FEDERAL MOGUL

GOETZE PISTONS
PISTON ASSEMBLIES

GOETZE®
PISTON RINGS • CYLINDER LINERS

GOETZE TP RINGS

PRODUCT CATALOGUE

COMMERCIAL VEHICLES

Driving the Future Through Leading Technology

Our company

We are innovators, our world-class technologies make our products and systems solutions market leaders.

Federal-Mogul Corporation is a global automotive supplier-with more than 39,000 employees worldwide delivering the highest standards for quality and customer satisfaction in the light vehicle, heavy-duty, agricultural and industrial market. We always anticipate and exceed our customers' expectations.

Federal-Mogul Goetze (India) Ltd. is the largest piston and ring manufacturer in the country. Together with its subsidiary company Federal-Mogul TPR (India) Ltd. which is a joint venture between Federal-Mogul Goetze (India) Ltd., and TPR Ltd. of Japan, the total ring manufacturing capacity exceeds the combined capacity of all the other ring manufacturers in the country.

With it's three, state-of-the-art,TS 16949, ISO 14001 and OHSAS 18001certified manufacturing facilities, highly skilled and dedicated workforce, whose manufacturing expertise matched with innovative thinking, has made Federal-Mogul Goetze (India) Ltd.'s products, the choice of all discerning customers. Federal-Mogul Goetze (India) ltd. is the only piston and piston ring company to cater to all segments of business including 2-wheelers, 3-wheelers, cars, jeeps, tractors, light commercial vehicles, heavy commercial vehicles, stationary engines, battle tanks, locomotives and marine engines.




Our Discerning Customers:

Ashok Leyland · BAJAJ · BIRLA Yamaha Ltd. · CD TVS Sundaram-Clayton Limited · EICHER · ESCORTS · ELGI · FARMTRAC · FIAT · FORCE MOTORS · GREAVES · Hindustan Motors

HONDA · HONDA POWER PRODUCTS · KINETIC ENGINEERING LIMITED · Kirloskar · INDO FARM TRACTORS & MOTORS LTD. · Mahindra · swaraj SWARAJ ENTERPRISES · SONALIKA INTERNATIONAL · STANDARD · ROYAL ENFIELD

HERO HONDA · LML · LOMBARDINI · MARUTI · NEW HOLLAND · swaraj mazda · TVS · TATA · TATA Cummins · V.S.T. TILLERS TRACTORS LTD. · YAMAHA

CATALOGUE USAGE GUIDELINES

(1) MAKE / MODEL

Models have been arranged as per their make and diameter.

(2) CYLINDER

(2.1) **No. of Cylinder**

This column indicates number of cylinders in an engine. However, in certain applications, same piston assembly is used in engines with different number of cylinders.

(2.2) **Cylinder Diameter**

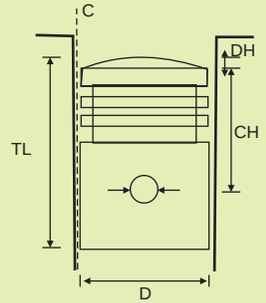
The Cylinder bore diameter is given against each application in millimeters.

(3) PISTON ASSEMBLY DETAILS

(3.1) Piston

Leading dimensions of a piston are given in this column viz.

1. Compression Height (in mm) - CH
2. Dome Height (in mm) - DH
3. Total Length (in mm) - TL
4. Pin Bore Diameter (in mm) - PHD
5. Piston Liner Clearance (in mm)/ [inches] - C

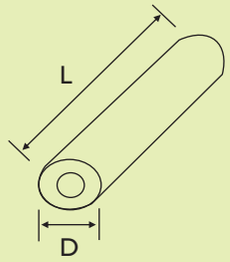


(3.2) Pin

Leading dimensions of the pin are given in this column viz

Gudgeon Pin Diameter (in mm) - D

Gudgeon Pin Length (in mm) - L



(3.3) Circlip

ABBREVATIONS USED IN CATALOGUE FOR CIRCLIP TYPE

ABBREVATION	CIRCLIPTYPE
SC	Seeger Circlip
RC	Round Wire Circlip
RC A_x_	Round Wire Circlip “A” Type (with Hooks)
RC C_x_	Round Wire Circlip “C” Type (without Hooks)
FC	Flat Wire Circlip

For example:

A 12x 1

It means it is round wire circlip, A-type (with hooks), suitable for 12mm pin hole and wire thickness is 1mm.

C 12x1

It is round wire circlip, C type (without hooks), suitable for 12mm pin hole and wire thickness is 1mm.

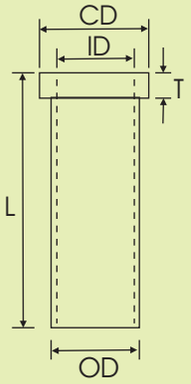
(3.4) Rings

The ring combination, type and number of rings per cylinder set are given in this column. Piston Ring type, Material and running surface coatings are discussed in ring section. Axial Height (in mm) of each type of ring is furnished in this column.

(4) LINER

Leading dimensions of a Liner are given in this column viz

(1) Outer Diameter (in mm) / [inches] - OD
(2) Inner Diameter (in mm) - ID
(3) Total Length (in mm) - L
(4) Collar Diameter (in mm) / [inches] - CD
(5) Collar Thickness (in mm) - T



ABBREVIATION USED IN CATALOGUE FOR PISTON FEATURES

ABBREVIATIONS	DETAILS
RC	Ring Carrier
RV	Ring Version
SH	Shim Type
STT	Strut Type
CP	Composite Piston
SSD	Slotted Skirt Design
SLD	Slipper Design
TC	Tin Coated
SGC	Skirt Graphite Coated
P	Phosphated
SM	Skirt Moly Coated
AN	Crown Anodized
ANG	Anodized Grooves
1GT	1st Groove Trapezoidal
HTG	Half Trapezoidal Groove
GPO	Pin Hole Offset
BD	Skirt Box Type Design
ASD	As Cast Side Drain
AGT	All Groove Trapezoidal
PHR	Pin Hole Relief
TPB	Tapered Pin Boss
GPC	Counter Bore At Pin Hole
AG	Accumulator Groove
SS	Scuppor Slot
LT	Lug Type
SN	Scraper Notch
PBH	Pin Boss Oil Hole
AP	Assymetric OD Profile
ACC	As Cast Crown
SR	Serrations
ACCV	As Cast Cavity
2LR/3LR	2nd/3rd Land Relieved
FP	Forged Piston

CATALOGUE USAGE GUIDELINES

ALLOYS USED TO MAKE PISTONS

(1) **CSA 12 -** Used in Diesel Engine / Four Stroke Passenger car applications. (Alloy has good tensile strength, minimum wear and very good thermal conductivity making it more suitable for high temperature conditions.

(2) **CSA 18 -** This is a medium range alloy having mixed properties of CSA12 and CSA 24 and can be used in all type of applications. (Alloy has very good thermal loading capacity and relatively less expansion rate).

(3) **CSA 24** - This is Hyper Eutectic Aluminum Silicon alloy generally used in Bl-wheeler two stroke applications. (Alloy has very less expansion rate and can be used for pistons running at very close clearances.)

(4) **AC 8A** - Equivalent to CSA 12 alloy used for Japanese 4S models.

(5) **AC 9A -** Equivalent to CSA 24 alloy used for Japanese 2S models.

(6) **CSCA** - Aluminum Silicon alloy having high copper content for better heat transfer and thermal loading.This is used for high power engine application.

VARIOUS COATINGS/SURFACE TREATMENT ON PISTONS

1. **MOLY COATING**

   Black in colour with layer thickness of 5 - 15 microns. Coating acts as anti scuff and anti friction layer which prevents pistons from scuffing during cold start. In some applications, this coating is also provided to reduce clearance, thereby reducing noise phenomenon. Unlike graphite coating this coating should be intact for longer time in life of the piston.

2. **GRAPHITE COATING**

   Grayish black in colour with thickness around 15 - 25 microns. It is done on the piston skirt and serves the purpose of emergency lubrication in newly assembled engine till such time normal lubrication is attained. Graphite acts as a dry lubricant and thereby prevents scoring / seizure of the piston till normal oil film is established.

3. **PHOSPHATING**

   Dark grayish colour with thickness around 1 micron. It is used to produce a crystalline corrosion resisting layer. This coating helps to have a good anti frictional properties. Phosphating is done all over the piston.

4. **TIN COATING**

   Creamish white coating with layer thickness 1 - 3 microns. It is used to ensure smoother running in of the engine, better lubricated cylinder walls and freedom from cold start scuffing. Tin coating may be done all over the piston or with the exception of gudgeon pin hole.

5. **ANODISING**

   Grayish layer of Aluminum oxide done on piston crown with thickness around five microns. Anodizing is done due to the fact that during combustion process, piston crown is exposed to very high temperatures. In order to avoid development of cracks in the piston crown due to thermal stresses, the upper layer is hardened by specialized anodizing process. This also prevents corrosion of piston crown.

MATERIAL USED TO MAKE RINGS

(1) **GREY CAST IRON (K-1)**

This material is fairly suitable & compatible for normal use & is widely used for automotive applications. Its lamellar structure ensures inherent lubrication.

(2) **SPECIAL CAST IRON (IKA)**

This is heat treated grey cast iron material with high bending strength & hardness.

(3) **SPHEROIDAL GRAPHITE CAST IRON (KV-1)**

This is a heat treated SG.Iron material having a very high life expectancy and inherent characteristics of high resistance against bending, breakage and wear.

(4) **CARBIDIC CAST IRON (F-14)**

This is a heat treated material having good wear resistance and generally used for second rings.

(5) **STEEL (KS-3)**

This material is recommended for heavy duty high performance engines, because of their property of exceptionally high resistance against breakage & wear even under unfavourable running conditions.

PERIPHERY COATINGS & SURFACE TREATMENT

(1) **Plasma Spray Coating, MP**

In this process the coating materials are melted in a plasma flame at very high temperatures(up to about 15000C) and sprayed on to the ring running surface. At such high temperatures almost all elements can be melted, enabling the production of metallic, metal-ceramic and all ceramic mixed coating with different characteristics.

(2) **Molybdneum Coating, MO**

By virtue of its high melting point, topography and characteristics of oil retaining capacity moly coated rings are now-a-days preffered in engines with very high thermal loads are experienced. They have very good scuff resistance even under elevated temperature levels, ensure quick bedding-in and provide optimum lubrication at all operating conditions.

(3) **Chrome Plating, C**

The long life expected of engines and the growing demand for environmental compatibility of exhaust emissions calls for chrome plated rings which are wear resistant and functions well even under severe working conditions.

(4) **Chromium-Ceramic Coating, CKS**

The CKS coating withstands higher thermal and mechanical loading than the existing chromium, molybdenum and plasma coatings, though these tried conditions lose none of their significance. In the appropriate designs they continue to satisfy the special demands in the tribological system.

(5) **Phosphating, P**

The process is employed to speed up and improve seating-in of the rings. The surface of the ring is transformed by chemical treatment to phosphate crystals

(6) **Gas Nitriding, N**

Surface treatment by gas nitriding to reduce wear of compression and oil rings (mainly steel rings).

