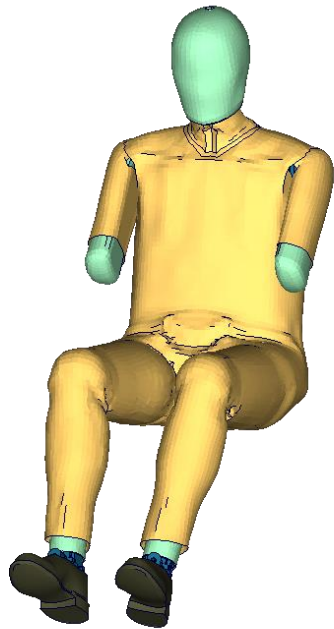


DYNAmore dummy model licensing FAQ

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Sebastian Stahlschmidt
Alexander Gromer

DYNAmore GmbH

How is a Dummy Model secured?

It is important to know that our dummy models are secured by an encrypted file which is part of the dummy model input.

Particularly the encrypted file is a pgg decrypted include file. This file contains all curve data of the dummy model which is necessary for the material definitions. So the material data and a huge part of the validation work are protected.

Which dummy models use an encrypted file?

All of DYNAmore's current commercial Dummy models (BioRID-2, ES-2/ES-2re and WorldSID) use an encrypted material file. Each major dummy model release has its own encrypted material include. The files can be used in combination with the current model release and possible bug fix releases (e.g. ES-2 v5.0.x). If there is a new major release of the model, a new encrypted file will be needed and, of course, it will automatically be delivered by your model distributor.

Can I read in the encrypted file with my preprocessing tool?

No, this is not possible since LS-DYNA is the only program which can read the decrypted include file. LSPP is also not capable to decrypt the pgg data.

Can I read in the dummy model with my preprocessing tool?

Yes. In the model delivery package a file named

dummy_version_units_load_curve_work.key

is enclosed. This is a placeholder for the encrypted include file and contains exactly the same curves but with fake data. Using this file instead of the license file allows the user to handle the model in the preprocessor like a common model without encrypted data. Before starting your occupant analysis it is required to replace the placeholder include file with the license file.



Is it possible to renumber the dummy model?

Yes. All the encrypted *DEFINE_CURVE definition have parameterized IDs. These ID parameters can be found in the (unencrypted) main model include. Above this there is a parameter called "lcoff". This parameter sets an ID offset for the curves. For example if it is desired to get the dummy model in the 5000000-range, just renumber the dummy model by offsetting all entity IDs by 5000000 except the Table and Load_Curve IDs. After that set "lcoff" to 5000000 and the model should be ready to run.

An alternative way of getting your dummy model in a specific number range is to use *INCLUDE_TRANSFORM. Here you have to set any entity offset to your desired value. In this case "lcoff" must be set to zero.

How does my Input expire?

In each case, only the encrypted material file will expire. DYNAMore delivers two different options for the encrypted material file.

Encryption expires due to expiration date in the encrypted file:

In this case the encrypted material file is expiring due to a date which is in the encrypted file. If the file has expired it must be replaced by a new file with a new

expiration Date. The naming of these files follow a certain scheme:

Dummy_version_allunits_customer_name_issue_date_license_expiration_date.asc

The dates are in the format mmddyyyy. So it can be seen easily when the license was generated and at which date it will expire. Another way to find the expiration date of your dummy model is to have a look into the d3hsp file of an arbitrary analysis. There you will find a comment block like:

```
ES-2 v5.0 mm ms kg license will expire on the
01/15/2013
licensed to DYNAMore GmbH
```

Encryption expires due to expiration of Vendor license of LS-DYNA License server:

In this case the encrypted material file is expiring due to a Vendor license which is imported on the LS-DYNA License server. If the expiration date is reached, only the Vendor License is expired on the License Server and must be renewed. The encrypted material file must not be replaced. The encrypted material file for Vendor License use is named:

Dummy__version_all_units_server.asc

In this case it is not possible to see the expiration date in the file name and also not in the d3hsp file of LS-DYNA.

What happens if my license has expired?

Using an expired license in an LS-DYNA analysis will lead to an error termination. In the d3hsp or in the standard output of LS-DYNA there should be information like:

In case of expiration date in encrypted material file:

```
DATE 12/31/2012
Your license for the WorldSID v2.0 has expired
Please contact info@dynamore.de
```

In case of server license file:

```
*** Error 10575 (KEY+575)
VENDOR block has passed expiration date:
12/31/2015
```

Your license for the WorldSID v2.0 model has expired on 12/31/ Please contact DYNAMore for a new license.

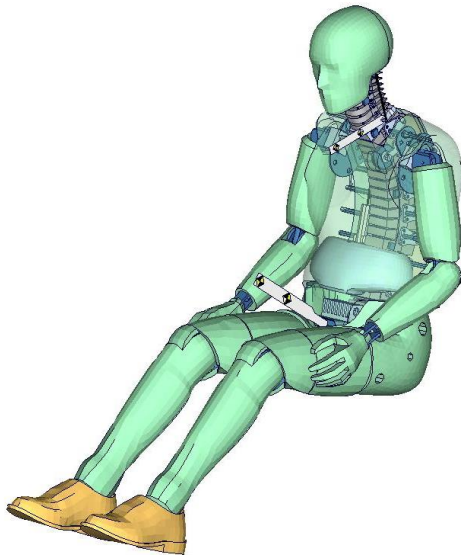
Where do I have to incorporate the encrypted material file?

The encrypted file has to be included **in the dummy model main file AFTER the parameter block**. We recommend storing the encrypted file of dummy models in a central place as read only. The name of the license include should be simple like for instance

wsid_license.asc .

With a symbolic link from the current license to this name it is possible to keep older input decks running without updating the input data of them.

In case of using Vendor license, the encrypted material file will never expire and must not be replaced any more.



How can a server license be installed on LS-DYNA License server?

In most cases there are needed root rights to install a Vendor License. The Vendor license file you receive will have the following naming:

Lic_Dummy_customername_issuedate_expirationdate

The file is a standard ascii file which can be opened in an editor. It is not allowed to change or edit anything in the file. This will lead to a non-working file and the license is invalid.

To get the license running on the LS-DYNA license server, the following steps have to be done:

1. Create VENDOR folder (if it doesn't exist) in current LS-DYNA license manager installation directory. It is important to use upper case letters.
2. Save the supplied DYNAmore license file into VENDOR folder of the LS-DYNA license server machine.
3. You can rename this license file if needed.
4. After saving the license file, open a command prompt.
5. Enter the command:

```
lstc_vrun -s port@server -reread
```

to read in the Vendor license.

6. If there are more than one LS-DYNA license servers defined, or a triad is used, you have to do the steps 1.-5. on every single license server machine of the triad.
7. After reading the license files in the folder VENDOR, a list of the read license files should be printed.

8. In case the list of the installed license files should only be printed, you can use the command:

```
lstc_vrun -s port@server
```

Then a list of the desired server is output.

How can I manage multiple license files on a license server?

If there is the need to put more than one license file on the license server, please put all license files which should be used in the VENDOR folder and follow the steps 1.-5. to get them run.

If two license files have the same name, one has to be renamed. Do not edit or change the content of the files.

Where can I find more information about dummy model licensing?

Any of our dummy models is delivered with a manual instruction. If the particular dummy model requires a license file there will be a section in the manual concerning to license issues.

If all this information is not enough please contact us: support@dynamore.de.