FORM PTO-1619A Expires 06/30/99 OMB 0651-0027

04-12-2001

U.S. Department of Commerce Patent and Trademark Office **PATENT** 



1016/188/ Resorbation form cover sheet				
PATENTS ONLY				
TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).				
	Conveyance Type			
New	Assignment Security Agreement			
Resubmission (Non-Recordation) Document ID#	License Change of Name			
Correction of PTO Error Reel # Frame #	Merger Other U.S. Government			
Corrective Document  Reel # 010756 Frame # 0602	(For Use ONLY by U.S. Government Agencies)  Departmental File Secret File			
Conveying Party(ies)	Mark if additional names of conveying parties attached Execution Date			
Name (line 1) Lucas Industries PLC	Month Day Year 06/08/1999			
Name (line 2)				
Second Party	Execution Date Month Day Year			
Name (line 1)				
Name (line 2)				
Receiving Party	Mark if additional names of receiving parties attached			
Name (line 1) Meritor Automotive, Inc.	If document to be recorded is an assignment and the receiving party is not			
Name (line 2)	domiciled in the United States, an appointment of a domestic			
Address (line 1) 2135 West Maple Road	representative is attached. (Designation must be a separate document from			
Address (line 2)	Assignment.)			
Address (line 3) Troy City	Michigan/ United States 48084-7186 State/Country Zip Code			
Domestic Representative Name and Address  Enter for the first Receiving Party only.				
Name				
Address (line 1)				
Address (line 2)				
Address (line 3)				
Address (line 4)	COR OFFICE LISE ONLY			
FOR OFFICE USE ONLY				

Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB Information Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

Mail documents to be recorded with required cover sheet(s) information to:
Commissioner of Patents and Trademarks, Box Assignments, Washington, D.C. 20231

<b>FORM</b>	PTO-1619B
Expires 06/	30/99
OMB 0651	-0027

#### Page 2

U.S. Department of Commerce
Patent and Trademark Office
PATENT

OMB 0651-0027			PATENT	
Correspondent Name and Address Area Code and Telephone Number 248 988-8360				
Name	Theodore W. Olds, Carlson, Gaskey &	Olds Attorneys		
Address (line 1)	400 W. Maple			
Address (line 2)	Suite 350			
Address (line 3)	Birmingham, Michigan			
Address (line 4)	USA			
Pages	Enter the total number of pages of including any attachments.	the attached conveyance c	document # 11	
<b>Application</b>	Number(s) or Patent Number(s	s) 🗸 🗸	Mark if additional numbers attached	
Enter either ti	ne Patent Application Number or the Patent N	·		
	ent Application Number(s)		Patent Number(s)	
08/732344	09/068979			
08/930593	09/043804			
08/952673	09/068976			
If this document i signed by the firs	s being filed together with a <u>new</u> Patent Appli st named executing inventor.	cation, enter the date the patent ap	oplication was Month Day Year	
Patent Cooperation Treaty (PCT)  Enter PCT application number  only if a U.S. Application Number PCT				
Number of Properties Enter the total number of properties involved. # 64				
Fee Amount Fee Amount for Properties Listed (37 CFR 3.41): \$				
	of Payment: Enclosed			
Deposit Account  (Enter for payment by deposit account or if additional fees can be charged to the account.)  Deposit Account Number:  # 50-1482				
	Author	ization to charge additional fe	es: Yes No No	
Statement a	and Signature		d source and any	
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. Charges to deposit account are authorized, as indicated herein.				
	agusa Reg. No 46,174	John M Drag	March 29, 2001	
	e of Person Signing	Signature	Date	

