

SOCIETY OF OPERATIONS ENGINEERS

Introducing the SOE and its UK safety-related activities

LEADING THE WAY...

IN ROAD TRANSPORT AND PLANT ENGINEERING

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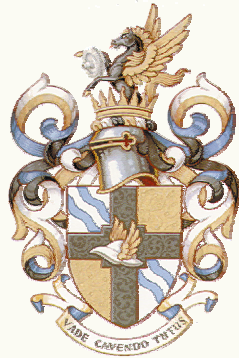


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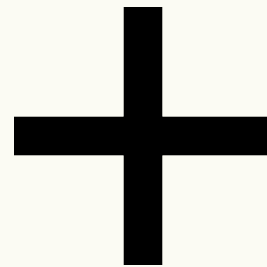
FOUNDED IN 2000

WITH 50 YEARS' EXPERIENCE

IRTE



IPlantE



FOUNDING PROFESSIONAL SECTORS



SOCIETY OF OPERATIONS ENGINEERS

The Vision

“To be the preferred professional body for those engaged in the life cycle management of systems, facilities, vehicles and equipment and the recognised authority on these matters.”



SOCIETY OF OPERATIONS ENGINEERS

The Professional Sectors

**Support and build upon the heritage,
enthusiasm and collective wisdom of the
IRTE and IPlantE
to better serve its members' interests
as well as society as a whole.**



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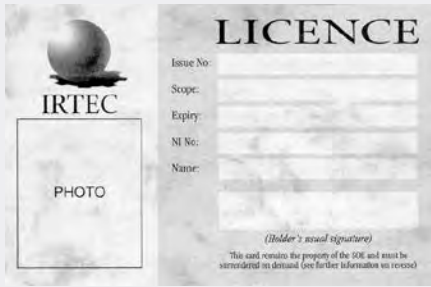
Safety Projects

- Technician licensing
- Wheel security
- Vehicle stability
- Tipper specification



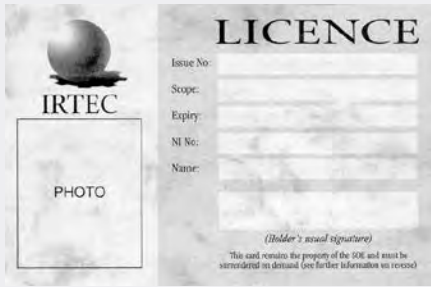
THE IRTEC Licence

- **Voluntary licence**
- **Safety and competence**
- **Staff audit**
- **CPD**



Industry sectors covered by IRTEC Test

- **Bus and Coach**
- **Heavy Commercial Vehicle**
- **Light Commercial Vehicle**



Benefits



Employer

- **benchmark qualification**
- **economic assessment**
- **cost savings**
- **marketing tool**
- **reduced corporate liability**



Benefits



Employee

- individual is licensed
- current competence
- enhanced status
- employability
- lifelong learning





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Wheel Security

- Ongoing problem
- Poster
- Guide
- Round-table debate

THE SOCIETY OF OPERATIONS ENGINEERS

Based on the work
of the
IRTE
The Institution of Road and Transport Technicians
The Institution of Mechanical Engineers

GUIDE TO WHEEL SECURITY

This poster is meant as a guide
throughout the United Kingdom
and internationally, where appropriate

WHEEL FIXING

MAKE SURE you know the different types of wheels and nuts
DO NOT MIX

| | | |
|----------------------|--------------------------|-----------------------------|
| <p>SPIGOT</p> | <p>BS CONICAL</p> | <p>DIN SPHERICAL</p> |
|----------------------|--------------------------|-----------------------------|

- **DO** lubricate threads and washer-to-nut interfaces with light engine oil before assembly
- **DON'T** use 'dual purpose' wheels as replacements for original equipment
- **DON'T** change the wheel or tyre specification without checking with the manufacturers

One of the most comprehensive ranges of tyres is complemented with sophisticated IT packages and support software. **ATS** Euromaster's Fleetmaster Tyre Management System enables fleets of all sizes to manage, monitor and control all aspects of tyre performance and purchases ensuring optimum mileage from tyres in operation.

