

Caterpillar D7F Sample File.

This single sample file contains samples for

Operations & Technical Manual

Parts Manual

Repair Manual (1)

Repair Manual (2)

**TECHNICAL MANUAL
OPERATOR'S MANUAL
TRACTOR, FULL TRACKED;
LOW SPEED; DED; MEDIUM
DRAWBAR PULL; OSCILLATING
TRACK, 78-IN. GAGE
(CATERPILLAR MODEL D7F)
WITH RIPPER;
FSN 2410-177-7283
WITH WINCH;
FSN 2410-177-7284**

HEADQUARTERS, DEPARTMENT OF THE ARMY

This reprint includes all changes in effect at the time of
publication - Change 3.

28 NOVEMBER 1972

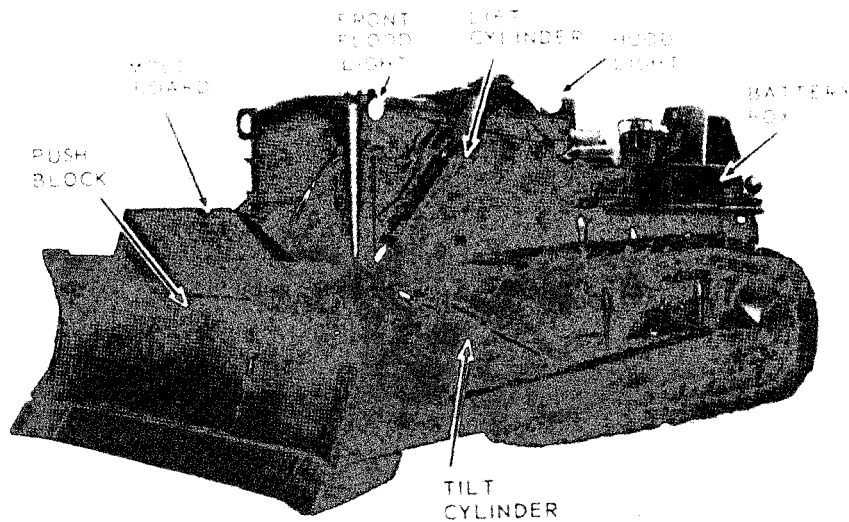
Boulevard, St. Louis, Mo. 63120. A reply will be furnished direct to you.

Section II. DESCRIPTION AND DATA

1-4. Description

a. The tractor (**fig. 1-1** thru 1-3) is a full-tracked, low speed, medium-drawbar-pull tractor powered by a 6-cylinder, turbo-charged, model D333CT diesel engine. The three major assemblies of the tractor are a center section and two side section. The center section contains the power source and the operator's controls. The two side sections consist of track frames extending approximately the full length of the tractor. Full-tracked tractors serve many purposes, such as prime movers for pushing and pulling loads, power units for winches and hoists, and moving mounts for dozer blades and rippers. TM 5-331A contains a more complete description of the purposes and uses for which the tractor is designed, The tractor can operate in muck or water as deep as the height of the tracks. Operation in deeper water is possible for short periods of time if the tractor is properly waterproofed.

b. The hydraulically operated power units consist of a hydraulic pump mounted on the transmission, hydraulic lines leading to and from the control valves,



ME 2410-233-10-1-1

Figure 1-1. Left-front, 3/4 view.

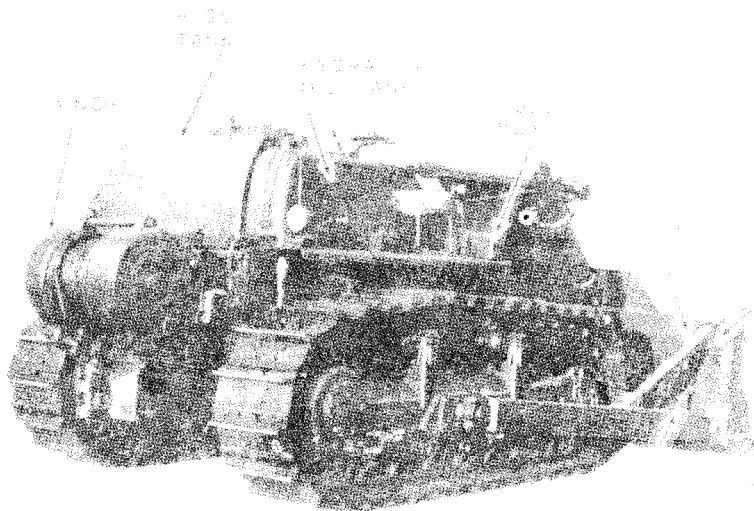


Figure 1-2. Right-rear, 3/4 view, w/winch.

CHAPTER 2

OPERATING INSTRUCTIONS

Section 1. OPERATING PROCEDURES

2-1. Starting the Tractor

a. Perform the daily preventive maintenance procedures described in **table 3-1**.

b. Refer to **figure 2-1** and start the engine as follows:

(1) Apply brakes and lock with brake-lock lever.

(2) Lock speed selector lever in NEUTRAL with safety lock.

(3) Turn disconnect switch ON (located to left side of operator's seat, behind battery box).

(4) Pull the governor control lever back until it snaps over detents to open fuel injection pumps.

(5) Push in and turn heat-start switch to HEAT position for time indicated below if required.

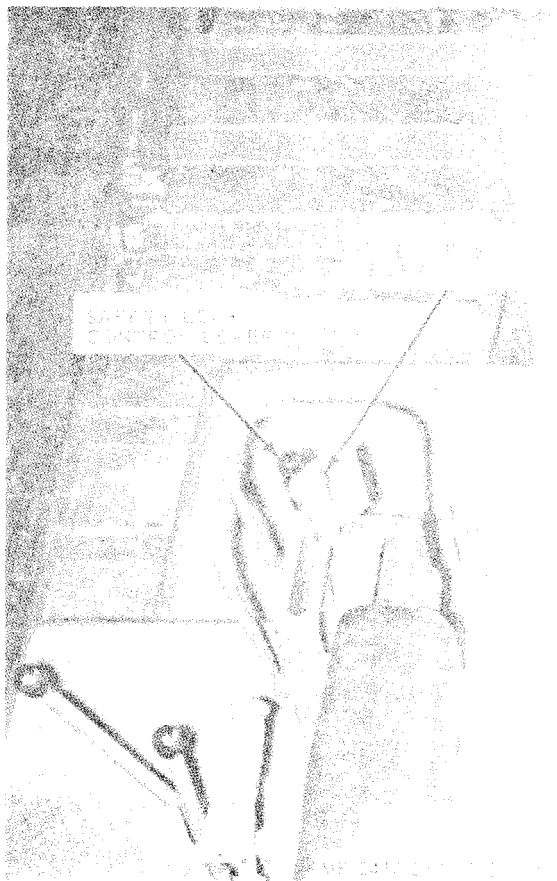
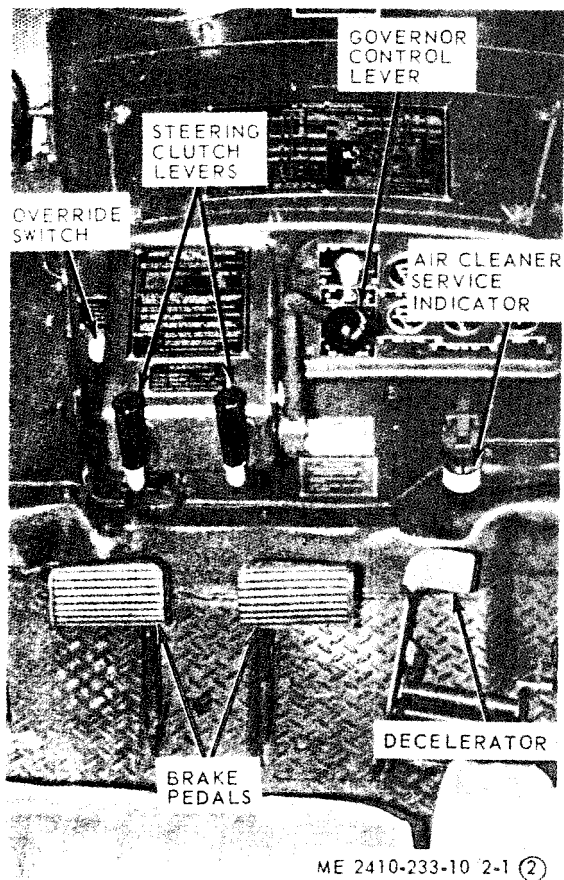


Figure 2-1. Controls and instruments (sheet 1 of 5)



ME 2410-233-10 2-1 (2)

Figure 2-1. Controls and instruments (sheet 2 of 5)

HEAT - START SWITCH - NORMALLY OFF. WHEN PLACED IN HEAT POSITION GLOW PLUGS WILL HEAT AIR IN PRECOMBUSTION CHAMBER.

