

Features and enhancements included in 971 R3.2.1 that were not available in R3.2:

Elements:

- Added 1-way slipping
- Add slippings' fs and fd as function of time when <0

Loads:

- Added option *LOAD_SEGMENT_SET_ANGLE
- Add warning in *LOAD_BLAST when segments are too close and empirical equation may no longer be valid

Output:

- messag:
 - Changed the restart name from messag to message#
- d3plot:
 - Added flag to d3plot database to signal l\$prepost that 4 inplane integration points are output. For 1 point shells 3 null inplane points are output.

General:

- *INITIAL_DETONATION_POINT can now use a larger PID (I10)

MPP:

- Add part set option for decomposition for partlist
- MPP changes to better handle thickness changes in contact

The remainder of this file describes (sometimes quite cryptically) many other enhancements, additions, and bug fixes made since the release of LS-DYNA version 971 R3.2:

Fix for Green Naghdi stress rate problem for *MAT_035

Fix in keyword reader for *MAT_165. *MAT_COMPOSITE_MSC_DMG now can be read as well as *MAT_COMPOSITE_DMG_MSC or *MAT_162

Fix for *MAT_162 causing improper delamination behavior in elements without a neighbor element

Fix for FPE in load curve lookup for *MAT_187 (SAMP-1)

Fix for *MAT_090 (*MAT_ACOUSTIC) with SMP consistency flag on

Fix for *MAT_083 with *DEFINE_TABLE and *INCLUDE_TRANSFORM. Strain rates in Table abscissa are now transformed correctly

Fix for *MAT_036 related to out-of-plane shear stress cap

Fixes for *MAT_187. Time step calculation now also correct in case BULK and GMOD are not given

Fix for *MAT_034 (*MAT_FABRIC) and include transformation of FAC load curve

Fix reading of *VENDOR card

Fix in writing stresses in dynain file for thick shell

Fix for initial stresses for solids in dynain which was broken in case an additional EOS was used.

Fix for a possible segmentation fault with eroding segment based contact

Fixes for user defined solid

Fix initialization of *CONSTRAINED_INTERPOLATION for solid only models.

Fixed hex spot weld assemblies that under certain circumstances were failing at the wrong time.

Fix for hex weld assemblies so that those generated by *DEFINE_HEX_SPOTWELD_ASSEMBLY go through the assembly failure routine and output to swforc as an assembly instead of individual elements

Fix memory problem with *CONTROL_SHELL, ESORT=2 when the model contains any *SECTION_SHELL, ELFORM=5 or *MAT_034 (*MAT_FABRIC)

Fix for restart ascii files that were missing for any restart run

Fix for *ELEMENT_SEATBELT_SENSOR, which now behaves consistently with the User's Manual

Fix selective mass scaling bug related to element sorting

Fix for user defined features crvval_v, tabval, tabval_v push_forward_4s, push_forward_4, push_forward_2, push_forward_2s and compute_f3 that were not available

Fix for memory handling of *DEFINE_FUNCTION

Fixes for interface linking file

Fix for output formats of belt curves and retractor number

Fix in temperature boundary condition nodes due to noise from interpolation

Fix for THKOPT=2 on Contact Optional Card B is working again

Fix for error message for *ELEMENT_BEAM_SECTION

Fix for blast IDs so it can be read in LS-Prepost

Fix lack of output at time 0.0 for inertia relief runs

Fix for rigid body number in error message

Fix in slipping definition which happens when more than one slipping is defined in one single *ELEMENT_SEATBELT_SLIPRING

Fix for Adaptivity: additional refinement removed if in fusion stage

Fix for adaptivity when *DEFINE_FUNCTION is used

Fix for adaptivity when *TERMINATION_CURVE is used

Fix for IACOOP=2 filtering. Filter initial conditions were not stored properly, thus affecting accuracy of results

Fix missing legend in MPP version of matsum file

Fix in MPP for drdisp.sif file output

Fix in MPP for certain SPC condition non properly enforced in ALE constrain and penalty coupling

Fix in MPP for initialization problems of some slave node arrays in
*CONTACT_ERODING_NODES_TO_SURFACE

Fix in MPP solid adaptivity when processor 0 had no surface elements

Fix in MPP for STRESS_INITIALIZATION and encryption

Fix in MPP for MPP Tied Contact

Fix in MPP for *CONTROL_MPP_DECOMPOSITION_PARTS_DISTRIBUTE and new keyword
*CONTROL_MPP_DECOMPOSITION_PARTSET_DISTRIBUTE