

# CRANKSHAFTS & ROTATING ASSEMBLIES

## 350-400-454 CHEVROLETS (2 PIECE REAR SEAL)

4340 NON-TWIST FORGINGS

LIGHTWEIGHT DESIGN

400 SB, 454 BB DESIGNED FOR INTERNAL BALANCE

- ✓ Heat Treated, Stress Relieved, Shot Peened, Nitrided, and 100% Magnafluxed
- ✓ Micro Polished Large .125" Radius Journals (Narrowed Rod Bearings Required)



Part No.	Engine Type	Stroke	Minimum Rod Length	Main Journal Diameter	Rod Journal Diameter	Bobweight (grams)	Total Weight (lbs.)
			<b>350 MAIN JOURNAL DIAMETER</b>				
190190	350	3.480"	6.000"	2.450"	2.100"	1750	45-47
190150	350/400	3.750"	6.000"	2.450"	2.100"	1800	49-51
190130	350/400	4.000"	6.000"	2.450"	2.100"	1800	49-51
			<b>454 MAIN JOURNAL DIAMETER</b>				
190170	454	4.000"	6.135"	2.750"	2.200"	2350	64-66
190140	454	4.250"	6.385"	2.750"	2.200"	2350	64-66

## 350-400-454 CHEVROLETS COMPETITION ROTATING ASSEMBLIES

- ✓ Lightweight 4340 Forged Steel Crankshaft, 400 SB and 454 BB Designed for Internal Balance
- ✓ 4340 Forged Steel "H" Beam Connecting Rods with 7/16" ARP 8740 or optional ARP 2000 Cap Screws\*
- ✓ 2618 Forged Aluminum Platinum Series Pistons with Premium Chrome Moly Wrist Pins
- ✓ Total Seal® Piston Rings & High Performance Clevite® "H" Series Rod (narrowed) and "P" Series Main Engine Bearings
- ✓ SB Chevy Horsepower range is 750 with the ARP 8740 and 1,500 with the optional ARP 2000 Cap Screws
- ✓ BB Chevy Horsepower range is 900 with the ARP 8740 and 1,500 with the optional ARP 2000 Cap Screws



\* Kit number 2908 is supplied with our Pro Series Lightweight I Beam with 7/16" ARP 2000 Cap Screws.

NOTE: The 350 and 400 Small Block rotating assemblies listed below are unbalanced. For a balanced assembly please also order part number 04000.

NOTE: The 454 Big Block rotating assemblies listed below are balanced.

Part No.	Engine Type	CID	Stroke @ .030	Crank Number	Rod Length	Rod Number	Piston Type	STD. Bore	Piston Number	Bore Sizes Available	Compression Ratio	Piston Ring Numbers	Piston Ring Package
<b>350 BLOCK WITH 350 MAIN JOURNAL DIAMETER</b>											<b>58cc</b>	<b>64cc</b>	<b>76cc</b>
2907	350	3.480"	355	190190	6.000"	14054	Flat -4cc	4.000"	5906	30 35 40	9.8 9.2 8.2	4635 3 5 4	1/16", 3/16"
2908	350	3.480"	355	190190	6.000"	14354	Flat -4cc	4.000"	5906	30 35 40	9.8 9.2 8.2	4635 3 5 4	1/16", 3/16"
2900	350	3.750"	383	190150	6.000"	14054	Dish -15cc	4.000"	5909	30 35 40	10.4 9.8 8.8	4635 3 5 4	1/16", 3/16"
2901	350	3.750"	383	190150	6.000"	14054	Flat -4cc	4.000"	5908	30 35 40	11.9 11.0 9.7	4635 3 5 4	1/16", 3/16"
2909	350	3.750"	383	190150	6.000"	14054	Dome +10cc (Gas Ported)	4.000"	5914	30 35 40	14.5 13.2 11.3	4621 3 5 4	.043", 3mm
<b>400 BLOCK WITH 350 MAIN JOURNAL DIAMETER</b>											<b>58cc</b>	<b>64cc</b>	<b>76cc</b>
2902	400	4.000"	434	190130	6.000"	14054	Dish -20cc	4.125"	5939	00 30	11.0 10.4 9.3	4616 0 3	1/16", 3/16"
2903	400	4.000"	434	190130	6.000"	14054	Dome +4cc	4.125"	5938	00 30	14.7 13.6 11.8	4616 0 3	1/16", 3/16"
<b>BIG BLOCK CHEVROLET</b>											<b>112cc</b>	<b>118cc</b>	<b>124cc</b>
2904	BBC	4.000"	516	190170	6.135"	14060	Dome +2cc	4.500"	6968	00 30	9.4 9.0 8.7	4645 0 3	1/16", 3/16"
2905	BBC	4.250"	548	190140	6.385"	14062	Dish -20cc	4.500"	6967	00 30 60	8.7 8.4 8.1	4645 0 3 6	1/16", 3/16"
2906	BBC	4.250"	548	190140	6.385"	14062	Dome +42cc (Gas Ported)	4.500"	6978	00 30 60	14.2 13.3 12.5	4655 0 3 6	.043", 3/16"

Add an "R" to the assembly part number to order the optional ARP 2000 rod bolt upgrade.

