

2008 Calendar

# 74の系譜

A genealogy of the 74



*Knowledge Transformation*

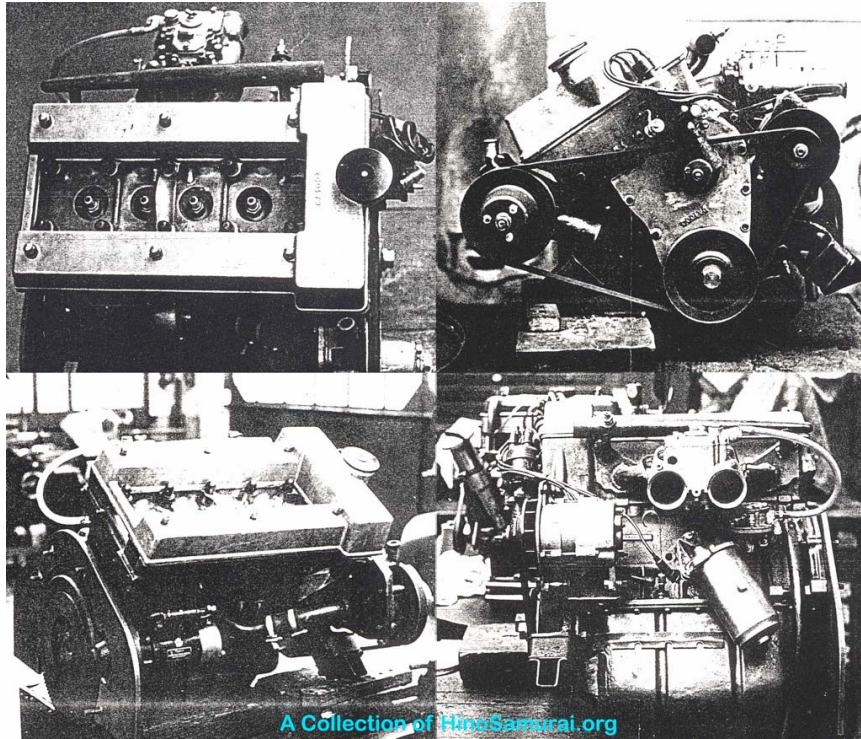


Study by HinoSamurai.org (In Process)

