



Magic Capsule

- Automatic Fuel Control Device

WELCOME



The engine used for vehicle and vessel is called the internal combustion engine. It has been engineering judgment that automobiles are moving getting power under the cycle of 4 –stroke in engine called “inhale- compression-explosion exhaust”

This is the serious of repeated process which is air and fuel inhaled and compressed into cylinder by piston, exploded by spark plug, and the burned air exhausted. Unfortunately, there might be some big difference between engineering theory and reality. The most important process among 4-storke is “inhale” because it is the process for air and fuel to be supplied to the cylinder.

When inhale-stroke happens to all the fossil automobiles, the air is supplied into cylinders by pistons. However, the most essential air needed to be used for automobiles is not likely to be inhaled. The fuel is injected by force with the only supplying pressure method automotive makers unilaterally regulate.

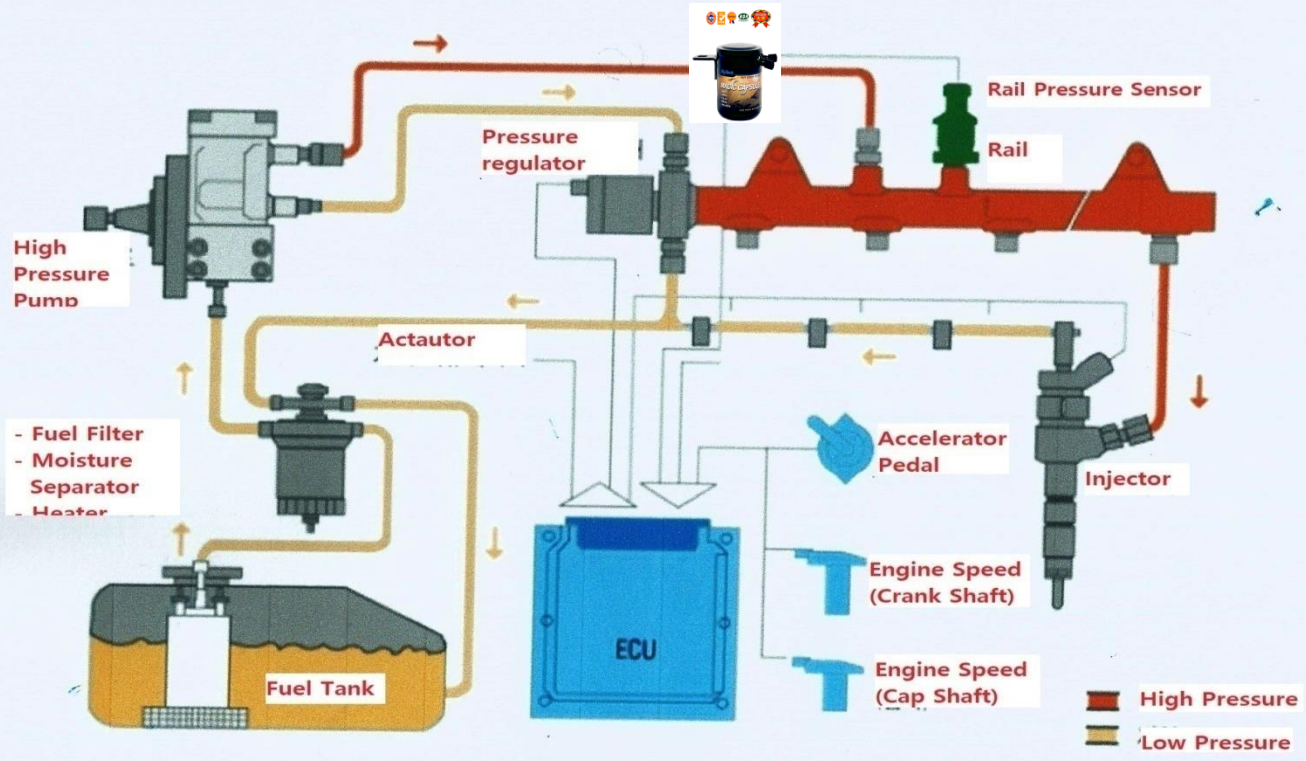
Being different from the real 4 strokes, the real cycle of 4 strokes is working as “ injection-compression-explosion-exhaust”. The fuel supply by intentional injection, not by “inhale” cannot meet the changeable driving condition at any time.

More than 15% of the precious fuel on average is likely to be wasted by intentional injection, which also cause environmental air pollution by incomplete combustion in the engine.

In addition, the excessive fuel supply to the engine can cause abnormal strange heat regardless of complete combustion. Actually, thus heat is the carbon emission which accelerates global warning.

The precious fuel is being wasted and even worsening the air pollution and global warming. It is a big dilemma even though we have such an automatic device or not for fuel supplying fit for driving condition.





