

TM 9-2350-256-24P-2

THIS MANUAL SUPERSEDES MANUAL DATED APRIL 1977.
SEE TABLE OF CONTENTS PAGE FOR DETAILS.

TECHNICAL MANUAL

**UNIT, DIRECT SUPPORT AND GENERAL SUPPORT
MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST
(INCLUDING DEPOT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS)**

FOR

RECOVERY VEHICLE, FULL TRACKED; MEDIUM,

M88A1 (NSN 2350-00-122-6826)

**WINCH, POWER TAKE-OFF
AND HOIST SYSTEM**

Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

8 MAY 1992

**UNIT, DIRECT SUPPORT AND
GENERAL SUPPORT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS LIST
(Including Depot Maintenance
Repair Parts and Special Tools)**

**FOR
RECOVERY VEHICLE, FULL TRACKED; MEDIUM
M88A1 (NSN 2350-00-122-6826)
WINCH, POWER TAKE-OFF
AND HOIST SYSTEM
Current as of 15 November 1994**

REPORTING OF ERRORS

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 Commander, US Army Tank-automotive and Armaments Command, ATTN: AMSTA-MMAA, Warren, MI 48397-5000. A reply will be furnished to you.

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- TACOM's fax number is DSN 786-6323
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THIS MANUAL SUPERSEDES MANUAL TM9-2350-256-34P-2 DATED APRIL 1977.

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CHANGE 1

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**UNIT, DIRECT SUPPORT 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 Unit, Direct Support, and General Support maintenance of the M88A1 Recovery Vehicle Winch, Power Take-Off and Hoist System. 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 parts kits are listed separately in their own functional group within Section II. Repair parts for repairable special tools are also listed in this section. Items listed are shown on the associated illustration(s)/figure(s).

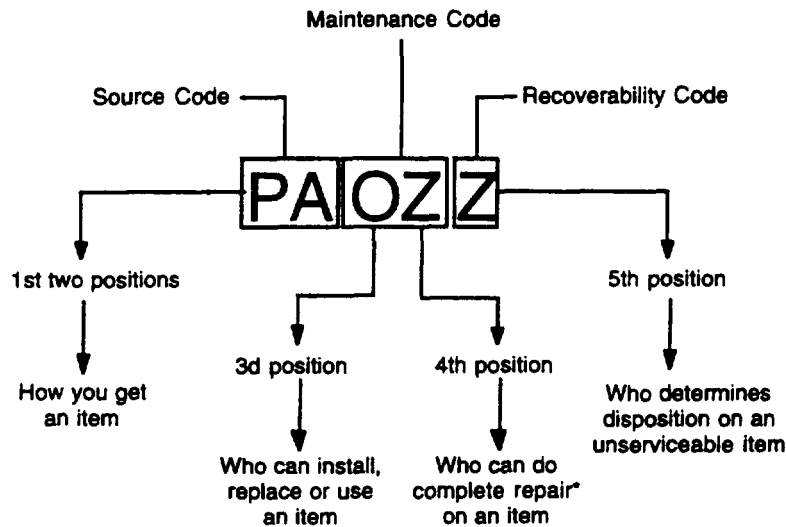
b. Section III. Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE column) for the performance of maintenance.

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 (NSN's) 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, CAGEC and part numbers.

3. Explanation of Columns (Section 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 instruction, as shown in the following example:



*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.

(1) Source Code. The source code tells you how to get an item needed for maintenance, repair or overhaul of an end item/equipment. Explanation of source codes follows:

Code	Explanation
PA PB PC.. PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3rd position of the SMR code. **NOTE: Items coded PC are subject to deterioration.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3rd position of the SMR code. The complete kit must be requisitioned and applied.
MO- (Made at Org/ AVUM Level) MF- (Made at DS/ AVUM Level) MH- (Made at GS Level) ML- (Made at Spe- cialized Repair Activity (SRA)) MD- (Made at Depot)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number or NSN in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. If the item is authorized to you by the 3rd position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.

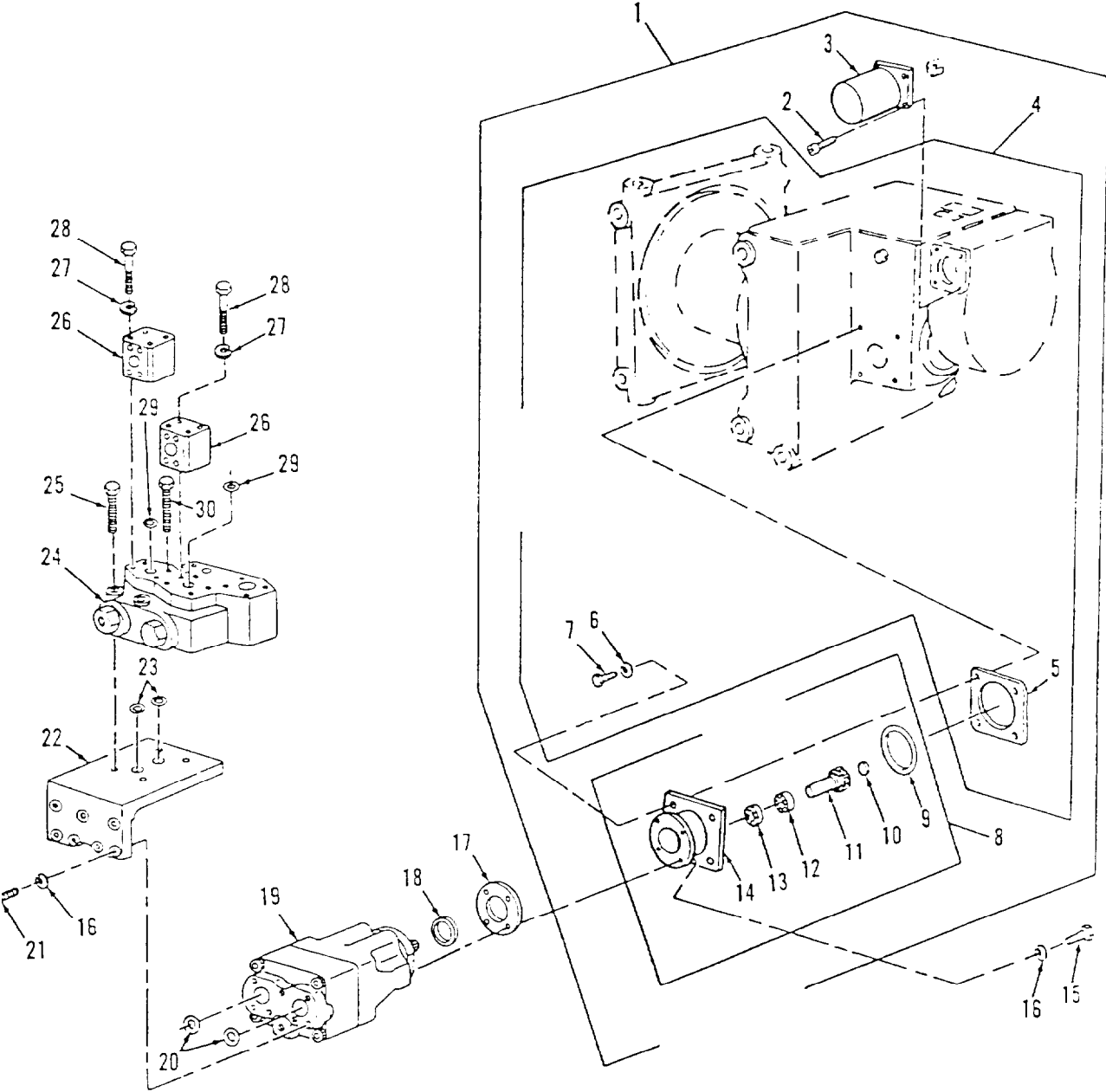


Figure 1. Main Winch and Motor

SECTION II

TM9-2350-256-24P-2

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(3) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP: 2001					
FIGURE 1. MAIN WINCH AND MOTOR					
1	AFFDD	19207	8739010	WINCH, DRUM VEHICLE	1
2	PAFZZ	96906	MS16998-97	SCREW, CAP, SOCKET HE	4
3	PAFZZ	19207	8738944	.CHAMBER, AIR BRAKE	1
4	PBFDZ	19207	8738937	.WINCH, DRUM, VEHICLE	1
5	PADZZ	19207	8738880	..SHIM	1
6	PADZZ	96906	MS35338-48	..WASHER, LOCK	4
7	PADZZ	96906	MS90726-11	..SCREW, CAP, HEXAGON H	4
8	XDDZZ	19207	8738941	.CARRIER	1
9	PADZZ	96906	MS28775-241	.. PACKING, PREFORMED	1
10	PADZZ	96906	MS35648-10	.. PLUG, EXPANSION	1
11	PADZZ	19207	8739016	. GEAR, BEVEL PART OF KIT P/N 11644755	1
12	PBDZZ	21760	1210F	.. BEARING, BALL, ANNULA	1
13	PADZZ	21450	713454	BEARING, BALL, ANNULA	1
14	PADZZ	19207	8739017	..CARRIER, GEARSHAFT W	1
15	PAFZZ	96906	MS90727-112	SCREW, CAP, HEXAGON H	4
16	PAFZZ	96996	MS35338-48	WASHER, LOCK	11
17	PAFZZ	19207	10867446	GASKET	1
18	PAFZZ	19207	11672156	SPACER, RING	1
19	PAFDD	19207	11672155	MOTOR, HYDRAULIC	1
20	PAFZZ	96906	MS28775-228	PACKING, PREFORMED	2
21	PAFZZ	96906	MS900728-118	SCREW, CAP, HEXAGON H	7
22	PAFZZ	19207	11672154	BRACKET, MOUNTING	1
23	PAFZZ	96906	MS28775-223	PACKING, PREFORMED	2
24	PAFZZ	02892	281	VALVE, LINEAR, DIRECT	1
25	PAFZZ	96906	MS90727-123	SCREW, CAP, HEXAGON H	3
26	PAFZZ	19207	10867168	ADAPTER, STRAIGHT, HO	2
27	PAFZZ	96906	MS35338-47	WASHER, LOCK	8
28	PAFZZ	96906	MS90726-99	SCREW, CAP, HEXAGON H	8
29	PAFZZ	96906	MS28775-222	PACKING, PREFORMED	2
30	PAFZZ	96906	MS90727-127	SCREW, CAP, HEXAGON H	1

END OF FIGURE

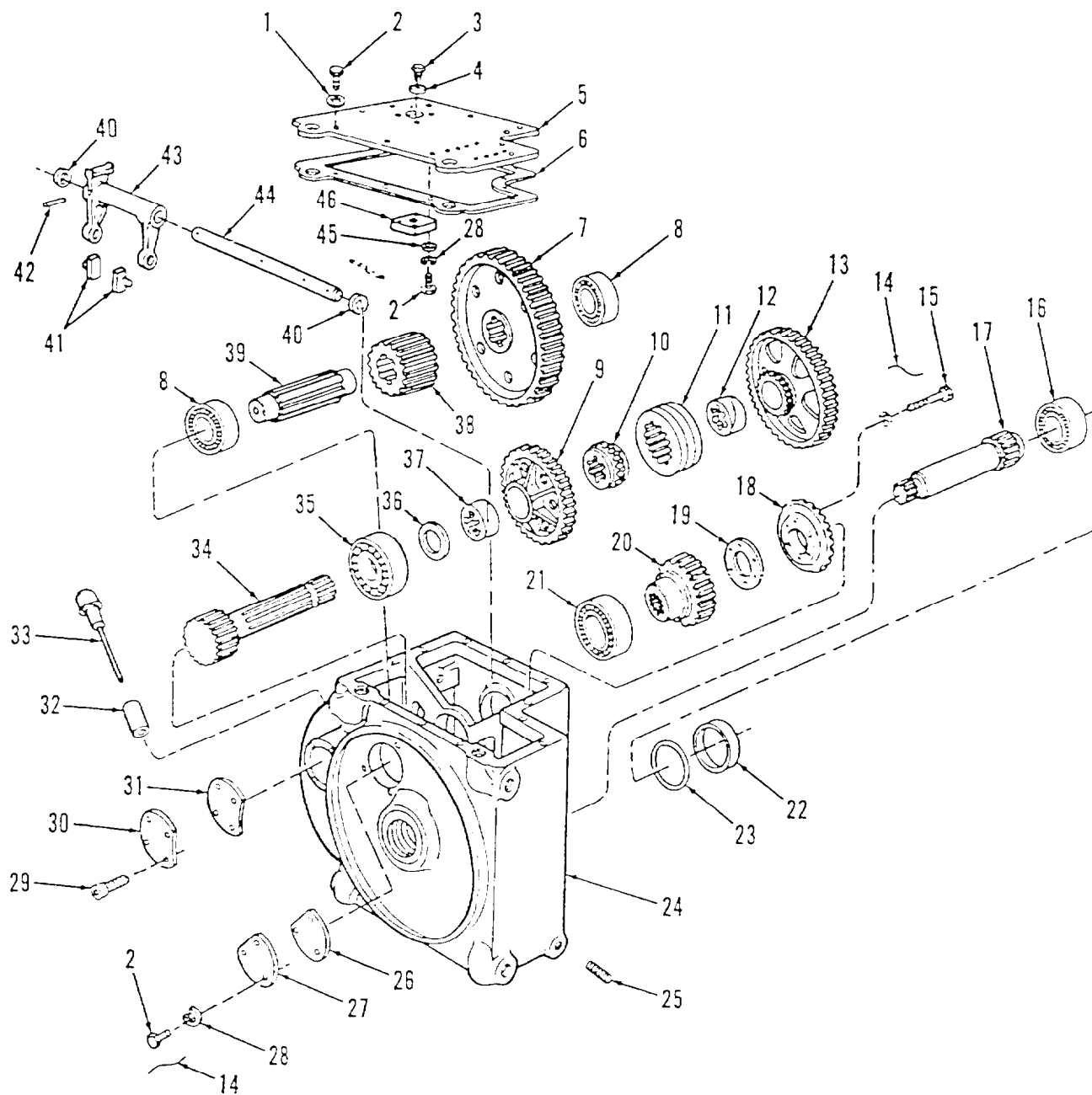


Figure 2. Main Winch Gears and Case

SECTION II		TM 9-2350-256-24P-2		(5)	(6)
(1)	(2)	(3)	(4)		
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP: 2001					
FIGURE 2. MAIN WINCH GEARS AND CASE					
1	PADZZ	96906	MS35333-42	WASHER, LOCK	11
2	PADZZ	96906	MS90726-60	SCREW, CAP, HEX HEAD	18
3	XDDZZ	45320	X38582	DETENT ASSEMBLY	1
4	PADZZ	88044	AN901-16C	GASKET	1
5	XDDZZ	45320	F38587	COVER	1
6	PADZZ	19207	8738912	GASKET	1
7	PADZZ	19207	8738916	GEAR, SPUR	1
8	PADZZ	96906	MS17133-4	BEARING, ROLLER, SELF	2
9	PADZZ	19207	8738927	GEAR CLUSTER	1
10	PADZZ	19207	8738885	GEAR, SPUR	1
11	PADZZ	19207	8738914	GEAR, INTERNAL	1
12	PADZZ	34712	Y40988	BEARING, SLEEVE	1
13	PADZZ	19207	8738931	GEAR CLUSTER	1
14	MDDZZ	45320	Y48125-4	WIRE, LOCK MAKE FROM NSN 9505-00-684-0982	2
15	PBDZZ	96906	MS90727-62	SCREW, CAP, HEXAGON H	6
16	PADZZ	43334	ND3311	BEARING, BALL, ANNULA	1
17	PBDZZ	19207	8738924	GEARSHAFT, SPUR	1
18	XDDZZ	19207	8738922	GEAR, BEVEL PART OF KIT P/N 11644795.	1
19	PADZZ	19207	8738379	SHIM	1
