ALWAYS Order by Part Number and Motor Number

CHAMPION MAGNETO ASSEMBLY 1DD220B
REPLACING 1AA220B ASSEMBLY

USED ON MODELS

1A	Up to 2000
S1D	Nos. 10101, 10104, 10106-10109, 10111-10116, 10118 and up.
D1D	Nos. 2358, 2365, 2367-2370, 2372 and up.

Part Number	Name of Part
	Mounting Plate
HG5278	Housing Assembly Complete
CV52101	Mounting Plate Assembly Complete
CV52107	Mounting Plate with Pole Shoe
SC25-20CA	Mounting Plate Clamping Screw
WA6-6	Clamping Screw Lock Washer
NT3-6CA	Clamping Screw Hex Nut
HP527	Holding Piece for Coil
HP528	Holding Piece for Coil
SC41-16CA	Holding Piece Fastening Screw
WA5-5	Holding Piece Screw Lock Washer
CL5217	Coil Assembly
SC39-4CA	Coil Ground Lead Fastening Screw
WA6-4	Coil Lead Screw Lock Washer
WA72112	Coil Lead Screw Plain Washer
	Condenser
CW5216	Condenser
SC39-4CA	Condenser Fastening Screw
WA6-4	Condenser Fastening Screw Lock Washer
EC1007	Terminal Clip for Condenser Lead

CHAMPION MOTORS COMPANY

Printed In U.S.A. Prices Subject to Change Without Notice. Prices F.O.B. Mpls.,Minn.

MAGNETO ASSEMBLY 1DD220B (CON'T)

Part Number	Name of Part
	Interrupter
IN5220	Interrupter Complete with Lever
SA85073	Interrupter Plate with Pivot Stud
SC41-7CA	Interrupter Plate Fastening Screw
WA5-5	Interrupter Plate Fastening Screw Lock Washer
WA60077	Interrupter Plate Fastening Screw Plain Washer
LE5219	Interrupter Lever with Contact Point
FP83425	Interrupter Lever Operating Spring
FP79322	Felt Wick for Interrupter Lever
FP78727	Plate for Supporting Adjustable Contact Scr.
1B75502	Plate Insulating Bushing
1S75501	Plate Insulating Strip - Either Side
SC104335	Plate Fastening Screw
WA95209	Plate Fastening Screw Lock Washer
NT3-3CA	Plate Fastening Screw Hexagon Nut
CS77777	Contact Screw - long
NT5222	Contact Screw Lock Nut
RI61-7CA	Rivet for Interrupter Lever Grounding Lead
SC37-4CA	Screw for Fastening Condenser Lead to Interrupter
	Short-Circuit
CT5223	Short-Circuit Button Assembly
SA83760	Short-Circuit Insulation Contact Plate with Contact Piece
SC153-6	Contact Plate Drive Screw
CB5234	Grounding Wire with Clip - Condenser to Insulation Contact Plate
EC1007	Grounding Wire Terminal Clip
EC956	Grounding Wire Holding Clamp
SC39-4CA	Clamp Fastening Screw
WA6-4	Clamp Fastening Screw Lock Washer
TU524	Grounding Wire Rubber Sleeve - at Contact Plate
	Cables
SA84535	High Tension Cable with Hook Terminal
FP83416	Clamp for Holding Cable
SC39-4CA	Clamp Fastening Screw
WA6-4	Clamp Fastening Screw Lock Washer
1S76378	Insulation Bushing (rubber) for High Tension Cable
WR67733	Magneto Wrench
	1AA22OB Parts Different from 1DD22OB Parts
NT66775	Contact Screw Lock Nut
CS83421	Contact Screw
IL83422	Interrupter Lever with Point
CD83661	*Condenser
SA79461	Lead Assembly
SA83759	Button Assembly
SA84737	Handle Complete
SC79556	Handle Screw
SC75705	Lead Assembly Screw
WA1288	Lead Assembly Lock Washer
SA83627	Strike Block Assembly

*Not Illustrated

EISEMANN MODEL 71-L FLYWHEEL MAGNETO

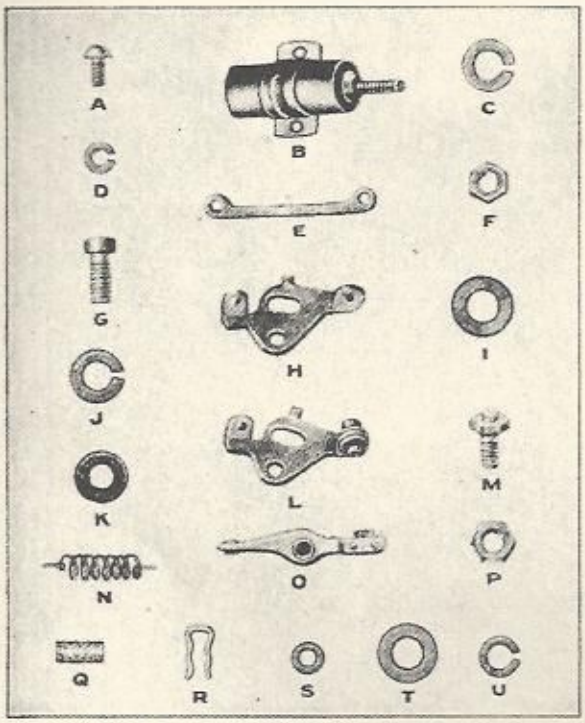
CHAMPION MAGNETO ASSEMBLY
1AA220E — 1BB220E
(old type) (new type)

NOTE: *Order by Part Number and Motor Number*

USED ON MODELS

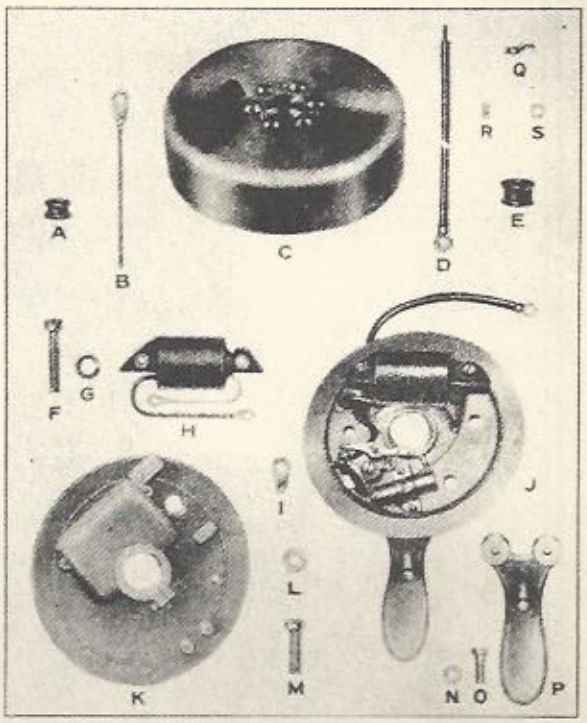
1A — Motors with Serial Numbers over 2000
1B - SIC - DIC — All Motors
SID — Up to 10000 - 10102 - 10103 - 10105 - 10110 - 10117

Manufactured by
CHAMPION MOTORS COMPANY, Minneapolis, Minn.



Breaker #23018 illustrated above is latest type and replaces Breaker used on Models 1A numbered over 2000 and Models 1B below number 7000.

Number	*Description*
A—15137	Fastening Screw for Condenser
B—20549	Condenser, with mounting strap
C— 9407	Lock Washer for Condenser post
D—15126	Lock Washer for 15137 Screw
E—20127	Conductor Strap (Breaker—Condenser)
F—20131	Hex Nut for Condenser binding post
G—17393	Fastening Screw for Breaker Plate
H—23019	Breaker Plate only
I —15024	Plain Washer for 17393 Screw
J —20975	Lock Washer for 17393 Screw
K—22986	Insulation Washer for Contact Screw
L —23018	Breaker Plate, with Contact Screw
M—22887	Screw with Tungsten Contact Point
N—22066	Tension Spring for Breaker Lever
O—22671	Breaker Lever with Tungsten Point
P —22944	Hex Nut for 22887 Contact Screw
Q—20484	Oil Wick for Breaker Lever pivot pin
R —20476	Spring Clip for 22671 Breaker Lever
S —22985	Insulating Washer for Contact Screw
T —20481	.050" Spacing Washer for 22671 Lever
T —20547	.016" Spacing Washer for 22671 Lever
T —20485	.006" Spacing Washer for 22671 Lever
U—22615	Lock Washer for 22887 Contact Screw

