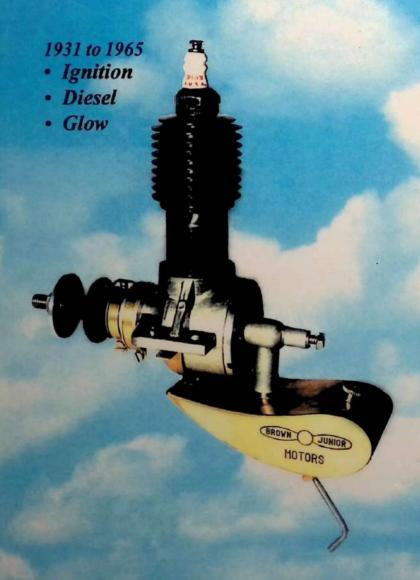
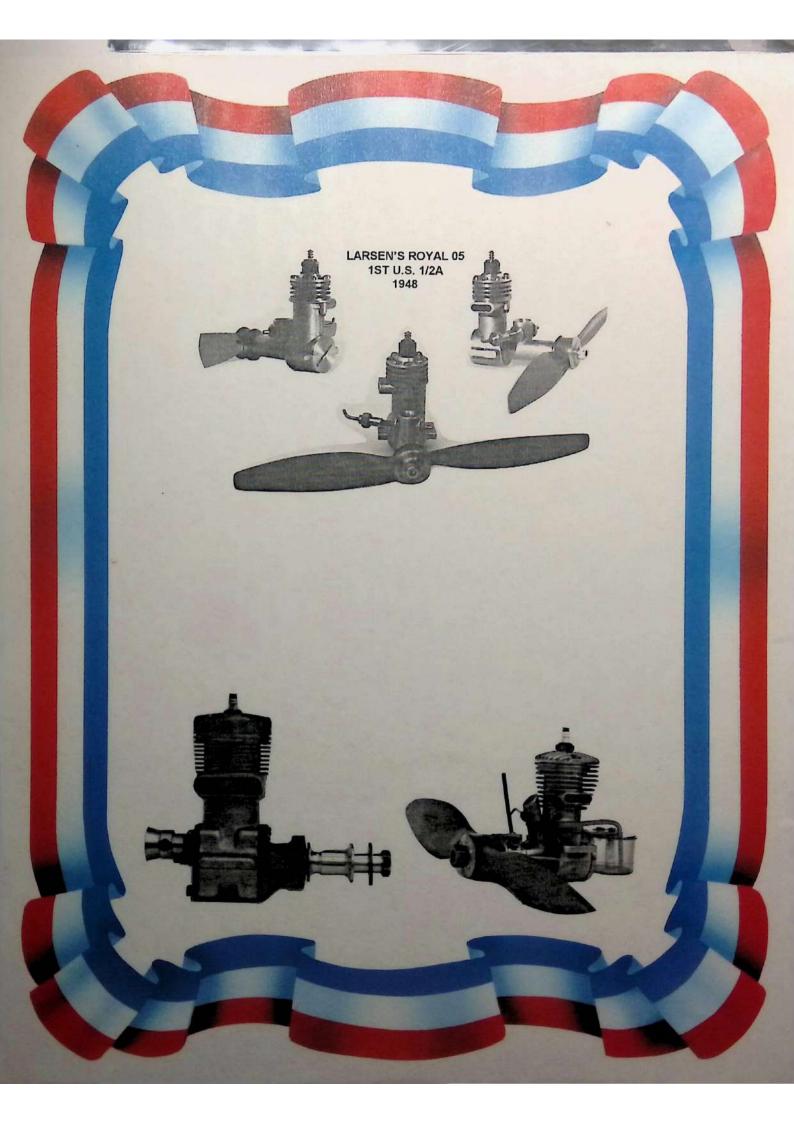
# ANDERSON'S BLUE BOOK

Model Airplane Engine Collector's Listings and Price Guide, with Photos and Drawings
1996 Edition



The Ultimate History of American Model Engines
Over 1300 Listings and nearly 500 Cross References of
Antiques and Collectibles



Model Airplane Engine Collector's Listings and Price Guide, with Photos and Drawings

### ANDERSON'S BLUE BOOK

1996 EDITION By Frank H. Anderson

SECTION I: 1931 - 1965: Larger Engines
Ignition, Diesel And Glow Engines
From .09 Displacement (Inclusive) And Up.

SECTION II: 1948 - 1965: 1/2A Type Small Engines Glow And Diesel Engines Up To .09 Displacement (Inclusive)

#### **1ST EDITION**

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from Frank H. Anderson

#### DEDICATED TO VICKI

My closest friend ... Co-Director ... F/F Timer .. U/C Assistant ... R/C Pattern caller ... R/C Pylon caller ... Co-Writer/Author ... without whom most of this couldn't or wouldn't have happened without my Wife of more than 30 Years.

#### FORWORD:

Bill Browns' first engine (COVER PHOTO) for the Magazines in 1931 led to his production of the famous Brown Series (with Walter Hurleman) through the early '30's ... our Guide starts here!

The subsequent record breaking by Maxwell Bassett at Roosevelt Field, Long Island N.Y., June 1933 amongst 165 Contestants ... capturing 3 outdoor titles; the National Mulvihill, the Stout and the Admiral Moffet International contest (with a flight of 28:18, reaching an estimated 5000 feet and traveling 7 miles) ... all Brown powered, made them change the rules of 'rubber' powered competition for ever!!

Throughout the '30's a proliferation of model engines enjoyed various degrees of popularity (this in a gradually recovering Depression period!).

Most of the mid-thirties saw large gas models, such that in 1937 the State of Massachusetts ruled that "gasoline-powered models are legally aircraft and cannot be flown in the State unless licensed and operated by licensed pilots"! ... and was enforced with potential prosecution by the commonwealth ... all promoted by a 'discontented faction within the model group who conducted a propaganda campaign against the gas model. The Boston Gas Model Society wasn't too happy at the time.

Many engine designers of the time tried to develop miniatures for smaller airplanes, hence the Atom, Bantam, Brats, Chunn, Elf, Huskys, M & m, Madewell (Miles & Wasps), Ohlsson, Pee Wee and Syncro (bee) to name most of the '30's more well known miniatures (under .24)... but there was always the 'pain of the coil, condenser and batteries of the day.

Race Car engines became more popular as Aircraft engines ... some came and went ... others stayed, for a time.

The Second World War virtually ended American engine production, except for a few such as Ohlsson, G.H.Q. etc., who managed to find occasional material sources (or as in Canada, touted manufacture of model engines as "Educational Tools"!).

In an ad in 1942, G.H.Q. claimed over 65,000 in use and it was selling for \$9.95 !! Post War engines really proliferated and by 1946 there were probably over 200 readily identifiable engines on the market. Some manufacturers produced as many as 3 or 4 different models in the same year. The vast numbers of returning service men made companies such as Ohlsson & Rice very wealthy, and they believed 'anything' would sell, and for a while it did.

"Production quantities" are very imaginative words since some manufacturers produced as few as 50 (Cave Cobra) and became quite well known with quantities of 150 (Chunn). In fact K & B's initial production run was around 100 units! In the '90's we think of runs of 5000 (K & B) but our good friend Ame Hende (Sweden) produces short (?) Runs of more than 100 Repros at a time and he's considered to be producing 'custom engines' ... one wonders?!

During World War II this author started flying Free Flight in the Toronto area and was exposed to, and owned, many of the 'sought after' engines of todays' (90's) collecting. I hated to use the ignition systems and reveled when the Glow Plug arrived.

Sales in late 1947 of the Arden Glow Plug brought down many engine manufacturers because their engines couldn't stand the stresses of higher R.P.M.'s and Alcohol/Nitrated fuels.

There were not a lot of jobs for the Post War modelers and returning service men, so development of the cheaper/2A engines brought a whole new young group of modelers into the scene.

Many of the older modelers yearned for the 'more relaxed days' of yesteryear but were busy raising families and didn't have much money left over for the extras, such as aeromodeling.

Through the '50's. U-Control was on the upswing and even fewer major U.S. engine manufacturers survived because they were either 'niche' oriented or 'youth' (1/2A) oriented.

Most real engine development evolved from the U-Control racing events and when the '60's arrived, Radio Control engines become more prominent... even the 1/2A's sported throttles.

By the time we reached into the '60's, Joe Wagner had kicked off the Model Engine Collector's Association and John Pond had taken on the reigns of the Society of Antique Modelers ... we were well on the way to flying Antique ('30's) models and actually using some of the most sought after collectible engines of these '90's!

There are a tremendous number of people to thank who, without thought of financial reward, actually grew both MECA and SAM from their most humble beginnings into viable Associations under the umbrella of the Academy of Model Aeronautics which in itself grew out from under NAA in the '30's to the largest and strongest Aero Club in the World ... mostly under the guidance of all the Past Presidents and 'specially our old friend John Worth (Past President and Executive Director Emeritus), with whom this writer managed to co-ordinate the activities of competition flying under the auspices of A.M.A. and its' counterpart, the Model Aeronautics Association of Canada in 1963.

Whether its' A.M.A. - M.A.A.C. - MECA or SAM, it has to be an 'old boys' network! ... otherwise how would you ever get things done ... and don't ever forget our old friend Frank Zaic's untiring efforts through his writings and priceless books.

In MECA, the Swap Sheet/Bulletin are primary but the constant thread throughout it all has been Tim Dannels, whom this writer has never met. In fact this Guide was about 90% complete from research and collecting literature for about 40 years when we located **old** issues of the Model Engine Collectors Journal which permitted us to really review just how right/wrong we were. The further back we went the more interesting they got ... one wonders where all the energy came from to continuously produce a 'Journal' for more than 30 years!! Just working 7 days a week for 6 months with intense effort to get this 'done' has nearly worm us out ... 'hats off' to Tim and all his Writers ... we've also included an ad for the Journal so you too can get some real in-depth reviews of many engines ... reading some stories about the Designers and Manufacturers of these engines has been a real joy for me ... spend some more money and, not only get a subscription, but buy back issues of the Journal .... and don't forget to join MECA if you're not a member.

The following is an alphabetical listing of the many people we can never thank enough for making this possible. Thanks to all of the following friends who took their time to help in compiling this book - data - photos - old magazines etc.

#### Alphabetically:

Dick Antoszewski
Bud Brautlecht
Dick Dreps
Walt Grigg
Arne Hendé
Larry Hoistion
Jeff Ling
Larry Lundy
Frank Mock
Stu Richmond
Bob Roe
Dan Vincent
Jim Walston
Wayne Yeager

#### REFERENCE WORKS:

Personal collection of Engine Literature (comprising over 200 Original & Repros), old Magazines and Files obtained over the past 40 years; plus the following:

G.H.Q. Catalog Jasco Catalog Scientific Catalog **Hurleman Catalog Bunch Catalog** Model Mechanic Model Airplane News Universal Model Airplane News Flying Aces Air Trails Air Trails Model Annuals **Bill Barnes Air Trails** Model Aircraft Engineer Model Aircraft Builder R/C Modeler American Boy Zaic Year Books Model Engine Collectors Journal MECA Bulletins & Swap Sheets

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3	ATWOOD MFG. CO.
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MINIATURE MOTORS CO, INC.   40   MADEWELL MFG. CO.   MITE DIESEL   40   MITE MANUFACTURING CO.   40   MODEL CRAFT   11   C.L.E. & CHURCH ENGINES   MODEL POWER COMPANY   60   YELLOW JACKET   MOHAWK CHIEF   46   O.K. ENGINES   COBEY-WAITE, CO.   MONDAR MODEL MOTORS MFG.CO.   40   MORTON AIRCRAFT CORP.   41   (FIRST O & R COMPANY)   40   MORTON AIRCRAFT CORP.   41   (FIRST O & R COMPANY)   40   MORTON AIRCRAFT CORP.   45   MORTON AIRCRAFT CORP.   4		1000	
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MITE DIESEL 40 MITE MANUFACTURING CO. 40 MITE MANUFACTURING CO. 40 MODELCRAFT 11 C.I.E. & CHURCH ENGINES MODELCRAFT 46 O.K. ENGINES MOLDED INSULATION COMPANY 12 COBEY-WAITE, CO. 40 MOLDAR MOLDED INSULATION COMPANY 12 COBEY-WAITE, CO. 40 MONARCH (CANADIAN) 40 MORTON ARCRAFT CORP. 40 MORTON-AVIATION INDUSTRIES OFFENBACH'S HOBBY SUPPLY CO. 28 JIM BROWN ENGINES OF & R CICE MFG. CO. 42 OHLSSON & RICE OHLSSON & RICE OHLSSON WINIATURES 41 (FIRST O & R COMPANY) OK ENGINES 45 OLYMPIC 13 COX (L.M.) MFG. CO. 45 OLYMPIC 13 COX (L.M.) MFG. CO. 47 ORRENGINES 47 ORWICK 48 PACEMAKER 48 PACIFIC AIRMOTIVE CORP. 49 PAGCUAL ARMOTIVE CORP. 49 PAGCUAL ARMOTIVE CORP. 49 PAGCUAL ARMOTIVE CORP. 49 PAGCUAL ARMOTIVE CORP. 49 PAGLIUSO ENGINEERING 49 PARELESS MODEL AIRPLANE CO. 49 PERENEES MODEL AIRPLANE CO. 49 PER			
MITE MANUFACTURING CO.  MODEL CRAFT  MODEL POWER COMPANY  MODEL POWER COMPANY  MOHAWK CHIEF  MOLDED INSULATION COMPANY  MOLNAR MODEL MOTORS MFG.CO.  MONARCH (CANADIAN)  MORTON AIRCRAFT CORP.  MORTON AIRCRAFT CO.  MORTON AIRCRAFT CORP.  MORTON AIRCRAFT CORP.  MORTON AIRCRAFT CO.  MORTON AIRC	MITE DIESEL		
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MOLNAR MODEL MOTORS MFG.CO.  MONARCH (CANADIAN)  MORTON AIRCRAFT CORP.  NEW HURRICANE  OFFENBACH'S HOBBY SUPPLY CO.  O & R CHEMINOL  O & R CHEMINOL  OLLSSON & RICE  OHLSSON & RICE  OHLSSON MINIATURES  OLLSSON & RICE  OHLSSON MINIATURES  OLYMPIC  OR ENGINES  OLYMPIC  OR ENGINES  ORWICK  P & S CO.  PACEMAKER  PACETIC AIRMOTIVE CORP.  PAGCO  PAL ENGINEERING  PAL ENGINEERING  PAL ENGINEERING  PAL ENGINEERING  PHANTOM MOTORS  PHANTOM MOTORS  PHANTOM MOTORS  PHANTOM SPECIAL (RACE CAR)  POOO  POOO  POWER MODEL ENGINE CO.  PRECISION MACHINE WORKS  PRICE  PUMBRICANE   UBURGESS & M-S ENGINEERING)  MORTON-AVIATION INDUSTRIES  JIM BROWN ENGINES  OK CHURSON & NICHERINS  OK CHONNALTION INDUSTRIES  OK COX (L.M.) MFG. CO.  OK R COMPANY)  OK COMPANY  OHLSSON MINIATURES  JIM BROWN ENGINES  OHLSSON & NICHERIS  OHLSSON & NICHERS  OHLSSON MORNIATURES  JIM BROWN ENGINE  ON MORTON & OHLSSON & NICHERS  JIM BROWN ENGINE  OHLSSON MORTON ON SENCIC  OHLSSON ON SENCIC  OHLSSON MORTON ON SENCIC  OHLSSON ON SENCIC  OHLSSON ON SENCIC  OHLSSON ON SE		7.7	
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OHLSSON MINIATURES         41         (FIRST O & R COMPANY)           OK ENGINES         45           OLYMPIC         13         COX (L.M.) MFG. CO.           ORR ENGINES         47           ORWICK         48           P & S CO.         48         ORWICK (GLOW STREAK)           PAC         15         DENNY INDUSTRIES           PACEMAKER         48         DENNY INDUSTRIES           PAGEO         49         PAGCO           PAGLIUSO ENGINEERING         49         PAGCO           PAL ENGINEERING LTD.         49         PAGCO           PEERLESS MODEL AIRPLANE CO.         49         PEERLESS MODEL SUPPLY           PHANTOM MOTORS         50         PHANTOM MOTORS           PHANTOM SPECIAL (RACE CAR)         59         WASP MODEL SUPPLY           PHANTOM P-30         51         PHANTOM MOTORS           PIERCE INDUSTRIES         51         PHANTOM MOTORS           PIONEER BROWN         51         POOD           POWER MODEL ENGINE CO.         32         KNIGHT           PRECISION MACHINE WORKS         52           PRECISION MOTORS         52           PRECISION MOTORS         52           PRICE         52	OHLSSON & RICE MFG. CO.		
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ORR ENGINES         47           ORWICK         48           P & S CO.         48         ORWICK (GLOW STREAK)           PAC         15         DENNY INDUSTRIES           PACEMAKER         48         PACIFIC AIRMOTIVE CORP.           PAGCO         49         DENNY INDUSTRIES           PAGCO         49         PAGCO           PAL ENGINEERING LTD.         49         PAGCO           PEE-WEE         49         PEE-WEE           PEE-WEE         49         PERKY           PHANTOM MOTORS         50         PHANTOM SPECIAL (RACE CAR)         59         WASP MODEL SUPPLY           PHANTOM P-30         51         PHANTOM MOTORS         PHANTOM MOTORS           PIERCE INDUSTRIES         51         PHANTOM MOTORS         PROGO           POWER MODEL ENGINE CO.         32         KNIGHT           PRECISION MACHINE WORKS         52         PRECISION MACHINE WORKS         52           PRICE         52         PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52         HURRICANE	OLYMPIC		COX (L.M.) MFG. CO.
P & S CO.  PAC  PAC  15  DENNY INDUSTRIES  PACEMAKER  48  PACIFIC AIRMOTIVE CORP.  PAGCO  PAGLIUSO ENGINEERING  PAEL ENGINEERING LTD.  PEERLESS MODEL AIRPLANE CO.  PEE-WEE  PERKY  PHANTOM MOTORS  PHANTOM SPECIAL (RACE CAR)  PHANTOM P-30  PIERCE INDUSTRIES  PIONEER BROWN  POGO  POWER MODEL ENGINE CO.  PRECISION MACHINE WORKS  PRICE  PRODUCTION & TOOL CO. (CDN.)  QUEEN BEE (CANADIAN)  15  DENNY INDUSTRIES  DENNY INDUSTRIES  PAGCO  PAG	ORR ENGINES		
PAC PACEMAKER  PACIFIC AIRMOTIVE CORP. PAGCO PAGLIUSO ENGINEERING PEERLESS MODEL AIRPLANE CO. PEERLESS MODEL AIRPLANE CO. PEERKY PHANTOM MOTORS PHANTOM P-30 PHANTOM P-30 PIERCE INDUSTRIES PIONEER BROWN POGO POWER MODEL ENGINE CO. PRECISION MACHINE WORKS PRICE PRODUCTION & TOOL CO. (CDN.) QUEEN BEE (CANADIAN)  15 DENNY INDUSTRIES DENNY INDUSTRIE	ORWICK		
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PACIFIC AIRMOTIVE CORP. 15 DENNY INDUSTRIES  PAGCO 49  PAGLIUSO ENGINEERING 49 PAGCO  PAL ENGINEERING LTD. 49  PEERLESS MODEL AIRPLANE CO. 49  PEE-WEE 49  PERKY 50  PHANTOM MOTORS 50  PHANTOM SPECIAL (RACE CAR) 59 WASP MODEL SUPPLY PHANTOM P-30 51 PHANTOM MOTORS  PIERCE INDUSTRIES 51  PIONEER BROWN 51  POGO 51  POWER MODEL ENGINE CO. 32 KNIGHT  PRECISION MACHINE WORKS 52  PRECISION MOTORS 52  PRICE 52  PRODUCTION & TOOL CO. (CDN.) 26 HURRICANE  QUEEN BEE (CANADIAN) 52	PAC	15	
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PAGLIUSO ENGINEERING       49       PAGCO         PAL ENGINEERING LTD.       49         PEERLESS MODEL AIRPLANE CO.       49         PEE-WEE       49         PERKY       50         PHANTOM MOTORS       50         PHANTOM SPECIAL (RACE CAR)       59       WASP MODEL SUPPLY         PHANTOM P-30       51       PHANTOM MOTORS         PIERCE INDUSTRIES       51       PHANTOM MOTORS         POGO       51       POWER MODEL ENGINE CO.       32       KNIGHT         PRECISION MACHINE WORKS       52       PRECISION MOTORS       52         PRICE       52       PRODUCTION & TOOL CO. (CDN.)       26       HURRICANE         QUEEN BEE (CANADIAN)       52       HURRICANE	PACIFIC AIRMOTIVE CORP.	15	DENNY INDUSTRIES
PAL ENGINEERING LTD.       49         PEERLESS MODEL AIRPLANE CO.       49         PEE-WEE       49         PERKY       50         PHANTOM MOTORS       50         PHANTOM SPECIAL (RACE CAR)       59       WASP MODEL SUPPLY         PHANTOM P-30       51       PHANTOM MOTORS         PIERCE INDUSTRIES       51       PHANTOM MOTORS         POGO       51       POWER MODEL ENGINE CO.       32       KNIGHT         PRECISION MACHINE WORKS       52       PRECISION MOTORS       52         PRICE       52       PRODUCTION & TOOL CO. (CDN.)       26       HURRICANE         QUEEN BEE (CANADIAN)       52	PAGCO	49	
PEERLESS MODEL AIRPLANE CO.         49           PEE-WEE         49           PERKY         50           PHANTOM MOTORS         50           PHANTOM SPECIAL (RACE CAR)         59         WASP MODEL SUPPLY           PHANTOM P-30         51         PHANTOM MOTORS           PIERCE INDUSTRIES         51         PHANTOM MOTORS           PIONEER BROWN         51         POGO           POWER MODEL ENGINE CO.         32         KNIGHT           PRECISION MACHINE WORKS         52         PRECISION MOTORS           PRICE         52         PRICE           PRICE         52         PRICE           PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52	PAGLIUSO ENGINEERING	49	PAGCO
PEE-WEE         49           PERKY         50           PHANTOM MOTORS         50           PHANTOM SPECIAL (RACE CAR)         59         WASP MODEL SUPPLY           PHANTOM P-30         51         PHANTOM MOTORS           PIERCE INDUSTRIES         51         PHANTOM MOTORS           POGO         51         POWER MODEL ENGINE CO.         32         KNIGHT           PRECISION MACHINE WORKS         52         PRECISION MOTORS         52           PRICE         52         PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52         HURRICANE	PAL ENGINEERING LTD.	49	
PERKY         50           PHANTOM MOTORS         50           PHANTOM SPECIAL (RACE CAR)         59         WASP MODEL SUPPLY           PHANTOM P-30         51         PHANTOM MOTORS           PIERCE INDUSTRIES         51         PHANTOM MOTORS           POGO         51         POWER MODEL ENGINE CO.         32         KNIGHT           PRECISION MACHINE WORKS         52         PRECISION MOTORS         52           PRICE         52         PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52         HURRICANE	PEERLESS MODEL AIRPLANE CO.	49	
PHANTOM MOTORS         50           PHANTOM SPECIAL (RACE CAR)         59         WASP MODEL SUPPLY           PHANTOM P-30         51         PHANTOM MOTORS           PIERCE INDUSTRIES         51           PIONEER BROWN         51           POGO         51           POWER MODEL ENGINE CO.         32         KNIGHT           PRECISION MACHINE WORKS         52           PRECISION MOTORS         52           PRICE         52           PRICE         52           PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52	PEE-WEE	49	
PHANTOM SPECIAL (RACE CAR)         59         WASP MODEL SUPPLY           PHANTOM P-30         51         PHANTOM MOTORS           PIERCE INDUSTRIES         51           PIONEER BROWN         51           POGO         51           POWER MODEL ENGINE CO.         32         KNIGHT           PRECISION MACHINE WORKS         52           PRECISION MOTORS         52           PRICE         52           PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52	PERKY	50	
PHANTOM P-30         51         PHANTOM MOTORS           PIERCE INDUSTRIES         51           PIONEER BROWN         51           POGO         51           POWER MODEL ENGINE CO.         32         KNIGHT           PRECISION MACHINE WORKS         52           PRECISION MOTORS         52           PRICE         52           PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52	PHANTOM MOTORS	50	
PIERCE INDUSTRIES         51           PIONEER BROWN         51           POGO         51           POWER MODEL ENGINE CO.         32         KNIGHT           PRECISION MACHINE WORKS         52           PRECISION MOTORS         52           PRICE         52           PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52	PHANTOM SPECIAL (RACE CAR)	59	WASP MODEL SUPPLY
PIONEER BROWN         51           POGO         51           POWER MODEL ENGINE CO.         32         KNIGHT           PRECISION MACHINE WORKS         52           PRECISION MOTORS         52           PRICE         52           PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52	PHANTOM P-30	51	PHANTOM MOTORS
POGO         51           POWER MODEL ENGINE CO.         32         KNIGHT           PRECISION MACHINE WORKS         52           PRECISION MOTORS         52           PRICE         52           PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52	PIERCE INDUSTRIES	51	
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PRECISION MACHINE WORKS         52           PRECISION MOTORS         52           PRICE         52           PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52		51	
PRECISION MOTORS         52           PRICE         52           PRODUCTION & TOOL CO. (CDN.)         26         HURRICANE           QUEEN BEE (CANADIAN)         52	POWER MODEL ENGINE CO.	32	KNIGHT
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PRODUCTION & TOOL CO. (CDN.)  QUEEN BEE (CANADIAN)  52  HURRICANE  52	PRECISION MOTORS	52	
QUEEN BEE (CANADIAN) 52	PRICE	52	
	PRODUCTION & TOOL CO. (CDN.)	26	HURRICANE
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	RANGER	52	PRECISION MOTORS

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SAVAGE	1	AERO RESEARCH & DEV. CO. INC.
SCARABE	54	AERO RESEARCH & DEV. CO. INC.
SCOTT MOTORS, INC.	56	THUNDERBIRD
SCOUT (RACING .60's)	54	THONDERBIRD
SCOUT TWIN (WASP)	60	WASP TWINS
SCRAPPER	54	WASP I WINS
SIDEWINDER	32	LEE (CLARENCE)
SILVER KING	53	ROCKET
SKY CHIEF	54	ROCKET
SKY DEVIL	17	EDCO(ENGINEERING & DEV.CORP.)
SKY KING	12	CLIPPER
SKYCHARGER	15	DENNY INDUSTRIES
SKYLARK	2	APEX MOTORS
SNYDER-BLITZEN	55	AFEA MOTORS
SOUTHERN MODEL ENGINEERS	55	
SPEED DEMON	55	
SPEEDWAY	9	BUNCH MOTOR CO.
SPITFIRE	2	ANDERSON SPITFIRE/McCORD
SPITFIRE A	5	BARKER ENGINEERING CO.
SPORTSMAN	13	COX (L.M.) MFG. CO.
SPORTSMAN	35	McCOY
SPRINGFIELD	55	MCGO1
STANLEY MACHINE & TOOL CO.	24	GREMLIN
STENMOOR MFG. CO.	6	BOBCAT
STRATO (CANADIAN)	55	DOBCAI
SUPER ACE	56	TLUSH SUPER ACE MOTOR CO.
SUPER ATOM	3	ATOM
SUPER BLITZEN	55	SNYDER-BLITZEN
SUPER CHAMPION	3	ATWOOD & ADAMS MFG.
SUPER CYCLONE	14	
SUPER HURRICANE	27	CYCLONES (BABY & SUPER)
SUPER MOTORS, INC.	14	HURRICANE
SUPER SCRAPPER	54	DELONG
SUPER STUNT	37	SCRAPPER
SUPERCHARGER	50	McCOY
	30	PERKY

NAME	PAGE	REFERENCE
SUPERCHARGER 'C'	55	
SUPER THOR	56	THOR ENGINE DIV.
SUPER WASP TWIN	60	WASP TWINS
SWIFT AIR ASSOCS. ENGINE DIV.	55	
SYNCRO DEVICES	55	
TALISMAN	56	
TARZAN	56	
TEE DEE	13	COX (L.M.) MFG. CO.
TESTORS	34	McCOY
THERMITE	28	JIM BROWN ENGINES
THIMBLEDROME	13	COX (L.M.) MFG. CO./CAMERON
THOR ENGINE DIV.	56	
THUNDERBIRD	56	
THUNDERHEAD	24	GILBERT (A.C.)
TIGER AERO	9	BUNCH MOTOR CO.
TLUSH SUPER ACE MOTOR CO.	56	
TOM THUMB (REBRANDED BUNCH)	56	
TORNADO	47	ORR
TORPEDO	50	HI-SPEED DIV. PHANTOM MOTORS
TORPEDO	29	K & B MANUFACTURING
TORPEDO SPECIAL (TWIN STACK)	40	MINIATURE MOTORS INC.
TRIDENT	57	
TRIUMPH	4	ATWOOD MOTORS
TROJAN MINIATURE PRODUCTS	57	
VECO PRODUCTS	57	
VIKING (TWIN)	58	
VIVELL MOTORS	58	
WARREN SALES & SERVICE	56	TOM THUMB
WARRIOR	8	BUNCH MOTOR CO.
WASP (.141)	33	MADEWELL MFG. CO.
WASP MODEL SUPPLY	59	
WASP TWINS	60	
WATER NIMPH	27	INTERNATIONAL MODELS CO.
WEISS	32	LOUTREL MOTORS
WENSEN	60	
WERNER	60	
WHIRLWIND (1936)	39	MINIATURE AIRCRAFT OF N.Y.
WHIRLWIND (1942)	26	HURRICANE
WILLARD	60	
WIZARD (TWIN)	58	VIKING (TWIN)
WOODBRIDGE MFG. CO.	54	SCRAPPER
WORLD WIDE DISTRIBUTOR	15	DEMON
YELLOW JACKET	60	

#### PRICE GUIDE:

The Model Engine Collector's Association Swap Sheet has been reviewed from '91 thru' early '95.

Prices for various engines are based on "Asking" prices in range from "Very Good to Excellent".

We analyzed and averaged the prices. Note that most Collectors in the Swap Sheet state "repaired lug" or "XNVA" etc. are "Otherwise Excellent"!! ... since there is no way to control this by downgrading (according to MECA) so we've tried to combine "very good - excellent - nearly new" and trust this is an acceptable "ESTIMATED VALUE" with full knowledge it will be criticized ... prices do vary from New York to California and are cheaper here in Florida!

Some large engines can add as much as 50 to 100% to their price with the inclusion of Aircraft or Race-car magnetos ... i.e. Homets, McCoys etc.

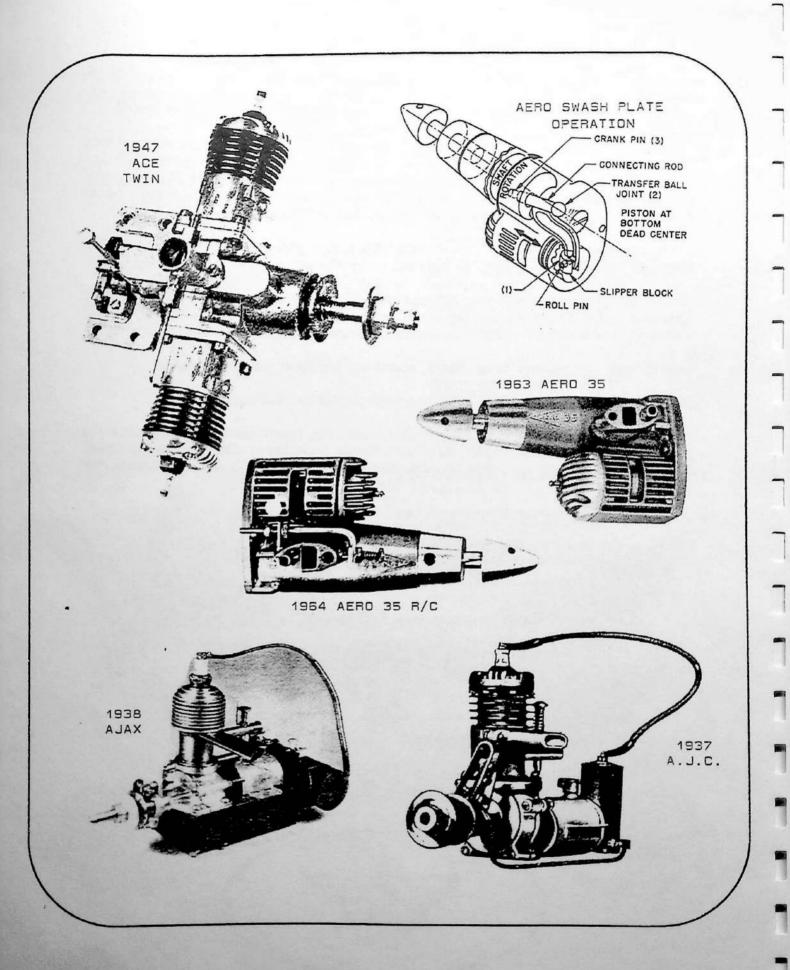
No one seems to really differentiate between years of engines such as O & R 60's ... except the 'Customs' ... McCoys of different years still seem to attract same prices for similar models. Collectors of other multiple engine manufacturers have the same 'asking price' structure.

Look through a few years of 'Swap Sheets', collectively, and then I'm sure you'll agree.

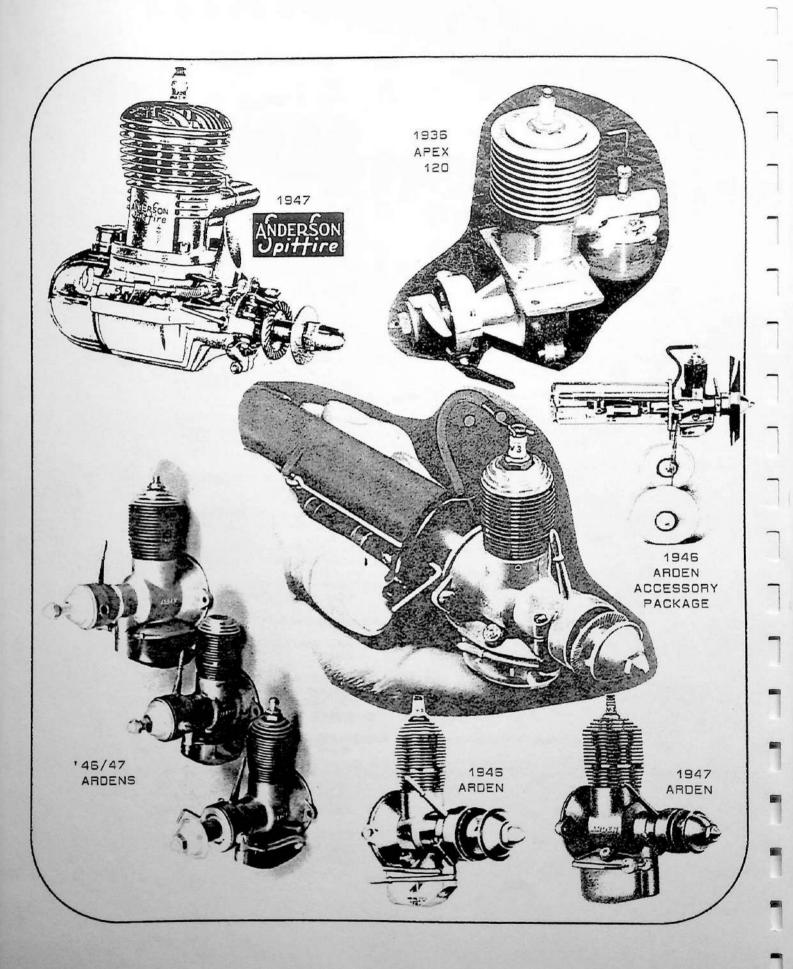
An 'S' after a price indicates we're aware of a 'sale'; comments would be appreciated.

Prices for some engines may not exist, simply because they haven't been offered for sale in the Swap Sheet; then we must ask YOU, our collector friends, to provide us with data from "Collectos". We don't have Auctions as in other Collectable/Antique fields. Only YOU can help us correct our listings.





MFR. OR ENGINE NAME	YR.	I/D/G	ENGINE NAME OR REFERENCE	DISP. CU. IN.	DESCRIPTION & INFORMATION	U.S \$ V.GOOD EXC.
ACE (JOHN KRAMER & SAM GROW)	-	-			MFG.BY KRAMER-GROW MACHINE CO. (ALSO PRODUCED PARTS FOR EDCO & MADE DOOLING PISTONS)	
•	'45	I	TWIN	0.619	OPPOSED TWIN/REAR FACING RINGED PISTONS/PROTOTYPES HAD REAR LOCATED INTAKES	
	'47	1	TWIN		AS PREV./SINGLE CENTERED CARBURETOR/ ORTHODOX PLUGS/SIMILAR TO VIKING TWIN/RINGED PISTONS/TIMER AT REAR/ APPROX. 100 MANUFACTURED	
AERO RESEARCH AND DEVELOPMENT CO. INC. (AUGIE SAVAGE & JOHN PISTON)	'46	1	SAVAGE 60		HORIZONTAL ENGINE SIMILAR TO AERO 35 SWASH PLATE OPERATION/PRE-PROD. MODELS ONLY - AT LEAST 12 MADE	
JOINTISION	'47	1	SAVAGE 45/29		EXPERIMENTAL HORIZONTAL ENGINES SIMILAR TO 60/REDUCED DISPLACEMENT- PRE-PRODUCTION ONLY	
и •	'63	G	AERO *35*	0.347	'SWASH-PLATE' ENGINE IN PRODUCTION/ RINGS/BALL BEARINGS/WEAR ADJUSTMENT SCREW IN REAR OF RADIAL MOUNT FOR TRANSFER BALL JOINT	300 - 425
	'63	G	AERO '35'	0.347	AS PREV./INTERNAL MODS. INCREASED PERFORMANCE AS MUCH AS 1,000 RPM (NETZEBAND/AM 1/64) NO KNOWN EXTERNAL DIFFERENCES	
•	'64	G	AERO '35' R/C	0.347	AS PREV./R/C/SLIDE VALVE CARBURETOR THROTTLE ADDED	425 - 595
A. J. C. MOTORS	'36	F	*AJC 60*	0.601	SAND CAST CASE/NO HEAD FINS/LAPPED PISTON/RADIAL MOUNT/METAL TANK	
	'37	I	'AJC 60'		AS PREV./PISTON RINGS.RADIAL MOUNT METAL TANK/FINNED HEAD/ASS'D OR KIT	
AJAX MOTORS (CANADIAN)	'38	1	AJAX 35	0.359	RADIAL OR BEAM MOUNTING/FINS FROM EXH.UP TO PLUG/TAPERED HOR.HEAD FINS	
	'40	1	AJAX 35	0.359	AS PREV./ V-2 PLUG REVISION	
A. L. ENGINES	'38	ı		1.687	SAND CAST CASE/4-CYCLE/ OVERHEAD VALVES	
ANCIL MOTORS (ANCIL ROUCH)	'46	ı	ANCIL AIRCRAFT	0.604	SAND CAST CASE/LAPPED PISTON/ 8 CYL. FINS/HIGH FRONT INTAKE/OPEN TIMER/REAR COVERS REMOVEABLE/SPOOL PROP DRIVE AS McCOY/VR-2 PLUG IN SMOOTH HEAD	
•	'46	1	ANCIL RACE CAR	0.604	AS PREV./FLYWHEEL MTD.ON FRONT END/ VR-2 PLUG IN SMOOTH HEAD	
	'47	1	ANCIL VARIATIONS	0.650	BOTH AIRCRAFT & CAR ENGINES MFD. TO THIS DISPL/BETTER CRANK BAL./7 CYL.FINS BYPASS INCREASED/RINGED PISTONS/250 APPROX. TOTAL PRODUCTION ALL ENGINES	
ANDERSON (MALCOLM)	'47	G	COMPETITION	?	MFD. IN HAYWARD-FREMONT, CALIF. AREA AFTER WORLD WAR II/ NUMEROUS DISPL. CUSTOM BUILT ENGINES	



1   ANDEN								
1   ANDERSON   1   ANDERSON   0.645   AS PREVIOUS/BORD OUT   150 - 300	ANDERSON (MEL) MI	rg. co.					8. 1/2A LIST-ALSO DESIGNED SUPER CYCS. 8. EARLIER ONE-OFF ENGS.STARTING IN '32	
**************************************	•		'47	1				295 - 325
MODIFIED   SAND CAST PROTOTYPES EXISTSCALED   U.P. 065/FRED DUNN REDESIGNED POR POR POCO / NEW CASE PLUS EXISTING PARTS			'49	1		0.645	AS PREVIOUS/ BORED OUT	150 - 300
3 BOLT CASE/LAPPED PISTON/BRAZED CYL. WITH MACH. ALUM. RIPS SHARK CON			*53	G		0.091	SAND CAST PROTOTYPES EXIST/SCALED- UP .065/FRED DUNN REDESIGNED FOR 'POGO'/NEW CASE PLUS EXISTING PARTS	
ARDEN (RAY ARDEN)  '46  I ARDEN .099PB  O.099  BALL BEARING/LEVER THROTTLE INTAKE/ CLEAR PLASTIC TANK/MAG.DIE CAST CASE  '46  I ARDEN .199PB  O.198  BALL BEARING/LEVER THROTTLE INTAKE CLEAR PLASTIC TANK/MAG. CASE  150 - 165  150 -	APEX MOTORS		'36	1	APEX SKYLARK	0.562	3 BOLT CASE/LAPPED PISTON/BRAZED CYL.	
(RAY ARDEN) '46 I ARDEN .099PB 0.099   PLAIN BEARING/LEVER THROTTLE INTAKE   105 - 165			'36	1	APEX 120	1.208	SAND CAST CRANKCASE/SIMILAR TO FORSTER 99/ BYPASS CAST INTO CYLINDER	
(RAY ARDEN) '46 I ARDEN .099PB 0.099   PLAIN BEARING/LEVER THROTTLE INTAKE   105 - 165							MED. BY MICRO-BILT INC.	
CLEAR PLASTIC TANK/MAG. CASE			'46	-1	ARDEN .099PB	0.099	PLAIN BEARING/LEVER THROTTLE INTAKE/	105 - 165
CLEAR PLASTIC TANK/MAG. CASE			'46	I	ARDEN .099BB	0.099	BALL BEARING/LEVER THROTTLE INTAKE CLEAR PLASTIC TANK/MAG. CASE	165
. '47   1 ARDEN .099PB   0.099   PLAIN BEARING/NEEDLE VALVE/ ALLIM. DIE CAST CASE/BLACK TANK  - '47   1 ARDEN .099BB   0.099   BALL BEARING/NEEDLE VALVE/ ALLIM. CASE/ BLACK TANK  - '47   1 ARDEN .199   0.198   BALL BEARING/NEEDLE VALVE/DROPPED PLAIN BEARING '19' IN 1947/ALLIM. CASE BLACK TANK  - NOTE: '47   ALL MODELS   BLACK TANKS STD. FOR ALL '47 MODELS WITH RED TANKS AS ACCESSORY/ RED TANKS USUALLY SUPPLIED ON ENGINES WITH FREE FIGHT ITMER - COIL - BATTERY CASE AND WHEELS ETC. ACCESS. PKG.  - '49   G ARDEN .099PB   0.099   PLAIN BEARING/CAP ON SHAFT HOUSING  - '49   G ARDEN .199   0.198   BALL BEARING/ CAP ON SHAFT HOUSING  - NOTE: - PRE-PRODUCTION   AMA WAS MADE AWARE IN 1985 OF ARDEN ENGINES HELD BY HIS GRAND-DAUGHTER AFTER HIS DEATH AND TOLD AMA SHE WANTED HER CHILDREN TO BE ABLE TO 'PLAY WITH THEM' II ONE PRE-PRODUCTION ENGINES SURFACED IN THE EARLY '70's - FOUND BY JERRY GREAVES (MECA) - A .29 CIRCA 1939-TYPICAL ATOMARDEN 'ARR-THISOTILE'-RADIAL MOUNTED-			'46	ı	ARDEN .199PB	0.198	PLAIN BEARING/LEVER THROTTLE INTAKE CLEAR PLASTIC TANK/MAG, CASE	150 - 185
DIE CAST CASE/BLACK TANK  1 ARDEN .099BB 0.099 BALL BEARING/NEEDLE VALVE/ ALUM. CASE/ BLACK TANK  1 ARDEN .199 0.198 BALL BEARING/NEEDLE VALVE/DROPPED PLAIN BEARING '19' IN 1947/ALUM. CASE BLACK TANK  1 NOTE: '47 ALL MODELS BLACK TANKS STD. FOR ALL '47 MODELS WITH RED TANKS AS ACCESSORY/ RED TANKS USUALLY SUPPLIED ON ENGINES WITH FREE FLIGHT TIMER - COIL - BATTERY CASE AND WHEELS ETC. ACCESS. PKG.  1 '49 G ARDEN .099PB 0.099 PLAIN BEARING/CAP ON SHAFT HOUSING 1 '49 G ARDEN .199 0.198 BALL BEARING/ CAP ON SHAFT HOUSING 1 '49 G ARDEN .199 0.198 BALL BEARING/ CAP ON SHAFT HOUSING 1 NOTE: — PRE-PRODUCTION — AMA WAS MADE AWARE IN 1985 OF ARDEN ENGINES HELD BY HIS GRAND- DAUGHTER AFTER HIS DEATH AND TOLD AMA SHE WANTED HER CHILDREN TO BE ABLE TO PLAY WITH THEM! I ONE PRE- PRODUCTION ENGINE SURFACED IN THE EARLY '70's - FOUND BY JERRY GREAVES (MECA.) - A .29 CIRCA 1939- TYPICAL ATOM- ARDEN 'ART-THROTTLE'-RADIAL MOUNTED-			'46	1	ARDEN .199BB	0.198	BALL BEARING/LEVER THROTTLE INTAKE/ CLEAR PLASTIC TANK/ MAG. CASE	150 - 175
CASE/ BLACK TANK  1 ARDEN .199 0.198 BALL BEARING/NEEDLE VALVE/DROPPED PLAIN BEARING '19' IN 1947/ALUM. CASE BLACK TANK  NOTE: '47 ALL MODELS BLACK TANKS STD. FOR ALL '47 MODELS WITH RED TANKS AS ACCESSORY RED TANKS USUALLY SUPPLIED ON ENGINES WITH REE FLIGHT TIMER - COIL - BATTERY CASE AND WHEELS ETC. ACCESS. PKG.  '49 G ARDEN .099PB 0.099 PLAIN BEARING/CAP ON SHAFT HOUSING  '49 G ARDEN .199 0.198 BALL BEARING/ CAP ON SHAFT HOUSING  NOTE: — PRE-PRODUCTION — AMA WAS MADE AWARE IN 1985 OF ARDEN ENGINES HELD BY HIS GRAND-DAUGHTER AFTER HIS DEATH AND TOLD AMA SHE WANTED HER CHILDREN TO BE ABLE TO 'PLAY WITH THEM' II ONE PRE-PRODUCTION ENGINE SURFACED IN THE EARLY '70's - FOLUND BY JERRY GREAVES (MECA)- A .29 CIRCA 1939-TYPICAL ATOMARDEN 'AIR-THROTTLE'-RADIAL MOUNTED-			'47	I	ARDEN .099PB	0.099		
PLAIN BEARING '19' IN 1947/ALIUM. CASE BLACK TANK  BLACK TANK  BLACK TANKS STD. FOR ALL '47 MODELS WITH RED TANKS AS ACCESSORY/ RED TANKS USUALLY SUPPLIED ON ENGINES WITH FREE FLIGHT TIMER - COIL - BATTERY CASE AND WHEELS ETC. ACCESS. PKG.  '49 G ARDEN .099PB 0.099 PLAIN BEARING/CAP ON SHAFT HOUSING  '49 G ARDEN .199 0.198 BALL BEARING/ CAP ON SHAFT HOUSING  NOTE: — PRE-PRODUCTION — AMA WAS MADE AWARE IN 1985 OF ARDEN ENGINES HELD BY HIS GRAND- DAUGHTER AFTER HIS DEATH AND TOLD AMA SHE WANTED HER CHILDREN TO BE ABLE TO 'PLAY WITH THEM' II ONE PRE- PRODUCTION ENGINE SURFACED IN THE EARLY '70's - FOUND BY JERRY GREAVES (MECA) - A .29 CIRCA 1939- TYPICAL ATOM- ARDEN 'AIR-THROTTLE'-RADIAL MOUNTED-			'47	1	ARDEN .099BB	0.099		
WITH RED TANKS AS ACCESSORY/ RED TANKS USUALLY SUPPLIED ON ENGINES WITH FREE FLIGHT TIMER - COIL - BATTERY CASE AND WHEELS ETC. ACCESS. PKG.  '49 G ARDEN .099PB 0.099 PLAIN BEARING/CAP ON SHAFT HOUSING  '49 G ARDEN .099BB 0.099 BALL BEARING/ CAP ON SHAFT HOUSING  '49 G ARDEN .199 0.198 BALL BEARING/ CAP ON SHAFT HOUSING  NOTE: — PRE-PRODUCTION — AMA WAS MADE AWARE IN 1985 OF ARDEN ENGINES HELD BY HIS GRAND- DAUGHTER AFTER HIS DEATH AND TOLD AMA SHE WANTED HER CHILDREN TO BE ABLE TO PLAY WITH THEM' II ONE PRE- PRODUCTION ENGINE SURFACED IN THE EARLY '70's - FOUND BY JERRY GREAVES (MECA)- A .29 CIRCA 1939- TYPICAL ATOM- ARDEN 'AIR-THROTTLE'-RADIAL MOUNTED-			'47	I	ARDEN .199	0.198	PLAIN BEARING '19' IN 1947/ALUM. CASE	160 - 200
. '49 G ARDEN .099BB 0.099 BALL BEARING/ CAP ON SHAFT HOUSING  '49 G ARDEN .199 0.198 BALL BEARING/ CAP ON SHAFT HOUSING  NOTE: — PRE-PRODUCTION — AMA WAS MADE AWARE IN 1985 OF ARDEN ENGINES HELD BY HIS GRAND-DAUGHTER AFTER HIS DEATH AND TOLD AMA SHE WANTED HER CHILDREN TO BE ABLE TO 'PLAY WITH THEM' II ONE PRE-PRODUCTION ENGINE SURFACED IN THE EARLY '70's - FOLIND BY JERRY GREAVES (MECA)- A .29 CIRCA 1939- TYPICAL ATOMARDEN 'AIR-THROTTLE'-RADIAL MOUNTED-		NOTE:	'47		ALL MODELS		WITH RED TANKS AS ACCESSORY/ RED TANKS USUALLY SUPPLIED ON ENGINES WITH FREE FLIGHT TIMER - COIL - BATTERY	
. '49 G ARDEN .199 0.198 BALL BEARING/ CAP ON SHAFT HOUSING  NOTE: — PRE-PRODUCTION — AMA WAS MADE AWARE IN 1985 OF ARDEN ENGINES HELD BY HIS GRAND-DAUGHTER AFTER HIS DEATH AND TOLD AMA SHE WANTED HER CHILDREN TO BE ABLE TO 'PLAY WITH THEM' II ONE PRE-PRODUCTION ENGINE SURFACED IN THE EARLY '70's - FOLIND BY JERRY GREAVES (MECA)- A .29 CIRCA 1939- TYPICAL ATOMARDEN 'AIR-THROTTLE'-RADIAL MOUNTED-			'49	G	ARDEN .099PB	0.099	PLAIN BEARING/CAP ON SHAFT HOUSING	
NOTE: — PRE-PRODUCTION — AMA WAS MADE AWARE IN 1985 OF ARDEN ENGINES HELD BY HIS GRAND-DAUGHTER AFTER HIS DEATH AND TOLD AMA SHE WANTED HER CHILDREN TO BE ABLE TO 'PLAY WITH THEM' II ONE PRE-PRODUCTION ENGINE SURFACED IN THE EARLY '70's - FOLIND BY JERRY GREAVES (MECA)- A .29 CIRCA 1939- TYPICAL ATOMARDEN 'AIR-THROTTLE'-RADIAL MOUNTED-	•		'49	G	ARDEN .099BB	0.099	BALL BEARING/ CAP ON SHAFT HOUSING	80
ARDEN ENGINES HELD BY HIS GRAND- DAUGHTER AFTER HIS DEATH AND TOLD  AMA SHE WANTED HER CHILDREN TO BE ABLE TO "PLAY WITH THEM" !! ONE PRE- PRODUCTION ENGINE SURFACED IN THE EARLY '70's - FOLIND BY JERRY GREAVES (MECA)- A .29 CIRCA 1939- TYPICAL ATOM- ARDEN 'AIR-THROTTLE'-RADIAL MOUNTED-			'49	G	ARDEN .199	0.198	BALL BEARING/ CAP ON SHAFT HOUSING	
		NOTE:	-	-	PRE-PRODUCTION		ARDEN ENGINES HELD BY HIS GRAND- DAUGHTER AFTER HIS DEATH AND TOLD AMA SHE WANTED HER CHILDREN TO BE ABLE TO 'PLAY WITH THEM' !! ONE PRE- PRODUCTION ENGINE SURFACED IN THE EARLY '70's - FOUND BY JERRY GREAVES (MECA)- A .29 CIRCA 1939- TYPICAL ATOM- ARDEN 'AIR-THROTTLE'-RADIAL MOUNTED-	

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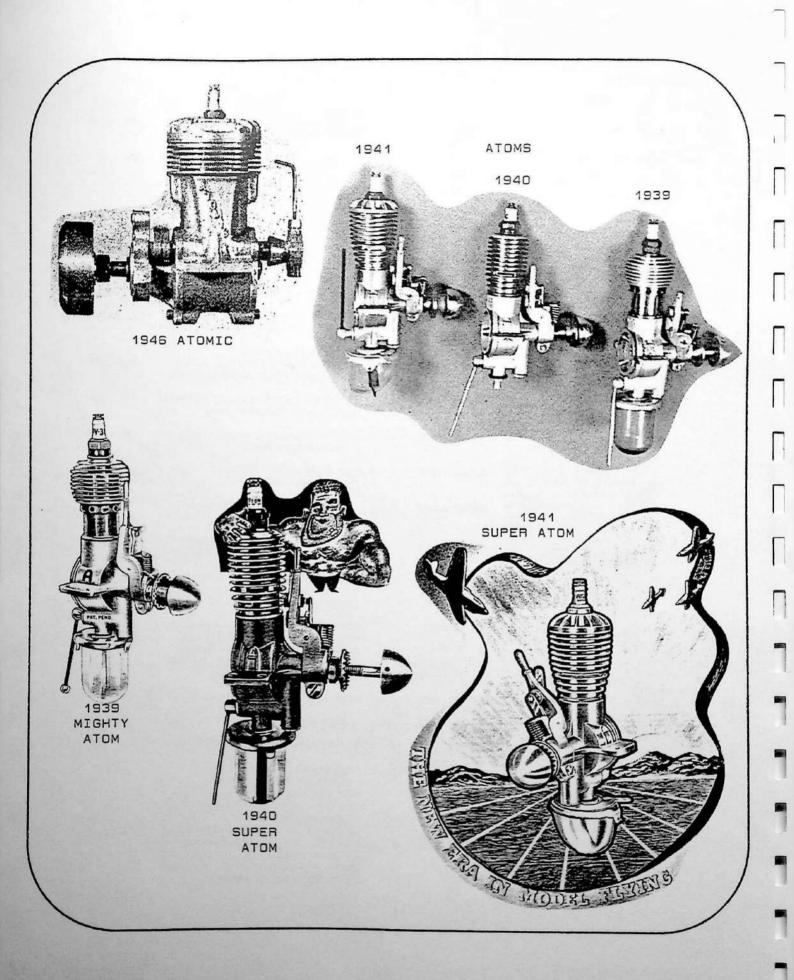
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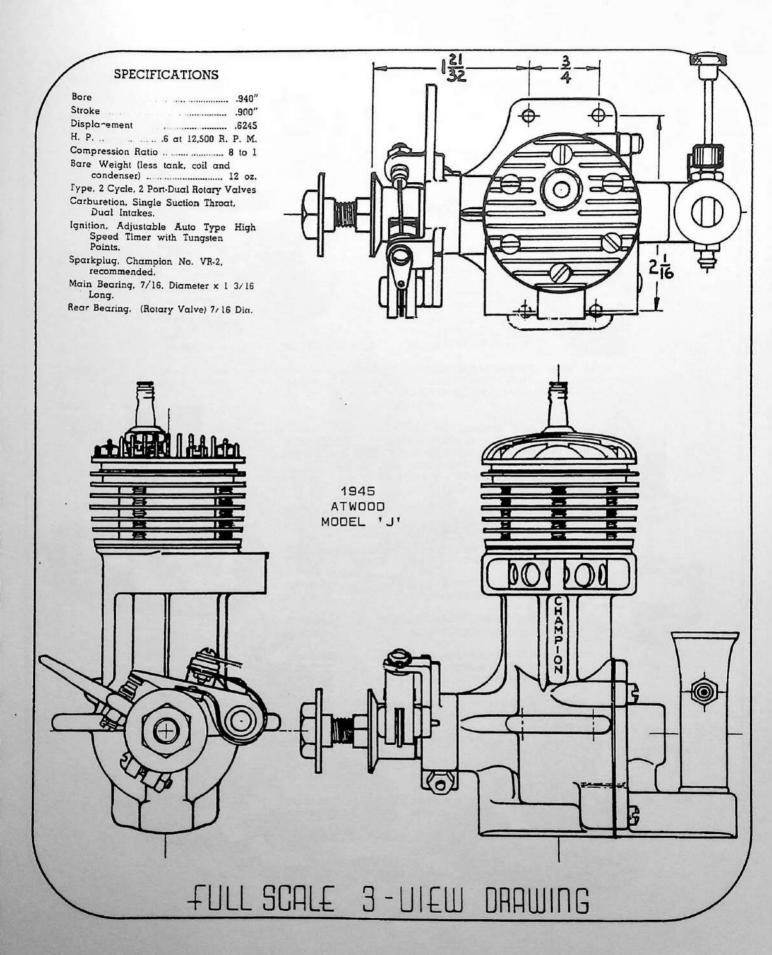
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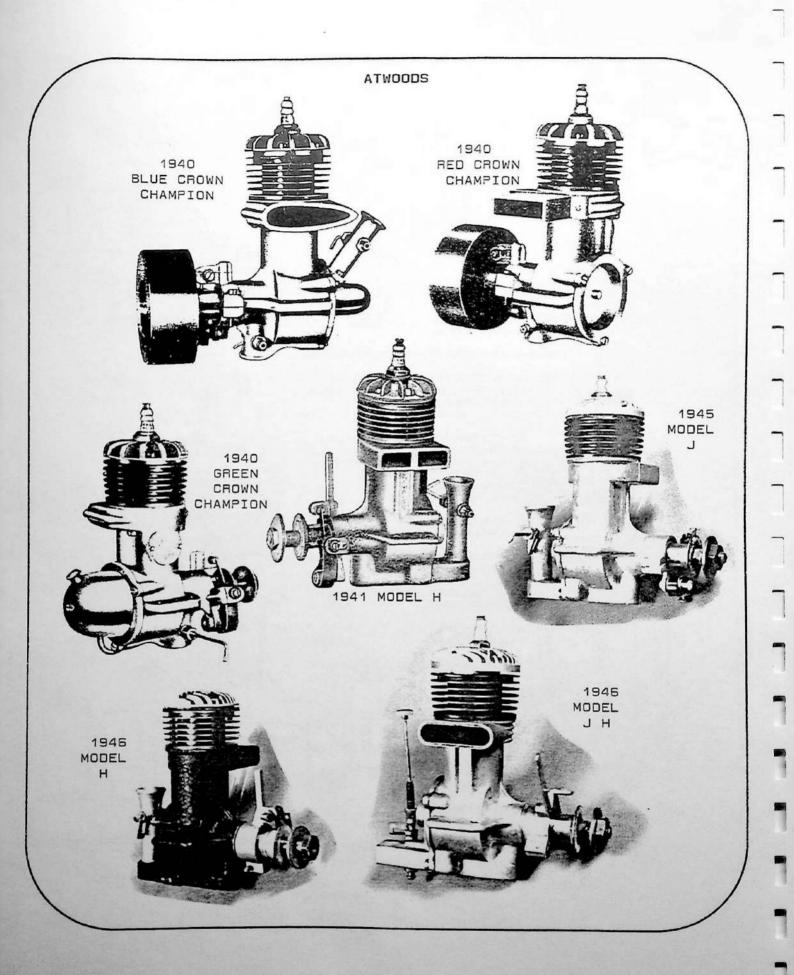
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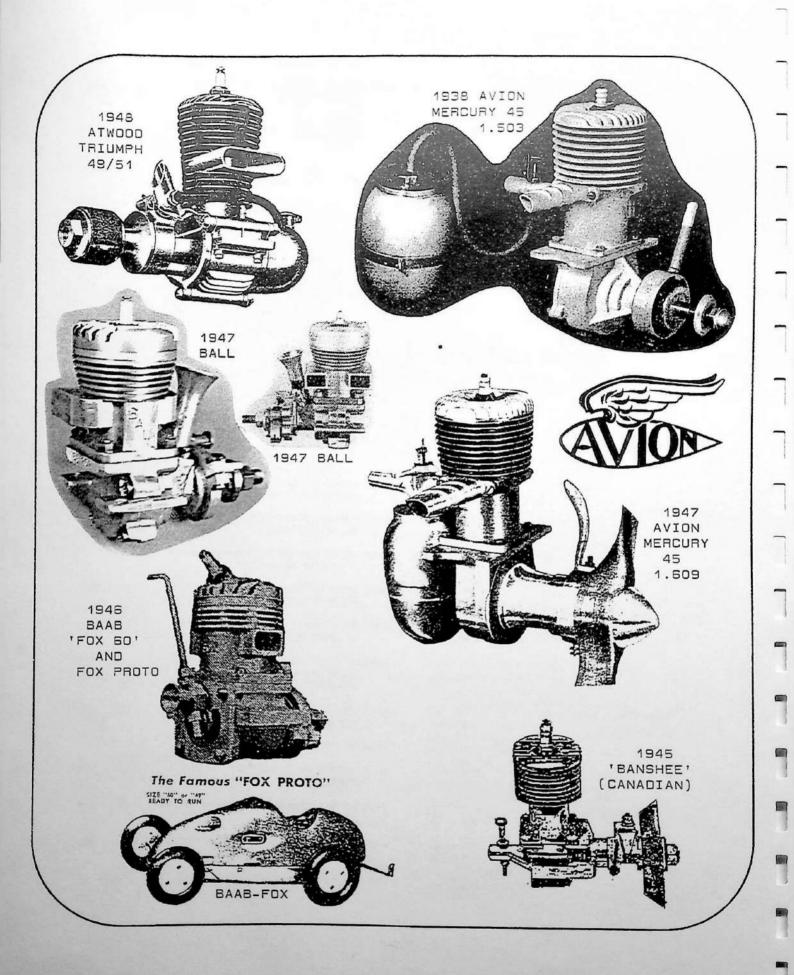
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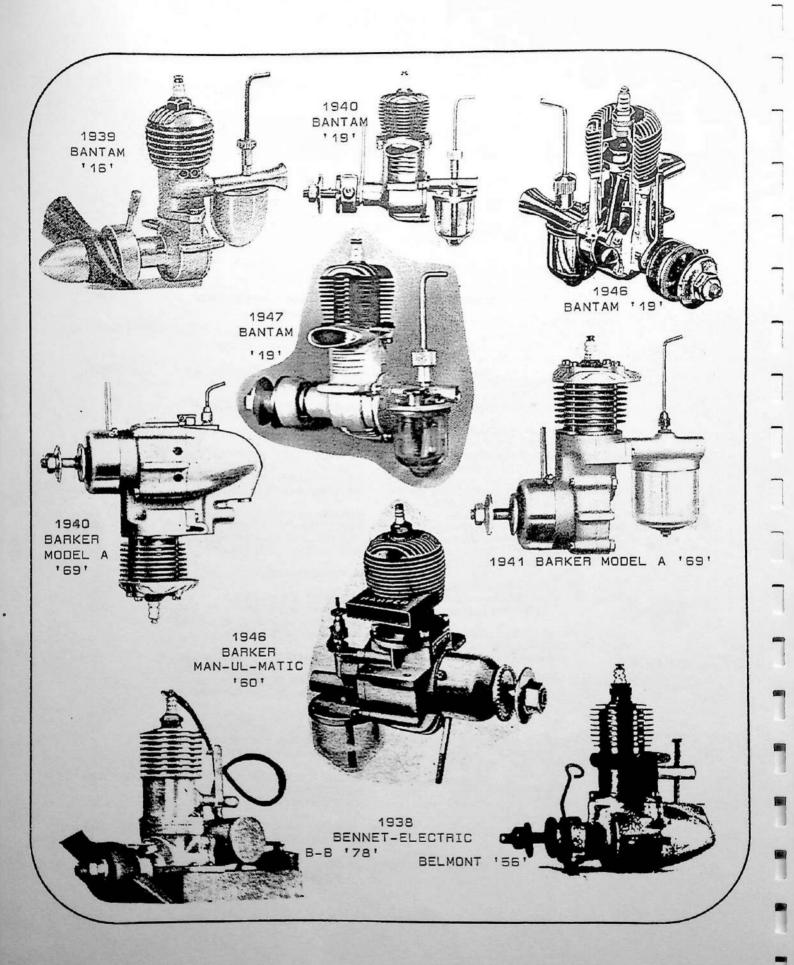