High Pressure Pump

- Fuel Filter
- Moisture Separator
- Heater

Fuel Tank

Pressure regulator

Actuator

ECU

Accelerator Pedal

Engine Speed (Crank Shaft)

Engine Speed (Cap Shaft)

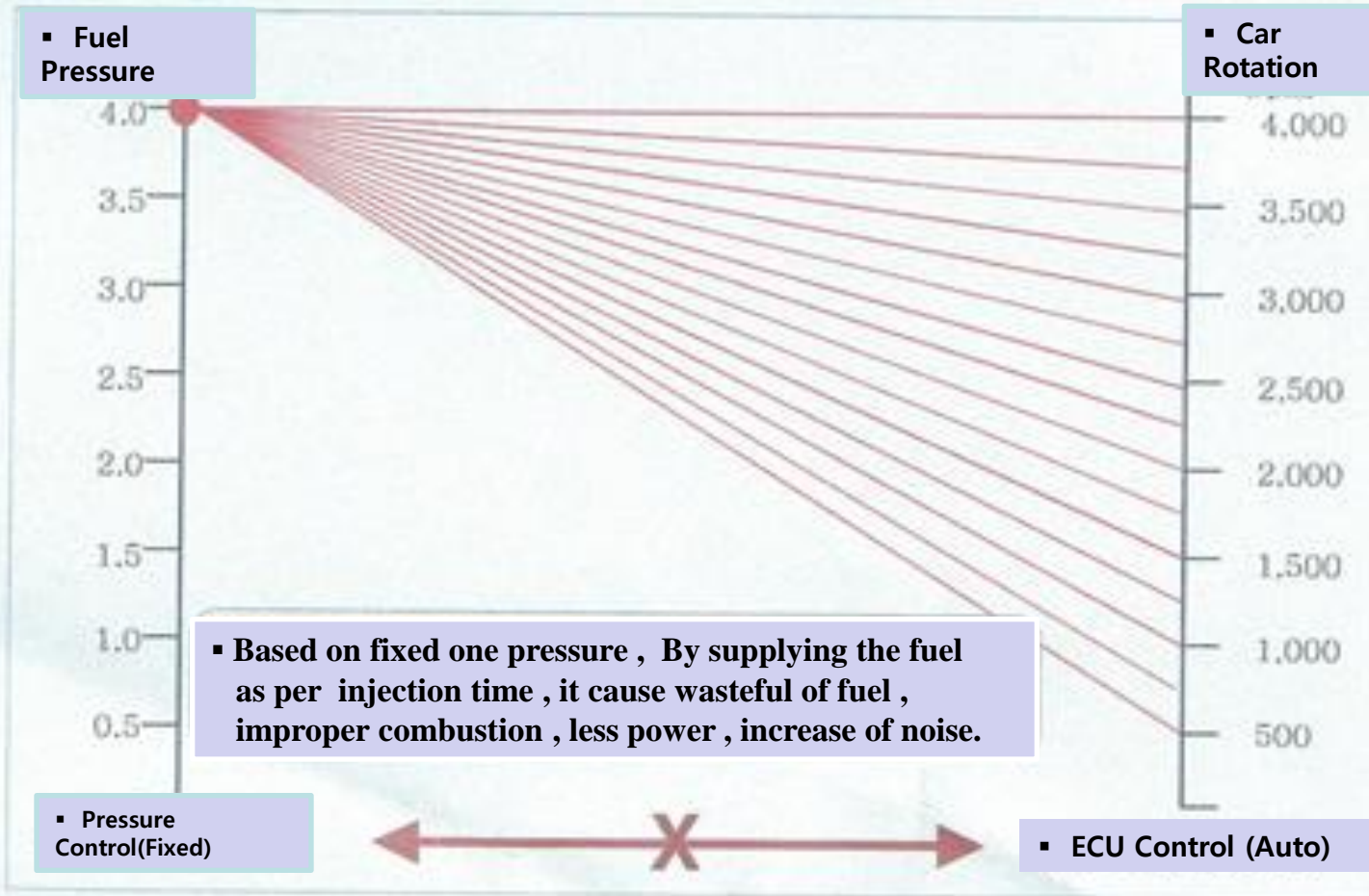
Rail Pressure Sensor

Rail

Injector

- High Pressure
- Low Pressure

1. *Car Fuel Supply Pressure Graph & Car RPM (Current Cars Case)*



2. After installing the Magic Capsule , The Graph Characteristic

▪Fuel Pressure

(kg/cm²)

4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5

▪Car Rotation

(rpm)

4,000
3,500
3,000
2,500
2,000
1,500
1,000
500

▪ By matching the fuel pressure and injection time as per operation condition , It can protect wasteful of fuel and solve Fundamental problem of current car fuel supply system

▪ Pressure Control(Fixed)



▪ ECU Control (Auto)

> Exported Country : US , China around 40 Country are importing it

> 미래 비전 : 대한민국 고유 제품으로서 월드 히든 챔피언으로 등극하여 국가 산업에 기여하고 탄소발생 저감에 기여하여 지구환경을 지키고자 함.

What is the advantage of the Magic capsule?

- 1 Reducing the Car Pollution more than 95 %
- 2 Fuel saving ag 10 ~ 15%
- 3 Increasing engine power (Pick up)
- 4 Effective and optimum engine running

What is the advantage of the Magic capsule?

