Fisher

CATALOGUE

FOR

CARS
TRUCKS
TRACTORS
MOTOR CYCLES
MARINE AND
STATIONARY
ENGINES

D. P. FISHER, LIMITED.

PISTON & PISTON RING MANUFACTURING SPECIALISTS

22 WIGAN STREET : : : WELLINGTON, C.2., N.Z.

Telephones: 53-320, 52-569 P.O. Box 102. Te Aro Telegrams "RINGFISHER"

Improved

Gudgeon Pin Fitting

IS AVAILABLE IN

FISHER PISTONS (Pins Fitted)

WHY FACTORY PIN FITTING NECESSITATES REVISED CLEARANCES—

Firstly, because all gudgeon pins are lapped finished, and have a perfectly smooth surface.
Secondly, because the gudgeon bosses of the piston are not reamed by the old method, but are **honed finished,** thereby removing all high spots, and providing the maximum bearing surface.
It is necessary, therefore, that where a pin oscillates in the piston bosses, **clearance should be allowed for an oil film.**

REMEMBER—

Fitting varies according to type of pin assembly.

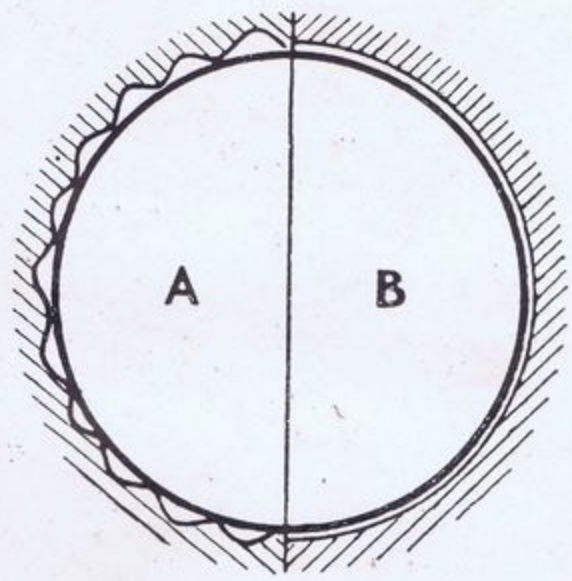
FACTORY CLEARANCES

Oscillating type (Fixed in Con. Rod).
Cast Iron—Clearance .001.
Cast Iron (Bushed)—Clearance .0005.
Alloy—Thumb pressure fit.

Full Floating Type.
Cast Iron—Light palm pressure fit.
Alloy—Light drive in fit with soft hammer.

Set Screw Type (Pin fixed in piston).
Cast Iron—Drive in fit with soft hammer.
Alloy—Drive in fit with soft hammer.

Note.—To allow free movement for expansion and contraction in the piston, it is advisable in this type of assembly to relieve the boss opposite to the set screw to a push fit.



The sketch above represents an exaggerated cross section of pin and hole, showing the difference between the reamer and Hone methods.

Section "A" shows the high spots caused by reamer marks. These spots vary in height from .0005″ to .002″, depending on type and condition of reamer used.
Section "B" shows how the pin hole is finished by the Honed method — perfectly round and absolutely free from high spots—assuring a full bearing surface.

In adapting the above clearances, it is necessary that the pins and pin holes should be clean, and free from lubricant. When checking pin fits this is important, as a film of oil or dust will materially affect the feel of the fit. Remember that 1/10 of a thousandth in pin fitting makes a great difference.
When fitting pins by the reamer method, reamer standards must be adopted.

D. P. FISHER LTD.

22 WIGAN STREET — WELLINGTON

G. DESLANDES LTD. PRINT.

FISHER

Electrically Heat Treated "Y" Alloy Low Expansion AND Light Weight Semi-Steel and Grey Iron PISTONS

- **DESIGN:**

Fisher Pistons are scientifically designed to suit New Zealand conditions. A careful check has been kept over a number of years on pistons used in all makes of motors, and where trouble has been experienced with original equipment pistons, the cause of such trouble has been studied and provision made in the design of Fisher Replacement Pistons to prevent such trouble recurring.

- **HEAT TREATING:**

Fisher Pistons are all heat-treated in pyrometer-controlled electric ovens. Heat-treating relieves all internal strains in the original castings, increases the hardness of the metal, and allows close fitting of the piston without risk of seizure. Heat-treating eliminates the tendency of what is commonly called permanent growth.

- **MACHINING:**

Fisher Pistons are machined by the most modern practice in piston production. The methods adopted ensure even thickness of metal throughout the piston. Ring grooves are machined with standard gauge cutters, ensuring accurate and uniform width and depth of grooves.

- **PISTON PIN ALIGNMENT:**

Many pistons fail to give satisfaction because the piston pin bosses have not been bored in true alignment. The boring of the bosses on Fisher Pistons is carried out on a special machine designed for this purpose, and absolutely true piston pin alignment is obtained.

- **SEMI-FINISHED OR FINISHED PISTONS:**

Fisher Pistons are carried in stock semi-finished with pins fitted, ample oversize being allowed to meet practically any reconditioned cylinder. If finished pistons are required, they can be supplied within a few hours of receiving order.

All finished pistons are ground finished on a special piston grinder, which produces an exceptionally accurate and highly polished surface.

See instructions re ordering on page 2 when ordering finished pistons.