23	PADZZ	19207	8738923	GEAR, SPUR	1
21	PADZZ	43334	3L21X1	BEARING, BALL, ANNULA	1
22	PADZZ	45320	X38687	GEARSHAFT COVER	1
23	PADZZ	96906	MS2875-246	PACKING, PREFORMED	1
24	XADZZ	45320	R38414	CASE, GEAR	1
25	PADZZ	96906	MS49006-10	PLUG, PIPE, MAGNETIC	1
26	PADZZ	19207	8738893	GASKET	1
27	XDDZZ	45320	X38599	COVER, SHAFT	1
28	PADZZ	96906	MS35338-48	WASHER, LOCK	7
29	PADZZ	96906	MS16998-72	SCREW, CAP, SOCKET HE	4
33	XDDZZ	45320	F38493	COVER	1
31	PBDZZ	19207	8738913	GASKET	1
32	XDDZZ	45320	X38591	TUBE	1
33	PBDZZ	45320	Y16278-8	DIP STICK	1
34	PADZZ	19207	8738932	GEARSHAFT, SPUR	1
35	PADZZ	52676	NU312	BEARING, ROLLER, CYLI	1
36	PADZZ	19207	8738877	BEARING, WASHER, THRU	1
37	PADZZ	19207	8738890	BEARING, SLEEVE	2
38	PAOZZ	19207	8738900	GEAR, SPUR	1
39	PADZZ	19207	8738925	GEARSHAFT, BEVEL	1
49	PADZZ	19207	7341493	SEAL, PLAIN ENCASED	2
41	PADZZ	19207	8738889	SLIDING BLOCK, T-SLO	2
42	DADZZ	96906	MS16562-67	PIN, SPRING	1
43	XDDZZ	45320	F38507	FORK, SHIFTER	1
44	XDDZZ	45320	X38586	SHAFT	1
45	PADZZ	96906	MS27183-15	WASHER, FLAT	4
46	PADZZ	19207	8738897	PLATE, MOUNTING	1

