

KAP 140 Fault Diagnosis			
Defect	Cause	Action	Notes
Pitch trim fail	Faulty or sticking Manual Electric Trim switch	Replace MET switch	Arching in the switch can cause intermittent failures
	Faulty or sticking AP disconnect switch	Replace switch	Arching in the switch can cause intermittent failures
Autopilot fails to engage	Faulty or sticking AP disconnect switch Both "P" and "R" illuminated	Replace switch	Arching in the switch can cause intermittent failures
	Roll servo invalid "R" illuminated only	Check harness and power supply to roll servo	Will disengage the AP and prevent re engagement.
	Turn Coordinator invalid (dashes in mode annunciations)	Check TC flag/power supply. Replace TC.	
	Install strap mismatch (mode annunciations dashed with "P" and "R" illuminated)	Check harness strap code in diagnostics with STC data	
"P" Indication and autopilot will not engage pitch mode	Pitch servo invalid	Check harness and power supply to pitch servo	Will disengage the AP but will allow re engagement in roll mode only.
	FCC acceleration monitor active	Normal operation	Caused by turbulence or manoeuvring
All pitch modes porpoise or have poor tracking behaviour	Pitch servo bridle cable low tension	Check and adjust bridle cable tension	
	Pitch servo slip clutch below min torque	Check and adjust slip clutch torque	
	Autotrim fault	Check for normal autotrim response to induced effort on control wheel. Check trim sense signal.	
Flashing "PT" indication with arrow	Normal operation		Indicates direction of electric trim actuation
"PT" indication with no arrow head indicates Pitch Trim Fail	Faulty or sticking Manual Electric Trim switch	Replace MET switch	Arching in the switch can cause intermittent failures
	Faulty or sticking AP disconnect switch	Replace switch	Arching in the switch can cause intermittent failures
AP engages but does not drive servos	Faulty or sticking Control Wheel Steering button		Faulty CWS can cause servo clutch disconnections
After pre flight test "P" indication illuminates	Normal operation on condition it extinguishes within approx 30 seconds		
With autopilot disengaged "P" illuminates during flight	Normal operation caused by turbulence or during manoeuvring.		
Erratic pitch axis behaviour	AP engagement prior to pitch axis stabilisation	Disengage and wait up to 5 mins before re engaging.	Caused by AP power interruption. If the AP is recycled in flight for some reason.
Glideslope tracks with an offset	G/S offset not adjusted correctly	Adjust offset to correct setting.	
	G/S gain low due to MM activity	Check MM for proper operation	
All roll modes have wing walk	Roll servo bridle cable low tension	Check and adjust bridle cable tension	
	Roll servo slip clutch below min torque	Check and adjust slip clutch torque	
	TC has excessive hysteresis or delay/lag.	Replace TC	
Selected altitude display dashed	Invalid altitude code from altimeter	Check altimeter interconnect (Gilham code) in diagnostics. Replace altimeter as required.	
Roll made OK but heading mode has poor performance	Directional gyro or HSI has faulty output	Check DG or HSI and replace as required	

Heading mode tracks with excessive offset	Heading offset not properly adjusted	With heading set to North check heading/course datum and adjust as required	
Localizer modes track with offset	LOC offset not properly adjusted	With simulated centered LOC signal check LOC offset adjustment in FCC and adjust as required.	
GPS modes track with offset	GPS offset not properly adjusted	With simulated centered GPS signal check GPS offset adjustment in FCC and adjust as required.	
VOR modes track with offset	VOR offset not properly adjusted	With simulated centered VOR signal check VOR offset adjustment in FCC and adjust as required.	
Manual Electric Trim inop	If "PT" illuminated on FCC then MET switch stuck or faulty	Check MET switch operations, replace as required.	Arching in the switch can cause intermittent failures