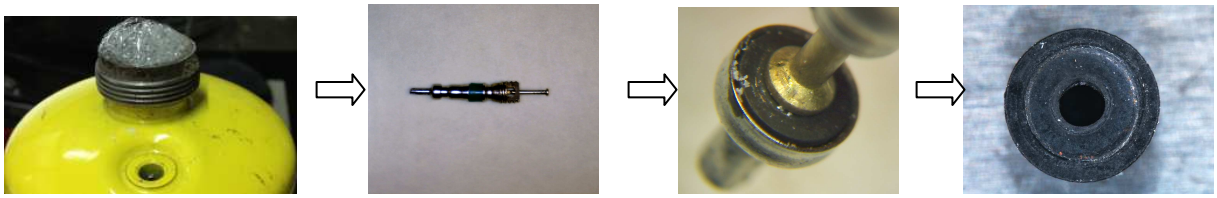
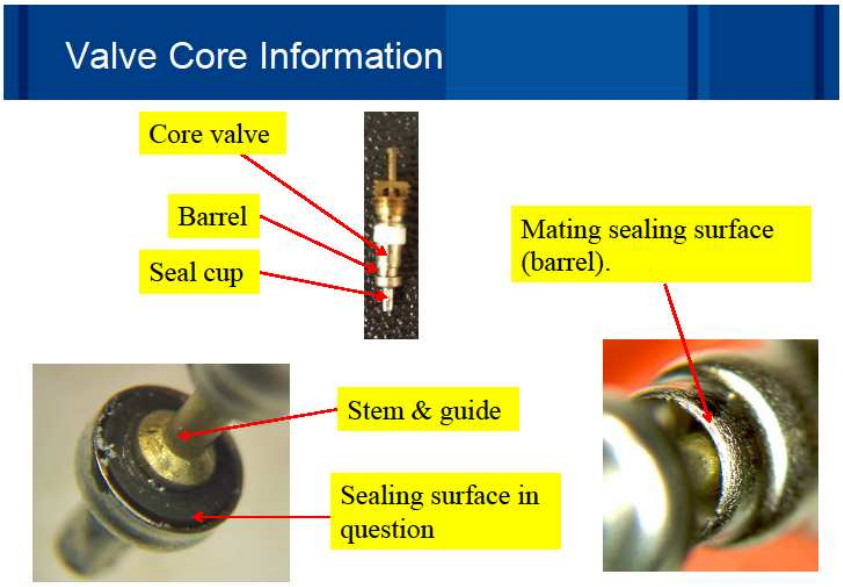
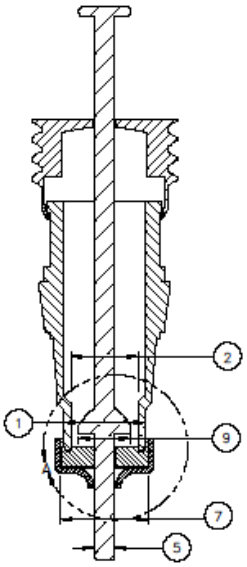
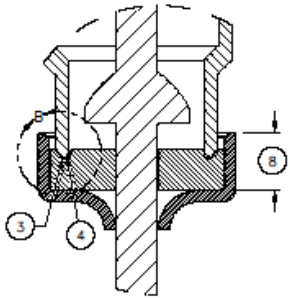


Valve Core Leak **Valve Core** **Seal** **Degraded Seal**

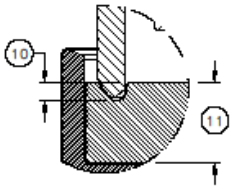


BALLOON #	FEATURE
1	BARREL SEAL OD
2	BARREL SEAL ID
3	BARREL SEAL EDGE RADIUS
4	BARREL SEAL CHAMFER PROFILE
5	PIN STEM OD
7	CUP ID
8	CUP DEPTH
9	OD OF GUIDE
10	COMPRESSION SET DEPTH
11	ORING DEPTH
12	CONCENTRICITY OF (1) TO (7)





DETAIL A
SCALE 12 : 1



DETAIL B
SCALE 24 : 1

NOTES:
1. ALL DIMENSIONS IN INCHES.

