NPR (Nippon Piston Ring) Piston Rings.

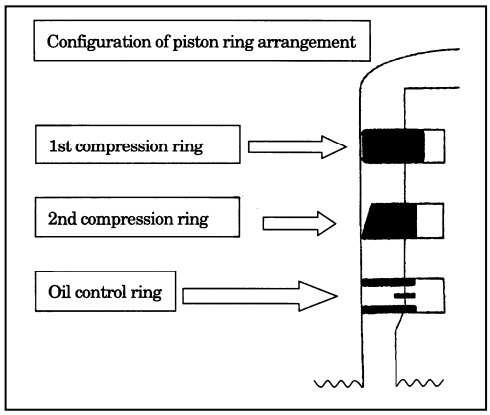
1. The most important functions of NPR Piston Rings.

NPR's most important principles of Piston Rings are:

a. Function (Reliability).
b. Reduced Weight.
c. Low Friction.
d. Low Production Cost.

Functions of each 1st, 2nd, and Oil Control Rings (please see below figures):

Function \ Type	1st compression ring	2nd compression ring	Oil control ring
Gas seal	◎	○	—
Oil control	○	◎	◎
Heat conduction	◎	○	—
Bearings	◎	○	○



1) **Gas Seal**:
The seal must perform during both the compression stroke and expansion stroke to provide maximum performance. This is the best achieved with the proper amount of lubricant oil film on the piston ring cylinder contact point and complete contact of the bottom of the piston ring against the piston groove. Therefore, the proper seal improves performance and decreases oil consumption.

2) **Oil Control**:
The function of the oil control ring is to assure the proper amount of lubricant film. By providing the correct lubricant film for all piston ring contact points on the cylinder, this will prevent scuffing and excessive wear. However, an excessive amount of lubricant film will force too much oil into the combustion chamber resulting in soot in the exhaust.

3) **Heat Conduction**:
The function of heat conduction is to allow heat to escape from the piston head to cylinder wall and then to cooling water and/or cooling fins. If the heat is not allowed to decrease, oil temperature will increased. These results in reduced oil viscosity and increased oil consumption.

4) **Bearing**:
Pistons have reciprocation motion in both expansion and compression strokes. Because of this the piston exerts a higher pressure against one side of the cylinder wall during the expansion stroke. The piston ring assures a proper clearance between the piston and the cylinder wall while maintaining complete contact around the entire circumference of the cylinder wall. This prevents both gas blow by and piston scoring.

2. The quality advantages of NPR Steel Rings.

NPR's unrivaled Piston Rings and Pistons will satisfy the needs of today's higher performance engine. All Piston Rings and Pistons listed in this catalog are the results of NPR's many years of engineering knowledge and experience taking into consideration material composition and surface treatment design.

Material – Steel vs. Cast Iron vs. Ductile Iron.

Today's modern engines have higher operating temperatures, higher compression, higher stress and higher restrictions on emissions. These conditions have put greater demands on piston rings. Steel rings outperform their cast iron predecessors in reduced oil consumption, reduced blow by, reduced wear, reduced breakage, and reduced friction.

Oil consumption

Steel piston rings allow for a reduction in the radial wall thickness. This (thinner) and lighter design seals more completely against the ring groove. Also, NPR's steel ring designs with greater material strength, reduced width and radial wall dimensions conform better to less than perfect cylinder bores. These two advantages can reduce oil consumption by more than 30%.

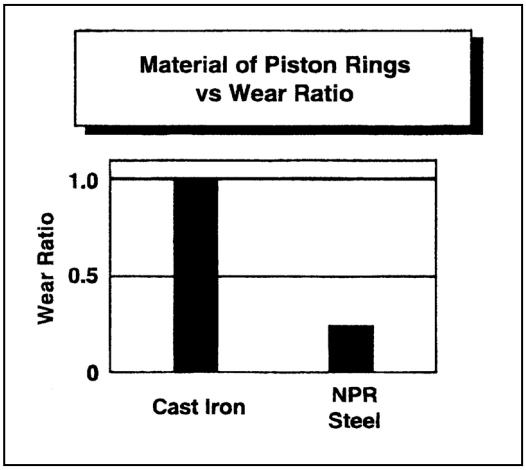
Durability of Steel

The inherent strength of high alloy steel dramatically reduces the chance of ring breakage. Late model engines have reduced their ring thickness from 2.0 to 1.2 and 1.0 mm. Steel also provides for longer service life because ring wear is reduced by over 60%. Simply stated steel rings last 50% longer.

Steel Piston Rings

Advantages: Higher tensile strength.
Higher yield strength.
Greater fatigue life.
Greater hardness.
Lower ring mass.

Benefits: Better stress resistance.
Reduced rings side wear.
Reduced grooves pound out.
Longer service life.
Better conformability.
Superior oil economy.
Superior blow-by control.
Lower friction.



Surface Treatment

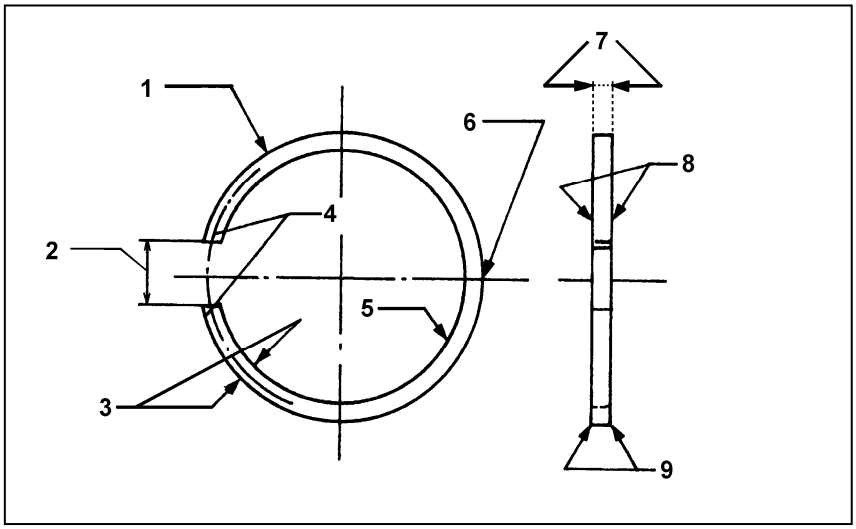
NPR's surface treatment is also very high quality, and the result of our technology. The chart below shows surface treatment comparison.

Surface Treatment	Anti Scuffing	Anti Wearing	Anti Damage to other parts.	Anti Corrosion	Cost
Chrome	Good	Good	Good	Good	Very Good
Moly	Good	Poor	Very Poor	Poor	Good
Gas Nitride	Good	Very Good	Very Good	Very Good	Good
PVD	Excellent	Excellent	Excellent	Excellent	High

3. Piston Ring – Name of Parts

Free (Unstressed) Ring

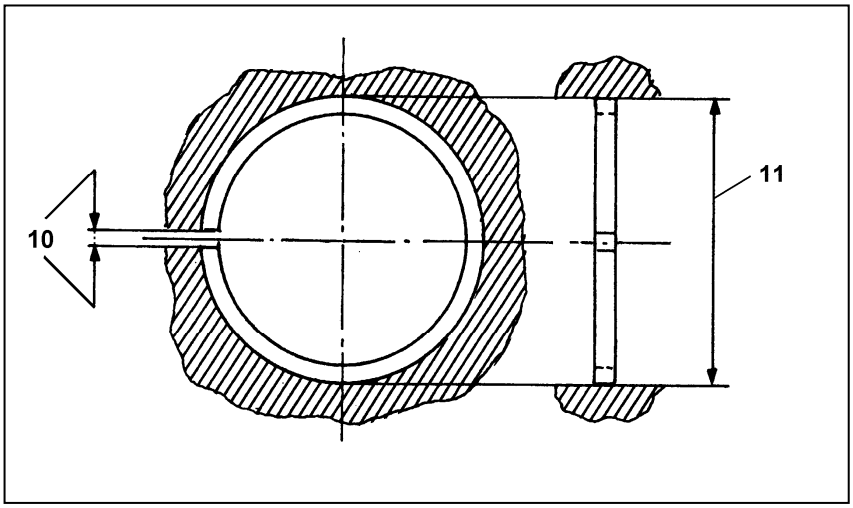
1. Ring face or Periphery.
2. Total free gap (m).
3. **T**: Radial wall thickness (ai).
4. Butt ends.
5. Inside Surface.
6. Back of the ring.
7. **B**: Ring width (h1)
8. Side Face.
9. Peripheral edges.



Closed Gap

10. Closed gap (S1).
11. Cylinder Bore (H).
    Nominal ring diameter (d1).

Symbols in ( ) are as given in :
ISO6621/1
SAE J1588
JIS B 8032

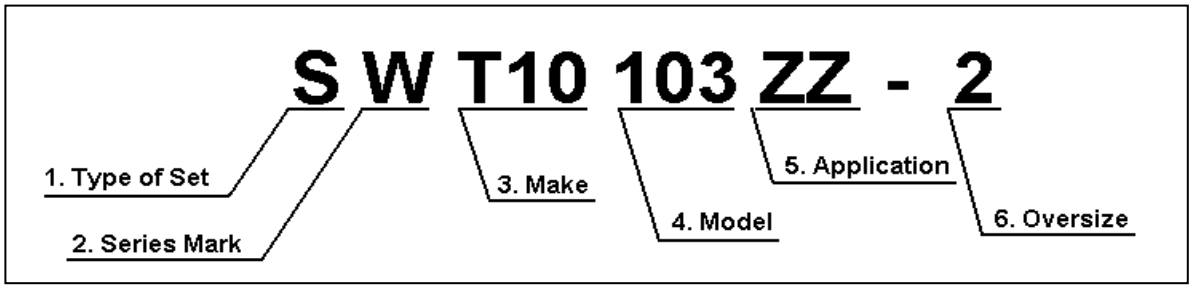


Recommended Closed Ring Gap
NPR generally manufacturers its rings to meet the JIS (Japanese Industrial Standard) B8032-6-1998. It is important to recognize that some end gaps for individual engines may vary from this standard because of the original engine manufacturer's requirements. The table appearing below is for reference only. All sizes are in millimeters. See page #xi for more information.

Recomendacion De Cierre Del Espacio Final Del Anillo (End Gap)
NPR generalmente fabrica sus anillos para piston siempre siguiendo las normas del FIS (El estandar industrial Japones) B8032-6-1998. Es importante reconocer que en algunos motores, el espacio final del anillo puede variar del JIS a causa de los requerimientos del fabricante. La tabla que aparece debajo es de referencia solamente. Todas las medidas son en milimetros.

Cylinder Bore Size	Compression Ring Gap	2pc. Oil Ring Gap	3pc. Oil Ring Gap
40.00 ~ 59.00	0.15 ~ 0.35	0.15 ~ 0.35	-
60.00 ~ 74.00	0.20 ~ 0.40	0.20 ~ 0.40	0.20 ~ 0.95
75.00 ~ 89.00	0.25 ~ 0.50	0.25 ~ 0.50	0.25 ~ 1.00
90.00 ~ 109.00	0.30 ~ 0.55	0.30 ~ 0.50	0.30 ~ 1.05
110.00 ~ 120.00	0.35 ~ 0.60	0.35 ~ 0.60	0.35 ~ 1.10

4. Explanation of NPR Ring set Code.



1) Type of Set.

S: Eleven digits code started with S represents a complete set of piston rings for an engine model S assigned by Make and Model codes. For instance, TOYOTA 22RE (4 cylinder) has been assigned as T10103. In this case, SWT10103ZZ-2 represents four sets of each 1st, 2nd, and oil rings.

Y: Eleven digits code started with Y represents only one cylinder set of piston ring. In case of TOYOTA 22RE, YWT10103ZZ-2 represents one set of 1st, 2nd, and oil rings.

Note: NPR has both engine set (S-) and cylinder set (Y-) code in the same Make, Model and Application for some makes (HONDA / ISUZU / SUZUKI / YAMAHA etc.).

Note 2: Since a cylinder set code (Y-) represents a piston ring set for only one cylinder, an engine requires a cylinder set multiplied by the number of cylinders of the engine.

2) Series Marks

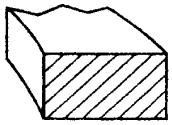
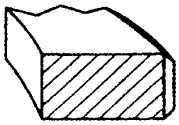
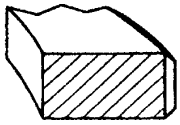
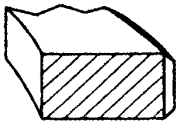
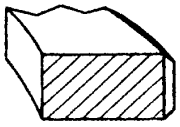
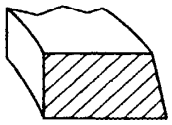
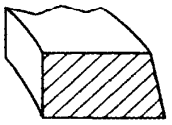
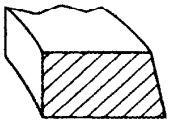
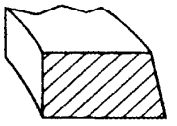
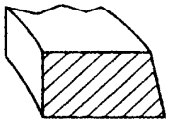
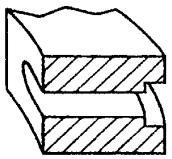
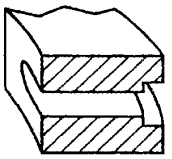
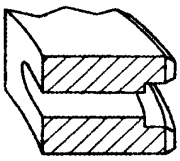
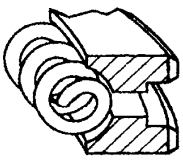
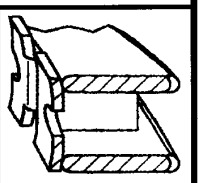
Series Mark	Series #	Series Mark	Series #
A	100	L	100X
B	300	M	300X
C	500	N	500X
D	555	R	Mt.100X
F	Mt.100	S	Mt.300X
G	Mt.300	T	Mt.500X
H	Mt.500	W	777
J	Mt.555	X	Mt.777

US Application
Most of Piston Rings for Gas Engine: Mt.777 or 777.
Most of Piston Rings for Diesel Engine: Mt.555 or 555.

Export Piston Rings
There are varieties of Piston Ring Series. Please see above.

Important Note!
From time to time the surface treatment specifications may be changed. Contact NPR, if you have questions on individual engine applications.

Explanation of Series #
There are various combinations of piston rings to make the set suitable to the engine. Using a ring set containing three rings per cylinder, we explain our basic Series #'s as under:

Series #	100	300	500	555	777
Top Ring					
2nd Ring					
Oil Ring					
Feature	Ring set without Chrome Plating.	1st Ring is Chrome Plated.	1st Ring and Oil Ring are Chrome Plated.	This ring set employs Dieselex ring (incorporating a coil expander) as the oil control ring.	This ring set employs Nifflex ring (Consisting of combination of three pieces) as the oil control ring.

Mt.: Top and bottom sides of the ring are Chrome Plated.
X: Plate expander is coupled with oil control ring.

Important Note!

Diesel Ring 555 Series:
Because Diesel Cylinders may have different inside Cylinder wall surfaces, NPR ring surface treatments on Top and Oil Control Ring will change:

Ring Type	Surface Treatment
555	Chrome on outside contact surface.
Mt.555	Chrome on Top, Bottom and Outside contact surface. There may be Chrome on the inside surface depending on individual application.
Mt.555F	Chrome on Top and Bottom surfaces, but no Chrome on outside contact surfaces. Typically used in Chromard Liner applications.

From time to time the surface treatment specifications may be changed. Contact NPR, if you have questions on individual engine applications.

3) NPR Part Number Codes for Vehicle / Engine Manufacturers.

Code	Make
A10	**ASIA**
C10	**CHRYSLER**
D10	DAIHATSU
D20	**DAWEOO**
E10	EUROPAN APPLICATION
F30	**FORD**
F20	SUBARU
G10	**GMC**
G30	**HYUNDAI**
H20	HINO
H30	ACURA, HONDA
I10	ISUZU, (GM, CHEVROLET, GEO)
K04	KOMATSU
K30	**KIA**
M30	MITSUBISHI, (CHRYSLER, DODGE, EAGLE, PLYMOUTH, HYUNDAI)
M31	MITSUBISHI, (HYUNDAI)
N30	INFINITI, NISSAN, (FORD MERCURY)
N31	UD TRUCK NISSAN (NISSAN DIESEL)
S20	SUZUKI, (GM, CHEVROLET, GEO)
T10	LEXUS, TOYOTA, (GM, CHEVROLET, GEO)
T20	MAZDA (FORD, MERCURY)

NOTE: EXPLANATION OF MAKES IN PARENTHESIS ( )
When engines are out-sourced, you may find some set codes which have a make code assigned for an engine manufacturer other than the vehicle manufacturer (For example: SWM31047 is used for Chrysler engine).

4) Model

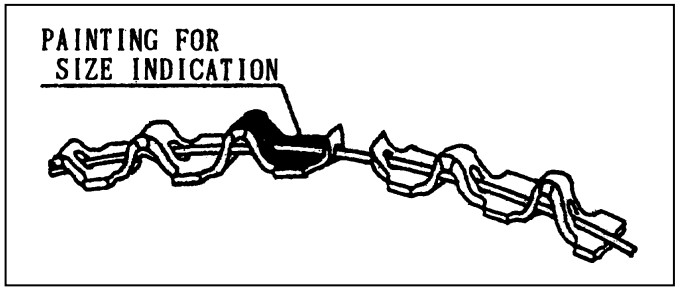
A three digit number is uniquely assigned by an engine model connected with a make code.

5) Serial Code for Application

Assigned by engineer.

6) Oversize Code for Nifflex Expander.

0:	Standard.	No Color
1:	Oversize (0.25mm).	White
2:	Oversize (0.50mm).	Blue
3:	Oversize (0.75mm).	Black
4:	Oversize (1.00mm).	Yellow
5:	Oversize (1.25mm).	Orange
6:	Oversize (1.50mm).	Green



* Indication is only for **Nifflex** type expander rings. *

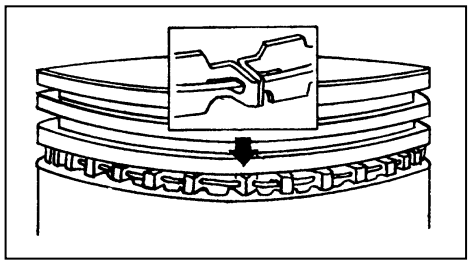
* Please note that there may be some exceptions for this color code depending on the original manufacturers requirement. *

Installation Instruction of Oil Rings.
(Instalacion del Anillo de Control de Aceite)

1. Series 777 Oil Rings. (Anillo de Aceite Serie 777)

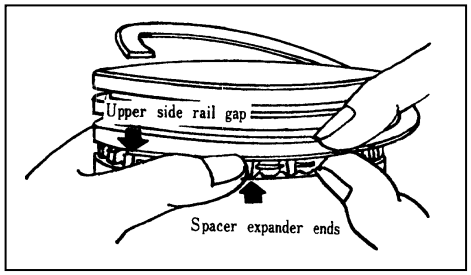
Fit the spacer expander into the ring groove, and ensure that the ends are butting as shown in the illustration.

Acomodar el espaciador dentro de la ranura y asegurarse que las orillas se lleguen a juntar, sin encimarse. Como se muestra en la ilustracion donde las orillas del espaciador se juntan.



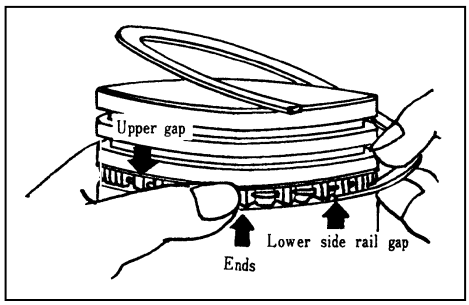
Hold with thumb the spacer expander with its ends completely butting. Install the upper side rail with its gap approximately 45 Degree left of Spacer Expander end.

Con el dedo pulgar sostener el espaciador donde se juntan ambas orillas. Installar primero la lamina o riel superior con una distancia de una pulgada o' 45 grados a la izquierda donde se juntaron las orillas del espaciador.



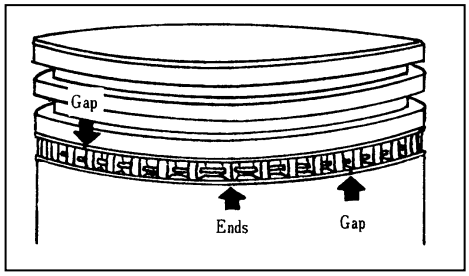
Install the lower side rail with its gap approximately 45 Degree right of the expander ends.

Posteriormente de la misma manera a como se menciono anteriormente se instala la lamina o riel inferior con una distancia de una pulgada o' 45 grados hacia la derecha de donde se juntaron las orillas del espaciador.



If you have followed these instructions, this ring will Be installed as illustrated on the right. Make sure each gap is located as illustration to the right demonstrates.

Si usted ha seguido estas instrucciones como la ilustracion que aparece de lado derecho. Tiene que asegurarse que los huecos (Gap) sean colocados como se muestra en el dibujo.

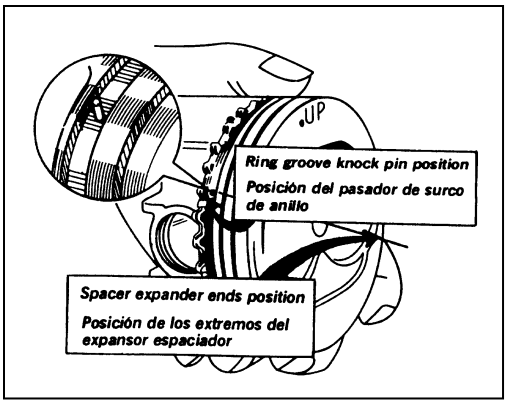


Installation Instruction of Oil Rings.
(Instalacion del Anillo de Control de Aceite.)

2. Series 777 Oil Rings for Subaru EA Engine.
(Serie 777 Anillo de Control de Aceite para Subaru Tipo de Maquina EA.)

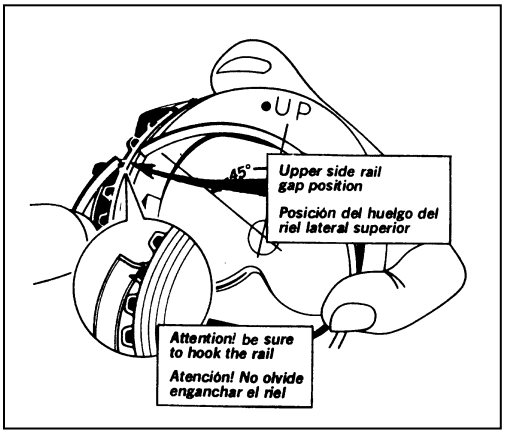
In EA Engine pistons, there is a knock pin in the oil ring groove. Install the spacer expander around the whole piston perimeter, placing its ends approximately 180 Degree from the knock pin.

Los pistones del motor EA tienen un pasador en el Surco del anillo aceitador. Instale el expansor Espaciador alrededor del perimetro total del piston, Ubicando sus extremos a unos 180 Grado de dicho pasador.



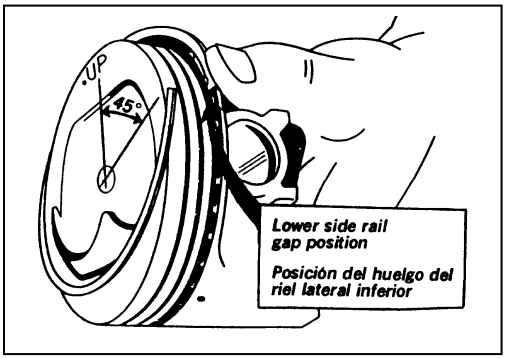
One of the two side rails has one of its ends slightly bent. Hook the bent part into the spacer expander, at a point located approximately 45 Degree left of the piston head "UP" mark, then install the rail around the whole piston perimeter (see figure).

Uno de los dos rieles laterales tiene uno de sus extremos ligeramente doblado. Enganche esta parte doblada en el expansor espaciador, en un punto ubicado a unos 45 Grado a la izquierda de la marca "UP" grabada en la cabeza del piston, e instale el riel alrededor del perimetro total del pison (ver figura).



Install the lower side rail with its gap approximately 45 Degree right of the piston head "UP" mark.

Instale el riel lateral inferior con su hueco ubicado a unos 45 Grado a la derecha de la marca "UP" grabada en la cabeza del piston.

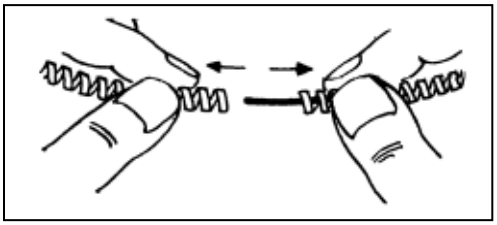


Installation Instruction of Oil Rings.
(Instrucciones para Instalar el Anillo De Control de Aceite.)

3. Series 555 Oil Rings. (Anillo de Aceite Serie 555)

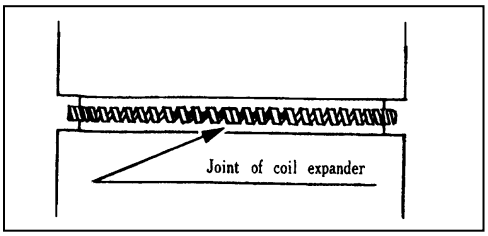
First, disconnect the joint of coil expander.

Primero, desconectar el alambrillo en forma de espiral del espaciador.



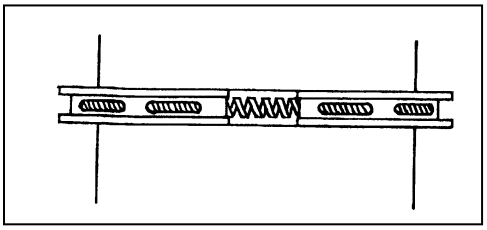
Next, encircle the 1st oil ring groove with coil expander and joint the ends of coil expander again.

Despues, instale el alambrillo en forma de espiral dentro de la ranura del piston en la ranura correspondiente y cerrar el circulo.



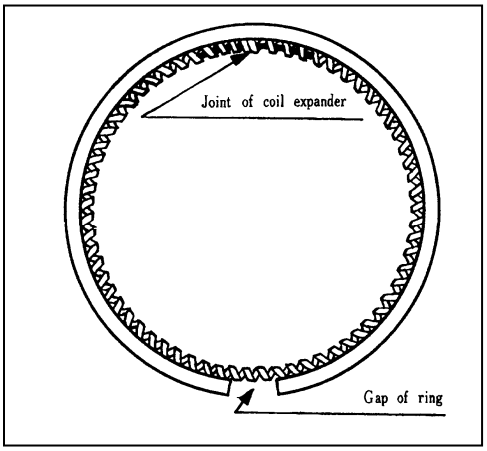
Last, install the ring outside of coil expander. (Please use Piston Ring Installation Tool).

Finalmente, instalar el espaciador por fuera del alambrillo en forma de espiral.



The end of the ring must be placed on the opposite side of the joint of the coil expander.

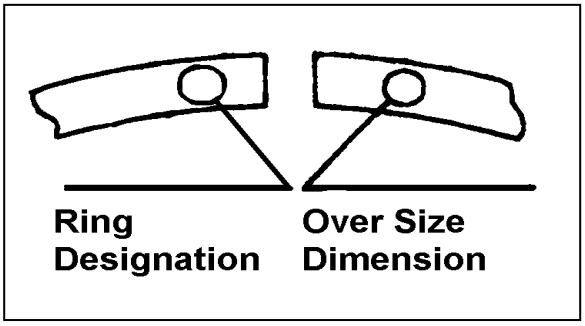
Las orillas del anillo deben de ser colocadas del lado opuesto a la union del alambrillo en forma de espiral.



Installation Instruction of Compression Rings.

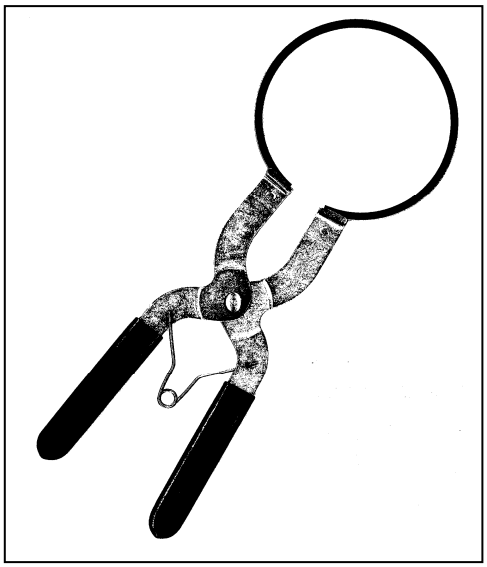
"N" or Number is facing upward when installed on the piston.

Siempre hay que asegurarse que al instalar el anillo de compresion para la primera ranura del piston, este debera notarse que la **N** y el numero**1** deberan estos estar siempre hacia arriba dentro la primera ranura del piston.



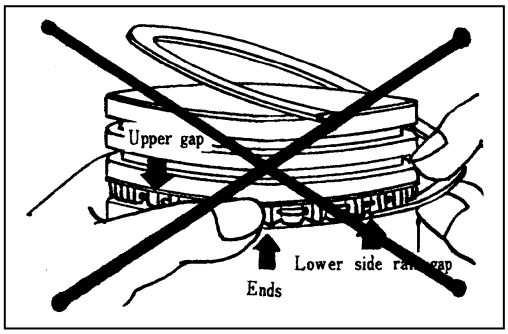
Use Piston Ring tool to expand the end gap. Then install 2nd and Top ring to Piston Ring Groove.

Siempre es recomendable usar herramienta especial, como Ensanchadores del Anillo de Piston.
Para el segundo anillo de compresion se usa el mismo procedimiento del primer anillo de compresion, pero en este hay que notar que el numero **2** y la letra **N**, deberan estar siempre hacia arriba dentro de la segunda ranura del piston.



Do not install compression rings like rail rings.

Nunca hay que instalar los anillos de compression de la misma manera que se instalan los anillos de control de aceite (rieles o laminas).

