

---

## Technical Bulletin

No. 43

**Published:** 9 July 2015

**Topic:** Hyundai 40/45 Main Rail Failure

---

We have observed a marked increase in the number of cracked main rails being observed in the Hyundai 40/45 expandable chassis. This is a known defect however there appears to be some confusion over the proper repair technique for correcting the problem. It is the purpose of this document to provide guidance in identifying and repairing these defects.

### Identification

All chassis affected will be Hyundai 40/45 expandable chassis built 2003 – 2008

Symptoms will appear as a crack in the main rail and bottom flange behind the landing gear and at the end of forward end of the closed expansion.

### Repair

Repairs have been divided into two classifications Minor and Major. Procedure for each repair is as follows

#### Minor

Minor repair is identified by a crack in the bottom horizontal flange only directly adjacent to the expander transition. The crack does not extend into the rail vertical web. Minor repair procedure as follows:

1. Using a 3/16" bit, stop drill the crack in the main beam at its highest point.
2. Carefully grind a bevel in to all cracks to ensure 100% penetration
3. Weld all cracks using carbon steel rods such as E7018 or equivalent
4. Grind all surfaces as required to remove excess buildup
5. Install doubler plate as depicted in attached drawing RFC-025 underneath the bottom flange as depicted in attached repair procedure drawing

#### Major

Major repair is identified by a crack in the bottom horizontal flange directly adjacent to the expander transition that extends into the rail vertical web as depicted in the attached drawings. Major repair procedure is as follows:

1. Using a 3/16" bit, stop drill the crack in the main beam at its highest point.
2. Carefully grind a bevel in to all cracks to ensure 100% penetration
3. Weld all cracks using carbon steel rods such as E7018 or equivalent
4. Grind all surfaces as required to remove excess buildup
5. Install doubler plates as indicated on the attached drawings to the outside of the main rail and the underside of the bottom flange
6. Ensure that all repairs are cleaned primed and painted

Recording the repairs

Please note that the following component repair combinations should be used when performing these repairs

Minor

Service Group	Component Code	Component Dsc	Repair Type	Repair Dsc	Damage Code List	Location Code List	MAH	Repair Explanation
FRMCH	KMR	Main Rails	WM	Warranty Repair Minor	CK	CF2N, CF5N, CF8N	.75	Hyundai/transition area modification. Stop drill crack in main rail bottom flange. Grind crack in and weld on both sides, grind flat install doubler plate on bottom flange. Time allowed includes all pre and finish work as required

Major

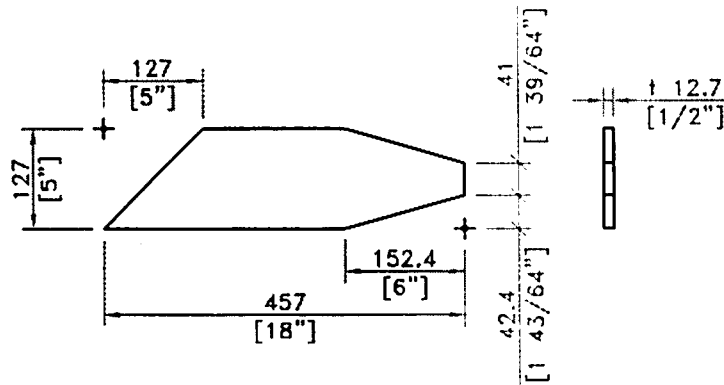
Service Group	Component Code	Component Dsc	Repair Type	Repair Dsc	Damage Code List	Location Code List	MAH	Repair Explanation
FRMCH	KMR	Main Rails	MD	Modification, miscellaneous	BR, CK,	CF2N, CF5N, CF8N	2.00	Hyundai/transition area modification. Stop drill crack in main rail. Grind crack in web and bottom flange and weld on both sides, install doubler plates on outside only on web and on bottom flange. Time allowed includes relocation/shielding of air and electrical lines as necessary, all pre and finish work as required

