

ASSIGNMENT # 01: ANTI-LOCK BRAKING SYSTEM

Submitted To: Dr. Zohaib Iqbal

Submitted by:

Fitash-Ul-Haq (i16-1057)

Ahsan Shabbir (i16-1049)

Ali Raza (i16-1018)

Muhammad Abbas (i16-1001)



FAST National University of Computer and Emerging Sciences

Anti-lock Braking System

System Requirements

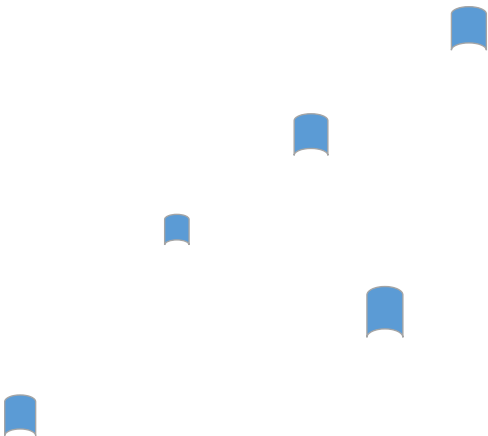
- 1. System should run diagnostic test for ABS failure on ignition
- 2. System should notify driver and display signal light for ABS failure
- 3. System should prevent from sudden wheel lock on applying breaks
- 4. System should shift to normal breaks if ABS fails
- 5. System should reduce acceleration gradually upon applying breaks
- 6. System should disable ABS if speed is below 20 km/h and vice versa

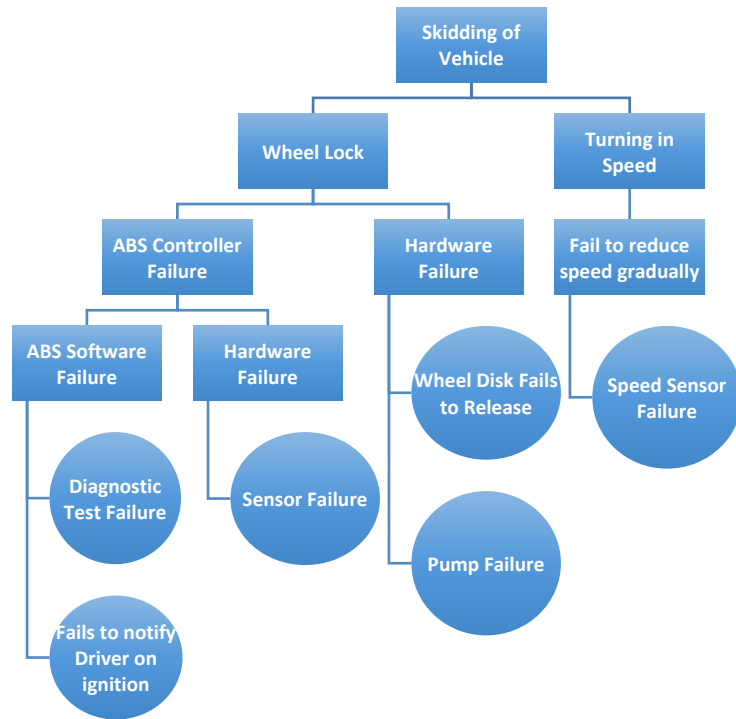
Hazards Identification

Hazard	Reason
Vehicle Turn Over	Skidding of vehicle on applying break
Major Collision (Car didn't stopped)	On applying brake car did not stopped because brakes failed (Top Speed)
Minor Collision	Sudden blow ascendant on applying brake (if ABS enabled below 20 km/h)

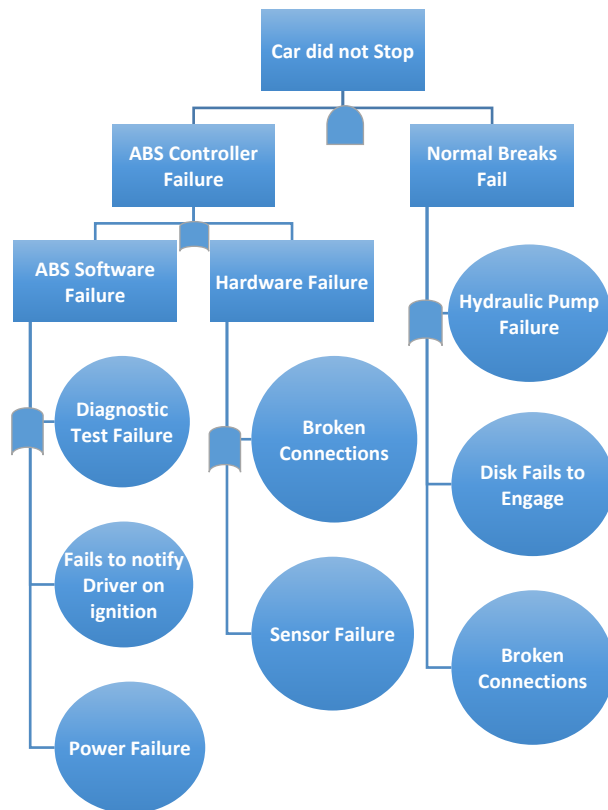
Fault Tree Analysis

- 1. Vehicle Turn-Over (Skidding)





2. Major Collision (Car didn't stop)



3. Minor Collision

