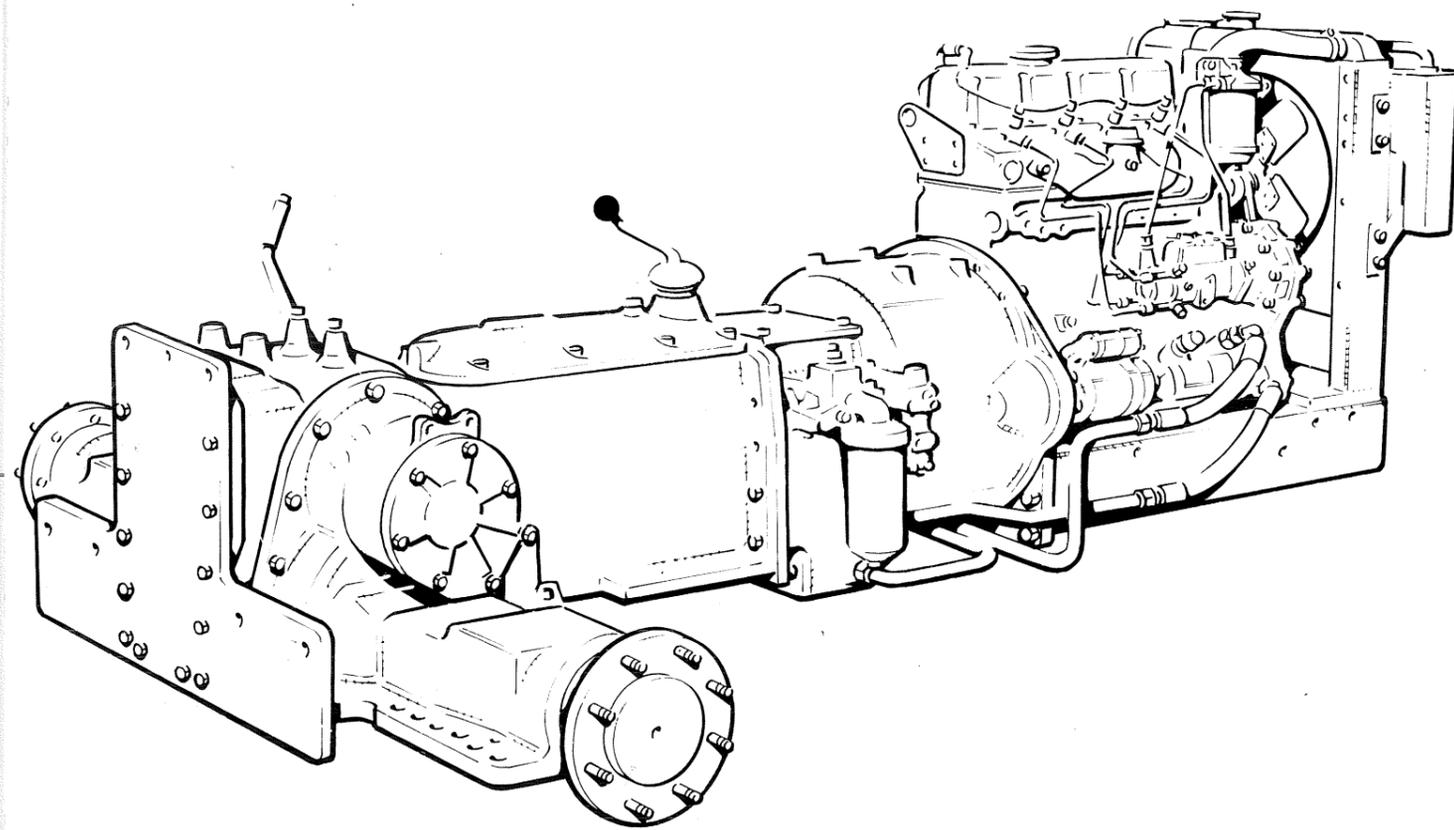




# 180° ENGINE & TRANSMISSION



# BMC

<b>4 Cylinder Engine</b>	<b>EA</b>
<b>3 Cylinder Engine</b>	<b>EC</b>
<b>Throttle Linkage</b>	<b>MA</b>
<b>Clutch</b>	<b>ME</b>
<b>Gearbox &amp; Transmission</b>	<b>MF</b>
<b>Steering Column</b>	<b>MG</b>
<b>Brakes</b>	<b>MJ</b>
<b>Electrical Equipment</b>	<b>MK</b>
<b>Floor Plate</b>	<b>MN</b>
<b>Drawbar</b>	<b>MO</b>
<b>P.T.O. &amp; Hydraulics</b>	<b>MR</b>
<b>Torque Converter</b>	<b>TC</b>



# MACHINE - ENGINE RECORD

M/C Type	Year of Manufacture	Engine Manufacture	Type	Prefix	Year		Replacement Engine	
					From	To	Prefix	Part No.
JCB 2	1964 to 1967	Ford	4 cyl.			1964	See Ford Dealer	
		BLMC	3 cyl.	28T	1964	1967	Assy. Not Available Use Components	
		BLMC	3 cyl.	28TD	1967			
JCB 2B	1964 to 1971	Ford	4 cyl.			1964	See Ford Dealer	
		BLMC	3 cyl.	28T	1964	1967	Assy. Not Available Use Component Parts	
		BLMC	3 cyl.	28TD	1967	1971		
JCB 2D	1970 on	BLMC	4 cyl.	38TD		E43480	4.98NV	BAK120N†
		BLMC	4 cyl.	38TD	E43481	Nov.72	4.98NT	BAK121N††
		BLMC	4 cyl.	4.98NT	Nov.72		4.98NT	BAK121N††
JCB 3	1961 to 1967	Ford	4 cyl.			1964	See Ford Dealer	
JCB 3 II	1967 to 1971	BLMC	3 cyl.	28T	1964	1967	Assy. Not Available Use Component Parts	
JCB 3 III	1971 on	BLMC	4 cyl.	38TD	1967	E43480	4.98NV	BAK120N†
		BLMC	4 cyl.	38TD	E43481	Nov.72	4.98NT	BAK121N††
		BLMC	4 cyl.	4.98NT	Nov.72		4.98NT	BAK121N††
JCB 3C	1963 to 1967	Ford	4 cyl.			1965	See Ford Dealer	
JCB 3C II	1967 on	BLMC	4 cyl.	38T	1965	1967	4.98NV	BAK120N†
JCB 3C III	1977 on	BLMC	4 cyl.	38TD	1967	E43480	4.98NV	BAK120N†
		BLMC	4 cyl.	38TD	E43481	Nov.72	4.98NT	BAK121N††
JCB 3D	1967 to 1968	BLMC	4 cyl.	38TD	Nov.72		4.98NT	BAK121N††
		BLMC	4 cyl.	38T		1967	4.98NV	BAK120N†
		BLMC	4 cyl.	38TD	E43480	Nov.72	4.98NV	BAK120N†
JCB 3D II	1968 on	BLMC	4 cyl.	38TD	E43481	Nov.72	4.98NT	BAK121N††
JCB 3D III	1977 on	BLMC	4 cyl.	4.98NT	Nov.72		4.98NT	BAK121N††
JCB 4C	1962 to 1967	Ford	4 cyl.			1965		
		BLMC	4 cyl.	38T	1965	1967	4.98NV	BAK120N†
JCB 4D	1968 to 1971	BLMC	4 cyl.	38TD		E43480	4.98NV	BAK120N†
		BLMC	4 cyl.	38TD	E43481		4.98NT	BAK121N††
		BLMC	4 cyl.	38TD	E43480	Nov.72	4.98NV	BAK120N†
JCB 700	1969 on	BLMC	4 cyl.	38TD	E43481	Nov.72	4.98NT	BAK121N††
		BLMC	4 cyl.	38TD			4.98NT	BAK121N††
		BLMC	4 cyl.	4.98NT	Nov.72		4.98NT	BAK121N††

**NOTE:**

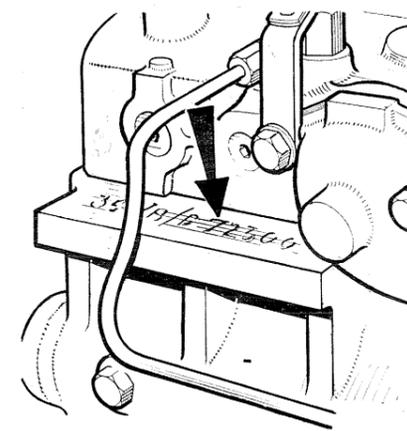
In 1964/65 with the introduction of the BLMC Skid all machines with this skid unit fitted were marked with a letter 'N' for Nuffield. after the machine serial number. This remained until approximately 1968 when JCB deleted the letter 'N' from the number.

† The BAK120N is a Basic Unbalanced Engine.

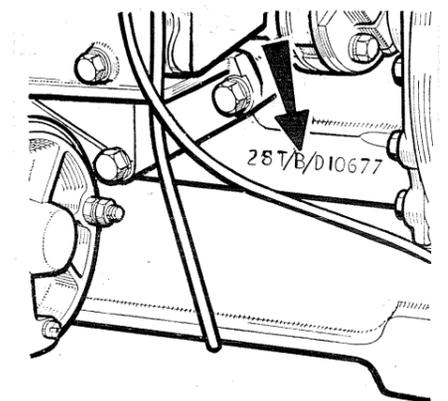
†† The BAK121N is a Basic Engine and machined to take Engine Balancer.

**ENGINE SERIAL NUMBERS - Location & Explanation**

BMC 4 cyl. DIESEL ENGINE



BMC 3 cyl. DIESEL ENGINE



**ENGINE SERIAL NUMBER (CODE EXAMPLE)**

38TD/1260/12345

PREFIX  
(3.8 litre tractor engine)

SERIAL NUMBER

BUILD NUMBER

TYPE	MODEL	PREFIX	COMMENCING ENGINE
3 cyl.	28—Litre Diesel (Type T)	28T	E 101
3 cyl.	28—Litre Diesel (Type TD)	28TD	E 101
4 cyl.	38—Litre Diesel (Type T)	38T	E 101
4 cyl.	38—Litre Diesel (Type TD)	38TD	E 101
4 cyl.	4.98—Litre Diesel (Type NT)	4.98NT	E 101
4 cyl.	4.98—Litre Diesel (Type NV)	4.98NV	E 101

JCB have used the above engines in there 180° machines.

# EA

**4 Cylinder Engine**

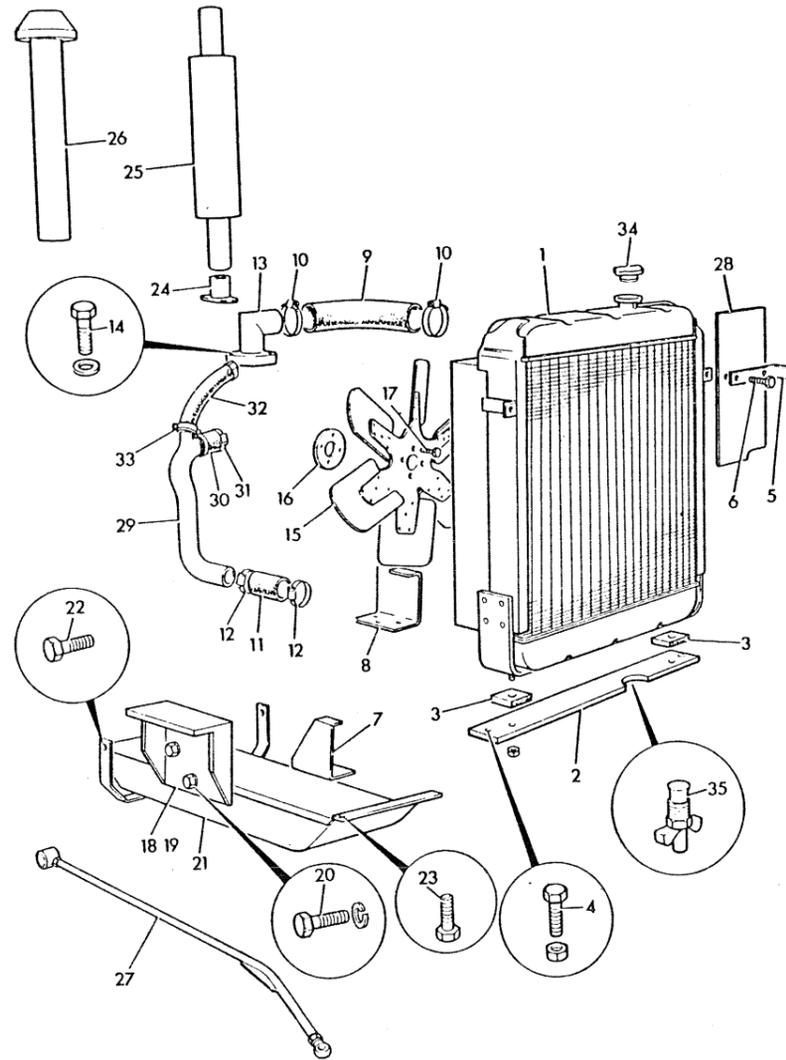
**Pages EA1 to EA5**



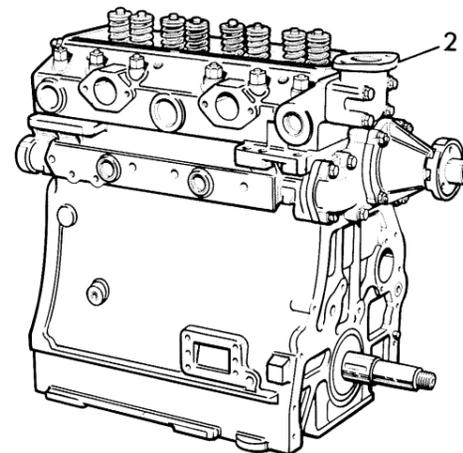
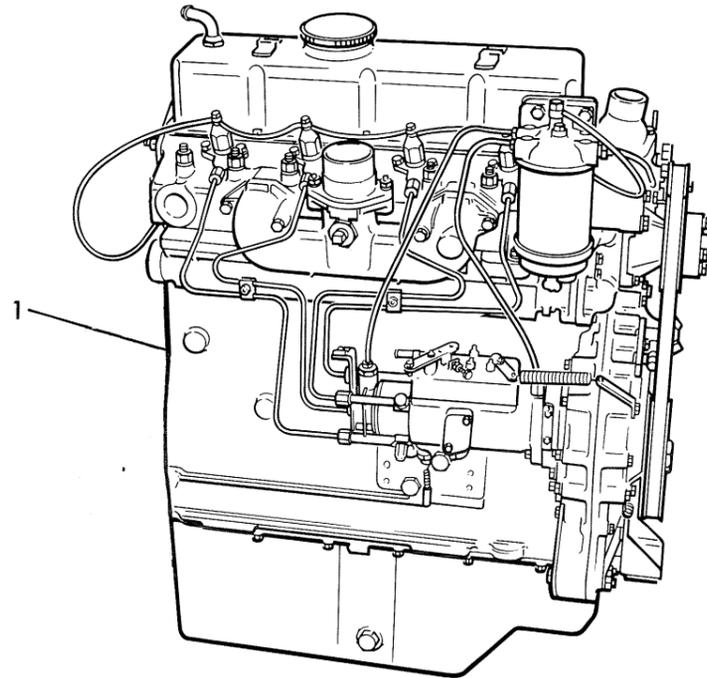
# SECTION EA 4 Cylinder Engine

Description	38 T	38 TD	498 NT	498 NV	JCB 2D	JCB 3	JCB 3C	JCB 3D	JCB 4C	JCB 4D	JCB 700
-Sediment Trap	1	1	1	1	EA30.1 M110552 on		EA30 EA30.1 M110552 on	EA30 EA30.1 M110552 on	EA30		EA30.1 M110552 on
Inlet Manifold	1	1	1	1	EA17	EA17	EA17	EA17	EA17	EA17	EA17
Oil Filter	1	1	1	1	EA16	EA16	EA15 EA16	EA15 EA16	EA15	EA16	EA16
Oil Gauge Union	1	1	1	1	EA28	EA28	EA28	EA28	EA28	EA28	EA28
Oil Pump	1	1	1	1	EA14.1	EA14.1	EA14 EA14.1	EA14 EA14.1	EA14 EA14.1	EA14.1	EA14.1
Oil Relief Valve	1	1	1	1	EA14.1	EA14.1	EA14 EA14.1	EA14 EA14.1	EA14 EA14.1	EA14.1	EA14.1
Piston/Connecting Rod	1	1	1	1	EA4 EA5	EA4 EA5	EA4 EA5	EA4 EA5	EA4 EA5	EA4 EA5	EA4 EA5
Pump-Power Steering -Manual Trans.	1	1	1	1	EA34.1	EA34 M45973 EA34.1	See m/c Catalogue EA34 M45973 EA34.1	See m/c Catalogue EA34 M45973 EA34.1	See m/c Catalogue	EA34 M45973 EA34.1	EA34.1
-T/C Trans. Japanese		1	1	1	EA34.2 M118633 EA34.3 EA34.2	EA34.2 M118633 EA34.3 EA34.2	EA34.2 M118633 EA34.3 EA34.2	EA34.2 M118633 EA34.3 EA34.2			EA34.2 M118633 EA34.3 EA34.2
-T/C Trans.Adapters		1	1	1	EA34.4 M118634 on	EA34.4 M118634 on	EA34.4 M118634 on	EA34.4 M118634 on			EA34.4 M118634 on
Push Rod/Tappets	1	1	1	1	EA4	EA4	EA4	EA4	EA4	EA4	EA4
Radiator & Fan	1	1	1	1	EA33	EA33	EA32 EA33	EA32 EA33	EA32 EA33	EA33	EA33
Sump	1	1	1	1	EA13	EA13	EA13	EA13	EA13	EA13	EA13
Thermostat & Housing	1	1	1	1	EA10	EA10	EA10	EA10	EA10	EA10	EA10
Timing Case	1	1	1	1	EA7	EA7	EA7	EA7	EA7	EA7	EA7
Valves	1	1	1	1	EA8	EA8	EA8	EA8	EA8	EA8	EA8
Valve Rocker Cover	1	1	1	1	EA10	EA10	EA10	EA10	EA10	EA10	EA10
Valve Rocker Gear	1	1	1	1	EA9	EA9	EA9	EA9	EA9	EA9	EA9
Water Pump	1	1	1	1	EA12	EA12	EA11 EA12	EA11 EA12	EA11 EA12	EA12	EA12

