United States District Court,
S.D. California.

DAIMLERCHRYSLER AG and Mercedes-Benz USA, Inc,
Plaintiffs.
v.
FEULING ADVANCED TECHNOLOGIES, INC. and James J. Feuling,
Defendants.

CIV. No. 00 CV 1541-B (NLS)

Feb. 3, 2003.

John L. Haller, Esq., Neil F. Martin, Esq., Susan B. Meyer, Esq., Brown, Martin, Haller & McClain, LLP, Paul R. Kennerson, Esq., Kennerson, Schwartz, Semerdjian & Haile, LLP, San Diego, CA, for Defendants and Counterclaimants, James J. Feuling and Feuling Advanced Technologies, Inc.

William S. Boggs, Esq., Cathy Ann Bencivengo, Esq., Gray Cary Ware & Freidenrich, LLP, San Diego, CA, Richard L. Mayer, Esq., Michael J. Lennon, Esq., Mark A. Hannemann, Esq., Kenyon & Kenyon, New York, NY, for Plaintiffs and Counterclaim Defendants, Daimlerchrysler AG; Mercedes-Benz USA, Inc.; Daimlerchrysler Services North America, LLC; Mercedes-Benz International, Inc.; and Hoehn Motors, Inc.

ORDER CONSTRUING PATENT CLAIMS AND TERMS FOR JURY TRIAL

RUDI M. BREWSTER**, Senior District Judge.**

This matter came on regularly for hearing on Tuesday, January 7, 2003, concluding on Wednesday, January 8, pursuant to Markman v. Westview Instruments, 52 F.3d 967 (Fed.Cir.1995). Plaintiff was represented by attorneys Cathy Ann Bencivengo, Mark Hanneman, and Michael Lennon. Defendant was represented by attorneys John Haller, Paul Kennerson, and Susan Meyer.

The hearing began with a joint tutorial session conducted by all counsel to familiarize the Court with the technology and terms of the patents at issue in this case. Following the tutorial, the Court and parties conducted a *Markman* hearing in order to prepare jury instructions interpreting the pertinent claims of each of the four patents at issue. In addition, the Court and parties prepared a case dictionary defining terms that were considered too technical for a jury of laymen to understand clearly without specific definition.

The resulting jury instructions for all claims at issue in each patent are attached hereto as exhibits A-D. Attached here to as exhibit E is the aforementioned case dictionary of pertinent technical terms.

IT IS SO ORDERED.

EXHIBITS A-E TO ORDER FOR CLAIM CONSTRUCTION

DAIMLERCHRYSLER AG and MERCEDES-BENZ USA, INC., Plaintiffs,

v.

FEULING ADVANCED TECHNOLOGIES, INC. and JAMES J. FEULING, Defendants.

AND RELATED COUNTERCLAIMS

Case No. 00 CV 1541 L(NLS)

Exhibit A to Order Re: Claim Construction of U.S. Patent No. 5,313,921

Claim 1 FN1

FN1. Claim 1 is independent.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
An improved combustion chamber system for use with internal combustion engine having at least one piston and a cooperating cylinder head forming a combustion chamber therebetween, which comprises:	An improved combustion chamber system for use with an internal combustion engine having at least one piston and an opposing cylinder head forming a combustion chamber therebetween, which comprises:
three valves in the head at the combustion chamber, the valves substantially uniformly arranged around the axis of the cylinder;	three valves in the head at the combustion chamber, the valves substantially uniformly arranged around the axis of the cylinder;
two of the valves having substantially equal areas and adapted to act as intake valves;	two of the valves having substantially equal areas and adapted to act as intake valves;
the third of the valves having an area substantially equal to, or slightly greater than, the area of one of the intake valves, the third valve being adapted to act as an exhaust valve;	the third of the valves adapted to act as an exhaust valve, with a diameter of from 1 to 1.2 times the diameter of one of the intake valves;
said piston having a generally planar surface adjacent to said head forming one wall of the combustion chamber;	said piston having a generally flat surface opposing said head and forming one wall of the combustion chamber;
at least one spark plug for igniting an air/fuel mixture in the combustion chamber said spark plug located entirely within said head without extending below the plane of the piston generally planar surface at any point during engine operation.	at least one spark plug for igniting an air/fuel mixture in the combustion chamber, said spark plug located in the head without extending below the plane of the piston at any point during engine operation.

