

Also featured in this copy of **Link**:-

Page 2	A319 Makes Maiden Flight On Course To Beat Profit Target
Page 3	Toulouse Build Line Visit DRS Saving Time
Pages 4 & 5	Museum Gears Up Exam Successes Getting Better All The Time
Page 6	Facing The Future Together Teamwork Triumphs
Page 7	New Military Opportunity French Commuters Arrive At Gloucester
Page 8	Doing It With Data Climb Every Mountain I Grant You 3 Wishes...

# MESSIER-DOWTY **Link**

The House Magazine of Messier-Dowty Limited Issue 12, October 1995

# RAF Salute

## **The Battle of Britain Memorial Flight made a flying "thank you" visit to Gloucester in August.**

The fly past was in recognition of ourselves and DAAS Gloucester providing an instant response to a request from the RAF to refurbish the Avro Lancaster landing gear.

The Lancaster was in the middle of a busy summer display programme, plus it was scheduled to participate in the VJ day fly past and poppy drop over London.

Following an earlier heavy landing, officials at RAF Conningsby, home of the Battle of Britain Memorial Flight, requested urgent assistance. Our Product Support Department responded immediately and sent Steve Mitchell to inspect the gear and assess the situation. All agreed that the gear should be returned for strip down, inspection and repair.

Our colleagues at DAAS Gloucester worked around the clock and delivered the refurbished gear to the RAF within 24 hours.

The fly past included the Lancaster, the last flying in Britain, together with a Spitfire and Hurricane.



*Pictured are the Lancaster  
and Hurricane at 100ft  
over the front office*



# A319 Makes Maiden Flight



**On August 25 the A319 made a successful maiden flight, the day after it was rolled out at Hamburg.**

The A319, with a maximum take off weight of 70 tonnes, typically seats 124 passengers and offers the longest range in its class, 5500 kilometres. The A319 will now continue on its flight test programme through to certification in late March 1996.

At the time of the roll out, Airbus had 81 firm orders for A319 aircraft, bringing the total number of single aisle aircraft on order to 905. The single aisle family includes A319, A320

and A321. The main gear is identical to the A320 gear.

Hamburg is the final assembly centre for both A321 and now the A319. There is some debate between Germany and France that Hamburg should be made the final assembly point for all single aisle aircraft. This would entail moving the A320 line from Toulouse.

*Malcolm Shore, Messier-Dowty's service representative based at Hamburg, is pictured helping to 'roll-out' the landing gear. Pictured above is the aircraft taking off for its first flight*



# On Course To Beat Profit Target

**Nine months into this financial year we are on course to achieve our sales target and beat our profit target. The year can be seen in two distinct halves in terms of our sales.**

In the first 6 months of the year we exceeded our sales target by £2.4 million, giving a major boost to our profits. This was mainly due to the bringing forward of Airbus original equipment sales from the second half of this year.

The downside of this phasing effect is that it reduces sales in the second half of the year. Our latest prediction is

that sales in the period July to December will be £1.9 million below target. The chart illustrates the pattern of sales in the two halves of the year.

Whilst the sales shortfall in the second half of the year has an adverse effect on profits we can counteract this by making every effort to keep costs down. In addition, spares sales are still higher than forecast and this has a positive effect upon profit.

Our performance in the period July to September has been mixed. Overall sales were, as expected, below target and we had a poor month in August

with both efficiency levels and delivery performance below par. We did, however, manage to recover the situation with a good performance in September.

Looking forwards, we need to keep up our efforts for the rest of the year and overcome the month end delivery problems which have affected us recently. If we can do this we will be well placed to be able to beat our 1995 profit target and to achieve the maximum payout from this year's profit sharing scheme.

## 1995 SALES

JANUARY TO JUNE		JULY TO DECEMBER	
Target	Achieved	Target	Latest expectation
£45.1 million	£47.5 million	£43.1 million	£41.2 million



## Toulouse Build Line Visit



*Our team at the A330/340 build line.*

**Back in September, 35 people from across the site managed to stumble from their beds in time to meet in the car park at 5.00a.m. The reason for this early start? - a trip to Airbus Industrie in Toulouse.**

The party was shown around the Toulouse facility by Airbus Industrie's Production Director, Frederic Ribere. The highlights of the tour were the A330/340 build line which was for-

merly used for the construction of Concorde.

