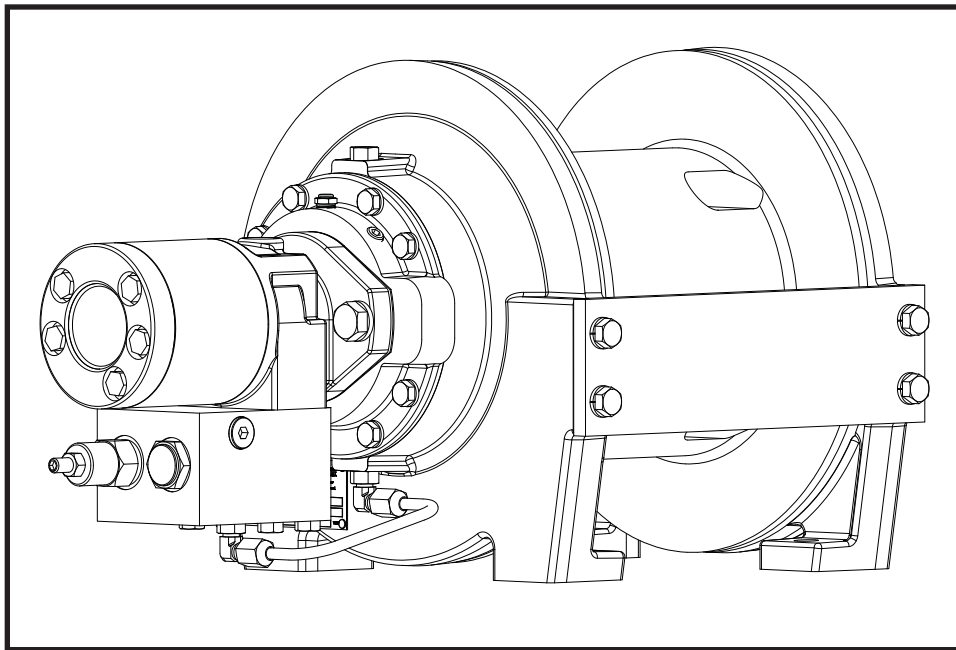


# BRADEN

# BG4B

## MATERIAL LIST



**PACCAR** WINCH DIVISION  
P.O. BOX 547 BROKEN ARROW, OK U.S.A. 74013  
PHONE (918) 251-8511 FAX (918) 259-1575  
[www.paccarwinch.com](http://www.paccarwinch.com)

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## MODEL CODE DESCRIPTION

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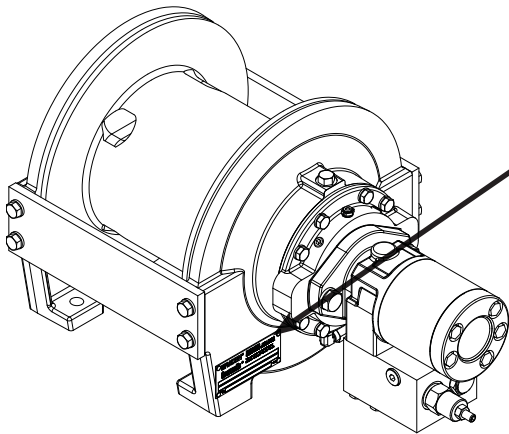
**BG 4 B - 05 119 - 01 H**

<b>BG</b>	-	Braden Gearmatic hoist
<b>4</b>	-	Weight Rating for first Layer Line Pull
<b>B</b>	-	Design evolution designation
<b>05</b>	-	Overall Gear Ratio (50:1)
<b>119</b>	-	Hydraulic Motor Displacement (1.19 cu in/ REV)
<b>01</b>	-	Drum Option
<b>H</b>	-	High intermittent load option (5,000 lbs)

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### TO ORDER PARTS:

1. List model and serial numbers of the winch.
2. Refer to drawings and select the component(s) needed and list the item number(s).
3. Find item number(s) on material list; show part number, description and quantity required on your order.
4. Refer to parts price list and show price for each part or assembly.



