		0.2.0	
1 R	MISCELLANEOUS	230	Compression volume is also
1 A	.Fuels, lubricants and additives	221	expansion volume
2	COMBINED DEVICES	231	Vane
3	.Generating plants	232	Interengaging rotors
200	ROTARY	233	Nonparallel axes
201	.Reversible	234	Compression volume means
202	.With means to control degree of		axially disposed relative to
	compression	025	expansion volume means
203	.With combusted gas treatment or	235	Transfer means in rotor
	handling means	236	Vane
204	.With compression volume means in	237	Abutment
	uninterrupted communication	238	Interengaging rotors
	with expansion volume means	239	Compression volume means
205	.With fuel injection means		radially disposed relative to
206	And pump or control means		expansion volume means
207	Into intake port	240	Concentric
208	Into intake chamber	241	.With compression, combustion,
209	Into prechamber		and expansion in a single
210	.With ignition means		variable volume
211	Plural	242	Planetating rotor
212	.With plural compression volume	243	Vane
	means	244	Abutment
213	In series	245	Alternately approaching and
214	.With plural expansion volume		receding elements
	means	246	Eccentric interengaging rotors
215	In series	247	.Only combustion and expansion of
216	.With charge treatment means		charge in engine
217	Exhaust gas recirculation	248	Abutment
218	Rotor shape	249	Interengaging rotors
219	Stratification	18 R	OSCILLATING PISTON
220	Preheating	18 A	.Toroidal cylinder
221	.With transfer means intermediate	19	LIQUID PISTON
221	single compression volume	21	CONVERTIBLE CYCLE
	means and single expansion	22	INTERNAL COMBUSTION AND AIR
	volume means	23	SOLID FUEL
222	Isolated charge in movable	24 R	GUNPOWDER
222	transfer element	24 A	.Single shot gun powder motors
223	Reciprocating or oscillating	25 R	WATER AND HYDROCARBON
223	compression volume means	25 A	.Water in charge
224	Radially spaced from expansion	25 B	.Water plus heat into charge
224	volume means	25 C	.Water into cylinder
225	Abutment acts as compression	25 D	.Water plus heat into charge
225	means	25 E	.Water introduced by mixing with
226	Compression means disposed in		other materials
220	rotor	25 F	.Water plus heat by mixing with
227	Vane acts as compression	20 1	other materials
221	means	25 G	.Washers and cleaners
228	Compression volume means	25 H	.Washers and cleaners with heat
220	circumferentially disposed	25 J	.Automatic water control
	relative to expansion volume	25 K	.Automatic water control;
	means		thermostatic
229	Transfer means in rotor	25 L	.Automatic water control; suction
22,	ITAIDICI MOAID III IOCOI	25 M	.Automatic water control; speed
		2.5 1.1	.macomacic water control, speed

25 N	.Automatic water control interconnected with throttle	273	.Precombustion chamber mounting means
25 P	.Steam injection	274	.Having combustible mixture
25 Q	.Cooling regulation		forming means
26	ADDITIONAL AIR SUPPLY	275	By fuel injection into
250	ENGINE MEANS HAVING INTERNAL		precombustion or main
	VAPORIZING IN PRECHAMBER WITH		combustion chamber
	ALL COMBUSTION IN MAIN CHAMBER	276	Fuel injected into
251	.Whirling in prechamber		precombustion chamber formed
252	.Vaporizing by a hot surface of		in piston
	prechamber	277	By fuel injection into
253	PRECOMBUSTION AND MAIN COMBUSTION		precombustion chamber with
	CHAMBERS IN SERIES		carbureted main chamber
254	.Chamber temperature control means	278	By fuel injection into main chamber with carbureted
255	.Vaporizing in precombustion	0.00	precombustion chamber
256	chamber .Plural precombustion chambers	279	.Piston carried precombustion chamber
257	.Two-cycle	280	.Atomizer, deflector, or shield
258	.Having timed valves to		in precombustion chamber
250	precombustion and main combustion chambers	281	.Precombustion chamber shape is a figure of revolution
259	.Having volumetric relation	282	Figure of revolution is
	between precombustion and main		multishaped to form a
	combustion chambers		precombustion chamber
260	.With ignition means particularly	283	Cylindrical
	positioned relative to	284	Spherical
	precombustion and main	285	.Precombustion chamber having a
	combustion chambers		specific shape
261	.With injection means	286	.Having specific connecting
	particularly positioned		passage means between
	relative to precombustion and		precombustion and main
	main combustion chambers		combustion chambers
262	.Having fluid whirling means	287	With ignition means in
263	Whirling in precombustion		connecting passage
	chamber only	288	Having fuel, a combustible
264	.Precombustion chamber is carried by a valve		mixture, or air added in the connecting passage
265	.Precombustion and main chambers	289	Fluid flow through passage
	form an "I" head		controlled by working piston
266	.Precombustion chamber assembly	290	With whirling
	inserted in spark plug hole	291	Multiple connecting passages
267	Separate fuel or combustible	292	With valve means or variable
	mixture added to precombustion		orifice means in the passage
	chamber	293	Having multiple passages
268	.Valveless precombustion chamber	294	COMBUSTION CHAMBER MEANS HAVING
269	.Piston shape complements	0.05	FUEL INJECTION ONLY
	precombustion chamber	295	.Combustible mixture
070	discharge	206	stratification means
270	.Precombustion chamber liner or	296	.Injector is an integral part of
071	coating	0.05	engine valve
271	With liner mounting means	297	.Combination igniting means and
272	Including combustion catalyst		injector
	THE OF COALING MEANS		

298	.Injection of fuel onto igniter, deflector, heater, or atomizer	41.17	.Coolant released into cylinder or valve passages
299	.Using multiple injectors or	41.18	.Convertible
	injections	41.19	.Refrigerating cycle
300	<pre>Alternating multiple injectors (e.g., series injection)</pre>	41.2	.With vapor generation and/or condensing
301	.Injected fuel spraying into whirling fluid	41.21	Coolant circulation with condensing
302	.Air entering combustion chamber through plural inlets	41.22	Intake or carburetor
303	Having inlet uncovered by	41.23	Entrained in secondary circuit
	working piston	41.24	From top of jacket to bottom
304	.Injecting diverse fuels or		of radiator
	different states of same fuel	41.25	Water bypasses condenser
305	.Having a particular relationship	41.26	Vapor only circulated
	between injection and ignition	41.27	Overflow vent to condenser
	characteristics (e.g., nozzle	41.28	.Multiple cylinders with
	location, spray pattern,		equalized cooling
	timing relative to igniter	41.29	.Parallel flow
07 D	location, timing)	41.3	.Mixed air and liquid
27 R	BURNING BY HIGHLY COMPRESSED AIR	41.31	.With cooling of additional parts
27 GE	.Gas engines (diesel type)		or materials
	convertible from liquid to gas or operable with liquid and	41.32	With spark plug heat exchange
	gas	41.33	With lubricant heat exchange
27 A	Oil engine air preheated	41.34	.Internal cooling of moving
27 11	OIL ENGINES		parts; e.g., hollow valves,
	.Pump supply to air inlet	44 25	pistons, and movable cylinder
37	MULTIPLE EXPLOSION	41.35	Piston
38	ATMOSPHERIC	41.36	Telescoping piston and
39	NONCOMPRESSION	41.37	stationary conduits
41 R	REVERSIBLE	41.37	Hollow piston rod
41 E	.Electrical	41.50	Wrist pin type; e.g., nonrigidly connected
41.01	COOLING	41.39	Side wall opening
41.02	.Automatic coolant flow control	41.4	Rotary valves
41.03	Float control	41.41	Poppet-type valves
41.04	Shutters, air valves, dampers	41.42	.Liquid coolants other than water
	or adjustable cowls	41.42	and water treatment
41.05	Temperature and engine	41.43	.Movably mounted tank or radiator
	operation responsive	41.44	.With liquid coolant circulating
41.06	Servomotor-operated type		means
41.07	Interrelated shutter and	41.45	Jet pumps
	throttle control	41.46	Common drive for pump and fan
41.08	Valves for fluid coolant	41.47	Engine shaft driven
41.09	Coolant source bypass	41.48	.Devices for cooling liquid by
41.1	Radiator or condenser source		air flow
41.11	Air impeller	41.49	Fan type
41.12	Temperature-responsive	41.5	.Yielding or resilient walls
41.13	.Interrelated coolant flow and throttle control	41.51	.Plural radiators and/or tanks in series
41.14	.System drained and/or heat- storing	41.52	.Engine or cylinder-mounted heat dissipators
41.15	.Indicators and safety devices	41.53	Hopper type
41.16	.Coolant sealed in cylinder valve or piston	41.54	.With vent

