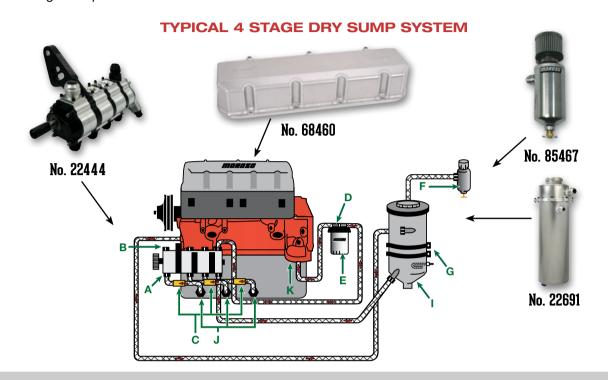
# DRY SUMP OILING SYSTEMS

Dry Sump Oiling Systems are the safest, most dependable oiling systems available. They're popular in all forms of racing, especially where low chassis height is important for good handling. Horsepower gain is maximized because there is virtually no oil in the pan and no internal pump, allowing the windage tray or screen to run the full length of the pan. Other advantages of a dry sump system include a remotely mounted oil tank for increased capacity, the ability to easily add remote oil coolers, more consistent oil pressure, adjustable oil pressure, improved scavenging and increased ring seal due to greater pan vacuum.



CATEGORY	PART # AND DESCRIPTION	CATEGORY	PART # AND DESCRIPTION
A) Dry Sump	No. 22343, Tri-Lobe, Door Car, 3 Stage	Oil Preheaters	No. 23980, In Tank w/ Aluminum Fitting
Oil Pumps	No. 22443, Tri-Lobe, Dragster, 3 Stage		No. 23990, In Tank w/ Steel Fitting
	No. 22253, Door Car, 3 Stage		No. 23995, External Heating Pad, 6"x12"
	No. 22523, Dragster, 3 Stage		No. 23996, External Heating Pad, 5" x 7"
	No. 22344, Tri-Lobe, Door Car, 4 Stage		No. 23997, External Heating Pad, 2" x 15"
	No. 22444, Tri-Lobe, Dragster, 4 Stage	H) Oil Tanks	No. 22681, 13", 5 qt., (1) -16AN w/o Integral
	<b>No. 22254</b> , Door Car, 4 Stage		Breather
	<b>No. 22524</b> , Dragster, 4 Stage		No. 22682, 13", 5 qt., (1) -16AN w/ Integral
B) Pump Fittings	No. 22741, Replacement Fitting -10AN		Breather
	No. 22742, Replacement Fitting -12AN		<b>No. 22682</b> , 13", 5 qt., (3) -12AN w/o Integral
	No. 22743, Replacement Fitting -16AN		Breather
	No. 22744, Replacement Fitting -16AN		<b>No. 22684</b> , 13", 5 qt., (3) -12AN w/ Integral
	W/-12 AN		Breather
C) In-Line	<b>No. 23850</b> , -10AN fittings, 5/8		No. 22686, 15", 6 qt., (1) -16AN w/o Integral
Screened Oil	<b>No. 23860</b> , -12AN fitting, <sup>3</sup> / <sub>4</sub> "		Breather
Filters	<b>No. 23870</b> , -8AN fitting, ½"		<b>No. 22687</b> , 15", 6 qt., (1) -16AN w/ Integral
D) Remote Filter	Nos. 23700/23710, Ford/Chrysler Style		Breather
Mounts	Nos. 23750/23760, Chevy Style		No. 22688, 15", 6 qt., (3) -12AN w/o Breather
	No. 23766, Large Diameter Style		<b>No. 22689</b> , 15", 6 qt., (3) -12AN w/ Integral
E) Racing Oil	<b>No. 22459</b> , Chevy, 4-% <sub>32</sub> " high	N F111 F1111	Breather
Filters	<b>No. 22460</b> , Chevy, 5-1/4" high	I) Filter Fittings	No. 23960, 3/4" NPT Male to -12AN Male
	No. 22461, Chevy, 8" high		No. 23961, -12AN Male to -12AN Male
	No. 22470, Ford/Chrysler, 5-1/4" high	J) Filter Block-	No. 23690, Filter Adaptor, Chevy
	No. 22465, Large Dia. (Fram HP-6	Off/ Bypass	No. 23770, Bypass, SBC & BBC
E) Duanthau	replacement), 6-1/4" high	Plates	No. 23782, Bypass, Merlin Block
F) Breather	No. 85465, -12AN Inlet		No. 23780, Block-Off SBC & BBC
Tanks	No. 85466, Dual -12AN Inlet Fittings		No. 23840, Block-Off BBC (Gen V)
	No. 85470, %" NPT Inlet		No. 23820, Block-Off Ford/Chrysler
C) Touls Mounts	No. 85475, -16AN Inlet		
G) Tank Mounts	Nos. 22677, 22678, 22679		

