

AGROSAL d.o.o.



12LD 477



AGROSAL d.o.o.

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**LOMBARDINI**

A KOHLER COMPANY

Group: 12LD 477-2

Engine: 12LD 477-2 Drawing: E

INTAKE/EXHAUST/CYLINDER HEAD/ROCKER ARM BOX/VALVES

POS.	CODE	DESCRIPTION	Qty
01	4400.088	gasket	2
02	9732.064	screw M 8 X 30	4
03	948R.082	pipe	2
04	894R.033	charging oil plug	2
04a	894R.050	charging oil plug	2
05	579R.047	O-ring	2
06	326R.025	nut	3
07	233R.100	rocker arm cover without compression release	2
08	886R.044	plug	2
09	850R.035	taper pin	2
10	6045.143	rocker arm ass.y	2
11	«-----»	snap ring - see Pos. E 10	0
13	1770.014	bolt M 8 X 45	4
14	771R.011	washer	4
15	726R.003	setscrew	4
16	323R.007	nut	4
18	601R.062	rocker arm shaft	2
19	809R.004	cotter	8
20	6400.101	retainer	4
21	540R.077	spring	4
22	6400.098	retainer	4
23	059R.068	ring	4
24	«-----»	valve guide	0
24	464R.077	valve guide	4
25	4535.015	gasket	4
26	960R.055	eXhaust valve	2
27	«-----»	eXhaust v.seat	0
27	059R.096	ring	2
28	960R.056	intake valve	2
29	059R.097	inlet v.seat	2
29	060R.008	inlet v.seat	2
30	7625.281	washer	8
31	7625.020	washer diam.10,5	2
32	995R.071	screw	2
33	323R.032	nut	5
34	A20R.089	cyl. head with guid.	2
34	A20R.090	complete cylinder head	2
35	«-----»	Cyl. head gasket 0,50	0
35	4730.790	Cyl. head gasket 0,95	2
35	4730.791	Cyl. head gasket 1,00	2
35	4730.793	Cyl. head gasket 0,55	2
35	4730.794	Cyl. head gasket 0,60	2
35	4730.795	Cyl. head gasket 0,65	2
35	4730.796	Cyl. head gasket 0,70	2
35	4730.797	Cyl. head gasket 0,75	2
35	4730.798	Cyl. head gasket 0,80	2
35	4730.799	Cyl. head gasket 0,85	2
35	4730.800	Cyl. head gasket 0,90	2
35	4730.829	Cyl. head gasket 1,05	2
36	203R.073	cylinder	2
37	«-----»	gasket	0
41	3240.163	nut M 8	4
42	684R.025	Cylinder stud	8