Claim 6 FN2

FN2. Claim 6 depends from Claim 1.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**

The system according to claim 1 wherein each of the valves is substantially circular	The system according to claim 1 wherein each of the valves is substantially circular
and the ratio of diameters of the intake valves to the diameter of the exhaust valve being from about 1:1 to 1:1.2.	and the ratio of diameters of the intake valves to the diameter of the exhaust valve being from about 1:1 to 1:1.2.

Claim 7 FN3

FN3. Claim 7 depends from Claim 1.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 1 wherein the head includes three hemispheric depressions each housing one of the valves.	The system according to claim 1 wherein the head includes three hemispheric depressions, each containing one of the valves.

Claim 8 FN4

FN4. Claim 8 depends from Claim 1.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 1 wherein the exhaust area/intake area ratio is less than 65%.	The system according to claim 1 wherein the ratio of the exhaust valve area to total area of the intake valves is less than 65%.

Claim 9 FN5

FN5. Claim 9 depends from Claim 1.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 1 wherein the exhaust area/intake area ratio is in the range of 50% to 65%.	The system according to claim 1 wherein the ratio of the exhaust valve area to total area of the intake valves is in the range of 50% to 65%.

Claim 10 FN6

FN6. Claim 10 depends from Claim 1.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 1 wherein said combustion chamber includes a squish area.	The system according to claim 1 wherein said combustion chamber includes a squish area.

Claim 11 FN7

FN7. Claim 11 depends from Claim 1.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 1 wherein said cylinder head includes a squish area.	The system according to claim 1 wherein said cylinder head includes a squish area.

Claim 12 FN8

FN8. Claim 12 depends from Claim 1.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 1 wherein squish areas are formed at substantially equally spaced areas around the combustion chamber, each squish area located along the combustion chamber periphery between two adjacent valves.	The system according to claim 1 wherein squish areas are formed at substantially equally spaced areas around the combustion chamber, each squish area located along the combustion chamber periphery between two adjacent valves.

Claim 13 FN9

FN9. Claim 13 is an independent claim.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
An improved combustion chamber system for use with an internal combustion engine having at least one cylinder each having a piston and a cylinder head forming a combustion chamber therebetween, which comprises:	An improved combustion chamber system for use with an internal combustion engine having at least one cylinder each having a piston and a cylinder head forming a combustion chamber therebetween, which comprises:
three valves in the head at each combustion chamber, the valves substantially uniformly arranged around the axis of the cylinder;	three valves in the head at each combustion chamber, the valves substantially uniformly arranged around the axis of the cylinder;
two of the valves having substantially equal areas and adapted to act as intake valves;	two of the valves having substantially equal areas and adapted to act as intake valves;
the third of the valves having an area substantially equal to, or slightly greater than, the area of one of the intake valves, the third valve being adapted to act as an exhaust valve; and	the third of the valves adapted to act as an exhaust valve, with a diameter of from 1 to 1.2 times the diameter of one of the intake valves;
the head having three approximately hemispherical recesses, each of the recesses housing one of the valves.	the head having three approximately hemispherical recesses, each of the recesses containing one of the valves.

Claim 16 FN10

FN10. Claim 16 depends from Claim 13.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 13 wherein each of the valves is substantially circular	The system according to claim 13 wherein each of the valves is substantially circular
and the ratio of diameters of the intake valves to the diameter of the exhaust valve is from about 1:1 to 1:1.2.	and the ratio of diameters of the intake valves to the diameter of the exhaust valve is from about 1:1 to 1:1.2.

Claim 17 FN11

FN11. Claim 17 depends from Claim 13.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 13 wherein the exhaust area/intake area is less than 65%.	The system according to claim 13 wherein the ratio of exhaust valve area to total area of the intake valves is less than 65%.

Claim 18 FN12

FN12. Claim 18 depends from Claim 13.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 13 wherein the exhaust area/intake area ratio is in the range of 50% to 65%.	The system according to claim 13 wherein the ratio of exhaust valve area to total area of the intake valves is in the range of 50% to 65%.

