

## Against All Odds

Despite rolling blackouts, food shortages, and other inconveniences that have afflicted Japan in the wake of the March 11th earthquake and tsunami, DSI's representatives at Y-Max have been rock solid, supporting **eXpress** users in Japan without interruption. We'd like to give a big "shout out" to Y-Max in appreciation of their efforts. Thanks, guys!!!



In this picture taken in Tokyo last year, DSI's Jim Lauffer discusses **eXpress** marketing strategies with Y-Max's Masayo Tagami, Tetsushi ("Tets") Nishida and Tomohiro Kimura. Below, they are joined by Yasuhisa Yamada (far right).



## eXpress 5.11

*"A Little Something for Everybody"*

In February, DSI released **eXpress 5.11** — a new general release of the software that features a wealth of improvements that are sure to please both novice and power users alike. Here's a list of some of the improvements introduced in this release:

- Prognostic Analysis / Prognostic-Informed Diagnostic Analysis
- Recommendation of Candidate Failures for Prognostics
- Ability to Display Lower-Level Item Status during Diagnostics
- Chinese & Japanese versions of Main Analysis Reports
- Extended Coverage on Signature & Inspection Tests
- New Fault Group Rankings Report
- Additional Fault Resolution Statistics
- Multiple Symbol Views on Objects
- Default Object and Design States
- Function Naming Templates
- Improvements to Grid View

**Prognostic Effectiveness Report Summary**

Prognostic Effectiveness	100.0%
Prognostic Effectiveness	100.0%
Expected Prognostic Hours	66.81 Hours
Overall Prognostic Accuracy	31.0%
Overall Prognostic Coverage	3.1%
Expected Failures Prognosted	3.1%

**Prognostic Candidates Report Summary**

Probability (Top 25 Fails): 0.01111  
 Reliability Status Group: 0.0001919  
 Avg Time (Top 25 Fails): 112.26 minutes  
 Std Time (Bottom Group): 111.26 minutes

**Fault Group Rankings Report**

Isolated Fault Groups	Size	Failure Probability	Ranking
Group 1	20	0.01111	0.0001919
Group 2	18	0.01111	0.0001919
Group 3	19	0.01111	0.0001919
Group 4	17	0.01111	0.0001919
Group 5	16	0.01111	0.0001919
Group 6	15	0.01111	0.0001919
Group 7	14	0.01111	0.0001919
Group 8	13	0.01111	0.0001919
Group 9	12	0.01111	0.0001919
Group 10	11	0.01111	0.0001919
Group 11	10	0.01111	0.0001919
Group 12	9	0.01111	0.0001919
Group 13	8	0.01111	0.0001919
Group 14	7	0.01111	0.0001919
Group 15	6	0.01111	0.0001919
Group 16	5	0.01111	0.0001919
Group 17	4	0.01111	0.0001919
Group 18	3	0.01111	0.0001919
Group 19	2	0.01111	0.0001919
Group 20	1	0.01111	0.0001919

**故障隔离报告**

仅采用测试来诊断初始故障的时间费用 (多重故障隔离)

故障类别 (故障)	故障时间 (小时)	故障类别 (故障)	故障时间 (小时)
最大	10.00	最大	10.00
最小	0.00	最小	0.00
平均	0.276	平均	0.276
标准	0.000	标准	0.000
方差	0.000	方差	0.000
标准差	0.000	标准差	0.000
故障类别 (故障)	0.000	故障类别 (故障)	0.000
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标准差	0.000	标准差	0.000
故障类别 (故障)	0.000	故障类别 (故障)	0.000
最大	10.00	最大	10.00
最小	0.00	最小	0.00
平均	0.276	平均	0.276
标准	0.000	标准	0.000
方差	0.000	方差	0.000
标准差	0.000	标准差	0.000

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### Mark Your Calendars

For those of you who are planning to be in Denver on June 20–23 for the 2011 IEEE International Conference on Prognostics and Health Management (sponsored by the IEEE Reliability Society), DSI's Eric Gould will be presenting a paper on system prognostic requirements and prognostic-informed diagnostic analysis.

