

Cadman

POWER EQUIPMENT

Limited

AGRICULTURAL MACHINERY & IRRIGATION EQUIPMENT

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DO-MAN-PUMP-UG

Upgrade Instructions - Mechanical Seal

Creation		Revision	
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Introduction

We would like to thank you for purchasing the **DODA Pump Mechanical Seal Upgrade Kit**. This upgrade kit will improve the seal of your pump.

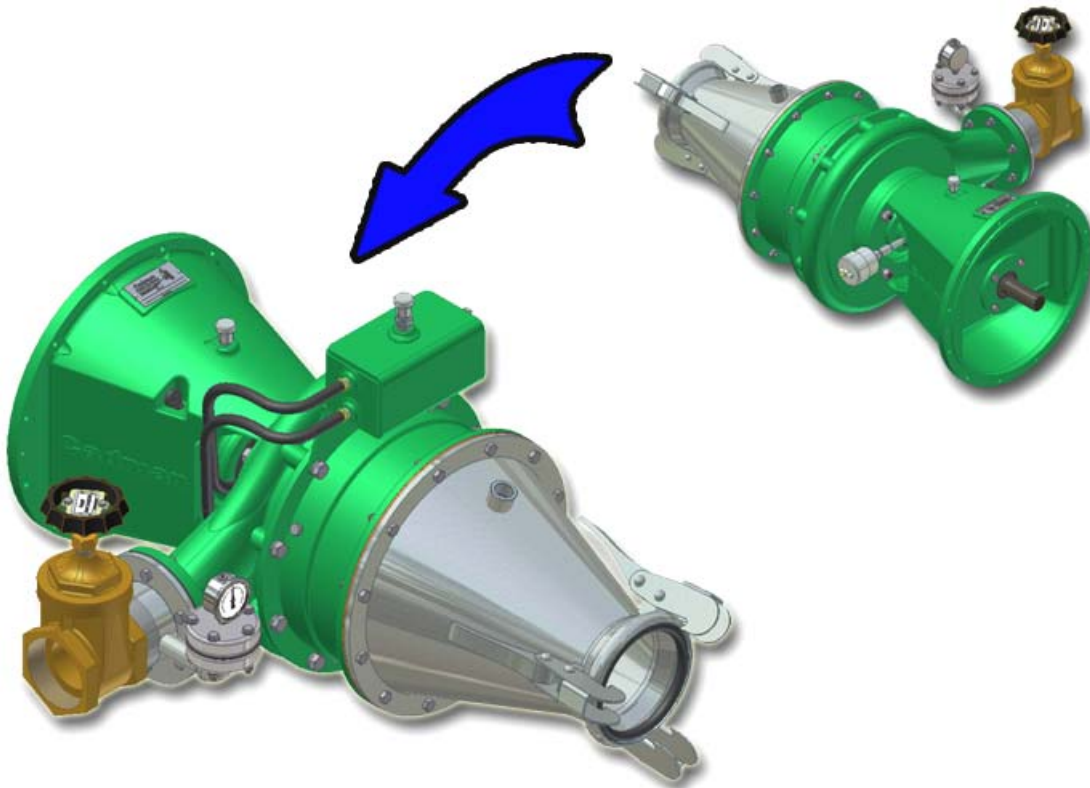


Figure 1 - Upgrading your DODA Pump

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BEFORE attempting to install this **DODA Pump Mechanical Seal Upgrade Kit**, inspect for damaged or missing parts. **REPORT ANY DAMAGE TO CADMAN POWER EQUIPMENT LIMITED OR YOUR LOCAL DEALER IMMEDIATELY!**

Kit Contents

The following shows the contents required to complete the DODA Pump Mechanical Seal Upgrade.

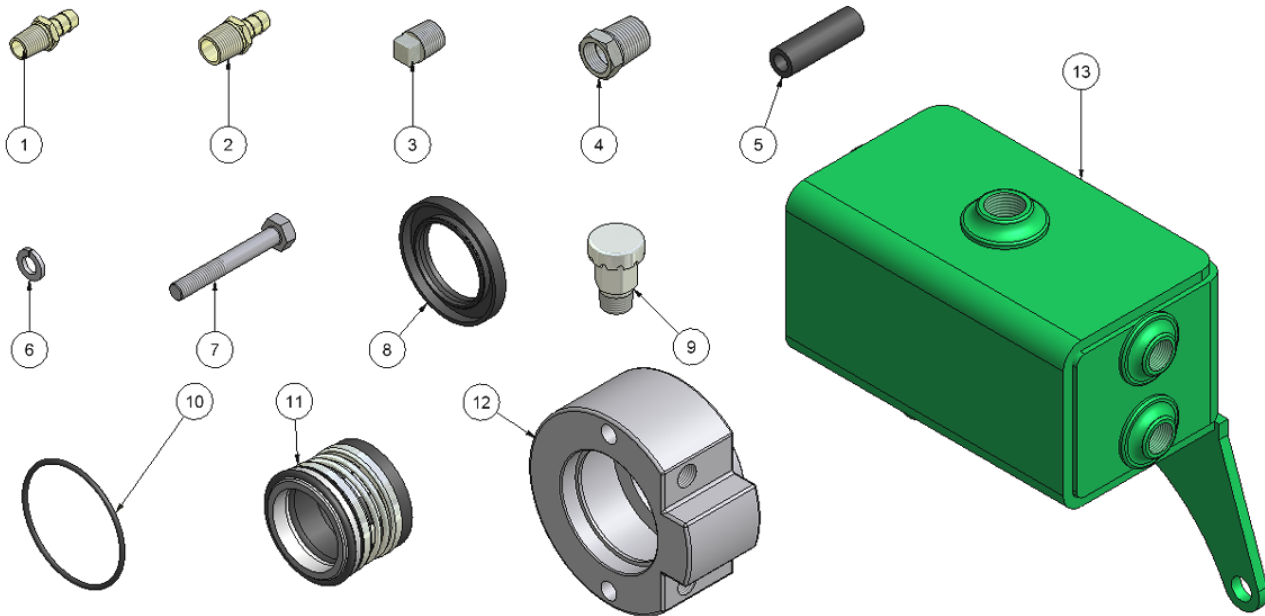


Figure 2 - Kit Contents

Img-00220.png

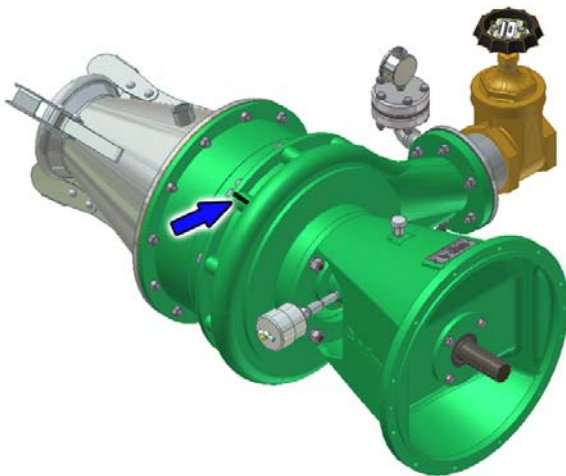
Item	Description	Part Number	Qty
1	1/4 NPT-M X 3/8 HOSE BARB	25-WHD-10006B104	2
2	3/8 NPT-M X 3/8 HOSE BARB	25-WHD-10006B106	2
3	3/8 NPT PLUG, GALVANIZED	40-NPT-PLG038G	2
4	3/4 – 3/8 NPT REDUCER BUSHING, GALVANIZED	40-NPT-RB050X038G	1
5	3/8 NEOPRENE FUEL LINE	50-039	4 ft.
6	10mm LOCK WASHER, STAINLESS STEEL	88-WSR-LOCM10	2
7	M10-1.50 X 70mm BOLT, STAINLESS STEEL	88-BLT-M10150X070	2
8	45 X 68 X 8 DOUBLE LIPPED PUMP SEAL	DO-PRT-35007	1
9	AIR VENT – 3/8 NPT	DO-PRT-35014	1
10	GLAND O-RING 3/32 X 2 5/8 X 2 13/16	DO-PRT-35015	1
11	45mm T-2100 MECHANICAL SEAL	DO-PRT-35042	1
12	SEAL GLAND	DO-PRT-35043-E	1
13	RESERVOIR WELDMENT – DODA PUMP	DO-PRT-35046	1
14	TERESSO #68 OIL (Not Shown)	85-LUB-OIL/TERESSO68	1.5 L
15	Shim – Stainless Steel (Not Shown)	DO-PRT-35021	1

Disassemble

To replace the existing seal system with the new mechanical seal complete the following steps.

Step 1

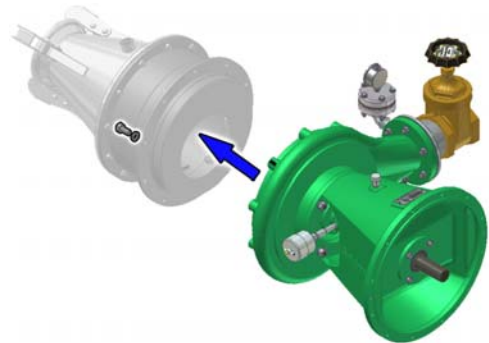
Mark the volute and extension prior to disassembly. This will greatly improve the reassembly procedure.



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Step 2

Once the volute and volute extension have been marked, remove the volute extension. This may require a block of wood and a hammer. Carefully work around the entire extension. Set part aside carefully after removal.

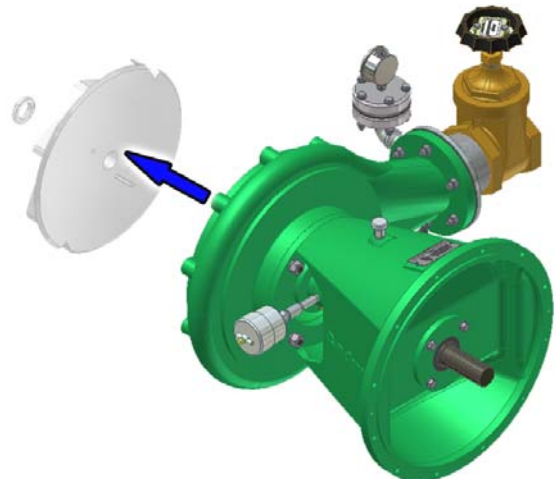


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Step 3

Remove the impeller locknut, impeller, and impeller key.

You may be required to use two (2) M10-1.50 bolts to remove the impeller. Simply install the bolts in the provided holes. Once the bolts have reached the volute, turn each bolt a 1/2 turn at a time until the impeller separates from the shaft.

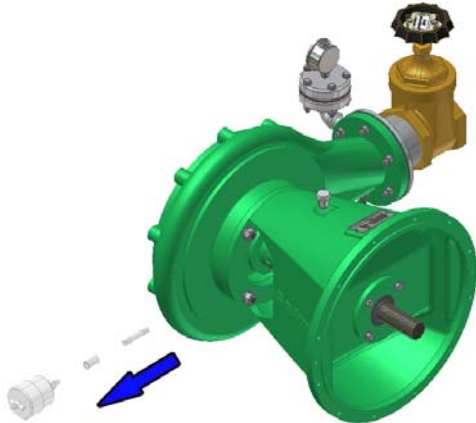


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Step 4

Remove the grease cup, coupler, and nipple.

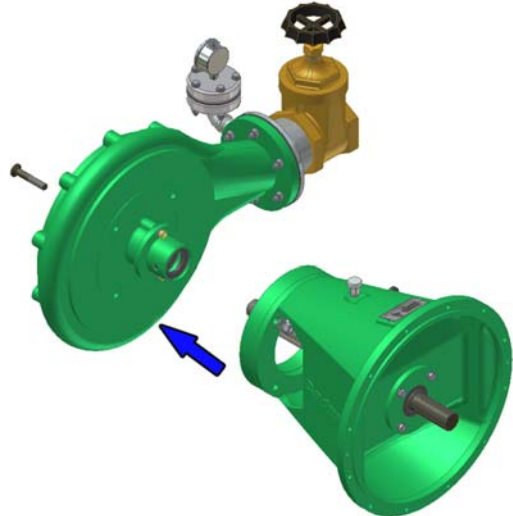
These three (3) parts are no longer required.



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Step 5

Now remove the volute from the SAE 3 mount spacer.

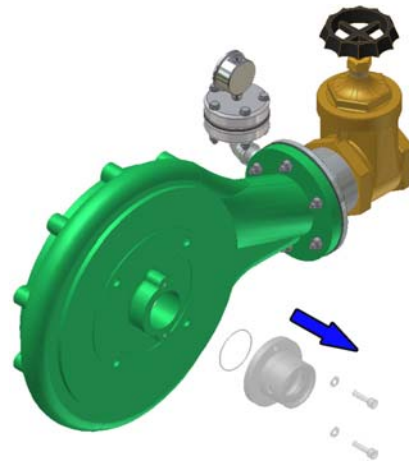


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Step 6

Remove the two (2) bolts that attach the seal gland. Now remove the seal gland and the o-ring.

The seal gland, seals, o-ring, washers, and bolts are no longer required.



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Step 7

Thoroughly clean all mating surfaces of the volute, volute extension, and seal gland mount. Inspect the shaft for excessive wear. If wear is present you will be required to replace or repair the shaft. Contact your local dealer or **Cadman Power Equipment Limited** for more information.

Install New Mechanical Seal

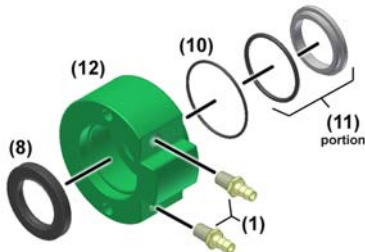
You are now ready to install the new mechanical seal.



CAUTION: Hardened seal faces are brittle, treat seal with care. Failure to properly handle seal will result in seal damage.

Step 1

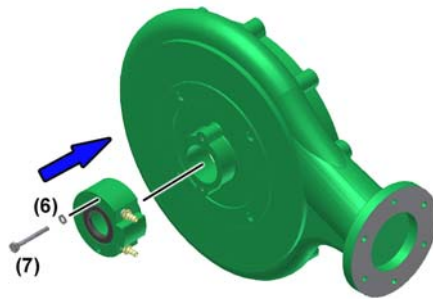
Preassemble the new seal gland. Ensure that item 11 is correctly oriented. Only install the portion of the mechanical seal (11) shown at this time.



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Step 2

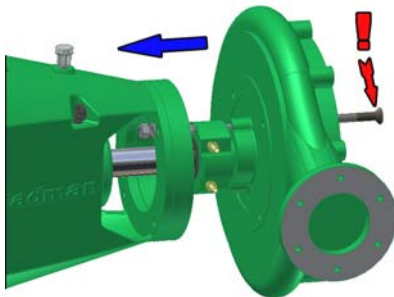
Loosely install the seal gland to the volute. Use the fasteners provided.



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Step 3

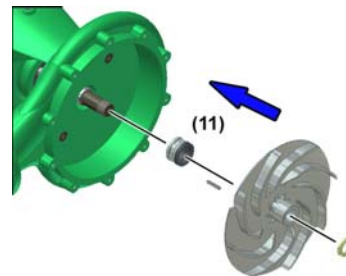
Reinstall the volute to the SAE 3 mount spacer. Be careful while guiding the seal gland on the shaft. Reuse the original mounting bolts.



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Step 4

Insert the remaining portion of the mechanical seal (11) with the rubber end of the mechanical seal facing the impeller. Ensure that the mechanical seal (11) is fully seated on the shaft before installing the impeller. If require return to step 2 and loosen the seal gland. Then insert the impeller key. Then slide the impeller on the shaft. Now tighten impeller lock nut.



