General Information

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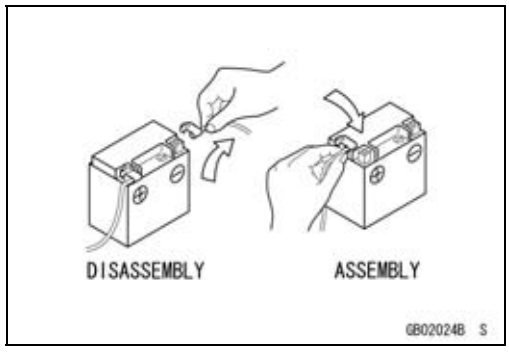
Before Servicing

Before starting to perform an inspection service or carry out a disassembly and reassembly operation on a motorcycle, read the precautions given below. To facilitate actual operations, notes, illustrations, photographs, cautions, and detailed descriptions have been included in each chapter wherever necessary. This section explains the items that require particular attention during the removal and reinstallation or disassembly and reassembly of general parts.

Especially note the following:

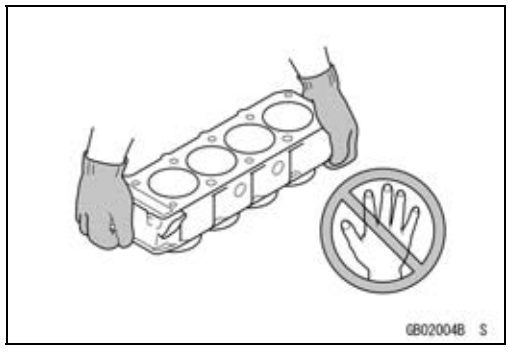
Battery Ground

Before completing any service on the motorcycle, disconnect the battery cables from the battery to prevent the engine from accidentally turning over. Disconnect the ground cable (–) first and then the positive (+). When completed with the service, first connect the positive (+) cable to the positive (+) terminal of the battery then the negative (–) cable to the negative terminal.



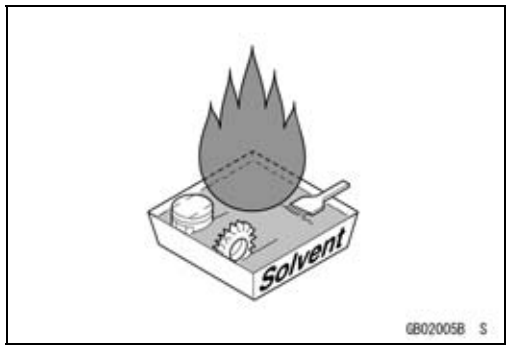
Edges of Parts

Lift large or heavy parts wearing gloves to prevent injury from possible sharp edges on the parts.



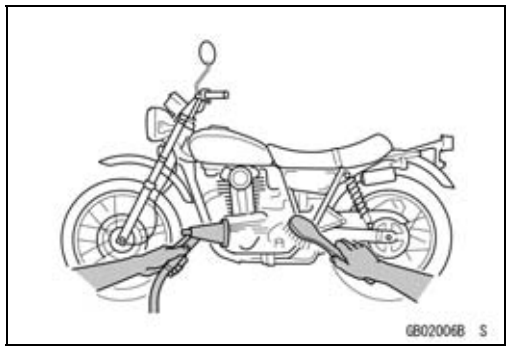
Solvent

Use a high flash-point solvent when cleaning parts. High flash-point solvent should be used according to directions of the solvent manufacturer.



Cleaning vehicle before disassembly

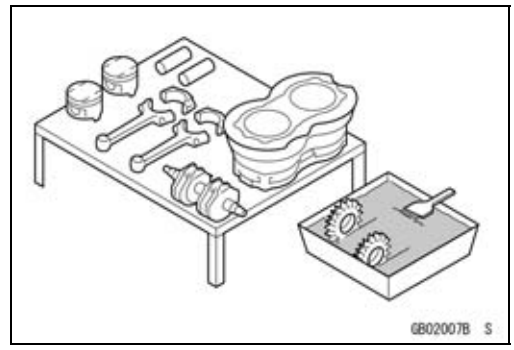
Clean the vehicle thoroughly before disassembly. Dirt or other foreign materials entering into sealed areas during vehicle disassembly can cause excessive wear and decrease performance of the vehicle.



