

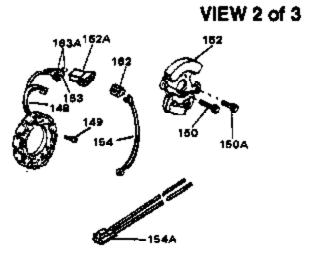
Ref #	Part Number	Qty	Description
2 2 2 2 2 4	33707A 31927 28483 9556 28534 27652 33497C		Cylinder (Incl. 2, 4 & 33) (3-1/2" Bo re) Pipe Plug, 3/8-18 sq. head (Use as re quired) Pipe Plug (3/8-18 hex countersunk) (A s req.) Pipe Plug (3/4-14 sq.hd.)(As req.)(Bu y local) Pipe Plug (1/8-27 sq. hd.) (Use as re quired) Pipe Plug(1/8-27 hex c/sunk headless) (As req) Pin, Dowel Crankshaft (Incl. 6 thru 9, 140 & 141) NOTE: When using this crankshaft to repair older units equippedwith straight cut cam and governor gears,it will be necessary to order 34751 helical governor gear assembly and 34752 helical camshaft in order to the complete the repair.
7 8 9 11 11 11A 11A 11A 11A 12 13 13 14 14 14 14 15 16 17 18 19 20 21 21 22 22 22 23 24 25A 25 26 27 28 29 30 31	29783 31931 31932 31928 34511 34512 34513 32238B 32239B 32240B 31919 32241 32242 32243 33093A 34383 34384 32077 26073 28264 33470 33472 33471 33505 33645 33506 33646 33507 33508 34410 33509 33510 33473 650745 35479 30590A 31948 31956B 34002A		helical camshaft in order to the complete the repair. Pin, Crankshaft gear Gear, Crankshaft (Straight) Bearing, Tapered roller Cup, Bearing Piston, Pin & Ring Set (Std.) (3-1/2" Bore) Piston, Pin & Ring Set (.010" OS) Piston, Pin & Ring Set (.020" OS) Piston & Pin Ass'y. (Std.)(3-1/2")(In cl.12) Piston & Pin Assy'. (.010" OS) (Incl. 12) Piston & Pin Assy'. (.020 " OS) (Incl. 12) Piston & Pin Assy'. (.020 " OS) (Incl. 12) Ring, Piston pin retaining Ring Set (.010" OS) Ring Set (.010" OS) Ring Set (.020" OS) Connecting Rod Assy.(Std.)(Incl.15, 1 6 & 17) Connecting Rod Assy.(.010" US)(Incl.1 5,16,17) Connecting Rod Assy.(.020" US)(Incl.1 5,16.17) Bolt, Connecting rod Washer, Connecting rod Nut Assy. Camshaft (MCR) (Straight) Lifter, Valve Rod, Push Intake Valve (Std.) Intake Valve (Std.) Exhaust Valve (Std.) Exhaust Valve (Std.) Exhaust Valve (Std.) Spring, Valve Retainer & Cap Set, Keeper valve * "O" Ring (Intake only) (Also Incl. in 251) * "O" Ring (Intake only) (Also Incl. in 251) Cap, Valve Governor Gear & Shaft Ass'y. (Straigh t) Washer, Flat Washer, Flat Washer, Flat Washer, Flat Spool, Governor * Gasket, Cylinder cover Cylinder Cover Ass'y. (Incl. 2, 33 & 134)
33 34 35 36 37	31950 650451 650492 32425 32426 29193		* Seal, Oil Screw, 1/4-20 x 1" Screw, 1/4-20 x 2-1/4" Rod Assy., Governor Spacer, Governor rod Ring, Retaining

