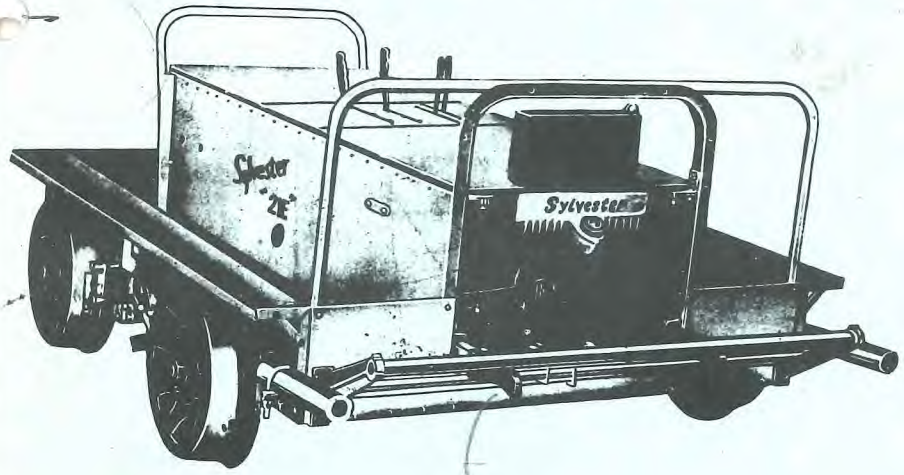
No. 14. Mtce. Engr. SWD

PARTS and INSTRUCTION MANUAL

"GEMCO"

SYLVESTER



H21B MEDIUM GANG CAR

&

E21B LIGHT INSPECTION CAR

Manufactured By:—

GEORGE MOSS PTY. LTD.

18 ROSS ST., NEWSTEAD

BRISBANE, QLD.

SPECIAL NOTE Re GEARBOX.

Keep gearbox under observation to detect any movement along axle.

If movement detected report matter immediately to Maintenance Engineer's Office.

Do not use section car until gearbox is checked by fitter.

Top up gearbox regularly with 140 E.P. gearbox oil.

"GEMCO" SYLVESTER ENGINE OPERATING INSTRUCTIONS

STARTING INSTRUCTIONS

1. Turn on fuel cock (allow a few seconds for fuel to fill carburettor).
2. Full choke, full throttle.
3. Make sure ignition switch is on.
4. Crank engine over once.
5. Close choke, leave throttle fully opeh.
6. Crank engine and it will fire and start.
7. Adjust needle valve as required.

STOPPING

1. Turn off fuel cock and let engine stop. This is to ensure all fuel is used in engine.
2. Only use ignition switch in an emergency.

** NOTE. Flooded Engine. Open drain cock and open throttle. Crank engine to discharge excess fuel.

FUEL MIX

½ pint S.A.E. 30 oil - 1 gal. 70 octane petrol.

GREASE

Multi - purpose.

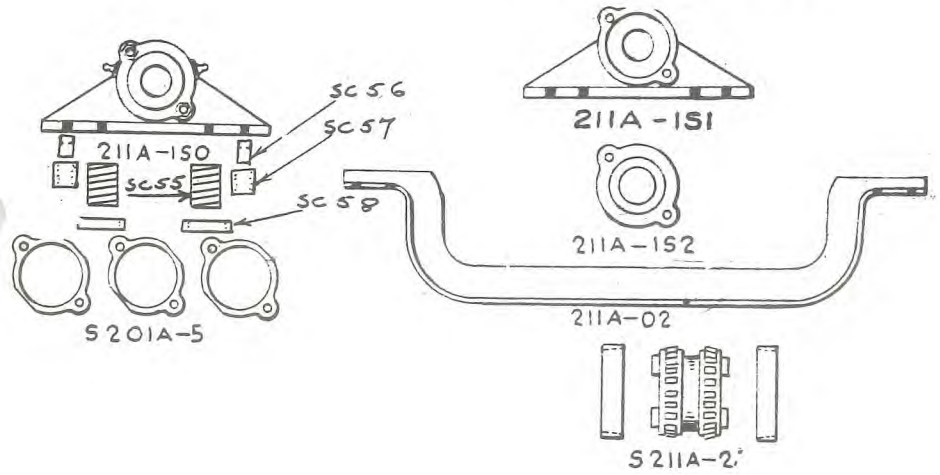
GEARBOX

140 E.P.

TOOLS SUPPLIED WITH LIGHT SECTION CAR

Plug wrench	1
8" Adjustable wrench	1
Screwdriver	1
" (Phillips)	1
Oilcan	1
Grease Gun (lever Type)	1

"GEMCO" SYLVESTER

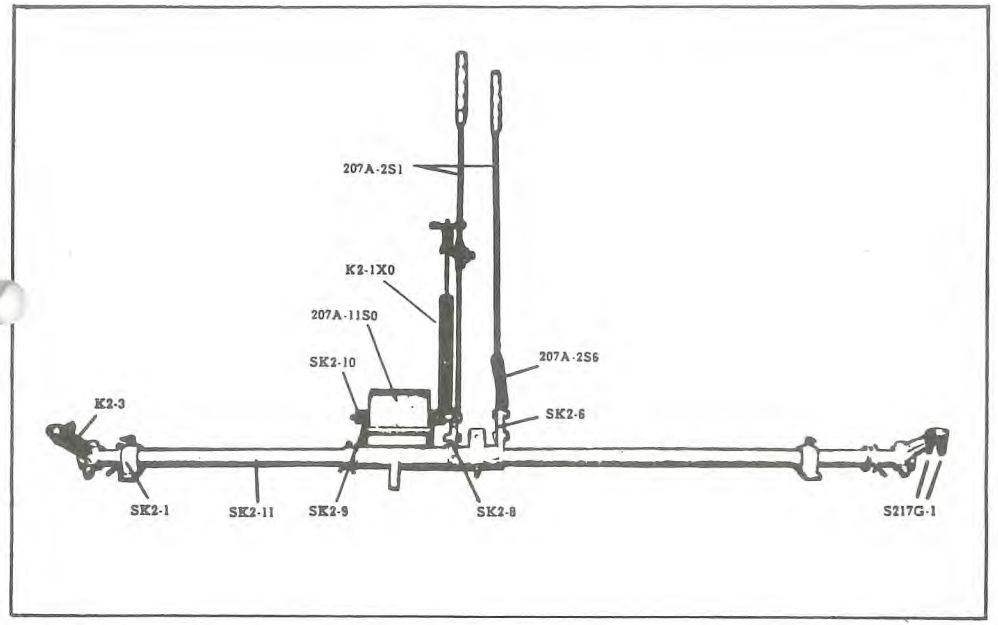


* 211A-02	Rail Skid	2
* 211A-1S0	Bearing housing assembly	5
* 211A-1S1	Bearing housing only	5
* 211A-1S2	Bearing housing cover	5
* S211A-1	Bearing cover cap screws & Lock washers	5 sets
* S211A-2	Timken Bearing cone & cups	5 sets
* S201A-5	Timken bearing shims	5 sets
* 120-38	Tecalemit fitting	10
* S211A-3	Bearing bolt (long), nut & lock washer	13 sets
SC55	Coil Spring	8
SC56	Guide Pins	8
SC57	Guide Pin Bushes	8
SC58	Spring Retainers	8

N.B. Springs must be tightened down evenly.

