Caterpillar D7F Sample File.

This single sample file contains samples for

Operations & Technical Manual
Parts Manual
Repair Manual (1)
Repair Manual (2)

TM 5-2410-233-10

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

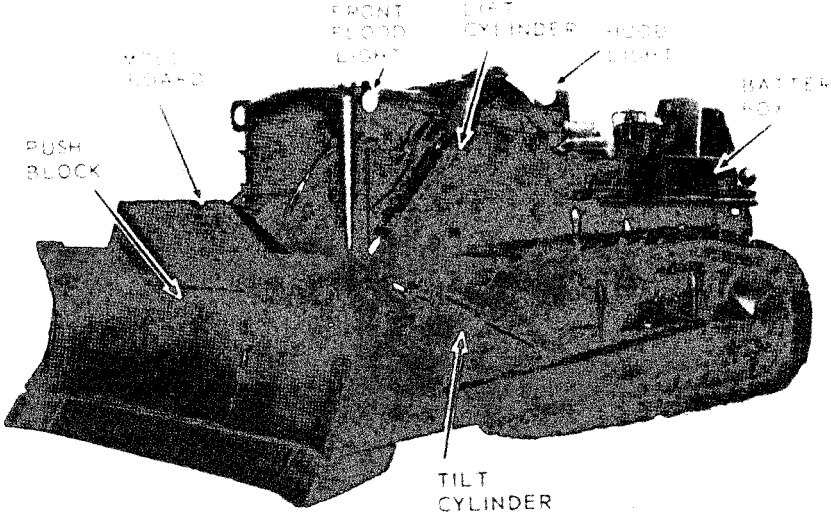
Boulevard, St. Louis, Mo. 63120. A reply will be furnished direct to you.

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, ¾ view.

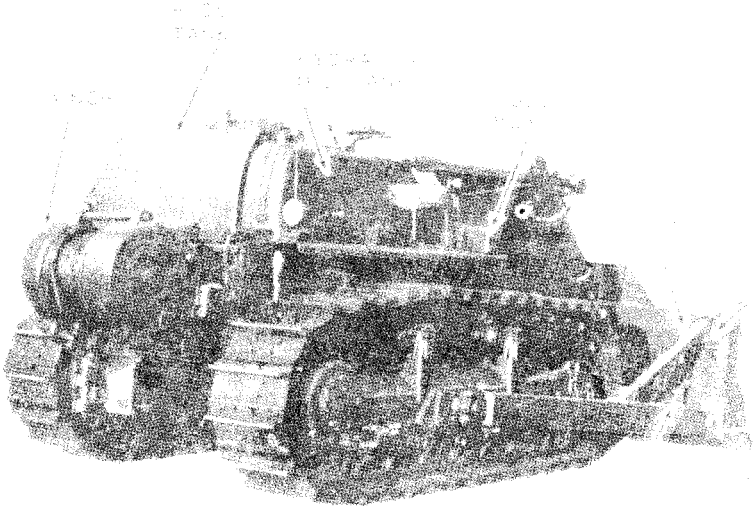


Figure 1–2. Right-rear, ¾ view, w/winch.

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.

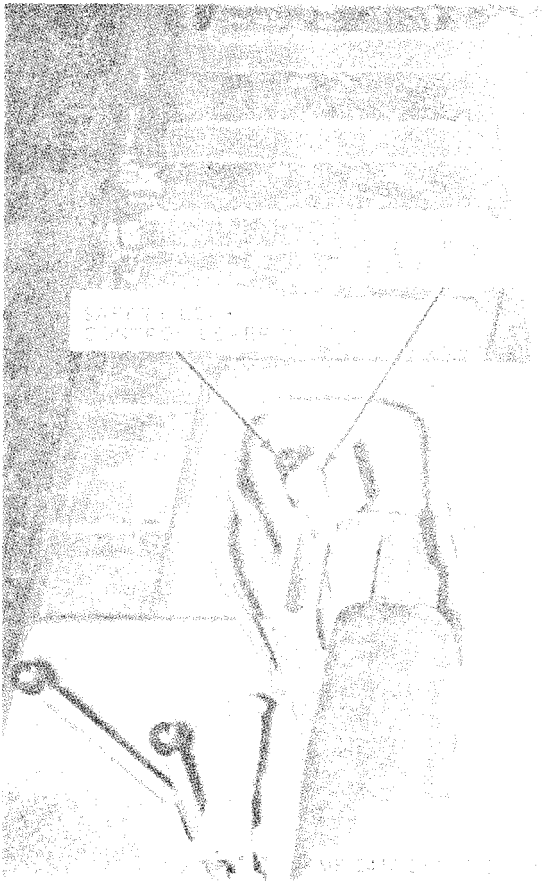


Figure 2–1. Controls and instruments (sheet 1 of 5)

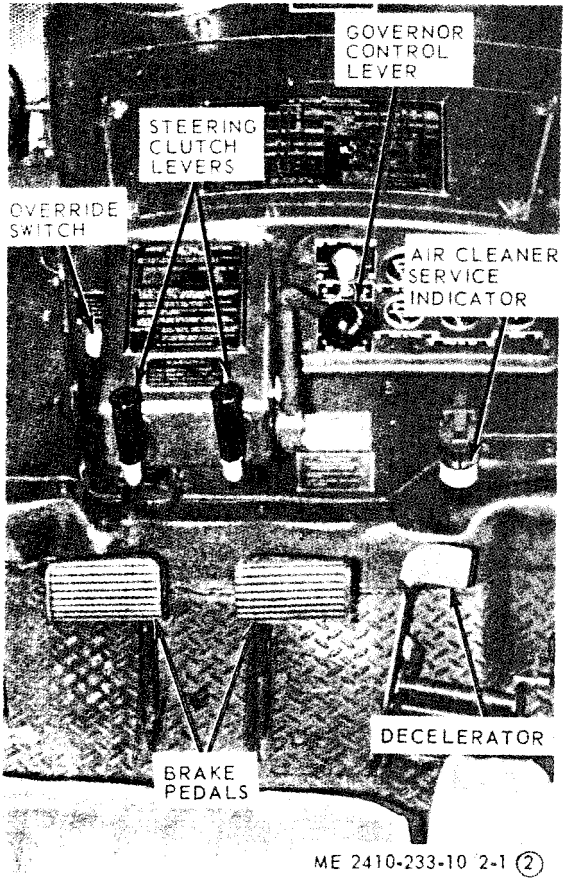


Figure 2–1. Controls and instruments (sheet 2 of 5)

