

TECHNICAL MANUAL

**OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE
MANUAL INCLUDING REPAIR PARTS LIST**

FOR

STAND, MAINTENANCE

MODEL B/M 613

(4910-00-977-7506)

HEADQUARTERS, DEPARTMENT OF THE ARMY

MAY 1983

TECHNICAL BULLETIN

No. 9-4910-676-14&P



HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 2 May 1983

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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in back of this manual direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSARMAS-SE, Rock Island, IL 61299. A reply will be furnished to you.

NOTE

This manual is published for the purpose of identifying an authorized commercial manual for the use of the personnel to whom this equipment is issued.

Manufactured by: Avitech, Inc.
2 Highland Street
Port Chester, NY 10573

Procured under Contract No. DAAA09-77-C-6890

This technical manual is an authentication of the manufacturers' commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

INSTRUCTIONS FOR REQUISITIONING PARTS

NOT IDENTIFIED BY NSN

When requisitioning parts not identified by National Stock Number, it is mandatory that the following information be furnished the supply officer.

- 1 - Manufacturer's Federal Supply Code Number. 51314
- 2 - Manufacturer's Part Number exactly as listed herein.
- 3 - Nomenclature exactly as listed herein, including dimensions, if necessary.
- 4 - Manufacturer's Model Number. B/M 613
- 5 - Manufacturer's Serial Number (End Item).
- 6 - Any other information such as Type, Frame Number, and Electrical Characteristics, if applicable.
- 7 - If DD Form 1348 is used, fill in all blocks except 4, 5, 6, and Remarks field in accordance with AR 725-50.

Complete Form as Follows:

(a) In blocks 4, 5, 6, list manufacturer's Federal Supply Code Number - 51314 followed by a colon and manufacturer's Part Number for the repair part.

(b) Complete Remarks field as follows:

Noun: (nomenclature of repair part)
For: NSN: 4910-00-977-7506
Manufacturer: Avitech, Inc.
2 Highland Street
Model: B/M 613 Port Chester, NY 10573
Serial: (of end item)

Any other pertinent information such as Frame Number, Type, Dimensions, etc.

Introduction

This manual covers operation and service instructions for the Stand, Maintenance, Hold & Revolve Engine Automotive.

Purpose

The stand is designed to provide a work platform for assembly or repair of automotive engines.

Description

The stand is intended for use in repair and overhaul shops for positioning automotive engines during repair or overhaul operations.

The engine is bolted to an adapter pad located opposite to the worm gear drive. By means of a manually operated crank driving a worm gear which in turn drives the large worm gear the engine assembly can be rotated through 360 degrees.

Positive locking of the rotating mechanism is provided by using a retaining pin in any of the four holes located at 90 degree increments.

Operation

The engine requiring maintenance is bolted on to the adapter pad.

The engine assembly can then be rotated to any orientation to best suit the maintenance procedure.

Positive locking of the rotating member is provided at four ninety degree increments.

Safety Precautions

The engine assembly must be properly bolted to the adapter pad before starting any repair operations.

Lubrication

Maintain, as necessary by the users activity, a light coat of grease on the worm gear drive assembly.

All other bearings are oil impregnated and require no additional servicing.

Parts Catalog

See drawing on page 8.

The Bill of Materials referenced on the above drawing describes the parts used on this stand.

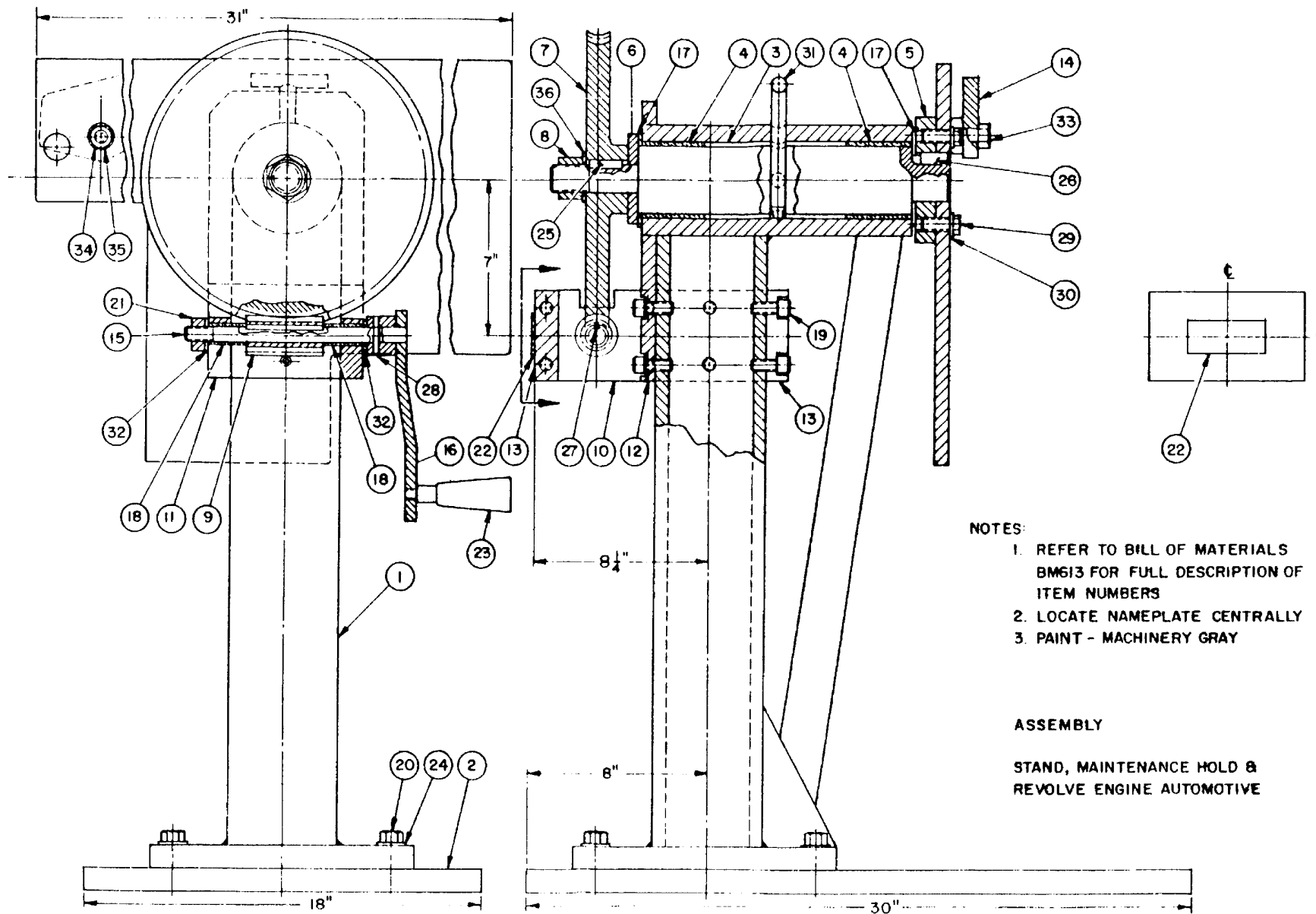
Part numbers plus a complete description of the item should be used to procure replacement parts.