"GEMCO" SYLVESTER

Part No.	Description	No. off
SC 15	Main Frame	1
SC 16	Sub-Frame	1
SC 17	Rear Frame (Timber panelled)	1
SC 18	Front Frame (Timber panelled)	1
SC 19	Light alloy side panel (L.H.)	1
SC 20	Light alloy side panel (R.H.)	1
SC 21	Light alloy rear side panel	2
SC 22	Light alloy seat panel (L.H.)	1
SC 23	Light alloy seat panel (R.H.)	1
SC 24	Light alloy floor panel	2
SC 25	Seat frames	2
SC 26	Engine cover (Timber)	1
SC 27	Engine controls cover (Timber)	1
SC 29	Engine starting handle guide	1
SC 30	Radiator protection grille	1
SC 31	Radiator front support rubber mounts	2
SC 32	Stone deflectors front (L.H.)	1
SC 33	Stone deflectors front (R.H.)	1
SC 34	Stone deflectors rear (L.H.)	1
SC 35	Stone deflectors rear (R.H.)	1
SC 36	Stone deflector rubbers	4
SC 37	Seats	2
SC 38	Seat back rests	2
SC 39	Lifting handles	2
SC 40	Generator (6 volt)	1
SC 41	Voltage regulator (6 volt)	1
SC 42	Wiring Loom	1
SC 43	Loom clips	3
SC 44	Friction Drive Wheel	1
SC 46	Generator Mounting Bracket complete	1
SC 48	Operating Lever Complete with Pin	1
SC 49	Tension Spring and Bracket	1
SC 50	Head Lamp with Double Contact Socket	1
SC 51	6 volt, 48 watt, 2 contact Bulb	1
SC 60	Canopy complete	1
SC 61	Canopy Frame	1
SC 62	Front window (Perspex)	2
SC 63	Rear window	1
SC 64	Window Frames (Long)	10
SC 65	Window Frames (Small)	2
SC 66	Front Panel	1
SC 67	Back Panel	1
SC 68	Top Panel (Front)	1
SC 69	Top Panel (Back)	1
SC 70	Top Panel Joint Strip	1
SC 71	Rear Securing Strips	2

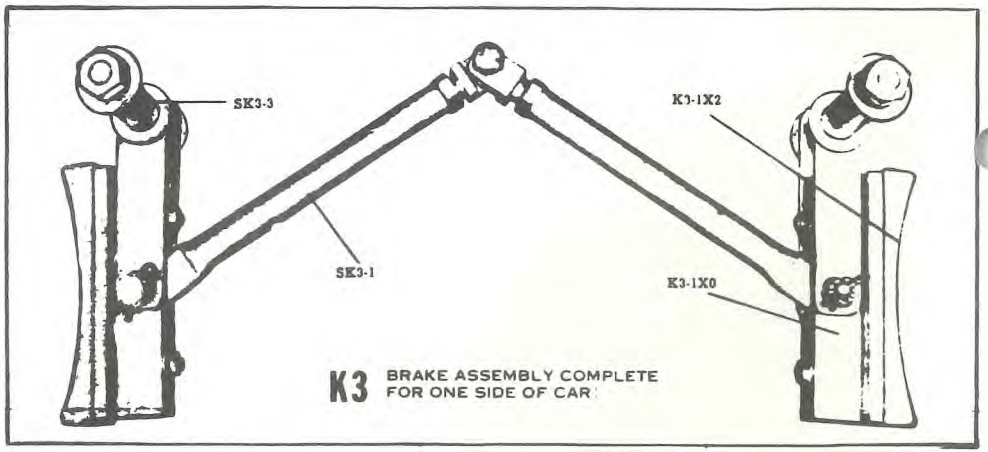


Part No.	Name of Part	No. Reg. per Car.
SK2-11	Brake pipe complete (includes washers and cotters)	1
SK2-1	Brake pipe bearing complete (includes 1 alemite fitting, 2 bolts, nuts and lockwashers)	2
K2-3	Brake pipe arm	2
S207A-012	Bolt, nut and lockwasher for Brake pipe arm	2
S217G-1	Brake pipe arm link (includes 2 links, 2 pins and 2 cotters)	2
207A-2S1	Brake lever with handgrip	1
SK2-6	Brake lever casting complete (includes 2 bolts, nuts and lockwashers)	1
207A-2S6	Brake lever spring	1
S2010A-1S5	Bolt, nut, lockwasher and cotter for Brake lever casting and pipe	1
207A-2S1	Belt tightener lever with handgrip	1
SK2-8	Belt tightener lever casting complete (includes 2 bolts, nuts and lockwashers)	1

Part No.	Name of Part	No. Reg. per Car.
SK2-9	Belt tightener arm with alemite fitting	1
20-7A-11S0	Belt tightener pulley complete (includes 1 pulley, 2 caps, 4 screws and 2 pulley ball bearings	1
K2-1X0	Belt tightener spring and clamp complete (includes 1 spring, 1 spring rod and cotter, 1 spring guide, 1 wing nut 1 spring end, 1 clamp (rod end), 1 clamp (rod end), 1 clamp (plain end), 2 screws and lockwasher, 1 set screw for clamp).	1
SK2-10	Pulley axle complete with alemite fitting, spacers, washer and cotter, nut and lockwasher	1
K2-2X0	Belt tightener arm and pulley complete (includes 1-SK2-9 Belt tightener arm with alemite fitting, 1-207A-11SO Belt tightener pulley complete, 1-K2-1X0 Belt tightener spring and clamp complete 1-SK2-10 Pulley axle complete.	
K5-70	Belt tightener and Brake lever handgrip	2

BE SURE TO GIVE BOTH ENGINE AND CAR SERIAL NUMBERS WHEN ORDERING REPAIR PARTS.

"GEMCO" SYLVESTER

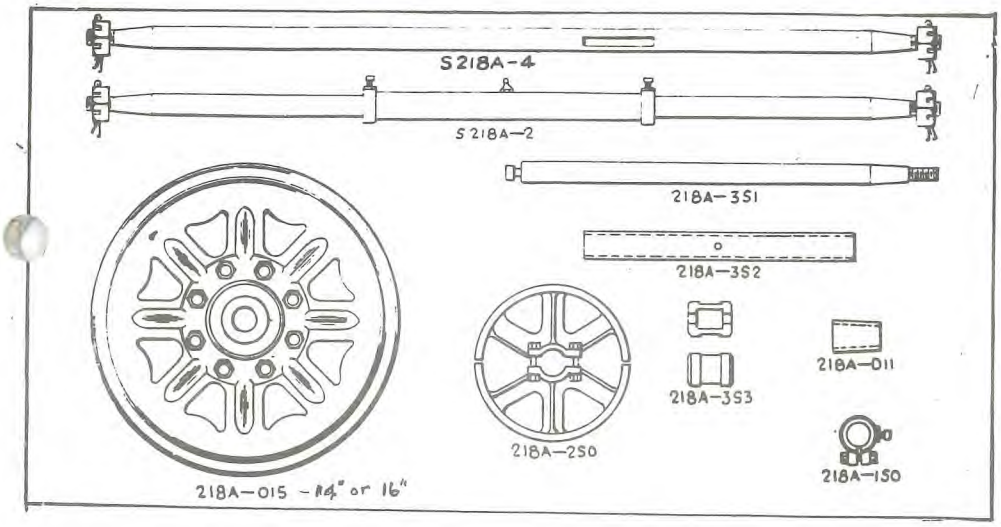


K3 BRAKE ASSEMBLY COMPLETE FOR ONE SIDE OF CAR

Part No.	Name of Part	No. Reg. per Car.
K3	Brake assembly complete for one slide of car (includes 2-SK3-1 Brake toggle complete 2-SK3-3 Brake stud complete 2-K3-1X0 Wood brake shoe complete)	
SK3-1	Brake toggle complete (includes 1 toggle, 1 lock nut, 1 eye bolt)	4
SK3-3	Brake stud complete (includes 1 stud 1 nut, 1 washer, 1 cotter and 1 washer for brake stud and link	4
K3-1X0	Wood brake shoe complete (includes 1 brake shoe, 1 brake shoe link assembly, 1 brake shoe facing, 2 bolts, nut and washers for facing, bolt, nut and lockwasher and cotter for brake shoe link)	4
K3-1X2	Brake shoe facing	4

BE SURE TO GIVE BOTH ENGINE AND CAR SERIAL NUMBERS WHEN ORDERING REPAIR PARTS.