5

Extension of Engine lifetime

6

Protect against sudden rapid start

7

Removing exhaust gas going to inside car

8

Reduce car Vibration 30 ~40%



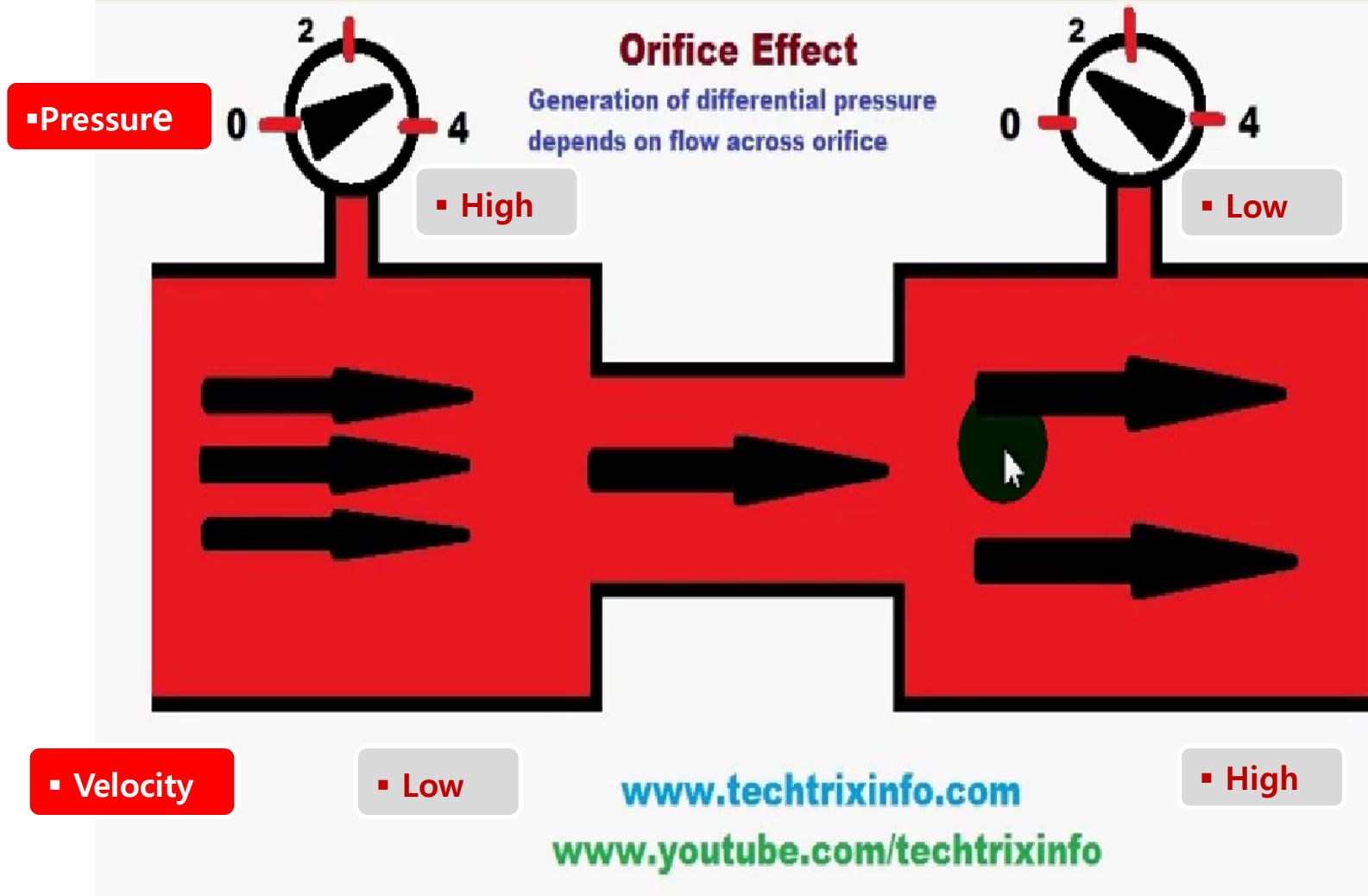
Principle

- *The principle of "Magic Capsule"*

▪ There are 3 steps taken inside of "Magic Capsule".



Principle



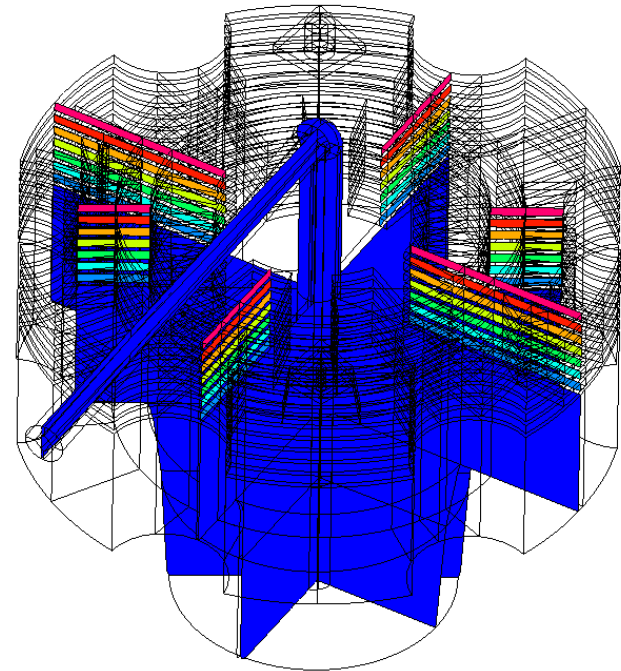
Principle

- *The principle of "Magic Capsule"*

- There are 3 steps taken inside of "Magic Capsule".

- 1st step : 1st space for air suspension

- The fuel pressure by mechanical power such as fuel pump, injection pump, or high pressure pump is not necessary for real driving. The 1st space for air suspension inside of "Magic Capsule" blocking these fuel direct to engine plays a role like a spring in preventing the fuel pressure supplied intentionally and storing it.



