TM 5-4310-256-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DS, GS AND DEPOT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS

COMPRESSOR, RECIPROCATING,

AIR, HAND TRUCK MOUNTED, GASOLINE ENGINE, 8 CFM, 175 PSI

(CHAMPION PNEUMATIC MODEL LP-832-ENG-2) FSN 4310-788-8969

5 CFM, 175 PSI. (CHAMPION PNEUMATIC MODEL LP-512-ENG-2) FSN 4310-733-2210

This copy is a reprint which includes current pages from Change 1 through 7.

HEADQUARTERS, DEPARTMENT OF THE ARMY
MAY 1966

SAFETY PRECAUTIONS

BEFORE OPERATION

When handling gasoline, always provide a metal-to-metal contact between the container and tank. This will prevent a spark from being generated as gasoline flows over the metallic surface.

Never attempt to service any of the air compressor components until the unit is relieved of all air pressure.

Do not operate the air compressor in an inclosed area unless the exhaust gases are piped to the outside. The exhaust gases contain carbon monoxide, which is a colorless, odorless, and poisonous gas.

DURING OPERATION

Never attempt to service any of the air compressor components until the unit is relieved of all pressure.

AFTER OPERATION

When handling gasoline, always provide a metal-to-metal contact between the container and tank. This will prevent a spark from being generated as gasoline flows over the metallic surfaces.

Never attempt to service any of the air compressor components until the unit is relieved of all air pressure.

Be extremely careful when using a carbon tetrachloride fire extinguisher in an inclosed area. A poisonous gas is generated by the contact of carbon tetrachloride with a heated metallic surface. Provide adequate ventilation before entering an inclosed area where carbon tetrachloride has been used.

Changes in force: C1, C2, C3, C4, C5, C6, and C7

TM 5-4310-256-15
C 7

CHANGE

NO. 7

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON D. C., 15 July 1993

Operator, Organizational, Direct Support, General Support and Depot Maintenance Manual
Including Repair Parts and Special Tools Lists

COMPRESSOR, RECIPROCATING; AIR HAND TRUCK MTD, GASOLINE ENGINE 8 CFM, 175 PSI (CHAMPION PNEUMATIC MDL LP-832-ENG-2) FSN 4310-788-8969 5 CFM, 175 PSI (CHAMPION PNEUMATIC MDL LP-512-ENG-2) FSN 4310-733-2210

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited

TM 5-4310-256-15, 4 May 1966 is changed as follows:

Page 63, Line no. 0068, Tire, Hand Truck, change mfr, code and part no. to 81348 and GP1/TYA/4-10-6/B/PLRB.

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of StafF

Official:

MILTON H. HAMILTON
Administrative Assistant to the Secretary of the Army
04613

DISTRIBUTION:
To be distributed in accordance with DA Form 12-25–E, block no. 0382, requirements for TM 5-4310-256-15.

Changes in force: C 1, C 2, C 3, C 4, C 5, and C **6**

TM 5-4310-256-15
C 6

CHANGE
NO. 6

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 21 May 1991

Operator, Organizational, Direct Support, General Support and Depot Maintenance Manual
Including Repair Parts and Special Tools Lists

COMPRESSOR, RECIPROCATING; AIR HAND TRUCK MTD, GASOLINE ENGINE 8 CFM, 175 PSI (CHAMPION PNEUMATIC MDL LP-832-ENG-2) FSN 4310-788-8969
5 CFM, 175 PSI (CHAMPION PNEUMATIC MDL LP-512-ENG-2) FSN 4310-733-2210

Approved for public release; distribution is unlimited

TM 5-4310-256-15, 4 May 1966, is changed as follows:

Page 62, Figure 13, Item 15. Line no. 0024, Fuel Tank Strainer, change mfr. code and part **no. to "86823 and T17-4," add FSN "291 0–00–711 -0395."**

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

THOMAS F. SIKORA
Brigadier Genera/, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-25E, (qty rqr block no. 0382)

TM 5-4310-256-15
C 5

CHANGE NO. 5

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 5 February 1990

Operator, Organizational, Direct Support, General Support and Depot Maintenance Manual, Including Repair Parts and Special Tools Lists

COMPRESSOR, RECIPROCATING: AIR HAND TRUCK MTD, GASOLINE ENGINE 8 CFM, 175 PSI (CHAMPION PNEUMATIC MDL LP-832-ENG-2) FSN 4310-788-8969
5 CFM, 175 PSI (CHAMPION PNEUMATIC MDL LP-512-ENG-2)
FSN 4310-733-2210

TM 5-4310-256-15, 4 May 1966, is changed as follows:

Page 16, paragraph 33d, line 1; change as follows: "Refer to TM 5-2805-257-14 for detailed engine lubrication. "

Page 17, LO; change reference as follows: "Reference: LO 5-2805-257-14, C9100IL."

By Order of the Secretary of the Army:

C.ARL E. VUONO
General, United States Army
Chief of Staff

Official:

THOMAS F. SIKORA
Brigadier Genera/, United States Army
The Adjutant General

DISTRIBUTION:
To be distributed in accordance with DA Form 12-25A, Operator, Unit, Direct Support and General Support Maintenance requirements for Compressor, Reciprocating, Air, Gas Engine, Power Driven, Hand Truck Mounted, 8 CFM, 175 PSI (LP-832-ENG, LP-512-ENG-2)

CHANGE NO. 4

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 21 April 1987

Operator, Organizational, Direct Support, General Support and Depot Maintenance Manual, Including Repair Parts and Special Tools Lists

COMPRESSOR, RECIPROCATING; AIR HAND TRUCK MTD, GASOLINE ENGINE 8 CFM, 175 PSI (CHAMPION PNEUMATIC MDL LP-832-ENG-2) FSN 4310-788-8969
5 CFM, 175 PSI (CHAMPION PNEUMATIC **MDL LP-512-ENG-2)** FSN 4310-733-2210

TM 5-4310-256-15, 4 May 1966, is changed as follows:

Page 62, Appendix IV, Repair Parts List Line no. 0021, change FSN, FSCM and P/N as follows: "2910-00-705-7814, 86823".

Page 63, Line no. 0055, change SMR as follows: "PBOZZ".

Page 63, Line no. 0098, change FSN as follows: "4720-00-289-4612".

Page 66, Line no. 0230, change SMR, FSCM and P/N as follows: "PBOZZ, 93061, 68CL-10-8 .

Page 67, Line no. 004, change SMR, FSN and P/N as follows, "PAFHH, 2805-01-169-1100, 2A016-4".

Page 68, Line no. 0004, change FSCM, and p/N as follows: "97403, 1AO8-3".

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:
To be distributed in accordance with DA Form 12-25A, Operator, Organizational, Direct Support and General Support Maintenance requirements for Compressor, Reciprocating, Air, Gas Engine, Power Driven, Hand Truck Mounted, 8 CFM, 175 PSI (LP-832-ENG, LP-512-ENG-2)

Changes in Force: C 1, C 2, and C 3

TM 5-4310-256-15
C3

Change No. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C. 15 July 1974

Operator's Organizational, Direct Support, General Support and Depot Maintenance Manual Including Repair Parts and Special Tools Lists
COMPRESSOR, RECIPROCATING, POWER-DRIVEN, AIR; HAND-TRUCK MOUNTED;
GASOLINE ENGINE; 8 CFM, 175 PSI
(CHAMPION PNEUMATIC MODEL LP-512-ENG-2) FSN 4310-733-2210
(CHAMPION PNEUMATIC MODEL LP-832-ENG) FSN 4310-788-8969

TM 5-4310-256-15, 4 May 1966, is changed as follows:

Cover *Page.* Title is changed as shown above. Reverse *of Cover Page.* Add to Safety Precautions:

WARNING

This compressor is NOT SUITABLE for the supply of air for charging cylinders with BREATHABLE AIR.

WARNING

Operation of this equipment presents a NOISE HAZARD to personnel in the area. The noise level exceeds the allowable limits for unprotected personnel. Wear ear muffs or ear plugs which were fitted by a trained professional.

WARNING

Cleaning solvent, PD-680, is a POTENTIALLY DANGEROUS CHEMICAL. Do not use near open flame.

Page 9, paragraph 10b, add: Install the separately-packed engine muffler on the engine.

Paragraph 10d is added.

d. Noise Hazard Warning Signs, Signs conforming to the provisions of AR 385-30 will be erected in the area to provide notification of NOISE HAZARD in accordance with TB MED 251. The signs should read:

WARNING

NOISE HAZARD EQUIPMENT
HEARING PROTECTION REQUIRED

Page 10, paragraph 18, add:

WARNING

This compressor is NOT SUITABLE for the supply of air for charging cylinders with BREATHABLE AIR.

WARNING

Operation of this equipment presents a NOISE HAZARD to personnel in the area. Wear ear muffs or ear plugs which *were* fit ted by a trained professional.

Page 16, paragraph *33b* add:

WARNING

Dry cleaning solvent, PD-680, used for cleaning is a POTENTIALLY DANGEROUS CHEMICAL. Do not use near open flame.

Paragraph 33e. Paragraph title should read: "Compressor Air Intake Filter".

Page 19. Figure title for Figure 9 should read:

"Air intake filter service".

Page 53, Section 11, Maintenance Allocation Chart, Delete Group 0102, Crankshaft and Pulley.

Page 61, paragraph 4, add: 83205 Magline, Inc.

Page 63, change Federal Stock Numbers and Part Numbers as follows:

Line 0077, P/N Z261-6A (11568) to 323277-1 (83205)

Line 0078, P/N Z261-6B (11568) to 323277-2 (83205)

Line 0079, P/N Z261-21 (11568) to 323277-11 (83205)

Line 0080, P/N Z261-13 (72962) to 323277-12 (83205)

Line 0083, P/N Z261-11 (11568) to 323277-10 (83205)

Line 0084, P/N Z261-22 (11568) to 323277-18 (83205)

Line 0085, P/N Z261-23 (11568) to 323277-16 (83205)

Line 0086, P/N Z261-17 (11568) to 323277-13 (83205)

Line 0088, P/N Z261-25A (11568) to 323277-4 (83205)

Line 0089, add FSN 5310-761-6882; P/N Z261-20B (11568) to 323277-5 (83205)

Line 0095, add FSN 5310-582-5965; P/N 1-4LW (11568) to MS35388-44 (96906)

Line 0110A is added: PO; FSN 4310-870-5911; VALVE, SAFETY (75336) Z67-75.

Page 64. Change Federal Stock Numbers and Part Numbers as follows:

Line 0113, X20R to P; add FSN 4310-462-7487.

Line 0122, FSN 5310-262-6589 to 5310-984-3806; P/N 29NEO58E (72962) to MS51022-9 (96906)

Line 0142. Description "CONNECTING ROD" to "MAIN".

Page 66. Change Federal Stock Numbers and Part Numbers as follows:

Line 0219, X20 to PO; add FSN 4310-221-4433.

Line 0232, X20 to PO; add FSN 4730-104-6191.

Line 0234, X20 to PO; add FSN 4310-931-8397

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:
VERNE L. BOWERS
Major General, United States Amy
The Adjutant General

Distribution:
To be distributed in accordance with DA Form 12-25A (qty rqr block No. 13) Operator's Maintenance requirements for Air Compressors, 8 CFM.

TM 5-4310-256-15
C 2

Change
No. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D. C., 16 July 1973

Operator, Organizational, Direct Support, General Support, and Depot Maintenance Manual, Including Repair Parts and Special Tool Lists COMPRESSOR, RECIPROCATING; AIR HAND TRUCK MTD, GASOLINE ENGINE 8 CFM, 175 PSI (CHAMPION PNEUMATIC MDL LP-832-ENG-2) FSN 4310-788-8969 5 CFM, 175 PSI (CHAMPION PNEUMATIC MDL LP-512-ENG-2) FSN 4310-733-2210

Current as of 21 May 1973

TM 5-4310-256-15, 4 May 1966, is changed as follows:

The title is changed as shown above.

Page 1. Appendix II title is changed as follows:

"BASIC ISSUE ITEMS LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED."

Page 2. Paragraph 3d is changed as follows:

"d. Reports of errors, omissions, and recommendations for improving this publication by individual user is encouraged. Reports should he submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to Commanding General, U.S. Army Troop Support Command, ATTN: AMSTS-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120."

Page 8. After paragraph 8; add "j. For Maintenance and Operating Supplies see Table O."

Page 47. Appendix II, Basic Issue Items List and Maintenance and Operating Supplies is superseded as follows:

APPENDIX II.
BASIC ISSUE ITEM LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED
Section I. INTRODUCTION

1. Scope

This appendix lists basic issue items, items troop installed or authorized which accompany the air compressor and are required by the crew/operator for operation, installation, or operator's maintenance.

2. General

This basic issue items, items troop installed or authorized list is divided into the following sections.

a. *Basic Issue Items List — Section II.* Not applicable.

b. Items Troop Installed or *Authorized List – Section III.* A list in alphabetical sequence of items which at the discretion of the unit commander may accompany the end item, but are NOT subject to be turned in with the end item.

3. Explanation of Columns

The following provides an explanation of columns in the tabular list of Basic Issue Items List, Section II, and Items Troop Installed or Authorized, Section III.

a. Source, Maintenance and Recoverability *Code(s) (SMR):* Not applicable.

b. Federal Stock Number. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. This column indicates the Federal item name and any additional description of the item required.

d. Unit of Measure (U/M). A 2-character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. Quantity Authorized (Items Troop Installed or Authorized Only). This column indicates the quantity of the item authorized to be used with the equipment.

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

(1) SMR code	(2) Federal stock No.	(3) Description Ref. No. & Mfr code	Usable on code	(4) Unit of me -	(5) Qty auth
	4210-555-8837	EXTINGUISHER, FIRE		EA	1

Page 63. Line item 0071, column 4, Mfg code and P/N is changed as follows "(83205) 323277."

Line item 0072, change col 2 as follows: "PO", add to column 3, "3920-450-9813,'" change column 7 Depot Maintenance, as follows: "2".

Line item 0074, change column 4, Mfg code and P/N as follows: "(83205) 340588."

Line item 0075, change column 4, mfg code and P/N as follows: "(83205) 500353."

Line item 0076, column 4, mfg code and P/N is changed as follows: "(83205) 323277-7."

Line item 0077, column 4, Mfg code and P/N is changed as follows: *"(83205) 323277-2."*

Line item 0079, add to column 3, "5305-071-2237."

Line item 0080, add to column 3, "5310-761-6882."

Line item 0081, column 4 MFG code and P/N is changed as follows: "(83205) 500352."

Line item 0082, change column 3 as follows: "5305-071 -2238."

Line item 0083, change column 3 as follows: "5305-225-3839 ."

Line item 0084, add to column 3, "5305-071-2237."

Line item 0085, add to column 3, "5305-071-2235."

Line item 0086, add to column 3, "5310-828-8803."

Line item 0088, column 4, Mfg code and P/N is changed as follows: "(83205) 323277-5,"

Line item 0089, column 4, Mfg code and P/N is changed as follows: "(83205) 323277-4."

Page 63. Line item 0090, change column 3 as follows: "5310 -761-6882," add to column 4, Mfg code and P/N as follows: "(96906) MS51967-2."

Line item 0108, change column 2 as follows: *"PO"*, add to column 3 as follows: "4730-496-9665."

Page 66. Line item 0213, change Column 2 as follows: "PO", add to column 3 as follows: "4310-236-2443," change column 7 Depot Maintenance, as follows: "3".

Line item 0224, change column 2 as follows: "PO", add to column 3 as follows: "4820-019-3019."

Line item 0231, change column 2 as follows: "PO", add to column 3 as follows: "4730-l04-6191," change column 7 Depot Maintenance, as follows: "10".

Line item 0233, change column 2 as follows: "PO", add to column 3 as follows: "43l0-105-2373," change column 7 Depot Maintenance, as follows: "10".

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:
VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:
To be distributed in accordance with DA Form 12-25A (qty rqr block No. 5) operator maintenance requirements for Air Compressors 5 CFM.

TM 5-4310-256-15
C1

CHANGE
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C. 6 June 1970

Operator, Organizational, DS, GS, and Depot Maintenance Manual, Including Repair Parts and Special Tool Lists

COMPRESSOR, RECIPROCATING; AIR, HAND TRUCK MTD, GASOLINE ENGINE, 8 CFM, 175 PSI/(CHAMPION PNEUMATIC MDL LP-832-ENG-2) FSN 4310-788-8989
5 CFM, 175 PSI (CHAMPION PNEUMATIC MDL LP-512-ENG-2) FSN 4310-733-2210

Current as of 8 May 1970

TM 5-4310-256-15,4 May 1966, is changed as follows:

Page 24, Paragraph 41a Removal. Delete lines 1 and 2. Add:
(1) Stop the engine (para 17).
(2) Remove the oil filler plug (para 40).

Page 38, Figure 23, change callout 15 from TUBE, to read HUB.

Page 45, Figure 26, delete callouts 26 and 27 from legend.

Page 59, Table 1, add the following item:

3030-640-2371 BELT, V: Compressor drive (25472) 4L560-2 Functional Group 5007 Unit of Issue Set 1-5 allowances (1) 6-10 allowances (1).

All changes, additions, or deletions of Federal Stock Numbers or Manufacturer's Part Numbers within the changes should be appropriately reflected in the index,

Section II change, add. or delete as shown on the following pages:

1

Page	Line	Action	Source Codes				Federal Stock Number	Description	Unit of Issue	Expendability	Quantity Incorporated in Unit	15 Days Organizational maintenance Allowance Per 100 Equipments		Guide Quantities Per 100 Equipments			Illustrations	
			Technical Service	Source	Maintenance	Recoverability								Maintenance 15-Day		Depot Maintenance	Fig. No.	Item No.
												2nd Echelon		D8	G8			
												1-5	6-10	100 equipments				
								SECTION II – REPAIR PARTS LIST PART I GROUP – 5000 – AIR COMPRESSOR ASSEMBLY										
64	0113	Ch source code ch D/M colm add FSN		P			4310-462-7487	COMPRESSOR, AIR (11568) CAW								3		
								5000 – VALVES, CAMSHAFT AND TIMING MECHANISM										
65	0171A	Add		P	O		4310-870-5911	VALVE, HIGH PRESSURE: in-interstage safety (75336) Z67-75	EA		1	*	*	*	*	5	21	1C
								5008 – AIR INTAKES										
66	0219	Chg source code, chg D/M col add FSN		P	O		4310-221-4433	MUFFLER *** (11568) Z129C								10		
66	0234	Ch source code, ch D/M colm add FSN		P	O		4310-931-8397	TUBE*** (11568) A45								10		

By order of the Secretary of the Army:

W. C. WESTMORELAND,
General, United States *Army,*
Chief of Staff.

official:

KENNETH G. WICKHAM,
Major General United States Army,
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-25, Section I, (qty rqr block no. 5) operator maintenance requirements for Air Compressors 5 CFM

TECHNICAL MANUAL
No. 5--4310-256-15

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *4 May 1966*

OPERATOR, ORGANIZATIONAL, DS, GS, AND DEPOT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS:

COMPRESSOR, RECIPROCATING: AIR HAND TRUCK MOUNTED GASOLINE ENGINE 8 CFM, 175 PSI. (CHAMPION PNEUMATIC MODEL LP-832-ENG-2)

FSN 4310-788-8969

5 CFM, 175 PSI. (CHAMPION PNEUMATIC MODEL LP-512-ENG-2)

FSN 4310-733-2210

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. These instructions are published for the use of the personnel to whom air compressor is issued. Chapters 1 through 3 provide information on the operation, preventive maintenance services, and organizational maintenance of the equipment, accessories, components, and attachments. Chapters 4 through 6 provide information for direct and general support and depot maintenance. Also included are descriptions of main units and their functions in relationship to other components.

b. Appendix I contains a list of publications applicable to this manual. Appendix II contains the list of Basic Issue Items authorized the operator of this equipment and the list of Maintenance and Operating Supplies required for initial operation. Appendix III contains the Maintenance Allocation Chart. The Organizational, Direct and General Support, and Depot Maintenance Repair Parts and Special Tools are listed in Appendix IV.

c. Numbers in parentheses on illustrations indicate quantity. Numbers preceding nomenclature callouts on illustrations indicate the preferred maintenance sequence.

d. The direct reporting by the individual user, of errors, omissions, and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting these improvements. This form will be completed using pencil, pen, or typewriter and forwarded direct to Commanding General, U. S. Army Mobility Equipment Center, ATTN: SMOME-MPD, 4300 Goodfellow Blvd., St. Louis, Mo. 63120.

e. Report all equipment improvement recommendations as prescribed by TM 38-750.

2. Record and Report Forms

a. DA Form 2258 (Depreservation Guide for Vehicles and Equipment).

b. For other record and report forms applicable to operator, crew and organizational maintenance, refer to TM 38-750.

Note. Applicable forms, excluding Standard Form 46 (US Government Motor Vehicle Operator's Identification Card) which is carried by the operator, shall be kept in a canvas bag mounted on the equipment.

Section II. DESCRIPTION AND DATA

3. Description

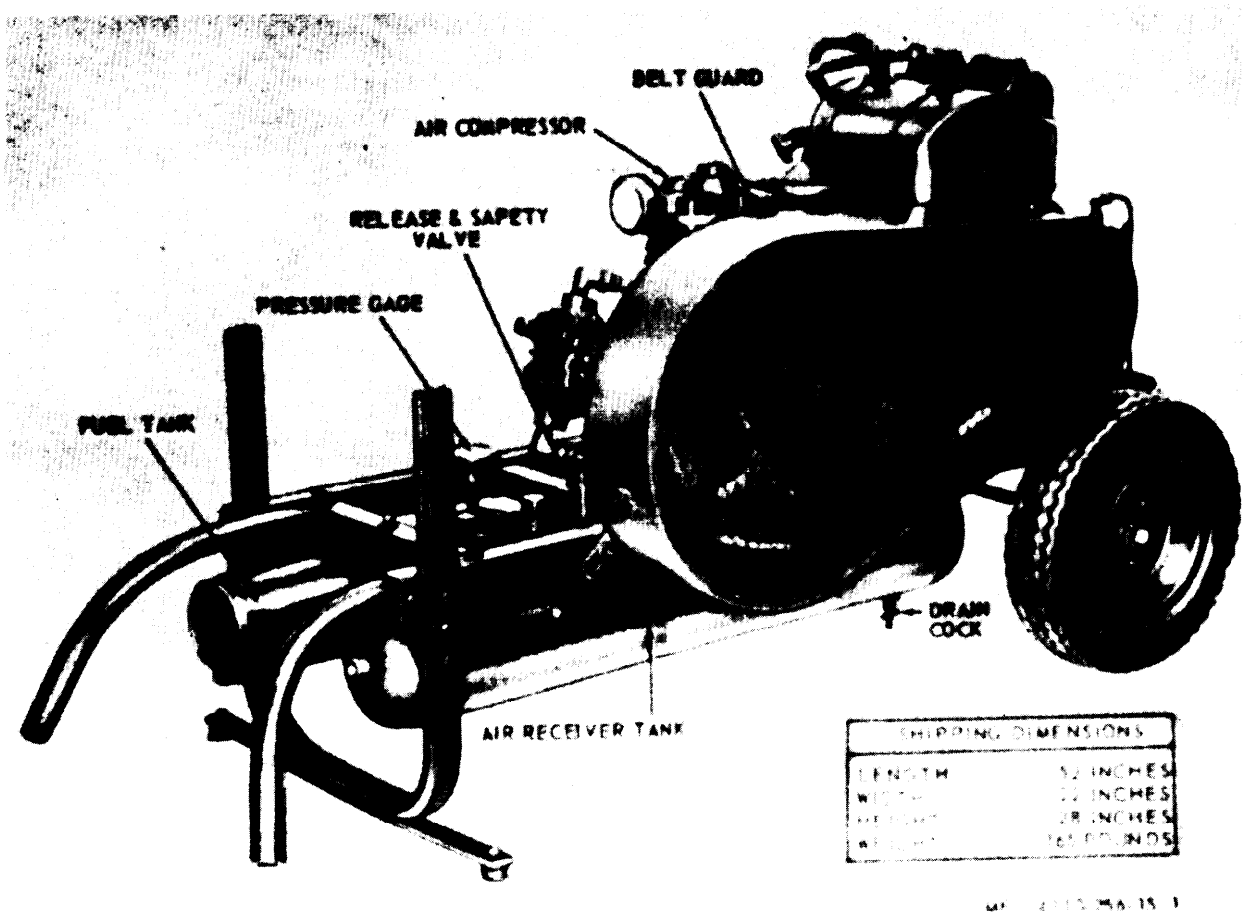
a. General. The Champion air compressor Model LP-832-ENG-2 (figs. 1 ① and 2 ①) is designed to deliver 8 CFM (cubic feet per minute) of air compressed to 175 psi (pounds per square inch) pressure to the air receiver tank at 710 rpm (revolutions per minute). The Champion air compressor Model LP-512-ENG-2 (figs. 1 ① and 2 ②) is designed to deliver 5 CFM of air compressed to 175 psi pressure to the air receiver tank at 710 rpm. Both models are gasoline engine driven, hand truck mounted, and constructed of steel materials.

b. Engine. Air Compressor Model LP-832-ENG-2 is driven by a Military Standard Model 2A06-III, 3 hp (horsepower) engine and Air Compressor Model LP–512-ENG-2 is driven by a Military Standard Model 1A08-III, 1.5 hp engine.

4. Identification and Tabulated Data

a. Identification. The air compressor has two major identification plates. The information contained on these plates is listed below.

(1) Corps of Engineers plate. The Corps of Engineers plate specifies the name of the



1 Model LP-832-ENG-2

Figure 1. Air compressor, right rear, three-quarter view with shipping instructions.

manufacturer, make, model, number, date of manufacture, serial number and the Federal Stock Number of the air compressor. The plate is mounted on the left rear of the hand truck.

(2) *Air compressor plate.* The air compressor plate specifies the name of the manufacturer, the model, and the serial number of the compressor. The plate is mounted on the governor housing of the compressor.

b. Tabulated *Data.* Data is the same for both models unless otherwise indicated.