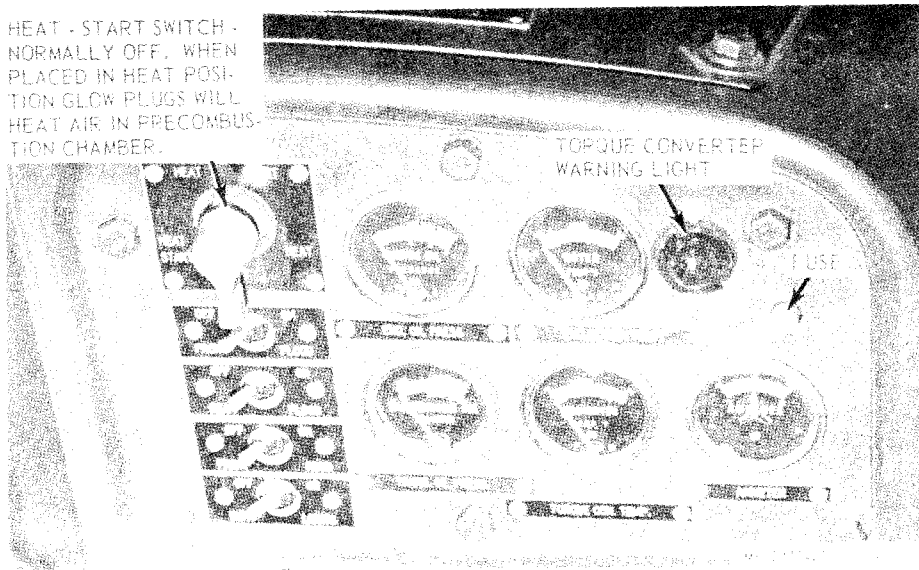


Figure 2-1. Controls and instruments (sheet 3 of 5)

Glow Plug Heating Time

Starting temperature range----- Heat-Start switch ON.

Above 60°F----- None.

60 °F to 32°F----- 1 Minute.

32 °F to 0°F----- 2 Minutes.

Below 0°F----- 3 Minutes.

(6) Push in and turn heat-start switch to START position to crank engine.

CAUTION

Never operate electric starter more than 30 seconds at a time. Allow 2 minutes for cooling before using starter again.

(7) When engine starts, return heat-start switch to HEAT position (when temperature is below 60°F) until engine runs smoothly. If engine does not start after 10 seconds, turn heat-start switch to HEAT for 30 seconds; then repeat starting procedure. A safety device to protect the starter bendix is controlled by an oil pressure switch. When oil pressure is 8- to 12-lbs., the oil pressure switch activates the automatic disconnect switch and breaks the flow of electrical current to the starter. A manual override button (on left-side of console) is provided to by-pass the automatic disconnect system when cranking to start the engine and oil pressure builds up to the cut-off limits.

TECHNICAL MANUAL

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

**TRACTOR, FULL-TRACKED, LOW
SPEED, DED, MEDIUM DRAWBAR
PULL; OSCILLATING TRACK,
78 IN. GAGE**

NSN 2410-00-177-7283 W/RIPPER

NSN 2410-00-177-7284 W/WINCH

NSN 2410-00-185-9794

W/RIPPER AND ROPS

NSN 2410-00-185-9792

W/WINCH AND ROPS

CATERPILLAR MODEL D7F

This manual Supersedes TM 5-2410-233-24P, 22 September 1989 and all changes.

Approved for public release; distribution is unlimited.

**HEADQUARTERS, DEPARTMENT OF THE ARMY
21 JANUARY 2002**

Technical Manual

*TM 5-2410-233-24P

HEADQUARTERS,
DEPARTMENT OF THE ARMY
Washington, DC, 21 January 2002

UNIT
DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING
DEPOT MAINTENANCE REPAIR PARTS
AND SPECIAL TOOLS LISTS)
TRACTOR, FULL-TRACKED, LOW SPEED, DED,
MEDIUM DRAW BAR PULL; OSCILLATING TRACK,
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NSN 2410-00-185-9792 W/WINCH AND ROPS

CATERPILLAR MODEL D7F

CURRENT AS OF 06 November 2001

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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*THIS PUBLICATION SUPERSEDES TM 5-2410-233-24P, DATED 22 SEPTEMBER 1989 AND ALL CHANGES.

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40 KITS _____	99	
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50 BULK MATERIAL _____	BULK	
BULK _____	BULK	BULK

SECTION III. SPECIAL TOOLS LIST (NOT APPLICABLE)

SECTION IV. CROSS REFERENCE INDEX

NATIONAL STOCK NUMBER TO FIGURE AND ITEM NUMBER INDEX
 PART NUMBER TO ITEM NUMBER INDEX



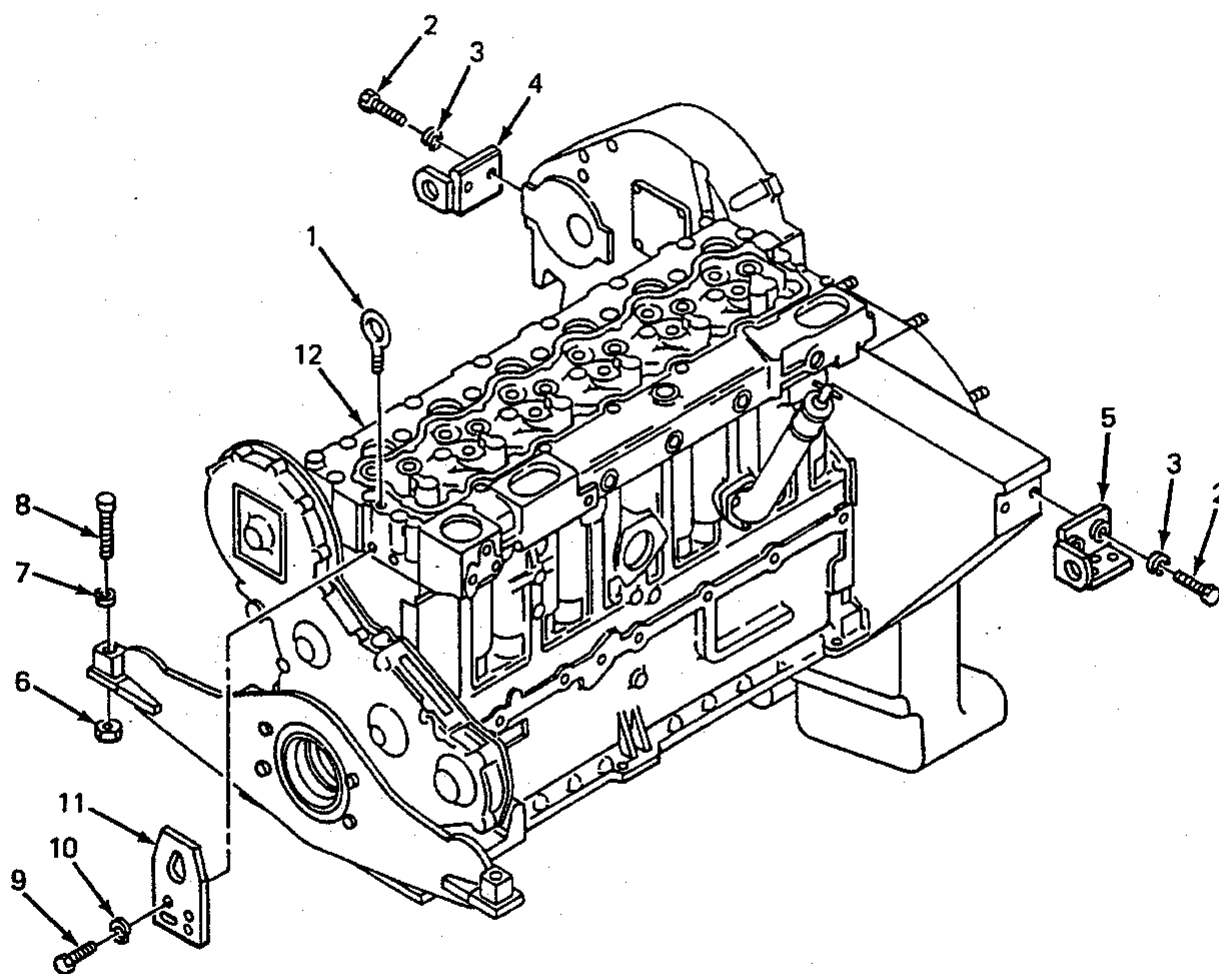


FIGURE 1. ENGINE AND MOUNTING BRACKETS, 5R0829, 5R3715, 5R7757, 5R8357 ENGINES.