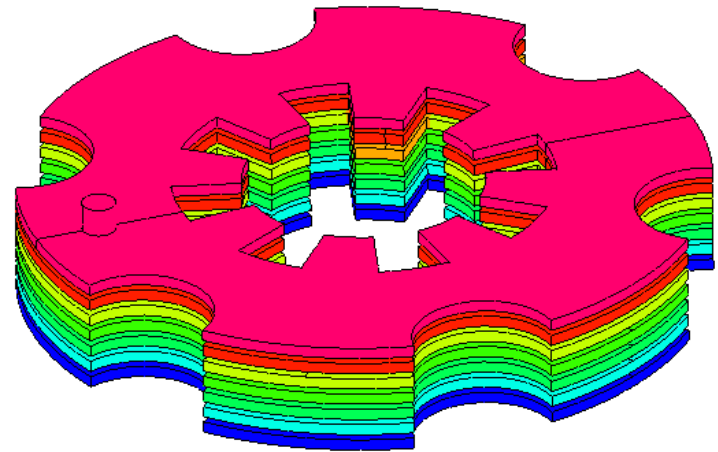
Principle

- *The principle of "Magic Capsule"*

- There are 3 steps taken inside of "Magic Capsule".

- 2nd step : nozzle layer composed of multi-layer

- There are normally different inhale pressure supplied inside cylinder of engine in the car depending on various driving condition. The nozzle layer composed of multi-layer controls quite freely the fuel pressure kept in the 1st space for air suspension to the engine fit for inhale pressure in real time.



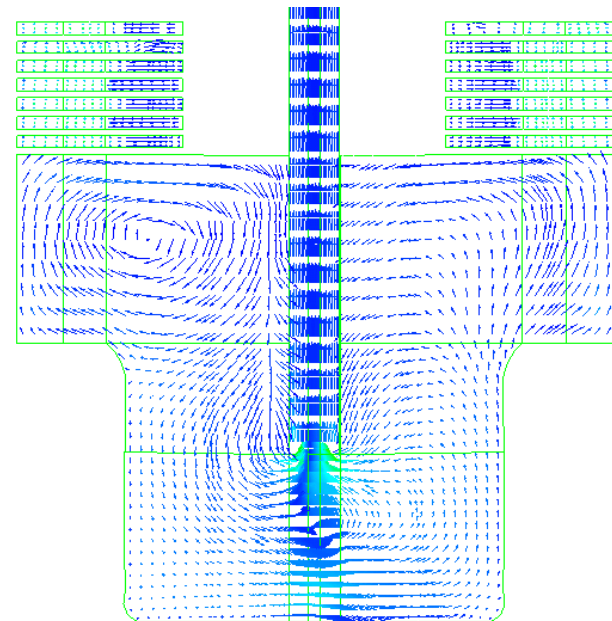
Principle

- *The principle of "Magic Capsule"*

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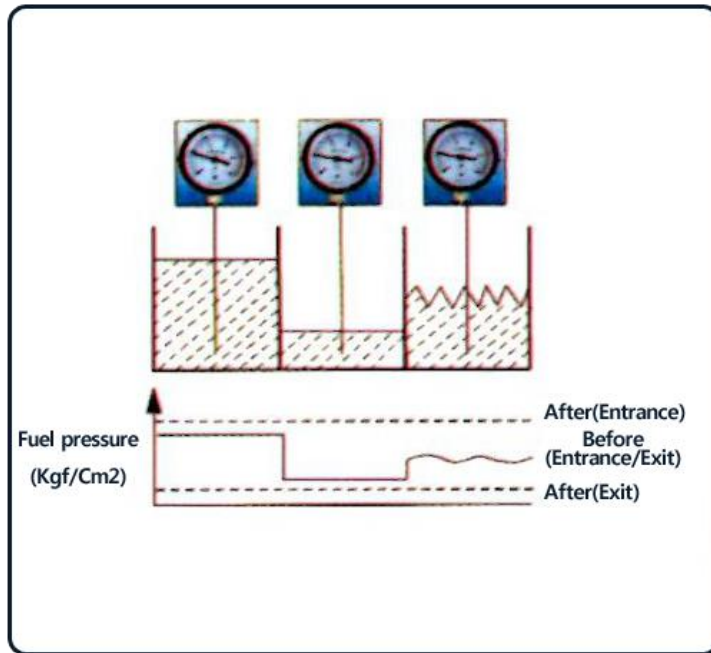
- 3rd step : 2nd space for air suspension

- This is the final space for reading the exact inhale pressure of engine. Just like the elasticity on the rubber ball by finger's touch, as the 2nd space plays a role in reading the exact inhale pressure of engine like a air spring.
- In addition, it plays another role like a spray to make a complete combustion at ignition time depending on rpm in this final process.



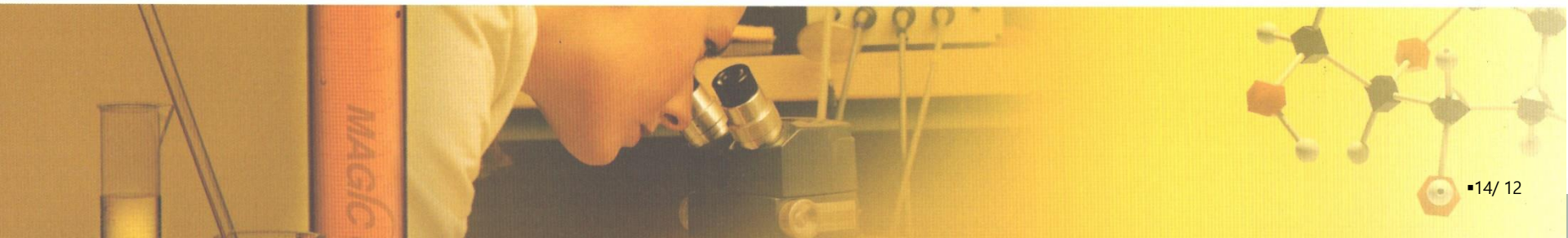
Principle

- "Top-notch technology of "Magic Capsule"