*Stop By, Say "Hi," and Show Support for DSI!*

# DSI Workbench

DSI Workbench

Start Session Start Monitor Test Results

Test Session

### Restart Session

Pass     Fail    **Fault Group # 34**  
 Replace 5 Items

Back

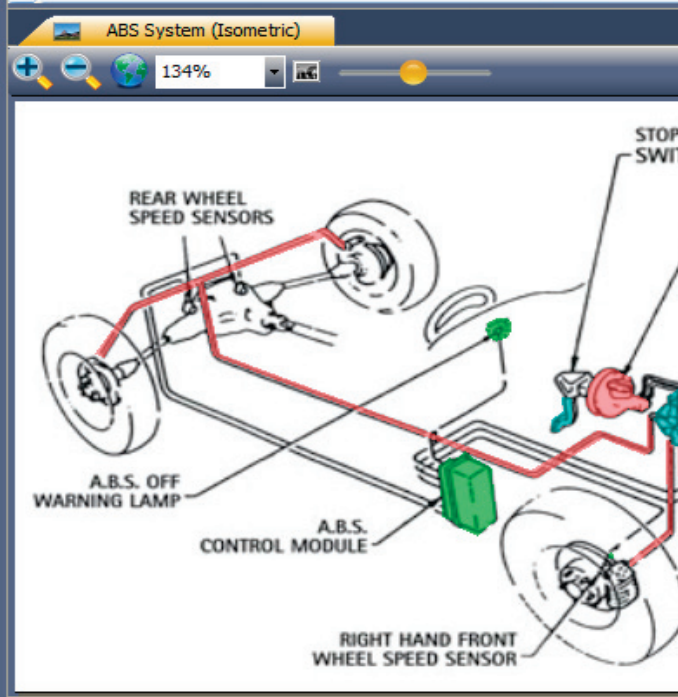
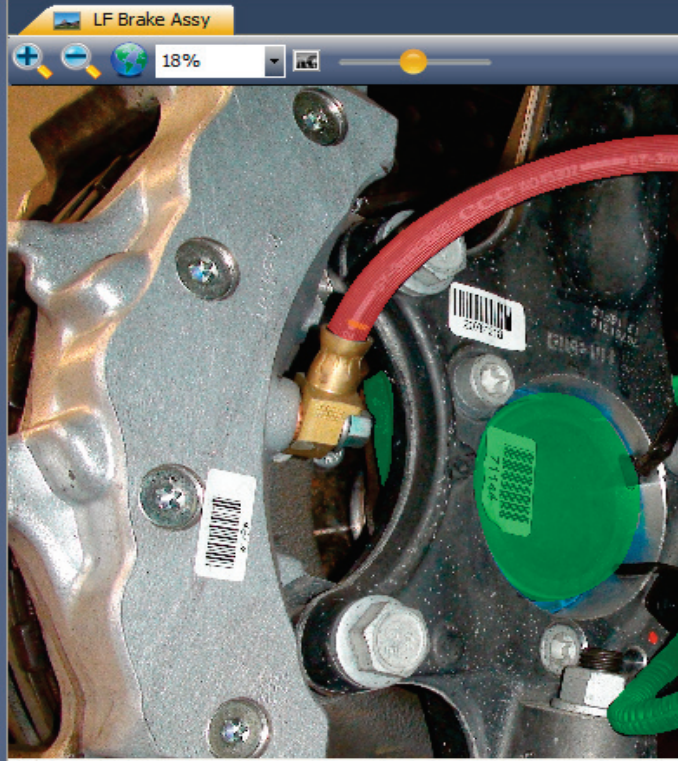
**Fault Group # 34:**  
 Replace FS Line  
 Replace RS Line  
 Replace FR Line  
 Replace RR Line  
 Replace Master Cyl

