

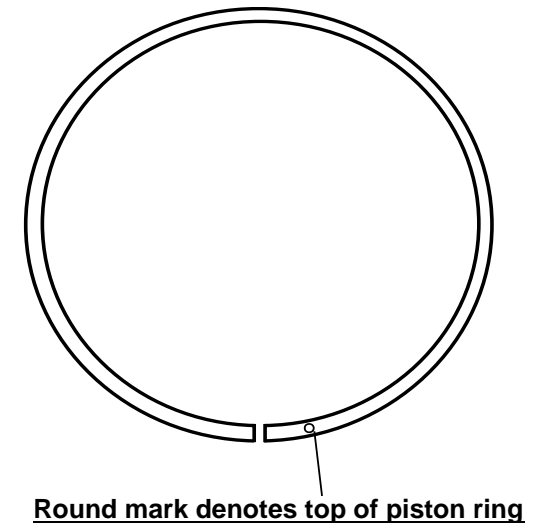
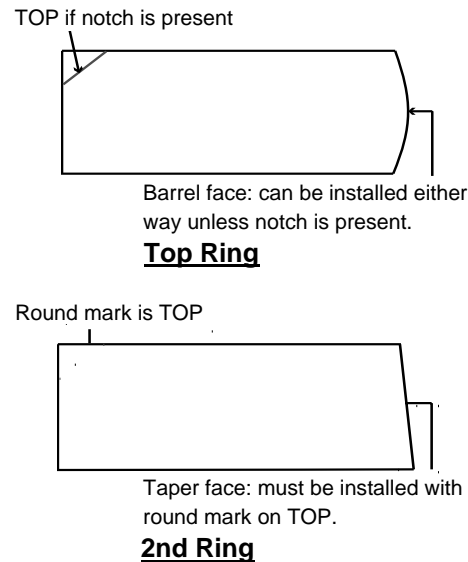
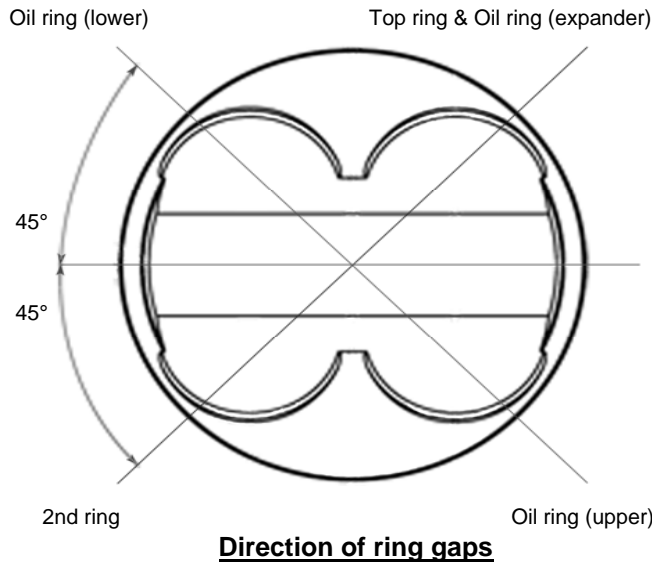
# COSWORTH

## PISTON INFORMATION AND REFERENCE

B = Barrell Face T = Taper Face C = Chrome S = Stainless Steel D = Ductile Iron M=Moly