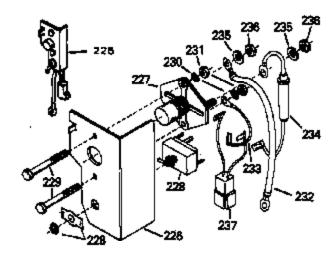
D-4#	Dort Ni wash an	Description
	Part Number Qty	
	650687	Screw, 10-32 x 5/16"
	33495	Cover, Cylinder head
	34225A	* Gasket, Cylinder head
	33465	Head, Cylinder
45	33657	Spark Plug (L-82C)
46A	650691	Washer, Flat
46	650690	Washer, Belleville
47A	650746	Screw, 5/16-18 x 1-3/8"
	650692	Screw, 5/16-18 x 1-3/4"
	730218	Valve Guide Kit (Incl. 49)
	792035	Ring, Retaining
	33515A	* Gasket, Intake pipe
	33475	Pipe, Intake
	650378	Screw, Torx T-30, 5/16-18 x 1-1/8"
	792028	Screw, 5/16-18 x 7/8" * Cooket Corburator
	33476A	* Gasket, Carburetor
	33477A	Baffle, Air cleaner
	792075	Nut, Lock 5/16-24 (Used in early prod uction)
	33478	Link, Governor lever-to-throttle leve r
	31963	Lever, Governor
	31964	Clamp, Governor lever
	650518	Lockwasher, No. 10 E.T.
61	30312	Screw, 10-32 x 1/2"
62	650544	Screw, Torx T-25, 10-24 x 7/8"
63	7975	Nut, 10-24
64	31965	Plate, Governor spring
65	31984A	Lever Assy., Control
	28558	Washer, Wave
	31966	Bushing, Governor lever
	650597	Screw, 10-24 x 5/8"
	31967	Spring, Governor
	650591	Screw, 10-24 x 2"
	33099	Spring
	32599	"O" Ring (Incl. in 251)
	650666	Washer, Lock
	32579	Baffle, Blower housing
	650561	
		Screw, 1/4-20 x 5/8"
	650592	Key, Flywheel
	610909	Flywheel
	730201	Trigger Pin Kit (Use as required)
	650594	Nut, Flywheel
	610906	Solid State Magneto (Incl. 158 thru 1 61)
	650661	Screw, 1/4-20 x 3/4"
	33479	Extension, Blower housing
	30063	Screw, 1/4-20 x 1/2"
83	650751	Screw, 1/4-20 x 7/16"
84	33775A	Blower Hsg.(Incl.218A,219)(For elec.s tarter)
85	8274	Washer, Lock
	8274	Washer, Lock
	650595	Screw, 5/16-24 x 3/8"
	650595	Screw, 5/16-24 x 3/8"
	650752	Screw, 1/4-20 x 7/16"
	35475	Tube, Push rod
	33481	* "O" Ring (Also Incl. in 251)
	34754	Housing, Rocker arm
	33484	* "O" Ring (Also Incl. in 251)
	650168	
	32610A	Washer, Flat Screw, 1/4-20 x 29/32"
90	02010/1	OOI GVV, 1/4-20 A 23/32

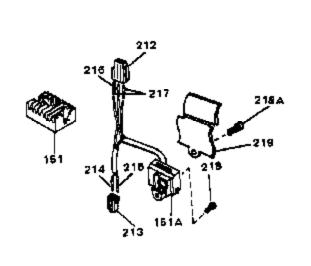
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	Part Number	Qty	Description
	33485		Arm, Rocker
	33486		Ring, Retaining
	650755		Screw, 1/4-20 x 3/4"
	650864		Nut, Hex, 1/4-20
101	650756		Stud, Rocker arm
102	33487		* "O" Ring (Also Incl. in 251)
103	33488		Cover, Rocker arm
104	31958A		* Gasket, Breather (Also Incl. in 251)
	33489		Body Assy., Breather
	33490		Tube, Breather
	30102		* Screw, 10-32 x 5/8" (Also Incl. in 25 1)
	650738		Screw, 1/4-20 x 5/8"
	35471		* Gasket, Air cleaner
	35472		Bracket, Air cleaner
	650399		Screw, 10-32 x 5/8"
	32008		Element, Air cleaner
	32810		•
			Cover, Air cleaner
	650513 650675		Nut, Wing
	650675		Washer, Flat
	32426		Spacer, Screen
	33776		Screen, Pulley
	650670		Screw, 1/4-20 x 3/4"
	27070		Washer, Lock
	650744		Screw, 10-24 x 7/8"
	33467		Tube extension, Oil fill
146	32577		Cover, Cylinder NOTE: Determine the gap between the cover
			and the machined surface on the cylinder, which can be
			from .001" up to .007", in which case no shim gaskets will be
			required. Use of gaskets must be limited to a combined total
			of .010" thick. Steel spacersmust be used as required to eli
1/17	792028		Screw, 5/16-18 x 7/8"
	31971		* Gasket, Shim (.004/.005 thick) NOTE: Determine the gap
133	319/1		between the cover and the machined surface on the
			cylinder, which can be from .001" up to .007", in which case
			no shim gaskets will be required. Use of gaskets must be
			limited to a combined total of .010" thick. Steel
			spacersmust be used a
156	31972		* Gasket, Shim (.005/.007 thick) NOTE: Determine the gap
			between the cover and the machined surface on the
			cylinder, which can be from .001" up to .007", in which case
			no shim gaskets will be required. Use of gaskets must be
			limited to a combined total of .010" thick. Steel
			spacersmust be used a
			•
157	32031		* Spacer, Steel (.010 thick) NOTE: Determine the gap
			between the cover and the machined surface on the
			cylinder, which can be from .001" up to .007", in which case
			no shim gaskets will be required. Use of gaskets must be
			limited to a combined total of .010" thick. Steel
			spacersmust be used as re
450	610110		
	610118		Cover, Spark plug
	610750		Grommet, Lead wire
	610408		Nut, 8-32
	610908		Terminal, Female
	27793		Clip, Conduit
	28942		Screw, 10-32 x 3/8"
189	33984A		Dipstick (Incl. 190)

