

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DS, GS,

AND DEPOT MAINTENANCE MANUAL

COMPRESSOR, RECIPROCATING, POWER DRIVEN;
WHEEL MOUNTED; 2 WHEEL, PNEUMATIC TIRES,
W/TOWBAR AND LUNETTE EYE, GASOLINE ENGINE;

4.00 CFM, 3000 PSI

(STEWART-WARNER MODEL 3800219)

FSN 4310-728-2031

(STEWART-WARNER MODEL 3800219-1)

FSN 4310-930-0060

This copy is a reprint which includes current
pages from Change 2.

H E A D Q U A R T E R S , D E P A R T M E N T O F T H E A R M Y

O C T O B E R 1 9 6 7

TECHNICAL MANUAL

NO. 5-4310-226-15

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., 20 October 1967

**COMPRESSOR, RECIPROCATING, POWER DRIVEN.
WHEEL MOUNTED; 2 WHEEL, PNEUMATIC TIRES, W/TOWBAR AND LUNETT EYE,
GASOLINE ENGINE; 4.00 CFM, 3,000 PSI
(STEWART-WARNER MODEL 3800219) FSN 4310-728-2031
(STEWART-WARNER MODEL 3800219-1) FSN 4310-930-0060**

PART I. COMPRESSOR OPERATION AND MAINTENANCE

SECTION I. INTRODUCTION AND DESCRIPTION

Paragraph		Page
1.1	Contents of Manual	3
1.2	Orientation	3
1.3	General Description	3
1.4	Tabulated Data	5
1.5	Functional Description	7
1.5.4	Basic Air Compressor	8
1.5.5	Filter and Separator Assembly	10
1.5.6	Pneumatic Dump Valve	10
1.5.7	Pressure Relief Valve	10
1.5.8	Back Pressure Valve	11
1.5.9	Check Valve	13
1.5.10	System Drain Valve	13
1.5.11	Dehydrator	13
1.5.12	Line Filter	13
1.5.13	Safety Fitting Assembly	13
1.5.14	Receiver	13
1.5.15	Pressure Regulators	13
1.6	Electrical Requirements	13
1.7	Gasoline Engine	13
1.8	Ground Cart Assembly	13

SECTION II. OPERATING INSTRUCTIONS

2.1	Towing and Positioning	15
2.2	Pre-Operating Inspections	15
2.3	Pre-Operating Servicing	15
2.3.1	Compressor Lubrication	15
2.3.2	Engine Lubrication	16
2.3.3	Engine Fuel	16
2.4	Pneumatic Connections	16
2.5	Operating Precautions	16
2.6	Routine Operating Instructions	17
2.7	Shut Down	18
2.8	Operation Under Unusual Conditions	18
2.8.1	Extreme Cold	18
2.8.2	Extreme Heat	18
2.8.3	Extreme Humidity	18
2.8.4	Extreme Dust, Sand, Grit	18

SECTION III. PREVENTIVE MAINTENANCE

Paragraph		Page
3.1	General	19
3.2	Cleaning	19
3.2.1	External Surfaces	19
3.2.2	Compressor Air Intake Filter	19
3.2.3	Dehydrator Cartridge	19
3.2.4	Line Filter	19
3.2.5	Compressor Strainer and Relief Valve Assembly	19
3.2.6	Gasoline Engine	20
3.3	Periodic Inspection	20
3.4	Lubrication	20
3.6	Functional Tests	23
3.6.3	Leakage Test	23
3.6.4	Pressure Regulator and Gage Test	23
3.6.5	Push Valve Test	23
3.6.6	Blow Down on Shut Down	23
3.6.7	System Drain	23
3.7	Trouble Shooting	24
3.8	Preparation for Storage or Shipment	24