Before Servicing

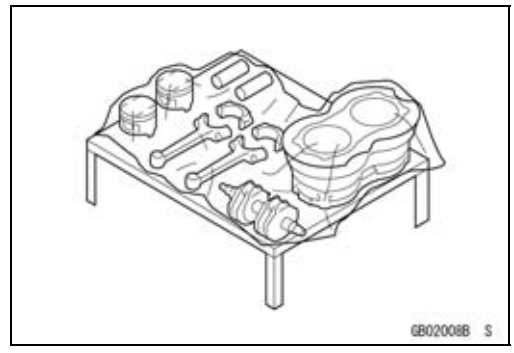
Arrangement and Cleaning of Removed Parts

Disassembled parts are easy to confuse. Arrange the parts according to the order the parts were disassembled and clean the parts in order prior to assembly.



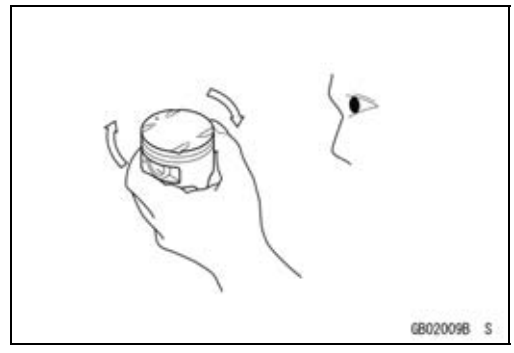
Storage of Removed Parts

After all the parts including subassembly parts have been cleaned, store the parts in a clean area. Put a clean cloth or plastic sheet over the parts to protect from any foreign materials that may collect before re-assembly.



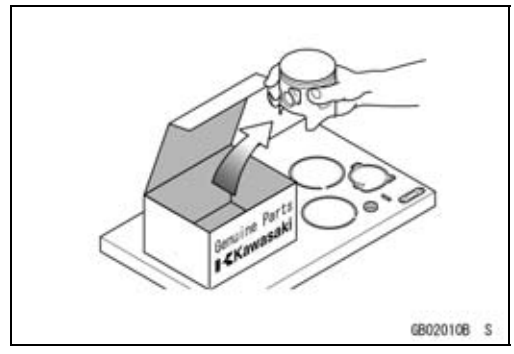
Inspection

Reuse of worn or damaged parts may lead to serious accident. Visually inspect removed parts for corrosion, discoloration, or other damage. Refer to the appropriate sections of this manual for service limits on individual parts. Replace the parts if any damage has been found or if the part is beyond its service limit.



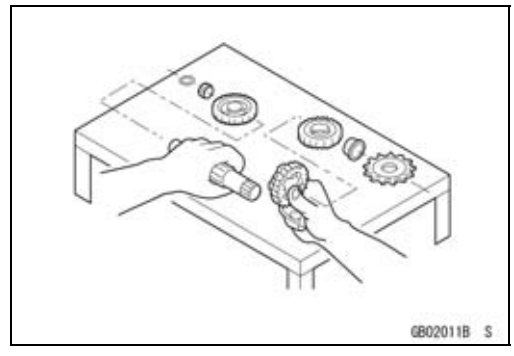
Replacement Parts

Replacement Parts must be KAWASAKI genuine or recommended by KAWASAKI. Gaskets, O-rings, Oil seals, Grease seals, circlips, cotter pins or self-locking nuts must be replaced with new ones whenever disassembled.