(1) *Compressor Assembly*

(a) Model LP-832-ENG-2

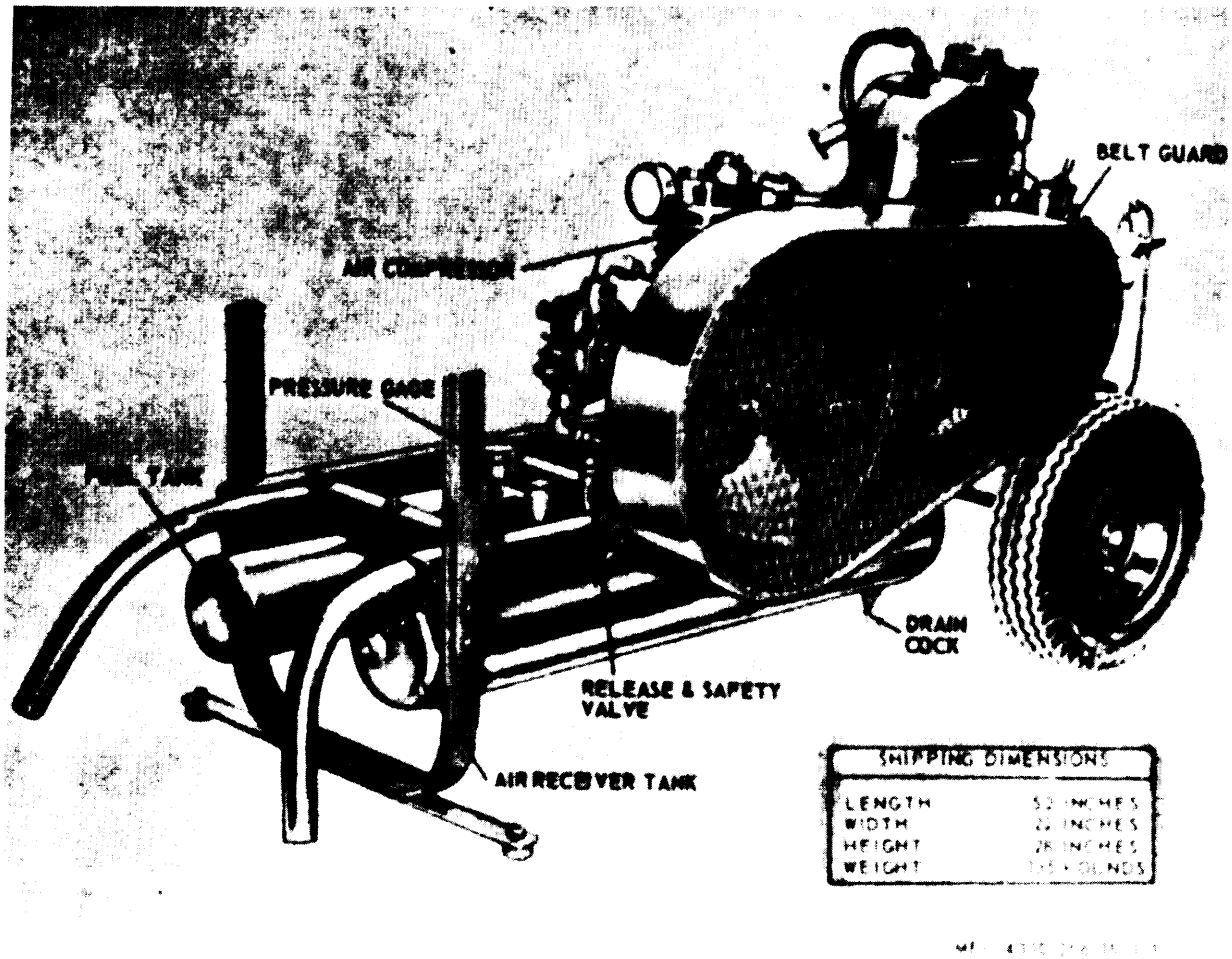
Manufacturer	Champion Pneumatic Machinery Co.
Model	LP-832-ENG-2
output	8 CFM at 175 psi
Type	Hand truck mounted, engine driven
Serial Numbers	4534 through 4757

(b) Model LP-512-ENG-2

Manufacturer	Champion Pneumatic Machinery Co.
Model	LP-512-ENG-2
output	5 CFM at 175 psi
Type	Hand truck mounted, engine driven
Serial Numbers	1 through 4533

(2) Compressor

Manufacturer	Champion Pneumatic Machinery Co.
Model	CAW



2 Model LP-512-ENG-2

Figure 1—Continued.

TypE 3-cylinder, 2-stage
Bore and stroke
High pressure l¾ X 2 in. (inches)
Low pressure 2 5/8 X 2 in.

(3) *Compressor Air* Cleaner

Manufacturer Champion Pneumatic Machinery Co.
Type Dry

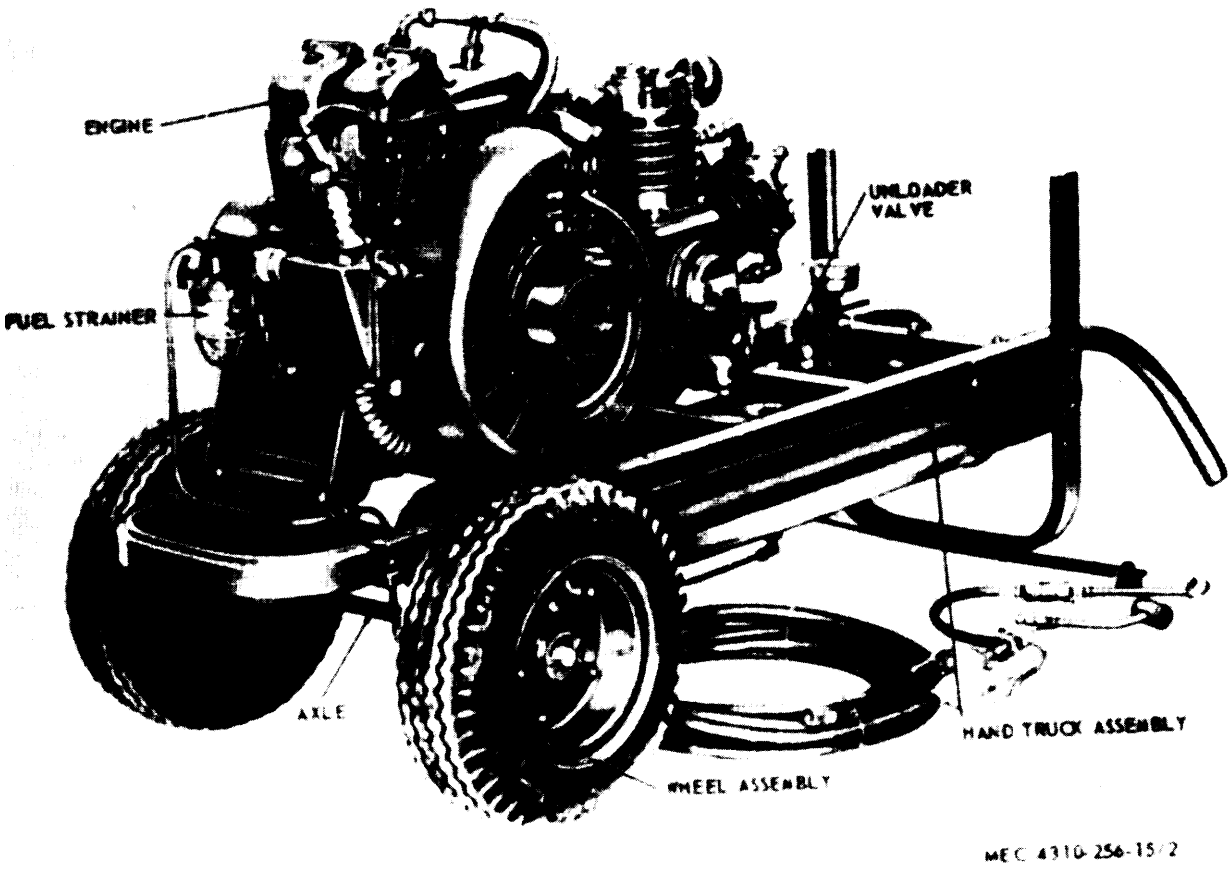
(4) Engine

(a) Model LP-832-ENG-2

Make Military Standard
Model 2A016-III
Type Air-cooled
Cycle 4
Valves Overhead
Cylinders 2
Fuel Gasoline
Horsepower 3
Rated speed 3600 rpm

(b) Model LP-512-ENG-2

Make Military Standard
Model 1A08-III
Type Air-cooled
Cycle 4
Valves Overhead
Cylinders 1
Fuel Gasoline
Horsepower 1.5
Rated speed 3600 rpm



1 Model LP-832-ENG-2

Figure 2. Air compressor, left front, three-quarter view.

(5) *Capacities*

(a) Model LP-832-ENG-2

Compressor crankcase	1/4 qt.
Engine crankcase	5/8 qt.
Fuel tank	5.2 qt.
Air tank	2 gal.

(b) Model LP-512-ENG-2

Compressor crankcase	1/4 qt.
Engine crankcase	1 pt.
Fuel tank	5.2 qt.
Air tank	2 gal. (gallons)

(6) *Air Receiver*

Manufacturer	Champion Pneumatic Machinery Co.
Working pressure	175 psi
Shell thickness	.000 in.
Head thickness	.090 in.
Maximum temperature	450° F.

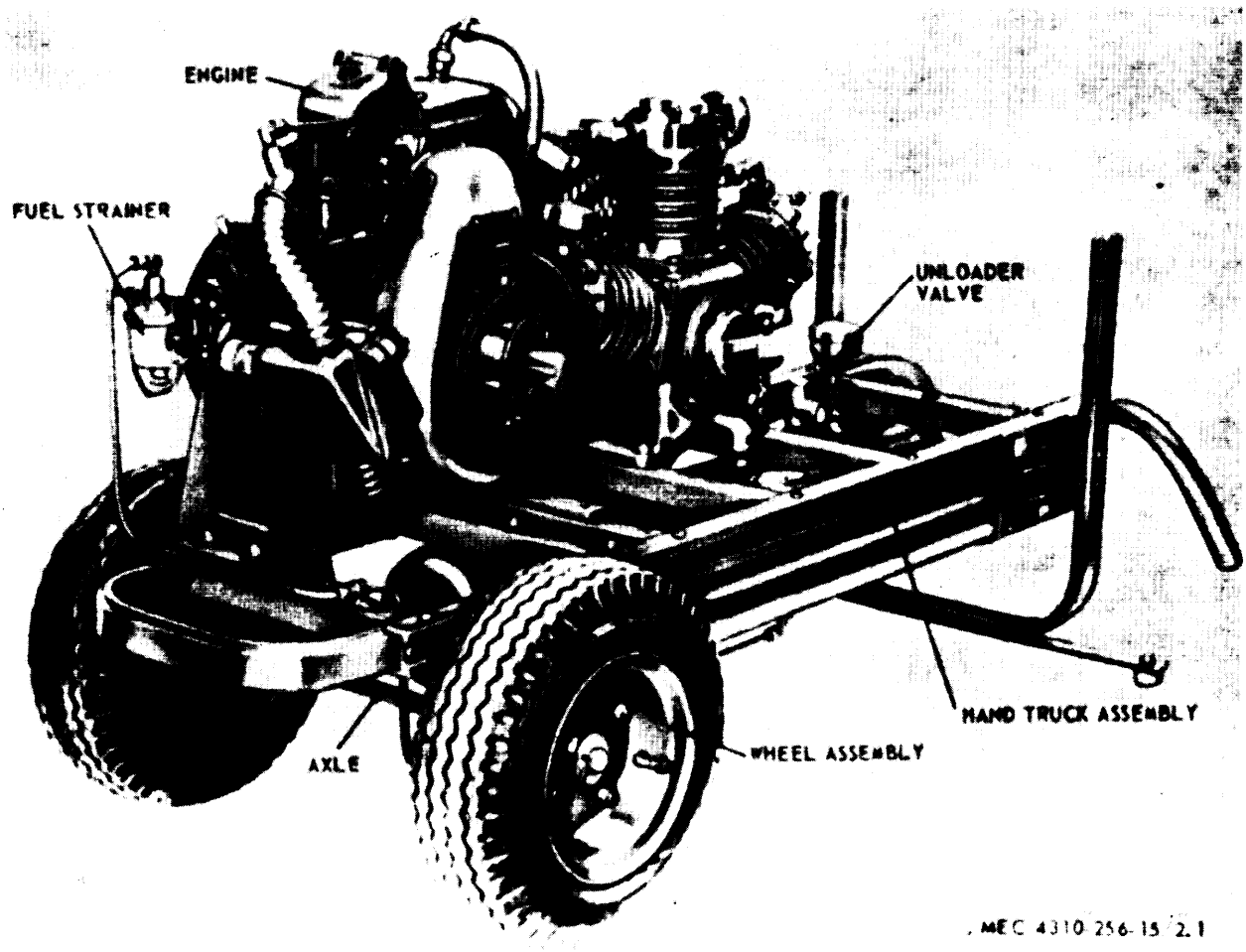
(7) *Air Hose*

Size	*5/16* in. x 25 ft.

(8) *Dimensions and Weight*

(a) Model LP-832-ENG-2

Shipping weight	165 lb (pounds)
Shipping cube	18.5 cu-ft
Length	52 in.
Height	28 in.
Width	22 in.



2 Model LP-512-ENG-2

Figure 2 - Continued.

(b) Model LP-512-ENG-2

Shipping weight	135 lb.
Shipping cube	18.5 cu-ft
Length	52 in.
Height	28 in.
Width	22 in.

(9) *Nut and Bolt Torque Data, Compressor*

Cylinder flange stud nuts	45 ft-lb)
Cylinder flange nuts	45 ft-lb
Unloader to crankcase bolts	40 ft-lb
Side plate to crankcase bolts	25 ft-lb
Intake manifold stud nuts	60 ft-lb
Intake manifold studs	60 ft-lb
Exhaust manifold stud nuts	25 ft-lb
Exhaust manifold studs	25 ft-lb
Connecting rod cap bolt nut	*25* ft-lb

5. Differences in Models

This manual covers the Champion Pneumatic Machinery Company Models LP-832-ENG-2 and LP-512-ENG-2 Air Compressors. The differences between the two models are the engine assemblies and the CFM of air delivered. Model LP-832-ENG-2 is driven with a 2-cylinder Military Standard Model 2A016-III Engine and delivers 8 CFM of air. Model LP-512-ENG-2 is driven by a 1-cylinder, Military Standard Model lA08-III Engine and delivers 5 cfm of air.

CHAPTER 2

INSTALLATION AND OPERATION INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

6. Unloading Equipment

a. Remove all tiedowns or blocking that secures the crate to the carrier. Refer to figure 3.

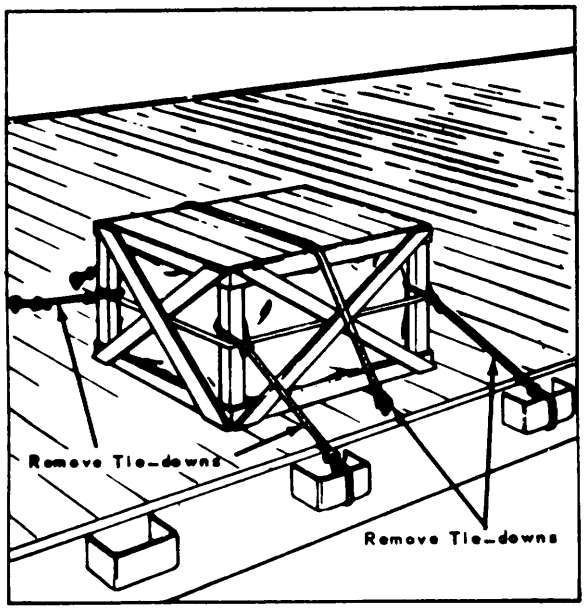


Figure 9. Shipping tie-downs.

b. A forklift truck, pipe rollers, or a suitable hoist must be used when removing the air compressor from the carrier.

Warning: **Make certain any lifting device has a capacity equal to** the weight **being lifted. Failure to observe this precaution could result in injury or death to personnel and damage to the equipment.**

7. Unpacking the Equipment

a. Place the air compressor as close to the point of installation or use as possible. Remove the box containing the air hose assembly and inflation device from the inside of the crate. These are illustrated in figure 27. A publications case and copies of this manual are also included.

b. Remove the tape and protective material from the engine, compressor, and air receiver tank. Remove the preservative lubricant from the compressor and engine crankcase.

c. Remove the nuts and lockwasher that secure the air compressor to the bottom of the crate and remove the air compressor.

8. Inspection and Servicing Equipment

a. Make a complete visual inspection of the air compressor for any loss or damage that may have occurred during shipment. Prior to inspection or operation of the compressor, accomplish depreservation of the compressor as outlined on DA Form 2258.

b. Refer to paragraph 35 for daily preventive maintenance services.

c. Inspect the engine (fig. 2 ① or 2 ②) for loose connections, and insecure mounting.

d. Inspect the compressor (fig. 1 or 1.1) for loose mounting bolts, cracks, breaks and other defects.

e. Inspect the safety relief valve (fig. 1 ① or 1 ②) for loose mounting.

f. Inspect the hand truck assembly (fig, 2 ① or 2 ②) for cracks, breaks, and other damage.

g. Inspect the wheel assembly (fig. 2 ① or 2 ②) for cracks, breaks, insecure mounting and alinement.

h. Check the contents of the crate against the packing list to make sure no items are missing.

i. Correct all deficiencies or report them to the proper authority.

9. Installation of Separately Packed Components

The air compressor is delivered with an air nose assembly packed separately. The air hose assembly is installed directly in the end of the air receiver tank.

10. Installation or Setting-Up Instructions

a. General. The compressor is portable and requires no base, but should be as level as possible when used.

b. Outdoor Installation. Avoid muddy, sandy or dusty locations as a site for operation as dirt and moisture shorten the life of all moving parts.

c. *Indoor Installation.* If the compressor is to be operated within a building or vehicle, pipe the exhaust to the outside. Use as few bends as possible in the exhaust line and make sure all connections are tight.

Warning: **Do not operate the air compressor in an enclosed area unless the exhaust gases are piped to the outside. Inhalation of exhaust fumes will result in serious illness or death.**

Section II. MOVEMENT TO A NEW WORKSITE

11. Dismantling for Movement

a. Build up the pressure in the air receiver tank (fig. 1 ① or 1 ②) to a pressure just below 400 psi.

b. Stop the engine (para 17). Open the drain cock (fig. 1 ① or 1 ②) and blow the condensate from air tank. Close the draincock.

c. Remove the bail assembly (1, fig. 14) from the fuel strainer (fig. 14). Drain the fuel tank (fig. 1 ① or 1 ②).

d. Remove the airhose assembly (20, fig. 13) from the air receiver tank (25, fig. 13). Cover the hose mount in the air receiver tank.

e. Lift the air compressor and accessories on a suitable carrier and block and tie it down.

f. Move the air compressor to the new worksite. ‘Unload it and set it up for operation, following the instructions in paragraph 10.

12. Reinstallation After Movement

Unload the compressor and follow the instructions in paragraph 10.

Section III. CONTROLS AND INSTRUMENTS

13. General

This section describes, locates, illustrates, and furnishes the operator, crew, or organizational maintenance personnel sufficient information about the various controls and instruments for proper operation of the air compressor.

14. Controls and Instruments

The purpose of the controls and instruments and the normal and maximum reading of the instruments are illustrated in figure 4.

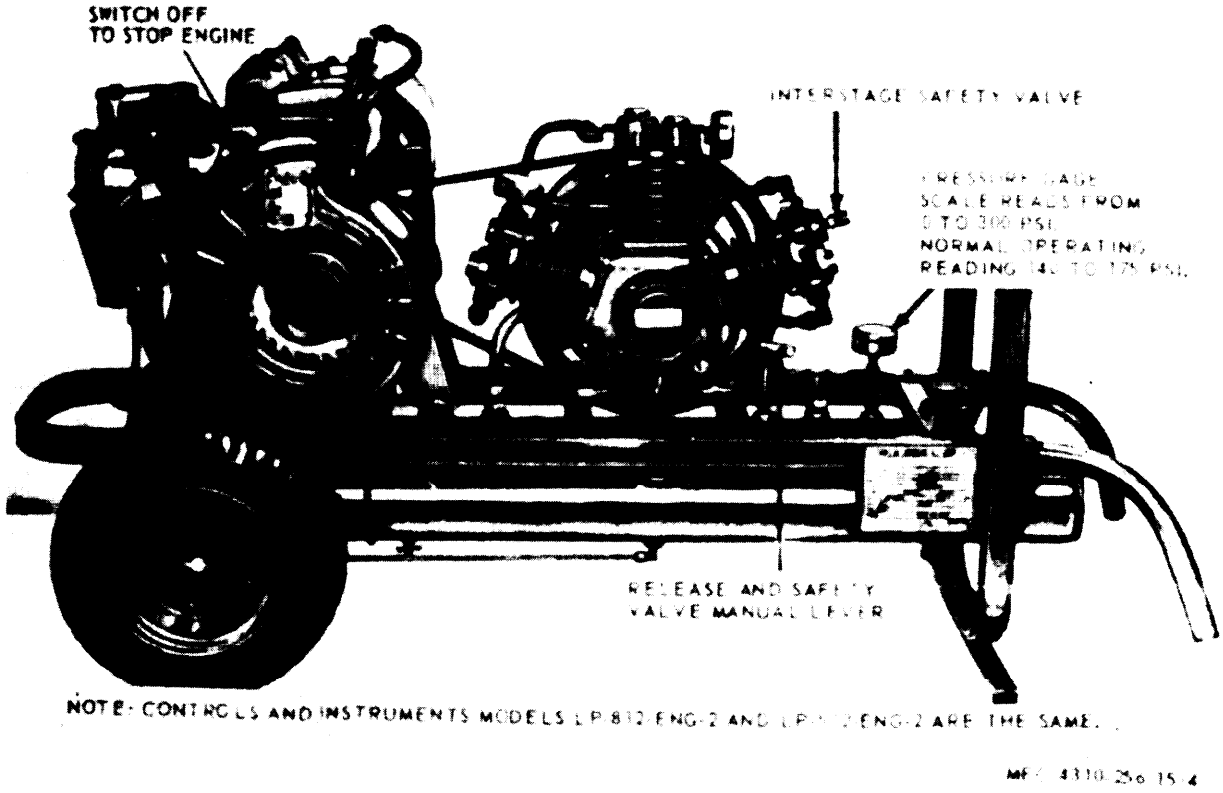


Figure 4. Controls and instruments.

Section IV. OPERATION OF EQUIPMENT

15. General

a. The instructions in this section are published for the information and guidance of the personnel responsible for operation of the air compressor,

b. The operator must know how to perform every operation of which the air compressor is capable, This section gives instructions on starting and stopping the air compressor, basic motions of the air compressor, and on coordinating the basic motions to perform the specific tasks for which the equipment is designed. Since nearly every job presents a different problem, the operator may have to vary given procedures to fit the individual job.

16. Starting

a. *Preparation for Starting.* Perform the daily preventive- maintenance services described in paragraph 35.

b. Starting. Refer to figure 5 and start the air compressor.

17. Stopping

a. Refer to figure 6 and stop the air compressor.

b. Perform the necessary daily preventive maintenance services (para 35).

18. Operation Under Usual Conditions

a. Start the air compressor as instructed in paragraph 16.

b. Refer to figure 7 and operate the air compressor.

19. Operation in Extreme Cold (below 0°F)

a. Locate the air compressor in a shed or building whenever possible If the unit is operated outdoors,

protect it from prevailing winds and cover it with a tarpaulin when not in USC.

b. Lubricate the air compressor according to the lubrication order.

c. Avoid excessive handling, kinking, and sharp bending of the air hose, which will become brittle at low temperatures.

d. Keep all fuel tanks and storake containers filled with fuel to prevent formation of ice crystals from the freezing of condensate. Such crystals will clog fuel lines and carburetor jets. Use filter paper, chamois, or other type strainer when filling the fuel tank or transferring fuel from one container to another.

Warning: **Always provide a metallic contact between the fuel container and the fuel tank. This will prevent a spark from being generated as the gasoline flows over metallic surfaces.**

20. Operation in Extreme Heat

a. Lubricate the compressor in accordance with the lubrication order.

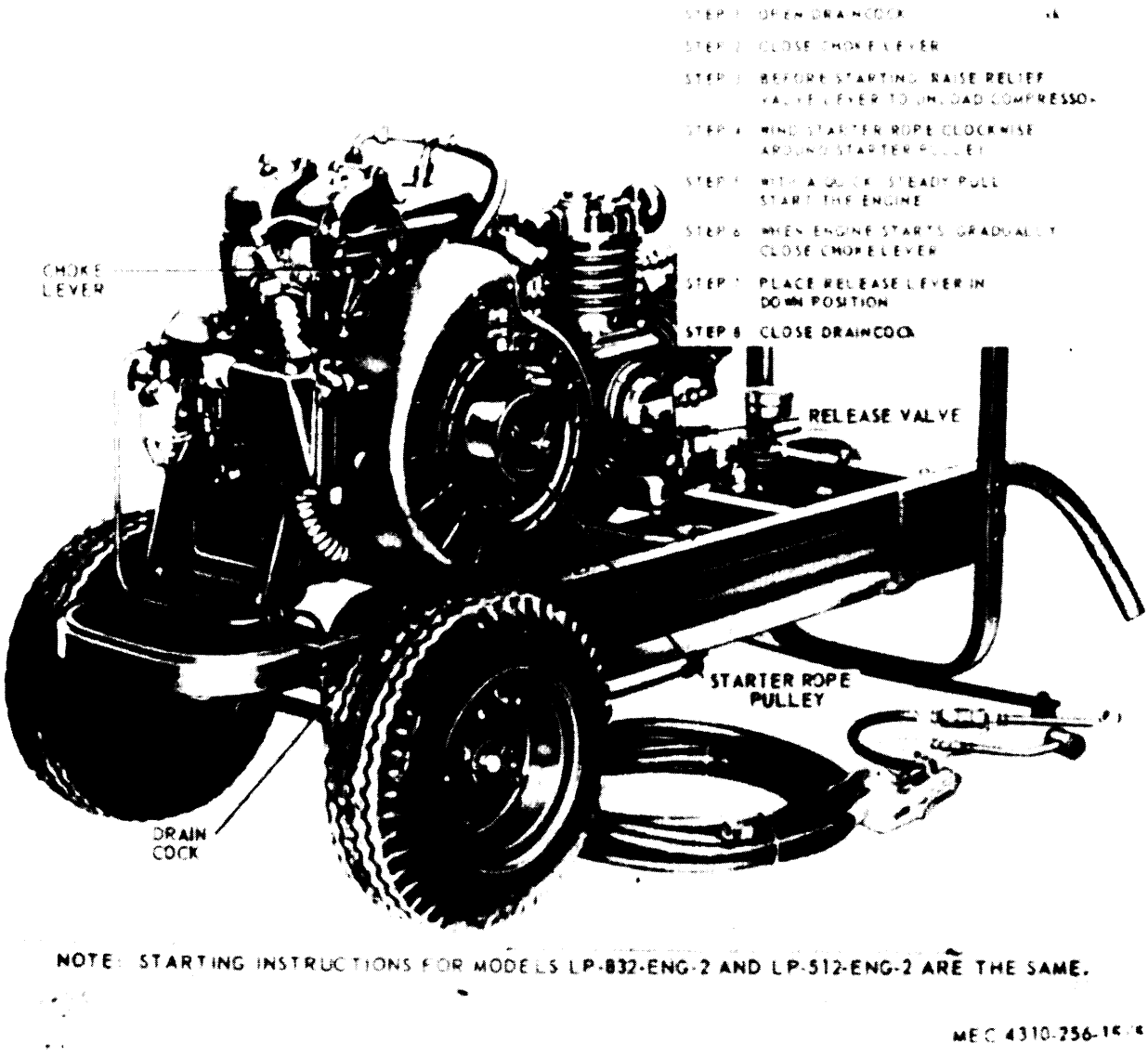


Figure 5. Starting the air compressor.

b. Check the drive-belt tension frequently. Improper drive-belt tension often results in overheating.

c. Locate the air compressor in an operating area that is well ventilated or provide intake and exhaust fans to ventilate in closed area.

d. Fill the fuel tank at the end of each day's operation, especially in areas where the temperature drops sharply at night, This will prevent condensation from forming in the fuel tank.

e. Keep the engine clean. Service the engine air cleaner as often as necessary.

21. Operation in Dusty or Sandy Areas

a. Lubricate the air compressor in accordance with the lubrication order, making sure that all lubrication points are free from dirt and sand before applying lubricant. Keep all lubricant containers clean and tightly cosed. Do not lubricate excessively as dirt and sand will adhere to excess lubricant and may work into moving parts. Wipe off all lubrication points after lubricating.

b. Protect the air compressor from dust with screens, shelters, built from tarpaulins, or other dustproof material. Keep the unit covered when not in use.

c. Clean the compressor air cleaner more often than when operating under normal conditions.

d. Take adequate precautions to prevent sand and dirt from entering the fuel tank. Service the fuel strainer as often as necessary to keep the bowl free from dirt and sand. Clean the engine air cleaner more often than usual.

