



Engine MINI-48

VERSION 2015-7

SPARE PARTS MANUAL



PARTS LIST CATALOGUE

NORMS TO PLACE AN ORDER:

For fast and more efficient service, please specify the following information on spare parts orders that must be preferably done by FAX or e-mail as specified below:

- 1- Engine model: As shown in identification plate
- 2- Engine serial number: As shown in identification plate and stamped on crankcase
- 3- Item description + part number + quantity required

Spare parts requests must be addressed to:

recambios@solediesel.com

Telf.: +34 93 775 44 05

Fax: +34 93 775 30 13

The components shown in the catalog have:

- Figure: Number by which they are represented in scheme
 - Description: Trade name of the component
 - Quantity: Total number of parts used in the assembly of the part represented (may differ from the total minimum quantities)
- Hoses, indicates the total length in meters

The diagrams shown in this catalog of spare parts, have only the purpose to identify the piece in question, its representation is not meaningful and may differ from the actual piece.

In case of doubt, contact Solé Diesel, or your authorized dealer.

The parts i / or references in this catalog are subject to change without notice.

[SOLÉ, S.A.](#)

C-243b, Km, 2 - P.O. BOX 15
08760 Martorell (Barcelona) Spain

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Engine body, MINI-48

Cylinder Head
Oil Pan & Gear Case
Timing Parts
Crankcase
Crankshaft, Piston & Connecting Rod
Oil System
Engine Brackets & Inlet

Cooling System, MINI-48

Water Pump
Cooling System 1
Cooling System 2

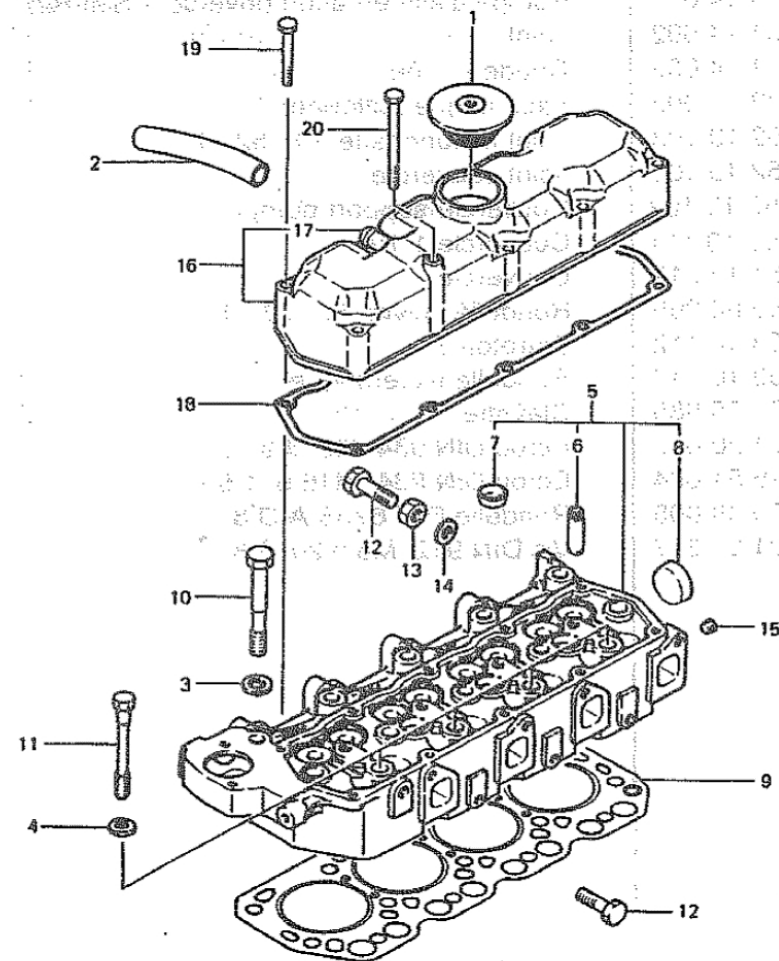
Fuel System, MINI-48

Fuel Pipe
Fuel Injection Pump
Nozzle (Up to N°5786)
Nozzle (From N°5787)
Governor Parts
Fuel Filter
Feed Pump

Electrical System, MINI-48

Electrical System 1
Electrical System 2
Spare Parts Alternator
Spare Parts Starter
Electrical Wiring & Panel

D_MI48_1_1			Cylinder Head
FIG.	REF.	QTY	DESCR.
1	13321023	1	Cap Oil FILLER
2	17021006	1	Hose BREATHER
3	13121005	10	Washer FINISHED P
4	13221007	4	Washer
5	17021001	1	Head Assy CYLINDE
6	17021002	8	Guide Valve
7	13520013	3	Cap,Sealing
8	*	1	Descripcion [NP]
9A	17021003	0	Gasket Head Cylinder [VAR]
9B	17021004	0	Gasket Head Cylinder [VAR]
10	17021005	10	Bolt Head (14X104
11	17021013	4	Bolt Cylinder HEA (12X104)
12	17021014	2	Bolt
13	13124053	1	Nut
14	51030012	1	Washer DIN 125-12
15	13120011	1	Plug TAPER 1/8
16	17021009	1	Cover Assy Rocker
17	17021017	1	NIPPLE
18	17021010	1	Gasket,rocker cover
19	13224062	9	Bolt
20	52101273	1	Bolt DIN 931 M8-100 8.8

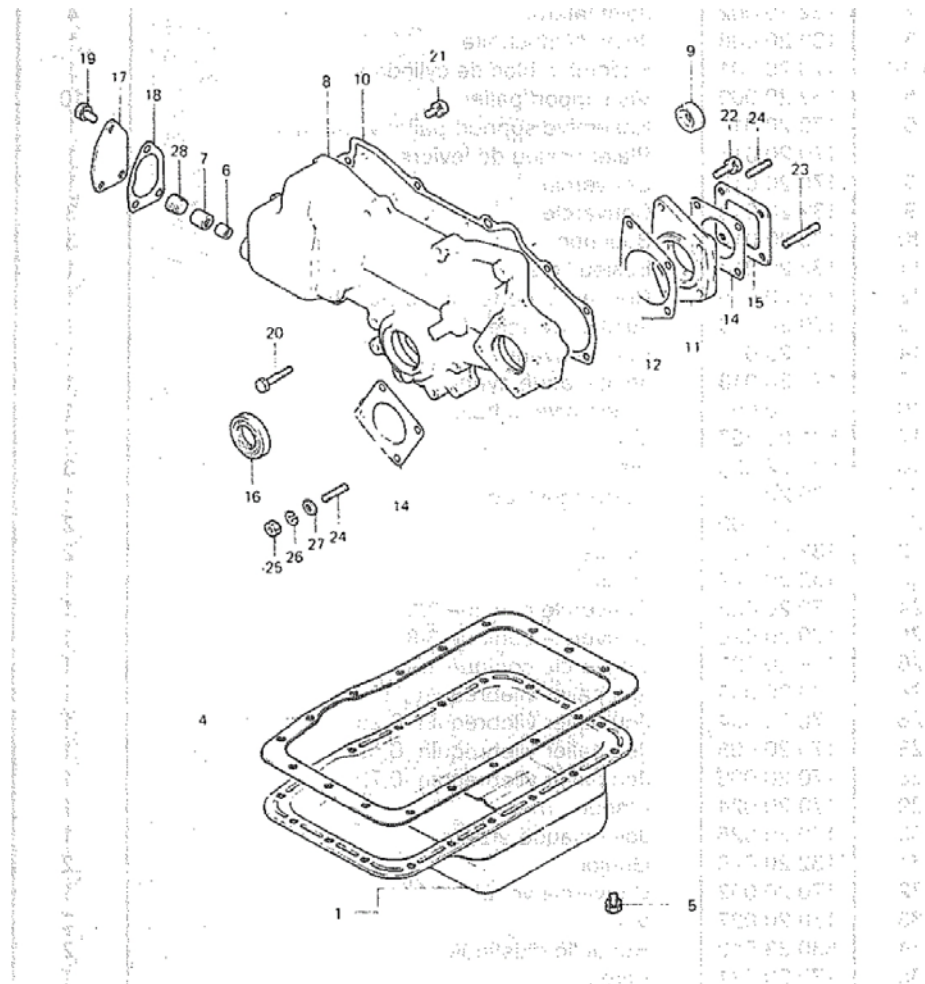


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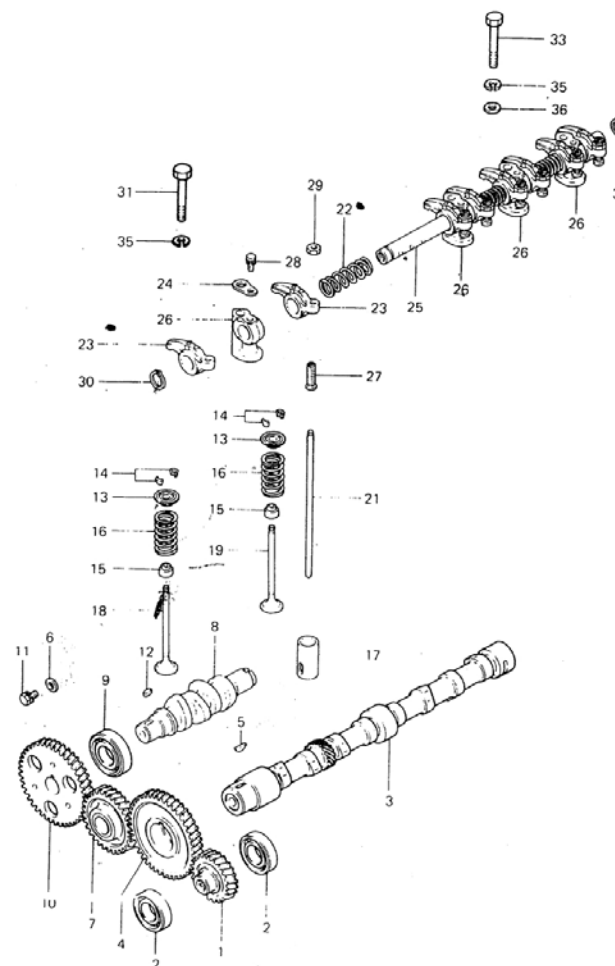
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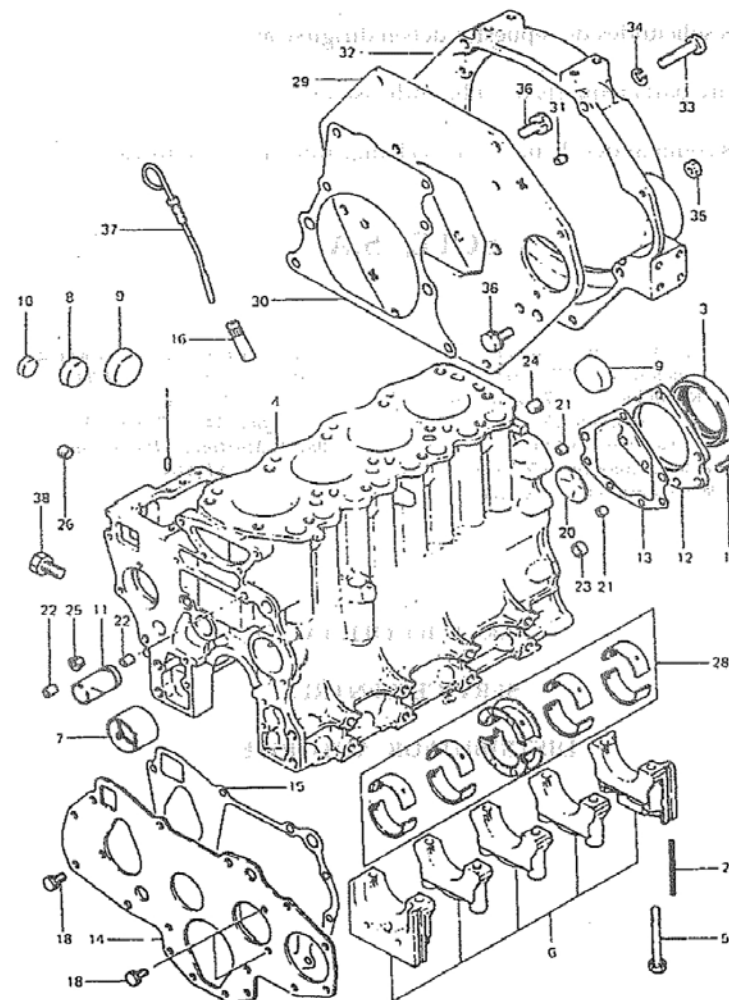
D_MI48_1_2			Oil Pan & Gear Case
FIG.	REF.	QTY	DESCR.
1	17020030	1	PAN Assy Oil
4	17020033	1	Gasket Oil PAN
5	52102256	18	Bolt DIN 933 M8-15 8.8
6	13220034	1	Roller Bearings
7	13220036	1	Roller Bearings
8	17020035	1	Case Gear
9	13420051	1	Plug THRUST
10	17020040	1	Gasket Gear Case
11	17020037	1	Housing Pump Gear
12	17020038	1	Gasket Housing
14	13120047	2	Gasket Water Pump
15	17020051	1	Cover Oil Pump
16	13220039	1	Seal Oil
17	13423009	1	Cover GOverNOR
18	17020056	1	Gasket GOverNOR C
19	52102256	3	Bolt DIN 933 M8-15 8.8
20	52101262	10	Bolt DIN 931 M8-45 8.8
21	52102256	2	Bolt DIN 933 M8-15 8.8
22	52102258	2	Bolt DIN 933 M8-25 8.8
23	13220042	2	Stud L 54
24	13220043	6	Stud L 34
25	52120008	8	Nut DIN 934 M8 8.8
26	53033008	8	Washer GROWER DIN 127-8
27	51030008	8	Washer DIN 125-8
28	13120037	1	Plug TAPER 1/2



