SUSPENSION SPRING QUALITY CERTIFICATE

REGULATION
European Commission No. 1400/2002 of 31 July 2002

Suspension springs manufactured and supplied by Lesjöfors Fjädrar AB are classified as Parts of Matching Quality.

Spring calculation, material used, spring manufacturing, anti-corrosion surface treatment, quality and environment assurance are according to OE suspension spring branch standards.

NORMATIVE REFERENCES:

Spring calculation
EN 13906 Calculation of cylindrical helical springs made from round wire and bar.
ISO 2162 Technical product documentation – springs.
Lesjöfors Fjäderhandbok 1990

Material
EN 10089:1998 Hot rolled steel for quenched and tempered springs.
EN 10270-2:2001 Oil hardened and tempered spring steel wire.
ASTM A401 Steel wire Chrome-Silicon alloy.
ASTM A229 Steel wire Oil tempered.
ASTM A689 Steel bars for springs
DIN 17221 1988-12 Hot rolled steels for quenched and tempered springs.
EN 10204:1991/A1:1995 Type of inspection documents.
EN10021 General technical delivery conditions for steel
EN10277 Technical delivery conditions

Spring manufacturing
DIN 2095 Specifications for cold coiled compression springs
DIN 2096-1 Quality requirements for hot formed springs
DIN 2096-2 Quality requirements for mass production
ASTM A125 Steel springs, Helical, Heat treated, Specification for.
Stress relief heat treatment according to material supplier specifications.
Lesjöfors Standard for Pre-setting.
SAE J-442, Almen test, Shot Peening

Anti-corrosion surface treatment
Volvo Standard 5751.5; Y500-4, Painting class for components of metal exposed for severe corrosive attacks.
Volvo test methods: Std 1021, Std 1024, Std 1027, Std 1029, Std 3371, Std 5711, Std 5715.
EN 12476, Zinc phosphate, Method of specifying requirements.
ISO 9717, Zinc phosphate, Method of specifying requirements.
ISO 9220, Measurement of coating thickness, Scanning electron microscope method

Quality and environment assurance
ISO 9001:2000, auditor TÜV
ISO 14001:1996, auditor TÜV
TÜV Automotive GMBH, Test chassis spring performance.

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