Current Isolation Sequence

Test Name	Cost	Time	Result
Test 1-0:Automobile Start Test	1	0.016667	Passed
Test 2-0:Diagnostic code input tests	5	0.000556	Passed
Test 3-0:ABS LED Lit	1	0.000556	Passed
Test 4-0:Spongy Breaking	1	0.016667	Failed
Test 4-1:Check Rear Pump Flow	70	0.016667	Passed
Test 4-2:Check Front Pump Flow	70	0.016667	Passed
Test 4-3:Spongy Air in the line tests	15	0.333333	Failed

Primary Suspects

Suspect Item	Repair Cost	Repair Time	Failure Probability
FS Line	\$20.00	0.50	0.013622
Air in Hydraulic Line			
RS Line	\$20.00	0.50	0.013622
Air in Hydraulic Line			
FR Line	\$20.00	0.50	0.007169
Air in Hydraulic Line			
RR Line	\$20.00	0.50	0.007169
Air in Hydraulic Line			
Master Cyl	\$110.00	2.50	0.003656
Air in the Cylinder			



# h Has Arrived!!

The screenshot displays a diagnostic software interface with two main windows. The top window, titled "Diagnostic Status View", shows a detailed schematic of an "Automotive Braking System". This diagram includes four wheels (R-F, R-R, L-F, L-R), a central ECU (Electronic Control Unit), various hydraulic lines, valves, and sensors. The bottom window, titled "Maintenance Manual", shows "Page 5 of 23" with a "Go to page 5" option. The manual page contains a schematic of the "ABS Actuator" system, highlighting components such as "No. 1 Check Valve", "No. 2 Check Valves Pumps", "No. 3 Check Valves", "Pressure Holding Valve", "Pressure Reduction Valve", and "Reservoirs". The actuator is connected to four wheel brakes: "Front Right Wheel Brake", "Rear Left Wheel Brake", "Rear Right Wheel Brake", and "Front Left Wheel Brake".

# Training Schedule

Course Number	Pre-requisite	Course Description	Dates	Location	POC
200	120	Advanced Diagnostic Development & Assessment	2 May 2011	Orange, CA	Denise Aguinaga, DSI
230	200	eXpress Advanced "Tips and Tricks"	2 May 2011	Orange, CA	Denise Aguinaga, DSI
205	200	Advanced Test Development & Importing	4 May 2011	Orange, CA	Denise Aguinaga, DSI
100		System Diagnostics Concepts and Applications	9 May 2011	Orange, CA	Denise Aguinaga, DSI
110	100	Basic Modeling & Introduction to Testing	9 May 2011	Orange, CA	Denise Aguinaga, DSI
120	110	Introduction to Testing & Analysis	12 May 2011	Orange, CA	Denise Aguinaga, DSI
100		System Diagnostics Concepts and Applications	27 June 2011	Orange, CA	Denise Aguinaga, DSI
110	100	Basic Modeling & Introduction to Testing	27 June 2011	Orange, CA	Denise Aguinaga, DSI
120	110	Introduction to Testing & Analysis	30 June 2011	Orange, CA	Denise Aguinaga, DSI
200	120	Advanced Diagnostic Development & Assessment	11 July 2011	Orange, CA	Denise Aguinaga, DSI
230	200	eXpress Advanced "Tips and Tricks"	11 July 2011	Orange, CA	Denise Aguinaga, DSI
205	200	Advanced Test Development & Importing	13 July 2011	Orange, CA	Denise Aguinaga, DSI

## Run-Time Authoring Tool 2.0



In the above screen capture of the eXpress Run-Time Authoring Tool, a newly-outlined region of a photo is being mapped to the corresponding object in the eXpress model.

With the latest version of the eXpress Run-Time Authoring Tool, "authoring engineers" can now map regions in graphic documents to items in their eXpress design. In DSI Workbench (or other custom IETM or diagnostic applications), these mappings allow photographs, schematics, isometric drawings, PDF documents and other types of graphics to be fully integrated with the run-time diagnostics. Not only can the mapped regions be color-coded to indicate item status, but the technician can also click on a region and automatically pull up information for that object. So, LCN numbers, stock numbers, repair procedures—any data that can be stored in an object attribute in eXpress—can be accessed by clicking on the picture!!

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