

**OUR HISTORY** WHICH SET DO YOU NEED?

## **Our 47 Years of Racing Heritage!**



Back in the late 60s, the Cloyes engineering team, headed by Mr. Bob Bub, saw the surging popularity of the weekend racer and set out to develop products to service the race crowd. In 1970, Mr. Bub and his team developed and marketed the very first TRUE® Roller Speed set. With its balanced and multi-keyway sprockets, hand-matched with a new chain featuring solid bushing type rollers, the TRUE® Roller set was designed for racing and changed the timing game forever. In this 1972 letter, Junior Johnson attributes the new Cloyes TRUE® Roller set to aiding in their win at Atlanta (with Bobby Allison driving).

They won 10 races that year. The Cloyes name soon became known for the best racing timing set in the U.S.

As racing grew both professionally and at the enthusiast level, the Cloyes line of High Performance cam drives grew with it. Over the years, Cloyes engineers have collaborated on projects with some of the legendary names in racing – names like Hendrick, Roush, Yates, Dorton, Mondello, as well as the major racing programs at GM, Ford, Mopar, and Mercury Marine.

As competitors came into the market with copy-cat speed sets, we needed to take it up a notch. In 1992, Cloyes developed and patented the Hex-A-Just® TRUE® Roller. Hex-A-Just® was an industry

first, allowing an engine builder to easily adjust valve timing with the turn of an allen wrench, saving hours on the dyno or at the track. We soon added our Quick Button 2 pc Timing Cover allowing easy access to the timing adjustment. Cloyes developed over five patents that complimented our Hex-A-Just system, which remains the premier adjustable timing set on the market.

Cloyes Wins Indy!! Cloyes helped power Arie Luyendyk's winning car at the 1997 Indianapolis 500. This was the first race featuring the Olds Aurora racing engine. Because of our close ties to GM, we were asked to make the timing set for their entries in the new Indy Racing League.

Until its demise in 2006, all the Pontiac Firebirds running in the IROC Series (International Race of Champions) were equipped with a Cloyes TRUE® Roller set. Other notable accomplishments include Mike Vater's "Overkill Evolution" as the 2015 Freestyle World Champion, and Rick Hernandez with the World's Fastest Cobra Jet Mustang.

Over the past 47 years, it has been our innovation and attention to detail that has set us apart from the rest. Today, Cloyes custom race products are in winning engines at all racing levels across the country and around the world. We continue to work for you, the professional racer. We know what's on the line when you head to the track. We are committed to continue providing the unmatched quality and performance you expect to keep you ahead of the competition!

We thank you for your continuing support... 47 years and counting!



# WHICH SET DO YOU NEED?

#### **HEAVY DUTY SETS**

This standard double row chain set offers that little extra durability and peace of mind. Heavy Duty Sets - Double row cast iron cam sprocket with .200" or .220" double row chain and induction heat-treated billet steel 3 keyway crank sprocket. 3 keyways allow +/- 4° of adjustability at the crank, equivalent to +/- 2° of cam timing adjustment.

## STREET TRUE® ROLLERS BETTER

Entry-level TRUE® Roller offerings for the budget-minded street enthusiast.

Street TRUE® - Offering a .250 TRUE® Roller chain with a cast iron cam sprocket and induction heat treated billet steel 3 keyway crank sprocket.

Street Billet - Same as above with added features of billet steel cam sprocket and 9 key crank sprocket. 9 keyways allow +/- 8° of adjustability in 2 crank degree increments.

#### BEST RACE TRUE® ROLLERS

Race-proven speed sets. These custom hand-matched sets give the professional racer the assurance needed for a race-dedicated engine.

Race TRUE® - Induction heat-treated sprockets hand-matched with Premium .250 TRUE® Roller chain. Sets contain ductile iron or induction heat-treated cast iron cam sprockets and induction heat treated 3 keyway billet steel crank sprockets. Sprockets are paired with a premium .250 TR chain. The original Race set put Cloyes in the race business in 1970.

Race Billet - We took a good idea and made it better. Similar to above with the added assurance of all billet sprockets and added benefit of versatility with 3 or 9 keyway crank sprockets.

