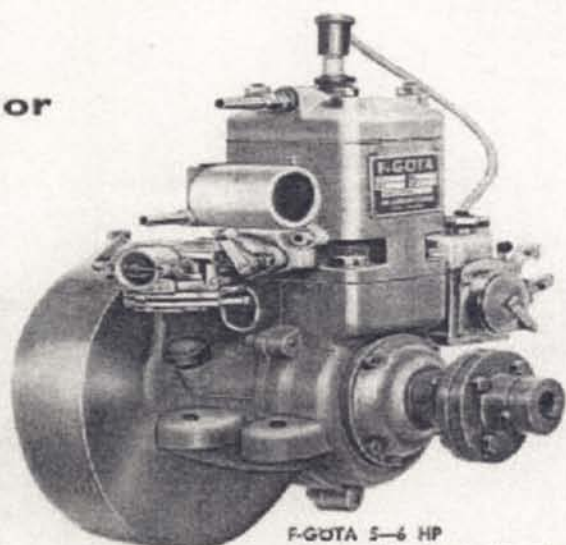


Gasoline or
Kerosene

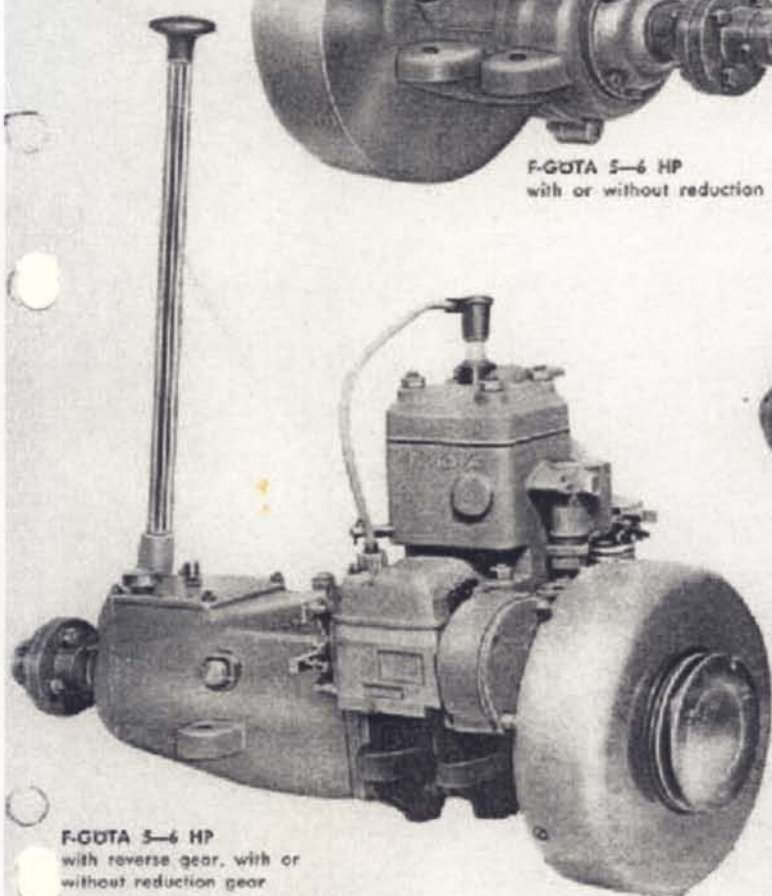
Swedish Marine 2-stroke Engine

F-GÖTA

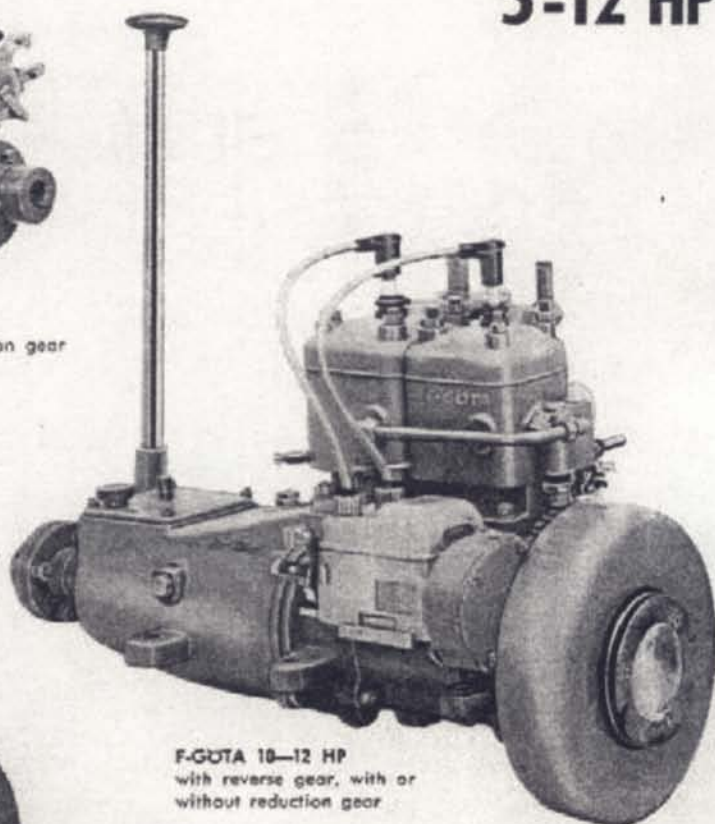
5-12 HP



F-GÖTA 5-6 HP
with or without reduction gear



F-GÖTA 5-6 HP
with reverse gear, with or
without reduction gear



F-GÖTA 10-12 HP
with reverse gear, with or
without reduction gear

Motor	F-GÖTA											
Type*)	5	5B	5V	6R	6BR	6VR	10	10B	10V	12R	12BR	12VR
HP	5	5	5	6	6	6	10	10	10	12	12	12
Number of cylinders	1	1	1	1	1	1	2	2	2	2	2	2
Cylinder volume cm ³	270	270	270	270	270	270	540	540	540	540	540	540
Cylinder stroke mm	70	70	70	70	70	70	70	70	70	70	70	70
Cylinder diameter mm	70	70	70	70	70	70	70	70	70	70	70	70
Motor r.p.m.	2000	2000	2000	2500	2500	2500	2000	2000	2000	2500	2500	2500
Propeller r.p.m.	2000	2000	2000	830	830	830	2000	2000	2000	830	830	830
Net weight, motor kg ca.	40	60	40	50	65	50	60	80	60	70	85	70
Gross weight, motor kg ca.	70	100	70	80	100	80	100	125	100	110	125	110
Net weight, equipment kg ca.	9	9	21	10	10	22	12	12	28	13	13	29
Gross weight, equipment kg ca.	21	21	33	22	22	34	24	24	40	25	25	41
Shipping box, motor, m ³ ca.	0,20	0,25	0,20	0,20	0,25	0,20	0,25	0,30	0,25	0,25	0,30	0,25
Shipping box, equipment, m ³ ca.	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05
Fuel consumption lit/h ca.	2,1	2,1	2,1	2,6	2,6	2,6	4,3	4,3	4,3	5,2	5,2	5,2
Fuel	Gasoline or kerosene											

