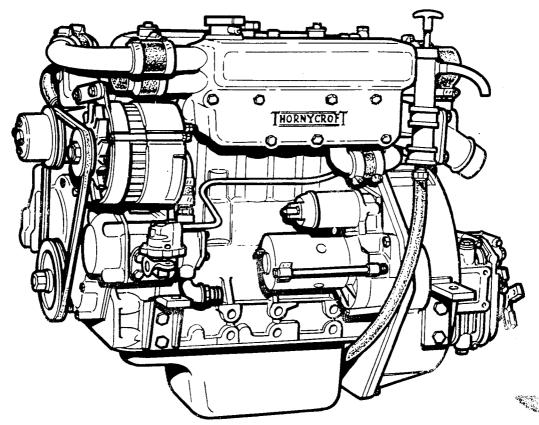


# ILLUSTRATED PARTS LIST



TYPE 60 & 80 ENGINES



#### Introduction

The purpose of this Illustrated Spare Parts Manual is to enable the operator of the Thornycroft 60 and 80 type engines to easily identify replacement parts.

Due to our policy of continuous improvement and specific engine applications, it is imperative that ALL ORDERS AND OR ENQUIRIES FOR ENGINE SPARES IS ACCOMPANIED BY THE ENGINE NUMBER.

Technical Publications Department
Thornycroft Engines
PO Box 2
Hurst Lane
Tipton
West Midlands DY4 9AD

Phone:

England

021-522-2757

Telex:

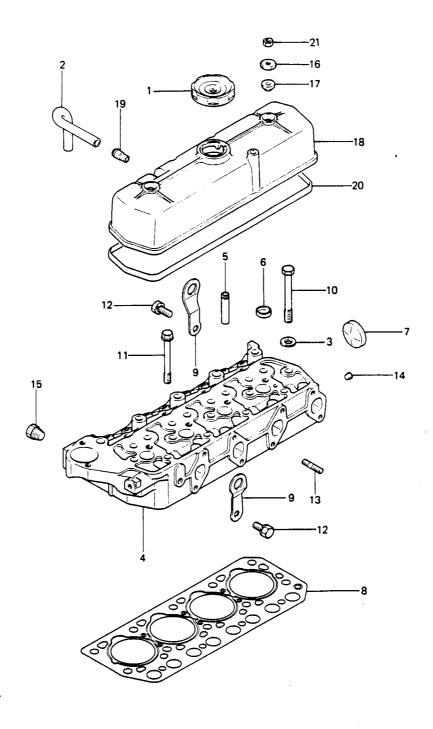
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Telefax:

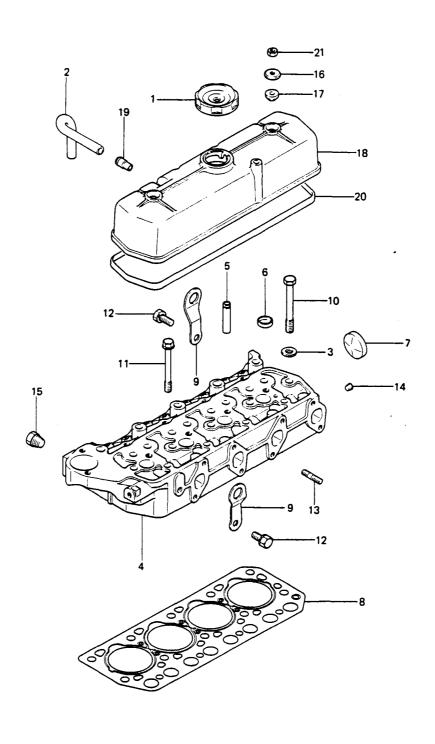
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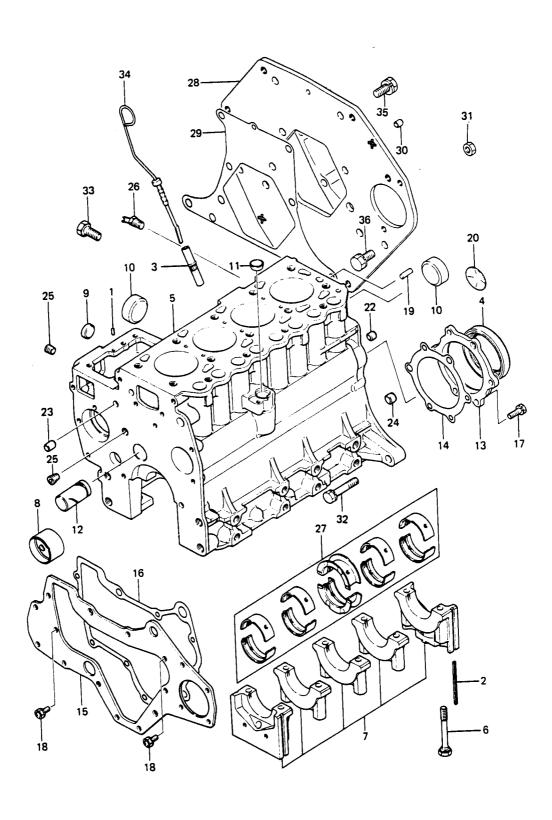


		CYLINDER HEAD	TH	ORN	YCR	OF	
REF.	PART	DESCRIPTION	ENGINE & Qty. Req'd.		PAGE	2	
No.	No.		60D	60 E	80 D	80 E	
1	MD008784	Cap, Oil Filler	1	1	1	1	
2	MM408536	Pipe, Air Breather	1	1	_	-	
	MM408537	Pipe, Air Breather	-	-	1	1	
3	MD020733	Washer, Cylinder Head Bolt	8	8	10	10	
4-7	MM408394	Head Assy, Cylinder	1	_	_	-	
	MM409814	Head Assy, Cylinder	-	1	-	-	
	MM408409	Head Assy, Cylinder	_	-	1	-	
	MM409758	Head Assy, Cylinder	_	_	-	1	
5	MM408441	Guide, Valve	6	6	8	8	
6	MF665538	Cap, Sealing (25)	3	3	4	4	
7	MF665543	Cap, Sealing (45)	1	1	1	1	
8	MM408453	Gasket, Cylinder Head	1	-	_	_	
	MM409815	Gasket, Cylinder Head	-	1	-	_	
	MM408448	Gasket, Cylinder Head	-	-	1	-	
	MM408457	Gasket, Cylinder Head	-	_	-	1	
9	MM408470	Lifting Eye	2	2	2 .	2	
10	MM408481	Bolt, Cylinder Head	8	8	10	10	
11	MM404316	Bolt (10 x 90)	3	3	4	4	
12	MF241280	Bolt, With Washer	2	2	2	2	
13	MF401936	Stud	1	1	1	1	
14	MS661120	Plug, Taper	1	1	1	1	
15	-	Sender (see instruments illustration)	-	_	_	-	
16	MM408509	Washer	2	2	2	2	
17	MD000523	Oil Seal	2	2	2	2	
18–19	MM408491	Cover Assy, Rocker	1.	1	-	-	
18–19	MM408492	Cover Assy, Rocker	-	_	1	1	
19	K9644171	Pipe	1	1	1	1	



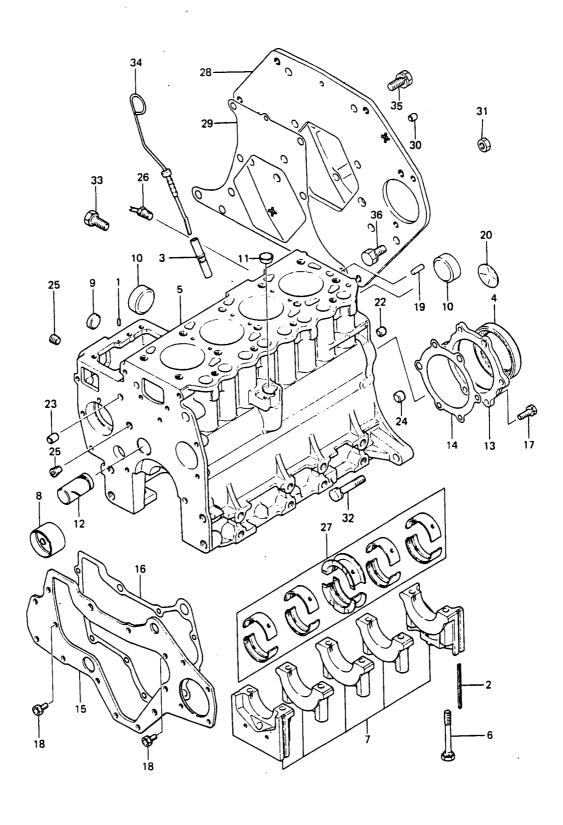
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REF.	PART	DESCRIPTION		ENGINE & Qty. Req'd.		4	
No.	No.	Sesent for	60D	60 E	80 D	80	
20	MM408501	Gasket, Rocker Cover	1	1	-	-	
20	MM408502	Gasket, Rocker Cover	-	-	1	1	
21	MF430005	Nut	2	2	2	2	
- -							



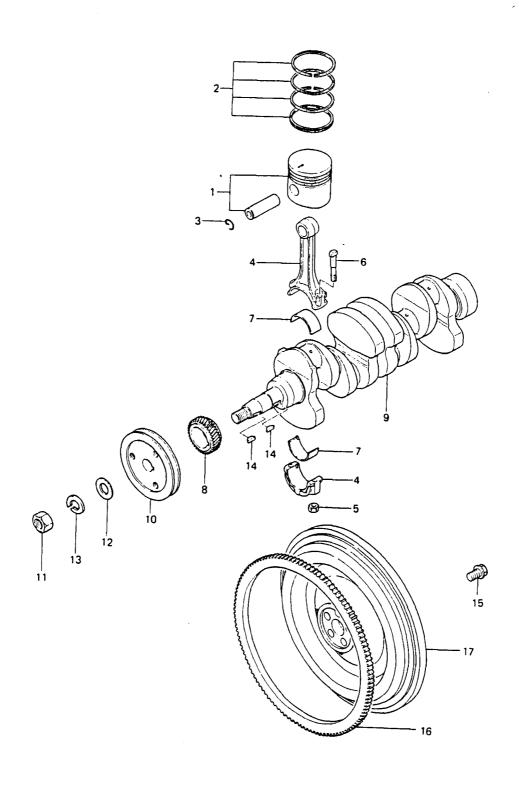


		CYLINDER BLOCK	TH	ORN	YCR	OF
REF.	PART	DESCRIPTION	i .	INE & Req'd.	PAGE	6
No.	No.		60D	60 E	80 D	80E
1	MM409645	Pin, Dowel	2	2	2	2
2	MM406228	Seal, Side	4	4	4	4
3	MM430613	Guide, Dipstick	1	1	1	1
4	MM406242	Oil Seal	1	1	1	1
5-10	MM430182	Block Sub Assy, Cylinder	1	_	-	-
	MM430236	Block Sub Assy, Cylinder	-	1	_	-
	MM413866	Block Sub Assy, Cylinder	-	_	1	_
	MM430185	Block Sub Assy, Cylinder	-	_	-	1
6	MM406217	Bolt, Bearing Cap	8	8	10	10
7	*	Cap Assy, Bearing	1	1	1	1
8	MM408176	Bushing, Camshaft	1	1	1	1
9	MF665538	Cap, Sealing (25)	2	1	2	2
10	MF665543	Cap, Sealing (45)	2	2	3	3
11	MF665537	Cap, Sealing (22)	1	1	1	1
12	MM430113	Shaft, Idler	1	1	1	1
13	MM408200	Case, Oil Seal	1	1	1	1
14	MM408205	Gasket Oil Seal	1	1	1	1
15	MM408221	Plate, Front	1	1	1	1
16	MM408226	Gasket, Front Plate	1	1	1	1
17	MF240054	Bolt, With Washer	6	6	6	6
18	MF240051	Bolt, With Washer	3	3	3	3
19	MF472404	Pin, Dowel	1	1	1	1
20	MF665511	Plug, Expansion (40)	1	1	1	1
21	-	Not Illustrated	_	-	_	_
22	MS471104	Bushing, Knock (8 x 9)	2	2	2	2
23	MS471105	Bushing, Knock (8-13)	2	2	2	2
24	MS471110	Bushing, Knock (12 x 9)	1	1	1	1