FEDERAL MOGUL

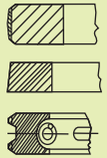
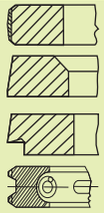
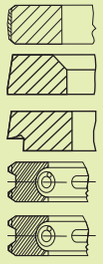
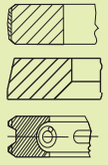
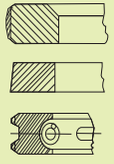
INDEX

FEDERAL MOGUL

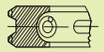
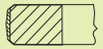
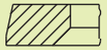
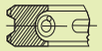
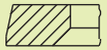
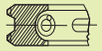
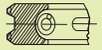
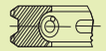
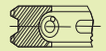
INDEX

FEDERAL MOGUL

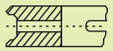
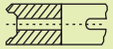
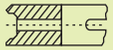
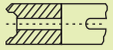
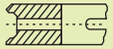
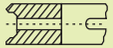
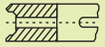
INDEX

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
1 BAJAJ TEMPO MATADOR - 3RV	78.00 4	CH=48.00 DH=0.00 TL=77.50 PHD=25.00 C=(0.070)/[0.003]	2 3 RV GPO SGC P	0450 STD	0450N 25.00 64.00 RC A 25 X 1.6	GK 110CB GK 120P GO 582C	1 1 1		2.500 2.500 4.000	0.20-0.35 0.45-0.60 0.25-0.50	6850 DCES STD	OD=81.99 ID=77.09 L=171.70 CD=(82.750)/ [3.258] T=4.875	0038 DRY SEMI FINISHED STD
2 BAJAJ TEMPO MATADOR - 5RV (D 301-E2) 19.8:1, 1797CC 48HP, 3800RPM	78.00 4	CH=47.95 DH=0.00 TL=90.00 PHD=25.00 C=(0.068)/[0.003]	2 5 RV GPO ASD SGC P	0451 STD [0.020] [0.030]	0451N 25.00 64.00 RC A 25 X 1.6	GK 110CB GK 130P GO 320P GO 542P	1 1 1 2		2.500 2.500 2.500 5.000	0.20-0.35 0.20-0.35 0.20-0.35 0.20-0.35	6851 CP STD [0.010] [0.020] [0.030] [0.040]		
						GK 110CB GK 130P GO 320P GO 582C GO 542P	1 1 1 1 1		2.500 2.500 2.500 5.000 5.000	0.20-0.35 0.20-0.35 0.20-0.35 0.25-0.40 0.20-0.35	6851 DCESM STD [0.010] [0.020] [0.030] [0.040]		
3 BAJAJ TEMPO MINIDOR 3W - DIESEL 499CC, 9BHP, 3000RPM WATER COOLED	85.00 1	CH=47.05 DH=0.00 TL=85.00 PHD=23.00 C=(0.120)/[0.005]	68 3 RV LT SGC	0195 STD 0.50 1.00	0195N 23.00 67.80 RC A23X1.5	GK 110 CB GK 153 P GO 582C(PG)	1 1 1		2.500 2.000 4.000	0.30-0.55 0.30-0.55 0.25-0.50	1950 TIDCES STD		
						GK 150CBPLSE GK 120P GO 582CP	1 1 1		2.500 2.000 4.000	0.20-0.40 0.80-1.00 0.25-0.50	1950 SHAKTI STD (0.25) (0.50)		

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
4 BAJAJ TEMPO MINIDOR DI TD499LC 15DI E-II	85.00 1	CH=47.05 DH=0.00 TL=85.00 PHD=23.00 C=(0.090)/[0.004]	85 3 RV SGC PHR LT	01801 STD	01801N 23.00 67.80 RC A23X1.5	GK 110CB	1		2.500	0.30-0.55	1950 TIDCES STD		
						GK 153P	1		2.000	0.30-0.55			
						GO 582C	1		4.000	0.25-0.50			
						GK 150CBPLSE	1		2.500	0.20-0.40	1950 SHAKTI STD (0.25) (0.50)		
						GK 120P	1		2.000	0.80-1.00			
						GO 582CP	1		4.000	0.25-0.50			
5 BAJAJ TEMPO DI MINIDOR TD499LC	85.00 1	CH=47.05 DH=0.00 TL=85.00 PHD=23.00 C=(0.080)/[0.003]	67 3 RV SGC ASD	0180 STD	0180N 23.00 67.80 RC A23X1.5	GK 110CB	1		2.500	0.30-0.55	1950 TIDCES STD		
						GK 153P	1		2.000	0.30-0.55			
						GO 582C	1		4.000	0.25-0.50			
						GK 150CBPLSE	1		2.500	0.20-0.40	1950 SHAKTI STD (0.25) (0.50)		
						GK 120P	1		2.000	0.80-1.00			
						GO 582CP	1		4.000	0.25-0.50			
6 BAJAJ TEMPO MINIDOR EURO-I TD 499 LC IDI	85.00 1	CH=47.05 DH=0.00 TL=85.00 PHD=23.00 C=(0.080)/[0.003]	82 3 RV SGC	0113 STD	0113N 23.00 67.80 RC A 23 X 1.5	GK 110CB	1		2.500	0.30-0.55	1950 TIDCES STD		
						GK 153P	1		2.000	0.30-0.55			
						GO 582C	1		4.000	0.25-0.50			
						GK 150CBPLSE	1		2.500	0.20-0.40	1950 SHAKTI STD (0.25) (0.50)		
						GK 120P	1		2.000	0.80-1.00			
						GO 582CP	1		4.000	0.25-0.50			

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
7 BAJAJ TEMPO MINIDOR CNG TD499LC	85.00 1	CH=47.90 DH=0.00 TL=85.00 PHD=23.00 C=(0.080)/[0.003]	105 3 RV SGC ASD	0123 STD	0123N 23.00 67.80 RC A23X1.5	GK 150CBPLSE	1		2.500	0.20-0.40	1950 SHAKTI STD		
						GK 120P	1		2.000	0.80-1.00			
						GO 582CP	1		4.000	0.25-0.50			
						GK 110CB	1		2.500	0.30-0.55	1950 TIDCES STD		
						GK 153P	1		2.000	0.30-0.55			
						GO 582C	1		4.000	0.25-0.50			
8 BAJAJ TEMPO OM 616 IDI TEMPO TRAVELLER/TRAX AUTOTHERMATIC PISTON 2399CC, 21:1 65HP, 4000RPM	90.90 4	CH=48.35 DH=0.00 TL=81.85 PHD=26.00 C=(0.035)/[0.001]	42 3 RV RC GPO SGC P	0454 STD	0454N 26.00 74.00 RC C 26 X 1.6	GK 150CP	1		3.000	0.20-0.40	6852 TKDCES STD	OD=94.00 ID=90.00 L=158.10 CD=(96.00)/[3.780] T=4.70	0040 DRY SEMI FINISHED OD GROUND STD
						GK 150P	1		2.000	0.80-1.00			
						GO 582C	1		4.000	0.20-0.40			
						GK 150MPBP	1		3.000	0.20-0.45	6853 PLASMA STD		
						GK 150P	1		2.000	0.80-1.00			
						GO 582C	1		4.000	0.20-0.40			
						GK 150C	1		3.000	0.20-0.40	6852 SHAKTI STD		
						GK 151C	1		2.000	0.08-1.00			
						GO 582C	1		4.000	0.20-0.40			
9 BAJAJ TEMPO OM 616 DI CNG	90.90 4	CH=47.20 DH=0.00 TL=80.70 PHD=26.00 C = (0.035)/[0.001]	97 3 RV RC GPO P SGC	0455 STD	0455N 26.00 74.00 RC C 26 X 1.6	GK 150CB	1		3.000	0.20-0.40	6852 TKDCES STD	OD=94.00 ID=90.00 L=158.10 CD=(96.00)/[3.780] T=4.70	0040 DRY SEMI FINISHED OD GROUND STD
						GK 150	1		2.000	0.08-1.00			
						GO 582C	1		4.000	0.20-0.40			

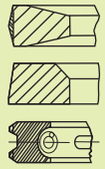
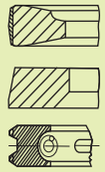
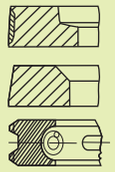
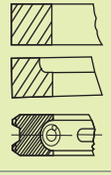
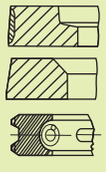
Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
10 BAJAJ TEMPO OM616DITD 2400F	90.90 4	CH=48.60 DH=0.00 TL=82.10 PHD=26.00 C=(0.035)/[0.001]	3 RV RC GPO P SGC ASD 80	0453 STD	0453N 26.00 74.00 RC C 26 X 1.6	GK 150MPBP GK 150P GO 582C	1 1 1		3.000 2.000 4.000	0.20-0.40 0.08-1.00 0.20-0.40	6853 PLASMA STD		
						GK 150C GK 151C GO 582C	1 1 1		3.000 2.000 4.000	0.20-0.45 0.80-1.00 0.20-0.40	6852 SHAKTI STD		
11 BAJAJ TEMPO OM616TC TD2400FT-I-NCR 50KW	90.90 4	CH=48.35 DH=0.00 TL=81.85 PHD=26.00 C=(0.035)/[0.001]	3RV RC ASD SGC P 42	0442 STD	0442N 26.00 74.00 RC C26X1.6	GK 150MPBP GK 150P GO 582C	1 1 1		3.000 2.000 4.000	0.20-0.45 0.80-1.00 0.20-0.40	6853 PLASMA STD		
12 BAJAJ TEMPO OM616TC	90.90 4	CH=48.35 DH=0.00 TL=81.85 PHD=28.00 C=(0.050)/[0.002]	3RV RC BD SGC P 42	0452 STD	0452N 28.00 77.00 RC C28X1.5	GK 150MPBP GK 150P GO 582C	1 1 1		3.000 2.000 4.000	0.20-0.45 0.80-1.00 0.20-0.40	6853 PLASMA STD		
13 BEDFORD DIESEL 330	103.17 6	CH=71.44 DH=0.00 TL=118.24 PHD=34.925 C=(0.207)/[0.008]	5 RV TC 26	0412 STD	0412N 34.925 88.060 SC 35 X 1.5	GK 110C GK 150P GO 541P	1 2 2		2.385 2.385 4.760	0.31-0.44 0.31-0.44 0.31-0.44	5104 C STD		
						GK 115CP GK 150P GO 541PHE	1 2 2		2.385 2.385 4.760	0.35-0.55 0.31-0.44 0.31-0.44	5104 CXP/ 5104CSPL		