2007.12



# January & February - 2008

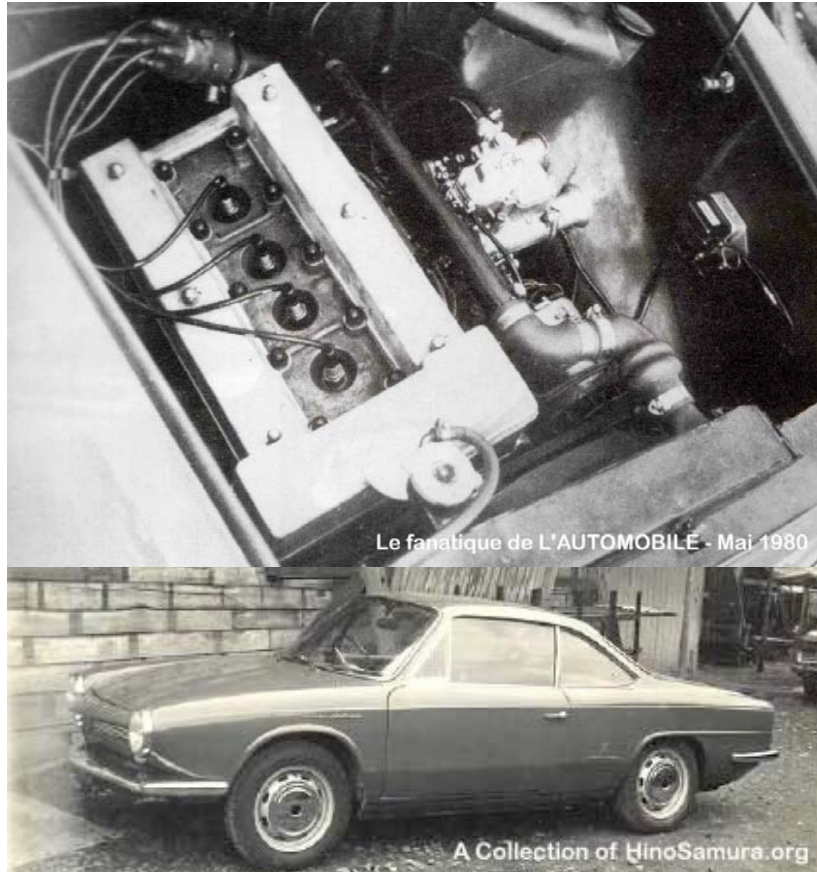


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	<b>27</b>	28	29	30	31		
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	<b>24</b>	25	26	27	28	29	

## The birth of Hino TOHC Engine at Alpine in Dieppe, France (1964)

Docking Hino's GR100 - Contessa 1300 lower deck and some ideas and parts from Alfa Romeo 1300cc in those days for inventing new TOHC engine was engineer's idea in quick way and low budget (Estd. - mid. ~ late 1964). This Alpine's invention was a layout to locate Hino's water pump in side of block and to exhaust hot water from left side of block and to intake cooled water from right side of cylinder head. Cam cover may be one off parts with simple mold for this experimental TOHC. This basic layout was influenced to all of later series of Hino's TOHC without changes. Bore & Stroke by Alpine was 72mm x 79mm.

# March & April - 2008



Le fanatique de L'AUTOMOBILE - Mai 1980

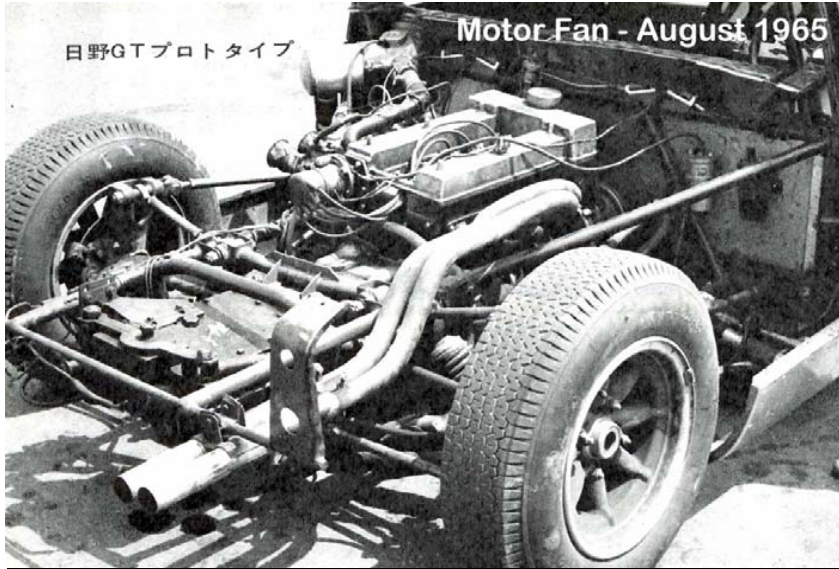
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	26	27	28	29	30		

## Hino Sprint GT 1300 and Power Unit by Alpine in Dieppe, France (1964~)

Joint project to develop High Performance Light Wight European taste sports car and studying constructing plastic body was prepared for Hino by Alpine in 1964. TOHC engine based on GR100 block was completed in late 1964 and one was in Hino Sprint 1300GT and other was shipped to Japan for engineering study. Chassis design was completed through 1964 that has completely same architecture with Alpine's 1xx series and body skin was plastic as well as all Alpine cars. Hino Sprint 1300 GT was in 1966 Paris Auto Salon with other Hino Contessa, then car was shipped to Hino Plant in Japan (bottom) after benchmarking in driving throughout European motor ways including mountain road.

