

LUBRICATION ORDER

LO 5-3895-275-12

5 July 1984

LO 5-3895-275-12
(Supersedes LO 5-3895-275-12-1, and -2, 12 JANUARY 1968)

**PAVING MACHINE, BITUMINOUS MATERIAL:
GASOLINE ENGINE DRIVEN, CRAWLER MOUNTED,
8 TO 12 FEET WIDE (BARBER-GREENE MODEL SA-35)
(NSN 3895-00-057-8715)**

Reference: TM 5-3895-275-12 and FEDERAL SUPPLY CATALOG C9100-IL.

Hard time intervals and the related man-hour -times are based on normal operation. The man-hour time specified is the time you need to do all the services prescribed for a particular interval Change the hard time interval if your lubricants are contaminated or if you are operating the equipment under adverse operating conditions, including longer than-usual operating hours. The hard time interval may be extended during periods of low activity. If extended, adequate preservation precautions must be taken.

Clean parts or fittings with dry cleaning solvent (SD), Type II or equivalent. Dry before lubricating. Dotted arrow shafts indicate lubrication on both sides of equipment. A dotted circle indicates a drain below. Relubricate all items found contaminated after fording or washing.

The lowest level of maintenance authorized to lubricate a point is indicated by one of the following symbols as appropriate: Operator/Crew (C); and Organizational Maintenance (O).

WARNING

Dry cleaning fluid is flammable. Do not use near a flame or excessive heat. Use only with adequate ventilation. Avoid prolonged breathing of vapors and minimize skin contact.

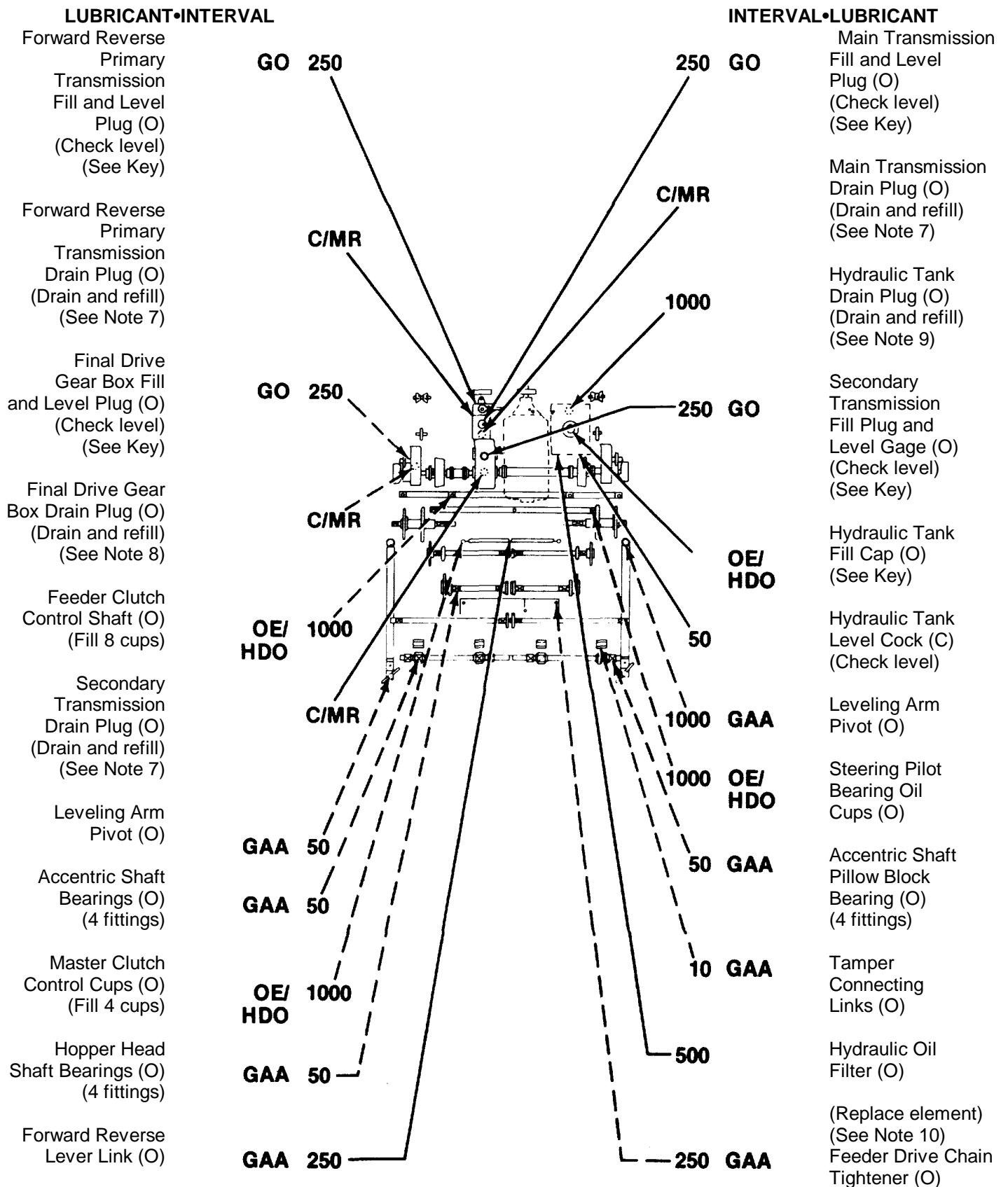
Reporting errors and recommending improvements.