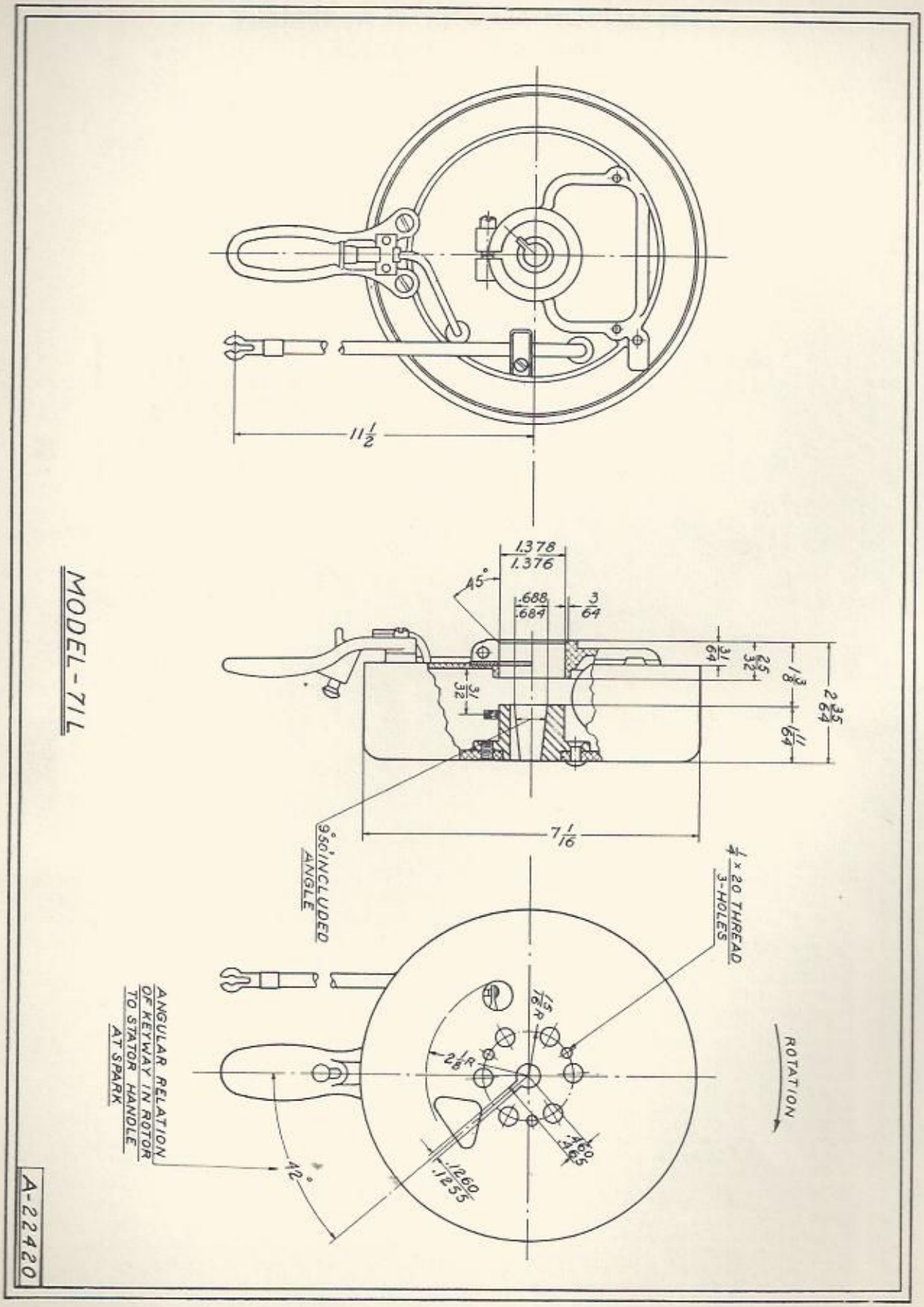


Number	*Description*
A—20482	Rubber Grommet for Low Tension Cable
B—22383	Low Tension Cable with terminal
C—22421	Rotor, complete with ring magnet
D—22148	High Tension Cable with terminal
E—17466	Rubber Grommet for High Tension Cable
F—20791	Fastening Screw for Winding core
G—20817	Lock Washer for 20791 Screw
H—21808	Winding, complete with core
I —20490	Solder Clip for ground lead
J —22423	Complete Stator assembly
K—22424	Stator Casting only
L—16356	Lock Washer for 22378 Screw
M—22378	Screw for tightening Stator Clamp
N—20477	Lock Washer for 20144 Screw
O—20144	Fastening Screw for 17947 Handle
P—17947	Spark Control Handle, with Switch
Q—21776	Clamp for High Tension Cable
R—16315	Screw for High Tension Cable Clamp
S —13817	Lock Washer for 16315 Screw

COMPLETE MODEL 71-L FLYWHEEL MAGNETO

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

EISEMANN MODEL 71-L FLYWHEEL MAGNETO

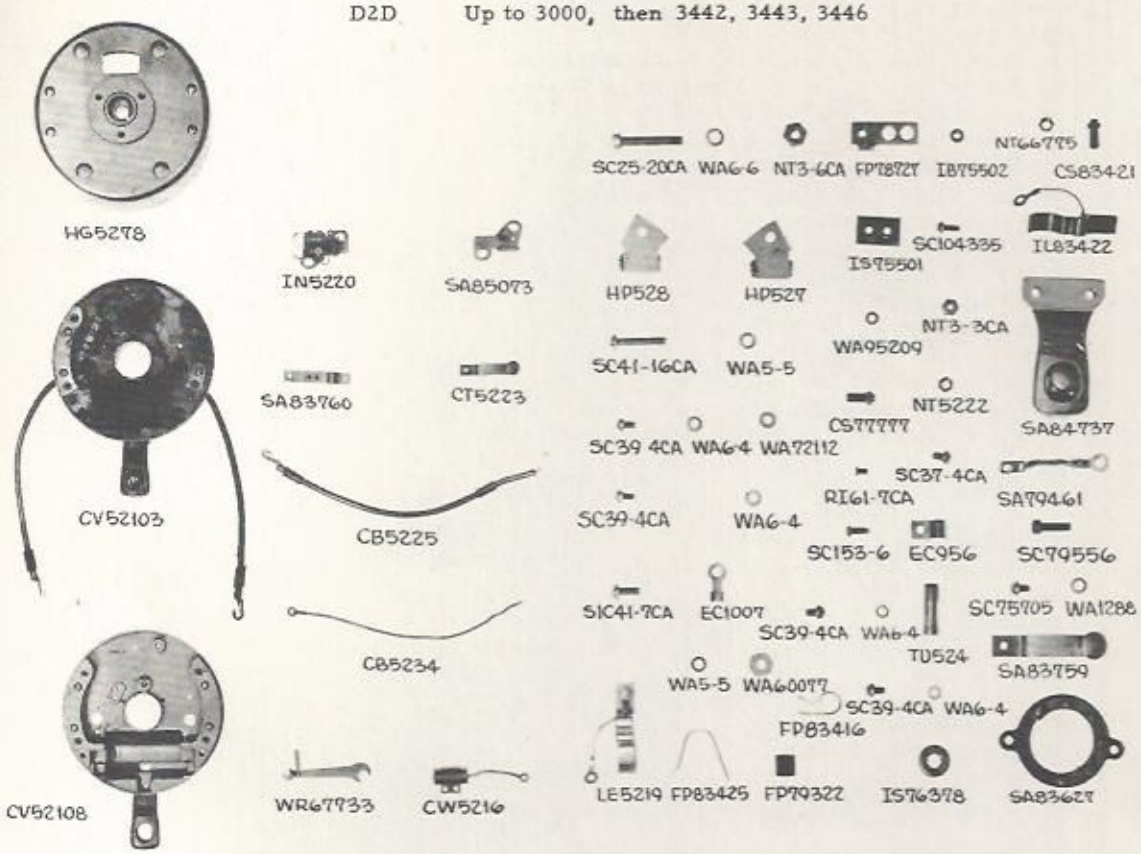


ALWAYS Order by Part Number and Motor Number

CHAMPION MAGNETO ASSEMBLY 2DD220B
REPLACING 2CC220B ASSEMBLY

USED ON MODELS

S2C	Nos. 2074-2251
D2C	Nos. 1322-1698
S2D	All Motors
D2D	Up to 3000, then 3442, 3443, 3446



Part Number	Name of Part
	Mounting Plate
HG5278	Housing Assembly Complete
CV52103	Mounting Plate Assembly Complete
CV52108	Mounting Plate with Pole Shoe
SC25-20CA	Mounting Plate Clamping Screw
WA6-6	Clamping Screw Lock Washer
NT3-6CA	Clamping Screw Hex Nut
HP527	Holding Piece for Coil
HP528	Holding Piece for Coil
SC41-16CA	Holding Piece Fastening Screw
WA5-5	Holding Piece Screw Lock Washer
SC39-4CA	Coil Ground Lead Fastening Screw
WA6-4	Coil Lead Screw Lock Washer
WA72112	Coil Lead Screw Plain Washer
	Condenser
CW5216	Condenser
SC39-4CA	Condenser Fastening Screw
WA6-4	Condenser Fastening Screw Lock Washer
EC1007	Terminal Clip for Condenser Lead

CHAMPION MOTORS COMPANY

Printed In U.S.A. Prices Subject to Change Without Notice. Prices F.O.B. Mpls., Minn.

ALWAYS Order by Part Number and Motor Number

MAGNETO ASSEMBLY 2DD220B (CON'T)

Part Number	Name of Part
	Interrupter
IN5220	Interrupter Complete with Lever
SA85073	Interrupter Plate with Pivot Stud
SC41-7CA	Interrupter Plate Fastening Screw
WA5-5	Interrupter Plate Fastening Screw Lock Washer
WA60077	Interrupter Plate Fastening Screw Plain Washer
LE5219	Interrupter Lever with Contact Point
FP83425	Interrupter Lever Operating Spring
FP79322	Felt Wick for Interrupter Lever
FP78727	Plate for Supporting Adjustable Contact Scr.
1B75502	Plate Insulating Bushing
1S75501	Plate Insulating Strip - Either Side
SC104335	Plate Fastening Screw
WA95209	Plate Fastening Screw Lock Washer
NT3-3CA	Plate Fastening Screw Hexagon Nut
CS77777	Contact Screw - Long
NT5222	Contact Screw Lock Nut
RI61-7CA	Rivet for Interrupter Lever Grounding Lead
SC37-4CA	Screw for Fastening Condenser Lead to Interrupter
	Short-Circuit
CT5223	Short-Circuit Button Assembly
SA83760	Short-Circuit Insulation Contact Plate With Contact Piece
SC153-6	Contact Plate Drive Screw
CB5234	Grounding Wire with Clip - Condenser to Insulation Contact Plate
EC1007	Grounding Wire Terminal Clip
EC956	Grounding Wire Holding Clamp
SC39-4CA	Clamp Fastening Screw
WA6-4	Clamp Fastening Screw Lock Washer
TU524	Grounding Wire Rubber Sleeve - at Contact Plate
	Cables
CB5225	High Tension Cable with Hook Terminal
FP83416	Clamp for Holding Cable
SC39-4CA	Clamp Fastening Screw
WA6-4	Clamp Fastening Screw Lock Washer
1S76378	Insulation Bushing (rubber) for High Tension Cable
WR67733	Magneto Wrench
	2CC22OB Parts Different From 2DD22OB Parts
NT66775	Contact Screw Lock Nut
CS83421	Contact Screw
IL83422	Interrupter Lever with Point
CD83661	*Condenser
SA79461	Lead Assembly
SA83759	Button Assembly
SA84737	Handle Complete
SC79556	Handle Screw
SC75705	Lead Assembly Screw
WA1288	Lead Assembly Lock Washer
SA83627	Strike Block Assembly