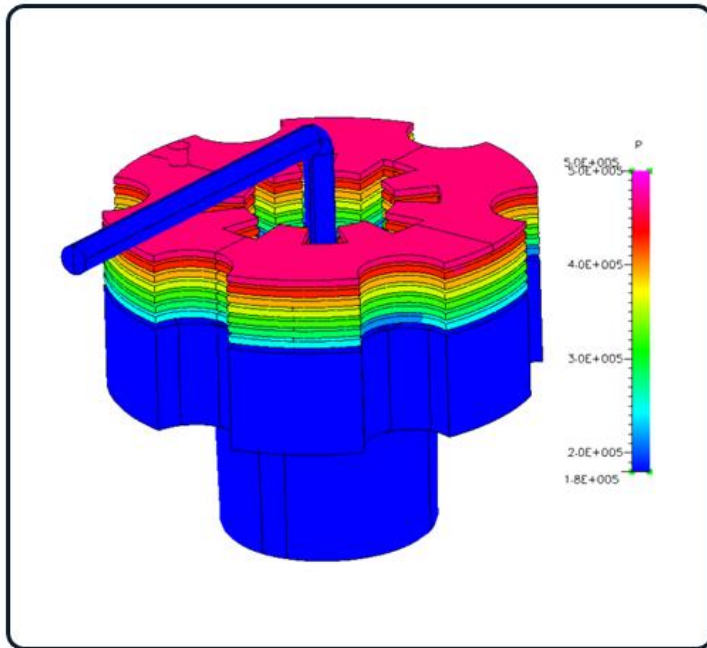
Switch pressure

- With the function of 1st space for air suspension, the fuel supplied intentionally will be completely blocked and kept. The max pressure the fuel pump supplies will be kept as it is. At this time, when the fuel is supplied by the operation of engine, the amount of fuel will be automatically controlled fit for road condition and velocity by the nozzle composed of 2nd multi-layer. Besides, when the fuel is sprayed to engine in the 3rd space for air suspension in the device, the fuel pressure will be supplied automatically switched fit for real driving condition.



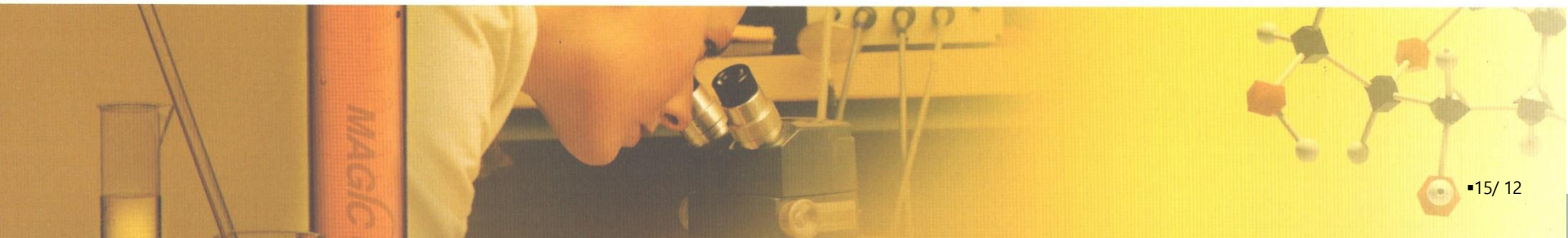
Principle

- "Top-notch technology of "Magic Capsule"



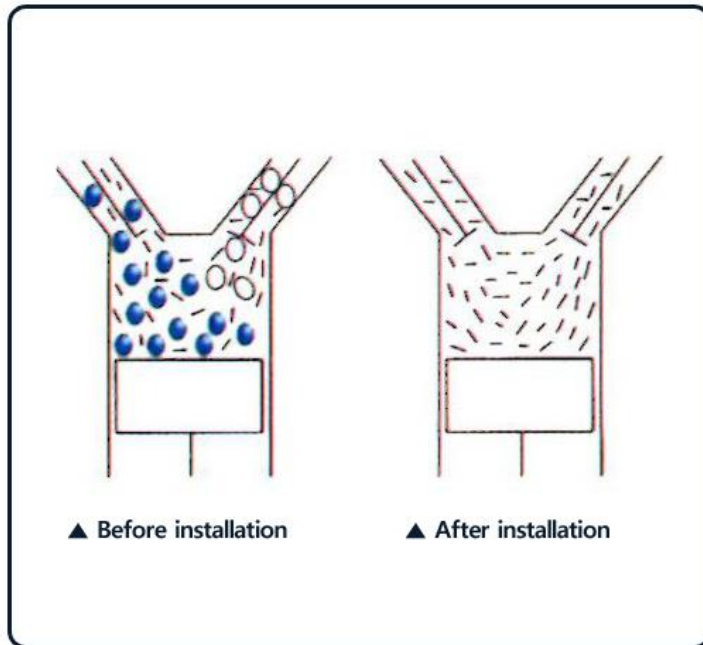
▪ Fuel particle

- As shown in the picture, the red part on the upper area of capsule means high pressure and the 1st space for air suspension will be kept in the upper area of red part. The changed blue color descending means lowered fuel pressure. Even though the fuel pressure goes down, the fluid speed gets fast and passed the narrow space, which makes fuel particle more fast through orifice effect.