D_MI48_1_4			Timing Parts
FIG.	REF.	QTY	DESCR.
1	17022066	1	Gear, Pressure Water Pump
2	17022067	2	Ball Bearing 6205-C3
3	17022035	1	CamShaft
4	13222037	1	Gear CamShaft
5	13222020	1	KEY
6	51030008	1	Washer DIN 125-8
7	17022038	1	Gear IDLER
8	17022040	1	Shaft,fuel injection pump cam
9	13222062	1	Ball Bearing 6228
10	13222043	1	Gear Fuel I/P Cam
11	52102256	1	Bolt DIN 933 M8-15 8.8
12	17622060.4	1	Key, Sunk
13	13122058	8	Retainer
14	13122059	16	Lock Retainer
15	17022054	8	Seal Valve ST
16	17022057	8	Spring Rocker
17	13222061	8	Tappet
18	17022055	4	Intake Valve
19	17022056	4	Exhaust Valve
21	17022041	8	ROD PUSH
22	13122047	3	Spring
23	13222042	8	ARM Rocker
24	13222063	2	Washer Seat
25	17022046	1	Shaft
26	17022048	4	STAY Rocker
27	13122044	8	Screw Adjusting
28	52102156	2	Bolt DIN 933 M6-16 8.8
29	13122045	8	Nut
30	53040019	2	CIRClip DIN 471 E-19
31	17022053	2	Bolt
33	17022053	2	Bolt
35	53033010	4	Washer GROWER DIN 127-10
36	51030010	2	Washer DIN 125-10



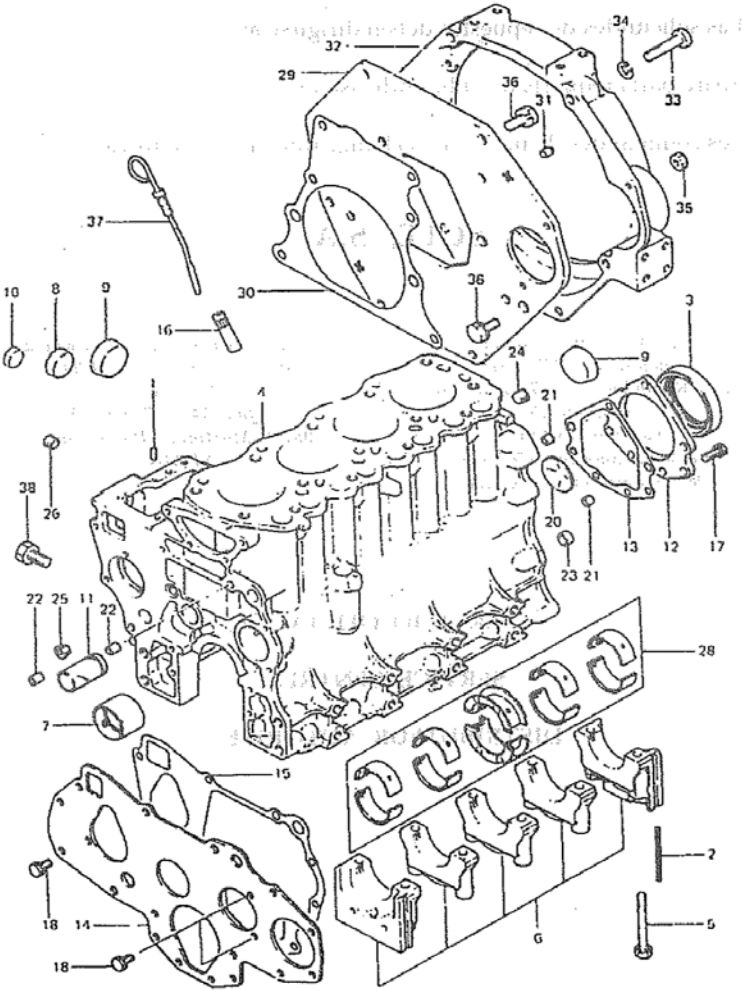
D_MI48_1_6			Cranckcase
FIG.	REF.	QTY	DESCR.
1	13120036	2	Pin Dowel
2	13220002	4	Seal Side
3	13220008	1	Seal Oil
4-9	17020001	1	Block SUB Assy CYLIN
5	13220009	10	Bolt Bearing Cap
6	17020010	1	Cap Assy,bearing [NP]
7	17120011	1	Bushing, CamShaft fr.
8	17020012	1	Cap
9	13220013	3	Cap
10	17020014	3	Cap
11	13220014	1	Shaft IDLER
12	17020015	1	Case Oil Seal
13	17020016	1	Gasket Oil Seal
14	17020017	1	Plate, Front
15	17020018	1	Gasket Front PLAT
16	13220007	1	Guide
17	52102257	7	Bolt DIN 933 M8-20 8.8
18	52102256	3	Bolt DIN 933 M8-15 8.8
20	17020013	1	Plug
21	13120009	2	Bushing
22	13220021	2	Bushing KNOCK
23	13220022	1	BUSHING,KNOCK
24	17020023	1	Plug TAPER 3/8
25	17020026	1	Plug TAPER 3/8
26	13220023	1	Plug TAPER
28A	17020003	1	Bearing Set CRANK STD.
28B	17020004	1	Bearing Set CRANK
28C	17020005	1	Bearing Set CRANK
28D	17020006	1	Bearing Set CRANK
29	17020024	1	Plate REAR
30	17020025	1	Gasket REAR Plate
31	13220026	2	Pin KNOCK (10X12)
32	17020002	1	FLYWEEL Housing
33	17020027	2	Bolt
34	53033012	2	Washer GROWER DIN 127-12



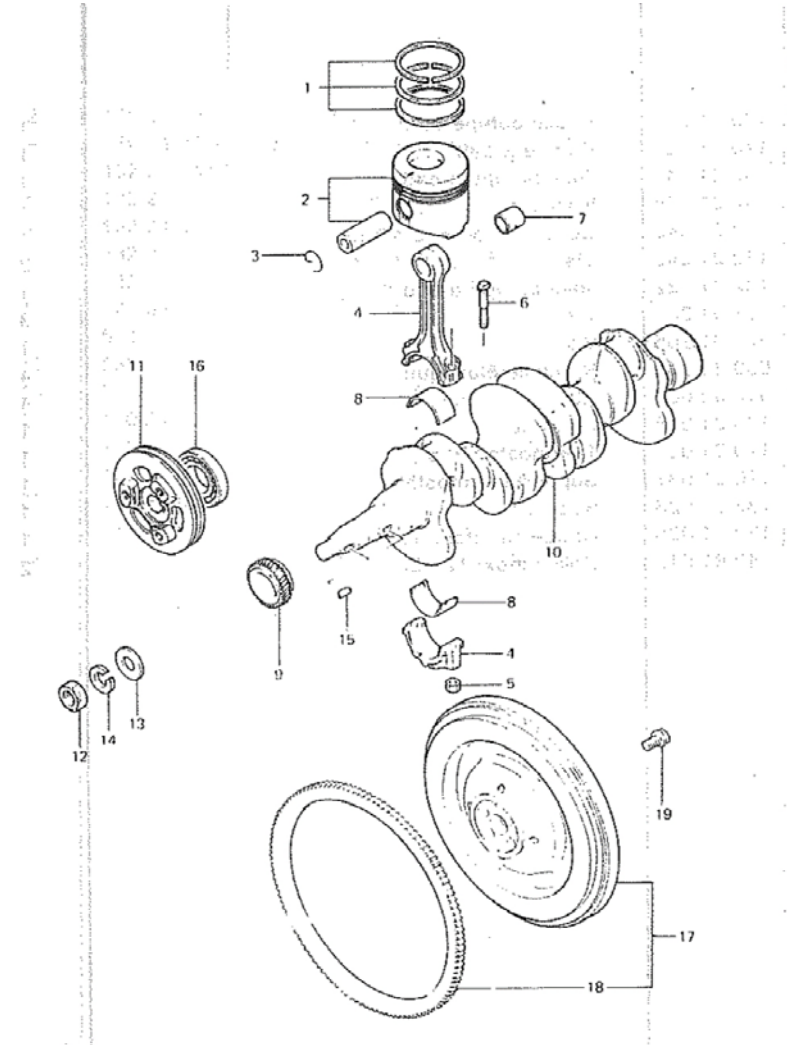
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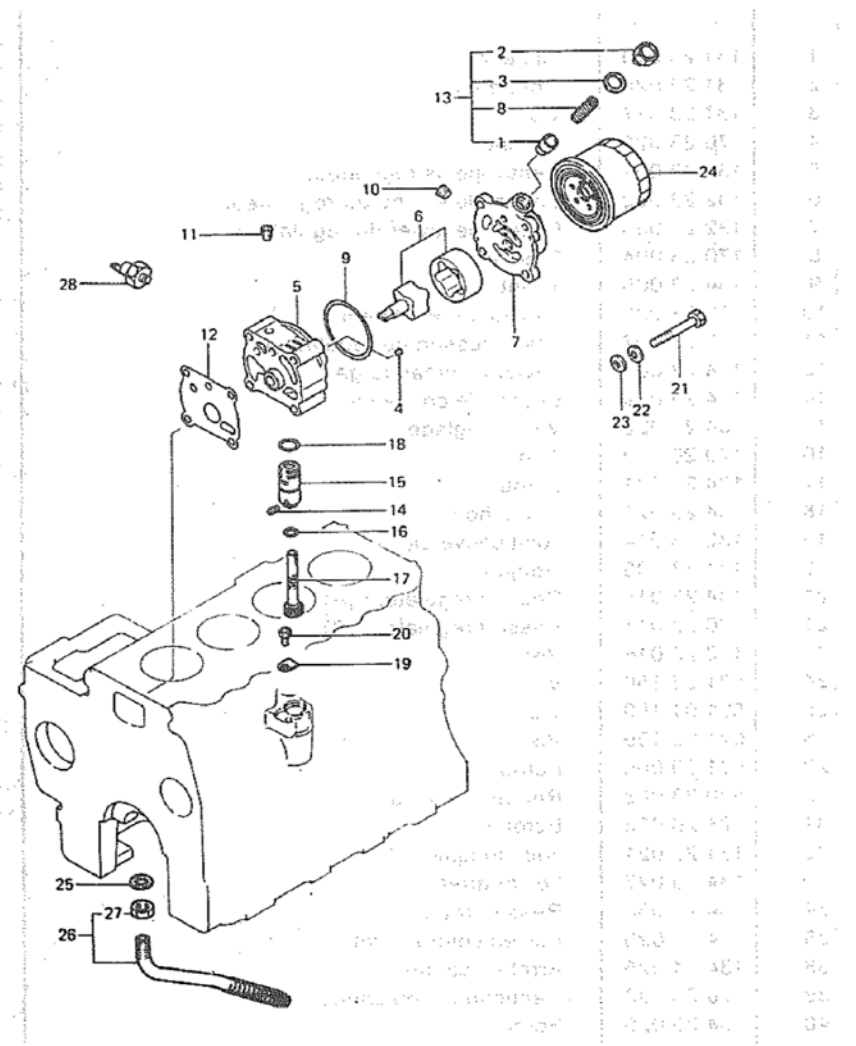
D_MI48_1_6			Cranckcase
FIG.	REF.	QTY	DESCR.
35	13127002	1	Nut
36	52202359	11	Bolt DIN 933 M12-1,25-30 8.8
37	13820029	1	Gauge Oil Level
38	13220028	4	Bolt