REVISION HISTORY

REV	BY	DATE	DESCRIPTION
A	CCH	1-16-12	ADD DETAIL B AND BUBBLES 9-12

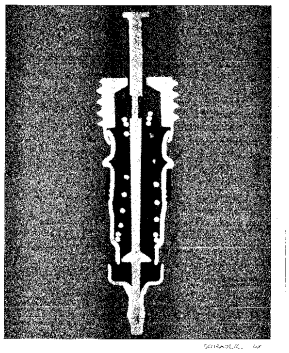
STANDARD TOLERANCES:
DECIMAL:± .06"
FRACTION:± 1/16"
ANGLE:± 1°
SQUARE:±

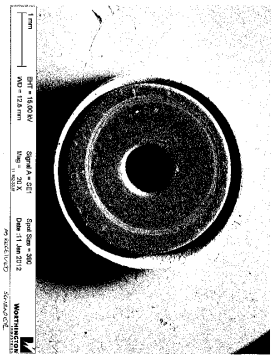
WORTHINGTON CYLINDERS
200 OLD WILSON BRIDGE RD
COLUMBUS, OHIO 43085

WORTHINGTON CYLINDERS
A Worthington Industries Company

DESCRIPTION: FILL CORE
PART NAME:

SCALE:		DRN. BY:	CHKD. BY:	DWG. NO.: WC1056
6:1	1-13-12	CCH		





Chemical Compatibility Table

This chemical compatibility information is for use as a general guideline only. The customer assumes sole responsibility for the design, and must test and verify the material of the seal for each specific application.

Exposure Rating Guide:

- ● Good
- ▲ Fair (Usually OK for static seal.)
- ♦ Questionable (Sometimes OK for static seal.)
- ■ Poor

Blank Insufficient data at time of publication.

All recommendations for 70°F temperature

	Alkus®	Buna-N (Nitrile)	Butyl	Chemraz®	Epichlorohydrin	Ethylene-Propylene	Fluorocarbon	Fluorosilicone	Hypalon®	Kalrez®	Natural Rubber	Neoprene®	Nitrile, Hydrogenated	Polyacrylate	Polychloroprene	Polyurethane, Cast	Polyurethane, Millable	Silicone	Styrene Butadiene	Teflon® Virgin	Vamac®
Propyl Acetate		■	▲	●	■	▲	■	■	■		■	■	■	■	▲		■	■	■	■	
Propyl Alcohol	●	●	●	●	●	●	●	●	●		●	●	●	■	●		■	●	●	●	●
Propylene		■	■	●		■	●	▲	■	●	■	■	■	■	▲		■	■	■	●	
Propylene Oxide		■	▲	●		▲	■	■	■	●	■	■	■	■			■	■	■	●	
Pydraul, 230C, 312C, 540C		■	■	▲	■	■	●	■	■		■	■	■	■	■		■	■	■	●	■
Pydraul, 30E, 50E, 65E, 90E		■	▲	▲	■	▲	●	●	■		■	■	■	■			■	●	■	●	■
Pydraul, 10E		■	▲	▲	■	▲	●	■	■		■	■	■	■			■	■	■	●	
Pyranol, Transformer Oil		●	■	●	■	■	●	●	▲		■	▲	●	●	■		▲	■	■		●
Pyrogard42,43, 53,55 (Phosphate Ester)		■	●	●		●	●	■	■		■	■	■	■	■		■	■	■	●	
Radiation		♦	■	▲		♦	■	■	♦		♦	♦	♦	♦	■			▲	♦	●	●
Rapeseed Oil		▲	●	●	●	●	●	●	■		■	▲	▲	▲	■		▲	■	■	●	
Red Oil		●	■	●	●	♦	●	●	▲		■	♦	●	▲	●		▲	■	■	●	
RJ-1 (MIL-F-25558)		●	■	●	●	■	●	●	▲	●	■	▲	●	●	●		▲	■	■		
RP-1 (MIL-R-25576)		●	■	●	●	■	●	●	♦		■	♦	●	●	●			■	■		
Sea Water		●	●	●		●	●	●	●	●	●	▲	●		■			●	●	●	●
Silicone Greases		●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	♦	●	●	●
Silicone Oils		●	●	●	●	●	●	●	●	●		●	●	●	●		●	■	●	●	●
Silver Nitrate		▲	●	●	■	●	●	●	●	●	●	●	▲	●	▲		●	●	●	●	
Skydrol 500	●	■	▲	●	■	●	■		■	●	■	■	■	■	■	▲	■	♦	■	●	■
Sodium Bicarbonate		●	●	●	●	●	●	●	●	●	●	●	●	■	♦		●	●	●	●	●
Sodium Carbonate	●	●	●	●	●	●	●	●	●	●	●	●	●	■	■		▲	●	●	●	●
Sodium Chloride	●	●	▲	●	●	●	●	●	●	●	●	●	●	●	♦		●	●	●	●	●
Sodium Hydroxide	●	●	●	●		●				●		●									
Soybean Oil		●		●	●	■	●	●		●	■	●	●	●	■		▲	●	■	●	▲
Steam to 350°F	●	■	▲			●	■	■	■	●	■		●			■	■	■		●	
Stearic Acid	●	●	▲	●	▲	▲	●	♦	♦	●		▲	▲	■	▲		●	▲	●	●	
Stoddard Solvent		●	■	●	●	■	●	●	■	●	■	♦	●	●	▲		▲	■	■	●	♦
Styrene Monomer	▲	▲	▲	●		■	▲	♦	■	●	■	■	■	■	■		♦	■	■	●	■
Sucrose Solutions		●	●	●		●	●	♦	▲	●	●	●	▲	■	■			●	●	●	
Sulfur Chloride		■	■	●		■	●	●		●	■	■	■	■	■		♦	♦	■	▲	
Sulfur Dioxide Gas, Dry		■	▲	●		●	●	▲		●	♦	■	■	■	■			▲	♦	●	▲
Sulfur Dioxide Gas, Wet	●	■	●	●		●	●	▲		●		▲	■	■	■		♦	▲		●	▲
Sulfur Dioxide, Liquefied Under Pressure		■	▲	●		●	■	▲	■		■	■	■	■	■			▲	■		
Sulfur Hexafluoride		▲	●	▲	●	●		▲	▲		■	●	▲	■	♦		▲	▲	■	●	
Sulfur Trioxide		■	▲	▲		♦	●	▲	■	●	♦	■		■	■		■	▲	■	●	

COMPOUND COMPATIBILITY RATING
1 - Satisfactory
2 - Fair (usually OK for static seal)
3 - Doubtful (sometimes OK for static seal)
4 - Unsatisfactory
x - Insufficient Data

	Recommended	Nitrile NBR	Hydrogenated Nitrile HNBR	Ethylene Propylene EPDM	Fluorocarbon FKM	Hifluor FKM	Perfluoroelastomer FFKM	Aflas (TFE/Propylene) FEPM	Neoprene/Chloroprene CR	Styrene-Butadiene SBR	Polyacrylate ACM	Polyurethane AU, EU	Butyl IIR	Butadiene BR	Isoprene IR	Natural Rubber NR	Hypalon CSM	Fluorosilicone FVMQ	Silicone MQ, VMQ, PVMQ
Potassium Silicate	V3819-75	X	X	X	X	1	1	X	X	X	X	X	X	X	X	X	X	X	X
Potassium Sodium Tartrate	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Potassium Stannate	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Potassium Stearate	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Potassium Sulfate	N0674-70	1	1	1	1	1	1	X	1	2	4	1	1	1	2	2	2	1	1
Potassium Sulfide	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Potassium Sulfite	N0674-70	1	1	1	1	1	1	X	1	2	4	1	1	1	2	2	2	1	1
Potassium Tartrate	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Potassium Thiocyanate	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Potassium Thiosulfate	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Potassium Triphosphate	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Prestone Antifreeze	N0674-70	1	1	1	1	1	1	X	1	1	4	4	1	1	1	1	1	1	1
PRL-High Temp. Hydr. Oil	V1164-75	2	2	4	1	1	1	X	2	4	1	2	4	4	4	4	4	1	2
Producer Gas	N0674-70	1	1	4	1	1	1	X	2	4	2	1	4	4	4	4	2	2	2
Propane	N0674-70	1	1	4	1	1	1	X	2	4	1	3	4	4	4	4	2	2	4
Propionaldehyde	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Propionic Acid	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Propionitrile	N0674-70	1	1	4	1	1	1	1	2	X	X	X	X	X	X	X	X	X	X
Propyl Acetate	E0540-80	4	4	2	4	1	1	X	4	4	4	4	2	4	4	4	4	4	4
Propyl Acetone or n-Propyl Acetone	E0540-80	4	4	1	4	1	1	X	4	4	4	4	1	4	4	4	4	4	4
Propyl Alcohol	N0674-70	1	1	1	1	1	1	X	1	1	4	4	1	1	1	1	1	1	1
Propyl Nitrate	E0540-80	4	4	2	4	1	1	X	4	4	4	X	2	4	4	4	4	4	4
Propyl Propionate	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Propylamine	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Propylbenzene	V1164-75	X	X	X	1	1	1	X	4	4	4	3	4	4	4	4	4	2	X
Propylene	V1164-75	3	3	4	1	1	1	X	4	4	4	4	4	4	4	4	4	3	4
Propylene Chloride	V1164-75	X	X	X	1	1	1	X	4	4	4	3	4	4	4	4	4	2	X
Propylene Chlorohydrin	V1164-75	X	X	X	1	1	1	X	4	4	4	3	4	4	4	4	4	2	X
Propylene Dichloride	V1164-75	X	X	X	1	1	1	X	4	4	4	3	4	4	4	4	4	2	X
Propylene Glycol	E0540-80	3	3	1	3	1	1	X	1	1	4	4	1	1	1	1	1	1	2
Propylene Imine	V1164-75	X	X	X	1	1	1	X	4	4	4	3	4	4	4	4	4	2	X
Propylene Oxide	E0540-80	4	4	2	4	1	1	X	4	4	4	4	2	4	4	4	4	4	4
Pydraul 90e	E0540-80	4	4	1	1	1	1	1	4	X	X	X	X	X	X	X	X	X	X
Pydraul, 10E	E0540-80	4	4	1	4	1	1	X	4	4	4	4	1	4	4	4	4	4	1
Pydraul, 115E	V1164-75	4	4	1	1	1	1	X	4	4	4	4	1	4	4	4	4	3	4
Pydraul, 230C, 312C, 540C, A200	V1164-75	4	4	4	1	1	1	X	4	4	4	4	4	4	4	4	4	4	4
Pydraul, 29ELT 30E, 50E, 65E	V1164-75	4	4	1	1	1	1	X	4	4	4	4	1	4	4	4	4	1	1
Pyranol Transformer Oil	N0674-70	1	1	4	1	1	1	X	2	4	1	2	4	4	4	4	2	1	4
Pyridine	V1164-75	4	4	2	1	2	1	X	4	4	4	3	4	4	4	4	4	2	X
Pyridine Oil	E0540-80	4	4	2	4	1	1	X	4	4	4	X	2	4	4	4	4	4	4

Approximate Service Temperature Ranges for Commonly Used Basic Polymer Types*

Nitrile (General Service)	-34°C to 121°C (-30°F to 250°F)*	AFLAS	-9°C to 232°C (15°F to 450°F)*
Nitrile (Low Temperature)	-55°C to 107°C (-65°F to 225°F)*	Neoprene	-51°C to 107°C (-60°F to 225°F)*
Hydrogenated Nitrile	-32°C to 149°C (-23°F to 300°F)*	Polyacrylate	-21°C to 177°C (- 5°F to 350°F)*
Ethylene Propylene	-57°C to 121°C (-70°F to 250°F)*	Polyurethane	-40°C to 82°C (-40°F to 180°F)*
Fluorocarbon	-26°C to 205°C (-15°F to 400°F)*	Butyl	-59°C to 120°C (-75°F to 250°F)*
Hifluor	-26°C to 205°C (-15°F to 400°F)*	Fluorosilicone	-73°C to 177°C (-100°F to 350°F)*
Perfluoroelastomer (Parofluor)	-26°C to 320°C (-15°F to 608°F)*	Silicone	-115°C to 232°C (-175°F to 450°F)*

NOTE: *These temperature ranges will apply to the majority of media for which the material is potentially recommended. With some media however, the service temperature range may be significantly different. ALWAYS TEST UNDER ACTUAL SERVICE CONDITIONS.

Parker Hannifin Corporation • O-Ring Division
2360 Palumbo Drive, Lexington, KY 40509
Phone: (859) 269-2351 • Fax: (859) 335-5128
www.parkerorings.com

Notice to Worthington Customers
January 17, 2012

WORTHINGTON CYLINDERS
a worthington industries company

Voluntary Product Recall of MAP-Pro, Propylene and MAPP Cylinders

Worthington is voluntarily recalling its MAP-Pro, Propylene and MAPP cylinders due to a quality issue with the valve which is purchased from a vendor. There are no known incidents of fire or injury associated with this issue. New cylinders in customers' inventory that have never had a torch attached will not leak due to this issue when stored, transported or moved. Worthington is undertaking this voluntary recall out of an abundance of caution.

Yellow Black

Products affected:

- 14.1 oz MAP-Pro (yellow cylinder)
- 14.1 oz Propylene (black cylinder)
- 16 oz MAPP (yellow cylinder)
- Hand torch kits containing 14.1 oz MAP-Pro

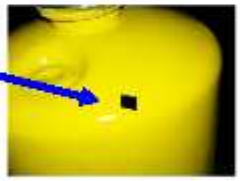
Not affected by this recall

- 14.1 oz propane (blue cylinder)
- 1.4 oz oxygen (red cylinder)
- 16.4 oz propane (green cylinder)

Worthington's Course of Action

Worthington has notified the United States Consumer Product Safety Commission (CPSC) and Health Canada of this issue and is working with other consumer product commissions worldwide to provide appropriate notice to consumers. Worthington is pulling back its customers' inventory in parallel with the consumer recall and will help coordinate product inventory collection.

New cylinders produced after January 12, 2012 will be marked with a black or white diamond on the top shoulder of the cylinder. The master carton is marked with date of manufacture. Cylinders produced after January 12, 2012 are not part of the recall.



Instructions for Customers

1. Discontinue selling current inventory
2. Quarantine inventory and consolidate it with consumer returns.
    a. Full cylinders should be returned to Worthington in full container load quantities. Contact Worthington to arrange transportation.
    b. Partially full or empty cylinders should be properly disposed of. Do not return partially full or empty cylinders to Worthington. Contact Worthington to arrange for credit.
3. Post the "Important Safety Recall" notice for consumers

We apologize for this inconvenience and are aggressively working to provide customers with appropriate replacement products as well as provide a reasonable mechanism for returning the affected products.

IMPORTANT SAFETY RECALL

MAP-PRO, PROPYLENE AND MAPP CYLINDERS

Worthington Cylinders is voluntarily recalling its MAP-Pro, Propylene and MAPP cylinders sold before January 15, 2012. Cylinders were sold as replacement fuel and in torch kits under brand names including Rothenberger, SuperEgo, Castolin, Turbotorch, Nevax, Bromic, Uniweld, Ameriflame, Hotery, Go-System, Turner and Worthington.

Product Description

- Approximately 3" in diameter x 11" tall
- Always yellow or black
- Lot code marking on the bottom of the cylinder starts with a W_D, W_E, W_F, W_G, W_H, W_J, W_K, W_L, per chart below

2004	2005	2006	2007	2008	2009	2010	2011
	W1E	W1F	W1G	W1H	W1J	W1K	W1L
	W2E	W2F	W2G	W2H	W2J	W2K	W2L
	W3E	W3F	W3G	W3H	W3J	W3K	W3L
	W4E	W4F	W4G	W4H	W4J	W4K	W4L
	W5E	W5F	W5G	W5H	W5J	W5K	W5L
	W6E	W6F	W6G	W6H	W6J	W6K	W6L
	W7E	W7F	W7G	W7H	W7J	W7K	W7L
	W8E	W8F	W8G	W8H	W8J	W8K	W8L
W9D	W9E	W9F	W9G	W9H	W9J	W9K	W9L
W10D	W10E	W10F	W10G	W10H	W10J	W10K	W10L
W11D	W11E	W11F	W11G	W11H	W11J	W11K	W11L
W12D	W12E	W12F	W12G	W12H	W12J	W12K	W12L

Yellow **Black**

Note: Cylinders with a black or white diamond on the cylinder shoulder are not affected by the recall.

Issue

The cylinder may leak after a torch or other device is disconnected from the cylinder. If the leak is large enough or if the gas is permitted to accumulate in an enclosed area and there is a source of ignition, a fire could occur. There are no known incidents of fire or injury associated with this issue. Worthington is undertaking this voluntary recall out of an abundance of caution.

Important: Never transport a leaking cylinder.

What to Do

		ACTION
Unused cylinder (If the cylinder has never been connected to a torch or other device)		Do not use cylinder. Return cylinder to store where it was purchased for exchange or a full refund.
Partially Used Cylinder	If the cylinder is currently connected to a torch or other device	Do not disconnect the torch or other device. Take outdoors. Ignite the torch and burn off the entire contents of the cylinder. * Disconnect torch from empty cylinder. Dispose of empty cylinder per cylinder label instructions or return it to the store where it was purchased for exchange or a full refund.
	If the cylinder has been connected to a torch or other device, but is not connected now	Attach torch or other device. Take cylinder outdoors. Ignite the torch and burn off the entire contents of the cylinder. * Disconnect torch from empty cylinder. Dispose of empty cylinder per cylinder label instructions or return it to the store where it was purchased for exchange or a full refund.
*** Never leave lit torch and cylinder unattended. Use torch only in a well-ventilated area.**		

For more information

Contact your distributor or original point of purchase.
Email: MAPCylinderRecall@worthingtoncylinders.com
Details will be available at www.MAPCylinderRecall.com.

We apologize for your inconvenience. Thank you for your cooperation and understanding.