IMPORTANT

HOW TO ORDER

Please note these instructions carefully, as a great deal of time and expense can be saved by making sure of your requirements and then making your order clear:—

1. When telegraphing, use words instead of numbers wherever possible, as numbers are subject to mutilation in transmission.

2. Use code word in place of piston number for piston required.

3. State quantity of pistons required (not sets), as some motors use 4, 6 or 8.

4. If pistons required are not listed, sample piston must be forwarded, with particulars of the motor it is out of, such as make, model, year, etc.

5. Always check piston taken from motor with Catalogue specifications before ordering. Proceed by measuring as follows:—

   A—Diameter on skirt.
   B—Length overall
   C—Compression from centre of pin to extreme top.
   D—Diameter of piston pin.
   E—Type of piston pin (important).
   F—Distance between bosses.
   G—Number and width of Rings.

EXPLANATIONS OF ABBREVIATIONS.

Types of Pistons:

Cast = Light weight cast-iron.
Alloy, SS.=Split skirt alloy.
Alloy = Plain, skirt, alloy.
Alloy Aero = Alloy fluted skirt.

Types of Piston Pins:

OSC = Clamped in connecting rod.
SS = Set screw locked in piston.
FF = Full floating, with circlips or end caps.

FINISHING PISTONS TO SIZE.

THE ONUS IS ON YOU TO GIVE CORRECT SIZE.

When Finished Pistons are required, it is most important that care be taken in giving the size the pistons are to be finished to, as when pistons are finished to clients' specifications they are not returnable if found unsuitable.

Check cylinder bores with a reliable micrometer (not a cylinder gauge) after the cylinders have been reconditionel—NOT BEFORE.

THEN STATE

PISTONS FINISHED TO SUIT CYLINDER BORE (give size), or

PISTONS FINISHED, NEAT DIAMETER (give neat diameter).

Unless these instructions are clear, all pistons will be finished neat piston diameter to size given, and clearance must be allowed on the finished cylinder size.

ELECTRICALLY HEAT TREATED

PISTONS
FOR
MOTOR CYCLES

Wherever possible send sample when ordering Motor Cycle Pistons, as many machines are fitted with pistons which are not standard equipment.

