Lubrication devices or arrangements for oil or grease

1/00 Constructional modifications of parts of machines or apparatus for the purpose of lubrication

3/00 Devices for supplying lubricant by manual action (draining equipment for liquid containers B65D)

3/02 delivering oil
3/04 Oil cans; Oil syringes
3/06 delivering on squeezing
3/08 incorporating a piston-pump
3/10 delivering grease
3/12 Grease guns

5/00 Apparatus with hand-positioned nozzle supplied with lubricant under pressure (F16N 3/00 takes precedence)

5/02 Nozzles or nozzle-valve arrangements therefor, e.g. high-pressure grease guns

7/00 Arrangements for supplying oil or unspecified lubricant from a stationary reservoir or the equivalent in or on the machine or member to be lubricated (axle-box lubrication for railway rolling-stock B61F 17/00)

7/02 with gravity feed or drip lubrication
7/04 with oil flow promoted by vibration
7/06 Arrangements in which the droplets are visible
7/08 controlled by means of the temperature of the member to be lubricated (thermostats G05D)
7/10 incorporating manually-operated control means, e.g. spindles

7/12 with feed by capillary action, e.g. by wicks
7/14 the lubricant being conveyed from the reservoir by mechanical means (by pumping devices F16N 7/36, F16N 7/38; adaptations for lubrication of machines or engines in general, of internal-combustion engines F01M)

7/16 the oil being carried up by a lifting device (scoop devices in general F04D)
7/18 with one or more feed members fixed on a shaft
7/20 with one or more members moving around the shaft to be lubricated
7/22 shaped as rings
7/24 with discs, rollers, belts or the like contacting the shaft to be lubricated

7/26 Splash lubrication (mist lubrication F16N 7/32)
7/28 Dip lubrication
7/30 the oil being fed or carried along by another fluid (in internal- combustion engines F02F)
7/32 Mist lubrication (splash lubrication F16N 7/26)
7/34 Atomising devices for oil (atomising devices in general B05B)

7/36 with feed by pumping action of the member to be lubricated or of a shaft of the machine; Centrifugal lubrication
7/363 [Centrifugal lubrication]
7/366 with feed by pumping action of a vertical shaft of the machine

7/38 with a separate pump; Central lubrication systems
7/385 [Central lubrication systems]
Lubrication devices or arrangements for oil or grease

17/04 . at low temperature (lubrication of refrigerating machines F25B)
17/06 . in vacuum or under reduced pressure (lubrication of evacuating pumps F04; of rotary anodes of X-ray tubes H01J 35/10)

Details of lubricators or lubrication systems

19/00 Lubricant containers for use in lubricators or lubrication systems
19/003 . [indicating oil level (measuring liquid level in general G01E)]
19/006 . [maintaining oil level (level control in general G05D 9/00)]
21/00 Conduits; Junctions (in general F16L); Fittings for lubrication apertures
2021/005 . [modular units]
21/02 . lubricating nipples
21/04 . Nozzles for connection of lubricating equipment to nipples
21/06 . covering members for nipples, conduits or apertures
23/00 Special adaptations of check valves (check valves in general F16K)
25/00 Distributing equipment [with or without proportioning devices]
25/02 . with reciprocating distributing slide valve
25/04 . with rotary distributing member (combined with oil pump F16N 13/22)
27/00 Proportioning devices (liquid meters G01F)
27/005 . [using restrictions]
27/02 . gating equipment (multiple-way valves F16K; metering cocks G01F)
29/00 Special means in lubricating arrangements or systems providing for the indication or detection of undesired conditions; Use of devices responsive to conditions in lubricating arrangements or systems (in bearings F16C; constructions of apparatus outside the lubricating arrangements or systems; see the relevant classes)
29/02 . for influencing the supply of lubricant
29/04 . enabling a warning to be given; enabling moving parts to be stopped
31/00 Means for collecting, retaining, or draining-off lubricant in or on machines or apparatus (oil separators for separating oil from exhaust steam F22G)
31/002 . [drain pans]
31/004 . [combined with container]
31/006 . [drip trays]
31/008 . [drain plugs]
31/02 . oil catchers; Oil wipers (oil-scraping rings for pistons F16J 9/20 ; cleaning means for indicating or measuring dip members, e.g. dipstick wipers G01F 23/045)]
31/025 . [oil-slinger]
33/00 Mechanical arrangements for cleaning lubricating equipment; Special racks or the like for use in draining lubricant from machine parts
3203/005 . [flushing]
Care of lubricants

