

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT7443291

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JEREMY T. PETERSON	07/13/2022
DANIEL P. SERGISON	07/07/2022
EDWARD WILLIAM MATE	07/13/2022
JEFFREY L. KUEHN	07/06/2022
ANDREW J. DE HASETH	07/13/2022
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	CATERPILLAR INC.
<b>Street Address:</b>	INTELLECTUAL PROPERTY DEPARTMENT
<b>Internal Address:</b>	100 NE ADAMS STREET
<b>City:</b>	PEORIA
<b>State/Country:</b>	ILLINOIS
<b>Postal Code:</b>	61629
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	17856656
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Email:</b>	request@slwip.com
<b>Correspondent Name:</b>	SCHWEGMAN LUNDBERG & WOESSNER, P.A.
<b>Address Line 1:</b>	P.O. BOX 2938
<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55402
<b>ATTORNEY DOCKET NUMBER:</b>	22-0643US01 / 4992.233US1
<b>NAME OF SUBMITTER:</b>	CATINA JENSEN
<b>SIGNATURE:</b>	/CaTina Jensen/
<b>DATE SIGNED:</b>	07/21/2022
<b>Total Attachments: 7</b>	
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RECORDATION FORM COVER SHEET  
PATENTS ONLY

Atty Ref/Docket No.: 22-0643US01 / 4992.233US1

Patent and Trademark Office

To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Jeremy T. Peterson, Daniel P. Sergison, Edward William  
Mate, Jeffrey L. Kuehn, Andrew J. de Haseth

Additional name(s) of conveying party(ies) attached?

Yes  No

3. Nature of conveyance:

Assignment  Merger  
 Security Agreement  Change of Name  
 Other

Execution Date: July 13, 2022, July 7, 2022, July 13,  
2022, July 6, 2022, July 13, 2022

2. Name and address of receiving party(ies):

Name: Caterpillar Inc.

Street Address: Intellectual Property Department  
100 NE Adams Street

City: Peoria State: IL Zip: 61629  
Country: United States of America

Additional name(s) & address(es) attached?  Yes  
 No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

B. Patent No.(s)

Serial No. 17/856,656

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence  
concerning document should be mailed:

Name: Brett A. Klein

Address:

Schwegman Lundberg & Woessner, P.A.  
P.O. Box 2938  
Minneapolis, Minnesota 55402

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$ 0.00

Enclosed

Authorized to be charged to deposit account  
19-0743

8. Please charge any additional fees or credit any over  
payments to our Deposit Account No.: 19-0743

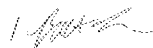
DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy  
of the original document.

Brett A. Klein/Reg. No. 64,448

Name of Person Signing



Signature

Jul 20, 2022

Date

Total number of pages including cover sheet: 7

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks  
Mail Stop Assignment Recordation Services  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PATENT**  
**REEL: 060575 FRAME: 0646**

## ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

### DIRECT SENSING SYSTEM FOR A SPHERICAL JOINT

for which I/We will or have filed a patent application; and

WHEREAS, **Caterpillar Inc.**, a corporation of Delaware, United States of America whose post office address is **Intellectual Property Department, 100 NE Adams Street, Peoria, IL 61629** (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, and in and to the patent application for this invention and any and all patents to be issued upon this application throughout the world;

NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all patents which may be granted thereon, and all reissues thereof, as well as all rights to claim priority in any country or jurisdiction or patent office on the basis of this application, and all applications for patents which may hereafter be filed for this invention in any country or jurisdiction or patent office and all patents which may be granted on this invention in any country or jurisdiction or patent office, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request any official of any country or jurisdiction or patent office whose duty it is to issue patents on applications as described above, to issue all patents for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in any country or jurisdiction or patent office, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns;

AND, I/WE HEREBY authorize the attorneys/representatives that I/WE have empowered to prosecute this application to insert here in parentheses the country, application number, and official filing date (United States of America Application No. 17/856,656, filed July 1, 2022).




SOLE/JOINT INVENTION

(Worldwide Rights)




Attorney Docket No. 22-0643US01 / 4992.233US1

Client Ref. No. 22-0643US01

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.


