

# MELLING™

PERFORMANCE



## **2023 HEMI PARTS GUIDE**



Melling Engine Parts got its start soon after World War II. In 1946, automakers devoted themselves to producing new vehicles. At that time, they were not concerned with providing service parts for older cars that were in desperate need of repair. George Melling Sr. and his son Ben operated a tool shop in Jackson, Michigan and they recognized the opportunity to provide high quality automotive aftermarket parts. George and Ben then focused on oil pumps manufactured with an attention to quality. Their first product that year was the M-10 for the 1937 6 cylinder Chevrolet. It sold well and they knew they needed to expand and make oil pumps for other engines.

By 1952 the line consisted of 20 oil pumps and 15 repair kits when the first high-volume oil pump was introduced making it a banner year for Melling Engine Parts. The high-volume oil pump was a Melling “brainchild” revolutionizing the automotive oil pump aftermarket. That same year Melling expanded its business horizons beyond oil pumps when it became the first nationally recognized aftermarket supplier to distribute new replacement camshafts. 70 years later Melling is still recognized as an industry leader in camshafts.

Today, after 75 years we are still family-owned and directed by the fourth generation of the Melling family. Melling has expanded its product offerings to thousands of aftermarket engine parts spanning 27 different product lines with a coverage of over 1 million applications. Being an original equipment supplier of engine parts to the automakers keeps us current on the latest product design and manufacturing technologies. Melling’s commitment to quality is verified by its ISO/TS 16949 quality certification.

The company has traveled a long road and paving the way has always been the Melling customer. Listening to the feedback from our customers has been one of the keys to our success. Success brought about by utilizing that information to provide innovative and economical solutions to the issues engine builders encounter.

The resulting product improvements have become vital when building a high performance Hemi engine for the track or a rebuilt engine for your daily driver. The following pages of this catalog focuses just on our high performance offerings for late model Hemi applications. Please refer to the Melling website for additional application information and tech videos covering a wide range of topics including installation instructions.

Thank you for the 75 years of loyalty you have given us. We are humbled by it and will continue to build on our tradition of supplying dependable performance engine parts.





## MELLING CHRYSLER HEMI VALVE SPRING SEATS

Seat Number	O.D.	Locator I.D.	Thickness	Shoulder Height	Shoulder Diameter	Material	Type
	Inch	Inch	Inch	Inch	Inch		
<b>478014</b>	1.364	.570	.045	.220	1.367	Steel	Cup
<b>478024</b>	1.250	.570	.060	.135	.656	Steel	I.D. Locator

When installing non OE style valve seals onto aluminum Hemi cylinder heads the use of steel spring seats are a must to protect the soft aluminum spring pocket. Melling Performance valve spring seats are manufactured from the highest quality heat treated material, which will ensure that your spring pockets remain free from damage.



478014



478024



## MELLING CHRYSLER HEMI VALVE SPRING SHIMS



473052HP

Shim Number	O.D.	Locator I.D.	Thickness	Material	Type
	Inch	Inch	Inch		
<b>471060HP</b>	1.246	.814	.015	Steel	Shim
<b>473060HP</b>	1.246	.814	.003	Steel	Shim
<b>476060HP</b>	1.246	.814	.006	Steel	Shim
<b>471052HP</b>	1.246	.518	.015	Steel	Shim
<b>473052HP</b>	1.246	.518	.003	Steel	Shim
<b>476052HP</b>	1.246	.518	.003	Steel	Shim



471060HP



Valve spring shims can be a critical piece when trying to dial in your desired spring loads. Melling performance valve spring shims are manufactured from the highest quality heat treated materials ensuring a trouble free, accurate valve spring set up every time.

## MELLING CHRYSLER HEMI ENGINE PLUGS

Plug Number	Description	Contains
<b>MEP-337</b>	MDS Block off plugs; Used on engines not utilizing the Chrysler MDS system	(4) MDS Block Off Plugs
<b>MPE-902BR</b>	Brass Plug kit for engine block and cylinder heads	(4) Expansion Plugs, (1) Cam Plug, (11) Pipe Plugs
<b>MPE-903BR</b>	Brass Cylinder Head Plug Kit	(4) Expansion Plugs, (2) Pipe Plugs



MEP-337



MPE-902BR



MPE-903BR



Chrysler HEMI engine block/ cylinder head plug kits. Whether purchased individually, or as an entire engine kit, you can rest assured knowing that the components in these kits are manufactured using only the highest quality materials, ensuring a positive seal every time.

## MELLING CHRYSLER HEMI LIFTERS

Lifter Number	Type	Description	Material
292326-16	Drop In / Hydraulic	Premium drop in design lifter Designed to be used with factory lifter trays	Cold Forged Steel Body Cold Forged Steel Piston

\*Sold in quantities of 16 pieces



Melling Performance Chrysler HEMI high performance lifters are designed and built to get the job done while ensuring efficient performance and quiet valve train operation. Melling Performance Chrysler HEMI high performance lifters are manufactured from the finest materials thus ensuring long dependable lifter life.

## MELLING CHRYSLER HEMI CAMSHAFT SPECIFICATIONS



Camshaft Number	VVT	MDS	Lift Int./Exh.	Duration @ .050 Int. / Exh.	Lobe Separation	RPM Range
23107	Non VVT	Non MDS	.520 / .520	211 / 215	114	1000-5000
23108	With VVT	Non MDS	.520 / .520	211 / 215	114	1000-5000
23207	Non VVT	Non MDS	.575 / .575	213 / 219	114	1200-5200
23208	With VVT	Non MDS	.575 / .575	213 / 219	114	1200-5200



23107



23108



23207



23208

Melling Performance offers Chrysler HEMI specific high performance camshaft choices for street, RV, strip and circle track racing applications. Melling Performance camshafts are produced from high quality CNC ground billet steel camshaft cores. This material and processing provides tight tolerances, ultra-fine finished lobes and journals.

## MELLING ENGINE OIL PUMP PRIMING TANK



Part Number	Priming Tank Features
MPL-201	<ul style="list-style-type: none"> <li>• Eliminates dry starts after engine repairs</li> <li>• Can be used on all internal combustion engines</li> <li>• Large capacity 2 gallon stainless steel tank</li> <li>• Includes 3 adaptor fittings: 1/8 x 1/8 NPT • 1/4 x 1/8 NPT • 1.5 x 1/8 NPT</li> <li>• 75 lb. safety blow off valve</li> <li>• Built in handles for easy transport</li> <li>• 8 ft. chemical resistant hose with wand</li> </ul>



The Melling Engine Oil Priming Tank was developed as a way for engine builders to safely pre-prime the engine with oil prior to initial engine startup. The priming tank, when filled with clean oil and air pressure will supply pressurized oil into all of the critical areas of the new engine quickly and safely.

The above information is intended to be a convenient reference guide for Chrysler HEMI engines. Please consult the appropriate application listings in the Melling Performance catalog for accurate fitment information

### MELLING CHRYSLER HEMI SPEED SET

Timing Set Number	Description
<b>40540</b>	Billet steel crank sprocket; 1 bolt stainless steel camshaft sprocket; Keyway adjustable; Max 6° advance/retard; Silent timing chain with heavy duty timing chain tensioner <b>(Not for use with VVT)</b>

\*For use with Melling oil pumps - Crankshaft sprocket will not fit OEM oil pumps



### Single Roller; 6 Keyway



### MELLING CHRYSLER HEMI SPEED SET

Timing Set Number	Description
<b>48567T-9</b>	Billet steel crank sprocket; Stainless steel camshaft sprocket; 9 Keyway adjustable; Max 6° advance/retard; seamless double roller timing chain with heavy duty timing chain tensioner & thrust bearing. <b>(Not for use with VVT)</b>



