

# SPORTSMAN EVP STR.19.06.000 INSTRUCTIONS

- PAGE 1: VACUUM PUMP DESCRIPTION AND OPERATION
- PAGE 2: OVERALL DIMENSIONS OF VACUUM PUMP
- PAGES 3 & 4: INSTALLATION
- PAGE 5: MAINTENANCE
- PAGE 6: FEMALE CONNECTOR WIRING



STAR MACHINE  
7810 OAK AVENUE  
PARKVILLE, MARYLAND 21234

PHONE: 667.210.3874  
FAX: 410.661.2467  
EMAIL: STARVACUUMPUMPS@GMAIL.COM

The Star Machine Sportsman Electric Vacuum Pump (EVPS) is representative of our continued efforts to provide racers with the latest vacuum pump technology. The EVPS is a DC electric, reciprocating piston vacuum pump. The EVPS offers the distinct advantage of ALL the HP gains, thru increased crank case vacuum, with ZERO HP lost to driving a mechanical vacuum pump.

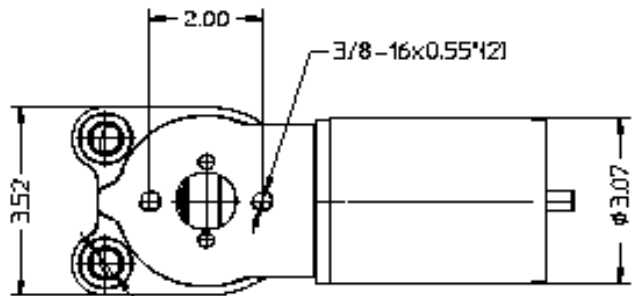
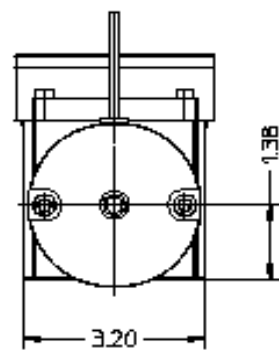
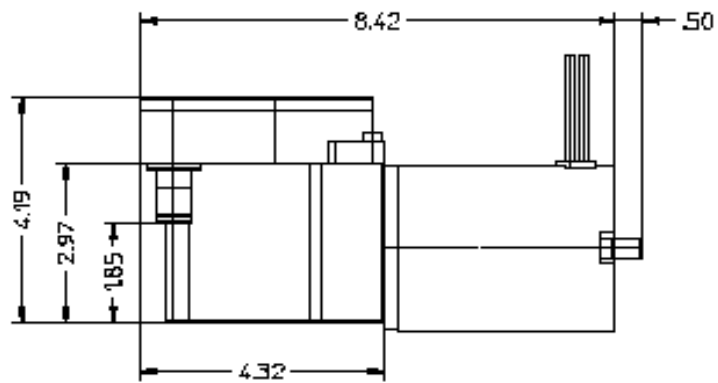
At Star Machine we realize that you don't get something for nothing. The electric motor driven EVPS adds the requirement of between round battery maintenance (recharging). This will be considered, by some racers as a burden (one more between round headache). Other racers, looking for that last .01 second advantage, will view the additional maintenance as part of the game.

The EVP operates off your existing 12 to 28 VDC electrical system. To complete the EVP installation one 12V-75A normally open switch is required to operate the pump. We recommend switching the positive side. If you would like to control the EVP with a relay we recommend the Bosch 24VDC/50A, PN 0.332.002.250.

**The use of other battery systems is OK, as long as the voltage is not exceeding 30VDC.**

Activating the pump is presently (and recommended) done when the vehicle is pre-staged. In most cases at the same time the data recorder is switched on. This will guarantee the pump motor will receive the maximum available battery power.

The vacuum line connection to the engine is critical to the operation of the EVP. Drawing oil into the EVP may result in damage to the reeds. Care must be taken to baffle and/or separate the engine oil from the air drawn by the pump. More important to the performance of the pump is the sealing of the engine, the better the seal the higher the potential vacuum. Use clear 5/8" ID vacuum rated hose for the intake and exhaust connections.