#### BEST ADJUSTABLE RACE TRUE® ROLLERS

Like above, these custom hand-matched sets give the professional racer the assurance needed for a race-dedicated engine, with the added feature of infinite adjustability anywhere between +/- 6°. Hex-A-Just® - Our number one seller to the professional race crowd. All the assurances of our top-of-the-line speed set - billet steel heat-treated sprockets, hand-matched with our Premium .250 TRUE® Roller chain - and infinitely adjustable (from +/- 6°) with the simple turn of a wrench. Add our Quick Button Two Piece Timing Cover and you are way ahead of the field!

## "Z-RACING" TRUE® ROLLERS Z-BEST

Developed for those extreme racing conditions that push your internal engine components to their limits. With the addition of the exclusive Cloyes "Z" Chain, the "Z-Racing" series is available as an upgrade for a select number of popular racing applications on all race categories discussed above.

See application listings on pages 5-10 for available coverage. For more details on "Z-Racing" see page 8.

FOR REPLACEMENT CHAIN NUMBERS FOR ALL SPEED SETS - SEE PAGE 12

## Why Advance or Retard Valve Timing?

Adjusting your valve timing gives you the ability to customize your torque and power curves to optimize your desired engine output for your specific application needs.

### ADVANCED TIMING = MAXIMUM TORQUE AT LOW RPM

Recommended for towing, performance street driving, and drag racing with automatic transmissions.

#### RETARDED TIMING = MAXIMUM TORQUE AT HIGH RPM

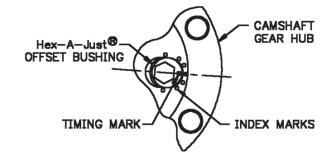
Recommended for circle track, drag racing with manual transmissions and other all-out racing applications.

# **How to Advance or Retard Valve Timing**

Cloyes offers several different options to adjust your valve timing:

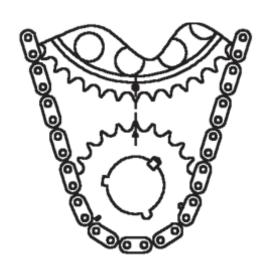
## **HEX-A-JUST®**

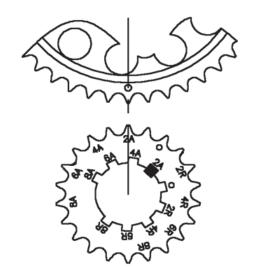
With the simple turn of an allen wrench, our patented Hex-A-Just® systems allow you to infinitely adjust valve timing within a window of +/- 6°.



## **MULTIPLE KEYWAYS**

Use our three or nine keyway crank sprockets for incremental adjustments:

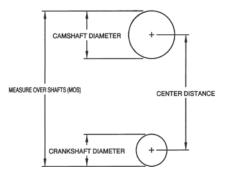




## What is Center Distance?

Center Distance (or CD) is the measurement from the center of the camshaft to the center of the crankshaft. Accurately matching your timing set to the center distance of your engine will determine the performance and longevity of your timing set.

CD = MOS - (CRANK DIA./2 + CAM DIA./2)



# Hand Matching... A Cloyes Exclusive!

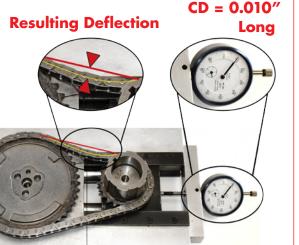
Each and every Cloyes Premium Race set (Hex-A-Just®, Race Billet, and Original Race TRUE®) is hand-matched at the Cloyes facility by trained technicians. This process starts with a detailed component fitment and critical feature analysis. Each set is then measured on a pneumatic matching fixture, allowing rotation of the timing set under a predetermined load to both qualify center distance and control runout. It is this attention to detail that sets Cloyes apart from all competitors.

Accurate and consistent valve timing is a key component to maximizing engine performance. The illustrations below show a typical mass-produced OE timing set versus a hand-matched Cloyes TRUE® Roller Set.

## **OE Set**

Center Distance measures 0.010" too long causing chain deflection, resulting in -

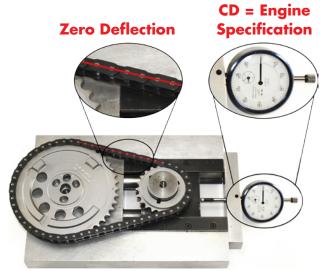
- Timing Variation: The cam sprocket is allowed to rotate a certain number of degrees (relative to amount of deflection) without taking lead from the crank sprocket. This prevents the engine from attaining optimum performance.
- Chain Whip: This will lead to shortened chain fatigue life and can cause ultimate failure.



