



ALAM Newsletter

Winter 2010

2011 Conference

Plans are coming together for a conference to be hosted by Claas UK at their headquarters in Suffolk. The date is set for the week beginning 18th July 2011, so keep the date free and see our next newsletter or the website for full details nearer the time.

2010 Conference

There are more reports from the 2010 ALAM Tour of Ireland in this newsletter.

One-Day events

Our next offering is a chance to get your City & Guilds certification in Air Conditioning refrigerant handling, hosted at Reaseheath on Wednesday 23rd February - see page 3.

There's the first of the reports from the one-day Valtra event hosted at Walford College in this newsletter.

We are always open to ideas and suggestions from members for future one-day updates, and names of useful contacts would be most welcome. Please contact the ALAM secretary, Graham Higginson at Reaseheath College.

Membership

You will find a list in this newsletter of all the paid-up members for the current 2010-11 year.

We still a few unresolved issues with unidentifiable standing orders so please check with your colleagues – if any have standing orders taking money from their bank but are not on the membership list, please get in touch with the treasurer.

Parts Offer

John Gough has a range of warranty return items sourced from JCB, which are available for colleges to use for teaching. For full info about what is available, contact John by email at gough.j@btinternet.com - note this is a new email address. Phone - 01630 685 942 - evenings 7 to 10pm, please.

Contents

ALAM Committee 2010-11	2
Air Conditioning Qualification	3
Bord na Mona Peat Bog Workshop	4
Moynalty Steam Threshing Committee Museum.....	7
JCB Cab Systems - A Room With A View	8
Valtra Tractor Transmissions.....	10
Membership Application Form.....	17

ALAM Committee 2010-11

Updates are highlighted in **bold** text.

Position	Name	Work			Mobile	Home	
		Place	Tel	Email		Tel	Email
Chairman	Phil Goddard	Walford College	01939 262100			phil.goddard24@talktalk.net	
Secretary	Graham Higginson	Reaseheath College	01270 613230	grahamh@reaseheath.ac.uk	01948 667982	gphigginson@sky.com	
Treasurer	David Heminsley	JCB Training	01889 594700	david.heminsley@jcb.com	01889 566882		
Chair Elect							
Conference Organiser 2011	John Palmer	Claas UK					
Conference Organiser 2010	Gwynfor Williams				01995 604538	Gwynfor@dorchester.entadsl.com	
Committee	John Gough	Walford College	01939 262100 ext 2158	j.gough@wnsc.ac.uk	01630 685942	gough.j@btinternet.com	
	Jonty Roston	Appleby Heritage Centre				Jontyrostron@yahoo.co.uk	
	David James	Coleg Meirion Dwyfor		d.james@llandrillo.ac.uk	07919 458878		
	Neil Jewell	Reaseheath College	01270 613239	neilj@reaseheath.co.uk	07968 067298	neil.jewell@tiscali.co.uk	
	Charles Szabo					szabocharl@aol.com	
	Paul Clarke						

ONE-DAY EVENT

Air Conditioning Qualification

ALAM presents an opportunity for members to gain City & Guilds certification in Refrigerant Handling.



Date:

- Wednesday 23rd February 2011, start time 9:30am.

Venue:

- Reaseheath College

Course program includes:

- Air conditioning theory
- Refrigerant handling demonstrations and use
- Practical and theory tests

Cost:

- £160 for members, £180 for non-members.
- Cost includes all registration and certification fees.

To book please forward details to Graham Higginson grahamh@reaseheath.ac.uk or:

Reaseheath College
Nantwich
Cheshire
CW5 6DF

There is a limit of 15 delegates to allow sufficient time for all tasks to be completed.

ALAM ANNUAL CONFERENCE 2010

Bord na Mona Peat Bog Workshop

Tuesday 6th April 2010

The session commenced with two Power Point presentations from John McNiff and John McKiernan.

Bord na Mona was set up in 1946 and now covers:

- Peat/Biomass Operations
- Horticulture
- Fuels
- Power Generation
- Waste Recovery
- Environmental
- Projects

Their main role is to supply peat for power generation. However, they also referred to the horticultural side which is supplying peat to England (All of B&Q requirements), Holland and France as Shamrock Peat.

The fuels side refers to the production of fire lighters and fire logs and also the sale of Polish coal.

The environmental side refers to sewage systems, which they run from business bases in Ireland and America.

Irish Peat Resources Area (Ha)

Raised Bogs	338,000
Blanket Bogs	905,000
<u>Fens</u>	<u>102,000</u>
Total	1,345,000

17% of Land Surface

Bord na Mona 80,000 - 6% - 25%

BNM tend to focus on the Midlands of Ireland.

Their peat operations employees are:

Permanent	650
<u>Seasonals</u>	<u>470</u>
Total	1,120

Operating machinery which includes:

Tractors	983
Harvester Units	127
Locomotives	217
<u>Bulldozer + Excavators</u>	<u>255</u>
Total Items of Plant	4,000+

The locomotives are there because they operate their own railways via temporary tracks, which they lay, from which ever site they are harvesting from, to bring the peat to the power station.

As a company, their production/sales for 2009/10 (kt) are:

Works	Production	Sales
Mountdillon	700	775
Boora	526	646
Blackwater	833	1018
D/greenagh	850	948
Littleton	270	308
Horticulture	236	234
Totals	3,415	3,928

Which goes to their customers:

- Electricity Production (8% -10%)
 - EPL (BnM) 127MW
 - WOP (ESB) 150MW
 - LRP (ESB) 100MW
 - 3.0m tonnes per annum
- Peat Briquettes
 - 0.6m tonnes per annum
- Horticulture Products
 - 0.4m tonnes per annum

As a company, they have supplied Biomass and will continue to do so.