	05-15-2000
Form PTO-1597 RECORI (Rev. 6/93) OMB No. 0651-0011	U. S. Dept. of Commerce Patent and Trademark Office
To the Honora Please record the attached orig	inal documents or copy thereof
1. Name of propering Party(ies); 12: 44  Lucas Industries PLC OPR/FINANCE  Additional name(s) of conveying party(ies) attached?Yes _X_No	2. Name and address of receiving party(ies)  Name: Meritor Automotive, Inc.  Internal Address: Patent Department  Street Address: 2135 West Maple Road  City: Troy State: Michigan Zip: 48084-7186  Additional name(s) & address(es) attached: Yes X_ No
3. Nature of conveyance:	
X Assignment Merger	
Security Agt Change of Name	
Other	
Execution Date: <u>June 8, 1999</u> 4. Application number(s) or patent number(s):	
If this document is being filed together with a new application, the execu	ution date is:
A. Patent Application No.(s) B.  Additional numbers attached: Ye	Patent No(s). 4,637,498, 4,666,022, 4,817,763, 4,685,541, 4,923,036, 4,907,678, 4,688,661, 4,702,352, 5,715,681, 4,838,390, 4,516,400, 5,012,901, 4,830,149, 5,074,388, 5,441,293, 5,398,790, 5,520,267, 4,712,839, 4,795,219, 5,328,251, 5,004,300, 5,004,299, 5,002,343, 5,427,440, 5,080,445, 5,050,938, 5,295,736, 4,920,493, 5,088,042, 5,632,530, 5,355,978, 4,603,761, 5,090,520, 5,253,477, 5,819,884, 4,809,822, 5,316,115, 4,759,429, 4,773,511, 5,819,885, 4,557,110, 4,782,924, 4,358,002, 5,460,434, 4,677,420, 5,575,543, 5,558,002, 5,513,726, 4,862,998, 5,496,098, 5,069,316, 4,919,239, 5,630,484, 5,407,037, 4,913,267, 5,228,545, 5,710,716, 5,518,306
<ol> <li>Name and address of party to whom correspondence concerning document should be mailed:</li> </ol>	6. Total no. of applications and patents involved66
Name: Theodore W. Olds, Howard & Howard Attorneys	
Internal Address: The Pinehurst Office Center, Suite 101  1400 North Woodward  Street Address: Same As Above  City: Bloomfield Hills State: Michigan Zip: 48304	
	7. Total fee (37 CFR 3.41)
12/2000 JSMRBGZZ 00000110 4637498	08-2789  (Attach duplicate copy of this page if paying by deposit account)
Fr-581 2640.00 @P	
DO NOT U	SE THIS SPACE
original document.	foregoing information is true and correct and any attached copy is a true copy of the  April 19, 2000
Theodore W. Olds, Reg. No. 33.080 Name of Person Signing Signature	Date
	er sheet, attachments and document:7

G:\M\MERITOR\ip00748\PATENT\ASGNREC.doc

#### Schedule B-PAT Lucas Industries PLC to Meritor Automotive, Inc.

TITLE	COUNTRY	APPLICATION NO.	PATENT NO.
The second secon			
			,
		e e e e e e e e e e e e e e e e e e e	
		in the second of the second	
Roberdo			
GI			
GIG CARROW - 1			
GOT TOWN			
			4637408
CIR LAIDOR MKIV Adjuster	US	697509	4637498
618. A100R MK1V Adjuster	US US	697509 750500	4666022
510 A21 S Wedge Modification	US US	. 1	4666022 4817763
619. A2LS Wedge Modification  620. Actuator – Intermediate Disc Conn	US US US	750500	4666022 4817763 4685541
619. A2LS Wedge Modification 620. Actuator – Intermediate Disc Conn 621. Add On Hydro-Mechanical Unit	US US	750500 105732	4666022 4817763 4685541 4923036
<ul> <li>619. A2LS Wedge Modification</li> <li>620. Actuator – Intermediate Disc Conn</li> <li>621. Add On Hydro-Mechanical Unit</li> <li>622. Air Chamber Mounted On Caliper</li> </ul>	US US US US US	750500 105732 133006	4666022 4817763 4685541 4923036 4907678
<ul> <li>619. A2LS Wedge Modification</li> <li>620. Actuator – Intermediate Disc Conn</li> <li>621. Add On Hydro-Mechanical Unit</li> <li>622. Air Chamber Mounted On Caliper</li> <li>623. Air Chamber Mounting Bracket</li> <li>624. ALT Theinston - Boot And Retainer</li> </ul>	US US US US US US US	750500 105732	4666022 4817763 4685541 4923036 4907678 4688661
<ul> <li>619. A2LS Wedge Modification</li> <li>620. Actuator – Intermediate Disc Conn</li> <li>621. Add On Hydro-Mechanical Unit</li> <li>622. Air Chamber Mounted On Caliper</li> <li>623. Air Chamber Mounting Bracket</li> <li>624. ALT/Twinstop - Boot And Retainer</li> </ul>	US US US US US US US US US	750500 105732 133006 796234	4666022 4817763 4685541 4923036 4907678 4688661 4702352
<ul> <li>619. A2LS Wedge Modification</li> <li>620. Actuator – Intermediate Disc Conn</li> <li>621. Add On Hydro-Mechanical Unit</li> <li>622. Air Chamber Mounted On Caliper</li> <li>623. Air Chamber Mounting Bracket</li> <li>624. ALT/Twinstop - Boot And Retainer</li> <li>625. Anti Rotation Means For FCSS Auto Adj</li> <li>626. As M/CYL with High Pressure Tolerant</li> </ul>	US US US US US US US US US	750500 105732 133006	4666022 4817763 4685541 4923036 4907678 4688661 4702352 5715681
<ul> <li>619. A2LS Wedge Modification</li> <li>620. Actuator – Intermediate Disc Conn</li> <li>621. Add On Hydro-Mechanical Unit</li> <li>622. Air Chamber Mounted On Caliper</li> <li>623. Air Chamber Mounting Bracket</li> <li>624. ALT/Twinstop - Boot And Retainer</li> <li>625. Anti Rotation Means For FCSS Auto Adj</li> <li>626. As M/CYL with High Pressure Tolerant</li> </ul>	US US US US US US US US	750500 105732 133006 796234 640866	4666022 4817763 4685541 4923036 4907678 4688661 4702352 5715681
<ul> <li>619. A2LS Wedge Modification</li> <li>620. Actuator – Intermediate Disc Conn</li> <li>621. Add On Hydro-Mechanical Unit</li> <li>622. Air Chamber Mounted On Caliper</li> <li>623. Air Chamber Mounting Bracket</li> <li>624. ALT/Twinstop - Boot And Retainer</li> <li>625. Anti Rotation Means For FCSS Auto Adj</li> <li>626. As M/CYL with High Pressure Tolerant Recup. Seal</li> </ul>	US	750500 105732 133006 796234 640866	4666022 4817763 4685541 4923036 4907678 4688661 4702352 5715681
<ul> <li>619. A2LS Wedge Modification</li> <li>620. Actuator – Intermediate Disc Conn</li> <li>621. Add On Hydro-Mechanical Unit</li> <li>622. Air Chamber Mounted On Caliper</li> <li>623. Air Chamber Mounting Bracket</li> <li>624. ALT/Twinstop - Boot And Retainer</li> <li>625. Anti Rotation Means For FCSS Auto Adj</li> <li>626. As M/CYL with High Pressure Tolerant Recup. Seal</li> <li>626. Bi Directional Adjuster For FCSS</li> </ul>	US US US US US US US US	750500 105732 133006 796234 640866	4666022 4817763 4685541 4923036 4907678 4688661 4702352 5715681

