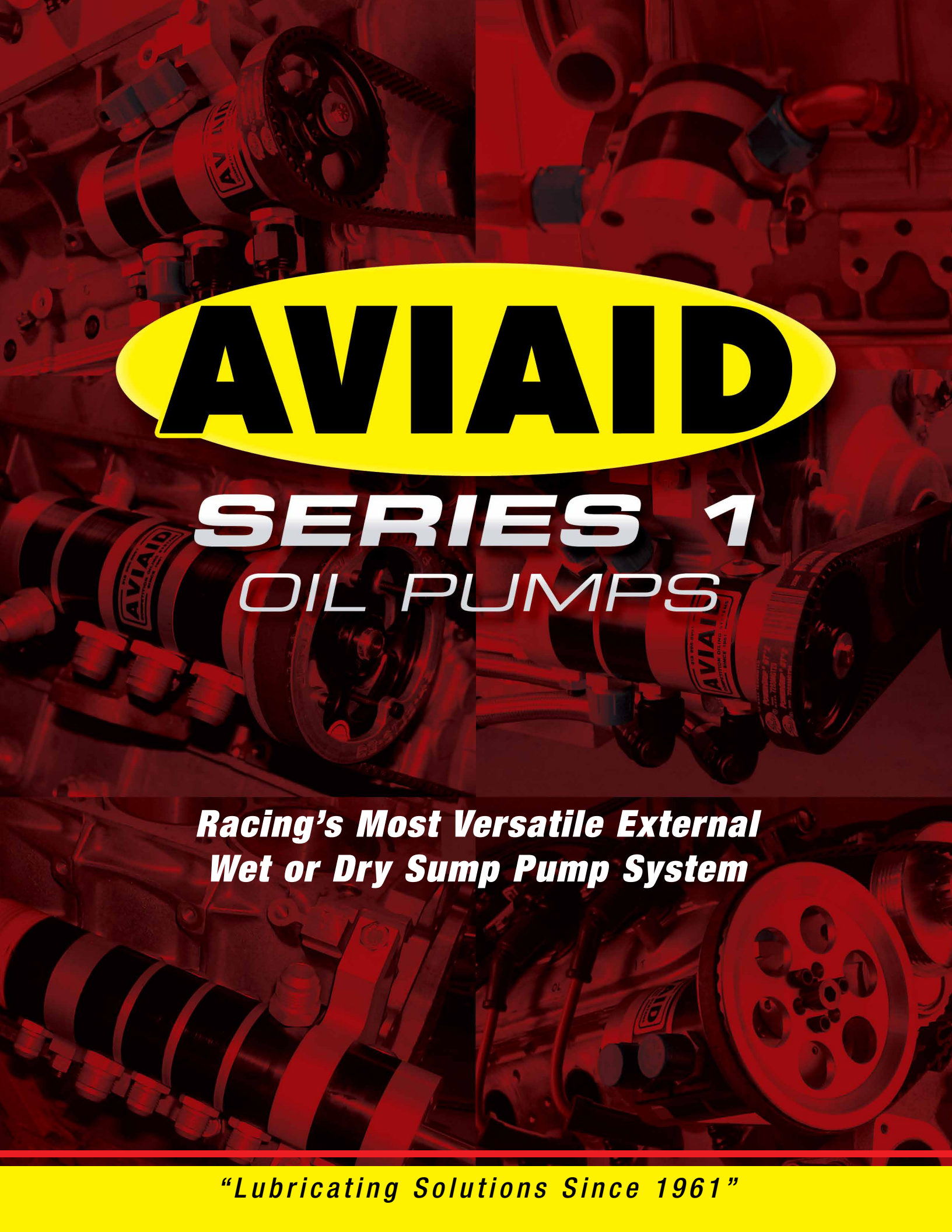


AVIAID

SERIES 1
OIL PUMPS

Racing's Most Versatile External Wet or Dry Sump Pump System

"Lubricating Solutions Since 1961"

INTRODUCTION TO SERIES 1 PUMPS

Today's Aviaid Series 1 pump has evolved through over 40 years of refinement and embodies a number of design, material and manufacturing enhancements. That said, many Aviaid pumps that were sold ten, twenty or even thirty years ago are still in service—a testament to their performance and reliability.

