

# HODAKA



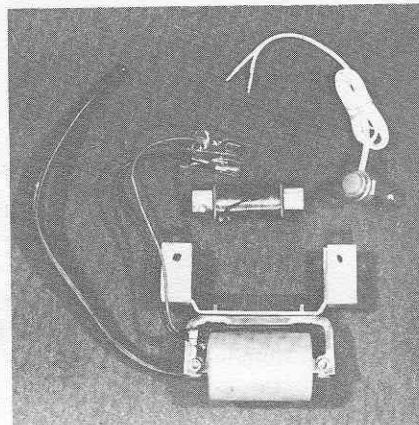
## Racing Parts

## ENERGY TRANSFER CONVERSION FOR ACE 90

Converts standard FA-87 magneto to energy transfer ignition system. Energy transfer conversion moves high tension coil away from engine heat—gives more reliable ignition performance, hotter spark. HT coil used in this conversion is the same as racing coil listed for ACE 100 model.

Note! For racing applications where lighting coil is removed a blank coil core must be fitted to lighting coil mount. Order part 913003R.

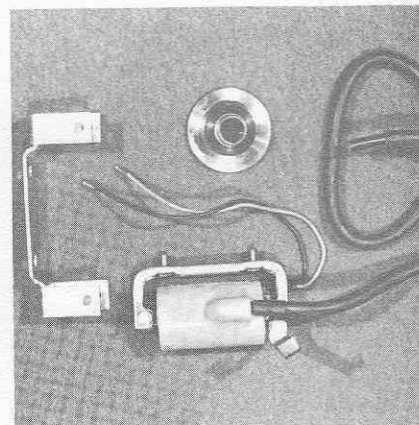
High tension coil	. . . . .	933009R
Coil mounting bracket	. . . . .	913029R
Primary coil	. . . . .	923002
2-wire kill button	. . . . .	913004R
Heavy duty points	. . . . .	913016R
Blank coil core	. . . . .	913003R



## BATTERY IGNITION SYSTEM

Constant loss battery ignition for high winding flat track and road racing engine conversions. Replaces stock magneto. Increases available horsepower output by 1/2 hp—Enables engine to attain speeds up to 14,000 rpms without misfire. Specially shaped point cam increases point closing time for maximum coil saturation. Stock points, condenser and stator plate are retained for use with this system.

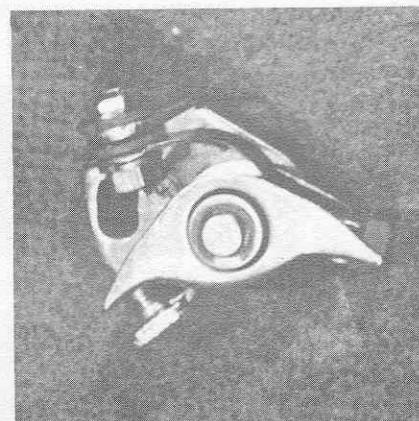
Battery ignition point cam	. . . . .	913007R
Battery ignition coil	. . . . .	913009R
Coil mounting bracket	. . . . .	913029R



## HEAVY DUTY POINTS

Ignition point sets with stiff springs to eliminate point bounce and/or flutter at high rpms. A must item for racing. Rubbing block on movable point is made of special Phenolic material to resist wear.

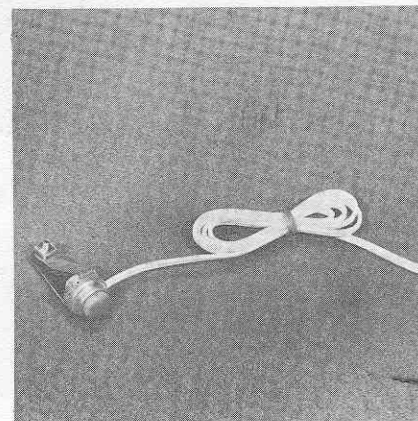
913016R



## 2-WIRE KILL BUTTON

Handlebar type, 2-wire kill button with screw clamp mounting. 32" wire leads are equipped with male connector tips. Rubber cushion strap fits underneath switch and clamp—insulates and protects switch from vibration. Designed to work with both energy transfer and magneto ignition systems.

