

DEN04LA149

cy to FAA

FORM APPROVED FOR USE THROUGH 7/31/96 BY OMB NO.3147-0001.

**NATIONAL TRANSPORTATION SAFETY BOARD
PILOT/OPERATOR AIRCRAFT ACCIDENT REPORT**
This form To Be Used For Reporting Civil Aircraft Accidents
~~including commercial and military aircraft within 12 miles~~

Location				
Nearest City/Place, State, Zip Code LAS CRUCES, NM		Date of Accident 27 SEP 04	Local Time (24 HOUR CLOCK) C 2340	Zone MTN
Elevation At Accident Site C 4,000 Feet MSL Feet MSL				
1. The Accident Occurred On Approach, Takeoff or Within 12 Miles of the Airport. (For use by the FAA only)				
Proximity To Airport				
1. ☐ On Approach		3. ☐ Within 1/2 Mile		5. ☐ Within 1 Mile
2. ☐ Within 1/4 Mile		4. ☐ Within 3/4 Mile		6. ☐ Within 2 Miles
				7. ☐ Within 3 Miles
				8. ☒ Beyond 3 Miles
Airport Name LAS CRUCES INT'L		Airport Ident KLRU	Runway/Landing Surface Conditions:	
			1. ☐ Direction: 3. ☐ Width: 5. ☐ Condition:	
			2. ☐ Length: 4. ☐ Surface: 6. ☐ Surface:	
Phase Of Operation:				
1. ☐ Standing		3. ☒ Takeoff		5. ☐ Cruise
2. ☐ Taxi		4. ☐ Climb		6. ☐ Descent
				7. ☐ Approach
				8. ☐ Landing
				9. ☒ Hover/Maneuver
				10. ☐ Altitude Of In-Flight Occurrence _____ Feet MSL
Aircraft Information				
Registration Mark N497AE	Aircraft Manufacturer EUROCOPTER ASTAR	Aircraft Type/Model ASTAR 350B3	Serial Number	Cert Max Gross WT 4,960 on Scales
Type Of Aircraft		Type Of Airworthiness Certificate		Amateur Built
1. ☐ Airplane		5. ☐ Restricted		1. ☐ Yes
2. ☒ Helicopter		6. ☐ Limited		2. ☒ No
3. ☐ Glider		7. ☐ Experimental		
4. ☐ Balloon		8. ☐ Specify _____		
5. ☐ Blimp/Dirigible				
6. ☐ Ultralight				
7. ☐ Gyroplane				
8. ☐ Specify _____				
Landing Gear				No. Of Seats
1. ☐ Tricycle—Fixed				Flight/Cabin
2. ☐ Tricycle—Retractable				Crew _____
3. ☐ Tailwheel—Fixed				Pax 3
4. ☐ Tailwheel—Retractable				
5. ☐ Tailwheel—Retractable Mains				
6. ☐ Amphibian				
7. ☒ Skid				
8. ☐ Limited				
9. ☐ Specify _____				
Stall Warning System Installed		IFR Equipped		Engine Type
1. ☐ Yes		1. ☒ Yes		1. ☐ Reciprocating—Carburetor
2. ☒ No		2. ☐ No		2. ☐ Reciprocating—Fuel Injected
				3. ☐ Turbo Prop
				4. ☐ Turbo Jet
				5. ☐ Turbo Fan
				6. ☒ Turbo Shaft
Engine Manufacturer		Engine Model/Series	Engine Rated Power	Type Of Fire Extinguishing System Used
			1. _____ Horsepower	1. ☒ None
			2. _____ Lbs Thrust	2. ☐ Specify _____
Engine(s)	Date of Mfg.	Mfg. Serial No.	Total Time	Time Since Inspection
Engine No. 1			Hours	Hours
Engine No. 2			Hours	Hours
Engine No. 3			Hours	Hours
Engine No. 4			Hours	Hours
Type Of Maintenance Program		Type Of Last Inspection		Date Last Inspection Performed
1. ☐ Annual		1. ☐ Annual		(M/D/Y)
2. ☐ Manufacturer's Inspection Program		2. ☐ 100 Hours		Time Since Last Inspection _____ Hours
3. ☐ Other Approved Inspection Program(AAIP)		3. ☐ AAIP		Airframe Total Time _____ Hours
4. ☐ Continuous Airworthiness		4. ☐ Continuous Airworthiness		
5. ☐ Specify _____				
Emergency Locator Transmitter (ELT)	ELT Manufacturer	Model/Series	Serial Number	Battery Date (M/D/Y)
	Switch			
	1. ☐ On 2. ☐ Off 3. ☒ Armed			
		Operated		Aided In Accident Location
		1. ☐ Yes 2. ☒ No		1. ☐ Yes 2. ☒ No
Registered Aircraft Owner		Address _____		
Operator Of Aircraft		Address _____		
1. ☐ Same As Registered Owner		1. ☐ Same As Registered Owner		
2. Name _____		2. _____		
3. DBS _____				

Owner / Operator Information (cont.)