The Series 1 pump features a compact housing design and a 9-tooth gearset. They are available with one through seven sections—although 1 through 4 are the most popular. The sections are made of aluminum with optional cast iron pressure sections. Sections are offered in seven widths (0.600", 0.840", 1.000", 1.250", 1.500" 1.750" and 2.000"). Lead alloy gears are standard. It can be configured to use as either an external wet sump or dry sump pump.

Mounting blades are incorporated as section spacers for many applications. This provides for more rigid mounting than those competitor's systems with mounts that bolt to the spacers. There are six additional mounting options, including cam drive, gear drive, direct-to-block, universal side-mount, alternator mount or generic front flange with or without registers.

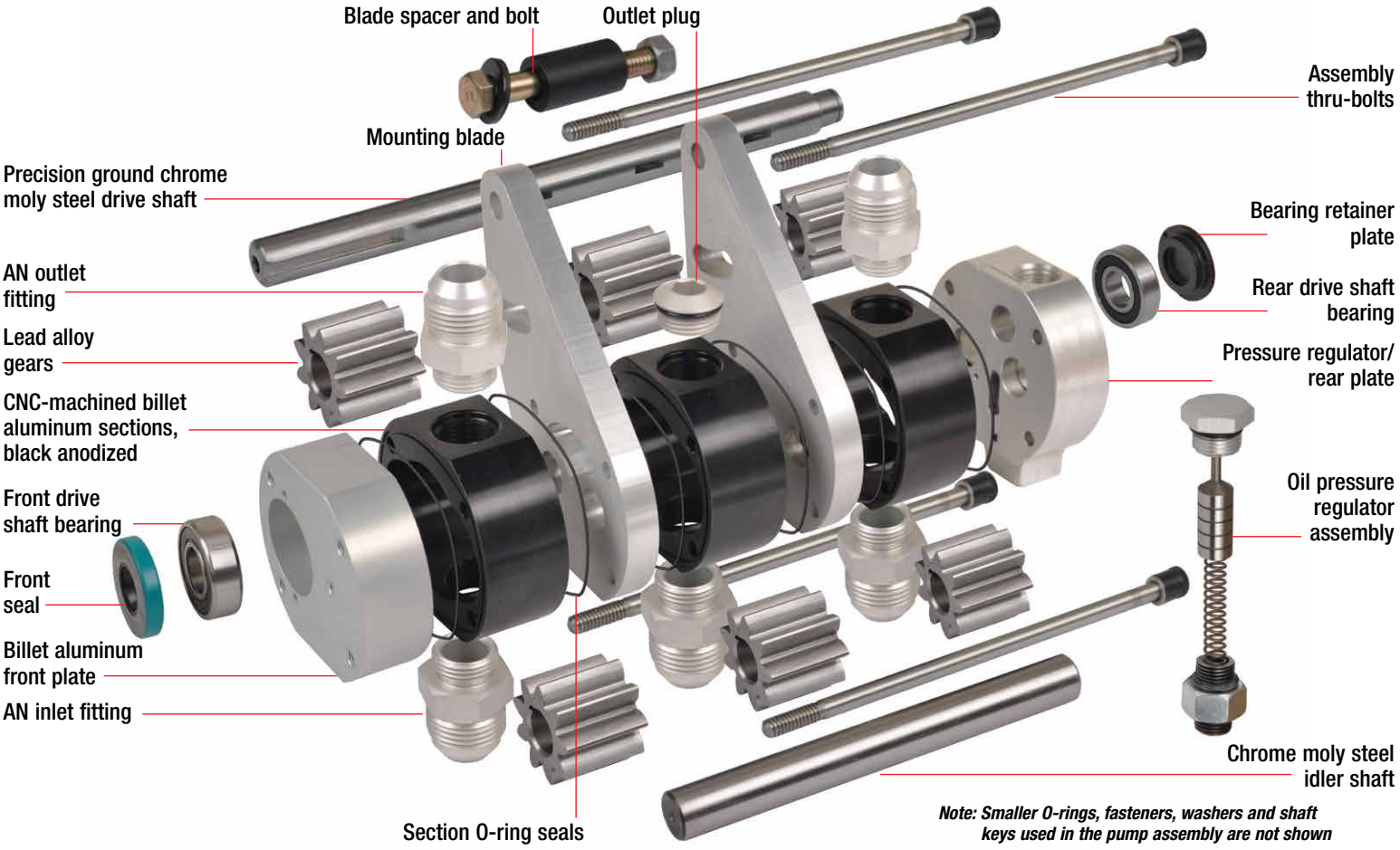
Drive and idler shafts are precision ground chrome moly steel, with the drive shaft available with a 3/16" belt drive keyway, 3/8", 7/16" or 1/2" hex, or 1/4" tang drives. The drive shaft runs on precision roller bearings; the idler shaft is fixed in the pump. Most Aviaid pumps have built-in pressure regulators, with remote-mounted regulators an option.

Series 1 Pump cross-section
Note the interlocking 9-tooth gears and compact housing design

Aviaid's modular design is the key to flexibility and allows pumps to be configured to for most any application from a small displacement 4-cylinder pushrod engine to a huge twin-turbocharged V-8 (or larger) powerplant.

Due to the myriad modifications that can be employed on sophisticated all-out racing engines, it's more advantageous to go with a custom (bespoke) pump configuration. It's a delicate balance of how much volume and oil pressure an engine requires in concert with scavenging and evacuation. And the experts at Aviaid know to work with engine builders to configure the optimum pump and lubrication system.

Components used in typical Aviaid Series 1 pump assembly



Note: Smaller O-rings, fasteners, washers and shaft keys used in the pump assembly are not shown

PUMPS FOR RACING & STREET APPLICATIONS

Aviaid Series 1 pumps can be configured for most any application. With the ability to go from one to seven sections—with seven different section widths—allows Aviaid to provide the optimum amount of oil flow/pressure and scavenging for maximum power and reliability. Add in seven mounting options plus a variety of special features and you can see how Aviaid has the field covered!

ROAD RACING

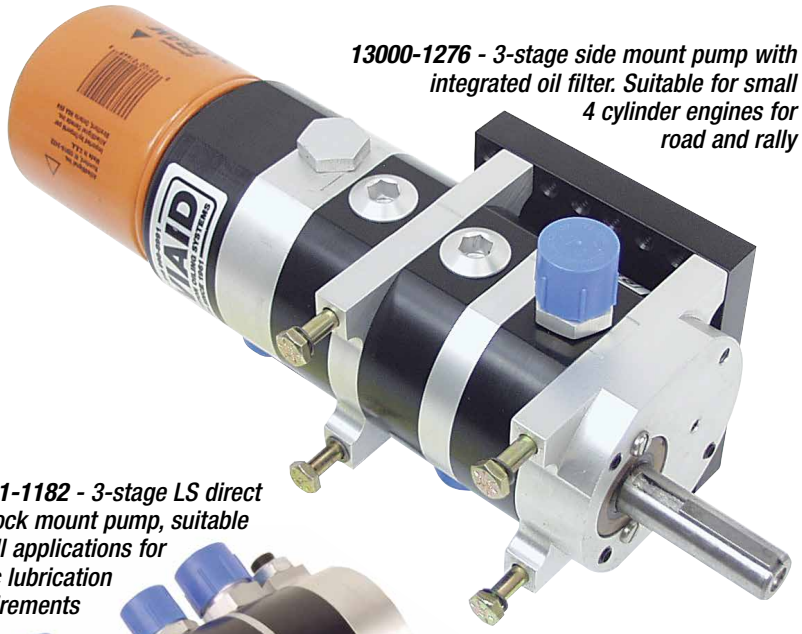
Virtually every major endurance race, from LeMans to Sebring, has been won by race cars equipped with Aviaid oil systems. Aviaid pumps have proven their ability to provide the required pan evacuation and ample supply of lubricant for hour after hour of grueling competition. The pumps can range from single-stage external wet sumps to six-stage dry sump systems; tailored to the exact requirements of the vehicle.

DRAG RACING

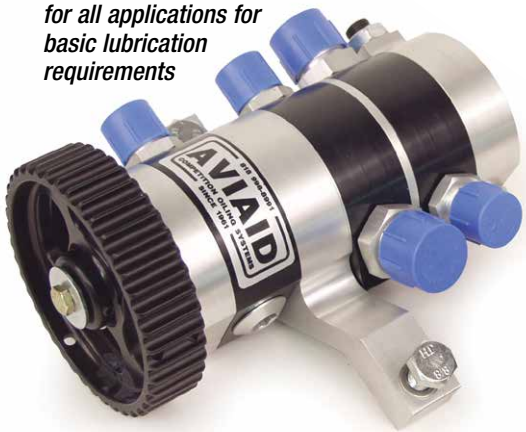
The severe g-force acceleration and braking in drag racing demands lubrication systems that will maintain an ample supply of oil at all times. Moreover, the excellent scavenging of Aviaid Series 1 pumps helps eliminate power-robbing windage to increase performance. From single-stage external wet sumps to multi-stage (up to 6) dry sumps for engines with power-adders or nitromethane. Scavenge sections can also be employed to evacuate windage from under the valve covers, etc.