Code	Piston Stock No.	NAME AND MODEL	YEARS	Piston Type	Cyl	Bore	Length	Comp.	Ring Equipment	Dist. between Bosses	Pin Diam.	Pin Stock No.
		A. J. S.										
Fahat	566A	2.48, S.V., K12 & M12	1928–29	Alloy	1	65 m.	77 m.	44 m.	4–1⅛ m.	1⅛	.562	P1077
Gafne	645A	2.48, O.H.V., R12, S12	1930–31	Alloy	1	65 m.	80 m.	52 m.	4–1⅛ m.	1 5/16	.562	P1000
Galas	683A	3.49, O.H.V. 2 Port, R6	1930–31	Alloy	1	74 m.	84½	46 m.	4–1½ m.	1 5/16	.625	P1005
Gagpe	654A	3.49, R4 & M4	1930	Alloy	1	74 m.	3 1/16	2⅛	4–1½ m.	1 5/16	.625	P1005
Caets	212A	2¾ S.V., E4 & H4	1925–27	Alloy	1	74 m.	3 3/32	1⅜	4–1½ m.	1½	.625	P1005
Falib	595A	2¾ O.H.C., M6 & K7	1928–29	Alloy	1	74 m.	75 m.	37 m.	4–1½ m.	1 5/16	.625	P1005
Faloc	596A	2¾ O.H.V., High Comp.	1925–27	Alloy	1	74 m.	2⅝	1⅜	4–1½ m.	1	.625	P1005
Ebnix	490A	2¾ O.H.V., High Comp. K3	1928	Alloy	1	74 m.	3 1/32	1 3/32	3–1½ m.	1 3/32	.625	P1005
Ebfam	461A	2¾ O.H.C., M7	1929	Alloy	1	74 m.	2 5/16	1⅝	4–1½ m.	1½	.625	P1005
Bajla	175A	2¾ OHV, Low Comp. G8–H8, E7–G7	1925–27	Alloy	1	74 m.	64 m.	31 m.	4–1⅛ m.	1	.625	P1005
Ebdop	449A	3.49, S.V., M5–M4–M3	1929	Alloy	1	74 m.	3 5/32	2 7/32	4–1½ m.	1 5/16	.625	P1005
Dagya	395A	3.49, S.V., K4–K5–K3	1928–29	Alloy	1	74 m.	89 m.	44 m.	4–1½ m.	1 5/16	.625	P1005
Gafma	644A	3.49, S.V., R5	1930	Alloy	1	74 m.	3½	1 3/16	4–1½ m.	1 5/16	.625	P1005
Haech	714A	Denley Model	——	Alloy	1	79 m.	3 3/16	1⅞	3–1/16	1	.875	
Gajub	669A	4.95, S.V., H9	1926–27	Alloy	1	84 m.	79 m.	35 m.	4–2 m.	1 3/16	.687	P1006
Galet	684A	4.98, O.H.V., H8	1927	Alloy	1	84 m.	75 m.	40 m.	4–2 m.	1½	.687	P1006
Hacul	703A	4.98, O.H.V., 2 Port, R8–S8	1930	Alloy	1	84 m.	87 m.	57 m.	4–2 m.	1½	.687	P1006
Ebavd	418A	4.98, O.H.V., G8	1926	Alloy	1	84 m.	69 m.	31 m.	4–2 m.	1 3/32	.687	P1006
Faift	575A	4.98, O.H.V., K8–M8	1928–29	Alloy	1	84 m.	77 m.	44 m.	4–2 m.	1½	.687	P1006
Gaany	603A	3½ S.V. & Twin M9–K9–R9, M1, M2	1929	Alloy	1–2	84 m.	95 m.	48 m.	4–2 m.	1½	.687	P1006
Hahpo	745A	4.98 O.H.V., TB8 & SB8	1931–32	Alloy	1	84 m.	75 m.	41 m.	3–2 m.	1½	.687	P1006
		ARIEL										
Cahuk	276A	3½ h.p. O.H.V., E. 2 Port	1927	Alloy	1	81.8 m.	82 m.	45 m.	2–⅛	1 7/16	.750	P1010
Cahyl	278A	4¼ h.p. S.V., A & B	1927	Alloy	1	86.4 m.	76 m.	40 m.	2–⅛	1¼	.750	P1040
Ebfen	462A	5.5 S V., A & B	1928–30	Alloy	1	86.4 m.	3 3/16	1 9/16	2–⅛	1¼	1	P1001
Dacat	330A	5 & 5.5, O.H.V., C & D	1925–27	Alloy	1	81.8 m.	68 m.	32 m.	2–⅛	1¼	.750	P1010
Daegz	367A	5 & 5.5, O.H.V., C.–D.–F	1928–30	Alloy	1	81.8 m.	73 m.	33 m.	2–⅛	1¼	1	P1002
Ebbil	423A	5 h.p. High Comp. E.	1928–30	Alloy	1	81.8 m.	86 m.	44 m.	2–⅛	1¼	1	P1002
Fagiv	554A	2.5, O H V., (Colt) LF	1929–31	Alloy	1	65 m.	68 m.	32 m.	2–3/32	1 5/16	.750	P1052
Gagan	649A	2.5, S.V., (Colt) LB	1929–31	Alloy	1	65 m.	70 m.	29 m.	2–3/32	1 5/16	.750	P1052
Gadyr	628A	5 h.p., SF. 31, Sloping Engine	1931	Alloy	1	86.4 m.	82 m.	44 m.	2–⅛	1¼	.812	P1057
Galzy	603A	5 h.p., O.H.V. 4 Valve SG31, Sloping Engine & Red Hunter Vertical VH32	1931–32	Alloy	1	86.4 m.	80 m.	43 m.	3–1/16	1 5/16	.812	P1057
Hafmo	728A	5.5 S.V., S.B. Sloping Engine	1931–32	Alloy	1	86.4 m.	93 m.	49 m.	2–⅛	1¼	.812	P1057
Hanvo	783A	2¾ S.V., & O.H.V., MF31–MB	1931–32	Alloy	1	72 m.	66 m	32 m.	3–1/16	1⅛	.750	P1062
Hanov	779A	2.5 O.H.V. High Comp.	1929	Alloy	1	65 m.	72 m.	36 m.	2–3/32	⅞	.750	P1052
Ibcyv	813A		—	Alloy	1	81.8 m.	70 m.	32 m.	2 1/16, 1–⅛	1 3/16	.812	
		A. K. D.										
Hagon	737A	350 c.c. S.V. 40	1930	Alloy	1	70 m.	66½ m.	29 m.	3–2 m.	1⅜	.500	
		B. S. A.										
Bagmo	132A	2¾ S.V., L28–L32/4	1927–32	Alloy	1	72 m.	82 m.	36 m.	3–3/32	1¼	.625	P1012
Bagpy	132CI	2¾ S.V., L28–L32/4	1927–32	Cast	1	72 m.	82 m.	36 m.	3–3/32	1¼	.625	P1012
Caheg	272A	2¼ S.V., B25 to B33	1924–31	Alloy	1	63 m.	68 m.	28 m.	3–3/32	1⅛	.625	P1010
Cahfa	272CI	2¼ S.V., B25 to B33	1924–31	Cast	1	63 m.	68 m.	28 m.	3–3/32	1⅛	.625	P1010
Cajul	297A	7.70 Twin E.	1925–32	Alloy	2	76 m.	88 m.	36 m.	3–3 m.	1⅝	.625	P1008
Dacev	332A	3.49 O.H.V. L. Low Comp.	1926–31	Alloy	1	72 m.	3	1 7/32	3–3/32	1¼	.625	P1012
Ebijs	480A	1.74, 2–Stroke A28	1928–30	Alloy	1	60 m.	80 m.	42 m.	2–⅛	1⅛	.500	P1013
Ebikt	482A	4.93 O.H V., Low Comp. S.	1927–32	Alloy	1	80 m.	79 m.	38 m.	2–3 m.	1 7/16	.750	P1011
Fafrg	543A	4.93, O.H.V. High Comp.	1927–30	Alloy	1	80 m.	88 m.	48 m.	2–3 m.	1 7/16	.750	P1011
Fafyx	550A	3.49, O.H.V., L. High Comp.	1929–31	Alloy	1	72 m.	3 1/16	1 9/32	3–3/32	1 3/16	.625	P1012
Fahoy	570A	2¾ O.H.V., L29, High Comp.	1929–31	Alloy	1	72 m.	3 7/16	1 21/32	2–3/32	1 3/16	.625	P1012
Fakuc	585A	5.57 S.V. H	1926–30	Alloy	1	85 m.	88 m.	35 m.	4–3 m.	1⅝	.625	P1034
Gaac	621A	3½ S.V. S.	1925–30	Alloy	1	80 m.	95 m.	42 m.	3–3 m.	1 7/16	.625	P1009
ac	621A	9.86 Colonial G.	1926–28	Alloy	2	80 m.	95 m.	42 m.	3–3 m.	1 7/16	.625	P1009
Haej..	716A	5.95 O.H.V. & S.V. M33–10 & M33–11	1933	Alloy	1	85 m.	88 m.	35 m.	2–3 m.	1⅝	.750	P1040
Haejn	716A	4.99 S.V. & 5.57, O.H.V., H32-9, W32-6	1932	Alloy	1	85 m.	88 m.	35 m.	2–3 m.	1⅝	.750	P1040
Hagah	730A	2¼ O.H.V. B30–4	1930–31	Alloy	1	63 m.	72 m.	30½ m.	2–3/32	1⅛	.625	P1010
Hagup	738A	9.86 Low Comp. G	1925–28	Alloy	2	80 m.	92 m.	39 m.	2–3 m.	1⅝	.625	P1009
Haowf	736A	986 c.c. S.V., G32-10 Twin	1932–33		2	80 m.	3 5/16	1 1/2	3–3 m.	1 7/16	.750	P1011

ALL FISHER PISTONS

Code	Piston Stock No.	NAME AND MODEL	YEARS	Pistn Type	Cyl.	Bore	Length	Comp.	Ring Equipment	Dist. between Bosses	Pin Diam.	Pin Stock No.
		CHATER LEA										
Cagda	240A	2¾ O.H.C.	1925–28	Alloy	1	71 m.	2 5/16	1 1/16	2–3/32	1 9/32	.708	P1018
		CALTHORPE										
Dagud	392A	3.48, O.H.V., 2 Port	1929–31	Alloy	1	74 m.	70 m.	38 m.	2–3/32	1⅛	.625	P1005
Hanra	781A	4.93, O.H.V., Ivory Major	1932–34	Alloy	1	85.5 m.	3 1/16	1⅛	2–1/16, 1–⅛	1 5/16	.750	P1040
		DOUGLAS										
Bagja	127CI	T S.	All	Cast	2	61 m.	56 m.	26 m.	2–4 m.	1 29/64	.375	P1016
Bagke	129CI	E.W.	All	Cast	2	60.8 m.	54 m.	27 m.	2–3/32	1	.500	P1015
Cagho	247CI	C.W.	All	Cast	2	60.8 m.	56 m.	27 m.	2–1/16	1 29/64	.375	P1016
Dageo	386CI	5.96 S.V., E29 Domed.	1927–29	Cast	2	68 m.	57 m.	27½ m.	2–3/32	1 3/16	.562	P1067
Ebnoz	492CI	350 c.c., Dry Sump	1930	Cast	2	60.8 m.	2 27/32		4–3/32	1	.500	P1015
Faijy	580A	600 c.c., S.V.	1930–31	Alloy	2	68 m.	63½ m.	33 m.	4–3/32	1 3/16	.625	P1035
		DUNELT										
Gaavd	608A	3.48, O.H.V., Twin Port	1929–31	Alloy	1	71 m.	2¾	1 7/16	2–3/32	1	.708	P1018
		EXCELSIOR (AMERICAN)										
Dabwo	3I9C1	Super X	——	Cast	2	3	3	1¾	3–⅛	1 13/32	.625	P1008

FRANCIS – BARNETT—(See VILLIERS ENGINES)

