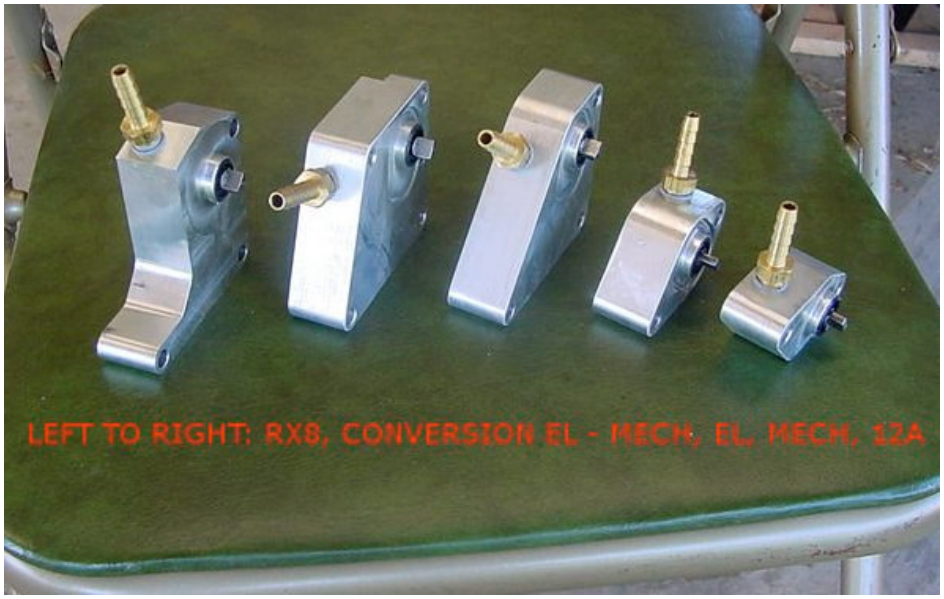
Metering Pump Adapter for Wankel Engine.

Description.

Wankel engines such as the one used in the MAZDA RX7 sports car need oil in the combustion area for lubricating the metal seals.
Most stock engines use a metering pump pumping a small amount of engine oil from the oil pan into the intake manifold and/or directly into the combustion chamber. Engine oil is designed to lubricate sleeve bearings and carry heat from the engine interior to some cooling areas. In the RX7 the heat is removed from the oil in an oil cooler. When engine oil is getting into the combustion chamber, it only is burning partially, leaving some unburned deposits behind. These deposits can build up and reduce engine performance. One obvious method of preventing this is to disconnect the metering pump altogether and mix two-stroke oil to the gasoline like some older two-stroke engines require. With this method it has been demonstrated that two-stroke oil is an effective lubricant and there is no build up of combustion residues.
The Metering Pump Adapter, as offered by ***Richard Sohn*** takes the solution one step further in allowing to still using the stock metering pump but supply it with two-stroke oil. With the Adapter installed, all that is needed is a small oil tank with two-stroke oil, connected to the Metering Pump Adapter. The oil level in the tank should never be less then 6” above metering pump.Oil consumption is approximately 1/100 of fuel used.



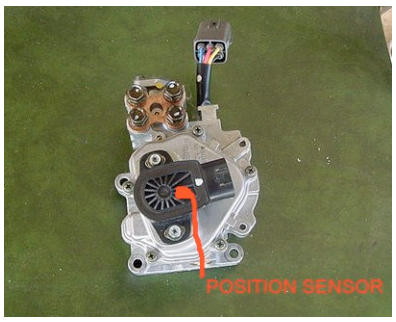
ADJUSTER FOR THE RENESIS OMP

The RENESIS engine is becoming increasingly popular for conversion for use in experimental airplanes. Using the Oil Metering Pump for top lubrication is an open question, because most after market EMSs do not provide an output for OMP control.
In the RX8 automobile the OMP oil flow is controlled by engine RPM and pump-rate. The pump-rate control is activated by the engine computer. This pump-rate control is used to increase oil flow when there is an increased power demand at low engine RPM. This condition does generally not occur in an airplane.
When the engine is used with an EMS with no output for the OMP, the only option is to mix some oil in the fuel for top lubrication. The preferred oil used for this method is two-stroke oil for its ability to readily mix with gasoline and lower combustion residues than regular motor oil.