MARINE

Given that race boats and pleasure craft often operate in rough, choppy water where constant pounding or hard turns can play havoc with oil systems, it's critically important to maintain ample lubrication to the bearings and valve train. Aviaid has been building oil pumps for marine applications since "day one" and knows how to provide proper lubrication under all conditions. Many leading engine builders in the off-shore market have come to rely on Aviaid for their entire lubrication systems.



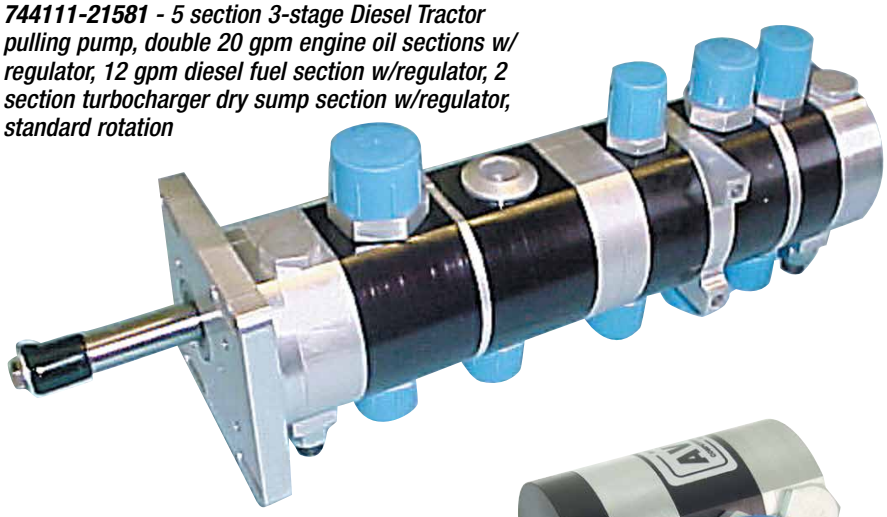
13000-1276 *- 3-stage side mount pump with integrated oil filter. Suitable for small 4 cylinder engines for road and rally*



13111-1182 *- 3-stage LS direct to block mount pump, suitable for all applications for basic lubrication requirements*

13425-7085 *- 3-stage 426-440 Hemi/Wedge for drag race or pulling application for direct replacement of stock pump*

14132-2123 *- 4-stage belt drive pump for small block drag, circle track, marine and road race requirements*



744111-21581 *- 5 section 3-stage Diesel Tractor pulling pump, double 20 gpm engine oil sections w/ regulator, 12 gpm diesel fuel section w/regulator, 2 section turbocharger dry sump section w/regulator, standard rotation*

TRACTOR PULLING

The requirements of Pullers are unique, and Aviaid has worked closely with many of the sports' most prolific competitors for many years. Aviaid's product line includes pumps that are specially manufactured for use in diesel applications. They can also be configured to provide lubrication for turbochargers. Whether it's a multi-engine Modified or diesel-powered truck, Aviaid knows what it takes to help you achieve full-pull performance and reliability.

11205-5085 *- Single stage 426-440 Hemi/Wedge direct replacement pump for street or Nostalgia Hemi drag race*

CIRCLE TRACK

Over the years Aviaid has been involved in all manner of oval track competition from the NASCAR Cup level to Saturday night racing at local bullrings. Of course. the requirements of each venue are unique, and Aviaid offers a wide variety of pumps that are optimized for each particular type of racing. The Aviaid Series 1 pump is a very cost-effective investment in long-term engine life. It is available in configurations from one to six sections. We can also upgrade any existing pump and add sections, etc.

14131-2122 *- 4-stage belt drive pump for small block drag, circle track, marine and road race requirements*

OFF-ROAD

There's probably no more strenuous test of a pump's reliability than off-road racing. Even the mounting system and hardware has to be up to the task. Aviaid can proudly point to a number of racers who have conquered Baja, etc. with the company's pumps, plans and related accessories. Series 1 pumps for off-road applications are available to fit most any engine and chassis combination.