END OF FIGURE

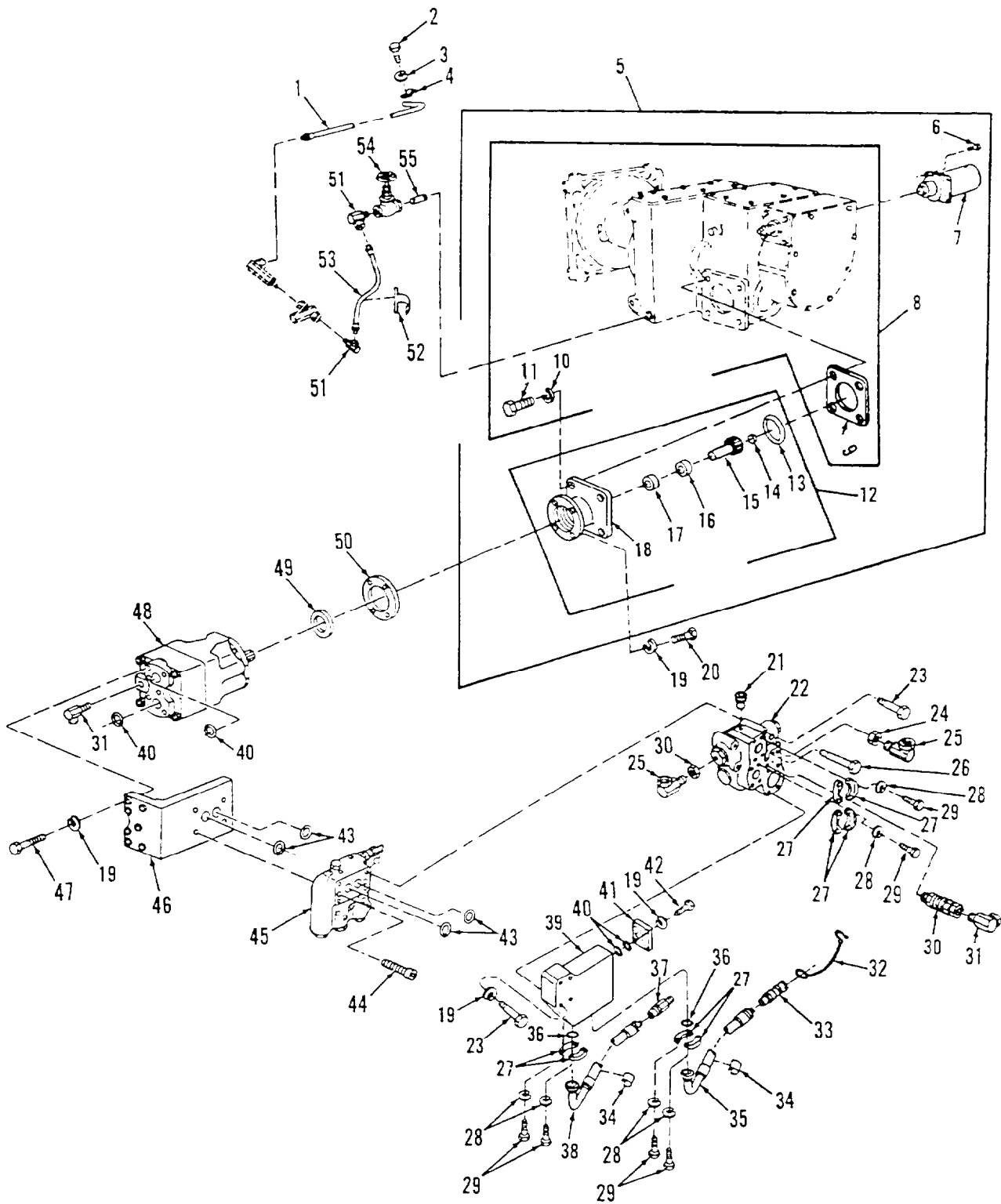


Figure 3. Hoist Winch and Motor

SECTION II

TM 9-2350-256-24P-2

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GPOUP: 2001					
FIGURE 3. HOIST WINCH AND MOTOR					
1	PAFZZ	19207	10866650	HOSE, ASSEMBLY, NONME	2
2	PAFZZ	96906	MS90727-6	BOLT,MACHINE	1
3	PAFZZ	96906	MS35338-44	WASHER,LOCK	1
4	PAFZZ	96906	MS51956-3	STRAP,RETAINING	1
5	AFFDD	19207	8379009	WINCH,ASSY	1
6	PAFZZ	96906	MS16998-97	.SCREW, CAP, SOCKET HE	4
7	PAFZZ	19207	8738944	. CHAMBER, AIR BRAKE	1
8	AFFDD	19207	8738935	.WINCH, DRUM, VEHICLE	1
9	PADZZ	19207	8738880	.. SHIM	1
10	PADZZ	96906	MS35338-49	WASHER,LOCK	4
11	PADZZ	96906	MS90726-113	..SCREW, CAP, HEXAGON H	4
12	XCFDD	19207	8738941	. CARRIER	1
13	PADZZ	96906	MS28775-241	.. PACKING,PREFORMED	1
14	PADZZ	96906	MS35643-10	.. PLUG,EXPANSION	1
15	PADZZ	19207	8739016	.. GEAR,BEVEL PART OF KIT P/N 11644795	1
16	PBDZZ	21760	1210F	..BEARING,BALL,ANNUL	1
17	PADZZ	21450	713454	BEARING, BALL, ANNUL	1
18	PADZZ	19207	8739017	..CARRIER, GEARSHAFT W	1
19	PAFZZ	96906	M35338-48	WASHER,LOCK	19
20	PAFZZ	96906	MS90727-112	SCREW,CAP,HEXAGON H	4
21	PAFZZ	96906	MS49006-6	PLUG,PIPE,MAGNETIC	1