SECTION II		TM5-2410-233-24P				
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP 01 ENGINE						
GROUP 0100 ENGINE ASSEMBLY						
FIG 1 ENGINE AND MOUNTING BRACKETS, 5R0829, 5R3715, 5R7757, 5R8357 ENGINES						
1	PAFZZ	5306001401975	11083	5L4544	BOLT,EYE.....	1
					UOC:BSU,BSV,BSW,BSX,BSZ,GAB	
2	PFFZZ	5305007247221	80204	B1821BH063C175N	SCREW,CAP,HEXAGON H 5/8" 11NC	4
					1.75" LONG.....	
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	
3	PFOZZ	5310008206653	96906	MS35338-50	WASHER,LOCK.....	4
					UOC:BSR,BSS,BSU,BSV,BSW,BSX	
4	PAFZZ	2510013515937	11083	9S6987	BRACKET,ENGINE MOUN.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	
5	PAFZZ	2510013514026	11083	9S8926	BRACKET,ENGINE MOUN.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	
6	PAFZZ	5310009785406	11083	2J3506	NUT,PLAIN,HEXAGON.....	2
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	
7	PAFZZ	5310004191363	11083	2S0115	WASHER,FLAT.....	2
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	
8	PAFZZ	5306004264171	11083	3B2968	BOLT,MACHINE.....	2
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	
9	PAFZZ	5305007215322	96906	MS35307-462	SCREW,CAP,HEXAGON H.....	2
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	
10	PAFZZ	5310011073590	11083	8D5054	WASHER,FLAT.....	2
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	
11	PAFZZ	5365011575068	11083	8N8721	SPACER,PLATE.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	

END OF FIGURE

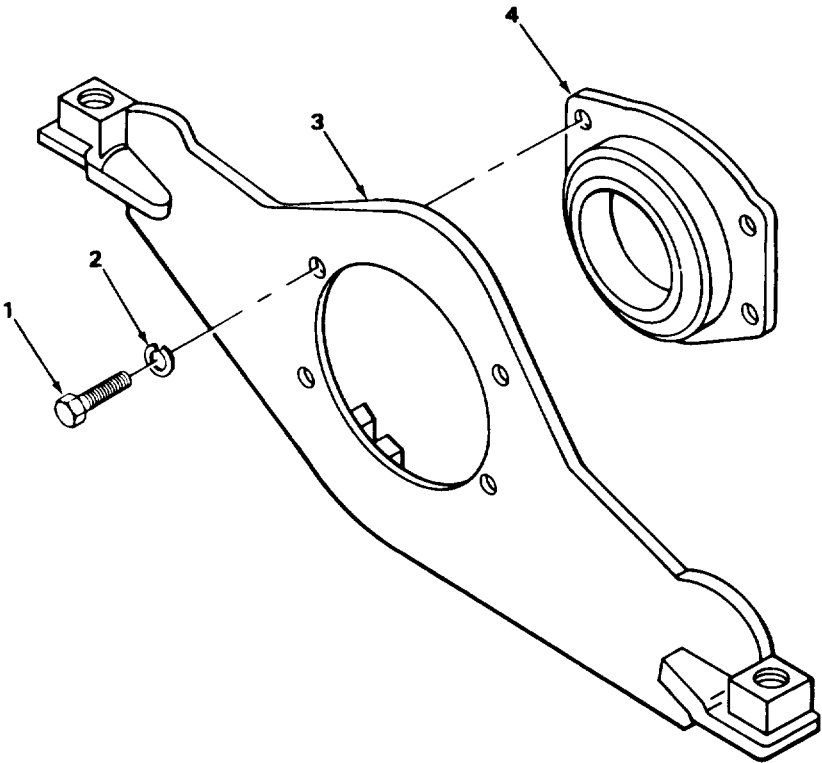


FIGURE 2. ENGINE FRONT SUPPORT.

SECTION II			TM5-2410-233-24P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP 0100 ENGINE ASSEMBLY						
FIG. 1 ENGINE FRONT SUPPORT, 5R0829						
ENGINE						
1	PAFZZ	5306004238117	11083	S1595	BOLT,MACHINE.....	4
					UOC:BSR,BSS,BSU,BSV,BSW,BSX	
2	PFFZZ	5310005845272	96906	MS35338-48	WASHER,LOCK.....	4
					UOC:BSR,BSS,BSU,BSV,BSW,BSX	
3	XDFZZ	2510013515938	11083	1P6074	BRACKET,ENGINE MOUN.....	1
					UOC:BSR,BSS,BSU,BSV,BSW,BSX	
4	PFFZZ	3120004933910	11083	7S1234	BUSHING,SLEEVE.....	1
					UOC:BSR,BSS,BSU,BSV,BSW,BSX	
END OF FIGURE						

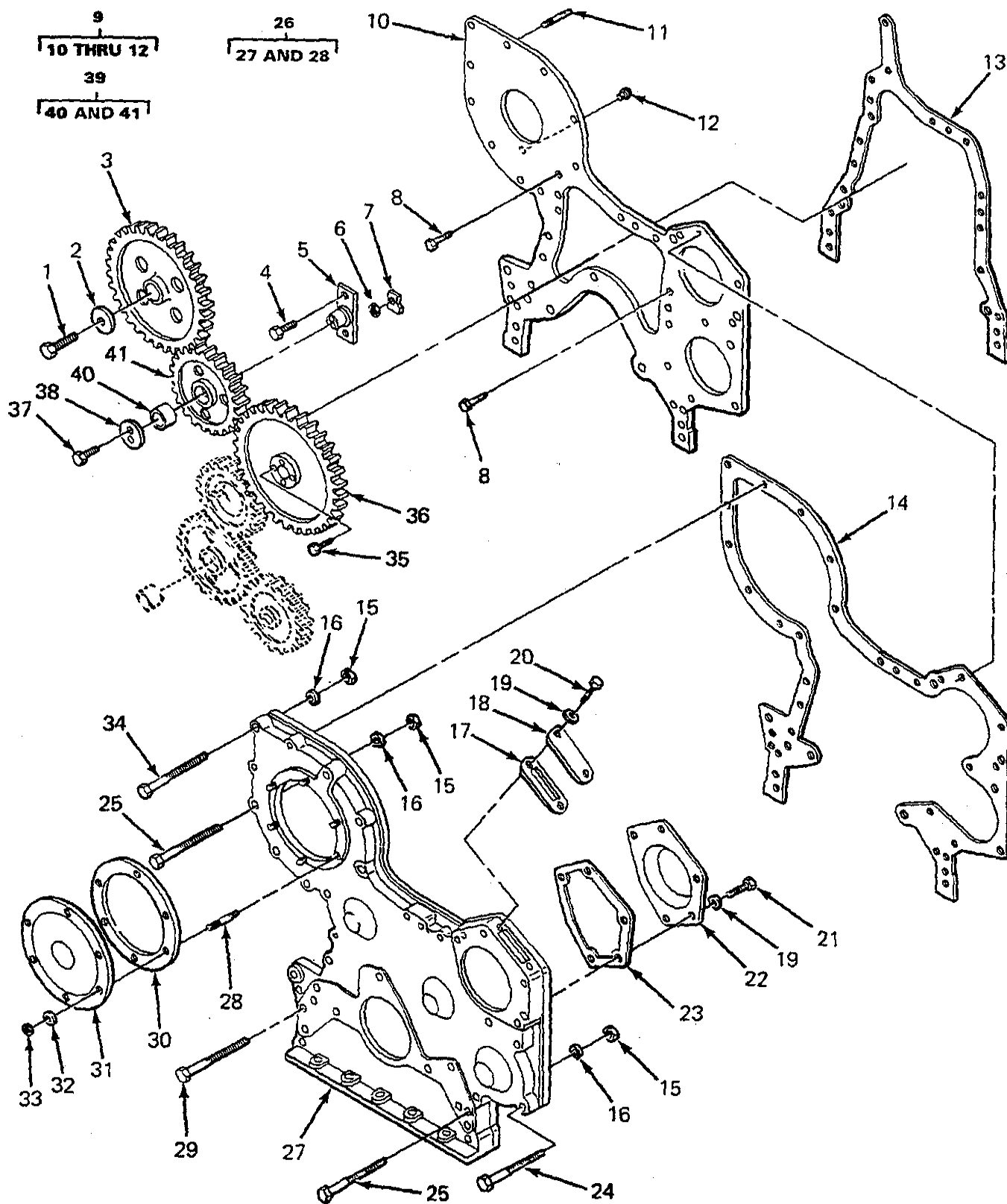


FIGURE 16. TIMING GEAR HOUSING AND COVERS, 5R3715, 5R7757, 5R8357 ENGINES.