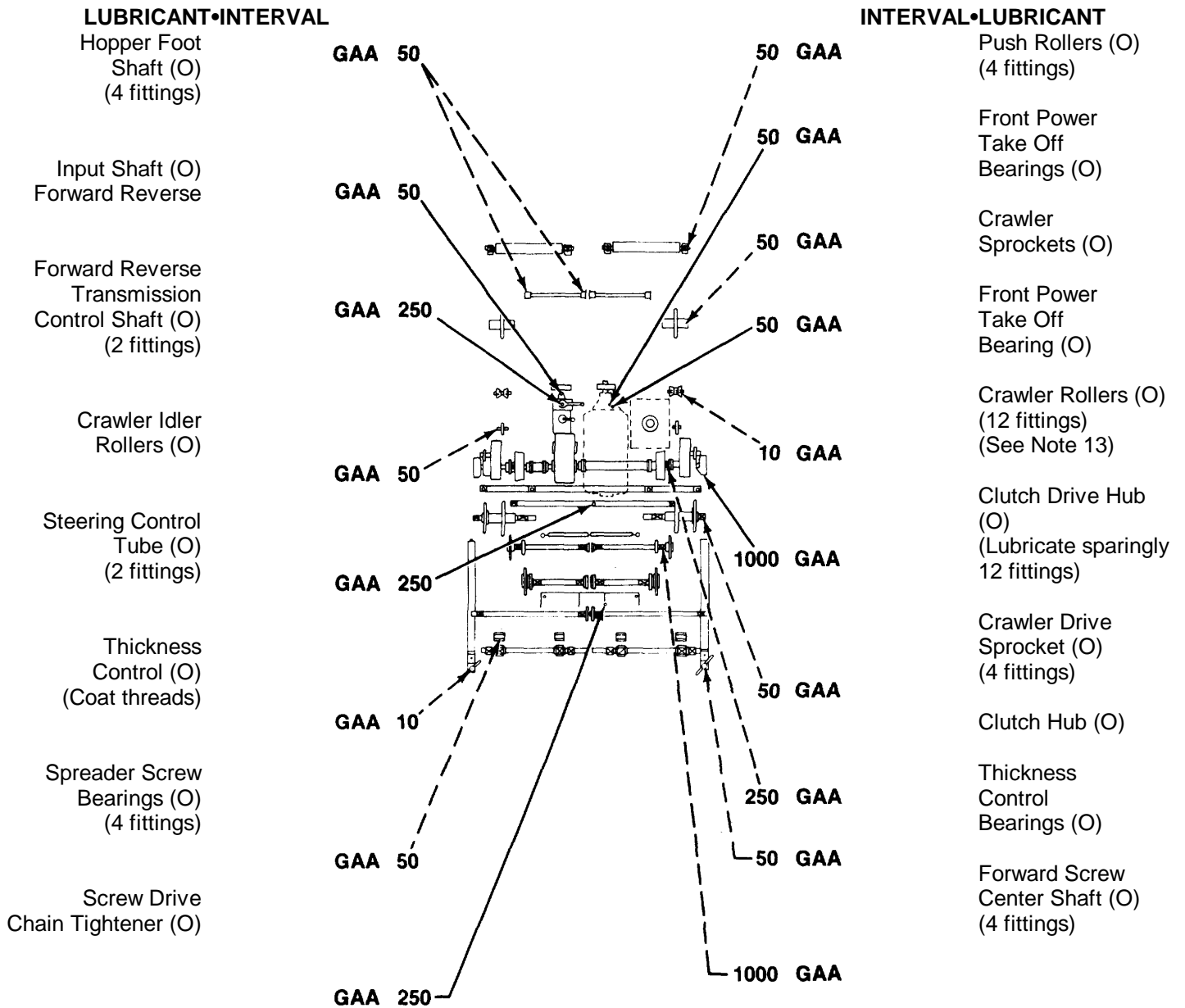
You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MB, Warren, MI 48090. A reply will be furnished to you.