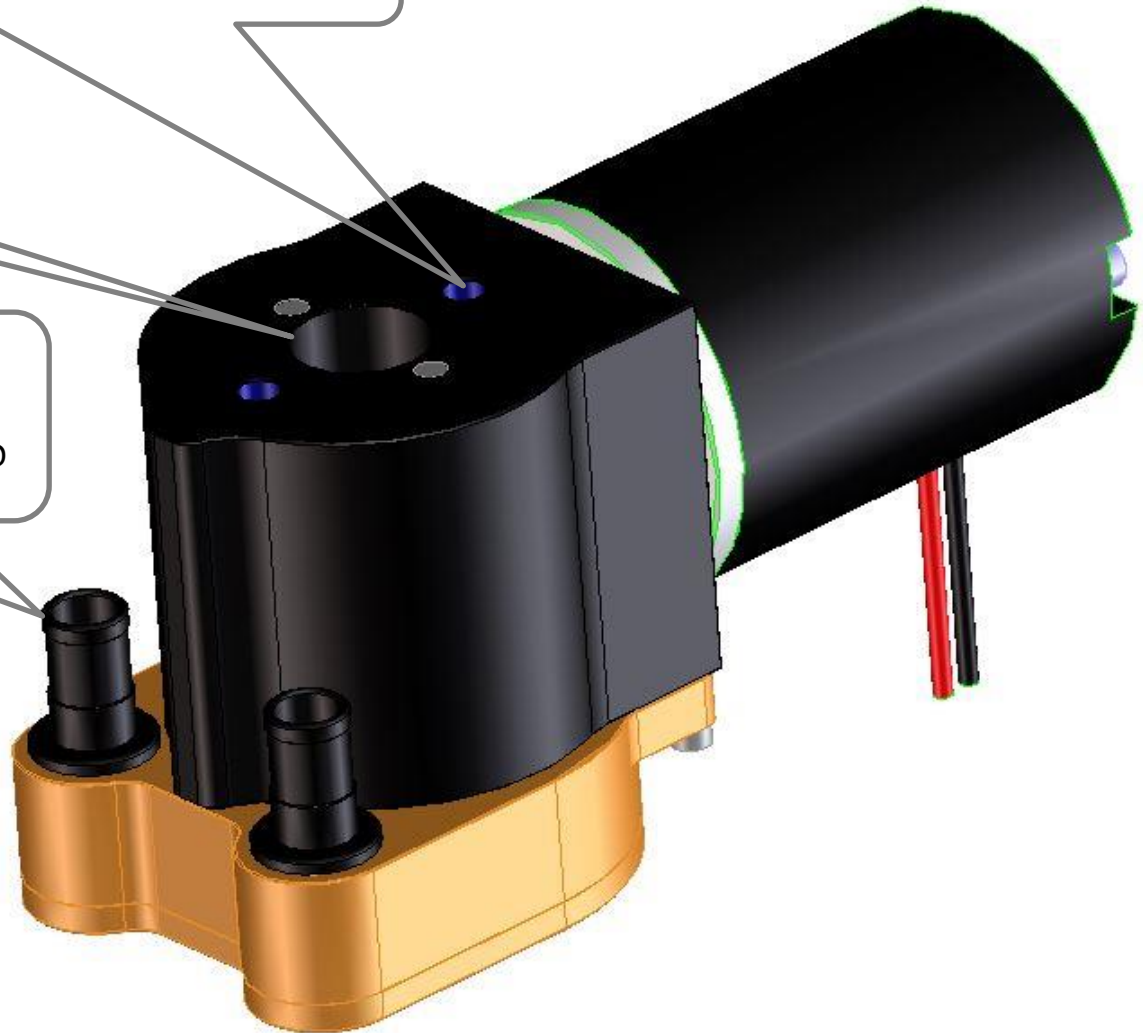
Ø .425 IN TAKE & EXHAUST FITTING (Ø)