41.55	.Combined	43 B	.Toroidal cylinders
41.56	.Air-cooled	43 C	.Cam transmission
41.57	With liquid cooling	45 R	ROTARY RECIPROCATING PISTON
41.58	Flow-regulating means	45 A	.Piston and crankshaft coaxial
41.59	Adjustable discharge	46 R	FREE PISTON
41.6	Steam dividing vanes, baffles,	46 A	.Two chambers; one piston
	conduits, or the like for	46 B	.Phasing means between two or
	multiple cylinders		more units
41.61	Individual deflecting cylinder	46 SC	.Single chamber; one piston
	baffles	46 E	.Electric generating means
41.62	Air duct with discharge ports	46 H	.Hammer
	or conduits	47 R	VALVED PISTON
41.63	With impelling means	47 A	.Charge passes from crankcase
41.64	Jet type		through valve in piston
41.65	Fan type	47 AA	.Lost motion connection actuates
41.66	Suction		valve
41.67	Jacketed cylinder	47 AB	.Inlet and exhaust valve in
41.68	Spiral passages		piston
41.69	Finned cylinder and/or head	48 R	ADJUSTABLE COMBUSTION CHAMBER
41.7	Engine encasing air duct; e.g.,	48 A	.Piston in head adjusted manually
	cowling		or mechanically
41.71	.Plural materials	48 AA	.Piston in head adjusted
41.72	.With jacketed head and/or	48 B	.Piston varied by means in
	cylinder		crankshaft, connecting rod or
41.73	Jet or spray within jacket		piston
41.74	Multiple cylinder	48 C	.Cylinder or sleeve-moved
41.75	Reentrant head	48 D	.Auxiliary chamber
41.76	With cooled valve seats or	50 R	RECIPROCATING CYLINDER
	guides	50 A	.Four-cycle
41.77	Poppet-type valves	50 B	.Two-cycle
41.78	Cylinder side wall valves	51 R	MULTIPLE PISTON, COMMON
41.78 41.79	Cylinder side wall valvesWith passages, baffles, etc.	51 R	NONRESTRICTIVE COMBUSTION
_		51 R	
41.79	With passages, baffles, etc.	51 R 51 A	NONRESTRICTIVE COMBUSTION
41.79 41.8	<pre>With passages, baffles, etcSpiral passages</pre>		NONRESTRICTIVE COMBUSTION CHAMBER
41.79 41.8 41.81	With passages, baffles, etc.Spiral passagesCylinder jacket supported	51 A	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycle
41.79 41.8 41.81 41.82 R	With passages, baffles, etc.Spiral passagesCylinder jacket supported solely by cylinder	51 A	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft
41.79 41.8 41.81 41.82 R	With passages, baffles, etc.Spiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangements	51 A 51 AA 51 AC	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for piston
41.79 41.8 41.81 41.82 R 41.82 A	With passages, baffles, etc.Spiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite head	51 A 51 AA	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers
41.79 41.8 41.81 41.82 R 41.82 A 41.83	 With passages, baffles, etc. Spiral passages Cylinder jacket supported solely by cylinder With head-cooling arrangements Composite head Cylinder detachable 	51 A 51 AA 51 AC	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84	 With passages, baffles, etc. Spiral passages Cylinder jacket supported solely by cylinder With head-cooling arrangements Composite head Cylinder detachable Flanged cylinder or liner 	51 A 51 AA 51 AC 51 B	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycle
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides	51 A 51 AA 51 AC 51 B	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycleTwo-cycle separate crankshaft
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION	51 A 51 AA 51 AC 51 B 51 BA	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycleTwo-cycle separate crankshaft for piston
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER	51 A 51 AA 51 AC 51 B 51 BA 51 BB	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaft
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42 43 R	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER ROTATING CYLINDER	51 A 51 AA 51 AC 51 B 51 BA 51 BB	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaftPlural combustion chamber and
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42 43 R 44 R	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER ROTATING CYLINDER .Radial	51 A 51 AA 51 AC 51 B 51 BA 51 BB 51 BC	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaftPlural combustion chamber and plural piston
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42 43 R 44 R 44 A	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER ROTATING CYLINDER .RadialWheel	51 A 51 AA 51 AC 51 B 51 BA 51 BB 51 BC	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaftPlural combustion chamber and plural pistonInlet or exhaust ports in two
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42 43 R 44 R 44 A	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER ROTATING CYLINDER .RadialWheelCombustion chamber is center of	51 A 51 AA 51 AC 51 B 51 BA 51 BB 51 BC 51 BD	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the pistonTwo-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaftPlural combustion chamber and plural pistonInlet or exhaust ports in two or more planes
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42 43 R 44 R 44 A 44 B	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER ROTATING CYLINDER .RadialWheelCombustion chamber is center of starTwo-cycle	51 A 51 AA 51 AC 51 B 51 BA 51 BB 51 BC 51 BD	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the pistonTwo-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaftPlural combustion chamber and plural pistonInlet or exhaust ports in two or more planes MULTIPLE CYLINDER
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42 43 R 44 R 44 A 44 B	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER ROTATING CYLINDER .RadialWheelCombustion chamber is center of star	51 A 51 AA 51 AC 51 B 51 BA 51 BB 51 BC 51 BD	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the pistonTwo-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaftPlural combustion chamber and plural pistonInlet or exhaust ports in two or more planes MULTIPLE CYLINDER .Simultaneous compression,
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42 43 R 44 R 44 A 44 B	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER ROTATING CYLINDER .RadialWheelCombustion chamber is center of starTwo-cycleValve casing-cylinders have no	51 A 51 AA 51 AC 51 B 51 BA 51 BB 51 BC 51 BD 52.1 52.2	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaftPlural combustion chamber and plural pistonInlet or exhaust ports in two or more planes MULTIPLE CYLINDER .Simultaneous compression, distinct pistons, restricted
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42 43 R 44 R 44 A 44 B	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER ROTATING CYLINDER .RadialWheelCombustion chamber is center of starTwo-cycleValve casing-cylinders have no valves but have ports which	51 A 51 AA 51 AC 51 B 51 BA 51 BB 51 BC 51 BD 52.1 52.2	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaftPlural combustion chamber and plural pistonInlet or exhaust ports in two or more planes MULTIPLE CYLINDER .Simultaneous compression, distinct pistons, restricted communication to a single combustion chamberFour-stroke cycle
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42 43 R 44 R 44 A 44 B	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER ROTATING CYLINDER .RadialWheelCombustion chamber is center of starTwo-cycleValve casing-cylinders have no valves but have ports which register with ports in casing	51 A 51 AA 51 AC 51 B 51 BA 51 BB 51 BC 51 BD 52.1 52.2	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaftPlural combustion chamber and plural pistonInlet or exhaust ports in two or more planes MULTIPLE CYLINDER .Simultaneous compression, distinct pistons, restricted communication to a single combustion chamberFour-stroke cycleMultiple crankshafts
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42 43 R 44 R 44 A 44 B	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER ROTATING CYLINDER .RadialWheelCombustion chamber is center of starTwo-cycleValve casing-cylinders have no valves but have ports which register with ports in casingCam transmission	51 A 51 AA 51 AC 51 B 51 BA 51 BB 51 BC 51 BD 52.1 52.2	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaftPlural combustion chamber and plural pistonInlet or exhaust ports in two or more planes MULTIPLE CYLINDER .Simultaneous compression, distinct pistons, restricted communication to a single combustion chamberFour-stroke cycle
41.79 41.8 41.81 41.82 R 41.82 A 41.83 41.84 41.85 41.86 42 43 R 44 R 44 A 44 B 44 C 44 D	With passages, baffles, etcSpiral passagesCylinder jacket supported solely by cylinderWith head-cooling arrangementsComposite headCylinder detachableFlanged cylinder or liner .Valve seats or guides CRANKCASE VENTILATION OSCILLATING CYLINDER ROTATING CYLINDER .RadialWheelCombustion chamber is center of starTwo-cycleValve casing-cylinders have no valves but have ports which register with ports in casingCam transmission .Parallel to shaft	51 A 51 AA 51 AC 51 B 51 BA 51 BB 51 BC 51 BD 52.1 52.2	NONRESTRICTIVE COMBUSTION CHAMBER .Four-cycleFour-cycle separate crankshaft for pistonTwo or more combustion chambers between the piston .Two-cycleTwo-cycle separate crankshaft for pistonPiston offset from crankshaftPlural combustion chamber and plural pistonInlet or exhaust ports in two or more planes MULTIPLE CYLINDER .Simultaneous compression, distinct pistons, restricted communication to a single combustion chamberFour-stroke cycleMultiple crankshafts