22	PAFZZ	19207	12322573	VALVE, LINEAR, DIRECT	1
23	PAFZZ	96906	MS90727-123	SCREW CAP HEXAGON H	7
24	PAFZZ	19207	8764824	SEAL NUT, PIPE	2
25	PAFZZ	19207	8695830	ELBOW, PIPE	1
26	PAFZZ	96906	MS90727-127	SCREW, CAP, HEXAGON H	1
27	PAFZZ	19207	8395524	FLANGE, PIPE,SWIVEL	8
28	PAFZZ	96906	MS35338-47	WASHER, LOCK	16
29	PAFZZ	96906	MS18153-88	SCREW, CAP, HEXAGON H	16
30	PAFZZ	70434	7135474	COUPLING, PIPE	1
31	PAFZZ	19207	8392701	ELBOW, PIPE	3
32	PAFZZ	19207	10894260	RING, CONNECTING,ROU	1
33	PAFZZ	81361	E150-1-12-12-1A	COUPLING HALF,QUICK	1
34	PAFZZ	19207	10867458	BAND, MARKER	4
35	PAFZZ	19207	10867396	HOSE, ASSEMBLY, NONME	1
36	PAFZZ	96906	MS28775-222	PACKING, PREFORMED	2
37	PAFZZ	81361	E150-1-12-11-1A	COUPLING,HALF, QUICK	1
38	PAFZZ	19207	10867397	HOSE, ASSEMBLY,NONME	1
39	PAFZZ	19207	10866666	MANIFOLD, HYDRAULIC	1
40	PAFZZ	96906	MS28775-228	PACKING, PREFORMED	3
41	PAFZZ	19207	10866667	COVER, ACCESS	1
42	PAFZZ	96906	MS90727-113	SCREW, CAP, HEXAGON H	4
43	PAFZZ	96906	MS28775-223	PACKING, PREFORMED	4
44	PAFZZ	96906	MS16998-102	SCREW, CAP, SOCKET,HE	4
45	PAFDD	19207	10923500	VALVE HEAD,HYDRAULI	1
46	PAFZZ	19207	11672154	BRACKET, MOUNTING PART OF KIT P/N 11672161	1

