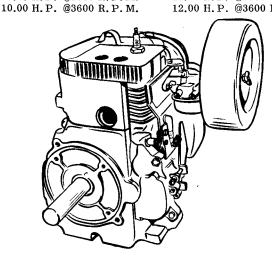
# MODEL HH100 - 10.0 H.P. MODEL HH120 - 12.0 H.P.

#### RANGE IN HORSEPOWER

#### MODEL HH100

#### MODEL HH120

5.30 H.P. @1800 R.P.M. 7.60 H.P. @2400 R.P.M. 9.25 H.P. @3000 R.P.M. 6.15 H.P. @1800 R.P.M. 8.90 H.P. @2400 R.P.M. 10.70 H.P. @3000 R.P.M. 12.00 H.P. @3600 R.P.M.



TECUME IAUSON · POWER PRODUCTS
ENGINES
POWER PACKED

Operating and Maintenance

SOUTH QUALITY . LIGHT

Instructions

and
Parts List

### **SPECIFICATIONS**

BORE-HH100-3-5/16 inches

BORE-HH120-3-1/2 inches

STROKE—HH100—2-3/4 inches STROKE—HH120—2-7/8 inches

DISPLACEMENT—HH100—23.7 cubic inches

PISPLACEMENT—HH120—27.66 cubic inches

TYPE - 4 cycle, L-head, horizontal crankshaff, single cylinder

DIRECTION OF ROTATION — (viewed from power take-off side) counterclockwise.

SPARK PLUG - 14mm

IGNITION — High tension external flywheel type magneto with external stopswitch - points located in dust and moisture tight enclosure external to engine entire ignition system can be serviced without removing flywheel (battery ignition optional)

LUBRICATION - Positive splash type

CARBURETOR — Automotive float feed type

CONNECTING ROD - High strength aluminum alloy

AIR CLEANER — Large capacity pleated paper

CRANKSHAFT — Ductile iron - heat treated crankpin

GOVERNOR — Efficient mechanical type to insure positive

control of engine speed

CYLINDER - Precision alloy cast iron

CYLINDER HEAD - Aluminum alloy

MAIN BEARINGS — Tapered roller bearings, both ends of

PISTON — Cam ground permanent mold aluminum alloy

PISTON RINGS — Chrome plated top ring for extra wear re-

sistance, scraper second ring, expansion oil ring

VALVE GUIDES — Integral with cylinder casting

VALVE LIFTERS — Precision machined and heat treated

INTAKE VALVE — Austenitic steel

EXHAUST VALVE — Austenitic steel with "stellite" seating surface

OIL CAPACITY—HH100—3 pints

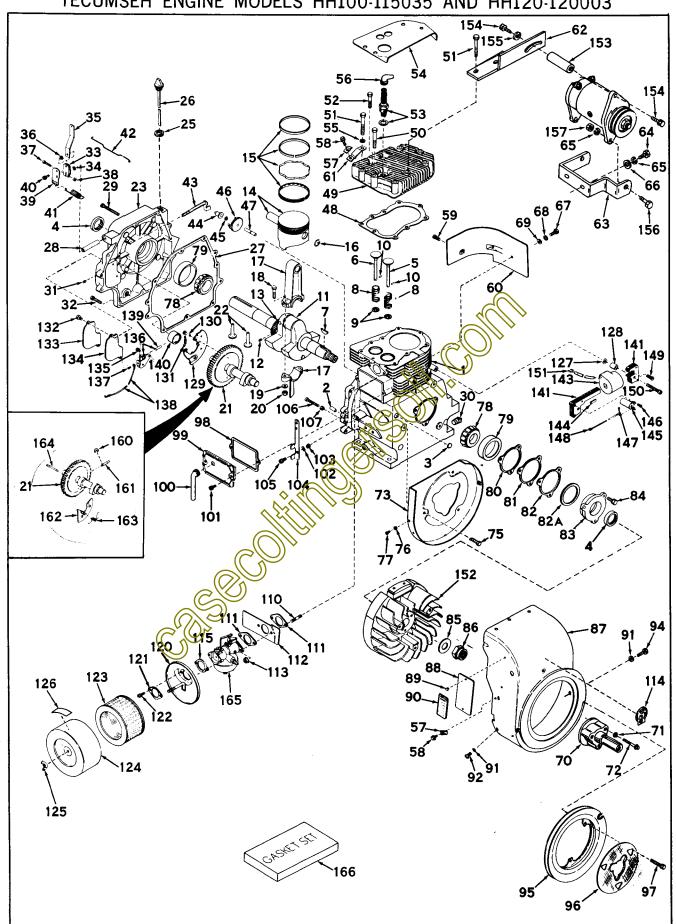
OIL CAPACITY-HH120-40 ounces

MODELS

HH100-115035 HH120-120003

As Manufactured For COLT MANUFACTURING CO.