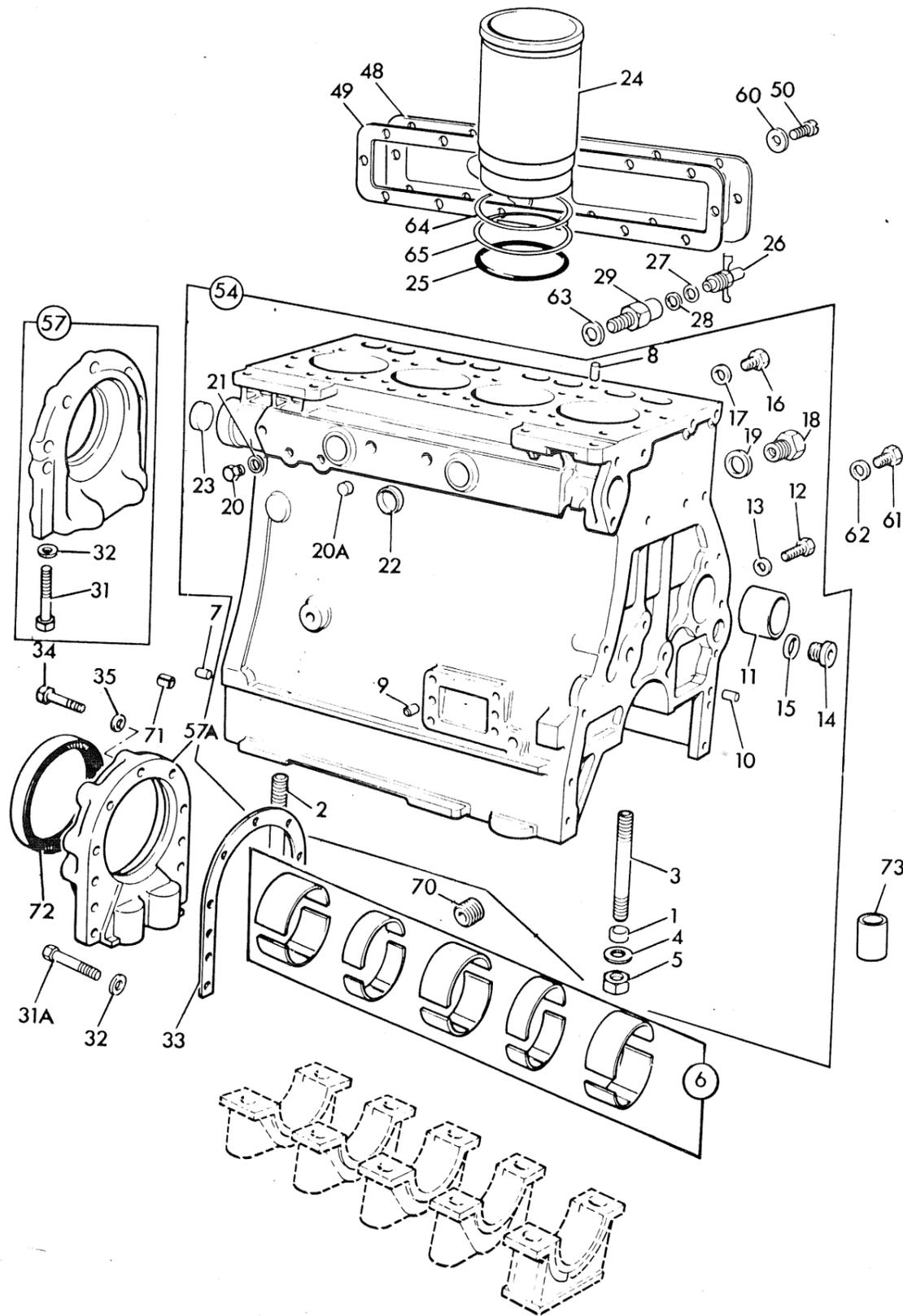




ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
For items 1 to 17 Refer to Page EA32							
18	AL17/13	....	Bracket N/S	JCB 3C	....	1	
	AL16/3	No./Con.	Bracket N/S	JCB 4C	....	1	
	104/80800						
19	AL17/14	....	Bracket O/S	JCB 3C	....	1	
	AL16/4	No./Con.	Bracket O/S	JCB 4C	....	1	
	104/80900						
20	1305/3718	....	Bolt	....	....	3	
	1416/0011	....	Washer	....	....	3	
	1340/0703	....	Nut	....	....	3	
For items 21 to 23 Refer to Page Mf 1-1							
For items 24 & 25 Refer to Page EA28							
26	See Page EA31	....	Air Breather	....	....	1	
27	AL17/63	....	Drag Link	JCB 3C	....	1	
	AL 16/36	No./Con.	Drag Link	JCB 4C	....	1	
	104/81200						
	ATJ4025	....	:Socket	....	....	1	
	7H3657	....	:Socket	....	....	1	
For items 28 to 34 Refer to Page EA32							



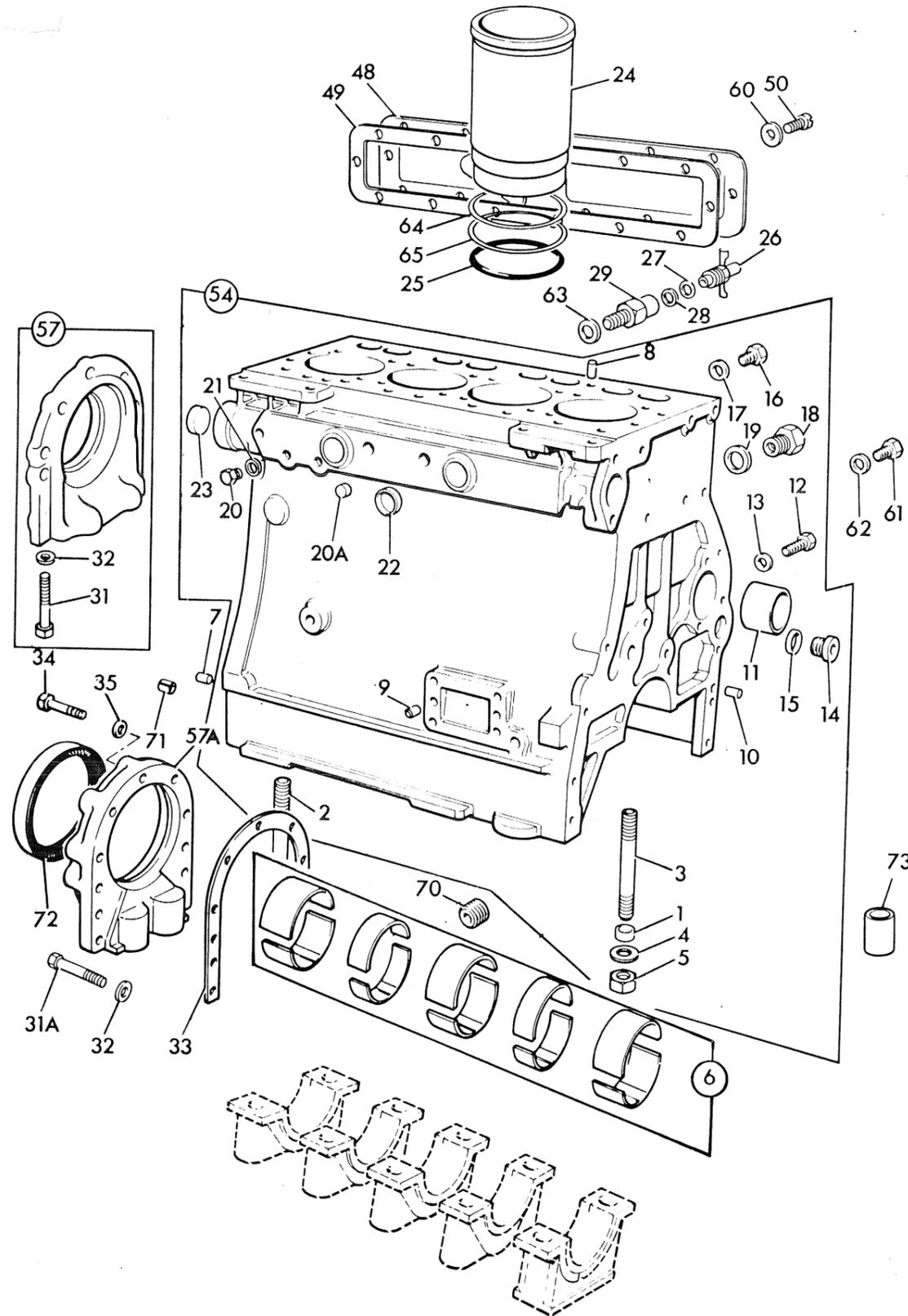
ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD					
				38 T	38 TD	498 NT	498 NV		
1	01/300700	....	....	Engine	Complete with Balancer D.P.A. Pump, Alternator Was BAK 12, BAK59 & BAK63	1	1	1	1
2	BAK91N	Superseded	Basic Engine	Unbalanced ....	1	1		1	
	BAK120N	To E44287							
	BAK95N BAK124N BAK121N	Superseded Superseded	Basic Engine	Machined to take Balancer	1	1			



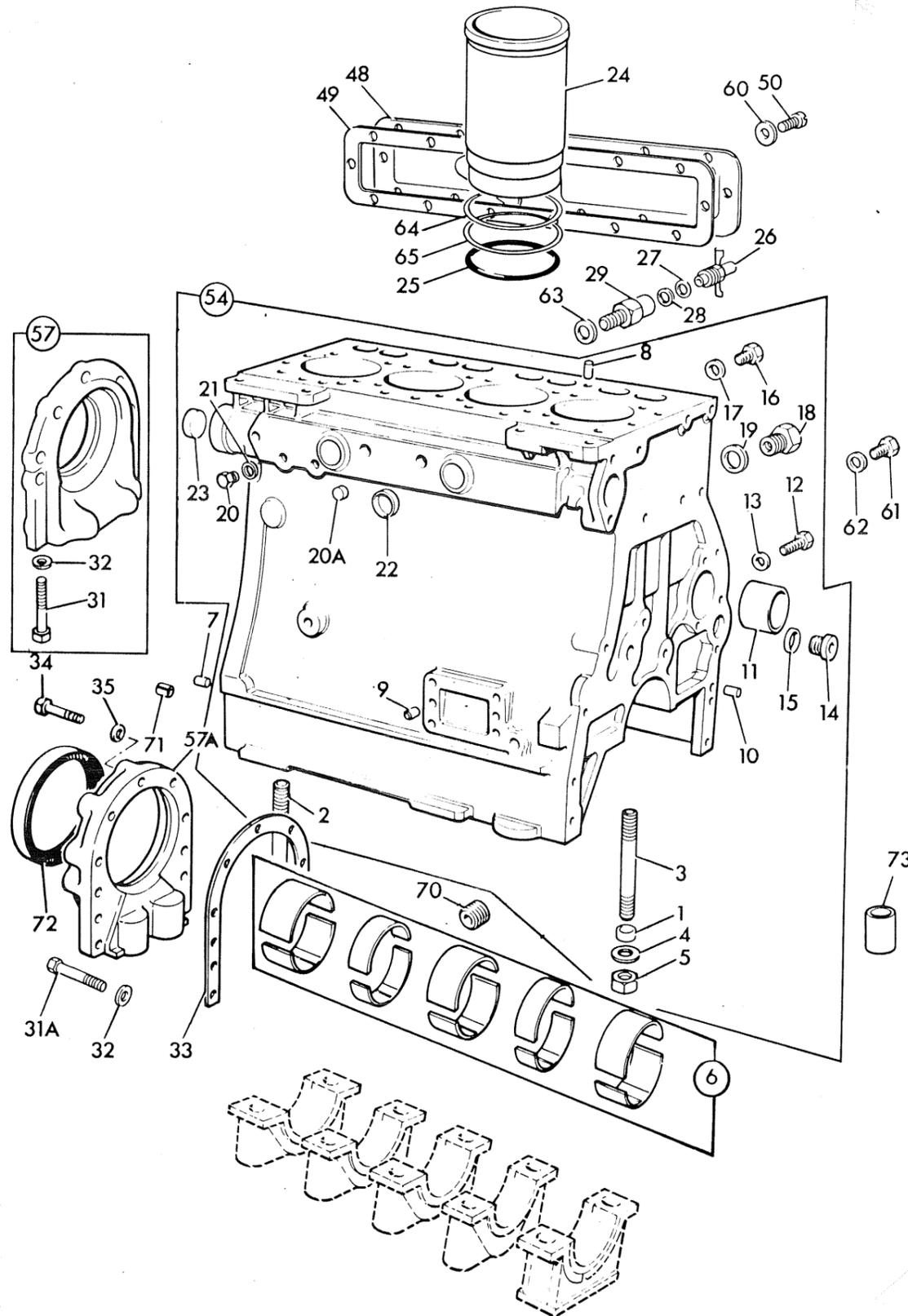
ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD	38 T	38 TD	498 NT	498 NV
54	37D96 37D403 86K1341	To E49184 Superseded	*Cylinder Block 37D96 N/A Use 86K 1341 with 86K 1190 4 off, 37D 1857 4 off, 37D426 4 off	1				
	37D808 37D2938 37D3067 37D3476 37D4003 N.S.P.	To E21241 Superseded To E40898 To E44286 Superseded	*Cylinder Block 37D808 N/A Use 37D3067 with 4off 86K 1190,37D3067 N/A Use 37D3476 Cylinder Block with 37D3480, for Balanced 86K623,4 off Engine 86K1190, 37D3483, 37D3486,37D3488 & 37D3484	1				
1	02/300201	....	*Dowel	12	12			
2	37D86 37D528	....	Stud-Short	8		8		
3	37D85 37D527 37D3449	....	Stud-Long	2			2	
4	37D91	....	Washer	10	10			
5	13H1990 13H2995 13H4043 88G590	....	Nut	10			10	
6	8G2366 02/392008 8G2366/15 02/392009 8G2366/30 02/392010 8G2366/45 02/392011	....	Main Bearing-STD Size *Main Bearing-STD Size Main Bearing.015in.(.38mm)U/S *Main Bearing.015in.(.38mm)U/S Main Bearing 0.030in.(.762mm)U/S *Main Bearing 0.030in.(.762mm)U/S Main Bearing.045in.(1.43mm)U/S *Main Bearing.045in.(1.43mm)U/S	1 set 1 set 1 set 1 set 1 set 1 set				
7	AMK1017	....	Dowel	3	3			
8	AMK697	....	Dowel	2	2			
9	AMK783	....	Dowel	2				
10	02/394005	....	*Dowel	3	3			
11	02/392001	....	*Bush	1	1			



# EA 2 CYLINDER BLOCK



ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
12	826/00582	.....	*Screw	1	1		
13	823/00208	.....	*Washer	1	1		
14	816/80013	.....	*Plug	2	2		
15	823/00209	.....	*Washer	2	2		
16	816/80014	.....	*Plug	2	2		
17	823/00210	.....	*Washer	2	2		
18	AMK317	.....	Plug	1			
19	N.S.P.	.....	Washer	1			
			Was AMK1016				
20	816/80014	.....	*Plug-Screw	2			
	816/80014	To E40898	*Plug-Screw				2
20A	835/10020	To E44286	*Core Plug				2
	835/10020						4
			5/8in. (15.875mm)				
21	823/00210	.....	*Washer	2			
	823/00210	To E40898	*Washer				2
22	816/80017	.....	*Plug-Screw	2			
	816/80017	To E40898	*Plug-Screw				2
	835/10021	.....	*Core Plug				
			1in. (25.4mm)				
23	AMK706	.....	Core Plug	1			
	AMK706	To E30798	*Core Plug				1
	835/10022						
			1 1/2in. (38.1mm)				
24	CMK169	Superseded	Cylinder Liner	4			
	37D425	To E49184					
	37D346	Superseded					
	37D1837	Superseded					
	988/00095						
	988/00095	To E21241	Cylinder Liner				4
	37D2942	Superseded					
	86K931	Superseded					
	86K1190	Superseded					
	988/00051						
	37D2843	.....	Cylinder Liner-Service Purposes only See Tractor 184 for information.				4
25	AMK61	To E49184	Sealing Ring	4			
	37D347	Superseded					4
	37D1857						
26	AMK13576	.....	Drain Tap	1			
	02/300094	To E47782	*Drain Tap				1
27	AMK1358	.....	Shim	1			



ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
28	AMK1359	....	Washer	2	2		
29	AMK1337	....	Adapter	1			
31	HBN522 HBZ522 1305/3120	Superseded Superseded	Bolt	2			
31A	HBN0412 1305/3010	Superseded	Bolt		2		
32	LWN305 1416/0005	Superseded	Washer	2	2		
33	813/00193	....	*Gasket	1	1		
34	HNS407 HZS407 1305/0005	Superseded Superseded	Bolt	9	9		
35	LWN304 1416/0004	Superseded	Washer	9	9		
48	AMK90 02/300045	....	Tappet Cover *Tappet Cover	1		1	
49	813/00203	....	*Gasket	1	1		
50	13H2102 1305/0002	Superseded	Screw	15	15		
57	AMK2532	....	Cover	1			
57A	37D531 86K1953	Superseded	*Cover		1		
60	823/00217	....	*Washer	15	15		
61	816/80014 816/80015	....	*Plug *Plug	1		1	
62	823/00210 823/00211	....	*Washer *Washer	1		1	
63	ARH517	....	Washer	1			
64	AMK1970	To E49184 From E21241	Shim-Cyl. Liner 0.003in.(0.076mm)	A/R			
	89J88 988/00057	Superseded	Shim-Cyl. Liner 0.003.(0.076mm)	A/R			
65	AMK1971	To E49184 From E21241	Shim-Cyl. Liner 0.005in.(0.127mm)	A/R			
	02/300102	....	*Shim-Cyl. Liner 0.004in.(0.102mm)	A/R	A/R		
	02/300103	....	*Shim-Cyl. Liner 0.005in.(0.127mm)	A/R	A/R		



# EA 2 CYLINDER BLOCK

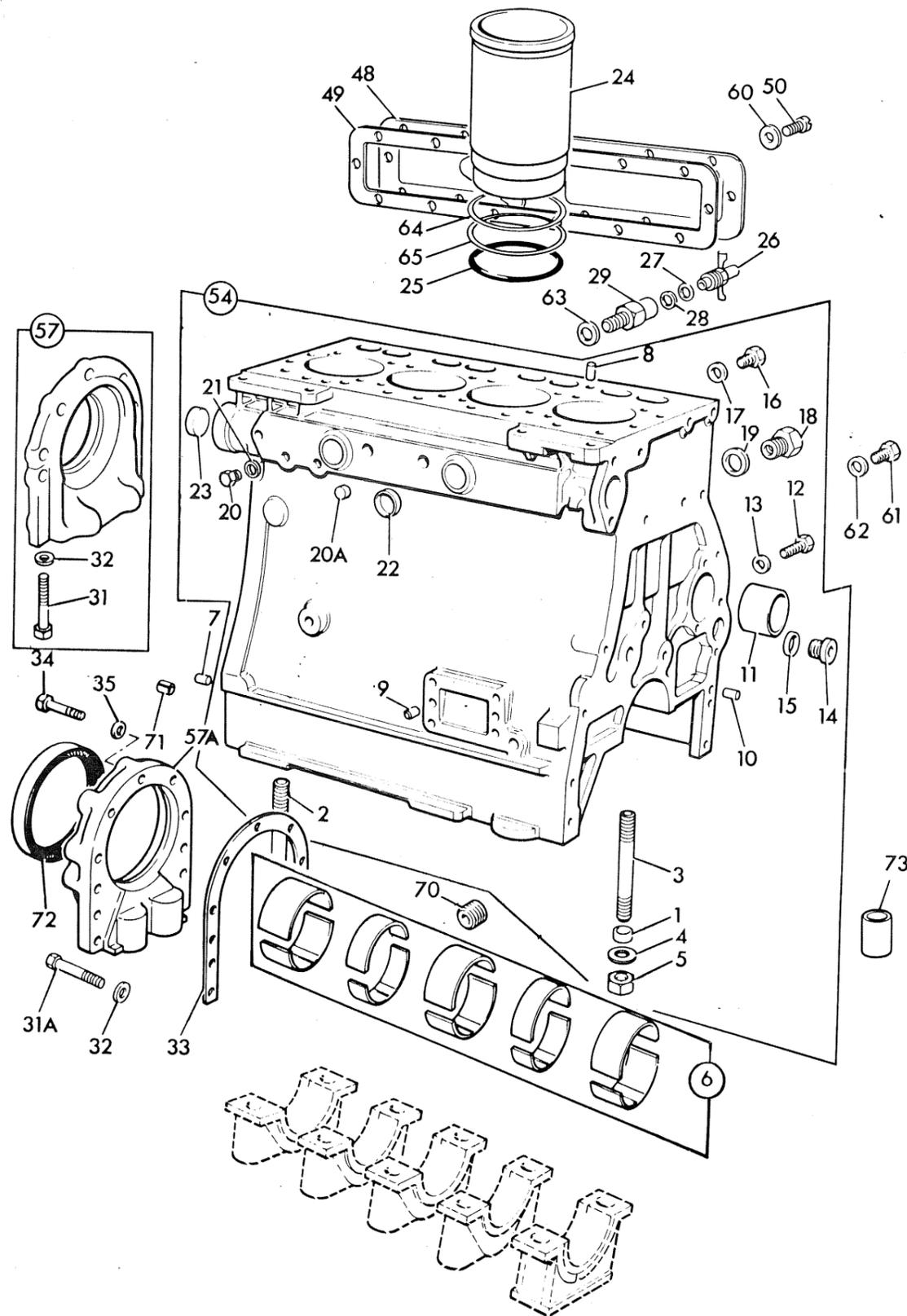
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ITEM PART No. CHANGE No. DESCRIPTION

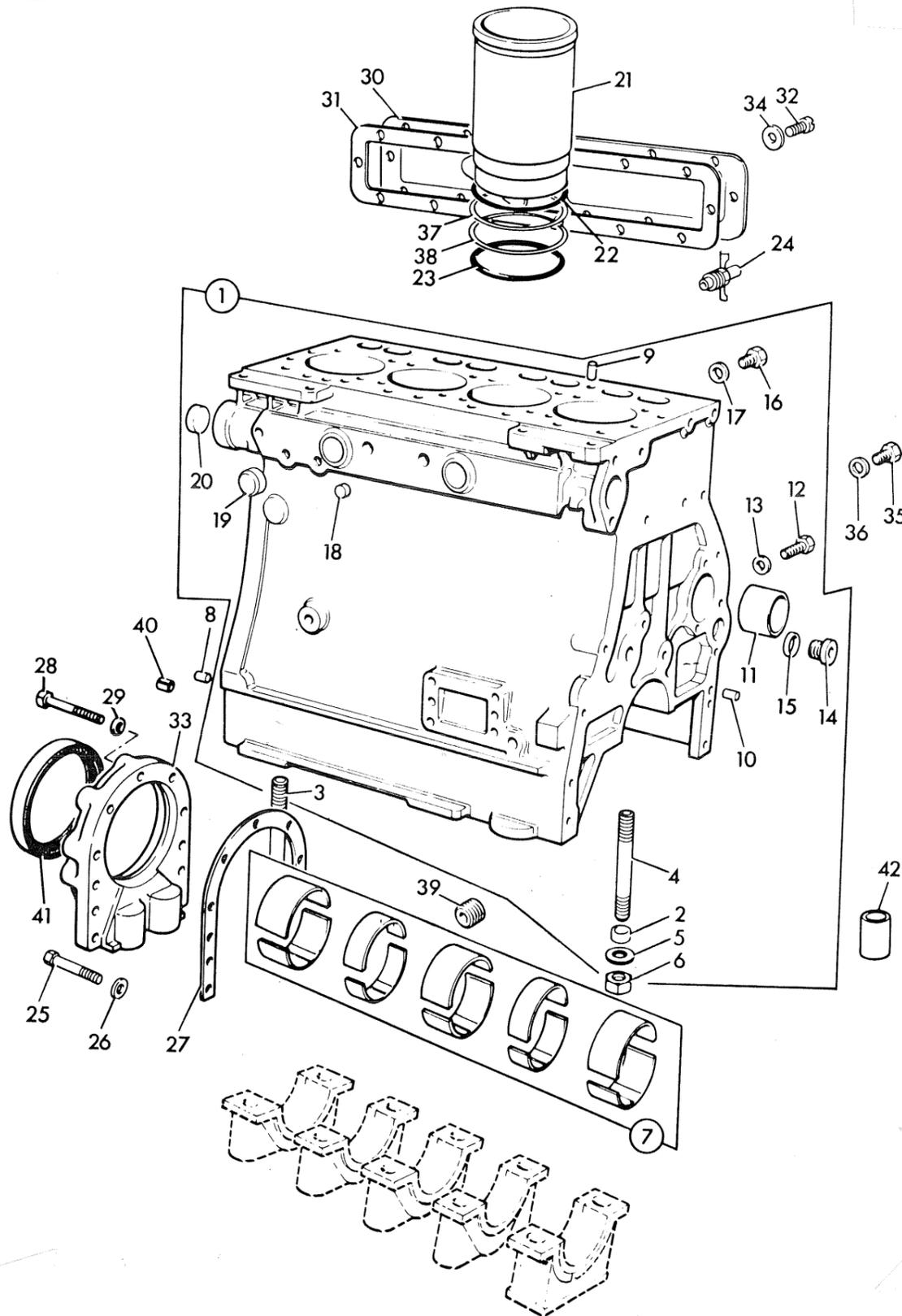
QTY OF BUILD

ITEM	PART No.	CHANGE No.	DESCRIPTION	38 T	38 TD	498 NT	498 NV
70	816/80016	....	*Plug	1	1		
71	AEA557 RPS1222 2102/0616	Superseded Superseded	Roll Pin		2		
72	813/00222	....	*Lip Seal		1		
73	86K98	E 44287 on	Spacer-Centre Main Bearing Stud Fitted to engine without balancer		2		





# EA 3 CYLINDER BLOCK



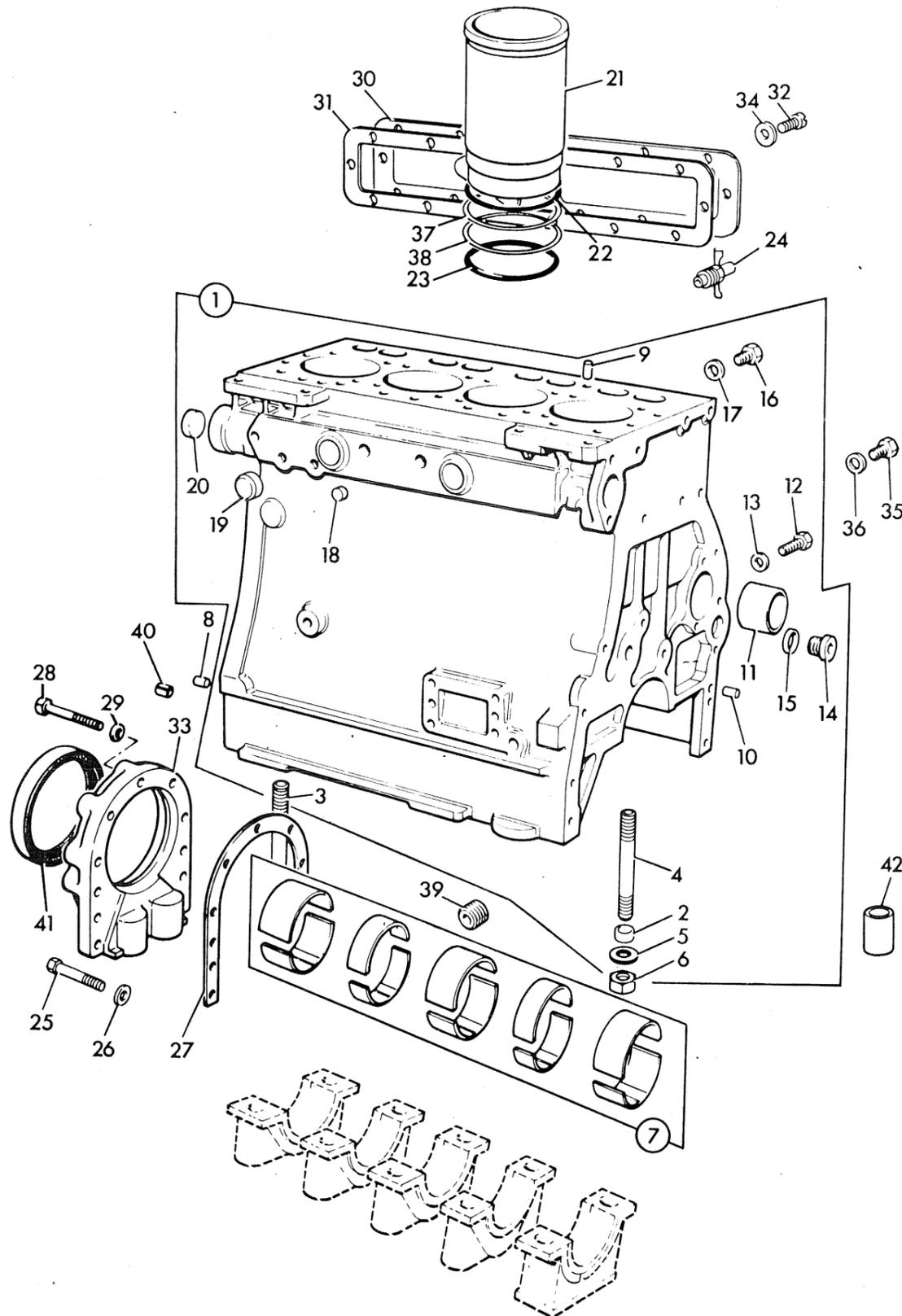
ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
1	86K935	....	Cylinder Block	....	....	....	1
	86K1083	....	Cylinder Block	....	....	....	1
2	02/300201	....	*Dowel-Hollow Main Bearing Cap to Oil Pump	....	....	....	2
3	37D528	....	:Stud-Short	....	....	....	6
4	37D527	....	:Stud-Long	....	....	....	2
	37D3449	....	:Stud-Centre	....	....	....	2
5	37D91	....	:Washer	....	....	....	10
6	88G590	....	:Nut	....	....	....	10
7	02/392008	....	*:Main Bearing STD	....	....	....	1 set
	02/392009	....	*:Main Bearing .015in.(.38mm) U/S	....	....	....	1 set
	02/392010	....	*:Main Bearing .030in.(.762mm)U/S	....	....	....	1 set
	02/392011	....	*:Main Bearing .045in.(1.43mm) U/S	....	....	....	1 set
8	AMK1017	....	:Dowel	....	....	....	3
9	02/394009	....	*:Roll Pin	....	....	....	2
10	02/394005	....	*:Dowel	....	....	....	3
11	02/392001	....	*:Bush	....	....	....	1
12	826/00582	....	*:Screw	....	....	....	1
13	ATJ2035 ZHM1011	Superseded	:Washer	....	....	....	1
14	816/80013	....	*:Plug	....	....	....	2
15	823/00209	....	*:Washer	....	....	....	2
16	816/80014	....	*:Plug	....	....	....	2
17	823/00210	....	*:Washer	....	....	....	2
18	835/10020	....	*:Core Plug 5/8in.(15.875mm)	....	....	....	4
19	835/10021	....	*:Plug 1in. (25.4mm)	....	....	....	2
20	835/10022	....	*:Core Plug 1 1/2in.(38.1mm)	....	....	....	1
21	86K937 988/00046	Superseded	Cylinder Liner	....	....	....	4
22	86K938 988/00071	Superseded	Sealing Ring-Top	....	....	....	4
23	86K939 988/00070	Superseded	Sealing Ring-Bottom	....	....	....	4
24	02/300094	....	*Drain Tap	....	....	....	1
25	1305/3010	....	Bolt	....	....	....	7
26	1416/0005	....	Washer	....	....	....	7
27	AMK63 988/00118	Superseded	Gasket	....	....	....	1



# EA 3 CYLINDER BLOCK

110M ISSUE

3\*



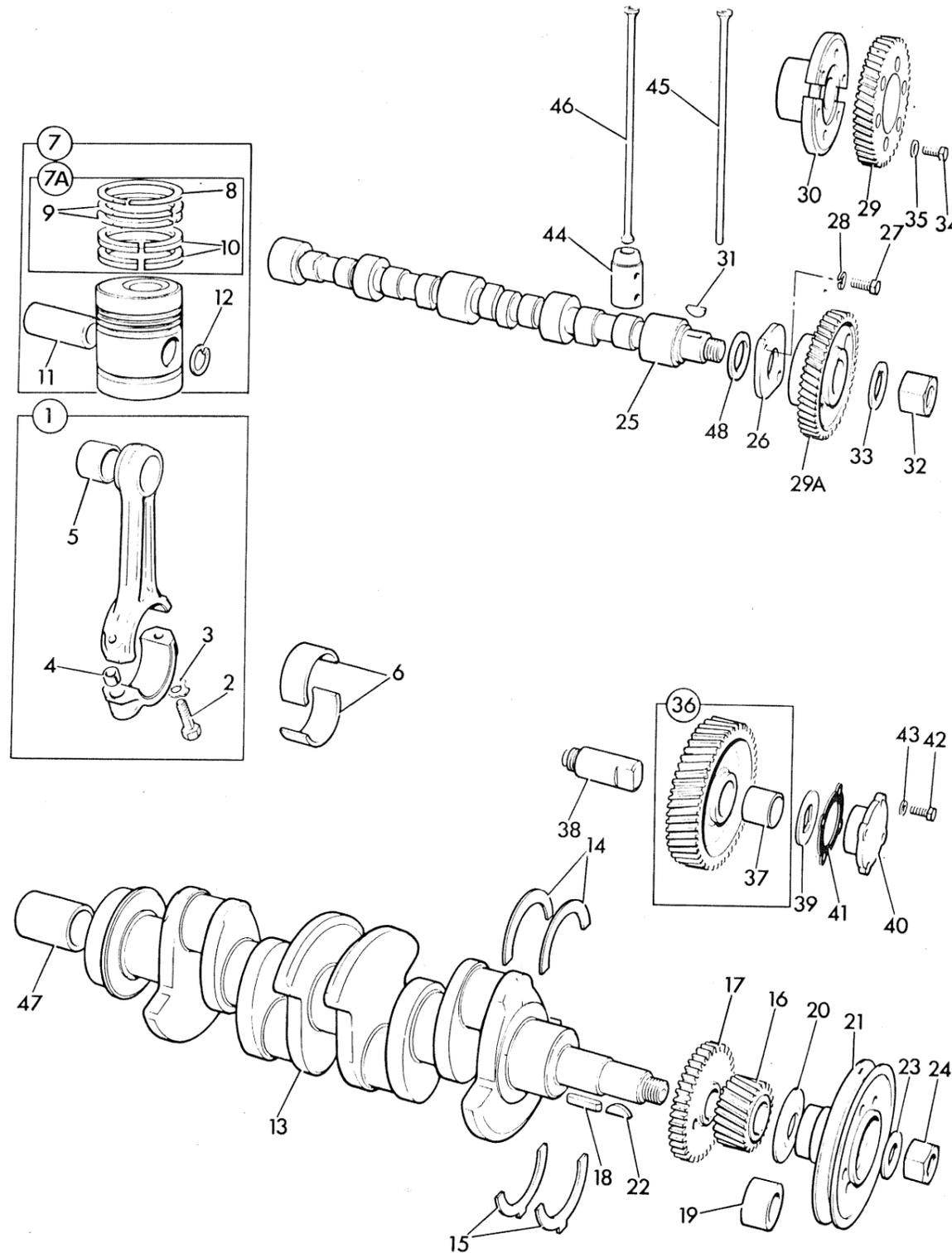
ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD				
				38 T	38 TD	498 NT	498 NV	
28	1305/0005	....	Bolt	....	....	....	2	2
29	1416/0004	....	Washer	....	....	....	2	2
30	02/300045	....	*Tappet Cover	....	....	....	1	1
31	37D335 988/00124	Superseded	*Gasket	....	....	....	1	1
32	13H2102 1305/0002	Superseded	Screw	....	....	....	15	15
33	37D531 86K1953	Superseded	*Housing	....	....	....	1	1
34	823/00217	....	*Washer	....	....	....	15	15
35	816/80015	....	*Plug	....	....	....	1	1
36	823/00211	....	*Washer	....	....	....	1	1
37	02/300102	....	*Shim-Cylinder Liner 0.004in. (.102mm)	....	....	....	A/R	A/R
38	02/300103	....	*Shim-Cylinder Liner 0.005in. (.127mm)	....	....	....	A/R	A/R
39	816/80016	....	*Plug	....	....	....	1	1
40	RPS1222 2102/0616	Superseded	Roll Pin	....	....	....	2	2
41	813/00222	....	*Oil Seal	....	....	....	1	1
42	86K98	....	Spacer	....	....	....	....	2



# EA 4 CRANKSHAFT & PISTON CAMSHAFT

110M ISSUE

2\*



ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
1	37D48	Superseded	Connecting Rod	4			
	37D3365						
2	37D539	E32022	Connecting Rod		4		
	37D3176	Superseded	37D539 N/A Use 86K1093 in set of 4				
2	CMK1140	.....	:Bolt	2			
	CMK1140	E32022	*:Bolt		2		
3	02/300401	.....					
	CMK1140	E32022	*:Bolt		2		
3	AEB163	.....	:Tab Washer	2	2		
4	02/394006	.....	*:Dowel	2	2		
5	BMK635	Superseded	:Bush	1	1		
	37D3037	Superseded					
6	988/00105	.....					
	8G2370	.....	Big End Bearing-STD	1 set			
6	02/392003	.....	*Big End Bearing-STD			1 set	
	8G2370/15	.....	Big End Bearing .015in(.381mm)U/S	1 set			
6	02/392004	.....	*Big End Bearing.015in.(.381mm)U/S			1 set	
	8G2370/30	.....	Big End Bearing.030in.(.762mm)U/S	1 set			
6	02/392005	.....	*Big End Bearing.030in.(.762mm)U/S			1 set	
	8G2370/45	.....	Big End Bearing.045in.(1.43mm)U/S	1 set			
6	02/392006	.....	*Big End Bearing.045in.(1.43mm)U/S			1 set	
	8G2370/45	.....	Big End Bearing.045in.(1.43mm)U/S	1 set			
7	CMK389	To E49184	Piston Assembly	4			
	37D426	Superseded					
7	988/00097	.....					
	37D426	To E25263	Pinion Assembly		4		
7	86K820	Superseded					
	988/00098	.....					
7	37D426/20	.....	Piston Assembly.020in(.508mm)O/S	4			
	37D426/20	To E25263	Piston Assembly .020in(.508mm)O/S		4		
7A	37D3106/20	.....					
	AHM9024	To E49184	Piston Ring Kit-STD	1			
7A	AHM9025	To E25263	:Piston Ring Kit-STD			1	
	AHM9045	.....					

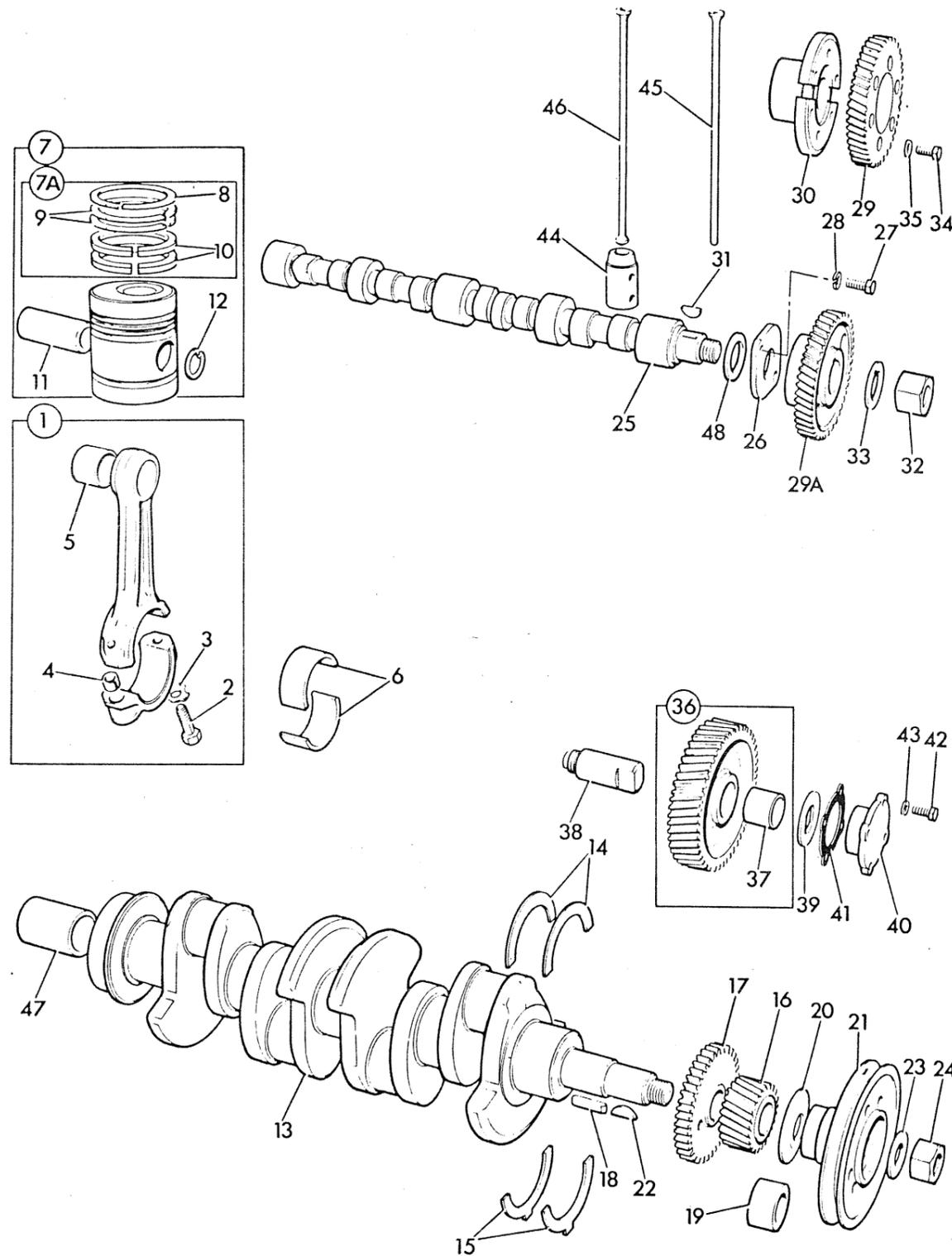
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# EA 4 CRANKSHAFT & PISTON CAMSHAFT

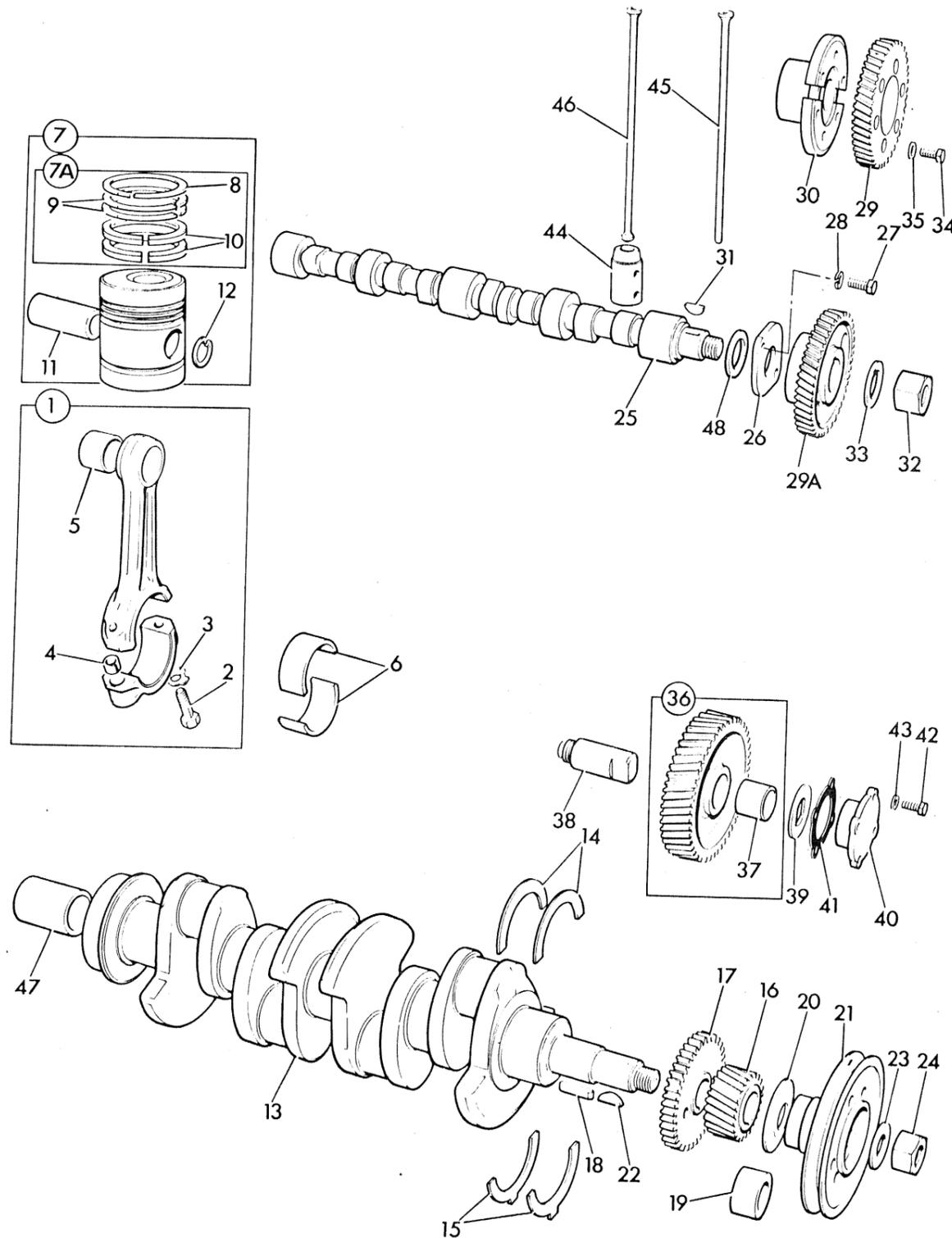
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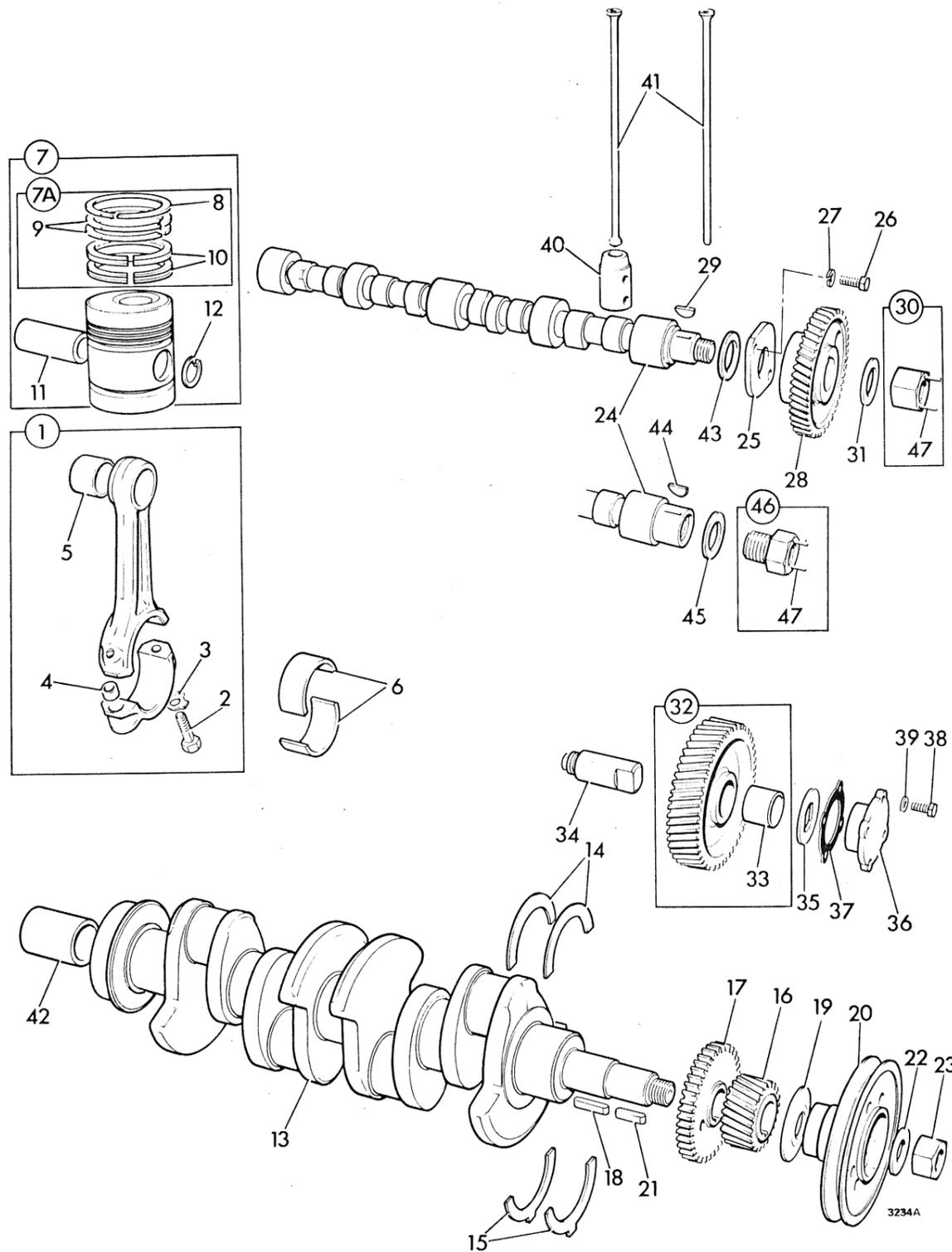


ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
8	N.S.P.	....	::Piston Ring Compression-STD Was CMK196 & 86K822	1	1		
	N.S.P.	....	::Piston Ring Compression .020in. (.508mm)O/S Was CMK196/20	1	1		
9	N.S.P.	....	::Piston Ring Compression-STD (Tapered) Was CMK198	2	2		
	N.S.P.	....	::Piston Ring Compression .020in. (.508mm) O/S Was CMK198/20	2	2		
10	N.S.P.	....	:Piston Ring Scraper .... Was CMK197	2			
	N.S.P.	....	:Piston Ring Scraper .... Was 37D446 & 86K809	2	2		
	N.S.P.	....	:Piston Ring Scraper.020in. (.508mm) O/S Was 37D446/20	2	2		
11	CMK237	....	:Gudgeon Pin ....	1	1		
12	CCN222	....	:Clip ....	2	2		
13	37D453 88G413	Superseded	Crankshaft ....	1			
	37D812	....	Crankshaft ....		1		
14	37D155	....	Thrust Washer-Upper ....	2			
	02/300115	....	*Thrust Washer-Upper ....		2		
15	37D154	....	Thrust Washer-Lower ....	2			
	02/300116	....	*Thrust Washer-Lower ....		2		
16	02/390002	....	*Pinion ....	1	1		
17	02/390001	....	*Driving Gear ....	1	1		
18	02/394001	....	*Key ....	1	1		
19	CMK120	....	Distance Piece ....	1			
20	02/300001	....	*Oil Thrower ....	1	1		
21	AMK1352 37D454 988/00152	Superseded Superseded	Pulley ....	1			
	37D2100 37D454 988/00152	To E11974 Superseded	Pulley ....		1		
22	02/394001	....	*Key ....	1	1		
23	AMK724	....	Tab Washer ....	1			
	02/300095	....	*Tab Washer ....		1		
24	FNN116 1340/0901	Superseded	Nut ....	1	1		

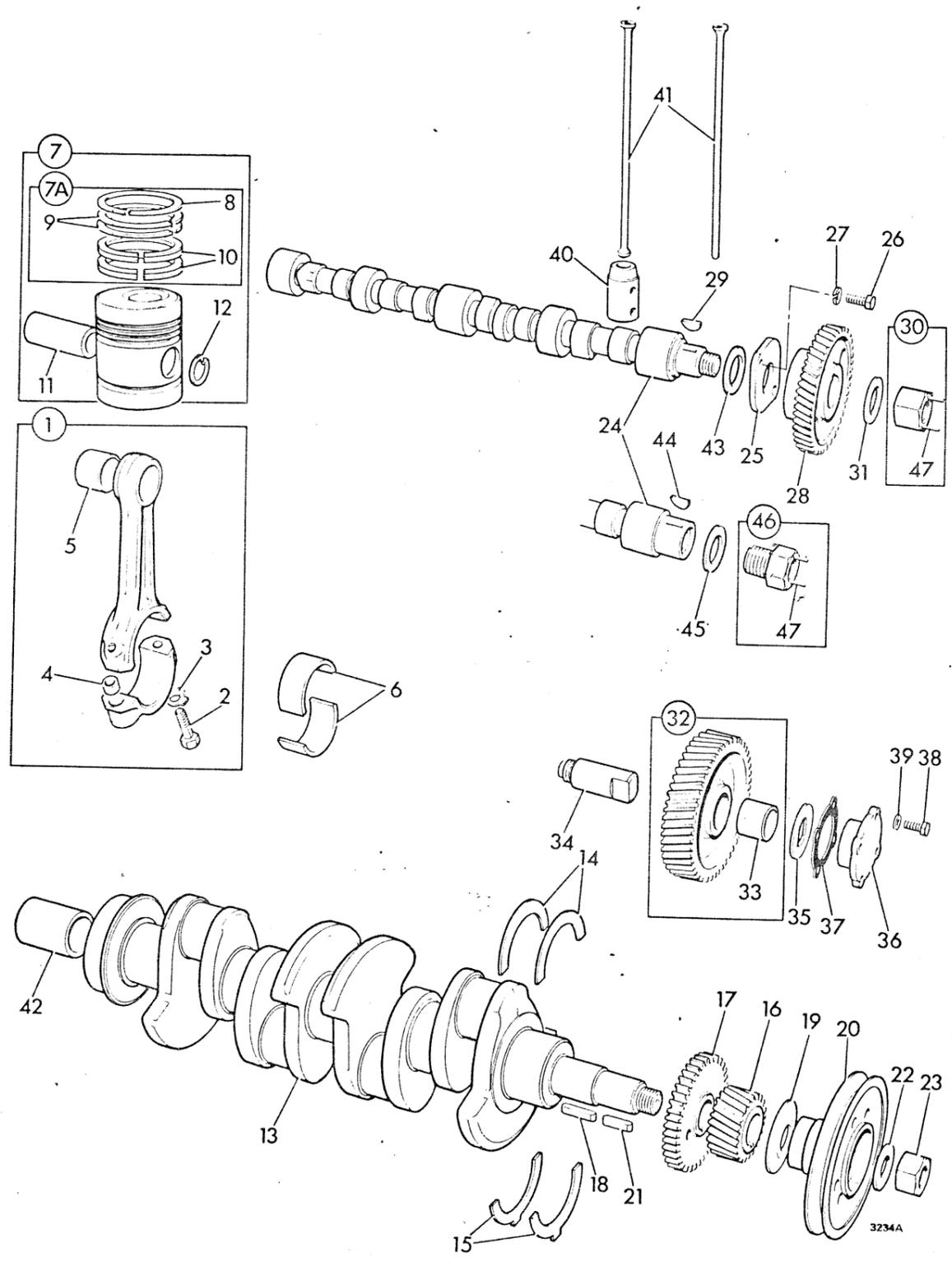
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ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD					
				38 T	38 TD	498 NT	498 NV		
25	AMK2850 37D813 02/300041	Superseded See Remarks	*Camshaft	37D813 N/A Use 86K542 with 86K1504 86K1228 & 86K1505	1	1			
26	02/300004	.....	*Plate	.....	.....	.....	1	1	
27	HNS0507 1305/0105	Superseded	Bolt	.....	.....	.....	2	2	
28	LWN305 1416/0006	Superseded	Washer	.....	.....	.....	2	2	
29	CMK184	To E85792	Gear	.....	.....	.....	1		
29A	02/390003	.....	*Hub & Gear	.....	.....	.....	1	1	
30	AMK98	To E85792	Gear Hub	.....	.....	.....	1		
31	WKN809	.....	Key	.....	.....	.....	1	1	
32	FNN214 1340/0801	Superseded	Nut	.....	.....	.....	1	1	
33	AMK112	.....	Tab Washer	.....	.....	.....	1	1	
34	AMK732	To E85792	Bolt	.....	.....	.....	6		
35	1411/0002	To E85792	*Washer	.....	.....	.....	6		
36	02/390004	.....	*Idler Gear	.....	.....	.....	1	1	
37	02/392013	.....	*:Bush	.....	.....	.....	1	1	
38	02/300007	.....	*Shaft	.....	.....	.....	1	1	
39	02/300008	.....	*Thrust Washer	.....	.....	.....	1	1	
40	02/300009	.....	*Bearing	.....	.....	.....	1	1	
41	813/00198	.....	*Gasket	.....	.....	.....	1	1	
42	HNS0507 1305/0105	Superseded	Bolt	.....	.....	.....	4	4	
43	LWN304 1416/0004	Superseded	Washer	.....	.....	.....	4	4	
44	02/300039	.....	*Tappet Valve	.....	.....	.....	8	8	
	990/00057	.....	Tappet Valve	Alternatives				8	8
45	N.S.P.	.....	*Push Rod-Tubular Was AMK85	Alternatives Use in Set only				8	8
46	02/300040	.....	*Push Rod-Solid	.....	.....	.....	8	8	
47	02/392007	.....	*Bush	.....	.....	.....	1	1	
48	CMK496	.....	Thrust Washer	.....	.....	.....	1		
	CMK496 02/300003	To E51654	*Thrust Washer	.....	.....	.....		1	



ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
1	86K1093	....	Connecting Rod			4	4
2	02/300401	....	*:Bolt			2	2
3	AEB163	....	:Tab Washer			2	2
4	02/394006	....	*:Dowel			2	2
5	37D3037 988/00105	Superseded	:Bush			1	1
6	02/392003	....	*Big End Bearing STD			1	1
	02/392004	....	*Big End Bearing 0.15in(.381mm)U/S			set 1	set 1
	02/392005	....	*Big End Bearing.030in(.762mm)U/S			set 1	set 1
	02/392006	....	*Big End Bearing.45in(1.43mm)U/S			set 1	set 1
7	86K949 988/00100	Superseded To E473	Piston-4 ring			4	4
	86K1259 988/00101	Superseded	Piston-5 Ring				
7A	AHM9013 AHM9014 988/00102	To E473 Superseded	:Piston Ring Kit-4 Rings			1	1
			:Piston Ring Kit-5 Rings			1	1
8	N.S.P.	....	::Piston Ring-Compression STD Was 86K952			1	1
9	N.S.P.	....	::Piston Ring-Tapered Was 86K953			2	2
10	N.S.P.	....	::Piston Ring Scraper Was 86K954			1	1
	N.S.P.	E474on....	::Piston Ring Scraper Was 86K1260			1	1
11	86K951	....	:Gudgeon Pin			1	1
12	CCN222	....	:Clip-Was 2203/1039			2	2
13	02/300106	....	*Crankshaft			1	1
14	02/300115	....	*Thrust Washer-Upper			2	2
15	02/300116	....	*Thrust Washer-Lower			2	2
16	02/390002	....	*Pinion			1	1
17	37D3472 988/00139	Superseded	*Driving Gear			1	1
18	02/394001	....	*Key			1	1
19	02/300001	....	*Oil Thrower			1	1
20	37D454 988/00152	Superseded	*Pulley			1	1
21	02/394001	....	*Key			1	1
22	02/300095	....	*Tab Washer			1	1
23	1340/0901	....	Nut			1	1



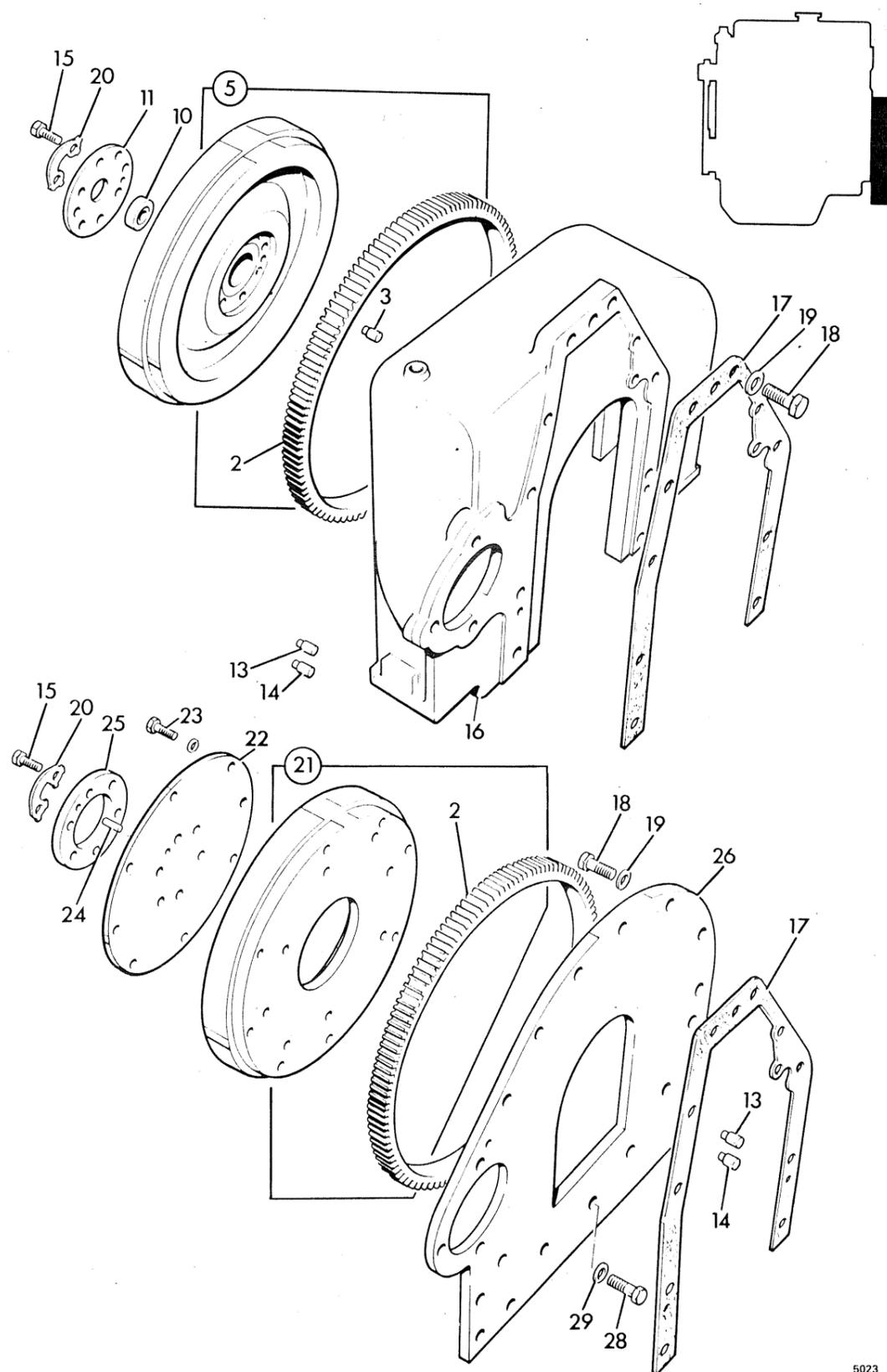
ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
24	37D813 02/300041	To E36424	*Camshaft			1	1
			37D813 N/A Use 86K542 with 86K1504, 86K1228 & 86K1505				
25	92/300004	....	*Plate			1	1
26	1305/0105	....	Bolt			2	2
27	1416/0006	....	Washer			2	2
28	02/390003	....	*Hub & Gear			1	1
29	WKN809		Key			1	1
30	86K457	ToE36424	Nut			1	1
31	AMK112		Tab Washer			1	1
32	02/390004	....	*Idler Gear			1	1
33	02/392013	....	*:Bush			1	1
34	02/300007	....	*Shaft			1	1
35	02/300008	....	*Thrust Washer			1	1
36	02/300009	....	*Bearing			1	1
37	813/00198	....	*Gasket			1	1
38	1305/0105	....	Bolt			1	1
39	1416/0004	....	Washer			4	4
40	02/300039	....	*Tappet Valve			8	8
41	N.S.P.	....	*Push Rod-Tubular			8	8
			Alternatives				
	02/300040	....	*Push Rod-Solid			8	8
42	02/392007	....	*Bush			1	1
43	02/300003	....	*Thrust Washer			1	1
44	02/394002		*Key			1	1
45	02/300006	E36425on	*Washer			1	1
46	02/300005		*Bolt			1	1
47	2102/0305	....	:Tension Pin			2	2

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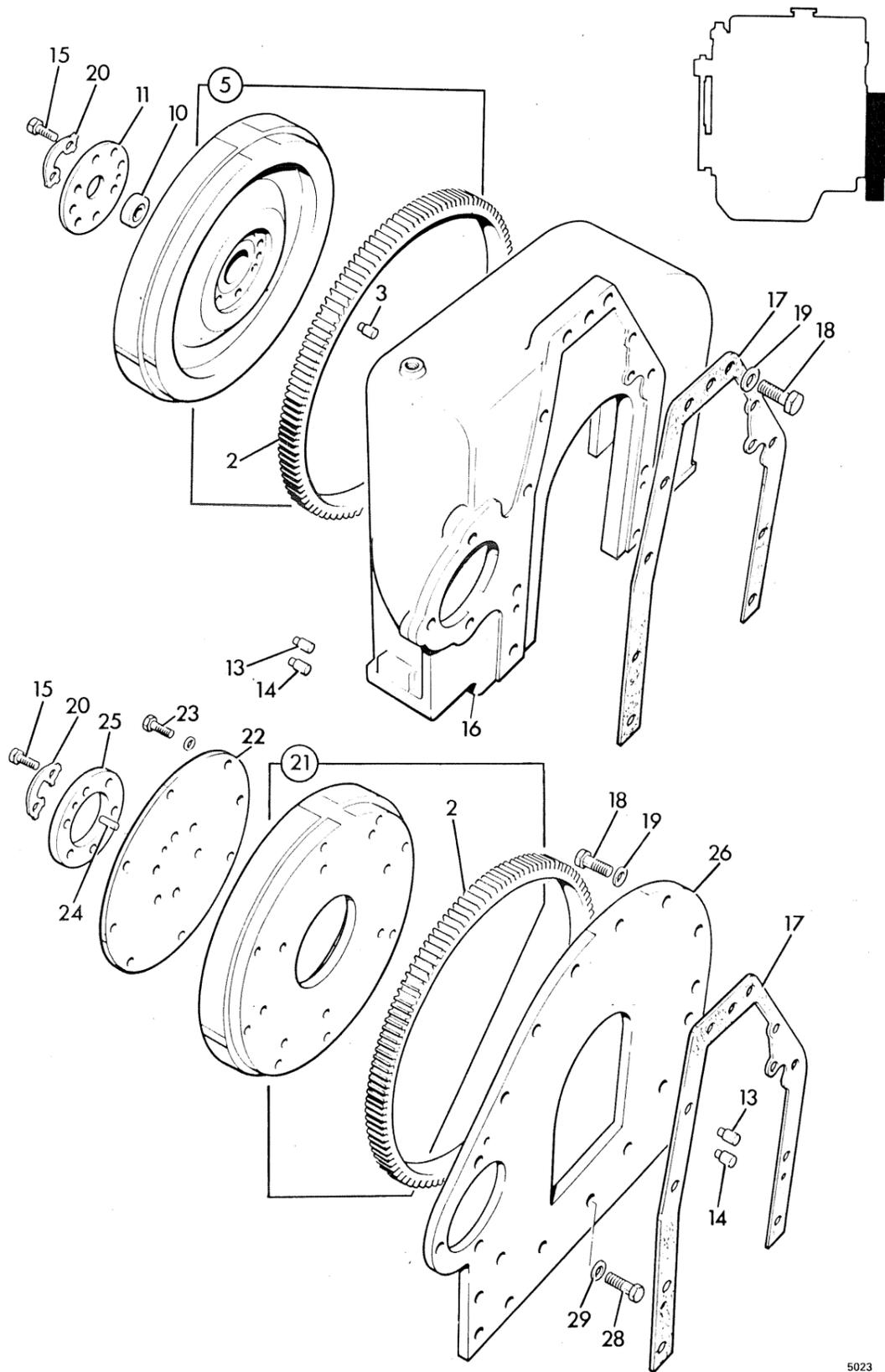
**Pages EA 6 to EA 12**



