

## BE-55 Prop Questions and Fuel Diagram.

### **What does oil pressure do to Prop?**

drives a piston which moves blades

### **Which lever manipulates prop oil pressure**

prop lever

### **Which unit regulates oil pressure to the prop**

prop governor

### **What is function of nitrogen cylinder**

PROP-AFT, oil pressure is reduced by prop governor. This allows a nitrogen-charged cylinder with a large spring on the opposite side of the piston to drive the blades to a HIGH PITCH-LOW RPM (feathered) position.

### **Purpose of spring in prop dome**

When prop lever is aft, oil pressure is reduced by prop governor. This allows a nitrogen-charged cylinder with a large SPRING on the opposite side of the piston to drive the blades to a HIGH PITCH/LOW RPM (feathered) position

### **Define constant speed**

the propeller governor varies the oil pressure to adjust the prop blade to maintain a constant RPM

### **What unit adjusts the prop to maintain a constant RPM and how does it do it**

prop governor...varies the oil pressure to adjust the prop blade to maintain a constant RPM

### **Define full feathering**

when prop blades are in line with the relative wind

### **Will prop always feather**

centrifugal stop pin prevents engine feathering below 950 RPM. However, if oil pressure is lost, the prop will feather when the RPM is above 950 RPM

### **What are centrifugal stop pins**

They prevent the engine feathering below 950 RPM. The purpose is to allow the prop blades to remain in a LOW PITCH upon engine

shutdown. Thus preventing excessive loads on the engine starter during the next engine start.



**What is the true purpose of the centrifugal stop pins**

Prevents engine feathering below 950 RPM The purpose of this is to allow the prop blades to remain in a low pitch upon engine shutdown-prevents excessive loads on the engine starter during the next engine start.



**What is correct action for prop overspeeding out of control**

retard the throttle. The propeller control should be moved to full 'DECREASE RPM" and then set if any control is available.



**In an overspeed, does the governor try to get the oil flow back into the engine or into the prop?**

Into the engine, to slow the prop down.



**Describe what happens when the plane enters a climb from cruise set at 2400rpm**

Initiall, the prop slows down. The fly weights go inward which tells the governor to send oil to the prop so that the prop goes back to 2400rpm.