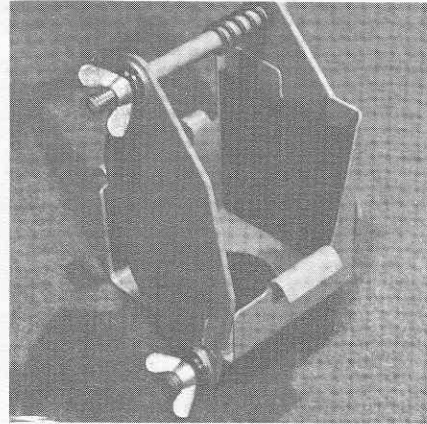
913004R



## RACING KIT BATTERY BOX

Relocates battery higher in frame cradle to clear other than stock carburetor/air cleaner setups. Installation requires removal of tool box. Battery is secured in bracket by means of wing nut retained side plate. Assembly comes complete with hardware and mounts to existing brackets on the frame.

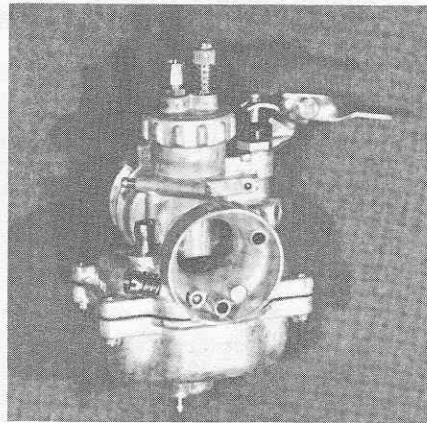
919040R



## 22mm CARBURETOR

22mm slide valve Mikuni racing carburetor with integral float chamber. Increases engine mid-range and top end performance. Suitable for most racing applications. Dual float instrument spigot mounted with Phenolic heat shield in mounting bore. Spring-loaded inlet needle prevents float chamber flooding under conditions of extreme vibration and shock. Unit retains starting carburetor feature found on standard ACE 90 and 100 carburetors.

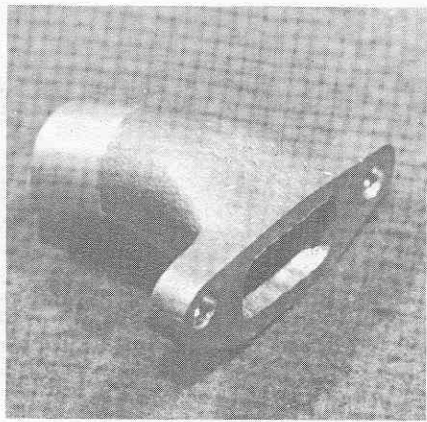
VM 2200



## MANIFOLD FOR 22mm CARBURETOR

Cast aluminum manifold to mount spigot style 22mm racing carburetor (VM 2200). Mounts to either standard or racing type Hodaka cylinders—ACE 90 or 100. Machined spigot boss slip fits into carburetor mounting bore.