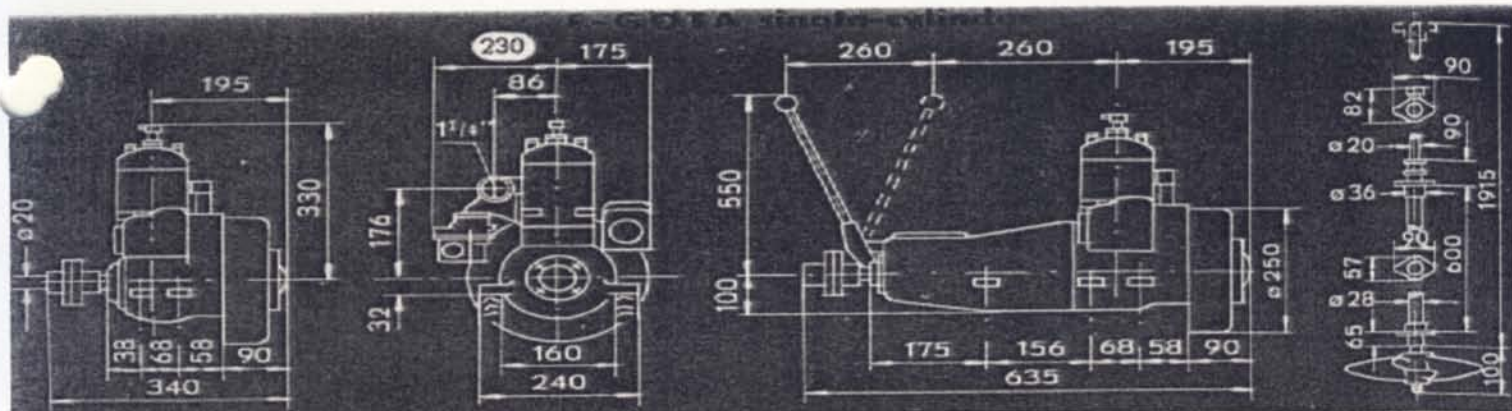
*) Designation: B = Reverse gear, V = Reversible propeller, R = Reduction gear, E = Electric equipment
1 kg = 2,205 lbs., 1 m³ = 35,3147 cubic foot, 1 lit. = 0,22 imp. gallon, 25,4 mm = 1"

AB GÖTAMOTORER - OSBY

Tel. 100 25

SWEDEN

Tel. 112 05



SPECIFICATIONS

Cylinder block with detachable cylinder head is made of special finegrained, alloyed cast iron possessing high tensile strength and resistance to wear. The cylinder bore is accurately ground and water and gas jackets of ample size. Reverse lateral flow provides increased efficiency and reduced fuel consumption.

Crankshaft is forged of alloyed steel, with accurately ground journals, and is statically and dynamically balanced.

Main bearings consist of amply dimensioned SKF ball bearings.

Piston is of aluminium alloy with domed top and provided with three compression rings.

Connecting rod of drop forged H section steel has the big end provided with an accurately ground race for double SKF needle bearings. Piston pin bushing is of bronze.

Piston pin is of alloy steel hardened and ground and securely fitted to the piston.

Exhaust and intake manifold is cast in one piece. Pre-heating the fuel-air mixture provides complete combustion of the fuel, whether petrol or kerosene.

Water pump is of the plunger type and of an efficient and wear resistant design. It is cam-operated, runs in oil and requires no maintenance.

The carburettor of the brand Tillotson is a diaphragm type. **Not dropping that eliminates the danger of fire.**

Ignition is by magneto, gear operated from the crankshaft, with the middle gear wheel made of Ferobestos. The silent drive runs in oil, the level of which is measured by a stick. The spark plug is protected by a splash guard.

Lubrication of the motor is by oil mixed with the fuel.

Sealing of the main bearings and pump plunger is obtained by self-adjusting spring loaded rings. Flat surfaces are provided with high grade oil resistant gaskets. Cylinder top gasket of Klingerit.

Reverse gear is enclosed in a robust casing and provided with SKF ball bearings running in oil for silent operation and insignificant wear. The oil level is measured by a stick.

Starting is accomplished by cord, crank handle or by electric motor. The engine starts easily hot or cold.

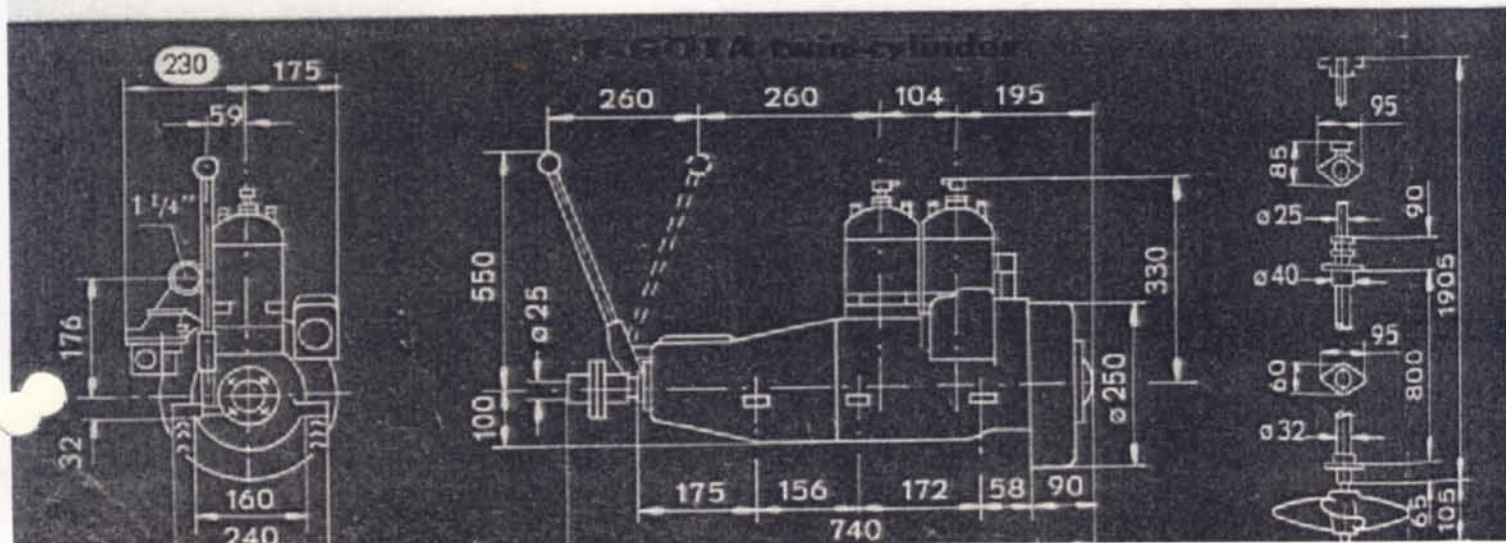
Warranty. Each engine is thoroughly tested prior to delivery. It is sold with a warranty against defective material and workmanship for a period of one year.

