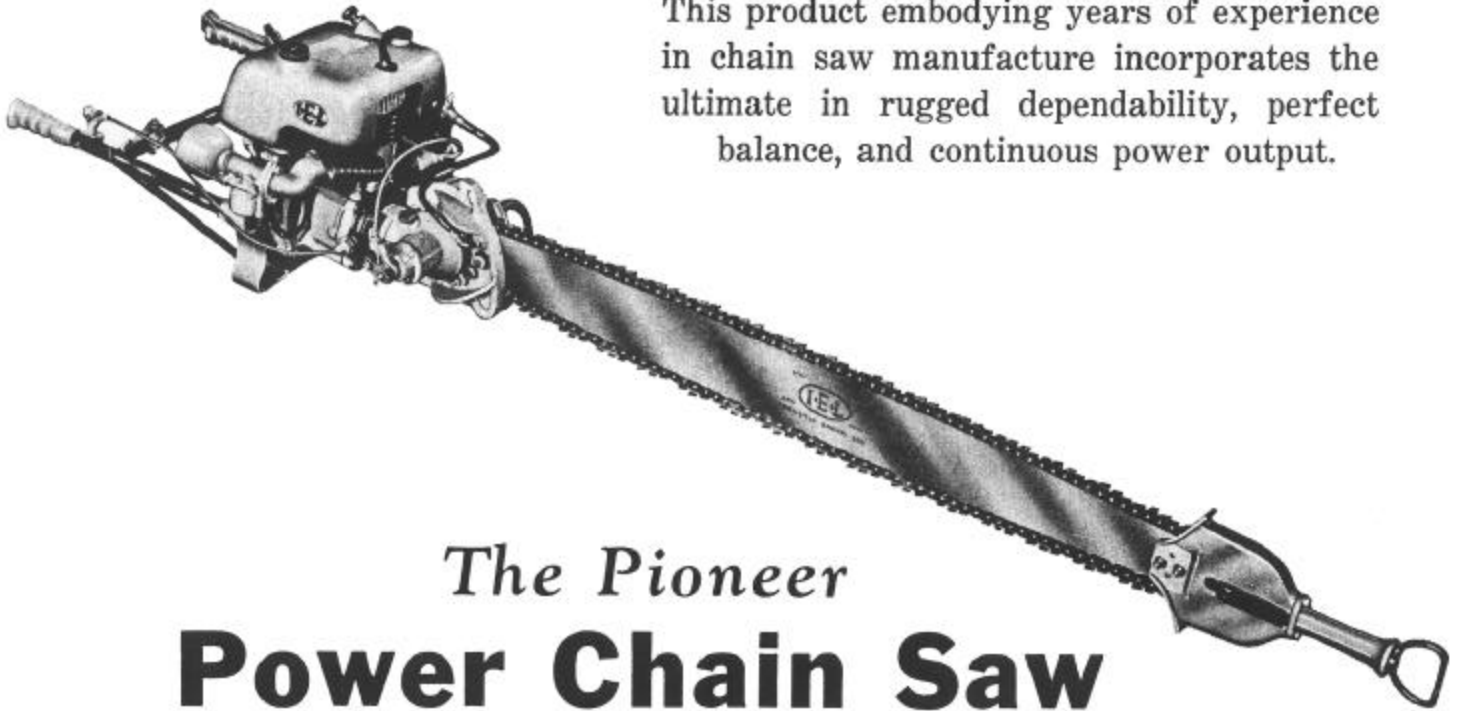




NEW MODEL "M"

This product embodying years of experience in chain saw manufacture incorporates the ultimate in rugged dependability, perfect balance, and continuous power output.



The Pioneer **Power Chain Saw**

I.E.L. Power Chain Saws are proudly offered by the owners who work at the benches, lathes, and desks.

Any criticism, comments or suggestions that users care to offer will be most sincerely appreciated in the spirit of co-operation.

There's an I.E.L. Chain Saw to suit every application. Write direct, or see the dealer in your vicinity for information and pamphlets on I.E.L.'s other great models.

8 B.H.P.

INDUSTRIAL ENGINEERING LIMITED

503 East Pender Street

Vancouver, Canada

Phone: HASTINGS 1760—Wires and Cables—I.E.L.

ALWAYS Specify Machine Model and Serial Number When Ordering Spare Parts

Specifications

Type—Two-cycle, aircooled, single cylinder.

Bore and Stroke — 2.83 inches bore, 2.83 inches stroke.

Horsepower—8 H.P. at 3200 RPM.

Magneto—Eisemann, Model AM2N-2.

Carburetor — Specially manufactured I.E.L. model.

Crankshaft — Alloy steel, heat-treated and precision ground.

Connecting-rod — Alloy steel drop forging, heat-treated and ground.

Piston—Permanent mold, special alloy, heat-treated.

Wrist-pin—Case-hardened alloy steel, ground.

Main bearings — Four large capacity ball races.

Connecting-rod bearing — Needle roller at bottom, bronze bush at top, heat-treated.

Cylinder — Cast iron alloy heat-treated, machined ports. **Bore**—precision honed.

Cylinder head—Alluminum alloy.

Reduction gear — Heat-treated alloy steel bevel drive.

Clutch — Seven plate dry clutch, asbestos lined.

GUARANTEE:

All machines are guaranteed for thirty days against defective parts, provided our recommendation regarding lubrication and general operation are observed.