SECTION II			TM5-2410-233-24P		(6)	(7)
(1)	(2)	(3)	(4)	(5)		
ITEM	SMR		PART			
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP 0105 VALVES, CAMSHAFTS AND TIMING SYSTEMS						
FIG. 16 TIMING GEAR HOUSING AND COVERS, 5R3715, 5R7757, 5R8357 ENGINES						
1	PAHZZ	5305007247222	80204	B1821BH063C200N	SCREW,CAP,HEXAGON H.....	1
					UOC:BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
1	PFHZZ	5306011235894	11083	0S1603	BOLT,TFR PUMP.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX	
2	PAHZZ	5310011576813	11083	7N2994	WASHER,SHOULDERED.....	1
					UOC:BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
2	PFHZZ	5310010239757	11083	4N3371	WASHER,FLAT.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX	
3	PAHZZ	3020012539281	11083	7W0508	GEAR,HELICAL.....	1
					UOC:BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
3	PFHZZ	3020011268956	11083	7N3536	GEAR,HELICAL.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX	
4	PFHZZ	5306002637301	11083	L1351	BOLT,MACHINE.....	2
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
5	PFHZZ	3040011255536	11083	8N4959	SHAFT,IDLER.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
6	PFHZZ	5310009752075	96906	MS35691-21	NUT,PLAIN,HEXAGON.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
7	PFHZZ	5340004492612	11083	5S7611	LOCKING PLATE,NUT A PART OF KITS 6V2550,6V4780,6V4707,5R1425.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
8	PAHZZ	5306006906976	03038	LH90725-59	BOLT,SELF-LOCKING.....	6
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
9	XDHZZ		11083	1W7816	PLATE ASSEMBLY.....	1
					UOC:BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
9	PFHZZ	2815011255544	11083	6N9060	PLATE ASSEMBLY,FRON.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX	
10	PFHZZ	2815011774792	11083	1W7110	.PLATE,COVER.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
11	PAHZZ	5307005873434	11083	6H192	.STUD,PLAIN.....	1
					UOC:BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
11	PFHZZ	5307011074197	11083	4M8743	.STUD,PLAIN.....	3
					UOC:BSQ,BST,BSU,BSV,BSW,BSX	
12	PFHZZ	4730009247886	11083	5M6214	.PLUG,PIPE.....	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	
13	PFHZZ	5330011284137	11083	8N110	GASKET PART OF KIT P/N 6V1549..	1
					UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ,GAB,RJG	

CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
11083	6N7523	5310-01-064-1494	49	3
			59A	17
			59B	23
11083	6N7527	2910-01-024-0939	46	3
11083	6N7615	2910-01-247-5504	47	5
11083	6N7887	5330-01-093-7888	16	30
11083	6N8003	3040-01-149-5043	4	12
			5	19
11083	6N8629	5340-01-071-2545	59	18
11083	6N8885	4710-01-351-6048	56	9
11083	6N8940	3120-00-007-6320	10	6
11083	6N9060	2815-01-125-5544	16	9
11083	6N9587	5940-01-097-3578	63A	22
			63A	29
11083	6N9916	2815-01-143-1409	23	8
11083	6P1703	2510-01-217-9361	152	1
11083	6P1705	5340-01-216-6831	152	11
11083	6P6653	2530-00-195-5819	136	3
11083	6P6979	4720-01-229-6402	121	5
11083	6P7639	5330-01-129-2544	137	17
04055	6TLFP	6140-01-431-1172	100	17
11083	6T0362	5970-01-315-1944	88	9
11083	6T1980	2530-00-947-9857	136	6
11083	6T7223		83	1
11083	6T7799	3120-01-186-1302	112	9
11083	6V0899	5330-01-278-9683	KIT	
11083	6V1343	5330-00-496-8955	KIT	
11083	6V1426	5307-01-258-4709	9	7
11083	6V1427	5307-01-256-9782	9	4
11083	6V1549	5330-01-445-2376	KIT	
11083	6V1895		KIT	
11083	6V1980	5330-01-445-2386	KIT	
11083	6V2202	3110-00-985-2248	82	7
11083	6V2376	4730-01-196-7172	35B	8
11083	6V2550	5330-01-445-2389	KIT	
11083	6V2604		149	2
11083	6V2911	5330-01-259-3828	KIT	
11083	6V3265	5340-01-184-5459	62C	35
11083	6V3507	5330-01-152-0601	197A	2
			197B	3
11083	6V4626	5306-01-160-4498	79	8
11083	6V4707	5330-01-445-2391	KIT	
11083	6V4780	5330-01-181-7439	KIT	
11083	6V5894	5305-01-210-7417	49A	1
11083	6V6835	5305-01-187-5879	60A	4
			60A	7
11083	6V6921	5330-01-183-1504	50	41
11083	6V8188	5310-01-184-3538	92	2
			87A	2
11083	6V8363		63B	8
11083	6V8370	5310-01-184-3539	63B	12

TM 5-2410-233-20

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE MANUAL

**TRACTOR, FULL - TRACKED, LOW SPEED; DED;
MEDIUM DRAWBAR PULL; OSCILLATING TRACK,
78- IN. GAGE (CATERPILLAR MODEL D7F)**

WITH RIPPER; FSN 2410-177-7283

WITH WINCH; FSN 2410-177-7284

This copy is a reprint which includes current
pages from Changes 1 and 2.

HEADQUARTERS, DEPARTMENT OF THE ARMY

31 AUGUST 1973

CHANGE

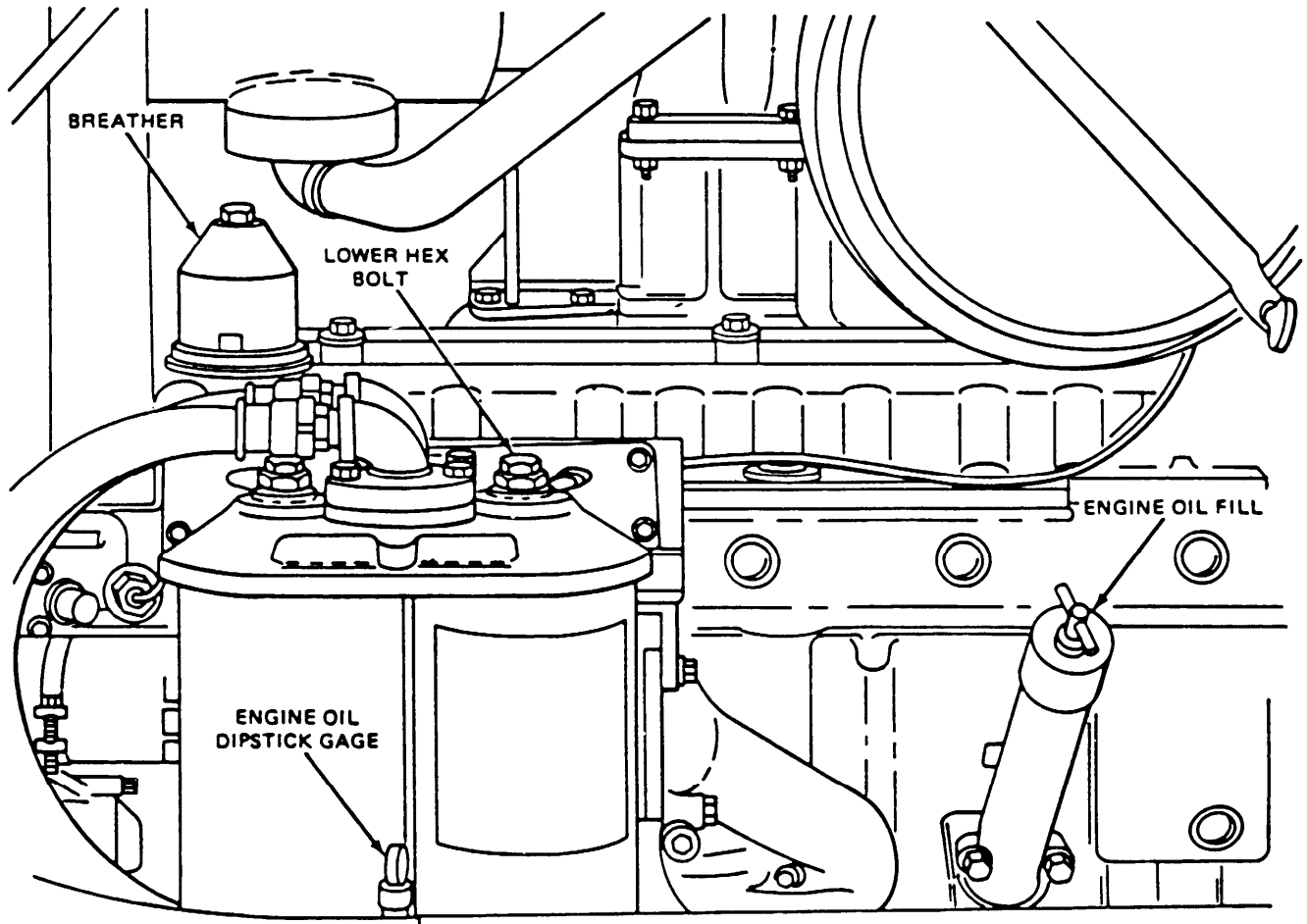
No. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 14 December 1982

Organizational Maintenance Manual
TRACTOR, FULL-TRACKED, LOW SPEED; DED;
MEDIUM DRAWBAR PULL; OSCILLATING TRACK,
78-IN. GAGE (CATERPILLAR MODEL D7F)
WITH RIPPER; NSN 2410-00-177-7283
WITH RIPPER AND ROPS; NSN 2410-00-185-9794
WITH RIPPER, ROPS (CAB) WINTERIZED; NSN 2410-00-300-6665
WITH WINCH; NSN 2410-00177-7284
WITH WINCH AND ROPS; NSN 2410-00-185-9792
WITH WINCH, ROPS (CAB) WINTERIZED; NSN 2410-00-300-6664

TM 5-2410-233-20, 31 August 1973, is changed as follows:

Page 2-6. Figure 2-4 is superseded as follows:



TA211648

Figure 2-4. Engine oil system servicing.