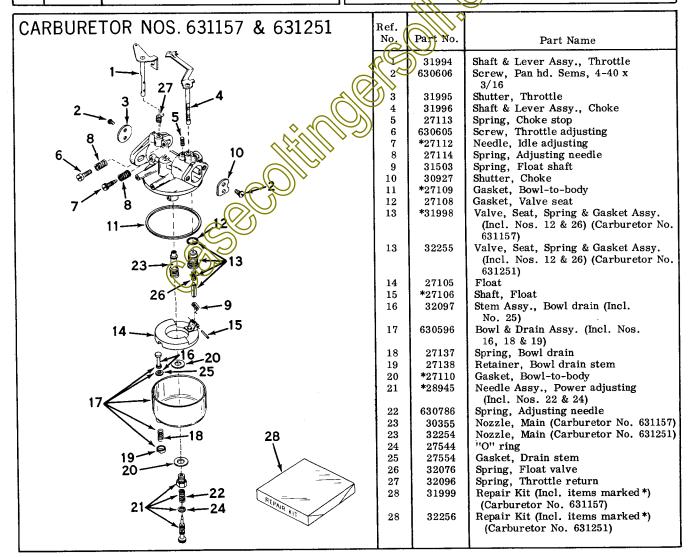
# TECUMSEH ENGINE MODELS HH100-115035 AND HH120-120003