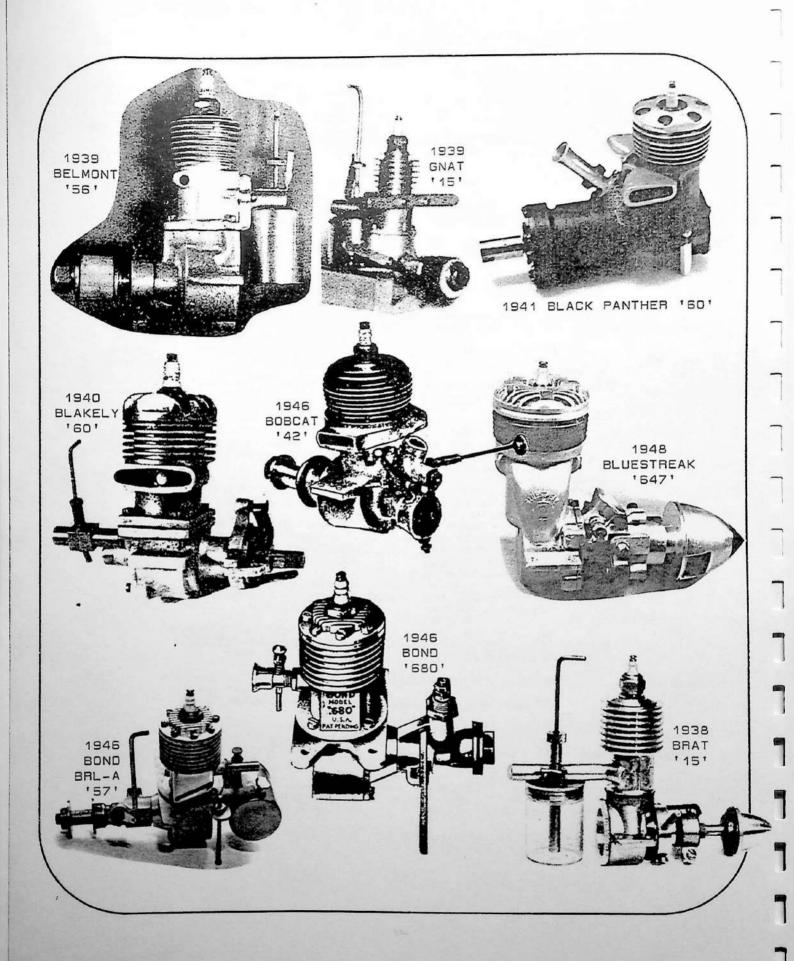
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ARLINGTON MOTOR CO.	'46	I	ARLINGTON '51'	0.512	SIDEPORT CASTINGS KIT/NONE SEEN (REF. 'JOURNAL')	
ATOM	_				MFD. BY MICRODYNE ENGINES	
IRWIN&NAT POLK-OWNERS (RAY ARDEN-DESIGNER)	'39	I	MIGHTY ATOM	0.097	EXHAUST PORTS ROUND HOLES MAGNESIUM CASE/BULB SHAPED CYL.FINS	
•	'40	I	SUPER ATOM	0.097	AS PREV.LOWER END/STRAIGHT CYL. FIN PROFILE/360 PORTS/MAGNESIUM CASE	125 - 185
	'40	1	SUPER ATOM	0.097	AS PREV./KNOB ON THROTTLE ARM & WIREL TANK AS LATER ATOMS (REF. 'JOURNAL')	180
n:	'41	1	SUPER ATOM	0.098	NEW ENGINE/ALUM. CASE/TAPERED CYL. PROFILE/SPOKE FINS ON HEAD	
	'46	1	SUPER ATOM	0.098	AS PREV./MAGNESIUM CASTINGS/SERIAL #'s ABOVE 30,000 (REF. 'JOURNAL') TAPERED CYL.FINS UNPLATED/POOREST WORKMAN- SHIP OF ALL ATOMS/THIS DOOMED FUTURE ATOM PRODUCTION	
" NOTE:			PRE-PRODUCTION		SEE NOTE IN ARDEN ABOVE	
ATOMIC			*********		DISTRIBUTED BY RICHMOND HOBBYCRAFTS	
	'46	1	ATOMIC	0.604	AS HORNET .60/UNUSUAL 3 BOLT FRONT AND REAR CASE COVERS/ 'ATOMIC' ON BYPASS	
1 TUOOD 1177 60					ALSO SEE 1/2A LIST	
ATWOOD MFG. CO. (BILL ATWOOD)	'40	1	BLUE CROWN	0.603	FOR CARS/2 INTAKES - FRONT UP DRAFT	
(BILL ATTOOD)			CHAMPION	0.000	INTAKE WITH N.V. PLUS REAR 45° DOWN-	
					DRAFT INTAKE WITH N.V./SPOKE HEAD/	
					ADDED ROUND PLATE ON BYPASS WITH	
					'MFD.BY BILL ATWOOD/SAND CAST CASES	
		-	DED COOUNT	0.603	FOR CARS/SINGLE FRONT UPDRAFT INTAKE/	
	'40	I	RED CROWN CHAMPION	0.003	RED HEAD/FLYWHEEL	
•	'40	1	GREEN CROWN CHAMPION	0.603	AS RED CROWN/FOR AIRPLANES/ BLACK- PLATE-TANK/GREEN HEAD	
	'41	1	CHAMPION MODEL H	0.624	SPOKE HD.FINS/TWIN CPLD.INTAKES/ONE N.V.ON REAR UPDRAFT INTAKE/NAT.FINISH	300
			CHAMPION	0.624	AS '41 MODEL H/NAT.FINISH/PARALLEL	150
	'45	I	CHAMPION MODEL J		HEAD FINS/BLACK CYLINDER FINS	150 -
	'46	I	CHAMPION	0.624	AS '41 MODEL H/PARALLEL HEAD FINS/	150
			MODEL H		BLACK WRINKLE PAINTED CASE/HEAD STACK INTAKE UNPAINTED	
ATWOOD & ADAMS MFG. CO.	'46	1	CHAMPION MODEL JH	0.624	AS PREV.'H'/'JH'ON BYPASS/EXHAUST ON OPPOSITE SIDE/REAR DOWNDRAFT INTAKE	150 - 150
	'46	1	MODEL JH	0.624	AS PREV./STRAIGHT-IN REAR INTAKE	
	'47	1	SUPER CHAMP	0.624	AS PREV. JH/ 'SUPER CHAMPION' ON	175 - 175
	4/		MODEL JH		BYPASS	
ATWOOD MOTORS	'47	1	SUPER CHAMP MODEL DR	0.624	AS PREV. JH/BYPASS ENGLARGED/'DR' ON BYPASS	150 - 150
	'47	1	SUPER CHAMP MODEL DR	0.624	AS PREV. 'DR'/STRAIGHT-IN REAR INTAKE (FOR INVERTED RUNNING)	150 - 300
STARLETO BY THE	'40		GLO-DEVII	0.624	AS PREV. 'DR'/'GD' ON CASE/NO TIMER	150
	'48	G	GLO-DEVIL MODEL GD	0.024	I ASTREE DRY GO ON CASE/NO IDNER	



ATWOOD - CO	NTINUED	'48	I	GLO-DEVIL MODEL GD	0.624	AS GLO-DEVIL/WITH TIMER/'GD' ON CASE	300
		'48	I	TRIUMPH .49		NEW DESIGN 2 PC.DIE CAST CASE-SPLIT UNDER MTG. LUGS/FRONT ROTARY VALVE/ TANK ON BACKPLATE/ENCLOSED TIMER/ STAMPED '49'	145
(•)		'48	I	TRIUMPH .51	0.503	AS 49/STAMPED 51/BORE INCREASED	
	•	'48	G	TRIUMPH .49	0.491	AS IGNIT./CASE NOT MACHINED FOR TIMER	120
•		'48	G	TRIUMPH .51	0.503	AS IGNIT./CASE NOT MACHINED FOR TIMER	125
ALRONI AIRCD						ENGINES KNOWN AS 'AVION MERCURY'	
AVION AIRCR	Ari Mrg. Co	'38	ı	MERCURY 45	1.503	RIBS ON CRANKCASE FRONT COVER/ MAGNESIUM CASTINGS	
n		'46	I	MERCURY 45	1.609	SMOOTH CRANKCASE FRONT COVER/ MAGNESIUM CASTINGS	1000
•	•	'47	I	MERCURY 45M	1.609	AS PREV./WATER JACKET AROUND CYL./ HEAVY CAST BRASS CRANKCASE	
*		'47	1	MERCURY 45	1.609	AS '46 MODEL/VARIATIONS IN MAG. & ALUMINUM CRANKCASES	1300
•		'47	I	MERCURY TWIN	_	PRE-PROD. TWIN/DIRECT OPPOSED (?)	
		'47	1	MERCURY 99		PRE-PROD (?)	
EAAB MODEL (CLIFF FOX		'46	1	FOX 60	0.604	SAND CAST CASE & CYL./REAR ROTARY RACE CAR ENGINE/RESEMBLES HORNET/ DUAL EXHAUST/PLUG SWEPT BACK IN FINNED HEAD/FOX' ON CYL. FRONT	
BALL		_ '46		BALL	0.604	MFD. BY B & D RACING LABORATORY TWIN EXHAUST STACKS ON SAME SIDE OF CYLINDER/LONG FRONT INTAKE/SAND	900
						CAST RACE CAR ENGINE/SPOKE HEAD FINS	
		'47	I	BALL	0.604	AS PREV. DIE CAST/PARALLEL HEAD FINS	
 BANSHEE		_				MFD. BY BARRETT ENGINES	
(CANADIAN	ŋ	'45	I	BANSHEE		RACING/AIRCRAFT/REAR ROTARY INTAKE ALUM.ALLOY CAST/MACHINED CYLINDER AND FINS -SHORT HEAD FINS	425
BANTAM ENG (BEN SHER)		 '38	<u> </u>	NEW BANTAM	0.164	MFD.BY MINIATURE MOTORS CO.(INITIALLY) SAND CAST/SIDE PORT/TWO RECT.HOLES FOR EXHAUST/MATTE FIN./PISTON RINGS/ METAL TANK/CLOSED TIMER/HOR.HD.FINS	
		'39	I	NEW BANTAM	0.164	AS PREV./TWO ROUND HOLES FOR EXH./ MORE CYLINDER & HEAD FINS/MACHINED & POLISHED/TIMER HOUSING MACHINED/ CLEAR PLASTIC TANK/PISTON RINGS	250
•		'39	1	BANTAM	0.199	1ST REAR ROTARY BANTAM/LAPPED PISTON, MAGNESIUM CASE/UNPAINTED THICK ROUNDED HEAD PROFILE	125 - 140
		'40	I	BANTAM	0.199	AS PREV./ ALUM.CASE/SHORT VENTURI HIGHER ROUNDED HEAD PROFILE	150 - 175
		'40	1	BANTAM	0.199	AS PREV./ALUMIUM CASE/ LONGER FLARED VENTURI	150 - 150



BANTAM - CONTINUED	'40	I	BANTAM	0.192	AS PREV./MAGNESIUM CASE/PAINTED THIN CLOSELY SPACED CYLINDER FINS/ HEAD PROFILE FLATTENED	
BANTAM PRODUCTS INC	'46	1	BANTAM (STRAP)	0.199	AS PREV./EXTRA METAL 'STRAP'UNDER CRANKCASE/BLACK CYLINDER & HEAD FINS NOW MFD. BY BANTAM PRODUCTS INC.	150 - 175
O.K. BANTAMS	'47	1	'OK'-BANTAM	0.199	AS PREV./EARLY MODELS MAGNESIUM CASES/LATER ALUMINUM USING UP PARTS & RIGHTS PURCHASED BY 'OK'HERKIMER/ STILL FLARED VENTURI	
	'47	1	'OK' BANTAM	0.199	AS PREV./ALUM.CASE/SHORT INTAKE (NO FLARE) & HAS 'OK' NEEDLE VALVE	115 - 135
	'47	G	BANTAM G		GLOW MODEL AS PREV./NO CAM ON SHAFT/NO TIMER ARM GROOVE/HOT FUEL TANK/SCREW INTO SHAFT PROP DRIVE	
BARKER ENGINEERING CO.	'40	1	MODEL A	0.691	SAME AS MOD. B WITH NEEDLE VALVE COMING OUT BOTTOM OF TANK FOR INVERTED USE ONLY/ELIPTICAL TANK FAIRED INTO CRANKCASE	
и.	'40	1	MODEL B	0.691	SAND CAST VERTICALLY SPLIT CASE/ ELIPTICAL TANK INCLUDING VENTURI FAIRED INTO CRANKCASE	
	'41	I	MODEL C	0.691	TRNSPRNT. FUEL TANK ON REAR INTAKE SAND CAST MAG. CASTINGS/TEARDROP SHAPED FINNED HEAD BOLTED TO ROUND CYLINDER	
	'41	I	SPITFIRE	0.691	AS 'C' MODEL REAR INTARE CASE/SPUN METAL-CONE SHAPED TANK	
	'46	I	MAN-UL-MATIC	0.604	NEW DESIGN REAR ROTARY/NAME PLATE ON MAG. CASE/BLACK PAINTED CYL. & HEAD FINS BOLTED TO CASE/ BOLT-ON RECTANGULAR EXHAUST	325
BAT	- '38	ī	BAT	0.192	MFD. BY RAY DAY PISTONS INC. SAME AS HUSKY JR./NAME SHAVED OFF CYLINDER/ 4 BOLT CASE	
•	'38	1	BAT	0.192	PERMANENT MOLD CASTINGS/NAME ON FRONT OF CYL./EXHAUST CAST AS PART OF CYLINDER/ 3 BOLT CASE	
BATZLOFF (BILL BATZLOFF)	'41	I	BATZLOFF 60	0.61	AS HASSAD EXCEPT 45° DOWNDRAFT REAR CARB. WITH BUITTERFLY/LAPPED DOMED PISTON/APPROX.12 MFD. BY FRIEND OF IRA HASSAD	1695
BENNETT ELECTRIC MACHINE WORKS	'38	1	B - B	0.781	DIE CAST/'CAN' FUEL TANK/BROWN TYPE/ 'FACTORY TESTED'/SOLD ALSO IN KIT AS 'LEWIS ENGINE' (REF. 'JOURNAL')	
	'38	I	BELMONT 56	0.562	SAND CAST ALUM. CASE/WIRE TIMER ARM/ CAST STREAMLINED TANK BOLTED TO REAR OF CRANKCASE/EXHAUST STACKS EXTRA	



BELMONT MINATURE MOTORS	'39	1	BELMONT .56	0.562	SIMILAR TO '38 MODEL BENNET ENGINE/ RATCHET NEEDLE VALVE/ CYLINDRICAL METAL TANK	
•	<b>.</b> 39	I	GNAT	0.156	SAND CAST ALUM. CASE/SAND CAST IRON CYL./FRONT EXH. WITH TUBE EXH. SWEPT BACK/INTAKE BOLTED TO REAR OF CYL./ FIXED TIMER	
BESSETT-GNOME MODEL ENGINE WORKS	'37	I	'60'	0.601	CAST ALUM.CASE/TALL CYLINDER/2PISTON RINGS/TANK SEPARATE/HIGH COMPR.HEAD EXTRA/APPROX. 300 MFD.	
BLACK PANTHER ENGINE CO	), <b>'4</b> 1	1	BLACK PANTHER (RACE CAR)	0.604	AS EDCO SKY DEVIL/BLACK/VERY LARGE FRONT END WITH ENCLOSED FLYWHEEL/ APPARENT 'RIP-OFF' OF HASSAD DESIGN & WERE 'PERSUADED' BY HASSAD LAWYER TO CEASE PRODUCTION - VERY FEW MFD.	1400
BLAKELY	'40	I	BLAKELY (RACE CAR)	0.604	HORNET TYPE/SHORTENED SHAFT/ NAME ON REAR COVER	
BLUESTREAK					MFD. BY INTERNATIONAL TOOL	
(IRA HASSAD)	'48	I	BLUESTREAK 647	0.647	HASSAD DESIGNED NEW SMOOTH CASE WITH EXHAUST ON LEFT SIDE-SKYDEVIL INTERNALS USED/BLUE ANODIZED CYL.FINS VERY SHORT INTAKE/ OPEN TIMER	225 - 350
	'49	G	BLUESTREAK	0.647	SAME AS IGNITION MODEL/ NO TIMER	
BOBCAT	-	-			MFD. BY STENMOOR MFG. CO. (STARTED BY SCRAPPER MANUFACTURER AFTER BANK SHUT THEM DOWN - REF. (JOURNAL')	
	'46	1	BOBCAT	0.421	ROUGH SAND CAST CASE WITH DOUBLE SWEPT BACK EXH./REAR 45° DOWNDRAFT DRUM INTAKE/REAR TIMER/FEW MFD./MORE ASSEMBLED LATER FROM PARTS	
BOHABOY (ANTON BOHABOY)	'33/39	I	"69" MARINE	0.686	VERT.SPLIT SANDCAST CASE/MACH.CYL.FINS REMOV.FINNED HD./SIDEPORT/AJD.CAST TIMER W/ARM/FLYWHEEL/'BOHABOY'ON BYPASS OR FLYWHEEL/VARIOUS ONE -OFF(REF.JOURNAL)	
BOND RESEARCH LAB.	'46	1	BOND BRL. A	0.571	SAND CAST CASE/CYLINDER BRAZED/NAME ON BYPASS/LONG REAR INTAKE WITH 'CAN' FUEL TANK	200 - 525
	'46	I	MODEL 680	0.679	SIMILAR TO PREV LARGER/ NAME ON BYPASS/SHORT REAR INTAKE/FEW MFD.	
BONNEY	'39	I	В'	0.276	(REF. 'JOURNAL') NONE SEEN	
	'39	I	·C	0.488	(REF. 'JOURNAL') NONE SEEN	
	'39	1	SUPER 'C'	0.687	(REF. 'JOURNAL') NONE SEEN	
BRADLEY	'46	I	CLASS C	0.609	(REF. 'JOURNAL') NONE SEEN	
BRAT	-	-			MFD. BY KEENER AIRCRAFT INDUSTRIES &	
(JACK KEENER)	'37	1	BRAT	0.138	DISTR. BY JAY'S MODEL AIRCRAFT CO. LIKE MINI BROWN/HEX HEAD/METAL TANK SPINNER OVER PROP NUT/NO NAME ON ENG.	
	'37	1	BRAT	0.138	AS PREV./ROUND FINNED OR FLAT HEAD/ BOTH PLUG SIZES/NAME ON BYPASS	
	'38	1	BRAT	0.152	SIMILAR TO PREVIOUS/PERMANENT MOLD CASE/NAME IN OVAL ON CYLINDER FRONT	



# GASOLINE ENGINE

FOR

# Model Plane Builders

Planes powered with this motor carried off the first place honors in

The Moffett International Contest,

The Mulvihill outdoor event,

The Stout outdoor event, and

The Texaco Trophy at the National Meet

at Roosevelt Field, L. I., last June.

The Improved Model of this motor, which now holds the official world's record, is in production.

For full particulars communicate with

### JUNIOR MOTORS CORP.

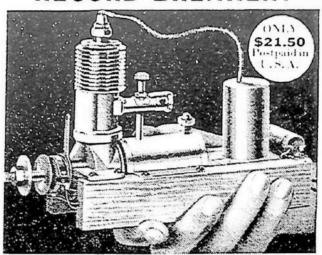
BROAD STREET STATION BLDG., PHILADELPHIA, PA.

1934 FIRST BROWN AD RECOGNIZING MAXWELL BASSETTS 3 WINS IN JUNE OF 1933



1938 BROWN 'D'

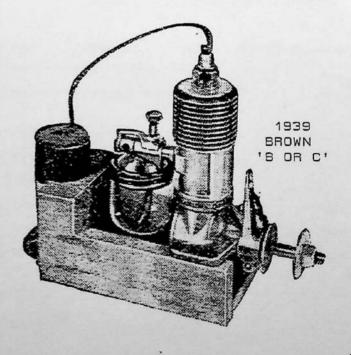
#### RECORD BREAKER!

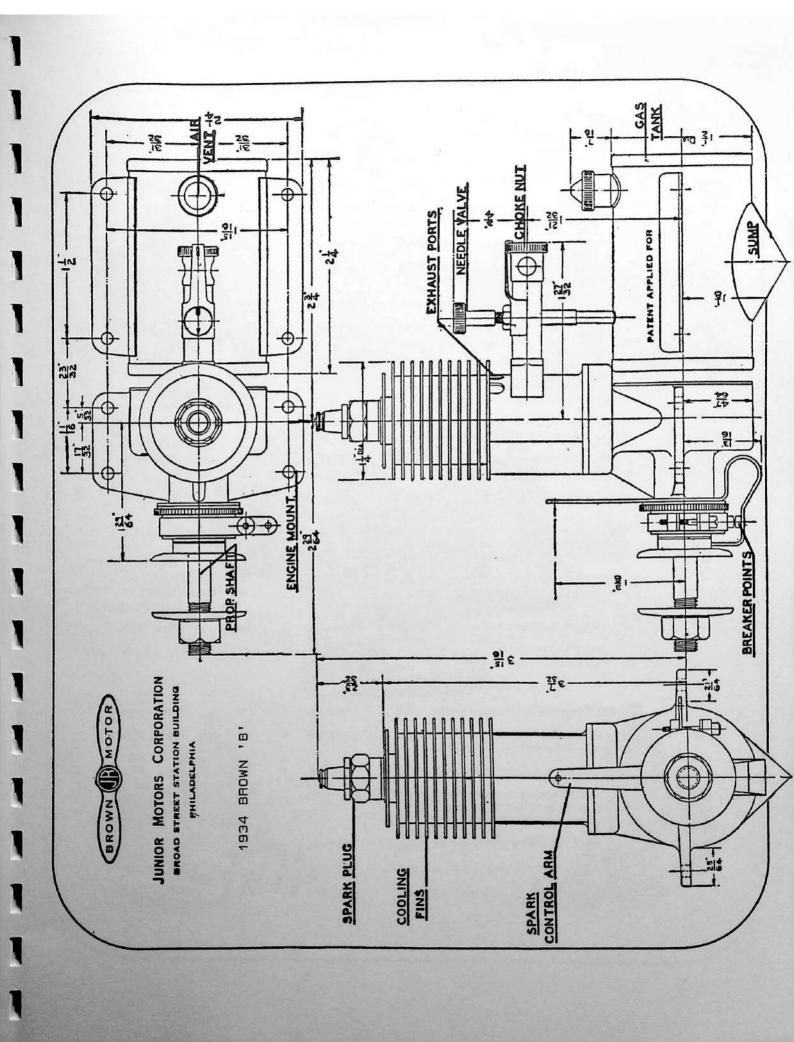


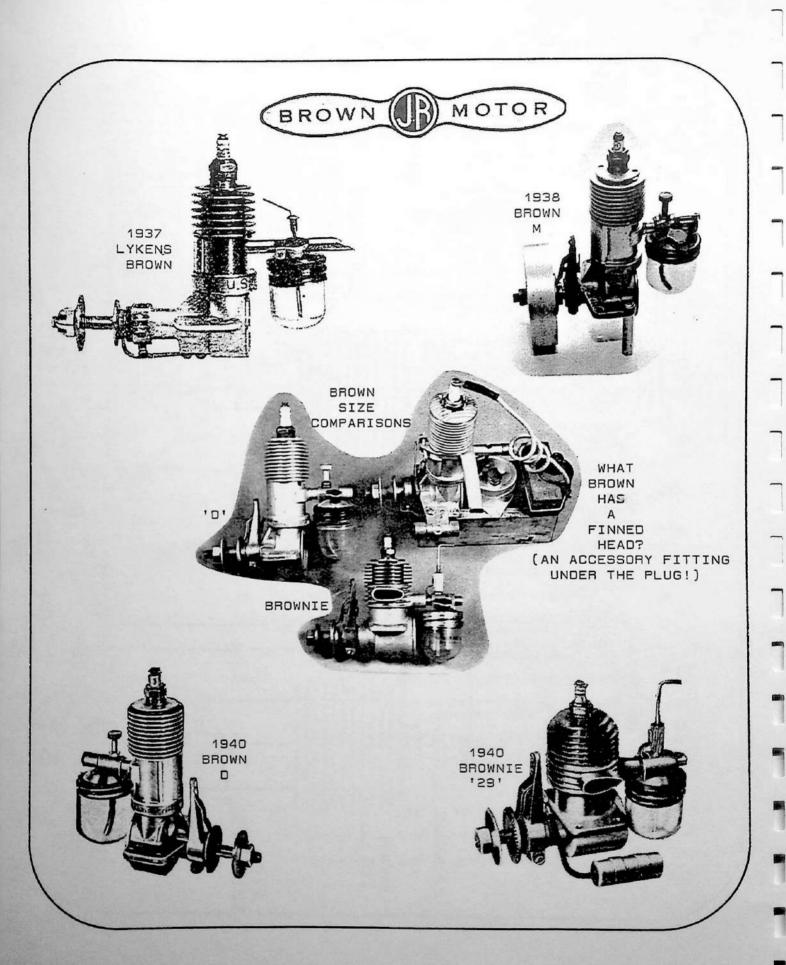


# Greater Power—Less Weight!

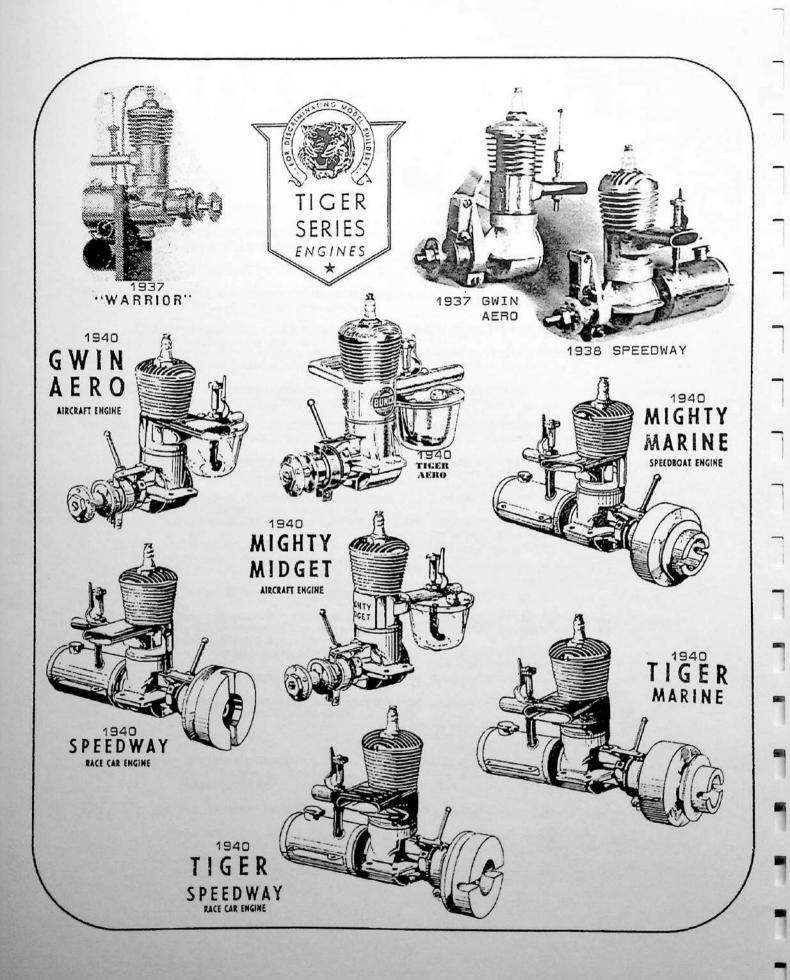
Man, here's power—speed—THRILLS! For your model plane, why not install the motor that holds every major flight record for 1934 and 1935? The swellest little precision job that ever took a plane soaring up in the clouds. No other like it for consistent performance—none gives as much power per unit of weight. Weighs only 6½ ounces bare; yet develops 1200 to 10,000 R.P.M. and delivers 1/5 horsepower. Complete, with no extras to buy, only \$21.50 postpaid. Send for yours today. Clip the coupon now!



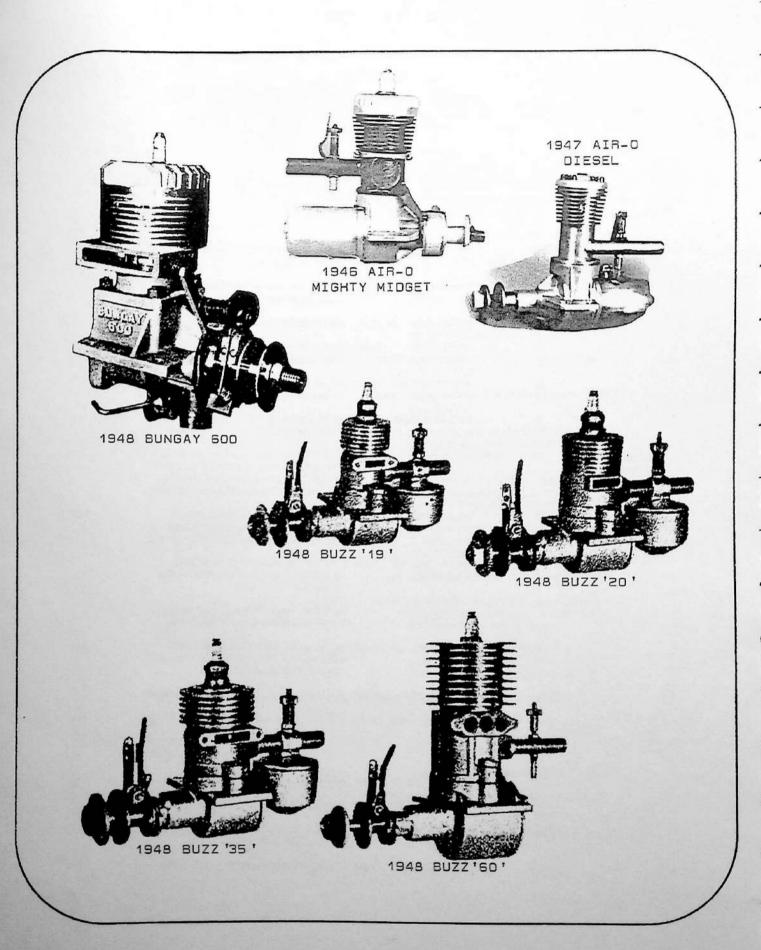




BROWN ENGINES					SOME MFD. BY HURLEMAN AND THEN BY	
(BILL BROWN)	'30/31	I	BROWN	0.291	JUNIOR MOTORS FIRST ENGINE/PRE-PRODUCTION/PHOTO ON THIS BOOK'S FRONT COVER-FULL SIZE	
* (SERIAL #'s BELOW)	'31	1	BROWN	0.601	SECOND ENGINES(3)/PRE-PRODUCTION	
* FROM #A1	'32	1	BROWN A	0.601	SAND CAST CASE& COVER/LAPPED PISTON SAME TIMER TIL'39(15-20 BLT. BROWN)	
* TO #A50	'33	1	BROWN A	0.601	SAME 25-30 BLT.BROWN/HURLEMAN	
* #B1 - B1000	'34	1	BROWN B	0.601	DIE CAST CASE & COVER/INTAKE WITH CHOKE NUT/.090° THICK MTG.LUG(1000 BLT.)	
* #B1001 - B4000	'35	1	BROWN B	0.601	SAME/MTG.LUG .125° THICK (3000 BLT.)	
' NO SERIAL NOS.	'35	I	MARINE B	0.601	STEEL BRAZED WATER JACKET/SOME USED BRASS JACKETS & .165' MTG. LUGS	300
* #1 - 100	'37	1	LYKENS BROWN	0.121	MINI BROWN/CHROME PL.CYL./FIXED TIMER (12 BUILT)/BALANCE USED MOVABLE TIMER/ SCREW ON PLASTIC TANK (100 BUILT)/HEAVY SUPPORTING FIN UNDER FRONT HOUSING	
* #B4001 - B5550	'37	I	BROWN B	0.601	AS '35B W/BRASS TANK CAD PL. (1550 BLT) LOWER CYL.FIN SM./BYPASS TACKED ON	
* #C10,000 - C12,500	'37	I	BROWN C	0.601	AS '37B/ ALUM.PISTON WITH RINGS/N.V. A BENT WIRE AT END OF INTAKE (2500BLT.)	175
* #B5551 - B7600	'38	1	BROWN B	0.601	AS '37B/WITH MOUNTING LUG INCREASED TO .165' (2050 BUILT)	
* #C12,501 - C13,000	'38	1	BROWN C	0.601	AS '37C WITH MOUNTING LUG INCREASED TO .165'/LAST ONES CAME WITH STANDARD N.V. & CAD. PLATED CYLINDER (500 BUILT)	
* #D1 - D13,5000 ('D'AFTER # ON FEW)	'38	1	BROWN D	0.601	AS '38C W/ALUM.CONROD&CAST IRON CRANK/SOME USED OLD .125' LUGS/LAST ONES HAD STD.N.V.&CAD.PL.CYL.(13,500)	110
*M1 - M600	'38	I	BROWN M	0.601	AS '38D WITH FLYWHEEL (600 BUILT)	350
* #B7601 - 38,999	'39	1	BROWN B	0.601	AS '38B W/CAST ZINC TANK TOP W/STEEL RING&PLASTIC TANK/ALSO CAST ZINC TIMER BRKT.& REAR ACTING CAM/ CAD. PLATED CYLINDER (5400 BUILT)	
· #1C1 - 24C00	'39	I	BROWN C	0.601	AS '39B/ALUM.PISTON WITH RINGS (3400)	
* #1D1 - 65D99	'39	I	BROWN D	0.601	AS '39C W/NO CHOKE NUT&RETAINER/ ALUM.ROD&CAST IRON SHAFT(16,600 BLT)	250
· #1M1 - 1M600	'39	1	BROWN M	0.601	AS '39D W/FLYWHEEL&CHOKE NUT (600)	
* #E1 - 94EXX	'40	1	BROWNIE E	0.299	DIFFERENT DESIGN/BYPASS PORTS IN CRANK CASE CASTING WITH TIMER ASSEMBLY SAME AS ON '39 - 60'S (10,500 BUILT)	115 - 125
* #10800 - 22800	'41	1	BROWN B	0.601	AS '39B W/S.N. ON SIDE OF LUG (2200 BLT)	200
· #40C00 - 40C99	'41	1	BROWN C	0.601	AS '39C W/S.N. ON SIDE OF LUG (100 BLT.)	
* #80D1 - 97D99	'41	1	BROWN D	0.601	AS '39D W/S.N. ON SIDE OF LUG (1800 BLT)	

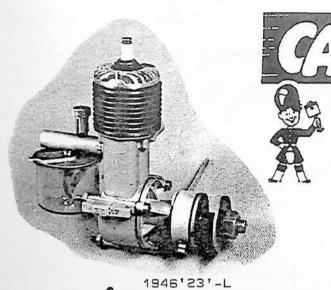


BROWN - CONTINUED						
* (UNKNOWN SERIAL #'s)	'46	1	BROWN 'B'	0.601	AS '39B W/S/N/ ON SIDE OF LUG/CAD.PL. MFD.BY W.M.L.BROWN 3RD CO.	
" (UNKNOWN SERIAL #'s)	'46	1	BROWN 'D'	0.601	AS '46B WITH LAPPED PISTON/MFD. BY W.M.L.BROWN 3RD CO.	
BUNCH MOTOR CO.					BY AIR-O-MODEL SUPPLY CO. FROM 1945	
(EARLY BUNCH'S WERE ASSEMBLED OR KIT) (INDIANA PRODUCTION)	'36	1	GWIN AERO		SAND CAST CASE/NAME PLATE ON CYL./ SCREW IN PLAIN HEAD/LAPPED PISTON	
(DAN BUNCH)	'36	1	MIGHTY MIDGET	0.421	SIMILAR TO GWIN AERO/NAME ON CYL./ LAPPED PISTON/ 4 BOLT FINLESS HEAD	
	'37	1	MIGHTY MIDGET	0.488	AS PREV./BORE INCREASED/PISTON RINGS/ 6 BOLT FINLESS HEAD	
н	'37	1	GWIN AERO	0.488	AS PREV. GWIN AERO/EXHAUST ON RIGHT SIDE/PISTON RINGS/6 BOLTS FINLESS HEAD	
•	'37	I	GWIN AERO	0.488	AS PREVIOUS/ 6 BOLT FINNED HEAD	
	'37	I	GWIN AERO INVERTED	0.488	AS PREV.NAME STAMPED 'UPSIDE DOWN' ON INVERTED ENGINE	
	'37	ı	MIGHTY MIDGET INVERTED	0.488	AS PREV.FINLESS BOLT-ON HEAD/NAME "UPSIDE DOWN"	
W	'37	1	MIGHTY MARINE	0.488	AS PREV.MIGHTY MIDGET/BOLT-ON FINNED HEAD/ FLYWHEEL	160
* (CALIFORNIA PROD. FROM HERE)	'37	ı	WARRIOR	0.488	NEW ENGINE 3 BOLT RADIAL MOUNT ONLY 2 PISTON RINGS/ODD TIMER UP CLOSE TO CRANKCASE/METAL TANK/ 'W' ON CYL./ CRANKCASES SUBJECT TO EARLY BREAKAGE	
	'38	ı	MIGHTY MIDGET	0.488	AS PREV./DIE CAST CASE/BRAZED-ON TAPERED ROLIND PROFILE CYL.FIN&HD./AS CONTESTOR D60's/FRONT BYPASS W/NAME	200
	'38	ľ	MIGHTY MIDGET INVERTED	0.488	AS PREV. '38 MIGHTY MIDGET/NAME STAMPED 'UPSIDE DOWN' ON INVERTED ENGINE/METAL TANK	
" NOTE:	-				TRNSPRNT. TANKS FOR AIRCRAFT ENGINES METAL TANKS FOR CAR & BOAT ENGINES	
	'38	I	GWIN AERO	0.488	AS PREV./DIE CAST CASE/BRAZED-ON EXHAUST ON RIGHT SIDE/NAME ON LEFT/ ROUND PROFILE FINNED HEAD	225
•	'38	1	GWIN AERO INV.	0.488	AS PREV. NAME STAMPED "UPSIDE DOWN"	
	'38	1	MIGHTY MARINE	0.488	AS '38 MIGHTY MIDGET BUT WITH FLYWHEE.	200
	'38	I	SPEEDWAY	0.488	AS PREV. GWIN AERO/EXHAUST ON LEFT SIDE/FLYWHEEL/'SPEEDWAY' ON BYPASS	225
	'40	1	MIGHTY MIDGET	0.451	AS PREV./BUINCH' CIRCLED ON BYPASS	150
	'40	I	M.M. INVERTED	0.451	AS PREVIOUS NAME 'UPSIDE DOWN'	
	'40	1	GWIN AERO	0.451	AS PREV./'BUNCH' NAME IN CIRCLE ON BYPASS/SHALLOW FINNED HEAD	
	'40	ī	GWIN AERO INV.	0.451	AS PREV.NAME STAMPED "UPSIDE DOWN"	



BUNCH - CONTINUED	'40	I	MIGHTY MARINE	0.451	AS '40 MIGHTY MIDGET/WITH FLYWHEEL	
	'40	1	SPEEDWAY	0.451	AS GWIN AERO/EXHAUST ON LEFT SIDE/ SHALLOW FINNED HD./PORTHOLE IN CYL./ FLYWHEEL	
	'40	1	TIGER AERO	0.451	NEW CASE CASTING WITH 2 RIBS ABOVE OVAL-ENDED EXHAUST STACK ON LEFT SIDE/CADMIUM PLATED CYLINDER	155 - 200
	'40	1	TIGER MARINE	0.451	AS TIGER AERO WITH FLYWHEEL/CYLINDER PAINTED BLACK/RIBS ON EXHAUST	
	'40	I	TIGER SPEEDWAY	0.451	AS TIGER MARINE/FLYWHEEL HAS CORD GROOVE IN MAIN DIA.OF WHEEL/CUT BACK EARS ON FUEL TANK MOUNTS	
	'40	1	MIGHTY MIDGET	0.451	AS PREV.MIGHTY MIDGET/BYPASS IN FRONT, EXHAUST AT REAR	165 - 215
	'40	1	GWIN AERO	0.451	AS PREV.TIGER AERO/BYPASS & EXHAUST REVERSED/NO RIBS ON EXHAUST	
	'40	1	MIGHTY MARINE	0.451	AS PREV.MIGHTY MARINE/EXHAUST ON LEFT/FLYWHEEL	
•	'40	1	SPEEDWAY	0.451	AS MIGHTY MARINE/PORT HOLE IN FRONT OF CYLINDER	
" AIR-O NOTE:	-	_			POST WORLD WAR II CONTINUATION OF BUNCH BY AIR-O-MODEL SUPPLY ( MOST HAD METAL TANKS)	
и	'46	1	TIGER AERO	0.451	AS 1940 TIGER AERO/SPUN ALUM. TANK POST WAR USE OF PARTS/SQUARE ENDED EXHAUST STACK/BLACK PAINTED CYL.FINS	
и	'46	1	AIR-O MIGHTY MIDGET	0.451	AS 1940 MIGHTY MIDGET/SPUN ALUM.REAK TANK/BLACK CYLINDER FINS/FINNED HEAD BOLTED ON	225
	'46	1	TIGER AERO	0.451	AS PREV. TIGER AERO/STRAIGHT CYL. FINS	
	'47	D	AIR-O DIESEL	0.278	SIMILAR TO STD. BUNCH TYPE/VARIABLE COMPRESSION/ALLEN KEY HEAD/NO HEAD FINS/TANK MOUNTED TO REAR	
	'47	D	AIR-O RACE CAR DIESEL	0.278	AS PREV./ SINGLE MOUNTING FLANGE HOR. NEEDLE VALVE/MOUNTING HOLES DRILLED OR NOT DRILLED ON MTG.FLANGE	
•	'48	G	AIR-O MIGHTY MIDGET	0.451	FINLESS HEAD/NO TIMER/BOLT-ON HEAD/ GLOW VERSION	
BUNGAY BROTHERS	'48	1	BUNGAY 600	0.607	RACING ENGINE/FRONT UPDRAFT INTAKE SQUARED OFF CASTINGS	
BUZZ	-	_			MFD. BY JUDSCON CO. FOR AMERICA'S HOBBY CENTER INC.	
	'48	1	'A .19'	0.199	ROGER'S STYLE/SLAG CONSTRUCTION (NO CYLINDER LINER)	
	'48	1	'B .29'	0.292	'ROGERS' STYLE/SLAG AS PREVIOUS/WITH LARGER CYLINDER CASTING	

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Grintilli-

NEW
THIMBLE DROME
199
Laterchan geable

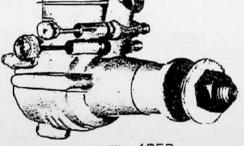
Bare .635 . Stroke .625. Displacement .199 cu. in. Supreme high speed racing engine for THIMBLE DROME cars - \$1095

Engine mid. for L. M. Cox Mig. Co

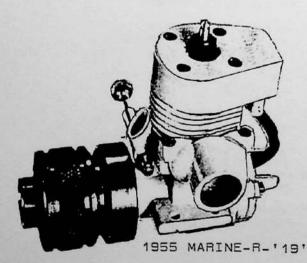
1949 '09-15-19'

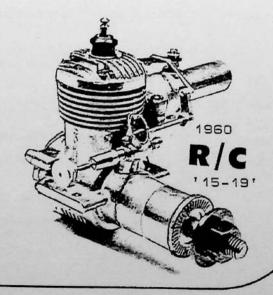


MODEL "L"- 1191 Lapped Piston Type MODEL "R" - ' 19 ' Piston Ring Type

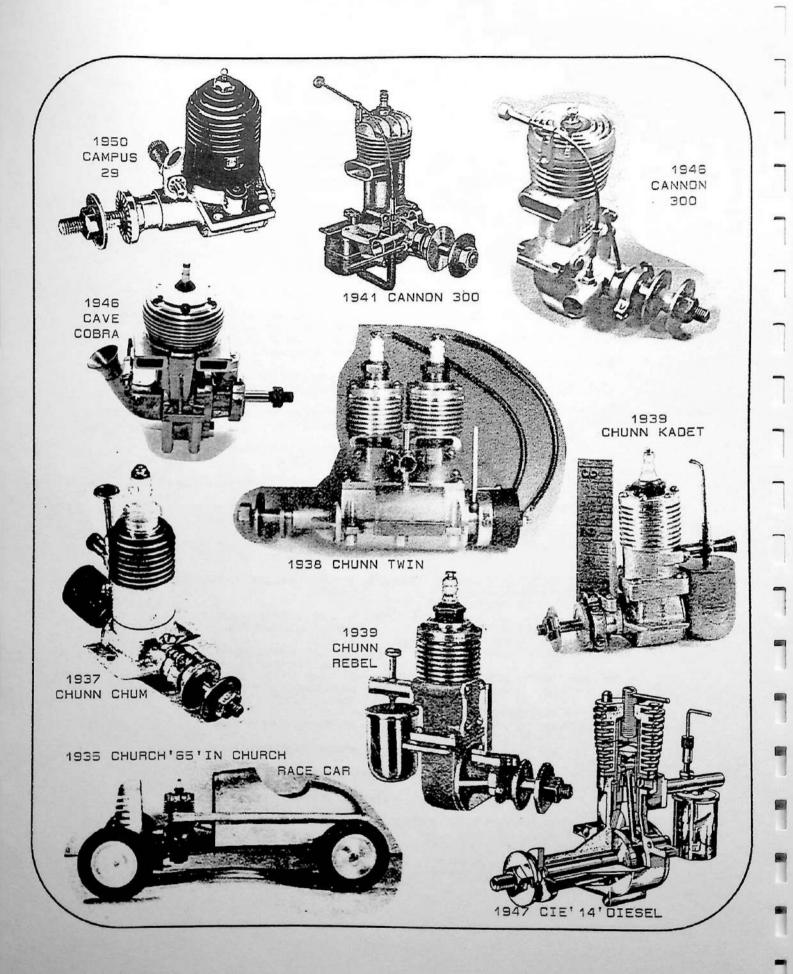


THE CAMERON .19 TWO SPEED 1953

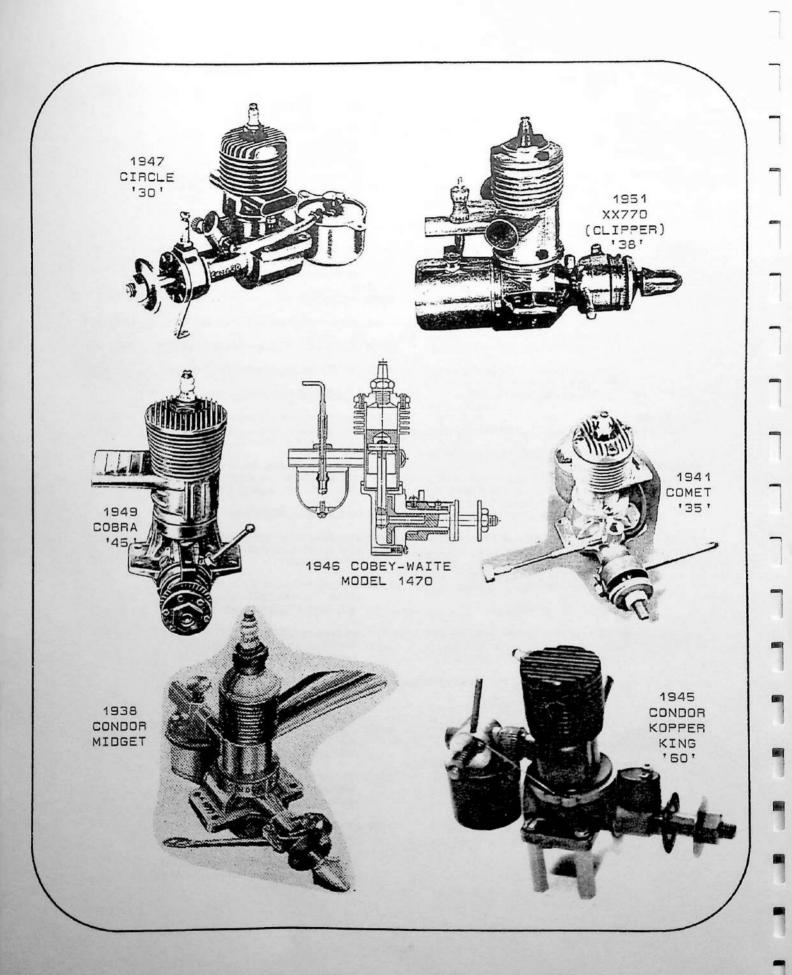




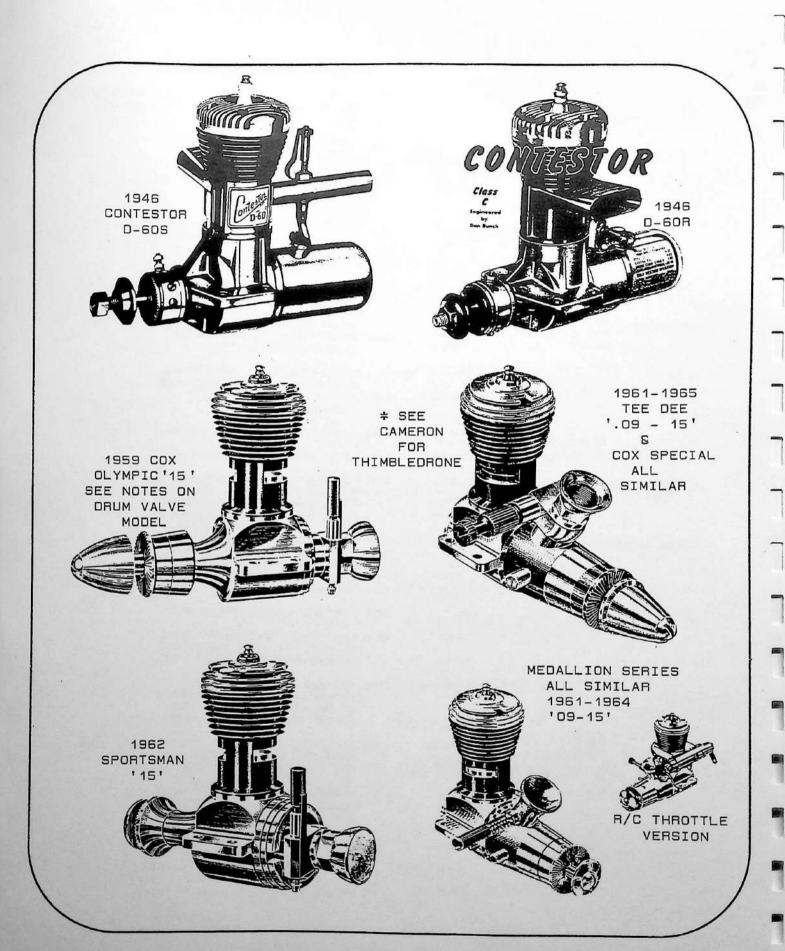
BUZZ - CONTINUED	'48	1	°C .35°	0.342	'ROGERS' STYLE/SLAG AS PREVIOUS/WITH LARGER CYLINDER CASTING/BOLT ON EXH.	
	'48	I	.D .60.	0.609	ORIGINAL/DIFFERENT CASTINGS/NO TANK/ 3 HOLE EXH. (BEST OF BUZZ BUT FEW MFD.)	300
	'49	G	'A .19'	0.199	AS IGNITION/CASE NOT MACH. FOR TIMER	
	'49	G	'B .29'	0.292	AS IGNITION/AS PREVIOUS NOTE	50
	'49	G	°C .35°	0.342	AS IGNITION/AS PREVIOUS NOTE	
	'49	G	'D .60'	0.609	AS IGNITION/AS PREVIOUS NOTE/ NONE SUPPOSEDLY SOLD THROUGH A.H.C AUTHOR SAW ONE IN AUCTION IN BUFFALO CIRCA 1980	
		_			GROUP 4 - A/ B/ C/ D	250
CAMERON BROTHERS	'46	1	'23' - L	0.231	GRAY HAMMERTONE PAINTED CASE (SIMILAR TO OHLSSON & RICE .23) SOLD INTO THE 1970's DIRECT FROM CAMERON FOR \$30!	120 - 140
	'49	G	THIMBLEDROME 15	0.147	CAR ENGINE BLT. FOR COX/VERTICAL CYL. FINS/FRONT ROTARY/RINGED PIST./SEE COX	
•	'49	G	LIGHTNING BUG 19	0.199	AS PREVIOUS/INCREASED DISPL./LAPPED PISTON/ SEE COX	
•	'49	G	DOODLE BUG O9	0.098	AS PREVIOUS/ SMALLER OVERALL/LAPPED PISTON/ SEE COX	
•	'52	G	'19 - L'	0.193	FRONT ROTARY/3 BOLT BACKPLATE/LAPPED FLAT PISTON WITH BAFFLE	50
*	'52	G	*19 - R*	0.199	AS PREV./RINGED HI DOME PISTON	
	'53	G	09 SPEC.MARINE	0.098	SIMILAR TO ENGINE SOLD FOR USE BY COX AS DOODLEBUG/FLYWHEEL FOR BOAT	
	'53	G	19 'L2'	0.199	AS 19-L/TWIN NEEDLE VALVES/LAPPED PISTON	
	'54	G	.09 RACE CAR-L	0.098	OVAL CYL/VERTICAL FINS/SINGLE N.V. WITH INTAKE BUTTERFLY VALVE	
	'54	G	.09 MARINE L2	0.098	AS CAR ENG./2 SPEED/TWIN NDLE.VALVES BUTTERFLY VALVE/FLYWHEEL	
	*55	G	19 MARINE-R	0.199	WATER COOLED/ROUND EXHAUST/PISTON RINGS/BUTTERFLY VALVE/ FLYWHEEL	
	'55	G	19 MARINE-L	0.193	AS PREVIOUS/LAPPED PISTON	65 - 85
	'55	G	19 MARINE-R	0.199	AS RING PISTON MODEL/2 NEEDLE VALVES	
	'55	G	19 MARINE-L	0.193	AS PREVIOUS/ LAPPED PISTON	
	'59	G	15 MARINE-L	0.152	AS .19L WATER COOLED JACKET/STROKE REDUCED	
	'59	G	15-L	0.152	AS . 19L/LAPPED PISTON/STROKE REDUCED	
	'60	G	15 RC-L	0.152	AS . 19L WITH UNUSUAL COUPLED INTAKE AND EXHAUST THROTTLE	



CAMERON - CONTINUED	'60	G	19 RC-L	0.199	AS 19L WITH UNUSUAL COUPLED INTAKE & EXHAUST THROTTLE	
" " NOTE:	'65		15/19/23's		CONTINUED PRODUCTION THRU' 1965 WITH LITTLE OR NO CHANGES.	
CAMPUS INDUSTRIES INC.					UNIVERSITY OF PENNSYLVANIA ENGINEERING	
•	'50	G	.59.	0.292	PROJECT UNDER BILL BROWN-INSTRUCTOR RESEMBLES BROWNIE/FRT.&REAR BYPASS FRONT INTAKE/BUZZ OR ROGERS TYPE CRANKCASE/STEEL CYLINDER/ORIGINAL (APPROX. 50) MACHINED FOR TIMERS	
CANNON MFG. CO.			200000000000000000000000000000000000000		SEE DELONG & STEELE-PRE-CANNON (1940)	190
CAMINON MIG. CO.	'41		'300'	0.299	SAND CAST/FRONT INTAKE ON RIGHE SIDE OF SHAFT/PARALLEL HEAD FINS	
	'41	1	<b>'358'</b>	0.358	AS 300/ STROKED	
•	'46	I	<b>.</b> 300.	0.299	AS 300/DIE CAST/CIRCULAR HEAD FINS	140 - 160
	'46	ı	<b>'358'</b>	0.358	AS 358/DIE CAST/DOMED HEAD W/CIR.FINS	150
	'46	1	·300·	0.299	AS PREVIOUS/SAND CAST STRATO TIMER	150
	'46	ı	'358'	0.358	AS PREV./STRATO TIMER/DOMED HEAD	
CAVE COBRA (WALTER CAVE)	'46	I	RACE CARS	0.601	BRASS FLARED REAR INTAKE/CASE CASTING INCLUDES DUAL RECTANGULAR EXHAUST SAME SIDE/ 50 MANUFACTURED	1500
CHUNN MFG. (BOB CHUNN)	-				SOLD BY KENWOOD HOBBIES & LATER DISTR. BY KAYDET PRODUCTS FROM 1939	
	'37	1	CHUM	0.163	FIXED TIMER & VARIATION WITH WIPE TIMER	
•	'38	I	TWIN	0.451	ALTERNATE FIRING TWIN(APPROX. 50 MFD.)	
u.	'39	1	KAYDET	0.163	REAR PORT/OPEN TIMER/METAL TANK/CAST CASE & UPPER CYL. WITH MACHINED FINS/ NO HEAD FINS	
и	'39	Í	REBEL	0.230	SAND CAST CASE/SIDEPORT/BYPASS WITH NAME SCREWED TO CYL.FRONT/ADJ.TIMER/ UNIQUE REPLACEABLE COPPER MTG.PLATE	
CHURCH ENGINES	_				DIVISION OF MODELCRAFT	
	'35	1	RACING	0.651	SAND CAST SPLIT CASE - SPOKE HEAD - VENTURI/ IRON CYLINDER/LIKE LOUTREL	
	'36	ı	INLINE TWIN	1.320	TWICE RACING 65/FLYWHEEL/TEE'D INTAKE (R. McCLELLAND)	
C. I. E. (COMPRESSION IGNIION ENGINES)	'46	_ D	10 DIESEL	0.103	DIVISION OF MODELCRAFT SIDE PORT/ONE PIECE CRANKCASE/BACK COVER SCREWED-IN/ PLASTIC TANK AS BROWNIE .29/FLARED INTAKE	
	'47	D	14 DIESEL	0.144	SIDE PORT/ 3 BOLT CRANKCASE WITH ATTACHED BACK COVER/CLEAR PLASTIC HANG TANK	
	'47	D	15 DIESEL	0.147	AS PREV./LARGER BORE/NO FUEL TANK/ STRAIGHT VENTURI/SOME USED FOR RACE CARS HAD MTG. LUGS ROUGHLY SAWED OFF AT FACTORY/'CIE' STAMPED ON FRONT BYPASS WITH 'HY PRO' STAMPED UNDER IT	

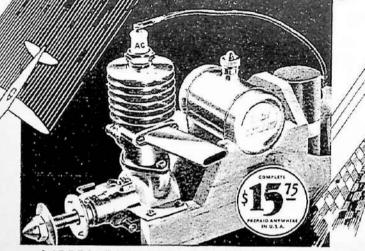


CIRCLE 30		'47	<u> </u>	CIRCLE 30	0.297	MFD. BY LASKIN MFG. CO. TWIN EXHAUSTS/SPRING CONNECT TIMER/ SEPARATE METAL TANK
CLIPPER MFG	i. co.	'51	I	GENERATOR CLIPPER (XX770)	0.381	BUILT IN GENERATOR ATTACHED TO REAR COVER PLATE/ FEW MADE
		'51	I	'XX770'	0.381	SOME MODELS HAD SELF-CONTAINED 'FIRING HEAD'/OTHERS HAD REGULAR SPARK PLUGS
4		'51	I/G	SKY KING	0.381	DUMMY TIMER HOUSING FOR GLOW MODEL/ IDENTICAL TO XX770 WITH PL.TANK & BRASS TOP UNDER VENTURI/SUPPOSEDLY NEVER RELEASED FOR PRODUCTION/SOME SEEN!
		'51	G	GLOW CLIPPER	0.381	XX770/NO TANK/FINNED HEAD/ GREEN WRINKLE PAINTED CASE/DUMMY TIMER
COBEY-WAIT	TE .	'46	<u> </u>	MODEL 1470	0.147	MFD. BY MOLDED INSULATION COMPANY POSTWAR VERSION OF MADEWELL MITE MATTE FIN./PLASTIC TIMER FRAME
COBRA '45'		-	_		_	SOLD BY BERKELEY MODELS-MFD.& DISTR.
		'47	1	COBRA .45	0.451	BY AIR-O MODEL SUPPLY CO. (POST WW II) AS BUNCH TIGER AERO/ 3/8* PLUG/ COBRA NAME
*		'48	G	COBRA .45	0.451	AS PREVIOUS COBRA/GLOW/ 3/8" PLUG
		'49	G	COBRA .45	0.451	AS PREVIOUS/ 1/2" SHORTER/ 1/4" PLUG
COMET MOD COMPA	DEL AIRPLANE ANY	'41	t	COMET 35	0.351	PERMANENT MOLDED CASE/ONE PIECE CYL. & HD./FORE-RUINNER OF VIVELL 35/ PLASTIC TANK/'COMET'ON BYPASS/LATER BECAME VIVELL 35 WITH NEW CYL. & HEAD
CONDOR MI	DGET MOTORS	_	-			SOLD BY AEROCRAFTERS POST W. W. II
		'38	Į.	MIDGET	0.139	4 MODELS/SIMILAR/HAND MADE/ HEAD SLOPED TO PLUG/FIRST MODELS HAD 3/8* PLUG-LATER HAD 1/4*/DIFFERENT HEADS/ (ACTUAL 9/16X9/16 BORE/STROKE=.139 DISPL.)
	•	'39	1	FLEA	0.092	NONE SEEN ('JOURNAL' REF.DISPL081?)
	•	'39	ľ	CONDOR '60'	0.678	SIMILAR TO KOPPER KING/LAPPED PISTON/ PRODUCED BY LLOYD & GARDINER (UNDER NAME ROB ROY CO. IN 1942) NONE SEEN
		'41	1	KOPPER KING	0.604	PRE-WAR & POST-WAR ALMOST SAME/ LAPPED PISTON/PITTSBURGH BRASS MFG. CO. BOUGHT RIGHTS FOR MFG./ APPROX. 100 ENGS. PRODUCED/COPPER COLORED
		'45	1	KOPPER KING	0.604	SIDE SLANTED PLUG(EARLY KOPPER KINGS HAD BRONZE ROD - LATER MODELS HAD FORGED STEEL ROD)FEW PRODUCED POST '45 HAD 2 LETTER PREFIX TO SERIAL NO'S & PREWAR MODELS HAD SINGLE 'A' PREFIX ALL RIGHTS-PARTS-TOOLS PURCHASED IN 1946 BY MILLER MACHINE PRODUCTS WHICH ALSO OWNED AEROCRAFTERS HOBBY SHOP



	CONTESTOR (DAN BUNCH)	'46	1	CONTEST.D-60S	0.596	MFD. BY LUCAS & SMITH SIDEPORT/VERY DEEP HEAD FINS/BLACK PAINTED CYLINDER FINS	200 - 250
		'46	I	CONTEST.D-60R	0.596	REAR ROTARY DRUM VALVE DOWN AND THRU' REAR FUEL TANK	175 - 175
	COX (L.M.) COMPANY					ALSO SEE 1/2A LIST	
	(LEROY COX)	'48	G	THIMBLEDROME	0.147	CAR ENGINE/MADE BY CAMERON/RINGS	
	•	'49	G	LIGHT'NG BUG		CAR ENGINE/MADE BY CAMERON/LAPPED	
		'49	G	DOODLE BUG	0.098	CAR ENGINE/MADE BY CAMERON/LAPPED	
		'59	G	OLYMPIC	0.149	REAR REED VALVE/BLUE PROP DRIVER/BALL BEARINGS/LARGER .049 SPACE HOPPER	70
		'60	G	OLYMPIC DRUM VALVE	0.149	CUSTOM BUILT BY BILL ATWOOD WITH 45° DOWNDRAFT REAR VENTURI FEEDING A DRUM VALVE RUN BY A SPECIAL CRANK- SHAFT/HI-COMP. HD.& STAMPED 30/GIVEN TO SPEED FLYERS '60 DALLAS NATS/20 MFD.	
		'61	G	TEE DEE 09	0.099	LARGE TEE DEE .049/(SEE 1/2A LIST) WITH BLACK PLASTIC FRONT END/SCREWED-IN INTAKE & NEEDLE VALVE ASSEMBLY	
		'61	G	TEE DEE 15	0.152	LARGE TEE DEE .099	58 - 80
	•	'61	G	MEDALLION 09	0.099	SIMPLIFIED TEE DEE .099/RED PLASTIC FRONT HOUSING WITH INTEGRAL INTAKE/ SPORT	34
		'62	G	SPORTSMAN 15	0.149	SIMPLIFIED OLYMPIC . 15/NO BALL BEARING USED IN READY-FLY MODELS/DROPPED FROM PRODUCTION IN '63	40 - 60
		'62	G	MEDALLION 15	0.152	LARGE MEDALLION .099/ SPORT	40
		'62	G	COMPETITION SPEC. 15 MK I	0.152	COMPETITION MODIFIED TEE DEE 15 INTERNAL PORTING & SPL. HEAVY CYL. & WRIST-PIN EQUIPPED PISTON/REPLACED TEE DEE .15	70
		'64	G	MEDAL.09 R/C	0.099	STD.MEDALLION WITH R.C. COUPLED EXHAUST & INTAKE THROTTLE	
		'64	G	MEDAL 15 R/C	0.152	AS 09 R/C	
		'65	G	COMPETITION SPEC. 15 MK II	0.152	INTERNAL MODS. OF '62 COMP. SPECIAL	
•	CYCLONES (ATWOOD DESIGNS)		-			MFD. BY AIRCRAFT INDUSTRIES - OTHER COMPANY NAMES GRAND CENTRAL AIRPORT CO./CAL-AERO TECH.INSTITUTE (FORMERLY CURTISS WRIGHT TECH. INST.)	
		'35	1	BABY CYC - X	0.364	7 FINS/FIXED POINTS (ATWOOD DESIGN) ROUND 'CAN' FUEL TANK/NO HEAD FINS/ CYLMFD. OF 'FURNACE ALLOY' IRON WITH MACHINED FINS	
		'36	1	BABY CYC - X	0.364	AS PREV./CYLINDER FINS MACHINED ALUM. AND THREADED OVER IRON CYLINDER	
		'36	1	BABY CYC - A	0.364	AS 'X'/ 11 FINS/ BLUE-GRAY PAINT	
		'36	1	BABY CYC - B	0.364	AS X/ 11 FINS/ NO PAINT	225

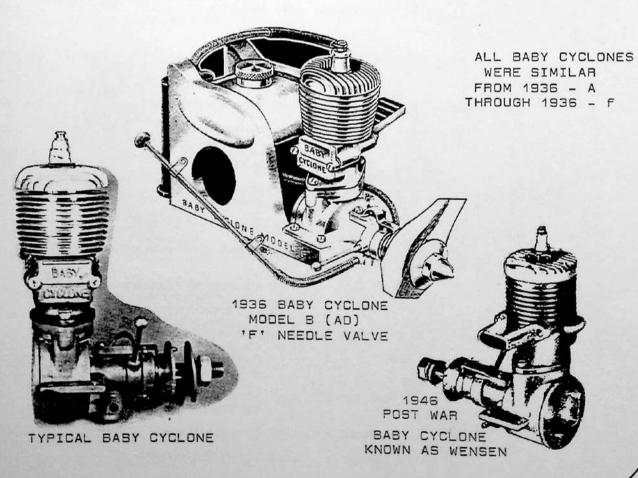


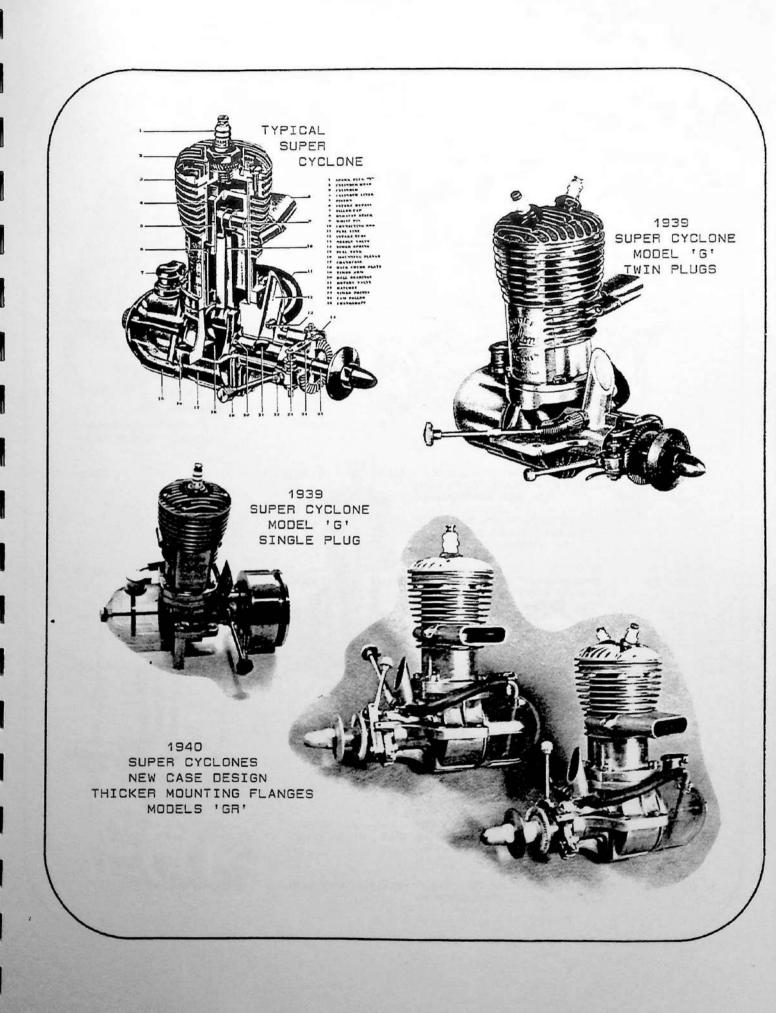


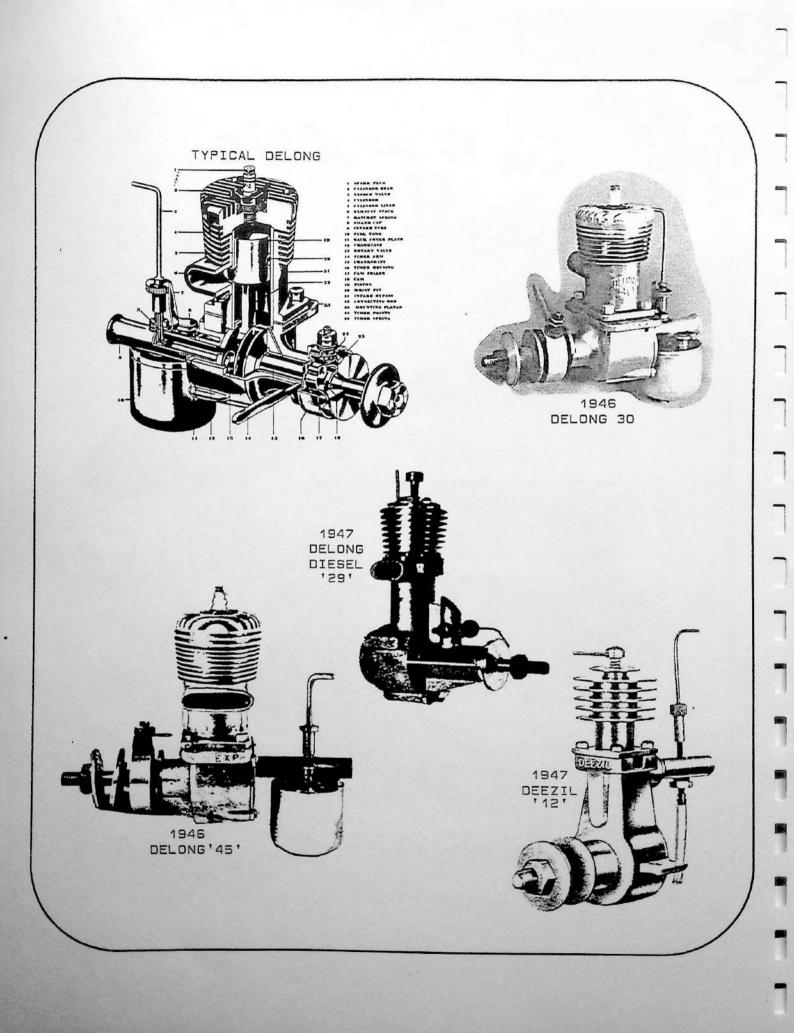
'1936' BABY CYCLONE AD



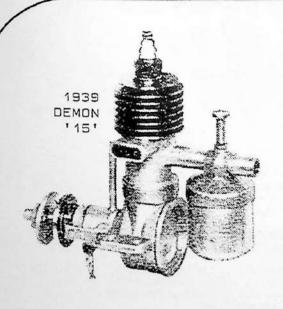
"BABY CYCLONE" ENGINES OUT TO CAPTURE EVERY WORLD'S RECORD

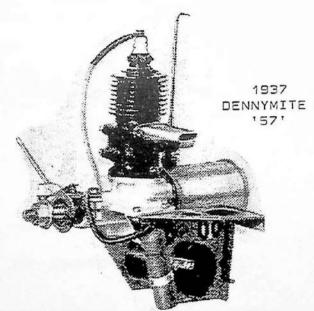






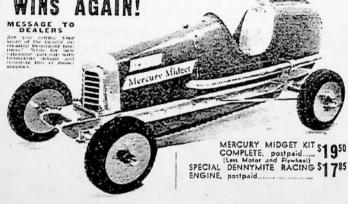
CYCLONES - CONTINUED	'36	1	BABY CYC - C	0.364	AS 'X'/ 6 HOLES IN HEAD	
•	'37	I	BABY CYC - D	0.364	AS 'X'/ FIRST WITH MOVABLE POINTS	
•	'38	ı	BABY CYC - E	0.364	TAPERED CYLINDER FIN PROFILE/HEAD FINS STREAMLINED FUEL TANK	
•	'38	I	BABY CYC - F	0.364	SAME AS 'E' EXTERNALLY / LONG FLEXIBLE NEEDLE VALVE	300
	'39	l	SUPER CYC - G	0.647	NEW ENGINE DESIGN SINGLE SPARK PLUG/ THIN MTG. LUGS/3 ROUND DIE MARKS ON LOWER END OF BYPASS/3 ROUND DIE MARKS ON EXHAUST STACK/ALL PREWAR CASTINGS IDENTIFIED BY DIE MARKS/ CLEAR PLASTIC TANK	
•	'39	ľ	SUPER CYC - G	0.647	AS PREV. TWIN SPARK PLUGS/WITH OR WITHOUT FLYWHEEL	175 - 225
	'40	1	SUPER CYC - GR	0.603	SIMILAR /NEW CASE/SINGLE PLUG/THICK FLANGES/SUB-PISTON PORTS DRILLED IN FRONT & BACK OF CYL./CLAM TYPE TIMER/ AMBER PLASTIC TANK	175 - 225
	'40	1	SUPER CYC - GR	0.603	TWIN PLUGS/THICK FLANGES	
SUPER CYCLONE INC. (POST WORLD WAR II)	'46	1	SUPER CYC - GR	0.603	SIMILAR TO PREVIOUS/NEW CASE/NO DIE MARKS AS PREV. NOTED/LAST AIRCRAFT INDUSTRIES MADE ENGINE	165
DAVIES	'39	t	DWARF	0.255	FRONT ROTARY VALVE/UPDRAFT CARB./ NAME ON CRANKCASE UNDER EXHAUST/ ALUMINUM FINS/OPEN TIMER	
	'40	1	DWARF	0.255	AS PREV./NO NAME ON CASE/CLEANER CASTING/STEEL CYLINDER LINER & FINS/ SERIAL NUMBERS ON LUG	
DEEZIL	<del>-</del> '47	_ D	DEEZIL 'A'	0.125	DISTRIBUTED BY GOTHAM HOBBY CORP. ROUGH CASTING/NO TANK/SIMILAR TO EUROPEAN 'DYNO'- (FIRST PROD. DIESEL) FINALLY SOLD FOR \$1.95/KIT OR ASS'BD	60 - 60
	'48	D	DEEZIL 'A'	0.125	ADVERTISED AS PREV. WITH BALL BEARING SHAFT/UNKNOWN IF PRODUCED	
DELONG & STEELE	'39	1	D & S 29	0.298	SANDCAST/UPDRAFT FRONT ROTARY/UGLY SPOKE HEAD/OVAL EXHAUST/NAME IN REAR OF CASE/ 4 CYLINDER FINS	
	'39	1	D & S 35	0.331	AS PREVIOUS/ BORED OUT	
	'40	1	D & S 29	0.309	PRE. CANNON/SAND CAST/PARALLEL HD. FINS/VENTURI ON RIGHT SIDE OF SHAFT/ MOUNTING ON SHAFT C.L.	
	'40	1	D&S 60	0.605	LARGE VERSION OF LAST 29/BEAM MTS. RAISED ABOVE SHAFT C.L.	
DELONG	- '45	1	DELONG 30	0.299	MFD. BY SUPER MOTORS INC. SAND CAST PARTS/HAND STAMPED NAME/ MTG. LUGS ABOVE SHAFT C.L./STRAIGHT VENTURI	135 - 135
	'46	1	DELONG 30	0.299	DIE CAST PARTS/NAME ON BYPASS/FLARED VENTURI/STAMPED OR SPUN TIMER CASE	135 - 150

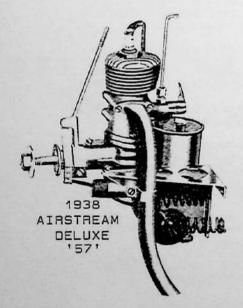


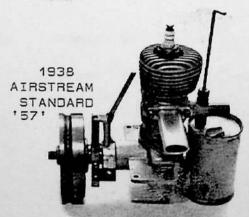


## MERCURY MIDGET WINS AGAIN!

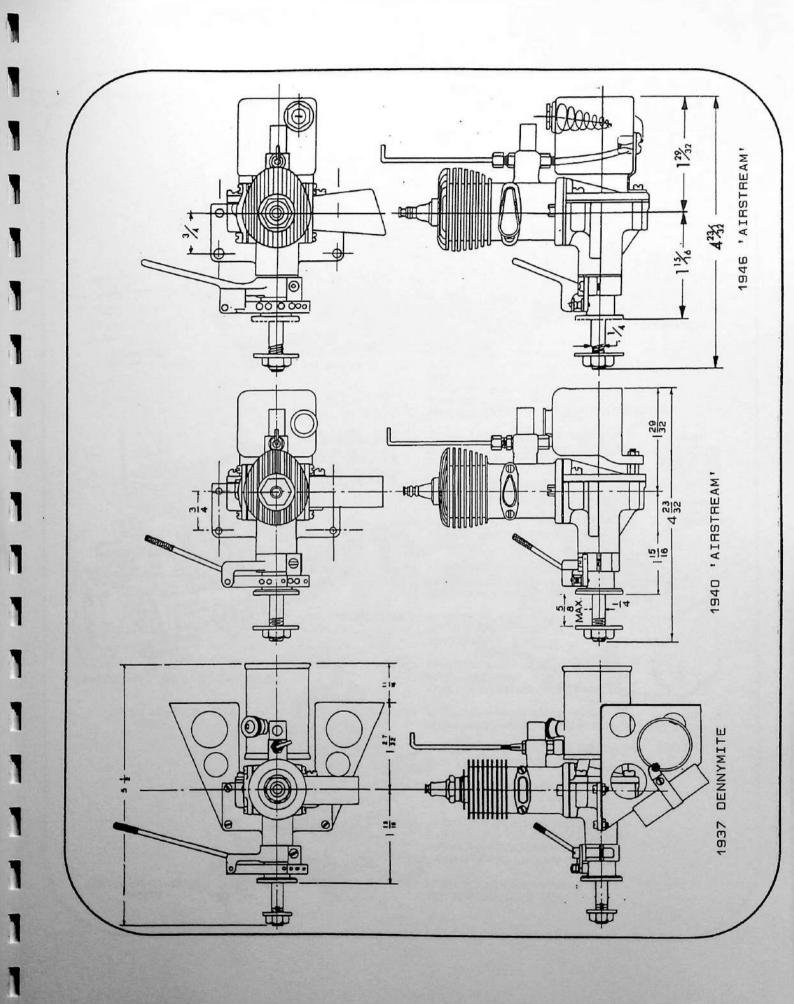
Taking 1st, 2nd and 3rd places at Fresno, California, April 23rd, these three separate racing cars all powered with Dennymite engines set a new record for the 16th of a mile track. 1939

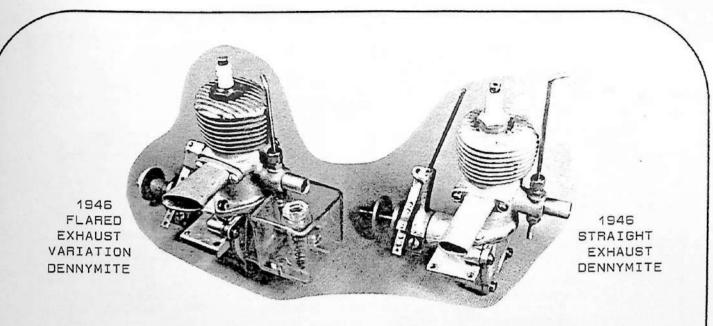


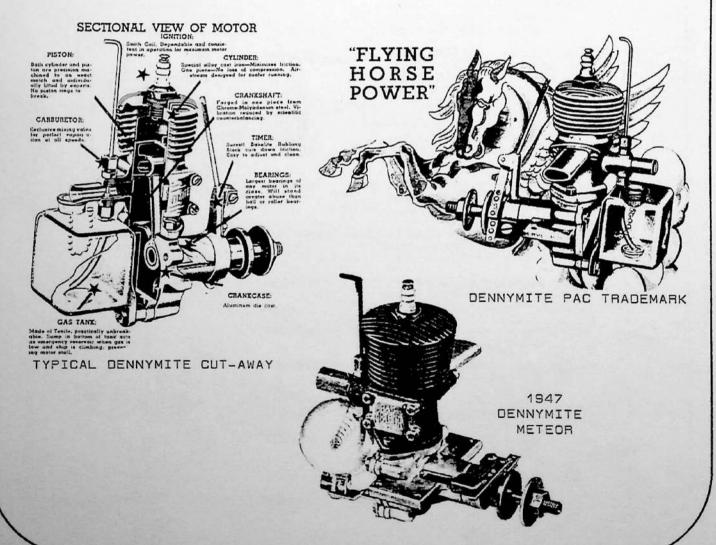




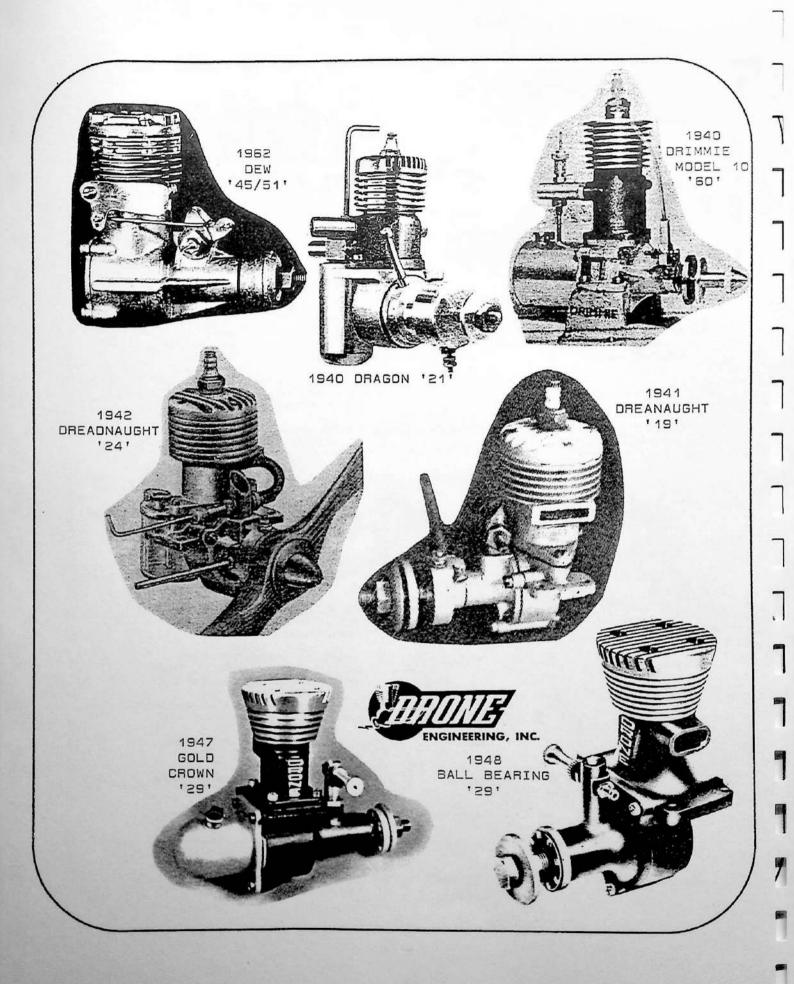
REGINALD DENNY INDUSTRIES, INC.

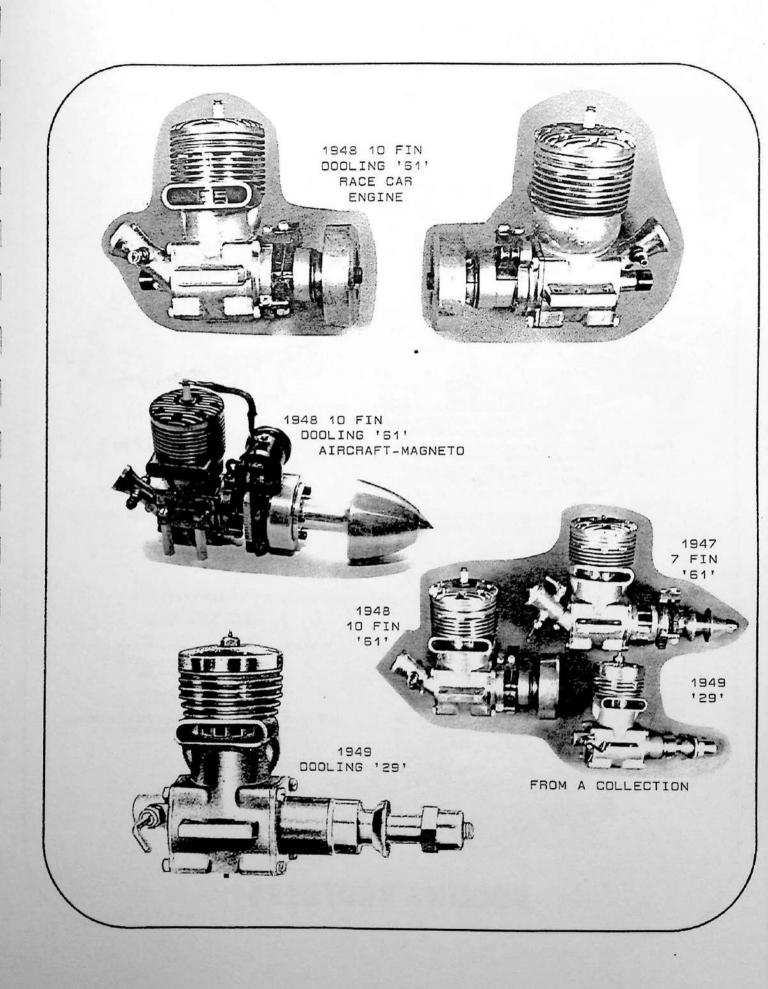


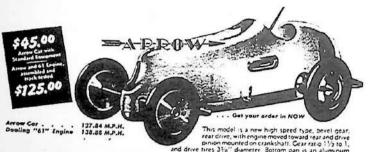




DELONG -	CONTINUED	'46	ı	DELONG .45	0.454	SANDCAST CRANKCASE W/BALL BEARING SHAFT/CON ROD HAS NEEDLE BEARINGS ON BIG END/DELONG 30 UPPER PARTS WITH LONGER STROKE	
		'46	1	DELONG 60	0.604	NO INFORMATION (REF. 'JOURNAL')	
		'47	D	DELONG DIESEL	0.292	VARIABLE COMP./DIE CAST/FRONT ROTARY/ BEAM MOUNTING ABOVE SHAFT C/L	
		'49	G	GLOW PLUG SPECIAL 30	0.299	NEW SAND CAST CASE W/BALL BEARING SHAFT/CON. ROD HAS NEEDLE BEARINGS/ NO TANK/OTHER UPPER PARTS SAME AS PREV. 30/BEAM MOUNTING ON SHAFT C/L	
DEMON						SOLD BY WORLD WIDE DISTRIBUTORS	
	EDDERMAN)	'39	ī	DEMON	0.154	LIKE A MINIATURE 'BROWN'/CAST CYL. & EXH./CAST METAL TANK TOP WITH METAL TANK UNDER REAR INTAKE/ FEW MFD.	
DENNY (R		-				MFD.BY RIGHTER MFG.CO. (1937 - 1940)	
	istries Er righter)	'37	1	SKYCHARGER	0.573	8. PACIFIC AIRMOTIVE CORP. FROM 1946 SAND CAST/ROUNDED CYLINDER FINS/ HORIZONTAL 'CAN' TANK/FLARED REAR (SIDEPORT) INTAKE/NAME CAST INTO BACK- PLATE/ OPEN TIMER/ 10 MADE FOR PRE-PRODUCTION - NONE SOLD	
		'37	1	DENNYMITE	0.573	AS PREV./THIN MTG.LUGS/NO SUPPORT UNDER SHAFT/EXHAUST STACK BENT FROM FLATTENED TUBE	
•		'37	1	DENNYMITE	0.573	AS PREV./THICK MTG.LUGS/VERT. 'CAN' TANK/EXHAUST STACK WELDED TO FLANGE	350
		'38	1	AIRSTREAM STANDARD	0.573	CAST IRON CYL. WITH TEAR DROP FINS ALUMINUM OUTSIDE EXHAUST/ NO CHOKE ON VENTURI	275
		'38	1	AIRSTREAM DELUXE	0.573	AS STANDARD AIRSTREAM VERTICAL 'CAN' TANK/LONG CURVED EXHAUST/SPRING LOADED CHOKE ON INTAKE	
		'40	1	DENNYMITE-BERG RACE CAR	0.573	AS AIRSTREAM/NOT REG. PROD./CONVER- SION UNIT/FRONT ROTARY VALVE WITH NEW CASE-SHAFT & HIGH INTAKE	
		'40	I	AIRSTREAM		AS AIRSTREAM STANDARD/PERMANENT MOLD CAST/SQUARE AMBER PLASTIC TANK W/MTG. LUGS CAST INTO BOTTOM OF TANK	
* (PACIF	CORP.)	'46	1	'PAC' VERSION		AS PREV. DENNYMITE/POST WAR VERSION/ HEAVIER MTG/SAME SQUARE PLASTIC TANK	225
		'46	1	AIRSTREAM	0.573	AS PREV./BRONZED CONROD/FLARED EXH./ TIMER & TANK MOUNT ETC. CHANGES	
		'47	1	METEOR	0.604	ROUNDED CYL./SANDCAST& COPPER PLATED CYLINDER/'METEOR' CAST INTO BYPASS	
		'47	1	AIRSTREAM	0.573	AS PREV. PAC MODEL/ASS'D BY OHLSSON & RICE/ REAR COVER HOLES DRILLED THRU CRANKCASE BOSSES/SERIAL # STAMPED ON EDGE OF MTG. LUGS/LONGER INTAKE	
	ODEL AERO ORKS	'38	I	BABY WASP	0.149	KIT ENGINE/ MINI GHQ APPEARANCE (REF. 'JOURNAL') NONE SEEN	

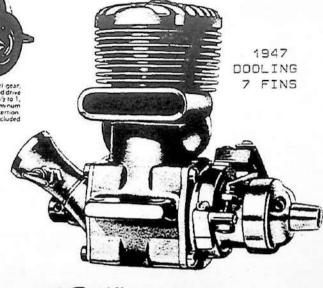






DOOLING RACE CAR

The New Dooling
Prototype RACE CAR

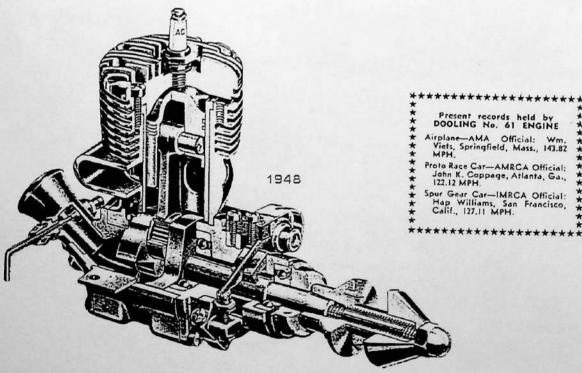


## The Finest in Race Car Design and Workmanship

BALL BEARING DRIVE UNIT - BALL BEARING FRONT WHEELS
DOUBLE UNIVERSAL AND FLYWHEEL INCLUDED - KNEE ACTION FRONT END SUSPENSION
WHEEL HUBS MACHINED FROM DURALUMIN BAR STOCK AND BALANCED
BODY -- 2 MECE DIE CAST MAGNESIUM

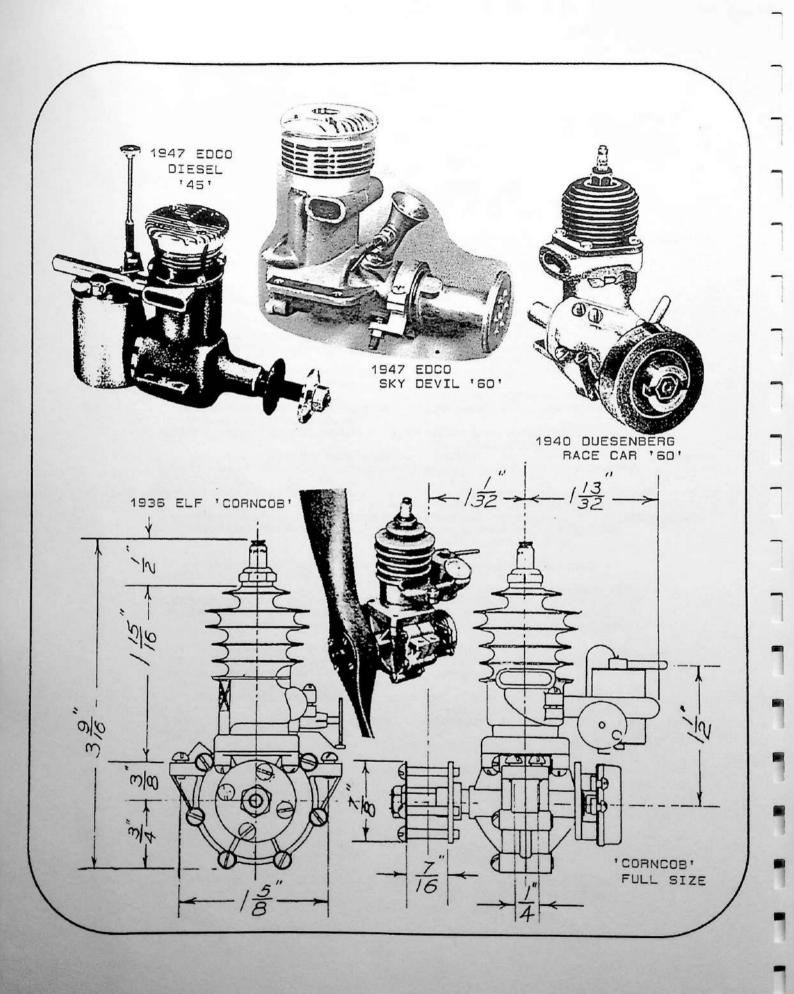
## DOOLING ENGINE

COMPANION TO TYPE F PROTOTYPE RACE CAR

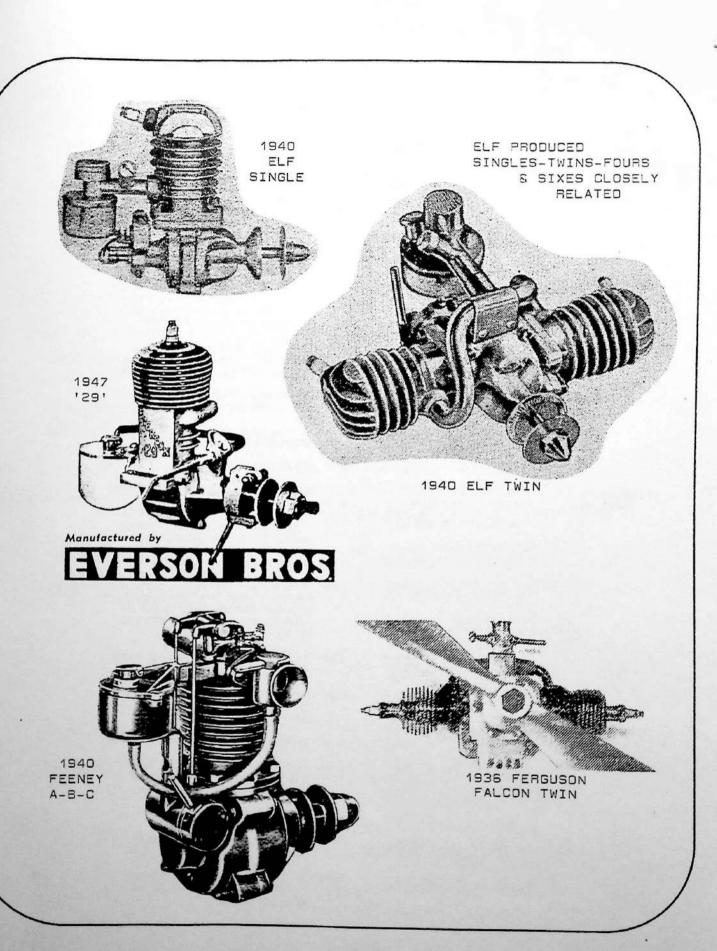


**DOOLING BROTHERS** 

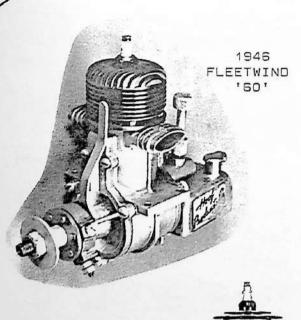
DEW CORPORATION (DALE E. WOOD)					SOLD TO ANOTHER COMPANY - NAME CHANGED TO KUSTOM ENGINES	
	'62	G	DEW 45 R/C	0.451	APPEARANCE SIMILAR TO VECO BUT	
		1550%()			DESIGNED WITH CARB. AS PART OF VENTURI	
					HAS CONNECTED EXHAUST BAFFLE	
				•	72 10 10 11 11 12 12 12 12 12 12 12 12 12 12 12	
•	'62	G	DEW 51 R/C	0.513	AS PREVIOUS/ BORED OUT	
	'62	G	DEW 45	0.451	AS PREVIOUS/ NO R/C	
	'62	G	DEW 51	0.513	AS PREVIOUS/ NO R/C	
DOOLING BROTHERS			***************************************		SEE 'YELLOW JACKET'BY MODEL POWER CO.	
	'47	I	DOOLING '61'	0.605	RACING CARS (PRIMARILY) 10 CYL. FINS	900 - 975
					NEEDLE BEARINGS ON CRANK PIN/ NAME	
					ON BYPASS	
	'48	1	DOOLING '61'	0.605	AS PREVIOUS/ RACING CARS (PRIMARILY)	650
					7 CYLINDER FINS	
	'48	1	DOOLING '61	0.605	AS PREV./CRANKCASE MATTE/ NO FIN	65
					AROUND SIDE OF HEAD (REF. 'JOURNAL')	
	'49	G	DOOLING '29'	0.298	SPEED U-CONTROL (PRIMARILY)/MINI-61/	135 - 195
					MATTE FINISH/NAME ON BYPASS	
	12000					
	'50	G	DOOLING '49'	0.497	NO NAME ON CASE/SHORTER STROKE/	450
					STD.PISTON-CYL.LINER/PRE-PROD.? MAY	
					HAVE BEEN HOME-BUILT (REF. G. MUNICH)	
DRACON	140					
DRAGON	'40	1	DRAGON	0.211	NEARLY IDENTICAL TO TROJAN JR.	
					OF .191 DISPLACEMENT/CAST IRON BLACK	
					CYLINDER/REAR TUBULAR EXHAUST STACK/	
					BALL BEARING SHAFT/SPUN METAL TANK	
DREADNAUGHT	'41	1	DRDNGHT, 19	0.108	PRE-CDN. HURRICANE (EARLY) BUT HAS	
			Didition. 19	0.190	SCREWED-IN FRONT INTAKE/PLASTIC HANG	
					TANK	
					27.041	
	'42	1	DRDNGHT. 24	0.243	AS 19/BORED OUT CYLINDER/HIGHER	
					DOMED HD. PROFILE/PLASTIC HANG TANK	
	'43	I	DRDNGHT. 60	0.601	SAND CAST/REAR ROTARY/DOUBLE BALL	
					BEARING SHAFT/TIMER TYPICAL HORNET-	
					McCOY/ 4 BUILT (REF. 'JOURNAL')	
DELLA MARCHA	140	13	MODEL			
DRIMMIE MOTORS	'40	I	MODEL 10		COPPER ALUM. ALLOY CRANKCASE/CAST	
(CANADIAN)					IRON CYL./LAPPED PISTON/MACHINED	
					TANK ATTACHED WITH EARS BY BACKPLATE	
					BOLTS/ NAME CAST INTO CYLINDER/SPL.	
					MTG. LUGS SUPPLIED WITH ENGINE	
DRONE ENGINEERING CO.	'47	D	DRONE 'B'ee	0.297	SHORT VENTURI PART OF CASE CASTING	
(LEON SHULMAN)			DIONE DCC	0.257	ADVERTISING PHOTO/NO PROD. OF ENGINE	
					LOOKING LIKE THIS.	
	'47	D	GOLD CROWN	0.297	GOLD HD./VENTURI SCREWS INTO CASE	99 - 135
					FIXED COMPRESSION/CYL. BOLTED TO	<i>yy</i> - 133
					LOWER CASE/PRESSED TANK FLANGE	
					CLAMPED W/BACKPLATE/PLAIN BEARING	
STATE OF THE PARTY	'48	D	BALL BEARING	0.299	CASE CONTOURS VERY SMOOTH/VENTURI	99 - 125
					PART OF CASE/BALL BEARING/FIXED COM-	
					PRESSION/ GOLD HEAD	

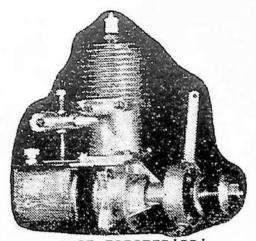


DRONE - CONTINUED	'48	D	VARICOMPR	0.299	AS PREV./BALL BEARING TYPE/ VARIABLE COMPRESSION HEAD-SOLD AS COMPLETE ENGINE AS WELL AS ACCESSORY HEAD	
	'49	G	GLOW	0.299	AS '48 DIESEL/HAS RED GLOW HEAD/ ALSO SOLD AS ACCESSORY	
DUESENBERG (A.C.)	'40	I	RACE CAR ENGINE	0.604	SAND CAST/STEEL CYL. BOLTED TO CASE ABOVE EXH./ROTARY VALVE/ALUM.RINGED PISTON/DESIGNED & MANUFACTURED BY A.C.DUSENBERG/ PRE-PRODUCTION ONLY	
DYNAMIC MFG. CO.	-	_			ADVERTISED SINGLE CYL. & MULTI CYL. ENGINES IN '29 & '30 - NONE SEEN AND PRODUCTION UNKNOWN (CHICAGO AREA)	
EDCO (ENGINEERING AND DEVELOPMENTS CORP.) (IRA HASSAD)	-				SKY DEVIL WAS MASS-PRODUCED VERSION OF HASSAD CUSTOM WHICH HAD BEEN SOLD UNDER SKY-DEVIL NAME IN WEST- CHESTER HOBBY SHOP IN NEW YORK	
	'47	1	SKY DEVIL 1500 SD	0.649	DULL RED CASE/RACING/FRONT INTAKE BOLTED ON/ALMOST SAME AS HASSAD CUSTOM EXCEPT LARGE EXH.STACKS RE- MOVED & FRONT BEARING REDUCED IN SIZE	325
	'47	1	SKY DEVIL 1500 SDR/CARS	0.609	AS PREV./RED CASE/THICK SLEEVE/RACING CAR VERSION - APPROX. 1500 TOTAL MFD.	
	'47	D	EDCO DIESEL	0.451	MASSIVE ALUMINUM DIE CAST RED CASE/ FIXED COMPRESSION/VERY FEW MFD.	
" " NOTE:	'48	I/G	SEE BLUESTREAK	0.647	MFD.AS'BLUESTREAK'BY INTERNATIONAL TOOL	
ELF ENGINE CO. (DAN CALKIN)	<del>-</del> '36		ELF SINGLE CORN COB)	0.139	ALSO MFD.BY MINIATURE AIRCRAFT CORP. FAMOUS 'CORNCOB' MODEL/VERTICAL PLUG/FLOAT CARB./4 SCREWS THROUGH PROP/ALUMINUM SAND CAST CASE SPLIT VERTICALLY/NAME ON BYPASS	700
	'38/40	1	ELF SINGLE	0.139	AS PREV./ CYLINDER FINS MACHINED	
	'40	1	ELF SINGLE		NEW SAND CAST VERTICAL SPLIT CASE WITH BOLT ON CYL&HD./PLUG SWEPT BACKWARD/ TANK UNDER INTAKE/SMOOTH (NO WEB) SHAFT HOUSING/HORIZONTAL MTG. LUGS/ 'ELF' NAME ON FRONT	
	'40	1	ELF SINGLE MODIFIED	0.097	AS PREVIOUS/MTG. NOW VERTICAL/WEBS ADDED TO SHAFT HOUSING	
	'40	1	ELFTWIN	0.198	OPPOSED TWIN USING SINGLE 'ELF' PARTS NO WEBS ON SHAFT HOUSING/LITTLE TANK OPEN TIMER	
	'41	1	ELFTWIN MODIFIED 20	0.198	AS PREV./WEBS ADDED TO SHAFT HOUSING	
	'41	I	ELF FOUR MODIFIED 40	0.396	4 CYLINDER OPPOSED/EXTERNAL PIPES UNDER ENGINE TO RED TANK/LARGE DISTRIBUTOR BEHIND REAR TIMER	
	'42	I	ELFTWIN	0.198	AS PREVIOUS/ ENCLOSED TIMER	
	'42 '42	1	ELF SINGLE		AS PREVIOUS/ ENCLOSED TIMER  AS PREV./ENCLOSED TIMER & LARGE PLASTIC TANK UNDER INTAKE	

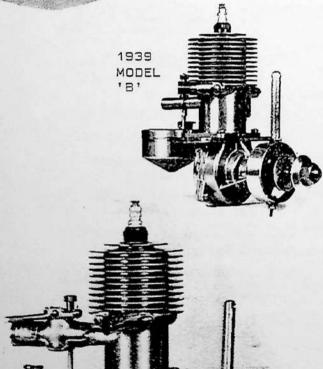


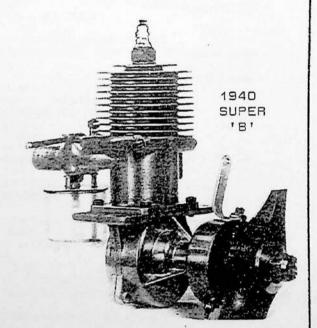
ELF - CONTINUED .	'46	1	ELF SINGLE	0.097	AS PREWAR/ VACUUM SAND CAST	995
	'46	1	ELF TWIN	0.198	AS PREWAR/VACUUM SAND CAST/LG.TANK	1475
	'46	1	ELF FOUR	0.396	AS PREWAR/VACUUM SAND CAST/PLASTIC TANK ON VERY LONG INTAKE	1900
	'50	I/G	ELF SINGLE (REEDS)	0.097	SIMILAR TO '46 SINGLE/HIGHER HEAD FINS/ NEW CASE WITH REAR DOWNDRAFT INTAKE & REED VALVE INDUCTION/WITH OR WITH- OUT TIMER	
• •	'50	I/G	ELF TWIN (REEDS)	0.198	SIMILAR TO '46 TWIN/REED VALVE INTAKE IN NEW CASE/WITH OR WITHOUT TIMER	1000
	'50	I/G	ELF FOUR (REEDS)	0.396	SIMILAR TO NEW CASE ON TWIN/WITH OR WITHOUT TIMER	1800
•	'50	G	ELF SIX (REEDS)	0.594	SIMILAR TO NEW CASE ON FOUR/FOUR REED VALVE INTAKES COUPLED TO SINGLE VENTURI	
EVERSON BROTHERS	'47	1	EVERSON 29	0.291	SAND CAST 3 BOLT MATTE CASE/NAME ON BYPASS/FRONT INTAKE/OPEN TIMER/ PLASTIC TANK ATTACHED TO BRKT.AT REAR	
FEENEY ENGINE CO. (CASIMIR LEJA-DESIGNER) (JACK FEENEY - MFR.)	'38	1	SINGLE	0.687	SAND CAST OPEN VENTURI SPLIT CASE WITH BOLT ON CAST CYL./4-CYCLE O-H VALVES/IGNITION AT REAR/CARBURETOR - NO NEEDLE VALVE	
	'39	I	TWIN	1.374	AS PREV./COMPLEX SPLIT CAST./4 CYCLE	
	'40	1	MODEL A	1.176	LARGE VERSION OF '38 SINGLE/4- CYCLE	
	'40	ı	MODEL B	0.914	SMALLER VERSION OF 'A'/ 4 - CYCLE/ BORE AND STROKE REDUCED	
	'40	ı	MODEL C	0.617	SMALLER VERSION OF 'B'/ 4- CYCLE BORE AND STROKE REDUCED	
FERGUSON	'36	ſ	EAGLE	0.589	SINGLE CYLINDER/NO HEAD FINS/AS EARLY O.K./PRODUCTION UNKNOWN	
	'36	ı	FALCON	1.178	TWIN CYL. SAND CAST CASE/CYL. & HDS. AS EARLY O.K.'s/ASSEMBLED OR KIT/REAR MTD. DISTR. & LARGE HIGH INTAKE &CHOKE	KIT - 70
	'36	Ĺ	CONDOR	2.356	AS PREV. FOUR CYL./ASSD.OR KIT/REAR MTD. DISTR./BALL RACES FOR SHAFT/ OPPOSED CYLINDERS FIRE ALTERNATELY IN PAIRS	КП - 70
FIREBALL	35	1	FIREBALL	0.588	MFD. BY DEMCO DATA AND PRODUCTION UNKNOWN	
FIREBALL 500	- '38	<u> </u>	FIREBALL 500	0.789	MFD.BY ACUNTRA TOOL & DIE CO.OF N.Y. SIDE PORT/SPLIT CASE/CAST IRON CYL./ SPOKE HEAD REAR INTAKE HAS CURVED FORWARD EXTN./LONG STREAMLINED EXH.	
	'38	1	FIREBALL 38	0.375	AS PREV./ MINIATURE OF 500	
	'40	1	V-TWIN	1.569	AS PREV./SIMULTANEOUS FIRING/ BRASS HEADS/NONE SEEN	
	'41	1	MARVEL	0.608	DATA AND PRODUCTION UNKNOWN	

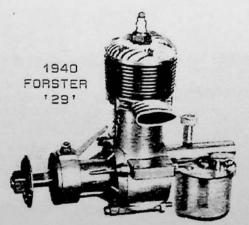




1935 FORSTER '99' 'LITTLE HERCULES'

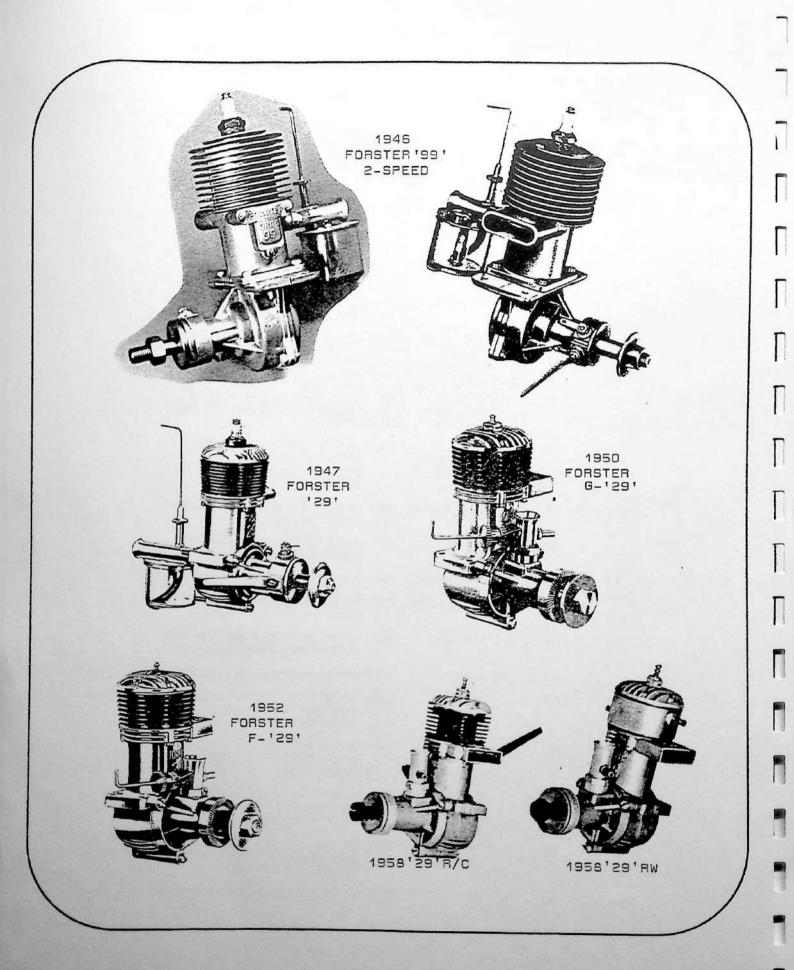


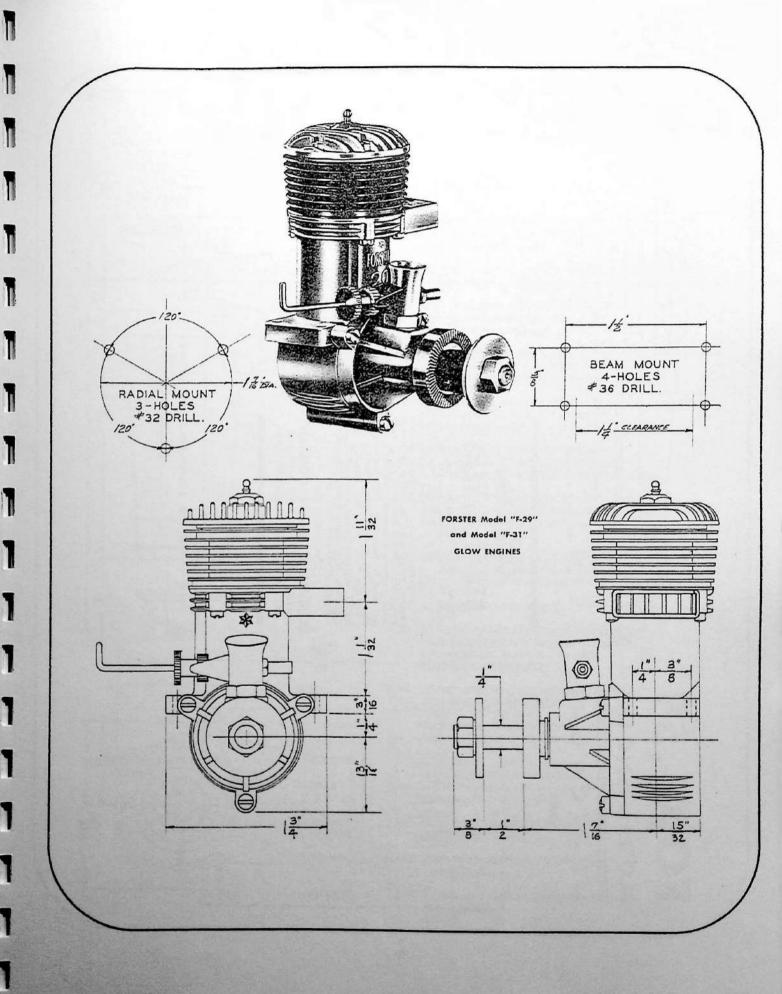


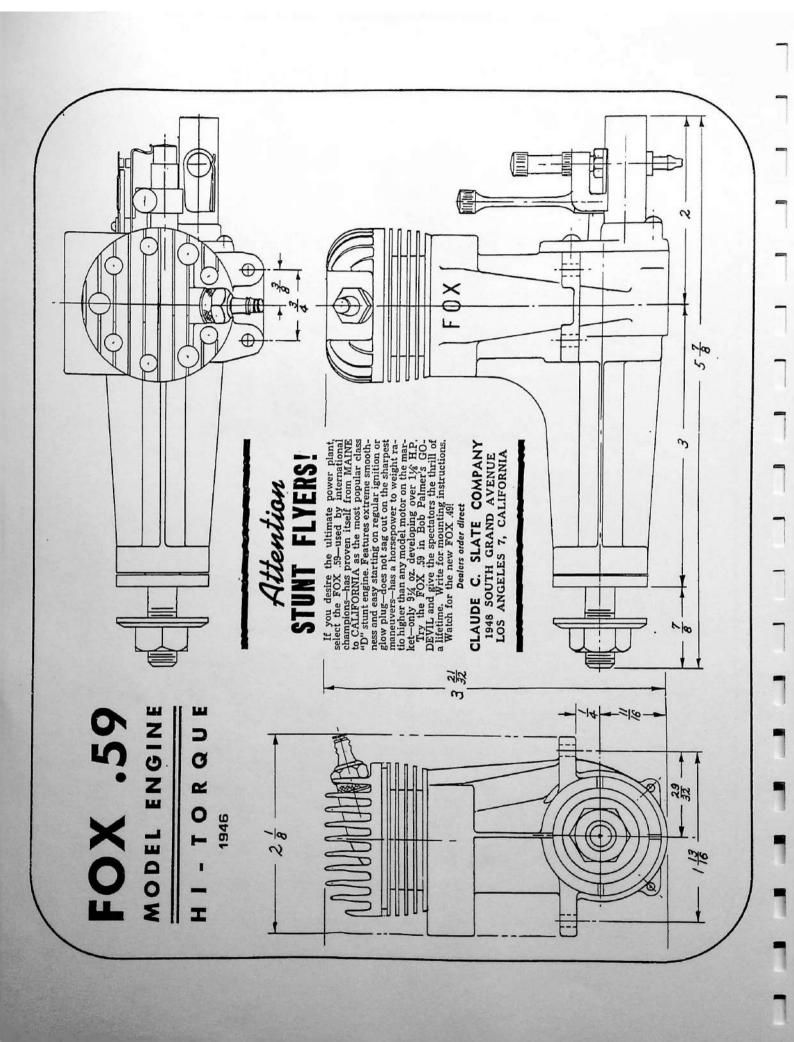


HERE IT IS!
THE PERFECT MOTOR FOR RADIO CONTROLLED CRAFT! MODEL 'B' - R/C

FLEETWIND "	'46	<u> </u>	FLEETWIND	0.603	MFD. BY HOOF PRODUCTS TWIN EXHAUST STACKS/DIE CAST/FRONT & REAR BYPASS/REAR DISC ROTARY INTAKE/ RECT. METAL TANK/'MODERNIZATION'KIT AVAILABLE TO UPDATE OLD ENGINES (REF. 'JOURNAL')	175 - 235
FORSTER BROTHERS		_			ALSO MFD.UNDER FORSTER MFG.INC. &	
•	'34	1	·A·	0.997	FORSTER APPELT SAND CAST/CHOKE-NUT ON VENTURI/BALL BEARING SHAFT/ 2 PISTON RINGS SEE ALSO 'APEX' (COPY?)	
	'34	1	'AW'	0.007	AS PREV./WATER COOLING JACKET ON CYL.	
	'34	1	.c.	0.884	AS PREV./SMALLER BORE/AIR COOLED	
•	'34	I	LITTLE HERCULES	0.884	AS PREV. SMALLER BORE/WATER COOLING JACKET ON CYLINDER	
	'34	1	·cw	0.884	AS PREV. W/SMALLER BORE/WATER COOLED	
	'35	1	LITTLE HERCULES	0.997	AS PREV.SAND CAST/MTG. LUGS RAISED/ AIR OR WATER COOLED	
	'36	1	'A' AIR OR WATER COOLED	0.997	DIE CAST/BOLT-ON BYPASS/CYLINDER METAL TANK/FORSTER NAME CAST INTO BYPASS	
•	'36	I	C AIR OR WATER COOLED	0.884	DIE CAST/AS PREV./SMALLER BORE/ 4 STYLES-AIR COOLED BALL OR PLAIN BEARING/WATER COOLED BALL OR PLAIN BEARING	
	'37	1	LITTLE HERCULES	0.997	AS PREV./CROSS MTD. METAL TANK/BALL OR PLAIN BEARING	
•	'37	1	LITTLE HERCULES	0.997	AS PREV./BEAM MTS. REMOVED/RADIAL MOUNT ENGINE	
	'37	I	LITTLE HERCULES	0.997	AS PREV./RADIAL W/BEAM MOUNTS ADDED	
	'38	1	LITTLE HERCULES	0.997	AS PREV./BEAM MTS. ONLY/NEW METAL TANK	
	'39	I	MODEL B	0.997	AS PREV./DIFFERENCES UNKNOWN - FIRST REFERENCE TO 'B' MODEL (REF. 'JOURNAL')	
	'39	1	MODEL C	0.884	AS PREV. LARGE PORTS/ SMALLER BORE	280
	'39	ı	SUPER B	0.997	AS PREV. B/THROTTLE INTAKE/PLAIN BEARINGS OR SUPER 'BB' FOR BALL BEARING MODEL	290 - 320
	'39	ı	SUPER C	0.884	DIE CAST/THROTTLE INTAKE/DOUBLE ENDED SHAFT/FLYWHEEL SUPER 'CW' IS WATER COOLED	
	'40	ı	SUPER B	0.997	AS PREV. SUPER B/REGULAR INTAKE/ PLASTIC TANK/BALL OR PLAIN BEARING/ AIR OR WATER COOLED	
	'40	1	*29*	0.297	DIE CAST ALUM. CASE/LAPPED PISTON/ STEEL ROTARY DISC VALVE/PLAIN BRONZE BEARING/ 10 CYLINDER FINS	125 - 150
	'41	I	.73.	0.297	AS PREV./REINFRCD.WEBS IN REAR OF CASE	125 - 150

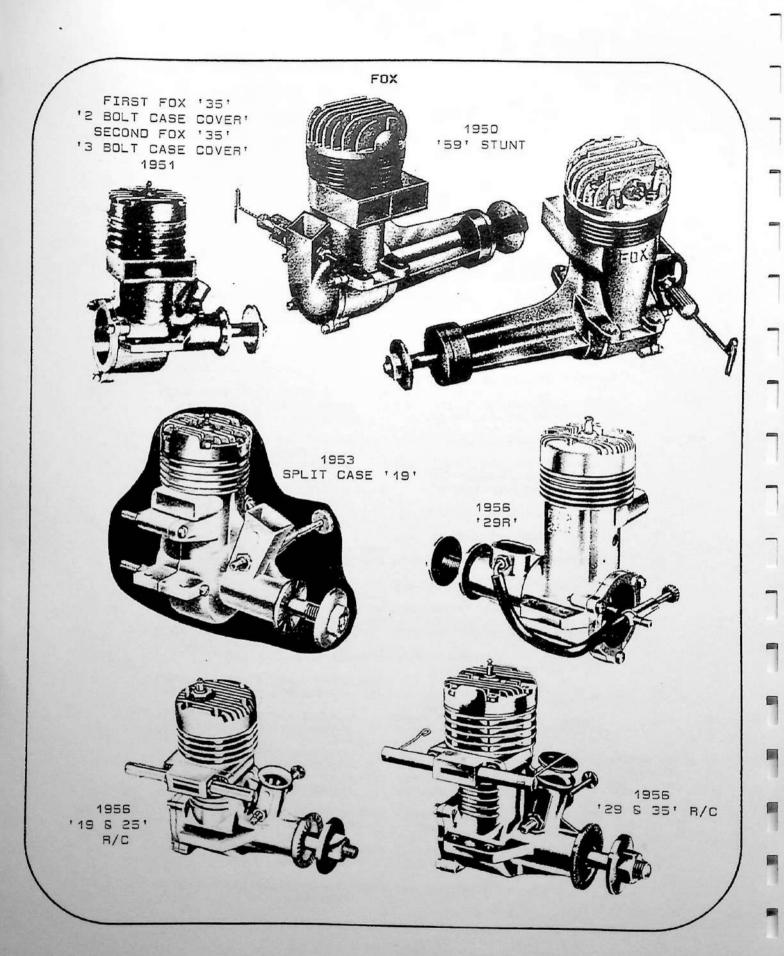




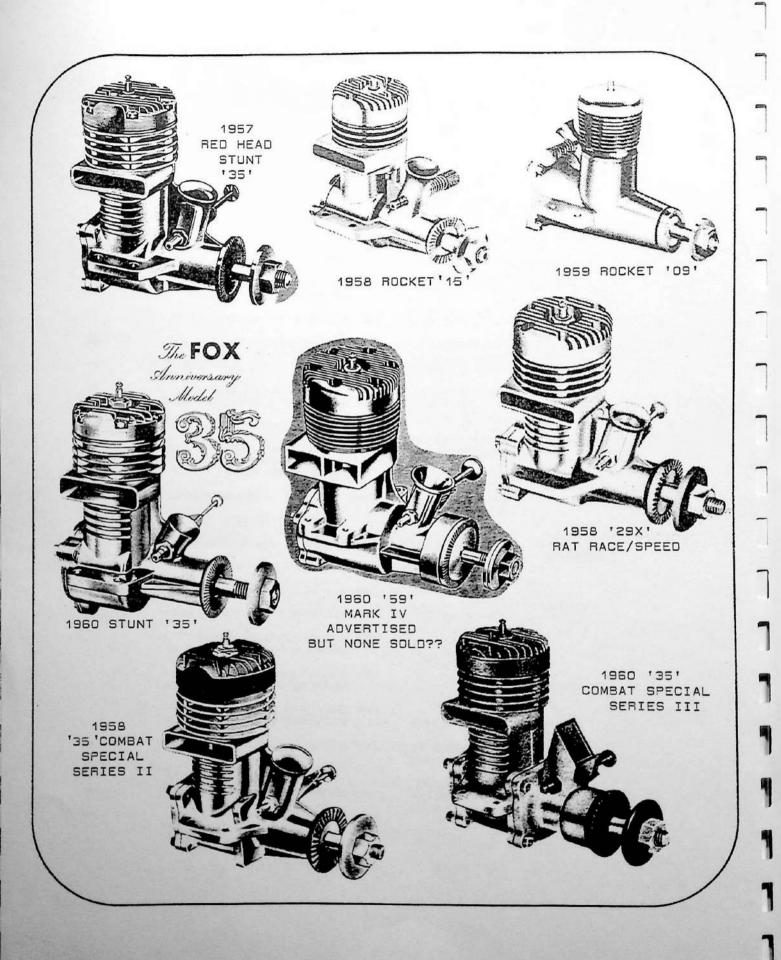


FORSTER - CONTINUED	'42	I	'29'	0.297	AS PREV./INTAKE BEVELLED/STEEL N.V.	
	'42	1	'305'	0.305	AS 29/MARKED 305/FEW PRODUCED	125 - 150
n	'46	I	<b>.</b> 29 <b>.</b>	0.297	AS PREV.PREWAR 29/ALUM.NUT ON INTAKE	138
	'46	I	'99'	0.997	AS '39 MODEL/3/8" PLUG/LARGE OVAL EXHAUST/2-SPEED IGNITION/AIR OR WATER COOLED	
(FORSTER-APPELT) (JOHN APPELT)	'47	I	*29*	0.297	AS PREVIOUS & PRE-WAR/STRENGTHENED CASTINGS/FLARED END VENTURI/ BALL BEARING SHAFT	140
	'49	1	'305'	0.305	AS POST WAR '29/BORED-OUT CYLINDER/ METAL TANK	125 - 150
	'50	G	'G-29'	0.297	SIMILAR TO PREVIOUS/UPSLANTED REAR INTAKE/LONG PROP DRIVE SPOOL WITH 'SLEEVE' PROP NUT/BALL BEARING SHAFT	75
•	'50	G	'G-31'	0.305	SIMILAR TO PREVIOUS G-29/UPSLANTED REAR INTAKE/SPOOL & SLEEVE NUT/BALL BEARING SHAFT/BORED OUT CYLINDER	
	'52	G	'F-29'	0.297	SIMILAR TO PREV./FRONT ROTARY VALVE/ SHORTENED DRIVE/PROP NUT ON SHAFT PLAIN BEARING SHAFT	65
	'52	G	'F-31'	0.305	SIMILAR TO PREV. F-29/FRONT ROTARY VALVE/SHORTENED DRIVE/PROP NUT ON SHAFT/PLAIN BEARING SHAFT/BORED OUT	
	'55	G	'F-35'	0.349	SIMILAR TO PREV. F-31/FRONT ROTARY VALVE/SHORTENED DRIVE/PROP NUT ON SHAFT/PLAIN BEARING SHAFT/BORED AND STROKED	
•	'55	I	'99'		AS PREVIOUS/REPRISED FROM '47 MODEL FOR R/C'ers/STRENGTHENED CASE/1/4' PLUG/ALSO WATER COOLED VERSION	
	'55	G	*99*	0.997	AS PREVIOUS/ GLOW VERSION	185
	'58	G	*29R*	0.297	AS PREVIOUS/FRONT ROTARY VALVE/PROP STUD (NUT)/29 R/C HAS EXH.THROTTLE/29 RW HAS WATER JACKET/29 RCW HAS THROTTLE & WATER JACKET	
	'58	G	*35R*	0.349	AS PREV. 29R/FRONT ROTARY VALVE/PROP STUD (NUTI/R-C/R-W/RC-W	
NOTE:			AIRCRAFT MODELS		R-C/R-W/RC-W MODELS AS '29 PREVIOUS AVAILABLE FROM RJL INDUSTRIES IN '96	
FOX MANUFACTURING CO.		_			ALSO MFD.BY CLAUDE C. SLATE CO. &	
(DUKE FOX)	'46	1	FOX59 HI-TORQ. 'D' STUNT	0.599	ARNOLD AND FOX ENGINEERING CO. LAPPED PISTON/BALL BEARINGS/LONG CRANKSHAFT/ PLUG OFFSET	
	'48	I	FOX59 HI-SPEED 'D' STUNT		AS PREV./PISTON RINGS/TOTAL BOTH MODELS MFD. 1200	550 - 650
	'49	1	FOX49 HI-TORQ.	0.499	AS 59 WITH SHORT STROKE/ FEW MFD./ LAPPED PISTON	
	'49	1	FOX49 HI-SPEED	0.499	AS 59 WITH SHORTER STROKE/ FEW MFD./ PISTON RINGS	