Operator (Certificate Number)

Operator Designator (4 Letter Designator)

Purpose of Flight And Type Of Operation

Regulation Flight Conductor Under

☐ FAR 91 (only) 4. ☐ FAR 121 7. ☐ FAR 133
☐ FAR 91D 5. ☐ FAR 125 8. ☐ FAR 135
☐ FAR 103 6. ☐ FAR 129 9. ☐ FAR 137

Purpose of Flight

1. ☐ Personal 6. ☐ Aerial Observation
 2. ☐ Business 7. ☐ Other Work Use
 3. ☐ Educational 8. ☐ Public Use
 4. ☐ Executive/Corporate 9. ☐ Ferry
 5. ☐ Aerial Application 10. ☐ Positioning

Operator Authority

FAR 121
 1. ☐ Domestic
 2. ☐ Flag
 3. ☐ Supplemental

FAR 133
 6. ☐ Rotorcraft
 External Load

FAR 125
 4. ☐ On Demand
 5. ☐ Commuter

7. ☐ Large Aircraft

FAR 129

8. ☐ Foreign

FAR 121, 125, 127, 129, 135

Revenue Operations

1. ☐ Scheduled
 2. ☐ Non Scheduled
 3. ☐ Domestic
 4. ☐ International
 5. ☐ Passenger
 6. ☐ Cargo
 7. Specify _____

Not Information

Not Name

HARVEY NORTH WITCHER

Pilot Certificate No.

Address

EL PASO, TX 79922

Nationality

US

Certificate (s)

1. ☐ Student 3. ☐ Commercial 5. ☒ Flight Instructor 7. ☐ Military 9. ☐ None
 2. ☐ Private 4. ☒ Airline Transport 6. ☐ Flight Engineer 8. ☐ Foreign 10. Specify _____

Rating (s)

1. ☐ None 6. ☒ Helicopter
 2. ☒ Single Engine Land 7. ☐ Glider
 3. ☐ Single Engine Sea 8. ☐ Free Balloon
 4. ☐ Multiengine Land 9. ☐ Airship
 5. ☐ Multiengine Sea 10. ☐ Gyroplane

Instrument Rating (s)

1. ☐ None
 2. ☒ Airplane
 3. ☐ Helicopter

Instructor Rating (s)

1. ☐ None 6. ☐ Instrument Airplane
 2. ☐ Airplane S.E. 7. ☐ Instrument Helicopter
 3. ☐ Airplane M.E. 8. ☐ Ground Instructor
 4. ☒ Helicopter 9. ☐ Specify _____
 5. ☐ Glider

Type Ratings/Student Endorsements

B14206

Date Of Biennial Flight Review
or Equivalent (M/D/Y)

MARCH 2004

BFR Aircraft

1. Make EUROCOPTER 2 AS350
 2. Model 350B3

Medical Certificate

☐ None 3. ☒ Class 2
☐ Class 1 4. ☐ Class 3

Date Of Last Medical
(M/D/Y)

2-19-04

Limitations

MUST WEAR CORRECTIVE LENSES

Waivers

NONE

Date Of Birth (M/D/Y)

Degree Of Injury

☐ None
☒ Minor
☐ Serious
☐ Fatal

Seat Occupied

1. ☐ Left 4. ☒ Front
 2. ☒ Right 5. ☐ Rear
 3. ☐ Center

Person At Controls At Time Of Accident

1. ☒ Pilot In Control 4. ☐ Non-Pilot
 2. ☐ Second Pilot 5. ☐ No One
 3. ☐ Both Pilots