*Not Illustrated

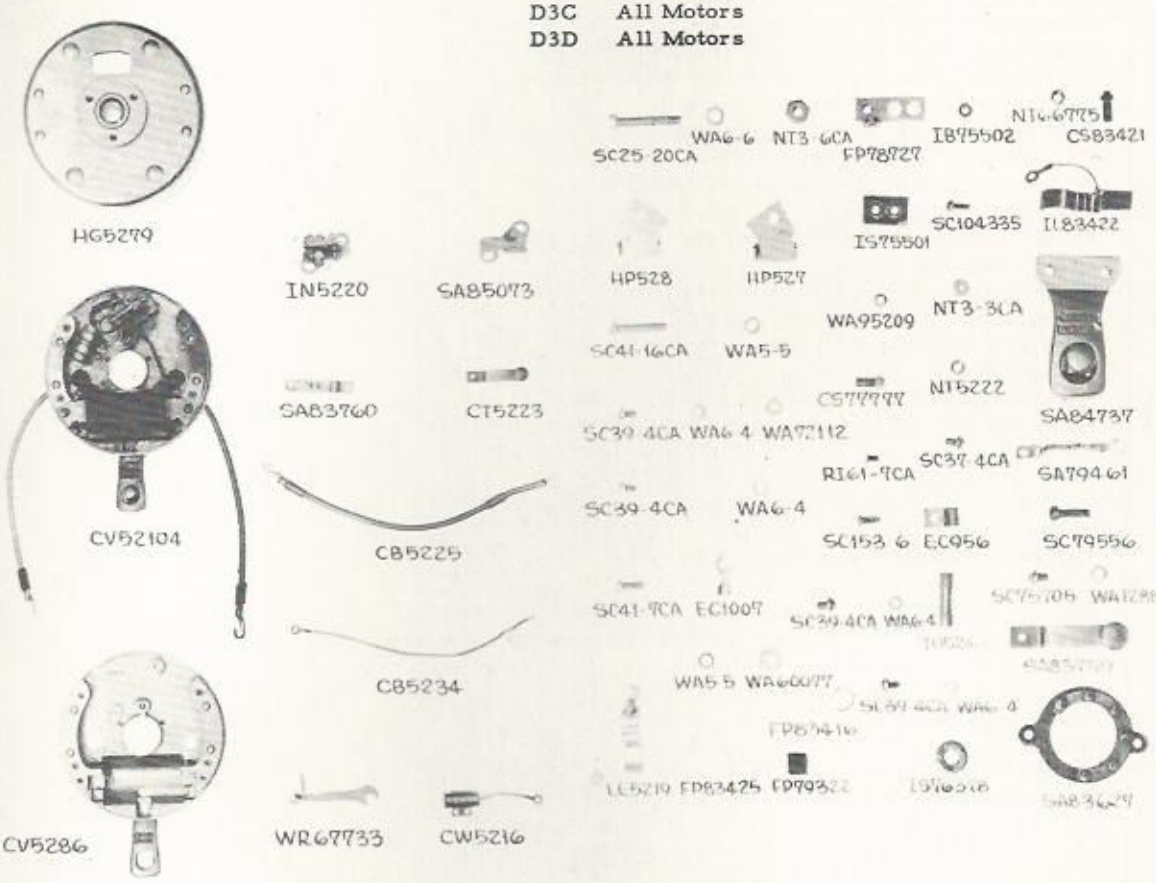
ALWAYS Order by Part Number and Motor Number

CHAMPION MAGNETO ASSEMBLY 3DD220

REPLACING 3BB220 ASSEMBLY

USED ON MODELS

3B	All Motors
D3C	All Motors
D3D	All Motors



Part Number	Name of Part
	Mounting Plate
HG5279	Housing Assembly Complete
CV52104	Mounting Plate Assembly Complete
CV5286	Mounting Plate with Pole Shoe
SC25-20CA	Mounting Plate Clamping Screw
WA6-6	Clamping Screw Lock Washer
NT3-6CA	Clamping Screw Hex Nut
HP527	Holding Piece for Coil
HP528	Holding Piece for Coil
SC41-16CA	Holding Piece Fastening Screw
WA5-5	Holding Piece Screw Lock Washer
SC39-4CA	Coil Ground Lead Fastening Screw
WA6-4	Coil Lead Screw Lock Washer
WA72112	Coil Lead Screw Plain Washer
	Condenser
CW5216	Condenser
SC39-4CA	Condenser Fastening Screw
WA6-4	Condenser Fastening Screw Lock Washer
EC1007	Terminal Clip for Condenser Lead

MAGNETO ASSEMBLY 3DD220 (CON'T)

Part Number	Name of Part
	Interrupter
IN5220	Interrupter Complete with Lever
SA85073	Interrupter Plate with Pivot Stud
SC41-7CA	Interrupter Plate Fastening Screw
WA-5	Interrupter Plate Fastening Screw Lock Washer
WA60077	Interrupter Plate Fastening Screw Plain Washer
LE5219	Interrupter Lever with Contact Point
FP83425	Interrupter Lever Operating Spring
FP79322	Felt Wick for Interrupter Lever
FP78727	Plate for Supporting Adjustable Contact Scr.
1B75502	Plate Insulating Bushing
1S75501	Plate Insulating Strip - Either Side
SC104335	Plate Fastening Screw
WA95209	Plate Fastening Screw Lock Washer
NT3-3CA	Plate Fastening Screw Hexagon Nut
CS77777	Contact Screw - long
NT5222	Contact Screw Lock Nut
RI61-7CA	Rivet for Interrupter Lever Grounding Lead
SC37-4CA	Screw for Fastening Condenser Lead to Interrupter
	Short-Circuit
CT5223	Short-Circuit Button Assembly
SA83760	Short-Circuit Insulation Contact Plate with Contact Piece
SC153-6	Contact Plate Drive Screw
CB5234	Grounding Wire with Clip - Condenser to Insulation Contact Plate
EC1007	Grounding Wire Terminal Clip
EC956	Grounding Wire Holding Clamp
SC39-4CA	Clamp Fastening Screw
WA6-4	Clamp Fastening Screw Lock Washer
TU524	Grounding Wire Rubber Sleeve - at Contact Plate
	Cables
CB5225	High Tension Cable with Hook Terminal
FP83416	Clamp for Holding Cable
SC39-4CA	Clamp Fastening Screw
WA6-4	Clamp Fastening Screw Lock Washer
1S76378	Insulation Bushing (rubber) for High Tension Cable
WR67733	Magneto Wrench
	3BB220 Parts Different From 3DD220 Parts
NT66775	Contact Screw Lock Nut
CS83421	Contact Screw
IL83422	Interrupter Lever with Point
CD83661	*Condenser
SA79461	Lead Assembly
SA83759	Button Assembly
SA84737	Handle Complete
SC79556	Handle Screw
SC75705	Lead Assembly Screw
WA1288	Lead Assembly Lock Washer
SA83627	Strike Block Assembly

*Not Illustrated

EISEMANN MODEL 72-B FLYWHEEL MAGNETO

CHAMPION MAGNETO ASSEMBLY
2BB220E

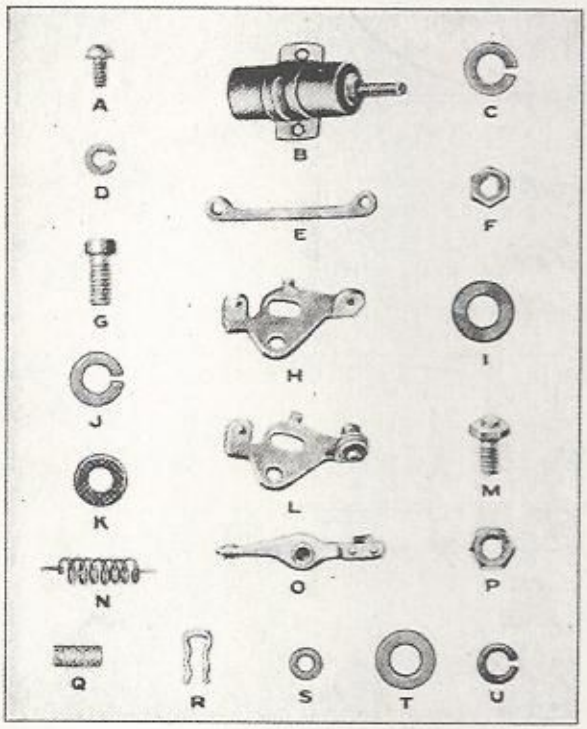
NOTE: *Order by Part Number and Motor Number*

USED ON MODELS

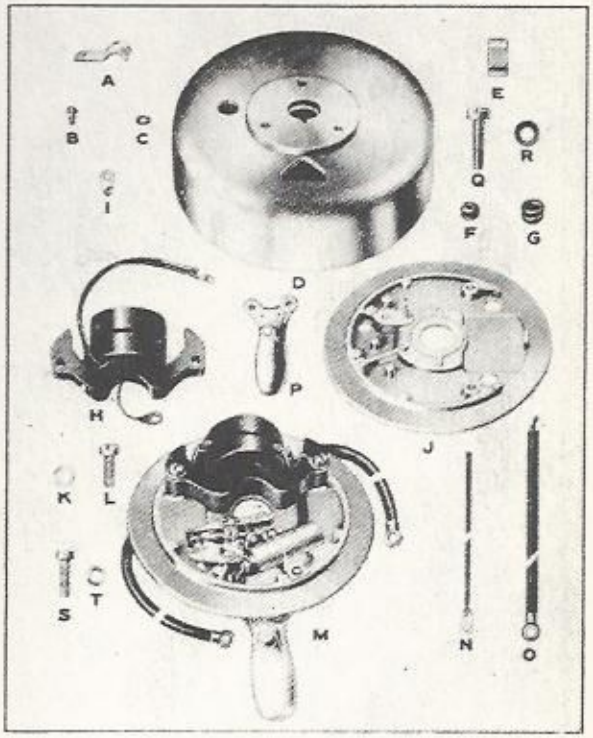
2B, S2E — All Motors
S2C — Motors with Serial Numbers below 2073
D2C — Motors with Serial Numbers below 1322
D2D — All Motors (FROM 3,000 UP) Except Nos. 3442 - 3443 - 3446

Manufactured by

CHAMPION MOTORS COMPANY, Minneapolis, Minn.