# PARTS LIST

Ref.   No.   Part Name   Ref.   No.   Part Name   Ref.   No.   Part Name   Part Name   Part Name   Ref.   No.   Part Name		<del></del>				
1   32233   Cyllinder Assy, (finel. Nos. 2, 3, 4, 30, 47   4   1   31967   2   1   31950   31940   2   31950   31941   Valve, Intake (Randard)   Valve, Intake (Randard)   Valve, Intake (Randard)   Valve, Exhaust (Bandard)   Valve, Exha	Ref. No.	Part No.	Part Name	1	Part No.	Part Name
1   32233   Cyllinder Assy, (finel. Nos. 2, 3, 4, 30, 47   4   1   31967   2   1   31950   31940   2   31950   31941   Valve, Intake (Randard)   Valve, Intake (Randard)   Valve, Intake (Randard)   Valve, Exhaust (Bandard)   Valve, Exha	1	32010	Cylinder Assy (Incl. Nos. 2, 3, 4, 30, 47	39	31965	Plate Governor spring
2   32233   Cylinder Assy. (Incl. Nos. 2, 3, 4, 30, 47   42   31967   Spring. Governor	1	32010				
\$ 190, Dowel   43   31939   Rod Assay, Governor   8   31941   100, Nos.   12   13   13   13   13   13   13   13	1	32253				
2 27852 Pin, Dowel 3 31932 Ping, Expansion Scal, Oil 4 31950 Scal, Oil 5 31943 Vilve, Exhaust (Standard) 7 650552 Key, Flywheel 8 31944 Spring, Valve spring (Std.) 8 31944 Spring, Valve spring (Std.) 9 31946 Spring, Valve spring (Std.) 9 28810 Pin, Valve spring (Std.) 9 28810 Canachast Assy, (Incl. Nos. 12 & 13) 10 28810 Crantashaft Assy, (Incl. Nos. 12 & 13) 11 32251 Crantashaft Assy, (Incl. Nos. 12 & 13) 12 32050 Pin, Spring (Std.) 13 31931 Spring (Std.) 14 32001 Pin (Std.) Model HII100) 14 32202 Pin, Assy, (Incl. 2 of No. 16) 15 32064 Spring (Std.) Spring (Std.				1		
4   31950   Seal, Oil   Valve, Intake (Klandard)   Valve, Intake (Klandard)   Valve, Intake (Klandard)   Valve, Exhaust (Klandard)   Valve,	2	27652		43	31951	Rod Assy., Governor
19	3	31929	Plug, Expansion	44	31948	Spool, Governor
Sample   Valve, Intake   U/32" oversize) (Incl.   No. 9)   47   31930   48   432246   48   432246   49   49   49   49   49   49   49	4	*31950		45	29193	Ring, Retaining
6 31942 Valve, Exhaust (732" oversize) (Incl. No. 9)  7 650502 No. 9)  8 31944 Spring, Valve Spring (Std.).  5 650502 Spring, Valve Spring (Std.).  5 670502 Spring, Valve Spring (Std.).  6 7 670502 Spring, Valve Spring (Std.).  6 7 670502 Spring, Valve Spring (Std.).  6 7 670502 Spring, Valve Spring (Std.).  6 8 7 670502 Spring, Valve Spring (Std.).  6 8 7 670502 Spring, Valve Spring (Std.).  6 9 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6	5	31940	Valve, Intake (Standard)	46	31947	
Salest		5	1 ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '			
Read, Cylinder   Spring, Valve   Spring, Valve   Spring, Valve   Cap, Lower valve spring (Rid.)   Spring, Valve   Spring,		1				
566922   Screw, Hex hd. cap. 5/16-18x 2-1/4	6	31943				
Sample	-	05.05.00				
9 31946 Cap, Lower valve spring (Std.) 2010 Cap, Lower valve spring (1/32" oversize) Cap, Lower valve spring (1/32" oversize) 52 650559 Screw, Hex hd. cap, 5/16-18 x 1.38 (1) 2011 32250 Crankshaft Assy. (Incl. Nos. 12 & 13) 55 28673 Model HH100) Crankshaft Assy. (Incl. Nos. 12 & 13) 56 27276 Cover, Spark plug Cover,			"' "	1	1	
9		1				
20810   Pin, Valve spring retaining   Crankshaft Assy, (Incl. Nos. 12 & 13)   55   25673   Crankshaft Assy, (Incl. Nos. 12 & 13)   56   27276   Crankshaft Assy, (Incl. Nos. 12 & 13)   75   27793   Crankshaft Assy, (Incl. Nos. 12 & 13)   75   27793   Crankshaft Assy, (Incl. 2 of No. 16)   75   27942   Cover, Spark plug   Crankshaft Say, (Incl. 2 of No. 16)   75   27942   Cover, Spark plug   Cover, Cylinder   Spark plug   Cover, Spark plug   Cover, Cylinder   Spark plug   Cover, Spark plug   Cover, Cylinder   Spark plug   Cover, Cyli		I .				
11   32250   Crankshaft Assy, (Incl. Nos. 12 & 13)   55   26073   Washer, Flat (Model HH100)   56   27726   Crow, Spark plug   Clip, Conduct				1		
1   32251   Crankshaft Assy. (Incl. Nos. 12 & 13)   56   27276   Cover. Spark plug   Crankshaft Assy. (Incl. 2 of No. 16)   78   27793   Cover. Spark plug   Screw, Kil. M. Sems. 10-32 x 3/8   Screw, Kil. M. Sems. 10-32 x 3/8   Screw, Kil. M. Sems. 10-32 x 3/8   Screw, Kil. M. Sems. 10-24 x 1/2   Screw, Kil. M. Sems. 10-32 x 1-34   Screw, Kil. M. Sems. 10-32 x 1-		1			ſ	
11   32251   Crankshaft Assy. (Incl. Nos. 12 & 13)   (Model HII120)   59   650128   528942   Screw, Hz. hit. Scms, 10-32 x 3/8   59   650128   528942   Screw, Hz. hit. Scms, 10-32 x 3/8   59   650128   528942   Screw, Hz. hit. Scms, 10-32 x 3/8   59   650128   528942   Screw, Hz. hit. Scms, 10-32 x 3/8   59   650128   528942   Screw, Hz. hit. Scms, 10-32 x 3/8   59   650128   528942   Screw, Hz. hit. Scms, 10-32 x 3/8   59   650128   Screw, Hz. hit. Scms, 10-24 x 1/2   Screw, Hz. hit. Screw, Hz. h	11	02200		1		
12   29783   31931   6247   7418   584   29842   8crew, Tai, M. Sems, 10-32 x 3/8   7818	11	32251	1 ` '	1	Į.	
29783		1	· · · · · · · · · · · · · · · · · · ·	I I		
3   31931	12	29783	1 , , , ,	59	650128	Screw, Fil. kd. Sems, 10-24 x 1/2
Sidd.) (Model Hill00)	13	1		60	31976	
14   32002   Piston & Pin Assy. (Incl. 2 of No. 16)   63   32240   (.010 oversize) (Model HH100)   Piston & Pin Assy. (Incl. 2 of No. 16)   65   65   65   65   65   65   65	14	32001	Piston & Pin Assy. (Incl. 2 of No. 16)	61	30972	Bracket, Choke control
14   3203			(Std.) (Model HH100)	62	32208	Fracker, Starter adjusting
14   32203   Piston & Pin Assy. (Incl. 2 of No. 16)   (.020 oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16)   (.010 oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16)   (.010 oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16)   (.010 oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16)   (.020 oversize) (Model HH120)   Ring Set, Piston (.010 oversize)   (Model HH120)   Ring Set, Piston (.010 oversize)   (Model HH120)   Ring Set, Piston (.010 oversize)   (Model HH120)   Ring Set, Piston (.010 oversize)   (Model HH120)   Ring Set, Piston (.010 oversize)   (Model HH120)   Ring Set, Piston (.010 oversize)   (Model HH120)   Ring Set, Piston (.010 oversize)   (Model HH120)   Ring Set, Piston (.020 oversize)	14	32002	Piston & Pin Assy. (Incl. 2 of No. 16)	63	32207	Bracket, Starter mounting
14   32238   Piston & Pin Assy. (Incl. 2 of No. 16) (Std.) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (O. Oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (O. Oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (O. Oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (O. Oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (O. Oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (O. Oversize) (Model HH100)   Piston & Pin Assy. (Incl. 2 of No. 16) (O. Oversize) (Model HH100)   Piston & Pin Assy. (Incl. 2 of No. 16) (O. Oversize) (Model HH100)   Piston & Pin Assy. (Incl. 2 of No. 16) (O. Oversize) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 2001 (Model HH120)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 2001 (Model HH120)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 2001 (Model HH120)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 2001 (Model HH120)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 2001 (Model HH120)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH120)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH120)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH120)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH120)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH120)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH120)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH100)   Piston & Piston & Piston & Piston & Piston			(.010 oversize) (Model HH100)	64		