This was the first time ever that Airbus had allowed a party of this size to tour their site so extensively. The aim of the visit was to give people the opportunity to visit Toulouse and a chance to see the end result of our efforts for themselves.

Elaine Taylor from Engineering was one of those who made the trip. "I was

amazed at the sheer size and scale of the Toulouse activity," she told **Link**. "It was very impressive and well worth visiting. And our Airbus hosts made us feel very welcome."

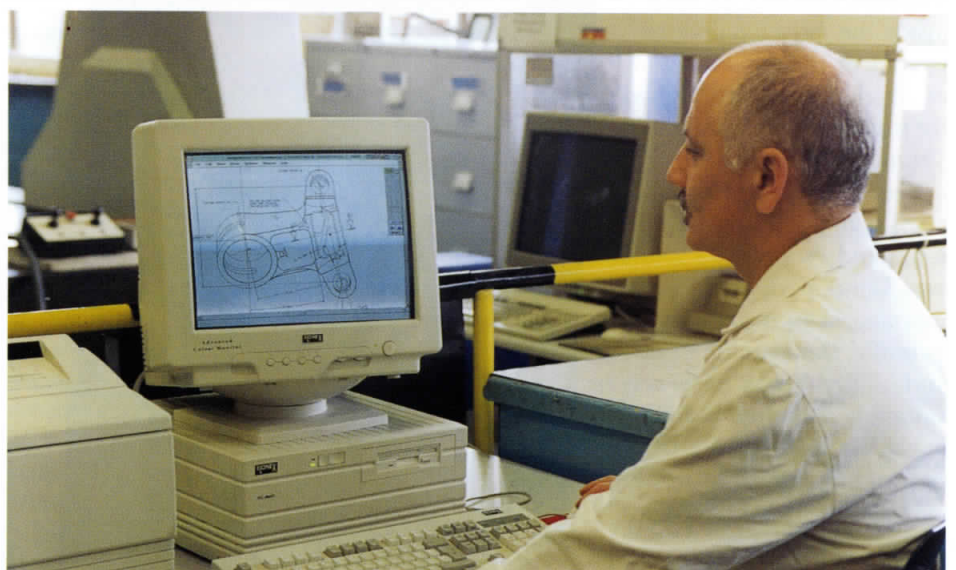
The visit was a great success, the only disappointment being that more time couldn't have been spent at the build lines. It is intended to arrange further trips in the future.

## DRS Saving Time

**The Drawing Retrieval System was successfully launched at the beginning of September allowing drawings to be viewed and printed from PC's around the site. DRS is already bringing benefits to users such as Val Calderone of Large Landing Gear.**

"Since the introduction of DRS there has been a considerable reduction in the number of times I have to visit the Production Drawing Stores for stage drawings and Engineering Services for finished drawings," Val told **Link**. "With DRS I can print locally on A3 and A4 sheets, view drawing information on the screen without taking a print, enlarge any area I want to look at and view many other documents. It really is proving to be very useful."

The big task of loading drawings on to the system is accelerating with



*Val use the DRS*

hundreds being added each week. Please continue to supply Engineering Services with lists of drawings which

you need and phone 1696 if you have any queries or require training.



# Museum Gears Up

During the year in which we received the Queen's Award for Technology, it is fitting that we have donated and installed an A340 landing gear in the Science Museum in London.

This is a very prestigious and visible location for one of our key products and something of which we are rightly proud. The opportunity arose during the Farnborough Airshow just over a year ago. A senior curator from the museum visited our stand and was so impressed with the A340 landing gear that he immediately saw it as a potential exhibit for the museum.

We agreed to donate the gear to the museum and after some detailed planning and delicate handling, it is now installed in the front foyer area.

The installation itself was rather tricky. Very little headroom was available above the gear for any lifting equipment. The floor loadings were restricted for both the area inside the museum and the pavement just outside, none of which had been designed for the movement of a 15ft, 5 tonne exhibit.

