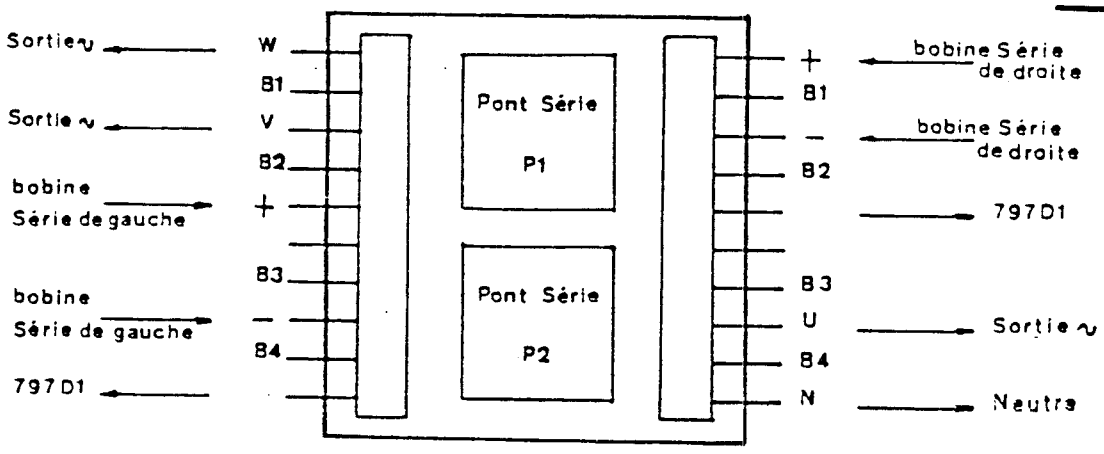
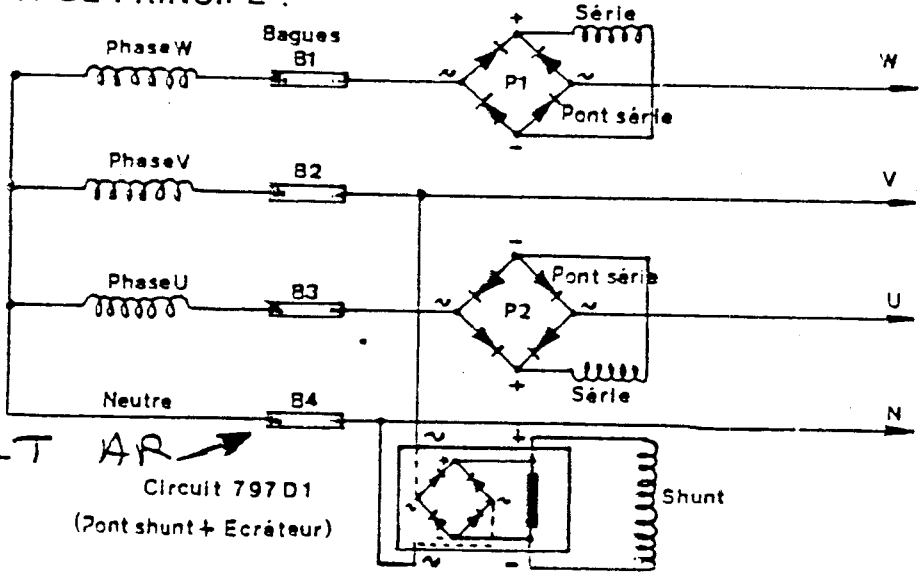
DOCUMENTATION TECHNIQUE	ALTERNATEURS **TAC**	C2514

ALTERNATEURS *TAC 243 à 283* COMPOUND

SCHEMA DE BRANCHEMENT DE LA PLATINE DE CONNEXIONS : 1028 DI



SCHEMA DE PRINCIPE :



OTE RLT AR

PRINCIPE DE FONCTIONNEMENT :

L'alternateur TAC est un alternateur à induit tournant.

La tension alternative est receuillie sur quatre bagues : trois phases et neutre.

