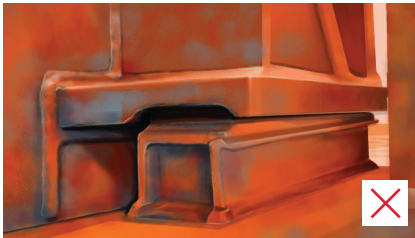
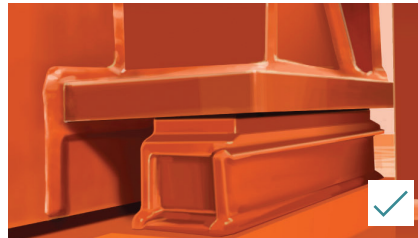


Hatch Cover



Bearing pad - no support



Bearing pad - correct support



Rubber seal - corner made up



Rubber seal - corner pre-formed



Rubber seals - short inserts



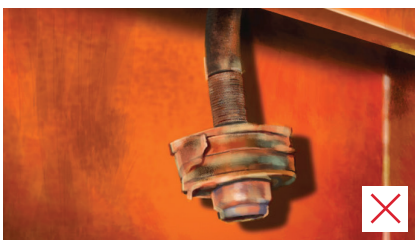
Rubber seals - min. insert 50cm



Rubber seals - permanent set



Rubber seals - good compression



Cleat - damaged washer



Cleat - washer in good condition

Worn out bearing pads cause panel steel to steel contact and over compressed rubber seals. Always check the bearing pads are in contact and providing correct support and rubber seal compression.

Always use the correct materials and spares as recommended in Maker's Manual. Are there sufficient spares on board including spare cleats and rubber washers, pre-formed rubber seal corners, and linear rubber seal? Corner pieces should not be made up by splicing pieces of linear rubber seal.

Never use short inserts to make up gaps in linear rubber seals. In practice the minimum length of any insert should be about 1 metre, with an absolute minimum of 50 centimetres.

Do not try to correct permanent set in rubber seals by inserting another seal underneath. Always replace with new when the permanent set reaches half of the designed compression.

Seized and/or rusty cleats with damaged rubber washers, more than one rubber washer, or bent rods must be replaced. Regularly inspect the cleats and replace rubber washers with one correct spare when necessary.

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Checklist

HATCH COVER

Use with North's loss prevention guide – Hatch Cover Maintenance and Operation – and Maker's Manual. Always refer to hatch cover Makers for specific advice on repairs.

Disclaimer

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Closure:

- Bearing pads are in contact and providing correct support and rubber seal compression.....
- Adjacent hatch cover panels in alignment.....
- Cross-joint wedge support areas on panel tops in good condition.....
- Cross-joint wedges and fittings in good condition (if fitted).....
- All cleats correctly applied.....
- Sufficient spares onboard (cleats, rubber seal corners, rubber seal linear).....

Coamings:

- No structural corrosion in coamings or coaming brackets.....
- Bearing pads, chocks or support blocks free of wear or damage.....
- Hatch cover panel edges have not worn grooves in coaming tops.....
- Compression bars good condition, undamaged, no corrosion – uniform height and thickness.....
- Edge plate extends to form water channel and in good condition, no damage.....
- Water channel clean and not corroded.....
- Inner face – no vertical rust staining (water leakage) especially at cross-joints.....
- Drains free and non-return valves working.....
- Cleats all in place, rods straight, washer good, surrounding steel work in good condition.....

Panels:

- Panel tops free of corrosion and damage.....
- Panel undersides and internal structure free of corrosion and damage.....
- Panel sides (especially edge on coaming) in good condition and free of corrosion.....
- Rubber seal retaining channels in good condition and free of corrosion.....
- Cross-joint seal retaining channels in good condition and corrosion free.....
- Cross-joint compression bars in good condition and corrosion free.....
- Secondary drainage channels in good condition and draining into the coaming top water channel.....
- Panel moving parts, fixed parts and any hydraulic system – all in good condition.....
- Side and cross-joints seals in good condition.....
- Compression bar mark in centre of rubber seals (no misalignment).....
- Rubber seals free of deformation or tipping to one side.....
- Rubber seal corners fitted with pre-formed inserts – not made up of separate pieces.....

Sealing:

The use of sealing tape or foam at the cross-joints of hatch covers is common, sometimes even being expressly called for by the shipper or charterer. See chapter 3.8 of North's loss prevention guide Hatch Cover Maintenance and Operation.

Use of such tapes or foam is acceptable as an additional precaution on well-maintained weathertight hatch covers, but is not acceptable as an alternative to proper permanent repairs.