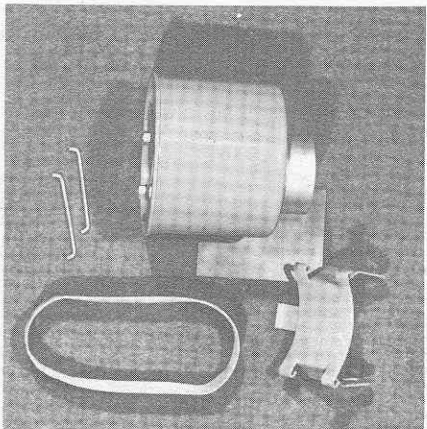
913504R



## AIR CLEANER KIT FOR 22mm CARBURETOR

4 1/4" diameter, single stage air cleaner for 22mm racing carburetor. Large capacity, washable synthetic element to handle dusty running conditions. Carburetor coupling equipped with neoprene seal. Element is easily removed for cleaning—simply loosen and remove two nuts and element slips free of shell. (Note! When using this air cleaner, it is necessary to remove tool box from the machine and relocate battery position with racing kit battery box (919040R)). Mounting bracket for racing air cleaner requires removal of the original air cleaner mount bracket welded to the frame. (ACE 90 only).

- 913600R . . . . . Air cleaner body assy.
- 913607R . . . . . Air cleaner mount bracket
- 913609R . . . . . Air cleaner setting band
- 913610R (2 reqd.) . . . . . Air cleaner setting band clips
- 913608R . . . . . Air cleaner cushion pad



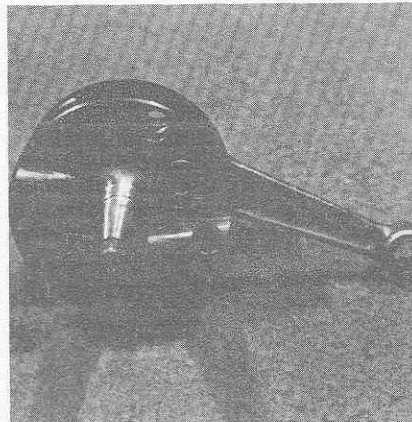


## COMPETITION CRANKSHAFT ASSEMBLY\*

Chrome Moly crankshaft factory assembled with needle bearing connecting rod. Crankshaft is precision aligned on special fixture with maximum runout held to .0008". Chrome Moly material is more than adequate to meet stress imposed by racing applications. Forged steel connecting rod equipped with caged needle bearings at both ends. Crank assembly comes complete with needle bearing for wrist pin.

\*Std. equipment in ACE 100 engines.

912700R



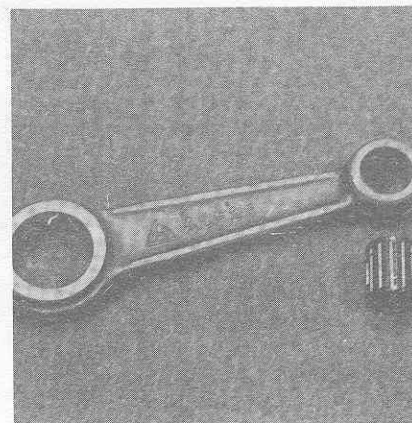
## NEEDLE BEARING CONNECTING ROD

Forged steel connecting rod mounts caged needle roller bearing at wrist pin as well as crankpin end. Rugged design permits high engine rpms without risk of wrist pin bearing failure. Rod bearing bores are heat treated before finish grinding operation allowing parallelism of bearing bores to be held to +/- .0006". Use of needle bearing at wrist pin end substantially reduces friction losses at this point. Additionally, better lubrication is provided by large, milled slot atop the rod "eye."

\*For ACE 90 engines only (std. equipment in ACE 100 engines)

\*\*May be used only with Chrome Moly crankshaft (identifiable by blackish appearance of flywheel circumferences).

Connecting rod . . . . .912710R  
Needle bearing . . . . .912712R



## 4-PLATE RACING CLUTCHES

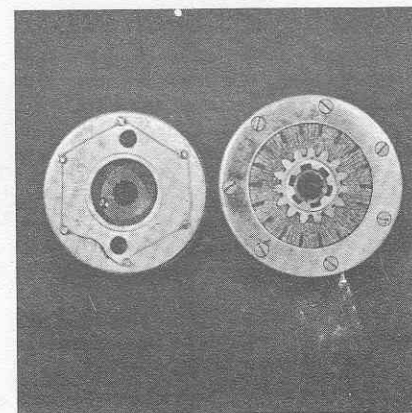
Two styles to choose from: Style A is a 3 3/4" diameter, 6 double spring 4-plate clutch and style B is a 4 1/4" diameter, 7 single spring 4-plate clutch. Both are aluminum framed and have cast Meehanite hubs. Each has 4 fibre/brass compound friction plates and 3 steel plates. Style A has somewhat harsher engagement than style B; however, due to its smaller diameter, there is less "flywheel" action. Both types are ideally suited to the rigors of competition and will handle increased engine outputs without slipping.

