

**DEPARTMENT
OF THE ARMY TECHNICAL MANUAL**

**OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE
MANUAL INCLUDING REPAIR PARTS LIST
FOR
SPRAY OUTFIT, PAINT, MODEL 50-6519
(ECLIPSE SYSTEMS, INC) (4940-00-857-2290)**

**HEADQUARTERS,
DEPARTMENT OF THE ARMY**

APRIL 1978

TECHNICAL MANUAL

No. 9-4940-428-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 21 April 1978

Operator, Organizational, Direct Support
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Manual Including Repair Parts List

FOR

SPRAY OUTFIT, PAINT, MODEL 50-6519

(ECLIPSE SYSTEMS, INC) (NSN 4940-00-857-2290)

REPORTING OF ERRORS

You can help improve this manual by calling attention to errors and by recommending improvements and by stating your reasons for the recommendations. Your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) should be mailed directly to Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished directly to you. For your convenience, preaddressed DA Form 2028-2's are included as final pages of this manual.

NOTE

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

Manufactured by: Eclipse Systems Inc.
28 Kulick Road
Fairfield, New Jersey 07006

Procured under Contract No. DAAA09-76-M-7923

SPRAY OUTFIT ASSEMBLY INSTRUCTIONS

The paint spray gun cup attaches to the threads on the head of the Spray Gun. The fluid tube should point away from the gun with the cup removed. The cup is held in place by a yoke which is activated by turning the lock ring to attach or release the cup.

An air line is attached to the threaded fitting on the handle of the gun. The other end of the hose is attached to the shut-off valve on the separator.

DESCRIPTION

The Model 76 is a heavy-duty production spray gun which will spray a complete range of materials, such as lacquers to heavy synthetics, with ease, using either a siphon cup or pressure feed.

OPERATION

There are two basic controls on the 76 spray gun. The fan control (18) regulates air going to the holes of the air cap. The fluid needle adjustment screw (8) controls needle travel and fluid flow.

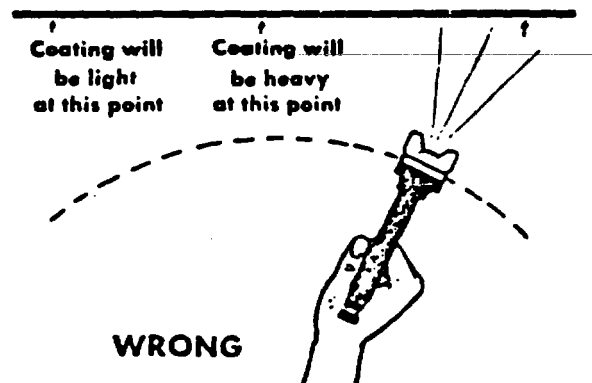
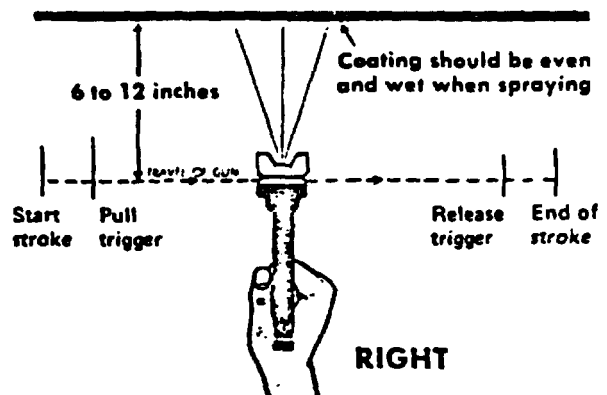
Mix and prepare material according to instructions for siphon feed.

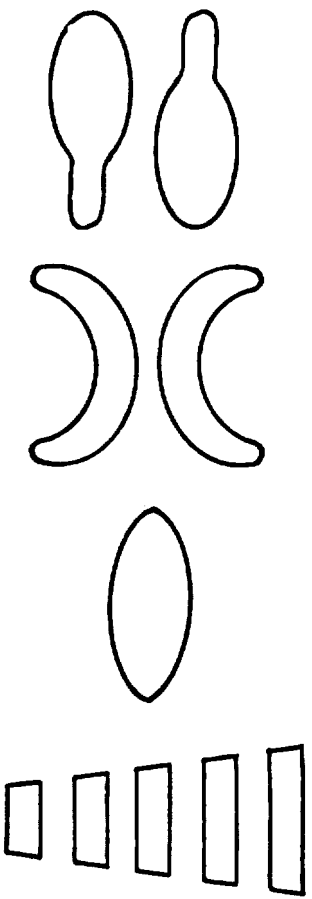
1. Attach air hose to gun at air inlet (10)
2. Attach cup or pressure feed to gun at material inlet
3. Adjust air pressure to desired amount at the Air Regulator
4. Adjust fluid volume by turning the fluid control screw (8) to the left or right.
5. Adjust to proper pattern by turning the fan control screw (18) to left or right.

