U. S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

CLASSIFICATION ORDER 1876

MARCH 4, 2008

PROJECT M-1852

The following classification changes will be effected by this order:

	Class	Subclass	Art Unit	Ex'r Search Room No.
Abolished:	73	112-117, 117.1-117.4, 118.1, 118.2, 119, 120	2834	ELEC0000
Established:	73	112.01-112.06, 113.01, 114.01-114.09, 114.11-114.19, 114.21-114.29, 114.31-114.39, 114.41-114.49, 114.51-114.59, 114.61-114.69, 114.71-114.79, 114.81, 115.01-115.08, 116.01-116.09, 116.11, 117.01-117.03, 118.01-118.04	2834	ELEC0000

The following classes are also impacted by this order:
29, 60, 116, 123, 313, 324, 356, 436, 701, 702

This order includes the following:

A. CLASSIFICATION MANUAL CHANGES,

B. LISTING OF PRINCIPAL SOURCE OF ESTABLISHED AND DISPOSITION OF ABOLISHED SUBCLASSES,

C. CHANGES TO THE USPC-TO- IPC CONCORDANCE,

D. DEFINITION CHANGES AND NEW OR ADDITIONAL DEFINITIONS.

CLASSIFICATION ORDER 1876

MARCH 4, 2008

PROJECT M-1852

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1.01 INSTRUMENT PROVING OR CALIBRATING
1.02 .Gas or liquid analyzer
1.03 ..Reference standard
1.04 ...Permeable outlet or flawed element
1.05 ...Piston, sprayer, nozzle, or orifice
1.06 ..Gas
1.07 ...Span or zero
1.08 .Dynamometer
1.09 ..Torque
1.11 ...Electrical
1.12 ...Wrench
1.13 ..Weight
1.14 ..Rotor unbalance or a roller having a smooth surface
1.15 ..Load cell (e.g., strain gauge or piezoelectric sensor)
1.16 .Volume of flow, speed of flow, volume rate of flow, or mass rate of flow
1.17 ..Plug with leak detector
1.18 ..Sphere
1.19 ..Piston
1.21 ...With plural pistons
1.22 ...With magnetic or optical sensor
1.23 ...With position sensing switch
1.24 ..Tracer
1.25 ..Orifice or restriction
1.26 ...Nozzle or venturi
1.27 ..Turbine, geared meter, pulse activated, or counter
1.28 ...Turbine or geared meter
1.29 ..Anemometer or pitot tube
1.31 ..With liquid level monitor or timer
1.32 ...Prover bell
1.33 ..With floating element or weighing
1.34 ..With signal processing, span or set point adjustment (e.g., zero correction)
1.35 ..With pressure measurement or plural flowmeters
1.36 ..Metering dispenser
1.37 .Speed, velocity, or acceleration
1.38 ..Acceleration utilizing an inertial element
1.39 ...Involving pendulum or impact
1.41 ..Optical or magnetic sensing
1.42 .Timing apparatus (e.g., fuse, camera, or shutter)
1.43 ..Chronometer (e.g., clock, watch, or watch unbalance)
1.44 ...Using antenna or radio frequency (RF)
1.45 ...Using optical sensor or element
1.46 ....With sound sensor
1.47 ....Resilient element
1.48 ...Using sound sensor or piezoelectric vibration sensor
1.49 ....Plural watches or plural sensors
1.51 ....Resilient element
1.52 ...Plural watches
1.53 ...With resilient element
1.54 ....Coil spring
1.55 .....Plural coil springs
1.56 ..Optical instrument (e.g., camera shutter) or optical sensor
1.57 .Fluid pressure
1.58 ..Vacuum
1.59 ..With signal correction or processing
1.61 ...Span
1.62 ...Zero
1.63 ...With reference source or attachment therefor
1.64 ....Varying
1.65 ..Dead weight type
1.66 ..Varying
1.67 ...Using or containing liquid
1.68 ..With piston and cylinder
1.69 ..Using or containing liquid
1.71 ..Pressure activated device
1.72 ...Valve
1.73 .Liquid level or volume measuring apparatus
1.74 ..Volumetric dispenser (e.g., pipette)
1.75 .Angle, direction, or inclination
1.76 ..Compass
1.77 ..Gyroscope
1.78 ..Aircraft, inertial navigation, or attitude
1.79 .Displacement, motion, distance, or position
1.81 ..Length, width, or height
1.82 .Apparatus for measuring by use of vibration or apparatus for measuring vibration (e.g., acoustic or ultrasonic)
1.83 ..Liquid
1.84 ..Rotary or rotor unbalance
1.85 ..Seismic (e.g., geophone) or with optical sensor
1.86 ..Reference standard detail
1.87 .Centrifuge
1.88 .Span or set point adjustment (e.g., zero correction)
1.89 .Roughness or hardness
7 BY ABRASION. MILLING, RUBBING, OR SCUFFING
8 .Wheel tread, tire, track, or roadway
9 FRICTIONAL RESISTANCE, COEFFICIENT OR CHARACTERISTICS
10 .Lubricant testing
11.01 TESTING IMPACT DELIVERING DEVICE (E.G., A HAMMER)
11.02 .Shot peener
11.03 .Pile driving hammer
11.04 TESTING OF SHOCK ABSORBING DEVICE (E.G., AUTOMOBILE SHOCK ABSORBER, GUN RECOIL APPARATUS, ETC.)
11.05 .Torsional vibration damper
11.06 .Railway draft gear
11.07 .In situ vehicle suspension
11.08 ..By applying reciprocating or oscillating motion
11.09 .By applying reciprocating or oscillating motion
12.01 TESTING BY IMPACT OR SHOCK
12.02 .Resilient ball (e.g., golf ball baseball, etc.)

Title Change
@ Indent Change
* Newly Established Subclass
& Position Change

	TESTING BY IMPACT OR SHOCK	
12.03	.Typewriting ribbon or carbon paper	
12.04	.Accelerated or decelerated specimen (e.g., propelled or dropped specimen support carriage)	
12.05	..Particle or projectile specimen	
12.06	..Dropped	
12.07	..By hydraulic or pneumatic forces	
12.08	.Specimen directly subjected to a fluid pressure pulse or wave	
12.09	.Specimen impactor detail	
12.11	..Particle or projectile	
12.12	..Reciprocating or oscillating	
12.13	..Dropped	
12.14	...Pivoted	
19.01	GAS CONTENT OF A LIQUID OR A SOLID	
19.02	.By gas chromatography	
19.03	.By vibration	
19.04	.By rate of flow of the gas	
19.05	.By pressure of the gas	
19.06	..Of a beverage	
19.07	.Of metal	
19.08	.Of concrete, mortar, or plastic while in a fluent state	
19.09	.Of mud	
19.1	.Of a liquid	
19.11	..Lubricant	
19.12	.Particular separator	
23.2	GAS ANALYSIS	
23.21	.With compensation detail (for error or drift correction, etc.)	
23.22	..For gas chromatography	
23.23	...Baseline drift correction circuitry	
23.24	...Rate of flow	
23.25	...Temperature	
23.26	....Gradient	
23.27	...Pressure	
23.28	..For density or specific gravity	
23.29	...Pressure	
23.3	.Breath analysis	
23.31	.Gas of combustion	
23.32	..Air-fuel ratio	
23.33	...Solid content	
23.34	.Odor	
23.35	.Gas chromatography	
23.36	..With electrical computer or data processor control	
23.37	..With spectrometer	
23.38	..Petrochemical	
23.39	..Column detail	
23.4	..Detector detail	
23.41	..Including sample preparation or sampling	
23.42	..Detail of gas handling means	
24.01	.By vibration	
24.02	..Produced by radiant energy	
24.03	..Solid content of gas	
24.04	..Moisture content or vapor pressure of gas	
24.05	..Density or specific gravity of gas	
24.06	..Detector detail	
25.01	.By thermal property	
25.02	..With magnetic property (e.g., paramagnetic gas)	
25.03	..Thermoconductivity	
25.04	..Moisture content or vapor pressure	
25.05	..Detector detail	
28.01	.Solid content of gas	
28.02	..Particle charging	
28.03	..Pressure	
28.04	..Separator detail	
28.05	...Impactor	
28.06	....Fractionalizing	
29.01	.Moisture content or vapor pressure	
29.02	..Hygrometer	
335.01	...With optical element	
335.02	...With electric circuitry or electric circuit component detail	
335.03	....Impedance	
335.04	.....Capacitance	
335.05	.....Resistance or conductivity	
335.06	...Wet and dry responsive elements	
335.07	....With direct readout or calculator detail	
335.08	....Wet bulb detail	
335.09	.....Relative air motion creating means (e.g., sling psychrometer)	
335.11	...Expanding-sorption element	
335.12	....Coiled or twisted	
335.13	....Arcuate or elongated	
335.14	....Tensioned	
29.03	..Pressure	
29.04	..With visual indication	
29.05	..Detector detail	
30.01	.Density or specific gravity	
30.02	..By pressure measurement	
30.03	..By rate of flow	
30.04	..Detector detail	
31.01	.Ambient air	
31.02	..Impurity	
31.03	.Impurity	
31.04	.Pressure	
31.05	.Detector detail	
31.06	..Semiconductor	
31.07	.Particular separator	
32 R	SPECIFIC GRAVITY OR DENSITY OF LIQUID OR SOLID	
433	.With weighing feature	
434	..Continuous test fluid supply	
435	..Plural supports for specimen	
436	...Vertically, commonly suspended	
437	..Immersion	
438	.Hydrostatic pressure type	
439	..Bubble tube	
440	.Multiple floats of graduated density	
441	.Portable hand manipulable syringe type	
442	..With thermometer	
443	...With calculator	
444	.Freely vertical reciprocable float with carried indicium	
445	..Continuous test fluid supply	
446	..With section means	
447	..With liquid level responsive gauge or compensator	

Title Change
* Newly Established Subclass
@ Indent Change
& Position Change

LIQUID ANALYSIS OR ANALYSIS OF THE SUSPENSION OF SOLIDS IN A LIQUID
.Viscosity
..Force reactance to member driven therein
...By vibration
54.27 ....With detail (e.g., circuitry) of a drive means or a detecting means
54.28 ...Rotationally driven member
54.29 ....Comparator
54.31 ....By measuring the driving force or the speed of the driven member
54.32 ....By measuring an opposed drag force
54.33 .....By measuring angular displacement
54.34 .....By measuring a counterbalance or restoring force
54.35 ....Including detail of a motor drive, a stator, or a housing structure of a motor
54.36 ...Penetrometer
54.37 ...By movement or displacement between shearing surfaces
54.38 ...Detector detail
54.39 ..Shearing torque between parallel surfaces
54.41 ..Vibration
54.42 ..Thermal
54.43 ..With detail of a pressure or a temperature regulating means
60.11 .Cleaning or foaming ability
61.41 .Content or effect of a constituent of a liquid mixture
61.42 ..Metallic particle constituent
61.43 ..Liquid constituent of a liquid mixture
61.44 ...Plural liquid constituent (e.g., multiphase liquid)
61.45 ....By vibration
61.46 ...By thermal measurement
61.47 ...By pressure measurement
61.48 ...By optical irradiation
61.49 ...By vibration
61.51 ...Buoyant detector
61.52 ...Chromatography
61.53 ....Column detail
61.54 ....Paper or thin layer type
61.55 ....Including sampling, sample handling, or sample preparation
61.56 ....Detail of fluid handling means (e.g., valve, control, etc.)
61.57 ....With detail of compensation or regulating means
61.58 ....Detector detail
61.59 ...With detail of sampling, sample handling, or sample preparation
61.61 ...Detector detail
61.62 ..Depositing characteristic
61.63 ..Settling or filtering ability
61.64 ...By volume or flow rate
61.65 ...Sedimentation rate
61.66 ....With means for accelerating solids (e.g., particles)
61.67 ....By pressure measurement
61.68 ....Including detail of fluid handling means, sampling, sample handling, or sample preparation
61.69 ....By optical measurement
61.71 ..For measuring solid components (e.g., particles)
61.72 ...By separation and subsequent measurement (e.g., by weighing, X-ray or microscope, etc.)
61.73 ...By flowing through barrier or restriction and measuring flow effect (e.g., pressure, volume of or rate of flow)
61.74 ....Thermal
61.75 ...Vibration
61.76 ..By thermal measurement
61.77 ...Vaporization (e.g., evaporation, distillation, etc.)
61.78 ..By pressure measurement
61.79 ..By vibration
64.41 .Gelling or coagulation
64.42 ..By vibration
64.43 ..By optical measurement
64.44 .Vapor-liquid ratio
64.45 .Vapor pressure
64.46 ..Differential pressure
64.47 .Osmotic pressure (e.g., diffusion characteristic)
64.48 .Surface tension
64.49 ..By force or torque
64.51 ..By pressure
64.52 ..Liquid droplet
64.53 .By vibration
64.54 .Molecular weight
64.55 .Interface
64.56 .Sampler, constituent separation, sample handling, or sample preparation
65.01 CENTER OF GRAVITY; TURNING MOMENT; METACENTRIC HEIGHT
65.02 .Spherical specimen
65.03 .Ball driving sporting implement (e.g., golf club, baseball bat, etc.)
65.04 .Watercraft (e.g., metacentric height)
65.05 .Air or space vehicle
65.06 ..Electric sensor
65.07 .Dynamic
65.08 ..Torsional oscillation
65.09 .Electric sensor
66 ROTOR UNBALANCE
455 .Propeller, impeller, or fluid coupling
456 ..Single blade balancing
457 .In situ
458 ..With counterbalancing means
459 .Combined static and dynamic
460 .Dynamic (spinning)
461 ..Mass centering
462 ..With electrical sensor and indicator
463 ...Wattmeter
464 ...Rotatable switch
465 ...Oscilloscope (cathode ray)
466 ...Stroboscopically illuminated
467 ....Indicator

Title Change
* Newly Established Subclass
@ Indent Change
& Position Change

ROTOR UNBALANCE
.Dynamic (spinning)
468 ..With counterbalancing means
469 ...By radially and circumferentially adjustable weights
470 ...By circumferentially adjustable weights
471 ..With vibratable mount feature
472 ...Free floating rotor
473 ....Horizontal axis
474 ...One rotor end universally tiltable
475 ...Horizontal rotational axis
476 ....Horizontal plane of vibration
477 .....Both ends free
478 ......With selective endlock
479 ....Horizontal fulcrum
480 .Gravitational moment turns rotor about spin axis
481 ..Ways
482 .Gravitational moment tilts rotor about axis transverse to spin axis
483 ..Universally tiltable
484 ...With tapered rotor centering means
485 ...With expansible or contractible centering means
486 ...With suspension means
487 .Tool and adjunct
570 VIBRATION
570.5 .Acoustic levitation
571 .Test chamber
572 .Loose object detection
573 .Hardness or compliance
574 .Mechanical impedance
575 ..Of an elastomer
576 ..Device having an electromagnetic drive
577 .Fatigue study
578 ..Electromagnetic drive
579 .Resonance, frequency, or amplitude study
580 ..Including weight determination
581 ..Including axial force determination
582 ..Including structural bond evaluation
583 ...Of aircraft or related structural element
584 .By mechanical waves
585 ..Including ear or hearing testing
586 ..Reverberation
587 ..Acoustic emission
588 ..Structural bond evaluation
589 ..Acoustical impedance
590 ..In detection of a liquid reaction, a chemical reaction, or a nuclear reaction
591 ..Listening or sound tube
592 ..Fluid, fluid leak, or pipe flaw detection
593 ..Bearing, gear, or related moving mechanism
594 ..Soil or building structure
595 ..Frangible
596 ..Beamed
597 ...Velocity or propagation time measurement
598 ....For flaw or discontinuity detection
599 ...Attenuation measurement
600 ....For flaw or discontinuity detection
601 ...Having plural, diverse forms of radiant energy
602 ...With signal analyzing or mathematical processing
603 ...Acoustic holography
604 ....Having means substituted for reference signal
605 ....Liquid or deformable surface holography
606 ...Imaging of discontinuity with stationary sonic transmitter
607 ....By scan of a sonic receiver
608 ....By Bragg diffraction
609 ...Measuring or testing system having threshold, gating, delay, or blocking means
610 ....Electronic gating
611 .....Adjustably responsive to information signal
612 .....Plural gating
613 .....Of noise
614 .....Of signals to pass only echoes from within test body
615 .....Of signals to pass only echoes from front surface or flaw and from rear surface of test body
616 .....Of signals to pass only echoes from rear surface of test body
617 ....Having mechanical delay or mechanical blocking
618 ...Measuring or testing system having scanning means
619 ....Programmed scan
620 ....By reflected wave
621 .....Having compound scan
622 .....Of tubing, vessel, or cylindrical object
623 ......Scan from within object
624 .....Having separate sonic transmitter and receiver
625 .....Having plural sonic type transmitter or receiver transducers
626 ......Switched
627 ...By reflected wave
628 ....Having plural sonic type transmitters or receivers tranducers
629 ....Having unitary sonic type transmitter-receiver transducer
630 .....Establishing resonance in a test body
631 .....Having automatic gain control
632 ...Sonic wave transmitter or receiver transducer
633 ....Having transducer scanning means
634 .....Automatic transducer positioning
635 .....Rolling contact
636 ......On railroad rails
637 ......Around cylindrical object

VIBRATION
.By mechanical waves
..Beamed
...Sonic wave transmitter or receiver transducer
....Having transducer scanning means
.....Rolling contact
638 ......Along cylindrical object
639 ......Transducer forms wheel or is within a wheel
640 .....Scanning curved surface in direction of curvature
641 .....Plural sonic transmitters or receivers
642 ....Having wave shaping means
643 ....Nonvibrating transducer
644 ....Having significant coupling means
645 ..Acoustic parameter
646 ...Amplitude, power, or intensity
647 ....Current generating or modifying
648 .....Frequency sensitive
649 .Sensing apparatus
650 ..Torsional
651 ..Vibratable reed
652 ..With inertia element
653 ...With light beam indicator
654 ...With electrically controlled indicator
655 ..With light beam indicator
656 ...By optical holography
657 ...By frequency or phase shift
658 ..With electrically controlled indicator
659 ...Spectrum analysis
660 ...Rotating machinery or device
661 ...Having a probe
662 .Vibrator
663 ..Table, platform, or other support
664 ...Circuitry
665 ...Having fluid bearing or fluid pressure actuated
666 ...Having spring support
667 ...Eccentrically vibrated
668 ...Electromagnetically vibrated
669 ..Vehicle shaker
670 ...Treadmill
671 ..Having a fluid jet
672 ..Having a rotatable imbalanced mass
73 MOISTURE CONTENT OR ABSORPTION CHARACTERISTIC OF MATERIAL
74 .By residual capacity measurement
75 .By heat conductivity
76 .By desiccation or extraction
77 .By wet and dry bulb temperature
78 HARDNESS
79 .Scleroscope or rebound
81 .By penetrator or indentor
82 ..Impact type
83 ..With successive minor and major load
84 ..Soil bearing capacity
85 ..Penetrator element
86 EMBRITTLEMENT OR EROSION
87 DUCTILITY OR BRITTLENESS
760 SPECIMEN STRESS OR STRAIN, OR TESTING BY STRESS OR STRAIN APPLICATION
761 .Threaded fastener stress
762 .Indicating coating or sheet providing direct visual indication (e.g., cracking, color change)
763 .Specified electrical sensor or system
764 ..Having level attainment counter
765 ..Compensation (e.g., linearization)
766 ...Temperature
767 ..Plural sensors at single location (e.g., diverse orientation, plural level)
768 ..Sensor embedded in specimen
769 ..Coupling circuit for specific additional purpose (e.g., noise suppression) or having specified structure
770 ...Peak indicating system
771 ...Having selector switching means
772 ...Plural sensed signal system
773 ...Specified signal transmitting link
774 ..Specified sensor structure
775 ...Bonded to specimen
776 ....Sensor comprises coating
777 ...Semiconductor
778 ...Vibratory element
779 ...Magnetic or inductive
780 ...Capacitive
781 .Specified load or strain transmission device from specimen to electrical detector
782 ..Strain multiplier
783 .Deformation or change in stress after fracture, cutting, or boring
784 .Earth stresses
785 .Prestressed specimen
786 .In static structures (e.g., buildings, bridges)
787 .Stress or strain history of a specimen without application of a load
788 .By loading of specimen (e.g., strength of material test)
789 ..Stress-strain relationship determination
790 ...Compression
791 ...Graphical output
792 ....Moving chart
793 .....Drum
794 ..Plural diverse stress-strain tests or composite loads
795 ...Strain
796 ...Tension-compression
797 ....Alternating
798 ....Hydraulic or pneumatic actuation
799 ..Specimen cracking or crack propagation
800 ..Optical
801 ..Acoustic emission
802 ..Aircraft structure
803 ..Concrete
804 ..Model of structure to determine structure properties

SPECIMEN STRESS OR STRAIN, OR TESTING BY STRESS OR STRAIN APPLICATION
.By loading of specimen (e.g., strength of material test)
805 ..Varied in response to specimen condition other than failure
806 ..Varied according to predetermined pattern
807 ...Applied directly by fluid pressure
808 ...Repetitive
809 ....Plural specimen
810 ....To failure
811 ....Electric control circuit or particular loading device
812 ....Flexing, bending, or folding
813 ....Compressive
814 ....Torsional
815 ....Shear
816 ...Hydraulic or pneumatic actuation
817 ...Motor driven actuating screw
818 ..Compressional
819 ...Plural specimen or multiaxial loading
820 ...Fluid displacement provides indication
821 ...To fracture, crushing, or yield point
822 ...Plastic flow or creep
823 ...Residual deformation (e.g., consolidation)
824 ...By rotating squeezing element
825 ...With hydraulic or pneumatic actuation
826 ..Tensile
827 ...Bond test
828 ...Strand or chain test
829 ....By roller
830 ....To failure
831 ...Having specified clamp
832 ....Interior to specimen
833 ....Jaws
834 ...To failure
835 ....Tear
836 ...Pendulum dynamometer
837 ...Hydraulic or pneumatic actuation
838 ..Rupture or burst strength of sheet material by transverse loading
839 ...Including cutting or piercing element
840 ...Hydraulic or pneumatic actuation
841 ..Shear
842 ...Bond
843 ...By rotary element
844 ...Impact (e.g., pendulum)
845 ...To fracture or failure
846 ...Opposing work holders including specimen
847 ..Torsion
848 ...To failure
849 ..Bending, flexing, or folding
850 ...Weld testing
851 ...To failure or fracture
852 ...Loading means intermediate stationary end holders or supports
853 ...Having opposite ends of specimen clamped
854 ...By angular displacement of opposite ends of specimen
855 .Support, holder, or housing for unspecified type electrical sensing element
856 .Specimen clamp, holder, or support
857 ..With hydraulic or pneumatic actuation of grip
858 ..Winding drum or roller type
859 ..With wedging or camming elements contacting specimen
860 ..Opposed pair
104 SURFACE AND CUTTING EDGE TESTING
105 .Roughness
* 112.01 TURBINE ENGINE
* 112.02 .Steam powered
* 112.03 .Efficiency
* 112.04 .Output thrust
* 112.05 .Compressor
* 112.06 ..Surge or stall
* 113.01 STEAM OR WATER OPERATED ENGINE; RELATED ENGINE SYSTEM OR ENGINE COMPONENT
* 114.01 INTERNAL COMBUSTION ENGINE OR RELATED ENGINE SYSTEM OR ENGINE COMPONENT
* 114.02 .Irregular combustion (e.g., misfire)
* 114.03 ..By time variation
* 114.04 ..By speed variation
* 114.05 ..By acceleration
* 114.06 ..By exhaust pressure
* 114.07 ..By vibration
* 114.08 ..By ignition measurement
* 114.09 ..By optical measurement
* 114.11 ..By torque variation
* 114.12 ..Having road condition detection
* 114.13 .Power output
* 114.14 ..As horsepower
* 114.15 ..As torque
* 114.16 .Compression (i.e., cylinder pressure)
* 114.17 ..As a mean effective pressure
* 114.18 ..Pressure sensor detail
* 114.19 ...Combined with spark plug
* 114.21 ....Washer type
* 114.22 ..Using engine speed
* 114.23 ..Using starter current
* 114.24 .Engine acceleration
* 114.25 .Engine speed
* 114.26 .Relative rotational position
* 114.27 ..With cylinder phase identification
* 114.28 ...Piston position
* 114.29 ....Using microwave energy
* 114.31 .Monitoring intake air system (e.g., air filter)
* 114.32 ..Intake flow rate
* 114.33 ...Using pressure measurement
* 114.34 ...Using thermal measurement
* 114.35 ...Using a vortex
* 114.36 ..Throttle position sensor or idling state detection
* 114.37 ..Intake air pressure
* 114.38 .Fuel system or part thereof
* 114.39 ..With vapor vent or purge
* 114.41 ..Fuel pump
* 114.42 ..Fuel flow

INTERNAL COMBUSTION ENGINE OR RELATED ENGINE SYSTEM OR ENGINE COMPONENT
.Fuel system or part thereof
* 114.43 ..Fuel pressure
* 114.44 ..Carburetor
* 114.45 ..Fuel injector
* 114.46 ...Spray pattern
* 114.47 ...Needle position
* 114.48 ...Volume flow amount
* 114.49 ...Injector timing
* 114.51 ...Injector pressure
* 114.52 .Fuel consumption
* 114.53 ..Fuel efficiency or economy
* 114.54 ..Remaining fuel (amount or range)
* 114.55 .Lubricant condition
* 114.56 .Lubrication system
* 114.57 ..Pressure
* 114.58 .Electrical system
* 114.59 ..Starter or alternator
* 114.61 ..Electronic control unit
* 114.62 ..Ignition
* 114.63 ...Timing
* 114.64 ....Using a tool
* 114.65 .....Timing light
* 114.66 ...Distributor
* 114.67 ...For ionization
* 114.68 .Cooling system
* 114.69 .Exhaust system
* 114.71 ..Exhaust gas component analysis
* 114.72 ...For air/fuel ratio
* 114.73 ...With oxygen sensor
* 114.74 ..Exhaust gas recirculation system (EGR)
* 114.75 ..Catalyst or catalytic converter
* 114.76 ..Exhaust pressure
* 114.77 .Testing of an individual engine part
* 114.78 ..Piston ring
* 114.79 ..Valve train
* 114.81 ..Bearing
* 115.01 VEHICLE DRIVE TRAIN
* 115.02 .Transmission
* 115.03 ..Manual
* 115.04 ...Clutch
* 115.05 .Drive shaft
* 115.06 .Rear end (e.g., differential)
* 115.07 .Wheel or axle component
* 115.08 ..To determine speed
* 116.01 TEST STAND
* 116.02 .For engine
* 116.03 ..Turbine engine
* 116.04 ..For an auxiliary component to the engine
* 116.05 ..With dynamometer
* 116.06 ...With vehicle support
* 116.07 ....On a belt
* 116.08 ....Vehicle positioning
* 116.09 ....For a two-wheeled vehicle
* 116.11 ....For a tracked vehicle
* 117.01 VEHICLE CHASSIS
* 117.02 .Steering
* 117.03 .Suspension system
* 118.01 SIMULATING OPERATING CONDITION
* 118.02 .Engine specific
* 118.03 .Aircraft
* 118.04 .Marine
121 BRAKE TESTING
122 .Slidable platform
123 .Roller or belt wheel support
124 ..Relatively shiftable front and rear wheel supports
125 ..Inertia type
126 ..With driving effort indication
127 ...Single wheel portable unit
128 .Road test attachment or adjunct
129 .Vehicle installation
130 .Single wheel rotating and resistance measuring means
131 ..Torque measuring lever
132 .Brake depressor with measuring means
862 DYNAMOMETERS
862.01 .For testing force-biased connections
862.02 ..Ski bindings
862.03 .For testing relative pulling power (e.g., for contests)
862.041 .Responsive to multiple loads or load components
862.042 ..Along or about mutually orthogonal axes
862.043 ...Three dimensional (e.g., x, y, z axes)
862.044 ....Using a resistance strain gage
862.045 ..Using a resistance strain gage
862.046 ..Transducer array (e.g., columns and rows)
862.05 ..Applied to guidance means
862.06 ..On machine tools
862.07 ..To determine distribution of tensile stress
862.08 .Responsive to torque
862.09 ..By absorption
862.11 ...Having plural brake means
862.12 ...Having friction brake means
862.13 ....Automatic load control
862.14 ...Having fluid brake means
862.15 ....Air brakes
862.16 ....Automatic load control
862.17 ...Having magnetic or electromagnetic brake means
862.18 ....Automatic load control
862.191 ..During transmission to an external load
862.21 ...For making or breaking threaded connections (e.g., torque measuring wrenches)
862.22 ....With variable capacity or sensitivity
862.23 ....With detection of specific torque value or condition (e.g., peak torque)
862.24 .....Rate of change
862.25 ....Power tongs
862.26 ....Bending beam type
862.27 ...With recording or totalizing means
862.28 ...With electrical computation of horsepower

	DYNAMOMETERS
	.Responsive to torque
	..During transmission to an external load
862.29	...By measuring reaction forces of a prime mover
862.31	...By measuring reaction forces of transmission gearing
862.321	...By measuring elastic deformation of a torque transmitting member
862.322	....With rotary to linear conversion
862.323	....Using a flowing fluid (e.g., using a shaft mounted nozzle and baffle)
862.324	....Using a light sensor
862.325	....Using an electrical sensor
862.326	.....Phase angle detection
862.327	......Vernier type
862.328	......By plural toothed or notched sensing means
862.329	.......Interlaced teeth
862.331	.....Inductance or reluctance sensor
862.332	......Variable air gap in a magnetic core
862.333	......Detecting magnetostrictive or magnetoelastic property
862.334	.......Grooved or slotted torsion shaft
862.335	.......Magnetic sleeve or layer
862.336	........Particular constituent
862.337	.....Capacitance sensor
862.338	.....Resistance strain gage
862.339	......With noncontact coupling (e.g., rotary transformer)
862.37	...By measuring the fluid pressure of a hydraulic coupling
862.192	...By measuring angular acceleration
862.193	...By measuring an electrical or magnetic characteristic of a torque delivering electric motor
862.194	...By measuring tension in a drive belt or chain
862.195	...By converting transmitted torque into axial force
862.381	.Responsive to force
862.391	..To determine tension on a flexible element
862.41	...By measuring vibrations (e.g., resonant frequency)
862.42	...By applying a measured tensioning force
862.43	....Racket stringing
862.44	....With winding or reeling means
862.451	...By measuring deflection or a deflecting force
862.452	....For testing racket stringing
862.453	....For testing a drive belt
862.454	....Using a fluid for deflection or force measuring
862.46	....With angular deflection
862.471	....Using an elastically deformable force measuring means
862.472	.....With pivoted deflecting member between spaced guides or supports
862.473	.....Electrical sensor
862.474	......Resistance strain gage
862.392	...By measuring axial force or stretch
862.393	....Pulling force on an anchoring device
862.49	..To determine axial thrust on a rotating machine element
862.51	..With recording means
862.52	..With variable capacity or sensitivity
862.53	..With detection of specific force value or condition (e.g., peak force)
862.541	..Combined
862.55	...With pressure applying roller (e.g., mill roll)
862.56	...With hoisting means
862.57	...With towing means
862.542	...With jack or press
862.543	...With pumping unit
862.581	..By measuring a fluid pressure
862.582	...Using a load responsive valve or restrictor
862.583	....Pneumatic
862.584	...Using a piston
862.59	..By measuring vibrations (e.g., resonant frequency)
862.61	..By measuring a counterbalancing or restoring force
862.621	..By measuring elastic deformation
862.622	...With compensation
862.623	....Temperature
862.624	...Using a light sensor
862.625	...Using a specific type of electrical sensor
862.626	....Inductance or capacitance sensor
862.627	....Resistance strain gage
862.628	.....Including a specific type of electrical circuit
862.629	.....Specific type of elastic member
862.631	......Axle or pivot pin
862.632	......Flexible element (e.g., beam, plate, or web)
862.633	.......Parallel
862.634	.......Cantilever
862.635	......Closed loop (e.g., ring or tube)
862.636	...Specific type of elastic member
862.637	....Flexible element (e.g., beam, plate, or web)
862.638	.....Parallel
862.639	.....Cantilever
862.641	....Helical or spiral
862.642	....Closed loop (e.g., ring or tube)
862.68	..By measuring electrical properties
862.69	..By measuring magnetic properties
862.382	..With detail of overload protection
146	TIRE, TREAD OR ROADWAY
146.2	.Tire inflation testing installation
146.3	..By direct fluid pressure reading
146.4	...Telemetric (e.g., indicator on cowl)
146.5	....Electric
146.8	...Tire stem attachments
147	WIND TUNNEL: AERODYNAMIC WING AND PROPELLER STUDY
148	MODEL BASIN AND TESTING TANK