Group: 12LD 477-2

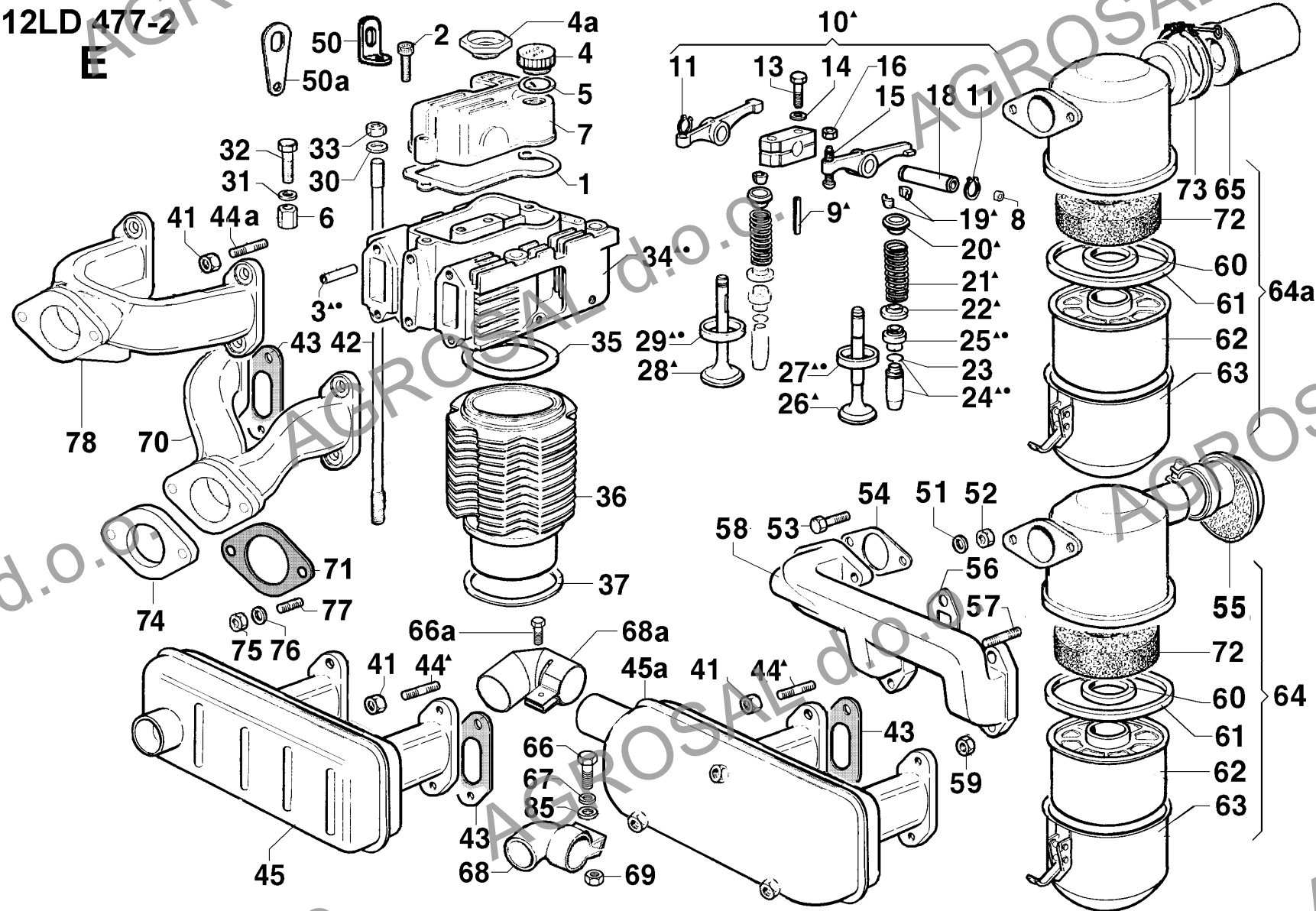
Engine: 12LD 477-2 Drawing: E

INTAKE/EXHAUST/CYLINDER HEAD/ROCKER ARM BOX/VALVES

POS.	CODE	DESCRIPTION	Qty
43	4501.154	gasket	2
44	6780.057	stud M 8 X 30 (45)	4
44a	676R.014	stud	4
45	5460.663	muffler - unified with E 45a	1
50	8506.089	bracket	2
50a	8545.190	lifting brace	1
51	771R.011	washer	2
52	3240.164	nut M 8	2
53	1770.089	bolt M 8 X 1,25 X 30	2
54	4490.099	gasket	1
55	151R.048	cap	1
56	4501.154	gasket	2
57	676R.014	stud	4
58	211R.038	intake manifold	1
58	211R.040	inlet manifold fitted for glow plug	1
59	3240.164	nut M 8	4
60	«-----»	ring	0
61	579R.041	O-ring	1
62	359R.026	filter element	1
63	«-----»	oil sump - see Pos. E 64	0
64	3700.445	air cleaner	1
64a	3700.446	air cleaner	1
65	6727.022	cyclonic prefilter	1
66	1770.004	bolt M 8 X 1,25 X 20	1
66a	1760.131	bolt M 6 X 1 X 20	1
67	7565.007	washer diam. 8	1
68	9170.052	muffler end (diam. 39,5/42)	1
68a	9170.136	muffler end	1
69	3240.018	nut M 8	1
70	2485.102	exh.manifold with front outlet	1
71	4490.099	gasket (center distance 64)	1
71	4501.118	gasket (center distance 70)	1
72	060R.048	filter element	1
73	3617.223	clamp	1
74	3815.108	flange	1
75	323R.003	nut	2
76	763R.002	washer	2
77	6780.008	stud M 8 X 20 (32)	2
78	2486.478	ehXaust manifold	1
85	7625.012	washer diam. 8,4	1

12LD 477-2

E



**LOMBARDINI**

A KOHLER COMPANY

Group: 12LD 477-2

Engine: 12LD 477-2 Drawing: C

CAMSHAFT/SPEED GOVERNOR/CONTROL LEVER

POS.	CODE	DESCRIPTION	Qty
01	<----->	plug - no longer avail.	1
01a	9600.090	foolproof tube	1
02	<----->	nut	1
03a	722R.024	eXtra fuel adjusting screw	1
03a	722R.041	eXtra fuel adjusting screw EPA version	1
04	<----->	Stop lever set - no longer avail. - see Pos. C 7-C 9-C 10	0
05	1760.001	bolt M 6 X 1 X 10	1
06	7625.008	washer diam. 6,4	1
07	493R.031	Stop lever	1
07a	494R.065	Stop lever	1
08	547R.025	spring	1
08a	547R.070	spring for cover set for electro-magnet	1
09	579R.001	O-ring	2
10	493R.029	Stop lever set	1
11	4431.178	gasket	1
12	232R.081	cover set	1
12a	233R.013	cover set for electro-magnet	1
13	231R.081	cover set	1
14	9180.191	adjuster M 6	1
15	323R.007	nut	1
15a	3240.008	nut M 6	1
16	1760.131	bolt M 6 X 1 X 20	3
17	6760.034	stud M 6	1
18	926R.038	tie rod 3000 R.p.M.	1
18	927R013	tie rod 1500/1800 R.p.M.	1
19	244R.002	cotter pin	1
20	<----->	lever	0
20a	5202.104	lever	1
21	551R.033	governor spring	1
22	<----->	Shaft - see Pos. C 20	0
23	579R.032	O-ring	2
24	1760.034	bolt M 6 X 25	2
25	1770.001	bolt M 8 X 1,25 X 12	1
26	1165.036	ring	1
27	3240.008	nut M 6	2
28	555R.021	spring	1
29	5655.382	governor spring for 2K70 inj.pump EPA version	1
29	5655.383	spring	1
29	5655.391	governor spring for 2K70 inj.pump	1
30	494R.077	accelerator internal lever	1
31	612R.003	plate	1
31	6370.716	plate	1
32	9180.193	wire end	1
33	547R.061	spring	1
36	494R.076	Throttle lever	1
37	7625.026	washer diam.12	1
38	7626.051	washer	1
39	059R.085	ring	1
40	777R.078	washer	1
41	621R.022	governor tappet	1
42	469R.078	gear	1
43	1011.905	camshaft EPA version	1
43	A23R.079	camshaft	1