L'auto-excitation de la machine est fournie par l'enroulement shunt, alimenté par un pont redresseur (platine 797), connecté entre phase et neutre.

La régulation de la tension en charge est assurée par deux circuits de compoundage, en série sur les deux autres phases.

Le courant débité traverse les ponts de diodes (P1 et P2) qui alimentent chacun un enroulement série qui renforce le flux en fonction de la charge.

NOTA : Cette machine fonctionne indifférement dans les deux sens de rotation.

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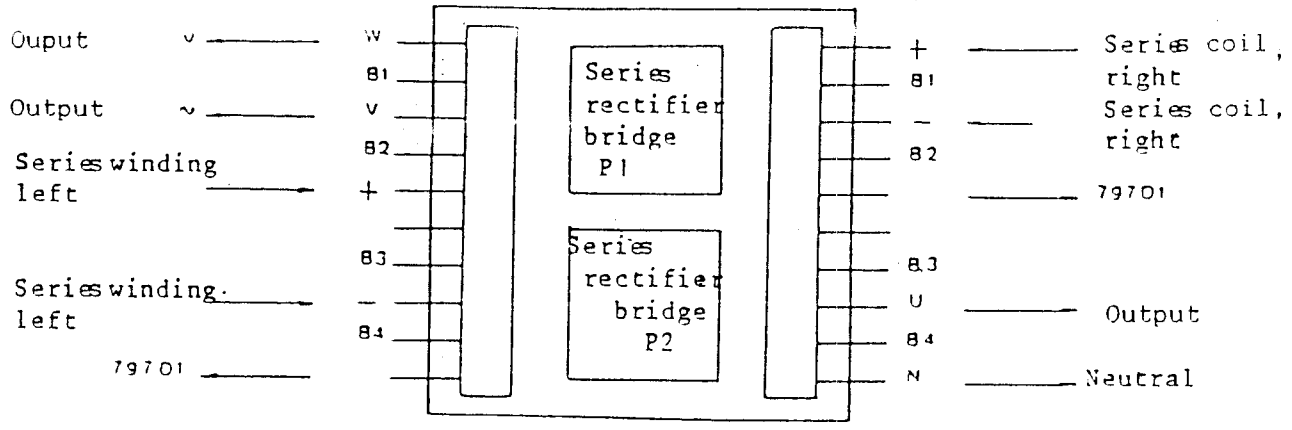
A.C. GENERATORS *TAC 243 à 283 COMPOUND*

DIAGRAM OF CONNECTION CIRCUIT BOARD 1028 D1



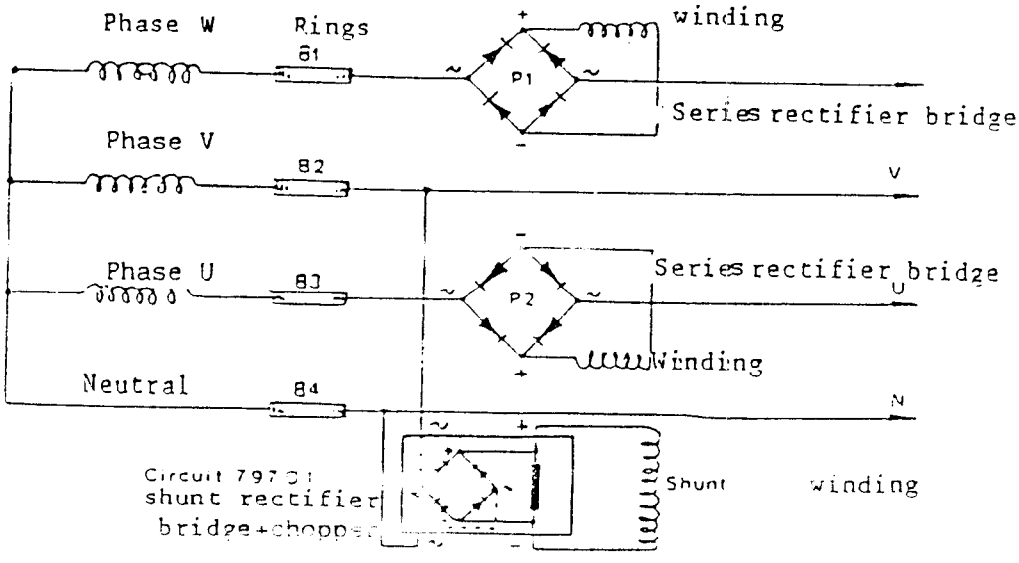
On the rotating armature of the TAC A.C. generator, the current is collected on four slip-rings by means of brushes.