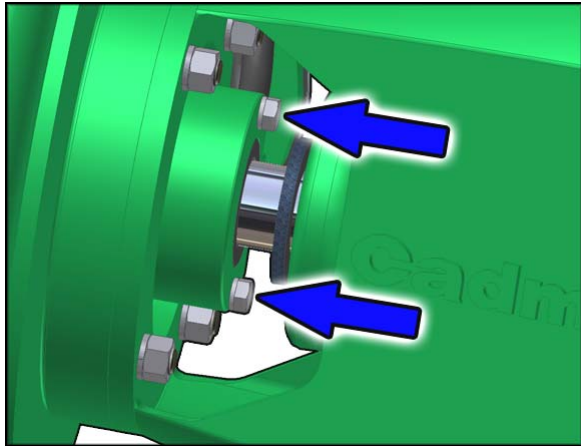
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Use silicone to seal bolts to the volute to prevent air leaks. Failure to properly seal the bolt will result in loss of suction.

Step 5

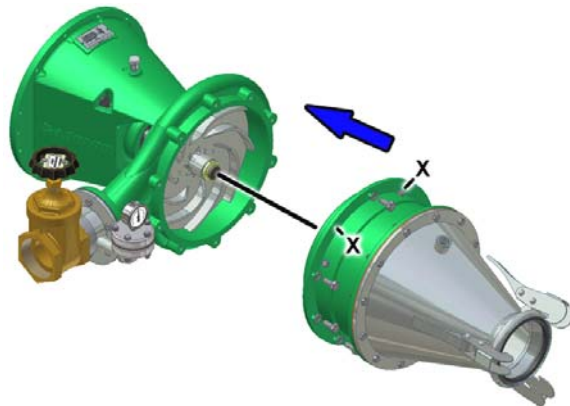
Tighten the seal gland bolts once you have completed step four (4).



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Step 6

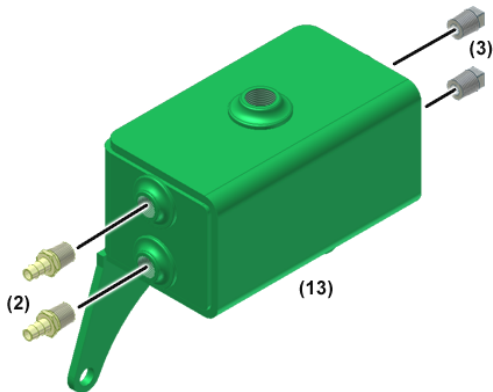
Reassemble the remainder of the pump. Line up the marks of the volute and the extension. Do not install the fasteners marked with an X.



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Step 7

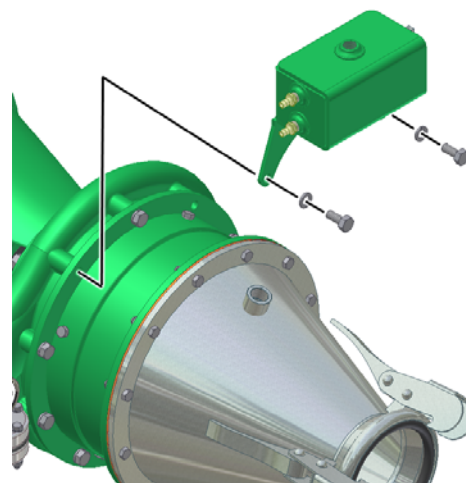
Preassemble the reservoir. Ensure orientation of barb fittings (2) match (same side of pump) the seal gland barb fittings (1).



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Step 8

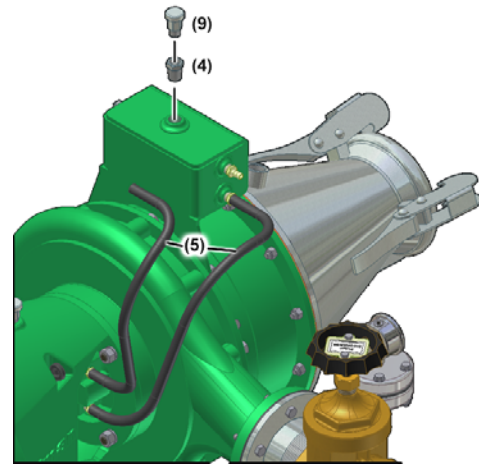
Install the reservoir. Use the volute extension bolts to fasten the reservoir.