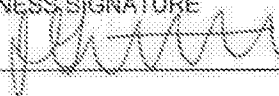

1. FULLNAME OF SOLE OR FIRST ASSIGNOR Jeremy T. Peterson	ASSIGNOR'S SIGNATURE 	DATE 7/13/22
ADDRESS 24553 Pleasant View Rd Washington, IL 61571		CITIZENSHIP United States of America
1. WITNESS NAME Scott A. Kammeyer	WITNESS SIGNATURE 	DATE 13 JUL 2022
ADDRESS 2904 W Singing Woods Road Dunlap IL 61535		CITIZENSHIP USA
2. WITNESS NAME Jason L. Brinkman	WITNESS SIGNATURE 	DATE 7/13/2022
ADDRESS 302 W NORTHLAND AVE. PEORIA IL 61614		CITIZENSHIP USA

2. FULLNAME OF SECOND ASSIGNOR, IF ANY		ASSIGNOR'S SIGNATURE	DATE
Daniel P. Sergison		<i>Daniel P. Sergison</i>	7-7-22
ADDRESS		CITIZENSHIP	
3500 East Washington St East Peoria, IL 61611		United States of America	
1. WITNESS NAME		WITNESS SIGNATURE	DATE
James D. Dubac		<i>James D. Dubac</i>	7-7-22
ADDRESS		CITIZENSHIP	
831 Arnold Ave East Peoria, IL 61611		USA	
2. WITNESS NAME		WITNESS SIGNATURE	DATE
Conner Haines		<i>Conner Haines</i>	7-7-22
ADDRESS		CITIZENSHIP	
1453 West Arnold Lake Road, Harrison, MI 48625		USA	




3. FULLNAME OF THIRD ASSIGNOR, IF ANY  Edward William Mate	ASSIGNOR'S SIGNATURE 	DATE 7/13/2022
ADDRESS  275 S Eastern Ave Manhattan, IL 60442		CITIZENSHIP United States of America
1. WITNESS NAME MAITREYA V. LAGADAMTI	WITNESS SIGNATURE 	DATE 07/13/2022
ADDRESS 7300 KEMPTON ST JOLIET, IL 60431		CITIZENSHIP INDIA
2. WITNESS NAME KALPESHKOHAR PATEL	WITNESS SIGNATURE 	DATE 7/13/2022
ADDRESS 2207 COMSTOCK LN NAPERVILLE, IL 60564		CITIZENSHIP U.S.A.

SOLE/JOINT INVENTION  
(Worldwide Rights)

Attorney Docket No. 22-0643US01 / 4992.233US1  
Client Ref. No. 22-0643US01

<p>4. FULLNAME OF FOURTH ASSIGNOR, IF ANY</p> <p>Jeffrey L. Kuehn</p>	<p>ASSIGNOR'S SIGNATURE</p> 	<p>DATE</p> <p>7/6/2022</p>
<p>ADDRESS</p> <p>426 Mackenzie Place Germantown Hills, IL 61548</p>		<p>CITIZENSHIP</p> <p>United States of America</p>
<p>1. WITNESS NAME</p> <p>Jennifer Gillette</p>	<p>WITNESS SIGNATURE</p> 	<p>DATE</p> <p>7/6/2022</p>
<p>ADDRESS</p> <p>1040 W. Partridge Dr Palatine, IL 60067</p>		<p>CITIZENSHIP</p> <p>USA</p>
<p>2. WITNESS NAME</p> <p>Ryan Kingdom</p>	<p>WITNESS SIGNATURE</p> 	<p>DATE</p> <p>7/6/2022</p>
<p>ADDRESS</p> <p>702 W. Scythwood Dr. Peoria, IL 61615</p>		<p>CITIZENSHIP</p> <p>USA</p>



5. FULLNAME OF FIFTH ASSIGNOR, IF ANY  Andrew J. de Haseth	ASSIGNOR'S SIGNATURE 	DATE 13-July-22
ADDRESS  9432 W Gambel Oak Ln Marana, AZ 85653		CITIZENSHIP United States of America
1. WITNESS NAME CARMELO GALFRE	WITNESS SIGNATURE 	DATE 13-July-22
ADDRESS 1021 W. LOAN BUNTING LN., ORB VALLEY, AZ 85755		CITIZENSHIP United States of America
2. WITNESS NAME ROB VAN	WITNESS SIGNATURE 	DATE 7/13/22
ADDRESS 1510 N. EXAS BLVD VAN AZ 85241		CITIZENSHIP United States