### BEARING CHART

Engine Type	Clevite® "H" Series Rod Bearings	Clevite® "P" Series Main Bearings
SB Chevy	30010	33010
BB Chevy	30040	33040

NOTE: Clevite® "H" Series rod bearings are narrowed.

**CHEVROLET "LS" CRANKSHAFTS**

**Manley Performance is proud to introduce our new line of "PRO SERIES" crankshafts specifically designed for the CHEVROLET LS market...** The perfect compliment to our existing product range of LS pistons and connecting rods. Why shop anywhere else when you can bullet-proof your LS engine's bottom-end with quality Manley components?

- ✓ Lightweight (LW) and Super Lightweight (SLW) designs
- ✓ 4340 material forgings
- ✓ Multi-step heat treatment process and Nitrided for added strength
- ✓ Stress relieved, shot-peened, and 100% magnafluxed
- ✓ Micro polished large .125" radius journals (narrowed bearings required)
- ✓ Available with either 24 or 58 tooth reluctor wheel
- ✓ Gun drilled mains and lightened rod journals for weight reduction
- ✓ Counterweights fully profiled



Part No.	Design LW or SLW	Reluctor Wheel 24 or 58 Tooth	Stroke	Minimum Rod Length	Main Journal Diameter	Rod Journal Diameter	Bobweight (grams)	Total Weight (lbs.)
<b>LIGHTWEIGHT</b>								
190024	LW	24	4.000"	6.125"	2.559"	2.100"	1730	50-52
190058	LW	58	4.000"	6.125"	2.559"	2.100"	1730	50-52
190124	LW	24	4.100"	6.125"	2.559"	2.100"	1730	50-52
190158	LW	58	4.100"	6.125"	2.559"	2.100"	1730	50-52
<b>SUPER LIGHTWEIGHT</b>								
190324	SLW	24	4.000"	6.125"	2.559"	2.100"	1686	46-48
190358	SLW	58	4.000"	6.125"	2.559"	2.100"	1686	46-48



CRANKS & KITS

# CUSTOM ROTATING ASSEMBLIES

With the introduction of our outstanding new line of Pro Series LS crankshafts, we have the ability to offer our customers complete rotating assemblies utilizing Manley Platinum Series pistons and Manley H-Beam or Pro Series I-Beam connecting rods.

Ordering a Manley LS rotating assembly is as easy as 1-2-3.....

1. Choose your crankshaft part number based on stroke, weight, and reluctor wheel and order the corresponding Rod and Main bearing part numbers shown.
2. Choose your connecting rod part number.
3. Choose your piston part number based on bore size and desired compression ratio and the corresponding piston ring part number.



Ordering all of the required components for your LS rotating assembly from Manley will result in extra \$ savings. Please contact your Manley representative for more details.

Order P/N 04000 if you require Manley to perform balancing.

## CRANKS

- ✓ Super Lightweight and Lightweight 4340 material forgings
- ✓ Multi-step heat treatment process and Nitrided for added strength
- ✓ Stress relieved, shot-peened, and 100% magnafluxed
- ✓ Micro polished large .125" radius journals
- ✓ Available with either 24 or 58 tooth reluctor wheels
- ✓ Gun drilled mains and lightened rod journals for weight reduction
- ✓ Counterweights fully profiled

## RODS

- ✓ Lightweight design 4340 material forgings
- ✓ Fully machined, heat treated, stress relieved, shot peened, and 100% magnafluxed
- ✓ Big and small end bores are final honed to a tolerance of  $\pm .0002$ "
- ✓ Bend and twist is tightly controlled
- ✓ Weight matched to +/- 1.5 grams
- ✓ H-Lite comes standard with 3/8" ARP 2000 bolts
- ✓ H-Beam comes standard with 7/16" ARP 8740 bolts (affix an R suffix for ARP 2000 bolt upgrade)
- ✓ I-Beam comes standard with 7/16" ARP 2000 bolts (affix an R6 suffix for ARP 625+ bolt upgrade)