Propeller equipment, consisting of propeller shaft and stern bush of brass and of propeller and propeller bearing of bronze. Bearing lining made of Ferobestos. The equipment can also be supplied with reversible blades. Length of propeller shaft 2.0 Metres (6' 6.3/4"), Standard length of stern bush 0.8 M. (2' 7 1/2").

Assembly fittings consisting of oil fuel tank for petrol and paraffin, cock, cock mountings and fuel flexible tube. Cooling water equipment consisting of a filter, sea cock with mountings and hose for sea inlet and exhaust.

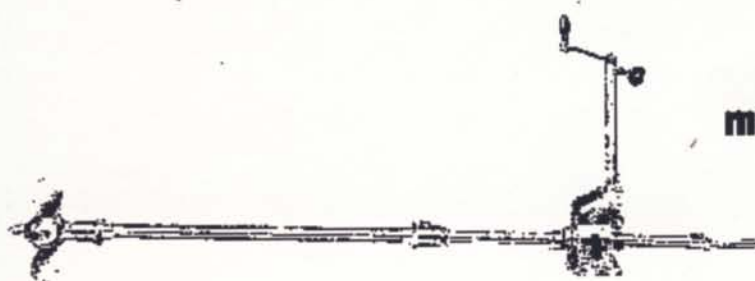
Electrical equipment supplied on special order includes motor-generator, instrument panel, wiring accessories but less battery and cables.

Data and illustrations are subject to modifications



SCREW PROPELLER EQUIPMENT

with
movable blades
for



F-GÖTA 5-18

SPECIFICATIONS

Propellershaft, Shifting collar, Propeller shaft stem casing, Thrust bearing casing, Bearing flanges, Clamp collars and Stuffing box are made of first class brass.

Manouver-housing made of cast steel.

Manouvring nut made of brass.

Manouvring shaft made of stainless steel, Locking handwheel of Bakelite, Handle of Bakelite.

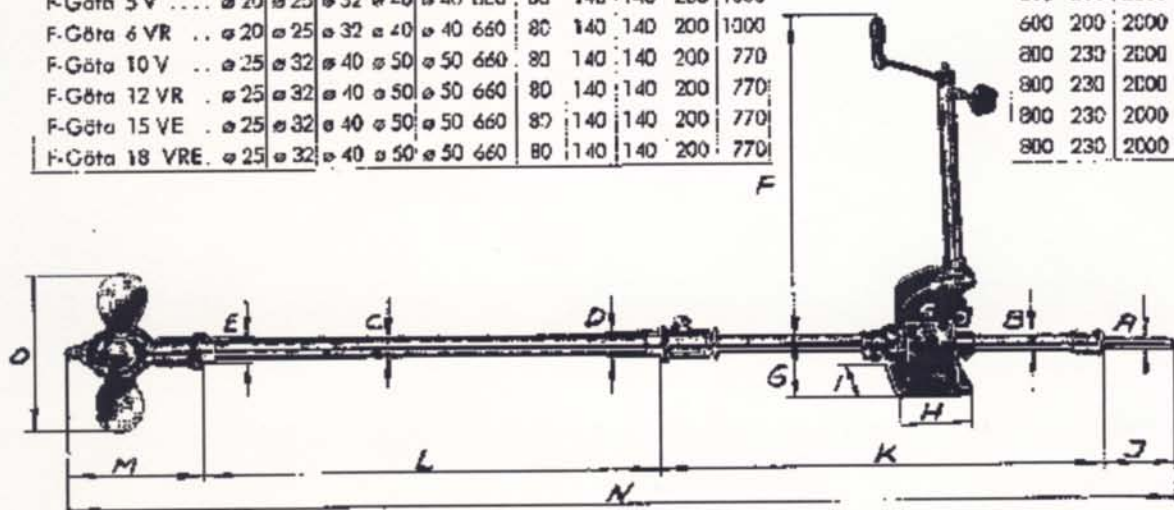
Propeller bearing casing, Propeller hub housing and propeller blades made of bronze.

The bearing cups are made of ferobestas.

The propellerthrust is caught by a SKF- thrust bearing housed in the manouvring screw.

The propellerblades can be placed into the position most suitable when sailing.

Type of motor	A	B	C	D	E	F	G	H	I	J	K	L	M	N	ø
F-Göta 5V	20	25	32	40	40	660	80	140	140	200	1000	600	200	2000	300
F-Göta 6VR	20	25	32	40	40	660	80	140	140	200	1000	600	200	2000	400
F-Göta 10V	25	32	40	50	50	660	80	140	140	200	770	800	230	2000	320
F-Göta 12VR	25	32	40	50	50	660	80	140	140	200	770	800	230	2000	450
F-Göta 15VE	25	32	40	50	50	660	80	140	140	200	770	800	230	2000	320
F-Göta 18VRE	25	32	40	50	50	660	80	140	140	200	770	800	230	2000	450



Dates and pictures are valid with the reservations for amendments of design.

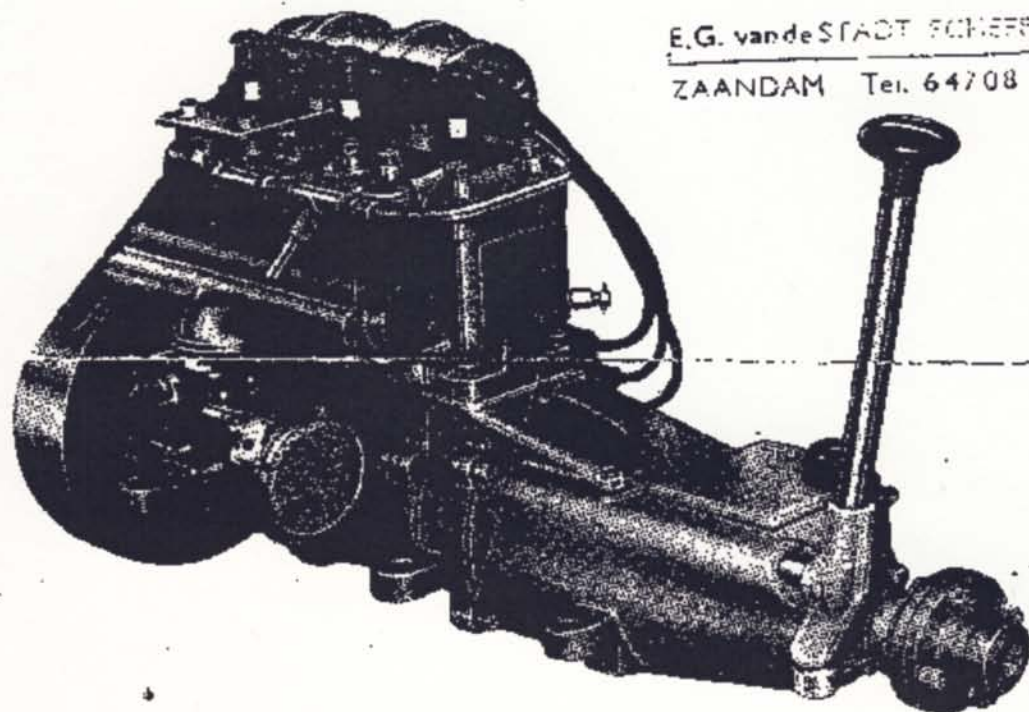
AB GÖTAMOTORER - OSBY

TELEPHONE OSBY 100 25, 112 06 — WIREADDRESS: "GÖTAMOTORER SWEDEN"

FÄRE-GÖTA

GASOLINE or KEROSENE

E.G. van de STADT SCHEEPSWERF N.V.
ZAANDAM Tel. 64708 HOLLAND



TECHNICAL DATA

No. of cylinders	3
Type	2-stroke
Bore	70 mm
Stroke	70 mm
Cylinder volume	670 cm ³
Effect at 2000 r/m	15 HP
Effect at 2500 r/m	18 HP
Fuel consumption	6 l/h

Easy to operate.

Electrical starter and generator for instantaneous starting and for light.

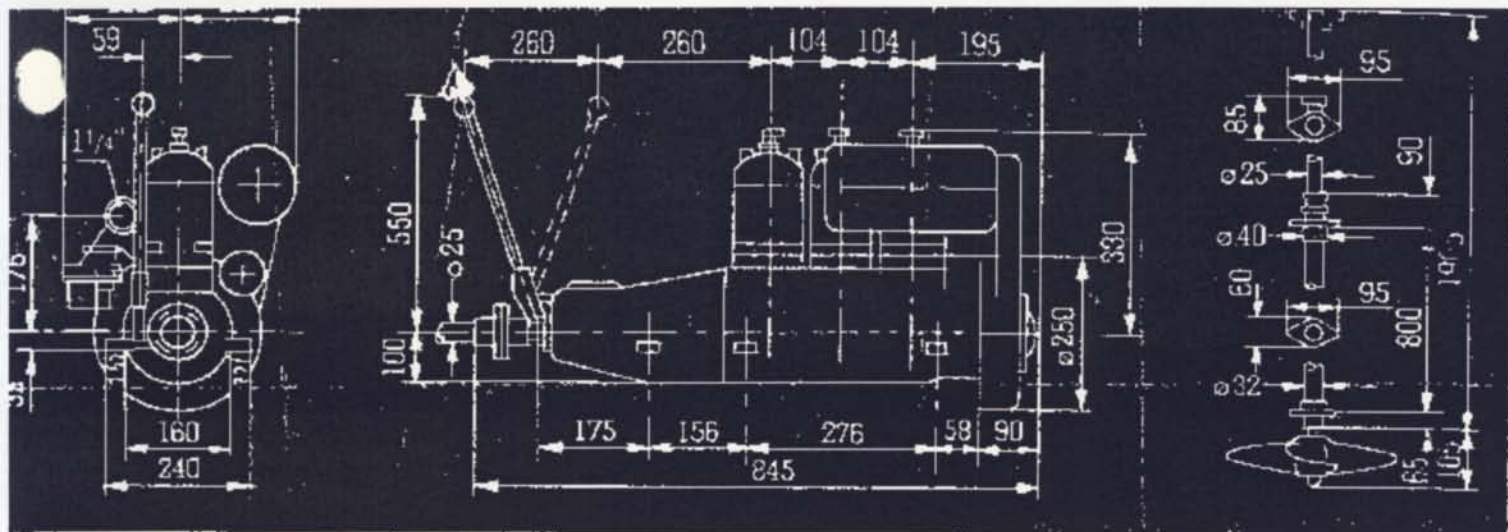
Built according to the most up to date principles.

Reliable in running.

Remarkably low weight and volume.



SWEDEN



Measure in mm.: 1" = 25,4 mm.

SPECIFICATION

The cylinder blocks have detachable covers and are constructed of special alloy, fine-grained cast iron offering great resistance to wear.

The cylinder walls are carefully ground, and cooling — and gas ports are of ample size. Reversed cross scavenging gives increased power and reduced fuel consumption.

The crank shaft is constructed of special steel with ground pins and is well balanced.

Connecting rods are of drop forged steel of H-section and provided with tempered and carefully ground bearing surfaces for their double precision needle bearings of SKF manufacture. Top end bearing of special bronze.

Main bearings have robust SKF ball bearings.

Pistons are of light metal with convex tops and have three compression rings.

Gudgeon pins are manufactured of tempered chrome nickel steel and carefully ground, being secured in the pistons by means of Seeger locking devices.

The exhaust- and inlet casing is cast in one unit, and preheating of the fuel-air mixture gives complete combustion.

The cooling water pump is an effective and robust cog wheel pump, one wheel being constructed of bronze and the other of Ferobestos, which makes for silent running. The pump is driven by a gear which runs in an oil bath. Oil level is determined by a sounding rod.

Ignition by Bosch 12 V equipment

The engine is lubricated by means of oil added to the fuel.

The packing of all rotating parts is by Zimmer rings and of plane surfaces by oil packing of best quality. Cylinder top gasket of Klingerit.

The reversing gear is totally enclosed and of robust construction with SKF ball bearings. It works in an oil bath giving very little wear and silent running. Oil level is determined by a sounding rod.

An effective silencer is fitted to the motor.

Electrical equipment is a standard fitting for all 3-cylinder motors. The equipment consists of a Bosch 12 V starter-generator with relay and starting switches, cut exclusive of battery and cables.

A switchboard is included and consists of a board with 3 controls and thermometer.

Flame guard, also acting as an inlet damper is supplied to the motor.

Guarantee. Each motor is very carefully tested before delivery. 1 year's guarantee is given for defects of material or in manufacture.

EXTRA OUTFIT

Propeller equipment, consisting of propeller shaft and stern bush of brass and of propeller and propeller bearing of bronze. Bearing lining made of Ferobestos. The equipment can also be delivered with reversible blades. Length of propeller shaft 2,0 Metres (6' 6.3/4"); Standard length of stern bush 0,9 M. (2' 7 1/2").

Assembly fittings consisting of oil fuel tank for petrol and paraffin, cock, cock mountings and fuel flexible tube. Cooling water equipment consisting of a filter, sea cock with mountings and hose for sea inlet and exhaust.

Type x)	15 B	15 V	18 BR	18 VR
Output, BHP	15	15	18	18
R.P.M.-engine	2000	2000	2500	2500
R.P.M.-propeller	2000	2000	830	830
Net weight, kos	137	146	143	153
Gross weight, kos	189	193	195	200
Volume, m ³	0,342	0,322	0,342	0,327

x) B = reversing gear V = propeller with reversible blades R = reduction gear

Data and illustrations are subject to modifications

Description of reverse gear for F-Gota

(The figures in paranthesis refer to the illustrated numbers of the spare part list, picture 10 & 11)

The reverse gear mechanism consists of a housing (176) together with a conical coupling, which in turn consists of a cone (184) and a bowl (186) for propulsion ahead, and a reversing coupling (199-205) for driving astern. The reversing coupling is housed in the front half of the conical coupling.

In the aft part of the housing an axial thrust bearing is placed together with an oilseal.

Movement ahead is accomplished by pushing the gear lever forward when the conical coupling engages.

Movement astern is accomplished by pulling the gear lever aft as far as possible and is fully engaged after weak resistance is felt.