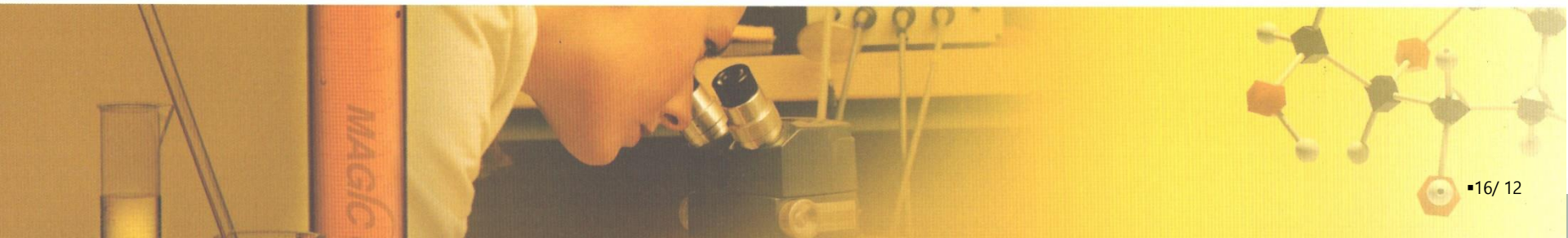
Principle

- *"Top-notch technology of "Magic Capsule"*



▪ product effectiveness

- 1. The fuel consumption will be reduced by supplying the fuel with switched pressure.
- 2. The complete combustion produces no discharge gas by fuel particle, and thus power will be improved thanks to high flame propagation speed.
- 3. The residue left inside cylinder will be removed by fuel particle, which makes the combustion rate higher as time goes by.



- After actual test , Test result

广州德成汽车配件有限公司



项目	安装前	安装后	说明
测试时间	2007年8月9日	2007年8月11日	
天气状况	晴	晴	
气温	34℃	35℃	
行驶里程	540公里	546公里	
耗油	54.6升	43.5升	
刹车次数	20次	15次	
停车次数	5次	5次	

$$\text{节油率} = (54.6\text{L} - 43.5\text{L}) \div 54.6\text{L} \times 100\% = 20.32\%$$

六、结论

测试结果表明，“Magic Capsule”汽油节油、环保装置在本工况条件下有一定的节能效果。尤其在中低速时较为明显，节油率为20.32%。

测试人员：黎晓光、黄备民

审 定：吴一军



ARTICLE	BEFORE SETTING	AFTER SETTING	REMARKS
TEST DATE	2007 8 9	2007 8 11	
WEATHER	SUNNY	SUNNY	
TEMPERATURE	34°C	35°C	
MILEAGE	540	546	
OIL COMSUMPTION	54.6	43.5	
BRAKING TIMES	20	15	
STOPS	5	5	

$$\begin{aligned} \text{RATE OF OIL SAVING} &= (54.6\text{L} - 43.5\text{L}) / 54.6\text{L} \times 100\% \\ &= 20.32\% \end{aligned}$$

TEST RESULT SHOWS: "MAGIC CAPSULC" OIL SAVING .ENVIRONMENT EQUIPMENT HAVE CERTAIN SAVING OIL EFFECT. ESPECIALLY IN MEDIUM AND LOW SPEED IS MORE OBVIOUS.SAVING OIL IS 20.32%.

试验报告

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6、试验结果

6.1 A01号、B01号样车加装C01号样品节油环保装置试验结果

试验项目		加装前			
车型	测试内容	测试结果 (平均值)			
		怠速	2000转	3000转	4000转
海南马自达	一氧化碳	2.23			
	碳氢	156			
广州日产风神	一氧化碳	0.36	0.35	0.03	0.05
	碳氢	123	125	50	42
试验项目		加装后			
车型	测试内容	测试结果 (平均值)			
		怠速	2000转	3000转	4000转
海南马自达	一氧化碳	0.59			
	碳氢	64			
广州日产风神	一氧化碳	0.00	0.08	0.1	0.00
	碳氢	5	38	5	3

说明：加装前与加装后怠速测试对比如下：

车型	Before Install	After Install	Reduce Rate
海南马自达	碳氢 156	碳氢 64	加装后降低58.97%
风神	一氧化碳 0.36	一氧化碳 0	加装后降低100%
风神	碳氢 123	碳氢 5	加装后降低95.94%

China Car

Japan Car



6. TEST RESULT

6.1 A01 , B01 C01 CAR NO.:A01. CAR NO.: B01,after setting C01 Energy saving and environmental protection.test result as follows:

test content		BEFORE SETTING			
car model	test content	TEST RESULT (AVERAGE)			
hainan mazda		RPM	2000	3000	4000
	CO	2.23			
GUANGZHOU NISSAN	H4C	156			
	CO	0.36	0.36	0.03	0.05
	H4C	123	125	50	42
test content		AFTER SETTING			
CAR MODEL	TEST CONTENT	TEST RESULT (AVERAGE)			
hainan mazda		RPM	2000	3000	4000
	CO	0.59			
GUANGZHOU NISSAN	H4C	64			
	CO	0.00	0.08	0.1	0.00
	H4C	5	38	5	3

REMARKS: IDLE TEST COMPARASION AS BELOWS BEFORE SETTING AND AFTER SETTING

car model	BEFORE SETTING		AFTER SETTING		COMPARASION %
hainan mazda	CO	2.23	CO	0.59	AFTER SETTING REDUCED 73.54%
	H4C	156	H4C	64	AFTER SETTING REDUCED 58.97%
GUANGZHOU NISSAN	CO	0.36	CO	0	AFTER SETTING REDUCED 100%
	H4C	123	H4C	5	AFTER SETTING REDUCED 95.94%

- Carbon monoxide
- Hydrocarbons

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:

KIM, KI JONG

Korea Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea**PCT**NOTIFICATION OF RECEIPT
OF SEARCH COPY

(PCT Rule 25.1)

Date of mailing
(day/month/year) 12 APRIL 2006 (12.04.2006)

Applicant's or agent's file reference

2006-26844

IMPORTANT NOTIFICATION

International application No.

