



Sourcing & Service

HINO DIESEL

Liner Kit | Cylinder Kit



REO TECHNOLOGY CORP.

Version:2016

Important Information

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Names, descriptions, numbers of vehicles or manufacturers etc. are only stated for reference. All figures, drawings and other data serve for explanatory and for illustration purposes only. Any reprint, imitation and reproduction shall be subject to our prior approval in writing with exact indication of the source.

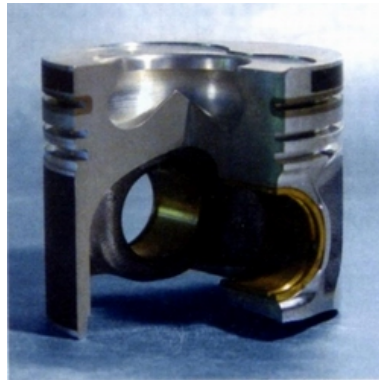
Subject to be changed without notice.

1. Design feature of Pistons



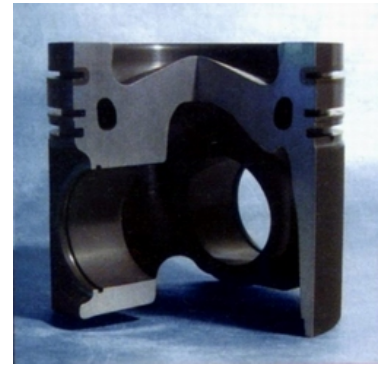
Cast Piston

Distinguish itself with a long operating life and economic viability for gasoline and diesel engines. In this piston, the piston crown, ring zone and skirt make a robust unit. Therefore the possibilities for use range from a small to a large engine



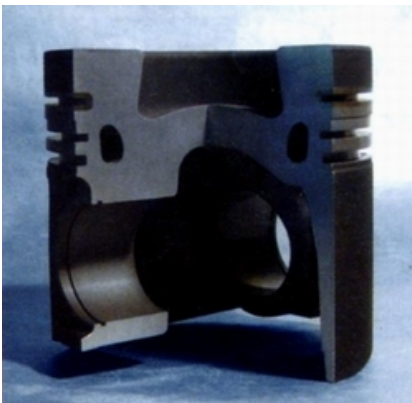
Al-fin Piston

Have a ring carrier made of special cast iron which is cast into piston. This provides protection to the top ring groove from the wear and tear which diesel engines in particular are subjected to. This design allows for an increase in the loads to which the pin boss can be subjected.



Al-fin & cooling gallery piston

The piston is used in situations in which particularly high operating temperatures occur. In order to reduce the high temperatures—which are caused by the increased performance—in the piston crown and in the ring area, intensive cooling is done by circulating oil in the cooling gallery.



Al-fin, cooling gallery & head anodized piston

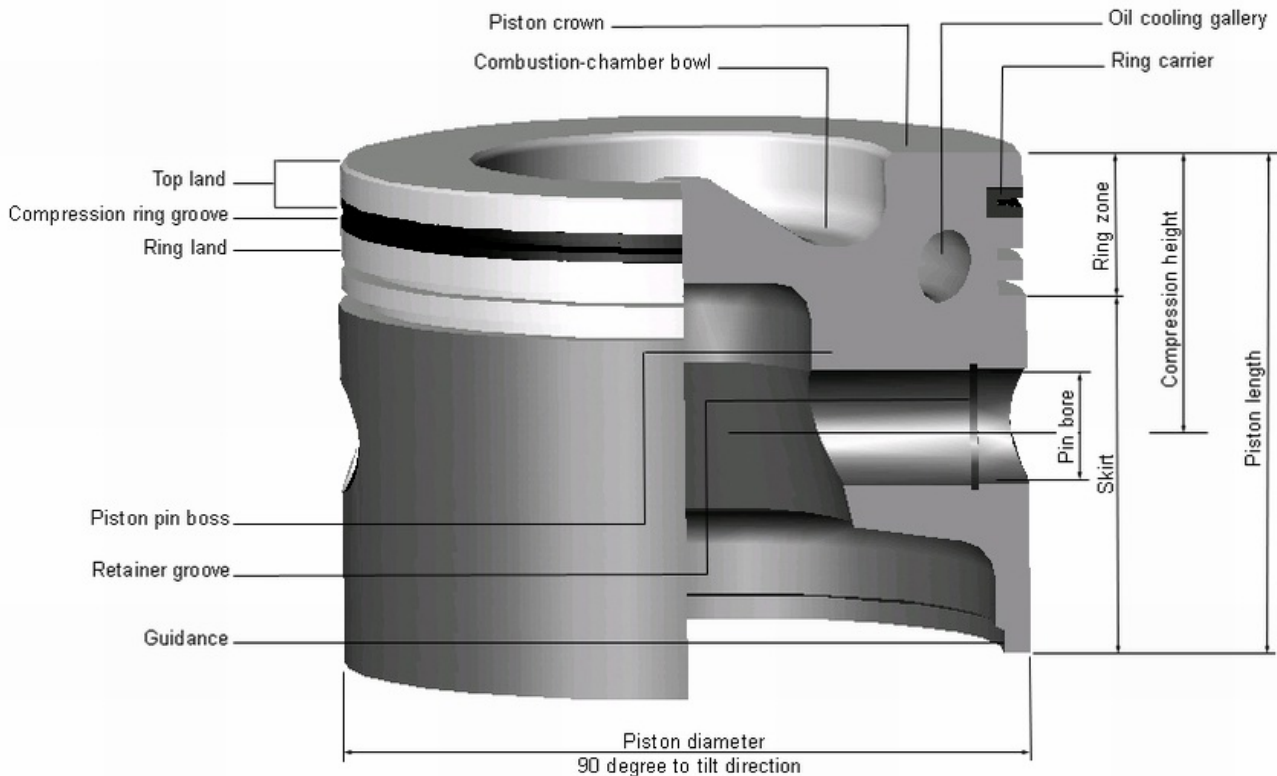
This design is used for highly loaded diesel engines. For additional protection and in order to avoid cracking in the combustion chamber and the crown, the piston has a special hard anodized layer on the piston crown. (Head anodized)



Two pieces piston

Consist of a steel piston head and an aluminum piston skirt which have a moveable connection to each other via the piston pin. Due to great strength and low wear and tear, it is possible to achieve low exhaust emission values for diesel engines that are subjected to particularly high loads.

2. Technical Terms of the piston



Fitting recommendation

Shrink fit

Assembling pistons and pins with shrink fit in the con rod requires the greatest of care. It is particularly important that there is freedom of movement between piston and pin after assembly.

Floating pin

For pistons with floating pins, the enclosed circlips serve to fix the piston in the piston pin bore. The circlips must be mounted with a suitable tool. When this is done it should be ensured that the circlips fit completely into the slot for which they are intended and that the impact is always in the stroke direction of the piston.

Never use old circlips and avoid pressing them together too much, otherwise permanent deformations can result.

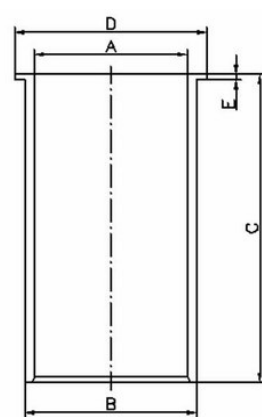
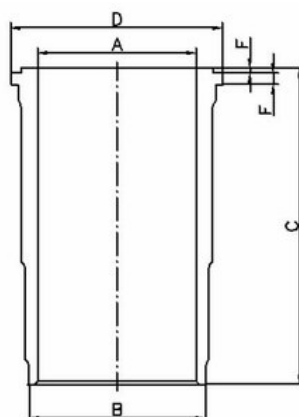
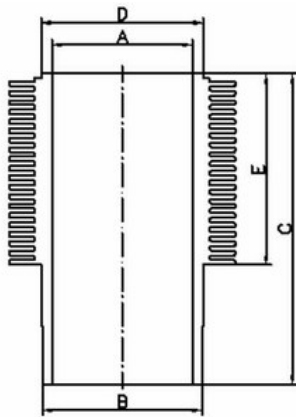
Installation of the piston

When the piston is installed, the installation direction must be observed. The impacts on the individual piston rings are to be distributed evenly across their circumference. The pin locking device is to be installed in such a way that the impact is at the top or the bottom. The cylinder bore or the pistons and the rings must be oiled.

In order to avoid damage when the piston is being fitted in the cylinder bore, a suitable tool is to be used for assembly.

In the case of Diesel engines, the clearance must be measured and the relevant instructions from the engine manufacturer must be followed. The part of the engine (cylinder block, crankshaft, con rod and pil pan) must be cleaned carefully before assembly to remove machining residues and deposits.

3. Types and technical terms of the cylinder liner



Main dimensions

- A = maximum finished diameter for pre-machined liners(Fully-finished)
- B = Fitting diameter
- C =Total length
- D =Flange diameter
- E =Flange height
- F =Fire protection rim height

Fitting recommendation

Wet cylinder liners



The location bores and particularly the running surfaces in the cylinder block must be cleaned carefully and they must be undamaged. Corroded surfaces must be reworked (use flange liners and outer diameter oversize liners). As this is done, make sure that the liners move in easily and that they take up the correct position (the projecting length of the liner must be in accordance with the regulations of the engine manufacturer). After the liner has been installed with the seal rings that belong to it (use slip agent), the cylinder diameter is to be checked—particularly in the region of seal rings—so as to determine whether any deformation has been caused by pinched sealing rings. Using the wrong sealing rings (wrong diameter/wrong material) can cause a narrowing of the cylinder, which can lead to engine damage. The cooling system should be pressure tested after the liners have been installed, so as to determine whether there is any leakage before the engine is started.

Semi-finished cylinder liners



The surface which supports the flange must be vertical to the location bore and it must be sufficiently and evenly beveled. If the liner flange is unevenly supported it can tear off. After the installation of the liner, which is only semi-finished in its inside diameter, this cylinder boring is finely bored and then finished by honing until it has the specified dimensions or, in the case of finely bored liner, it is only finished by honing (tolerance accordingly to DIN/ISO H5). The surface of the liner must be flush to the sealing surface of the cylinder block; if necessary, the block surface and the liner must be finished by surface grinding.

Finished cylinder liners



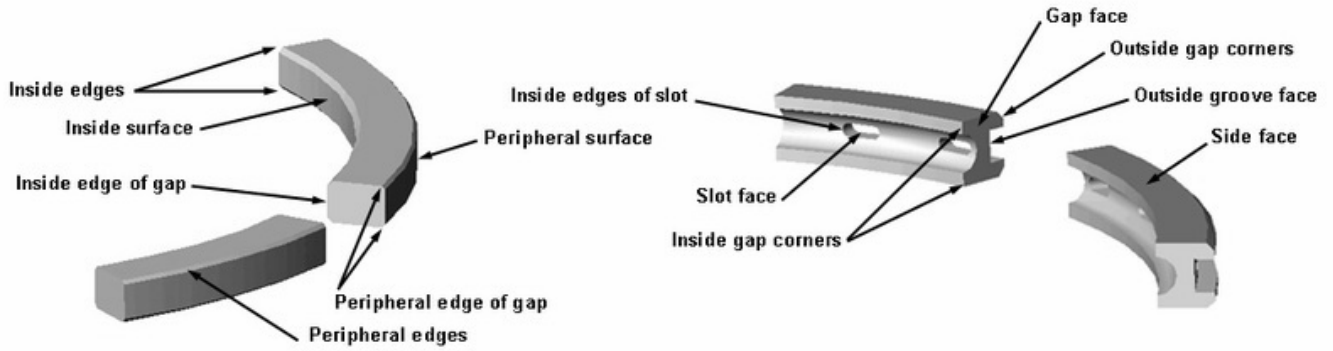
Before the liner is installed, the locating bore in the cylinder block must be cleaned carefully, and must be checked to ensure the accuracy of the dimensions and to determine whether any distortion has occurred. Out-of-center or damaged bores can be reworked for the installation of oversize liners. It is important for this that the locating bore is cylindrical, as this is what determines the geometrical shape of the inside of the pressed-in, thin-walled liner.

Finned cylinders



In accordance with the instructions from the engine manufacturer, cast iron cylinders or light alloy cylinders are used. Light alloy cylinders are separated into several groups due to the small installation clearance in the standard cylinder dimensions.