After a number of discussions with the Science Museum and Pickfords, a solution was found. Early one Sunday morning, with the road closed to traffic, the exercise began and on the day all went very smoothly. But then from the leaders in landing gear technology and the country's leading curator of technology, what would you expect!!

The montage of photographs show the team from Gloucester (Peter Hall, Clive Locke and Brian Dobbins) during the installation.





# Getting Better All The Time

**Steve Beard recently joined us as Project Leader - Continuous Improvements in the Quality Department. We asked him to tell us his views on continuous improvement and his initial impressions of Messier-Dowty.**

**Link.** *What is continuous improvement?*

**Steve.** *It's about taking small incremental steps to improve, implemented through gradual, constant effort. Generally it's a team based activity which is ongoing and involves all parts of the company.*

**Link.** *Why do we need to continuously improve?*

**Steve.** *The aerospace industry is becoming increasingly demanding. We have to continuously improve simply to maintain our competitive position and provide the standard of service our customers expect. You can be sure our competitors are doing the same.*

**Link.** *What are your initial impressions of Messier-Dowty?*

**Steve.** *Over the past few weeks I have visited many departments to find out what's in place to promote continuous improvement. I found that there are already a lot of good initiatives and teams working to implement improvements.*

**Link.** *Can you give us an example?*

**Steve.** *Yes. In the Purchasing Department they have developed a supplier rating system that lets us measure the*



*performance of our suppliers. This has involved working very closely with many other departments, other Messier-Dowty companies and our suppliers.*

*We are now able to regularly monitor the performance of our suppliers and help them meet our performance standards. Other initiatives that have been introduced with the assistance of other departments include:-*

- *Purchasing kits of parts for assembly - this reduces handling, paperwork and inventory.*
- *Promoting concurrent engineering on purchased parts and new bid work.*

- *Reducing administration by better billing procedures.*

*This is only one example. Similar initiatives are going on throughout the company.*

**Link.** *So what are your thoughts about the future?*

**Steve.** *I have found an encouraging commitment to continuous improvement throughout the company. We need to build on this for the future. Everybody has a part to play either as individuals or as active members of team based activities.*

## Exam Successes

Congratulations go to the following who successfully passed exams in the last academic year:-

Name	Department	Qualification	Name	Department	Qualification
Andrea Allen	Marketing & Sales	RSA Beginners Teeline Shorthand	Matthew Shipp	Medium Landing Gear	City & Guilds 2240/02
Gary Barnes	Stores/Despatch	IQA A2, B6	Adrian Short	Test	City & Guilds BS767
Steve Goode	Material Control	RSA I in Information Technology	Cleve Wilson	Large Landing Gear	City & Guilds NC/CNC Machine Tool Setting & Operation
Kath Hale	Product Support - Spares	RSA II in Information Technology RSA III NVQ Business Administration	Sarah Wilson	Finance	CIMA Stage 3
Phil Hawes	Medium Landing Gear	Certificate in Management Studies	Mark Worrall	Finance	ATT
Malcolm Hayne	Material Control	RSA I in Information Technology	Andy Bromberg	Medium Landing Gear	French for Business
Sue Hewitt	Finance	CIMA Stage 2	Marilyn White	Processing	French for Business
Norman Hunt	Test	HNC Pneumatic & Hydraulic Services	Roland West	Medium Landing Gear	French for Business
Martin Langford	Medium Landing Gear	City & Guilds Autocad Customisation & System Management	Ray Wallace	Design	French for Business
Rachel Limbrick	Finance	CIMA Stage 1	Doug Knott	Site Services	French for Business
Tony Mills	Material Control	RSA I in Information Technology	Geoff Capps	Finance	French for Business
Andy Neophytou	Planning	HNC in Software Engineering	Bernard Jobbins	Customer Support Centre	French for Business
Phil Perry	Material Control	RSA I in Information Technology	Andy Fardon	Finance	French for Business
Kevin Pettit	Assembly - MLG	RSA I in Information Technology	Andy Cracknell	Pricing	French for Business
Mike Pictor	I.T.	BSc Business Computer Systems	Vince Dusang	Product Support - Spares	French for Business
Roy Scrivens	Design	BSc Hons 2.1 Maths with Computing			

Particular congratulations go to Roland West and Ray Wallace who came in the top 11 for the whole of the UK in their French exam.



