Landing gear noise identification using phased array with experimental and computational data
Computational Analysis of the Effect of Bogie Inclination Angle on Landing Gear Noise. K.J. van Mierlo. Most of the experimental work focuses on the application of noise reduction treatments such as fairings. Fairings can be used to change the unsteady flow field around the landing gear and reduce the strength of the noise sources. Flow measurement techniques such as Particle Image Velocimetry can be used to determine far field sound pressure levels. An advantage of CFD simulation over wind tunnel experiment is that the data generated by CFD simulation can be used as source term in a noise radiation model to determine far field sound pressure levels. A landing should be carried out on a hard surface runway using any available landing gear. Foaming of the runway is recommended. Manual braking should be used. Reverse thrust should not be used as it will cause ground spoiler extension. The GRVTY GEAR EXTN handcrank should be turned back to normal to allow the landing gear down actuators to be pressurized and thus reduce the chance of gear collapse. If the nose gear is not available, move the CG aft by moving passengers to the rear of the aircraft. Use elevator to keep the nose off the runway, but lower the nose onto the runway before elevator. Use of seismic noise for investigating the subsurface structure has already been done for several decades. Green stars indicate the location of the seismic noise measurements using small arrays. The vertical thick black line indicates the cross section discussed and shown in Figure 12. Thin black lines show the surface locations of known faults. Array measurements were carried out with 16 seismological stations and for 120 min duration at each site. Seismic noise data were divided into signal windows of 120 s and the Extended Spatial Correlation Analysis ESAC method (Ohori et al., 2002) was applied. The estimated Rayleigh wave dispersion curves were inverted jointly with the H/V curves following the scheme proposed by Parolai et al. Predicting Far-Field Noise Generated by a Landing Gear Using Multiple Two-Dimensional Simulations. by Sultan Alqash 1,2,* Sharvari Dhote 1 and Kamran Behdinan 1. The present numerical results are validated with the available experimental and numerical data. Table 2 presents the comparison of different flow quantities, such as the St and mean drag coefficient. Undercarriage Problems – Guidance for Flight Crew. Flight crews encountering problems with the operation of landing gear must firstly, Fly the Airplane, then follow the appropriate EICAS or ECAM procedure, Emergency or Abnormal Checklist (EAC)/Quick Reference Handbook (QRH), Operations Manual and AFM direction and guidance for the resolution of problems and the continued safe conduct of the flight.