4. Types and technical terms of the piston ring



Cross-section configurations

Sealing rings



Barrel-faced ring



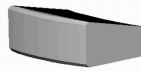
Rectangular ring



Taper-faced ring



Half keystone ring



Keystone ring



Napier ring



Scraper ring (Stepped)

Oil control rings



Bevelled edge oil control ring



Coil spring loaded beveled edge
oil control ring



Steel-rail oil control ring
(multi piece)

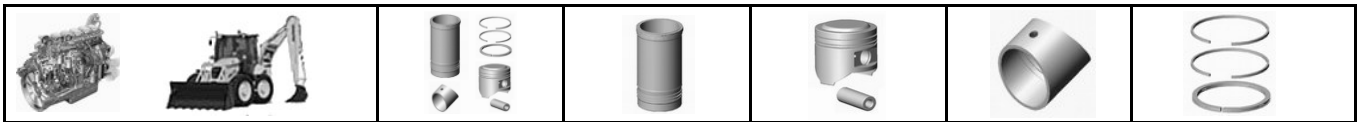
INDEX

Bore	Engine Code						
90mm	DM100						
97mm	EC100						
104mm	WO4D	WO4D New	WO4CT	WO4DT	WO6D	WO6E	WO6DT
	WO6E						
105mm	DS70	EH100					
105.8mm	HO6B-T1						
108mm	EH300	HO6CT -1	HO6CT -2	HO6CT-3	HO6CT-4	HO6C.TA	HO6CT-5
110mm	DS50	EH700	EH700 New	EH700T	HO7C	HO7C	HO7CT
	HO7D	HO7DT	HO7CT				
114mm	JO5C	JO5CT	JO7C	JO7CT	JO8C	JO8CT-1	JO8CT-2
	JO8CT-3	JO8CT-4					
116mm	EL100						
120mm	DK10	EB300	EB400	EP100	EP100T	PO9CT	
122mm	P11C-1	P11C-2					
124mm	EM100						
127mm	M10C	M10CT	M10U				
128mm	ED100	ER200					
135mm	EF500	EF550	K13C-12V	K13C-24V			
137mm	EF750	EK100	EK130T	EK200	F17D	K13D	E13C
139mm	F17C	F17E	V22D				
146mm	F20C-1	F20C-2	V25C-1	V25C-2			
150mm	V26C						

4 cyls.	5 cyls.	6 cyls.	8 cyls.	10 cyls.
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Simple Click On the Engine Code you like to view, it will connect to the specification automatically!

Liner Kit For HINO



Engine	Bore	1A90S01	1L90S01-F	1P90S01-T	1B90S01	1R90S01
DM100	90mm	04013-1020	11467-1401 2352-1695-01 11467-1440	13216-1120 13216-1120A 3352-1961-00	13272-1130 P132L	13011-1350 13011-1350A R15700
6 cyl. 4313cc Truck:KM300 KM320 KM330 KM340 KM350 KM410 KM450 KM320D,Bus:RM100 BM320 Tractor:HM300 HM301			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Non-Al-fin, Tin Plated. Liner :Fully-Finished.			TL 199.0	TL 104.0		2.5
			OD 104.5	CH 54.0 -2.1		2.5
			FD 110.0	<u>Piston Pin</u>		2.5
			FH 9.0+1.0	PD 29.0		4.0 FO
				PL 77.0		4.0 FO

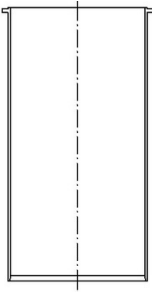
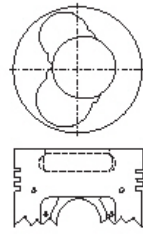



Engine	Bore	1A97S01	1L97S01-F	1P97S01-T	1B97S01	1R97S01
EC100	97mm		11467-1130 2353-8019-10 2353-8019-30	13216-1140 13216-1140C 2380-1940-01	13272-1140 P145L	13011-1390 13011-1400 R15470
6 cyl. 5010cc Truck KL300 ,Bus RL100 ,Tractor HL300			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Tin Plated. Liner :Fully-Finished.			TL 206.0	TL 112.0		RN 2.5
			OD 110.5	CH 58.0 -6.1		2.5
			FD 117.0	<u>Piston Pin</u>		2.5
			FH 10.0+1.0	PD 31.5		RN 4.0 FO
				PL 81.5		4.0 FO

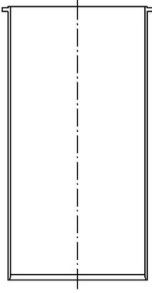
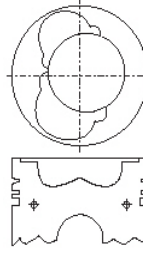



Engine	Bore	1A04F01	1L04F01-FP	1P04F01-T	1B04F01	1R04F01
WO4D	104mm	HMK161460	11467-1761(W) 11467-1771(X) 11467-1781(Y) 11467-1791(Z)	13211-1801 13216-1460 13216-1460E	13272-1280 13272-1281 P133L	13011-1973 R15011
4 cyl.4,009 cc Ranger KM.FB112			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston: Tin Plated, Round Combustion Chamber 51mm Liner: O/D is graded as W,X,Y,Z Phosphated			TL 201.0	TL 106.2		RN 2.5
			OD 107.0	CH 60.2 -19.1		2.0
			FD 112.0	<u>Piston Pin</u>		5.0 FX
			FH 8.0+0.9	PD 35.0		
				PL 85.0		

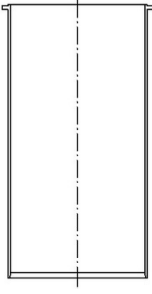
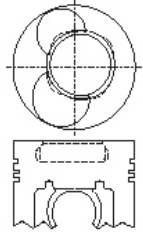



Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating **TL**=Total Length **OD**=Outer Diameter **FD**=Flange Diameter **FH**=Flange Height

Liner Kit For HINO



Engine WO4D New 4 cyl.4,009 cc Ranger KM.FB112 Piston:ALFIN,Tin Plated Liner:O/D is graded as W,X,Y,Z Phosphated	Bore 104mm	1A04F02 	1L04F01-FP 11467-1761(W) 11467-1771(X) 11467-1781(Y) 11467-1791(Z)	1P04F02-AT 13216-2220 Piston TL 106.2 CH 60.2 -18.4 Piston Pin PD 35.0 PL 85.0	1B04F01 13272-1280 13272-1281 P133L 	1B04F01 13011-1973 R15011 Piston Ring RN 2.5  2.0  5.0 FX 
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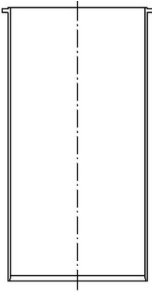
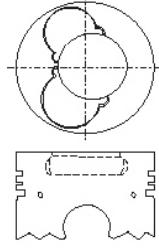



Engine WO4CT 4 cyl.4,009 cc Bus Rainbow RW,RB145 Piston:ALFIN & Oil Gallery,Tin Plated Round Combustion chamber 52mm Liner:O/D is graded as W,X,Y,Z Phosphated	Bore 104mm	1A04F03 HMKT161631 	1L04F01-FP 11467-1761(W) 11467-1771(X) 11467-1781(Y) 11467-1791(Z)	1P04F03-AT 13216-2210 Piston TL 108.7 CH 62.7 -19.4 Piston Pin PD 37.0 PL 85.0	1B04F02 13011-2891A SJH20068ZZ 	Piston Ring 2.8  2.5  4.0 
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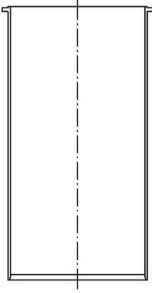
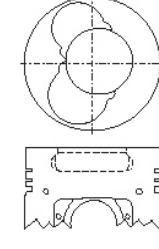



Engine WO4DT 4 cyl. 4,009 cc Piston:ALFIN,Tin Plated Round Combustion Chamber 56mm Liner:O/D is graded as W,X,Y,Z Phosphated	Bore 104mm	1A04F04 	1L04F01-FP 11467-1761(W) 11467-1771(X) 11467-1781(Y) 11467-1791(Z)	1P04F04-AT 13216-3201 Piston TL 106.2 CH 60.2 -18.5 Piston Pin PD 37.0 PL 84.5	1B04F01 13272-1280 13272-1281 P133L 	1B04F03 13011-3950 13011-3950A SDH20099ZZ Piston Ring 2.5  2.0  4.0 
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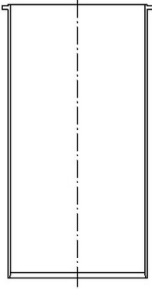
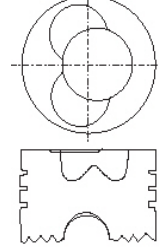



Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating **TL**=Total Length **OD**=Outer Diameter **FD**=Flange Diameter **FH**=Flange Height

Liner Kit For HINO



<u>Engine</u> WO6D 6 cyl.5,759 cc Bus AC,FC42 Piston: Tin Plated, Round Combustion Chamber 51mm Liner: O/D is graded as W,X,Y,Z Phosphated	<u>Bore</u> 104mm	1A04S01 HMKT161470	1L04F01-FP 11467-1761(W) 11467-1771(X) 11467-1781(Y) 11467-1791(Z)	1A04S01-T 13216-1470 13216-1470D 13216-1470E	1B04F01 13272-1280 13272-1281 P133L	1B04S01 13011-1983 13011-2420 13011-2440 R15010
			<u>Cylinder Liner</u> TL 201.0 OD 107.0 FD 112.0 FH 8.0+0.9	<u>Piston</u> TL 108.7 CH 62.6 -18.5 <u>Piston Pin</u> PD 35.0 PL 85.0		<u>Piston Ring</u> RN 2.5  2.0  5.0 FX 

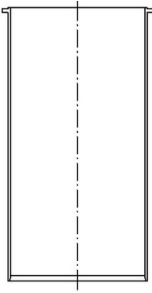
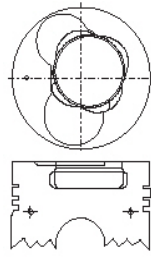



<u>Engine</u> WO6E 6 cyl.5,759 cc Bus AC,FC42 Piston: ALFIN, Tin Plated Liner: O/D is graded as W,X,Y,Z Phosphated	<u>Bore</u> 104mm	1A04S02	1L04F01-FP 11467-1761(W) 11467-1771(X) 11467-1781(Y) 11467-1791(Z)	1A04S02-AT 13216-2220	1B04F01 13272-1280 13272-1281 P133L	1B04S01 13011-1983 13011-2420 13011-2440 R15010
			<u>Cylinder Liner</u> TL 201.0 OD 107.0 FD 112.0 FH 8.0+0.9	<u>Piston</u> TL 106.2 CH 60.2 -18.4 <u>Piston Pin</u> PD 35.0 PL 85.0		<u>Piston Ring</u> RN 2.5  2.0  5.0 FX 

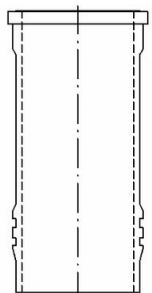
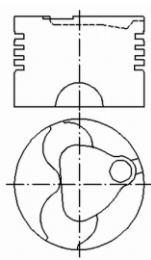





<u>Engine</u> WO6DT 6 cyl.6,014cc Ranger Piston: ALFIN, Round Combustion Chamber 56mm Liner: O/D is graded as W,X,Y,Z Phosphated	<u>Bore</u> 104mm	1A04S03 HMKT161900	1L04F01-FP 11467-1761(W) 11467-1771(X) 11467-1781(Y) 11467-1791(Z)	1A04S03-AT 13216-1900	1B04F01 13272-1280 13272-1281 P133L	1B04S02 13011-2610A 13011-2950A 13011-2680A SJH20-055ZZ
			<u>Cylinder Liner</u> TL 201.0 OD 107.0 FD 112.0 FH 8.0+0.9	<u>Piston</u> TL 108.6 CH 62.6 -19.2 <u>Piston Pin</u> PD 37.0 PL 85.0		<u>Piston Ring</u> 2.8K  2.5  5.0 

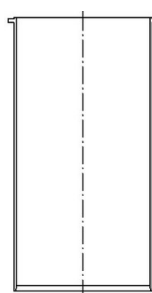
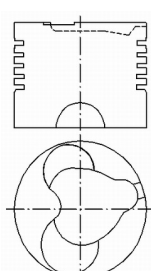





Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating **TL**=Total Length **OD**=Outer Diameter **FD**=Flange Diameter **FH**=Flange Height

Liner Kit For HINO



Engine WO6E 6 cyl. 6,014cc Piston:Round Combustion Chamber 51mm Liner :O/D is graded as W,X,Y,Z Phosphated	Bore 104mm	1A04S04 04013-1197	1L04F01-FP 11467-1761(W) 11467-1771(X) 11467-1781(Y) 11467-1791(Z)	1A04S04-T 13211-2070 13216-1720 13216-1740	1B04F01 13272-1280 13272-1281 P133L	1B04S01 13011-1983 13011-2420 13011-2440 R15010
			Cylinder Liner TL 201.0 OD 107.0 FD 112.0 FH 8.0+0.9	Piston TL 106.2 CH 60.2 -19.0 Piston Pin PD 35.0 PL 85.0		Piston Ring RN 2.5  2.0  5.0 FX 

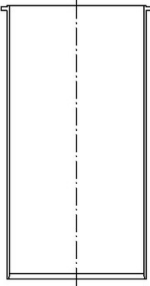
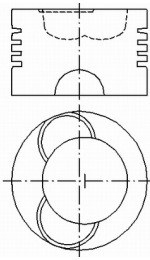
Engine DS70 6 cyl. 7014cc Truck:TE61,TE11,KL320,TE100,KL300 Tractor:TE100D,TE100,120,Bus:RD100,120,BK11,BT10,BT30,BT31 Piston :Non-Al-fin Liner : Fully-Finished.	Bore 105mm	1A05S01 04013-1025	1L05S01-F 11467-1280	1P05S01 13216-1040	1B10S01 13272-1180 13272-1070 P100L1	1R05S01 13011-1550A 13011-1210 R15710
			Cylinder Liner TL 261.0 OD 122.0 FD 130.0 FH 10.0+1.0	Piston TL 140.0 CH 78.5 - 1.7 Piston Pin PD 40.0 PL 82.0		Piston Ring 3.0  3.0  3.0  4.5 FO  4.5 FO 