## **Cloyes Hand-Matched Set**

Center Distance measures to exact engine specification -

- Exact and Consistent Timing = Optimum engine performance
- Smooth Chain Operation = Increased chain life



## Reduced Center Distance Sets for Align Honed Applications

Some Race TRUE® Roller Sets are available in reduced center distance as noted by optional -5 (0.005" undersized) and -10 (0.010" undersized.) To order, just add the suffix to the part number. For example: 9-3100 becomes 9-3100-5 to order a 0.005" undersized set.

# **Quick Button™ Two-Piece Timing Cover**

The perfect compliment to our Chevy Hex-A-Just® TRUE® Roller Sets. The Quick Button™ Two Piece Timing Cover provides easy access to cam timing adjustment saving hours of set-up time on the dyno or at the track. The built-in cam button allows you to adjust cam endplay with the cover in place.



- Designed for easy access to Hex-A-Just®
- Easily-Adjustable, Thrust Bearing Cam Button
- O-Ring Seal & Center Plate Bolts Included
- Accepts OEM-style timing cover gasket and crank shaft seal



## **CHEVY SMALL BLOCK** PART # 1955-UP (non-Factory Roller Cam) 9-221 Rocket Block (Raised Cam) 9-226 **CHEVY BIG BLOCK** PART # 1965-UP (up to and including Gen 4)



**Repair Kit** Part #9-221D Includes O-Ring Seal, the 4 mounting bolts, locking screw, and cam button.

REPLACEMENT PARTS Plate Only (cam button not included)					
For Cover#	Order Part#				
9-221	9-221B				
9-226	9-226B				
9-231	9-221B				

# **HIGH PERFORMANCE SPEED SETS**

AMC	
<b>1-4 250</b> Center Distance = 5.045"	1983-84
RACE SETS	
Race TRUE® (3 Keyway)	<b>9-3127</b> Optional -5 -10
<b>1-6 199, 232, 258</b> Center Distance = 5.045"	1964-88
RACE SETS	
Race TRUE® (3 Keyway)	<b>9-3127</b> Optional -5 -10

CADILLAC	
V-8 368, 425, 472, 500 1/2" pitch single roller chain Center Distance = 5.045"	1968-84
STREET SETS	
Street TRUE® (3 Keyway)	9-1139
Street Billet (9 Keyway)	9-3539X3
RACE SETS	
Race Billet TRUE® (3 Keyway)	9-3639X3

BUICK	
<b>V-6 198, 225, 231</b> w/o integral distributor drive gear Center Distance = 4.335"	1962-82
STREET SETS	
Street TRUE® (3 Keyway)	9-1132
<b>V-6 181, 198, 225, 231 (RWD)</b> with integral distributor drive gear Center Distance = 4.335"	1977-88
STREET SETS	
Street TRUE® (3 Keyway)	9-1134
<b>V-8 215, 300, 340, 350H, J, X</b> Center Distance = 4.335"	1962-82
STREET SETS	
Street TRUE® (3 Keyway)	9-1132

JEEP	
<b>1-4 150 (2.5)</b> Center Distance = 5.045"	1983-2002
RACE SETS	
Race TRUE® (3 Keyway)	<b>9-3127</b> Optional -5 -10
<b>I-6 232, 242, 258</b> Center Distance = 5.045"	1964-98
RACE SETS	
Race TRUE® (3 Keyway)	<b>9-3127</b> Optional -5 -10

OLDSMOBILE						
V-8 260F, 307, 330, 350R, 400, 403, 425, 455 Center Distance = 5.044"	1964-87					
STREET SETS						
Street Billet® (9 Keyway)	9-3513X9					
RACE SETS						
Race Billet TRUE® (9 Keyway)	<b>9-3613X9</b> Optional -5 -10					