Group: 12LD 477-2

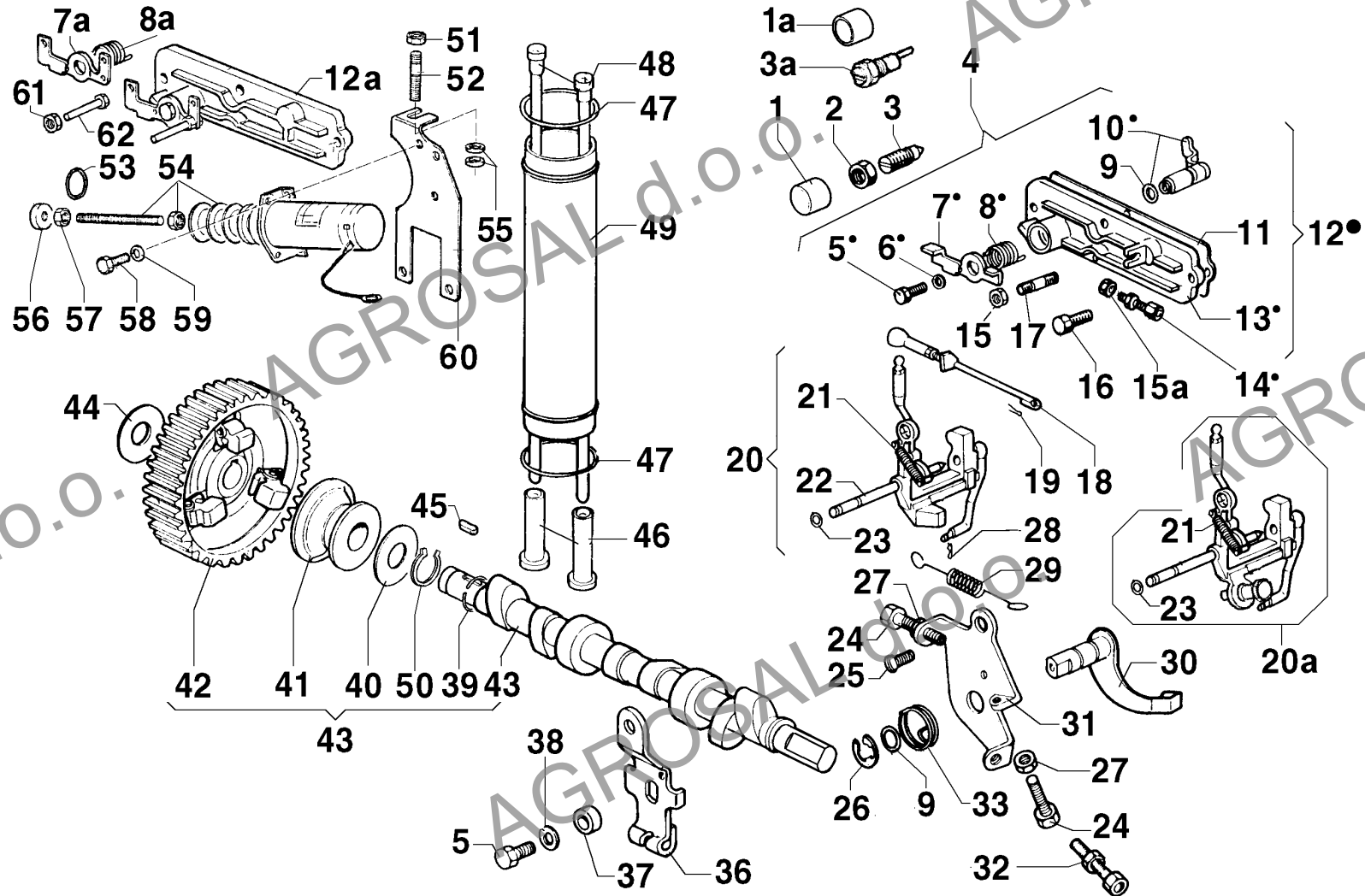
Engine: 12LD 477-2 Drawing: C

CAMSHAFT/SPEED GOVERNOR/CONTROL LEVER

POS.	CODE	DESCRIPTION	Qty
44	777R.033	washer	1
44	777R.034	washer	1
45	498R.036	tab	1
46	708R.013	tappet	4
47	579R.046	O-ring	4
48	071R.058	push rod	4
49	940R.021	protection pipe	2
50	1240.013	snap ring	1
51	323R.003	nut	1
52	6780.085	stud M 8 X 35 (47)	1
53	060R.011	circlip	1
54	674R.046	electromagnet	1
55	7625.012	washer diam. 8,4	2
56	326R.037	nut	1
57	323R.007	nut	1
58	9730.107	screw M 6 X 14	2
59	7625.008	washer diam. 6,4	2
60	879R.032	electro-magnet support	1
61	3203.037	nut M 5	1
62	993R.038	screw M 5 X 30	1
63	1760.034	bolt M 6 X 25	2
64	1760.032	screw TE M6X14	1

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C



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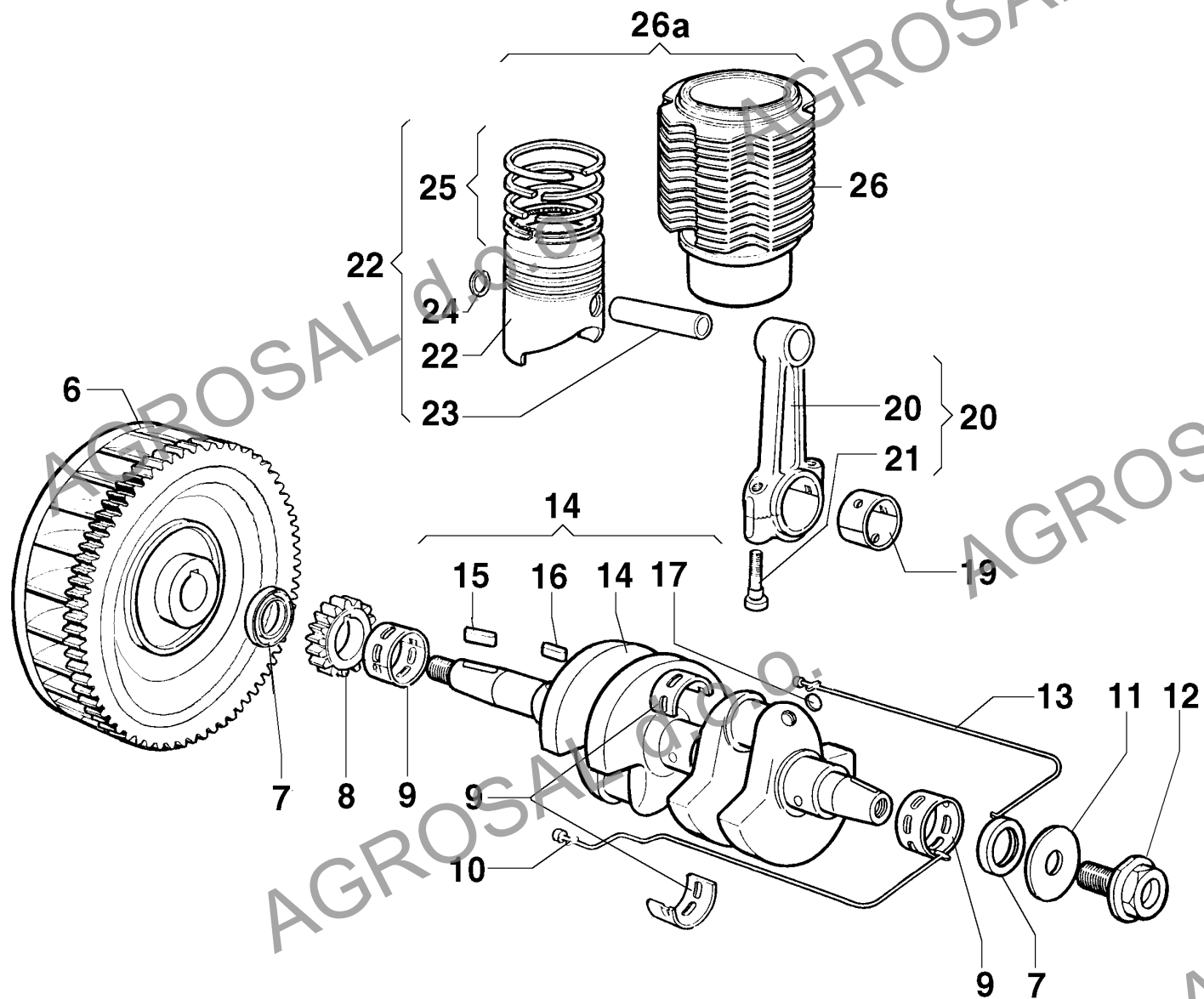
Engine: 12LD 477-2 Drawing: B