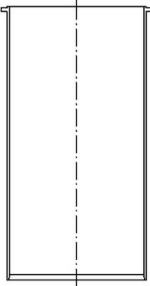
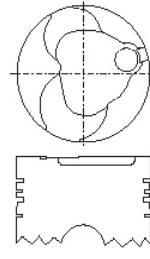
Engine EH100 6 cyl. 5871cc Truck:KL500,540,560,580,520,KR320, WB311,321,Tractor:KJ500,KU500,KR300,350,KU580,590,Bus:BX320,AM101 Piston :Tin Plated. Liner:Fully-Finished.	Bore 105mm	1A05S02 04013-1021	1L05S02-F 11467-1030 11467-1040	1P05S02-T 13216-1010 2382-1961-00	1B05S02 13271-1030 P148L1	1R05S02 13011-1150 13011-1410 R15690
			Cylinder Liner TL 206.0 OD 110.0 FD 115.0 FH 8.0+0.8	Piston TL 112.0 CH 59.0 -6.7 Piston Pin PD 34.0 PL 89.5		Piston Ring RN 2.5  2.5  2.5  RN 4.0 FO  4.0 FO 

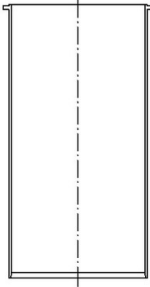
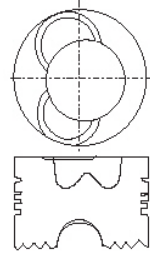
Suffix Code	Piston A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length CH =Compression Height Piston Pin OD=Outer Diameter TL=Total Length Liner C=Chrome plating F=F/F IH=Induction Harden N =Nitrided P =Phosphated S =S/F U =Copper plating TL =Total Length OD =Outer Diameter FD =Flange Diameter FH =Flange Height
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Liner Kit For HINO



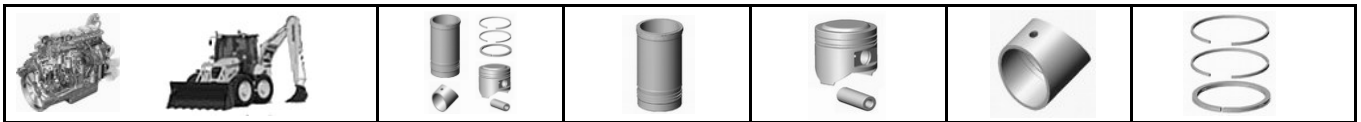
Engine	Bore	1A058S01	1L058S01-FP	1P058S01-AT	1B058S01	1R058S01
HO6B-T1	105.8mm		11467-1921 11467-1931 11467-1941 11467-1951	13216-1591	13272-1270 P1108L	13011-2880A SJH20-064ZZ
6 cyl. 6224cc Ranger			<u>Cylinder Liner</u> TL 204.0 OD 110.0 FD 118.0 FH 8.0+0.7	<u>Piston</u> TL 121.5 CH 69.5 -24.4 <u>Piston Pin</u> PD 39.0 PL 87.5		<u>Piston Ring</u> S 2.806 2.5 2.5 RN 5.0 FX
Piston : Alfin & Tin Plated. Liner O/D is graded as W,X,Y,Z , Fully-Finished & Phosphated .						

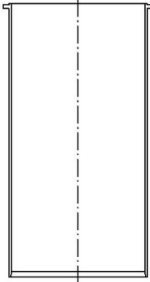
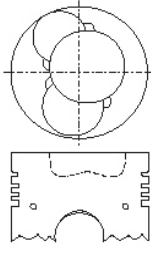
Engine	Bore	1A08S01	1L08S01-FP	1P08S01-T	1B08S01	1R08S01
EH300	108mm		11467-1010 11467-1020	13216-1160	13272-1030 P149L1	13011-1032 13011-1032A 13011-1062 R15160
6 cyl. 6211cc Truck:KR301,321,361 KL501,KJ501,KU580, Bus:RL300,320 RD300			<u>Cylinder Liner</u> TL 204.0 OD 112.0 FD 118.0 FH 8.0+0.8	<u>Piston</u> TL 114.0 CH 59.5 -6.3 <u>Piston Pin</u> PD 35.0 PL 90.0		<u>Piston Ring</u> RN 3.0 2.5 RN 5.0 FX 4.0 FX
Piston : Tin Plated. Liner : Fully-Finished .						

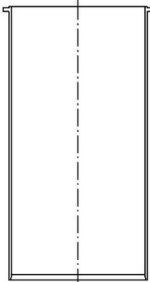
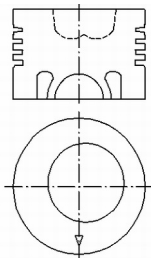
Engine	Bore	1A08S02	1L08S02-FP	1P08S02-AT	1B08S02	1R08S02
HO6CT	108mm	04013-1240	11467-1591 11467-1601 11467-1611 11467-1621	13216-1540 13216-1540B	13272-1270 P1108L	13011-1961 R15360
6 cyl.6485cc Ranger F,D			<u>Cylinder Liner</u> TL 204.0 OD 113.0 FD 118.0 FH 8.0+1.0	<u>Piston</u> TL 121.5 CH 69.5 -25.5 <u>Piston Pin</u> PD 39.0 PL 90.0		<u>Piston Ring</u> RN 2.806 2.5 2.5 5.0 FX
Piston : Alfin & Tin Plated.Round Combustion Chamber 54mm Liner O/D is graded as W,X,Y,Z , Fully-Finished & Phosphated .						

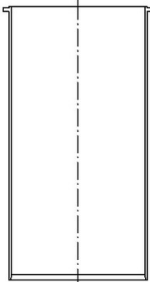
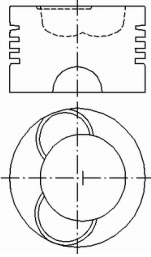
Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
 N=Nitrided P=Phosphated S=S/F U=Copper plating TL=Total Length OD=Outer Diameter FD=Flange Diameter FH=Flange Height

Liner Kit For HINO



<u>Engine</u> HO6CT	<u>Bore</u> 108mm	1A08S03 04013-1142	1L08S02-FP 11467-1591 11467-1601 11467-1611 11467-1621	1P08S03-AT 13216-1750	1B08S02 13272-1270 P1108L	1R08S02 13011-1961 R15360
6 cyl.6485cc Ranger 4.25ton FD			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Alfin & Tin Plated.Round Combustion Chamber 59mm Liner O/D is graded as W,X,Y,Z , Fully-Finished & Phosphated .			TL 204.0 OD 113.0 FD 118.0 FH 8.0+1.0	TL 121.5 CH 69.5 -21.1		RN 2.806 2.5 2.5 5.0 FX

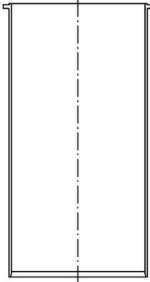
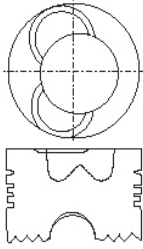
<u>Engine</u> HO6CT	<u>Bore</u> 108mm	1A08S04	1L08S02-FP 11467-1591 11467-1601 11467-1611 11467-1621	1P08S04-AT	1B08S02 13272-1270 P1108L	1R08S02 13011-1961 R15360
6 cyl.6485cc Ranger 4.25ton FD			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Alfin & Tin Plated. Liner O/D is graded as W,X,Y,Z , Fully-Finished & Phosphated .			TL 204.0 OD 113.0 FD 118.0 FH 8.0+1.0	TL 121.5 CH 69.5 -20.3		RN 2.806 2.5 2.5 5.0 FX

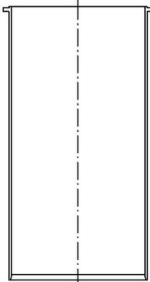
<u>Engine</u> HO6CT	<u>Bore</u> 108mm	1A08S05 HMKT16810	1L08S02-FP 11467-1591 11467-1601 11467-1611 11467-1621	1P08S05-AT 13216-1810 13216-1810A	1B08S02 13272-1270 P1108L	1R08S02 13011-1961 R15360
6 cyl.6485cc Ranger 4.25ton FD			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Alfin & Tin Plated.Round Combustion Chamber 57mm Liner O/D is graded as W,X,Y,Z , Fully-Finished & Phosphated .			TL 204.0 OD 113.0 FD 118.0 FH 8.0+1.0	TL 121.5 CH 69.5 -25.5		RN 2.806 2.5 2.5 5.0 FX

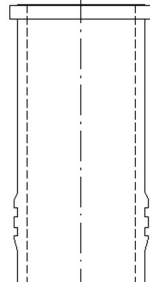
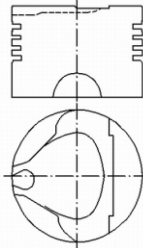
Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating **TL**=Total Length **OD**=Outer Diameter **FD**=Flange Diameter **FH**=Flange Height

Liner Kit For HINO



Engine	Bore	1A08S06	1L08S02-FP	1P08S06-AT	1B08S02	1R08S02
HO6C.TA	108mm		11467-1591 11467-1601 11467-1611 11467-1621	13211-1891	13272-1270 P1108L	13011-1961 R15360
6 cyl.6485cc Ranger 4.25ton FD			<u>Cylinder Liner</u> TL 204.0 OD 113.0 FD 118.0 FH 8.0+1.0	<u>Piston</u> TL 121.4 CH 69.3 -25.1 <u>Piston Pin</u> PD 39.0 PL 90.0		<u>Piston Ring</u> RN 2.806 2.5 2.5 5.0 FX
Piston : Alfin & Tin Plated. Liner O/D is graded as W,X,Y,Z , Fully-Finished & Phosphated .						

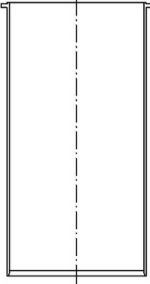
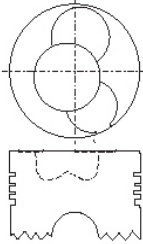
Engine	Bore	1A08S07	1L08S02-FP	1P08S06-AO	1B08S02	
HO6CT	108mm	HMKT162750	11467-1591 11467-1601 11467-1611 11467-1621	13211-1891	13272-1270 P1108L	
6 cyl.6485cc Ranger 4.25ton FD			<u>Cylinder Liner</u> TL 204.0 OD 113.0 FD 118.0 FH 8.0+1.0	<u>Piston</u> TL 121.5 CH 69.5 <u>Piston Pin</u> PD 39.0 PL 90.0		<u>Piston Ring</u>
Piston : Alfin & Oil Gallery, Round Combustion Chamber 57mm Liner O/D is graded as W,X,Y,Z , Fully-Finished & Phosphated .						

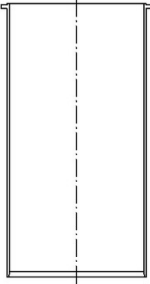
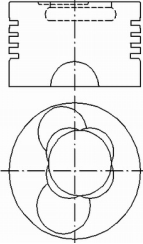
Engine	Bore	1A10S01	1L10S01-F	1P10S01	1B10S01	1R10S01
DS50	110mm	HMKT161050	11467-1550	13216-1050	13272-1180 13272-1070 P100L1	13011-1230 13011-1261 13011-1830 R15730
6 cyl. 7982cc Truck ZC34D,44D, Bus BT100H			<u>Cylinder Liner</u> TL 266.0 OD 124.5 FD 131.0 FH 10.0+1.0	<u>Piston</u> TL 145.5 CH 78.8 -2.3 <u>Piston Pin</u> PD 40.0 PL 92.0		<u>Piston Ring</u> 3.0 3.0 3.0 4.5 FO 4.5 FO
Piston : Non-Al-fin Liner : Fully-Finished.						

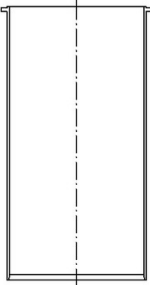
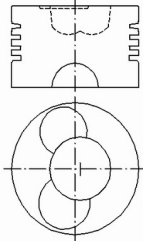
Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** **OD**=Outer Diameter **TL**=Total Length **Liner** **C**=Chrome plating **F**=F/F **IH**=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating **TL**=Total Length **OD**=Outer Diameter **FD**=Flange Diameter **FH**=Flange Height

Liner Kit For HINO



Engine	Bore	1A10S02	1L10S02-FP	1P10S02-T	1B10S02	1R10S02
EH700	110mm	04013-1389	11467-1200	13211-1471	13272-1220	13011-1610
		04013-1390	11467-1210	13216-1180	13272-1270	13011-1620
		04013-1391	11467-1220	13216-1181	P1108L	R15170
		04013-1392	11467-1230			
6 cyl. 6443cc Truck:KL545,585,KR365,KL525,KR305 ,LB595,KL555,KR325,KL565,FD171,172,174,175,476 Bus:RJ170,171,172,RD300,301,RL320			<u>Cylinder Liner</u> TL 204.0 OD 113.0 FD 118.0 FH 8.0+0.8	<u>Piston</u> TL 121.5 CH 69.5 -24.3 <u>Piston Pin</u> PD 39.0 PL 90.0		<u>Piston Ring</u> RN 3.0 2.5 2.5 RN 5.0 FX
Piston : Tin Plated. Round Combustion Chamber 54mm Liner:O/D is graded as W,X,Y,Z Fully-Finished & Phosphated.						