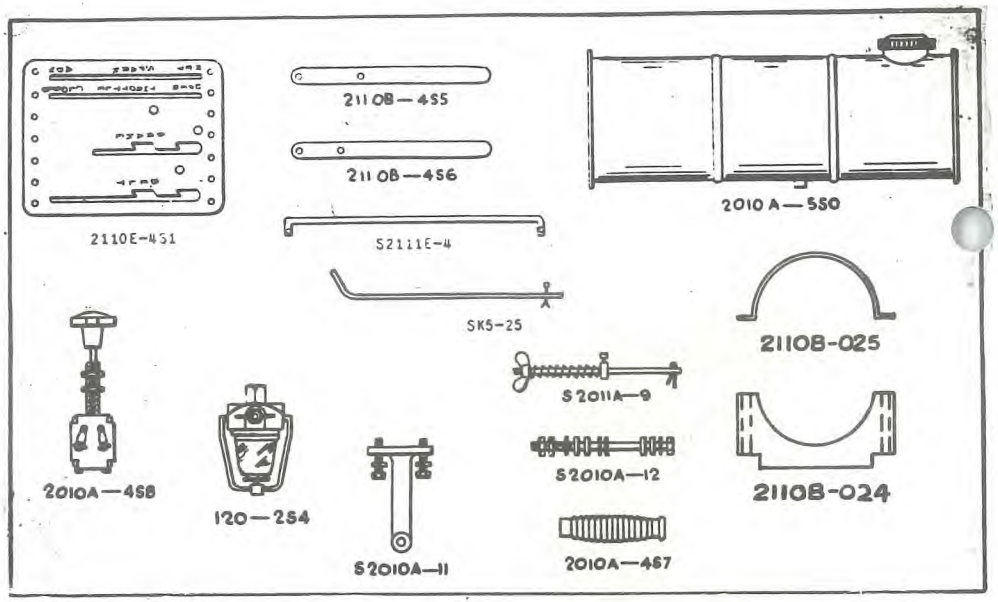
"GEMCO" SYLVESTER



*S218A-2	Differential axle complete with slotted nuts & cotters	1
*218A-3S1	Differential half axle	2
*218A-3S2	Differential axle sleeve	1
*218A-3S3	Differential axle split bushing (1 pr)	1
*120-8	Sleeve grease fitting	1
*218A-3S4	Differential axle collar	2
*S208A-2	Differential axle collar set screw & nut	2 sets
*S218A-4	Rear Axle with slotted nut & cotters	1
*218A-04	Axle nut (slotted)	4
*218A-05	Axle steel washer	4
*218A-07	Axle cotter.	4
*S218A-1	Complete set of insulations for 1 wheel	4 sets
*218A-06	Axle insulating washer	4
*218A-011	Tight wheel insulating bushing	4
*218A-015	Demountable light wheel insulated bore 16" 14".	
*218A-017	Hub for tight wheel insulated bore	
*208A-020	Demountable tire shapes 16"	
*208A-4	Demountable wheel bolt, nut & lockwasher	32 sets
*218A-1S0	Thrust collar assembly	5
*S208A-2	Thrust collar set screw & nut	5 sets
*S208A-3	Thrust collar clamping bolt, nut & lockwasher	5 sets
*218A-2S0	Drive axle pulley assembly	1
*S207A-5	Drive axle pulley bolt & lockwashers	4 sets
*218A-012	Drive axle pulley key	1
218E-018	Endless Belt 3" x 85"	1

BE SURE TO GIVE BOTH ENGINE AND CAR SERIAL NUMBERS WHEN ORDERING REPAIR PARTS.

"GEMCO"
SYLVESTER



Part No.	Name of Part	No. Reg. per Car.
* 2010A-5S0	Gas Tank	1
* 120-1S3	Gas Tank cap	1
2110B-024	Gas Tank Cradle	2
2110B-125	Gas tank strap	2
S2110B-026	Gas tank cradle support with bolts, nuts & lockwashers	2 sets
2110E-4S1	Control Panel	1

Part. No.	Name of Part	No. Reg. per Car.
* 2010A-11	Control panel bracket, cap screws & lock-washers	1 set
*S2010A-12	Control panel bracket bolt, double nuts, rubber & steel washers	1 set
2110B-4S6	Throttle lever	1
* 2010A-4S7	Throttle lever grip	2
S2111E-4	Throttle lever control link & cotters	2 sets
* 2010A-4S8	Starting switch	1
* S2011A-8	Choke wire	1 set
SK5-25	Carburetor adjusting rod & cotter	1 set
120-2S4	Sediment bowl	1

BE SURE TO GIVE BOTH ENGINE AND CAR SERIAL NUMBERS WHEN ORDERING REPAIR PARTS.

GEMCO LIGHT SECTION CAR

Installation of Generator Lighting

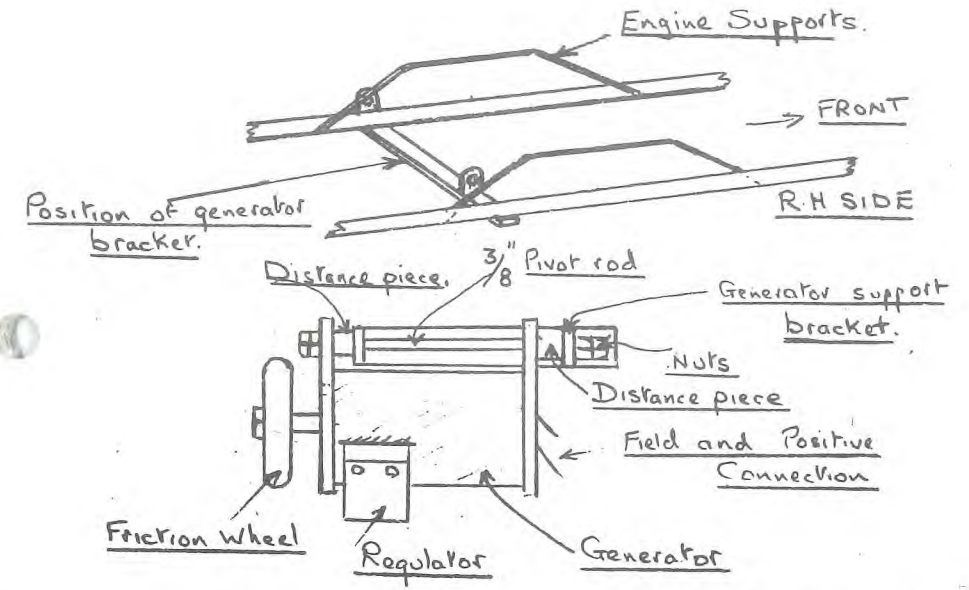
1. Turn car over to rest on left hand side so that petrol filler cap is uppermost.