Please direct any questions on this matter to CCM Technical Services

UNFOLD

DECIDE DIMENSION AFTER TRIAL

112.7x127x457



L/H SHOWN  
R/H OPPOSITE

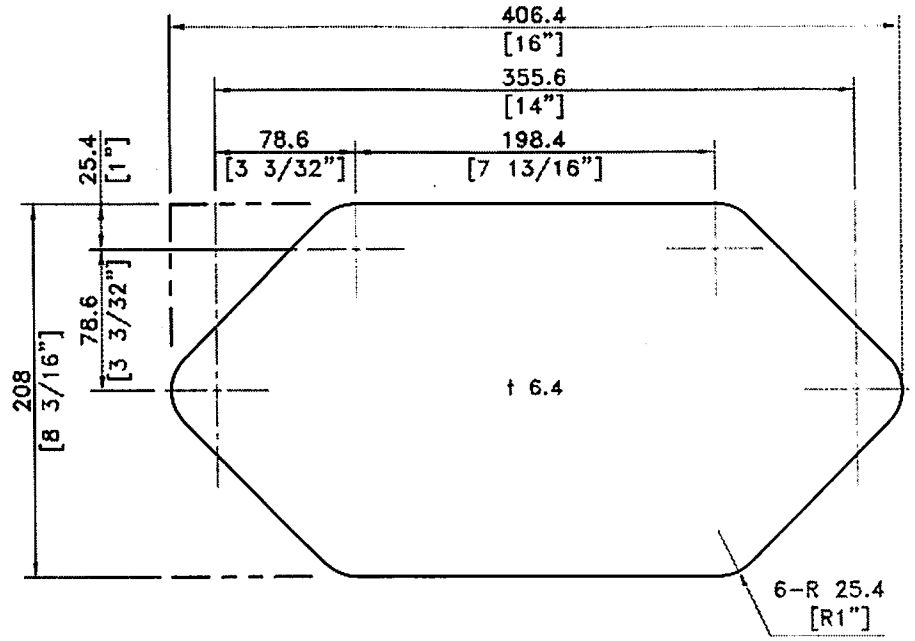
CUTTING PLAN

△				APPROVED	C.I.H.	SAP NO.	LH:20028287	DATE:
△				DRAWN	AMED		RH:20043894	OCT.14.04
△				SCALE	1/2	TITLE	REINFORCEMENT FLANGE	APPROVED
△				WEIGHT	1.6 Kg.			VENDOR:
△				UNLESS OTHERWISE SPECIFIED DIMENSIONS IN MM TOLERANCES ARE				
△				DECIMALS ANGLES XXX ±1.00 mm ±0° 30' (DEGREE)				
△	OCT.14.04	NO REV JUST STANDARD ASSIGNMENT	AMED	C.I.H.				
MARK	DATE	DETAIL OF REVISION	CHECKED	APPROVED				
HYUNDAI TRANSLEAD OWNS PROPRIETARY RIGHTS TO THE INFORMATION DISCLOSED. IT IS ISSUED FOR ENGINEERING INFORMATION ONLY AND MAY NOT BE REPRODUCED OR MANUFACTURED WITHOUT PERMISSION FROM HYUNDAI TRANSLEAD.					MAT'L GR50 1/2 [1/2"]	DWG. NO.	RFC-025	

**UNFOLD**

**DECIDE DIMENSION AFTER TRIAL**

**16.4x208x406**



CUTTING PLAN

△					APPROVED	C.I.H.	SAP NO.	20043875	DATE:
△					DRAWN	AMED			MAY.29.07
△					SCALE	1/2	TITLE REINFORCEMENT FLANGE	APPROVED	
△					WEIGHT	--		VENDOR:	N/A
△					UNLESS OTHERWISE SPECIFIED DIMENSIONS IN MM TOLERANCES ARE: ANGLES: HOLE: DECIMALS: ASSY: 0.5<2000>2.0 COMPONENTS: 0.5<2000>1.0				
△					<b>HYUNDAI</b> Translead				
MARK	DATE	DETAIL OF REVISION	CHECKED	APPROVED	MAT'L GR50 t 6.4 [1/4"]		DWG. NO.	REF-043	