13111-1182 *- 3-stage LS direct to block mount pump, suitable for all applications for basic lubrication requirements*

14230-3176 *- 4 stage belt drive pump for 426/440 Mopar Hemi-Wedge engines, mounting off Oil Pump Pad on driver side of block, for all requirements*

SPRINT CARS

The lubrication requirements for wheelstanding, sideways-sliding Sprinters are far more demanding than ordinary circle track applications. And that's why Aviaid has devoted special attention to the breed. Special setups are available for 410 and 360 engines and configured for all popular accessory and power steering drives. Aviaid's race-proven reliability is a powerful testament to the pump's design and manufacturing excellence.

***14327-7269** - 4-stage cam drive pump for big block drag race w/ fuel pump ad adapter plate*

STREET

Many contemporary engines—the GM LS-series being a prime example—come from the factory with lubrication systems not suited to high performance use. There are many problems associated with the new generation of crank-driven oil pumps, too. Aviaid comes to the rescue with external wet sump (and complete dry sump setups) that provide a consistent flow of lubricant under all conditions.

***31201-1126RR** - Single stage auxiliary scavenge pump for Z06/ LS7 OEM dry sump system upgrade*

***14122-21339RSM** - 4 stage belt drive pump LS Z06 GT3 Corvette with 'alternator mount' for road race and other similar application*

A COMPLETE ASSORTMENT OF REPLACEMENT COMPONENTS

While the reliability of Aviaid Series 1 pumps is near-legendary, there are situations where particles are ingested into the pump and cause damage.

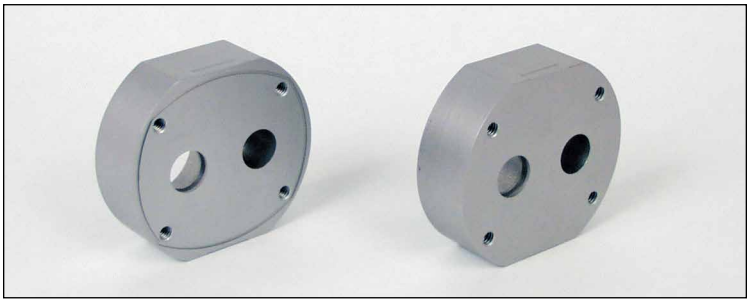
Likewise, there are racers who want to add sections or otherwise modify an existing pump. For this reason, Aviaid maintains a large inventory of components that include 19 sections, 13 separators, 8 pump adapters, 46 mounting blades, plus assorted pump ends, pressure regulators, accessory drives and filter adapters.

It's important to note that these components are all "backwards compatible" with any Aviaid Series 1 pump manufactured from the late '60s to date.

Most of the components are shown with their appropriate part numbers. For shaft and gear assemblies (pictured at right) the most practical thing to do is describe the parts needed to Aviaid personnel and they can determine the optimum course of action. This includes ordering replacement gear sets, drive shafts, keys, idlers and pump studs. It is also possible to configure a complete Series 1 pump using the part numbers in this section and requesting the matching shaft/gear assemblies.

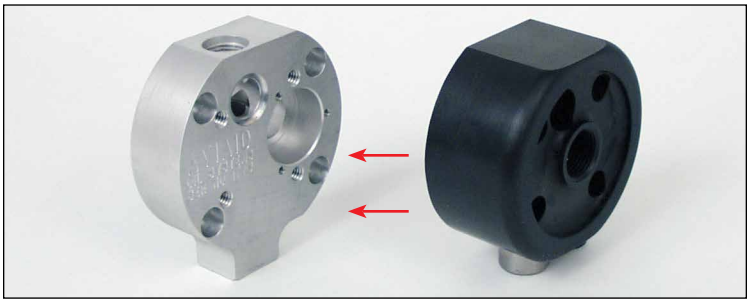
NON-REGULATED PUMP ENDS

Part No.	Description
30610-00	Non-regulator pump end – standard or reverse rotation
30610-01	Non-regulator pump end – std. or reverse rotation, w/inlet & outlet ports
36010-02	Non-regulator pump end - blank with O-ring
30610-03	Non-regulator pump end – std.rotation, for integral pump end filter adapter



BELT DRIVE PUMP FRONTS

Part No.	Description
30500-00	Belt drive pump front – with O-ring
30500-01	Belt drive pump front – without O-ring
30500-76	76 Side mount front