## PISTONS

- ✓ High strength 2618 alloy forgings
- ✓ Exacting ring groove squareness to cylinder wall provides maximum horsepower.
- ✓ Offset wrist pin design
- ✓ Moly coated skirts

## RINGS

- ✓ 1.5 x 1.5 x 3mm Total Seal (moly in-lay tops standard)
- ✓ Premium steel top rings are optional (affix ST suffix)

## BEARINGS

- ✓ Premium Clevite® "H" Series narrowed rod bearings and "P" Series main bearings

## SMALL BLOCK CHEVROLET LS SERIES

### SUPER LIGHTWEIGHT 1686gm. BOBWEIGHT 4.000" STROKE CRANKS

Crank P/N Reluctor Wheel	Piston Part No.	Piston Description	Ring Part No.	Compression Ratio				Balance Req. (Y/N) H-Lite
				64cc	66cc	70cc	72cc	
190324 24 Tooth or 190358 58 Tooth	592207C-8	3.905/-4cc F/T	46107-8	11.2	11.0	10.4	10.2	Y
	592605C-8	4.005/-4cc F/T	46110-8	11.7	11.4	10.9	10.7	N
	592630C-8	4.030/-4cc F/T	46113-8	11.9	11.6	11.1	10.9	N
	592670C-8	4.070/-4cc F/T	46117-8	12.1	11.8	11.3	11.1	N
	592300C-8	4.125/-5cc F/T	46360-8	12.3	12.0	11.5	11.3	N
	592305C-8	4.130/-5cc F/T	46360-8	12.4	12.1	11.6	11.4	N
Rod P/N Description	592701C-8	4.001/-10cc Dish	46110-8	10.8	10.6	10.1	9.9	Y
	592705C-8	4.005/-10cc Dish	46110-8	10.9	10.7	10.2	10.0	N
	592730C-8	4.030/-10cc Dish	46113-8	11.1	10.8	10.3	10.1	N
	592765C-8	4.065/-10cc Dish	46116-8	11.3	11.0	10.5	10.3	N
	592770C-8	4.070/-10cc Dish	46117-8	11.4	11.1	10.6	10.4	N
14031-8 6.125" H-Lite	592400C-8	4.125/-11cc Dish	46360-8	11.5	11.3	10.8	10.6	N
	592405C-8	4.130/-11cc Dish	46360-8	11.6	11.4	10.9	10.5	N
Bearing P/N Description	592807C-8	3.905/-29cc Dish	46107-8	8.7	8.5	8.2	8.1	Y
	592805C-8	4.005/-29cc Dish	46110-8	9.1	8.9	8.6	8.5	Y
30010 Rod & 33030 Main	592830C-8	4.030/-29cc Dish	46113-8	9.2	9.0	8.7	8.6	N
	592865C-8	4.065/-29cc Dish	46116-8	9.3	9.1	8.8	8.7	N
	592870C-8	4.070/-29cc Dish	46117-8	9.4	9.2	8.9	8.8	N
	592900C-8	4.125/-29cc Dish	46360-8	9.6	9.4	9.1	9.0	N
	592905C-8	4.130/-29cc Dish	46360-8	9.7	9.5	9.2	9.1	N