Instructions

For the Operation and Care of I.E.L. Model "M" Power Saw

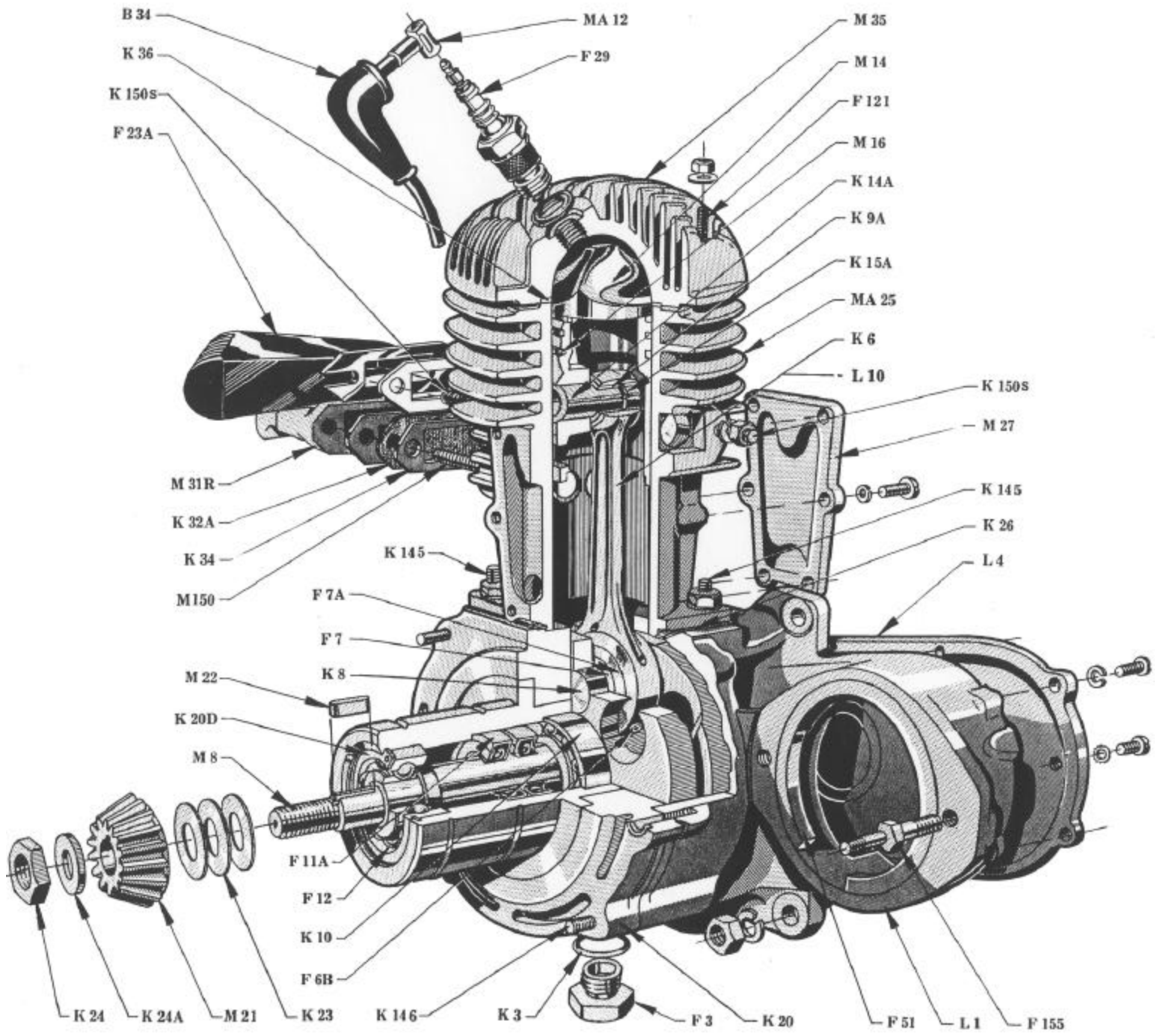
IMPORTANT—The lubrication of this engine is supplied by mixing lubricating oil with the gasoline. This is the only source of lubrication, and trouble is certain if the machine is run on gasoline alone.

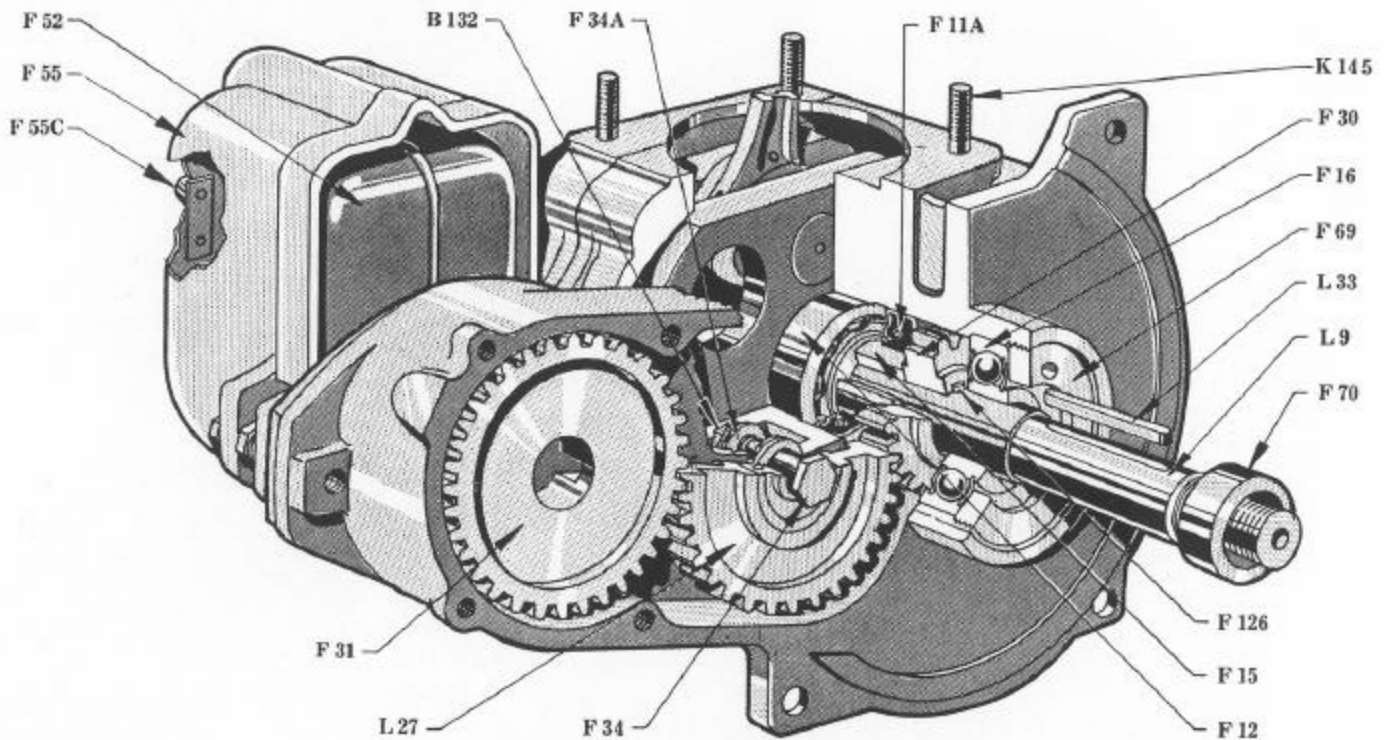
PREPARATION FOR STARTING:

The tank should be filled with a mixture of high-grade (70 octane) gasoline and S.A.E. 50 or 60 lubricating oil, in the proportions of eight parts of gasoline to one part of oil when the motor is new. This can be decreased to a twelve to one mix when the motor is broken in.

The gasoline and oil should be mixed in a separate clean container, and must be well stirred with a paddle for thorough mixing. Extra care must be taken in cold weather when the oil is thick and hard to mix.

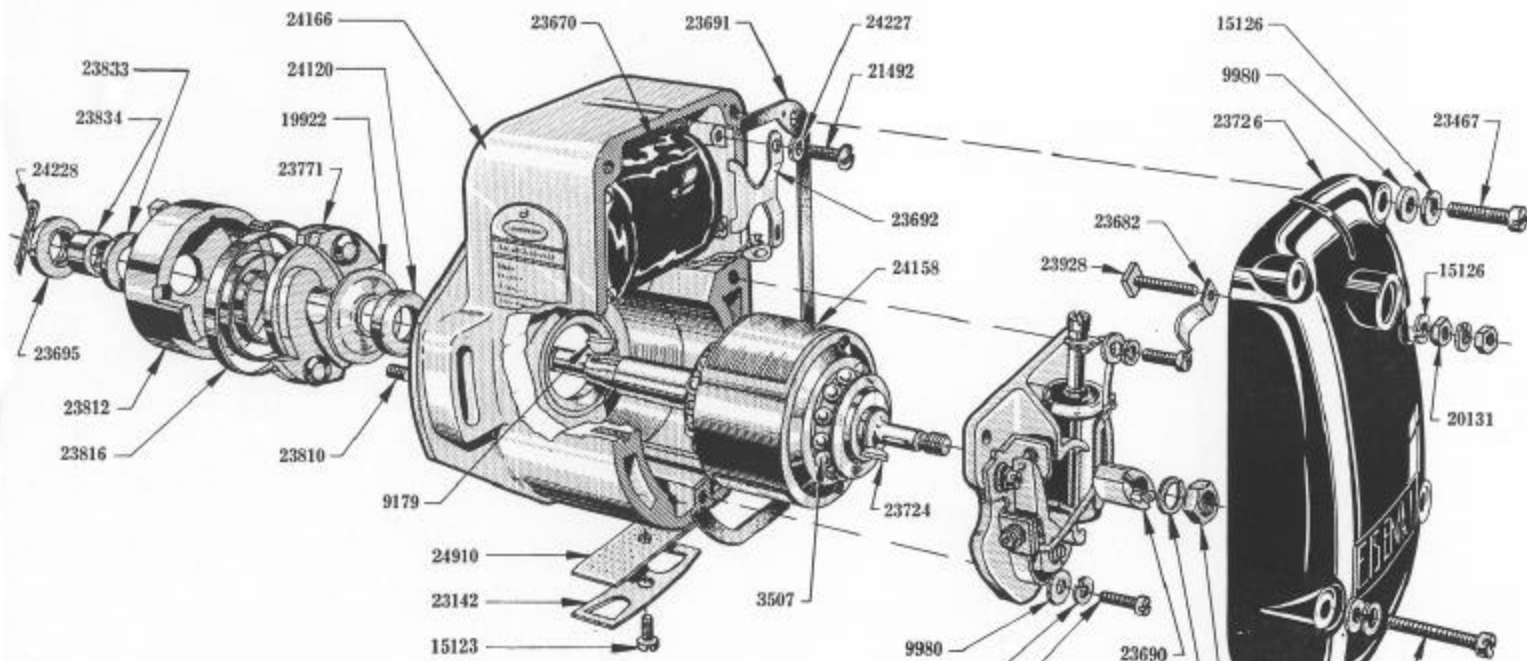
Always shake the mixture well before pouring into the tank of the engine.