CONN.ROD/PISTON SET/CYLINDER/CRANKSHAFT/FLYWHEEL

POS.	CODE	DESCRIPTION	Qty
01	325R.084	nut	1
02	771R.046	washer	1
06	9881.339	Flywheel	1
07	2312.000	oil seal	1
08	468R.052	gear	1
09	«-----»	main bearing - not avail.	0
09	A26R.049	supp.bearing std.	3
09	A26R.050	supp.bearing -0,25	3
09	A26R.051	supp.bearing -0,50	3
10	449R.062	gasket	1
11	771R.049	washer	1
12	116R.001	bolt (flanging side)	1
13	449R.063	gasket (yellow type)	1
13	4601.203	gasket (red type)	1
14	1051.259	crankshaft for flanging plate 3835.162	1
14	2941.000	crankshaft	1
15	498R.012	tab	1
16	498R.035	tab	1
17	9080.132	plug diam. 6	4
19	A26R.038	big end bushing std.	2
19	A26R.042	big end bushing -0,25	2
19	A26R.043	big end bushing -0,50	2
20	100R.037	connecting rod	2
21	1770.101	bolt M 8 X 1 X 42	4
22	6502.882	piston d.90 EPA II	2
22	6502.900	piston d.90 EPA IV	2
22	A20R.063	piston d.90 STD	2
22	A20R.064	piston d.90.5	2
22	A20R.065	piston d.91	2
23	854R.017	piston pin	2
24	1160.053	ring	4
25	8211.206	piston ring set std.	2
25	8211.207	piston ring set +0,50	2
25	A21R.059	piston ring set +1,00	2
26	203R.073	cylinder	2
26	204R.048	cylinder EPA IV	2
26a	4898.056	kit cylinder-piston EPA II	2
26a	4898.064	kit cylinder-piston EPA IV	2
26a	A23R.098	kit cylinder-piston STD	2

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**LOMBARDINI**

A KOHLER COMPANY

Group: 12LD 477-2

Engine: 12LD 477-2 Drawing: A

CRANKCASE/OIL SUMP/OIL DIPSTICK/OIL PUMP/COOLING PANELS/MOUNTS/GASKET

POS.	CODE	DESCRIPTION	Qty
01	3617.088	clamp dia. 9,5	1
02a	7625.008	washer diam. 6,4	20
03	323R.007	nut	2
04	1760.130	bolt M 6 X 1 X 12	3
05	2569.697	air conveyor	1
06	1760.082	bolt M 6 X 35	1
07	1760.131	bolt M 6 X 1 X 20	1
08	4670.058	copper gasket diam. 8,2X12X1,5	3
09	716R.042	union	1
09a	718R.019	3 way 'union	1
11	995R.016	capscrew	1
12	1901.173	union	2
14	4670.060	copper gasket diam.12	1
15	717R.033	union	1
16	375R.051	clamp	1
17	949R.016	breather line	1
18	3630.178	clamp	1
22	4580.198	gasket 3/10	1
22	4580.199	gasket 9,5/10	1
23	1770.007	bolt M 8 X 1,25 X 30	2
24	771R.011	washer	4
25	3240.021	nut M 8	4
26	234R.041	cover	1
27	1770.004	bolt M 8 X 1,25 X 20	2
30	993R.062	screw	1
31	7625.052	washer	1
32	9865.122	screw M 6 X 12	3
33	5066.306	conveyor	1
34	588R.060	conveyor	1
35	588R.059	conveyor	1
36	608R.030	plate	1
37	1760.130	bolt M 6 X 1 X 12	5
38	2920.181	air baffle hood	1
39	588R.055	conveyor	1
40	1770.056	bolt M 8 X 1,25 X 18	2
41	1760.076	bolt	15
41a	1760.034	bolt M 6 X 25	4
42	7625.012	washer diam. 8,4	2
43	9790.165	screw	1
44	772R.036	washer	1
46	076R.082	oil dipstick std	1
46a	1400.471	oil dipstick	1
46b	1400.497	oil dipstick	1
47	151R.023	cap	2
48	151R.024	cap	4
49	1511.110	crankcase with hole for dipstick on the controls side	1
49	A20R.053	crankcase std	1
50	1760.016	bolt M 6 X 50	10
52	8400.120	lockpin	2
53	8990.058	plug	4
54	234R.044	oil pump cover	1
55	1755.003	bolt	3
56	7555.003	washer diam. 5	3

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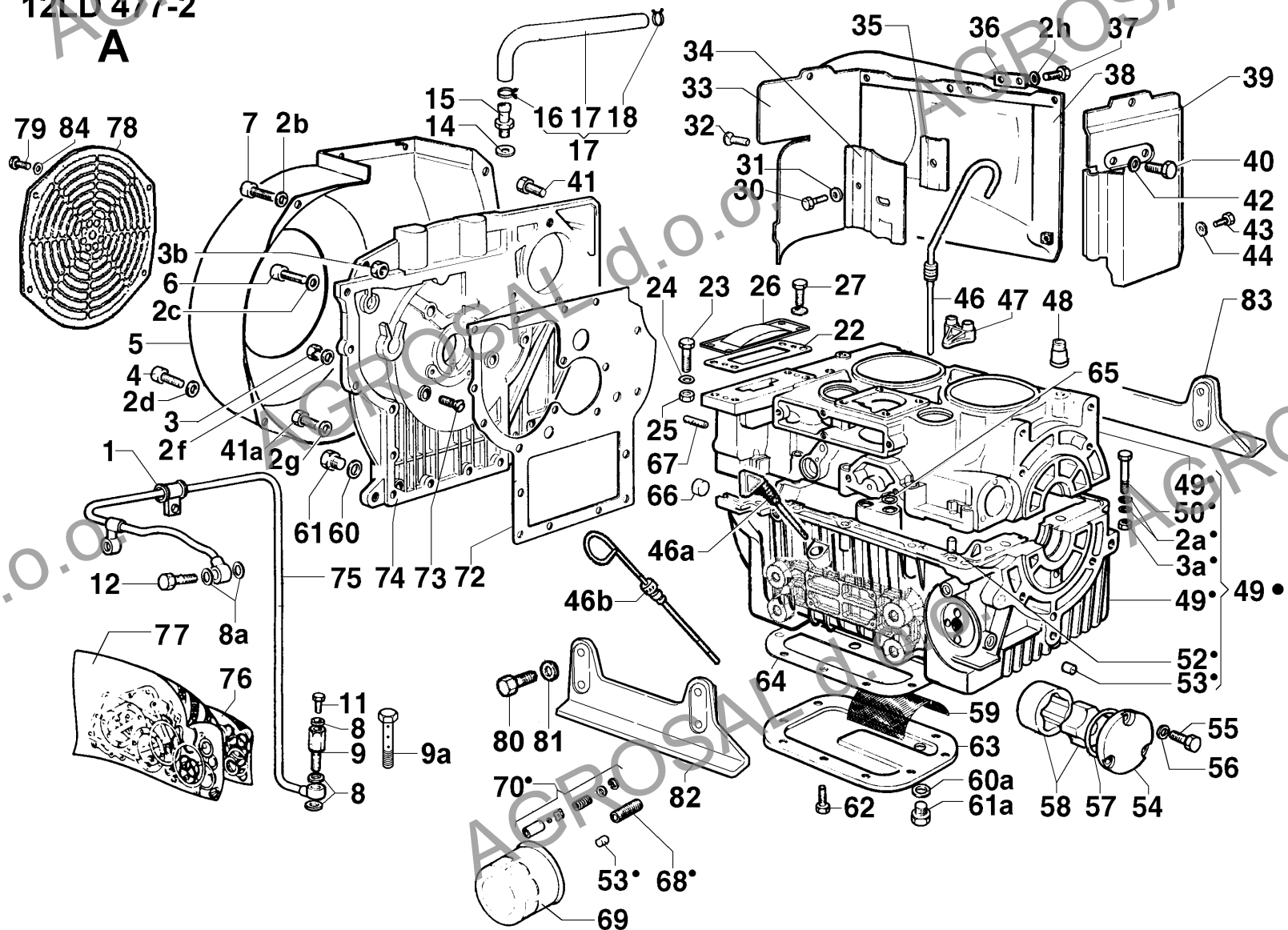
Engine: 12LD 477-2 Drawing: A