# CUSTOM ROTATING ASSEMBLIES



## SMALL BLOCK CHEVROLET LS SERIES

LIGHTWEIGHT 1730gm. BOBWEIGHT 4.000" STROKE CRANKS

Crank P/N Reluctor Wheel	Piston Part No.	Piston Description	Ring Part No.	Compression Ratio				Balance Req. (Y/N)	
				64cc	66cc	70cc	72cc	H-Beam	I-Beam
190024 24 Tooth or 190058 58 Tooth	592207C-8	3.905/-4cc F/T	46107-8	11.2	11.0	10.4	10.2	Y	Y
	592605C-8	4.005/-4cc F/T	46110-8	11.7	11.4	10.9	10.7	N	N
	592630C-8	4.030/-4cc F/T	46113-8	11.9	11.6	11.1	10.9	N	N
	592670C-8	4.070/-4cc F/T	46117-8	12.1	11.8	11.3	11.1	N	N
Rod P/N Description	592300C-8	4.125/-5cc F/T	46360-8	12.3	12.0	11.5	11.3	N	N
	592305C-8	4.130/-5cc F/T	46360-8	12.4	12.1	11.6	11.4	N	N
14051-8 6.125" H-Beam or 14359-8 6.125" I-Beam	592701C-8	4.001/-10cc Dish	46110-8	10.8	10.6	10.1	9.9	N	N
	592705C-8	4.005/-10cc Dish	46110-8	10.9	10.7	10.2	10.0	N	N
	592730C-8	4.030/-10cc Dish	46113-8	11.1	10.8	10.3	10.1	N	N
	592765C-8	4.065/-10cc Dish	46116-8	11.3	11.0	10.5	10.3	N	N
Bearing P/N Description	592770C-8	4.070/-10cc Dish	46117-8	11.4	11.1	10.6	10.4	N	N
	592400C-8	4.125/-11cc Dish	46360-8	11.5	11.3	10.8	10.6	N	N
30010 Rod & 33030 Main	592405C-8	4.130/-11cc Dish	46360-8	11.6	11.4	10.9	10.5	N	N
	592807C-8	3.905/-29cc Dish	46107-8	8.7	8.5	8.2	8.1	Y	Y
	592805C-8	4.005/-29cc Dish	46110-8	9.1	8.9	8.6	8.5	N	Y
	592830C-8	4.030/-29cc Dish	46113-8	9.2	9.0	8.7	8.6	N	N
	592865C-8	4.065/-29cc Dish	46116-8	9.3	9.1	8.8	8.7	N	N
	592870C-8	4.070/-29cc Dish	46117-8	9.4	9.2	8.9	8.8	N	N
	592900C-8	4.125/-29cc Dish	46360-8	9.6	9.4	9.1	9.0	N	N
	592905C-8	4.130/-29cc Dish	46360-8	9.7	9.5	9.2	9.1	N	N



## SMALL BLOCK CHEVROLET LS SERIES

LIGHTWEIGHT 1730gm. BOBWEIGHT 4.100" STROKE CRANKS

Crank P/N Reluctor Wheel	Piston Part No.	Piston Description	Ring Part No.	Compression Ratio				Balance Req. (Y/N)	
				64cc	66cc	70cc	72cc	H-Beam	I-Beam
190124 24 Tooth or 190158 58 Tooth	596505C-8	4.005/-10cc Dish	46110-8	11.1	10.9	10.5	10.3	N	Y
	596565C-8	4.065/-10cc Dish	46116-8	11.4	11.2	10.7	10.5	N	N
	596570C-8	4.070/-10cc Dish	46117-8	11.5	11.3	10.8	10.6	N	N
Rod P/N Description	596600C-8	4.125/-11cc Dish	46360-8	11.6	11.4	10.9	10.7	N	N
	596605C-8	4.130/-11cc Dish	46360-8	11.7	11.5	11.0	10.8	N	N
14051-8 6.125" H-Beam or 14359-8 6.125" I-Beam	596705C-8	4.005/-31cc Dish	46110-8	9.1	9.0	8.7	8.5	N	Y
	596765C-8	4.065/-31cc Dish	46116-8	9.3	9.2	8.9	8.7	N	N
	596770C-8	4.070/-31cc Dish	46117-8	9.4	9.3	9.0	8.8	N	N
Bearing P/N Description	596800C-8	4.125/-31cc Dish	46360-8	9.6	9.4	9.1	9.0	N	N
	596805C-8	4.130/-31cc Dish	46360-8	9.7	9.5	9.2	9.1	N	N
30010 Rod & 33030 Main									

CRANKS & KITS

# CRANKSHAFTS & ROTATING ASSEMBLIES

## CHRYSLER 5.7L/6.1L HEMI 4340 FORGED CRANKSHAFTS



**Manley Performance is proud to introduce our "PRO SERIES" stroker crankshaft designed for the small block HEMI engine...** Manufactured from a premium 4340 steel forging, these cranks feature a 4.050" stroke which can turn your 5.7L into a 392 c.i. engine and your 6.1L into a 426 c.i. engine. The Manley 4.050" stroke HEMI crankshaft features small block Chevy small journal (2.000") crank pin diameters and widths. This provides taller "side walls" on the crankshaft rod journals for better oil control and reduced windage. The counterweights are profiled for 6.125" length connecting rods. All crankshafts are shipped with either a 32 tooth or 58 tooth reluctor wheel installed.

- ✓ 4340 material forging
- ✓ Multi-step heat treatment process and Nitrided for added strength
- ✓ Stress relieved, shot-peened, and 100% magnafluxed
- ✓ Micro polished large .125" radius journals (narrowed rod bearings required)
- ✓ Dual keyed post for supercharger drive pulleys
- ✓ Gun drilled mains and lightened rod journals for weight reduction
- ✓ Counterweights fully profiled



Part No.	Reluctor Wheel 32 or 58 Tooth	Stroke	Bobweight (grams)	Total Weight (lbs.)
191832	32	4.050"	1700	49-51
191858	58	4.050"	1700	49-51

With the introduction of our new "PRO SERIES" 4.050" stroke small block HEMI crankshaft, we have the ability to offer our customers complete rotating assemblies utilizing Manley Platinum Series pistons and Manley H-Beam or Pro Series I-Beam connecting rods.