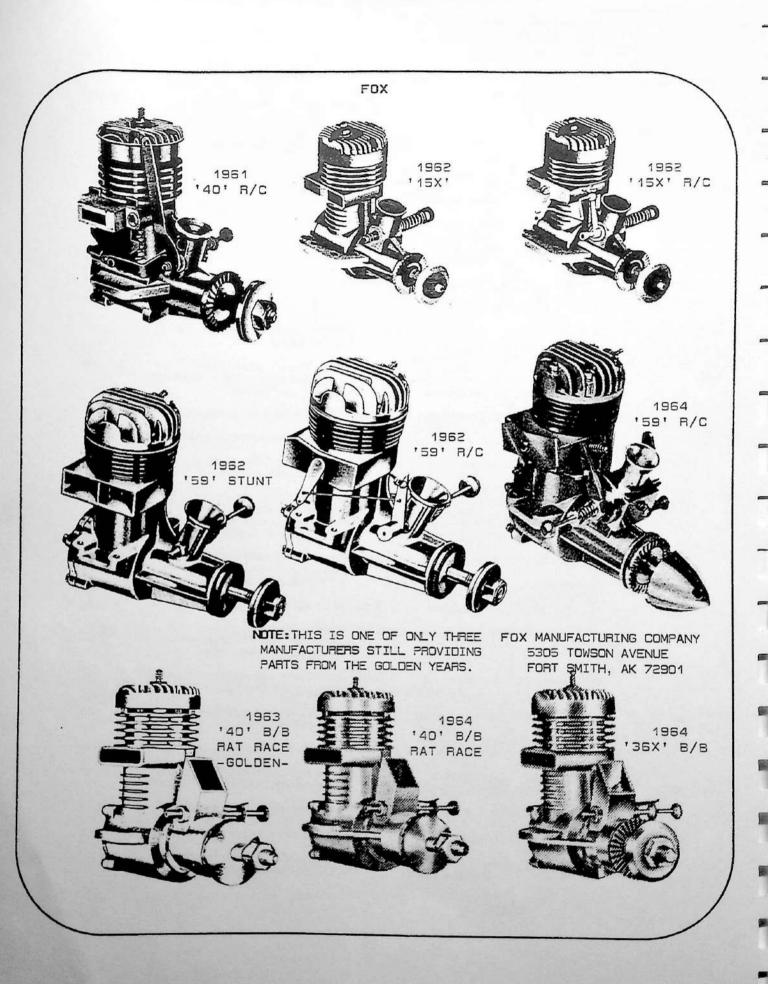
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FOX -	CONTINUED		'49	G	*35* STUNT	0.352	SAND CAST/NO MARKINGS ON ENGINE 2 BOLT REAR CRKCASE COVER/4 BOLT HD. FIRST FOX STUNT '35'	
		2 <b>.</b> #0	'49	G	*29* STUNT	0.299	SAND CAST/ '29' ON EXHAUST STACK 2 BOLT REAR CRKCASE COVER/4 BOLT HD.	
			'50	G	RACING SPEC.	0.299	SAND CAST/BIG PORTS	
			'50	G	*59* STUNT	0.602	LARGE SQUARE REAR VENTURI/CAST WITH REAR COVER LAPPED PISTON/CHANGED BORE AND STROKE/ OFFSET PLUG IN SIMILAR HEAD	160
		•	'51	G	*59* STUNT	0.602	SM.DOWNDRAFT VENTURI/INDENTED END/ TOTAL GLOW 59's MFD. 2000	250
			'51	G	*29* STUNT	0.299	SAND CAST CASE/3 BOLT REAR COVER/ 4 BOLT HEAD/ 2ND FOX STUNT '29'	
			'51	G	'35' STUNT	0.352	AS PREVIOUS 29/ BORED OUT CYLINDER	75
			'52	G	*29* STUNT	0.299	AS PREV./6 BOLT HEAD/DIFF.CASE CAST	65
*			'52	G	"35" STUNT	0.354	AS PREV./6 BOLT HEAD/DIFF. CASE CAST	68
			'53	G	'19' (SPLIT CASE)	0.198	COMPLEX VERTICALLY SPLIT CRANKCASE/ SQUARE VENTURI/ FEW MANUFACTURED	175
			'54	G	·19·	0.198	CONVENTIONAL DESIGN CASE	50
	•		'54	G	'59'	0.599	NEW CASE FRONT ROTARY VALVE/SHORT SHAFT/OFFSET PLUG IN HEAD SIMILAR TO PREV. '59'/ LAPPED PISTON	
			'54	G	'25'	0.257	BORED-OUT 19/"25" MARKED ON BYPASS	
	FOX		'55 -	_		_	FOX MOVED TO ARKANSAS	
			'55	G	19-1 OR 2 SPEED	0.199	NEW CASE .19/1 OR 2 N.V.'s/HIGH INTAKE	
			'55	G	25-1 OR 2 SPEED	0.257	AS 19/ 1 OR 2 N.V.'s/ HIGH INTAKE	
			'55	G	29-1 OR 2 SPEED	0.299	AS 29 STUNT/1 OR 2 N.V.'s/ HIGH INTAKE	
:•			'55	G	35-1 OR 2 SPEED	0.352	AS 29 STUNT/1 OR 2 N.V.'s/ HIGH INTAKE	
	*		'55	G	59-1 OR 2 SPEED	0.602	TWIN NEEDLE VALVES/MANY MINOR VARIATIONS THROUGH TO 1973	
		•	'56	G	"29R"	0.299	HUGE BATHTUB FRONT INTAKE/SINGLE PLUG HD. W/FINS/REAR MOUNTED NEEDLE VALVE	200
		•	'56 '56	G G	'29R' '29R' VARIATIONS			200
					*29R*	0.299	HD. W/FINS/REAR MOUNTED NEEDLE VALVE SINGLE OR TWIN PLUG HEAD NO FINS/	45 - 65
		•	'56	G	'29R' VARIATIONS	0.299	HD. W/FINS/REAR MOUNTED NEEDLE VALVE SINGLE OR TWIN PLUG HEAD NO FINS/ SINGLE OR TWIN PLUG HEAD WITH FINS	
•			'56 '56	G	'29R' VARIATIONS COMBAT SPEC.	0.299 0.353 0.199	HD. W/FINS/REAR MOUNTED NEEDLE VALVE SINGLE OR TWIN PLUG HEAD NO FINS/ SINGLE OR TWIN PLUG HEAD WITH FINS DIE CAST CASE/MODIFIED STUNT FORMAT	
			'56 '56	G G G	'29R' VARIATIONS COMBAT SPEC. '19'	0.299 0.353 0.199 0.199	HD. W/FINS/REAR MOUNTED NEEDLE VALVE SINGLE OR TWIN PLUG HEAD NO FINS/ SINGLE OR TWIN PLUG HEAD WITH FINS DIE CAST CASE/MODIFIED STUNT FORMAT AS PREV. 19 SPLINED SHAFT & PROP DRIVER	45 - 65
			'56 '56 '56	G G G G	'29R' VARIATIONS COMBAT SPEC. '19' '19' R/C	0.299 0.353 0.199 0.199	HD. W/FINS/REAR MOUNTED NEEDLE VALVE  SINGLE OR TWIN PLUG HEAD NO FINS/ SINGLE OR TWIN PLUG HEAD WITH FINS  DIE CAST CASE/MODIFIED STUNT FORMAT  AS PREV. 19 SPLINED SHAFT & PROP DRIVER  SPEED CONTROL VIA EXHAUST THROTTLE	45 - 65



FOX - CONTI	NUED		'57	G	'59' R/C	0.599	SPEED CONTROL VIA EXHAUST THROTTLE	65 - 75
*		•	'57	G	<b>.</b> 19.	0.199	WIDE MOUNTING LUGS/STANDARD PISTON BAFFLE OR ROUND PISTON BAFFLE WITH MATCHING HD2 VARIATION OF SAME ENG.	30 - 45
			'57	G	'25'	0.256	WIDE MOUNTING LUGS/AS STD. '19'	60
			'57	G	35 STUNT R/HD	0.352	AS PREVIOUS/RED PAINTED HEAD	
	•	8.00	'58	G	35 COMBAT SERIES II	0.352	AS PREV. COMBAT 35/BLACK PAINTED HEAD/NEW CRANKCASE DESIGN	
			'58	G	ROCKET 15	0.145	NEW SMOOTH CASE/ FRT. ROTARY VALVE	25 - 35
•	*		'58	G	*29X*	0.299	RAT-TEAM RACE-SPEED/SPLINED CRANK- SHAFT PROP DRIVE/HEAD SCREWS GO THIRU CYL.FINS/THICKER LINER TO REDUCE BORE FROM '35'/ .010 ALUM.GASKET PROV. CHANGING TIMING BETWEEN CYL. SLEEVE AND CRANKCASE	
		140	'59	G	ROCKET .099	0.098	UPSLANTED REAR INTAKE (SIDEPORT TYPE)/ GLOW HD./BUILT-IN TANK/BEAM OR RADIAL MOUNT/ GILBERT SIMILAR	25 - 40
			'59	G	35 STUNT	0.352	AS PREV./ANNIVERSARY MODEL/NAT. HD.	
	•	•	'59	G	'29' STUNT	0.299	AS PREV./ANNIVERSARY MODEL/NAT. HD.	
(11)	•		'60	G	*59* MARK IV	0.602	NEW CASE & HD./2 BALL BEARING SHAFT/ WEB IN EXHAUST/ NONE SOLD ?	
•		(*)	'60	G	'35' COMBAT SPEC.SERIES III	0.352	DIE-CAST SILICON ALUM. ALLOY CASE/RE- MOVEABLE FRONT & REAR COVERS/12-1 COMPR.RATIO/NEW BAL.SHAFT/'SWIRL- QUENCHED' HEAD CHAMBER	
•		•	'61	G	HUSTLER R/C	0.101	TRIAL MARKETING BY 'FAKE' MAIL ORDER COMPANY/NO FOX NAME OR GUANTEES/ EXH. BAFFLE/SCREW-IN OR 2 BOLT BACKPLT.	45
A#B	•	•	'61	G	HUSTLER	0.101	AS R/C MODEL - NO BAFFLE	40
		*	'61	G	'40' R/C	0.399	ROCKET & COMBAT 35 PARTS/COUPLED INTAKE EXH./IMPROVED CARB./LAPPED PISTON/BRONZE PLAIN BEARING	
	•		'61	G	'35 X'	0.352	'BLUE-RIBBON' LOW PRICE MODEL/ CASE CHANGES/ SQUARE INTAKE	35
	•		'62	G	FOX "10" R/C	0.101	SAME AS 'HUSTLER'WITH FOX NAME ON CASE/ EXHAUST BAFFLE	30
	<b>**</b>		'62	G	FOX "10"	0.101	AS PREVIOUS/ NO EXHAUST BAFFLE	25
			'62	G	*15 X*	0.145	SUPERCEDES ROCKET 15/TILTED PLUG/FINS' BUMPS ON NEW CASE/LOW PRICED MODEL	50
			'62	G	'15 XX'	0.145	COMP. VERSION OF 15X/HD.GASKET GONE LIGHTENED PISTON & MATCHING SLEEVE/ LOWERED HEAD/'XX' STAMPED ON LUG	
			'62	G	·15 XXX	0.145	SPEC. FACTORY MOD. RACE VERSION/FEW FOR COMP. FLYERS/XXX* ON LUG	

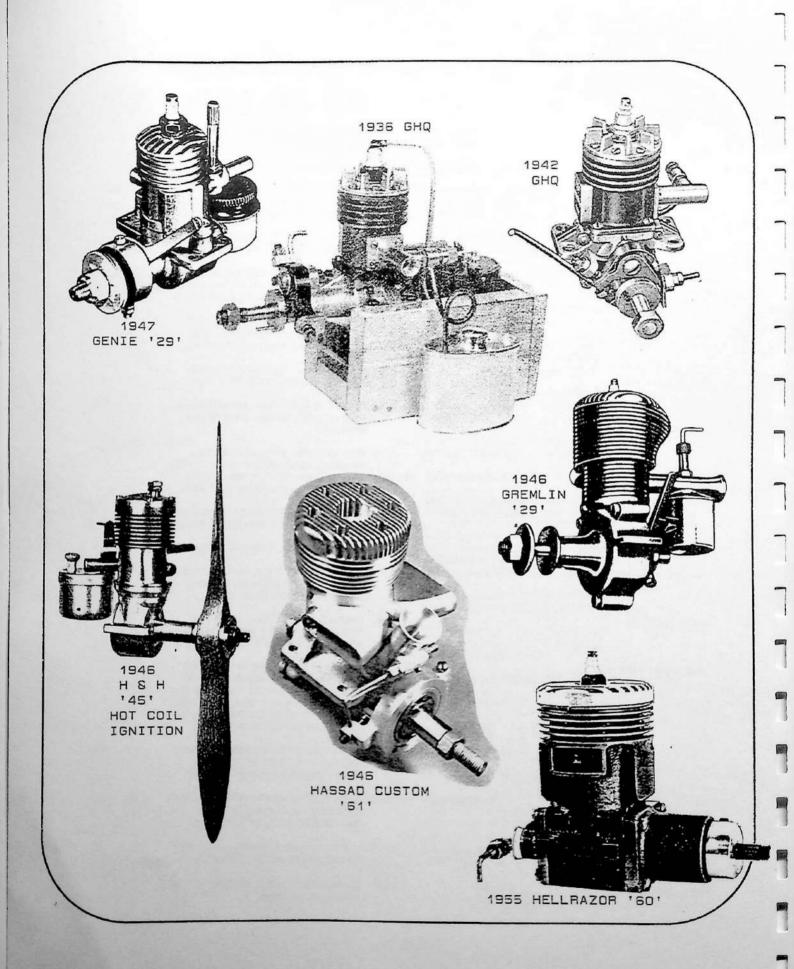


FOX - CONTIN	IUED		'62	G	*15 X* R/C	0.148	AS 15X/ COUPLED ROTATING INTAKE BUTTERFLY VALVE WITH EXHAUST WIPE	
<b>#</b> .0	(*)		'62	G	'29 X'	0.299	INTERNALLY MODIFIED 1958 - 29X/ 2 NEEDLE BEARINGS	
90.0			<b>'</b> 62	G	'59' STUNT	0.585	'63' MODEL/ NEW CASE	
	•	•	'63	G	"40BB" RAT RACE (GOLDEN)	0.397	GOLD COLORED/35X CASE/RAT RACE MODEL/BALL BEARING MAIN & NEEDLE BEARING FRONT END	125
			'63	G	*59* R/C	0.585	AS PREV.59 STUNT W/COUPLED EXHAUST & BUTTERFLY INTAKE AS '61 - 40 R/C	
	•	•	'64	G	'36 X'	0.359	'65 MODEL/ANGLED PLUG/WIDER EXHAUST INCREASED CRANK THROW/ PORTED FOR HI-NITRO (FOX 'BLAST')/NEEDLE BEARINGS	35 - 60
	•		'64	G	'59' R/C	0.585	AS 1962 .59 R/C/ '3-JET' METERED CARB. THROTTLE-COUPLED EXHAUST BAFFLE/ ALUM. PISTON & RINGS/PLAIN BEARING	
			'64	G	*15* R/C	0.145	AS PREV.15 R/C/ '3-JET' METERED CARB. THROTTLE-COUPLED EXHAUST BAFFLE	
•		*	'64	G	'40BB' RAT RACE	0.397	AS PREV. 40 BB/NATURAL COLOR/SPECIAL FACTORY ATTENTION/RAT RACE MODEL- HIGH COST	125
•			'65	G	'29 X' BB	0.299	29X CASE-MOD. FOR REAR INDUCTION/ MACHINED REAR COVER WITH LARGE STUB INTAKE/HARDENED STEEL DISC. VALVE/ TWO BALL BEARINGS/EXTRA WIDE EXHAUST	125
•			'65	G	'36 X' BB	0.359	CUSTOM VERSION OF 36X/EXTRA HOP-UP MODS. FOR COMBAT PERF./1-BALL BEARING	
•	· NOT	Eı	_	G	OTHERS	-	DUKE PRODUCED SPECIALS/THRU '60's	
FRASER MFG.	. co.		'46	1	FRASER	0.351	FRONT INTAKE/PLAIN BEARING/CLOSED TIMER/ATTACHED CYLINDRICAL TANK/ ADVERTISED - NONE SEEN	
GENIE MODELS			'47	I	GENIE 29	0.292	MODIFIED THOR WITH OHLSSON TYPE TIMER/FINS MACHINED ROUND/ASSEMBLED OR KIT/SLAG CONSTRUCTION/NO CYL.LINER	
GHQ MODEL A	IRPLANE CO	).					MFD. AS LOUTREL FROM 1934 TO 1936	
			'36	I	GHQ AERO	0.518	NO MAJOR CHANGES TIL '48/ORIGINAL 'CAST' FACTORY PROP SET FOR CLOCKWISE OPERATION,THEN CHANGED!/ASS'B OR KIT CAST IRON CYLINDER BARREL & STROKE DIFFERED FROM LOUIREL/SAND CAST	
			'36	1	GHQ AERO	0.518	AS PREV./DIE CAST/ MACHINED COUNTER BALANCED CRANKSHAFT/, DIFFERENT PISTONS IN SOME MODELS	100 - 150
			'40	1	GHQ 'M'	0.518	AS PREV./M' STAMPED ON REAR/SOLD AS AIRCOOLED MARINE WITH MARINE ACCESSORIES (PER D.DREPS, FLORIDA)	90
			'41	1	GHQ 'M' +	0.518	AS PREV./HAS STEEL MARINE JACKET FROM FACTORY (PER D. VINCENT, FLORIDA)	
GIL MANUFAC	TURING CO.		'31	1	CIL	0.527	AS PRIMITIVE SYNCO ACE/NOTED AS 1.18 DISPL REF. 'JOURNAL'	

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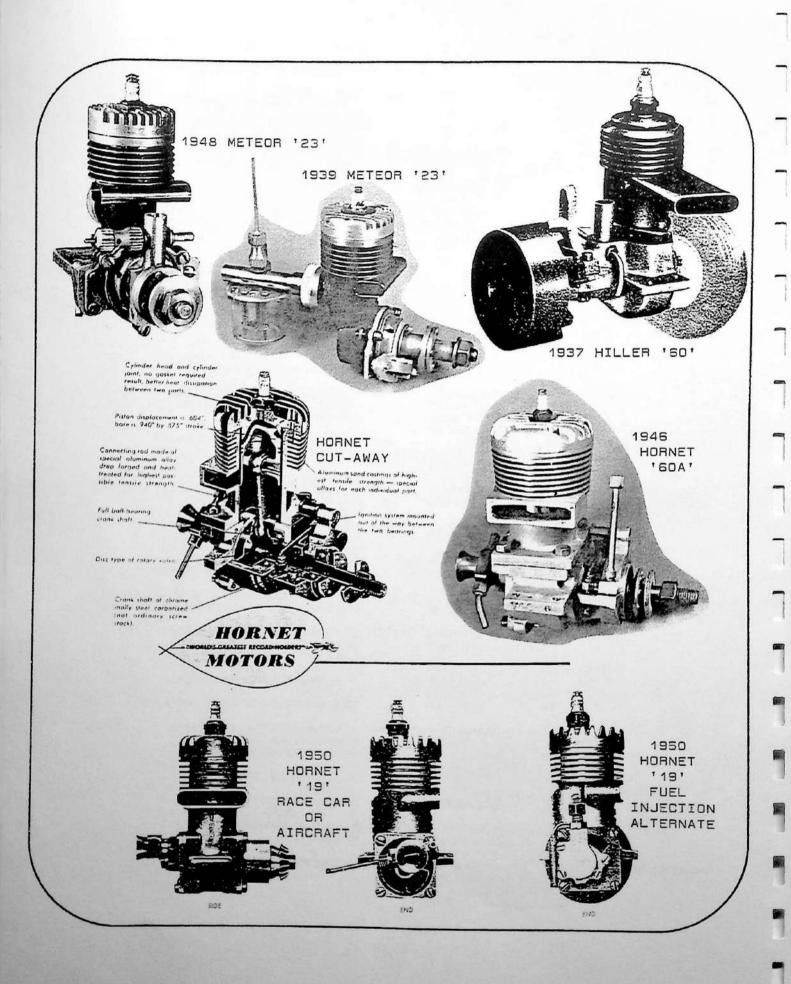
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GILBERT (A.C.) (DESIGNED BY FOX AND MFD. BY JOHNSON)	 '61	 G	THUNDERHEAD II	0.119	ALSO SEE 1/2A LIST  UPSLANTED REAR INTAKE/SIDE PORT TYPE/ WIND BACK STARTER/TWIN MUFFLERS SUPPLIED FOR READY FLY-ALSO WITHOUT MUFFLERS/'II' IN CIRCLE ON CASE	20
( <b>9</b> )/=	'61	G	THUNDERHEAD II	0.119	AS PREVIOUS/'II' ON CASE NO CIRCLE	18
GREMLIN "	 '46	ī	GREMLIN 'B'	0.294	MFD. BY STANLEY MACHINE & TOOL CO.  LAPPED PISTON/SIDEPORT/VERTICAL SPLIT CRANKCASE-3 SCREWS/LUCITE FUEL TANK/ TIMER AT REAR/UNUSUALLY SHAPED ELIPTICAL CYL.FINS ABOVE EXHROUND TINY FINS BELOW EXHAUST	
H & H MODEL MOTORS (HOWIE & HEUR)	'45	H/C	HOWIE TWIN	0.389	DIRECTLY OPPOSED FLAT TWIN/ALTERNATE FIRING/SINGLE CARB. FEEDS EACH OF TWIN PIPES IN REAR OF EACH CYL.AS SIDE PORT/ 'SCOTCH YOKE' CONNECTING ROD/VERY UNIQUE DESIGN FEATURES	
	'46	H/C	H & H 45	0.451	FIRST TRUE GLOW PLUG ENGINE/ PLUG ELEMENT BUILT INTO HEAD/HOT-COIL IGNTTON-PATENTED/ OVAL EXHAUST	
	'46	H/C	H & H 45	0.451	AS PREV./RECTANGULAR EXHAUST APPROX. 150 ENGINES MFD./BALANCE MELTED DOWN IN FOUNDRY!	
HAYWARD-CONNELLY	'48	1	н-с	0.647	REVISED VERSION OF THUNDERBIRD/SHORT INTAKE/NO TANK/DUAL PLUGS	
	'49	G	H-C	0.647	AS PREVIOUS/NO TIMER/ SINGLE PLUG	
HASSAD (IRA) (HASSAD/SCHOCK)	-	_		_	SOLD BY H & H MODELCRAFT AND WESTCHESTER HOBBIES	
	'39		CUSTOM		H/S ON CASE ('S' FOR SCHOCK-FRIEND OF IRA HASSAD) BASICALLY A CAR & BOAT ENGINE/BOLT-ON EXHAUST STACK ACROSS FRONT/PLAIN BRONZE BEARING/SMOOTH HEAD/LAPPED PISTON/5 BOLT BACKPLATE	
	'39	1	HASSAD CUSTOM		SIMILAR/REAR ROTARY DISC VALVE/'HRE' ON ENGINE/ ONLY 2 PRE-PRODUCTION	
	'41	I	HASSAD CLISTOM	0.610	H/S DROPPED OFF CASE/ MINOR VARIA- TIONS/SOLID OR FINNED HDS./OFFSET PLUG AND STRAIGHT PLUG	
	'41	1	BLACK PANTHER		SEE BLACK PANTHER-'RIP-OFF'OF HASSAD	
	'41	I	BATZLOFF 60		SEE BATZLOFF CUSTOM HASSAD VARIATION	
	'46	1	HASSAD CUSTOM	0.610	AS PREV./RINGED PISTON/4 BOLT BACK- PLATE/HIGH POLISHED CRANKCASE/ APPROX. 125 MANUFACTURED	390
• NOTE:	'47	1	SKY DEVIL		SEE EDCO FOR POST WAR HASSADS	
HELL RAZOR (BIEDERMAN AND HASSELBACH)	'55	G	HELLRAZOR 60		7 DIFFERENT MODELS/FRONT&REAR ROTARY/ SANDCAST CASE/MACH.ALUM.HD./SINGLE RING/PHENOL RESIN ROTOR/LINKNOWN PRODUCTION	
HENRY ENGINEERING CO.	-	-			SEE VECO PRODUCTS CORP.(SUBSIDIARY)	

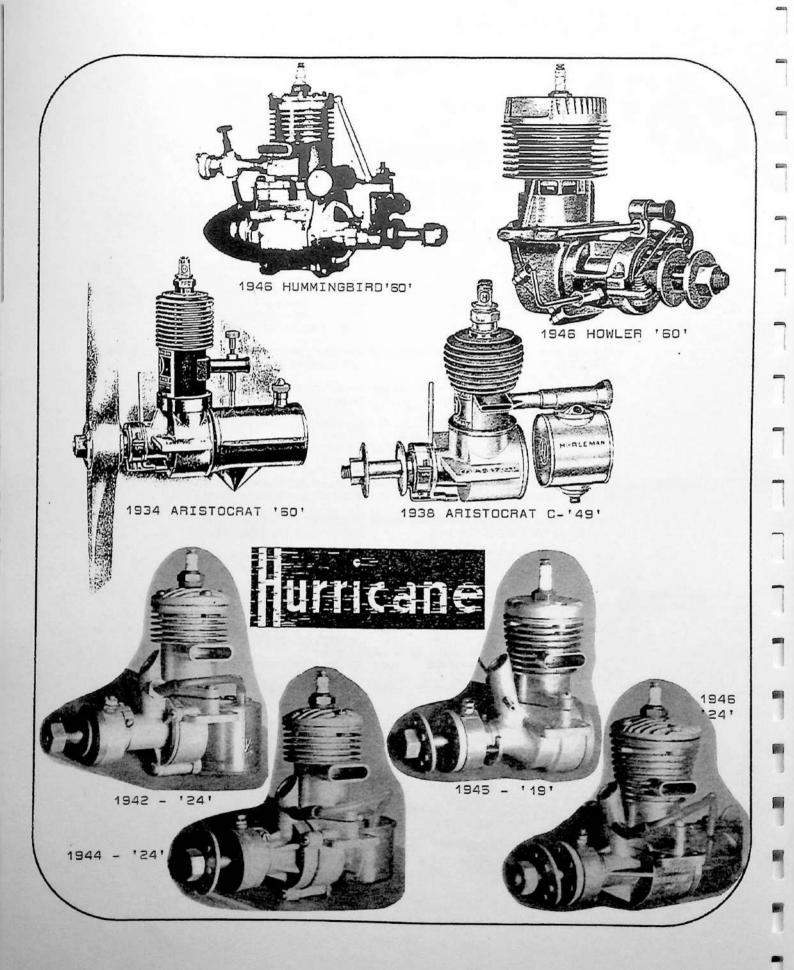
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HETHERINGTON (ROBERT J. HETHERINGTON)	'36	<u> </u>		0.60	ORIGINALLY STARTED WITH AIR ENGINES  (FIRST ENGINE BUILT AS PRE-PROD. IN 1932)  7/8" X 1" BORE & STROKE-LATER WERE .488  AND .232 DISPLACEMENTS	
	'37	1	METEOR	0.232	2. SANDCAST CASE & TIMER FRAMES/LARGE EXHAUST HOLE WITH SMALL SLOT EXH.IN CYLINDER LINER/WITH & WITHOUT RINGS/ APPROX. 50 MFD.	
	'38	1	METEOR	0.488	ALSO UNUSUAL CASE DESIGN SIMILAR TO '23'/SIDEPORT/CYL.WITH FINS SCREWED TO LOWER CRANKCASE/HD.FINS/OPEN TIMER/ 30 MANUFACTURED	
	'39	ı	METEOR	0.232	'FLUTTER VALVE'REAR VENTURI/ALL MAIN ENGINE COMPONENTS FABRICATED FROM SHEET METAL STAMPINGS-UNIQUE I/ALL BRAZED TOGETHER IN AN EXCELLENT MANNER/SIMILAR CONFIGURATION TO PREV. MODEL/LAPPED PISTON/250 MFD.	250 - 250
	'39	1	METEOR	0.198	AS PREV./PROBABLY PROTOTYPE FOR SMALLER DISPL./ 6 MANUFACTURED	
	'48	ı	METEOR	0.232	AS PREV. 23/FRONT ROTARY VALVE MTD. ON FRONT OF CASE/SAME 'FLUTTER' VALVE/ 3-PROTOTYPES MFD./ALL REST ARE MFD. FROM PARTS ENGINES	
" NOTE:		G		0.232	NO 'FACTORY GLOWS' - ONLY THOSE MADE UP LATER FROM PARTS BY UNKNOWN	
HILLER INDUSTRIES	'37	1	HILLER(HORNET)	0.604	SAND CAST ALUMINUM CASE/CAST IRON CYLINDER/FRONT ROTARY/NO HEAD FINS	450 S
	'39	1	HILLER(HORNET)	0.604	AS PREVIOUS WITH CRANKCASE CAST TO INCLUDE GEAR AND AXLE CARRIER	
	'42	1	HILLER (COMET)	0.604	SIMILAR TO PREV./CROSS HEAD FINS/ FORWARD SWEPT EXHAUST	
HORNET MOTORS (ANDERSON-CASE-SNOW)	'32/46	1	RACE CAR	0.607	A-C SPECIALS-3 PROTOTYPES MFD. FOR HORNET/NO PROP WASHER/ FLYWHEEL	
	'46	I	HORNET '60A'	0.607	SAND CAST CASE/REAR ROTOR AIRPLANE TYPE WITH PROP DRIVER	300
	'46	I	HORNET '60B'	0.607	AS PREV./MARINE TYPE WITH FLYWHEEL	
	'46	1	HORNET '60RC'	0.607	AS PREV./FLYWHEEL/DOWEL PIN HOLES IN LUGS	300 - 475
	'50	G	HORNET '19' RACE CAR & AIRCRAFT		DOUBLE BALL SHAFT/LIKE LATER SERIES '61 K&B 15/W/RACE CAR GEAR/PISTON RINGS/ ALSO MFD.AS AIRCRAFT VERSION W/PROP DR.&FUEL INJECTION REAR END/250 MFD.BOTH	300 S
	'50	I	HORNET 'R' (BULGE)	0.607	AS PREVIOUS/ BUILGE BYPASS/ DIE CAST VENTURI/ BIG SHAFT	450 - 950
	'51	1	HORNET 'V'	0.607	AS PREV./IRREGULAR CAST EXHAUST/ 'V' IN SERIAL NUMBER	
• • NOTE:			MODIFICATIONS		CONVERSION KIT HAD MOD.CYL. JACKET- BACK COVER-CARB. WITH 3/8" BORE OVER STD.5/16'/ALSO BIGGER LINERS WITH 'FLY- WHEEL' PISTONS-INCREASED DISPL.TO 65	

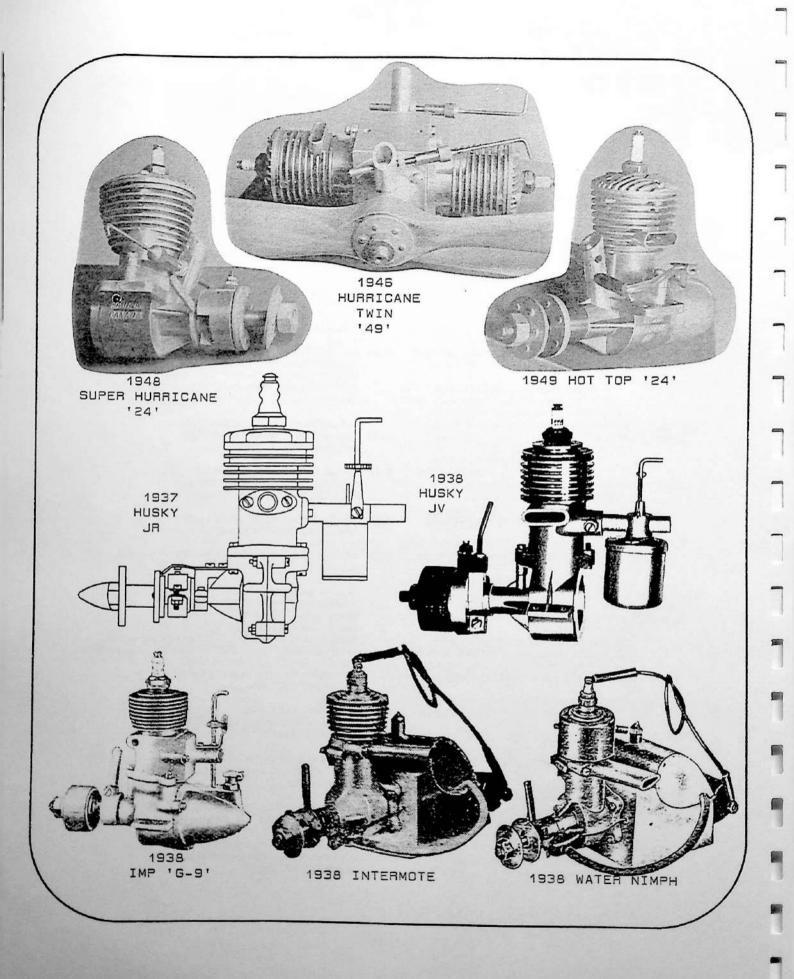
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HOWLER					MFD.BY BONE TOOL & GAUGE CO. ORIGINALLY DESIGNED TO FLY MODEL HELICOPTERS AS RESCUE MARKERS FOR U.S. NAVY LIFE BOATS	
	'46	ı	HOWLER	0.604	NO AIR INTAKE AT NEEDLE VALVE/AIR INTAKE ONLY THROUGH SUB-PISTON INDUCTION (APPROX. 300 MFD.)	
	'47	1	HOWLER	0.604	SMALL AIR INTAKE AT NEEDLE VALVE TO SUPPLEMENT AIR INDUCTION	400 - 750
HOWLER (CRAIG ASHER)	'62	G	HOWLER 15	0.149	REAR ROTARY RACING ENGINE KIT/ SAND CAST	
	'62	G	HOWLER 65	0.647	REAR ROTARY RACING ENGINE KIT/ SAND CAST/SIMILAR TO .15 - LARGER	
HUMMER (ED LANDGRAF)	- '35		HUMMER 50	0.528	MFD. BY MECHANICAL DEVELOPMENT CO. SAND CAST/ROTARY DRUM REED VALVE/ IRON CYL.&FINS/SINGLE RING PISTON/10 BUILT REF. 'JOURNAL'	
HUMMINGBIRD ENGINE CO.	'46	Ĭ	HUMMINGBIRD	0.604	SIDE PORT/INTERNALLY TURBINE SUPER- CHARGED'/OPEN TIMER/STREAMLINED TANK AT REAR/ 3-PROTOTYPES ONLY/ NO PRODUCTION BUT WAS ADVERTISED. (REF. 'JOURNAL')	
HURLEMAN DISTR. CO. (WALTER J. HURLEMAN)	- '34		ARISTOCRAT	0.601	LATER MFD. BY J.B.L. INSTRUMENT CO. SIMILAR TO BROWN .60/ SAND CAST/ LAPPED PISTON/ (2 - MODELS ?)	
	'38	I	ARISTOCRAT C		COLLAR TYPE FULL ADJUSTER INSTEAD OF NEEDLE VALVE WITH FRICTION SPRING & CLICK ADJUST/SINGLE EXH./SMALL BYPASS	
	'39	ı	ARISTOCRAT C		AS PREV./ENLARGED SINGLE EXHAUST & MFD. WITH DIFFERENT FUEL TANKS	
	'46	I	ARISTOCRAT C		AS '39/SMALLER HEAD FINS/DUAL EXH. SOLD IN LIMITED QUANTITIES	125
HURRICANE (CANADIAN) (RAY HUNTER)	'42	1	1ST HURRICANE		MFD. BY PRODUCTION & TOOL CO. PRODUCTION CONTINUED IN CANADA AS EDUCATIONAL TOOLS THROUGH WAR YRS ORIGINALLY CALLED "WHIRLWIND"/CURTIS- WRIGHT CANADA DEMANDED NAME CHANGE	
	'42	I	HURRICANE 24		SAND CAST/IHIN FRONT HOUSING FLANGE WITH INTEGRALLY CAST INTAKE & TINY SUPPORT WEBS/CYLINDER FINS STOP AT EXHAUST/PLASTIC HANG TANK	350 S
	'44	1	HP WHIRLWIND	X.	EXPERIMENTAL FOR TARGET DRONES/SAND CAST CASE/MACHINED CASE FINS&HEAD OPEN TIMER (6 BUILT)	
	'44	1	HURRICANE 24		AS '43/THICKER FRONT HOUSING FLANGE WITH INTEGRALLY CAST INTAKE & LARGER SUPPORT WEBS	275 S
	'45	I	HURRICANE 24	0.243	AS '44/NEW CYLINDER W/FINS TAPERED- TO BELOW EXHAUST	250 S
	'45	1	HURRICANE 19		EXPERIMENTAL/'45 MODEL CYLINDERS/ WITH MODIFIED LOWER CASE FOR REDUCED CRANK THROW (8 BUILT)	

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HURRICANE - CONTINUED	'46	1	SUPER HURRICANE 24	0.244	ALL NEW DIECAST CRANKCASE/CYLINDER HD,TIMER/NEW SHORTERS FATTER MOLDED HANG TANK/ TEARDROP CASE AND HEAD INTEGRALLY CAST INTAKE	105 - 165
	'46	I	SUPER HURRICANE 24	0.244	AS NEW DESIGN '45/MOLDED CLEAR STREAMLINED PLASTIC TANK	145
	'46	I	HURRICANE TWIN	0.488	EXPERIMENTAL/3 DIFF.MODELS (7 BUILT)	
	'47	I	SUPER HURRICANE 24	0.244	AS '46/FINS SHAPED FROM CONSTANT TAPER TO ROUNDED OFF BELOW HEAD	
	'48	I	SUPER HURRICANE 24	0.244	AS '47 W/OHLSSON TYPE TIMER WITH TWO SCREW HOLES	
	'49	G	HOT TOP 24	0.244	AS '46& '47 LESS TIMER W/FRONT BEARING REPLACED BY STREAMLINED BRONZE NOSE BOSS & STREAMLINED METAL TANK	
•	'49	I/G	SUPER HURRICANE 24	0.244	MANY MINOR VARIATIONS/THIN&THICK HEADS/EARLY PISTONS W/OIL GROOVES REPLACED BY FACTORY WITH SMOOTH PISTONS BETWEEN '47 & '50	
HUSKY MINIATURE MOTOR					MFD. BY BAINBRIDGE MACHINE CO.	
COMPANY	'37	1	HUSKY 'JR.'	0.192	SAND CAST CYLINDER/OPEN TIMER/SPLIT CASE/BOLT ON STACK/SPOKE HEAD FINS/ BOLT ON BYPASS/25 PROTOTYPES BUILT	
	'37	1	HUSKY 'JR.'	0.192	NEW CASTINGS/SPLIT CASE/NAME ON FRONT OF CYLINDER	
	'38	I	HUSKY 'JV'	0.199	CYL.BUILT UP FROM BRAZED STEEL SHEET PERMANENT MOLD CASTINS/NAME ON BYPASS/CAST TANK TOP/ VARIATIONS EXIST WITH TIMERS	450
	'39	1	HUSKY NEW 'JV'	0.199	CADMIUM PLATED CYLINDER/ INTAKE COMES DIECTLY OUT BACK OF CYLINDER	
•	'39	1	HUSKY JV 'B'	0.205	SAME AS NEW JV/INCREASED BORE (APPROX. 200 BUILT)	
	'46	1	HUSKY 'JV'	0.199	AS '39 WITH FLARED VENTURI	
INTERNATIONAL MODELS COMPANY	_				FIRST TWO MFD. BY MORTON BROS. FOR INTERNATIONAL MODELS COMPANY & G-9	
•	'38	1	WATER NIMPH		PROBABLY A RE-BRANDED BELMONT WATER JACKET/RADIAL MTG./METAL TANK	
	'38	I	INTERMOTE		AS WATER NIMPH/FINS-AIR COOLED/RADIAL MOUNTING/ METAL TANK	
	'38	1	IMP "G-9"	0.564	TWIN EXHAUST/CAD.CYL./STREAMLINED METAL TANK/RATCHET N.V./ROGERS TYPE TIMER W/CAST ARM(SIMILAR TO BELMONT)	
JAMES MOTORS (HARRY RICE)	-			-	MFD. BY HARRY RICE BEFORE JOINING OHLSSON SOLD BY THE GREAT WESTERN AIRPLANE CO.	
	'38	1	JAMES	0.647	LOOKS LIKE 'GOLD SEAL'/BEAM OR RADIAL MTG. THIN LUGS/9 CYL.FINS/LAPPED PISTON CLOSED TIMER/SQUARE LINER PORTS - VARIED TO ALSO INCLUDE 'KEY HOLE' SHAPE ON ENGINES SOLD IN ENGLAND AS 'FLEET'	

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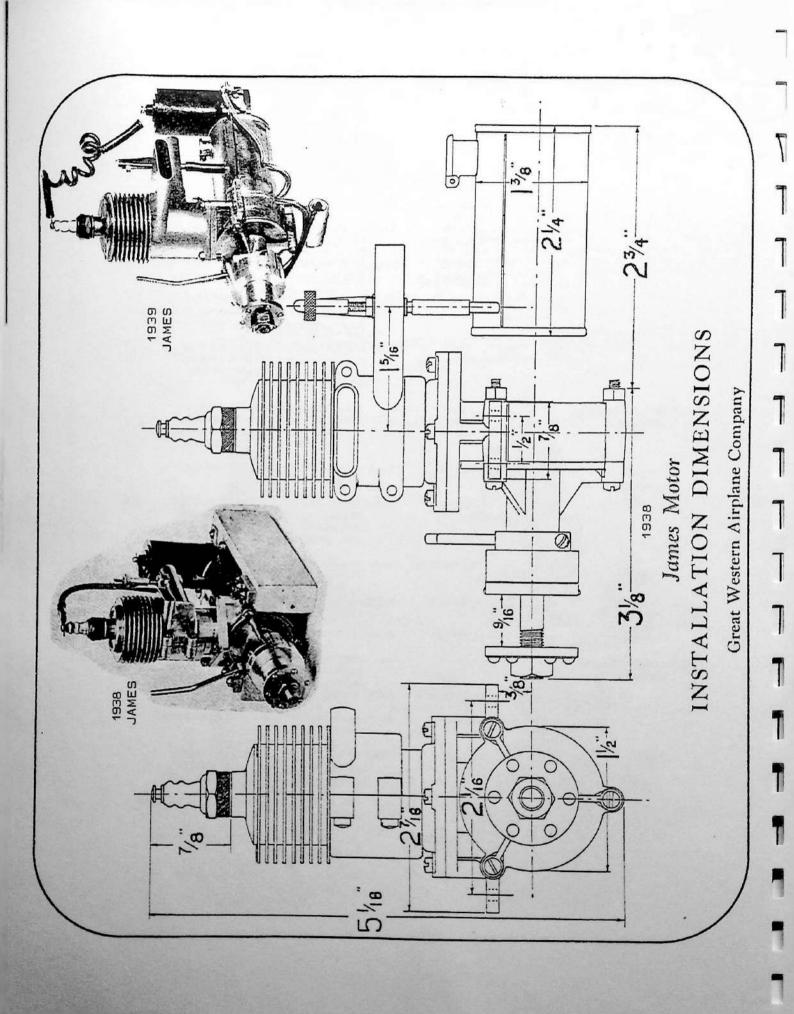
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#### 1938 LAST HARRY RICE AD BEFORE JOINING IRWIN OHLSSON AS OHLSSON 8







ABOVE: High-dome Mono-steel, one-piece drawn hardened steel pistons. Available in 1/3", 11/16", and 1/2" sizes, or to your specifications.

RIGHT: Drop-forged Dural light-weight connecting rod. Made in any size to meet your require-ments.

BELOW: Fully counterbalanced one-piece crank shaft, with tubular crank pin, made to your specifications.



## ATTENTION! MOTOR MANUFACTURERS

We have been manufacturing model airplane motors for more than 10 years, and are equipped to handle any or all phases of manufacture, either complete units, parts, or accessories. Our facilities include dies, alu-minum die easting, tools, and automatic screw machine and punch press work, etc.

The services of the finest engineering and manufacturing staff in the industry, plus an unconditional guarantee on all work, is your assurance of complete satisfaction.

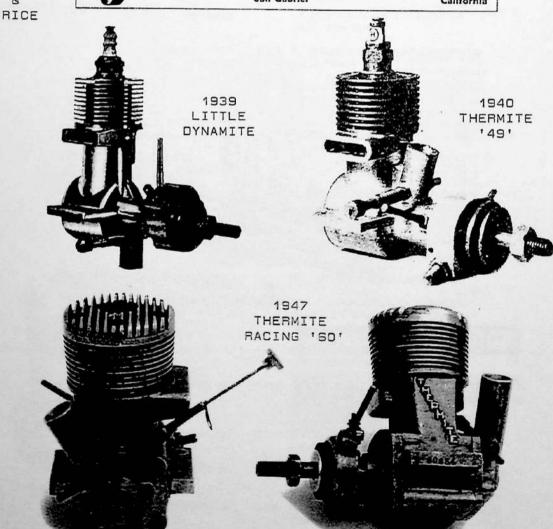
Quantity prices upon request. Simply submit blue prints or specifications.

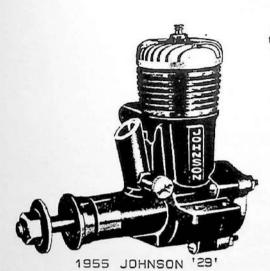
Have your motor parts made by men who know the model airplane business. Write today for further information.

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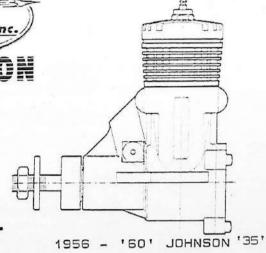






Johnson .

**Engines** 



The INSIDE STORY

• LARGE EXHAUST STACK —

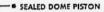
The only American made engine having an exhaust stack specifically designed for mounting a supressing header.

. VENTURI RESTRICTOR -

Remorable to allow for convenien to a "Hap-Up" (ab, when used with the new fuel tank pressere autlet.

· ENLARGED CRANKSHAFT

by autilia diameter with a bigyer value apening than any other angine of comparative size, yet has less friction area due to incorporation of a lubrication reserves.



Mode lighter, foster and strenger by infiltration of a new non-lerrous mosteriol. New design incorperates a reities part which allows a greater volume of feel to enter the comlustion chamber. This greatly increases the compression & power vortes.

#### · CRANKCASE DESIGN

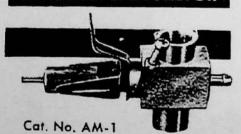
incorporates larger venturi and lug webs. Six screws held head, cylinder and crankcase together as one rugged unit.

### FUEL TANK PRESSURE OUTLET

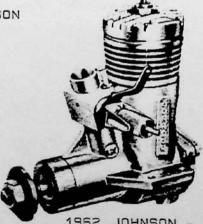
increases hi-speeds and assures a steady unvarying flow of fuel 5 the engine during violent maneuvers.

TYPICAL JOHNSON CUT-AWAY

### AUTO MIX CARBURETOR



JOHNSON CARBURETOR
USED IN MANY
R/C ENGINES IN EARLY '60's'



1962 JOHNSON - J R/C

JAMES	- CONTINU	ED	'38	I	JAMES	0.604	AS PREV./THICKER MTG.LUGS/ 7-9 CYLINDER FINS/ 5-ROUND (DRILLED) EXHAUST PORTS/ RINGED PISTON	
	*		'38	I	JAMES	0.647	AS PREV./LARGER INTAKE TUBE/ 4-ROUND EXH.PORTS/9 FIN CYLINDER/LAPPED PISTON	1195
			'39	1	JAMES	0.647	AS PREV./ 3-ROUND EXH. PORTS/ NEW CYLINDER BASE BRAZED TO CYLINDER/ PROBABLY SOLD IN ENGLAND WITH STRAIGHT TIMER ARM & NUT (JOURNAL)	
			'39	1	JAMES	0.604	AS PREV./ 4 EXH. PORTS/RINGED PISTON	900 - 950
•		NOTE:	'45	1	JAMES ROCKET	0.647	LTD. PRODUCTION BY UNKNOWN MFRDIST. SIMILAR TO PREV./ROUNDED CYLINDER FIN PROFILE/CASE & MANIFOLDS ANODIZED OLIVE DRAB/SPUN ALUM. COVER PLATE OVER FRONT PLATE/POL.TIMER (JOURNAL)	
JIM BR	OWN ENGI	NES					ALSO DISTR. BY OFFENBACHS' HOBBY	
•	•	*	'37	_1	LITTLE DYNAMITE	0.374	SUPPLY IN 1939 UPPDRAFT FRONT ROTARY INTAKE/LARGE SEMI-ENCLOSED TIMER/EARLIER MODELS WITH OPEN TIMER	
•	•	•	'39	1	LITTLE DYNAMITE	0.374	AS PREVIOUS/ENCLOSED TIMER/ INTAKE MOVED BACK	
•		•	'40	1	LITTLE DYNAMITE	0.374	AS PREV./NEW CASE CASTING INCLUDING BYPASS & EXHAUST CYL.BOLTS TO CASE	
	•	•	'39	1	THERMITE '60'	0.588	SAND CAST CASE/FRONT ROTARY-UPDRAFT INTAKE/LARGE SEMI-ENCLOSED TIMER/	
	*		'39	1	LITTLE DYNAMITE '49'	0.489	AS PREV./BOTTOM AND FRONT ROTARY INTAKE/SEMI-ENCLOSED TIMER	
•	#-		'40	1	THERMITE '49'	0.489	PRE VIVELL 49/LARGE SEMI-ENCLOSED TIMER/FRONT ROTARY/SEMI-CUSTOM/ STEEL CYLINDER/FLAT HEAD	
			'41	1	THERMITE '60'	0.588	LARGER VERSION OF '49/STEEL CYL. WITH ALUM. CYL. FINS & ALUM. HEAD FINS	
		" NOT	E '41/45	1	ALL MODELS	_	MFD. WHEN MATERIALS AVAILABLE	
			'47	1	THERMITE	0.607	SAND CAST CASE-FRONT & REAR COVERS- HD./UNIQUE REAR ROTORY DRUM VALVE W/HIGH SLANTED LONG INTAKE/RACE TYPE	
JOHNS	ON PRODU	ICTS	-	_			FORMERLY "ORWICK ENGINES" MFD. BY DYNAMIC MODELS INC. ALSO SEE 1/2A LIST	
			'55	G	JOHNSON .29	0.299	MINI-ORWICK IRIDESCENT GREEN CASE/ RADIAL OR BEAM MTG./FRONT ROTARY PLAIN BEARING	
			'55	G	JOHNSON .32	0.317	BORED OUT AS PREVIOUS/IRIDESCENT GREEN CASE	
			'55	G	JOHNSON .35	0.331	BORED AND STROKED AS PREVIOUS/ IRIDESCENT GREEN CASE	
			'55	G	JOHNSON .64	0.647	AS ORWICK 64/WITH BEAM MOUNTS/ IRIDESCENT GREEN	

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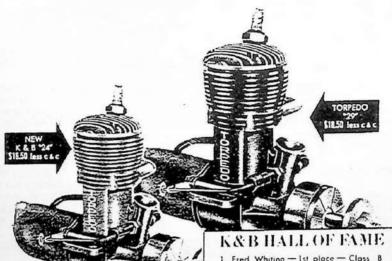
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## We will NOT sacrifice QUALITY to lower our prices

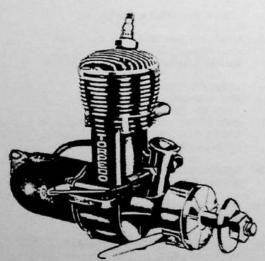
Precision engineering, Highest quality material and skilled workmanship have made K & B engines the great champions they are. We will continue to produce quality not quantity.

- 1. Fred Whiting 1st place Class B Sr. F. F.— Nationals
- 2. Jerry James 1st place Class B Jr. F. F. — Nationals
- Don Newberger 1st place (120 mph)
   Class 3 Speed-Open—10/18/47
- Lew Mahieu 1st place (117.64 mph)
   Senior Class 3 Speed —10/18/47
- Roy Acord Official AMA Record 32:02.6 mins, Free Flight-open
- 6. Paul Conrad—Official AMA Record— 98.97 mph—Class 3 Jr.U-Control Speed

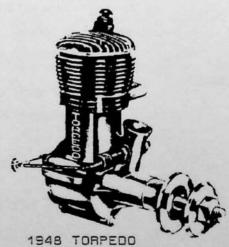
WATCH THIS GROW

## K & B MANUFACTURING COMPANY

EARLY 1948 AD SHOWING THE START OF K & B's WINNING WAYS



1946 TORPEDO IGNITION SERIES



GLO TORP SERIES

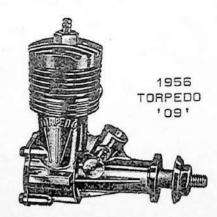
version laboration						NEW CASE OF THE PER CASE AT READ COVER	
JOHNSON - CO	NTINUED	'56	G	JOHNSON .29	0.299	NEW CASE/THINNER CASE AT REAR COVER MTG./LARGER CRANKSHAFT DIA. & PLAIN BEARING/SUPPORT WEB AT INTAKE TO CASE/NATURAL FINISH	
		'56	G	JOHNSON .32	0.317	AS PREV./BORED OUT (FOR FREE FLIGHT)	
		'56	G	JOHNSON .35	0.331	AS PREV./BORED & STROKED/NAT. FINISH	
		'59	G	JOHNSON STUNT R/C	0.335	AS PREV./RE-PORTED & TIMED FOR R/C WITH UNIQUE 'AUTOMIX' AM-1 CARB BEST R/C CARB AT THIS TIME - ALSO SOLD AS ACCESSORY FOR OTHER ENGINES	
*	и	'59	G	JOHNSON 35	0.331	AS PREVIOUS/ SPORT MODEL	80 - 90
	•	'60	G	JOHNSON 35 (COMBAT)	0.349	AS PREV./COMBAT SPECPRESSURE BLEED IN CASE/REDESIGNED & BORED OUT FOR COMBAT & RAT-RACE RULES (UP TO .36)	100
	•	'60	G	JOHNSON 35 STUNT SUPREME	0.349	AS PREV.STUNT R/C/ NO CARB./RE-PORTED FOR HI-TORQ-LOW SPEED STUNT	60
		'60	G	JOHNSON 29R	0.299	AS PREV./BIG CRANKSHAFT - 5/8' O.D./ MODIFIED FOR SPEED	150
		'62	G	JOHNSON-J-R/C	0.358	AS PREVIOUS/NEW CASE FOR TWO BALL BEARINGS/'AUTOMIX' AM-1 CARB.	70
	**	'62	G	JOHNSON - J	0.358	AS PREVIOUS/DOUBLE BALL RACE CASE/ NO R/C CARBURETOR	
	•	'63	G	JOHNSON SPORT SPECIAL	0.3205	AS PREVIOUS CASE STYLE/PLAIN BEARING	55
		'63	G	BULLDOG 09	0.092	HEAVY CAST CASE/MASSIVE CRANKSHAFT/ SPECIAL 'HONELAP' PISTON-LINER FIT/ DESIGNED FOR PROPOSED F.A.I. 1.5 CC CLASS IN '64	
*		'63	G	BULLDOG 09RC	0.092	AS PREV./WITH JOHNSON 'AUTOMIX' AM-2 R/C CARB. WITH COUPLED EXHAUST RESTRICTORS	75
JUDSON CO.			_		_	MFD.VARIETY OF ENGINES FOR SALE BY OTHERS (I.E. 'BUZZ')	
•		'47	1	JUDCO RAM	0.292	ROGERS-TYPE ENGINE/SLAG CONSTRUCTION NO CYLINDER LINER/ASSEMBLED OR KIT	
		'47	1	c	0.601	HIGH FRONT INTAKE/RACING STYLE/STEEL CYLINDER LINER/PISTON HAS 4 RINGS	
		'48	1	ъ.	0.292	LIKE BUZZ 'B'/ KIT	
(LUD K	ACTURING CO. ADING & BRODBECK)	_			-	ORIGINALLY PURCHASED RIGHTS & INVEN- TORY FROM BILL ATWOOD FOR PHANTOM MOTORS HI-SPEED DIV. TORPEDO' WHICH WAS APPARENTLY ALSO SOLD TO MINIA- TURE MOTORS - PURCHASED ALLYN PROD- UCTS IN '55 - BECAME SUBSIDIARY OF AURORA PLASTICS IN '60 AND REVERTED	
• • •	•	'46	1	TORPEDO 'B'	0.299	BACK TO ORIG. NAME.ALSO SEE 1/2A LIST DIE CAST/NO MARKINGS ON CASE/LAPPED PISTON/PLUG OFFSET/BCYLFINS/PLASTIC	
						TANK/CLOSED TIMER/PROD.RUN 100 UNITS	

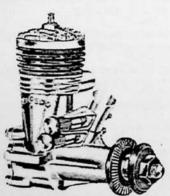
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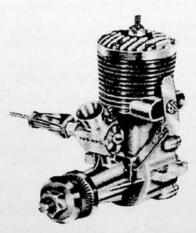
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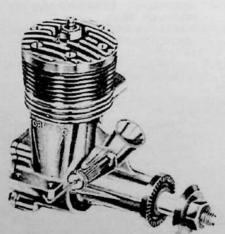




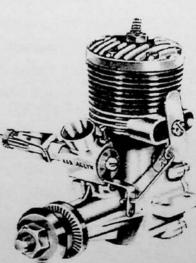
1951/54 TORPEDO 2 SPEED



1958 TORPEDO '35' R/C



1959 TORPEDO '45'



1959 TORPEDO '45' R/C

K & B MFG C	CONTINUED	'46	I	TORPEDO 'B'	0.299	AS FIRST MODEL/MAGNESIUM TANK/WEB ADDED TO TANK SCREW BOSS IN REAR COVER/OTHER MINOR CHANGES/PRODUC- TION SERIAL #'s TO APPROX. 2500	150
• • •		. '47	I	TORPEDO 24	0.249	AS PREVIOUS .29/'249' ON LUG/LATE '47 IGNITION ADDITION/SHORT RUN UNTIL GLO-TORP CAME OUT IN EARLY '48	175
	34.0	' '47	1	TORPEDO 'B'	0.299	AS PREV./7 CYL.FINS/SOME HAD K & B STAMP ON LUGS/SER.#'s TO APPROX.7500	
• • •		' '47	I	TORPEDO 'B-32'	0.320	LIMITED SHORT RUN OF MOD.29's AS PRE- PRODUCTION GLO TORP 32 FREE FLIGHT ENGINES/ '32' STAMPED ON CASE	
• • •	•	' '48	G	GLO-TORP 29	0.299	AS TORP 'B'/NO TIMER CAM ON SHAFT/ NATURAL CYLINDER/NO TANKS SUPPLIED BUT SOME BACK COVERS HAD A THREADED BOSS	125
		' '48	G	GLO-TORP 24	0.249	AS GLO-TORP 29/ '249' ON LUG	
		' '48	G	GLO-TORP 32	0.320	AS GLO-TORP 29/ '32' ON CASE	75
	•	' '51	G	TORPEDO .19	0.199	FIRST 4 BOLT CASE/MTG.LUGS INLINE WITH THRUST LINE/PLUG VERT./PLAIN FINNED HD.	
	•	• '51	G	TORPEDO .29	0.297	AS PREV. 19/4-BOLT CASE/PLUG STRAIGHT UP/PLAIN FINNED HEAD	
• • •	*	' '51	G	TORPEDO 32	0.320	AS PREV. 19/4-BOLT CASE/PLUG STRAIGHT UP/PLAIN FINNED HEAD	
	•	' '51	G	TORP 19 2-SPEED	0.199	AS PREV.19/4-BOLT CASE/PLUG STRAIGHT UP/2 NEEDLE VALVES/SPECIAL VENTURI INSERT FOR 2ND N.V./PLAIN FINNED HEAD	
	y <b>#</b>	' '52	G	TORPEDO 15	0.146	AS 4-BOLT 19/ GREEN HEAD/ '15' ON CASE	75
• • • • • • • • • • • • • • • • • • • •	( <b>.</b>	' '53	G	TORPEDO 23	0.227	AS PREV. 19/ GREEN HEAD/ '23' ON CASE	55
	•	' '54	G	TORPEDO 19	0.199	AS PREV. 19/ GREEN HEAD/ '19' ON CASE	45 - 65
		' '54	G	TORP 19 2-SPEED	0.199	AS PREV. 19/2 N.V.'s/GR.HD./'19' ON CASE	44
		' '54	G	TORPEDO 35	0.353	LGR. VERSION OF 19/GR.HD./'35' ON CASE	80
		' '54	G	TORP 15 2-SPEED	0.146	AS PREV./2 N.V.'s/GR.HD./'15' ON CASE	
•••	•	' '56	G	TORPEDO 09	0.098	MINI-TORPEDO/GREEN HEAD/NO WEB IN EXHAUST PORT/ 09 ON CASE	35 - 80
		' '57	G	TORPEDO 29S	0.299	AS PREV.35/DESIGNATED '29S'/STUINT ENG.	40 - 55
	•	' '58	G	TORPEDO 09	0.098	AS PREV./WEB IN EXHAUST PORT/VENTURI RESTRICTOR ADDED	
		' '58	G	TORPEDO 29R	0.299	AS PREV.29/NATURAL HEAD/DESIGNATED '29R'/FACTORY MODS. FOR SPEED USE	
		' '58	G	TORPEDO .35RC	0.353	AS 1954-35/THICK WEB IN EXHAUST FOR BAFFLE CONNECTED TO 'MULTI-SPEED' CARB/SMALLER INTAKE PORT/IMPROVED CRANK BALANCING/NEW TYPE K & B 'IDLE- BAR' GLOW PLUG	38

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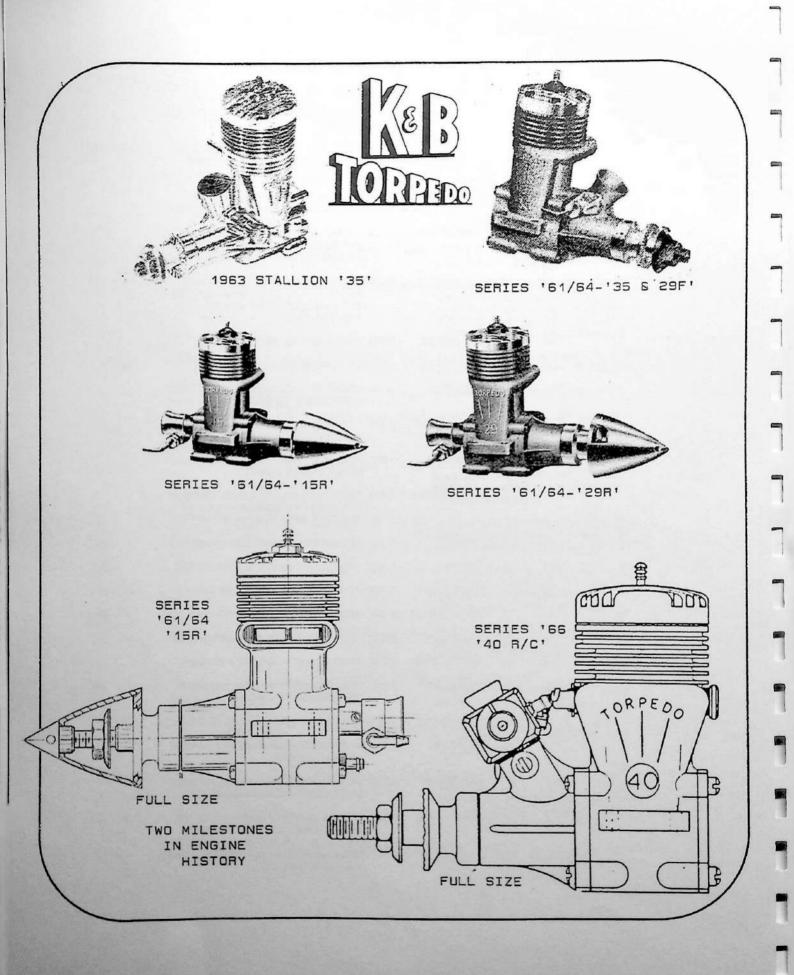
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K & B MFG CONTINUED	'58	G	TORPEDO 201	0.201	STROKED TORP .19 FOR FREE FLIGHT COMP./ NATURAL HEAD/ '201' ON CASE	
	' '59	G	TORPEDO 35C	0.353	AS PREV.'54-'35'/'C' ON CASE MODIFIED FOR COMBAT	
N . N . N	' '59	G	TORPEDO 45	0.454	SAME CASE AS 35 WITH SLIGHT INCREASE AROUND CYLINDER/ALL FUTURE 35 & 45 CASES SAME/ NO WEB IN EXHAUST	
	' '59	G	TORPEDO 45R/C	0.454	AS PREV.45/'MULTI-SPEED'CARB WITH EXH. BAFFLE & WEB EXHAUST/REAR COUNTER- BALANCING FLYWHEEL	90
	' '60	G	TORPEDO 19RC	0.199	AS PREV.19/MULTI-SPEED CARB./DE-TUNED SHAFT-ROUND PORT/GREED HD./NO BAFFLE	
	' '61	G	15R - SERIES '61	0.149	NEW CASE DESIGN FOLLOWING McCOY- HORNET-DOOLING STYLE/REAR ROTARY VALVE/MATTE FINISH/SHINY CAST FINNED HD.W/DOMED COMB. CHAMBER/LAPPED PISTON/B.B.SHAFT/ALUM.SPINNER ASSEM.	75
•••	' '61	G	29R - SERIES '61	0.298	AS 15R/LARGER/'29' ON CASE/SHINY CAST FINNED HEAD-DOMED COMB. CHAMBER	
• • •	' '61	G	35 - SERIES '61	0.353	AS 29R/ RONT ROTARY/ 35 ON CASE	60
	' '62	G	TORPEDO 35R/C	0.353	AS PREV. 35/ R.C./WEB IN EXHAUST PORT/ EXHAUST WIPE BAFFLE RESTRICTOR CON- NECTED TO R.C. CARBURATOR	
	' '63	G	STALLION 35	0.353	DISTINCTLY DIFFERENT 4-BOLT CASE/1/2* DIAMETER SHAFT/LAPPED PISTON/FRONT ROTARY/REPLACEABLE PROP SHAFT STUD 'STALLION 35' ON CASE	50
•••	' '64	G	15R SERIES '64	0.149	SIMILAR TO SERIES '61/FINLESS HEAD WITH SQUISH BAN COMBUSTION CHAMBER/ MORE BYPASS BULGE/INTERN.MODSF.A.I.	
•••	' '64	G	29R SERIES '64	0.298	AS PREV. 15R/LARGER/FINLESS MACHINED BAR STOCK HEAD WITH SQUISH BAND COMBUSTION CHAMBER/MORE BYPASS BULGE/INTERNAL MODS. FOR 'SPEED'	110
•••	' '65	G	29F SERIES '64	0.298	SIMILAR TO SERIES '61 - 35/FRONT ROTARY/ STRAIGHT BYPASS/NO WEB IN EXHAUST/ THINNER CAST FINNED HEAD	75
	' '65	G	35 - SERIES '64	0.353	ALMOST SAME AS SERIES '61 - 35/CAST FINNED HEAD WITH WEDGE COMBUSTION CHAMBER, NO VENTURI RESTRICTOR	
•••	' '65	G	35R/C-SERIES '64	0.353	AS SERIES '64 - 35/VENTURI MODIFIED FOR K & B 'MULTI-SPEED' CARBURETOR/NO EXHAUST BAFFLE	
	' '65	G	40 - SERIES '66	0.399	SIMILAR TO SERIES '64 - 35/FIRST K & B WITH SINGLE 'DYKES' RING PISTON/FRONT ROTARY/ .40 ON BYPASS/PRESSURE FITTING IN CENTER OF BACK COVER PLATE/SPLIT HOLLOW PIN THRU SHAFT & PROP DRIVE	60
• • • •	' '65	G	40R/C-SERIES '66	0.399	AS PREV. 40/SMALL K & B CARB. WITH BASE SHIMMED TO FIT LARGE VENTURI	