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
						GK 110P	1		2.385	0.30-0.55	5104 P STD		
						GK 150P	2		2.385	0.30-0.55			
						GO 541P	2		4.760	0.30-0.60			
						GK 110P	1		2.385	0.30-0.55	5104 PHE STD		
						GK 150P	2		2.385	0.30-0.55			
						GO 541PHE	1		4.760	0.30-0.60			
						GO 541P	1		4.760	0.30-0.60			
						GK 11OP	1		2.385	0.30-0.45	5104 TIP STD		
						GK 150P	2		2.385	0.30-0.45			
						GO 541P	2		4.760	0.30-0.45			
						GK 110P	1		2.385	0.30-0.55	5104 TIPHE STD		
						GK 150P	2		2.385	0.30-0.55			
						GO 541PHE	1		4.760	0.30-0.60			
						GO 541P	1		4.760	0.30-0.60			
						GK 110P	1		2.385	0.30-0.45	5104EX STD		
						GK 150P	2		2.385	0.30-0.45			
						GO 541PHE	1		4.760	0.30-0.45			
						GO 541P	1		4.760	0.30-0.45			
						GK 110P	1		2.385	0.31-0.44	5102 TKHEP		
						GK 150P	1		2.385	0.31- 0.44	STD		
						GK 150P	1		2.385	0.31- 0.44			
						GO 541P	1		4.760	0.31 - 0.44			
						GO 541P	1		4.760	0.31 - 0.44			

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
14 EICHER CANTER 3297CC, 92.5PS, 3500RPM	100.00 4	CH=60.70 DH=0.00 TL=110.70 PHD=34.00 C=(0.047)/[0.002]	76 3 RV RC GPO TC	0441 STD	0441N 34.00 84.00 FC 34 X 1.5	GK 165CBP GK 151CP GO 582CP	1 1 1		3.000 2.000 5.000	0.30-0.50 0.30-0.50 0.30-0.50	6883 TKTCES STD	OD=(104.09) ID=98.90 L=192.00 CD=NA T=NA	0034 WET FULLY FINISHED OD GROUND STD
15 EICHER E483 TCI (MODIFIED PROFILE)	100.00 4	CH=60.60 & 60.67 DH=0.00 TL=95.70 PHD=34.00 C=(0.130)/[0.005]	67 3RV RC 1GT SM	0413 STD 0.25 0.50 0.75 1.00	0413N 34.00 81.00 FC 34X1.5	GK 165CBP GK 152C GO 582N	1 1 1		3.000 2.000 3.000	0.30-0.50 0.30-0.50 0.20-0.40	6882 STEEL PREMIUM STD		
						GK 165CBP GK 151CP GO 582CP	1 1 1		3.000 2.000 5.000	0.30-0.50 0.30-0.50 0.30-0.50	6882 TKIDCES STD		
16 LEYLAND 370 (RC) 16:1, 6075cc 110 HP, 2400 rpm	103.35 6	CH=82.09 DH=0.00 TL=145.60 PHD=33.02 C=(0.135)/ [0.005]	32 4 RV RC 1,2GT GPO	0421 STD SC 33 X 1.2	0421N 33.02 90.85	GK 173 GO 580 GO 535P	2 1 1		3.420 6.360 6.360	0.25-0.40 0.25-0.40 0.25-0.40	6111ES STD	OD=(111.22)/ [0.005] [4.448] ID=102.7 L=239.60 CD=(112.75)/ [4.435] T=5.37	0049 DRY SEMI FINISHED OD GROUND

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
						GK 173CB	1		3.420	0.25-0.40	6111 DCES STD [0.005]	OD=(111.27)/ [4.450] ID=103.39 L=239.57 CD=(112.70)/ [4.437] T=5.37	0050 DRY FULLY FINISHED OD GROUND & HARDENED
						GK 173	1		3.420	0.25-0.40			
						GO 582C	1		6.360	0.25-0.40			
						GO 535P	1		6.360	0.25-0.45			
						GK 173Cu	2		3.420	0.25-0.40	6111 DICUCES STD		
						GO 582C	1		6.360	0.25-0.40			
						GO 542P	1		6.360	0.25-0.40			
						GK 173	2		3.420	0.25-0.40	6111 DICES STD		
						GO 582C	1		6.360	0.25-0.40			
						GO 535P	1		6.360	0.25-0.40			
17 LEYLAND 400 (RC) 16:1, 6538cc 125 HP, 2400rpm	107.30 6	CH=82.09 DH=0.00 TL=145.60 PHD=33.02 C=(0.135)/ [0.005]	4 RV RC 1,2GT 32	0414 STD	0414N 33.02 90.85 SC 33 X 1.2	GK 173P	2		3.390	0.25-0.40	6115ES STD	OD=(111.285) /[4.451] ID=107.305 L=239.57 CD=(112.70)/ [4.437] T=5.372	0053/0083 DRY FULLY FINISHED OD GROUND
						GO 580	1		6.350	0.25-0.40			
						GO 535 P	1		6.350	0.25-0.40			
						GK 173CB	1		3.390	0.25-0.40	6115CES STD [0.005]		
						GK 173P	1		3.390	0.25-0.40			
						GO 580	1		6.350	0.25-0.40			
						GO 535P	1		6.350	0.25-0.40			

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
18 LEYLAND 401 (RC) VIKING/TUSKER/ SUPER 16:1, 6538cc 125HP, 2400rpm	107.30 6	CH=82.09 DH=0.00 TL=145.60 PHD=33.02 C=(0.178)/ [0.007]	32 4 RV RC 1GT SGC	0419 STD	0419N 33.02 90.85 SC 33 X 1.2	GK 170 P	1		2.390	0.30-0.45	6122 DICES STD	OD=(111.285) / [4.451] ID=107.305 L=239.57 CD=(112.70)/ T=5.372	00831 DRY F. F. OD GROUND
						GK 130 P	1		2.390	0.30-0.45			
						GO 582C	1		4.770	0.30-0.45			
						GO 535 P	1		4.770	0.30-0.45			
						GK 170Cu	1		2.390	0.30-0.45	6122 DICUCES STD (0.1)		
						GK 130Cu	1		2.390	0.30-0.45			
						GO 582C	1		4.770	0.30-0.45			
						GO 535P	1		4.770	0.30-0.45			
19 LEYLAND 401 (RC)- SLIPPER TYPE VIKING/TUSKER/SUPER 16:1, 6538CC 125HP, 2400 rpm	107.30 6	CH=82.09 DH=0.00 TL=145.60 PHD=33.02 C=(0.178)/ [0.007]	32 3 RV RC SLD 1GT SGC	0406 STD	0406N 33.020 90.850 SC 33 X 1.2	GK 170Cu	1		2.390	0.30-0.45	6120 DICUCES STD	OD=(111.285) / [4.451] ID=107.305 L=239.57 CD=(112.70)/ T=5.372	0831 DRY F. F. OD GROUND
						GK 130Cu	1		2.390	0.55-0.70			
						GO 582C	1		4.770	0.30-0.45			
20 LEYLAND 401 RC 6.65 EURO 1, GRADE-L, M, H COMET Co1611	107.30 6	CH=82.035L CH=82.115M CH=82.195H DH=0.00 TL=125.16 PHD=33.026 C=(0.203)/[0.008]	94 3RV RC 1GT GPO SGC P SLD	0405 STD	0405N 33.026 90.850 SC 33 X 1.2	GK 175MPBP	1		3.190	0.30-0.45	6129 PLASMA STD	OD=(111.285) OD=(111.285) /[4.451] ID=107.305 L=239.57 CD=(112.70)/ [4.437] T=5.37	0831 DRY F.F. OD GROUND
						GK 130P	1		2.390	0.30-0.55			
						GO 582C	1		4.770	0.30-0.60			
21 LEYLAND 401 RC INDUSTRIAL	107.30 6	CH=82.115 DH=0.00 TL=125.16 PHD=33.026 C=(0.203)/ [0.008]	99 3 RV RC 1GT SGC ASD P	0723 STD	0723N 33.026 90.850 SC 33 X 1.2	GK 175MPBP	1		3.190	0.30-0.45	6129 PLASMA STD		
						GK 130P	1		2.390	0.30-0.55			
						GO 582C	1		4.770	0.30-0.60			

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
22 LEYLAND 402 LTC	107.30 6	CH=82.09 DH=0.00 TL=125.10 PHD=33.026 C=(0.135)/ [0.005]	3 RV RC 1GT SGC ASD P 95	0433 STD	0433N 33.026 90.850 SC 33 X 1.2	GK 175MPBP GK 130P GO 582C	1 1 1		3.190 2.390 4.770	0.30-0.45 0.30-0.55 0.30-0.60	6129 PLASMA STD	OD=(111.285) /[4.451] ID=107.305 L=239.57 CD=(112.70)/ [4.437] T=5.372	00831 DRY FULLY FINISHED OD GROUND
23 LEYLAND IVECO 8040 EURO-I	104.00 4	CH=65.33 DH=0.00 TL=104.33 PHD=38.00 C=(0.139)/ [0.005]	3 RV RC 1GT TPB BD SLD 110	0407 STD 0.60	0407N 38.00 85.15 RC 38 X 2	GK 173CBLSE GK 153P GO 582C	1 1 1		3.500 2.500 4.000	0.30-0.45 0.35-0.55 0.30-0.55	6137 TKIDCES		
24 LEYLAND IVECO 8040-8060 CNG	104.00 4	CH=65.33 DH=0.00 TL=104.33 PHD=38.00 C=(0.139)/ [0.005]	3 RV RC TPB ASD 97	0713 STD 0.60	0713N 38.00 85.15 RC 38 X 2	GK 155MPBP GK 130P GO 582C	1 1 1		2.500 2.000 4.000	0.30-0.45 0.45-0.60 0.30-0.55	6141 PLASMA		
25 LEYLAND HINO WO 6D 17.9:1, 5759cc 135HP	104.00 4	CH=62.69 DH=0.00 TL=108.69 PHD=35.00 C=(0.140)/	3RV TC SLD 40	0427 STD	0427N 35.00 85.00 SC 35 x 1.2	GK 110CB GK 150P GO 582CP(PG)	1 1 1		2.500 2.000 5.000	0.30-0.45 0.30-0.55 0.30-0.45	6135 TKDCES STD		0054SHF
						GK 155MPBP GK 130P GO 582CP	1 1 1		2.500 2.000 5.000	0.30-0.45 0.55-0.70 0.30-0.45	6136 PLASMA STD		