### ORDERING INFORMATION

Ordering a Manley SB HEMI rotating assembly is as easy as 1-2-3...

1. Choose your crankshaft part number based on required reluctor wheel for your vehicle and order the corresponding rod and main bearing part numbers shown.
2. Choose your connecting rod part number.
3. Choose your piston part number based on bore size and desired compression ratio and the corresponding piston ring part number.

Ordering all of the required components for your SB HEMI rotating assembly from Manley will result in extra \$ savings. Please contact your Manley representative for more details.

Order P/N 04000 if you require Manley to perform balancing.

# CUSTOM ROTATING ASSEMBLIES



## CRANKS

- ✓ Lightweight 4340 material forging
- ✓ Multi-step heat treatment process and Nitrided for added strength
- ✓ Stress relieved, shot-peened, and 100% magnafluxed
- ✓ Micro polished large .125" radius journals
- ✓ Available with either 32 or 58 tooth reluctor wheels
- ✓ Gun drilled mains and lightened rod journals for weight reduction
- ✓ Counterweights fully profiled

## RODS

- ✓ Lightweight design 4340 material forgings
- ✓ Fully machined, heat treated, stress relieved, shot peened, and 100% magnafluxed
- ✓ Big and small end bores are final honed to a tolerance of  $\pm .0002$ "
- ✓ Bend and twist is tightly controlled
- ✓ Weight matched to  $\pm 1.5$  grams
- ✓ H-Beam comes standard with 7/16" ARP 8740 bolts (affix an R suffix for ARP 2000 bolt upgrade)
- ✓ I-Beam comes standard with 7/16" ARP 2000 bolts (affix an R6 suffix for ARP 625+ bolt upgrade)

## PISTONS

- ✓ High strength 2618 alloy forgings
- ✓ Exacting ring groove squareness to cylinder wall provides maximum horsepower.
- ✓ Offset wrist pin design
- ✓ Moly coated skirts

## RINGS

- ✓ 1.5 x 1.5 x 3mm Total Seal (moly in-lay tops standard)
- ✓ Premium steel top rings are optional (affix ST suffix)

## BEARINGS

- ✓ Premium Clevite® "H" Series narrowed rod bearings and "P" Series main bearings

## SMALL BLOCK CHRYSLER 5.7L HEMI SERIES

**LIGHTWEIGHT 1700gm. BOBWEIGHT 4.050" STROKE CRANKS**

Crank P/N Reluctor Wheel	Piston Part No.	Piston Description	Ring Part No.	Compression Ratio			Balance Req. (Y/N)	
				85cc	65cc	74.5cc	H-Beam	LW I-Beam
191832 32 Tooth or 191858 58 Tooth	597200C-8	3.917/-1.5cc F/T	46120-8	9.63	12.00	10.73	Y	N
	597205C-8	3.922/-1.5cc F/T	46121-8	9.65	12.03	10.75	Y	N
	597220C-8	3.937/-1.5cc F/T	46122-8	9.72	12.11	10.83	Y	N
Rod P/N Description	597300C-8	3.917/-14cc Dish	46120-8	8.60	10.39	9.45	Y	Y
	597305C-8	3.922/-14cc Dish	46121-8	8.62	10.41	9.47	Y	Y
	597320C-8	3.937/-14cc Dish	46122-8	8.68	10.48	9.53	Y	N
14056-8 6.125" H-Beam or 14455-8 6.125" LW I-Beam	Bearing P/N Description							
	30020	Rod Main						
	33050							

## SMALL BLOCK CHRYSLER 6.1L HEMI SERIES

**LIGHTWEIGHT 1700gm. BOBWEIGHT 4.050" STROKE CRANKS**

Crank P/N Reluctor Wheel	Piston Part No.	Piston Description	Ring Part No.	Compression Ratio	Balance Req. (Y/N)	
				74.5cc	H-Beam	LW I-Beam
191832 32 Tooth or 191858 58 Tooth	597860C-8	4.060/-1.5cc F/T	46116-8	11.07	N	N
	597865C-8	4.065/-1.5cc F/T	46116-8	11.10	N	N
	597880C-8	4.080/-1.5cc F/T	46118-8	11.17	N	N
Rod P/N Description	597960C-8	4.060/-31cc Dish	46116-8	8.49	N	N
	597965C-8	4.065/-31cc Dish	46116-8	8.50	N	N
	597980C-8	4.080/-31cc Dish	46118-8	8.56	N	N
14056-8 6.125" H-Beam or 14455-8 6.125" LW I-Beam	Bearing P/N Description					
	30020	Rod Main				
	33050					