## Facing The Future Together

### Six members of the Messier-Dowty team were invited to the first ever Supplier Conference held by BAE Airbus.

We were honoured to be asked to play an active role in the event. Peter Booth helped in the planning and preparation and Geoff Smith was the only supplier representative invited to make a presentation.

The theme of the conference was "Developing Relationships" and it took the form of a series of presentations and workshops in which suppliers played an active part. BAE Airbus shared their objectives and vision for the future and there was joint discussion on establishing best practice and how to achieve the performance levels needed to succeed in the Aerospace market. Representatives from 50 suppliers attended along with 100 people from various functions in Airbus.

The Conference was led by Alan Wakeham, Head of



Procurement for BAE Airbus, and the keynote presentation was made by Chris Geoghegan, Managing Director. In his address he stressed the need for mutual support. *"This top level involvement emphasises the importance we place on working with suppliers. Mutual cooperation will lead to best practice in everything we do - and through that we will achieve most of the cost reductions targeted in our business plan."*

In 1995 BAE Airbus will spend £407 million with its suppliers - over 80% of their total costs. It is clear why they are looking to their suppliers for a significant contribution to an overall cost reduction of 50% by 1998.

In his presentation Geoff Smith reaffirmed our commitment to support BAE Airbus in their cost reduction and other initiatives - in fact we have already been working on this for some time. As a follow up, selected suppliers, of

which we can be sure to be one, will be invited to work with BAE on a variety of issues arising during the conference.



Pictured is an A340 wingbox being moved out of assembly jig at the Airbus manufacturing facility at Chester

## Teamwork Triumphs

**In August a major milestone in the qualification of the A330/340 257 tonne main landing gear was reached.** The fatigue test on a complete landing gear was concluded with none of the major components having failed.

It was a major project to design, install and commission the rig because everything was much larger than anything else we had worked with in the past. New working methods evolved to deal with the size and weight of the landing gear and rig equipment.

The testing was completed in record time. The 250,000 test cycles were achieved over two years which is significantly faster than any previous programme. This remarkable feat was achieved through a great deal of commitment and dedication from not just the Test Team members, but from all of the departments involved in supporting the testing.

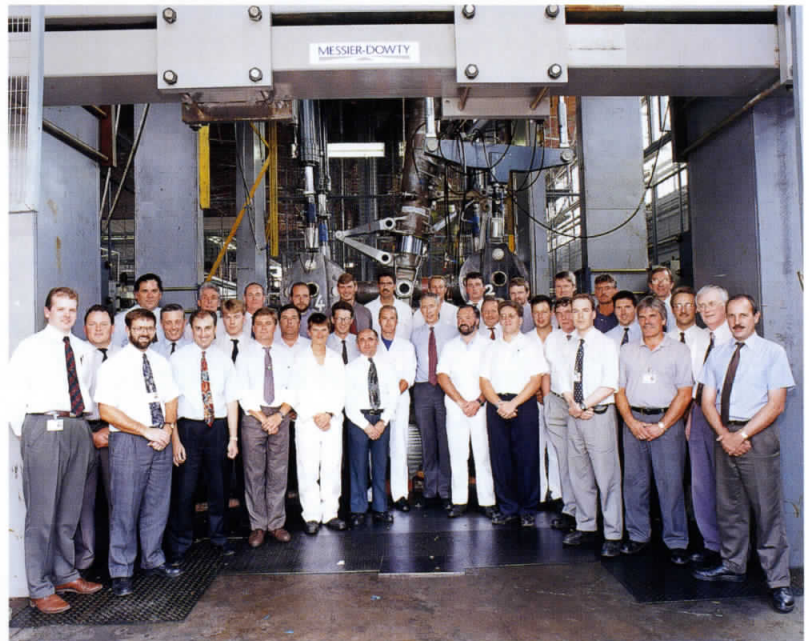
During testing, the gear had to be stripped down and removed from the rig on about fifteen occasions. Through improvements in working methods, mostly suggested by fitters working on the gear, the time for a complete strip and rebuild was reduced from fourteen to six days.

