

Last edited:  
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# Magnet Change-out Checklist

Magnet name: \_\_\_\_\_

Location: \_\_\_\_\_

Serial number: \_\_\_\_\_

**Spare magnet** Serial number: \_\_\_\_\_

- Spare magnet located, location given to Mechanical crew, magnet marked if necessary
- Serial number sent to alignment geodesist to make sure it is referenced
- Recent Electrical tests good (hi-pot to ground, coil-to-feedthrough resistance, total resistance, etc.)
- Recent hydro-static test good (>200 psi held for 20 min.) ES&H permit required for test.
- Beam pipe length and flanges compatible with intended operational location
- Water and electrical connections compatible with intended operational location
- Klixon connection present

## Mechanical Crew

Engineer: \_\_\_\_\_

Technicians: \_\_\_\_\_

**Alignment Crew** *Reminder:* Over-time needs to be authorized by AD for alignment to work on Friday

Geodesist: \_\_\_\_\_

Technicians: \_\_\_\_\_

## Pre-Changout

- RSO notified of all work (alignment, magnet changeout, etc.). RWP created/signed if necessary
- Alignment as-found completed of failed magnet and surrounding elements (one upstream, one down)
- Job hazard analysis read and signed by all parties present for the changeout
- Technicians have LOTO'd magnet power supply
- Coordinate with Ops to put enclosure in Supervised Access
- Remove klixon connection to failed magnet
- Remove any loss monitors on failed magnet
- Have mechanical/fluids technicians remove water connections to failed magnet

## Post-Changout

- Power supply connected to new magnet
- Water connected to new magnet and flowing with no leaks
- Klixon cables connected to new magnet
- Loss monitors put back on magnet
- Beam pipe flanges re-connected
- Final alignment of magnet complete
- Vacuum pump-down and leak checking complete
- Visual inspection of work area for forgotten tools or material, especially near power cables or bus
- Enclosure re-secured, configuration control unlocked
- Hi-pot or resistance measurement of magnet/string/bus before energizing power supply

**Signature/Date:** \_\_\_\_\_