Assembly Order

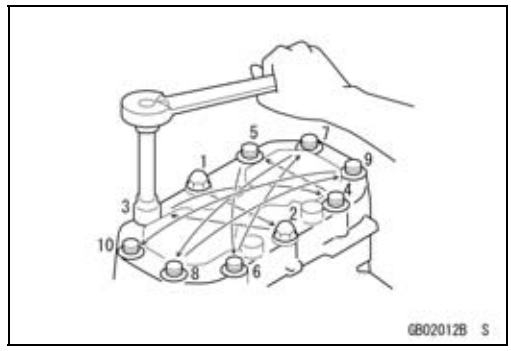
In most cases assembly order is the reverse of disassembly, however, if assembly order is provided in this Service Manual, follow the procedures given.



Before Servicing

Tightening Sequence

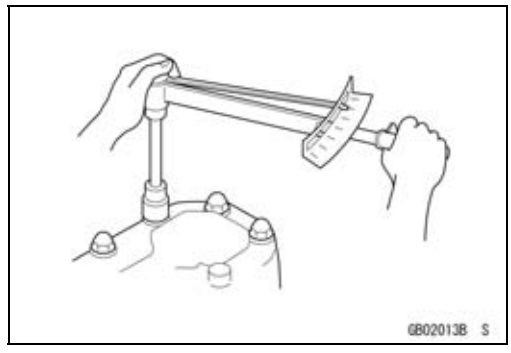
Generally, when installing a part with several bolts, nuts, or screws, start them all in their holes and tighten them to a snug fit. Then tighten them according to the specified sequence to prevent case warpage or deformation which can lead to malfunction. Conversely when loosening the bolts, nuts, or screws, first loosen all of them by about a quarter turn and them remove them. If the specified tightening sequence is not indicated, tighten the fasteners alternating diagonally.



Tightening Torque

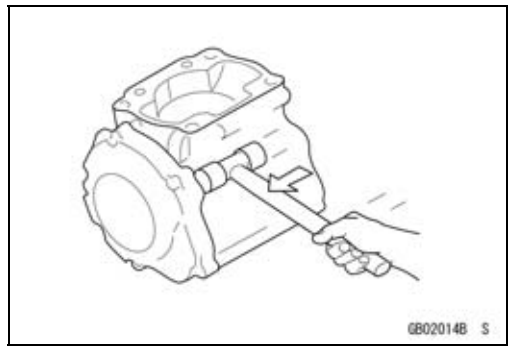
Incorrect torque applied to a bolt, nut, or screw may lead to serious damage. Tighten fasteners to the specified torque using a good quality torque wrench.

Often, the tightening sequence is followed twice-initial tightening and final tightening with torque wrench.



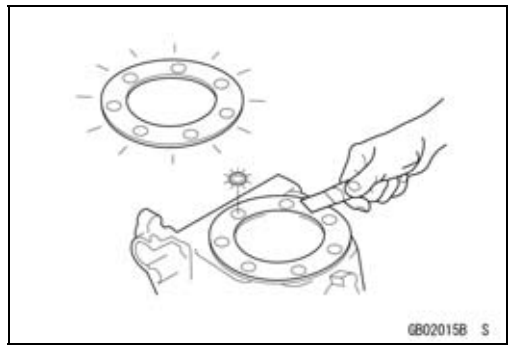
Force

Use common sense during disassembly and assembly, excessive force can cause expensive or hard to repair damage. When necessary, remove screws that have a non -permanent locking agent applied using an impact driver. Use a plastic-faced mallet whenever tapping is necessary.