Wherever possible, the rig was kept

running twenty four hours a day. This meant that rig or component breakages had to be resolved as quickly as possible. The team members sometimes worked till midnight seven days a week until the rig was run-

ning again. Further benefits came from constantly striving to increase the speed of the test through improvements to the hydraulic power supply and the control system. Running rates increased from an initial 600 cycles per day to 950 cycles per day by the end of the test.

The reduced test time is important from the point of view of financial risk and potential damage to the company's reputation. If a major component, such as a main fitting,



had failed during the test, we should have had to replace all of the main fittings in service at significant cost.

This emphasises the need to complete such tests in the shortest possible time. The sooner the test finishes, the lower the risk, since less aircraft will be in service.

To celebrate the event, many of the people who had been involved gathered in the Test Department to be congratulated by Geoff Capps and David Johnson.



# New Military Opportunity

Earlier this year McDonnell Douglas requested target pricing information from us for the T-45A and F-15E landing gears. The gears currently are produced by different suppliers. The T-45A main gear is made by AP and the nose gear by IAI. Menasco produce the F-15E gears. McDonnell Douglas see an opportunity for reducing costs by placing both aircraft gears with one supplier.

After evaluating these initial replies McDonnell Douglas has decided to conduct a make-to-print competition for the T-45A main landing gear and the F-15E nose and main landing gears. As a result, Requests for Proposals have been issued to 7 landing gear manufacturers. Discussions are continuing now between Toronto and Gloucester to compile our best proposal which has a due date in November.

*McDonnell Douglas  
T-45A Gosbawk*



# French Commuters Arrive At Gloucester



ATR 72



Dassault Falcon 2000

**Falcon, Dornier and ATR are not names that most of us here at Gloucester are familiar with.** That will change over the coming months as the transfer of the manufacture of component parts for their landing gear takes place. The work is transferring

here from the Messier-Bugatti site at Molsheim, which is not part of our joint venture. Before these transfers can take place a lot of manufacturing engineering work has to be carried out and our Manufacturing Engineers have been working flat out to cope with the

additional load. The parts we make here will be shipped to the Messier-Dowty S.A. manufacturing plant at Bidos for final assembly.

Shown below are some of the basic details about the commuter aircraft and the parts we will be making here.

AIRCRAFT	SEATS	WINGSPAN	LENGTH	TAKEOFF WEIGHT	1996 AIRCRAFT QUANTITY	FIRST DELIVERY FROM GLOUCESTER	PARTS BEING MADE
Dornier 328	30	21 metres	21 metres	13,990 kgs	34	January 1996	Main fitting (main gear) Wheel lever, axle
ATR 72	74	27 metres	27.2 metres	21,500 kgs	24	April 1996	Main fitting (main gear) Wheel lever
ATR 42-500	50	24.6 metres	22.7 metres	18,600 kgs	24	October 1996	Main fitting (main gear) Wheel lever
Dassault Falcon 50	8 to 12	18.9 metres	18.5 metres	17,600 kgs	12	May 1996	Main fitting (main and nose gears)
Dassault Falcon 900EX	19 max	19.3 metres	20.2 metres	20,640 kgs	18	June 1996	Main fitting (main and nose gears)
Dassault Falcon 2000	12 max	19.3 metres	20.2 metres	15,875 kgs	12	May 1996	Main fitting (main and nose gears)



# Doing It With Data

**S.P.C. (Statistical Process Control) is about collecting and analysing data to help us understand processes, bring them under control and then improve them.**

By using S.P.C. we can not only monitor what is being produced but also predict what is likely to be produced. Recently, a number of departments have recognised the potential for using S.P.C. for improving their processes. While still being guided by Quality where required, departmental teams around the site

are now developing to take over ownership of S.P.C.