Bill of Material

ITEM	PART NO.	DESCRIPTION	QUAN.		
1	A613-121	SUPPORT ASSEMBLY	1		
2	A613-112	BASEPLATE	1		
3	A613-101	SHAFT	1		
4	B4048-24	BEARING, OIL IMPREGNATED BOSTON GEAR	2		
5	A613-103	MOUNTING PLATE	1		
6	A613-104	BEARING, THRUST	1		
7	A613-122	WORM GEAR	1		
8		NUT 1-1/4-12 STEEL CAD-PLATE	1		
9	L1086	WORM GEAR (FSC71041) BOSTON	1		
10	A613-105A	WORM HOLDER WALL	1		
11	A613-105B	WORM HOLDER WALL	1		
12	A613-106	GEAR POSITIONER	1		
13	A613-107	BACK AND FRONT WALL	2		
14	A613-118	ADAPTOR	1		
15	A613-114	WORM SHAFT	1		
16	A613-115	HANDLE	1		
17	A613-108	WASHER	2		
18	M1417-14	BEARING (FSC 71041) BOSTON GEAR	2		
19		1/2-13 SOCKET HD. CAP SCREW X 1-1/4" LONG CAD. PL.	18		
20		3/4-16 HEX. HD. BOLT X 1-3/4" LONG CAD. PL.	4		
21		7/8-14 HEX. HD. NUT	1		
22	A613-120	NAMEPLATE	1		
23	21906	HANDLE, REVOLVING (FSC 94882)	1		
24		3/4" LOCK WASHER, STEEL, CAD. PL.	4		
25		KEY, 3/8" SQUARE X 7/8" LONG	1		
26		KEY, 1/2" SQUARE X 1-1/4" LONG	1		

Bill of Material (Continued)

ITEM	PART NO.	DESCRIPTION	QUAN.		
27		KEY, 3/16" SQUARE X 3" LONG	1		
28		ROLL PIN, STEEL, 1/4" DIA X 2" LG.	1		
29		1/2-13 HEX. HD. BOLT X 1-1/2" LONG	8		
30		1/2" LOCKWASHER, STEEL, CAD. PL.	8		
31	A613-119	RETAINING PIN	1		
32		WASHER, FLAT 7/8"	2		
33		5/8-11 HEX HD BOLT 2-1/2" LG., STEEL, CAD. PL.	1		
34		5/8-11 HEX. HD. NUT, STEEL, CAD. PL.	1		
35		5/8" LOCK WASHER, STEEL, CAD. PL.	1		
36		1-1/4" WASHER, STEEL, CAD PL.	1		



NOTES:

1. REFER TO BILL OF MATERIALS
BM613 FOR FULL DESCRIPTION OF
ITEM NUMBERS
2. LOCATE NAMEPLATE CENTRALLY
3. PAINT - MACHINERY GRAY

ASSEMBLY

STAND, MAINTENANCE HOLD &
REVOLVE ENGINE AUTOMOTIVE

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with Special List.

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH PUBLICATION

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

PUBLICATION DATE

PUBLICATION TITLE

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.

PARA-GRAPH

FIGURE NO.

TABLE NO.

IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
 1 Kilometer = 1000 Meters = 0.621 Miles

SQUARE MEASURE

1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches
 1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
 1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
 1 Kilogram = 1000 Grams = 2.2 Lb
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

CUBIC MEASURE

1 Cu Centimeter = 1000 Cu Millimeters = 0.06 Cu Inches
 1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

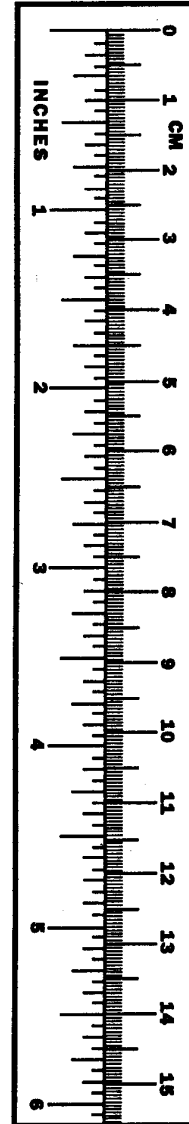
TEMPERATURE

$5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 212° Fahrenheit is equivalent to 100° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 $9/5 \text{ C}^{\circ} + 32 = \text{F}^{\circ}$

APPROXIMATE CONVERSION FACTORS

<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds/Sq Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Sq Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Sq Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metrication	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Sq Inch	0.145
Km per Liter	Miles per Gallon	2.354
Km per Hour	Miles per Hour	0.621



STAND , MAINTENANCE-MAY 1983