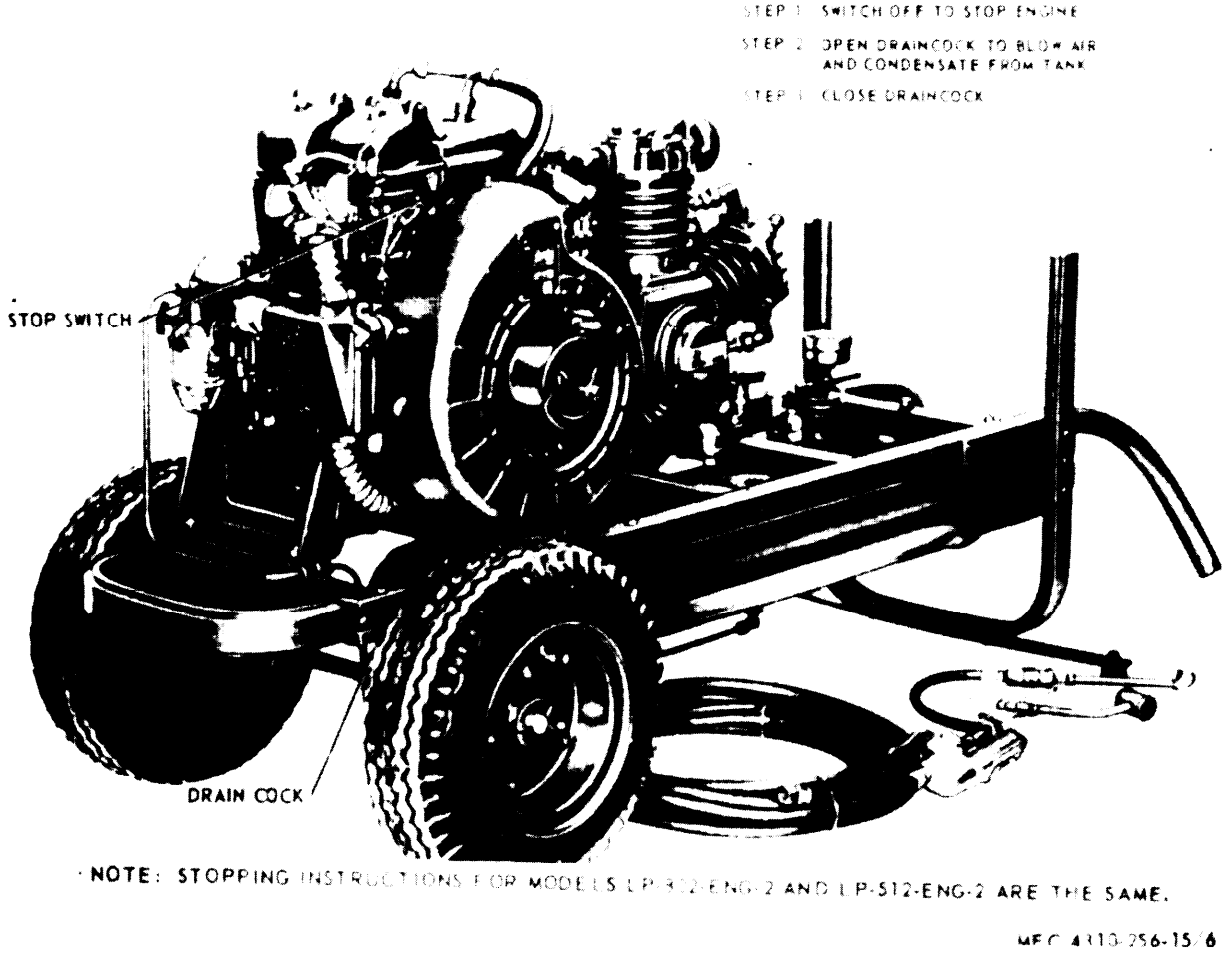


Figure 6. Stopping the air compressor.

22. Operation Under Rainy or Humid Conditions

a. Protect the unit with a shelter of some kind. Keep the sides open for ventilation.

b. Make sure all surfaces requiring lubrication are clean and dry before applying lubricant. Lubricate the unit in accordance with the lubrication order.

c. Coat exposed polished or machined metal surfaces with a suitable rustproof material after first removing any accumulations of rust.

d. Open the draincock frequently to blow condensate from the air receiver tank,

c. Service the engine air cleaner more frequently.

23. Operation in Salt-Water Areas

a. Wipe the unit dry at frequent intervals, with particular emphasis on the engine.

b. If the unit becomes encrusted with salt, wash it with fresh water, taking care not to damage the electrical system with water.

c. Make sure all surfaces requiring lubrication are clean and dry before applying lubricant. Lubricate the unit in accordance with the lubrication order.

d. Coat exposed polished or machined metal sur-

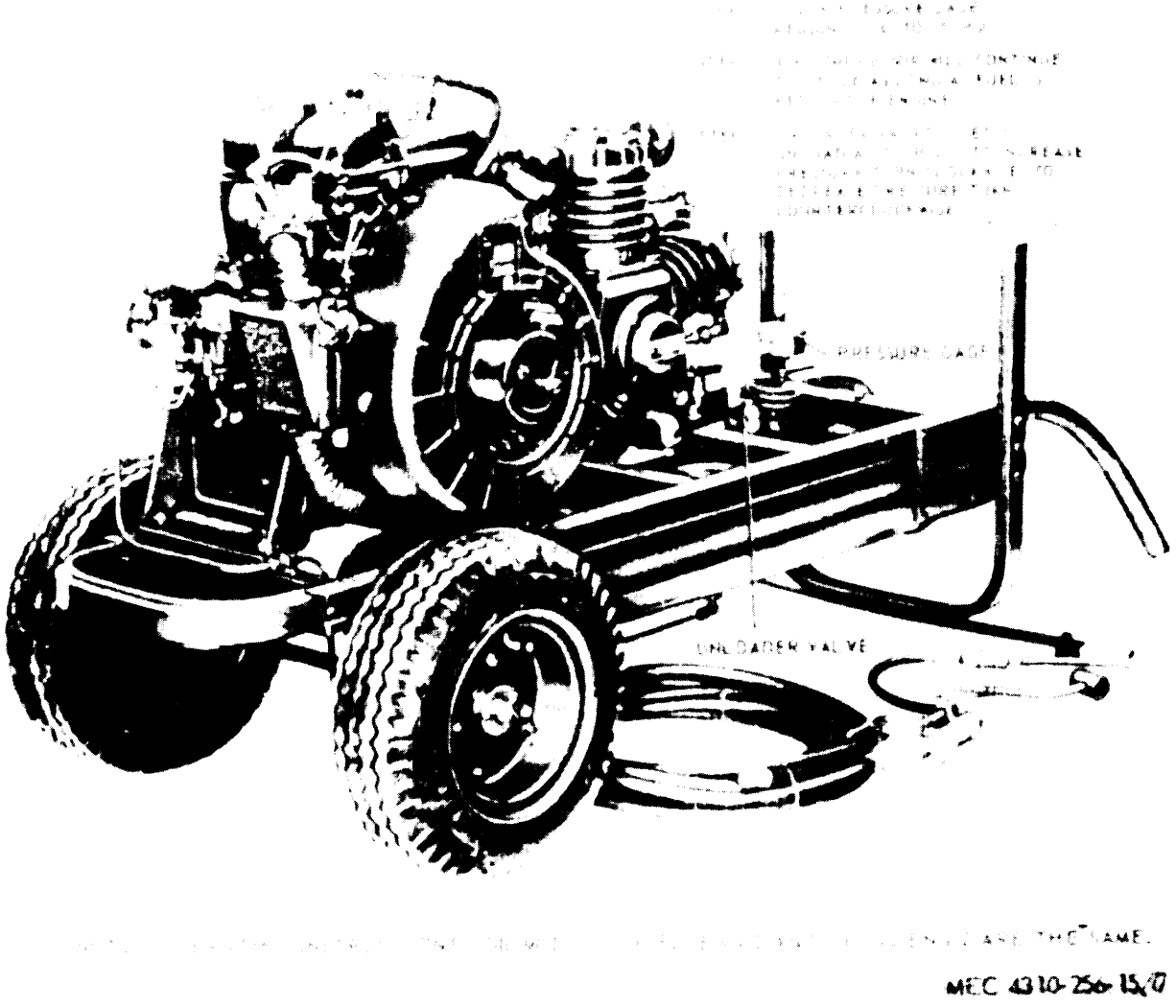


Figure 7. Operating the air compressor.

faces with a suitable rustproof material after first removing any accumulation of rust.

24. Operation at High Altitudes

a. The air compressor is designed to operate efficiently at elevations up to 5,000 feet. There will be a reduction in efficiency because of the rarified air at this level. This is a normal condition that cannot be prevented.

b. Make sure the unit is supplied with quantities of fresh air. Do not operate it in an enclosed area that does not have ample ventilation.

c. Fill the fuel tank at the end of each day's operation to prevent condensation of moisture in the fuel tank.

d. Adjust the carburetor to compensate for the reduced amount of oxygen available to the carburetor (TM 5–2805-208-14).

Section V. OPERATION OF MATERIEL USED IN CONJUNCTION WITH THE EQUIPMENT

25. Fire Extinguisher (Monobromotrifluoromethane Type)

a. Description. The monobromotrifluoromethane type fire extinguisher is generally suitable for all types of fire, except fires involved with LOX (liquid oxygen) generating equipment, The fire extinguisher is furnished with a disposable type cylinder.

b. Operation. To operate the first extinguisher, perform the following:

(1) Remove first extinguisher from its location.

(2) Break seal by pulling safety pin from handle.

(3) Point horn at base of flame.

(4) Press trigger for discharge and direct stream at base of flame.

(5) Replace cylinder immediately after using.

c. Replacement of Cylinder. To replace cylinder, perform the following:

(1) Press lever to release pressure from used cylinder.

(2) Loosen swivel valve coupling nut and remove valve assembly from used cylinder.

(3) Remove instruction band from used cylinder.

(4) Place new cylinder through instruction band.

(5) Replace safety pin in valve and seal pin with sealing wire.

(6) Attach valve assembly and tighten swivel coupling nut on the new cylinder and place fire extinguisher in mounting bracket.

(7) Adjust instruction band on cylinder to show maintenance and operating instructions.

d. Maintenance. Weigh fire extinguisher every 3 months and replace cylinder if gross weight has decreased 4 ounces or more. Lubricate cylinder neck threads with one drop of OE 30 oil before reassembly.

26. Fire Extinguisher (Carbon Dioxide Type)

a. Description. The carbon dioxide type fire extinguisher is suitable for electrical and flammable liquid fires. The carbon dioxide types are the 4-pound, 7½ pound, and 10-pound sizes. The 4-pound extinguisher is portable, the other two are the fixed type.

b. Operation. Remove the fire extinguisher from its location; break the seal, operate the control valve, and direct the stream at base of the flame.

c. Maintenance. For maintenance of the first extinguisher, refer to TM 5-687.

27. Fire Extinguisher (Carbon Tetrachloride Type)

a. Description. The carbon tetrachloride type fire extinguisher is suitable for electrical fires because it will not damage electrical equipment or conduct electricity. It is a l-quart, vaporizing-liquid, pump-operated extinguisher.

b. Operation. Remove fire extinguisher from its location; turn the handle and work the handle like a pump. Direct the stream at base of flame.

Warning: **Be extremely careful when using a carbon tetrachloride fire extinguisher in an enclosed area. Provide adequate ventilation before entering an enclosed area where carbon tetrachloride has been used.**

c. Maintenance. For maintenance of the fire extinguisher, refer to TM 5-687.

28. Fire Extinguisher (Dry Chemical Type)

a. Description. The dry chemical type fire extinguisher is suitable for use on all types of fire and is effective in areas where ambient temperature is –25°F. and above. If winterized (pressurized with nitrogen), the fire extinguisher may be used in temperatures below –25°F. The fire extinguisher is a 2½ pound, stored pressure, lever-operated extinguisher.

b. Operation. Remove the fire extinguisher from its location, lift the handle, press lever, and direct the powder at the base of the flame using a side-to-side sweeping motion.

c. Maintenance. Weigh the fire extinguisher every 6 months and replace the extinguisher if weight is less than 4½ pounds, or if pressure is below 125 pounds.. Refer to TB 4200-200-10. The dry chemical fire extinguisher will be serviced at installation level through Repair and Utilities Facilities, with the filling agent supplied by local procurement through Troop Supply Channels.

CHAPTER 3

OPERATOR AND ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. OPERATOR AND ORGANIZATIONAL MAINTENANCE TOOLS AND EQUIPMENT

29. Special Tools and Equipment

No special tools or equipment are required by the operator or organizational maintenance personnel for the maintenance of the air compressor.

30. Basic Issue Tools and Equipment

Tools and repair parts issued with or authorized for the air compressor are listed in the Basic Issue Items List, appendix II of this manual.

31. Organizational Maintenance Repair Parts

Organizational Maintenance repair parts are listed and illustrated in appendix IV.

Section II. LUBRICATION

32. General Lubrication Information

a. This section contains a reproduction of the lubrication order and lubrication instructions which are supplemental to, and not specifically covered in the lubrication order.

b. The lubrication order shown in figure 8 is an exact reproduction of the approved lubrication order for the air compressor. For the current lubrication order, refer to DA PAM 310-4.

33. Detailed Lubrication Information

a. General. Keep all lubricants in closed containers and store in a clean, dry place away from external heat. Allow no dust, dirt, or other foreign material to mix with the lubricants. Keep all lubrication equipment clean and ready for use.

b. Cleaning. Keep all external parts not requiring lubrication clean of lubricants. Before lubricating the equipment, wipe all lubrication points free of dirt and grease. Clean all lubrication points after lubricating to prevent accumulation of foreign matter.

c. Points of Lubrication. Service the lubrication points at proper intervals as illustrated in figure 8.

d. Engine. Refer to TM 5-2805-208-14 for detailed engine lubrication.

e. Compressor Air Intake Muffler Service. Refer to figure 9 and service the air intake muffler by disassembling in numerical sequence and washing the elements in soapy water.

LUBRICATION ORDER

LO 5-4310-256-15

4 FEBRUARY 1966

COMPRESSOR, RECIPROCATING: AIR, HAND TRUCK MOUNTED, GASOLINE ENGINE: 8 CFM; 175 PSI (CHAMPION PNEUMATIC MODEL LF-832 ENG-2) AND COMPRESSOR, RECIPROCATING: AIR; 5 CFM: 175 PSI (CHAMPION PNEUMATIC MODEL LP-512-ENG-2)

Reference: LO5-2805-208-14, C9100IL

Intervals are based on normal hours of operation. Reduce to compensate for abnormal operation and severe conditions. During inactive periods, sufficient lubrication must be performed for adequate preservation.

Relubricate after washing.

Clean fitting before lubricating.

Clean parts with SOLVENT, dry-cleaning, or with OIL, fuel, Diesel. Dry before lubricating.

Lubricate points indicated by dotted arrow shaft on both sides of equipment.

Drain crankcase and gearcase when hot. Fill and check level.

FOLD

FOLD

INTERVAL • LUBRICANT

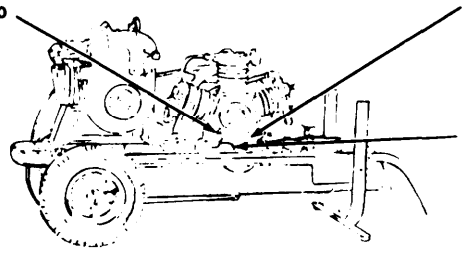
Air compressor Crankcase Fill Plug (See Key)

LUBRICANT • INTERVAL

5 Air Compressor Crankcase Oil Level Sight Gage (Check level)

250 Air Compressor Crankcase Drain Plug (Drain and refill)

2190 TEP



MODEL LP-512 ENG-2
MODEL LP-832-ENG-2

MEC 4310-256-15 8 ①

Figure 8. Lubrication order.

- KEY -

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above + 32°F	+40°F to -10°F	0°F to -65°F	
2190 TEP-LUBRICATING OIL, General Purpose		2190-TEP	2110-TH	2075-TH	Intervals given are in hours of normal operation.
Air Compressor Crankcase	1/4 qt				
GAA-GREASE, Automotive and Artillery		All Temperatures			

NOTES:

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW-10°F. Remove lubricants prescribed in the key for temperatures above-10°F. Clean parts with SOLVENT, Dry-cleaning. Relubricate with lubricants specified in the key for temperatures below -10°F.

Copy of this Lubrication Order will remain with the equipment at all times, instructions contained herein are mandatory.

BY ORDER OF THE SECRETARY OF THE ARMY:

HAROLD K. JOHNSON
General, United States Army,
Chief of Staff.

OFFICIAL
J C LAMBERT,
Major General, United States Army,
The Adjutant General.

FOLD

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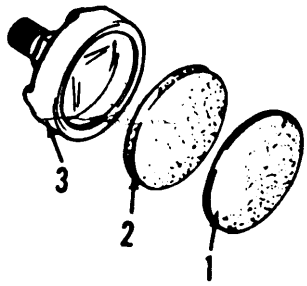
MEC 4310-256-15/8 (2)

Figure 8 - Continued.



1 Element
2 Element
3 Body

MEC 4310-256-15/9

Figure 9. Air intake muffler service.

Section III. PREVENTIVE MAINTENANCE SERVICES

34. General

To insure that the air compressor is ready for operation at all times, it must be inspected systematically, so that defects may be discovered and corrected before they result in serious damage or failure. The necessary Preventive Maintenance Services to be performed are listed and described in paragraphs 35 and 36. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the unit shall be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noticed during operation which would damage the equipment if operation were continued. All deficiencies and shortcomings will be recorded together with the corrective action taken on DA Form 2404 at the earliest possible opportunity.

35. Daily Preventive Maintenance Services

This paragraph contains an illustrated tabulated listing of preventive maintenance services which must be performed by the operator. The item numbers are listed consecutively and indicate the sequence of minimum requirements. Refer to figure 10 for the Daily Preventive Maintenance Services.

36. Quarterly Preventive Maintenance Services

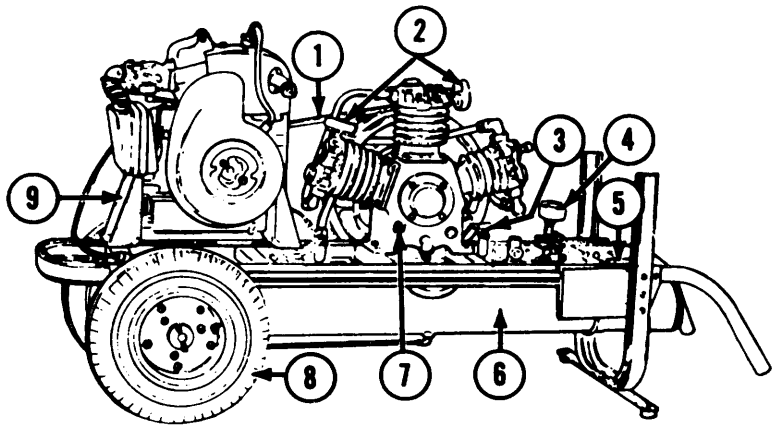
a. This paragraph contains an illustrated tabulated listing of preventive maintenance services which must be performed by Organizational Maintenance personnel at quarterly intervals. A quarterly interval is equal to 3 calendar months, or 250 hours of operation, whichever occurs first.

b. The item numbers are listed consecutively and indicate the sequence of minimum requirements. Refer to figure 11 for the Quarterly Preventive Maintenance Services.

PREVENTIVE MAINTENANCE SERVICES

DAILY

TM 5-4310-256-15 | CHAMPION MODEL LP-5i2-ENG-2 AND LP-832-ENG-2 | COMPRESSOR



LUBRICATE IN ACCORDANCE WITH CURRENT LUBRICATION ORDER

ITEM		PAR REF
1	DRIVE BELTS. Inspect for improper tension. Belt deflection is 3/4 to 1 inch midway between pulleys. (Weekly)	
2	AIR MUFFLER. Inspect for insecure mounting and internal obstructions. Service (Weekly)	
3	RELEASE VALVE. Inspect for improper operation. Pull ring to check for freedom of movement.	
4	CONTROLS AND INSTRUMENTS. Inspect for damage and insecure mounting. With the unit operating, inspect for improper operation. Normal operating pressure is 140-175 psi.	
5	AIR RECEIVER TANK. Drain water from the tank.	
6	FUEL TANK. Check fuel level.	
7	FILLER PLUG. Check oil level. Service as required. Ref. current LO	
8	TIRES AND TUBES. Check air pressure. Proper pressure is 25 psi (Weekly).	

MEC 4310-256-15/10 ①

Figure 10. Daily preventive maintenance services.

ITEM		PAR REF
9	DIPSTICK. Check oil level. Add oil as indicated on dipstick. Reference LO 5-2805-208-14.	
	NOTE 1. OPERATION. During operation observe for any unusual noise or vibration.	
	NOTE 2. FIRE EXTINGUISHER. Inspect for full charge and proper working condition (weekly)	

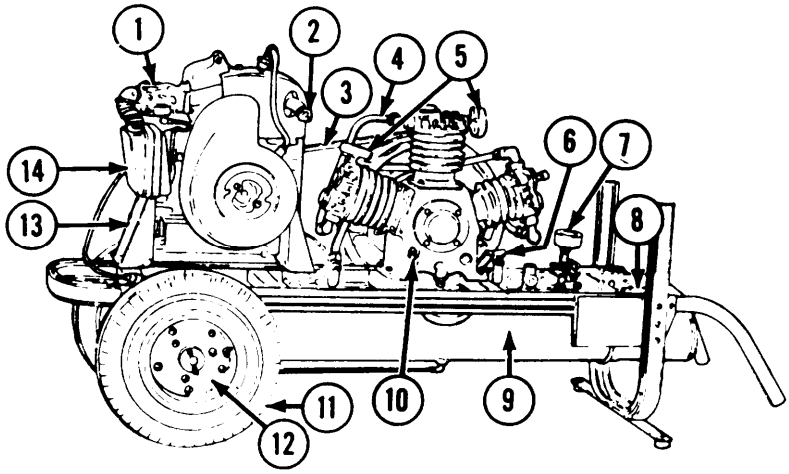
MEC 4310-256-15/10 ②

Figure 10 - Continued.

PREVENTIVE MAINTENANCE SERVICES

QUARTERLY

TM 5-4310-256-15 | CHAMPION MODEL LP-512-ENG-2 AND LP-832-ENG-2 | COMPRESSOR



LUBRICATE IN ACCORDANCE WITH CURRENT LUBRICATION ORDER

ITEM		PAR REF
1	CARBURETOR. Inspect for insecure mounting and improper operation.	
2	MUFFLER. Inspect for leaks and insecure mounting.	
3	DRIVE BELTS. Inspect for improper tension, excessive wear, and cracked or frayed conditions. Belt deflection is 3/4 to 1 inch midway between pulleys.	
4	AFTERCOOLER AND INTERCOOLER. Inspect for leaks, damage and loose connections.	
5	COMPRESSOR AIR MUFFLER. Inspect for insecure mounting and internal obstructions. Remove clean and install.	
6	RELEASE VALVE. Inspect for improper operation and insecure mounting. Max. pressure is 200 psi.	
7	CONTROLS AND INSTRUMENTS. Inspect for damage and insecure mounting. With the unit operating inspect for improper operation. Normal operating pressure is 140-175 psi.	

MEC 4310-256-15/11 ①

Figure 11. Quarterly preventive maintenance services.

ITEM		PAR REF
8	AIR RECEIVER TANK. Inspect for leaks and damage. Drain water from the tank.	
9	FUEL TANK. Check fuel level. Inspect for leaks, loose and missing hardware.	
10	FILLER PLUG. Check oil level. Add oil as indicated in sight glass. Reference current LO.	
11	TIRES AND TUBES. Inspect for cuts, foreign objects and damage. Check air pressure. Proper pressure is 25 psi.	
12	WHEELS. Inspect for loose or missing hardware. Service as required	
13	DIPSTICK. Check oil level. Add oil as indicated on dipstick. Reference LO 5-2805-208-14.	
14	ENGINE AIR CLEANER. Clean as indicated in TM 5-2805-208-14.	
	NOTE 1. OPERATIONAL TEST. During operation observe for any unusual noises or vibration.	
	NOTE 2. ADJUSTMENTS. Make all adjustments found necessary during operational test.	
	NOTE 3. FIRE EXTINGUISHER. Inspect for full charge and broken seal.	

MEC 4310-256-15/11 ②

Figure 11 - Continued.

Section IV. OPERATOR'S MAINTENANCE

37. General

The instructions in this section are published for the information and guidance of the operator to maintain the air compressor.

38. Intake Air Muffler

Refer to figure 9 for intake air muffler servicing.

39. Fuel Strainer

Refer to paragraph 59 and TM 5–2805-208-14.

40. Oil Filler Plug

a. Removal.

(1) Stop the engine (para 17).

(2) Remove the oil filler plug from the compressor crankcase as illustrated in figure 18.

b. Cleaning and Inspection.

(1) Clean the plug with an approved cleaning solvent.

(2) Inspect for cracks or breaks.

(3) Replace if defective.

c. Installation. Install the oil filler plug as illustrated in figure 18.

41. Drain Plug and Elbow

a. Removal.

(1) Remove the oil filler plug (para 40).

(2) Stop the engine (para 17).

(3) Remove the drain plug from the oil drain elbow. Drain the oil from the crankcase and remove the elbow as illustrated in figure 18.

b. Cleaning and Inspection.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Inspect the plug and elbow for dents and damaged threads. Replace a defective part.

c. Installation.

(1) Install the elbow in the compressor crankcase and install the drain plug as illustrated in figure 18. Fill the compressor crankcase in accordance with the lubrication order.

(2) Install the oil filler plug (para 40).

Section V. TROUBLESHOOTING

42. General

This section provides useful information in diagnosing and correcting unsatisfactory operation or failure of the air compressor and its components. Each trouble symptom stated is followed by a list of probable causes of trouble. The possible remedy recommended is described opposite the probable cause. Any trouble beyond the scope of organizational maintenance shall be reported to direct support maintenance.

43. Compressor Pumps Too Slowly

Probable cause	*Possible remedy*
Intake air cleaner clogged.	Service intake air cleaner (para 33).
V-belts improperly adjusted.	Adjust V-belts (para 67).
Oil level low	Check oil level in crankcase and fill in accordance with the lubrication order.
Intake and exhaust valves faulty.	Clean or replace valves (para 71).
Air leakage in unit	Tighten connection.
Load too great for compressor capacity.	Reduce load requirement of compressor.

44. Compressor Overheats

Probable cause	*Possible remedy*
Flywheel defective	Replace flywheel (para 68).
v-belts slipping	Adjust v-belts (para 67).
Intake and exhaust valves faulty,	Clean or replace valves (para 71).
Intake air cleaner dirty..	Service intake air cleaner (para 33).
Oil level	Inspect oil level in crankcase and fill in accordance with lubrication order.

45. Compressor Fails to Pump to Pressure

Probable cause	*Possible remedy*
Air leakage in unit.	Eliminate by tightening connections.
Unloader valve leaks..	Adjust or replace unloader valve.