### Double Roller W/Thrust Bearing; 9 Keyway



Displ.	Year	VIN	Melling Set #	Make	Models
5.7L	2005-08	H	40540, 48567T-9	Chrysler	300
5.7L	2007-08	2	40540, 48567T-9	Chrysler	Aspen
5.7L	2006-08	H	40540, 48567T-9	Dodge	Charger
5.7L	2005-08	2	40540, 48567T-9	Dodge	Durango, Magnum, Ram 1500
5.7L	2003-08	D	40540, 48567T-9	Dodge	Durango, Ram 1500, Ram 2500, Ram 3500
5.7L	2005-08	Z	40540, 48567T-9	Jeep	Commander, Grand Cherokee
6.1L	2005-10	W	40540, 48567T-9	Chrysler	300
6.1L	2006-10	W	40540, 48567T-9	Dodge	Challenger, Charger
6.1L	2006-08	3	40540, 48567T-9	Dodge	Magnum
6.1L	2009-10	W	40540, 48567T-9	Jeep	Grand Cherokee
6.1L	2006-08	3	40540, 48567T-9	Jeep	Grand Cherokee

Mell-Gear Performance timing chain kits provide an efficient and economical way to provide the timing components needed for your performance engine rebuild. Mell-Gear Performance timing chain options include silent, single or double roller chains matched with the high quality sprockets needed for the demands of street, strip and racing. Mell-Gear Performance timing chains and sprockets are manufactured from the highest quality materials.



# CHRYSLER HEMI OIL PUMPS

Oil Pump Number	Description	Manf. Volume	Manf. Pressure	Optional Pressure 1	Optional Pressure 2
<b>10342</b>	Standard volume, standard pressure. Hard coat anodized	Standard	50 PSI	60 PSI (Red)	65 PSI (Pink)
<b>10342-BR</b>	Standard volume, standard pressure. Billet steel rotors. Hard coat anodized	Standard	50 PSI	60 PSI (Blue)	65 PSI (Pink)
<b>10342HV</b>	High volume, high pressure. Hard coat anodized	+20%	60 PSI	50 PSI (Yellow)	N/A
<b>10452</b>	Standard volume, high pressure. Hard coat anodized	Standard	75 PSI	65 PSI (Blue)	N/A
<b>10452HV</b>	High volume, high pressure. Hard coat anodized	+20%	75 PSI	65 PSI (Blue)	N/A

\*Oil pump pressure can vary due to engine clearances and modifications \*Pressure/spring color



Melling high performance oil pumps provide dependable performance in every application under the toughest RPM conditions. Melling high performance oil pumps are CNC machined and hardcoat anodized. The HEMI cast iron covers are CNC machined and phosphate coated for improved pump performance and durability. The relief valves feature a threaded plug with optional pressure relief springs included. The oil pump pickup tube o-rings are also supplied. Every Melling high performance oil pump is individually tested for pressure and flow ensuring superior performance every time.

## OE - Stock - HP Oil Pump Interchange

Chrysler OE	Stock Oil Pumps	Performance Oil Pumps	Oil Pump Features
53021622AD	M342	10342	Standard Volume, Hi Pressure (+10 psi / +15 psi)
53021622AD	M342	10342-BR	Standard Volume, Hi Pressure (+10 psi / +15 psi) Billet Rotors
53021622AE	M342	10342	Standard Volume, Hi Pressure (+10 psi / +15 psi)
53021622AE	M342	10342-BR	Standard Volume, Hi Pressure (+10 psi / +15 psi) Billet Rotors
53021622AF	M342	10342	Standard Volume, Hi Pressure (+10 psi / +15 psi)
53021622AF	M342	10342-BR	Standard Volume, Hi Pressure (+10 psi / +15 psi) Billet Rotors
5037687AB	M362	10342	Standard Volume, Standard Pressure
N/A	M342, M362	10342HV	High Volume (+20%), Hi Pressure (+10 psi / +15 psi)
53021622BB	M452	10452	Standard Volume, Hi Pressure (+10 psi / +20 psi)
53021622BE	M452	10452	Standard Volume, Hi Pressure (+10 psi / +20 psi)
53021622BF	M452	10452	Standard Volume, Hi Pressure (+10 psi / +20 psi)
53021622BG	M452	10452	Standard Volume, Hi Pressure (+10 psi / +20 psi)
53021622BH	M452	10452	Standard Volume, Hi Pressure (+10 psi / +20 psi)
5038398AB	M462	10452	Standard Volume, Hi Pressure (+10 psi)
5038398AC	M462	10452	Standard Volume, Hi Pressure (+10 psi)
5038398AD	M462	10452	Standard Volume, Hi Pressure (+10 psi)
5038398AE	M462	10452	Standard Volume, Hi Pressure (+10 psi)
N/A	M452, M462	10452HV	High Volume (+20%), Hi Pressure (+10 psi / +20 psi)