149 VOLUMETRIC CONTENT MEASURING
150 R COATING MATERIAL: INK ADHESIVE AND/OR PLASTIC
150 A .Bond strength
152.01 BOREHOLE OR DRILLING (E.G., DRILL LOADING FACTOR, DRILLING RATE, RATE OF FLUID FLOW)
152.02 .Formation logging (e.g., borehole studies of pressure derivatives or of pressure-temperature derivatives)
152.03 ..During drilling
152.04 ...By drill mud analysis
152.05 ..Density, porosity, or permeability
152.06 ...Including oil, gas, or water saturation
152.07 ...By a core sample analysis
152.08 ..Oil, gas, or water saturation
152.09 ...By a core sample analysis
152.11 ..By a core sample analysis
152.12 ..Thermal
152.13 ...With heating or cooling
152.14 ..With radioactivity measuring
152.15 ...With vibration measuring
152.16 ..With vibration measuring
152.17 ..With detail of a borehole wall engaging means
152.18 .Fluid flow measuring or fluid analysis
152.19 ..During drilling
152.21 ...Rate of fluid flow
152.22 ...Pressure
152.23 ..With sampling
152.24 ...From formation wall
152.25 ....With a filter
152.26 ....With sealing detail
152.27 ...Pressure
152.28 ...Downhole
152.29 ..Rate of fluid flow
152.31 ...Plural diverse measuring
152.32 ...Vibration
152.33 ...Thermal
152.34 ...Rotary
152.35 ....Magnetic
152.36 ...Packer or deflector detail
152.37 ..Steady state fluid flow interruption
152.38 ...Drawdown or shutin test
152.39 ..Fluid injection into formation
152.41 ...Determining permeability or saturation
152.42 ..Determining relative proportion of fluid constituent
152.43 .During drilling
152.44 ..Drill depth rate
152.45 ...Electronic processing or electronic recording
152.46 ..Downhole measurement
152.47 ...Vibration
152.48 ...Force
152.49 ..Force
152.51 .Pressure measurement
152.52 ..Plural diverse measurements
152.53 ..With recorder
152.54 .Downhole test
152.55 ..Fluid test
152.56 ..Free point or stuck point
152.57 ..Casing or cementing
152.58 ..Using vibration
152.59 ..By measurement of response due to force
152.61 .Pump test
152.62 ..With recorder
156 STATISTICAL RECORD VERIFYING
157 RECORD STRIP SPROCKET HOLE TESTING
158 HOISTING CABLE AND ROPE
159 SHEET, WOVEN FABRIC OR FIBER
160 .Filament
161 SPRING TESTING
162 TOOTHED GEAR
163 COIN
164 MINER'S LAMP
167 ORDNANCE AND PROJECTILE
168 BLOWER, PUMP, AND HYDRAULIC EQUIPMENT
169 FLOUR, DOUGH, OR BREAD
172 ORTHOPEDIC PRESSURE DISTRIBUTION
178 R NAVIGATION
179 .Rate of climb (pressure type)
180 .Leeway incidence or side-slip
181 .Ship's log
182 ..Pressure differential type
183 ...With integrating means
184 ..Drag type
185 ...Rotary
186 ..Vane type
187 ..Rotary
178 H .Helicopter
178 T .Take-off and landing monitors
170.01 FLUID FLOW DIRECTION (E.G., WIND SOCK, WEATHER VANE, ETC.)
170.02 .Relative to aircraft or watercraft
170.03 ..Sailboat (e.g., sailing aid)
170.04 .Using a drifter or tracer (e.g., smoke)
170.05 .Using a fluid actuated alignment device (e.g., wind sock, weather vane, etc.)
170.06 ..With illumination means or an electro-optical indicator (e.g., beacon or signal lamp)
170.07 ..With velocity determination
170.08 ...Electric sensor
170.09 ..Electric sensor
170.11 .With velocity determination
170.12 ..Thermal
170.13 ..Acoustic
170.14 ..Fluid pressure differential
170.15 ..Thrust or drag force
170.16 METEOROLOGY
170.17 .Precipitation (e.g., rain gauge)
170.18 ..With recorder detail
170.19 ..With heater or vaporizer
170.21 ..Sensing accumulated amount (e.g, rain gauge)
170.22 ...Using a float
170.23 ...Weight actuated (e.g., tipping bucket)
170.24 .Electric disturbance (e.g., lightning)

	METEOROLOGY	
170.25	.Micrometeorite	
170.26	.Icing condition (e.g., accretion)	
170.27	.Naturally occurring radiation (e.g., solar radiation)	
170.28	.Using unmanned, self-controlled airborne instrumentation carrier (e.g., radiosonde)	
170.29	OCEANOLOGY (E.G., OCEANS, RIVERS, OR LAKES)	
170.31	.Surface wave	
170.32	.Bottom sediment or soil	
170.33	.Towed probe	
170.34	.Unattached, self-contained probe with buoyancy controlled level of descent	
861	VOLUME OR RATE OF FLOW	
861.01	.With indirect temperature or density compensation	
861.02	..Electrical	
861.03	...Digital	
861.04	.Of selected fluid mixture component	
861.05	.By measuring transit time of tracer or tag	
861.06	..With autocorrelation or cross-correlation detection	
861.95	..Thermal tracer or tag	
861.07	.By measuring tracer concentration	
861.08	.By measuring electrical or magnetic properties	
861.09	..Ionization type	
861.11	..Electromagnetic induction (e.g., Faraday type)	
861.12	...With detecting electrodes	
861.13	....Including permanent magnet or D.C. field	
861.14	....For dielectric fluids	
861.15	....Plural pairs of detecting electrodes	
861.16	....Including electrically interconnected or synchronized input and output circuit	
861.17	.....Selective or periodic sampling	
861.18	.By measuring vibrations or acoustic energy	
861.19	..Produced by fluidic oscillator	
861.21	..Caused by fluid interaction with obstacle	
861.22	...Vortex shedders	
861.23	....Acoustic	
861.24	....Movable sensor responsive to vortices	
861.25	..Reflection or scattering of acoustic waves	
861.26	..Deflection of acoustic waves	
861.27	..Transit time of acoustic waves	
861.28	...Transmitted along single path	
861.29	....In both directions simultaneously	
861.31	...Transmitted along parallel paths	
861.32	.By measuring swirl rate imparted by static means	
861.33	..With turbine in a swirl chamber	
861.34	..Precess type	
861.351	.Mass flow by imparting angular or transverse momentum to the fluid	
861.352	..Rotated resiliently coupled elements	
861.353	..Reaction turbine or vane	
861.354	..Coriolis or gyroscopic	
861.355	...Vibrated conduit	
861.356	....Signal processing or analysis details	
861.357	....Drive and sensor element located on straight conduit portion	
861.39	.Using an applied fluid jet	
861.41	.By counting drops, bubbles, or particles	
195	.System	
196	..Flow comparing	
197	..Compound meter	
198	.Combined	
199	..With pressure regulator or demand limit	
200	..With gas and liquid separator	
201	..With connection or box	
202	.Proportional	
202.5	..Thermal sensing of flow	
203	..With valved proportioning means	
204.11	.Thermal type	
204.12	..With conduit extending between heat sinks	
204.13	..With auxiliary fluid contacting or in heat exchange relation with flow path (e.g., thermodilution)	
204.14	..Including digital or pulse measuring circuitry	
204.15	..Including detail of feedback or rebalancing circuitry	
204.16	...By control of a separate heating or cooling element	
204.17	..With distinct heating circuitry for a self-heated sensor	
204.18	..Including response characteristic or condition compensation	
204.19	...For temperature	
204.21	..With fluid flow deflector or restrictor (e.g., baffle, constriction)	
204.22	..With sensor housing	
204.23	..Having particular electrical heating, cooling, or thermal sensing element	
204.24	...Thermoelectric junction	
204.25	...Resistive element	
204.26	....With substrate carrier (e.g., thin film)	
204.27	....Wire type (e.g., hot wire)	
861.42	.Using differential pressure	
861.43	..With time integration	
861.44	...By electrical means	
861.45	...By mechanical means	
861.46	....Including pressure applied to liquid column or reservoir	
861.47	..Pressure applied to movable member (e.g., a diaphragm)	
861.48	...With linearization (e.g., square root extraction)	
861.49	..Pressure applied to liquid column or reservoir	

Title Change
* Newly Established Subclass
@ Indent Change
& Position Change

	VOLUME OR RATE OF FLOW
	.Using differential pressure
	..Pressure applied to liquid column or reservoir
861.51	...With linearization
861.52	..With restriction
861.53	...Automatically variable restriction
861.54	....Slotted piston or cylinder
861.55	....Cone and ball or disk
861.56	.....With structure of coupling to indicator
861.57	.....With structure of float, float tube, or float guide
861.58	....Orifice and tapered plug
861.59	...Including recirculation pump
861.61	...Orifice or flow nozzle
861.62	....Adjustable
861.63	...Venturi
861.64	....Inlet or outlet structure
861.65	..Pitot
861.66	...Sensing at plural transverse locations
861.67	...Adjustable
861.68	...With heating element
861.69	..Centrifugal
215	.Weir type
216	..Submerged orifice or discharge nozzle
	.Tank type
217	..Rotary tank or bucket
218	...With power drive
219	..Plural measuring chamber
220	...With fluid-pressure operated valve
221	...With float operated valve
222	...With siphon discharge
223	..Single measuring chamber
224	...With float operated valve
225	....With trip gear
226	...With siphon discharge
227	.Area-velocity integrating
861.71	.By measuring thrust or drag forces
861.72	..By changing fluid direction
861.73	..Impact of particulate material
861.74	..On a vane
861.75	...With rotation about a fixed axis
861.76	....Spring biased
861.77	.Using rotating member with particular electrical output or circuit
861.78	..With pick-up coil
861.79	.Using turbine
861.81	..With response modification
861.82	...Pressure responsive valve or restriction
861.83	...Axial supply and delivery
861.84	....Differentially responsive turbines
861.85	..Anemometers
861.86	..With fluid directed radially outward
861.87	..With flow direction retained in a plane perpendicular to turbine axis
861.88	...Mechanical coupling to indicator
861.89	..Axial supply and delivery
861.91	...With structure to reduce friction or wear
861.92	...With structure of bearing or turbine support structure
861.93	...With mechanical coupling to indicator
861.94	...With magnetic coupling drive assembly
232	.Expansible chamber
233	..With variable indicator drive
234	..Wet type (e.g., liquid seal)
235	...Rotary drum
236	...Oscillating bell or drum
237	...Reciprocating bell
238	...Nutating bell
239	..Reciprocating piston or cylinder
240	...Transversely reciprocating piston and cylinder
241	...Oscillating cylinder
242	...Valveless
243	...Duplex
244	....Wobble plate or cam
245	....With transverse shaft
246	.....With single distributing valve
247	...Radial cylinder
248	...Valved piston
249	...With fluid actuated valve
250	...With piston or rod actuated valve gear
251	....With trip gear
252	..Oscillating piston
253	..Rotary piston or cylinder
254	...With compensating bypass
255	...With orbital movement
256	....Plural stationary abutment
257	....Single stationary abutment
258	.....Nutating piston
259	...With sliding vane
260	...With swinging vane
261	...With interengaging pistons
262	..Diaphragm or collapsible wall
263	...Multiple diaphragm
264	....Duplex
265	....With rotary valve
266	.....Crank operated
267	......With flag rod
268	....With oscillating or reciprocating valve
269	...Single diaphragm
270	....With diaphragm actuated valve trip gear
271	....With fluid actuated valve
272 R	.Element
273	..Casing
274	...Diaphragm meter type
275	..Antireversing mechanism
276	...Check valve
277	.."Frostproof" construction
278	..Diaphragm mounting
279	..Diaphragm
280	...With oiling structure
281	..Tangent adjustment
272 A	..With remote register
290 R	LIQUID LEVEL OR DEPTH GAUGE
291	.With other measuring device
292	..Thermometer

	LIQUID LEVEL OR DEPTH GAUGE	
293	.With illumination	
294	.With funnel or hose nozzle	
295	.Thermal type	
296	.Weighing type	
297	.Test cock type	
298	.Exploring tube	
299	.Hydrostatic pressure type	
300	..Bathometer type	
301	..With electrically controlled indicator	
302	..With fluid displacement or replenishment	
303	...Suction type or vacuum tank action	
304 R	.Immersible electrode type	
304 C	..Capacitative	
305	.Float	
306	..Combined	
307	...With warning signal or alarm	
308	....Electric	
309	..Buoyancy type	
310	..Total registering	
311	..Multiple floats	
312	..Recording	
313	..With electrically controlled indicator	
314	..With position sensing	
315	..With float lock	
316	..With fluid transmission	
317	..Pivoted float arm	
318	...With flexible cable transmission	
319	..Vertically reciprocable	
320	...With spiral cam or guide	
321	...With flexible cable transmission	
322	...Indicator stem attached	
322.5	..Float structure	
323	.Sight glass	
324	..With cleaner	
325	..With guard or casing	
326	...Boiler type	
327	..Reflector or magnifier	
328	..Boiler type	
329	...Duplex or multiple section	
330	...Transparent closure plate type	
331	....Bull's eye type	
332	...With valve	
333	....Safety feature	
334	..Transparent closure plate type	
290 B	.Ullage volume	
290 V	.Vibratory type	
379.01	MUSCULAR FORCE (E.G., STRENGTH TESTING, EXERCISING OR TRAINING EFFORT, ETC.)	
379.02	.Jaw or hand (e.g., gripping, pinching, or biting)	
379.03	..Using a resilient force-resister	
379.04	.Impact	
379.05	..Using a resilient force-resister	
379.06	.Including a rotary element with a braking means (e.g., friction brake)	
379.07	..Pedal driven (e.g., cycle ergometer)	
379.08	.Using a resilient force-resister	
379.09	.Using hydraulic or pneumatic force-resister	
382 R	GRAVITATIONAL DETERMINATION	
383	.Torsion balance	
382 G	.Gravitational variation	
488	SPEED, VELOCITY, OR ACCELERATION	
489	.Recording or registering interrelated factors	
490	.With distance registering means	
491	.With means for retaining reading	
492	..Maximum acceleration	
493	.Structural installation or mounting means	
494	..Installed in rotary speed source	
495	.Indicating diverse conditions	
496	.Vibration control or antistick means for reading structure	
497	.Temperature compensator	
498	.Adjusting means for reading structure	
499	.Illuminated reading device	
500	.Liquid surface is or moves reading means	
501	..Surface of revolving liquid body	
502	.Externally connected pressure gauge gives reading	
503	.Means integrating time and acceleration	
503.3	..Gyroscope	
504.01	..Angular rate using wave or beam motion (e.g., Sagnac type)	
504.02	.Angular rate using gyroscopic or Coriolis effect	
504.03	..Multisensor for both angular rate and linear acceleration	
504.04	...Vibratory mass	
504.05	..Fluid or fluent inertial mass (e.g., electrons, ions, plasma)	
504.06	...Fluid jet	
504.07	...Rotary	
504.08	..Rotary gyroscope	
504.09	...Gimbal support	
504.11	...Flexible rotor or flexibly mounted rotor	
504.12	..Vibratory mass	
504.13	...Hollow circular-shaped inertial element	
504.14	...Elongated element with spaced supports	
504.15	...Cantilever	
504.16	....Tuning fork	
504.17	.Angular rate using a fluid vortex rate sensor	
504.18	.With rotary gyroscope	
506	.Means integrating intermittent speed source impulses	
507	.Comparison to a fixed standard, master or reference speed device	
508	.With governor drive failure responsive means	
509	.With response to a nonspeed condition	
510	.Response to multiple sensing means or motion conditions	
511	..Response to both velocity and acceleration	
512	...Centrifugal-type velocity sensor and separate inertial means	