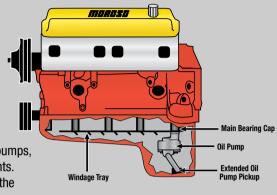
(Straight, Offset or U-Weld-It Kits)

## WET SUMP VS DRY SUMP OILING SYSTEMS

The use of a wet or dry sump oiling system is often determined by the level of competition and the racer's budget. A wet sump system is based on the original equipment oiling system, and can be enhanced with certain components to improve oil control and increase power. A dry sump system is designed for the top levels of racing where maximum power and oil control are absolutely essential.

## **TYPICAL WET SUMP SYSTEM**

In a typical Wet Sump system, oil is stored in the bottom of the pan and distributed throughout the engine by an internally-mounted pump. An oil pump pickup, mounted to the pump, extends to within a quarter inch of the pan's bottom to "pickup" the oil. Although a Wet Sump system is essentially the same system used in production cars, it can be enhanced significantly with components that improve oil control and increase power. For performance street and racing applications, these components include high capacity pans, extended oil pump pickups, racing oil pumps, windage trays, oil control kits, racing oil filters and other components. In some racing applications an external oil pump is used, allowing the windage tray or screen to run the pan's full length.



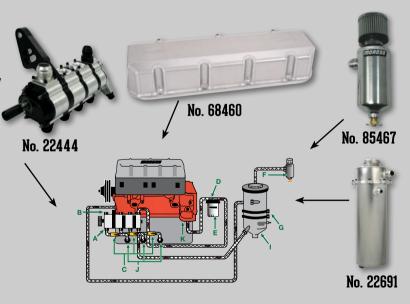
Moroso Wet Sump Oiling System components are race proven, designed to keep the engine properly supplied with oil during the most demanding conditions.

### **OIL PAN CAPACITIES**

Capacities listed for Moroso Wet Sump Oil Pans include the capacity of the pan only, measured at or below the normal fill mark on a stock dipstick. Additional oil must be added to compensate for filters, coolers, tanks, etc.

#### TYPICAL DRY SUMP SYSTEM

Unlike a wet sump system where oil is stored in the pan, a Dry Sump Oiling System stores oil in a separate tank leaving the pan essentially "dry." An externally mounted pump, generally with three or four stages, is used to "scavenge" or remove oil from the pan, deliver it to the storage tank, and send it back through the engine. In a typical setup, all but one of the stages is used to scavenge oil from the pan. A single pressure stage is normally used to return oil from the tank to the engine. The primary advantage of a Dry Sump System is its ability to make more power. With very little oil in the pan, the rotating assembly is not burdened with the weight of excess oil (a phenomenon commonly referred to



as "windage"). Because there is no internal pump, the windage tray or screen which serves to isolate sump oil from the rotating assembly, is allowed to run the full length of the pan. Keeping the rotating assembly free of windage allows it to spin freely and make more power. In addition, the extra crankcase vacuum created by the dry sump pump helps to improve ring seal for additional power gain. Other advantages of a Dry Sump System include increased oil capacity, more consistent oil pressure, the ability to easily add remote coolers, and adjustable oil pressure. And because the pan doesn't store oil, it can be relatively shallow in depth to allow lower engine placement for improved weight distribution and handling. Moroso manufactures a full range of Dry Sump Oiling System components, all of which are engineered to be fully compatible with one another. This allows the engine builder to select the best combination of equipment and avoid the costly problems that often occur when "mixing and matching" components from various manufacturers.

NOTE: Oil pan rules vary from track to track. Check with your race track and/or sanctioning body before purchasing.