The idling or neutral position of the gear lever lies between ahead and astern. The bowl and the cone inside the conical coupling are disengaged when idling by means of a compression spring (185).

For movement ahead, the coupling ball (191) connected to the gear lever will move ahead, the three claws in their support (192) will grip and, in turn, force the aft part of the conical coupling, (the bowl), against the front half, (the clutch). These will rotate together and establish direct drive to the shaft.

If this coupling slips after having been used for a while, the claw support (192), after first having been released by unscrewing the locking (Allen) screw, must be turned slightly to the right (clockwise) and the locking screw then re-tightened, thus allowing the claws to obtain a tighter grip and a firmer coupling.

Movement astern is accomplished when the brake-band (187) firmly engages the aft half of the conical coupling, (the bowl), preventing it from turning and thus actuating the reverse movement. The gear lever is connected to the operating shaft (188) which by means of an oblique angled surface constricts the brake-lining. An adjusting (Allen) screw (237) on the upper part of the housing is provided for adjustment to the brake-lining. The adjustment should be carried out when gear is engaged in astern. The screw visible on the side of the housing (232) is a lock screw for the brake-lining and must not be used for adjustment. The adjustment screw (234) on the lower part of the housing is for adjustment of the brake-lining. This must not be touched before the upper adjustment screw has been screwed in to its limit. All adjustments can be performed when the inspections cover (177) has been removed. In no case should the inclination of the motor exceed 15° , and within this limit the level of lubrication oil must be high enough to cover the cogwheels of the equalizing gear at the fore end of the mechanism. The graduation of the dip-stick is based on the motor being level.

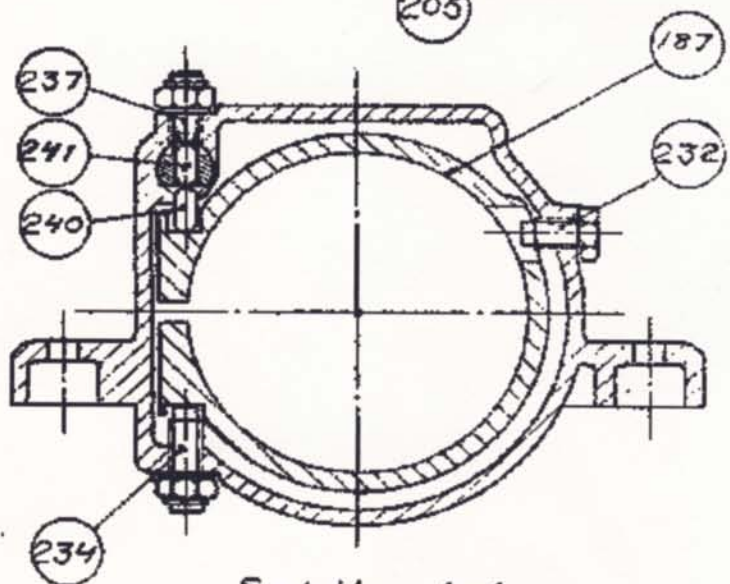
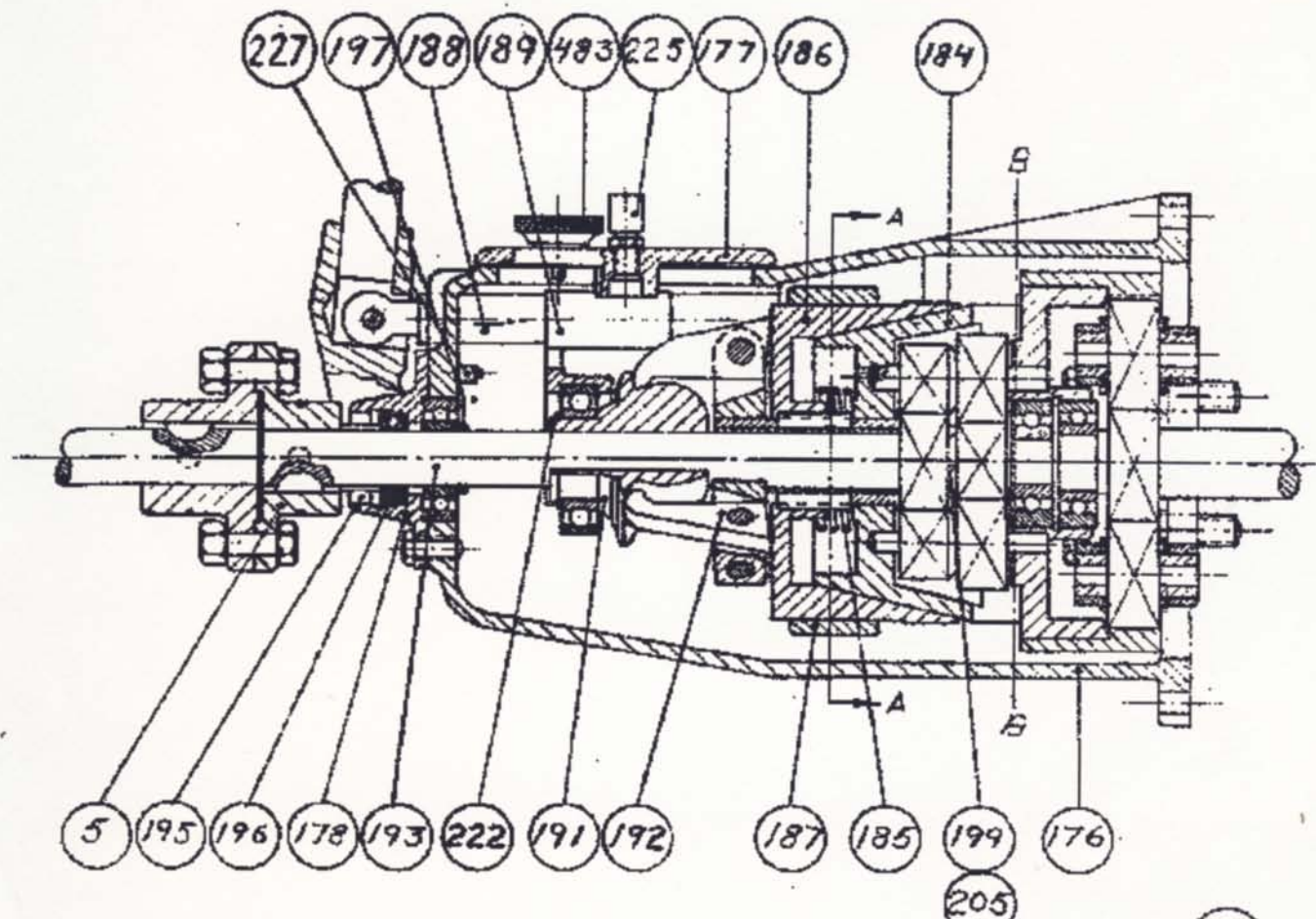
Complete dismantling of the reverse gear is accomplished in the following manner:

The flange (5) is removed from the shaft.

The end-cover (178) is removed by means of a special tool.

Thereafter dismount the coupling link (189) entirely.