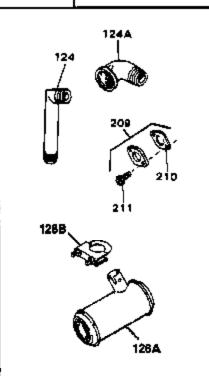
Ref #	Part Number	Qty	Description
190	33590	•	"O" Ring
191	33893A		Tube, Oil filler
244B	31752		Decal, Air cleaner
244A	550223		Decal, Name
244A	32676		Decal, Solid state
244	34346		Decal, Instruction
246	631687		Valve, Seat & Spring Assy.
247	631754		Carburetor (Incl. 54 & 246) (Refer to Division 5, Section A, page 124 for breakdown)
	33516G 35075		* Gasket Set (Incl. items marked *) "O" Ring Kit (Incl. Nos. items marked +)

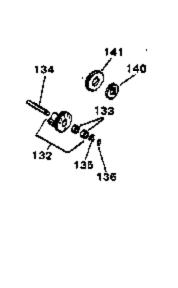
ILLUSTRATION SHOWS TYPICAL PARTS ONLY. ORDER BY PART NUMBER. PARTS NOT LISTED ARE SUPPLIED BY CEM.

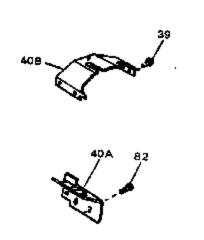


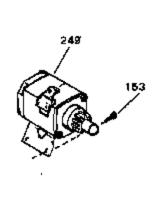


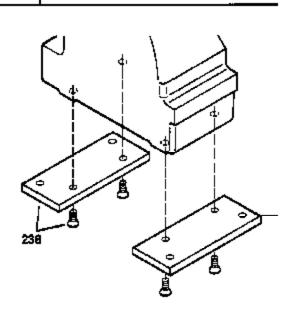






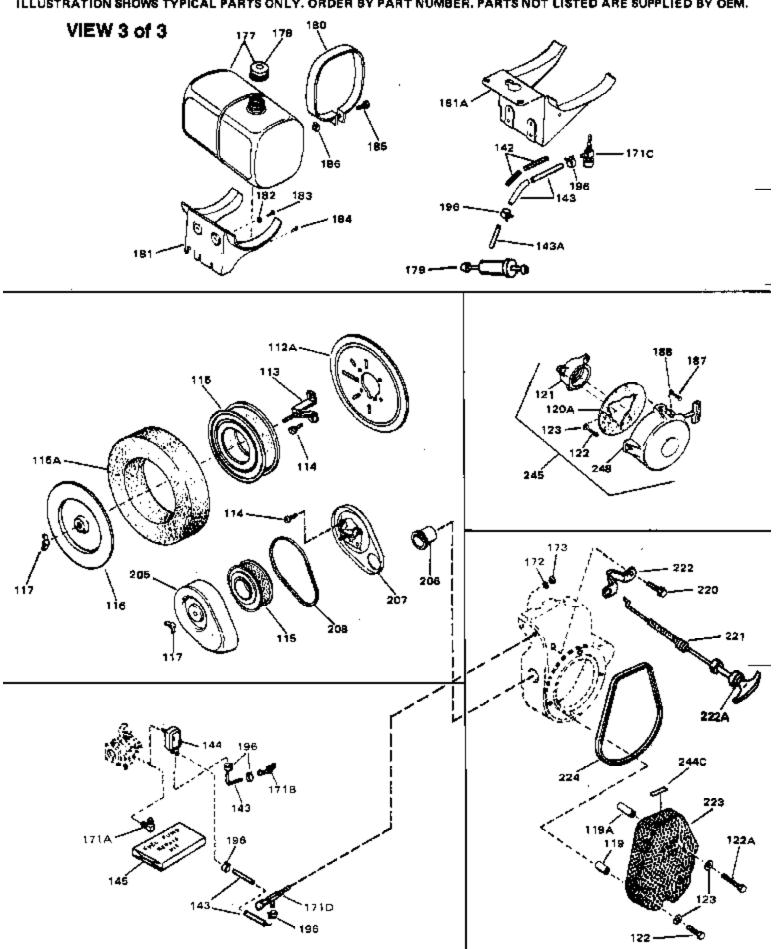






Ref #	Part Number	Qty	Description
39	650687	-	Screw, 10-32 x 5/16"
82	30063		Screw, 1/4-20 x 1/2"
126A	35731		Muffler (Incl. 126B)
132	33965		Counterbalance Weight Ass'y. (Helical teeth) (Incl. 2 of 133)
133	33501		Bearing, Needle
	33502		Shaft, Counterbalance
	33503		Washer, Thrust
	792017		Ring, Retaining
	33499		Spacer
	33963		Gear, Counterbalance weight (Helical teeth)
141			Gear, Counterbalance weight (Straight teeth) (For
			replacement see Ref. 132. Order correct kit for your
			enginemodel number.)
148	610902		Alt.Coil Ass'y. (Incl.162,163,163A) (20 amp)
	650521		Screw, 10-32 x 1-1/8"
151	610907A		Regulator (20 Amp)(Incl.151A, 154A & 218)
153	792028		Screw, 5/16-18 x 7/8"(Use w/32817 str .motor)