SECTION II		TM9-2350-256-24P-2			
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
47	PAFZZ	80204	B1821BH050C275N	SCREW,CAP,HEXAGON H PART OF KIT P/N 11672161	7
48	PAFDD	19207	11672155	MOTOR,HYDRAULIC PART OF KIT P/N 11672161	1
49	PAFZZ	19207	11672156	SPACER,RING PART OF KIT P/N11672161	1
50	PAFZZ	19207	10867446	GASKET PART OF KIT P/N 11672161	1
51	PAFZZ	63906	12MA12UFS	ELBOW,PIPE	2
52	PAFZZ	19207	10867456	BAND,MARKER	5
53	PAFZZ	19207	1086665	HOSE ASSEMBLY,NONME	1
54	PAFZZ	21450	593401	VALVE,GATE	1
55	PAFZZ	96906	MS51953-102	NIPPLE,PIPE	1

END OF FIGURE

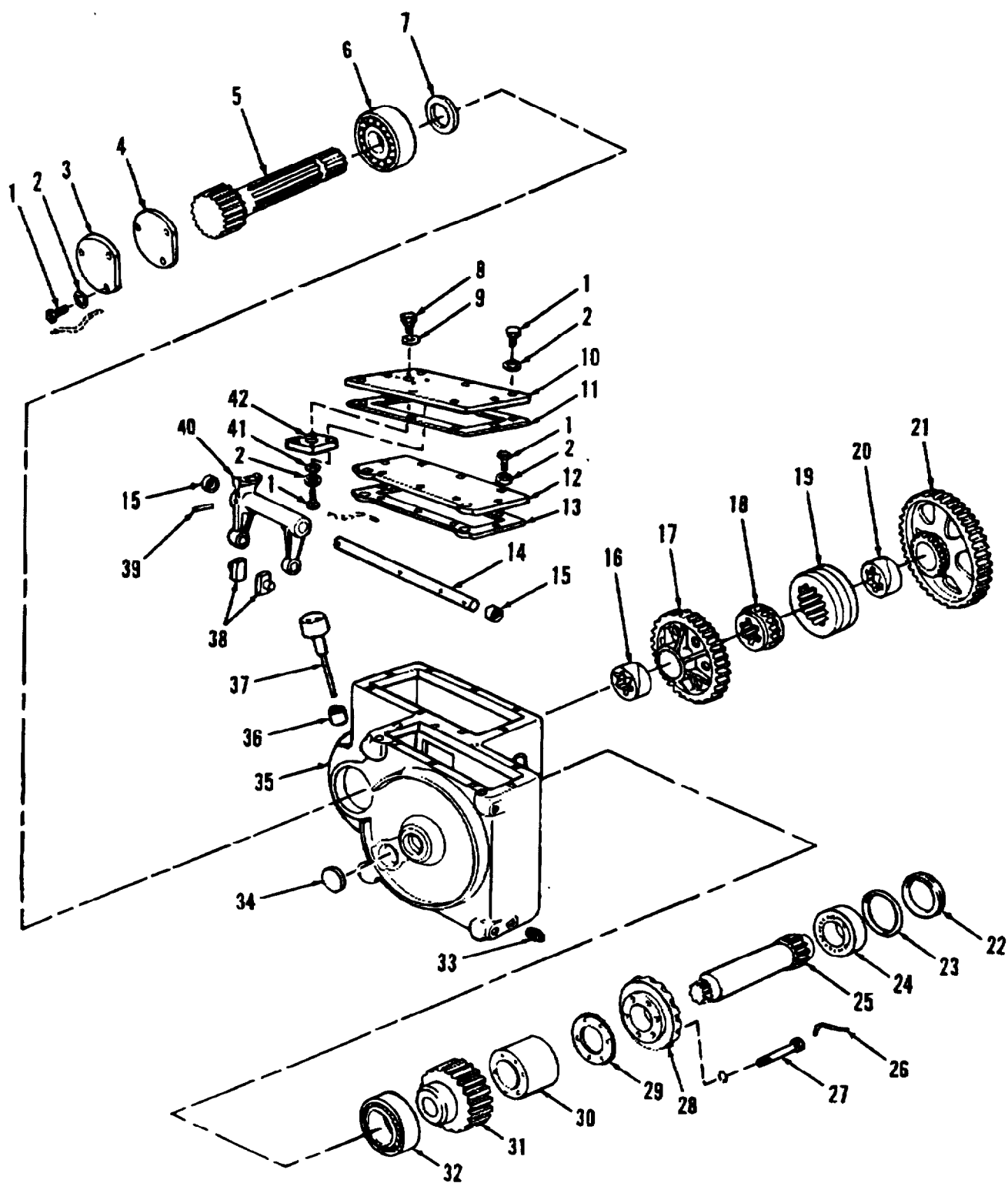


Figure 4. Hoist Winch Gears and Case

SECTION II

TM9-2350-256-24P-2

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP: 2031					
FIGURE 4. HOIST WINCH GEARS AND CASE					
1	PADZZ	96906	MS90726-60	SCREW, CAP, HEX HEA.....	23
2	PAOZZ	96906	MS35333-42	WASHER, LOCK.....	23
3	XDDZZ	45320	X38599	COVER, SHAFT.....	1
4	PADZZ	19207	9738993	GASKET.....	1
5	PADZZ	19207	8738932	GEARSHAFT, SPUR.....	1
6	PAOZZ	52676	NU312	BEARING, ROLLER, CYLI.....	1
7	PADZZ	192C7	738877	BEARING, WASHER, THRU.....	1
8	XDDZZ	45320	X38582	DETENT ASSEMBLY.....	1
9	PAOZZ	88044	AN901-16C	GASKET.....	1
10	XDDZZ	45320	F38588	COVER.....	1
11	PADZZ	19207	8738891	GASKET.....	1
12	XDOZZ	45320	F38589	COVER, BULL GEAR.....	1
13	XOOZZ	45320	X38710	GASKET.....	1