CHRYSLER	
V-6 283 (3.9) V-8 273, 315, 318, 325, 326 340, 354, 360, 392 HEMI Center Distance = 6.125"	1956-91
STREET SETS	
Heavy Duty (3 Keyway)	C-3028X
Street Billet (9 Keyway)	9-3503X9
RACE SETS	
Race Billet TRUE® (9 Keyway)	<b>9-3603X9</b> Optional -5 -10
BIG BLOCK - THREE BOLT V-8 350, 361, 383, 400, 413W 426W, 426 HEMI, 440 Center Distance = 5.152"	1958-78
STREET SETS	
Heavy Duty (3 Keyway)	C-3045
Street Billet (9 Keyway)	9-3525TX9
RACE SETS	
Race Billet TRUE® (9 Keyway)	<b>9-3625TX9</b> Optional -5 -10
BIG BLOCK - ONE BOLT V-8 350, 361, 383, 400, 413W 426W, 426 HEMI, 440 Center Distance = 5.152"	1958-78
STREET SETS	
Heavy Duty (Single Keyway)	C-3044

PONTIAC	
7-8 287, 316, 326, 347, 350P, 370, 389, 400, 421, 428, 455 Center Distance = 5.192"	1955-79
STREET SETS	
Heavy Duty	C-3043
Street Billet (9 Keyway)	9-3512X9
RACE SETS	
Race Billet TRUE® (9 Keyway)	<b>9-3612X9</b> Optional -5 -10 Optional Z
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CHEVROLET

	CHEVROLET		STREET SETS Heat-Treated, Billet Steel Crank			RACE TRUE® ROLLER SETS Induction Heat-Treated Sprockets, Hand-Matched w/ Premium TRUE® Roller Chain or Z-Chain (where available)		
	ENGINE	YEAR	Heavy Duty X = 3 Keyway Double Roller	Street TRUE® 3 Keyway .250 TRUE® Roller Chain	Street Billet 9 Keyway .250 TRUE® Roller Chain	Race TRUE®	Race Billet TRUE® X3 = 3 Keyway X9 = 9 Keyway Z = Z-Racing	Hex-A-Just® Adjustable (+/-) 6° Z = Z-Racing
1	V-6 & SMALL BLOCK V-8  Except Factory Roller Cam V-6 200, 229, 262, 4.3 w/o Bal Shaft V-8 262, 265, 267, 283, 302, 305G, 305H, 307, 327, 350L, 350K, 400  Center Distance = 4.521"	1955 - 1996	C-3023X 3 Keyway C-3055 Single Roller Single Keyway	9-1100	9-3500TX9	<b>9-3100</b> Optional -5 -10	9-3600TX3 9-3600TX9 Optional -5 -10 Optional Z	<b>9-3100A</b> Optional -5 -10 Optional Z
	W/ BIG BLOCK CRANK SNOUT	ALL					<b>9-3600BTX3</b> Optional -5 -10 Optional Z	<b>9-3100B</b> Optional -5 -10 Optional Z
2	V-6 TRUCK 4.3L W/ BALANCE SHAFT 1/2" Pitch Single Roller Chain Center Distance = 4.521"	1992 - 2006	C-3211 Single Keyway					
3	V-6 & SMALL BLOCK V-8  Factory Roller Cam  V-6 262, 4.3 w/o Bal Shaft V-8 305E, F, G, H, 350 (5.7-7, 5.7-8)  Center Distance = 4.521"	1985 - 2002	C-3092 Single Roller Single Keyway	9-1145	9-3545X9	<b>9-3145</b> Optional -5 -10	9-3645X3 9-3645X9 Optional -5 -10	<b>9-3145A</b> Optional -5 -10
	W/ BIG BLOCK CRANK SNOUT	ALL						<b>9-3145B</b> Optional -5 -10
4	V-8 SMALL BLOCK "ROCKET"  Cam Raised 0.391"  Center Distance = 4.912"	ALL		9-1146	9-3546TX9	<b>9-3146</b> Optional -5 -10	9-3646TX3 9-3646TX9 Optional -5 -10 Optional Z	<b>9-3146A</b> Optional -5 -10 Optional Z
	W/ BIG BLOCK CRANK SNOUT	ALL					<b>9-3646BTX3</b> Optional -5 -10 Optional Z	<b>9-3146B</b> Optional -5 -10 Optional Z
5	<b>V-8 348, 409</b> Center Distance = 5.045"	1958 - 1965		9-1101			<b>9-3601X3</b> Optional -5 -10	

