

# General Information

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## 1-2 GENERAL INFORMATION

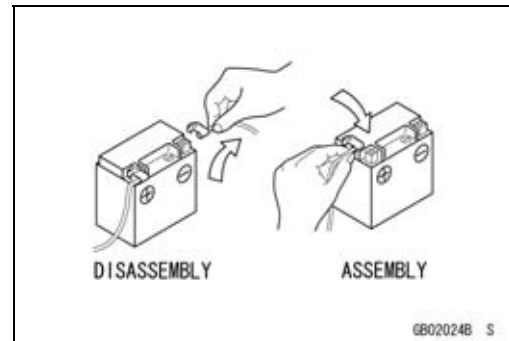
### Before Servicing

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:

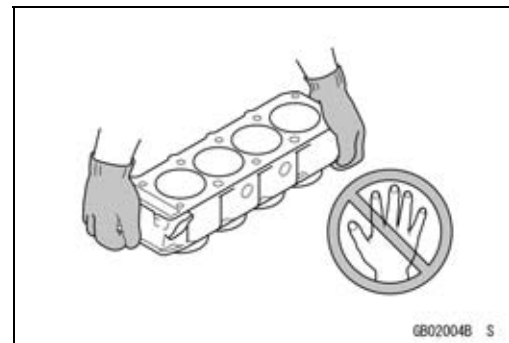
#### **Battery Ground**

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.



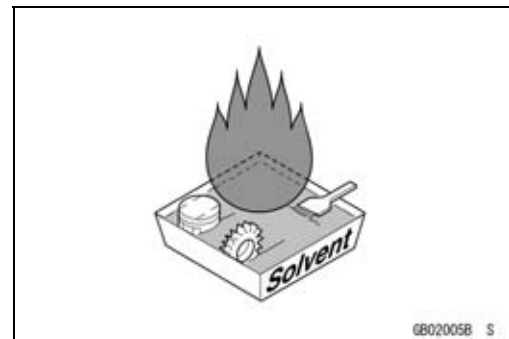
#### **Edges of Parts**

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



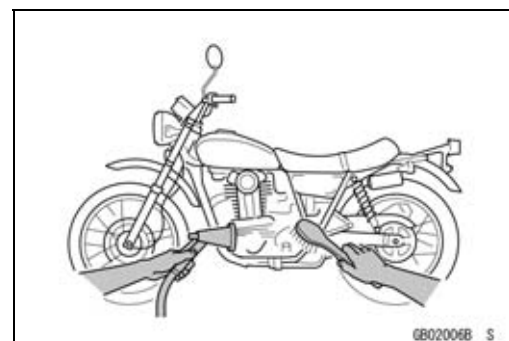
#### **Solvent**

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**

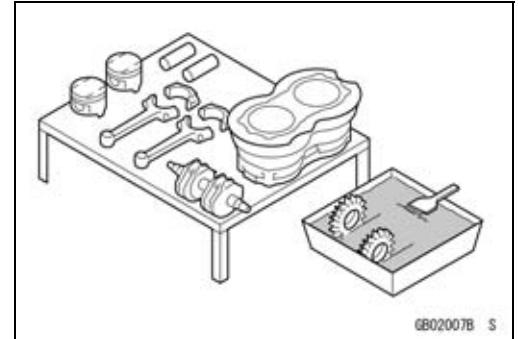
Clean the vehicle thoroughly before disassembly. Dirt or other foreign materials entering into sealed areas during vehicle disassembly can cause excessive wear and decrease performance of the vehicle.



## Before Servicing

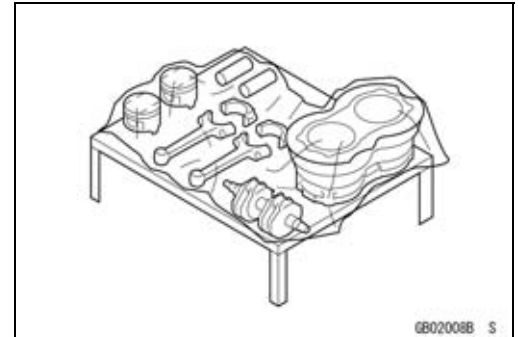
### Arrangement and Cleaning of Removed Parts

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.