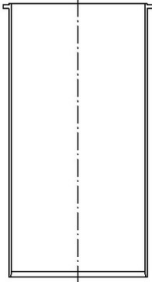
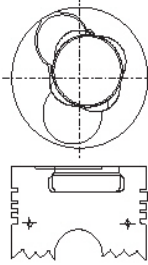




Engine	Bore	1A10S03	1L10S02-FP	1P10S03-AT	1B10S02	1R10S02
EH700 New	110mm		11467-1200	13216-1890	13272-1220	13011-1610
			11467-1210	13211-2260	13272-1270	13011-1620
			11467-1220		P1108L	R15170
			11467-1230			
6 cyl. 6443cc Truck:KL545,585,KR365,KL525,KR305 ,LB595,KL555,KR325,KL565,FD171,172,174,175,476 ,Bus:RJ170,171,172,RD300,301,RL320			<u>Cylinder Liner</u> TL 204.0 OD 113.0 FD 118.0 FH 8.0+0.8	<u>Piston</u> TL 121.5 CH 69.4 -20.4 <u>Piston Pin</u> PD 39.0 PL 90.0		<u>Piston Ring</u> RN 3.0 2.5 2.5 RN 5.0 FX
Piston : Alfin & Tin Plated. Liner:O/D is graded as W,X,Y,Z Fully-Finished & Phosphated.						

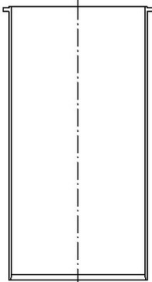





Engine	Bore	1A10S04	1L10S02-FP	1P10S04-AT	1B10S02	1R10S02
EH700T	110mm	HMKT161390	11467-1200	13216-1380	13272-1220	13011-1610
			11467-1210	13216-1390	13272-1270	13011-1620
			11467-1220		P1108L	R15170
			11467-1230			
6 cyl. 6443cc Truck:KL545,585,KR365,KL525,KR305 ,LB595,KL555,KR325,KL565,FD171,172,174,175,476 Bus:RJ170,171,172,RD300,301,RL320			<u>Cylinder Liner</u> TL 204.0 OD 113.0 FD 118.0 FH 8.0+0.8	<u>Piston</u> TL 121.3 CH 69.3 -23.9 <u>Piston Pin</u> PD 39.0 PL 90.0		<u>Piston Ring</u> RN 3.0 2.5 2.5 RN 5.0 FX
Piston : Alfin & Tin Plated.Round Combustion Chamber 57mm Liner:O/D is graded as W,X,Y,Z Fully-Finished & Phosphated.						

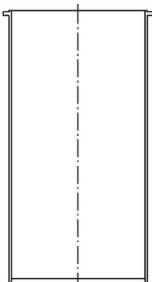
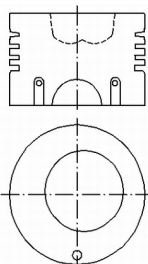




Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating **TL**=Total Length **OD**=Outer Diameter **FD**=Flange Diameter **FH**=Flange Height

Liner Kit For HINO



Engine	Bore	1A10S05	1L10S02-FP	1P10S05-AT	1B10S02	1R10S03
HO7C	Late Model 110mm	HMKT162300	11467-1200 11467-1210 11467-1220 11467-1230	13216-1771 13216-2300	13272-1270 P1108L	13011-1610 13011-1620 13011-2070A R15135
6 cyl.6443cc Ranger 4D,Ranger 5,Ranger 7D,Truck KLSD,KP6D Piston : Alfin & Tin Plated. Round Combustion Chamber 53mm Liner O/D is graded as W,X,Y,Z , Fully- Finished & Phosphated .		 <p><u>Cylinder Liner</u></p> <p>TL 204.0 OD 113.0 FD 118.0 FH 8.0+0.8</p>		 <p><u>Piston</u></p> <p>TL 121.6 CH 69.5 -19.8</p> <p><u>Piston Pin</u></p> <p>PD 39.0 PL 90.0</p>		<p><u>Piston Ring</u></p> <p>RN 3.0 </p> <p>2.5 </p> <p>2.5 </p> <p>RN 5.0 FX </p>

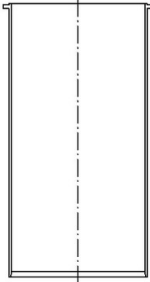
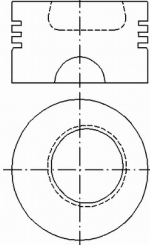



Engine	Bore	1A10S06	1L10S02-FP	1A10S06-AT	1B10S02	1R10S03
HO7C	Old model 110mm	HMKT161500	11467-1200 11467-1210 11467-1220 11467-1230	13216-1500	13272-1270 P1108L	13011-1610 13011-1620 13011-2070A R15135
6 cyl.6443cc Ranger 4D,Ranger 5,Ranger 7D,Truck KLSD,KP6D Piston : Alfin & Tin Plated. Round Combustion Chamber 51mm Liner O/D is graded as W,X,Y,Z , Fully- Finished & Phosphated .		 <p><u>Cylinder Liner</u></p> <p>TL 204.0 OD 113.0 FD 118.0 FH 8.0+0.8</p>		 <p><u>Piston</u></p> <p>TL 121.4 CH 69.4 -27.6</p> <p><u>Piston Pin</u></p> <p>PD 39.0 PL 90.0</p>		<p><u>Piston Ring</u></p> <p>RN 3.0 </p> <p>2.5 </p> <p>2.5 </p> <p>RN 5.0 FX </p>

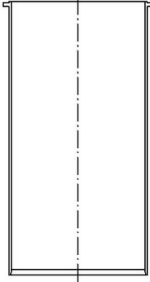
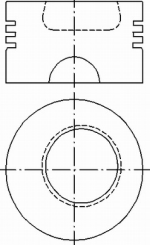



Engine	Bore	1A10S07	1L10S02-FP	1P10S07-AOT	1B10S02	1R10S04
HO7CT	110mm		11467-1200 11467-1210 11467-1220 11467-1230	13216-2062 13216-2431 13216-2062A	13272-1270 P1108L	13011-2672 13011-2672A R15167
6 cyl.6443cc Ranger SD Piston : Alfin,Oil Gallery & Tin Plated. Round Combustion Chamber 58mm Liner O/D is graded as W,X,Y,Z , Fully- Finished & Phosphated .		 <p><u>Cylinder Liner</u></p> <p>TL 204.0 OD 113.0 FD 118.0 FH 8.0+0.8</p>		 <p><u>Piston</u></p> <p>TL 121.4 CH 69.4 -19.4</p> <p><u>Piston Pin</u></p> <p>PD 39.0 PL 90.0</p>		<p><u>Piston Ring</u></p> <p>RN 2.806 </p> <p>RN 2.0 </p> <p>2.5 </p> <p>4.0 FM </p>

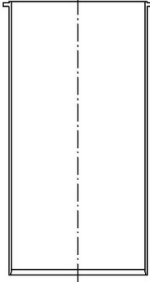
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CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating **TL**=Total Length **OD**=Outer Diameter **FD**=Flange Diameter **FH**=Flange Height

Liner Kit For HINO



<u>Engine</u> HO7D	<u>Bore</u> 110mm	1A10S08 HMKT162260	1L10S02-FP 11467-1200 11467-1210 11467-1220 11467-1230	1P10S08-AOT 13216-2260	1B10S03	1R10S05 13011-2650 13011-2651 13011-2660 R15920
6 cyl.7412cc FD,FC,GD,FF,FT,RI			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Alfin & Tin Plated.Round Combustion Chamber 58mm Liner O/D is graded as W,X,Y,Z , Fully-Finished & Phosphated .			TL 204.0 OD 113.0 FD 118.0 FH 8.0+0.8	TL 100.0 CH 57.0 -20.5		RN 3.0  RN 2.0  4.0 FM 

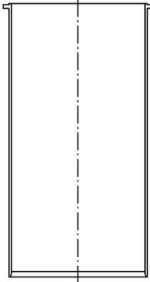
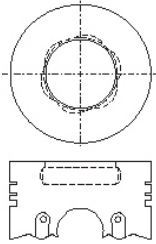
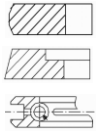
<u>Engine</u> HO7DT	<u>Bore</u> 110mm	1A10S09 HMKT161980	1L10S02-FP 11467-1200 11467-1210 11467-1220 11467-1230	1P10S09-AOT 13216-1980	1B10S03	1R10S05 13011-2650 13011-2651 13011-2660 R15920
6 cyl.7412cc FD,FC,GD,FF,FT,RI			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Alfin & Tin Plated.Round Combustion Chamber 57mm Liner O/D is graded as W,X,Y,Z , Fully-Finished & Phosphated .			TL 204.0 OD 113.0 FD 118.0 FH 8.0+0.8	TL 100.0 CH 57.0 -20.4		RN 3.0  RN 2.0  4.0 FM 

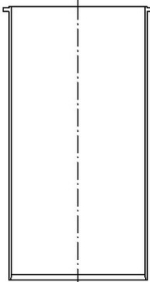
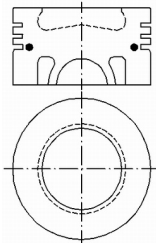
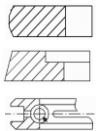
<u>Engine</u> HO7CT	<u>Bore</u> 110mm	1A10S10	1L10S02-FP 11467-1200 11467-1210 11467-1220 11467-1230	1P10S10-AOT 13216-2450	1B10S02 P1108L	
6 cyl.6443cc Ranger SD			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Alfin,Oil Gallery & Tin Plated. Round Combustion Chamber 58mm Liner O/D is graded as W,X,Y,Z , Fully-Finished & Phosphated .			TL 204.0 OD 113.0 FD 118.0 FH 8.0+0.8	TL CH	PD PL	

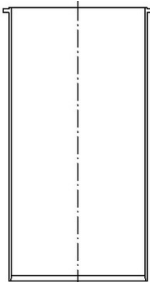
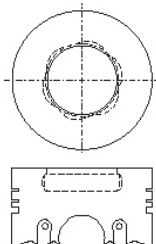
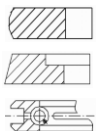
Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating **TL**=Total Length **OD**=Outer Diameter **FD**=Flange Diameter **FH**=Flange Height

Liner Kit For HINO



Engine JO5C 4 cyl.,5,307 cc 99~03' Dutral 5 Ranger 4 Metro XZU410 XZU420 XZU430 FB4J Piston:ALFIN,Tin Plated. Liner:O/D is graded as A,B,C Phosphated.	Bore 114mm	1A14F01 	1L14F01-FP 11467-2601 11467-2611 11467-2621 11461-78060/70/80 Cylinder Liner TL 204.0 OD 117.0 FD 122.0 FH 8.0+0.8	1P14F01-AT 13216-2631 Piston TL 100.0 CH 57.1 -19.6 Piston Pin PD 37.0 PL 84.5 	1B14F01 13272-1300B P1105L 	1R14F01 13011-3391B Piston Ring RN 3.0 RN 2.0 4.0 FM
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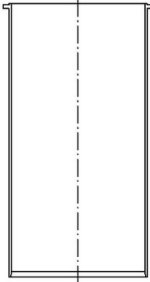
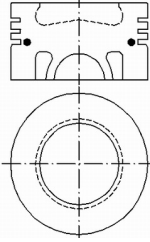



Engine JO5CT 4 cyl.,5,307 cc 03'~ Ranger Pro 5 FC Piston:Tin plated,Alfin,Oil gallery & Pin bushing inserted Liner:O/D is graded as A,B,C Phosphated.	Bore 114mm	1A14F02 	1L14F01-FP 11467-2601 11467-2611 11467-2621 11461-78060/70/80 Cylinder Liner TL 204.0 OD 117.0 FD 122.0 FH 8.0+0.8	1P14F02-AOT 13306-1080 Piston TL 100.0 CH 57.1 -18.4 Piston Pin PD 37.0 PL 85.0 	1B14F01 13272-1300B P1105L 	1R14F02 13011-3880A 13011-3940A 13019-1010 SJH-20086ZZ Piston Ring 2.5 2.0 4.0
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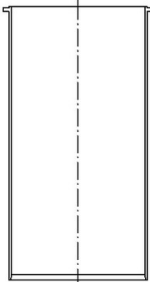
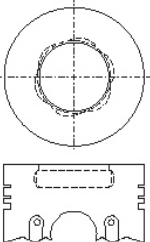



Engine JO7C 5 cyl.6,634 cc 96 - 03' Ranger 5 Short Dump FC3J Piston:ALFIN,Tin Plated Liner :O/D is graded as A,B,C Phosphated	Bore 114mm	1A14V01 	1L14F01-FP 11467-2601 11467-2611 11467-2621 11461-78060/70/80 Cylinder Liner TL 204.0 OD 117.0 FD 122.0 FH 8.0+0.8	1P14F01-AT 13216-2631 Piston TL 100.0 CH 52.1 -19.6 Piston Pin PD 37.0 PL 84.5 	1B14F01 13272-1300B P1105L 	1R14V01 13011-3371B 13011-3771A 13011-2962 R15965 SJH-20082 Piston Ring 3.0 2.0 4.0
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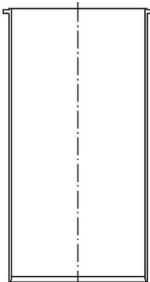
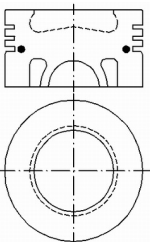