14   32238   Piston & Pin Assy. (Incl. 2 of No. 16) (Std.) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (.0) oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (.0) oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (.0) oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (.0) oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (.0) oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (.0) oversize) (Model HH100)   Piston & Pin Assy. (Incl. 1 of No. 16) (.0) oversize) (Model HH100)   Piston & Pin Assy. (Incl. 1 of No. 16) (.0) oversize) (Model HH100)   Piston & Pin Assy. (Incl. 1 of No. 18)   Piston & Pin Assy. (Incl. 1 of No. 18)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 20) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 20) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 20) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 20) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 20) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 20) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 20) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 20) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 20) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 20) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 18, 19 & 20) (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 100 (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 100 (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 100 (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 100 (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 100 (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 100 (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 100 (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 100 (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 100 (Model HH100)   Piston & Pin Assy. (Incl. Nos. 129, 130, 131 & 100 (Model HH100)	14	32003	Piston & Pin Assy. (Incl. 2 of No. 16)	65	Z-311	
Std.   (Model HH120)		}				
14   32239   Piston & Pin Assy. (Incl. 2 of No. 16) (.010 oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (.020 oversize) (Model HH120)   Piston & Pin Assy. (Incl. 2 of No. 16) (.020 oversize) (Model HH100)   Ring Set. Piston (Standard) (Model HH100)   Ring Set. Piston (.010 oversize)   Model HH100   Ring Set. Piston (.020 oversize)   Ring Set.	14	32238	, , ,	1 1		
14   32240   Piston & Pin Assy, (Incl. 2 of No. 16) (20 oversize) (Model HH120)   Ring Set, Piston (0.10 oversize) (Model HH100)   Ring Set, Piston (0.10 oversize) (Model HH100)   Ring Set, Piston (0.10 oversize) (Model HH100)   Ring Set, Piston (0.20 oversize) (Model HH120)   Ring Set, Piston (Standard) (Model HH120)   Ring Set, Piston (Standard) (Model HH120)   Ring Set, Piston (0.20 oversize) (Model HH120)   Ring Piston pin (Caluma Rodel HH120)   Ring Piston pin (Caluma Rodel HH120)   Rod Assy, Competing (Incl. Nos. 18, 19 & 2007 (Model HH120)   Secondary (Model HH120)   Secondary (Model HH120)   Ring Piston pin (Caluma Rodel HH120)   Ring Piston pin (Caluma Rodel HH120)   Ring Piston (Ring Min			, , ,			
1	14	32239		_ //		
(.020 oversize) (Model HH120)   72   650615   Screw, Ferry cap, 1/4-20 x 1-3/4   Big Set, Piston (Standard) (Model HH100)   76   650561   Screw, Hex hd. cap, 1/4-20 x 5/8   Grommet (Model HH100)   78   Screw, Hex hd. cap, 1/4-20 x 5/8   Grommet (Model HH100)   78   Screw, Hex hd. cap, 1/4-20 x 5/8   Grommet (Model HH100)   78   Screw, Hex hd. cap, 1/4-20 x 5/8   Grommet (Model HH100)   78   Screw, Hex hd. cap, 1/4-20 x 5/8   Grommet (Model HH100)   78   Screw, Hex hd. cap, 1/4-20 x 5/8   Grommet (Model HH100)   78   Screw, Hex hd. cap, 1/4-20 x 5/8   Grommet (Model HH100)   78   Screw, Hex hd. cap, 1/4-20 x 5/8   Grommet (Model HH100)   78   Screw, Hex hd. cap, 1/4-20 x 5/8   Grommet (Model HH100)   78   Screw, Hex hd. cap, 1/4-20 x 5/8   Grommet (Model HH100)   78   Screw, Hex hd. cap, 1/4-20 x 1/8   Screw, Hex hd. Sems, 1/4-20 x 2   Screw, Hex hd. Sems, 1/4-20 x 1/2   Screw, Hex hd. Sems, 1/4-20 x 1						
15   32005   Ring Set, Piston (Standard) (Model HH100   73   31975   8affle, Blower housing   8crew, Hex hd. cap, 1/4-20 x 5/8   8crew, Hex hd. cap, 1/4-20 x 3/4   8crew, Hex hd. Sems, 1/4-20 x 2   104   31936   31964   31964   31964   31964   31963   31965   31963   31966   31965   31965   31963   31966   31966   31966   31967   31064   31986   31966   31967   31064   31986   31966   31967   31064   31986   31966   31967   31064   31986   31966   31967   31064   31986   31966   31967   31064   31986   31966   31967   31064   31986   31966   31967   31064   31967   31064   31967   31064   31967   31064   31967   31064   31064   31064   31064   31064   31064   31064   31064   31064   31064   31064   31064   31064   31064   31064   31064   31064   3106	14	32240				
15   32005   Ring Set, Piston (.010 oversize)   76   680561   Ring Set, Piston (.020 oversize)   77   28847   78   31932   Ring Set, Piston (.010 oversize)   78   79   31928   Ring Set, Piston (.010 oversize)   78   31932   Ring Set, Piston (.010 oversize)   79   31928   Ring Set, Piston (.020 oversize)   80   831970   Casket, Shim (.003/.004 thick, see note 1 (.0064 HH120)   81   *31971   Casket, Shim (.004/.005 thick, see note 1 (.0064 HH120)   81   *31971   Casket, Shim (.004/.005 thick, see note 1 (.0064 HH120)   82   *31972   Casket, Shim (.004/.005 thick, see note 1 (.0064 HH120)   82   *31972   Casket, Shim (.0064/.005 thick, see note 1 (.0064 HH120)   82   *31972   Cover, Cylinder (.0064 HH120)   83   31964   See of the state	15	20004				
Model HH100    Ring Set, Piston (.020 oversite)   78   31932   Ring Set, Piston (.010 oversite)   78   31932   Ring Set, Piston (.010 oversite)   80   *31970   Casket, Shim (.003/.004 thick, see note 1)   Ring Set, Piston (.020 oversite)   81   *31971   Casket, Shim (.003/.004 thick, see note 1)   Ring Piston pin (elabors)   Ring, Piston (indodel Hil20)   Ring, Piston pin (elabors)   Ring, Piston (indodel Hil20)   Ring, Ring, Piston pin (elabors)   Ring, Ring, Piston pin (elabors)   Ring, Ring, Piston (indodel Hil20)   Ring,		1		hW		,
15   32006   Ring Set, Piston (.020 oversize)   77   28547   78   31932   79   31928   81932	19	32005				
Comparison of the comparison	15	22006				