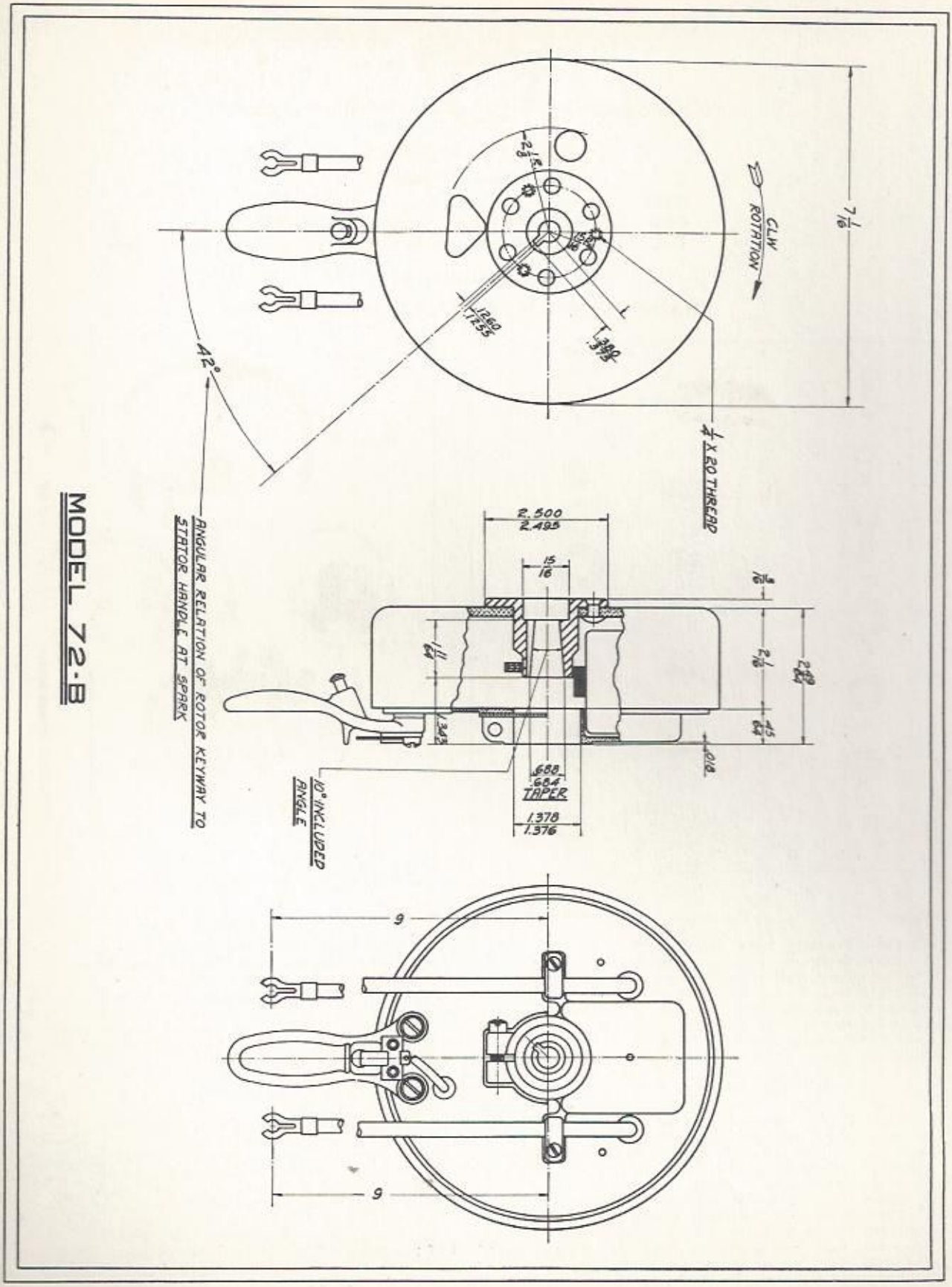
Number	*Description*
A—15137	Fastening Screw for Condenser
B—20549	Condenser, with mounting strap
C— 9407	Lock Washer for Condenser post
D—15126	Lock Washer for 15137 Screw
E—20127	Conductor Strap (Breaker—Condenser)
F—20131	Hex Nut for Condenser binding post
G—17393	Fastening Screw for Breaker Plate
H—23019	Breaker Plate only
I—15024	Plain Washer for 17393 Screw
J—20975	Lock Washer for 17393 Screw
K—22986	Insulation Washer for Contact Screw
L—23018	Breaker Plate, with Contact Screw
M—22887	Screw with Tungsten Contact Point
N—22066	Tension Spring for Breaker Lever
O—22671	Breaker Lever with Tungsten Point
P—22944	Hex Nut for 22887 Contact Screw
Q—20484	Oil Wick for Breaker Lever pivot pin
R—20476	Spring Clip for 22671 Breaker Lever
S—22985	Insulating Washer for Contact Screw
T—20481	.050" Spacing Washer for 22671 Lever
T—20547	.016" Spacing Washer for 22671 Lever
T—20485	.006" Spacing Washer for 22671 Lever
U—22615	Lock Washer for 22887 Contact Screw



Number	*Description*
A—21776	Clamp for High Tension Cable
B—16315	Screw for High Tension Cable Clamp
C—13817	Lock Washer for 16315 Screw
D—23111	Rotor, complete with ring magnet
E—	This Part not used in Model 72-B
F—20482	Rubber Grommet for Low Tension Cable
G—17466	Rubber Grommet for High Tension Cable
H—23049	Winding, complete with core
I—20490	Solder Clip for ground lead
J—23118	Stator Casting only
K—16356	Lock Washer for 22378 Screw
L—22378	Screw for tightening Stator Clamp
M—23114	Complete Stator assembly
N—23068	Low Tension Cable with terminal
O—23119	High Tension Cable with terminal
P—17947	Spark Control Handle, with Switch
Q—21472	Fastening Screw for Winding Core
R—20817	Lock Washer for 21472 Screw
S—20144	Fastening Screw for 17947 Handle
T—20477	Lock Washer for 23067 Screw
*—24024	Cover (not illustrated)

COMPLETE MODEL 72-B FLYWHEEL MAGNETO

EISEMANN MODEL 72-B FLYWHEEL MAGNETO



MODEL 72-B

EISEMANN MODEL 61-E FLYWHEEL MAGNETO

CHAMPION MAGNETO ASSEMBLY
1EE220E

NOTE: *Order by Part Number and Motor Number*

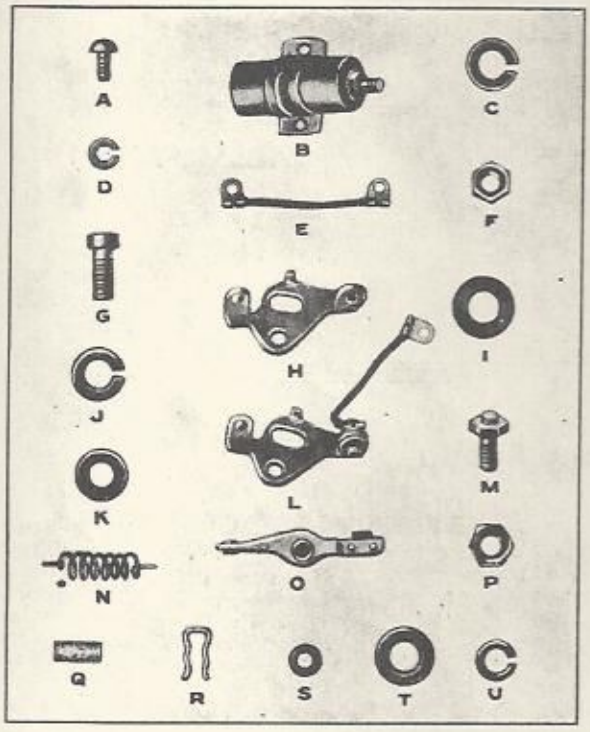
USED ON MODELS

DIE — All Motors

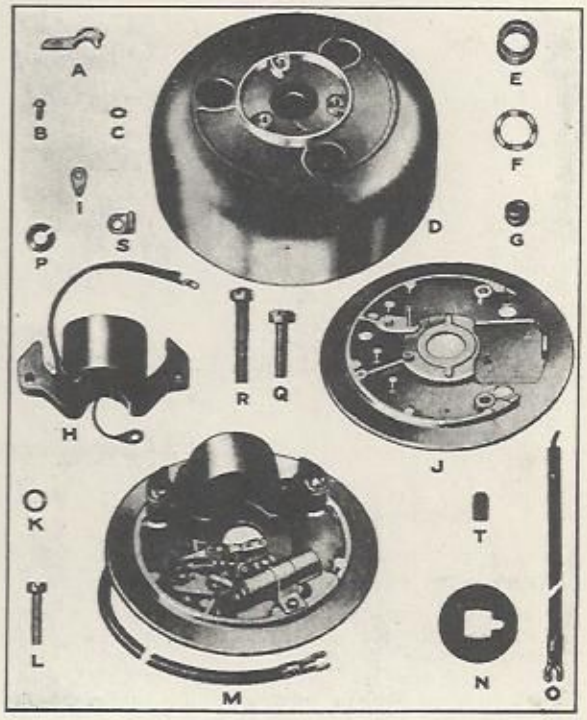
SIE — Motor Nos. 1 to 18871 and between 19517 to 19543 - 19546 to 19612

Manufactured by

CHAMPION MOTORS COMPANY, Minneapolis, Minn.



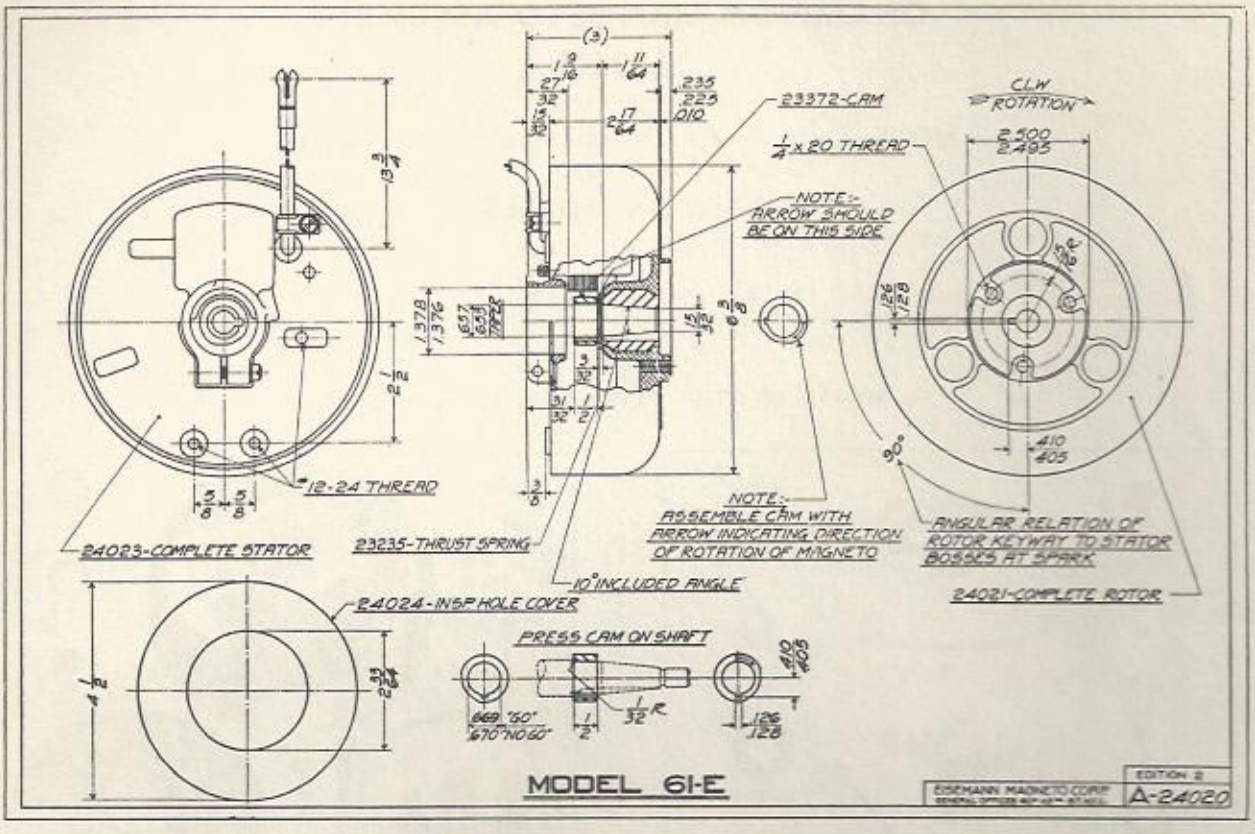
Number	*Description*
A—17183	Fastening Screw for Condenser
B—20549	Condenser, with mounting strap
C— 9407	Lock Washer for Condenser post
D—15126	Lock Washer for 15137 Screw
E—23280	Conductor (Breaker to Condenser)
F—20131	Hex Nut for Condenser binding post
G—17393	Fastening Screw for Breaker Plate
H—23019	Breaker Plate only
I —15024	Plain Washer for 17393 Screw
J —20975	Lock Washer for 17393 Screw
K—22986	Insulation Washer for Contact Screw
L —23018	Breaker Plate, with Contact Screw
M—22887	Screw with Tungsten Contact Point
N—22066	Tension Spring for Breaker Lever
O—22671	Breaker Lever with Tungsten Point
P —22944	Hex Nut for 22887 Contact Screw
Q—20484	Oil Wick for Breaker Lever pivot pin
R —20476	Spring Clip for 22671 Breaker Lever
S —22985	Insulating Washer for Contact Screw
T —20481	.050" Spacing Washer for 22671 Lever
T —20547	.016" Spacing Washer for 22671 Lever
T —20485	.006" Spacing Washer for 22671 Lever
U—22615	Lock Washer for 22887 Contact Screw