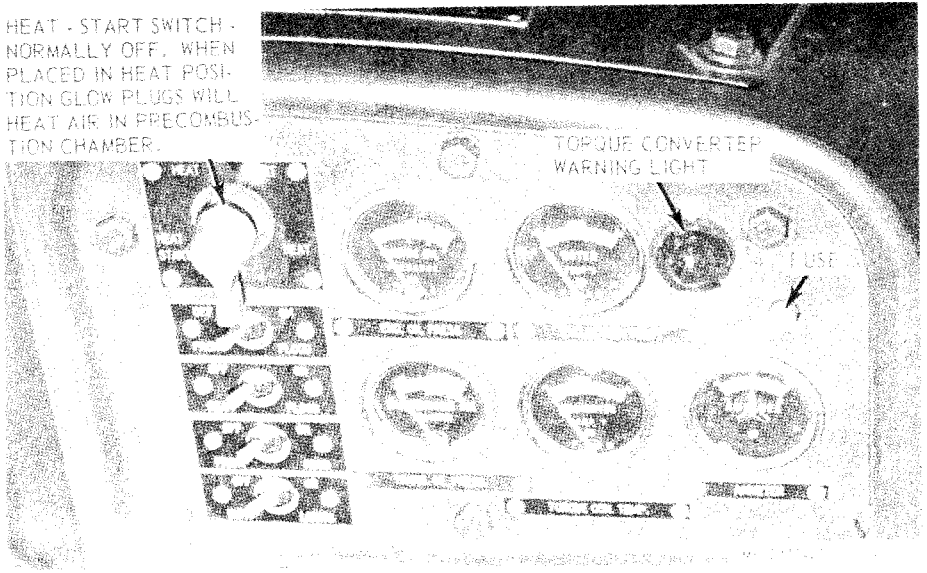


Figure 2–1. Controls and instruments (sheet 3 of 5)

Glow Plug Heating Time

Starting temperature range---------	Heat-Start witch 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.

TM5-2410-233-24P

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; OSCILLLATING TRACK, 78 IN. GAGE NSN 2410-00-177-7283 W/RIPPER NSN 2410-00-185-7284 W/WINCH NSN 2410-00-185-9794 W/RIPPER AND ROPS NSN 2410-00-185-9792 W/WINCH AND ROPS

CATERPILLAR MODEL D7F

CURRENT AS OF 06 November 2001

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028 (Recommended Changes to Equipment Technical Publications), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is http://aeps.ria.army.mil. If you need a password, scroll down and click on "ACCESS REQUEST FORM". The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of the AEPS. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax or E-mail your letter or DA Form 2028 direct to: AMSTA-LC-CI / TECH PUBS, TACOM-RI, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The email address is TACOM-TECH-PUBS@ria.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

Approved for public release: distribution is unlimited.

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

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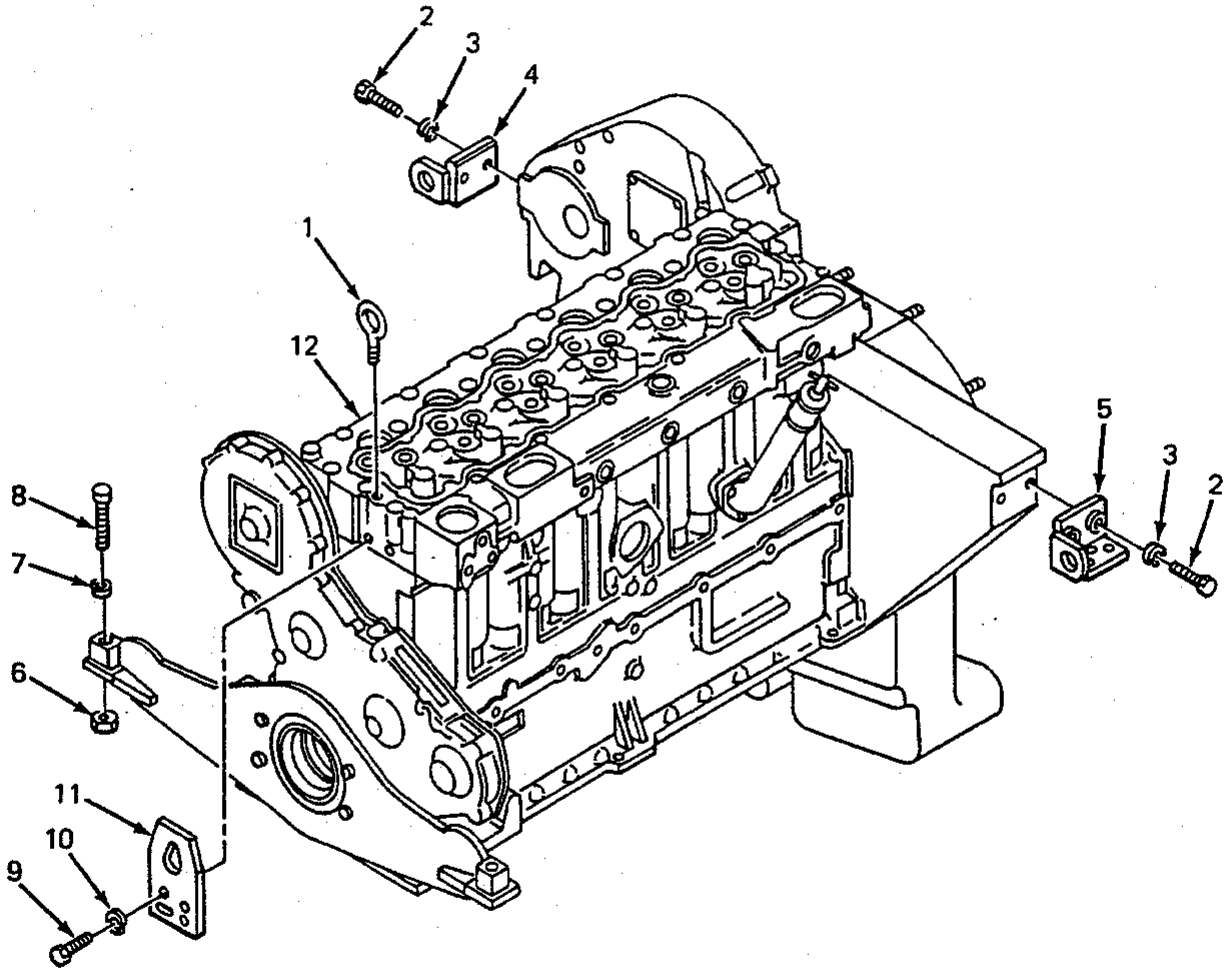
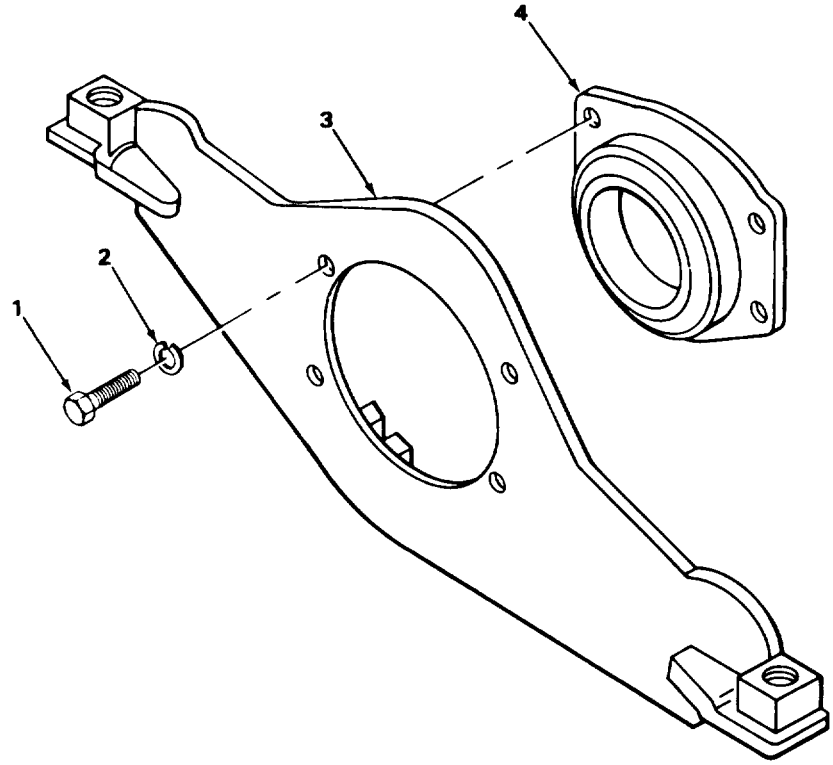


FIGURE 1. ENGINE AND MOUNTING BRACKETS, 5R0829, 5R3715, 5R7757, 5R8357 ENGINES.

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES(UOC)	(7) 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..... UOC:BSU,BSV,BSW,BSX,BSZ,GAB	1
2	PFFZZ	5305007247221	80204	B1821BH063C175N	SCREW,CAP,HEXAGON H 5/8" 11NC 1.75" LONG..... UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	4
3	PFOZZ	5310008206653	96906	MS35338-50	WASHER,LOCK..... UOC:BSR,BSS,BSU,BSV,BSW,BSX	4
4	PAFZZ	2510013515937	11083	9S6987	BRACKET,ENGINE MOUN..... UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	1
5	PAFZZ	2510013514026	11083	9S8926	BRACKET,ENGINE MOUN..... UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	1
6	PAFZZ	5310009785406	11083	2J3506	NUT,PLAIN,HEXAGON..... UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	2
7	PAFZZ	5310004191363	11083	2S0115	WASHER,FLAT..... UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	2
8	PAFZZ	5306004264171	11083	3B2968	BOLT,MACHINE..... UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	2
9	PAFZZ	5305007215322	96906	MS35307-462	SCREW,CAP,HEXAGON H..... UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	2
10	PAFZZ	5310011073590	11083	8D5054	WASHER,FLAT..... UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	2
11	PAFZZ	5365011575068	11083	8N8721	SPACER,PLATE..... UOC:BSQ,BST,BSU,BSV,BSW,BSX,BSY,BSZ, GAB,RJG	1
					END OF FIGURE	



TA204033

FIGURE 2. ENGINE FRONT SUPPORT.