15   32242   Ring Set, Piston (Standard) (Model HH120)   8   79   31928   31970   Gasket, Shim (.003/.004 thick, see note 1)   Gasket, Shim (.004/.005 thick, see note 1)   Gasket, Shim (.005/.007 thick, see note 1)   Gasket (.010 th	10	32000	, , ,			
15	15	32241	Ring Set Piston (Standard) (Model VH120)	8 1		
Comparison of the comparison			Ring Set, Piston (010 oversize)			
15	10	02212		1 6	B .	
(Model HH120)   Ring, Piston pin (Etalung)   Ring, Retaining   Ring, Piston pin (Etalung)   Ring, Retaining   Ring, Piston pin (Etalung)   Ring, Retaining   Ring, Ring, Retaining   Ring, Ri	15	32243	_ \	1 1		
16		1	(Model HH120)	82A		
Rod Assy., Comeeting (Incl. Nos. 18, 19 & 20)(Model (HR)(6)	16	31919	Ring, Piston pin retaining	83	31969	Cover, Cylinder
Rod Assyr Contesting (Incl. Nos. 18, 19	17	31933	Rod Assy., Connecting (Incl. Nos. 18, 19		650512	Screw, Hex hd. Sems, $5/16-18 \times 7/8$
Rod Assy Confesting (Incl. Nos. 18, 19 & 86 & 650616   Nut. Flywheel, pilot & 200 (Model) Hill 20)   87 & 32038   Housing, Blower			& 20)(Mode (HH) (6)			
18	17	32244	Rod Assy Conhecting (Incl. Nos. 18, 19	1 !		
19			& 20) (Model HH120)			1 9,
28264   Nut, Lock   21   32116   Camshaft Assy. (Incl. Nos. 129, 130, 131   & 160 thru 164) (Model HH100)   22   650624   Screw, Hex hd. cap, 5/16-24 x 9/16   92   650624   Screw, Hex hd. cap, 5/16-24 x 1/2   94   650595   Screw, Hex hd. cap, 5/16-24 x 1/2   95   31980   Pulley, Starter   96   32044   Screw, Hex hd. Sems, 1/4-20 x 3/4   Screw, Hex hd. Sems, 1/4-20 x 2   Screw, Hex hd. Sems, 1/4-20 x 2   Screw, Fil. hd. Sems, 10-24 x 1/2   Screw, Fil. hd. Sems, 10-24 x 1/2   Screw, Fil. hd. Sems, 10-24 x 1/2   Screw, Hex hd. Sems, 1/4-20 x 2   Screw, Fil. hd. Sems, 1/4-20 x 2   Screw, Fil. hd. Sems, 1/4-20 x 2   Screw, Hex hd. Sems, 1/4-20 x 3/4   Screw, Hex hd. Sems,						
32116   Camshaft Assy. (Incl. Nos. 129, 130, 131 & 160 thru 164) (Model HH100)				1 1		
\$\frac{8}{21}\$   \$32245   Camshaft Assy. (Incl. Nos. 129, 130, 131 & \$\frac{8}{6}\$ 160 thru 164) (Model HH120)   \$\frac{9}{6}\$ (160 thru 164) (Sers, 14-20 x 3/4 (Sersen, Hex hd. cap, 5/16-24 x 1/2 (Sersen, Hex hd. Sems, 1/4-20 x 3/4 (Sersen, Hex				1 3		
21 32245	21	32116		11		
\$\frac{8}{20}   \$\frac{160}{20} \text{ thru 164} \text{ (Model HH120)} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	0.1	00045		1 1		
22   31939   Lifter, Valve   23   32036   Cover, Cylinder (Incl. Nos. 4, 28 & 31)   25   *29673   Gasket, Dipstick   97   650489   Screw, Hex hd. Sems, 1/4-20 x 3/4   Screw, Hex hd. Sems, 1/4-20 x 3/4   Gasket, Breather   Screw, Fil. hd. Sems, 1/4-20 x 3/4   Screw, Hex hd. Sems, 1/4-20 x 3/4   Screw, Hex hd. Sems, 1/4-20 x 3/4   Screw, Hex hd. Sems, 1/4-20 x 3/4   Gasket, Breather   Breather, Assembly   Tube, Breather   Screw, Fil. hd. Sems, 10-24 x 1/2   Screw, Fil. hd. Sems, 10-24 x 1/2   Screw, Fil. hd. Sems, 1/4-20 x 2   102   28558   Washer, Wave   103   31966   Bushing, Governor lever   104   31984   Lever, Control   *Indicates Parts Included in Gasket Set, Ref. No. 166.   Note 1: Use of gaskets must be limited to a combined total maximum of .010 thick. Steel spacers must be used as required to allow maximum crankshaft end play tolerance of	21	32245		11		
32036	99	91000		1 1	I .	
25				11		
26		1 .				1
100   27627   Tube, Breather   Screw, Fil. hd. Sems, 10-24 x 1/2				\$ E		
28   31949   Bearing, Governor rod   101   650128   Screw, Fil. hd. Sems, 10-24 x 1/2   102   28558   Washer, Wave   103   31966   Bushing, Governor lever   104   31984   Lever, Control   104   31984   Lever, Control   105		1 .		11	1	
29   650588   Screw, Hex hd. Sems, 1/4-20 x 2   102   28558   Washer, Wave   31927   91ug, Oil drain   9in   32   30564   Screw, Hex hd. Sems, 1/4-20 x 1   103   31966   Bushing, Governor lever   104   31984   Lever, Control   *Indicates Parts Included in Gasket Set, Ref. No. 166.   Note 1: Use of gaskets must be limited to a combined total maximum of .010 thick. Steel spacers must be used as required to allow maximum crankshaft end play tolerance of		•		1 1		
30 31927 Plug, Oil drain 31 29783 Pin 32 30564 Screw, Hex hd. Sems, 1/4-20 x 1 33 31964 Clamp, Governor lever 34 29193 Signary Ring, Retaining 35 31963 Lever, Governor adjusting 36 650518 Lockwasher, No. 10 E.T. 37 650108 Screw, Fil. hd. mach., 10-24 x 7/8  103 31966 Bushing, Governor lever 104 12984 Lever, Control  *Indicates Parts Included in Gasket Set, Ref. No. 166.  Note 1: Use of gaskets must be limited to a combined total maximum of .010 thick. Steel spacers must be used as required to allow maximum crankshaft end play tolerance of						
29783 Pin 32 30564 Screw, Hex hd. Sems, 1/4-20 x 1 33 31964 Clamp, Governor lever 34 29193 Ring, Retaining 35 31963 Lever, Governor adjusting 36 650518 Lockwasher, No. 10 E.T. 37 650108 Screw, Fil. hd. mach., 10-24 x 7/8  Pin  104 31984 Lever, Control  *Indicates Parts Included in Gasket Set, Ref. No. 166.  Note 1: Use of gaskets must be limited to a combined total maximum of .010 thick. Steel spacers must be used as required to allow maximum crankshaft end play tolerance of				11	1	
32 30564 Screw, Hex hd. Sems, 1/4-20 x 1 33 31964 Clamp, Governor lever 34 29193 Ring, Retaining 35 31963 Lever, Governor adjusting 36 650518 Lockwasher, No. 10 E.T. 37 650108 Screw, Fil. hd. mach., 10-24 x 7/8  38 30564 Screw, Hex hd. Sems, 1/4-20 x 1 *Indicates Parts Included in Gasket Set, Ref. No. 166.  Note 1: Use of gaskets must be limited to a combined total maximum of .010 thick. Steel spacers must be used as required to allow maximum crankshaft end play tolerance of			1 . <del>-</del> :			
33 31964 Clamp, Governor lever 34 29193 Ring, Retaining 35 31963 Lever, Governor adjusting 36 650518 Lockwasher, No. 10 E.T. 37 650108 Screw, Fil. hd. mach., 10-24 x 7/8  38 1964 Clamp, Governor lever Ring, Retaining Note 1: Use of gaskets must be limited to a combined total maximum of .010 thick. Steel spacers must be used as required to allow maximum crankshaft end play tolerance of				السَّا	L	L
34 29193 Ring, Retaining 35 31963 Lever, Governor adjusting 36 650518 Lockwasher, No. 10 E.T. 37 650108 Screw, Fil. hd. mach., 10-24 x 7/8  Ring, Retaining Note 1: Use of gaskets must be limited to a combined total maximum of .010 thick. Steel spacers must be used as required to allow maximum crankshaft end play tolerance of				* Indi	cates Par	ts Included in Gasket Set, Ref. No. 166.
35 31963 Lever, Governor adjusting 36 650518 Lockwasher, No. 10 E.T. 37 650108 Screw, Fil. hd. mach., 10-24 x 7/8   Note 1: Use of gaskets must be limited to a combined total maximum of .010 thick. Steel spacers must be used as required to allow maximum crankshaft end play tolerance of			1	11		
36 650518 Lockwasher, No. 10 E.T. maximum of .010 thick. Steel spacers must be used as regular to allow maximum crankshaft end play tolerance of				Note	1: Use of	gaskets must be limited to a combined total
37 650108 Screw, Fil. hd. mach., 10-24 x 7/8 quired to allow maximum crankshaft end play tolerance of						
				quire	ed to allow	maximum crankshaft end play tolerance of
				.002	to .003 to	be maintained.