CRANKCASE/OIL SUMP/OIL DIPSTICK/OIL PUMP/COOLING PANELS/MOUNTS/GASKET

POS.	CODE	DESCRIPTION	Qty
57	579R.049	O-ring	1
58	A23R.084	lub. oil pump	1
59	734R.029	net	1
60	4670.061	copper gasket diam.14	1
61	8965.005	oil drain plug M 14	1
62	1760.006	bolt M 6 X 1 X 20	10
63	248R.056	oil sump	1
64	4601.200	gasket	1
65	579R.039	O-ring	8
66	886R.044	plug	1
67	8430.102	lockpin 8 X 12	1
68	717R.015	union	1
69	2175.201	oil filter cartridge	1
70	956R.045	by-pass valve	1
72	4431.193	gasket	2
72	4431.194	gasket	1
73	997R.012	screw	3
74	6645.732	gear cover	1
74	6645.733	gear cover fitted for hydraulic pump	1
75	948R.070	pipe	1
76	A20R.092	compl. gasket set	1
77	A20R.093	overhaul gasket set	1
78	6925.009	flywheel guard	1
79	1760.001	bolt M 6 X 1 X 10	4
80	1780.031	bolt M 10 X 1,5 X 25	8
81	7625.019	washer diam.10	8
82	6429.186	engine mount	1
83	6429.187	engine mount	1
84	7625.008	washer diam. 6,4	4