Suffix Code	Piston A =Alfin D =Head Anodizing M =MoS2 Coating N =Nitrided O =Oil Gallery T =Tin Plating TL =Total Length CH =Compression Height Piston Pin OD =Outer Diameter TL =Total Length Liner C =Chrome plating F =F/F IH =Induction Harden N =Nitrided P =Phosphated S =S/F U =Copper plating TL =Total Length OD =Outer Diameter FD =Flange Diameter FH =Flange Height
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Liner Kit For HINO



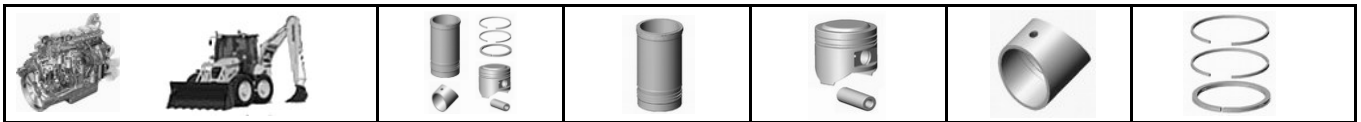
Engine JO7CT 5 cyl.6,634 cc Piston: Tin plated,Alfin,Oil gallery & Pin bushing inserted Liner :O/D is graded as A,B,C Phosphated	Bore 114mm	1A14V02 11467-2601 11467-2611 11467-2621 11461-78060/70/80	1L14F01-FP 11467-2601 11467-2611 11467-2621 11461-78060/70/80	1P14F02-AOT 13306-1080	1B14F01 13272-1300B P1105L	1R14V02 13011-3660A 13011-3900A SDH20087ZZ
			<u>Cylinder Liner</u> TL 204.0 OD 117.0 FD 122.0 FH 8.0+0.8	<u>Piston</u> TL 100.0 CH 57.1 -18.4 <u>Piston Pin</u> PD 37.0 PL 85.0		<u>Piston Ring</u> 2.5  2.0  4.0 

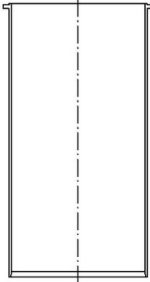



Engine JO8C 6 cyl.,7,961 cc 96'~ Ranger 6 7 8 FG1J FF1J GD1J FD2J Piston:ALFIN,Round Combustion Chamber 56mm Liner :O/D is graded as A,B,C Phosphated	Bore 114mm	1A14S01 04013-1378 04013-1379	1L14F01-FP 11467-2601 11467-2611 11467-2621 11461-78060/70/80	1P14S01-A 13216-2631	1B14F01 13271-1420 13272-1300B P1105L	1R14V01 13011-2962 R15965
			<u>Cylinder Liner</u> TL 204.0 OD 117.0 FD 122.0 FH 8.0+0.8	<u>Piston</u> TL 100.0 CH 52.1 -19.6 <u>Piston Pin</u> PD 37.0 PL 84.5		<u>Piston Ring</u> RN 3.0  RN 2.0  4.0 FM 

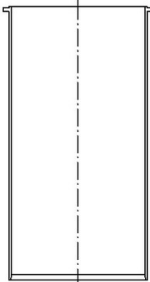



Engine JO8CT 6 cyl.,7,961 cc Piston:ALFIN & Oil Gallery,Round Combustion Chamber 65mm Liner: O/D is graded as A,B,C ,Phosphated	Bore 114mm	1A14S02 HMKT061080	1L14F01-FP 11467-2601 11467-2611 11467-2621 11461-78060/70/80	1P14S02-AO 13306-1080	1B14F01 13271-1420 13272-1300B P1105L	1R14S01 13011-3570 13011-3820 13011-3870 R15284 SDH20088ZZ
			<u>Cylinder Liner</u> TL 204.0 OD 117.0 FD 122.0 FH 8.0+0.8	<u>Piston</u> TL 100.0 CH 57.0 -18.4 <u>Piston Pin</u> PD 37.0 PL 85.0		<u>Piston Ring</u> GN 2.5  GN 2.0  4.0 SM 

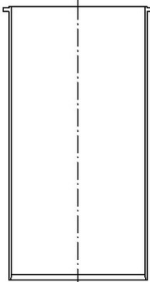
Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T= Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating **TL**=Total Length **OD**=Outer Diameter **FD**=Flange Diameter **FH**=Flange Height

Liner Kit For HINO



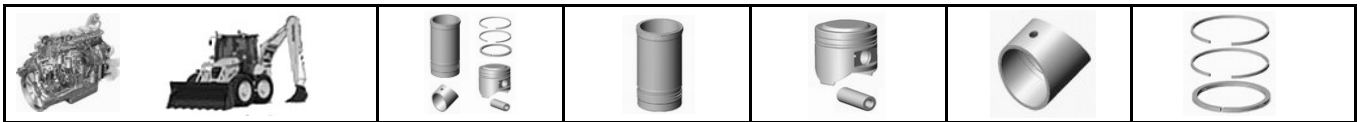
<u>Engine</u> JO8CT 6 cyl.,7,961 cc Piston:ALFIN & Oil Gallery,Round Combustion Chamber 61mm Liner: O/D is graded as A,B,C ,Phosphated	<u>Bore</u> 114mm	1A14S03 HMKT061070	1L14F01-FP 11467-2601 11467-2611 11467-2621 11461-78060/70/80	1P14S03-AO 13306-1012	1B14F01 13271-1420 13272-1300B P1105L	1R14S01 13011-3570 13011-3820 13011-3870 R15284 SDH20088ZZ
			<u>Cylinder Liner</u> TL 204.0 OD 117.0 FD 122.0 FH 8.0+0.8	<u>Piston</u> TL 100.0 CH 57.0 <u>Piston Pin</u> PD 37.0 PL 85.0		<u>Piston Ring</u> GN 2.5  GN 2.0  4.0 SM 

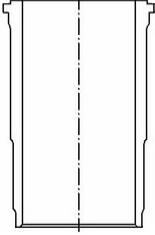
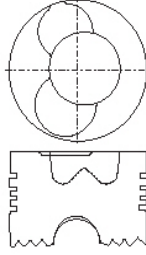
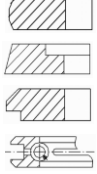
<u>Engine</u> JO8CT 6 cyl.,7,961 cc Piston:ALFIN & Oil Gallery,Round Combustion Chamber 63mm Liner: O/D is graded as A,B,C ,Phosphated	<u>Bore</u> 114mm	1A14S04 HMKT061012	1L14F01-FP 11467-2601 11467-2611 11467-2621 11461-78060/70/80	1P14S04-AO 13306-1070	1B14F01 13271-1420 13272-1300B P1105L	1R14S01 13011-3570 13011-3820 13011-3870 R15284 SDH20088ZZ
			<u>Cylinder Liner</u> TL 204.0 OD 117.0 FD 122.0 FH 8.0+0.8	<u>Piston</u> TL 100.0 CH 57.0 <u>Piston Pin</u> PD 37.0 PL 85.0		<u>Piston Ring</u> GN 2.5  GN 2.0  4.0 SM 

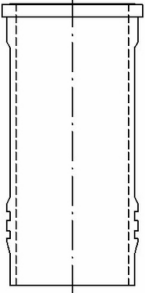
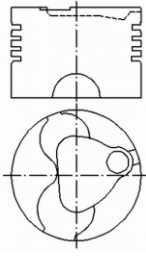
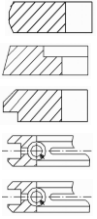
<u>Engine</u> JO8CT 6 cyl.,7,961 cc Piston:Alfin & Oil Gallery Liner: O/D is graded as A,B,C ,Phosphated	<u>Bore</u> 114mm	1A14S05 HMKT061012	1L14F01-FP 11467-2601 11467-2611 11467-2621 11461-78060/70/80	1P14S05-AO 13306-1200		
			<u>Cylinder Liner</u> TL 204.0 OD 117.0 FD 122.0 FH 8.0+0.8	<u>Piston</u> TL CH <u>Piston Pin</u> PD PL		

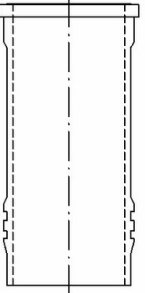
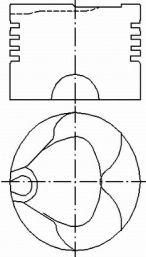
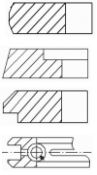
Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating **TL**=Total Length **OD**=Outer Diameter **FD**=Flange Diameter **FH**=Flange Height

Liner Kit For HINO



<u>Engine</u> EL100	<u>Bore</u> 116mm	1A16S01 04013-1071	1L16S01-F 11467-1640	1P16S01-AT 13216-1272 13216-1272A	1B16S01 13272-1200 P137L	1R16S01 13011-1700 R15190
6 cyl. 7,862 cc Truck:Rnager 7E FG185 LB760						
Piston : Alfin & Tin Plated. Round Combustion Chamber 57mm Liner : Fully-Finished .		<u>Cylinder Liner</u> TL 222.8 OD 129.0 FD 138.0 FH 9.0+0.75		<u>Piston</u> TL 130.0 CH 78.2 -27.4 <u>Piston Pin</u> PD 40.0 PL 93.0		<u>Piston Ring</u> RN 3.0 2.5 2.5 RN 5.0 FX

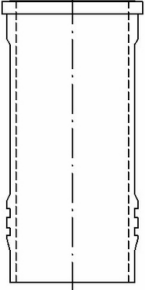
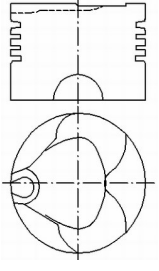
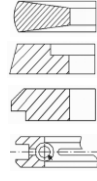
<u>Engine</u> DK10	<u>Bore</u> 120mm	1A20S01 04013-1014	1L20S01-F 11467-1380	1P20S01 13216-1080	1B20S01 13272-1190 13272-1150 P112L1	1R20S01 13011-1290 R15150
6 cyl. 10170cc Truck:TC301,311,121,BG100,Bus:RC300,320,300P,320P,RC320PT,Tractor:HE100,HF300,HF301,HH700,HH720						
Piston :Non-Al-fin Liner : Fully Finished.		<u>Cylinder Liner</u> TL 292.0 OD 138.0 FD 145.0 FH 11.0+1.5		<u>Piston</u> TL 164.4 CH 95.4 <u>Piston Pin</u> OD 48.0 TL 99.5		<u>Piston Ring</u> RN 3.5 3.5 3.5 5.0 FX 5.0 FX

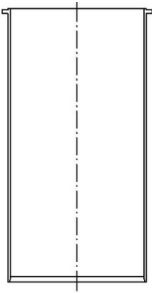
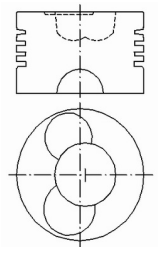
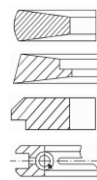
<u>Engine</u> EB300	<u>Bore</u> 120mm	1A20S02 04013-1045	1L20S02-F 11467-1180 11467-1520 2334-1963-00	1P20S02-AT 13216-1100 13216-1100A 2334-1961-00	1B20S02 13272-1100 P121L	1R20S02 13011-1330 13011-1720 13011-1730 R15200
6 cyl. 9838cc Truck:KB113D,122,303D,313,314,322,342,362,720,383,392,E320,ZH100D,KB304D,KH120,BG100,KB394,721,ZT300,320,Bus RF400						
Piston : Al-fin,Tin Plated. Liner :Fully-Finished.		<u>Cylinder Liner</u> TL 288.0 OD 136.0 FD 143.0 FH 11.0+1.0		<u>Piston</u> TL 155.4 CH 86.4 -10.0 <u>Piston Pin</u> PD 45.0 PL 100.0		<u>Piston Ring</u> RN 3.5 3.5 3.5 6.0 FX

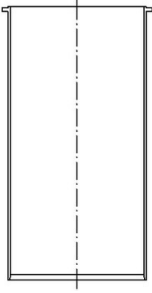
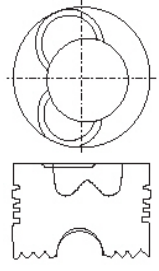
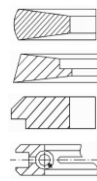
Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
 N=Nitrided P=Phosphated S=S/F U=Copper plating TL=Total Length OD=Outer Diameter FD=Flange Diameter FH=Flange Height

Liner Kit For HINO



<u>Engine</u> EB400	<u>Bore</u> 120mm	1A20S03 04013-1058	1L20S02-F 11467-1180 11467-1520 2334-1963-00	1P20S03-A 13216-1230 2334-1961-00	1B20S02 13272-1100 P121L	1R20S03 13011-1640A 13011-1630 R15290
6 cyl. 9838cc Bus RE101,RE161,RE121,RE141			<u>Cylinder Liner</u> TL 288.0 OD 136.0 FD 143.0 FH 11.0+1.0	<u>Piston</u> TL 155.4 CH 85.9 <u>Piston Pin</u> PD 45.0 PL 100.0		<u>Piston Ring</u> RN 3.306 3.0 3.0 6.0 FX 
Piston : Al-fin Liner : Fully-Finished.						