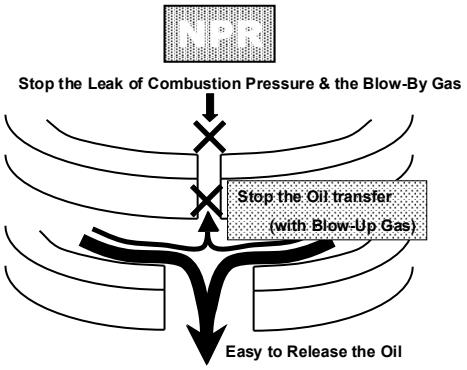


Piston Ring End Gaps / ABERTURA DE LUZ PARA ANILLOS

In the last 10 – 15 years engine and piston ring manufacturers have changed the dimensions of the TOP and second ring gaps. The general trend has been to reduce the top ring and enlarge the second ring gap.
The primary reason for this change was to reduce oil consumption in engines with low tension rings.

En los ultimos 10 – 15 años los fabricantes de anillos para piston han cambiado las dimensiones de abertura de luz para el primer y Segundo anillo. La tendencia general ha sido reducir la abertura de luz en la primera ranura y ampliar la Segunda ranura.
La principal razon de este cambio es reducir el consumo de aceite en maquinas con anillos de baja tension.

This change in end gaps reduces oil consumption in two ways:
Este cambio en la abertura de luz reduce el consumo de aceite de dos maneras:



1. The reduced top ring gap helps reduce the flow of oil vapor from below the top ring to the combustion chamber (see "X" in diagram right)

   El diseño de la abertura de luz en la primera ranura ayuda a reducir el flujo de vapor de aceite por debajo del anillo de la primer ranura a la camara de combustion(vease " X " en el diagrama derecho) .

2. The enlarged sceond ring gap increases gas flow from the piston land between the Top and Second ring to below the Second Ring, and avoids accumulattion of the pressure between the Top and Second Ring. By doing so, this reduces the period of the pressure between the Top and Second ring higher than combustion chamber and reduces the flow of oil vapor from below the Top ring to the combustion chamber. A second advantage to this is that it will allow the top ring to seat better against the bottom of the piston ring groove, which will also reduce oil consumption.

   La abertura de luz del segundo anillo al ser más amplia permite incrementar el pase de flujo de gases entre el primer anillo y el segundo anillo y evita acumulación de presión entre estos. Al suceder esto reduce el tiempo de presión que se acumula entre el primer anillo y el segundo evitando que haya escape de aceite a la cámara de combustión, a través del primer anillo. Una Segunda ventaja a esto es que permitira que el primer anillo asiente mejor contra el fondo del surco del piston, que reducira tambien el consumo de aceite.

   - CONTINUE

To use one standard for all end gaps is no longer correct. The correct end gap for each engine depends on many factors including tension, ring material, ring shape, piston shape and combustion pressure. As examples listed below are the correct end gaps for some of today's more popular engines:

Para utilizar un estandar para todas las aberturas de luz , no es correcto, La medida correcta por cada motor depende de Muchos factores incluyendo la tension , el material del anillo, la forma del anillo , la forma del piston y la presion del combustible . A continuacion mostraremos unos ejemplos de abertura de luz actualizados para las motores mas populares de hoy:

Engine	*Ring#*	*Top Ring Gap*	*2nd Ring Gap*
Isuzu 4ZDI	SWI10123	0.35-0.55mm	0.35-0.55mm
Isuzu 4ZEI	SWI10162	0.20-0.40mm	0.30-0.50mm
Mitsubishi G15B	SWM31063	0.20-0.40mm	0.20-0.40mm
Nissan E16	SWN30057	0.20-0.30mm	0.15-0.25mm
Nissan Z24	SWN30085	0.30-050mm	0.55-0.70mm
Suzuki G13A	SWS20141	0.15-0.35mm	0.20-0.40mm
Suzuki G13BA	SWS20143	0.20-0.40mm	0.20-0.40mm
Toyota 22R	SXT10077	0.22-0.40mm	0.18-0.33mm
Toyota 22R	SWT10103	0.25-0.45mm	0.60-0.75mm
Toyota 3E	SWT10143	0.25-0.45mm	0.15-0.30mm
Toyota 4AF	SWT10142	0.20-0.35mm	0.35-0.55mm
Toyota 4AL	SWT10108	0.20-0.35mm	0.15-0.30mm

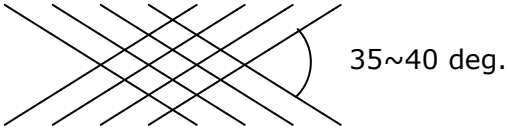
NPR manufacturers each piston ring gap with the correct OEM specification for each individual engine. There is no need, nor do we recommend that you alter them in anyway as this might void our warranty. Also note; these end gaps are set at exact bore dimensions. If the bore is slightly oversize (for example 92.52mm instead of 92.50mm) then the end gap will increase accordingly.

NPR fabrica sus anillos con la especificacion correcta de OEM(Equipo Original) para cadad motor individual y es ello que la abertura de luz es diferente de un motor a otro aunque tengan el mismo diametro . .Por lo tanto no hay necesidad, ni recomendamos que usted los altere, haciendo esto puede anular la garantia del producto. Tambien notese que la abertura de luz en nuestros anillos estan diseñados exactamente a la medida del diametro interno del cilindro. Por ejemplo si el diametro es levemente fuera de sobre medida (Ejemplo: 92.52mm en lugar de 92.50mm) la abertura de luz se incrementara por consiguiente.
Finalmente siempre installe anillos NPR, los mejores del mundo.

Cylinder Honing Recommendation

For use with our piston rings we recommend a Plateau Honing with a Cylinder Bore cross hatch angle of 35 – 40 degrees.

Para el uso de nuestros anillos nosotros recomendamos una meseta que afila con piedra
Con una angulo de trampa de cruz de 35- 40 grados (Cross Hatch)



For NPR Piston Rings we recommend a roughness of:
NPR recomienda para sus anillos, una aspereza de:
R_z = 59 – 138 µ in [= 1.5 – 3.5 µm] or
R_a = 15 – 35 µ in [= 0.4 – 0.9 µm]

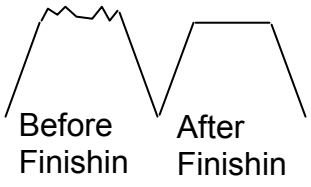
To reach this roughness the manufacturers of honing machines & accessories recommend to use for a gray cast iron engine block

- Conventional stones #220 - #280 grit or
- Diamond stones #325 - #550 grit

Para alcanzar esta aspereza los fabricantes de maquinas de afilado y accesorios relacionados a la rectificacion de motores recomiendan usar para bloques de motor de hierro fundido grisaceo lo siguiente:

- Piedra convencional # 220 - # 280 o
- Piedra con diamante # 325 - # 550

After honing with either conventional or diamond stone, the same manufacturers suggest to finish your honing by smoothing the surface with a fine grit conventional abrasive (#400 - #600 grit) or to sweep the bores with a flexible brush or a nylon bristle plateau honing tool. This is necessary to get rid of jagged peaks and folded & torn material.



Despues del afilado convencional o si se uso la piedra con diamante, los mismos fabricantes sugieren para darle terminado final deben de hacer un afilado para suavizar la superficie con un abrasivo convencional (400- # 600) O cepillandolo con uno de nylon flexible. Esto es necesario para eliminar los picos dentados y de material doblado o rasgado.

- CONTINUE

Important Note –
Be sure to reconfirm with your honing equipment manufacturer that the recommended stone grit will produce our R_Z and R_a roughness recommendations.

Nota Importante.
Estar seguro de reconfirmar con el fabricante del equipo de afilado que los granos de arena recomendados de piedra produciran nuestro RZ y las recomendaciones de aspereza de RA

PISTON SURFACE TREATMENT
TRATAMIENTO SUPERFICIAL DEL PISTON

Pistons from many late model engines have added piston skirt coatings to reduce friction and cylinder wall clearance. Anodized piston heads to deflect heat are also becoming more common. Whenever original equipment pistons have these surface treatments for a specific application, NPR pistons will also have moly skirts and/or anodized heads. It is important to note that pistons with moly skirts require tighter cylinder wall clearances. Please refer to the piston "PISTON FITTING CLEARANCE RECOMMENDATION" beginning on page xvi ~ xxi for specific cylinder wall recommendations for each piston part number.

Pistones de modelos recientes han agregado capas a la falda del piston para reducir la friccion y la holgura de la pared del cilindro. Pistones con cabeza anodizado para disipar el calor tambien estan siendo mas comunes. Cuando el piston de equipo original tenga este tipo de tratamientos para una aplicacion en especifico, los pistones de NPR tambien tendran faldas de molibdeno y/o cabezas anodizadas. Es importante resaltar que pistones con faldas de molibdeno requieren una holgura mas apretada en la pared del cilindro. Por favor de referirse a la seccion "AJUSTE RECOMENDADO PARA JUEGO de PISTON" ver pagina xvi ~ xxi Para recomendaciones especificas de la pared del cilindro para cada numero de piston en especifico.

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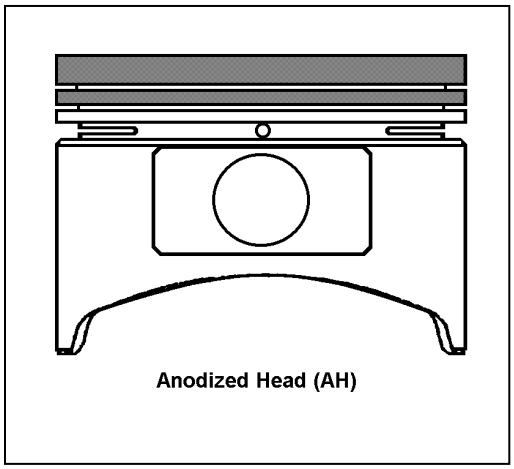
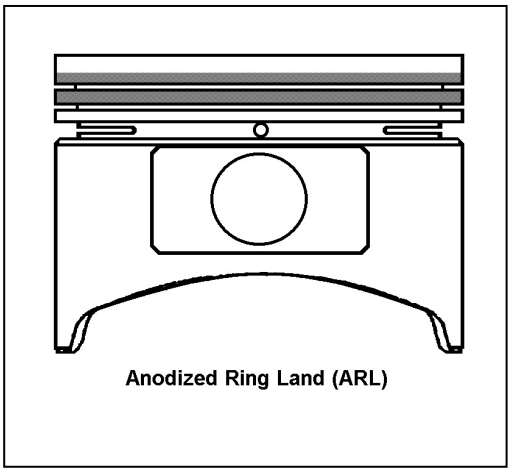
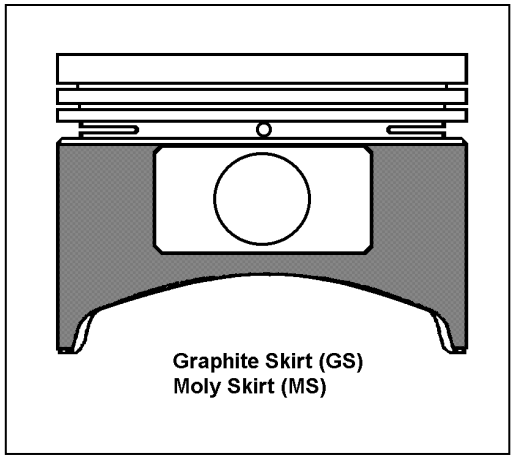
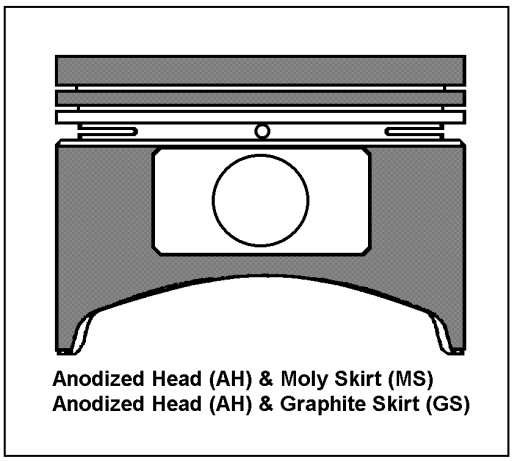

Anodized Head (AH)


Anodized Ring Land (ARL)


Graphite Skirt (GS)
Moly Skirt (MS)


Anodized Head (AH) & Moly Skirt (MS)
Anodized Head (AH) & Graphite Skirt (GS)