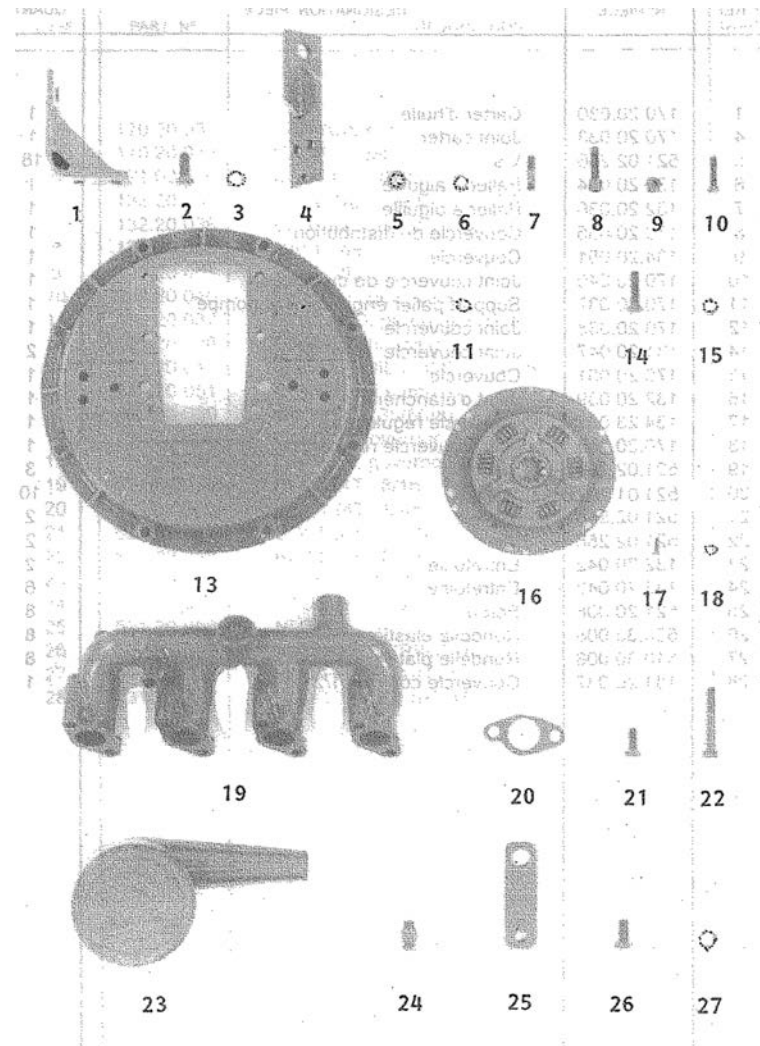
D_MI48_1_8		Crankshaft, Piston & Connecting Rod	
FIG.	REF.	QTY	DESCR.
1A	17022006	4	Ring Set Piston S
1B	17022007	4	Ring Set Piston O
1C	17022008	4	Ring Set Piston O
1D	17022009	4	Ring Set,piston 0,75 OS
2A	17022001	4	Piston & Pin Set
2B	17022002	4	Piston & Pin Set
2C	17122003.1	4	Piston +0.50
3	17122032	8	Plate, thrust
4-7	17022012	4	ROD CONNECTING
5	17122011	8	Nut,connecting rod
6	17122013	8	Bolt,connecting rod
7	17022033	4	Bearing Small END
8A	13122014	4	Bearing Set CON R
8B	13122015	4	Bearing Set CON R
8C	13122016	4	Bearing Set CON R
8D	13122017	4	Bearing Set CON R
9	13222021	1	Gear CrankShaft
10	17022018	1	Shaft CRANK
11	17122024	1	Pulley CrankShaft
12	17122026	1	Nut, jam
13	17022025	1	Washer
14	17022023	1	Washer Spring
15	13222020	2	KEY
16	17022034	1	Ball Bearing 6207
17	17022027	1	Flywheel Assy
18	13222029	1	Gear
19	17022031	5	Bolt Drive



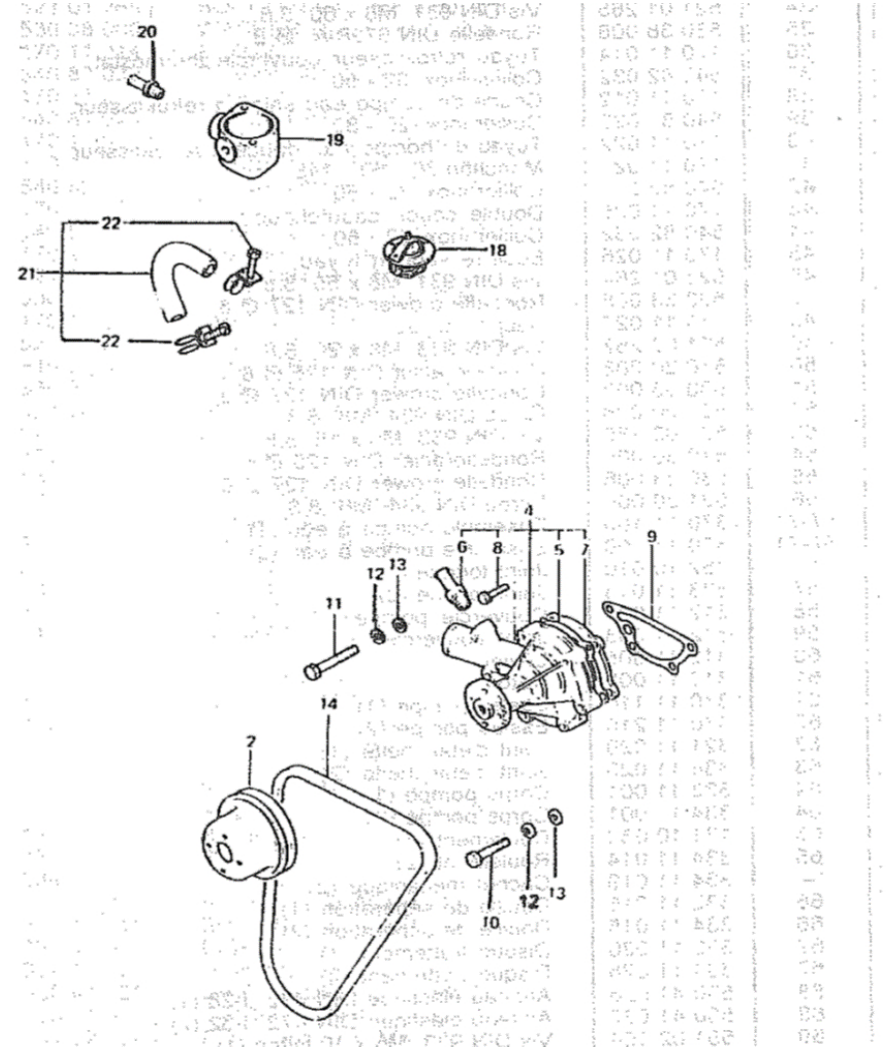
D_MI48_1_10			Oil Sysem
FIG.	REF.	QTY	DESCR.
1	13224043	1	Plunger
1-11	17024040	1	Pump Assy Oil
2	13224045	1	Plug
3	56000077	1	Washer 18-23-1,5
4	13220044	2	Pin
5	17024046	1	Body Oil Pump
6	17024042	1	Rotor Assy Oil PU
7	13224061	1	Cover Oil Pump
8	13224044	1	Spring RELIEF
9	13224049	1	O-Ring
10	13220023	1	Plug TAPER
11	13120011	1	Plug TAPER 1/8
12	13224041	1	Gasket Oil Pump B
13	13224070	1	SERVICE Kit RELIE
14	17024055	1	Pin
14-18	13224054	1	DriveN UNIT SPEED
15	13224056	1	SLEEVE SPEEDO
16	13224057	1	O-Ring D. 11X2,5
17	13224054	1	DriveN UNIT SPEED
18	13224059	1	O-Ring D. 19X2,4
19	13224063	1	Plate
20	52102156	1	Bolt DIN 933 M6-16 8.8
21	17024062	4	Bolt
22	53033008	4	Washer GROWER DIN 127-8
23	51030008	4	Washer DIN 125-8
24	13924051	1	Filter Assy,oil
25	17024001	1	Gasket
26	17024052	1	SCREEN Assy Oil
27	13822026	1	Nut
28	13124060	1	Switch



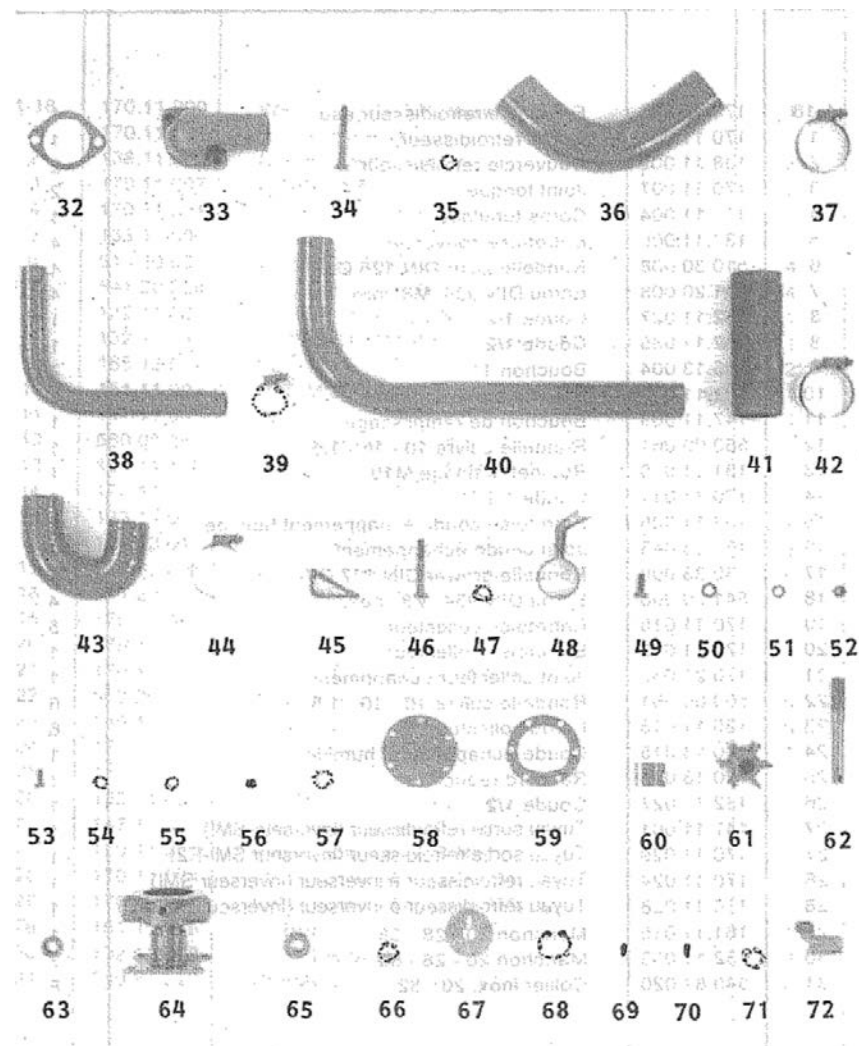
D_MI48_1_12			Engine Brackets & Inlet
FIG.	REF.	QTY	DESCR.
1	17010001	2	Bracket,front
2	52202359	4	Bolt DIN 933 M12-1,25-30 8.8
3	53033012	4	Washer GROWER DIN 127-12
4	17010002	2	Bracket,rear
5	52030010	4	Washer DIN 125
6	51035010	2	Washer DIN 433 10
7	13110011	2	Stud
8	52101311	4	Bolt DIN 931 M10-40 8.8
9	51123010	2	Nut DIN 985 M10 5.6
10	52102310	2	Bolt DIN 933 M10-35 8.8
11	53038010	2	Washer DIN 6798-A 10
13	17010012	1	Block, reverser connection
14	52202311	8	Bolt DIN 933 M10-1,25-40 8.8
16	17010070	1	Flexible Coupling Type A D. 185
17	52102156	6	Bolt DIN 933 M6-16 8.8
18	53033006	6	Washer GROWER DIN 127-6
19	17010009	1	MANIFOLD Intake
20	17021032	4	Gasket Intake MAN
21	52202308	4	Bolt DIN 933 M10-1,25-25 8.8
22	13522053	4	Bolt
23	17010030	1	Air Filter Assy
25	17010008	1	HANGER,engine
26	52202358	1	Bolt DIN 933 M12-1,25-25 8.8
27	53033012	1	Washer GROWER DIN 127-12