2. Remove existing throttle lever pivot bolt and nut. Insert generator control lever through ignition advance/retard slot in control panel and secure to pivot with 2" x 5/16" whit. bolt provided. Fit nut and lock nut to give freedom of movement of levers.

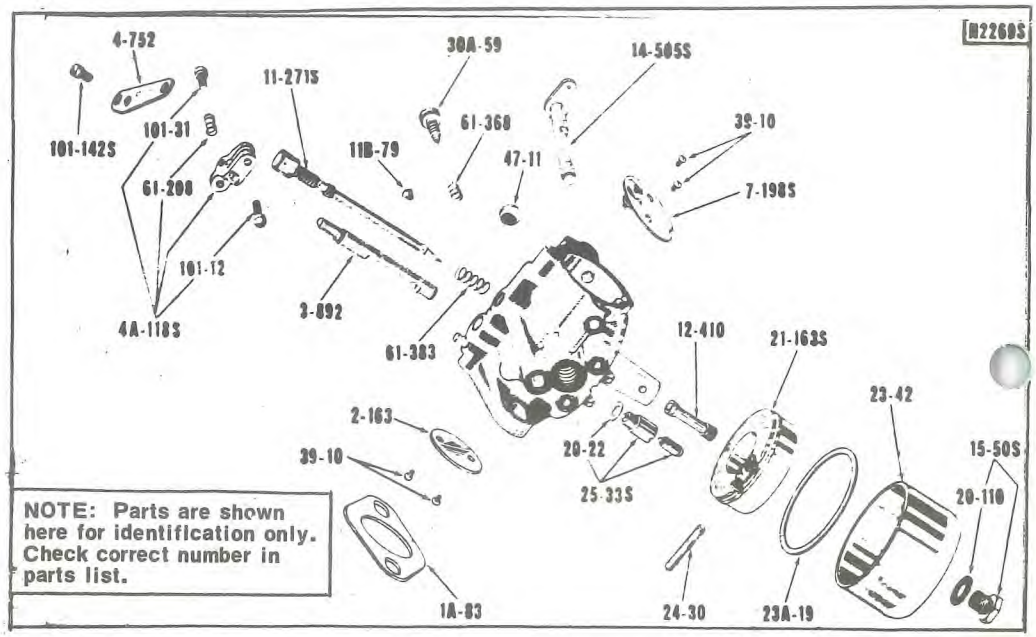
3. Fit friction wheel to generator shaft, lock with spring washer and nut.

4. Connect wiring loom to generator and regulator terminals in accordance with wiring diagram in parts book. Earth lead eyelet to be attached firmly to a regulator securing bolt.

5. Assemble generator to its support bracket with long hinge bolt provided, threading the bolt through gap between rear of engine mounting frame and longitudinal angle lower frame. Ensure distance pieces are fitted.



Assembly of generator on bracket.



CARBURETTER NO. N-2269S

Part No.	Description	
1A-83	Flange gasket	
2-163	Throttle valve	
3-892	Throttle shaft	
4-752	Throttle lever	
4A-118S	Throttle shaft dog assembly	
7-198S	Choke valve assembly	
11-271S	Low speed jet and high speed adjusting needle assembly	
11B-79	Rivet plug	
12-410	Nozzle	
14-505S	Choke lever and shaft assembly	
15-50S	Bowl nut assembly	
20-22	Needle seat gasket	
20-110	Bowl nut gasket	
21-163S	Float and lever assembly	
23-42	Bowl	
23A-42	Bowl ring gasket	
24-30	Float lever pin	
25-33S	Needle and seat assembly	
30A-59	Idle adjustment screw	
39-10	Choke and throttle valve attaching screw	(4)
47-11	Welsh plug	
61-208	Throttle lever adjusting screw spring	
61-368	Idle adjustment screw spring	
61-383	High speed adjusting needle spring	
101-12	Throttle shaft dog screw	
101-31	Throttle lever adjusting screw	
101-142S	Throttle lever screw and washer assembly	

- 2 -

GEMCO LIGHT SECTION CAR

Installation of Generator Lighting - contd.

6. Clamp support bracket to lower members in such a position that the operating handle can be bolted to the upper front lug of the generator. With the lever in its rearmost position the friction wheel must be in line with and contact the flywheel firmly. With the lever in a forward position and the lock pin fitted at the top of the lever, the friction wheel must be clear of the flywheel. Adjust the position of the generator support bracket to achieve this.

7. Drill and bolt the generator securing bracket into position.

8. Fit spring retaining bracket to left rear engine mounting bolt and attach spring to this bracket and to lower end of operating lever.

9. Feed electrical loom along upper top left angle section of upper frame, securing with three cleats provided.

10. Secure forward part of loom to top of front frame box section with strap provided.

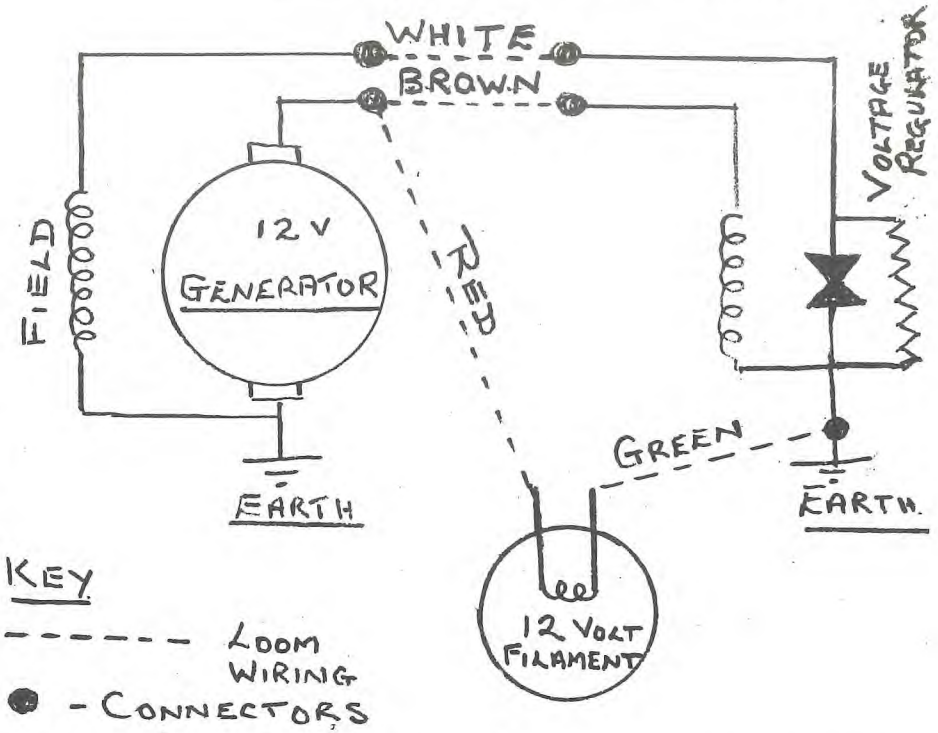
11. Fit aluminium guard to generator support bracket, and lay any excess cable along turn-up at top of guard.

LIGHT SECTION CAR - LIGHTING

COMPONENTS:-

Part No.	Description	Qty.
SC 40	Generator - 12 volt	1
SC 41	Voltage Regulator - 12 volt	1
SC 42	Wiring Loom	1
SC 43	Loom Clips	3
SC 44	Friction Drive Wheel	1
SC 45	Friction Drive Wheel Tyre	1
SC 46	Generator Mounting Bracket Complete	1
SC 47	Generator Guard	1
SC 48	Operating Lever complete with Pin	1
SC 49	Tension Spring	1
SC 50	Head Lamp complete with Wiring	1
SC 51	12 volt 48 watt 2 Contact Bulb	1

WIRING DIAGRAM



VOLTAGE REGULATOR PRE-SET 13·8 VOLTS

GEMCO 2 CAM REVERSIBLE MAGNETO

1. The only adjustment necessary to this magneto is the periodic setting of contact breaker points after normal wear or cleaning has taken place. Set points to .014" - .018" when fully open.