Biomass Supply -EPKL (kt)

Year	2008	2009	2010	2011	2012	2013
Planned	25	40	60	80	100	120

The peat production process includes:

- Virgin bog drainage
- Milling
- Harrowing with hydraulic spoon harrows
- Ridging
- Harvesting
- Loading into the railway wagons

Following these two presentations, we were then shown around their yards, workshops and museum by Pdraig Mulryan. This gave us a fantastic insight into the scale of their operation and the sort of equipment they use, much of which is adapted or made by themselves.

Nick Bevan



ALAM ANNUAL CONFERENCE 2010

Moynalty Steam Threshing Committee Museum

Friday 9th April 2010

After a hearty breakfast at the Newgrange in Navan we set for Kells and Moynalty. John Clancy my Irish “no problem man” was there to meet us.

We were greeted by Chairman Peter Gaynor, PRO Sean Sheridan and Secretary Betty Smith.

Moynalty in Gaelic “Magh nEalta” means “the plain of the flock of birds.”

Moynalty Steam Threshing started as a church fund raising event and in 1976 raised £1000. To-day it is Ireland’s premier event drawing in 30,000 visitors and has raised thousands and thousands for charities. Moynalty also supports a network of smaller vintage rallies.

The machinery and tools were well exhibited with much emphasis on the machinery of Philip Pierce of Wexford.

To my delight I found a chaff cutting machine of about 1880-90 made in Wales by John Williams and Son of Rhuddlan Nr Rhyl. Up to the 1950s every farm would have chopped straw (chaffing) to about 10mm in length, mixed it with milled grain and chopped turnips for cattle feed. Same for horses but without turnip (I could go on and on)!!

Our hosts had tea and scones and cake prepared and wished that we could attend their 35th working, unfortunately on the 8th of August I shall be on my way back from Austria, perhaps next year.

It was by chance that I mentioned water turbines and my host said that there was one running nearby. Having heard of “Irish Miles I was rather sceptical. A phone call was made and in minutes appeared the turbine owner. Thanking our hosts at the museum we proceeded to see the turbine, just in the village.

The owner explained how in 1985 he made a weir across the river and installed the turbine and generator producing about 2.5 Kw at ahead of 5ft. Everything was second-hand, but it worked.

A quick estimate at 40% overall efficiency flow of water through turbine would be about 300litres/second or roughly 60 gallons.

The hospitality at the museum (the Betty Smith tea and scones) was memorable, must put Moynalty Steam Threshing 1911 in my diary.

Gwynfor Williams

ALAM AGM REASEHEATH 2010

JCB Cab Systems - A Room With A View

Tuesday 20th July 2010

At first glance you would be forgiven for thinking that a visit to a cab manufacturing plant would be somewhat lacking in engineering inspiration and rather mundane. Well my friend you would be wrong, and you certainly would not have witnessed the energy, enthusiasm and range of knowledge and experience which was plain to see for those who were fortunate enough to attend the JCB Cab Systems manufacturing plant visit at Rugeley on Tuesday 20th July. We were greeted by our hosts Mr Alastair Cumming, Plant Manager, and Simon Davies, Chief Designer who treated us to a presentation which clearly and chronologically laid out the facts which have eventually resulted in the cabs which are being produced by the company today.

Historically the company has increased its range of products as it has grown and each product area has been responsible for the design of the whole machine, each having their own views and requirements for the design of their cab. This has inevitably resulted in the duplication of a wide range of items, each of slightly different specification but designed for the same purpose, being produced and held in stock in order to build the cabs. Windscreen wiper motors, over 60 different types, steering wheels, grab handles, door straps... the list goes on, the complication factor goes up and so do the costs and organisation on the production line. Decisions were made to bring the responsibility for the design and construction of the cabs under one specialist unit which was given the brief to rationalise design and reduce production costs while producing a unique JCB "Feel" to the full range of cabs.

With this in mind the team at Rugeley embarked on an exciting and somewhat daunting challenge which is still in progress but has already yielded / delivered considerable standardisation, simplification and cost savings to the process. The cab design process which has developed considers all of the following factors; customer requirements, machine requirements, cab system engineering, JCB Feel, and design and manufacture. At this stage of the presentation the word "haptics" was introduced which was defined as feel and instinctive reaction. The aim is to create a cab environment which has the same feel, layout and ambiance throughout the range so that it is immediately recognisable as JCB. A common bill of design was applied to all cabs going through the updating process. The design sequence starts with the seat index point, the most advantageous seating point for the driver within the space envelope, visibility, ergonomics, steering, heating ventilation and a.c., controls, pedals, door / structure.

The design is also required to enable the cab to be sold in any country which added the extra complications of differing safety regulations. It was decided to build all cabs to meet the highest safety requirements which would then eliminate the need for a number of models and possible mistakes at the delivery stage.

Once the cab design has been finalised a cab has to be built and subjected to the ROPS and FOPS tests. For both of these tests a mannequin dummy is strapped into the driver's seat and should not come into contact with the structure during the procedure. In order to verify this, grease is applied to vulnerable parts of the dummy, any traces on the cab structure following the test tell their own story! The cab is mounted on the machine chassis and a load of 65 tons is applied to the front, sides and rear for the Roll Over Protection System test. The Falling Object Protection System test involves a ¼ ton weight being dropped from 5 metres height without bending the roof. Other tests include noise and vibration; active cab suspension is being used on some models with sensors picking up machine movements with a computer controlling cab movement corrections to minimise operator disturbance.