ATS
EUROMASTER

MAINTENANCE CHECKS

1. ESTABLISH causes of wear and damage on loose nuts before re-tightening.
2. **KEEP** nutting surfaces clean and preferably free of paint. If paint is used it should be no thicker than 25 microns.
3. **STUDS** and nuts should comply with BS AU 50 Part 2; Section 2; 1994.
4. **ENSURE** that nuts run freely over the whole length of the stud thread by hand action only.
5. **FINAL** tightening must be with a calibrated torque wrench set to the vehicle manufacturer's torque value.
6. **POMER** ratchet tools and extensions to wheel braces should not be used for final tightening.
7. **IT IS CRITICAL** that all wheel nuts are re-checked for tightness after 30 minutes, whether the vehicle has moved or not OR after the vehicle has travelled between 40 to 50km (25 to 50 miles).

25 - 50 MILES
(40 - 80km)

8. **WHEN RE-TIGHTENING**, nuts should not be slackened and re-tightened, but simply tightened to the recommended torque.
9. **DRIVERS** should inspect tyres and wheels at the start of each shift for signs of damage, under inflation, cracked or distorted wheel rims, cracks or loose fittings, signs of wheel looseness (bright metal or rust marks around the nuts or capnuts - weather settings).
10. **DRIVERS** should check for loose nuts with a socket and a bar no longer than 500mm (20") to avoid over-tightening.

For more details contact the Society of Operations Engineers at
44 Grosvenor Place, London W1C 3BP. Tel: 0207 461 2111



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Vehicle Stability

- **Long-term problem**
- **Vehicle design**
- **Driver comfort**
- **Driver education/training**
- **SOE seminar**



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Tipper Specification

- **Original guide published in 1992**
- **Developments in suspension systems**
- **Major changes in operating requirements**
- **Investigations into tipper stability**
- **SOE working on new guide**



SOCIETY OF OPERATIONS ENGINEERS

“to promote safe, efficient and environmentally sustainable operations engineering to the benefit of society”



LICENCE

Issue No: _____

Scope: _____

Expiry: _____

NI No: _____

Name: _____

PHOTO

(Holder's, manual signature)

This card remains the property of the SOE and must be surrendered on demand (see further information on record)

THE SOCIETY OF OPERATIONS ENGINEERS

GUIDE TO WHEEL SECURITY

WHEEL FITTING

MAKE SURE you know the different types of wheels and nuts

DO NOT MIX

| | | |
|---------------|-------------------|----------------------|
| SPIGOT | BS CONICAL | DIN SPHERICAL |
|---------------|-------------------|----------------------|

- DO lubricate threads and washer-to-nut interfaces with light engine oil before assembly.
- DO NOT use 'old purpose' wheels as replacements for original equipment.
- DO NOT change the wheel or tyre specification without checking with the manufacturer.

Maintenance Checks

- ESTABLISH causes of wear and damage on loose nuts before re-tightening.
- KEEP nutting surfaces clean and preferably free of paint. If paint is used it should be no thicker than 25 microns.
- STUDS and nuts should comply with BS AU 30 Part 2: Section 2: 1904.
- ENSURE that nuts run freely over the whole length of the stud thread by hand action only.
- FINAL tightening must be with a calibrated torque wrench set to the vehicle manufacturer's torque value.
- POWER spanner tools and extensions to wheel braces should not be used for final tightening.
- IT IS CRITICAL that all wheel nuts are re-checked for tightness after 30 minutes, whether the vehicle has moved or not OR after the vehicle has travelled between 40 to 50kms (25 to 50 miles).

25 - 50 MILES

WHEN RE-TIGHTENING, nuts should not be slackened and re-tightened, but simply tightened to the recommended torque.

- DRIVERS should inspect tyres and wheels at the start of each shift for signs of damage, under inflation, cracked or distorted wheel rims, cracks or loose fittings, signs of wheel loosening (bright metal or rust marks around the nuts or captive nut-toe settings).
- DRIVERS should check for loose nuts with a socket and a bar no longer than 100mm (40") to avoid over-tightening.

ATS One of the most comprehensive ranges of tyres in conjunction with professional IT packages and support software. ATS EuroMaster's FleetMaster Tyre Management System enables fleets of all sizes to manage, monitor and control all aspects of tyre performance and purchases ensuring optimum mileage from tyres in operation.

EUROMASTER www.euromaster.co.uk

For more details contact the Society of Operations Engineers at All Government House, Cranborne Road, Dorchester, Dorset DT11 1JH