## 

## Constants

**[FMUDATA-96]:** CTR\_TK\_LO\_LVL\_DELAY = 180 sec

**[FMUDATA-171]:** FUEL\_BALANCE\_COMPLETE\_DELAY = 10 sec

**[FMUDATA-170]:** FUEL\_BALANCE\_COMPLETE\_TH = 75 kg

**[FMUDATA-1]:** FAULT\_DETECT\_CONFIRM\_DELAY = 0.5 sec

**[FMUDATA-97]:** FLIGHT\_PHASE\_TAKEOFF = 3

**[FMUDATA-2]:** FUEL\_LEVEL\_MIN = 0 gal

**[FMUDATA-3]:** FUEL\_LEVEL\_MAX = 1000 gal

**[FMUDATA-4]:** FUEL\_TANK\_TEMP\_OVHT\_RESET\_DELAY = 2 sec

**[FMUDATA-5]:** FUEL\_TANK\_TEMP\_OVHT\_SET\_DELAY = 3 sec

**[FMUDATA-6]:** FUEL\_TANK\_TEMP\_OVHT\_TH\_RESET = 125 DegC

**[FMUDATA-7]:** FUEL\_TANK\_TEMP\_OVHT\_TH\_SET = 130 DegC

**[FMUDATA-8]:** IN\_ENGINE\_TEMP\_ICD\_MAX = 240 DegC

**[FMUDATA-9]:** IN\_ENGINE\_TEMP\_ICD\_MIN = -60 DegC

**[FMUDATA-10]:** IN\_CTR\_TK\_FUEL\_LEVEL\_ICD\_MAX = 12000 kg

**[FMUDATA-11]:** IN\_CTR\_TK\_FUEL\_LEVEL\_ICD\_MIN = 0 kg

**[FMUDATA-12]:** IN\_FUEL\_TANK\_TEMP\_ICD\_MAX = 150 DegC

**[FMUDATA-13]:** IN\_FUEL\_TANK\_TEMP\_ICD\_MIN = -30 DegC

**[FMUDATA-14]:** IN\_FUEL\_TANK\_TEMP\_MIN = 0 DegC

**[FMUDATA-15]:** IN\_GROUND\_SPEED\_ICD\_MAX = 121kts

**[FMUDATA-16]:** IN\_GROUND\_SPEED\_ICD\_MIN = 0 kts

**[FMUDATA-17]:** IN\_RECORDED\_SPEED\_ICD\_MAX = 250 kts

**[FMUDATA-18]:** IN\_RECORDED\_SPEED\_ICD\_MIN = 5 kts

**[FMUDATA-19]:** IN\_FLIGHT\_TH = 100 kts

**[FMUDATA-72]:** ISM\_FAULT\_CONFIRM\_DELAY = 10 sec

**[FMUDATA-20]:** LEAK\_DETECTION\_DELAY = 5 sec

**[FMUDATA-21]:** LEAK\_DETECTION\_DELAY2 = 15 sec

**[FMUDATA-22]:** LEAK\_DETECT\_THRESHOLD = 5 gal

**[FMUDATA-23]:** OVERSPEED\_FAULT\_DELAY = 5 sec

**[FMUDATA-24]:** STABLE\_FLIGHT\_DELAY = 5 sec

**[FMUDATA-78]:** IN\_FLIGHT\_PHASE\_ICD\_MIN = 1

**[FMUDATA-79]:** IN\_FLIGHT\_PHASE\_ICD\_MAX = 8

**[FMUDATA-163]:** WING\_TK\_FUEL\_LEVEL\_ICD\_MIN = 0 kg

**[FMUDATA-164]:** WING\_TK\_FUEL\_LEVEL\_ICD\_MAX = 2500 kg

**[FMUDATA-201]:** FUEL\_IMBALANCE\_DISPLAY\_TH = 1000 kg

**[FMUDATA-202]:** FUEL\_IMBALANCE\_DISPLAY\_DELAY = 5 sec

**[FMUDATA-227]:** LP\_MFLD\_PRESSURE\_ICD\_MAX = 200 psi

**[FMUDATA-226]:** LP\_MFLD\_PRESSURE\_ICD\_MIN = 0 psi

**[FMUDATA-236]:** LP\_LOW\_PRESSURE\_TH = 10 psi

**[FMUDATA-237]:** LP\_LOW\_PRESSURE\_RESET\_TH = 20 psi

**[FMUDATA-238]:** LP\_LOW\_PRESSURE\_DELAY = 1 sec

**[FMUDATA-290]:** FUEL\_LEVEL\_ICD\_MIN = 0 kg