Claim 19 FN13

FN13. Claim 19 depends from Claim 13.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 13 wherein squish areas are formed at substantially equally spaced areas around the combustion chamber, each squish area located along the combustion chamber periphery between two adjacent valves.	The system according to claim 13 wherein squish areas are formed at substantially equally spaced areas around the combustion chamber, each squish area located along the combustion chamber periphery between two adjacent valves.

Claim 22 FN14

FN14. Claim 22 is an independent claim.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
An improved combustion chamber system for use with	An improved combustion chamber system for use

internal combustion engine having at least one generally planar piston surface cooperating with a recessed combustion chamber in a	with an internal combustion engine having at least one generally flat piston surface opposing a recessed combustion chamber in a
generally planar cylinder head, which comprises:	generally planar cylinder head, which comprises:
three valves in the head at the combustion chamber, the valves substantially uniformly arranged around the axis of the cylinder;	three valves in the head at the combustion chamber, the valves substantially uniformly arranged around the axis of the cylinder;
two of the valves having substantially equal areas and adapted to act as intake valves;	two of the valves having substantially equal areas and adapted to act as intake valves;
the third of the valves having an area substantially equal to, or slightly greater than, the area of one of the intake valves, the third valve being adapted to act as an exhaust valve;	the third of the valves adapted to act as an exhaust valve, with a diameter of from 1 to 1.2 times the diameter of one of the intake valves;
at least one spark plug for igniting an air/fuel mixture in the combustion chamber, said at least one spark plug located entirely within said cylinder head and combustion chamber without extending below the plane of the cylinder head; and	at least one spark plug for igniting an air/fuel mixture in the combustion chamber, said at least one spark plug located within said cylinder head and combustion chamber without extending below the cylinder head; and
three squish areas formed at substantially equally spaced areas around the combustion chamber, each squish area located along the combustion chamber periphery between two adjacent valves.	three squish areas formed at substantially equally spaced areas around the combustion chamber, each squish area located along the combustion chamber periphery between two adjacent valves.

Exhibit B to the Order Re: Claim Construction of U.S. Patent No. 5,501,191

Claim 16 FN1

FN1. Claim 16 is an independent claim.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
An improved combustion chamber system for use with internal combustion engine having at least one cylinder each having a piston and a cylinder head forming a combustion chamber therebetween, comprising:	An improved combustion chamber system for use with an internal combustion engine having at least one cylinder each having a piston and a cylinder head forming a combustion chamber therebetween, comprising:
three valves in the head at each combustion chamber, the valves being arranged around the axis of the cylinder;	three valves in the head at each combustion chamber, the valves being arranged around the axis of the cylinder;
two of said valves having substantially equal areas and adapted to act as intake valves;	two of said valves having substantially equal areas and adapted to act as intake valves;
the third of said three valves having an area substantially equal to, or slightly greater than, the area of one of the intake valves, the third valve being adapted to act as an exhaust valve;	the third of the valves adapted to act as an exhaust valve, with a diameter of from 1 to 1.2 times the diameter of one of the intake valves;
said two intake valves positioned closer to each other than to said exhaust valve; and	said two intake valves positioned closer to each other than to said exhaust valve; and

said head having three approximately hemispherical recesses, each of the recesses housing one of the valves.	said head having three approximately hemispherical recesses, each of the recesses containing one of the valves.

Claim 20 FN2

FN2. Claim 20 depends from Claim 16.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 16 further including squish areas are provided along the combustion chamber periphery between each pair of adjacent valves, the squish area between said intake valves having an area greater than the squish area between said exhaust valve and an adjacent intake valve.	The system according to claim 16 further including squish areas are provided along the combustion chamber periphery between each pair of adjacent valves, the squish area between said intake valves having an area greater than the squish area between said exhaust valve and an adjacent intake valve.