PCT/KR2006/001123

International filing date (day/month/year)

28 MARCH 2006 (28.03.2006)

Priority date (day/month/year)

24 MARCH 2006 (24.03.2006)

Applicant

CHOI, IN SUP1. **Where the International Searching Authority and the receiving Office are not the same Office:**

The applicant is hereby notified that the search copy of the international application was received by this International Searching Authority on the date indicated below.

Where the International Searching Authority and the receiving Office are the same Office:

The applicant is hereby notified that the search copy of the international application was received on the date indicated below.

10 APRIL 2006 (10.04.2006) (date of receipt).

2. The search copy was accompanied by nucleotide and/or amino acid sequence listing or tables related thereto in electronic form.
3. The search copy contained a nucleotide and/or amino acid sequence listing or tables related thereto in electronic form.
4. **Time limit for establishment of international search report and written opinion of the International Searching Authority**
The applicant is informed that the time limit for establishing the international search report and the written opinion of the International Searching Authority is three months from the date of receipt indicated above or nine months from the priority date, whichever time limit expires later (Rules 42.1 and 43bis.1(a)).
5. A copy of this notification has been sent to the International Bureau and, where the first sentence of paragraph 1 applies, to the receiving Office.

Name and mailing address of ISA/KR
Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Form PCT/ISA/202 (April 2005)

Authorized officer

COMMISSIONER

Telephone No. 82-42-481-5207





2016 After Running 1,400KM

Test Report

INFORME DE INSPECCIÓN
TÉCNICA DE VEHÍCULOS



ITVERSA GESTIÓN, S.L. C.I.F.: B-19247691 Estación nº 2861
Pol. Ind. Casablanca - C/ Jacinto Benavente, 6 - 28850 Torrejón de Ardoz (Madrid) - Tel. 91 172 29 74

Clasificación 1000	Marca MERCEDES E320	Tipo 211	Nº Bastidor WDB2110261A567259	Fecha 1ª matrícula 27/04/2004	Matrícula 2165 CVK (E)
Tipo de Inspección PERIÓDICA -			Contraseña de homologación E1*2001/116*0183	Fecha inspección 20/04/2016	Informe Nº 100.141.633

Elementos inspeccionados:	Informe correspondiente a la factura:	2861/100.141.634
<p>01 IDENTIFICACIÓN</p> <p>A 01.01 DOCUMENTACIÓN A 03.04 ANTIFIEMO Y ANTIVARCO</p> <p>A 01.02 DIBUJO DE BASTIDOR A 03.05 ANTIRROBO Y ALARMA</p> <p>A 01.03 PLACAS DE MATRÍCULA A 03.06 CAMBIO VISIÓN DIRECTA</p> <p>A 01.04 SEÑAL OBLIGATORIO</p> <p>02 ACOSONAMIENTO</p> <p>A 02.02 CARROCERÍA Y CRISTAL A 03.08 INDICADOR VELOCIDAD</p> <p>A 02.04 GUARDAR y DISP. ANTIP. A 03.09 SALLERES</p> <p>A 02.05 LIMPÍA Y LAVAPARABR. A</p> <p>A 02.07 PROTECCIÓN TRANSELA A</p> <p>A 02.08 PUERTAS Y PEGUARNOS A</p> <p>A 02.09 RETROVISORES A</p> <p>A 02.14 VIDRIOS DE SEGURIDAD A</p> <p>03 ACOSONIC. INTERIOR</p> <p>A 03.01 ALTOPARL. Y ANCLAJES A 04.10 CATALEPTICOS</p> <p>A 03.02 LUZ. SIG. Y ANCLAJES A 04.11 ALUMBRADO INTERIOR</p> <p>A 04.12 AVISADOR ACUSTICO</p>	<p>05 EMIS. CONTAMINANTES</p> <p>A 05.01 RUIDO A 06.14 SERVOFRENO CILIN.MA.</p> <p>A 06.15 TUBOS RIGIDOS A 06.16 TUBOS FLEXIBLES</p> <p>A 06.17 FORROS A 06.18 TANQUES Y DISCOS</p> <p>A 06.19 CABLES,VARILLAS,PAL. A 06.20 CILINDR.DIST.FREINADO</p> <p>06 FRENO</p> <p>A 06.01 FRENO DE SERVICIO A 06.03 FRENO ESTACIONANTE.</p> <p>A 06.05 DISP.ANTIBLOQUEO A 06.07 PEDAL DISP.FREINADO</p> <p>07 DIRECCIÓN</p> <p>A 07.01 DESVIACIÓN DE RUEDAS A 10.06 REFORMAS NO AUTORIZ.</p> <p>A 07.02 VOLANTE, COL.DIRECC. A</p> <p>A 07.03 CAJA DE DIRECCIÓN A</p> <p>A 07.04 TIROTERIA Y ROTULAS A</p> <p>A 07.05 SERVODIRECCION A</p> <p>08 EJES, RUEDAS, NEUMÁT. RORP.</p> <p>A 08.01 EJES A</p> <p>A 08.02 RUEDAS A</p> <p>A 08.03 NEUMÁTICOS A</p> <p>A 08.04 SUSPENSIÓN A</p>	