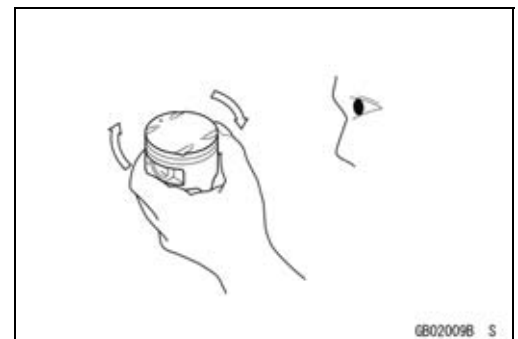
### Storage of Removed Parts

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.



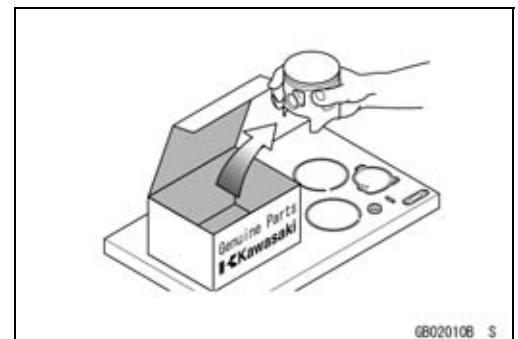
### Inspection

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.



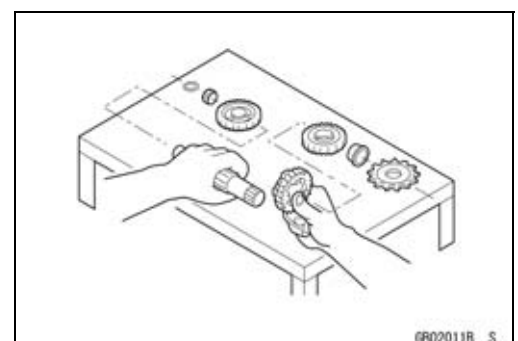
### Replacement Parts

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.

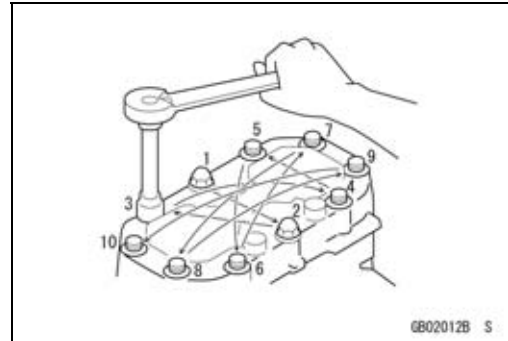


## 1-4 GENERAL INFORMATION

### Before Servicing

#### **Tightening Sequence**

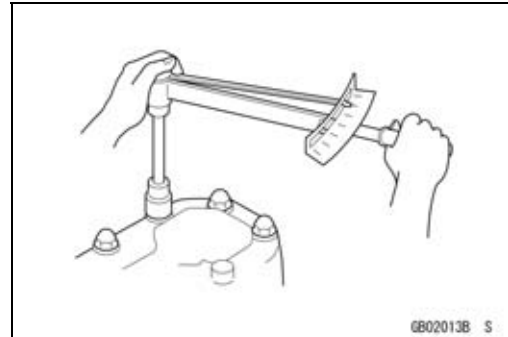
Generally, when installing a part with several bolts, nuts, or screws, start them all in their holes and tighten them to a snug fit. Then tighten them according to the specified sequence to prevent case warpage or deformation which can lead to malfunction. Conversely when loosening the bolts, nuts, or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



#### **Tightening Torque**

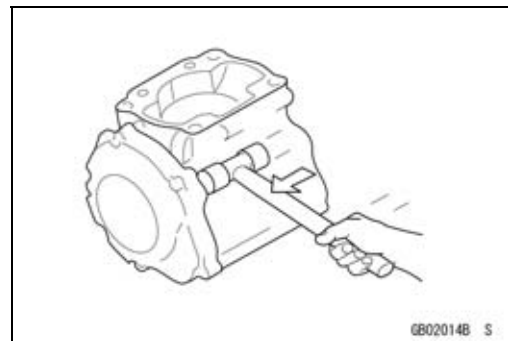
Incorrect torque applied to a bolt, nut, or screw may lead to serious damage. Tighten fasteners to the specified torque using a good quality torque wrench.