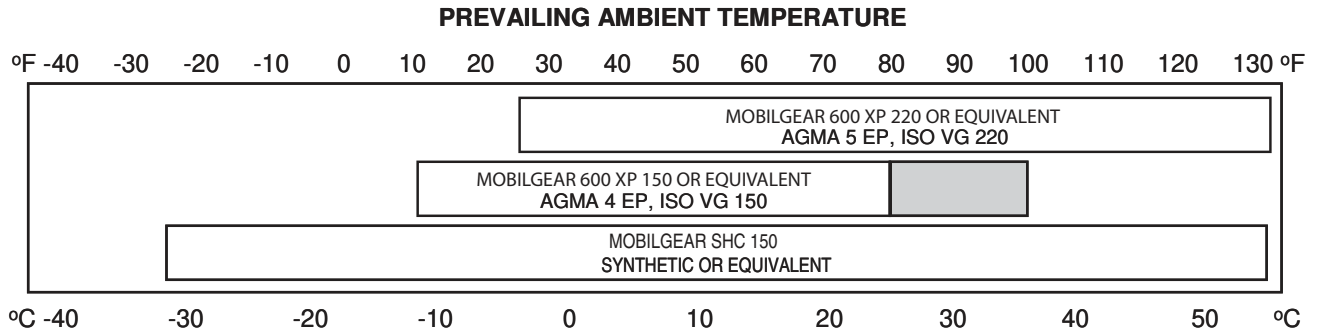
MODEL NUMBER  
SERIAL NUMBER

The BRADEN BG4B winch has the model and serial numbers stamped into the brake cylinder endplate. Always reference both of these numbers when ordering replacement parts. Our goal is to ship the correct parts, the first time.

## RECOMMENDED PLANETARY GEAR OIL

Field experience, supported by engineering endurance tests, indicates the use of the proper gear oil and a program of regular preventive maintenance will help provide extended gear train life and reliable winch brake performance. For this reason, BRADEN has published the following specifications to assist in determining which lubricant is best suited to your application. For simplicity, BRADEN has listed available products in each temperature range that have been tested and found to meet our specifications. This is not to say that other lubricant brands would not perform equally as well.

If the following lubricant brands are not available in your area, make certain your lubricant vendor supplies you with oil that is equivalent to those products listed below.



**NOTE:** SHADED TEMPERATURE RANGE IN THE CHART ABOVE NOT RECOMMENDED FOR SEVERE APPLICATIONS SUCH AS: OFFSHORE CRANES, SUSTAINED FAST DUTY CYCLES OR FREQUENT LIFTING.

Planetary hoists are factory filled with Mobilgear 600 XP 150, or equivalent. Consult your oil supplier for other equivalent oils if required.

Mobil	Shell	Chevron	Texaco
Mobilgear 600 XP 150	Omala 150	Gear Compounds EP 150	Meropa 150
Mobilgear 600 XP 220	Omala 220	Gear Compounds EP 220	Meropa 220