ENGINE ASSEMBLY

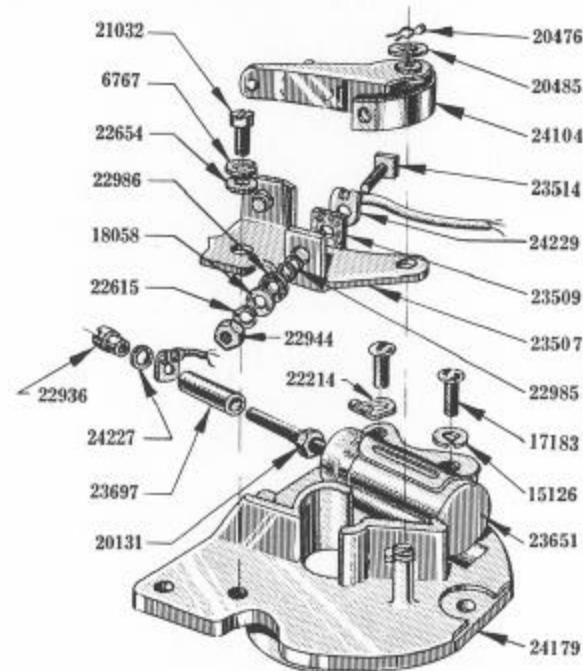
B 34	Spark plug cover	K 3	Gasket	K 9A	Bushings
B 132	Locknut for F 34	K 8	Crankshaft pin	K 15A	Lock ring
F 3	Plug	K 9A	Bronze wrist-pin bushing in K 6 (2 required)	K 7A	Outer race
F 6B	Retaining screw for conrod bearing	K 10	Bearing in K 20	F 6B	Retaining Screw
F 7	Inner bearing race	K 14A	Wrist pin	L 27	Idling gear complete with bearing
F 7A	Outer race	K 15A	Lock ring for wrist pin	L 33	Key for fan
F 11A	Grease seal (3 required)	K 20	End bearing housing with studs	MA 8	Crankshaft pinion end assembly
F 12	Bearing (2 required)	K 20D	Retaining ring in K 20	M 8	Crankshaft Pinion End
F 15	Bearing spacer	K 23	Shims for pinion (assorted thicknesses)	F 7	Inner race
F 16	Bearing	K 24	Pinion nut	K 8	Crankshaft pin
F 23A	Exhaust (K 33A1 Exhaust with clip)	K 24A	Pinion washer	MA 11	Crankshaft assembly complete with connecting rod
F 29	Spark plug	K 26	Base gasket	MA 12	Ignition wire assembly
F 30	Timing gear	K 32A	Intake screen	M 14	Piston
F 31	Timing gear on magneto	K 34	Gasket for exhaust and carburetor manifold (4 required)	M 16	Piston rings (3 required)
F 34	Bolt for idling gear	K 36	Cylinder head gasket	M 21	Pinion (sold only with MA 90 Crown and pinion set)
F 34A	Nut and washer assembly for F 34	K 145	Studs	M 22	Key for pinion
F 51	Magneto adapter	K 146	Stud	MA 25	Cylinder block complete with studs
F 52	Magneto.. (Eisemann.. AM 2N2)	K 150S	Stud	M 27	Bi-pass covers (2 required)
F 55	Magneto cover	L 1	Crankcase	M 31R	Intake manifold
F 55C	Stop button	L 4	Timing gear cover	M 35	Cylinder head
F 69	Threaded locking ring	L 9	Crankshaft fan end	M 150	Intake stud (2 required)
F 70	Spacer for fan	L 10	Connecting rod assembly		
F 121	Stud	K 6	Con rod (less bearing)		
F 126	Timing gear key				
F 155	Magneto bolt (2 required)				



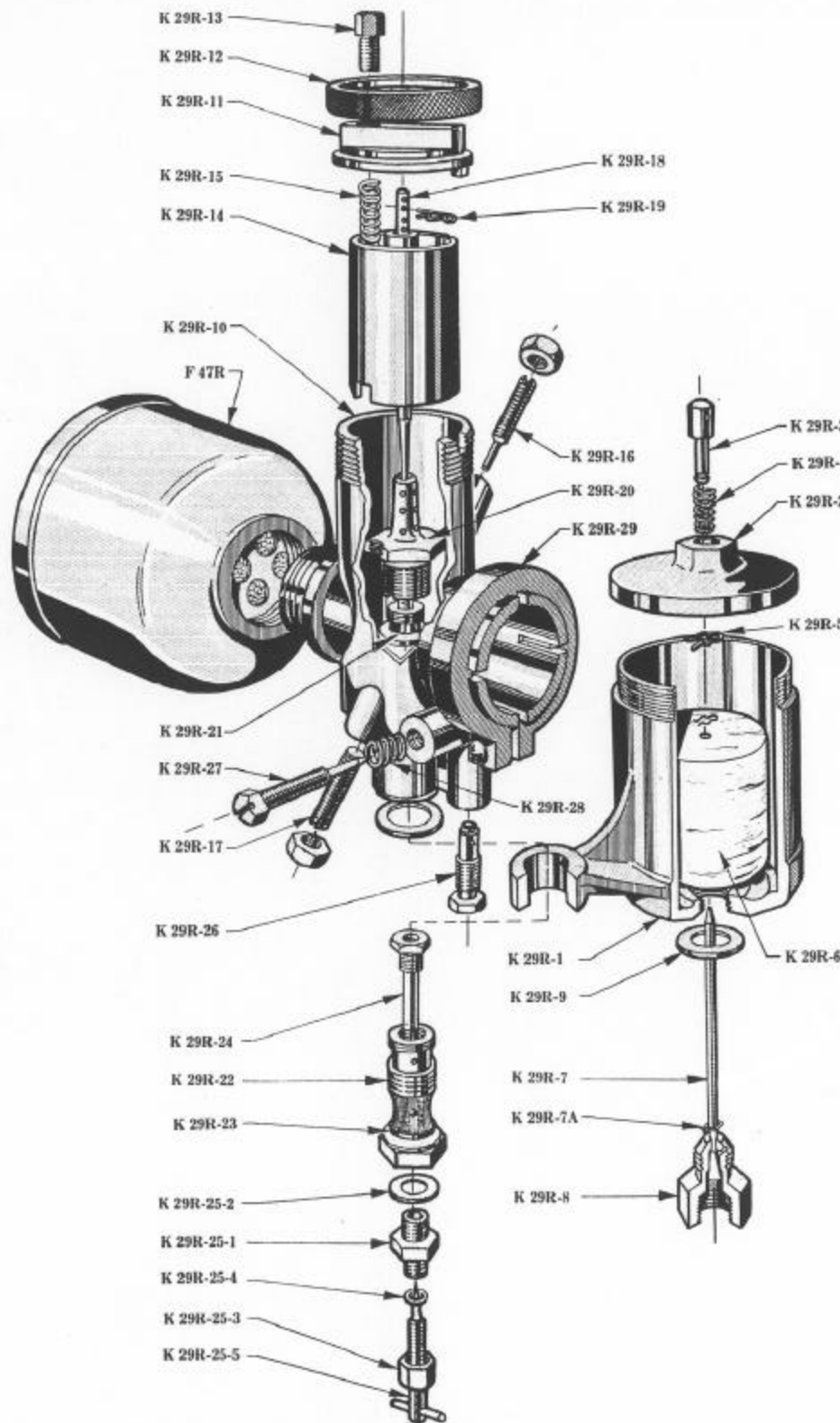
F-52 EISEMANN MAGNETO (AM2N2)