Seat Belt Available

1. ☒ Yes
 2. ☐ No

Shoulder Harness

Used

☒ Yes
☐ No

Shoulder Harness
Available

☒ Yes
☐ No

Shoulder Harness

Used

☒ Yes
☐ No

Source Of Pilot Flight Time Information

1. ☐ Pilot Logbook 4. ☒ Company
 2. ☒ Operators Estimate 5. ☐ Specify ATTACHED
 3. ☐ FAA Records

Flight Time

	All AC	This Make & Model	Single Engine Airplane	Multiengine Airplane	Night	Instrument Actual Simulated	Rotorcraft	Glider	Lighter Than Air
Total Time	16,239	124.2	800+	1,000+	1,265	143 1,119+	8,600+		
Time In Command (PIC)	8,479	112.2	750+	878	600+	613 610+	7,201		
As Pilot	3,499	0	0	878	600+	610	2,621		
Make & Model					0 40+	0			
90 Days	46.6	46.6	0	0	42.5	0	46.6		
30 Days	15.2	15.2	0	0	13.0	0	15.2		
24 Hours	2.4	2.4	0	0	2.4	0	2.4		

Second Pilot Information

Second Pilot Responsibilities At The Time Of Accident

1. Co-Pilot 2. ☐ Dual Student 3. ☐ Safety Pilot 4. ☒ Check Pilot 5. ☐ None (Pilot-Rated Passenger)

Name

Pilot Certificate No.

Address

Nationality

Certificate (s)

☐ Student 3. ☐ Commercial 5. ☐ Flight Instructor 7. ☐ Military 9. ☐ None
☐ Private 4. ☐ Airline Transport 6. ☐ Flight Engineer 8. ☐ Foreign 10. Specify _____

Second Pilot Information (cont.) <u>N/A</u>											
Rating (s) ☐ Single Engine Land ☐ Single Engine Sea ☒ Multiengine Land ☐ Multiengine Sea			☐ Glider ☐ Free Balloon ☐ Airplane ☐ Helicopter			☐ None ☐ Airplane S.E. ☐ Airplane M.E. ☐ Helicopter ☐ Glider			☐ Instrument Airplane ☐ Instrument Helicopter ☐ Instrument Airplane		
Type Ratings/Student Endorsements			Date Of Biennial Flight Review or Equivalent (M/D/Y)			BFR Aircraft 1. Make 2. Model					
Medical Certificate ☐ None ☐ Class 1 ☐ Class 2 ☐ Class 3			Date Of Last Medical (M/D/Y) _____			Limitations _____ Waivers _____			Date Of Birth (M/D/Y) _____		
Degree Of Injury ☐ None ☐ Minor ☐ Serious ☐ Fatal			Seat Occupied ☐ Left ☐ Right ☐ Center ☐ Front ☐ Rear			Seat Belt Available ☐ Yes ☐ No					
Seat Belt Used ☐ Yes ☐ No		Shoulder Harness Available ☐ Yes ☐ No		Shoulder Harness Used ☐ Yes ☐ No		☐ Pilot Logbook ☐ Operators Estimate ☐ FAA Records		☐ Company ☐ Specify			
Flight Time	All A/C	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air	
Total Time						Actual	Simulated				
Pilot In Command (PIC)											
Instructor											
This Make & Model											
Last 90 Days											
Last 30 Days											
Last 24 Hours											
Other Personnel <u>N/A</u>											
Name	Seat	Address (City & State)	Crew	Non-Revenue	Revenue	Non-Occupant	FAA	Fatal	Serious	Minor	None
1.											
2.											
3.											
4.											
5.											
6.											
Flight Itinerary Information											
Last Departure Point		Time Of Departure		Destination		Flight Plan Filed * <u>FLY FOLLOWING: ABQCTR</u>					
1. Airport ID <u>HOSPITAL @ TRUTH OR CONSEQUENCE</u>		1. Time <u>2300 hrs</u>		1. Airport ID <u>MEMORIAL MEDICAL</u>		1. ☒ None		4. ☐ VFR/IFR			
2. City/Place <u>NEW MEXICO</u>		2. Time Zone <u>MTN</u>		2. City/Place <u>LAS CRUCES</u>		2. ☐ VFR		5. ☒ Company (VFR)			
3. State <u>NEW MEXICO</u>				3. State <u>N.M.</u>		3. ☐ IFR		6. ☐ Military (VFR)			
If Weather Was Involved, State If Weather Briefing Was Obtained or If Weather Reports Were Checked And How It Was Accomplished											
<u>WX NOT A FACTOR; FULL MOON OVERHEAD.</u>											
Fuel On Board At Last Takeoff				Fuel Type				7. Specify			
<u>APPROX 70</u> Gallons				1. ☐ 80/87 2. ☐ 100 Low Lead				4. ☐ 115/145 5. ☒ Jet A			
Weather Information At The Accident Site (cont.)											
Dew Point	Altimeter Setting	Sky/Lowest Cloud Condition									
		1. ☐ Clear <u>CLEAR</u>									
		4. ☐ Overcast									
		Feet AGL									