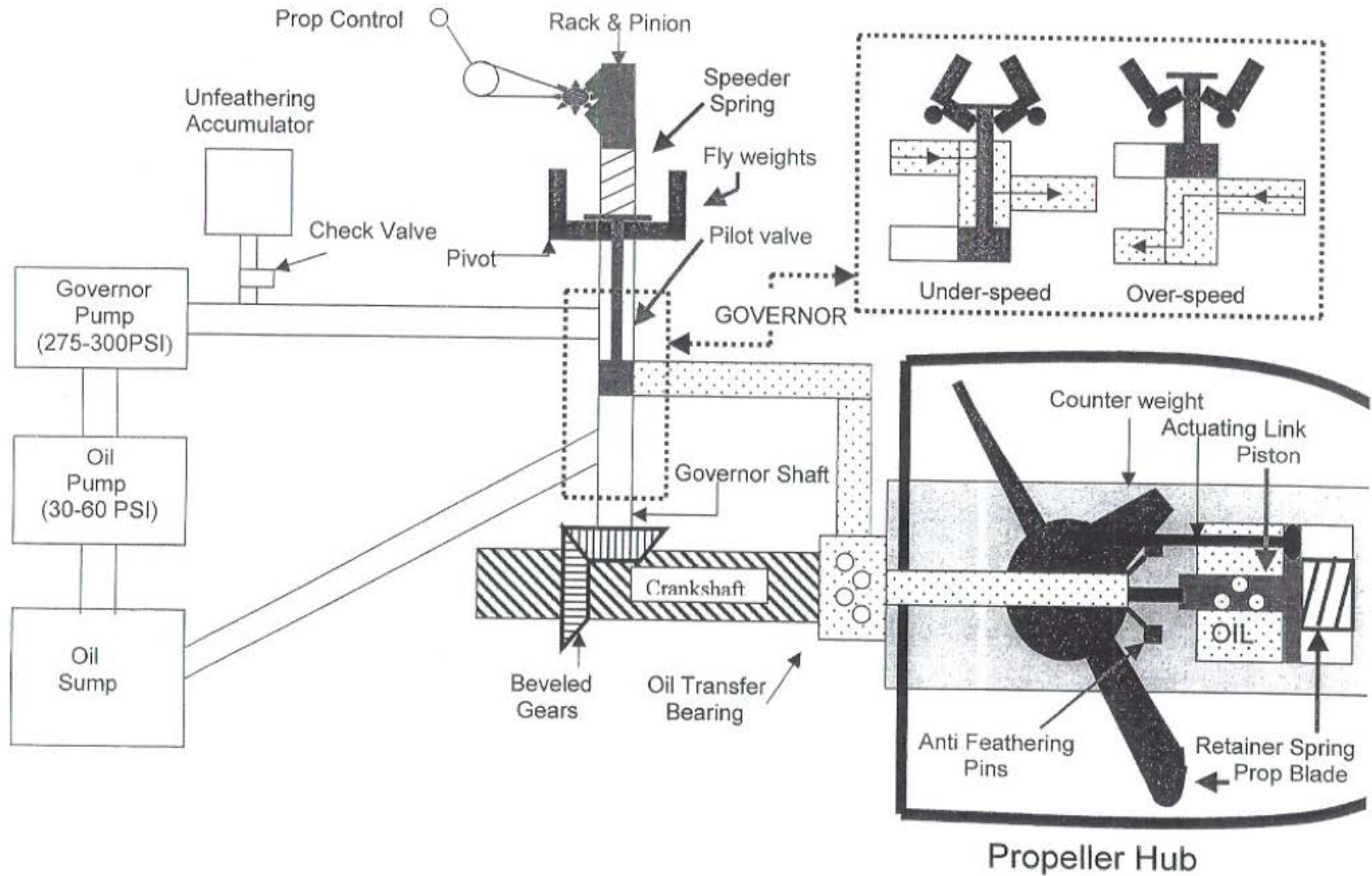


**Describe what happens when the plane enters a descent from cruise set at 2400rpm**

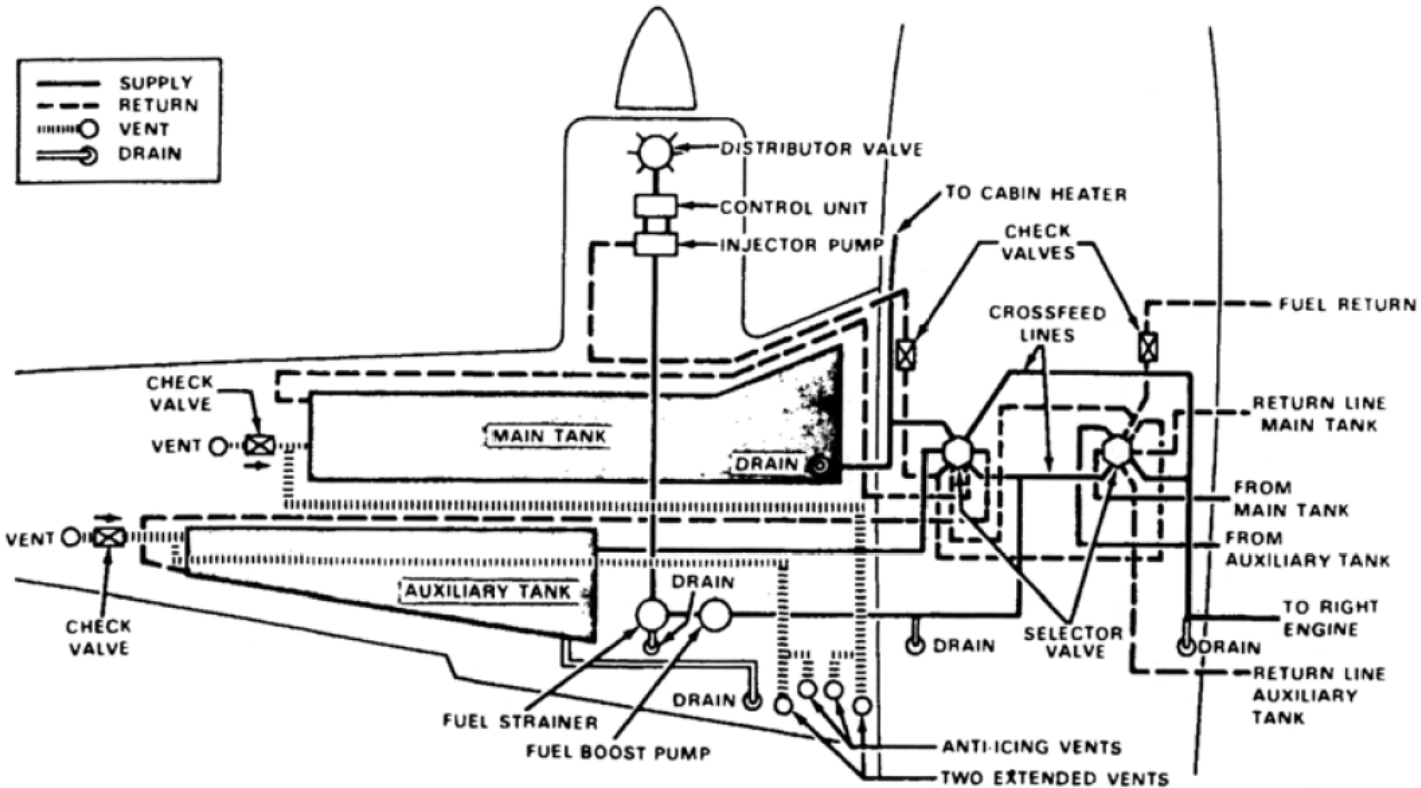
Initiall, the prop overspeeds from 2400rpm. The fly weights go outward which tells the governor to send some oil back to the engine so the prop goes back to 2400rpm.

# CONSTANT SPEED PROPELLER SYSTEM

(Governor-On Speed)



June 1982



7-21

BEECHCRAFT Baron 55, A55  
Serial TC-1 thru TC-501  
Section VII  
Systems Description

1. Describe the process for cross feeding if the left engine is the good engine and the right engine is the failed engine. Assume you used up most of the fuel in the left main and aux tanks.
  - a. Move right fuel selector to main or aux.
  - b. Then move left fuel selector to crossfeed.