With the ever increasing legislative demand for traceability and accountability we were introduced to yet another European directive imaginatively named Euro Norm 474 which was succinctly summed up by our presenter in the following way; What you build, is it what you tested, is it what you designed, prove it!!

Future developments will be likely to concentrate on heating, ventilation and air conditioning improvements, operator comfort and further investigation of fabricated door frames. Studies are currently being undertaken to reduce and standardise the range of different fasteners being used in the cab build to simplify production and stocks.

The presentation was then followed by a tour of the manufacturing plant which was laid out to run two assembly lines, one for the Backhoe cabs and the other for the Loadall, mini digger, Teletruck and other machines. The lines were organised to flow in opposite direction to each other so that the fork lift trucks could deliver parts and bare cab frames onto the one line and collect finished cabs from the other on the way back out. Cabs were built up with sub assemblies and modules in order to make the process as efficient as possible. Once completed the cabs were dispatched to the other production facilities to be fed onto their production lines.

The factory currently produces 60 Backhoe cabs per day plus Loadall and other machine cabs as well. The quickly growing demand for Backhoe machines following the low point of the recession has proved to be a big challenge. Keeping an existing trained workforce on reduced hours during the depth of the recession has proved very valuable as the recovery commences.

This visit provided a number of valuable insights into both the approach that a successful British manufacturer takes towards product development and production efficiencies and the dedication of the workforce in achieving these goals. We thank them for sharing that expertise with us.

John Gough

VALTRA ONE-DAY EVENT

Valtra Tractor Transmissions

Thursday 28th October 2010

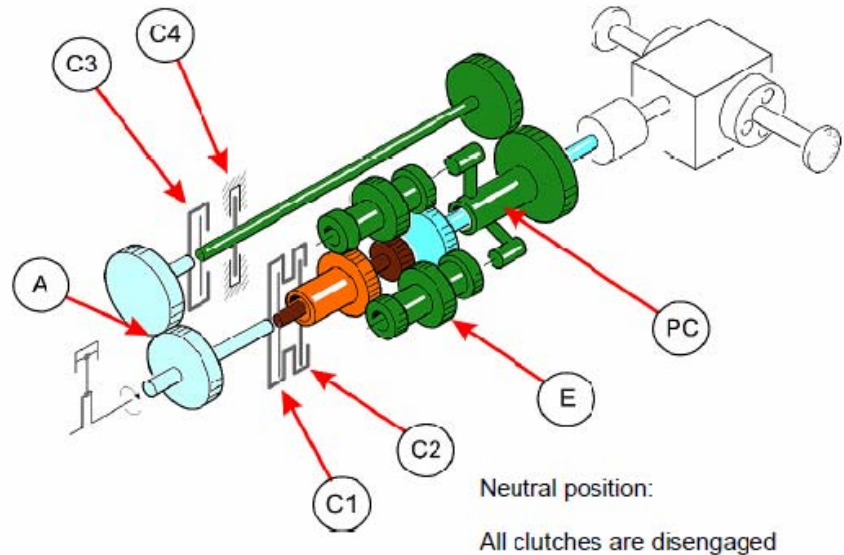
This presentation started by outlining the principles of design and operation of the two types of transmission on offer to the Valtra customer. A lot of analysis and thought had obviously gone into designing out potential disadvantages and minimising the risk of unnecessary wear or power loss. The gearbox has been designed to house its own oil lubrication system which is separate to the hydraulic oil system. The transmission uses a dry sump system so the gears are not immersed in oil; this has been done to reduce oil drag which is particularly energy hungry in cold conditions.

The Versu gearbox has 4 ranges plus 2 creeper ranges with 5 powershift speeds in each range. It uses 4 clutches to produce the different gear ratios in each range, which are cleverly achieved by only engaging one clutch at each gearchange. This means that a smoother change is achieved and there is reduced clutch wear. In many other gearboxes gear changes rely on one clutch disengaging while another clutch engages; if drive and traction are to be maintained there is inevitably slip taking place in both these clutches during the change process. This inevitably produces wear and therefore reduces reliability. The Valtra gear ratios have a generous overlap and are designed to give a 128% step in each range right up to 50kph. The forward and reverse shuttle clutchpacks are each equipped with 9 friction drive plates for maximum reliability and this assembly is housed in a different compartment to the transmission. Lubrication is supplied by a transmission oil pump which maintains an 18 bar pressure and the oil is filtered through a 10 micron filter.

Versu Transmission Basic Layout.

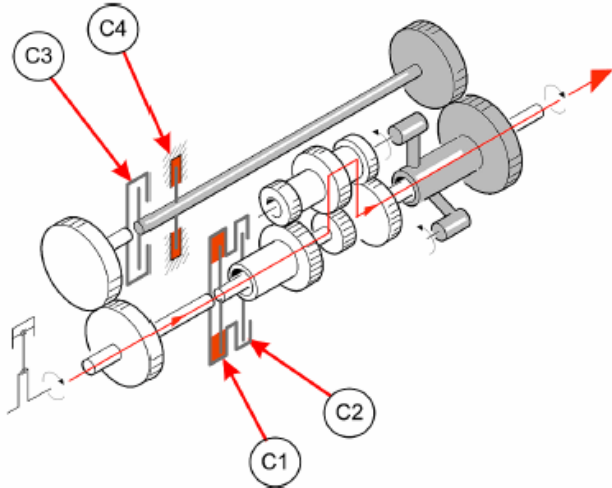
- Power splitting at point A
- Countershaft with two clutches instead of hydrostatic variator
- Countershaft driving the planet carrier (PC) of the planetary underdrive/overdrive set (E), the same as with Direct
- F-R Shuttle identical for both Versu, Direct and HiTech