53.1	.Cylinder offset from crankshaft	59.4	Disc valve
	axis	59.5	Plural carburetors
53.2	Multiple crankshafts	59.6	Multiple crankshafts
53.3	Cylinders opposite	59.7	Two-stroke cycle
53.4	Two-stroke cycle	60.1	.Locked annular piston
53.5	Crankshaft between parallel		DOUBLE-ACTING
	cylinders	61 R	.Two-cycle
53.6	.Cylinders having opposing heads	62	Combined pump and motor
54.1	.Cylinders radiating		cylinder
54.2	Star	61 V	Lengthwise scavenging of
54.3	Cam on rotary output shaft		cylinders from cylinder head
54.4	"V" type		to piston
54.5	Odd number of cylinders	63	.Four-cycle
54.6	Six cylinder	64	SIX-CYCLE
54.7	Eight cylinder	65 R	TWO-CYCLE
54.8	More than eight cylinder	66	.Combined pump and motor cylinder
55.1	Semi-radial	67	.Divided pump discharge
55.2	Cylinders opposite	68	.Pump compression
55.3	Cam on rotary output shaft	69 R	.Separate air and gas pumps
55.4	Four-stroke cycle	69 V	Lengthwise scavenging of
55.5	Cylinders opposite and		cylinder by gas from cylinder
	aligned		head to piston
55.6	Two-stroke cycle	70 R	.Pump and cylinder adjacent
55.7	Cylinders opposite and aligned	70 V	Lengthwise scavenging of power cylinder
56.1	.Having rotary output shaft	71 R	.Pump and cylinder coaxial
30.1	parallel to cylinders	71 V	Lengthwise scavenging of
56.2	Cam on rotary output shaft	, ± v	cylinder from head to piston
56.3	Swash plate type	71 VA	Sleeve valve
56.4	Single bank of cylinders	72	.Pump and cylinder inclined
56.5	Motion converting means	, 2	Rear compression
30.3	between two banks of cylinders	73 R	Crankcase
56.6	Multiple swash plate drive	73 A	Fuel to crankcase
56.7		73 AA	Ported piston
56.8	Single bank of cylinders	73 AV	Valved
30.0	Motion converting means	73 AB	Inlet valve in head
F.6. O	between two banks of cylinders	73 AC	
56.9	Multiple cam drives	73 AC	Varies compression spaceLubricant oil and fuel mixing
57.1	Shaft rotates through piston	73 AD	3
58.1	.Cylinders in-line	73 AE	devices
58.2	Locked pistons	/3 AL	Auxiliary piston moves
58.3	Two-stroke cycle		synchronously with piston to enlarge volume of crankcase or
58.4	Lengthwise charging		incoming charge
58.5	Step piston	73 AF	Crankcase compression with
58.6	Step piston	/3 AF	-
58.7	Cylinder supercharged by	73 В	auxiliary pump meansFuel to bypass
	pressure pulse of released	73 ВА	
	exhaust gases	/3 BA	Lengthwise scavenging of
58.8	Exhaust to next cylinder ready	73 C	cylinders from head
	to fire		Fuel to cylinder
58.9	Oscillating or reciprocating,	73 CA	Lengthwise scavenging of
- 0 1	nonpoppet valve	72 00	cylinders from head
59.1	Rotary valve	73 CB	With liquid pump to separate
59.2	Tapered	72 00	inlet
59.3	Sleeve valve	73 CC	With gas or vapor pump to
			separate

73	D	Disc valves	65 P	.Ports
	DA	Charge to crankcase through	306	MEANS TO WHIRL FLUID BEFORE,
13	DA	crankshaft	300	UPON, OR AFTER ENTRY INTO
73	E	Reentrant cylinder head		COMBUSTION CHAMBER
73	_	Stepped piston	307	.Structural projection on working
	FA	Ported	307	piston causes whirling
73			308	.Having multiple oxidant inlet
73		Supercharging of crankcase	300	means
	•	Valves for crankcase	309	
/3	SC	Returns charge to crankcase or	310	.Specific spark plug location
п.		rejects to exhaust	310	COMBUSTION CHAMBER HAVING
/3	PP	Distinct passages from	211	MULTIPLE SPARK GAPS FOUR-CYCLE
		crankcase to cylinder	311	
	SP	Slow-speed operation	312	Engine cylinder having a
74		Cylinder	242	reciprocating sleeve valve
74	A	Fuel to rear of piston	313	Having a junk ring seal
74	AA	Lengthwise scavenging from head	314	Having sleeve valve lubrication means
74	AP	Reduced portion of piston acts	315	.Multiple exhaust
		as guide	316	.Having subcharger associated
74	AC	Cross head between piston and		with the cylinder
		crank	317	.Crankcase compression of air or
74	AE	Enclosed crankcase		combustible mixture to be
74		Lengthwise bypass		subsequently pumped into the
74	_	Lengthwise cylinder combustion		working cylinder
, -	C	space	318	.Rear compression of air or
74	D	Slide valve between chamber of		combustible mixture to be
		pump and crankcase		subsequently pumped into the
65	PE	.Exhaust ports		working cylinder
65		.Inlet and exhaust ports in two	76	.Scavenging
0.5		or more planes	77	.Single revolution
65	В	. Pumps	78 R	.Variable clearance
	BA	.Blowers	78 A	Piston in head adjusted
	PD	.Port deflectors		mechanically
65		Scavenging by inertia of exhaust	78 AA	Piston in head adjusted by
0.5	15			fluid means
		gas and charging by use of pressure waves	78 в	Varying means is in the piston
65	С	-	78 BA	Varying means is in the piston
		.Step piston (see sub. 59 BS)		connection
65		.Valves	78 C	Cylinder or sleeve moved
	VA	Sleeve valve	78 D	Auxiliary chamber
65	VS	Sleeve driven by auxiliary	78 E	Varying means is in the
6 F		crankshafts	70 1	connecting rod
	VB	.Lengthwise scavenging list above	78 F	Varying means is in the
65	VC	.Lengthwise scavenging exhaust above		crankshaft
65	VD	.Intake and exhaust valve in top	79 R	.Single poppet valve
		of cylinder	79 A	Rotary valve and poppet which
65	W	.Whirl through piston-controlled		extends through rotary valve
		ports	79 C	Concentric valves; relatively
65	WA	Whirl in top of cylinders and		movable
		lengthwise scavenging	80 R	.Rotating valve
65	WV	.Vacuum intake	80 BA	Rotary valve is perpendicular
	SP	.Single port for inlet and		to cylinder
55	DI	exhaust	80 BB	Rotary valve is parallel to
65	EM	.Exhaust manifolds		cylinder
55	1111	· Limage mairroras	80 C	Sleeve valve