(Note: spring pressure in the B style clutch may be increased even more by adding "helper" springs listed below. This should be done only in the case of an all-out modified engine.)

For "helper" springs to fit style B clutch, order P/N 904017

\*Std. Equipment in ACE 100 engines

Style A 3 3/4" clutch . . . . .914000R  
Style B 4 1/4" clutch . . . . .924000\*

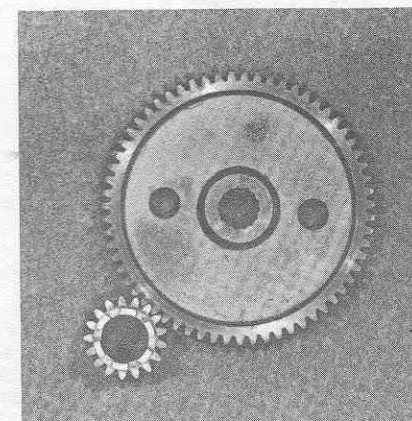


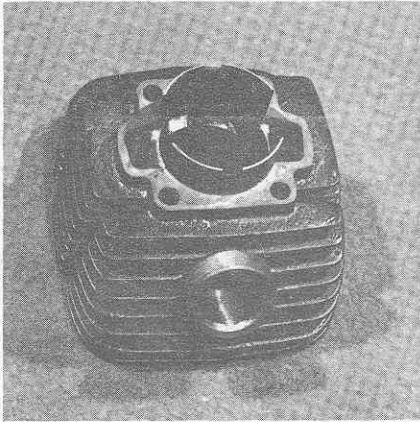
## STRAIGHT CUT PRIMARY GEARS

Matching cast steel clutch pinion and mainshaft primary gears with straight cut tooth pattern. Gear tooth module is a husky 1.75. Straight cut gears eliminate side load power losses associated with helical cut gears—increase available output by 5%—reduce stress on shafts and bearings. Gears are heat treated for prolonged service life. 17T pinion x 63T primary gear gives 3.71:1 primary ratio. Fits all Hodaka engines except early ACE 90 with keyed mainshaft.\* Must be used as a set.

\*For splined 4-speed mainshaft to replace early type keyed mainshaft, order P/N 904501B

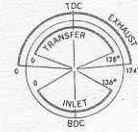
Clutch pinion gear . . . . .914001R  
Primary gear . . . . .914502R





## RACING CYLINDER

Cast Meehanite racing cylinder features outsized cooling fins, hand finished passageways and port timing suited to most racing applications. Standard finished bore dimension is 48mm (90cc)—cylinder may be safely bored to .080" (98.12cc). Inlet port accepts standard or racing manifold. Cylinder fits ACE 90 crankcases only \* (due to o.d. of spigot). A proven performer for increasing engine mid-range and top end.

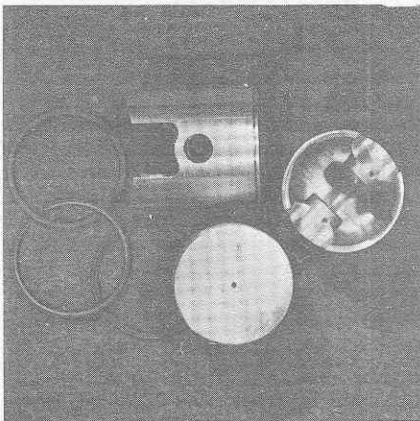


Racing Cylinder Timing Diagram

\*Racing cylinders for the ACE 100 will not be available until mid to late 1968—prices and specification are not available at this writing.