Wind Information 1. Direction <u>VARIABLE</u> 2. Velocity <u>0-5</u> Kts 3. Gusts <u>NW</u> Kts		Restriction To Visibility <u>NONE</u>		Type Precipitation <u>N/A</u>		Intensity Of Precipitation 1. ☐ Light 3. ☐ Heavy 2. ☐ Moderate 4. Specify _____	
Turbulence (Multiple Entry) 1. ☒ None 2. ☐ Light 3. ☐ Moderate 4. ☐ Severe 5. ☐ Extreme 6. ☐ Clear Air 7. ☐ In Clouds		Degree Of Aircraft Damage 1. ☐ None 2. ☐ Minor 3. ☐ Substantial 4. ☐ Destroyed					
Description Of Damage To Aircraft And Other Property <u>MAIN ROTOR ASSEMBLY, TAIL ROTOR & TAIL BOOM, CRACKED R/H DOOR WINDOW, R/R SKID WITH THAT, POSSIBLY ENGINE & TRANSMISSIONS SUDDEN STOPPAGE DAMAGE</u>		Fire 1. ☐ Yes 3. ☐ In-Flight 2. ☒ No 4. ☐ On Ground					
Mechanical Malfunction Failure 1. ☐ No 2. ☐ Yes List The Name Of The Part, Manufacturer, Part No., Serial No. And Describe The Failure		Total Time On Part _____ Hours At Overhaul _____ Hours					
Collision Accident <u>N/A</u> If Collision Accident Occurred, Complete The Information For Other Aircraft		Degree Of Aircraft Damage 1. ☐ Destroyed 3. ☐ Minor 2. ☐ Substantial 4. ☐ None					
Registered Aircraft Owner		Aircraft Manufacturer		Aircraft Type/Model		Pilot Name	
Address		Address		Address		Pilot Certificate No.	
Evacuation Of Aircraft Assistance Received 1. ☒ Outside Person (s) 3. ☐ Slide 5. ☐ Ladder 2. ☐ Auxiliary Lighting 4. ☐ Rope 6. ☐ Specify _____		Method Of Exit (State Approximate Number Of Persons Using Each Of The Following 1. Main Door <u>1</u> 2. Auxiliary Door <u>N/A</u> 3. Emergency Exit <u>N/A</u>					
Recommendation (How Could This Accident Have Been Prevented) Operator/Owner Safety Recommendation (Optional Entry) <u>NOT SURE - I SUSPECT HYDRAULIC VALVE/SWITCH MALFUNCTION BECAUSE I HAD TO FIGHT THE HELICOPTER'S TURN & TENDENCY TO ROLL. I WAS THE ONLY PERSON THERE - NO OTHER WITNESSES. AT SHUTDOWN THE HYD'S ARE DEPRESSURIZED - THEN SWITCH IS PLACED IN THE "PRESSURIZED" POSITION. ALL THAT WAS DONE. THE ONLY DIFFERENCE IS THAT I HAD NOT YET TURNED OFF THE BATTERY, BUT I HAD DEPRESSURIZED THE HYD SYSTEM AND RESET THE SWITCH, EVIDENCED BY PHOTOS OF COCKPIT.</u>							

Additional Flight Crew Members			
For Each Additional Flight Crew Member, Exclusive Of Cabin Attendants Complete The Following Information			
Name	FAA Certificate No.	Address	Title
Certificate(s) ☐ Student ☐ Commercial ☐ Flight Instructor ☐ Foreign ☐ Private ☐ Airline Transport ☐ Flight Engineer 8. Specify			
Ratings/Endorsements		Total Flight Time	Flight Time This Accident
Name	FAA Certificate No.	Address	Title
Certificate(s) ☐ Student ☐ Commercial ☐ Flight Instructor ☐ Foreign ☐ Private ☐ Airline Transport ☐ Flight Engineer 8. Specify			
Ratings/Endorsements		Total Flight Time	Flight Time This Accident
Name	FAA Certificate No.	Address	Title
Certificate(s) ☐ Student ☐ Commercial ☐ Flight Instructor ☐ Foreign ☐ Private ☐ Airline Transport ☐ Flight Engineer 8. Specify			
Ratings/Endorsements		Total Flight Time	Flight Time This Accident

Describe What Occurred In Chronological Order. The first sentence should pertain to the accident and the names of the accident. Describe The
 Of Departure, Intended Destination And Services Obtained.

Hereby Certify That The Above Information Is Complete And Accurate To The Best Of My Knowledge

NOTE OF THIS REPORT

Signature Of Pilot/Operator

Signature Of Person Filing Report Other Than Pilot/Operator

Signature

Type Or Print Name

Title

For NTSB Use Only

SB Accident No.

Reviewed By NTSB Office Located At

NATIONAL TRANSPORTATION SAFETY BOARD

NTSB Form 6120.1/2

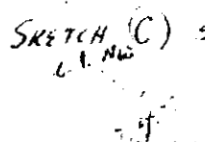
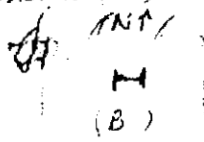
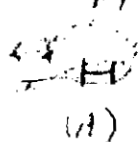
PILOT/OPERATOR AIRCRAFT ACCIDENT REPORT

RECEIVED

OCT 12 2004

NTSB - DEN

NARRATIVE Page 2 N457AE, WITCHER, HARVEY N.
 ATTEMPTED TO PLACE THE ENGINE START SWITCH TO OFF - I DID MOVE IT, ~~AND~~
 NOT SURE IF I GOT IT TO THE OFF POSITION (MAYBE JUST TO THE IDLE POSITION).
 VERY QUICKLY THE ENGINE STOPPED. BY THEN I WAS STANDING UP & OPENING THE UPPER
 DOOR (NOW THE LEFT FORWARD DOOR). I WAVED AT THE APPROACHING SECURITY PERSONNEL
 & AMBULANCE, SEEING THEM THROUGH A SLOWLY ^(C)DEPARTING (TO THE NORTH) PLUME/
 COLUMN OF DUST. I THEN STEPPED DOWN & TURNED OFF THE BATT - ODDLY, THE
 COCKPIT WAS STILL ILLUMINATED BRIGHTLY w/ A WHITE ILLUMINATION (OUR HELO HAD JUST
 BEEN MOD'D FOR NVG FLT SO ALL LIGHTS WERE GREEN.) AFTER CLIMBING OUT,
 I LOOKED BACK AND THE LIGHT WAS GONE. - THE COCKPIT DARK EXCEPT FOR THE
 AMBIENT MOONLIGHT. I WAS THEN WHISKED UP TO EIC AT THE HOSPITAL.
 FROM THE NEWSPAPER PHOTO, WHILE I WAS AT EIC. SOMEONE FURTHER OPENED
 THE HELO DOORS. ALSO EVIDENT AS A "BEFORE AND AFTER" SITUATION,
 THE FOLLOWING DAY THE MAIN ROTOR BLADES HAD BEEN MOVED - DRAGGED AND
 PLACED BY THE ROTOR HEAD. ALSO, THE ROTOR DAMPER ASSEMBLY WAS ~~THE~~
 MOVED FROM ITS CRASHED LOCATION TO THE ROTOR HEAD. TOO, IT WASN'T UNTIL
 AFTER THE NTSB/FAA LEFT THE SITE THAT THE TAIL ROTOR BLADES WERE FOUND,
 EACH AT DIFFERENT AZIMUTHS FROM THE ^{ALC'S} FINAL RESTING LOCATION. I BELIEVE
 THE DENT BLADES AND OTHER DAMAGE TO THEM SUBSTANTIATE A SPINNING MOTION OF
 THE HELO BEFORE IMPACT & ROLLOVER. SKETCH BELOW (A) SHOWS BEGINNING LOCATION OF THE
 HELO BEFORE IMPACT & ROLLOVER. SKETCH (B) SHOWS FINAL RESTING PLACE, NEXT TO 25' LEFT & 1 FT OF ORIG. LOC.
 AT 'H'. SKETCH (C) SHOWS APPROX LOCATIONS OF T/R BLADES,



BOTH BEING OVER 100' FROM THE H/L,
 DIFFERENT LOCATIONS, SOUTHWEST &
 NORTHWEST.