D_MI48_3_1			Water Pump
FIG.	REF.	QTY	DESCR.
2	17021021	1	Pulley,Water Pump
4	17021020	1	Pump Assy Water
5	13221041	1	Gasket Water Pump
6	13221026	1	NIPPLE Hose
7	13221042	1	Plate Water Pump
8	52101159	2	Bolt DIN 931 M6-30 8.8
9	13221022	1	Gasket Water Pump
10	52101262	3	Bolt DIN 931 M8-45 8.8
11	52101265	1	Bolt DIN 931 M8-60 8.8
12	53033008	4	Washer GROWER DIN 127-8
13	51030008	4	Washer DIN 125-8
14	17021028	1	Belt Type SPZX 987
18	17221027	1	Thermostat
19	17021037	1	FITTING THERMOSTA
20	13221026	1	NIPPLE Hose
21	13221025	1	Hose Assy Water
22	54081012	2	Clamp DIN 3017 12-22/9 W4



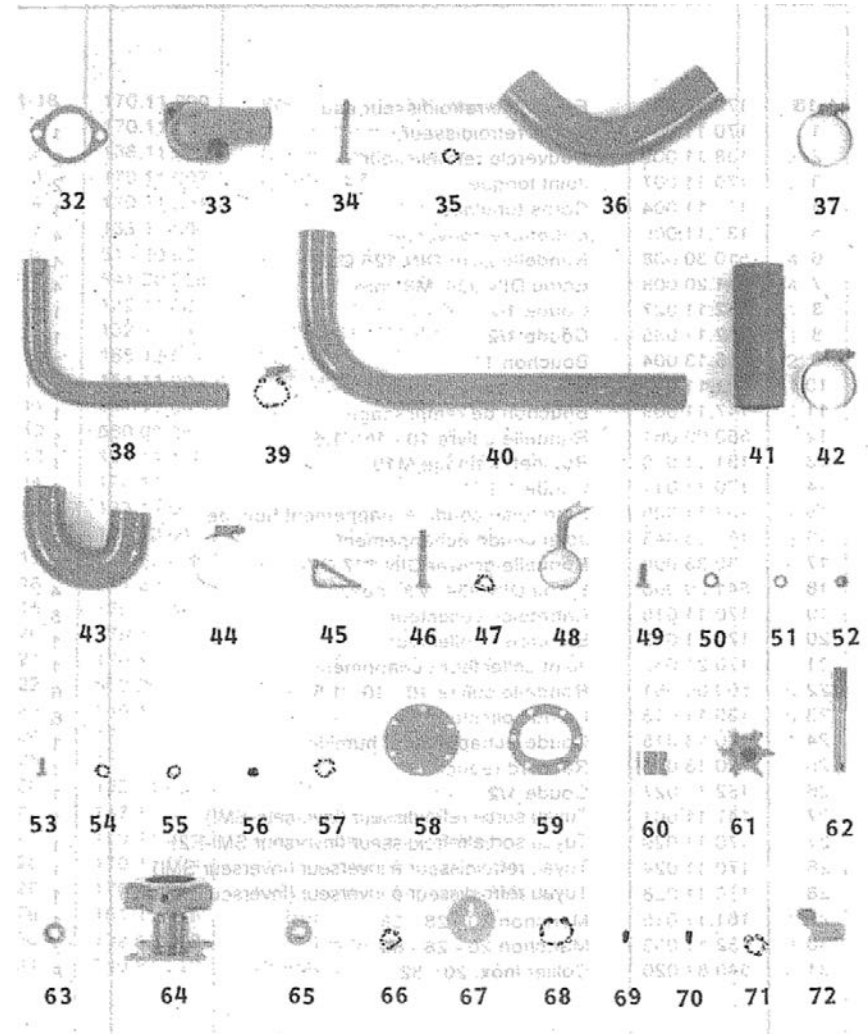
D_MI48_3_2		Cooling System 1	
FIG.	REF.	QTY	DESCR.
32	13211054	2	Engine Water OutLER Gasket
33	17011020	1	FITTING,water outlet
34	52101265	2	Bolt DIN 931 M8-60 8.8
36	17011014	1	Elbow
37	54082032	2	Clamp DIN 3017 32-50/12 W4
38	17011012	1	Elbow
39	54081020	2	Clamp DIN 3017 20-32/9 W4
40	17011022	1	Pipe,from cooler to engine
41	17011023	1	Pipe 38-50-145
42	54082032	2	Clamp DIN 3017 32-50/12 W4
43	17011025	1	Pipe,rubber
44	54082032	2	Clamp DIN 3017 32-50/12 W4
45	17011026	1	Bracket,pipe
46	52101264	1	Bolt DIN 931 M8-55 8.8
47	53033008	1	Washer GROWER DIN 127-8
48	17011027	1	Bracket,Pipe
49	52102257	1	Bolt DIN 933 M8-20 8.8
50	51030008	1	Washer DIN 125-8
52	52120008	1	Nut DIN 934 M8 8.8
53	52102156	1	Bolt DIN 933 M6-16 8.8
54	51030006	1	Washer DIN 125-6
55	53033006	1	Washer GROWER DIN 127-6
56	52120006	1	Nut DIN 934 M6 8.8
57-71	37011200	1	Pump,water Assy
57-71	37011200	1	Pump,water Assy
57A	25210010	1	O-Ring D. 10,77X2,62
57B	33311013	1	O-Ring D. 15X2
58	31211002	1	Cover Pump
59	31211003	1	Gasket Cover
60	31211005	1	Cam
61	31211008	1	1/2" Impeller
62A	37011110	1	Shaft Pump
62B	37011210	1	Shaft,water pump
63A	32111020	2	Seal Shaft 12-22-7
63B	33411020	1	Seal



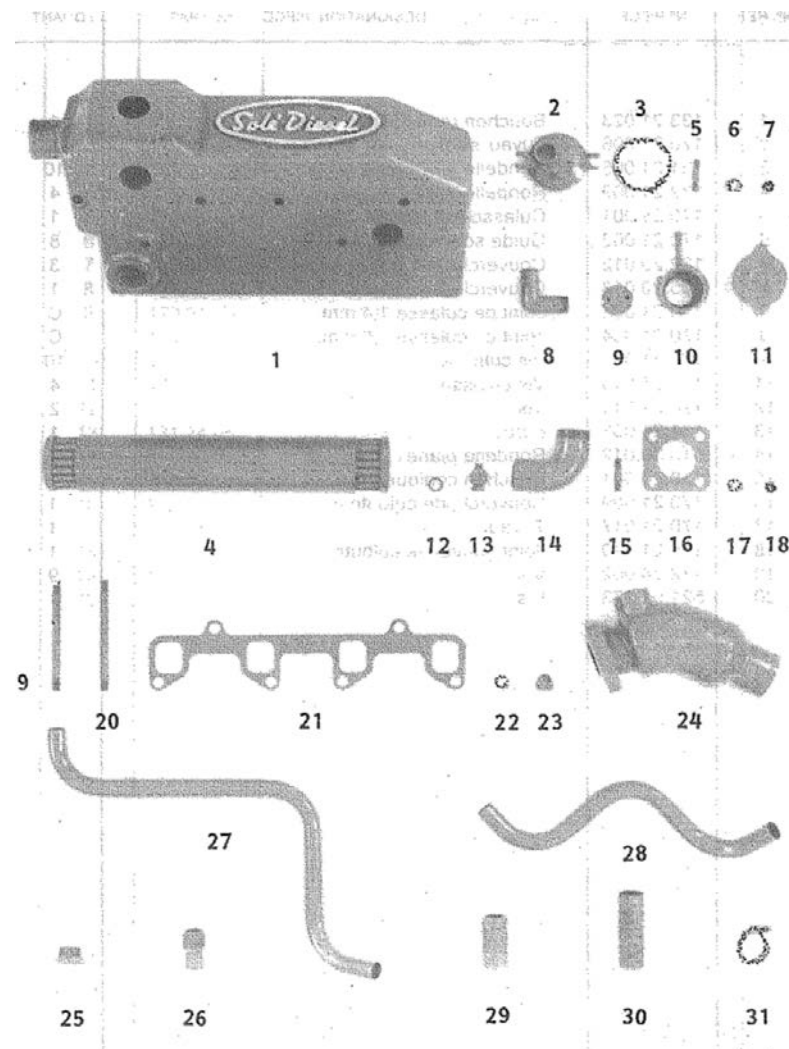
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D_MI48_3_2			Cooling System 1
FIG.	REF.	QTY	DESCR.
64A	33211001	1	Body Water Pump
64B	33411001	1	Body,Water Pump
65A	12110030	2	Ball Bearing 6001-C3
65B	33411014	2	Ball Bearing 6002-C3
66A	33211015	1	Bushing Spacer
66B	33411015	1	Bearing D. 32X26X8
67A	33211026	1	Disk
67B	33411026	1	Wearplate
68A	53041028	1	CIRClip DIN 472 I-28
68B	53041032	1	CIRClip DIN 472 I-32
69A	54102104	6	Bolt DIN 933 M5-10 INOX.
69B	54102104	6	Bolt DIN 933 M5-10 INOX.
70	55307105	1	Bolt DIN 86 W3/16-13
71	57000301	1	Washer 5-7,5-1
72	13211035	1	Exhaust MANIFold Outlet BEND
72	13211027	1	Water Inlet BEND
NS	33411019	1	Seal [NS]



D_MI48_3_3			Cooling System 2
FIG.	REF.	QTY	DESCR.
1	17011001C	1	Body,water cooler and cap
1-18	17011000	1	Water Cooler, Assy MINI-48
2	13811002	2	Cover, water cooler
3	17011007	2	O-Ring D. 57X3
4	17011004	1	Element,water cooler
5	13311006	4	Stud,cover
6	51030008	4	Washer DIN 125-8
7	54120008	4	Nut DIN 934 M8
8A	13211035	1	Exhaust MANIFOLD Outlet BEND
8B	13211027	1	Water Inlet BEND
9	16513004	2	Plug 1"
10	15111002	1	Cap Mouth
11	14711003	1	Cap
12	56000061	1	Washer 10-16-1,5
13	52102306	1	Bolt DIN 933 M10-15 8.8
14	17011011	1	Elbow 1 1/8"
15	13311006	4	Stud,cover
16	15113043	1	Exhaust Elbow Gasket
17	53033008	4	Washer GROWER DIN 127-8
18	54120008	4	Nut DIN 934 M8
19	17011015	5	Stud
20	17011016	1	Stud
21	17021035	1	Gasket Exhaust Manifold
22	56000061	6	Washer 10-16-1,5
23	13511013	6	Nut DIN 1587 M10
24	17013015	1	Elbow,wet exhaust
25	17013016	1	Racord
26	13211027	1	Water Inlet BEND
27	14711061	1	Pipe [NP]
27	17011029	1	Pipe
28A	17011024	1	Pipe,cooler
28B	17011028	1	Pipe
29	16111015	1	Pipe 20-28-55
30	13211033	3	Pipe 20-28-80
31	54081020	8	Clamp DIN 3017 20-32/9 W4

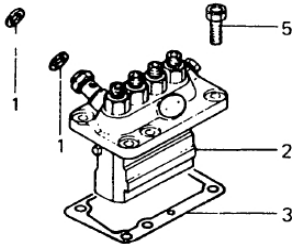
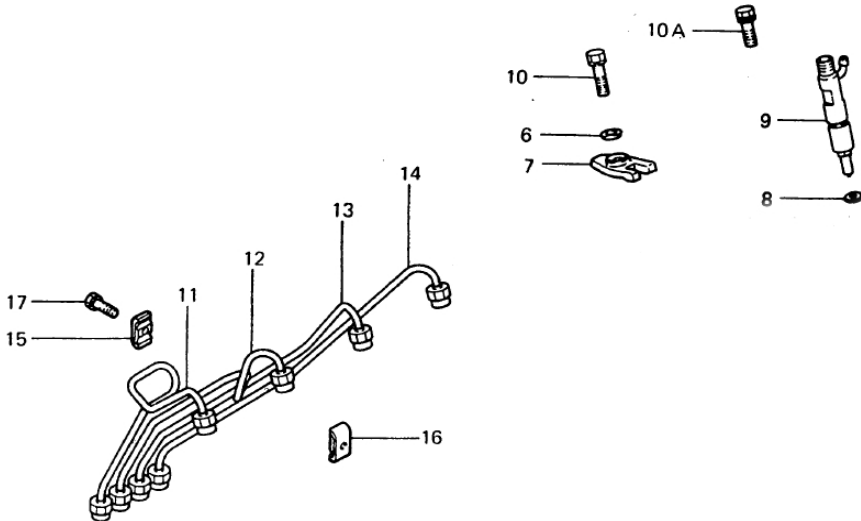