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
26 LEYLAND HINO WO 6E TUSKAR 2214/1612	104.00 6	CH=60.19 DH=0.00 TL=106.19 PHD=35.00 C=(0.100)/ [0.004]	3RV TC 40	0704 STD	0704N 35.00 85.00 SC 35X1.2	GK 110CB	1		2.500	0.30-0.45	6135 TKDCES		054SHF
						GK 150P	1		2.000	0.30-0.55			
						GO 582CP(PG)	1		5.000	0.30-0.45			
27 LEYLAND HINO WO 6E RC TUSKAR 2214/1612	104.00 6	CH=60.19 DH=0.00 TL=106.19 PHD=35.00 C=(0.100)/ [0.004]	3 RV RC 1GT TC ASD SLD 40	0716 STD	0716N 35.00 85.00 SC 35 X 1.2	GK 175MPBP	1		3.000	0.30-0.45	6134 PLASMA STEEL POWER STD (WITH STEEL OIL RING)		054SHF
						GK 130P	1		2.500	0.30-0.55			
						GO 582N	1		5.000	0.30-0.45			
						GK 175MPBP	1		3.000	0.30-0.45	6133 PLASMA STD		
						GK 130P	1		2.500	0.30-0.45			
						GO 582C	1		5.000	0.30-0.45			
28 LEYLAND HINO 6ETI EURO-II	104.00 6	CH-60.19 DH-0.00 TL-106.19 PHD-35 C-0.106	3 RV RC 1GT SM,LT ASD	7041 STD	7041N 35.00 85.00 SC 35 x 1.2	GK 175MPBP	1		3.000	0.30-0.45	6154 PLASMA STEEL POWER		0054SHF
						GK 130P	1		2.500	0.30-0.45			
						GO 582N	1		3.000	0.30-0.50			
29 LEYLAND HINO WO 6E CNG	104.00 6	CH=60.19 DH=0.00 TL=106.19 PHD=35.00 C=(0.100)/ [0.004]	3RV TPB TC 93	0712 STD	0712N 35.00 85.00 SC 35X1.2	GK 110CB	1		2.500	0.30-0.45	6135 TKDCES		054SHF
						GK 150P	1		2.000	0.30-0.50			
						GO 582CP(PG)	1		5.000	0.30-0.45			
						GK 155MPBP	1		2.500	0.30-0.45	6136 PLASMA STD		
						GK 130P	1		2.000	0.55-0.70			
						GO 582CP	1		5.000	0.30-0.45			

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
30 LEYLAND HINO W0 6 DTI EURO 1 1613/2516	104.00 6	CH=62.65 DH=0.00 TL=108.65 PHD=37.00 C=(0.100)/ [0.004]	3 RV RC 1GT SGC ASD P SLD 109	0708 STD	0708N 37.00 85.00 SC 37 X 1.2	GK 175MPBP	1		3.000	0.30-0.45	6134 PLASMA STEEL POWER STD		
						GK 130P	1		2.500	0.30-0.45			
						GO 582N	1		5.000	0.30-0.45			
						GK 175MPBP	1		3.000	0.30-0.45	6133 PLASMA STD		
						GK 130P	1		2.500	0.30-0.45			
						GO 582C	1		5.000	0.30-0.45			
31 LEYLAND HINO WO6DTI EURO II VIKING/BS II CHEETAH	104.00 6	CH=62.65 DH=0.00 TL=108.65 PHD=37.00 C=(0.100)/ [0.004]	3RV RC 1GT SGC P ASD SLD 109	0717 STD 0.50 1.00	0717N 37.00 85.00 SC 37 X 1.2	GK 175MPBP	1		3.000	0.30-0.45	6134 PLASMA STEEL POWER STD		
						GK 130P	1		2.500	0.30-0.45			
						GO 582N	1		5.000	0.30-0.45			
						GK 175MPBP	1		3.000	0.30-0.45	6133 PLASMA STD		
						GK 130P	1		2.500	0.30-0.45			
						GO 582C	1		5.000	0.30-0.45			
32 LEYLAND HINO 6CTI EURO III 87 KW	104.00 6	CH=62.65 DH=0.00 TL=108.65 PHD=37.00 C=(0.10)/ [0.004]	3 RV RC 1GT SLD SGC 110	07301 STD	07301N 37.00 85.00 SC 37X 1.2	GK 175MPBP	1		3.000	0.30-0.45	6142 PLASMA STEEL POWER STD		
						GK 130P	1		2.500	0.30-0.45			
						GO 582N	1		5.000	0.30-0.50			
33 LEYLAND HINO 6DTI EURO II 205PS	104.00 6	CH=62.65 DH=0.00 TL=108.65 PHD=37.00 C=(0.10)/ [0.004]	3 RV RC 1GT SLD SGC 110	07302 STD	07302 37.00 85.00 SC 37X 1.2	GK 175MPBP	1		3.000	0.30-0.45	6142 PLASMA STEEL POWER STD		
						GK 130P	1		2.500	0.30-0.45			
						GO 582N	1		5.000	0.30-0.50			

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
34 LEYLAND 412 (RC) COMET 16:1, 6540cc 165 HP, 2400 rpm	107.30 6	CH=82.09 DH=0.00 TL=145.60 PHD=41.281 C=(0.152)/ [0.006]	3 RV RC 1GT SLD SGC 32	0425 STD	0425N 41.281 88.850 SC 41.28 X 1.75	GK 170P GK 130P GO 582C	1 1 1		3.190 2.390 4.770	0.30-0.45 0.55-0.70 0.30-0.45	6125 DICES STD	OD=111.285 [4.451] ID=107.305 L=239.57 CD=(112.70)/ [4.437] T=5.372	0053 DRY FF OD GROUND
						GK 170Cu GK 130Cu GO 582C	1 1 1		3.190 2.390 4.770	0.30-0.45 0.55-0.70 0.30-0.45	6125 DICUCES STD [0.005]	OD=111.285 [4.451] ID=107.305 L=239.57 CD=(112.70)/ [4.437] T=5.372	00831 DRY FF OD GROUND
35 LEYLAND 412 TCAC/402 LTC EURO-I TUSKAR SUPER 1616 TAURUS 2516	107.30 6	CH=82.09 DH=0.00 TL=125.10 PHD=41.281 C=(0.135)/ [0.005]	3 RV RC 1GT SGC ASD SLD 95	0429 STD	0429N 41.281 88.850 SC 41.28 X 1.75	GK 175MPBP GK 130P GO 582C	1 1 1		3.190 2.390 4.770	0.30-0.45 0.30-0.55 0.30-0.60	6129 PLASMA STD	OD=111.285 [4.451] ID=107.305 L=239.57 CD=(112.70)/ [4.437] T=5.372	00831 DRY FF OD GROUND
36 LEYLAND 412 TCAC/ 402 LTC EURO-II TUSKAR SUPER 1616	107.30 6	CH=82.50 DH=0.00 TL=125.50 PHD=41.281 C=(0.135)/ [0.005]	3RV RC 1GT SGC ASD SLD 95	0722 STD	0722N 41.28 88.850 SC 41.28X1.75	GK 175MPBP GK 130P GO 582N	1 1 1		3.190 2.390 4.000	0.30-0.45 0.30-0.45 0.30-0.50	6130 PLASMA STEEL POWER STD		
37 LEYLAND 402 INDUSTRIAL APPLICATION	107.30 6	CH=82.115 DH=0.00 TL=125.10 PHD=41.281 C=(0.185)/ [0.007]	3 RV RC 1GT ASD SGC P 32	0727 STD	0727N 41.281 88.850 SC 41.28X1.75	GK 175MPBP GK 130P GO 582C	1 1 1		3.190 2.390 4.770	0.30-0.45 0.30-0.55 0.30-0.60	6129 PLASMA STD		

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
38 LEYLAND 402 (RC) VIKING/TUSKER/ SUPER 16:1, 6538cc 135 HP, 2400 rpm	107.30 6	CH=82.09 DH=0.00 TL=145.60 PHD=41.281 C=(0.178)/ [0.007]	4 RV RC 1GT SGC 32	0420 STD	0420N 41.281 88.850 SC 41.28 X 1.75	GK 170P	1		2.390	0.30-0.45	6122 DICES STD		
						GK 130P	1		2.390	0.30-0.45			
						GO 582C	1		4.770	0.30-0.45			
						GO 535P	1		4.770	0.30-0.45			
						GK 170Cu	1		2.390	0.30-0.45	6122 DICUCES STD (0.1)	OD=111.285 [4.451] ID=107.305 L=239.57 CD=(112.70)/ [4.437] T=5.372	0083 DRY FULLY FINISHED OD GROUND
						GK 130Cu	1		2.390	0.55-0.70			
						GO 582C	1		4.770	0.30-0.45			
						GO 535P	1		4.770	0.30-0.45			
39 LEYLAND 412 COMET 16:1, 6540cc 166 HP, 2400 rpm	107.30 6	CH=82.09 DH=0.00 TL=132.60 PHD=41.281 C=(0.152)/ [0.006]	3 RV 1GT SGC 32	0428 STD	0428N 41.281 88.850 SC 41.28X1.75	GK 170P	1		3.190	0.30-0.45	6125 DICES STD	OD=111.285 [4.451] ID=107.305 L=239.57 CD=(112.70)/ [4.437] T=5.372	0083 DRY FULLY FINISHED OD GROUND
						GK 130P	1		2.390	0.55-0.70			
						GO 582C	1		4.770	0.30-0.45			
40 LEYLAND 680 DUMPER / BEAVER 15.8:1, 11093cc 180 HP, 2200 rpm	127.028 6	CH=101.00 DH=0.00 TL=159.42 PHD=41.281 C=(0.275)/ [0.011]	5 RV 10	0409 STD	0409N 41.281 111.700 SC 41.28X1.75	GK 110	1		2.390	0.60-0.80	6112 ES STD (0.25)		
						GK 120	2		3.185	0.60-0.80			
						GO 580P	1		6.360	0.45-0.65	(0.50)		
						GO 535P	1		6.360	0.25-0.50	(0.75)		
41 LEYLAND 680 TC AC EURO-I	127.028 6	CH=101.00 DH=0.00 TL=148.80 PHD=44.711 C=(0.140)/ [0.0056]	3RV RC P,1GT SGC ASD SLD 98	0718 STD	0718N 44.711 109.200 SC 44.45 X1.75	GK 175MPBP	1		3.500	0.35-0.60	6139 PLASMA STD		
						GK 130P	1		3.000	0.35-0.60			
						GO 582C	1		4.000	0.35-0.60			

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
42 LEYLAND 680 INDUSTRIAL EURO-I	127.028 6	CH=101.00 DH=0.00 TL=148.80 PHD=44.711 C=(0.140)/ [0.0056]	3RV 98 RC,1GT SGC,P ASD GPO SLD	07181 STD	07181N 44.711 109.200 SC 44.45X1.75	GK 175MPBP GK 130P GO 582C	1 1 1		3.500 3.000 4.000	0.35-0.60 0.35-0.60 0.35-0.60	6139 PLASMA STD		
43 LEY LAND 680TC AC EURO-II	127.028 6	CH=101.00 DH=0.00 TL=148.80 PHD=44.711 C=(0.140)/ [0.0056]	3RV 98 RC,1GT SGC,ASD GPO P,SLD	07182 STD	07182N 44.711 109.200 SC 44.45X1.75	GK 175MPBP GK 130P GO 582C	1 1 1		3.500 3.000 4.000	0.35-0.60 0.35-0.60 0.35-0.60	6139 PLASMA STD		
44 LEYLAND 680 RC (INDUSTRIAL APPLICATION)	127.028 6	CH=101.00 DH=0.00 TL=148.80 PHD=44.711 C=(0.140)/ [0.0056]	3 RV 10 RC 1GT ASD SGC P	0714 STD	0714N 44.711 109.200 SC 44.45X1.75	GK 175MPBP GK 130P GO 582C	1 1 1		3.500 3.000 4.000	0.35-0.60 0.35-0.60 0.35-0.60	6139 PLASMA STD		
45 LEYLAND 690 RC HIPPO TC	127.028 6	CH=101.00 DH=0.00 TL=169.60 PHD=44.710 C=(0.175)/ [0.007]	4 RV 10 RC 1,2GT SGC GPO	0424 STD	0424N 44.711 109.200 SC 44.45X1.75	GK 173P GO 580P GO 535P	2 1 1		3.540 6.360 6.360	0.35-0.60 0.45-0.65 0.25-0.50	6126 DIES STD		
46 NISSAN Autothermic Piston	85.70 6	CH=53.30 DH=0.00 TL=94.50 PHD=20.65 C=(0.050)/ [0.002]	1 3 RV STT TC	0360 STD (0.12) (0.25) (0.50) (0.75) (1.00) (1.25) (1.50)	0360N 20.65 74.70 NO CIRCLIPS	GK 110CBP GK 151CP GO 582CP	1 1 1		2.500 2.500 4.780	0.25-0.40 0.15-0.30 0.25-0.40	6755 TCES STD		

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
47 SWARAJ MAZDA	100.00 4	CH=58.04 DH=0.00 TL=105.00 PHD=34.00 C=(0.050)/ [0.002]	3 RV 1 GW TPB ASD 71	0446 STD	0446N 34.00 82.00 SC 34 X 1.5	GK 160CBP GK 151C GO 582C	1 1 1		2.500 2.000 4.500	0.30-0.50 0.40-0.55 0.20-0.40	6885TKTCES STD	OD=103.50] ID=100.00 L=193.70 CD=(108.00)/ [4.252] T=2.50	0041 DRY FULLY FINISHED
						GK 110CBP GK 151C GO 582C	1 1 1		2.500 2.000 4.500	0.30-0.50 0.40-0.55 0.20-0.40	5516 TKTCES STD		
48 SWARAJ MAZDA EURO-III	100.00 4	CH=58.02 - 1 CH=58.06 - 2 DH=0.00 TL=105.00 PHD=34.00 C=(0.050)/[0.002]	3 RV RC STT SS 2 & 3LR SLD LT 103	04471 STD	04471N 34.00 82.00 SC 34 X 1.5	GK 160CBP GK 151C GO 582C	1 1 1		2.500 2.000 4.500	0.30-0.50 0.60-0.80 0.30-0.50	6885 TKTCES STD	OD=103.50 ID=100.70 L=193.70 CD=(108.00)/ [4.250] T=2.50	0041 DRY FULLY FINISHED STD
						GK 110CBP GK 151C GO 582C	1 1 1		2.500 2.000 4.500	0.30-0.50 0.40-0.55 0.20-0.40	5516 TKTCES STD		
49 SWARAJ MAZDA EURO-I	100.00 4	CH=58.04 DH=0.00 TL=105.00 PHD=34.00 C=(0.050)/[0.002]	3 RV 1 GW TPB ASD 103	0447 STD	0447N 34.00 82.00 SC 34 X 1.5	GK 160CBP GK 151C GO 582C	1 1 1		2.500 2.000 4.500	0.30-0.50 0.60-0.80 0.30-0.50	6885 TKTCES STD		
						GK 110CBP GK 151C GO 582C	1 1 1		2.500 2.000 4.500	0.30-0.50 0.40-0.55 0.20-0.40	5516 TKTCES STD		

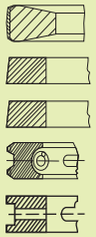
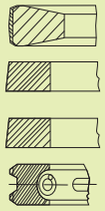
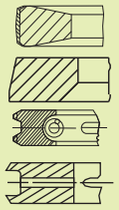
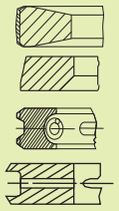
Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
50 SWARAJ MAZDA CNG	100.00 4	CH=58.04 DH=0.00 TL=105.00 PHD=34.00 C=(0.050)/[0.002]	104 3 RV RC 1GT ASD	0403 STD	0403N 34.00 82.00 SC 34 X 1.5	GK 160CBP	1		2.500	0.30-0.50	6885 TKTCES STD		
						GK 151C	1		2.000	0.60-0.80			
						GO 582C	1		4.500	0.30-0.50			
						GK 110CBP	1		2.500	0.30-0.50	5516 TKTCES STD		
						GK 151C	1		2.000	0.40-0.55			
						GO 582C	1		4.500	0.20-0.40			
51 TATA SIERRA TURBO/ SUMO/VICTA DLX/ SAFARI 4DL TURBO 1948CC, 21:1 90BHP@ 4300 RPM	83.00 4	CH=46.95 DH=0.00 TL=72.90 PHD=28.00 C=(0.060)/[0.002]	54 3 RV RC 1GT SGC P	0439 STD	0439N 28.00 67.00 RC A28 X 1.6	GK 176MOBP	1		2.500	0.25-0.50	6876 TKMOCES STD (0.2) (0.5)		
						GK 120P	1		2.000	0.40-0.55			
						GO 582CP	1		3.000	0.10-0.30			
52 TATA SUMO/VICTA 4 DL (MODIFIED SLIPPER)	83.00 4	CH=46.80 DH=0.00 TL=84.30 PHD=25.00 C=(0.070)/[0.003]	54 3 RV RC SGC P SLD	0440 STD (0.20) (0.50)	0440N 25.00 70.50	GK 110MOBSn	1		2.000	0.20-0.40	6873 TSMOICES STD	OD=(86.108)/ [3.39] ID=82.00 L=151.50 CD=(89.40)/ [3.520] T=4.220	0090 DRY SEMI FINISHED OD GROUND STD
						GO 320P	1		2.000	0.45-0.55			
						GO 582C(PG)	1		3.000	0.10-0.30			
						GK 115 MPBP	1		2.000	0.20-0.40	6873 PLASMA STD		
						GO 320P	1		2.000	0.45-0.60			
						GO 582CP	1		3.000	0.10-0.30			
						GK 110MOBP	1		2.000	0.20-0.40	6873 MOLY PLUS STD		
						GK 153MOP	1		2.000	0.40-0.55			
						GO 582C(PG)	1		3.000	0.10-0.30			

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
53 TATA 486 PL TATA SAFARI PETROL	86.00 4	CH=30.95 DH=0.00 TL=58.95 PHD=21.00 C=(0.040)/[0.0016]	1 3 RV LT TC	0348 STD	0348N 21.00 58.00 RC C21 X 1.5	GK 150CBPLSE GK 130P GO 582CP	1 1 1		1.500 1.500 3.000	0.20-0.40 0.50-0.70 0.25-0.50	5735 TKICES STD		
54 TATA 1210SE/692 DI RC 5RV SLIPPER DESIGN 17:1, 4788cc 112 HP@ 2800 rpm	92.00 6	CH=65.00 DH=0.00 TL=115.50 PHD=30.00 C=(0.100)/[0.004]	13 5 RV RC SLD	0470 STD [0.020] [0.030] [0.040] [0.060]	0470N 30.00 78.00 SC 30 X 1.2	GK 110CBSn GK 120P GO 320P GO 582CP GO 542	1 1 1 1 1		2.500 2.500 2.500 5.500 5.500	0.20-0.35 0.20-0.35 0.20-0.35 0.25-0.40 0.20-0.35	5308 TSDCPGES STD [0.010] [0.020] [0.030] [0.040] [0.050] [0.060]	OD=(95.00)/ [3.74] ID=91.00 L=212.00 CD=98.50/ [3.878] T:4.60	0094 DRY SEMIFINISHED OD. GROUND STD
55 TATA 1210/692 DI RC 5RV 17:1, 4788cc 112 HP@ 2800 rpm	92.00 6	CH=65.00 DH=0.00 TL=115.50 PHD=30.00 C=(0.100)/[0.004]	13 5RV SH 3LR SN AN SGC	0492 STD	0492N 32.00 78.00 SC 32X1.2	GK 110CBP GK 120P GO 320P GO 582CP(PG) GO 542	1 1 1 1 1		2.500 2.500 2.500 5.500 5.500	0.20-0.35 0.20-0.35 0.20-0.35 0.20-0.35 0.20-0.35	5308 DCES STD [0.010] [0.020] [0.030] [0.040] [0.060]	OD=(95.00)/ [3.74] ID=91.00 L=212.00 CD=98.50/ [3.878] T:4.60	0094/0094M DRY SEMIFINISHED OD. GROUND STD
						GK 110CBP GK 120P GO 320P GO 582CP(PG) GO 542	1 1 1 1 1		2.500 2.500 2.500 5.500 5.500	0.20-0.35 0.20-0.35 0.20-0.35 0.20-0.35 0.20-0.35	5308 SHAKTI STD [0.010] [0.020] [0.030] [0.040] [0.060]	OD=(96.80)/ [3.81] ID=91.20 L=215.00 CD=(97.90)/ [3.854] T=4.80 OD=(96.07)/ [3.78] ID=91.20 L=216.50 CD=(97.00)/ [3.819] T=6.30	0092/0092FF DRY SEMI FINISHED OD TURNED STD 0092M DRY SEMI FINISHED OD TURNED STD

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
56 TATA 1210/692 DI ST 5RV FORGED PISTON 17:1, 4788cc 112 HP@2800 rpm	92.00 6	CH=65.00 DH=0.00 TL=115.50 PHD=32.00 C=(0.100)/[0.004]	13 5 RV SH SN 3LR SGC FP	0495 STD [0.020] [0.030] [0.040] [0.060]	0495N 32.00 78.00 SC 32X1.2	GK 110CBSn	1		2.500	0.20-0.35	5308 TSDCPG STD [0.010] [0.020] [0.030] [0.040] [0.050] [0.060]	OD=(96.07)/ [3.78] ID=92.00 L= 216.5 CD=(97.00)/ [3.819] T= 6.30	0092MFF DRY FULLY FINISHED OD TURNED STD
						GK 120P	1		2.500	0.20-0.35			
						GO 320P	1		2.500	0.20-0.35		OD=(95.24)/ [3.75] ID=91.00 L=214.00 CD=(95.90)/ [3.776] T=4.75	0098 DRY SEMI FINISHED OD GROUND STD
						GO 542 CP	1		5.500	0.20-0.35			
						GO 542	1		5.500	0.20-0.35			
57 TATA 1210/692 DI 5RV 17:1, 4788cc 112HP@ 2800 rpm	92.00 6	CH=65.00 DH=0.00 TL=115.50 PHD=30.00 C=(0.100)/[0.004]	13 5 RV SH 3LR SN AN SGC FP	0488 STD [0.020] [0.030] [0.040] [0.060]	0488N 30.00 78.00 SC 30X1.2	GK 110CBP	1		3.000	0.20-0.35	5310DCES STD (0.25) (0.50) (0.75) (1.00) (1.50)	OD=(95.00)/ [3.74] ID=91.00 L=212.00 CD=98.50/ [3.878] T:4.60	0094 DRY SEMIFINISHED OD. GROUND STD
						GK 120P	1		3.000	0.20-0.35			
						GO 320P	1		3.000	0.20-0.35		OD=(95.00)/ [3.74] ID=91.00 L=212.00 CD=98.50/ [3.878] T:4.60	0094M DRY SEMIFINISHED OD. GROUND STD
58 TATA 1210/692 DI RC 5RV 32mm G. PIN 17:1, 4788cc 112 HP@ 2800 rpm	92.00 6	CH=65.00 DH=0.00 TL=115.50 PHD=32.00 C=(0.100)/[0.004]	13 5 RV RC 3LR SN AN SGC	0479 STD [0.020] [0.030] [0.040] [0.060]	0479N 32.00 78.00 SC 32X1.2	GO 582CP(PG)	1		5.500	0.25-0.40			
						GO 542	1		5.500	0.20-0.35		OD=(96.80)/ [3.81] ID=91.20 L=215.00 CD=(97.90)/ [3.854] T=4.80	0092 DRY SEMI FINISHED OD TURNED STD