Probable cause	*Possible remedy*
V-belts improperly adjusted.	Adjust V-belts (para 67).
Intake find exhaust valves defective,	Clean or replace valves (para 71).
Unloader leaking	Repair or replace unloader.
Engine defective	Replace engine (TM 5-2805-208-14).
Intake air cleaner clogged. .	Clean or replace intake air cleaner (para 33).
Intercooler leaks	Replace defective intercooler (para 69).

46. Compressor Noisy

Probable cause	*Possible remedy*
Flywheel loose	Tighten nut on flywheel bolt (para 68).
Lubrication improper	Lubricate the air compressor as directed in the lubrication order.

47. Compressor Vibrates Excessively

Probable cause	*Possible remedy*
Mounting insecure	Tighten mounting bolts.
Drive pulley out of line.. . .	Inspect and adjust alinement of drive pulley (para 67).
Foundation insecure . . . . . ,	Strengthen foundation or place air compressor on solid base.

48. Compressor Fails to Shut Down

Probable cause	*Possible remedy*
Load requirement excessive for air compressor capacity.	Reduce air load requirement.

49. V-Belts Wear Excessively

Probable cause	*Possible remedy*
Flywheel loose	Tighten nut on flywheel bolt (para 68).
V-belts improperly adjusted.	Adjust V-belts (para 67).
Oil or grease on belts.	Clean belts or replace damaged belts (para 67).

50. Interstate Safety Valve Blowing at too Low Pressure

Probable cause	*Possible remedy*
Safety valve defective	Replace valve (para 76).

51. Safety Relief Valve Blows at too Low Pressure

Probable cause	*Possible remedy*
Valve not properly seated..	Drain air and valve will reseat.
Valve defective	Replace valve (para 76).

52. Intercooler Pressure too Low

Probable cause	*Possible remedy*
Tubing to high-pressure stage leaking.	Tighten fittings.
Safety relief valve leaks	Replace valve (para 76).
Low-pressure stage intake or exhaust valves faulty.	Clean or replace valve (para 71).

Section VI. RADIO INTERFERENCE SUPPRESSION

53. General

Refer to TM 11-483 for definitions, purposes, source and methods used to obtain proper radio suppression.

54. Interference Suppression Components

Refer to TM 5-2805-208-14.

55. Replacement of Suppression Components

Refer to TM 5-2805-208-14 and ground strap 12, figure 16.

Section VII. GASOLINE ENGINE AND ACCESSORIES

56. General

a. The gasoline engine can be removed as a unit after a removal of the V-belt guard, belts, fuel line, and mounting brackets.

b. The gasoline engine accessories consist of the fuel tank, fuel strainer, fuel line, and drive pulley.

57. Gasoline Engine

a. Removal.

(1) Stop the engine (para 17).

(2) Remove the V-belt guard (para 66).

(3) Remove the V-belts (para 67).

(4) Remove the engine as illustrated in figure 12.

b. Installation.

(1) Install the engine as illustrated in figure 12.

(2) Install and adjust the V-belts (para 67).

(3) Install the V-belt guard (para 66).

58. Fuel Line

a. Removal and Disassembly.

(1) Stop the engine (para 17).

(2) Drain the fuel tank.

(3) Remove and disassemble the fuel line as illustrated in figure 13.

b. Cleaning and Inspection.

(1) Clean the fuel line by blowing compressed air through the line. If the line contains a gummy deposit, soak the line in an approved cleaning solvent and dry thoroughly.

(2) Inspect the fuel line for cracks, split, stretched, or frayed ends. Replace the fuel line if it is defective.

c. Installation and Reassembly,

(1) Reassemble and install the fuel line as illustrated by figure 13.

(2) Fill the fuel tank,

59. Fuel Strainer

a. Removal.

(1) Stop the engine (para 17).

(2) Drain the fuel tank.

(3) Remove the fuel strainer as illustrated in figure 12.

b. Disassembly. Disassemble the fuel strainer in numerical sequence as illustrated in figure 14.

c. Cleaning, Inspection and Repair.

(1) Clean all parts with an approved cleaning solvent. Blow out the fuel strainer' cover with compressed air.

(2) Inspect all threaded parts for worn or damaged threads. Inspect the fuel strainer for damage. Inspect the fuel strainer cover for cracks. Inspect the bail for bends. Replace all defective parts.

d. Reassembly. Reassemble the fuel strainer in the reverse of the numerical sequence illustrated in figure 14.

e. Installation.

(1) Install the fuel strainer as illustrated in figure 12.

(2) Fill the fuel tank,

60. Fuel Tank

a. Removal.

(1) Stop the engine (para 17).

(2) Remove the fuel line (para 58).

(3) Remove the fuel tank as illustrated in figure 13,

b. Cleaning and Inspection. Clean all parts with an approved cleaning solvent and dry thoroughly, Inspect all parts for dents or breaks, Inspect the nuts and bolts for stripped threads and worn heads. Replace any defective part.

c. Installation.

(1) Install the fuel tank as illustrated in figure 13.

(2) Install the fuel line (para 58).

61. Drive Pulley

a. Removal.

(1) Stop the engine (para 17).

(2) Remove the V-belt guard (para 66).

(3) Remove the V-belts (para 67).

(4) Remove the drive pulley as illustrated in figure 15 and figure 16.

b. Cleaning and Inspection.

(1) Clean the pulley and key with an approved cleaning solvent and dry thoroughly.

(2) Inspect the pulley for cracks, and breaks, and key for chips and burrs, and the threaded surfaces for wear and damage. See that the key fits snugly in the keyway.

(3) Replace all defective parts.

c. Installation.

(1) Install the drive pulley as illustrated in figure 15 and figure 16.

(2) Install and adjust the V-belts (para 67).

(3) Install the V-belt guard (para 66).

62. Engine Brackets

a. Removal.

(1) Remove the gasoline engine (para 57).

(2) Remove the front mounting brackets as illustrated in figure 16. Remove the rear mounting brackets in the same manner.

b. Cleaning, Inspection and Repair, Clean all parts with an approved cleaning solvent, and dry thoroughly. Inspect all parts for dents and breaks. Inspect the bolts for stripped threads and worn heads. Replace any defective parts.

c. Installation.

(1) Install the front engine mounting bracket as illustrated in figure 16. Install the rear mounting brackets in the same manner.

(2) Install the gasoline engine (para 57).

63. Engine Oil Drain Line

a. Removal.

(1) Stop the engine (para 17).

(2) Remove the cap (14, fig. 16) and drain the oil from the engine.

b. Cleaning and Inspection. Clean all parts with an approved cleaning solvent, and dry thoroughly. Inspect all parts for cracks or breaks. Replace any defective parts.

c. Installation.

(1) Install the plug (14) on the engine oil pan drain.

(2) Fill the crankcase with the proper grade of oil in accordance with the lubrication order.

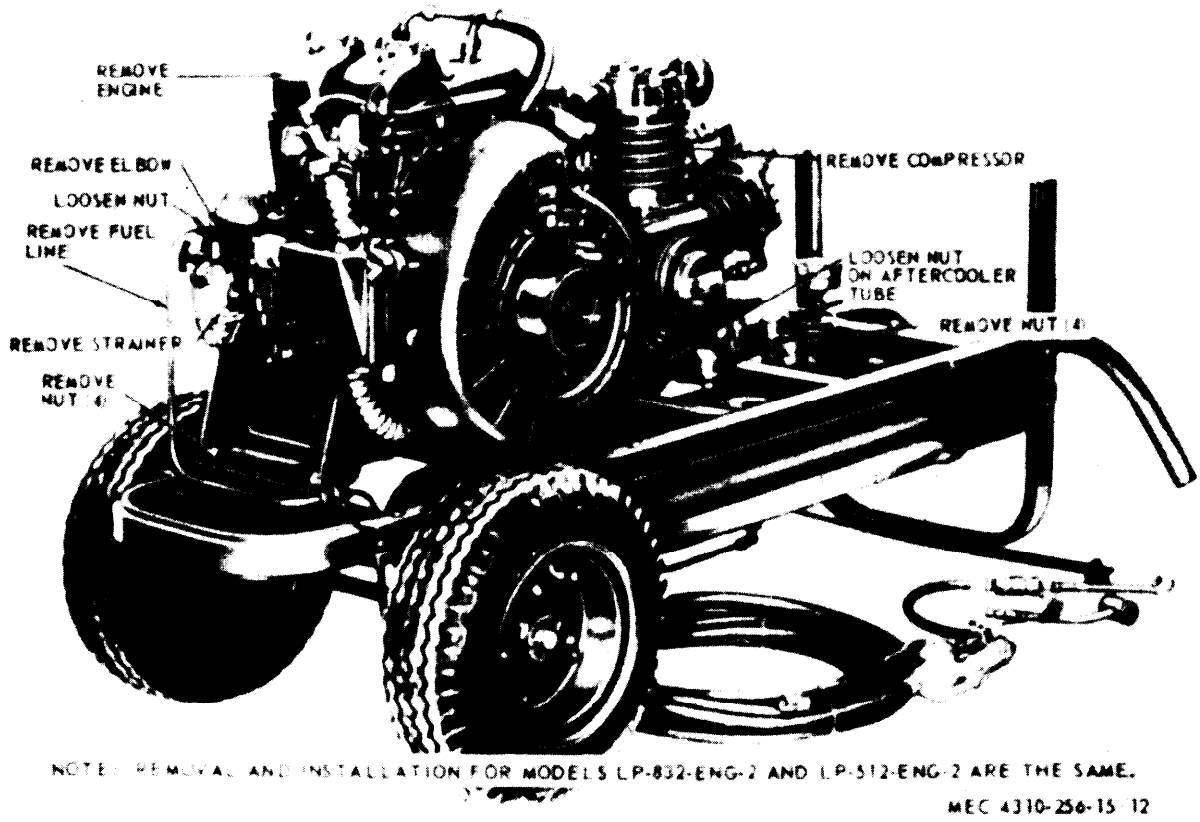


Figure 12. Gasoline engine and compressor, removal and installation.

Section VIII. COMPRESSOR ASSEMBLY AND COMPONENTS

64. General

a. The compressor assembly is a three-cylinder, two-stage, air-coded unit. It consists of intercooler and aftercooler tubes, and high-and-low pressure cylinders.

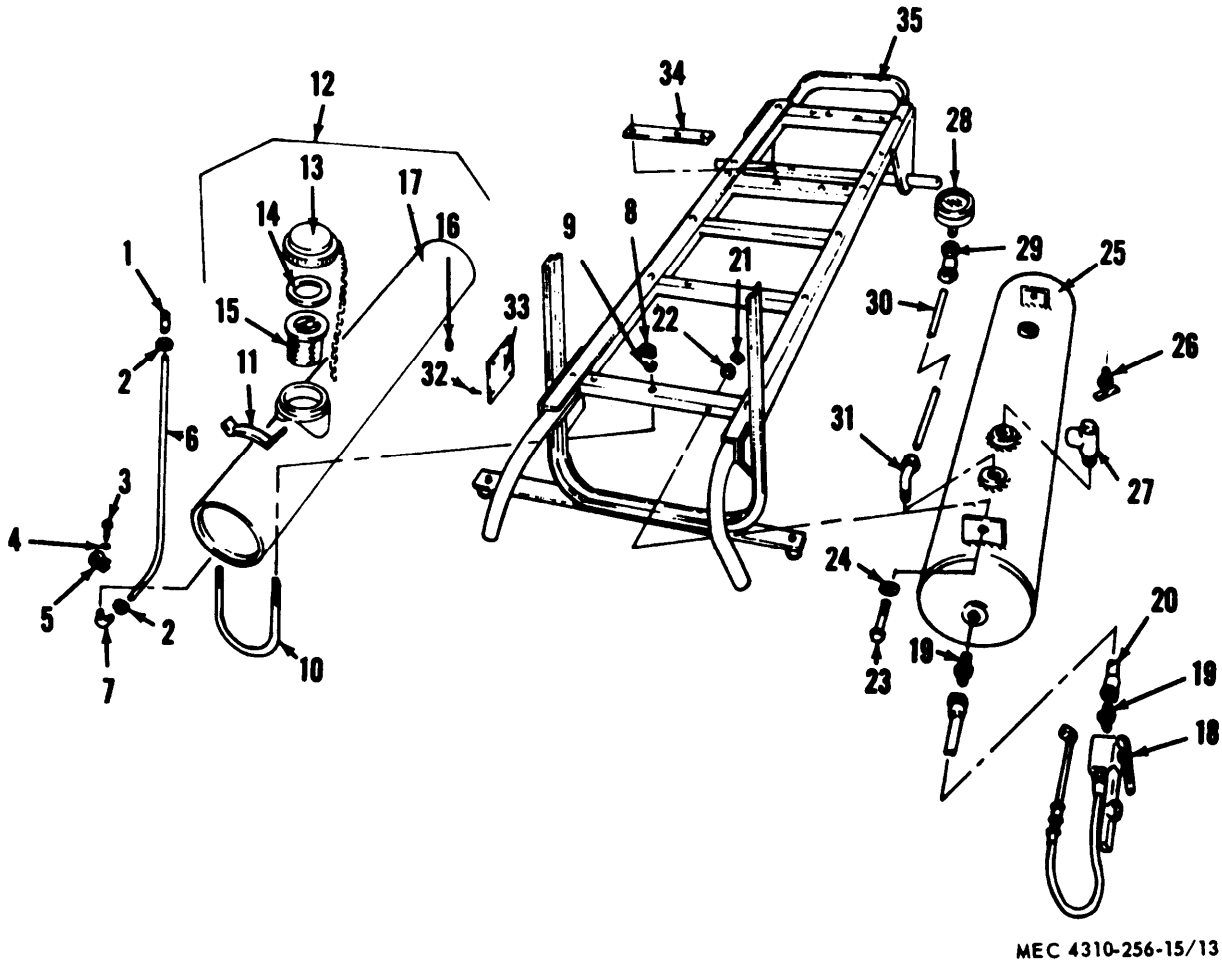
b. The compressor assembly can be removed as a unit after the V-heft guard, V-belts, and aftercooler tube are removed.

65. Compressor Assembly

a. Removal.

(1) Stop the engine (para 17).

(2) Remove the V-belt guard (para 66).



1	Nipple	10	U-bolt	19	Adapter	28	Gage
2	Nut	11	Bracket	20	Hose	29	Fitting
3	Screw	12	Tank assembly	21	Nut	30	Tube
4	Washer	13	Cap and chain	22	Washer	31	Fitting
5	Clamps	14	Gasket	23	Bolt	32	Screw
6	Fuel line	15	Strainer	24	Washer	33	Plate
7	Elbow	16	Plug	25	Air receiver tank	34	Spacer
8	Nut	17	Fuel tank	26	Drain cock	35	Hand truck
9	Washer	18	Gage	27	Unloader valve		

Figure 13. Hand truck, fuel tank, air receiver tank, and related parts, removal and disassembly.

(3) Remove the V-belts (para 67).

(4) Remove the compressor as illustrated in figure 12.

b. Installation.

(1) Install the compressor assembly as illustrated in figure 12.

(2) Install and adjust the V-belts (para 67).

(3) Install the V-belt guard (para 66).

66. V-Bolt Guard and Brackets

a. *Removal.*

(1) Stop the engine (para 17)

(2) Release all air from the compressor by opening the draincock (fig. 1 ① or l ②).

(3) Remove the V-belt guard as illustrated in figure 17.

Warning: Never operate the air compressor with the drive belt guard off.

b. Cleaning and Inspection.

(1) Clean all parts with an approved cleaning solvent.

(2) Inspect the V-belt guard and mounting brackets for dents, cracks, or other damage. Straighten minor dents, and bends in the guard and brackets.

(3) Inspect all attaching hardware for damaged threads. Replace damaged attaching hardware and replace an unserviceable guard, bracket, or other defective part.

c. Install the V-belt guard as illustrated in figure 17.

67. V-Belts

a. Removal.

(1) Remove the V-belt guard (para 66).

(2) Remove the V-belts as illustrated in figure 15.

b. Cleaning and Inspection.

(1) Clean the V-belts with a clean, dry cloth, taking care to remove all dirt, grease, and oil.

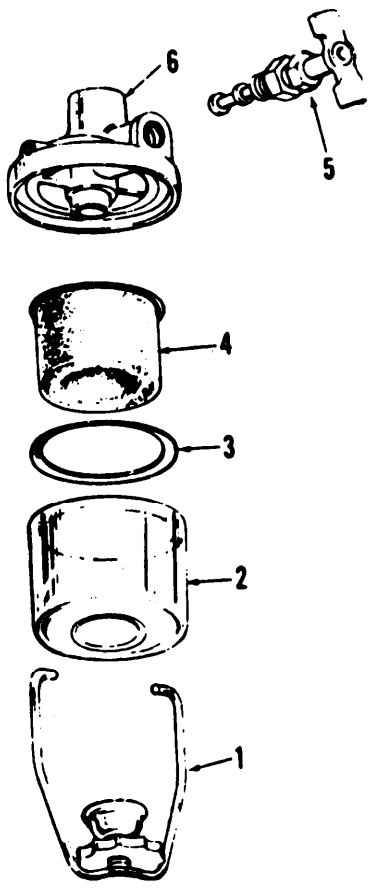
(2) Inspect the V-belts for cuts, fraying, and wear.

(3) Replace worn or damaged V-belts.

Note. Always replace the V-belts in sets of two.

e. *Installation.*

(1) Install the V-belts as illustrated in figure 15.



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1	Bail assembly	4	Strainer
2	Bowl	5	Shut-off
3	Gasket	6	Cover, fuel strainer

Figure 14. Fuel strainer

(2) See preventive maintenance service chart for correct V-belt adjustment.

68. Crankshaft Flywheel

a. Removal.

(1) Remove the V-belt guard (para .66).

(2) Remove the V-belts (para 67).

(3) Remove the flywheel as illustrated in figure 16 and figure 18.

b. Cleaning and Inspection.

(1) Clean all parts with an approved cleaning solvent.

(2) Inspect the flywheel for chips and cracks.

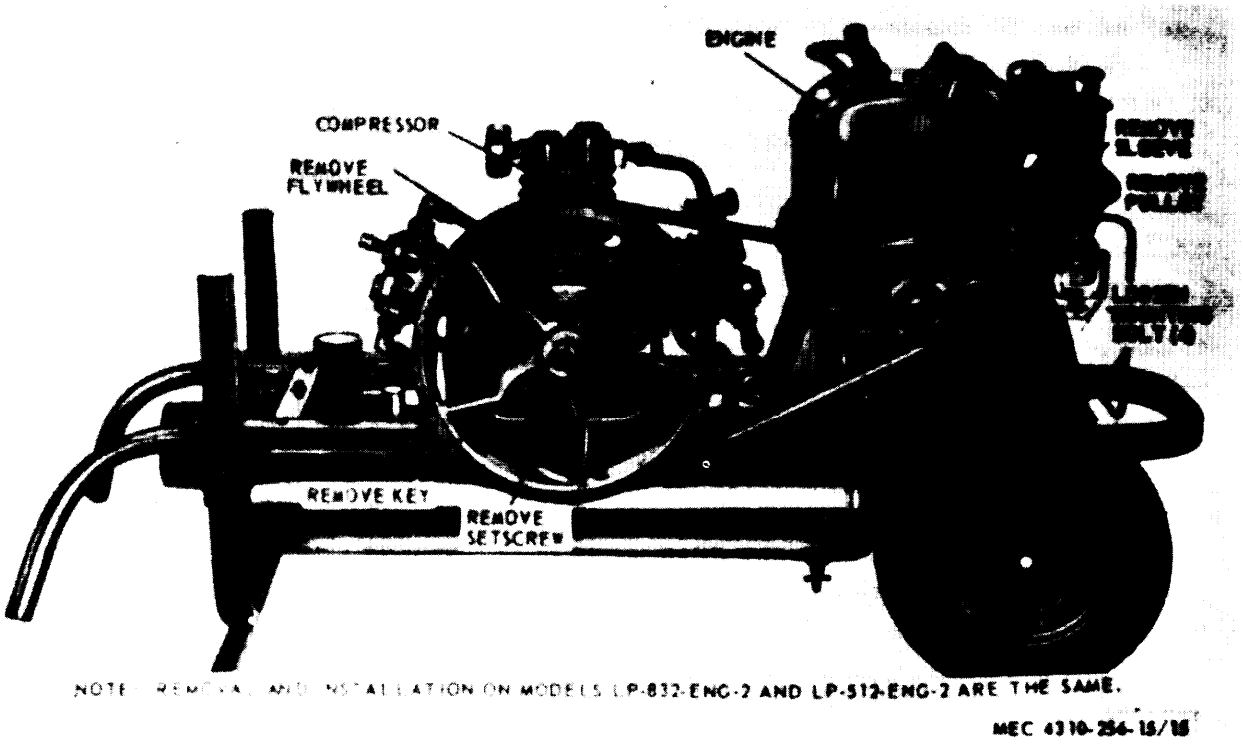


Figure 15. V-belts, crankshaft flywheel, and drive pulley, removal and installation.

(3) Inspect the key for chips, burrs, and snug fit.

(4) Replace any defective parts.

c. Installation.

(1) Install the flywheel as illustrated in figures 15 and 18.

(2) Install and adjust the V-belts (para 67).

(3) Install the V-belt guard (para 66).

69. Tube Assemblies

a. *Removal and Disassembly.*

(1) Stop the engine (para 17).

(2) Remove and disassemble the intercooler and aftercooler tubes in numerical sequence as illustrated in figure 19.

b. Cleaning and Inspection.

(1) Clean all parts with an approved cleaning solvent and dry thoroughly. Blow out all grease and dirt collected inside the tubes.

(2) Inspect the tubes for dents, holes, and cracks. Replace a defective tube.

c. Reassemble and Installation. Reassemble and install the tubes in the reverse order of that shown in figure 19.

70. Cylinder Heads

a. Removal. Remove the cylinder heads as illustrated in figure 19.

b. Cleaning and Inspection.

(1) Clean all parts with an approved cleaning solvent and dry thoroughly.

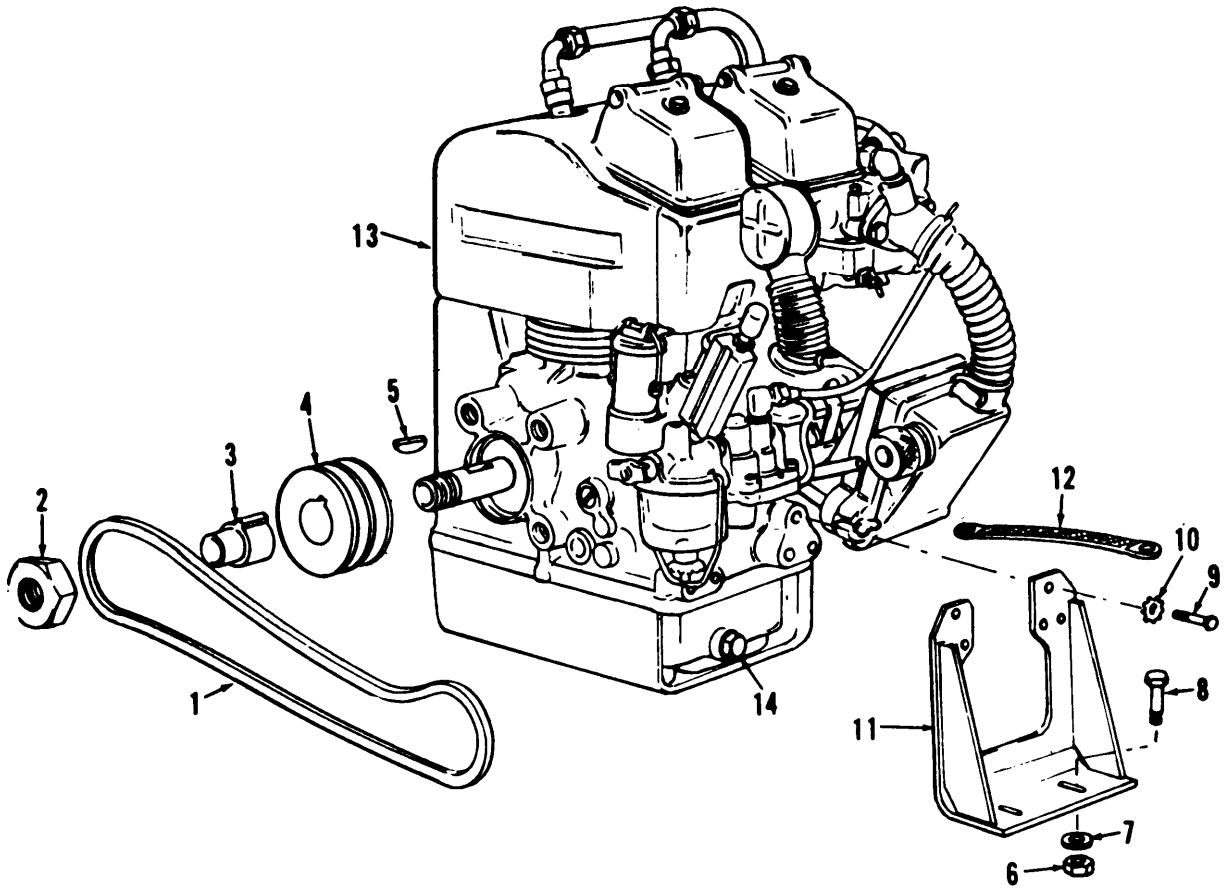
(2) Inspect all parts for cracks, breaks, and other damage. Replace a defective part.

c. Installation. Install the cylinder heads in the reverse order of that shown in figure 19.

71. Intake and Exhaust Valves

a. *Removal.* Remove the valve assemblies as shown in figure 20.

b. Disassembly. Disassemble the valves in numerical sequence as illustrated in figure 21.



NOTE: ENGINE BRACKET, DRIVE PULLEY, AND V-BELTS ON MODELS LP-832-ENG-2 AND LP-512-ENG-2 ARE THE SAME.

MEC 4310-256-15/16

1 V-belt
2 Nut
3 Sleeve
4 Pulley
5 Key
6 Nut
7 Washer
8 Screw
9 Screw
10 Washer
11 Bracket
12 Strap
13 Engine
14 Plug

Figure 16. Engine bracket, drive pulley, and V-belts.

c. Cleaning and Inspection.

(1) Clean all parts with an approved cleaning solvent and dry thoroughly.

(2) Inspect all valve seats and housings for cracks, breaks, rough or scored valve seats, and mating surfaces.

(3) Inspect the springs for distortion, weak tension, or broken helical coils.

(4) Inspect the cylinder block for defective intake and exhaust valve assembly seats.

(5) Inspect the gaskets for distortion or imprints that will render the gaskets unserviceable.

(6) Replace all defective parts that cannot be repaired.

d. Reassembly. Reassemble the valves in the reverse order of that given in figure 21.

e. Installation. Install the valves as shown in figure 20.