Countershaft clutches

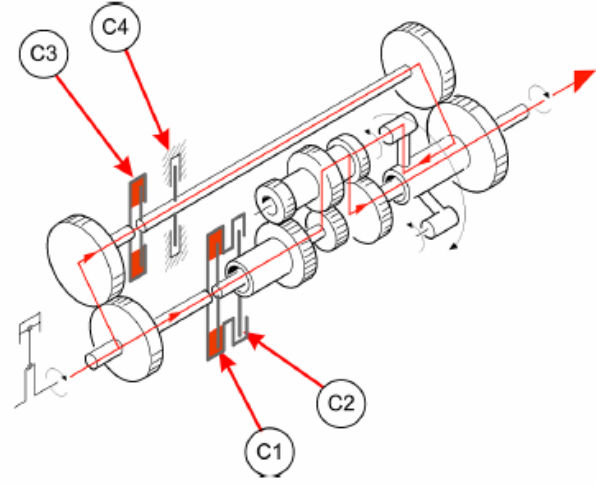


Versu First and Second Gear.

- Clutch C1 engages underdrive
- Clutch C4 connected to frame preventing the rotation of planet carrier
- Lowest speed, ratio 1.509:1

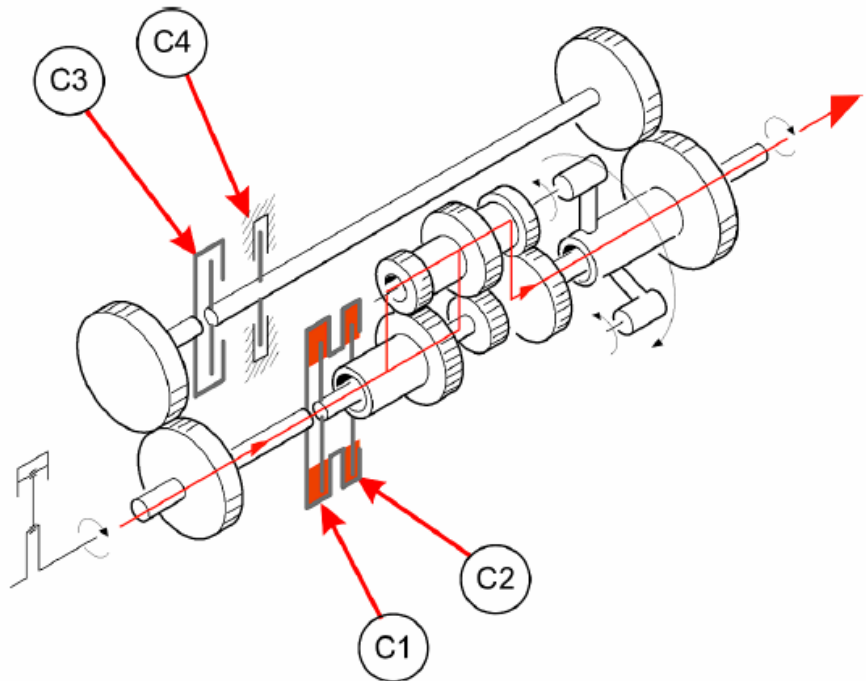


- Clutch C1 engaged for underdrive
- Clutch C3 engages the planet carrier to increase the speed
- Second speed, ratio 1.203:1



Versu Third Gear.

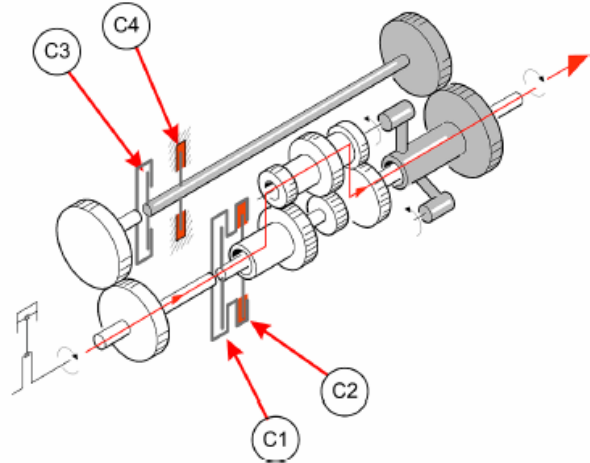
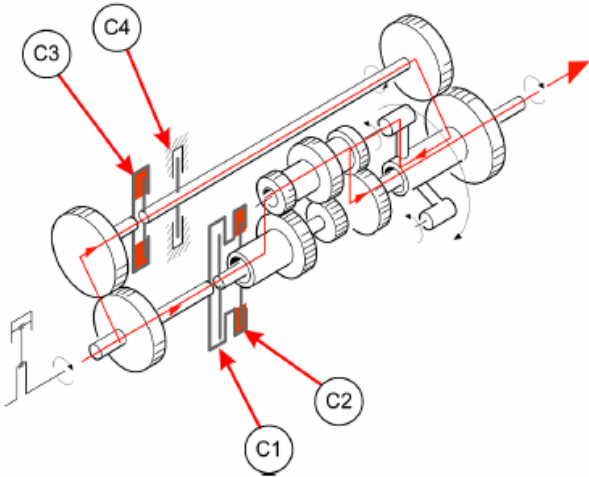
- Clutch C1 and C2 engaged for rotating the whole planet set as one unit
- This gives direct drive ratio 1:1



Versu Fourth and Fifth Gear.

- Clutch C2 engaged connecting the overdrive
- Clutch C3 engages the planet carrier to increase the speed
- This gives fourth overdrive ratio 0.796:1

- Clutch C2 engaged connecting the overdrive
- Clutch C4 connected to stop the rotation of planet carrier.
- This gives fifth overdrive ratio 0.661:1

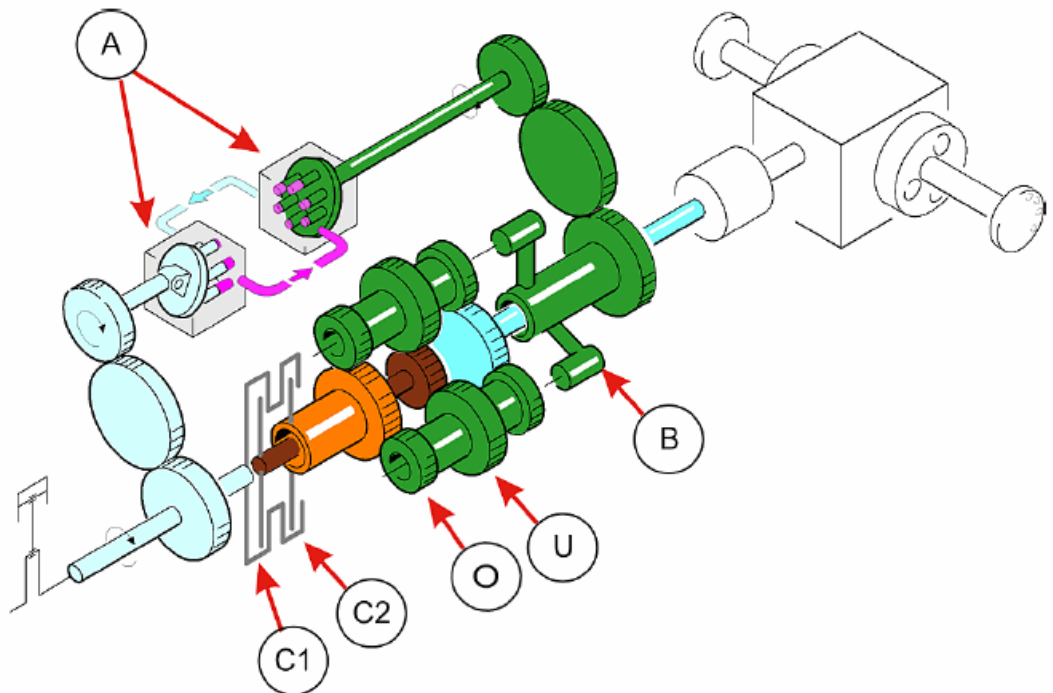


Direct CVT Transmission

The Valtra Direct transmission contains what we know as the CVT continuous variable transmission system. The configuration of the geartrain is almost identical to that of the mechanical transmission with a pair of clutches being removed and substituted by the hydrostatic variator drive unit which is able to transmit drive through intermediate drive gears at either end of the geartrain. There are only four ranges, the creeper gears are not needed as the CVT facility gives this flexibility.

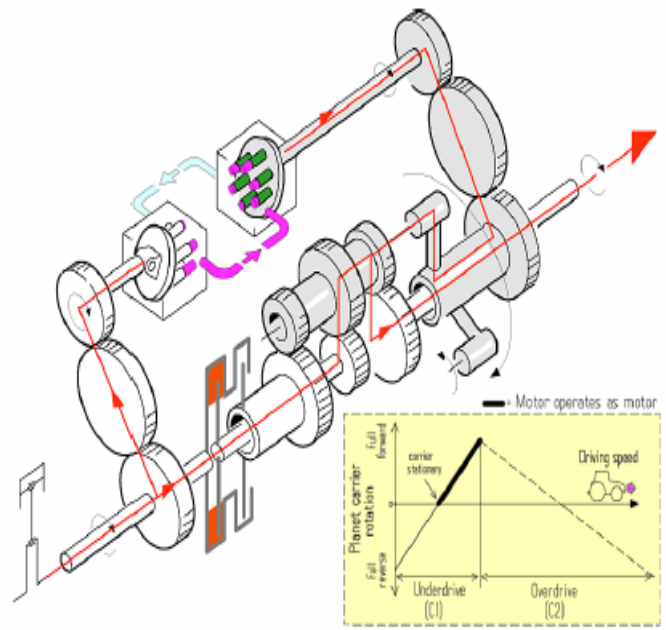
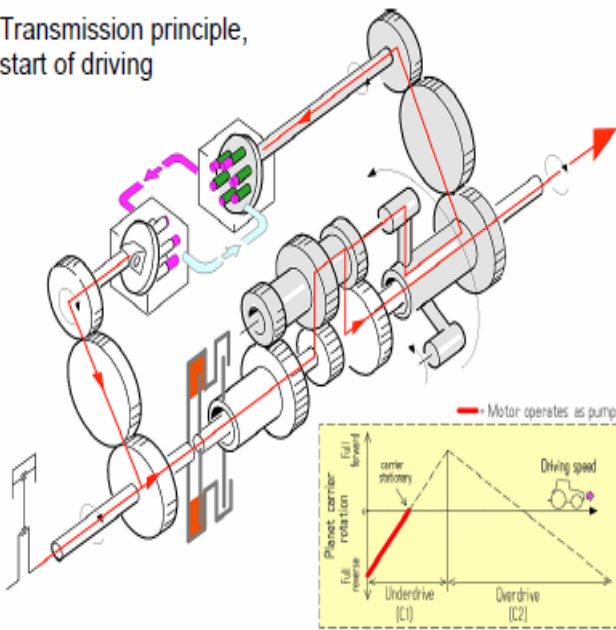
The pump / motor unit is made by Linde, it runs at a mid operating pressure of 250 bar, max operating pressure of 420 bar and intermittent pressure of 500 bar. The pump and motor unit each have a maximum displacement of 75cl / rev.