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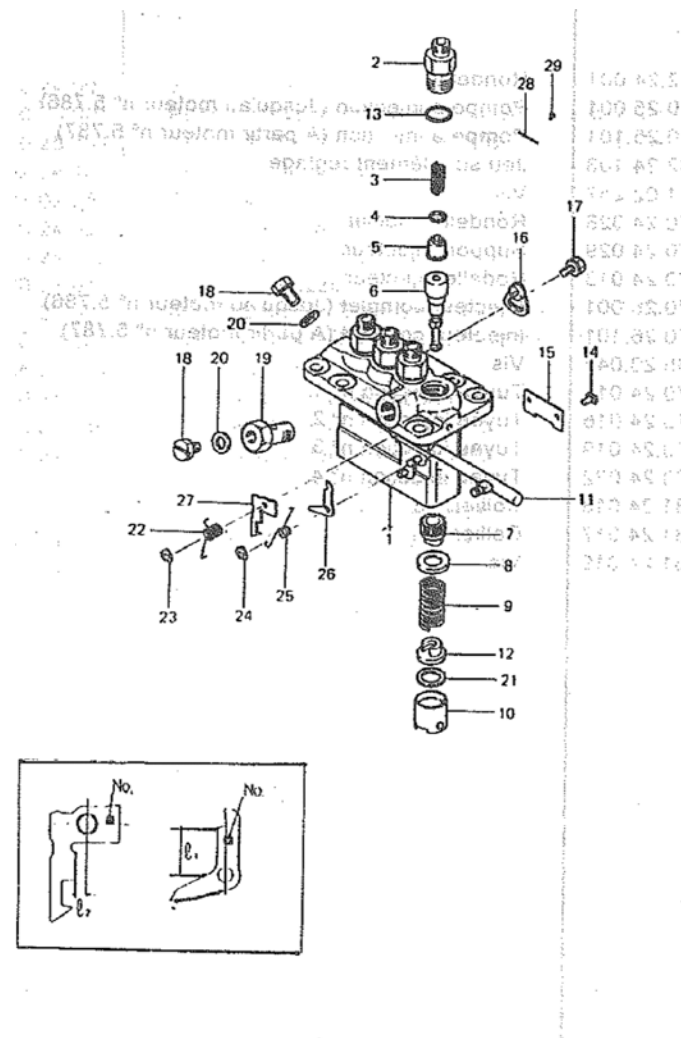
D_MI48_4_1			Fuel Pipe
FIG.	REF.	QTY	DESCR.
1	13224001	2	Washer
2A	17025101	1	Pump Assy,Fuel Injection
2B	17025101	1	Pump Assy,Fuel Injection
3	13224103	1	Shim Set Adjusting
5	52102257	6	Bolt DIN 933 M8-20 8.8
6	17024028	4	Washer SPECIAL
7	17024029	4	Support Nozzle
8	17024013	4	Gasket Nozzle
9	17026101	4	Nozzle & Holder Assy
9	17026001	4	Nozzle & Holder Assy [NP]
10	52101260	4	Bolt DIN 931 M8-35 8.8
11	17024015	1	Pipe Injection N.1
12	17024016	1	Pipe Injection N.2
13	17024019	1	Pipe Injection N.3
14	17024022	1	Pipe Injection N.4
15	13124018	3	Clamp (A)
16	13124017	3	Clamp (B)
17	13124019	3	Bolt



[NP] Not provided

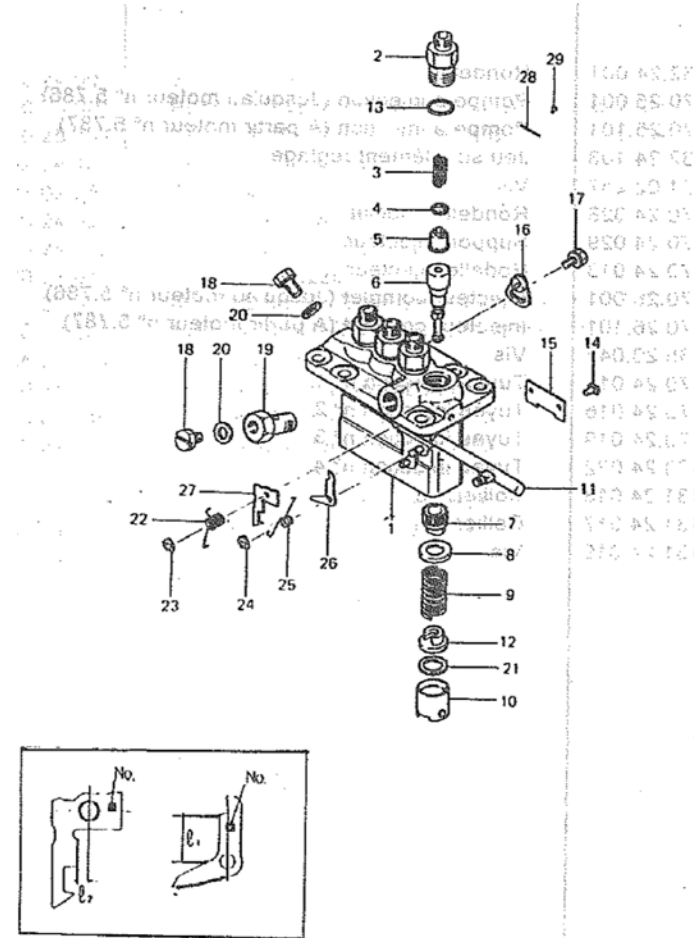


D_MI48_4_2		Fuel Injection Pump		
FIG.	REF.	QTY	DESCR.	
1	17025005	1	Housing SUB Assy	
1-29	17025101	1	Pump Assy,Fuel Injection	
1-29	17025101	1	Pump Assy,Fuel Injection	
2	17025004	4	Holder DELIVERY V	
3A	17025002	4	Spring,delivery valve	
3B	13225002	4	Spring DELIVERY Valve	
4	13125007	4	Gasket DELIVERY V	
5A	17025008	4	Valve SUB Assy DE	
5B	17025108	4	Valve SUB Assy	
6	17025009	4	Element SUB Assy	
7	13125010	4	SLEEVE	
8	13125011	4	Seat Spring Upper	
9	13125012	4	Spring Plunger	
10	13125021	4	Tappet SUB Assy	
11	17025006	1	RACK Control	
12	13125013	4	Seat Spring LOWER	
13	13125033	4	O-Ring D. 15X2,5	
14	13125022	4	Pin Tappet Guide	
15	13125023	2	Plate	
16	13125030	3	Plate Assy Pressure	
17	13125028	3	Bolt Washer ASSEM	
18	13125026	2	Screw Air BRETATH	
19	13225057	1	Washer Plate	
20	13125025	2	Washer	
21A	13125014	0	Shim T=0.60 [VAR]	
21B	13125015	0	Shim T=0.20 [VAR]	
21C	13125016	0	Shim T=0.30 [VAR]	
21D	13125017	0	Shim T=0.40 [VAR]	
21E	13125018	0	Shim T=0.50 [VAR]	
21F	13125019	0	Shim T=0.25 [VAR]	
21G	13125020	0	Shim T=0.35 [VAR]	
21H	13725021	0	Shim Adjusting T=0,45MM. [VAR]	
21I	13725022	0	Shim Adjusting T=0,55MM. [VAR]	
21J	13725023	0	Shim Adjusting T=0,65MM. [VAR]	
22	17025031	1	Spring SMOKE Set	



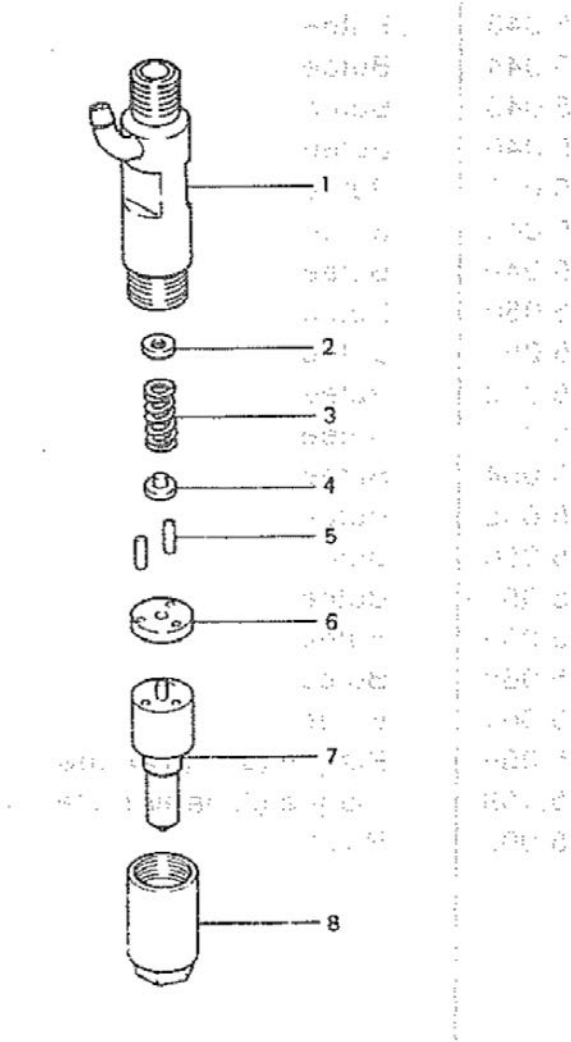
[VAR] Variable according to repair

D_MI48_4_2			Fuel Injection Pump
FIG.	REF.	QTY	DESCR.
23	17025032	1	Washer
24	17025033	1	Washer
25	17025035	1	Spring ANGLEICH S
26A	17025040	0	Plate ANGLEICH SE [VAR]
26B	17025036	0	Plate ANGLEICH SE [VAR]
26C	17025037	0	Plate ANGLEICH SE [VAR]
26D	17025039	0	Plate ANGLEICH SE [VAR]
26E	17025038	0	Plate ANGLEICH SE [VAR]
27A	17025042	0	Plate SMOKE Set [VAR]
27B	17025043	0	Plate SMOKE Set [VAR]
27C	17025044	0	Plate SMOKE Set [VAR]
27D	17025045	0	Plate SMOKE Set [VAR]
27E	17025047	0	Plate SMOKE Set [VAR]
27F	17025048	0	Plate SMOKE Set [VAR]
27G	17025049	0	Plate SMOKE Set [VAR]
27H	17025050	0	Plate SMOKE Set [VAR]
27I	17025051	0	Plate SMOKE Set [VAR]
27J	17025052	0	Plate SMOKE Set [VAR]
27K	17025053	0	Stopper [VAR]
27L	17025054	0	Stopper [VAR]
27M	17025055	0	Stopper [VAR]
27N	17025056	0	Stopper [VAR]
27O	17025057	0	Stopper [VAR]
27P	17025059	0	Stopper [VAR]
27Q	17025060	0	Stopper [VAR]
27R	17025061	0	Stopper [VAR]
28	17025058	1	Plate,name
28	17025158	1	Plate,name
29	13125003	2	RIVET





D_MI48_4_3A			Nozzle (Up to N°5786)
FIG.	REF.	QTY	DESCR.
1	17026002	4	Body SUB Assy
1-8	17026001	4	Nozzle & Holder Assy [NP]
2A	17026023	0	Washer 1,80 [VAR]
2B	17026021	0	Washer 1,70 [VAR]
2C	17026015	0	Washer 1,45 [VAR]
2D	17026017	0	Washer 1,55 [VAR]
2E	17026016	0	Washer 1,50 [VAR]
2F	17026019	0	Washer 1,60 [VAR]
2G	17026011	0	Washer 1,25 [VAR]
2H	17026022	0	Washer 1,75 [VAR]
2I	17026020	0	Washer 1,65 [VAR]
2J	17026014	0	Washer 1,40 [VAR]
2K	17026012	0	Washer 1,30 [VAR]
2L	17026010	0	Washer 1,20 [VAR]
2M	17026013	0	Washer 1,35 [VAR]
3	17026004	4	Spring Pressure
4	17026003	4	Pin Pressure
5	17026008	8	Pin Straight
6	17026007	4	Packing TIP
7	17026018	4	Nozzle Assy
8	17026006	4	Nut RETAINING