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Step 9

Install the hoses (5) as shown. Fill the reservoir with oil (14). Before attaching the top hose at the reservoir ensure that oil has filled the seal gland. Blocking the fill port, use low pressure air to purge the gland. Attach the top hose (5) once oil is visible. Then check the oil level (fill if necessary). Install the reducer bushing (4) then the air vent (9).



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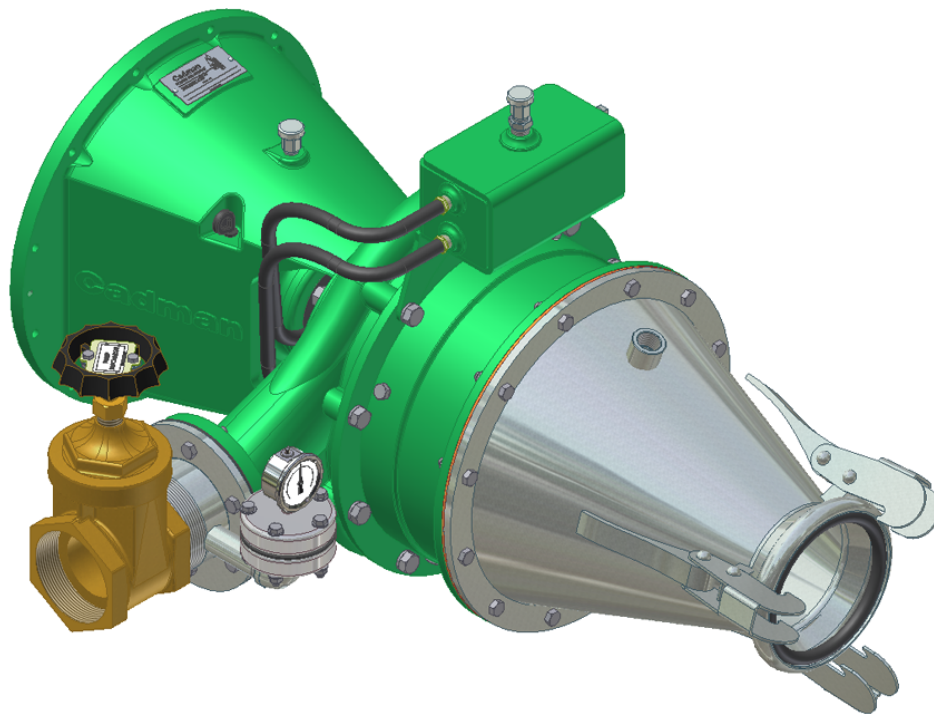


Figure 3 - Upgrade Complete

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**Congratulations! You have successfully upgraded your
DODA Liquid Manure Pump.**

Useful Information

LENGTH

1 FOOT	= 12	Inches	1 METER	= 39.37	Inches
1 ROD	= 0.3048	Meter	1 MILE	= 5280	Feet

AREA

1 SQUARE FOOT	= 144	Square Inches
	= 0.0929	Square Meters
1 SQUARE YARD	= 1296	Square Inches
	= 0.8361	Square Meters
1 SQUARE METER	= 1549.4	Square Inches
	= 10.764	Square Feet
1 ACRE	= 43560	Square Feet
	= 4047	Square Meters
	= 0.4047	Hectare
1 HECTARE	= 107642.62	Square Feet
	= 10000	Square Meters
	= 2.47105	Acres
1 SQUARE MILE	= 640	Acres
	= 259	Hectares

VOLUME

1 GALLON (US)	= 0.8327	Imperial Gallons
	= 231	Cubic Inches
	= 0.1337	Cubic Feet
	= 8.345	Pounds
1 CUBIC FOOT	= 1728	Cubic Inches
	= 7.48	Gallons (US)
	= 62.4	Pounds
	= 28.32	Liters
1 ACRE INCH	= 27154	Gallons (US)
	= 254	Cubic Meters / Hectare

AREA OF A CIRCLE = Diameter x Diameter x 0.7854

CYLINDER VOLUME (US GAL.) = Diameter (ft.) x Diameter (ft.) x Length (ft.) x 5.8748