# May & June - 2008



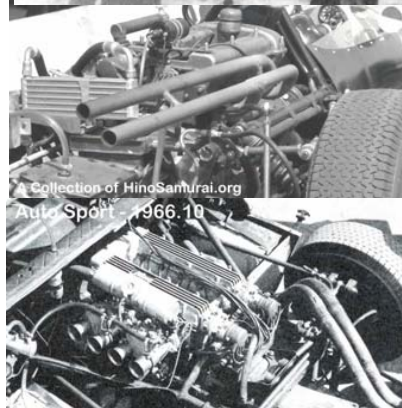
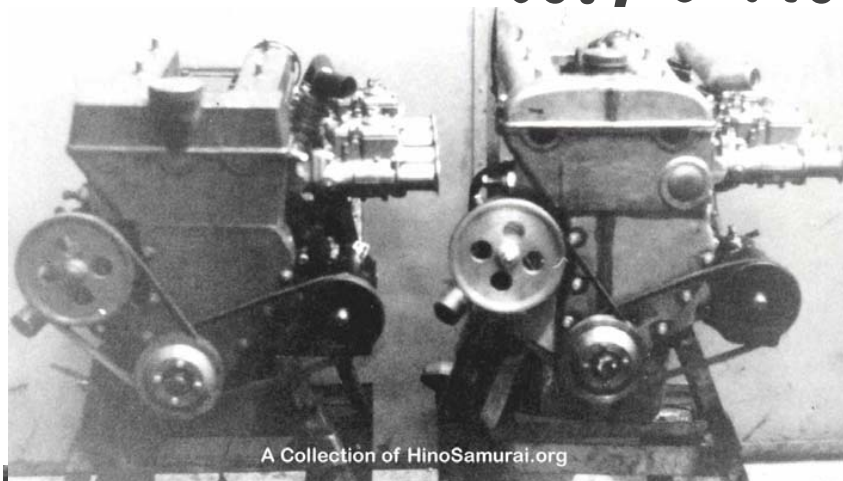
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5	S	M	T	W	T	F	S
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	29	30					

## Initial experimental TOHC with Hino 1965 GT Proto

The project to develop TOHC started in the end of 1964 with GT Proto program. Hino has been discussed to develop it from the scratch. But, they eventually started development with Alpine's TOHC as referencing design and engineering. Earlier model of GTP based on the chassis technology and components by Cooper FIII (UK) was with the initial phase TOHC and it seems the idea came from Alpine's one even sculpturing Hino's prototype code on cam cover. A car was in running condition in the summer of 1965 and diplayed in 65's Tolyo Motor Show.

# July & August - 2008



<b>7</b>	<b>S</b>	<b>M</b>	<b>T</b>	<b>W</b>	<b>T</b>	<b>F</b>	<b>S</b>
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		7	8	9	10	11	12
	<b>13</b>	14	15	16	17	18	19
	<b>20</b>	21	22	23	24	25	26
	<b>27</b>	28	29	30	31		