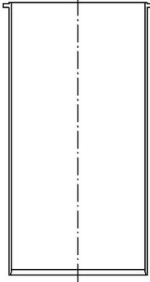
<u>Engine</u> EP100	<u>Bore</u> 120mm	1A20S04 04013-1130	1L20S04-FP 11467-1730 11467-1740 11467-1750	1P20S04-AO 13216-1420	1B20S04 13272-1260 P143L	1R20S04 13011-1952 R15245
6 cyl. 8821cc Super Dolphin FN288 11.5ton			<u>Cylinder Liner</u> TL 236.0 OD 125.0 FD 132.0 FH 8.0+0.8	<u>Piston</u> TL 144.6 CH 85.6 <u>Piston Pin</u> PD 47.0 PL 99.0		<u>Piston Ring</u> RN 3.306 RN 2.8 2.5 5.0 FX 
Piston : Alfin & Oil Gallery , Round Combustion Chamber 67mm Liner : Fully-Finished & Phosphated .						





<u>Engine</u> EP100T	<u>Bore</u> 120mm	1A20S05 HMKT161450	1L20S04-FP 11467-1730 11467-1740 11467-1750	1P20S05-AOT 13216-1450C	1B20S04 13272-1260 P143L	1R20S04 13011-1952 R15245
6 cyl. 8821cc Super Dolphin FN288 11.5ton			<u>Cylinder Liner</u> TL 236.0 OD 125.0 FD 132.0 FH 8.0+0.8	<u>Piston</u> TL 144.6 CH 85.6 -26.8 <u>Piston Pin</u> PD 47.0 PL 99.0		<u>Piston Ring</u> RN 3.306 RN 2.8 2.5 5.0 FX 
Piston : Alfin & Oil Gallery & Tin Plated. Round Combustion Chamber 67mm Liner : Fully-Finished & Phosphated .						





Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided P=Phosphated S=S/F U=Copper plating TL=Total Length OD=Outer Diameter FD=Flange Diameter FH=Flange Height

Liner Kit For HINO



<u>Engine</u> PO9CT 6 cyl. 8821cc Piston:Al-fin & Oil Gallery ,Round Combustion Chamber 69mm Liner :Fully-Finished & Phosphated .	<u>Bore</u> 120mm	1A20S06 HMKT162460	1L20S04-FP 11467-1730 11467-1740 11467-1750	1P20S06-AO 13216-2460	1B20S04 13271-1390 P1144L	<u>Piston Ring</u> 1st 2nd 3rd Oil
				<u>Cylinder Liner</u> TL 236.0 OD 125.0 FD 132.0 FH 8.0+0.8	<u>Piston</u> TL 144.6 CH 85.6 <u>Piston Pin</u> PD 47.0 PL 99.0	

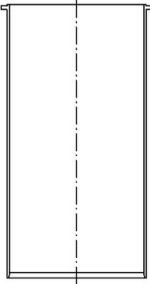
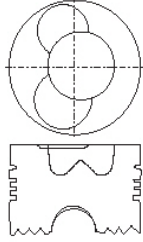




<u>Engine</u> P11C 6 cyl. 10,520 cc 92~03' Super Dolphin Profia 03'~ Profia Iron Piston: Round Combustion Chamber 75mm Liner : Fully-Finished & Phosphated .	<u>Bore</u> 122mm	1A22S01	1L22S01-FP	1P22S01 13211-2700	1B22S01 13271-1460 P1150L	1R22S01 13011-3110A 13011-3112A 13011-3800A 13011-3870A SDH20073ZZ
		<u>Cylinder Liner</u> TL 239.0 OD 127.0 FD 134.0 FH 8.0 +1.0		<u>Piston</u> TL 96.3 CH 63.8 <u>Piston Pin</u> PD 47.0 PL 89.0	<u>Piston Ring</u> 3.306  2.306  2.0  4.0 	

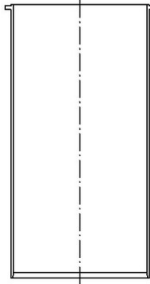
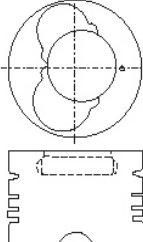




<u>Engine</u> P11C 6 cyl. 10,520 cc 92~03' Super Dolphin Profia 03'~ Profia Iron Piston: Round Combustion Chamber 75mm Liner : Fully-Finished & Phosphated .	<u>Bore</u> 122mm	1A22S02	1L22S01-FP	1P22S02 13211-2723	1B22S01 13271-1460 P1150L	1R22S01 13011-3110A 13011-3112A 13011-3800A 13011-3870A SDH20073ZZ
		<u>Cylinder Liner</u> TL 239.0 OD 127.0 FD 134.0 FH 8.0 +1.0		<u>Piston</u> TL 96.3 CH 63.8 <u>Piston Pin</u> PD 47.0 PL 89.0	<u>Piston Ring</u> 3.306  2.306  2.0  4.0 	

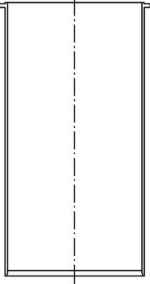





Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
 N=Nitrided P=Phosphated S=S/F U=Copper plating TL=Total Length OD=Outer Diameter FD=Flange Diameter FH=Flange Height

Liner Kit For HINO



<u>Engine</u> EM100	<u>Bore</u> 124mm	1A24S01 04013-1091	1L24S01-FP 11467-1661 11467-1671	1P24S01-AT 13216-1370	1B24S01 13272-1250 P138L	1R24S01 13011-1921 13011-1931 13011-3530
6 cyl. 9419cc Super Dolphin FH288 8ton			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Alfin & Tin Plated. Round Combustion Chamber 63mm Liner O/D is graded as A & B , Fully-Finished & Phosphated .			TL 236.0	TL 139.4		RN 2.8 
			OD 129.1	CH 80.4 -28.1		RN 2.5 
			FD 134.0	<u>Piston Pin</u>		3.0 
			FH 8.0+0.8	PD 42.0		RN 5.0 FX 
				PL 98.0		

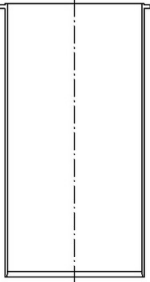
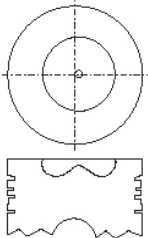
<u>Engine</u> M10C	<u>Bore</u> 127mm	1A27S01 04013-1177	1L27S01-FP 11467-2000 11467-2010 11467-2020 11467-2030	1P27S01-A 13216-2411	1B27S01 13272-1260 P143L	1R27S01 13011-2250 13011-2870 R15033
6 cyl.9880cc Bus HT,HU			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston:ALFIN, Round Combustion Chamber 65mm Liner :O/D is graded as W,X,Y,Z Fully finished & Phosphated.			TL 236.0	TL 144.5		RN 3.306 
			OD 130.3	CH 85.5 -23.9		RN 3.0 
			FD 135.2	<u>Piston Pin</u>		3.0 
			FH 8.0+0.9	PD 47.0		5.0 FX 
				PL 99.0		

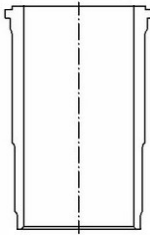
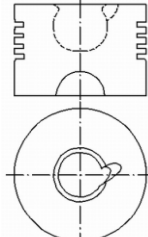
<u>Engine</u> M10CT	<u>Bore</u> 127mm	1A27S02 HMKT162070	1L27S01-FP 11467-2000 11467-2010 11467-2020 11467-2030	1P27S02-A 13216-2070	1B27S01 13272-1260 P143L	1R27S01 13011-2250 13011-2870 R15033
6 cyl., 9880cc			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston:ALFIN, Round Combustion Chamber 69mm Liner :O/D is graded as W,X,Y,Z Fully finished & Phosphated.			TL 236.0	TL 144.4		RN 3.306 
			OD 130.3	CH 85.4		RN 3.0 
			FD 135.2	<u>Piston Pin</u>		3.0 
			FH 8.0+0.9	PD 47.0		5.0 FX 
				PL 99.0		

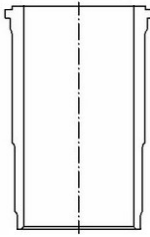
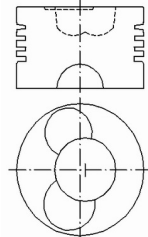
Suffix Code	<u>Piston</u> A =Alfin D =Head Anodizing M =MoS2 Coating N =Nitrided O =Oil Gallery T =Tin Plating TL =Total Length CH =Compression Height <u>Piston Pin</u> OD =Outer Diameter TL =Total Length <u>Liner</u> C =Chrome plating F =F/F IH =Induction Harden N =Nitrided P =Phosphated S =S/F U =Copper plating TL =Total Length OD =Outer Diameter FD =Flange Diameter FH =Flange Height
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Liner Kit For HINO



<u>Engine</u> M10U	<u>Bore</u> 127mm	1A27S03 HMKT161700	1L27S01-FP 11467-2000 11467-2010 11467-2020 11467-2030	1P27S03-A 13216-1700	1B27S01 13272-1260 P143L	1R27S01 13011-2250 13011-2870 R15033
6 cyl., 9880cc			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston:ALFIN, Round Combustion Chamber 65mm Liner :O/D is graded as W,X,Y,Z Fully finished & Phosphated.			TL 236.0 OD 130.3 FD 135.2 FH 8.0+0.9	TL 144.5 CH 85.4 -27.4 <u>Piston Pin</u> PD 47.0 PL 99.0		RN 3.306 RN 3.0 3.0 5.0 FX

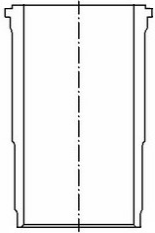
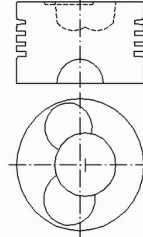
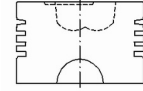












<u>Engine</u> ED100	<u>Bore</u> 128mm	1A28S01 04013-1019	1L28S01-F 11467-1020	1P28S01-A 13216-1170	1B20S01 13272-1190 13272-1150 P112L1	1R28S01 13011-1670 13011-1660 13011-2240 R15210
6 cyl. 11581cc Truck:KB500,TC302,322,342,362,382,921,KF300D,320,340,360,380,390,355,365,385,HH130,ZH102,8G150D,HE335,ZH110D,ZC120,ZG150D,ZR300,ZC150			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Alfin, Round Combustion Chamber 48mm Liner : Fully-Finished.			TL 291.0 OD 144.0 FD 151.0 FH 11.1+0.8	TL 160.0 CH 99.0 -48.5 <u>Piston Pin</u> PD 48.0 PL 107.0		RN 3.5 RN 3.5 3.5 6.0 FX

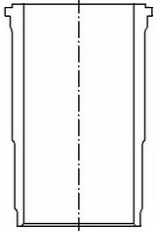
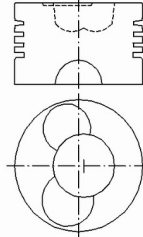
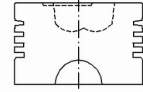












<u>Engine</u> ER200	<u>Bore</u> 128mm	1A28S02 04013-1098	1L28S01-F 11467-1020	1P28S02-A 13216-1281	1B20S01 13272-1190 13272-1150 P112L1	1R28S02 13011-1770 R15180
6 cyl. 11581cc Bus RC300,301,302,RC321,381			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Alfin, Round Combustion Chamber 69mm Liner : Fully-Finished			TL 291.0 OD 144.0 FD 151.0 FH 11.1+0.8	TL 160.3 CH 95.3 -29.0 <u>Piston Pin</u> PD 48.0 PL 107.0		RN 3.306 3.0 3.0 6.0 FX

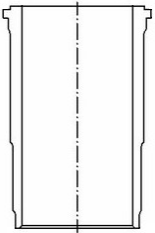
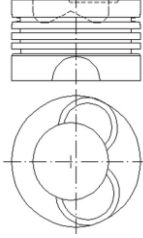













Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T= Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating TL=Total Length OD=Outer Diameter FD=Flange Diameter FH=Flange Height