		HARLEY DAVIDSON										
Bajme	179CI	10–12 h.p.	1924–28	Cast	2	3 7/16	2 31/32	1 21/32	3–⅛	1 5/8	.791	P1092
Bakne	195CI	2¾ S.V. Pup.	All	Cast	1	2⅞	2⅞	1½	3–⅛	1⅝	.610	P1011
Bakur	195A	2¾ S.V. Pup.	All	Alloy	1	2⅞	2⅞	1½	3–⅛	1⅝	.610	P1021
Cafac	215A	2¾ O.H.V. Pup.	1926–28	Alloy	1	2⅞	2¾	1 9/16	3–⅛	1 5/32	.610	P1022
Cafed	219CI	7–9 h.p.	1928–30	Cast	2	3 5/16	3 3/32	1 23/32	3–⅛	1 5/8	.791	P1020
Gaack	600A	750 c.c.	1929–31	Alloy	2	2¾	2 27/32	1 17/32	2–⅛, 1–7/32	1	.791	P1023
Gaagn	600CI	750 c.c.	1929–31	Cast	2	2¾	2 27/32	1 17/32	3–⅛	1	.791	P1023
Gadop	627A	500 c.c. S.V.	1928–30	Alloy	1	3 3/32	3 5/32	1 11/16	3–⅛, 1–7/32	1⅛	.791	—
Haefk	715A	2¾ S.V., Pup.	1928–30	Alloy	1	2⅞	2⅞	1½	2–⅛	1	.791	P1023
Gakit	674A	2¾ O.H.V., Pup.	1929	Alloy	1	2⅞	2¾	1 9/16	2–⅛	1	.791	P1023
		INDIAN										
Abjem	97CI	Chief & Power Plus.	1919–26	Cast	2	3⅛	3¼	1¾	3–3/16	1⅜	.625	P1026
Abjin	98CI	Standard Scout and Prince	All	Cast	1 & 2	2¾	3	1 21/32	2–⅛	1 5/16	.625	P1024
Bagil	124CI	Super Chief (Early)	1916–26	Cast	2	3¼	3¼	1¾	3–3/16	1 11/32	.625	P1025
Dafuc	382CI	Super Chief (Late)	1927–29	Cast	2	3¼	2 15/16	1 17/32	3–⅛	1⅝	.750	P1064
Eblas	486A	Super Scout	1927–30	Alloy	2	2⅞	2 11/16	1 11/32	2–⅛	1 7/16	.750	P1027
Eblet	486CI	Super Scout	1927–30	Cast	2	2⅞	2 11/16	1 11/32	2–⅛	1 7/16	.750	P1027
Ebliv	487A	750 c.c.	1928–32	Alloy	2	2⅞	2 13/16	1 15/32	2–⅛	1 7/16	.750	P1027
Haens	717A	12.65 Ace	1928–31	Alloy	4	2¾	3¼	1 7/16	3–3/32	1 11/32	.687	
		J.A.P.										
Dagud	392A	350 c.c. (New Imp Ete	1925–26	Alloy	1	74 m.	70 m.	38 m.	2–⅛	1⅛	.615	P1053
Ebawf	419A	500 c.c., O.H.V. 2 Port	1928–29	Alloy	1	3⅜	3 1/16	1 25/32	3–⅛	1⅜	.812	P1057
Fahev	568A	2¾ S.V.	1928–30	Alloy	1	2¾	72 m.	40 m.	3–3/32	1	.615	P1053
Haept	718A	350 c.c. O.H.V.	1926–27	Alloy	1	2¾	2 5/16	1⅛	3–3/32	1	.615	P1053
		LEVIS										
Faget	553A	247 c.c., 6 Port	1928–30	Alloy	1	67 m.	97 m.	56 m.	2–2 m.	1 3/16	.500	
		MATCHLESS										
Ebilv	483A	2.46, R–R3–RS	1926–30	Alloy	1	2 15/32	3	1 7/16	2–3/32	1 1/16	.875	
Faazm	501A	4.98, L5–T3–T5	1926–29	Alloy	1	3¼	3 1/16	1 7/16	2–⅛	1 5/32	.875	
Fafit	542A	4.95 V2, 4.98, MR3	1926–28	Alloy	1	3⅜	3¼	1 13/16	2–⅛	1 3/16	.875	P1028
Fafit	542A	5.86, V5 & V6	1929–30	Alloy	1	3⅜	3¼	1 13/16	2–⅛	1 3/16	.875	P1028
Fafov	X542A	9.90, Twin (odd Bosses)	1930	Alloy	1	3⅜	3¼	1 13/16	2–⅛	1½	.875	P1028
Hahyr	746A	3.47 O.H.V. LR–L4	1924–27	Alloy	1	2 23/32	3	1½	2–3/32	1 3/16	.875	
		NEW HUDSON										
Ebgor	469A	2¾ O.H.V. 2 Port	1927–28	Alloy	1	70 m.	72 m.	37 m.	3–2 m.	1¼	.750	
Eblux	488A	350, O.H.V. High Comp.	1929–30	Alloy	1	70 m.	80 m.	40½ m.	2–2 m.	1¼	.750	
Fagsa	557A	4.9, Twin Port, O.H.V. (87–88)	1928–30	Alloy	1	79½ m.	70 m.	37 m.	3–2 m.	1¼	.750	P1011
Fakiz	583A	4.98, O.H.V. High Comp.	1929–30	Alloy	1	79½ m.	82 m.	48½ m.	2–2 m.	1¼	.750	P1011
Faloc	586A	2¾ h.p.	1928	Alloy	1	70 m.	2 25/32	1 3/32	2–2 m.	1 9/32	.625	
Fakob	584A	2¾ S.V.	1924	Alloy	1	70 m.	79 m.	40 m.	2–2 m.	1 7/32	.750	
Gakvo	680A	3½ O.H.V.	1932	Alloy	1	83½ m.	3 9/16	1 15/32	3–2 m.	1 9/32	.750	
Haevb	720A	350 c.c. S.V. 81	1928–29	Alloy	1	70 m.	2⅞	1⅛	3–2 m.	1¼	.750	
Hagka	731A	2.50 c.c. S.V. 80	1929–30	Alloy	1	63 m.	2 21/32	1 1/32	3–2 m.	1⅛	.562	
Hagka	731A	2.5 c.c. O.H.V. 91	1929–30	Alloy	1	63 m.	2 21/32	1 1/32	3–2 m.	1⅛	.562	
Hahme	743A	5.47 S.V.	1931	Alloy	1	83½ m.	72 m.	36 m.	3–2 m.	1 9/32	.750	

