

## Wheel Bearings Cups and Cones

FAA-PMA approved Timken wheel bearings for Goodyear, Cleveland, and McCauley wheels.

- Class 2 aviation grade bearings (Timken designates these with a -20629 suffix)
- When landing the wheel bearings must go from Zero RPM to 1384 RPM, or more, instantaneously. Automotive bearings aren't designed for this type of service
- Tighter tolerance and higher quality control than Class 4 automotive bearings
- Save \$\$



### Don't be tempted to buy cheap automotive bearings

Because Timken uses the same part number for both the automotive and aviation versions of these bearings, many people mistakenly use the lower quality automotive bearings in their airplane. It is critical that the FAA-PMA Class 2 version be used for aircraft applications for two reasons:

- They are a higher class of bearing with tighter tolerance and have been subjected to more stringent quality control procedures. Due to the smaller diameter of aircraft wheels, at a given ground speed the bearings rotate at a much higher RPM and require the tighter tolerances to prevent premature failure. Example: At a 70 mph touchdown speed (equivalent to highway speed of a car), a typical 17 inch diameter airplane tire is rotating at 1384 RPM, whereas a typical 27 inch car tire is only rotating at 871 RPM. So even though the aircraft bearing is only subject to intermittent use, some of the performance demands are much higher than a typical automotive application.
- It is a violation of FAA regulations to use non-approved automotive bearings on certified aircraft.

**See the table on the next page to find the correct bearing for your wheels.**

## Wheel Seal Kits

Finally a low cost alternative! FAA-PMA approved for Cessna aircraft with Cleveland, and McCauley wheels.

Convenient Kits now available

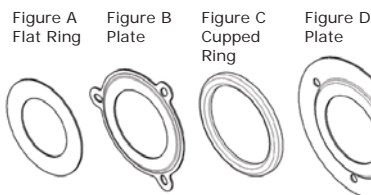
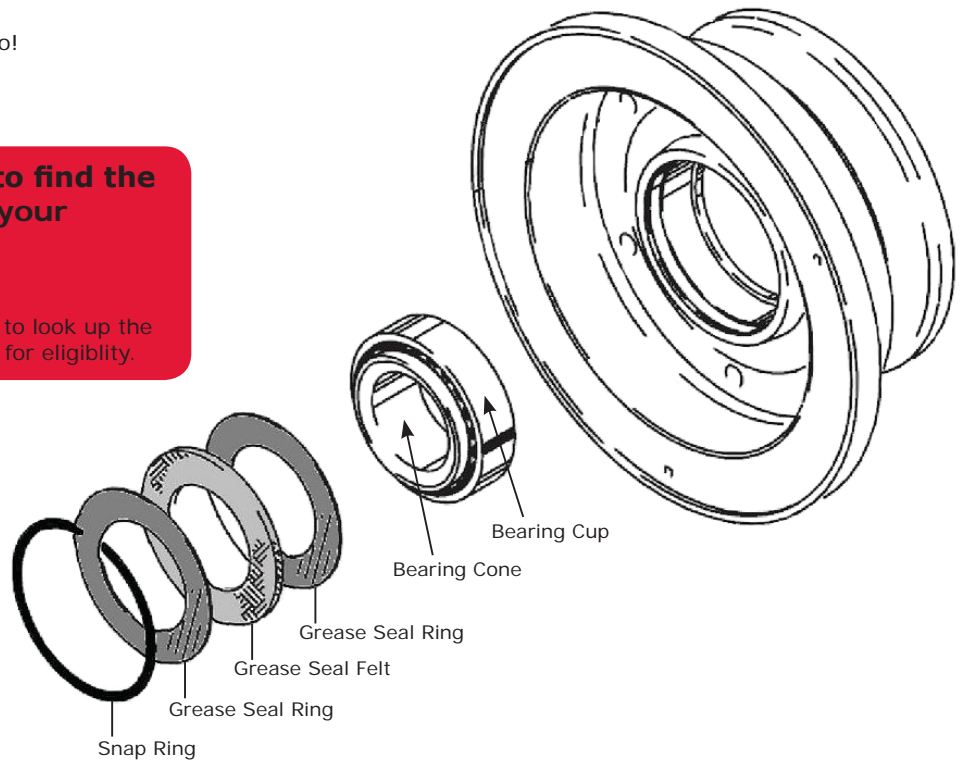
- Each kit contains everything required to service one wheel: grease seal rings, plates, snap rings and felts; even screws and washers when required.
- We have done the research so you don't have to!
- Hard to find parts in stock.
- Save \$\$

**Finally  
FAA-PMA  
Approved!**

**See the table on the next page to find the correct kit and components for your wheel.**

### Not sure what wheel you have?

Go to [www.mcfarlaneaviation.com/wheel-seals](http://www.mcfarlaneaviation.com/wheel-seals) to look up the original equipment wheels for your aircraft and for eligibility.



**Hard to find  
grease seal rings  
and plates!**

**Approval for Piper and  
Beechcraft coming soon!**

Grease Seal Rings and Plates				
Part Number	ID	OD	Thickness	Figure
MC153-00300	1-33/64	2-1/2	0.034	A
MC153-00400	1-45/64	2-5/8	1/32	A
153-00500	1-3/4	2-3/4	5/32	B
MC153-00800	1-53/64	2-23/64	1/32	A
153-01000	2-1/16	2-3/4	1/8	B
MC153-01500	2-1/16	2-5/8	13/64	C
MC153-30013	1-11/16	2-39/64	1/32	A
153-30014	2-1/16	2-5/8	11/64	C
MC153-30015	1-17/32	2-35/64	1/32	A
MC156-00100	1-3/4	3/22-32	1/8	D

Grease Seal Felt			
Part Number	ID	OD	Thickness
MC154-00300	1-5/8	2-5/8	1/8
MC154-00600	1-3/4	2-13/32	1/8
MC154-00900	2-1/8	2-7/16	1/8
MC154-01300	2-1/8	2-1/2	3/16
MC154-30010	2-1/8	2-17/32	1/8
Snap Ring			
MC155-00100	9/64	2-3/4	1/32
MC155-00200	9/64	2-1/2	0.025
MC155-11800	5/32	2-1/2	1/32
MC155-11900	5/32	2-3/4	1/32

Dimensions are approximate and for identification only. All dimensions are in inches.

Bearing Cups		
P/N	OD	Width
07196	1.9687	0.3750
07204	2.0470	0.5000
08231	2.3125	0.4219
13830	2.5000	0.3750
13836	2.5625	0.3750
18337	3.3750	0.5000
19268	2.6250	0.4688
39412	4.1250	0.6250
A4138	1.3775	0.3437
L217813	5.0000	0.7500
LL217810	4.7812	0.4375
LM29710	2.5625	0.5500
LM67010	2.3280	0.4650
LM501310	73.431	0.5800

Bearing Cones		
P/N	Bore	Inner Ring Width
07100	1.0000	0.5614
08118	1.1875	0.5937
08125	1.2500	0.5937
13889	1.5000	0.4688
18200	2.0000	0.7190
19150	1.5000	0.6504
39250	2.5000	0.8661
A4050	0.5000	0.4326
L217849	3.5000	0.5938
LL217849	3.5000	0.5938
LM29749	1.5000	0.7200
LM67048	1.2500	0.6600
LM501349	41.275	.7800

Visit [mcfarlaneaviation.com](http://mcfarlaneaviation.com) for aircraft eligibility