Page 21

## Schedule B-PAT <u>Lucas Industries PLC to Meritor Automotive, Inc.</u>

	TITLE	COUNTRY	APPLICATION NO.	PATENT NO.
	Sensor			
630.	CCV/CV Tractor/Trailer Brake Dual M.CYL System	US		4516400
631.	Compound Disc Ball Brake	US	411708	5012901
632	De Adjust For Reaction Beam Caliper	US	133654	4830149
633.	Determination Of Lining Wear Condition	US	08/732344	
634.	Direct Mechanical Actuation Using Electric Motor	US	485504	5074388
635.	Drawbar Trailer Coupling Load Transducer	US	194066	5441293
636.	Drum Brake With Wear Compensation	US	138797	5398790
639.	Elsa II	US	08/307789	5520267
	EPB Differential Braking Control	US	08/930593	
641.	EPB Load Apportioning of Backup	US	08/952673	·
645	Pressure	US	868559	4712839
642		-00		4712020
	FOR Dynamic Load Apportioning	US	056626	4795219
644.	Took Custom	US	921113	5328251
645.	EPB. Prieumatic backup rest System	US	489037	5004300
646.	EPB. Pressure Control (Link Pipe)	US		5004299
647.	EPB. Pressure Control (Link Pipe)	US	481218	5002343
648.	EPB. Semi-Trailer Braking	US	094096	5427440
649.		US	437754	5080445
650.	EPB. Trailer Brake Control	US	437821	5050938
651	EPB. Trailer Control with Improved		936405	5295736
	Compatibility	US	56625	4920493
653	EPB. Transducer Zero Setting	US	488976	5088042
654	. EPB. Wear Equalization			
Œ,	- Committy)			
	- Change III			
	7. EPS System Test	US	08/598073	5632530

Page 22

### Schedule B-PAT Lucas Industries PLC to Meritor Automotive, Inc.

	TITLE	COUNTRY	APPLICATION NO.	PATENT NO.
6.0	Falling Ball Spin Tall Compensator	UC		1350404-
	CCV MAS CITE			
659.	Fault Error Generator in Electronic Sensors	US	09/068979	
660.	GOIMPD Gooling Fluid Control Device	US	907127	5355978
	Guide Pin Boot Protection	US		4603761
		US	533517	5090520
663.	Hydraulic Servo Reservoir Improvements	US	877291	5253477
664.		US	08/666429	5819884
	Improved Lever For HD Caliper	US	098150	4809822
	Improved Lubrication System FCSSA/A/USA	US	604659	5316115
667	Improved Wedge Actuator	US	018410	4759429
	Leaf Spring For Disc Brake	US		4773511
660	Lever/Camshaft Assembly	US	682647	5819885
670.	Limited Compensation Dual Master Cylinder	US	662530	4557110
CT	Lining Segment With Different Radii	US	053718	4782924
672	- A L - L'- A divetor	US	076494	4358002
673.	Optimal Braking Force Distribution	US	211425	5460434
<u></u>	Strategy Indicator	US		4677420
674. 675.	Partially Distributed ABS Control in a		08/337407	5575543
676.	Braking System Power Servo with Shanban Seals on	US	093270	5558002
	Spool Valve	US	478793	5513726
677	PWWI Cable Guide			
	D. Little a Conton	US	196370	4862998
679	Retaining Garter	US	08/313065	5496098
680	Retarder Blending in an EPB System	US	549167	5069316
681	. Ring Gear With Pinion For FCSS/A			
1	1 But Firelydor For Pushrod	US	043804	
683	Secondary Dust Excluder For Pushrod	US	133005	4919239
684	Shoe Return Spring	US	974090	5630484
683	5. Shoe Tip Having Multiple RadII	US	314660	
68	Shoe Tip Having Multiple RadII			