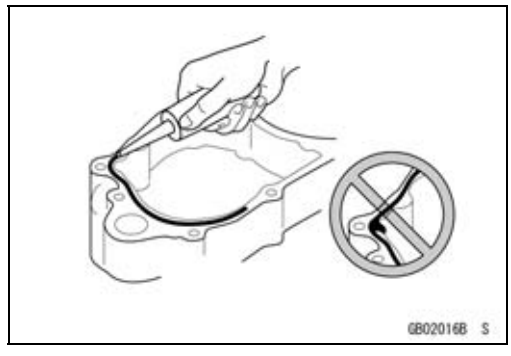
Gasket, O-ring

Hardening, shrinkage, or damage of both gaskets and O-rings after disassembly can reduce sealing performance. Remove old gaskets and clean the sealing surfaces thoroughly so that no gasket material or other material remains. Install new gaskets and replace the used O-rings when re-assembling.



Liquid Gasket, Non-permanent Locking Agent

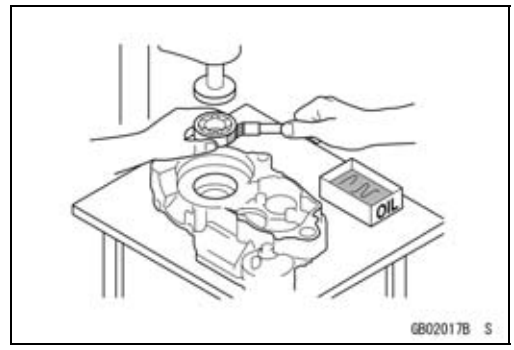
For applications that require Liquid Gasket or a Non-permanent Locking agent, clean the surfaces so that no oil residue remains before applying liquid gasket or Non-permanent locking agent. Do not apply them excessively. Excessive application can clog oil passages and cause serious damage.



Before Servicing

Press

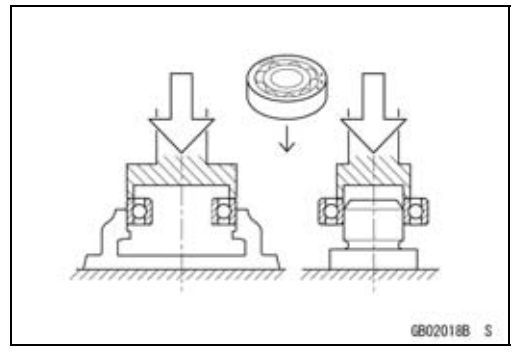
For items such as bearings or oil seals that must be pressed into place, apply small amount of oil to the contact area. Be sure to maintain proper alignment and use smooth movements when installing.



Ball Bearing and Needle Bearing

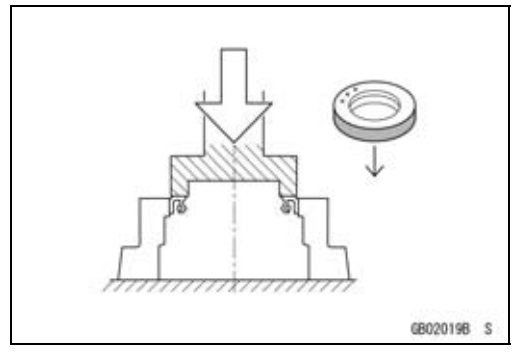
Do not remove pressed ball or needle unless removal is absolutely necessary. Replace with new ones whenever removed. Press bearings with the manufacturer and size marks facing out. Press the bearing into place by putting pressure on the correct bearing race as shown.

Pressing the incorrect race can cause pressure between the inner and outer race and result in bearing damage.

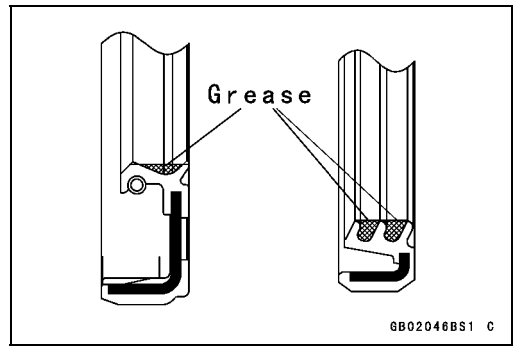


Oil Seal, Grease Seal

Do not remove pressed oil or grease seals unless removal is necessary. Replace with new ones whenever removed. Press new oil seals with manufacture and size marks facing out. Make sure the seal is aligned properly when installing.