Part #	Engine	Bore Size	Nominal Comp Ratio	Stroke	Th x Wth	Top Ring	Color/Type	Th x Wth	2nd Ring	Color/Type	Th x Wth	Oil Ring	Color/Type
						Sug. Gap	/Material		Sug. Gap	/Material		Sug. Gap	/Material
PA2667	Subaru EJ257	99.5	8.2:1	79.0	1.18 x 3.58	0.30-.36	Silver / B / C	1.18 x 4.19	0.25-.31	Black / T / D	1.96 x 3.175	0.20-.70	Silver / B / C
PA2667+025	Subaru EJ257	99.75	8.2:1	79.0	1.18 x 3.58	0.30-.36	Silver / B / C	1.18 x 4.19	0.25-.31	Black / T / D	1.96 x 3.175	0.20-.70	Silver / B / C
PA2667+050	Subaru EJ257	100.0	8.2:1	79.0	1.18 x 3.58	0.30-.36	Silver / B / C	1.18 x 4.19	0.25-.31	Black / T / D	1.96 x 3.175	0.20-.70	Silver / B / C
PA2690	Subaru EJ205/207	92.0	8.0:1	75.0	1.48 x 3.10	0.30-.36	Silver / B / M	1.48 x 4.00	0.25-.31	Black / T / D	3.00 x 3.30	0.20-.70	Silver / B / C
PA2690+050	Subaru EJ205/207	92.5	8.0:1	75.0	1.48 x 3.10	0.30-.36	Silver / B / M	1.48 x 4.00	0.25-.31	Black / T / D	3.00 x 3.30	0.20-.70	Silver / B / C
PA2688	Nissan VQ35DE	95.5	10.3:1	81.4	1.18 x 3.50	0.30-.36	Silver / B / S	1.18 x 4.10	0.25-.31	Black / T / D	2.50 x 3.30	0.20-.70	Silver / B / C
PA2688+050	Nissan VQ35DE	96.0	10.3:1	81.4	1.18 x 3.50	0.30-.36	Silver / B / S	1.18 x 4.10	0.25-.31	Black / T / D	2.50 x 3.30	0.20-.70	Silver / B / C
PA2687	Nissan VQ35DE	95.5	8.8:1	81.4	1.18 x 3.50	0.30-.36	Silver / B / S	1.18 x 4.10	0.25-.31	Black / T / D	2.50 x 3.30	0.20-.70	Silver / B / C
PA2687+050	Nissan VQ35DE	96.0	8.8:1	81.4	1.18 x 3.50	0.30-.36	Silver / B / S	1.18 x 4.10	0.25-.31	Black / T / D	2.50 x 3.30	0.20-.70	Silver / B / C
PA2689	Mitsubishi 4G63 EVO	85.0	8.8:1	88.0	1.18 x 3.10	0.40-.46	Silver / B / S	1.18 x 3.66	0.36-.41	Black / T / D	2.00 x 2.30	0.20-.70	Silver / B / C
PA2689+100	Mitsubishi 4G63 EVO	86.0	8.8:1	88.0	1.18 x 3.10	0.40-.46	Silver / B / S	1.18 x 3.66	0.36-.41	Black / T / D	2.00 x 2.30	0.20-.70	Silver / B / C
PA2701+100	Mitsubishi 4G63 EVO	86.0	8.8:1	94.0	1.18 x 3.10	0.40-.46	Silver / B / S	1.18 x 3.66	0.36-.41	Black / T / D	2.00 x 2.30	0.20-.70	Silver / B / C
KK3467	Mazda/Ford MZR 2.3	87.5	12:1	94.0	0.990 x 3.2	0.30-.36	Silver / B / S	1.18 x 3.30	0.25-.31	Black / T / D	2.415 x 2.50	0.20-.70	Silver / B / C
KK3699	Mazda/Ford MZR 2.0	87.5	12:1	83.1	0.990 x 3.2	0.30-.36	Silver / B / S	1.18 x 3.30	0.25-.31	Black / T / D	2.415 x 2.50	0.20-.70	Silver / B / C
KK3732	Mazda/Ford MZR 2.0	87.5	14:1	83.1	0.990 x 3.2	0.30-.36	Silver / B / S	1.18 x 3.30	0.25-.31	Black / T / D	2.415 x 2.50	0.20-.70	Silver / B / C

\* All dimensions in millimeters unless otherwise stated.



# COSWORTH

## COSWORTH PISTON INSTRUCTIONS - SUBARU 4 CYLINDER EJ205 & EJ257

Thank you very much for purchasing a set of genuine Cosworth Racing pistons. What you have purchased is not only a high quality set of pistons, but also 50 years of racing heritage from F1, Champ Car, Prototypes, Formula Atlantic, World Rally Championship, and many other forms of high level motorsports. Your new set of pistons have been designed and manufactured by the very same engineers, machinists, and machines as our motorsports pistons.

◦ <b>Bore x Stroke: and ring pack</b>	PA2667	99.50 x 79mm	EJ257	◦ <b>Cosworth Ring Pack:</b>	PR7865
	PA2667+025	99.75 x 79mm	EJ257		PR7866
	PA2667+050	100.0 x 79mm	EJ257		PR7867
	PA2690	92.0 x 75mm	EJ205/207		PR7320
	PA2690+050	92.5 x 75mm	EJ205/207		PR7321

◦ **Kit contents:** Cosworth lightweight forged pistons x 4, EN39B tool steel wristpins x 4, wristpin locks x 8, piston ring set with Chrome top ring

◦ **Piston crown cc and weight:**

PA2667 =	-20.33cc dish and 397grams
PA2667+025 =	-20.33cc dish and 397 grams
PA2667+050 =	-20.33cc dish and 398 grams
PA2690 =	-16.99cc dish and 336 grams
PA2690+050 =	-16.99cc dish and 340 grams

◦ **Nominal compression ratios:  
(with stock combustion chamber)**

Head gasket thickness	0.6mm	1.0mm
PA2667	8.4	8.1
PA2667+025	8.4	8.1
PA2667+050	8.4	8.1
PA2690	8.0	7.8
PA2690+050	8.0	7.8

◦ **Piston to Valve clearance (P-V):** Due to the infinite combinations of valve, piston, head, and gasket combinations, the P-V clearance must be checked and at least 0.040".