		······································					
Ref.			Ref.		·		
No.	Part No.	Part Name	No.	Part No.	Part Name		
105	650597	Screw, Hex washer hd., 10-24 x 5/8	138	31953	Wire, Points-to-Grommet		
106	650591	Screw, Fil. hd. mach., 10-24 x 2	139	31952	Rod, Ignition push		
107	650154	Nut, Hex, 10-24	140	31938	Cam, Breaker		
110	650587	Stud, Carburetor	141	32012	Core Group (Incl. Ref. No. 149)		
111	*31960	Gasket, Carburetor (2 Req.)	143	32014	Coil		
112	31959	Baffle, Air	144	32019	Clip, Coil locking		
113	29752	Nut, Hex, 1/4-28	145	32015	Condenser		
114	32045	Decal, H.P. (Model HH100)	146	32016	Screw, Condenser mounting		
114	32248	Decal, H.P. (Model HH120)	147	32017	Screw, Condenser		
115	*27272	Gasket, Air cleaner	148	31974	Wire, Condenser-to-Grommet		
120	32041	Bracket, Air cleaner	149	32018	Screw, Lamination locking		
121	30767	Spacer, Cleaner	150	650412	Screw, Fil. hd. Sems, 1/4-20 x 1-7/8		
122	28820	Screw, Fil. hd. Sems, $10-32 \times 1/2$	151	30554	Wire, Lead		
123	32008	Element, Air cleaner	152	32020	Flywheel		
124	32009	Cover, Air cleaner	153	32083	Spacer, Starter		
125	650513	Nut, Wing, 1/4-20	154	650512	Screw, Hex hd. Sems, $5/16-18 \times 7/8$		
126	31752	Decal, Air cleaner	155	650570	Washer, Flat		
127	650168	Washer, Flat	156	650185	Screw, Hex hd. cap, 5/16-18 x 1		
128	31973	Spacer	157	650266	Nut, Hex, 5/16-18		
129	31935	Yoke, Cam adjusting	160	32121	Ring, Retaining		
130	31936	Rivet, Yoke	161	32120	Plunger, Compression release		
131	31937	Spring, Cam adjusting	162	32145	Yoke, Compression release		
132	650128	Screw, Fil. hd. Sems, 10-24 x 1/2	163	32123	Spring, Yoke		
133	31954	Cover. Breaker box	164	5⊿122	Pin, Hinge		
134	*31955	Gasket, Breaker box	165	631157	Carburetor (Model HH100)		
135	650596	Screw, Pan hd. Sems, 8-32 x 5/16	165	631251	Carburetok (Model HH120)		
136	32011	Point & Push Rod Assy., Breaker (Incl.	166	31993A	Gasket Set (Incl. items marked*)		
1		No. 139)	<b> </b>				
137	610302	Screw, Breaker	* Ind	*Indicates Parts Included in Gasket Set, Ref. No. 166.			
					\ \ //		