Liner Kit For HINO



<p><u>Engine</u> EF500</p> <p><u>Bore</u> 135mm</p> <p>V8 cyl. 15459cc Truck:ZM500D,WP325,HE356,ZM560, KF585,ZM540,ZM580,TC921,TC541,5 61B,HE350,355,WB300,HE330 Bus:RV541,RV561P,RS360P,RV530P, 540P,550P</p> <p>Piston : Alfin, Round Combustion Chamber 69mm Liner : Water Jacket Chromed, Fully-Finished. Liner O-Ring:11471-1210</p>	<p>1A35E01-L 04013-1054 1A35E01-R 04013-1053</p> 	<p>1L35E01-CF 11467-1101</p> <p><u>Cylinder Liner</u></p> <table border="1"> <tr><td>TL</td><td>248.0</td></tr> <tr><td>OD</td><td>153.0</td></tr> <tr><td>FD</td><td>165.0</td></tr> <tr><td>FH</td><td>13.6+0.8</td></tr> </table>	TL	248.0	OD	153.0	FD	165.0	FH	13.6+0.8	<p>1P35E01L-A 13216-1252 L 1P35E01R-A 13216-1022 R</p> <p><u>Piston</u></p> <table border="1"> <tr><td>TL</td><td>145.3</td></tr> <tr><td>CH</td><td>90.3</td></tr> </table> <p><u>Piston Pin</u></p> <table border="1"> <tr><td>PD</td><td>50.0</td></tr> <tr><td>PL</td><td>110</td></tr> </table> 	TL	145.3	CH	90.3	PD	50.0	PL	110	<p>1B35E01 13272-1050 P127L1</p> 	<p>1R35E01 13011-1141 13011-1460 13011-2150 R15340</p> <p><u>Piston Ring</u></p> <table border="1"> <tr><td>RN 3.306</td><td></td></tr> <tr><td>3.5</td><td></td></tr> <tr><td>3.5</td><td></td></tr> <tr><td>6.0 FX</td><td></td></tr> </table>	RN 3.306		3.5		3.5		6.0 FX	
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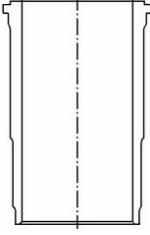
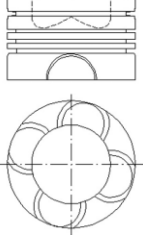
<p><u>Engine</u> EF550</p> <p><u>Bore</u> 135mm</p> <p>V8 cyl. 16260cc Truck FS,FR, FN,SH,RU</p> <p>Piston : Alfin, Round Combustion Chamber 71mm Liner : Water Jacket Chromed, Fully-Finished. Liner O-Ring:11471-1210</p>	<p>1A35E02-L 04013-1096 1A35E02-R 04013-1095</p> 	<p>1L35E02-CF 11467-1690</p> <p><u>Cylinder Liner</u></p> <table border="1"> <tr><td>TL</td><td>248.0</td></tr> <tr><td>OD</td><td>153.0</td></tr> <tr><td>FD</td><td>165.0</td></tr> <tr><td>FH</td><td>12.1+0.8</td></tr> </table>	TL	248.0	OD	153.0	FD	165.0	FH	12.1+0.8	<p>1P35E01L-A 13216-1560 L 1P35E01R-A 13216-1140 R</p> <p><u>Piston</u></p> <table border="1"> <tr><td>TL</td><td>145.4</td></tr> <tr><td>CH</td><td>90.3</td></tr> <tr><td></td><td>-30.4</td></tr> </table> <p><u>Piston Pin</u></p> <table border="1"> <tr><td>PD</td><td>50.0</td></tr> <tr><td>PL</td><td>110</td></tr> </table> 	TL	145.4	CH	90.3		-30.4	PD	50.0	PL	110	<p>1B35E02 13272-1240 P123L</p> 	<p>1R35E02 13011-2700 R15241</p> <p><u>Piston Ring</u></p> <table border="1"> <tr><td>RN 3.306</td><td></td></tr> <tr><td>RN 3.5</td><td></td></tr> <tr><td>3.5</td><td></td></tr> <tr><td>RN 5.0 FX</td><td></td></tr> </table>	RN 3.306		RN 3.5		3.5		RN 5.0 FX	
TL	248.0																														
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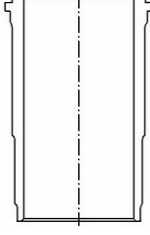
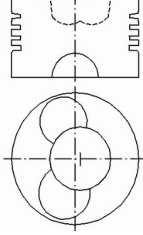
<p><u>Engine</u> K13C-12V</p> <p><u>Bore</u> 135mm</p> <p>6 cyl.12882 cc Truck FS,FR, FN</p> <p>Piston with ALFIN & Oil Gallery, Round Combustion Chamber 80mm Liner : Water Jacket Chromed & Fully-finished</p>	<p>1A35S01 04013-1137</p> 	<p>1L35S01-CF 11467-2090 11467-2380</p> <p><u>Cylinder Liner</u></p> <table border="1"> <tr><td>TL</td><td>267.0</td></tr> <tr><td>OD</td><td>153.0</td></tr> <tr><td>FD</td><td>164.0</td></tr> <tr><td>FH</td><td>12.1+0.8</td></tr> </table>	TL	267.0	OD	153.0	FD	164.0	FH	12.1+0.8	<p>1P35S01-AO 13216-2140</p> <p><u>Piston</u></p> <table border="1"> <tr><td>TL</td><td>145.4</td></tr> <tr><td>CH</td><td>90.3</td></tr> <tr><td></td><td>-27.3</td></tr> <tr><td></td><td>-2.2</td></tr> </table> <p><u>Piston Pin</u></p> <table border="1"> <tr><td>PD</td><td>50.0</td></tr> <tr><td>PL</td><td>110.0</td></tr> </table> 	TL	145.4	CH	90.3		-27.3		-2.2	PD	50.0	PL	110.0	<p>1B35S01 13272-1320 P107L</p> 	<p>1R35S01 13011-3090 R15465</p> <p><u>Piston Ring</u></p> <table border="1"> <tr><td>RN 3.306</td><td></td></tr> <tr><td>RN 3.5</td><td></td></tr> <tr><td>3.5</td><td></td></tr> <tr><td>RN 5.0 FX</td><td></td></tr> </table>	RN 3.306		RN 3.5		3.5		RN 5.0 FX	
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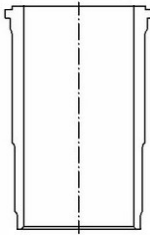
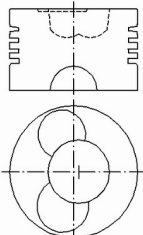
Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T= Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating TL=Total Length OD=Outer Diameter FD=Flange Diameter FH=Flange Height

Liner Kit For HINO



Engine K13C-24V 6 cyl.12882 cc Truck FS,FR,FN Piston with ALFIN & Oil Gallery, Round Combustion Chamber 82mm Liner :Water Jacket Chromed & Fully-finished	Bore 135mm	1A35S02 04013-1201	1L35S01-CF 11467-2090 11467-2380	1P35S02-AO 13216-2330	1B35S01 13272-1320 P107L	1R35S01 13011-3090 R15465
			Cylinder Liner TL 267.0 OD 153.0 FD 164.0 FH 12.1+0.8	Piston TL 145.4 CH 90.3 -27.3 -2.2 Piston Pin PD 50.0 PL 110.0		Piston Ring RN 3.306 RN 3.5 3.5 RN 5.0 FX

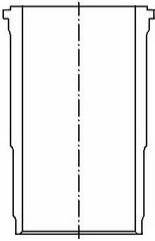




Engine EF750 V8 cyl. 15920 cc Tractor HE366, HH341, TC562,ZM500,ZM940 Piston:ALFIN & Tin Plated. Round Combustion Chamber 73mm Liner:Water Jacket Chromed ,Fully-Finished.	Bore 137mm	1A37E01-L 04013-1112 1A37E01-R 04013-1111	1L37E01-CF 11467-1900 11467-1091	1P37E01L-AT 13216-1860 L 1P37E01R-AT 13226-1170 R	1B35E02 13272-1240 P123L	1R37E01 13011-1112 13011-1121 13011-1122 R15230
			Cylinder Liner TL 248.0 OD 153.0 FD 165.0 FH 12.0+0.8	Piston TL 144.3 CH 90.3 -30.3 Piston Pin PD 50.0 PL 110.0		Piston Ring RN 3.306 3.5 3.5 6.0 FX

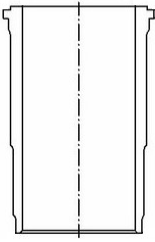
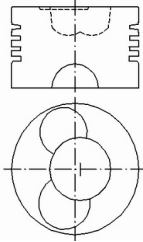




Engine EK100 6 cyl. 13267cc Truck:TC363D,KF392,KS391,KS341,K B501D,KF301,391,ZM303,TC922,ZR2 55,TC343,362,WD300,TC383 ,ZC101,121,Bus:RC721P Piston : Alfin & Tin Plated. Round Combustion Chamber 73mm Liner :Water Jacket Chromed,Fully-Finished .	Bore 137mm	1A37S01 04013-1110	1L37S01-CF 11467-1080 11467-1910 11467-1960	1P37S01-AT 13216-1224	1B37S01 13272-1010 P106L	1R37S01 13011-1010 13011-1011 13011-1021 R15320
			Cylinder Liner TL 267.0 OD 153.0 FD 164.0 FH 12.0+0.8	Piston TL 145.3 CH 90.3 -31.2 Piston Pin PD 50.0 PL 110.0		Piston Ring RN 3.306 3.5 3.5 6.0 FX

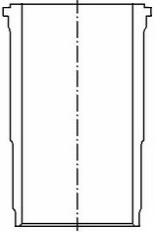
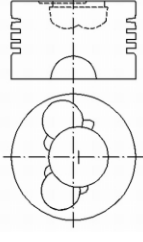




Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
 N=Nitrided P=Phosphated S=S/F U=Copper plating TL=Total Length OD=Outer Diameter FD=Flange Diameter FH=Flange Height

Liner Kit For HINO



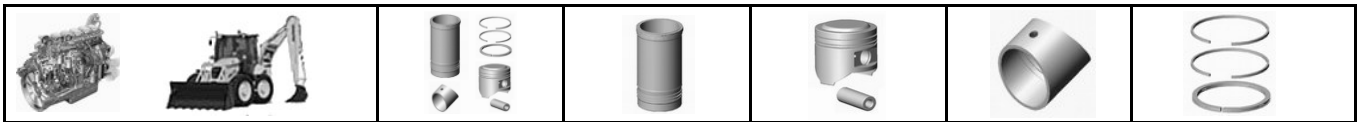
Engine	Bore	1A37S02	1L37S01	1P37S02-A	1B37S01	1R37S01
EK130T	137mm	HMKT112191	11467-1080 11467-1910 11467-1960	13211-2191	13272-1010 P106L	13011-1010 13011-1011 13011-1021 R15320
6 cyl. 13267cc			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston :Alfin,Round Combustion Chamber 82mm Liner :Water Jacket Chromed,Fully-Finished .			TL 267.0 OD 153.0 FD 164.0 FH 12.0+0.8	TL 145.3 CH 90.3		RN 3.306  3.5  3.5  6.0 FX 
				<u>Piston Pin</u>		
				PD 50.0 PL 110.0		

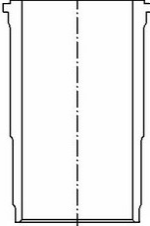
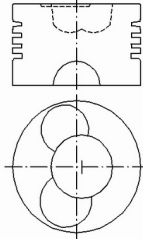
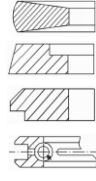
Engine	Bore	1A37S03	1L37S01-CF	1P37S03-AT	1B37S01	1R37S01
EK200	137mm	04013-1115	11467-1080 11467-1910 11467-1960	13216-1530 13216-1530A	13272-1010 P106L	13011-1010 13011-1011 13011-1021 R15320
6 cyl. 13267cc Truck:TC363D,KF392,KS391,KS341,K B501D,KF301,391,ZM303,TC922,ZR2 55,TC343,362,WD300,TC383 ,ZC101,121,Bus:RC721P			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Alfin & Tin Plated. Round Combustion Chamber 73mm Liner:Water Jacket Chromed,Fully-Finished .			TL 267.0 OD 153.0 FD 164.0 FH 12.0+0.8	TL 145.3 CH 90.3 -31.3		RN 3.306  3.5  3.5  6.0 FX 
				<u>Piston Pin</u>		
				PD 50.0 PL 110.0		

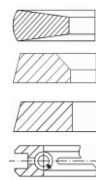
Engine	Bore	1A39E02-L	1L37E01-CF	1P39E02L-A	1B39E01	1R37E02
F17D	137mm	1A39E02-R	11467-1091 11467-1900	13216-2050 L 1P39E02R-A 13226-1200 R	13272-1240 P123L	13011-2990 13011-2991 R15371
8 cyl.17238cc Truck FS,FR,RU, FN,FW,SH			<u>Cylinder Liner</u>	<u>Piston</u>		<u>Piston Ring</u>
Piston : Alfin,Round Combustion Chamber 73mm Liner:Water Jacket Chromed ,Fully-Finished.			TL 248.0 OD 153.0 FD 165.0 FH 12.1+0.8	TL 144.3 CH 90.3		RN 3.306  RN 3.5  3.5  5.0 FM 
				<u>Piston Pin</u>		
				PD 50.0 PL 110.0		

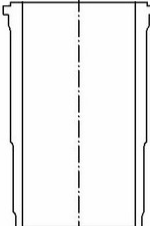
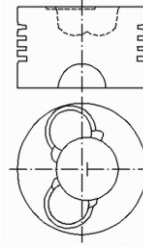
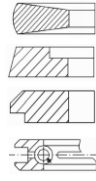
Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
 N=Nitrided P=Phosphated S=S/F U=Copper plating TL=Total Length OD=Outer Diameter FD=Flange Diameter FH=Flange Height

Liner Kit For HINO



Engine K13D 6 cyl. 13267 cc Piston:ALFIN ,Round Combustion Chamber 74mm Liner : Water Jacket Chromed,Fully-Finished .	Bore 137mm	1A37S04 04013-1200	1L37S01-CF 11467-1080 11467-1910 11467-1960	1P37S04-AO 13216-2440	1B37S02 13271-1010 P106L	1R37S02 13011-2770 13011-2771 SDH20-061ZZ
			Cylinder Liner TL 267.0 OD 153.0 FD 164.0 FH 12.0+0.8	Piston TL 144.3 CH 90.3 Piston Pin PD 50.0 PL 110.0		Piston Ring 3.306 3.5 3.5 5.0 

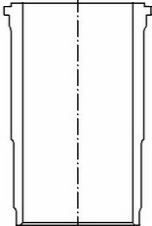
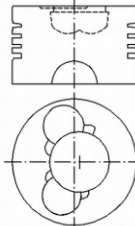