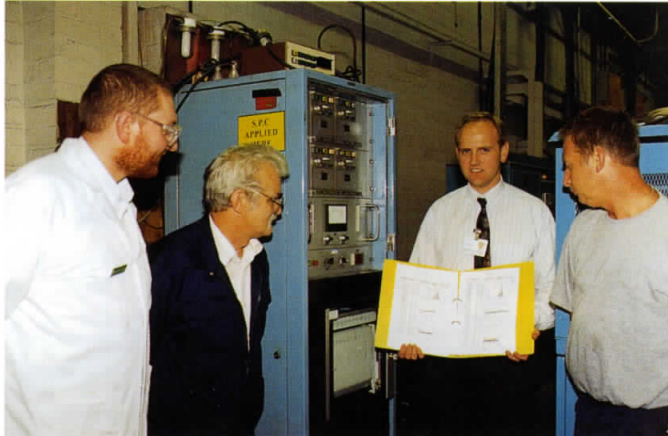
## Process Department

The most notable success in the Process Department has been the control exercised during the heat treatment of MAT 135. This means that we can start to predict when this process is likely to go "out of control", thus avoiding the need for re-processing, which could lead to costly distortion and possible scrap.

Further benefits are becoming available by using S.P.C. in the Paint, Plating and NDT Shops.

## Medium Landing Gear Machine Shop

Within the Medium Landing Gear Shop much work has been done by various teams on the subject of single



Members of the Processing S.P.C. team at work

point boring in aluminium. This was because this process had the highest number of concessions, mainly oversized bores.

There have been a number of attempts, with varying degrees of success, to use the process as a pilot study before introducing S.P.C. into other areas within the Department.

Recently it has been apparent that the benefits of pre-set tooling are starting to show. There has been a reduction of oversized bores from an average of 4.5 to 1.5 per month.

Another pilot study has been performed

on reaming with interesting results. This study is set to continue.

## Large Landing Gear Machine Shop

Several jobs have been picked to give a good example of what each process can achieve. For example, 4 reamed holes on the A320/321 main fitting have been measured during the last 20 components so that data can be analysed. The data has been used to define the machine's "Process Capability" (the tolerance it can hold reliably).

Data collected by the Large Landing Gear Machine Shop team has been influential in revising the reamed hole tolerance on the A320 main fitting and the A340 torque link.

## Large Landing Gear Assembly

This is the most recent area where S.P.C. is being used to monitor the weight of a number of sub assemblies that go into making the 271 tonne A330/340 Main Landing Gear.

The sub assemblies are being weighed by fitters and the results recorded on computer within the department to establish the average and range of expected weights.

In future issues of **Link** we will look at individual processes, related activities and the development of the teams involved around site.

Further information about S.P.C. is available from your supervision or Paul Stevens, QA, Ext. 1530.

# Climb Every Mountain

**Mike Davis who recently joined our Quality team, has fulfilled a life-long ambition when he and two friends took to the hills on a cycling tour of the French Alps.**

During the 15 day tour the team carried all their own luggage and cycled over many of the mountain roads used in the Tour de France cycle race. On completion of the famous climb "L'alpe d'huez", they each received a certificate stating the time it took to cycle to the top. L'alpe d'huez is one of the hardest Tour de France climbs, with 13 kilometres of climbing taking you up 1100 metres. (By way of comparison, the road over Cleeve Hill is a 200 metre climb).

Mike took 1 hour 25 minutes to complete this climb. "My legs were aching when I got to the top" Mike says, "But it gave me a great sense of achievement ... and I did enjoy the ride down the other side!"



Proof that he really did it! - Mike at the top of La Madeleine

The team covered a total of 700 miles during their tour and cycled at least one mountain road every day. If you would like to try a cycle tour but don't have quite the pedal power of Mike, the Gloucester City Cycling Club organise easy rides once a month throughout the year. Anyone interested in club cycling will find a G.C.C.C. runs list in most cycle shops.

# I Grant You 3 Wishes...



Genie of the lamp Gareth Hughes who raised £260 for the Cot Death Society by dressing up as a genie and appearing, complete with shaven head, in this year's Gloucester Carnival. Congratulations Gareth!