



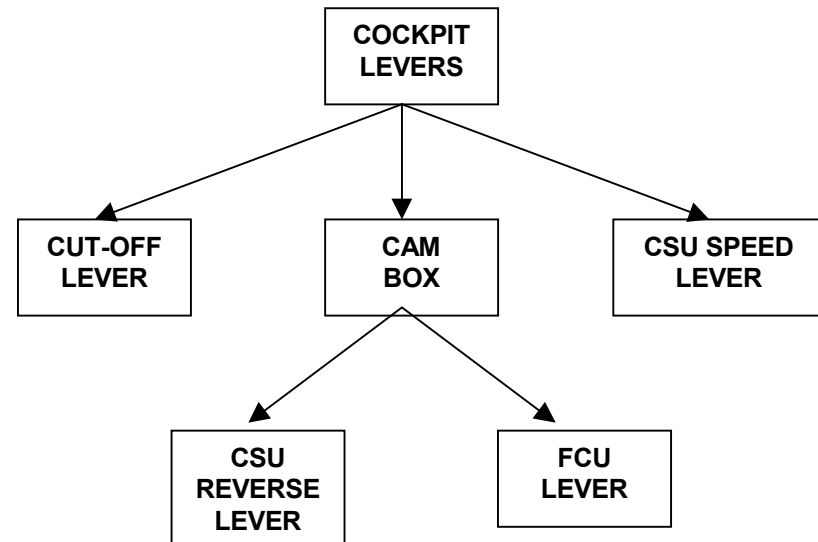
Purpose:

Provide the operator with a basic approach to engine rigging. This section defines the logical sequence that should be followed when rigging the engine. It also describes the post run-up adjustments necessary to get an ideal cockpit lever to engine response relationship. Use the airframe maintenance manual for specific engine rigging information.

Pre-Rigging Verification:

- Ensure that cockpit levers and cables operate freely and do not bind before connecting it to the engine.
- Ensure that the engine reversing cable is not damaged and operates freely when disconnected from the beta lever.
- Verify that the propeller reversing lever is connected to the beta valve and make sure the carbon block is in good condition.
- Verify that the beta valve is properly connected to the beta lever.
- Verify run-out on beta feedback slip ring (.003 max)
- Check that beta valve slides freely.

You are now ready to rig the engine.



REAR LINKAGE RIGGING



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One of the first steps prior to rigging the fuel control unit on the PT6 is to carefully rig the cambox position. Once this is done, the fuel control unit and the reversing cable can be rigged.

Note:

A "rig pin" hole located on the cambox may be used to facilitate the track point rigging. Ensure that the above procedure applies for a more precise rigging.

Cambox Rigging:

With the airframe power lever cable and the engine reverse cable disconnected from the cambox, move the cockpit power lever through the full range and verify motion is free of binding and excessive friction.

- The next step is to find the track point.
- Cycle the power lever forward and back slowly until the cockpit idle detent is contacted.
- Find the track point by rotating the cambox input lever counterclockwise until the reverse cam moves back 1/32 inch (apply light forward force on reversing cam while measuring).
- Once the track point is located, position the cambox input lever at the angle specified by the airframe manufacturer.
- Cycle the cockpit power lever between maximum forward and reverse position and ensure the power lever cable terminal travel exceeds the required input lever displacement.
- Connect the airframe power lever cable to the cambox input lever