912505R . . . . . For ACE 90 Engines only

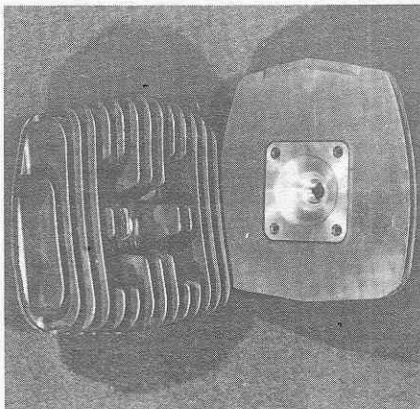
## DYKES RING RACING PISTONS



Single Dykes ring racing pistons are both cam ground and tapered. Ring groove is fitted with brass anti-rotation pin. Single strut web support for wrist pin bosses—bosses are offset drilled for oiling. Dykes pattern rings are Parkerized to insure quick break-in. Extremely light and sturdy piston design permits high engine rpm. Dykes ring gives precision port timing, superior ring seal at high speeds with minimum ring friction and high resistance to "flutter" conditions. Hodaka racing pistons are available in 50mm (+.010, .020, .030, & .040) diameters. Dykes rings are ordered separately.

Std. piston	9301500R (std.)	. . . . .	std. ring	. 9302500R
	9301501R (.010)	. . . . .	.010 "	. 9302501R
	9301502R (.020)	. . . . .	.020 "	. 9302502R
	9301503R (.030)	. . . . .	.030 "	. 9302503R
	9301504R (.040)	. . . . .	.040 "	. 9302504R

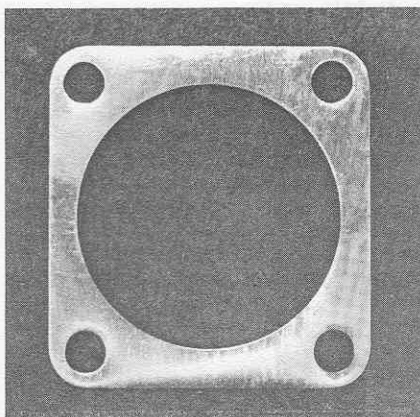
## HIGH COMPRESSION CYLINDER HEAD



12:1 comp. ratio, alloy racing head features machine-finished combustion chamber. Rough-textured, large, vertical fins and encircling horizontal base fin provide maximum heat dissipation. Dynamometer-proven combustion chamber shape insures efficient combustion—increases rpm, power. Accepts 1/2" reach 14mm spark plugs.

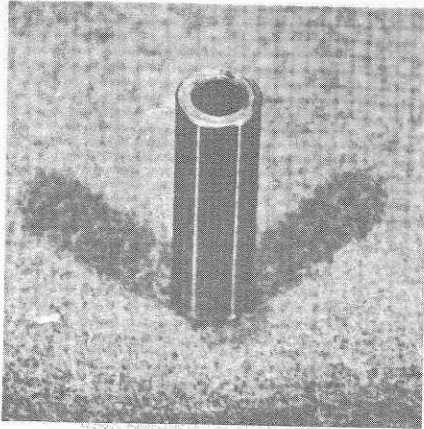
912501R . . . . . 48mm cylinders (std. ACE 90)  
932501R . . . . . 50mm cylinders (std. ACE 100)

## HEAD GASKETS



Aluminum head gaskets for 50mm cylinder bores. Eliminates having to trim out stock gasket when reboring 90cc cylinders.\* Correct thickness for proper piston to head clearance.

\*Std. equipment in ACE 100 engines.