#### BEFORE STARTING

- 1. Fill Fuel Tank. Do not mix oil with gasoline.
- 2. Fill Crankcase with oil (Fig. 1). Position equipment so that engine is setting level. Remove dipstick or filler plug, (Fig. 1). Pour oil into filler tube from which dip stick is screwed into filler opening as far as it will go when measuring oil level. DO NOT OVER FILL.

During initial "Break-In" period oil level should be watched closely see "Engine Maintenance".

OIL... Use a good oil of A.P.I. classification MS. Do not use oils marked only MM or ML or unmarked.

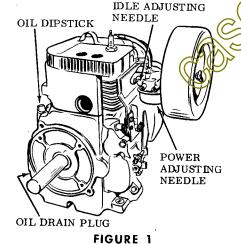
> Above 32° use S.A.E. 30 Below 32° use S.A.E. 10W

These recommendations must be followed for best performance and long life.

Check oil level every (5) five operating hours or each time equipment is used.

Change oil every twenty-five (25) operating hours or sooner if equipment is operated in extremely dusty or dirty conditions.

Note: Carburetors are preset at the factory. DO NOT attempt to make adjustments at this time. See carburetor instructions outlined under "Carburetor Adjustments".



## NOW, LET'S START THE ENGINE

1. Be sure that the spark plug wire is properly attached.

- 2. If equipment is equipped with remote engine and speed controls, set controls in "Choke" and "run" speed positions.
- 3. Electric Starter
- A. Be sure equipment is in "neutral" all blades, clutches, belts etc. must be disengaged to relieve engine of extra load while cranking.
- B. Be sure carburetor controls are properly set for starting. Be sure engine is filled with proper oil and gasoline and fuel valve is open. Be sure spark plug wire is attached.
- C. Refer to tractor manual for electric starter operation.
- D. When servicing the battery care must be taken to connect the wires to the battery as they were before removal. (Fig. 2) See battery manufacturer's instruction for service and storage. Battery should be maincharge.

4. As engine starts, move choke lever off "choke" position to "run position.

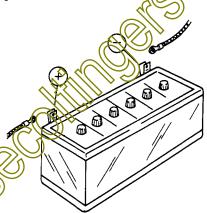


FIGURE 2

### TO STOP ENGINE

- 1. Press stop switch and hold until engine stops running. If Key starting is used, turn key to "off position".
- 2. Remove high tension wire from spark plug to prevent accidental starting by children while equipment is unattended.

### CARBURETOR ADJUSTMENTS

DO NOT MAKE UNNECESSARY AD-JUSTMENTS. Factory settings are

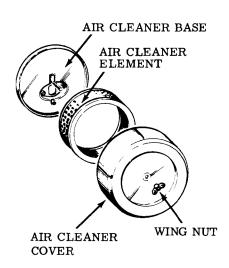
- correct for most applications. If adjustments are needed, proceed as follows:
- 1. Close power adjusting needle (Fig. 1) by turning right (clockwise). Close finger tight only. Forcing will cause damage.
- 2. Open 1 & 1/2 turn (counterclockwise).
- 3. Close idle adjusting needle (Fig. 1) by turning to right (clockwise). Close finger tight only. Forcing will cause damage.
- 4. Open 2 turns (counterclockwise).
- 5. Start engine. Follow starting instructions.
- 6. With throttle open (carburetor at "run" or "fast" position) adjust power needle one-eighth (1/8) turn at a time forward or backward until engine runs smoothly. If engine tends tained at 1.260 specific gravity (to stall under load, enrich mixture slightly (counterclockwise).
  - 7. Hold throttle lever closed or move carburetor control to "idle or slow" position and adjust idle adjusting needle until the engine runs smoothly, proceeding as in step (6) six above.
  - 8. Allow several seconds between each adjustment when performing either step six (6) or seven (7) to allow engine to react to new setting.