81 R . Oscillating valve or disc control or disc control 10	80 D	Disc valve	337	.Specific throttle valve
81 B .Oscillating valve not sleeve or disc or	80 DA	Rotary plug		structure
or disc 1	81 R	.Oscillating valve	338	.Fuel injection pump bypass
81 C Sleeve valve 82	81 B	Oscillating valve - not sleeve		control
81 D .Disc valve 82		or disc	339.1	.Idle speed control
Rotating side shaft Rotating transverse valves Rotating transverse valves Rotating transverse valve and lever Rotating transverse valve and lever Rotating at transverse valve and lever Rotating at transverse valve and bell crank Rotating at transverse valve and lever Rotating at transverse valve and l	81 C	Sleeve valve	339.11	By regulating spark ignition
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Solution	83	.Rotating transverse shaft		controlled
85	84	.Adjacent supply and exhaust	339.13	Manual adjustment
86 Opposite supply and exhaust valves 87		valves	339.14	Electrically operated control
86	85	.Aligned supply and exhaust		means
valves 7		valves	339.15	_
87	86	.Opposite supply and exhaust		
88		valves	339.16	External load condition
89	87	.Longitudinal valve and lever		-
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control in between) 359	350	5		_
cuts off fuel pump) 396Resistance or override acts on input connection to regulator vacuum) 398Throttle position lock 399Throttle position lock 399Throttle position lock 399Throttle position lock 399Throttle position lock 362Cold engine control 363Mechanical sensor or regulator 364Fuel injection pump governor (e.g., diesel) 400Mechanical connection between input and speed regulator 365Governor override 366Engine starting or warm-up control 367Variable throttle or control rod stop 399Three-dimensional cam control 370Acceleration responsive 402Based axial link (e.g., sliding rod with spring return) 405Based axial link (e.g., sliding rod with spring return) 405Movable fulcrum (e.g., slot and pin) 406.11Movable fulcrum (e.g., slot and pin) 406.12Movable fulcrum (e.g., slot and pin) 406.13Movable fulcrum (e.g., slot and pin) 406.14Movable fulcrum (e.g., slot and pin) 406.15Movable fulcrum (e.g., slot and pin) 406.16Movable fulcrum (e.g., slot and pin) 406.17Movable fulcrum (e.g., slot and pin) 406.18Movable fulcrum (e.g., slot and pin) 406.19Movable fulcrum (e.g., slot and pin) 406.10Movable fulcrum (e.g., slot and pin) 406.11Movable fulcrum (e.g., slot and pin) 406.12Movable fulcrum (e.g., slot and pin) 406.16Movable	330	_	394	-
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381Fuel viscosity sensor (e.g., malfunction responsive				-
1 · · · · · · · · · · · · · · · · · · ·		Barometric sensor	406.17	Cylinder pressure sensor
temperature sensing)	381			malfunction responsive
		temperature sensing)		

406.18	Engine shaft rotational	406.43	Responsive to derivative,
	position sensor malfunction		integral or average of
	responsive (e.g., crank shaft,		pressure
	cam shaft)	406.44	Exhaust gas condition
406.19	Closed loop feedback control of		responsive control of spark
	spark timing		timing
406.2	Separate control for each	406.45	Including control of
	cylinder		combustible mixture or a
406.21	Knock responsive		constituent thereof (e.g.,
406.22	Cylinder pressure responsive		air, fuel, exhaust gas)
406.23	Engine output (e.g., torque, speed, horsepower) or fuel	406.46	Acceleration or deceleration responsive
	consumption optimization	406.47	With fuel injection control
406.24	Including means responsive to	406.48	With exhaust gas recirculation
400.24	the instantaneous change in	100110	(EGR) control
	engine speed (e.g., roughness,	406.49	Barometric pressure responsive
	unstable combustion, etc.)	406.5	Acceleration or deceleration
406.25	Acceleration or deceleration	400.3	responsive
100.23	responsive	406.51	Acceleration responsive
406.26	Combustion condition	406.51	Throttle position responsive
400.20	responsive	406.53	Starting condition responsive
406.27	Combustion failure responsive	406.53	Starting condition responsiveStart detected by engine speed
400.27	(e.g., misfire)	406.55	
406.28	Combustion condition sensed	406.33	Temperature responsive (e.g.,
400.20	by optical sensor	106 E6	ambient, engine, etc.)
406.29	Engine knock responsive	406.56	With magneto
406.29		406.57	And capacitor discharge for
400.5	Fuel quality or composition signal responsive	406 50	ignition spark energy
406.31	Alcohol concentration	406.58	Having engine shaft rotational
400.31	responsive		<pre>position signal generator (e.g., crank shaft, cam shaft)</pre>
406.32	Having a plurality of	406.59	
400.32	speed/load maps related to	400.39	Speed responsive timing control
	fuel quality or composition	406.6	Having counter or addressable
406.33	With modifying or updating		memory (e.g., digital timing
	<pre>memory (i.e., learning)</pre>		circuit)
406.34	Modification of knock signal	406.61	Plural engine shaft position
	by engine operating condition		sensors
	signal	406.62	Position sensors at
406.35	Engine operating condition		separate shafts
	is load or speed	406.63	Position sensors having
406.36	Acceleration or		different pulse rates
	deceleration responsive	406.64	Memory addressed by engine
406.37	Having specific knock		speed or load
	detecting means	406.65	With microprocessor
406.38	Knock frequency	406.66	With resistor/capacitor (RC)
	distribution pattern		timing circuit (e.g.,
406.39	responsive	406 67	multivibrator)
406.39	Knock signal counting	406.67	.Vacuum timing control
400.4	And specific system	406.68	Barometric pressure responsive
	component mounting or location details	406.69	Condition responsive valve in
406.41	Engine cylinder pressure	406 7	fluid path from vacuum source
400.41	responsive	406.7	Temperature responsive
406.42	Peak pressure responsive	406.71	Fluid delay between vacuum
400.4A	bressure responsive		source and actuator (e.g.,
			fixed restriction)