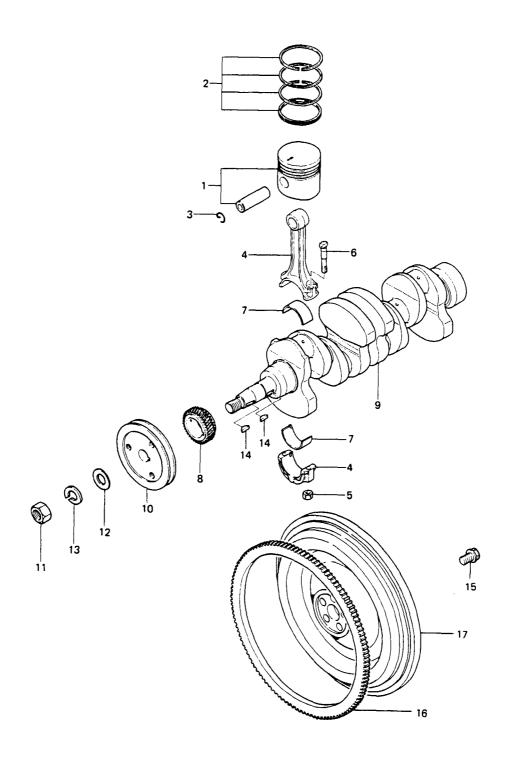
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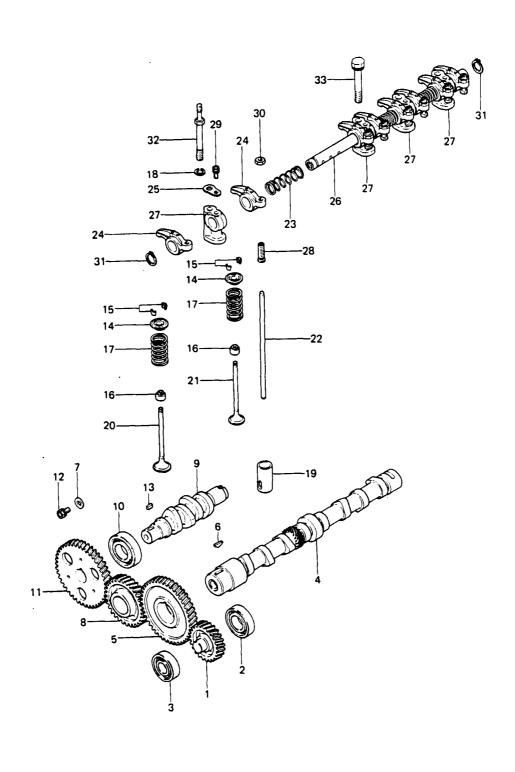
		CYLINDER BLOCK	TH	ORN	YCR	OF[
REF.	PART	DESCRIPTION	1	NE & Req'd.	PAGE	8
No.	No.		60D	60 E	80 D	80E
25	MS661121	Plug, Taper	3	3	3	3
26	55380080	Tap, Drain Cylinder Block	1	1	1	1
27	MM408160	Bearing Set, Crankshaft STD	1	-	_	_
	MM412710	Bearing Set, Crankshaft STD	-	1	_	_
	MM408164	Bearing Set, Crankshaft STD	-	-	1	-
	MM408165	Bearing Set, Crankshaft STD	-	-	_	1
	MM408161	Bearing Set, Crankshaft 0.25 US	1	-	_	-
	MM412711	Bearing Set, Crankshaft 0.25 US	-	1	-	-
· · · · · · · · · · · · · · · · · · ·	MM408165	Bearing Set, Crankshaft 0.25 US	-	_	1	_
	MM409591	Bearing Set, Crankshaft 0.25 US	-	-	-	1
	MM408162	Bearing Set, Crankshaft 0.50 US	1	-	_	-
	MM412712	Bearing Set, Crankshaft 0.50 US	-	1	-	_
	MM408166	Bearing Set, Crankshaft 0.50 US	-	_	1	_
	MM409592	Bearing Set, Crankshaft 0.50 US	-	-	_	1
	MM408163	Bearing Set, Crankshaft 0.75 US	1	_	-	_
	MM412713	Bearing Set, Crankshaft 0.75 US	-	1	-	-
	MM408167	Bearing Set, Crankshaft 0.75 US	-	_	1	-
	MM409593	Bearing Set, Crankshaft 0.75 US	-	-	_	1
28	MM408212	Plate, Rear	1	1	1	1
29	MM408216	Gasket, Rear Plate	1	_	-	-
	MM409577	Gasket, Rear Plate	-	1	1	1
30	MM408245	Pin, Knock	2	2	2	2
31	MF430006	Nut	1	1	1	1
32	MF241315	Bolt, With Washer	2	4	4	4
33	MF100110	Bolt	4	4	4	4
34	54012970	Dipstick	1	1	1	1
35	MF241308	Bolt, With Washer	8	8	11	11



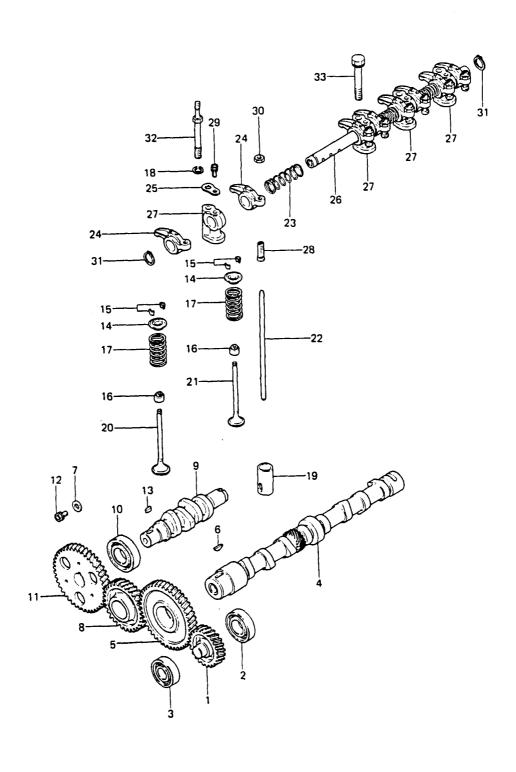
		CRANKSHAFT	H	ORN	YCR	OF
REF.	PART	DESCRIPTION		NE & Req'd.	PAGE	10
No.	No.		60D	60 E	80 D	80E
1	MM408520	Piston & Pin Set STD	3	-	4	-
	MM409730	Piston & Pin Set STD	-	3	-	4
	MM408521	Piston & Pin Set 0.25 OS	3	-	4	_
	MM412780	Piston & Pin Set 0.25 OS	-	3	_	4
	MM408522	Piston & Pin Set 0.50 OS	3	_	4	-
	MM412781	Piston & Pin Set 0.50 OS	-	3	-	4
	MM408523	Piston & Pin Set 0.75 OS	3	-	4	_
	MM412782	Piston & Pin Set 0.75 OS	-	3	_	4
2	MM406600	Ring Set, Piston STD	3	-	4	-
	MM409753	Ring Set, Piston STD	_	3	_	4
	MM406601	Ring Set, Piston 0.25 OS	3	_	4	-
	MM409765	Ring Set, Piston 0.25 OS	-	3	-	4
	MM406602	Ring Set, Piston 0.50 OS	3	-	4	-
	MM409766	Ring Set, Piston 0.50 OS	_	3	_	4
	MM406603	Ring Set, Piston 0.75 OS	3	-	4	-
	MM409767	Ring Set, Piston 0.75 OS	-	3	-	4
3	K8221251	Clip, Piston Pin	6	6	8	8
4-6	MM408790	Rod Assy, Connecting	3	_	4	-
	MM409733	Rod Assy, Connecting	_	3	-	4
5	MD000704	Nut, Connecting Rod	6	6	8	8
6	MM402547	Bolt, Connecting Rod	6	6	8	8
7	MM408795	Bearing Set, Con Rod STD	3	-	4	_
	MM409608	Bearing Set, Con Rod STD	_	3	-	4
	MM408796	Bearing Set, Con Rod 0.25 US	3	-	4	-
<del></del>	MM409605	Bearing Set, Con Rod 0.25 US	_	3	_	4
	MM408797	Bearing Set, Con Rod 0.50 US	3	-	4	-
	MM409606	Bearing Set, Con Rod 0.50 US	-	3	-	4



		CRANKSHAFT	TH	ORN	YCRO	F
REF.	PART	DESCRIPTION	4	NE & Req'd.	PAGE	12
No.	No.		60D	60 E	80 D	80 E
	MM408798	Bearing Set, Con Rod 0.75 US	3	-	4	1
	MM409607	Bearing Set, Con Rod 0.75 US	-	3	_	4
8	MM430859	Gear, Crankshaft	1	1	1	1
9	MM408811	Crankshaft	1	_	-	-
	MM408895	Crankshaft	-	1	_	-
	MM408817	Crankshaft	-	_	1	-
	MM408896	Crankshaft	_	_	_	1
10	MM408820	Pulley, Crankshaft	1	1	_	-
	MM408823	Pulley, Crankshaft	_	_	1	1
11	MF430126	Nut	1	1	1	1
12	MF450010	Washer, Plain	1	1	1	1
13	MF450410	Washer, Spring	1	1	1	1
14	MF476215	Key, Woodruff	2	2	2	2
15	MD952231	Bolt, Flywheel	5	5	5	5
16	MD024812	Starter Gear, Ring	1	1	1	1
17	-	See Flywheel Housing Illustration	-	_	_	-
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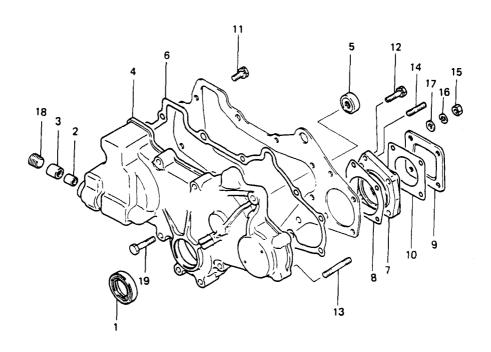


	C	AMSHAFT, ROCKER SHAFT	TH	ORN	YCR	OF
REF.	PART	DESCRIPTION	1	INE & Req'd.	PAGE	14
No.	No.		60D	60 E	80 D	80E
1	MM407265	Gear, Pressure Oil Pump	1	1	1	1
2	K7631160	Bearing, Ball	1	1	_	_
	K7831160	Bearing, Ball	_	-	1	1
3	MD700127	Bearing, Ball	1	1	1	1
4	MM408906	Camshaft	1	1	_	-
	MM408907	Camshaft	_	-	1	1
5	MM406722	Gear, Camshaft	1	1	1	1
6	MF476215	Key, Woodruff	1	1	1	1
7	MD000425	Washer	1	1	1	1
8	MM408908	Gear Assy, Idler	1	1	1	1
9	MM408964	Camshaft, Fuel Injection Pump	1	1	_	-
·	MM408965	Camshaft, Fuel Injection Pump	_	-	1	1
10	MD703856	Bearing, Ball	1	1	1	1
11	MM406685	Gear, Injection Pump Camshaft	1	1	1	1
12	MF241251	Bolt, With Washer	1	1	1	1
13	MF476018	Key	1	1	1	1
14	MD016482	Retainer, Valve Spring	6	6	8	8
15	MD016483	Collet, Valve Spring	12	12	16	16
16	MD016490	Seal, Valve Stem	6	6	8	8
17	MM402381	Spring, Valve	6	6	8	8
18	MF450406	Washer, Spring	2	2	2	2
19	MM402737	Tappet	6	6	8	8
20	MM408450	Valve, Inlet	3	3	4	4
21	MM408455	Valve, Exhaust	3	3	4	4
22	MM408920	Push Rod	6	6	8	8
23	MD000963	Spring, Rocker Shaft	2	2	3	3
24	MM406732	Rocker Arm	6	6	8	8

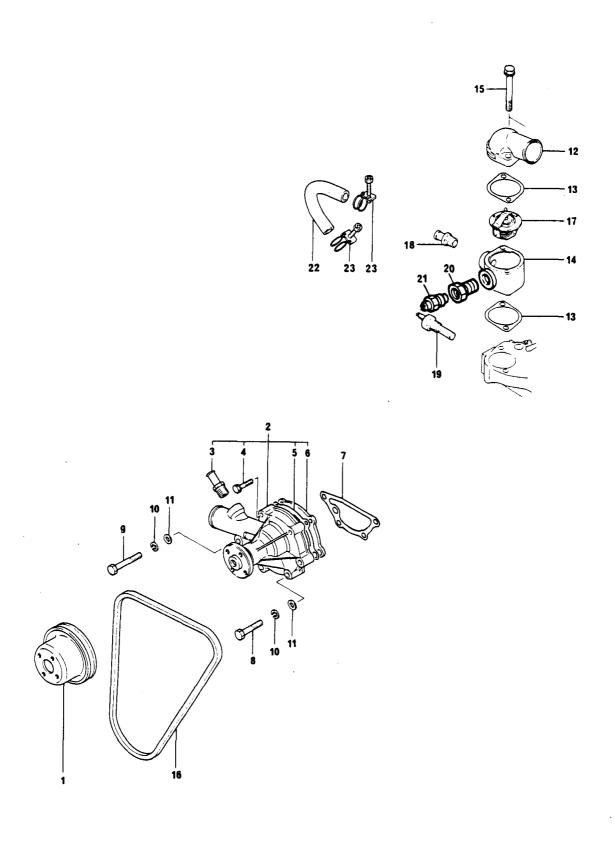


		CAMSHAFT, ROCKER SHAFT	TH	ORN	YCR	F
REF.	PART	DESCRIPTION		INE & Req'd.	PAGE	16
No.	No.	. Description	60D	60 E	80 D	80E
25	MM406745	Washer, Seat	2	2	2	2
26	MM408935	Shaft Assy, Rocker	1	1	-	-
	MM408936	Shaft Assy, Rocker	-	-	1	1
27	MM314770	Pilar, Rocker Shaft	3	3	4	4
28	K7231220	Screw, Adjusting	6	6	8	8
29	MF241225	Bolt, With Washer	2	2	2	2
30	MF430726	Locknut	6	6	8	8
31	MF522010	Circlip	2	2	2	2
32	MM408950	Bolt	2	2	2	2
33	MF244892	Bolt, With Washer	1	1	2	2
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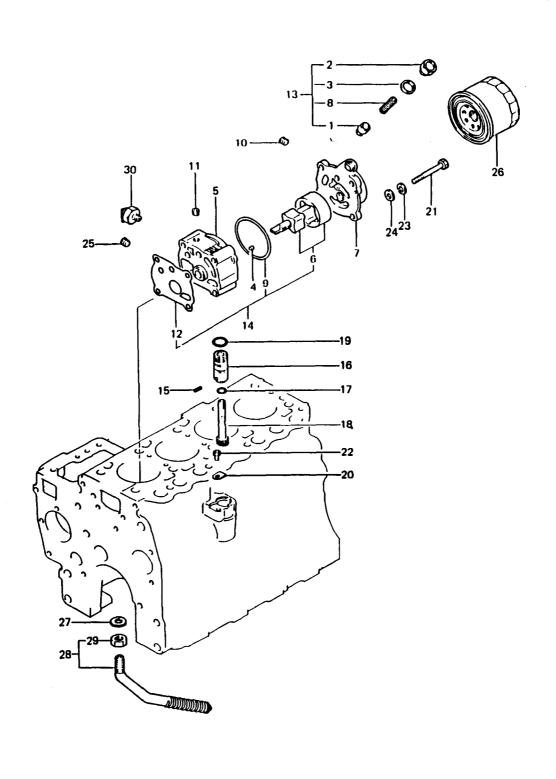