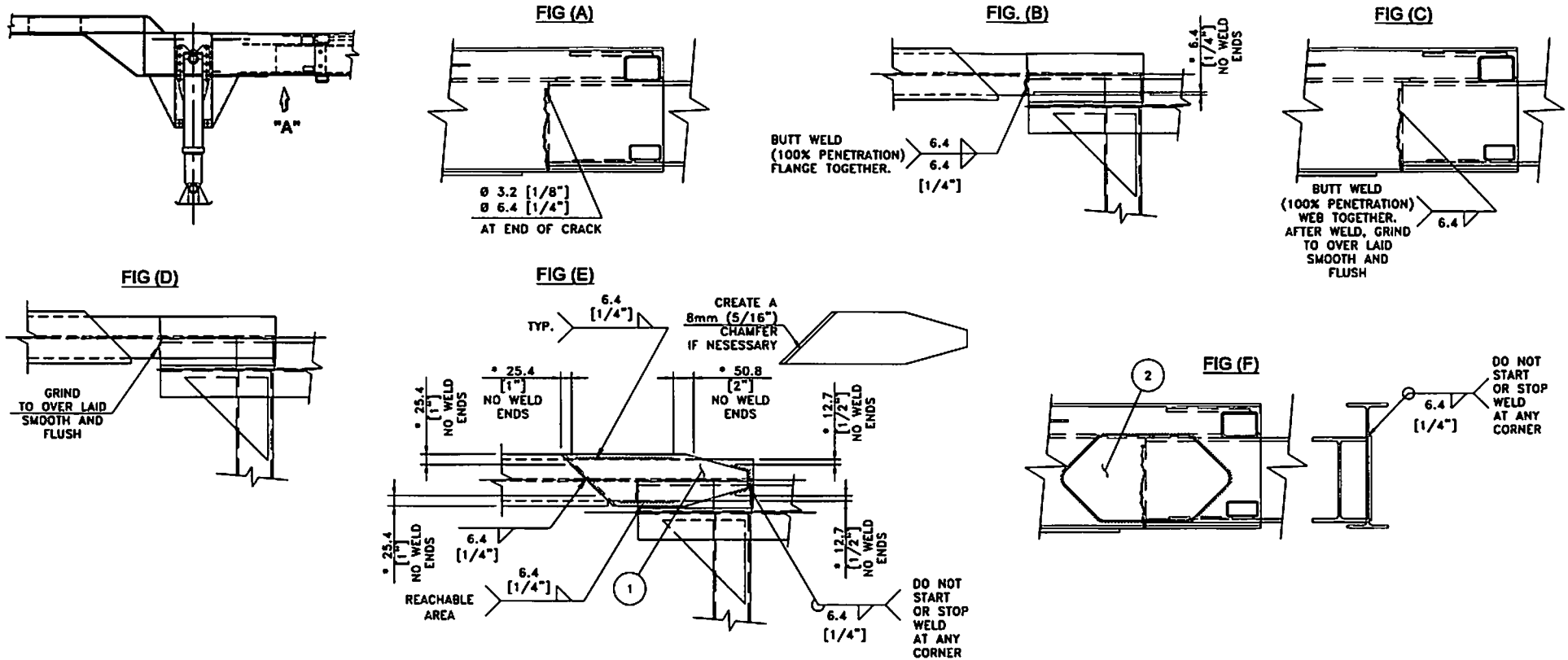


HYUNDAI TRANSLEAD OWNS PROPRIETARY RIGHTS TO THE INFORMATION DISCLOSED. IT IS ISSUED FOR ENGINEERING INFORMATION ONLY AND MAY NOT BE REPRODUCED OR MANUFACTURED WITHOUT PERMISSION FROM HYUNDAI TRANSLEAD.

# REPAIR METHOD FOR 40'/45' EXT-NO 1

**\*WITH MAIN BEAM WEB CRACK\***

SAP NO.	CODE NO.	NO.	DESCRIPTION	MAT'L	QTY	REMARKS
20028267	RFC-025	1	REINFORCEMENT FLANGE		1SET	L/H 1RH
20043875	RFC-043		REINFORCEMENT WEB		1SET	L/H 1RH



**PROCEDURES (ENGLISH):**

- CLEAN AFFECTED AREAS PRIOR TO ANY WELDING.
- DRILLING 3.2 TO 6.4 mm (1/8" TO 1/4") DIAMETER, STOP HOLE AT END OF CRACK (FIG. A).
- VEE GROOVE ANY CRACKS AND BUTT WELD TOGETHER (FIG. B & C).
- GRIND WELDS THAT WILL HAVE REINFORCEMENTS OVER LAID SMOOTH AND FLUSH (FIG. C & D).
- APPLY REINFORCEMENT AS SHOWN (FIG. E & F).
- EXCEPT INDICATIONS 6.4 NO WELD ANY OPEN ENDS.
- CLEAN WELDS AND AFFECTED AREA AS REQUIRED AND PRIME AND FINISH PAINT AS REQUIRED.

**PROCEDIMIENTO (ESPAÑOL):**

- LIMPIE LAS AREAS AFECTADAS ANTES DE REALIZAR CUALQUIER SOLDADURA.
- BARRENE DE 3.2 mm A 6.4 mm (1/8" A 1/4") DE DIAMETRO AL FINAL DE LA RUPTURA (FIG. A).
- RANURE LA RUPTURA Y SOLDE AMBAS PARTES (FIG. B Y C).
- ESMERILE LA SOLDADURA PARA OBTENER UNA SUPERFICIE PLANA Y COLOCAR EL REFUERZO (FIG. C Y D).
- COLOQUE EL REFUERZO TAL COMO SE MUESTRA EN LA (FIGURA E Y F).
- EXCEPTO INDICACIONES NO SOLDE 6.4 mm EN NINGUNA TERMINACION DEL MATERIAL.
- SE REQUIERE LIMPIAR LA SOLDADURA Y AREAS AFECTADAS ANTES DE APLICAR PRIMER Y PINTURA.

L/H	AS DRAWN
R/H	SYM. OPPOS.

HYUNDAI TRANSLEAD OWNS PROPRIETARY RIGHTS TO THE INFORMATION DISCLOSED. IT IS ISSUED FOR ENGINEERING INFORMATION ONLY AND MAY NOT BE REPRODUCED OR MANUFACTURED WITHOUT PERMISSION FROM HYUNDAI TRANSLEAD.

△	MAY.29.07	NO REV. JUST STANDARD ASSIGNMENT	AMED	C.I.H.
MARK	DATE	DETAIL OF REVISION	CHECKED	APPROVED
SAP No.	CUSTOMER			DATE:
APPROVED	C.I.H.	TITLE		MAY.29.07
DRAWN	AMED	REPAIR PROCEDURE		WEIGHT:
SCALE	INDICATED	HYUNDAI Translead		---
UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN MM UNLESS OTHERWISE INDICATED				REF. NO.
SAP: 05-00000-10 (REVISED: 15-02-2010)				DRW NO.
REPAIR PROCEDURE				