After removing the six connecting bolts, the housing of the reverse gear can be taken off completely.



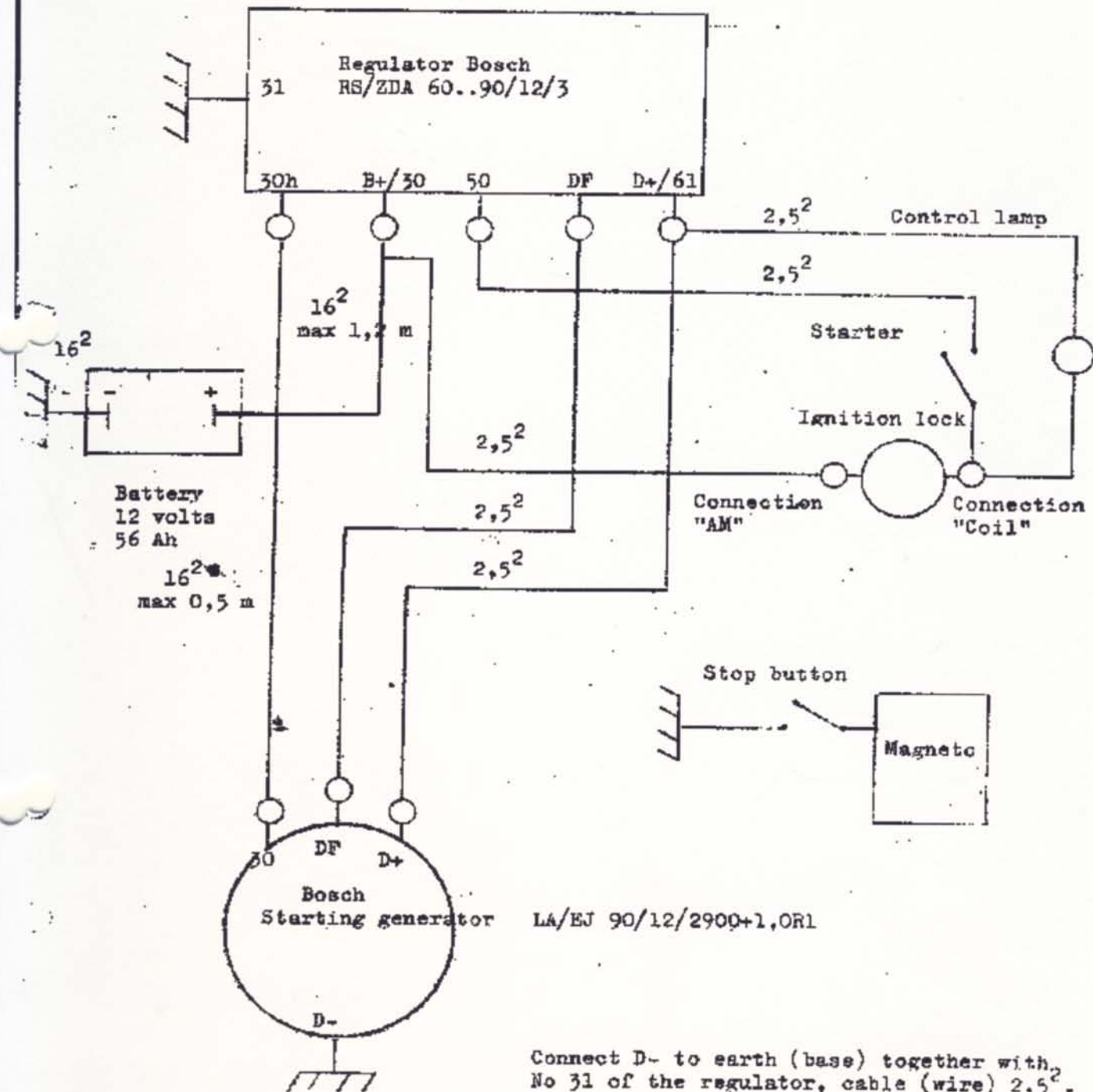
Sektion A-A

- 483 Dipstick
- 241 Set pin short
- 240 Set pin long
- 237 Adjustment screw
- 234 Adjustment screw
- 232 Locking screw
- 227 Set screw
- 225 Air valve
- 222 Clamp ring
- 205 Details for reversing gear
- 199 Details for reversing gear
- 197 Clampring
- 196 Axial bearing (51104)
- 195 Jointing ring
- 193 Shaft for reversing gear
- 192 Claw holder
- 191 Clutch ball
- 189 Cluth coupling
- 188 Operating axle
- 187 Brake lining
- 186 Bowl
- 185 Spring
- 184 Cone
- 178 End cover
- 177 Top cover
- 176 Cap for reversing gear
- 5 Coupling flange

N:r	Benämning	Ant.	Material	Modell nr
Skala		Datum	Namn	Kontr.
1:2,5	Ritad	18-6-63	L.W.	
A.B. GÖTAMOTORER - OSBY				
REVERSE GEAR WITH REDUCTIONS- GEAR FOR F-GÖTA			A4-912	

CONNECTION DIAGRAM FOR P-GÖTA 5 - 12 HP, BOSCH 12 VOLTS.

ATTENTION! Connect 31 together with D- of the starting generator to earth (base), 2,5² cable (wire).



Connect D- to earth (base) together with No 31 of the regulator, cable (wire) 2,5².

ATTENTION! For DF use always forked cableclips, for other terminals closed clips.

AB GÖTAMOTORER OSBY
A4 - 910

Connecting diagram for Bosche electric equipment
on marinmotor F-Göta:

The regulator should not be mounted too close to the motor, so that risk for its heating up appears. When too high a regulator temperature the tension of loading becomes altered with the result of unsatisfactory loading of the battery.

The regulator has to be mounted in such a manner, that it is well protected against splashing water. The mounting is to be made vertically with the terminals at the bottom end. Vibrations occurring in the support have to be repressed as far as possible.

Connection of the current has to take place by means of a separate cable (wire), $2,5 \text{ mm}^2$, between the terminals 31 of the regulator and the D-terminal of the starting generator.

The connecting cables (wires) ought not to be shifted as heavy damage can occur in the regulator and starting generator. For DF use forked cable clips and for the other terminals closed clips. If the length of the starting cables (wires) exceeds mentioned max. length, choose a cable with the next bigger size of area.

The V-belts have to be controlled by even intervals concerning the tension of the belts. When pressing the thumb on the belts they have to slack within 10 mm ($3/8''$). Too high a stretching pressure on the belts might cause damage on the bearings of the starting generator, and the contrary might cause starting difficulties and unsatisfactory loading. The capacity of the battery might not exceed 90 watts. Loads lasting very short (i.e. el.horn) exceeding this maximum of load may be granted.