SECTION IV. REPAIR, OVERHAUL, ADJUSTMENT, TEST

4.1	General	26
4.2	Special Tools and Test Equipment	26
4.3	Painted Surfaces	26
4.4	Air Hose and Reel	26
4.5	Instrument Panel Assembly	26
4.6	Pneumatic Lines and Fittings	29
4.7	Fuel Lines and Tank	29
4.8	Pressure Relief Valve Assembly	29
4.9	Safety Fitting Assembly	30
4.10	Check Valve Assembly	31
4.11	Back Pressure Valve Assembly	32
4.12	Pneumatic Dump Valve and Filter and Separator Assembly	33
4.13	Dehydrator Assembly	35
4.14	Basic Air Compressor	36
4.14.3	Replacing First Stage Cylinder, Piston and Valves	37
4.14.4	Replacing Second Stage Cylinder, Piston and Valve Mechanism	37
4.14.5	Replacing Third Stage Cylinder, Piston and Valve Assembly	39
4.14.6	Second Stage Strainer and Relief Valve	39
4.14.7	Oil Pump, Sight Indicator and Reservoir	40
4.15	Gasoline Engine	41
4.16	Cart Handle and Tow Bar	41
4.17	Access Doors and Housing	41
4.18	Wheels and Brakes	41

PART II. ENGINE OPERATION AND MAINTENANCE

Operation Instructions	64
Maintenance	65
Service Procedure	66
Compression Check	66
Crankcase Vacuum Check	66
Air Cleaner	66
Fuel System	67
Governor	69
Ignition System	70
Reconditioning	72
Disassembly of Engine	72
Inspection of Parts	72
Assembly of Engine	73
Final Adjustments	78
Specifications	81
APPENDIX A	A-1
APPENDIX B	B-1

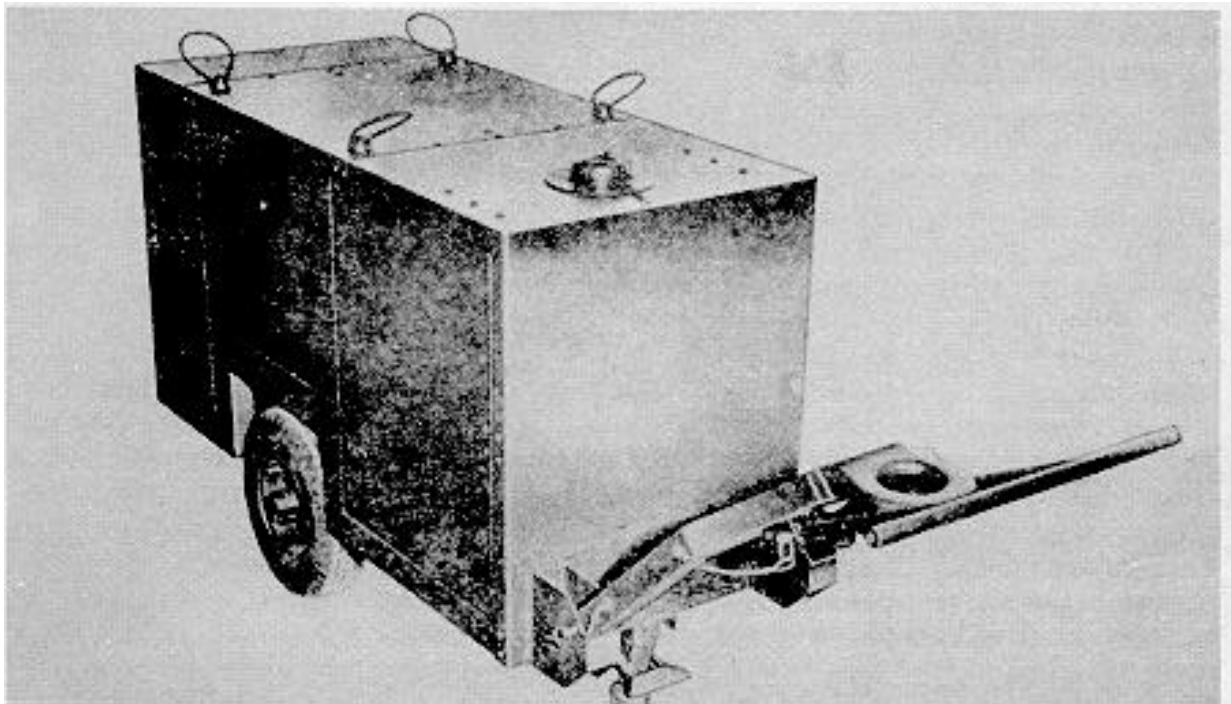


Figure 1-1. Compressor,-reciprocating, power driven, model 3800219 and 3800219-1, right front view.

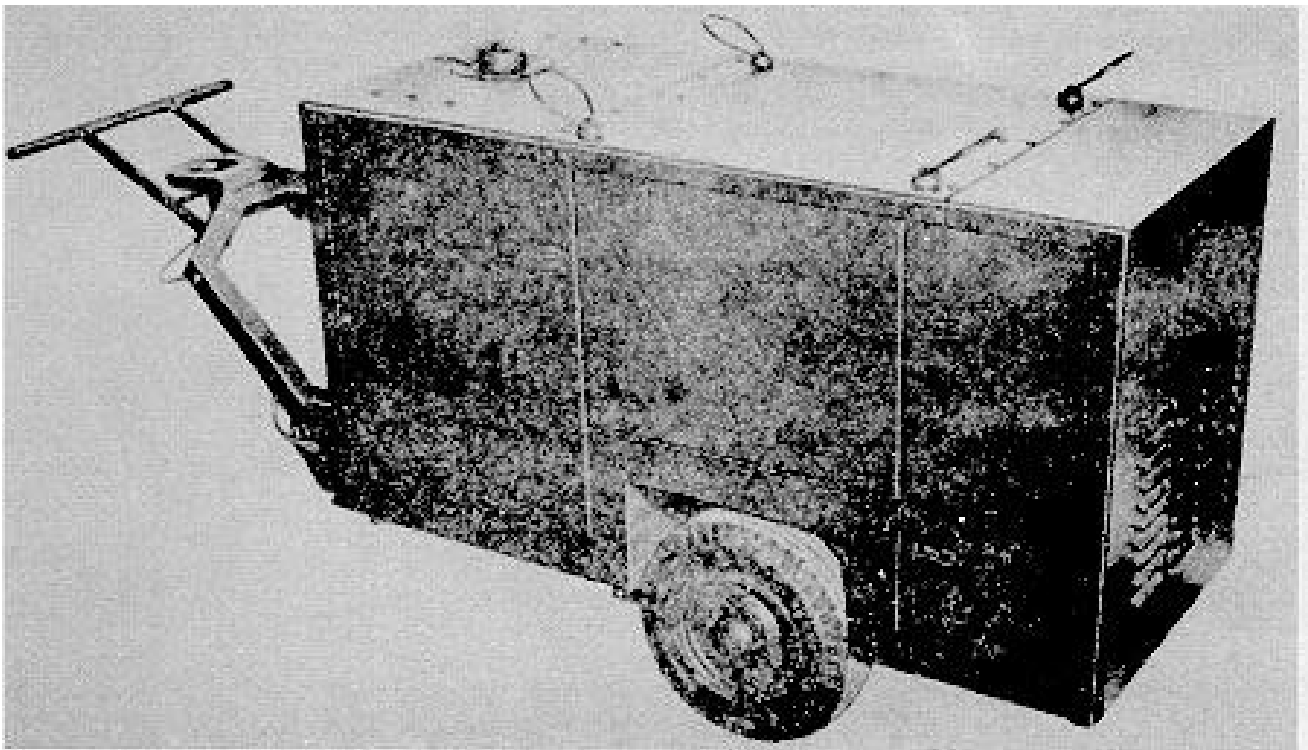


Figure 1-2. Compressor, reciprocating, power driven, model 3800219 and 3800219-1, left front view.