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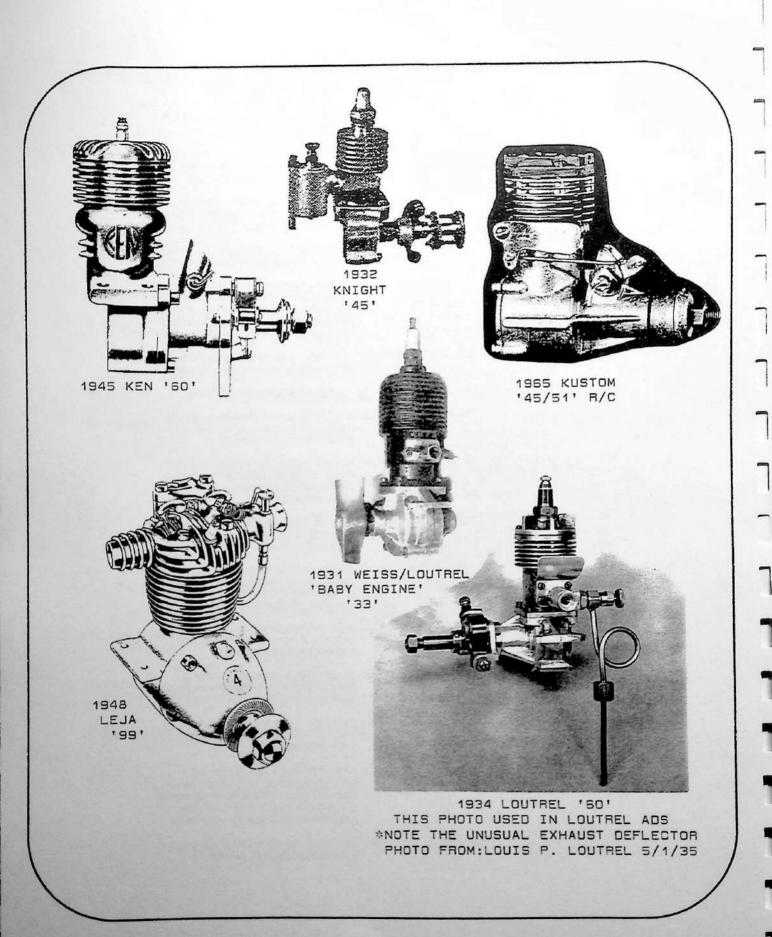
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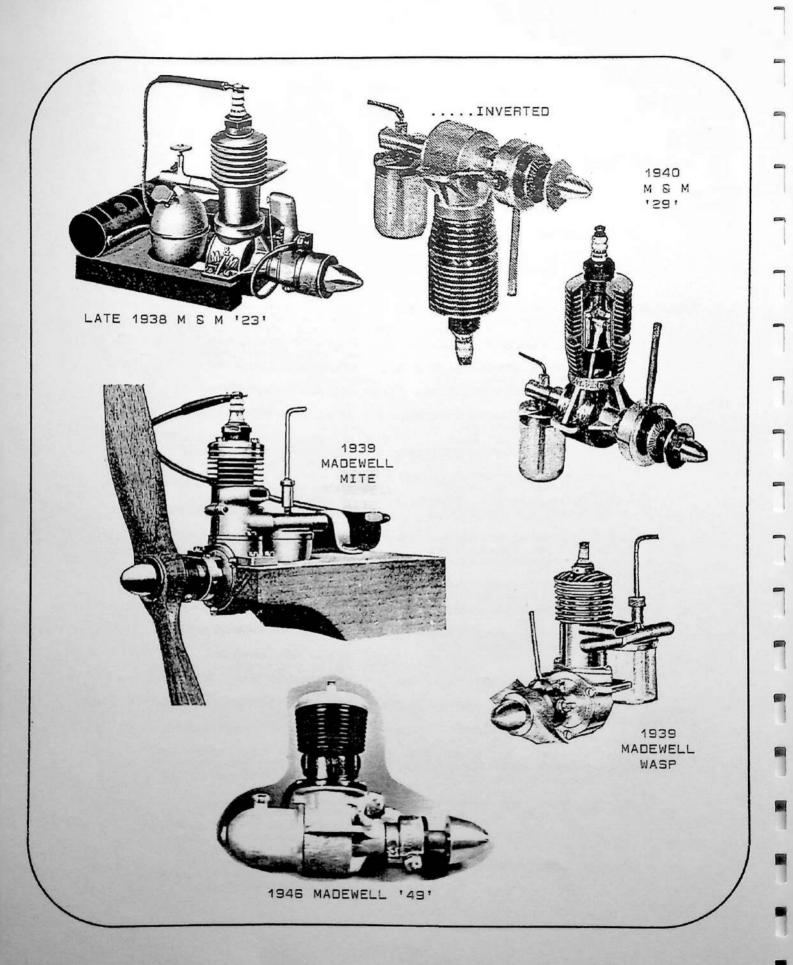
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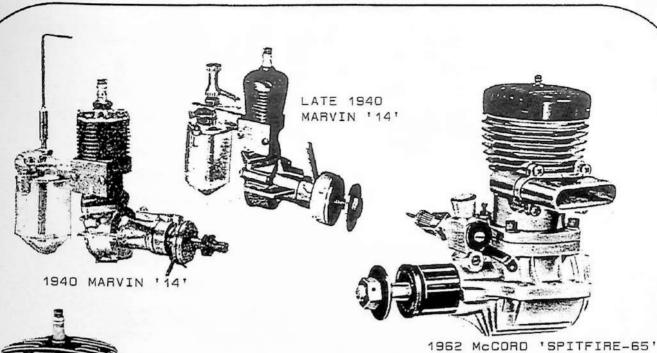
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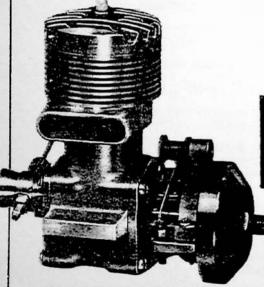


KENCRAFT COMPANY	'45	I	KEN	0.604	RACING/FRONT INTAKE/BALL BEARINGS 'IMPELLOR' FUEL INDUCTION/ RINGED OR LAPPED PISTON	385
	'47	D	KEN DIESEL	0.604	SAME/FIXED COMPR. DIESEL VERSION WITH MACHINED FLAT 6-BOLT HEAD	
KNIGHT "	 '32	ī	SINGLE	0.451	MFD.BY POWER MODEL ENGINE CO. SAND CAST CASE/CAST IRON CYL./SIDE PORT/SPLIT CASE/ACTUAL CARBURETOR USED	
н	'32	I	TWIN	0.902	INLINE TWIN OF PREV./COUPLED INTAKES/ SAME CARB. BOTH CYLINDER TYPES	
	'34	1	SINGLE	0.687	AS PREV. SINGLE/LARGER BORE/BOLT-ON SPOKE HEAD/DIFFERENT CARBURETOR	
KUSTOM ENGINES	_				PURCHASED DIES-TOOLING-INVENTORY	
	'65	G	KUSTOM 51	0.511	FROM 'DEW' & REINTRODUCED AS'KUSTOM' DEW MOD. BY APPLICATION OF BLACK EINISH TO CYL. HEAD - GROUND 'DEW' OFF AND APPLIED COLORFUL STICKER/SOME HAD RED-ORANGE BACKPLATES	
	'65	G	KUSTOM 45	0.451	(MOD. DEW) CHANGES PER 51	
	'65	G	PRE-PRODUCTION	VAR.	R/C .61 (SEVERAL BUILT) & RACE 40 TWIN	
LEE (CLARENCE)	'52	G	IN-LINE SINGLE I	0.299	CYL.PARALLEL TO SHAFT/SIDE EXHAUST VECO .32 CASE - K&B PISTONS/DRIVE DIRECTION CHANGED BY GEARS	
•	'54	G	IN-LINE SINGLE II	0.299	AS PREV. WITH EXHAUST ON BOTTOM/ ONLY 4 OF BOTH INLINES BUILT (NAMED 'SIDEWINDERS' BY J.WAGNER)	
•	'59	G	LEE '45'	0.451	SIMILAR TO VECO/CUSTOM MADE FOR R/C COMPETITION/WHITE SAND CAST CASE/ BALL BEARINGS/CARB FINS-BACK COVER AND FRONT HOUSING POLISHED/PURPLE ANODIZED HEAD	
	'65	G	SHORT RUN	0.499	BORED OUT LEE-VECO 45/SHORT RUN ONLY	
	'65	G	SHORT RUN	0.511	STROKED LEE-VECO 45/SHORT RUN ONLY	
LEJA ENGINES INC.	_	_		_	SEE ALSO TEENEY ENGINE CO.	
(CASIMIR LEJA)	'47	1	4 CYCLE 99	0.994	DIE-CAST/4 CYCLE O.H.V./TIMER AT REAR/ 10 PROTOTYPES/NONE PRODUCED('47 NATS)	
LINDBERG (PAUL W. LINDBERG)	'41	I	HORNET A	0.231	UPDRAFT FRONT ROTARY/CLOSED TIMER/ REAR MTD. PLASTIC TANK/ORIGINALLY MAGAZINE PLAN/ FEW PROD./ALSO KIT	35 (KIT)
LOUTREL MOTORS (L.P. LOUTREL)	'31	1	WEISS/LOUTREL	0.331	SIMILAR TO THE 1913 WEISS (BABY)ENGINE/ SMALLER/SAND CAST SPLIT CASE/CYL. BOLTED TO CASE/REAR TIMER/ (PHOTO R. McCLELLAND)	
	'34	1	LOUTREL	0.609	ORIGINAL WAS A PLAN IN APRIL MODEL- CRAFTERS MAG1933/KIT & ASSEMBLED/ SAND CAST/LATER MFD. WITH MINOR MODIFICATIONS BY GHQ/INCL. REDUCED STROKE/EXCELLENT INTERNAL CON- STRUCTION ON ORIGINAL/HAD EXHAUST DEFLECTOR/EXCELLENT STARTING	



LUXOR			'37	Ī	LUXOR 48	0.489	SOLD BY BRIDGEPORT MODEL SHOP APPEARANCE ALMOST SAME AS BROWN JR. BUT SLIGHTLY SMALLER/CAST ALUM. CASE & HD. WITH 2 BOLTS ATTACHING/ LAPPED PISTON/OPEN TIMER/ 2 OZ. TIN PLATE TANK/ APPROX. 40 MANUFACTURED	
			'37	1	LUXOR 30	0.298	AS PREVIOUS 48/SMALLER/APPROX.15 MFD.	650 - 725
M & M MOI	DEL WH	EEL CO.	'37	1	M & M 'BEE'	0.249	SAND CAST CASE/SIDEPORT/'BEE' ON BY PASS/4 SEPARATE MTG.LUGS/SCREW IN HD.	
		( <b>#</b> )	'37	I	M & M 'BEE'	0.249	AS PREV./REGULAR MTG.LUGS/BOLT-ON HD.	
٠	•	•	'38	1	M & M 23	0.233	SAND CAST CASE/SIDEPORT/UNUSUAL OPEN TIMER/ELIPTICAL SPUN COPPER TANK/ NO INITIALS	
•		н	'38	1	M & M 23	0.233	AS PREV./HAS INITIALS ON CASE/PLATED TANK/WITH OR WITHOUT EXHAUST STACK	
•		NOTE:	'38	I	'29'		SEE NEPTUNE PRE-PRODUCTION 29	
			'39	I	M & M 29 (PISTON VALVE)	0.292	PERMANENT-MOLD CASE WITH INITIALS/ 'FLUTTER VALVE'IN INTAKE-PERKY STYLE/ SUBPISTON PORTING/FULL DEPTH CYL-FINS	
•		•	'40	I	M & M 29 HIGH SPEED	0.292	AS PREV./ALUM. COVER SLEEVE BELOW EXHAUST/360° PORTING/NO SUB PISTON	
			'40	1	M & M TWIN	0.556	INLINE TWIN (EXPER.) NO PRODUCTION	
	н		'40	1	M&M6CYL.	1.662	6 CYL. RADIAL (EXPER.) NO PRODUCTION	
•			'46	1	M & M 29	0.292	POST WORLD WAR II/SAME AS 1940 - 29 HIGH SPEED-NO APPARENT MARKINGS	
MADEWELL (MADEWEL			'38	I	МІТЕ	0.147	SANDCAST CASE/CAST BYPASS & EXHAUST CLAMPED TO CYL./NO HD. FINS/ 3/8' PLUG/ OPEN TIMER/ METAL TANK	
•			'39	I	MITE	0.147	PERMANENT MOLD CAST AS PREV./INTAKE & BYPASS BRAZED TO CYLINDER/METAL TANK 3/8" PLUG("COBEY-WAITE"-POSTWAR)	
			'39	1	WASP	0.147	SIMILAR TO PREV./LIGHTER CASE/NO HEAD FINS/OVAL EXHAUST BRAZED TO CYLINDER/ 3/8" PLUG/ METAL TANK	
			'39	I	WASP	0.147	AS PREVIOUS/NAME ON BYPASS	
			'39	I	WASP	0.147	AS PREV./HD.FINS/1/4" PLUG/PLASTIC TANK	
			'40	1	WASP	0.147	AS PREVIOUS/ CAST FRONT PLATE/ ENCLOSED TIMER	450
			'46	1	MADEWELL '49'	0.488	LIKE A LARGER VIVELL 35/SAME ENCLOSED TIMER/FLEX-CABLE NEEDLE VALVE	
			'46	1	MADEWELL '49'	0.488	AS PREV./LUGS EXTEND TO REAR OF CASE/ LARGER EXHAUST STACK	117 - 145
			'48	G	MADEWELL 49G	0.488	AS PREV./CASE NOT MACHINED FOR TIMER	
			'48	G	MADEWELL TWIN	0.976	OFFSET FLAT TWIN/SIDE PORT/PROTO.ONLY	



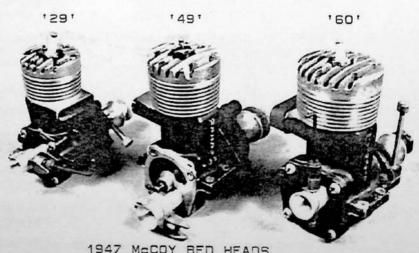


1945 McCOY 'MCCR 60'

# McCOY

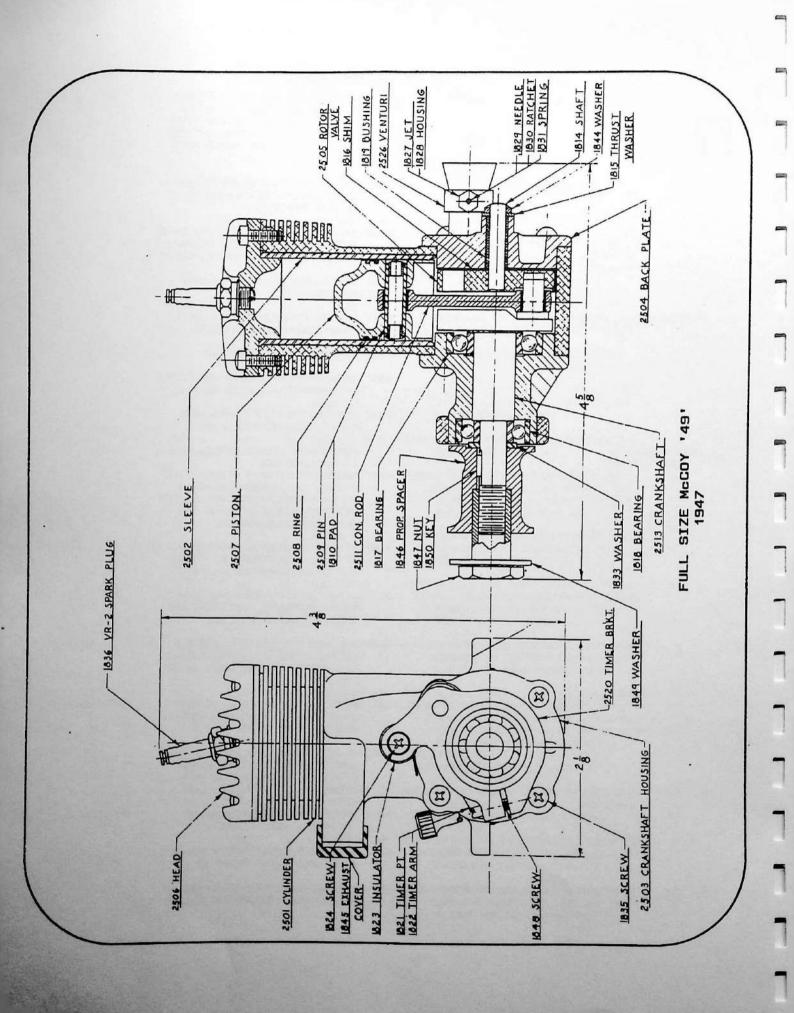
World's Fastest Engine. Two new official A.M.A. records were set by the McCoy engine in the August '46 All-Western Open championships, Los Angeles. The McCoy has set an international top mark of 123.88 m.p.h.!





1947 McCOY RED HEADS FROM A COLLECTION

• NOTE:			ALL McCOYS		NO NEW McCoys with Black cases - But sold Black production Thru '48	
	'47	1	McC.'RED HEAD' 29	0.299	AN EVEN SMALLER VERSION OF PREVIOUS 60/'29' BELOW NAME ON BYPASS	225
	'47	1	McC.'RED HEAD' JR.' (AIRCRAFT)	0.499	SMALLER VERSION OF PREVIOUS .60/ '49' BELOW NAME ON BYPASS	175 - 235
	'47	1	McC. RED HEAD' (RACE CAR)	0.607	AS PREV./CASE-TIMER-FRONTS.BACK PLATES ANODIZED BLACK/EARLY SHAFTS AND FLYWHEELS NO KEYWAY-LATER ONES HAD KEYWAYS	
	'47	1	McC.'RED HEAD' (AIRCRAFT)	0.607	AS PREV./KEYWAY IN SHAFT - 7/8" PROP SPOOL WITH 'SLEEVE' PROP-NUT AND WASHER/HAS TIMER ARM	150 - 335
	'46	1	McC.'SUPER 60' (RACE CAR)	0.607	SIMILAR TO PREV./NEW SAND CASTINGS W/RAISED BYPASS/NO SHAFT OR FLYWHEEL KEYWAY/NO TIMER ARM/LARGER 'McCOY' LETTERS	350
	'46	1	McC.'SUPER 60' (AIRCRAFT)	0.607	AS PREV./KEYWAY IN SHAFT-PROVIDING FOR 7/8' PROP SPOOL WITH 'SLEEVE' PROP NUT & WASHER/HAS TIMER ARM	
	'45	1	McCOY 'MCCA' (AIRCRAFT)	0.607	AS PREV./PLUS SHAFT KEYWAY FOR AND INCLUDING 1' PROP SPOOL WITH 'SLEEVE' PROP NUT & WASHER/HAS TIMER ARM	
(DECINECOT)	'45	1	McCOY 'MCCR' (RACE CAR)	0.607	TESTORS FROM 1956 SANDCAST/MATTE FINISH/FLUSH BYPASS/ NO SHAFT OR FLYWHEEL KEYWAY/ NO TIMER ARM/RINGED PISTON/SMALL'McCOY' ON BYPASS/'DUROMATIC'ON LEFT LUG/ SERIAL NUMBER ON RIGHT LUG	
McCOY PRODUCTS (DICK McCOY)	_		-		MFD. BY DURO-MATIC PRODUCTS CO. &	
	'62	G	SPITFIRE 65	0.647	AS PREVIOUS WITH K & B MULTI-SPEED CARB./RINGED OR LAPPED PISTON	
•	'58	I	SPITFIRE 65	0.647	AS PREVIOUS LAPPED OR RINGED PISTONS/ BLUE ANODIZED MACHINED HEAD	
	'58	G	SPITFIRE 65	0.647	HD.DIE CAST/PLASTIC CAM COVER & TANK  AS PREVIOUS NO TIMER OR TANK	
McCORD PRECISION PRODS.	'58	1	SPITFIRE 65	0.647	SAME AS ANDERSON SPITFIRE 65/RINGS/	
•	'46	1	'JR. A'	0.138	AS PREV./ADV. 1946 WITH ENCLOSED TIMER/ NONE SEEN	
	'46	1	'JR. A'	0.138	AS PREV./PARALLEL FIN HEAD CAST WITH VERTICAL TAPERED CYLINDER FINS/O&R TYPE N.V.ASSY./NAME ON BYPASS COVER	
•	'41	Ţ	MARVIN	0.138	AS PREVIOUS/SPOKE FIN HEAD/EXHAUST STACK/LARGER VENTURI/SAME STRAIGHT VERTICAL CYLINDER FINS	
					FLAT HEAD/OPEN TIMER/TINY NEEDLE VALVE BODY/BOLT ON EXHAUST STACK/ STRAIGHT VERTICAL CYLINDER FINS WITH 2 HOLES IN HEAD FOR WRENCH/FLAT BACK PLATE	
MARVIN MFG. CO.	'40	1	MARVIN	0.138	AS LAST MODEL DALLAIRE 'PEE WEE'/	



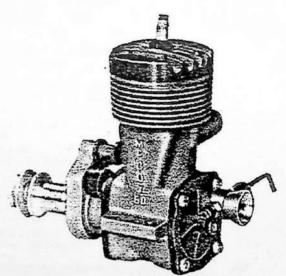
McCOY - CONTINUED	'48	G G	'SPORTSMEN JR.' RED HEAD 36	0.349	SIMILAR TO PREV./'36' ON BYPASS/ CASE ANODIZED CLEAR (SILVER) /FIRST SINGLE BALL RACE FRONT END/FRONT & REAR COVERS PAINTED BLACK/HEAD ANOD.RED	140 - 285
	'48	G	'SPORTSMEN SR.' RED HEAD 55	0.549	AS PREVIOUS/LARGER/ '55' ON BYPASS	
" NO	TE: '48	I	SPORTSMEN MODELS		ONLY EXPERIMENTAL FACTORY MODELS HAD IGNITION FRONT-ENDS-NO PRODUCTION	
	'48	1	McC.'RED HD.'60 SERIES 20	0.607	NEW CASTINGS/60 BELOW NAME/ANOD. CLEAR (SILVERY)/THICK FRONT PLATE AND REAR COVER PAINTED RED-REAR LATER RED ANOD./SLIGHTLY ROUNDED HEAD ANOD. RED/EARLY HAD SERIAL #'s - LATER NONE	200
	'48	1	McC. 'RED HEAD' 19	0.195	CANDY APPLE PAINTED RED HD./SHINY CASE/SERIAL # ON RIGHT LUG/RINGED PISTON/BUMP' LUGS/MAIN BALL BEARING/ CLOSED TIMER/REAR INTAKE CAST IN PLACE	200
	'48	G	McCOY 19	0.195	AS PREV./ALUMINUM COVER REPLACES TIMER MOUNT/ NATURAL HEAD	
	'49	G	McCOY 19 RACE CAR	0.195	AS PREV./CRANK-COVER MACHINED FROM STOCK-2 BALL BEARINGS/BEVEL GEAR ON SHAFT / NATURAL HEAD	400
	'49	G	McC.'RED HD.'19 RACE CAR	0.195	AS PREVIOUS/ ROUNDED HEAD PAINTED CANDY APPLE RED	
	'49	G	SPORTSMAN 29	0.295	SHINY CASE/UP-SLANTED REAR VENTURI CAST IN CASE/SINGLE MAIN BEARING/UN- PAINTED HEAD/'McCOY SPORTSMAN' ON BYPASS/SERIAL # ON RIGHT LUG	
	'49	G	McCOY '9'	0.098	FIRST FRONT ROTARY/SHINY CASE/ROUNDED HEAD/PLAIN BEARING/NO SERIAL #'s/ METAL TANK/LAPPED PISTON	
	'49	G	'DUROGLOW 9'	0.098	SAME AS PREV./GLOW ELEMENT BETWEEN TWO HEAD GASKETS/RED ANODIZED PLUG REPLACED STD. GLOW PLUG/NO SERIAL NUMBERS/ PISTON RINGS	
	'49	ľ	McC.'RED HD.'29 SERIES 20	0.299	SAME CASTINGS AS BLACK 1947/ 29 NOW ANODIZED CLEAR/FRONT & BACK COVERS PAINTED RED/ HEAD ANODIZED RED	
	'49	G	McC. 'RED HD.'29 SERIES 20	0.299	AS PREV. BLACK CASE/2 BALL BEARINGS/ CASE ANOD.CLEAR/NO PROV.FOR TIMER/ FRONT&REAR COVER PAINTED BROWNISH- RED/HD.ANOD.RED/BACK COVER HAS EXTRA SUPPORT FOR VENTURI/ HAS SERIAL #'s	
· NO	TE:		SERIAL #'S		NO FURTHER SERIAL #'s ON McCOY's	
	'49	ı	McC.'RED HD.'49 SERIES 20	0.499	AS PREV.BLACK CASE/TWO BALL BEARINGS CASE ANOD. CLEAR/FRONT & REAR COVER PAINTED RED/ HEAD ANODIZED RED	115
	'49	G	McC.'RED HD.'49 SERIES 20	0.499	AS PREV.IGN. 49/NO PROVISION FOR TIMER FRONT&REAR COVERS PAINTED BROWNISH- RED/ROUNDED HEAD ANODIZED RED	
	'49	G	McC.'RED HD.'60 SERIES 20	0.607	AS 1948 IGN.SERIES 20/NO PROVISION FOR TIMER/ROUNDED HEAD ANOD.RED/ NEW DARKER RED FRONT COVER/FLAT BYPASS	135 - 300



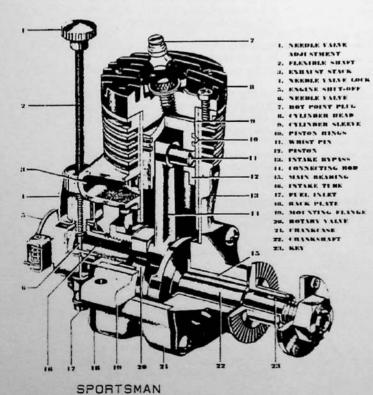
Designed by Dick McCoy

At last! An end to ignition problems - new Hoe-Point plug offers fast, sure starting and smooth operation without wiring, coil, condenser, battery or timer.

1948 JR/SR '36/55'



1948 McCOY RED HEAD '60' SERIES 20

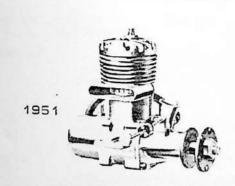


CUT-AWAY

1948 McCOY RED HEAD '19'

OTHER LATER MODELS
ARE SIMILAR SEE LISTINGS

McCOV CONTINUE				0.000	AC PRELL DOMATTE PRICLIPEGE DOLLARS	
McCOY - CONTINUED	'50	G	McCOY 9	0.098	AS PREV09/MATTE FINISH/LESS ROUNDED HD./THIN FRONT COVER FLANGE/BUMP'LUGS	
	'50	G	McCOY 19 STUNT	0.195	SIMILAR TO McCOY 9'S/FRONT ROTARY/ MATTE CASE/'BUMP'LUGS/PISTON RINGS/ REAR SCREW MTD. TANK/ONE MAIN BALL BEARING/ROUNDED NATURAL HEAD	85
	'50	G	McC.'RED HD.'19 RED HEAD	0.195	SIMILAR TO PREV. 1948 19's/MATTE CASE/ ROUNDED HD. PAINTED CANDY APPLE RED FRONT COVER PAINTED BROWNISH-RED/ PISTON RINGS	
*	'50	G	McC.'RED HD.'19 RACE CAR	0.195	SIMILAR TO PREV. 1948 19's/REAR VENTURI MATTE CASE/ROUNDED HD. PAINTED CANDY APPLE RED/PISTON RINGS/2 BALL BEARINGS/ BEVEL GEAR	
	'50	I	McC.'RED HD.'29	0.299	PRODUCED USING SPORTSMAN 29 MACH- INED TO TAKE SERIES 20 IGNIT.29 FRONT & REAR COVERS/'SPORTSMAN' TAKEN OFF CASE/MATTE CASE/PAINTED CANDY APPLE RED HD./COVERS & TIMER PAINTED RED/ PISTON RINGS	
	'50	G	McC.'RED HD.'29	0.299	SAME AS PREV. IGN./USES SERIES 20 FRONT AND REAR COVERS	175
	'50	G	McCOY 29 STUNT	0.299	SPORTSMAN 29 DIE MOD. TO INCLUDE WEB IN BACK OF CASE FOR TANK MTG./INVERTED TRIANGLE ON BYPASS TO REPLACE SPORTS- MAN NAME/ONE MAIN BALL BEARING/ MATTE CASE & NATURAL HEAD/BUMP' LUGS/ METAL TANK	60
	'50	G	McC.'RED HD.'29	0.299	STUNT '29' MOD. CASE CASTING WITH END MACHINED FROM REAR ROTARY/FRONT & REAR COVERS PAINTED BROWNISH-RED/ CANDY APPLE RED HEAD	
	'51	G	McCOY 19 STUNT	0.195	AS PREV. 1950 STUNT/NARROWER BYPASS/ HD. SCREW LUGS IN CYLINDER FINS/PLAIN BEARING/TANK/MATTE FINISH/NAT. HEAD	
•	'51	G	McC.'RED HD.'19	0.195	SIMILAR TO PREV. 1950 FRONT INTAKE 19/ EXCEPT REAR VENTURI/MATTE FINISH CASE CASTINGS (A FEW 'DULL')/BROWNISH-RED PAINTED FRONT COVER/CANDY APPLE RED ROUNDED HEAD	
	'51	G	McC.'REDHD.'19	0.195	AS PREV. 19 RED HEAD/ 2-BALL BEARINGS/ CANDY APPLE RED HD./ A FEW RED ANOD. MACHINED FRONT COVERS	
	'51	G	McCOY 9	0.098	AS PREVIOUS .09/LAPPED PISTON/THICK FRONT HOUSING/HEAVY MTOR MOUNTS/ MATTE FINISH	30
	'52	G	McCOY 29 STUINT	0.299	AS PREV. 1950 STUNT 29/NO 'BUMP' LUGS/ KNOCKOUT DIE MARK ON LEFT LUG/PLAIN BEARINGS/ A FEW WITH BALL BEARINGS	55 - 60
	'52	G	McCOY 29 STUINT	0.299	AS PREV. STUNT 29/LARGER CRANKSHAFT IN PLAIN BEARING LONGER FRONT COVER WITH WEBS/MATTE FINISH/NATURAL HEAD/ METAL TANK	



McCOY "9"-"/9"-"29".

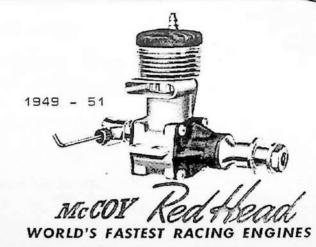
#### FRONT ROTOR SPORT ENGINES

The World's MOST EASY STARTING Model Engines

"9" Complete with integral gas tank \$ 795

"/9" Complete with integral gas tank \$ 995

-29" Complete with integral gas tank \$1195

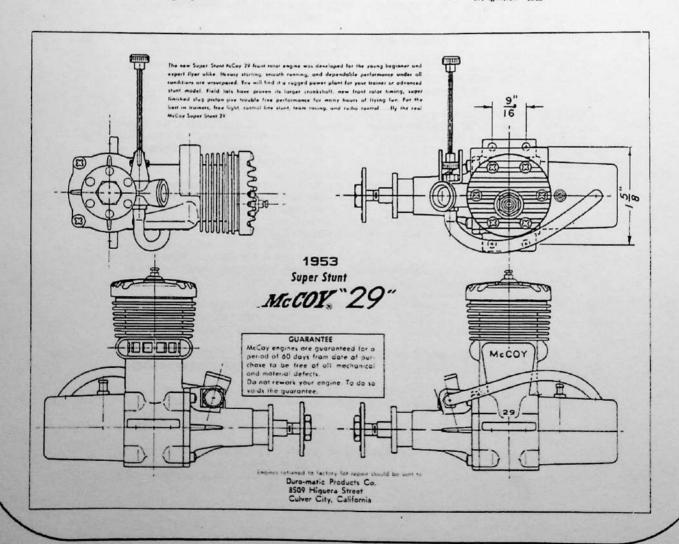


-/9" Glo-ignition \$ 1095

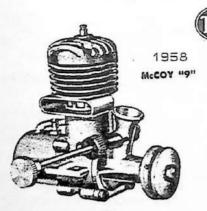
"29" Glo-ignition \$ 1495

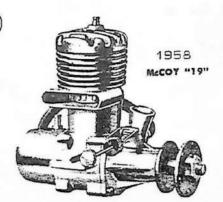
"49" Glo-ignition \$ 1995

60 Glo-ignition \$2250



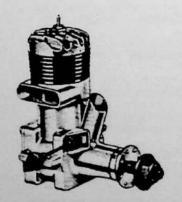
McCOY - CONTINUED	'52	G	McC.'RED HD.'29	CASE (SOME DUI 'BUMPS')/FRONT	F 1952 STUNT 29/SHINY LL)/ THICK LUGS (NO '8. REAR COVERS PAINTED HEAD PAINTED RED	125
	'52	G	McCOY 9	0.098 AS PREV./HI-HE/ FINISH	AD FINS/MATTE OR SHINY	35
	'53	G	McCOY 29 STUNT	LUGS/ 3-KNOCKO	TUNT/NEW CASE/ THICK OUT DIE MARKS ON LEFT ON WIDER BYPASS/METAL	
	'53	G	McC.'RED HD.'29	SIMILAR McCOY AND ROUNDED B	ND CAST CASE FOLLOWG. 'RACE' LAYOUT/INCREASED BYPASS/ROUNDED HEAD- OVERS PAINTED BRIGHT RED	100
	'53	G	McCOY 09	0.098 AS PREV./FLEX N FINS SHINY FINIS	EEDLE VALVE/LOW-HEAD H	
	'54	G	McCOY 19 SUPER STUNT		UNT 19/THICK LUGS/ONE NARK/HEAD SCREW LUGS /PLAIN BEARING	35 - 35
	'54	G	McC.'RED HD.'19		D HEAD 19/DIE CAST ONT COVER PAINTED ROUNDED RED HEAD	
	'54	G	McC.'RED HD.'19 RACE CAR		IARK/FRONT COVER I DIE CAST./ ROUNDED	
	'54	G	McCOY 29 SUPER STUNT	HEAD/THIN LUGS 29' LIGHTLY ON V	P/MATTE FINISH/NATURAL - NO 'BUMPS'/'McCOY VIDE BYPASS/LARGE DIA. LAIN BEARING/METAL TANK	
	'54	G	McC. RED HD. 29		SSION OF 1954 SUPER SE FINISH/ORANGE-RED ARINGS/PISTON RINGS	125
	'54	D	McC. '9' DIESEL (RED HEAD)		YERSION OF 1953 .049 HINY CASE/BEAM MTS./ : TANK/RED ANOD. HEAD	50
	'54	G	McCOY 9	FINISH THIN HEAD	MATTE FINISH/NATURAL D/HEAVY LUGS/THICK NGE/METAL TANK	
	'55	G	McCOY '9'	.098 AS PREVIOUS 195 SQUARISH HEAD		
	'55	G	McCOY 19 SUPER STUNT	.195 AS 1954 SUPER ST LONGER INTAKE/	UNT 19/ SHINY FINISH/ SQUARISH NAT.FIN. HEAD	40 - 40
	'55	G	McC.'RED HD.'19	.195 AS 1954 RED HEA REAR VENTURI/ OI	D 19/ SHINY FINISH RANGE-RED HEAD	
	'55	G	McC.'RED HEAD' RACE CAR	.195 AS PREV. RACE CA NARROW BYPASS, CYLINDER FINS/TH	/ HD. SCREW LUGS IN	
	'55	G	McC. RED HD. 29		29/SHINY CASE/'McCOY' WITH 29 ON RAISED LOW NAME	45



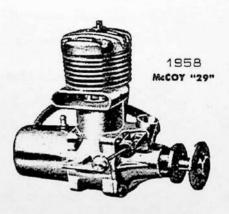


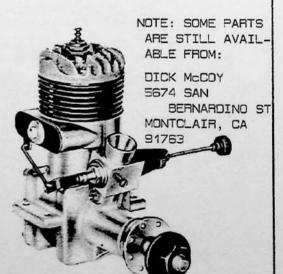






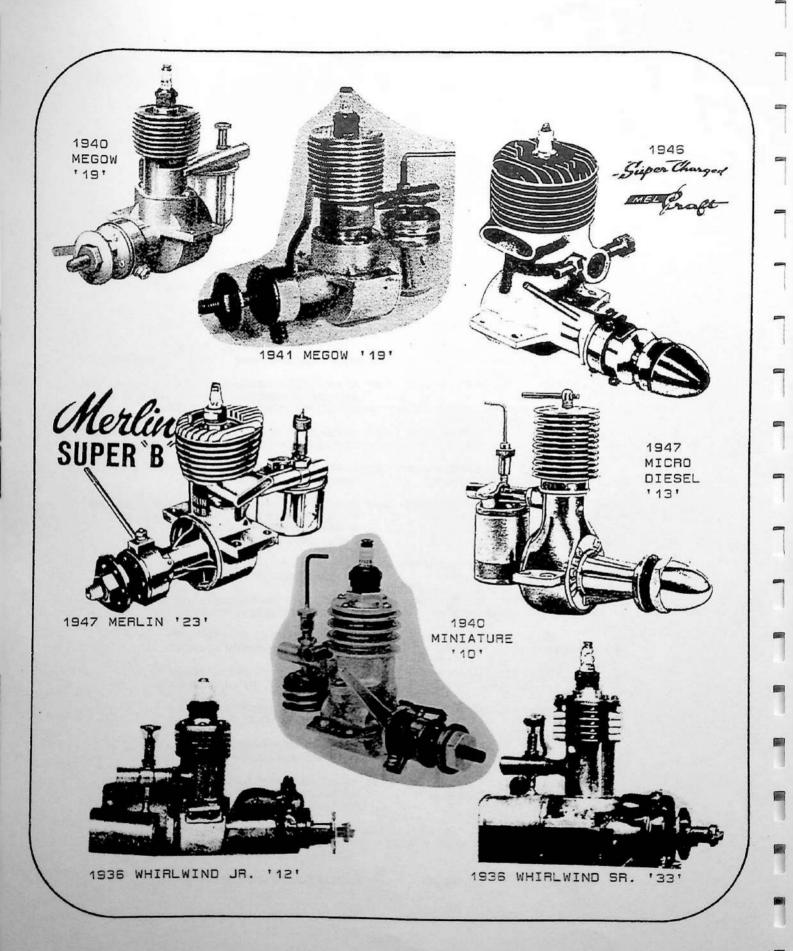
1957-61 TESTORS ALL MODELS SIMILAR



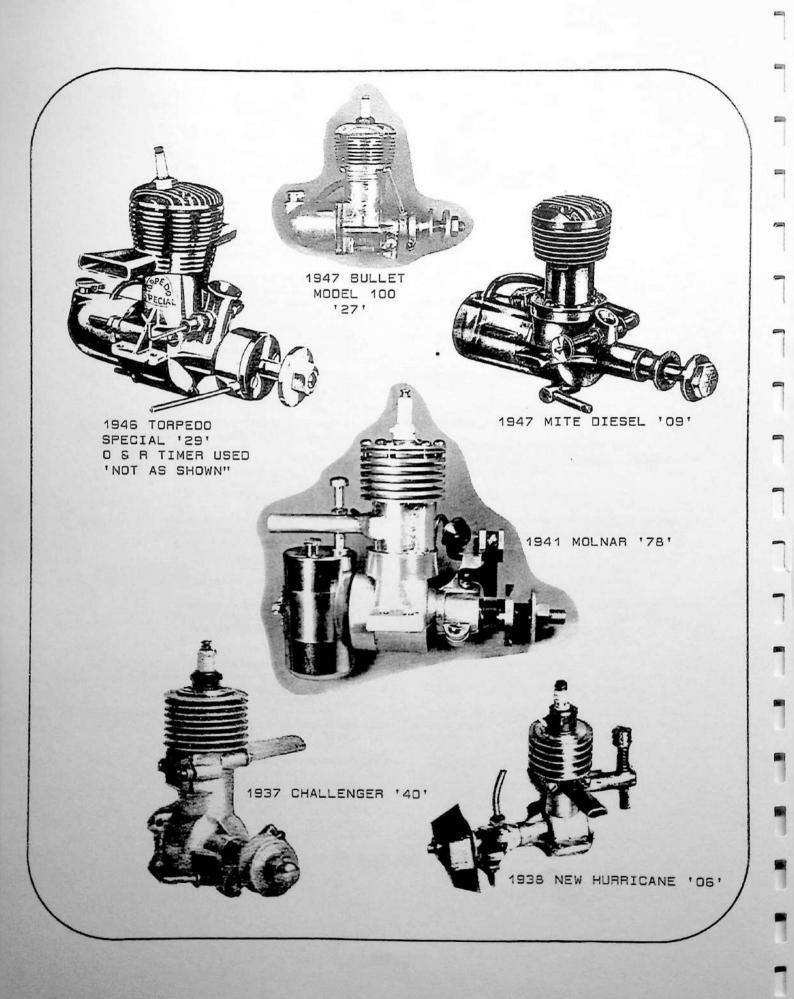


1964 - TESTORS McCOY '35' R/C OTHERS SIMILAR

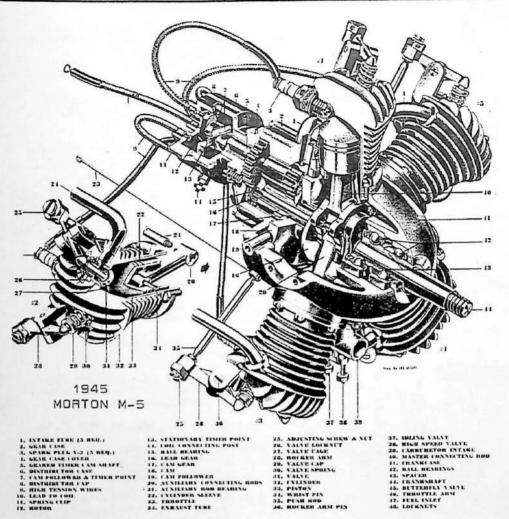
McCOY - CONTINUED		'55	G	McCOY 29 SUPER STUNT	0.299	AS 1954 SUPER STUNT .29/SHINY CASE 'McCOY' ON WIDE BYPASS WITH 29 ON RAISED CIRCULAR PAD BELOW NAME/ METAL TANK/PISTON RINGS OR LAPPED(MOST)	45
		'55	G	McCOY 36 SUPER STUNT	0.354	AS PREV. SUPER STUNT .29/'McCOY' ON WIDE BYPASS W/'36' ON CIRCULAR PAD	36
	NOTE:	'56		ALL ENGINES		LAST McCOY-BUILT ENGINES WERE BEING SOLD IN 'TESTORS' PACKAGES	
		'57	G	McC.'RED HD.'35	0.349	COMPLETELY NEW DESIGN/'35' IN CIRCLE UNDER 'McCOY' ON BYPASS/FRONT ROTARY INTAKE IS PART OF CASE WITH REMOVABLE BACKPLATE/NO FLATS ON VENTURI/RE- CESSED WEB IN EXHAUST/PAINTED RED HD.	20
		'58	G	McC.'RED HD.'35	0.349	AS 1957 RED HEAD 35/FLATS ON VENTURI/ RED PAINTED HEAD	
		'58	G	McC.'RED HD.'29	0.299	AS PREV.1958 RED HEAD 35/ '29' ON CASE	
		'58	G	McC.'RED HD.'19	0.199	AS PREV./ SMALLER VERSION/NO 'WEB' IN EXHAUST/ '19' ON CASE	
		'58	G	McC. RED HD. 60	0.607	AS 1949 SERIES 20/NEW CASE-BULGE BY- PASS-SIDES OF NAME/RED ANOD.HEAD & FRONT COVER/BACK COVER PAINTED RED	325
•		'59	G	McC'RED HD.'19	0.199	AS 1958 RED HEAD 19/DIE MARKS IN BACK COVER/ SMALL RAISED 'WEB' IN EXHAUST	42
		'61	G	McCOY 29 STUNT	0.299	AS 1958 RED HEAD 29/DIE MARKS IN BACK COVER/RESTRICTOR IN VENTURI	
		'61	G	McC.'RED HD.'35 STUNT		AS PREV. McCOY 35/DIE MARKS IN BACK COVER/GLOW-PLUG OFFSET TOWARDS FRONT & EXHAUST SIDE & SCREWED INTO LARGE RAISED BOSS/ RED HEAD	28 - 45
		'64	G	McC.'RED HD.'40 STUNT	0.398	AS PREV. McCOY 35 STUNT/'40' ON CASE/ FRONT MTG.HOLES OPEN SLOTS/RED HEAD	
		'64	G	McC. 'RED HEAD' 19 R/C	0.199	AS PREV.McCOY 19/COUPLED EXHAUST & THROTTLE/RED HEAD/PLUG MTG.OFFSET	
		'64	G	McC.'RED HEAD' 35 R/C		AS PREV.McCOY 35/COUPLED EXHAUST & THROTTLE/RED HEAD/PLUG MTG. OFFSET	
		'65	G	McC.'BLUE HD.' 19 R/C	0.199	AS PREV. 19 R/C/COUPLED EXHAUST AND THROTTLE/BLUE HD./PLUG MTG, CENTERED	
		'65	G	McC.'RED HEAD' 35 STUNT	0.349	AS PREV.McCOY 35 STUNT/HEAVY FLUSH WEB IN EXH./RED HD./PLUG MTG. OFFSET	
		'65	G	McC. BLUE HEAD 35 R/C		AS PREV.McCOY 35 R/C/COUPLED EXHAUST & THROTTLE/BLUE HD./PLUG MTG.CENTERED	
		'65	G	McC.'RED HEAD' 40 STUNT		AS PREV.McCOY 40 STUNT/HEAVY FLUSH WEB IN EXH./FRONT MTG.HOLES ARE OPEN SLOTS/RED HEAD/PLUG MOUNTING OFFSET	
		'65	G	McC.'BLUE HD.' 40 R/C	0.398	AS PREV.McCOY 40 STUNT/COUPLED EXHAUST & THROTTLE/FRONT MTG. HOLES SLOTS/BLUE HEAD/PLUG MTG. OFFSET	
	NOTE	'66 G		ALL McCOYS		HAD LIGHTNING BOLT ON BYPASS TIL 1971	

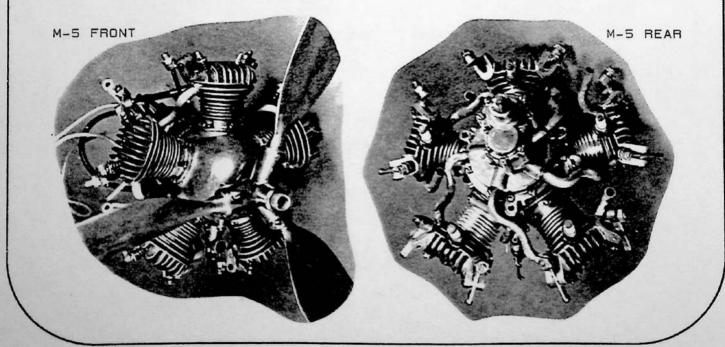


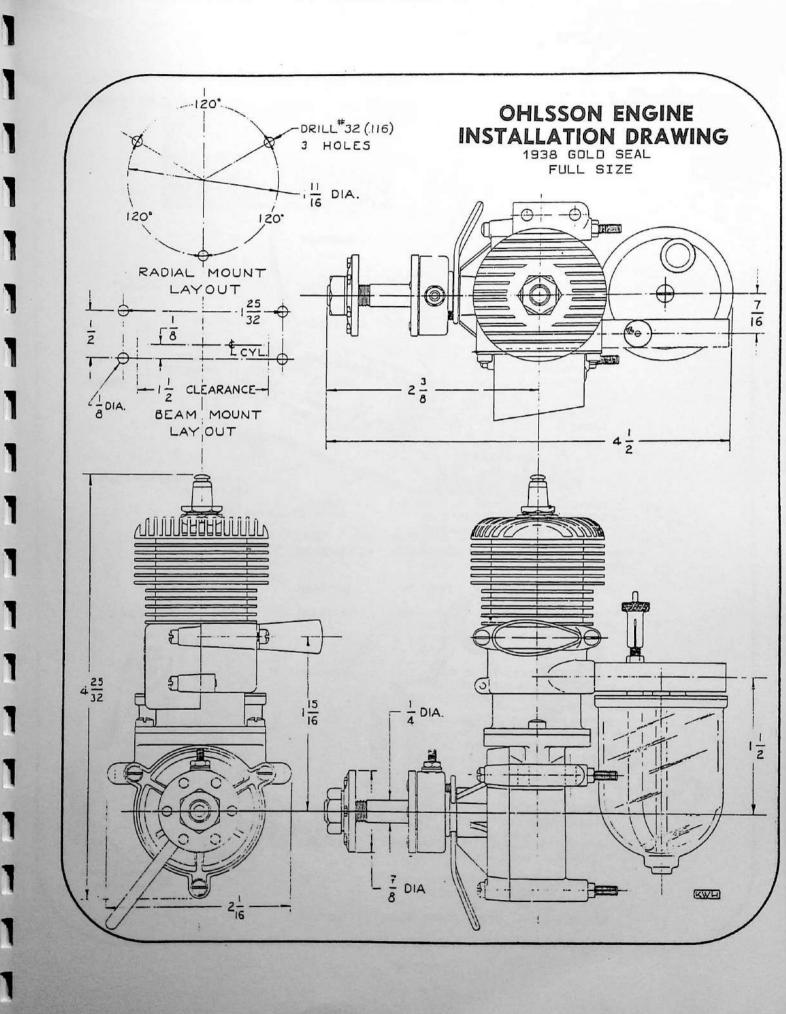
MEGOW MODELS	'40	1	MEGOW 19	0.191	DIE CAST/CYL.& HD. INTEGRAL/NO EXH. STACK/FLAT HEAD/CLOSED TIMER	
	'41	1	MEGOW 19	0.191	AS PREV./OPEN TIMER/DOMED HEAD	600
MELCRAFT	'45	I	MELCRAFT BLUESTREAK 29	0.287	ROUGH CAST CASE DARK BROWNISH OR BLUE CYL./STRAIGHT FORWARD VENTURI FROM CRANKCASE/WITH OR WITHOUT UNPLATED TANK/DULL & SHINY FINISHES/ SHORT AIRFOILED EXHAUST	
	'46	1	MELCRAFT SUPER CHARGED 29	0.287	SIMILAR TO PREVIOUS/BYPASS IS CURVED/ SMOOTHER CASTING/BLACKISH CYLINDER/ PLATED TANK/LONGER ANGLED EXHAUST	200 - 250
MERLIN MINIATURES INC. (CANADIAN)					ORIGINATED BY SAM ALTBAUM OF CNDN. HOBBYCRAFT (STILL OPERATED BY SONS)	
	'44	I	MERLIN SUPER B	0.232	UNIQUE SINGLE UNIT CRANKCASE/CYLINDER HEAD PLUG IS SCREWED INTO TOP OF CRANKCASE/FRONT END SCREWED INTO MAIN CASE/'MADE IN CANADA' ON CASE WITH SERIAL #'s / SQUARED EXHAUST	
MERLIN MINIATURES INC., NEW YORK	'46	1	MERLIN SUPER B	0.232	AS CDN. MODEL WITHOUT 'MADE IN CANADA' / WITH SERIAL NUMBERS/ EDGE OF CYL.HD.PLUG INSERT SERRATED	150
	'47	1	MERLIN SUPER B	0.232	AS U.S.MODEL/SLANTED EXHAUST STACK/ SERIAL #'s ON INTAKE TUBE	120 - 120
MICRO-DIESEL COMPANY	'47	D	DIESEL	0.132	SIDEPORT/ONE PIECE CAST ALUM.CASE/ SCREWED IN BACKPLATE/METAL HANG TANK/ NAME ON FRONT OF CASE/ VARIABLE COMPRESSION	
MICRO-MODEL COMPANY (HOUSEPIAN BROS.)	'39	ı	MICRO 19	0.208	ROUGH CAST CASE/UP DRAFT FRT. INTAKE/ OPEN TIMER/ALUM.FINS SHRUNK ON STEEL CYL./NAME ON BYPASS/Z-LONG BRASS TUBE EXHAUSTS/CYL.SCREWED TO CASE	1000
	'40	1	MICRO 24	0.244	AS PREV./EXHAUST STACK BRAZED TO CYL.	
MINIATURE AIRCRAFT OF NEW YORK	'36	1	WHIRLWIND JR.	0.123	HEX HEAD/3/8' PLUG/SIDE PORT/STEEL CYLINDER WITH IRON PISTON/CLAIMED 'SMALLEST GAS MOTOR EVER MADE' IN 1936!	
	'36	1	WHIRLWIND SR.	0.331	SAND CAST CASE/REAR EXHAUST PORTS/ BOLT ON FINLESS HEAD/STEEL CYLINDER WITH IRON PISTON/BRAZED CYL. ASS'Y/ ALUM.CARB.SCREWS ONTO CYL. INTAKE	
	'36	I	WHIRLWIND SR. MARINE	0.331	AS PREVIOUS/WATER COOLING JACKET	
	'40	1	MINIATURE (MITE?)	0.104	ALL SAND CAST (LIKE ELF) 2 PC. CRANK- CASE SPLIT HORIZONTALLY/OPEN TIMER/ GLASS SCREW-ON TANK/PREVIOUSLY IN 'MODEL CRAFTSMAN' MAG. AS 'MIDGET' PLAN/ALSO ADVERTISED & KNOWN AS 'MINATURE' GAS MOTOR (DESIGNED BY A. TEED WESTLAKE - REF. 'JOURNAL')	
	'43	1	WHIRLWIND	0.243	NONE SEEN	

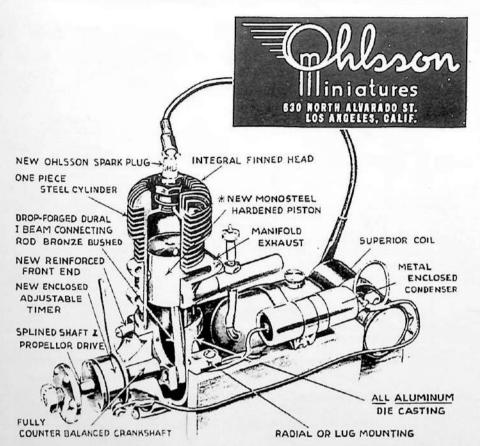


MINIATURE M	OTORS			*******		SEE BANTAM PRODUCTS FOR BANTAMS	
COMPAN						NOTE: SOME CONFUSION STILL EXISTS ON VARIOUS BULLETS & TORPEDOS	Agains Newson
		'46	I	BULLET	0.275	AS 1940 BULLET (PHANTOM MOTORS)/ NEW 4 BOLT MAG. CASE/NATURAL FINISH	100 - 150
•		'46	1	TORPEDO SPEC. (TWIN STACK)	0.298	AS PHANTOM HI-SPEED TORPEDO/TWIN STACKS/O&R TYPE TIMER - NOT AS PICTURED/ NATURAL FINISH	
	#	'47	Ī	BULLET	0.275	AS PREV. BULLET/ALUMINUM CASE/BLACK WRINKLE PAINT ON ALL ENGINE PARTS/ OPEN TIMER	
•		'47	I	BULLET MODEL 100	0.275	NEW ALUM. CASTINGS THROUGHOUT/ NATURAL FINISH/OPEN TIMER/'MODEL 100' STAMPED UNDER ENGINE.	
	*	'47	1	TORPEDO SPEC.	0.298	AS PREV. TORPEDO/ K & B TYPE TIMER	155
		'47	I/G	BANTAM G	0.199	BANTAM SOLD BY M/M THEN SOLD TO O.K. MOTORS IN SAME YEAR	
		'49	G	BULLET MODEL 100	0.275	AS PREV. IGNITION BULLET/NO TIMER OR CAM ON SHAFT	
	•	'49	G	TORPEDO SPEC.	0.298	AS PREV. IGNITION TORPEDO/ NO TIMER OR CAM ON SHAFT	
MITE MANUFA	CTURING CO.	'47	D	MITE DIESEL	0.098	DIE CAST MAG.CASE/FIXED COMPRESSION/ CRANKCASE RELIEF LEVER/PLASTIC FUEL TANK ATTACHED AT REAR	150
	•	'48	G	GLO-MITE	0.098	AS DIESEL/HD. HAD GLOW PLUG/NO TANK	
	*	'48	G	GLO-MITE	0.098	AS GLOW/FINLESS MAG.OR. ALUM.HEAD/ LONG ALUMINUM TANK/TOTAL OF ALL MITES MFD 5 TO 6,000	
MOLNAR MOT (JOSEPH F. I		'41	1	MOLNAR	0.992	SIDE PORT/SCREWED ON FLAT HEAD/LARGE VERTICAL METAL 'CAN' TANK/OPEN TIMER CHOKE THROTTLE AT END OF INTAKE/ '99' ON FRONT BYPASS	
		'41	1	MOLNAR	0.785	AS PREV./SMALLER/WITH OR WITHOUT PISTON RINGS/ '78' ON FRONT BYPASS	375
MONARCH (CANADIA)	N)	'47	1	MONARCH 60	0.604	SAND CAST BLACK CASE/RACE TYPE/ VARIOUS MODELS MFD. IN THE TORONTO AREA/SHORT RUNS(AUTHOR OWNED ONE!)	
MORTON AIRC		-	-			M-5's SOLD BY BURGESS BATTERY COMPANY AND M & S ENGINEERING CO.	
(Moldor)		'36	1	INTERMOTE		ALUM.CAST/RADIAL MTG./UPDRAFT FRONT ROTARY/LAPPED PISTON/FIXED IGNITION/ 9 CYL.FINS/BOLT ON EXHAUST & BYPASS	
		'37	I	CHALLENGER	0.406	AS PREV./MOVEABLE IGNITION/FINS ON CASE TO SUPPORT SHAFT BEARINGS/ 8 CYLINDER FINS	1000
		'37	1	CHALLENGER-M	0.406	AS PREVIOUS/WATER JACKET OVER CYL.	
· (AVIA	• NOTE: TION IND.)	'38	1	NEW HURRICANE	0.066	DESIGNED BY GLEN MORTON OF MORTON BROS. & MFG. AS AVIATION INDUSTRIES -ZINC ALLOY CASE/SIDEPORT/BRASS IN- TAKE & TANK/ OPEN TIMER/ASSEMBLED OR KIT	

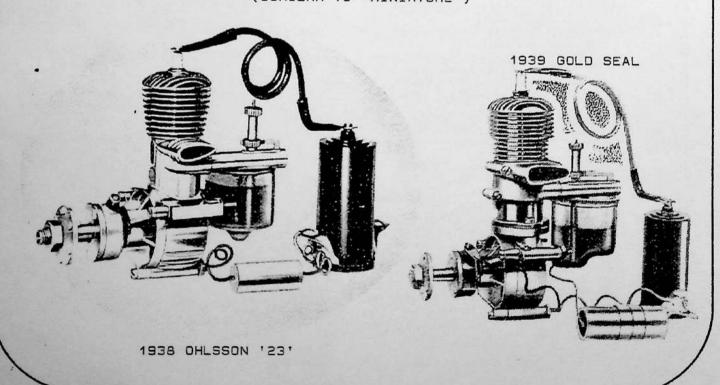








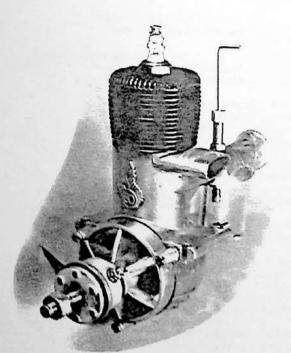
1938 OHLSSON GOLD SEAL (SIMILAR TO 'MINIATURE')



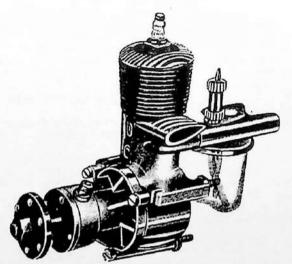
MOD	TON CON	Thurs							
MOR	ION - CON		_				0.744	DI ANG EVICTA CARINDED INTO IS A	
		- NO	IE:	'44	I	M-4/42	0.744	PLANS EXIST/4 CYLINDER INLINE & 2 STROKE INLINE/VARIOUS PARTS EXIST FOR BOTH	
				'45	1	MORTON M-5	0.922	5 CYL./4 CYC. RADIAL/NO ROCKER FILLETS BAR STOCK CRANKSHAFT/ HAD ONLY POWER OF .29	1050
		•		'45	1	MORTON M-5	0.922	AS PREVIOUS/FORGED CRANKSHAFT	
		•	•	'45	I	MORTON 29	0.295	SINGLE CYLINDER DIE CAST/UPDRAFT FRONT ROTARY/HORIZONTAL REAR PLUG/ M-5 TIMER HOUSING	
	* BURGESS	BATTERY		'47	I	BURGESS M-5	0.922	AS MORTON/HAS FILLETS ON ROCKER ARMS/SOLD BY BURGESS	1250
	' M & S EN	IG.		'50	Ì	BURGESS M-5	0.922	AS PREV./NEW CASE CASTINGS WITH 8 EVENLY SPACED CYL.FINS/LONG BARREL CARB./SINGLE ADJUSTABLE JET/DULL FINISH 30 MFD. & SOLD BY M & S ENGINEERING	
NEPTI	LINE							PRE-PRODUCTION FOR M & M 29	
				'38	1	NEPTUNE	0.292	PERMANENT MOLD CASE/FLUITER VALVE IN INTAKE - 'PERKY' STYLE/ SUB PISTON PORTING/ OPEN TIMER/3/8' PLUG	
				'38	I	NEPTUNE	0.292	VARIATION/CONVENTIONAL BYPASS BRAZED TO CYLINDER	
OHLS	SON MINIA	TURES			_			EARLY OHLSSON & RICE TO 1940 - ALSO SEE 1/2A LIST	
				'36	1	MINIATURE	0.562	DIE CAST CASE/STEPPED CYL.FINS/OPEN TIMER/LARGE HORIZ.METAL 'CAN'TANK/ OHLSSON ON FRONT CRANK COVER	
				'37	1	MINIATURE	0.562	AS PREV./NEW CYL. WITH FINS & MOUNTING FLANGE ENLARGED TO MATCH CRANKCASE	
	•	•		'37	1	MINIATURE	0.562	AS PREV./ 2 ADDED SCREWS IN MANIFOLD	
		*		'38	1	GOLD SEAL	0.562	AS PREV./NAME ON BYPASS/OPEN TIMER/ FRONT COVER HAS HEAVY RIM & 6 WEBS/ BEAM MTG. LUGS ADDED/NEW SHAFT SPLINED TO FIT 3 SPOT DRIVE WASHERS	
	м			'38	1	GOLD SEAL	0.562	AS PREV. EXCEPT FOR NEW DEEP BOWL TANK HUNG UNDER INTAKE WITH NEEDLE	
								VALVE BODY THRU INTO TANK	
				'38	I	-23*	0.232	SIMILAR TO PREVIOUS/FORE RLINNER OF SMALLER' BORE ENGINE/DIE CAST/ '23' ON FRONT OF CASE/6 WEB FRONT COVER WITH NO PROVISION FOR TIMER RETENTION BALL ALUM. SHAFT BEARING IS PRESSED INTO CASE COVER WITH TIMER HOLISING GROOVES. TAPERED CRANKSHAFT IS HOLLOW WITH HOLLOW CRANK PIN/ 9	
				'38	ı	GOLD SEAL	0.542	OR 10 BLACK UNPAINTED CYLINDER FINS  AS PREV./NEW SMALLER FUEL TANK WITH	
						JOHN SERVE	0.302	FLAT BOTTOM & STRAIGHT PICK UP TUBE	
				'39	1	73'	0.232	AS PREVIOUS/BALL THRUST BEARING ADDED TO TAPERED SHAFT	
				'39	1	GOLD SEAL	0.562	AS PREV./BULGE ADDED TO SHAFT HSG.	

## Ohlsson & Rice

Emery at Grande Vista, Los Angeles 23, Calif.