Number	*Description*
A—21776	Clamp for High Tension Cable
B —16315	Screw for 21776 H. T. Cable Clamp
C —13817	Lock Washer for 16315 Screw
D—24021	Rotor with Magnet and pole shoes
E —23372	Breaker Cam (with keyway)
F —23235	Thrust Washer for 23372 Breaker Cam
G—17466	Rubber Grommet for H. T. Cable
H—23010	Winding, complete with core
I —20490	Solder Clip for ground lead
J —24025	Stator Casting only
K—16356	Lock Washer for 22378 Screw
L —22378	Screw for Stator hub clamp
M—24023	Stator assembly, complete
N—23263	Insulation Washer for Winding
O—22148	High Tension Cable (15¼" long)
P —20817	Lock Washer for 20791, 21472 Screws
Q—21472	Screw 1" long fastens Winding core
R —20791	Screw 1¼" long fastens Winding core
S —22214	Solder Clip for insulated primary lead
T —23269	Insulation Strip for Winding core

COMPLETE MODEL 61-E MAGNETO

EISEMANN MODEL 61-E FLYWHEEL MAGNETO



Maintenance and Repairs

CONTACT POINT ADJUSTMENT

The magneto functions at its highest efficiency with a maximum Contact Point opening of .018" to .022".

To check gap, proceed as follows: (1) Remove flywheel from crankshaft. (2) Remove spark plug. (3) Rotate crankshaft slowly in normal operating direction until Breaker Lever fibre rests on highest part of Cam, approximately ¼" past breaking edge, or 30° beyond firing point. (4) Check gap with .020" feeler gauge.

Contact Points are closed while Breaker Lever fibre travels over flat section of sleeve Cam, and remain open during the entire travel of Breaker Lever fibre from breaking edge to closing edge—but the heavy section of Cam is not of uniform thickness over its entire length, being thicker near breaking edge than near the closing edge. For this reason Breaker Lever fibre must be positioned as above when checking gap.

If necessary to adjust gap: (1) loosen *slightly* the screw which fastens Breaker Plate to Stator Plate. (2) Move entire Breaker mechanism toward sleeve Cam to increase gap, or away from Cam to decrease gap. (3) Tighten Breaker Plate Fastening Screw securely. *Do not loosen lock nut on stationary Contact Screw.*

The entire Breaker assembly pivots on Breaker Lever Bearing Pin, which permits adjustment of gap without altering relationship between Contact Point surfaces.

If sleeve Cam is removed from crankshaft, replace with arrow (indicating rotation) on the outside.

DRESSING CONTACT POINTS

Uneven or pitted Contact Points can be restored to a true, even condition by using a special Carborundum stone sold for this particular purpose; after which all dust particles should be removed with a dry cloth. *Do not use a steel file on Contact Point surfaces.* Stiff paper or Cardboard will remove the oxide formation on Contact Points, resulting from long idleness.

LUBRICATION

The magneto should require no lubrication for a long period of service. Frequent removal of flywheel from crankshaft for this purpose alone is not recommended. But if it becomes necessary to remove flywheel, apply one (1) drop of crankcase oil to concealed Oil Wick in Breaker Lever Bearing Pin and spread a light coating of "Sta-Put" Grease or Vaseline over Breaker Cam.

REPLACING CABLES

Install eyelet terminal at spark plug end. Strip other end 7/8", twist strands together and attach to Winding. *Do not solder High Tension Cable to Winding.*

MAGNET

A sharp blow may cause a loss of magnetism, but no appreciable de-magnetization occurs in normal service.

WINDING AND CONDENSER

Authorized Eisemann Service Stations are equipped with approved testing instruments to determine the condition of questionable Windings and Condensers.

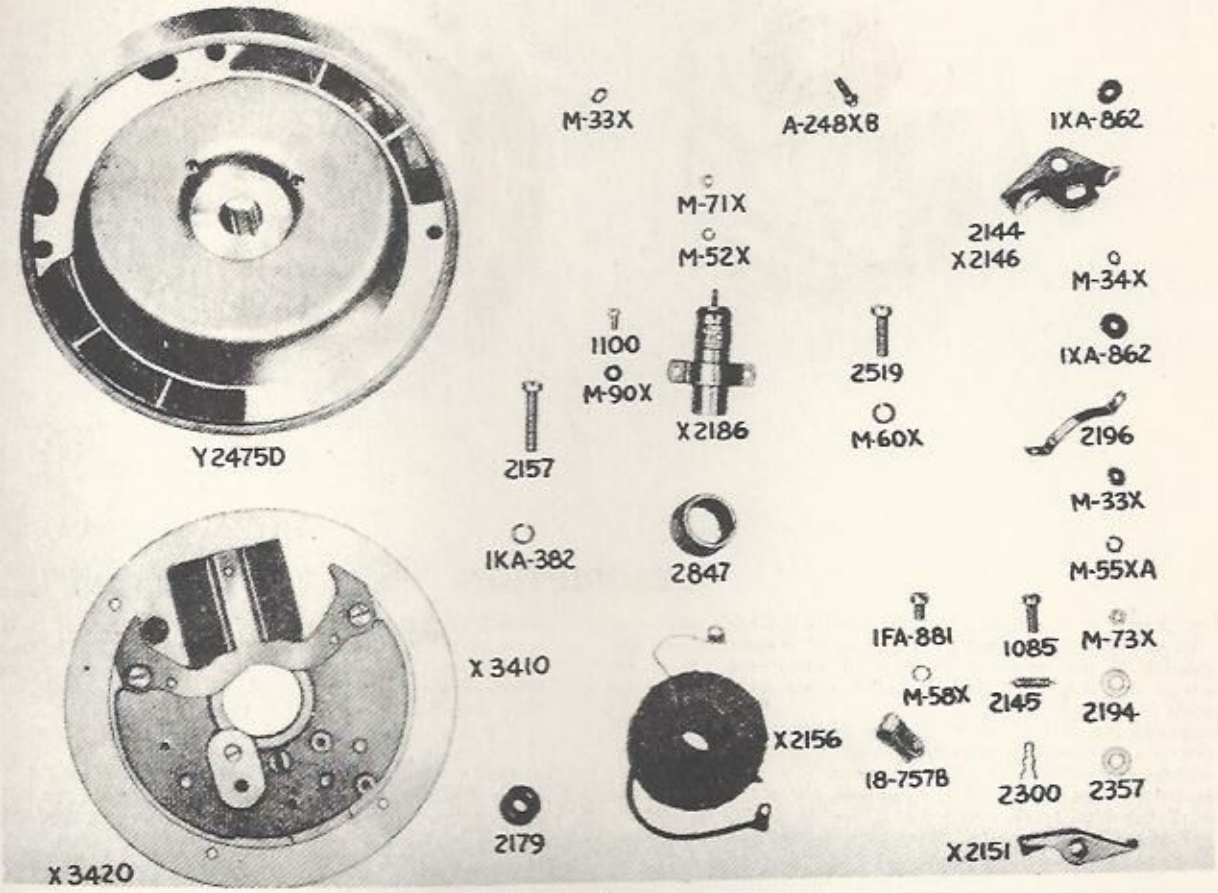
ALWAYS Order by Part Number and Motor Number

CHAMPION MAGNETO ASSEMBLY 1EE220W

Wico Series FW6½ Specification 828B

USED ON MODEL S1E

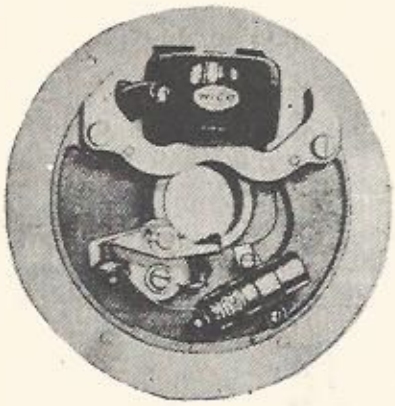
1939 Standard Single with Serial Numbers 18872-19516. 19544, 19613 and above.