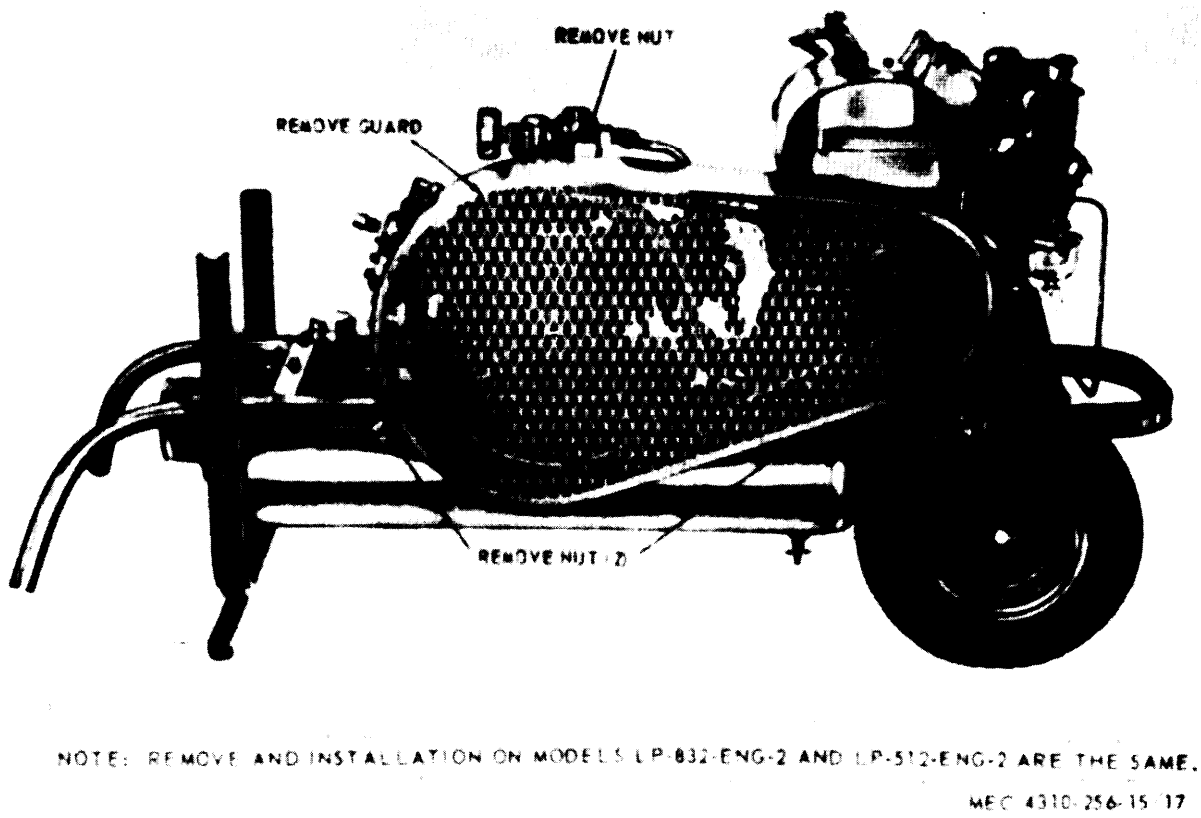


Figure 17. V-belt guard, removal and installation.

72. Breather

a. Removal and Disassembly. Remove and disassemble as shown in figure 18.

b. Cleaning and Inspection.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Inspect all parts for cracks, breaks, and other damage. Replace a defective part.

c. Reassembly and Installation. Reassemble and install in the reverse order of that shown in figure 18.

73. Release and Safety Valve

a. Removal and Disassembly. Remove and disassemble the release valve in numerical sequence as illustrated in figure 22.

b. Cleaning and Inspection.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Inspect all parts for breaks, cracks, and other damage. Replace a defective part.

c. Reassembly and Installation. Reassemble and install the release valve in the reverse order of that shown in figure 22.

74. Air Receiver Tank

a. Removal.

(1) Remove the release valve tube (para 73).

(2) Remove the air pressure gage (fig. 13).

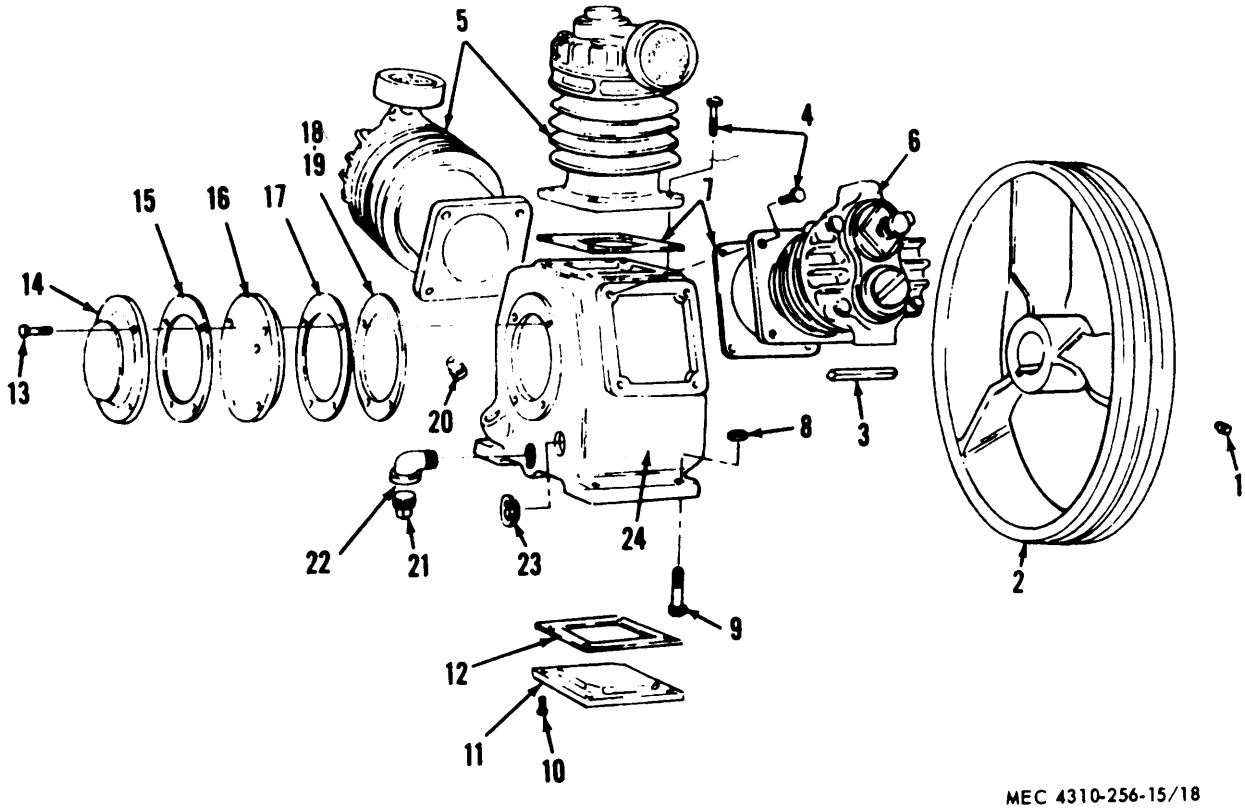
(3) Remove the unloader valve (fig. 13).

(4) Remove the drain cock (fig, 13).

(5) Remove the air receiver tank as illustrated in figure 13.

b. Cleaning, Inspection, and Testing.

(1) Clean the interior of the air tank with live steam, if available, or with an approved cleaning solvent. Dry thoroughly.



1 Setscrew
2 Flywheel
3 Key
4 Screw
5 Cylinder low pressure
6 Cylinder high pressure
7 Gasket
8 Nut
9 screw
10 Screw
11 H. H. plate
12 Gasket
13 Screw
14 Breather chamber
15 Gasket
16 Cover
17 Gasket
18 Gasket
19 Gasket
20 Filler plug
21 Drain plug
22 Elbow
23 Window
24 Crankcase

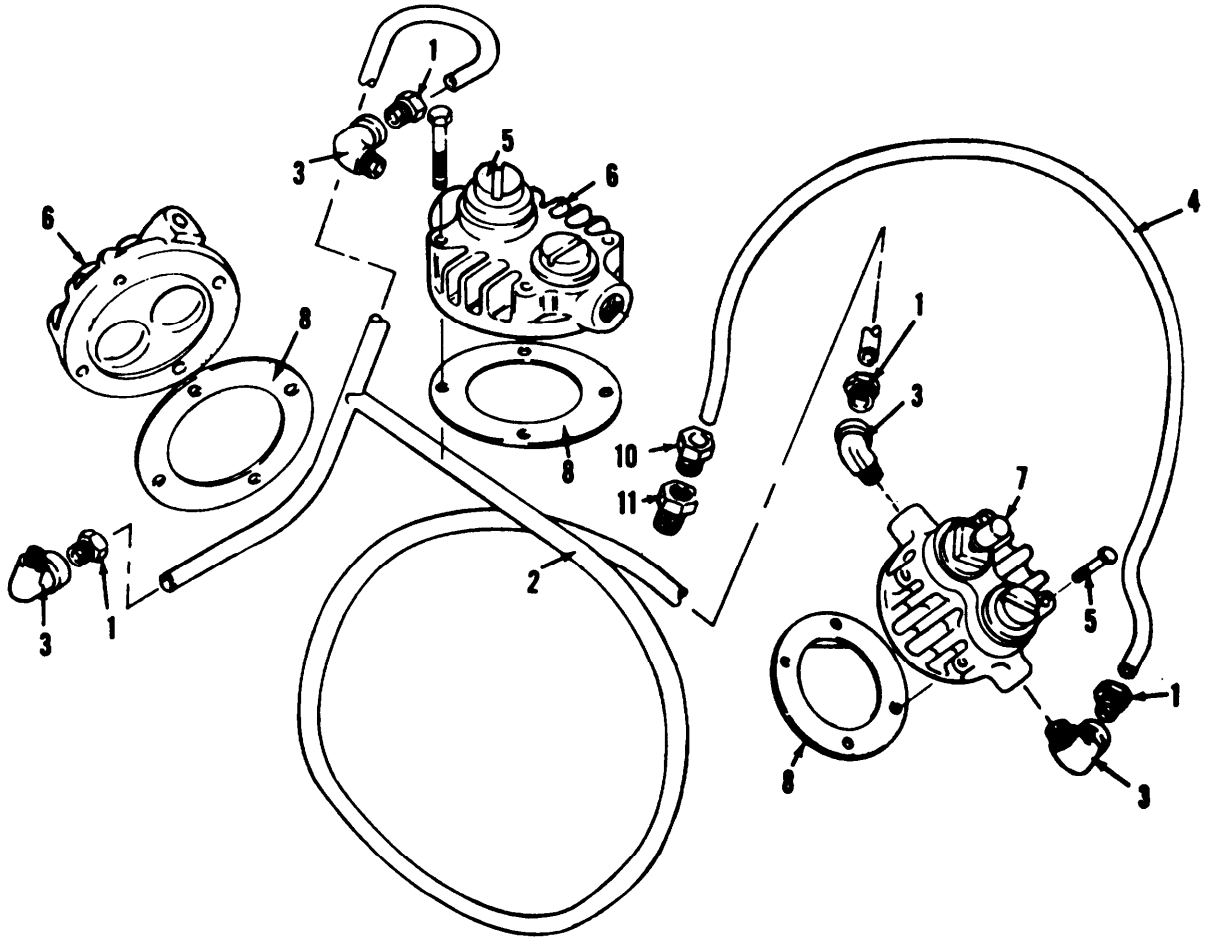
Figure 18. Compressor assembly, exploded view.

(2) Inspect the interior and the exterior of the tank for cracks, broken welds, dents, or corrosion. Check all threaded surfaces for damaged threads.

c. Installation.

(1) Install the air receiver tank as illustrated in figure 13.

(2) Install the draincock (fig. 13).
(3) Install the unloader valve (fig. 13).
(4) Install the air pressure gage (fig. 13).
(5) Install the release valve tube (para 73).



1 Nut
2 Intercooler tube
3 Body, compression
4 Aftercooler tube
5 Screw
6 Cylinder head
7 Cylinder head, high pressure
8 Gasket, low pressure
9 Gasket, high pressure
10 Nut
11 Fitting

Figure 19. Compressor components, exploded view.

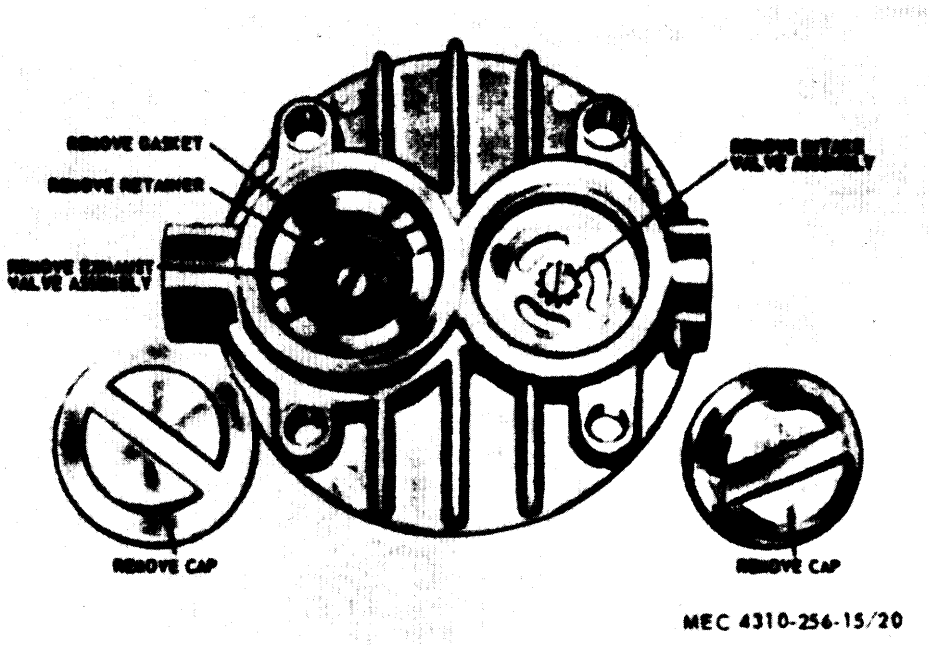
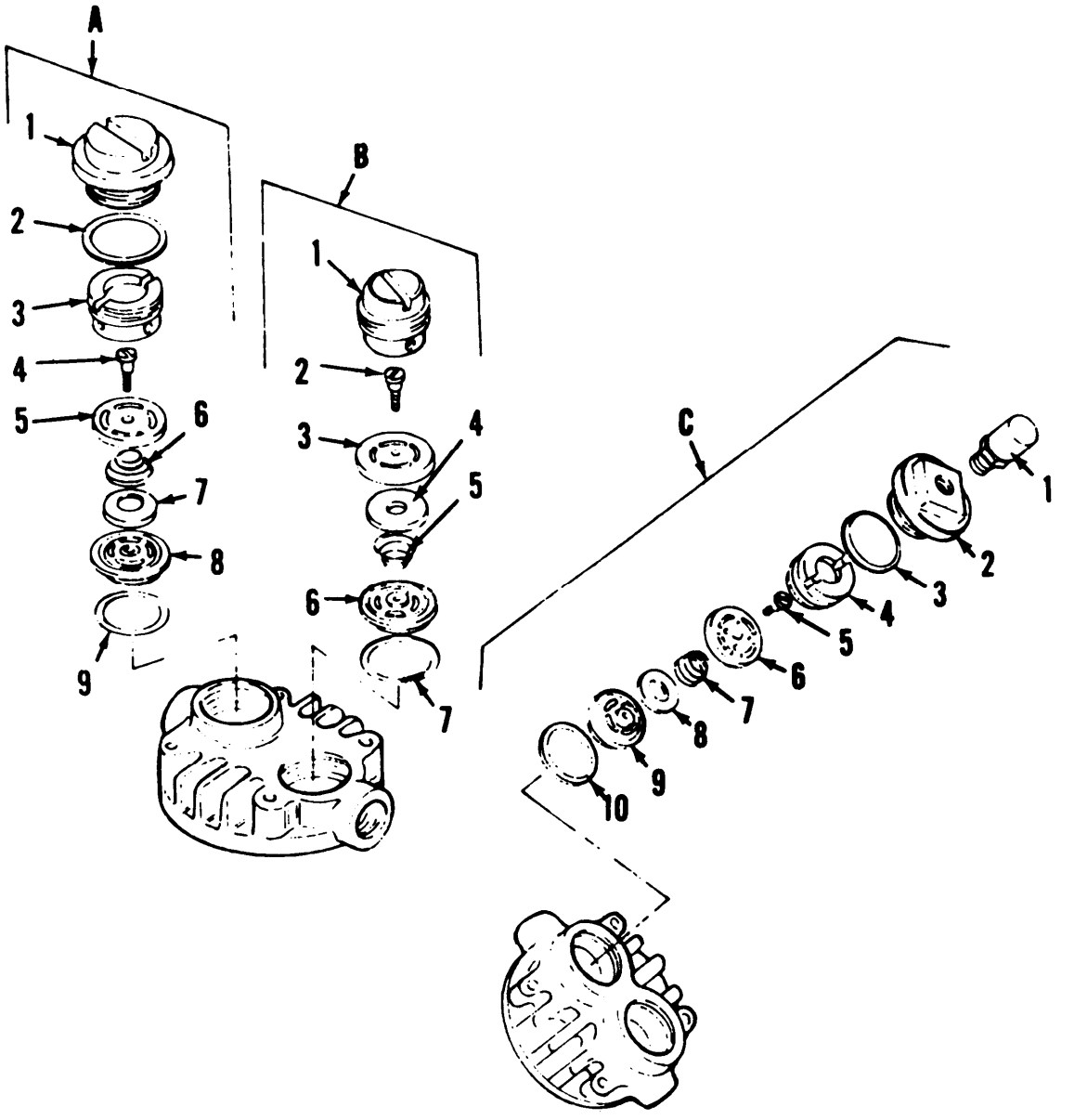


Figure 20. Intake and exhaust valves, removal and installation.



A—Exhaust valve

1 Cap
2 Gasket
3 Retainer
4 Screw
5 Cage
6 Spring
7 Disc
8 Seat
9 Gasket

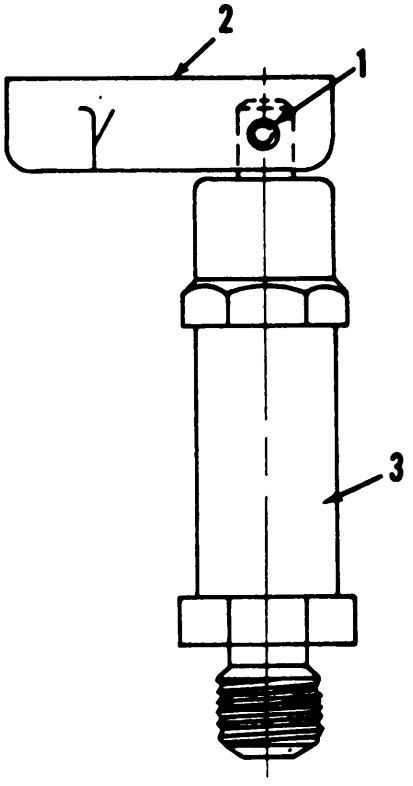
B—Intake valve

1 Retainer
2 Screw
3 Seat
4 Disc
5 Spring
6 Cage
7 Gasket

C-Intake valve

1 Valve, interstage safety
2 Cap
3 Gasket
4 Retainer
5 Screw
6 Seat
7 Spring
8 Disc
9 Cage
10 Gasket

Figure 21. Valves and gaskets, exploded view.



MEC 4310-256-15/22

1 Pin
2 Lever
3 Valve

Figure 22. Release valve, exploded view.

Section IX. CONTROLS AND INSTRUMENTS

75. Engine Controls

Refer to TM 5-2805-208-14.

76. Safety Relief Valves

Refer to paragraph 73.

77. Interstate Safety Valve

a. Removal. Stop the engine and drain all air from the compressor, Remove the interstate safety valve (1, fig. 21C) from the high-pressure intake manifold by turning the valve counterclockwise.

b. Cleaning and Inspection. Wash the intercooler safety valve with an approved cleaning solvent. Inspect the cracks in the body of the valve, Inspect the threads for wear or damage. Replace a defective intercooler relief valve.

c. Installation. Install the intercooler safety valve (1) in the high-pressure intake manifold by turning the valve clockwise.

78. Air Pressure Gage

a. Removal.

(1) Stop the engine (para 17).

(2) Release all air from the compressor by opening the draincock (fig. 1 ① or 1 ②).

(3) Remove the air pressure gage as illustrated in figure 13.

b. Cleaning and Inspection.

(1) Clean all metal parts with an approved cleaning solvent and dry thoroughly. Clean the glass on the gage with solvent and dry with a lint-free cloth.

(2) Inspect metal parts for cracks, rust, or damaged threads. Inspect the glass for cracks.

(3) Replace any defective part.

c. Installation. Install the air pressure gage as illustrated in figure 13.

79. Oil Level Gage

a. Removal.

(1) Stop the engine (para 17).

(2) Install the drain plug and elbow (para 41).

(3) Remove hand hole plate (11, fig. 18).

(4) Drive the oil level gage (23, fig. 18) from the crankcase, using a round piece of wood the same diameter as the oil level gage.

Note. Do not remove the oil level gage unless the gage is leaking or defective.

b. Cleaning and Inspection. Inspect the oil level gage for cracks, breaks, or other defects. Replace the oil level gage if defective,

c. Installation.

(1) Coat the outer edges of the oil level gage (23, fig. 18) with a light coat of sealing compound; turn the oil level gage so that when it is positioned in the crankcase the line of the gage runs parallel to the bottom of the crankcase.

(2) Install the drain plug and elbow (para 41).

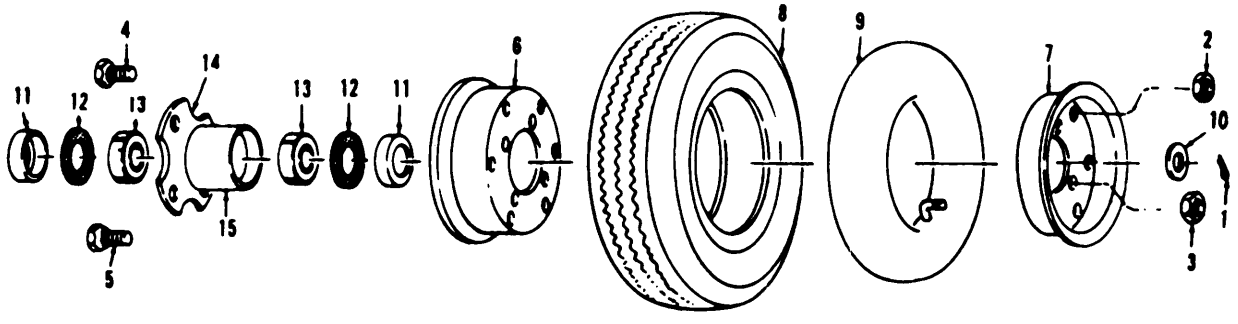
Section X. WHEELS AND TIRES

80. Removal and Disassembly

Remove and disassemble the wheel assembly in numerical sequence as illustrated in figure 23.

81. Reassembly and Installation

Reassemble and install the wheel assembly in the reverse of the numerical sequence as illustrated in figure 23.



MEC 4310-256-15/23

1 Pin
2 Nut, lock
3 Nut
4 Bolt
5 Screw, cap
6 Disc
7 Disc
8 Tire
9 Tube
10 Retainer
11 Cap, end
12 Seal
13 Bearing
14 Flange
15 Tube

Figure 23. Wheel assembly, exploded view.

CHAPTER 4

DIRECT AND GENERAL SUPPORT AND DEPOT MAINTENANCE INSTRUCTIONS

Section I. GENERAL

82. Scope

a. These instructions are published for the use of direct and general support and depot maintenance personnel maintaining the air compressor. They provide information on the maintenance of the equipment, which is beyond the scope of the tools, equipment, personnel, or supplies normally available to using organization.

b. The direct reporting, by the individual user, of errors, omissions, and recommendations for improving this manual, is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting these improvements. This form will be completed using pencil, pen, or typewriter, and forwarded direct to Commanding General, U.S. Army Mobility Equipment Center, ATTN: SMOME-MPD, 4300 Goodfellow Blvd, St. Louis, Mo. 63120.

c. Report all equipment improvement recommendations as prescribed by TM 38-750.

83. Record and Report Forms

a. DA Form 2258 (Depreservation Guide for Vehicles and Equipment).

b. For other record and report forms applicable to direct and general support and depot maintenance, refer to TM 38-750.

Note. Applicable forms, excluding standard Form 46 which is carried by the operator, shall be kept in a canvas bag mounted on the equipment.

Section II. DESCRIPTION AND DATA

84. Description

A general description of the air compressor, the location and description of the identification and instruction plates, and information on the differences in models are contained in chapter 1, section II, of this manual. The repair and maintenance instructions are described in appropriate sections of this manual.

85. Tabulated Data

a. General. This paragraph contains all the overhaul data pertinent to direct and general support and depot maintenance personnel.

b. Engine. For overhaul information see TM 5-2805-208-14.

c. Nut and Bolt Torque Data for Compressor.

Cylinder flange stud nuts	45 ft-lb
Cylinder flange studs	45 ft-lb
Unloader to crankcase bolts	40 ft-lb
Side plate to crankcase bolts	25 ft-lb
Intake manifold stud nuts	60 ft-lb
Intake manifold studs	60 ft-lb
Exhaust manifold stud nuts	25 ft-lb
Exhaust manifold studs	25 ft-lb
Connecting rod cap bolt nut	25 ft-lb
Flywheel to crankshaft	50 ft-lb

d. Repair and Replacement Standards. Table 1 lists manufacturer's sizes, tolerances, desired clearances, and maximum allowable wear and clearance.

Table 1. Compressor Repair and Replacement Standards

	Manufacturer's dimensions and tolerance in inches		Desired Clearance		Maximum allowable wear and clearance over max. desired clearance
	Min.	Max.	Min.	Max.	
Cylinders:					
Bore, low-pressure	2.6245	2.6255	.003	.0065	.002
Bore, High-pressure	1.7495	1.7505	.002	.0055	.002
Out-of-round	.000	.001	...	...	...
Taper	.000	.001	...	...	...
Crankshaft:					
Journal (rod) size	.9995	1.0005	.0005	.0030	.001
Taper	.000	.001	...	...	...
Out-of-round	.0001	.001	...	...	...
End Play	.0005	.0030	.0005	.0030	.000
Pistons and Pins:					
Piston, low-pressure	2.6190	2.6200	.003	.0065	.002
Piston, high-pressure	1.7465	1.7475	.002	.0055	.002
Pin, low-pressure	.5628	.5633	.0001	.0003	.0001
Pin, high-pressure	.5628	.5633	.0001	.0003	.0001
Bearing, Connecting Rod:					
Bearing, id	1.0013	1.0023	.0005	.0030	.0001
Bearing, side clearance	.005	.062	.005	...	...

CHAPTER 5

GENERAL MAINTENANCE INSTRUCTIONS

Section I. SPECIAL TOOLS AND EQUIPMENT

86. Special Tools and Equipment

No special tools or equipment are required.

87. Direct and General Support and Depot Maintenance Repair Parts

Direct and General Support and Depot Maintenance Repair Parts are listed and illustrated in appendix IV.

88. Specially Designed Tools and Equipment

No specially designed tools or equipment are required.

Section II. TROUBLESHOOTING

89. General

This section provides information useful in diagnosing and correcting unsatisfactory operation or failure to the air compressor or any of its components. Each trouble symptom stated is followed by a list of probable causes of trouble. The possible remedy recommended is described opposite the probable cause.

90. Compressor Fails to Pump to Pressure

Probable cause	*Possible remedy*
Engine pistons or piston rings worn.	Repair engine (refer to TM 5-**2805-208-14).**
V-belt improperly adjusted.	Adjust or replace V-belt (para **67).**

91. Compressed Air Contains Oil

Probable cause	*Possible remedy*
Compressor pistons or piston rings worn.	Replace pistons or piston rings **(para 93).**
Cylinder bore worn out-of-round.	Replace cylinder (pare 93).