The most efficient atomization air pressure is the lowest possible air pressure that will give the desired results.

A spraying distance of 6 to 12 inches from gun to work surface is recommended. The gun should be held perpendicular to the surface being coated.

The stroke should be started before the trigger is pulled and the trigger released before the end of each stroke.



TROUBLESHOOTING AND REPAIR		
PATTERN	TROUBLESHOCAUSE	CORRECTION
	<p>Dried Material in side port hole. re-stricts passage of air. Greater flow of air from clean side port hole forces fan pattern in direction of clogged side.</p>	<p>Dissolve material in side ports with thinner. Do not use metal instrument</p>
	<p>Dried material build-up on the outside of the fluid nozzle tip restricts the passage of atomizing air at one point through the center opening of air nozzle. This pattern may be caused by loose air nozzle.</p>	<p>Remove air nozzle and clean off fluid tip, using rag, wet with thinner. Tighten air nozzle.</p>
	<p>A split spray or one that is heavy on each end and weak in middle by (1) too high an atomization air pressure, or (2) by too wide a spray pattern with thin material.</p>	<p>Reducing air pressure will correct cause (1). To correct cause (2), open fluid control needle, at the same time turn fan control in. This will reduce width of spray but will correct split spray pattern.</p>
	<p>1. Insufficient fluid in cup. 2. Obstructed fluid Passage or hose. 3. Loose or defective cup 4. Loose fluid tip or defective 5. Dry or worn packing (301 or loose packing nut 16).</p>	<p>1. Fill Cup 2. Clean 3. Retighten or replace 4. Retighten or replace . Lubricate or replace. Tighten.</p>
MAINTENANCE & CLEANING <p>Lubrication - Place a drop of light machine oil on:</p> <ol style="list-style-type: none"> fluid needle packing. air valve packing. fan control packing. trigger pivot point. <p>Coat the fluid control spring with petrolatum.</p> <p>Cleaning - Empty material from cup and replace with compatible thinner or solvent. Replace cup and spray in the usual manner to flush passage thoroughly and to clean tip of needle.</p> <p>To clean air and fluid nozzles, soak them in solvent to dissolve any dried material and blow clean with air.</p> <p>Never immerse gun in solvent beyond spray head.</p>		

**REG-FILT. SHUT-OFF
50-6518
OPERATING
&
MAINTENANCE INSTRUCTIONS**

Supply air inlet is a 1/2" NPT on the side of filter head (1).
The shut-off valve (7) on the side of filter (1) is filtered supply line pressure air.

Regulated filtered air is supplied thru the regulator (4) mounted on the side of filter (1). The regulator (4) is used to control the air pressure. Turn the adjustment rod on the regulator (4) out to decrease air pressure and in to increase air pressure. When desired air pressure is maintained, tighten locknut on the adjustment rod. Regulated filtered air is supplied to the shut-off valves (7) mounted on the side of the regulator (4). Regulated filtered air pressure is indicated on a pressure gauge (6) mounted on the regulator head.
Gauge reads in pounds per square inch (PSI) from 0-160 PSI.

The bowl of the filter (1) should be drained daily or whenever water accumulates in the bottom of the bowl. To drain, open the drain valve on the bottom of the valve. The filter should be disassembled and cleaned periodically.