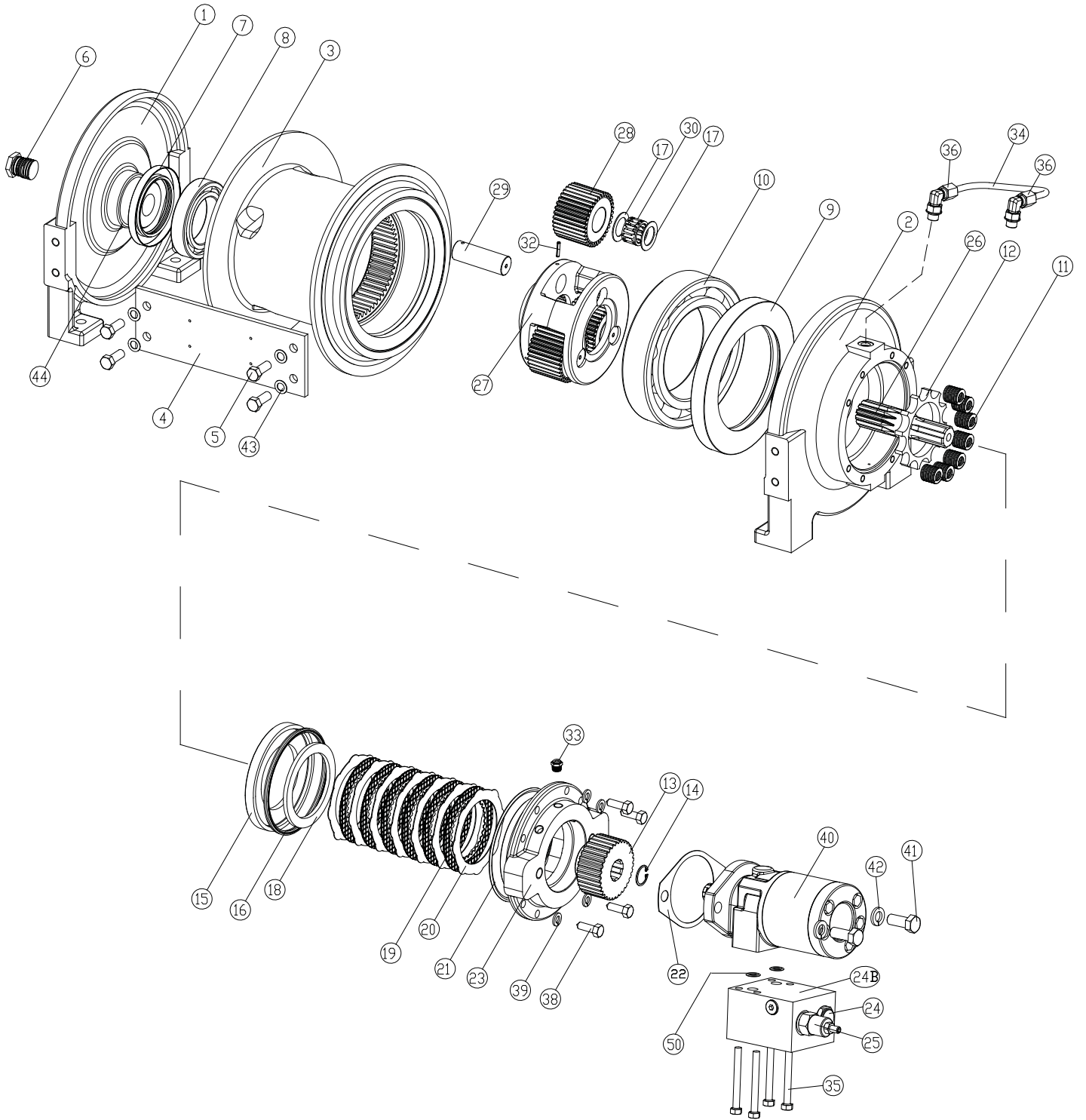
Unless otherwise specified, it is recommended that the gear oil be changed after the first one hundred (100) hours or thirty (30) days of machine operation, then every one thousand (1,000) hours or twelve (12) months, whichever occurs first. The gear oil should also be changed whenever the ambient temperature changes significantly and an oil from a different temperature range would be more appropriate.

A warm-up procedure is recommended at each start-up and is essential at ambient temperatures below +40°F (4°C).

The prime mover should be run at its lowest recommended RPM with the hydraulic winch control valve in neutral allowing sufficient time to warm up the system. The winch should then be operated at low speeds, forward and reverse, several times to prime all lines with warm hydraulic oil and to circulate gear lubricant through the planetary gear sets.

If you have any questions regarding your BRADEN planetary winch, please contact the BRADEN Product Support Department at 1-918-251-8511, Monday through Friday from 08:00 to 16:30 hours CT, or by fax at 1-918-259-1575.