CHAPTER 6

COMPRESSOR REPAIR INSTRUCTIONS

92. General

The compressor assembly is a two-stage, three-cylinder, air-cooled unit. There are two low-pressure pistons and one high-pressure piston operating off the crankshaft. The major repair instructions are those covering the pistons, connecting rods, and crankshaft.

93. Pistons, Rings, Connecting Rods, and Crankshaft

a. Removal and Disassembly.

(1) Remove the tube assemblies (para 69).

(2) Remove the belt guard (para 66).

(3) Remove the V-belts (para 67).

(4) Remove the compressor (para 65).

(5) Remove the hand hole plate (11, fig, 18).

(6) Revolve the crankshaft until the connecting rod nuts are accessible through the bottom of the crankcase (fig. 24).

(7) Remove the units, lockwashers, oil scoops, and bearing caps as illustrated in figure 24.

(8) Remove the crankshaft as illustrated in figure 24.

(9) Remove each cylinder block (fig. 18) with the piston and connecting rod in it from the crankcase.

(10) Pull the assembled piston and connecting rod from each block and disassemble the unit in numerical sequence as illustrated in figure 25.

b. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Inspect the cylinder blocks for cracks and breaks. Inspect the cylinder bores for wear, scoring, pitting, or other damage.

(3) Measure the clearance of the piston pin to the piston pin backing (table 1). Check for proper fit. Aline or replace the connecting rods, if necessary.

(4) Not used.

(5) Measure the ring groove in the pistons for wear. Replace the pistons if necessary.

(6) Inspect the crankshaft for cracks, scores, and distortion, Measure the crankshaft bearing journals for wear. If the connecting rod journals measure 0.005 inch out-of-round, replace the crankshaft.

(7) Inspect the roller bearings for rough, pitted, or scored bearings. Replace a defective bearing.

c. Reassembly and Instalation.

(1) Reassemble the pistons and connecting rods in the reverse order of that given in figure 25.

(2) Lubricate each piston, and connecting rod assembly with a light coat of oil.

(3) Install the piston and connecting rod assemblies in the cylinders and install the cylinders on the crankcase (fig. 18).

(4) Install the crankshaft and connecting rod bearings as illustrated in figure 24.

(5) Install the hand hole plate (11, fig. 18)

(6) Install the compressor (para 65).

(7) Install the V-belts (para 67).

(8) Install the belt guard (para 66).

(9) Install the tube assemblies (para 69).

94. Hand Truck Assembly

a. Removal and Disassembly.

(1) Remove the air compressor (para 65).

(2) Remove the engine (para 57).

(3) Remove the fuel tank (para 60).

(4) Remove the air receiver tank (para 74).

(5) Remove the wheel assemblies (para 80).

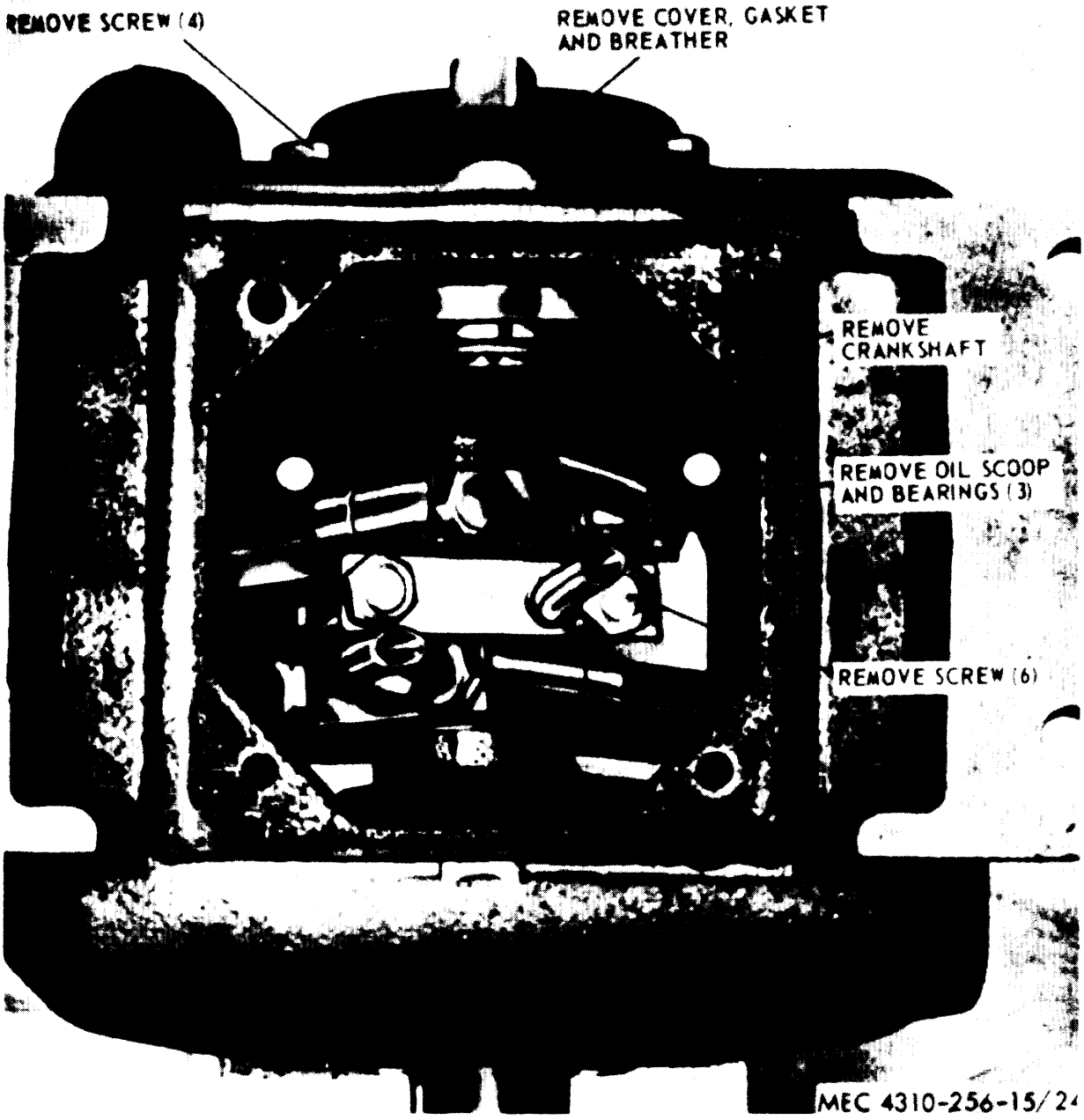


Figure 24. Crankshaft and correcting rod bearings, removal and installation.

(6) Remove the hand truck assembly in numerical sequence as illustrated in figure 26.

b. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Inspect all parts for cracks, breaks, bends, and other damage.

(3) Repair or replace all unserviceable parts.

c. Reassembly and Installation.

(1) Reassemble and install the hand truck assembly in the reverse order of that shown in figure 26.

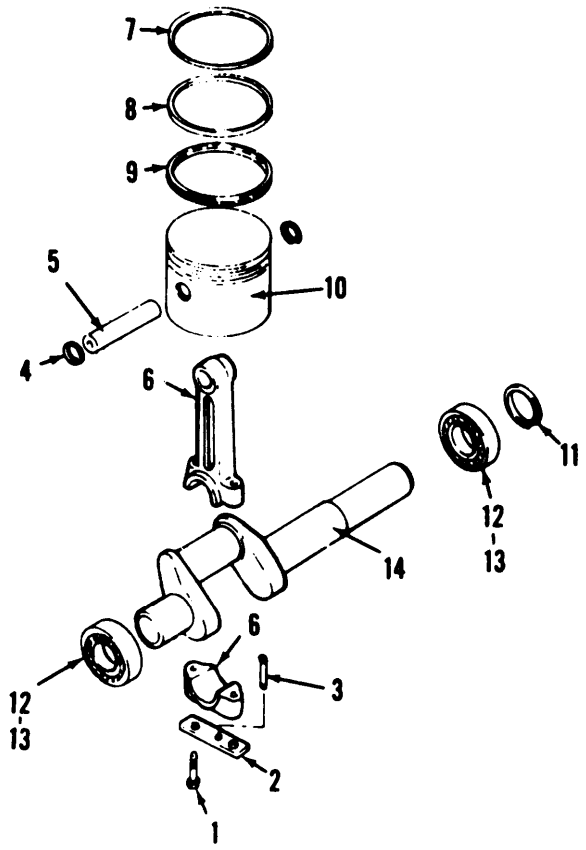
(2) Install the wheel assemblies (para 81).

(3) Install the air receiver tank (para 74).

(4) Install the fuel tank (para 60).

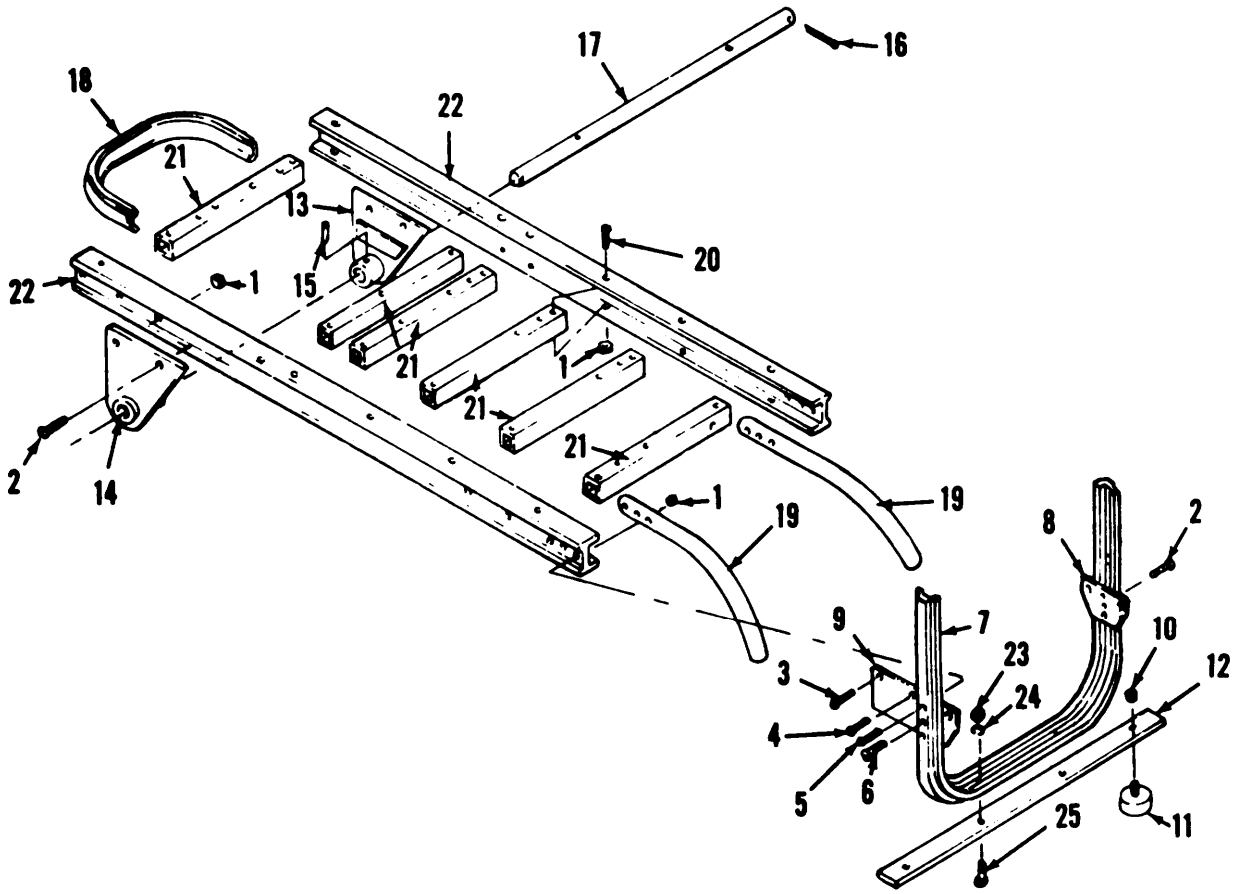
(5) Install the engine (para 57)

(6) Install the air compressor (para 65).



1 Screw
2 Retainer
3 Oil scoop
4 Retainer
5 Pin, piston
6 Rod, connecting
7 Ring
8 Ring
9 Ring
10 Piston
11 Seal
12 Cup
13 Bearing, roller
14 Crankshaft

Figure 25. Pistons, connecting rods, and crankshaft, exploded view.



1 Nut	7 Leg	14 Nose, L H	21 Cross member
2 Screw	8 Gusset	15 Pin, roll	22 Rail
3 Screw	9 Gusset	16 Pin, cotter	23 Nut
4 Screw	10 Nut	17 Axle	24 Washer
5 Screw	11 Foot	18 Bumper	25 Screw
6 Screw	12 Bracket	19 Handle	26 Gusset
	13 Nose, R H	20 Screw	27 Gusset

Figure 26. Hand truck assembly, exploded view.

APPENDIX I

REFERENCES

1. Fire Protection

TB 5-4200-200-10 Hand Portable Fire Extinguishers Approved for Army Users.

TM 5-687 Repair and Utilities: Fire Protection Equipment and Appliances: Inspections, Operations, and Preventive Maintenance.

2. Lubrication

C9100-IL Petroleum, Petroleum-Base Products and Related Material.

LO 5-2805-208-14 Engine, Gasoline, Military Standard Models (Model lA08-III) l½ HP, FSN 2805-068-7510, (Mode 12A016-III) 3 HP, FSN 2805-0724871.

LO 5-4310-256-15 Compressor, Reciprocating: Air, Hand Truck Mounted, Gasoline Engine: 8 CFM; 175 psi (Champion Pneumatic Model LP–832-ENG-2) and Compressor, Reciprocating: Air; 5 CFM: 175 psi (Champion Pneumatic Model LP–512-E ENG-2).

3. Preventive Maintenance

TM 38-750 Army Equipment Record Procedures.

4. Publication Indexes

DA Pam 310-4 Index of Technical Manuals, Technical Bulletins, Supply Manuals (Types 7, 8 and 9) Supply Bulletins, Lubrication Orders, and Modification Work Orders.

5. Radio interference Suppression

TM 11-483 Radio Interference Suppression.

6. Technical Manuals

TM 5-2805-208-14 **Operator,** Organizational, Direct and General Support Maintenance Manual (Including Repair Parts and Special Tool Lists): Engine, Gasoline, Military Standard Models (Model 1A08-III) 1½ HP, FSN 2805-068-7510 and (Model 2A016-III) 3 HP, FSN 2805472-4871.

APPENDIX II

BASIC ISSUE ITEMS LIST AND MAINTENANCE AND OPERATING SUPPLIES

Section I. INTRODUCTION

1. General

Section II lists the accessories, tools, and publications required for maintenance and operation by the operator, initially issued with; or authorized for the compressor. Section III lists the maintenance and operating supplies required for initial operation,

2. Explanation of Columns Contained in Section II

a. Source Codes. The information provided in each column is as follows:

(1) *Materiel.* The column is left blank. For identification of agencies assigned supply responsibility for parts, refer to appropriate Federal and Department of Army Supply Catalogs.

(2) *Source.* The selection status and source of supply for each part are indicated by one of the following code symbols:

(a) P—applied to high-mortality repair parts which are stocked in or supplied from the army supply system, and authorized for use in indicated maintenance categories.

(b) P1—applied to repair parts which are low-mortality parts, stocked in or supplied from the army supply system and authorized for installation at indicated maintenance categories.

(c) M—applied to repair parts which are not procured or stocked but are to be manufactured at indicated maintenance categories.

(d) X2—applied to repair parts which are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.

(3) *Maintenance.* The lowest maintenance level authorized to use, stock, install, or manufacture the part is indicated by the following code symbol:

O—Organizational Maintenance

Note. When no code is shown in the recoverability column the part is considered expendable.

a. Federal Stock Number. When a Federal stock number is available for a part, it will be shown in this column, and will be used for requisitioning purposes.

b. Description. The item name and a brief description of the part are shown,

c. *Unit of Issue.* If no abbreviation is shown in this column, the unit of issue is "each".

d. Quantity Authorized. This column lists the quantities of repair parts, accessories, tools, or publications authorized for issue to the equipment operator or crew as required.

e. Quantity Issued with Equipment. This column lists the quantities of repair parts, accessories, tools, or publications that are initially issued with each item of equipment. Those indicated by an asterisk are to be requisitioned through normal supply channels as required.

f. Illustrations. This column is subdivided into two columns which provide the following information:

(1) *Figure number.* Provides the identifying number of the illustration.

(2) *Item number.* Provides the referenced number for the parts shown in the illustration.

3. Explanation of Columns Contained in Section III

a. Item. This column contains numerical sequenced item numbers, assigned to each component application, to facilitate reference.

b. Component Application. This column identifies the component application of each maintenance or operating supply item.

c. Source of *Supply.* This column is left blank. For identification of agencies assigned supply responsibility for parts, refer to appropriate Federal and Department of Army Supply Catalogs.

d. Federal Stock Number. The Federal stock number will be shown in this column and will be used for requisitioning purposes.

e. Description. The item and a brief description are shown.

f. Quantity Required for Initial Operation. This column lists the quantity of each maintenance or operating supply item required for initial operation of the equipment.

g. Quantify Required for 8 Hours Operation. Quantities listed represent the estimated requirements for an average eight hours of operation.

h. Notes. This column contains informative notes keyed to data appearing in the preceding column.

Section II. BASIC ISSUE ITEMS LIST

Source codes				Federal stock No.	Description	Unit of issue	Quantity authorized	Quantity issued with equipment	Illustration	
Materiel	Source	Maintenance	Recoverability						Fig.	Item
					GROUP 31. BASIC ISSUE ITEMS MANUFACTURER INSTALLED					
					3100. BASIC ISSUE ITEMS MANUFACTURER OR DEPOT INSTALLED					
	P	O		5220-559-9618	CASE: Maintenance and Operational Manuals, Cotton Duck, Water Repellent, Mildew Resistant, MIL-B-11743B.		1	1		
					DEPARTMENT OF THE ARMY OPERATOR, ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT AND DEPOT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS TM 5-4310-256-15.		1	1		
					DEPARTMENT OF THE ARMY LUBRICATION ORDER LO 5-4310-256-15.		1	1		
					DEPARTMENT OF THE ARMY OPERATOR, ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS TM 5-2805-208-14.		1	1		
					DEPARTMENT OF THE ARMY LUBRICATION ORDER LO 5-2805-208-14.		1	1		
	P	O		2990-233-4725	STARTER ROPE: engine, 3 ft. lg.		1	1		
	P	O		4310-873-1767	HOSE, AIR: w/coupling, 25 ft. lg.		1	1		
	P	O		4910-030-2365	GAGE: Inflator, air		1	1		

Source codes				Federal stock No.	Description	Unit of issue	Quantity authorized	Quantity issued with equipment	Illustration	
Material	Source	Maintenance	Recoverability						Fig.	Item
					GROUP 32. BASIC ISSUE ITEMS TROOP INSTALLED					
					3200. BASIC ISSUE ITEMS TROOP INSTALLED OR AUTHORIZED					
	Pl	O		4210-893-1092	EXTINGUISHER, FIRE (DRY-CHEMICAL TYPE)					
	P	O		5120-223-7396	PLIERS, SLIP JOINT: Stght nose, comb w/cutter, 8 in. lg.		1	*		
	P	O		5120-277-9491	SCREW DRIVER, FLAT TIP: wood hdl, ¼ in. w/flared tip, 4 in. lg. blade.		1	*		
	P	O		5120-240-5238	WRENCH, OPEN END, ADJUSTABLE: sgle hd, 0.947 in. jaw opng, 8 in. lg.		1	*		

"Requisition as required.

Section III. MAINTENANCE AND OPERATING SUPPLIES

Item	Component application	Source of supply	Federal stock No.	Description	Quantity required for initial operation	Quantity required for 8 hours operation	Notes
1	0101 CRANKCASE (1)			OIL, LUBRICATING: 1 qt can as follows:			(1) Includes quantity of oil to fill engine oil system as follows: *3 H.P. Engine* ⅝ qt—Crankcase *1½ H.P. Engine* ½ qt—Crankcase
			9150-265-9433(2)	OE–30	(1)	(3)	
			9150-265-9425(2)	OE–10	(1)	(3)	
			9150-242-7602(2)	OES	(1)	(3)	
2	0303 TANK, FUEL			FUEL, GASOLINE: 5 gal can as follows:			(2) See C9100–IL for additional data and requisitioning procedure.
			9130-160-1817(2)	Automotive, combat 91A	5.2 gal (4)		
3	5001 CRANKCASE			OIL LUBRICATING 5 gal pail as follows:			(3) See current LO for grade application and replenishment intervals
			9150-235-5571(2)	SAE–10	¼ qt	(3)	
			9150-233-4137(2)	SAE–20	¼ qt	(3)	(4) Tank Capacity
			9150-231-6639(2)	SAE–30	¼ qt	(3)	(5) Includes quantity of oil to fill compressor

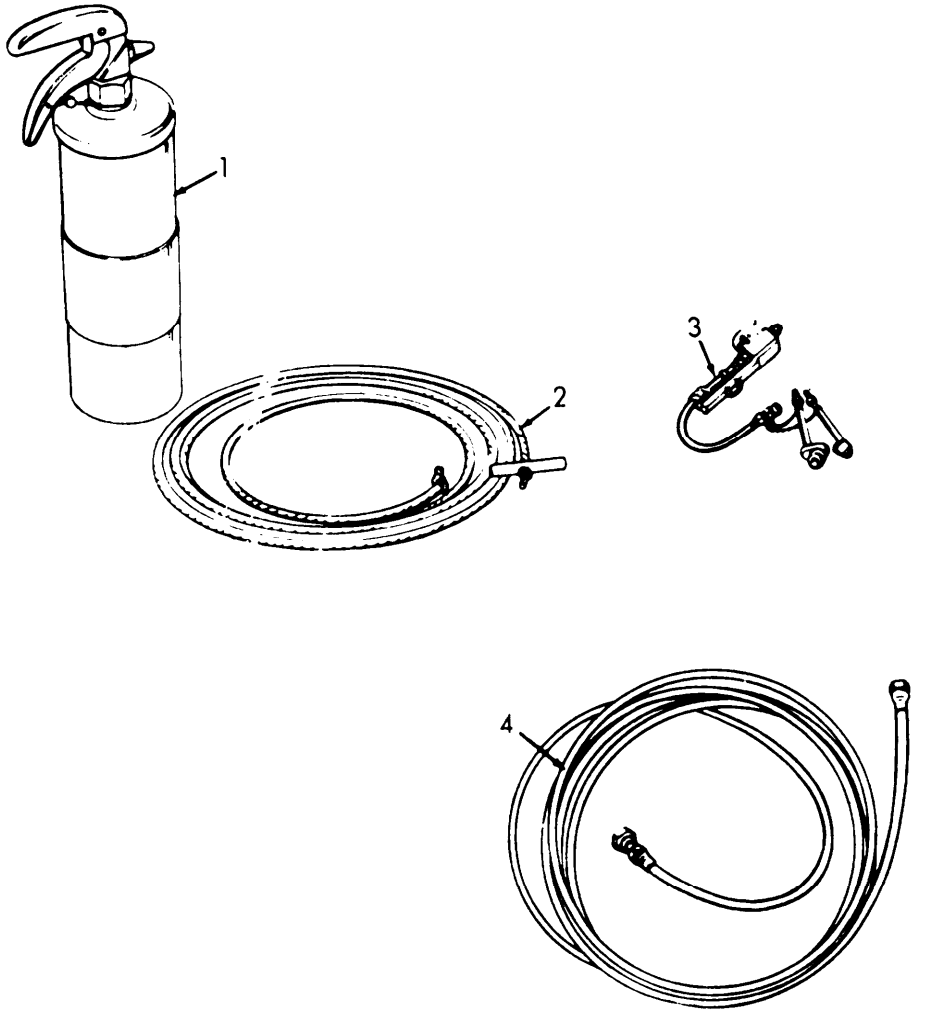


Figure 27. Basic issue items.

APPENDIX III

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

1. General

a. Section I provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. Section II designates overall responsibility for the performance of maintenance operations on the identified end item or component. The implementation of the maintenance tasks upon the end item or component will be consistent with the assigned maintenance operations.

c. Section III lists the special tools and test equipment required for each maintenance operation as referenced from Section II.

d. Section IV contains supplemental instructions, explanatory notes and/or illustrations required for a particular maintenance function.

2. Explanation of Columns in Section II

a. Functional Group Number. The functional group is a numerical group set up on a functional basis. The applicable functional grouping indexes (obtained from TB 750-93-1 Functional Grouping Codes) are listed on the MAC in the appropriate numerical sequence. These indexes are normally set up in accordance with their function and proximity to each other.

b. Component Assembly Nomenclature. This column contains a brief description of the components of each functional group.

c. *Essentiality.* The essentiality column reflects whether or not an assembly, or repair part, is combat essential to the tactical use of the end item. The letter "E" in this column indicates an item is combat essential,

d. Maintenance Operations and Maintenance Levels. This column lists the various maintenance operations ("A" through "J") and indicates the lowest maintenance level authorized to perform these operations.

The symbol designations for the various maintenance levels are as follows:

O/C —Operator or crew
O —Organizational
DS —Direct Support
GS —General Support
D —Depot

The Maintenance Operations are defined as follows :

A—SERVICE: Operations required periodically to keep the item in proper operating condition, i.e., to clean, preserve, drain, paint, and replenish fuel, lubricants, hydraulic, and deicing fluids, or compressed air supplies.

B —ADJUST: Regulate periodically to prevent malfunction. Adjustments will be made commensurate with adjustment procedures and associated equipment specifications.

C—ALINE: Adjust two or more components *of* an electrical or mechanical system so that their functions are properly synchronized or adjusted.

D-CALIBRATE: Determine, check, or rectify the graduation of an instrument, weapon, or weapons systems or components of a weapons system.

E—INSPECT: Verify serviceability and detect incipient electrical or mechanical failure by close visual examination.

F—TEST: Verify serviceability and detect incipient electrical or mechanical failure by measuring the mechanical or electrical characteristics of the item and comparing those characteristics with authorized

standards. Tests will be made commensurate with test procedures and with calibrated tools and/or test equipment referenced in the MAC.

G—REPLACE: Substitute serviceable components, assemblies and subassemblies for unserviceable counterparts or remove and install the same item when required for the performance of other maintenance operations.

H—REPAIR: Restore to a serviceable condition by replacing unserviceable parts or by any other action required using available tools, equipment and skills-to include welding, grinding, riveting, straightening, adjusting and facing.

I—OVERHAUL: Restore an item to a completely serviceable condition (as prescribed by serviceability standards developed and published by the commodity commands) by employing techniques of "Inspect and Repair Only as Necessary" (IROAN). Maximum use of diagnostic and test equipment is combined with minimum disassembly during overhaul, "Overhaul" may be assigned to any level of maintenance except organizational, provided the time, tools, equipment, repair parts authorization, and technical skills are available at that level. Normally, overhaul as applied to end items, is limited to depot maintenance level.

J—REBUILD: Restore to a condition comparable to new by disassembling to determine the condition of each component part and reassembling using serviceable, rebuilt, or new assemblies, subassemblies, and parts.

e. Reference Note. This column, subdivided into columns "K" and "L", is provided for referencing the "Special Tool and Test Equipment Requirements" (sec. III) and "Remarks" (sec. IV) that may be associated with maintenance operations (sec. II).