- A Hydrostatic variator
- B Planet carrier
- C1 Clutch for underdrive
- C2 Clutch for overdrive
- U Underdrive
- O Overdrive

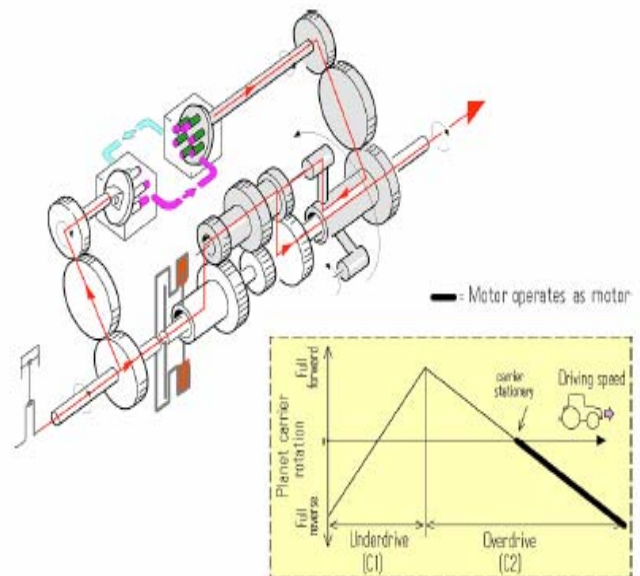
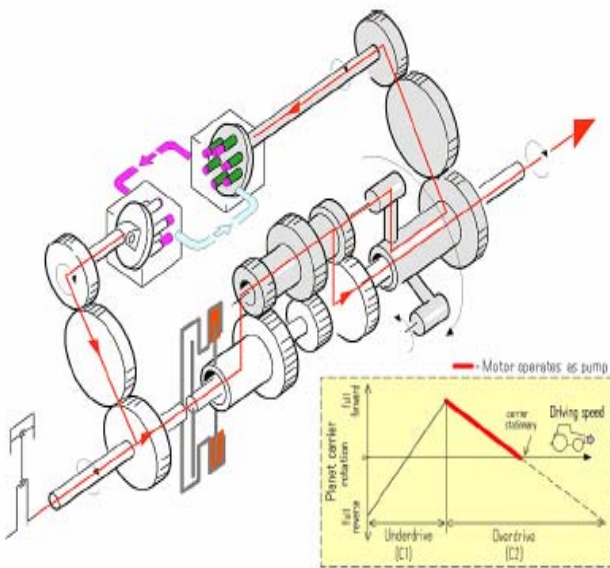


CVT Start and Increasing Speed

Transmission principle, start of driving



CVT After Shifting to Overdrive, Top Speed

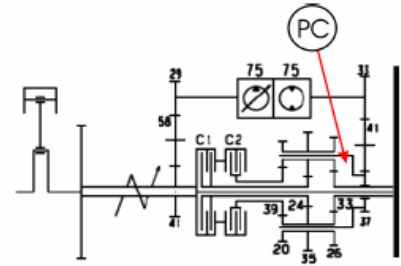


Function of the CVT-part is based on two speed powershift, underdrive selected by clutch C1 and overdrive selected by clutch C2.

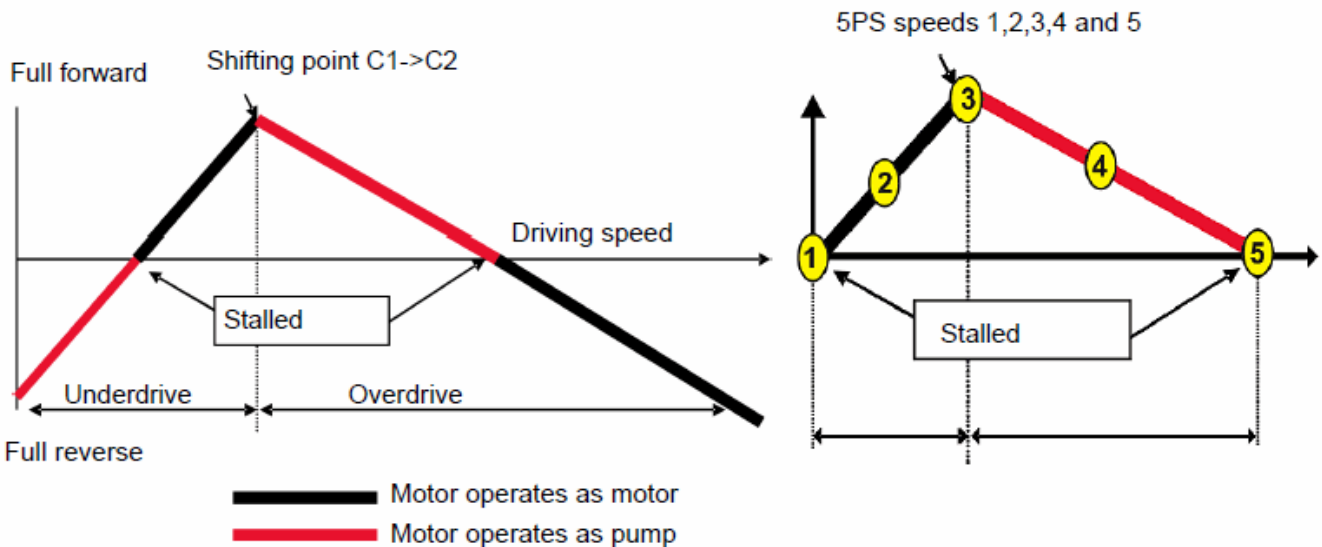
■ Control of rotating direction and speed of planet carrier PC by hydrostatic variator consisting of variable displacement pump and fixed displacement motor. When direction of flow is changed, the system is reversing and motor operates as a pump and vice versa.