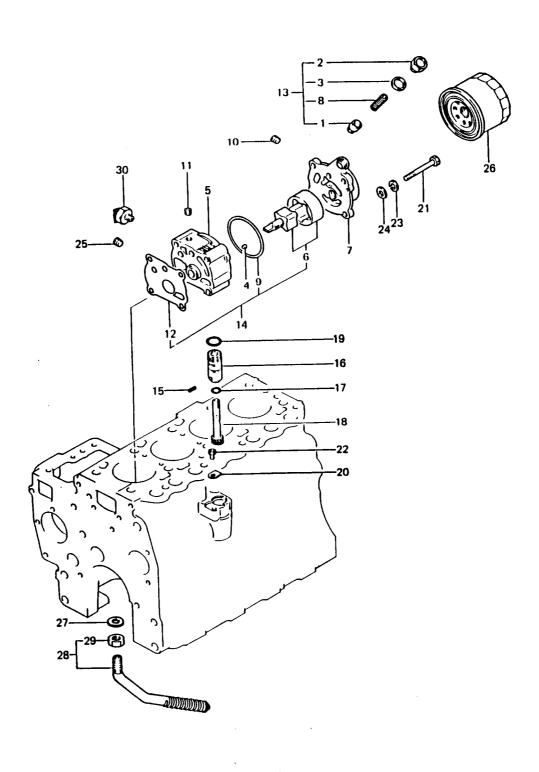
		FRONT COVER ASSEMBLY	THE	ORN	YCR	OF[
REF.	PART	DESCRIPTION		NE & Req'd.	PAGE	18
No.	No.	BESCHII HOIN	<b>60</b> D	60 E	80 D	80E
1	K9413390	Oil Seal	1	1	1	1
2	MM406420	Bearing, Needle	1	1	1	1
3	MM406421	Bearing, Needle	1	1	1	1
4	MM408227	Front Cover, Gear Case	1	1	1	1
5	MM409718	Plug, Thrust	1	1	1	1
6	MM408235	Gasket, Front Cover	1	1	1	1
7	MM409230	Housing	1	1	1	1
8	MM409235	Gasket	1	1	1	1
9	K7910451	Cover	1	1	1	1
10	MM401206	Gasket	1	1	1	1
11	MF240051	Bolt, With Washer	2	2	2	2
12	MF241257	Bolt, With Washer	1	1	1	1
13	MS401434	Stud	3	3	3	3
14	MM402565	Stud	1	1	1	1
15	MF430005	Nut	4	4	4	4
16	MF450405	Washer, Spring	4	4	4	4
17	MF450005	Washer, Plain	4	4	4	4
18	MS661123	Plug, Taper	1	1	1	1
19	MF100064	Bolt	8	8	8	8
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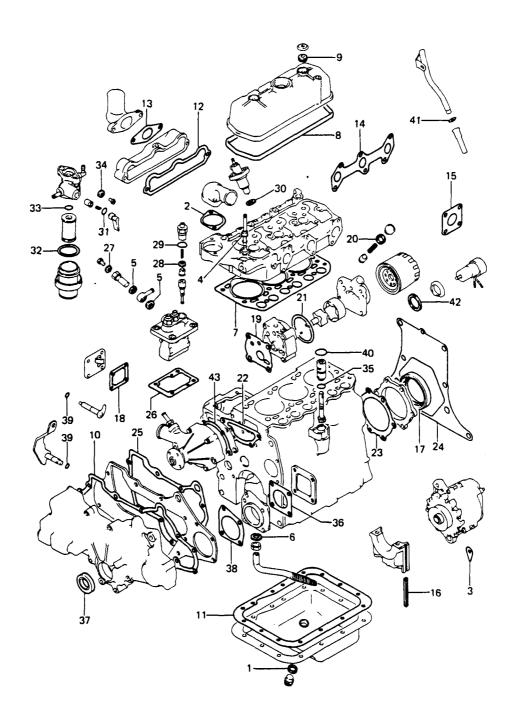
		FRESH WATER PUMP	THE	<u>HORNYCRO</u>			
REF.	PART	DESCRIPTION		INE & Req'd.	PAGE	20	
No.	No.		60D	60 E	80 D	80E	
1	K9674051	Pulley, Water Pump	1	1	-	-	
	MM405460	Pulley, Water Pump	_	_	1	1	
2	MM409303	Pump Assy, Water	1	1	1	1	
3	MM409304	Connector, Hose	1	1	1	1	
4	MF240031	Bolt, With Washer	2	2	2	2	
5	MM409326	Gasket	1	1	1	1	
6	MM409327	Plate, Water Pump	1	1	1	1	
7	MM407422	Gasket	1	1	1	1	
8	MF101264	Bolt	3	3	3	3	
9	MF101267	Bolt	1	1	1	1	
10	MF450405	Washer, spring	4	4	4	4	
11	MS450035	Washer, Plain	4	4	4	4 .	
12	54012248	Elbow, Water Outlet	1	1	1	1	
13	54012282	Gasket	2	2	2	2	
14	54012245	Thermostat Housing	1	1	1	1	
15	MF241267	Bolt, With Washer	2	2	2	2	
16	54384058	Drive Belt	1	1	1	1	
17	K6516441	Thermostat	1	1	1	1	
18	MM409304	Connector, Hose	1	1	1	1	
19	MM409381	Sender	1	1	1	1	
20	54380810	Adaptor	1	1	1	1	
21	54381375	Sender	1	1	1	1	
22	MM409330	Hose	1	1	1	1	
23	MF661011	Clip	2	2	2	2	



		ENGINE OIL PUMP	THE	ORN	YCR	F
REF.	PART	DESCRIPTION	Qty. Red d.		PAGE	,22
No.	No.		60D	60 E	80 D	80E
1–11	MM409371	Oil Pump Assy	1	1	-	1
	MM409370	Oil Pump Assy	_	_	1	-
1	MD001402	Plunger, Relief	1	1	1	1
2	MD001404	Plug	1	1	1	1
3	MD000312	Gasket	1	1	1	1
4	MM409373	Dowel	2	2	2	2
5	MM409244	Body, Oil Pump	1	1	1	1
6	MM407125	Rotor Assy, Oil Pump	1	1	1	1
7	MM409372	Cover, Oil Pump	1	1	1	1
8	MM409204	Spring Relief	1	1	1	1
9	MM407145	'O' Ring	1	1	1	1
10	MS661121	Plug, Taper	1	1	1	1
11	MS661120	Plug, Taper	1	1	1	1
12	MM407124	Gasket, Oil Pump Body	1	1	1	1
13	MM409893	Service Kit, Relief Valve	1	1	1	1
14	MM409894	Service Kit, Rotor	1	1	1	1
15–19	MM430598	Drive Unit (Speedo not used)				
15	MF472535	Pin (Speedo not used)				
16	MM430419	Sleeve (Speedo not used)			<u> </u>	
17	MD701788	'0' Ring (Speedo not used)				
18	MM407171	Gear (Speedo not used)				
19	MF5020012	'O' Ring (Speedo not used)				
20	MD701789	Plate (Speedo not used)	<u> </u>			
21	MF101268	Bolt	4	4	4	4
22	MF241224	Bolt With Washer	1	1	1	1
23	MF450405	Washer, Spring	4	4	4	4
24	MS450035	Washer, Plain	4	4	4	4

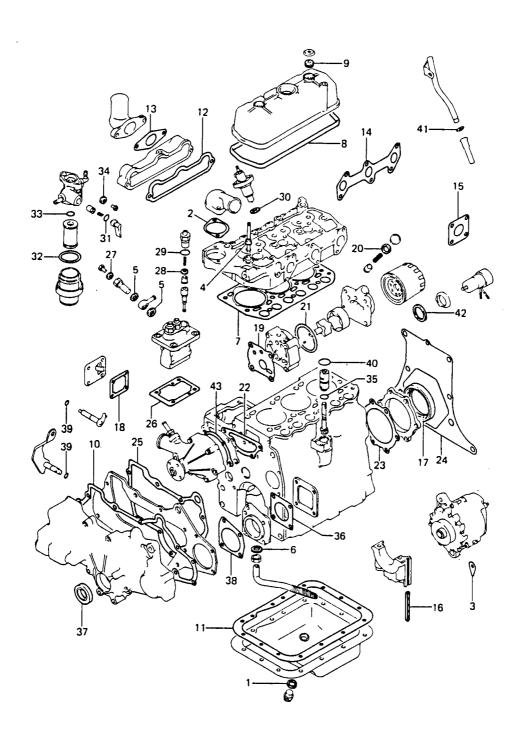


		THORNYCROF					
REF.	PART	DESCRIPTION	ENG Qty.	ENGINE & Qty. Req'd.		PAGE 24	
No.	No.		60D	60 E	80 D	80E	
25	MS661120	Plug	1	1	1	1	
26	CROS368	Filter Assy Oil	1	1	1	1	
27	MF660036	Joint	1	1	1	1	
28	MM430174	Screen Assy, Oil	1	-	-	_	
	MM430176	Screen Assy, Oil	-	1	1	-	
	MM413264	Screen Assy, Oil	-	_	_	1	
29	MF430729	Lock Nut	1	1	1	1	
30	MD001482	Switch Assy, Oil Pressure	1	1	1	1	
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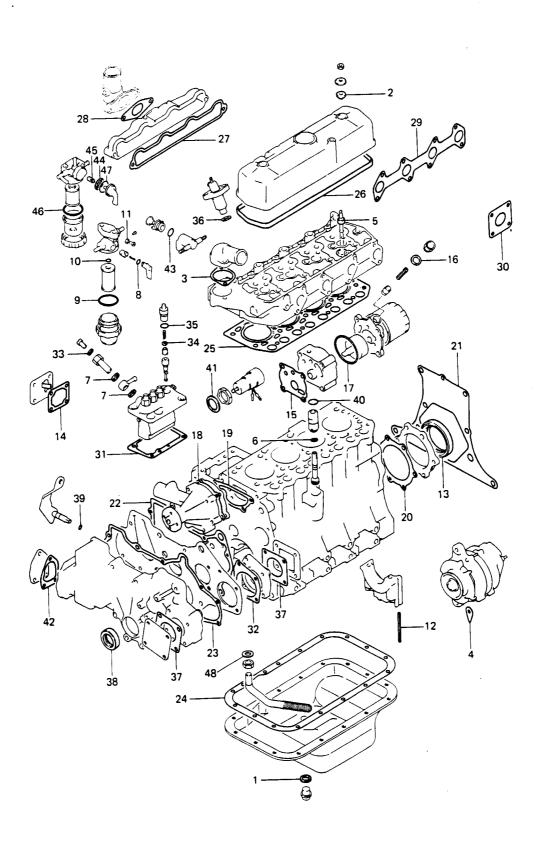


	ENGINE OVER	RHAUL GASKET SET TYPE 60 ENGINES	TH	ORN	YCR	OFT	
REF.	PART	DESCRIPTION		ENGINE & Qty. Req'd.		PAGE 26	
No.	No.		60D	60 E	80 D	80E	
1-43	MM408383	Gasket Kit	1	-	-	_	
	MM409768	Gasket Kit	_	1	_	-	
1	MD000312	Gasket, Oil Drain Plug (18)	1	1	-	_	
2	MD000551	Gasket	2	2	-	_	
3	MD001517	Shim	3	3	-	-	
4	MD016490	Seal, Valve Stem	6	6	_	-	
5	MK66112000	Washer, Seal	2	2	_	-	
6	MF660036	Gasket (16)	1	1	-	_	
7	MM408453	Gasket, Cylinder Head	1	-	_	-	
	MM409815	Gasket, Cylinder Head	-	1	-	-	
8	MM408501	Gasket, Rocker Cover	1	1	-	-	
9	MD000523	Oil Seal	2	2	-	-	
10	MM408235	Gasket, Gear Case	1	1	_	-	
11	MM408321	Gasket, Sump	1	1	_	-	
12	MM408551	Gasket, Intake Manifold	1	1	-	-	
13	MM408566	Gasket, Inlet Pipe	1	1	_	-	
14	MM408576	Gasket, Exhaust Manifold	1	1	_	-	
15	MM408580	Gasket	1	1	-	-	
16	MM406228	Seal, Side	4	4	_	_	
17	MM406242	Oil Seal	1	1	-	_	
18	MM409151	Gasket, Cover	1	1	_	-	
19	MM407124	Gasket, Oil Pump Body	1	1	_	-	
20	MM407137	Gasket	1	1	_	-	
21	MM407145	'O' Ring	1	1	_	_	
22	MM407422	Gasket, Water Pump	1	1	-	-	
23	MM408205	Gasket, Oil Seal	1	1	-	-	
24	MM409577	Gasket, Rear Plate	1	1	_	-	