The self-excitation current is generated by a shunt field winding. It is supplied by a rectifier-bridge connected between phase and neutral.

The voltage regulation at load is obtained by means of the series winding, supplied with the current which is rectified by two rectifier-bridges.

The output voltage is regulated as a function of the load.

DIAGRAM OF PRINCIPLE (C 2514)



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II. PUTTING INTO SERVICE

a) Mechanical checkings

Before the first starting up, check that the a. c. generator is properly installed. Make sure that :

- the attachment bolts and nuts of the flange or mounting feet are correctly secured as well as the central rod, in the case of the V.A. version.
- the brushes are free in their brush polder and that they have a proper contact with their rings.
- the ventilation openings are free of packing paper.

b) Checking of the speed

Make sure that the alternator runs at the rated speed : 3000 RPM.

c) Checking of the voltage

Make a test with and without load.

III. MAINTENANCE

a) Cleaning

Be sure that the cooling air circulation is not reduced by bits of paper and dust.

b) Lubrication

No inspection required,: the bearings are life lubricated.

c) Brushes

Carefully inspect the brush condition every 50 hours of service : said brushes may be dirtied by exhaust fumes, grease or dust.

IV. TROUBLE SHOOTING

a) Lack of voltage at no load

Check that :

- the driving engine rotates at its rated speed,
- all the wires and leads are properly connected,
- the brushes have a correct contact with their rings,
- the windings are not broken,
- the shunt rectifier bridge is not cut or short-circuited.

b) Priming

Prime the machine , with the help of a 4,5 V dry cell, by connecting the plus and minus terminals of the cell to the plus and minus terminals of the series field winding, respectively.

c) Voltage instability at load

Check that :

- the motor rotates at rated speed
- the series field winding is neither open, nor broken (see § inspections hereafter
- the contacts are neither oxydized, nor loose,
- the series rectifier bridge is in proper condition (see § inspections hereafter

V. INSPECTIONS

a) Shunt and series windings

At the ambient temperature the resistance of the windings shall have the following values :

TYPES	RESISTANCES IN OHMS		
	Armature winding	Shunt field winding	Series field winding
TAC 243	1,15	305	0,61
TAC 263	0,75	255	0,4
TAC 283	0,7	238	0,27

b) Shunt and series rectifier-bridges

Check each diode of the rectifier-bridges with an ohmeter, or a pilot warning lamp supplied by a direct current (for instance from a 12 V DC battery) The lamp must light up in one direction only.

VI. COUPLING THE SINGLE BEARING A. C. GENERATORS

a) Necessary pieces for coupling

- 4 screws (in accordance with motor flange)
- 1 spanner of 10 mm
- 1 spanner of 13 mm.

b) Description of shipped machine

The "TAC" A.C. Generators are delivered in cardboard box or container, they are ready to be coupled.