■ The ratios of powershift speeds (underdrive and overdrive) have been selected so that the highest speed of underdrive is the same as the lowest speed of overdrive while the hydrostat unit is rotating the planet carrier full forward. In this situation clutch C2 for overdrive is engaged and then clutch C1 for underdrive is disengaged.

■ The hydrostat then starts to reduce the speed of the planet carrier, whilst the motor operates as a pump, up until stalling point. The system then starts reversing and the motor again acts as a motor; the top speed can then be achieved.



Planet carrier rotation



Note:

In underdrive the the rotational speed increase of planet carrier increases the driving speed
 In overdrive the the rotational speed decrease of planet carrier increases the driving speed

Two drive mode options can be selected by the driver, automatic or semi automatic, in automatic the accelerator pedal controls the forward speed and when released the tractor comes to a standstill. Semi automatic mode allows the driver to manually adjust the relationship between engine speed and drive speed. There is also a facility to select "Soft Start" a system which enables a smooth pull away from standstill in difficult conditions. Ground speed PTO is an available option with this transmission.

John Gough

ANNUAL ACCOUNTS 2009-10

The ALAM accounts 2009-10, as presented at the AGM:

THE ASSOCIATION OF LECTURERS IN AGRICULTURAL MACHINERY

Income and Expenditure - Year Ending 31st March 2010									
		2008 -09			2009 -10				
				Income	Expenditure			Income	Expenditure
Subscriptions				887.00				897.00	
Committee Expenses					446.90				241.22
Newsletter					36.76				80.44
Courses	Feb 08	Road Legislation		600.00	4.44	Oct 08	Hayter	0.00	0.00
	Oct 08	Hayter		480.00		Feb 09	IsoBus	275.00	0.00
						Oct 09	tba	0.00	0.00
Conference	2008	C M D		2065.00	1771.62	2009	Cumbria	3320.00	3510.41
						2010	Ireland	1360.00	981.01
Interest				20.94				2.90	
Miscellaneous				180.00	288.77			125.00	392.80
Surplus/Deficit	Surplus				1684.45	Surplus			774.02
TOTAL				4232.94	4232.94			5979.90	5979.90

Statement of Affairs as of 31st March 2010			
Bank Account as on 1 April 2009	5580.04	Bank Account as on 31 March 2010	3291.16
Building Society as on 1 April 2009	1420.43	Building Society as on 31 March 2010	4423.33
Plus uncleared incoming cheques		Plus uncleared incoming cheques	0.00
Less uncashed outgoing cheques	60.00	Less uncashed outgoing cheques	0.00
Plus Surplus	774.02		
	7714.49		7714.49

In my opinion the above is a true and fair view of the financial state of the Association of Lecturers in Agricultural Machinery for the year ending 31st March 2010		
Signed Treasurer	Signed First inspection	Signed Second inspection

Notes

Reduced committee expenses is a result of being able to get the committee together at the Ireland tour in April and the AGM at Reaseheath in July, removing the need for dedicated meetings.

The accounts for the Kverneland IsoBus day in February 2009 only show a part of the complete story - the total surplus from this event was £365.

Likewise the figures for the Ireland Tour in April 2010 are not the complete story - an income of £3760 and costs of £4613 gave an overall deficit of £853, which is a great result, as ALAM always plans to subsidise overseas trips for members. A deficit of this small size is thanks to the careful planning and booking of hotels, etc.

Interest income is low, due to the general state of interest rates and the economy.

The miscellaneous income includes late payments for courses in the previous year.

Miscellaneous expenditure the payments to the secretary and treasurer for the past 2 years and the charge for an accountant to examine the accounts.

At the close of the year, there were 93 members.