Title Change
* Newly Established Subclass

@ Indent Change
& Position Change

	FLUID PRESSURE GAUGE
	.Diaphragm
	..With electrical readout
725	...Resistive
726	....Strain gauge
727	.....Piezoresistive
728	...Electromagnetic
729.1	..Bellows
729.2	..Capsule
730	..Expansible conduit
731	..Sack
732	.Bourdon
733	..With electrical readout
734	...Resistive
735	...Electromagnetic
736	..Multiple and/or differential
737	..Intermediately supported
738	..Safety pressure release casing
739	..With mechanism dampening
740	..With zeroizing adjustment
741	..Bourdon tube and mounting
742	...Helical Bourdon tube
743	...Spiral Bourdon tube
744	.Piston
745	..With electrical readout
746	...Resistive
747	.U-tube liquid column
748	..Sphygmomanometer
749	..With electrical readout
750	...Resistive
751	.Balance
752	.McLeod type
753	.Electrical
754	..Semiconductor
755	..Pirani type
756	.Mounting and connection
863	SAMPLER, SAMPLE HANDLING, ETC.
863.01	.Automatic control
863.02	..Quantity or rate of flow responsive
863.03	...Rate of sample flow continuously controlled
863.11	.With heating or cooling
863.12	..And separation
863.21	.With constituent separation
863.22	..Particle impact
863.23	..Sieve, filter, or semipermeable membrane
863.24	...Cleaning
863.25	...Changing feature
863.31	.Plural parallel systems
863.32	..Pipette
863.33	..Plural capture, single receiver
863.41	.Flow divider, deflector, or interceptor
863.42	..Attached to mouth of dumpable receptacle
863.43	..Having precapture flow guide or homogenizer
863.44	...Oscillating or reciprocating
863.45	...Rotary
863.51	..Having an upstream-facing-opening-type capture element
863.52	...With receptacle
863.53	....Mounted for flow zone traverse
863.54	...Mounted for reciprocation
863.55	...Oscillating
863.56	...Rotary
863.57	...With blocking means
863.58	...Pitot tube type
863.61	..Branched conduit
863.71	.Conduit or passageway section capture chamber
863.72	..Single valve unit
863.73	...Capture chamber within valve unit
863.81	.Withdrawing through conduit or receptacle wall
863.82	..Capture element movable to plural loci
863.83	..With metering means or pump
863.84	...Expansible chamber
863.85	..Lock or seal for sampler insertion or removal
863.86	..Valve or restriction
863.91	.Conveyor coacting
863.92	..Integral with conveyor structure
864	.Capture device
864.01	..Pipette or cannula
864.02	...Self-filling of self-limiting
864.03	...With user mouth protection
864.11	...With suction applying and liquid discharge means
864.12	....With separate diluent supply
864.13	....Piston within pipette
864.14	....With particular connection or release means
864.15	....With valve for connection to external pressure source
864.16	....Piston and cylinder
864.17	.....Plural
864.18	.....Plural or adjustable limit stops
864.21	...With sample supply to analyzer
864.22	...With pipette contacting second fluid supply
864.23	...Pipette fixed; source movable
864.24	...Pipette longitudinally movable
864.25	....And transversely movable
864.31	..With capture device transporter
864.32	...Cyclically operated scoop
864.33	..Capture by fluid current
864.34	..Sample meter or pump
864.35	...Chamber with alternate pressure or vacuum applier
864.41	..Cutter, tearer, or scraper
864.42	...Jaw
864.43	...Auger or drill
864.44	...Corer
864.45	....With corer advancing means
864.51	..Receptacle type
864.52	...Preevacuated
864.53	...Mold
864.54	....With suction applier
864.55	....With diminutive fill passageway
864.56	.....Mating sections
864.57	......Labyrinth
864.58	....With sample conditioner
864.59	....With holder or connector

	SAMPLER, SAMPLE HANDLING, ETC.
	.Capture device
	..Receptacle type
864.61	...Fluid displacement
864.62	...Expansible chamber
864.63	...With valve or closure
864.64	....Side opening
864.65	....Contact actuated
864.66	....Support force or inertia actuated
864.67	....Messenger actuated
864.71	..Material for particulate adhesion
864.72	..Capillary attraction retention
864.73	..Conduit
864.74	...With penetrating means
864.81	.Analyzer supplier
864.82	..Having sample capsule support
864.83	..Having sample confining chamber
864.84	...Connector for separable holder
864.85	..Connector for separable holder
864.86	...Septum structure
864.87	...Syringe with connector
864.91	.Sample holder
426	MEASURING VESSEL
427	.With depth indication
428	..Removable indicator
429	.Capacity adjustable
430	INSTRUMENT MECHANISM DAMPENING
431	INSTRUMENT CASING
865	MASS
865.1	HUMAN STRESS LIMIT (E.G., DECOMPRESSION GAUGE FOR DIVERS)
865.2	HYDRAULIC ALTIMETER
865.3	TESTING BY IMPARTING MOTION
865.4	ANALYZING BODILY MOVEMENT (E.G., SKILLS OR KINETICS OF HANDWRITING)
865.5	PARTICLE SIZE
865.6	SIMULATED ENVIRONMENT (E.G., TEST CHAMBERS)
865.7	TOUCH OR TASTE
865.8	INSPECTING
865.9	TESTING OF APPARATUS
866	TESTING OF MATERIAL
866.1	INSTRUMENT MECHANISM OR TRANSMISSION
866.2	.Rate of change
866.3	DISPLAY OR DISPLAY DEVICE DETAILS
866.4	SPECIMEN MODEL OR ANALOG
866.5	PROBE OR PROBE MOUNTING
432.1	MISCELLANEOUS

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CROSS-REFERENCE ART COLLECTIONS

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900	AUTOMATIC GAIN CONTROL
901	DIGITAL READOUT .

****

FOREIGN ART COLLECTIONS

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FOR 000	CLASS-RELATED FOREIGN DOCUMENTS

> Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

FOR 100	BORE HOLE AND DRILLING STUDY (73/151)
FOR 101	.Drill depth-rate (73/151.5)
FOR 102	.Formation logging (73/152)
FOR 103	..By drill mud or core analyst (73/153)
FOR 104	..Thermal (73/154)
FOR 105	.Fluid intrusion, theft of flow study (73/155)
* FOR 106	POWER PLANT OR UNIT EFFICIENCY (73/112)
* FOR 107	.Automobile fuel consumption (73/113)
* FOR 108	..Miles per gallon (73/114)
* FOR 109	.Pressure derivative (73/115)
* FOR 110	MOTOR AND ENGINE TESTING (73/116)
* FOR 111	.With vehicle supporting roller or belt (73/117)
* FOR 112	.Utilizing a test chamber or tank to simulate operating conditions (73/117.1)
* FOR 113	.Disparate tests under operating conditions (73/117.2)
* FOR 114	..With continuous operation (73/117.3)
* FOR 115	.Thrust measurement (e.g., jet engine) (73/117.4)
* FOR 116	.Testing auxiliary unit (73/118.1)
* FOR 117	..Intake air flow (73/118.2)
* FOR 118	.Motor part (73/119)

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DIGESTS

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DIG 1	Vibration
DIG 2	Magnetostrictive
DIG 3	Hall effect
DIG 4	Piezoelectric
DIG 5	Liquid levels with magnetic transmission
DIG 8	Fluid circuits
DIG 9	Molten metal samplers
DIG 10	Instrument mechanisms with acceleration compensation
DIG 11	Photoelectric cell

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SOURCE CLASSIFICATION(S) OF PATENTS
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/112.01	1	73/112	60
	1	73/112	60
	1	73/118.2	267
	2	73/113	109
	2	73/117.2	68
	3	73/119 A	291
	4	73/117.1	34
	6	73/115	227
	6	73/117.4	70
	9	73/119 R	107
	11	73/118.1	880
	15	73/117.3	448
	52	73/116	600
73/112.02	3	73/112	60
	3	73/112	60
	3	73/118.1	880
	5	73/116	600
73/112.03	1	73/117.4	70
	2	73/112	60
	2	73/112	60
	4	73/116	600
	11	73/117.3	448
73/112.04	1	73/112	60
	1	73/115	227
	1	73/117	205
	49	73/117.4	70
73/112.05	1	73/116	600
	1	73/117.4	70
73/112.06	1	73/117.2	68
	1	73/117.3	448
	2	73/118.1	880
	2	73/118.2	267
	3	73/115	227
	7	73/116	600
73/113.01	1	73/112	60
	20	73/115	227
	26	73/112	60

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Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/114.01	1	73/114	126
	1	73/118.2	267
	1	73/119 A	291
	1	73/119 R	107
	2	73/117.2	68
	6	73/117.3	448
	10	73/118.1	880
	17	73/116	600
73/114.02	1	73/117.3	448
	1	73/119 R	107
	2	73/117.2	68
	8	73/116	600
	19	73/117.3	448
73/114.03	12	73/116	600
	20	73/117.3	448
73/114.04	24	73/116	600
	49	73/117.3	448
73/114.05	1	73/112	60
	1	73/117.2	68
73/114.05	5	73/116	600
	13	73/117.3	448
73/114.06	1	73/118.1	880
	2	73/115	227
	4	73/116	600
	12	73/117.3	448
73/114.07	1	73/115	227
	7	73/117.3	448
	8	73/116	600
73/114.08	1	73/117.2	68
	2	73/118.1	880
	6	73/117.3	448
	15	73/116	600
73/114.09	1	73/112	60
	1	73/117.2	68
	1	73/119 A	291
	2	73/118.1	880
	4	73/115	227
	5	73/117.3	448
	15	73/116	600

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SOURCE CLASSIFICATION(S) OF PATENTS
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/114.11	1	73/116	600
	1	73/118.1	880
	3	73/117.3	448
73/114.12	2	73/117.3	448
	3	73/117.3	448
73/114.13	1	73/113	109
	1	73/117	205
	3	73/112	60
	3	73/117.2	68
	3	73/118.1	880
	12	73/116	600
	12	73/117.3	448
	18	73/115	227
73/114.14	1	73/116	600
	1	73/117.3	448
	1	73/118.1	880
	2	73/114	126
	2	73/117.2	68
	4	73/117.3	448
	6	73/115	227
73/114.15	1	73/117.2	68
	1	73/119 A	291
	2	73/115	227
	3	73/118.1	880
	4	73/118.1	880
	18	73/116	600
	21	73/117.3	448
73/114.16	1	73/112	60
	1	73/115	227
	1	73/118.1	880
	1	73/119 R	107
	4	73/117.2	68
	8	73/117.3	448
	12	73/116	600
	43	73/115	227
73/114.17	12	73/115	227

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SOURCE CLASSIFICATION(S) OF PATENTS
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/114.18	1	73/115	227
	1	73/118.1	880
	1	73/118.2	267
	1	73/119 A	291
	1	73/119 A	291
	2	73/119 R	107
	4	73/117.3	448
	6	73/116	600
	30	73/115	227
73/114.19	1	73/119 R	107
	3	73/116	600
	8	73/115	227
73/114.21	1	73/118.1	880
	1	73/119 A	291
	1	73/119 R	107
	13	73/115	227
73/114.22	1	73/115	227
	1	73/115	227
	1	73/117.3	448
	5	73/116	600
73/114.23	1	73/117.3	448
	2	73/115	227
	3	73/116	600
	10	73/117.2	68
73/114.24	1	73/118.1	880
	1	73/118.2	267
	4	73/117.3	448
	5	73/116	600
73/114.25	1	73/116	600
	1	73/117.2	68
	1	73/117.3	448
	1	73/119 A	291
	1	73/119 R	107
	6	73/118.1	880
	15	73/117.3	448
	21	73/116	600

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SOURCE CLASSIFICATION(S) OF PATENTS
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/114.26	1	73/112	60
	1	73/119 R	107
	3	73/117.2	68
	3	73/118.2	267
	6	73/118.1	880
	20	73/117.3	448
	36	73/116	600
73/114.27	1	73/117.2	68
	1	73/118.1	880
	1	73/119 R	107
	19	73/116	600
	19	73/117.3	448
73/114.28	1	73/120	35
	2	73/118.1	880
	2	73/119 R	107
	3	73/115	227
	3	73/119 A	291
	4	73/117.2	68
	12	73/117.3	448
	15	73/116	600
73/114.29	4	73/117.3	448
	7	73/116	600
73/114.31	1	73/112	60
	1	73/117.3	448
	1	73/117.3	448
	2	73/116	600
	3	73/119 R	107
	8	73/118.1	880
	8	73/118.2	267
73/114.32	1	73/112	60
	1	73/117.3	448
	2	73/119 A	291
	5	73/116	600
	20	73/118.1	880
	76	73/118.2	267
73/114.33	1	73/115	227
	1	73/116	600
	2	73/117.3	448
	6	73/118.1	880
	24	73/118.2	267

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New Classification	Number of ORs	Source Classification	Number of ORs
73/114.34	1	73/116	600
	2	73/116	600
	10	73/118.1	880
	94	73/118.2	267
73/114.35	2	73/116	600
	2	73/118.1	880
	12	73/118.2	267
73/114.36	1	73/113	109
	1	73/117.3	448
	2	73/119 R	107
	4	73/116	600
	6	73/117.3	448
	21	73/118.2	267
	58	73/118.1	880
73/114.37	1	73/119 A	291
	2	73/117.2	68
	4	73/116	600
	8	73/117.3	448
	10	73/118.1	880
	12	73/118.2	267
	15	73/115	227
73/114.38	1	73/112	60
	1	73/113	109
	1	73/114	126
	1	73/116	600
	2	73/117.3	448
	3	73/119 A	291
	12	73/118.1	880
73/114.39	1	73/118.1	880
	2	73/116	600
	3	73/117.3	448
	79	73/118.1	880
73/114.41	1	73/113	109
	1	73/113	109
	1	73/116	600
	1	73/119 R	107
73/114.41	8	73/118.1	880
	35	73/119 A	291

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SOURCE CLASSIFICATION(S) OF PATENTS
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/114.42	1	73/113	109
	1	73/116	600
	1	73/117.3	448
	1	73/119 R	107
	2	73/118.2	267
	5	73/118.1	880
	9	73/114	126
	13	73/119 A	291
	15	73/113	109
73/114.43	1	73/117.2	68
	2	73/113	109
	2	73/119 R	107
	8	73/118.1	880
	20	73/119 A	291
73/114.44	1	73/119 R	107
	2	73/113	109
	35	73/118.1	880
73/114.45	1	73/117.2	68
	1	73/117.3	448
	1	73/118.1	880
	45	73/119 A	291
73/114.46	14	73/119 A	291
73/114.47	1	73/116	600
	30	73/119 A	291
73/114.48	34	73/119 A	291
73/114.49	1	73/116	600
	1	73/117.3	448
	2	73/118.1	880
	38	73/119 A	291
73/114.51	1	73/116	600
	1	73/119 A	291
	3	73/118.1	880
	14	73/119 A	291
73/114.52	1	73/112	60
	1	73/113	109
	2	73/115	227
	2	73/118.2	267
	6	73/119 A	291
	25	73/114	126
	55	73/113	109