14	XOOZZ	45320	X38586	SHAFT.....	1
15	PADZZ	19207	7341493	SEAL, PLAIN ENCASED.....	2
16	PADZZ	19207	9738890	BEARING, SLEEV.....	1
17	PAOZZ	19207	9738927	GEAR CLUSTER.....	1
18	PAOZZ	19207	9738885	GEAR, SPUR.....	1
19	PAOZZ	19207	8738914	GEAR, INTERNAL.....	1
20	PAOZZ	34712	Y40988	BEARING, SLEEVE.....	1
21	PADZZ	19207	8738931	GEAR CLUSTER.....	1
22	PADZZ	45320	X38687	GEARSHAFT COVER.....	1
23	PADZZ	96906	MS28775-246	PACKING, PREFORMED.....	1
24	PADZZ	01425	P000001526	BEARING, BALL, ANNULA.....	1
25	PBDZZ	19207	8738924	GEARSHAFT, SPUR.....	1
26	MDDZZ	45320	Y48125-5	WIRE, LOCK MAKE FROM NSN 9505-00- 191-3680.....	1
27	PADZZ	96906	MS51096-369	SCREW, CAP, HEXAGON H.....	6
28	XDDZZ	19207	8738922	GEAR, BEVEL PART OF KIT P/N 11644795.....	1
29	PADOZZ	19207	8738879	SHIM.....	1
30	PADZZ	45320	F38566	SPACER, SLEEVE.....	1
31	PADZZ	19207	8738923	GEAR, SPUR.....	1
32	PADZZ	21335	9121K	BEARING, BALL, ANNULA.....	1
33	PADZZ	10001	12Z329PC93	PLUG, PIPE.....	1
34	PADZZ	96906	M535648-21	PLUG, EXPANSION.....	1
35	XDOZZ	45320	R35418	CASE, GEAR.....	1
36	XOOZZ	45320	X38591	TUBE.....	1
37	PAOZZ	45320	Y16278-8	DIP STICK.....	1
38	PADZZ	19207	8738889	SLIDING BLOCK, T-SLO.....	2
39	PADZZ	96906	M516562-67	PIN, SPRING.....	1
40	XDDZZ	45320	F38507	FORK, SHIFTER.....	1
41	PADZZ	96906	M527183-14	WASHER, FLAT.....	4
42	PADZZ	19207	89738897	PLATE, MOUNTING.....	1

END OF FIGURE