**DISASSEMBLY OF FILTER FOR CLEANING AND
MAINTENANCE.**

CAUTION

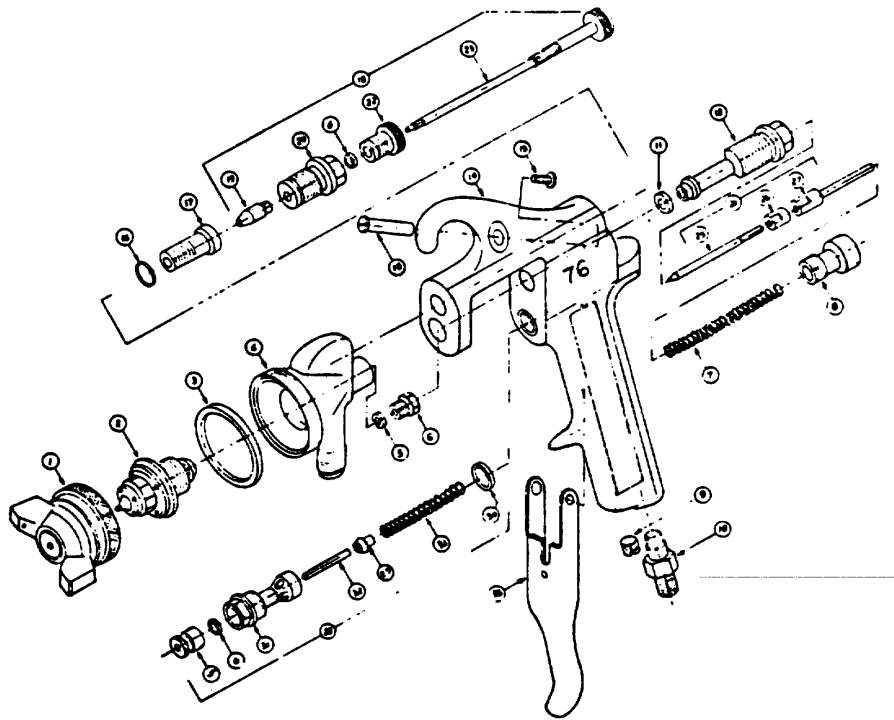
**Turn off the air supply before loosening or
removing any parts from this unit.**

FILTER DISASSEMBLY

Remove bowl and bowl guard by pressing lever and turning ring and remove parts by sliding off. Unscrew baffle to remove filter element. Clean element by tapping on hard surface and blowing off with air blow gun. To assemble follow above instructions in reverse.

REGULATOR MAINTENANCE

Occasionally unscrew plug and clean internal parts. Gauges (6), valves (7), mounting bracket (5) and fittings may be removed for cleaning or replacing by unscrewing from filter (1) or regulator (4).



**PARTS LIST, '76 GUN
50-6510**

Item No.	Part No.	Description	Qty.
1	50-6509	Air Nozzle Assy.	1
2	43-15-1-4	Fluid Nozzle	1
3	4-4437	Gasket	1
4	20-5972	Gun Head	1
5	4-4301	Packing	3
6	20-5961	Packing Nut	2
7	3.4359	Fluid Control Spring	1
8	20-5660	Fluid Control Screw	1
9	5.07-21-8	Plug	1
10	20-5572	Air Connection	1
11	4-4438	Fluid Control Gasket	1
12	20-5962	Fluid Control Housing	1
13	1-4348	Trigger Screw	1
14	20-5973	Handle	1
15	1-4342	Trigger Stud	1
16	4-4420	Gasket	1
17	20-5963	Screw. Gun Head Mtg.	1
18	50-6513	Air Control Assy.	1
19	20-5964	Air Control Head	1
20	20-5974	Body Air Control	1
22	20-5965	Air Control Screw	1
23	50-6506	Air Control Assy.	1
24	50-6507	Needle Assy.	1
25	20-5966	Needle	1
26	20-5967	Locknut	1
27	20-5968	Locknut Extension	1

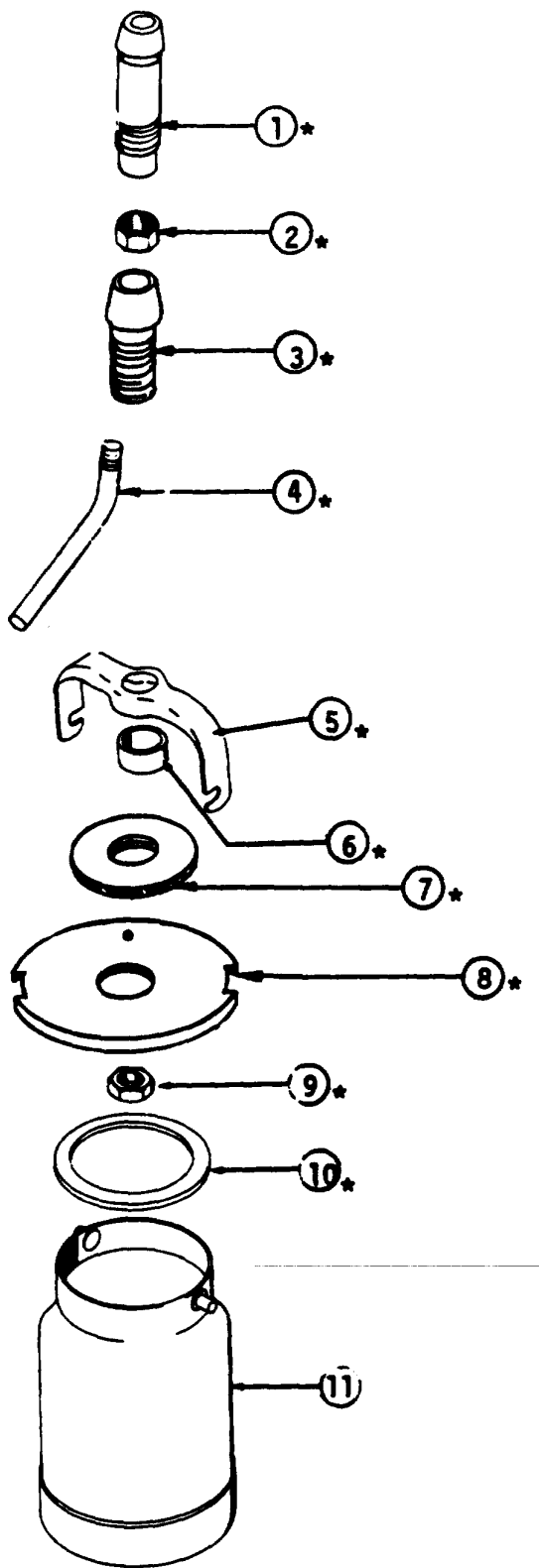
Item No.	Part No.	Description	Qty.
28	50-6511	Air Valve Assy.	1
29	20-5654	Air Valve	
31	20-5977	Air Valve Body	1
32	20-5651	Air Valve Stem	1
33	34358	Air Valve Spring	1
34	4-4440	Air Valve Gasket	1
35	50-6508	Trigger	1