ELECTRICALLY HEAT TREATED

Code	Piston Stock No.	NAME AND MODEL	YEARS	Pistn Type	Cyl.	Bore	Length	Comp.	Ring Equipment	Dist. between Bosses	Pin Diam.	Pin Stock No.
		NORTON										
Cahge	273A	3½ O.H.V., Model 18	1922–29	Alloy	1	79 m.	66 m.	36 m.	2–3/32	1 3/16	.625	
Cagef	245CI	3½ S.V., Model 16H	1925–26	Cast	1	79 m.	91 m.	45 m.	2–5/32	1 3/8	.625	
Ebnub	493A	3.48 O.H.C.	1929	Alloy	1	71 m.	74 m.	42 m.	3–1/16	1 1/16	.687	
Faduv	528A	3½ O.H.C.	1928–29	Alloy	1	79 m.	66 m.	36 m.	3–1/16	1 3/16	.625	
Gahpa	664A	3½ O.H.V. CS1, 18–20	1930–31	Alloy	1	79 m.	66 m.	36 m.	3–1/16	1 3/16	.875	P1030
		P. and M.										
Dafye	384A	3½ O.H.V. Panther	1926	Alloy	1	84 m.	72 m.	36 m.	3–1/8	1 3/8	.750	
Fabpe	509A	247 c.c. Twin Port	1929–30	Alloy	1	67 m.	111 m.	50 m.	2–3/16	1 1/4	.492	
Fagas	551A	499 c.c. O.H.V.	1928–30	Alloy	1	87 m.	68 m.	33 m.	3–1/8	1	.750	
Gabyp	615A	3½ h.p., 1A	1928–29	Alloy	1	84 m.	73 m.	38 m.	3–1/8	1	.750	P1028
		RALEIGH										
Ebgus	472A	2¼ h.p. S.V.	1925–26	Alloy	1	60 m.	58 m.	28 m.	2–3/32	15/16	.551	P1038
Ebeks	454A	4.96 O.H.V. 2 Port, 23	1928–31	Alloy	1	79 m.	63 m.	32 m.	2–3/32	1 7/32	.708	P1017
Ebepy	457A	2¾ O.H.V.	1925–26	Alloy	1	71 m.	80 m.	48 m.	2–3/32	1 1/16	.708	P1018
Fadwy	530A	2¼ h.p.	1927–28	Alloy	1	60 m.	66 m.	36 m.	2–3/32	29/32	.551	P1038
Fahta	573A	1¾ h.p., Model 17	1926	Alloy	1	52 m.	50 m.	25 m.	2–3/32	3/4	.472	
Gafip	642A	4.98 S.V., 21–22	1927–28	Alloy	1	79 m.	72 m.	36 m.	3–3/32	1 7/32	.708	P1017
Gajar	672A	2½ h.p., MO. 31, MO. 32	1930–32	Alloy	1	65½ m.	67 m.	31 m.	2–3/32	23/32	.472	
		ROYAL ENFIELD										
Haept	718A	2¾ O.H.V. 351	1926–27	Alloy	1	2¾	2 5/16	1 1/8	2–1/8	1	.615	P1053
Haetz	719A	2¾ O.H.V., 2 Port	1931–32	Alloy	1	2¾	2 3/32	1 3/8	2–1/16	1	.615	P1053
Hahal	739A	488 S.V. and 986 S.V.	1929–30	Alloy	1 & 2	85.5 m.	3¼	1 5/8	3–3/32	1 9/32	.750	P1040
Hahop	744A	2¾ S.V.	1928–30	Alloy	1	2¾	2 5/64	1 37/64	3–1/16	1 3/32	.615	P1053
Hamuv	776A	2¾ O.H.V.	1927–28	Alloy	1	2¾	2 17/33	1 5/16	2–3/32	1	.615	P1053
Haogn	788A	3½ O.H.V.	——	Alloy	1	85.5 m.	3 11/16	1 23/32	3–1/16	1 3/8	.750	P1040
Ebgep	468A	8 h.p. 180–190	1926–27	Alloy	1	85.5 m.	3 15/32	1 29/32	2–1/8	1 1/4	.750	P1040
Fafse	544A	3½ O.H.V.	1929	Alloy	1	85.5 m.	3 9/16	1 29/32	3–3/32	1 7/32	.750	P1040
		RUDGE										
Baken	191A	2¾ h.p., 4 Valve	1924–25	Alloy	1	70 m.	66 m.	30 m.	3–3/32	1 1/8	.750	
Bakip	192A	3½ O.H.V., 4 Valve	1927–28	Alloy	1	85 m.	75 m.	41 m.	2–1/16	1 7/16	.750	P1040
Gaarz	604A	3.48 O.H.V.	1929–31	Alloy	1	70 m.	2 9/32	1 11/16	2–1½	1	.750	
Gacno	620A	3½ O.H.V. Ulster, G. Prix, S. Sports	1928–31	Alloy	1	85 m.	2 15/16	1 27/32	2–1½	1 13/32	.750	P1040
Gacon	X620A	Dirt Track, High Comp.	All	Alloy	1	85 m.	—	—	2–1½	1 13/32	.750	P1040
		SCOTT										
Gaerb	637A	4.98 Squirrel	1925	Alloy	2	2 1/16	3 13/16	2 1/32	2–1/16	1 5/32	.625	
Gafam	639A	5.96	——	Alloy	2	2 5/16	3 13/16	2	2–1/16	1 5/32	.625	
		TRIUMPH										
Cafog	224CI	P	1924–26	Cast	1	84 m.	3¼	1 5/8	2–4 m.	1 1/16	.687	P1042
Dabsa	315CI	4 h.p., New P.	1927	Cast	1	84 m.	3¼	1 5/8	3–4 m.	1 1/16	.687	P1042
Ebbre	427A	3½ h.p. S.V. Q.	1927–28	Alloy	1	84 m.	3¾	1 29/32	2–4 m.	1 1/16	.687	P1042
Ebbun	429A	4.98, T.T.–C.T.T.–T.T.C.	1927–30	Alloy	1	80 m.	3	1 11/32	2–3/32, 1–3m.	1 13/32	.740	P1044
Ebipz	484A	4.98 & 5.94, N.–N.P.–N.S.D	1927–30	Alloy	1	84 m.	3 9/16	1 3/4	3–4 m.	1 1/16	.687	P1042
Fabro	512A	4.98 C.N.	1929	Alloy	1	80 m.	3 11/16	2 1/16	2–3/32, 1–3m.	1 13/32	.740	P1044
Fabus	515A	3.48 C.O.	1929–30	Alloy	1	72 m.	3 1/16	1 11/16	3–1/16	1 1/16	.687	
Facir	517A	3.48, S.V. N.L.	1929	Alloy	1	84 m.	3 13/32	1 3/4	3–3/32	1 1/16	.740	
Fakye	588A	2.77 h.p. W.	1927–28	Alloy	1	66⅔ m.	2 7/8	1 1/2	2–1/8	1	.616	P1043
Gabil	610A	5.49, C.S.D.	1929–30	Alloy	1	84 m.	3 13/32	1 3/4	3–3/32	1 13/32	.740	
Gardy	631A	1.74 c.c., X. 2 Stroke	1930	Alloy	1	59½ m.	3 5/16	1 3/4	2–1/8	1 3/32	.472	
		VELOCETTE										
Dabux	318CI	2 Stroke, 2½ h.p.	1922–26	Cast	1	63 m.	2 27/32	1 29/32	2–1/8	1 9/32	.500	
Fader	526A	3.48 O.H.C., K.	1925–27	Alloy	1	74 m.	3 5/32	1 3/4	2–1/8, 1–5/32	1 5/16	.625	P1005
Fadet	526A	3.48 O.H.C., K.S.S.	1929–30	Alloy	1	74 m.	3 5/32	1 3/4	2–1/8, 1–5/32	1 5/16	.625	P1005
Fadre	X526A	3.48 O.H.C.	1928	Alloy	1	74 m.	3 5/32	1 3/4	3–1/16	1 5/16	.625	P1005
Gabja	611A	2.49, G.T.P., 2 Stroke	1929–30	Alloy	1	63 m.	102 m.	44½ m.	2–3/32	1 3/32	.500	
		VILLIERS										
Bajpo	186CI	147 c.c., 2-Stroke, V.I.C.	1923–26	Cast	1	55 m.	80 m.	41 m.	2–3/16	1 3/8	.492	P1048
Daaph	307CI	2¾ h.p., 2-Stroke	1920–25	Cast	1	70 m.	3¾	2 3/16	2–3/16	1½	.490	
Dacoy	336CI	1¾ h.p., 2-Stroke	1926–27	Cast	1	2¼	3 13/16	1 7/8	2–1/8	1	.492	
Gakyx	681CI	1¼ h.p., 2-Stroke	1932–33	Cast	1	50 m.	72 m.	40 m.	2–3/32	29/32	.492	
Ibban	802CI	98 c.c., 2-Stroke	1931–32	Cast	1	50 m.	3¼	1 3/8	2–3/32	7/8	.492	