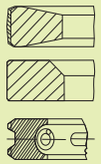
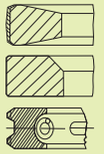
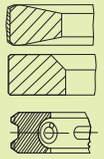
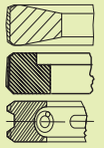
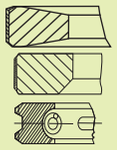
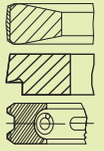
Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
59 TATA 1210/692 DI ST 5RV FORGED PISTON 17:1, 4788cc 112 HP@2800 rpm	92.00 6	CH=65.00 DH=0.00 TL=115.50 PHD=32.00 C=(0.100)/[0.004]	13 5 RV SH 3LR SN SGC AN FP	0493 STD [0.020] [0.030] [0.040] [0.060]	0493N 32.00 78.00 SC 32X1.2	GK 110CBSn	1		3.000	0.20-0.35	5310 TSDCPGES STD (0.25) (0.50) (0.75) (1.00) (1.50)	OD=(96.07)/ [3.78] ID=91.20 L=216.50 CD=(97.00)/ [3.819] T=6.30	0092M DRY SEMI FINISHED OD TURNED STD
						GK 120P	1		3.000	0.20-0.35			
						GO 320P	1		3.000	0.20-0.35			
						GO 582CP	1		5.500	0.25-0.40			
						GO 542	1		5.500	0.20-0.35			0092FF DRY FULLY FINISHED OD TURNED STD
60 TATA 1210/692 DI(ST) 5RV RING CARRIER SLIPPER DESIGN 17:1, 4788cc 112 HP@ 2800 rpm	92.00 6	CH=65.00 DH=0.00 TL=115.50 PHD=32.00 C=(0.100)/[0.004]	13 5 RV RC SLD SH 3LR SN SS SGC P	0471 STD [0.020] [0.030] [0.040] [0.060]	0471N 32.00 78.00 SC 32X1.2	GK 115CBP	1		3.000	0.20-0.35	5310SHAKTI STD	OD=(96.80)/ [3.81] ID=92.00 L=215.00 CD=(97.90)/ [3.854] T=4.80	
						GK 120P	1		3.000	0.20-0.35			
						GO 320P	1		3.000	0.20-0.35			
						GO 582CP(PG)	1		5.500	0.25-0.40		OD=(96.07)/ [3.78] ID=92.00 L= 216.5 CD=(97.00)/ [3.819] T= 6.30	0092MFF DRY FULLY FINISHED OD TURNED STD
						GO 542P	1		5.500	0.25-0.40			
						GK 110CBSn	1		3.000	0.20-0.35	5310 TSDCPG STD (0.25) (0.50) (0.75) (1.00) (1.50)		
						GK 120P	1		3.000	0.20-0.35			
						GO 320P	1		3.000	0.20-0.35		OD=(95.24)/ [3.75] ID=91.00 L=214.00 CD=(95.90)/ [3.776] T=4.75	0098 DRY SEMI FINISHED OD GROUND STD
						GO 542CP	1		5.500	0.20-0.35			
						GO 542	1		5.500	0.20-0.35			
61 TATA 1210/692 DI RC 4RV 17:1, 4788cc 112 HP@ 2800 rpm	92.00 6	CH=65.00 DH=0.00 TL=115.50 PHD=32.00 C=(0.100)/[0.004]	13 4RV RC SGC 3LR AN	0484 STD [0.020] [0.030] [0.040]	0484N 32.00 78.00 SC 32X1.2	GK 115 CP	1		2.500	0.20-0.35	5306 SHAKTI STD	OD=(95.00)/ [3.74] ID=91.00 L=212.00 CD=98.50/ [3.878] T:4.60	0094 DRY SEMIFINISHED OD. GROUND STD
						GK 120P	1		2.500	0.20-0.35			
						GO 320P	1		2.500	0.20-0.35			
						GO 582CP(PG)	1		5.500	0.25-0.40			

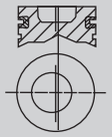
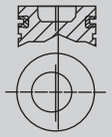
Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
						GK 110CBP GK 120P GO 320P GO 582CP(PG)	1 1 1 1		2.500 2.500 2.500 5.500	0.20-0.35 0.20-0.35 0.20-0.35 0.25-0.40	5306 DCES STD (0.25) (0.50) (0.75) (1.00) (1.50)	OD=(95.00)/ [3.74] ID=91.00 L=212.00 CD=98.50/ [3.878] T:4.60	0094M DRY SEMIFINISHED OD. GROUND STD
						GK 110CBP GK 120P GO 320 GO 582C	1 1 1 1		2.500 2.500 2.500 5.500	0.20-0.35 0.20-0.35 0.20-0.35 0.25-0.40	5306 TSDCPGES STD (0.10) (0.25) (0.50) (0.75) (1.00) (1.50)	OD=(96.80)/ [3.81] ID=91.20 L=215.00 CD=(97.90)/ [3.854] T=4.80	0092 DRY SEMI FINISHED OD TURNED STD
62 TATA 1210/692 DI RC 3RV 17:1, 4788cc 112 HP@ 2800 rpm PLAIN DESIGN	92.00 6	CH=65.00 DH=0.00 TL=105.00 PHD=32.00 C=(0.100)/[0.004]	13 3 RV RC SGC J G SN	0482 STD (0.075) (0.125)	0482N 32.00 78.00 FC 32X1.2	GK 170CBSn GK 153P GO 582C	1 1 1		2.500 2.500 4.000	0.20-0.35 0.45-0.60 0.25-0.40	5314 TSIDCPGES STD (0.10)	OD=(96.07)/ [3.78] ID=91.20 L=216.50 CD=(97.00)/ [3.819] T=6.30	0092M DRY SEMI FINISHED OD TURNED STD
63 TATA 1210/692 DI 3RV RC 17:1, 4788CC 112HP@2800 RPM SLIPPER DESIGN	92.00 6	CH=65.00 DH=0.00 TL=105.00 PHD=32.00 C=(0.100)/[0.004]	13 3 RV RC SLD,JG SGC,ASD AN	0475 STD [0.020] [0.030] [0.040] [0.060]	0475N 32.00 78.00 FC 32X1.0	GK 170CBSn GK 153CP GO 582C	1 1 1		2.500 2.500 4.000	0.20-0.35 0.45-0.60 0.25-0.40	5314 SHAKTI STD	OD=(96.80)/ [3.81] ID=92.00 L=215.00 CD=(97.90)/ [3.854] T=4.80	0092FF DRY FULLY FINISHED OD TURNED STD
64 TATA 1210SE/692 CNG-3RV	92.00 6	CH=65.00 DH=0.00 TL=105.00 PHD=32.00 C=(0.100)/[0.004]	45 3 RV RC SGC GPO	0724 STD	0724N 32.00 78.00 SC 32X1.2	GK 170CBPLSE GO 320P GO 582CP(PG)	1 1 1		2.500 2.500 4.000	0.20-0.35 0.45-0.60 0.25-0.40	5314 TKIDCES STD	OD=(96.07)/ [3.78] ID=92.00 L= 216.5 CD=(97.00)/ [3.819] T= 6.30	0092MFF DRY FULLY FINISHED OD TURNED STD

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
65 TATA 1612/1510/2213 697 NA 5 RV - RING CARRIER 5677CC, 120PS 2800	97.00 6	CH=65.20 DH=0.00 TL=115.27 PHD=36.00 C=(0.100)/[0.004]	41 5 RV RC 1GT P SGC	0474 STD (0.50) (0.75) (1.00) (1.50)	0474N 36.00 82.50 FC 36X1.5	GK 170CBSn GK 120P GK 120P GO 582C GO 535P	1 1 1 1 1		3.000 3.000 3.000 5.500 5.500	0.35 - 0.55 0.35 - 0.55 0.25 - 0.40 0.25 - 0.40 0.25 - 0.40	5316 TSDCPGES STD (0.10) (0.25) (0.50) (0.75) (1.00) (1.50)	OD=(100.00)/ [3.94] ID=97.00 L=219.50 CD=(103.50)/ 4.075] T=4.00	0097FFM DRY FULLY FINISHED OD GROUND STD
66 TATA 1612/1510/1313/ 2213/697 NA-4RV 130 HP, 2800 rpm ALL RINGS ABOVE PIN BORE	97.00 6	CH=65.20 DH=0.00 TL=115.20 PHD=36.00 C=(0.100)/[0.004]	41 4 RV RC 1GT SGC P	0490 STD (0.075) (0.125) (0.50) (1.00) (1.50)	0490N 36.00 82.50 SC 36 X 1.5	GK 170CBSn GK 120P GK 120P GO 582C	1 1 1 1		3.000 3.000 3.000 5.500	0.20-0.35 0.25-0.40 0.35-0.55 0.25-0.40	5317 TSDCPGES STD (0.10) (0.50) (1.00) (1.50)	OD=(100.00)/ [3.94] ID=96.30 L=220.00 CD=(103.50)/ [4.075] T=5.10	0097SHP/ SHAKTI POWER DRY SEMI FINISHED OD GROUND STD [0.020] [0.040] [0.060]
67 TATA 1612/1510/1313/ 2213/697 NA-4RV OIL RING BELOW PIN BORE	97.00 6	CH=65.20 DH=0.00 TL=105.20 PHD=36.00 C=(0.100)/[0.004]	41 4 RV RC 1GT SGC P	0460 STD [0.010] [0.020] [0.030] [0.040]	0460N 36.00 82.50 SC 36 X 1.5	GK 170MOB GK 153P GO 582C(PG) GO 542P	1 1 1 1		2.500 2.500 4.000 4.000	0.20-0.35 0.40-0.60 0.25-0.40 0.30-0.55	5326 TSMOICES STD	OD=(100.00)/ [3.94] ID=96.30 L=220.00 CD=(103.50)/ [4.075] T=5.10	0097M DRY SEMI FINISHED OD GROUND STD [0.020] [0.040] [0.060]
						GK 175MPBP GK 153P GO 582C(PG) GO 542P	1 1 1 1		2.500 2.500 4.000 4.000	0.20-0.35 0.40-0.60 0.25-0.40 0.20-0.35	5326 PLASMA GOLD STD	OD=(100.00)/ [3.94] ID=97.00 L=219.50 CD=(103.500)/ [4.075] T=4.00	0097SHF DRY FULLY FINISHED OD GROUND STD