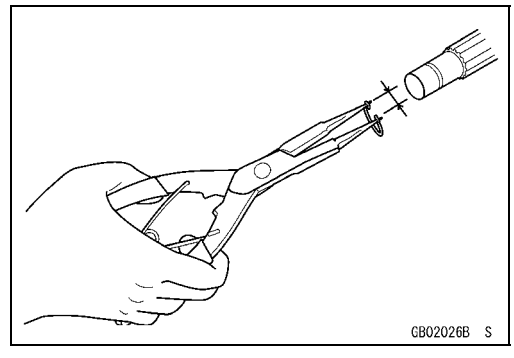


Apply specified grease to the lip of seal before installing the seal.



Circlips, Cotter Pins

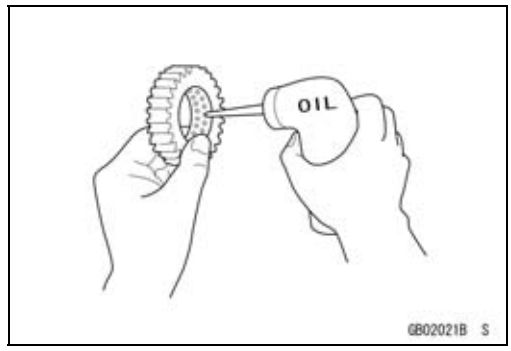
Replace circlips or cotter pins that were removed with new ones. Take care not to open the clip excessively when installing to prevent deformation.



Before Servicing

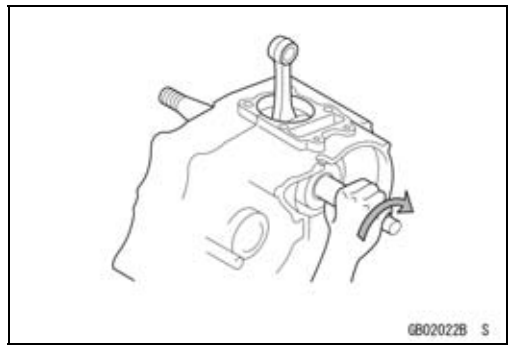
Lubrication

It is important to lubricate rotating or sliding parts during assembly to minimize wear during initial operation. Lubrication points are called out throughout this manual, apply the specific oil or grease as specified.



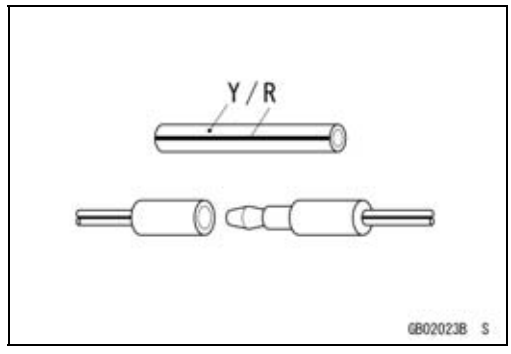
Direction of Engine Rotation

When rotating the crankshaft by hand, the free play amount of rotating direction will affect the adjustment. Rotate the crankshaft to positive direction (clockwise viewed from output side).



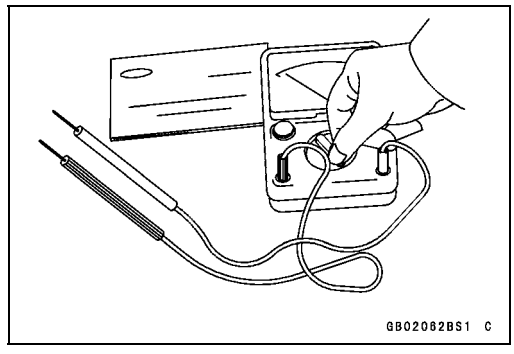
Electrical Leads

A two-color lead is identified first by the primary color and then the stripe color. Unless instructed otherwise, electrical leads must be connected to those of the same color.