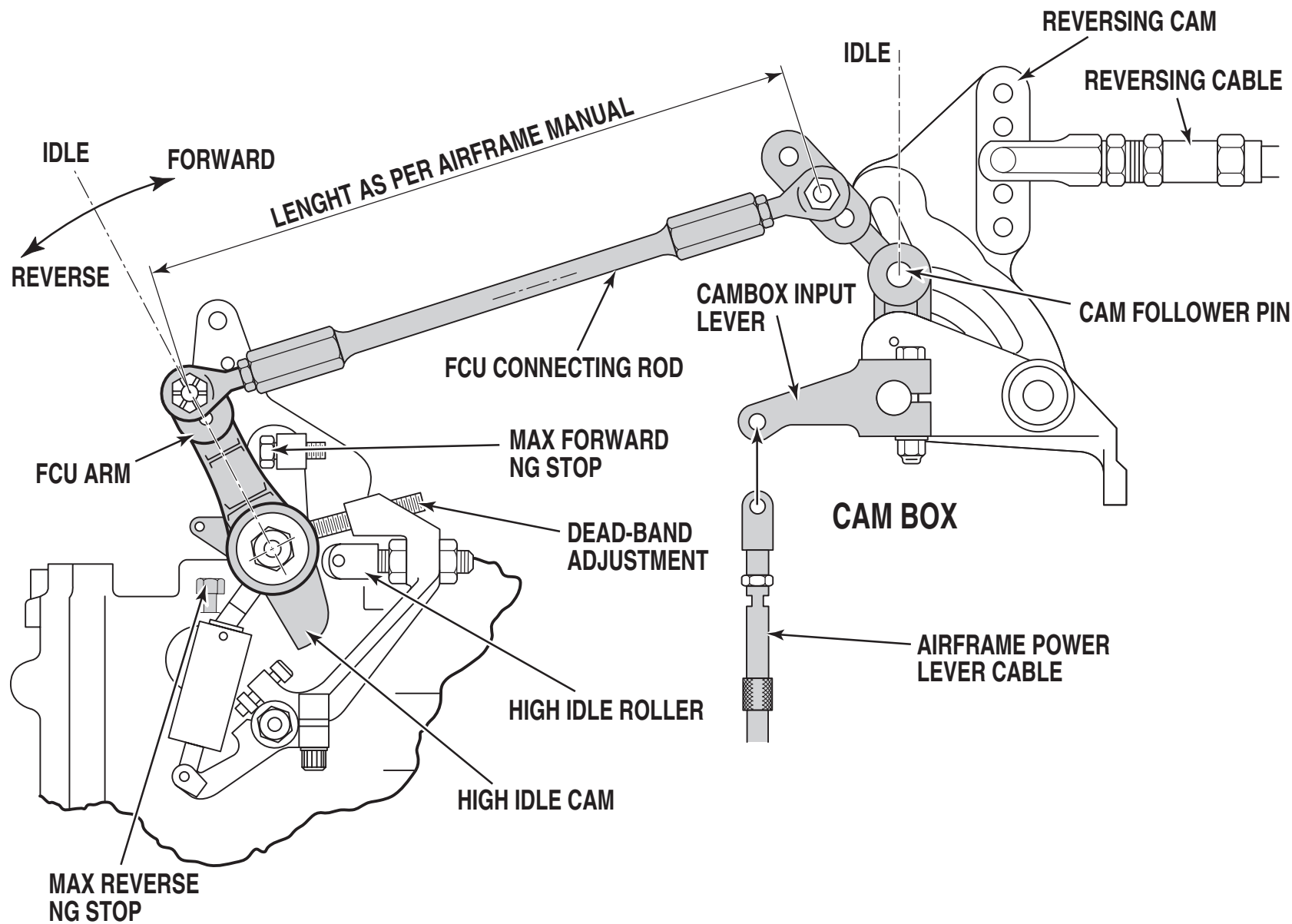


1. Disconnect the FCU interconnecting rod and set it's length to 1/8 inch shorter than specified in the airframe maintenance manual (the rod length will be rectified later on).
2. With the rod disconnected position the fuel lever to contact the idle stop without going into the deadband.
3. Connect the FCU inter connecting rod to the proper hole on the FCU actuating lever. Connect the rear end of the rod to the FCU arm using the serrated washer to position the FCU shaft as marked in step 2 (at the idle stop).
4. Remove FCU interconnect rod and lengthen it 1/8 inch (so it goes back to airframe manual recommendation). This will provide some forward deadband (approximately 1/4 inch) on the pedestal before Ng picks up.
5. Move the power lever through the full range (make sure the reverse cable is disconnected). The cam follower pin should not bottom out at either end of the reverse cam slot. In the maximum forward position, the FCU maximum Ng stop screw should contact the FCU maximum stop.

REAR LINKAGE (WOODWARD)



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FRONT LINKAGE RIGGING



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Telescopic Interconnect Rod:

1. Disconnect the reverse cable at the cambox.
2. Move the Power Lever in the cockpit between Flight Idle and Max Power setting to verify free movement.
3. Pull on the Beta Lever and adjust the front clevis so that the Beta Valve clevis slot face is flush with the Beta Valve cap.
4. Adjust the length of the interconnect rod to get the required gap as specified in the Airframe Maintenance manual.
5. Cycle the cockpit levers from idle to max power to verify smooth operation. Adjust the reverse cable pre-load at the rear clevis connection if excessive friction is observed. The reverse cable will be in tension since it is pushed forward by the Beta valve spring.