FAA-PMA Approved



Wheel to Seal Kit and Bearing Cross Reference					
Wheel Manufacturer	Wheel Manufacturer P/N	Cessna Wheel P/N	Wheel Seal Kit P/N	Bearing Cone P/N	Bearing Cup P/N
CLEVELAND	040-07502	C163001-0301	WH-KT-2	13889	13836
CLEVELAND	40-101	C163001-0601	WH-KT-22	LM29749	LM29710
CLEVELAND	40-101A		WH-KT-22	LM29749	LM29710
CLEVELAND	40-113	C163001-0104	WH-KT-2	13889	13836
CLEVELAND	40-12	0441179-2	WH-KT-15	08125	08231
CLEVELAND	40-135A	9910393-2, 9910393-6	WH-KT-28	LM29749 and 07100	LM29710 and 07204
CLEVELAND	40-138A		WH-KT-17	LM29749 and 07100	LM29710 and 07204
CLEVELAND	40-140A	9910194-8	WH-KT-39	13889	13836
CLEVELAND	40-142	C163001-0701	WH-KT-2	13889	13836
CLEVELAND	40-177A	C163001-0901	WH-KT-42	13889	13836
CLEVELAND	40-179	040-17900	WH-KT-42	LM29749	LM29710
CLEVELAND	40-18	0441179-14	WH-KT-34	08125	08231
CLEVELAND	40-19	0441156-13	WH-KT-15	08125	08231
CLEVELAND	40-20	0441156-14	WH-KT-34	08125	08231
CLEVELAND	40-21	0441156-15	WH-KT-11	13889	13836
CLEVELAND	40-32	0741026-3	WH-KT-8	13889	13836
CLEVELAND	40-35	0743001-4	WH-KT-34	08125	08231
CLEVELAND	40-40A	5041016-3	WH-KT-28	LM29749 and 07100	LM29710 and 07196
CLEVELAND	40-40D	5041016-5	WH-KT-28	LM29749 and 07100	LM29710 and 07204
CLEVELAND	40-55	0441156-16	WH-KT-38	13889	13836
CLEVELAND	40-57	0441156-17	WH-KT-8	13889	13836
CLEVELAND	40-57A		WH-KT-11		
CLEVELAND	40-66	0441156-18	WH-KT-8	13889	13836
CLEVELAND	40-67	0441156-19	WH-KT-11	13889	13836
CLEVELAND	40-68	0441156-20	WH-KT-34	08125	08231
CLEVELAND	40-73	1241156-11	WH-KT-39		
CLEVELAND	40-75	1241156-10	WH-KT-2	13889	13836
CLEVELAND	40-75B	040-07502, 1241156-10, C163001-0301	WH-KT-2	13889	13836
CLEVELAND	40-75D	C163001-0302	WH-KT-2	13889	13836
CLEVELAND	40-75T	040-07518-1	WH-KT-2	13889	13836
CLEVELAND	40-76	1241156-11	WH-KT-39	13889	13836
CLEVELAND	40-76A	1241156-11, 1241156-43	WH-KT-39	13889	13836
CLEVELAND	40-76B	0441156-16	WH-KT-42	13889	13836
CLEVELAND	40-77	1241156-12, 0441156-14, 0441156-20, 0441179-14, 0743001-4	WH-KT-34	08125	08231
CLEVELAND	40-78	1241156-13	WH-KT-34	08125	08231
CLEVELAND	40-79	1241156-14	WH-KT-2	13889	13836
CLEVELAND	40-79A	1241156-14	WH-KT-2	13889	13836
CLEVELAND	40-96E	C163001-0401	WH-KT-2	13889	13836
CLEVELAND	40-97	C163001-0102	WH-KT-2	13889	13836
CLEVELAND	40-97A	C163001-0102, C163001-0103	WH-KT-2	13889	13836
CLEVELAND	40-98A	C163001-0501	WH-KT-2	13889	13836
CLEVELAND	40-98H	C163001-0801	WH-KT-2	13889	13836
CLEVELAND	40-127, 40-137, 40-174			18200	18337
CLEVELAND	40-211, 40-279, 40-279A			39250	39412
GOODYEAR	9532522	0541183-9		13889	13830
GOODYEAR	9532673	0541160-13		13889	13830
GOODYEAR	511960S	0441016-1		13889	13830
GOODYEAR	95-3472	0441016-1		13889	13830
MCCAULEY	C30480	C163003-0401	WH-KT-35	LM67048	LM67010
MCCAULEY	D30065	C163002-0101		LM29749	LM29710
MCCAULEY	D30256	C163003-0101		LM29749	LM29710
MCCAULEY	D30291-1	C163004-0101	WH-KT-5	LM29749	LM29710
MCCAULEY	D30291-2	C163004-0102	WH-KT-5	LM29749	LM29710
MCCAULEY	D30291-3	C163004-0103	WH-KT-5	LM29749	LM29710
MCCAULEY	D30291-6	C163004-0104	WH-KT-5	LM29749	LM29710
MCCAULEY	D30500	C163002-0201, C163003-0201, C163005-0201	WH-KT-35	LM67048	LM67010
MCCAULEY	D30580	C163003-0102	WH-KT-5	LM29749	LM29710
MCCAULEY	D30660-1	C163002-0101, C163003-0101, C163005-0101, C163006-0101	WH-KT-5	LM29749	LM29710
MCCAULEY	D30660-2	C163006-0102	WH-KT-5	LM29749	LM29710
MCCAULEY	D30660-3	C163006-0103	WH-KT-5	LM29749	LM29710
MCCAULEY	D30665	9910194-1, C163002-0301, C163003-0301, C163003-0302, C163006-0201	WH-KT-47	LM29749	LM29710
		95-3472		13889	13830
		3244		A4050	A4138
		0441150-6, 0441150-7		LL217849	LL217810
GOODYEAR		0441150-8, 0441150-9, 0541116-2, 0541116-3		LL217849	LL217810

**Note:**  
 For FAA-PMA approved aircraft model eligibility, see [www.mcfarlaneaviation.com](http://www.mcfarlaneaviation.com)  
 Cone P/N LM29749 and Cup P/N LM29710 are used on the outboard of the wheel and Cone P/N 07100 and Cup P/N 07196 or P/N 07204 are used on the inboard of the wheel.

Wheel Seal Kits			
Kit P/N	Qty	Part Number	Description
WH-KT-2	1	MC154-00300	Felt, Grease Seal
	1	MC154-01300	Felt, Grease Seal
	1	MC153-00300	Ring Grease Seal, Flat
	2	MC153-00400	Ring Grease Seal, Flat
	1	MC153-01500	Ring Grease Seal, Cupped
	2	MC155-00100	Ring, Snap
WH-KT-5	1	MC154-00300	Felt, Grease Seal
	1	MC154-30010	Felt, Grease Seal
	2	MC153-30013	Ring Grease Seal, Flat
	1	153-30014	Ring Grease Seal, Cupped
	1	MC153-30015	Ring Grease Seal, Flat
WH-KT-8	2	MC155-11900	Ring, Snap
	1	154-00400	Felt, Grease Seal
	1	153-00500	Plate, Grease Seal
	1	MC156-00100	Plate, Grease Seal
WH-KT-11	6	MS35265-45	Screw, Drilled
	6	MS35333-38	Lock Washer
	1	154-00400	Felt, Grease Seal
	1	MC154-00900	Felt, Grease Seal
	1	MC153-00300	Ring Grease Seal, Flat
	1	153-00500	Plate, Grease Seal
WH-KT-15	1	153-01000	Plate, Grease Seal
	1	MC156-00100	Plate, Grease Seal
	6	MS35265-45	Screw, Drilled
	6	MS35333-38	Lock Washer
	1	MC154-00600	Felt, Grease Seal
	2	MC153-00800	Ring Grease Seal, Flat
WH-KT-17	2	MC155-00200	Ring, Snap
	1	154-00800	Felt, Grease Seal
	2	153-00900	Ring Grease Seal, Flat
	1	MC155-00100	Ring, Snap
WH-KT-22	1	155-00600	Ring, Snap
	1	154-00400	Felt, Grease Seal
	2	153-00900	Ring Grease Seal, Flat
WH-KT-28	2	MC155-00200	Ring, Snap
	1	154-03000	Molded Seal
	1	MC155-00100	Ring, Snap
WH-KT-34	1	155-00600	Ring, Snap
	2	MC154-00600	Felt, Grease Seal
	4	MC153-00800	Ring Grease Seal, Flat
	2	MC155-00200	Ring, Snap
WH-KT-35	2	MC154-00600	Felt, Grease Seal
	4	MC153-00800	Ring Grease Seal, Flat
	2	MC155-11800	Ring, Snap
WH-KT-38	2	MC154-00900	Felt, Grease Seal
	2	MC153-00300	Grease Seal Plate
	2	153-01000	Plate, Grease Seal
	6	MS35265-45	Screw, Drilled
	6	MS35333-38	Lock Washer
	2	MC154-01300	Felt, Grease Seal
WH-KT-39	2	MC153-00300	Ring Grease Seal, Flat
	2	MC153-01500	Ring Grease Seal, Cupped
	2	MC155-00100	Ring, Snap
	2	MC155-00100	Ring, Snap
WH-KT-42	2	154-03000	Molded Seal
	2	MC155-00100	Ring, Snap
WH-KT-47	2	MC154-30010	Felt, Grease Seal
	2	153-30014	Ring Grease Seal, Cupped
	2	MC153-30015	Ring Grease Seal, Flat
	2	MC155-11900	Ring, Snap