1940 0 & R CUSTOM '50'



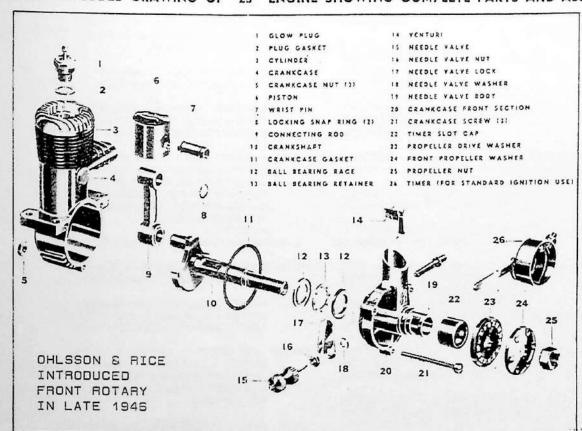
1940 0 & R '19'

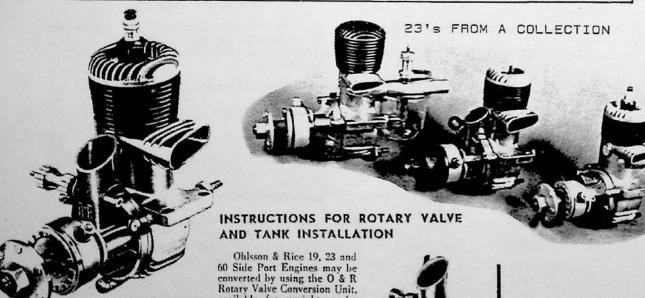


1942 SPECIAL '60'

OHLSSON - CON	MNUED	'39	I	·23·	0.232	2. AS PREV./10 CYL.FINS/3 STIFFENING WEBS ADDED TO INTAKE BOSS	
•	•	'39	1	GOLD SEAL	0.562	AS PREV./NEW CYLINDER WITH STRAIGHT TAPER OF FINS/ALUMINUM TIMER PARTS STARTED WITH THIS RUN	
, <b>*</b>	•	'40	I	'23'	0.232	AS PREV./NEW 'JIFFY FILL' TANK ASS'Y./ POSSIBLE BLACK PAINTED CYLINDER	78
	•	'40	I	19*	0.199	AS-23 WITH '19' ON CASE/10 CYL.FINS/ SPARK PLUG BOSS CUT LOWER-MATCHING SHORTER STROKE/BLACK PAINTED CYL.	
OHLSSON & RIC (IRWIN OHLSSO HARRY RICE)		'40	1	CUSTOM '60'	0.604	SIMILAR TO '23' STYLE/O & R 'EAGLE' ON FRONT OF CASE/CAST FLARED VENTURI WITH TANK TOPE/BLACK PAINTED CYL.FINS/ FRONT WEB HIDING BALL THRUST & ROLLER BEARING WITH ALUM. MAIN BEARING/ 1/4' PROP SHAFT/ 1/4' PLUG	
•	•	'40	I	CUSTOM '60'	0.604	AS PREV.60/NEW CYL.ASS'Y W/ 3.8" PLUG	
	*	'40	I	·19·	0.199	'LIGHTWEIGHT' AS PREV./SMALL DIAMETER UNPAINTED CYLINDER & LOW HEAD FINS	
		'40	1	CUSTOM '60'	0.604	AS PREVIOUS/3/8" PLUG/BRONZE MAIN BEARING/EARLIER CUSTOM '60's' REWORKED FOR 3/8" PLUG/LAPPED CAST IRON PISTON	
		'41	1	'23'	0.232	AS PREV./NEW CYL. WITH BLACK PAINTED TAPER FIN PROFILE/INTAKE CAST IN PLACE BRONZE CRANK BEARING STARTED HERE & CRANKSHAFT TAPER ELIMINATED FOR 19's AND 23's	
	•	'41	I	.19.	0.199	AS PREV. 23 EXCEPT NEW 9 FIN UNPAINTED CYLINDER WITH INCREASED HEIGHT	
		'41	1	'60' SPECIAL	0.604	ECONOMY CUSTOM/NO ROLLER BEARING/ NO EAGLE/'60' STAMPED ON FRONT/ UNPAINTED CYL/LARGER '23' TANK/ 1/4' SHAFT	118 - 155
	•	'41	1	CUSTOM '60'	0.604	AS PREVIOUS CUSTOM/ 5/16' SHAFT	175 - 250
	•	'41	I	'60' SPECIAL	0.604	AS PREVIOUS SPECIAL/ 5/16' SHAFT	99
•	•	'42	1	'60' SPECIAL	0.604	AS PREV. SPECIAL/CYL.PAINTED BLACK	125 - 130
		'42	I	'23'	0.232	AS PREV. '41 - '23'/THICK CYLINDER FINS/ LESS POLISHED CASTINGS/MOLD LINE ON BYPASS/DULL NICKLE PLATED INTAKE TUBE/WARTIME MODEL	100
		'42	I	'19'	0.199	SIMILAR TO PREVIOUS/WARTIME MODEL	
		'42	1	'60' SPECIAL	0.604	SIMILAR TO OTHER WARTIME MODELS INCLUDING ROUGH CASTINGS	
	" NOTE:			ALL MODELS		OTHER WARTIME MODELS/SLIGHT VARIA- TIONS WITH MATERIALS WHEN AVAILABLE	
		'46	1	'23'	0.232	AS PREV. PRE-WARTIME -23/NEW FRONT COVER WITH VERTICAL WEBS/ALUMINUM INTAKE TUBE	115

## ENGINEER'S EXPLODED DRAWING OF "23" ENGINE SHOWING COMPLETE PARTS AND ASSEMBLY.

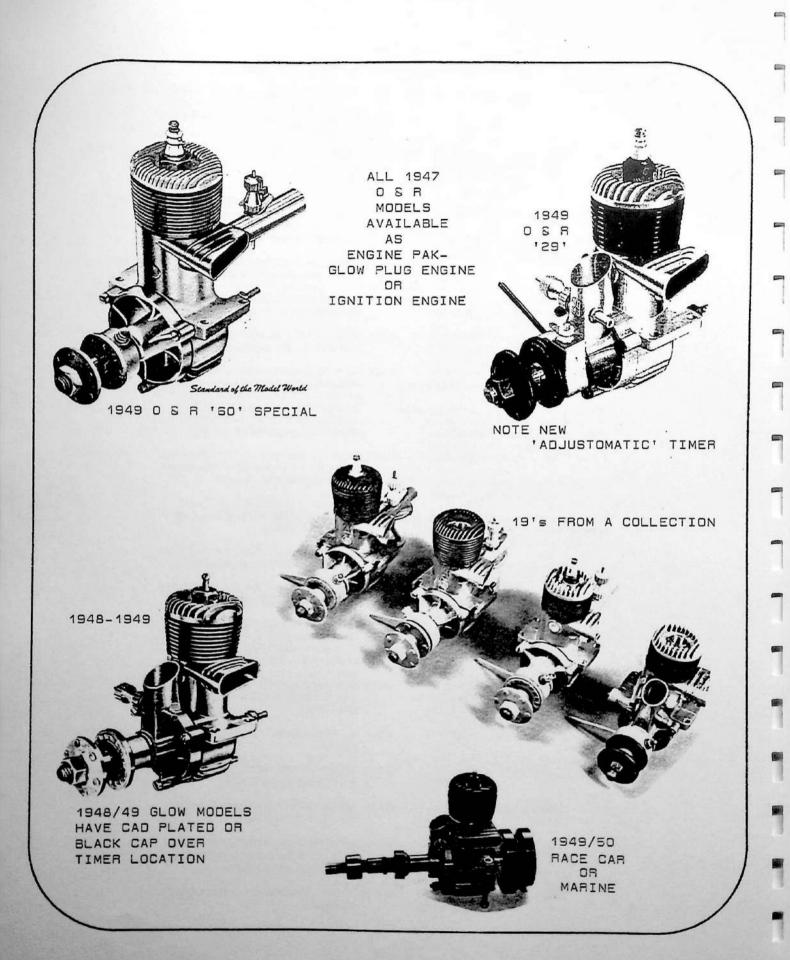




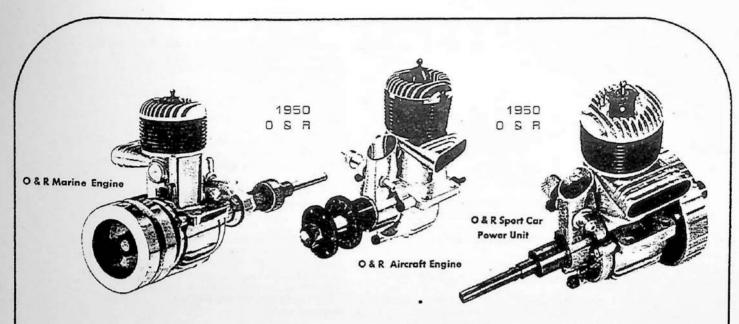
1948 ROTARY VALVE '19's & 23's' 1950 - 60's Ohlsson & Rice 19, 23 and 60 Side Port Engines may be converted by using the O & R Rotary Valve Conversion Unit, available for upright or inverted operation. For accessibility to the rotary valve venturi tube, the special inverted unit is available. This consists of a special ported crankshaft and a regular rotary valve front section.



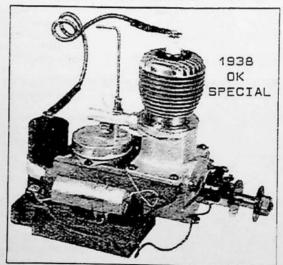
OHLSSON 8	RICE - CON'T	'46	ı	*19*	0.199	AS PREV. PRE WARTIME - 19/NEW FRONT COVER WITH VERTICAL WEB/UNPOLISHED CASTINGS/BARE BRASS INTAKE TUBE/CYL.	
						PAINTED BLACK/ SHORT RUN	
		'46	1	'60' SPECIAL	0.604	AS PREV. '42- '60' BLACK CYL. MODEL/ NEW VERTICAL WEB IN FRONT COVER/ ALUMINUM INTAKE TUBE	125 - 200
	•	'47	1	"23" (RADIAL MT.)	0.232	SIMILAR TO PREV./NEW RADIAL MOUNTED CRANKCASE/10 HEAVY COOLING FINS ON BOTTOM/STYLIZED '23' ON FRONT OF CASE/HIGHLY POLISHED ENGINE	100 - 125
	M	'47	I	*19* (RADIAL MT.)	0.199	SAME AS PREV.23/STYLIZED '19' ON CASE RADIAL MTG. ONLY/POLISHED ENGINE	125
	•	'47	ı	*19* (RADIAL MT.)	0.199	AS PREV. 19/ 19 EMBLEM CHANGED TO A RECOGNIZEABLE '19'/ UNPOLISHED ENG.	110
•		'47	1	'60' SPECIAL (RADIAL MT.)	0.604	SIMILAR TO PRV.23/LARGE OVAL EXHAUST 7/16' INTAKE TUBE/RADIAL MTG. ONLY	125 - 185
	· NO	<b>)TE:</b> '47	I	DENNYMITE AIRSTREAM	0.573	PARTS PURCHASED FROM PACIFIC AIR- MOTIVE CORP.8. ASSEMBLED BY O 8. R - IDENTICAL TO P.A.C. DENNY EXCEPT REAR COVER MTG. HOLES ARE DRILLED THRU CRANKCASE BOSSES/SER.#s STAMPED ON MOUNTING LUGS/LONG INTAKE TUBE	
		'48	1	*23*	0.232	SIMILAR TO PREVIOUS .23/NEW UNMARKED BRIGHT SATIN CRANKCASE/BEAM MOUNTS WITH HOLES INSTEAD OF SLOTS	100
	•	'48	G	*23*	0.232	AS PREV.23/8 FIN CYLINDER WITH FIRST STAKED-ON ALUM. 15 FIN HEAD - ALSO 13 FIN HEAD MODEL	
•		'48	1	.19.	0.199	AS PREV. 23/SMALLER DIA. 7 FIN CYLINDER WITH STAKED-ON ALUMINUM HEAD	
	•	'48	ı	'60' SPECIAL	0.604	SIMILAR TO '47-'60' SPECIAL/BEAM MTG. WITH HOLES INSTEAD OF SLOTS	155
•		'48	1	"23" FRONT ROTARY	0.232	NEW FRONT ROTARY VALVE DESIGN WITH O&R STYLING BEAM & RADIAL MOUNT CASE WITH LARGE OVAL EXHAUST/8 FIN CYLINDER/SATIN FINISH ON CASTINGS	
	*	'48	G	'23' GLOW FRONT ROTARY	0.232	NEW FRONT ROTARY VALVE DESIGN WITH CAD PLATED CAP OVER CASE COVER TIMER SLOT	
		'48	1	'60' SPECIAL	0.604	AS '48-60/O&R INITIALS ADDED TO REAR OF CASE	85 - 155
•		'48	1	'23' FRONT ROTARY	0.232	AS PREV. 23/NEW FRONT COVER WITH BALL DETENT FOR NEW TIMER	65 - 105
		'48	G	'23' GLOW FRONT ROTARY	0.232	AS PREV. 23/CAP OVER TIMER POSITION ON COVER WITH BALL DETENT LOCATION	
		'48	1	*19* FRONT ROTARY	0.199	SAME CASTINGS AS PREV. IGNITION 23/ SMALLER DIAMETER HEAD WITH 7 FINS/ STAKED ALUMINUM HEAD	135
		'48	G	19' GLOW FRONT ROTARY	0.199	AS PREV. IGNITION .19/CAP OVER TIMER POSITION	



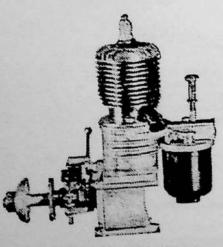
OHLSSON & RIC	E - CON'T	'49	I	.53.	0.232	I. IGNITION SIDEPORT-AGAIN/NEW FRONT COVER WITH TIMER BALL DETENT/TANK OR NO TANK/STAKED ALUMINUM HEAD	
		'49	I	.19.	0.199	IGNITION SIDEPORT-AGAIN/NEW FRONT COVER WITH TIMER BALL DETENT/TANK OR NO TANK/STAKED ALUMINUM HEAD	
	•	'49	1	'60' SPECIAL	0.604	IGNITION SIDEPORT-AGAIN/NEW FRONT COVER WITH TIMER BALL DETENT/NO TANK STAKED ALUMINUM HEAD	175
	· NOTE:			ALL MODELS FRONT ROTARY FROM HERE		LAST SIDEPORTS MFD. IN 1949 AND SOLD UNTIL SIDEPORT INVENTORY GONE	
-	*	'49	I	*29*	0.299	O&R STYLE/NEW ENGINE/8 FIN CYL.WITH STAKED ALUM. HD./PAINTED CYL.FINS/ FRONT COVER WITH '29' ON INTAKE/ ROLLER BEARINGS/BALL DETENT FOR O&R 'ADJUSTOMATIC' TIMER/POLISHED CASTINGS EXTERIOR STEEL PARTS HAVE BLACK FINISH/NO TANK	195
	•	'49	G	'29' GLOW	0.299	AS PREV./BLK.CAP OVER TIMER LOCATION	95
•		'49	1	"23" DELUXE		AS PREV.FRONT ROTARY '23'/REAR OF CRANKCASE MOD./ROLLER BEARING FRONT COVER/NEW STAKED ALUM.HD. WITH 12 FINS/CASTINGS POLISHED/EXTERNAL STEEL PARTS BLACK	
	•	'49	G	'23' DELUXE	0.232	AS PREVIOUS '23' DELUXE/BLACK CAP OVER TIMER LOCATION	
	•	'49	1	<b>'23'</b>		STANDARD MODEL '23'/CASTINGS NOT POLISHED/BRONZE BEARING IN FRONT COVER/NO ROLLER BEARINGS/NO TANK	
	•	'49	G	*23* GLOW	0.232	AS PREVIOUS 23 IGNITION/GLOW MODEL/ PLATED CAP OVER TIMER LOCATION	55
***************************************		'49	I	.19. DELUXE	0.199	AS PREV. FRONT ROTARY '19'/MOD. AS '23' DELUXE/ NO TANK	
•		'49	G	'19' DELUXE GLOW	0.199	AS PREVIOUS DELUXE '19'/ BLACK CAP OVER TIMER LOCATION	
		'49	G	'29' GLOW RACE CAR		AS '29' GLOW/NEW DOUBLE END CRANK- CASE CASTING WITH NO TAPER ON EXH./ NICKEL PLATED FLYWHEEL/FRONT COVER SUPPORTS REDUCTION GEAR IN WHEEL 'DRUM BRAKE'/ALUM.HEAD ROTATED 90' AND STAKED ON	
		'50	1	.33.		SIMILAR TO .29 IGNITION/STROKED/8 FIN CYL-/RED ANOD.HD./'29'EMBLEM MILLED OFF/ NO TANK	115
	•	'50	G	.33. GTOM		AS '33' IGNITION/BLACK CAP OVER TIMER LOCATION	
		'50	L	*60* SPECIAL		CASE MOD.TO ELIMINATE SIDEPORT BOSS/ STAKED ALUM. HD./ROLLER BEARING/ BALL DETENT FOR TIMER/ POLISHED CASTINGS/STEEL PARTS BLACK/NO TANK	



## ANNOUNCING "O.K."



AN EASY STARTER!



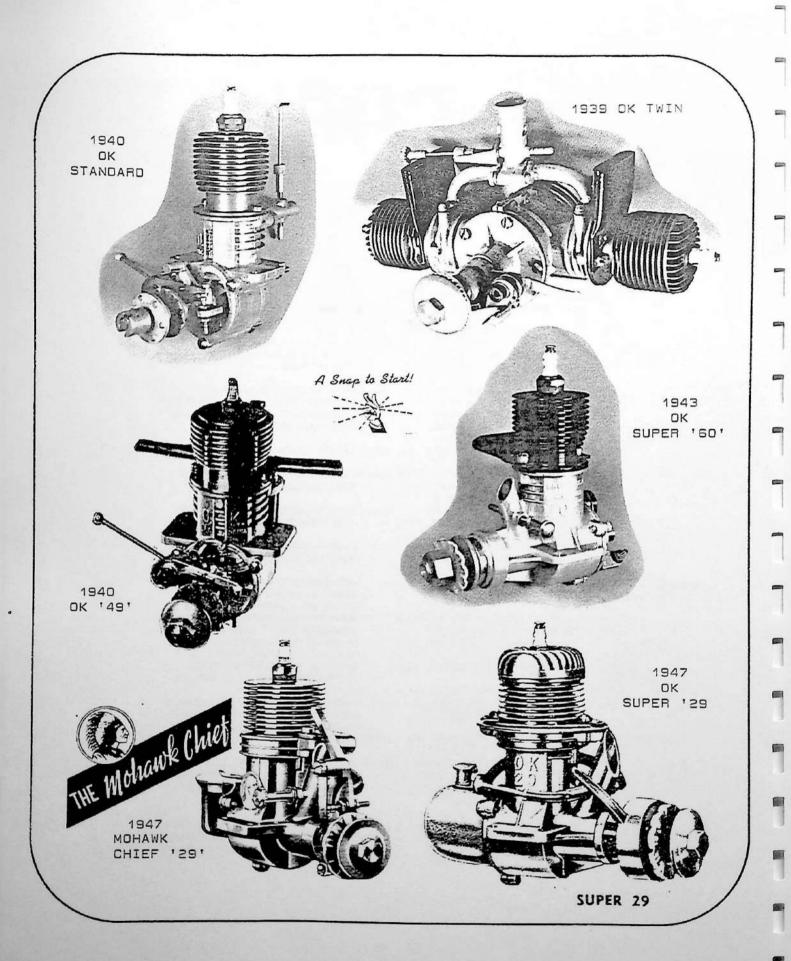
1939 OK STANDARD & OK DELUXE



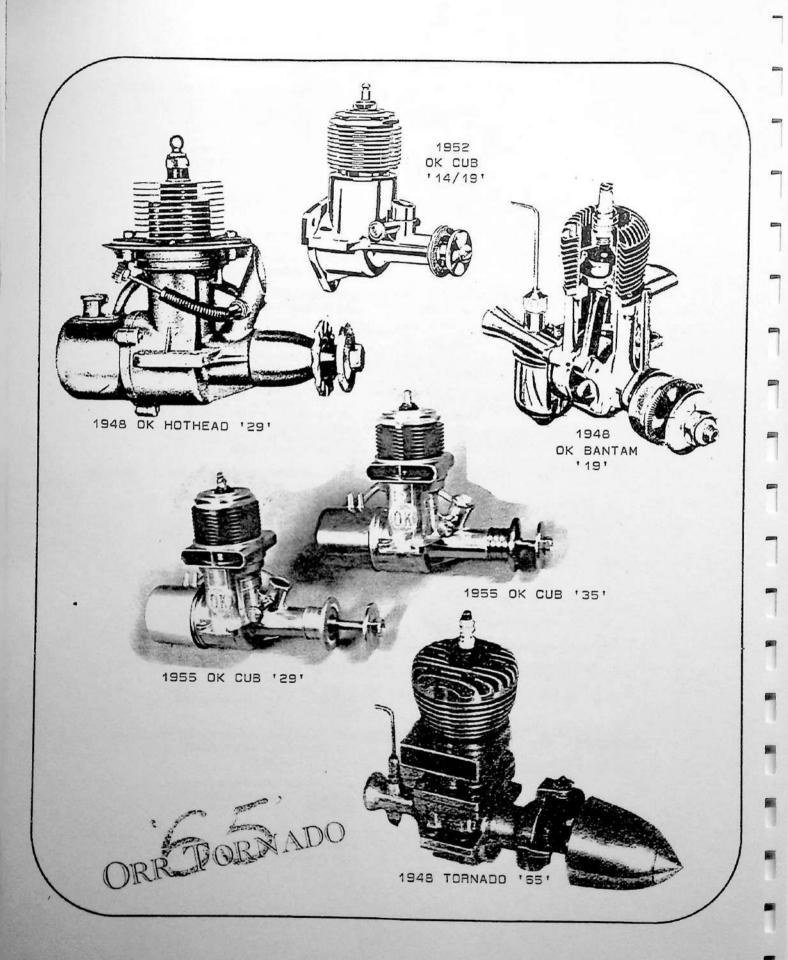


1940 RACEWAY S MARINE

OHLSSON & RICE	- CON'T	'50	G	*60* GLOW	0.604	AS PREV. IGNITION '60'/BLACK CAP OVER TIMER LOCATION
		'50	G	*29* GLOW MARINE	0.299	BASED ON '29' RACE CAR CASTINGS/ POLISHED/BLUE HD./BLACK STEEL FLYWHEEL
	•	'50	I	'29'	0.299	AS PREV.'49 - 29/BLUE CYLINDER HEAD/ CRANKCASE REINF. AS FAIRING TO BYPASS/ NICKEL PLATED BRASS TANK
		'50	G	*29* GLOW	0.299	AS PREV. IGNITION '29'/BLACK CAP OVER TIMER LOCATION/NICKEL PL.BRASS TANK
		'50	1	.33.	0.329	AS PREV.IGNITION '33'/CYL. ASS'Y.SEATED ON 2 ALUM. WASHERS/CRANKCASE RE- INFORCED AS FAIRING TO BYPASS/NICKEL PLATED BRASS TANK
	3 <b>.</b>	'50	G	'33' GLOW	0.329	AS PREV. IGNITION'33'/BLACK CAP OVER TIMER LOCATION/NICKEL PL. BRASS TANK
	•	'50	G	'29' GLOW COMP.RACE CAR	0.299	AS PREV. '29' RACE CAR ENGINE/DIRECT DRIVE/SOLD WITH 4-SEMI-PNEUMATIC TIRES AND HUBS
	" NOTE:					RE-ORGANIZED AS 'CHEMINOL CORP.' BY HARRY RICE WHO CONTINUED PRODUCTION OF O&R ENGINES - IN 1955 THE .049 WAS INTRODUCED - SEE 1/2A LIST
		'52	I	'60' SPECIAL	0.604	AS PREV. '60'/CYL.HEAD ANOD. PURPLE
•	•	'52	G	'60' GLOW	0.604	AS PREV. IGNITION '60'/BLACK CAP OVER TIMER LOCATION
		'52	1	.19. DELUXE	0.199	AS PREV. DELLIXE IGNITION '19'/CYL.HD. ANODIZED GOLD
•	•	'52	G	GLOW GLOW	0.199	AS PREV. IGNITION '19'/BLACK CAP OVER TIMER LOCATION
O K ENGINES (CHARLES BRE	веск)					MFD.BY HERKIMER TOOL & MODEL WORKS ALSO SEE 1/2A LIST TED BREBECK (GRANDSON OF ORIGINAL BREBECK) CLAIMS SOME OK ENGINES HAVE BEEN CHANGED BY COLLECTORS TO EN- HANCE VALUE - SUBSEQUENT UP DATES HERE WILL ATTEMPT TO IDENTIFY HIS CONCERNS BEYOND THESE LISTINGS CROSSCHECKED WITH HIS CO. RECORDS.
		'38	I	OK SPECIAL 60 (SIDEPORT)		SAND CAST CASE & FRONT COVER/SINGLE CARB. AT REAR/CRUDELY WELDED 3 PIECE CRANKSHAFT/MILLED BRASS TIMER AND STEEL ARM
		'39	I	OK STANDARD 60 (SIDEPORT)		DIE CAST CAST/'PATENT PENDING'ON CASE/ FINNED HD./'CAN'TANK/DIE CAST TIMER FRAME WITH STEEL ARM/NO EXHAUST STACK/MACHINED CRANKSHAFT
		'39	1	OK DELUXE 60 (SIDEPORT)		AS PREV. STANDARD '60'/EXHAUST STACK/ GREY CAD.PLATED STEEL PARTS/STEEL'CAN' TANK/INTAKE CHOKE/CRANK MACHINED & BALANCED

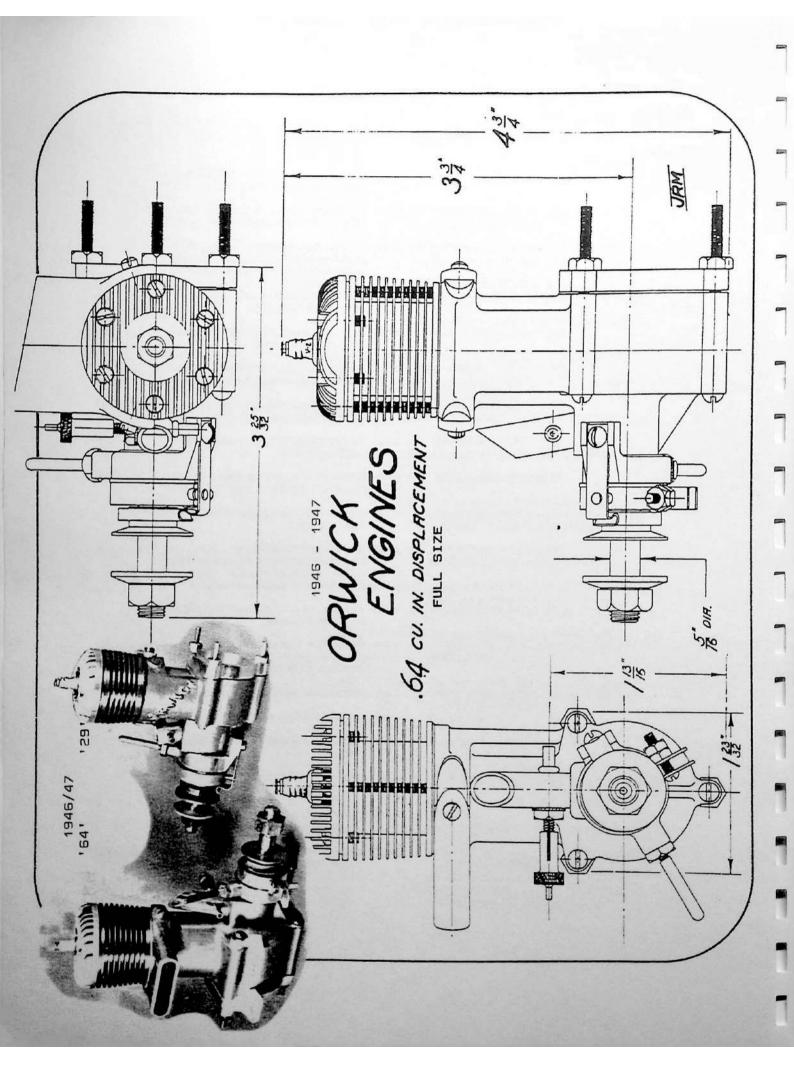


O.K. ENGINES - CONTINUED	'39	1	OK TWIN T-500	1.208	SAND CAST CASE-PAINTED BLACK/FINNED HDS./TURNED ALUM.FRONT & REAR COVER/ CENTER SPLIT CASE/METAL 'CAN' TANK/ MACHINED BRASS CARB./NO EXH. STACKS	
	'40	I	OK STANDARD 60 (2ND MODEL)	0.604	AS PREV. '39-STANDARD '60'/CRANKCASE NOW SHOWS PAT.#'s/BAKELITE TANK/ SMALL CARB NO CHOKE	
	'40	I	OK SPECIAL 60 (2ND MODEL)	0.604	AS PREVIOUS 1940 - STANDARD '60'/ DOMED FLAT HEAD	
•	'40	1	OK DELUXE 60	0.616	AS PREVIOUS STANDARD '60'/BORED OUT	
•	'40	I	OK RACEWAY MARINE	0.616	AS PREV. DELUXE '60'/METAL TANK/FLY- WHEEL AND THRUST WASHER	250
	'40	1	OK TWIN (2ND MODEL)	1.120	DIE CAST CASE/PAT. #'s ON CASE/DIE CAST COVERS - TIMER - CARB.	495
•	'40	1	OK 49 (SIDEPORI)	0.493	SOLD IN FOREIGN MARKETS/AS PREVIOUS STANDARD '60'/REDUCED BORE & STROKE/ ALUM. CON.ROD/DOMED FLAT HEAD ON CYLINDER/'49' ON LUG/EXHAUST STACK	350
	'41	1	OK TORNADO 60 (FRONT ROTARY) AIRCRAFT & RACE CAR	0.604	NEW CASE/FIRST FRONT ROTARY/ BALL BEARING SUPPORTED SHAFT/DOMED HEAD 3 DIE STRAPS ON LEFT SIDE/SEPARATE BRASS TANK/FORGED STEEL CON.ROD/FLY- WHEEL ON MARINE & CAR ENGINE /PROP DRIVE ON AIRCRAFT ENGINE	
•	'43	1	OK SUPER 60	0.604	IDENTICAL TO TORNADO '60'/IMPRINTED 'SUPER 60' ON CASE/TIME' BRKT. ARM ALUM./ACCESSORY TANK RED OR WHITE	110 - 150
	'45	1	OK TWIN	1.120	AS PREV. PREWAR TWIN/ALUMINUM TIMER FRAME/SMALLER INTAKE/ALUMINUM CON RODS/FLAT CYLINDER HEADS AFTER 1950/ BAKELITE ACCESS. TANK	
•	'45	1	OK TWIN MARINE	1.120	AS PREV. OK TWIN/FLYWHEEL ATTACHED/ NO RADIAL MOUNTING ON REAR	
	'46	1	OK SUPER 60 MARINE	0.604	AS SUPER '60'/NO FLAT ON CRANKSHAFT/ FITTED KEYWAY/CHROME PLATED V-BELT FLYWHEEL	
	'46	1	OK B-29	0.299	AS MINI SUPER'60'/FLAT HD/BAKELITE TANK	125
	'47	I	OK SUPER 29	0.299	AS PREV. '29'/GOLD ANOD. HD.& ACCESS. TANK/BLACK OXIDE CYLINDER/FORGED ALUMINUM CON ROD	130
• (MOHAWK ENG.)	'47	I	MOHAWK CHIEF '29'	0.299	SAME AS B-29 WITH 'MOHAWK CHIEF' ON CASE/SOLD FROM 'FAKE' COMPANY - MOHAWK ENGINEERING	100
	'48	G	OK HOTHEAD "29"	0.299	SAME AS PREV. SUPER '29'/GOLD TANK & NEW NOSE COVER/BLACK CYLINDER/NO HEAD FINS	
	'48	1	OK BANTAM 19	0.199	ALL DIES & INVENTORY PURCHASED BY OK/ IGNITION VERSION SAME AS MINIATURE MOTORS/BOX FOR ENGINE IDENTIFIES OK	

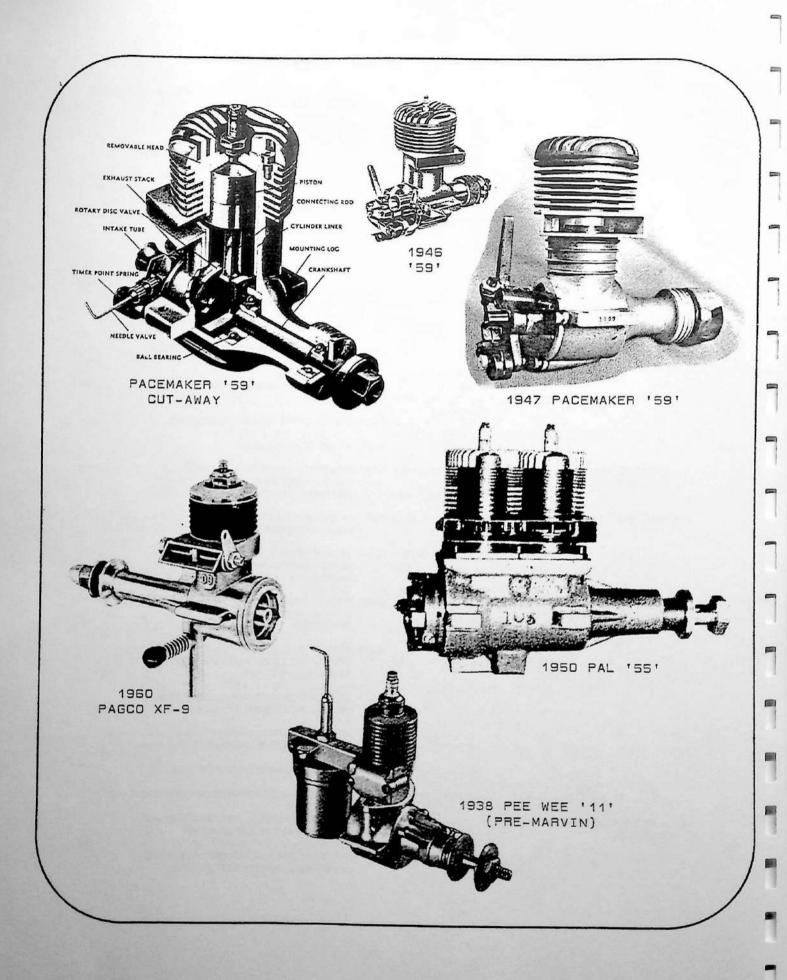


O.K. ENGINES - CONTINUED	'48	G	OK BANTAM 19	0.199	AS PREVIOUS/GLOW VERSION SAME AS MINIATURE MOTORS/BOX FOR ENGINE IDENTIFIED OK	
	'48	G	OK TWIN-GLOW	1.120	SAME AS PREV. O.K. TWIN/FLAT HEADS/ INNER CYLINDER DOMED	
*	'49	G	OK TWIN-GLOW	1.120	AS PREV./BLACK CYL./GOLD ANODIZED HDS./DISPLAY MODELS FOR DEALERS ONLY	
	'49	G	OK BANTAM 19	0.199	AS PREV. BANTAM/METAL TANK/OK STYLE BRASS N.V./CAST LIGHTWEIGHT CON.ROD/ FRONT & REAR PROP WASHERS BY O.K.	
	'49	G	OK CUB .099	0.099	LARGE CASE/BEAM MOUNT ONLY/EARLY MODELS HAD SERIAL #'s	17 - 30
•	'50	I	OK SUPER 60	0.604	BLACK CYL./GOLD ANODIZED FINNED HD./ DISPLAY MODELS FOR DEALERS ONLY	120
	'50	I	MOHAWK CHIEF	0.299	AS PREV. MOHAWK CHIEF/BLUE TANK & TIMER CAM COVER/BLACK CYLINDER	
	'50	G	MOHAWK CHIEF	0.299	AS PREV. 29/NO TIMER/BLUE NOSE COVER/ LATER MODELS HAD GOLD TANK & NOSE	60 - 150
	'52	G	OK CUB .14	0.149	ENLARGED SMALL CUB MODEL/BEAM OR RADIAL MOUNTING	30 - 35
•	'52	G	OK CUB .19		AS OK CUB 14 RADIAL OR BEAM MOUNTS/ USES BORED-OUT CUB'14'CASE/STAMPED'19'	55
	'53	D	OK CUB .15 (D)	0.149	DIESEL VERSION OF OK CUB '14'/VARIABLE COMPRESSION	
	'55	G	OK CUB .29 (TWIN STACK)	0.299	HOT HEAD VERSION/MAJOR DESIGN CHANGE/FLOATING PISTON WITHOUT PIN/ RED TANK & PROP DRIVE/BLACK OXIDE CYL./SEPARATE HEAD & GLOW PLUG	65 - 100
•	'55	G	OK CUB .15	0.149	AS PREV. CUB 14/EXPERIMENTAL PUSHER PROP SHAFT AT REAR	
	'55	G	OK CLIB .35 (TWIN STACK)	0.349	LARGEST OK 'CUB' ENGINE/AS PREV. '29' CUB/BORED OUT/GOLD ANOD.TANK & PROP DRIVE/LATER MODELS HAD PLAIN TANK	65 - 100
	'56	G	OK CUB .09	0.099	AS PREVIOUS .09/RED TANK & PROP DRIVE	
	'57	G	OK CUB .09-S	0.099	AS PREVIOUS WITH RECOIL STARTER	
	'58	G	OK CUB .09-MS	0.099	AS PREVIOUS MARINE/FLYWHEEL RECOIL STARTER	
ORR ENGINES INC.	'38	ı	ORR '65'	0.647	SAND CAST/VERTICAL NEEDLE VALVE/3/8' PLUG/REAR ROTARY INTAKE/PROTOTYPES-6	
	'48	ı	TORNADO '65'	0.647	VERTICAL NEEDLE VALVE/ 3/8" PLUG/ REAR ROTARY INTAKE/HORNET STYLE	
	'48	1	TORNADO '65'	0.647	VERTICAL NEEDLE VALVE/ 1/4" PLUG REAR ROTARY INTAKE/APPROX.500 MFD.	325

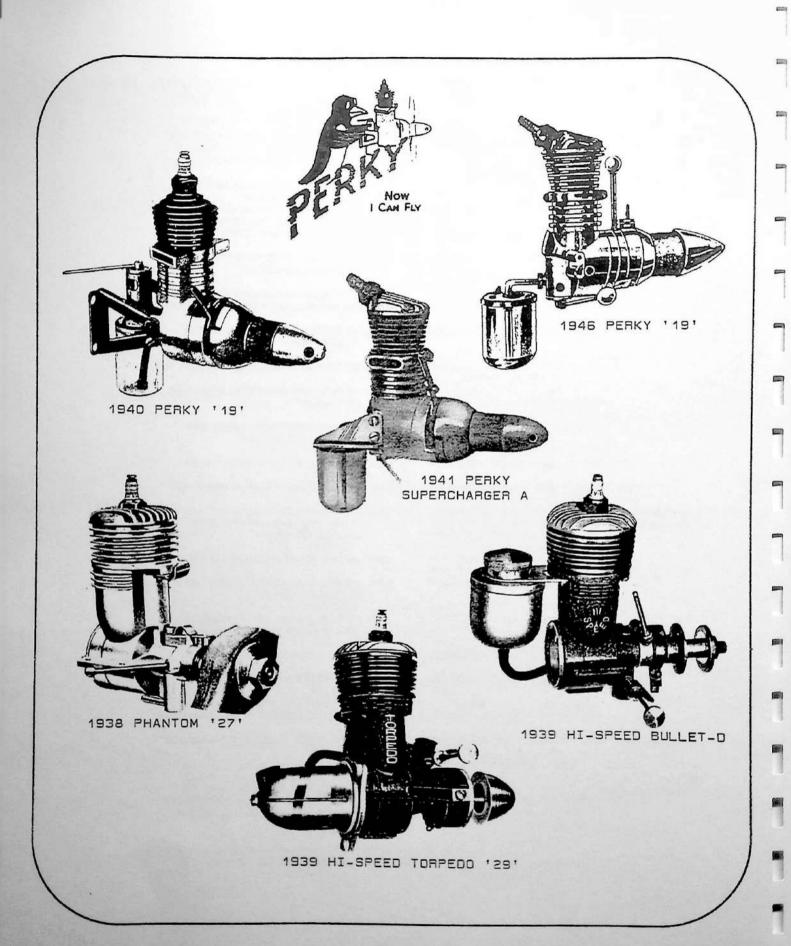
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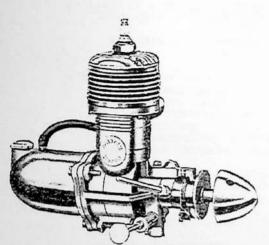
ORWICK ENG (HENRY ORV	INES	 '41		·73'	0.73	MFD.BY CUNNINGHAM CO.FROM LATE '46  1 SAND CAST/FRONT ROTARY/FLAT EXH./HD.	
			i	75	0.70	& LINER INTEGRAL/NO PAINT/3 BOLT CASE/ RADIAL MOUNTING	
	•	'42	I	'73'	0.73	AS PREV./REMOVABLE HD./MOST UNPAINTED	
		'45	I	'73'	0.73	AS PREV./WRAP-AROUND EXHAUST/DULL GREEN WRINKLE PAINT	
		'45	1	·64·	0.647	73' CASE FOR PROTOTYPE/FLAT EXHAUST/ NO PAINT/ 11 CYLINDER FINS	400
•		'46	1	'64'	0.647	AS PREV./ SMALLER '64 CASE/ GREEN WRINKLE PAINT/THINNER HEAD	
		'46	1	·64·	0.647	AS PREV./WRAP-AROUND EXHAUST STACK GREEN WRINKLE PAINT	350
. с	UNNINGHAM	'46		ALL ORWICKS		BUILT BY CUNNINGHAM FROM THIS POINT	
•	*	'46	1	·64·	0.647	AS PREV./ROUND TIMER ARM BOSS/ GREEN WRINKLE PAINT	
•		'47	I	·64·	0.647	AS PREV./THICK HD./GREEN HAMMERTONE PAINT	400
	•	'47	I	*29*	0.299	SMALLER VER S.'64'/MID-GREEN FINISH	450
	•	'47	1	<b>'32'</b>	0.323	AS .29/ LONGER STROKE	
(CUNNING BANKRL	GHAM IPT IN '47)	'47	1	*23*	0.237	SAME CASE AS '.29'/SMALLER CYLINDER HEAD & SHAFT/VARIOUS COLORS OR NO PAINT/MANY SILVER-GREEN HAMMERTONE	650
(ORWICK RESI	LIMED PROD.)	'48	I	·64·	0.647	AS PREV.64/9CYL.FINS/THICK HD./SMOOTH GREEN FINISH/HAMMERTONE & WRINKLE	
		'48	1	BLUESTREAK 65	0.647	SIMILAR TO PREVIOUS .64 WITH NEW CASE BEAM MOUNTS & INTEGRAL INTAKE/BLUE HAMMERTONE PAINT/2 SPEED OFFERED	
PIERSON 8	& S CO. L STEFFAN)	'48	G	GLOW STREAK '65'	0.647	AS BLUE STREAK CASE/NO TIMER PROV- ISION/MACHINED FINLESS HEAD/ SOLD BY P & S CO.	
		'50	G	*29* GLOW	0.299	AS PREV. 29/INEGRAL EXHAUST STACK & INTAKE/DULL DARK GREEN ANODIZED/NO MACHINING FOR TIMER	
		'51	G	*32* GLOW	0.323	AS PREV. 29/LONGER STROKE/LIGHT BLUE OR GREEN ANODIZED	
		'51	G	'29' GLOW	0.299	AS PREV. 29/NEW ALUMINUM PROP DRIVE/ LIGHT GREEN IRIDESCENT ANODIZED	175
	NOTE:			ALL ORWICKS		OTHER COLORS USED RANDOMLY THRU'OUT	
	· NOTE:			ORWICK/JOHNSON		ORWICK ASBORBED INTO JOHNSON FROM '55	
PACEMAKER E	AND THE PERSON OF THE PERSON O		-		_	FIRST MFD.BY CAPITAL MFG. COCLOSE-OUT SALE IN '48 BY GOTHAM HOBBY CO.	
		'46		PACEMAKER	0.594	SAND CAST MAG./SMOOTH EXTERIOR CASE/REAR TIMER AND CARB/BALL BEARING CRANK/NAME DIAGONALLY ON CASE	250



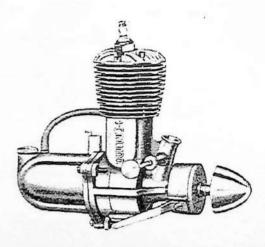
PACEMA	AKER - CONTI	NUED	'47	I	PACEMAKER	0.594	SIMILAR TO PREV. DIE CAST MAGNESIUM WITH RIBS ON CASE & FRONT BEARING/ NAME VERTICALLY ON CASE	190 - 225
•			'48	I/D/G	PACEMAKER	0.594	AS PREV./GLOW & IGNITION KIT SELL-OUT BY GOTHAM HOBBY CO./MENTIONED IS ALSO A DIESEL VERSION (NONE SEEN)	
PAGCO (ALS	O SEE POGO)			-			MFD. BY PAGLIUSO ENGINEERING FROM 'ANDERSON' HORNET .09	
•			'59	G	PAGCO CAR	0.091	DIRECT DRIVE & FLYWHEEL ON SHAFT/ONE MTG.LUG GROUND OFF/MTG. WITH PLATE CLAMPED TO BACKPLATE/ 'PAGCO' NAME	40
•			'59	G	"XF-D9"	0.091	AS ATHEARN 'POGO'/'PAGCO'NAME/ THREADED CRANKSHAFT	
	*		'59	G	PAGCO XF 9	0.091	MOD. FROM POGO/PAGCO NAME ON EXH.THROTTLE/BEAM MTS./ALUM.FLAT HD.	
*			'60	G	PAGCO XF 9	0.091	REDESIGNED POGO/ANDERSON SPITFIRE 'HORNET' HEAD	45 - 50
			'60	G	PAGCO XF 9	0.091	DOMED & BLUE STEEL PLUG IN TOP OF CYL	
			'61	G	PAGCO	0.091	AS PREV./BLUE OR NATURAL ALUMINUM HEAD INSERT	
			'61	G	PAGCO	0.091	AS PREV./SHORTENED INTAKE/COMBO STEEL CYLINDER & HEAD	
			'62	G	PAGCO XF 9	0.091	DOMED ALUM.PLUG IN CYLINDER HEAD	
	N	OTE:	'63	G	PAGCO XF 9	0.091	NUMBER OF MODS/BEAM & RADIAL MTG.	
	INEERING LTD LEBEDA)	•	'50	1	PAL '55'	0.552	SAND CAST CASE/INLINE ALTERNATE FIRING TWIN/REAR IGNITION/APPROX. 50 MFD./LAPPED PISTON	
•	•	*	'51	G	'55' G	0.552	AS PREV./IGNITION REMOVED/FEW MFD.	
		•	'51	G	*55' G R/C	0.552	AS PREVIOUS/THROTTLE CONTROL CARB. ADDED/ FEW SOLD	
		•	'53	G	*110°	1.104	4 CYLINDER/2 CYCLE/EXTRA COST COWL SOLD TO PREVENT REAR CYLS.OVERHEATING	
		•	'53	G	55 MARINE	0.552	INLINE TWIN/WATER COOLING JACKET	
		*	'54	G	PAL 4 MARINE	1.104	4 CYLINDER/WATER COOLING JACKET	
•		NOTE	'73		PAL	-	ADVERTISED OPPOSED TWIN/INLINE 4/ OPPOSED 4/OPPOSED 8 - PROD.UNKNOWN	
PEERLESS AIRPL	MODEL ANE CO.		'35	1	PEERLESS	1.122	LARGE SINGLE CYLINDER (REF. 'JOURNAL')	
PEE WEE	DALL ATT					_	MFD. BY DALLAIRE MODEL AIRCRAFT	
(FRANK	( DALLAIRE)		'38	1	PEE-WEE	0.110	FORERUINNER OF MARVIN/SAND CAST ALUM. CASE-VENTURI & TIMER/SAND CAST IRON CYLINDER/MACHINED ALUMINUM TANK/ 3/8° PLUG	
			'38	1	PEE-WEE B	0.141	BORED OUT VERSION OF PREV.PEE WEE TRANSPARENT TANK/ 1/4" PLUG	



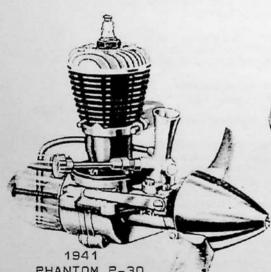
DEC MEET CO.	2-07-0					
PEE WEE - CONTINUED	'39	1	PEE-WEE B	0.141	PERMANENT MOLD CASE & VERTURI/ BACKPLATE BOLTS ON/NO HEAD FINS	
" " NOTE	: '40	-			CONTINUATION OF PEE-WEE UNDER 'MARVIN MFG. CO.'	
PERKY	_				MFD.BY BAYCRAFT MINIATURES MOTORS AND VICTORY MACHINE & TOOL CO.	
	'40	ı	PERKY	0.191	VERTICAL SPARK PLUG/UNIQUE VERTICAL SPECIAL METAL MOUNTS/ CLAPPER OR 'FLUTTER VALVE' INSERTED INSIDE CRANK- CASE ATTACHED TO UNUSUAL DOWN- DRAFT CARBURETOR/AIR BLEED THROTTLE	
	'41	I	SUPERCHARGER 'A'	0.191	AS PREVIOUS/BACKSWEPT SPARK PLUG UPDRAFT AIR BLEED WITH DIFFERENT CARBURETOR ARRANGEMENT	
	'41	I	SUPERCHARGER 'B'	0.232	AS 'A' WITH LONGER STROKE	
	'41	1	SUPERCHARGER 'C'	0.609	SCALED UP VERSION OF 'A'/NONE SEEN	
•	'46	I	PERKY 19'	0.191	AS SUPERCHARGER 'A'/IMPROVED TIMER WITH TIMER & THROTTLE ARMS HAVING BALL ENDS OF PLASTIC	185
	'62	1	PERKY 19'	0.191	SOLD BY J.A. THOMPSON N.Y. SAME AS 'SUPERCHARGER A'/VERTICAL PLUG AND HEAD OF 1940 TYPE/T.A2' ON CASE	
	'62	1	PERKY '19'	0.191	SAME AS 'SUPERCHARGER A' - 1940 WITH SLANT PLUG HEAD/T.B2' ON CASE	
	'62	1	PERKY "19"	0.191	SAME AS 1946 PERKY WITH T.C2' ON CASE	
PHANTOM MOTORS (HI-SPEED DIV.) (BILL ATWOOD DESIGNS)	_	_		_	ALSO KNOWN AS HI-SPEED MOTORS - HI-SPEED DIVSOME CONFUSION STILL EXISTS IN ENGINE MODELS	
	'38	ı	PHANTOM		ORIGINAL 'BULLET'ROUND BACKPLATE/2 BOLT CYL. ATTACHMENT/ROUND EXHAUST PORT/SERIAL # ON CRANKCASE/SEPERATE PLATED TANK/ 3 CYLINDER FINS	
	'38	I	PHANTOM	0.275	AS PREV./AIRFOILED EXHAUST/4 CYL.FINS	
	'38	1	HI-SPEED	0.275	AS PHANTOM/'HI-SPEED' CAST INTO BY- PASS/PLUG OFFSET & ANGLED/BLUE	
					PAINTED CASE ON SOME	
WASP MODEL SUPPLY	'39	1	PHANTOM SPECIAL	0.275		
WASP MODEL SUPPLY	'39 '39	I			PAINTED CASE ON SOME  CAR PHANTOM/ ALSO SEE 'WASP MODEL	
WASP MODEL SUPPLY			SPECIAL	0.275	PAINTED CASE ON SOME  CAR PHANTOM/ ALSO SEE 'WASP MODEL SUPPLY'	
WASP MODEL SUPPLY	'39	I	SPECIAL HI-SPEED HI-SPEED	0.275 0.298 0.275	PAINTED CASE ON SOME  CAR PHANTOM/ ALSO SEE 'WASP MODEL SUPPLY'  AS PREV. 'HI-SPEED'/4 BOLT CYLATTACHMT.  NEW CASE/FRONT ROTARY/BLACK WRINKLE PAINT/3 BOLT CASE COVER/TORPEDO' ON BYPASS/4 HEAD BOLTS - 8 BOLTS ON LAST	



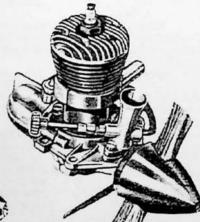
1940 PHANTOM BULLET '27'



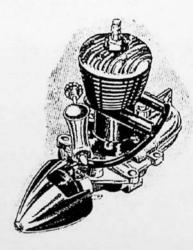
1940 PHANTOM TORPEDO '29'



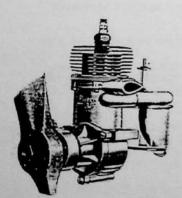
PHANTOM P-30



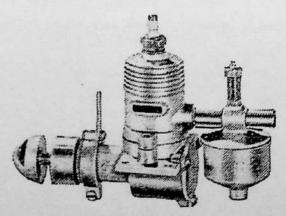
1946 PHANTOM P-30



1947 PHANTOM P-30

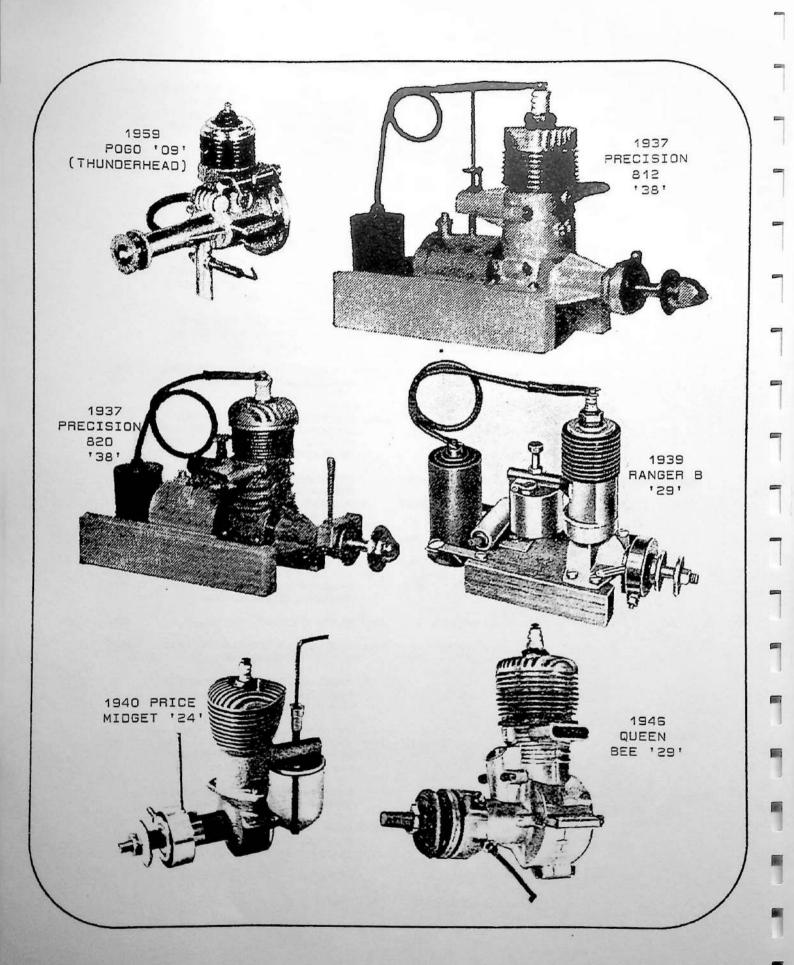


1946 PIERCE SUPER J '29'



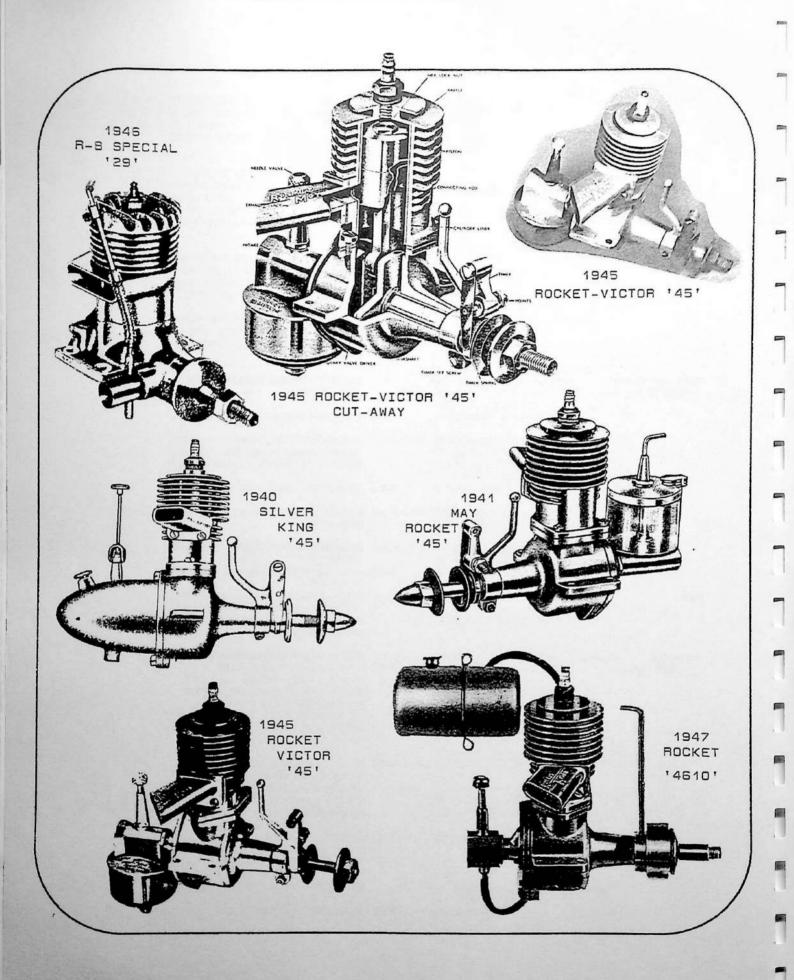
1941 PIONEER BROWN '29'

PHANTOM - CO	DNIINU	ED	'40	ľ	PHANTOM 'BULLET'	0.275	AS PHANTOM-G/'PHANTOM MOTORS' ON BYPASS/TANK ATTACHES TO MTG. RING BETWEEN CASE & REAR COVER/BLACK OR RED WRINKLE PAINT - ALSO UNPAINTED	133 - 175
			'40	ı	PHANTOM TORPEDO'	0.298	AS PREV.TORPEDO/TANK MOUNTS AS PREV. BULLET/TANK FLOAT GUAGE/BLACK OR RED WRINKLE PAINT - ALSO UNPAINTED/ SOME LATE MODELS HAD WEB BETWEEN CASE AND MOUNTING LUGS	165
•		NOTE:			BULLET/TORPEDO		SOLD BY MINIATURE MOTORS CO. INC. FROM 1946 THRU! 1950 - SEE LISTINGS	
	•		'41	I	PHANTOM P-30°	0.295	SINGLE DETACHABLE EXHAUST STACK FLAT PISTON-NO DEFLECTOR/'A' SERIES ENGINES HAD ALUM. CASE/ 'AA' HAD HEAVY POT METAL CASE	
•		NOTE:	'44			-	ENTIRE STOCK OF P-30 PARTS SOLD TO 'HOBBYCRAFTS' BY WETZEL MOTORS OF LOS ANGLEES IN MID-1944	
	•		'46	I	PHANTOM 'P-30'	0.298	TWIN DIE CAST BOLT ON STACKS/BORE CHANGED/SERIAL #'s START WITH 'B'/ (SOME 'AA' OVERSTRUCK)	150
	•		'47	1	PHANTOM 'P-30'	0.295	TWIN TUBULAR STACKS PERMANENTLY BRAZED ON/ALUM.CASE/SPINNERS SPUN OR DIE CAST ALUM./SHINY BLACK PAINT ON CYLINDER	295
PIERCE INDUST	RIES		-	_			(LOOK-A-LIKE TO FORSTER 29 WITH PIERCE NAME STAMPED ON FRONT) GLO-CHAMP DISTR.BY MERCURY MODEL AIRPLANE COMPANY	
			'46	1	PIERCE 29R	0.297	REAR ROTARY/UNPAINTED FINS/BLACK PAINTED HEAD/ENCLOSED TIMER/SIDE- PORT BOSS/'PIERCE' NAME ON FRONT	175
•			'46	1	PIERCE SUPER J	0.297	SIDEPORT/MADE FROM SAME CASE CAST. NO HEAD FINS/ENCLOSED TIMER/PLASTIC FORSTER 99 SIZE TANK UNDER INTAKE	150
			'47	I	PIERCE J	0.297	AS PREV. SIDEPORT/BLACK FINS/ KIT	150
			'47	1	PIERCE R.	0.297	AS '46 MOD. R/REAR ROTARY WITH HEAD FINS/KIT/ALSO MODEL WITH 2-SPEED TIMER	150 - 160
			'48	I/G	PIERCE GLO-CHAMP	0.297	AS PREV./ONE PIECE CYL./SIDEPORT/METAL TANK/KIT OR ASSEMBLED/IGNITION OR GLOW MODEL	
PIONEER BROW	/N		<del>-</del> '41	ī	PIONEER BROWN		SOLD BY BILL BROWN OUTSIDE JUNIOR MTRS. SIMILAR TO EARLY ROGERS/KIT/ PIONEER BROWN' STAMPED ON CYLINDER HEAD & REAR CRANKCASE COVER	90
POGO (ALSO SEE P	AGCO		_	_		_	BUILT BY PAGLIUSO FOR ATHEARN/SOLD BY PIONEER MODELCRAFT IN REGULAR AIRCRAFT VERSION(APPRX.1100 POGO'S BLT.)	
			'59	G	POGO .09	0.091	FROM MOD.SPITFIRE'HORNET'DIES/FOR PLASTIC READY FLY/'POGO' NAME/ THROTTLE IN EXH./NO MOUNTING LUGS	

