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(71) Applicant (for all designated States except US): **POLARIS INDUSTRIES INC.** [US/US]; 2100 Highway 55, Medina, MN 55340 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LEONARD, Joshua, J.** [US/US]; 41005 Fahrion Avenue, North Branch, MN 55056 (US). **MAKI, Richard, Raymond**

[US/US]; 5375 Fernwood Trail, North Branch, MN 55056 (US). **BJERKETVEDT, Eric** [US/US]; 7468 393rd Street, North Branch, MN 55056 (US). **SCHNEIDER, Michael, D.** [US/US]; 38001 Helium Street, Nw, Dalbo, MN 55017 (US). **MORISCH, Bradley, Robert** [US/US]; 13999 274th Court, Lindstrom, MN 55045 (US). **KROSSCHELL, Brian, D.** [US/US]; 11093 East Amy Lane, Chisago City, MN 55013 (US). **BRADY, Louis, J.** [US/US]; 25724 Goldfinch Avenue, Wyoming, MN 55092 (US). **BERGMAN, James** [US/US]; 20455 470th Avenue, Nw, Oslo, MN 56744 (US). **HOLTER, Larry** [US/US]; 410 West Bend Lane, Alvarado, MN 56710 (US). **NELSON, Richard** [US/US]; 26076 470th Avenue, Nw, Oslo, MN 56744 (US). **HOFF, Lionel** [US/US]; 20745 470th Avenue, Nw, Oslo, MN 56744 (US). **MO-MAN, Doug** [US/US]; 416 East Fletcher Avenue, Warren, MN 56762 (US). **GEORGES, Lyle** [US/US]; 7320 Kurt Street, Loretto, MN 55357 (US). **JOHNSON, Mitchell, D.** [US/US]; 27003 County Road 28, Roseau, MA 56751 (US).

(74) Agent: **GROEN, Eric, J.**; Baker & Daniels LLP, 300 North Meridian Street, Suite 2700, Indianapolis, IN 46204 (US).

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(54) Title: VEHICLE

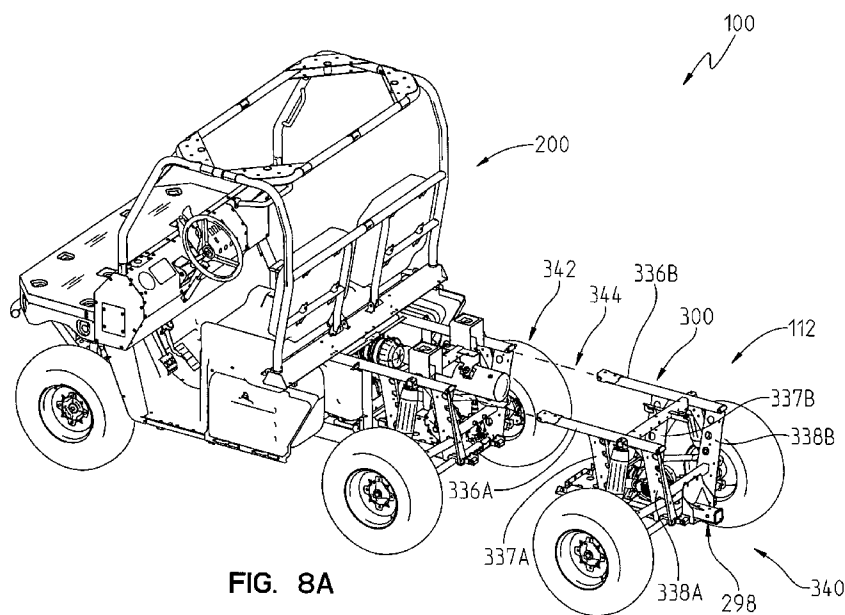


FIG. 8A

(57) Abstract: A vehicle (100) is disclosed. The vehicle may include a base portion (104) and a modular portion (112). The base portion may be a four wheel vehicle having an operator area (114) with seating for at least two occupants in a side-by-side arrangement. The modular portion may be coupled to the base portion resulting in a six wheel vehicle. The wheels (102) of the modular portion may be powered by an engine (500) of the base portion.

