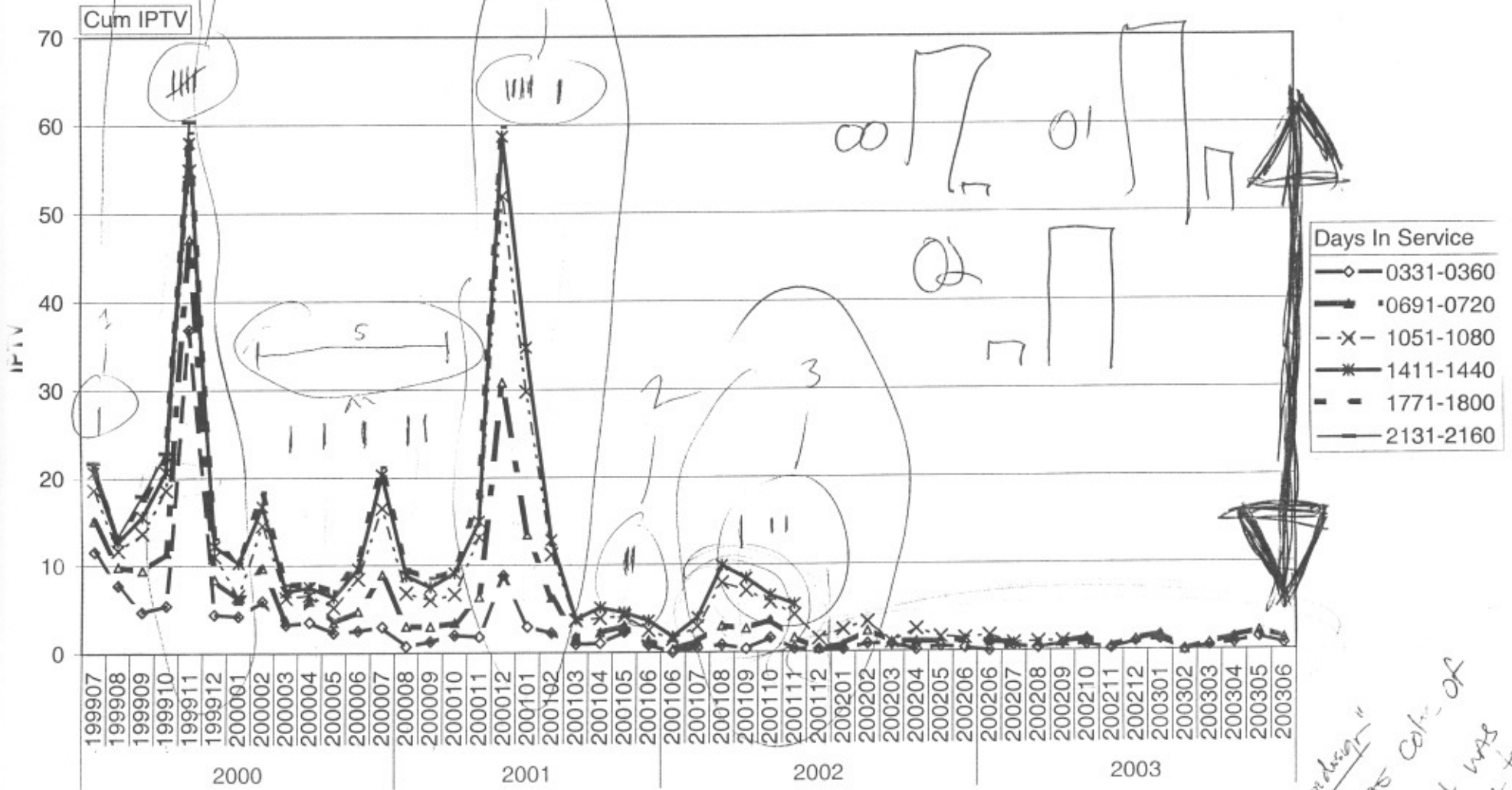


is there warranty?  
 can replace way down effort  
 but the code up supp stes so.