Engine E13C 6 cyl. 12,913 cc,137x146mm 03'~ Profia ,SS 2845 Air Iron Piston: Round Combustion Chamber 89mm Liner :	Bore 137mm	1A37S05 04013-0145		1P37S05-I		1R37S03 13011-4010A
			Cylinder Liner TL OD FD FH	Piston TL 110.0 CH 72.0 Piston Pin PD 55.0 PL 100.0		Piston Ring 3.306 2.806 2.5 4.0 

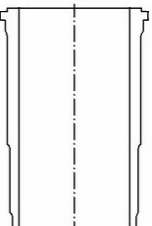













Engine F17C 8 cyl.17238cc Truck FS,FR,RU, FN,FW,SH Piston : Alfin,Round Combustion Chamber 74mm Liner:Fully-Finished & Water Jacket Chromed Liner O-Ring:11471-1510	Bore 139mm	1A39E01-L 04013-1135 1A39E01-R 04013-1134	1L39E01-CF 11467-1702	1P39E01L-A 13216-1910 L 1P39E01R-A 13226-1180 R	1B39E01 13272-1240 P123L	1R39E02 13011-3150 13011-3160 R15381
			Cylinder Liner TL 248.0 OD 154.0 FD 166.0 FH 12.1	Piston TL 144.3 CH 90.3 Piston Pin PD 50.0 PL 110.0		Piston Ring RN 3.306 RN 3.5 3.5 5.0 FM 

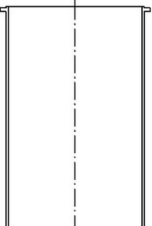
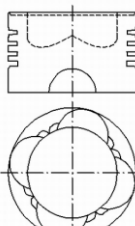












Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
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Liner Kit For HINO



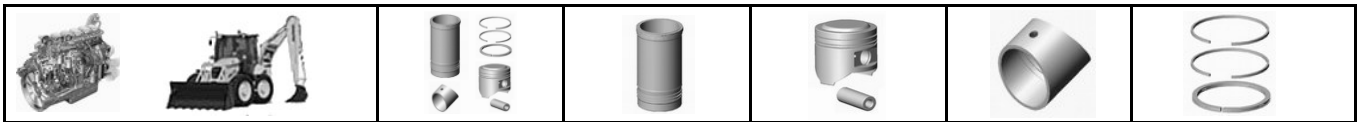
Engine F17E	Bore 139mm	1A39E02-L 04013-1141 1A39E02-R 04013-1140	1L39E01-CF 11467-1702	1P39E02L-A 13216-2110 L 1P39E02R-A 13226-1210 R	1B39E01 13272-1240 P123L	1R39E02 13011-3150 13011-3160 R15381																								
FS,FR,RU, FN,FW,SH	Truck	 <p><u>Cylinder Liner</u></p> <table border="1"> <tr><td>TL</td><td>248.0</td></tr> <tr><td>OD</td><td>154.0</td></tr> <tr><td>FD</td><td>166.0</td></tr> <tr><td>FH</td><td>12.1+0.8</td></tr> </table>		TL	248.0	OD	154.0	FD	166.0	FH	12.1+0.8	 <p><u>Piston</u></p> <table border="1"> <tr><td>TL</td><td>144.3</td></tr> <tr><td>CH</td><td>90.3</td></tr> </table> <p><u>Piston Pin</u></p> <table border="1"> <tr><td>PD</td><td>50.0</td></tr> <tr><td>PL</td><td>110.0</td></tr> </table>		TL	144.3	CH	90.3	PD	50.0	PL	110.0	<p><u>Piston Ring</u></p> <table border="1"> <tr><td>RN 3.306</td><td></td></tr> <tr><td>RN 3.5</td><td></td></tr> <tr><td>3.5</td><td></td></tr> <tr><td>5.0 FM</td><td></td></tr> </table>	RN 3.306		RN 3.5		3.5		5.0 FM	
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5.0 FM																														
Piston : Alfin, Round Combustion Chamber 70mm Liner: Water Jacket Chromed, Fully-Finished. Liner O-Ring: 11471-1510																														

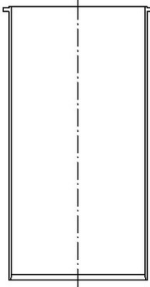
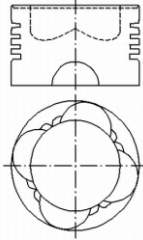




Engine V22D	Bore 139mm	1A39T02-L 04013-1141 1A39T02-R 04013-1140	1L39T01-CF 11467-2130	1P39T02L-A 13216-2560 L 1P39T02R-R 13226-1210 R	1B39E02 13271-1510 P1160L	1R39T02 13011-3170A 13011-3180 13011-3080 R15391																								
10 cyl., 21548cc Truck SH, FS, FN		 <p><u>Cylinder Liner</u></p> <table border="1"> <tr><td>TL</td><td>248.0</td></tr> <tr><td>OD</td><td>156.0</td></tr> <tr><td>FD</td><td>167.0</td></tr> <tr><td>FH</td><td>12.1</td></tr> </table>		TL	248.0	OD	156.0	FD	167.0	FH	12.1	 <p><u>Piston</u></p> <table border="1"> <tr><td>TL</td><td>144.2</td></tr> <tr><td>CH</td><td>90.5</td></tr> </table> <p><u>Piston Pin</u></p> <table border="1"> <tr><td>PD</td><td>50.0</td></tr> <tr><td>PL</td><td>110.0</td></tr> </table>		TL	144.2	CH	90.5	PD	50.0	PL	110.0	<p><u>Piston Ring</u></p> <table border="1"> <tr><td>RN 3.306</td><td></td></tr> <tr><td>RN 3.5</td><td></td></tr> <tr><td>3.5</td><td></td></tr> <tr><td>5.0 FM</td><td></td></tr> </table>	RN 3.306		RN 3.5		3.5		5.0 FM	
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Piston: ALFIN, Round Combustion Chamber 71mm Liner: Water Jacket Chromed & Fully-Finished.																														

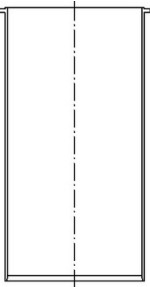
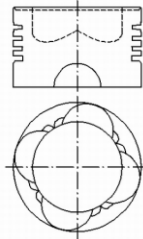




Engine F20C	Bore 146mm	1A46E01-L 04013-1301 1A46E01-R 04013-1298	1L46E01-FP 11467-2290	1P46E01L-A 13216-2671 L 1P46E01R-A 13226-1321 R	1B39E01 13272-1240 P123L	1R46E01 13011-2792A R15336																																
8 cyl. 19688cc Truck: FS, FR, FO, FY, RU, FN, FW, SH		 <p><u>Cylinder Liner</u></p> <table border="1"> <tr><td>TL</td><td>152.0</td></tr> <tr><td></td><td>154.0</td></tr> <tr><td></td><td>244.3</td></tr> <tr><td>OD</td><td>244.3</td></tr> <tr><td></td><td>159.0</td></tr> <tr><td>FD</td><td>161.0</td></tr> <tr><td></td><td>8.0</td></tr> <tr><td>FH</td><td>8.5</td></tr> </table>		TL	152.0		154.0		244.3	OD	244.3		159.0	FD	161.0		8.0	FH	8.5	 <p><u>Piston</u></p> <table border="1"> <tr><td>TL</td><td>138.3</td></tr> <tr><td>CH</td><td>84.3</td></tr> </table> <p><u>Piston Pin</u></p> <table border="1"> <tr><td>PD</td><td>50.0</td></tr> <tr><td>PL</td><td>110.0</td></tr> </table>		TL	138.3	CH	84.3	PD	50.0	PL	110.0	<p><u>Piston Ring</u></p> <table border="1"> <tr><td>RN 3.306</td><td></td></tr> <tr><td>RN 3.5</td><td></td></tr> <tr><td>RN 3.5</td><td></td></tr> <tr><td>5.0 FM</td><td></td></tr> </table>	RN 3.306		RN 3.5		RN 3.5		5.0 FM	
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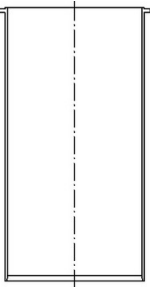
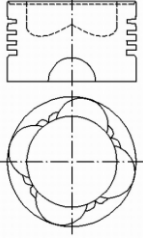




Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T= Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating TL=Total Length OD=Outer Diameter FD=Flange Diameter FH=Flange Height

Liner Kit For HINO



Engine F20C 8 cyl.19688cc Truck:FS,FR,FO,FY,RU,FN,FW,SH	Bore 146mm	1A46E02-L 04013-1330 1A46E02-R 04013-1328	1L46E01-FP 11467-2290 11467-2690	1P46E02L-A 13216-2323 L 1P46E02R-A 13226-1263 R	1B39E01 13272-1240 P123L	1R46E01 13011-2792A R15336
Piston : Alfin, Round Combustion Chamber 72mm Liner: Fully Finished, Phosphated.		Cylinder Liner TL 152.0 154.0 244.3 OD 244.3 244.3 FD 159.0 161.0 FH 8.0 8.5	Piston TL 138.3 CH 84.3 Piston Pin PD 50.0 PL 110.0		Piston Ring RN 3.306  RN 3.5  RN 3.5  5.0 FM 	

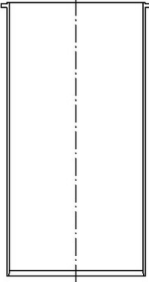












Engine V25C 10 cyl.24610 cc Super Dolphin, Profia:SS	Bore 146mm	1A46T01-L 04013-1301 1A46T01-R 04013-1298	1L46E01-FP 11467-2290 11467-2690	1P46T01L-A 13216-2671 L 1P46T01R-A 13226-1321 R	1B39E01 13272-1240 P102L	1R46T01 13011-2980A SJH20-069ZZ
Piston:ALFIN, Round Combustion Chamber 76mm Liner: Fully Finished, Phosphated.		Cylinder Liner TL 244.3 244.3 152.0 OD 154.0 159.0 FD 161.0 8.0 FH 8.5	Piston TL 138.3 CH 84.3 Piston Pin PD 50.0 PL 110.0		Piston Ring RN 3.306  RN 3.5  3.5  5.0 FM 	

Engine V25C 10 cyl. 24610 cc Super Dolphin, Profia:SS	Bore 146mm	1A46T02-L 04013-1330 1A46T02-R 04013-1328	1L46E01-FP 11467-2290 11467-2690	1P46T02L-A 13216-2323 L 1P46T02R-A 13226-1263 R	1B39E01 13272-1240 P102L	1R46T01 13011-2980A SJH20-069ZZ
Piston:ALFIN, Round Combustion Chamber 72mm Liner: Fully Finished, Phosphated.		Cylinder Liner TL 244.3 244.3 152.0 OD 154.0 159.0 FD 161.0 8.0 FH 8.5	Piston TL 138.3 CH 84.3 Piston Pin PD 50.0 PL 110.0		Piston Ring RN 3.306  RN 3.5  3.5  5.0 FM 	

Suffix Code **Piston** A=Alfin D=Head Anodizing M=MoS2 Coating N=Nitrided O=Oil Gallery T=Tin Plating TL=Total Length
CH=Compression Height **Piston Pin** OD=Outer Diameter TL=Total Length **Liner** C=Chrome plating F=F/F IH=Induction Harden
N=Nitrided **P**=Phosphated **S**=S/F **U**=Copper plating **TL**=Total Length **OD**=Outer Diameter **FD**=Flange Diameter **FH**=Flange Height

Liner Kit For HINO



<p><u>Engine</u> V26C</p> <p><u>Bore</u> 150mm</p> <p>10 cyl. 25977cc Truck:FS,SS Duto, Ranger, Profia</p> <p>Piston:ALFIN, Round Combustion Chamber 72mm Liner: Fully Finished, Phosphated.</p>	<p>1A50T01-L 04013-1365</p> <p>1A50T01-R 04013-1362</p>  <p><u>Cylinder Liner</u></p> <table border="0"> <tr><td>TL</td><td>244.3</td></tr> <tr><td>OD</td><td>154.0</td></tr> <tr><td>FD</td><td>161.0</td></tr> <tr><td>FH</td><td>8.5</td></tr> </table>	TL	244.3	OD	154.0	FD	161.0	FH	8.5	<p>1L50T01-FP</p> <p>1P50T01L-A 13216-2661 L</p> <p>1P50T01R-A 13226-1311 R</p> <p><u>Piston</u></p> <table border="0"> <tr><td>TL</td><td>138.3</td></tr> <tr><td>CH</td><td>84.3</td></tr> </table> <p><u>Piston Pin</u></p> <table border="0"> <tr><td>PD</td><td>50.0</td></tr> <tr><td>PL</td><td>110.0</td></tr> </table>	TL	138.3	CH	84.3	PD	50.0	PL	110.0	<p>1B50E01 P1160L</p> <p>1R50T01 13011-3450A SJH20-080ZZ</p> <p><u>Piston Ring</u></p> <table border="0"> <tr><td>RN 3.306</td><td></td></tr> <tr><td>RN 3.0</td><td></td></tr> <tr><td>RN 3.0</td><td></td></tr> <tr><td>4.0 FM</td><td></td></tr> </table>	RN 3.306		RN 3.0		RN 3.0		4.0 FM	
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