**[FMUDATA-291]:** FUEL\_LEVEL\_ICD\_MAX = 17000 kg

## External Signals

**[FMUDATA-25]:** IN\_BRAKE\_SENSOR

**[FMUDATA-26]:** IN\_BRAKE\_SENSOR\_ACTIVE

**[FMUDATA-98]:** IN\_CTR\_TK\_LOW\_LEVEL

**[FMUDATA-99]:** IN\_CTR\_TK\_LOW\_LEVEL\_ACTIVE

**[FMUDATA-80]:** IN\_CTR\_TK\_MAN\_SWITCH

**[FMUDATA-81]:** IN\_CTR\_TK\_MAN\_SWITCH\_ACTIVE

**[FMUDATA-84]:** IN\_CTR\_TK\_PUMP\_1\_SWITCH

**[FMUDATA-85]:** IN\_CTR\_TK\_PUMP\_1\_SWITCH\_ACTIVE

**[FMUDATA-86]:** IN\_CTR\_TK\_PUMP\_2\_SWITCH

**[FMUDATA-87]:** IN\_CTR\_TK\_PUMP\_2\_SWITCH\_ACTIVE

**[FMUDATA-27]:** IN\_ENGINE\_TEMP

**[FMUDATA-28]:** IN\_ENGINE\_TEMP\_ACTIVE

**[FMUDATA-67]:** IN\_FAULT\_IGNORE

**[FMUDATA-68]:** IN\_FAULT\_IGNORE\_ACTIVE

**[FMUDATA-74]:** IN\_FLIGHT\_PHASE

**[FMUDATA-75]:** IN\_FLIGHT\_PHASE\_ACTIVE

**[FMUDATA-152]:** IN\_FUEL\_BALANCE\_PB

**[FMUDATA-153]:** IN\_FUEL\_BALANCE\_PB\_ACTIVE

**[FMUDATA-29]:** IN\_CTR\_TK\_FUEL\_LEVEL

**[FMUDATA-30]:** IN\_CTR\_TK\_FUEL\_LEVEL\_ACTIVE

**[FMUDATA-31]:** IN\_FUEL\_TANK\_TEMP

**[FMUDATA-32]:** IN\_FUEL\_TANK\_TEMP\_ACTIVE

**[FMUDATA-33]:** IN\_GROUND\_SPEED

**[FMUDATA-34]:** IN\_GROUND\_SPEED\_ACTIVE

**[FMUDATA-161]:** IN\_L\_TK\_FUEL\_LEVEL

**[FMUDATA-162]:** IN\_L\_TK\_FUEL\_LEVEL\_ACTIVE

**[FMUDATA-104]:** IN\_L\_TK\_HI\_LEVEL

**[FMUDATA-105]:** IN\_L\_TK\_HI\_LEVEL\_ACTIVE

**[FMUDATA-100]:** IN\_L\_TK\_LOW\_LEVEL

**[FMUDATA-101]:** IN\_L\_TK\_LOW\_LEVEL\_ACTIVE

**[FMUDATA-118]:** IN\_L\_TK\_PUMP\_1\_SWITCH

**[FMUDATA-119]:** IN\_L\_TK\_PUMP\_1\_SWITCH\_ACTIVE

**[FMUDATA-120]:** IN\_L\_TK\_PUMP\_2\_SWITCH

**[FMUDATA-121]:** IN\_L\_TK\_PUMP\_2\_SWITCH\_ACTIVE

**[FMUDATA-35]:** IN\_ON\_GROUND

**[FMUDATA-36]:** IN\_ON\_GROUND\_VALID

**[FMUDATA-37]:** IN\_PBIT\_STATUS

**[FMUDATA-38]:** IN\_PBIT\_STATUS\_ACTIVE

**[FMUDATA-39]:** IN\_RECORDED\_SPEED

**[FMUDATA-40]:** IN\_RECORDED\_SPEED\_ACTIVE

**[FMUDATA-165]:** IN\_R\_TK\_FUEL\_LEVEL

**[FMUDATA-166]:** IN\_R\_TK\_FUEL\_LEVEL\_ACTIVE

**[FMUDATA-102]:** IN\_R\_TK\_LOW\_LEVEL

**[FMUDATA-103]:** IN\_R\_TK\_LOW\_LEVEL\_ACTIVE

**[FMUDATA-106]:** IN\_R\_TK\_HI\_LEVEL

**[FMUDATA-107]:** IN\_R\_TK\_HI\_LEVEL\_ACTIVE

**[FMUDATA-122]:** IN\_R\_TK\_PUMP\_1\_SWITCH

**[FMUDATA-123]:** IN\_R\_TK\_PUMP\_1\_SWITCH\_ACTIVE

**[FMUDATA-124]:** IN\_R\_TK\_PUMP\_2\_SWITCH