	CHEVROLE	STREET SETS  Heat-Treated, Billet Steel Crank		RACE TRUE® ROLLER SETS Induction Heat-Treated Sprockets, Hand-Matched w/ Premium TRUE® Roller Chain or Z-Chain (where available)				
	ENGINE	YEAR	Heavy Duty X = 3 Keyway Double Roller	Street TRUE® 3 Keyway .250 TRUE® Roller Chain	Street Billet 9 Keyway .250 TRUE® Roller Chain	Race TRUE®	Race Billet TRUE® X3 = 3 Keyway X9 = 9 Keyway Z = Z-Racing	Hex-A-Just® Adjustable (+/-) 6° Z = Z-Racing
6	V-8 SMALL BLOCK VORTEC (L31)  1/2" Pitch Single Roller Chain Center Distance = 4.521"	1996 - 2002		9-1157		<b>9-3157</b> 3 Keyway <b>9-3157X1</b> Single Keyway		
7	LT-1 / LT-4 (VENTED OPTI-SPARK) 1/2" Pitch Single Roller Chain Center Distance = 4.521"	1995 - 1997					9-3651X3	
8	V-8 BIG BLOCK 396, 400, 402, 427, 454  Non-factory Roller Cam Center Distance = 5.152"	1965 - 1998	<b>C-3024X</b> 3 Keyway	9-1110 9-1110T	9-3510TX9	<b>9-3110</b> Optional -5 -10	9-3610TX3 Optional -5 -10 9-3610TX9 Optional -5 -10 Optional Z	<b>9-3110A</b> Optional -5 -10
9	V-8 BIG BLOCK "MERLIN" 454 Cam Raised 0.399" Center Distance = 5.551"	ALL		9-1147	9-3547TX9	<b>9-3147</b> Optional -5	9-3647TX3 9-3647TX9 Optional -5	<b>9-3147A</b> Optional -5
1 0	V-8 BIG BLOCK GEN VI  Factory Roller Cam  Center Distance = 5.152"  * Not for use with crankshaft sensor ring	ALL					<b>9-3649X3</b> Single Roller	9-3149A Single Roller Optional -5



# Z-Series Racing Chains take your timing set to the pinnacle of durability. It is the #1 choice of top professional teams in spring, circle, track, drag, and off road racing.

The double roller Z-Chain is made from high strength steel with proprietary heat-treat processing. The fine blanked links reduce stress risers, thus reducing fractures under severe load. The press fit center links improve load share by reducing load spikes on any single component and providing greater overall strength - offering 33% more overall strength than our current premium chain.

The "Z Racing" series is the choice for those extreme custom engine builds that demand no compromise.

For All-Out racing, Cloyes offers its single roller "Z-Racing" series for GM LS applications featuring the race-proven Cloyes "Z" chain.

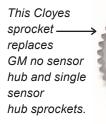
## "Z-RACING" LS TRACK-PROVEN FOR:

- Abusive on-and-off throttle applications
- Power levels exceeding 1200 horsepower
- Valve spring pressures approaching 800 lb/in open
- Drive mechanical fuel pumps/distributor ignition systems
- Drive your front accessory drive units (water pump, oil pump, etc.)

You can identify a Cloyes Z-Racing set by the "Z" suffix attached to the part #.