Page 23

### Schedule B-PAT Lucas Industries PLC to Meritor Automotive, Inc.

	TITLE	COUNTRY	APPLICATION NO.	PATENT NO.
	Shoe Tip Having Multiple RadII	US	500143	5407037
688.	Slotted Braking Member	US		4913267
689.	Spring Retention FCSS/A	US	788368	5228545
1				
691.	Trailer Control with Indirect Force Measure	US	09/068976	
692	Vehicle Load Measuring System	US	08/571233	5710716
693.	WSP With High Flow Bypass (Solenoid	US	013296	5518306
	Controlled)		-	'
ČOĆ				
70000				
699		11000		
=				
		1.000		
				100,403.56
7				
7.5				
	THE PERMIT WITH KEELING	- W. 3 - 2		
_				
700	Los frances of the second			0000570
	The state of the s			
			A SECTION OF THE PROPERTY OF T	
1		- H - N - H - H - H - H		
7				
34			• •	
1		and the second s		2
7	The second secon			
7				
	and the second of the second o	والمرابع والمعين والمستدارين	and the second second	

Page 24

### ASSIGNMENT United States Issued Patents And Patent Applications

WHEREAS, Lucas Industries PLC, a British corporation having its principal place of business at 46 Park Street, London W1Y 4DJ, England (hereinafter referred to as "ASSIGNOR"), is the owner of certain issued and filed United States Patents, as hereinafter specified; and

WHEREAS, Meritor Automotive, Inc., a Delaware corporation, having its principal place of business at 2135 Maple Road, Troy, Michigan 48084, (hereinafter referred to as "ASSIGNEE"), desires to acquire the entire right, title and interest in and to the issued and filed United States Patents hereinafter specified;

#### WITNESSETH:

NOW, THEREFORE, in consideration of good and valuable consideration the receipt and sufficiency of which is hereby acknowledged:

- 1. ASSIGNOR hereby assigns and sets over unto ASSIGNEE, its successors and assigns, the following:
- (a) Its entire right, title and interest in and to the United States Patents enumerated in Schedule B-PATs hereof, attached hereto and made a part hereof, and all renewals and extensions thereof.
- (b) All claims, demands, and rights of action, both statutory and based upon common law, that ASSIGNOR has or might have by reason of any infringements of the patents listed in Schedule B-PATs hereof prior to the date of this Assignment, together with the right to prosecute such claims, demands, and rights of action in ASSIGNEE's own name.
- (c) Its entire right, title and interest in and to the applications filed for the United States Patents enumerated in Schedule B-PATs hereof and all issued patent's that may be granted therefor and all renewals and extensions thereof.

Page 1

# ASSIGNMENT United States Issued Patents And Patent Applications

IN WITNESS WHEREOF, ASSIGNO hereby, has caused this Assignment to 1999.	R, expressly intending to be legally bound be duly executed this <u>\$ta</u> day of
LUCAS INDUSTRIES PLC	MERITOR AUTOMOTIVE, INC.
Signature: 4 449	Signature: <u>Rommer Fullum</u>
Printed: James Zigel	Printed: Bonnie Wilkinson
Title: Authorized Signatory	Title: Assistant Secretary
Date: $6-F-99$	Date:June 17, 1999
of \( \ldots \) \( \text{unc} \), 1999, personally apperduly sworn, did say that s/he is the \( \text{unc} \) British corporation, and that such instrume corporation by authority of its Board acknowledged that instrument to be the free	NOTARY PUBLIC STATE OF NEW YORK OUALIFIED IN FRIE COLINTY  Notary Public MY COMMISSION EXPIRES 5/24/200  Address 3112 E River Ra.  GRAND ISLAND, NY 14072
(Seal)	My commission expires: 5/24/2001
Witness Will M. Jones	Witness Patricia a blende

**RECORDED: 03/30/2001**