. All two stroke motors except for the Ultra Cobra 149 are now sold as top end kits: you send Denco your cylinders and heads and we ship back everything you need to assemble a competition proven Denco Cobra motor. We have spent five years and more than \$100,000 to develop these combinations, and there is no surer way to hop up a Kawasaki — we know! All kits use Denco components throughout and will positively deliver their rated horsepower without being short lived or impossibly peaky.

The Ultra Cobra 149 motors are assembled only at Denco and as such are treated to a complete lower end blueprint. This service is available for all Denco motors; write or call for specific prices. We can also supply special purpose racing motors in the 250, 350 and 400cc engine sizes, again on special request. All complete engine prices include assembly but do not cover replacement of unserviceable internal parts such as transmission gears or bearings. Denco porting work is designed to allow sequential power step ups — 120hp cylinders may be reworked to 141hp specs by Denco, for example. Cylinders or heads that have been over cut or over ported will be refused since they can not be modified to our specs. All kits are supplied with black expansion chambers — chrome may be substituted at additional cost.

90 Cobra Kit

Our ultimate small bore race motor, the 90hp Cobra holds the modified national records in both dragster and stock chassis form. The H1 cylinder and port design is felt by many to be superior to even the 750, so this is truly an engine with untapped potential. Ship your cylinders and heads to Denco for reworking. Top end kit includes porting, head machine work, Killer racing chambers, pistons, rings and 34mm Mikuni carbs.

MAX HP:	90 at 8800 RPM
DISPLACEMENT:	532cc (32.46 C.I.)
HEADS:	Dual Squish Band .060 Squish gap at ½°
CARBURETION:	3 DENCO Mikuni VM34-300R
POWERBAND:	-20% at 6100 and -20% at 9300
CHAMBERS:	500KW Open

80 Street Cobra

A true giant killer if there ever was one, the 80hp H1 will hold its own against all but the most highly modified street superbikes. Capable of quarter mile times in the mid-11's this kit will surprise anyone who didn't really believe that 500's could be incredibly fast. Send your barrels and heads for modification; kit comes with pistons, rings, 34mm street carbs and black silenced expansion chambers (chrome optional at extra cost).

MAX HP:	80 at 8650 RPM
DISPLACEMENT:	532cc (32.46 C.I.)
HEADS:	Dual Squish Band .060 Squish gap at ½°
CARBURETION:	3 DENCO Mikuni VM34 301S
POWERBAND:	-20% at 6000 and -20% at 8900
CHAMBERS:	01-3 Silenced

2mm OVERBORE

Denco 792cc Racing Motors

*2mm
BORE*

Denco 792cc Racing Kits

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149 Ultra Cobra Motor

As the top of the line Denco two stroke racing motor, the 149 Ultra Cobra has been smashing records in everything from our own triple engine Top Gasser to the single engine alters as well as garnering the national Pro Stock #1 plate for Denco team racer Bob Carpenter. This is the no holds barred racing 750 motor, squeezing over three horsepower from every cubic inch of displacement as a result of Denco's radical development of two stroke porting theories — you just can't buy more horsepower anywhere. Due to the refinement of this powerplant all 149 Ultra Cobras are built only at Denco. Send your complete motor minus carbs (74-75 cylinders and heads only). This build up includes all porting and head cutting, critical transmission shimming and machine work, oil pump reworking, carburetor float bowl modifications (for oil system) and our 15 plate clutch assembly with ball bearing pusher. A totally massaged motor, delivered ready to drop in your frame and go faster than you've ever gone before. Capable of 9.70/140+ in street legal Pro Stock chassis.

MAX HP:	149 at 9500 RPM
DISPLACEMENT:	792cc (48.33 C.I.)
HEADS:	Dual Squish Band .040 Squish gap at 1/2°
CARBURETION:	3-DENCO Mikuni VM38-1001R
POWERBAND:	-20% at 6700 and -20% at 10,400
CHAMBERS:	750 KW Open



141 Pro Cobra

New to our line of competition kits this year, the 141hp Pro Cobra is based on further refinement of Denco's formerly most popular Pro Stock combination, the 138. This is the engine that turned back the Harleys and Hondas throughout the range of drag racing classes and is our premier power package kit. Ship your heads and cylinders for rework and porting; we'll send back the ported cylinders bored, honed and matched to Denco 792cc pistons and rings, cut heads, a trio of 38mm Denco-Mikuni carbs and Killer expansion chambers. Maybe you better order a set of our wheelie bars while you're at it! Best ET — 9.87 as legal Pro Stock.

MAX HP:	141 at 9500 RPM
DISPLACEMENT:	792cc (48.33 C.I.)
HEADS:	Dual Squish Band .040 Squish gap at 1/2°
CARBURETION:	3 DENCO Mikuni VM38-1000R
POWER BAND:	-20% at 7000 and -20% at 10,600
CHAMBERS:	750KW Open

133 Super Cobra III

The accountant said no, but we said yes so our economy competition motor kit is still in the line up. This is a high horsepower heavy hitter, but due to the less involved cylinder machine work we can offer it at a reasonable enough price so that the beginner can make a professional caliber showing. Porting and machine work, 792cc pistons and rings, KW Killer pipes and 34mm Mikuni carbs included in kit price. Send your cylinders and heads to Denco.

MAX HP:	133 at 9300 RPM
DISPLACEMENT:	792cc (48.33 C.I.)
HEADS:	Dual Squish Band .040 Squish gap at 1/2°
CARBURETION:	3 DENCO Mikuni VM 34-100R
POWERBAND:	-20% at 7,000 and -20% at 10,200
CHAMBERS:	750KW Open

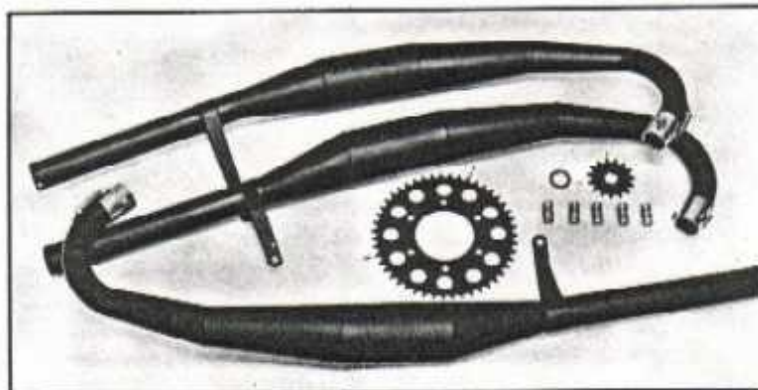
120 King Cobra

The King Cobra is Denco's original superbike motor and by far the fastest street combination available for the money. This is a frighteningly quick (as good as 10.17 ET in a Pro Stock chassis) powerplant, but tractable and dependable enough for everyday transportation. The King Cobra uses 772cc displacement pistons and rings for maximum reliability and a many thousand mile life between top end rebuilds. Silenced SQM black expansion chambers come with the kit, chrome optional at extra cost. Ship your heads and cylinders to Denco; we ship back the pipes, top end kit and Mikuni 34mm carbs.

MAX HP:	120 at 9000 RPM
DISPLACEMENT:	772cc
HEADS:	Dual Squish Band .040 Squish gap at $\frac{1}{2}^\circ$
CARBURETION:	3 DENCO Mikuni VM34-101S
POWERBAND:	-20% at 6800 and -20% at 10,000
CHAMBERS:	01-1 Silenced

Econo Racer Kit

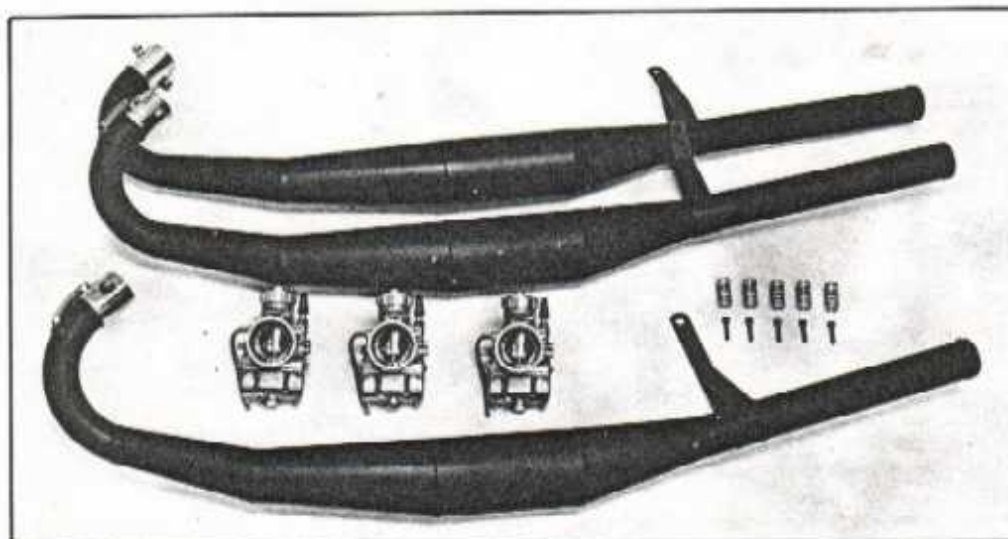
Just the ticket for a bolt on performance wake up for any year H2 — silenced SQM chambers (black is standard, chrome optional), Denco competition clutch springs and allen bolts and the optimum quarter mile/super street gearing. This combination of pieces will put your 750 solidly in the 11's and unleash performance you never thought your Kawasaki had.