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A



**LOMBARDINI**

A KOHLER COMPANY

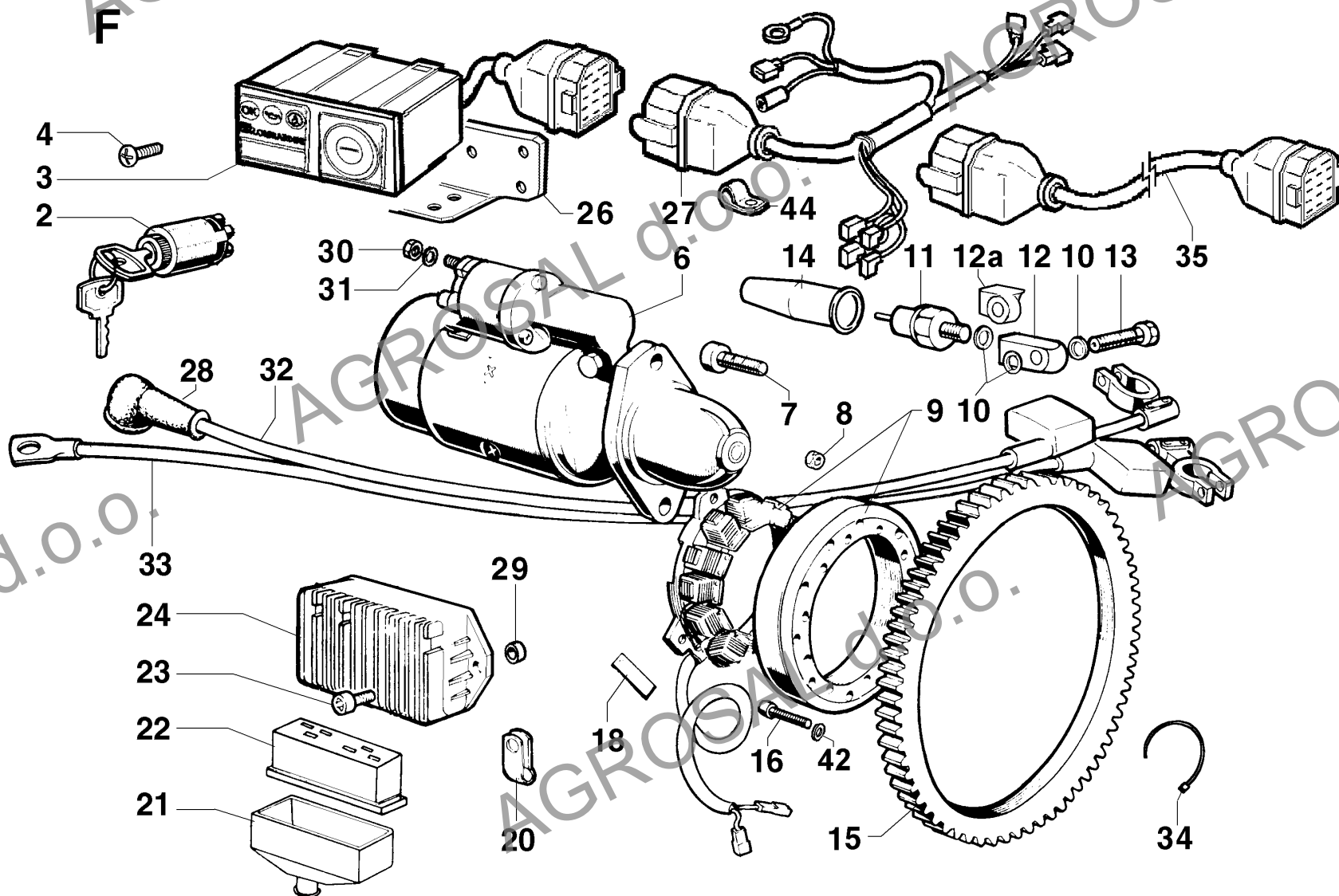
Group: 12LD 477-2

Engine: 12LD 477-2 Drawing: F

ELECTRICAL STARTING/ELECTRICAL EQUIPMENT

POS.	CODE	DESCRIPTION	Qty
02	5041.020	key switch	1
03	7245.417	dashboard 3 warning lights	1
03	7245.419	dashboard 6 warning lights	1
03	7245.421	dashboard 6 warning lights for glow plug	1
04	9730.325	screw M 5 X 10	4
06	5840.211	starting motor 24V 2,5 KW (BOSCH)	1
06	5840.223	starting motor 12 V 1,8 KW	1
07	9730.045	screw M 10 X 30	2
08	3203.048	nut M 6	3
09	014R.041	alternator	1
10	4670.058	copper gasket diam. 8,2X12X1,5	3
11	6745.042	pressure oil switch 0,6 bar (M 12) - red	1
11	674R.001	pressure switch	1
12	612R.030	safety plate	1
12a	7330.019	oil switch connector	1
13	716R.050	union	1
14	6491.013	pipe elbow	1
15	256R.008	crown gear	1
16	992R.058	screw	5
18	613R.076	safety plate	1
20	3617.021	clamp	1
21	2145.014	regulator cap	1
22	6740.153	inlet regul.Saprisa	1
23	9730.031	screw M 8 X 40	2
24	7362.298	voltage regul.12 V maX 30 A - 5 contacts for alt.2 wires	1
24	7362.338	voltage regul.24 V	1
26	8506.130	bracket	1
27	2186.115	engine wires	1
28	6491.005	pipe elbow	1
29	3521.043	spacer	2
30	323R.003	nut	1
31	763R.002	washer	1
32	187R.097	cable	1
33	187R.096	cable	1
34	2471.019	collar mm 175	1
35	2185.882	eXtension wire	1
42	7555.004	washer diam. 6	2
44	3617.020	clamp	1
XX	2186.206	connection wire to control relay	1

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F



**LOMBARDINI**

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Group: 12LD 477-2

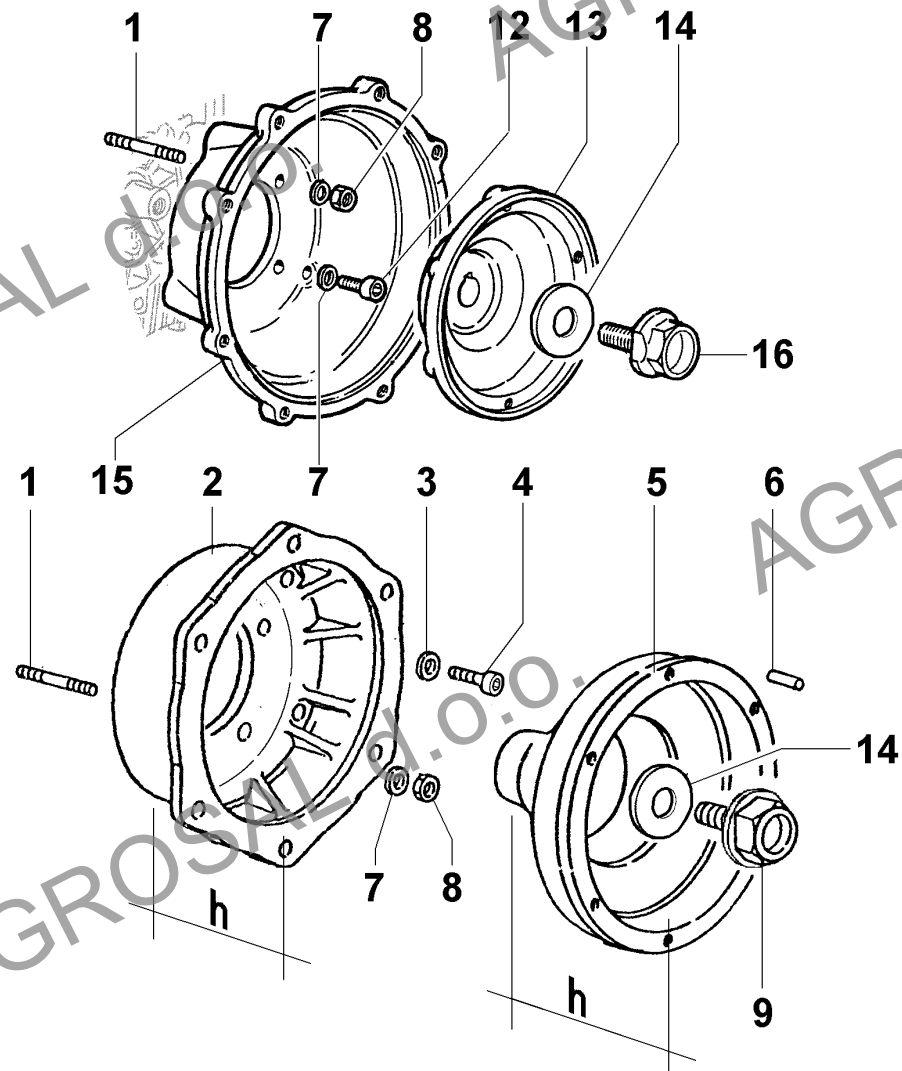
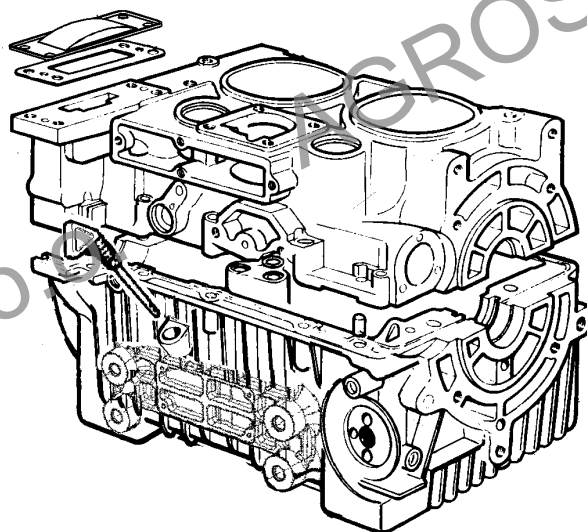
Engine: 12LD 477-2 Drawing: G

FLANGING

POS.	CODE	DESCRIPTION	Qty
01	6800.010	stud M 10 X 25 (40)	4
02	134R.024	flanging bell (h=108,5)	1
02	134R.078	flanging bell (h=89,5)	1
03	7555.008	washer diam.10	5
04	9730.045	screw M 10 X 30	5
04	992R.024	screw M 10 X 25	5
05	3835.162	"clutch bell F187 "L" special version"	1
05	638R.050	clutch bell F187 (h=108)	1
05	639R.041	clutch bell F187 (h=88,5)	1
06	841R.017	lockpin 7 X 16	2
07	7625.020	washer diam.10,5	4
08	323R.004	nut M 10	4
09	116R.020	bolt M18 (h=30,5)	1
09	116R.046	bolt M18 (h=19,5)	1
12	9730.046	screw M 10 X 35	5
13	639R.019	disc	1
14	771R.049	washer	1
15	134R.037	flanging bell SAE 5	1
16	116R.055	bolt M18	1