- 43507 15 M.M. ball bearing
- 6767 Lockwasher 3/64" (4 used)
- 9179 1/8" Woodruff key for mag-
neto rotor shaft
- 9980 Plain washer
- 15126 Lockwasher (2 used)
- 17183 6/32" screw
- 18058 Plain washer
- 19922 Oil slinger for drive shaft
- 20131 Hexagon nut (2 required)
- 20476 Retaining clip spring
- 21032 Filister head screw
- 21163 Filister head screw 10-32 x
5/8"
- 13847 Lockwasher (3 used)
- 14199 Lockwasher
- 20485 .006 Shim washer
- 21492 8 x 32 screw (4 used)
- 22214 Clip for primary lead
- 22615 1/32" Lock washer
- 22640 Lower cover holding screw
- 22654 Plain spacing washer
- 22936 Round nut
- 22944 No. 6 Hexagon nut
- 22985 Bakelite washer (2 used)
- 22986 Bakelite washer
- 23142 Filter hood
- 23467 Screw (2 used)
- 23507 Breaker plate with tungsten
rivet
- 23509 Square bakelite plate

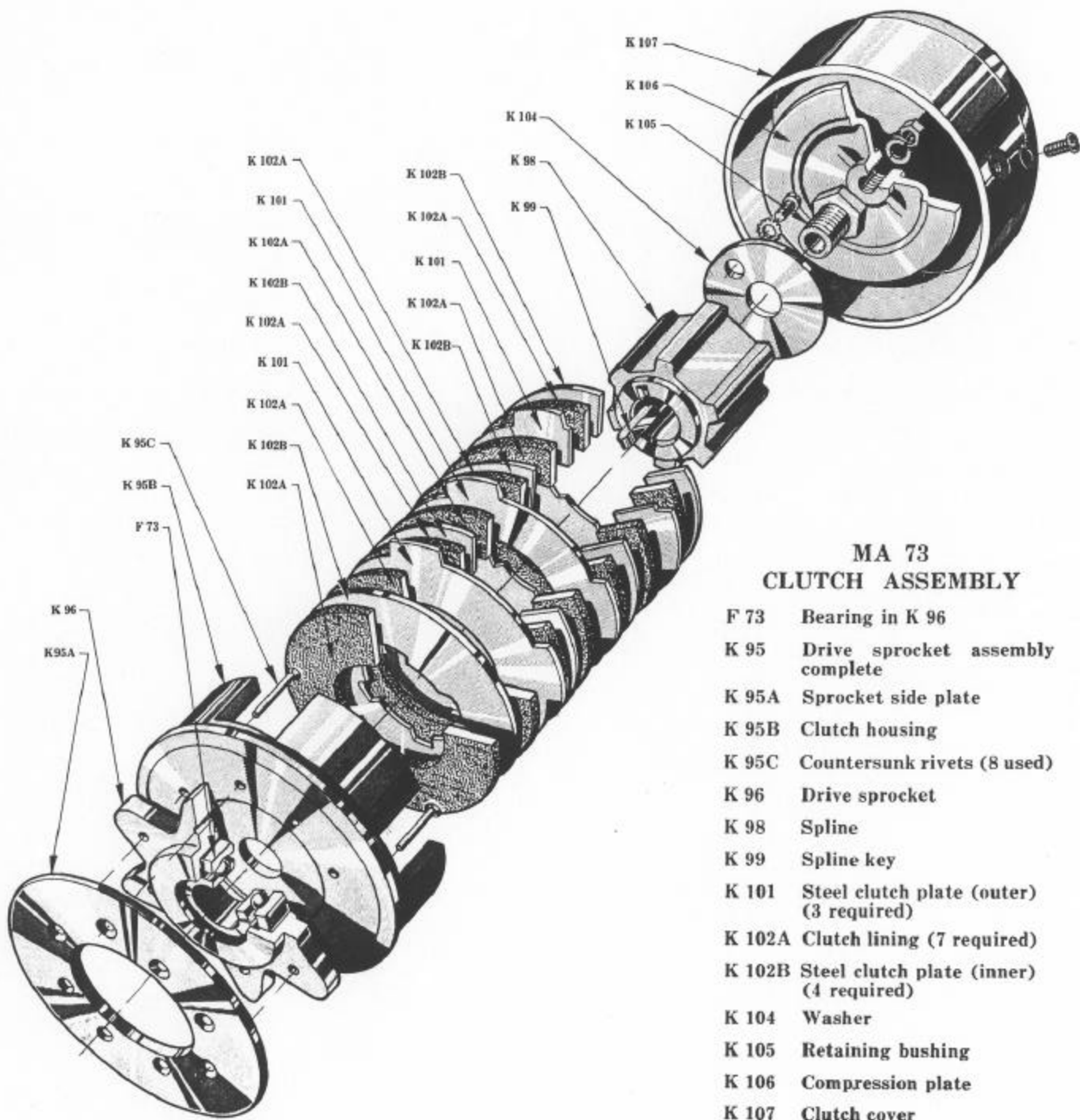
- 23514 No. 6 square head screw
- 23651 Condenser
- 23670 Coil
- 23682 Contact spring
- 23690 Breaker cam
- 23691 Distributor plate gasket
- 23692 Clamp for coil (2 used)
- 23695 Castellated nut
- 23696 Hexagon nut
- 23697 Spacer bushing
- 23724 Woodruff key
- 23726 Bakelite cover
- 23771 Coupling flange with pawls
- 23810 Catch pin for impulse starter
- 23812 Impulse coupling with lugs
- 23816 Compression spring
- 23833 15/16" gear bearing washer
- 23834 Gear bearing bushing
- 23928 Terminal screw
- 24104 Breaker lever with tungsten
rivet
- 24120 Spring type oil seal
- 24158 Rotor shaft
- 24166 Horizontal flange mounting
housing
- 24179 End plate
- 24227 Lock washer
- 24228 Cotter pin
- 24229 Breaker lead to condenser
- 24910 Filter screen