◦ **Piston to Cylinder wall clearance:** EJ205/207 - Measure piston size at 4.4mm from bottom of skirt. Recommended clearance for EJ205/207 is 0.08-0.11mm (0.003-.0043")  
EJ257 - Measure piston size at 7.75mm from bottom of skirt. Recommended clearance for EJ257 is 0.062-0.102mm (0.0025-.004")  
Your clearances will vary depending upon the use of the engine. The more severe the usage, the larger your clearance should be.

◦ **Cylinder bore finish:** 280-325 grit  
42-45 degree crosshatch

◦ **Wristpin to pin bore clearance:** 0.005-0.015mm (0.0002-.0006")  
Deburr and round the end of the wristpin locks before installation.

◦ **Information:**

- Always use generous amounts of oil when installing piston into bore.
- Deburr piston rings immediately after filing and before installation.
- Deburr and round the end of the wristpin locks before installation.
- Please ensure that bores are machined absolutely round. Tapered or oval bores will lead to shorter piston and ring life.
- Cosworth pistons are designed for racing and high performance purposes only. There are absolutely no warranties expressed or implied. Cosworth is not responsible for any damages to engine, vehicle, or person, caused by piston failure.

# COSWORTH

## COSWORTH PISTON INSTRUCTIONS - NISSAN 6 CYLINDER VQ35DE

Thank you very much for purchasing a set of genuine Cosworth Racing pistons. What you have purchased is not only a high quality set of pistons, but also 50 years of racing heritage from F1, Champ Car, Prototypes, Formula Atlantic, World Rally Championship, and many other forms of high level motorsports. Your new set of pistons have been designed and manufactured by the very same engineers, machinists, and machines as our motorsports pistons.

- **Bore x Stroke:**

PA2688	95.50 x 81.4mm	VQ35DE	◦ <b>Cosworth Ring Pack:</b>	PR7323
PA2688+050	96.00 x 81.4mm	VQ35DE		PR7325
PA2687	95.50 x 81.4mm	VQ35DE		PR7323
PA2687+050	96.00 x 81.4mm	VQ35DE		PR7325
  
- **Kit contents:** Cosworth lightweight forged pistons x 6, EN39B tool steel wristpins x 6, wristpin locks x 12, piston ring set with Chrome top ring
  
- **Piston crown cc and weight:**

PA2688 =	-2.83cc dish and 375 grams
PA2688+050 =	-2.83cc dome and 375 grams
PA2687 =	-10.11cc dish and 354 grams
PA2687+050 =	-10.11cc dish and 354 grams
  
- **Nominal compression ratios:**

<b>(with stock combustion chamber)</b>	Head gasket thickness	<b>0.5mm</b>
	PA2688	10.3
	PA2688+050	10.3
	PA2687	8.8
	PA2687+050	8.8
  
- **Piston to Valve clearance (P-V):** Due to the infinite combinations of valve, piston, head, and gasket combinations, the P-V clearance must be checked and at least 0.040".
  
- **Piston to Cylinder wall clearance:** Measure piston size at 19mm from bottom of skirt.  
Recommended clearance is 0.083-0.123mm (0.0033-.0049")
  
- **Cylinder bore finish:**  
280-325 grit  
42-45 degree crosshatch
  
- **Wristpin to pin bore clearance:** 0.005-0.015mm (0.0002-.0006")  
Deburr and round the end of the wristpin locks before installation.
  
- **Information:**
  - Always use generous amounts of oil when installing piston.
  - Deburr piston rings immediately after filing and before installation.
  - Deburr and round the end of the wristpin locks before installation.
  - Please ensure that bores are machined absolutely round. Tapered or oval bores will lead to shorter piston and ring life.
  - Cosworth pistons are designed for racing and high performance purposes only. There are absolutely no warranties expressed or implied. Cosworth is not responsible for any damages to engine, vehicle, or person, caused by piston failure.

# COSWORTH

## COSWORTH PISTON INSTRUCTIONS - MITSUBISHI 4 CYLINDER 4G63EVO

Thank you very much for purchasing a set of genuine Cosworth Racing pistons. What you have purchased is not only a high quality set of pistons, but also 50 years of racing heritage from F1, Champ Car, Prototypes, Formula Atlantic, World Rally Championship, and many other forms of high level motorsports. Your new set of pistons have been designed and manufactured by the very same engineers, machinists, and machines as our motorsports pistons.