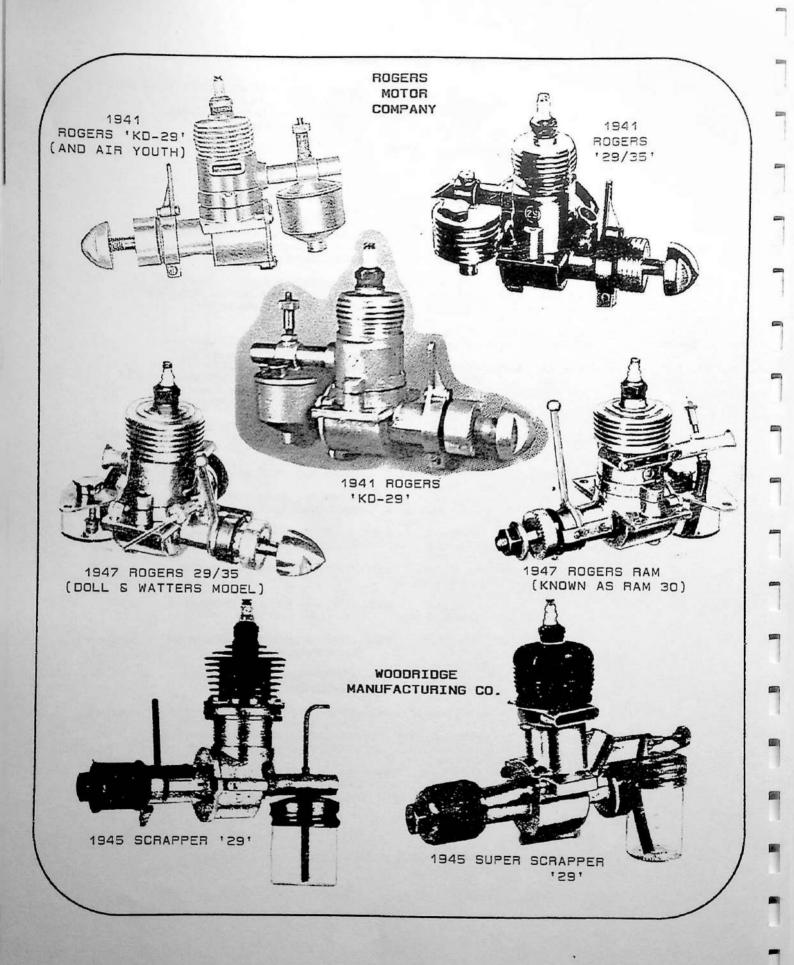


POGO - CONTINU	LIED	'59	G	POGO .09 (THUNDERHEAD)	0.09	1 AS PREV./ BEAM MOUNTS/REGULAR PLUG EXHAUST THROTTLE/SOLD BY PIONEER
		'59	G	POGO .09 (THUNDERHEAD)	0.09	1 AS PREV./NO EXHAUST THROTTLE/ SOLD BY PIONEER
PRECISION MAC	HINE WKS.	 '37	1	PRECISION 812	0.387	CONFUSED WITH PRECISION MOTORS  5 SQUARE FIN HEAD/MTG. RADIAL OR LUGS/ SIDEPORT/DIE CAST VERTICAL SPLIT ALUM. CAST/STEEL CYL. & MACHINE FINS/METAL 'CAN' TANK (PRODUCTION QUESTIONABLE REF. 'JOURNAL')
	•	'37	1	PRECISION 820	0.387	ROUNDED HIGH FINNED BOLT-ON HEAD/ SIDE PORT/BEAM MTG,/GREEN PAINTED CASE/SPLIT VERTICAL/ENCLOSED TIMER/ ALLOY MACH.FINNED CYL. (FEW MFD.)
•		'37	1	PRECISION ?	?	ENGINE NOTED WITH PHOTO IN'JOURNAL' IDENTIFIES PRECISION 820 'TYPE' WITH UPDRAFT FRONT ROTARY! 820 NOTED AS SIDEPORT
PRECISION MOTO (JERRY SMITH)	ORS	_				USUALLY CONFUSED WITH PRECISION MACHINE WORKS
		'39	I	RANGER 'A'	0.208	UNKNOWN INFO. OR PRODUCTION
	•	'39	1	RANGER 'B'	0.292	VERY CLOSELY COPIED BROWN IN MINIA- TURE/ENCLOSED TIMER/SPUN ALUM.TANK MOUNTED UNDER INTAK/SAND CAST CASE
		'39	1	RANCER 'C'	0.363	SIMILAR TO 'B'/ BORED & STROKED
		'43	I	RANGER '16'	0.164	SIMILAR TO 'LYKENS BROWN' WITH METAL HANG TANK
		'46	1	RANGER 'C'	0.363	SAME AS PREWAR MODEL NO DIST.MARKS
	•	'46	I	RANGER 'B'	0.292	SAME AS PREWAR MODEL NO DIST.MARKS
PRICE		'40	1	MIDGET	0.243	SAND CAST BLACK MAG. CASE/STREAM- LINED CYL. & HEAD FINS-POLISHED/SIDE PORT/ROUNDED EXHAUST HOLES/SIMILAR TO EARLY BANTAM
QUEEN BEE (CANADIAN)		'45	1	'QUEEN BEE' 24		MFD. BY SALONEN BROS., VANCOUVER LOOKS LIKE K&B-3 BOLT CASEWITH RADIAL & BEAM MTG./ EXHAUST PORT PART OF CASE/COMPOSITE MEEHANITE LOWER SECTION WITH ALUM. UPPER SECTION & FINNED HDATTACHED TO CASE WITH 2 BOLTS/APPROX. 50 MFD./REAR MTD. PLASTIC TANK
		'46	Ĭ	'QUEEN BEE' 29		AS PREV./INCREASED STROKE/CASE DIA. INCREASED/BYPASS ENLARGED/SQUARED OFF HD./SERIAL #'s TO 200/BAL. HAD NO SERIAL #'s/WEST COAST SPEED RECORD HELD BY SALONEN OVER 100 MPH IN 1947
		'47	1	'QUEEN BEE'		AS PREV./MACHINED ALUM. COLLAR REPLACED TIMER/ THREADED POCKET FOR TANK MOUNTING ELIMINATED
	NOTE 1			DIESELS		A VARIETY OF PROTOTYPES-NO PRODUCTION
	NOTE 2			IGN.& GLOW 60	0.607	PROTOTYPES - NO PRODUCTION

a a a

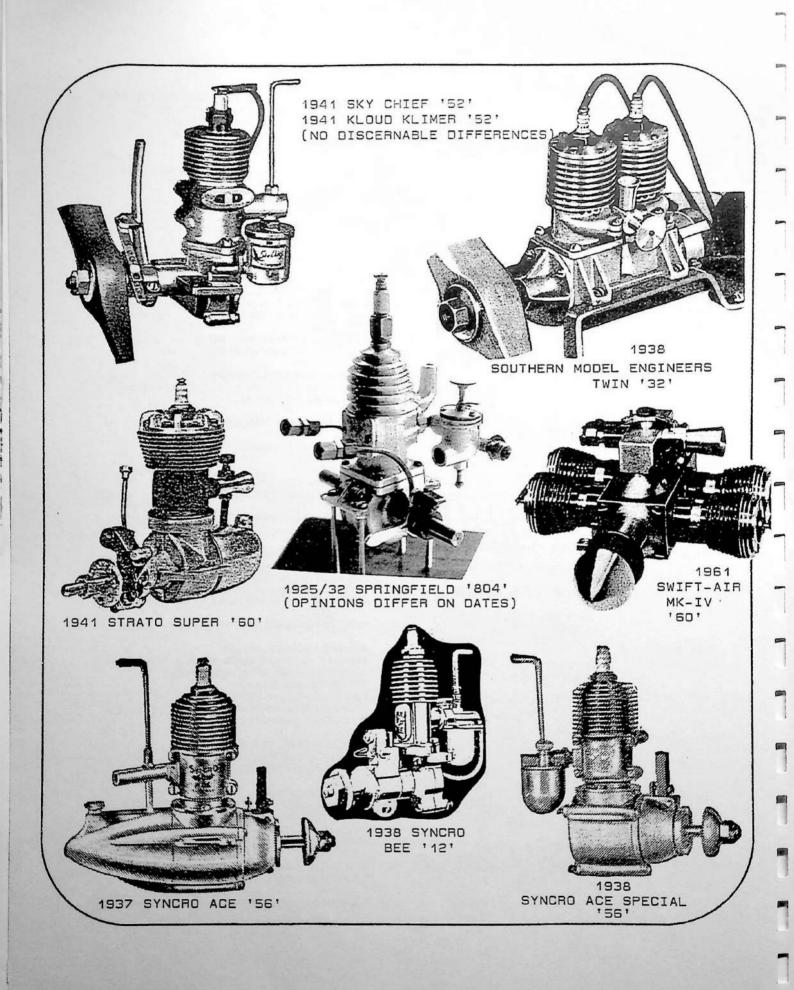


R. B. STEELE MACHINE CO. (STEELE IS 'S' OF PREWAR DELONG&STEELE ENGINES)	'46	1	RB SPECIAL	0.299	SOLD BY CENTAVE MFG. FROM 1952 SIDE DRAFT INTAKE LIKE CANNON/ BALL BEARINGS ON SHAFT/SHEET METAL TIMER ON REAR OF SAND CAST CASE	
	'47	I	RB - C	0.362	SIMILAR TO RB SPECIAL/STROKED 29	
	'50	G	RB SPECIAL	0.299	RB LESS TIMER/ FEW PRODUCED	60
NOTE:	-				ONE-OFFS PRODUCED FOR VARIOUS MODELERS - DEBOLT REMADE ONE INTO RINGED MODEL FOR SPEED - HE OWNED 3 - ONE IN THE MODEL - ONE ON THE WAY TO THE FACTORY - ONE ON THE WAY BACK FROM THE FACTORY!	
ROBAR	 '52	G	ROBAR '60'	0.605	MFD. BY AERO TOOL CO. RACING/SIMILAR TO HORNET/SLEEVE VALVE UNIQUE MEGAPHONE ENHAUST/ 45 UPDRAFT REAR INTAKE	
ROCKET	-	-			MFD. BY MAY MOTORS '40-'45 AND CORP. PROD. '47 (SOLD OFF IN 1952 BY LITTLE MIKE MARX TOY CO. AT \$3.95)	
	'40	1	MAY MOTOR	0.273	SAND CAST/SMALL SINGLE HOLE MTG. LUGS/NO EXH. STACK/STREAMLINED TANK ATTACHED TO BACKPLATE WITH 2 SCREWS	
	'40	I	SILVER KING		VENTURI INSIDE TANK TO PROMOTE CLAIM OF 'LIQUID COOLED CARBURETION'/ 'MAY MOTORS' ON EXH. STACK/AIR INTAKE IN BOTTOM OF STREAMLINED TANK/ FIRST ACTUAL 'ROCKET' STYLING/VARIOUS N.V.'S	
	'40	I	SILVER KING 'H' RACE CAR	0.453	AS PREV./EXH. STACKS POINT FORWARD/ SMALL BRASS CARB NO TANK	
	'40	I	SILVER KING 'G' MARINE	0.453	AS PREVIOUS/WATER COOLING JACKET AROUND CYLINDER	
	'40	I	SILVER KING 'H' RACE CAR	0.453	AS PREVIOUS 'H'/THICKER MTG. LUGS	
	'40	1	SILVER KING 'G' MARINE	0.453	AS PREVIOUS 'G'/THICKER MTG. LUGS	
	'41	1	MAY ROCKET	0.453	AS PREV. SILVER KING/PLASTIC TANK ON TOP OF INTAKE TUBE	
	'44	I	MAY ROCKET	0.453	AS PREV. 'MAY MOTORS' ON EXHAUST' STACK/AMBER PLASTIC TANK	
	'45	1	ROCKET-VICTOR		AS PREV. PLASTIC TANK UNDER VENTURI/ 'ROCKET MOTORS' ON EXHAUST STACK SOME MODELS HAS SET-SCREW IN BOTTOM OF CASE TO CONTAIN MAIN BEARING	110 - 140
	'47	I	ROCKET 4610		ENCLOSED TIMER/TANK SEPARATE - USED CAR CARB FLOAT BY AUTOLITE/HEXAGON CARB HOUSING FOR VENTURI	120

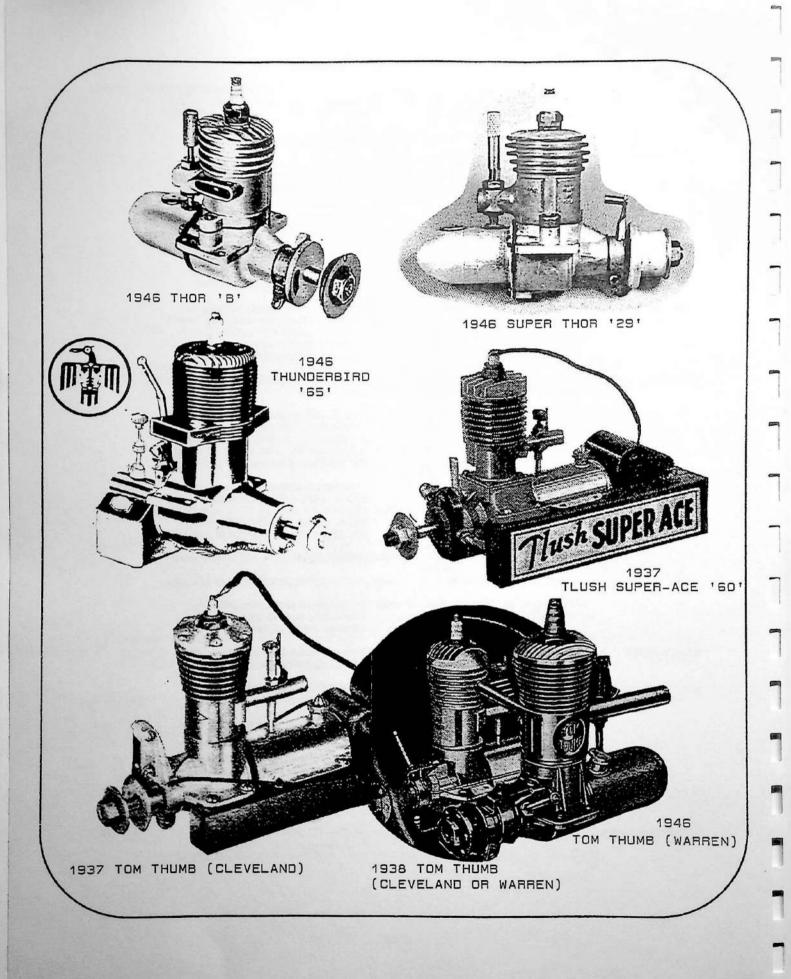


ROGERS MOTOR CO.	'41	ı	'KD-29' 'AIR-YOUTH' 29	0.292	2. SIDEPORT/ASSEMBLED & KIT/ALL ROGERS' SLAG TYPE CONSTRUCTION - ALUM.PISTON RUNNING IN ALUM. CASTING (SPLIT HORL- ZONTALLY)WITH BULB SHAPED CYL.& HD.	45 - 85
	'41	1	.59.	0.292	2. SIMILAR TO KD-29-NEW LOWER CASE FRONT ROTARY/TANK ON FAKE SIDEPORT '29' ON BYPASS/MACHINED FINS ON TANK	60 - 85
	'41	1	'35'	0.352	AS '29'/ '35' ON BYPASS/ BORED OUT	
	'42	ı	'RMC-2'	0.292	IDENTICAL TO KD-29 EXCEPT 'RMC-2' STAMPED ON BYPASS & A2 ON ONE LUG/ IT WAS ASSEMBLED/NO FINS ON TANK OR PROP DRIVE	55
' (ROGERS MOTOR CO. DETROIT,MICHIGAN)	'46	I	*29*	0.292	AS .29/FRONT ROTARY/STUB REAR AIR IN- TAKE-FLARED/'WIPE' TIMER/NEW CYL.FIN SHAPE/SEPARATE PLASTIC TANK	45 - 95
	'47	ı	'RAM'	0.292	LONG REAR VENTURI/MAKE & BREAK TIMER/'RAM' STAMPED ON BYPASS	45
' (DOLL & WATTERS MFG. CO., PINCKNEY, MICH.)	'48	1	'29'	0.292	AS '46-29/ NEW TIMER ASSEMBLY	
	'48	1	'35'	0.352	AS LAST '29'/ '35' ON CASE	
	'48	I	'RAM'	0.292	AS LAST RAM/ NEW TIMER ASSEMBLY	
SABER (CALIF.)	'48	Ī	4 CYCLE	,C,	BALL BEARING/ FLYWHEEL/ADVERTISED (REF. 'JOURNAL')	
SAMPSON	'51	G	SAMPSON 30	0.297	MADE WITH PIERCE CRANKCASE (GREY)/ SIDEPORT & REAR DISK ROTARY/FEW MFD.	
SCARABE	_ '40		'29'	0.299	MFD. BY CENTURY PACIFIC CO. PRODUCTION UNKNOWN	
scour	_	-			MFD.BY GARFIELD PROGRESSIVE DIE CORP.	
	'49	I	SCOUT 61	0.609	NEARLY 15 YEARS AND ONLY WITHDRAWN FROM SALE IN 1964 FOR LACK OF DEMAND! RACING/SPEED BOATS & U.C. CARRIER SAND CAST/ REAR ROTARY VALVE	600
	'49	I	SCOUT 65	0.649	AS PREVIOUS/ LARGER BORE	
SCRAPPER	_			_	MFG. BY WOODRIDGE MFG. CO. SAME OWNER STARTED STENMOOR MFG. COMPANY (BOBCAT) AFTER BANK CLOSED WOODRIDGE (REF. 'JOURNAL')	
	'45	1	SCRAPPER		SAND CAST CASE & FRONT END/ FRONT OPEN TIMER/BLIND BORED CYL. AND HEAD/ PLASTIC TANK UNDER REAR INTAKE	
	'45	1	SUPER SCRAPPER	0.291	REAR TIMER/HEAD FINS/BLACK CYLINDER UNIQUE REAR INTAKE SYSTEM - APPEARS TO BE PERKY 'FLUTTER VALVE'/FEW MFD.	
SKY CHIEF	<u>-</u> '39		SKY CHIEF	0.526	MFD.BY AMERICAN SUPERCRAFT CORP. SINGLE EXHAUST HOLE/ LAPPED PISTON SIMILAR TO 1ST MODEL DENNYMITE/DIE CAST CASE/PLASTIC TANK UNDER VENTURI/ UNMARKED BYPASS	
	'40	1	KLOUD KLIMER	0.526	AS SKY CHIEF NO DISCERNABLE DIFFERENCE NO SKY CHIEF DECAL ON TANK/FOR 'SEARS'	
	'41	1	SKY CHIEF	0.526	DOUBLE EXHAUST HOLE/ RINGED PISTON	160 - 275

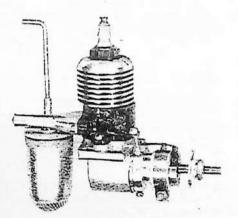
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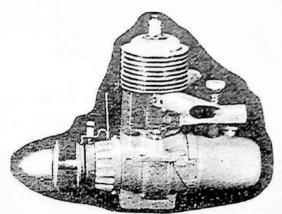
SKY CHIEF - CONTINUED	'41	1	KLOUD KLIMER	0.526	AS SKY CHIEF/NO DISCERNABLE DIFFERENCE EXCEPT POSSIBLE LACK OF NEEDLE VALVE TENSION WIRE (REF. 'JOURNAL')/FOR 'SEARS'	
•	'41	I	SKY CHIEF JR.	0.198	B EXISTS BUT NONE SEEN	
SNYDER-BLITZEN	'39	I	SUPER BLITZEN 29	0.292	SAND CAST CASE/SIDE INLET SIDEPORT/ STREAMLINED METAL TANK UNDER INTAKE/ STEEL CYL.WITH 'STAKED ON'ALUM. HEAD/ HURLEMAN TIMER (25 BLTREF. 'JOURNAL')	
	'39	1	SUPER BLITZEN 35	0.343	AS PREVIOUS/INTAKE LARGER/BORED OUT	
SOUTHERN MODENGINEERS (R. CHUNN DESIGN)	'38	1	ALT.FIRING TWIN	0.326	SEE ALSO CHUNN MANUFACTURING UPRIGHT IN-LINE TWIN ALL SAND CAST/ SIDE PORT/CENTER CARB. REAR TIMER	
SPEED DEMON			20.00		MFD. BY EASTERN MODEL ENGINEERING	
•	'47	D	SPEED DEMON DIESEL	0.296	ALUMINUM MACHINED FROM BAR/UNIQUE COMPR.CHANGED WITH SLIDING SLEEVE BY LEVER ROTATING ANTI-CLOCKWISE/ NO CASTINGS/SOME MFD. AS .27 DISPL.	950
SPRINGFIELD	'31/34	I	SPRINGFIELD 99	0.997	SANDCAST - UNIQUE BOLT ON INTAKE AND EXHAUST	
	'31/34	1	SPRINGFIELD	0.804	SPLIT LOWER CASE&BOLT ON UPPER CYL. W/HOR FINS UP TO PLUG/SIDEPORT COMBO INTAKE & EXH./MODELS VARY WITH FRONT REAR TIMERS/DATES OF MFR.I.D.START 1925 (REF. 'JOURNAL' & B.BRAUTLECHT)	
STRATO					PRODUCTION CONTINUES OF CALLES	
(CANADIAN)					PRODUCTION CONTINUED IN CANADA AS EDUCATIONAL TOOLS DURING WAR YEARS	
(RANDALL BAINBRIDGE)	'41	1	SUPER 60	0.644	SPOKE FIN HD./LIKE AIR-O M.M./SIDEPORT FLARED INTAKE/DELCO TIMER/CAST IRON CYLINDER & HEAD/ROUND EXHAUST PORTS	
	'42	I	SUPER 60	0.604	AS PREV./ALLOY CYL.&. HD./FINNED HEAD	
•	'43	I	SUPER 60	0.604	SIMILAR TO PREV./FRONT ROTARY/FEW MFD.	
	'44	D	DIESEL	0.604	SIMILAR TO IGNITION/SIDEPORT/WITH CRANKCASE RELEASE/DETACHABLE EXHAUST STACK/ FEW MADE	
SUPERCHARGER	'46	I	·C·	0.604	TWIN EXHAUSTS, REAR DRUM ROTARY AND TIMER/PRODUCTION IN DOUBT	
SWIFT AIR ASSOCIATES ENGINE DIV.	'61	G	MK IV-4 CYL. (THROTTLE)	0.601	OPPOSED 4 IN-LINE/BAR STOCK CASE/ COX LINERS AND HEADS/ GOLD ANOD.	
	'61	G	MK 3 - 2 CYL. (THROTTLE)	0.301	OPPOSED TWIN/BAR STOCK CASE/ COX LINERS AND HEADS/ GOLD ANOD.	195
	'62	G	MK 2 - 4 CYL. (THROTTLE)	0.181	OPPOSED 4 IN-LINE/BAR STOCK CASE/ COX LINERS AND HEADS/ GOLD ANOD.	
	'62	G	MK 1 - 2 CYL. (THROTTLE)	0.099	OPPOSED TWIN/BAR STOCK CASE/ COX LINERS AND HEADS/ GOLD ANOD.	
SYNCRO DEVICES INC.	'37	1	ACE	0.562	DIE CAST STREAMLINED ENGINE REAR TANK INTEGRAL WITH CASE/ SIDEPORT BOLT ON EXHAUST STACK/CLOSED TIMER	550



SYNCRO - CONTINUED	'38	I	BEE	0.122	VERTICAL SPLIT DIE CAST CASE/OPEN TIMER/SMALL DIE CAST METAL TANK HUNG ON REAR INTAKE/OPEN TIMER	
	'38	1	ACE SPECIAL	0.562	SIMILAR TO ACE WITH SMALL DIE CAST METAL TANK HUNG ON REAR INTAKE/ 'SPECIAL' STAMPED ON MOUNTING LUG	
	'40	1	'B-30'	0.292	PRE ROGERS-BUZZ/IST ROGERS-TYPE/ 'SLAG' CONSTRUCTION/LARGE CASTING BELOW EXHAUST CARRIES SIDEPORT VENTURI/TANK OFFSET PLACING IT CENTERED ON REAR OF ENGINE/LAPPED OR ONE OR TWO RING PISTONS	90
	'40	1	'PC-2'	0.292	SIDEPORT/KIT ONLY/LAPPED PISTON/AS B-30 WITH DIFFERENT CYLINDER/ 'SLAG' CONSTRUCTION/ NO CYLINDER LINER	40
TALISMAN (BILL CUBITT)	'46	1	TALISMAN 60	0.604	SAND CAST/REAR ROTARY/HORNET STYLE/ NAME ON BYPASS/APPROXIMATELY 10 BLIILT (REF. 'JOURNAL')	
THOR ENGINE DIVISION OF AMERICA'S HOBBY CENTER	'46	1	THOR 'B'	0.292	DIE CAST CASE & STREAMLINED CYLINDER/ 'SLAG' ENGINE/SHEET METAL TIMER/ METAL TANK/KIT OR ASSEMBLED	
•	'46	I	THOR 'B'	0.292	AS PREV./LONG THIN NEEDLE VALVE AND SLIMMER TANK/HEAVIER TIMER	45 - 80
	'46	I	SUPER THOR	0.292	SIMILAR TO PREV./NEW CYLINDER WITH FILLETS AT INTAKE/DARKER COLOR (REF. 'JOURNAL')	
TARZAN (TONY GRISH)	'38	I	TARZAN	0.601	SAND CAST TIMER FRAME & CASE/ FABRICATED CYLCOPPER PLATED/NAME ON EXH. STACK/50 BLT(REF. 'JOURNAL')	
THUNDERBIRD	'46	1	THUNDERBIRD C		MFD. BY SCOTT MOTORS, INC. DIE CAST WITH TWIN STACKS/SUPERCHARGER IMPELLER/SPARK & MIXTURE CONTROLS AT REAR / FEW MANUFACTURED	
	'46	1	THUNDERBIRD	0.647	AS PREV. WITH THIN WALLED SLEEVE/ BORED OUT/MANY MANUFACTURED	
TLUSH SUPER ACE MOTOR COMPANY (FRANK TLUSH)	'37	I	SUPER ACE		TALL THINK HD.FINS/SPL.LIGHTENED FORD TIMER/HORIZONTAL 'CAN'TANK WITH 'V' BOTTOM/CAST MAG.CASE & CYL.HD./CAST IRON CYL./SERIAL # ON BYPASS COVER	700
TOM THUMB				_	REBRANDED BY BUNCH FOR CLEVELAND MODELS & WARREN SALES & SERVICE/ MODELS IDENTICAL TO BUNCH MODELS	
	'37	I	TOM THUMB	0.488	OF SAME YEAR AS '37 BUNCH MIGHTY MIDGET EXCEPT DIAMOND CLEVELAND EMBLEM STAMPED ON FRONT OF ENGINE	
	38	I	TOM THUMB	0.488	AS BUNCH MIGHTY MIDGET/TOM THUMB' ON BYPASS (CLEVELAND OR WARREN)	
	38	1	T.T. INVERTED	0.488	AS PREVIOUS/NAMES UPSIDE DOWN	
	46	I	TOM THUMB	0.451	AS '46 BUNCH TIGER AERO (WARREN)	170

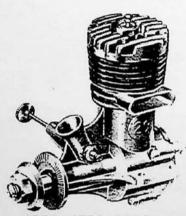


1938 TROJAN JR.'19'



1938 TROJAN SR.

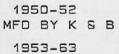
The ONLY engine that has



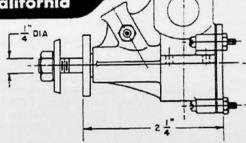
1950 VECO '29'



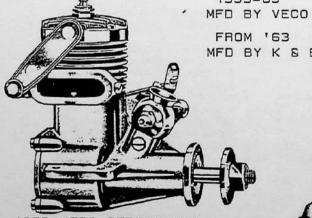
HENRY ENGINEERING CO. Burbank, California



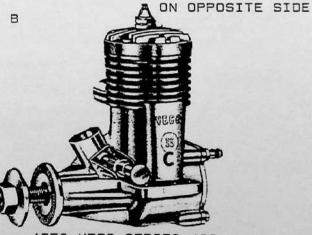
FROM '63 MFD BY K & B



1952 ADVERTISING 'T.C.C.' 1953 VECO HAD EXHAUST



1956 VECO SERIES 100 4-BOLT CASE/PLAIN BEARING 1958 -19 R/C IS SHOWN



1958 VECO SERIES 100 '35C' - COMBAT

TRIDENT	'46	I/G	TRIDENT 65	0.647	REAR ROTARY & TIMER/TWIN STACK EXH./ SAND CAST CASE/PROTOTYPE MFD.BY ZIP GRANDELL EX MINIATURE MOTORS/ALSO SHOWS RESEMBLANCE TO EARLY HASSADS WITH 5-BOLT REAR COVER FASTENING/ ALSO PRODUCED GEARED VERSION/ ALL VERY WELL MADE/BLACK WRINKLE PAINT	
	'48	G	TRIDENT 65	0.647	AS PREVIOUS/ NO TIMER PROVISION	
TROJAN MINIATURE PRODS. (HAL M. ATKINS)	'37	1	TROJAN JR.	0.192	SAND CAST CASE/BRAZED CYL./ALUM.CYL. FINS/FLAT HEAD/ROLLER BEARING SHAFT/ NO EXH. STACK/ 3/8" PLUG/RED PAINTED CYLINDER/ METAL HANG TANK	
	'38	I	TROJAN JR.	0.192	AS PREV./MACHINED HEAD FINS/ 1/4" OR 3/8" PLUG/ PLASTIC TANK OPEN TIMER	
	'38	1	TROJAN SR.	0.982	SAND CAST FINNED CASE/BALL & ROLLER BEARINGS/SIMILAR TO JR./SWEPT EXHAUST/ METAL BAFFLED TANK	
	'39	1	TROJAN 23	0.232	AS "JR"/SLIGHTLY LARGER/BLUE PAINTED CYL./SCREW-IN TUBUL.EXH./ENCL. TIMER	
VECO PRODUCTS COPR.		_	-		EARLY VECO'S BUILT BY K & B MFGLATER	
SUBSIDIARY OF HENRY	'50	G	VECO '29'	0.297	MFD.BY VECO - ABSORBED BY K & B - 60's SIMILAR TO K & B - 29/STEEL CYL. FINS/ MOTOR MTG. ON THRUST LINE/SMALLER EXHAUST/SQUARISH HEAD FINS/HEAVIER THAN K & B	
	'51	G	VECO '31'	0.319	AS'29'/'31' ON CASE/MOUNTING INTERCH.	
	'51	G	VECO '35'	0.348	AS '29'/ '35' ON CASE/MOUNTING INTERCH.	
* (START OF VECO MFG.)	'53	G	29 T.C.C.	0.298	NEW 3-BOLT CASE WITH CYLINDER FINS ABOVE EXHAUST FORMING SEPERATE ALUM. DIE-CAST SECTION BETWEEN CRANKCASE & HD./STEEL CYLINDER LINER/ MAJOR CHANGE FROM K & B MFG. IS EXHAUST ON OPPOSITE SIDE	60
	'53	G	31 T.C.C.	0.319	AS PREV. 29/ '31' ON CASE/MTG. INTERCH.	55
	'54	G	35 T.C.C.	0.348	AS PREV. 29/'35' ON CASE/MTG. INTERCH.	
	'56	G	SERIES 100 - 19	0.199	NEW 4-BOLT ONE PIECE CASE WITH BACK- PLATE / PLAIN BEARING SHAFT	30
	'57	G	SERIES 100 - 29	0.298	LARGER/ AS '19'/ '29' ON CASE	70
	'57	G	SERIES 100 - 35	0.348	LARGER/ AS '19'/ '35' ON CASE	
	'58	G	SERIES 100 - 35	0.348	AS PREVIOUS 35/BARREL CARB. WITH NO EXHAUST BAFFLE	
	'58	G	SERIES 100-19RC	0.348	AS PREVIOUS '19'/BARREL CARB.THROTTLE COUPLED TO EXHAUST WIPE RESTRICTOR	35
	'58	G	SERIES 100-29RC	0.298	AS PREV.'29'/THROTTLE & EXH.WIPE AS'19'	
	'58	G	SERIES 100-35RC	0.348	AS PREV.35/THROTTLE & EXH.WIPE AS '19'	
	'58	G	SERIES 100 - 35C (COMBAT)	0.348	VECO 'COMBAT'/'C' UNDER 35 ON CASE/ FACTORY PRESSURE TAP IN UPPER (BYPASS) LEFT SIDE OF BACKPLATE IN PLACE OF SCREW/INTERNAL TIMING & OTHER MODS.	

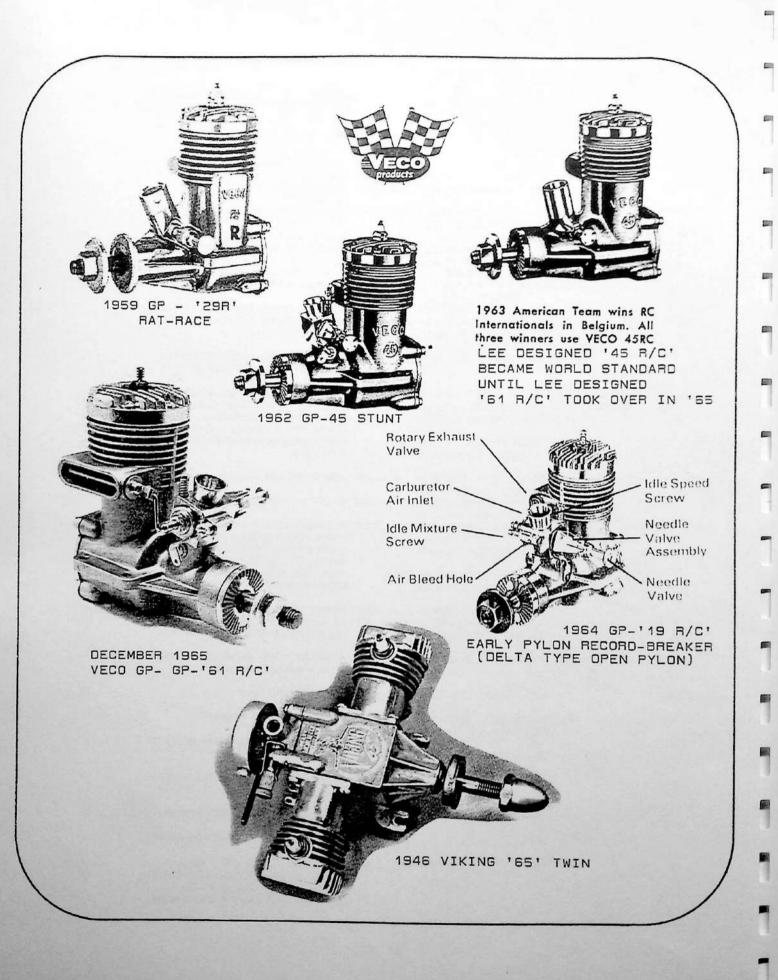
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VECO - CONTINUED	'59	G	GP 29R (RAT RACE)	0.299	VECO 'RAT RACE'/ 'R' UNDER '29' ON CASE/ REDESIGNED CRANKSHAFT	70
•	'59	G	GP 35A	0.348	VECO 'STUNT'/RE-PORTED/NEW VENTURI	
	'59	G	GP 29A	0.299	VECO .29 'SPORT STUNT'/ AS '35A'	
	'62	G	GP 45 STUNT	0.465	'GROWN-UP' VERSION OF 35A/BALL SHAFT/ LAPPED PISTON / BY 'LEE'	
	'62	G	GP 45 R/C	0.465	AS 45 STUNT/RE-DESIGNED 'BARREL' CARB. WITH NEW ROTATING EXH. RESTRICTOR/ THIS WAS A HIGH POINT IN R.C. DESIGN BY 'CLARENCE LEE' WHEREIN THIS ENGINE BECAME VIRTUALLY THE 'INTERNATIONAL STANDARD' FOR COMPETITION FLYERS/ALL BUT 2 OF FIRST 10 PLACES IN '63 WORLD R/C CHAMPIONSHIPS	45 - 85
	'63	G	GP 35C	0.348	NEW 'COMBAT'/NEW BEEFED-UP CASE/ CRANK TO 3/4'/WEB IN EXHAUST/BRONZE PLAIN BEARING/INTERNAL MODS. INCL. HARDER MOD. MEEHANITE CAST-IRON PISTON	70
* (RETURN TO K&B MFG.)	'64	G	GP 19	0.199	SIMILAR TO PREV. 19/HEAVIER CASE-EXTRA MATERIAL AROUND EXHAUST (FOR R/C RESTR.)/DOUBLE BALL BEARING ON SHAFT	60
	'64	G	GP 19 R/C	0.199	AS PREV. 19/NEW CARB AND EXHAUST RESTRICTOR AS 45 R/C	95
	'65	G	GP 61 R/C		SIMILAR TO 45 R/C/ SCALED UP IN APPEAR- ANCE INTERNAL DESIGN CHANGES INCL. 2 PISTON RINGS/MORE COMPLEX CARB. WITH AIRBLEED CONTROL COMBINED WITH 'AUTOMIX TYPE' CARB. BARREL/ HARD CHROMED CYLINDER SLEEVE/BRONZE BUSHED LOWER END	90
	'65	G	GP 45 R/C	0.465	AS PREV./CARB. BROUGHT UP TO 61 STD. WITH AIRBLEED MIXTURE ADJUSTABLE	
• VIKING (TWIN)	'46	ī	VIKING 65 (TWIN)		MFD. BY MacVAL ENGINEERING ALUM. DIE CAST RED ENAMEL CASE/RED ANODIZED TIMER/SIMULTANEOUS FIRING/ 2 SMALL HOLES IN BOTH FRONT & REAR OF OFFSIDE CYL. PROVIDING SUB-PISTON INDUCTION FOR THIS CYLINDER TO GO LEANER & EQUALIZE MIXTURE/ONE PIECE CYLINDER AND HEAD	210 - 325
	'48	G	WIZARD 65(TWIN)	0.647	AS VIKING/ POLISHED CASE AND IGNITION REMOVED	
	'64	I	VIKING 65(TWIN)	0.647	ASS'D BY D.SITTER FROM PARTS/MODELS HAVE SLIGHT VARIATIONS AND COLOR CHANGES	
VIVELL MOTORS (EARL VIVELL)	'44	1	CLASS C	0.347	SEE 1/2 A LIST CONTINUATION OF 'COMET 35' DESIGN FRONT INTAKE CADM.PLATED CYL./LONG CLOSED TIMER ARM/METAL HANG TANK/ MINOR VARIATIONS LE.TIMER & FLEX N.V.	

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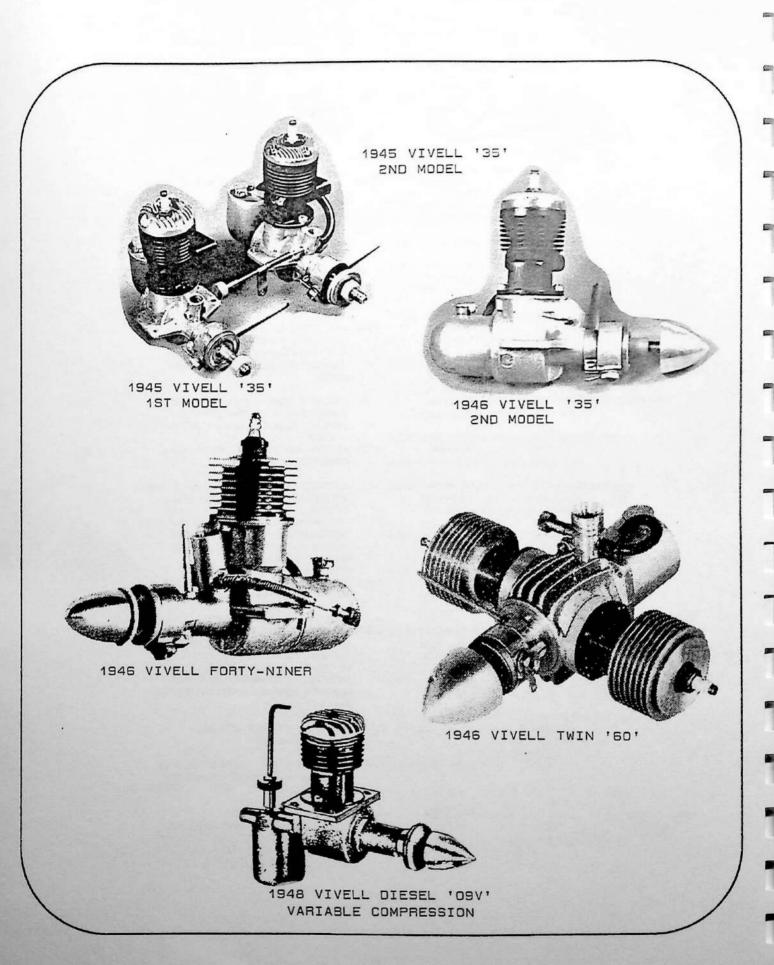
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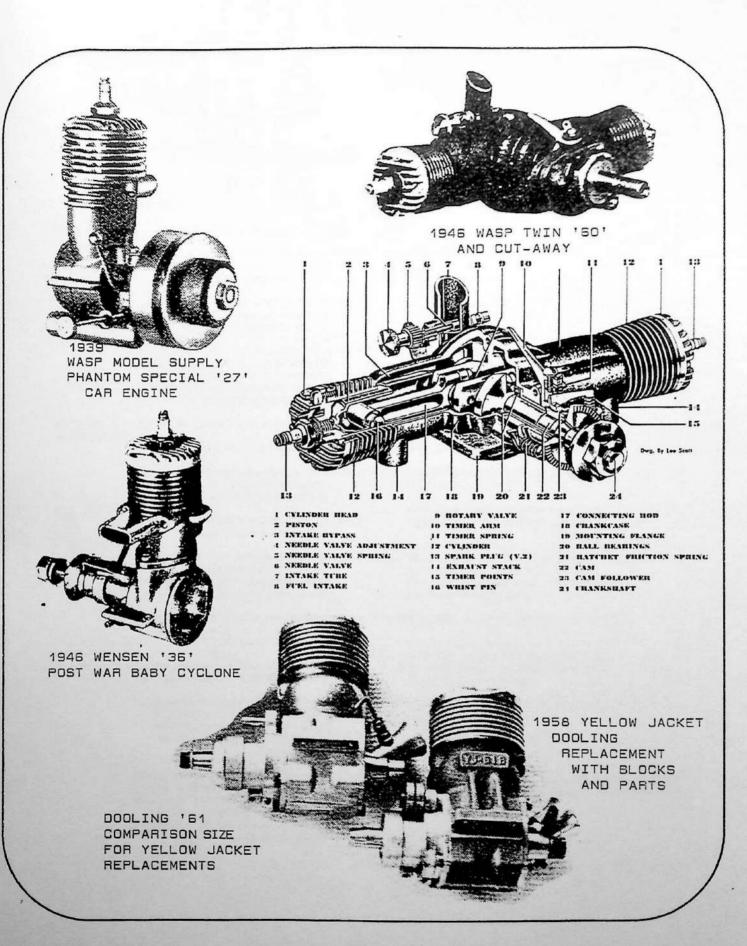
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VIVELL -	CONTINUED	'45	1	<b>.</b> 35.	NE VA	PREV./BLK.CYL./SMALL EXHAUST STACK W 'OVEN BRAZED' CYL.WITH BAKED RNISH COAT/MINOR VARIATIONS I.E. ST TIMER & BAFFLED PISTON	
		'45	1	.35.		PREV./BLK.CYL./LARGE EXHAUST STACK IAPED BYPASS/ NEW CASE	
•	•	'46	ı	<b>'35'</b>	STR	PREV./BLK.CYLINDER/LARGE EXHAUST/ PEAMLINED TANK MOUNTED ON BACK VER WITH SCREW/NEW CYLINDER HEAD	
		'46	I	·35·	0.347 AS	PREVIOUS/INTAKE CUT AT ANGLE	110 - 155
•	*	'46	I	FORTY-NINER	BOL	T TOPPED 1 PC. CYLINDER & HEAD/2 LTS HOLD CYLINDER TO CASE/SIMILAR THERMITE 49 BY JIM BROWN	350
	•	'46	1	FORTY-NINER	RE	PREV./ 4 BOLTS HOLD CYL. TO CASE VISED 8 CYL.FINS AS TOP 2 FINS COUNT SINGLE FIN/ (REF. 'JOURNAL')	
		'46	I	TWIN 60	CYL TIMI WIT	P CRANKCASE CYL.FINS/FLAT HEAD & FINS SCREW ONTO CYL. LINERS/OPEN ER/REAR MOUNT DOWNDRAFT CARB. H METAL TANK/4 BOLT MOUNTING INDERS TO CRANKCASE	
	•	'47	I	SUPER 35	0.347 LRG	BYPASS & EXH./STAMPED'SUPER 35"	140
V <b>a</b> :	•	'47	I	TWIN 60	0.596 AS	.60 TWIN/ CLOSED TIMER	
•	-1 <b>.</b>	'48	1	TWIN 60	CYL	PREV.TWIN .60 WITH MODERNIZED BLK. INDER & ALUM.FINNED HEADS/CLOSED IER/WITH OR WITHOUT TANK	
•		'48	D	DIESEL 09		ND CAST CASE & FRONT END/ FIXED MPRESSION/REAR ROTARY	
•		'48	D	DIESEL 09 V	PISTO LINE	IABLE COMPRESSION/WITH CONTRA ON IN HEAD INSTEAD OF UPPER CYL. FR (AS RECENT DAVIS DIESEL HD. TYPE)/ R ROTARY/'ALLEN KEY' ADJUSTMENT	
		'48	1	FORTY-NINER	INC	PREV. 49/LARGER EXH./VARIATIONS L. FINNED & FLAT HDSDIFFERENT ERS/ (REF. 'JOURNAL')	
		'49	D	VIVELL .09 G	0.098 AS. &TA	09 DIESEL/FIXED COMPR.HEAD DRILLED APPED FOR GLOW PLUG/REAR ROTARY	
		'49	D	VIVELL .09 G/II	SHA INTO CLC	PREV. GLOW/REUSED CRANKCASE AND AFT/FRONT ROTARY COVER SCREWS O CRANKCASE/REAR ROTARY PORT OSED (FACTORY PROD. UNKNOWN - -'JOURNAL')	
WASP MC (BILL AT	DDEL SUPPLY WOOD)	'39	ı	PHANTOM SPECIAL	INTI INTI CAS TIM	R CAR ENGINE/SAND CAST CASE WITH EGRALLY CAST FRONT ROTARY UPDRAFT AKE EXTENDED ALONG LOWER CRANK- SE TO REAR/FRONT NEEDLE VALVE & SER WITH ARM/FLYWHEEL/FINNED HEAD LIED TO CYLINDER	



	No. Co.							
(DEWITT T & JOHN			'46	ī	WASP TWIN	0.604	MFD. BY MICRO-MODEL COMPANY OFFSET OPPOSED TWIN/CASE SPLIT ON SHAFT CENTER LINE/5 SCREW CRANKCASE/ BOLT-ON HEADS/ REAR INTAKE/ FRONT TIMER/ BLACK WRINKLE PAINT	1100
	•		'46	1	WASP TWIN	0.604	AS PREV./BLACK WRINKLE PAINT ON MOST/ 6 SCREW CRANKCASE	450
			'46	1	WASP TWIN SPECIAL	0.604	AS PREVIOUS/BLACK WRINKLE PAINT/ 10 SCREW CRANKCASE	
			'47	I	SCOUT TWIN	0.604	AS WASP/RED-ORANGE CASE/FOR MAIL ORDER ONLY/24 SOLD BY MODERN MODELS	900
	**		'47	1	SUP.WASP TWIN	0.645	DIRECTLY OPPOSED CYLINDERS/NEW ONE PIECE CASE CASTING NO PAINT/REAR FACING PLUGS/REGTANGULAR EXHAUST PORTS/ RADIAL MOUNTING	1250
*	•		'48	G	WASP TWIN G	0.604	A FEW OF 6 & 10 SCREW TWINS MFD. AS GLOW/NO TIMER PROVISION/MACHINED HEADS FROM BAR STOCK	
	•		'48	1	SUP.WASP TWIN	0.645	AS PREVIOUS SUPER TWIN/ NEW CASE CASTING WITH ROUND EXHAUST PORTS/ SHAPED BYPASS/ FEW MADE	
WENSEN			'46	I	WENSEN '36'	0.359	SAND CAST UPDRAFT FRONT ROTARY POST- WAR IMPROVED COPY BABY CYCLONE	
*			'47	I	WENSEN '36'	0.359	AS PREVIOUS/ NEW HEAVIER CASTING/ NEW TIMER	180 - 320
WERNER			'60	G		0.245	5 CYLINDER RADIAL/FROM 5 - 049 COXES/ UNIQUE CASE - PRODUCTION UNKNOWN	
WILLARD			'36	<u> </u>	MIGHTY MIDGET	0.066	SOLD BY HUNGERFORD  SAND CAST REAR ROTARY (ALSO SEE 'NEW HURRICANE' IN 1/2A LIST).  THIS 'MIGHTY MIDGET' PROTOTYPE IS NOT RECORDED ON 1/2A LIST.	
			'38	I	WILLARD 19	0.198	SIMILAR TO MADEWELL MITE/REAR ROTARY	
YELLOW JAC	e((a)(	•	 '46/55	I/G	YELLOW JACKET		MFD. BY MODEL POWER COMPANY INDIVIDUAL MODIFIED DOOLINGS INCLUD. EARLY FOUR STROKE & CO2 EXPANSION AIR ENGINES - PROTOTYPE	
		•	'58	G	YELLOW JACKET		REPLACEMENT CAST CYLINDER BLOCK TO REPLACE DOOLING '61'S	
•			'59	G	YELLOW JACKET		CAST CYLINDERS FOR WATER COOLED MARINE '61'S	
	•		'60	G	YELLOW JACKET		UP TO 1977-VARIOUS MARINE & AIRCRAFT MODELS - FRONT OR REAR ROTARYS	

### ANDERSON'S BLUE BOOK

## SECTION II 1948 .....1965

# 1/2A COLLECTING OR MODERN AMERICAN 'SMALL ENGINE' COLLECTING

30 Years ago this format was laid down by John H. Krickel ..... 1/2A Collector Extraordinaire!

He guided this writer through nearly twenty odd years of 1/2A Collecting with his 049 Newsletters (1966 thru' 1968).

Subsequent articles by John, elsewhere, have increased 1/2A knowledge ..... many thanks are due!

The revolution in ignition components had already started with Rudolph Diesel who developed the glow plug to initially start his 'oil-burning' engine in 1897. More recent developments related to model engines were Howie and Heur's H & H 45 - Hot-Coil Ignition Engine ..... then Art Hasselback's converted spark plug with replaceable elements ..... and finally Ray Arden's 'Glo-Plug' (also with replaceable elements) ..... leading to what we recognize as the various 'Glo-Plugs' used throughout the world.

Elmer Larsen, a Boeing Airplane Company machinist, jumped the 'experts' by kicking off the miniature engine explosion with his Royal 05 in 1948 ..... just about the time that Boeing was ready to test Americas' XB-47! He used the Arden Glo-Plug released in late 1947. Elmers' Royal was aimed at kids and smaller models and quote, "turning them into model airplane enthusiasts ..... cutting down on juvenile delinquency" ..... a lofty principle assisted by his inexpensive \$10 engine. His Royal, although sold primarily into the Seattle, Washington area, probably helped inspire Lud Kading and Johnny Brodbeck (K & B) with their 020 Infant released in 1949 along with Mel Anderson and his 045 Baby Spitfire also released in '49.

The introduction of the more well known (Nationally) K & B and Mel Anderson's miniature engines selling for less money probably ended the aspirations of Elmer Larsen for increased production of his Royals.

Although 1/2A generally refers to 049 engines, I agree with John Krickel that line should really be a grey area with many 1/2A's growing into 051's - 065's - 070's and even their senior partners such as 09 Cubs and Foxes ... perhaps stretching to the Gilbert 11's ... all too closely related to be excluded!

Ardens with their capped timer locations and other (?) 09 conversions have not been included since they are really only quasi-glows (or diesel conversions - Arden) at best.

Marine and Car versions are not covered in depth and, hopefully, will have coverage in the 2nd Edition (1997?).

Please feel free to write and have us improve our 'Guide' since we know that no one is perfect, least of all this author.

I believe we have provided a comprehensive 'Guide' and look forward to your comments on how we stand now and improvements for the next edition.

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HUSTLER 13 WEN-MAC div/AMF	
HUSTLER '10' 5 FOX MFG. CO.	
INFANT 020 7 K & B MFG. CO.	
JIM WALKER 4 FIRECRACKER	
JOHNSON PRODUCTS 6	
K & B MFG. CO. 7	
LARSEN MFG. 8	
McCOY 8	
MAR FURY 7 K & B (ALLYN) MFG. C	0.
MEDALLION 4 COX MFG.	
MEL ANDERSON MFG. 1 ANDERSON (MEL) MF	G.
MIDJET 10 O & R CHEMINOL	
MITE - DIESEL 9 MITE MFG. CO.	
MITE-GLOW 11 O & R CHEMINOL/MIT	TE MFG. CO.
MITE MFG. CO. 9	
O K ENGINES 9	
OHLSSON & RICE CHEMINOL 10	

## CONTENTS & CROSS REFERENCE INDEX

NAME	PAGE	REFERENCE
PAGCO	11	
PAGLIUSO ENGINEERING CO.	11	PAGCO
PEE WEE	3	COX MFG.
PIONEER MODELCRAFT CO.	11	POGO
POGO	11	
ROTO-MATIC	13	WEN-MAC div/AMF
ROYAL 05	8	LARSEN MFG.
ROYAL SPITFIRE	1	ANDERSON (MEL) MFG.
SEA FURY	7	K & B (ALLYN) MFG. CO.
SHRIEK	2	ATWOOD MFG. CO.
SKY FURY	7	ALLYN & K & B
SPACE BUG	3	COX MFG.
SPITFIRE HORNET	1	ANDERSON (MEL) MFG.
SPITZY	1	ANDERSON (MEL) MFG.
STALLION	8	K & B MFG. CO.
STRATO BUG	3	COX MFG.
SUPER BEE	3	COX MFG.
SUPER CADET	2	ATWOOD MFG. CO.
TEE-DEE	3	COX MFG.
TESTORS	8	McCOY
THERMAL HOPPER	3	COX MFG.
THUNDERHEAD	6	GILBERT (A.C.)
THUNDERHEAD 'POGO'	11	POGO (PIONEER)
TORNADO	8	K & B MFG. CO.
TORPEDO	7	K & B MFG. CO.
VIVELL MOTORS	12	
WASP	1	ATWOOD/HOLLAND
WEN-MAC div/AMF	12	(AMERICAN MACH. & FOUND. CO.)

#### PRICE GUIDE:

The Model Engine Collector's Association Swap Sheet has been reviewed from '91 thru' early '95.

Prices for various engines are based on "Asking" prices in range from "Very Good to Excellent".

We analyzed and averaged the prices. Note that most Collectors in the Swap Sheet state "repaired lug" or "XNVA" etc. are "Otherwise Excellent"!! ... since there is no way to control this by downgrading (according to MECA) so we've tried to combine "very good - excellent - nearly new" and trust this is an acceptable "ESTIMATED VALUE" with full knowledge it will be criticized ... prices do vary from New York to California and are cheaper here in Florida!

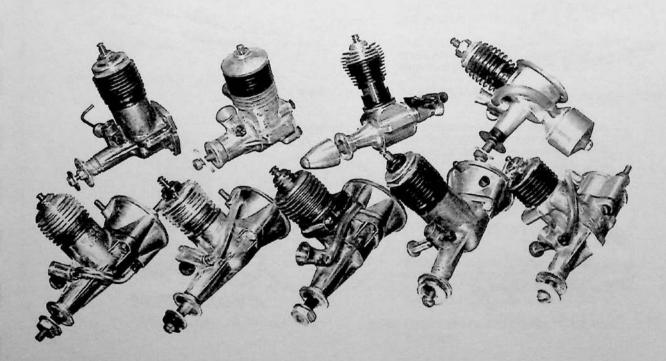
Some large engines can add as much as 50 to 100% to their price with the inclusion of Aircraft or Race-car magnetos ... i.e. Hornets, McCoys etc.

No one seems to really differentiate between years of engines such as O & R 60's ... except the 'Customs' ... McCoys of different years still seem to attract same prices for similar models. Collectors of other multiple engine manufacturers have the same 'asking price' structure.

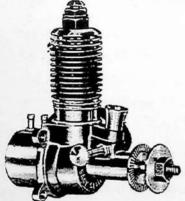
Look through a few years of 'Swap Sheets', collectively, and then I'm sure you'll agree.

An 'S' after a price indicates we're aware of a 'sale'; comments would be appreciated.

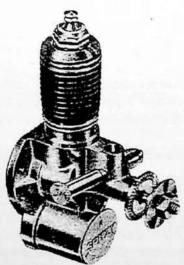
Prices for some engines may not exist, simply because they haven't been offered for sale in the Swap Sheet; then we must ask YOU, our collector friends, to provide us with data from "Collectos". We don't have Auctions as in other Collectable/Antique fields. Only YOU can help us correct our listings.







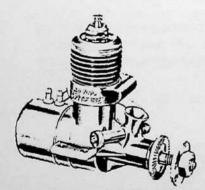
1949 BABY SPITFIRE



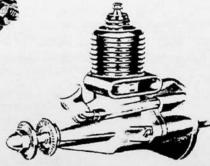
1950 SPITZY



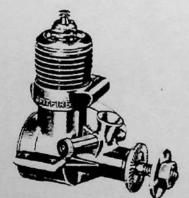
1950 SPITZY BR.



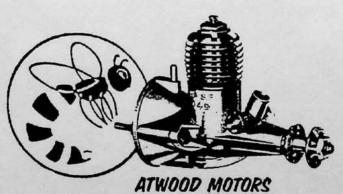
1951 ROYAL SPITFIRE



1952 ROYAL BABY SPITFIRE

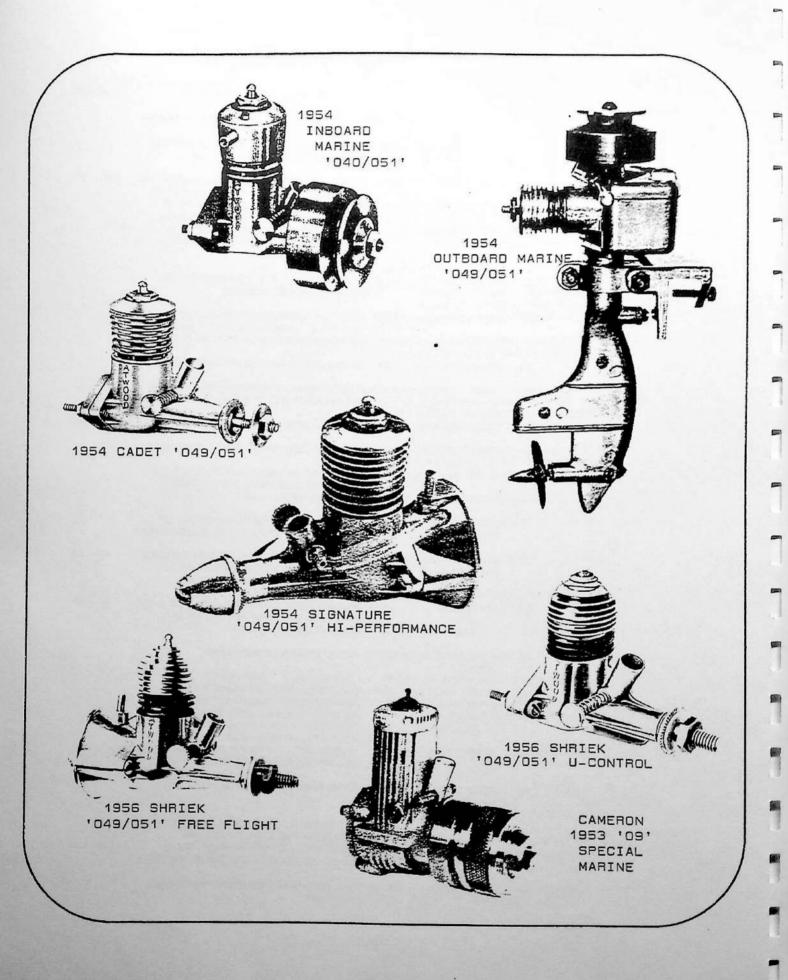


1953 SPITFIRE HORNET

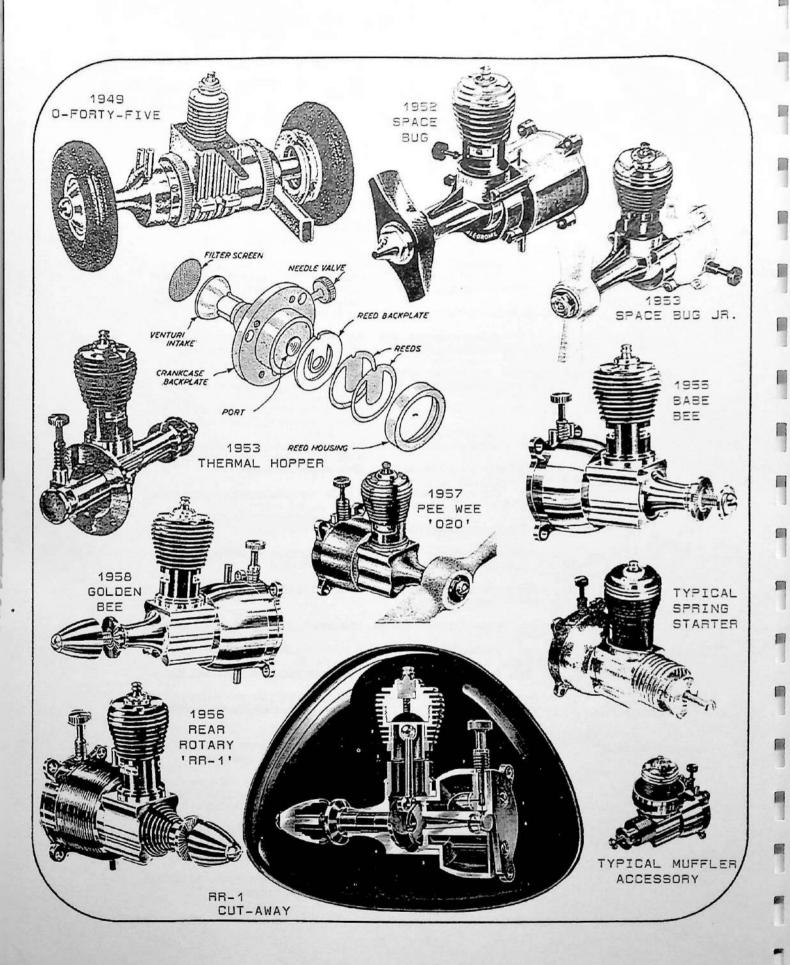


1950 WASP '049'

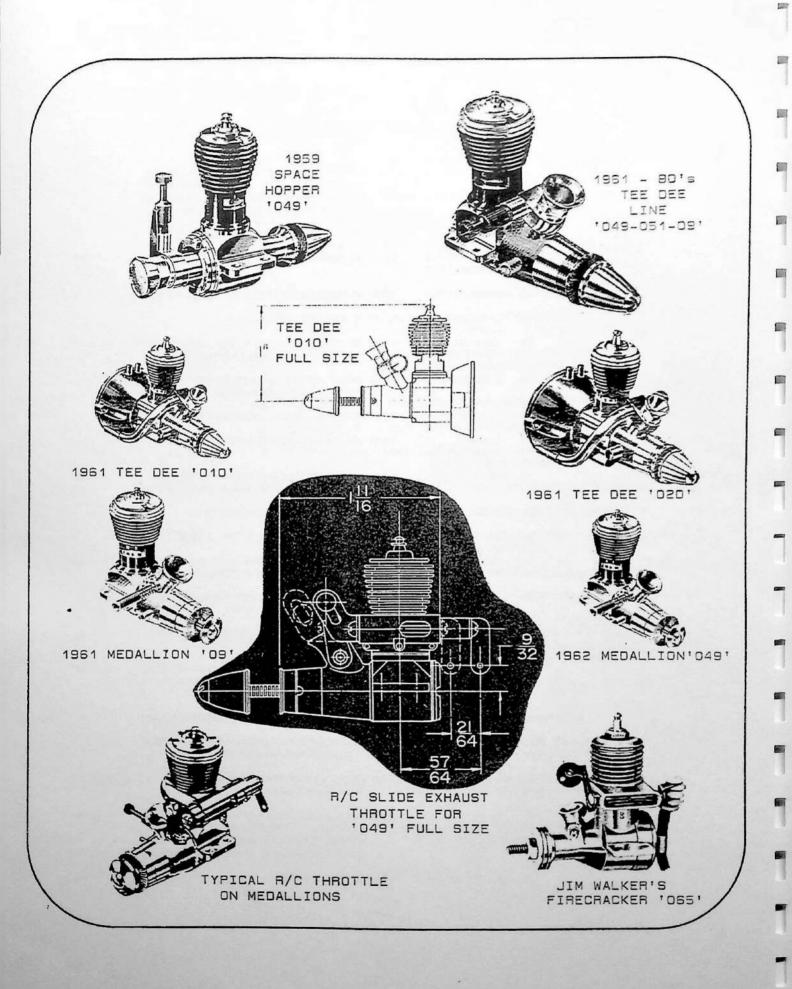
			ENGINE NAME	DISP.	DESCRIPTION & INFORMATION	VALUE U.S. S V.GOODEXC.
MFG. OR ENGINE NAM	IE.	YR.	OR REFERENCE	cu.in.	DESCRIPTION & INFORMATION	
ANDERSON (MEL) MFC	. co.	'49	BABY SPITFIRE	0.045	PRE-PRODUCTION/SAND CAST PROTOTYPES SEEN	
		'49	BABY SPITFIRE	0.045	ALUMINUM OR BRASS HEAD/NAME ON TANK/ REMOVABLE VENTURI/DIE CAST CASE	
		'49	BABY SPITFIRE	0.045	ORANGE ANODIZED ALUM, HEAD AND BYPASS RING/ RED-BLUE-PURPLE-GREEN/ ONLY A FEW ADDITIONAL COLORS MADE FOR MODEL & HOBBY INDUSTRY PACKAGING COMPETITION FOR DETERMINING OFFICIAL CHOICE/ ALSO YELLOW HEAD USED ON MORGAN MODELS 'BUSTER' READY-FLY	40 - 45
)as		'49	BABY SPITFIRE	0.045	ALUMINUM HEAD AND BYPASS/SOME WITH LONGER TANK AND NO NAME	
		'50	BABY SPITFIRE	0.045	MADE FOR AMERICAN 'JR' FIRE-BABY/ HAS SPITZY-TYPE FLUSH MOUNT BACKPLATE WITH NO PROVISION FOR ATTACHED FUEL TANK	
•	•	'50	BABY SPITFIRE	0.045	MADE FOR WEN-MAC/ LONG RIGID TANK STUD	
		'50	SPITZY	0.045	SHORT TANK BELOW CASE/ #'s ON ALL TANKS ONLY INDICATE DIE NO.'S/PLAIN ALUM.HEAD	35 - 40
	•	'51	SPITZY SENIOR	0.045	AS SPITZY/ LONGER TANK/ BRASS HEAD	33
u		'51	SPITZY 'DELUXE'	0.045	AS PREV./ALUM.HEAD/LARGE ALUM. SPINNER	
•	• NOTE	'51	SPITZY	0.045	VARIATIONS INCLUDE SCREW-IN BACKPLATES SOME MACHINED FOR '0'-RINGS/ LONGER NEEDLE VALVES	
//#/		'51	ROYAL SPITFIRE PRE-PRODUCTION	0.065	EXHAUST STACK/BEAM MOUNTS/NAME ON SIDE/SAND CAST CASE/BIG ENG. SCALED DOWN	
	•	'51	ROYAL SPITFIRE	0.065	AS PREV./WITH DIE CAST CASE/TANK ATTACHED TO BACKPLATE/NUMBERS ON CASE ONLY DESIGNATE MANUFACTURER'S DIE NO.'s	33 - 45
	•	'52	ROYAL BABY SPITFIRE	0.049	SIMILAR TO ROYAL SPITZY INCLUDING EXHAUST STACK AND REAR TANK WITH RADIAL MTG./ PALE BLUE FINS AND HEAD	50
•	•	'53	ROYAL BABY SPITFIRE	0.049	AS PREVIOUS/ ALUMINUM HEAD	
		'53	SPITFIRE HORNET MODIFIED	0.091	ADVERTISED ONLY/ SEE AMERICAN JR 'FIRE- CRACKER'/SAND CAST PROTOTYPES EXIST/ SCALED UP .065/FRED DUNN REDESIGNED CRANKCASE FOR ATHEAN 'POGO' AND ALREADY MADE PARTS WERE USED BY ATHEARN MFG./NO TANK/LATER MODS.MADE 'PAGCO' BY PAGLIUSO ENGINEERING CO.	
•		'54	ROYAL BABY SPITFIRE	0.049	AS PREV./WITH BLACK HEAD	
ATWOOD MFG. CO.		-		-	CELEBRATED 20 YRS. AS PIONEER IN '53 - SOLD	
(BILL ATWOOD)		'50	WASP .049	0.049	WASP & BECAME ATWOOD MOTORS  'WASP' ON CASE/TAPERED FIN PROFILE  'WASP' SOLD TO HOLLAND ENG.IN LATE '52	40 - 40
	NOTE:	'52	HOP-UP-KIT	0.049	NEW LOWER CRANKCASE AND SHAFT FOR WASP .049	