PISTON FITTING CLEARANCE RECOMMENDATION

NOA PART #	COATING	MANUFACTURER NAME	SDT SIZE BORE DIAMETER	CLEARANCE and WHERE to MEASURE
11-012		GM / ISUZU	84.00MM (3.307")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-016		GM / ISUZU	87.00MM (3.425")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-020		CHRYSLER	74.00MM (2.913")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-027		CHRYSLER / MITSUBISHI	85.00MM (3.346")	0.040MM (0.0016") @ 30.00MM (1.181") from the Bottom.
11-028		CHRYSLER / MITSUBISHI	91.10MM (3.587")	0.100MM (0.0039") @ 10.00MM (0.394") from the Bottom.
11-031		CHRYSLER / MITSUBISHI	91.10MM (3.587")	0.040MM (0.0016") @ 37.50MM (1.476") from the Bottom.
11-035		CHRYSLER / MAZDA / MITSUBISHI	91.10MM (3.587")	0.040MM (0.0016") @ 25.00MM (0.984") from the Bottom.
11-049		NISSAN	76.00MM (2.992")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-050		NISSAN	76.00MM (2.992")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-052		NISSAN	76.00MM (2.992")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-059		NISSAN	85.00MM (3.346")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-060		NISSAN	85.00MM (3.346")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-062		NISSAN	84.50MM (3.327")	0.040MM (0.0016") @ 30.00MM (1.181") from the Bottom.
11-064		NISSAN	85.00MM (3.346")	0.040MM (0.0016") @ 20.00MM (0.787") from the Bottom.
11-068		NISSAN	83.00MM (3.268")	0.100MM (0.0039") @ 15.00MM (0.591") from the Bottom.
11-069		NISSAN	87.00MM (3.425")	0.040MM (0.0016") @ 0.00MM (0.000") from the Bottom.
11-070		NISSAN	89.00MM (3.504")	0.040MM (0.0016") @ 30.00MM (1.181") from the Bottom.
11-071		NISSAN	83.00MM (3.268")	0.040MM (0.0016") @ 25.00MM (0.984") from the Bottom.
11-076		NISSAN	83.00MM (3.268")	0.040MM (0.0016") @ 12.00MM (0.472") from the Bottom.
11-081		NISSAN	86.00MM (3.386")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-082		NISSAN	86.00MM (3.386")	0.040MM (0.0016") @ 22.00MM (0.866") from the Bottom.
11-084		NISSAN	86.00MM (3.386")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-105		HONDA	74.00MM (2.913")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-106		HONDA	74.00MM (2.913")	0.040MM (0.0016") @ 20.00MM (0.787") from the Bottom.
11-111		HONDA	74.00MM (2.913")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-113		HONDA	74.00MM (2.913")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-122		HONDA	80.00MM (3.150")	0.040MM (0.0016") @ 30.00MM (1.181") from the Bottom.
11-124		MAZDA	77.00MM (3.031")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-127		MAZDA	77.00MM (3.031")	0.040MM (0.0016") @ 1.00MM (0.039") from the Bottom.
11-129		KIA / MAZDA	86.00MM (3.386")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-140		TOYOTA	75.00MM (2.953")	0.040MM (0.0016") @ 12.00MM (0.472") from the Bottom.
11-141		TOYOTA	75.00MM (2.953")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-142		TOYOTA	77.50MM (3.051")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-143		TOYOTA	77.50MM (3.051")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-144		GM / TOYOTA	81.00MM (3.189")	0.040MM (0.0016") @ 13.00MM (0.512") from the Bottom.
11-145		TOYOTA	85.00MM (3.346")	0.040MM (0.0016") @ 25.00MM (0.984") from the Bottom.
11-149		TOYOTA	85.00MM (3.346")	0.040MM (0.0016") @ 30.00MM (1.181") from the Bottom.
11-153		TOYOTA	88.50MM (3.484")	0.040MM (0.0016") @ 20.00MM (0.787") from the Bottom.
11-155		TOYOTA	86.00MM (3.386")	0.040MM (0.0016") @ 0.00MM (0.000") from the Bottom.
11-157		TOYOTA	88.50MM (3.484")	0.040MM (0.0016") @ 20.00MM (0.787") from the Bottom.
11-171		TOYOTA	90.00MM (3.543")	0.040MM (0.0016") @ 0.00MM (0.000") from the Bottom.
11-174		TOYOTA	94.00MM (3.701")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-175		TOYOTA	94.00MM (3.701")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-236		NISSAN	87.00MM (3.425")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-238		NISSAN	89.00MM (3.504")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-239		TOYOTA	92.00MM (3.622")	0.040MM (0.0016") @ 26.00MM (1.024") from the Bottom.
11-241		TOYOTA	92.00MM (3.622")	0.040MM (0.0016") @ 32.00MM (1.260") from the Bottom.
11-502		ACURA	75.00MM (2.953")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-514		HONDA	75.00MM (2.953")	0.040MM (0.0016") @ 30.00MM (1.181") from the Bottom.
11-515		HONDA	74.00MM (2.913")	0.040MM (0.0016") @ 17.50MM (0.689") from the Bottom.
11-518		HONDA	75.00MM (2.953")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-519		HONDA	82.70MM (3.256")	0.040MM (0.0016") @ 30.00MM (1.181") from the Bottom.
11-520		HONDA	82.70MM (3.256")	0.040MM (0.0016") @ 0.00MM (0.000") from the Bottom.
11-524		HONDA	81.00MM (3.189")	0.040MM (0.0016") @ 9.00MM (0.354") from the Bottom.
11-525		HONDA	81.00MM (3.189")	0.040MM (0.0016") @ 9.00MM (0.354") from the Bottom.
11-529		CHRYSLER / HYUNDAI / MITSUBISHI	75.50MM (2.972")	0.040MM (0.0016") @ 7.00MM (0.276") from the Bottom.
11-530		CHRYSLER / HYUNDAI / MITSUBISHI	75.50MM (2.972")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-531		CHRYSLER / MITSUBISHI	75.50MM (2.972")	0.025MM (0.0010") @ 19.00MM (0.748") from the Bottom.
11-536		MITSUBISHI	86.50MM (3.406")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-538		CHRYSLER / HYUNDAI / MITSUBISHI	86.50MM (3.406")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-539		CHRYSLER / MITSUBISHI	85.00MM (3.346")	0.040MM (0.0016") @ 17.00MM (0.669") from the Bottom.
11-540		CHRYSLER / MITSUBISHI	85.00MM (3.346")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-543		CHRYSLER / MITSUBISHI	91.10MM (3.587")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-545		CHRYSLER / MITSUBISHI	80.60MM (3.173")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-546	MS	CHRYSLER / MITSUBISHI	85.00MM (3.346")	0.030MM (0.0012") @ 26.00MM (1.024") from the Bottom.

PISTON FITTING CLEARANCE RECOMMENDATION

NOA PART #	COATING	MANUFACTURER NAME	SDT SIZE BORE DIAMETER	CLEARANCE and WHERE to MEASURE
11-547		CHRYSLER / MITSUBISHI	91.10MM (3.587")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-549		CHRYSLER / HYUNDAI / MITSUBISHI	91.10MM (3.587")	0.040MM (0.0016") @ 8.00MM (0.315") from the Bottom.
11-554		ISUZU	89.30MM (3.516")	0.040MM (0.0016") @ 30.00MM (1.181") from the Bottom.
11-555		ISUZU	92.60MM (3.646")	0.040MM (0.0016") @ 25.00MM (0.984") from the Bottom.
11-558		ISUZU	88.00MM (3.465")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-559		HONDA / ISUZU	92.60MM (3.646")	0.040MM (0.0016") @ 25.00MM (0.984") from the Bottom.
11-573		FORD / MAZDA	86.00MM (3.386")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-575	MS	MAZDA	90.00MM (3.543")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-579		MAZDA	78.00MM (3.071")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-580		MAZDA	92.00MM (3.622")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-582		FORD / MAZDA	86.00MM (3.386")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-583		FORD / MAZDA	86.00MM (3.386")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-584		MAZDA	83.00MM (3.268")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-589		FORD	71.00MM (2.795")	0.040MM (0.0016") @ 12.00MM (0.472") from the Bottom.
11-590		NISSAN	76.00MM (2.992")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-598	MS	NISSAN	89.00MM (3.504")	0.030MM (0.0012") @ 17.00MM (0.669") from the Bottom.
11-600		NISSAN	89.00MM (3.504")	0.040MM (0.0016") @ 5.00MM (0.197") from the Bottom.
11-601		NISSAN	76.00MM (2.992")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-602		INFINITI / NISSAN	86.00MM (3.386")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-603		FORD / INFINITI / NISSAN	87.00MM (3.425")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-609	MS	NISSAN	89.00MM (3.504")	0.030MM (0.0012") @ 17.00MM (0.669") from the Bottom.
11-610		SUBARU	92.00MM (3.622")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-612		SUBARU	96.90MM (3.815")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-625		GM / SUZUKI	74.00MM (2.913")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-626		SUZUKI	74.00MM (2.913")	0.030MM (0.0012") @ 12.00MM (0.472") from the Bottom.
11-627		SUZUKI	74.00MM (2.913")	0.030MM (0.0012") @ 14.00MM (0.551") from the Bottom.
11-628		SUZUKI	74.00MM (2.913")	0.040MM (0.0016") @ 7.50MM (0.295") from the Bottom.
11-629		GM / SUZUKI	75.00MM (2.953")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-630		GM / SUZUKI	75.00MM (2.953")	0.040MM (0.0016") @ 21.00MM (0.827") from the Bottom.
11-631		TOYOTA	92.00MM (3.622")	0.100MM (0.0039") @ 15.00MM (0.591") from the Bottom.
11-632		TOYOTA	92.00MM (3.622")	0.100MM (0.0039") @ 10.00MM (0.394") from the Bottom.
11-634		TOYOTA	90.00MM (3.543")	0.100MM (0.0039") @ 32.00MM (1.260") from the Bottom.
11-636		TOYOTA	95.00MM (3.740")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-637		TOYOTA	91.00MM (3.583")	0.030MM (0.0012") @ 25.00MM (0.984") from the Bottom.
11-639		TOYOTA	83.00MM (3.268")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-641		TOYOTA	83.00MM (3.268")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-642		TOYOTA	83.00MM (3.268")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-644		TOYOTA	86.00MM (3.386")	0.040MM (0.0016") @ 7.00MM (0.276") from the Bottom.
11-646		TOYOTA	86.00MM (3.386")	0.040MM (0.0016") @ 5.00MM (0.197") from the Bottom.
11-647		TOYOTA	86.00MM (3.386")	0.030MM (0.0012") @ 11.00MM (0.433") from the Bottom.
11-648		TOYOTA	86.00MM (3.386")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-649		GM / TOYOTA	81.00MM (3.189")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-650		TOYOTA	73.00MM (2.874")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-651	MS	LEXUS / TOYOTA	87.50MM (3.445")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-653		TOYOTA	87.50MM (3.445")	0.040MM (0.0016") @ 2.00MM (0.079") from the Bottom.
11-654		TOYOTA	87.00MM (3.425")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-656		TOYOTA	74.00MM (2.913")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-657		TOYOTA	87.00MM (3.425")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-659		TOYOTA	81.00MM (3.189")	0.040MM (0.0016") @ 0.00MM (0.000") from the Bottom.
11-660		GM / TOYOTA	81.00MM (3.189")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-661		LEXUS / TOYOTA	87.50MM (3.445")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-665		GM	74.00MM (2.913")	0.030MM (0.0012") @ 13.80MM (0.543") from the Bottom.
11-673		TOYOTA	94.00MM (3.701")	0.030MM (0.0012") @ 27.50MM (1.083") from the Bottom.
11-675		NISSAN	87.00MM (3.425")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-676		NISSAN	89.00MM (3.504")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-677		TOYOTA	92.00MM (3.622")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-678		HONDA	85.00MM (3.346")	0.040MM (0.0016") @ 20.00MM (0.787") from the Bottom.
11-679		HONDA	75.00MM (2.953")	0.040MM (0.0016") @ 27.00MM (1.063") from the Bottom.
11-680	MS	NISSAN	76.00MM (2.992")	0.025MM (0.0010") @ 12.00MM (0.472") from the Bottom.
11-681		NISSAN	87.00MM (3.425")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-686		ACURA / HONDA / ISUZU	93.40MM (3.677")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.

PISTON FITTING CLEARANCE RECOMMENDATION

NOA PART #	COATING	MANUFACTURER NAME	SDT SIZE BORE DIAMETER	CLEARANCE and WHERE to MEASURE
11-689		DAIHATSU	76.00MM (2.992")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-690		HYUNDAI	81.50MM (3.209")	0.040MM (0.0016") @ 20.00MM (0.787") from the Bottom.
11-691		HYUNDAI	75.50MM (2.972")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-692		HYUNDAI	85.00MM (3.346")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-693		HYUNDAI	82.00MM (3.228")	0.040MM (0.0016") @ 24.00MM (0.945") from the Bottom.
11-696		ISUZU	88.00MM (3.465")	0.100MM (0.0039") @ 0.00MM (0.000") from the Bottom.
11-699		KIA	86.00MM (3.386")	0.040MM (0.0016") @ 18.00MM (0.709") from the Bottom.
11-701		MAZDA	86.00MM (3.386")	0.100MM (0.0039") @ 20.00MM (0.787") from the Bottom.
11-703		KIA / MAZDA	83.00MM (3.268")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-704	MS	MAZDA	90.00MM (3.543")	0.030MM (0.0012") @ 5.00MM (0.197") from the Bottom.
11-706		FORD / MAZDA	83.00MM (3.268")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-707		CHRYSLER / MITSUBISHI	91.10MM (3.587")	0.040MM (0.0016") @ 16.00MM (0.630") from the Bottom.
11-709		CHRYSLER / MITSUBISHI	86.50MM (3.406")	0.030MM (0.0012") @ 12.00MM (0.472") from the Bottom.
11-711	MS	INFINITI / NISSAN	93.00MM (3.661")	0.030MM (0.0012") @ 14.00MM (0.551") from the Bottom.
11-713		GM / TOYOTA	81.00MM (3.189")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-714		GM / TOYOTA	81.00MM (3.189")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-716	MS	FORD / MAZDA	84.50MM (3.327")	0.030MM (0.0012") @ 11.00MM (0.433") from the Bottom.
11-718		CHRYSLER / MITSUBISHI	85.00MM (3.346")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-719	MS	CHRYSLER / MITSUBISHI	85.00MM (3.346")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-720	MS	LEXUS / TOYOTA	87.50MM (3.445")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-722	MS	TOYOTA	93.50MM (3.681")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-723		TOYOTA	86.00MM (3.386")	0.040MM (0.0016") @ 20.00MM (0.787") from the Bottom.
11-724	MS	TOYOTA	95.00MM (3.740")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-725	MS	TOYOTA	95.00MM (3.740")	0.025MM (0.0010") @ 15.00MM (0.591") from the Bottom.
11-726		HONDA	83.00MM (3.268")	0.030MM (0.0012") @ 16.00MM (0.630") from the Bottom.
11-727		INFINITI / NISSAN	87.00MM (3.425")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-728	MS	INFINITI / NISSAN	91.50MM (3.602")	0.025MM (0.0010") @ 11.00MM (0.433") from the Bottom.
11-729		HYUNDAI	82.30MM (3.24")	0.040MM (0.0016") @ 28.00MM (1.102") from the Bottom.
11-730		HYUNDAI	75.50MM (2.972")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-731		MAZDA	75.30MM (2.965")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-732		HONDA	75.00MM (2.953")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-733		ACURA	81.00MM (3.189")	0.040MM (0.0016") @ 14.00MM (0.551") from the Bottom.
11-735		CHRYSLER / MITSUBISHI	87.50MM (3.445")	0.040MM (0.0016") @ 13.00MM (0.512") from the Bottom.
11-736		HONDA	75.00MM (2.953")	0.030MM (0.0012") @ 15.50MM (0.610") from the Bottom.
11-737		HONDA	81.00MM (3.189")	0.030MM (0.0012") @ 16.00MM (0.630") from the Bottom.
11-738		HONDA	84.00MM (3.307")	0.040MM (0.0016") @ 0.00MM (0.000") from the Bottom.
11-739		HONDA	87.00MM (3.425")	0.040MM (0.0016") @ 7.00MM (0.276") from the Bottom.
11-740		HONDA	87.00MM (3.425")	0.040MM (0.0016") @ 11.00MM (0.433") from the Bottom.
11-741		HONDA	87.00MM (3.425")	0.040MM (0.0016") @ 7.00MM (0.276") from the Bottom.
11-742		HYUNDAI	75.50MM (2.972")	0.040MM (0.0016") @ 5.00MM (0.197") from the Bottom.
11-743	MS	ACURA	81.00MM (3.189")	0.030MM (0.0012") @ 15.00MM (0.591") from the Bottom.
11-745	MS	TOYOTA	95.00MM (3.740")	0.030MM (0.0012") @ 7.00MM (0.276") from the Bottom.
11-747		ISUZU	86.00MM (3.386")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-749		MITSUBISHI	93.00MM (3.661")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-750		TOYOTA	87.00MM (3.425")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-751		HONDA / ISUZU	85.00MM (3.346")	0.040MM (0.0016") @ 14.00MM (0.551") from the Bottom.
11-752		HONDA	75.00MM (2.953")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-753		ACURA	81.00MM (3.189")	0.040MM (0.0016") @ 6.00MM (0.236") from the Bottom.
11-754		ACURA	81.00MM (3.189")	0.040MM (0.0016") @ 12.00MM (0.472") from the Bottom.
11-755	MS	NISSAN	89.00MM (3.504")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-756		GM / TOYOTA	79.00MM (3.110")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-757		ACURA	85.00MM (3.346")	0.040MM (0.0016") @ 14.00MM (0.551") from the Bottom.
11-758	MS	CHRYSLER / MITSUBISHI	85.00MM (3.346")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-759	MS	MAZDA	90.00MM (3.543")	0.030MM (0.0012") @ 16.00MM (0.630") from the Bottom.
11-762		MITSUBISHI	91.10MM (3.587")	0.040MM (0.0016") @ 20.00MM (0.787") from the Bottom.
11-764		ISUZU	93.40MM (3.677")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-767		CHRYSLER / MITSUBISHI	81.00MM (3.189")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-769		SUZUKI	74.00MM (2.913")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-771		HYUNDAI / KIA	84.00MM (3.307")	0.030MM (0.0012") @ 6.00MM (0.236") from the Bottom.
11-772		HYUNDAI / KIA	86.50MM (3.406")	0.030MM (0.0012") @ 5.00MM (0.197") from the Bottom.
11-773		KIA	75.50MM (2.972")	0.030MM (0.0012") @ 18.00MM (0.709") from the Bottom.

PISTON FITTING CLEARANCE RECOMMENDATION

NOA PART #	COATING	MANUFACTURER NAME	SDT SIZE BORE DIAMETER	CLEARANCE and WHERE to MEASURE
11-774		MITSUBISHI	93.00MM (3.661")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-775		SUZUKI	84.00MM (3.307")	0.040MM (0.0016") @ 10.00MM (0.394") from the Bottom.
11-776		SCION / TOYOTA	75.00MM (2.953")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-777	MS	GM / TOYOTA	79.00MM (3.110")	0.025MM (0.0010") @ 19.50MM (0.768") from the Bottom.
11-778	MS	TOYOTA	86.00MM (3.386")	0.025MM (0.0010") @ 12.30MM (0.484") from the Bottom.
11-779		DAEWOO	79.00MM (3.110")	0.030MM (0.0012") @ 8.00MM (0.315") from the Bottom.
11-780	MS	CHRYSLER	86.00MM (3.386")	0.030MM (0.0012") @ 7.00MM (0.276") from the Bottom.
11-781		ACURA / HONDA	86.00MM (3.386")	0.040MM (0.0016") @ 16.00MM (0.630") from the Bottom.
11-785		HONDA	75.00MM (2.953")	0.030MM (0.0012") @ 3.00MM (0.118") from the Bottom.
11-788	MS	SAAB / SUBARU	99.50MM (3.917")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-791		ACURA / HONDA	86.00MM (3.386")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-792	MS	GM / SCION / TOYOTA	88.50MM (3.484")	0.025MM (0.0010") @ 4.00MM (0.157") from the Bottom.
11-793		ACURA / ISUZU	93.40MM (3.677")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-794		MAZDA	78.00MM (3.071")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-795		TOYOTA	86.00MM (3.386")	0.040MM (0.0016") @ 15.00MM (0.591") from the Bottom.
11-797		HONDA	75.00MM (2.953")	0.030MM (0.0012") @ 5.00MM (0.197") from the Bottom.
11-798		HONDA	75.00MM (2.953")	0.030MM (0.0012") @ 5.00MM (0.197") from the Bottom.
11-799		HONDA	84.00MM (3.307")	0.030MM (0.0012") @ 15.00MM (0.591") from the Bottom.
11-801	MS	LEXUS / TOYOTA	94.00MM (3.701")	0.025MM (0.0010") @ 10.50MM (0.413") from the Bottom.
11-802		TOYOTA	82.00MM (3.228")	0.030MM (0.0012") @ 25.00MM (0.984") from the Bottom.
11-804		CHRYSLER / MITSUBISHI	86.50MM (3.406")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-806	MS	CHRYSLER / MITSUBISHI	93.00MM (3.661")	0.030MM (0.0012") @ 13.00MM (0.512") from the Bottom.
11-807	MS	CHRYSLER / MITSUBISHI	93.00MM (3.661")	0.030MM (0.0012") @ 13.00MM (0.512") from the Bottom.
11-808	MS	CHRYSLER	83.50MM (3.287")	0.025MM (0.0010") @ 9.00MM (0.354") from the Bottom.
11-809	MS	FORD	90.20MM (3.551")	0.030MM (0.0012") @ 6.00MM (0.236") from the Bottom.
11-810	MS	FORD	90.20MM (3.551")	0.030MM (0.0012") @ 5.00MM (0.197") from the Bottom.
11-811	MS	FORD	90.20MM (3.551")	0.030MM (0.0012") @ 6.00MM (0.236") from the Bottom.
11-814		CHRYSLER	87.50MM (3.445")	0.030MM (0.0012") @ 5.00MM (0.197") from the Bottom.
11-817		CHRYSLER / MITSUBISHI	91.10MM (3.587")	0.030MM (0.0012") @ 15.00MM (0.591") from the Bottom.
11-820	MS	FORD	90.20MM (3.551")	0.030MM (0.0012") @ 11.00MM (0.433") from the Bottom.
11-821		CHRYSLER	99.31MM (3.910")	0.040MM (0.0016") @ 14.00MM (0.551") from the Bottom.
11-822		FORD	84.86MM (3.341")	0.040MM (0.0016") @ 7.00MM (0.276") from the Bottom.
11-823	MS	GM	101.60MM (4.000")	0.030MM (0.0012") @ 21.00MM (0.827") from the Bottom.
11-825		FORD	89.00MM (3.504")	0.040MM (0.0016") @ 8.00MM (0.315") from the Bottom.
11-826	MS	FORD	96.80MM (3.811")	0.030MM (0.0012") @ 11.50MM (0.453") from the Bottom.
11-827		GM	101.60MM (4.000")	0.040MM (0.0016") @ 12.00MM (0.472") from the Bottom.
11-828		GM	101.60MM (4.000")	0.040MM (0.0016") @ 12.00MM (0.472") from the Bottom.
11-829	MS	GM / ISUZU	96.00MM (3.780")	0.030MM (0.0012") @ 16.00MM (0.630") from the Bottom.
11-830	MS	GM	103.00MM (4.055")	0.090MM (0.0035") @ 17.00MM (0.669") from the Bottom.
11-832	MS	HONDA	86.00MM (3.386")	0.025MM (0.0010") @ 7.00MM (0.276") from the Bottom.
11-833	MS	HONDA	87.00MM (3.425")	0.025MM (0.0010") @ 11.00MM (0.433") from the Bottom.
11-834	MS	HONDA	87.00MM (3.425")	0.025MM (0.0010") @ 11.00MM (0.433") from the Bottom.
11-835	MS	HONDA	89.00MM (3.504")	0.025MM (0.0010") @ 7.00MM (0.276") from the Bottom.
11-836	MS	ACURA / HONDA	89.00MM (3.504")	0.025MM (0.0010") @ 7.00MM (0.276") from the Bottom.
11-837		HYUNDAI	75.50MM (2.972")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-838		HYUNDAI / KIA	82.00MM (3.228")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-840		ISUZU	86.00MM (3.386")	0.030MM (0.0012") @ 15.00MM (0.591") from the Bottom.
11-841		KIA	81.00MM (3.189")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-842		MAZDA	83.00MM (3.268")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-843	MS	MAZDA	87.50MM (3.445")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-844		MAZDA	87.50MM (3.445")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-847	MS	MITSUBISHI	93.00MM (3.661")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-848	MS	MITSUBISHI	95.00MM (3.740")	0.025MM (0.0010") @ 12.00MM (0.472") from the Bottom.
11-849	MS	NISSAN	84.00MM (3.307")	0.025MM (0.0010") @ 5.50MM (0.217") from the Bottom.
11-850	MS	TOYOTA	86.00MM (3.386")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-851	MS	LEXUS / TOYOTA	86.00MM (3.386")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-852	MS	NISSAN	89.00MM (3.504")	0.025MM (0.0010") @ 19.00MM (0.748") from the Bottom.
11-853	MS	FORD	90.20MM (3.551")	0.030MM (0.0012") @ 13.00MM (0.512") from the Bottom.
11-854	MS	MAZDA	87.50MM (3.445")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-855		CHRYSLER	99.31MM (3.910")	0.040MM (0.0016") @ 14.00MM (0.551") from the Bottom.
11-856		CHRYSLER / FORD	102.00MM (4.016")	0.100MM (0.0039") @ 20.00MM (0.787") from the Bottom.

PISTON FITTING CLEARANCE RECOMMENDATION

NOA PART #	COATING	MANUFACTURER NAME	SDT SIZE BORE DIAMETER	CLEARANCE and WHERE to MEASURE
11-857	MS	FORD	95.00MM (3.740")	0.090MM (0.0035") @ 15.00MM (0.591") from the Bottom.
11-859	MS	INFINITI	95.50MM (3.760")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-860	MS	INFINITI / NISSAN	95.50MM (3.760")	0.025MM (0.0010") @ 6.00MM (0.236") from the Bottom.
11-861	MS	CHRYSLER	99.50MM (3.917")	0.030MM (0.0012") @ 5.00MM (0.197") from the Bottom.
11-862		HYUNDAI / KIA	86.70MM (3.413")	0.030MM (0.0012") @ 6.00MM (0.236") from the Bottom.
11-863	MS	CHRYSLER	93.00MM (3.661")	0.030MM (0.0012") @ 7.00MM (0.276") from the Bottom.
11-864	MS	CHRYSLER / VOLKSWAGEN	96.00MM (3.780")	0.030MM (0.0012") @ 6.50MM (0.256") from the Bottom.
11-865	MS	FORD	84.80MM (3.339")	0.025MM (0.0010") @ 11.00MM (0.433") from the Bottom.
11-866	MS	ACURA / HONDA	86.00MM (3.386")	0.025MM (0.0010") @ 5.00MM (0.197") from the Bottom.
11-867	MS	LEXUS / TOYOTA	92.00MM (3.622")	0.025MM (0.0010") @ 9.40MM (0.370") from the Bottom.
11-868	MS	FORD / MAZDA	89.00MM (3.504")	0.025MM (0.0010") @ 7.00MM (0.276") from the Bottom.
11-869	MS	NISSAN	80.00MM (3.150")	0.025MM (0.0010") @ 12.50MM (0.492") from the Bottom.
11-870	MS	LEXUS / TOYOTA	94.00MM (3.701")	0.025MM (0.0010") @ 5.50MM (0.217") from the Bottom.
11-871	MS	TOYOTA	94.00MM (3.701")	0.025MM (0.0010") @ 8.00MM (0.315") from the Bottom.
11-872	MS	AUDI / VOLKSWAGEN	81.00MM (3.189")	0.025MM (0.0010") @ 8.00MM (0.315") from the Bottom.
11-873	MS	CHRYSLER	99.50MM (3.917")	0.025MM (0.0010") @ 6.00MM (0.236") from the Bottom.
11-874	MS	FORD	89.00MM (3.504")	0.025MM (0.0010") @ 11.00MM (0.433") from the Bottom.
11-875	MS	CHRYSLER	96.00MM (3.780")	0.025MM (0.0010") @ 9.00MM (0.354") from the Bottom.
11-876	MS	NISSAN	80.00MM (3.150")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-878	MS	NISSAN	95.50MM (3.760")	0.025MM (0.0010") @ 6.00MM (0.236") from the Bottom.
11-879	MS	INFINITI / NISSAN	98.00MM (3.858")	0.025MM (0.0010") @ 6.00MM (0.236") from the Bottom.
11-880	MS	TOYOTA	95.00MM (3.740")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-881	MS	NISSAN / SUZUKI	89.00MM (3.504")	0.025MM (0.0010") @ 9.50MM (0.374") from the Bottom.
11-882	MS	HONDA	86.00MM (3.386")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-883		SUZUKI	84.00MM (3.307")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.
11-884	MS	GM	103.00MM (4.055")	0.110MM (0.0043") @ 20.00MM (0.787") from the Bottom.
11-885		CHRYSLER / FORD	107.00MM (4.213")	0.120MM (0.0047") @ 20.00MM (0.787") from the Bottom.
11-886	MS	FORD	98.20MM (3.866")	0.050MM (0.0020") @ 15.00MM (0.591") from the Bottom.
11-887	MS	GM	92.00MM (3.622")	0.030MM (0.0012") @ 15.00MM (0.591") from the Bottom.
11-888		GM	96.52MM (3.800")	0.030MM (0.0012") @ 12.00MM (0.472") from the Bottom.
11-889	MS	GM / ISUZU	101.60MM (4.000")	0.025MM (0.0010") @ 13.00MM (0.512") from the Bottom.
11-890	MS	HONDA	73.00MM (2.874")	0.020MM (0.0008") @ 6.00MM (0.236") from the Bottom.
11-891	GS	HONDA	81.00MM (3.189")	0.020MM (0.0008") @ 6.00MM (0.236") from the Bottom.
11-892	MS	HYUNDAI / KIA	86.70MM (3.413")	0.020MM (0.0008") @ 5.00MM (0.197") from the Bottom.
11-893	MS	NISSAN	78.00MM (3.071")	0.025MM (0.0010") @ 8.00MM (0.315") from the Bottom.
11-894	MS	NISSAN	89.00MM (3.504")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-895	MS	TOYOTA	75.00MM (2.953")	0.020MM (0.0008") @ 0.00MM (0.000") from the Bottom.
11-896	MS	SCION / TOYOTA	88.50MM (3.484")	0.025MM (0.0010") @ 6.00MM (0.236") from the Bottom.
11-897	MS	SCION / TOYOTA	90.00MM (3.543")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-898	MS	MAZDA	87.50MM (3.445")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-899	MS	GM / SAAB	96.00MM (3.780")	0.020MM (0.0008") @ 16.00MM (0.630") from the Bottom.
11-900	MS	GM	96.00MM (3.780")	0.020MM (0.0008") @ 25.00MM (0.984") from the Bottom.
11-901	GS	HYUNDAI / KIA	82.00MM (3.228")	0.025MM (0.0010") @ 5.00MM (0.197") from the Bottom.
11-902	MS	CHRYSLER / MITSUBISHI	93.00MM (3.661")	0.020MM (0.0008") @ 8.00MM (0.315") from the Bottom.
11-903	MS	FORD	90.20MM (3.551")	0.020MM (0.0008") @ 9.00MM (0.354") from the Bottom.
11-904	MS	GM	103.25MM (4.065")	0.020MM (0.0008") @ 9.00MM (0.354") from the Bottom.
11-905	MS	HONDA	87.00MM (3.425")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-906	MS	HONDA	89.00MM (3.504")	0.025MM (0.0010") @ 15.00MM (0.591") from the Bottom.
11-907	MS	INFINITI / NISSAN	95.50MM (3.760")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-908	MS	CHRYSLER / HYUNDAI / KIA / MITSUBISHI	88.00MM (3.465")	0.025MM (0.0010") @ 15.00MM (0.591") from the Bottom.
11-909	MS	HYUNDAI / KIA	86.00MM (3.386")	0.025MM (0.0010") @ 15.00MM (0.591") from the Bottom.
11-910	MS	SAAB / SUBARU	99.50MM (3.917")	0.025MM (0.0010") @ 13.00MM (0.512") from the Bottom.
11-911	MS	SUBARU	99.50MM (3.917")	0.025MM (0.0010") @ 15.00MM (0.591") from the Bottom.
11-912	MS	LEXUS / TOYOTA	94.00MM (3.701")	0.025MM (0.0010") @ 15.00MM (0.591") from the Bottom.
11-913	MS	CHRYSLER	99.50MM (3.917")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-914	MS	FORD	100.40MM (3.953")	0.025MM (0.0010") @ 12.50MM (0.492") from the Bottom.
11-915	MS	FORD	99.00MM (3.898")	0.050MM (0.0020") @ 0.00MM (0.000") from the Bottom.
11-916	MS	CHRYSLER / VOLKSWAGEN	96.00MM (3.780")	0.025MM (0.0010") @ 9.00MM (0.354") from the Bottom.
11-917	MS	GM	94.00MM (3.701")	0.025MM (0.0010") @ 15.00MM (0.591") from the Bottom.
11-918	MS	FORD	95.00MM (3.740")	0.050MM (0.0020") @ 15.00MM (0.591") from the Bottom.
11-919	MS	CHRYSLER	86.00MM (3.386")	0.025MM (0.0010") @ 15.00MM (0.591") from the Bottom.

PISTON FITTING CLEARANCE RECOMMENDATION

NOA PART #	COATING	MANUFACTURER NAME	SDT SIZE BORE DIAMETER	CLEARANCE and WHERE to MEASURE
11-920	MS	GM	96.00MM (3.780")	0.025MM (0.0010") @ 0.00MM (0.000") from the Bottom.
11-921	MS	SUBARU	99.50MM (3.917")	0.025MM (0.0010") @ 10.00MM (0.394") from the Bottom.
11-922	MS	CHRYSLER / VOLKSWAGEN	96.00MM (3.780")	0.025MM (0.0010") @ 7.00MM (0.276") from the Bottom.
11-923	MS	CHRYSLER	93.00MM (3.661")	0.025MM (0.0010") @ 13.00MM (0.512") from the Bottom.
11-9000	MS	VOLKSWAGEN	82.50MM (3.248")	0.025MM (0.0010") @ 5.40MM (0.213") from the Bottom.
11-D807	MS	CHRYSLER	90.20MM (3.551")	0.030MM (0.0012") @ 10.00MM (0.394") from the Bottom.

NPR Piston and Ring Kits

NPR Pistons and Rings can be order as Kits. The prefix of the 11- piston part number is changed to 10- which then indicates a Piston and Ring "Kit".

These 10-kits are sold as a quantity of one, which contains all the pistons and rings needed for an engine application.

Abbreviation & Words used in this NPR Catalog.

1 Cyl Pkg	1 Cylinder Package.
1 Cyl Set	1 Cylinder is 1 Engine Set.
4WD	Four Wheel Drive.
AH	Anodized Head.
ARL	Anodized Ring Land.
All Plt	All Surface are Plated.
BC3	Single Piece Dieselex.
BF	Barrel Face.
BF-IB	Barrel Face Inner Bevel.
BF-K1	Barrel Face Double Keystone.
BF-K1-IB	Barrel Face Double Keystone Inner Bevel.
BF-K2	Barrel Face Single Keystone.
BF-K3	Barrel Face Single Keystone Inner Bevel.
B1-TUC	Bevel Comp Taper Under Cut.
C & F	Engine is Carburetor or Fuel Injection.
C1	Single Piece Dieselex.
CALIF. E.C.S.	California Emission Control System.
CARB.	Carburetor Engine.
DOHC	Dual Over Head Cam.
Diesel	Diesel Engine.
E-BC3	Two Pieces Dieselex.
E-BC16	Two Pieces Dieselex.
ES-TUC	Effective Seal Taper Under Cut.
FI	Fuel Injection Engine.
FWD	Front Wheel Drive.
FRONT	Front side of engine bank only.
FUEL Pkg	Fuel Package.
Left	Left-hand side of engine bank only.
MS	Moly Skirt.
NIFF-H	Nifflex-H.
NIFF-S	Nifflex-S.
Oil1	Oil Control Ring #1
Oil2	Oil Control Ring #2
OHV	Over Head Valve.
RWD	Rear Wheel Drive.
SOHC	Single Over Head Cam.
T1	Taper Face.
T1-IB	Taper Face Inner Bevel.
T1-IC	Taper Face Inner Cut.
T1-K1	Taper Face Double Keystone.
T1-K2	Taper Face Single Keystone.
T1-RB	Taper Face Reverse Bevel.
TBA	To Be Announced.
TUC	Taper Under Cut.
TUC-RB	Taper Under Cut Reverse Bevel.
W/	With.
W/o	Without.
(Forklift)	This Piston Ring is used for Forklift engine, too.

NEW PISTON RING INFORMATION from YEAR 2015.

MAKER NAME	ENGINE SIZE			MODEL NAME	YEAR	C Y L	ENGINE CODE NUMBER	F.I. CARB DIESEL	O.H.V. S.O.H.C. D.O.H.C.	RING REFERENCE NUMBER	NOA PISTON RING #	DIA. mm	1 S T	2 N D	O 1	REMARK
	cc	L	ci													
FORD	3496	3.5L	213	**EDGE**	2007 - 2010	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	24 VALVE
FORD	3496	3.5L	213	**EDGE**	2011 - 2017	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	24 VALVE
FORD	3496	3.5L	213	**EXPLORER**	2011 - 2017	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	24 VALVE
FORD	3496	3.5L	213	**FLEX**	2009 - 2016	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	24 VALVE
FORD	3496	3.5L	213	**FUSION**	2010 - 2012	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	24 VALVE
FORD	3496	3.5L	213	**MKX**	2007 - 2010	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	24 VALVE
FORD	3496	3.5L	213	**MKZ**	2007 - 2012	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	24 VALVE
FORD	3496	3.5L	213	**SABLE**	2008 - 2009	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	24 VALVE
FORD	3496	3.5L	213	**TAURUS**	2008 - 2012	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	Cyclone, 24 VALVE
FORD	3496	3.5L	213	**TAURUS**	2013 - 2017	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	Cyclone, 24 VALVE
FORD	3496	3.5L	213	**TAURUS X**	2008 - 2009	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	Cyclone, 24 VALVE
FORD	3496	3.5L	213	**TAURUS X**	2013 - 2017	V6	DURATEC 35	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	Cyclone, 24 VALVE
FORD	3496	3.5L	213	**MKS**	2012 - 2017	V6	EcoBoost 35T	F.I.	D.O.H.C.	BL3Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	RIGHT, DAMB, w/ TURBO, 24 VALVE
FORD	3496	3.5L	213	**MKS**	2012 - 2017	V6	EcoBoost 35T	F.I.	D.O.H.C.	BL3Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	LEFT, DAMB, w/ TURBO, 24 VALVE
FORD	3496	3.5L	213	**MKT**	2010 - 2012	V6	EcoBoost 35T	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	RIGHT, DAMB, w/ TURBO, 24 VALVE
FORD	3496	3.5L	213	**MKT**	2010 - 2012	V6	EcoBoost 35T	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	LEFT, DAMB, w/ TURBO, 24 VALVE
FORD	3496	3.5L	213	**TAURUS SHO**	2010 - 2016	V6	EcoBoost 35T	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	RIGHT, DAMB, w/ TURBO, 24 VALVE
FORD	3496	3.5L	213	**TAURUS SHO**	2010 - 2016	V6	EcoBoost 35T	F.I.	D.O.H.C.	AT4Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	LEFT, DAMB, w/ TURBO, 24 VALVE
FORD	3496	3.5L	213	**EXPLORER**	2013 - 2017	V6	EcoBoost 35T	F.I.	D.O.H.C.	BL3Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	DAMB, w/ TURBO, 24 VALVE
FORD	3496	3.5L	213	**F150**	2011 - 2014	V6	EcoBoost 35T	F.I.	D.O.H.C.	BL3Z 6148 A	**SWF30026**	92.50	1.20	1.50	2.50	DAMB, w/ TURBO, 24 VALVE
FORD	3496	3.5L	213	**FLEX**	2010 - 2017	V6	EcoBoost 35T	F.I.	D.O.H.C.	BL3Z 6148 C	**SWF30026**	92.50	1.20	1.50	2.50	DAMB, w/ TURBO, 24 VALVE
FORD	4951	5.0L	302	**F150**	2011 - 2016	V8	COYOTE 50	F.I.	D.O.H.C.	CU7Z 6148 A	**SWF30027**	92.20	1.20	1.20	2.50	MODULAR, 32 VALVE
FORD	4951	5.0L	302	**MUSTANG**	2011 - 2017	V8	COYOTE 50	F.I.	D.O.H.C.	CU7Z 6148 A	**SWF30027**	92.20	1.20	1.20	2.50	MODULAR, 32 VALVE
FORD	4951	5.0L	302	**SHELBY GT350**	2014 - 2017	V8	COYOTE 50	F.I.	D.O.H.C.	CU7Z 6148 A	**SWF30027**	92.20	1.20	1.20	2.50	MODULAR, 32 VALVE
FORD	6651	6.7L	406	**ECONOLINE E450**	2011 - 2015	V8	Pow erStroke 6.7T	DIESEL	O.H.V.	BC3Z 6148 A	**SDF30025**	99.00	2.89	2.00	2.50	32 VALVE
FORD	6651	6.7L	406	**ECONOLINE E550**	2011 - 2015	V8	Pow erStroke 6.7T	DIESEL	O.H.V.	BC3Z 6148 A	**SDF30025**	99.00	2.89	2.00	2.50	32 VALVE
FORD	6651	6.7L	406	**F250**	2011 - 2015	V8	Pow erStroke 6.7T	DIESEL	O.H.V.	BC3Z 6148 A	**SDF30025**	99.00	2.89	2.00	2.50	32 VALVE
FORD	6651	6.7L	406	**F350**	2011 - 2017	V8	Pow erStroke 6.7T	DIESEL	O.H.V.	BC3Z 6148 A	**SDF30025**	99.00	2.89	2.00	2.50	32 VALVE
FORD	6651	6.7L	406	**F450**	2011 - 2017	V8	Pow erStroke 6.7T	DIESEL	O.H.V.	BC3Z 6148 A	**SDF30025**	99.00	2.89	2.00	2.50	32 VALVE
FORD	6651	6.7L	406	**F550**	2011 - 2017	V8	Pow erStroke 6.7T	DIESEL	O.H.V.	BC3Z 6148 A	**SDF30025**	99.00	2.89	2.00	2.50	32 VALVE
GMC	2384	2.4L	145	**EQUINOX**	2010 - 2011	4	ECOTEC 2.4 LAF	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**LaCrosse**	2010 - 2011	4	ECOTEC 2.4 LAF	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**REGAL**	2011 ONLY	4	ECOTEC 2.4 LAF	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**TERRAIN**	2010 - 2011	4	ECOTEC 2.4 LAF	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**HHR**	2010 - 2011	4	ECOTEC 2.4 LE9	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**MALIBU**	2010 - 2012	4	ECOTEC 2.4 LE9	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**EQUINOX**	2012 - 2017	4	ECOTEC 2.4 LEA	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**LaCrosse**	2012 - 2015	4	ECOTEC 2.4 LEA	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**REGAL**	2012 - 2017	4	ECOTEC 2.4 LEA	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**TERRAIN**	2012 - 2017	4	ECOTEC 2.4 LEA	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**TERRAIN DENALI**	2013 - 2017	4	ECOTEC 2.4 LEA	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**VERANO**	2012 - 2016	4	ECOTEC 2.4 LEA	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2384	2.4L	145	**IMPALA HYBRID**	2014 ONLY	4	ECOTEC 2.4 LUK	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	eAssist System, 16 VALVE
GMC	2384	2.4L	145	**MALIBU HYBRID**	2013 - 2014	4	ECOTEC 2.4 LUK	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	eAssist System, 16 VALVE
GMC	2384	2.4L	145	**REGAL HYBRID**	2012 - 2015	4	ECOTEC 2.4 LUK	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	eAssist System, 16 VALVE
GMC	2457	2.5L	150	**ATS**	2013 - 2015	4	ECOTEC 2.5 LCV	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2457	2.5L	150	**CANYON**	2013 - 2015	4	ECOTEC 2.5 LKW	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2457	2.5L	150	**IMPALA**	2013 - 2015	4	ECOTEC 2.5 LKW	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	2457	2.5L	150	**MALIBU LS**	2013 - 2015	4	ECOTEC 2.5 LKW	F.I.	D.O.H.C.	12659419	**SWG10048**	88.00	1.20	1.50	2.00	16 VALVE
GMC	3564	3.6L	217	**ACADIA**	2009 - 2015	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	LEFT, 24 VALVE
GMC	3564	3.6L	217	**ACADIA**	2009 - 2015	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	RIGHT, 24 VALVE
GMC	3564	3.6L	217	**ACADIA DENALI**	2011 - 2015	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	LEFT, 24 VALVE
GMC	3564	3.6L	217	**ACADIA DENALI**	2011 - 2015	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	RIGHT, 24 VALVE
GMC	3564	3.6L	217	**CAMARO**	2010 - 2011	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	LEFT, 24 VALVE
GMC	3564	3.6L	217	**CAMARO**	2010 - 2011	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	RIGHT, 24 VALVE
GMC	3564	3.6L	217	**CTS**	2008 - 2011	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	VIN V, LEFT, 24 VALVE
GMC	3564	3.6L	217	**CTS**	2008 - 2011	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	VIN V, RIGHT, 24 VALVE
GMC	3564	3.6L	217	**CTS SPORT WAGON**	2010 - 2011	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	VIN V, LEFT, 24 VALVE
GMC	3564	3.6L	217	**CTS SPORT WAGON**	2010 - 2011	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	VIN V, RIGHT, 24 VALVE
GMC	3564	3.6L	217	**ENLCLAVE**	2008 - 2011	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	LEFT, 24 VALVE
GMC	3564	3.6L	217	**ENLCLAVE**	2008 - 2011	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	RIGHT, 24 VALVE
GMC	3564	3.6L	217	**LaCrosse**	2010 - 2011	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	LEFT, 24 VALVE
GMC	3564	3.6L	217	**LaCrosse**	2010 - 2011	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	RIGHT, 24 VALVE
GMC	3564	3.6L	217	**TRAVERSE**	2009 - 2017	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	LEFT, 24 VALVE
GMC	3564	3.6L	217	**TRAVERSE**	2009 - 2017	V6	Alloytec LLT	F.I.	D.O.H.C.	12616973	**SWG10052**	94.00	1.20	1.50	2.50	RIGHT, 24 VALVE

NEW PISTON RING INFORMATION from YEAR 2015.