FILTER ADAPTER

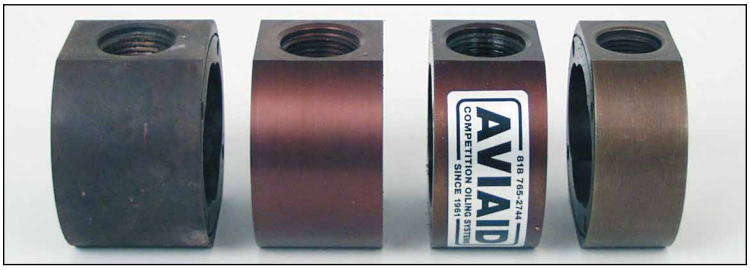
Part No.	Description
40106	Filter adapter – pump end (use with standard rotation pump end)

REGULATORS

Part No.	Description
30600	Regulator – pump end, standard rotation
30605	Regulator – pump end, reverse rotation
30607	Regulator – standard rotation – ported for integral oil filter adapter
30603	Regulator – mid-pump, standard & reverse rotation

SECTIONS (ALUMINUM)

Part No.	Description
30160	Section (aluminum) 2.000” (AN-12 x AN-12)
30162	Section (aluminum) 2.000” (AN-12 x AN-16)
30150	Section (aluminum) 1.750” (AN-12 x AN-12)
30140	Section (aluminum) 1.500” (AN-12 x AN-12)
30130	Section (aluminum) 1.250” (AN-10 x AN-10)
30150	Section (aluminum) 1.250” (AN-10 x AN-12)
30120	Section (aluminum) 1.000” (AN-8 x AN-8)
30110	Section (aluminum) .840” (AN-6 x AN-6)
30100	Section (aluminum) .600 (AN-5 x AN-5)

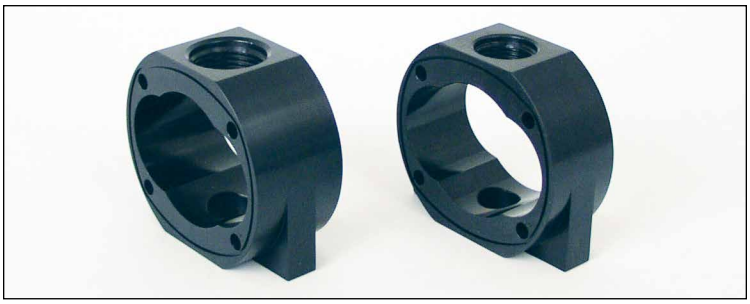


SECTIONS (CAST IRON)

Part No.	Description
30165	Section (cast iron) 2.000” (AN-12 x AN-12)
30166	Section (cast iron) 2.000” (AN-12 x AN-16)
30155	Section (cast iron) 1.750” (AN-12 x AN-12)
30145	Section (cast iron) 1.500” (AN-12 x AN-12)
30135	Section (cast iron) 1.250” (AN-10 x AN-10)
30125	Section (cast iron) 1.000” (AN-8 x AN-8)

SECTIONS (DIESEL)

Part No.	Description
30132	Housing & gear set 1.250"
30021	Housing & gear set 1.000”

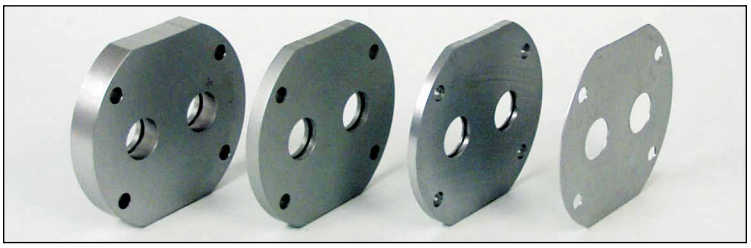


SECTIONS (DIRECT MOUNT)

Part No.	Description
30140-05	Section (direct mount) 1.500"
30130-05	Section (direct mount) 1.250"