FROM SKETCH (A), BASED ON THE LEFT

SPIN + THE RIGHT ROLL. I BELIEVE THE TOTAL LEFT VECTOR TOWARD A RIGHT ROLL, ^{ACCOMPLISHED}
 CAUSED AN ELLIPTICAL TIGHT TURN RESULTING IN IMPACT ON A HEADING OF C. 120° BUT WITH
 A 270° COURSE CHANGING TO A 280-290° MOVEMENT. I BELIEVE IT'S HIGHLY PROBABLE THAT
 T/R BLADE (A) DEPARTED w/ INITIAL IMPACT, T/R (B) DEPARTING MILLISECONDS LATER - TWO DIFFERENT
 COURSES ENCOUNTERED DURING THE SPIN ~~ALC'S~~

NARRATIVE Page 3 N497HE, WITCHER, HARVEY W.
 LASTLY, MY PHYSICAL THERAPIST, w/ 14 YEARS EXPERIENCE IN SPORTS INJURIES,
 HAS DEDUCED, FROM MY INJURIES AND MY DEMONSTRATED SITTING POSITION,
 MY INJURIES ARE CONSISTENT WITH EXTREME MUSCULAR STRESS OF MY ~~RIGHT~~
 APPLYING PRESSURE TO THE LEFT - DO I WOULD HAVE APPLIED AND I BEEN
 TRYING TO APPLY LEFT CYCLIC (TO CORRECT FOR A RIGHT ROLL - QUESTION:
 IF THE HYDRAULICS WERE WORKING, WHY COULD I NOT APPLY THE LEFT
 VECTOR TO THE LEFT?). FURTHERMORE, THE ONLY BLOW RECEIVED TO
 MY RIGHT SHOULDER CAME FROM THE SLIGHTLY AFT - INDICATIVE THAT
 MY RIGHT SHOULDER WAS TURNED TOWARD THE LEFT AS IF IT WERE TRYING
 TO HELP MY ARM & WOULD PUSH LEFT. I'M NOT SURE WHAT / WHERE MY
 FLIGHT HELMET^W HIT - THERE WERE NO MARKS ON THE RIGHT SIDE w/ PASTIC-TYPE
 SUBSTANCE "STUCK TO" / "ADHESION ONTO" THE HELMET SURFACE. THE HELMET
 WAS SENT AWAY FOR INSPECTION w/OUT ANY KNOWN ATTEMPTS TO ASCERTAIN
 WHAT / WHERE IT STRUCK. (1)
 BOTTOM LINE, THE AIRCRAFT TURNED LEFT FOLLOWED IMMEDIATELY / SIMULTANEOUSLY
 BY AN INCREASING RIGHT ROLL, NEITHER OF WHICH I COULD CORRECT /
 OVERCOME BEFORE IMPACT AND ROLLOVER. THE INJURIES TO MY RIGHT SHOULDER,
 RIGHT PECTORAL & RIGHT TRAPEZIUS MUSCLES, AND TO MY "COLLAR BONE" AND
 TO THE INSIDE OF MY RIGHT THIGH ABOVE THE KNEE. ATTEST TO (1) MY ATTEMPTS
 TO RIGHT THE A/C w/ LEFT ARM, SHOULDER, UPPER BODY & LEG and (2) THE
 FACT THAT THE CYCLIC WAS IN A LEFT OF CENTER / NEARLY CENTERED POSITION -
 IT WOULDN'T GO FARTHER LEFT! MY REMAINING QUESTION: WHY NO HYD'S?

~~WITCHER~~

ONE MORE THING - THIS A/C HAD RECENTLY BEEN REPAIRED TO THE FACTORY
 FOR ELECTRICAL PROBLEMS - EMI THEY SAID. IT TOOK AROUND 2 MOS
 TO GET IT BACK, AND IT HAD ELECTRICAL PROBLEMS TWICE AFTER ITS RETURN.
 WHY NO HYD'S? - COULD IT BE AN ELECTRICAL SWIRL, SOLENOID OR VALVE THAT
 JUST HAPPENED TO HICCUP FOR A FEW SECONDS? COULD I HAVE HAD A "CYCLIC
 HARDOVER" LIKE EARLY HAWK'S HAD? ~~WITCHER~~ OR "SERVO TRANSPARENCY?"