# BG4B COMPONENTS

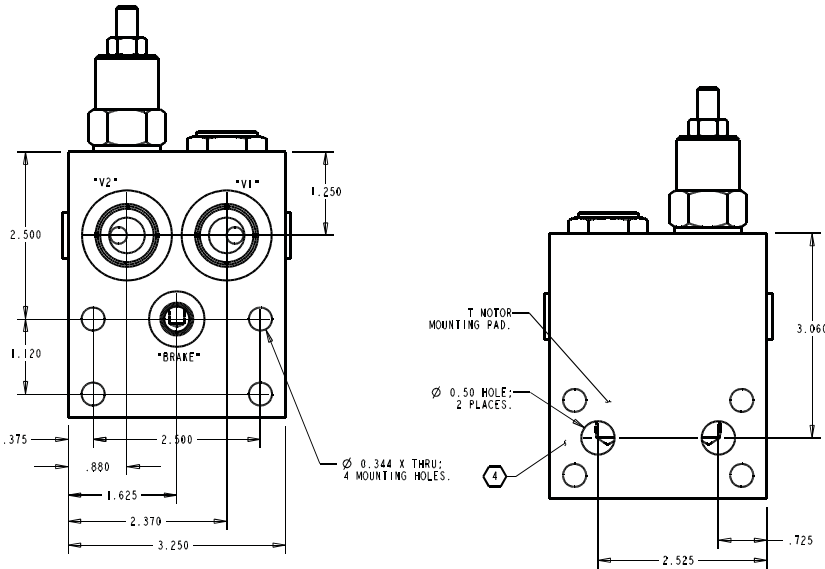


ITEM	PART NO.	DESCRIPTION	QTY
1	29962	BEARING SUPPORT ENDPLATE	1
2	29933	BRAKE CYLINDER ENDPLATE	1
3	29960	CABLE DRUM	1
4	29983	TIEPLATE	2
5	104309	CAPSCREW (3/8 - 16 X 1 HEX HD GD8)	8
6	26705	SIGHT GUAGE	1
7	25582	OIL SEAL	1
8	25917	BALL BEARING	1
9	25918	OIL SEAL	1
10	26998	BALL BEARING	1
11	26094	SPRING	8
	26094	SPRING ("H" VERSION)	12
12	100136	SPRING LOCATOR	1
13	29929	BRAKE COUPLING	1
14	27535	SNAP RING	1
15	25552	SPRING PLATE	1
16	25594	U-CUP SEAL	1
17	27718	THRUST RACE	6
18	25550	BRAKE PLATE SPACER	1
19	25541	FRICTION DISC	8
20	102314	BRAKE DISC	9
21	70138	O-RING	1
22	23108	GASKET - MOTOR	1
23	105706	MOTOR ADAPTER	1
24A	****	MANIFOLD BLOCK	1
24	****	PILOT OPERATED CHECK VALVE	-
25	****	COUNTERBALANCE VALVE	-
26	29928	SUN GEAR	1
27	100130	PRIMARY PLANET CARRIER	1
28	100001	PRIMARY PLANET GEAR	3
29	26993	PRIMARY PLANET GEAR SHAFT	3
30	27717	ROLLER BEARING	3
32	22824	ROLLPIN	3
33	18062	RELIEF VALVE/VENT (7.5 - 15 PSI)	1
34	106358	TUBE ASSEMBLY (4.15 center to center)	1
	29984	TUBE ASSEMBLY (1.84 center to center)	1
	25750	HOSE ASSEMBLY (-4 JIC X 17.00)	1
	25936	HOSE ASSEMBLY (-4 JIC X 10.00)	1
35	106032	CAPSCREW (5/16 - 18 X 3 HEX HD GD8)	4
	27622	CAPSCREW (5/16 - 18 X 3-1/2 HEX HD GD8)	4
	22522	CAPSCREW (5/16 - 18 X 2-1/2 SOCKET HD GD8)	4
	69338	CAPSCREW (5/16 - 18 X 4-1/2 SOCKET HD GD8)	4
36	25302	ELBOW FITTING	2
38	11767	CAPSCREW (5/16 - 18 X 1 HEX HD GD8)	8
39	11024	LOCKWASHER (5/16 SPLIT)	8
40	100138	HYD MOTOR (11.9 CU/IN)	1
	101214	HYD MOTOR (8.0 CU/IN)	1
	105246	HYD MOTOR (3.6 CU/IN)	1
	103316	HYD MOTOR (14.2 / 7.1 CU/IN)	1
	105602	HYD MOTOR (13.9 CU/IN)	1
	103629	HYD MOTOR (7.2 / 3.6 CU/IN)	1
41	104174	CAPSCREW (1/2 - 13 X 1 1/4 HEX HD GD8)	2
42	11026	LOCKWASHER (1/2 SPLIT)	2
43	27152	LOCKWASHER (3/8 SPLIT)	8
44	12034	RETAINING RING	1
46	11842	DRIVE SCREW (NOT SHOWN)	4
49	26095	CABLE WEDGE (NOT SHOWN)	1
50	12463	O-RING, VALVE BLOCK TO MOTOR	2

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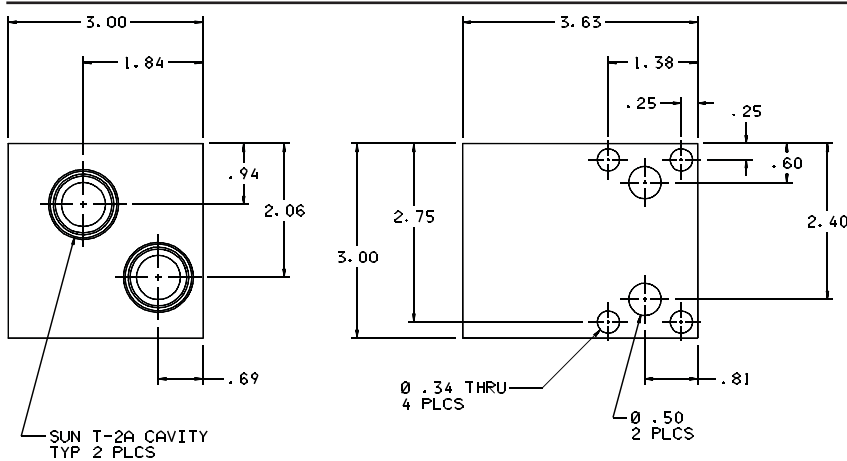
SEE FOLLOWING PAGE FOR DETAILS