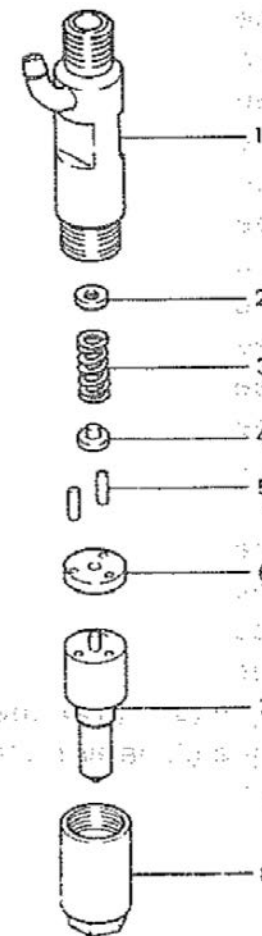
[NP] Not provided

[VAR] Variable according to repair

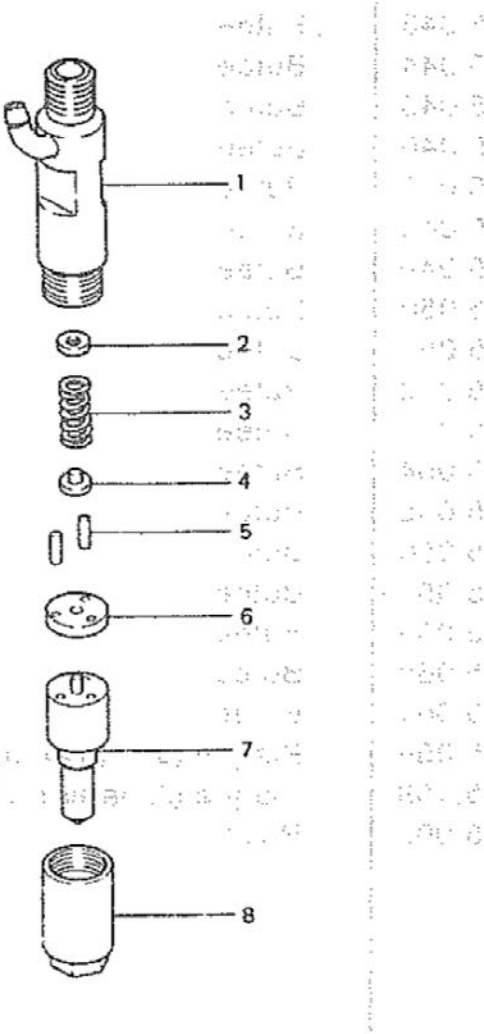


D_MI48_4_3B			Nozzle (From N°5787)
FIG.	REF.	QTY	DESCR.
1	17026102	4	Body SUB Assy
1-8	17026101	4	Nozzle & Holder Assy
2A	17026010	0	Washer 1,20 [VAR]
2AA	17026137	0	Washer 1,575 [VAR]
2AB	17026138	0	Washer 1,625 [VAR]
2AC	17026139	0	Washer 1,675 [VAR]
2AD	17026140	0	Washer 1,725 [VAR]
2AF	17026141	0	Washer 1,775 [VAR]
2AG	17026142	0	Washer 0,950 [VAR]
2AH	17026143	0	Washer 1,000 [VAR]
2AI	17026144	0	Washer 1,050 [VAR]
2AJ	17026145	0	Washer 1,100 [VAR]
2AK	17026146	0	Washer 1,150 [VAR]
2B	17026011	0	Washer 1,25 [VAR]
2C	17026012	0	Washer 1,30 [VAR]
2D	17026013	0	Washer 1,35 [VAR]
2E	17026014	0	Washer 1,40 [VAR]
2F	17026015	0	Washer 1,45 [VAR]
2G	17026016	0	Washer 1,50 [VAR]
2H	17026017	0	Washer 1,55 [VAR]
2I	17026019	0	Washer 1,60 [VAR]
2J	17026020	0	Washer 1,65 [VAR]
2K	17026021	0	Washer 1,70 [VAR]
2L	17026022	0	Washer 1,75 [VAR]
2M	17026023	0	Washer 1,80 [VAR]
2N	17026124	0	Washer 1,85 [VAR]
2O	17026125	0	Washer 1,90 [VAR]
2P	17026126	0	Washer 1,95 [VAR]
2Q	17026127	0	Washer 2,00 [VAR]
2R	17026128	0	Washer 2,05 [VAR]
2S	17026129	0	Washer 2,10 [VAR]
2T	17026130	0	Washer 2,15 [VAR]
2U	17026131	0	Washer 1,275 [VAR]
2V	17026132	0	Washer 1,325 [VAR]
2W	17026133	0	Washer 1,375 [VAR]

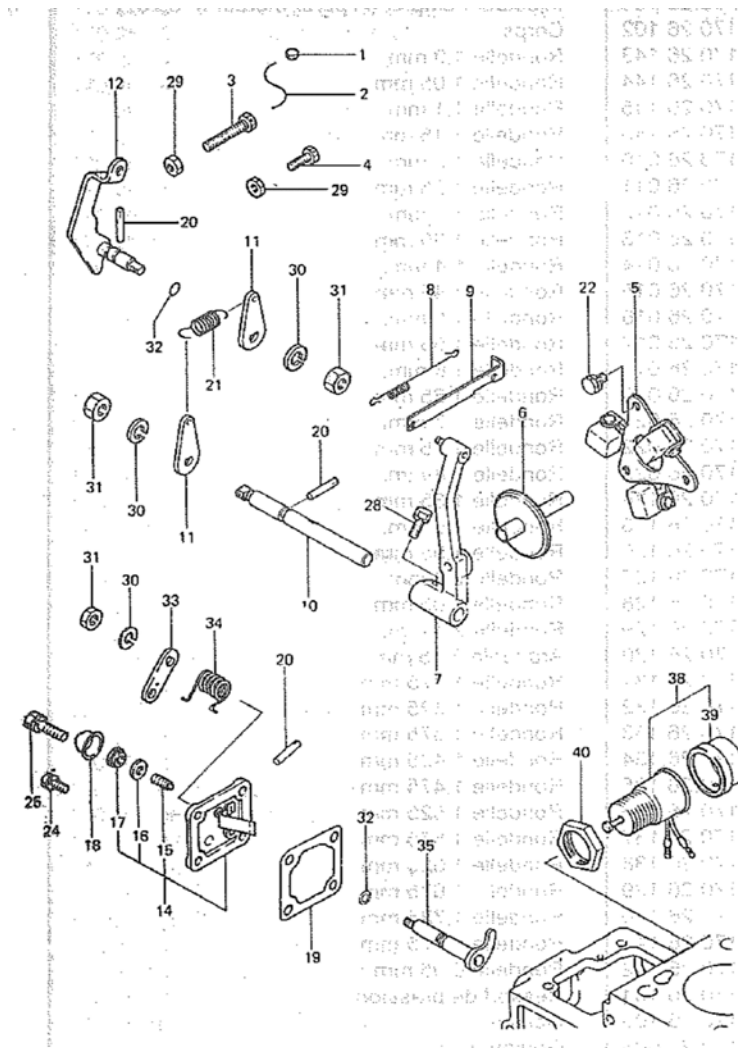
[VAR] Variable according to repair



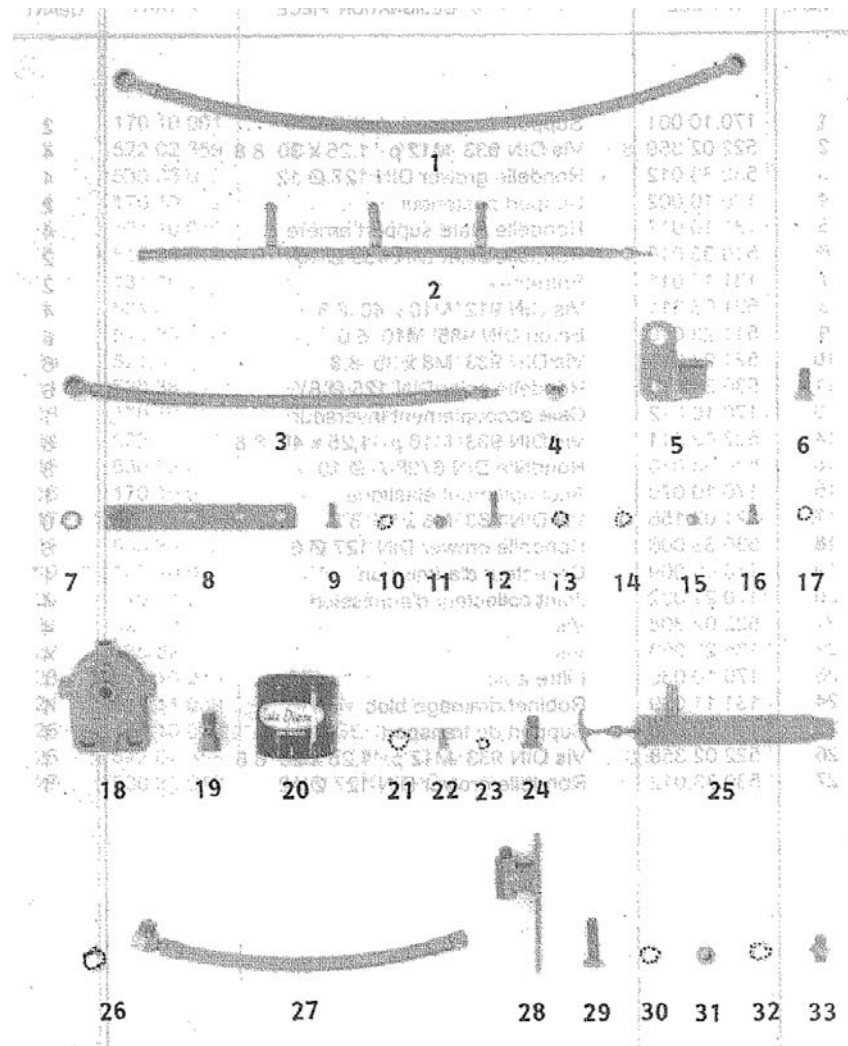
D_MI48_4_3B			Nozzle (From N°5787)
FIG.	REF.	QTY	DESCR.
2X	17026134	0	Washer 1,425 [VAR]
2Y	17026135	0	Washer 1,475 [VAR]
2Z	17026136	0	Washer 1,525 [VAR]
3	17026104	4	Spring,pressure
4	17026103	4	Pin,pressure
5	17026008	8	Pin Straight
6	17026107	4	Packing,tip
7	17026118	4	Nozzle Assy
8	17026006	4	Nut RETAINING