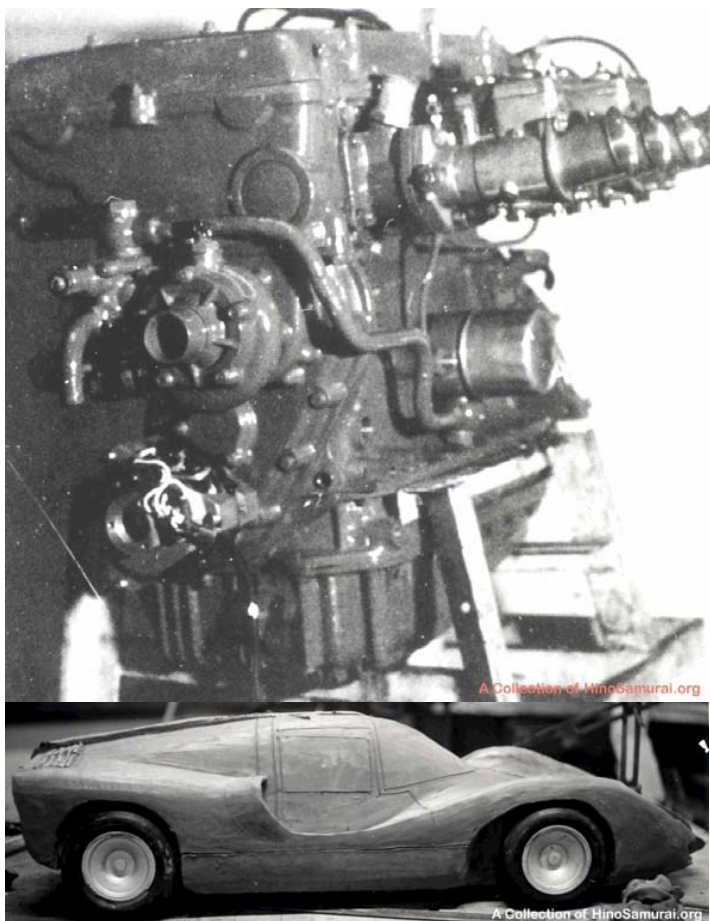
<b>8</b>	<b>S</b>	<b>M</b>	<b>T</b>	<b>W</b>	<b>T</b>	<b>F</b>	<b>S</b>
						1	2
	<b>3</b>	4	5	6	7	8	9
	<b>10</b>	11	12	13	14	15	16
	<b>17</b>	18	19	20	21	22	23
	<b>24/31</b>	25	26	27	28	29	30

## Evolution of Hino's TOHC in experimental phases (1965-1966)

This is the process of evolution about Hino's TOHC. Upper left is initial model, then upper right is secondary model. It is very clear that Hino has been extended the basic idea, layout, and schema by Alpine including the pattern. Even matured and late model of middle 1966 in lower right called YE28a is still the same even they made new pattern for some portions such as oil sump for instance. This demonstrates the engineering may be manured by improvement but the basic schema or architecture is sometimes difficult to change by constraints on the engineering. Middle left is 2nd model on DEL Formula by Hino's dedicated contract racing team including developing Formula and GTP cars. Lower left is YE28a on GTP called code name J494. Hino was very conservative to prove and mature their TOHC in competition fields while contract racing team has been expected to win with high performance engine.

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# September & October- 2008



9	S	M	T	W	T	F	S
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10	S	M	T	W	T	F	S
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	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	

## More Evolution - Twarding 1967 racing season

YE28b as an evolution version of original YE28a and last TOHC at Hino is fantastic with engineer's eccentric actions such as direct gear drive of water pump and electric alternator including the use of magnesium material. The engineer who did those great works moved to Honda as well as other chassis engineers by Hino's termination of Contessa program that means to discontinue developing gasoline engine and GTP cars without completing 1967 GTP model (bottom). They have contributed to develop and improve Honda's FI engines and to become or transform to truly conventional designs after S800 at Honda.

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# November & December- 2008



11	S	M	T	W	T	F	S
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	16	17	18	19	20	21	22
	23/30	24	25	26	27	28	29
12	S	M	T	W	T	F	S
		1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31			

## Validation with ..., not a rumore! (Today)

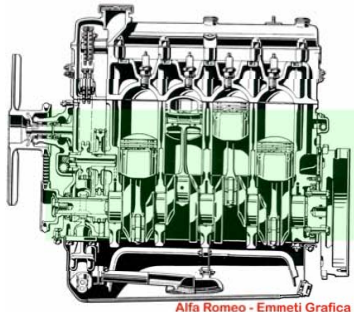
A series of Hino's TOHC that originates to the engineering by Aline was very short lifecycle without prominent success in the market including competition fields by terminating Contessa program in the late of 1966. We feel Honda's late 70 and after models seem that basic engineering has had some influences by Hino technologies based on Hino Contessa and TOHC development even for later several models.

Also we see engine parts from Alfa's 1300 may use to Hino's YE28b TOHC 74mm piston and to Hino's special OHV 74mm piston today. OHV 74mm special engine that is different concept about the configuration of piston rings with regular OHV GR100 including special Sport Kits. It is the "same" with Alfa 1300 rather than "usable". It may be back to running condition with Alfa's piston rings now!