406.72	Increasing vacuum retards spark timing	686	Engine coolant temperature responsive
406.73	Plural diaphragms or actuators	687	Speed responsive
406.74	.Mechanical or hydraulic link to	688	Inoperative sensor responsive
400.74	throttle valve or accelerator	689	Engine fluid or engine
406.75	.Centrifugal timing mechanism	005	component temperature
406.76	.Spark delay actuated or		responsive
400.70		690	With fail-safe, backup, or
420	deactuated by starting device	090	malfunction means
429	COMBUSTION CHAMBER MEANS COMBINED	691	
	WITH AIR-FUEL MIXTURE FORMING MEANS	691	Multiple sensors controlling group of cylinders
430	.Stratification in combustion chamber	692	Controlling plural groups of cylinders
431	.Having a single combustible	693	With compensator for sensor
	mixture inlet combined with		output (e.g., current or
	means for injecting additional		voltage)
	fuel into the combustion	694	Output fed to compensating circuit
432	Air or combustible mixture	695	Variable reference value
132	entering the combustion	696	Proportional or integral
	chamber through plural inlets	050	circuit
433	One inlet is uncovered by	697	Heater for sensor or sensor
	piston travel		environment
434	CHARGE FORMING DEVICE (E.G.,	698	With addition of secondary
	POLLUTION CONTROL)		fluid (e.g., fuel or exhaust
435	.Including cylinder pressure or		gas)
	temperature responsive means	699	Secondary fluid is auxiliary
436	.Including means responsive to		air or oxygen (e.g.,
	instantaneous change in engine		carburetor air bleed)
	speed	700	Fed to air/fuel mixture
672	.Including exhaust gas condition responsive means	701	With auxiliary control of carburetor
673	With sensor controlling each	702	Variable venturi carburetor
	cylinder individually	703	Exhaust gas composition sensor
674	With modifying or updating	704	.Air/fuel ratio prior to
	memory (i.e., learning)		combustion responsive means
675	Acceleration or deceleration	437	.Auxiliary control of carburetor
	responsive	10.	fuel metering
676	Exhaust gas temperature or	438	By electrical or electronic
	pressure repsonsive	130	control system
677	Combined with ambient condition	439	Variable venturi carburetor
	responsive means (e.g.,	441	By mechanical speed sensor
	pressure)	442	.Injection or carburetion system
678	Ambient temperature responsive	112	having a series of throttle
679	Combined with engine condition		valves
	responsive means	443	.Alternate or simultaneous lean-
680	Idling responsive	113	rich
681	Engine load responsive	444	.Having fluidic logic control
682	Acceleration or deceleration		means
	responsive	445	
683	Throttle position responsive	445	.Fuel injection systemFuel pump flow regulation
684	Pressure downstream of	447	With accumulator
301	throttle valve responsive	447	
685	Starting or warmup responsive	448	Sequential distributor
505	scarcing or warmup responsive	447	Rotary and reciprocating distributor

450	Rotary distributor	486	Having a digital memory
451	Reciprocating distributor		addressed by an engine
452	Nonsequential distributor		parameter
453	\ldots Enrichment of the combustible	487	Having an up or up-down
	mixture for cold starting or		counter in circuit
	cold running	488	Subcircuit operates on a
454	Equal pressure valve type		parameter sensor output before
455	Distributor and metering unit		input to main fuel control
	are in common housing	400	(e.g., function generator)
456	Common rail system	490	Injector solenoid drive
457	Regulating means adjusts fuel	491	Starting condition responsive
	pressure	492	Acceleration or full load
458	Electric regulator	400	condition responsive
459	Bleed off valve	493	Deceleration condition
460	Series regulator	404	responsive
461	Having vapor returned to tank	494	Having specific transducer
	or pump inlet	495	.With fuel pump
462	By throttle control	496	Variable rate of injection
463	Manifold pressure responsive	400	stroke
464	Temperature responsive	497	. Electric fuel pump
465	Barometric responsive	498	Piezoelectric drive
466	Having an antitampering	499	Solenoid drive
	device	500	Variable beginning and ending
467	Drip prevention means at	E 0.1	of pumping stroke
	injector nozzle	501	Variable beginning of pumping
468	Having a specific shape,	F00	stroke
	material, or location of fuel	502	Fluid pressure control
4.60	line	503	Variable ending of pumping
469	Specific fuel line mounting	504	stroke
470	means	504	Variable stroke
470	Injection nozzle mounting means	303	Fuel pump and intake air controls interconnected
471	Nozzle isolated from manifold	506	Having pressure relief valve
470	vacuum effect	507	Pumping member driven by a
472 473	Electrically actuated injector	307	piston or valve of the
4/3	Mechanically actuated		internal combustion engine
171	<pre>switchingIquition distributor used as</pre>	508	Pumping member driven by the
474	switch	300	internal combustion engine
475			valve operating mechanism
476	Actuated by ignition pulseMagnetically actuated	509	Specific location or mounting
4/0	switching	303	of pump
477	Radiation actuated switching	510	.Fuel flow regulation between the
477	Actuator circuit (e.g., engine		pump and the charge-forming
4/0	condition responsive		device
	electronic circuit actuates	511	Regulator means adjusts fuel
	injector valve)		pressure
479	Backup systems, fail-safe,	512	Engine parameter responsive
475	failure indicator	513	Environmental condition
480	Having microprocessor		responsive
481	Engine cylinder cutout	514	Excess fuel returned to tank
482	Circuit activates valve for	515	Regulator controls flow of a
- =	continuous fuel flow		plurality of fuels
483	Having plural multivibrators	516	Air or fuel vapor purging
484	Having single multivibrator		system
485	Having ramp generator	517	Carburetor float bowl drain
-	J : F J: : ****		

518	.Having fuel vapor recovery and storage system	553	Intermediate fluid used for heating
519	Having an adsorbent canister	554	Combustible mixture, air, and
520	Purge valve controlled by		fuel are heated separately
	engine parameter	555	Air and fuel heated separately
521	Responsive to secondary air	556	Air only
	pressure	557	Fuel only
522	Liquid fuel evaporating by	558	Fuel is heated to ignition
	submerged air supply		temperature
523	Liquid fuel evaporating by	559.1	.Supercharger
	extended fuel film	559.2	Pressure exchange with exhaust
524	Screen or mat		gas
525	.Combined liquid and gaseous fuel	559.3	With clutch
526	Diesel engine convertible from	560	Two-cycle compressor feeds a
	liquid to gas		four-cycle engine
527	.Gaseous fuel and air mixer	561	Variable ratio compressor
528	Supercharged engine		driven supercharger
529	Safety device (e.g., cutoff)	562	Multiple superchargers
530	.Constant flow fuel supply	563	Intercooler
531	.Auxiliary air or gas used to	564	Boost control
	inject fuel	565	Supercharger is driven
532	Air is bled from the cylinder		independently of the engine
	on the compression stroke in	566	Funnel-type supercharger (e.g.,
	that cylinder		ram-air)
533	Having a separate pump for the	567	.Oxidant is solely oxygen
	air or gas	568.11	.Exhaust gas used with the
534	Air is bled from another engine		combustible mixture (e.g.,
	cylinder		emission control Exhaust Gas
535	Constant fuel level		Recirculation (EGR) valve)
536	.Combustible mixture ionization,	568.12	Exhaust gas cooled during
	ozonation, or electrolysis		recirculation
537	Before intake valve (e.g., in	568.13	Having recirculation path
	manifold)		formed entirely in the
538	Fuel only		cylinder block or head
539	Air only	568.14	Internal exhaust gas
540	.Cooling of combustible mixture		recirculation (e.g., exhaust
541	Fuel only		gas retained in the combustion
542	Air only		chamber)
543	.Heating of combustible mixture	568.15	Having exhaust gas mixed with a
544	Lighter fuel is used during		constituent before entry into
	starting		intake manifold
545	Heating meduim surrounds	568.16	With electrical means for fail-
	combustible mixture		safe, backup, or malfunction
546	Combustible mixture surrounds		detecting of EGR system
	heating medium	568.17	Having specific exhaust gas
547	Combustible mixture and heating		outlet structure at intake
	meduim adjoin one another	560.40	manifold
548	Trap for liquid particle	568.18	Having a valve located at the
	vaporization	560 10	outlet of the EGR passage
549	Electric heater	568.19	EGR valve position controlled
550	Combustion heater		only in relationship to intake
551	Part of combustible mixture is	E 6 0 0	throttle valve position
	burned	568.2	Plural EGR valves in the
552	Automatic control		recirculation passage