Ex. 9-3xxx**Z** 

# **How to Identify your LS Engine Management System**











3 bolt cam no or 1 sensor hub 24x reluctor

3 bolt cam 4 sensor hubs 58x reluctor

1 bolt cam 4 sensor hubs 58x reluctor

	TRUE® Roller Se	ts for GM - LS I	Engines		
APPLICATION	HEX-A-JUST® TRUE® ROLLER		RACE BILLET TRUE® ROLLER		
<b>Standard Center Dista</b> Center Distance = 4.890"	ince	3 Keyway	9 Keyway		
LS1 / LS2 /	LS6 1997-2005 5.7, 6 - this also incl	.0 (three bolt cam / ludes 2006 Pontiac (		o)	
Single Roller	9-3158A	9-3658TX3	9-3658TX9	9-304	
Single Roller "Z-Racing"	9-3158AZ	9-3658TX3Z	9-3658TX9Z	9-303	
Double Roller	9-3159A	9-3659X3		9-131	
	LS2 2006 6.0 (three	bolt cam / four ser	isor hub)		
Single Roller	9-3172A	9-3672TX3	9-3672TX9	9-304	
Single Roller "Z-Racing"	9-3172AZ	9-3672TX3Z	9-3672TX9X	9-303	
L\$2/L\$	3 2007-2009 6.0, 6.2 - these sets also	2 (single bolt cam / include the chain do			
Single Roller		9-3673TX3	9-3673TX9	9-304	
Single Roller "Z-Racing"		9-3673TX3Z	9-3673TX9Z	9-303	
	LS7 2006-10 (three	bolt cam / four sen	sor hub)		
Single Roller	9-3167A	9-3667TX3		9-304	
Single Roller "Z-Racing"	9-3167AZ	9-3667TX3Z		9-303	
Raised Block Sets Center Distance raised .390 - damper #9-5491 recommo		3 Keyway	9 Keyway		
LS1 /	LS2 / LS6 5.7, 6.0 (th	ree bolt cam / no or	one sensor hub)		
Single Roller "Z-Racing"	9-3158AZR	9-3658TX3ZR	9-3658TX9ZR	9-302	
Double Roller (no bearing)	9-3159AR	9-3659X3R		9-132	
	LS2 6.0 (three bo	olt cam / four senso	r hub)		
Single Roller "Z-Racing"	9-3172AZR	9-3672TX3ZR	9-3672TX9ZR	9-302	
	LS2/LS3 6.0, 6.2 (sing	jle bolt cam / four s	ensor hub)		
Single Roller "Z-Racing"		9-3673TX3ZR	9-3673TX9ZR	9-302	
	LS7 (three bolt	cam / four sensor l	nub)		
Single Roller "Z-Racing"	9-3167AZR	9-3667TX3ZR		9-302	

## Replacement Needle Bearing for LS sets = Part #9-232

Replacement Damper Part # 9-5491

**VVT TENSIONER** 



Damper included on single bolt sets as noted above, but can be ordered as option for all your LS applications.



For the Racer that wants to tune for optimum performance, this kit eliminates the common problem area - tensioner failure.

ELIMINATION
KIT FOR LS
Part # 9-3673TE

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	FORD		REET SE eated, Billet Stee	RACE TRUE® ROLLER SETS Induction Heat-Treated Sprockets, Hand-Matched			
	ENGINE		Heavy Duty 3 Keyway Double Roller	Street TRUE®	Street Billet 9 Keyway	Race TRUE®	Race Billet TRUE® X3 = 3 Keyway X9 = 9 Keyway Z = Z-Racing
1	V-8 SMALL BLOCK 221, 255, 260, 289 Std, 302 H/O, 351 Std, 351W H/O (to 03/21/84) Factory 1 pc. fuel pump eccentric Center Distance = 4.804"	1962 - 1984	C-3054X	9-1135	9-3535X9	<b>9-3135</b> Optional -5 -10	9-3635X3 9-3635X9 Optional -5 -10 Optional Z
2	V-8 SMALL BLOCK 302 Std, 302 (5.0) H/O (from 03/21/84), 351W Std Factory 2 pc. fuel pump eccentric Center Distance = 4.804"	1972 - 2001	C-3057X	9-1138		<b>9-3138</b> Optional -5 -10	
3	V-8 351C, 351M, 400  Center Distance = 5.044"	1970 - 1982			9-3521X9		<b>9-3621X9</b> Optional -5 -10
4	V-8 FE 352, 360, 390, 410, 427, 428  Center Distance = 5.044"	1963 - 1973	C-3029X		9-3508X9		<b>9-3608X9</b> Optional -5 -10
5	V-8 BIG BLOCK 429, 460 Factory set top dead center Center Distance = 6.078"	1968 - 1971	C-3079X		9-3522X9		<b>9-3622X9</b> Optional -5 -10
6	V-8 BIG BLOCK 460 Factory set top dead center Center Distance = 6.078"	1988 - 1992	C-3079X		9-3522X9		<b>9-3622X9</b> Optional -5 -10

CAM BUTTONS		THRUST WASHERS AND BEARINGS		
Cam Button is a must for Aftermarket Roller Cams				
CAM BUTTONS	CAM BUTTONS		STEEL THRUST WASHER	
SB/BB Chevrolet .925 (59/64") long .030" thick Used with old style 3 spoke covers	9-200	SB Chevrolet .030" thick	9-201	
SB/BB Chevrolet .640 (41/64") long Used with newer style covers	9-202	BB Chevrolet .030" thick	9-203	
Cam Buttons, Thrust Washers a	and Thrust	BRONZE THRUST WASH	IER	
Bearings prevent the cam from walking and provide antifriction surface between block and cam sprocket.		SB/BB Chevrolet BB Chrysler .150" thick	9-220B	
REPLACEMENT		CAPTURED THRUST BEAR	INGS	
ADJUSTING TOOL for Hex-A-Just®		SB/BB Chevrolet BB Chrysler .150" thick	9-220	
Used in all SB/BB Chevro BB Chrysler Hex-A-Just® Part # P9005		Cloyes LS Application Only	9-232	
	NT QUICK BUT	ITON PARTS, REFER TO PAGE 4		