**[FMUDATA-125]:** IN\_R\_TK\_PUMP\_2\_SWITCH\_ACTIVE

**[FMUDATA-140]:** IN\_XFEED\_VALVE\_SWITCH

**[FMUDATA-141]:** IN\_XFEED\_VALVE\_SWITCH\_ACTIVE

**[FMUDATA-148]:** IN\_XFEED\_VALVE\_FULLY\_CLOSED

**[FMUDATA-149]:** IN\_XFEED\_VALVE\_FULLY\_CLOSED\_ACTIVE

**[FMUDATA-150]:** IN\_XFEED\_VALVE\_FULLY\_OPEN

**[FMUDATA-151]:** IN\_XFEED\_VALVE\_FULLY\_OPEN\_ACTIVE

**[FMUDATA-172]:** IN\_ENG1\_RUNNING

**[FMUDATA-173]:** IN\_ENG1\_RUNNING\_ACTIVE

**[FMUDATA-174]:** IN\_ENG2\_RUNNING

**[FMUDATA-175]:** IN\_ENG2\_RUNNING\_ACTIVE

**[FMUDATA-187]:** IN\_FUEL\_BALANCE\_VALVE\_L\_FULLY\_OPEN

**[FMUDATA-188]:** IN\_FUEL\_BALANCE\_VALVE\_L\_FULLY\_OPEN\_ACTIVE

**[FMUDATA-189]:** IN\_FUEL\_BALANCE\_VALVE\_R\_FULLY\_OPEN

**[FMUDATA-190]:** IN\_FUEL\_BALANCE\_VALVE\_R\_FULLY\_OPEN\_ACTIVE

**[FMUDATA-191]:** IN\_FUEL\_BALANCE\_VALVE\_L\_FULLY\_CLOSED

**[FMUDATA-192]:** IN\_FUEL\_BALANCE\_VALVE\_L\_FULLY\_CLOSED\_ACTIVE

**[FMUDATA-193]:** IN\_FUEL\_BALANCE\_VALVE\_R\_FULLY\_CLOSED

**[FMUDATA-194]:** IN\_FUEL\_BALANCE\_VALVE\_R\_FULLY\_CLOSED\_ACTIVE

**[FMUDATA-206]:** IN\_APU\_RUNNING

**[FMUDATA-207]:** IN\_APU\_RUNNING\_ACTIVE

**[FMUDATA-208]:** IN\_APU\_MASTER\_SWITCH

**[FMUDATA-209]:** IN\_APU\_MASTER\_SWITCH\_ACTIVE

**[FMUDATA-212]:** IN\_APU\_FIRE

**[FMUDATA-213]:** IN\_APU\_FIRE\_ACTIVE

**[FMUDATA-216]:** IN\_APU\_LP\_VALVE\_FULLY\_OPEN

**[FMUDATA-217]:** IN\_APU\_LP\_VALVE\_FULLY\_OPEN\_ACTIVE

**[FMUDATA-220]:** IN\_APU\_LP\_VALVE\_FULLY\_CLOSED

**[FMUDATA-221]:** IN\_APU\_LP\_VALVE\_FULLY\_CLOSED\_ACTIVE

**[FMUDATA-228]:** IN\_L\_LP\_MFLD\_PRESSURE

**[FMUDATA-229]:** IN\_L\_LP\_MFLD\_PRESSURE\_ACTIVE

**[FMUDATA-234]:** IN\_R\_LP\_MFLD\_PRESSURE

**[FMUDATA-235]:** IN\_R\_LP\_MFLD\_PRESSURE\_ACTIVE

**[FMUDATA-243]:** IN\_L\_REFUEL\_VALVE\_FULLY\_CLOSED

**[FMUDATA-244]:** IN\_L\_REFUEL\_VALVE\_FULLY\_CLOSED\_ACTIVE

**[FMUDATA-245]:** IN\_L\_REFUEL\_VALVE\_FULLY\_OPEN

**[FMUDATA-246]:** IN\_L\_REFUEL\_VALVE\_FULLY\_OPEN\_ACTIVE

**[FMUDATA-247]:** IN\_R\_REFUEL\_VALVE\_FULLY\_CLOSED

**[FMUDATA-248]:** IN\_R\_REFUEL\_VALVE\_FULLY\_CLOSED\_ACTIVE

**[FMUDATA-249]:** IN\_R\_REFUEL\_VALVE\_FULLY\_OPEN

**[FMUDATA-250]:** IN\_R\_REFUEL\_VALVE\_FULLY\_OPEN\_ACTIVE

**[FMUDATA-251]:** IN\_C\_REFUEL\_VALVE\_FULLY\_CLOSED

**[FMUDATA-252]:** IN\_C\_REFUEL\_VALVE\_FULLY\_CLOSED\_ACTIVE