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Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/114.53	1	73/116	600
	2	73/112	60
	3	73/117.3	448
	6	73/115	227
	17	73/113	109
	82	73/114	126
73/114.54	1	73/114	126
	3	73/117.3	448
	3	73/118.1	880
	7	73/113	109
73/114.55	1	73/117.2	68
	3	73/116	600
	3	73/117.3	448
	4	73/118.1	880
73/114.56	1	73/112	60
	1	73/117.3	448
	1	73/119 R	107
	2	73/113	109
	2	73/117.2	68
	5	73/116	600
	5	73/118.1	880
73/114.57	1	73/117.2	68
	2	73/117.3	448
	2	73/119 R	107
	3	73/116	600
	4	73/115	227
	7	73/118.1	880
73/114.58	1	73/112	60
	1	73/114	126
	5	73/116	600
	5	73/117.3	448
	8	73/118.1	880
73/114.59	1	73/112	60
	1	73/117.2	68
	1	73/119 R	107
	3	73/116	600
	14	73/118.1	880

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SOURCE CLASSIFICATION(S) OF PATENTS
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/114.61	1	73/117.2	68
	3	73/119 A	291
	6	73/117.3	448
	7	73/118.1	880
	8	73/116	600
73/114.62	1	73/119 A	291
	2	73/117.2	68
	6	73/116	600
	14	73/117.3	448
	18	73/118.1	880
73/114.63	2	73/117.2	68
	2	73/119 A	291
	2	73/119 R	107
	3	73/118.1	880
	5	73/117.3	448
	13	73/116	600
73/114.64	1	73/117.2	68
	1	73/119 R	107
	4	73/117.3	448
	4	73/118.1	880
	6	73/116	600
	6	73/119 A	291
73/114.65	2	73/116	600
	2	73/117.3	448
	5	73/119 A	291
73/114.66	1	73/117.3	448
	6	73/118.1	880
73/114.67	1	73/117.3	448
	1	73/118.1	880
	1	73/119 R	107
	2	73/115	227
	4	73/117.3	448
	7	73/116	600
73/114.68	1	73/115	227
	1	73/117.2	68
	2	73/117.3	448
	3	73/118.1	880
	3	73/119 R	107
	6	73/116	600
	36	73/118.1	880

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Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/114.69	1	73/117	205
	1	73/119 R	107
	2	73/117.1	34
	2	73/118.1	880
	3	73/117.2	68
	5	73/116	600
	5	73/117.3	448
	11	73/118.1	880
73/114.71	1	73/119 R	107
	2	73/117	205
	3	73/118.1	880
	4	73/117.3	448
	14	73/116	600
	18	73/118.1	880
73/114.72	1	73/114	126
	1	73/119 A	291
	2	73/118.2	267
	10	73/117.3	448
	14	73/116	600
	14	73/118.1	880
73/114.73	1	73/112	60
	1	73/114	126
	1	73/118.2	267
	1	73/119 R	107
	3	73/117.3	448
	6	73/116	600
	21	73/118.1	880
73/114.74	1	73/117.3	448
	1	73/118.2	267
	5	73/117.3	448
	7	73/116	600
	24	73/118.1	880
73/114.75	1	73/112	60
	1	73/118.1	880
	1	73/119 R	107
	2	73/116	600
	2	73/117.3	448
	37	73/118.1	880

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SOURCE CLASSIFICATION(S) OF PATENTS
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Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/114.76	1	73/117.2	68
	1	73/117.3	448
	1	73/118.1	880
	2	73/116	600
	2	73/118.1	880
	5	73/115	227
73/114.77	1	73/115	227
	2	73/115	227
	2	73/117.3	448
	10	73/116	600
	12	73/118.1	880
73/114.77	20	73/119 R	107
73/114.78	1	73/115	227
	33	73/120	35
73/114.79	1	73/114	126
	1	73/117.2	68
	1	73/118.2	267
	2	73/117.3	448
	6	73/116	600
	10	73/118.1	880
	20	73/119 R	107
73/114.81	4	73/118.1	880
	6	73/119 R	107
73/115.01	1	73/115	227
	1	73/117.3	448
	3	73/115	227
	3	73/116	600
	4	73/117	205
	21	73/118.1	880
73/115.02	1	73/116	600
	3	73/115	227
	3	73/117	205
	3	73/117.3	448
	67	73/118.1	880
73/115.03	2	73/117	205
	4	73/118.1	880
73/115.04	1	73/117.3	448
	2	73/119 R	107
	13	73/118.1	880

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SOURCE CLASSIFICATION(S) OF PATENTS
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Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/115.05	1	73/117.2	68
	1	73/118.2	267
	2	73/116	600
	4	73/118.1	880
73/115.06	1	73/116	600
	1	73/117	205
	9	73/118.1	880
73/115.07	1	73/115	227
	1	73/116	600
	4	73/117	205
	23	73/118.1	880
73/115.08	1	73/116	600
	1	73/118.1	880
	13	73/118.1	880
73/116.01	1	73/119 A	291
	1	73/119 R	107
	1	73/120	35
	2	73/117.1	34
	2	73/117.2	68
	3	73/116	600
	4	73/117	205
	14	73/116	600
	14	73/118.1	880
73/116.02	1	73/119 R	107
	2	73/119 R	107
	3	73/118.1	880
	4	73/117.1	34
	4	73/117.2	68
73/116.02	4	73/117.3	448
	16	73/116	600
73/116.03	12	73/117.4	70
	13	73/116	600
73/116.04	1	73/116	600
	1	73/116	600
	1	73/117.1	34
	2	73/119 A	291
	5	73/119 R	107
	17	73/118.1	880

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SOURCE CLASSIFICATION(S) OF PATENTS
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Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/116.05	1	73/115	227
	1	73/118.1	880
	1	73/119 R	107
	2	73/112	60
	2	73/116	600
	2	73/117.1	34
	4	73/117	205
	8	73/117.3	448
	14	73/116	600
73/116.06	1	73/116	600
	4	73/117.3	448
	5	73/118.1	880
	119	73/117	205
73/116.07	15	73/117	205
73/116.08	1	73/117	205
	1	73/118.1	880
	12	73/117	205
73/116.09	4	73/117	205
73/116.11	1	73/118.1	880
	5	73/117	205
73/117.01	1	73/117	205
	1	73/117.3	448
	1	73/118.1	880
	2	73/116	600
	13	73/118.1	880
73/117.02	1	73/117	205
	2	73/116	600
	34	73/118.1	880
73/117.03	1	73/114	126
	1	73/117	205
	1	73/119 R	107
	2	73/116	600
	2	73/117.3	448
	9	73/118.1	880

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Generated by Data Control Division

New Classification	Number of ORs	Source Classification	Number of ORs
73/118.01	1	73/117	205
	1	73/117.1	34
	1	73/117.2	68
	2	73/118.1	880
	3	73/117.3	448
	4	73/116	600
	8	73/118.1	880
	17	73/117	205
73/118.02	1	73/117	205
	1	73/117.3	448
	1	73/118.1	880
	1	73/118.2	267
	2	73/117.1	34
	2	73/119 R	107
	4	73/116	600
	6	73/118.1	880
73/118.03	1	73/117.1	34
	1	73/117.3	448
	1	73/117.4	70
	5	73/116	600
	7	73/117.1	34
73/118.04	2	73/116	600
	8	73/117.1	34

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/112	60	73/112.01	2
		73/112.02	6
		73/112.03	4
		73/112.04	1
		73/113.01	27
		73/114.05	1
		73/114.09	1
		73/114.13	3
		73/114.16	1
		73/114.26	1
		73/114.31	1
		73/114.32	1
		73/114.38	1
		73/114.52	1
		73/114.53	2
		73/114.56	1
		73/114.58	1
		73/114.59	1
		73/114.73	1
		73/114.75	1
		73/116.05	2
73/113	109	73/112.01	2
		73/114.13	1
		73/114.36	1
		73/114.38	1
		73/114.41	2
		73/114.42	16
		73/114.43	2
		73/114.44	2
		73/114.52	56
		73/114.53	17
		73/114.54	7
		73/114.56	2
73/114	126	73/114.01	1
		73/114.14	2
		73/114.38	1
		73/114.42	9
		73/114.52	25
		73/114.53	82

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/114	126	73/114.54	1
		73/114.58	1
		73/114.72	1
		73/114.73	1
		73/114.79	1
		73/117.03	1
73/115	227	73/112.01	6
		73/112.04	1
		73/112.06	3
		73/113.01	20
		73/114.06	2
		73/114.07	1
		73/114.09	4
		73/114.13	18
		73/114.14	6
		73/114.15	2
		73/114.16	44
		73/114.17	12
		73/114.18	31
		73/114.19	8
		73/114.21	13
		73/114.22	2
		73/114.23	2
		73/114.28	3
		73/114.33	1
		73/114.37	15
		73/114.52	2
		73/114.53	6
		73/114.57	4
		73/114.67	2
		73/114.68	1
		73/114.76	5
		73/114.77	3
		73/114.78	1
		73/115.01	4
		73/115.02	3
		73/115.07	1
		73/116.05	1
73/116	600	73/112.01	52
		73/112.02	5

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/116	600	73/112.03	4
		73/112.05	1
		73/112.06	7
		73/114.01	17
		73/114.02	8
		73/114.03	12
		73/114.04	24
		73/114.05	5
		73/114.06	4
		73/114.07	8
		73/114.08	15
		73/114.09	15
		73/114.11	1
		73/114.13	12
		73/114.14	1
		73/114.15	18
		73/114.16	12
		73/114.18	6
		73/114.19	3
		73/114.22	5
		73/114.23	3
		73/114.24	5
		73/114.25	22
		73/114.26	36
		73/114.27	19
		73/114.28	15
		73/114.29	7
		73/114.31	2
		73/114.32	5
		73/114.33	1
		73/114.34	3
		73/114.35	2
		73/114.36	4
		73/114.37	4
		73/114.38	1
		73/114.39	2
		73/114.41	1
		73/114.42	1
		73/114.47	1
		73/114.49	1

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/116	600	73/114.51	1
		73/114.53	1
		73/114.55	3
		73/114.56	5
		73/114.57	3
		73/114.58	5
		73/114.59	3
		73/114.61	8
		73/114.62	6
		73/114.63	13
		73/114.64	6
		73/114.65	2
		73/114.67	7
		73/114.68	6
		73/114.69	5
		73/114.71	14
		73/114.72	14
		73/114.73	6
		73/114.74	7
		73/114.75	2
		73/114.76	2
		73/114.77	10
		73/114.79	6
		73/115.01	3
		73/115.02	1
		73/115.05	2
		73/115.06	1
		73/115.07	1
		73/115.08	1
		73/116.01	17
		73/116.02	16
		73/116.03	13
		73/116.04	2
		73/116.05	16
		73/116.06	1
		73/117.01	2
		73/117.02	2
		73/117.03	2
		73/118.01	4
		73/118.02	4

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/116	600	73/118.03	5
		73/118.04	2
73/117	205	73/112.04	1
		73/114.13	1
		73/114.69	1
		73/114.71	2
		73/115.01	4
		73/115.02	3
		73/115.03	2
		73/115.06	1
		73/115.07	4
		73/116.01	4
		73/116.05	4
		73/116.06	119
		73/116.07	15
		73/116.08	13
		73/116.09	4
		73/116.11	5
		73/117.01	1
		73/117.02	1
		73/117.03	1
		73/118.01	18
		73/118.02	1
73/117.1	34	73/112.01	4
		73/114.69	2
73/117.1	34	73/116.01	2
		73/116.02	4
		73/116.04	1
		73/116.05	2
		73/118.01	1
		73/118.02	2
		73/118.03	8
		73/118.04	8
73/117.2	68	73/112.01	2
		73/112.06	1
		73/114.01	2
		73/114.02	2
		73/114.05	1
		73/114.08	1
		73/114.09	1

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/117.2	68	73/114.13	3
		73/114.14	2
		73/114.15	1
		73/114.16	4
		73/114.23	10
		73/114.25	1
		73/114.26	3
		73/114.27	1
		73/114.28	4
		73/114.37	2
		73/114.43	1
		73/114.45	1
		73/114.55	1
		73/114.56	2
		73/114.57	1
		73/114.59	1
		73/114.61	1
		73/114.62	2
		73/114.63	2
		73/114.64	1
		73/114.68	1
		73/114.69	3
		73/114.76	1
		73/114.79	1
		73/115.05	1
		73/116.01	2
		73/116.02	4
		73/118.01	1
73/117.3	448	73/112.01	15
		73/112.03	11
		73/112.06	1
		73/114.01	6
		73/114.02	20
		73/114.03	20
		73/114.04	49
		73/114.05	13
		73/114.06	12
		73/114.07	7
		73/114.08	6
		73/114.09	5

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/117.3	448	73/114.11	3
		73/114.12	5
		73/114.13	12
		73/114.14	5
		73/114.15	21
		73/114.16	8
		73/114.18	4
		73/114.22	1
		73/114.23	1
		73/114.24	4
		73/114.25	16
		73/114.26	20
		73/114.27	19
		73/114.28	12
		73/114.29	4
		73/114.31	2
		73/114.32	1
		73/114.33	2
		73/114.36	7
		73/114.37	8
		73/114.38	2
		73/114.39	3
		73/114.42	1
		73/114.45	1
		73/114.49	1
		73/114.53	3
		73/114.54	3
		73/114.55	3
		73/114.56	1
		73/114.57	2
		73/114.58	5
		73/114.61	6
		73/114.62	14
		73/114.63	5
		73/114.64	4
		73/114.65	2
		73/114.66	1

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/117.3	448	73/114.67	5
		73/114.68	2
		73/114.69	5
		73/114.71	4
		73/114.72	10
		73/114.73	3
		73/114.74	6
		73/114.75	2
		73/114.76	1
		73/114.77	2
		73/114.79	2
		73/115.01	1
		73/115.02	3
		73/115.04	1
		73/116.02	4
		73/116.05	8
		73/116.06	4
		73/117.01	1
		73/117.03	2
		73/118.01	3
		73/118.02	1
		73/118.03	1
73/117.4	70	73/112.01	6
		73/112.03	1
		73/112.04	49
		73/112.05	1
		73/116.03	12
		73/118.03	1
73/118.1	880	73/112.01	11
		73/112.02	3
		73/112.06	2
		73/114.01	10
		73/114.06	1
		73/114.08	2
		73/114.09	2
		73/114.11	1
		73/114.13	3
		73/114.14	1
		73/114.15	7
		73/114.16	1

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/118.1	880	73/114.18	1
		73/114.21	1
		73/114.24	1
		73/114.25	6
		73/114.26	6
		73/114.27	1
		73/114.28	2
		73/114.31	8
		73/114.32	20
		73/114.33	6
		73/114.34	10
		73/114.35	2
		73/114.36	58
		73/114.37	10
		73/114.38	12
		73/114.39	80
		73/114.41	8
		73/114.42	5
		73/114.43	8
		73/114.44	35
		73/114.45	1
		73/114.49	2
		73/114.51	3
		73/114.54	3
		73/114.55	4
		73/114.56	5
		73/114.57	7
		73/114.58	8
		73/114.59	14
		73/114.61	7
		73/114.62	18
		73/114.63	3
		73/114.64	4
		73/114.66	6
		73/114.67	1
		73/114.68	39
		73/114.69	13
		73/114.71	21

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/118.1	880	73/114.72	14
		73/114.73	21
		73/114.74	24
		73/114.75	38
		73/114.76	3
		73/114.77	12
		73/114.79	10
		73/114.81	4
		73/115.01	21
		73/115.02	67
		73/115.03	4
		73/115.04	13
		73/115.05	4
		73/115.06	9
		73/115.07	23
		73/115.08	14
		73/116.01	14
		73/116.02	3
		73/116.04	17
		73/116.05	1
		73/116.06	5
		73/116.08	1
		73/116.11	1
		73/117.01	14
		73/117.02	34
		73/117.03	9
		73/118.01	10
		73/118.02	7
73/118.2	267	73/112.01	1
		73/112.06	2
		73/114.01	1
		73/114.18	1
		73/114.24	1
		73/114.26	3
		73/114.31	8
		73/114.32	76
		73/114.33	24
		73/114.34	94
		73/114.35	12
		73/114.36	21

