

TECHNICAL MANUAL

DIRECT SUPPORT AND
GENERAL SUPPORT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS LISTS
(INCLUDING DEPOT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS LISTS)

CRANE, TRUCK MOUNTED,
GED, 3/4 CUBIC YARD,
20 TON, WITH CLAMSHELL,
DRAGLINE AND BACKHOE
ATTACHMENTS
NSN 3810-00-151-4431

HARNISCHFEGGER CORP. MODEL M320T2

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THIS PUBLICATION SUPERSEDES TM 5-3810-294-34P,
DATED 9 APRIL 1985 AND ALL CHANGES

HEADQUARTERS, DEPARTMENT OF THE ARMY
APRIL 1989

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HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 24 Apr 89

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CURRENT AS OF 14 SEPTEMBER 1988

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended changes to Publications and Blank Forms) or DA Form 2028-2 located in the back of this manual direct to: U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren MI. 48397-5000. A reply will be furnished to you.

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DIRECT AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

SECTION I. INTRODUCTION

1. Scope.

This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of Direct and General Support Maintenance of the Crane, Truck Mounted. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

2. General.

In addition to Section I., Introduction, this Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in item name sequence. Repair kits are listed separately in their own functional group within Section II. Repair parts for repairable special tools are also listed in the section. Items listed are shown on the associated illustration(s)/figure(s).

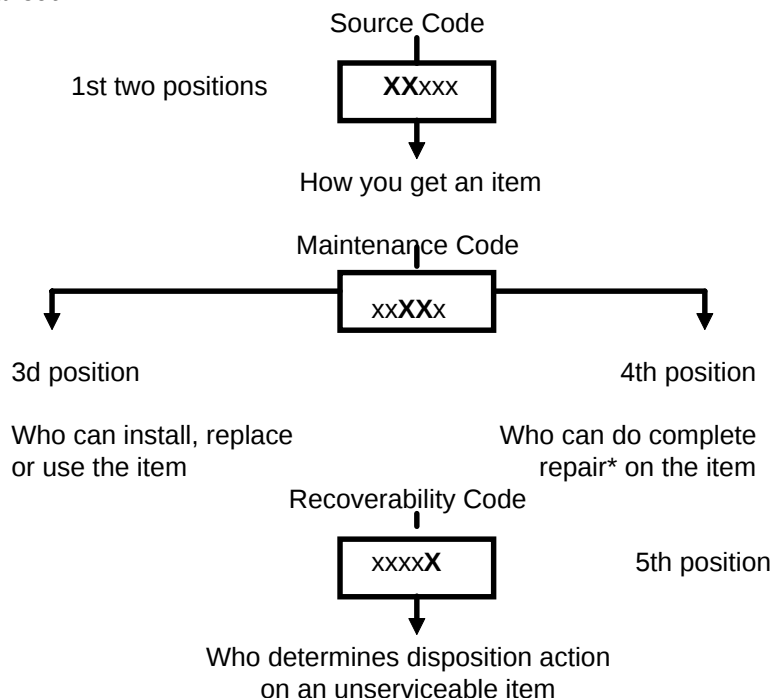
b. Section III. Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE column) for the performance of maintenance.

c. Section IV. Cross-reference Indexes. A list, in National Item Identification Number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing; in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance. The figure and item number index lists figure and item numbers in alphanumeric sequence and cross-references NSN, FSCM, and part numbers.

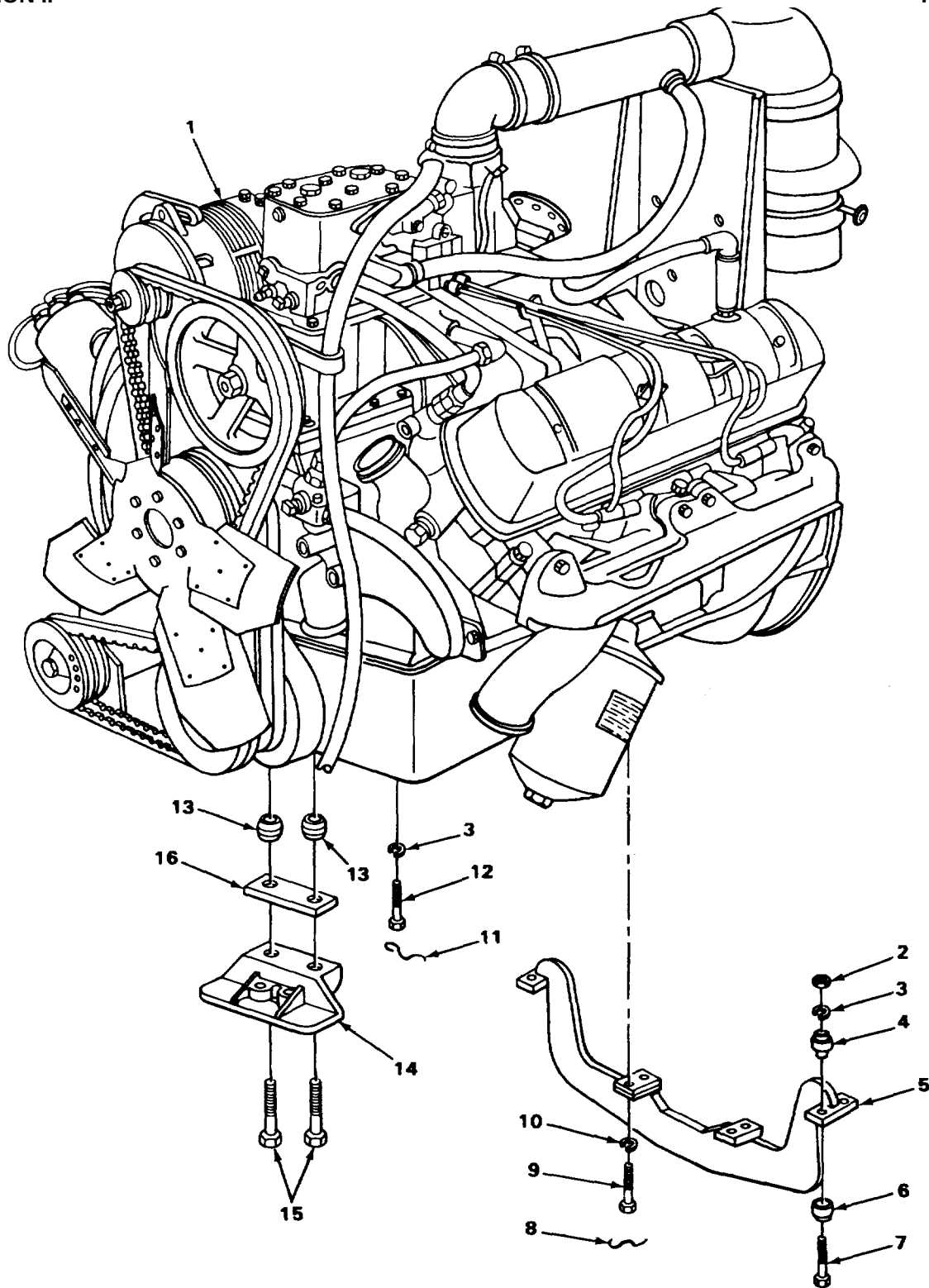
3. Explanation of Columns (Sections II and III).

a. ITEM NO. (Column (1)). Indicates the number used to identify items called out in the illustration.

b. SMR CODE (Column (2)). The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instructions, as shown in the following breakout:



**Complete Repair.* Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.



TA215140

Figure 1. Carrier Engine and Related Parts

SECTION II

TM5-3810-294-34P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 01 ENGINE					
GROUP 0100 ENGINE ASSEMBLY					
FIG. 1 CARRIER ENGINE AND RELATED PARTS					
1	PFFFF	27315	51Q183	ENGINE,GASOLINE CARRIER	1
2	PFFZZ	96906	MS51968-14	NUT, PLAIN,HEXAGON ENGINE MOUNTING.....	4
3	PFFZZ	96906	MS35338-48	WASHER,LOCK ENGINE MOUNTING	6
4	PFFZZ	22337	CA368-2	MOUNT,RESILIENT ENGINE	4
5	PFFZZ	27315	816N129	BRACKET ENGINE,REAR	1
6	PFFZZ	22337	CA368-8	MOUNT,RESILIENT ENGINE.....	4
7	PFFZZ	27315	82CT36	BOLT,SHOULDER ENGINE NOUNTING.....	4
8	XDFZZ	27315	16-8100JO573	WIRE LOCK.....	1
9	PFFZZ	27315	20T73633174	SCREW ENGINE NOUNTING.....	4
10	PFFZZ	96906	MS35338-50	WASHER,LOCK ENGINE MOUNTING	4
11	XDFZZ	27315	60-8100JO573	WIRE LOCK.....	1
12	PFFZZ	27315	20T7363D117	SCREW ENGINE MOUNTING	2
13	PFFZZ	96906	MS21045-6	NUT,SELF-LOCKING SUPPORT.....	2
14	PFFZZ	89346	145339P1	BRACKET,ENGINE FRONT.....	1
15	PFFZZ	96906	MS90726-115	SCREW,CAP,HEXAGON SUPPORT.....	2
16	PBFZZ	16662	33-305822R1	MOUNT,RESILIENT FRONT SUPPORT.	1
CARRIER.....					

END OF FIGURE

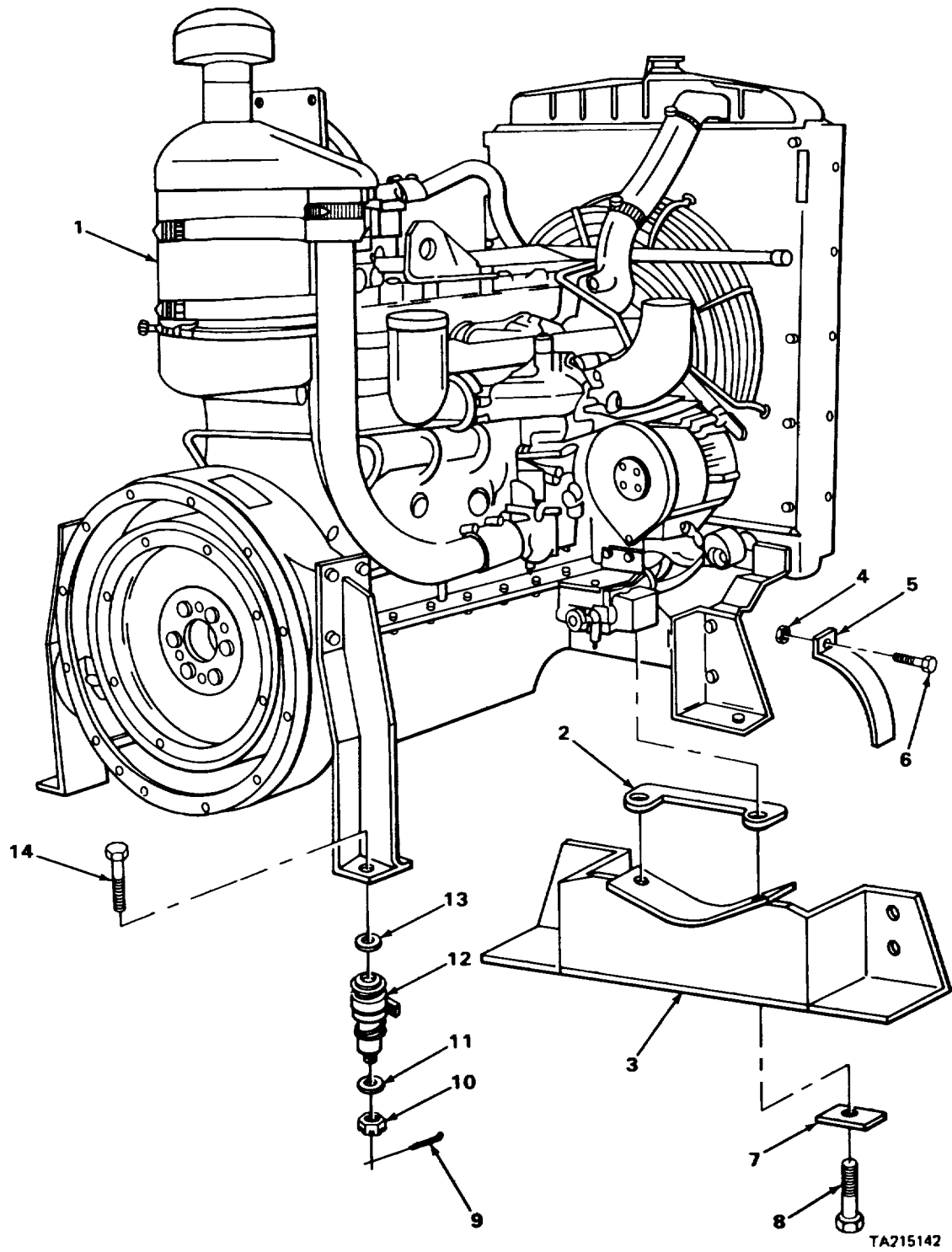


Figure 2. Crane Engine and Supports

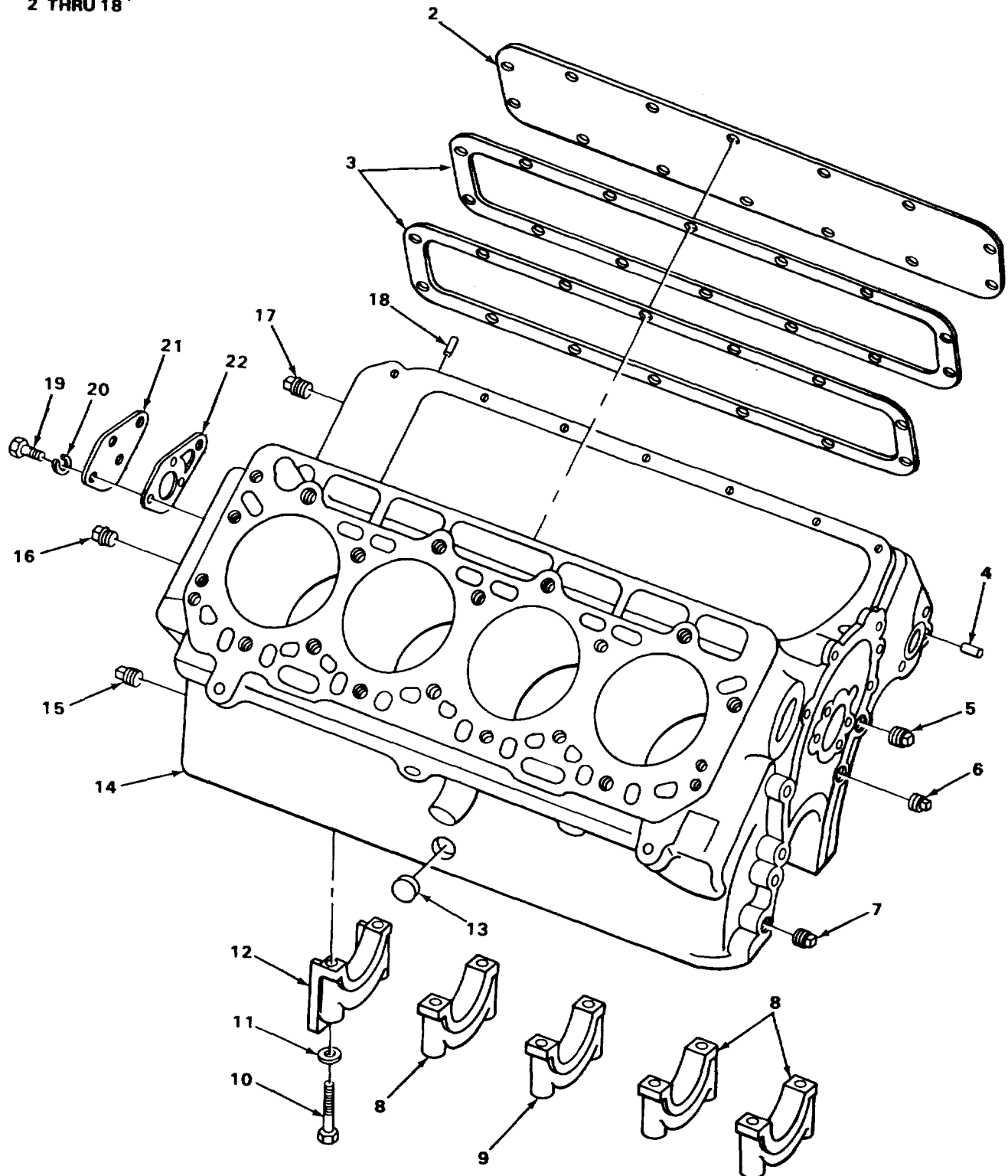
SECTION II

TM5-3810-294-34P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 0100 ENGINE ASSEPBLY					
FIG. 2 CRANE ENGINE AND SUPPORTS					
1	PAFFF	27315	51Q230	ENGINE, GASOLINE CRANE.....	1
2	PBFZZ	89346	83815H	INSULATOR PLATE.....	1
3	XDFZZ	31007	314351R91	SUPPORT ENGINE FRONT.....	1
4	PFOZZ	96906	MS51967-2	NUT,PLAIN HEXAGON RELAY	2
5	XDDZZ	27315	214P68	GUARD,ALTERNATOR FAN	1
6	PFOZZ	96906	M59072i-12	SCREW, CAP, HEXAGON GUARD	1
7	PFFZZ	92679	27599R1I	BOLT,LOCK.....	2
8	PFFZZ	29930	364257R1	BOLT,FRONT SUPPORT.....	2
9	PFFZZ	96906	MS24665-423	PIN,COTTER ENGINE MOUNTING.....	4
10	PFFZZ	96906	M535692-49	NUT,SLOTTED,HEXAGON ENGINE MOUNTING	4
11	PFFZZ	96906	MS27183-22	WASHER,FLAT ENGINE MOUNTING	4
12	PFFZZ	76005	J8006-1	MOUNT,RESILIENT ENGINE	4
13	PFFZZ	27315	18H38920405	WASHER ALIGNING,ENGINE	4
14	PFFZZ	27315	2CT5443D9	BOLT, MACHINE ENGINE MOUNTING	4

END OF FIGURE

1
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Figure 3. Carrier Crankcase and Related Parts