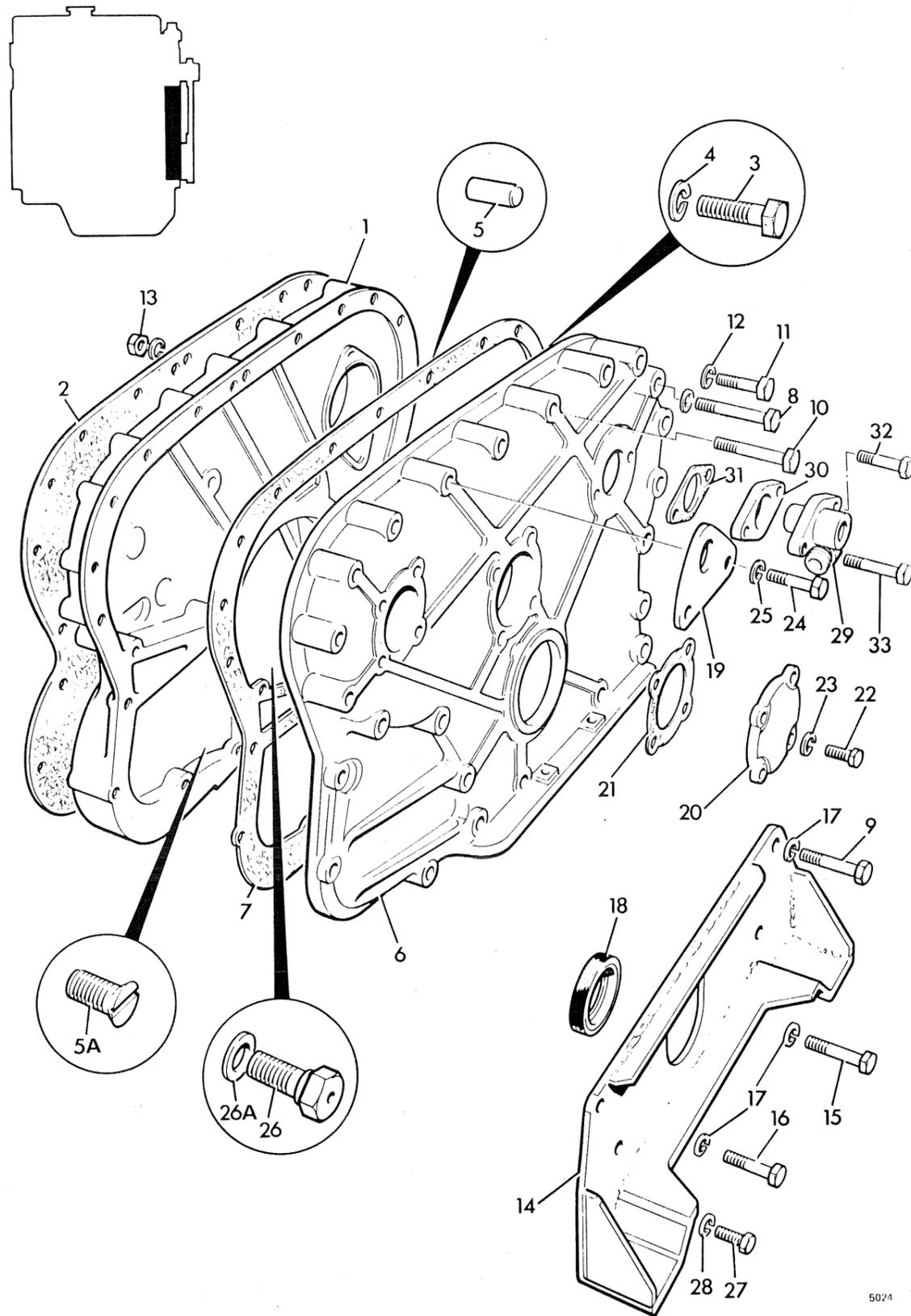
# EA 6 FLYWHEEL & HOUSING



ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
5	CMK1565	.....	Flywheel	1			1
	37D2421	Superseded	Flywheel		1		1
	37D2815						
	86K1215	Superseded	Flywheel			1	
	96K210	To E7442					
	86K1374	Superseded					
	96K217						
	37D2955	Superseded	Drive Plate-Torque Converter	1	1		
	Item 21						
2	AMK1261	.....	:Starter Ring	1			1
	CMK181	.....	:Starter Ring		1	1	1
3	AMK1041	.....	:Dowel	2	2	2	
	AMK901	.....	:Dowel			1	
	CMK182	E7443 on	:Dowel			1	
10	BMK411	Superseded	Bearing	1	1	1	1
	13H4897	Superseded					
	83H406	Superseded					
	83H534	Superseded					
	88G622	Superseded					
	988/00042						
11	AMK2721	.....	Plate	1	1	1	1
13	CMK1457	Superseded	Dowel	1	1	1	1
	988/00052						
14	CMK1458	.....	Dowel	1	1	1	1
15	AMK29	Superseded	Bolt	4	6	6	6
	37D418						
16	AMK2614	Superseded	Housing	1			1
	8G2498						
	37D2093	.....	Housing		1	1	1
17	AMK392	Superseded	Gasket	1	1	1	1
	988/00122						
18	HNS0709	Superseded	Bolt	11	11	11	11
	1305/0307						
19	LWN307	Superseded	Washer	11	11	11	11
	1416/0007						
20	37D417	Superseded	Tab Washer	3	3	3	3
	988/00055						
21	446/19303	.....	Drive Plate	1	1	1	1
22	446/19305	.....	Disc	1	1	1	1
23	1305/0204	.....	Bolt	8	8	8	8
	1418/0012	.....	Washer	8	8	8	8
24	2102/1113	.....	Dowel	1	1	1	1



ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
25	446/19315	....	Clamping Ring	1	1	1	1
26	37D3043 446/19317	Superseded	Sandwich Plate	1	1	1	1
27	HNS0709 1305/0307	Superseded	Bolt	3	3	3	3
			Torque Converter				
28	HNS0710 1305/0308	Superseded	Bolt	6	6	6	6
29	LWN307 1416/0007	Superseded	Washer	9	9	9	9



ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
1	CMK171 86K138	Superseded	*Timing Case-Rear Half ....	1			
	37D2411	To T98999	Timing Case-Rear Half ....		1		
	37D2116	T99001 on	Timing Case-Rear Half ....		1		
2	CMK170 86K417 988/00120	Superseded Superseded	Gasket ....	1	1	1	1
3	HNS508 HZS508 1305/0106	Superseded Superseded	Bolt ....	1	1	1	1
4	LWN305 1416/0005	Superseded	Washer ....	4	4	4	4
5	02/394007	....	*Dowel ....	2	2	2	2
5A	826/00583	....	*Screw-Countersunk ....		2	2	2
6	CMK172 02/300109 86K1189 86K1551	To T98999 T99001 on Superseded	Timing Cover-Front Half .... *Timing Cover-Front Half .... Timing Cover-Front Half ....	1	1		
					1		
						1	1
7	AMK237 813/00195	To T98999 ....	Gasket .... *Gasket ....	1	1	1	1
8	HBN528 1305/3126	Superseded	Bolt ....	1	1	1	1
9	HBN530 1305/3128	Superseded	Bolt ....	2	2	2	2
10	HBN528 1305/3126	Superseded	Bolt ....	2	2	2	2
11	HBN516 1305/3114	Superseded	Bolt ....	5	5	5	5
12	LWN305 1416/0005	Superseded	Washer ....	8	8	8	8
13	FNN505 FNZ505 1340/0101	Superseded Superseded	Nut ....	2	2	2	2
14	CMK482	....	Support ....	1	1	1	1
15	HBN0530 1305/3128	Superseded	Bolt ....	5	5	5	5
16	HBN0518 1305/3116	Superseded	Bolt ....	1	1	1	1
17	LWN305 1416/0005	Superseded	Washer ....	8	8	8	8

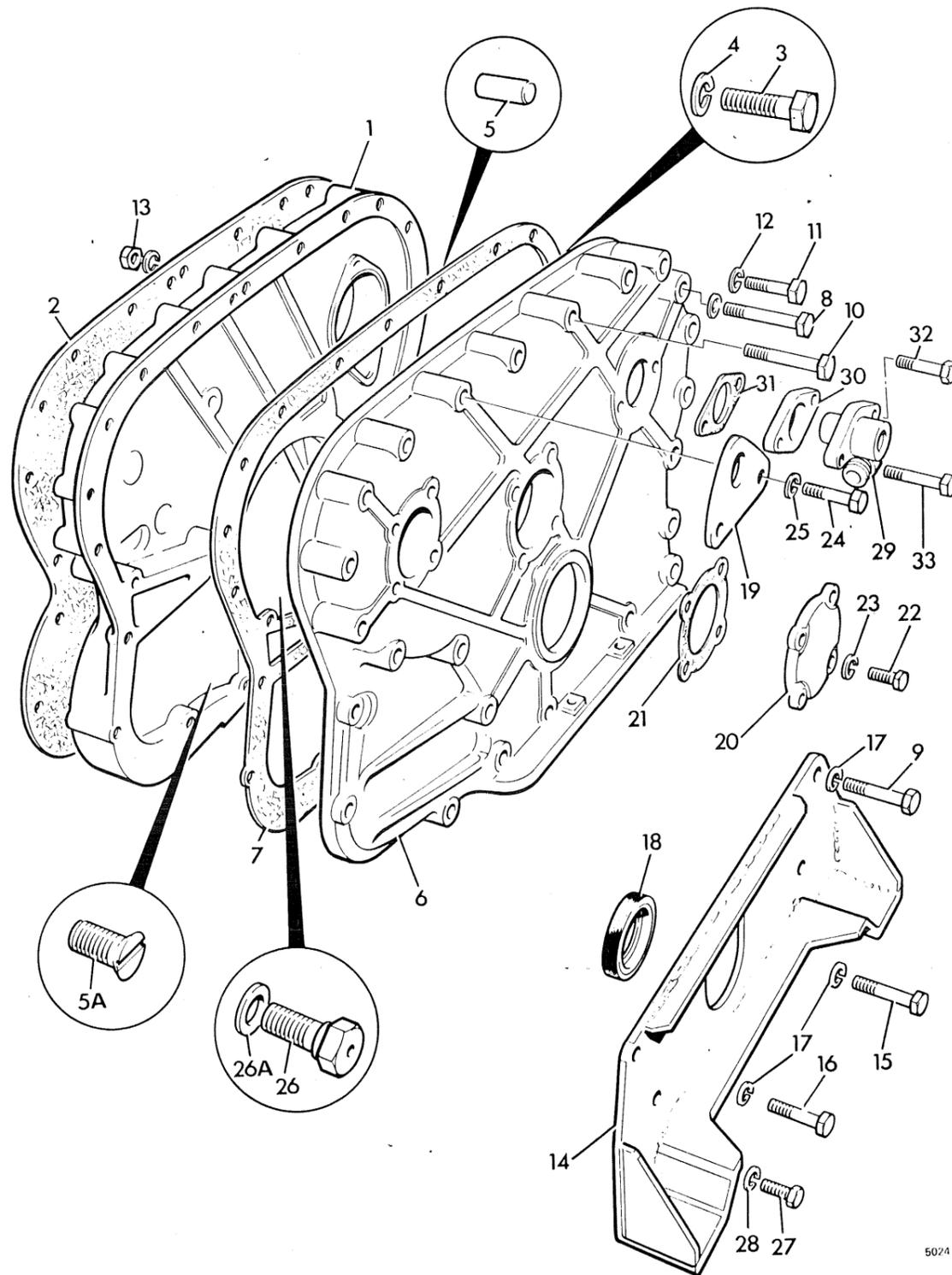


# EA 7 TIMING CASE

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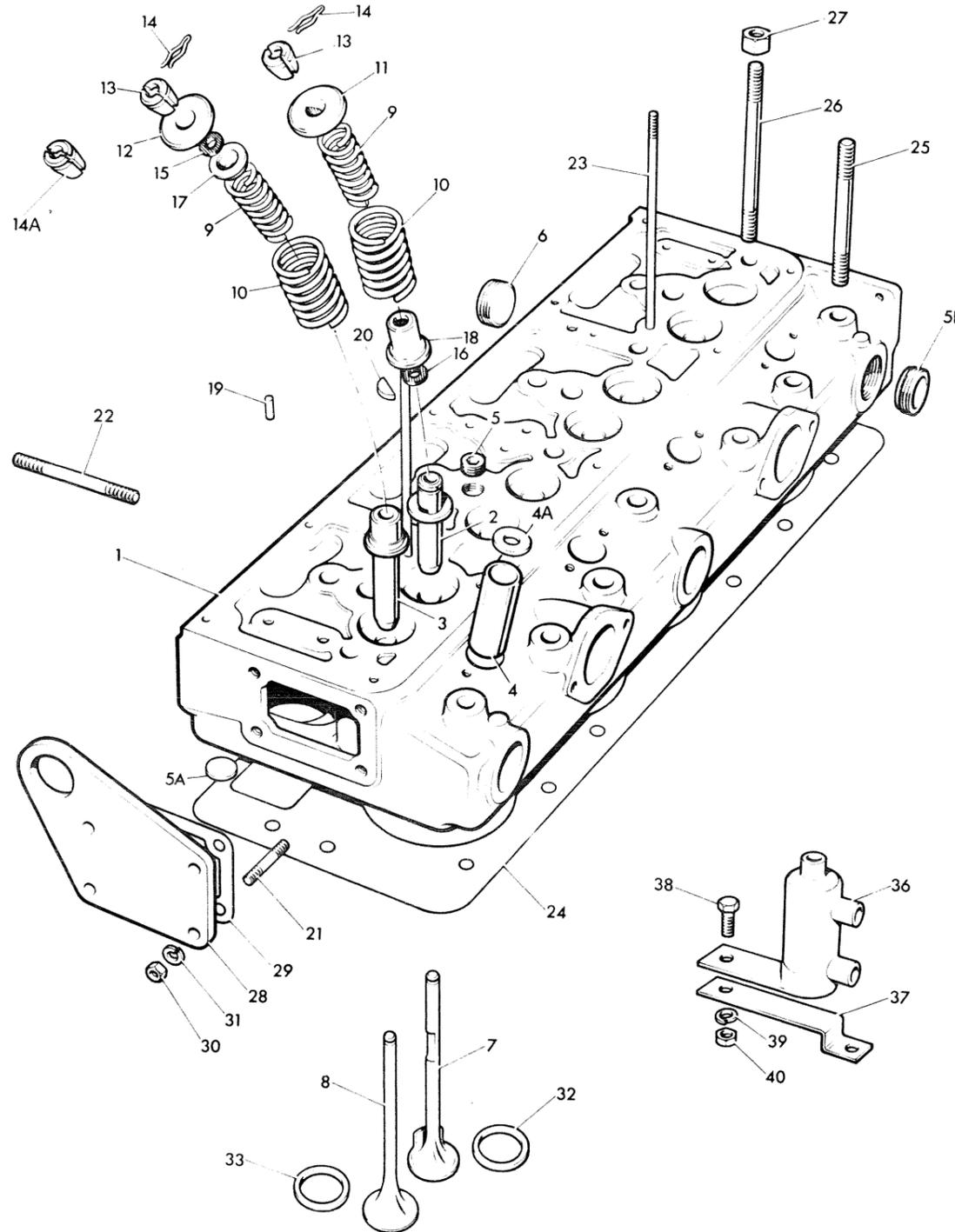
ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
18	BMK 991	....	Oil Seal	1			
			For use with Pulley AMK 1352				
	813/00223	....	*Oil Seal	1	1	1	1
19	AMK 538	....	Lifting Plate-Front	1	1	1	1
20	02/300111	....	*Plate	1	1	1	1
21	AMK 121 988/00113	Superseded	Gasket	1	1	1	1
22	HNS0406 SH604061 1305/0004	Superseded Superseded	Screw	4	4	4	4
23	LWN304 1416/0004	Superseded	Washer	2	2	2	2
24	HBN0518 1305/3116	Superseded	Bolt	2	2	2	2
25	LWN305 1416/0005	Superseded	Washer	2	2	2	2
26	02/300112	....	*Jet-Oil Feed	1	1	1	1
26A	823/00210	....	*Washer	1	1	1	1
27	HNS0507	....	Bolt	2	2	2	2
28	LWN305 1416/0005	Superseded	Washer	2	2	2	2
29	83H112 02/300113	From E7443 To E36424	*Angle Drive Unit			1	
30	02/300114	....	*Spacer	1			
31	813/00197	E7443 on	*Gasket			1	
32	HZS0409 1305/0007	Superseded	Bolt-Short			1	
33	1305/0014	....	Bolt-Long			1	