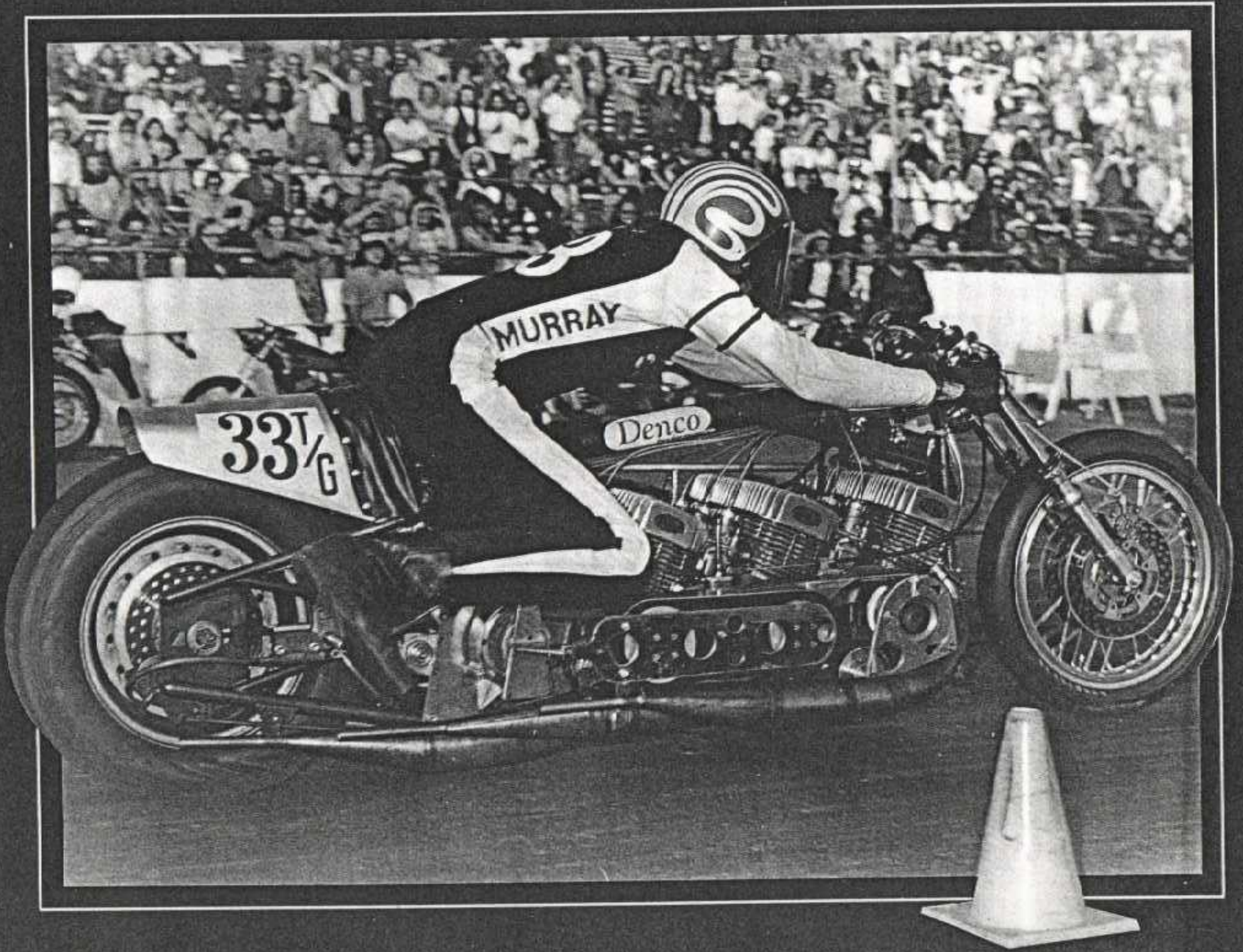


Super Stock X Kit

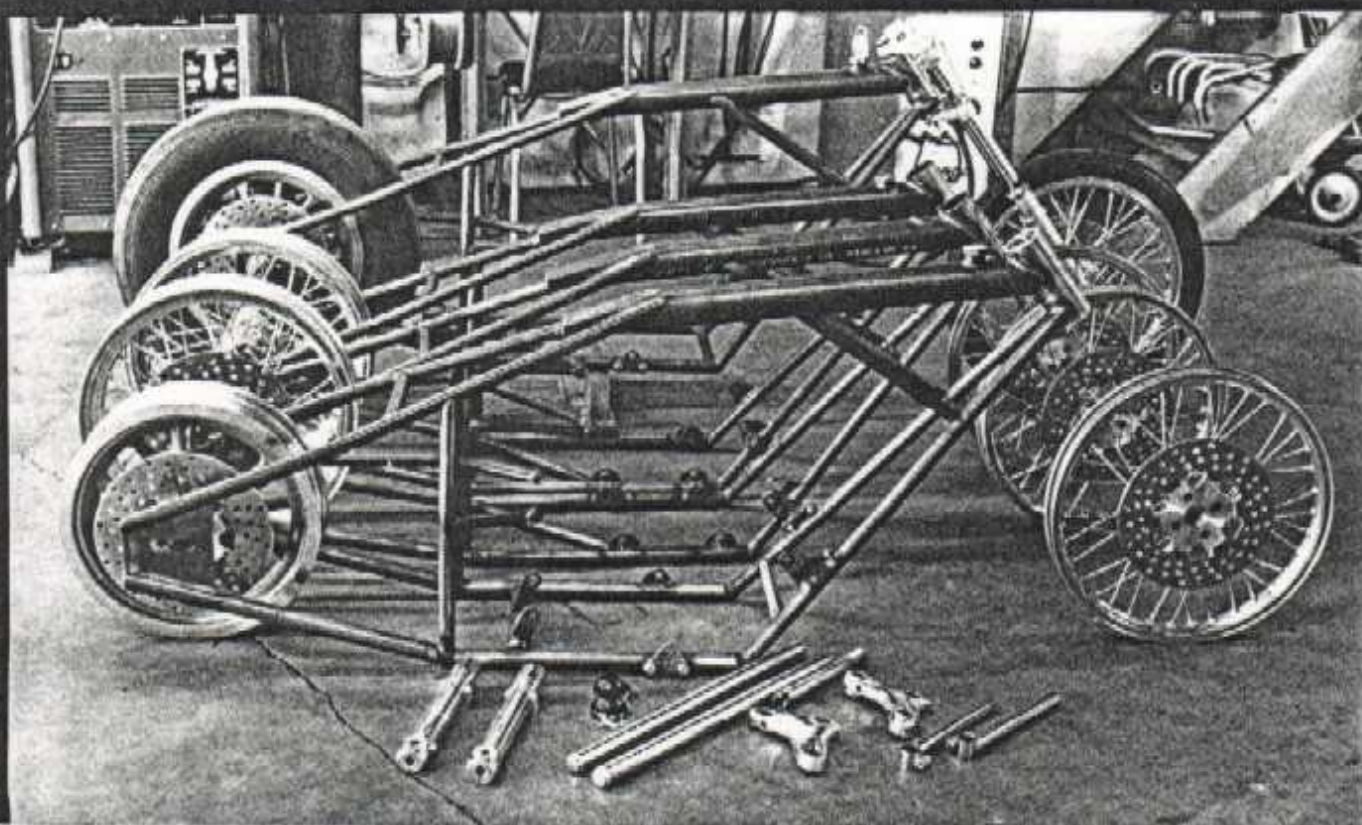
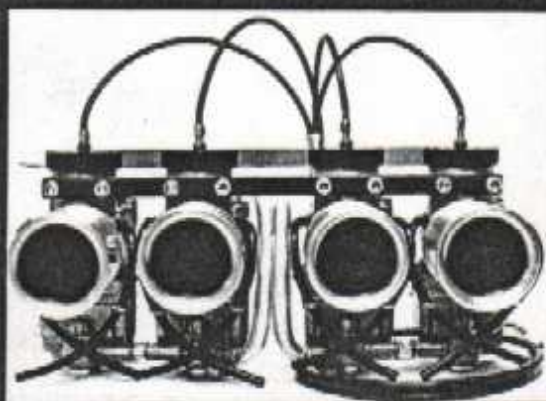
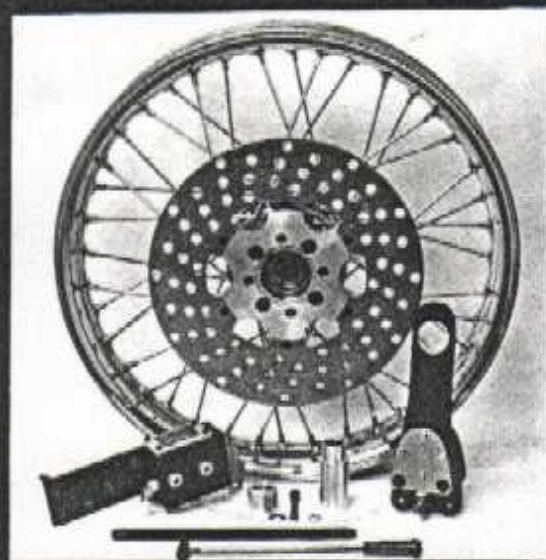
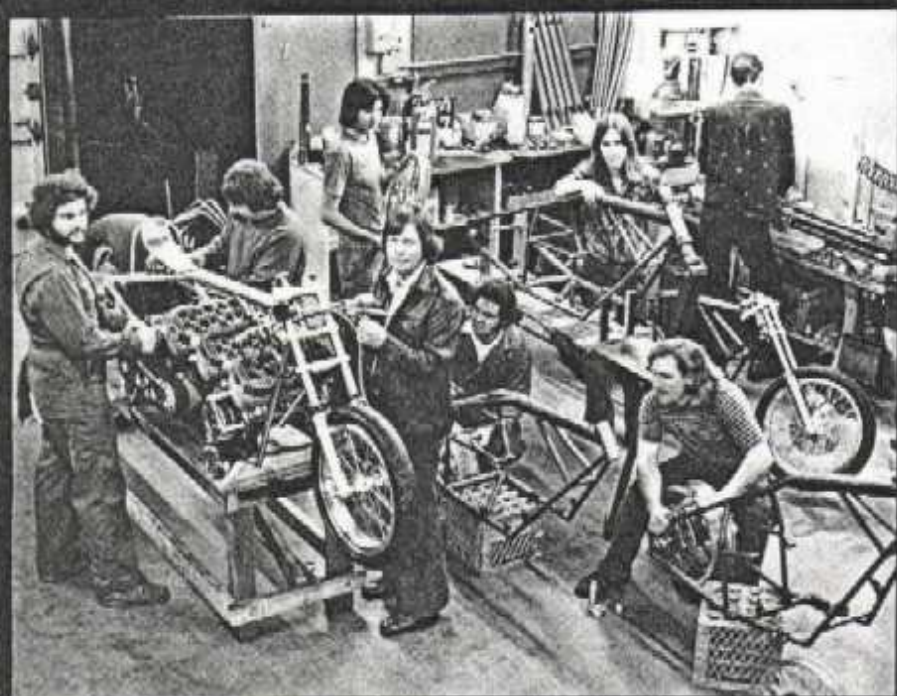
A bolt on kit formulated for AMDRA's and IDBA's fastest Stock Eliminator class, this kit contains these essential go fast components: Denco SQM Limited Production black silenced expansion chambers, Denco-Mikuni 34mm

carburetors, competition clutch springs and allen head clutch bolts. This is a pure Kawasaki class with ET's ranging in the 10.90's; no doubt the Denco equipped racers will dominate as usual.





DENCO KAWASAKI DRAG RACING PRODUCTS



Denco Dragster Frames for Z1 and H1, H2

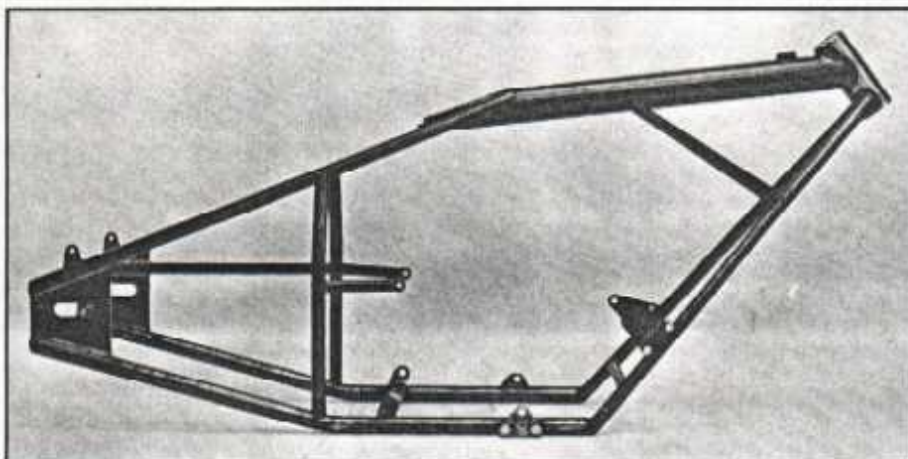
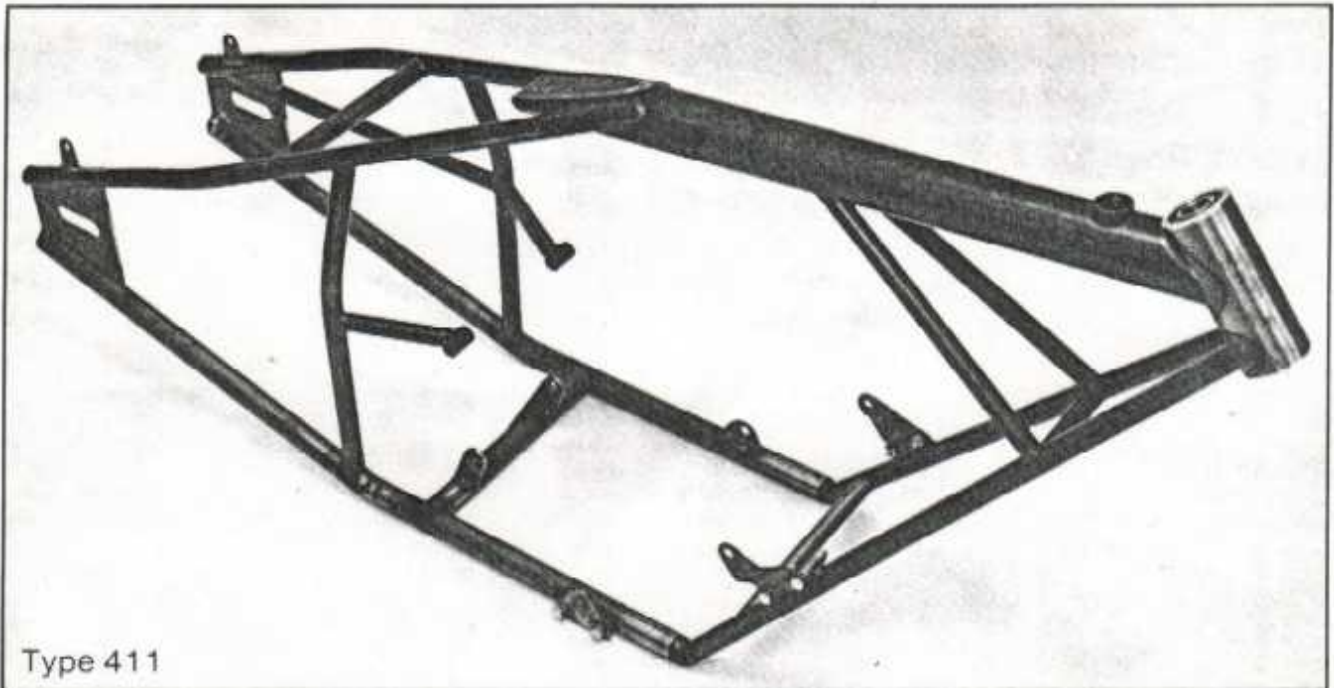
34

Typical of the quality workmanship and advanced engineering that people have come to expect from Denco products, our dragster frames for Kawasakis are the standard of the industry. They are unquestionably the most rigid, best handling chassis to be found anywhere and are the lightest available from any major frame builder: H2 bare frame weighs 26 lb. 6 oz., Z1 bare frame 27 lb. 8 oz., single engine rolling chassis with wheels and tires, 99 lb.

It may not seem logical that a company basically into volume sales of "small" parts such as headers, pistons and carburetors would want to bother with painstakingly hand

built one-at-a-time dragster chassis. Actually, we were forced into the business — there was simply not any safe handling, straight running frame for sale capable of containing the kind of power that Denco motors produce. In order for our customers to go fast safely with Denco powerplants we had no choice but to hire the top dragster racer/frame builder in the country and go into production.

All Denco frames are fixture built on our custom chassis jig from 4130 seamless chrome moly tubing and are fully heliarc welded. Triangulated pyramid section construction is used throughout to provide maximum rigidity at minimum weight and there



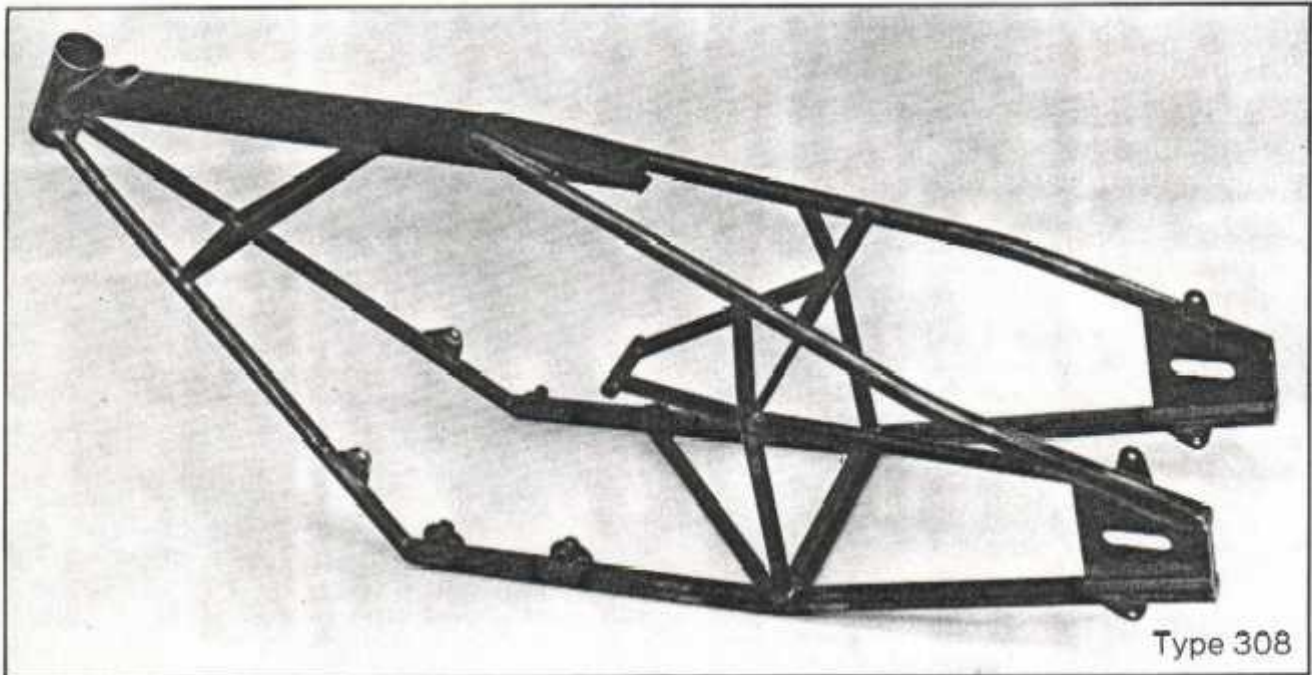
is supplemental bracing on the drive (sprocket) side in the rear wheel area. Frames are available in the following configurations:

H1, H2	single engine	Type 308
H1, H2	double engine	Type 616
H1, H2	triple engine	Type 924
Z1	single engine	Type 411
Z1	double engine	Type 822
Z1	single engine fuel	Type 411F

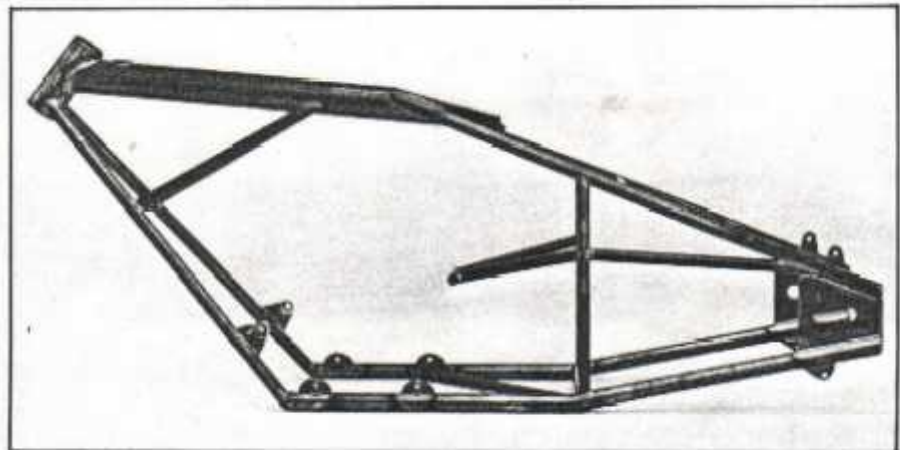
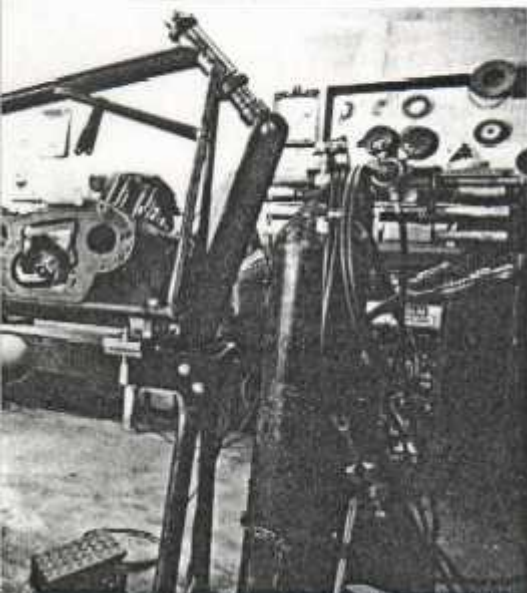
Single engine frames have a 71 inch wheelbase (73" on Type 411F, 78" on Type 924) and all use a 40 degree fork head angle.

Singles will accept a 6" wide slick; Type 411F uses an 8" tire and triple engine frames take a 9" wide tire.

All chassis have an integral 3½ quart capacity gas tank with rear drain plug. Two inches of drive chain adjustment is provided for and push type adjusters are used on all frames. Rear axle plates are undrilled with regards to footpegs; the customer can locate his footpegs to suit his own riding style and comfort. All motor and accessory mounting tabs are 4130 steel rather than cheap flat stock and the fork head is set up for angular contact type bearings rather than preloaded ball bearings. (CONTINUED)



Type 308

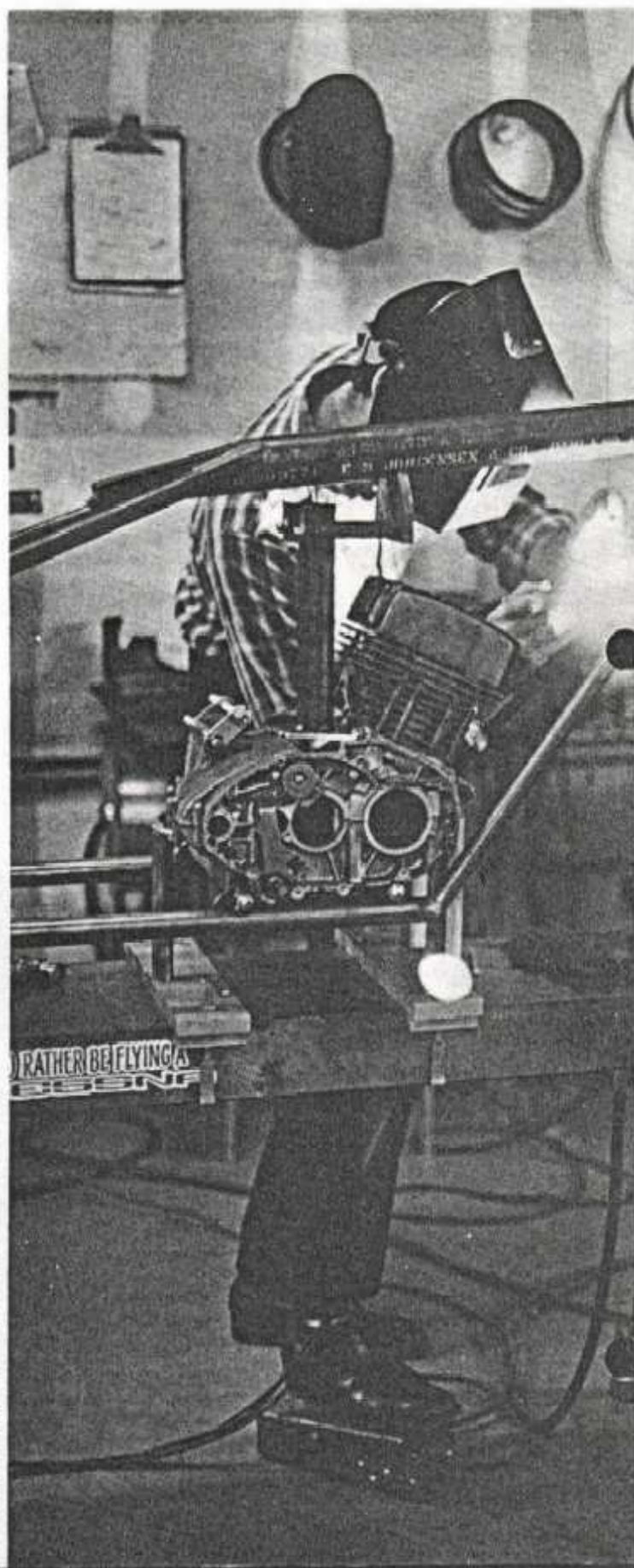


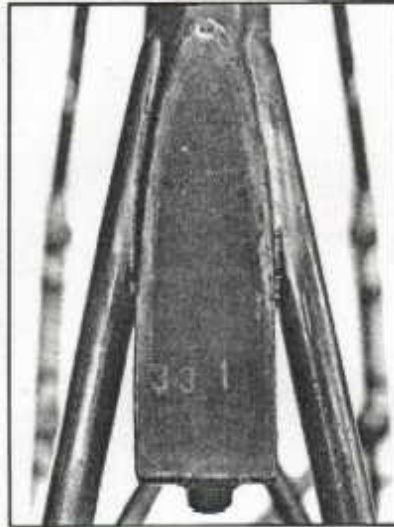
Denco Dragster Frames for Z1 and H1, H2

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Dragsters are available from basic bare frame form to complete ready to race bikes. Bare frames are unpainted and include motor mounting tabs and brackets, integral gas tank and cap, rear axle adjusters and rear master cylinder mounting plate. All additional accessories are optional at extra cost and can be purchased separately or fitted to the frame. Rolling chassis are complete with brakes, wheels, forks and linkages; all parts are fitted except the rear fender (upholstery not supplied). Rolling chassis come less motor, control cables, tires and tubes and electrics.

Finished frames can also be purchased with choice of complete Denco racing motors — Z1, H1 or H2. Race ready finished dragsters are shipped completely fitted and assembled with the frame painted gloss black. Write or call for particulars on any dragster configuration and full details on options and outfitting. Denco specializes in the personal touch on everything from our bare frames on up to the world's most expensive production motorcycle, the \$15,000 ready to run triple engine Type 924.