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/118.2	267	73/114.37	12
		73/114.42	2
		73/114.52	2
		73/114.72	2
		73/114.73	1
		73/114.74	1
		73/114.79	1
		73/115.05	1
		73/118.02	1
73/119 A	291	73/112.01	3
		73/114.01	1
		73/114.09	1
		73/114.15	1
		73/114.18	2
		73/114.21	1
		73/114.25	1
		73/114.28	3
		73/114.32	2
		73/114.37	1
		73/114.38	3
		73/114.41	35
		73/114.42	13
		73/114.43	20
		73/114.45	45
		73/114.46	14
		73/114.47	30
		73/114.48	34
		73/114.49	38
		73/114.51	15
		73/114.52	6
		73/114.61	3
		73/114.62	1
		73/114.63	2
		73/114.64	6
		73/114.65	5
		73/114.72	1
		73/116.01	1
		73/116.04	2
		73/118.02	1

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DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number Of ORs	New Classification	Number Of ORs
73/119 R	107	73/112.01	9
		73/114.01	1
		73/114.02	1
		73/114.16	1
		73/114.18	2
		73/114.19	1
		73/114.21	1
		73/114.25	1
		73/114.26	1
		73/114.27	1
		73/114.28	2
		73/114.31	3
		73/114.36	2
		73/114.41	1
		73/114.42	1
		73/114.43	2
		73/114.44	1
		73/114.56	1
		73/114.57	2
		73/114.59	1
		73/114.63	2
		73/114.64	1
		73/114.67	1
		73/114.68	3
		73/114.69	1
		73/114.71	1
		73/114.73	1
73/119 R	107	73/114.75	1
		73/114.77	20
		73/114.79	20
		73/114.81	6
		73/115.04	2
		73/116.01	1
		73/116.02	3
		73/116.04	5
		73/116.05	1
		73/117.03	1
		73/118.02	2
73/120	35	73/114.28	1
		73/114.78	33
		73/116.01	1

C. CHANGES TO THE US-TO-IPC CONCORDANCE

U. S. Class	Subclass	I. P. C. Subclass	Notation
73	112.01	G01M	15/00
		G01M	19/00
	112.02	G01M	15/00
		G01M	19/00
	112.03	G01M	15/00
	112.04	G01M	15/00
		G01L	5/13
	112.05	G01M	15/00
	112.06	G01M	15/00
		G01J	5/34
	113.01	G01M	15/00
		G01M	19/00
	114.01	G01M	15/00
	114.13	G01M	15/00
		G01L	3/26
	114.14	G01M	15/00
		G01L	3/26
	114.15	G01M	15/00
	114.02	G01M	15/00
	114.03	G01M	15/00
		F02P	17/00
	114.04	G01M	15/00
	114.05	G01M	15/00
	114.06	G01M	15/00
	114.07	G01M	15/00
		G01L	23/22
	114.08	G01M	15/00
		F02P	17/00
	114.09	G01M	15/00
		G01L	1/24
	114.11	G01M	15/00
	114.12	G01M	15/00
	114.16	G01M	15/00
	114.17	G01M	15/00
	114.18	G01M	15/00

C. CHANGES TO THE US-TO-IPC CONCORDANCE

U. S. Class	Subclass	I. P. C. Subclass	Notation
73	114.19	G01M	15/00
	114.21	G01M	15/00
		G01L	23/22
	114.22	G01M	15/00
	114.23	G01M	15/00
	114.24	G01M	15/00
		G01L	3/26
	114.25	G01M	15/00
		G01L	5/26
		G01L	3/00
	114.26	G01M	15/00
	114.27	G01M	15/00
		G01M	19/00
	114.28	G01M	15/00
	114.29	G01M	15/00
		G01N	15/00
	114.31	G01M	15/00
		G01M	19/00
	114.32	G01M	15/00
		G01M	19/00
	114.33	G01M	15/00
		G01M	19/00
	114.34	G01F	1/68
		G01M	15/00
		G01M	19/00
	114.35	G01F	1/32
		G01M	15/00
	114.36	G01M	15/00
		G01M	19/00
	114.37	G01M	15/00
		F02B	37/12
	114.38	G01M	15/00
	114.39	G01M	15/00
		G01M	19/00
		F02M	25/08

C. CHANGES TO THE US-TO-IPC CONCORDANCE

U. S. Class	Subclass	I. P. C. Subclass	Notation
73	114.41	G01M	15/00
	114.42	G01M	15/00
		G01M	9/00
	114.43	G01M	15/00
	114.44	G01M	15/00
	114.45	G01M	15/00
		G01M	19/00
	114.46	G01M	15/00
	114.47	G01M	15/00
		G01M	19/00
	114.48	G01M	15/00
		G01F	9/00
		G01M	19/00
	114.49	G01M	15/00
	114.51	G01M	15/00
		G01M	19/00
	114.52	G01M	15/00
		G01F	9/00
		G01L	3/26
	114.53	G01M	15/00
		G01F	9/00
		G01F	9/02
	114.54	G01M	15/00
		G01F	9/00
	114.55	G01M	15/00
	114.56	G01M	15/00
	114.57	G01M	15/00
		G01M	19/00
	114.58	G01M	15/00
	114.59	G01M	15/00
		G01M	19/00
	114.61	G01M	15/00
		G01M	19/00
	114.62	G01M	15/00
		G01M	19/02

C. CHANGES TO THE US-TO-IPC CONCORDANCE

U. S. Class	Subclass	I. P. C. Subclass	Notation
73	114.63	G01M	15/00
	114.64	G01M	15/00
	114.65	G01M	15/00
	114.66	F02P	7/00
	114.67	G01M	15/00
	114.68	G01M	15/00
		G01M	19/00
	114.69	G01M	15/00
		G01M	19/00
	114.71	G01M	15/00
	114.72	G01M	15/00
		G01M	19/00
	114.73	G01M	15/00
	114.74	G01M	15/00
	114.75	G01M	15/00
		G01M	19/00
	114.76	G01M	15/00
	114.77	G01M	15/00
		G01M	19/00
	114.78	G01M	15/00
		G01M	19/00
	114.79	G01M	13/02
	114.81	G01M	19/00
	115.01	G01M	15/00
		G01M	19/00
	115.02	G01M	15/00
		G01M	13/02
		G01M	19/00
	115.03	G01M	15/00
		G01M	19/00
	115.04	G01M	15/00
		G01M	13/02
		G01M	19/00
	115.05	G01M	15/00
		G01M	19/00

C. CHANGES TO THE US-TO-IPC CONCORDANCE

U. S. Class	Subclass	I. P. C. Subclass	Notation
73	115.06	G01M	15/00
		G01M	19/00
	115.07	G01M	19/00
		G01M	15/00
	115.08	G01M	19/00
	116.01	G01M	15/00
		G01M	17/00
		G01M	19/00
	116.02	G01M	15/00
	116.03	G01M	15/00
	116.04	G01M	15/00
		G01M	19/00
	116.05	G01M	15/00
	116.06	G01L	5/13
		G01M	15/00
		G01L	3/02
	116.07	G01M	19/00
		G01M	15/00
	116.08	G01M	15/00
	116.09	G01M	15/00
		G01L	5/13
	116.11	G01L	5/14
		G01M	15/00
	117.01	G01M	15/00
		G01M	17/04
	117.02	G01M	15/00
		G01M	17/06
	117.03	G01M	15/00
		G01M	17/04
	118.01	G01M	15/00
		G01M	19/00
	118.02	G01M	15/00
		G01M	19/00
	118.03	G01M	15/00
	118.04	G01M	15/00

D. CHANGES TO THE DEFINITIONS

CLASS 29- METAL WORKING

Definitions Modified

Subclass 888.01: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclass 66 for testing rotor unbalance and subclass 114.01 for a device for testing an internal combustion engine or related engine system or engine component.

Subclass 890.03: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, especially subclass 113.01 for measuring or testing a steam or water operated engine; related engine system or engine component, subclass 114.68 for measuring or testing the cooling system of an internal combustion engine and subclass 700 for a fluid pressure gauge, generally.

D. CHANGES TO THE DEFINITIONS

Class 60 - POWER PLANTS

Definitions Modified

Subclass 200.1: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclass 112.01 for turbine engine testing and subclass 147 for wind tunnel; aerodynamic wing and propeller study.

D. CHANGES TO THE DEFINITIONS

CLASS 73 - MEASURING AND TESTING

Definitions Abolished

Subclasses

112-117, 117.1-117.4, 118.1, 118.2, 119, 120

Definitions Modified

Subclass 11.01: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclasses 112+

Subclass 11.04: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclasses 112+

Insert:

117.03, for measuring or testing the suspension system of a vehicle.

Subclass 19.05: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclass 115

Subclass 30.03: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclasses 118.2+

D. CHANGES TO THE DEFINITIONS

Insert:

114.32 through 114.25, for the measuring of the air intake of an auxiliary unit of an engine or a motor.

Subclass 35.01: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclasses 116+

Insert:

114.02, for measuring or testing irregular combustion (e.g., misfire).

114.03, for measuring or testing for irregular combustion (e.g., misfire) by time variation.

114.04, for measuring or testing for irregular combustion (e.g., misfire) speed variation.

114.05, for measuring or testing for irregular combustion (e.g., misfire) by acceleration.

114.06, for measuring or testing for irregular combustion (e.g., misfire) by exhaust pressure.

114.07, for measuring or testing for irregular combustion (e.g., misfire) by vibration.

114.08, for measuring or testing for irregular combustion (e.g., misfire) by ignition measurement.

114.09, for measuring or testing for irregular combustion (e.g., misfire) by optical measurement.

114.11, for measuring or testing for irregular combustion (e.g., misfire) by torque variation.

114.12, for measuring or testing for irregular combustion (e.g., misfire) in combination with road condition detection.

D. CHANGES TO THE DEFINITIONS

Subclass 35.12: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclass 115

Insert:

114.06, for measuring or testing for irregular combustion (e.g., misfire) by exhaust pressure.

114.16 through 114.21, for measuring or testing the compression (i.e., cylinder pressure) of an internal combustion engine.

Subclass 49.7: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The references to subclasses 118 and 119

Subclass 123: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclass 117

Insert:

116.06 through 116.11, for engine measuring or testing involving a roller or belt-type of vehicle wheel support.

Subclass 147: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclass 116

Insert:

D. CHANGES TO THE DEFINITIONS

118.03, for simulating the operating condition of an aircraft.

Subclass 168: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclasses 112+

Insert:

114.41 through 114.51, for measuring and testing of a fuel pump, fuel injector and related systems.

Subclass 170.12: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclass 118.2

Insert:

114.34, for measuring or testing intake flow rate of an internal combustion engine using a thermal measurement.

Subclass 204.11: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclass 118.2

Insert:

114.34, for measuring or testing intake flow rate of an internal combustion engine using a thermal measurement.

Subclass 700: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

D. CHANGES TO THE DEFINITIONS

The reference to subclass 115

Insert:

114.16 through 114.21, for measuring or testing the compression (i.e., cylinder pressure) of an internal combustion engine.

Subclass 733: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclass 117

Insert:

114.16 through 114.21, for measuring or testing the compression (i.e., cylinder pressure) of an internal combustion engine.

Subclass 862.193: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclasses 116+

Insert:

114.59, for measuring or testing the starter or alternator of an internal combustion engine.

Subclass 862.381: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The reference to subclass 117.4

Insert:

112.04, for measuring or testing the output thrust of a turbine engine.

D. CHANGES TO THE DEFINITIONS

114.13 through 114.15, for measuring or testing the power output of an internal combustion engine.

116.05 through 116.11, for a test stand in combination with a dynamometer.

Subclass 865.9: Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete:

The references to subclasses 112+ and 116+

Insert:

112.03, for measuring or testing the efficiency of a turbine engine.

114.01 through 114.81, for measuring or testing an internal combustion engine or related engine system or engine component.

Under the Foreign Art Collections title:

Delete:

The existing foreign art collections paragraph.

Insert:

The definitions below correspond to abolished subclasses from which these collections were formed. See the Foreign Art Collection schedule of this class for specific correspondences. [Note: The titles and definitions for *indented* art collections include all the details of the one(s) that are hierarchically superior.]

Definitions Established

112.01 TURBINE ENGINE:
This subclass is indented under the class definition. Subject matter wherein a test or measurement is performed on an engine incorporating a vaned wheel or rotor, rotated by the impulse from or reaction to a fluid passing across the vane(s) from a combustion chamber.

D. CHANGES TO THE DEFINITIONS

SEE OR SEARCH THIS CLASS, SUBCLASS:

865.9, for testing or monitoring of devices for machines not otherwise classified.

116.05, for a test stand for a turbine engine.

112.02 Steam powered:
This subclass is indented under subclass 112.01. Subject matter wherein a test or measurement is performed on a turbine engine using water vapor as the fluid passing across the vane(s).

SEE OR SEARCH THIS CLASS, SUBCLASS:

113.01, for testing or monitoring of steam or water operated engine, related engine system or engine component thereof.

112.03 Efficiency:
This subclass is indented under subclass 112.01. Subject matter wherein measurement is made of the ratio of input energy divided by usable output energy during actual use or while on a test stand.

112.04 Output thrust:
This subclass is indented under subclass 112.01. Subject matter wherein the measurement determines the pushing force developed by the engine.

112.05 Compressor:
This subclass is indented under subclass 112.01. Subject matter wherein the measurement is made on a device which increases the pressure of a fluid before it enters the combustion chamber.

112.06 Surge or stall:
This subclass is indented under subclass 112.05. Subject matter wherein the measurement is made to determine an engine condition wherein either (1) a transient rise in power, pressure, etc. (for example a brief rise in the discharge pressure of a rotary compressor) or (2) an abrupt failure or sudden loss of power, occurs in an engine that had been running properly.

113.01 STEAM OR WATER OPERATED ENGINE; RELATED ENGINE SYSTEM OR ENGINE COMPONENT:
This subclass is indented under the class definition. Subject matter comprising a process or an apparatus for performing a test on (1) an engine which uses water vapor or water as a motive fluid, (2) a unit ancillary to the engine or (3) a part of the engine.

SEE OR SEARCH THIS CLASS, SUBCLASS:

112.02, for testing or monitoring of steam powered turbine engine.

865.9, for testing or monitoring of devices for machines not otherwise classified.

D. CHANGES TO THE DEFINITIONS

SEE OR SEARCH CLASS:

29, Metal Working, subclass 890.03 for heat exchanger or boiler making.

114.01 INTERNAL COMBUSTION ENGINE OR RELATED ENGINE SYSTEM OR ENGINE COMPONENT:
This subclass is indented under the class definition. Subject matter comprising a process or an apparatus for performing a test on (1) an engine in which the combustion of the fuel takes place within a cylinder, (2) a unit ancillary to the engine or (3) a part of the engine.

SEE OR SEARCH THIS CLASS, SUBCLASS:

865.9, for testing or monitoring of devices for machines not otherwise classified.

SEE OR SEARCH CLASS:

29, Metal Working, subclass 888.01 I.C. (internal combustion) engine making, per se.

123, Internal-Combustion Engines, subclasses 319 through 405 for measuring or testing devices used to regulate engine speed; and subclasses 406.11-406.76 for measuring or testing devices used for control of spark ignition timing.

310, Electrical Generator or Motor Structure, subclass 338 for piezoelectric sensor.

324, Electricity: Measuring and Testing, subclasses 378 through 402 for subject matter relating to the testing of electrical systems and devices for engine ignition systems and subclass 772 for measuring or testing an electric motor or generator for faults.

338, Electrical Resistors, subclass 4 for strain gauge-type Fluid- or gas pressure-actuated sensor.

