

THE NEW PROFESSIONAL FIGURE OF MACHINE LUBRICATION EXPERT (MLE)

We cannot overlook the fact that one of the crucial steps to understanding "how" and "when" is best or even necessary to intervene on the founding principle of good lubricant management, requires a careful check-up of the fluid status.

Whether we are talking about oil, the most frequent and perhaps best understood case, or greases, with their well known flaws...

In order to operate well, a machine of any size, in safe conditions and in full compliance with the expected qualitative and quantitative performance, requires an effective and efficient lubrication system!

We can no longer waste resources, whether they are absorbed energy or consumables. This holds true with oil drums, grease cartridges or filters, for which selection or replacement we essentially rely on empirical practices.

Overwhelmed by daily routine, very few plant directors can devote the necessary time and intellectual energy to selecting products that are appropriate (or suitable, in light of continuous technical improvements) in a given operating context. The manufacturer's manual, where available and updated, is not always adaptable to suit the demands of current production, which are increasingly pressing and at the same time discontinuous.

Only tribological analyses and some targeted inspections (a routine practiced abroad, and particularly in the USA, where monitoring technology and Oil Analysis for diagnostic purposes are widespread) have the power to identify the primary causes of a malfunction or an imminent failure. A few cubic centimeters of oil, timely sent in a suitable container to a certified laboratory, can give you the answer to the main questions of "how", "when" and "where" it is appropriate to intervene in a corrective manner.

The acquisition of those particular "weak signals" coming from the most intimate part of the machinery can guarantee an adequate functioning of the strategic machines, without a hitch!

In this regard, considering the difficulties that people usually encounter to compensate for the innumerable deficiencies around this subject, there is now a need for a training path and therefore to have qualified personnel in the field of Machine Lubrication.

The need to regulate this sector at a national level has led the CICPND (the Italian Certification Center for Non-Destructive Testing and Industrial Processes) to draw up the Regulation and the Minimum Requirements for the Qualification and Certification of Machine Lubrication Expert (MLE) Personnel, establishing principles, criteria and procedures for the management of the activities related to the certification of the aforementioned staff at levels 1, 2 and 3.

The figure of Machine Lubrication Expert takes its cue from the already consolidated path of ICML and Lubecouncil, through which over 3500 Machine Lubrication Experts have already been certified internationally.

It was observed that the preparatory sector is, at its basis, among the most lacking; topics such as the selection of products (both their quality and quantity), in the case of a grease or an oil, as well as cleaning a system or applying an offline filter cartridge, are particularly difficult. Even the collection of a sample of lubricant (in theory a very simple passage), for analytical purposes, often raises doubts.

This is the reason for the desire to institutionalize the aforementioned professional figure according to Italian laws and procedures, in the light of binding international standards.

With reference to the CICPND Regulation no. 381 for the Qualification and Certification of Machine Lubrication Expert Personnel, we will now define the relative levels of competence:

Level 1 (basic skills)

- a) can manage the reception and storage of lubricants, if instructed by a level 2;
- b) cleaning the machinery, checking the levels and greasing of the components, according to procedures and instructions from the Machine Manual;
- c) replacing and/or refilling oil and grease in machines commonly used in industrial contexts;
- d) ensuring proper inspection and maintenance of automatic lubrication systems (self-lubrication, mist lubrication systems, etc.);
- e) taking representative samples of lubricating oil for diagnostic analysis, as instructed by a Level 2.

Level 2 (advanced skills)

The Level 2 Certification for Machine Lubrication Technician applies to maintenance and monitoring procedures and certifies that the person who has achieved it is qualified to perform the following operations:

- a) management of reception, storage and application of lubricants;
- b) management of re-lubrication and/or inspection of machines;
- c) appropriate oil change and/or refill of machinery normally used in industrial plants;
- d) use of simple techniques for selecting lubricating oils containing base oil and suitable additives for machines normally used in industrial plants;
- e) use of simple selection techniques for suitable lubricating greases for machines normally used in industrial plants;
- f) use of simple selection techniques for less intrusive and more effective grease application methods (including automated application) for machines normally used in industrial plants;
- g) use of simple techniques for estimating the re-greasing intervals and quantities of grease suitable for machines normally used in industrial plants;
- h) appropriate maintenance of automatic lubrication systems (self-lubrication, mist lubrication systems, etc.);
- i) use of basic oil analysis techniques for the identification and elimination of abnormal degradation of the conditions of the lubricant, and use of simple techniques for appropriate modification of the lubricant specifications;
- j) thorough training on environmental and health standards, concerning the safe handling and storage of lubricants and their disposal;
- k) understanding of product data sheets and safety data sheets;
- l) proper storage of documents and records of maintenance work.

The usual qualifications of people who achieve the level 2 certification are: Lubrication Technician, Preventive Maintenance Technician, Mechanical Fitter, Mechanical Operator, etc. Typically, a person with one of these qualifications interacts regularly with the machine and routinely determines the condition of the lubricants and hydraulic fluids in use; they are likely to be assigned tasks directly related to the lubrication process of the machine.

Level 3 (managerial skills and duties)

The Level 3 Machine Lubrication Technician certification applies to maintenance and monitoring procedures and certifies that the person who has achieved it is qualified to perform the following operations:

- a) management of selection, application and periodic replenishment of oils, consolidation of oils and lubricating greases appropriate for machines normally used in industrial plants; including estimation of re-greasing intervals and suitable amounts of grease for the machines, taking into account work environments, health and safety;
- b) management of re-lubrication and/or inspection of machines;
- c) creation and management of preventive lubrication selection techniques;
- d) application of the most suitable filtration procedures, choosing among the systems available according to the expected performance;
- e) appropriate replacement and/or refilling of lubricants for machines normally used in industrial plants;
- f) management of reception, storage and distribution, design and planning of storage, taking into account work environments, health and safety;
- g) lubricant testing management, quality assurance, use of appropriate sampling procedures to ensure that representative lubricant samples have been selected consistently;
- h) use and interpretation of technical analysis and the results obtained with regard to oil conditions for the identification and elimination of abnormal lubricant degradation and the use of appropriate corrective techniques for lubricant specification;
- i) suitable management for handling maintenance equipment;
- j) particular emphasis on the handling and recovery/filtration procedures of the charges;
- k) correct interpretation and data sheets of the oils;
- l) competence in the correct handling and storage of the materials; ability to understand and interpret labels and safety data sheets; proper archiving of documents and maintenance record sheets.

**New Staff Examination Center for Level 1 and 2
Machine Lubrication Expert Certification**

On 17-05-2010 the CICIPND Board of Directors ratified the approval of the new Examination Center of MECOIL Diagnosi Meccaniche Srl in Florence for Level 1 and 2 Machine Lubrication Expert Certification.

The new Registry of Examination Centers for this sector is provided below.

**REGISTRY OF EXAMINATION CENTERS APPROVED BY
CICIPND**

for Machine Lubrication Expert Certification

(May 2010)

Organization	Registration number and expiration date	Sector
MECOIL DIAGNOSI MECCANICHE Srl Via del Salvatino, 6 50137 Firenze Fi Tel. 055-6120486 Fax 055-6120375 e-mail info@mecoil.net	001 / MLE 16-05-2013	MLE

Regarding the **Transitional Period**, we are publishing below the CICIPND Calls for level 2 and 3 Certification and level 2 Provisional Certification for experts in Machine Lubrication Expert (MLE) that are expiring at the end of October: