Previous research suggests that amnesics may show impaired semantically based false recognition under conditions where control participants show high levels of gist-based errors, but little or no impairment when controls show less robust false recognition. Using abstract novel objects, we examined perceptually based false recognition in amnesics under conditions designed to induce differing levels of false recognition in controls. Whereas amnesics showed significantly impaired false recognition for category prototypes, and numerically impaired false recognition when many perceptually similar exemplars were studied – conditions where controls showed high rates of illusory recognition – amnesics and controls showed lower, and comparable, levels of false recognition when few related exemplars were studied, or lures were at a far transformational distance from the prototype. Although amnesics may be able to extract some information regarding the perceptual "gist" of studied items, they appear to do so less efficiently than controls.