CRANKS & KITS

# CRANKSHAFTS

## MITSUBISHI 4G63/4G64 7 BOLT CRANKSHAFTS

### FORGED "RACE SERIES" FOR STREET / STRIP

- ✓ Premium heat treated forgings
- ✓ Special teardrop, diagonal oiling features not found on stock OEM style cranks
- ✓ Better performance at High RPM
- ✓ Stress Relieved & Shot Peened
- ✓ Nitrided
- ✓ 100% Magnafluxed



Forged Part No.	Stroke	Weight
190100	88mm	33.5 lbs
190120	100mm	37 lbs

### FULLY MACHINED "TURBO TUFF SERIES" BILLET FOR HIGH HORSEPOWER / HIGH BOOSTED APPLICATIONS

- ✓ 4340 Billet
- ✓ Multi-step heat treatment process
- ✓ Stress Relieved and Shot Peened
- ✓ Nitrided
- ✓ 100% Magnafluxed
- ✓ Special teardrop diagonal oiling
- ✓ Knife-edged counterweights



Billet Part No.	Stroke	Weight
190110B	94mm	32.5 lbs
190120B	100mm	33.5 lbs



Manley Turbo Tuff Series Billet Mitsubishi crankshafts now feature uniquely designed, ultra-lightweight, fully contoured counterweights resulting in reduced windage and maximum performance.



## SUBARU EJ20/EJ25 CRANKSHAFTS

### FULLY MACHINED "TURBO TUFF SERIES" BILLET FOR HIGH HORSEPOWER/HIGH BOOSTED APPLICATIONS

- ✓ 4340 Billet
- ✓ Multi-step heat treatment process
- ✓ Stress Relieved and Shot Peened
- ✓ Nitrided
- ✓ 100% Magnafluxed
- ✓ Knife-edged counterweights
- ✓ Center gun drilled
- ✓ "Direct Shot" dual main priority rod journal oiling
- ✓ Gun drilled crank pin and counterweights

Part No.	Stroke	Weight
190160B	75mm	19.5 lbs
190040B	79mm	19.75 lbs
190060B	83mm	21 lbs



Create your own "Bullet-Proof" Mitsubishi and Subaru Rotating Assemblies with Manley H-Beam, H-Plus or Turbo Tuff Connecting Rods and Manley Platinum Series Pistons

# CUSTOM ROTATING ASSEMBLIES

Ordering a Manley Mitsubishi or Subaru Rotating Assembly is as easy as 1-2-3....

1. Choose your Crankshaft part number based on stroke and style (for Mitsubishi either Forged Race Series or Turbo Tuff Billet) and order the corresponding Rod and Main bearing part numbers shown.
2. Choose your connecting rod part number.
3. Choose your piston part number based on desired bore size and compression ratio (piston pins, locks and rings are included).



Ordering all of the required components for your rotating assembly from Manley will result in extra \$ savings. Please contact your Manley representative for more details.

## CRANKS

- ✓ Premium heat treated forgings or lightweight 4340 billet
- ✓ Multi-step heat treatment process and Nitrided for added strength
- ✓ Stress relieved, shot-peened, and 100% magnafluxed
- ✓ Fully profiled knife-edged counterweights on the billet forgings

## RODS

- ✓ 4340 material forgings or aircraft quality 300M material for extreme boost
- ✓ Fully machined, heat treated, stress relieved, shot peened, and 100% magnafluxed
- ✓ Big and small end bores are final honed to a tolerance of  $\pm .0002$ "
- ✓ Bend and twist is tightly controlled
- ✓ Weight matched to +/- 1.5 grams
- ✓ H-Beam comes standard with 3/8" ARP 2000 bolts
- ✓ H-Plus comes standard with 3/8" ARP 625+ bolts
- ✓ I-Beam and 300M comes standard with 3/8" ARP 2000 bolts  
(affix an R6 suffix for ARP 625+ bolt upgrade)

## PISTONS

- ✓ High strength 2618 alloy forgings
- ✓ Exacting ring groove squareness to cylinder wall provides maximum horsepower
- ✓ Offset wrist pin design
- ✓ Moly coated skirts

## RINGS

- ✓ 1.2 x 1.2 x 2.8mm 4G63/4G64/EJ20
- ✓ 1.2 x 1.2 x 2.0mm EJ25
- ✓ Total Seal steel tops standard
- ✓ Rings included in piston kits