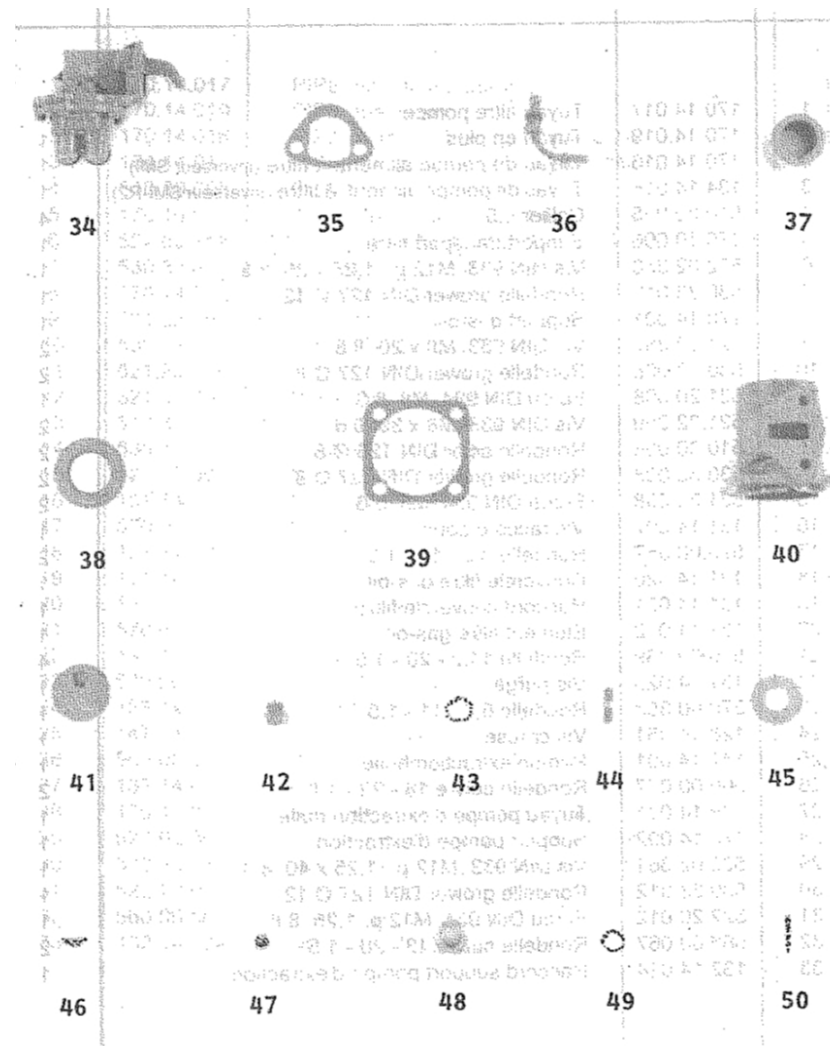
D_MI48_4_4			Governor Parts
FIG.	REF.	QTY	DESCR.
1	13123019	1	METAL Sealing
2	13123020	1	Shutter
3	13123017	1	Bolt High Speed
4	17023025	1	Bolt LOW IDLE Set
5	13223001	1	WEIGHT Assy,GOverNOR
6	13223002	1	Shaft Assy
7	13223003	1	Lever Assy GOverN
8	17023004	1	Spring TIE ROD
9	13423005	1	ROD TIE
10	13223006	1	Shaft Governor
11	13223007	2	Lever Governor
12	13423008	1	Lever Assy SPEED
14	13423019	1	Cover Assy TIE RO
15	13423022	1	Screw Adjusting
16	17023020	1	Gasket
17	13423021	1	Nut SPECIAL (6)
18	13423023	1	Cap Sealing
19	13223014	1	Gasket Cover
20	13123009	3	Pin GROOVED
21A	13423015	1	Spring Governor (A)
21B	17023015	1	Spring GOverNOR (B)
22	13223016	3	Bolt
24	52102156	3	Bolt DIN 933 M6-16 8.8
25	52101159	1	Bolt DIN 931 M6-30 8.8
28	52102156	1	Bolt DIN 933 M6-16 8.8
29	52120006	2	Nut DIN 934 M6 8.8
30	53033008	3	Washer GROWER DIN 127-8
31	52120008	3	Nut DIN 934 M8 8.8
32	13123021	2	O-Ring D. 7X1.8
33	13425027	1	Lever Stop
34	13425030	1	Spring Return
35	13425026	1	Lever Assy Stop
38	13424025	1	Solenoid
39	17023030	1	Cap GUM
40	13425029	1	Nut (old)



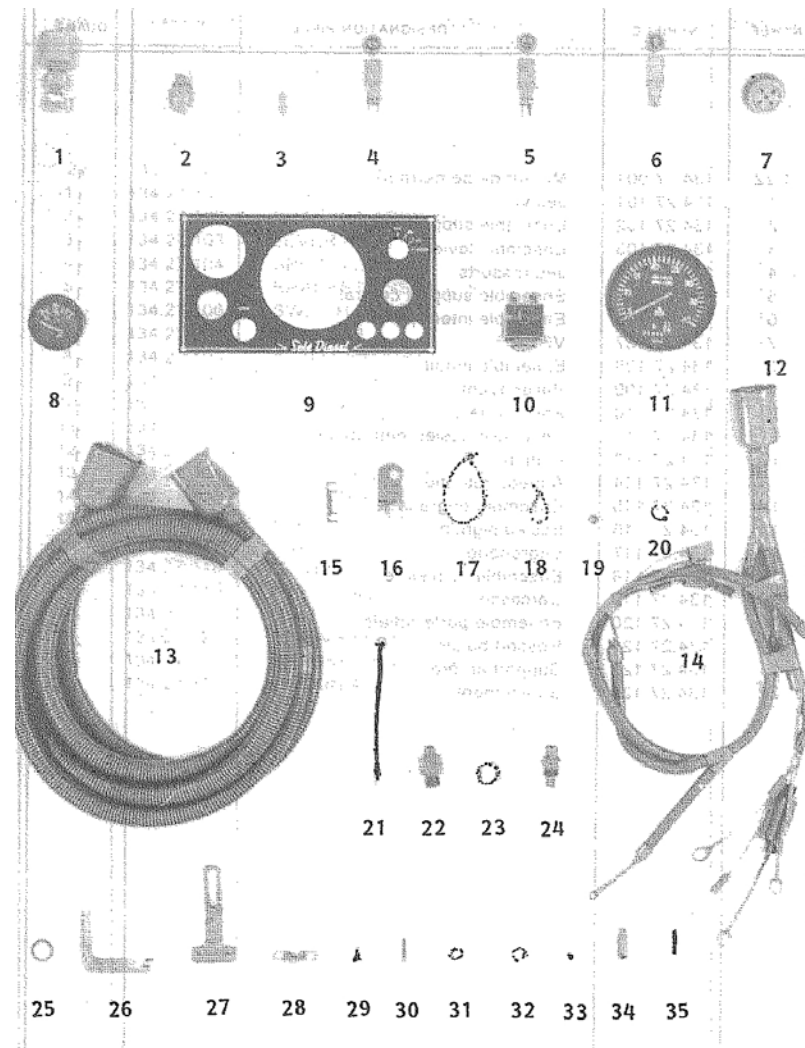
D_MI48_4_5			Fuel Filter
FIG.	REF.	QTY	DESCR.
1	17014017	1	Pipe, filter to inj. pump
2	17014019	1	Assy,Fuel Return
3	17014016	1	Pipe, pump to filter
3	13414016	4	Pipe, Pump TO Filter
4	51080095	4	Clamp 9,5-10
5	17010006	1	Support CANIAGE and Filter
6	52202358	1	Bolt DIN 933 M12-1,25-25 8.8
7	53033012	1	Washer GROWER DIN 127-12
8	17014001	1	Bracket,gas-oil filter
9	52102257	2	Bolt DIN 933 M8-20 8.8
10	53033008	2	Washer GROWER DIN 127-8
11	52120008	1	Nut DIN 934 M8 8.8
12	52102259	2	Bolt DIN 933 M8-30 8.8
13	51030008	2	Washer DIN 125-8
14	53033008	2	Washer GROWER DIN 127-8
15	52120008	2	Nut DIN 934 M8 8.8
16	13114007	1	Screw SHORT Connector
17	57000357	2	Washer 8,2-12-1,5
18	13114020	1	Cover,filter
19	13114021	1	Coupling,cover filter
20	13114022	1	Filter,element
21	57000369	4	Washer 14,2-20-1,5
22	13114023	1	Screw, air breather
23	57000353	1	Washer 6,2-11-1,5
24	12814051	1	Screw,eye
25	14714001	1	Pump,oil Suction
26	56000077	2	Washer 18-23-1,5
27	13214021	1	ExtraCTION Hose
28	17014002	1	Bracket,oil extraction pump
29	52202361	1	Bolt DIN 933 M12-1,25-40 8.8
30	53033012	1	Washer GROWER DIN 127-12
31	52220012	1	Nut DIN 934 M12-1,25 8.8
32	56000067	2	Washer 13-20-1,5
33	13214024	1	NIPPLE,oil pump bracket



D_MI48_4_6			Feed Pump
FIG.	REF.	QTY	DESCR.
34	13114001	1	Pump Fuel Supply
34-50	25310100	1	Pump Assy,fuel supply
35	13114002	2	Gasket
36	13114003	1	Pipe Inlet
37	13214002	1	Cam,fuel pump
38	25210103	1	Seal,oil 30-52-7
39	25210105	1	Gasket
40-43	25215102	1	Cover,fuel supply pump
41	25310111	1	Plug 1 1/4"
42	16112012	1	Pin
43	56000069	1	Washer 14-20-1,5
44	25310112	2	Stud
45	25310113	1	Washer
46	40025085	1	KEY DIN 6888 22-9-5 INOX
47	52120008	2	Nut DIN 934 M8 8.8
48	61651004	1	Nut
49	53038008	2	Washer DIN 6798-A 8
50	52103257	2	Bolt DIN 912 M8-20 8.8



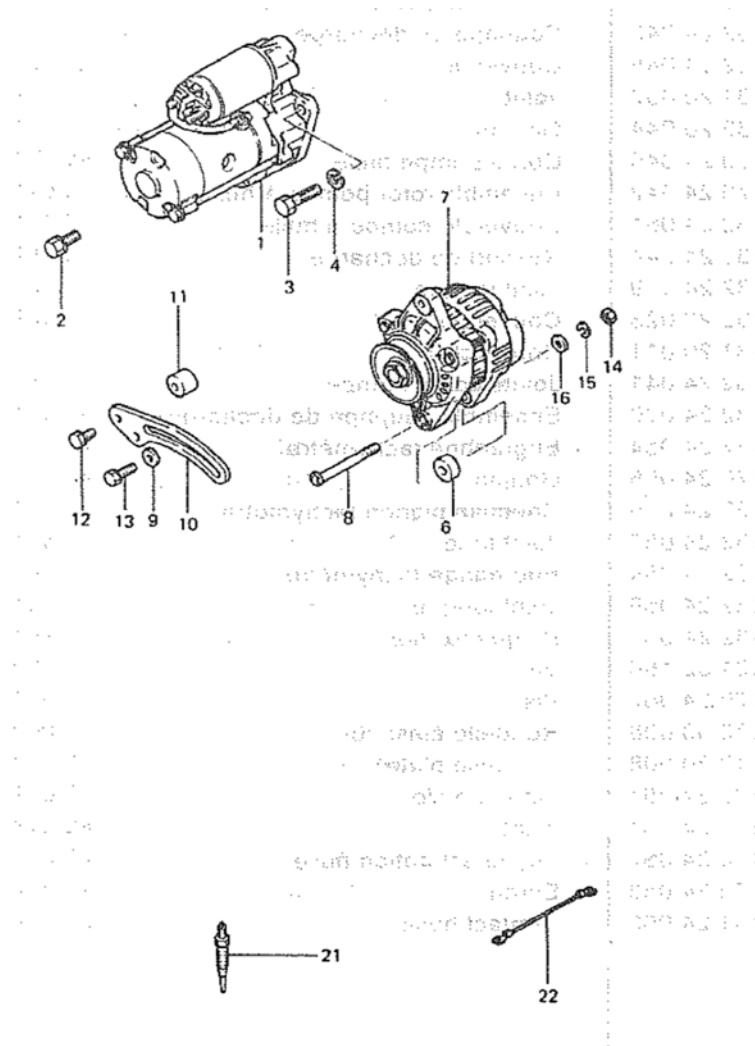
D_MI48_5_1			Electrical System 1
FIG.	REF.	QTY	DESCR.
1	60900031	1	Key-Locking Switch
2	60900040	1	SWITCH, stop
3	60900045	3	Bulb 12V 3W
4	60900050	1	LAMP, oil press.
5	60900051	1	LAMP, charge
6	60900052	1	LAMP, water temp.
7	60900060	1	Alarm, SWITCH
8	60900815	1	Water Gauge 12 V
10	60970095	1	SIGNAL Glow
11	60970710	1	TACHOMETER MINI-48
12	60900110	2	DIODE 3 A.
13	60952210	1	Engine Wiring Ext. 4 M.
15	60934117	1	Fuse 60A.
16	15217010	1	Bracket,wirings
17	58088282	1	Clamp
18	58088284	1	Clamp
19	52120005	1	Nut DIN 934 M5 8.8
20	53033005	1	Washer GROWER DIN 127-5
21	60934040	1	WIRINE
22	60900070	1	Thermo-Switch 97°C
23	56000073	1	Washer 16-23-1,5
24	60900780	1	Temperature SENDER 12 V
26	13419002	1	Bracket,engine control
27	12119021	1	SUPORT Clamp
28	14719013	1	Clamp,cable
29	55307104	2	Bolt DIN 86 W3/16-10
30	52102157	2	Bolt DIN 933 M6-20 8.8
31	51030006	4	Washer DIN 125-6
32	53033006	2	Washer GROWER DIN 127-6
33	52120006	2	Nut DIN 934 M6 8.8
34	13419003	1	GAS,control yoke
35	51051107	1	Pin DIN-94 1,6-16
NS	60900035	1	Cover,key [NS]



