

Steel Repairability Matrix

Ford Recommended Steel Repairability Matrix

Grade	Trade Descriptions	Welding Method			Cold Repairs	Use of Heat for Repair	Temperature Range	Maximum Heat
		Metal Inert Gas (MIG)	Squeeze-Type Resistance Spot Welding (STRW)	MIG Braze				
Mild Steel	Mild	Yes	Yes	NA	Yes ^a	Yes	Up to 650°C (1,200°F)	90 sec. x 2
Laminate Steel	Quiet Steel	No	Yes	No	Yes ^a	NA	NA	NA
Bake Hardened	BH 180, BH210, BH 250, BH 280	Yes	Yes	Yes ^b	Yes ^a	Yes	Up to 650°C (1,200°F)	90 sec. x 2
Solid Solution Strengthened	—	Yes	Yes	Yes ^b	Yes ^a	Yes	Up to 650° C (1,200°F)	90 sec. x 2
High-Strength Low Alloy (HSLA)	HSLA 250, HSLA 350, HSLA 550	Yes	Yes	Yes ^b	Yes ^a	Yes	Up to 650°C (1,200°F)	90 sec. x 2

Ford Recommended Steel Repairability Matrix (Continued)

Grade	Trade Descriptions	Welding Method			Cold Repairs	Use of Heat for Repair	Temperature Range	Maximum Heat
		Metal Inert Gas (MIG)	Squeeze-Type Resistance Spot Welding (STRW)	MIG Braze				
Dual Phase = 600 MPa Ultimate Tensile Strength	DP 500, DP 600	Yes	Yes	Yes ^b	Yes ^a	No	NA	NA
Dual Phase = 600 MPa Ultimate Tensile Strength particular to 780 and 980 grades) ^c	DP 700, DP 780, DP 900	Yes ^d	Yes	Yes ^b	No	No	NA	NA
Ultra High Strength Steel (UHSS) (Martensitic, Boron) ^e	Boron	Yes ^a	Yes	Yes ^b	No	No	NA	NA
Transformation Induced Plasticity Steel (TRIP) Steel	TRIP 590, TRIP 780, TRIP 980	NA	NA	NA	NA	NA	NA	NA

- a Cold repairs can be performed if damage excludes kinks. May section only if approved procedure in workshop manual.
- b MIG braze allowed for non-structural applications only.
- c Dual phase steels DP 700, DP 780 and DP 980 must be replaced at factory joints, no sectioning unless approved procedure in workshop manual.
- d For DP 980, use MIG plug welding only, no stitch welding.
- e Boron components must be replaced at factory joints, no sectioning allowed.