340, Communications: Electrical, subclasses 438 through 462 for an internal alarm or indicator responsive to a condition of the vehicle, subclass.

374, Thermal Measuring and Testing, subclasses 144 through 146 for a combustion engine or cooling system therefor.

701, Data Processing: Vehicles Navigation and Relative Location, subclasses 29 through 35 for vehicle diagnosis or maintenance indication, subclass 99 with indication or control of power plant (e.g., performance), subclasses 101-115 for Internal-combustion engine data processing; and subclass 123 for data processing related to indication of fuel consumption rate or economy of usage.

702, Data processing: Measuring, calibrating, or Testing, subclass 41 for Force or torque measurement, subclass 44 for Mechanical work or power measurement, subclass 140 for pressure within an enclosure, subclass 145 for Rotational speed, subclass 182+ for Performance or efficiency evaluation and subclass 189 for Measured signal processing.

D. CHANGES TO THE DEFINITIONS

114.02 Irregular combustion (e.g., misfire):
This subclass is indented under subclass 114.01. Subject matter wherein the fuel charge in one or more engine cylinders fails to fire or ignite at the proper time.

SEE OR SEARCH THIS CLASS, SUBCLASS:

35.01, for sensing irregular combustion of an internal combustion engine.

SEE OR SEARCH CLASS:

123, Internal-Combustion Engines, subclass 406.26+ for combustion condition responsive, per se.

701, Data Processing: Vehicles, Navigation, and Relative Location, subclass, 111 for a data processing system to control or sense vibration, roughness, or knocking condition of an engine.

114.03 By time variation:
This subclass is indented under subclass 114.02. Subject matter wherein the irregular combustion (i.e., misfire) is detected by time variation.

114.04 By speed variation:
This subclass is indented under subclass 114.02. Subject matter wherein the irregular combustion (i.e., misfire) is detected by speed variation.

114.05 By acceleration:
This subclass is indented under subclass 114.02. Subject matter wherein the irregular combustion (i.e., misfire) is detected by acceleration variation

114.06 By exhaust pressure:
This subclass is indented under subclass 114.02. Subject matter wherein the irregular combustion (i.e., misfire) detected based on the force per unit area of a gas exiting from a combustion chamber.

114.07 By vibration:
This subclass is indented under subclass 114.02. Subject matter wherein the irregular combustion (i.e., misfire) is detected by the vibration of the engine or component thereof.

SEE OR SEARCH THIS CLASS, SUBCLASS:

570, for testing an article using vibration.

114.08 By ignition measurement:
This subclass is indented under subclass 114.02. Subject matter wherein the irregular combustion (i.e., misfire) is detected based on a process which initiates the combustion of a compressed air/fuel mixture in the combustion chamber.

SEE OR SEARCH CLASS:

D. CHANGES TO THE DEFINITIONS

123, Internal-Combustion Engines, subclass 406.14 for ignition timing regulating means which includes means to detect the omission of the spark.

114.09 By optical measurement:
This subclass is indented under subclass 114.02. Subject matter wherein the irregular combustion (i.e., misfire) is detected based on the condition of a ray of light.

114.11 By torque variation:
This subclass is indented under subclass 114.02. Subject matter wherein the irregular combustion (i.e., misfire) is detected by variation of a quantity of turning or twisting force such as the force output by the engine, i.e., torque.

(1) Note. Often torque is measured in lb-ft. It is the product of the magnitude of a force and its force arm (perpendicular distance from the axis of rotation of the body to the line of action of the force), is employed.

114.12 Having road condition detection:
This subclass is indented under subclass 114.02. Subject matter wherein the engine power a vehicle over a surface (e.g., road) and the irregular combustion (i.e., misfire) is detected by a system which includes an input from a sensor indicative of the surface condition over which vehicle is driven.

114.13 Power output:
This subclass is indented under subclass 114.01. Subject matter wherein a measurement is made of the work per unit time delivered by the engine.

SEE OR SEARCH THIS CLASS, SUBCLASS:

862, for dynamometers, per se.

114.14 As horsepower:
This subclass is indented under subclass 114.13. Subject matter wherein the output is determined in units of horsepower.

(1) Note. Horsepower is defined as a unit of power in the British engineering system, equal to 550 foot-pounds per second or approximately 746 watts. (Originally developed by James Watt as a means of relating the work done by a steam engine to comparable work done by a horse.)

114.15 As torque:
This subclass is indented under subclass 114.13. Subject matter wherein the power output is a function of turning or twisting force, i.e., torque.

(1) Note. Torque is often measured in lb-ft. It is the product of the magnitude of a force and its force arm (perpendicular distance from the axis of rotation of the

D. CHANGES TO THE DEFINITIONS

body to the line of action of the force), and is employed to determine output power.

114.16 Compression (i.e., cylinder pressure):
This subclass is indented under subclass 114.01. Subject matter wherein pressure within the engine cylinder is measured.

SEE OR SEARCH THIS CLASS, SUBCLASS:

35.12, for a pressure sensing means detecting a rapid fluctuation in pressure caused by detonation.

700, for a fluid pressure gauge, per se.

SEE OR SEARCH CLASS:

123, Internal-combustion engines, subclass 406.41 for a device for testing engine cylinder pressure as related to engine performance.

114.17 As a mean effective pressure:
This subclass is indented under subclass 114.16. Subject matter wherein the average compression is measured.

(1) Note. There are two kinds of mean effective pressure (MEP): (a) indicated mean effective pressure (imep), which is developed in the cylinder and can be measured, and (b) brake mean effective pressure (bmep), which is computed from the brake horsepower (bhp) delivered by the engine. BMEP equals the average (mean) pressure which, if imposed on the pistons uniformly from the top to the bottom of each power stroke, would produce the measured (brake) power output.

114.18 Pressure sensor detail:
This subclass is indented under subclass 114.16. Subject matter wherein the pressure sensor includes structure or working details.

114.19 Combined with spark plug:
This subclass is indented under subclass 114.18. Subject matter wherein the pressure sensor is combined with the structure supporting electrodes in a cylinder for the purpose of igniting a mixture of fuel and air.

114.21 Washer type:
This subclass is indented under subclass 114.19. Subject matter wherein the pressure sensor forms and annular ring around the spark plug.

114.22 Using engine speed:
This subclass is indented under subclass 114.16. Subject matter wherein the compression is measured using the engine rotational rate, e.g., revolutions per minute (rpm) as an input to the calculation.

D. CHANGES TO THE DEFINITIONS

114.23 Using starter current:
This subclass is indented under subclass 114.16. Subject matter wherein the cylinder pressure is measured using the amperage flowing through an electric motor which is used initially rotate the engine.

114.24 Engine acceleration:
This subclass is indented under subclass 114.01. Subject matter wherein the change in the engine rotational rate, e.g., revolutions per minute (rpm) per unit time is measured.

114.25 Engine speed:
This subclass is indented under subclass 114.01. Subject matter wherein the cylinder pressure is measured using the number of revolutions the crankshaft makes per unit time is measured, typically revolutions per minute: (RPM)

114.26 Relative rotational position:
This subclass is indented under subclass 114.01. Subject matter wherein the angular position of an engine component is measured with respect to the crankshaft.

SEE OR SEARCH CLASS:

123, Internal-Combustion Engines, subclass 406.18 for engine shaft rotational position sensor malfunction responsive (e.g., crank shaft, cam shaft), per se.

114.27 With cylinder phase identification:
This subclass is indented under subclass 114.26. Subject matter wherein the measurement is utilized to indicate the timing cycle of an individual cylinder.

114.28 Piston position:
This subclass is indented under subclass 114.27. Subject matter wherein the piston location within the cylinder is measured.

114.29 Using microwave energy:
This subclass is indented under subclass 114.28. Subject matter wherein the measuring instrument utilizes electromagnetic radiation having a free-space wavelength between 0.3 and 30 centimeters, corresponding to frequencies of 1-100 gigahertz.

114.31 Monitoring intake air system (e.g., air filter):
This subclass is indented under subclass 114.01. Subject matter wherein the measurement is related to a quality of air directed toward the engine or an apparatus for facilitating the flow.

114.32 Intake flow rate:
This subclass is indented under subclass 114.31. Subject matter wherein a measurement is made of the volume or the mass rate of flow of the intake fluid.

114.33 Using pressure measurement:
This subclass is indented under subclass 114.32. Subject matter wherein a measurement includes a force per unit area (i.e., pressure) input.

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114.34 Using thermal measurement:
This subclass is indented under subclass 114.32. Subject matter wherein a temperature measurement of the intake flow is measured

114.35 Using a vortex:
This subclass is indented under subclass 114.32. Subject matter wherein flow velocity is proportional to the number of vortices generated and the flow rate is calculated by multiplying the flow velocity by the cross sectional area of the flow.

(1) Note. Vorticity can be defined as a vector measure of local rotation in a fluid flow.

114.36 Throttle position sensor or idling state detection:
This subclass is indented under subclass 114.31. Subject matter wherein a measurement is made of the location of the throttle or a determination is made that the throttle is in idle position.

114.37 Intake air pressure:
This subclass is indented under subclass 114.31. Subject matter wherein a measurement of the intake air includes a force per unit area (i.e., pressure) determination.

114.38 Fuel system or part thereof:
This subclass is indented under subclass 114.01. Subject matter wherein the measurement determines a characteristic of an apparatus which routes the fuel to the engine or of the dynamics of the fuel itself.

114.39 With vapor vent or purge:
This subclass is indented under subclass 114.38. Subject matter wherein the apparatus includes a passage or escape for fuel in the vapor state or an evacuation apparatus or method.

114.41 Fuel pump:
This subclass is indented under subclass 114.38. Subject matter wherein the apparatus is a device that moves fuel toward the engine.

114.42 Fuel flow:
This subclass is indented under subclass 114.38. Subject matter wherein the measurement is of the rate of the passage of unit mass or volume per time of the fuel.

114.43 Fuel pressure:
This subclass is indented under subclass 114.38. Subject matter wherein a measurement is made of a force per unit area (i.e., pressure) of the fuel.

114.44 Carburetor:
This subclass is indented under subclass 114.38. Subject matter wherein a measurement is made on the system used to produce an explosive mixture of vaporized fuel and air.

D. CHANGES TO THE DEFINITIONS

114.45 Fuel injector:
This subclass is indented under subclass 114.38. Subject matter wherein the measurement is made on a device for actively injecting fuel into an internal-combustion engines by directly forcing the liquid fuel into the combustion chamber at an appropriate point in the piston cycle.

114.46 Spray pattern:
This subclass is indented under subclass 114.45. Subject matter wherein a measurement of the quantity and distribution of the fuel pattern is made.

114.47 Needle position:
This subclass is indented under subclass 114.45. Subject matter wherein the injector includes an exit or exhaust valve (i.e., needle) and the location of the valve is measured.

114.48 Volume flow amount:
This subclass is indented under subclass 114.45. Subject matter wherein a measurement is made of the quantity of fuel mass or volume through the injector.

114.49 Injector timing:
This subclass is indented under subclass 114.45. Subject matter wherein a measurement is made relating to the point in time when the injection is made.

114.51 Injector pressure:
This subclass is indented under subclass 114.45. Subject matter wherein a measurement is made of the force per unit area of the fuel output from the fuel injector.

114.52 Fuel consumption:
This subclass is indented under subclass 114.01. Subject matter wherein a measurement is made of the amount of fuel used.

114.53 Fuel efficiency or economy:
This subclass is indented under subclass 114.52. Subject matter wherein a measurement is made of the ratio of the effective or useful output to the total fuel input or the mileage (e.g., miles per gallon) is determined.

114.54 Remaining fuel (amount or range):
This subclass is indented under subclass 114.52. Subject matter wherein a measurement is made of the volume or mass of the fuel in a tank or the distance of travel this fuel would permit.

114.55 Lubricant condition:
This subclass is indented under subclass 114.01. Subject matter wherein measurement is made of the quality of a substance used to reduce friction and wear when applied as a surface coating to moving parts or surfaces.

114.56 Lubrication system:

D. CHANGES TO THE DEFINITIONS

This subclass is indented under subclass 114.01. Subject matter wherein a measurement is made on the apparatus used to deliver lubricant.

114.57 Pressure:
This subclass is indented under subclass 114.56. Subject matter wherein a measurement is made of the force per unit area (i.e., pressure) of the lubricating fluid is made.

114.58 Electrical system:
This subclass is indented under subclass 114.01. Subject matter wherein measurement is made on the system that generates, stores, and distributes electrical current to crank the engine for starting and to keep it running by providing high voltage to the spark plugs; and to give power to the lights, the heater motor, radio, and includes the ignition system, starter motor, battery, alternator, voltage regulator, lights, electrical accessories, and all the wiring, switches, and relays.

114.59 Starter or alternator:
This subclass is indented under subclass 114.58. Subject matter wherein the measurement is made on a small electrical motor that causes the engine crankshaft to begin to turn, which starts the engine running or where the measurement is made on a device which produces alternating current (AC) by converting the engine's turning (mechanical) energy into alternating electrical current.

(1) Note. Typically the current is rectified (converted from AC to DC) before reaching the vehicle's electrical system.

114.61 Electronic control unit:
This subclass is indented under subclass 114.58. Subject matter wherein a measurement is made of a microprocessor and memory with electronic maps, forming the central part of an engine management system or of subsystems such as a fuel injection or ignition system.

114.62 Ignition:
This subclass is indented under subclass 114.58. Subject matter wherein a measurement is made relating to the system used to deliver a pulse of electric current across electrodes in a cylinder for the purpose of igniting a mixture of fuel and air.

114.63 Timing:
This subclass is indented under subclass 114.62. Subject matter wherein a firing time of a spark plug is measured to be coincidental with a piston position as the engine is running.

SEE OR SEARCH CLASS:

324, Electricity Measuring and Testing, subclasses 378-402 for purely electrical testing of electrical systems and electrical devices which cause rapid combustion of fuel in an internal-combustion engine and involving no mechanical manipulation.

D. CHANGES TO THE DEFINITIONS

114.64 Using a tool:
This subclass is indented under subclass 114.63. Subject matter wherein the measurement is made using a particular or specific tool.

114.65 Timing light:
This subclass is indented under subclass 114.64. Subject matter wherein the tool is a timing light.

(1) Note. A timing light is a stroboscopic unit that flashes light in unison with the firing of a specific spark plug so that timing marks appear to stand still on the timing wheel.

(2) Note. By adjusting the distributor while using timing light the timing of the engine can be set.

114.66 Distributor:
This subclass is indented under subclass 114.62. Subject matter wherein a measurement is made relating to a unit in the ignition system designed to make and break the ignition primary circuit and to route the resultant high voltage to the proper cylinder at the correct time.

(1) Note. The high voltage typically comes from a coil to the center terminal of the distributor cap and passes down a rotor. As the rotor turns, contact is made with successive terminals located along the circumference of the distributor cap. Spark plug wires are use to make a connection between these terminals and a spark plug located in cooperation with a cylinder.

114.67 For ionization:
This subclass is indented under subclass 114.62. Subject matter wherein a measurement is made related to the conductivity in the spark gap

114.68 Cooling system:
This subclass is indented under subclass 114.01. Subject matter wherein a measurement is made in the system that removes heat from the engine.

(1) Note. The cooling system may include a radiator, pressure cap, fan, water pump, thermostat, water jackets a fan, cooling fins, and ducting.

SEE OR SEARCH CLASS:

29, Metal Working, subclass 890.03 for heat exchanger or boiler making.

114.69 Exhaust system:
This subclass is indented under subclass 114.01. Subject matter wherein a measurement is made on the spent fuel or the apparatus used to remove spent fuel from the engine.

D. CHANGES TO THE DEFINITIONS

114.71 Exhaust gas component analysis:
This subclass is indented under subclass 114.69. Subject matter wherein a quality of the spent fuel mixture is measured.

114.72 For air/fuel ratio:
This subclass is indented under subclass 114.71. Subject matter wherein the exhaust gas is analyzed to determine the mass of air supplied to the engine divided by the mass of fuel supplied in the same period of time .