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REPLACEMENT CHAIN REFERENCE TESTIMONIALS

REPLACEMENT CHAIN GUIDE						
			REPLACEMENT CHAIN INFO			
SET BASE #	MAKE	CHAIN #	STYLE	LINKS		
		Y DUTY TIMING SETS				
3023	Chevrolet	C163	Double Roller	58		
3024	Chevrolet	C168	Double Roller	66		
3028 3029	Chrysler Ford	C160 C169	Double Roller  Double Roller	68		
3029	Pontiac	C165	Double Roller	60		
3044	Chrysler	C168	Double Roller	66		
3045	Chrysler	C168	Double Roller	66		
3054	Ford	C163	Double Roller	58		
3055	Chevrolet	9-4149	Single Roller	46		
3057	Ford	C163	Double Roller	58		
3079	Ford	C168	Double Roller	66		
3092	Chevrolet	9-4149	Single Roller	46		
	STREET TRU	E® / STREET BILLET	TRUE®			
1100/3500	Chevrolet	9-145	Double Roller	58		
1101	Chevrolet	9-4160	Double Roller	48		
3503	Chrysler	9-147	Double Roller	68		
3508	Ford	9-149	Double Roller	64		
1110/3510	Chevrolet	9-146 9-148	Double Roller	66		
3512 3513	Pontiac Oldsmobile	9-148	Double Roller  Double Roller	64		
3521	Ford	9-149	Double Roller	64		
3522	Ford	9-146	Double Roller	66		
3525	Chrysler	9-146	Double Roller	66		
1132	Buick	9-143	Double Roller	54		
1134	Buick	9-143	Double Roller	54		
1135/3535	Ford	9-145	Double Roller	58		
1138	Ford	9-145	Double Roller	58		
1139/3539	Cadillac	9-4160	Double Roller	48		
1145/3545	Chevrolet	9-145	Double Roller	58		
1146/3546	Chevrolet Chevrolet	9-148 9-147	Double Roller  Double Roller	60		
1157	Chevrolet	9-4149	Single Roller	46		
		CE BILLET TRUE® /				
2100/2400		9-130		E0.		
3100/3600 3100/3600 (Z)	Chevrolet  Chevrolet	9-130 9-130Z	Double Roller  Double Roller	58		
3601	Chevrolet	9-133	Double Roller	64		
3603	Chrysler	9-135	Double Roller	68		
3608	Ford	9-133	Double Roller	64		
3110/3610	Chevrolet	9-134	Double Roller	66		
3110/3610 (Z)	Chevrolet	9-134Z	Double Roller	66		
3612	Pontiac	9-131	Double Roller	60		
3612 (Z)	Pontiac	9-131Z	Double Roller	60		
3613	Oldsmobile	9-133	Double Roller	64		
3118/3618	AMC	9-132 9-133	Double Roller  Double Roller	62		
3621 3622	Ford Ford	9-133	Double Roller	64		
3625	Chrysler	9-134	Double Roller	66		
3127	AMC	9-133	Double Roller	64		
3135/3635	Ford	9-130	Double Roller	58		
3135/3635 (Z)	Ford	9-130Z	Double Roller	58		
3138	Ford	9-130	Double Roller	58		
3639	Cadillac	9-190	Single Roller	48		
3145/3645	Chevrolet	9-130	Double Roller	58		
3146/3646	Chevrolet	9-131	Double Roller	60		
3146/3646 (Z) 3147/3647	Chevrolet Chevrolet	9-131Z 9-135	Double Roller  Double Roller	60		
3149/3649	Chevrolet	9-135	Single Roller	50		
3651	Chevrolet	9-193	Single Roller	46		
3157	Chevrolet	9-193	Single Roller	46		
3158/3658	Chevrolet	9-304	Single Roller	60		
3158/3658 (Z)	Chevrolet	9-303	Single Roller	60		
3158/3658 (ZR)	Chevrolet	9-302	Single Roller	60		
0100,0000 (2.1)		9-131	Double Roller	60		
3159/3659	Chevrolet			_		
3159/3659 3159/3659 (R)	Chevrolet Chevrolet	9-132	Double Roller	62		
3159/3659 3159/3659 (R) 3167/3667	Chevrolet Chevrolet	9-304	Single Roller	60		
3159/3659 3159/3659 (R) 3167/3667 3167/3667 (Z)	Chevrolet Chevrolet Chevrolet	9-304 9-303	Single Roller Single Roller	60		
3159/3659 3159/3659 (R) 3167/3667 3167/3667 (Z) 3167/3667 (ZR)	Chevrolet Chevrolet Chevrolet Chevrolet	9-304 9-303 9-302	Single Roller Single Roller Single Roller	60 60 60		
3159/3659 3159/3659 (R) 3167/3667 3167/3667 (Z) 3167/3667 (ZR) 3172/3672	Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet	9-304 9-303 9-302 9-304	Single Roller Single Roller Single Roller Single Roller	60 60 60		
3159/3659 3159/3659 (R) 3167/3667 3167/3667 (Z) 3167/3667 (ZR) 3172/3672 3172/3672 (Z)	Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet	9-304 9-303 9-302 9-304 9-303	Single Roller Single Roller Single Roller Single Roller Single Roller	60 60 60 60		
3159/3659 3159/3659 (R) 3167/3667 3167/3667 (Z) 3167/3667 (ZR) 3172/3672 3172/3672 (ZR)	Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet	9304 9303 9302 9304 9303 9302	Single Roller Single Roller Single Roller Single Roller Single Roller Single Roller	60 60 60 60 60		
3159/3659 3159/3659 (R) 3167/3667 3167/3667 (Z) 3167/3667 (ZR) 3172/3672 3172/3672 (Z)	Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet	9-304 9-303 9-302 9-304 9-303	Single Roller Single Roller Single Roller Single Roller Single Roller	60 60 60 60		
3159/3659 (R) 3167/3667 3167/3667 (Z) 3167/3667 (ZR) 3172/3672 3172/3672 (ZI) 3172/3672 (ZR) 3673	Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet Chevrolet	9.304 9.303 9.302 9.304 9.303 9.302 9.304	Single Roller	60 60 60 60 60 60		

