



Maxwell Propulsion Systems, Inc.

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Maxwell Propulsion Systems January Update

Well, 2007 has arrived bringing longer days; while we are in the midst of the longest cold spell since the 1950's and are anxiously awaiting the arrival of Spring, MPS is making excellent progress. Read on...

NEW HOURS

Along with the New Year, MPS has moved to working four 10 hour days. Our official working hours are 6:30 am to 5:00 pm Monday through Thursday. Of course, there is a possibility that someone will answer the phone on Fridays and during other hours, however, don't be surprised if you get the answering machine!

TEST STAND ENGINE

We now have a fully operational production-quality MPS EJ25 engine package installed on a GlaStar mockup. If you want to come see, hear, and touch the complete package, we would love to see you!

VOLTAGE MONITOR

MPS is excited to announce the availability of a device that protects your electrical system and gives early warning of an over or under voltage situation. The monitor has two precision voltage comparators each built with 0.1% parts. It can be installed on any engine that does not have a self-exciting alternator.

- The under voltage circuit compares the incoming voltage against voltage output. When the alternator fails to produce at least 13 volts, the LED glows solid on.
- The over voltage circuit monitors the incoming voltage output. When the output exceeds 16.5 volts, the LED flashes, indicating that the unit has turned off the voltage to the alternator and shut down the alternator. (Note, In contrast to other commercially available systems, the alternator shut-down occurs without damaging to the alternator.) The LED continues to flash until the Alternator Field Switch is turned OFF. To reset the Voltage Monitor return on the Alternator Field Switch to the ON position. We have a supply in stock, ready to ship. The list price is \$319; however, we are offering an introductory price of \$289 on the first 10 orders.

VARIABLE PITCH PROPELLER

Trust me when I say that we collectively are absolutely ecstatic to announce that MPS is ready to accept orders for the new variable pitch propeller. As we receive customer orders we will issue a purchase order for the blades. There is an estimated lead time of four weeks for receiving blades. On a related note, the production version of the optional prop pitch indicator will be ready for delivery mid-to-late February.

The key improvements included increased

- Bearing thrust capacity for drive screw;
- Threads/inch of drive screw to give adequate leverage; and
- Section thickness in stressed areas.

In addition, the design incorporates

- Positive stops and limit switches on blade motion; and
- A redesigned motor coupling.

PSRU

We continue to move forward on the design/development of the new PSRU, as happens with most design/development projects, things are progressing rather more slowly than hoped for. However, key features have been decided. The gear box engineering specifications include: Approximately 4.119 inch prop offset Approximately 10.556 inches from engine face to prop flange

- Approximately 180 hp maximum with standard ratio
- Designed to use with lightweight composite props
- Incorporate a friction disc style clutch
- AGMA quality level 10 gears
- Multiple gear ratios available
- Standard gear ratio 62:29
- Unmodified starter

In an effort to minimize the production lead-time we have already begun giving our key vendors a heads-up about parts we will need. With the assumption that testing will not reveal any major design issues, we are cautiously optimistic that deliveries can begin in late 2nd quarter 2007.

ELECTRICAL RETROFITS

These upgrades continue to be "best sellers." We have now shipped 16 retrofits and are happy to have had a part in getting several more systems starting and running smoothly!

WEBSITE

We are nearing completion of photos and descriptions of the individual kits available from MPS. Here is a sneak peak at some of our most popular products:

- Exhaust System: For EJ25 engines that are having overheating problems, MPS is offering two retrofit options. 1) For \$850 you get a complete assembly from the exhaust flange to the stainless steel tips. 2) Alternatively, for \$550 the customer can ship us their existing NSI exhaust system; MPS removes and reuses components to build the system.
- Air Boot Package: Another upgrade that can improve both airflow and cooling replaces the existing air filter system with an Air Boot kit that mounts to the throttle body. Cost \$120.
- Crankcase Ventilation Kit: This kit eliminates the existing cross-over ducting and filters/vents the crankcase using a K&N breather filter. Cost \$58.

FIRE SALE

Amongst our other activities we have made substantial progress in photographing and categorizing items that are available for sale. Our again, cautiously optimistic, goal is to announce the Fire Sale in our February 2007 update. Stay tuned!

Best regards,

Maxwell Propulsion System Staff