**[FMUDATA-253]:** IN\_C\_REFUEL\_VALVE\_FULLY\_OPEN

**[FMUDATA-254]:** IN\_C\_REFUEL\_VALVE\_FULLY\_OPEN\_ACTIVE

**[FMUDATA-271]:** IN\_L\_TK\_REFUEL\_SW

**[FMUDATA-272]:** IN\_R\_TK\_REFUEL\_SW

**[FMUDATA-273]:** IN\_C\_TK\_REFUEL\_SW

**[FMUDATA-274]:** IN\_TK\_REFUEL\_SW\_ACTIVE

**[FMUDATA-275]:** IN\_FUEL\_XFER\_MODE (Enum: XM\_OFF, XM\_MAN, XM\_AUTO, XM\_DEFUEL)

**[FMUDATA-276]:** IN\_FUEL\_XFER\_MODE\_ACTIVE

**[FMUDATA-279]:** IN\_DEFUEL\_VALVE\_FULLY\_OPEN

**[FMUDATA-280]:** IN\_DEFUEL\_VALVE\_FULLY\_CLOSED

**[FMUDATA-281]:** IN\_DEFUEL\_VALVE\_ACTIVE

**[FMUDATA-288]:** IN\_DESIRED\_FUEL\_LEVEL

**[FMUDATA-289]:** IN\_DESIRED\_FUEL\_LEVEL\_ACTIVE

**[FMUDATA-292]:** IN\_CTR\_TK\_HI\_LEVEL

**[FMUDATA-293]:** IN\_CTR\_TK\_HI\_LEVEL\_ACTIVE

## Internal Signals

**[FMUDATA-58]:** AC\_NO\_GO

**[FMUDATA-69]:** AUTO\_FAULT\_DETECT\_ENABLED

**[FMUDATA-61]:** BRAKE\_SENSOR\_STATUS

**[FMUDATA-62]:** BRAKE\_SENSOR\_STATUS\_VALID

**[FMUDATA-108]:** CTR\_TK\_LOW\_LEVEL

**[FMUDATA-109]:** CTR\_TK\_LOW\_LEVEL\_VALID

**[FMUDATA-82]:** CTR\_TK\_MAN\_SWITCH

**[FMUDATA-83]:** CTR\_TK\_MAN\_SWITCH\_VALID

**[FMUDATA-94]:** CTR\_TK\_PUMP\_1\_AUTO\_STOP

**[FMUDATA-92]:** CTR\_TK\_PUMP\_1\_ENABLE

**[FMUDATA-88]:** CTR\_TK\_PUMP\_1\_SWITCH

**[FMUDATA-89]:** CTR\_TK\_PUMP\_1\_SWITCH\_VALID

**[FMUDATA-95]:** CTR\_TK\_PUMP\_2\_AUTO\_STOP

**[FMUDATA-93]:** CTR\_TK\_PUMP\_2\_ENABLE

**[FMUDATA-90]:** CTR\_TK\_PUMP\_2\_SWITCH

**[FMUDATA-91]:** CTR\_TK\_PUMP\_2\_SWITCH\_VALID

**[FMUDATA-65]:** ENGINE\_TEMP

**[FMUDATA-66]:** ENGINE\_TEMP\_VALID

**[FMUDATA-52]:** FAULT\_DETECT\_ENABLED

**[FMUDATA-70]:** FAULT\_IGNORE

**[FMUDATA-71]:** FAULT\_IGNORE\_VALID

**[FMUDATA-76]:** FLIGHT\_PHASE

**[FMUDATA-77]:** FLIGHT\_PHASE\_VALID

**[FMUDATA-156]:** FUEL\_BALANCE\_ENABLE

**[FMUDATA-157]:** FUEL\_BALANCE\_ENABLE\_RESET

**[FMUDATA-154]:** FUEL\_BALANCE\_PB

**[FMUDATA-155]:** FUEL\_BALANCE\_PB\_VALID

**[FMUDATA-47]:** CTR\_TK\_FUEL\_LEVEL

**[FMUDATA-48]: [**[**OUT**](https://docs.google.com/document/d/12D5GRfBfAnd2X0PLQaqHuINScP0YR-SBQ8rxftGvZJU/edit#bookmark=id.hpgln32jhpj4)**] [**[**IN**](https://docs.google.com/document/d/12D5GRfBfAnd2X0PLQaqHuINScP0YR-SBQ8rxftGvZJU/edit#bookmark=id.8m0ejgslj6qt)**]** CTR\_TK\_FUEL\_LEVEL\_VALID