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



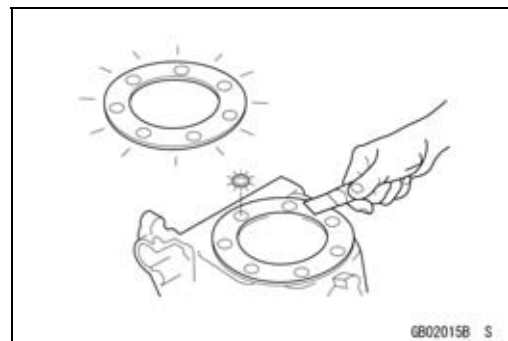
#### **Force**

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**

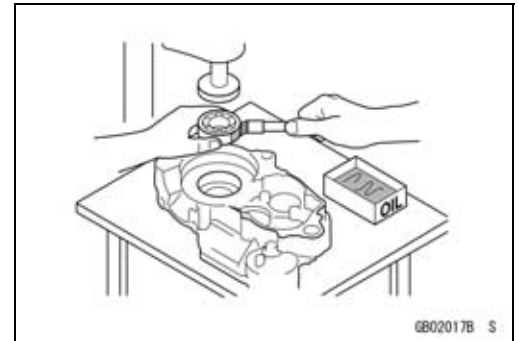
For applications that require Liquid Gasket or a Non-permanent Locking agent, clean the surfaces so that no oil residue remains before applying liquid gasket or Non-permanent locking agent. Do not apply them excessively. Excessive application can clog oil passages and cause serious damage.



**Before Servicing**

**Press**

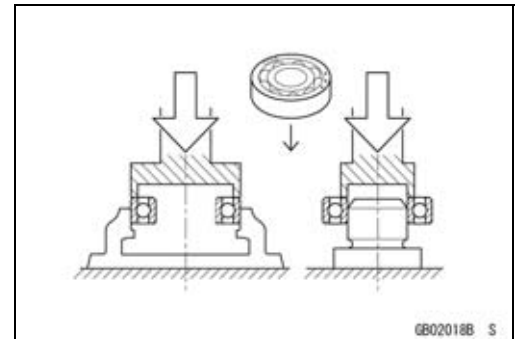
For items such as bearings or oil seals that must be pressed into place, apply small amount of oil to the contact area. Be sure to maintain proper alignment and use smooth movements when installing.



**Ball Bearing and Needle Bearing**

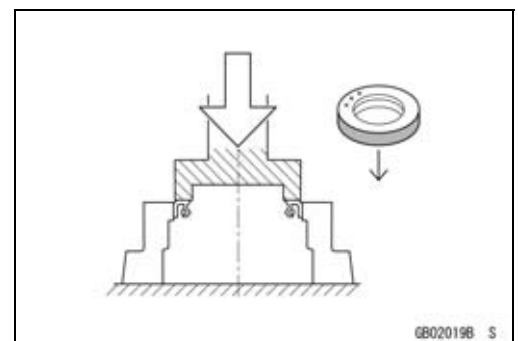
Do not remove pressed ball or needle unless removal is absolutely necessary. Replace with new ones whenever removed. Press bearings with the manufacturer and size marks facing out. Press the bearing into place by putting pressure on the correct bearing race as shown.

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

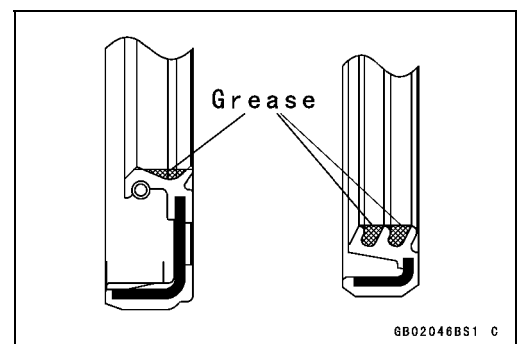


**Oil Seal, Grease Seal**

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.