Liter	Year	VIN	Performance Oil Pumps	Make	Models
5.7L	2005-08	H	10342, 10342-BR, 10342HV	Chrysler	300
5.7L	2007-08	2	10342, 10342-BR, 10342HV	Chrysler	Aspen
5.7L	2009-22	2	10452, 10452HV	Chrysler	Aspen, 300
5.7L	2006-08	H	10342, 10342-BR, 10342HV	Dodge	Charger
5.7L	2005-08	2	10342, 10342-BR, 10342HV	Dodge	Durango, Magnum, Ram 1500
5.7L	2003-08	D	10342, 10342-BR, 10342HV	Dodge	Durango, Ram 1500, Ram 2500, Ram 3500
5.7L	2009-20	T	10452, 10452HV	Dodge	Challenger, Charger
5.7L	2009-20	T	10452, 10452HV	Jeep	Commander, Grand Cherokee
5.7L	2009-20	T	10452, 10452HV	Ram	1500, 2500, 3500
6.1L	2005-10	W	10342, 10342-BR, 10342HV	Chrysler	300
6.1L	2006-10	W	10342, 10342-BR, 10342HV	Dodge	Challenger, Charger
6.1L	2006-08	3	10342, 10342-BR, 10342HV	Dodge	Magnum
6.4L	2012-14	J	10452, 10452HV	Chrysler	300
6.4L	2011-20	J	10452, 10452HV	Dodge	Durango, Challenger, Charger
6.4L	2012-20	J	10452, 10452HV	Jeep	Grand Cherokee
6.4L	2014-20	J	10452, 10452HV	Ram	2500, 3500, 4500, 5500

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[www.melling.com](http://www.melling.com)

- Check out digital versions of our condensed catalogs focusing on the GM LS, Ford Modular, and Chrysler Hemi V8 applications.
- In addition you can also download catalogs focusing on performance valve springs, heavy duty valve springs and water pumps.
- Don't forget to check out the Melling tech video library covering a wide range of topics including detailed installation instructions.





## **POWERING PERFORMANCE ENGINES FOR OVER 75 YEARS**

Since 1946 when George Melling Sr. and his son Ben started Melling Tool Company in Jackson, Michigan, the Melling brand has been recognized as a leader in supplying quality parts to the engine building industry.

More than 75 years later, demand for Melling products is stronger than ever and widely preferred by professionals in markets around the world. From those first products shipped three generations ago to our now extensive portfolio of world class automotive solutions, Melling has given customers multiple reasons to prefer one brand and one standard of quality and performance

Melling Performance offers these quality product lines:

- Oil Pumps - Cast Iron, Aluminum and Billet Aluminum
- Oil Pump Pick-up Screens and Pick Up Tube Support Brackets
- Camshafts
- Timing Chain Speed Sets
- Valve Train Kits and Components
- Cylinder Sleeves
- Speciality Items and Installation Tools

On behalf of Melling Performance, thank you for your continued support for over 75 years.

Melling Engine Parts are manufactured with key advantages. Each part is backed by resources, technologies and people who are the very best in the world at designing, manufacturing and building exceptional products. Melling Performance parts deliver "An Advantage by Design".