2. Lubrication to the armature bearing is provided by a semi-circular absorbent pad at rear of magneto. The oil filler cap should be replenished with Castrolite to overflowing every 200 running hours.

3. The magneto cam felt pad should be lubricated with one drop of Castrolite every 200 running hours.

4. En sure the contact breaker cover vent gauze is kept clear of debris and so provide venting of ozone to atmosphere.

5. Repairs to this magneto will be carried out by GEMCO on an exchange basis.

6. Spark plug gap .025".

7. Total timing are, 4.75" to 5.25".

DIVISION OF
AMERICAN BOSCH ELECTRIÇAL PRODUCTS | AMBAC | COLUMBUS, MISS. 39701, U. S. A.
Supersedes IF 52104-2 Issued October, 1967

General Information and Maintenance Instructions
for
American Bosch® Type "MRD Edition A" Magneto

GENERAL DESCRIPTION

The American Bosch MRD Edition "A" Magneto is a small, compact, dependable unit employing the induction principle of current generation. It is especially applicable to Marine, Farm and Industrial Engines of small and medium size, and is available for Base or Flange mounting applications.

The Magneto is of simplified design with rotating parts limited to the magnet rotor with integral cam, the distributor rotor and, in the three-, four- and six-cylinder types, the magnet rotor gear and distributor rotor gear.

The magnet rotor for the three-, four- and six-cylinder types revolves on ball bearings located at both the drive and breaker end of the shaft. On the one- and two-cylinder types, the ball bearing at the breaker end of the shaft is replaced by an oilless bearing.

The high tension coil is located on top of the laminated pole shoes and is secured by two screws which have been sealed to prevent moisture from entering the magneto.

The breaker assembly, which includes the condenser, is securely fastened to the open end of the magneto housing and the cam, rotating through the center of the breaker plate, is constantly lubricated by a felt strip wick which has been saturated with a special lubricant.

The distributor rotor and gear revolves on an oilless bearing located in the upper part of the breaker plate. In certain types of MRD magnetos, the oilless bearing is replaced by ball bearings.

The open end of the magneto is enclosed by a bakelite distributor plate which contains the high tension conductor and contact brush, grounding terminal (located in the magneto housing on some types) and the high tension cable outlets. By withdrawing the four fastening screws, the distributor plate is easily removed from the magneto housing providing ready access to the breaker assembly. Labyrinth ventilators are located on each side of the magneto housing.

Shielded MRD edition A magnetos are also available for installations requiring this type of magneto construction.

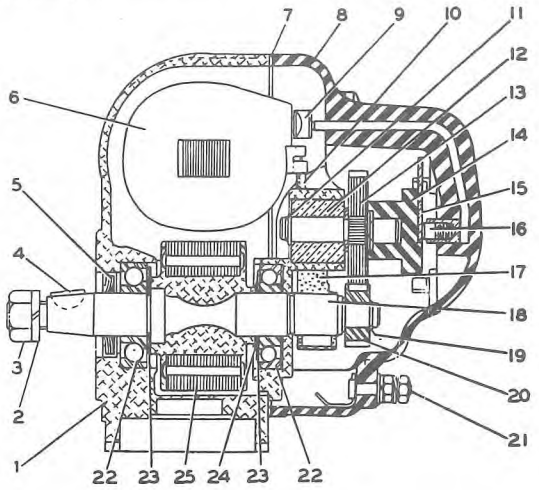


Figure 1
CUTAWAY OF MRD MAGNETO

Illus. No.	
1	HOUSING, MAGNETO
2	LOCKWASHER, DRIVE SHAFT
3	NUT, DRIVE SHAFT
4	KEY, WOODRUFF
5	OIL SEAL
6	COIL
7	GASKET, DISTRIBUTOR PLATE
8	PLATE, DISTRIBUTOR
9	SPRING, COIL CONTACT
10	LEAD, COIL PRIMARY
11	RING, SPRING — DISTRIBUTOR GEAR SHAFT
12	BEARING, OILLESS — DISTRIBUTOR GEAR SHAFT

Illus. No.	
13	GEAR, DISTRIBUTOR
14	ROTOR, DISTRIBUTOR
15	ELECTRODE, DISTRIBUTOR ROTOR
16	BRUSH WITH SPRING, DISTRIBUTOR PLATE
17	WICK, CAM
18	CAM
19	RING, SPRING — MAGNET ROTOR GEAR
20	GEAR, MAGNET ROTOR
21	STUD, GROUNDING
22	BEARING, BALL
23	WASHER, GREASE RETAINING
24	WASHER, EQUALIZING
25	ROTOR, MAGNET

TIMING

If the Engine Manufacturer's timing instructions are available they should be followed in preference to the instructions given in this text.

With the average two- or four-cylinder engines, proper operating results are obtained by timing the engine as follows:

The timing position of No. 1 cylinder for engines requiring timing range is approximately top dead center (T. D. C.) of compression stroke for magnetos set in full retard position, and before top dead center (B. T. D. C.) of compression stroke for magnetos set in full advance position. The number of degrees before top dead center (B. T. D. C.) varies with the type and characteristic of the engine. MRD edition "A" magnetos are fixed timing range instruments which fire at a position which corresponds to the fully advanced position of a variable timing range magneto.

Crank engine until piston in No. 1 cylinder goes upward on the compression stroke to the location where ignition is to occur. The Engine Manufacturer's instruction book will provide information in this regard, generally in terms of a mark on the flywheel.

TIMING MAGNETO TO ENGINE

With piston in No. 1 cylinder in firing position of compression stroke, proceed with timing of magneto to engine as follows:

BASE MOUNTED MAGNETO WITHOUT IMPULSE COUPLING

1. Remove the distributor plate and rotate the magnet rotor in the direction the magneto is to be driven until the distributor rotor electrode is approximately opposite cable outlet, or tower, No. 1. Continue turning the magnet rotor very slowly until the contact points just begin to separate. The magneto is now in proper firing position.

2. Engage the magneto to the engine drive and securely fasten the magneto in place. Make certain that the position described in paragraph 1 is maintained.

3. Secure the distributor plate to the magneto housing and connect a cable between distributor plate tower No. 1 and the spark plug of cylinder No. 1 which is now timed to fire correctly.

4. Complete the installation by inserting the remaining cables into the distributor plate towers and connecting them to the spark plugs in their proper firing order (usually indicated on the engine block).

On 3, 4 and 6 cylinder magnetos, No. 1 distributor plate cable outlet, or tower, is identified by the numeral 1 on the distributor plate adjacent to the tower. On 2 cylinder magnetos which have a distributor plate with two vertical cable outlets, No. 1 cable outlet, or tower, is always on the right hand side as viewed from the distributor plate end and with the distributor plate in the upright position.

BASE MOUNTED MAGNETO WITH IMPULSE COUPLING

5. Remove the distributor plate and rotate the impulse coupling in the direction opposite that to which the magneto is to be driven until the distributor rotor electrode is in the position that will place it adjacent to distributor plate tower No. 1. At this point, the contact points should be fully opened. Continue turning the impulse coupling very slowly in the same direction until the contact points are almost closed.

6. Engage the impulse coupling to the engine drive. APPROXIMATE timing is now obtained. Carefully align the magneto to the engine drive and secure.

7. To obtain the EXACT timing, the contact points must just begin to open. If adjustment to this position is necessary, loosen the adjustable drive member and turn the impulse coupling either clockwise or anti-clockwise, whichever is applicable, then retighten the adjustable drive member. Complete the installation by following the instructions in paragraphs 3 and 4.

FLANGE MOUNTED MAGNETO WITH IMPULSE COUPLING

8. Remove the distributor plate and rotate the impulse coupling in the direction opposite that to which the magneto is to be driven until the distributor rotor electrode is in the position that will place it adjacent to distributor plate tower No. 1.

9. With the piston of engine cylinder No. 1 in correct firing position, flange the magneto to the engine and tighten the mounting screws by hand, but not to the extent that the magneto cannot be moved either toward or away from the cylinder block. APPROXIMATE timing to the engine is now obtained.

10. To obtain the EXACT timing, the contact points must just begin to open and it may be necessary, to gain this position, to turn the entire magneto slightly away or toward the cylinder block. Following this procedure, steady the magneto in position and securely tighten the mounting screws. Complete the installation by following instructions in paragraphs 3 and 4.

TIMING MAGNETO WITH IMPULSE COUPLING BY COUPLING RELEASE

11. When the flywheel timing mark is not accessible, making it difficult to determine the exact position of piston No. 1, the magneto may be timed to the engine by the release position of the impulse coupling.

12. Determine the *release position* of the impulse coupling and if not already present, place a mark on both the arrester plate and coupling housing to indicate this position.

13. Install magneto on engine.

14. Rotate the impulse coupling in the opposite direction the magneto is to be driven until marks on arrester plate and coupling housing coincide. Make certain the distributor rotor electrode is adjacent to distributor plate tower No. 1.

15. Time the engine so that cylinder No. 1 is slightly beyond top dead center, making certain that the piston has definitely started downward on the power stroke.

16. Connect the magneto drive to the engine.

17. Complete the installation by following instructions in paragraphs 3 and 4.

CARE AND MAINTENANCE

For efficient operation all electrodes and contacts should be kept clean. Dress pitted contacts with a suitable stone. DO NOT USE A FILE OR SANDPAPER. The contact opening specification is .014" to .018". If adjustment is required, loosen the two contact bracket assembly fastening screws slightly and place a screw driver in the slot provided in the top of the bracket and move the bracket in the direction required to obtain the correct opening.

Retighten the two fastening screws and recheck the contact opening — make certain the contacts are aligned.

Whenever contact renewal becomes necessary, always replace both contacts at the same time. Maintain clean contact points at all times. The ball bearings contain a special grease and should not require additional lubrication except during the periodic overhaul of the magneto. Do not relubricate the cam wick, replace it instead.

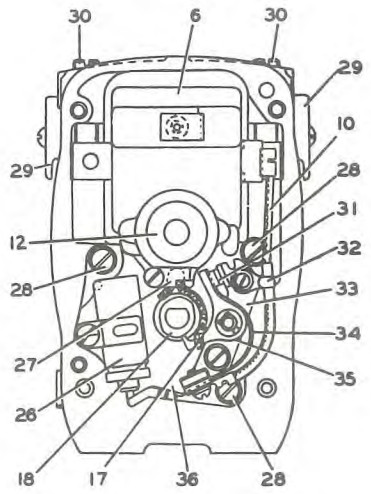


Figure 2
MRD MAGNETO VIEWED FROM BREAKER PLATE END — DISTRIBUTOR PLATE, DISTRIBUTOR GEAR, DISTRIBUTOR ROTOR AND MAGNET ROTOR GEAR REMOVED.

Illus. No.	
26	CONDENSER
27	PLATE, WICK HOLDING
28	SCREW AND LOCKWASHER, FASTENING — BREAKER PLATE
29	VENTILATORS
30	SCREW, COIL SET
31	CONTACT POINTS
32	CLIP, HOLDING — COIL CABLE
33	BRACKET, ADJUSTABLE — CONTACT POINT
34	SPRING, BREAKER LEVER
35	LEVER, BREAKER
36	PLATE, BREAKER

TROUBLE SHOOTING

In case of faulty ignition, it must first be determined whether the fault is in the magneto or elsewhere. In general, when only one cylinder misfires, the fault is in the spark plug. The most common plug difficulties are as follows:

PLUG GAP TOO WIDE

The proper distance between the electrodes of the spark plugs varies in some engines, but normally this distance should not be less than .025". On the other hand, however, too wide a gap increases the electrical resistance and interferes with the operation of the engine at low speed. Difficulty in starting an engine and missing at low speed are very often due to spark plug gaps being too wide; the spark will have a tendency to burn the electrodes and thereby gradually increase the gap. It is especially important that the plugs be examined occasionally to see that the gap is not too great; any difficulty due to this cause may be readily overcome by readjusting the electrodes. When adjusting plug electrodes, do not attempt to adjust the center electrode as this will almost invariably cause the insulation to either crack or break.

PLUG SHORT CIRCUTED

This is usually caused by a cracked or porous insulator, or by fouling of the electrodes or insulator. Any of these conditions will cause misfiring by permitting the current to stray from its intended path.

CABLES

Misfiring of one cylinder, either continuously or intermittently, may be due to a chafed or broken cable, or a loose cable connection. The metal terminals of the cables must not come in contact with any metal parts of the engine or the magneto except the spark plug terminals and the brass inserts of the distributor plate towers. Make certain that the cable terminals are inserted to the full depth of the cable outlets in the distributor plate of the magneto, and fastened to the spark plug. Another cause of misfiring is loose or defective cables. A cable with the insulation cut or frayed may make contact with the frame or engine block causing the high tension voltage from the magneto to stray from its intended path.

IRREGULAR FIRING

If the cables and plugs are in good condition, and the ignition is still irregular, the trouble is probably with the magneto, and the breaker assembly should be carefully examined. It should be seen that the breaker lever moves freely and the contacts are clean and in correct alignment.

DAMAGED INSULATING PARTS

Should the distributor plate become cracked, either by carelessness or accident, high tension flashover and leakage will probably result. A cracked or damaged distributor plate should always be replaced.

MAGNETO REPAIR

The magneto should be completely serviced at least once a year, and more often when subjected to severe operating conditions, by