35/00 Storage of lubricants in engine-rooms or the like (storage containers B65)
37/00 Equipment for transferring lubricant from one container to another
  37/02 for filling grease guns
39/00 Arrangements for conditioning of lubricants in the lubricating system (cleaning of lubricating oil, lubricating compositions C10M)
  39/02 by decration (degasification of liquids B01D 19/00)
  39/05 by evaporating or purifying (for heating or cooling of filters B01D 35/18, e.g. comprising a vapourising unit B01D 35/185)
2039/007 (Using strainers)
  39/02 by cooling (heat-exchangers in general F28)
  39/04 by heating (heat-exchangers in general F28)
  39/06 by filtration (filters in general B01D; magnetic separators B03C 1/00; centrifugal separators or filters B04B 5/005)
2039/065 [inlet foot filter]
  39/08 by diluting, e.g. by addition of fuel (lubrication of machines or engines in general, of internal-combustion engines F01M)
99/00 Subject matter not provided for in other groups of this subclass

2200/00 Condition of lubricant
  2200/02 Oxidation
  2200/04 Detecting debris, chips, swarf
  2200/06 Film thickness
  2200/08 Acidity, pH-value
  2200/10 Temperature
  2200/12 Viscosity
  2200/14 Treating with electricity
  2200/16 using tracers
  2200/18 Detecting foaming
  2200/20 Detecting water

Care of lubricants

2210/00 Applications
  2210/02 Turbines
  2210/04 Vehicles
  2210/06 Marine
  2210/08 Aircraft
  2210/09 for inverted flight
  2210/10 Refrigerators
  2210/12 Gearings
  2210/14 Bearings
  2210/16 Pumps
  2210/18 Electric motors
  2210/20 Electric generators
  2210/22 Centrifuges
  2210/24 Conveyors
  2210/26 Spinning spindles
  2210/28 submerged
  2210/30 for reversed rotation
  2210/32 Sewing machines
  2210/33 Chains
  2210/34 Cables and wires

2220/00 Signal processing
  2220/02 Microprocessor; Microcomputer
  2220/06 using mapping techniques
  2220/10 Timing network
  2220/12 with pneumatic elements
  2220/13 with hydraulic elements
  2220/14 with bimetallic elements
  2220/16 with capacitors
  2220/18 Switches
  2220/19 Photo sensor
  2220/20 Reed relays
  2220/22 using counters

2230/00 Measuring
  2230/04 Pressure
  2230/05 Atmospheric pressure
  2230/06 for determining flow
  2230/08 Temperature
  2230/11 Ambient temperature
  2230/16 Number of revolutions, RPM
  2230/18 Level
  2230/30 Dialecticum
  2230/32 Inductive
  2230/34 Transparency; Light; Photo sensor
  2230/36 Viscosity
  2230/38 Piezo; x-tal
  2230/40 Flow
  2230/42 Friction
  2230/50 Sampling
  2230/52 magnetic

2240/00 Fail safe
  2240/02 Indicating
  2240/04 Oil level
  2240/05 Oil flow
  2240/06 Temperature
  2240/065 by means of colours or dye
  2240/08 Pressure
  2240/12 using warning lamps
  2240/14 using sound
  2240/16 using recording
  2240/18 necessity of changing oil
  2240/20 Emergency
  2240/21 limping home
  2240/22 Rupture
  2240/24 using accumulator
  2240/30 Clogging filter
  2240/32 Pump failure
  2240/40 Pre-lubrication
  2240/50 After-lubrication
  2240/60 Limping home

2270/00 Controlling
  2270/10 Level
  2270/12 using overflow (F16N 2270/18 takes precedence)
  2270/14 using float device
  2270/18 using overflow by filling
Amount of lubricant

with restrictions

using porous, felt, ceramic, or sintered material

variable

intermittent

Fixed pulse, fixed length, fixed amplitude

pressure-controlled

Condition

Viscosity

pH; Acidity

Temperature

Pressure

Limit

Set-pressure

Supply

only during use

Valves

electromagnetically operated

Variable-flow or proportional valves