

# Attachment 4

To Operations Group Factual Report

DCA15FA085

Landing TOLD Card

**REVISION NOTIFICATION**  
FLIGHT OPERATIONS DEPT.

**PUBLICATION: MD-88/90 TAKEOFF AND LANDING SPEED BOOKLET      DATE: 06**

REMOVE	INSERT	REMARKS
MD-88/90 TAKEOFF AND LANDING SPEED BOOKLET Dated 01-24-05	MD-88/90 TAKEOFF AND LANDING SPEED BOOKLET Dated 06-06-13	Page 3 of 35: Updated MD Flap 28 & 40 Limit Speed KIAS to match Vol. 1.

 **DELTA**

MINIMUM MANEUVERING SPEEDS	
Configuration	Maneuvering Speed
Flaps 5	Flaps 15 Maneuv + 20 kts.
Flaps 11	Flaps 15 Maneuv + 10 kts.
Flaps 18	Flaps 15 Maneuv
Flaps 23	Flaps 15 Maneuv
Flaps 28 or 40	$V_{REF} + 10$ kts.

FLAP RETRACTION SPEEDS	
Configuration	Flap Retraction Speed
Flaps 1 - 13	$V_2 + 5$ kts.
Flaps 15 - 24	$V_2 + 15$ kts.
Go-around	Go-around + 15 kts.

**NOTE:** Use the closest weight for all reference speeds.

HOLDING SPEEDS (KIAS)							
Pressure Altitude (1000 ft.)	Gross Weight (1000 lbs)						
	90	100	110	120	130	140	150
2 thru 25	194	205	215	224	233	242	251
30	194	205	215	224	233	242	<b>Buffet Limited</b>
33	194	205	215	224	233		
35	194	205	215	224			
37	197	206	215				

**NOTE:** These speeds do not take into account the FAA maximum holding speeds which are found in the Delta Airway Manual.

FLAP LIMIT SPEEDS (KIAS)		
Configuration	MD-88	MD-90
Flaps 11°	280	280
Flaps 15°	240	240
Flaps 23°	220	220
Flaps 28°	200	205
Flaps 40°	200	200

<b>186</b>	<b>SLAT RET</b>	
<b>232</b>	<b>CLEAN</b>	<b>M A N E U V</b>
<b>185</b>	<b>0/EXT</b>	
<b>157</b>	<b>FLAPS 15</b>	
<b>136</b>	<b>V<sub>REF</sub> 28</b>	
<b>131</b>	<b>V<sub>REF</sub> 40</b>	
<b>144</b>	<b>GO-AROUND</b>	
<b>127,500 lbs</b>		