FRENADO	1º EJE	2º EJE	3º EJE	4º EJE
Equipo nº T-01	IZQDA/DCHA.	IZQDA/DCHA.	IZQDA/DCHA.	IZQDA/DCHA.
Freno Servicio (KN)	2.59/ 2.37	2.04/ 1.97	— / —	— / —
Freno Socorro (KN)	— / —	— / —	— / —	— / —
Freno Estacionamiento (KN)	— / —	1.61/ 1.65	— / —	— / —
Decelerómetro (m/s²)	— / —	— / —	— / —	— / —
Báscula	— / —	— / —	— / —	— / —
EQUIPOS / ÚTILES AUXILIARES	— / —	— / —	— / —	— / —

EMISIONES	T-09
Equipo nº	
Opacidad (m⁻¹) K	0.060
CO Ralentí (%)	—
CO Acelerado (%)	—
Factor λ	—
Ruido (dba)	—
Equipo nº	—

ALINEACIÓN (m/Km)	T-04
Equipo nº	
1º Eje	2, 90
2º Eje	—
KILÓMETROS	296, 965
VEL. ACT. LIM: (Km/h)	—
Equipo nº	—
DINAMÓMETRO	—
Equipo nº	—

Relación de defectos encontrados en la inspección:
DEFECTOS GRAVES
02.09.03.01 Deterioro de las superficies que dificulten la retrovisión (Si es obligatorio) (IZQUIERDO)
08.03.07 Desgaste irregular excesivo en la banda de rodadura (EJE 1 IZQUIERDA/O INTERIOR)

DEFECTOS LEVES
02.12.04 Fisuras, impactos o deterioros fuera del campo de vision mínimo del conductor
04.03.02.01 No funciona alguna luz o la frecuencia de pulsacion es tal que el efecto es proximo a la luz fija o luz apagada (Si se trata de las luces de intermitencia lateral complementaria) (IZQUIERDA/O LATERAL/LES)
04.03.05 Estado de dispositivo defectuoso (LAS/OS DOS LATERAL/LES)

(El resto de los puntos inspeccionados han sido calificados como favorables)
Los elementos indicados con A han sido inspeccionados en
Los elementos indicados con B han sido inspeccionados en
Los elementos indicados con C han sido inspeccionados en
Los elementos indicados con D han sido inspeccionados en

La línea 01

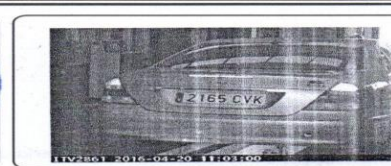
por el inspector 18
por el inspector
por el inspector
por el inspector



RESULTADO DE LA INSPECCIÓN:	DESFAVORABLE	PRÓXIMA INSPECCIÓN: Antes de (sólo en caso de inspección favorable)
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Observaciones

Fecha Prox. Fase: 19/06/2016
INSPECCIÓN DESFAVORABLE.
DEBE VOLVER A PASAR NUEVA
INSPECCIÓN UNA VEZ CORREGIDOS
LOS DEFECTOS GRAVES INDICADOS,
ESTA INSPECCIÓN TENDRÁ UNA
VIGENCIA DE DOS MESES
DURANTE LOS CUALES NO SE
COBRARÁ NUEVA TASA

Página 1 de 1



- 
- 
- This Magic Capsule's life time is semi permanent
 - Actual test will be demonstrated by Technical team
 - The Magic capsule can be used for any cars

Sedan . SUV , Bus , Truck , Trailer , Ship , Generator,

Construction equipment etc ..

▪ Saving Simulation

A. Taxi – Fuel Gasoline Cost saving - Minimum 10% Saving

$$\text{Fuel} \quad 130 \text{ dhs} \quad \times \quad 0.10 \quad = \quad 13 \text{ dhs}$$

$$\text{Days} \quad 13 \text{ dhs} \quad \times \quad 25 \text{ Times} \quad = \quad 325 \text{ dhs / month}$$

$$\text{Months} \quad 325 \text{ dhs} \quad \times \quad 12 \text{ months} \quad = \quad 3,900 \text{ dhs / year}$$

$$3,900 \text{ dhs} \quad \times \quad 100 \text{ cars} \quad = \quad 390,000 \text{ dhs / year}$$

$$3,900 \text{ dhs} \quad \times \quad 1,000 \text{ cars} \quad = \quad 3,900,000 \text{ dhs / year}$$

$$3,900 \text{ dhs} \quad \times \quad 5,000 \text{ cars} \quad = \quad 19,500,000 \text{ dhs / year}$$

$$3,900 \text{ dhs} \quad \times \quad 10,000 \text{ cars} \quad = \quad 39,000,000 \text{ dhs / year}$$

$$3,900 \text{ dhs} \quad \times \quad 20,000 \text{ cars} \quad = \quad 78,000,000 \text{ dhs / year}$$

Note : The above calculations are of lower end considering the minimum savings and fuel savings can reach to maximum savings of 20.32% as per the actual trials conducted & reports attached