**[FMUDATA-53]:** FUEL\_LEVEL\_LEAK\_DETECT\_VALUE\_1

**[FMUDATA-54]:** FUEL\_LEVEL\_LEAK\_DETECT\_VALUE\_1\_VALID

**[FMUDATA-55]:** FUEL\_LEVEL\_LEAK\_DETECT\_VALUE\_2

**[FMUDATA-56]:** FUEL\_LEVEL\_LEAK\_DETECT\_VALUE\_2\_VALID

**[FMUDATA-57]:** FUEL\_LEVEL\_LEAK

**[FMUDATA-49]:** FUEL\_LEVEL\_XDCR\_FAULT

**[FMUDATA-41]:** FUEL\_TANK\_TEMP

**[FMUDATA-42]:** FUEL\_TANK\_TEMP\_VALID

**[FMUDATA-43]:** FUEL\_TANK\_OVHT\_LATCHED

**[FMUDATA-44]:** FUEL\_TANK\_OVHT\_LATCHED\_RESET

**[FMUDATA-158]:** FUEL\_WING\_TK\_LEVEL\_DIFF

**[FMUDATA-59]:** GROUND\_SPEED

**[FMUDATA-60]:** GROUND\_SPEED\_VALID

**[FMUDATA-73]:** ISM\_FAULT

**[FMUDATA-159]:** L\_TK\_FUEL\_LEVEL

**[FMUDATA-160]:** L\_TK\_FUEL\_LEVEL\_VALID

**[FMUDATA-112]:** L\_TK\_LOW\_LEVEL

**[FMUDATA-113]:** L\_TK\_LOW\_LEVEL\_VALID

**[FMUDATA-116]:** L\_TK\_HI\_LEVEL

**[FMUDATA-117]:** L\_TK\_HI\_LEVEL\_VALID

**[FMUDATA-134]:** L\_TK\_PUMP\_1\_ENABLE

**[FMUDATA-126]:** L\_TK\_PUMP\_1\_SWITCH

**[FMUDATA-127]:** L\_TK\_PUMP\_1\_SWITCH\_VALID

**[FMUDATA-135]:** L\_TK\_PUMP\_2\_ENABLE

**[FMUDATA-128]:** L\_TK\_PUMP\_2\_SWITCH

**[FMUDATA-129]:** L\_TK\_PUMP\_2\_SWITCH\_VALID

**[FMUDATA-63]:** ON\_GROUND

**[FMUDATA-64]:** ON\_GROUND\_VALID

**[FMUDATA-45]:** PBIT\_STATUS

**[FMUDATA-46]:** PBIT\_STATUS\_VALID

**[FMUDATA-50]:** RECORDED\_SPEED

**[FMUDATA-51]:** RECORDED\_SPEED\_VALID

**[FMUDATA-167]:** R\_TK\_FUEL\_LEVEL

**[FMUDATA-168]:** R\_TK\_FUEL\_LEVEL\_VALID

**[FMUDATA-110]:** R\_TK\_LOW\_LEVEL

**[FMUDATA-111]:** R\_TK\_LOW\_LEVEL\_VALID

**[FMUDATA-114]:** R\_TK\_HI\_LEVEL

**[FMUDATA-115]:** R\_TK\_HI\_LEVEL\_VALID

**[FMUDATA-136]:** R\_TK\_PUMP\_1\_ENABLE

**[FMUDATA-130]:** R\_TK\_PUMP\_1\_SWITCH

**[FMUDATA-131]:** R\_TK\_PUMP\_1\_SWITCH\_VALID

**[FMUDATA-137]:** R\_TK\_PUMP\_2\_ENABLE

**[FMUDATA-132]:** R\_TK\_PUMP\_2\_SWITCH

**[FMUDATA-133]:** R\_TK\_PUMP\_2\_SWITCH\_VALID

**[FMUDATA-143]:** XFEED\_VALVE\_CLOSE\_CMD