(1) Note. The stoichiometric, or chemically exact, air-fuel ratio (A/F ratio) is the precise ratio required for burning all the carbon and hydrogen in the fuel into carbon dioxide and water with no oxygen remaining.

(2) Note. The fuel-air ratio is the reciprocal of the air-fuel ratio.

114.73 With oxygen sensor:
This subclass is indented under subclass 114.71. Subject matter wherein a measurement is made of the amount of oxygen in the exhaust stream.

114.74 Exhaust gas recirculation system (EGR):
This subclass is indented under subclass 114.69. Subject matter wherein a measurement is made on the system used to recirculate exhaust gases from the exhaust into the combustion chamber.

114.75 Catalyst or catalytic converter:
This subclass is indented under subclass 114.69. Subject matter wherein the measurement is made related to a pollution control device containing platinum, rhodium, or palladium which is a catalyst for the chemical reaction needed to burn off any unburned hydrocarbons and carbon monoxide by turning them into water vapor, carbon dioxide and other less toxic gases.

114.76 Exhaust pressure:
This subclass is indented under subclass 114.69. Subject matter wherein a measurement is made of the force per unit area (i.e., pressure) of the gas in the exhaust stream.

114.77 Testing of an individual engine part:
This subclass is indented under subclass 114.01. Subject matter wherein a measurement is made on a single component of the engine.

114.78 Piston ring:
This subclass is indented under subclass 114.77. Subject matter wherein the measurement is related to a split ring installed in the groove on the outside wall of the piston.

D. CHANGES TO THE DEFINITIONS

114.79 Valve train:
This subclass is indented under subclass 114.77. Subject matter wherein the measurement is related to the various parts making up a control surface which controls ingress and egress to the combustion cylinder and its operating mechanism.

114.81 Bearing:
This subclass is indented under subclass 114.77. Subject matter wherein a measurement is made on a device that supports, guides, and reduces the friction of motion between fixed and moving machine parts.

115.01 VEHICLE DRIVE TRAIN:
This subclass is indented under the class definition. Subject matter wherein a measurement is made on an apparatus used to transmit the output work from the engine to a vehicle part, which causes the vehicle to move (e.g., wheels).

SEE OR SEARCH THIS CLASS, SUBCLASS:

865.9, for testing or monitoring of devices for machines not otherwise classified.

115.02 Transmission:
This subclass is indented under subclass 115.01. Subject matter wherein a measurement is made of device that uses gearing or torque conversion to effect a change in the ratio between engine output revolution per minute (rpm) and driving wheel rpm.

115.03 Manual:
This subclass is indented under subclass 115.02. Subject matter wherein measurement is made on a transmission system in which gears are typically selected by the driver by means of a hand-operated gearshift and a foot-operated clutch.

115.04 Clutch:
This subclass is indented under subclass 115.03. Subject matter wherein measurement is made on a device that mechanically disconnects the engine from the transmission, to allow the vehicle to change gears, and then allows the engine and transmission to resume communication and turn together at a new speed.

115.05 Drive shaft:
This subclass is indented under subclass 115.01. Subject matter wherein measurement is made on a shaft connecting the transmission output shaft to the differential pinion shaft whereby mechanical power is transmitted from the transmission to the differential.

115.06 Rear end (e.g., differential):
This subclass is indented under subclass 115.01. Subject matter wherein measurement is made on a unit that takes the power of the rotating drive shaft at right angles to the rear axle and passes it to the axle.

115.07 Wheel or axle component:
This subclass is indented under subclass 115.01. Subject matter wherein measurement is made on a circular frame with spokes (or a solid disc) that can rotate on a shaft or axle; or a supporting shaft or member on or with which a wheel revolves.

D. CHANGES TO THE DEFINITIONS

115.08 To determine speed:
This subclass is indented under subclass 115.07. Subject matter wherein a measurement is made on the wheel or axle apparatus to indicate the amount of travel per unit time.

116.01 TEST STAND:
This subclass is indented under the class definition. Subject matter wherein including a fixture used to support an engine, engine component or vehicle for the purpose of measuring.

116.02 For engine:
This subclass is indented under subclass 116.01. Subject matter wherein the test stand is for a device which converts fuel energy to mechanical energy, i.e. engine.

116.03 Turbine engine:
This subclass is indented under subclass 116.02. Subject matter wherein the engine primarily consists of a vaned wheel or rotor, rotated by the impulse from or reaction to a fluid passing across the vane(s) as a principal component.

116.04 For an auxiliary component to the engine:
This subclass is indented under subclass 116.02. Subject matter wherein the measurement is made on a device which aids or supports the operation of the engine.

116.05 With dynamometer:
This subclass is indented under subclass 116.02. Subject matter wherein the test stand includes an electric or hydraulic machine used to measure the actual engine horsepower output and torque.

(1) Note. An engine dynamometer measures horsepower at the crankshaft and a chassis dynamometer measures horsepower output at the wheels.

SEE OR SEARCH THIS CLASS, SUBCLASS:

862, for dynamometers, per se.

116.06 With vehicle support:
This subclass is indented under subclass 116.05. Subject matter wherein the test stand provides for a conveyance on wheels or runners used to carry people or goods over land (e.g., bicycle, motorcycle, car, truck, sleigh, snowmobile).

116.07 On a belt:
This subclass is indented under subclass 116.06. Subject matter wherein the vehicle is supported by a closed web surface.

116.08 Vehicle positioning:
This subclass is indented under subclass 116.06. Subject matter wherein the vehicle location on the support is adjustable while the measurement is made.

D. CHANGES TO THE DEFINITIONS

116.09 For a two-wheeled vehicle:
This subclass is indented under subclass 116.06. Subject matter wherein the support is associated with a vehicle having only two (2) wheels (e.g., motorcycle).

116.71 For a tracked vehicle:
This subclass is indented under subclass 116.06. Subject matter wherein the support is associated with a vehicle having treads or a webbed surface.

117.01 VEHICLE CHASSIS:
This subclass is indented under the class definition. Subject matter wherein a measurement is made on any of the vehicle frame, engine, front and rear axles, springs, steering system, and fuel tank.

SEE OR SEARCH THIS CLASS, SUBCLASS:

865.9, for testing or monitoring of devices for machines not otherwise classified.

117.02 Steering:
This subclass is indented under subclass 117.01. Subject matter wherein a measurement is made on a mechanism for controlling the direction of a vehicle.

117.03 Suspension system:
This subclass is indented under subclass 117.01. Subject matter wherein a measurement is made on an assembly of springs, shock absorbers, torsion bars, joints, arms, etc., that cushions the shock of bumps on the road and serves to keep the wheels in constant contact with the road, thereby improving control and traction.

SEE OR SEARCH THIS CLASS, SUBCLASS:

11.04, for testing or monitoring of a shock absorbing device, (e.g., automobile shock absorber).

118.01 SIMULATING OPERATING CONDITION:
This subclass is indented under the class definition. Subject matter wherein the operation is measured while using a device that generates test conditions approximating actual or operational conditions or environment.

118.02 Engine specific:
This subclass is indented under subclass 118.01. Subject matter wherein the simulation involves a particular type of device used to convert fuel into mechanical energy.

118.03 Aircraft:
This subclass is indented under subclass 118.01. Subject matter wherein the simulation involves flying through a gas or atmosphere.

SEE OR SEARCH THIS CLASS, SUBCLASS:

D. CHANGES TO THE DEFINITIONS

147, for wind tunnel: aerodynamic wing and propeller study, per se.

118.04 Marine:
This subclass is indented under subclass 118.01. Subject matter wherein the simulation involves a liquid environment.

SEE OR SEARCH THIS CLASS, SUBCLASS:

147, for wind tunnel: aerodynamic wing and propeller study, per se.

FOREIGN ART COLLECTIONS

FOR 106 POWER PLANT OR UNIT EFFICIENCY:
Foreign art collection for determining the working efficiency (input vs. output) of power plants or units thereof, such as condensers.

FOR 107 Automobile fuel consumption:
Foreign art collection for measuring fuel consumption over selected period of operation or distance traveled.

FOR 108 Miles per gallon:
Foreign art collection for indicating at any given instant or for an immediately elapsed period or distance the rate of fuel consumption per mile.

FOR 109 Pressure derivative:
Foreign art collection utilizing the pressure within an engine as a factor of its performance or efficiency.

FOR 110 MOTOR AND ENGINE TESTING:
Foreign art collection for performing a test on a motor or engine to determine a distinguishing, operational characteristic.

FOR 111 With vehicle wheel supporting roller or belt:
Foreign art collection where the motor drives the vehicle wheels which, in turn, are supported upon rollers or a belt which comprise part of the test means.

FOR 112 Utilizing a test chamber or tank to simulate operating conditions:
Foreign art collection including an enclosure or a tank which provides controlled simulated conditions.

FOR 113 Disparate tests under operating conditions:
Foreign art collection comprising plural means for performing diverse tests on a motor or an engine under operating conditions.

FOR 114 With continuous operation:
Foreign art collection where the tests are made without shutdown of the engine during actual operation or on a test stand.

D. CHANGES TO THE DEFINITIONS

FOR 115 **Thrust measurement (e.g., jet engine):**
Foreign art collection for obtaining a measurement of thrust as developed by a reaction or reciprocating engine during actual use or on a test stand.

FOR 116 **Testing auxiliary unit:**
Foreign art collection for the testing of auxiliary units of motors and power units, including carburetors, generators, starters, ignition parts, etc.

(1) Note. Ignition testing where the sensing means is mechanical in nature or responsive to pressure is herein included.

FOR 117 **Intake air flow:**
Foreign art collection wherein the auxiliary unit is the air intake passage of the engine and the measurement is the airflow rate.

FOR 118 **Motor part:**
Foreign art collection for testing of parts of motors and power apparatus.

D. CHANGES TO THE DEFINITIONS

CLASS 116 - SIGNALS AND INDICATORS

Definitions Modified

Class Definition: In Section IV, References to Other Classes, under SEE OR SEARCH CLASS:

Delete:

The last sentence in the reference to Class 73.

D. CHANGES TO THE DEFINITIONS

CLASS 123 - INTERNAL-COMBUSTION ENGINES

Definitions Modified

Subclass 406.14: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclasses 35.01 for explosive-detonation or knock measuring and testing, subclasses 114.02 - 114.12 for irregular combustion of internal combustion engine testing and subclass 114.62 for an ignition measurement.

Subclass 406.18: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclasses 114.26 for rotational position sensor.

Subclass 406.25: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

D. CHANGES TO THE DEFINITIONS

73, Measuring and Testing, subclasses 114.36 for throttle position or idling state detection.

Subclass 406.27: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclasses 114.02 - 114.12 for irregular combustion (e.g., misfire) testing.

Subclass 406.36: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclass 114.01 for internal combustion engine testing, especially 114.05 for determining irregular combustion (e.g., misfire) using an acceleration measurement and 114.24 for measuring engine acceleration.

Subclass 406.41: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclasses 114.16 - 114.23 for a device for measuring the cylinder pressure of an engine.

D. CHANGES TO THE DEFINITIONS

Subclass 406.46: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclass 114.01 for internal combustion engine testing, especially 114.05 for determining irregular combustion (e.g., misfire) using an acceleration measurement, 114.24 for measuring engine acceleration, and 114.62 for a measurement made to the ignition system of an internal combustion engine.

Subclass 406.5: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclass 114.01 for internal combustion engine testing, especially 114.05 for determining irregular combustion (e.g., misfire) using an acceleration measurement, 114.24 for measuring engine acceleration, and 114.62 for a measurement made to the ignition system of an internal combustion engine.

D. CHANGES TO THE DEFINITIONS

Class 313 - ELECTRIC LAMP AND DISCHARGE DEVICES

Definitions Modified

Subclass 118: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclasses 114.62 through 114.67 for measuring or testing the ignition system of an internal combustion engine and subclass 114.08 for using an ignition measurement for determining irregular combustion (e.g., misfire) using an ignition measurement.

Insert:

324, Electricity: Measuring and Testing, subclasses 378 through 402 for spark plug testers.

D. CHANGES TO THE DEFINITIONS

Class 324 - ELECTRICITY: MEASURING AND TESTING

Definitions Modified

Class Definition: In Section III, References to Other Classes, under SEE OR SEARCH CLASS:

In the reference to Class 73

Delete:

“subclasses 116+ for motor and engine determinations (i.e., not merely ignition system).”

Insert:

subclasses 112.01 - 112.06 for turbine engine testing, 114.01 - 114.81 for internal combustion engine measuring and testing, and especially 114.58 - 114.67 for electrical system testing of an internal combustion engine.

Subclass 378: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclasses 114.62 through 114.67 for measuring or testing the ignition system of an internal combustion engine and subclass 114.08 for using an ignition measurement for determining irregular combustion (e.g., misfire) using an ignition measurement.

Subclass 391: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

D. CHANGES TO THE DEFINITIONS

73, Measuring and Testing, subclasses 114.62 through 114.67 for measuring or testing the ignition system of an internal combustion engine, especially subclasses 114.63 - 114.66 for ignition timing testing and measurement and subclass 114.08 for using an ignition measurement for determining irregular combustion (e.g., misfire) using an ignition measurement.

D. CHANGES TO THE DEFINITIONS

Class 356 - OPTICS: MEASURING AND TESTING

Definitions Modified

Class Definition: In Section IV, References to Other Classes, under SEE OR SEARCH CLASS:

In the reference to Class 73 (first occurrence)

Delete:

“subclass 116 for motor and engine testing including engine parts”

Insert:

subclass 114.08 for using an optical measurement for determining irregular combustion (e.g., misfire), and subclass 114.29 for using microwave energy to determine piston position in combination with a rotational position sensor in an internal combustion engine

D. CHANGES TO THE DEFINITIONS

Class 436 - CHEMISTRY: ANALYTICAL AND IMMUNOLOGICAL TESTING

Definitions Modified

Subclass 164: Under SEE OR SEARCH CLASS:

In the reference to Class 73

Delete:

"Again Class 73 subclasses 116+ provides for engine testing involving optical tests of the Class 356 type together with some mechanical manipulation of the parts beyond the scope of Class 356."

Insert:

Again Class 73 subclass 114.09 provides for internal combustion engine testing of irregular combustion (e.g., misfire) involving optical tests and subclass 114.65 provides for internal combustion engine testing of timing using a light source of the Class 356 type together with some mechanical manipulation of the parts beyond the scope of Class 356.

D. CHANGES TO THE DEFINITIONS

CLASS 701 - DATA PROCESSING: VEHICLES, NAVIGATION, AND RELATIVE LOCATION

Definitions Modified

Class Definition: In Section IV, References to Other Classes, under SEE OR SEARCH CLASS:

In the reference to Class 73

Delete:

"subclasses 116+ for motor or engine testing,"

Insert:

subclasses 112.01 - 112.06 for turbine engine testing, 114.01 - 114.81 for internal combustion engine measuring and testing,

Subclass 111: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 73

Insert:

73, Measuring and Testing, subclasses 114.02 through 114.12 for irregular combustion of internal combustion engine (e.g., misfire) testing, especially subclass 114.07 for vibration measurement to determine irregular combustion.

D. CHANGES TO THE DEFINITIONS

Class 702 - DATA PROCESSING: MEASURING, CALIBRATING, OR TESTING

Definitions Modified

Class Definition: In Section III, References to Other Classes, under SEE OR SEARCH CLASS:

In the reference to Class 73

Delete:

“motor and engine determination (i.e., not merely ignition system), subclasses 116+;”

Insert:

subclasses 112.01 - 112.06 for turbine engine testing, 114.01 - 116.81 for internal combustion engine measuring and testing;

Subclass 113: Under SEE OR SEARCH CLASS:

In the reference to class 73

Delete:

“subclasses 116+ for motor or engine testing,”

Insert:

subclasses 112.01 - 112.06 for turbine engine testing and 114.01 - 114.81 for internal combustion engine measuring and testing,