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G



**LOMBARDINI**

A KOHLER COMPANY

Group: 12LD 477-2

Engine: 12LD 477-2 Drawing: D

FUEL SYSTEM

POS.	CODE	DESCRIPTION	Qty
01	936R.084	dearection pipe	1
02	9376.195	injection pipe EPA version	1
02	944R.034	injection pipe	1
03	«-----»	terminal connector	0
04	323R.003	nut	2
04a	3240.021	nut M 8	4
05	771R.097	washer	2
05a	4670.058	copper gasket diam. 8,2X12X1,5	2
06	858R.094	brace	2
06a	1901.029	union bolt M 8	1
07	6780.084	stud M 8 X 40 (52)	2
07a	898R.021	tank cap	1
08	9374.036	fuel hose mm 360	1
08	9375.867	pipe mm 500	1
09	9375.896	pipe	1
09a	656R.017	injection pump STANADYNE 2K 70	1
09a	656R.019	injection pump BOSCH	1
09a	656R.021	injection pump STANADYNE 2K 60	1
09a	6590.468	injection pump STANADYNE 2K 60 - EPA version	1
10	754R.035	washer	2
10	754R.051	washer	2
11	6615.132	injector	2
11a	4670.001	copper gasket diam. 6,2 X 10 X 1	4
12	1901.171	deaceration plug	2
13	7555.029	washer diam. 8	8
13a	8400.048	taper pin	1
13b	771R.011	washer	2
14	379R.014	felt gasket	2
15	1770.056	bolt M 8 X 1,25 X 18	4
15a	4670.061	copper gasket diam.14	2
16	877R.089	fuel tank bracket	1
16a	1901.032	union bolt M 14	1
17	8103.326	fuel tank with fuel filter seat	1
17	824R.078	fuel tank without fuel filter seat	1
18	2175.200	fuel filter element	1
26	1770.006	bolt M 8 X 1,25 X 25	1
27	1760.083	bolt M 6 X 1 X 55	1
28	7626.051	washer	1
29	7625.008	washer diam. 6,4	2
30	323R.007	nut	2
31	3730.155	fuel filter	1
32	2175.197	filter Element	1
33	450R.075	gasket	2
33	451R.069	gasket	3
33	4580.170	gasket 0,80	1
34	704R.005	feed pump rod	1
35	6780.008	stud M 8 X 20 (32)	2
36	1901.030	union bolt M 10	2
37	4670.059	copper gasket	4
38	6585.031	fuel feeding pump	1
39	9374.022	fuel hose(mm 580)	1
39	9375.867	pipe mm 500	1
40	676R.070	stud	4

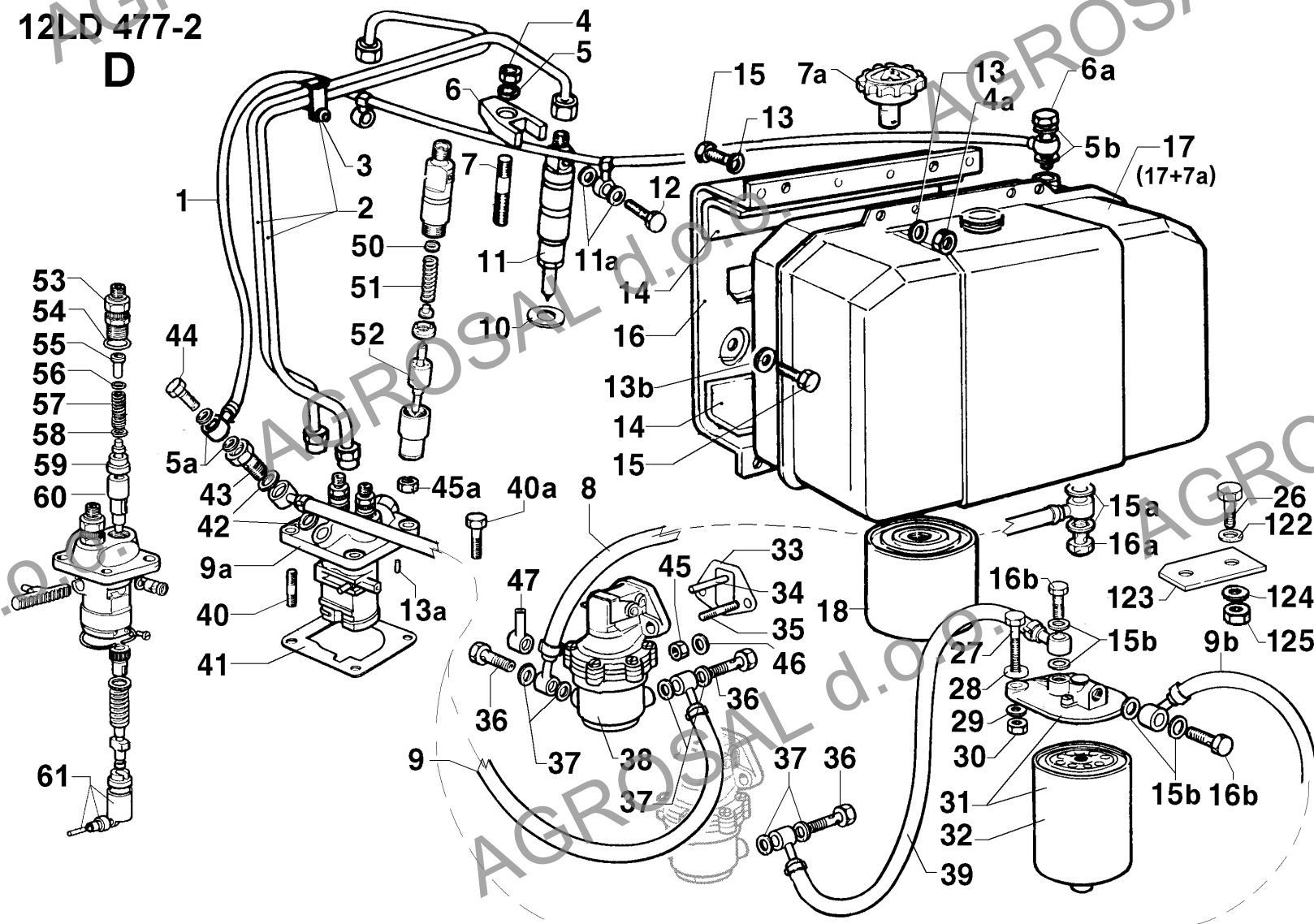
Group: 12LD 477-2

Engine: 12LD 477-2 Drawing: D

FUEL SYSTEM			
POS.	CODE	DESCRIPTION	Qty
40a	1770.156	bolt M 8 X 1,25 X 25	4
41	4580.002	gasket 0,10	4
41	4580.009	gasket 0,50	1
41	4580.093	gasket 0,30	2
42	4670.060	copper gasket diam.12	2
43	1901.012	union bolt	1
44	1570.056	union bolt	1
45	3240.164	nut M 8	2
45a	323R.003	nut	4
46	7555.029	washer diam. 8	2
47	7270.104	banjo union diam.10	1
50	837R.030	shim	2
50	837R.035	shim	2
51	540R.079	spring	2
52	644R.037	nozzle	2
52	6615.128	nozzle EPA version	2
53	7265.008	union	2
54	1200.279	O ring	3
55	7470.003	filler	2
56	8335.029	washer seal	2
57	540R.045	spring	2
58	4760.015	valve gasket	2
59	956R.051	delivery valve NEW DIESEL	2
59	9672.012	delivery valve BOSCH	2
60	660R.013	pumping element BOSCH_K70	2
60	660R.017	pumping element Stanadyne_K70	2
60	660R.020	pumping element NEW DIESEL _K60	2
61	«-----»	tappet - see pos. D 9a	0
122	7625.316	washer	2
123	613R.012	safety plate	1
124	771R.011	washer	1
125	323R.003	nut	1