2			
1			
0			
REV.	REVISION DESCRIPTION	DATE	
<b>STAR MACHINE</b> 788 OAK AVENUE PARRYVILLE, MD. 21781		DESCRIPTION: LAYOUT DIMENSIONS. EVPS	
HEAT TREATING		MATERIAL	
HARDNESS		DESIGNED BY	T HIGDON
SURFACE PREPARATION		SCALE	SHEET 1 OF 1 SIDE B
FINISH		DRAWN BY STR.19.06.000	
<small>         THE DRAWING IS THE PROPERTY OF STAR MACHINE. IT SHALL NOT BE COPIED OR REPRODUCED WITHOUT THE WRITTEN AUTHORIZATION OF STAR MACHINE.       </small>			

3/8"-16 UNC TAPPED HOLES, 2.0" CENTER TO CENTER.  
USE FASTENERS THAT WILL HAVE NO MORE THAN 0.6" OF  
THREAD INTO PUMP.

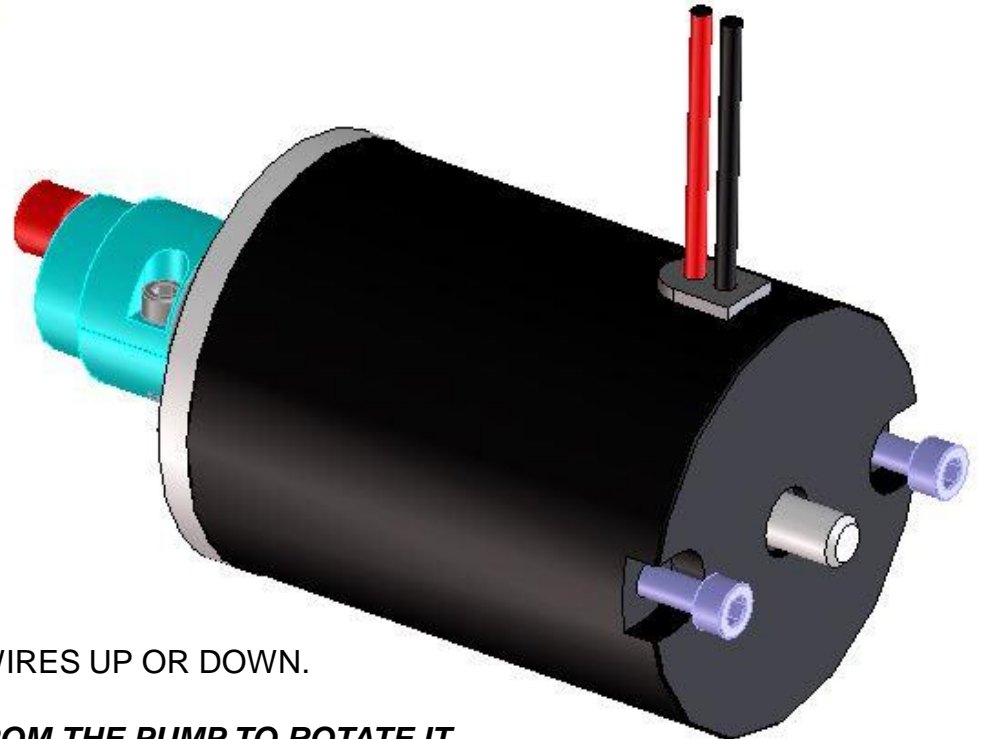
DO NOT BLOCK THIS HOLE

FITTINGS ARE MARKED AS:  
"INTAKE" AND "EXHAUST"  
**INTAKE** CONNECTS TO ENGINE  
**EXHAUST** CONNECTS TO A VENTED  
EXHAUST TANK.