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
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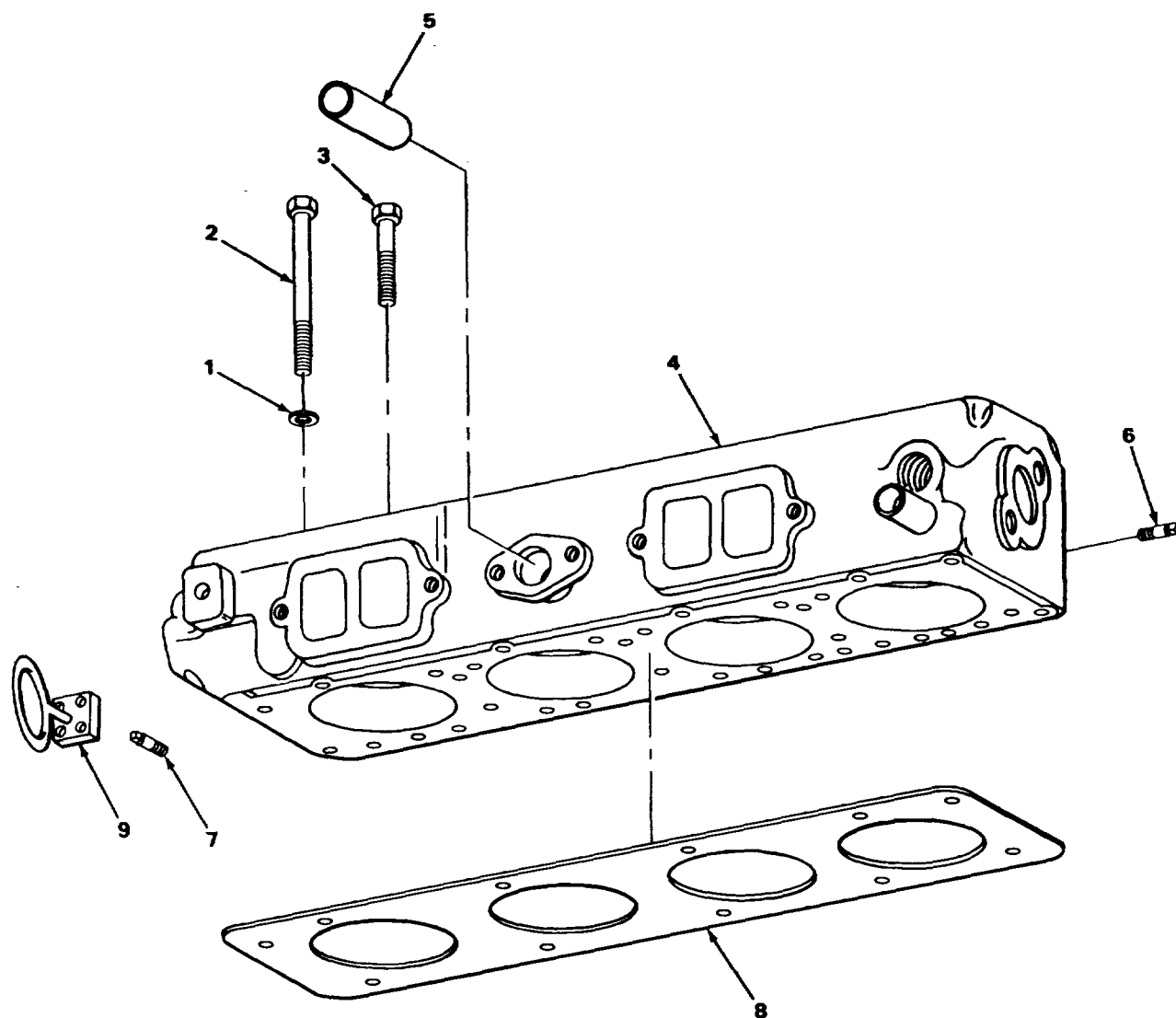
GROUP 0101 CRANKCASE. BLOCK,
CYLINDER HEAD

FIG. 3 CARRIER CRANKCASE AND RELATED
PARTS

1	XDHHH	89346	133466R31	ENGINE BLOCK, GASOLINE.....	1
2	XDHZZ	31007	133575R2	COVER	1
3	PFHZZ	89346	133 577 R4	GASKET	2
4	PFHZZ	89346	141260	PIN, FRONT.....	2
5	PFHZZ	76474	1-8PIPEPLUG	PLUG,PIPE	4
6	PFHZZ	70960	208-03	PLUG,PIPE CRANKCASE.....	1
7	XDHZZ	31007	16845R1	PLUG CRANKCASE.....	2
8	XDHZZ	31007	133443R1	CAP BEARING,1, 2, 4	3
9	XDHZZ	31007	133442R1	CAP BEARING, 3	1
10	XDHZZ	89346	224839R1	BOLT, SPECIAL BEARING CAP.....	10
11	PFHZZ	89345	151341R1	WASHER BRG CAP	10
12	XDHZZ	31007	133444R1	CAP BEARING,5	1
13	PAHZZ	89345	133453R1	PLUG,EXPANSI ON	7
14	XAHHH	31007	133466	CRANKCASE ENGINE	1
14	XDHHH	89346	292287C91	BLOCK,ENGINE,SHORT PART OF KIT P/N	1
				570571128	
15	PFHZZ	24617	444667	PLUG,PIPE CRANKCASE.....	2
16	XDHZZ	31007	444783	PLUG,PIPE CRANKCASE	4
17	PFHZZ	31007	13467R1	PLUG,PIPE CRANKCASE	1
18	PFHZZ	89346	133452R1	BEARINGISLEEVE ROCKER ARM DOWEL... ..	4
19	PFFZZ	96906	MSJ8154-58	SCREW,CAP,HEXAGON CAMSHAFT COVER.....	4
20	PFFZZ	96906	MS35338-46	WASHER,LOCK CAMSHAFT COVER.....	4
21	XDFZZ	31007	133461RI	COVER CANSHAFT.REAR.....	1
22	PFFZZ	89346	133462RI	GASKET PART OF KIT P/N 133476R92.....	1
22	XDOZZ	89346	304516C92	GASKET SET PART OF KIT P/N 5705728.....	1