I. E. L. CARBURETOR Part No. K 29R

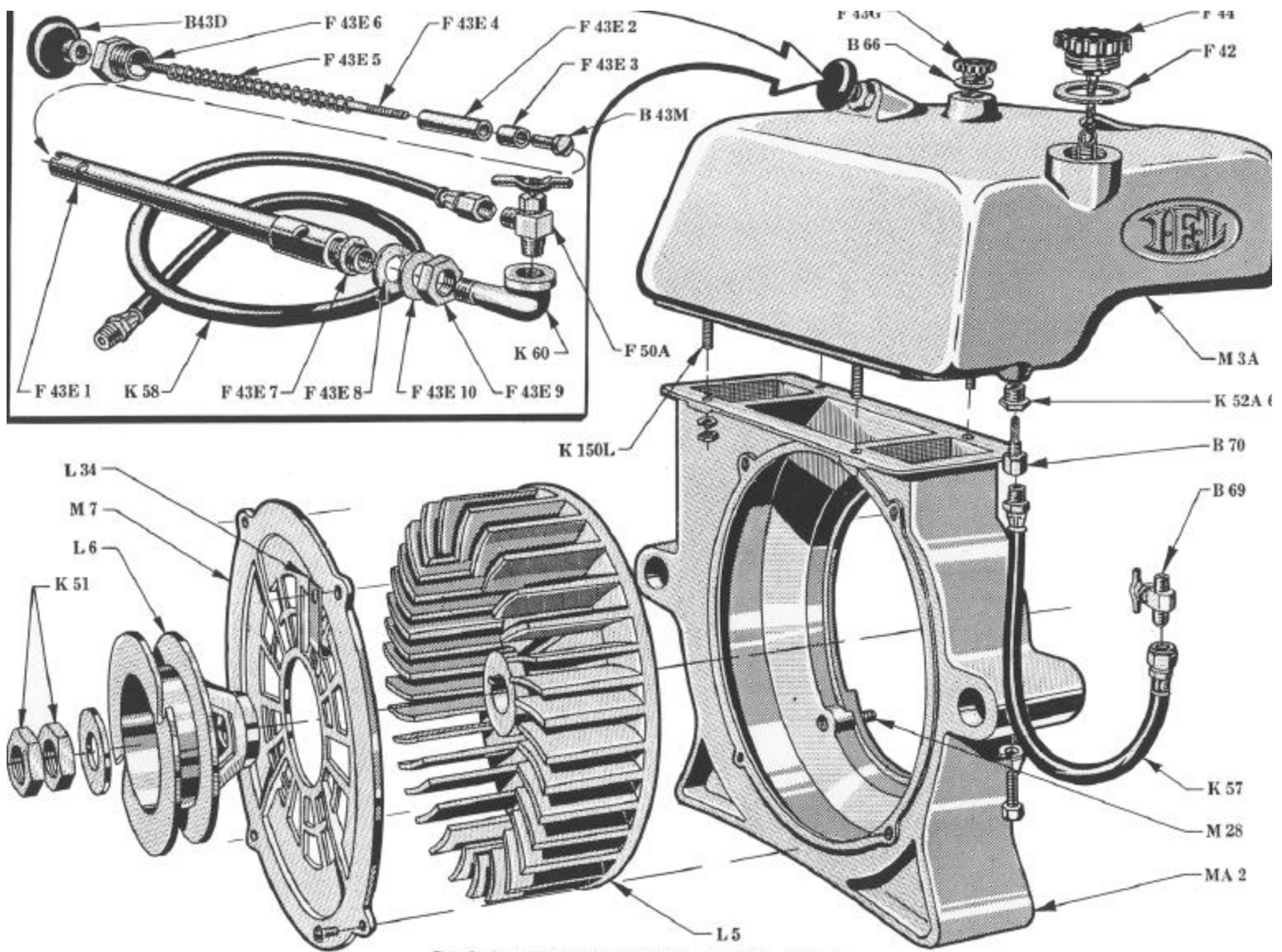


- | | |
|------------|---|
| F 47R | Air filter |
| K 29R-1 | Carburetor bowl |
| K 29R-2 | Top for bowl |
| K 29R-3 | Primer pin |
| K 29R-4 | Primer pin spring |
| K 29R-5 | Primer pin clip |
| K 29R-6 | Float |
| K 29R-7 | Needle valve in float |
| K 29R-7A | Clip for needle valve
(2 required) |
| K 29R-8 | Seat for needle valve |
| K 29R-9 | Fibre washer for K 29R-8 |
| K 29R-10 | Main body assembly |
| K 29R-11 | Top for main casting |
| K 29R-12 | Lock ring for K 29R-11 |
| K 29R-13 | Bowden casing adjustment screw |
| K 29R-14 | Sliding throttle valve |
| K 29R-15 | Spring for throttle valve |
| K 29R-16 | Guiding screw and nut for throttle slide |
| K 29R-17 | Adjusting screw and nut |
| K 29R-18 | Needle valve for mixer |
| K 29R-19 | Clip for needle valve |
| K 29R-20 | Main mixer (sold only as assembled in K 29R-10) |
| K 29R-21 | Mixer |
| K 29R-22 | Bolt with screen |
| K 29R-23 | Fibre washer (2 required) |
| K 29R-24 | High speed jet |
| K 29R-25-1 | Main body adjuster |
| K 29R-25-2 | Fibre gasket |
| K 29R-25-3 | Adjustment nut |
| K 29R-25-4 | Leather gasket in K 29R-25-3 |
| K 29R-25-5 | Needle valve for high speed jet |
| K 29R-26 | Idling jet |
| K 29R-27 | Air valve for idling jet |
| K 29R-28 | Spring for air valve |
| K 29R-29 | Clamp |



**MA 73
CLUTCH ASSEMBLY**

- F 73 Bearing in K 96
- K 95 Drive sprocket assembly complete
- K 95A Sprocket side plate
- K 95B Clutch housing
- K 95C Countersunk rivets (8 used)
- K 96 Drive sprocket
- K 98 Spline
- K 99 Spline key
- K 101 Steel clutch plate (outer) (3 required)
- K 102A Clutch lining (7 required)
- K 102B Steel clutch plate (inner) (4 required)
- K 104 Washer
- K 105 Retaining bushing
- K 106 Compression plate
- K 107 Clutch cover



