U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

CLASSIFICATION ORDER 1891

FEBRUARY 02, 2010

PROJECT M-B192

The following classification changes will be effected by this order:

	Class	Subclass	Art Unit	Ex'r Search Room
Abolished:	192	85, 86, 87.1, 87.11-87.19, 88, 91	3655	0S0001
Established:	192	48.601-48.609, 48.61, 48.611-48.619, 85.01-85.09, 85.1, 85.11- 85.19, 85.2, 85.21-85.29, 85.3, 85.31- 85.39, 85.4, 85.41-85.49, 85.5, 85.51- 85.59, 85.6, 85.61-85.63	3655	0S0001

The following classes are also impacted by this order:
73, 74, 137, 188, 415, 418, 464

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 1891

February 02, 2010

PROJECT NO. MB192

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3.21 **VORTEX-FLOW DRIVE AND CLUTCH**
3.22 .With means to effect torque reversal
3.23 .With brake
3.24 ..Alternatively operative clutch and brake
3.25 .With additional drive or clutch
3.26 ..Simultaneously operative clutches
3.27 ..Alternatively operative clutches
3.28 .Including drive-lockup clutch
3.29 ..Having fluid-pressure operator
3.3 ...With auxiliary source of pressure
3.31 ..Having speed-responsive operator
3.32 .Alternatively operative drive and clutch
3.33 .Fluid-pressure operator for engaging clutch
3.34 **VORTEX-FLOW DRIVE AND BRAKE**
3.51 **TRANSMISSION CONTROL AND CLUTCH CONTROL**
3.52 .Planetary transmission and coaxial clutch
3.53 ..Including separate, reversing pedal
3.54 .Common control
3.55 ..Power-operated clutch
3.56 ...Electromagnetically operated
3.57 ...Fluid-press operated
3.58 ....Electrically triggered
3.59 ....Vacuum operated
3.61 ..Stepped ratio transmission
3.62 ...With control lever
3.63 .Interrelated (e.g., with interlock)
215 **TRANSMISSION AND BRAKE**
216 .Internal resistance brake
217 .Velocipede
217.1 ..Back-pedaling brake (e.g., coaster brake)
217.2 ...Rotatable crank axle
217.3 ...Wheel hub
217.4 ....With change-speed transmission
217.5 .....Plural sprockets
217.6 ....With screw operator
217.7 ....Multidisc brake
218 .Motor vehicle
219 ..Transmission control affects brake
219.1 ...Hill-holder
219.2 ....One-way brake
219.3 .....Ball or roller
219.4 ...Emergency or parking brake
219.5 ....Parking pawl
219.6 ....With separate manual operator
219.7 .....Foot operated
220 ..Brake control affects transmission change
220.1 ...Brake application neutralizes transmission
220.2 ...Park-lock device
220.3 ....Floor-mounted shift lever
220.4 .....Solenoid operated lock
220.5 ......Rotary bushing
220.6 ....Override
220.7 ......Override
221 ..Fluid operated
221.1 ...Brake and gearing at axle end
222 ..Electromagnetic
223 .Torque-responsive brake
223.1 ..Transversely engaged positive brake
223.2 ..Ball or roller type brake
223.3 ..With cam mechanism for axially moving brake member
223.4 ..Wrap-spring brake
224 .Belt or chain transmission
224.1 ..Belt tensioner affects brake operation
224.2 ..Belt failure operates brake
224.3 ..Belt shipper affects brake operation
225 .Fluid operated
226 .Electromagetic
12 R **CLUTCH AND BRAKE**
13 R .Vehicle type
13 A ..Clutch-released brake holder
14 .Same member
15 .Automatic check and release
16 ..Clutch and brake same member
17 R .Peripheral brake
17 A ..Fluid operator
17 C ..Electric
17 D ..Coil
18 R .Sliding operation
18 A ..Fluid operator
18 B ..Electric and magnetic
19 .Crank control
12 A .Internal resistance
12 B .One-way engaging
12 BA ..Coil spring type
12 C .Fluid operator

12 D .Electric
20 **CLUTCH AND GEAR**
21 .Reversing
21.5 **FIELD RESPONSIVE FRICTIONAL MEDIA TYPE**
22 **LATCH OPERATED**
23 .Corn-planter type
24 .Longitudinally moving transmission member
25 ..Pin
26 .Transversely moving transmission member
27 ..Ball or roller
28 ..Positive
29 ...Rotating key
30 R **CLUTCHES**
31 .Automatic
32 ..Manual control
33 R ...Definite-position release
33 C ....Coil
34 ...Shaft thrust
35 ...Pilot mechanism
36 ....Brake band
37 ...Transversely moving
38 ....Ball or roller
39 ....Positive
40 ...Electric
41 R ..One-way engaging
42 ...Free-engine type
43 ...Reversible
43.1 ....Pivoted pawls
43.2 ....Slidable pawls
44 ....Ball or roller
45 ...Ball or roller
45.1 ...Wedging pawl or block
45.2 ...Two-point gripper
46 ...Positive
47 ...Manual control
41 S ...Spring
41 A ...Sprags
48.1 .Plural clutch-assemblage
48.2 ..Including electrically actuated clutch assemblage
48.3 ..Diverse clutch-assemblages
48.4 ...Including three or more assemblages
48.5 ...Including one clutch-assemblage having interdigitated clutch-elements
48.6 ....And another clutch-assemblage having unirotationally engaging clutch elements
48.601 ..Having fluid pressure operator
48.602 ...Operator rotatable relative to its clutch-assemblage
48.603 ....Operator coaxial with its clutch-assemblage
48.604 .....Common or interconnected operator(s)
48.605 ......Operator between clutch-assemblages
48.606 .....Axially spaced coaxial clutch-assemblages
48.607 ....Axially spaced coaxial clutch-assemblages
48.608 ....Plural fluid pressure operators forming nested pistons
48.609 ...Axially spaced coaxial clutch-assemblages
48.61 ....Plural fluid pressure operators forming nested pistons
48.611 ....Operator coaxial with its clutch-assemblage
48.612 .....Common or interconnected operator(s)
48.613 ......Operator between clutch-assemblages
48.614 .....Operator between clutch-assemblages
48.615 ....Radially acting operator
48.616 ...Plural fluid pressure operators forming nested pistons
48.617 ....At least one operator coaxial with its clutch-assemblage
48.618 ...Operator coaxial with its clutch-assemblage
48.619 ....Radially spaced coaxial clutch-assemblages
48.7 ..With means to actuate or deactuate clutch-assemblages sequentially
48.8 ..Associated with three or more shafts
48.9 ...Alternatively operative assemblages
48.91 ....Having common clutch-element support
48.92 ..Including unirotationally engaging clutch-elements
49 ..Parallel vehicle wheels
50 ...Free wheel
51 ..Reversing
52.1 .Progressive engagement
52.2 ..Surface area

52.3 ...Yielding
52.4 ..Variable force
52.5 ...Initial engagement causes increase in applied force
52.6 ..Yielding
53.1 ..Frictional and positive
53.2 ...Magnetic or electromagnetic operated friction clutch
53.3 ...With blocker
53.31 ....Self-energizing
53.32 ....Interposed friction members
53.33 ....Member extending axially between friction surfaces
53.331 .....Blocker on axially extending stepped pin
53.332 ......Resilient detent pin
53.34 ....Outward tooth or lug on friction member
53.341 .....With thrust member
53.342 ......Resilient thrust bar
53.343 ......Resilient expander ring
53.35 ....Inward tooth or lug on friction member
53.36 ....Radially movable blocker
53.361 .....Detent acts as blocker
53.362 ......Rocker lever actuates friction clutch
53.363 .....Radially movable friction element acts as blocker
53.364 ......Resilient friction element
53.4 ...Lock for positive clutch
53.5 ...Axially projecting positive clutch
53.51 ....Cylindrical pin
53.6 ...Transversely moving positive clutch
54.1 .Torque responsive
54.2 ..Hub clutch
54.5 ..Cam operated
54.51 ...Screw operated
54.52 ...Ball or roller type
55.1 ..With overload release coupling
55.2 ..With flexible shaft coupling permitting limited relative rotation
55.3 ...Separate resilient member between clutch element and its shaft
55.4 ....Fluid damper
55.5 ....Coil spring coaxial with rotation axis
55.51 .....Radially overlapping convolutions
55.6 ....Plural resilient members
55.61 .....Coil springs with center line spaced from rotational axis
55.62 ......Center line of coil springs parallel to rotational axis
55.7 ....Coil spring with center line spaced from rotational axis
56.1 ..Overload release
56.2 ...Coil
56.3 ...Fluid-operated clutch
56.31 ....Axially engaged
56.32 .....Positive
56.33 ......Ball or roller
56.4 ...Magnetic or electromagnetic
56.41 ....Axially engaged
56.42 .....Positive
56.43 ......Ball or roller
56.5 ...Clutch elements remain disengaged after overload corrected
56.51 ....Having separate latch to hold clutch elements disengaged
56.52 .....Axially engaged
56.53 ......Positive
56.54 ....Ball or roller
56.55 ....Axially engaged
56.56 .....Positive
56.57 ......Ball or roller
56.6 ...Axially engaged
56.61 ....Positive
56.62 .....Ball or roller
54.3 ..Fluid operated
54.4 ..Magnetic or electromagnetic
57 .Fluent material and mechanical
58.1 .Fluent material
58.2 ..Fluid
58.3 ...Vane clutch
58.4 ...Viscous shear
58.41 ....Multiple plate
58.42 .....Variable gap or volume
58.43 ....Variable gap or volume
58.5 ....Separate reservoir
58.6 .....Automatic regulation
58.61 ......Magnetic or electric
58.62 ......Temperature and speed
58.63 ......Temperature
58.64 ....Coolant and clutching medium
58.65 ....Ambient and clutching medium
58.66 ....Ambient and coolant
58.67 ....Clutching medium
58.68 ....Ambient
58.681 ....Bi-metallic

58.682 .....Spiral
58.683 .....Resilient or adjustable mounting feature
58.684 .....Mounting feature
58.7 .....Pump-out feature
58.8 .....Specific valve
58.9 ...Radial vane
58.91 ....Vanes on inner member
58.92 .....Spring-biased
59 ..Axially movable piston
60 ..Transversely movable piston
61 ..Gear-pump type
62 .Plow-lifting type
63 .Free-engine type
64 .Velocipede free wheel
65 .Axially and transversely engaging
66.1 .Axially engaging
66.2 ..Conical or frustoconical
66.21 ...Plural radially spaced surfaces
66.22 ...Spring engaged
66.23 ...Spring released
66.3 ..Planar radially extending
66.31 ...Spring engaged
66.32 ...Spring released
69 ..Positive
69.1 ...Pivoting positive clutch element
69.2 ...Plunger disconnect
69.3 ...Pilot pawl
69.4 ...Wheel hub clutched to axle
69.41 ....Fluid pressure
69.42 ....Electromagnetic
69.43 ....Manual
69.5 ...Ball or roller
69.6 ...Cylindrical pin
69.61 ....Axial pin on only one member
69.62 .....Pin engages aperture in other member
69.63 ....Radial pin
69.7 ...Axial-radial
69.71 ....Axially extending projection engages aperture
69.8 ...Axial-axial
69.81 ....Sawtooth
69.82 ....Square tooth
69.83 .....With lead-in
69.9 ...Radial-radial
69.91 ....Outward projection on movable member
70 ..Spreading
70.11 ..Interposed, mating clutch-elements
70.12 ...With means to cool or lubricate clutch parts
70.13 ...With removable or replaceable or interchangeable clutch parts
70.14 ...Including surface characteristics of clutch-element
70.15 ....Axially tapered mating surfaces
70.16 ...With torque connection between clutch-element and its shaft
70.17 ....Resilient torque connection (e.g., for damping vibration)
70.18 .....Including chordally disposed connection
70.19 ....Axially slidable connection
70.2 .....Spline connection for multiple clutch-elements
70.21 ...With means to move multiple clutch-elements axially and sequentially
70.22 ...With means to move clutch-element axially and latch into engaged or disengaged position
70.23 ...With cam or wedge contacting clutch-element or pressure plate for axial movement thereof
70.24 ....By cam surface on bell-crank
70.251 ...With adjustable means to move clutch-element axially (e.g., to compensate for wear)
70.252 ....Automatic
70.26 ....Including plural adjusting screws (e.g., to equalize pressure angularly)
70.27 ...With spring means to move clutch-element axially
70.28 ....To separate engaged clutch-elements
70.29 ....And actuator lever pivoted on pressure plate
70.3 ...With actuator lever pivoted on pressure plate or back plate to move clutch-element axially
.Transversely engaged
71 ..Positive
72 ..Interior and exterior
73 ...Opposing
74 ..Interior
75 ...Expanding
76 ....Radial
77 ....Split ring
78 .....Cam operated

79 ..Exterior
80 ...Strap
81 R ....Multiple folds
81 C .....Coil
82 R .Operators
83 ..Multiple for same clutch
84.1 ..Electric or magnetic
84.2 ...Plural coils
84.21 ....Plural armatures
84.3 ...Including permanent magnet
84.31 ....And electromagnet
84.4 ...Electrostatic
84.5 ...Air gap adjustment
84.51 ....Automatic
84.6 ...Rotary electric motor is clutch actuator
84.7 ...Mechanical force increasing means
84.8 ...Operator for transversely engaging elements
84.81 ....Coil spring
84.9 ...Operator for axially engaging elements
84.91 ....Interposed friction elements
84.92 ....Positively engaging elements
84.93 ....Magnetic flux path spaced from engaging elements
84.94 ....Specified torque transmitting spring
84.941 .....Nonmetallic
84.95 ....With slip rings
84.951 .....With pulley or gear
84.96 ....Fixed concentric coil
84.961 .....With pulley or gear
85.01 ..Fluid pressure
85.02 ...Operator force derived from clutch input or output
85.03 ...Elastic (e.g., diaphragm, pneumatic tube)
85.04 ....Rotating with clutch input or output
85.05 .....And causing purely axial movement
85.06 ......Including flexible friction discs
85.07 ......Plural oppositely acting elastic operators
85.08 ......Clutch has flat friction surfaces
85.09 ....More than two friction elements
85.1 ....Plate or diaphragm spring release
85.11 ......Clutch has positively engaging clutch members
85.12 .....And causing purely radial movement
85.13 ......Elastic operator integral with radially outer clutch member
85.14 ....Rotatable relative to clutch input and output
85.15 .....And causing purely axial movement
85.16 .....And causing purely radial movement
85.17 ...Piston and cylinder operator rotating with clutch input or output
85.18 ....Positive clutch
85.19 ....Friction clutch
85.2 .....Having friction elements movable axially only
85.21 ......Having conical or frustoconical friction surfaces (e.g., cone clutch)
85.22 ....Plural radially spaced frustoconical surfaces
85.23 ......Having flat friction surfaces
85.24 ....More than two friction elements
85.25 ....Including balance chamber
85.26 ....Cam mechanism between piston and friction element
85.27 ....Auxiliary exhaust or relief passage from piston chamber
85.28 ....Fluid escape from piston chamber by rotation-induced pressure
85.29 ....In piston
85.3 ....Valve in passage
85.31 ....Valve in passage
85.32 ....Variable fluid contacting piston area
85.33 ....Axially stationary piston, moving cylinder
85.34 ....Cushioning element between piston and friction element
85.35 ....Operator acts on friction elements via diaphragm spring or lever
85.36 ....Electric or magnetic release
85.37 ....Fluid released clutch

85.38 .....And fluid pressure engaged
85.39 .....Spring released clutch
85.4 .....Release spring between discs
85.41 .....Coil spring
85.42 .....Encircling clutch axis of rotation
85.43 .....Having particular friction element structure
85.44 .....Having particular piston seal
85.45 .....Piston has interrupted engagement face
85.46 .....Piston has non-planar engagement face
85.47 .....Having radially displaceable friction surface
85.48 ...Operator rotatable relative to clutch input and output
85.49 ....And aligned with clutch axis of rotation
85.5 .....Operator acts on clutch through push rod extending coaxially through input or output shaft
85.51 .....Operator acts on clutch via diaphragm spring or lever
85.52 .....Pull-to-release type clutch
85.53 .....Details of fluid operator
85.54 .....Having particular seal
85.55 .....Details of master cylinder
85.56 ....Operator spaced from and parallel to clutch axis of rotation
85.57 ....Fluid released clutch
85.58 .....By vacuum
85.59 ....Details of fluid operator
85.6 ....Details of master cylinder
85.61 ...Cooling or lubricating
85.62 ...Having wear compensator
85.63 ...Including fluid pressure control
89.1 ..Weight operated
89.2 ..Spring engaged
90 ...Electric release
89.21 ...Cam release
89.22 ...Belleville disc spring
89.23 ....Push-type
89.24 ....Pull-type
89.25 ....Geometric configuration
89.26 ...Plural coil springs spaced from clutch axis
89.27 ...Coil spring coaxial to clutch axis
89.28 ....Transversely engaged
89.29 ...Quick throw spring
92 ..One-direction apply and release
93 R ..Cam
93 A ...Axially thrusting cams rotatable about clutch axis
93 B ...Axially moving cam acting on pivoted lever
93 C ...Axially moving cam acting on transversely moving wedge or clutch member
94 ..Screw
95 ..Handwheel
96 ..Central pin
97 ...Screw operated
98 ..Shipper saddles
99 R ..Lever systems
99 A ...Levers mounted on axially engaging clutch
99 B ...Levers mounted on transversely engaging clutch
99 S ...Stationary levers
100 ..Follow-up
101 ..Releasing
102 ..Check of driven member
103 R ..Speed responsive
104 R ...Fixed-speed release
104 B ....Transversely engaged-interior
104 C ....Transversely engaged-exterior
104 F ....Fluid clutches and operators
105 R ...Fixed-speed engagement
105 A ....Centrifugal (fluid or powder) nonpivoted weights (radially movably or slidable) i.e., mercury clutch
105 B ....Axially engaged with nonpivoted weights-weights movable radially or slidable
105 BA ....Transversely engaged with nonpivoted weights
105 BB ....Transversely engaged positive with nonpivoted weights
105 C ....Axially engaged with pivoted weights
105 CP ....Weights pivoted on axis parallel to clutch axis-axially engaged
105 CS ....Single pair clutching elements axially engaged with pivoted weights
105 CD ....Transversely expanding clutch with pivoted weights
105 CE ....Transversely engaged-pivoted weights and clutching elements movable separately

105 CF ....Transversely contracting
105 F ....Fluid controls for centrifugal clutches
106 R ...Release
106 F ....Devices to prevent fluid clutches from being operated by centrifugal forces acting on fluid
103 A ...Centrifugal operated, axially engaged
103 B ...Centrifugal operator transversely engaged
103 C ...Acceleration and inertia responsive
103 F ...Fluid operated
103 FA ...Fluid pressure engaged with centrifugal valve
82 P ..Rack and pinion operator
82 T ..Temperature operator
30 W .Warning, indicating, and signal devices
30 V .Vibration dampers

ELEMENTS

200 .Clutch element resiliently carried on hub
201 ..Speed-responsive
202 ..Manually adjustable
203 ..Coil spring detail
204 ..Specified bushing
205 ..Separate seat detail
206 ..Relatively axially movable hub sections
207 ..Circumferential resilience
208 ...With fluid damping
209 ...Nonmetallic
210 ....Interposed friction element
210.1 .....Biasing means
211 ....And coil spring
212 ...Coil spring
213 ....Plural helical coil spring damping stages
213.1 .....Plural axially spaced springs
213.11 ......Interposed friction element
213.12 ....Biasing means
213.2 .....Plural radially spaced springs in a common radial plane
213.21 ......Interposed friction element
213.22 ....Biasing means
213.3 .....Interposed friction element
213.31 ......Biasing means
214 ....Interposed friction element
214.1 .....Biasing means
107 R .Engaging surfaces
108 ..Positive
107 M ..Material
107 T ..Transversely engaging
107 C ..Clutch plate axially compressible
109 R .Thrust members, retarders, and stops
109 A ..Resilient operators and pressure plates
109 B ..Resilient backing plates
109 F ..Cushioning devices for fluid operators
109 D ..Dashpot
110 R .Shafts, bearings, and adjusting devices
110 B ..Bearings
110 S ..Shafts for removable clutches or discs
111.1 .Wear compensators
111.11 ..Compensator in actuating mechanism outside of the clutch (EPO)
111.12 ...Automatic
111.13 ..Compensator in or near release bearing (EPO)
111.14 ...Automatic
111.15 ..Compensator on or inside clutch cover (e.g., acting on diaphragm or pressure plate) (EPO)
111.16 ...Automatic
111.17 ....Worm mechanism
111.18 ....Relatively rotatable cam rings
111.19 .....Between cover and diaphragm spring
111.2 .....Between diaphragm spring and pressure plate
111.3 ......Having clearance sensor bridging gap between clutch members and moveable only during engagement
111.4 ....Having clearance sensor bridging gap between clutch members and moveable only during engagement
111.5 ...Relatively rotatable cam rings
111.6 ...Threaded element centered on clutch axis
111.7 ....Threaded in clutch cover
112 .Casings
113.1 .Lubricating, insulating, or cooling
113.2 ..Air cooling

113.21 ...Heat radiating structure
113.22 ...Grooved surfaces
113.23 ...Air directing structure
113.24 ....Rotating cover
113.25 ....Spring
113.26 ....Clutch plate
113.3 ..Liquid cooled or lubricated clutch surfaces
113.31 ...Entire coolant path is spaced from clutch surfaces
113.32 ...Overrunning clutch
113.33 ...Positive
113.34 ...Lubricant or coolant between engaging surfaces
113.35 ....With change of coolant flow during disengagement
113.36 ....Grooved surfaces
113.4 ..Thermal insulating
113.5 ..Lubrication of ancillary clutch parts
114 R .Locks
114 T ..Interlocking clutch teeth or splines
115 .Supports
116.5 **STOP MECHANISM**
125 R .Material control
126 ..Sheet material
127 ...Electrical
128 ...Pneumatic
125 A ..Power stop-material control-electrical
125 B ..Mechanical
125 C ..Pneumatic
125 D ..Granular material
125 E ..Work start
125 F ..Length of material stop
129 R .Safety device
130 ..Hand protector
131 R ...Two hand
131 H ....Hand and foot
132 ...Delayed action drive
133 ..Automatic guard
134 ...Punch-press type
135 ...Cover
136 ....Centrifugal-machine type
137 ...Disabled transmission
129 A ..Electrical
129 B ..Pneumatic
138 .Limit stop
139 ..Rotary-member control
140 ...Speed responsive
141 ...Screw
142 R ...Electrical
142 A ....Radio tuner type
143 ..Reciprocating-member control
144 .Drive release and brake
145 ..Multiple clutch
146 ..Change speed
147 ..Speed responsive
148 ..Positive stop
149 ...Cushioned
150 .Overload release

FOREIGN ART COLLECTIONS

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.

CLUTCHES (192/30)
.Operators (192/82 R)
..Electric (192/84 R)

FOR 101 **TRANSMISSION CONTROL AND BRAKE (192/4 R)**
FOR 102 .Back-pedaling brake (192/5)
FOR 103 ..Hub brake (192/6 R)
FOR 104 ...With change speed transmission (192/6 A)
FOR 105 ...Rotatable axle (192/6 B)
FOR 106 .Automatic brake (192/7)
FOR 107 ..Responsive to drive release (192/8/R)
FOR 108 ...Cable (192/8 A)
FOR 109 ...Coil brake (192/8 C)
FOR 110 .Electric control (192/9)
FOR 111 .Belt shipper (192/10)
FOR 112 .Belt tightener (192/11)
FOR 113 .Automatic type (192/4 A)
FOR 114 .Internal resistance brake (192/4 B)
FOR 115 .Forward and reverse gearing (192/4 C)

CLUTCHES (192/30)
.Axially engaging (192/66.1)
..Interposed,mating clutch-elements

FOR 116 ...With adjustable means to move clutch-element axially (e.g., to compensate for wear) (192/70.25)

ELEMENTS

FOR 117 .Wear compensators (192/111)

CLUTCHES (192/30)

.Operators (192/82 R)

FOR 118 ..Fluid pressure (192/85 R)

FOR 119 ...Double acting (192/86)

FOR 120 ...Multiple clutches (192/87.1)

FOR 121 ....Having independent operators (192/87.11)

FOR 122 .....Responsive to rotational speed of clutch-element (192/87.12)

FOR 123 .....With selective distributor for fluid pressure (192/87.13)

FOR 124 ....Alternatively operative clutches (192/87.14)

FOR 125 .....Clutches coaxial with operators (192/87.15)

FOR 126 ......Common or interconnected operator(s) (192/87.16)

FOR 127 ....Operator between clutches (192/87.17)

FOR 128 .....With selective distributor for fluid pressure (192/87.18)

FOR 129 ......Having neutral position (192/87.19)

FOR 130 ...Flexible motor (192/88 R)

FOR 131 ....Flexible fluid motor-axially engaged (192/88 A)

FOR 132 ....Radially engaged (192/88 B)

FOR 133 ...Axially engaging-rotating motor and clutch (192/85 A)

FOR 134 ...Axially engaging clamping rotating motor and clutch (192/85 AA)

FOR 135 ...Axially engaging spreading rotating motor and clutch (192/85 AB)

FOR 136 ...Transversely engaging rotating motor and clutch (192/85 AT)

FOR 137 ...Clutch and nonrotating motor (192/85 C)

FOR 138 ...Clutch and nonrotating motor (192/85 CA)

FOR 139 ...Centrifugal fluid clutches (192/85 F)

FOR 140 ...Vacuum clutches and operators (192/85 V)

..Spring engaged (192/89.2)

FOR 141 ...Fluid release (192/91R)

FOR 142 ....Motor concentric with clutch shaft (192/91 A)

DIGESTS

DIG 1 **REMOVABLE MEMBERS**

DIG 2 **UNIVERSAL JOINT**

FEBRUARY 02, 2010

PROJECT M-B192

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
192/106 R	1	192/85 AA	262
192/48.601	1	192/87.11	56
	1	192/87.12	8
	2	192/87.1	8
	3	192/85 R	139
	6	192/87.18	9
	11	192/87.19	23
	17	192/87.13	54
192/48.602	1	192/87.13	54
	2	192/87.11	56
	2	192/87.14	10
192/48.603	1	192/85 CA	145
	4	192/87.11	56
192/48.604	1	192/87.17	33
	4	192/87.16	11
192/48.605	1	192/87.11	56
192/48.606	1	192/87.11	56
	1	192/87.15	34
192/48.607	1	192/85 AA	262
	1	192/85 C	51
	1	192/87.1	8
	1	192/87.11	56
	1	192/87.18	9
	2	192/86	63
	2	192/87.14	10
	3	192/87.13	54
	3	192/87.19	23
192/48.608	1	192/87.13	54
192/48.609	1	192/85 AT	40
	1	192/87.1	8
	1	192/87.18	9
	1	192/87.19	23
	3	192/87.15	34
	5	192/87.13	54
192/48.61	1	192/85 AA	262
	1	192/87.17	33
	3	192/87.11	56
192/48.611	1	192/85 A	45
	1	192/86	63
	1	192/87.1	8
	1	192/87.12	8
	1	192/87.16	11
	1	192/87.17	33

FEBRUARY 02, 2010

PROJECT M-B192

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
	2	192/87.19	23
	4	192/88 A	83
	6	192/87.13	54
	7	192/85 AA	262
	15	192/87.15	34
	17	192/87.11	56
192/48.612	1	192/87.15	34
	1	192/87.17	33
	2	192/86	63
	6	192/87.16	11
192/48.613	1	192/85 R	139
	1	192/86	63
	1	192/87.11	56
	1	192/87.15	34
	1	192/87.18	9
	1	192/87.19	23
	28	192/87.17	33
192/48.614	1	192/86	63
	1	192/87.1	8
	2	192/85 AA	262
	2	192/87.14	10
	4	192/87.12	8
	5	192/87.15	34
	8	192/87.11	56
	8	192/87.13	54
192/48.615	1	192/86	63
	1	192/87.13	54
	1	192/87.14	10
	2	192/87.15	34
192/48.617	1	192/87.11	56
192/48.618	1	192/85 AA	262
	1	192/85 AB	25
	1	192/87.19	23
	2	192/87.12	8
	2	192/87.13	54
	2	192/87.15	34
	8	192/87.11	56
192/48.619	1	192/85 AA	262
	6	192/87.11	56
192/76	1	192/91 R	124
192/85.01	1	192/85 AA	262
	1	192/85 C	51
	1	192/86	63

FEBRUARY 02, 2010

PROJECT M-B192

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
	1	192/87.11	56
	1	192/91 R	124
	27	192/85 R	139
192/85.02	1	192/85 AB	25
	1	192/85 C	51
	1	192/85 CA	145
	1	192/86	63
	1	192/88 A	83
	2	192/85 A	45
	2	192/88 B	60
	3	192/85 R	139
	5	192/85 AT	40
	9	192/85 F	14
	28	192/85 AA	262
192/85.04	1	192/85 V	10
	1	192/88 A	83
	2	192/88 B	60
192/85.05	1	192/85 A	45
	3	192/85 AA	262
	27	192/88 A	83
192/85.06	1	192/85 V	10
	2	192/88 A	83
192/85.07	1	192/85 CA	145
	3	192/85 AA	262
	3	192/88 A	83
192/85.08	1	192/85 A	45
	1	192/85 AA	262
	1	192/85 V	10
	3	192/88 A	83
192/85.09	1	192/87.15	34
	1	192/88 R	2
	2	192/85 R	139
	2	192/91 A	72
	4	192/85 AA	262
	5	192/85 AB	25
	28	192/88 A	83
192/85.1	1	192/85 CA	145
192/85.11	2	192/88 A	83
192/85.12	1	192/85 AT	40
	1	192/88 A	83
	34	192/88 B	60
192/85.13	1	192/85 R	139
	1	192/86	63

FEBRUARY 02, 2010

PROJECT M-B192

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
	1	192/87.13	54
	1	192/88 R	2
	1	192/91 R	124
	22	192/88 B	60
192/85.14	4	192/91 R	124
192/85.15	1	192/86	63
	3	192/85 CA	145
	3	192/85 V	10
	3	192/91 A	72
	8	192/91 R	124
	11	192/88 A	83
192/85.16	1	192/86	63
192/85.17	1	192/85 R	139
192/85.18	1	192/85 AT	40
	1	192/85 CA	145
	2	192/85 R	139
	2	192/91 A	72
	4	192/86	63
	6	192/85 A	45
192/85.2	2	192/91 A	72
192/85.21	1	192/85 AT	40
	1	192/87.15	34
	1	192/91 R	124
	3	192/85 AB	25
	3	192/85 R	139
	3	192/86	63
	5	192/85 AA	262
	8	192/91 A	72
	10	192/85 A	45
192/85.22	1	192/85 AA	262
	2	192/85 A	45
	6	192/85 AB	25
	7	192/86	63
192/85.23	1	192/85 AA	262
	1	192/85 R	139
	1	192/86	63
	4	192/91 A	72
	15	192/85 A	45
192/85.24	1	192/85 CA	145
	1	192/85 F	14
	1	192/86	63
	2	192/85 R	139
	3	192/85 C	51

FEBRUARY 02, 2010

PROJECT M-B192

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
	26	192/85 AA	262
192/85.25	2	192/86	63
	11	192/85 AA	262
192/85.26	2	192/85 AA	262
192/85.27	1	192/85 AA	262
	1	192/85 R	139
	1	192/86	63
192/85.28	1	192/85 AA	262
	1	192/85 F	14
	1	192/85 R	139
192/85.29	1	192/86	63
	5	192/85 AA	262
192/85.3	1	192/86	63
	1	192/87.17	33
	11	192/85 AA	262
192/85.31	1	192/85 AA	262
	1	192/85 AB	25
192/85.32	1	192/86	63
	5	192/85 AA	262
192/85.33	1	192/85 R	139
	1	192/91 R	124
	2	192/85 F	14
	2	192/91 A	72
	4	192/86	63
	8	192/85 AA	262
192/85.34	1	192/86	63
	24	192/85 AA	262
192/85.35	6	192/85 AA	262
192/85.36	1	192/85 AA	262
192/85.37	1	192/86	63
	2	192/85 AA	262
	2	192/91 R	124
	4	192/91 A	72
192/85.38	2	192/86	63
	3	192/85 AA	262
192/85.39	1	192/85 A	45
	1	192/85 F	14
	3	192/85 R	139
	10	192/85 AA	262
192/85.4	1	192/85 AB	25
	1	192/85 R	139
	8	192/85 AA	262
192/85.41	1	192/85 A	45

FEBRUARY 02, 2010

PROJECT M-B192

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
	3	192/85 AB	25
	3	192/85 R	139
	38	192/85 AA	262
192/85.42	1	192/85 A	45
	1	192/85 CA	145
	1	192/85 R	139
	14	192/85 AA	262
192/85.43	2	192/85 AB	25
	4	192/85 AA	262
192/85.44	3	192/85 AA	262
192/85.45	6	192/85 AA	262
192/85.46	1	192/85 AA	262
192/85.47	1	192/86	63
	1	192/87.14	10
	1	192/91 R	124
	2	192/85 AB	25
	2	192/87.13	54
	2	192/91 A	72
	28	192/85 AT	40
192/85.48	1	192/91 A	72
	2	192/91 R	124
	3	192/86	63
	6	192/85 C	51
	7	192/85 R	139
192/85.49	1	192/85 AA	262
	1	192/85 C	51
	1	192/85 R	139
	2	192/85 A	45
	3	192/91 A	72
	22	192/85 CA	145
192/85.5	1	192/85 A	45
	1	192/85 AA	262
	2	192/91 A	72
	4	192/85 CA	145
192/85.51	1	192/85 AA	262
	1	192/87.1	8
	2	192/85 C	51
	3	192/85 R	139
	3	192/86	63
	5	192/91 R	124
	14	192/91 A	72
	60	192/85 CA	145
192/85.52	1	192/86	63

FEBRUARY 02, 2010

PROJECT M-B192

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
	1	192/91 R	124
	11	192/91 A	72
	13	192/85 CA	145
192/85.53	1	192/85 A	45
	1	192/85 AT	40
	1	192/85 C	51
	1	192/85 V	10
	1	192/87.15	34
	1	192/91 R	124
	2	192/85 R	139
	2	192/86	63
	6	192/91 A	72
	17	192/85 CA	145
192/85.54	1	192/91 R	124
	4	192/91 A	72
	13	192/85 CA	145
192/85.56	1	192/85 R	139
	1	192/91 R	124
	2	192/86	63
	2	192/91 A	72
	3	192/85 CA	145
	5	192/85 C	51
192/85.57	1	192/85 V	10
	3	192/85 R	139
	6	192/85 C	51
	6	192/86	63
	25	192/91 R	124
192/85.58	1	192/85 R	139
	1	192/85 V	10
	66	192/91 R	124
192/85.59	1	192/85 AT	40
	1	192/85 CA	145
	1	192/86	63
	1	192/87.13	54
	1	192/91 R	124
	4	192/85 R	139
	16	192/85 C	51
192/85.6	1	192/91 R	124
	3	192/85 C	51
192/85.61	1	192/85 AT	40
	1	192/87.11	56
	3	192/87.19	23
	4	192/85 R	139

FEBRUARY 02, 2010

PROJECT M-B192

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
192/85.62	2	192/85 R	139
192/85.63	1	192/85 CA	145
	1	192/85 V	10
	1	192/86	63
	1	192/87.15	34
	1	192/87.19	23
	2	192/87.14	10
	4	192/85 C	51
	6	192/87.13	54
	7	192/85 AA	262
	52	192/85 R	139
192/94	1	192/85 CA	145
418/171	1	192/85 R	139
477/18	1	192/87.1	8
74/733.1	1	192/85 R	139
92/23	1	192/85 C	51

FEBRUARY 02, 2010

PROJECT M-B192

DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number of ORs	New Classification	Number of ORs
192/85 A	45	192/85.5	1
		192/85.02	2
		192/85.05	1
		192/85.08	1
		192/85.18	6
		192/85.21	10
		192/85.22	2
		192/85.23	15
		192/85.39	1
		192/85.41	1
		192/85.42	1
		192/85.49	2
		192/85.53	1
		192/48.611	1
192/85 C	51	92/23	1
		192/85.6	3
		192/85.01	1
		192/85.02	1
		192/85.24	3
		192/85.48	6
		192/85.49	1
		192/85.51	2
		192/85.53	1
		192/85.56	5
		192/85.57	6
		192/85.59	16
		192/85.63	4
		192/48.607	1
192/85 F	14	192/85.02	9
		192/85.24	1
		192/85.28	1
		192/85.33	2
		192/85.39	1
192/85 R	139	74/733.1	1
		192/85.4	1
		192/85.01	27
		192/85.02	3
		192/85.09	2
		192/85.13	1
		192/85.17	1
		192/85.18	2
		192/85.21	3
		192/85.23	1

FEBRUARY 02, 2010

PROJECT M-B192

DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number of ORs	New Classification	Number of ORs
		192/85.24	2
		192/85.27	1
		192/85.28	1
		192/85.33	1
		192/85.39	3
		192/85.41	3
		192/85.42	1
		192/85.48	7
		192/85.49	1
		192/85.51	3
		192/85.53	2
		192/85.56	1
		192/85.57	3
		192/85.58	1
		192/85.59	4
		192/85.61	4
		192/85.62	2
		192/85.63	52
		192/48.601	3
		192/48.613	1
		418/171	1
192/85 V	10	192/85.04	1
		192/85.06	1
		192/85.08	1
		192/85.15	3
		192/85.53	1
		192/85.57	1
		192/85.58	1
		192/85.63	1
192/85 AA	262	192/106 R	1
		192/85.3	11
		192/85.4	8
		192/85.5	1
		192/48.61	1
		192/85.01	1
		192/85.02	28
		192/85.05	3
		192/85.07	3
		192/85.08	1
		192/85.09	4
		192/85.21	5
		192/85.22	1
		192/85.23	1

FEBRUARY 02, 2010

PROJECT M-B192

DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number of ORs	New Classification	Number of ORs
		192/85.24	26
		192/85.25	11
		192/85.26	2
		192/85.27	1
		192/85.28	1
		192/85.29	5
		192/85.31	1
		192/85.32	5
		192/85.33	8
		192/85.34	24
		192/85.35	6
		192/85.36	1
		192/85.37	2
		192/85.38	3
		192/85.39	10
		192/85.41	38
		192/85.42	14
		192/85.43	4
		192/85.44	3
		192/85.45	6
		192/85.46	1
		192/85.49	1
		192/85.51	1
		192/85.63	7
		192/48.607	1
		192/48.611	7
		192/48.614	2
		192/48.618	1
		192/48.619	1
192/85 AB	25	192/85.4	1
		192/85.02	1
		192/85.09	5
		192/85.21	3
		192/85.22	6
		192/85.31	1
		192/85.41	3
		192/85.43	2
		192/85.47	2
		192/48.618	1
192/85 AT	40	192/85.02	5
		192/85.12	1
		192/85.18	1
		192/85.21	1

FEBRUARY 02, 2010

PROJECT M-B192

DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number of ORs	New Classification	Number of ORs
		192/85.47	28
		192/85.53	1
		192/85.59	1
		192/85.61	1
		192/48.609	1
192/85 CA	145	192/94	1
		192/85.1	1
		192/85.5	4
		192/85.02	1
		192/85.07	1
		192/85.15	3
		192/85.18	1
		192/85.24	1
		192/85.42	1
		192/85.49	22
		192/85.51	60
		192/85.52	13
		192/85.53	17
		192/85.54	13
		192/85.56	3
		192/85.59	1
		192/85.63	1
		192/48.603	1
192/86	63	192/85.3	1
		192/85.01	1
		192/85.02	1
		192/85.13	1
		192/85.15	1
		192/85.16	1
		192/85.18	4
		192/85.21	3
		192/85.22	7
		192/85.23	1
		192/85.24	1
		192/85.25	2
		192/85.27	1
		192/85.29	1
		192/85.32	1
		192/85.33	4
		192/85.34	1
		192/85.37	1
		192/85.38	2
		192/85.47	1

FEBRUARY 02, 2010

PROJECT M-B192

DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number of ORs	New Classification	Number of ORs
		192/85.48	3
		192/85.51	3
		192/85.52	1
		192/85.53	2
		192/85.56	2
		192/85.57	6
		192/85.59	1
		192/85.63	1
		192/48.607	2
		192/48.611	1
		192/48.612	2
		192/48.613	1
		192/48.614	1
		192/48.615	1
192/88 A	83	192/85.02	1
		192/85.04	1
		192/85.05	27
		192/85.06	2
		192/85.07	3
		192/85.08	3
		192/85.09	28
		192/85.11	2
		192/85.12	1
		192/85.15	11
		192/48.611	4
192/88 B	60	192/85.02	2
		192/85.04	2
		192/85.12	34
		192/85.13	22
192/88 R	2	192/85.09	1
		192/85.13	1
192/91 A	72	192/85.2	2
		192/85.5	2
		192/85.09	2
		192/85.15	3
		192/85.18	2
		192/85.21	8
		192/85.23	4
		192/85.33	2
		192/85.37	4
		192/85.47	2
		192/85.48	1
		192/85.49	3

FEBRUARY 02, 2010

PROJECT M-B192

DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number of ORs	New Classification	Number of ORs
		192/85.51	14
		192/85.52	11
		192/85.53	6
		192/85.54	4
		192/85.56	2
192/91 R	124	192/76	1
		192/85.6	1
		192/85.01	1
		192/85.13	1
		192/85.14	4
		192/85.15	8
		192/85.21	1
		192/85.33	1
		192/85.37	2
		192/85.47	1
		192/85.48	2
		192/85.51	5
		192/85.52	1
		192/85.53	1
		192/85.54	1
		192/85.56	1
		192/85.57	25
		192/85.58	66
		192/85.59	1
192/87.1	8	192/85.51	1
		192/48.601	2
		192/48.607	1
		192/48.609	1
		192/48.611	1
		192/48.614	1
		477/18	1
192/87.11	56	192/48.61	3
		192/85.01	1
		192/85.61	1
		192/48.601	1
		192/48.602	2
		192/48.603	4
		192/48.605	1
		192/48.606	1
		192/48.607	1
		192/48.611	17
		192/48.613	1
		192/48.614	8

FEBRUARY 02, 2010

PROJECT M-B192

DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number of ORs	New Classification	Number of ORs
		192/48.617	1
		192/48.618	8
		192/48.619	6
192/87.12	8	192/48.601	1
		192/48.611	1
		192/48.614	4
		192/48.618	2
192/87.13	54	192/85.13	1
		192/85.47	2
		192/85.59	1
		192/85.63	6
		192/48.601	17
		192/48.602	1
		192/48.607	3
		192/48.608	1
		192/48.609	5
		192/48.611	6
		192/48.614	8
		192/48.615	1
		192/48.618	2
192/87.14	10	192/85.47	1
		192/85.63	2
		192/48.602	2
		192/48.607	2
		192/48.614	2
		192/48.615	1
192/87.15	34	192/85.09	1
		192/85.21	1
		192/85.53	1
		192/85.63	1
		192/48.606	1
		192/48.609	3
		192/48.611	15
		192/48.612	1
		192/48.613	1
		192/48.614	5
		192/48.615	2
		192/48.618	2
192/87.16	11	192/48.604	4
		192/48.611	1
		192/48.612	6
192/87.17	33	192/85.3	1
		192/48.61	1

FEBRUARY 02, 2010

PROJECT M-B192

DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

Source Classification	Number of ORs	New Classification	Number of ORs
		192/48.604	1
		192/48.611	1
		192/48.612	1
		192/48.613	28
192/87.18	9	192/48.601	6
		192/48.607	1
		192/48.609	1
		192/48.613	1
192/87.19	23	192/85.61	3
		192/85.63	1
		192/48.601	11
		192/48.607	3
		192/48.609	1
		192/48.611	2
		192/48.613	1
		192/48.618	1

C. CHANGES TO THE USPC-TO-IPC CONCORDANCE

USPC Class	USPC Subclass	IPC Subclass	IPC Notation
192	48.601	F16D	25/10, 25/00, 21/00
192	48.602-48.608	F16D	25/10, 25/08, 21/00
192	48.609-48.619	F16D	25/10, 25/06, 21/00
192	85.01	F16D	25/00, 43/28
192	85.02	F16D	25/02, 43/28
192	85.03-85.16	F16D	25/04, 43/28
192	85.17	F16D	25/06, 43/28
192	85.18	F16D	25/061, 43/28
192	85.19	F16D	25/062, 43/28
192	85.2	F16D	25/063, 43/28
192	85.21	F16D	25/0632, 43/28
192	85.22	F16D	25/0632, 25/064, 43/28
192	85.23	F16D	25/0635, 43/28
192	85.24-85.46	F16D	25/0638, 43/28
192	85.47	F16D	25/065, 43/28
192	85.48-85.6	F16D	25/08, 43/28
192	85.61	F16D	25/12, 13/72, 13/74
192	85.62-85.63	F16D	25/12

D. CHANGES TO THE DEFINITIONS (Project No. M-B192)

CLASS 73 -- MEASURING AND TESTING

Definitions Modified

Subclass 488: Under SEE OR SEARCH CLASS, in the reference to Class 192,

Delete:

subclass .02 for automatic control of a motor and clutch by speed, and

Under SEE OR SEARCH CLASS

Insert:

477, Interrelated Power Delivery Controls, Including Engine Control, subclasses 14, 64+, 80+, 84+, 148, 154, 159+, 169, 175+, 186, 187, and 195+ for speed responsive control of an engine and associated device.

CLASS 74 -- MACHINE ELEMENT OR MECHANISM

Definitions Modified

Subclass 364: Under SEE OR SEARCH CLASS

Delete:

the reference to Class 192

Insert:

192, Clutches and Power-Stop Control, subclasses 48.601+ and 85.01+ for fluid pressure operated clutches.

CLASS 137 -- FLUID HANDLING

Definitions Modified

Subclass 625:

Delete :

SEE OR SEARCH CLASS and the reference to Class 192

CLASS 188 -- BRAKES

Definitions Modified

Subclass 72.4: Under SEE OR SEARCH CLASS

Delete:

85+

Insert:

48.601+ and 85.01+

Subclass 170: Under SEE OR SEARCH CLASS

Delete:

the reference to Class 192

Insert:

192, Clutches and Power-Stop Control, subclasses 85.37 and 85.57+ for a fluid pressure released clutch that may be spring applied.

CLASS 192 -- CLUTCHES AND POWER-STOP CONTROL

Definitions Abolished:

Subclasses

85, 86, 87.1, 87.11-87.19, 88, 91

Definitions Modified

Subclass 3.29: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete :

the reference to subclasses 85+

Insert:

48.601+ and 85.01+, for a fluid pressure operated clutch.

Subclass 3.31:Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

the reference to subclass 87.12

Subclass 30:

Delete:

The body of the definition

Insert:

This subclass is indented under the class definition. A power-transmitting device utilizing friction or interlocking parts for securing and releasing driving continuity as between two shafts or a pulley and a shaft or other driving and driven parts.

Subclass 48.1: In the title

Delete:

assemblage

Insert:

assemblages

In the body of the definition

Delete:

31

Insert:

30

Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

the reference to subclasses 87.1+

Subclass 48.9:Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

the reference to subclasses 87.14+

Insert:

48.604+ and 48.612+, for multiple fluid clutches having a common actuator that may allow only alternate engagement of the clutches.

Subclass 54.3: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete :

85+

Insert:

48.601+ and 85.01+

Subclass 56.3:

Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

85+

Insert:

48.601+ and 85.01+

Subclass 70.11:

Insert:

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.09+ and 85.24+, for a clutch having more than two mating friction elements.

Subclass 70.251: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Insert:

85.62, for a fluid-operated clutch including a wear compensator that operates by fluid actuator adjustment or control rather than by adjustment of relative positions of friction elements.

Subclass 82:

Delete:

The body of the definition

Insert:

This subclass is indented under subclass 30. Subject matter including an actuating device that causes the power-transmitting device to transition into or out of a state in which it provides the driving continuity between the driving and driven parts.

Subclass 106:

Insert:

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.25, for a fluid-operated clutch having a balance chamber for counteracting the effects of rotation-induced pressure in the operating fluid.

Subclass 113.1:

Insert:

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.61, for cooling or lubricating means for a fluid-operated clutch.

Definitions Established

48.601 Having fluid pressure operator:

This subclass is indented under subclass 48.1. Subject matter in which the clutch-assemblages include a clutch-assemblage that is actuated (i.e., caused to engage or disengage) by the action of fluid under pressure.

(1) Note. The phrase "action of fluid under pressure" is intended to include the effects of fluid whose pressure is less than ambient or atmospheric pressure and typically referred to as "vacuum" or "partial vacuum".

SEE OR SEARCH THIS CLASS, SUBCLASS:

3.25+, for a combination of vortex-flow drive and a plurality of clutches, wherein the clutches may be fluid-pressure operated.

3.29+, and 3.33, for a fluid-pressure operator for a clutch that is combined with a vortex-flow drive.

48.1+, for a combination of multiple clutches that are mechanically operated.

85.01+, for a clutch having a fluid-pressure operator.

SEE OR SEARCH CLASS:

92, Expansible Chamber Devices, appropriate subclasses for an expansible chamber device, per se, even though disclosed as a means to operate a clutch.

303, Fluid-Pressure and Analogous Brake Systems, appropriate subclasses for systems of distribution of fluid to motors of more general application.

48.602 Operator rotatable relative to its clutch-assemblage:

This subclass is indented under subclass 48.601. Subject matter in which the fluid under pressure acts through a fluid motor that is rotatable relative to both the driving and driven parts connected by the fluid-operated clutch-assemblage.

48.603 Operator coaxial with its clutch-assemblage:

This subclass is indented under subclass 48.602. Subject matter in which an axis along which the fluid motor acts is aligned with an axis of rotation of the fluid-operated clutch-assemblage.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.611+, 48.617, and 48.618+, for a clutch and coaxial actuator that may rotate with the clutch.

48.604 Common or interconnected operator(s):

This subclass is indented under subclass 48.603. Subject matter in which the fluid motor contributes to operation (engagement or disengagement) of two or more of the clutch-assemblages or in which the fluid motor and an additional fluid motor operate two or more of the clutch-assemblages and the position of an output element (e.g., piston, actuating shaft) of one of the fluid motors is dependent upon the position of an output element the other fluid motor.

SEE OR SEARCH THIS CLASS, SUBCLASS(ES):

3.27, for the combination of a vortex-flow drive and alternatively operative clutches that may include a common actuator or interconnected actuators.

48.612+, for common or interconnected actuator(s) that may rotate with associated clutches.

48.605 Operator between clutch-assemblages:

This subclass is indented under subclass 48.604. Subject matter in which the fluid motor is located between two of the clutch-assemblages.

SEE OR SEARCH THIS CLASS, SUBCLASS(ES):

48.613 and 48.614, for clutches and an actuator that may rotate relative to at least one of the clutches and that is located between the clutches.

48.606 Axially spaced coaxial clutch-assemblages:

This subclass is indented under subclass 48.603. Subject matter in which two of the clutch-assemblages rotate about a common axis and have disengageable power-transmitting portions (e.g., friction surfaces), all disengageable power-transmitting portions of one of the two clutch-assemblages being axially spaced at all times from all disengageable power-transmitting portions of the other clutch-assemblage.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.607 and 48.609+, for other axially spaced coaxial clutches.

48.607 Axially spaced coaxial clutch-assemblages:

This subclass is indented under subclass 48.602. Subject matter in which two of the clutch-assemblages rotate about a common axis and have disengageable power-transmitting portions (e.g., friction surfaces), all disengageable power-transmitting portions of one of the two clutch-assemblages being axially spaced at all times from all disengageable power-transmitting portions of the other clutch-assemblage.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.606 and 48.609+, for other axially spaced coaxial clutches.

48.608 Plural fluid pressure operators forming nested pistons:

This subclass is indented under subclass 48.602. Subject matter in which the fluid pressure also acts through an additional fluid motor, each fluid motor having a piston movable by application of the fluid pressure thereto, the piston of one of the fluid motors forming a cylinder of the other fluid motor in which cylinder the piston of the other fluid motor is movable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.61 and 48.616+, for other clutches having actuators forming nested pistons.

48.609 Axially spaced coaxial clutch-assemblages:

This subclass is indented under subclass 48.601. Subject matter in which two of the clutch-assemblages rotate about a common axis and have disengageable power-transmitting portions (e.g., friction surfaces), all disengageable power-transmitting portions of one of the two clutch-assemblages being axially spaced at all times from all disengageable power-transmitting portions of the other of the two clutch-assemblages.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.606 and 48.607, for other axially spaced coaxial clutches.

48.61 Plural fluid pressure operators forming nested pistons:

This subclass is indented under subclass 48.609. Subject matter including two fluid motors that actuate one or more of the clutch assemblages, each fluid motor having a piston movable by application of the fluid pressure thereto, the piston of one of the fluid motors forming a cylinder of the other fluid motor in which cylinder the piston of the other fluid motor is movable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.608 and 48.616+, for other clutches having actuators forming nested pistons.

48.611 Operator coaxial with its clutch-assemblage:

This subclass is indented under subclass 48.609. Subject matter in which the fluid under pressure acts through a fluid motor and an axis along which the fluid motor acts is aligned with an axis of rotation of the fluid actuated clutch-assemblage.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.603+, 48.617, and 48.618+, for a clutch and coaxial actuator.

48.612 Common or interconnected operator(s):

This subclass is indented under subclass 48.611. Subject matter in which the fluid motor contributes to operation (engagement or disengagement) of two of the clutch-assemblages or in which the fluid motor and an additional fluid motor operate two of the clutch-assemblages and the position of an output element (e.g., piston, actuating shaft) of one of the fluid motors is dependent upon the position of an output element the other fluid motor.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.604+, for common or interconnected actuator(s) that rotate relative to associated clutch(es).

3.27, for the combination of a vortex-flow drive and alternatively operative clutches that may include a common or interconnected actuator(s).

48.613 Operator between clutch-assemblages:

This subclass is indented under subclass 48.612. Subject matter in which the fluid motor is located between the two clutch-assemblages.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.605 and 48.614, for plural clutches and an actuator located between the clutches.

48.614 Operator between clutch-assemblages:

This subclass is indented under subclass 48.611. Subject matter in which the fluid motor is located between two of the clutch-assemblages.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.605 and 48.613, for other actuators located between clutches.

48.615 Radially acting operator:

This subclass is indented under subclass 48.609. Subject matter in which the fluid under pressure acts through a fluid motor and an axis along which the fluid motor acts is substantially perpendicular to the axis of rotation of the fluid actuated clutch-assemblage.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.12+, 85.16, and 85.47, for a clutch operated by a radially acting fluid pressure actuator.

48.616 Plural fluid pressure operators forming nested pistons:

This subclass is indented under subclass 48.601. Subject matter in which the fluid under pressure acts through two fluid motors that actuate one or more of the clutch assemblages, each fluid motor having a piston movable by application of the fluid pressure thereto, the piston of one of the fluid motors forming a cylinder of the other fluid motor in which cylinder the piston of the other fluid motor is movable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.608 and 48.61, for clutch actuators forming nested pistons.

48.617 At least one operator coaxial with its clutch-assemblage:

This subclass is indented under subclass 48.616. Subject matter in which at least one of the fluid motors acts along an axis that is aligned with an axis of rotation of (one of) the clutch-assemblage(s) it actuates.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.603+, 48.611+, and 48.618+, for a clutch and coaxial actuator.

48.618 Operator coaxial with its clutch-assemblage:

This subclass is indented under subclass 48.601. Subject matter in which the fluid under pressure acts through a fluid motor to actuate the clutch-assemblage and an axis along which the fluid motor acts is aligned with an axis of rotation of the clutch-assemblage.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.603+, 48.611+, and 48.617, for a clutch and coaxial actuator.

48.619 Radially spaced coaxial clutch-assemblages:

This subclass is indented under subclass 48.618. Subject matter in which the clutch-assemblages include two clutch-assemblages having the same axis of rotation and having disengageable power-transmitting portions (e.g., friction surfaces), the clutch-assemblages being arranged such that a plane perpendicular to the axis of rotation passes through or between at least one disengageable power-transmitting portion of each of the two clutch-assemblages.

85.01 Fluid pressure:

This subclass is indented under subclass 82. Subject matter in which the actuating device is powered by the action of a fluid under pressure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

3.29+, and 3.33, for a fluid-pressure operator to engage or actuate a clutch that is combined with a vortex-flow drive.

48.601, for plural clutches at least one of which is fluid-pressure operated.

56.3, for an overload release mechanism in a fluid-pressure operated clutch.

SEE OR SEARCH CLASS:

92, Expansible Chamber Devices, appropriate subclasses for an expansible chamber device, per se, even though disclosed as a means to operate a clutch.

303, Fluid-Pressure and Analogous Brake Systems, appropriate subclasses for systems of distribution of fluid to motors of more general application.

85.02 Operator force derived from clutch input or output:

This subclass is indented under subclass 85.01. Subject matter in which power is transmitted from one of the driving and driven parts via the fluid to the actuating device.

85.03 Elastic (e.g., diaphragm, pneumatic tube):

This subclass is indented under subclass 85.01. Subject matter in which the actuating device includes a flexible element that flexes in response to changes in fluid pressure.

(1) Note. Devices in which the actuating device includes sliding seals, in addition to a flexible element, along which sliding occurs during expansion or contraction are included in this subclass.

SEE OR SEARCH CLASS:

92, Expansible Chamber Devices, subclasses 34+ for a bellows type expansible chamber device, and subclasses 90+ for a flexible wall type expansible chamber device.

85.04 Rotating with clutch input or output:
This subclass is indented under subclass 85.03. Subject matter in which the flexible element rotates integrally with one of the driving and driven parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.17+, for an elastic clutch-actuating member that rotates relative to the clutch input and output.

85.05 And causing purely axial movement:
This subclass is indented under subclass 85.04. Subject matter in which flexing of the flexible element causes a component of the power-transmitting device to move in a first direction along a path that is parallel to the axis of rotation of the driving or driven part.

SEE OR SEARCH THIS CLASS, SUBCLASS:
85.2+, 85.15, and 85.49+, for other actuator configurations for producing axial displacement of a clutch element.

85.06 Including flexible friction discs:
This subclass is indented under subclass 85.05. Subject matter in which the flexible element includes a pair of flexible discs on which friction surfaces for providing the driving continuity are located, the fluid acting directly on the discs to cause elastic deformation thereof and, thereby, affect the extent of engagement of the friction surfaces with each other.

85.07 Plural oppositely acting elastic operators:
This subclass is indented under subclass 85.05. Subject matter in which the power-transmitting device includes an additional flexible element on which the fluid acts to cause it to flex and move in a second direction substantially opposite the first direction when the fluid acts on the flexible elements.

85.08 Clutch has flat friction surfaces:
This subclass is indented under subclass 85.05. Subject matter in which the component of the power-transmitting device is a first member having a first planar surface and the power-transmitting device includes a second member having a second planar surface parallel to the first planar surface, movement of the component in the first direction resulting in engagement of the first and second planar surfaces to transmit power therebetween by friction, the first and second members being drivingly connected, respectively, to the driving and driven parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.23+, for a clutch having flat friction surfaces that is operated by a fluid-pressure actuator other than an elastic actuator.

85.09 More than two friction elements:
This subclass is indented under subclass 85.08. Subject matter including a third member drivingly connected to one of the driving and driven parts and having a third planar surface parallel to the first planar surface, the second member having a fourth planar surface parallel to the first planar surface, the third member being movable axially relative to the second member such that the third and fourth planar surfaces engage to transmit power therebetween by friction.

SEE OR SEARCH THIS CLASS, SUBCLASS:

70.11+ and 85.24+, for a clutch having three or more friction elements.

85.1 Plate or diaphragm spring release:
This subclass is indented under subclass 85.09. Subject matter in which the first, second, third, and fourth planar surfaces are separated by the force of a substantially planar spring with or without radial slits that form a plurality of fingers.

85.11 Clutch has positively engaging clutch members:
This subclass is indented under subclass 85.05. Subject matter in which the power-transmitting device includes separable interlocking power-transmitting elements.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.18, for a clutch having positively engaging clutch members operated by a fluid actuator other than an elastic actuator.

85.12 And causing purely radial movement:
This subclass is indented under subclass 85.04. Subject matter in which flexing of the flexible element causes a first component of the power-transmitting device to move substantially along a line perpendicular to the axis of rotation of the driving or driven part when the fluid acts on the flexible element.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.615, 85.16, and 85.47, for a clutch operated by a radially acting fluid pressure actuator.

85.13 Elastic operator integral with radially outer clutch member:
This subclass is indented under subclass 85.12. Subject matter in which the first component engages a second component of the power-transmitting device in order to establish the driving continuity between the driving and driven parts, the first and second components being radially spaced and the flexible element having a portion that is fixed to the radially outer one of the first and second components.

85.14 Rotatable relative to clutch input and output:
This subclass is indented under subclass 85.03. Subject matter in which the flexible element is rotatable relative to both the driving and driven parts.

85.15 And causing purely axial movement:
This subclass is indented under subclass 85.14. Subject matter in which flexing of the flexible element causes a component of the power-transmitting device to move along a path that is parallel to the axis of rotation of the driving part or driven part.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.05+, 85.2+, and 85.49+, for other actuator configurations for producing axial displacement of a clutch element.

85.16 And causing purely radial movement:
This subclass is indented under subclass 85.14. Subject matter in which flexing of the flexible element causes a component of the power-transmitting device to move substantially along a line perpendicular to the axis of rotation of the driving or driven part.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.615, 85.12+, and 85.47, for a clutch operated by a radially acting fluid pressure actuator.

85.17 Piston and cylinder operator rotating with clutch input or output:
This subclass is indented under subclass 85.01. Subject matter in which the actuating device includes an enclosure (cylinder) in which a partition (piston) is slidably received in sealing engagement with the enclosure, fluid being admitted into the enclosure to apply a force to the enclosure and the partition, the enclosure or the partition being connected to and rotating integrally with the driving or driven part, relative displacement of the enclosure and partition due to the force applied by the fluid contributing to the transition of the power-transmitting device into or out of the state in which it provides the driving continuity between the driving and driven parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.04+, for an elastic clutch actuating member that rotates integrally with the clutch input or output.

85.18 Positive clutch:
This subclass is indented under subclass 85.17. Subject matter in which the power-transmitting device includes separable interlocking power-transmitting elements.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.11, for a clutch having positively engaging clutch members operated by an elastic fluid actuator.

85.19 Friction clutch:
This subclass is indented under subclass 85.17. Subject matter in which the power-transmitting device includes power-transmitting elements having mutually engageable surfaces that transmit power from one to another substantially solely by friction forces when pressed together.

85.2 Having friction elements movable axially only:
This subclass is indented under subclass 85.19. Subject matter in which the power-transmitting elements are engageable and disengageable by relative movement along a path that is parallel to an axis of rotation of at least one of the power-transmitting elements.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.05+, 85.15, and 85.49+, for other actuator configurations for producing axial displacement of a clutch element.

85.21 Having conical or frustoconical friction surfaces (e.g., cone clutch):
This subclass is indented under subclass 85.2. Subject matter in which the mutually engageable surfaces of the power-transmitting elements have the shape of a cone or frustum of a cone.

SEE OR SEARCH THIS CLASS, SUBCLASS:

66.2, for axially engaging clutches having conical or frustoconical friction surfaces.

85.22 Plural radially spaced frustoconical surfaces:
This subclass is indented under subclass 85.21. Subject matter in which the mutually engageable surfaces of the power-transmitting elements include a plurality of radially spaced concentric frustoconical surfaces on each power-transmitting element.

SEE OR SEARCH THIS CLASS, SUBCLASS:

66.21, for axially engaging clutches having plural radially spaced frustoconical friction surfaces.

85.23 Having flat friction surfaces:
This subclass is indented under subclass 85.2. Subject matter in which the mutually engageable surfaces of the power-transmitting elements are substantially planar.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.08+, for a clutch having flat friction surfaces that is operated by an elastic fluid-pressure actuator.

85.24 More than two friction elements:
This subclass is indented under subclass 85.23. Subject matter in which the power-transmitting device has at least three of the power-transmitting elements.

SEE OR SEARCH THIS CLASS, SUBCLASS:

70.11+ and 85.09+, for a clutch having three or more friction elements.

85.25 Including balance chamber:
This subclass is indented under subclass 85.24. Subject matter including a fluid receiving space outside the enclosure that rotates with the actuating device and is arranged such that rotation induced fluid pressure in the space acts on the partition or the enclosure to counteract an effect of a similar rotation induced pressure in the fluid in the enclosure.

(1) Note. The purpose of the balance chamber is, typically, to prevent a rotating clutch from being locked in an engaged (power-transmitting) state due to centrifugal forces acting on the fluid used to initially engage the clutch.

SEE OR SEARCH THIS CLASS, SUBCLASS:

106, for a speed responsive clutch that may be fluid operated and include means to prevent locking of the clutch due to centrifugal forces acting on the operating fluid.

85.26 Cam mechanism between piston and friction element:
This subclass is indented under subclass 85.24. Subject matter in which motion is transmitted from the enclosure or partition to at least one of the power-transmitting elements by a mechanism including slidably engaged relatively moving surfaces that include portions inclined to the direction of relative motion at a point of contact between the surfaces.

85.27 Auxiliary exhaust or relief passage from piston chamber:
This subclass is indented under subclass 85.24. Subject matter in which there are one or more primary inlets and outlets for the fluid in the enclosure or partition which inlets and outlets supply and return substantially the bulk of the fluid to the enclosure and the enclosure or partition includes an additional passage that permits flow of fluid out of the enclosure to provide an additional level of control over the action of the fluid on the device.

(1) Note. A plurality of return passages extending from and leading along similar paths to a fluid receiver or common exhaust channel is not sufficient to warrant placement here. This subclass requires a passage associated with a substantially different fluid exhaust path.

85.28 Fluid escape from piston chamber by rotation-induced pressure:
This subclass is indented under subclass 85.27. Subject matter in which substantially all of the flow of fluid from the enclosure through the additional passage is the result of pressurization of the fluid relative to pressure outside of the enclosure due to rotation of the enclosure.

85.29 In piston:
This subclass is indented under subclass 85.27. Subject matter in which the additional passage is formed in the partition.

85.3 Valve in passage:
This subclass is indented under subclass 85.29. Subject matter including structure that moves between a state in which it interrupts or blocks flow through the additional passage and a state in which it permits the flow during operation of the power-transmitting device.

85.31 Valve in passage:
This subclass is indented under subclass 85.27. Subject matter including structure that moves between a state in which it interrupts or blocks flow through the additional passage and a state in which it permits the flow during operation of the power-transmitting device.

85.32 Variable fluid contacting piston area:
This subclass is indented under subclass 85.24. Subject matter in which the fluid is brought into contact with different portions of the partition at different times during a single stroke of the partition.

(1) Note. Typically, the total area of contact between the fluid and the partition (piston) is increased in stages resulting in a more gradual increase in the force acting on the power-transmitting elements than would occur if the fluid were introduced into contact with the entire area at once.

85.33 Axially stationary piston, moving cylinder:
This subclass is indented under subclass 85.24. Subject matter in which the partition is fixed relative to the driving or driven part during operation of the power-transmitting device.

85.34 Cushioning element between piston and friction element:
This subclass is indented under subclass 85.24. Subject matter including a resilient element that deforms significantly in operation located in a force transmission path between the partition and one of the power-transmitting elements.

(1) Note. Typically, the resilient element provides for a more gradual increase in the force acting on the power-transmitting elements than would occur without the resilient element.

85.35 Operator acts on friction elements via diaphragm spring or lever:
This subclass is indented under subclass 85.24. Subject matter in which at least part of the force applied to the partition by the fluid is transmitted to the power-transmitting elements through a radially extending finger of an annular spring or a lever pivotally mounted in the power-transmitting device.

85.36 Electric or magnetic release:
This subclass is indented under subclass 85.24. Subject matter including a device utilizing electrical or magnetic forces that is at least partially responsible for causing the power-transmitting device to transition out of the state in which it provides the driving continuity between the driving and driven parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

84.1+, for an electric or magnetic operator that applies a clutch.

85.37 Fluid released clutch:
This subclass is indented under subclass 85.24. Subject matter in which the fluid under pressure is used to cause the power-transmitting device to transition out of the state in which it provides the driving continuity between the driving and driven parts.

85.38 And fluid pressure engaged:
This subclass is indented under subclass 85.37. Subject matter in which the force applied by the fluid to the enclosure and the partition contributes to the transition of the power-transmitting device into the state that provides the driving continuity between the driving and driven parts.

85.39 Spring released clutch:
This subclass is indented under subclass 85.24. Subject matter including an elastic element that deforms significantly in operation that is at least in part responsible for the transition of the power-transmitting device out of the state in which it provides the driving continuity between the driving and driven parts.

85.4 Release spring between discs:
This subclass is indented under subclass 85.39. Subject matter in which the elastic element is located between and presses in separating directions against two of the power-transmitting elements.

85.41 Coil spring:
This subclass is indented under subclass 85.39. Subject matter in which the elastic element has a helical shape and is deflected along its axis during use.

85.42 Encircling clutch axis of rotation:
This subclass is indented under subclass 85.41. Subject matter in which the axis of rotation of the power-transmitting elements passes through the interior of the elastic element.

85.43 Having particular friction element structure:
This subclass is indented under subclass 85.24. Subject matter including details of the power-transmitting elements.

85.44 Having particular piston seal:
This subclass is indented under subclass 85.24. Subject matter including details of means for preventing leakage of fluid between the partition and enclosure.

85.45 Piston has interrupted engagement face:
This subclass is indented under subclass 85.24. Subject matter in which the surface of the partition opposite its surface facing the interior of the enclosure has first and second portions and has a third portion located between the first and second portions, the first and second portions contacting one of the power-transmitting elements to apply an actuating force to the power-transmitting element while the third portion is spaced from the power-transmitting element.

85.46 Piston has nonplanar engagement face:
This subclass is indented under subclass 85.24. Subject matter in which there is at least one area of contact between the partition and one of the power-transmitting elements that is non-planar.

85.47 Having radially displaceable friction surface:
This subclass is indented under subclass 85.19. Subject matter in which some of the mutually engageable surfaces of the power-transmitting elements change their distance from the axis of rotation of at least one of the power transmitting elements as the mutually engageable surfaces are pressed together.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.615, 85.12+, and 85.16, for a clutch operated by a radially acting fluid pressure actuator.

85.48 Operator rotatable relative to clutch input and output:
This subclass is indented under subclass 85.01. Subject matter in which the actuating device includes a fluid motor through which the fluid affects the state of the power-transmitting device, the fluid motor being rotatable relative to both the driving and driven parts.

85.49 And aligned with clutch axis of rotation:
This subclass is indented under subclass 85.48. Subject matter in which the fluid motor includes an actuating element that moves, under the pressure of the fluid, along a line coaxial with the axis of rotation of the driving part or driven part.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.05+, 85.2+, and 85.15, for other actuator configurations for producing axial displacement of a clutch element.

85.5 Operator acts on clutch through push rod extending coaxially through input or output shaft:
This subclass is indented under subclass 85.49. Subject matter in which the fluid motor affects the state of the power-transmitting device by moving an elongated element that is coaxial with and extends through a hollow shaft integral with one of the driving and driven parts.

85.51 Operator acts on clutch via diaphragm spring or lever:
This subclass is indented under subclass 85.49. Subject matter in which the fluid motor affects the state of the power-transmitting device through a radially slit spring having plural fingers or through a set of levers that extend radially of the axis of rotation of the driving part or driven part.

85.52 Pull-to-release type clutch:
This subclass is indented under subclass 85.51. Subject matter in which portions of the fingers or levers move with the actuating element of the fluid motor and in which fluid induced motion of the actuating element of the fluid motor in a direction generally away from power-transmitting elements of the power-transmitting device and toward the fluid motor places the power-transmitting device in a state in which it does not transmit power between the driving and driven parts.

85.53 Details of fluid operator:
This subclass is indented under subclass 85.49. Subject matter including details of the fluid motor.

85.54 Having particular seal:
This subclass is indented under subclass 85.53. Subject matter including details of means for preventing leakage of fluid within or from the fluid motor.

85.55 Details of master cylinder:
This subclass is indented under subclass 85.49. Subject matter including details of a piston and cylinder mechanism that pressurizes the fluid to cause it to act on the fluid motor.

85.56 Operator spaced from and parallel to clutch axis of rotation:
This subclass is indented under subclass 85.48. Subject matter in which the fluid motor includes an actuating element that moves, under the pressure of the fluid, along a line that is parallel to the axis of rotation of the driving part or driven part.

85.57 Fluid released clutch:
This subclass is indented under subclass 85.48. Subject matter in which the power-transmitting device is transitioned out of the state in which power is transmitted between the driving and driven members (i.e., disengaged) under power of the fluid motor.

85.58 By vacuum:
This subclass is indented under subclass 85.57. Subject matter in which the pressure of fluid that powers the fluid motor is less than the pressure of fluid surrounding the fluid motor.

85.59 Details of fluid operator:
This subclass is indented under subclass 85.48. Subject matter including details of the fluid motor.

85.6 Details of master cylinder:
This subclass is indented under subclass 85.48. Subject matter including details of a piston and cylinder mechanism that pressurizes the fluid to cause it to act on the fluid motor.

85.61 Cooling or lubricating:
This subclass is indented under subclass 85.01. Subject matter in which the power-transmitting device includes features for facilitating removal of heat from the power-transmitting device or for directing a lubricant into, out of, or through the power-transmitting device.

SEE OR SEARCH THIS CLASS, SUBCLASS:

113.1+, for clutch cooling and lubricating means, per se.

85.62 Having wear compensator:
This subclass is indented under subclass 85.01. Subject matter in which the power-transmitting device includes means to mitigate the effect on the operation of the power-transmitting device of dimensional changes in components thereof that occur with repeated use.

SEE OR SEARCH THIS CLASS, SUBCLASS:

70.251+, for a clutch having means for adjusting the position of a friction element relative to friction element moving means for compensating for wear of the friction element.

111.1+, for wear compensators, per se.

85.63 Including fluid pressure control:
This subclass is indented under subclass 85.01. Subject matter including means to regulate, set, or modulate the pressure of the fluid that powers the actuating device.

CLASS 415 -- ROTARY KINETIC FLUID MOTORS OR PUMPS

Definitions Modified

Class definition: In SECTION III - REFERENCES TO OTHER CLASSES

Delete:

the reference to Class 192

Insert:

477, Interrelated Power Delivery Controls, Including Engine Control, subclasses 57, 62+, and 168+ for the combination of a fluid rotary motor and a clutch mechanism, in which there are interrelated controls for the motor and the clutch, and subclass 205, for the combination of a fluid rotary motor and a brake or lock applied to the motor or its output shaft and having a mechanism for the joint control of the motor and the brake or lock.

CLASS 418 -- ROTARY EXPANSIBLE CHAMBER DEVICES

Definitions Modified

Subclass 17: Under SEE OR SEARCH CLASS

Delete:

the reference to Class 192

Insert:

477, Interrelated Power Delivery Controls, Including Engine Control, subclasses 84+ and 91, for interrelated power delivery controls automatically controlled by speed.

CLASS 464 -- ROTARY SHAFTS, GUDGEONS, HOUSINGS, AND FLEXIBLECOUPLINGS FOR ROTARY SHAFTS

Definitions Modified

Class definition: In SECTION IV - REFERENCES TO OTHER CLASSES, in the reference to Class 192

Delete:

85+

Insert:

48.601+ and 85.01+

Subclass 24: Under SEE OR SEARCH CLASS

Delete :

85+

Insert:

48.601+ and 85.01+