568.21	Having electrically actuated control means	588	Oxidant controlled by engine temperature
568.22	Ambient condition responsive	590	.Charge-mixing device in intake
	(e.g., atmospheric		(e.g., device which insures
	temperature, atmospheric		the atomization of the
	pressure)		combustible mixture)
568.23	Having rotary actuator control	591	Having liquid fuel collector
	of EGR valve	592	By fan means
568.24	Electrical rotary actuator	593	By screen means
300.21	rotates the EGR valve	594	HIGH TENSION IGNITION SYSTEM
568.25	Vacuum actuator control of	595	Retrofit conversion ignition
300.23	EGR valve	333	unit
568.26	Having electromechanical	596	.Using capacitive storage and
300.20	actuator control of EGR valve	370	discharge for spark energy
568.27	Controlling vacuum actuator	597	Regulating sensed ignition
568.28	Including auxiliary vacuum	391	capacitor voltage
300.20	pump	598	Having an oscillator
568.29	Vacuum actuator control of EGR	599	_
300.23	valve	600	Having a magneto
568.3	Including auxiliary vacuum	600	Triggering voltage obtained
500.5	pump		from capacitor charging winding
568.31	Temperature responsive	601	Specific design of charge or
568.32	Having fixed restriction in	001	trigger winding core
300.32	vacuum line	603	Antireverse protection
572	.Crankcase vapor used with	604	Inductive capacitive discharge
572	combustible mixture	004	system
573	Vapor treated before mixing	605	Having a specific capacitor,
373	with combustible mixture	003	ignition coil means, or
	(e.g., cooling)		switching element circuit path
574	Specific control valve (e.g.,	606	.High frequency ignition system
	PCV valve)	607	Free running oscillator
575	.Diverse fuel supply		supplies coil primary
576	Fuel switched in response to	608	Having a specific spark plug
	engine starting condition	609	.Having dwell control
577	Fuel switched, condition	610	Using a monostable
	responsive to load	010	multivibrator
578	Fuel switched in response to	611	Dwell maintained at constant
	engine temperature		value
579	.Multiple carburetors	612	.Having engine component position
580	Each carburetor feeds a		sensor
	cylinder or group of cylinders	613	Optical sensing
	(e.g., split engine)	614	Including a zero crossing
581	Separate carburetor for		detector
	starting	615	Includng an oscillator
582	Separate carburetor for high	616	Piezoelectric sensor
	load	617	Inductive or magnetic sensor
583	With linkage between carburetor	618	.Having specific trigger
	throttle valves		circuitry
584	Staged opening of carburetor	619	Oscillatory trigger circuit
	throttle valves	620	.Additional spark energy supply
585	.Auxiliary air or oxygen added to	621	.Having an ignition coil with
	combustible mixture		multiple primary or secondary
586	Oxidant controlled by throttle		windings
587	Oxidant controlled by intake	622	Separate circuit for each
	manifold vacuum		winding

623	.Having supply voltage regulation	653	Additional capacitor other than
624	.Having ballast resistor cutout or control		breaker point capacitor is in series with coil primary or
625	Responsive to engine or		secondary
020	environmental condition	654	Additional capacitor other than
626	Oscillator or trigger circuit		breaker point capacitor is in
	responsive to engine condition		parallel with coil primary or
627	.Having auxiliary spark gap in		secondary
	series or parallel with the	655	Diode is in series with coil
600	coil	656	primary or secondary
628	.Having a continuous high voltage	020	Diode is in parallel with coil
	output to the high voltage	90.1	primary or secondary POPPET VALVE OPERATING MECHANISM
(20	distributor	90.11	Electrical system
629	.Monostable multivibrator	90.11	.Hydraulic system
	controls timing of coil primary current	90.12	With manifold and distributor
630	Safety device	90.13	. Pneumatic system
631	Reverse engine rotation	90.14	.With means for varying timing
031	protection	90.16	Cam-to-valve relationship
632	Ignition switch opened when	90.17	Camshaft or cam characteristics
	engine stops	90.18	Axially shiftable camshaft
633	.Radio interference protection	90.19	.With temperature compensation
634	.Having a specific ignition coil	90.2	.With compound movement of cam
635	.Specific coil location		follower
636	.Multiple spark ignition system	90.21	.Follower displaced axially of
637	System fires single spark plug		camshaft
	per cylinder	90.22	.Plural valve trains, single
638	System fires multiple spark		actuator
	plugs per cylinder	90.23	Intake and exhaust
639	System using vibrator for	90.24	.Valve driven closed
	multiple sparks upon starting	90.25	By valve-opening rocker
640	.Dual systems	90.26	By cam-actuated unitary
641	One for starting		follower
642	.Piezoelectric voltage generator	90.27	.Overhead camshaft
643	.Electronic cylinder sequencing	90.28	.With nonvalving movement (e.g.,
644	.Current or voltage sensing in		about valve stem)
645	coil primary .Maverick spark suppressor	90.29	Oscillating movement converted internally
646	Point bounce or arc suppression	90.3	Positive rotation provided by
040	system	J0.5	internal means
647	.Having a specific mounting of	90.31	.Camshaft drive means
	system component	90.32	.With alternate interruption of
648	.Having SCR triggered by lowering		drive train
	cathode voltage below ground	90.33	.Lubrication
649	.Multiple primary current	90.34	Camshaft
	interrupters	90.35	Tappet as conduit
650	.Power supply, ignition coil	90.36	Rocker fulcrum as conduit
	primary, and interrupter	90.37	Seals and shields
654	element all in series	90.38	Housings
651	Interrupter is multiple	90.39	.Rocker
650	transistor circuit	90.4	Plural valves
652	Interrupter is single	90.41	Individually fulcrumed
	transistor	90.42	Rotation prevention
		90.43	Lash adjustment at fulcrum
		90.44	Cam engaged