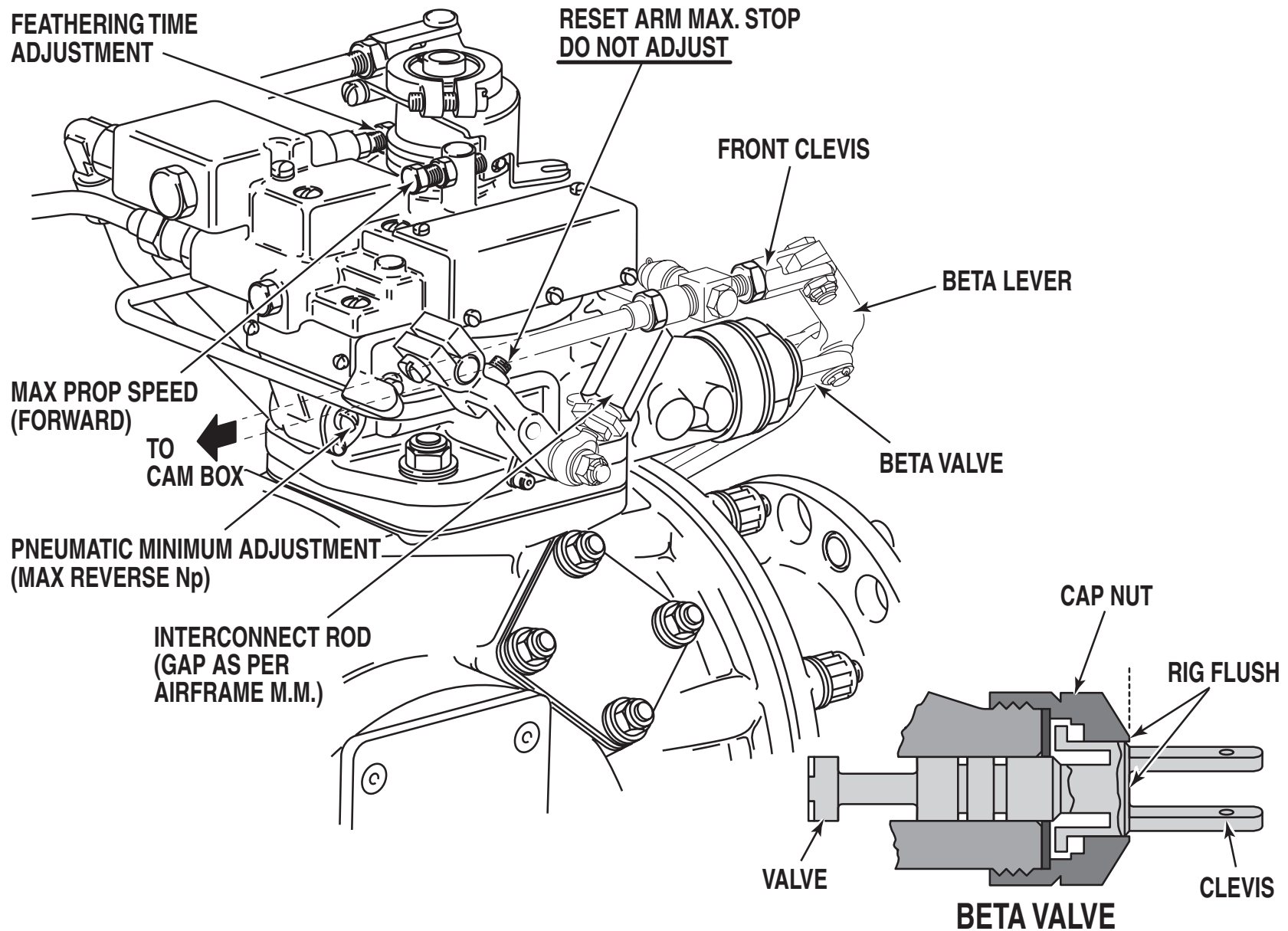
Rigid Interconnect Rod:

1. Disconnect the reverse cable at the cambox.
2. Move the cockpit power lever between idle and maximum power position to verify free movement
3. Disconnect the propeller governor interconnect rod, pull on the beta lever and adjust the front clevis so that the beta valve clevis slot face is flush with the beta valve nut.
4. Connect the reverse cable rear clevis to the required hole in the reverse cam. Adjust the clevis so that the cable is in light compression (pushed forward) when the clevis pin is installed.
5. Connect the CSU interconnect rod in the specified holes and adjust it to get a sliding fit, then shorten thread by turning one end 1/2 turn.
6. Cycle the cockpit power lever from idle to maximum to confirm smooth motion. Adjust the reverse cable pre-load at the rear clevis connection if excessive friction is observed.

FRONT LINKAGE



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FUEL CONDITION LEVER



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- Disconnect control cable from the fuel idle reset/cut-off lever
- Insert rigging pin through the idle reset/cut-off lever
- Place cockpit fuel condition lever to ground idle and adjust the aircraft cable to fit to the appropriate hole on the idle reset/cut-off lever
- Remove rigging pin

Ensure :

- Fuel condition lever moves freely throughout the entire range

At Cut-Off Position :

- Ensure that there is a positive contact with the cut-off stop.
- Ensure that the unloading valve screw fully depresses the unloading valve plunger.

At High Idle Position :

- Ensure high idle stop is contacted

Prior To Starting The Engine:

- Disconnect the fuel line going to the flow divider
- Perform a wet motoring run to confirm Positive fuel cut-off
- Ensure cut-off happens when the fuel lever position is halfway through the cut-off detent.
- Check low and high idle speed as per aircraft maintenance manual

Propeller Lever:

- Move the cockpit propeller lever fully forward. Ensure that speed select lever contacts maximum Np stop screw. Adjust console stop to comply.
- Move cockpit propeller lever to feather. Ensure speed select lever fully depresses the feathering valve plunger.

Note:

Speed select levers should be loaded slightly against the maximum Np when maximum propeller speed is selected.

Post Rigging Check:

Ensure the propeller feathers when the cockpit propeller lever is halfway through the feather detent.

FUEL & PROPELLER LEVER RIGGING



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