ITEM	DESCRIPTION	PART NO.	QTY
24	BRAKE VALVE ASSEMBLY, EATON	106180	1
	COUNTERBALANCE VALVE CARTRIDGE	106684	1
	SEAL KIT FOR COUNTERBALANCE VALVE CARTRIDGE	63985	1
	PILOT OPERATED CHECK CARTRIDGE	106204	1
	SEAL KIT FOR PILOT OPERATED CHECK CARTRIDGE	63984	1
24A	BRAKE VALVE MANIFOLD (USED W/SUN COUNTERBALANCE VALVE))	40045	1
	COUNTERBALANCE VALVE CARTRIDGE (SUN)	27258	2
	SEAL KIT FOR COUNTERBALANCE VALVE CARTRIDGE	29872	2



Dimensions in Inches

Part No. 106180 (EATON)



Dimensions in Inches

Part No. 40045 (USED WITH SUN COUNTERBALANCE VALVE CARTRIDGES)

## BG4B MOTORS

PART	DESCRIPTION
101214	8.0 Cu. In. Hyd Motor (Parker)
100138	11.9 Cu. In. Hyd Motor (Parker)
105602	13.9 Cu. In. Hyd Motor (Parker)

**62605 - SEAL KIT**

<b>PART NO</b>	<b>DESCRIPTION</b>	<b>QTY</b>
25582	OIL SEAL	1
25918	OIL SEAL	1
25594	U-CUP SEAL	1
70138	O-RING	1
25727	O-RING	1
12463	O-RING	2
23108	GASKET	1

**64582 - BRAKE DISC PACK**

<b>PART NO</b>	<b>DESCRIPTION</b>	<b>QTY</b>
102314	STEEL SEPARATOR DISC	9
25541	FRICITION DISC	8
26094	SPRING	8

**64583 - BEARING KIT**

<b>PART NO</b>	<b>DESCRIPTION</b>	<b>QTY</b>
25917	BEARING	1
26998	BEARING	1
27718	THRUST WASHER	6
27717	ROLLER BEARING	3
22824	ROLL PIN	3
26993	PLANET GEAR SHAFT	3