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION¹ SUBJECT MATTER

INV. B60G3/00	B60G15/06	B60K23/04	B62D21/12	B62D21/14
B62D61/12	B60T1/06	B60W10/12	B60G3/20	

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B62D B60T B60W B60G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal , WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 199 894 B1 (ANDERSON LEONARD E [US]) 13 March 2001 (2001-03-13) column 3, line 41 - column 5, line 32; figures 1-9	1-3, 8-13, 20, 21, 23, 24, 39, 40
Y		36-38
A	EP 1 557 345 A (RAVEN PAUL ANTHONY [GB]; RAVEN KEVIN WILLIAM [GB]) 27 July 2005 (2005-07-27) the whole document	1, 39
A	US 6 923 507 B1 (BILLBERG RUSTY [US] ET AL) 2 August 2005 (2005-08-02) cited in the application the whole document	1, 39
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Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

¹A* document defining the general state of the art which is not considered to be of particular relevance

'E' earlier document but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

'P*' document published prior to the international filing date but later than the priority date claimed

'T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

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INTERNATIONAL SEARCH REPORT

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PCT/US2008/003483

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document with indication, where appropriate, of the relevant passages	Relevant to claim No
P, A	US 7 237 789 B1 (HERMAN ANTHONY [US]) 3 July 2007 (2007-07-03) the whole document -----	1, 39
X	US 2005/248116 A1 (FANSON DAVID J [US]) 10 November 2005 (2005-11-10) paragraph [0027]; figures 1-8 -----	25, 26, 31-35
Y	-----	36-38
A	EP 0 238 077 A (WEBER RUDIGER PROF DR ING) 23 September 1987 (1987-09-23) the whole document -----	25
A	US 3 858 902 A (HOWELLS PAUL W ET AL) 7 January 1975 (1975-01-07) the whole document -----	25
X	EP 0 794 096 A (DANA CORP [US]) 10 September 1997 (1997-09-10) the whole document -----	48, 51, 52
Y	-----	49
Y	US 2002/147072 A1 (GOODELL DAVID J [US] ET AL) 10 October 2002 (2002-10-10) paragraph [0008] -----	49
Y	US 5 863 277 A (MELBOURNE KEITH [AU]) 26 January 1999 (1999-01-26) column 6, lines 14-18 -----	49
X	US 6 752 235 B1 (BELL DALE K [US] ET AL) 22 June 2004 (2004-06-22) the whole document -----	53-57

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/003483

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM POT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1 . claims: 1-24,39-47

Utility vehicle having an extendable frame

2 . claims: 25-38

Vehicle with at least a suspension system having a shock member which can provide multiple shock orientations

3 . claims: 48-52

Control of a differential of an utility vehicle with at least three axles

4 . claims: 53-57

Utility vehicle with at least three axles having independent suspensions of the rear ground engagement members

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/003483

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6199894	B L	13-03-2001	NONE	
EP 1557345	A	27-07-2005	GB 2410221 A	27-07-2005
US 6923507	B L	02-08-2005	NONE	
US 7237789	B L	03-07-2007	NONE	
US 2005248116	A L	10-11-2005	NONE	
EP 0238077	A	23-09-1987	DE 3609497 A1	01-10-1987
US 3858902	A	07-01-1975	NONE	
EP 0794096	A	10-09-1997	US 5673776 A	07-10-1997
US 2002147072	A L	10-10-2002	WO 02083448 A1	24-10-2002
US 5863277	A	26-01-1999	WO 9600844 A1 DE 19581686 T0 GB 2303944 A JP 10502147 T ZA 9505416 A	11-01-1996 22-05-1997 05-03-1997 24-02-1998 01-04-1996
US 6752235	B L	22-06-2004	NONE	