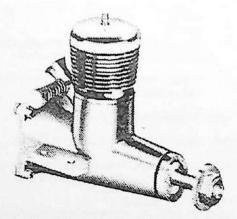
ATWOOD - CON	MNUED -	NOTE:	'52	HOP-UP-KIT .049	0.049	FREE FLIGHT VERSION/ RED HEAD/ WITH TANK AND U-CONTROL COVER	
		NOTE:	'52	HOP-UP-KIT .051	0.051	YELLOW ANODIZED HEAD	
			'53	ATWOOD .049	0.049	AS WASP/ NAME 'ATWOOD' ON CASE/ STRAIGHTER FIN PROFILE	25 - 38
			'53	ATWOOD .051	0.051	AS ATWOOD .049/.051 ON CASE	35 - 50
			'53	ATWOOD .049	0.049	U-CONTROL VERSION/BLUE HEAD/NO TANK	
	•	NOTE:	'54	Wasp/atwood L.H. Shafts		ALSO SOLD COLORED SPINNERS WHICH DO NOT DESIGNATE DIFFERENT MODELS	
	#		'54	INBOARD MARINE ATWOOD & CADET .049/ .051	вотн	BOTH VERSION OF ATWOOD & CADET USED MARINE CRANKSHAFTS WITH TAPER FOR PROP DRIVE/FIRST MODELS HAD STEEL FINS & PLAIN ALUM.HDS./LATER MODELS HAD BLACK FINS/ AIR COOLED OR WATER COOLED	55 - 55
	•		'54	OUTBOARD MARINE ATWOOD & CADET .049/ .051	вотн	BOTH VERSIONS WITH 'LOWER UNITS'/ WATER OR AIR COOLED/ GREEN HEADS/ LATER NATURAL HEADS	150
	•		'54	ATWOOD .049/.051		USED MARINE CRANKCASES WITH TAPER TO TAKE PROP DRIVE/SCREW-IN PROP SHAFT/SOLID SPINNER/CRANKCASE MACHINED SHORTER/ ANGLED VENTURI/ PLAIN OR BLACK FINS	
•			'54	CADET .049/.051		AS '53 MODEL/PLAIN HEADS/NO TANKS (LOW PRICED LINE-NO OBVIOUS DIFFERENCE FROM PREVIOUS MODELS)	
	•		'54	SIGNATURE.049/051	вотн	CUSTOM HIGH PERFORMANCE/MARINE CRANKS	
•	•		'56	SHRIEK .049/.051 F/F	вотн	FREE FLIGHT/BIG SHAFTS/TIMER TANK	
	S.		'56	SHRIEK .049/.051 U/C	вотн	U.C./BIG SHAFTS/HEAVY STIFF WEB UNDER SHAFT/ NO TANK	
			'56	SIGNATURE SUPER SHRIEK .049/.051	вотн	AS F/F SHRIEK/ STEEL SHAFT BEARINGS	
	•		'56	CADET .049/.051	вотн	USED SHRIEK PARTS/OLD STYLE HDS. & PLUGS	
			'58	VARIATIONS	вотн	TULSA' MFR. ADDED GOLD SPINNER & PROP DR.	
	•	NOTE:	'58	SUPER CADETS	вотн	TULSA' MFR.ADDED GLOW HDS./SPEC.TIMING	
CANUCK (CANADIAN)			'48	CANUCK	0.049	FRONT INTAKE 'CAI IUCK'(WITH BACKWARD 'N') ON CASE (MFD.IN TORONTO(/ONLY PARTS ENGINE SEEN	
CAMERON BROT	THERS		'49	DOODLE BUG	0.098	CAR ENGINE BLT. FOR COX/VERTICAL CYLINDER FINS/FRONT ROTARY/LAPPED PISTON	
	•		'53	.09 SPECIAL MARINE	0.098	OVAL CYLINDER/VERTICAL FINS/FLYWHEEL FOR BOAT/SINGLE NEEDLE VALVE/TAKEN FROM '49 ENGINE MANUFACTURED FOR COX	
	•		'54	.09 RACE CAR - L	0.098	OVAL CYLINDER/VERTICAL FINS/ INTAKE BUTTERFLY VALVE/SINGLE NEEDLE VALVE/ TAKEN FROM '49 ENGINE MFD. FOR COX	
			'54	.09 MARINE - LZ	0.098	AS CAR ENGINE/Z-SPEED/TWIN NEEDLE VALVES BUTTERFLY VALVE/FLYWHEEL	



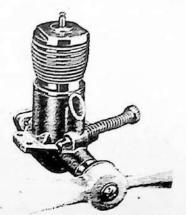
COX (L.M.) MFG. CO. INC. (LEROY COX)	'49	O-FORTY-FIVE	0.045	ENGINE,TRANSMISSION,TANK/RACE CAR SUPPLIED BY ANDERSON (MEL) MFG.	
•	'49	DOODLE BUG	0.098	CAR ENGINE/MADE BY CAMERON WITH VERTICAL CYLINDER FINS/FRONT ROTARY/ LAPPED PISTON	
	'52	SPACE BUG	0.049	WITH LARGE DIE CAST TANK/STEPPED LOWER PART CRANKCASE/DID NOT COME WITH REGUL. PLUG/ALL COXES TO '55 USED SMALL DIAMETER GLOW HEAD WHICH ALSO FITTED EARLY CUBS	40
	'53	НОР-ИР-КІТ	0.049	HOP-UP-KIT/SPL. HEAD & TANK - CARB.	
	'53	THERMAL HOPPER	0.049	AS PREVIOUS/RADIAL MOUNT/NO TANK	60
er e	'53	SPACE BUG JR.	0.049	AS PREV./WHITE NYLON TANK/SINGLE INT.PORT	35
in the second se	'54	SPACE BUG JR.	0.049	AS PREV./BLUE NYLON TANK	
•	'55	SPACE BUG JR.	0.049	AS PREV./BLUE OR RED NYLON TANK/CHANGED GLOW HEAD WITH LARGER DIAMETER THREAD	35
•	'55	STRATO BUG	0.049	SHORT METAL TANK VENTED FOR STUNT/RED PLASTIC TANK BACK/SPACE BUG CASE	
- 1. <b>0</b>	'55	BABE BEE	0.049	MACHINED CASE FROM STOCK/METAL TANK	
•	'55	THERMAL HOPPER	0.049	AS PREVIOUS/LARGER GLOW HEAD SIZE	
•	'56	RR - 1	0.049	MACHINED CASE WITH FINS ON FRONT END/ BLUE METAL TANK/DRUM ROTARY INTAKE VALVE	70
	'57	PEE WEE .020	0.020	SCALED DOWN BABE BEE/RED TANK	
	'58	RR - 1	0.049	AS PREVIOUS/ GOLD CASE/ BLUE TANK	
	'58	GOLDEN BEE	0.049	LONG TANK VENTED FOR STUNT/ MACHINED ORANGE CASE/ SPINNER AND TANK	15 - 20
	'59	SUPER BEE	0.049	DOUBLE BYPASS BABE BEE/'P-40'ON CYLINDER/ THIMBLEDROME" ON TANK	
	'59	BABE BEE	0.049	AS '55 BABE BEE/SCREEN IN INTAKE/THIMBLE- DROME' AROUND TANK	46
	'59	PEE WEE .020	0.020	CASE&TANK NATURAL ALUM./THIMBLEDROME AROUND TANK/ MADE FOR 'LIL STINKER' READY-FLY	15
•	'59	PEE WEE .020	0.020	AS PREV./TANK RED ANODIZED/INTAKE SCREEN	
	'59	SPACE HOPPER .049	0.049	THERMAL HOPPER REPLACEMENT/BEAM MTS./ MACHINED CASE/REED VALVE	
•	'61	TEE DEE .049	0.049	FIRST COX FRONT ROTOR/BLK.BEARING COVER/ (ATWOOD DESIGN)	15 - 30
	'61	TEE DEE .010	0.010	SMALLEST TRUE PRODUCTION ENGINE EVER MADE/MINI OF .049/FRONT ROTOR/WITH OR WITHOUT RED PLASTIC TANK/RED PLASTIC REAR COVER & MOUNT LESS TANK (ATWOOD DESIGN)	60
	'61	TEE DEE .020	0.020	AS .010/ LARGER	25



	COX - CONTINUED	'61	TEE DEE .051	0.051	AS TEE DEE .049/RED CRANKSHAFT COVER/ NUMBER '5' ON CYLINDER	15 - 30
1		'61	TEE DEE .09	0.099	LARGER VERSION OF TEE DEE .049/.051/BLACK PLASTIC FRONT CRANKSHAFT HOUSING	45
		'61	MEDALLION 09	0.099	SIMPLIED TEE DEE/RED PLASTIC FRONT HOUSING WITH INTEGRAL INTAKE/SPORT	30
I		'61	TEE DEE 09	0.099	LARGER TEE DEE .049	
		'62	TEE DEE .010	.010	ADVERTISED WITH 24K GOLD PLATED TIE CLIP!	
1		'62	'190' SERIES		SPL.CASE/NYLON BACKPLATE/NO MOUNTING HOLES/FOR READY-FLY MODELS/SINGLE PORT CYLINDERS STAMPED '2'	
I	•	'62	'190' SERIES	0.049	AS PREV./DBL.PORT CYLINDERS STAMPED '1'	
•		'62	'190' SERIES - "1"	0.049	AS PREV./WHITE NYLON BACKPLATE.SHORT BRASS NEEDLE VALVE/DOUBLE PORTED(STUKA)	8
		'62	*190* SERIES - *3*		AS PREV.SERIES 1/WHITE COMPLICATED BACK PLATE/LONGER BRASS NEEDLE VALVE/2-PORTS/ RR-1 CYLINDER	
ı		'62	'190' SERIES - '4'	0.049	AS PREV. SERIES 3/SINGLE PORT/DIFFERENT N.V.	
		'62	'190' SERIES - '2'	0.049	'HALL RACER SPECIAL' AS '190' - SERIES-'4'	
I		'62	MEDALLION .049	0.049	DETUNED TEE DEE .049/ RED PLASTIC FRONT HOUSING AND INTAKE COMBINED	20
1		'62	MEDAL09 R/C	0.099	STD09 MEDALLION WITH SLIDE EXH.THROTTLE	
<b>1</b>	•	'63	SPECIAL .049	0.049	CAST CRANKCASE/RED NYLON TANK/READY-FLY	
1	•	'63	'190' SERIES		RED NYLON BACKPLATE/YELLOW NEEDLE VALVE EXTENSION/BRASS NEEDLE	
		'63	'190' SERIES	0.049	AS PREV./ALUM.COLORED PLASTIC BACKPLATE	
	•	'63	'190' SERIES	0.049	AS PREVIOUS/CAST ALUMINUM BACKPLATE	
1		'63	*290* SPOOK		INTERCHANGEABLE W/'190'SERIES/ALUM.COLOR BACKPLATE/YELLOW PLASTIC N.V. EXTENSION/ SOLD SEPERATELY FOR 'SPOOK' AND REPLACE- MENT FOR HELLDIVER STUKA AND MUSTANG PLASTIC MODELS	
1		'64	TEE DEE .049	0.049	AS PREV./THICKER LINER/STEPPED	
		'64	TEE DEE .051	0.051	AS PREV./THICKER LINER/STEPPED	
1		'64	MEDALLION .09R/C	0.099	AS PREV.MEDALLION .099/WITH R/C COUPLED EXHAUST & INTAKE THROTTLE	
	FIRECRACKER	- '55	FIRECRACKER	0.065	MFD. BY A-J AIRCRAFT CO JIM WALKER MOD. ROYAL SPITFIRE .065 WITH 'JIM WALKER' ON BYPASS	
		'55	FIRECRACKER 'THROTTLED'	0.065	AS PREVIOUS/COUPLED INTAKE-EXHAUST THROTTLE/PRIMARILY USED IN U-CONTROL	40



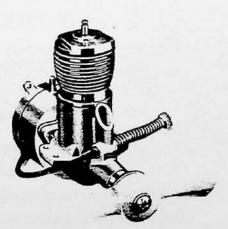
1959 ROCKET '09'



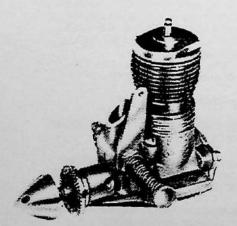
1959-61 COMET/FOX '07'



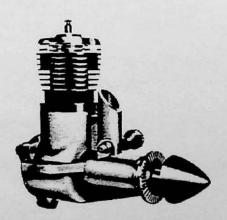
1961 HUSTLER/FOX '10 R/C'



1961 FOX '049'

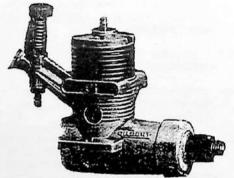


1964 FOX '07 R/C'

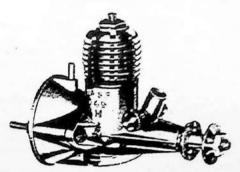


1964 FOX '049' F.A.I.

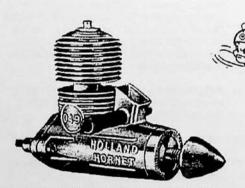
FOX MANUFACTURIN (DUKE FOX)	G CO. '57	'MINI .59'049	0.049	PROTOTYPE SAND CASTINGS OF VERY SMALL FOX .59 (ONE FINISHED MODEL STOLEN WITH FOX COLLECTION) ONE IS PARTIALLY COM- PLETE/ ONE CASTING LEFT BLANK	
2 <b></b> 5 <b></b> 5	'59	ROCKET .09	0.098	UPSLANTED REAR INTAKE/ (SIDEPORT TYPE)/ GLOW HEAD/BUILT-IN TANK/BEAM OR RADIAL MOUNT (ALSO SEE GILBERT)	25 - 35
	'59	COMET 07	0.069	NO EMBLEM ON ENGINE/ EXHAUST DEFLECTOR OPTIONAL/ DIE CAST TANK	
	'59	COMET 07	0.069	AS PREV./ALUM. SPACER RING MACHINED TO FIT UNDER BASE OF CYLINDER/HEAVIER DIE- CAST TANK	
	'60	COMET 07		AS PREV./EXHAUST DEFLECTOR ON CYLINDER CALLED 'DISHPAN' - A MODIFIED CUP/ADDED 'COMET' SHOOTING STAR EMBLEM/ GROOVE ON DRIVE WASHER	
	*61	COMET 07		AS PREV./WITH COMET OUT OF BUSINESS-NAME GROUND OFF CASE/NO TANK/SOME MINOR DIFF (ENGINES SOLD TO HOBBY SHOPS FOR \$1.00 EA.	40
	'61	FOX 07		MADE FROM LAST COMET DIES WITH EXHAUST DEFLECTOR OFF & COMET EMBLEM MACHINED OFF/ INTAKE BAVELLED AT 45 /DIE EXTRACTOR TAB BEVELLED/ALUM. PROP DRIVE FASTENED ON SPLINED STUB CRANKSHAFT WITH PROP SCREW/REAR COVER WAS CRUDE MFD. FROM MACHINED DOWN COMET TANKS.	20
	'61	HUSTLER '10' R.C.		TRIAL MKTG. BY 'FAKE'COMPANY WITH NO FOX NAME OR ENDORSEMENT/EXHAUST BAFFLE/ SCREW IN BACKPLATE	
	'61	HUSTLER '10'	0.101	AS R/C - NO HOLES FOR EXHAUST THROTTLE	
•	'61	FOX '10' R.C.	0.101	AS 'HUSTLER'/FOX NAME ON CASE/2 SCREW BACKPLATE	
	'61	FOX '10	0.101	AS R/C - NO HOLES FOR EXHAUST THROTTLE	
	'61	FOX .049	0.049	SMALLER VERSION 07/REDUCED BORE/SAME CASE/TANK MOUNT AS COMET/ 4 - MINOR VARIATIONS WITH & WITHOUT MOUNTING HOLES IN BEAMS	38
	'62	FOX .049	0.049	AS PREVIOUS/ TANK/ BEAMS DRILLED/DIE TAB MACHINED OFF TO LEAVE 'BARB' AS ON .07 CASES/SHORT DRIVE WASHER FITTED TO CON- VENTIONAL CRANKSHAFT	
•	'62	FOX 07	0.069	LAST RUN WITH CONVENTIONAL CRANKSHAFT/ NO 'BARB' AS ON OTHER .07's	
	'63	FOX .049	0.049	CHANGED/'FOX .049' ON POLISHED FINNED CRANKCASE WITH HEAVY DIE CAST TANK MT./ CONVENTIONAL CRANKSHAFT	
	'64	FOX 07 R.C.	0.069	HEAVY FINNED POLISHED CASE/W/FOX .07 RC ON SIDE/INTAKE THROTTLE/CONVENTIONAL CRANKSHAFT W/POL. SPINNER THREADED ON	30
	'64	FOX .049 FAI	0.049	DIFFERENT CASE CASTING/ NO CASE FINS/ MATTE FINISH/FOX RESEMBLANCE ONLY/ ADVERTISED IN '63-UNAVAILABLE TIL LATE '64	



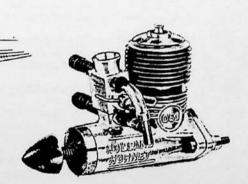
1962 GILBERT '7'
THUNDERHEAD I
THUNDERHEAD II-LARGER



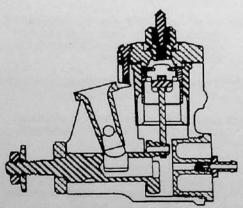
1952 HOLLAND 'WASP'



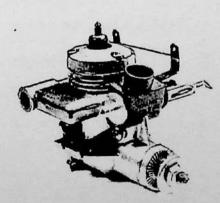
1957 HORNET '049/051'



1960 HORNET '051' 2 SPEED



1962 BULLDOG '09'



1963 BULLDOG '09 R/C'

	.C.) D BY FOX A JOHNSON)	ND	'62	THUNDERHEAD I READY FLY	0.069	DOWNDRAFT REAR INTAKE/SIDE PORT TYPE/ WIND BACK STARTER/TWIN MUFFLERS SUPPLIED FOR READY-FLY - ALSO WITHOUT MUFFLERS	20
*			'62	THUNDERHEAD II READY FLY	0.119	LARGER ENGINE/SAME APPREARANCE/PLASTIC TANKS LOOSE	20
•			'62	THUNDERHEAD I	0.069	AS PREV./NO MUFFLER OR STARTER/MODIFIED PROP DRIVE	18
			'62	THUNDERHEAD II	0.119	AS PREV./NO MUFFLER OR STARTER/MODIFIED PROP DRIVE	18
			'63	THUNDERHEAD I	0.069	AS PREVIOUS '62/ GOLD ANODIZED	355
HOLLAND E	MCINEEDING		10000000			MFD. BY DYNAMIC MODELS INC.	
HOLLAND E	HOINEERING		'52	HOLLAND 'WASP'	0.049	1ST ATWOOD UNDER HOLLAND OWNERSHIP 'H' STAMPED UNDER 'WASP'	
	•		'53	HOLLAND 'WASP'	0.049	AS PREV. / VENTURI MACHINED OFF 1/16'/ CRANKCASE MACHINED OFF UNTIL BARELY ABOVE NAME/OFFERED WITH 2 SECTION TIMER	
						TANK OR BACK COVER PLATE (NO 'H')	
	> <b></b>		'53	HOLLAND 'WASP'	0.049	AS PREV./MORE SHAVED OFF TOP OF CRANK- CASE/INTAKE FURTHER SHORTENED/ BLACK OXIDE TREATED CYLINDER/ SOME ANODIZED SPINNER IN RED, BLUE, GOLD (NO 'H')	40
	•		'57	HORNET	0.049	NEW DIE CAST CASE/TOTALLY DIFFERENT FRONT ROTARY - FIRST HOLLAND MODEL/BLUE ANODIZED SPINNER	100
• \			'57	HORNET	0.051	SAME AS .049/ALSO NO INTAKE RESTRICTOR	90
*)	•		'57	HORNET MK I	0.049	AS PREVIOUS/NYLON RESTRICTOR IN INTAKE/ PLAIN SPINNER	
•	•		'57	HORNET MK I	0.051	AS.049	
*	•		'59	HORNET MK II	0.049	MK II ON CASE WITH DISP. IN CIRCLE/METAL INTAKE RESTRICTOR/ANODIZED RED & BLUE SPINNER AND PROP DRIVER	75
			'59	HORNET MK II	0.051	A5.049	
			'60	HORNET 'MODIFIED'	0.049	AS MK II/ FACTORY HOP-UP/ STAMPED 'M' NEAR INTAKE	70
			'60	HORNET 'MODIFIED'	0.051	AS MK II/FACTORY HOP-UP STAMPED 'M' NEAR INTAKE	
	##W		'60	HORNET 2 SP.	0.051	2 SPEED/LONG VENTURI/ 2 NEEDLE VALVES	175
•		NOTE:	'62	VARIATIONS	вотн	ALL ALUMINUM/ NO COLOR/ .051 OCCASIONALLY ANODIZED ONE PART	
		NOTE:	'63	VARIATIONS	вотн	THICK TOP CYLINDER FIN/THICK ALUMINUM 'STEPPED' GLOW HEAD FINS (2 STYLES)/ NO SPINNER	
JOHNSON PR	ODUCTS		3119			MIN PUNISHED HORSE	
JOINTSON FR			'63	BULLDOG .09	0.092	MFD. BY DYNAMIC MODELS INC. HEAVY CAST CASE/MASSIVE CRANKSHAFT/ SPECIAL 'HONE LAP' PISTON-LINER FITS/ DESIGNED FOR PROPOSED F.A.I. 1.5cc CLASS IN '64/DM ON SIDE OF CASE	

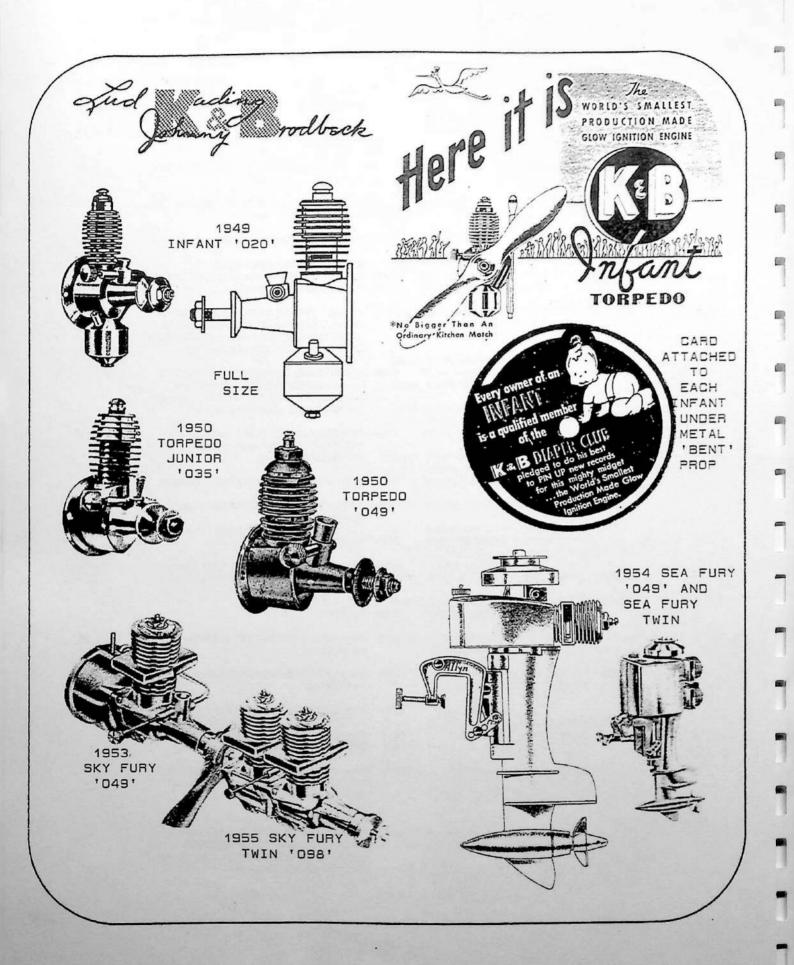
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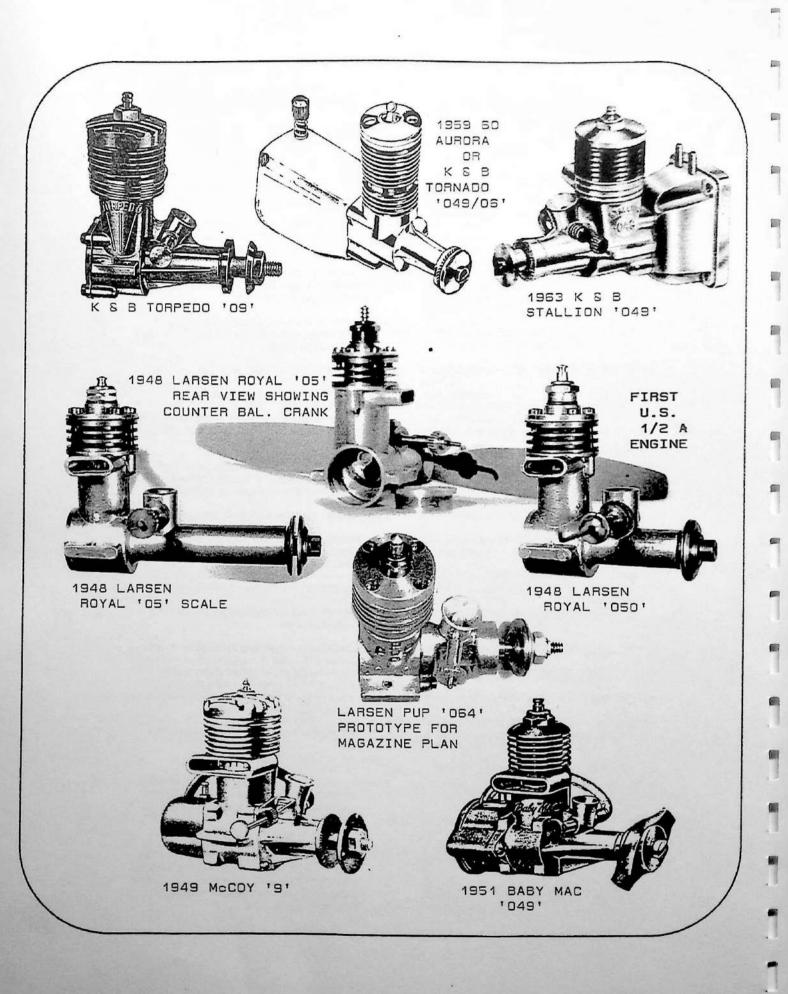
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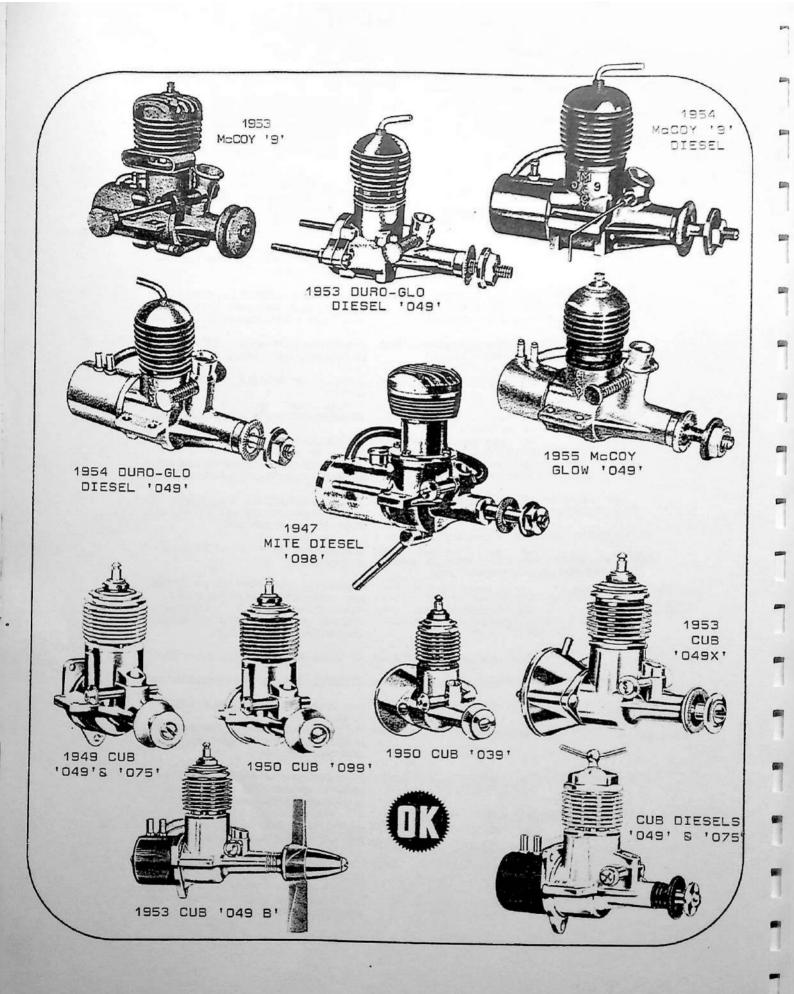
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JOHNSON -	CONTINUED	'63	BULLDOG .09 R.C.	0.092	AS PREV./WITH JOHNSON 'AUTOMIX' AM-2 R/C CARB. W/COUPLED EXHAUST RESTRICTORS	75
K & B MANUFACTURING CO. (LUD KADING&JOHN BRODBECK)					PURCHASED ALLYN PRODUCTS IN MAY 1955/ BECAME SUBSIDIARY OF AURORA PLASTICS IN '60 & REVERTED BACK TO ORIGINAL NAME	
и и		'49	INFANT .020	0.020	1ST 1/2A NATIONALLY AVAILABLE/10 HD.FINS/ GLOW PLUG INSERT INSIDE HD./BRASS WRIST PIN ON FIRST RUN & REVERTED TO BALL SOCKET ON REMAINING MANUFACTURING RUNS	60 - 65
	" NOTE	49	INFANT .020 VARIATIONS	0.020	VARIATIONS IN GLOW INSERTS/ VARIATIONS IN TANK ATTACHMENTS/LONGER TANK THAN STD.USED ONLY IN READY-FLY/DIFFERENT N.V.S	
		'50	TORPEDO JR.	0.035	SAME AS INFANT IN SIZE/11 HD.FINS/BALL SOCKET CONNECTING ROD TO PISTON/ SAME TYPE GLOW PLUG INSERTS	
		'50	TORPEDO .049	0.049	SIMILAR TO INFANT/LARGER ALL OVER/ CON- VENTIONAL GLOW PLUG & HEAD/BALL SOCKET CONNECTING ROD	46
		'50	TORPEDO JR.	0.035	SAME WITH LIGHT YELLOW HEAD	
		'50	TORPEDO .049	0.049	SAME WITH LIGHT YELLOW HEAD	
(#)	H.	'50	TORPEDO .049	0.049	LATER MODELS HAD FLAT TANK BOTTOM/LAST MODELS HAD NO TANK & CASE NOT DRILLED OR TAPPED FOR TANK STUD	
	SALES CO. INC. I C. CULVER)	'53	SKY FURY	0.049	1.049° ON SIDE OF CASE/ NONE ON K & B/ INITIALLY SUPPLIED WITH DIECAST BACKPLATE FOLLOWED BY LARGE DIE CAST TANK-MOUNT	
		'54	SKY FURY	0.049	SMALL PORTS IN SLEEVE/STANDARD PLUG	
	· NOTE:	'54	MAR FURY SEA FURY	_	MARINE MODELS ARE NOT LISTED IN THIS ISSUE DUE TO AN APPARENT COMPLEXITY AND MAY BE INCLUDED IN SUBSEQUENT EDITIONS	
•		'55	SKY FURY	0.049	DOES NOT HAVE NUMBER .049 ON CASE	
		'55	SKY FURY	0.049	AS PREVIOUS/DIE CAST/GROOVES FOR TANK SCREW IN CASE	48
		'55	SKY FURY TWIN 09	0.098	IN-LINE (ALLYN)SKYFURY TWIN/FROM 2049'S WITH NEW FRONT & REAR CRANKCASES/HEADS NATURAL ALUM./REGULAR GLOW PLUGS/ CENTER CASTING HAS INTAKE WITH NEEDLE VALVE/NO KNOWN DIFFERENCE FROM K & B AFTER TAKEOVER	
	ALLYN NOTE:	'55			ALLYN NAME DROPPED AS K & B REFERENCE	
	•	'55	SKY FURY TWIN 09	0.098	NO COLORED PARTS	
		'55	SKY FURY TWIN 15	0.149	AS .098/GOLD ANODIZED CYLINDER HEADS & PROP DRIVER/.074 PISTONS AND LINERS/THIS LARGER ENGINE LISTED BECAUSE IT DOUBLES 1/2A PARTS	99
		'55	.06 & .12		SKY FURYS WERE APPARENTLY NOT SOLD AS AIRCRAFT ENGINES BUT THE MARINE FURY .065 WAS USED BY MODELERS IN MAKE-UP ENGINES DUE TO INTERCHANGEABILITY THE .065 COULD HAVE BEEN USED AS 'CHEATER' FREE FLIGHT ENGINE IN 1/2A CLASSI	



K & B MFG CONTINUED	'56	SKY FURY DELUXE	0.049	O HAS GLOW HEAD AND LARGER PORTS/ NO NO NUMBER ON CASE/EXTENDED PROP DRIVE/ GLOW HEAD STAMPED .049 (MFD. BY IRWIN OHLSSON)/ '59 MODELS FINISHED WITH OLD STYLE HEADS AND REGULAR GLOW PLUGS	
	'57	SKY FURY .075	0.075	SAME AS .049/BORED OUT CYLINDER/ GLOW HDS. NOT STAMPED/NO EXTERNAL DIFFERENCE FROM 'DELUXE' .049 OTHER THAN THIN LOOKING SLEEVE ON .074	50
	'57	TORPEDO .09	0.099	GREEN HEAD/MINI-TORP./NO EXH.PORT WEB	68
•	'58	TORPEDO .09	0.098	AS '57 WITH WEB IN EXHAUST PORT/ INTAKE RESTRICTOR ADDED	
•	'59	AURORA TORNADO 0.049	0.049	DIE-CAST ALUM.CASE/BLACK CYL.FINS/LARGE WHITE DELRIN TANK/AURORA TORNADO '.049' ON BOTTOM OF CASE/REMOVABLE GLOW HD.	30
	'60	K&B TORNADO 049	0.049	AS PREV./ K & B TORNADO .049 ON BOTTOM OF CASE/ REED VALVE INTAKE	48
н н	'60	K&B TORNADO 06	0.061	BORED OUT .049 WITH K&B .060 STAMPED ON BOTTOM	
	'63	K&B TORNADO 06	0.061	AS PREVIOUS/GOLD HEAD/ RED NYLON TANK	
	'63	K&B TORNADO 049	0.049	AS PREV. 049/WHITE TANK/RED TANK BACK	
	'63	STALLION 049	0.049	MINI SIZE OF STALLION 35/WITH OR WITHOUT DIE CAST TANK(WITHOUT TANK VERSION IS RARE)	
	'64	STALLION 049	0.049	AS PREV./WITH 'AUTO-FLIP' STARTER/ SIDE MTD. TANK FOR READY-FLY TRI-PACER /UPRIGHT TANK SOLD WITH ENGINE SEPERATELY	
	'65	SKY FURY DELUXE	0.049	USED UP PARTS ON HAND/ OLD STYLE PLUG AND HEAD	
LARSEN MANUFACTURING	-			LARSEN ALSO PROTOTYPED A.191.125 AND	
1ST U.S049 (ELMER LARSEN)	'48	LARSEN ROYAL .05	0.049	A PLAN FOR A 'PUP' .064 PLUS OTHERS BEAM MOUNT/EXHAUST STACK/4 HEAD BOLTS/ COUNTER BAL. CRANKSHAFT/STAMPED 'ROYAL .05'/SOLD IN THE SEATTLE AREA	
	'48	LARSEN ROYAL .05	0.049	AS 1ST/NO NAME STAMPED/ 6 HEAD BOLTS	
	'48	ROYAL .05 SCALE	0.049	AS PREV./LONG SHAFT TO GO THROUGH COWLS	
McCOY PRODUCTS	-			MFD. BY DURO-MATIC & LATER BY TESTORS	
(DICK McCOY)	'49	McCOY 9	0.098	FROM APRIL 1956 FIRST RONT ROTARY/SHINY CASTINGS/ROUNDED HEAD/PLAIN BEARING/NO SERIAL #'s/ METAL TANK/LAPPED PISTON	
	'49	DUROGLOW '9'	0.098	SAME AS PREV./GLOW ELEMENT BETWEEN TWO HEAD GASKETS/RED ANOD.PLUG REPLACED STD. GLOW PLUG/NO SERIAL #'s/ PISTON RINGS	
	'50	McCOY '9'	0.098	AS PREV./MATTE FINISH/LESS ROUNDED HEAD/ THIN FRONT COVER FLANGE/BUMP LUGS	35
	'51	BABY MAC	0.049	EXHAUST STACK/2 BOLT RADIAL MOUNT/RED HEAD/STANDARD GLOW PLUG/WITH OR WITH- OUT TANK MOUNT/2 STYLES RED ANOD, HEADS -ONE STYLE HD.HAS FLATS FOR WRENCH AND OTHER HAS SLOTS	75



McCOY - CONTINUED	'51	McCOY 9	0.098	AS PREVIOUS/LAPPED PISTON/THICK FRONT HOUSING/HEAVY MOTOR MTS./MATTE FINISH	
	'52	McCOY 9	0.098	AS PREV./HEAVY MOUNTS/HI-HD. FINS/MATTE OR SHINY FINISHED CASE	
ū	153	McCOY 9	0.098	AS PREVIOUS/FLEX NEEDLE VALVE/LOW HEAD FINS/SHINY FINISH	
•	'53	DURO-GLO DIESEL	0.049	'DIESEL'/Z BOLT RADIAL MONT/RED ANODIZED HEAD/'DURO-GLO' ON SIDE OF CASE	50 - 50
*	'54	McCOY '9' DIESEL (RED HEAD)	0.099	'DIESEL'/LARGER VERSION '53 .049/ SHINY CASE/BEAM MTD./REAR COVER MTD.TANK/RED ANODIZED HEAD	
	'54	DURO-GLO DIESEL	0.049	'DIESEL'/LATE YEAR MODEL/BEAM MOUNT/RED ANOD.HD./SHINY & MATTE CASES/2CYL.TYPES/ ONE WITH EXTRA FIN ABOVE EXHAUST PORT	50
	'54	McCOY GLOW	0.049	CRANKCASE MACHINED FROM ALUMINUM EXTRUSION-INCLUDING TANK/COX BABY BEE APPEARANCE WITH CYL. & HEAD/PROTOTYPE FOR TESTORS/8 BUILT	40
	'55	McCOY GLOW	0.049	AS .049 DIESEL/BEAM MOUNT/RED ANODIZED HEAD WITH INSERT GLOW PLUG/CRANKCASES NOT INTERCHANGEABLE WITH DIESEL	40
	'59	McCOY '5'	0.049	BEAM MOUNT & 3 POINT RADIAL/'5" ON CASE RED ANOD. HEAD WITH INSERT GLOW PLUG/ DIES MODIFIED FROM PREVIOUS GLOW	
MITE MANUFACTURING CO. (HOWARD MANDERVILLE-DSGNR.) (WALT SHROEDER - MFR.)	'47	MITE DIESEL		DIE CAST MAG.CASE FIXED GOMPRESSION/ CRANKCASE RELIEF LEVER/PLASTIC FUEL TANK	
•	'48	GLO-MITE	0.098	AS DIESEL/HEAD SET FOR GLOW PLUG/NO TANK	
•	'48	GLO-MITE	0.098	AS GLOW/FINLESS MAG. OR ALUM.HEAD/LONG ALUM. TANK/TOTAL OF ALL MITE MFD.5-6000	
O. K. ENGINES	_			MFD. BY HERKIMER TOOL WORKS	
(CHARLES BREBECK)	'49	CUB .049	0.049	SEE LARGE ENGINE LIST LARGE CASE/RADIAL OR BEAM MOUNTING SERIAL # ON BOTTOM OF CASE	
	'49	CUB .075	0.075	SAME CASE AS .049/NO TANK	15
	'50	CUB .099	0.099	LARGER THAN PREVIOUS/BEAM MOUNT ONLY	25
	'50	CUB .039		RADIAL -2-BOLT MOUNTING/WITH TANK	60
	'50	CUB .049	0.049	AS PREVIOUS/LARGER DIE CAST TANK MOUNT	20
	'53	CUB .049 X	0.049	BORED OUT VERSION OF .039/WITH TANK	40
• •	'53	CUB .049 B	0.049	SMALLER VERSION OF ORIGINAL/RED TANK/ EXTENDED PROP DRIVE	20
	'53	CUB .075 DIESEL	0.075	DIESEL VERSION OF .074/ RED EXTENDED PROP DRIVE	60
	'54	CUB .049	0.049	AS '53/ EXTENDED PROP DRIVER/ RED TANK	15
	'54	CUB .075	0.075	AS '49/EXTENDED PROP DRIVER/ RED TANK	23 - 38
	'54	CUB .049 DIESEL	0.049	DIESEL VERSION OF .049/ RED EXTENDED PROP DRIVE/RED TANK	60

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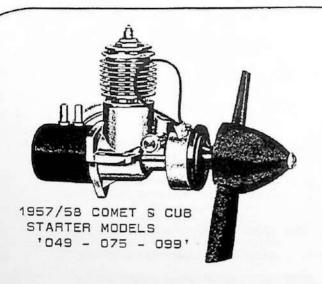
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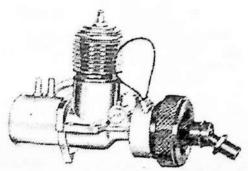
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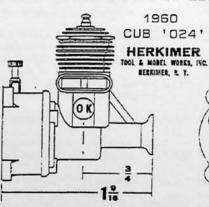


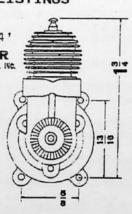


1958 CUB MARINE MODELS WITH FLYWHEEL & STARTER '049 - 075 - 099'

#### COMETS' ALL BEAR DIRECT RESEMBLANCE TO O.K. CUB MODELS WITH DIFFERENCES AS IDENTIFIED IN ADJACENT LISTINGS

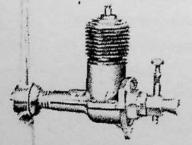








NOTE: THIS IS ONE OF ONLY THREE MANUFACTURERS STILL PROVIDING PARTS FROM THE GOLDEN YEARS



1960 CUB '049 R/A'

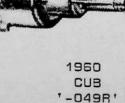
CUB '060 R/B/'

CRANKCASE IN PICTURE NOT USED FOR SALE. ACTUAL CASES WERE FROM '60-049A & '53-049B

MOHAWK N.Y. 13407 MANY PARTS STILL AVAILABLE FOR 1/2A AND LARGER ENGINES FROM TED BREBECK

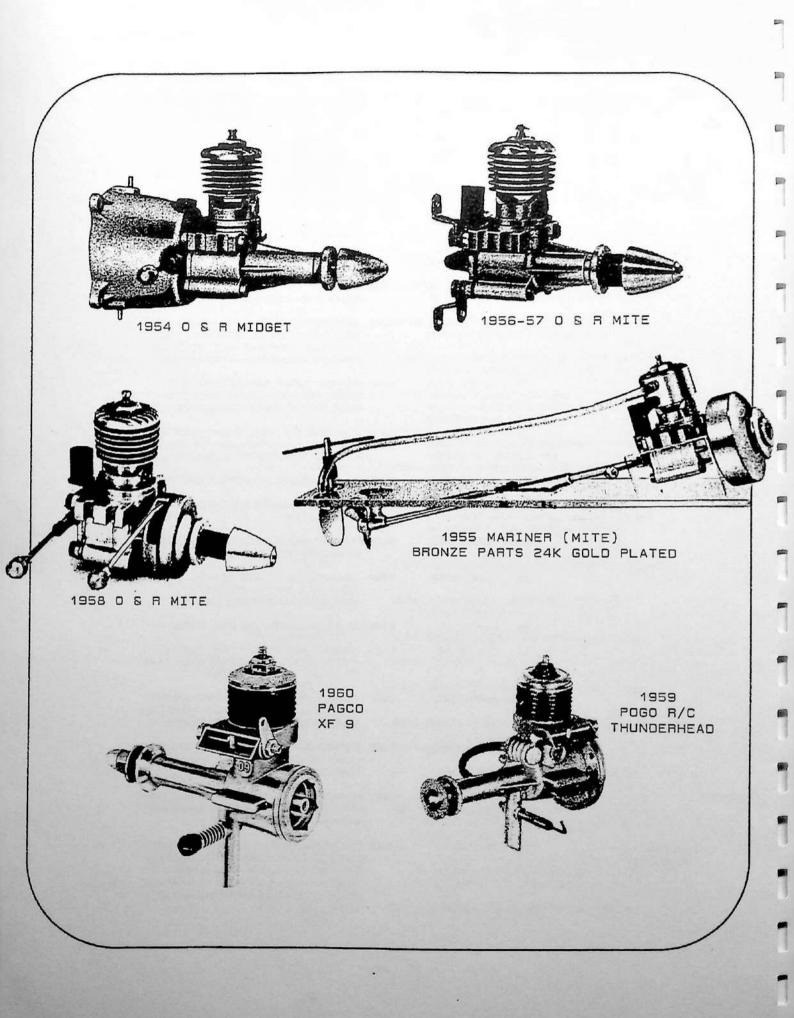
\$2 BRINGS A CATALOG

O.K. ENGINES P.O. BOX 355

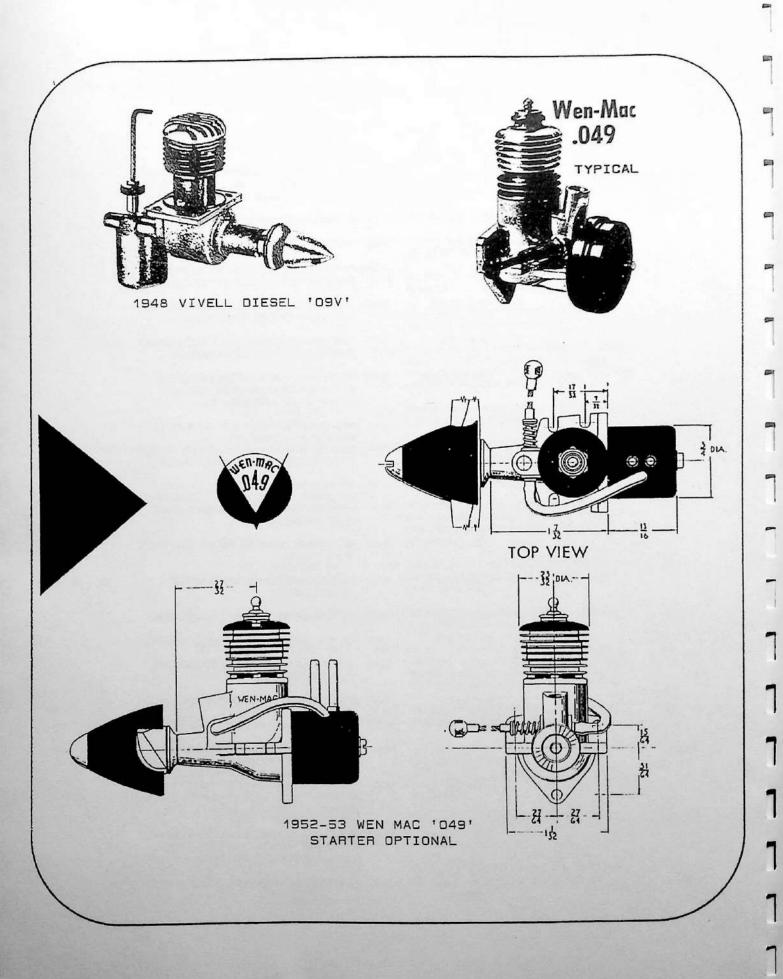


NOTE: EXPERIMENTAL DEPT. ENGINES IN 1/2A LINE SEEM TO CONTINUE TO APPEAR AT COLLECTOS AND SOME SWAP MEETS.

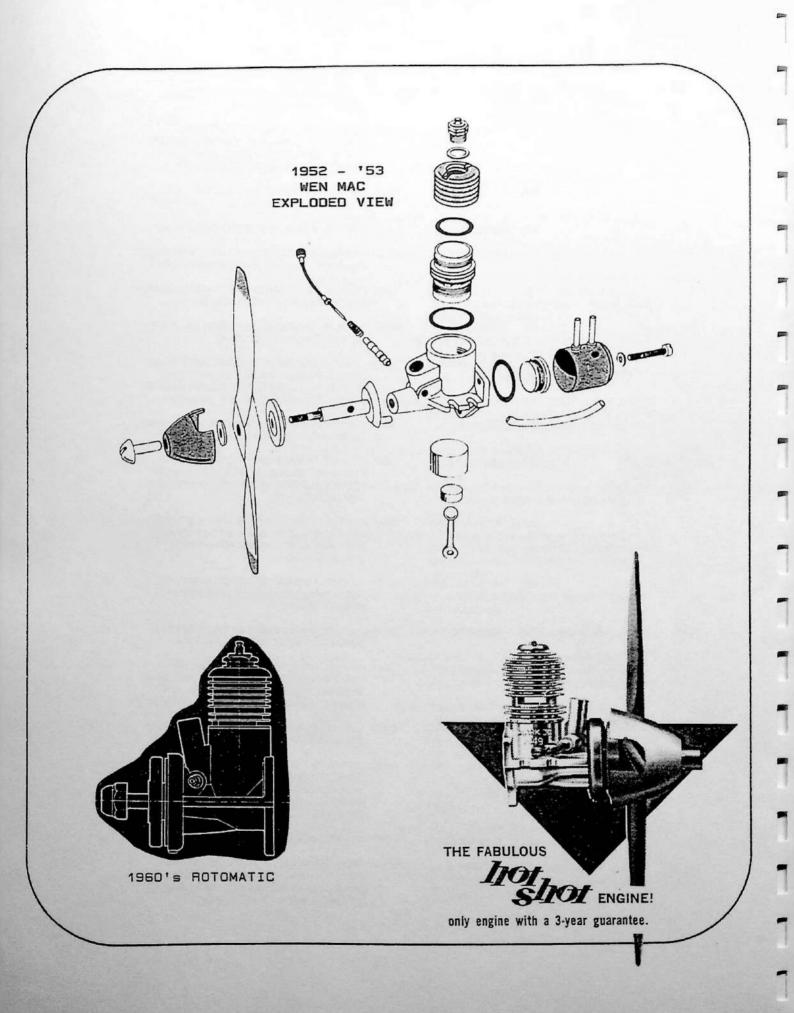
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	O. K. ENGINES - CONTINUED	'55	CUB .049 A	0.049	AS PREV./RED PLASTIC 'BABY BEE' TYPE TANK/ FRONT ROTARY/ALUMINUM SPINNER	15 - 25
		'56	COMET CUB B	0.049	FOR READY-FLY COMET SABRE 44/ 1ST MODELS STOCK .049B/LATER MODELS USED INTAKE EXTENTION/SILVER TANK/LONG N.V./LARGE PULLEY PROP DRIVE/ALUM. EXH. DEFLECTOR	
		'57	COMET CUB S	0.049	WITH PULL CORD STARTER/ NO INTAKE EXTN.	40
		'58	CUB .075/099 S		AS COMET-CUB. 0495/075&099 W/PULL STARTER	16
		'58	CUB .049 MS/ .075 MS/.099 MS	-	AS PREV./MARINE/FLYWHEEL/PULL STARTER	45
П	<b>n</b>	'58	CUB .049 A (KIT)	0.049	.049A/(KIT) SEMI-ASSEMBLED WITH KNURLED PULLEY STARTER SPINNER	
Π		'58	COMET .049 A	0.049	AS 'COMET'.049 B/INTAKE EXTENDER HAS PIN- HOLE INTAKE/LARG DIAMETER ALUM. PROP DRIVE WITH NARROW GROOVE FOR STARTER STRING/MOUNTING USUALLY ON THE SIDE	
I		'58	COMET .049 A		AS PREV. 'COMET' .049A/USED TRI-PACER 'DISPAN' STAMPED EXHAUST DEFLECTOR/ REGLR. SIZE PROP DRIVE WASHER/NO STARTER	
		'59	COMET .049		.049B/MADE FOR COMET P-40/ INTAKE EXTN. LARGE SILVER TANK WITH UNIQUE VENT SYSTEM/ FLYWHEEL DRIVE/FIRST CUB GLOW HEAD USED	
	" NOTE:	'59	VARIATION	0.049	ALL .049 MODELS HAD GLOW HEADS FROM '59	
	<b>.</b>	'60	CUB .024	0.024	SCALED DOWN LARGE CUB .29/REED VALVE/ TWIN EXHAUST	40
	* *	'60	CUB .049 R/A		OLD CASE DIES MODIFIED TO ELIMINATE FRONT ROTARY/NOW REED VALVE/RED PLASTIC TANK	
		'60	CUB . 049 R/B		ADVANCED CONTEST ENGINE WITH CASE FROM .049 B /PRE-PRODUCTION ONLY - ALTHOUGH A NUMBER WERE BUILT	
		'60	CUB .049 R/A	0.049	AS .049R/B EXCEPT USED .049A CRANKCASE	
	и и	'60	CUB .060 R/B	0.059	STROKED .049B/PRODUCED FOR COMET READY- FLY T-38 WITH PUSH BUTTON STARTER & TANK/ ADVERTISED - NEVER SOLD SEPARATELY	15
F		'60	COMET .060 A	0.059	STROKED .049A REED VALVE/WHITE NYLON TANK/LONG NEEDLE/GLOW HD./TALLER-8 FINS STAMPED 'DISHPAN' EXHAUST DEFLECTOR	
1		'60	COMET .060 B	0.059	STROKED .049B REED VALVE/WHITE NYLON TANK/PUSH-BOTTON STARTER/RADIAL TANK/ BEAM MOUNTS/TALL - 8 FINS	
		'64	CLIB .059 A & B		ASSEMBLED FROM COMET PARTS BEFORE GOING OUT OF BUSINESS/LESS STARTER/CRANKCASE MACHINED TO ACCEPT STARTER	
I	O & R CHEMINOL (HARRY RICE)	'54	O&R MIDJET	0.049	LONG CRANKSHAFT/LARGE DETACHABLE DIE CAST TANK MT./COPPER OHLSSON EAGLE EM- BLEM ON FRONT/DISTINCT BOSS IN CENTER OF BACKPLATE W/SHALLOW HOLE IN BOSS/BOSS WITH HOLE DESIGNED FOR MARINE VERSION	50



0 & R	- CONTINUED		'54	O&R MIDJET	0.04	9 AS PREV./NO TANK MOUNT/ PROVIDED WITH 4 SEPARATE RADIAL MOUNTING LUGS	
**			'55	MARINER (MITE)	0.04	9 INBOARD/SOLD WITH MARINE DRIVE & PROP ACCESSORIES/SHORTER CRANKSHAFT/ ALL BRONZE PARTS 24 CARAT GOLD PLATED	
•	•		'56/57	O&R MITE	0.049	AS MIDJET EXCEPT SHORTER CRANKSHAFT AND CASE/NO TANK MOUNT/4 LUGS SUPPLIED/ IN 1957 A 1 PIECE MOUNTING PLATE PROVIDED	95
			'58	O&R MIDJET	0.049	AS PREV./PULL CORD STARTER/WITH EMBLEMS	
•	•		'58	O&R MITE	0.049	AS PREV./PULL CORD STARTER/WITH EMBLEMS	
н			'58	O&R MITE	0.049	AS PREV./BL.CYL./STARTER ON CRANKCASE/U- SHAPED BRCKTS4 BOLTS/NO EAGLE EMBLEM	
			'58	O&R MIDJET	0.049	NON STARTER MODEL/BLACK FINISH/CYLINDER EMBLEMS USED UNTIL SUPPLY FINISHED	
•	•		'58	O&R MITE	0.049	NON STARTER MODEL/BLACK FINISH/CYLINDER EMBLEMS USED UNTIL SUPPLY FINISHED	
•		NOTE		CAR & MARINE	0.049	MODELS NOT COVERED/SOME VERSIONS SOLD WITH COMPLETE ACCESSORIES - NO O&R CHEMINOL MFD. AFTER MID - '58 -	
PAGCO			_			MFD. BY PAGLIUSO ENGINEERING CO. FROM	
			'59	PAGCO XF9	0.091	"ANDERSON - HORNET .091" MOD. FROM POGO/PAGCO NAME ON EXHAUST THROTTLE/BEAM MOUNTS/ALUM.FLAT HEAD	
			'59	PAGCO CAR		AS PAGCO WITH DIRECT DRIVE & FLYWHEEL (ON SHAFT) ONE MOUNTING LUG GROUND OFF/ MOUNTING WITH PLATE CLAMPED TO BACK- PLATE/ 'PAGCO' NAME	40
			'59	"XF - D9"	0.091	AS ATHEARN 'POGO'/THREADED CRANKSHAFT 'PAGCO' NAME	
			'60	PAGCO XF9	0.091	REDESIGNED POGO/ANDERSON SPITFIRE 'HORNET' HEAD	45 - 50
•			'60	PAGCO XF9	0.091	DOMED & BLUED STEEL PLUG IN TOP OF CYL.	
•			'61	PAGCO XF9	0.091	AS PREV./BLUE OR NATURAL ALUM. HD.INSERT	
			'61	PAGCO XF9	0.091	AS PREVIOUS/SHORT INTAKE/ COMBO STEEL CYLINDER AND HEAD	
			'62	PAGCO XF9	0.091	DOMED ALUMINUM PLUG IN TOP OF CYLINDER	
			'63	PAGCO XF9	0.091	NUMBER OF MODS./BEAM & RADIAL MOUNTS	
POGO			-			BUILT BY PAGLIUSO FOR ATHEARN/SOLD BY PIONEER MODELCRAFT IN REGULAR AIRCRAFT VERSIONS(APPROX. 1100 TOTAL POGO'S BUILT)	
			'59 1	POGO .09		FROM MOD.SPITHRE 'HORNET DIES/FOR PLASTIC READY-FLY/ 'POGO' ON SIDE/ THROTTLE IN EXHAUST/ NO MOUNTING LUGS	
			'59 1	THUNDERHEAD POGO R/C		SEPARATE FROM READY-FLY ATHEARN MODELS DIES REVISED FOR BEAM MT./RADIAL RING MT. INCL./EXH.THROTTLE/STANDARD GLOW PLUG	
			'59 1	THUNDERHEAD POGO	0.091	AS PREV./BEAM MOUNTS/NO EXH. THROTTLE	



VIVELL MOTORS	'48	DIESEL .09F	0.098	SAND CAST CASE AND FRONT END/FIXED COMPRESSION/REAR ROTARY	
	'48	DIESEL .09 V		VARIABLE COMPRESSION/WITH CONTRA PISTON IN HEAD INSTEAD OF UPPER CYLINDER LINER (AS RECENT DAVIS DIESEL HEAD TYPE) REAR ROTARY/ 'ALLEN KEY' ADJUSTMENT	
	'48	DIESEL .035V	0.035	ALL MACHINED FROM BAR STOCK/RADIAL MOUNTING WITH SCREWS INTO REAR OF CASE	
	'48	DIESEL .035F	0.035	AS PREV. FIXED COMPRESSION/REAR ROTARY	
	'48	DIESEL .035V	0.035	AS .09V ('DAVIS'STYLE) VARIABLE COMPRESSION ALLEN KEY ADJ./MACHINED FROM BAR STOCK	
	'49	GLOW .035	0.035	AS PREV035/CYLINDER CAD PLATED/BOLT ON FINNNED HEAD D.&T. FOR GLOW PLUG	
•	'49	VIVELL .09G	0.098	AS .09 DIESEL/FIXED COMPRESSION HD. D. & T. FOR GLOW PLUG/ REAR ROTARY	
•	'50	VIVELL .09G/II	0.098	AS PREV. GLOW/REUSED CRANKCASE & SHAFT FRONT ROTARY COVER SCREWS INTO FRONT OF CASE/REAR ROTARY PORT CLOSED (FACTORY PRODUCTION UNKNOWN - REF. 'JOURNAL')	
	'51	VIVELL .020	0.02	MACHINED FROM BAR STOCK WITH REAR TANK/ RADIAL MT./FRONT ROTARY/(REF. 'JOURNAL')	
WEN - MAC CORP. (div./AMF) (BILL ATWOOD)	'51	AEROMITE		SPL.BABY SPITFIRE/LONG FUEL TANK WITH 2- TALL BRASS VENTS/MTD. BY LONG TANK STUD STICKING OUT REAR AND FASTENED WITH NUT AND LOCKWASHER	
	'52/'53	WEN-MAC .049	0.049	SOME RED & SILVER HEADS/TANK & SPINNER/ BEAM RADIAL (DESIGNED & MFD.BY ATWOOD WITH SOME PARTS INTERCHANGING WITH WASPS '52 - '54)	12
	'54	WEN-MAC MK II	0.049	AS PREV./MK II ON CASE/STARTER OPTIONAL LEFT RADIAL MT.DRILLED OUT FOR FUEL LINE TO GO THROUGH	12
	'56	WEN-MAC MK II	0.049	AS PREV./ SMALL CIRCULAR 'PAD' ADDED TO INTAKE TO TAKE STARTER HOLDING PIN	12
	'56	WEN-MAC MK II	0.049	AS PREV./INTAKE BLOCK HAS HEAVY PADS ADDED TO OFFSET NEEDLE VALVE AWAY FROM PROP/PULL CORD STAKTER OPTIONAL - ALSO SOLD LATER WITH NEOPRENE O-RING STAKTER	12
	'56	WEN-MAC MK II	0.049	AS PREV./THROTTLE ON EXHAUST STACK/PULL CORD STARTER/LARGE CRANKSHAFT	12
	'56	WEN-MAC MK II	0.049	AS PREV./LONG INTAKE/SHORT BEAM MOUNTS AS ALL MK II's/STARTER OPTIONAL/ NO THROTTLE/ALUM.CASED PULL CORD STARTERS OR LATER MODELS WITH BLUED STEEL STARTER HOUSINGS	12
	'56	WEN-MAC MK II	0.049	AS PREVIOUS/ LARGE CRANKSHAFT	12
	'57	HELICOPTER MKII	0.049	AS '56/TANK CUT DOWN/SPL. RADIAL MT./ ALUM. SLIP-RING ATTACHED OVER TANK ALLOWS ENGINE TO ROTATE WHILE STRAIGHT UP-USED IN FREE FLIGHT HELI MODEL	



WEN MAC - CONTINUED	'58	WEN-MAC MK II	0.049	AS PREV./EXHAUST STACK MACHINED OFF/ STARTER OPTIONAL	12
	'59	WEN-MAC MK II	0.049	AS PREV./ONE SHORT & ONE LONG BEAM MT. STARTER OPTIONAL	12
	'60	WEN-MAC MKII'V'	0.049	AS PREV./'V" BELOW .049 ON CASE/ MODEL USED TO PROMOTE EASY STARTING BY SALESMEN, TO SHOPS.	12
	'61	WEN-MAC MKIII'V'	0.049	AS PREV./ 'V'.049/2 LONG BEAM MOUNTS/ STARTER OPTIONAL	12
	'61	WEN-MAC MK III	0.049	AS PREV./ NO 'V' ON CASE	12
	'62	WEN-MAC MK IV	0.049	AS PREVIOUS/INTAKE SHORT/STRAIGHT MAIN BEARING BOSS/MARK IV OVER .049 AND AMF OVER WEN-MAC/SOME HAD BLACK CYLINDER/ SIGNIFICANT REDESIGN	12
	'63	WEN-MAC MK V	0.049	AMF ON CASE/MARK 'V' OVER 049/NO STARTER BLACK FINISHES ON MOST CYLINDERS	10
GUARANTEE	'63	HOT SHOTS - ALL		ADV'HOT SHOTS HAVE 3 YR. GUARANTEE!!'	
	'63	HOT SHOT MK X	0.049	REDESIGN OF WEN-MAC/STARTER MODEL/ 'X' OVER .049/WEN-MAC NAME OVER TRIANGLE WITH CIRCLE WITH AMF NAME/INTEGRAL HEAD	10
	'63	HOT SHOT MK XI	0.049	MK XI OVER .049/INTAKE HAS CRUDE FLAT AT REAR/CRUDE CRANKCASE DIE	10
	'63	HOT SHOT MIK XII	0.049	AS PREV./STARTER MODEL/ MK XII OVER .049 IN SMALLER LETTERS/WEN-MAC BELOW AMF TRIANGLE	10
н	'63	HOT SHOT MK XII	0.049	AS PREV./STARTER MODEL/BLACK CYLINDER/ 'BAR' BELOW .049/NEW STYLE HD. WITH 'FLATS' FOR WRENCH/OCCASIONALLY OLD STYLE HEADS USED	10
	'64	HOT SHOT MK XIII	0.049	AS PREV./MK XIII OVER .049 NO 'BAR' ON SIDE OF CRANKCASE	10
	'64	HOT SHOT MK XIII	0.049	AS PREV./LINE OR BAR BELOW .049 ON SIDE	10
• NOTE 1	ALL	VARIATIONS	0.049	NO STARTER MODELS CALLED 'HUSTLERS'/ STARTER ENGINES CALLED 'ROTOMATIC' OR 'CYCLOMATIC' DEPENDING ON STARTERS USED	
•	'65	THUNDERBOLT MK XII	0.049	SIMILAR TO 4TH HOT SHOT/BLACK CYLINDER/ NEW TYPE HEAD/THROTTLE OPTIONAL/ TINY HOLE DRILLED IN SIDE OF INTAKE SMOOTH THICK RING AROUND CYLINDER AT EXHAUST PORT FOR THROTTLE	12
	'65	THUNDERBOLT MK XIII	0.049	AS PREV./ SIMILAR TO 1964 HOT SHOTS/ THROTTLE OPTIONAL/HAS 'BAR' OR 'NO BAR' ON CASE	12
NOTE 2	ALL	VARIATIONS	0.049	RACE CAR & MARINE ENGINE VERSIONS OF FOREGOING NOT NOTED IN THESE LISTS.	
· NOTE 3	LATER	VARIATIONS	0.049	SOME MODELS HAD WINDUP FLAT SPRING STARTERS OTHER THAN PULL CORD STARTER USING SIMILAR PARTS.	

FRANK H. ANDERSON

\*AMA 2001 C/D MAAC 200L C/D

Past President: Model Aeronautics

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