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CHANGE }
No. 1 }

HEADQUARTERS
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WASHINGTON, DC, 8 May 1981

**Organizational Maintenance Manual
TRACTOR, FULL-TRACKED, LOW SPEED; DED;
MEDIUM DRAWBAR PULL; OSCILLATING TRACK,
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WITH RIPPER, ROPS (CAB) WINTERIZED; NSN 2410-00-300-6665
WITH WINCH; NSN 2410-00-177-7284
WITH WINCH AND ROPS; NSN 2410-00-185-9792
WITH WINCH, ROPS (CAB) WINTERIZED; NSN 2410-00-300-6664**

TM 5-2410-233-20, 31 August 1973, is changed as follows:

The title is changed as shown above.

Page i, following chapter 2, section XV add the following:
"XVI. Maintenance of the roll-over protective structure"
paragraph "2-64" page "2-80".

Page ii, List of Illustrations.

2-1 change "moldboard and push beams" to
"moldboard and push arms".

Following 2-1 add the following:

2-1.1. Moldboard and push MTIIS (w/Rops), right
side 2-2.

Following 2-28 add the following:

2-28.1. Steering Clutch control linkage. . . 2-46.

Following 2-52 add the following:

2-52.1. Tractor body accessories (w/ROPS), right
side 2-75.

Following 2-54 add the following:

2-54.1. Tractor body accessories (w/ROPS), left
side 2-79.

Following 2-55 add the following:

2-56. Roll-over protective structure 2-81.

Page 1-1. Paragraph 1-5 is superseded as follows:

**1-5. 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 or DA 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MBP, Warren, MI 48090. A reply will be furnished to you.

Paragraph 1-7a(1) is superseded as follows:

(1) *US Army identification plate.*

Manufactured by Caterpillar Tractor Co.
Model D7F
Serial number 61G and up

National stock number. 2410-00-177-7283 (w/ripper)
2410-00-185-9794 (w/ripper and
ROPS)
2410-00-300-6665 (w/ripper and
ROPS (CAB) WINTERIZED)
2410-00-177-7284 (w/winch)
2410-00-185-9792 (w/winch and
ROPS)
2410-00-300-6664 (w/winch and
ROPS (CAB) WINTERIZED)

Engine serial number 61G and up
Length w/winch and dozer 232 in.
Length whipper and dozer 287 in.
Width 133 in.
Height w/ROPS and exhaust
stack 131 in.
Height w/ROPS, w/o stack. . . . 124 in.
Height w/o ROPS and stack. . . . 93 in.
Shipping weight w/ROPS, winch
and dozer 49,400 lb.
Shipping weight w/ROPS, ripper
and dozer 54,870 lb.
Shipping weight w/o ROPS 46,460 lb.

Paragraph 1-7 b(1) is superseded as follows:

(1) *Tractor.*

Forward speed:
Gear 0-2.2 mph
Gear 0-3.9 mph
Gear 0-6.0 mph
Reverse speed:
Gear 0-2.6 mph
Gear 0-4.6 mph
Gear 0-7.1 mph
Weight, ROPS 1,850 lbs.
Weight, tractor (w/ROPS) 39,490 lbs.
Weight, tractor only (w/o ROPS) . 36,760 lbs.
Weight, dozer and push arms. . . 6,617 lbs.
Weight, winch. 3,080 lbs.
Weight, ripper. 7,515 lbs.
Weight, operating (w/dozer,
winch, fuel and lubricants). . . 49,400 lbs.
Weight, operating w/o ROPS
(w/dozer, winch, fuel and
lubricants) 47,700 lbs.

Weight, operating (w/ripper, and dozer, fuel and lubricants)	54,870 lbs.
Weight, operating, w/o ROPS (w/dozer, ripper, fuel and lubricants)	50,800 lbs.
Length, overall w/winch and dozer	232 in.
Length, (w/ripper and dozer) . . .	287 in.
Width, overall	133 in.
Width, w/o moldboard and push arms	105 in.
Height, overall (w/ROPS and exhaust stack)	131 in.
Height, reducible (w/ROPS, w/o exhaust stack)	121 in.
Height, overall (w/o ROPS)	124 in.
Height, reducible (w/o ROPS and exhaust stack),	93 in.
Winch, rear mounted, reversible.	1 drum
Ripper, rear mounted	3 shanks

Bridge weight classification. 46

Page 2-1.

Paragraph 2-2a(3). Change "short cable" to "positive to negative cable assembly".

Paragraph 2-2a(5). Change "battery-to-disconnect" to "disconnect".

Paragraph 2-26.

Paragraph title. Change "Beams" to "Arms".

Subparagraph (1). Change "push beams" to "push arms".

Subparagraph (2). Change "push beams" to "push arms".

Subparagraph (3). Change "beams" to "arms".

Subparagraph (4). Change "Install beams" to "k-stall arms" and "beam caps" to "arm caps".

Paragraph 2-2c(2) add "(fig. 2-48)."

Page 2-2. Figure 2-1 is superseded as follows:

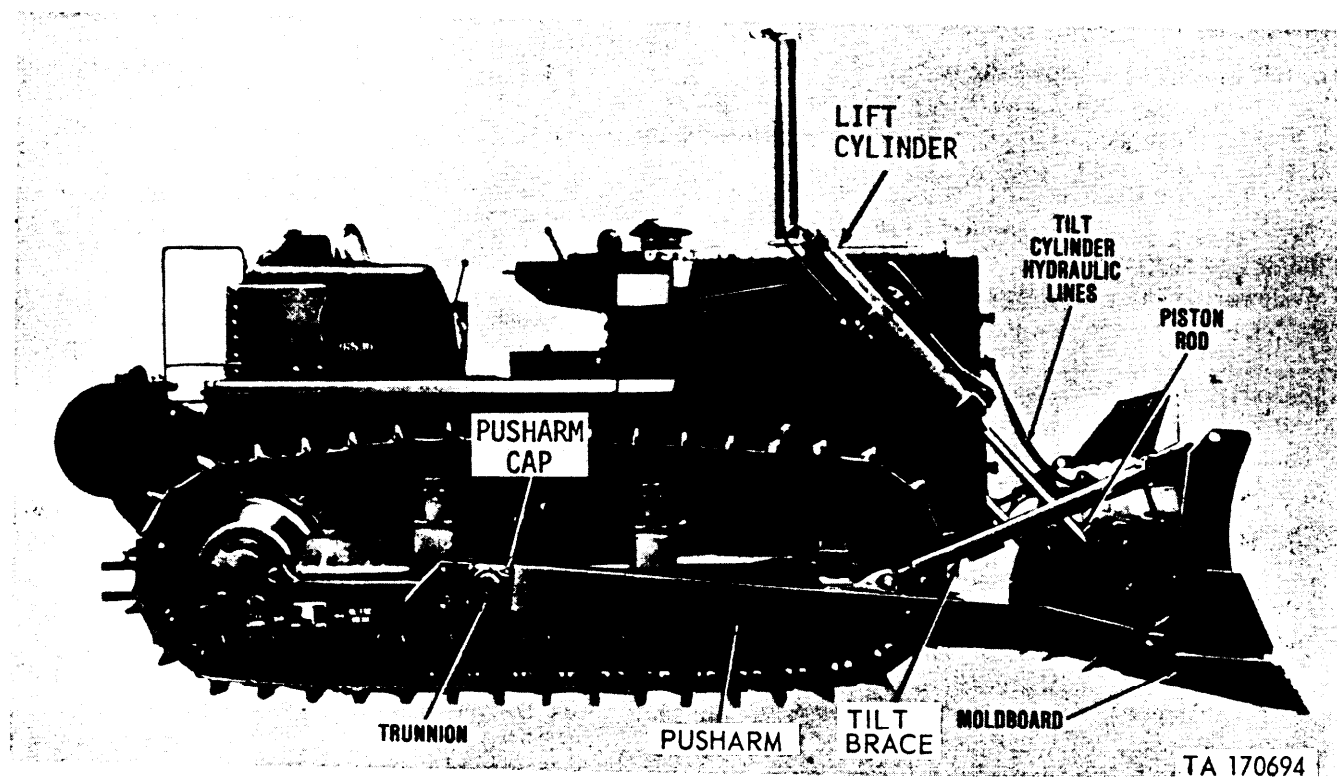
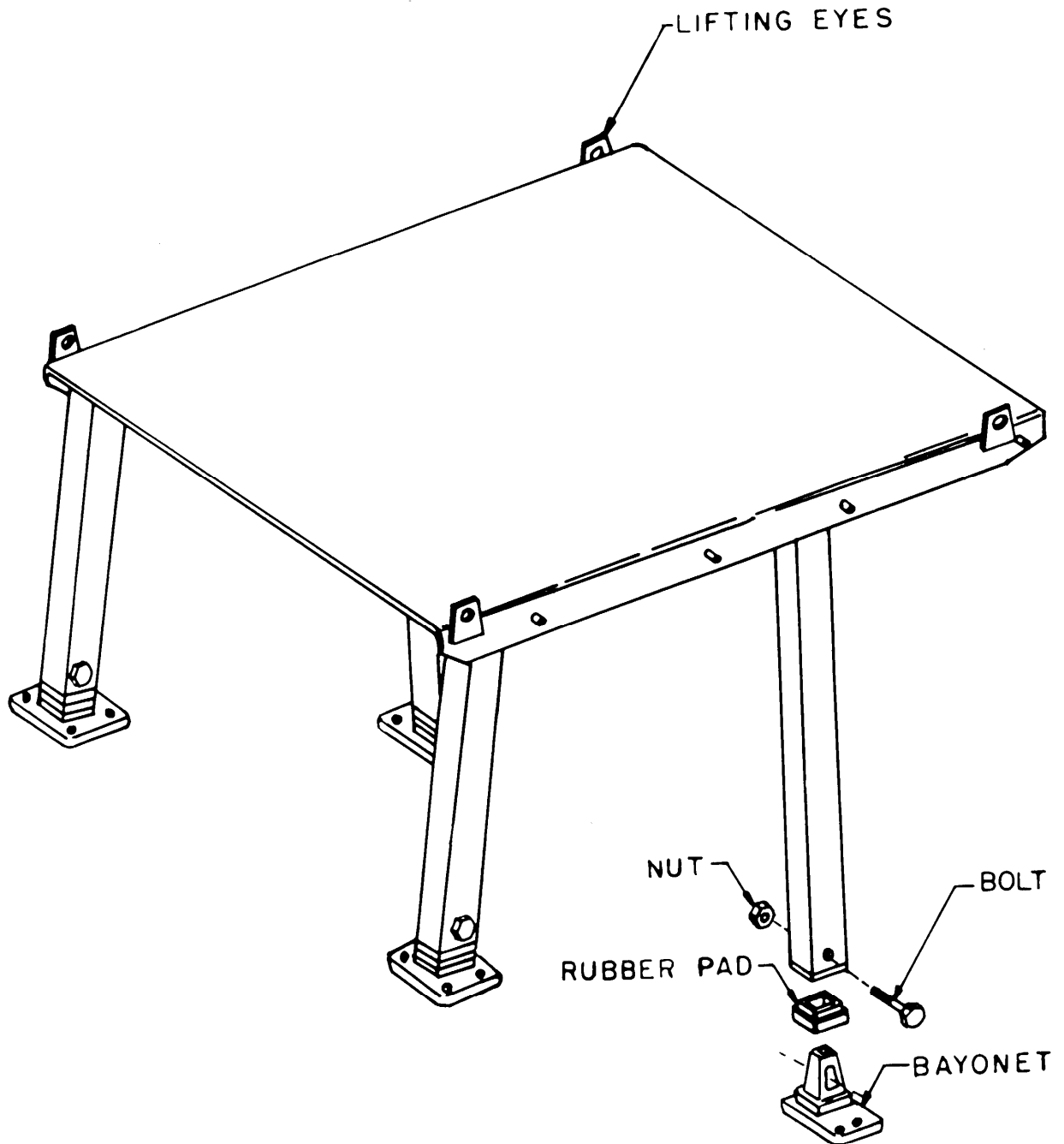


Figure 2-1. Moldboard and push arms.

Figure 2-1.1. is added as follows:



TA 072645

Figure 2-56. Roll-over protective structure.

Page A-1, paragraph A-3. Change "TB-740-93-1" to "TB 746-93-1".

Page B-2, Section II, group No. 02.

Column (2). Add "Trunnion Caps and Trunnion".

Column (3)H. Add "O" maintenance level and "3"

repair time.

Column (3)1. Add "F" maintenance level and "2.5" repair time.

Page B-3, Group No. 06.

Column (2). Delete "Exhaust pipe" and "Trunnion

TECHNICAL MANUAL }
No. 5-2410-233-20 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., 31 August 1973

ORGANIZATIONAL MAINTENANCE MANUAL
TRACTOR, FULL-TRACKED, LOW SPEED; DED;
MEDIUM DRAWBAR FULL; OSCILLATING TRACK,
78-IN GAGE (CATERPILLAR MODEL D7F)
WITH RIPPER; FSN 2410-177-7283
WITH WINCH; FSN 2410-177-7284

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Section II. Movement to a new worksite	1	1
Section III. Repair parts, special tools and equipment	1	1
Section IV. Lubrication instructions	2	1
Section V. Preventive maintenance checks and services	1	1
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Section VII. Radio interference suppression	2	1
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* This manual supersedes TM 5-2410-233-20, 4 June 1971, including all changes.

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	Moldboard and push beam.	
	Transmission servicing (sheet 1 of 2)	
	Transmission servicing (sheet 2 of 2)	
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	Fuel tank filler-cap servicing	
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	Final drive servicing	
	Track roller frame bearing servicing	
	Track adjusting	
	Lift cylinder trunnion servicing	
	Winch oil screen servicing	
	Radio interference suppression components	
	Air cleaner elements servicing (sheet 1 of 3)	
	Air cleaner elements servicing (sheet 2 of 3)	
	Air cleaner elements servicing (sheet 3 of 3)	
	Valve clearance adjustment (sheet 1 of 2)	
	Valve clearance adjustment (sheet 2 of 2)	
	Fuel transfer pump and hourmeter	
	Cooling System servicing	
	Fan blade adjustment	
	Fan drive belt adjustment	
	Fan belts	
	Governor and throttle linkage adjustment	
	Engine speed governor	
	Muffler	
	Polarizing generator	
	Alternator	
	Battery box and batteries	
	Glow plug removal	
	Steering clutch brake adjustment	
	Sprocket hub bearing adjustment	
	Track frame roller guard	
	Torque divider scavenge pump	
	Transmission oil Cooler	
	Transmission and steering clutch pump.	
	Dozer and winch hydraulic pumps.. . . .	
	Lift and tilt cylinders.	
	Trunnion and tube assembly.	
	Rod packing adjustment	
	Levers and linkage	
	Tilt brace and diagonal arm ball and socket adjustment	
	Cutting edge and end bit replacement	
	Scarifier removal.	
	Moldboard (blade) removal.	
	Winch brake band adjustment.	
	Winch brake band removal	
	Winch cable installation.	
	Winch Control removal and adjustment.. . . .	
	Winch removal.	
	Ripper guard protector, and tip replacement.	
	Ripper mounting bracket nut removal.	
	Hydraulic manifold (for ripper).	
	Operator's seat.	
	Tractor body accessories, right side.	
	Engine side panels.	
	Tractor body accessories, left side.. . . .	
	Floor boards removal.	

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1 . Scope

This manual is published for the use of organizational maintenance personnel responsible for maintaining the Caterpillar D7F Full-Track Tractor.

1-2. Maintenance Forms and Records

Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

1-3. Destruction of Materiel to Prevent Enemy Use

Instructions for destruction of materiel to prevent enemy use will be found in TM 750-244-3.

1-4. Administrative Storage

Instructions for preparation for shipment and limited storage will be found in TM 740-90-1.

1-5. Reporting of Errors

Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commander, U. S. Army Troop Support Command, ATTN: AMSTS-MPP, 4300 Goodfellow Boulevard, St. Louis, Missouri 63120.

Section II. DESCRIPTION AND DATA

1-6. Description

A general description of the tractor is contained in ~~TM 5-2410-233-10~~. A more detailed description of specific components and assemblies is contained in the applicable maintenance paragraphs of this manual.

1-7. Tabulated Data

a. Identification.

(1) U. S. Army identification plate.

Manufactured by	Caterpillar Tractor Co.
Model	D7F
Serial number	61G and up
Federal stock number	2410-177-7283 (w/ ripper)
	2410-177-7284 (w/ winch)
Engine serial number	61G and up
Length	232 in.
Width	133 in.
Height	93 in.
Shipping weight	46,460

(2) Turbocharger warning plate.

Altitude setting 7500 ft. or below

(3) Tractor serial number plates. One located on the firewall above battery slave connector, one located on left-rear of engine block, and one on the left-rear of the tractor.