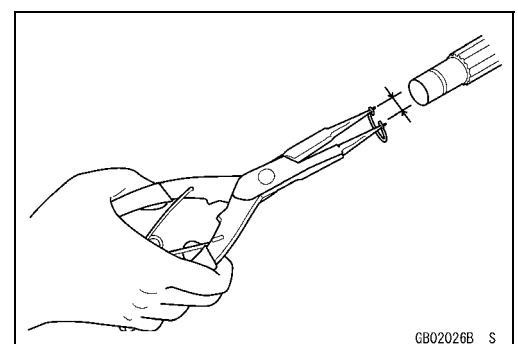


Apply specified grease to the lip of seal before installing the seal.



**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.

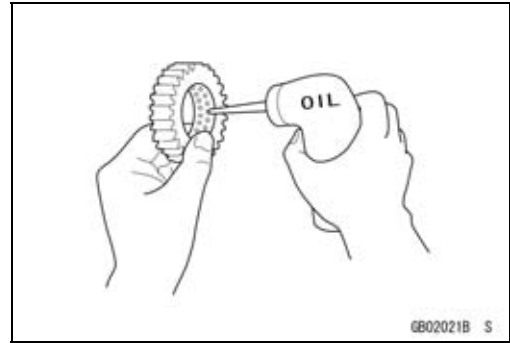


# 1-6 GENERAL INFORMATION

## Before Servicing

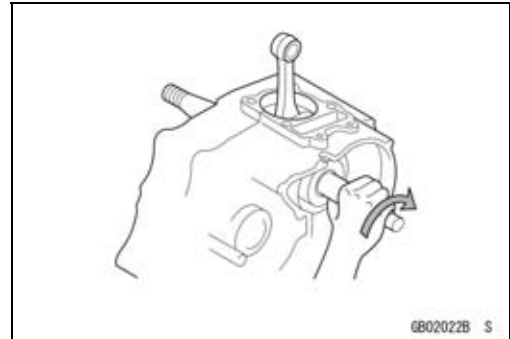
### **Lubrication**

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.



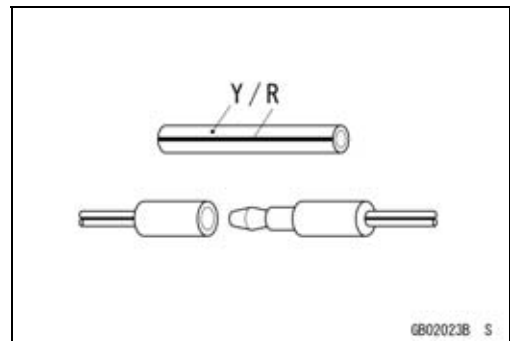
### **Direction of Engine Rotation**

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).



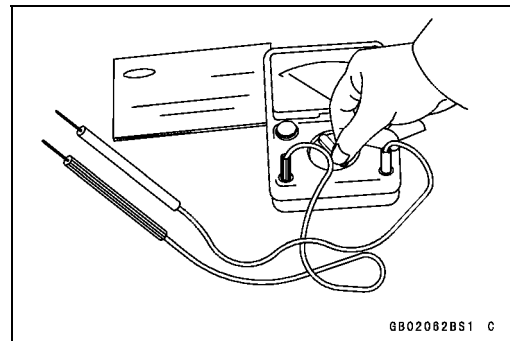
### **Electrical Leads**

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



## 1-8 GENERAL INFORMATION

### Model Identification

KLX110DA Left Side View



KLX110DA Right Side View





**General Specifications**

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

# 1-10 GENERAL INFORMATION

## General Specifications

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

# 1-12 GENERAL INFORMATION

## 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/cm <sup>2</sup>
kPa	×	0.1450	=	psi
kPa	×	0.7501	=	cmHg
kgf/cm <sup>2</sup>	×	98.07	=	kPa
kgf/cm <sup>2</sup>	×	14.22	=	psi
cmHg	×	1.333	=	kPa

### Units of Speed:

km/h	×	0.6214	=	mph
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### Units of Power:

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

### Units of Temperature:

