## TOOLS

## 4 02. Extreme Pressure Lube \#3

- The assembly lubricant preferred by top engine builders
- Can be used as a rod bolt lubricant

| Part No. | Quantity | Description |
| :--- | :---: | :--- |
| 40177 | $\mathbf{1}$ | Extreme Pressure Lube \#3 |



## Manley Luhe

For Connecting Rod Bolits

- Provides superior lubrication for rod bolt assembly

| Part No. | Quantity | Description |
| :--- | :---: | :--- |
| 40171 | $1 / 2 ~ o z$. | Manley Rod Bolt Assembly Lube <br> 40172 |

## 2 02. Moly Lube

- Molybdenum disulfide is excellent as a break in coating for camshafts, lifters, pushrod ends and rocker balls.

| Part No. | Quantity | Description |
| :--- | :---: | :--- |
| 40199 | $\mathbf{1}$ | Moly lube |



## ARP Ulitra-Torque ${ }^{\text {® }}$ Fastener Assembly Lube

- Can be used for torqueing engine fasteners

| Part No. | Quantity | Description |
| :--- | :---: | :--- |
| $\mathbf{4 0 1 7 0}$ | $1 / 2 \mathrm{oz}$. | Fastener Assembly Lube |



## Pushrod Length Checker

- Long valves, milled heads, cut blocks, small base circle camshafts all move rocker geometry far from optimum
- Correct length pushrods keep rockers centered on the valve tip and reduce stem and guide wear
- Checker tells the engine builder instantly what length pushrod is required

| Part No. | Quantity | Description |
| :--- | :---: | :--- |
| 42137 | 1 | Small Block Chevys w/ $3 / 8^{\prime \prime}$ studs |
| 42132 | 1 | Small Block Chevys w/ 7/16" studs |
| 42133 | 1 | Big Block Chevys ( intakes and exhausts ) |



## Valve Spring Chamfering Tool

- Detailing valve springs is crucial to preserving retainer life
- ID chamfering of springs provides clearance and distributes stress along flat surface of retainer step rather than the corner radii

| Part No. | Quantity | Description |
| :--- | :---: | :--- |
| 40174 | 1 | Chamfering tool w/ 4 abrasive cones |
| 40175 | 12 pcs. | Replacement abrasive cones |
| 40176 | 25 pcs. | Replacement abrasive cones |



## Valve Spring Compressor Tool

- Sturdy black oxide tools for changing valve springs
- Rated for 350 lbs . maximum open spring pressure

| Part No. | Quantity | Description |
| :--- | :---: | :--- |
| 41870 | 1 | Compressor tool for all Chryslers and Fords with rocker shafts |



## APPABE!

## Short Sleeve T-Shirts

- Made with a $60 \%$ cotton $/ 40 \%$ polyester blend, the Manley logo is shown vertically on the front with a piston/connecting rod design on the back that is made up of the Manley logo.

| Size | Black <br> Part No. | Gray <br> Part No. |
| :--- | :---: | :---: |
| Small | 00005 | 00035 |
| Medium | 00004 | 00034 |
| Large | 00003 | 00033 |
| X Large | 00002 | 00032 |
| XX Large | 00001 | 00031 |



## Black Ladies Fit Tops

- Same $60 \%$ cotton/40\% polyester blend and printed design as our t-shirts except in a comfortable ladies fit top.

| Size | Part No. |
| :--- | :---: |
| Small | 00065 |
| Medium | 00064 |
| Large | 00063 |
| X Large | 00062 |
| XX Large | 00061 |



Ladies Fit Front


Ladies Fit Back

## Black Pullover Hoodies

- Pullover style made with a $50 \%$ cotton/50\% polyester blend with a full front pocket.

| Size | Hoodie <br> Part No. |
| :--- | :---: |
| Small | 00205 |
| Medium | 00204 |
| Large | 00203 |
| X Large | 00202 |
| XX Large | 00201 |



## FLEXFIT® Brand Fitted Hats

- Available in two sizes; S-M and L-XL, these black 98\% cotton hats feature the Manley logo embroidered in black and gray on the front left.

| Size | Part No. |
| :--- | :---: |
| S-M | 00010 |
| L-XL | 00012 |



## Embroidered Mechanics Apron

- Attractive black cotton/polyester with embroidered Manley logo in red and white - Large twin front pockets

| Size | Part No. |
| :--- | :---: |
| Fits All | 42014 |



## Vinyl Printed Banners

## Smaller Size White, Red and Black Design

- Made from durable 13-oz. vinyl material with 10 grommets around the border for easy hanging

| Size | Part No. |
| :--- | :--- |
| $52^{\prime \prime} \times 19^{\prime \prime}$ | 00008 |



## Larger Size White, Red and Black Design

- Made from durable 13-0z. vinyl material with 10 grommets around the border for easy hanging

| Size | Part No. |
| :--- | :--- |
| $96^{\prime \prime} \times 30 "$ | 00008 TS |

## Larger Size White and Red Design

- Made from durable 13-oz. vinyl material with 8 grommets around the border for easy hanging

| Size | Part No. |
| :--- | :--- |
| $72^{\prime \prime} \times 36^{\prime \prime}$ | 00013 |



- Printed with the MANLEY ${ }^{\circledR}$ Powers the Winners logo on both sides and a Lobster Claw Lanyard Attachment

| Size | Part No. |
| :--- | :--- |
| $5 / 8^{\prime \prime} \times 36^{\prime \prime}$ | LAN-BLACK |



## Did You Know...

... in 1929 you could purchase a Manley 25 ton hydraulic press for $\$ 115.00$ or a $21 / 2$ ton hydraulic jack for $\$ 48.00$. Both products were invented by Robert E. Manley then operating the Manley Manufacturing Company of Bridgeport, Connecticut.
... in 1931 the Eastern Valve Company of Hanover, Pennsylvania was purchased by Robert E. Manley, moved to York, Pennsylvania and renamed the Manley Products Corporation.
... in 1934 you could purchase Manley replacement Model T engine valves for $\$ 8.00$ - per 100 pieces.
... in 1940 the price of Model T valves had actually dropped to $\$ 7.55$ per 100 pieces. Depression!
... in 1950 Model T valves were sold for about $\$ 16.00$ per 100 pieces. Post war inflation!
... in 1966 Manley Performance Products, Inc. was founded by Henry D. Manley III. Forged pistons were sold for $\$ 50.72$ per set.
..i. in 1968 the Manley line included stainless valves, camshafts, lifters, vanadium valve springs, push rods and timing chain kits.
... in 1969 the race cars of Don Garlits, Bo Laws, and Joe Mondello appeared on the cover of the Manley Performance catalog.
... in 1971 Bill Jenkins' Grumpy's Toy made the first of ten appearances on the cover of the Manley Performance catalog.
... in 1983 Manley introduced its line of aluminum connecting rods. The jobber price was $\$ 394.56$ per set.
... in 1986, Manley's 20th year, " H " beam steel connecting rods were introduced at $\$ 788.00$ per set jobber price.
... in 1988 Manley Performance moved the factory from 13 Race Street in Bloomfield, NJ , to its present location in Lakewood, NJ .
... in 1997 Manley Performance introduced its Platinum Series of pistons.
... in 1998 an expansion of the factory doubled the manufacturing floor-space.
... in 2000 The Manley Performance "Gen II" custom stainless steel valve program is born and revolutionizes the custom valve market.
... in 2001 Manley Performance celebrated its 35th year of serving the racing and performance industry. Thank you to all our customers and especially the racers who trusted our products!
... in 2002 Manley entered the high performance passenger car market as an OEM supplier of connecting rods for the 2003 / 2004 Ford SVT Mustang Cobra.
... in 2004 Manley continued its presence in the OEM market as a connecting rod supplier for the Ford GT. In addition, Manley also sold the first set of their popular "Turbo Tuff ${ }^{\circledR \text { " }}$ connecting rods for the Mitsubishi 4G63 engine. The first of many to come!
I.. in 2005 Manley adds Platinum Series Mitsubishi pistons to the line.
... in 2006 Manley introduces "Turbo Tuff" connecting rods for the Subaru WRX/STi. Manley also celebrates its 40th anniversary in the performance aftermarket.

... in 2008 Manley significantly expands it's Platinum Series piston line for Chevy LS engine applications to compliment their connecting rod, valve and valve train offerings for this market segment.
... in 2010 Manley introduces a line of superior crankshafts and rotating assemblies for traditional SB, BB, and LS Series Chevrolets, Chrysler Hemis and Sport Compacts.
... in 2011, our 45th year in business, Manley develops a host of new products for the Ford 5.0 L "Coyote" and 6.2L "Raptor" engines, adds Mitsubishi EVO X crankshafts and introduces connecting rods for diesel applications.
... in 2012, Manley DOUBLES their sport compact H-Beam offerings, develops unique, "drop-in" pistons for the venerable Nissan GT-R and expands the line of Chevy LS Crankshafts.
... in 2013, a second expansion of the factory increases the manufacturing floor space by over $40 \%$.
... in 2015, the Manley West expansion is completed; doubling the size of our distribution facility in Orange, CA.
... in 2016, Manley celebrates its Golden Anniversary....... 50 years of manufacturing excellence and quality service for the performance aftermarket

## FORMULIS

## PEWFOMWHOE:  <br> Manley nresents some handy charts and formulas to guide you in huldiling engines.

FHME I EPMAHEMEN
Balcmating Ouhic InchesMultiply bore x bore x stroke x number of cylinders x .7854Example: $4.030 \times 4.030 \times 3.480 \times 8 \times .7854=355.1$ cubic inches
Gonverting Guhic Inches to Liters
Multiply the cubic inches by .01639Example: $427 \times .01639=6.997$ liters
Gonverting Guhic Gentimeters [ce's] To Gubic Inches
Multiply the cubic centimeters by .06102
Example: 1500 cc x $.06102=91.53$ cubic inches
Gonverting Guhic Gentimeters Per Minute To Pounds Per HourDivide the cc/min. by 10.5Example: $400 \div 10.5=38$ lbs. per hour
Gonverting Pound Per Hour Into Gallons Per Hour
Divide the lbs./hr. by 6Example: $300 \mathrm{lbs} . / \mathrm{hr} \div 6=50 \mathrm{GPH}$
Gonverting Gubic Gentimeters Per Minute To Gallons Per Hour

Multiply the cc/min. by .015873

Example: $400 \times .015873=11.17 \mathrm{GPH}$
GFM- Garhuretor Mir FLow Requirement [4 Stroke Engine]Multiply CID x RPM x VE and Divide by 3456CID is displacement. RPM is engine speed, VE is volumetric efficiency (1)
Example: $427 \times 6000 \times 1 \div 3456=741$ CFM
(note: racing engines use VE of 1, street engines use a VE of .85)

## GONTERSONS

| QUANIIY MERHUNI |  | SYMBOL | APPROKMATE GON | ERSION FAGTORES] |
| :---: | :---: | :---: | :---: | :---: |
| Length | millimeter | mm | $1 \mathrm{~mm}=0.039$ | $1 \mathrm{in}=25.4 \mathrm{~mm}$ |
|  | killometer | km | $1 \mathrm{~km}=0.62$ mile | 1 mile = 1.61 km |
| Mass | gram | g | $1 \mathrm{~g}=0.035 \mathrm{oz}$. | $1 \mathrm{oz}=28.4 \mathrm{~g}$ |
|  | kilogram | kg | $1 \mathrm{~kg}=2.2 \mathrm{lb}$ | $1 \mathrm{lb}=0.45 \mathrm{~kg}$ |
| Area | square milmeter | $\mathrm{mm}^{2}$ | $1 \mathrm{~mm}^{2}=0.002 \mathrm{in}^{2}$ | $1 \mathrm{in}=645 \mathrm{~mm}^{2}$ |
|  | square cenimeter | $\mathrm{cm}^{2}$ | $1 \mathrm{~cm}^{2}=0.15 \mathrm{in}^{2}$ | $1 \mathrm{in}=6.45 \mathrm{~cm}^{2}$ |
| Volume | cubic centimeter | $\mathrm{cm}^{3}$ | $1 \mathrm{~cm}^{3}=0.06 \mathrm{in}^{3}$ | $1 \mathrm{in}=16.4 \mathrm{~cm}^{3}$ |
| Volume (Liquids) | Liter | L | $1 \mathrm{~L}=0.22$ gal. | 1 gal = 4.55 L |
|  | cubic inch | $\mathrm{in}^{3}$ | $1 \mathrm{in}^{3}=.01639$ liter | 1 liter = $61.2545 \mathrm{in}^{3}$ |
| Flow | liter/sec | I/s | $1 / / \mathrm{s}=0.22 \mathrm{gal} / \mathrm{sec}$ | $1 \mathrm{gal}=4.55 \mathrm{l} / \mathrm{s}$ |
| Force | Newton meter | Nm | $1 \mathrm{Nm}=8.85 \mathrm{lb}$ in | 1 lb in $=0.11 \mathrm{Nm}$ |
|  |  |  | $1 \mathrm{Nm}=0.74 \mathrm{lb} \mathrm{ft}$ | $1 \mathrm{lb} \mathrm{ft}=1.36 \mathrm{Nm}$ |
| Pressure | kilopascal | kPa | $1 \mathrm{kPa}=0.15 \mathrm{lb} / \mathrm{in}$ | $1 \mathrm{lb} / \mathrm{in}=6.89 \mathrm{kPa}$ |
| Vacuum | kilopascal | kPa | $1 \mathrm{kPa}=0.30$ in Hg | $1 \mathrm{in} / \mathrm{Hg}=3.39 \mathrm{kPa}$ |
| Spring Rate newton/millimeter |  | er N/mm | $1 \mathrm{~N} / \mathrm{mm}=5.7 \mathrm{lb}$ in | 1 lb in $=0.10 \mathrm{~N} / \mathrm{mm}$ |
| Temperature ${ }^{\circ} \mathrm{C}$ (Celsius) |  | ${ }^{\circ} \mathrm{C}$ | ${ }^{\circ} \mathrm{C}-5 / 9\left({ }^{\circ} \mathrm{F}-32\right)$ | ${ }^{\circ} \mathrm{F}=9 / 5{ }^{\circ} \mathrm{C}+32$ |

NOTES
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## ACURA - AUDI - BUW - DODGE - FORD - HONDA

 IAMBORGHINI - MKZA - CITSUBISHI NISSN - SUBARU - TOTOIA - WWLIMUE EPRTLIGS
Linus tivilu

> SPORTSTER - PAN HEAD - SHOVEL HEAD EYO - TNIN CAN - BUELL XB9

Visit www.manleyperformance.com for more info

## Decimal Conversion Chart




Metric Conversion Chart
$0.1 \mathrm{~mm}=0.00394^{\prime \prime}$
$0.2 \mathrm{~mm}=0.00787^{\prime \prime}$
$0.3 \mathrm{~mm}=0.01181^{\prime \prime}$
$0.4 \mathrm{~mm}=0.01575^{\prime \prime}$
$0.5 \mathrm{~mm}=0.01969^{\prime \prime}$
$0.6 \mathrm{~mm}=0.02362^{\prime \prime}$
$0.7 \mathrm{~mm}=0.02756^{\prime \prime}$
$0.8 \mathrm{~mm}=0.03150^{\prime \prime}$
$0.9 \mathrm{~mm}=0.03543^{\prime \prime}$

| 1 mm | $=0.03937^{\prime \prime}$ |
| ---: | :--- |
| 2 mm | $=0.07874^{\prime \prime}$ |
| 3 mm | $=0.11811^{\prime \prime}$ |
| 4 mm | $=0.15748^{\prime \prime}$ |
| 5 mm | $=0.19685^{\prime \prime}$ |
| 6 mm | $=0.23622^{\prime \prime}$ |
| 7 mm | $=0.27559^{\prime \prime}$ |
| 8 mm | $=0.31496^{\prime \prime}$ |
| 9 mm | $=0.35433^{\prime \prime}$ |
| 10 mm | $=0.39370^{\prime \prime}$ |
| 20 mm | $=0.78740^{\prime \prime}$ |



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