- **Bore x Stroke:**

PA2689	85.00 x 88mm	4G63EVO	◦ <b>Cosworth Ring Pack:</b>	PR7317
PA2689+100	96.00 x 88mm	4G63EVO		PR7319
PA2701+100	96.00 x 94mm	4G63EVO		PR7319
  
- **Kit contents:** Cosworth lightweight forged pistons x 4, EN39B tool steel wristpins x 4, wristpin locks x 8, piston ring set with Chrome top ring
  
- **Piston crown cc and weight:**

PA2689 =	-6.38cc dish and 317 grams
PA2689+100 =	-6.38cc dish and 332 grams
PA2701+100 =	-10.58cc dish and 322 grams
  
- **Nominal compression ratios:**

<b>(with stock combustion chamber)</b>	Head gasket thickness	<b>1.0mm</b>
	PA2689	8.57
	PA2689+100	8.57
	PA2701+100	8.65
  
- **Piston to Valve clearance (P-V):** Due to the infinite combinations of valve, piston, head, and gasket combinations, the P-V clearance must be checked and at least 0.040".
  
- **Piston to Cylinder wall clearance:** Measure piston size at 19.64mm from bottom of skirt. Recommended clearance is 0.074-0.114mm (0.003-.0045")
  
- **Cylinder bore finish:**

280-325 grit
42-45 degree crosshatch
  
- **Wristpin to pin bore clearance:** 0.005-0.015mm (0.0002-.0006")  
Deburr and round the end of the wristpin locks before installation.
  
- **Information:**
  - Always use generous amounts of oil when installing piston.
  - Deburr piston rings immediately after filing and before installation.
  - Deburr and round the end of the wristpin locks before installation.
  - Please ensure that bores are machined absolutely round. Tapered or oval bores will lead to shorter piston and ring life.
  - Cosworth pistons are designed for racing and high performance purposes only. There are absolutely no warranties expressed or implied. Cosworth is not responsible for any damages to engine, vehicle, or person, caused by piston failure.

# COSWORTH

## COSWORTH PISTON INSTRUCTIONS - FORD & MAZDA 4 CYLINDER DURATEC

Thank you very much for purchasing a set of genuine Cosworth Racing pistons. What you have purchased is not only a high quality set of pistons, but also 50 years of racing heritage from F1, Champ Car, Prototypes, Formula Atlantic, World Rally Championship, and many other forms of high level motorsports. Your new set of pistons have been designed and manufactured by the very same engineers, machinists, and machines as our motorsports pistons.

- **Bore x Stroke:**

KK3467 (YD0200)	87.50 x 83.1/94mm	2.0/2.3L
KK3699 (YD0280)	87.50 x 83.1/94mm	2.0/2.3L
KK3732 (YD0394)	87.50 x 83.1/94mm	2.0/2.3L

  - **Cosworth Ring Pack:** KK3468
  - KK3468
  - KK3468
  
- **Kit contents:** Cosworth lightweight forged pistons x 4, EN39B tool steel wristpins x 4, wristpin locks x 8, piston ring set with Chrome top ring
  
- **Piston crown cc and weight:**

KK3467 =	+0.01cc dish and 301 grams
KK3699 =	+3.28cc dome and 312 grams
KK3732 =	+6.55cc dome and 309 grams
  
- **Nominal compression ratios:**

<b>(with stock combustion chamber)</b>	Head gasket thickness	<b>0.4mm</b>
	KK3467 (2.0/2.3L)	11.0/12.0
	KK3699 (2.0/2.3L)	12.0/13.0
	KK3732 (2.0/2.3L)	13.0/14.0
  
- **Piston to Valve clearance (P-V):** Due to the infinite combinations of valve, piston, head, and gasket combinations, the P-V clearance must be checked and at least 0.040".
  
- **Piston to Cylinder wall clearance:** Measure piston size at 19.64mm from bottom of skirt. Recommended clearance is 0.074-0.114mm (0.003-.0045")
  
- **Cylinder bore finish:**

280-325 grit
42-45 degree crosshatch
  
- **Wristpin to pin bore clearance:** 0.005-0.015mm (0.0002-.0006")  
Deburr and round the end of the wristpin locks before installation.
  
- **Information:**
  - Always use generous amounts of oil when installing piston.
  - Deburr piston rings immediately after filing and before installation.
  - Deburr and round the end of the wristpin locks before installation.
  - Please ensure that bores are machined absolutely round. Tapered or oval bores will lead to shorter piston and ring life.
  - Cosworth pistons are designed for racing and high performance purposes only. There are absolutely no warranties expressed or implied. Cosworth is not responsible for any damages to engine, vehicle, or person, caused by piston failure.