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
68 TATA 1612/1510/1313/ 2213/697 NA-3RV SLIPPER DESIGN	97.00 6	CH=65.20 DH=0.00 TL=105.20 PHD=36.00 C=(0.100)/[0.004]	41 3 RV RC 1GT SGC JG AG SS GPO SLD	0468 STD (0.50) (1.00)	0468N 36.00 82.50 SC 36 X 1.5	GK 170MOB	1		2.500	0.20-0.35	5321 MOLY PLUS STD	OD=(100.00)/ [3.94] ID=97.00 L=219.50 CD=(103.50)/ 4.075] T=4.00	0097FFM DRY FULLY FINISHED OD GROUND STD
						GK 153MOP	1		2.500	0.40-0.60			
						GO 582CP	1		4.000	0.25-0.40			
						GK 175MPBP	1		2.500	0.20-0.35	5321 PLASMA STEEL POWER STD	OD=(100.00)/ [3.94] ID=96.00 L=220.00 CD=(103.50)/ [4.075] T=5.10	0097MB DRY SEMI FINISHED OD GROUND STD
						GK 153P	1		2.500	0.40-0.60			
						GO 582 N	1		4.000	0.25-0.40			
69 TATA1612/1313/1613 Z697 NA 3 RV	97.00 6	CH=65.20 DH=0.00 TL=105.20 PHD=36.00 C=(0.100)/[0.004]	41 3 RV RC,1GT SGC,JG GPO	0496 STD (0.50) (1.00)	0496N 36.00 82.50 SC 36 X 1.5	GK 175CBP	1		2.500	0.20-0.35	5321 EURO POWER STD	OD=(100.00)/ [3.94] ID=97.00 L=219.50 CD=(103.500)/ [4.075] T=4.00	0097SHF DRY FULLY FINISHED OD GROUND STD
						GK 153CP	1		2.500	0.45-0.60			
						GO 582CP	1		4.000	0.25-0.40			
70 TATA 1612/1313/1613/ 697 NA 3 RV INDIA II SLIPPER LIGHT WEIGHT	97.00 6	CH=65.20 DH=0.00 TL=100.70 IPHD=36.00 C=(0.100)/[0.004]	41 3 RV RC,1GT SGC JG,AG SS,GPO SLD	0777 STD	0777N 36.00 80.00 SC 36 X 1.5	GK 175MPBP	1		2.500	0.20-0.35	5321 PLASMA GOLD POWER STD	OD=(100.00)/ [3.94] ID=97.00 L=219.50 CD=(103.50)/ 4.075] T=4.00	0097FFM DRY FULLY FINISHED OD GROUND STD
						GO 153P	1		2.500	0.45-0.60			
						GO 582P	1		4.000	0.25-0.40			
71 TATA 1612/1313/1613/ 1510/2213/697 NA 3RV MOLY COATED	97.00 6	CH=65.20 DH=0.00 TL=100.70 PHD=36.00 C=(0.100)/[0.004]	41 3 RV,RC 1GT,SM JG, AG SS, GPO SLD, PHR 2&3 LR	0888 STD	0888N 36.00 80.00 SC 36 X 1.5	GK 170CBSN	1		2.500	0.20-0.35	6881 TSIDCES STD	OD=(100.00)/ [3.94] ID=96.00 L=220.00 CD=(103.50)/ [4.075] T=5.10	0097MB DRY SEMI FINISHED OD GROUND STD
						GO 320P	1		2.500	0.45-0.60			
						GO 582CP	1		4.000	0.25-0.40			
						GK 170MOB	1		2.500	0.20-0.35	5321 CHALLENGER STD		
						GK 153CP	1		2.500	0.45-0.60			
						GO 582CP(PG)	1		4.000	0.25-0.40			

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
72 TATA1612/1510/2213/ 697 NA CNG	97.00 6	CH=65.20 DH=0.00 TL=100.70 PHD=36.00 C=(0.100)/[0.004]	97 3 RV,1GT SGC,JG AG,SS GPO SLD	0711 STD	0711N 36.00 80.00 SC 36 X 1.5	GK 170MOB GO 320P GO 582 CP	1 1 1		2.500 2.500 4.000	0.20-0.35 0.45-0.60 0.25-0.40	5321 TSMOICES STD	OD=(100.00)/ [3.94] ID=96.30 L=220.00 CD=(103.50)/ [4.075] T=5.10	0097M DRY SEMI FINISHED OD GROUND STD [0.020] [0.040] [0.060]
73 TATA 1516/697TC/ HITACHI LOADER RC 3RV 17:1, 5675cc 160 HP@ 2800 rpm	97.00 6	CH=65.20 DH=0.00 TL=105.20 PHD=36.00 C=(0.100)/[0.004]	7 3 RV RC 1GT SGC	0491 STD	0491N 36.00 82.50 FC 36 X 1.5	GK 170MOB GK 153P GO 582 CP	1 1 1		2.500 2.500 4.000	0.20-0.35 0.40-0.60 0.25-0.40	5321MOLY GOLD STAR STD	OD=(100.00)/ [3.94] ID=96.30 L=220.00 CD=(103.50)/ [4.075] T=5.10	0097SHP DRY SEMI FINISHED OD GROUND STD [0.020] [0.040] [0.060]
74 TATA 1613LPT/2515LPT 613/713/697TC-CMVR 110PS	97.00 6	CH=65.20 DH=0.00 TL=99.20 PHD=36.00 C=(0.120)/[0.005]	96 3 RV 1GT,SGC JG,SS AG,GPO SLD	0710 STD	0710N 36.00 80.00 FC 36X1.5	GK 176MOB GK 153MOP GO 582N	1 1 1		2.500 2.500 4.000	0.20-0.35 0.40-0.60 0.25-0.40	5321 MOLY EXTRA PREMIUM STD (0.10) (0.25)	OD=(100.00)/ [3.94] ID=96.30 L=220.00 CD=(103.50)/ [4.075] T=5.10	0097M/0097MB DRY SEMI FINISHED OD GROUND STD [0.020] [0.040] [0.060]
75 TATA 1613LPT/2515LPT 613/713/697TC-CMVR 110PS	97.00 6	CH=65.20 DH=N.A. TL=100.2 PHD=36.00 C=(0.110)	96 3 RV 1GT,SM JG,SS AG,GPO SLD	07101 STD	07101N 36.00 80.00 FC 36 X 1.5	GK 170CBSn GK 153P GO 582CP	1 1 1		2.500 2.500 4.000	0.20 - 0.35 0.40 - 0.55 0.20 - 0.40	5321 STEEL POWER STD (0.10) (0.25)	OD=(100.00)/ [3.94] ID=97.00 L=219.50 CD=(103.500)/ [4.075] T=4.00	0097SHF DRY FULLY FINISHED OD GROUND STD
76 TATA 1613LPT/2515LPT TATA 697TC EURO-II Old Type (4mm Oil Ring)	97.00 6	CH- 65.25 DH-0.00 TL-99.20 PHD- 36 C-0.12(0.005)	103 3RV RC,1GT SM,LT ASD	0702 STD	0702N 36.00 80.00 FC 36x1.5							OD=(100.00)/ [3.94] ID=97.00 L=219.50 CD=(103.50) /4.075] T=4.00	0097FFM DRY FULLY FINISHED OD GROUND STD

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
77 TATA 1613 LPT/2515 LPT/613/1516TC/713/ 697 TC EURO-II MODIFIED	97.00 6	CH=65.25 DH=0.00 TL=99.20 PHD=36.00 C=(0.120)/[0.005]	103 3 RV RC 1GT SM,P LT ASD	07022 STD	07022N 36.00 80.00 FC 36 X 1.5	GK 179MPBP GK 130P GO 582N	1 1 1		2.500 2.500 3.000	0.20-0.40 0.30-0.60 0.25-0.45	6891 PLASMA STEEL POWER STD	OD=(100.00)/ [3.94] ID=97.00 L=219.50 CD=(105.00)/ [4.134] T=4.6	00971EUROFF DRY FULLY FINISHED OD GROUND STD
78 TATA 1613 LPT/2515 LPT/697 TC EURO-II MODIFIED SLIPPER	97.00 6	CH=65.25 DH=N.A. TL=100.25 PHD=36.00 C=(0.110)/[0.005]	103 3 RV SM RC 1GT LT ASD	07024 STD	07024N 36.00 80.00 FC 36 X 1.5	GK 179MPBP GK 130P GO 582N	1 1 1		2.500 2.500 3.000	0.20-0.40 0.30-0.60 0.25-0.45	6891 PLASMA STEEL POWER STD	OD=(100.00)/ [3.94] ID=93.50 L=220.00 CD=(105.00)/ [4.134] -T=4.60	00971EURO DRY SEMI FINISHED OD GROUND STD
79 TATA 697/497EURO-III 609/709/909/1109- EURO-III	97.00 6	CH=65.25 DH=0.00 TL=100.5 PHD=36.00 C=(0.110)/[0.0045]	103 3 RV RC SM TVP ASD	04181 STD	04181N 36.00 80.00 SC 36 X 1.5	GK 176MPBP GK 130P GO 582N	1 1 1		3.000 2.500 3.000	0.20-0.35 0.45-0.60 0.25-0.40	6892 PLASMA STEEL POWER STD	OD=(100.00)/ [3.94] ID=97.00 L=219.50 CD=(103.500)/ [4.075] T=4.00	0097SHF DRY FULLY FINISHED OD GROUND STD
80 TATA 608/697 6SP 3RV RC 17:1, 4434cc 90 HP@2800 rpm	97.00 6	CH=58.50 DH=0.00 TL=93.50 PHD=36.00 C=(0.100)/[0.004]	13 3 RV RC 1GT SGC	0494 STD (0.075) (0.125)	0494N 36.00 80.00 SC 36 X1.5	GK 170MOB GK 151MO GO 582CP	1 1 1		2.500 2.500 4.000	0.20-0.35 0.20-0.35 0.25-0.40	6872 TSSMOCES STD	OD=(100.00)/ [3.94] ID=97.00 L=219.50 CD=(103.50)/ 4.075] T=4.00	0097FFM DRY FULLY FINISHED OD GROUND STD
						GK 170CBP GK 153P GO 582C	1 1 1		2.500 2.500 4.000	0.20-0.35 0.45-0.60 0.25-0.40	6872 TSDCPGES STD (0.50) (1.00)	OD=(100.00)/ [3.94] ID=96.00 L=220.00 CD=(103.50)/ [4.075] T=5.10	0097MB DRY SEMI FINISHED OD GROUND STD
						GK 170MOB GO 320P GO 582C(PG)	1 1 1		2.500 2.500 4.000	0.20-0.35 0.45-0.55 0.25-0.40	6872 TSSMOICES STD		