Claim 21 FN3

FN3. Claim 21 depends from Claim 16.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 16 wherein each of the valves is substantially circular and the ratio of diameters of the intake valves to the diameter of the exhaust valve are from 1:1 to 1:1.2.	The system according to claim 16 wherein each of the valves is substantially circular and the ratio of diameters of the intake valves to the diameter of the exhaust valve are from 1:1 to 1:1.2.

Claim 22 FN4

FN4. Claim 22 depends from Claim 16.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 16 wherein the head includes three hemispheric depressions each housing one of the valves.	The system according to claim 16 wherein the head includes three hemispheric depressions each containing one of the valves.

Claim 23 FN5

FN5. Claim 23 depends from Claim 16.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 16 wherein the exhaust area/intake area ratio is from	The system according to claim 16 wherein the ratio of exhaust valve area to total area of the intake valves is from

50% to 65%.	50% to 65%.

Claim 25 FN6

FN6. Claim 25 depends from Claim 16.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 16 wherein each of the valves is substantially circular and the ratio of diameters of the intake valves to the diameter of the exhaust valve is approximately 1:1.2.	The system according to claim 16 wherein each of the valves is substantially circular and the ratio of diameters of the intake valves to the diameter of the exhaust valve is approximately 1:1.2.

Claim 27 FN7

FN7. Claim 27 depends from Claim 16.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 16 wherein the exhaust area/intake area ratio is approximately 65%.	The system according to claim 16 wherein the ratio of exhaust valve area to total area of the intake valves is approximately 65%.

Claim 28 FN8

FN8. Claim 28 is an independent claim.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
An improved combustion chamber system for use with internal combustion engine having at least one piston and a cooperating cylinder head forming a combustion chamber therebetween, which comprises:	An improved combustion chamber system for use with an internal combustion engine having at least one piston and an opposing cylinder head forming a combustion chamber therebetween, which comprises:
three valves in the head at the combustion chamber, said valves being arranged around the axis of the cylinder;	three valves in the head at the combustion chamber, said valves being arranged around the axis of the cylinder;
two of said valves having substantially equal areas and adapted to act as intake valves;	two of said valves having substantially equal areas and adapted to act as intake valves;
the third of the valves having an area substantially equal to, or slightly greater than, the area of one of the intake valves, the third valve being adapted to act as an exhaust valve;	the third of the valves adapted to act as an exhaust valve, with a diameter of from 1 to 1.2 times the diameter of one of the intake valves;
said two intake valves being spaced a greater distance from said exhaust valve than from each other;	said two intake valves being spaced a greater distance from said exhaust valve than from each other;
said piston having a generally planar surface adjacent	said piston having a generally flat surface opposing

to said head forming one wall of the combustion chamber; and	said head and forming one wall of the combustion chamber; and
two spark plugs located between said exhaust valve and each of said intake valves, said spark plugs located outside of a line drawn between the center of said exhaust valve and the center of the corresponding intake valve.	two spark plugs located between said exhaust valve and each of said intake valves, said spark plugs located outside of a line drawn between the center of said exhaust valve and the center of the corresponding intake valve.

Claim 31 FN9

FN9. Claim 31 depends from Claim 28.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 28 wherein said intake valves and spark plugs are symmetrically located on the sides of a line drawn through the center of the exhaust valve and equally spaced between the intake valves.	The system according to claim 28 wherein said intake valves and spark plugs are symmetrically located on opposite sides of a line drawn through the center of the exhaust valve and equally spaced between the intake valves.

Claim 32 FN10

FN10. Claim 32 depends from Claim 28.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 28 wherein each of the valves is substantially circular and the ratio of diameters of the intake valves to the diameter of the exhaust valve are from 1:1 to 1:1.2.	The system according to claim 28 wherein each of the valves is substantially circular and the ratio of diameters of the intake valves to the diameter of the exhaust valve are from 1:1 to 1:1.2.

Claim 33 FN11

FN11. Claim 33 depends from Claim 28.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 28 wherein said head includes three hemispheric depressions each housing one of said valves.	The system according to claim 28 wherein said head includes three hemispheric depressions each containing one of said valves.

Claim 34 FN12

FN12. Claim 34 depends from Claim 28.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**

The system according to claim 28 wherein the exhaust area/intake area ratio is from 50% to 65%.	The system according to claim 28 wherein the ratio of exhaust valve area to total area of the intake valves is from 50% to 65%.