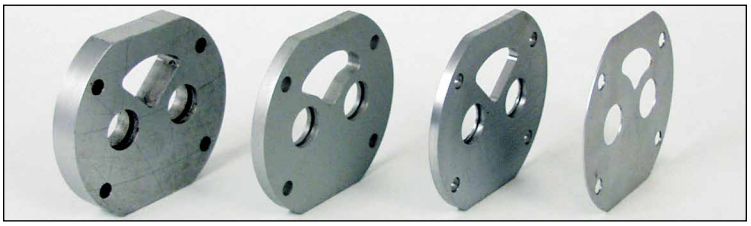
ANGLED SECTIONS

Part No.	Description
30130-06	1.250” section (2x 45° at 180°)
30130-04	1.250” section (2x 45° at 90°)
30130-02	1.250” section (1x 45°)
30130-07	1.250” section (1x 90°)
30140-06	1.500” section (2x 45° at 180°)
30140-04	1.500” section (2x 45° at 90°)
30140-02	1.500” section (1x 45°)
30140-07	1.500” section (1x 90°) 12x12
30150-01	1.750” section (1x 45°)
30150-02	1.750” section (1x 90°) 12x12



BLANK SEPARATORS

Part No.	Description
30485-00	Blank separator .500" wide
30480-00	Blank separator .250" wide
30475-00	Blank separator .125" wide
30470-00	Blank separator .030" wide



CROSS-FLOW SEPARATORS

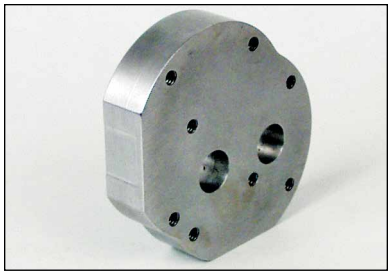
Part No.	Description
30485	Separator .500" thick Blank
30405-00	Separator .500" thick with Cross-Port
30403-00	Separator .500” thick with Bearing & Cross-Port
30404-01	Separator .500” thick with Double Shaft Seals
30473-00	Separator .375” thick Blank
30473-01	Separator .375” thick
30480	Separator .250" thick Blank
30481	Separator .250" thick with Cross-Port
30475	Separator .160” thick Blank
30476	Separator .160” thick with Cross-Port
30472-00	Separator .125" thick Blank
30472	Separator .125" thick with Cross-Port
30470	Separator .030" thick Blank
30471	Separator .030" thick with Cross-Port

SPECIAL SEPARATORS

Part No.	Description
30485-06	30485-06 Cross-flow separator .500" wide w/O-ring
30485-05	Blank separator .500" wide w/O-ring
30485-03	Shaft bearing support section (cross-flow) .500" wide
30485-04	Double seal separator (double O-rings, double shaft seal

MULTI IN/OUT SECTION

Part No.	Description
30160-06	2.000” Section (two AN-10 inlet, one AN-12 outlet) Uses two 1” gear sets



PRESSURE SECTION ROTATOR

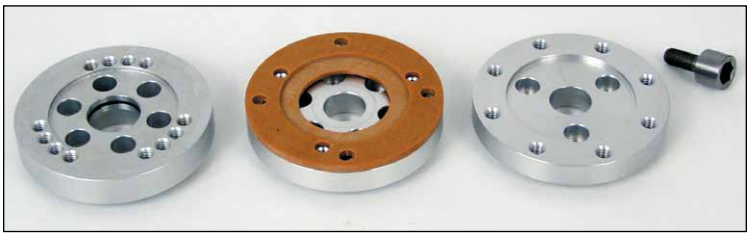
Part No.	Description
30406 90	Pressure section rotator

VERTICAL PUMP MOUNTS

Part No.	Description
30400-73	Vertical mount pump adapter – blank
30405-73	Vertical mount pump adapter – cross-flow