Instrument

Use a meter that has enough accuracy for an accurate measurement. Read the manufacture's instructions thoroughly before using the meter. Incorrect values may lead to improper adjustments.



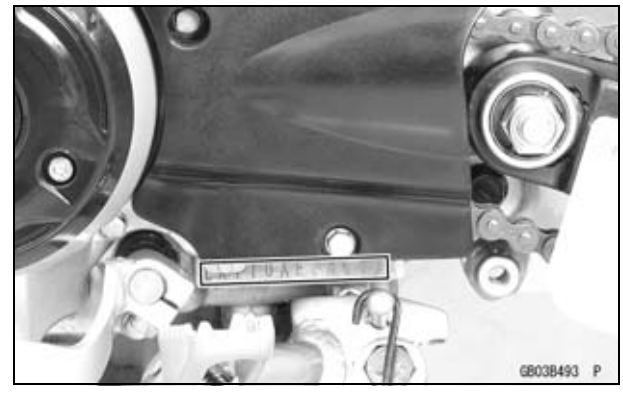
Model Identification

KLX110CA Left Side View

KLX110CA Right Side View

Frame Number

Engine Number



Model Identification

KLX110DA Left Side View

KLX110DA Right Side View

General Specifications

Items	KLX110CA ~ CE, KLX110DA ~ DE
Dimensions	
Overall Length	1 560 mm (61.42 in.)
Overall Width	650 mm (25.59 in.)
Overall Height:	
KLX110C	955 mm (37.60 in.)
KLX110D	990 mm (38.98 in.)
Wheelbase	1 075 mm (42.32 in.)
Road Clearance:	
KLX110C	215 mm (8.46 in.)
KLX110D	265 mm (10.4 in.)
Seat Height:	
KLX110C	680 mm (26.8 in.)
KLX110D	730 mm (28.7 in.)
Curb Mass:	76 kg (168 lb)
Front:	
KLX110C	35 kg (77 lb)
KLX110D	34 kg (75 lb)
Rear:	
KLX110C	41 kg (90 lb)
KLX110D	42 kg (93 lb)
Fuel Tank Capacity:	
KLX110CA ~ CC, KLX110DA ~ DC	3.8 L (1.0 US gal)
KLX110CD ~/DD ~	3.6 L (0.95 US gal)
Performance	
Minimum Turning Radius	–
Engine	
Type	4-stroke, single cylinder, SOHC
Cooling System	Air-cooled
Bore and Stroke	53.0 × 50.6 mm (2.09 × 1.99 in.)
Displacement	112 cm^3 (6.83 cu in.)
Compression Ratio	9.5 : 1
Carburetion System	Carburetor, KEIHIN PB18
Fuel Type:	
Minimum Octane Rating:	
Research Octane Number (RON)	(AU, EUR, TH) 91
Antiknock Index (RON + MON)/2	(US, CA) 87
Starting System	Kick starter and electric starter
Ignition System	Digital DC-CDI
Timing Advance	Electronically advanced
Ignition Timing	10° BTDC @1 300 r/min (rpm) ~ 31° BTDC @4 000 r/min (rpm)
Spark Plug	NGK CR6HSA