12LD 477-2

D



**LOMBARDINI**

A KOHLER COMPANY

Group: 12LD 477-2

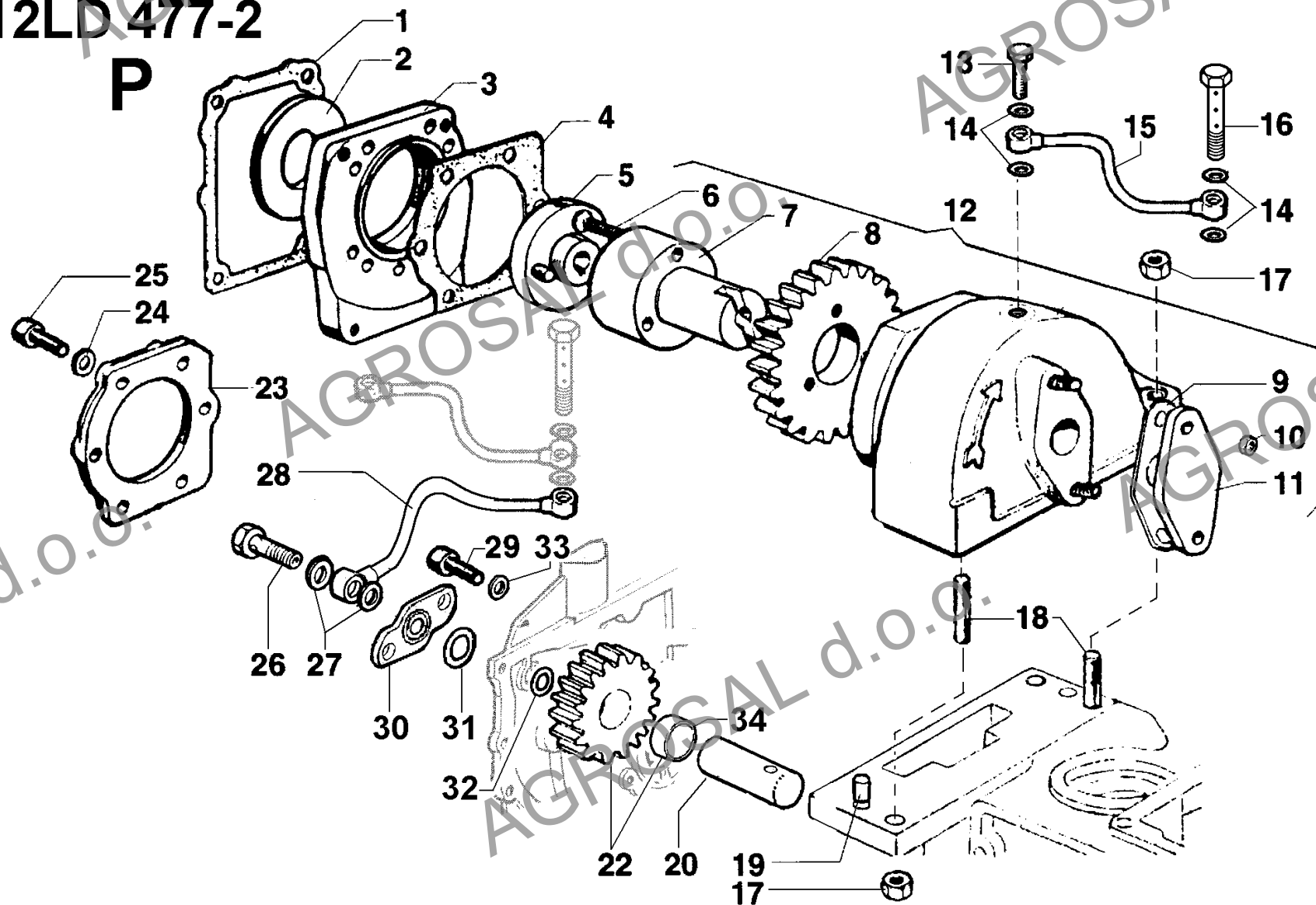
Engine: 12LD 477-2 Drawing: P

HYDRAULIC PUMP ADAPTER

POS.	CODE	DESCRIPTION	Qty
01	447R.097	gasket 2PD	1
01	4580.229	gasket 1PD	1
02	042R.002	center ring 1PD	1
02	042R.003	center ring 2PD	1
03	874R.046	support 2PD	1
03	874R.048	support 1PD	1
04	447R.095	gasket	1
05	813R.021	halfcoupling 2PD	1
05	814R.069	halfcoupling 1PD	1
06	997R.034	screw M 5 X 30	3
07	600R.070	gear shaft	1
08	468R.055	gear	1
09	«-----»	gasket	0
10	3240.004	nut M 5	2
11	«-----»	cover	1
12	877R.080	support	1
13	1901.029	union bolt M 8	1
14	4670.058	copper gasket diam. 8,2X12X1,5	4
15	949R.073	lubricating pipe	1
16	«-----»	see pos. A 9a	0
17	3240.164	nut M 8	4
18	6780.085	stud M 8 X 35 (47)	4
19	8460.055	locating dowel	2
20	602R.096	gear shaft	1
22	470R.048	gear	1
23	231R.026	support cover	1
24	7625.008	washer diam. 6,4	6
25	9730.012	screw M 6 X 20	6
26	1901.029	union bolt M 8	1
27	4670.058	copper gasket diam. 8,2X12X1,5	2
28	949R.024	lubricating pipe	1
29	9730.115	screw M 5 X 14	2
30	233R.077	cover	1
31	1200.006	O-ring	1
32	1200.040	O ring 113	1
33	771R.001	washer diam. 5,3	2
34	108R.063	sleeve	1

12LD 477-2

P



SHORT BLOCK

POS.	CODE	DESCRIPTION	Qty
01	C25R.008	short block	1

12LD 477-2

Z