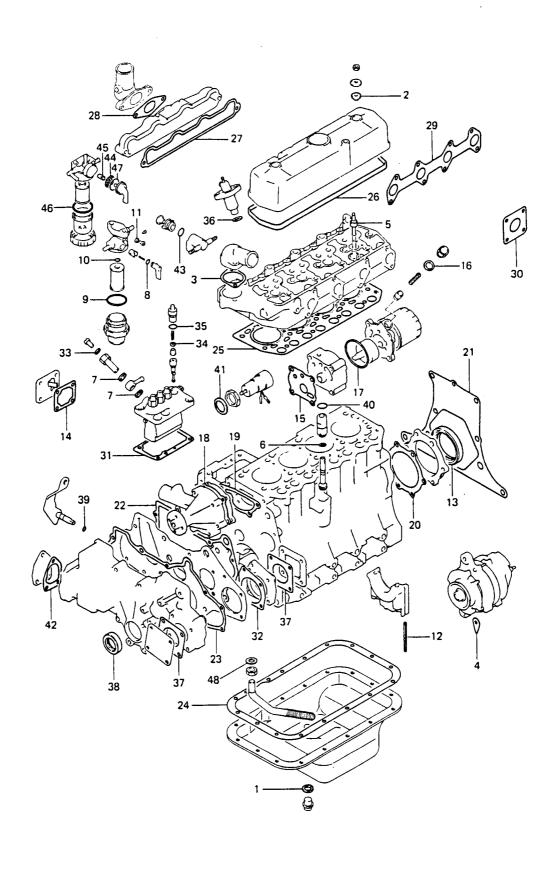
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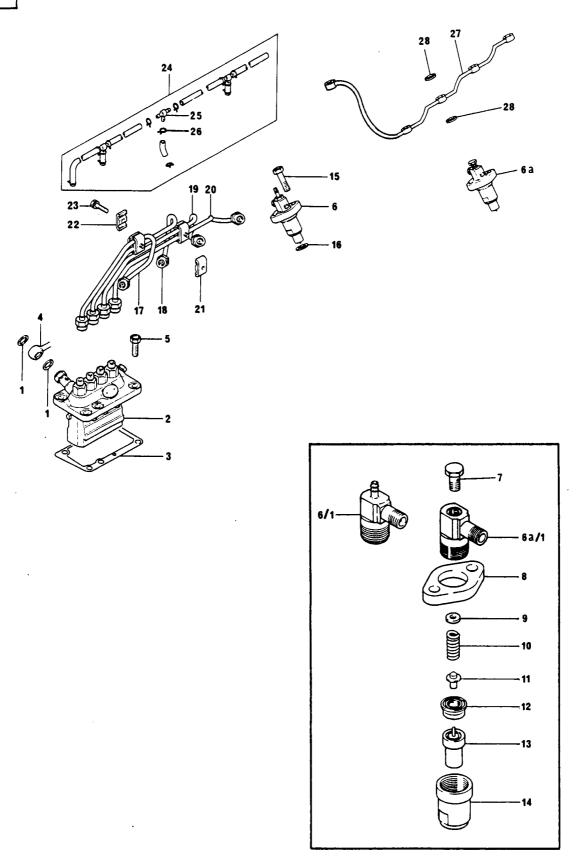
	ENGINE OVE	RHAUL GASKET SET TYPE 60 ENGINES	ENGINE & Qty. Req'd.		YCROF PAGE 28		
REF. No.	PART No.	DESCRIPTION	60D	60 E	80 D	80 E	
25	MM408226	Gasket, Front Plate	1	1	_	_	
26	MM409891	Shim Set, Adjusting	1	1	-	_	
27	MM500114	Washer, Fuel Pipe Union	1	1	_	_	
28	MM500336	Gasket, Delivery Valve	3	3	-	-	
29	MM500438	'O' Ring	3	3	-	_	
30	K6515430	Gasket, Nozzle Holder	3	3	-		
31	MM404874	'O' Ring, Valve	1	1	_	_	
32	MM404878	'O' Ring, Filter Cup	1	1	_	-	
33	MM404881	'O' Ring, Element	1	1	_	_	
34	MM404884	Packing	2	2	-	_	
35	MD701788	'0' Ring (8)	1	1	_	-	
36	MM401206	Gasket, Oil Pump Cover	1	1	_	-	
37	K9413390	Oil Seal	1	1	_	-	
38	MM409235	Gasket, Housing	1	1	-	-	
	MF520002	'0' Ring (7)	2	2	-	-	
40	MF520012	'0' Ring (18)	1	1	-	_	
41	MF520004	'O' Ring (9)	1	_	-	_	
42	MF660042	Gasket (30)	1	1	-	_	
43	MM409326	Gasket, Water Pump	1	1	-	_	



	ENGINE OVER	HAUL GASKET SET TYPE 80 ENGINES	TH	ORN	YCR	F
REF.	PART	DESCRIPTION	I	NE & Req'd.	IPA(JE	30
No.	No.		60D	60 E	<b>80</b> D	80E
1–48	MM408127	Gasket Kit	-	-	1	_
	MM409764	Gasket Kit	-	_	_	1
1	MD000312	Gasket, Oil Drain Plug	_	_	1	1
2	MD000523	Oil Seal	_	_	2	2
3	MD000551	Gasket	_	_	2	2
4	MD001517	Shim	_	_	3	3
5	MD016490	Seal, Valve Stem	_		8	8
6	MD701788	'O' Ring, B	_	_	1	1
7	MK66114000	Washer, Seal	_	-	2	2
8	MM404874	'O' Ring, Valve	_	_	1	1
9	MM404878	'O' Ring, Filter Cup	_	_	1	1
10 .	MM404881	'O' Ring, Element	-	-	1	1
11	MM404884	Packing	-	-	2	2
12	MM406228	Seal, Side	-	_	4	4
13	MM406242	Oil Seal	-	-	1	1
14	MM409151	Gasket, Cover	-	_	1	1
15	MM407124	Gasket, Oil Pump Body	_	-	1	1
16	MD000312	Gasket, Oil Drain Plug	_	-	1	1
17	MM407145	'O' Ring	_	-	1	1
18	MM409326	Gasket, Water Pump	-	-	1	1
19	MM407422	Gasket, Water Pump	-		2	2
20	MM408205	Gasket, Oil Seal	-	-	1	1
21	MM409577	Gasket, Rear Plate	-	_	1	1
22	MM408226	Gasket, Front Plate	_	-	1	1
23	MM408235	Gasket, Gear Case	_	_	1	1
24	MM408291	Gasket, Sump		-	1	1

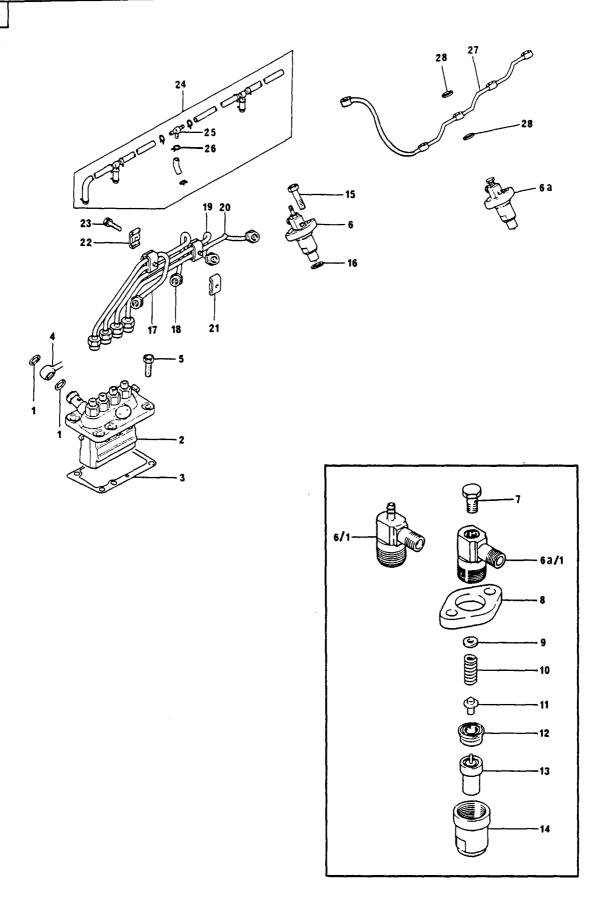


ENGINE OVERHAUL GASKET SET TYPE 80 ENGINES		THORNYCROFT				
REF. No.	PART	DESCRIPTION	ENGINE & Qty. Req'd.		PAGE 32	
	No.		60D	60 E	80 D	80 E
25	MM408448	Gasket, Cylinder Head	-	-	1	-
	MM408457	Gasket, Cylinder Head	_	_	-	1
26	MM408502	Gasket, Rocker Cover	_	_	1	1
27	MM408552	Gasket, Intake Manifold	_	-	1	1
28	MM408566	Gasket, Inlet Pipe	_	_	1	1
29	MM408577	Gasket, Exhaust Manifold	_	_	1	1
30	MM408581	Gasket	-	_	1	1
31	MM409898	Shim Set, Adjusting	-	_	1	1
32	MM409235	Gasket, Housing	-	_	1	1
33	MM500114	Washer, Fuel Pipe Union	-	-	2	2
34	MM500336	Gasket, Delivery Valve	-	_	4	4
35	MM500438	'O' Ring	_	_	4	4
36	K6515430	Gasket, Nozzle Holder	-	_	4	4
37	MM401206	Gasket, Oil Pump Cover	-	_	2	2
38	K9413390	Oil Seal	-	-	1	1
39	MF520002	'0' Ring (7)	-	-	2	2
40	MF520012	'0' Ring (18)	-	_	1	1
41	MF660042	Gasket (30)	_	_	1	1
42	MM408234	Gasket, Governor Cover	_	_	1	1
43	MM409632	'O' Ring	-	-	1	1
44	MM409863	Packing, Valve	_	_	1	1
45	MM409871	Seat, Valve	_	-	1	1
46	MM409869	'O' Ring, Filter Cup		-	1	1
47	MM409866	'O' Ring Valve	-	_	1	1
48	MF660036	Gasket (16)	-	-	1	1

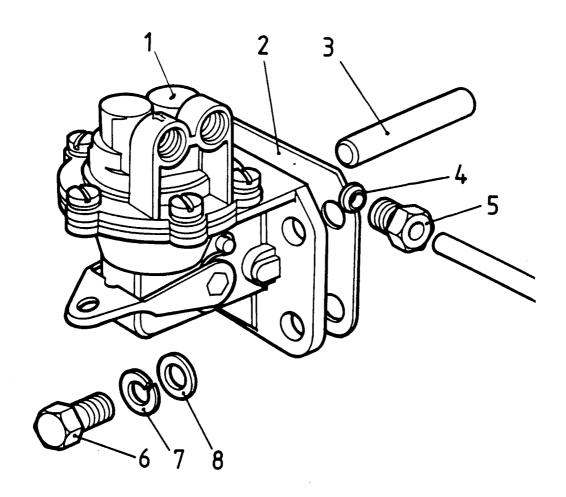


	FUEL INJE	CTION PUMP, NOZZLE AND PIPES	TH	ORN	YCR	F
REF.	PART	DESCRIPTION	I .	NE & Req'd.	PAGE	34
No.	No.		60D	60 E	80 D	80E
1	MK66112000	Washer, Seal	2	2	-	_
	MK66114000	Washer, Seal	_	_	2	2
2	MM409013	Pump Assy, Fuel Injection	1	-	-	_
	MM409842	Pump Assy, Fuel Injection	-	1	_	_
	MM409027	Pump Assy, Fuel Injection	-	_	1	_
	MM413239	Pump Assy, Fuel Injection	-	_	_	1
3	MM409891	Shim Set, Adjusting	1	1	-	-
	MM409898	Shim Set, Adjusting	-	-	1	1
4	-	Pipe (See Fuel Filter Page 40)	-	_	_	_
5	MF100055	Bolt	4	4	6	6
6	MM401110	Nozzle & Holder Assy (Flex L.O. Pipe)*	3	3	4	4
6A	MM408880	Nozzle & Holder Assy (Solid L.O.Pipe)*	3	3	4	4
6/1	MM501276	Body	3	3	4	4
6A/1	MM501245	Body	3	3	4	4
7	MM501100	Bolt, Banjo	3	3	4	4
8	MM501240	Flange	3	3	4	4
9	MM500785	Washer 1.3	A/R	A/R	A/R	A/R
	MM500786	Washer 1.35	A/R	A/R	A/R	A/R
	MM500787	Washer 1.4	A/R	A/R	A/R	A/R
	MM500795	Washer 0.9	A/R	A/R	A/R	A/R
	MM500796	Washer 1.0	A/R	A/R	A/R	A/R
	MM500797	Washer 1.1	A/R	A/R	A/R	A/R
	MM500798	Washer 1.2	A/R	A/R	A/R	A/R
	MM500799	Washer 0.1	A/R	A/R	A/R	A/R
10	MM500136	Spring, Pressure	3	3	4	4
11	MM500135	Pin, Pressure	3	3	4	4
12	MM500137	Distance Piece	3	3	4	4