Claim 36 FN13

FN13. Claim 36 depends from Claim 28.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 28 wherein each of the valves is substantially circular and the ratio of diameters of the intake valves to the diameter of the exhaust valve is approximately 1:1.2.	The system according to claim 28 wherein each of the valves is substantially circular and the ratio of diameters of the intake valves to the diameter of the exhaust valve is approximately 1:1.2.

Claim 38 FN14

FN14. Claim 38 depends from Claim 28.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 28 wherein the exhaust area/intake area ratio is 65%.	The system according to claim 28 wherein the ratio of exhaust valve area to total area of the intake valves is 65%.

Exhibit C to the Order Re: Claim Construction of U.S. Patent No. 5,638,787

Claim 1 FN1

FN1. Claim 1 is an independent claim.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
An improved combustion chamber system for use with internal combustion engine having at least one piston and a cooperating cylinder head forming a combustion chamber therebetween, which comprises:	An improved combustion chamber system for use with an internal combustion engine having at least one piston and an opposing cylinder head forming a combustion chamber therebetween, which comprises:
three valves in said head at said combustion chamber, said valves being arranged around an axis of said cylinder;	three valves in said head at said combustion chamber, said valves being arranged around an axis of said cylinder;
two of said valves adapted to act as intake valves; said third valve being adapted to act as an exhaust valve;	two of said valves adapted to act as intake valves; said third valve being adapted to act as an exhaust valve;
total exhaust valve area being approximately 45% to 65% of total intake valve area;	the ratio of exhaust valve area to total area of the intake valves is approximately 45% to 65%;
said piston having an at least partially planar face adjacent to said head forming one wall of said	said piston having an at least partially flat face opposing said head forming one wall of said

combustion chamber; and	combustion chamber; and
at least one ignition means for igniting an air/fuel mixture in said combustion chamber, said ignition means located entirely within said head without extending below said partially planar face at any point during engine operation.	at least one ignition means for igniting an air/fuel mixture in said combustion chamber, said ignition means located within said head without extending below the plane of the piston at any point during engine operation.

Claim 4 FN2

FN2. Claim 4 depends from Claim 1.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 1 wherein said piston has a substantially planar periphery and	The system according to claim 1 wherein said piston has a substantially planar periphery and
a recessed central area opposite said valves and	a recessed central area opposite said valves and
a squish area is provided along a combustion chamber periphery.	a squish area is provided along a combustion chamber periphery.

Claim 7 FN3

FN3. Claim 7 depends from Claim 1.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 1 wherein said head includes three hemispheric depressions each housing one of said valves.	The system according to claim 1 wherein said head includes three hemispheric depressions each containing one of said valves.

Claim 8 FN4

FN4. Claim 8 depends from Claim 1.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 1 wherein said two intake valves have substantially equal areas.	The system according to claim 1 wherein said two intake valves have substantially equal areas.

Claim 12 FN5

FN5. Claim 12 is an independent claim.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
An improved combustion chamber system for use with internal combustion engines having at least one cylinder, the engine having a piston and a cylinder	An improved combustion chamber system for use with internal combustion engines having at least one cylinder, the engine having a piston and a cylinder

head forming a combustion chamber therebetween, comprising:	head forming a combustion chamber therebetween, comprising:
said piston, cylinder head and combustion chamber each having a central axis and a common periphery;	said piston, cylinder head and combustion chamber each sharing a common central axis and periphery;
three valves in said head at each combustion chamber, said valves being arranged around an axis of said cylinder; two of said valves being adapted to act as intake valves; the third of said three valves being adapted to act as an exhaust valve and having an area between approximately 45 to 65 per cent of total area of said intake valves;	three valves in said head at each combustion chamber, said valves being arranged around an axis of said cylinder; two of said valves being adapted to act as intake valves; the third of said three valves being adapted to act as an exhaust valve and having an area between approximately 45 to 65 percent of total area of said intake valves;
a squish area along said combustion chamber periphery and extending at least partially between each adjacent pair of valves; and	a squish area along said combustion chamber periphery and extending at least partially between each adjacent pair of valves; and said head having three recesses, each of said recesses containing one of said valves.

said head having three recesses, each of said recesses housing one of said valves.