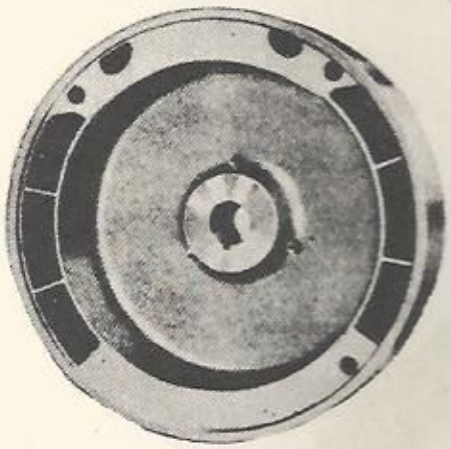


Part Number	Part Name		Part Number	Part Name	
M-33X	Fixed Contact Washer		2150	Breaker Arm Spacer	
M-34X	Fixed Contact Insulating Bushing		X2151	Breaker Arm Group	
M-52X	Condenser Connection L. W.		X2156	Coil Assembly	
M-55XA	Fixed Contact Lock Washer		2157	Core Screw	
M-58X	Lead Wire Clamp Screw L. W.		2179	Lead Wire Bushing	
M-58X	Breaker Plate Clamp Screw L. W.		X2186	Condenser Assembly	
M-60X	Pilot Clamp Screw L. W.		2194	Breaker Plate Clamp Screw Washer	
M-71X	Condenser Connection Nut		2196	Breaker Connection Strip	
M-73X	Fixed Contact Nut		X2215	Lead Wire Group (15")	
M-90X	Condenser Clamp Screw L. W.		2264B	Coil Wedge	
A-248XB	Fixed Contact		2300	Breaker Arm Lock	
IKA-362	Core Screw Lock Washer		2357	Breaker Arm Washer	
18-757B	Lead Wire Clamp		Y2475D	Rotor	
IXA-862	Fixed Contact Insulating Washer		2526	Breaker Cam CW	
IFA-881	Lead Wire Clamp Screw		3081	Spring Washer	
1085	Breaker Plate Clamp Screw		X3410	Stator Plate Unit (includes stator plate, coil, core, condenser, breaker assembly)	
1100	Condenser Clamp Screw		X3420	Stator Plate Assembly (for replacement only) (includes core, stator plate and breaker arm pivot)	
2144	Breaker Plate			Magneto (complete)	
2145	Breaker Arm Spring				
X2146	Breaker Plate Group				
2149	Breaker Arm Bushing				

CHAMPION MAGNETO ASSEMBLY 1EE220W

DESCRIPTION AND INSTRUCTIONS





DESCRIPTION

The series FW is a flywheel magneto featuring high spark output for easy starting, permanent retention of magnetism and the elimination of the necessity for frequent adjustment. It is the utmost in simplicity, consisting of a rotor, a cam and a stator plate assembly.

Integrally cast in the rim of the rotor is a magnetic unit which concentrates a powerful magnetic charge within a small space. By virtue of its ability to retain indefinitely this high magnetic concentration, this unit is able to provide the magneto with its extraordinary high spark output throughout its entire life. Its inductive characteristics are such that the magneto yields its maximum spark output over a wider timing range, thus making adjustment of the breaker points necessary less frequently than with the conventional type magneto. The magneto rotor forms the flywheel of the engine. It is ribbed inside to provide resistance to high centrifugal force and is chromium plated.

The cam is a separate, ground and polished part with inset key.

The stator plate unit includes the coil and core, condenser, and breaker mechanism, all easily accessible for servicing.

The FW provides deluxe ignition for outboard motors. Its high spark output is a great aid in making starting easy. It requires little or no attention over long periods of service.

SERVICE INSTRUCTIONS

It is recommended if there is an indication the magneto is causing trouble that a test be made before attempting to repair it.

If the motor refuses to start, the magneto can be checked by holding the spark plug cable 1/16" away from a point on the frame of the motor. When the motor is cranked over in its usual way, a properly performing magneto should jump this gap.

If the motor misses at high speed, first check the spark plugs. With the spark plugs in good condition and properly adjusted, the magneto should fire a spark without missing while the spark plug cable is held 1/16" away from the spark plug terminal.

The only adjustable part on the FW magneto is the breaker plate which provides adjustment for the breaker points.

To adjust the breaker points; unscrew the nut which holds the flywheel of the motor and remove it from the shaft. If the rotor should stick a little, tap the end of shaft with a mallet or a block of wood, while pulling on the flywheel, being careful not to damage the screw threads.

Turn the motor over until breaker points are fully open and measure opening with a feeler gauge. The opening should be .018" to .020" If points need adjusting loosen the screw which locks the breaker plate and move the plate to give the proper point setting, then lock the plate securely again by tightening the breaker plate screw. The breaker plate moves about the axis of the breaker arm stud and, thus assures proper alignment of contact surfaces.

The breaker point setting should only be adjusted in the manner described and at no time should the fixed contact be loosened or the breaker arm bent to provide adjustment.

The moving contact is integral with the breaker arm. If the contact points need replacement it is recommended that both the fixed and movable points be replaced at the same time.

The breaker arm bearing is packed with Wico cam lubricant at the time of assembly and should not need any other lubrication. A small amount of this lubricant is also packed on the breaker arm shoe and wipes off on the cam surface, providing permanent lubrication between these rubbing surfaces.

To remove the condenser on a single cylinder magneto, disconnect the breaker connection strip and the primary connection from the live end of the condenser and remove the two screws holding the condenser clamp. The primary ground connection is held under the inner clamp screw.

CHAMPION MOTORS CO.

MINNEAPOLIS, MINNESOTA

Printed in U.S.A.

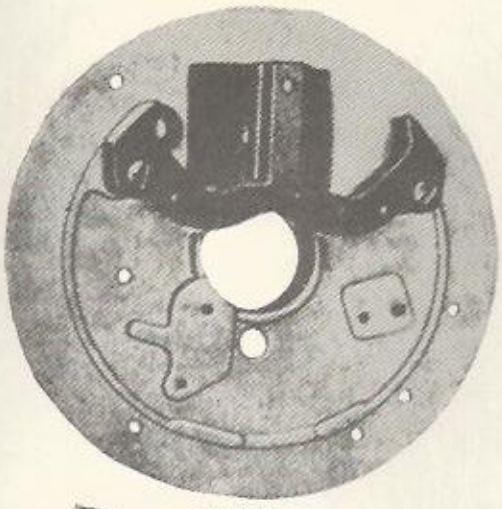
Prices F.O.B. Mpls., Minn.

CHAMPION MAGNETO ASSEMBLY 1FF220

Wico Series FW6½ Specification 1272

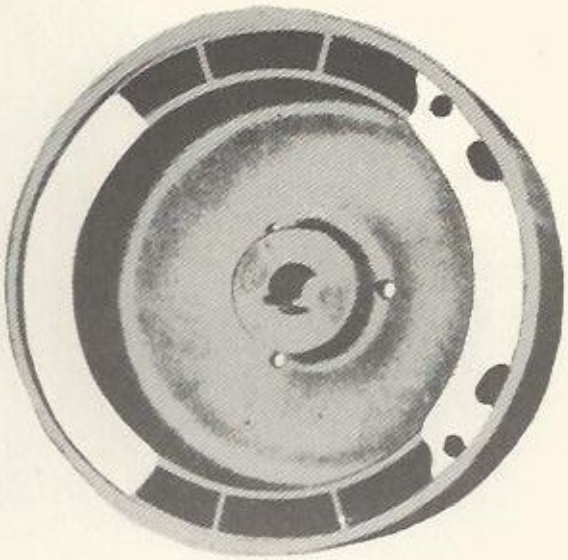
USED ON MODELS S1F-D1F

1940 Standard and DeLuxe Singles



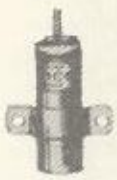
X 3659
X 3490

2264 B



Y 3491

X 2156



X 2186

X 3438

3475

3455

3454

IFA 881

2177

1100

2965

M-58X

2966

M-52X

M-71XA

X 2215

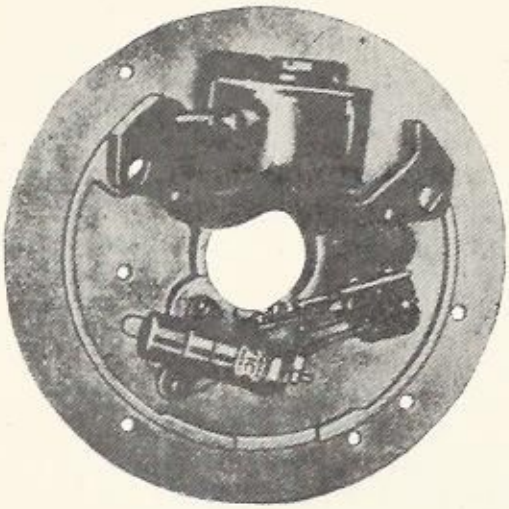
Part Number	Part Name	List Price
M-52X	Condenser Connection Nut Lock Washer	$
M-58X	Lead Wire Clamp Screw Lock Washer	
M-71XA	Condenser Connection Nut	
IKA-362*	Core Screw Lock Washer	
IFA-881	Lead Wire Clamp Screw	
1100	Condenser Clamp Screw	
2157*	Core Screw	
2177	Breaker Assembly Clamp Screw	
2179*	Lead Wire Bushing	
X2186	Condenser Assembly	
X2215	Lead Wire Group (15")	
2264B	Coil Wedge	
2965	Breaker Screw Washer	

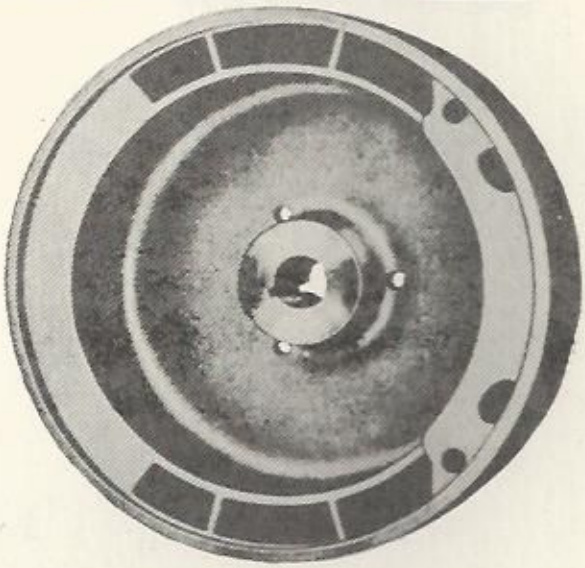
Part Number	Part Name	List Price
2966	Breaker Screw Lock Washer	
2966	Condenser Clamp Screw Lock Washer	
3081*	Spring Washer	
X3438	Breaker Assembly	
3454	Clamp Bushing	
3455	Lead Wire Clamp	
3475	Breaker Cam (CW)	
X3490	Stator Plate Unit (includes stator plate, coil core, condenser, breaker assembly)	
Y3491	Rotor	
X3659	Stator Plate Assembly (Replacement only)	
	Magneto (complete)	

*Not Illustrated

CHAMPION MAGNETO ASSEMBLY 1FF220

DESCRIPTION AND INSTRUCTIONS





DESCRIPTION

The series FW is a flywheel magneto featuring high spark output for easy starting, permanent retention of magnetism and the elimination of the necessity for frequent adjustment. It is the utmost in simplicity, consisting of a rotor, a cam and a stator plate assembly.