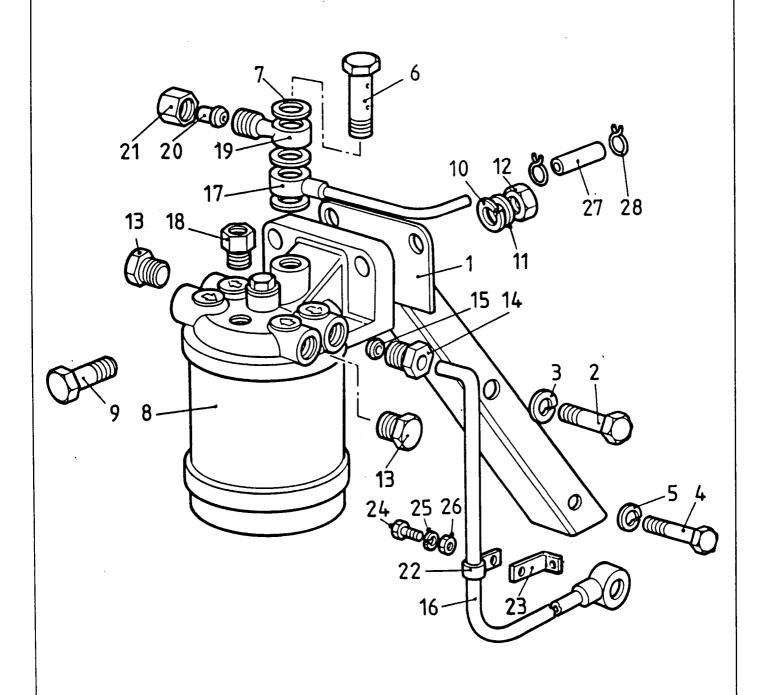
<sup>\*</sup> L.O.:- Leak Off



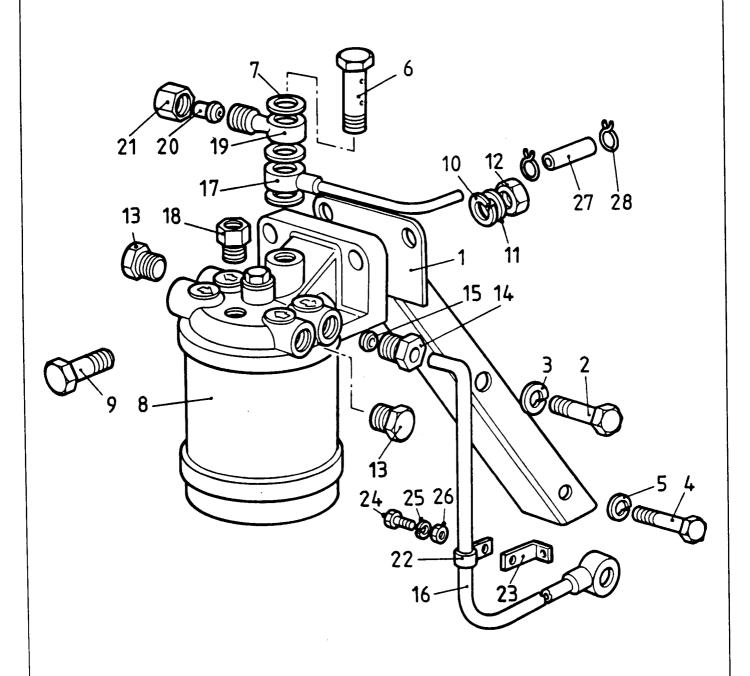
	FUEL INJ	ECTION PUMP, NOZZLE AND PIPES	TH	ORN	YCR	OF
REF.	PART	. DESCRIPTION		INE & Req'd.	PAGE	36
No.	No.		60D	60 E	80 D	80E
13	MM300152	Nozzle Assy	3	3	4	4
14	MM500908	Nut, Retaining	3	3	4	4
15	MF01260	Bolt	6.	6	8	8
16	K6515430	Gasket, Nozzle Holder	3	3	4	4
17	MM409094	Pipe Assy, Fuel Injection No. 1	1	1	1	1
18	MM409095	Pipe Assy, Fuel Injection No. 2	1	1	1	1
19	MM409096	Pipe Assy, Fuel Injection No. 3	1	1	1	1
20	MM409097	Pipe Assy, Fuel Injection No. 4	-	-	1	1
21	MM430703	Clamp	2	2	3	3
22	MM430614	Clamp	2	2	3	3
23	MF243628	Bolt, With Washer	2	2	3	3
24	MM409103	Pipe Assy, Flexible Leak Off	1	1	_	-
	MM409104	Pipe Assy, Flexible Leak Off	-	-	1	1
25	MM100088	Joint	A/R	A/R	A/R	A/R
26	MM100089	Clamp	8	8	12	12
27	54012971	Pipe Assy, Solid Leak Off	1	1	-	-
	54012972	Pipe Assy, Solid Leak Off	-	_	1	1
28	MK66108000	Sealing Washers	6	6	8	8
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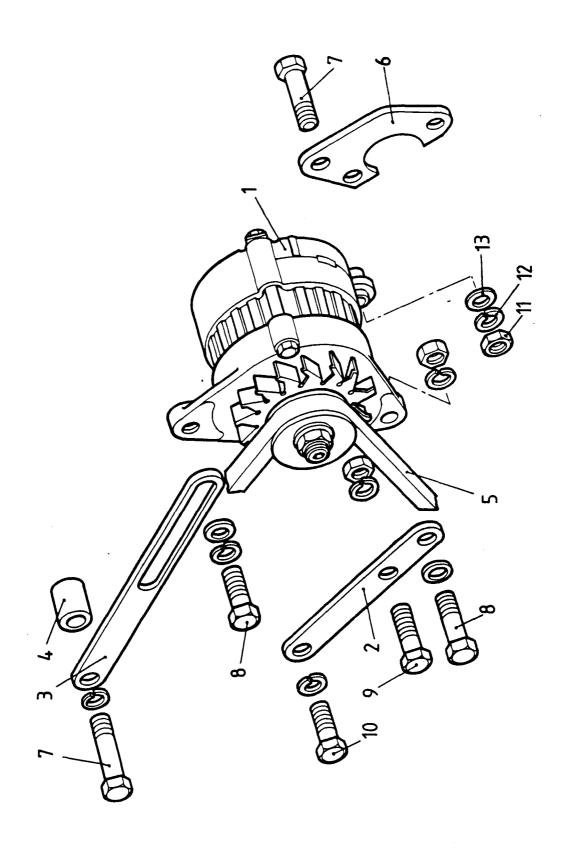
	FUEL	LIFT PUMP (MANUAL PRIMING)	THE	ORN	YCR	F
REF.	PART	DESCRIPTION		NE & Req'd.		
No.	No.	DESCRIPTION	60D	60 E	80 D	80 E
1	54383961	Fuel Lift Pump	1	1	1	1
2	54012275	Joint	1	1	1	1
3	54012326	Plunger	1	1	1	1
4	54381557	Olive	1	1	1	1
5	54382504	Nut	1	1	1	1
6	M8S x 20	Setscrew	4	4	4	4
7	WSM 8	Washer, Spring	4	4	4	4
8	WPM 8	Washer, Plain	4	4	4	4
9	54012279	Pipe, Lift Pump to Fuel Filter	1	1	-	_
	54012281	Pipe, Lift Pump to Fuel Filter	-	-	1	1
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			FUEL FILTER	TH	ORN	YCRO	F
	REF.	PART	DESCRIPTION	ŀ	NE & Req'd.	PAGE 40	
	No.	No.		60D	60 E	<b>80</b> D	80E
	1	54012277	Bracket, Fuel Filter	1	1	1	1
	2	M10x125x45	Bolt	1	1	1	1
	3	WSM 10	Washer, Spring	1	1	1	1
	4	M8B x 40	Bolt	1	1	1	1
	5	WSM 8	Washer, Spring	1	1	1	1
	6	54381315	Banjo Bolt	1	1	1	1
	7	54383351	Washer, Sealing	3	3	3	3
ľ	8	54383336	Fuel Filter, Assy	1	1	1	1
*		GFE 5296	Fuel Filter, Element	1	1	1	1
	9	M10S x 25	Screw	2	2	2	2
	10	WSM 10	Washer, Spring	2	2	2	2
Ī	11	WPM 10	Washer, Plain	2	2	2	2
Ţ	12	M10 N	Nut	2	2	2	2
	13	54383364	Plug, Filter	2	2	2	2
ſ	14	54381461	Nut	3	3	3	3
	15	54381531	Olive	3	3	3	3
	16	54012276	Fuel Pipe, Filter to Inj Pump	1	1	-	-
Ī		54012280	Fuel Pipe, Filter to Inj Pump	-	_	1	1
	17	54381627	Banjo Body	1	1	1	1
	18	54383550	Adaptor	1	1	1	1
	19	54381316	Banjo	1	1	1	1
	20	55300666	Nipple	1	1	1	1
	21	55300667	Nut, Union	1	1	1	1
	22	54384066	Clip, 'P'	1	1	1	1
	23	54384065	Support Strap	1	1	1.	1
	24	M6S x 16	Bolt	1	1	1	1
	25	WSM 6	Washer, Spring	1	1	1	1

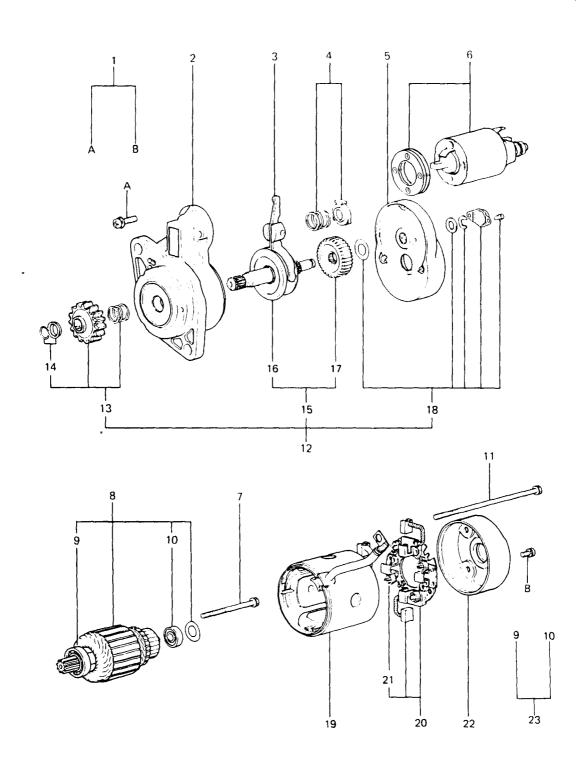


		FUEL FILTER	HORNYCROF					
REF.	PART	DESCRIPTION		ENGINE & PAGE Qty. Req'd.		42		
No.	No.	DESCRIPTION	60D	60 E	80 D	80E		
26	WPM 6	Nut	1	1	1	1		
27	54384073	Fuel Pipe	1	1	1	1		
28	54384074	Clip	2	2	2	2		
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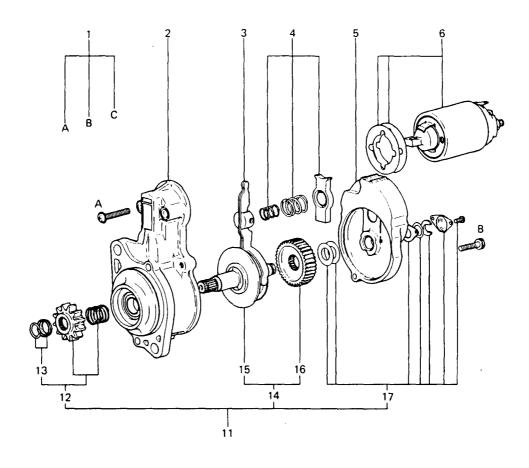


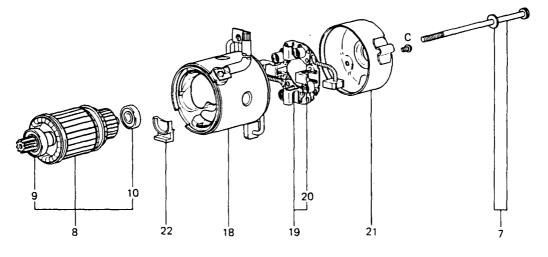
		ALTERNATOR	TH	ORN	YCR	OFT .
REF.	PART	DESCRIPTION		NE & Req'd.	PAGE	44
No.	No.	DESCRIPTION	60D	60 E	<b>80</b> D	80E
1	54384028	Alternator	1	1	1	1
	54384034	Pulley	1	1	1	1
	54384041	Spacer	1	1	1	1
2	54012330	Support Strap	1	1	1	1
3	54008704	Adjuster Arm	1	1	1	1
4	54012325	Spacer	1	1	1	1
5	54384058	Drive Belt	1	1	1	1
6	54012305	Clamp Plate	1	1	1	1
7	M8B x 40	Bolt	2	2	2	2
8	M8B x 35	Bolt	2	2	2	2
9	M8B x 45	Bolt	1	1	1	1
10	MF101264	Bolt	1	1	1	1
11	M8N	M8 Nut	3	3	3	3
12	WSM 8	Washer, Spring	5	5	5	5
13	WPM 8	Washer, Plain	6	6	6	6
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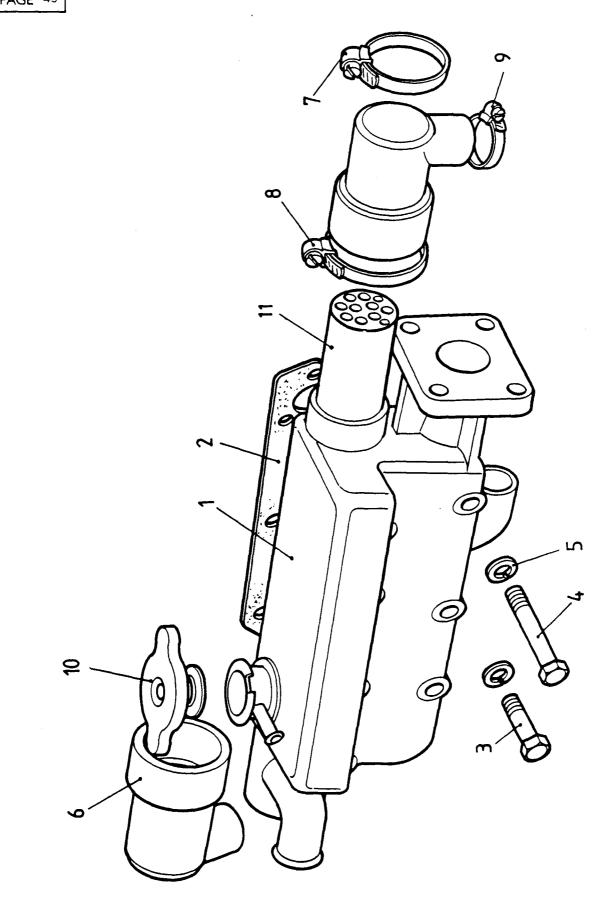
	STAR	TER MOTOR (TYPE 60 ENGINES)	TH	ORN	YCR	OF[
REF.	PART	DESCRIPTION		NE & Req'd.	PAGE 46	
No.	No.	Sesent for	60D	60 E	80 D	80E
1-23	MM409410	Starter Assy (12V-1.6kW):M	1	1	_	_
1	MD607432	Screw Set	1	1	-	_
2	MM502398	Bracket Assy, Front	1	1	_	_
3	MM502329	Lever Assy	1	1	_	_
4	MD602963	Spring Set	1	1	-	_
5	MM502331	Bracket Assy, Centre	1	1	-	-
6	MM502461	Switch Assy	1	1	_	-
7	MM502332	Bolt, Through	1	1	_	-
8	MM502333	Armature Set	1	1	_	_
9	MM502334	Bearing, Front	1	1	-	-
10	MM502335	Bearing, Rear	1	1	_	_
11	MM502347	Bolt, Through	2	2	-	_
12	MM502395	Shaft Assy, Clutch Set	1	1	-	_
13	MM502396	Pinion Set	1	1	-	_
14	MD607416	Stopper Set	1	1	-	-
15	MD607539	Gear Set	1	1	_	
16	MD607540	Shaft Assy, Pinion	1	1	-	-
17	MM502341	Gear	1	1	_	_
18	MM502342	Cover Set	1	1	· <b>-</b>	-
19	MM502397	Yoke Assy	1	1	_	-
20	MD607420	Holder Assy, Brush	1	1	_	-
21	MD602210	Spring, Brush	4	4	-	_
22	MM502346	Bracket, Rear	1	1	_	_
23	MM409895	Service Kit, Starter Bearing	1	1	-	-
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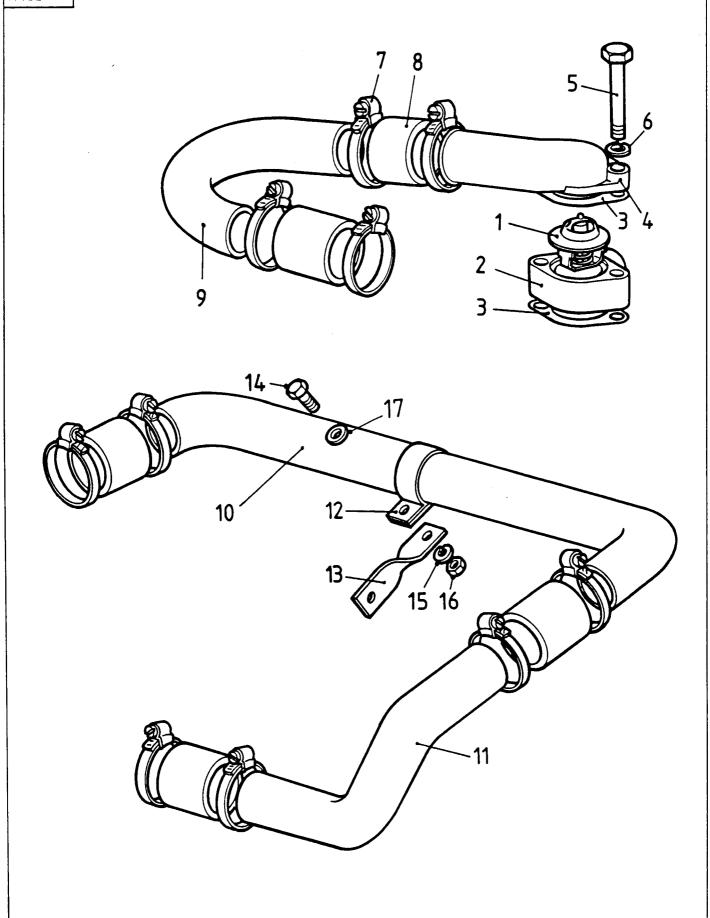
	STAR	TER MOTOR (TYPE 80 ENGINES)	THE	ORN	YCR	OFT
REF.	PART	DESCRIPTION		NE & Req'd.	PAGE 48	
No.	No.		60D	60 E	80 D	80 E
1-22	MM409413	Starter Assy (12V-2.0kW):M	-	_	1	1
1	MD607631	Screw Set	_	_	1	1
2	MM502452	Bracket Assy, Front	-	_	1	1
3	MD607633	Lever Assy	-	_	1	1
4	MD607446	Spring Set	-	-	1	1
5	MM502441	Bracket Assy, Centre	-	_	1	1
6	MD607634	Switch Assy	_	_	1	1
7	MD607635	Bolt Set	-	_	1	1
8	MD607636	Armature Set	_	_	1	1
9	MD607643	Bearing, Front	-	-	1	1
10	MD607638	Bearing, Rear	_	_	1	1
11	MM502438	Shaft Assy, Clutch Set	-	-	1	1
12	MM502439	Pinion Set	_	_	1	1
13	ME700124	Stopper Set	-	_	1	1
14	MM502442	Gear Set	-	-	1	1
15	MD607642	Pinion Shaft Assy	_	-	1	1
16	MM502443	Gear	_	_	1	1
17	ME700125	Cover Set	-	_	1	1
18	MM502453	Yoke Assy	-	-	1	1
19	ME700127	Holder Assy, Brush	_	-	1	1
20	ME700128	Spring, Brush	-	_	4	4
21	MD607645	Bracket Assy, Rear	-	-	1	1
22	MM502444	Packing	_	-	1	1





		HEAT EXCHANGER (IFWC)	[HORNYCROF]				
REF.	PART	DESCRIPTION		NE & Req'd.	PAGE 50		
No.	No.		60D	60 E	80 D	80E	
1	54383963	Manifold Heat Exchanger	1	1	_	_	
	54383962	Manifold Heat Exchanger	_	_	1	1	
2	54012295	Joint	1	1	_	_	
	54012296	Joint	<del>-</del>	-	1	1	
3	M8B x 100	Bolt	5	5	7	7	
4	M8S x 30	Screw	1	1	1	1	
5	WSM8	Washer, Spring	6	6	8	8	
6	54381596	Elbow	2	2	2	2	
7	54384056	Hose Clip	2	2	2	2	
8	54384057	Hose Clip	2	2	2	2	
9	54381452	Hose Clip	2	2	2	2	
10	54382602	Filler Cap	1	1	1	1	
11	54384505	Tubestack	1	1	_	_	
**************************************	54384506	Tubestack	_	-	1	1	
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-		FRESH WATER PIPES	TH	[HORNYCROF]			
REF.	PART	DESCRIPTION		NE & Req'd.	PAGE 52		
No.	No.		60D	60 E	80 D	80E	
1	K6516441	Thermostat	1	1	1	1	
2	54012245	Thermostat, Housing	1	1	1	1	
3	54012282	Joint	2	2	2	2	
4	54012248	Pipe, Thermostat Outlet	1	1	1	1	
5	MF241267	Bolt	2	2	2	2	
6	WSM8	Washer	2	2	2	2	
7	54381167	Hose Clip	10	10	10	10	
8	54383703	Hose	5	5	5	5	
9	54012283	Pipe, Thermostat Hsg to Heat/Exch	1	1	1	1	
10	54012285	Pipe, Heat/Exch to F.W. Pump	1	1	-	_	
	54012284	Pipe, Heat/Exch to F.W. Pump	_	-	1	1	
11	54012353	Pipe, From Heat Exchanger	1	1	1	1	
12	54011072	Clip	1	1	1	1	
13	54011867	Support Strap	1	1	1	1	
14	M6S x 16	Bolt	1	1	1	1	
15	WSM 6	Washer, Spring	1	1	1	1	
16	M6N	Nut	1	1	1	1	
17	WPM 6	Washer, Plain	1	1	1	1	
			1				

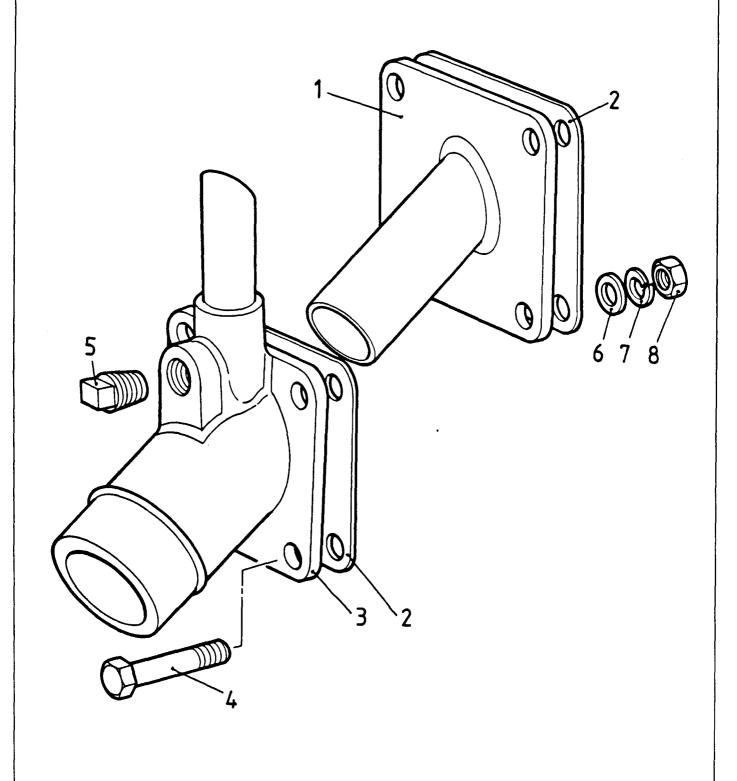


OIL COOLER AND PIPES DELTA AND PRM 160
GEARBOXES (IFWC ENGINES)