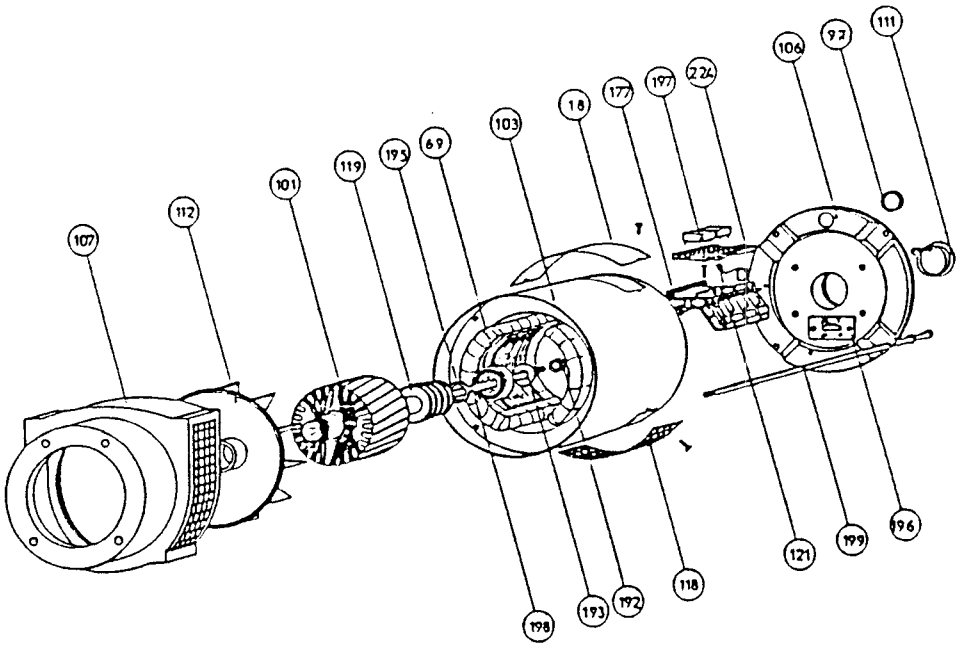
The unit consists of the following parts (see next page) :

- the a.c. generator itself
- the mounting rod of the rotor (198)
- the nut (192)
- the hood (111)

c) Coupling with the engine

1. Remove the hood (111).
2. Remove the nut (192) and the rod (198).
3. Unserew the 4 mounting rod nuts of the stator (199) ; tap slightly on them in order to remove the end shield (107).
4. Fasten the end shield (107) on the engine.
5. Make the whole a. c. generator slip along the conical shaft extension of the engine.
6. Tighten the 4 rod nuts (199).
7. Set and hold (198) and (192).
8. Put the hood (111).

N.B. : the N.D. endshield (106) is enable to receive a shock-absorber.



MOTEURS LEROY-SOMER
Z 2088

Mark	Qty	Designation	Single bearing V.A.	Two bearing B 34
18	1	Protection sheet.....	CA 1121.1.15	CA 1121.1.15
66	1	Bearing, drive end.....	no	6205 2Z
69	1	Bearing, non drive end.....	6204 2Z	6204 2Z
96	1	Spacer supporting the PC(printed circuit)	CA 112.1.52	CA 112.1.52
97	1	Cable-grommet, STERLING DG 13,5	2 300 467	2 300 467
101	1	Rotor complete wound.....	According type	
103	1	Stator complete wound.....	According type	
106	1	End shield, non drive end, for TAC 243 to 283.....	CA 1121.4.19	CA 1121.4.19
107	1	End shield, drive end, for TAC 243 to 283.....	CA 1121.4.03	CA 1121.4.04
111	1	Hood.....	2 300 473	2 300 473
112	1	Fan ventilating.....	LSC 1121.1.09	LSC 1121.1.09
113	2	Grids, air outlet.....	LSC 1121.1.02	LSC 1121.1.02
118	1	Grids, air inlet	CA 1121.1.02	CA 1121.1.02
119	1	Collector 4 rings.....	2 004 275	2 300 275
121	8	Brushes 6,3 x 12,5 x 20.....	2 101 176	2 101 176
133	1	Tightening washer, of the bearing..	no	CA 1121.1.58
177	1	Brush-holder + springs + closing plate	2.101.1.31	2.101.1.31
193	1	Pressure-washer SS Ø 20 Ø 28 thick 2	2 300 054	2 300 054
196	1	Printed circuit and rectifier bridge, (shunt)..	LS 797 D1	LS 797 D1
224	1	Base plate "Series", connexions....	1028 D1	1028 D1
198	1	Assembly rod of the rotor.....	According type	no
199	4	Assembly rod of the stator.....	According type	