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
						GK 175MPBP	1		2.500	0.20-0.35	6872 PLASMA STD (0.10) (0.25)	OD=(100.00)/ [3.94] ID=96.30 L=220.00 CD=(103.50)/ [4.075] T=5.10	0097SHP DRY SEMI FINISHED OD GROUND STD [0.020] [0.040] [0.060]
						GK 153P	1		2.500	0.40-0.60			
						GO 582C	1		4.000	0.25-0.40			
81 TATA 407/497 4SP 3RV RC 65 PS@ 3200 rpm	97.00 4	CH=58.50 DH=0.00 TL=93.50 PHD=36.00 C=(0.110)/[0.004]	13 3 RV RC 1GT JG SN SGC AN,P 	0445 STD (0.075) (0.125)	0445N 36.00 80.00 FC 36 X 1.5	GK 170MOB	1		2.500	0.20-0.35	6871 CHALLENGER STD	OD=(100.00)/ [3.93] ID=97.00 L=177.00 CD=(103.50)/ [4.075] T=4.00	0096SHF DRY FULLY FINISHED OD GROUND STD
						GK 153CP	1		2.500	0.45-0.55			
						GO 582CP	1		4.000	0.25-0.40			
82 TATA 407 4SP SLIPPER DESIGN	97.00 4	CH=58.50 DH=0.00 TL=93.50 PHD=36.00 C=(0.100)/[0.004]	13 3 RV RC 1GT SLD P, SGC AN 	0458 STD [0.020] [0.040]	0458N 36.00 82.50 SC 36 X 1.5	GK 170MOB	1		2.500	0.20-0.35	6871 TSSMOICES STD	OD=(100.00)/ [3.94] ID=96.30 L=177.00 CD=(103.50)/ [4.075] T=5.10	0096E DRY SEMI FINISHED OD GROUND STD
						GO 320P	1		2.500	0.30-0.55			
						GO 582CP	1		4.000	0.25-0.40			
						GK 175MOB	1		2.500	0.20-0.35	6871MOLY GOLD STAR STD	OD=(100.00)/ [3.94] ID=96.30 L=177.00 CD=(103.50)/ [4.075] T=5.10	0096/0096M DRY SEMI FINISHED OD GROUND STD
						GK 153P	1		2.500	0.45-0.60			
						GO 582CP	1		4.000	0.25-0.40			
						GK 170MOB	1		2.500	0.20-0.35	6871 MOLY EXTRA PREMIUM STD		
						GK 153MOP	1		2.500	0.45-0.60			
						GO 582N	1		4.000	0.25-0.40			

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
83 TATA 407 4SP CMVR 3RV-RING CARRIER 65PS@3200 RPM	97.00 4	CH=58.50 DH=0.00 TL=93.50 PHD=36.00 C=(0.110)/[0.004]	80 3 RV RC 1GT SGC P	0462 STD	0462N 36.00 80.00 SC 36 X 1.5	GK 170CBP GK 153 CP GO 582CP	1 1 1		2.500 2.500 4.000	0.20-0.35 0.45-0.55 0.25-0.40	6871 EURO POWER STD	OD=(100.00)/ [3.94] ID=96.30 L=177.00 CD=(103.50)/ [4.075] T=5.10	0096SHP DRY SEMI FINISHED OD GROUND STD
84 TATA 407 4SP TC SAFARI TC EURO-I	97.00 4	CH=58.50 DH=0.00 TL=93.50 PHD=36.00 C=(0.110)/[0.004]	96 3 RV RC 1GT SGC ASD P	0465 STD	0465N 36.00 80.00 SC 36 X 1.5	GK 170MOB GK 151MO GO 582CP	1 1 1		2.500 2.500 4.000	0.20-0.35 0.20-0.35 0.25-0.40	6871 TSSMOCES STD	OD=(100.00)/ [3.93] ID=97.00 L=177.00 CD=(103.50)/ [4.075] T=4.00	0096SHF DRY FULLY FINISHED OD GROUND STD
85 TATA 407 4SP TC/ 207 DI EURO-II	97.00 4	CH=58.80 DH=0.00 TL=93.50 PHD=36.00 C=(0.110)/[0.004	96 3 RV RC 1GT SM ASD P	04651 STD	04651N 36.00 80.00 SC 36 X1.5	GK 179MPBP GK 130P GO 582N	1 1 1		2.500 2.500 3.000	0.20-0.40 0.30-0.60 0.25-0.45	6887 PLASMA STEEL POWER		
86 TATA 407 4SP EURO-III	97.00 6	CH=58.80 DH=N.A. TL=93.80 PHD=36.00 C=(0.110)/[0.004	3 RV RC 1GT SM,LT ASD	04224 STD	04224N 36.00 80.00 SC 36 X1.5	GK 179MPBP GK 155MPP GO 582N	1 1 1		3.000 2.500 4.000	0.20-0.35 0.80-1.00 0.25-1.00	6889 PLASMA STEEL POWER		
87 TATA 609/709/809TC/ 497X128 TURBO ENGINE EURO-I	97.00 4	CH=65.20 DH=0.00 TL=105.20 PHD= 36.00 C=(0.100)/[0.004]	96 3 RV RC 1GT SGC ASD	0466 STD	0466N 36.00 80.00 SC 36 X 1.5	GK 170MOB GK 153MOP GO 582CP	1 1 1		2.500 2.500 3.000	0.20-0.35 0.40-0.55 0.25-0.40	6871 MOLY PLUS STD	OD=(100.00)/ [3.94] ID=96.30 L=177.00 CD=(103.50)/ [4.075] T=5.10	0096SHP DRY SEMI FINISHED OD GROUND STD

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
88 TATA 609/709/809 LP 497 X 128/ TORROIDAL CAVITY	97.00 4	CH=65.20 DH=0.00 TL=105.20 PHD=36.00 C=(0.100)/[0.004]	55 3 RV RC 1GT SGC	0461 STD	0461N 36.00 80.00 FC 36 X 1.5	GK 175MPBP GK 153P GO 582C	1 1 1		2.500 2.500 4.000	0.20-0.35 0.40-0.60 0.25-0.40	6871 PLASMA GOLD POWER STD	OD=(100.00)/ [3.93] ID=97.00 L=177.00 CD=(103.50)/ [4.075]-T=4.00	0096SHF DRY FULLY FINISHED OD GROUND STD
89 TATA SPACIO EURO-II	97.00 4	CH=59.00 DH=0.00 TL=94.00 PHD=36.00 C=(0.110)/[0.004]	96 3 RV RC 1GT SGC P ASD	0350 STD	0350N 36.00 80.00 FC 36 X 1.5	GK 170CBSN GK 153P GO 582C(PG)	1 1 1		2.500 2.500 4.000	0.20-0.35 0.40-0.55 0.25-0.40	6871 STEEL POWER	OD=(100.00)/ [3.94] ID=96.30 L=177.00 CD=(103.50)/ [4.075] T=5.10	0096SHP DRY SEMI FINISHED OD GROUND STD
90 TATA SAFARI DICOR / 97/ 4SP TCIC EURO-III MODIFIED 150PS	97.00 4	CH=58.80 DH=0.00 TL=93.80 PHD=36.00 C=(0.110)/[0.004]	103 3RV RC 1GT ASD GPO SGC	04221 STD	04221N 36.00 80.00 FC 36X1.5	GK 176MPBP GK 155MPP GO 582N	1 1 1		3.000 2.500 4.000	0.20-0.35 0.80-1.00 0.25-0.40	6889 PLASMA STEEL POWER STD		
91 TATA 97 4SP CNG	97.00 4	CH=57.00 DH=0.00 TL=92.00 PHD=36.00 C=(0.110)/[0.004]	97 3 RV RC TPB ASD	0426 STD	0426N 36.00 80.00 FC 36X1.5	GK 110MPBP GK 120P GO 582CP	1 1 1		2.450 2.000 4.000	0.20-0.35 0.35-0.50 0.25-0.40	6884 PLASMA STD (0.10) (0.25)	OD=(100.00)/ [3.94] ID=96.30 L=177.00 CD=(103.50)/ [4.075] T=5.10	0096SHP
92 TATA CUMMINS	102.00 6	CH=71.585 DH=0.00 TL=105.41 PHD=40.009 C=(0.120)/ [0.005]	103 3 RV RC 1GT TPB	0481 STD [0.020] [0.040]	0481N 40.00 82.68 SC 40 X 1.75	AVAILABLE ONLY IN O.E. PACKING						OD=(106.00)/ [4.17] ID=101.35 L=204.00 CD=(106.90)/ [4.209] T=4.85	0099M DRY FULLY FINISHED OD GROUND STD

Make & Model	Cyl.	Piston			Pin	Rings						Cylinder Liner	
	Cyl. Dia. (D) No. of Cyl.	Dimensions (mm) / [inch]	Head Shape Type / Coatings / Features	Ref. No. Size (mm) / [inch]	Ref. No.	Combination per set (coatings / features)	No. of Ring per Cyl.	Type	Axial Ht. (mm)	End Gap min - max (mm)	Ref. No. Size available (mm) / [inch]	Dimensions (mm) / [inch]	Ref. No. Type Bore finish Alternate Liner
93 TATA CUMMINS EURO II	102.00 6	CH=71.585 DH=0.00 TL=105.41 PHD=40.009 C=(0.120)/[0.005]	103 3 RV RC 1GT TPB Thin Top Land	04811 STD	04811N 40.00 82.68 SC 40 X 1.75	AVAILABLE ONLY IN O.E. PACKING						OD=(104.50)/ [4.11] ID=101.35 L=200.00 CD=(105.622)/ [4.158] T=4.12	0088 DRY SEMI FINISHED OD GROUND STD
94 TATA CUMMINS CNG TRAPEZOIDAL GROOVE	102.00 6	CH=70.635 DH=0.00 TL=104.46 PHD=40.009 C=(0.120)/[0.005]	105 3 RV RC 1GT SLD	0721 STD	0721N 40.00 82.68 SC 40 X 1.75	AVAILABLE ONLY IN O.E. PACKING						OD=(104.77)/ [4.12] ID=101.35 L=204.00 CD=(105.622)/ [4.158] T=4.85	00991 DRY FULLY FINISHED OD GROUND STD
95 TATA CUMMINS CNG	102.00 6	CH=70.635 DH=0.00 TL=104.46 PHD=40.00 C=(0.120)/[0.005]	105 3 RV RC TPB ASD	0707 STD	0707N 40.00 82.68 SC 40 X 1.75	AVAILABLE ONLY IN O.E. PACKING						OD=(104.50)/ [4.11] ID=101.35 L=200.00	0099 DRY SEMI FINISHED OD GROUND W/O COLLAR STD
96 TATA ACE / 275 IDI NA BS-II / III 16HP @3200 RPM	75.00 2	CH=42.95 DH=0.00 TL=69.00 PHD=23.00 C=(0.060)/[0.002]	54 3 RV SGC ASD P	04333 STD (0.25) (0.50) (0.75)	04333N 23.00 56.50 RC C23 X 1.5	GK 110MOB GK 120P GO 582CP	1 1 1		2.000 2.000 3.000	0.20-0.35 0.35-0.50 0.20-0.35	5764 MOLY GOLD POWER STD	OD=(78.30)/ [3.083] ID=73.80 L=134.50 CD=(79.40)/ [3.126] T=4.70	00992 DRY SEMI FINISHED OD GROUND STD
						GK 150CBPLSE GK 153P GO 582CP	1 1 1		2.000 2.000 3.000	0.20-0.35 0.35-0.50 0.20-0.35	5764 GOLD POWER STD		
						GK150CBPLSE GK 153P GO 582CP	1 1 1		2.000 2.000 3.000	0.20-0.35 0.35-0.50 0.20-0.35	5764 EURO POWER STD		