**50-6512
PACKING KIT**

3	44437	Gasket	1
5	44301	Packing	3

**50-6520
SPARE PARTS KIT**

3	4-4437	Gasket	1
5	4-4301	Packing	3
7	3-4359	Fluid Control Spring	1
11	4-4438	Fluid Control Gasket	1
13	14348	Trigger Screw	1
15	1-4342	Trigger Stud	1
16	4.4420	Gasket	1
19	20-5964	Air Control Head	1
25	20-5966	Needle	1
29	20-5654	Air Valve	1
32	20-5651	Air Valve Stem	1
33	3-4358	Spring, Air Valve	1
34	4-4440	Gasket. Air Valve	1



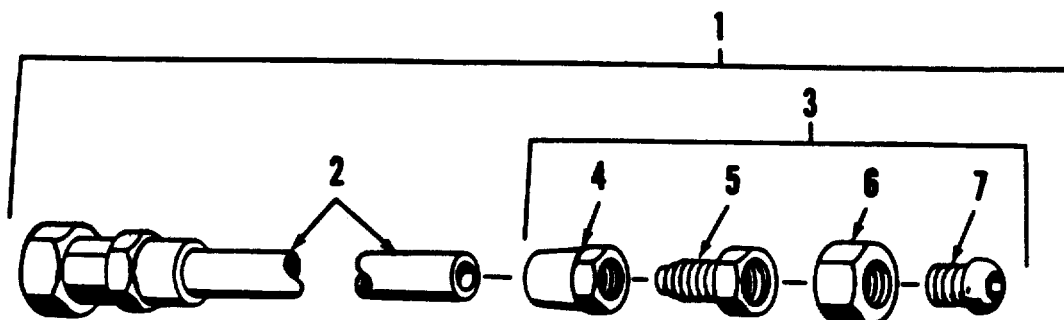
<u>Item No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	50-6515	Cover Ass'y.	1
1.	20-5980	Stem	1
2.	20-4584	Nut, Swivel	1
3.	20-5981	Adapter	1
4.	20-5979	Fluid Tube	1
5.	20-5985	Yoke	1
6.	20-5982	Spacer	1
7.	20-5978	Lockring	1
8.	20-5984	Cover	1
9.	1-1015-2	Nut, Brass	1
10.	4-4441	Gasket	1
11.	20-5986	Cup, 1 qt.	1

**NOTE: 50-6515 Cover Assembly
Items 1 thru 10 ***

**OPERATION & MAINTENANCE: KEEP
VENT HOLE IN COVER FREE FROM
CLOGGED MATERIAL. PERIODICALLY,
DISASSEMBLE UNIT AND CLEAN ALL
PARTS IN SOLVENT.**

AIR HOSE

PART NO. 7-116-125



1	Hose Assembly	7-116-125
2	Hose	7-102-1
3	Connector Assembly	50-4360-1
4	Sleeve	20-4590
5	Stem	20-4586
6	Nut	20-4325
7	Seat	20-4585

CAUTION

Do not immerse hoses in solvent.

INSPECTION: Flex hose sideways while checking for cracks. Check hoses for leaks under air pressure of 125 p.s.i.