GEORGE MOSS PTY. LTD., 18 Ross Street, Newstead, Qld. 4006

"GEMCO" SYLVESTER

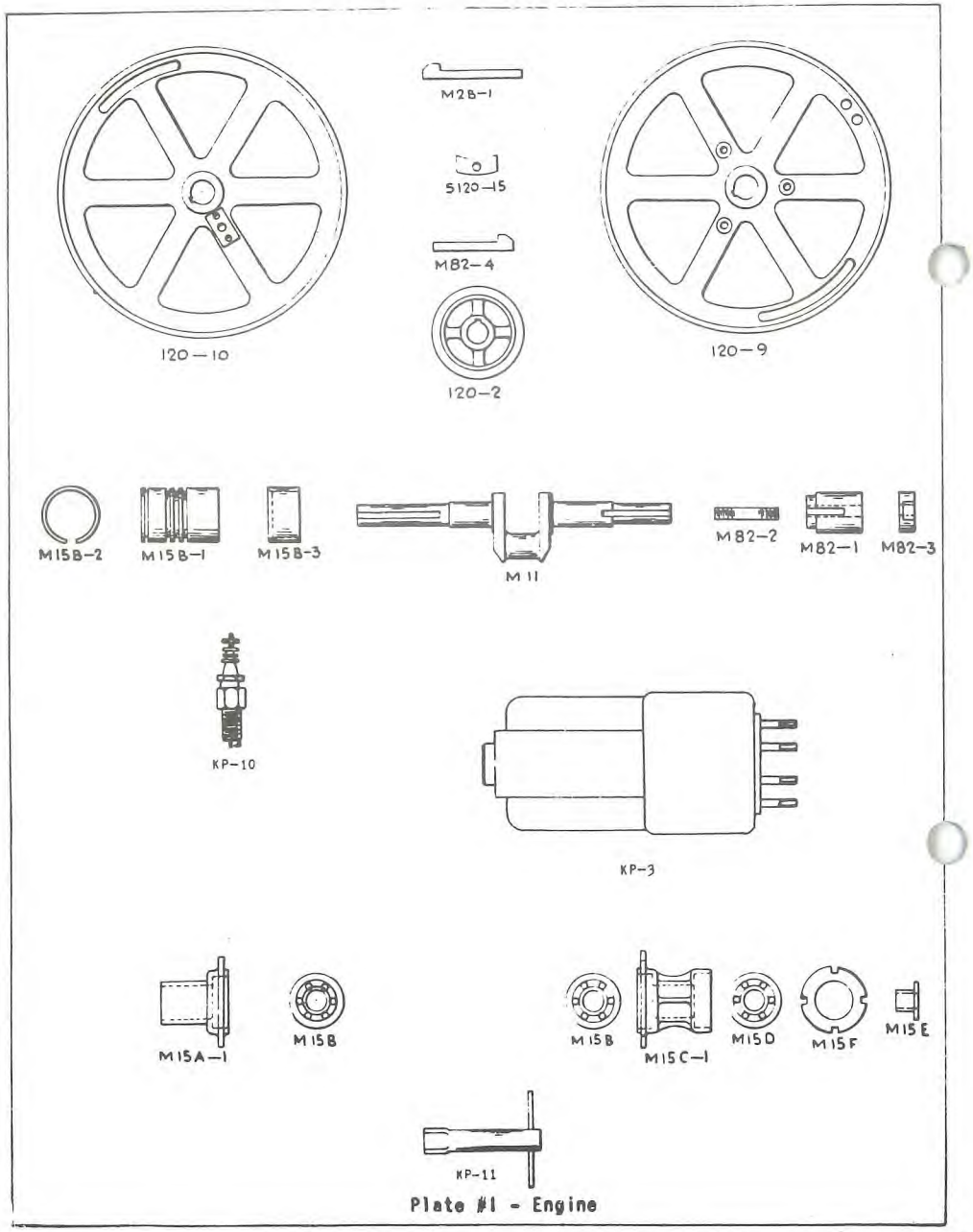


Plate #1 - Engine

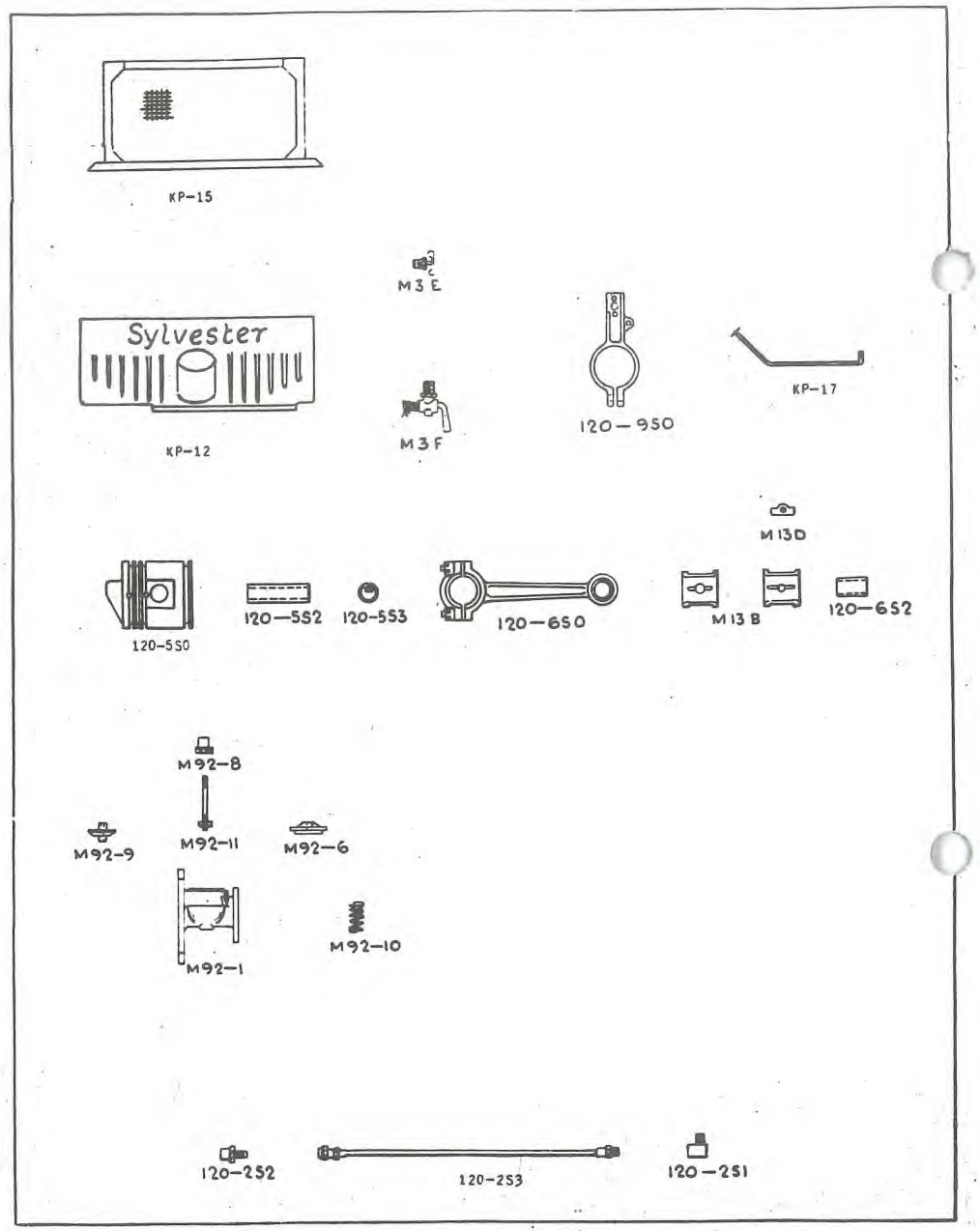
"GEMCO" SYLVESTER

Part. No.	Name of Part	No. Reg. per Car.
120-9	Flywheel Drive side	1
120-10	Flywheel Timer side	1
M2B-1	Flywheel keys	2
KP-3	Cylinder with studs	1
M3E	Cylinder crankcase drain cock	1
M4A1	Cylinder crankcase drain cock nipple	1
M4A-2	Cylinder crankcase drain cock coupling	1
M3F	Cylinder water drain cock	1
KP-4	Cylinder water drain cock flange	1
KP-5	Cylinder water drain cock flange gasket	1
M4C-1	Cylinder water drain cock flange screws	4
KP-6	Cylinder head	1
KP-7	Cylinder head gasket	1
KP-8	Cylinder head studs	8
M93-12J	Cylinder head studs washer	8
M8A-4	Cylinder head studs nuts	8
M11	Crankshaft	1
SM15A	Main bearing timer side complete set of parts	1 set
M15A-1	Main bearing timer side	1
M15B	Main bearing timer side inner ball bearing	1
M15B-1	Main bearing packing sleeve	1
M15B-2	Main bearing packing sleeve rings	3
M15B-3	Main bearing timer side space sleeve	1
M15B-4	Main bearing gasket	1