"15 years ago I began using your timing chain systems, and have been pleased with no timing component issues. This includes my 460 Ford based 509 cube Naturally Aspirated truck pull engine that is regularly abused leaving the line at 9000 and reaching as high as 10,000 rpm for 15+ seconds at a time in the Central Ohio Truck Pull Circuit. This Cloyes Premium "Z" chain billet timing set is responsible for opening the valves at

over 1050 pounds of spring pressure, and driving an in pan oil pump, as well as provides infinite adjustment to find that perfect cam timing. Your customer service for these years have always been top notch. After abusing your products for many many passes you graciously measured the stretch of the chain and reported back to me that it had almost no stretch (0.004")... Under these conditions with no issues at all... I'm SOLD on your product."

Thank You and God Bless,

#### **Brandon Kinzer**

"FORGIVEN" pulling team





"We have been using Cloyes Timing sets with their Premium chains and cam sprockets in our big block Ford blown alcohol injected engines for three years. Our monster trucks put these components to the test as we run high temperatures in our motors during the 90 second to 3 minute freestyle competitions and during racing. In the 27 years we have been racing monster trucks we haven't come across a roller chain set that lasts as long with little stretch as Cloyes. We also like the adjustability of the cam sprocket which enables us to dial our cam degree in easier than other brands. Based on our experience and compared to other products Cloyes is your best bet for any application be it performance or street vehicles."

#### **Michael Vaters**

Black Stallion Monster Truck Racing

"Producing over 1500 reliable HP with a traditional Pontiac engine is a challenge. I have been utilizing the Cloyes TRUE® Roller Timing sets on these engines for 12 years without a single timing system failure. This is with open valve spring pressures in excess of 1000 PSI and engine speeds in excess of 8000 RPM. In a match race environment, consistent performance and reliability are paramount. We have never had a cam timing related issue with the Cloyes chain drive."

#### Michael Garblik

Grocery Getter 1963 Pontiac Tempest Drag Car



Learn more about Replacement Engine Parts we have.