## BEARINGS

- ✓ Premium ACL Race Series with narrowed rod bearings

## MITSUBISHI 7 BOLT 4G63 STD STROKE SERIES 2.0L

### FORGED "RACE SERIES" 88MM STROKE CRANK W/150MM RODS

Crank P/N Type	Rod P/N Description	Bearing P/N Description	Piston P/N	Piston Description	Compression Ratio	
					43cc	47cc
190100 Forged	14022-4 150mm H-Beam or 14022R6-4 150mm H-Plus or 14400-4 150mm LW I-Beam or 14403-4 150mm TT I-Beam or 15403-4 150mm 300M I-Beam	30060 Rod & 33060 Mains w/o Thrusts or 33060T Mains w/ Thrusts	606000C-4	85mm/-12cc Dish	9.0	8.5
			606005C-4	85.5mm/-12cc Dish	9.0	8.5
			606010C-4	86mm/-12cc Dish	9.0	8.5
			606015C-4	86.5mm/-12cc Dish	9.0	8.5
	606100C-4	85mm/-8cc Dish	9.5	9.0		
	606105C-4	85.5mm/-8cc Dish	9.5	9.0		
	606110C-4	86mm/-8cc Dish	9.5	9.0		

## MITSUBISHI 7 BOLT 4G63 STD STROKE SERIES 2.0L

### FORGED "RACE SERIES" 88MM STROKE CRANK W/156MM RODS

Crank P/N Type	Rod P/N Description	Bearing P/N Description	Piston P/N	Piston Description	Compression Ratio	
					43cc	47cc
190100 Forged	14020-4 156mm H-Beam or 14020R6-4 156mm H-Plus or 14421-4 156mm TT I-Beam	30060 Rod & 33060 Mains w/o Thrusts or 33060T Mains w/ Thrusts	617000C-4	85mm/-12cc Dish	9.0	8.5
			617005C-4	85.5mm/-12cc Dish	9.0	8.5
			617010C-4	86mm/-12cc Dish	9.0	8.5

NOTE: "LW" signifies "Lightweight" design rod and "TT" signifies "Turbo Tuff" design rod

# CUSTOM ROTATING ASSEMBLIES

## MITSUBISHI 7 BOLT 4G63 STROKER SERIES 2.2L

### "TURBO TUFF" BILLET 94MM STROKE CRANKS W/150MM RODS

Crank P/N Type	Rod P/N Description	Bearing P/N Description	Piston P/N	Piston Description	Compression Ratio	
					43cc	47cc
190110B Billet	14022-4 150mm H-Beam	30060 Rod & 33060 Mains w/o Thrusts or 33060T Mains w/ Thrusts	618000C-4	85mm/-17cc Dish	9.0	8.5
	or		618005C-4	85.5mm/-17cc Dish	9.0	8.5
	14022R6-4 150mm H-Plus		618010C-4	86mm/-17cc Dish	9.0	8.5
	or					
	14400-4 150mm LW I-Beam					
or						
14403-4 150mm TT I-Beam						
or						
15403-4 150mm 300M I-Beam						

## MITSUBISHI 7 BOLT 4G63 STROKER SERIES 2.2L

### "TURBO TUFF" BILLET 94MM STROKE CRANKS W/156MM RODS

Crank P/N Type	Rod P/N Description	Bearing P/N Description	Piston P/N	Piston Description	Compression Ratio	
					43cc	47cc
190110B Billet	14020-4 156mm H-Beam	30060 Rod & 33060 Mains w/o Thrusts or 33060T Mains w/ Thrusts	619000C-4	85mm/-17cc Dish	9.0	8.5
	or		619005C-4	85.5mm/-17cc Dish	9.0	8.5
	14020R6-4 156mm H-Plus		619010C-4	86mm/-17cc Dish	9.0	8.5
	or					
	14421-4 156mm TT I-Beam					

## MITSUBISHI 7 BOLT 4G63 STROKER & 4G64 STD STROKE SERIES 2.4L

### FORGED "RACE SERIES" & "TURBO TUFF" BILLET 100MM STROKE CRANKS W/150MM RODS

Crank P/N Type	Rod P/N Description	Bearing P/N Description	Piston P/N	Piston Description	Compression Ratio	
					43cc	47cc
190120 Forged or 190120B Billet	14022-4 150mm H-Beam	30060 Rod & 33060 Mains w/o Thrusts or 33060T Mains w/ Thrusts	4G63			
	or		608000C-4	85mm/-22cc Dish	9.0	8.5
	14022R6-4 150mm H-Plus		608005C-4	85.5mm/-22cc Dish	9.0	8.5
	or		608010C-4	86mm/-22cc Dish	9.0	8.5
	14400-4 150mm LW I-Beam					
or						
14403-4 150mm TT I-Beam						
or						
15403-4 150mm 300M I-Beam						
			4G64			
			613000C-4	86.5mm/-23.5cc Dish	9.0	8.5
			613005C-4	87mm/-23.5cc Dish	9.0	8.5