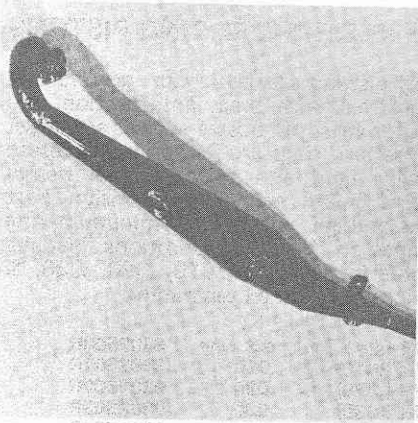


### WRIST PINS

Wrist pins for 50mm (and up) pistons.\* Required where fitting oversized pistons to 90cc cylinders. Eliminates excessive side play. Heat treated wrist pins are precision ground to exact dimensions for slip-fit in Hodaka piston pin bosses.

\*Std. equipment in ACE 100 engines.

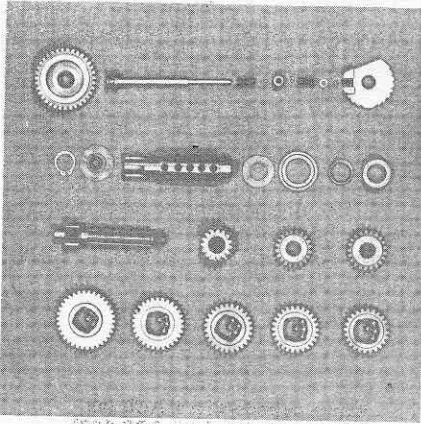
922707



### "F" PIPE

Factory engineered expansion chamber exhaust system for Hodaka engines. Designed to work with Hodaka "R" parts. Expansion chamber design improves engine mid-range and top end performance—produces maximum horsepower at 8,500 rpms. Pipe is finished in heat-dissipating black paint and is equipped with "rail" type heat guards. Exhaust system mounts close inboard to provide maximum clearance for rider. Hand-welded, one-piece pipe is ideal for flat track, scrambles, TT or moto-cross racing.

919171R



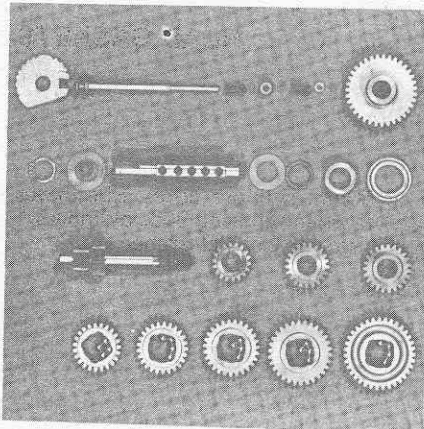
### CLOSE RATIO GEAR SETS

Five-speed, close ratio gear sets for ACE 90 and 100 engines. Close ratio gears are best used in drag or road racing applications where the requirement is minimum rpm drop between shifts on modified engines with narrow power bands. Conversion kit contains necessary parts and instructions. On ACE 90 engines some machining of right crankcase half is required to fit gear set.

#### CLOSE RATIO SET GEAR RATIOS (Transmission Gears)

1st	11T X 34T	: 3.09
2nd	15T X 30T	: 2.00
3rd	18T X 27T	: 1.50
4th	20T X 26T	: 1.30
5th	21T X 24T	: 1.14

Complete gear set . . . . . 914600R



### WIDE RATIO GEAR SETS\*

Five-speed transmission conversion sets for the sportsman-enthusiast or serious-minded racer. Wide ratio gears find their best use in trail riding, scrambles, TT and moto-cross racing where a wide range of speeds dictates a need for flexible gearing. Conversion kit contains necessary parts and instructions. On ACE 90 engines some machining of right crankcase half is necessary to fit gear set.