153	650781		Screw,5/16-18 x 11/16"(Use w/33835 st r.motor)
162A	610903		Connector, Flat
163	610904		Terminal
163A	610905		Terminal
209	730178		Ech.Adapter Kit (Incl.210 & 211)(As r equired)
210	34102B		Gasket, Exhaust (Use as required)
211	30196		Screw, 5/16-18 x 3/4" (Use as require d)
238	730212		Adapter Plate Kit (Optional) NOTE: If you are having
			mounting problems in using a HH100 thru0H180 inplace of a
			large frame competitivebrand, we would like to call your
			attention to 730212 adapter plate kit. The kit converts the
			bottom mounting system found on HH100 thru 0H180 to a
			top mounting sys
249	33835		Electric Starter Motor (12-Volt) (Refer to Division 5, Section
			D for breakdown)
			,

ILLUSTRATION SHOWS TYPICAL PARTS ONLY. ORDER BY PART NUMBER, PARTS NOT LISTED ARE SUPPLIED BY DEM.



Ref #	Part Number Qt	Description
114	650399	Screw, 10-32 x 5/8"
115	32008	Element, Air cleaner
117	650513	Nut, Wing
119	32426	Spacer, Screen
122	650670	Screw, 1/4-20 x 3/4"
123	27070	Washer, Lock
143	29774	Fuel Line (Braided 8.25")(21 cm)(As r equired)
143	30705	Fuel Line (Braided 16")(41 cm)(As req uired)
143	30962	Fuel Line (Braided 32")(81 cm)(As req uired)
171A	28566	Fitting, Fuel line
178	410144B	Fuel Cap (White Plastic)(Std)(As requ ired)
178	34210	Fuel Cap (Red Plastic) (Spurt resistant, High profile) (Use as required)
196	26460	Clamp, Fuel line (Use as required)
245	730134	Rewind Starter Kit (Incl.120A, 121, 122, 187, 188 & 248) (Use as required)