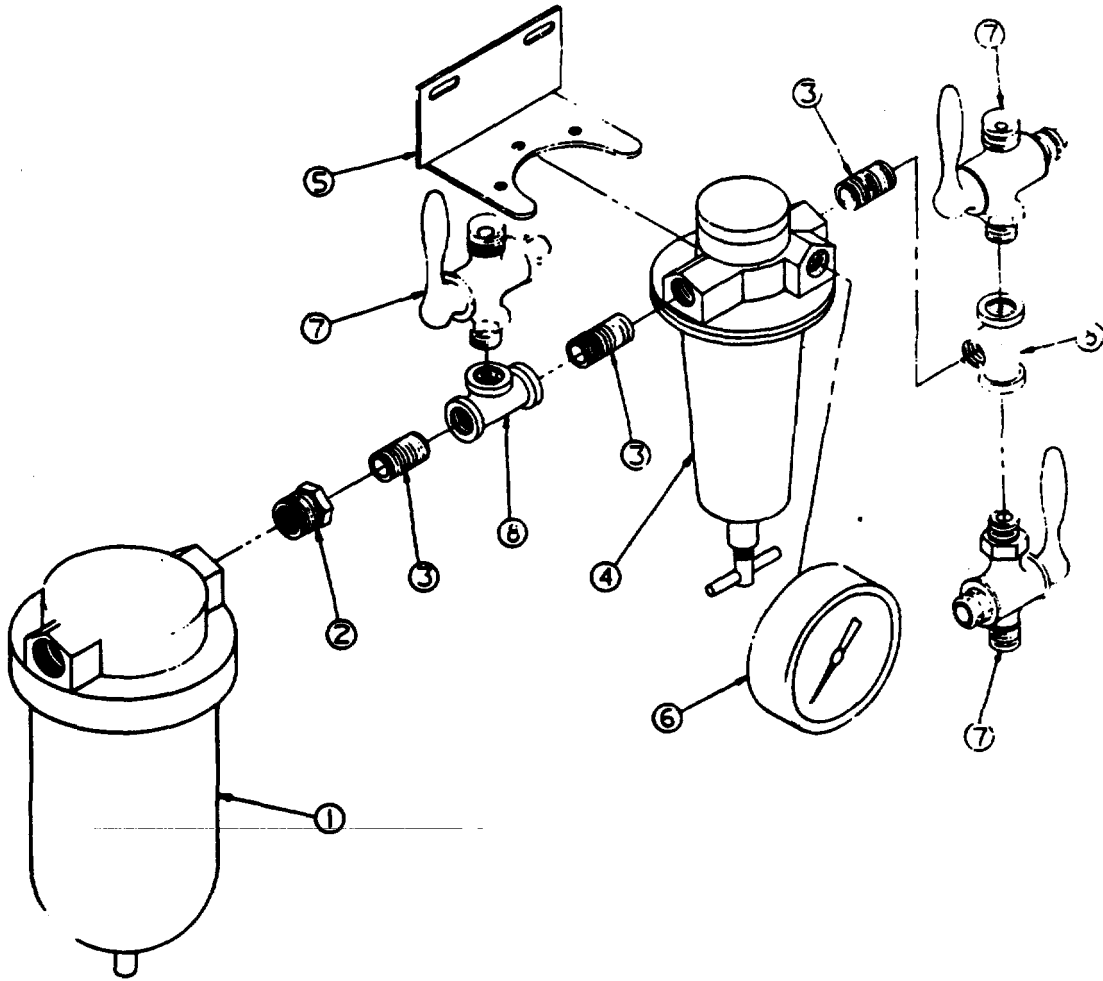
REPAIR: Any hose which is split at the end can be cut back as far as necessary with a sharp knife and the hose connector attached to the new end.

REASSEMBLY:

1. Slide sleeves (4) on ends of hoses (2).
2. Screw stem (5) into sleeve (4).
3. Insert setscrew (7) through nut (6) and screw seat (7) into sleeves (4).

FILTER--REGULATOR--SHUT-OFF ASSEMBLY

50-6518



Item No.	Part No.	Description	Qty.
1	6-4424	Filter	1
2	5-0842-8	Reducer	1
3	5-00-207-8	Nipple	3
4	6-4423	Regulator	1
5	11-5687	Bracket	1
6	6-4348-160	Gauge	1
7	5-10-4	Shut-off Cock	3
8	5-03-222-8	Tee	2

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***U.S. GOVERNMENT PRINTING OFFICE: 1982 0-380-451 (82)**

U.S. ARMY ADJUTANT GENERAL PUBLICATIONS CENTER, ST. LOUIS, MO, 1985

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PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.					
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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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