FINISHING INSTRUCTIONS FOR FISHER PISTONS

CLEARANCES RECOMMENDED

Inner Strut and Split Skirt Type Pistons

Cylinder Bore—Inches	2 to 2½	2½ to 3	3 to 3½	3½ to 4	4 to 4½	4½ to 5
Top Land	.012	.014	.018	.020	.025	.030
2nd Land	.010	.012	.014	.016	.020	.020
3rd and 4th Land	.008	.010	.012	.014	.018	.018
Oil Relief	Turned 1-32 in. less than standard bore diameter					
Skirt	.0015	.002	.002	.0025	.003	.0035

Split in piston must be opposite the driver's side of the motor, which is the side of minimum thrust.

The split in the skirt is left incomplete to facilitate finishing. After finishing and fitting the pin, it should be completed with hack saw blade at A and B.

Plain Skirt Pistons.

Land Clearances same as INNER STRUT and SPLIT SKIRT PISTONS.

SKIRT CLEARANCES—

FOR CARS & COMMERCIAL VEHICLES

Cylinder Bore—Inches	2 to 2½	2½ to 3	3 to 3½	3½ to 4	4 to 4½	4½ to 5
Skirt Clearance	.0035	.0045	.005	.006	.007	.008

FOR MOTOR CYCLES

Cylinder Bore—Inches	2 to 2½	2½ to 3	3 to 3½	3½ to 4
Skirt Clearance	.005	.0065	.0075	.008

Cast Iron Pistons.

FOR CARS

Cylinder Bore—Inches	2 to 2½	2½ to 3	3 to 3½	3½ to 4	4 to 4½	4½ to 5
Top Land	.009	.011	.013	.015	.017	.020
2nd Land	.007	.008	.009	.010	.012	.014
3rd Land	.006	.006	.007	.008	.009	.010
Skirt	.002	.0025	.003	.0035	.0045	.0047

On four ring pistons the fourth land clearance should be the same as the third land.
Above skirt clearance applies to pistons with or without skirt rings below pin.

NOTE: When fitting Cast Iron Pistons Increase Piston clearance .00025 per inch of Diameter on all Air Cooled Engines or Commercial Vehicles, Motor Cycles, Trucks, Tractors, Marine or Stationary Engines.