*The time specified is the time required to perform all services at the particular interval.

*TOTAL MAN-HOURS		*TOTAL MAN-HOURS	
INTERVAL	MAN-HOURS	INTERVAL	MAN-HOURS
10	1.0	500	0.9
50	2.0	1000	1.6
250	1.4		

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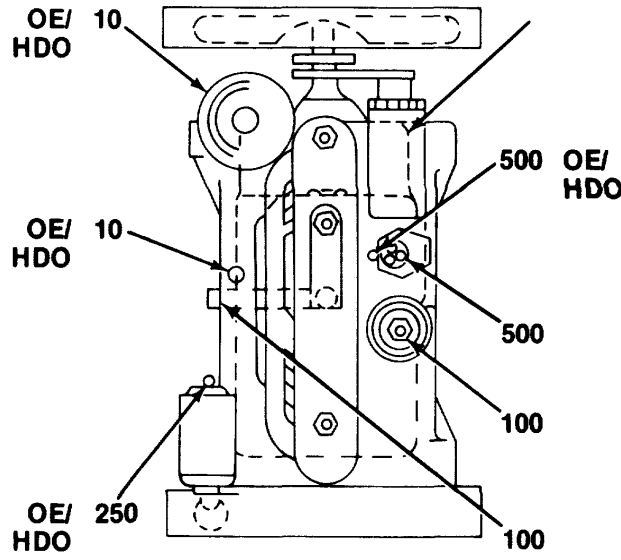


LUBRICANT•INTERVAL

Air Cleaner (O)
(See Key and Note 6)

Distributor Shaft
Bearing (O)
Crankcase Fill and
Level Cap (C)
(Check level)
(See Key)
(See Note 3)

Starter Motor (O)
(Remove plug,
lubricate sparingly,
reinstall plug)



**ENGINE: (WAUKESHA
MODEL 190GLCU)**

INTERVAL•LUBRICANT

Generator
(Sealed bearings
no lubrication
required)

(Remove distributor
shaft plug, lubricate,
reinstall plug)
Distributor (O)
(See Note 11)

Engine Oil Filter (O)
(Replace element)
(See Note 5)

Crankcase Drain (O)
(Drain and refill)
(See Note 4)

KEY

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +15°F (Above -9°C)	+40° to -15°F (+4° to -26°C)	+40° to -65°F (+4° to -54°C)	
OE/ - Lubricating HDO Oil, Internal Combustion Engine, Tac- tical Service OEA - Lubricating Oil, Internal Combustion, Arctic - Crankcase - Oil Can Points (See Note 2)	9 qts. (8.5 L)	OE/HDO 30	OE/HDO 10	OEA (See Note 1)	For Arctic operation refer to FM 9-207 C/MR- Condition Monitor Intervals given are in hours of normal operation.
- Air Cleaner - Hydraulic Oil Tank	3/4 qt. (0.71 L)				

*See Note 14 for lubricant specification number.

KEY

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +15°F (Above -9°C)	+40° to -15°F (+4° to -26°C)	+40° to -65°F (+4° to -54°C)	
GO - Lubricating Oil, Gear, Multipurpose - Main Transmission - Primary Transmission - Secondary Transmission - Final Drive Gearbox	4 qts. ea (3.78 L) 4 qts. ea (3.78 L) 26 qts. (24.6 L) 4 qts. ea (3.78 L)	GO 80W/90	GO 80W/90	GO 75W	C/MR - Condition Monitor Intervals given are in hours of normal operation.
GAA - Grease, Automotive and Artillery		ALL TEMPERATURES			

For Arctic operation refer to FM 9-207

*See Note 14 for lubricant specification number.

