# EUROPEAN PATENT OFFICE U.S. PATENT AND TRADEMARK OFFICE

# CPC NOTICE OF CHANGES 785

DATE: JANUARY 1, 2020

# PROJECT RP0610

# The following classification changes will be effected by this Notice of Changes:

<u>Action</u>	<u>Subclass</u>	Group(s)
SCHEME:		
Symbols New:	F04B	1/03
Titles Changed:	F04B	Subclass
Titles Changed:	F04B	1/00, 1/0404, 1/0408, 1/0413, 1/0417, 1/0421, 1/0426, 1/043, 1/0435, 1/0439, 1/0443, 1/0448, 1/0452, 1/0456, 1/0461, 1/0465, 1/047, 1/0472, 1/0474, 1/0476, 1/0478, 1/053, 1/0531, 1/0533, 1/0535, 1/0536, 1/0538, 1/06, 1/063, 1/066, 1/10, 1/107, 1/1071, 1/1072, 1/1074, 1/1075, 1/1077, 1/1078, 1/113, 1/1133, 1/1136, 1/12, 1/122, 1/124, 1/126, 1/128, 1/141, 1/143, 1/145, 1/146, 1/148, 1/182, 1/184, 1/186, 1/188, 1/2007, 1/2014, 1/2021, 1/2028, 1/2035, 1/2042, 1/205, 1/2057,
		1/2064, 1/2071, 1/2078, 1/2085, 1/2092, 1/24, 1/28, 1/295, 1/30, 1/303, 1/306, 1/322, 1/324, 1/326, 1/328, 1/34 5/00
		7/00
		9/04
		13/00
		15/04
		19/04
		23/00, 23/12, 23/14
		27/00, 27/0437, 27/0804
		31/00
		35/00
		37/02, 37/08, 37/10
		39/00, 39/06, 39/12
		41/00
		43/02
		45/04, 45/06
		49/02, 49/20
		53/08, 53/18
Indents Changed:	F04B	45/08, 45/085, 45/10
Warnings Deleted:	F04B	Subclass
Warnings New:	F04B	1/00, 1/03, 1/06, 1/063, 1/066, 1/07, 1/08, 1/10, 1/107, 1/1071, 1/1072, 1/1074, 1/113, 1/20, 1/2007, 1/2014, 1/2092, 1/22, 1/30, 1/328
		23/10, 23/103, 23/106, 23/12, 23/14
		43/02, 43/14

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Action	Subclass	Group(s)
		45/04, 45/06, 45/061, 45/065, 45/067,
		45/073, 45/08, 45/085, 45/10
		49/12, 49/18
Notes Modified:	F04B	Subclass
Guidance Headings Modified:	F04B	1/00, 25/00
DEFINITIONS:		
Definitions New:	F04B	1/0435, 1/0448, 1/10, 1/1072, 1/14, 1/20, 1/328, 9/04, 19/04, 37/02, 37/08, 39/06, 39/12, 49/02, 49/20, 53/08, 53/18,
Definitions Modified:	F04B	Subclass, 1/00, 7/00, 13/00, 23/00, 27/00, 31/00, 35/00, 39/00, 41/00

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following [Check the ones included]:

1. CL	SSIFICATION SCHEME CHANGES
	A. New, Modified or Deleted Group(s)
	B. New, Modified or Deleted Warning(s)
	C. New, Modified or Deleted Note(s)
	D. New, Modified or Deleted Guidance Heading(s)
2. DEI	INITIONS
	A. New or Modified Definitions (Full definition template)
	B. Modified or Deleted Definitions (Definitions Quick Fix)
3.	REVISION CONCORDANCE LIST (RCL)
4. 🛛	CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5. 🔲	CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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# 1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

# SUBCLASS F04B - POSITIVE-DISPLACEMENT MACHINES FOR LIQUIDS; PUMPS

Type*	<u>Symbol</u>	Indent Level Number of dots (e.g. 0, 1, 2)	Title  "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	F04B	Subclass	POSITIVE-DISPLACEMENT MACHINES FOR LIQUIDS; PUMPS (machines for liquids, or pumps, of rotary-piston or oscillating-piston type F04C; non-positive-displacement pumps F04D; pumping of fluid by direct contact of another fluid or by using inertia of fluid to be pumped F04F)	
С	F04B1/00	0	Multi-cylinder machines or pumps characterised by number or arrangement of cylinders (machines or pumps with pistons coacting within one cylinder F04B3/00)	F04B1/00, F04B1/03
U	F04B 1/02	1	having two cylinders (in V-arrangement F04B 1/04)	
N	F04B1/03	1	with cylinder axis arranged substantially tangentially to a circle centred on main shaft axis	
U	F04B1/04	1	having cylinders in star- or fan-arrangement	
M	F04B1/0404	2	Details or component parts	
M	F04B1/0408	3	Pistons	
M	F04B1/0413	3	Cams	
M	F04B1/0417	4	consisting of two or more cylindrical elements, e.g. rollers	
M	F04B1/0421	3	Cylinders	
M	F04B1/0426	3	Arrangements for pressing the pistons against the actuated cam; Arrangements for connecting the pistons to the actuated cam	
M	F04B1/043	4	Hydraulic arrangements	
M	F04B1/0435	3	Arrangements for disconnecting the pistons from the actuated cam	

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M	F04B1/0439	3	Supporting or guiding means for the pistons	
M	F04B1/0443	3	Draining of the housing; Arrangements for handling leaked fluids	
M	F04B1/0448	3	Sealing means, e.g. for shafts or housings (for pistons F04B1/0408 {; Stoffing boxes F04B 53/164})	
M	F04B1/0452	3	Distribution members, e.g. valves (machines or pumps with cam-actuated distribution members at the outer ends of the cylinders F04B1/0472; machines or pumps with cam-actuated distribution members at the inner ends of the cylinders F04B1/0531; the piston-driving cams being provided with inlets and outlets F04B1/0535)	
M	F04B1/0456	4	Cylindrical	
M	F04B1/0461	4	Conical	
M	F04B1/0465	4	plate-like	
M	F04B1/047	2	with actuating or actuated elements at the outer ends of the cylinders	
M	F04B1/0472	3	with cam-actuated distribution members	
M	F04B1/0474	3	with two or more serially arranged radial piston-cylinder units	
M	F04B1/0476	4	located side-by-side	
M	F04B1/0478	4	Coupling of two or more cylinder-barrels	
M	F04B1/053	2	with actuating or actuated elements at the inner ends of the cylinders	
M	F04B1/0531	3	with cam-actuated distribution members	
M	F04B1/0533	4	each machine piston having channels that coact with the cylinder and serve as distribution members for another piston-cylinder unit	

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M	F04B1/0535	3	the piston-driving cams being provided with inlets and outlets	
M	F04B1/0536	3	with two or more serially arranged radial piston-cylinder units	
M	F04B1/0538	4	located side-by-side	
Т	F04B1/06	2	Control	
T	F04B1/063	3	by using a valve in a system with several pumping chambers wherein the flow-path through the chambers can be changed, e.g. between series and parallel flow	
Т	F04B1/066	3	by changing the phase relationship between the actuating cam and the distributing means	
Т	F04B1/10	2	the cylinders being movable, e.g. rotary {(F04B 3/006 takes precedence)}	
Т	F04B1/107	3	with actuating or actuated elements at the outer ends of the cylinders	
Т	F04B1/1071	4	with rotary cylinder blocks	
T	F04B1/1072	5	with cylinder blocks and actuating cams rotating together (in two or more series radial piston-cylinder units F04B1/1075)	
Т	F04B1/1074	5	with two or more serially arranged radial piston-cylinder units	
T	F04B1/1075	6	with cylinder blocks and actuating cams rotating together (in two or more series radial piston-cylinder units directly located side-by-side F04B1/1078)	
Т	F04B1/1077	6	located side-by-side	
С	F04B1/1078	7	with cylinder blocks and actuating cams rotating together	F04B1/1072, F04B1/1078
Т	F04B1/113	3	with actuating or actuated elements at the inner ends of the cylinders	

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Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title  "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
T	F04B1/1133	4	with rotary cylinder blocks	
Т	F04B1/1136	5	with a rotary cylinder with a single piston reciprocating within the cylinder	
M	F04B1/12	1	having cylinder axes coaxial with, or parallel or inclined to, main shaft axis	
M	F04B1/122	2	Details or component parts, e.g. valves, sealings or lubrication means (for machines or pumps having rotary cylinder blocks F04B1/2014)	
M	F04B1/124	3	Pistons	
M	F04B1/126	4	Piston shoe retaining means	
M	F04B1/128	2	Driving means	
U	F04B1/14	2	having stationary cylinders	
M	F04B1/141	3	Details or component parts	
M	F04B1/143	4	Cylinders	
M	F04B1/145	4	Housings	
M	F04B1/146	4	Swash plates; Actuating elements	
M	F04B1/148	5	Bearings therefor	
U	F04B1/18	3	having self-acting distribution members, i.e. actuated by working fluid	
M	F04B1/182	4	Check valves	
M	F04B1/184	4	Cylindrical distribution members	
M	F04B1/186	4	Conical distribution members	
M	F04B1/188	4	Plate-like distribution members	

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Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title  "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
С	F04B1/20	2	having rotary cylinder block	F04B 1/20, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136
С	F04B1/2007	3	Arrangements for pressing the cylinder barrel against the valve plate, e.g. by fluid pressure	F04B 1/2007, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136
С	F04B1/2014	3	Details or component parts	F04B 1/2014, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136

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Type*	<u>Symbol</u>	Indent Level Number of dots (e.g. 0, 1, 2)	Title  "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
С	F04B1/2021	4	characterised by the contact area between cylinder barrel and valve plate	F04B 1/2021, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136
С	F04B1/2028	5	Bearings	F04B 1/2028, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136
С	F04B1/2035	4	Cylinder barrels	F04B 1/2035, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136

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Type*	Symbol	Indent   Level   Number of   dots (e.g. 0,   1, 2)	Title  "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
С	F04B1/2042	4	Valves	F04B 1/2042, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136
С	F04B1/205	5	Cylindrical	F04B 1/205, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136
С	F04B1/2057	5	Conical	F04B 1/2057, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136

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С	F04B1/2064	4	Housings	F04B 1/2064, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136
С	F04B1/2071	5	Bearings for cylinder barrels	F04B 1/2071, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136
С	F04B1/2078	4	Swash plates	F04B 1/2078, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136

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Type*	<u>Symbol</u>	Indent Level Number of dots (e.g. 0, 1, 2)	Title  "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
С	F04B1/2085	5	Bearings for swash plates or driving axles	F04B 1/2085, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136
С	F04B1/2092	3	Means for connecting rotating cylinder barrels and rotating inclined swash plates	F04B 1/2092, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136
С	F04B1/22	3	having two or more sets of cylinders or pistons	F04B 1/22, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113, F04B 1/1133, F04B 1/1136

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Type*	Symbol	Indent	<u>Title</u>	Transferred to#
		Level	"CPC only" text should normally be	
		Number of	<pre>enclosed in {curly brackets}**</pre>	
		<u>dots (e.g. 0,</u>		
		<u>1, 2)</u>		
С	F04B1/24	4	inclined to the main shaft axis	F04B 1/24,
				F04B 1/10,
				F04B 1/107,
				F04B 1/1071,
				F04B 1/1072,
				F04B 1/1074,
				F04B 1/1075,
				F04B 1/1077,
				F04B 1/1078,
				F04B 1/113, F04B 1/1133,
				F04B 1/1135, F04B 1/1136
M	F04B1/28	3	of machines or pumps with stationary cylinders	1048 1/1130
U	F04B1/29	4	by varying the relative positions of a swash plate and a	
			cylinder block	
		_		
M	F04B1/295	5	by changing the inclination of the swash plate	
	F04B1/30	3	of machines on nymne with notons eviloden blocks	E04D1/20
С	F04B1/30	3	of machines or pumps with rotary cylinder blocks	F04B1/30, F04B1/328
				FU4D1/326
M	F04B1/303	4	by turning the valve plate	
M	F04B1/306	4	by turning the swash plate, e.g. with fixed inclination	
U	F04B1/32	4	by varying the relative positions of a swash plate and a	
			cylinder block	
M	F04B1/322	5	by moving the swash plate in a direction perpendicular	
141	10401/322	3	to the axis of rotation of the cylinder barrel	
			to the train of fourton of the cylinder outrer	
M	F04B1/324	5	by changing the inclination of the swash plate	
M	F04B1/326	6	using wedges	
		_		
T	F04B1/328	5	by changing the inclination of the axis of the cylinder	
			barrel relative to the swash plate	
M	F04B1/34	1	Control not provided for in groups F04B1/02, F04B1/03,	
141	10701/37	'	F04B1/06 or F04B1/26	
			10.51/00 0110151/20	
M	F04B5/00	0	Machines or pumps with differential-surface pistons	
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M	F04B7/00	0	Piston machines or pumps characterised by having positively-driven valving	
М	F04B9/04	2	the means being cams, eccentrics or pin-and-slot mechanisms	
M	F04B13/00	0	Pumps specially modified to deliver fixed or variable measured quantities	
M	F04B15/04	1	the fluids being hot or corrosive (for liquids near their boiling point, e.g. under subnormal pressure, F04B15/06)	
M	F04B19/04	1	Pumps for special use	
M	F04B23/00	0	Pumping installations or systems (pumps characterised by combination with, or adaptation to, specific driving engines or motors F04B 17/00)	
С	F04B23/10	3	at least one pump being of the reciprocating positive- displacement type	F04B23/10, F04B23/12, F04B23/14
С	F04B23/103	4	{being a radial piston pump}	F04B23/103, F04B23/12, F04B23/14
С	F04B23/106	4	{being an axial piston pump}	F04B23/106, F04B23/12, F04B23/14
Т	F04B23/12	3	at least one pump being of the rotary-piston positive- displacement type	
T	F04B23/14	3	at least one pump being of the non-positive-displacement type	
М	F04B27/00	0	Multi-cylinder pumps specially adapted for elastic fluids and characterised by number or arrangement of cylinders (multi-stage pumps specially adapted for elastic fluids F04B25/00)	
M	F04B27/0437	3	{Disconnecting the pistons from the actuated cam}	

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M	F04B27/0804	2	{having rotary cylinder block}	
	E04D21/00	0		
M	F04B31/00	0	Free-piston pumps specially adapted for elastic fluids; Systems incorporating such pumps (muscle-driven pumps in which the stroke is not defined by gearing F04B33/00)	
М	F04B35/00	0	Piston pumps specially adapted for elastic fluids and characterised by the driving means to their working members, or by combination with, or adaptation to, specific driving engines or motors, not otherwise provided for	
M	F04B37/02	1	for evacuating by absorption or adsorption	
M	F04B37/08	2	by condensing or freezing, e.g. cryogenic pumps	
M	F04B37/10	1	for special use (for evacuating by absorption or adsorption F04B37/02; for evacuating by thermal means F04B37/06)	
M	F04B39/00	0	Component parts, details, or accessories, of pumps or pumping systems specially adapted for elastic fluids, not otherwise provided for in, or of interest apart from, groups F04B25/00-F04B37/00	
M	F04B39/06	1	Cooling; Heating; Prevention of freezing	
M	F04B39/12	1	Casings; Cylinders; Cylinder heads; Fluid connections	
M	F04B41/00	0	Pumping installations or systems specially adapted for elastic fluids (free-piston pumps specially adapted for elastic fluids or systems incorporating such pumps F04B31/00; piston pumps specially adapted for elastic fluids and characterised by the driving means to their working members, or by combination with, or adaptation to, specific driving engines or motors, not otherwise provided for F04B35/00)	
С	F04B43/02	1	having plate-like flexible members, e.g. diaphragms (F04B43/14 takes precedence)	F04B43/02, F04B43/14

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С	F04B 43/021	2	{the plate-like flexible member is pressed against a wall by a number of elements, each having an alternating movement in a direction perpendicular to the plane of the plate-like flexible member and each having its own driving mechanism}	F04B43/021, F04B43/14
С	F04B 43/023	2	{double acting plate-like flexible member}	F04B43/023, F04B43/14
С	F04B 43/025	2	{two or more plate-like pumping members in parallel}	F04B43/025, F04B43/14
С	F04B 43/026	3	{each plate-like pumping flexible member working in its own pumping chamber}	F04B43/026, F04B43/14
С	F04B 43/028	2	{with in- or outlet valve arranged in the plate-like flexible member (valve arranged in the piston F04B 53/12)}	F04B43/028, F04B43/14
С	F04B 43/04	2	Pumps having electric drive	F04B43/04, F04B43/14
С	F04B 43/043	3	{Micropumps}	F04B43/043, F04B43/14
С	F04B 43/046	4	{with piezo-electric drive}	F04B43/046, F04B43/14
С	F04B 43/06	2	Pumps having fluid drive	F04B43/06, F04B43/14
С	F04B 43/067	3	the fluid being actuated directly by a piston	F04B43/067, F04B43/14
С	F04B 43/073	3	the actuating fluid being controlled by at least one valve	F04B43/073, F04B43/14
С	F04B 43/0733	4	{with fluid-actuated pump inlet or outlet valves; with two or more pumping chambers in series}	F04B43/0733, F04B43/14
С	F04B 43/0736	4	{with two or more pumping chambers in parallel}	F04B43/0736, F04B43/14

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С	F04B45/04	1	having plate-like flexible members, e.g. diaphragms (F04B45/10 takes precedence)	F04B45/04, F04B45/10
С	F04B45/041	2	{double acting plate-like flexible pumping member}	F04B45/041, F04B45/10
С	F04B45/043	2	{two or more plate-like pumping flexible members in parallel}	F04B45/043, F04B45/10
С	F04B45/045	2	{with in- or outlet valve arranged in the plate-like pumping flexible members}	F04B45/045, F04B45/10
С	F04B45/047	2	Pumps having electric drive	F04B45/047, F04B45/10
С	F04B45/053	2	Pumps having fluid drive	F04B45/053, F04B45/10
С	F04B45/0533	3	{the fluid being actuated directly by a piston}	F04B45/0533, F04B45/10
С	F04B45/0536	3	{the actuating fluid being controlled by one or more valves}	F04B45/0536, F04B45/10
С	F04B45/06	1	having tubular flexible members (F04B45/02, F04B45/08 take precedence)	F04B 45/06, F04B 45/08, F04B 45/085
С	F04B45/061	2	{with fluid drive}	F04B 45/061, F04B 45/08, F04B 45/085
С	F04B45/062	3	{the fluid being actuated directly by a piston}	F04B 45/062, F04B 45/08, F04B 45/085
С	F04B45/064	3	{the actuating fluid being controlled by one or more valves}	F04B 45/064, F04B 45/08, F04B 45/085
С	F04B45/065	2	{with electric drive}	F04B 45/065, F04B 45/08, F04B 45/085

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Type*	<u>Symbol</u>	Indent Level Number of dots (e.g. 0, 1, 2)	Title  "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
С	F04B45/067	2	Pumps having electric drive	F04B 45/067, F04B 45/08, F04B 45/085
С	F04B45/073	2	Pumps having fluid drive	F04B 45/073, F04B 45/08, F04B 45/085
С	F04B45/0733	3	{the fluid being actuated directly by a piston}	F04B 45/0733, F04B 45/08, F04B 45/085
С	F04B45/0736	3	{the actuating fluid being controlled by one or more valves}	F04B 45/0736, F04B 45/08, F04B 45/085
Т	F04B45/08	1	having peristaltic action	
Т	F04B45/085	2	{the actuating element being a swash plate}	
Т	F04B45/10	1	having plate-like flexible members	
M	F04B49/02	1	Stopping, starting, unloading or idling control	
С	F04B49/12	1	by varying the length of stroke of the working members	F04B49/12, F04B1/06, F04B1/063, F04B1/066, F04B1/07, F04B1/08
С	F04B49/121	2	{Lost-motion device in the driving mechanism}	F04B49/121, F04B1/06, F04B1/063, F04B1/066, F04B1/07, F04B1/08
С	F04B49/123	2	{by changing the eccentricity of one element relative to another element}	F04B49/123, F04B1/06, F04B1/063, F04B1/066, F04B1/07, F04B1/08

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Type*	<u>Symbol</u>	Indent   Level   Number of   dots (e.g. 0,   1, 2)	Title  "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
С	F04B49/125	3	{by changing the eccentricity of the actuation means, e.g. cams or cranks, relative to the driving means, e.g. driving shafts (F04B 49/128 takes precedence)}	F04B49/125, F04B1/06, F04B1/063, F04B1/066, F04B1/07, F04B1/08
С	F04B49/126	4	{with a double eccenter mechanism}	F04B49/126, F04B1/06, F04B1/063, F04B1/066, F04B1/07, F04B1/08
С	F04B49/128	3	{by changing the eccentricity of the cylinders, e.g. by moving a cylinder block}	F04B49/128, F04B1/06, F04B1/063, F04B1/066, F04B1/07, F04B1/08
С	F04B49/14	2	Adjusting abutments located in the path of reciprocation	F04B49/14, F04B1/06, F04B1/063, F04B1/066, F04B1/07, F04B1/08
С	F04B49/18	1	by changing the effective cross-section of the working surface of the piston	F04B49/18, F04B1/06, F04B1/063, F04B1/066, F04B1/07, F04B1/08
M	F04B49/20	1	by changing the driving speed	
M	F04B53/08	1	Cooling; Heating; Preventing freezing	
M	F04B53/18	1	Lubricating	

<sup>\*</sup>N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T = existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to

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the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

#### NOTES:

- \*\*No {curly brackets} are used for titles in CPC only <u>subclasses</u>, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} <u>are</u> used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required "anchor" symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types.
- "Transferred to" column <u>must</u> be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the "Transferred to" column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: "<administrative transfer to XX>", "<administrative transfer to XX and YY simultaneously>", or "<administrative transfer to XX, YY, ...and ZZ simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be "additional information".
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations "ADD" or "INV": <administrative transfer to XX ADD> , <administrative transfer to XX INV>, or <administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the "D" entries of 2000-series or Y-series groups may not require a destination ("Transferred to") symbol, however it is required to specify "<no transfer>" in the "Transferred to" column for such cases.
- For finalization projects, the deleted "F" symbols should have <no transfer> in the "Transferred to" column.
- For more details about the types of scheme change, see CPC Guide.

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# B. New, Modified or Deleted Warning(s)

# SUBCLASS: F04B - POSITIVE-DISPLACEMENT MACHINES FOR LIQUIDS; PUMPS

Type*	Location	Old Warning	New/Modified Warning
D	F04B		<u>Delete</u> : The existing warning number 2 shown below.
			2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.
N	F04B 1/00		Insert: The following new warning.
			Group F04B 1/00 is impacted by reclassification into group F04B 1/03. Groups F04B 1/00 and F04B 1/03 should be considered in order to perform a complete search.
N	F04B 1/03		Insert: The following new warning.
			Group F04B 1/03 is incomplete pending reclassification of documents from group F04B 1/00. Groups F04B 1/00 and F04B 1/03 should be considered in order to perform a complete search.
N	F04B 1/06		<u>Insert</u> : The following new warning.
			Group F04B 1/06 is incomplete pending reclassification of documents from groups F04B 49/12-F04B 49/14, and F04B 49/18. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/063		<u>Insert</u> : The following new warning.
			Group F04B 1/063 is incomplete pending reclassification of documents from groups F04B 49/12-F04B 49/14, and F04B 49/18. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/066		Insert: The following new warning.
			Group F04B 1/066 is incomplete pending reclassification of documents from groups F04B 49/12-F04B 49/14, and F04B 49/18. All groups listed in this Warning should be considered in order to perform a complete search.

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Type*	<b>Location</b>	Old Warning	New/Modified Warning
N	F04B 1/07		Insert: The following new warning.
			Group F04B 1/07 is incomplete pending reclassification of documents from groups F04B 49/12-F04B 49/14, and F04B 49/18. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/08		Insert: The following new warning.
			Group F04B 1/08 is incomplete pending reclassification of documents from groups F04B 49/12-F04B 49/14, and F04B 49/18. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/10		Insert: The following new warning.
			Group F04B 1/10 is incomplete pending reclassification of documents from groups F04B 1/20-F04B 1/24. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/107		Insert: The following new warning.
			Group F04B 1/107 is incomplete pending reclassification of documents from groups F04B 1/20, F04B 1/2007, F04B 1/2014, F04B 1/2021, F04B 1/2028, F04B 1/2035, F04B 1/2042, F04B 1/205, F04B 1/2057, F04B 1/2064, F04B 1/2071, F04B 1/2078, F04B 1/2085, F04B 1/2092, F04B 1/22, and F04B 1/24. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B1/1071		Insert: The following new warning.  Group F04B 1/1071 is incomplete pending reclassification of documents from groups F04B 1/20-F04B 1/24. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/1072		Insert: The following new warning.
			Group F04B 1/1072 is incomplete pending reclassification of documents from groups F04B 1/1078, F04B 1/20-F04B 1/24. All groups listed in this Warning should be considered in order to perform a complete search.

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Type*	Location	Old Warning	New/Modified Warning
N	F04B 1/1074		Insert: The following new warning.
			Groups F04B 1/1074-F04B 1/1078 are incomplete pending reclassification of documents from groups F04B 1/20-F04B 1/24. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/113		Insert: The following new warning.
			Groups F04B 1/113-F04B 1/1136 are incomplete pending reclassification of documents from groups F04B 1/20- F04B 1/24. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/20		Insert: The following new warning.
			Group F04B 1/20 is impacted by reclassification into groups F04B 1/10-F04B 1/1136. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/2007		Insert: The following new warning.
			Group F04B 1/2007 is impacted by reclassification into groups F04B 1/10-F04B 1/1136. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/2014		Insert: The following new warning.
			Groups F04B 1/2014-F04B 1/2085 are impacted by reclassification into groups F04B 1/10-F04B 1/1136. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/2092		Insert: The following new warning.
			Group F04B 1/2092 is impacted by reclassification into groups F04B 1/10-F04B 1/1136. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 1/22		Insert: The following new warning.
			Groups F04B 1/22 and F04B 1/24 are impacted by reclassification into groups F04B 1/10-F04B 1/1136. All groups listed in this Warning should be considered in order to perform a complete search.

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Type*	Location	Old Warning	New/Modified Warning
N	F04B 1/30		Insert: The following new warning.
			Group F04B 1/30 is impacted by reclassification into group F04B 1/328. Groups F04B 1/30 and F04B 1/328 should be considered in order to perform a complete search.
N	F04B 1/328		Insert: The following new warning.
			Group F04B 1/328 is incomplete pending reclassification of documents from group F04B 1/30. Groups F04B 1/30 and F04B 1/328 should be considered in order to perform a complete search.
N	F04B 23/10		Insert: The following new warning.
			Group F04B 23/10 is impacted by reclassification into groups F04B 23/12 and F04B 23/14. Groups F04B 23/10, F04B 23/12, and F04B 23/14 should be considered in order to perform a complete search.
N	F04B 23/103		<u>Insert</u> : The following new warning.
			Group F04B 23/103 is impacted by reclassification into groups F04B 23/12 and F04B 23/14. Groups F04B 23/103, F04B 23/12, and F04B 23/14 should be considered in order to perform a complete search.
N	F04B 23/106		<u>Insert</u> : The following new warning.
			Group F04B 23/106 is impacted by reclassification into groups F04B 23/12 and F04B 23/14. Groups F04B 23/106, F04B 23/12, and F04B 23/14 should be considered in order to perform a complete search.
N	F04B 23/12		<u>Insert</u> : The following new warning.
			Group F04B 23/12 is incomplete pending reclassification of documents from groups F04B 23/10, F04B 23/103, and F04B 23/106. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 23/14		Insert: The following new warning.
			Group F04B 23/14 is incomplete pending reclassification of documents from groups F04B 23/10, F04B 23/103, and F04B 23/106. All groups listed in this Warning should be considered in order to perform a complete search.

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Type*	Location	Old Warning	New/Modified Warning
N	F04B 43/02		<u>Insert</u> : The following new warning.
			Groups F04B 43/02-F04B 43/0736 are impacted by reclassification into group F04B 43/14. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 43/14		Insert: The following new warning.
			Group F04B 43/14 is incomplete pending reclassification of documents from groups F04B 43/02, F04B 43/021, F04B 43/023, F04B 43/025, F04B 43/026, F04B 43/028, F04B 43/04, F04B 43/043, F04B 43/046, F04B 43/06, F04B 43/067, F04B 43/073, F04B 43/0733, and F04B 43/0736. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 45/04		Insert: The following new warning.  Group F04B 45/04-F04B 45/0536 are impacted by reclassification into group F04B 45/10. All groups listed in this Warning should be considered in order to
			perform a complete search.
N	F04B 45/06		Insert: The following new warning.
			Group F04B 45/06 is impacted by reclassification into groups F04B 45/08 and F04B 45/085. Groups F04B 45/06, F04B 45/08, and F04B 45/085 should be considered in order to perform a complete search.
N	F04B 45/061		Insert: The following new warning.
			Groups F04B 45/061-F04B 45/064 are impacted by reclassification into groups F04B 45/08 and F04B 45/085. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 45/065		Insert: The following new warning.
			Group F04B 45/065 is impacted by reclassification into groups F04B 45/08 and F04B 45/085. Groups F04B 45/065, F04B 45/08, and F04B 45/085 should be considered in order to perform a complete search.

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Type*	Location	Old Warning	New/Modified Warning
N	F04B 45/067		<u>Insert</u> : The following new warning.
			Group F04B 45/067 is impacted by reclassification into groups F04B 45/08 and F04B 45/085. Groups F04B 45/067, F04B 45/08, and F04B 45/085 should be considered in order to perform a complete search.
N	F04B 45/073		Insert: The following new warning.
			Groups F04B 45/073-F04B 45/0736 are impacted by reclassification into groups F04B 45/08 and F04B 45/085. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 45/08		<u>Insert</u> : The following new warning.
			Group F04B 45/08 is incomplete pending reclassification of documents from groups F04B 45/06-F04B 45/0736. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 45/085		Insert: The following new warning.
			Group F04B 45/085 is incomplete pending reclassification of documents from groups F04B 45/06-F04B 45/0736. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 45/10		Insert: The following new warning.
			Group F04B 45/10 is incomplete pending reclassification of documents from groups F04B 45/04-F04B 45/0536. Groups F04B 45/04-F04B 45/0536 and F04B 45/10 should be considered in order to perform a complete search.
N	F04B 49/12		Insert: The following new warning.
			Groups F04B 49/12-F04B 49/14 are impacted by reclassification into groups F04B 1/06-F04B 1/08. All groups listed in this Warning should be considered in order to perform a complete search.
N	F04B 49/18		Insert: The following new warning.
			Group F04B 49/18 is impacted by reclassification into groups F04B 1/06-F04B 1/08. All groups listed in this Warning should be considered in order to perform a complete search.

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\*N = new warning, M = modified warning, D = deleted warning

NOTE: The "Location" column only requires the symbol PRIOR to the location of the warning. No further directions such as "before" or "after" are required.

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# C. New, Modified or Deleted Note(s)

# SUBCLASS F04B - POSITIVE-DISPLACEMENT MACHINES FOR LIQUIDS; PUMPS

Type*	Location	Old Note	New/Modified Note
M	F04B	<ol> <li>In this subclass, the following term is used with the meaning indicated:         <ul> <li>"piston" also covers a plunger.</li> </ul> </li> <li>Attention is drawn to the notes preceding class F01, especially as regards the definitions of "machines", "pumps", and "positive-displacement".</li> </ol>	Replace: The existing note with the following new note.  1. In this subclass, the following term is used with the meaning indicated:  • "piston" also covers a plunger.  2. Attention is drawn to the Notes following the titles of class B81 and subclass B81B relating to "microstructural devices" and "microstructural systems".  3. Attention is drawn to the Notes preceding class F01, especially as regards the definitions of "machines", "pumps", and "positive displacement".  4. Machines, pumps or pumping installations having flexible working members are classified in groups F04B 43/00 or F04B 45/00.

N = new note, M = modified note, D = deleted note

NOTE: The "Location" column only requires the symbol PRIOR to the location of the note. No further directions such as "before" or "after" are required.

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#### D. New, Modified or Deleted Guidance Heading(s)

#### SUBCLASS F04B - POSITIVE-DISPLACEMENT MACHINES FOR LIQUIDS; PUMPS

Type*	<u>Location</u>	Old Guidance Heading	<u>New/Modified Guidance</u> <u>Heading</u>
M	F04B 1/00 – F04B 23/00	Pumps for liquids or for liquid and elastic fluids; Positive-displacement machines for liquids (pumps for raising fluids from great depths F04B 47/00; having flexible working members F04B 43/00)	Replace: The existing guidance heading with the following new heading.  Pumps for liquids or for liquid and elastic fluids; Positive-displacement machines for liquids
M	F04B 25/00 – F04B 41/00	Pumps specially adapted for elastic fluids (having a flexible working member F04B 45/00; for raising fluid from great depths F04B 47/00)	Replace: The existing guidance heading with the following new heading.  Pumps specially adapted for elastic fluids

<sup>\*</sup>N = new guidance heading, M = modified guidance heading, D = deleted guidance heading

#### NOTES:

- The "Location" column requires the symbol AFTER the guidance heading location. No further directions such as "before" or "after" are required.
- In cases where there may be confusion as to whether a new group falls within the scope of a guidance heading, indicate the guidance heading and whether the group does or does not go with the guidance heading. This can be included in the "Location" column. For example, the guidance heading "Compounds containing carbon together with sulfur, selenium or tellurium with or without hydrogen, halogens, oxygen or nitrogen" encompasses groups C07C 301/00-395/00 only. If a new group C07C 398/00 is proposed and is included in the guidance heading scope, indicate this in the "Location" column as follows: 398/00 to be included under the guidance heading: "Compounds containing carbon together with sulfur, selenium or tellurium with or without hydrogen, halogens, oxygen or nitrogen."

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# 2. A. DEFINITIONS (new)

**Insert:** The following new Definitions.

# F04B 1/0435

# References

# Informative references

Attention is drawn to the following places, which may be of interest for search:

Disconnecting pistons from the actuated cam in general F01B 31/24
---

# F04B 1/0448

# References

# Limiting references

This place does not cover:

Sealing means for piston	F04B 1/0408
Stoffing boxes	F04B 53/164

# F04B 1/10

# References

# Limiting references

This place does not cover:

Machines or pumps with piston coacting with rotating	F04B 3/006
cylinder block	

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# Informative references

Attention is drawn to the following places, which may be of interest for search:

Having rotary cylinder block	F04B 1/20
Control thereof	F04B 1/28

# F04B 1/1072

# References

# Limiting references

This place does not cover:

Control with cylinder blocks and actuating cams rotating	F04B 1/1075
together	

# Informative references

With cylinder blocks and actuating cams rotating together	F04B 1/1078
---	-------------

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# F04B 1/14

#### References

# Informative references

Attention is drawn to the following places, which may be of interest for search:

Control thereof	F04B 1/28
	110701/20

# F04B 1/20

# References

# Informative references

Attention is drawn to the following places, which may be of interest for search:

# F04B 1/328

# References

# Informative references

Control thereof	F04B 1/30

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#### F04B 9/04

#### References

# Informative references

Attention is drawn to the following places, which may be of interest for search:

With cylinder axes coaxial with, or parallel or inclined	F04B 1/12
to, main shaft axis	

# F04B 19/04

#### References

# Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Arrangements of pumps for transferring liquids from	B67D 7/58
bulk storage containers or reservoirs into vehicles or	
into portable containers	

### F04B 37/02

#### References

# Informative references

Absorption or adsorption in general	B01J
For gas-filled discharge tubes	H01J 17/24

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# F04B 37/08

# References

# Informative references

Attention is drawn to the following places, which may be of interest for search:

Cold trap	B01D 8/00

# F04B 39/06

# References

# Informative references

Attention is drawn to the following places, which may be of interest for search:

Cooling of machines or engines in general	F01P	
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# F04B 39/12

# References

# Informative references

Casings for machines or engines in general	F16M
Gaoingo for maoinneo or originoo in gonorai	

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# F04B 49/02

# References

# Informative references

Attention is drawn to the following places, which may be of interest for search:

Controlled electrically	F04B 49/06
1 Controlled Glockhodily	11010100

# F04B 49/20

# **References**

# Informative references

Attention is drawn to the following places, which may be of interest for search:

Controlled electrically	F04B 49/06
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# F04B 53/08

# References

# Informative references

Cooling of machines or engines in general	F01P
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# F04B 53/18

# References

# Informative references

	Lubricating of machines or engines in general	F01M
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# 2. B. DEFINITIONS QUICK FIX

Symbol	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
F04B	Limiting references		Insert: The following new Limiting references section.  Limiting references  This place does not cover:  Machines for liquids, or pumps, of rotary-piston or oscillating-piston type F04C  Non-positive-displacement pumps F04D  Pumping of fluid by direct contact of another fluid or by using inertia of fluid to be pumped F04F
F04B	Application- oriented references		Insert: The following new Application- oriented references section.  Application-oriented references  Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:  Engine fuel injection pumps F02M 37/00-F02M 71/04

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Symbol	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
F04B	Informative references		Insert: The following five new table rows into the Informative references section.  Flywheels F16F 15/30  Gearings for interconverting rotary motion and reciprocating motion in general F16H  Pistons, piston-rods, cylinders, in general F16J  Ion pumps H01J 41/12  Electrodynamic pumps H02K 44/02
F04B	Informative references		<ul> <li>Delete: The following six existing table rows from the Informative references section.</li> <li>Rotary-piston or oscillating piston machines F04C</li> <li>Non-positive displacement pumps F04D</li> <li>Flywheels F16F</li> <li>Rotary fluid gearing using pumps and motors of the volumetric type for conveying rotary motion F16H</li> <li>Sealing in general F16J</li> <li>Dynamo electric machines H02K</li> </ul>

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Symbol	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
F04B 1/00	Limiting references		Insert: The following new table row into the Limiting references section.
			Machines or pumps with pistons coacting within one cylinder F04B 3/00
F04B 1/00	Limiting References		<u>Delete</u> : The following existing table row from the Limiting references section.
			Compressors, i.e. pumps for elastic fluids F04B 27/00
F04B 1/00	Application- oriented references	For raising fluid from great depths F04B 47/00	Replace: The text of the existing Application table row for reference F04B 47/00 so that the row reads as follows.
			Pumps for raising fluids from great depths F04B 47/00
F04B 1/00	Informative references		Insert: The following three new rows into the Informative references table.
			Fluid-driven pumps F04B 9/08
			Compressor, i.e. pumps for elastic fluids F04B 27/00
			Control of reciprocating machines or pumps in general F04B 49/00
F04B 7/00	Application- oriented references	For raising fluid from great depths F04B 47/00	Replace: The text of the existing Application table row for reference F04B 47/00 so that the row reads as follows.
			Pumps for raising fluids from great depths F04B 47/00

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Symbol	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
F04B 7/00	Informative references		Insert: The following new Informative references section.
			Informative references
			Attention is drawn to the following places, which may be of interest for search:
			With cylinders in star- or fan- arrangement F04B 1/04
			With cylinder axes coaxial with, or parallel or inclined to, main shaft axis F04B 1/12
F04B 13/00	Application- oriented references		Insert: The following new table row into the Application-oriented references table.
			Arrangements of pumps for transferring liquids from bulk storage containers or reservoirs into vehicles or into portable containers  B67D 7/58
F04B 13/00	Application- oriented references	For raising fluid from great depths F04B 47/00	Replace: The text of the existing Application table row for reference F04B 47/00 so that the row reads as follows.
			Pumps for raising fluids from great depths F04B 47/00

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Symbol	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
F04B23/00	Limiting References	Insert: The following new Limiting references section.	
			Limiting references  This place does not cover:
			Pumps characterised by combination with, or adaptation to, specific driving engines or motors F04B 17/00
F04B 27/00	Limiting References		Insert: The following new row into the Limiting references table.
			Multi-stage pumps specially adapted for elastic fluids F04B 25/00
F04B 27/00	Limiting References		<u>Delete</u> : The following row from the Limiting references table.
			Pumps for liquids F04B 1/00
F04B 27/00	Application- oriented references	For raising fluid from great depths F04B 47/00	Replace: The text of the existing Application table row for reference F04B 47/00 so that the row reads as follows.
			Pumps for raising fluids from great depths F04B 47/00

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Symbol	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
F04B 27/00	Informative references		Insert: The following new Informative references section.
			Informative references
			Attention is drawn to the following places, which may be of interest for search:
			Control of reciprocating machines or pumps in general F04B 49/00
F04B 31/00	Limiting References		Insert: The following new row into the Limiting references table.
			Muscle-driven pumps in which the stroke is not defined by gearing F04B 33/00
F04B 31/00	Limiting References		<u>Delete</u> : The following <u>two</u> existing rows from the Limiting references table.
			Free-piston pumps for liquids F04B 19/003
			Free-piston engines. F03C 99/005
F04B 31/00	Application- oriented references		Insert: The following new row into the Application-oriented references table.
	Telefelioes		Free-piston combustion engines, free-piston gas generators F02B 71/00
F04B 31/00	Application- oriented references	For raising fluid from great depths F04B 47/00	Replace: The text of the existing Application table row for reference F04B 47/00 so that the row reads as follows.

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<u>Symbol</u>	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
			Pumps for raising fluids from great depths F04B 47/00
F04B 31/00	Informative references		Insert: The following new Informative references section.
			Informative references
			Attention is drawn to the following places, which may be of interest for search:
			Free-piston pumps for liquids F04B 19/003
			Free-piston engines F03C 99/005
F04B 35/00	Application- oriented references		Insert: The following new Application- oriented references section.
	Tererences		Application-oriented references
			Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:  For raising fluid from great depths
			F04B 47/00
F04B 39/00	Application- oriented references	For raising fluid from great depths F04B 47/00	Replace: The text of the existing Application table row for reference F04B 47/00 so that the row reads as follows.
			Pumps for raising fluids from great depths F04B 47/00

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Symbol	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
F04B 39/00	Informative references		Insert: The following new Informative references section.  Informative references  Attention is drawn to the following places, which may be of interest for search:  For controlling F04B 49/00
F04B 39/00	Limiting references		Insert: The following new Limiting references section.  Limiting references  This place does not cover:  Of machines or engines in general F01M

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## PROJECT RP0610

Symbol	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
F04B 41/00	Limiting References		Insert: The following Limiting references section.  Limiting references  This place does not cover:  Free-piston pumps specially adapted for elastic fluids or systems incorporating such pumps F04B 31/00  Piston pumps specially adapted for elastic fluids and characterised by the driving means to their working members, or by combination with, or adaptation to, specific driving engines or motors, not otherwise provided for F04B 35/00

## NOTES:

- The table above is used for corrections or modifications to existing definitions, e.g. delete an entire definition or part thereof; propose new wording or modify wording of a section, change the symbol the definition is associated with, change or delete a reference symbol, etc.
- Do not delete (F) symbol definitions.

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## PROJECT RP0610

# 3. REVISION CONCORDANCE LIST (RCL)

Type*	From CPC Symbol	To CPC Symbol(s)	
С	(existing) F04B 1/00	F04B 1/00, F04B 1/03	
C	F04B 1/1078	F04B 1/1072, F04B 1/1078	
C	F04B 1/1076	F04B 1/20, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
	104B 1/20	F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
С	F04B 1/2007	F04B 1/2007, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
	F04B 1/2007	F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
С	F04B 1/2014	F04B 1/2014, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
	1040 1/2014	F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
С	F04B 1/2021	F04B 1/2021, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
	10101/2021	F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
С	F04B 1/2028	F04B 1/2028, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
	10.12.172020	F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
С	F04B 1/2035	F04B 1/2035, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
		F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
С	F04B 1/2042	F04B 1/2042, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
		F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
С	F04B 1/205	F04B 1/205, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
		F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
C	F04B 1/2057	F04B 1/2057, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
		F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
C	F04B 1/2064	F04B 1/2064, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
		F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
C	F04B 1/2071	F04B 1/2071, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
		F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
C	F04B 1/2078	F04B 1/2078, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
		F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	
C	F04B 1/2085	F04B 1/2085, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
		F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
	F0.4D 1/2002	F04B 1/1133, F04B 1/1136	
C	F04B 1/2092	F04B 1/2092, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
		F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
	F04D 1/00	F04B 1/1133, F04B 1/1136	
С	F04B 1/22	F04B 1/22, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072,	
		F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/1133, F04B 1/1136	

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Type*	From CPC Symbol	To CPC Symbol(s)	
С	(existing)	E0AD 1/24 F0AD 1/10 F0AD 1/107 F0AD 1/1071 F0AD 1/1072	
C	F04B 1/24	F04B 1/24, F04B 1/10, F04B 1/107, F04B 1/1071, F04B 1/1072, F04B 1/1074, F04B 1/1075, F04B 1/1077, F04B 1/1078, F04B 1/113,	
		F04B 1/10/4, F04B 1/10/3, F04B 1/10/7, F04B 1/10/8, F04B 1/113, F04B 1/1136	
С	F04B 1/30	F04B 1/30, F04B 1/328	
C	F04B 1/30 F04B 23/10	F04B 23/10, F04B 23/12, F04B 23/14	
C	F04B 23/103	F04B 23/10, F04B 23/12, F04B 23/14 F04B 23/103, F04B 23/12, F04B 23/14	
C	F04B 23/103 F04B 23/106	F04B 23/105, F04B 23/12, F04B 23/14 F04B 23/106, F04B 23/12, F04B 23/14	
C	F04B 23/100 F04B 43/02	F04B 43/02, F04B 43/14	
C	F04B 43/021	F04B 43/02, F04B 43/14 F04B 43/021, F04B 43/14	
C	F04B 43/021 F04B 43/023	F04B 43/021, F04B 43/14 F04B 43/023, F04B 43/14	
C	F04B 43/025	F04B 43/025, F04B 43/14 F04B 43/025, F04B 43/14	
C	F04B 43/025 F04B 43/026	F04B 43/026, F04B 43/14	
C	F04B 43/028	F04B 43/028, F04B 43/14	
C	F04B 43/028 F04B 43/04	F04B 43/04, F04B 43/14 F04B 43/04, F04B 43/14	
C	F04B 43/043	F04B 43/043, F04B 43/14 F04B 43/043, F04B 43/14	
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C	F04B 43/046 F04B 43/06	F04B 43/046, F04B 43/14 F04B 43/06, F04B 43/14	
C		,	
	F04B 43/067	F04B 43/067, F04B 43/14	
С	F04B 43/073	F04B 43/073, F04B 43/14	
C	F04B 43/0733	F04B 43/0733, F04B 43/14	
	F04B 43/0736 F04B 45/04	F04B 43/0736, F04B 43/14	
С	_	F04B 45/04, F04B 45/10	
С	F04B 45/041	F04B 45/041, F04B 45/10	
С	F04B 45/043	F04B 45/043, F04B 45/10	
С	F04B 45/045	F04B 45/045, F04B 45/10	
С	F04B 45/047	F04B 45/047, F04B 45/10	
С	F04B 45/053	F04B 45/053, F04B 45/10	
С	F04B 45/0533	F04B 45/0533, F04B 45/10	
С	F04B 45/0536	F04B 45/0536, F04B 45/10	
С	F04B 45/06	F04B 45/06, F04B 45/08, F04B 45/085 F04B 45/061, F04B 45/08, F04B 45/085	
С	F04B 45/061	, ,	
С	F04B 45/062	F04B 45/062, F04B 45/08, F04B 45/085	
С	F04B 45/064	F04B 45/064, F04B 45/08, F04B 45/085	
С	F04B 45/065	F04B 45/065, F04B 45/08, F04B 45/085	
C	F04B 45/067	F04B 45/067, F04B 45/08, F04B 45/085	
C	F04B 45/073	F04B 45/073, F04B 45/08, F04B 45/085	
C	F04B 45/0733	F04B 45/0733, F04B 45/08, F04B 45/085	
C	F04B 45/0736	F04B 45/0736, F04B 45/08, F04B 45/085	
C	F04B 49/12	F04B 49/12, F04B 1/06, F04B 1/063, F04B 1/066, F04B 1/07,	
-	F04D 40/121	F04B 1/08	
С	F04B 49/121	F04B 49/121, F04B 1/06, F04B 1/063, F04B 1/066, F04B 1/07,	
C	E04D 40/122	F04B 1/08	
С	F04B 49/123	F04B 49/123, F04B 1/06, F04B 1/063, F04B 1/066, F04B 1/07,	
C	E04D 40/125	F04B 1/08	
С	F04B 49/125	F04B 49/125, F04B 1/06, F04B 1/063, F04B 1/066, F04B 1/07,	
С	E04D 40/126	F04B 1/08  F04B 40/126 F04B 1/06 F04B 1/062 F04B 1/066 F04B 1/07	
	F04B 49/126	F04B 49/126, F04B 1/06, F04B 1/063, F04B 1/066, F04B 1/07,	
С	E0/12 /0/129	F04B 1/08  F04B 40/128 F04B 1/06 F04B 1/063 F04B 1/066 F04B 1/07	
	F04B 49/128	F04B 49/128, F04B 1/06, F04B 1/063, F04B 1/066, F04B 1/07, F04B 1/08	
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Type*	From CPC Symbol	To CPC Symbol(s)
	(existing)	
С	F04B 49/14	F04B 49/14, F04B 1/06, F04B 1/063, F04B 1/066, F04B 1/07,
		F04B 1/08
С	F04B 49/18	F04B 49/18, F04B 1/06, F04B 1/063, F04B 1/066, F04B 1/07,
		F04B 1/08

<sup>\*</sup> C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed.

#### NOTES:

- Only C, D, F, and Q type entries are included in the table above.
- When multiple symbols are included in the "To" column, do not use ranges of symbols.
- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>", "<administrative transfer to XX and YY simultaneously>", or "<administrative transfer to XX, YY, ...and ZZ simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be "additional information".
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations "ADD" or "INV": <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the "D" entries of 2000-series or Y-series groups may not require a destination ("To") symbol, however it is required to specify "<no transfer>" in the "To" column for such cases.
- RCL is not needed for finalisation projects.

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# 4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

CPC	<u>IPC</u>	Action*
F04B 1/03	F04B 1/03	NEW
F04B 1/0404	F04B 1/0404	UPDATE
F04B 1/0408	F04B 1/0408	UPDATE
F04B 1/0413	F04B 1/0413	UPDATE
F04B 1/0417	F04B 1/0417	UPDATE
F04B 1/0421	F04B 1/0421	UPDATE
F04B 1/0426	F04B 1/0426	UPDATE
F04B 1/043	F04B 1/043	UPDATE
F04B 1/0435	F04B 1/0435	UPDATE
F04B 1/0439	F04B 1/0439	UPDATE
F04B 1/0443	F04B 1/0443	UPDATE
F04B 1/0448	F04B 1/0448	UPDATE
F04B 1/0452	F04B 1/0452	UPDATE
F04B 1/0456	F04B 1/0456	UPDATE
F04B 1/0461	F04B 1/0461	UPDATE
F04B 1/0465	F04B 1/0465	UPDATE
F04B 1/0472	F04B 1/0472	UPDATE
F04B 1/0474	F04B 1/0474	UPDATE
F04B 1/0476	F04B 1/0476	UPDATE
F04B 1/0478	F04B 1/0478	UPDATE
F04B 1/0531	F04B 1/0531	UPDATE
F04B 1/0533	F04B 1/0533	UPDATE
F04B 1/0535	F04B 1/0535	UPDATE
F04B 1/0536	F04B 1/0536	UPDATE
F04B 1/0538	F04B 1/0538	UPDATE
F04B 1/063	F04B 1/063	UPDATE
F04B 1/066	F04B 1/066	UPDATE
F04B 1/1071	F04B 1/1071	UPDATE
F04B 1/1072	F04B 1/1072	UPDATE
F04B 1/1074	F04B 1/1074	UPDATE
F04B 1/1075	F04B 1/1075	UPDATE
F04B 1/1077	F04B 1/1077	UPDATE
F04B 1/1078	F04B 1/1078	UPDATE
F04B 1/1133	F04B 1/1133	UPDATE
F04B 1/1136	F04B 1/1136	UPDATE
F04B 1/122	F04B 1/122	UPDATE
F04B 1/124	F04B 1/124	UPDATE
F04B 1/126	F04B 1/126	UPDATE
F04B 1/128	F04B 1/128	UPDATE
F04B 1/141	F04B 1/141	UPDATE
F04B 1/143	F04B 1/143	UPDATE
F04B 1/145	F04B 1/145	UPDATE

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<u>CPC</u>	<u>IPC</u>	Action*
F04B 1/146	F04B 1/146	UPDATE
F04B 1/148	F04B 1/148	UPDATE
F04B 1/182	F04B 1/182	UPDATE
F04B 1/184	F04B 1/184	UPDATE
F04B 1/186	F04B 1/186	UPDATE
F04B 1/188	F04B 1/188	UPDATE
F04B 1/2007	F04B 1/2007	UPDATE
F04B 1/2014	F04B 1/2014	UPDATE
F04B 1/2021	F04B 1/2021	UPDATE
F04B 1/2028	F04B 1/2028	UPDATE
F04B 1/2035	F04B 1/2035	UPDATE
F04B 1/2042	F04B 1/2042	UPDATE
F04B 1/205	F04B 1/205	UPDATE
F04B 1/2057	F04B 1/2057	UPDATE
F04B 1/2064	F04B 1/2064	UPDATE
F04B 1/2071	F04B 1/2071	UPDATE
F04B 1/2078	F04B 1/2078	UPDATE
F04B 1/2085	F04B 1/2085	UPDATE
F04B 1/2092	F04B 1/2092	UPDATE
F04B 1/295	F04B 1/295	UPDATE
F04B 1/303	F04B 1/303	UPDATE
F04B 1/306	F04B 1/306	UPDATE
F04B 1/322	F04B 1/322	UPDATE
F04B 1/324	F04B 1/324	UPDATE
F04B 1/326	F04B 1/326	UPDATE
F04B 1/328	F04B 1/328	UPDATE

#### \*Action column:

- For an (N) or (Q) entry, provide an IPC symbol and complete the Action column with "NEW."
- For an existing CPC main trunk entry or indexing entry where the existing IPC symbol needs to be changed, provide an UPDATE IPC symbol and complete the Action column with "UPDATE."
- For a (D) CPC entry or indexing entry complete the Action column with "DELETE." IPC symbol does not need to be included in the IPC column.
- For an (N) 2000 series CPC entry which is positioned within the main trunk scheme (breakdown code) provide an IPC symbol and complete the action column with "NEW".
- For an (N) 2000 series CPC entry positioned at the end of the CPC scheme (orthogonal code), with no IPC equivalent, complete the IPC column with "CPCONLY" and complete the action column with "NEW".

#### NOTES:

- F symbols are <u>not</u> included in the CICL table above.
- T and M symbols are not included in the CICL table above unless a change to the existing IPC is desired.