FISHER

PISTONS & PISTON RINGS

LIST OF STOCKISTS

AUCKLAND ...	... Kidd Garrett, Ltd.
ASHBURTON ...	... ... J. Coutts
BLENHEIM ...	B. Cresswell & Sons, Ltd.
CHRISTCHURCH	Trade Service Co., Ltd.
DANNEVIRKE ...	... ... W. Anderson
DUNEDIN ...	... A. L. S. Cassie, Ltd.
FEILDING ...	... Blake & Strawbridge
GISBORNE ...	Allen Bros. & Johnston, Ltd.
GORE ...	... Gore Wrecking Co.
HAMILTON ...	... Ibbotson Bros.
HASTINGS ...	Anderson & Hansen, Ltd. Freeman Motor Supplies, Ltd,
INVERCARGILL ...	... A. L. S. Cassie, Ltd. H. E. Melhop, Ltd.
MASTERTON ...	... ... Lyttle & Co.
NAPIER ...	Anderson & Hansen, Ltd.
NEW PLYMOUTH	Steels Motor Spares Service
OAMARU ...	Dewar & McKenzie, Ltd.
PALMERSTON NTH.	—Berry Engineering Works, Ltd.
ROTORUA ...	... H. Langguth & Co.
TAURANGA ...	... F. N. Christian & Co.
TIMARU ...	... Brehautt Bros. Ltd.
WANGANUI ...	... Freeman Motors, Ltd.
WELLINGTON ...	McMahon Motor Supplies Ltd. D. P. Fisher, Ltd.
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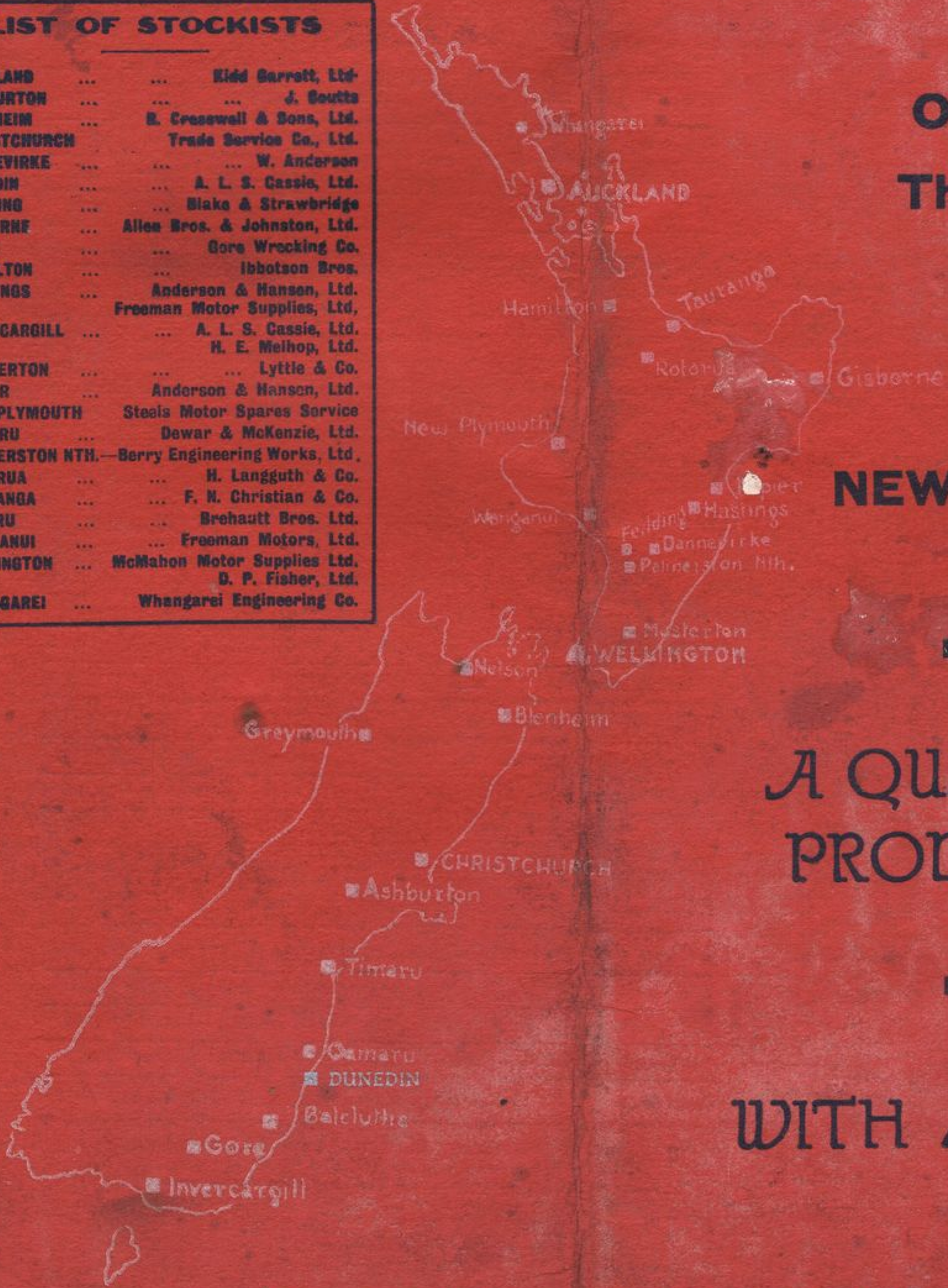

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