GEARBOXES (IFWC ENGINES) PAGE 53 16 -11

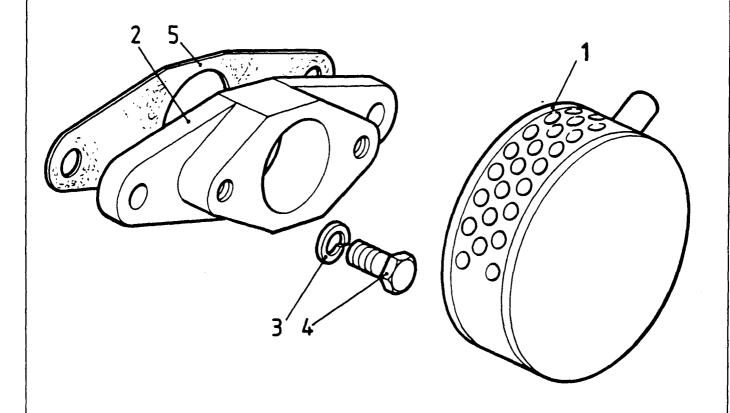
		LER AND PIPES DELTA AND PRM 160 GEARBOXES (IFWC ENGINES)	TH	ORN	YCR	F
REF.	PART	DESCRIPTION	1	NE & Req'd.	PAGE	54
No.	No.	DESCRIPTION	60D	60 E	80 D	80E
1	54012541	Pipe, Water (Cooler to Heat/Exch)	1	1	1	1
2	54381453	Hose Clip	2	2	2	2
3	54383789	Elbow, Hose End Cover	2	2	2	2
4	54381454	Hose Clip	2	2	2	2
5	54383648	Oil Cooler	1	1	1	1
6	54011127	Support Bracket	1	1	1	1
7	54381454	Hose Clip	1	1	1	1
8	54381592	Union (Oil Cooler)	2	2	2	2
9	54384090	Flexible Hose, Short (Delta Gearbox)	1	1	1	1
	54381599	Flexible Hose, Short (PRM 160 Gearbox)	1	1	1	1
10	54384091	Flexible Hose, Long (Delta Gearbox)	1	1	1	1
	54381589	Flexible Hose, Long (PRM 160 Gearbox)	1	1	1	1
11	54381593	Union, (PRM 160 Gearbox)	2	2	2	2
	54382594	Stud Coupling Union (Delta Gearbox)	2	2	2	2
12	54012540	Pipe, Water (Pump to Cooler)	1	1	1	1
13	54381453	Hose Clip	2	2	2	2
14	54383703	Hose	1	1	1	1
15	54012430	Adaptor	1	1	1	1
16	54384061	Elbow	1	1	1	1
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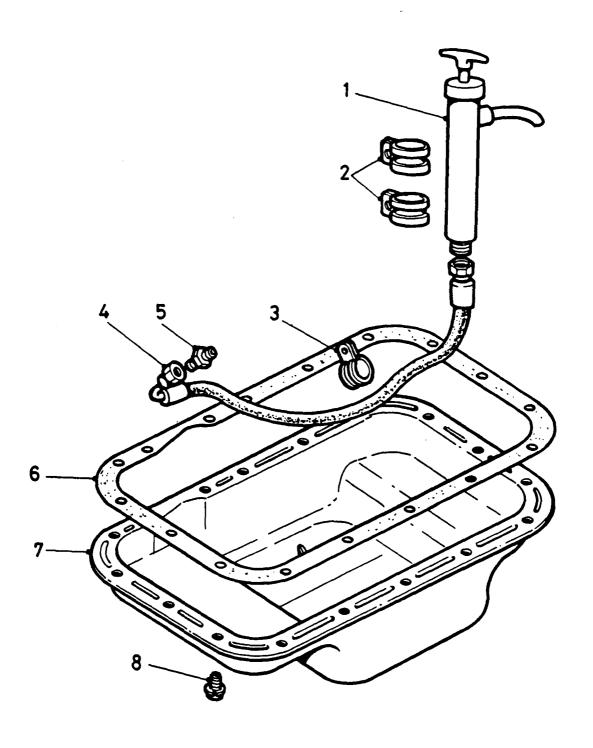
		WATER INJECTION BEND	HORNYCROF				
REF.	PART	DESCRIPTION		NGINE & PAGE		56	
No.	No.		60D	60 E	80 D	80E	
1	54011979	Exhaust Pipe Inner	1	1	1	1	
2	54009121	Joint	2	2	2	2	
3	54012267	Water Injection Bend Assy	1	1	1	1	
4	M8S x 45	Screw	4	4	4	4	
5	54383796	Taper Plug	1	1	1	1	
6	WPM8	Washer, Plain	4	4	4	4	
7	WSM8	Washer, Spring	4	4	4	4	
8	M8N	Nut	4	4	4	4	
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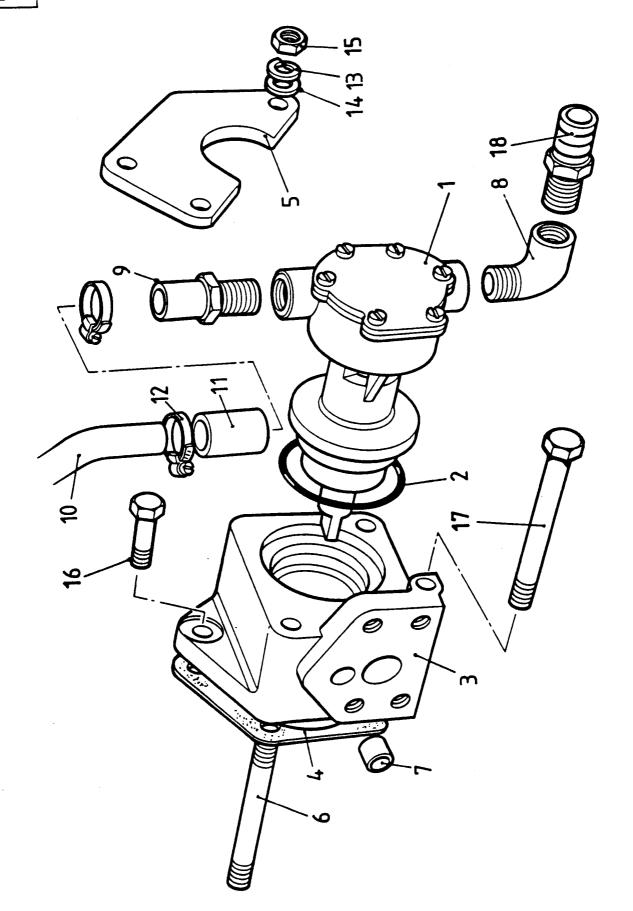
		AIR CLEANER	TH	ORN	YCR	F
REF.	PART	DESCRIPTION		INE & Req'd.	PAGE	58
No.	No.		60D	60 E	80 D	80E
1	54012246B	Air Cleaner	1	1	-	_
	54012246A	Air Cleaner	_	_	1	1.
2	54012261	Air Cleaner Adaptor	1	1	1	1
3	WSM8	Washer, Spring	2	2	2	2
4	M8S x 16	Screw	2	2	2	2
5	54012294	Joint	1	1	1	1
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		SUMP DRAIN PUMP	TH	ORN	YCR	OF]
REF.	PART	DESCRIPTION		NE & Req'd.	PAGE	60
No.	No.		60D	60 E	80 D	80E
1	54007802	Sump Drain Pump	1	1	1	1
2	54010754	Clip	2	2	2	2
3	54382513	Clip	1	1	1	1
4	54384128	Hose, Sump Pump To Sump	1	1	1	1
5	54384127	Union	1	1	1	1
6	MM408321	Gasket, Sump	1	1	-	-
	MM408322	Gasket, Sump	-	-	1	1
7	MM408303	Sump	1	-	_	_
	MM412636	Sump	_	1	_	_
	MM408305	Sump	-	-	1	_
	MM412605	Sump	_	-	_	1
8	MF240051	Bolt, With Washer	15	15	17	17
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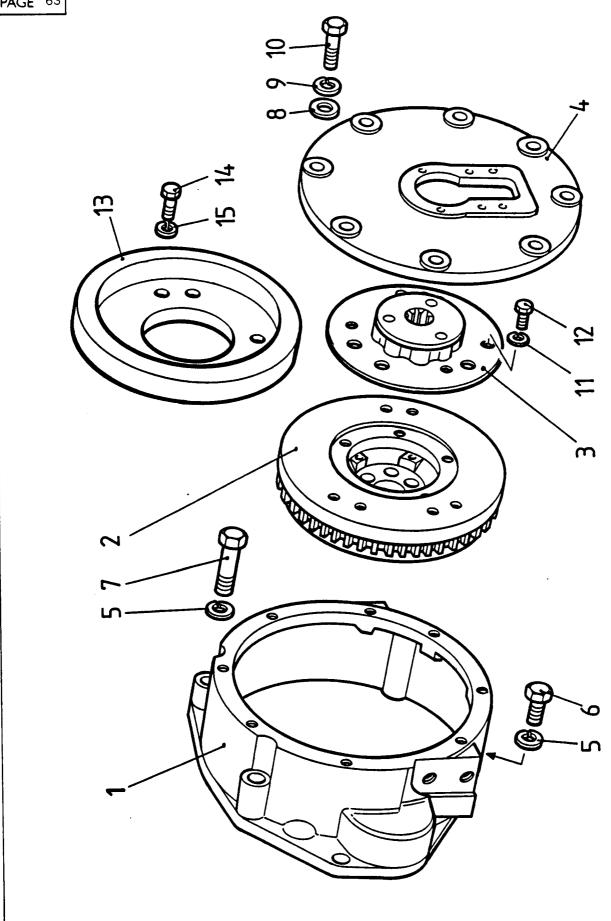
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		RAW WATER PUMP	THE	ORN	YCR	OF]
REF.	PART	DESCRIPTION		ENGINE & PA		62
No.	No.		60D	60 E	80 D	80E
1	54383964	Pump, Raw Water	1	1	1	1
2 .	54012308	Joint 'O' Ring	1	1	1	1
3	54012316	Housing, Pump	1	1	1	1
4	54012297	Joint	1	1	1	1
5	54012305	Clamp Plate	1	1	1	1
6	54012429	Stud, M8 x 95	2	2	2	2
7	54012327	Bush, Oilite	1	1	1	1
8	54384061	Elbow	1	1	1	1
9	54012430	Adaptor	1	1	1	1
10	54012289	Pipe, Raw Water Pump to Heat/Exch	1	1	1	1
11	54381587	Hose	1	1	1	1
12	54381452	Hose Clip	2	2	2	2
13	WSM8	Washer, Spring	2	2	2	2
14	WPM8	Washer, Plain	2	2	2	2
15	M8N	Nut	2	2	2	2
16	MF241257	Bolt	1	1	1	1
17	M8B x 90	Bolt	1	1	1	1
18	54384272	Adaptor	1	1	1	1
		NOTE:- When Delta Gearbox is used				
		2 Off item 8 are required				
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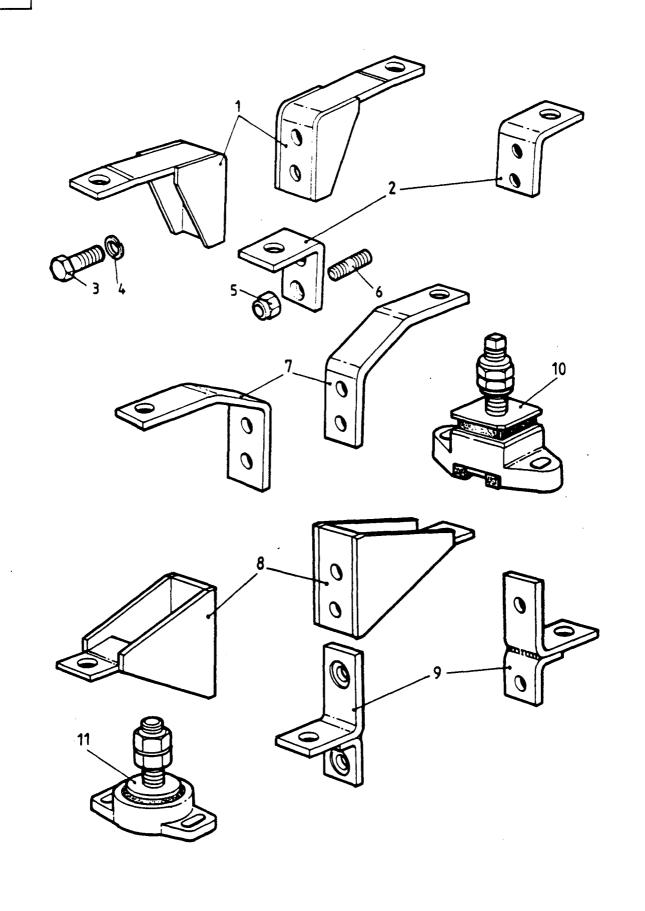


FLYWHEEL HOUSING, FLYWHEEL AND GEARBOX ADAPTOR PARTS

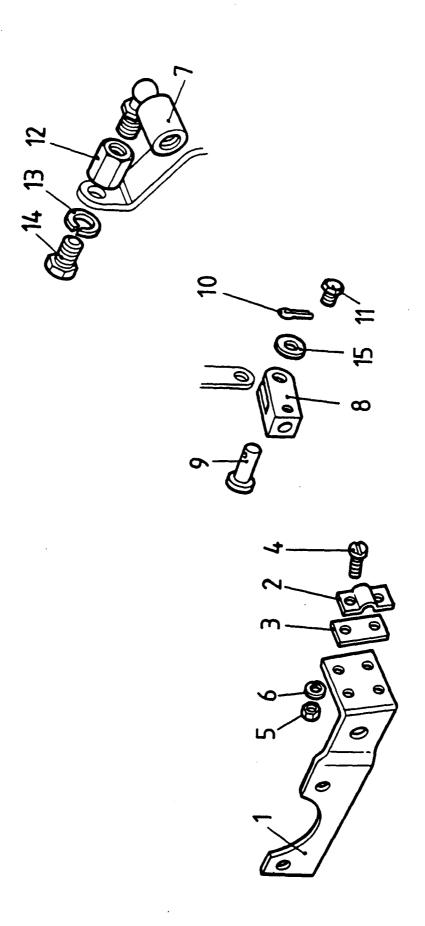


	FLYWHEEL	HOUSING, FLYWHEEL AND GEARBOX ADAPTOR PARTS	TH	ORN	YCR	OFT .
REF.	PART	DESCRIPTION	I	NE & Req'd.	PAGE	64
No.	No.		60D	60 E	8 <b>0</b> D	80E
1	54012237	Flywheel Housing SAE 5	1	1	1	1
2	MM408855	Flywheel Assembly	1	1	1	1
3	54384112	Drive Plate, (PRM 160 Drop Centre)	A/R	A/R	A/R	A/R
	54384059	Drive Plate, (Hurth)	A/R	A/R	A/R	A/R
	54384334	Drive Plate, (PRM 160 In Line)	A/R	A/R	A/R	A/R
	54384076	Drive Plate, (Delta)	A/R	A/R	A/R	A/R
4	54384081	Adaptor Housing (160 Drop Centre)	A/R	A/R	A/R	A/R
	54010316	Adaptor Housing (160 In Line)	A/R	A/R	A/R	A/R
	54012901	Adaptor Housing (Hurth)	A/R	A/R	A/R	A/R
	54011108	Adaptor Housing (Delta)	A/R	A/R	A/R	A/R
5	WSM 12	Washer, Spring	7	7	7	7
6	M12B x 20	Bolt	3	3	3	3
7	M12B x 50	Bolt	2	2	2	2
8	WPM 10	Washer, Plain	8	8	8	8
9	WSM 10	Washer, Spring	8	8	8	8
10	M10S x 25	Bolt	8	8	8	8
11	WSM 8	Washer, Spring	3	3	3	3
12	M8S x 25	Screw	3	3	3	3
13	54012916	Inertia Ring	1	1	1	1
14	M8S x 25	Screw	6	6	6	6
15	WSM 8	Washer, Spring	6	6	6	6
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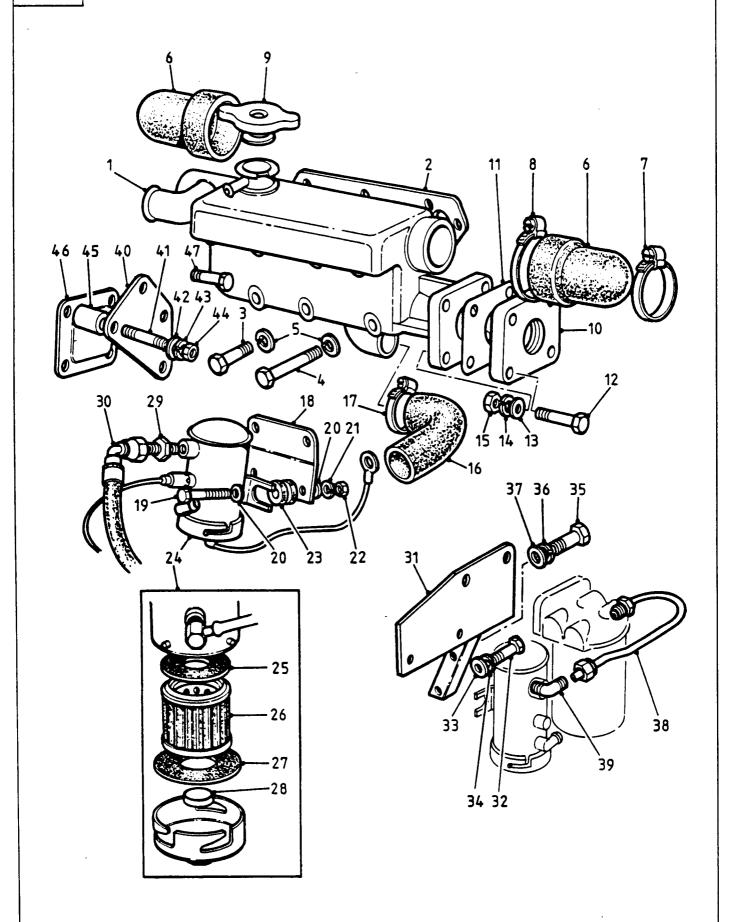
	SUPPORT BRACKETS			ORN	YCR	F
REF.	PART	DESCRIPTION		INE & Req'd.	PAGE	66
No.	No.	DESCRIPTION	60D	60 E	80 D	80E
1	54012895	Mtg Ft, Front (Depending on Applic'n)	2	2	2	2
2	54012243	Mtg Ft, Rear (Depending on Applic'n)	2	2	2	2
3	M12x125x25	Screw	4	4	4	4
4	WSM 12	Washer, Spring	4	4	4	4
5	M12S	Nut, Nylock	4	4	4	4
6	54012333	Stud	4	4	4	4
7	54012895	Mtg Ft, Front (Depending on Applic'n)	2	2	2	2
8	54012691	Mtg Ft, Front (Depending on Applic'n)	2	2	2	2
9	54012689	Mtg Ft, Front (Depending on Applic'n)	2	2	2	2
10	54383799	Flexible Mtg (Depending on Applic'n)	4	4	4	4
11	54383892	Flexible Mtg (Depending on Applic'n)	4	4	4	4
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	ENGI	NE MORSE KIT - REAR ENTRY	TH	ORN	YCR	F
REF.	PART	DESCRIPTION		INE & Req'd.	PAGE	68
No.	No.		60D	60 E	<b>80</b> D	80E
1	54012292	Bracket	1	1	1	1
2	54383105	Clamp	1	1	1	1
3	54383106	Shim	1	1	1	1
4	54382485	Screw	2	2	2	2
5	54382486	Nut	2	2	2	2
6	2BA	Washer, Spring	2	2	2	2
7	54380671	Ball Joint	1	1	1	1
8	54011922	Clevis	1	1	1	1
9	54383738	Clevis Pin	1	1	1	1
10	54383739	'R' Clip	1	1	1	1
11	54383735	Screw	1	1	1	1
12	54012310	Spacer	1	1	1	1
13	WSM 6	Washer, Spring	1	1	1	1
14	UFS 104/5	Screw	1	1	1	1
15	2BA	Washer, Plain	1	1	1	1
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EXTERNAL COOLED MANIFOLD, ELECTRIC FUEL LIFT PUMP (SIDE AND REAR MOUNTED)