NOTES:

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -15°F (-26°C). Remove lubricants prescribed in Key for temperatures above -15°F (-26°C). Relubricate with lubricants specified in Key for temperatures below -15°F (-26°C). If OEA lubricant is required to meet the temperature ranges prescribed in the Key, OEA lubricant is to be used in place of OE/HDO-10 lubricant for all temperature ranges where OE/HDO-10 is specified in the Key.

2. OIL CAN POINTS. Each 50 hours, lubricate control linkage, clevises, control slip joints and all adjusting threads with OE/HDO. Each 1000 hours fill steering pilot bearing oil cups with OE/HDO.

3. CRANKCASE OIL LEVEL HOT OR COLD CHECK. Cold engine, oil level should be at high mark on dipstick. Hot engine, oil level must be between high and low marks on dipstick (allow to set 5 minutes before checking).

4. CRANKCASE. Oil is to be changed each 100 hours. Drain when lubricant is warm.

5. ENGINE OIL FILTER. Each 100 hours, remove filter element, clean housing and install new filter element. After installing new filter element, fill crankcase, operate engine for 5 minutes, check housing for leaks, check crankcase oil level and bring to "FULL" mark.

6. AIR CLEANER. Each 10 hours, refill reservoir to level mark. Each 50 hours disassemble entire unit, clean, re-oil and assemble.

7. PRIMARY TRANSMISSION, SECONDARY TRANSMISSION AND MAIN TRANSMISSION. Each 250 hours check level. Change gear lubricant only when required by maintenance repair action, contamination by water, or other foreign material. After refill, operate for 5 minutes, check for leaks and bring oil level to fill and level plug opening.

NOTES - CONTINUED:

8. FINAL DRIVE GEARBOX. Each 250 hours check level. Change gear lubricant only when required by maintenance repair action, contamination by water, or other foreign material. After refill, operate for 5 minutes, check for leaks and bring oil level to fill and level plug opening.

9. HYDRAULIC TANK AND TANK STRAINER. Each 1000 hours drain tank, remove and clean tank strainer. Refill tank, operate Paver for 5 minutes, check for leaks, check oil level and bring to "FULL" mark.

10. HYDRAULIC OIL FILTER. Each 500 hours, remove element, clean filter shell and install new element. After replacement, operate hydraulic system for 5 minutes, check for leaks, check level and bring to "FULL" mark.

11. DISTRIBUTOR. Each 500 hours apply GAA sparingly to the breaker cam and apply OEIHDO to the camwick and breaker arm pivot point.

12. DRIVE CHAINS. Each 500 hours clean and lightly coat chains with OE/HDO.

13. CRAWLER ROLLERS. Lubricate rollers each 2 hours when traveling from work site to work site.

14. LUBRICANTS. The following is a list of lubricants with military symbols and applicable specification numbers.

OE/HDO	MIL-L-2104
GO	MIL-L-2105
GAA	MIL-G-10924
OEA	MIL-L-46167
(SD), Type II	P-D-680

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:

JOHN A. WICKHAM, JR.
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 DA Form 12-25B, Operator and Organizational maintenance requirements for Paving Machines.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

 <div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block; margin-left: 20px;"> <p style="margin: 0;"><i>THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.</i></p> </div>		SOMETHING WRONG WITH PUBLICATION		
		FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)		
PUBLICATION NUMBER		DATE SENT		
PUBLICATION DATE		PUBLICATION TITLE		
BE EXACT PIN-POINT WHERE IT IS				
PAGE NO.	PARA- GRAPH	FIGURE NO.	TABLE NO.	<p style="text-align: center; font-weight: bold; margin-top: 0;">IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.</p>
PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER			SIGN HERE	

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigrams = .035 ounce
 1 decagram = 10 grams = .35 ounce
 1 hectogram = 10 decagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliter = 10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

<i>To change</i>	<i>To</i>	<i>Multiply by</i>	<i>To change</i>	<i>To</i>	<i>Multiply by</i>
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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