MAKER NAME	ENGINE SIZE			MODEL NAME	YEAR	CY L	ENGINE CODE NUMBER	F.I. CARB DIESEL	O.H.V. S.O.H.C. D.O.H.C.	RING REFERENCE NUMBER	NOA PISTON RING #	DIA. mm	1ST	2ND	O 1	REMARK
	cc	L	ci													
GMC	6162	6.2L	376	**CAMARO**	2010 - 2015	V8	Vortec 6200 LS3	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	STD Trans., 16 VALVE
GMC	6162	6.2L	376	**CAMARO ZL1**	2013 - 2015	V8	Vortec 6200 L99	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	AUTO Trans., 16 VALVE
GMC	6162	6.2L	376	**CORVETTE**	2008 - 2013	V8	Vortec 6200 LS3	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**CORVETTE**	2014 - 2017	V8	Vortec 6200 LT1	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**ESCALADE**	2007 - 2009	V8	Vortec 6200 L92	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**ESCALADE**	2010 - 2014	V8	Vortec 6200 L94	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**ESCALADE EXT**	2007 - 2009	V8	Vortec 6200 L92	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**ESCALADE EXT**	2010 - 2013	V8	Vortec 6200 L94	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**G8**	2009 ONLY	V8	Vortec 6200 LS3	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**H2**	2008 - 2009	V8	Vortec 6200 L92	F.I.	O.H.V.	19198090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**SIERRA 1500**	2009 - 2017	V8	Vortec 6200 L92	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**SIERRA 1500 DENALI**	2009 - 2013	V8	Vortec 6200 L92	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**SILVERADO 1500**	2010 - 2013	V8	Vortec 6200 L92	F.I.	O.H.V.	19198090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**SS**	2014 - 2017	V8	Vortec 6200 LS3	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
GMC	6162	6.2L	376	**YUKON DENALI**	2007 - 2013	V8	Vortec 6200 L92	F.I.	O.H.V.	19168090	**SWG10050**	103.25	1.50	1.50	2.50	16 VALVE
HONDA	1497	1.5L	91	**CIVIC HYBRID**	2012 - 2015	4	LEA	F.I.	S.O.H.C.	13011-RW0-004	**SWH30479**	73.00	1.00	1.00	2.00	w/ i-VTECH, 8 VALVE
HONDA	2559	2.6L	156	**PASSPORT**	1994 - 1997	4	4ZE1	F.I.	S.O.H.C.	8-97037-801-1	**SWI10144**	92.60	1.50	1.50	4.00	8 VALVE
HYUNDAI	3342	3.3L	204	**AZERA**	2007 - 2011	V6	LAMBDA G6DB	F.I.	D.O.H.C.	23040-3C150	**SWG30055**	92.00	1.20	1.20	2.00	GLS, 24 VALVE
HYUNDAI	3342	3.3L	204	**SANTA FE**	2007 - 2009	V6	LAMBDA G6DB	F.I.	D.O.H.C.	23040-3C150	**SWG30055**	92.00	1.20	1.20	2.00	24 VALVE
HYUNDAI	3342	3.3L	204	**SONATA**	2006 - 2010	V6	LAMBDA G6DB	F.I.	D.O.H.C.	23040-3C150	**SWG30055**	92.00	1.20	1.20	2.00	24 VALVE
HYUNDAI	3342	3.3L	204	**XG350**	2002 - 2006	V6	SIGMA G6CU	F.I.	D.O.H.C.	23040-39800	**SWG30056**	93.00	1.50	1.50	3.00	24 VALVE
HYUNDAI	3342	3.3L	204	**SANTA FE**	2003 - 2006	V6	SIGMA G6CU	F.I.	D.O.H.C.	23040-39800	**SWG30056**	93.00	1.50	1.50	3.00	24 VALVE
ISUZU	2559	2.6L	156	**AMIGO**	1989 - 1992	4	4ZE1	C & F	S.O.H.C.	8-94405-614-2	**SWI10144**	92.60	1.50	1.50	4.00	8 VALVE
ISUZU	2559	2.6L	156	**AMIGO**	1993 - 1994	4	4ZE1	C & F	S.O.H.C.	8-94405-614-2	**SWI10144**	92.60	1.50	1.50	4.00	8 VALVE
ISUZU	2559	2.6L	156	**PICKUP**	1988 - 1992	4	4ZE1	C & F	S.O.H.C.	8-94405-614-2	**SWI10144**	92.60	1.50	1.50	4.00	8 VALVE
ISUZU	2559	2.6L	156	**PICKUP**	1993 - 1995	4	4ZE1	C & F	S.O.H.C.	8-94405-614-2	**SWI10144**	92.60	1.50	1.50	4.00	8 VALVE
ISUZU	2559	2.6L	156	**RODEO**	1991 - 1992	4	4ZE1	F.I.	S.O.H.C.	8-94405-614-2	**SWI10144**	92.60	1.50	1.50	4.00	8 VALVE
ISUZU	2559	2.6L	156	**RODEO**	1993 - 1997	4	4ZE1	F.I.	S.O.H.C.	8-94405-614-2	**SWI10144**	92.60	1.50	1.50	4.00	8 VALVE
ISUZU	2559	2.6L	156	**TROOPER**	1989 - 1991	4	4ZE1	F.I.	S.O.H.C.	8-94405-614-2	**SWI10144**	92.60	1.50	1.50	4.00	8 VALVE
ISUZU	2559	2.6L	156	**TROOPER II**	1988 ONLY	4	4ZE1	F.I.	S.O.H.C.	8-94405-614-2	**SWI10144**	92.60	1.50	1.50	4.00	8 VALVE
KIA	3342	3.3L	204	**SORENTO**	2008 - 2009	V6	LAMBDA G6DB	F.I.	D.O.H.C.	23040-3C150	**SWG30055**	92.00	1.20	1.20	2.00	24 VALVE
KIA	3497	3.5L	213	**AMANTI**	2004 - 2006	V6	SIGMA G6AU	F.I.	D.O.H.C.	23040-39800	**SWG30056**	93.00	1.50	1.50	3.00	24 VALVE
KIA	3497	3.5L	213	**SEDONA**	2002 - 2005	V6	SIGMA G6AU	F.I.	D.O.H.C.	23040-39800	**SWG30056**	93.00	1.50	1.50	3.00	24 VALVE
KIA	3497	3.5L	213	**SORENTO**	2003 - 2006	V6	SIGMA G6AU	F.I.	D.O.H.C.	23040-39800	**SWG30056**	93.00	1.50	1.50	3.00	24 VALVE
LEXUS	4663	4.7L	285	**GX 470**	2005 - 2009	V8	2UZ-FE	F.I.	D.O.H.C.	13011-50161	**SWT10240**	94.00	1.20	1.20	3.00	RIGHT, 32 VALVE
LEXUS	4663	4.7L	285	**GX 470**	2005 - 2009	V8	2UZ-FE	F.I.	D.O.H.C.	13011-50161	**SWT10240**	94.00	1.20	1.20	3.00	LEFT, 32 VALVE
LEXUS	4663	4.7L	285	**LX 470**	2005 - 2007	V8	2UZ-FE	F.I.	D.O.H.C.	13011-50161	**SWT10240**	94.00	1.20	1.20	3.00	RIGHT, 32 VALVE
LEXUS	4663	4.7L	285	**LX 470**	2005 - 2007	V8	2UZ-FE	F.I.	D.O.H.C.	13011-50161	**SWT10240**	94.00	1.20	1.20	3.00	LEFT, 32 VALVE
MITSUBISHI	1997	2.0L	122	**LANCER EVO.**	2003 - 2007	4	4G63	F.I.	D.O.H.C.	MN149594	**SWM31143**	85.00	1.20	1.20	2.00	16 VALVE
SCION	2494	2.5L	152	**tC**	2011 - 2016	4	2AR-FE	F.I.	D.O.H.C.	13011-0V010	**SDT10226**	90.00	1.00	1.00	2.00	VVT-i, 16 VALVE
TOYOTA	2494	2.5L	152	**AVALON HYBRID**	2013 - 2017	4	2AR-FXE	F.I.	D.O.H.C.	13011-36070	**SDT10226**	90.00	1.00	1.00	2.00	VVT-i, 16 VALVE
TOYOTA	2494	2.5L	152	**CAMRY**	2010 - 2017	4	2AR-FE	F.I.	D.O.H.C.	13011-0V010	**SDT10226**	90.00	1.00	1.00	2.00	VVT-i, 16 VALVE
TOYOTA	2494	2.5L	152	**CAMRY HYBRID**	2011 - 2017	4	2AR-FXE	F.I.	D.O.H.C.	13011-0V010	**SDT10226**	90.00	1.00	1.00	2.00	VVT-i, 16 VALVE
TOYOTA	2494	2.5L	152	**RAV4**	2009 - 2017	4	2AR-FE	F.I.	D.O.H.C.	13011-0V010	**SDT10226**	90.00	1.00	1.00	2.00	VVT-i, 16 VALVE
TOYOTA	2672	2.7L	163	**HIGHLANDER**	2009 - 2017	4	1AR-FE	F.I.	D.O.H.C.	13011-0V040	**SDT10226**	90.00	1.00	1.00	2.00	16 VALVE
TOYOTA	2672	2.7L	163	**SIENNA**	2011 - 2012	4	1AR-FE	F.I.	D.O.H.C.	13011-0V040	**SDT10226**	90.00	1.00	1.00	2.00	16 VALVE
TOYOTA	2672	2.7L	163	**VENZA**	2009 - 2015	4	1AR-FE	F.I.	D.O.H.C.	13011-0V040	**SDT10226**	90.00	1.00	1.00	2.00	16 VALVE
TOYOTA	4663	4.7L	285	**4 RUNNER**	2006 - 2010	V8	2UZ-FE	F.I.	D.O.H.C.	13011-50162	**SWT10240**	94.00	1.20	1.20	3.00	RIGHT, 32 VALVE
TOYOTA	4663	4.7L	285	**4 RUNNER**	2006 - 2010	V8	2UZ-FE	F.I.	D.O.H.C.	13011-50162	**SWT10240**	94.00	1.20	1.20	3.00	LEFT, 32 VALVE
TOYOTA	4663	4.7L	285	**LAND CRUISER**	2004 - 2007	V8	2UZ-FE	F.I.	D.O.H.C.	13011-50162	**SWT10240**	94.00	1.20	1.20	3.00	RIGHT, i-Force, 32 VALVE
TOYOTA	4663	4.7L	285	**LAND CRUISER**	2004 - 2007	V8	2UZ-FE	F.I.	D.O.H.C.	13011-50162	**SWT10240**	94.00	1.20	1.20	3.00	LEFT, I-Force, 32 VALVE
TOYOTA	4663	4.7L	285	**SEQUOIA**	2005 - 2008	V8	2UZ-FE	F.I.	D.O.H.C.	13011-50162	**SWT10240**	94.00	1.20	1.20	3.00	RIGHT, i-Force, 32 VALVE
TOYOTA	4663	4.7L	285	**SEQUOIA**	2005 - 2008	V8	2UZ-FE	F.I.	D.O.H.C.	13011-50162	**SWT10240**	94.00	1.20	1.20	3.00	LEFT, I-Force, 32 VALVE
TOYOTA	4663	4.7L	285	**TUNDRA**	2006 - 2009	V8	2UZ-FE	F.I.	D.O.H.C.	13011-0F022	**SWT10240**	94.00	1.20	1.20	3.00	RIGHT, i-Force, 32 VALVE
TOYOTA	4663	4.7L	285	**TUNDRA**	2006 - 2009	V8	2UZ-FE	F.I.	D.O.H.C.	13011-0F022	**SWT10240**	94.00	1.20	1.20	3.00	LEFT, I-Force, 32 VALVE

NEW PISTONINFORMATION from YEAR 2015.

MAKER NAME	ENGINE SIZE			MODEL NAME	YEAR	C Y L	ENGINE CODE NUMBER	F.I. CARB DIESEL	O.H.V. S.O.H.C. D.O.H.C.	PISTON REFERENCE NUMBER	NOA PISTON #	DIA. mm	1 S T	2 N D	O 1	REMARK
	cc	L	ci													
LEXUS	4663	4.7L	285	**GX 470**	2005 - 2009	V8	2UZ-FE	F.I.	D.O.H.C.	13101-50082-01	**11-912**	94.00	1.20	1.20	3.00	RIGHT, 32 VALVE
LEXUS	4663	4.7L	285	**GX 470**	2005 - 2009	V8	2UZ-FE	F.I.	D.O.H.C.	13103-50081-01	**11-912**	94.00	1.20	1.20	3.00	LEFT, 32 VALVE
LEXUS	4663	4.7L	285	**LX 470**	2005 - 2007	V8	2UZ-FE	F.I.	D.O.H.C.	13101-50082-01	**11-912**	94.00	1.20	1.20	3.00	RIGHT, 32 VALVE
LEXUS	4663	4.7L	285	**LX 470**	2005 - 2007	V8	2UZ-FE	F.I.	D.O.H.C.	13103-50081-01	**11-912**	94.00	1.20	1.20	3.00	LEFT, 32 VALVE
TOYOTA	4663	4.7L	285	**4 RUNNER**	2006 - 2010	V8	2UZ-FE	F.I.	D.O.H.C.	13101-50082-01	**11-912**	94.00	1.20	1.20	3.00	RIGHT, 32 VALVE
TOYOTA	4663	4.7L	285	**4 RUNNER**	2006 - 2010	V8	2UZ-FE	F.I.	D.O.H.C.	13103-50081-01	**11-912**	94.00	1.20	1.20	3.00	LEFT, 32 VALVE
TOYOTA	4663	4.7L	285	**LAND CRUISER**	2004 - 2007	V8	2UZ-FE	F.I.	D.O.H.C.	13101-50082-01	**11-912**	94.00	1.20	1.20	3.00	RIGHT, i-Force, 32 VALVE
TOYOTA	4663	4.7L	285	**LAND CRUISER**	2004 - 2007	V8	2UZ-FE	F.I.	D.O.H.C.	13103-50081-01	**11-912**	94.00	1.20	1.20	3.00	LEFT, I-Force, 32 VALVE
TOYOTA	4663	4.7L	285	**SEQUOIA**	2005 - 2008	V8	2UZ-FE	F.I.	D.O.H.C.	13101-50082-01	**11-912**	94.00	1.20	1.20	3.00	RIGHT, i-Force, 32 VALVE
TOYOTA	4663	4.7L	285	**SEQUOIA**	2005 - 2008	V8	2UZ-FE	F.I.	D.O.H.C.	13103-50081-01	**11-912**	94.00	1.20	1.20	3.00	LEFT, I-Force, 32 VALVE
TOYOTA	4663	4.7L	285	**TUNDRA**	2006 - 2009	V8	2UZ-FE	F.I.	D.O.H.C.	13101-0F031	**11-912**	94.00	1.20	1.20	3.00	RIGHT, i-Force, 32 VALVE
TOYOTA	4663	4.7L	285	**TUNDRA**	2006 - 2009	V8	2UZ-FE	F.I.	D.O.H.C.	13103-0F031	**11-912**	94.00	1.20	1.20	3.00	LEFT, I-Force, 32 VALVE
CHRYSLER	5654	5.7L	345	**300**	2010 - 2017	V8	EZH HEMI 5.7	F.I.	O.H.V.	53022257AE	**11-913**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
CHRYSLER	5654	5.7L	345	**300**	2010 - 2017	V8	EZH HEMI 5.7	F.I.	O.H.V.	53022258AE	**11-913**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
CHRYSLER	5654	5.7L	345	**CHALLENGER**	2009 - 2017	V8	EZH HEMI 5.7	F.I.	O.H.V.	53022257AE	**11-913**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
CHRYSLER	5654	5.7L	345	**CHALLENGER**	2009 - 2017	V8	EZH HEMI 5.7	F.I.	O.H.V.	53022258AE	**11-913**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
CHRYSLER	5654	5.7L	345	**CHARGER**	2010 - 2017	V8	EZH HEMI 5.7	F.I.	O.H.V.	53022257AE	**11-913**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
CHRYSLER	5654	5.7L	345	**CHARGER**	2010 - 2017	V8	EZH HEMI 5.7	F.I.	O.H.V.	53022258AE	**11-913**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
CHRYSLER	5654	5.7L	345	**DURANGO**	2011 - 2017	V8	HEMI 5.7	F.I.	O.H.V.	53022257AE	**11-913**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
CHRYSLER	5654	5.7L	345	**DURANGO**	2011 - 2017	V8	HEMI 5.7	F.I.	O.H.V.	53022258AE	**11-913**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
CHRYSLER	5654	5.7L	345	**Grand Cherokee**	2010 - 2017	V8	HEMI 5.7	F.I.	O.H.V.	53022257AE	**11-913**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
CHRYSLER	5654	5.7L	345	**Grand Cherokee**	2010 - 2017	V8	HEMI 5.7	F.I.	O.H.V.	53022258AE	**11-913**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
CHRYSLER	5654	5.7L	345	**RAM 1500**	2010 - 2017	V8	HEMI 5.7	F.I.	O.H.V.	53022257AE	**11-913**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
CHRYSLER	5654	5.7L	345	**RAM 1500**	2010 - 2017	V8	HEMI 5.7	F.I.	O.H.V.	53022258AE	**11-913**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
CHRYSLER	5654	5.7L	345	**RAM 2500**	2010 - 2017	V8	HEMI 5.7	F.I.	O.H.V.	53022257AE	**11-913**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
CHRYSLER	5654	5.7L	345	**RAM 2500**	2010 - 2017	V8	HEMI 5.7	F.I.	O.H.V.	53022258AE	**11-913**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
CHRYSLER	5654	5.7L	345	**RAM 3500**	2011 - 2017	V8	HEMI 5.7	F.I.	O.H.V.	53022257AE	**11-913**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
CHRYSLER	5654	5.7L	345	**RAM 3500**	2011 - 2017	V8	HEMI 5.7	F.I.	O.H.V.	53022258AE	**11-913**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
CHRYSLER	5654	5.7L	345	**RAM 3500 Chassis Cab**	2011 - 2014	V8	HEMI 5.7	F.I.	O.H.V.	53022257AE	**11-913**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
CHRYSLER	5654	5.7L	345	**RAM 3500 Chassis Cab**	2011 - 2014	V8	HEMI 5.7	F.I.	O.H.V.	53022258AE	**11-913**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
FORD	4015	4.0L	245	**EXPLORER**	2001 - 2010	V6	COLOGNE 40	F.I.	S.O.H.C.	XL2Z 6108 AA	**11-914**	100.40	1.20	1.50	3.00	12 VALVE
FORD	4015	4.0L	245	**Explorer Sport Trac**	2001 - 2005	V6	COLOGNE 40	F.I.	S.O.H.C.	XL2Z 6108 AA	**11-914**	100.40	1.20	1.50	3.00	Incld. TRUCK, 12 VALVE
FORD	4015	4.0L	245	**Explorer Sport Trac**	2007 - 2010	V6	COLOGNE 40	F.I.	S.O.H.C.	XL2Z 6108 AA	**11-914**	100.40	1.20	1.50	3.00	Incld. TRUCK, 12 VALVE
FORD	4015	4.0L	245	**MOUNTAINEER**	2002 - 2010	V6	COLOGNE 40	F.I.	S.O.H.C.	XL2Z 6108 AA	**11-914**	100.40	1.20	1.50	3.00	12 VALVE
FORD	4015	4.0L	245	**MUSTANG**	2005 - 2009	V6	COLOGNE 40	F.I.	S.O.H.C.	2U3Z 6108 AA	**11-914**	100.40	1.20	1.50	3.00	12 VALVE
FORD	4015	4.0L	245	**RANGER**	2001 - 2011	V6	COLOGNE 40	F.I.	S.O.H.C.	XL2Z 6108 AA	**11-914**	100.40	1.20	1.50	3.00	VIN-E, 12 VALVE
FORD	6651	6.7L	406	**ECONOLINE E450**	2011 - 2014	V8	PowerStroke 6.7T	DIESEL	O.H.V.	BC3Z 6108 D	**11-915**	99.00	2.89	2.00	2.50	32 VALVE
FORD	6651	6.7L	406	**ECONOLINE E550**	2011 - 2014	V8	PowerStroke 6.7T	DIESEL	O.H.V.	BC3Z 6108 D	**11-915**	99.00	2.89	2.00	2.50	32 VALVE
FORD	6651	6.7L	406	**F250**	2011 - 2015	V8	PowerStroke 6.7T	DIESEL	O.H.V.	BC3Z 6108 D	**11-915**	99.00	2.89	2.00	2.50	32 VALVE
FORD	6651	6.7L	406	**F350**	2011 - 2017	V8	PowerStroke 6.7T	DIESEL	O.H.V.	BC3Z 6108 D	**11-915**	99.00	2.89	2.00	2.50	32 VALVE
FORD	6651	6.7L	406	**F450**	2011 - 2017	V8	PowerStroke 6.7T	DIESEL	O.H.V.	BC3Z 6108 D	**11-915**	99.00	2.89	2.00	2.50	32 VALVE
FORD	6651	6.7L	406	**F550**	2011 - 2017	V8	PowerStroke 6.7T	DIESEL	O.H.V.	BC3Z 6108 D	**11-915**	99.00	2.89	2.00	2.50	32 VALVE
CHRYSLER	3604	3.6L	220	**200**	2011 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**300**	2011 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**AVENGER**	2011 - 2014	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**CHALLENGER**	2011 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**CHARGER**	2011 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**DURANGO**	2011 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**Grand Caraven**	2011 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**Grand Cherokee**	2011 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**JOURNEY**	2011 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**PACIFICA**	2017 - 2018	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**RAM CARGO VAN**	2011 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**RAM PROMASTER**	2011 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**TOWN & COUNTRY**	2011 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**WRANGLER**	2012 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**WRANGLER UNLIMITED**	2012 - 2017	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	5184347AG	**11-916**	96.00	1.20	1.20	2.00	24 VALVE
CHRYSLER	3604	3.6L	220	**ROUTAN**	2011 - 2012	V6	PENTASTAR 3.6	F.I.	D.O.H.C.	-	**11-916**	96.00	1.20	1.20	2.00	CHRYSLER Engine, 24 VALVE
GMC	3564	3.6L	217	**ACADIA**	2007 - 2008	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
GMC	3564	3.6L	217	**AURA**	2007 - 2009	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
GMC	3564	3.6L	217	**CTS**	2004 - 2009	V6	Alloytec LY7	F.I.	D.O.H.C	12590866	**11-917**	94.00	1.20	1.50	2.50	VIN 7, 24 VALVE
GMC	3564	3.6L	217	**ENLCLAVE**	2008 ONLY	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
GMC	3564	3.6L	217	**EQUINOX**	2008 - 2009	V6	Alloytec LY7	F.I.	D.O.H.C	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
GMC	3564	3.6L	217	**G6**	2007 - 2009	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
GMC	3564	3.6L	217	**G8**	2008 - 2009	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALUE
GMC	3564	3.6L	217	**LaCrosse**	2005 - 2008	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
GMC	3564	3.6L	217	**MALIBU**	2009 - 2012	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
GMC	3564	3.6L	217	**OUTLOOK**	2007 - 2010	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
GMC	3564	3.6L	217	**RENDEZVOUS**	2004 - 2006	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
GMC	3564	3.6L	217	**SRX**	2004 - 2009	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
GMC	3564	3.6L	217	**STS**	2005 - 2011	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE

NEW PISTONINFORMATION from YEAR 2015.

MAKER NAME	ENGINE SIZE			MODEL NAME	YEAR	C Y L	ENGINE CODE NUMBER	F.I. CARB DIESEL	O.H.V. S.O.H.C. D.O.H.C.	PISTON REFERENCE NUMBER	NOA PISTON #	DIA. mm	1 S T	2 N D	O 1	REMARK
	cc	L	ci													
GMC	3564	3.6L	217	**TORRENT**	2008 - 2009	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
GMC	3564	3.6L	217	**VUE**	2008 ONLY	V6	Alloytec LY7	F.I.	D.O.H.C.	12590866	**11-917**	94.00	1.20	1.50	2.50	24 VALVE
FORD	4506	4.5L	275	**LCF**	2006 - 2010	V6	PowerStroke 4.5T	DIESEL	O.H.V.	3C3Z 6108 AA	**11-918**	95.00	2.25	2.00	3.50	24 VALVE
CHRYSLER	1998	2.0L	122	**CALIBER**	2007 - 2012	4	WORLD 2.0	F.I.	D.O.H.C.	5191337AA	**11-919**	86.00	1.20	1.20	2.00	16 VALVE
CHRYSLER	1998	2.0L	122	**COMPASS**	2007 - 2017	4	WORLD 2.0	F.I.	D.O.H.C.	5191337AA	**11-919**	86.00	1.20	1.20	2.00	16 VALVE
CHRYSLER	1998	2.0L	122	**PATRIOT**	2007 - 2017	4	WORLD 2.0	F.I.	D.O.H.C.	5191337AA	**11-919**	86.00	1.20	1.20	2.00	16 VALVE
GMC	5328	5.3L	325	**AVALANCHE**	2007 - 2013	V8	Vortec 5300 IV	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	LC9, LMG, LY5, 16 VALVE
GMC	4818	4.8L	294	**CUTAWAY G3500**	2010 - 2017	V8	Vortec 4800 L20	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	16 VALVE
GMC	4818	4.8L	294	**EXPRESS G2500**	2010 - 2017	V8	Vortec 4800 L20	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	16 VALVE
GMC	4818	4.8L	294	**EXPRESS G3500**	2010 - 2017	V8	Vortec 4800 L20	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	16 VALVE
GMC	4818	4.8L	294	**SAVANA G2500**	2010 - 2017	V8	Vortec 4800 L20	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	16 VALVE
GMC	4818	4.8L	294	**SAVANA G3500**	2010 - 2017	V8	Vortec 4800 L20	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	16 VALVE
GMC	4818	4.8L	294	**SIERRA 1500**	2010 - 2013	V8	Vortec 4800 L20	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	16 VALVE
GMC	5328	5.3L	325	**SIERRA 1500**	2007 - 2013	V8	Vortec 5300 IV	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	LC9, LH6, LMG, LY5, 16 VALVE
GMC	4818	4.8L	294	**SILVERADO 1500**	2010 - 2013	V8	Vortec 4800 L20	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	16 VALVE
GMC	5328	5.3L	325	**SILVERADO 1500**	2007 - 2013	V8	Vortec 5300 IV	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	LC9, LH6, LMG, LY5, 16 VALVE
GMC	5328	5.3L	325	**SUBURBAN (CH)**	2007 - 2014	V8	Vortec 5300 IV	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	LC9, LMG, LY5, 16 VALVE
GMC	5328	5.3L	325	**TAHOE**	2010 - 2014	V8	Vortec 5300 IV	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	LC9, LMG, LY5, 16 VALVE
GMC	5328	5.3L	325	**YUKON**	2007 - 2013	V8	Vortec 5300 IV	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	LC9, LH6, LMG, LY5, 16 VALVE
GMC	5328	5.3L	325	**YUKON XL**	2007 - 2013	V8	Vortec 5300 IV	F.I.	O.H.V.	19208675	**11-920**	96.00	1.50	1.50	3.00	LC9, LH6, LMG, LY5, 16 VALVE
SUBARU	2457	2.5L	150	**FORESTER**	2006 - 2010	H4	EJ253	F.I.	S.O.H.C.	12013AB250	**11-921**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
SUBARU	2457	2.5L	150	**FORESTER**	2006 - 2010	H4	EJ253	F.I.	S.O.H.C.	12018AB250	**11-921**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
SUBARU	2457	2.5L	150	**IMPREZA**	2006 - 2011	H4	EJ253	F.I.	S.O.H.C.	12013AB250	**11-921**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
SUBARU	2457	2.5L	150	**IMPREZA**	2006 - 2011	H4	EJ253	F.I.	S.O.H.C.	12018AB250	**11-921**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
SUBARU	2457	2.5L	150	**LEGACY**	2006 - 2009	H4	EJ253	F.I.	S.O.H.C.	12013AB250	**11-921**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
SUBARU	2457	2.5L	150	**LEGACY**	2006 - 2009	H4	EJ253	F.I.	S.O.H.C.	12018AB250	**11-921**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
SUBARU	2457	2.5L	150	**OUTBACK H4**	2006 - 2011	H4	EJ253	F.I.	S.O.H.C.	12013AB250	**11-921**	99.50	1.20	1.20	2.00	RIGHT, 16 VALVE
SUBARU	2457	2.5L	150	**OUTBACK H4**	2006 - 2011	H4	EJ253	F.I.	S.O.H.C.	12018AB250	**11-921**	99.50	1.20	1.20	2.00	LEFT, 16 VALVE
CHRYSLER	3952	4.0L	241	**Grand Caraven**	2008 - 2010	V6	EGQ & EGS 4.0	F.I.	S.O.H.C.	4593589AA	**11-922**	96.00	1.20	1.50	3.00	24 VALVE
CHRYSLER	3952	4.0L	241	**NITRO**	2007 - 2011	V6	EGQ & EGS 4.0	F.I.	S.O.H.C.	4593589AA	**11-922**	96.00	1.20	1.50	3.00	24 VALVE
CHRYSLER	3952	4.0L	241	**PACIFICA**	2007 - 2008	V6	EGQ & EGS 4.0	F.I.	S.O.H.C.	4593589AA	**11-922**	96.00	1.20	1.50	3.00	24 VALVE
CHRYSLER	3952	4.0L	241	**ROUTAN**	2009 - 2010	V6	EGQ & EGS 4.0	F.I.	S.O.H.C.	4593589AA	**11-922**	96.00	1.20	1.50	3.00	CHRYSLER Engine, 24 VALVE
CHRYSLER	3293	3.3L	201	**CARAVAN**	2001 - 2008	V6	EGA 3.3	F.I.	O.H.V.	4897772AA	**11-923**	93.00	1.50	1.50	3.00	SH. Oil, 12 VALVE
CHRYSLER	3293	3.3L	201	**Grand Caraven**	2001 - 2005	V6	EGA 3.3	F.I.	O.H.V.	4897772AA	**11-923**	93.00	1.50	1.50	3.00	SH. Oil, 12 VALVE
CHRYSLER	3293	3.3L	201	**Grand Caraven**	2008 - 2010	V6	EGA 3.3	F.I.	O.H.V.	4897772AA	**11-923**	93.00	1.50	1.50	3.00	12 VALVE
CHRYSLER	3293	3.3L	201	**TOWN & COUNTRY**	2001 - 2010	V6	EGA 3.3	F.I.	O.H.V.	4897772AA	**11-923**	93.00	1.50	1.50	3.00	12 VALVE
CHRYSLER	3293	3.3L	201	**VOYAGER**	2001 - 2003	V6	EGA 3.3	F.I.	O.H.V.	4897772AA	**11-923**	93.00	1.50	1.50	3.00	12 VALVE