1		ED MANIFOLD, ELECTRIC FUEL LIFT PUMP (SIDE AND REAR MOUNTED)	THE	ORN	YCR	OF
REF.	PART	DESCRIPTION	l l	NE & Req'd.	PAGE	70
No.	No.	SESCIMI TION	60D	60 E	80 D	80E
1	54384045	Manifold	1	1	-	-
	54384044	Manifold	_	_	1	1
2	54012295	Joint	1	1	_	_
	54012296	Joint	-	_	1	1
3	M8S x 30	Screw	1	1	1	1
4	M8B x 100	Bolt	5	5	7	7
5	WSM8	Washer, Spring	6	6	8	8
6	54384055	End Cap	2	2	2	2
7	54384056	Hose Clip	2	2	2	2
8	54384057	Hose Clip	2	2	2	2
9	54382602	Filler Cap	1	1	1	1
10	54010654	Flange, Dry Exhaust	1	1	1	1.
11	54009121	Joint	1	1	1	1
12	M8S x 40	Screw	4	4	4	4
13	WPM8	Washer, Plain	4	4	4	4
14	WSM8	Washer, Spring	4	4	4	4
15	M8N	Nut	4	4	4	4
16	54009231	Elbow	1	1	1	1
17	54381167	Hose Clip	1	1	1	1
18	54012408	Bracket, Fuel Lift Pump (Side Mounted)	1	1	1	1
19	M6 x 30	Screw	2	2	2	2
20	WPM6	Washer, Plain	4	4	4	4
21	WSM6	Washer, Spring	2	2	2	2
22	M6N	Nut	2	2	2	2
23	-	Flex Mount, Incl on Lift Pump Assy	2	2	2	2
24	54012894	Fuel Lift Pump	1	1	1	1
25	MM409881	Gasket	1	1	1	1

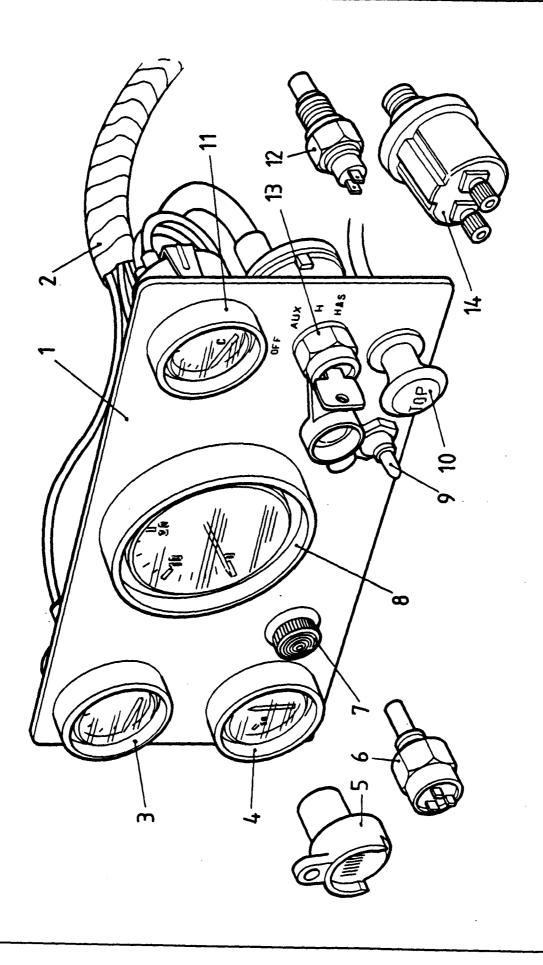
EXTERNAL COOLED MANIFOLD, ELECTRIC FUEL LIFT PUMP (SIDE AND REAR MOUNTED)

		D MANIFOLD, ELECTRIC FUEL LIFT PUMP SIDE AND REAR MOUNTED)	TE	ORN	YCR	OF]
REF.	PART	DESCRIPTION	l .	INE & Req'd.	PAGE	72
No.	No.		60D	60 E	80 D	80E
26	MM408992	Filter	1	1	1	1
27	MM409880	Gasket	1	1	1	1
28	MM409882	Magnet	1	1	1	1
29	54384227	Union (Side Mounted)	1	1	1	1
30	54384119	Fuel Pipe, Lift Pump to Fltr (Side Mtg)	1	1	1	1
31	54012896	Bracket (Fuel Filler & Lift Pump)	1	1	1	1
32	M8B x 40	Bolt	1	1	1	1
33	WPM8	Washer, Plain	1	1	1	1
34	WSM8	Washer, Spring	1	1	1	1
35	M10x125x45	Bolt	1	1	1	1
36	WSM 10	Washer, Spring	1	1	1	1
37	WPM 10	Washer, Plain	1	1	1	1
38	54012897	Fuel Pipe, Lift Pump to Fuel Filter	1	1	1	1
39	54384050	Elbow, Stud	1	1	1	1
40	54012407	Bracket	1	1	1	1
41	54012329	Stud	2	2	2	2
42	WPM8	Washer, Plain	3	3	3	3
43	WSM8	Washer, Spring	3	3	3	3
44	M8N	Nut	2	2	2	2
45	54010509	Spacer	3	3	3	3
46	K7910451	Cover, Plate	1	1	1	1
47	M8B x 60	Bolt	1	1	1	1
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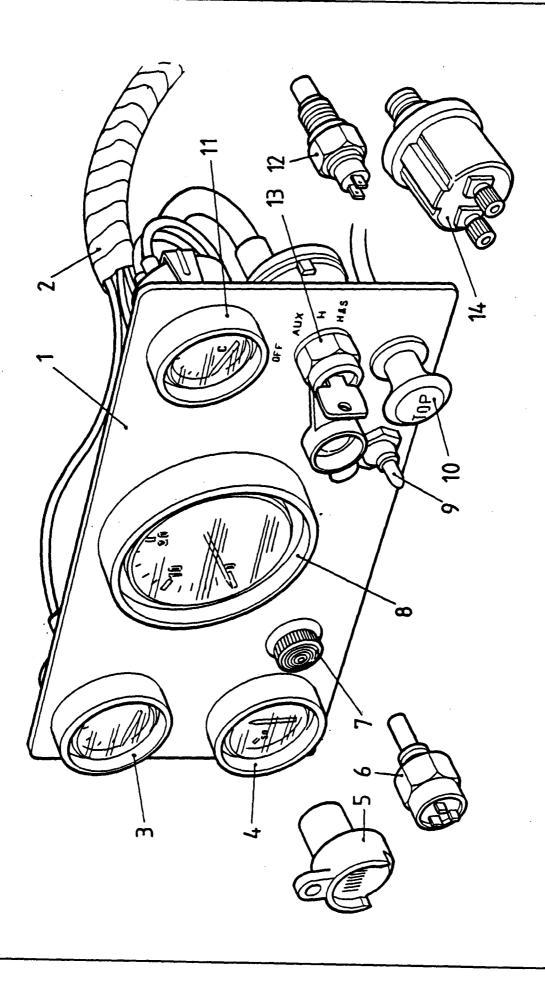


OIL COOLER AND PIPES FOR DELTA AND PRM 160 GEARBOXES (EFWC ENGINES)

		AND PIPES FOR DELTA AND PRM 160 EARBOXES (EFWC ENGINES)	TH	ORN	YCR	F
REF.	PART	DESCRIPTION	I	NE & Req'd.	PAGE	74
No.	No.		60D	60 E	80 D	80 E
1	54381453	Hose Clip	3	3	3	3
2	54383703	Hose	1	1	1	1
3	54012973	Water Pipe, Pump to Cooler	1	1	_	_
	54012567	Water Pipe, Pump to Cooler	_		1	1
4	54011072	Clip 'P'	1	1	1	1
5	M6S x 16	Screw	2	2	2	2
6	WPM6	Washer, Plain	4	4	4	4
7	WSM6	Washer, Spring	2	2	2	2
8	M6N	Nut	2	2	2	2
9	54011867	Strap	1	1	1	1
10	54010200	Elbow	1	1	1	1
11	54381453	Hose Clip	1	1.	1	1
12	54011127	Support Bracket	1	1	1	1
13	54381452	Hose Clip	2	2	2	2
14	54383648	Oil Cooler	1	1	1	1
15	54010194	End Cover	1	1	1	1
16	54381592	Union	2	2	2	2
17	54381589	Hose Long (PRM 160 Gearbox)	1	1	1	1
	54381599	Hose Long (Delta Gearbox)	1	1	1	1
18	54381599	Hose Short (PRM 160 Gearbox)	1	1	1	1
	54384240	Hose Short (Delta Gearbox)	1	1	1	1
19	54381593	Union (PRM 160 Gearbox)	2	2	2	2
	54382594	Union (Delta Gearbox)	2	2	2	2



		INSTRUMENT PANEL	TH	ORN	YCR	F
REF.	PART	DESCRIPTION	í	NE & Req'd.	PAGE	76
No.	No.	DESCRIPTION	60D	60 E	80 D	80E
		STANDARD INSTRUMENTS				
1	54012624	Instrument Panel, Standard	1	1	1	1
2	54012610	Panel, Harness	1	1	1	1
3	54383756	Oil Pressure Gauge	1	1	1	1
4	54383757	Ammeter	1	1	1	1
5	54382288	Alarm	1	1	1	1
6	54382439	Temperature, Switch Alarm	1	1	1	1
7	54383460	Warning Light	1	1	1	1
	54383536	Bulb	1	1	1	1
8	54382877	Tachometer	1	1	1	1
9	54383034/5	Switch/Seal	1	1	1	1
10	54381715/16	Stop Cable (16')	1	1	1	1
11	54383755	Water Temperature Gauge	1	1	1	1
12	54381375	Water Temperature, Sender	1	1	1	1
13	54383777	Key Start	1	1	1	1
14	54381376	Oil Pressure Sender	1	1	1	1
15	54380810	Adaptor, Water Temperature Sender	1	1	1	1
		BASIC INSTRUMENTS				
	54012625	Instrument Panel	1	1	1	1
	54383460	Lamp Holder	1	1	1	1
	54383536	Bulb 12V	1	1	1	1
<del></del>	54383756	Oil Pressure Gauge	1	1	1	1
	54383755	Water Temperature Gauge	1	1	1	1
	54383034	Toggle Switch	1	1	1	1
	54383035	Seal, Switch	1	1	1	1
<del></del>	54012610	Harness, Panel Lighting	1	1	1	1
	54012612	Fused Feed For Panel	1	1	1	1



		INSTRUMENT PANEL	TH	THORNYCE			
REF.	PART	DESCRIPTION	DESCRIPTION  ENGINE & Qty. Req'd.		PAGE	78	
No.	No.	DESCRIPTION	60D	60 E	80 D	80E	
		BASIC INSTRUMENTS					
	54383777	Key Switch	1	1	1	1	
	54381375	Water Temperature Sender	1	1	1	1	
	54384314	¼ Tab Terminal	2	2	2	2	
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