### **ENGINE MAINTENANCE**

To obtain long life and trouble free service from your engine, certain normal maintenance must be performed as outlined below:

- 1. Change oil in Crankcase after first two (2) hours of operation. Then follow instructions outlined under "Oil". CAUTION: Disconnect high tension wire at spark plug to prevent accidental starting of engine. Unscrew oil drain plug located on side at bottom of engine. "Note" Always tip engine toward oil drain hole. Be sure oil drains completely.
- 2. Replace oil drain plug and refill with oil as directed "under before starting" or engine name plate.
- 3. After each (5) five hours operating time, or each time equipment is used oil level should be checked.

- (a) Engines equipped with dip stick, keep oil level at mark indicated on stick; add oil if necessary. When measuring oil level with dip stick be sure dip stick is screwed into filler opening as far as it will go.
- 4. Cleaning Engine. This is an air cooled engine which operates most efficiently when the Cooling fins are clean. Clean Cylinder fins and underside of tank or housing thoroughly of all accumulated debris.
- 5. Air Cleaner. Paper type. Serviceable. Clean element every ten hours or oftener depending if engine is being operated in dusty or dirty conditions.



(a) Remove element from housing and tap lightly to dislodge dirt. Wipe inside of housing to remove all dirt, replace element. CAUTION Do not wash or oil this element.

#### STORAGE INSTRUCTIONS

In event engine is to be stored for any length of time (30 days or more) or at the end of mowing season, prepare as follows:

- 1. Drain gas tank completely by removing fuel line at the carburetor or fuel tank which ever is easier.
- 2. Drain carburetor by pressing upward on bowl drain. CAUTION: Fuel tank and carburetor should be drained into a container outdoors and away from fire or flame.
- 3. Inside protection of engine for storage is performed by removing spark plug and pouring one ounce of SAE 30 oil thru spark plug hole into cylinder. Crank engine with out starting several times to spread oil over cylinder walls.



# Be Sure To Observe Safety Precautions

- 1. PROVIDE EFFICIENT VENTILATION. Exhaust gases contain carbon monoxide which is odorless and is a deadly poison. Proper care must be taken to provide efficient ventilation when operating engine in closed rooms.
- 2. DO NOT FILL GAS TANK WHILE ENGINE IS RUNNING. Avoid spilling gasoline on a hot engine. This may cause an explosion.
- 3. KEEP ENGINE CLEAN. This engine is air cooled. If cooling system becomes clogged, serious damage may result. Keep blower, blower housing screen, fins on flywheel, cylinder head and block free from grass or dirt.
- 4. DO NOT MIX OIL WITH GASOLINE. This is a 4-cycle engine and requires oil to be used in crankcase only. DO NOT PUT OIL IN GAS TANK.
- 5. AT EACH OIL CHANGE be sure the crankcase of engine is thoroughly cleaned of dirt, sludge, etc. Use kerosene as a flushing oil.
- 6. KEEP SCREWS, NUTS AND BOLTS TIGHT.

# ENGINE WARRANT POLICY

The Lauson-Power Products Engine Divisions of Tecumseh Products Company (Manufacturer) will, at its option, replace of repair WITHOUT CHARGE to the original purchaser any part or parts manufactured by it and found upon examination by any Manufacturer's Authorized Service Ordlet or at the Manufacturer's Factory at Grafton, Wisconsin, to be DEFECTIVE IN MATERIAL AND/OR WORKMANSHIP if received for such examination, in the case of engines for use on chainsaws within thirty (30) days, and in all other cases within ONE YEAR, from date of original purchase, except that engines used to power any vehicle used in competitive racing or on commercial and/or rental tracks are not warranted in any respect.

All transportation energies on, and damages and loss incurred in connection with the transportation of parts submitted for replacement or repair under this Warranty shall be borne by the purchaser.

This warranty shall not apply to any engine or part which shall have been repaired or altered in any way by persons other than Manufacturer's Authorized Service Personnel, nor shall this warranty apply to any damage resulting from accident, alteration, misuse or abuse, nor shall this warranty apply to any damage resulting from failure to follow the Manufacturer's Instructions for operation and maintenance of engines and parts.

"The foregoing warranty IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR STATUTORY (INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILTIY AND FITNESS FOR PURPOSE) and of any other obligations and/or liabilities on the part of Manufacturer and Manufacturer neither assumes nor authorizes any other person, natural or corporate, to assume for it any other obligation or liability in connection with or with respect to any engine or parts. The Manufacturer shall in no event be liable for any consequential, incidental or special damages nor for the improper selection of an engine or part for a particular application."

This warranty shall be effective only if the attached card is properly filled out and returned to Manufacturer at the time of purchase.

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Lambert Electric Co., Ltd.
Halifax Ignition Limited

131-11th Avenue, West 10180 - 105th Street 126 Gore Avenue 915 Oxford St., Box 280 114 Avenue "A", North 6245 Quinpool Road

#### **FOREIGN**

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