

# LONG TERM PAVEMENT PERFORMANCE PROGRAM DIRECTIVE



For The Technical Direction Of The LTPP Program



**Program Area:** Monitoring

**Directive Number:** FWD-5

**Supersedes:** SHRP Directive FWD-17

**Date:** January 28, 1994

**Subject:** Special Provisions for Cold Weather FWD Testing

In accordance with recommendations provided by Dynatest, the following measures are to be taken when using the LTPP FWDs in cold weather.

1. The tow vehicle shall be warmed to achieve an interior temperature of at least 5 C (40 F) before starting the system processor and computer, in order to conform to the 5 C to 40 C (40 F to 105 F) ambient temperature range of the electronics.
2. For testing temperatures near or below -10 C (15 F), the lower bound of the normal operating range for the FWD components, the hydraulic fluid is to be replaced with a lighter weight fluid. Acceptable fluids include: AMSOIL synthetic, SHELL Tellus SAE10, or KENDALL SAE10. The concurrence of Dynatest is to be obtained before using fluids not specifically named herein.

The lighter weight hydraulic fluid is not to be used year-round, as the thinner fluid will allow faster operation of the falling weight assembly, which can cause the catch to come in contact with the top flange on the falling weight assembly, causing damage to the catch, and/or destruction of the catch piston flange after a short period of operation.

The occurrence of problems or unusual data (e.g. "zero" deflection conditions) which appear to be attributable to cold weather/frozen pavement conditions shall be promptly reported to the RCOC engineer in charge of deflection testing, and the LTPP Division Office.

Prepared by: Cheryl Richter

Approved by:

  
for Chief, LTPP Division