General Specifications

Items	KLX110CA ~ CE, KLX110DA ~ DE
Valve Timing:	
Inlet:	
Open	25° BTDC
Close	55° ABDC
Duration	260°
Exhaust:	
Open	60° BBDC
Close	20° ATDC
Duration	260°
Lubrication System	Forced lubrication (wet sump)
Engine Oil:	
Type	API SG, SH, SJ, SL or SM with JASO MA, MA1 or MA2
Viscosity	SAE 10W-40
Capacity	1.1 L (1.2 US qt)
Drive Train	
Primary Reduction System:	
Type:	
KLX110C	Gear, centrifugal
KLX110D	Gear
Reduction Ratio	3.409 (75/22)
Clutch Type:	
KLX110C	Centrifugal & wet, multi disc
KLX110D	Wet, multi disc
Transmission:	
Type	4-speed, constant mesh, return shift
Gear Ratios:	
1st	3.000 (36/12)
2nd	1.938 (31/16)
3rd	1.350 (27/20)
4th	1.087 (25/23)
Final Drive System:	
Type	Chain drive
Reduction Ratio	2.923 (38/13)
Overall Drive Ratio	10.832 @Top gear
Frame	
Type	Backbone
Steering Angle	45° to either side
Caster (rake angle):	
KLX110C	24.8°
KLX110D	24.2°
Trail:	
KLX110C	50 mm (2.0 in.)
KLX110D	47 mm (1.9 in.)

General Specifications

Items	KLX110CA ~ CE, KLX110DA ~ DE
Front Tire:	
Size	2.50-14 4P.R.
Make/Type	IRC, GS-45F, Tube
Rear Tire:	
Size	3.00-12 4P.R.
Make/Type	IRC, GS-45F, Tube
Rim Size:	
Front	14 × 1.40
Rear	12 × 1.60
Front Suspension:	
Type	Telescopic fork
Wheel Travel:	
KLX110C	110 mm (4.3 in.)
KLX110D	140 mm (5.5 in.)
Rear Suspension:	
Type	Swingarm
Wheel travel:	
KLX110C	110 mm (4.3 in.)
KLX110D	132 mm (5.2 in.)
Brake Type:	
Front and Rear	Drum
Electrical Equipment	
Battery	12 V 3 Ah
Alternator:	
Rated Output	6.4 A/14.0 V @10 000 r/min (rpm)

Specifications are subject to change without notice, and may not apply to every country.

Unit Conversion Table

Prefixes for Units:

Prefix	Symbol	Power
mega	M	× 1 000 000
kilo	k	× 1 000
centi	c	× 0.01
milli	m	× 0.001
micro	μ	× 0.000001

Units of Mass:

kg	×	2.205	=	lb
g	×	0.03527	=	oz

Units of Volume:

L	×	0.2642	=	gal (US)
L	×	0.2200	=	gal (IMP)
L	×	1.057	=	qt (US)
L	×	0.8799	=	qt (IMP)
L	×	2.113	=	pint (US)
L	×	1.816	=	pint (IMP)
mL	×	0.03381	=	oz (US)
mL	×	0.02816	=	oz (IMP)
mL	×	0.06102	=	cu in.

Units of Force:

N	×	0.1020	=	kg
N	×	0.2248	=	lb
kg	×	9.807	=	N
kg	×	2.205	=	lb

Units of Length:

km	×	0.6214	=	mile
m	×	3.281	=	ft
mm	×	0.03937	=	in.

Units of Torque:

N·m	×	0.1020	=	kgf·m
N·m	×	0.7376	=	ft·lb
N·m	×	8.851	=	in·lb
kgf·m	×	9.807	=	N·m
kgf·m	×	7.233	=	ft·lb
kgf·m	×	86.80	=	in·lb

Units of Pressure:

kPa	×	0.01020	=	kgf/cm²
kPa	×	0.1450	=	psi
kPa	×	0.7501	=	cmHg
kgf/cm²	×	98.07	=	kPa
kgf/cm²	×	14.22	=	psi
cmHg	×	1.333	=	kPa

Units of Speed:

km/h	×	0.6214	=	mph

Units of Power:

kW	×	1.360	=	PS
kW	×	1.341	=	HP
PS	×	0.7355	=	kW
PS	×	0.9863	=	HP

Units of Temperature:

$$\frac{9(°C+40)}{5} - 40 = °F \qquad \frac{5(°F+40)}{9} - 40 = °C$$