**[FMUDATA-144]:** XFEED\_VALVE\_FULLY\_CLOSED

**[FMUDATA-145]:** XFEED\_VALVE\_FULLY\_CLOSED\_VALID

**[FMUDATA-146]:** XFEED\_VALVE\_FULLY\_OPEN

**[FMUDATA-147]:** XFEED\_VALVE\_FULLY\_OPEN\_VALID

**[FMUDATA-142]:** XFEED\_VALVE\_OPEN\_CMD

**[FMUDATA-138]:** XFEED\_VALVE\_SWITCH

**[FMUDATA-139]:** XFEED\_VALVE\_SWITCH\_VALID

**[FMUDATA-169]:** FUEL\_BALANCE\_INHIBIT

**[FMUDATA-176]:** ENG1\_RUNNING

**[FMUDATA-177]:** ENG1\_RUNNING\_VALID

**[FMUDATA-178]:** ENG2\_RUNNING

**[FMUDATA-179]:** ENG2\_RUNNING\_VALID

**[FMUDATA-180]:** FUEL\_BALANCE\_COMPLETE

**[FMUDATA-181]:** FUEL\_BALANCE\_VALVE\_L\_OPEN\_CMD

**[FMUDATA-182]:** FUEL\_BALANCE\_VALVE\_R\_OPEN\_CMD

**[FMUDATA-183]:** FUEL\_BALANCE\_VALVE\_L\_FULLY\_OPEN

**[FMUDATA-184]:** FUEL\_BALANCE\_VALVE\_L\_FULLY\_OPEN\_VALID

**[FMUDATA-185]:** FUEL\_BALANCE\_VALVE\_R\_FULLY\_OPEN

**[FMUDATA-186]:** FUEL\_BALANCE\_VALVE\_R\_FULLY\_OPEN\_VALID

**[FMUDATA-195]:** FUEL\_BALANCE\_VALVE\_L\_FULLY\_CLOSED

**[FMUDATA-196]:** FUEL\_BALANCE\_VALVE\_L\_FULLY\_CLOSED\_VALID

**[FMUDATA-197]:** FUEL\_BALANCE\_VALVE\_R\_FULLY\_CLOSED

**[FMUDATA-198]:** FUEL\_BALANCE\_VALVE\_R\_FULLY\_CLOSED\_VALID

**[FMUDATA-199]:** FUEL\_BALANCE\_VALVE\_L\_CLOSE\_CMD

**[FMUDATA-200]:** FUEL\_BALANCE\_VALVE\_R\_CLOSE\_CMD

**[FMUDATA-203]:** FUEL\_IMBALANCE\_DISPLAY

**[FMUDATA-204]:** APU\_RUNNING

**[FMUDATA-205]:** APU\_RUNNING\_VALID

**[FMUDATA-210]:** APU\_MASTER\_SWITCH

**[FMUDATA-211]:** APU\_MASTER\_SWITCH\_VALID

**[FMUDATA-214]:** APU\_FIRE

**[FMUDATA-215]:** APU\_FIRE\_VALID

**[FMUDATA-218]:** APU\_LP\_VALVE\_FULLY\_OPEN

**[FMUDATA-219]:** APU\_LP\_VALVE\_FULLY\_OPEN\_VALID

**[FMUDATA-222]:** APU\_LP\_VALVE\_FULLY\_CLOSED

**[FMUDATA-223]:** APU\_LP\_VALVE\_FULLY\_CLOSED\_VALID

**[FMUDATA-224]:** APU\_LP\_VALVE\_OPEN\_CMD

**[FMUDATA-225]:** APU\_LP\_VALVE\_CLOSE\_CMD

**[FMUDATA-230]:** L\_LP\_MFLD\_PRESSURE

**[FMUDATA-231]:** L\_LP\_MFLD\_PRESSURE\_VALID