NOTE: "LW" signifies "Lightweight" design rod and "TT" signifies "Turbo Tuff" design rod

# CUSTOM ROTATING ASSEMBLIES

## SUBARU EJ20 STD STROKE SERIES "TURBO TUFF" BILLET 75MM STROKE CRANK

Crank P/N Type	Rod P/N Description	Bearing P/N Description	Piston P/N	Piston Description	Compression Ratio 48cc
190160B Billet	14024-4	30070	615000C-4	92mm/-12cc Dish	8.5
	130.5mm H-Beam	Rod &	615005C-4	92.5mm/-12cc Dish	8.5
	or	33070	615010C-4	93mm/-12cc Dish	8.5
	14024R6-4	Mains w/ #5 Thrust			
	130.5mm H-Plus	or			
	14416-4	33080			
	130.5mm TT I-Beam	Mains w/ #3 Thrust			

## SUBARU EJ20 STROKER SERIES "TURBO TUFF" BILLET 79MM STROKE CRANK

Crank P/N Type	Rod P/N Description	Bearing P/N Description	Piston P/N	Piston Description	Compression Ratio 48cc
190040B Billet	14024-4	30070	620000C-4	92mm/-16cc Dish	8.5
	130.5mm H-Beam	Rod &	620005C-4	92.5mm/-16cc Dish	8.5
	or	33070	620010C-4	93mm/-16cc Dish	8.5
	14024R6-4	Mains w/ #5 Thrust			
	130.5mm H-Plus	or			
	14416-4	33080			
	130.5mm TT I-Beam	Mains w/ #3 Thrust			

## SUBARU EJ25 DE-STROKED SERIES "TURBO TUFF" BILLET 75MM STROKE CRANK

Crank P/N Type	Rod P/N Description	Bearing P/N Description	Piston P/N	Piston Description	Compression Ratio 51cc
190160B Billet	14024-4	30070	621000C-4	99.5mm/-18cc Dish	8.5
	130.5mm H-Beam	Rod &	621002C-4	99.75mm/-18cc Dish	8.5
	or	33070	621005C-4	100mm/-18cc Dish	8.5
	14024R6-4	Main			
	130.5mm H-Plus		621100C-4	99.5mm/-6cc Dish	9.8
	or		621102C-4	99.75mm/-6cc Dish	9.8
	14416-4		621105C-4	100mm/-6cc Dish	9.8
		130.5mm TT I-Beam			

## SUBARU EJ25 STD STROKE SERIES "TURBO TUFF" BILLET 79MM STROKE CRANK

Crank P/N Type	Rod P/N Description	Bearing P/N Description	Piston P/N	Piston Description	Compression Ratio 51cc
190040B Billet	14024-4	30070	612000C-4	99.5mm/-22cc Dish	8.5
	130.5mm H-Beam	Rod &	612002C-4	99.75mm/-22cc Dish	8.5
	or	33070	612005C-4	100mm/-22cc Dish	8.5
	14024R6-4	Main			
	130.5mm H-Plus		612100C-4	99.5mm/-10cc Dish	9.8
	or		612102C-4	99.75mm/-10cc Dish	9.8
	14416-4		612105C-4	100mm/-10cc Dish	9.8
		130.5mm TT I-Beam			

## SUBARU EJ25 STROKER SERIES "TURBO TUFF" BILLET 83MM STROKE CRANK

Crank P/N Type	Rod P/N Description	Bearing P/N Description	Piston P/N	Piston Description	Compression Ratio 51cc
190060B Billet	14024-4	30070	622000C-4	99.5mm/-26cc Dish	8.5
	130.5mm H-Beam	Rod &	622002C-4	99.75mm/-26cc Dish	8.5
	or	33070	622005C-4	100mm/-26cc Dish	8.5
	14024R6-4	Main			
	130.5mm H-Plus		622100C-4	99.5mm/-14cc Dish	9.8
	or		622102C-4	99.75mm/-14cc Dish	9.8
	14416-4		622105C-4	100mm/-14cc Dish	9.8
		130.5mm TT I-Beam			

NOTE: "TT" signifies "Turbo Tuff" design rod