HORIZONTAL PUMP MOUNTS

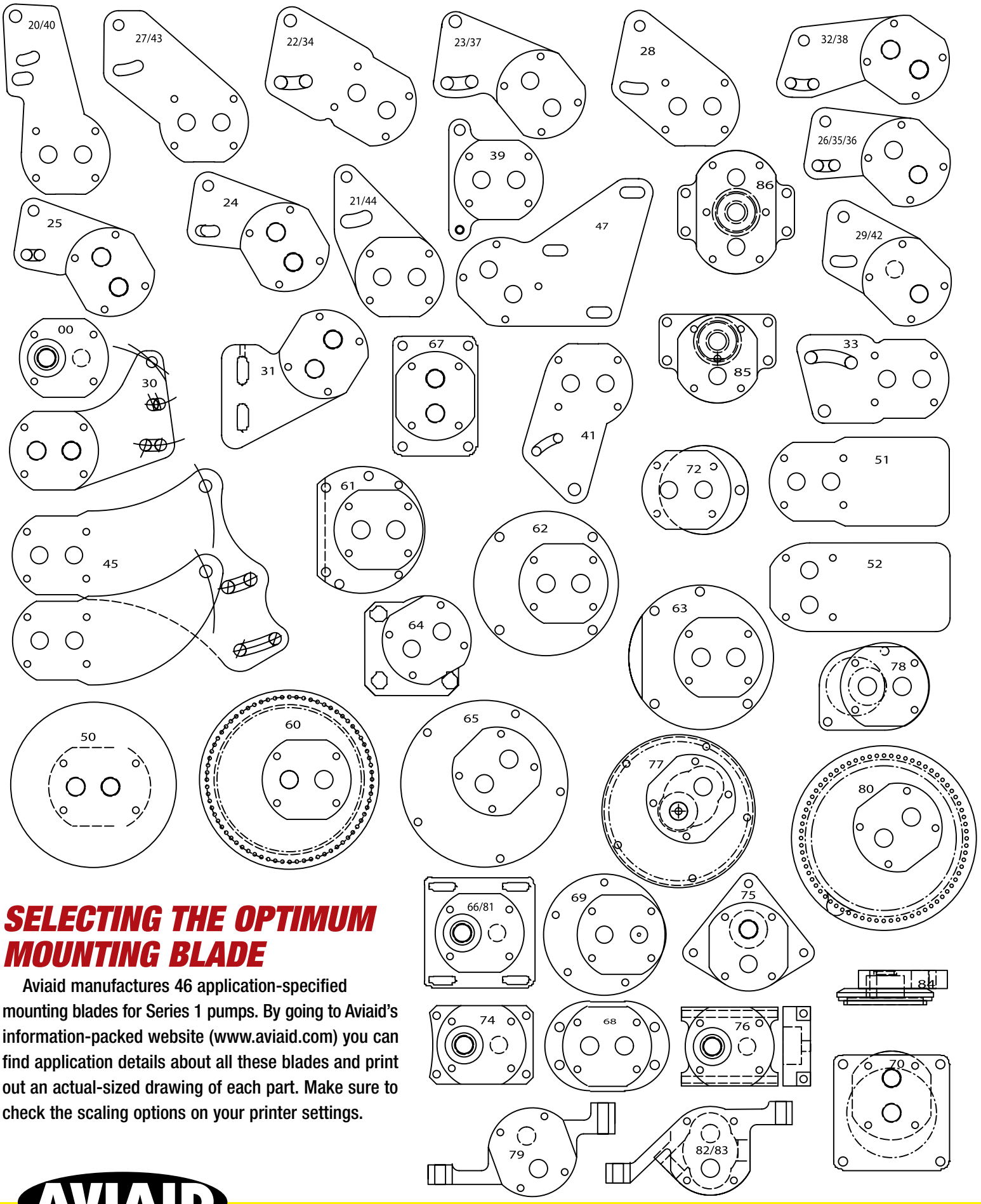
Part No.	Description
30400-76	Horizontal mount pump adapter – blank
30405-76	Horizontal mount pump adapter – cross-flow
30404-76	Horizontal mount pump adapter – double sealed
30403-76	Horizontal mount pump adapter – shaft bearing support section w/crossport
30401-76	Horizontal mount pump adapter – regulator port w/O-ring
30500-76	Horizontal mount pump adapter – pump front



ACCESSORY DRIVES

Part No.	Description
30550	Hilborn 3-bolt Fuel Drive Plate w/seals, hardware, insulator & drive screw
30551	Enderle 4-bolt Fuel Drive Plate w/seals, hardware, insulator & drive screw
30552	Fuel Drive Plate, blank w/seals, hardware, phenolc insulator & drive screw
30553	Power Steering Drive for KSE w/seals, hardware & drive screw
30554	Power Steering Drive for KRC w/seals, hardware & drive screw
30555	Power Steering Drive, Saginaw T/C pump w/seals, hardware & drive screw

MOUNTING BLADES



SELECTING THE OPTIMUM MOUNTING BLADE

Aviaid manufactures 46 application-specified mounting blades for Series 1 pumps. By going to Aviaid's information-packed website (www.aviaid.com) you can find application details about all these blades and print out an actual-sized drawing of each part. Make sure to check the scaling options on your printer settings.