Claim 15 FN6

FN6. Claim 15 depends from Claim 12.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
The system according to claim 12 wherein said piston has a substantially planar periphery and a recessed central area opposite said valves and squish areas are provided around said recessed central area.	The system according to claim 12 wherein said piston has a substantially planar periphery and a recessed central area opposite said valves and squish areas are provided around said recessed central area.

Exhibit D to the Order Re: claim Construction of U.S. Patent No. 6,199,544

Claim 19 FN1

FN1. Claim 19 is an independent claim.

Verbatim Claim Element	Meaning as decided at *Markman* hearing
An improved combustion chamber system for use with internal combustion engine having at least one piston and a cooperating cylinder head area forming a combustion chamber therebetween, which comprises:	An improved combustion chamber system for use with an internal combustion engine having at least one piston and an opposing cylinder head area forming a combustion chamber therebetween, which comprises:
three valves in said head at said combustion chamber;	three valves in said head at said combustion chamber;
first and second said valves positioned to act,	first and second said valves positioned to act

simultaneously as intake valves; a third of said valves being positioned to act as an exhaust valve;	simultaneously as intake valves; a third of said valves being positioned to act as an exhaust valve;
the ratio of total exhaust valve cross sectional area to total intake valve cross sectional area being in the range of about 45 to 65%;	the ratio of total exhaust valve cross sectional area to total intake valve cross sectional area being in the range of about 45 to 65%;
said combustion chamber system providing an exhaust gas velocity higher than inlet gas velocity;	said combustion chamber system providing an exhaust gas velocity higher than inlet gas velocity;
said piston slidably positioned in a bore having a predetermined cross sectional area and having a face adjacent to said head area forming one wall of said combustion chamber;	said piston slidably positioned in a bore having a predetermined cross sectional area and having a face opposite said head area forming one wall of said combustion chamber;
said piston face having three cooperating squish areas located along the piston face periphery and extending between adjacent valves;	said piston face having three squish areas located along the piston face periphery and extending between adjacent valves, which correspond to opposing squish areas in the head;
said piston having a substantially planar periphery and a recessed central area opposite said valves; and	said piston having a substantially planar periphery and a recessed central area opposite said valves; and
at least one ignition means for igniting an air/fuel mixture in said combustion chamber.	at least one ignition means for igniting an air/fuel mixture in said combustion chamber.

Claim 21 FN2

FN2. Claim 21 depends from Claim 19.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 19 herein said head area includes three hemispheric depressions each housing one of said valves.	The system according to claim 19 wherein said head area includes three hemispheric depressions each containing one of said valves.

Claim 24 FN3

FN3. Claim 24 depends from Claim 19.

Verbatim Claim Element	**Meaning as decided at *Markman* hearing**
The system according to claim 19, wherein said ignition means comprises two ignition means.	The system according to claim 19, wherein said ignition means comprises two ignition means.

Exhibit E

CASE DICTIONARY

Axis: the line that runs straight down the cylinder about which the cylinder is symmetrical.

Combustion chamber system: a group of interacting items in which combustion takes place.

Cylinder: a tubular chamber in which the piston of a reciprocating engine travels up and down.

Cylinder head: the part of a reciprocating engine that seals or closes the upper ends of the cylinders.

Diameter: the length of a straight line through the center of an object, measured from the furthest points of the object.

Hemispheric/hemispherical: relating to or resembling a hemisphere.

Piston: an engine component, usually in the form of a cylinder closed at one end, that converts gas pressure into mechanical movement and force, within a smooth walled cylinder, in which it is a sliding fit.

Planar: flat

Squish area: Approximately flat areas of the piston that correspond to approximately flat areas on the cylinder head. Squish areas may be tapered.

Substantially: largely, but not wholly that which is specified.

Valve: a device for controlling, restricting or interrupting the flow of the air, air-fuel, or exhaust gases.

S.D.Cal.,2003.
Daimlerchrysler AG v. Feuling Advanced Technologies, Inc.

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