21 VINS

### 2000-2003 L61 J0820, J1840, & J1880 L-Series IPTV by Build Month



Model\_Yr | Build Month

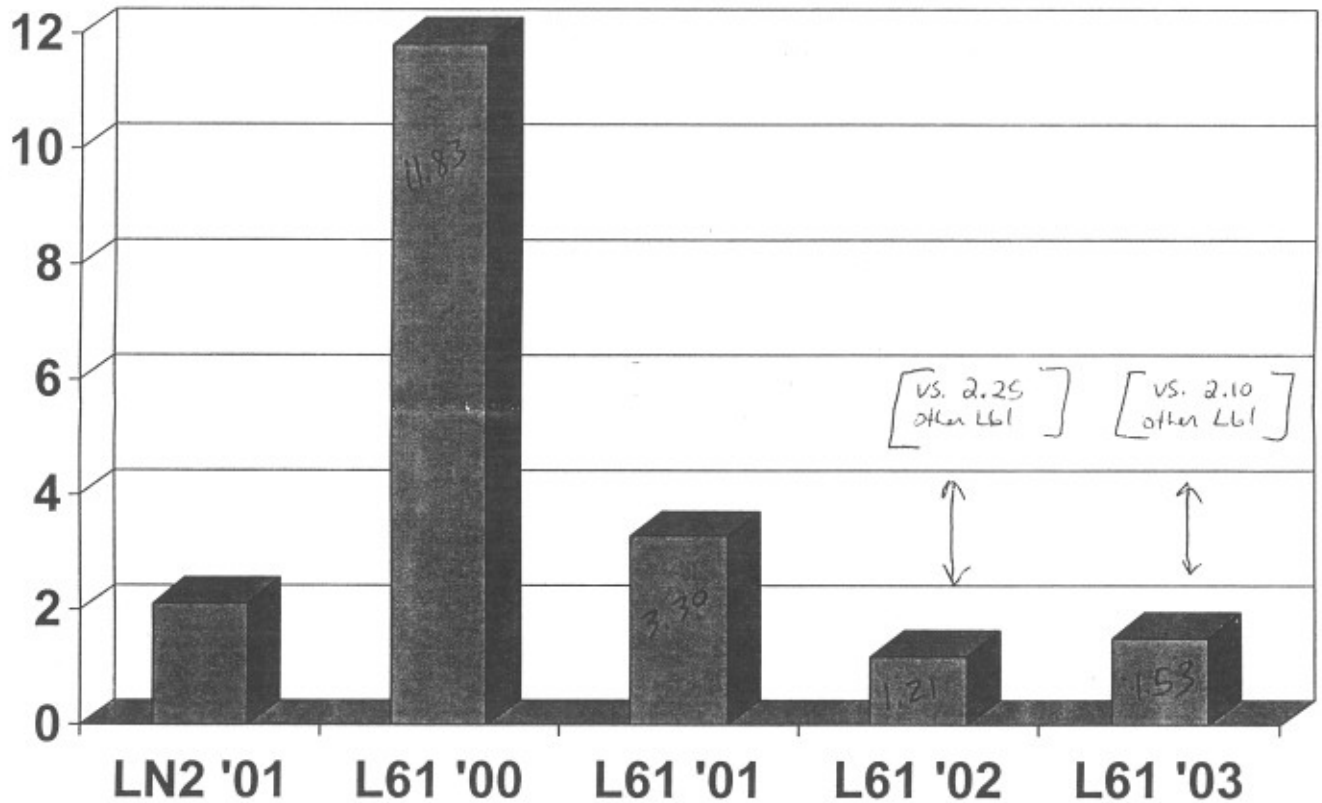
Days In Service	
—◇—	0331-0360
—■—	0691-0720
—x—	1051-1080
—*—	1411-1440
—-—	1771-1800
— —	2131-2160

"how design"  
 why change color of links  
 (X) last was change to the chr.

J1800  
J1810  
J1820 → ?

# Saturn

## Engine Replacement Labor Codes J1840 & J1880



Cumulative IPTV  
At 34 Months exposure

GM Powertrain

time from the archives.

Ron will be on vacation next week so likely we should meet week of 2/27/06.

Peter

Dean Guard



Dean Guard

02/16/2006 08:32 PM

To: PETER H DUGDALE/US/GM/GMC@GM  
cc: Pat Hewitt/US/GM/GMC@GM, Jay Subhedar/US/GM/GMC@GM  
Subject: NHTSA Investigation - MYs 00-03 Saturn L-series with L61 engine -  
Timing Chain may break

Peter,

Who best to answer these three questions - Ron Beals? Please RSVP to me and Pat Hewitt and forward this to Ron or whoever is elected to help.

Dean

----- Forwarded by Dean Guard/US/GM/GMC on 02/16/2006 08:31 PM -----



Pat Hewitt

02/16/2006 10:05 AM

To: Dean Guard/US/GM/GMC@GM  
cc:  
Subject: NHTSA Investigation - MYs 00-03 Saturn L-series with L61 engine -  
Timing Chain may break

Dean,

We expect to get a formal request for preliminary information from the government investigators within the next week. We remain quite confident in our story (limited issue, 99% in warranty, largely limited to spike windows, no safety incidents of any type, etc.).

**There is one piece we need that I would like to ask that you assign to someone and then to please let me know who that designee is so that I can follow up:**

**In service bulletin #03-06-01-017, there is a reference to the implementation of the newer design chain and differences in link colors. Could some please:**

- 1) Clarify what exactly the change in the chain was?
- 2) When was it put into production?
- 3) What specifically was the color change?