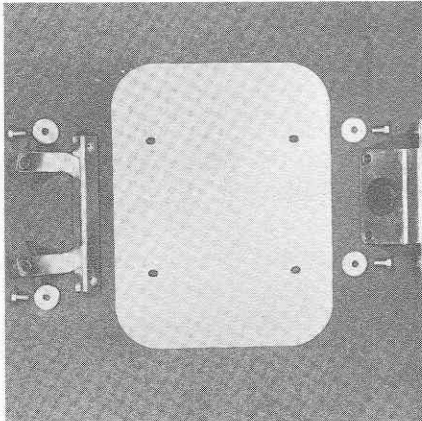
#### WIDE RATIO SET GEAR RATIOS (Transmission Gear)

1st	10T X 35T	: 3.50
2nd	14T X 30T	: 2.14
3rd	18T X 27T	: 1.50
4th	21T X 25T	: 1.19
5th	23T X 23T	: 1.00

\*Std. equipment in ACE 100 engines

Complete gear set . . . . . 924600

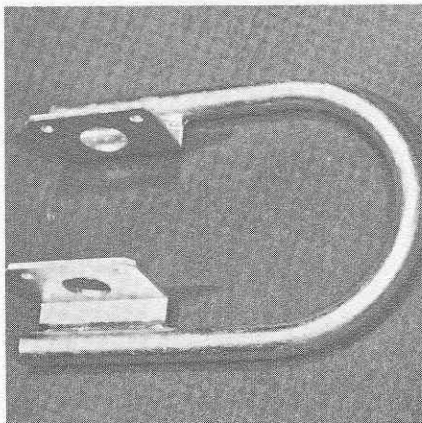




## FRONT NUMBER PLATE ASSEMBLY

10 x 8" white enameled aluminum number plate with fabricated steel brackets. Bolt-on fit for all Hodaka cycles. Aluminum panel has rolled edge—mounts with cap screws and special cupped washers to brackets. Top bracket bolts to handlebar clamp—lower bracket mounts on fork clamp bolts. Control cables are routed through rubber grommets hole in top bracket. Number panel design conforms to AMA regulations—adds professional touch to racing conversion. Number Plate comes complete with necessary hardware for mounting.

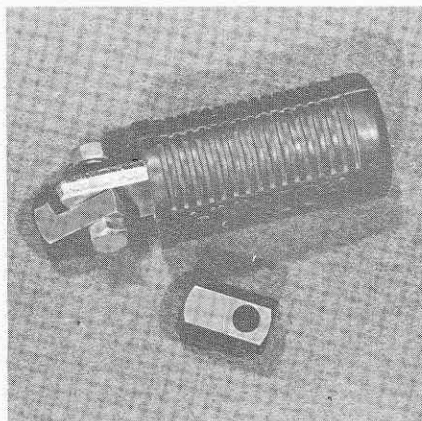
919300R



## STEEL FORK BRACE

Manufactured from high-strength steel tubing and formed brackets. Prevents forks from twisting in rough terrain. Large radius allows ample clearance for oversize tires. Finished in cadmium plate. Bolts onto stock forks with no alterations required. Fits all Hodaka motorcycles.

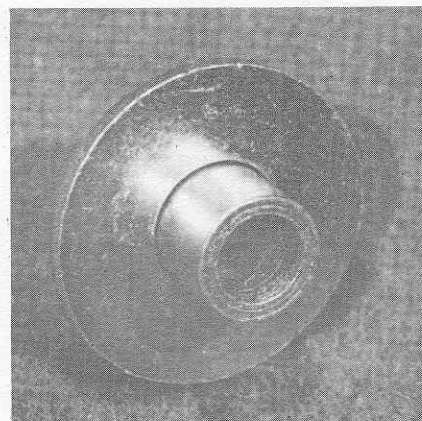
918731R



## COMPETITION FOOTRESTS

Rubber-covered folding pegs designed to be welded onto mount. Heavy-duty construction will withstand rough use of demanding competition.

919110



## FRONT HUB SHAFT COLLAR

Fits all Hodaka motorcycles—replaces speedometer drive unit where speedo is removed for racing. Eliminates slight power loss from drive unit. Fabricated steel collar adds distinctive custom touch to front hub.

918910R