3. Explanation of Columns in Section III

a. Reference Code. This column consists of a number and a letter separated by a dash. The number references the T & TE requirements column on the MAC. The letter represents the specific maintenance operation the item is to be used with. The letter is representative of columns "A" through "J" on the MAC.

b. Maintenance Level. This column shows the lowest level of maintenance authorized to use the special tool or test equipment.

c. Nomenclature. This column lists the name or identification of the tool or test equipment.

d. Tool Number. This column lists the manufacturer's code and part number, or Federal Stock Number, of tools and test equipment.

4. Explanation of Columns in Section IV

a. Reference Code. This column consists of two letters separated by a dash, both of which are references to section II. The first letter references column L and the second letter references a maintenance operation, column "A" through "J",

b. Remarks. This column lists information pertinent to the Maintenance Operation being performed, as indicated on the MAC, section II.

Section II. MAINTENANCE ALLOCATION CHART

Date:

Functional group No.	FOR: COMPRESSOR, RECIPROCATING AIR, HAND TRUCK MOUNTED, GASOLINE ENGINE: 8 CFM: 175 PSI (CHAMPION PNEUMATIC MODEL LP-832-ENG-2 and 5 CFM: 175 PSI CHAMPION MODEL LP-512-ENG-2) Component assembly nomenclature	Essentiality	Maintenance operations A Service	B Adjust	C Aline	D Calibrate	E Inspect	F Test	Maintenance levels G Replace	H Repair	I Overhaul	J Rebuild	Note ref K T&TE rqmt	L Remarks
01	ENGINE													
0100	Engine Assembly:													
	Engine, gasoline		O/C				O/C	O	O	O	GS			A B
0102	Crank shaft:													
	Pulley, crankshaft								O					
03	FUEL SYSTEM													
0306	Tanks, lines, fittings:													
	Tank assembly, fuel		O/C				O/C		O	O				
	Line assembly, fuel								O					
	Strainer assembly, tank		O/C						O					
06	ELECTRICAL SYSTEM													
0615	Radio interference suppression:													
	Strap, ground								O					
10	FRONT AXLE													
1000	Front axle assembly:													
	Axle, hand truck								O					
13	WHEELS AND TRACKS													
1311	Wheel assembly:								O	O				
	Bearing, wheel		O/C						O					
1313	Tires, tubes:													
	Tires, pneumatic		O/C						O					
	Inner tube								O	O				
15	FRAME													
1501	Frame assembly:													
	Hand truck assembly								O	O				
22	BODY CHASSIS OR HULL, AND ACCESSORY ITEMS													
2202	Accessory items:													
	Adapter, hose								O					
	Hose assembly								O					

Date:

Functional group No.	FOR: COMPRESSOR, RECIPROCATING AIR, HAND TRUCK MOUNTED, GASOLINE ENGINE: 8 CFM: 175 PSI (CHAMPION PNEUMATIC MODEL LP-832-ENG-2 and 5 CFM: 175 PSI CHAMPION MODEL LP-512-ENG-2) Component assembly nomenclature	Essentiality	Maintenance operations						Maintenance levels				Note ref	
			A	B	C	D	E	F	G	H	I	J	K	L
			Service	Adjust	Aline	Calibrate	Inspect	Test	Replace	Repair	Overhaul	Rebuild	T&TE rqmt	Remarks
2202	Accessory Items—Continued													
	Chuck, air								O					
2210	Data plates:													
	Plate, identification								O					
	Plate, C.O.E.								DS					
47	GAGES													
4702	Gages, mountings, lines and fittings:													
	Bracket, gage mounting								O					
	Gage, pressure								O					
	Hose assembly								O					
50	PNEUMATIC EQUIPMENT													
500	Air compressor assembly:													
	Compressor, air		O/C				O/C		O	DS				
5001	Crankcase, block, cylinder head:													
	Block, cylinder								DS					
	Crankcase, compressor								DS					
	Plates, handhole								O					
	Glass, sight								DS					
	Crankshaft:													
	Bearing, crankshaft								DS					
	Crankshaft, air compressor								DS					
	Seal, oil								DS					
	Pistons, connecting rods:													
	Piston assembly, high and low pressure								DS					
	Ring set, piston								DS					
	Rod assembly, connecting High and low pressure								DS	DS				
	Valves													
	Valve assembly, intake and discharge								O					

Date:

Functional group No.	FOR: COMPRESSOR, RECIPROCATING AIR, HAND TRUCK MOUNTED, GASOLINE ENGINE: 8 CFM: 175 PSI (CHAMPION PNEUMATIC MODEL LP-832-ENG-2 and 5 CFM: 175 PSI CHAMPION MODEL LP-512-ENG-2)	Essentiality	Maintenance operations						Maintenance levels				Note ref	
			A	B	C	D	E	F	G	H	I	J	K	L
	Component assembly nomenclature		Service	Adjust	Aline	Calibrate	Inspect	Test	Replace	Repair	Overhaul	Rebuild	T&TE rqmt	Remarks
5006	Lubrication system:													
	Cap, oil filler								O					
	Tube assembly, breather								O					
	Adapter, breather tube								O					
5007	Compressor drive:													
	Belt, V			O/C			O/C		O					
	Flywheel, drive								O					
	Guard, belt and flywheel								O					
5008	Air intake:													
	Filter assembly, air		O/C						O					
	Manifold, low pressure, intake								O					
5009	Unloader system components:													
	Baffle plate, unloader								O					
	Breather, unloader valve								O					
	Cover, governor housing								O					
	Tube assembly								O	O				
	Valve, safety relief, high and low pressure								O	O				
	Weight, governor								O					
5010	Compressor cooling:													
	Tube, intercooler								O					
	Manifolds, high and low pressure								O					
5014	Air receiver:													
	Receiver, air		O/C				O/C		O					
	Valve, unloader			O/C					O					
76	FIRE FIGHTING EQUIPMENT COMPONENTS													
7603	Fire extinguishers:													
	Extinguisher, fire								O/C					

Section III. MAINTENANCE ALLOCATION CHART

For: _____ Date _____

_____ Page _____ of _____

Special tool and special test equipment requirements

Reference code	Maintenance level	Nomenclature	Tool No.
		NO SPECIAL TOOLS REQUIRED	

Section IV. MAINTENANCE ALLOCATION CHART

For: _____ Date _____

_____ Page _____ of _____

Reference code	Remarks
A–F	Test includes engine operation and compression.
B–G	Refer to TM 5–2805–208–14 for engine maintenance and repair parts.

APPENDIX IV

REPAIR PARTS LIST

Section I. INTRODUCTION

1. General

a. This manual lists repair parts for organizational, direct and general support, and depot maintenance. It indicates the quantity of repair parts required to be stocked by organizational maintenance as their prescribed load. It indicates the guide quantity factors to be used for initial repair parts stockage by direct and general support, and recommends quantities of repair parts for depot maintenance. Information and data contained herein serve as requisitioning reference material, and as a guide to determine stockage quantities of repair parts.

b. Price information for stock-type repair parts may be obtained from applicable Federal Supply Catalogs and/or Supply Management Data and Price List (ML) of the Department of Defense Supply agencies.

c. Repair parts lists are arranged as follows:

(1) Individual parts and major assemblies are listed alphabetically by item name within the functional groups.

(2) Assembly components and subassemblies are indented and listed alphabetically by item name under major assemblies.

(3) Bulk material is listed in functional group 9501.

d. Allowances are based on 1000 hours operational per year.

e. Part I of Section II applies to all models covered in this manual,

f. Part II of Section II applies to Compressor, Reciprocating: Air, Hand Truck Mounted, Gasoline: 8 cfm: 175 psi (Champion Pneumatic Model LP-832-ENG-2) FSN 4310-788-8969.

g. Part III of Section II applies to Compressor, Reciprocating: Air, Hand Truck Mounted, Gasoline Engine: 5 cfm: 175 psi (Champion Pneumatic Model LP-512-ENG-2) FSN 4310-733-2210.

2. Explanation of Repair Parts and Prescribed load Listing (Table 1)

a. Source Codes. This column is subdivided into four columns. The titles and information provided in each column are as follows:

(1) *Materiel,* This column is left blank. For identification of agencies assigned supply responsibility for parts, refer to appropriate Federal and Department of Army Supply Catalogs.

(2) *Source.* The selection status and source of supply for each part are indicated by one of the following code symbols.

(a) P—applied to high-mortality repair parts which are stocked in or supplied from the Army Supply System, and authorized for use at indicated maintenance categories.

(b) Pi—applied to repair parts which are low-mortality parts, stocked in or supplied from the Army Supply System and authorized for installation at indicated maintenance categories.

(c) M—applied to repair parts which are not procured or stocked but are to be manufactured at indicated maintenance categories.

(d) X1—applied to repair parts which are not procured or stocked, the requirement for which will be supplied by use of next higher assembly or components.

(e) X2-applied to repair parts which are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain them through canni-

balization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.

Note. Source coding is not shown on common hardware items known to be readily available in Army Supply Channels and through local procurement.

(3) *Maintenance.*

(a) The lowest maintenance level authorized to manufacture, assemble, and/or install the part is indicated by one of the following code symbols:
O-Organizational Maintenance
F—Direct Support Maintenance (DS)
H—General Support Maintenance (GS)
D—Depot Maintenance

(b) This column is left blank when components of kits or sets are listed that are not applicable to the item of equipment, or when an item is source coded X 1.

(4) *Recoverability.* Repair parts and/or tool and equipment items that are recoverable are indicated by the following code symbol:
R—applied to repair parts and assemblies which are economically repairable at direct and general support maintenance activities and normally are furnished by supply on an exchange basis.

Note. When no code is shown in the recoverability column the part is considered expendable.

b, Federal Stock Number. When a Federal stock number is available for a part, it will be shown in this column and will be used for requisitioning purposes.

c. *Description.*

(1) The item name and a brief description of the part are shown.

(2) A five-digit Federal supply code for manufacturers and/or other supply service is shown followed by the manufacturer's part number. This number will be used for requisitioning purposes when no Federal stock number is indicated in the Federal stock number column.

Example: 0864586453

(3) Repair part quantities included in kits, sets, and assemblies, that differ from the actual quantity used in this specific end item, are listed in parentheses.

(4) When repair parts are source coded "C", the manufacturer's part number will be used for local procurement.

Note. When a minimum stockage sufficient to repair one item and/or assembly is authorized, this quantity will be indicated in the Description column with the notation "minimum stockage of is authorized".

d. Unit of Issue. If no abbreviation is shown in this column, the unit of issue is "each".

e. Quantity Incorporated in Unit. The actual number of parts used in the application indicated is shown in this column. A zero (0) is shown when components of kits or sets are listed that are not applicable to this specific end item.

f. 15-Day Organizational Maintenance Allowante. Shown for each repair part is either a quantity or an asterisk allocation which indicates the following:

(1) A guide quantity factor is shown for each repair part authorized to be stocked by organizational maintenance. This quantity is based on past experience with similar items and the latest mortality data for 1000 hours operation per year. It is the average quantity required to provide one prescribed load for 1–5 and/or 6-10 items of equipment for a 15-day period under average combat conditions.

Note. Combat essential items which must be stocked or on order at organizational maintenance at all times, regardless of demand, will be identified in the allowance column by a quantity in parentheses.

(2) The quantity of repair parts authorized for stockage in accordance with the number of prescribed loads authorized by the major commander are determined by using table 1.

(3) Table 1 is a consolidation of items quantitatively allocated in this manual. Quantities listed are for one prescribed load for a 15-day period. A minimum stockage sufficient to repair one item and/or assembly is authorized (e.g., if 3 belts are required, then 3 belts are allocated as the minimum stockage). This quantity will be indicated in the minimum stockage authorization column.

(4) Units and organizations authorized more than one prescribed load will multiply the

Table 1. Prescribed Load Listing

Federal stock No.	Description	Functional group	Minimum stockage authorization	Unit of issue	15 days organizational maintenance allowance	
					1-5	6-10
2940-594-2293	GASKET: fuel howl (70040)854389	0309			(1)	(1)
4310-911-6608	KIT, EXHAUST VALVE: high and low pressure (11568) Z122A	5005			(3)	(3)
3030-962-2254	BELT, V: compressor drive (25472) 4L570-2	5007		Set	(1)	(1)

quantity listed in the appropriate end item density spread column of 1-5 or 6-10 by the number of prescribed loads.

(5) When more than 10 equipments require support, multiply the quantity listed in the 6-10 column by the number of equipments and the number of authorized prescribed loads, divided by 10, and round to the nearest whole number.

Example: If the quantity listed in the 6-10 column is 4, the number of equipments is 17, and the number of authorized prescribed loads is 1, the following formula would be used:

$$4 \times 17 \times 1 \div 10 = 6.8$$

The resulting fraction is 0.8; therefore the authorized stockage is 7.

Example: If the quantity listed in the 6-10 column is 4, the number of equipments is 17, and the number of authorized prescribed loads is 3, the following formula would be used:

$$4 \times 17 \times 3 \div 10 = 20.4$$

The resulting fraction is 0.4; therefore the authorized stockage is 20.

Note. An exception is made for those units and organizations required to have on hand, boxed or packaged prescribed load(s) pursuant to a special mission assignment. Such prescribed load(s) will be computed or selected separately from quantities authorized for stockage at permanent station,

(6) Repair parts required to perform organizational maintenance, which are not authorized for stockage are identified by an asterisk, and are to be requisitioned for immediate use only.

(7) Subsequent changes to allowances will be limited as follows:

(a) No decrease in the stated quantity of Combat Essential items is authorized.

(b) No change in the range of items is authorized. If exception to the Prescribed Load Listing or revision to allowances is considered necessary, a recommendation should be forwarded to the U.S. Army Mobility Equipment Center (para 6).

(c) Decreases in the stated quantity of items other than Combat Essential Items are authorized to a minimum quantity sufficient to repair one item and/or assembly and increases in the stated quantity are authorized for all items when justified by demand and usage experience. Detailed procedures for performing these adjustments are prescribed in AR 735-35.

g. *Guide Quantities Per 100 Equipments.* Shown for each repair part applicable direct and general support, and/or depot maintenance is either an allowance factor or an asterisk allocation which indicates the following:

(1) A guide quantity factor is shown for each part authorized to be stocked by direct and general support maintenance and supply support activities, and the number of repair parts recommended for depot maintenance. This factor is based on the latest mortality data for 1000 hours operation per year and is the average quantity required by the various maintenance activities to provide maintenance and supply support for 100 items of equipment for a 15-day period under average combat conditions.

(2) The quantities of repair parts authorized for stockage are determined using the following mathematical formula:

Quantity of equipment to be supported, multiplied by the listed allowance factor, divided by 100.

Fractions derived from the use of the above formula will be rounded to whole numbers as follows: If the result is 1 or more and includes a fraction that is 0.5 or more, the quantity is rounded to the next higher number.

Example: If the number of equipment supported is 30 and the allowance factor for 100 equipments is 5, the following formula would be used:

30 x 5 ÷ 100 = 1.5

The resulting fraction is 0.5; therefore, the stockage is 2. If the result is 1 or more and includes a fraction of less than 0.5, the quantity is rounded to the next lower number. When the computed result is less than 0.5, no quantity is authorized for direct and general support, and depot maintenance. However, if the item is combat essential, a quantity of 1 is authorized.

Example: If the number of equipment supported is 30 and the allowance factor for 100 equipments is 28, the following formula would be used:

30 x 28 ÷ 100 = 8.4

The resulting fraction is less than 0,5; therefore, the stockage is 8.

(3) In the guide quantity columns for direct and general support maintenance, additional repair parts authorized for use but not for initial dockage, are listed without a guide quantity factor, These items are identified by an asterisk and may be added to or deleted from stock when recorded demand experience justifies a change in stockage objective.

(4) Parts that may be required for depot maintenance, in addition to those allocated, are identified by an asterisk. These parts are to be requisitioned, when required, if not obtainable from reclamation, fabrication, or local procurement.

(5) Combat essential items of a critical nature which must be stocked at direct and general support maintenance at all times, regardless of demand are identified in the allowance column by inclosing the allowance factor in parentheses.

h. Direct and General Support Maintenance 15-Day Level.

(1) *Direct Support (DS).* This column lists the initial guide quantity allowance factors of repair parts authorized for initial stockage by direct support maintenance activities to provide direct support maintenance for Mobility Command equipment and to provide organizational maintenance repair parts for supported units for a 15-day period. Additional repair parts identified by an asterisk are explained in g above. Upon establishment of supply records, recorded demand experience will be used to compute stockage objectives on authorized repair parts. Review of stockage objectives will be performed in the time cycle prescribed by major commanders.

(2) General Support (GS). This column lists initial guide quantity allocation factors of repair parts authorized for initial stockage by general support maintenance activities to provide general support maintenance for Mobility Command equipment for a 15-day period. Additional repair parts identified by an asterisk are explained in g above. Upon establishment of supply records,' recorded demand experience will be used to compute stockage objectives on authorized repair parts, Review of the stockage objectives will be performed in the time cycle prescribed by major commanders.

(3) Units with TOE capability of performing partial or complete Direct and General Support Maintenance for organic Mobility Command equipment. Units with the TOE capability of performing partial or complete direct and general support maintenance for organic Mobility Command equipment will be authorized to stock direct and/or general support repair parts only when specific agreements are made between the commander of the designated

parts supply activity, normally DSU (Direct Support Units) and using unit. Parts so furnished are in addition to the prescribed load and will be adjusted as demands indicate.

(4) *Units with TOE Mission to provide maintenance for Mobility Command equipment of supported units.* Units organized under TOE's with the assigned mission to provide direct and general support maintenance for Mobility Command equipment of supported units are authorized to stock direct and general support repair parts. These repair parts will be issued from the appropriate parts supply activity (parts depot and/or DSU). Such stockage is in addition to the prescribed load and will be adjusted as demands indicate.

i. Depot Maintenance. This column lists the quantity of repair parts recommended for depot maintenance shops (non-TOE) to provide depot maintenance for 100 equipments. Additional repair parts are allocated by an asterisk, for immediate use only. Explanation of the asterisk allowance is contained in g above.

j. Illustrations. This column is subdivided into two columns as follows:

(1) *Figure number.* Indicates the number of the illustration in which the part is shown.

(2) *Item number.* Indicates the reference number used to point out the part in the illustration.

3. Abbreviations

in. . . . . inch (es)

No. . . . . number (s)

sh . . . . . sheet (s)

4. Index to Federal Supply Code for Manufacturers

01406	Allis Chalmers Mfg. Co.
11431	Gleason Corp.
11568	Champion Pneumatic Machinery Corp.
25472	B. F. Goodrich Corp.
60038	Timken Roller Bearing Co.
70040	AC Spark Plug Div. of General Motors Corp.
72962	Elastic Stop Nut Corp.
75336	F. C. Kingston Co.
80201	Chicago Rawhide Co.
80463	AC Spark Plug Co., Inc.
81336	Corps of Engineers
87005	Madden Brass Products Co.
94894	Milton Mfg. Co.
96906	Military Standards
97403	Engineer Research and Development Laboratory

LINE NO.	SOURCE CODES: MATERIEL	SOURCE	MAINT	RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJ EQUIPS: 15 DAY MAINTENANCE ORGANIZATION 1-5	15 DAY MAINTENANCE ORGANIZATION 6-10	DEPOT MAINT DS 100 EQUIPMENTS	DEPOT MAINT GS 100 EQUIPMENTS	DEPOT MAINT 100 EQUIPMENTS	ILLUST FIGURE NO.	ILLUST ITEM NO.
0001						SECTION II - REPAIR PARTS LIST											
						PART I											
0002						GROUP I											
0003						0100 -ENGINE ASSEMBLY											
0004	X	2	0			SPACER: ENGINE MTG	11568	M617		2	*	*	*	*	*	13	34
0005			0		5305-639-8115	SCREW, CAP, HEXAGON HEAD: ENGINE MTG	96906	MS35297-6		12	*	*	*	*	*	16	9
0006			0		5310-012-1753	WASHER, LOCK: ENGINE MTG SCREW	96906	MS35335-19		12	*	*	*	*	*	16	10
0007			0		5305-021-7023	SCREW, CAP, HEXAGON HEAD: ENGINE MTG TO FRAME	00000	217025		4	*	*	*	*	*	16	8
0008			0		5310-050-3275	NUT, SELF-LOCKING, HEXAGON: ENGINE MTG TO FRAME SCREW	72962	29NU066		4	*	*	*	*	*	16	6
0009			0		5310-209-0710	WASHER, LOCK: ENGINE MTG TO FRAME SCREW	96906	MS15795-213		4	*	*	*	*	*	16	7
0010						0102 - CRANKSHAFT											
0011	X	2	0		4310-819-4222	SLEEVE: CRANKSHAFT PULLEY	11568	M643		1	*	*	*	*	*	16	3
0012			0		5310-021-8407	NUT, PLAIN: CRANKSHAFT PULLEY	00000	218407		1	*	*	*	*	*	16	2
0013			0		5315-021-8217	KEY, WOODRUFF: CRANKSHAFT PULLEY	00000	218217		1	*	*	*	*	*	16	5
						0106 - ENGINE LUBRICATION SYSTEM											
0015	X	2	0		4730-788-0441	PLUG, MAGNETIC: OIL DRAIN	97403	9786888		2	*	*	*	*	*	16	14
						GROUP 03 - FUEL SYSTEM											
0017						0306 - TANKS, LINES, FITTINGS, HEADERS											
0018	X	2	0			TANK, FUEL ASSEMBLY	11568	Z257A		1	*	*	*	*	*	13	
0019	X	1				TANK, FUEL	11568	Z257-1		1						13	17
0020			0		4370-278-3397	PLUG, PIPE: FUEL TANK DRAIN	76558	MD1303		1	*	*	*	*	*	13	16
0021	P	1	0		2910-307-3834	CAP W/CHAIN: FUEL TANK FILLER	11568	Z257-2		1	*	*	*	*	10	13	13
0022	M		0			GASKET: FUEL TANK FILLER CAP MANUFACTURE FROM:	11568	Z257-3		1						13	14
0023	P		0		5330-209-5674	CORK SHEET, (3 IN. X 3 IN. REQUIRED)			SH	SEE GROUP 9501							
0024	X	2	0			STRAINER: FUEL TANK	11568	Z257-4		1	*	*	*	*	*	13	15
0025	X	2	0			U-BOLT: FUEL TANK MTG	11568	M607		2	*	*	*	*	*	13	10
0026	X	2	0			BRACKET: FUEL TANK U-BOLT	11568	M606		2	*	*	*	*	*	13	11
0027			0		5310-050-3266	NUT, PLAIN HEXAGON: FUEL TANK U BOLT	00000	503266		4	*	*	*	*	*	13	8
0028			0		5310-194-1540	WASHER, LOCK: FUEL TANK U BOLT	96906	MS15795-210		4	*	*	*	*	*	13	9
0029			0		4730-221-3902	ELBOW: FUEL LINE TO TANK	79740	6400X4		2	*	*	*	*	*	13	7
0030			0		4730-289-1959	NUT, COMPRESSION: FUEL LINE	87005	M27		2	*	*	*	*	*	13	2
0031	X	2	0			FUEL LINE: TANK TO FUEL FILTER	11568	M538		1	*	*	*	*	*	13	6
0032	X	2	0			CLAMP, LOOP: FUEL LINE HOLD DOWN	11568	5419217		1	*	*	*	*	*	13	5
0033			0		5305-017-1346	SCREW, CAP, HEXAGON HEAD: FUEL LINE HOLD DOWN CLAMP	08288	MS55305-10		1	*	*	*	*	*	13	3
0034			0		5310-011-4601	WASHER, LOCK: FUEL LINE CLAMP SCREW	96906	MS35335-30		1	*	*	*	*	*	13	4
0035			0		4730-196-2054	NIPPLE, PIPE: FUEL LINE TO FILTER	81348	WWN3515TYPE1		1	*	*	*	*	*	13	1
						0309 - FUEL FILTERS											
0037	P	1	0		2910-737-3861	STRAINER ASSEMBLY: FUEL	96906	MS51086-1		1	*	*	*	*	10		
0038	X	1				BAIL ASSEMBLY	80463	854254		1						14	1
0039	P	1	0		2910-364-0893	BOWL: SEDIMENT	70040	1522092		1	*	*	*	*	30	14	2
0040	X	1				COVER: FUEL STRAINER	80463	854708		1						14	6
0041	P		0		2940-594-2293	GASKET: FUEL BOWL	70040	854389		1	(1)	(1)	(8)	*	100	14	3
0042	X	1				STRAINER: FUEL	80463	854187		1						14	4
0043	X	1				VALVE: FUEL SHUT-OFF	80463	100-7		1						14	5
0044						GROUP 06 - ELECTRICAL SYSTEM (ENGINE AND VEHICULAR, ETC.)											
0045						0615 - RADIO INTERFERENCE SUPPRESSION											
0046	X	2	0		2920-064-8834	STRAP, FLEXIBLE: ENGINE GROUND	11568	M640		1	*	*	*	*	*		
0047						GROUP 10 - FRONT AXLE											
0048						1000 - FRONT AXLE ASSEMBLY											
0049	X	2	0			AXLE, FRONT: HAND TRUCK	11568	Z261-9		1	*	*	*	*	*	26	17
0050						GROUP 13 - WHEELS AND TRACKS											
0051						1311 - WHEEL ASSEMBLY											
0052	X	2	0			WHEEL ASSEMBLY: HAND TRUCK	11431	A1560		2	*	*	*	*	*	23	
0053	X	2	0			BEARING: TRUCK WHEEL	11431	559		2						23	13
0054	X	2	0			BOLT: TRUCK WHEEL	11431	306		8	*	*	*	*	*	23	5