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

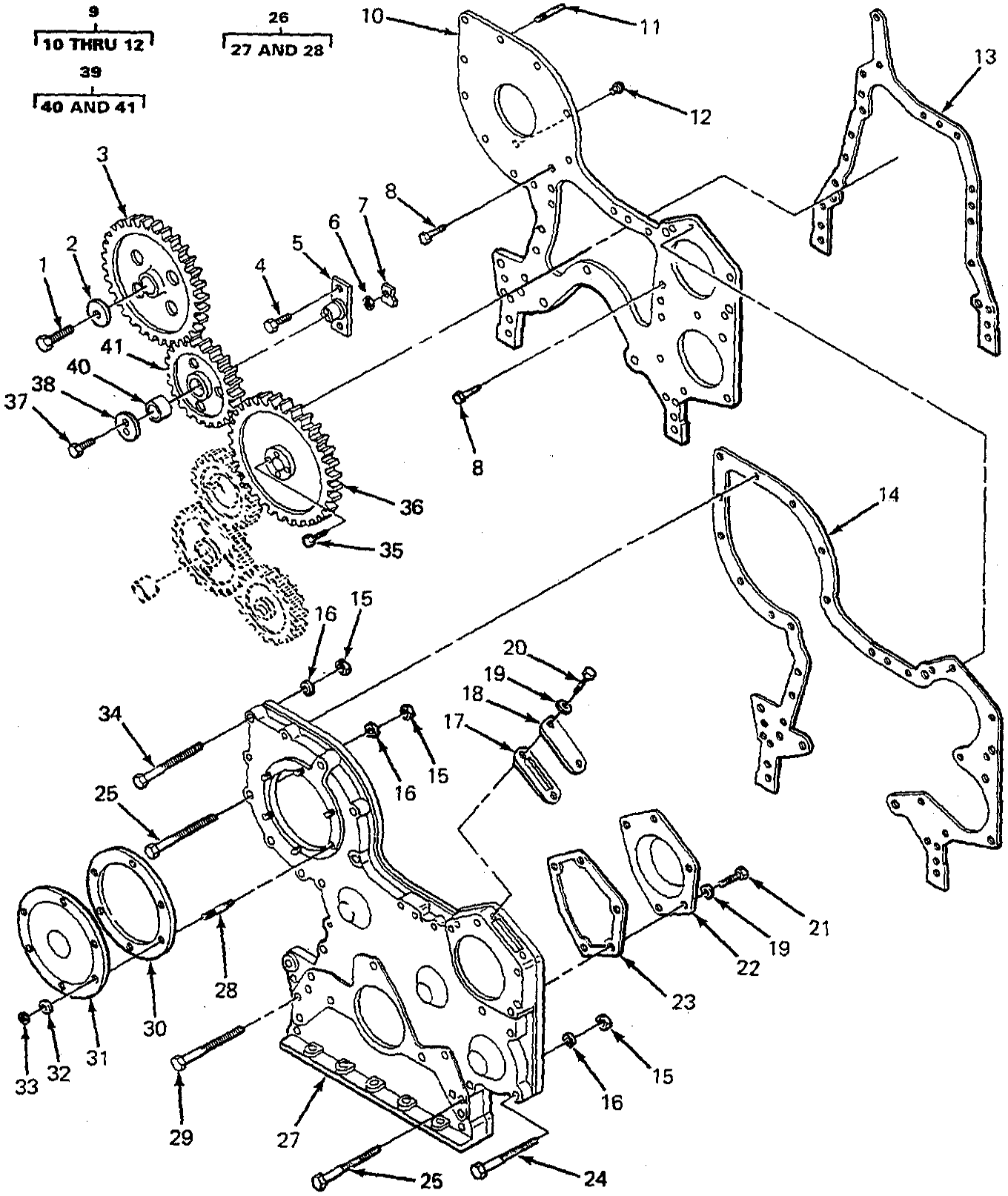


FIGURE 16. TIMING GEAR HOUSING AND COVERS, 5R3715, 5R7757, 5R8357 ENGINES.

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

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	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:

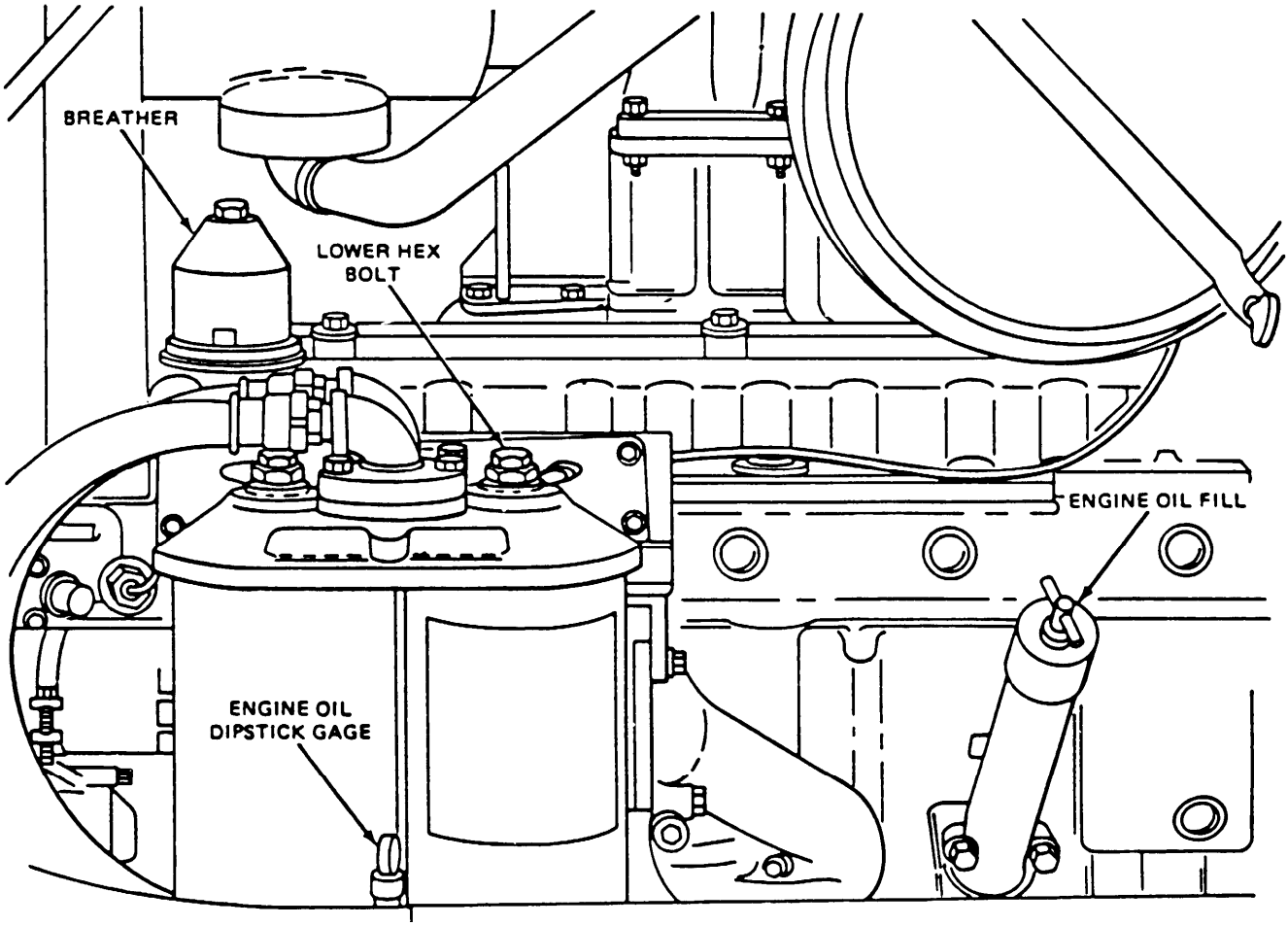


Figure 2-4. Engine oil system servicing.