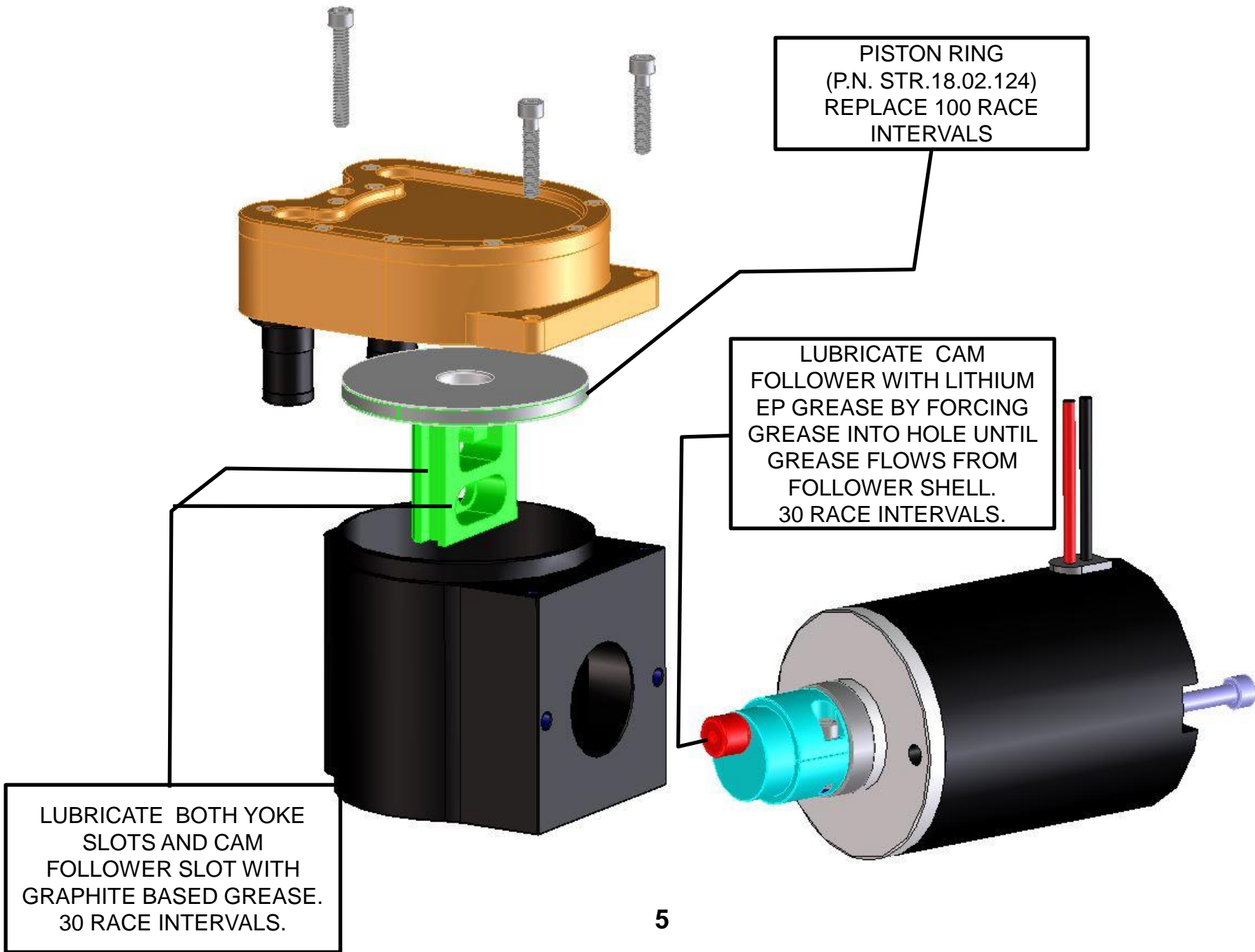
PUMP CAN BE MOUNTED  
IN ANY POSITION.

THE EVPS HAS THE MALE CONNECTOR ATTACHED AND A MATING FEMALE CONNECTOR WITH LEADS IS SUPPLIED.  
IT IS RECOMMENDED THAT THE POSITIVE LEAD BE SWITCHED.  
USE A 12V-75A RATED SWITCH TO OPERATE THE PUMP (GRAINGER # 5RLV9)  
IF YOU PREFER TO ACTUATE THE PUMP WITH A RELAY WE RECOMMEND  
THE BOSCH 24VDC/50A, PN 0.332.002.250



MOTOR CAN BE ROTATED 180° TO POSITION THE WIRES UP OR DOWN.  
LOOSEN SCREWS AND ROTATE THE MOTOR.

***\*\*MOTOR DOSE NOT HAVE TO BE PULLED AWAY FROM THE PUMP TO ROTATE IT.***



# FEMALE CONNECTOR WIRING

