

## THOR MOTOR COACH TEST REPORT

**DATE:** 11/22/2016  
**BY:** GLS  
**PROJ. NUMBER:** TAE16-0047  
**PROJECT:** CLASS A GAS MH REAR EXTENSION REINFORCE

### SCOPE:

DEVELOP CHASSIS RAIL EXTENSION REINFORCEMENT AT HITCH LC

### OBJECTIVE:

LOAD INVERTED HITCH AND CHASSIS EXTENSION ON PULL RACK AND APPLY LOADS TO ACHIEVE DEFLECTION CONCURRENT TO WHAT HAS BEEN OBSERVED WITH COACHES

### REFERENCE STANDARDS:

TO LOAD THE INVERTED EXTENSION VERTICALLY AND LONGITUDINALLY IN COMPRESSION WE COULD ONLY ACHIEVE AN ANGLE OF 17 deg. LOAD WAS APPLIED IN THE AMOUNT OF 4500 LBS WHICH IS EQUIVALENT TO LOADING THE EXTENSION WITH A TONGUE LOAD OF 4300 LBS (NOTE THIS IS GREATER THAN 4240 LBS LOADING IN STEP A OF SAE J684) AND SIGNIFICANTLY HIGHER THAN THE 500 LBS MAXIMUM TONGUE LOAD WHICH THE LCI HITCH IS RATED AT.

### TEST SET-UP AND PROCEDURE:

2 CHASSIS EXTENSION ASSEMBLIES WERE TESTED ONE NON REINFORCED THE OTHER REINFORCED WITH A 1/4" THICK STEEL PLATE WELDED TO THE CEE CHANNEL FLANGES AND WEB. A LOAD OF 4500 LBS WAS APPLIED AT AN ANGLE OF 17 DEGREES TO THE ASSEMBLY AND HELD FOR 10 SECONDS.

### OBSERVATION:

THE UNREINFORCED EXTENSION HAD A 5/16" PERMANENT WEB DEFLECTION. NO PERMANENT DEFORMATION WAS OBSERVED WITH THE REINFORCED EXTENSION. THE CEE CHANNEL DID TAKE ON A SLIGHT S SHAPE DEFORMATION DUE TO THIS LOADING.

### CONCLUSION/SUMMARY:

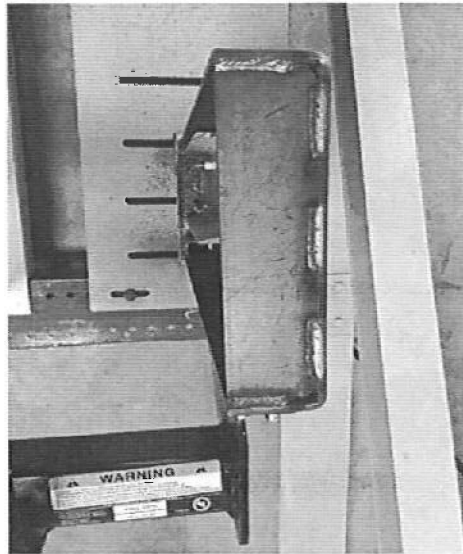
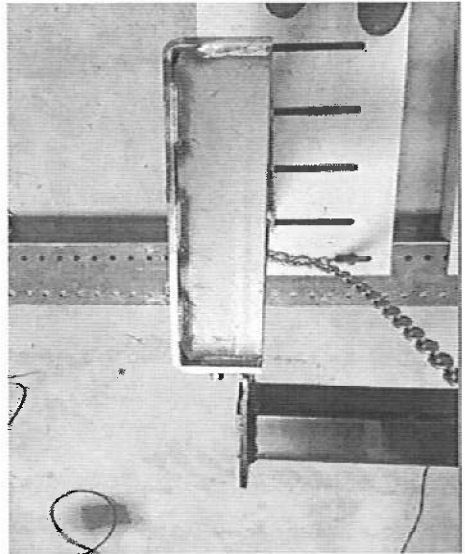
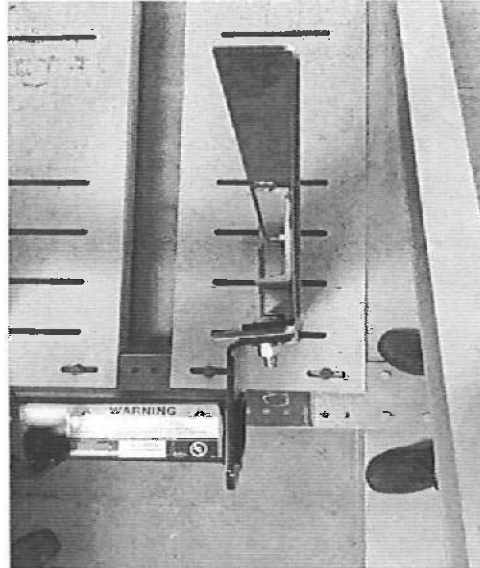
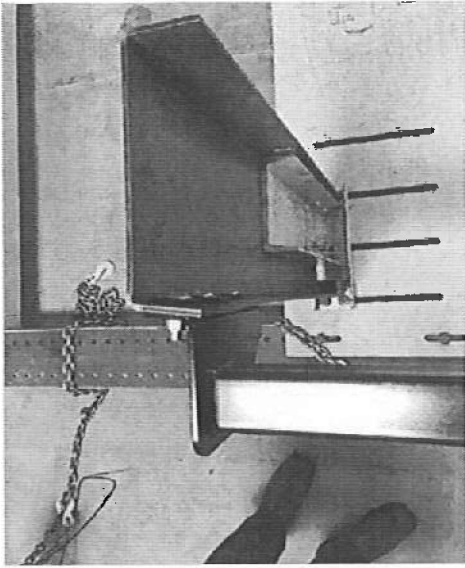
A 1/4" THICK STEEL PLATE IS TO BE INSTALLED IN THE CHASSIS EXTENSION. IT IS TO BE WELDED WITH (3) 2" FILLET WELDS EACH SIDE VERTICALLY AND (1) 2" WELD EACH SIDE HORIZONTALLY.

TAE 16 - 0047  
Chassis Extension  
Testing

# 11



**TEST SPECIMEN:**



**NEED TWO DRAWINGS 2.75" X 8.688" REINFORCEMENT AND A 2.75" X 10.5" REINFORCEMENT**