90.45	Lash adjustment		Compound insulation
90.46	Hydraulic	169 CB	Core retaining
90.47	Yieldable engagement	169 DW	Disk wrappings type
90.48	.Tappet	169 EL	Electrodes
90.49	Cushion and silencer	169 EA	Adjustable gap
90.5	Rotation prevention	169 EB	Replaceable electrode
90.51	Composition, surface treatment	169 EC	Adjustable and replaceable
	manufacture	169 C	Cool
90.52	Lash adjustment	169 E	Insulated electrodes
90.53	Self-operating	169 G	Intensity in gap only
90.54	Screw	169 P	Insulating protecting
90.55	Hydraulic	169 PA	Tubes and attachments
90.56	Pressure flow upwardly into	169 PB	Heaters
	pressure chamber	169 PH	Hoods and shields
90.57	Vent or bleed means for	169 MG	Multiple firing gap
	pressure chamber	169 TC	Transparent combustion chamber
90.58	Self-contained	169 V	Valved
90.59	With provision for	153	Make and break
	horizontal positioning	154	Electromagnetic
90.6	.Cam	155	Pneumatic
90.61	.Rod	162	Piston-operated
90.62	Self-adjusting	156	Reciprocating electrode
90.63	Hydraulic	157	Rocking-electrode hammer
90.64	Pull type		action
90.65	.Spring	158	Rocking and rigid electrodes
90.66	Attenuated	159	Rocking and yielding
90.67	Seat and retainer		electrodes
143 R	IGNITERS	160	
143 R 144	IGNITERS .Flame	160 161	Oscillating electrodesRotary electrodes
_			Oscillating electrodes
144	.Flame	161	<pre>Oscillating electrodesRotary electrodesStationary-electrode structure</pre>
144 145 R	.Flame .Incandescent	161 163 164	Oscillating electrodesRotary electrodes
144 145 R 146	.Flame .IncandescentValve controlled	161 163 164 146.5 A	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanism
144 145 R 146	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors	161 163 164 146.5 A 146.5 B	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimers
144 145 R 146 145 A	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source	161 163 164 146.5 A 146.5 B	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locks
144 145 R 146 145 A	<pre>.Flame .IncandescentValve controlledElectric (incandescent ignitors using electricity as a source of heat)</pre>	161 163 164 146.5 A 146.5 B	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switches
144 145 R 146 145 A	.Flame .IncandescentValve controlledElectric (incandescent ignitors using electricity as a source of heat) .Sparkers	161 163 164 146.5 A 146.5 B	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure-
144 145 R 146 145 A 146.5 R 147	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .SparkersLow tension	161 163 164 146.5 A 146.5 B	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the
144 145 R 146 145 A 146.5 R 147 149 R	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .Dynamos	161 163 164 146.5 A 146.5 B	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine
144 145 R 146 145 A 146.5 R 147 149 R 149 A	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor type	161 163 164 146.5 A 146.5 B 146.5 C	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery
144 145 R 146 145 A 146.5 R 147 149 R 149 A 149 B	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel type	161 163 164 146.5 A 146.5 B 146.5 C	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters
144 145 R 146 145 A 146.5 R 147 149 R 149 A 149 B 149 D	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse starters	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters
144 145 R 146 145 A 146.5 R 147 149 R 149 A 149 B 149 D 149 E	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature type	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires
144 145 R 146 145 A 146.5 R 147 149 R 149 B 149 D 149 E 149 F	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature typeSpecial waveforms	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires leading to plugs, distributor,
144 145 R 146 145 A 146.5 R 147 149 R 149 A 149 B 149 D 149 E 149 F 149 FA	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature typeSpecial waveformsDouble current generators	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires leading to plugs, distributor, etc.
144 145 R 146 145 A 146.5 R 147 149 R 149 A 149 B 149 D 149 E 149 F 149 FA	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature typeSpecial waveformsDouble current generatorsMovable pole shoes and bell-	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires leading to plugs, distributor, etc. VIBRATION COMPENSATING DEVICE
144 145 R 146 145 A 146.5 R 147 149 R 149 B 149 B 149 B 149 E 149 F 149 FA 149 G	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature typeSpecial waveformsDouble current generatorsMovable pole shoes and bell- magnets	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D 143 A 143 B 143 C	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires leading to plugs, distributor, etc. VIBRATION COMPENSATING DEVICE .Balancing arrangement
144 145 R 146 145 A 146.5 R 147 149 R 149 A 149 B 149 D 149 E 149 F 149 FA 149 G	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature typeSpecial waveformsDouble current generatorsMovable pole shoes and bellmagnetsReciprocating	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D 143 A 143 B 143 C	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires leading to plugs, distributor, etc. VIBRATION COMPENSATING DEVICE .Balancing arrangement TRANSMISSION MECHANISM FROM
144 145 R 146 145 A 146.5 R 147 149 R 149 A 149 B 149 D 149 E 149 F 149 FA 149 G	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature typeSpecial waveformsDouble current generatorsMovable pole shoes and bellmagnetsReciprocatingCombined adjusting and exhaust	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D 143 A 143 B 143 C	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires leading to plugs, distributor, etc. VIBRATION COMPENSATING DEVICE .Balancing arrangement TRANSMISSION MECHANISM FROM PISTON
144 145 R 146 145 A 146.5 R 147 149 R 149 A 149 B 149 D 149 E 149 F 149 FA 149 G	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature typeSpecial waveformsDouble current generatorsMovable pole shoes and bellmagnetsReciprocating .Combined adjusting and exhaust regulating	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D 143 A 143 B 143 C	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires leading to plugs, distributor, etc. VIBRATION COMPENSATING DEVICE .Balancing arrangement TRANSMISSION MECHANISM FROM PISTON .Including clutch
144 145 R 146 145 A 146.5 R 147 149 R 149 A 149 B 149 D 149 E 149 F 149 FA 149 G	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature typeSpecial waveformsDouble current generatorsMovable pole shoes and bellmagnetsReciprocatingCombined adjusting and exhaust regulatingCombined sparker and valve	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D 143 A 143 B 143 C	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires leading to plugs, distributor, etc. VIBRATION COMPENSATING DEVICE .Balancing arrangement TRANSMISSION MECHANISM FROM PISTON .Including clutch .With particular piston
144 145 R 146 145 A 146.5 R 147 149 R 149 A 149 B 149 D 149 E 149 F 149 FA 149 G	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature typeSpecial waveformsDouble current generatorsMovable pole shoes and bellmagnetsReciprocatingCombined adjusting and exhaust regulating .Combined sparker and valveCombined valve and sparker	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D 143 A 143 B 143 C 192.1 192.2 197.1 197.5 197.2 197.4	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires leading to plugs, distributor, etc. VIBRATION COMPENSATING DEVICE .Balancing arrangement TRANSMISSION MECHANISM FROM PISTON .Including clutch .With particular piston .Crankshaft and connecting rod
144 145 R 146 145 A 146.5 R 147 149 R 149 B 149 B 149 E 149 F 149 F 149 G 149 H 150	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature typeSpecial waveformsDouble current generatorsMovable pole shoes and bellmagnetsReciprocatingReciprocatingCombined adjusting and exhaust regulating .Combined sparker and valve .Combined valve and sparker operating	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D 143 A 143 B 143 C 192.1 192.2 197.1 197.5 197.2 197.4 197.3	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires leading to plugs, distributor, etc. VIBRATION COMPENSATING DEVICE .Balancing arrangement TRANSMISSION MECHANISM FROM PISTON .Including clutch .With particular piston .Crankshaft and connecting rodParticular connecting rod
144 145 R 146 145 A 146.5 R 147 149 R 149 B 149 B 149 F 149 F 149 F 149 F 149 F 149 G 149 H 150 151 152	.Flame .Incandescent .Valve controlled .Electric (incandescent ignitors using electricity as a source of heat) .Sparkers .Low tension .DynamosInductor typeImpulse startersFlywheel typeOscillating armature typeSpecial waveformsDouble current generatorsMovable pole shoes and bellmagnetsReciprocatingReciprocatingCombined adjusting and exhaust regulating .Combined sparker and valve .Combined valve and sparker operatingPlugs	161 163 164 146.5 A 146.5 B 146.5 C 146.5 D 143 A 143 B 143 C 192.1 192.2 197.1 197.5 197.2 197.4 197.3 179.1	Oscillating electrodesRotary electrodesStationary-electrode structureAdjusting mechanismTimersIgnition locksFluid level or pressure- actuated ignition switchesDevices for opening the ignition circuit when engine stops in order to save battery .High compression igniters .Special charge igniters .Insulated casing enclosing wires leading to plugs, distributor, etc. VIBRATION COMPENSATING DEVICE .Balancing arrangement TRANSMISSION MECHANISM FROM PISTON .Including clutch .With particular piston .Crankshaft and connecting rod .Particular connecting rod STARTING DEVICE