Options to bare dragster frames:

Ford head bearings

Fork head bearing cones

Axle (hollow 4130 steel) with axle nuts and washers

Forks with triple clamps, stem and axle

Front wheel with disc, caliper and master cylinder

Rear wheel with disc, caliper and master cylinder

15" magnesium 12 spoke wheel

15" spun aluminum monocoque wheel

18" wire spoke alloy wheel

Clip on handlebars: Tomaselli aluminum

Denco 4130 tubing
super light

Chain and sprocket kit (extra chain)

Foot pegs and universal linkage (cut, one end threaded)

Rear fender kit

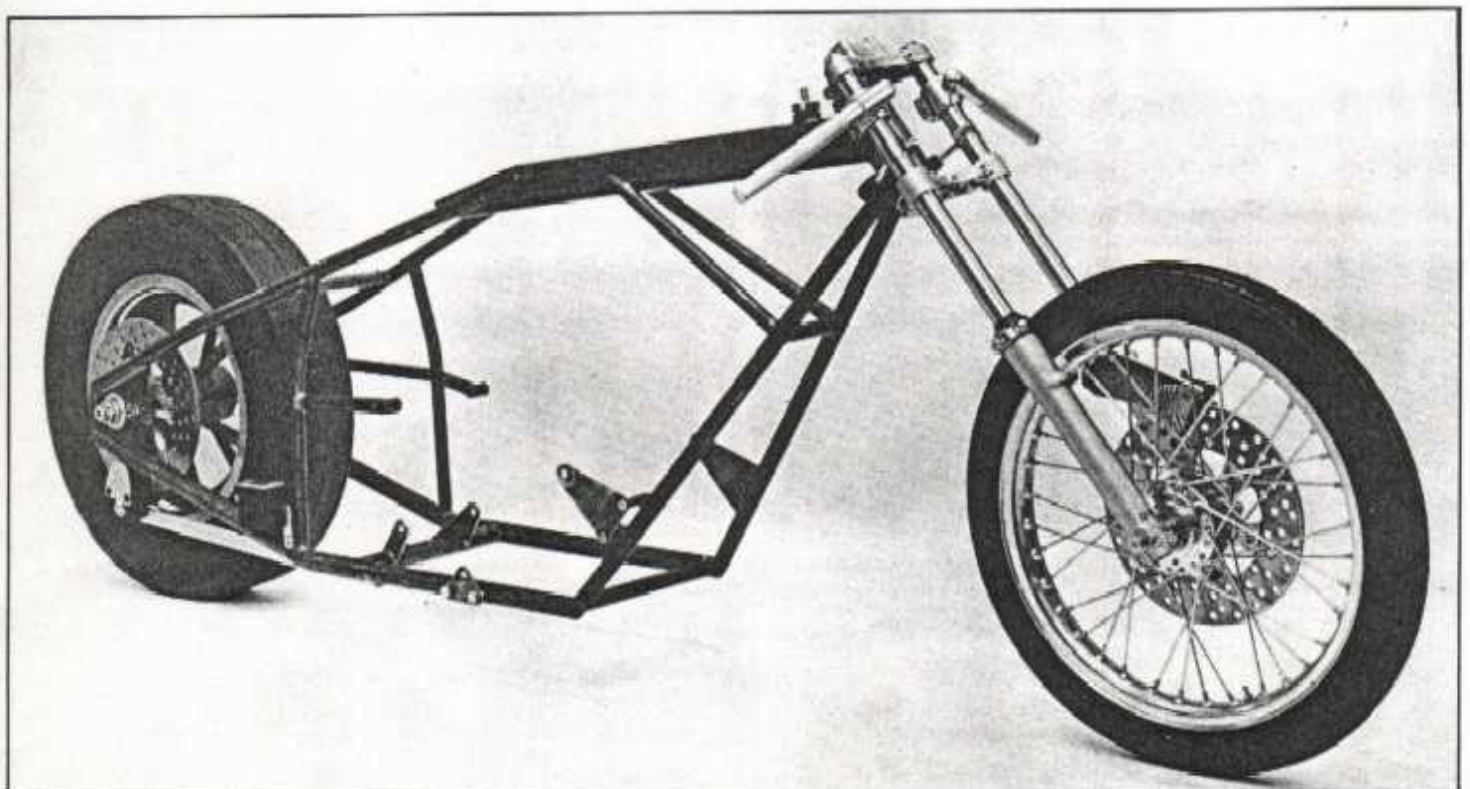
Mounting tabs: wheelie bar

rear fender

cable routing

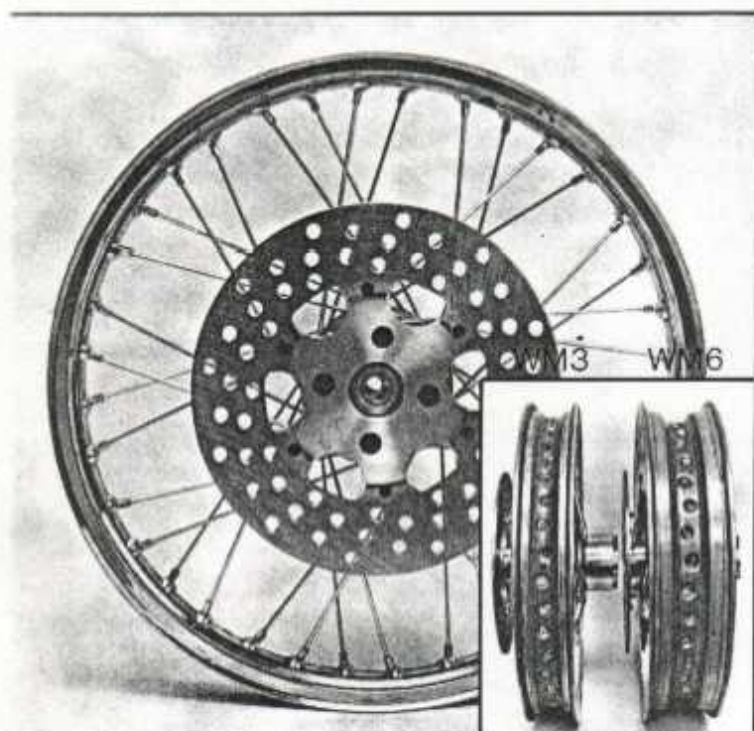
Dragster wheelie bar

(Denco frame order only)



Alloy Spoke Wire Wheels

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Lightweight Wheels

The strongest and lightest wheel assemblies anywhere, Denco alloy wheels use a captured bearing hub to positively prevent side play or wobble. All wheels shipped complete with bearings, vented disc and aluminum carrier. Rear wheels accept Barnes pattern sprockets.

ALLOY WHEEL AND DISC ASSEMBLIES

WM6x18	15 lb. 5 oz.	23-5
WM3x18	15 lb. 5 oz.	23-6
WM1x18	8 lb. 12 oz.	23-7



Rear Wheel Kits

In drag racing removing weight is as good as adding horsepower — both make you go faster. Put your Kawasaki on a diet with the Denco alloy rear wheel and disc brake conversion kit — save 18 lbs. over stock wheel and drum brake. The wide WM6 rear wheel allows mounting of road race low profile slicks required for proper traction with high horsepower Kawasakis and the lightweight vented meehanite disc assures rapid fade free stops (also sold in WM3 stock replacement width). Kit includes captured bearing design hub laced to alloy rim (Barnes sprocket bolt pattern), 3 wheel bearings, disc and carrier, caliper and bracket, master cylinder and mounting plate as well as all required brake lines, fittings, hardware and spacers.

Z1 REAR WHEEL AND DISC CONVERSION KIT

WM6	23-1
WM3	23-2

H2 REAR WHEEL AND DISC CONVERSION KIT

WM6	23-3
WM3	23-4

Denco Dragster Rear Wheels

DENCO

4480E ENTERPRISE, FREMONT, CA. 94538

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Magnesium 15 inch Twelve Spoke Wheel

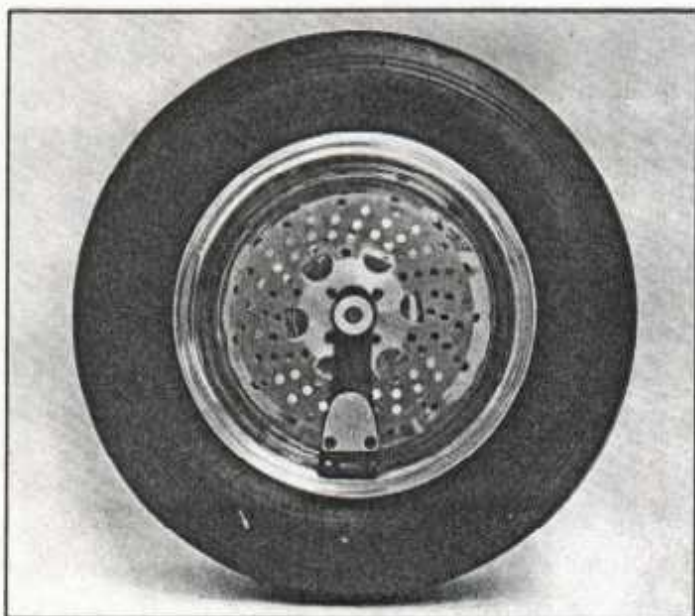
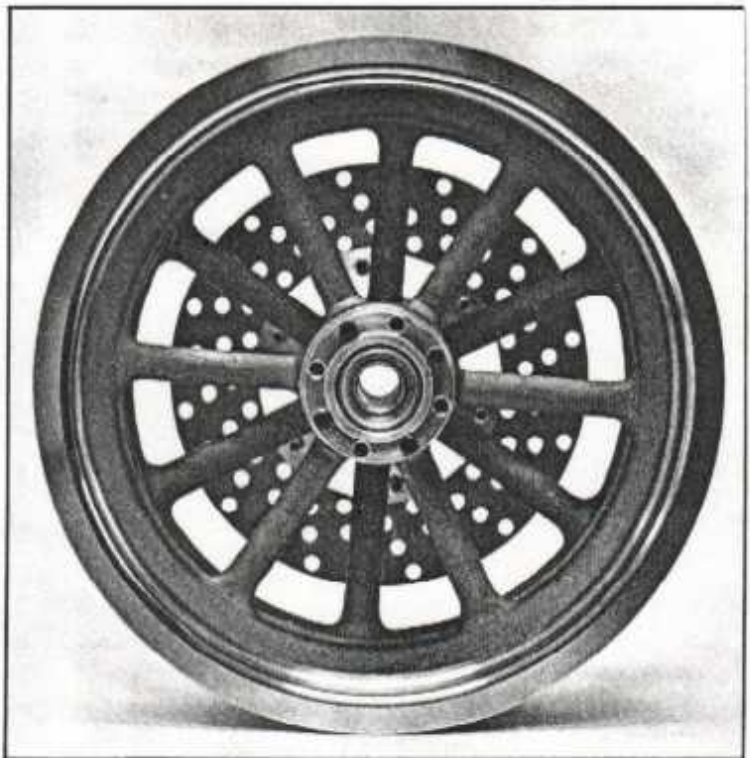
Our very exclusive and distinctive dragster lightweight 15 incher, this beauty weighs in at just 16½ lbs. complete with disc and wheel bearings. It has a 3¾" bead width and will mount slicks from 5 to 6½ inches wide. Incredible strength at a very low weight thanks to magnesium.

DRAGSTER 12 SPOKE MAG WHEEL 23-8

Monocoque 15 inch Dragster Wheel

The best wheel going for heavy multiple engine dragsters, this two piece bolt together spun aluminum wheel is rapidly becoming the most popular wheel design in all types of drag racing. Super strong and quite pretty, this wheel measures 15 x 6" and will accept slicks from 7 to 9.2 inches wide and is used on our 170 mph Top Gas Triple. Wheel is supplied with hub, bearings and brake disc.

MONOCOQUE 15" DRAGSTER WHEEL 23-9



Champion Spark Plugs

DENCO
4480E ENTERPRISE, FREMONT, CA. 94538

One of the secrets of the racing success around Denco has been the consistent use of Champion spark plugs for all applications, from mild street cruising to fuel dragsters because of their superior quality and vast selection of heat ranges. Why settle for anything less than the very best?

We can supply all the impossible to find trick racing plugs that make the difference between winners and also rans.

Two Stroke Champion Spark Plugs

	STANDARD TYPE	GOLD PALLADIUM
HOT	L81MC	L6GMC
	L78MC	
	L62RMC	L4GMC
	L60RMC	
	L77JMC	L3GMC
	L57RMC	
	L87RMC	L2GMC
	L84RMC*	L55GMC*
	UL17VMC	
COLD	L20VMC	

*Racing on 120 to 149hp 792cc motors.



Four Stroke Champion Spark Plugs

	STANDARD TYPE	PROJECTED TYPE	GOLD PALLADIUM
		N6YMC	
HOT	N3MC		N3GMC
	N2MC		N2GMC
	N62RMC		
	N60RMC	N60YMC	N59GMC
	E59RMC		
	N1MC		
	N57MC		
	N57RMC		N57GMC
	E55MC		
COLD	N54RMC		N55GMC

Two Stroke

1) All Kawasaki triples run best and produce maximum usable horsepower with 155psi cranking pressure. More compression will improve bottom end power slightly at a major loss in top end power. Less compression results in about the same amount of top end power with a major loss in bottom end and midrange power.

2) Good piston ring seal is probably the most important thing to achieve in a racing motor. Clean, hard running and the lack of carbon buildup below the rings are good signs of proper ring seating. We find that a relatively fine cylinder wall finish breaks in the quickest and seals the best in race motors; when reringing it is not necessary to rehone unless the cylinder is out of round or has scratches in the top part of the ring travel where compression will leak by. Top name drag pros will change rings as often as every eight passes down the strip if ET's fall off due to ring wear.

3) Ignition timing of 23 to 25 degrees BTDC is the *right* ignition timing. Advanced timing beyond this point will slow down the bike's top end (mph in the quarter mile) and also make the motor seizure prone.

4) Run the coldest spark plugs the ignition will fire and jet down as lean as necessary to get a good plug reading with the cold plugs. Any spark plugs hot enough for the street are too hot for racing.

5) Side gap electrode spark plugs will produce the strongest top end power. Conventional electrode plugs will produce the strongest bottom end.

6) Learning to read spark plugs is the only way to really be able to fine tune a race motor. Most spark plug companies offer brochures or charts showing what to look for in insulator coloring, deposits or wear. The tuners who fully understand what to look for on spark plugs will always get more power from a given motor combination than tuners who cannot read plugs.

7) A top notch high output motor will always have a proven combination and balance of proper port timing, port shape and size, exhaust system (expansion chambers) and intake tract (carburetors). More or bigger is *not* always better.

8) Porting is not a cure all for an ailing motor; if your motor has problems and you have the cylinders ported it will amplify the problem. If the motor is in good shape and has the proper intake (carbs) and exhaust (chambers) porting will amplify the power output. Expansion chambers are the first best improvement for any two stroke motor, then higher flow carbs and finally porting.

9) If your bike is used on the street we recommend a petroleum based oil (Kawasaki K2, Torco T2, etc.). If your bike is used for racing only, run a castor bean oil such as Blendzall Green racing castor or Castrol R. Current synthetic oils produce a ring sticking and corrosion problem and are not recommended by Denco.

10) Use Premium gasoline only, even though some rider's manuals recommend regular. We use Union 76 Premium or Mobil Premium exclusively. **DO NOT USE UNLEADED REGULAR**, even on a stock bike, as bottom end bearing failure can result.

Four Stroke

1) Compression ratios up to 10.5 to 1 can be used on street operated bikes (10.25:1 with stock cams). Racing only motors work best with 11.5 to 12.0:1 compression on gasoline. Higher compression ratios will hurt top end power.

2) As with the two strokes, good piston ring seal is what separates the good motors from the also rans. Reasonably fine bore finishes and piston rings with high unit wall loading promote good seal in any motor, though they tend to wear out and lose tension faster in race motors.

3) Ignition timing of 40 degrees BTDC works best on street operated 903 Kawasakis as well as oversized Z1/KZ900's. For race only motors 36 to 38 degrees total timing works best on gasoline; more spark advance will slow down the bike's top end power.

4) Run the coldest spark plugs the ignition will fire (critical on Z's) and jet down as lean as needed to get good plug readings. Extended tip plugs (Champion N60Y, N6Y, etc.) will produce more low end and midrange power with no loss of top end. Piston to plug clearance should be checked before running these plugs; learn how to read plugs if you want the most power from your motor!

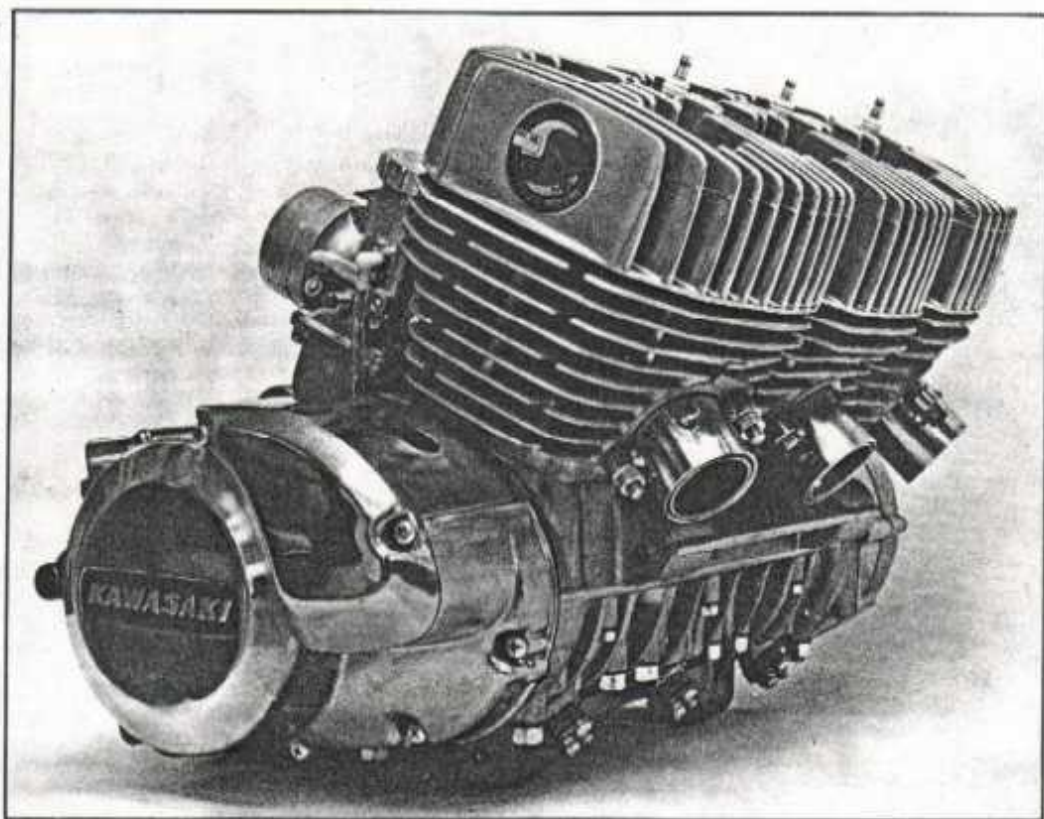
5) Degreeing in camshafts is an especially effective tuning procedure (slotted cam gears required). Degreeing the cams for more overlap will increase top end power at the expense of bottom end power. Degreeing for less overlap will increase bottom end power at the expense of top end. Splitting the overlap is usually the best intake to exhaust cam timing sequence: if the intake valve opens at 31 degrees BTDC, with the cams at split overlap the exhaust valve would close at 31 degrees ATDC.