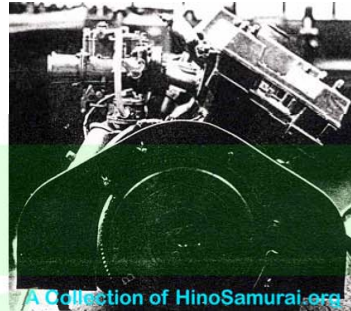
# Knowledge Transformation

## Inheriting and Innovating it by Engineers

Alfa Romeo I300 - 1954 ~  
(74X75 62~100hp)

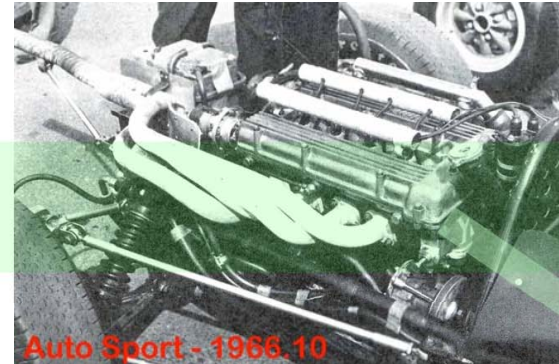


Alfa Romeo - Emmeti Grafica



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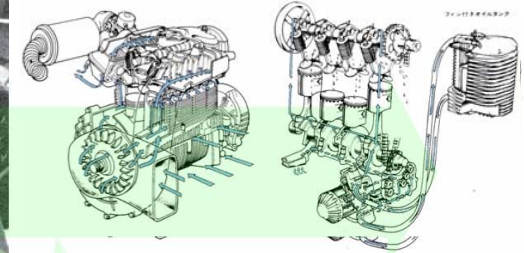
Alpine TOHC for Hino I 964  
(72X79, 80hp)



Auto Sport - 1966.10

YE28a on DEL Formula I 966.9.4  
(74X74, 110hp)

Honda I300 - 1969 ~  
(74X75.5, 110hp)



S.Ezawa

Hino GR100 1964-1966  
(71X79, 55/65hp)



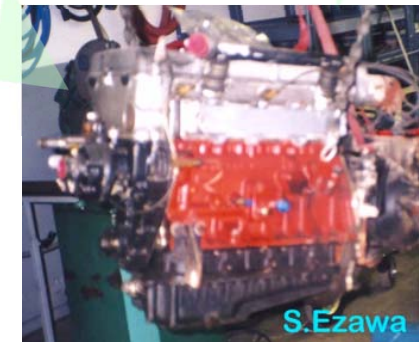
S.Ezawa

Hino Sprint GTI 300 by Alpine  
(72X79, 80hp)



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HINO GTP J494 with YE28a I 966.8  
(74X74, 110hp)



S.Ezawa

Modified YE28b with  
Alfa Romeo Cam by Privater -  
1974 ~ (74X74, 140hp)

### Thanks for .....

- Hino Motors
- [http://en.wikipedia.org/wiki/Hino\\_Motors](http://en.wikipedia.org/wiki/Hino_Motors)
- <http://en.wikipedia.org/wiki/Alpine>
- <http://en.wikipedia.org/wiki/Honda>
- [http://en.wikipedia.org/wiki/Alfa\\_Romeo](http://en.wikipedia.org/wiki/Alfa_Romeo)
- <http://it.wikipedia.org/wiki/Abarth>
- Motor Fan - August, 1965
- Auto Sport - Oct., 1966
- Automobile Year Book #14 1966-7
- Le fanatique de L'AUTOMOBILE Mai 1980
- Alfa Romeo by Emmeti Grafica
- Alpine des hommes des voitures - tome I

### Study by HinoSamurai.org (In Process)

Any information in here is based on the extensive research by HinoSamurai.org for many years globally. The description is an analysis of us and it does not means the other reports in the field including Hino Motos and other organization and resources.

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