The issue 'went away' by Jan01, well before we implemented any improvements/enhancements, as announced in the bulletin.

With that in mind, the timing and specifics of the design change to the chain could be very helpful in an already strong story.

Thank you,

Pat Hewitt  
248-255-3126

Ronald B. Beals  
02/17/2006 09:36 AM

To: PETER H DUGDALE/US/GM/GMC  
Subject: Re: NHTSA Investigation - MYs 00-03 Saturn L-series with L61 engine -  
Timing Chain may break

Peter -

When changing from previous chain (90537338) to S-pin chain (24461834) the timing link colors changed. Old chain (338) had silver (dacromet) and copper timing links, and all other links were black in color. S-pin has shiny silver standard links (identical to the black links, but tumbled to shiny color), therefore the silver (dacromet) timing link color was not acceptable. So, with an S-pin chain the timing links are dyed in dykum with the colors blue and pink, and as mentioned the remaining links are silver in color.

By the way, S-pin refers to the chromizing of the pins. Old level chains (338) pins were processed with a single plating of chrome, S-Pin chains (834) are processed with a double chromized pin. The added thickness of the chrome acts as an improved wear surface with improved durability.

As I mentioned, probably the best person to address these types of questions is Jim Tuttle as he was EGM at the time and is now the technical expert. Seems to be a good fit for both the history (in Eli's absence) as well the technical questions. I, of course, will address any questions which I am able.

## Ronald B. Beals

Ecotec L4 Valvetrain Design and Release - Valvetrain Hardware Release Center (VT-HRC)  
U.S. Mail: GM Powertrain - Engine Engineering Building - 823 Joslyn Rd., Pontiac, Michigan 48340-2920 - Mail Code: 483-730-227  
Shipping: GM Powertrain - Engine Engineering Building - Dock 55, Room 2AE48 - 823 Joslyn Rd., Pontiac, Michigan 48340-2920  
Phone: 248-866-8011 - VME: 248-089-8061  
Cell Phone: 248-866-8011  
Fax: 248-857-4384  
E-Mail: ronald.b.beals@gm.com  
Teleconference: Toll Free: 866-340-2763 - International: 214-622-4991 - Access Code: 2016515

PETER H DUGDALE

PETER H DUGDALE  
02/17/2006 08:38 AM

To: Dean Guard/US/GM/GMC@GM  
cc: Jay Subhedar/US/GM/GMC@GM, Pat Hewitt/US/GM/GMC@GM, Jim Tuttle/US/GM/GMC@GM, Ronald B. Beals/US/GM/GMC  
Subject: Re: NHTSA Investigation - MYs 00-03 Saturn L-series with L61 engine -  
Timing Chain may break

Dean/Pat

Ron Beals is the current DRE for the cam drive. Eli Whitney was the DRE during this period and since retired from GM. I was the DSE during this time frame for the design changes. I can help with most of your questions:

- 1) **Clarify what exactly the change in the chain was?** A new improved bushing material called "S Pin" plus a change to the chain oil squirter by deleting the oil pressure relief valve with 2 holes.
- 2) **When was it put into production?** May 2002
- 3) **What specifically was the color change?** Ron: can you please comment?

Pat

I took a call yesterday from Janelle (I think) and explained that the cam drive system is common for L61 engines for NAO. During this period of time the underlying chain failure rates were higher than desired plus there were 2 "spills" where failure rates were much higher. We can dig out more details in

Can track all unique VINs - month of build

2000 MY

Jun 99	29
Jul 99	78
Aug 99	102
Sep 99	170
Oct 99	224
Nov 99	161
Dec 99	120
Jan 00	49
Feb 00	55
Mar 00	79
Apr 00	59
May 00	64
Jun 00	81
Jul 00	46

2001 MY

Jul 00	2
Aug 00	90
Sep 00	83
Oct 00	84
Nov 00	103
Dec 00	266
Jan 01	186
Feb 01	124
Mar 01	71
Apr 01	59
May 01	77
Jun 01	33

2002 MY

Jun 01	21
Jul 01	38
Aug 01	88
Sep 01	81
Oct 01	95
Nov 01	38
Dec 01	20
Jan 02	6
Feb 02	30
Mar 02	9
Apr 02	20
May 02	7
Jun 02	1

MM02

11  
169  
95  
264  
454

#5

58% 3 months

454

23  
454  
6 months after  
breakpoint  
change  
16% 1/2 yr

Spikes

Spikes

Spikes



- ✓ 1 11/99
- ✓ 2 11/00 (12/00) → 01/01
- scraper 3 7/00
- scraper 4 02/00
- ✓ 5 08/01 → 10/01

Mar 03	4
Apr 03	5
May 03	2
Jun 03	4

93