# EA 8 CYLINDER HEAD & VALVES

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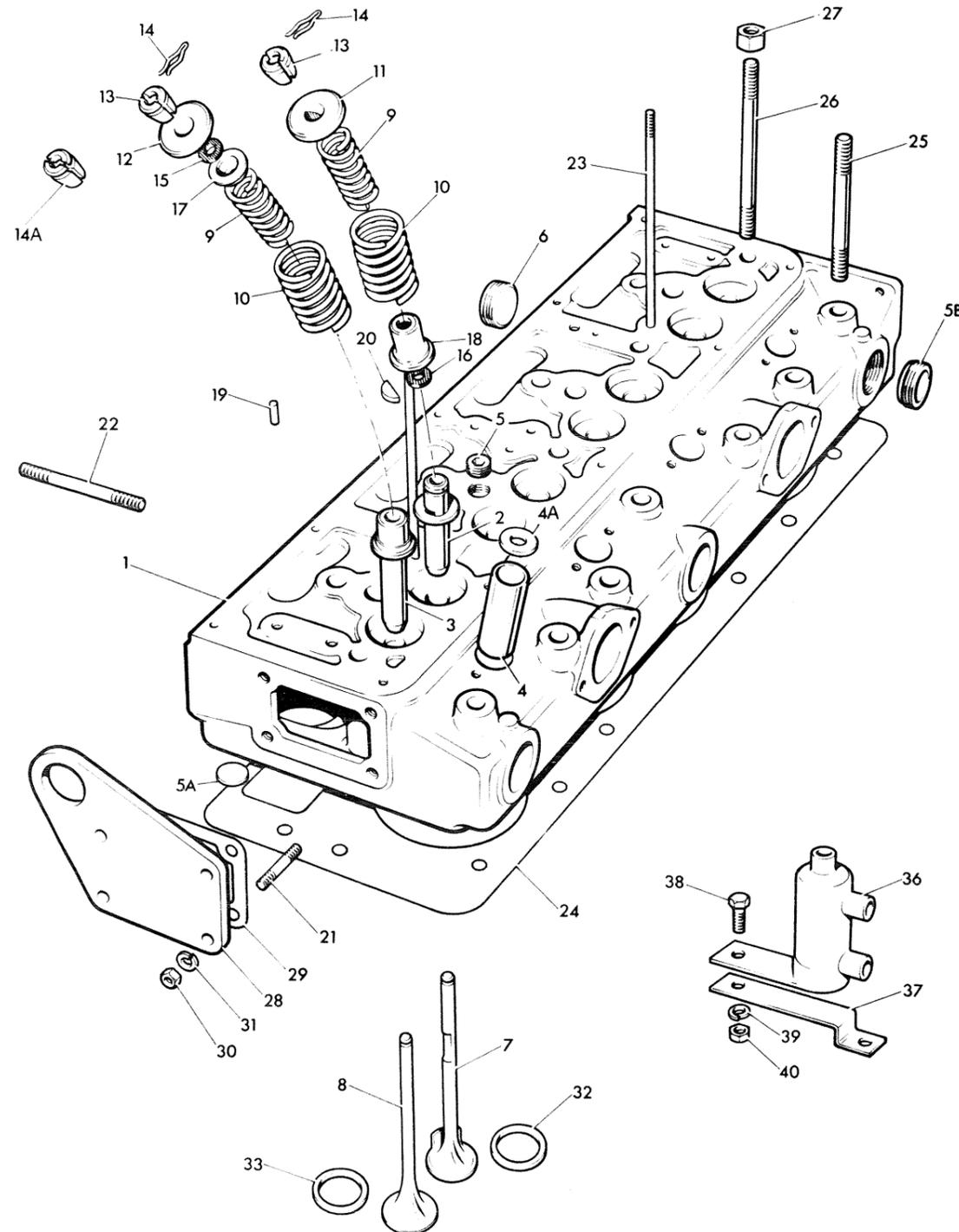
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				38 T	38 TD	498 NT	498 NV
1	AMK1638 37D1637 CMK817 37D2950 37D3065 86K1347	To E79974 To E80180 Superseded Superseded See Remarks	Cylinder Head	1			
			37D3065 N/A Use 86K1347 with 83H262 Plug				
	37D3065 86K1347 37D3480 86K1241	Cylinder Head To E44286 See Remarks	37D3065 N/A Use 86K1347 with 83H262 Plug. 37D3480 N/A Use 86K1241 with 83H262 Plug	1			
	86K941 86K909	Superseded	Cylinder Head			1	1
2	CMK205 988/00047 02/300501	Superseded Superseded	*:Guide-Inlet Valve	4	4	4	4
3	02/300502	....	*:Guide-Exhaust Valve	4	4	4	4
4	AMK330	....	:Sleeve	4			
	AMK330 37D2599 86K1098 988/00176	To E5954 See Remarks Superseded	:Sleeve		4		
			37D2599 N/A Use 86K1098 & 86K1099			4	4
4A	02/300504	....	*:Washer-Sleeve			4	4
5	816/80017	To E80180	*:Plug-Screw 1in.(25.4mm)	13			
	816/80017	To E30256	*:Plug-Screw 1in.(25.4mm)	10			
				4		4	4
5A	635/10021	To E40899	*:Core Plug	6			
	635/10021	To E48725	E20356 on	5			
	635/10021	....	*:Core Plug	3			
						3	3
5B	CMK826	To E19974	Plug-Screw 1.5/16in.(25.7mm)	2	2	2	2
	835/10023	....	*Coreplug-Dished 1.5/16in.(25.7mm)	2	2	2	2
6	AMK1302 37D3077	To E30256 To E44286	Plug-Screw 3/4in.(0.75mm) Core Plug-Dished	4			
7	AMK1567	....	Valve-Inlet	4	4		
	02/300015	....	*Valve-Inlet			4	4
8	AMK48	....	Valve-Exhaust	4	4		
	02/300016	....	*Valve-Exhaust			4	4
9	02/300017	....	*Spring-Inner	8	8	8	8



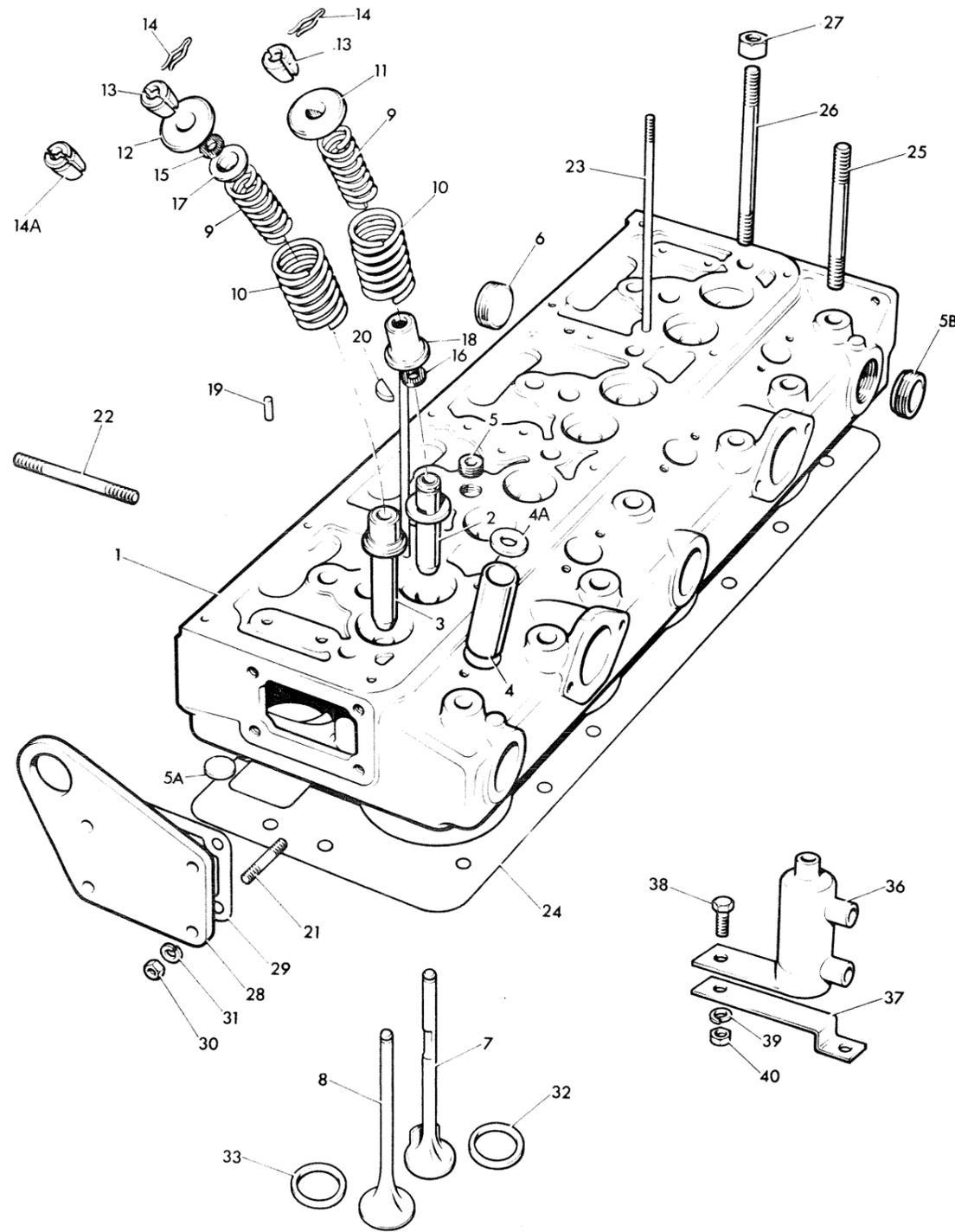
# EA 8 CYLINDER HEAD & VALVES

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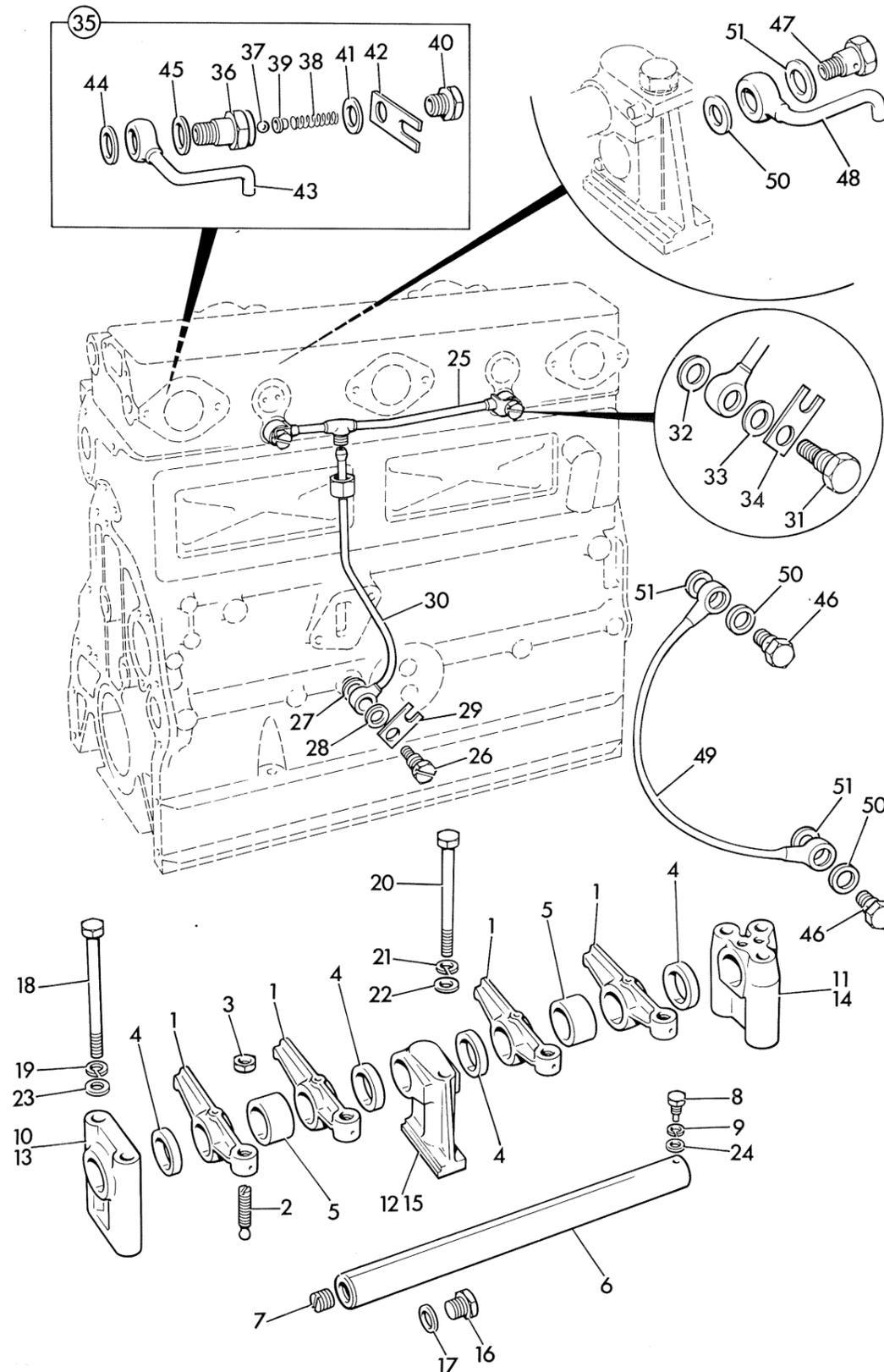
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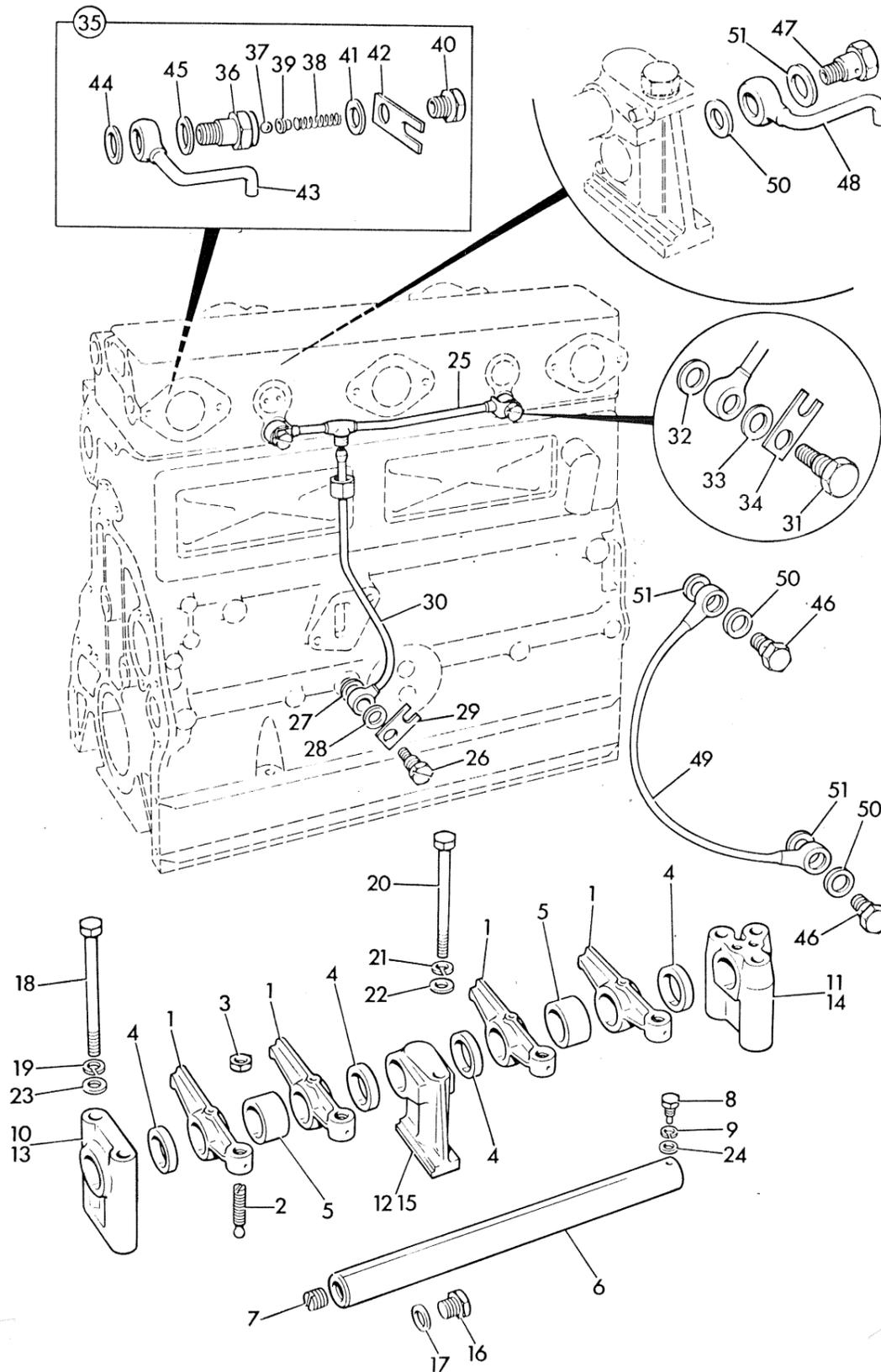
ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
10	02/300018	....	*Spring-Outer	8	8	8	8
11	02/300019	....	*Collet Holder-Inlet	4	4	4	4
12	02/300020	....	*Collet Holder-Exhaust	4	4	4	4
13	02/300021	....	*Collet	16	16	16	16
14	02/300022	....	*Spring Clip	8	8	8	8
14A	02/300023	....	*Collet-Alternative to items 13&14	8	8	8	8
15	813/00224	....	*Oil Seal-Exhaust	4	4	4	4
16	813/00225	....	*Oil Seal-Inlet	4	4	4	4
17	02/300024	....	*Retainer-Exhaust	4	4	4	4
18	AMK1569 02/300025	ToE58395	*Thimble-Inlet	4	4	4	4
19	AMK1571 02/394008	ToE58395	*Dowel	4	4	4	4
20	AMK1570 02/394003	To E58395	*Key	4	4	4	4
21	AMK652	....	Stud	4	4	4	4
22	826/00573 FNS0510 103/21209	.... Superseded	*Stud-Short Stud-Long	4 2	4 2	4 2	4 2
23	AMK2903	ToE80180	Stud	2			
24	AMK2213 37D1844 37D2741 37D2932 86K625	Superseded Superseded Superseded Superseded	Gasket-Cylinder Head	1			
	86K625 813/00200	ToE40898	Gasket-Cylinder Head	1	1	1	1
25	AMK2234 AMK2234 37D2465 86K650	ToE6784 ToE6784 ToE43568	Stud-Short Stud-Short	7		7	7
26	AMK2233 AMK2233 37D2464 86K649	.... ToE6784 ToE43568	Stud-Long Stud-Long	9	9		
	37D1860	....	Washer-Stud	16	16	16	16
27	02/300026	....	*Nut	16	16	16	16
28	02/300027	....	*Plate-Rear	1	1	1	1



ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
29	813/00201	....	*Gasket	1	1	1	1
30	FNN105 1340/0101	Superseded	Nut	4	4	4	4
31	LWN305 1416/0005	Superseded	Washer	4	4	4	4
32	AED407	....	Insert-Inlet	4	4		
33	AED408	....	Insert-Exhaust	4	4		
	02/300028	....	*Insert-Exhaust			4	4
36	13H3451	....	Tank-Thermostart	1			
38	HNS0607 1305/0205	Superseded	Screw	1			
39	LWN306 1416/0006	Superseded	Washer	1			
40	FNN506 1340/0201	Superseded	Nut	1			
41	86K906	....	'O'Ring			4	4



ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
1	02/300030	....	*Valve Rocker	8	8	8	8
2	02/300096	....	*Screw	8	8	8	8
3	826/00587	....	*Locknut	8	8	8	8
4	02/300031	....	*Spacer 1/2in.(6.35mm)	8	8	8	8
5	02/300032	....	*Spacer 13/16in.(20.63mm)	4	4	4	4
6	AMK69 02/300029	To E79974	*Shaft	2			
	02/300029	....	*Shaft		2	2	2
7	816/81007	....	*Plug	2	2	2	2
8	826/00586	....	*Screw	2	2	2	2
9	LWN304 1416/0004	Superseded	Washer	2	2	2	2
10	02/300033	....	*Bracket-Front &Rear-Cast Iron	2	2	2	2
			Alternatives to Aluminium Interchangeable in Sets only.				
11	02/300035	....	*Bracket-Centre -Cast Iron	1	1	1	1
12	02/300034	....	*Bracket-Intermediate- Cast Iron	2	2	2	2
13	02/300036	....	*Bracket-Front &Rear-Aluminium	2	2	2	2
			Alternatives to Cast Iron. Interchangeable in Sets only.				
14	02/300038	....	*Bracket-Centre-Aluminium	1	1	1	1
15	02/300037	....	*Bracket-Intermediate- Aluminium	2	2	2	2
16	816/80014	....	*Plug	1	1	1	1
17	823/00210	....	*Washer	1	1	1	1
18	HBN0526 1305/3124	Superseded	Bolt	7	7	7	7
19	LWN305 1416/0005	Superseded	Washer	7	7	7	7
20	HBN0626 1305/3224	Superseded	Bolt	2	2	2	2
21	LWN306 1416/0006	Superseded	Washer	2	2	2	2
22	PWN106 1411/0003	Superseded	Washer		2	2	2
23	PWN105 1411/0002	Superseded	Washer		7	7	7



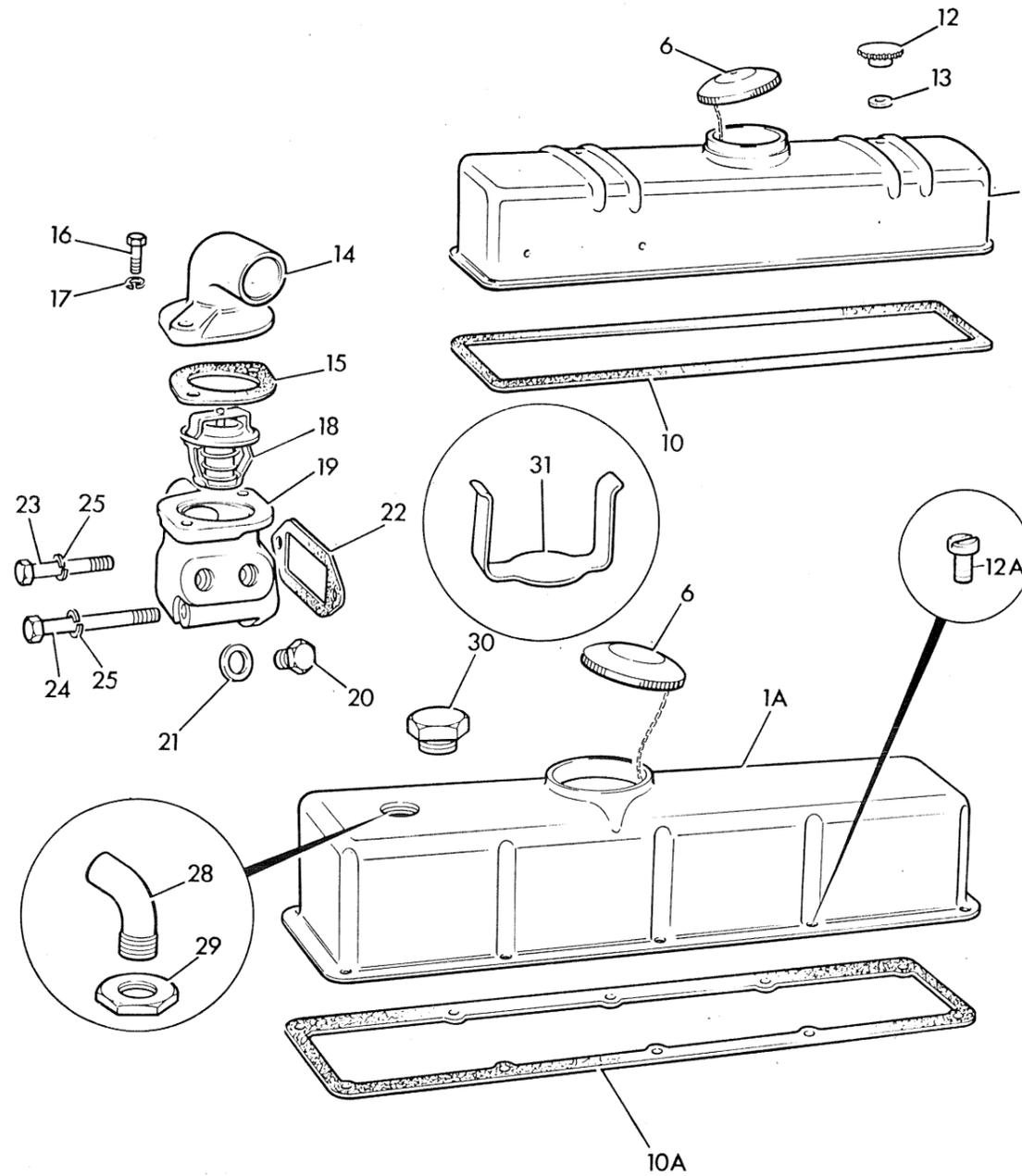
ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD					
				38 T	38 TD	498 NT	498 NV		
24	PWN104 1411/0001	Superseded	Washer	....	....	....	2	2	2
25	AMK285	....	Pipe	....	....	....	1		
	N.S.P.	....	*Pipe	Was CMK820	....	....	1	1	1
26	816/75009	....	*Banjo Bolt	....	....	....	2	2	2
27	823/00210	....	*Washer-Small	....	....	....	2	2	2
28	823/00214	....	*Washer-Large	....	....	....	2	2	2
29	N.S.P.	....	Tab Washer	Was AMK242	....	....	2		
30	AMK283 86K1337 86K541	Superseded See Remarks	Pipe	86K1137 N/A Use 86K541 with 1 off AMK 2469	....	....	1	1	1
30A	AMK2469 86K1337 86K541	Superseded Superseded	Banjo	....	....	....	1	1	1
31	816/75009	....	*Banjo Pin	....	....	....	2	2	2
32	823/00210	....	*Washer-Small	....	....	....	2	2	2
33	823/00214	....	*Washer-Large	....	....	....	2	2	2
34	N.S.P.	....	Tab Washer	....	....	....	2	2	2
35	AMK483	ToE	Oil Relief Valve	....	....	....	1	1	1
36	AMK484	....	:Body	....	....	....	1	1	1
37	AMK722	....	:Ball	....	....	....	1	1	1
38	AMK485	....	:Spring	....	....	....	1	1	1
39	AMK486	....	:Seat	....	....	....	1	1	1
40	N.S.P.	....	:Plug	Was AMK487	....	....	1	1	1
41	AMK488	....	:Washer	....	....	....	1	1	1
42	AMK489	....	:Tab Washer	....	....	....	1	1	1
43	AMK1366	....	:Overflow Pipe	....	....	....	1	1	1
44	823/00210	....	*:Washer-Small	....	....	....	1	1	1
45	823/00214	....	*:Washer-Large	....	....	....	1	1	1
46	86K1581	....	Banjo Pin	....	....	....		2	
47	816/75004	....	*Banjo Pin	....	....	....		1	
48	02/300067	....	*Pipe	....	....	....		1	
49	86K1576 86K1975	E Superseded	Pipe	....	....	....		1	
50	823/00210	....	*Washer-Small	....	....	....		1	
51	823/00214	....	*Washer-Large	....	....	....		1	



# EA 10 VALVE ROCKER COVER & THERMOSTAT

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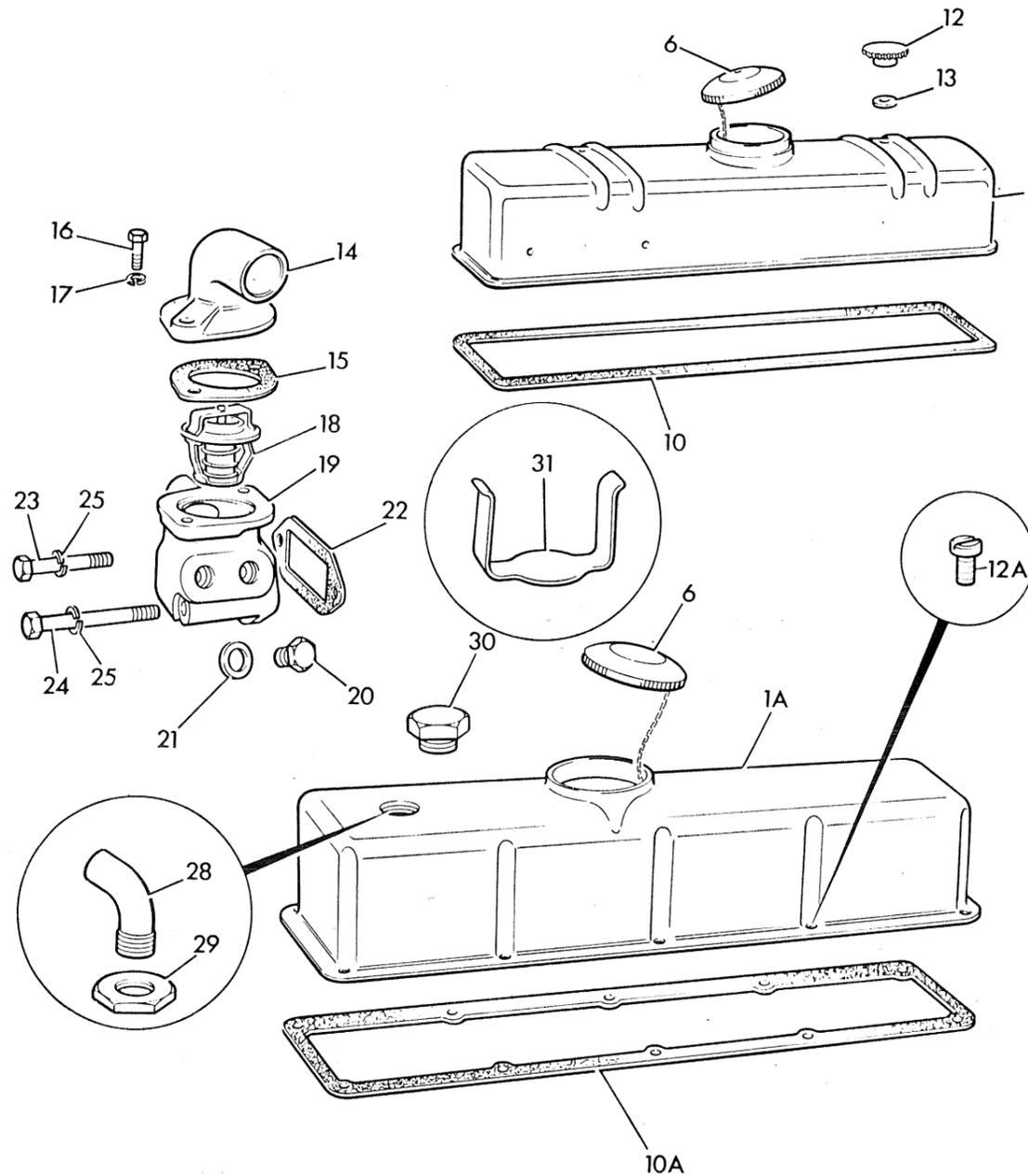
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ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
1	N.S.P.	To E80180	Rocker Cover	1			
1A	37D1129 96K24	To E	Rocker Cover	1	1	1	1
6	823/00216 12A402	To E	*Filler Cap	1	1	1	1
10	988/00126	To E80180	*Gasket	1			
10A	813/00202	....	*Gasket	1	1	1	1
12	AEB174	To E80180	Hand Nut	2			
12A	826/00584	....	*Screw	10	10	10	10
13	AMK721	To E80180	Washer	2			
14	103/28001 02/300055	To T98999	*Flange	1	1		
15	813/00212	....	*Gasket	1	1	1	1
16	1305/3108 1305/0106	To T98999	Bolt	2	2		
17	1406/0005	....	*Washer	2	2	2	2
18	GTS104	....	*Thermostat	1			
	GTS104	To E44286	*Thermostat (82°C)		1		
	02/300056	....	*Thermostat (82°C)			1	1
	GTS102	....	*Thermostat (74°C)	1			
			Hot Climates				
	GTS102	To E44286	*Thermostat (74°C)Hot Climates			1	
	02/300057	....	Hot Climates				
	GTS106	....	*Thermostat (88°C)	1			
			Cold Climates				
	GTS106	To E44286	Thermostat (88°C)		1		
	GTS108	....				1	1
	GTS108	....					
19	AMK2986	....	Body	1			
	AMK2986	To E44286	Body		1		
	37D3483	....					
	02/300058	....	*Body			1	1
20	AEK122	....	Plug	1			
	AEK122	To E44286	*Plug		1		
	816/80018	....				1	1
21	823/00211	....	*Washer	1			
	823/00211	To E44286	*Washer		1		
	1406/0018	....					



# EA 10 VALVE ROCKER COVER & THERMOSTAT



ITEM	PART No.	CHANGE No.	DESCRIPTION	QTY OF BUILD			
				38 T	38 TD	498 NT	498 NV
22	AEB 160	....	Gasket	1			
	AEB160 988/00108	To E44286	Gasket		1		
23	1305/3118	....	Bolt-Short	2			
	1305/3118 1305/3120	To E44286	Bolt-Short		2		
	1305/3124	....	Bolt-Short			2	2
24	1305/3124	....	Bolt-Long	2			
	1305/3124 1305/3122	To E44286	Bolt-Long		2		
	1305/3126	....	Bolt-Long			2	2
25	1416/0005	....	Washer	4	4	4	4
28	02/300044	99001 on	Vent Plug	1	1	1	1
29	1356/0006	99001 on	Nut		1	1	1
30	S49/4	....	Plug-Rocker Cover Tapping	1	1	1	1
31	86K1471	....	Plug-Bypass Thermostat Housing			1	1