Integrally cast in the rim of the rotor is a magnetic unit which concentrates a powerful magnetic charge within a small space. By virtue of its ability to retain indefinitely this high magnetic concentration, this unit is able to provide the magneto with its extraordinary high spark output throughout its entire life. Its inductive characteristics are such that the magneto yields its maximum spark output over a wider timing range. thus making adjustment of the breaker points necessary less frequently than with the conventional type magneto. The magneto rotor forms the flywheel of the engine. It is ribbed inside to provide resistance to high centrifugal force.

The cam is a separate, ground and polished part with inset key.

The stator plate unit includes the coil and core, condenser, and breaker mechanism, all easily accessible for servicing.

The FW provides deluxe ignition for outboard motors. Its high spark output is a great aid in making starting easy. It requires little or no attention over long periods of service.

SERVICE INSTRUCTIONS

CHECKING MAGNETO FOR SPARK:

It is recommended if there is an indication the magneto is causing trouble that a test be made before attempting to repair it.

If the engine refuses to start, the magneto can be checked by holding the spark plug cable about 1/16" away from a point on the frame of the engine. When the engine is cranked over in its usual way, a properly performing magneto should jump this gap.

If the engine misses at high speed first check the spark plug. With the spark plug in good condition and properly adjusted, the magneto should fire a spark without missing while the spark plug cable is held 1/16" away from the spark plug terminal.

REMOVAL OF FLYWHEEL FROM ENGINE:

Unscrew the nut which holds the flywheel on the shaft about one turn. The flywheel will stick to the shaft. To loosen it, grasp the flywheel firmly and while attempting to pull it off, strike the nut with a mallet or lead hammer being careful during this operation not to damage the threads. The rapping will break the flywheel loose from its tapered fit on the shaft. Remove the nut and flywheel.

ADJUSTMENT OF BREAKER POINTS:

The only adjustable part on the FW magneto is the breaker assembly which provides adjustments for the breaker points. Turn the motor over until the breaker points are fully open and measure the point opening with a feeler gauge. The opening should be .015" Loosen the two screws, slightly which hold the breaker assembly to the stator plate. Move the whole assembly until the proper gap is obtained then lock the plate securely by tightening the two screws. The breaker assembly pivots about the screw which is the furthest away from the center of the stator plate.

A small amount of WICO cam lubricant is packed on the breaker arm shoe and wipes off on cam surface, providing permanent lubrication between these rubbing surfaces.

REMOVAL OF CONDENSER:

To remove the condenser disconnect the leads from the live end of the condenser and remove the two screws holding the condenser clamp.

REPLACEMENT OF COIL:

If a new coil is to be installed, the coil and core must be removed from the stator plate. Remove the two screws which hold the core to the stator plate. With a screw driver as a lever, pry off core from dowel pins being careful not to bend dowels.

The coil is held to the core by a wedge. It will be necessary to press with considerable force to remove the coil. Great care should be exercised to avoid damage to the windings.

In replacing coil core, exercise great care that the dowels are not bent and that the laminations are not disturbed as it is essential that the coil core be replaced in exactly the original position. Fasten coil core to stator plate with the two screws.

CHAMPION MOTORS CO.

MINNEAPOLIS, MINNESOTA

Printed in U.S.A.

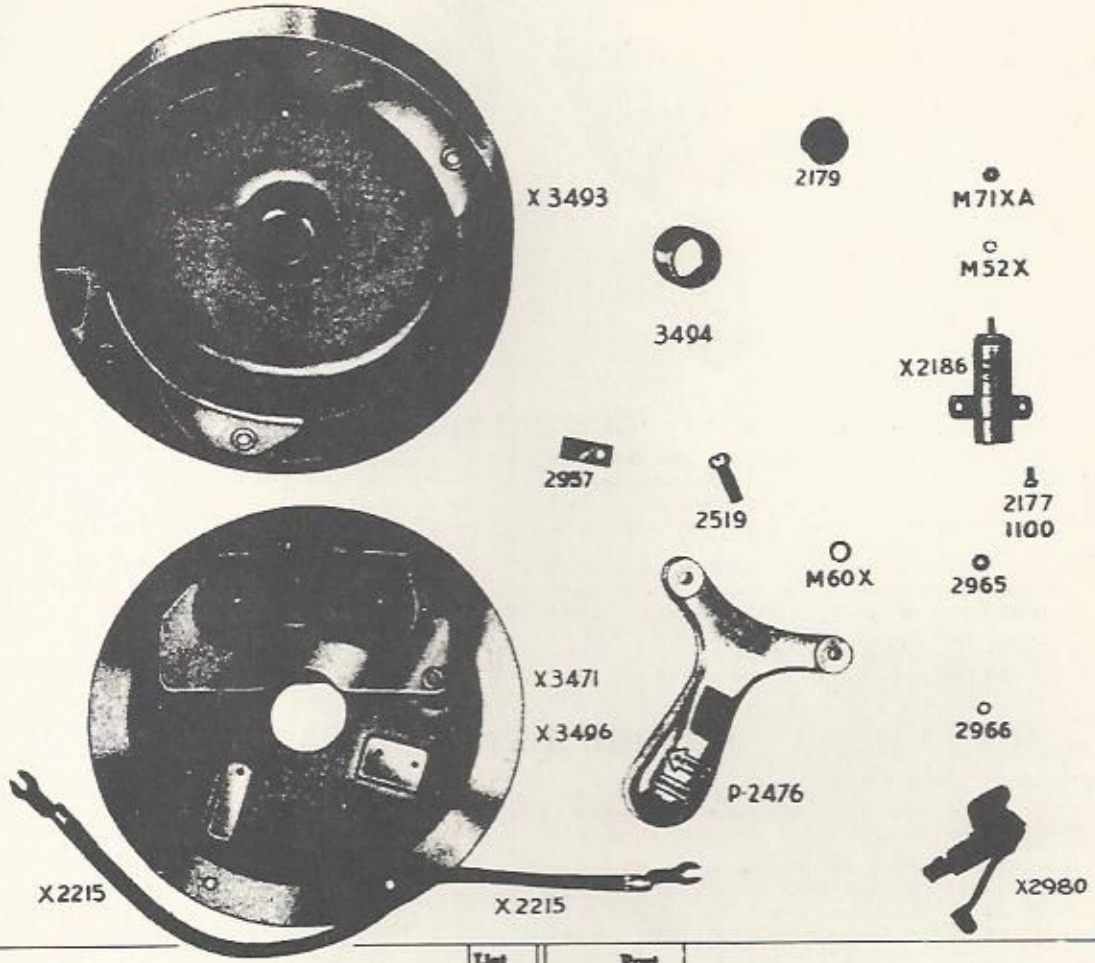
Prices F.O.B. Mpls., Minn.

CHAMPION MAGNETO ASSEMBLY S2FF220

Wico Series FW7 Specification 935B

USED ON MODEL S2F

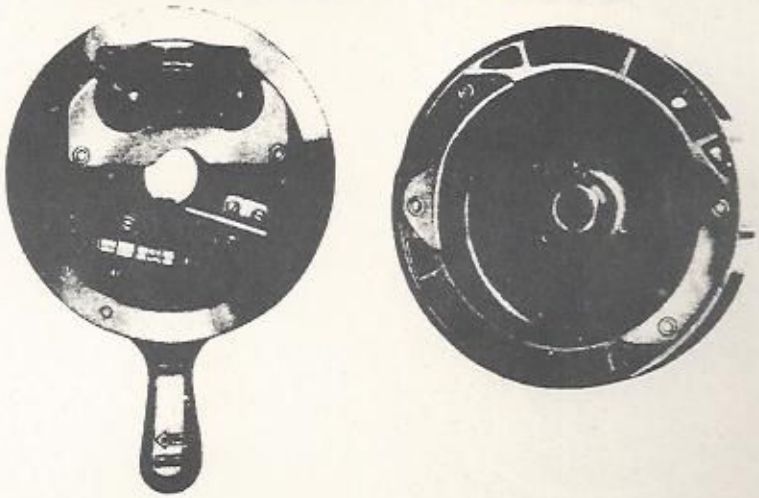
1940 Lite Twin



Part Number	Part Name	List Price	Part Number	Part Name	List Price
M-52X	Condenser Connection Nut L. W.		2966	Lead Wire Clamp Screw L. W.	
M-60X	Timing Lever Screw L. W.		X2980	Breaker Assembly	
M-71XA	Condenser Connection Nut		3081*	Spring Washer	
1100	Condenser Clamp Screw		X3428*	Friction Shoe Group	
2177	Lead Wire Clamp Screw		X3471	Stator Plate Group (includes coil, core, stator plate)	
2177	Breaker Assembly Clamp Screw				
2179	Lead Wire Bushing		X3493	Rotor Assembly (CW)	
X2186	Condenser Assembly		3494	Breaker Cam (CW)	
X2215	Lead Wire Group 2-12" (each)		X3496	Stator Plate Unit (includes stator plate group, condenser, breaker assembly, timing lever)	
P2476	Timing Lever			Magneto (complete)	
2519	Timing Lever Screw				
2957	Lead Wire Clamp				
2965	Breaker Screw Washer		*Not Illustrated		
2966	Breaker Screw L. W.				
2966	Condenser Clamp Screw L. W.				

CHAMPION MAGNETO ASSEMBLY S2FF220

DESCRIPTION AND INSTRUCTIONS



DESCRIPTION

The series FW is a flywheel magneto featuring high spark output for easy starting, permanent retention of magnetism and the elimination of the necessity for frequent adjustment. It is the utmost in simplicity, consisting of a rotor, a cam and a stator plate assembly.

Integrally cast in the rim of the rotor is a magnetic unit which concentrates a powerful magnetic charge within a small space. By virtue of its ability to retain indefinitely this high magnetic concentration, this unit is able to provide the magneto with its extraordinary high spark output throughout its entire life. Its inductive characteristics are such that the magneto yields its maximum spark output over a wider timing range, thus making adjustment of the breaker points necessary less frequently than with the conventional type magneto. The magneto rotor forms the flywheel of the engine. It is ribbed inside to provide resistance to high centrifugal force.

The cam is a separate, ground and polished part with inset key.

The stator plate unit includes the coil and core, condenser, and breaker mechanism, all easily accessible for servicing.

The FW provides deluxe ignition for outboard motors. Its high spark output is a great aid in making starting easy. It requires little or no attention over long periods of service.

SERVICE INSTRUCTIONS

CHECKING MAGNETO FOR SPARK:

It is recommended if there is an indication the magneto is causing trouble that a test be made before attempting to repair it.

If the engine refuses to start, the magneto can be checked by holding the spark plug cable about 1/16" away from a point on the frame of the engine. When the engine is cranked over in its usual way, a properly performing magneto should jump this gap.

If the engine misses at high speed first check the spark plug. With the spark plug in good condition and properly adjusted, the magneto should fire a spark without missing while the spark plug cable is held 1/16" away from the spark plug terminal.

REMOVAL OF FLYWHEEL FROM ENGINE:

Unscrew the nut which holds the flywheel on the shaft about one turn. The flywheel will stick to the shaft. To loosen it, grasp the flywheel firmly and while attempting to pull it off, strike the nut with a mallet or lead hammer being careful during this operation not to damage the threads. The rapping will break the flywheel loose from its tapered fit on the shaft. Remove the nut and flywheel.

ADJUSTMENT OF BREAKER POINTS:

The only adjustable part on the FW magneto is the breaker assembly which provides adjustments for the breaker points. Turn the motor over until the breaker points are fully open and measure the point opening with a feeler gauge. The opening should be .015". Loosen the two screws, slightly which hold the breaker assembly to the stator plate. Move the whole assembly until the proper gap is obtained then lock the plate securely by tightening the two screws. The breaker assembly pivots about the screw which is the furthest away from the center of the stator plate.

A small amount of WICO cam lubricant is packed on the breaker arm shoe and wipes off on cam surface, providing permanent lubrication between these rubbing surfaces.

REMOVAL OF CONDENSER:

To remove the condenser disconnect the leads from the live end of the condenser and remove the two screws holding the condenser clamp.

REPLACEMENT OF COIL CORE OR STATOR PLATE:

IF REPLACEMENT OF ANY OF THE ABOVE SHOULD BECOME NECESSARY IT MUST BE DONE AS A COMPLETE UNIT—the reason being, that the core, coils and stator plate are constructed as one complete unit.

CHAMPION MOTORS CO.

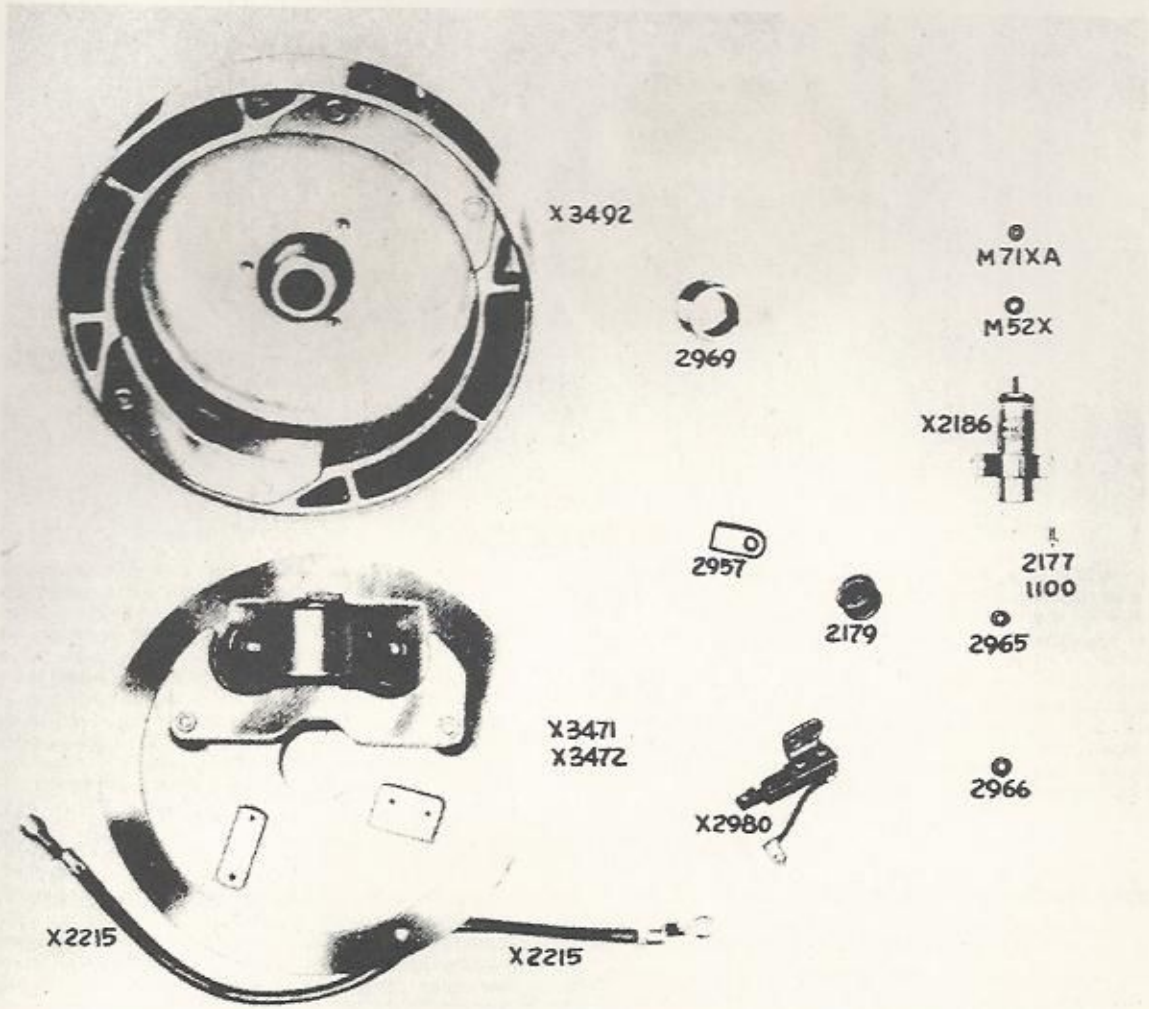
MINNEAPOLIS, MINNESOTA

Printed in U.S.A. Prices F.O.B. Mpls., Minn.

CHAMPION MAGNETO ASSEMBLY D2FF220

Wico Series FW7 Specification 1271

USED ON MODEL D2F



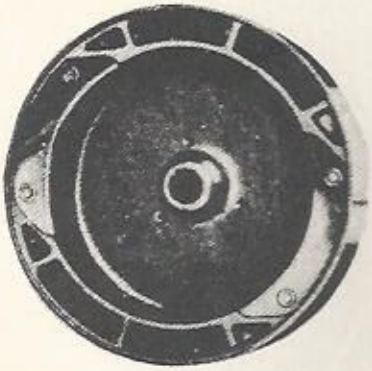
Part Number	Part Name	List Price
M-52X	Condenser Connection Nut L. W.	
M-71XA	Condenser Connection Nut	
1100	Condenser Clamp Screw	
2177	Lead Wire Clamp Screw	
2177	Breaker Assembly Clamp Screw	
2179	Lead Wire Bushing	
X2186	Condenser Assembly	
X2215	Lead Wire Group 2-12" (each)	
2957	Lead Wire Clamp	
2965	Breaker Screw Washer	
2966	Breaker Screw L. W.	
2966	Condenser Clamp Screw L. W.	
2966	Lead Wire Clamp Screw L. W.	

Part Number	Part Name	List Price
2969	Breaker Cam (CW)	
X2980	Breaker Assembly	
3081*	Spring Washer	
X3428*	Friction Shoe Group	
X3471	Stator Plate Group (includes stator plate, coil, core)	
X3472	Stator Plate Unit (includes stator plate group, condenser, breaker assembly)	
X3492	Rotor Assembly (CW)	
	Magneto (complete)	

*Not Illustrated

CHAMPION MAGNETO ASSEMBLY D2FF220

DESCRIPTION AND INSTRUCTIONS



DESCRIPTION

The series FW is a flywheel magneto featuring high spark output for easy starting, permanent retention of magnetism and the elimination of the necessity for frequent adjustment. It is the utmost in simplicity, consisting of a rotor, a cam and a stator plate assembly.

Integrally cast in the rim of the rotor is a magnetic unit which concentrates a powerful magnetic charge within a small space. By virtue of its ability to retain indefinitely this high magnetic concentration, this unit is able to provide the magneto with its extraordinary high spark output throughout its entire life. Its inductive characteristics are such that the magneto yields its maximum spark output over a wider timing range, thus making adjustment of the breaker points necessary less frequently than with the conventional type magneto. The magneto rotor forms the flywheel of the engine. It is ribbed inside to provide resistance to high centrifugal force.

The cam is a separate, ground and polished part with inset key.

The stator plate unit includes the coil and core, condenser, and breaker mechanism, all easily accessible for servicing.

The FW provides deluxe ignition for outboard motors. Its high spark output is a great aid in making starting easy. It requires little or no attention over long periods of service.

SERVICE INSTRUCTIONS

CHECKING MAGNETO FOR SPARK:

It is recommended if there is an indication the magneto is causing trouble that a test be made before attempting to repair it.

If the engine refuses to start, the magneto can be checked by holding the spark plug cable about 1/16" away from a point on the frame of the engine. When the engine is cranked over in its usual way, a properly performing magneto should jump this gap.

If the engine misses at high speed first check the spark plug. With the spark plug in good condition and properly adjusted, the magneto should fire a spark without missing while the spark plug cable is held 1/16" away from the spark plug terminal.

REMOVAL OF FLYWHEEL FROM ENGINE:

Unscrew the nut which holds the flywheel on the shaft about one turn. The flywheel will stick to the shaft. To loosen it, grasp the flywheel firmly and while attempting to pull it off, strike the nut with a mallet or lead hammer being careful during this operation not to damage the threads. The rapping will break the flywheel loose from its tapered fit on the shaft. Remove the nut and flywheel.

ADJUSTMENT OF BREAKER POINTS:

The only adjustable part on the FW magneto is the breaker assembly which provides adjustments for the breaker points. Turn the motor over until the breaker points are fully open and measure the point opening with a feeler gauge. The opening should be .015". Loosen the two screws, slightly which hold the breaker assembly to the stator plate. Move the whole assembly until the proper gap is obtained then lock the plate securely by tightening the two screws. The breaker assembly pivots about the screw which is the furthest away from the center of the stator plate.

A small amount of WICO cam lubricant is packed on the breaker arm shoe and wipes off on cam surface, providing permanent lubrication between these rubbing surfaces.

REMOVAL OF CONDENSER:

To remove the condenser disconnect the leads from the live end of the condenser and remove the two screws holding the condenser clamp.

REPLACEMENT OF COIL CORE OR STATOR PLATE:

IF REPLACEMENT OF ANY OF THE ABOVE SHOULD BECOME NECESSARY IT MUST BE DONE AS A COMPLETE UNIT—the reason being, that the core, coils and stator plate are constructed as one complete unit.

CHAMPION MOTORS CO.

MINNEAPOLIS, MINNESOTA

Printed in U.S.A.

Prices F.O.B. Mpls., Minn.