ALAM MEMBERS 2010-11

Name	Member No.	Mail to	Name	Member No.	Mail to
Gerald Anderson	10/056	Easton College	David James	10/027	Coleg Meirion Dwyfor
Bruce Badger	10/077	Sparsholt College	Melvin Johnson	10/004	Reaseheath College
Tim Ball	10/058	Reaseheath College	John Jones	10/049	Home address
Robin Blackford	10/052	Hayter Ltd	Chris Keeble	10/HON	Home address
Denis Bloomfield	10/042	Otley College	Brian Kessell	10/040	Duchy College
Chris Brown	10/083	Home address	David Lankester	10/037	Writtle College
John Bumby	10/HON	Home address	Nigel Macpherson	10/076	Sparsholt College
Brian Cairns	10/068	Home address	Patrick McLeod	10/025	Hartpury College
Denis Cartmel	10/048	Home address	Chris Morgan	10/013	Walford College
Nicholas Cartwright	10/062	Home address	Tym Morgan	10/036	Warwickshire College
Harry Catling	10/055	Royal Agricultural College	Richard Newman	10/034	Home address
Stuart Christie	10/017	Cannington College	Brian Nicholls	10/024	Reaseheath College
Richard Clarke	10/069	Otley College	Tim Northmore	10/018	Kingston Maurward College
Ian Coleman	10/019	Hereford College of Technology	Mike O'Dowd	10/HON	Home address
Peter Coleman	10/046	Home address	Robert Patmore	10/043	Home address
Stewart Cousins	10/003	Home address	Clive Perrins	10/044	Home address
Chris Creasy	10/041	Home address	Brian Poulson	10/026	Home address
Kevin Davenport	10/021	Myerscough College	Freddie Pullan	10/085	Walford College
Alan Davey	10/029	Cannington College	Robert Rattray	10/047	Home address
Wynn Davies	10/081	Home address	David Ross	10/057	Newton Rigg College
John Dixon	10/054	Lackham College	Jonty Rostron	10/061	Home address
Neal Dodd	10/012	Coleg Powys	Richard Rudge	10/080	Hereford College of Technology
Robin Drury	10/084	Notts Trent University	Jon Sarsfield	10/022	Home address
Oliver Dunthorne	10/078	Home address	Michael Sidlow	10/038	Lackham College
Duncan Elliott	10/002	Duchy College	Roger Soper	10/070	Home address
Sandy Ellis	10/035	Askham Bryan College	David Sparkes	10/001	Home address
Colin England	10/045	Kingston Maurward College	David Stephenson	10/023	Home address
Nigel Fox	10/072	Sparsholt College	Rick Sunderland	10/051	Bishop Burton College
Andrew Frank	10/014	Home address	Charles Szabo	10/016	Riseholme College
Philip Goddard	10/086	Walford College	Andy Tabernor-Mills	10/079	Hereford College of Technology
John Gough	10/HON	Walford College	Ian Taylor	10/007	Barony College
Julian Greenman	10/031	Lackham College	Emlyn Thomas	10/075	Home address
David Harris	10/028	Brinsbury College	Roger Tiller	10/066	Sparsholt College
Paul Harrison	10/050	Otley College	Martin Towsey	10/008	Brackenhurst College
Steve Hasell	10/030	Cannington College	Tom Turney	10/HON	Home address
Richard Heath	10/015	Home address	Mark Tyson	10/039	Home address
David Heminsley	10/HON	JCB Training	Arthur Walker	10/HON	Home address
David Henley	10/032	Bicton College	Richard Waterson	10/064	Home address
Graham Higginson	10/060	Reaseheath College	Stephen Watson	10/067	De Montfort University
Paul Hill	10/006	Writtle College	John Welwood	10/020	Home address
Vic Hird	10/063	Brackenhurst College	Ian Whitehead	10/HON	Home address
Peter Homer	10/010	Home address	Gwynfor Williams	10/HON	Home address
Tony Houghton	10/033	Home address	David Williams	10/087	Llysfasi College
Phillip Hurrell	10/073	South Cheshire College	David Wilson	10/005	Home address
Martin Hutchinson	10/082	Kingston Maurward College	Duncan Wilson	10/074	Home address
Andrew Jackson	10/065	Reaseheath College	Peter Woodliffe	10/053	Home address
			Paul Wray	10/011	Home address

We still a few unresolved issues with unidentifiable standing orders so please check with your colleagues – if any have standing orders taking money from their bank but are not on the membership list, please get in touch with the treasurer.



ASSOCIATION OF LECTURERS IN AGRICULTURAL MACHINERY

Membership Application Form

Title	Initials	Forename		Surname	
Home Address			College Name		
			Address		
Postcode			Postcode		
Phone			Email		
My connection with education in agricultural/horticultural engineering is:					
Signed			Date		
Proposer (Member of ALAM)					
If you don't know any members, just return the form and we'll arrange contact with one in your area.					
HOW TO PAY- The current rate is £10 per annum, payable on April 1st each year.					
By cheque: Cheques should be crossed and made payable to "The Association of Lecturers in Agricultural Machinery", and sent with this form to the treasurer.					
By standing order: It will help us provide an efficient service to members if you pay subscriptions by Standing Order, by completing the following, and returning the whole form to the treasurer.					
Bank Name			Name of Account		
Branch			Account No.		
Address			Sort Code		
			Payment Reference		
Postcode			Please write your Initial and Surname as a Payment Reference in the space above, to ensure ALAM can clearly identify your payments.		
Please pay to Lloyds Bank, 12 Lendal, York, YO1 2AF, (Sort Code 30-99-99) in favour of The Association of Lecturers in Agricultural Machinery (Account Number 1373714), the sum of £10 immediately, and then annually on the first of April each year, until cancellation by me of this standing order, debiting the account specified above.					
This order cancels and replaces all previous orders in favour of The Association of Lecturers in Agricultural Machinery.					
Signed			Date		
Standing Orders are for a fixed amount, which can only be altered by you. It is not a Direct Debit, which allows the payee to vary the amount drawn.					

Return completed forms to David Heminsley, ALAM Treasurer,
The Old Byre, Lower Street, Doveridge, Ashbourne, DE6 5NS.

For use by the treasurer							
Details recorded		Payment received		Bank Order processed		Member number	

Form revised June 2009