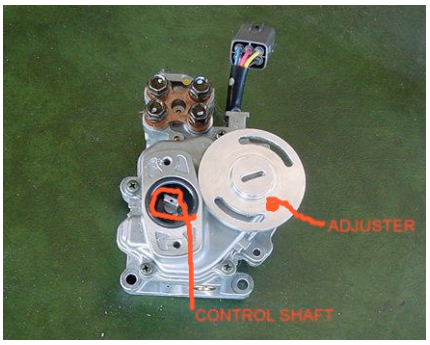
To overcome this draw back in aircraft use, the OMP pump-rate control can be fixed to a certain position, and the oil flow will only change with engine RPM.

Solution.

The RX8OMP is equipped with a position sensor, (pic 1.), which monitors the position of the control shaft on the pump. This position sensor may be replaced with an adjuster (pic.2.) to set the control shaft to a fixed position. In this way, the OMP is fully functional, giving an oil amount comparable to oil mixed in the fuel.



Picture 1.

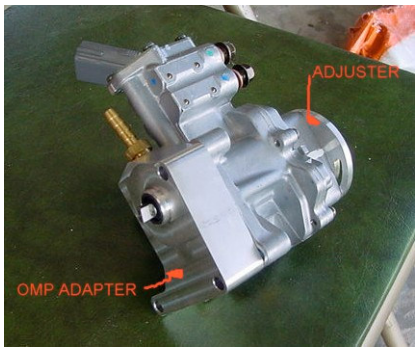


Picture 2.



Picture 3.

If the use of two-stroke oil is desired, the ADJUSTER with the ADAPTER represents a complete conversion (pic 4.).



Picture 4.

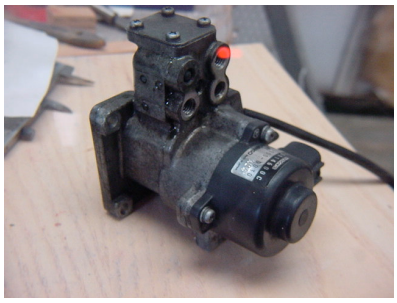
ADJUSTER FOR THE 3rd GEN RX7 ENGINE OMP

The 3rd GEN RX7 engine is a popular for conversion, for use in experimental airplanes. Using the Oil Metering Pump for top lubrication is an open question, because most after market EMSs do not provide an output for OMP control.
In the RX7 automobile, the OMP oil flow is controlled by engine RPM and pump-rate. The pump-rate control is activated by the engine computer. This pump-rate control is used to increase oil flow when there is an increased power demand at low engine RPM. This condition does generally not occur in an airplane.
When the engine is used with an EMS with no output for the OMP, the only option is to mix some oil in the fuel for top lubrication. The preferred oil used for this method is two-

stroke oil for its ability to readily mix with gasoline and lower combustion residues compared to the use of regular motor oil.
To overcome this draw back in aircraft use, the OMP pump-rate control can be fixed to a certain position, and the oil flow will only change with engine RPM.

Solution.

The RX7 OMP is controlled using a position stepper motor, (pic 1.). This stepper motor may be replaced with an adjuster (pic.2.) to set the control shaft to a fixed position. In this way, the OMP is fully functional, giving an oil amount comparable to oil mixed in the fuel.

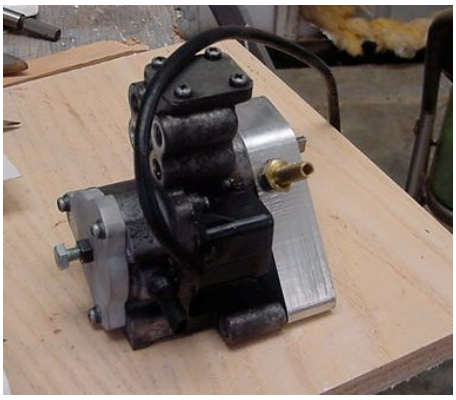


Picture 1.



Picture 2.

If the use of two-stroke oil is desired, the ADJUSTER with the OMP ADAPTER represents a complete two-stroke-oil conversion (pic 4.).



Picture 4.

Ordering Information.

Price: For 13B mech. Pump US$ 82.00
For 13B electronic Pump US$ 88.00 with adjuster US$ 105.00
Adjuster for 3rdGEN 13B US$ 22.00
For 12A US$ 76.00
For 13B 3rd GEN mech Pump US$ 92.00
For RX8 US$ 96.00 with adjuster US$ 108.00
Adjuster for RENESIS US$ 18.00

All prices include shipping within continental US

Florida resident add 6% sales tax

payable in check or money order to:

Richard Sohn
8029 HWY 1087
DeFuniak Springs, FL 32433

All adapter and adjuster configurations are in stock now.

Richard Sohn , 8029 HWY 1087, DeFuniak Springs, FL 32433. Tel/Fax(850)834-4905
email:unicorn@gdsys.net