6) Any time racing cams are installed, lobe to cylinder head clearance and valve to piston clearance must be checked. Absolute *minimum* clearance is 1mm (.040") from valve head to piston crown. Most cams also require racing valve springs, racing or modified tappets and a heavy duty cam chain. Check with the cam manufacturer as to requirements on his cams.

FOR BOTH TWO AND FOUR STROKE MOTORS, the least expensive way to go fast is to buy your parts from a reputable company that also races. This saves you money because the manufacturer has already tested and developed the parts and discarded those that were likely to break or didn't put out the proper horsepower. Most racers would prefer the pride of doing it all themselves, but it is rare for an independent racer to set records and win races because he simply hasn't got the resources to try all of the available combinations. All of the hardest running drag racers buy virtually the same motors and components as their competitors, but it is the top tuner and chassis builder that wins — ingenuity, perseverance and small touches are what separate the champions from the rest of the field.

Denco 149 Ultra Cobra Porting

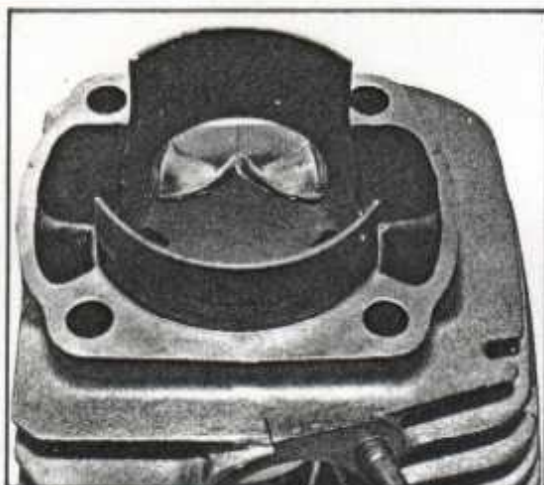
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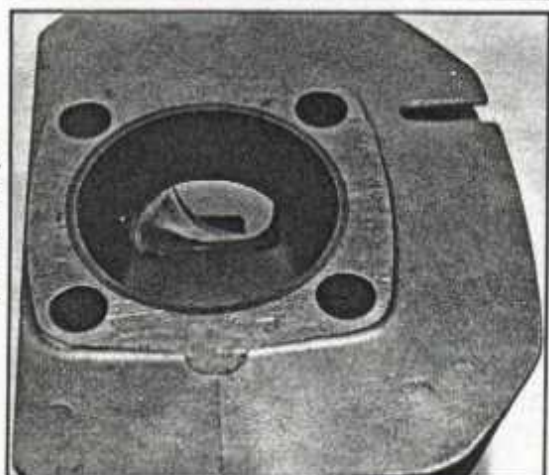
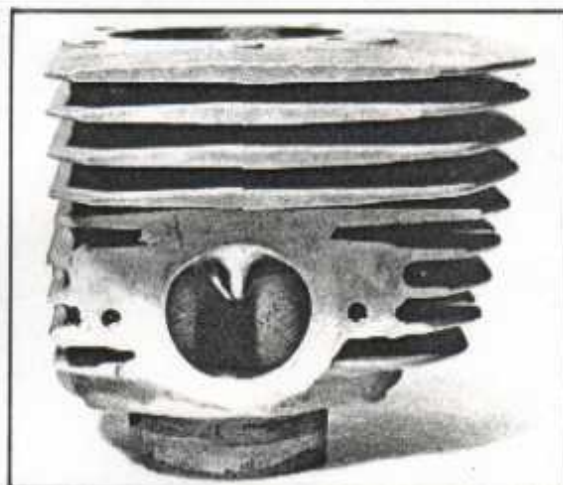
Dual Squish Band head



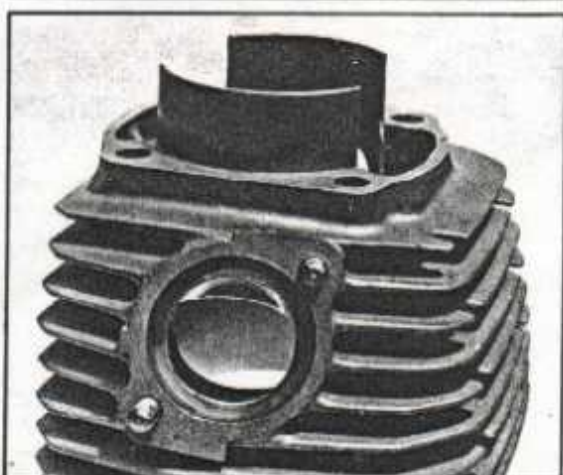
scavenge port



intake port



exhaust port



DENCO BULLETIN 10 KAWASAKI 750 MODEL H2 PORTING SPECS

EXHAUST:	87.25° ATDC, 35mm from top of Cylinder
SCAVENGE:	122° ATDC, stock
INTAKE:	100° ABDC remove 3.5mm from intake side of piston skirt
EXHAUST PORT WIDTH:	Stock DO NOT widen raise entire port roof maintaining stock shape as closely as possible
IGNITION TIMING:	Stock, set precisely
PISTON CLEARANCE:	.0038" With Stock Pistons
CUT HEADS:	.030"
CHAMBERS:	DENCO Silenced 01-1 or 01-1C
MAIN JET:	107.5 to 115 (Start Rich)
SPARK PLUGS:	Champion L55G
OPTIONAL:	Competition clutch springs 03-1 34mm DENCO MIKUNI GP CARBS
MAX HP:	95 at 8700 RPM