4.50		405 40	
179.3	.Condition responsive control of starting device	185.13	Means provided to prevent counter rotation of crank
179.4	Including automatic engine stop	184.1	.With auxiliary igniters
179.5	.Control of spark ignition during	184.21	INTAKE MANIFOLD
	starting	184.22	.Passage to crankcase
179.6	.Control of glow plug during	184.23	For use with carburetor
	starting		upstream of manifold
179.7	.Auxiliary fuel supply device	184.24	Manifold having plenum
179.8	Starting fluid	184.25	Plural plenums
179.9	Priming means	184.26	Interconnection between
179.11	Manual pump device or squeeze		plenums
	bulb	184.27	Multiple passage leading to
179.12	Condition responsive		inlet of head
179.13	Temperature	184.28	.For engine having radiating
179.14	Condition responsive		cylinders
179.15	Temperature	184.29	Star-type engine
179.16	.With fuel or intake air control	184.31	For V-type engine
179.17	Fuel injection pump	184.32	For use with carburetor
179.18	Intake air control		upstream of manifold
179.19	.Includes auxiliary internal	184.33	Inlet manifold heated by
	combustion engine		outlet manifold
179.21	.With charge or cylinder heating	184.34	Manifold having plenum
179.22	.Inertia type	184.35	Plural plenums
179.24	.Either power or manual starting	184.36	Interconnected between
	device		plenums
179.27	.For airplane	184.37	Multiple passage leading to
185.7	Manual type		inlet of one cylinder
179.28	.With electric generating means	184.38	.For in-line engine
179.29	Auxiliary magneto	184.39	For use with carburetor
179.31	.Having fluid-driven starting		upstream of manifold
	motor	184.41	Intake manifold heated by
183.1	.Gunpowder type		outlet manifold
182.1	.Compression relieving type	184.42	Manifold having plenum
179.25	.Having specific mounting or	184.43	Plural plenums
	drive connection for electric	184.44	Interconnection between
	starter motor		plenums
179.26	For nonoperator supporting	184.45	Multiple passage leading to
	wheeled platform		inlet of one cylinder
185.1	.Mechanical	184.46	.For use with carburetor upstream
185.14	Includes mechanical potential		of manifold
	motor (e.g., spring motor)	184.47	.Manifold having plenum
185.15	Operated by wheels of vehicle	184.48	Plural plenums
185.2	Includes cable	184.49	Interconnection between
185.3	Including recoil mechanism		plenums
185.4	Lever connected to the cable	184.51	Adjustable plenum
185.5	Includes lever or slide linkage	184.52	.Multiple passage leading to
185.6	Lever or slide actuates a gear	104 50	inlet of one cylinder
	segment	184.53	.Manifold tuning, balancing or
185.8	Includes friction means in	104 54	pressure regulating means
105.0	linkage	184.54	With back flow prevention valve
185.9	Includes coaxial cooperating	184.55	Adjustable length passage
105 11	threaded members in linkage	184.56	Adjustable cross section
185.11	Includes worm gear in linkage	10/ 57	passage
185.12	Including crank-type handle	184.57	Resonator chamber

184.58	Return loop to inlet	190.6	Elongated rotary double-
184.59	Interconnection between		function valve
	passages	190.7	Tapered
184.61	.Manifold material or composition	190.8	In horizontal plane above
142.5 R	WITH HEATING MEANS		cylinder
142.5 E	Electric heaters for heating	190.9	Tapered
	cooling system	190.11	In horizontal plane on the
657	COMBUSTION CHAMBER		side of the cylinder
658	.L- or T-shaped	190.14	Disc, cone, or sphere shaped
659	.Having groove to aid combustion	190.15	Controls plural cylinders
660	.An acoustic cavity used to	190.2	Single function, (i.e., exhaust
	attenuate detonation shock		and intake by separate tube)
	waves (e.g., Bodine)	190.16	Lubricant
661	.Having squish area	190.17	Seal
662	.Multiple annular combustion	188.6	.Packing
	chambers	188.7	.Combustion improving accessory
663	.Annular combustion chamber	188.8	.Valve seat relation
664	.Combustion chamber shape is a	188.9	.Guide, lubricant, or coolant
	figure of revolution	188.11	.Wear feature
665	Spherical	188.12	For spring
666	Hemispherical	188.13	Including attaching means
667	.Asymmetric combustion chamber	188.17	.Having actuation springs
668	.Having coating or liner		concentric with valve stem
669	With means for mounting coating	195 R	FRAME CONSTRUCTION
670	or liner	195 A	.Auxiliaries, brackets
670	.Having catalytic cambustion aid	195 C	.All covers
671	.Cylinder head shape conforms to	195 E	.Electrical
102 1	piston shape	195 P	.Outboard motor frames
193.1	PARTICULAR PISTON AND ENCLOSING	195 S	.Sheet metal frames
102 5	CYLINDER CONSTRUCTION	195 AC	.Inclined cylinder
193.5 193.3	.Cylinder head	195 H	.Horizontal stress members
193.3	Having detail of connection to	195 HC	.Horizontal cylinder
193.6	other cylinder structure	196 R	LUBRICATORS
193.4	Having detail to guiding	196 A	Filtering
193.4	structure cooperating with	196 CP	.Crankcase, pressure control
	cylinder	196 AB	.Heating and cooling
193.2	.Cylinder detail	196 M	.Upper cylinder lubricants
188.1	VALVE	196 S	.Safety devices
189	.Detachable	196 V	.Sleeve valve lubrication
188.14	.Valve head cooperates with	196 W	.Vertical shaft
100.14	manifold	198 R	ACCESSORIES
188.4	.Reciprocating valve	198 A	.Decarbonizers and antiknocks
188.15	Shepherd type	198 B	.Antitheft valves and locks
188.2	Poppet	198 C	Pumps
188.16	Pivoted	198 D	.Safety devices
188.3	Material or structure	198 DA	.Bearing wear, cylinder, oil drain, auto ignition
188.5	Sleeve	198 DB	.Fuel cut-off
190.1	.Rotary	198 DC	.Ignition cut-off control
190.12	Sleeve	198 E	.Covers, trays, vibrators,
190.13	With lubrication means	тэо Б	corrosion inhibitors, air
190.3	For crankcase		filters
190.4	Double function type	198 F	.Cylinder cut out
190.5	For two or more cylinders		,

198 P .Pressurizing - crankcase, clutch housing, transmission housing

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.

STARTING DEVICE

- FOR 100 .Spark delaying (123/186.1)
- FOR 101 SPARK IGNITION TIMING CONTROL (123/406)
- FOR 102 .Vacuum timing control (123/407)
- FOR 103 .. Multiple diaphragms (123/408)
- FOR 104 .. Fluid delay in fluid path line from vacuum source (123/409)
- FOR 105 ..Including sensor responsive to barometric pressure to alter vacuum level (123/410)
- FOR 106 .. Increasing vacuum retards the spark (123/411)
- FOR 107 .Barometric pressure responsive controller (123/412)
- FOR 108 .By mechanical or hydraulic link to throttle valve or accelerator (123/413)
- FOR 109 .Having engine shaft position sensor (123/414)
- FOR 110 .Analog electronic control (123/415)
- FOR 111 .Digital electronic control (123/416)
- FOR 112 .. Having microprocessor (123/417)
- FOR 113 .Speed responsive (123/418)
- FOR 114 ..Responsive to instantaneous changes in engine speed (e.g., roughness) (123/419)
- FOR 115 ..Centrifugal timing mechanism (123/420)
- FOR 116 .Ambient or engine temperature responsive (123/421)

- FOR 117 .Acceleration responsive (123/422)
- FOR 118 .Deceleration responsive (123/423)
- FOR 119 .Starting or cold running condition responsive (123/424)
- FOR 120 .Cylinder pressure or cylinder temperature responsive (123/425)
- FOR 121 .Feedback correction (123/426)
- FOR 122 .Timing control derived from ignition capacitor (123/427)
- FOR 123 .Having circuit that alters response of an oscillatory engine shaft position sensing circuit (123/428)
- FOR 124 .Exhaust gas used with the combustible mixture (e.g., emission control (e.g.r. valve) (123/568)
- FOR 125 ..Diesel engine (123/569)
- FOR 126 .. Exhaust gas cooled before recirculation (123/570)
- FOR 127 ..Electrical control of e.g.r. valve (e.g., between exhaust gas and intake manifold) (123/571)
- FOR 128 ...Having controllable timing means (123/602)

DIGESTS

- DIG 1 INTERCHANGEABLE
- DIG 2 ACCUMULATED FUEL RETURN TO TANK
 OR ENGINE-INDUCTION SYSTEM
- DIG 3 MODEL
- DIG 4 STRATIFICATION
- DIG 5 CRANKCASE PRESSURE-OPERATED PUMPS
- DIG 6 **DETACHABLE**
- DIG 7 **CONVERTIBLE**
- DIG 8 MULTIPLE ENGINE UNITS
- DIG 9 FLAME IGNITION
- DIG 10 FLUIDIC AMPLIFIER FUEL CONTROL
- DIG 11 ANTIDIESELING (STOPPING)
- DIG 12 HYDROGEN
- DIG 13 GAS