Part No.	Name of Part	No. Reg. per Car.
KP-9	Wire support bracket & grommet	1
SM15C	Main Bearing drive side complete set of parts	1 set
M15C-1	Main bearing drive side	1
M15B	Main bearing drive side inner ball bearing	1
M15D	Main bearing drive side outer ball bearing	1
M15E	Main bearing drive side outer ball bearing bushing	1
M15F	Main bearing drive side end cover	1
M15F-1	Main bearing drive side end cover screws	4
M15B-1	Main bearing packing sleeve	1
M15B-2	Main bearing packing sleeve rings	3
M15B-4	Main bearing gasket	1
120-8	Main bearing drive side alemite fitting	1
M15F-3	Main bearing cap screws	8
120-2	4" Flange pulley for engine	1
M82-1	Flange pulley sleeve	1
M82-2	Flange pulley stud	1
M82-3	Flange pulley stud nut	1
M82-4	Flange pulley key	1
KP-10	Spark Plug	1
MC-1	Bosch Mag. Kit	1
MC-2	Wico Mag. Kit	1
MC-3	Lucas Mag. Kit	1
MC-4	Flywheel Drive Sprocket	1
MC-5	Magneto Mounting Plate	1
MC-6	Magneto Drive Chain	1
MC-7	Magneto Chain Case	1
MC-8	Magneto Switch Leads	2
MC-9	H.T. Lead Comp.	1
MC-10	Throttle Lever Spacer	1

BE SURE TO GIVE BOTH ENGINE AND CAR SERIAL NUMBERS WHEN ORDERING REPAIR PARTS.

"GEMCO" SYLVESTER



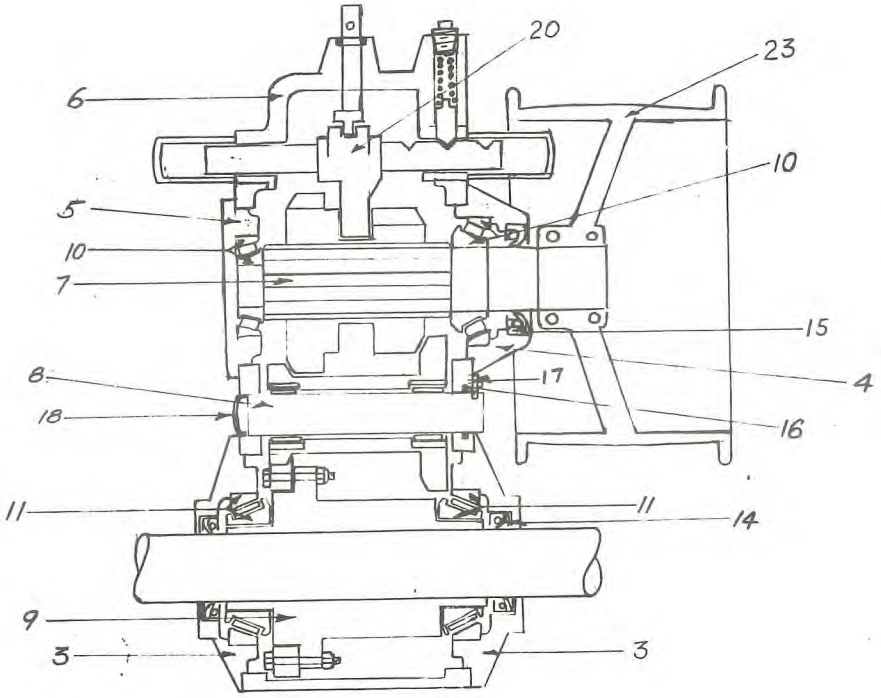
"GEMCO" SYLVESTER

Plate #2

Part No.	Name of Part	No. Reg. Per Car.	Part No.	Name of Part	No. Reg. Per Car.
KP-12	water hopper with studs	1	SM19A-1	Throttle & timer casting collar with screw & lockwasher	1
M92-4	water hopper studs, short	18	KP-17	Throttle casting & Carburetor link & cotters	1
KP-13	water hopper base studs, long	4	N2269S	Carburetor	
207A-2S4	water hopper stud nuts	8	M92-13	Carburetor gasket	1
M17B-4	water hopper base long stud washers	8	120-27	Air Cleaner	1
120-1S3	water hopper cover	1	120-31	Air Cleaner screws	2
KP-14	water hopper base gasket	1	KP-18	Carburetor adjusting needle sleeve & cotters	1
M3E	Water hopper try cock	1			
KP-15	Water hopper condenser	1	M92	Check valve body & hand hole plate complete	1
120B-2	Water hopper condenser gasket	2	M92-2	Check valve body & hand hole plate gasket	1
M92-5	Water hopper condenser stud nut	14	M15F-3	Check valve body and hand hole plate cap screw	2
KP-16 for	Water hopper condenser support	1	M92-4	Check valve body & hand hole plate stud	2
120-5S0	Piston Assembly, pin fitted 10% extra for oversize	1	M92-5	Check valve body and hand hole plate stud nut	2
120-5S2	Piston pin	1	M92-6	Check valve body cover	1
120-5S3	Piston pin spring retainers	2	M92-7	Check valve body cover gasket	1
M5-1	Piston rings	4	M92-8	Check valve body cover nut	1
120-6S0	Connecting rod complete with bearing & brushing	1	M92-9	Check Valve	1
120-6S2	Connecting rod bushing small end	1	M92-10	Check valve spring	1
M13B	Connecting rod crank end bearings (2 halves)	1	M92-11	Check valve stem & nut	1
M13D	Connecting rod shims	2	120-2S1	Gas line elbow	1
S120-2	Connecting rod studs, nuts & cotters	2	120-2S2	Gas line adapter	1
MC-10	Engine crank handle (special)	1	120-2S3	Flexible gas line 18"	1

BE SURE TO GIVE BOTH ENGINE AND CAR SERIAL NUMBERS WHEN ORDERING REPAIR PARTS.

"GEMCO" SYLVESTER



SPARE PARTS

Part No.	Description	Qty.
BTSG 1	Two speed gear complete with axle	1
BTSG 2	Gearcase with studs	1
BTSG 3	Cover (large) with oil seal and gasket	2
BTSG 4	Cover (pulley shaft) with oil seal and gasket	1
BTSG 5	Cover (pulley shaft) with gasket	1
BTSG 6	Cover (top gear case) with gasket	1
BTSG 7	Pulley shaft complete with gear	1
BTSG 8	Layshaft complete with gear and needle rollers	1
BTSG 9	Driven gear complete	1
BTSG 10	Bearings with races (pulley shaft)	2
BTSG 11	Bearings with races (axle shaft)	2
BTSG 12	Set shims (large cover)	1
BTSG 13	Set shims (small cover)	1
BTSG 14	Oil Seal (large)	2
BTSG 15	Oil Seal (pulley shaft)	1
BTSG 16	Oil Seal (layshaft)	1
BTSG 17	Lockplate Layshaft	1
BTSG 18	Expansion plug	1
BTSG 19	Selector shaft	1
BTSG 20	Gear Selector Fork	1
BTSG 21	Gear Selector Arm	1
BTSG 22	Selector dog assembly	1
BTSG 23	Pulley	1
BTSG 24	Gear shift lever	1
BTSG 25	Endless belt	1