# METRIC CONVERSION TABLE

## English to Metric

## Metric to English

English to Metric			Metric to English		
<b>LINEAR</b>					
inches (in.)	X 25.4	= millimeters (mm)	millimeters (mm)	X 0.3937	= inches (in.)
feet (ft.)	X 0.3048	= meters (m)	meters (m)	X 3.281	= feet (ft.)
miles (mi.)	X 1.6093	= kilometers (km)	kilometers (km)	X 0.6214	= miles (mi.)
<b>AREA</b>					
inches <sup>2</sup> (sq.in.)	X 645.15	= millimeters <sup>2</sup> (mm <sup>2</sup> )	millimeters <sup>2</sup> (mm <sup>2</sup> )	X 0.000155	= inches <sup>2</sup> (sq.in.)
feet <sup>2</sup> (sq.ft.)	X 0.0929	= meters <sup>2</sup> (m <sup>2</sup> )	meters <sup>2</sup> (m <sup>2</sup> )	X 10.764	= feet <sup>2</sup> (sq.ft.)
<b>VOLUME</b>					
inches <sup>3</sup> (cu.in.)	X 0.01639	= liters (l)	liters (l)	X 61.024	= inches <sup>3</sup> (cu.in.)
quarts (qts.)	X 0.94635	= liters (l)	liters (l)	X 1.0567	= quarts (qts.)
gallons (gal.)	X 3.7854	= liters (l)	liters (l)	X 0.2642	= gallon (gal.)
inches <sup>3</sup> (cu.in.)	X 16.39	= centimeters <sup>3</sup> (cc)	centimeters <sup>3</sup> (cc)	X 0.06102	= inches <sup>3</sup> (cu.in.)
feet <sup>3</sup> (cu.ft.)	X 28.317	= liters (l)	liters (l)	X 0.03531	= feet <sup>3</sup> (cu.ft.)
feet <sup>3</sup> (cu.ft.)	X 0.02832	= meters <sup>3</sup> (m <sup>3</sup> )	meters <sup>3</sup> (m <sup>3</sup> )	X 35.315	= feet <sup>3</sup> (cu.ft.)
fluid ounce (fl.oz.)	X 29.57	= milliliters (ml)	milliliters (ml)	X 0.03381	= fluid ounce (fl.oz.)
<b>MASS</b>					
ounces (oz.)	X 28.35	= grams (g)	grams (g)	X 0.03527	= ounces (oz.)
pounds (lbs.)	X 0.4536	= kilograms (kg)	kilograms (kg)	X 2.2046	= pounds (lbs.)
tons (2000 lbs.)	X 907.18	= kilograms (kg)	kilograms (kg)	X 0.001102	= tons (2000 lbs.)
tons (2000 lbs.)	X 0.90718	= metric tons (t)	metric tons (t)	X 1.1023	= tons (2000 lbs.)
tons (long) (2240 lbs.)	X 1013.05	= kilograms (kg)	kilograms (kg)	X 0.000984	= tons (long) (2240 lbs.)
<b>PRESSURE</b>					
inches Hg (60°F)	X 3600	= kilopascals (kPa)	kilopascals (kPa)	X 0.2961	= inches Hg (60°F)
pounds/sq.in. (PSI)	X 6.895	= kilopascals (kPa)	kilopascals (kPa)	X 0.145	= pounds/sq.in. (PSI)
pounds/sq.in. (PSI)	X 0.0703	= kilograms/sq.cm. (kg/cm <sup>2</sup> )	kilograms/sq.cm. (kg/cm <sup>2</sup> )	X 14.22	= pounds/sq.in. (PSI)
pounds/sq.in. (PSI)	X 0.069	= bars	bars	X 14.5	= pounds/sq.in. (PSI)
inches H <sub>2</sub> O (60°F)	X 0.2488	= kilopascals (kPa)	kilopascals (kPa)	X 4.0193	= inches H <sub>2</sub> O (60°F)
bars	X 100	= kilopascals (kPa)	kilopascals (kPa)	X 0.01	= bars
<b>POWER</b>					
horsepower (hp)	X 0.746	= kilowatts (kW)	kilowatts (kW)	X 1.34	= horsepower (hp)
ft.-lbs./min.	X 0.0226	= watts (W)	watts (W)	X 44.25	= ft.-lbs./min.
<b>TORQUE</b>					
pound-inches (in.-lbs.)	X 0.11298	= newton-meters (N-m)	newton-meters (N-m)	X 8.851	= pound-inches (in.-lbs.)
pound-feet (ft.-lbs.)	X 1.3558	= newton-meters (N-m)	newton-meters (N-m)	X 0.7376	= pound-feet (ft.-lbs.)
pound-feet (ft.-lbs.)	X .1383	= kilograms/meter (kg-m)	kilogram/meter (kg-m)	X 7.233	= pound-feet (ft.-lbs.)
<b>VELOCITY</b>					
miles/hour (m/h)	X 0.11298	= kilometers/hour (km/hr)	kilometers/hour (km/hr)	X 0.6214	= miles/hour (m/h)
feet/second (ft./sec.)	X 0.3048	= meter/second (m/s)	meters/second (m/s)	X 3.281	= feet/second (ft./sec.)
feet/minute (ft./min.)	X 0.3048	= meter/minute (m/min)	meters/minute (m/min)	X 3.281	= feet/minute (ft./min.)
<b>TEMPERATURE</b>					
°Celsius = 0.556 (°F - 32)			°Fahrenheit = (1.8°C) + 32		
<b>COMMON METRIC PREFIXES</b>					
mega	(M)	= 1,000,000 or 10 <sup>6</sup>	deci	(d)	= 0.1 or 10 <sup>-1</sup>
kilo	(k)	= 1,000 or 10 <sup>3</sup>	centi	(c)	= 0.01 or 10 <sup>-2</sup>
hecto	(h)	= 100 or 10 <sup>2</sup>	milli	(m)	= 0.001 or 10 <sup>-3</sup>
deka	(da)	= 10 or 10 <sup>1</sup>	micro	(μ)	= 0.000.001 or 10 <sup>-6</sup>