END OF FIGURE

4
5 THRU 7



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Figure 4. Carrier Engine Cylinder Head and Related Parts

SECTION II

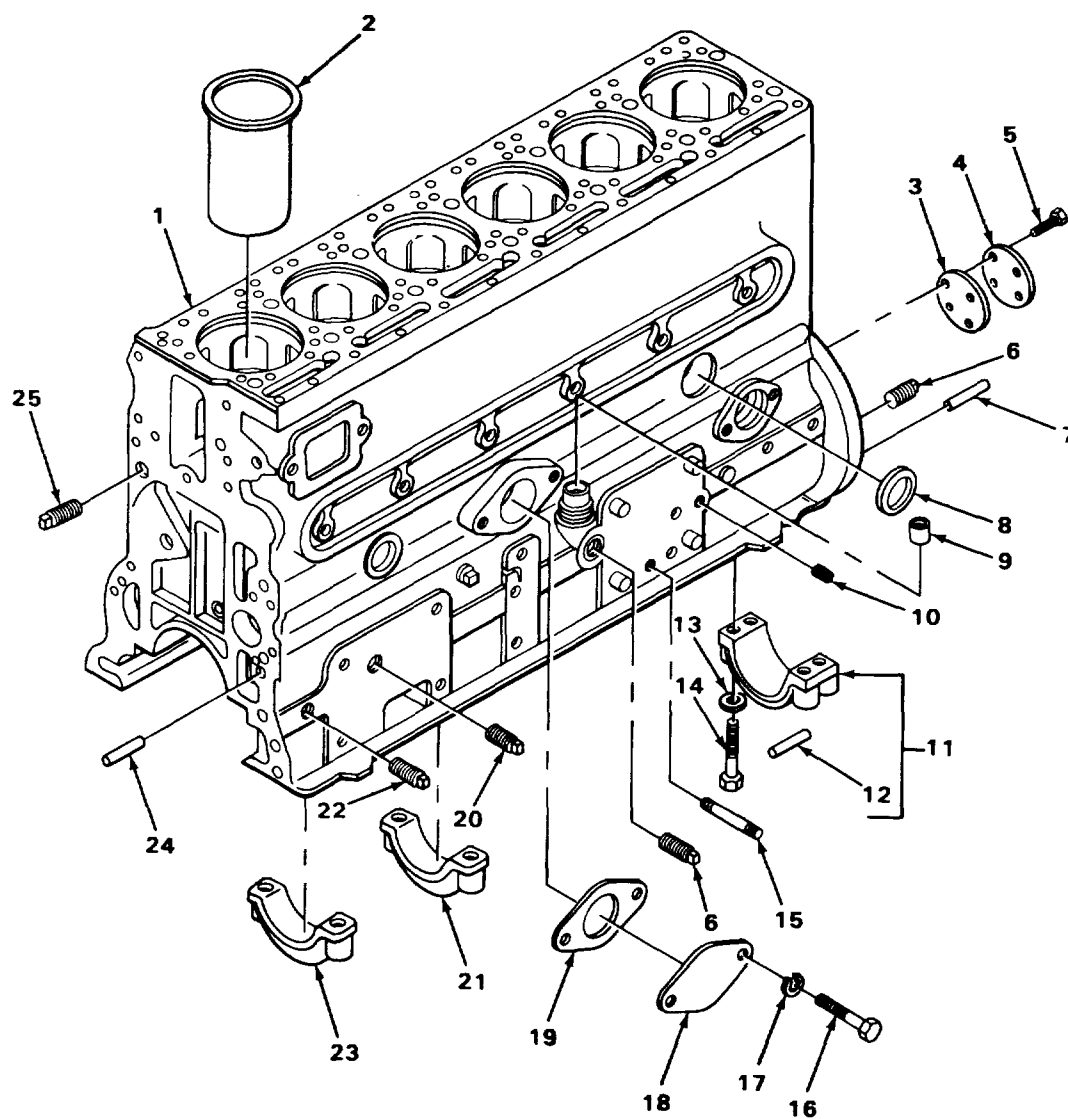
TM5-3810-294-34P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 0101 CRANKCASE, BLOCK, CYLINDER HEAD					
FIG. 4 CARRIER ENGINE CYLINDER HEAD AND RELATED PARTS					
1	PFFZZ	96906	MS27183-18	WASHER,FLAT CYLINDER HEAD	16
2	XDFZZ	31007	1141404R1	BOLT CYLINDER HEAD	16
3	XDFZZ	29930	133549R1	BOLT,SPECIAL CYLINDER HEAD	12
4	PFFHH	92679	601706C92	CYLINDER HEAD, ENGINE	2
5	XBFFZZ	89346	133818R1	TUBE EXHAUST CROSSOVER	2
6	PFFZZ	96906	NS51884-7	PLUG,PIPE CYLINDER HEAD	2
7	PFFZZ	24617	21I91	PLUG,PIPE CYLINDER HEAD	2
8	PAFZZ	89345	133514R91	GASKET CYLINDER HEAD PART OF KIT	2
				P/N 133476R92	
9	XDOZZ	31007	303639R1	EYE LIFTING	1

END OF FIGURE

1
2 THRU 25

11
12



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Figure 5. Crane Crankcase and Associated Parts

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 0101 CRANKCASE, BLOCK, CYLINDER HEAD					
FIG. 5 CRANE CRANKCASE AND ASSOCIATED PARTS					
1	XDHHH	31007	258137R95	ENGINE BLOCK	1
2	PFHZZ	89346	61440HA	CYLINDER SLEEVE CYLINDER,STANDARD.....	6
				PART OF KIT P/N 213442R91	
3	PAHZZ	79150	35020	GASKET COVER PLATE PART OF KIT P/N.....	1
				312309R9L	
4	PFHZZ	89346	62274VA	PLATE, RETAINING,BEA COVER,.....	1
				CAMSHAFT, REAR	
5	PFHZZ	96906	M590725-3	SCREW,CAP,HEXAGON COVER PLATE.....	4
6	PAFZZ	92679	126045	PLUG,PIPE	3
7	XDFZZ	31007	16C23D	PIN,DOWEL FLYWHEEL HOUSING	2
8	PFFZZ	96906	MS35648-15	PLUG,EXPANSION CRANKCASE	5
9	XDFZZ	31007	214045R1	TUBE DISTRIBUTOR BRACKET.....	1
10	PFFZZ	78500	208-03	PLUG,PIPE	2
11	XDHHH	31007	18622HBX	CAP BEARING,REAR	1
12	XOHZZ	31007	103718	PIN STRAIGHT	2
13	XDHZZ	t4170	340-8300010-9	WASHER ,FLAT BEARING CAP.....	16
14	XDHZZ	89346	118548HA	BOLT,SELF-LOCKING BEARING CAP.....	16
15	PAFZZ	92679	26893H	STUD,PLAIN.....	2
16	PFFZZ	96906	MS18154-58	SCREW,CAP,HEXAGON COVER	2
17	PFFZZ	96906	M535338-46	WASHERLOCK COVER.....	2
18	XDFZZ	31007	729a8R1	COVER COOLER MOUNTING BOSS	1
19	PFFZZ	92679	72989R1	GASKET COVER.....	1
20	PFFZZ	31007	445671	PLUG,PIPE	3
21	XDHZZ	31007	118615S	CAP BEARING,INTERMEDIATE	5
22	PFFZZ	96906	MS51884-7	PLUG,PIPE SQUARE HEAD.....	1
23	XDHZZ	31007	118608H	CAP BEARING,FRONT	1
24	PFFZL	31007	141221	PIN,DOWEL.....	2
25	XDFZZ	31007	98375H	PLUG,PIPE OIL GAGE HOLE	1

END OF FIGURE