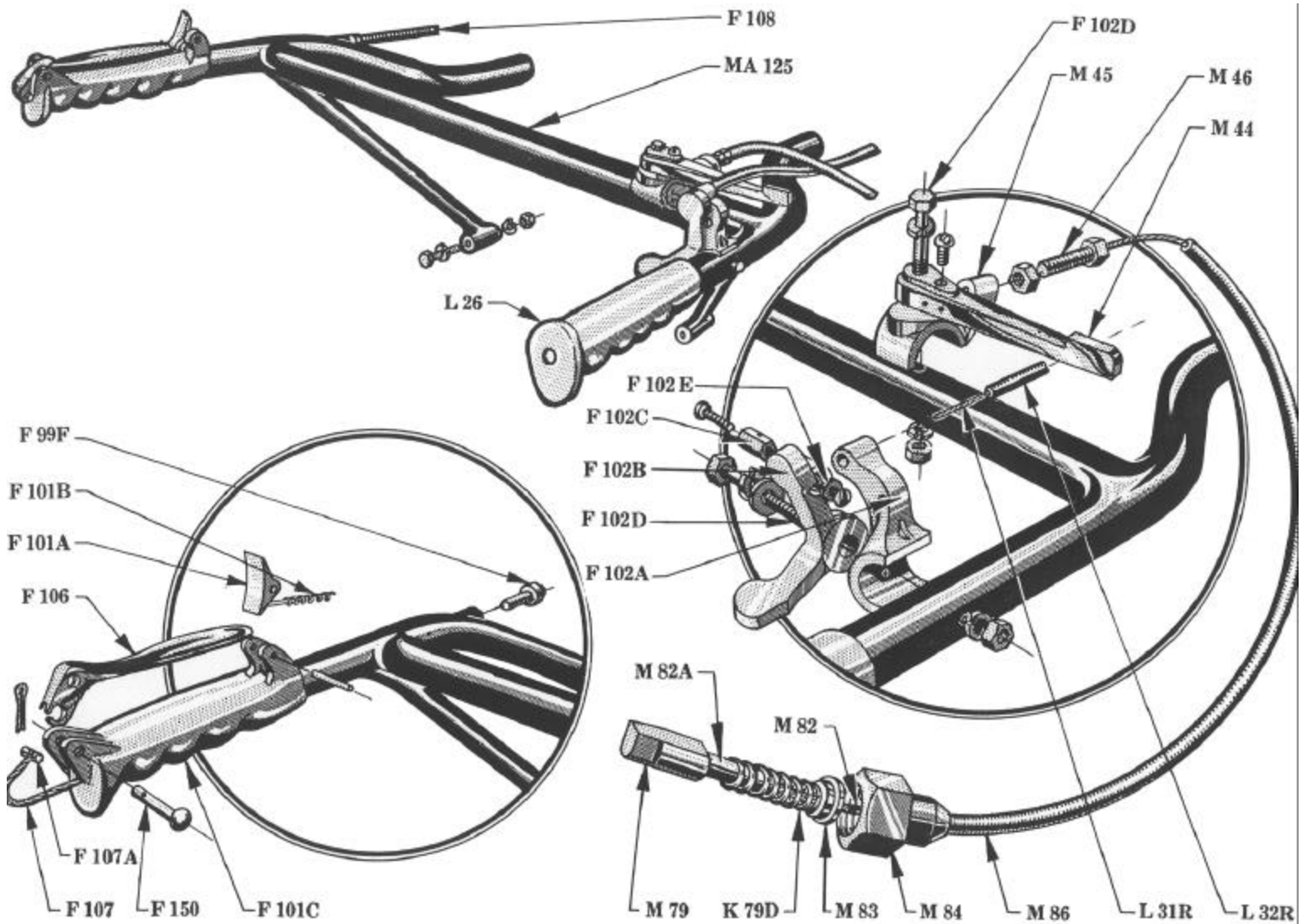
GAS TANK, FAN HOUSING, ETC.

B 43D Oil pump knob
B 43M Screw
B 66 Gasket
B 69 Shut off cock
B 70 Adapter with screen
F 42 Gasket
F 43E Oil pump complete
F 43E-2 Plunger
F 43E-1 Pump barrel
F 43E-3 Leather packing
F 43E-4 Plunger rod
F 43E-5 Plunger spring
F 43E-6 Plunger gland
F 43E-7 Small leather washer

F 43E-8 Large leather washer
F 43E-9 Nut for pump barrel
F 43E-10 Washer
F 43G Cap for oil compartment
F 44 Gas tank cap
F 50A Shut off cock
K 51 Left hand jamb nuts
K 52A-6 Reducer bushing
K 57 Gas line
K 58 Oil line
K 60 Elbow
K 150L Stud (4 required)

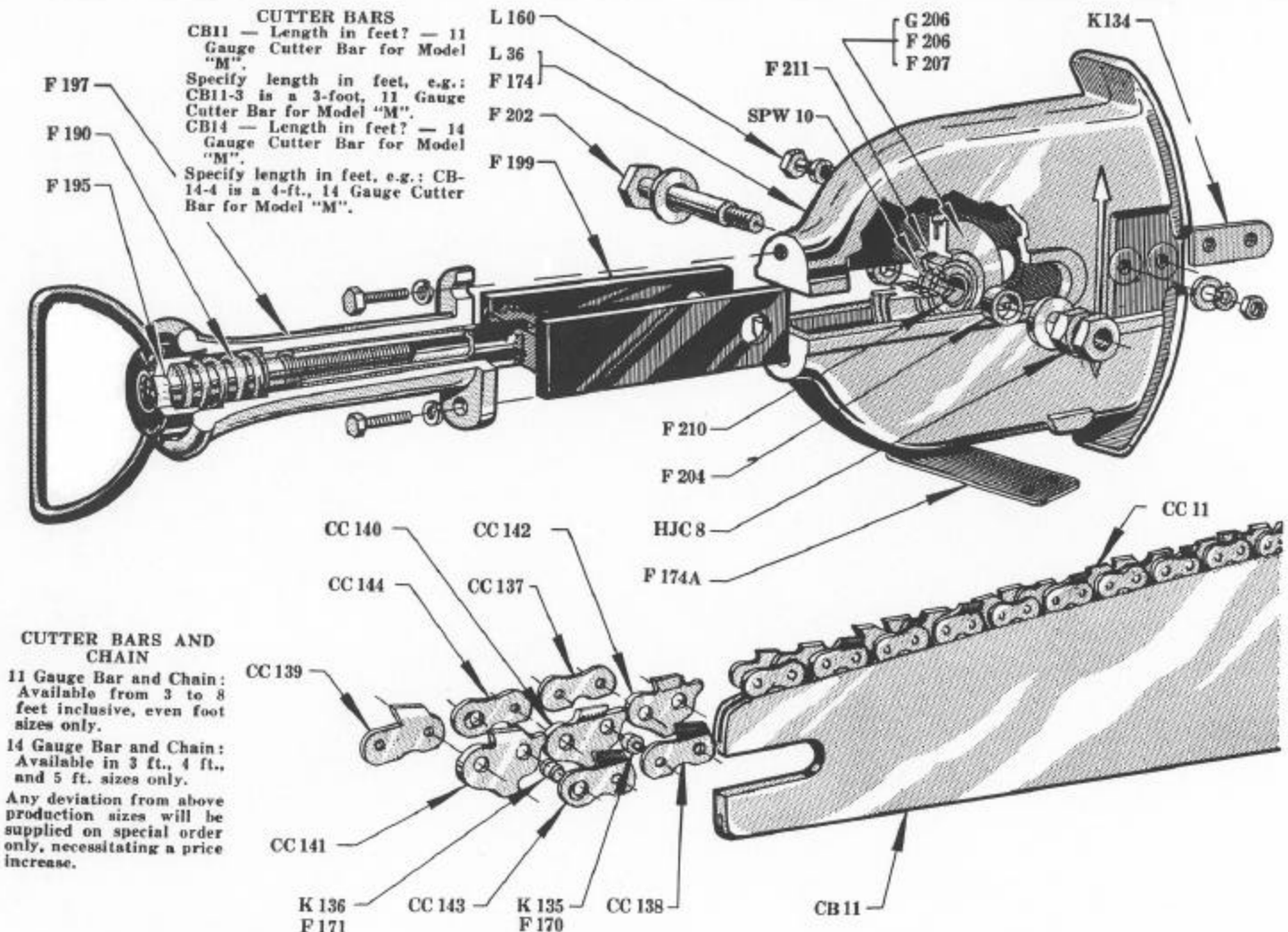
L 34 Clip
L 5 Fan
L 6 Starting pulley
M 7 Fan cover
M 28 Studs (4 required)
MA 2 Fan housing with studs
M 3A Gas tank
MA 3 Gas tank assembly (complete)

Extra Parts Supplied
F 29W Plug Wrench
K 62B Starting Rope
 (Rope supplied by the foot.)



HANDLEBARS AND CONTROLS

F 99F	Seat for Bowden casing	F 106	Clutch lever	MA 44	Swivel release assembly complete
F 101	L. H. grip with catch	F 107	Clutch Bowden wire. (Bowden wire is available by the foot on request)	M 45	Swivel lever bracket
F 101A	Catch for F 106			M 46	Bowden adjusting screw
F 101B	Spring for F 101A	F 107A	Nipple	M 79	Stop pin
F 101C	L.H. grip only	F 108	Clutch Bowden wire casing	MA 79	Stop pin assembly
F 102	Throttle control assembly complete.	F 150	Pin for clutch lever	M 92	Bowden wire and pin assembly. (Bowden wire is available by the foot on request)
F 102A	Throttle lever bracket	K 79D	Stop pin spring	M 82A	Stop pin spindle
F 102B	Throttle lever arm	L 26	Right hand grip	M 83	Spindle guide
F 102C	Brass swivel on throttle lever	L 31R	Throttle control wire	M 84	Retaining nut
F 102D	Special bolt for throttle lever assembly and swivel lever assembly	L 32R	Throttle wire Bowden casing	M 86	Swivel Bowden casing
F 102E	Special brass washer	M Group 1	Handle bars complete with grips	MA 125	Handle bars welded assembly
		M 44	Swivel lever handle		



- OUTER END ASSEMBLY**
- LA 37 Outer End Assembly 11 gauge
 - FA 195 Outer End Assembly 14 gauge (For FL type cutter bar only)
 - GA 195 Outer End Assembly 14 gauge
 - F 174 Main body casting 14 gauge complete with inspection door
 - F 174A Inspection door
 - F 190 Tail stock spring
 - F 195 Handle and tightening screw
 - F 197 Tail stock handle
 - F 199 Fork
 - F 202 Idler pin
 - F 204 Idler spacer (2 required)
 - F 206 14 gauge Idler (for FL type bar only)

- F 207 11 gauge Idler
- F 210 Tail stock bearing (2 required)
- F 211 Retaining ring for F 210
- G 206 14 gauge Idler
- HJC 8 1/2" Jam nut for F 202 (2 required)
- K 134 Butter bar guide
- L 36 Main body casting 11 gauge complete with inspection door
- L 160 Special bolt for K 134
- SPW 10 Special spacer washer for shimming F 210

- CHAINS**
- Chains are supplied in 11 or 14 gauge sizes, length specified being that of the cutter bar used. Length to be specified in feet.
- CC 11 11 gauge chain
 - CC 11A 11 gauge "A" type chain

- CC 14 11 gauge chain
 - CC 14A 14 gauge chain "A" type
- CHAIN PARTS**
- When ordering Chain parts the number is as listed below—Specify the gauge e.g.: cc 137-11 is an 11 gauge side link.
- CC 137 Side links
 - CC 138 Right side cutter
 - CC 139 Left side cutter
 - CC 140 Right raker
 - CC 141 Left raker
 - CC 142 Centre raker
 - CC 143 Master side cutter
 - CC 144 Master side links
 - CC 162 Dud — used on "A" type chain only
 - F 170 14 gauge rivets
 - F 171 14 gauge master rivets
 - K 135 11 gauge rivets
 - K 136 11 gauge master rivets