DENCO BULLETIN 11 KAWASAKI 500 MODEL H1 PORTING SPECS

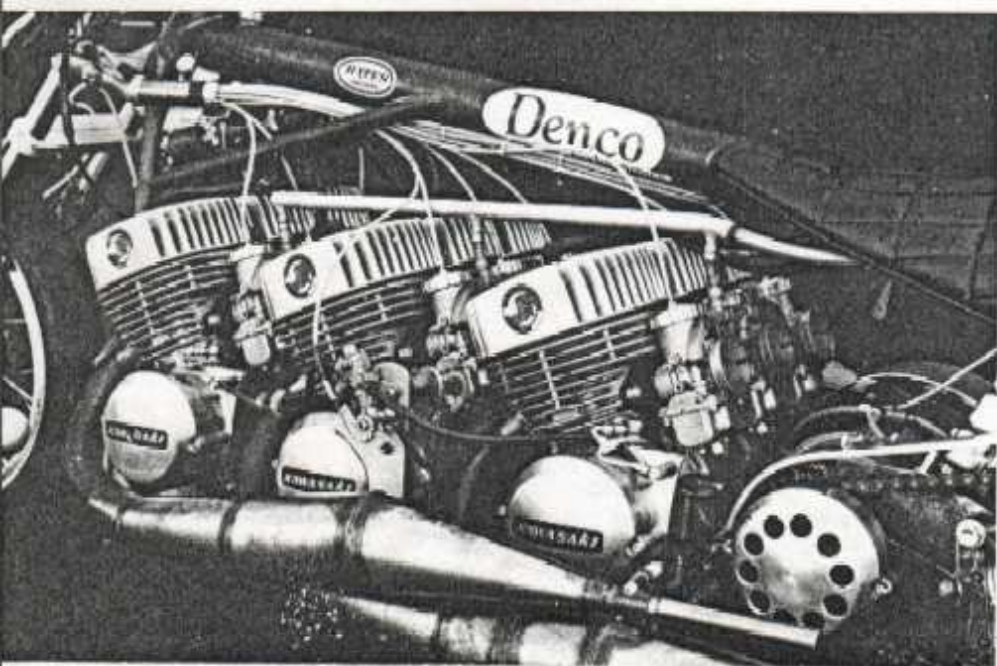
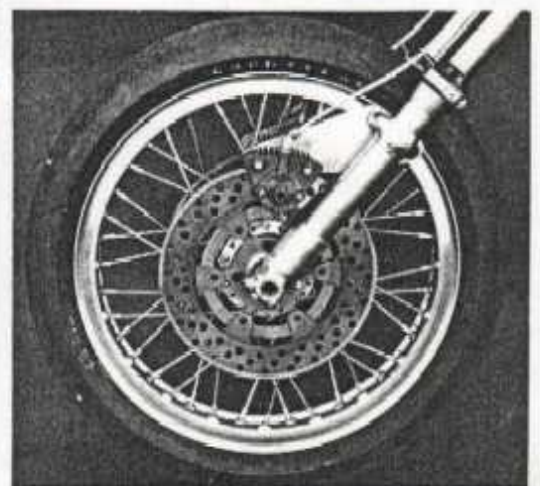
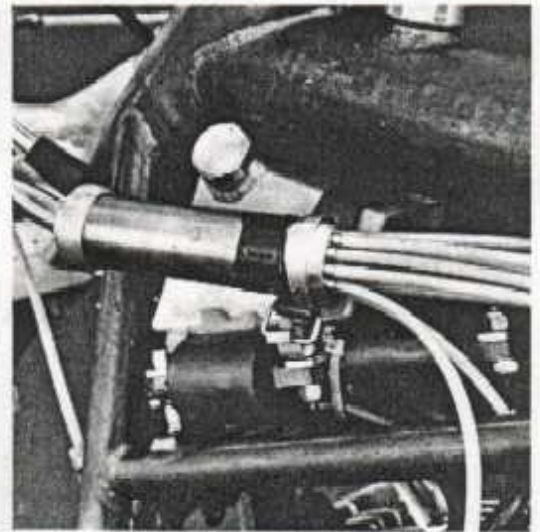
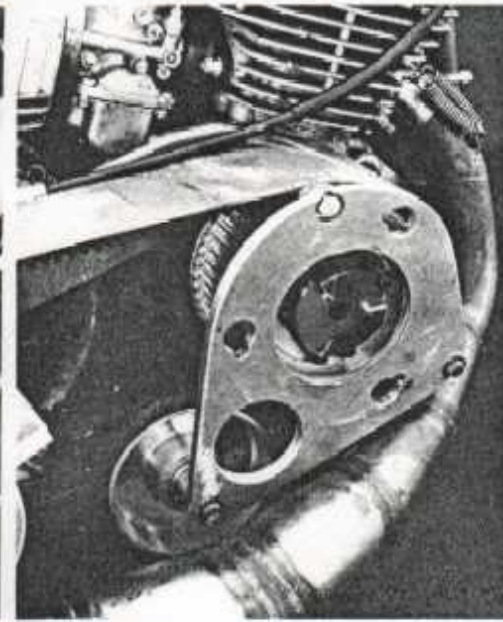
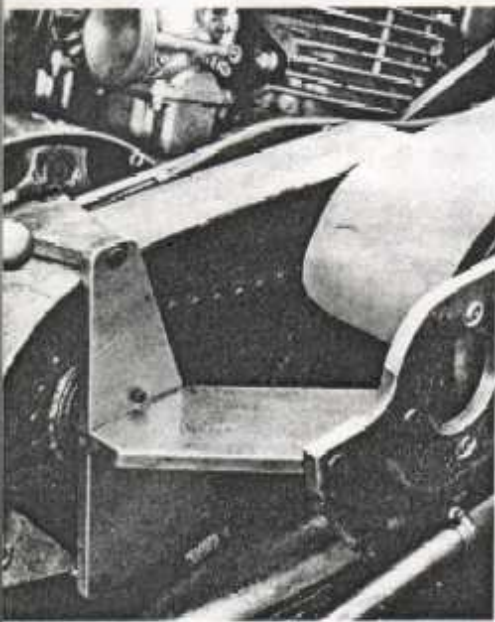
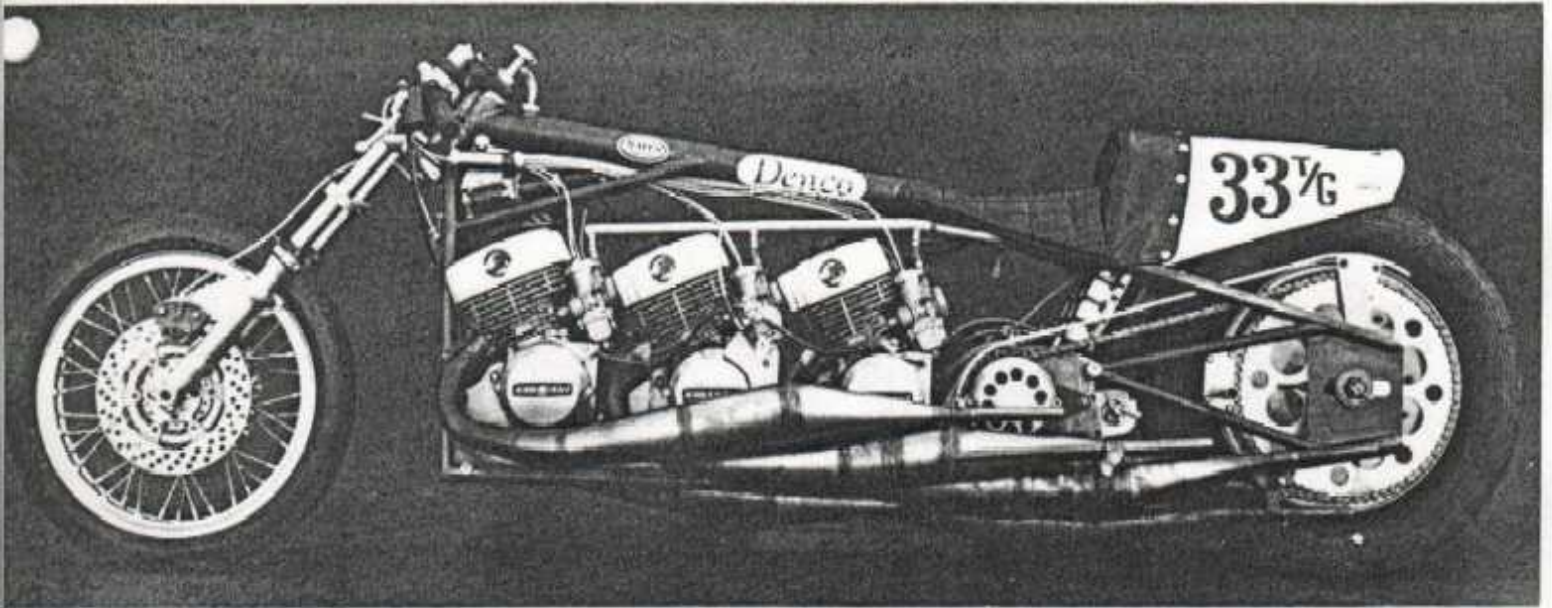
EXHAUST:	87.5° ATDC, 33.8mm from top of cylinder
SCAVENGE:	120.5° ATDC, stock
INTAKE:	100° ABDC Remove 2mm from intake side of piston skirt
EXHAUST PORT WIDTH:	Stock DO NOT widen, raise entire port roof maintaining stock shape as closely as possible
IGNITION TIMING:	3.46mm BTDC all year models
PISTON CLEARANCE:	.0028" with stock pistons
CUT HEADS:	.025"
CHAMBERS:	DENCO Silenced 01-3 or 01-3C
MAIN JET:	102.5 to 107.5 (Start Rich)
SPARK PLUGS:	Point Ignition: Champion L2G CDI Ignition: Champion L55G
OPTIONAL:	Competition Clutch Springs 03-1 34mm DENCO MIKUNI CARB KIT
MAX HP:	72 at 8500 RPM

DENCO BULLETIN 12 KAWASAKI 400 MODEL S3 PORTING SPECS

EXHAUST:	86° ATDC, 30.3mm from top of cylinder
SCAVENGE:	122° ATDC, stock
INTAKE:	105° ABDC, Remove 2.1mm from intake side of piston skirt
EXHAUST PORT WIDTH:	Stock DO NOT widen, raise entire port roof maintaining stock shape as closely as possible
IGNITION TIMING:	2.9mm BTDC
PISTON CLEARANCE:	.0035" with stock pistons
CUT HEADS:	.025"
CHAMBERS:	DENCO Silenced 01-5 or 01-5C
MAIN JET:	92.5 to 105 (start rich)
SPARK PLUGS:	Champion L2G
OPTIONAL:	Competition clutch springs 03-2
MAX HP:	58 at 9000 RPM



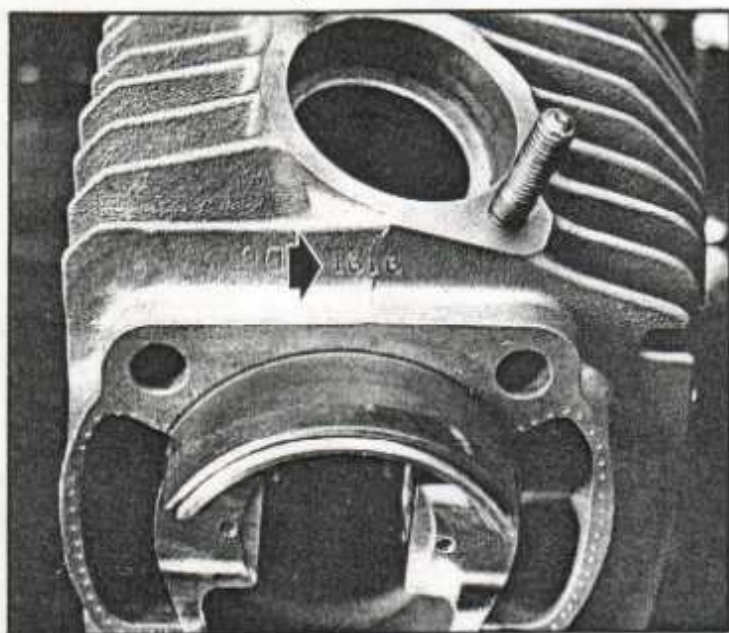
DENCO TYPE 924 GAS DRAGSTER



Denco Serial Number Systems

DENCO
4480E ENTERPRISE, FREMONT, CA, 94538

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It has been said that imitation is the sincerest form of flattery, but frankly we are disturbed, not flattered, by the growing number of motors and drag bikes being sold with supposed Denco Cobra origins. If you are in the market for or have been offered for sale a Denco Cobra motor there are a number of clues in addition to incredible performance to establish authenticity. All Denco Cobra motors are delivered with distinctive identification plaques on both end cylinder heads — these plates indicate horsepower level as well as sequential serial number. Denco serial numbers are stamped for your protection in the bottom cooling fin of every ported cylinder (visible only when cylinder is removed) and on the underside of each Denco prepared cylinder head. Cobra plaques are sold only on the motors — requests for replacements must be accompanied by the remains of any damaged plaque originally issued. A word to the wise should be sufficient — make sure you are getting what you pay for!