CHANGE
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *8 May 1981*

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 2410-00-177-7284
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(l) 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:

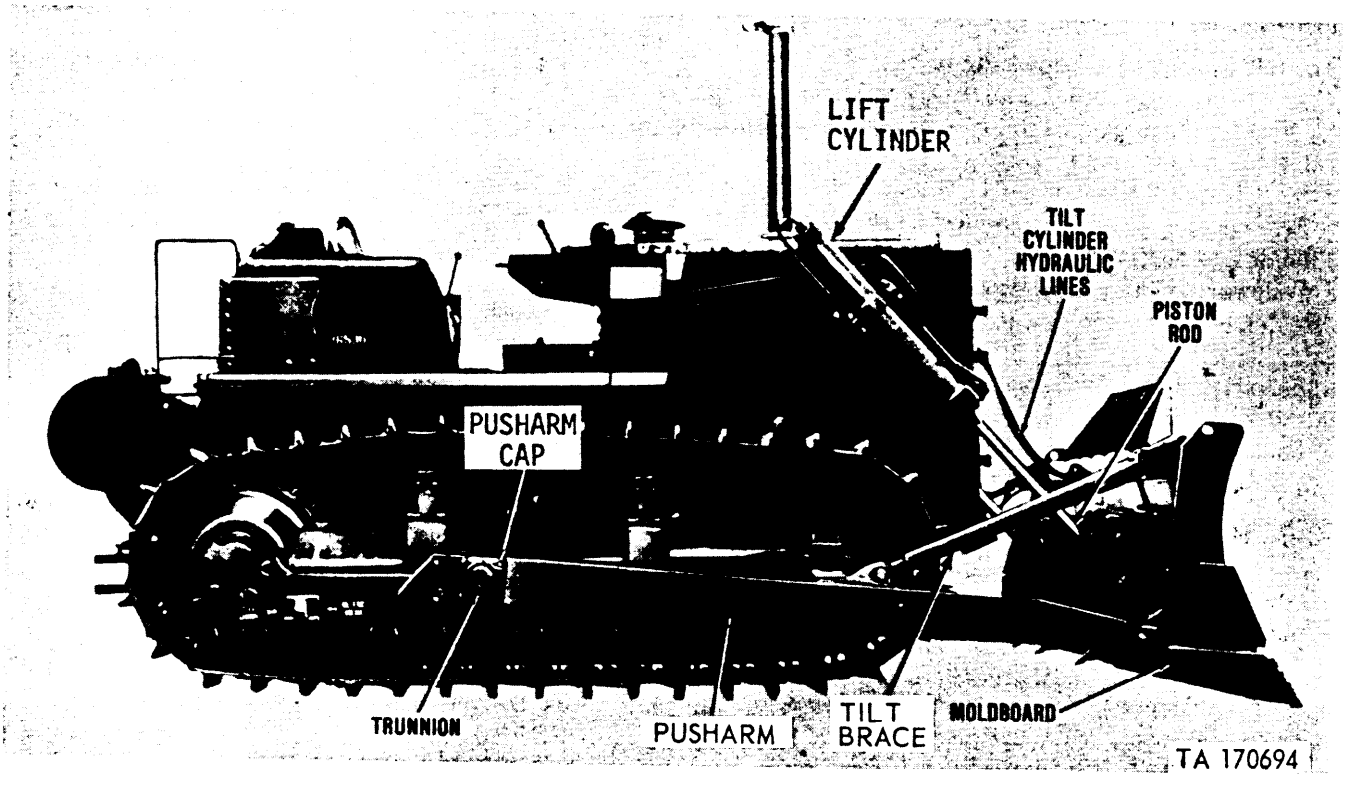


Figure 2-1. Moldboard and push arms.

Figure 2-1.1. is added as follows:

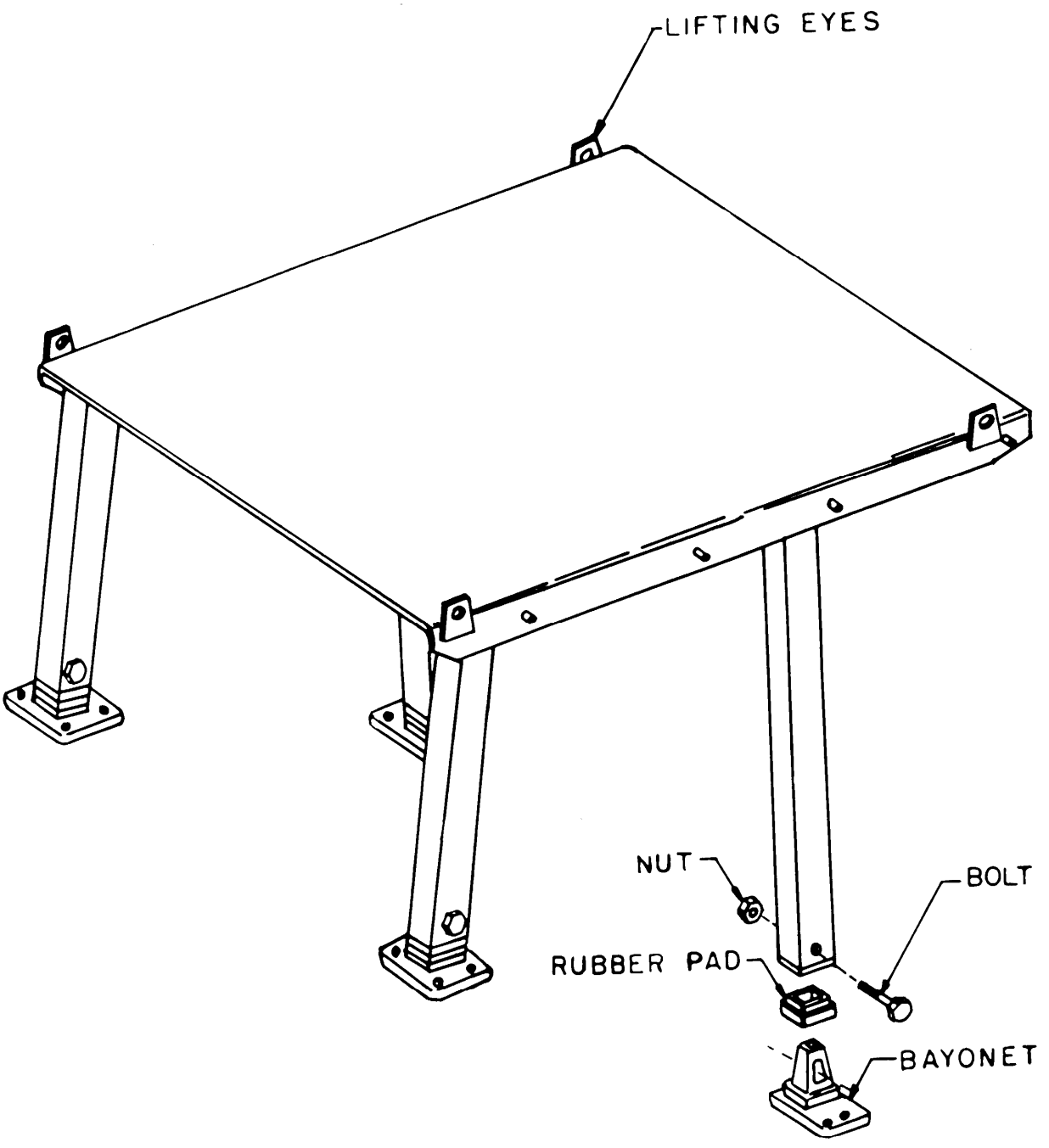


Figure 2-56. Roll-over protective structure.

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

* This manual supersedes TM 5-2410-233-20, 4 June 1971, including all changes.

LIST OF ILLUSTRATIONS

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1 . Scope

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

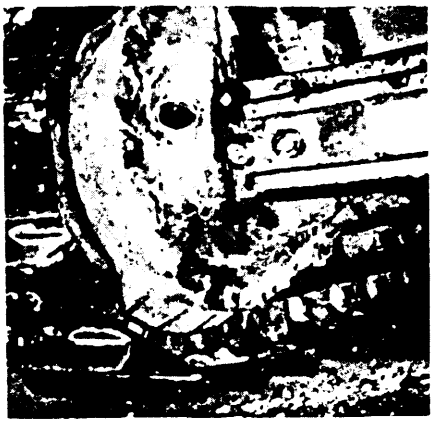
b. Tabulated Data.

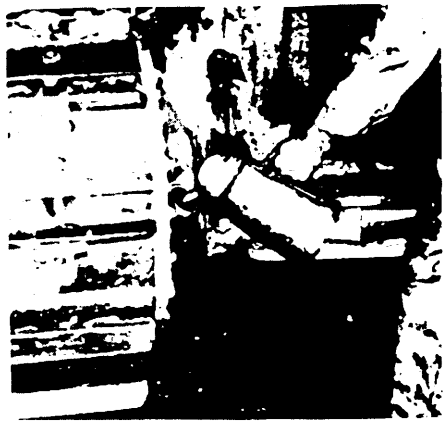
(1) *Tractor.*

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. overal.	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.	46

(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.

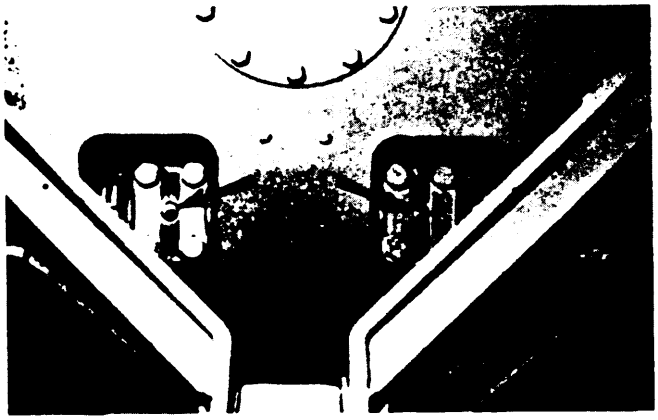
ME 2410-233-20/2-8

Figure 2-8. Final drive servicing.

2-12. Track Servicing

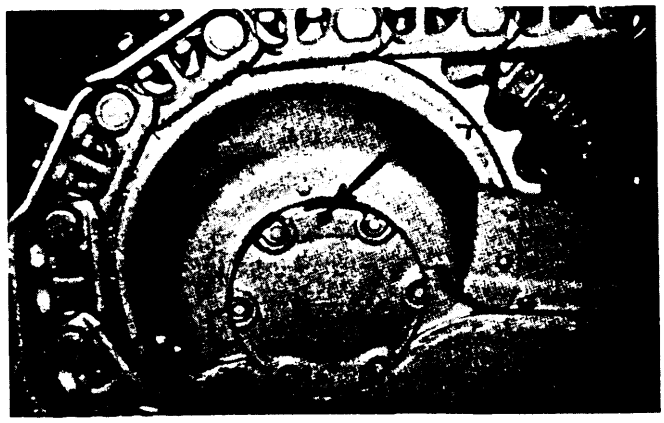
Every 10 hours of operation service the track roller frame bearings as described on Figure 2-9. Every 50 hours of operation check the track adjustment as described in Figure 2-10.

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.

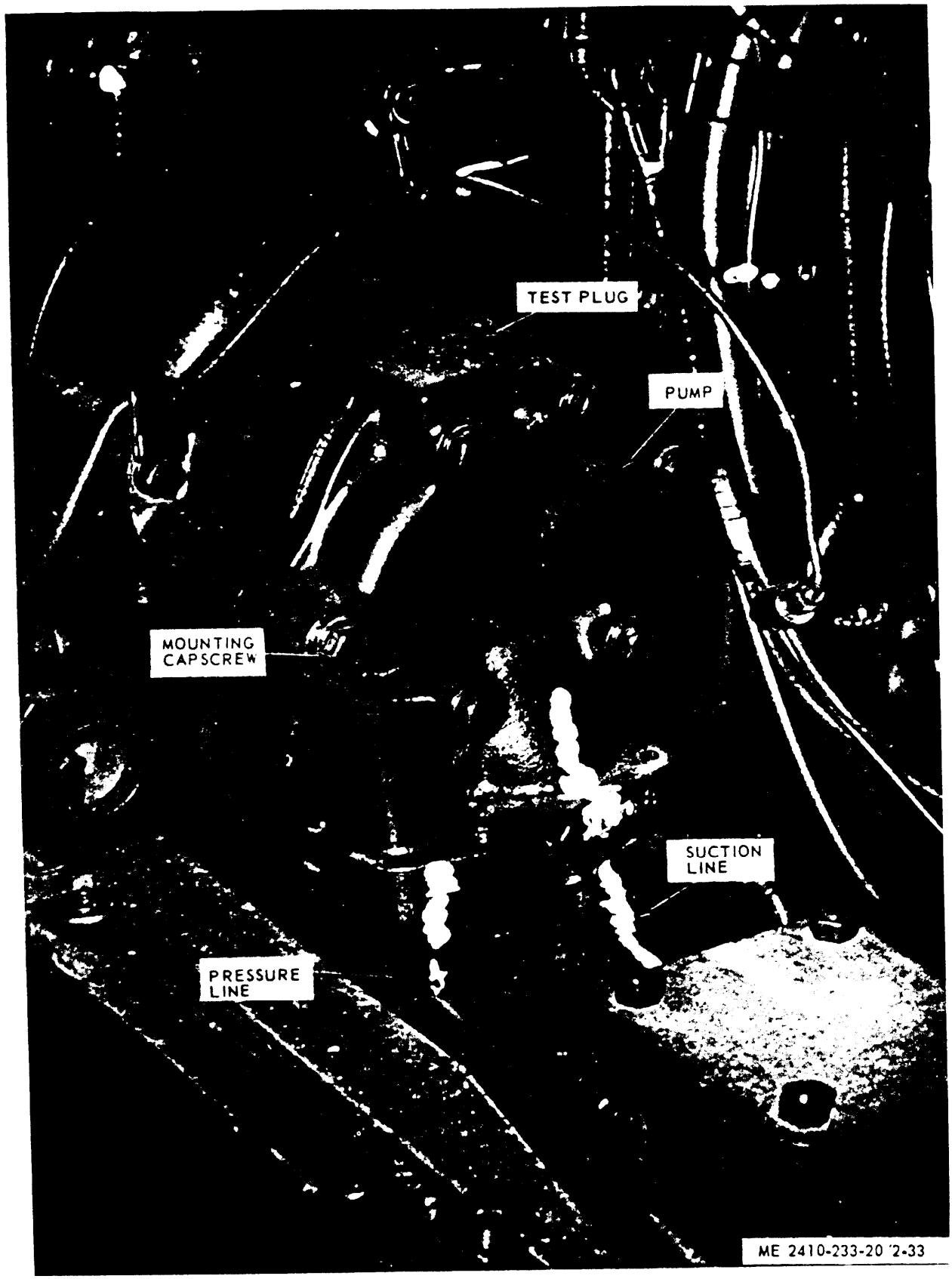


Figure 2-33. Transmission and steering clutch pump.

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 dam age.

(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.

INDEX

TM 5-2410-233-34

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.

HEADQUARTERS, DEPARTMENT OF THE ARMY

12 OCTOBER 1971

TM 5-2410-233-34
C 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/R0PS) (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:

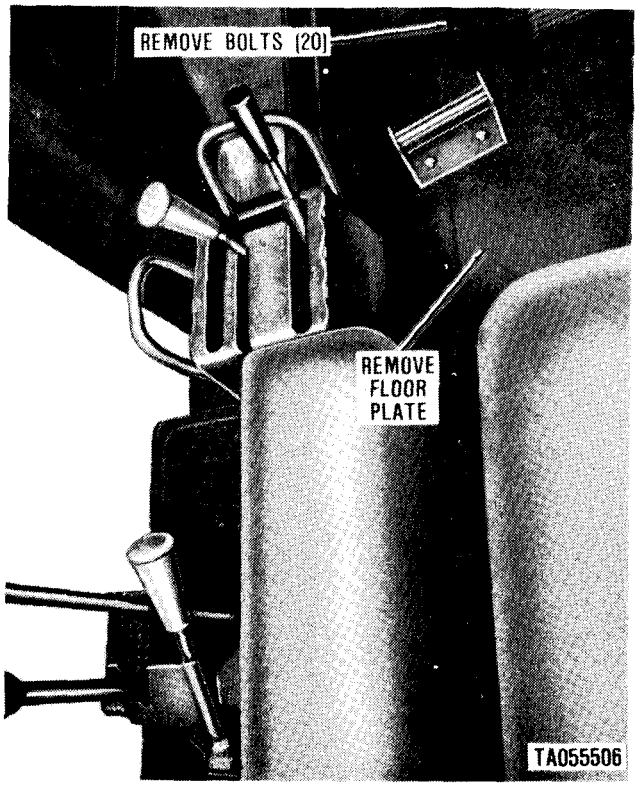


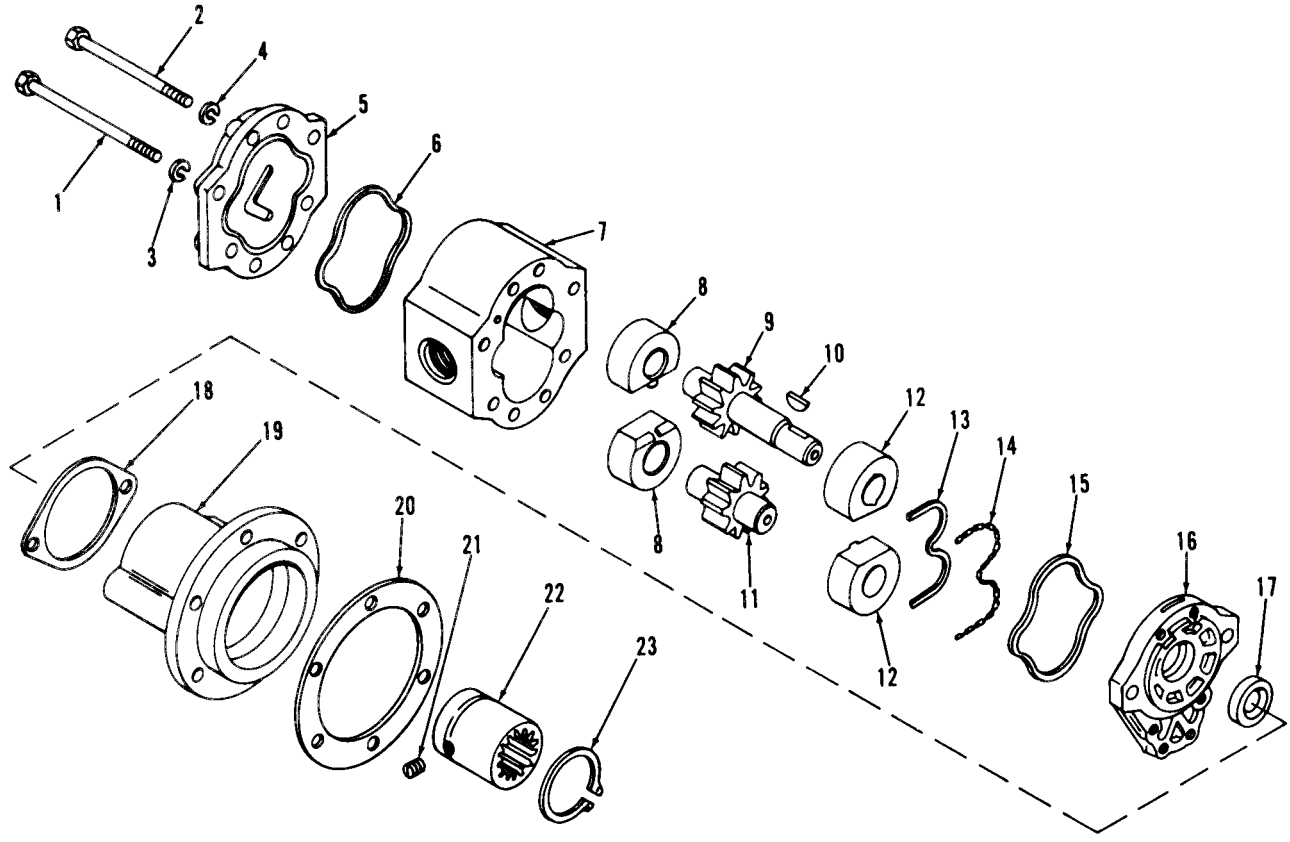
Figure 2-31.1. Preparing to remove engine (w/ROPS) (sheet 2 of 6).

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)

Page 3-5. Figure 3-4 is superseded as follows:



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

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

Page 3-8. Figure 3-7. is superseded as follows:

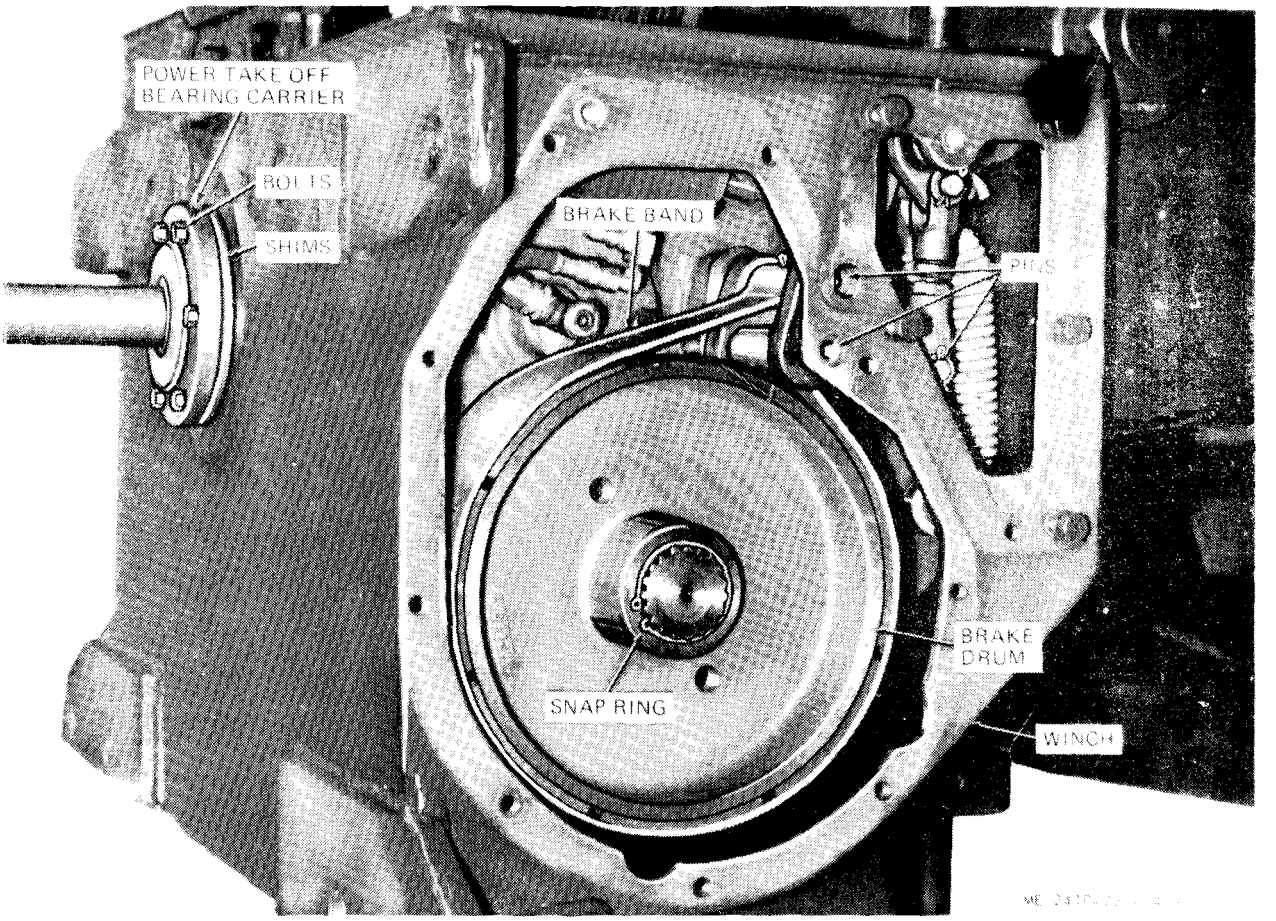

Figure 3-7. Power take off bearing and brake drum, removal and installation.