LINE NO.	SOURCE CODES: MATERIEL	SOURCE	MAINT	RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJ EQUIPS: 15 DAY MAINTENANCE ORGANIZATION 1-5	15 DAY MAINTENANCE ORGANIZATION 6-10	DS 100 EQUIPMENTS	GS 100 EQUIPMENTS	DEPOT MAINT 100 EQUIPMENTS	ILLUST FIGURE NO.	ILLUST ITEM NO.
0055	X	2	0			CAP, END: WHEEL BEARING	11431	4201		4	*	*	*	*	*	23	11
0056	X	2	0			DISC, WHEEL: INNER	11431	6460		4	*	*	*	*	*	23	7
0057	X	2	0			DISC, WHEEL: OUTER	11431	6461		4	*	*	*	*	*	23	6
0058	X	2	0			FLANGE, DISC	11431	4219		4	*	*	*	*	*	23	14
0059	X	2	0			NUT, HEXAGON: WHEEL MTG SCREW	11431	958		12	*	*	*	*	*	23	2
0060	X	2	0			SCREW, CAP: WHEEL MTG	11431	954		12	*	*	*	*	*	23	4
0061	X	2	0			NUT, HEXAGON: WHEEL DISC MTG SCREW	11431	307		8	*	*	*	*	*	23	3
0062	X	2	0			RETAINER: WHEEL BEARING	11431	4216		4	*	*	*	*	*	23	10
0063	X	2	0			SEAL: WHEEL BEARING	11431	919		4	*	*	*	*	*	23	12
0064			0		5315-013-7185	PIN, COTTER: TRUCK WHEEL	00000	137185		2	*	*	*	*	*	23	1
0065	X	2	0			TUBE: WHEEL FLANGE	11431	841		2	*	*	*	*	*	23	15
0066						GROUP - TIRES, TUBES											
0067	P	1	0		2610-051-9114	TUBE, INNER: HAND TRUCK	96906	MS35392-48		2	*	*	*	*	5	23	9
0068	P	1	0		2610-050-9560	TIRE: HAND TRUCK	96906	MS35389-1		2	*	*	*	*	5	23	8
0069						GROUP 15 - FRAME, TOWING ATTACHMENTS, AND DRAWBARS											
0070						1501 - FRAME ASSEMBLY											
0071	X	2	F			TRUCK ASSEMBLY, HAND	11568	Z261C		1	*	*	*	*	*	13	35
0072	X	2	0			BUMPER, FRONT: HAND TRUCK	11568	Z261-5A		1	*	*	*	*	*	26	18
0073	X	2	0			SCREW, MACHINE: GUSSET MTG	11568	Z261-24		1	*	*	*	*	*	26	6
0074	X	2	0			HANDLE: HAND TRUCK	11568	Z261-3A		2	*	*	*	*	*	26	19
0075	X	2	0			LEG: HAND TRUCK SUPPORT	11568	Z261-8		1	*	*	*	*	*	26	7
0076	X	2	0			MEMBER, CROSS: TRUCK SUPPORT	11568	Z261-2B		6	*	*	*	*	*	26	21
0077	X	2	0			NOSE: RIGHT HAND, FRONT AXLE SUPPORT	11568	Z261-6A		1	*	*	*	*	*	26	13
0078	X	2	0			NOSE: LEFT HAND, FRONT AXLE SUPPORT	11568	Z261-6B		1	*	*	*	*	*	26	14
0079	X	2	0			SCREW, MACHINE: GUSSET TO FRAME	11568	Z261-21		3	*	*	*	*	*	26	3
0080	X	2	0			NUT, PLAIN HEXAGON: NOSE MTG SCREW	72962	Z261-13		29	*	*	*	*	*	26	1
0081	X	2	0			RAIL: TRUCK FRAME	11568	Z261-1A		2	*	*	*	*	*	26	22
0082			0		5305-013-3058	SCREW, MACHINE: CROSS MEMBER TO FRAME	00000	133058		12	*	*	*	*	*	26	20
0083			0		5305-558-2679	SCREW, MACHINE: GUSSET TO LET	11568	Z261-11		10	*	*	*	*	*	26	2
0084	X	2	0			SCREW, MACHINE: FRAME TO HANDLE	11568	Z261-22		1	*	*	*	*	*	26	5
0085	X	2	0			SCREW, MACHINE: GUSSET TO FRAME	11568	Z261-23		2	*	*	*	*	*	26	4
0086	X	2	0			WASHER	11568	Z261-17		4	*	*	*	*	*	26	
0087	X	2	0		5315-0058-5925	PIN, ROLL: NOSE TO AXLE	00000	585925		2	*	*	*	*	*	26	15
0088	X	2	0			GUSSET: RIGHT SIDE, LEG TO FRAME	11568	Z261-25A		1	*	*	*	*	*	26	8
0089	X	2	0			GUSSET: LEFT SIDE, LEG TO FRAME	11568	Z261-20B		1	*	*	*	*	*	26	9
0090			0		5310-821-0858	NUT, PLAIN, HEXAGON: HAND TRUCK LEG BRACKET				2	*	*	*	*	*	26	23
0091	X	2	0			BRACKET: HAND TRUCK LEG	11568	M657A		1	*	*	*	*	*	26	12
0092	X	2	0			FOOT RUBBER: HAND TRUCK LEG	11568	M651		2	*	*	*	*	*	26	11
0093	X	2	0			NUT, PLAIN, HEXAGON: HAND TRUCK FOOT	11568	M746		2	*	*	*	*	*	26	10
0094	X	2	0			SCREW, CAP, HEXAGON HEAD: BRACKET TO LET	11568	M696		4	*	*	*	*	*	26	25
0095	X	2	0			WASHER, LOCK: BRACKET TO LEG SCREW	11568	1-4LW		4	*	*	*	*	*	26	24
0096						GROUP 22 - BODY CHASSIS OR HULL, AND ACCESSORY ITEMS											
0097						2202 - ACCESSORY ITEMS											
0098	P	1	0		4310-873-1767	HOSE ASSEMBLY, AIR	11568	Z538		1	*	*	*	*	5	13	20
0099	P	1	0			GAGE, INFLATOR	94894	61J2-1506		1	*	*	*	*	5	13	18
0100						2210 - DATA PLATES AND INSTRUCTION HOLDERS											
0101	X	2	F		9905-807-3712	PLATE, IDENTIFICATION A (COE)				1			*	*	*	13	33
0102	X	2	0			PLATE, IDENTIFICATION	11568	M645		1	*	*	*	*	*		
0103	X	2	0			SCREW, DRIVE: IDENTIFICATION PLATE MTG	11568	2X1-4U		4	*	*	*	*	*	13	32
0104						GROUP 47 -GAGES (NON-ELECTRICAL), WEIGHING AND MEASURING DEVICES											
0105						4072 - GAGES, MOUNTINGS, LINES, AND FITTINGS											
0106	P	1	0		6685-904-4540	GAUGE, PRESSURE: DIAL INDICATING	11568	M519F		1	*	*	*	*	5	13	28
0107	X	2	0			MOUNT, ASSEMBLY, GAGE	11568	Z294		1	*	*	*	*	*	13	
0108	X	2	0			FITTING: GAGE MTG	87005	70F2A		1	*	*	*	*	*	13	29
0109	X	2	0			FITTING, ELBOW: GAGE TUBE TO TANK	87005	69F2A		1	*	*	*	*	*	13	31
0110	X20					TUBE: AIR TANK TO GAGE	11568	M767		1	*	*	*	*	*	13	30
0111						GROUP 50 - PNEUMATIC EQUIPMENT (AIR COMPRESSORS, PNEUMATIC MOTORS, ETC.)											

LINE NO.	SOURCE CODES: MATERIEL	SOURCE	MAINT	RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJ EQUIPS: 15 DAY MAINTENANCE ORGANIZATION 1-5	15 DAY MAINTENANCE ORGANIZATION 6-10	DS 100 EQUIPMENTS	GS 100 EQUIPMENTS	DEPOT MAINT 100 EQUIPMENTS	ILLUST: FIGURE NO.	ILLUST: ITEM NO.
0112						5000 - AIR COMPRESSOR ASSEMBLY											
0113	X	2	0	R		COMPRESSOR, AIR	11568	CAW		1	*	*	*	*	*		
0114	P		0		4310-911-9565	GASKET SET: COMPRESSOR OVERHAUL	11568	Z281		1	*	*	*	*	100		
0115	X	1				GASKET: CYLINDER TO CRANKCASE	11568	A29		3	SEE GRP 5001						
0116	X	1				GASKET: LOW PRESSURE HEAD	11568	B31		2	SEE GRP 5001						
0117	X	1				GASKET:	11568	C31		1	SEE GRP 5001						
0118	X	1				GASKET:	11568	A33		1	SEE GRP 5001						
0119	X	1				GASKET:	11568	C30		2	SEE GRP 5006						
0120	X	1				GASKET:	11568	30A		1	SEE GRP 5006						
0121	X	1				GASKET:	11568	C30B		1	SEE GRP 5006						
0122			0		5310-262-6589	NUT, PLAIN HEXAGON, CRANKCASE MTG	72962	29NED58E		4	*	*	*	*	*	18	8
0123			P		5306-010-0125	SCREW, CAP, HEXAGON HEAD: CRANKCASE MTG	11568	5-16-18X175		4	*	*	*	*	*	18	9
0124						5001 - CRANKCASE, BLOCK, CYLINDER HEAD											
0125	X	2	F			BLOCK, CYLINDER, LOW PRESSURE	11568	A6A		2			*	*	*	18	5
0126	X	2	F			BLOCK, CYLINDER, HIGH PRESSURE	11568	C6B		1			*	*	*	18	6
0127	X	2	F			CRANKCASE	11568	B9		1			*	*	*	18	24
0128	X	1				GASKET, HAND, HOLD, PLATE (COMPONENT OF GASKET SET, STOCK NO. 4310-911-9565, SEE GROUP 5000)	11568	A33		1			*	*	*	18	12
0129	X	2	0			PLATE: HAND HOLD	11568	A15		1	*	*	*	*	*	18	11
0130	X	2	0			SCREW, MACHINE: HAND HOLD PLATE	11568	1-4X20X3-8		4	*	*	*	*	*	18	10
0131	X	1				GASKET: CYLINDER TO CRANKCASE (COMPONENT OF GASKET SET, STOCK NO. 4310-911-9565, SEE GROUP 5000)	11568	A29		3	*	*	*	*	*	18	7
0132	X	2	0			SCREW, CAP, HEXAGON HEAD: CRANKCASE TO BLOCK	11568	M567		12	*	*	*	*	*	18	4
0133	X	2	0			ELBOW, PIPE: CRANKCASE DRAIN	11568	3-8-90SE		1	*	*	*	*	*	18	22
0134			0		4730-278-3395	PLUG, PIPE: CRANKCASE DRAIN	11568	M485		1	*	*	*	*	*	18	21
0135	X	2	F			WINDOW, OBSERVATION	11568	B14		1			*	*	*	18	23
0136	X	2	F			HEAD, CYLINDER: LOW PRESSURE	11568	B1A		2			*	*	*	29	6
0137	X	2	F			HEAD, CYLINDER: HIGH PRESSURE	11568	C1		1			*	*	*	19	7
0138	X	1				GASKET: LOW PRESSURE HEAD (COMPONENT OF GASKET SET, STOCK NO. 4310-911-9565, SEE GROUP 5000)	11568	B31		2			*	*	*	19	8
0139	X	1				GASKET: HIGH PRESSURE HEAD (COMPONENT OF GASKET SET STOCK NO. 4310-91109565, SEE GROUP 5000)	11568	C31		1						19	9
0140			0		4730-200-0522	SCREW, CAP, HEXAGON HEAD: HIGH PRESSURE HEAD	11568	M457		12	*	*	*	*	*	19	5
0141						5002 - CRANKSHAFT											
0142	P	1	F		3110-926-1379	BEARING, ASSEMBLY: CONNECTING ROD	60038	44649		2			*	*	7	25	13
0143	P	1	F		3110-827-8548	CUP, BEARING: COMPRESSOR CRANKSHAFT	60038	144610		2			*	*	7	25	12
0144	P	1	F		5330-291-2337	SEAL, OIL:CRANKSHAFT BEARING	80201	14812		1			*	*	14	25	11
0145	X	2	F			CRANKSHAFT: COMPRESSOR	11568	C5		1			*	*	*	25	4
0146	X	2	0			KEY: COMPRESSOR CRANKSHAFT	11568	U8		1	*	*	*	*	*	18	3
0147						5004 - PISTONS, CONNECTING RODS AND ROTORS											
0148	P	1	F		4310-9111-3567	PISTON, ASSEMBLY: LOW PRESSURE	11568	ZA4A		2			*	*	10	25	
0149	X	1				PISTON: LOW PRESSURE	11568	A4A		2						25	10
0150	X	1				PIN, PISTON	11568	A21		2						25	5
0151	X	1				RETAINER: PISTON PIN	11568	A102		4						25	4
0152	P	1	F		4310-911-9566	RING, SET: LOW PRESSURE PISTON	11568	ZA10		2			*	*	10		
0153	X	1				RING, PISTON: TOP	11568	A10A		2						25	7
0154	X	1				RING, PISTON: CENTER	11568	A10B		2						25	8
0155	X	1				RING, PISTON: LOWER	11568	A10D		2						25	9
0156	P	1	F		4310-911-3568	PISTON, ASSEMBLY: HIGH PRESSURE	11568	Z04A		1			*	*	5		
0157	X	1				PISTON: HIGH-PRESSURE	11568	C4A		1						25	10
0158	X	1				PIN, PISTON: HIGH PRESSURE PISTON	11568	C21A		1						25	5
0159	X	1				RETAINER, PISTON PIN	11568	B102		2						25	4
0160	P	1	F		4310-911-9571	RING SET: HIGH PRESSURE PISTON	11568	Z-C10		1			*	*	5		
0161	X	1				RING, PISTON: TOP	11568	C10A		1						25	7
0162	X	1				RING, PISTON: CENTER	11568	C10B		1						25	8
0163	X	1				RING, PISTON: LOWER	11568	C10C		1						25	9
0164	P	1	F		4310-911-2222	ROD ASSEMBLY: CONNECTING	11568	ZB3		3			*	*	15		
0165	X	1				ROD, CONNECTING	11568	83		3						25	6
0166	X	1				SCREW, CAP: CONNECTING ROD	11568	M780		6						25	1
0167	X	1				RETAINER: CONNECTING ROD SCREW	11568	A-24-4		3						25	2
0168	X	2	F			SCOOP, OIL: CONNECTING ROD RETAINER	11568	A24-1		1			*	*	*	25	3
0169	X	2	F			SCOOP, OIL: CONNECTING ROD RETAINER	11568	A242		1			*	*	*	25	3
0170	X	2	F			SCOOP, OIL: CONNECTING ROD RETAINER	11568	A-24-3		1			*	*	*	25	3

LINE NO.	SOURCE CODES: MATERIEL	SOURCE	MAINT	RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJ EQUIPS: 15 DAY MAINTENANCE: ORGANIZATION 1-5	ORGANIZATION 6-10	DS 100 EQUIPMENTS	GS 100 EQUIPMENTS	DEPOT MAINT 100 EQUIPMENTS	ILLUST: FIGURE NO.	ILLUST: ITEM NO.
0171						5005 - VALVES, CAMSHAFT AND TIMING MECHANISM											
0172	X	2	0			RETAINER: INTAKE VALVE	11568	B23		2	*	*	*	*	*	21	1B
																21	4C
0173	X	2	0			RETAINER: EXHAUST VALVE	11568	B26A		4	*	*	*	*	*	21	3A
0174	X	2	0			CAP ; INTAKE VALVE	11568	C28A		1	*	*	*	*	*	21	2C
0175	X	2	0			CAP: EXHAUST VALVE	11568	B28A		3	*	*	*	*	*	21	1A
0176	P		0		4310-911-6609	KIT, INTAKE VALVE: LOW PRESSURE	11568	2121A		2	*	*	3	*	60		
0177	X	1				SCREW: EXHAUST VALVE CAGE	11568	U81		2						21	4A
																21	2B
																21	5C
0178	X	1				SEAT: INTAKE VALVE	11568	U66A		2						21	3B
																21	6C
0179	X	1				DISC: EXHAUST AND INTAKE VALVE	11568	U70A		2						21	7A
																21	4B
																21	8C
0180	X	1				SPRING: EXHAUST AND INTAKE VALVE	11568	U71		2						21	6A
																21	5B
																21	7C
0181	X	1				CAGE: EXHAUST AND INTAKE VALVE	11568	U67A		2						21	6B
																21	9C
0182	X	1				GASKET: EXHAUST AND INTAKE VALVE	11568	U48		2						21	9A
																21	7B
																21	10C
0183	P		0		4310-911-6608	KIT, EXHAUST VALVE: HIGH AND LOW PRESSURE	11568	Z122A		3	(3)	(3)	(4)	*	90		
0184	X	1				GASKET: EXHAUST VALVE CAP	11568	B75		3						21	2A
																21	3C
0185	X	1				SCREW: EXHAUST VALVE CAGE	11568	U61		3						21	4A
																21	2B
																21	5C
0186	X	1				CAGE: EXHAUST VALVE	11568	U69A		3						21	5A
0187	X	1				SPRING: EXHAUST AND INTAKE VALVE	11568	U71		3						21	6A
																21	5B
																21	7C
0188	X	1				DISC: EXHAUST AND INTAKE VALVE	11568	U70A		3						21	7A
																21	4B
																21	8C
0189	X	1				SEAT: EXHAUST VALVE	11568	U68A		3						21	8A
0190	X	1				GASKET: EXHAUST AND INTAKE VALVE	11568	U48		3						21	9A
																21	7B
																21	10C
0191	P		0		4310-911-6607	KIT, INTAKE VALVE: HIGH PRESSURE	11568	Z184		1	*	*	1	*	30		
0192	X	1				GASKET: EXHAUST VALVE CAP	11568	B75		1						21	2A
																21	3C
0193	X	1				SCREW: EXHAUST VALVE CAP	11568	U61		1						21	4A
																21	2B
																21	5C
0194	X	1				SEAT: INTAKE VALVE	11568	U66A		1						21	3B
																21	6C
0195	X	1				DISC: EXHAUST AND INTAKE VALVE	11568	U70A		1						21	7A
																21	4B
																21	8C
0196	X	1				SPRING: EXHAUST AND INTAKE VALVE	11568	U71		1						21	6A
																21	5B
																21	7C
0197	X	1				CAGE: EXHAUST AND INTAKE VALVE	11568	U67A		1						21	6B
																21	9C
0198	X	1				GASKET: EXHAUST AND INTAKE VALVE	11568	U48		1						21	9A
																21	7B
																21	10C
0199	P		0		4310-911-9564	KIT: VALVE GASKET SET	11568	Z183G		1	*	*	1	*	30		
0200	X	1				GASKET: EXHAUST AND INTAKE VALVE	11568	U48		6						21	9A
																21	7B
																21	10C
0201	X	1				GASKET: EXHAUST VALVE CAP	11568	B75		4						21	2A
																21	3C
0202						5006 - LUBRICATION SYSTEM											
0203	X	2	0			COVER: CRANKCASE SIDE	11568	C148		1	*	*	*	*	*	18	16
0204	X	1				GASKET: SIDE COVERS AND BREATHER CHAMBER	11568	C30		2						18	15
																18	17
						(COMPONENT OF GASKET SET STOCK NO. 4310-911-9565, SEE GROUP 5000)											
0205	X	1				GASKET: SIDE COVER	11568	C30A(005)		1						18	18
						(COMPONENT OF GASKET SET STOCK NO. 4310-911-9565, SEE GROUP 5000)											
0206	X	1				GASKET: SIDE COVER	11568	C30B(010)		1						18	19
						(COMPONENT OF GASKET SET, STOCK NO. 4310-911-9565, SEE GROUP 5000)											

LINE NO.	SOURCE CODES MATERIEL	SOURCE	MAINT	RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJ EQUIPS 15 DAY MAINTENANCE ORGANIZATION 1-5	15 DAY MAINTENANCE ORGANIZATION 6-10	15 DAY MAINTENANCE DS 100 EQUIPMENTS	15 DAY MAINTENANCE GS 100 EQUIPMENTS	DEPOT MAINT 100 EQUIPMENTS	ILLUST FIGURE NO.	ILLUST ITEM NO.
0207	X	2	0			CHAMBER, BREATHER	11568	A100		1	*	*	*	*	*	18	14
0208	X	2	0			SCREW, CAP, HEXAGON HEAD: SIDE COVER	11568	M696		4	*	*	*	*	*	18	13
0209			0			PLUG, PIPE: CRANKCASE FILLER	11568	M485		1	*	*	*	*	*	18	20
0210						5007 - COMPRESSOR DRIVE											
0211	X	2	0			FLYWHEEL: COMPRESSOR DRIVE	11568	NR47AL		1	*	*	*	*	*	18	2
0212	X	2	0			SETSCREW: FLYWHEEL	11568	M568		1	*	*	*	*	*	18	1
0213	X	2	0			GUARD, BELT: WITH BRACKET, FLYWHEEL	11568	Z291		1	*	*	*	*	*	28	3
0214	X	2	0			SCREW, CAP, HEXAGON HEAD: GUARD MTG	11568	M696		2	*	*	*	*	*	28	5
0215	X	2	0			NUT, PLAIN, HEXAGON: GUARD MTG SCREW	72962	29NE040E		2	*	*	*	*	*	28	1
0216			0		5310-584-5005	NUT, PLAIN, HEXAGON: GUARD MTG SCREW	72962	1420N		2	*	*	*	*	*	28	4
0217	X	2	0			WASHER, LOCK: GUARD MTG SCREW	11568	14W		2	*	*	*	*	*	28	2
0218						5008 - AIR INTAKES											
0219	X	2	0			MUFFLER ASSEMBLY	11568	Z129C		2	*	*	*	*	*	9	
0220	P	1	0		4310-911-6281	ELEMENT, FRONT	11568	B22A		2	*	*	*	*	100	9	1
0221	P	1	0		4310-911-6282	ELEMENT, REAR	11568	B22B		2	*	*	*	*	100	9	2
0222	X	2	0			BODY: INTAKE MUFFLER	1568	B57A		2	*	*	*	*	*	9	3
0223						5009 - UNLOADER SYSTEM COMPONENTS											
0224	X	2	0			VALVE ASSEMBLY, SAFETY AND RELEASE	11568	Z206-200L		1	*	*	*	*	*		
0025	X	2	0			LEVER: RELEASE VALVE	11568	M781		1	*	*	*	*	*	22	2
0226	X	2	0			PIN: RELEASE VALVE LEVER	11568	M782		1	*	*	*	*	*	22	1
0227	X	2	0			VALVE, SAFETY	75336	Z67-75		1	*	*	*	*	*	22	3
0228						5010 - COMPRESSOR COOLING AND HEATING											
0229	X	2	0			NUT COMPRESSION: AFTERCOOLER TUBE	11568	M82A		1	*	*	*	*	*	19	10
0230	X	2	0			FITTING, COMPRESSION: AFTERCOOLER TUBE	11568	M81		1	*	*	*	*	*	19	11
0231	X	2	0			ELBOW, COMPRESSION: AFTERCOOLER TUBE TO HIGH PRESSURE HEAD	11568	M515		1	*	*	*	*	*	19	3
0232	X	2	0			NUT, COMPRESSION: INNERCOOLER TUBE	11568	M594		4	*	*	*	*	*	19	1
0233	X	2	0			TUBE, INTERCOOLER	11568	A12		1	*	*	*	*	*	19	2
0234	X	2	0			TUBE, AFTERCOOLER	11568	A45		1	*	*	*	*	*	19	4
0235						5014 - AIR RECEIVER											
0236	X	2	0			COCK, DRAIN: AIR RECEIVER TANK	92976	1825A		1	*	*	*	*	*	13	26
0237	X	2	0			RECEIVER, AIR TANK	11568	P2202C		1	*	*	*	*	*	13	25
0238	X	2	0			SCREW, CAP, HEXAGON HEAD: RECEIVER TANK MOUNTING	11568	516-18X175		2	*	*	*	*	*	13	23
0239	X	2	0			NUT, PLAIN, HEXAGON: RECEIVER TANK MTG SCREW	72962	29NE058E		2	*	*	*	*	*	13	21
0240	X	2	0			ADAPTER: AIR RECEIVER TANK	11568	1-4X1-8		2	*	*	*	*	*	13	19
0241	P	1	0		4820-888-9302	VALVE, UNLOADER: AIR RECEIVER	71342	EP175		1	*	*	*	*	3	13	27
0242						GROUP 95 - GENERAL USE STANDARDIZED PARTS											
0243						95-01 - BULK MATERIAL											
0244	P	0			5330-298-5674	CORK, SHEET			SH		*	*	*	*	*		

LINE NO.	SOURCE CODES: MATERIEL	SOURCE	MAINT	RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJ EQUIPS: 15 DAY MAINTENANCE ORGANIZATION 1-5	15 DAY MAINTENANCE ORGANIZATION 6-10	15 DAY MAINTENANCE DS 100 EQUIPMENTS	15 DAY MAINTENANCE GS 100 EQUIPMENTS	DEPOT MAINT 100 EQUIPMENTS	ILLUST: FIGURE NO.	ILLUST: ITEM NO.
0001						SECTION II - REPAIR PARTS LIST PART II											
0002						GROUP 01 - ENGINE											
0003						0100 - ENGINE ASSEMBLY											
0004	P	1	0	R	2805-072-4871	ENGINE, GASOLINE (NOTE: REFER TO TM5-2805-208-24P FOR MAINTENANCE AND REPAIR PARTS)	81336	2A0163		1	*	*	*	*	5	16	13
0005	X	2	0			BRACKET: ENGINE MTG	11568	M596		2	*	*	*	*	*	16	11
0006						0102 - CRANKSHAFT											
0007	X	2	0			PULLEY ASSEMBLY	11568	Z255A		1	*	*	*	*	*	16	
0008	X	1				PULLEY	11568	35016X2AL		1						16	4
0009						GROUP 50 - PNEUMATIC EQUIPMENT (AIR COMPRESSOR, PNEUMATIC MOTORS, ETC.)												
0010						5007 - COMPRESSOR DRIVE											
0011	P		0		3030-962-2254	BELT, V DRIVE	25472	4L570-2	SE	1	(1)	(1)	(1)	*	30	16	1

LINE NO.	SOURCE CODES: MATERIEL	SOURCE	MAINT	RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJ EQUIPS: 15 DAY MAINTENANCE ORGANIZATION 1-5	15 DAY MAINTENANCE ORGANIZATION 6-10	15 DAY MAINTENANCE DS 100 EQUIPMENTS	15 DAY MAINTENANCE GS 100 EQUIPMENTS	DEPOT MAINT 100 EQUIPMENTS	ILLUST: FIGURE NO.	ILLUST: ITEM NO.
0001						SECTION II - REPAIR PARTS LIST PART III											
0002						GROUP 01 - ENGINE											
0003						0100 - ENGINE ASSEMBLY											
0004	P	1	0	R	2805-068-7510	ENGINE, GASOLINE (NOTE: REFER TO TM5-2805-208-24P FOR MAINTENANCE AND REPAIR PARTS)	81336	1A0163		1	*	*	*	*	5	16	13
0005	X	2	0			BRACKET: ENGINE MTG	11568	M502A		2	*	*	*	*	*	16	11
0006						0102 - CRANKSHAFT											
0007	X	2	0			PULLEY ASSEMBLY: CRANKSHAFT	11568	Z255B		1	*	*	*	*	*	16	
0008	X	1				PULLEY	11568	2-5X2KAL		1						16	4
0009						GROUP 50 - PNEUMATIC EQUIPMENT (AIR COMPRESSOR, PNEUMATIC MOTORS, ETC.)												
0010						5007 - COMPRESSOR DRIVE											
0011	P		0		3030-640-2371	BELT, V DRIVE	25472	4L560-2	SE	1	(1)	(1)	(1)	*	30	16	1

1. NUT
2. WASHER
3. GUARD
4. NUT
5. SCREW

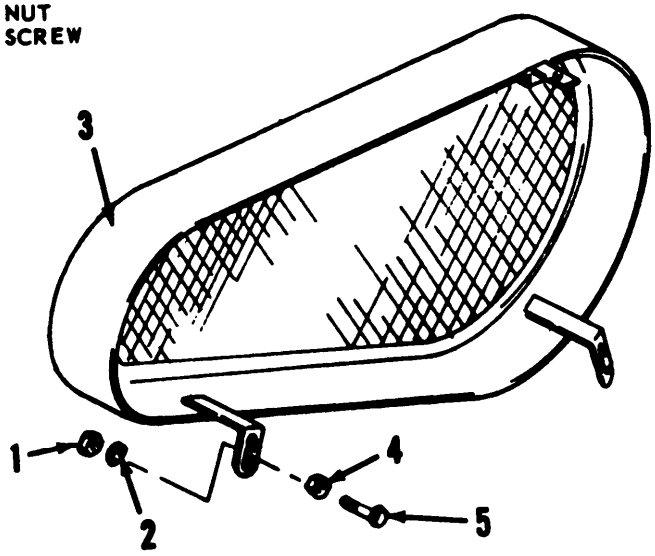


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Figure 28. V-beltguard.

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For explanation of abbreviations used see AR 320-50.

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