(4) Dozer serial number plate. Located on right-rear of moldboard.

b. Tabulated Data.

(1) Tractor.

Forward speed :	
Gear 1.	0-2.2 mph
Gear 2.	0-3.9 mph
Gear 3.	0-6.0 mph
Reverse speed:	
Gear 1.	0-2.6 mph
Gear 2.	0-4.6 mph
Gear 3.	0-7.1 mph
Weight, tractor only.	36,760 lbs
Weight, dozer and	
push arms.	6,617 lbs.
Weight, winch.	3,080 lbs.
Weight, ripper.	7,337 lbs.
Weight, Operating (w/ dozer,	
winch, fuel, and	
lubricants).	47,700 lbs
Length, overall.	232 in.
Width, overall.	133 in.
Width, w/o moldboard and	
push arms.	105 in.
Height, overall.	124 in.
Height, reducible.	93 in.
Winch, rear mounted.	
reversible.	1 drum
Ripper, rear mounted.	3 shanks
Bridge weight classification.	16

(2) Engine.

Manufacturer. Caterpillar Tractor Co.



1. Remove fill and drain plugs and allow oil to drain.
2. If oil has been contaminated with water or mud, fill drive to Proper level with kerosene or diesel oil. Drive tractor back and forth for 5 minutes, then drain oil.

3. Install drain plugs. Add oil to level of filler plug openings. (See Lubrication order for type and grade). Install filler plugs.

ME 2410-233-20/2-8

Figure 2-8. Final drive servicing.

2-12. Track Servicing

Every 10 hours of operation service the track roller frame bearings as described on ~~Figure 2-9~~. Every 50

hours of operation check the track adjustment as described in ~~Figure 2-10~~.

TRACK ROLLER FRAME INNER BEARINGS



Lubricate 2 fittings.

TRACK ROLLER FRAME OUTER BEARINGS



Lubricate 1 fitting on each side of tractor.
(5 strokes each) Remove relief plug.

ME 2410-233-20/2-9

Figure 2-9. Track roller frame bearing servicing.

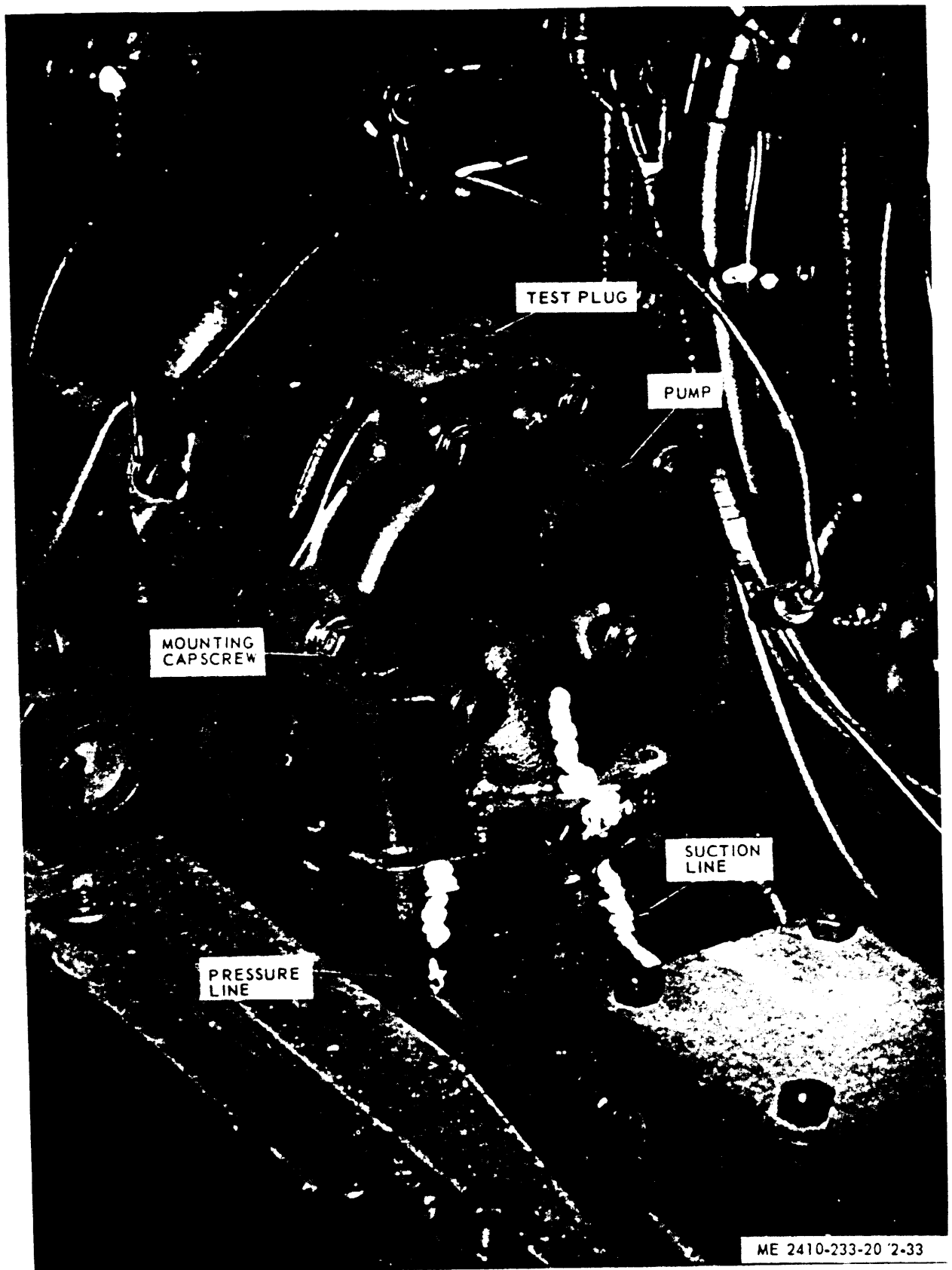


Figure 2-33. Transmission and steering clutch pump.

Section XI. MAINTENANCE OF TRACTOR HYDRAULIC SYSTEM

2-47. Dozer and Winch Hydraulic Pumps ~~Fig. 2-34~~

CAUTION

If tractor is to be operated while pump is removed, a cover plate must be installed on accessory drive housing to prevent loss of oil and to prevent entry of dirt or foreign matter.

a. Removal.

- (1) Drain hydraulic tank.
- (2) Remove floor boards covering pumps and lines.
- (3) Clean pump, lines, and areas where pump is mounted to flywheel housing.
- (4) Disconnect suction and pressure lines from pump to be removed. Cover pump and line

openings to prevent entry of dirt and or foreign material.

- (5) Remove capscrews securing pump to housing and remove pump.

b. Cleaning and Inspection.

- (1) Clean exterior of pump with cleaning solvent.
- (2) Inspect drive gear for worn teeth or other damage.
- (3) Inspect exterior of pump for cracks or evidence of leaks.
- (4) Replace pump if gear or pump is defective.

c. Installation. Install the pump in reverse order of removal. Fill hydraulic tank with oil prescribed on the lubrication order.

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DEPARTMENT OF THE ARMY TECHNICAL MANUAL

TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT

MAINTENANCE MANUAL

TRACTOR, FULL TRACKED, LOW SPEED, DED MEDIUM

DRAWBAR PULL; OSCILLATING TRACK, 78-IN. GAGE

(CATERPILLAR MODEL D7F)

FSN 2410-177-7283 W/RIPPER

FSN 2410-177-7284 W/WINCH

This reprint includes all changes in effect at the time of
publication; changes 1 and 2.

CHANGE

No. 2



HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON DC, 29 October 1981

**Direct Support and General Support
Maintenance Manual
TRACTOR, FULL TRACKED, LOW SPEED, DED; MEDIUM
DRAWBAR PULL; OSCILLATING TRACK, 78-IN. GAGE
(CATERPILLAR MODEL D7F)
WITH RIPPER: NSN 2410-00-177-7283
WITH RIPPER AND ROPS; NSN 2410-00-185-9794
WITH RIPPER, ROPS (CAB) WINTERIZED; NSN 2410-00-300-6665
WITH WINCH; NSN 2410-00-177-7284
WITH WINCH AND ROPS; NSN 2410-00-185-9792
WITH WINCH, ROPS (CAB) WINTERIZED; NSN 2410-00-300-6664**

TM 5-2410-233-34, 12 October 1971, is changed as follows:

The title is change to read as shown above.

Page iii, list of illustrations.

Following 2-31, "Preparing to remove engine (sheet 2 of 6)", add "2-31.1 Preparing to remove engine (w/ROPS) (sheet 2 of 6).

Following 4-1, "Hydraulic tank removal", add "4-1.1 Hydraulic tank removal (w/ROPS).

Page iv, following 5-23, "Fuel tank, removal and installation", add "5-23.1 Fuel tank, removal and installation (w/ROPS)

Page 1-1. Paragraph 1-3 is superseded as follows:

1-3. Reporting Errors and Recommending Improvements

You can help to 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 or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MBP, Warren, MI 48090. A reply will be furnished to you.