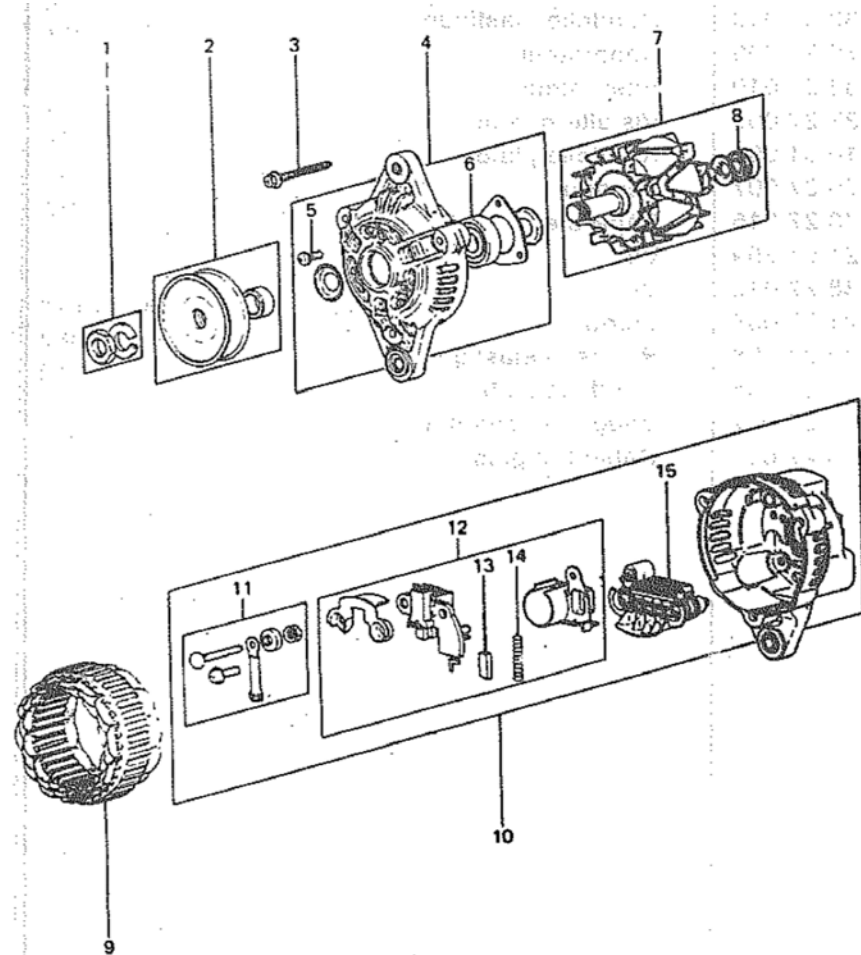
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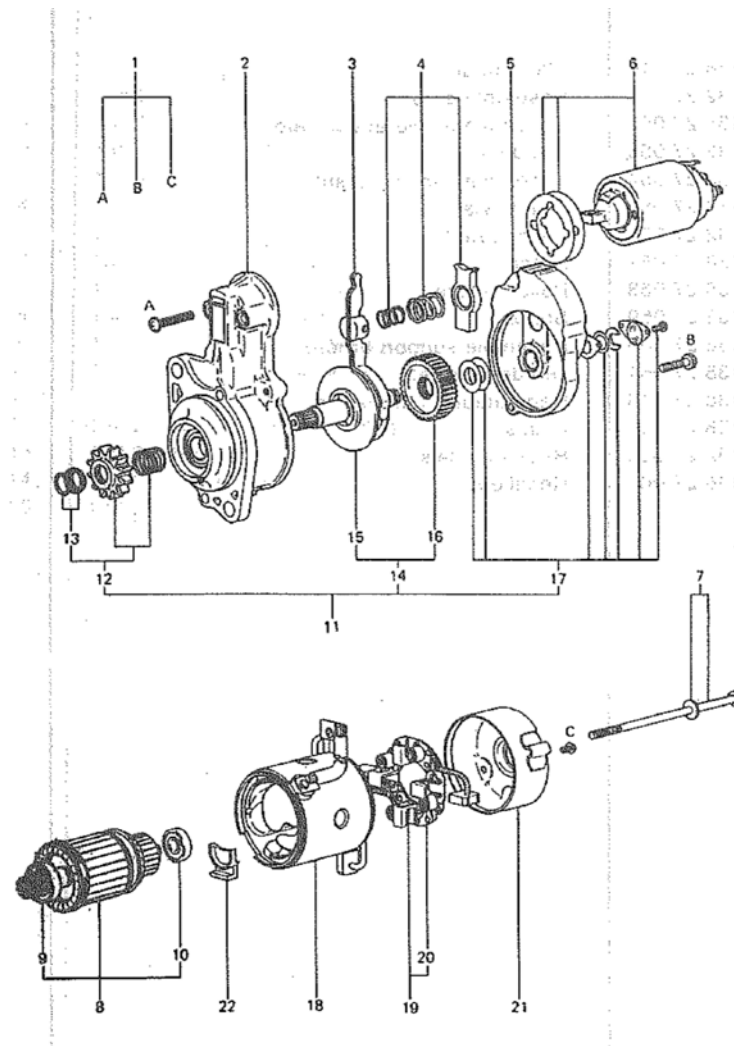
D_MI48_5_2			Electrical System 2
FIG.	REF.	QTY	DESCR.
1	13427001	1	Starter Assy
2	52202308	1	Bolt DIN 933 M10-1,25-25 8.8
3	52202311	1	Bolt DIN 933 M10-1,25-40 8.8
4	53033010	1	Washer GROWER DIN 127-10
6	17027006	1	Spacer
7	13827010	1	Alternator 12V/40A
8	13727008	1	Bolt ALT.
9	51031008	1	Washer DIN 9021 8
10	17027007	1	BRACE GENERAT
11	17027015	1	DISTANCE
12	52101259	1	Bolt DIN 931 M8-30 8.8
13	13827012	1	Bolt
14	52120008	1	Nut DIN 934 M8 8.8
15	53033008	1	Washer GROWER DIN 127-8
16	51030008	1	Washer DIN 125-8
21	17027017	4	Plug Glow
22	17027018	3	Plate Glow Plug



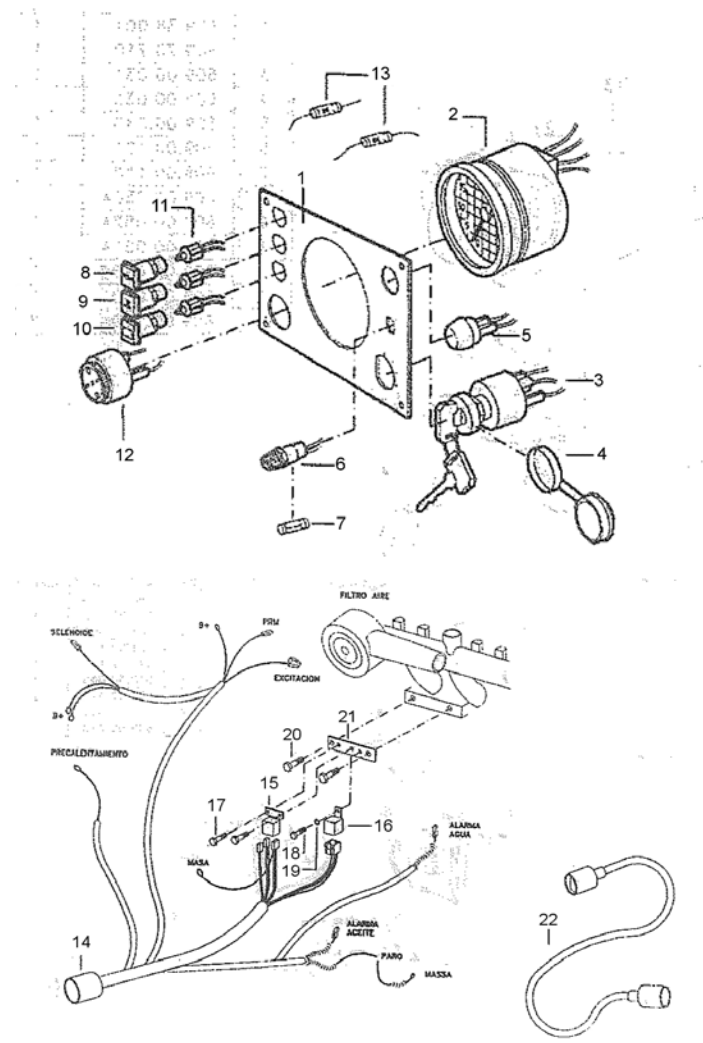
D_MI48_5_3 Spare Parts Alternator			
FIG.	REF.	QTY	DESCR.
1	13227051	1	Nut
1-15	13827010	1	Alternator 12V/40A
2	13827052	1	Pulley Set
3	13827053	1	Bolt Set
4	13827054	1	Bracket Assy
6	13227056	1	Ball Bearing 6202-LW
7	13827057	1	Rotor Assy
8	13827058	1	Ball Bearing B879-D
9	13827059	1	STATOR Assy
10	13827060	1	Bracket Assy REAR
11	13827061	1	TERMINAL
12	13827016	1	REGULATOR Assy
13	13827065	2	Brush
14	13227066	2	Spring Brush
15	13827067	1	RECTIFIER Assy



D_MI48_5_4			Spare Parts Starter
FIG.	REF.	QTY	DESCR.
1	13427101	1	Screw Set
1-22	13427001	1	Starter Assy
2	13427102	1	Bracket Assy FRON
3	13427103	1	Lever Assy
4	13427104	1	Spring Set
5	13427105	1	Bracket Assy CENT
6	13427106	1	Solenoid
7	13427107	1	Bolt Set
8	13427108	1	ARMATURE Set
9	13427109	1	Ball Bearing 6002-LU
10	17127110.2	1	Bearing
11	13427112	1	Shaft Assy
12	13427113	1	PinION Set
13	13427114	1	Stopper
14	13427115	1	Gear Set
15	13427116	1	Shaft Assy
16	13427117	1	Gear
17	13427118	1	Cover Set
18	13427119	1	Yoke Assy
19	13427120	1	Brush Holder Assy
20	13427121	4	Spring Brush
21	13427122	1	Bracket Assy
22	13427123	1	Packing



D_MI48_5_5		Electrical Wiring & Panel	
FIG.	REF.	QTY	DESCR.
1-13	60970000R	1	Panel MINI-48
1-21	17020101	1	Kit Gasket
1A	56000077	1	Washer 18-23-1,5
1B	60938001	1	Panel
2	13211054	2	Engine Water OutLER Gasket
3A	60900031	1	Key-Locking Switch </td
3B	17022054	8	Seal Valve ST
4A	60900035	1	Cover,key
4B	17021003	1	Gasket Head Cylinder
5A	60900040	1	SWITCH, stop
5B	17021010	1	Gasket,rocker cover
6	60900121	1	FuseHolder, panel
7A	60900118	1	Fuse 10 A.
7B	17020033	1	Gasket Oil PAN
8A	60900050A	1	LAMP, oil press.
8B	17021032	4	Gasket Intake MAN
9A	60900052A	1	LAMP, water temp.
9B	17021035	1	Gasket Exhaust Manifold
10A	60900051A	1	LAMP, charge
10B	13220002	4	Seal Side
11A	60900045A	3	Bulb 12V 3W
11B	13223014	1	Gasket Cover
12A	13224041	1	Gasket Oil Pump B
12B	60900060	1	Alarm, SWITCH
13A	13221041	1	Gasket Water Pump
13B	60900110	2	DIODE 3 A.
14A	60970200R	1	MINI-48 Electrical Wiring
14B	13221022	1	Gasket Water Pump
15A	17020016	1	Gasket Oil Seal
15B	13827005	1	GLOW Relay
16A	17020018	1	Gasket Front PLAT
16B	18517005	1	Relay 12V
17A	17024013	4	Gasket Nozzle
17B	52102155	2	Bolt DIN 933 M6-12 8.8
18	54102104	1	Bolt DIN 933 M5-10 INOX.



D_MI48_5_5		Electrical Wiring & Panel	
FIG.	REF.	QTY	DESCR.
19	51030005	1	Washer DIN 125-5
20A	52202310	2	Bolt DIN 933 M10-1,25-35 8.8
20B	13120047	2	Gasket Water Pump
21A	17017001	1	Support,relay
21B	17020038	1	Gasket Housing
22	60985210	1	Engine Wiring Ext. 4 M.