SEM

MAGNETOS

Type E-2R

Type E-2L

Type E-2R35*

for twin cyl. 2- and 4-stroke engines

* For Fåre-Göta engines model 10—12



DESCRIPTION

SEM Magnetos type E-2R(L) and E-2R35 are of a design employing the rotating magnet principle. The permanent magnet of Alnico-steel is diecast in a single unit with the laminated pole pieces and the spindles to form the magneto rotor. The less robust parts, such as the coil and condenser, are stationary. The contact breaker, which does not rotate, is of the pivotal type and entirely enclosed in a metal casing. The magnetos are designed for service under the most arduous conditions. The entire units are enclosed within a dust- and moisture-proof metal frame. The coil is effectively insulated by a method which protects against deterioration and power leakage under adverse running conditions.

INSPECTION AND MAINTENANCE

When faulty ignition occurs, the high tension cables and sparking plugs should first be examined. If the insulation shows signs of deterioration or cracking, the cables must be exchanged. For this purpose the main cover of the magneto housing need not be removed. Unscrew the nut on the cable outlet and remove the cable. The new cable should not be bared but must be cut off flush to the required length. The rubber bush is pulled onto the cable for a distance of at least 40 mm from its end and the cable is pushed well down into the bottom of the insulator. The nut on the cable outlet must then be screwed home.

The plug electrodes burn away slightly in service whereby the gap length gradually increases. Examine and clean them from time to time, adjusting them to the right setting if necessary. The distance should normally be 0,4 mm.

ADJUSTMENT OF BREAKER POINTS

The contact breaker should be inspected from time to time. It is important that the contacts should be kept clean. If they are burned or blackened, they may be cleaned with a very fine cor-

DATA

Cylinders: two

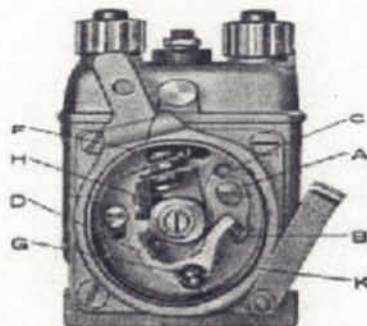
Timing range: 20°

Weight: 2.1 kgs

Drawing No. 17200 for E-2R(L)

No. 17218 for E-2R35

In the type designation »R» indicates right hand drive and »L» left hand drive.



borundum stone or emery cloth. Care must be taken that all particles of dirt or metal dust are wiped away. This can be done with a cloth moistened with petrol.

The gap between the contacts, when fully opened, should be 0,4 mm. The distance can be checked by means of the gauge on the adjusting spanner. If adjustment is necessary, proceed as follows. Slack off the screw A (See fig.) slightly. Insert the screw driver of the adjusting spanner in the slot C. Turning the spanner to the left decreases, and turning to the right increases, the distance between the contacts. When the gap is set to the thickness of the gauge tighten the screw A.

If the cam is removed from the shaft for any reason, make sure that it is replaced in its original position. The end surfaces of the cam are marked with an R and an L respectively. On magnetos for a right-hand drive the letter R must be turned towards the breaker cover. On magnetos for a left-hand drive the letter L should have the same position.

If the moving contact D is to be replaced, unscrew the nut F with the adjusting spanner and remove the split pin G. Fill the groove of the contact breaker pivot with ball bearing grease and install the new moving contact. If the felt lubricator H is dry, add a few drops of thin machine oil onto the felt. When replacing the contact breaker housing, fill its lubricating groove with ball bearing grease before assembly.

REPLACEMENT OF CONDENSER

When replacing the condenser remove the two retaining screws. When reassembling ensure that the cable connections from the contact breaker and the wound core are replaced in their original positions. The eyelet from the winding and the nickel-plated cable terminal from the contact breaker are placed under one of the retaining screws. The brass cable terminal from the contact breaker and the eyelets from the ignition coil and condenser are placed under the retaining screw for the shorting spring clip.

CLEANING OF HIGH TENSION MOULDING AND SLIP RING

The high tension moulding should be removed about once a year and cleaned. Wipe off any deposits and polish with a fine dry cloth. See that the pick up brushes move freely in their holders. Before replacing the high tension moulding, clean the slip ring by inserting a soft cloth and at the same time slowly turning the engine. When reassembling ensure that the cable connections from the wound core, the condenser and the contact breaker are made according to the instructions for replacement of the condenser.

AKTIEBOLAGET SVENSKA ELEKTROMAGNETER · ÅMÅL · SWEDEN

TELEPHONE: 120 10

Telegraphic address: MAGNETER

SEM

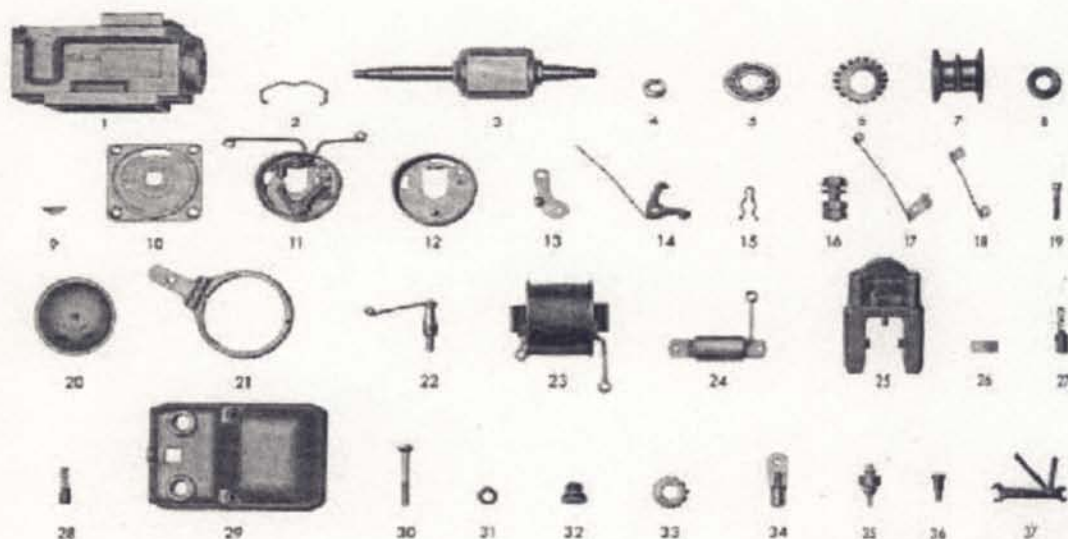
SERVICE-
LIST

ME—201



MAGNETOS type E-2R(L)

for twin cyl. 2- and 4-stroke engines
and type E-2R35 for Färe-Göta engines model 10—12



SPARE PARTS LIST

Fig. No.	Order No.	Fig. No.	Order No.
1	17221	17	17246
—	17224	18	17080
2	17030	19	17081
3	17231	20	17082
4	17239	21	17088
—	17059	—	17086
—	17051	22	17083
5	1761	23	17250
6	17052	24	17272
—	1704	25	17256
—	1750	26	17270
—	17240	—	2638
7	17236	27	1934
—	1760	28	17268
—	17039	—	2720
8	17038	—	1766
9	1597	—	2463
—	17053	29	17278
—	10110	—	17279
10	17061	30	17148
11	17245	31	17145
12	17064	32	14123
13	17069	33	17146
—	17092	34	1819
—	10159	35	17147
14	17071	—	17132
—	17131	—	17151
15	17063	—	17157
16	17097	36	17156
—	17094	37	1649

When ordering spare parts please state, in addition to the order number of the part (not number of the Fig.), also the type and factory number of the magneto.