Page 1-4, table 1-2. Add the following nut and bolt torque data between Ripper and Steering Clutch:

Roll-over Protective Structure:

Heavy duty fender support bolts. 900±100

Tractor frame support bolts 350±50

Plate-side mounting bolts 210±30

Page 2-13, paragraph 2-8a. Sub-subparagraph (1.1) is added as follows:

(1.1) Remove roll-over protective structure (TM 5-2410-233-20).

Page 2-15. Figure 2-31.1 (sheet 2 of 6) is added as follows:

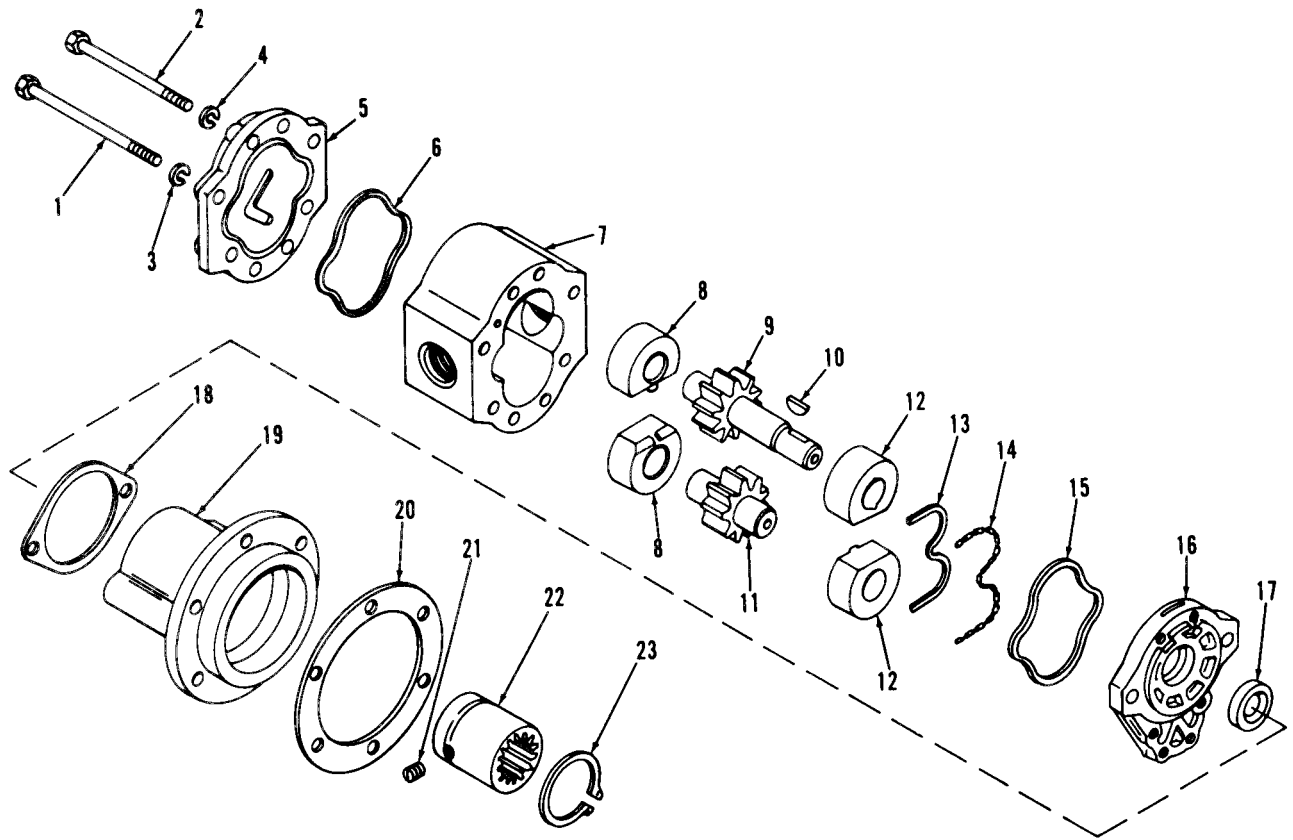


Figure 2-31.1. Preparing to remove engine (w/ROPS) (sheet 2 of 6).

Page 2-20, paragraph 2-9a. Sub-subparagraph (1.1) is added as follows:

(1.1) Remove roll-over protective structure (TM 5-2410-233-20).

Page 3-4, paragraph 3-12b. Delete subparagraph (3)



- | | |
|---------------|--------------|
| 1. BOLT | 13. GASKET |
| 2. CAPSCREW | 14. SPACER |
| 3. LOCKWASHER | 15. SEAL |
| 4. WASHER | 16. COVER |
| 5. COVER | 17. SEAL |
| 6. SEAL | 18. GASKET |
| 7. BODY | 19. BRACKET |
| 8. BEARING | 20. GASKET |
| 9. GEAR | 21. SETSCREW |
| 10. KEY | 22. COUPLING |
| 11. GEAR | 23. RING |
| 12. BEARING | |

TA.170657

Figure 3-4. Winch hydraulic pump, exploded view.

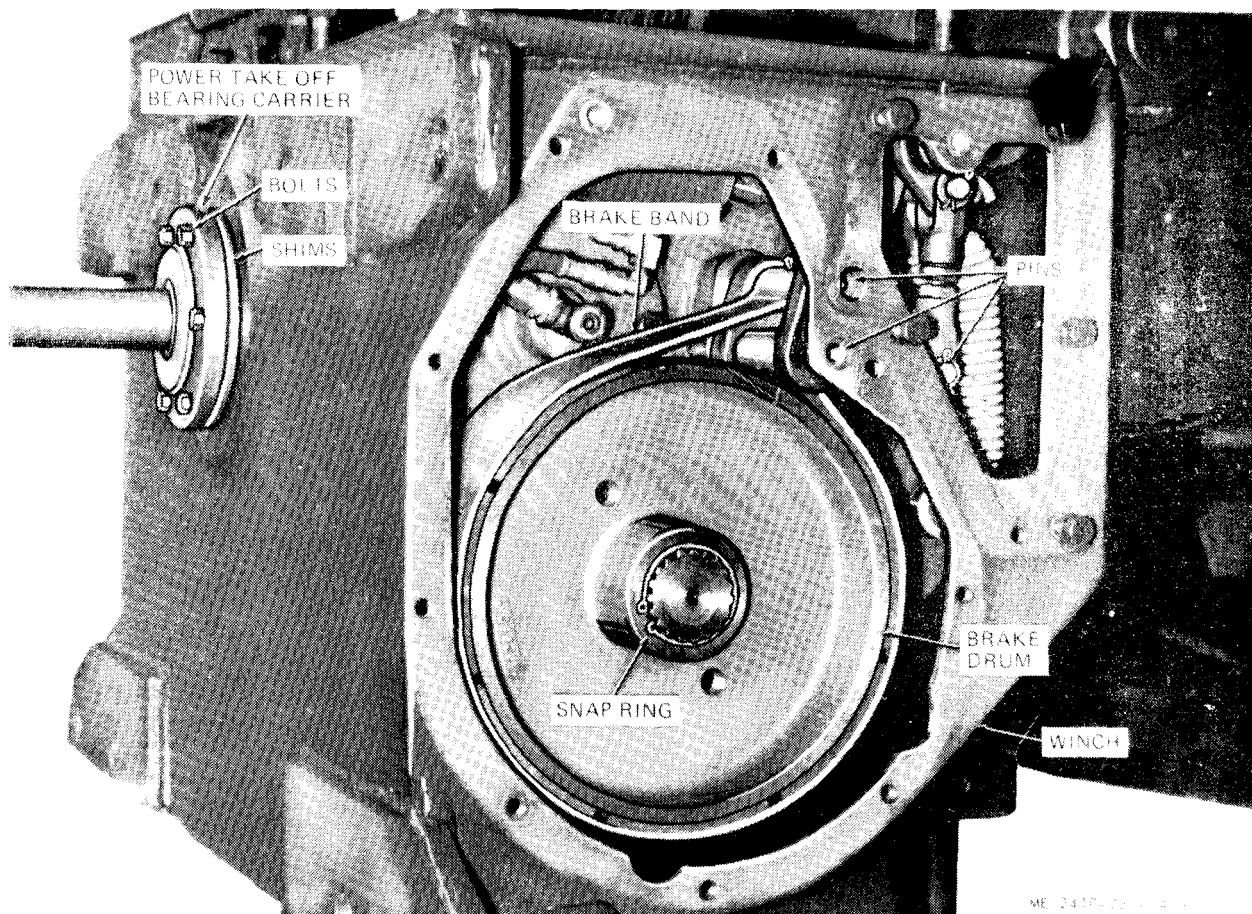


Figure 3-7. Power take off bearing and brake drum, removal and installation.