



# STAR XL



**TOTAL**

Concentrated solution of additives specifically developed for the cancellation of « stick and slip » and vibrations phenomenon which can sometimes occur in Earth Moving, Minings or Quarries machinery axles.

## USES

**STAR XL** is used in Public-Works or Construction machinery axles when they generate some noise when turning or at the end of braking phases.

**STAR XL** is used together with TP STAR Concept lubricants.

**STAR XL** should not be used in organs which require a CAT TO-4 level of performance lubricant, except when recommended by TOTAL Lubrifiants Technical Service.

## PROPORTIONINGS

The following proportionings have to be respected :

**For all noisy machinery axles (see exceptions) :**

- Use **TP STAR TRANS** or **STAR TRANS** lubricant and add **STAR XL** at around 3%.
- Double the dosage if the noises don't disappear after 1 hour of use.

Exceptions :

**VOLVO and KOMATSU wheel-loaders :**

- Use **TP STAR MAX** or **STAR MAX** lubricant and add **STAR XL** at around 3%.

**In all cases, refer to the Lubrication Chart given by TOTAL Lubrifiants.**

## APPLICATION

The product has to be added preferably during the oil filling operation after the drain.

Proceed like following :

- Fill the axle up to the half of the capacity with the recommended lubricant
- Add **STAR XL** additive directly in the axle filler plug.
- Finish the filling operation with the recommended lubricant

It's advised to use the machine, at least few minutes, immediately after the filling.

That procedure has to be done at each drain operation.

It's possible to put whenever the additive, directly inside a noisy axle.

Proceed like following :

- Let the machine cool during one hour or, if not, be cautious when opening the filler plugs, because hot oil ejections can occur.
- Be sure that the inside oil level permits the insertion of **STAR XL** without overflowing, otherwise, the equivalent additive quantity has to be removed.

The machine has to be used immediately after the insertion of **STAR XL**.

## CUSTOMER ADVANTAGES

- Permits to maintain the rationalization advantage provided by the TP STAR Concept for all machinery types, whatever the brand and the model, without going back to a supplementary new oil quality.
- Permits to the used axle lubricant to meet the technical requirements of friction or chemistry imposed by the material manufacturer.
- Maintains the drain intervals recommended by the OEMs.

## CHARACTERISTICS

STAR XL	Units	
Viscosity at 40°C	mm <sup>2</sup> /s	61
Pour Point	°C	-15

All values are typical values.