AKTIEBOLAGET SVENSKA ELEKTROMAGNETER · ÅMÅL · SWEDEN

TELEPHONE: 120 10

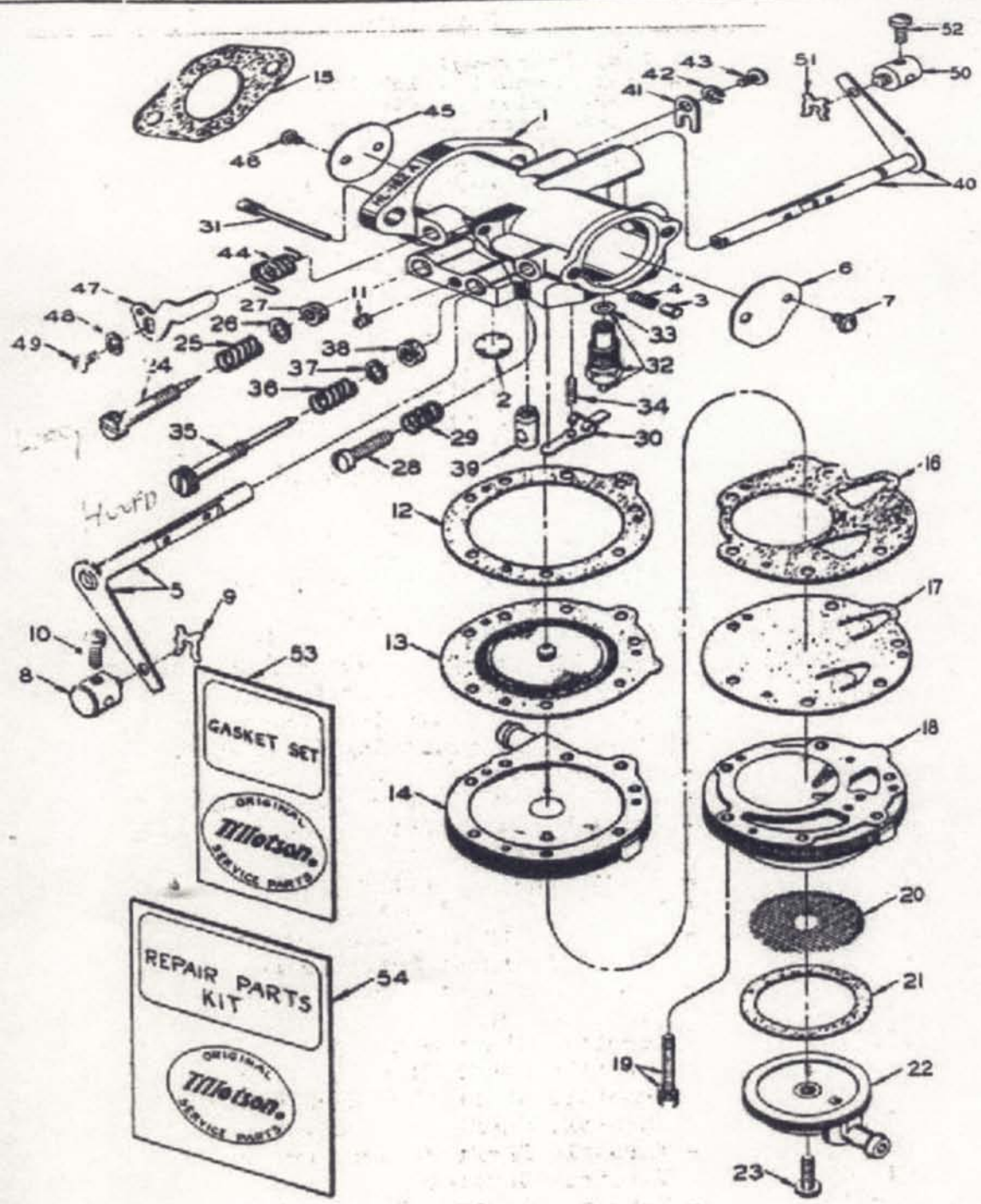
Telegraphic address: MAGNETER



Ref. No.	H1-162A Part No.	Part Name
1	013204	Body (service)
2	02531	* Body Channel Welch Plug
3	05454	Choke Friction Pin
4	08805	Choke Friction Spring
5	013199	Choke Shaft & Lever
6	09195	Choke Shutter
7	08942	Choke Shutter Screw (2)
8	012406	Choke Wire Connection
9	010392	Choke Wire conn. Ret. Clip
10	058	Choke Wire Ret. Screw
11	02232	Diaphragm Chamber Drain Screw
12	012473	Diaphragm Gasket
13	012475	* Diaphragm
14	010834	Diaphragm Cover
15	012354	Flange Gasket
16	012930	Fuel Pump Gasket
17	012708	* Fuel Pump Diaphragm
18	010525	Fuel Pump Body
19	010098	Fuel Pump Body Screw & Lockwasher (6)
20	010530	* Fuel Strainer Screen
21	010529	Fuel Strainer Cover Gasket
22	010527	Fuel Strainer Cover
23	010571	* Fuel Strainer Cover Ret. Screw
24	011498	* Idle Adjustment Screw
25	08793	* Idle Adjustment Screw Spring
26	011428	Idle Adjustment Screw Washer
27	011401	Idle Adjustment Screw Packing
28	05095	* Idle Speed Regulating Screw
29	0788	* Idle Speed Regulating Screw Spring
30	010513	* Inlet Control Lever
31	010581	* Inlet Control Lever Pinion Screw
32	012655	* Inlet Needle, Seat & Gasket
33	012656	Inlet Seat Gasket
34	011503	* Inlet Tension Spring
35	013195	* Main Adjustment Screw
36	08793	* Main Adjustment Screw Spring
37	011428	Main Adjustment Screw Washer
38	011401	Main Adjustment Screw Packing
39	012458	Nozzle Check Valve
40	013202	Throttle Shaft & Lever
41	09678	Throttle Shaft Clip
42	0992	Throttle Shaft Clip Lockwasher
43	01974	Throttle Shaft Clip Ret. Screw
44	010775	* Throttle Shaft Return Spring
45	012283	Throttle Shutter
46	08942	* Throttle Shutter Screw & Lockwasher (2)
47	010783	Throttle Stop Lever
48	06396	* Throttle Stop Lever Ret. Lockwasher
49	06393	* Throttle Stop Lever Ret. Screw
50	012406	Throttle Wire Connection
51	010392	Throttle Wire Conn. Ret. Clip
52	058	* Throttle Wire Ret. Screw
53	GS-170	* Gasket & Packing Set
54	RK-585	Repair Parts Kit

(*) Indicates contents of Repair Parts Kit

June 25, 1963



THE TILTON MFG. CO. - T. EDO. OHIO
 MADE IN U.S.A.
 A. B. GOTTSCHALKER
 RELEASE DATE: 3-28-63

DATE	NO.	REV.	ISS. BY	DATE

1L-102A