**[FMUDATA-232]:** R\_LP\_MFLD\_PRESSURE

**[FMUDATA-233]:** R\_LP\_MFLD\_PRESSURE\_VALID

**[FMUDATA-239]:** L\_LP\_MFLD\_LOW\_PRESSURE

**[FMUDATA-240]:** L\_LP\_MFLD\_LOW\_PRESSURE\_RESET

**[FMUDATA-241]:** R\_LP\_MFLD\_LOW\_PRESSURE

**[FMUDATA-242]:** R\_LP\_MFLD\_LOW\_PRESSURE\_RESET

**[FMUDATA-255]:** L\_REFUEL\_VALVE\_FULLY\_CLOSED

**[FMUDATA-256]:** L\_REFUEL\_VALVE\_FULLY\_CLOSED\_VALID

**[FMUDATA-257]:** L\_REFUEL\_VALVE\_FULLY\_OPEN

**[FMUDATA-258]:** L\_REFUEL\_VALVE\_FULLY\_OPEN\_VALID

**[FMUDATA-259]:** R\_REFUEL\_VALVE\_FULLY\_CLOSED

**[FMUDATA-260]:** R\_REFUEL\_VALVE\_FULLY\_CLOSED\_VALID

**[FMUDATA-261]:** R\_REFUEL\_VALVE\_FULLY\_OPEN

**[FMUDATA-262]:** R\_REFUEL\_VALVE\_FULLY\_OPEN\_VALID

**[FMUDATA-263]:** C\_REFUEL\_VALVE\_FULLY\_CLOSED

**[FMUDATA-264]:** C\_REFUEL\_VALVE\_FULLY\_CLOSED\_VALID

**[FMUDATA-265]:** C\_REFUEL\_VALVE\_FULLY\_OPEN

**[FMUDATA-266]:** C\_REFUEL\_VALVE\_FULLY\_OPEN\_VALID

**[FMUDATA-267]:** L\_TK\_REFUEL\_SW

**[FMUDATA-268]:** R\_TK\_REFUEL\_SW

**[FMUDATA-279]:** C\_TK\_REFUEL\_SW

**[FMUDATA-270]:** TK\_REFUEL\_SW\_VALID

**[FMUDATA-277]:** FUEL\_XFER\_MODE (Enum: XM\_OFF, XM\_MAN, XM\_AUTO, XM\_DEFUEL)

**[FMUDATA-278]:** FUEL\_XFER\_MODE\_VALID

**[FMUDATA-282]:** DEFUEL\_VALVE\_FULLY\_OPEN

**[FMUDATA-283]:** DEFUEL\_VALVE\_FULLY\_OPEN\_VALID

**[FMUDATA-284]:** DEFUEL\_VALVE\_FULLY\_CLOSED

**[FMUDATA-285]:** DEFUEL\_VALVE\_FULLY\_CLOSED\_VALID

**[FMUDATA-286]:** DESIRED\_FUEL\_LEVEL

**[FMUDATA-287]:** DESIRED\_FUEL\_LEVEL\_VALID

**[FMUDATA-294]:** CTR\_TK\_HI\_LEVEL

**[FMUDATA-295]:** CTR\_TK\_HI\_LEVEL\_VALID

**[FMUDATA-296]:** L\_REFUEL\_VALVE\_CLOSE\_CMD

**[FMUDATA-297]:** L\_REFUEL\_VALVE\_OPEN\_CMD

**[FMUDATA-298]:** R\_REFUEL\_VALVE\_CLOSE\_CMD

**[FMUDATA-299]:** R\_REFUEL\_VALVE\_OPEN\_CMD

**[FMUDATA-300]:** CTR\_REFUEL\_VALVE\_CLOSE\_CMD

**[FMUDATA-301]:** CTR\_REFUEL\_VALVE\_OPEN\_CMD

**[FMUDATA-302]:** FUEL\_ON\_BOARD

**[FMUDATA-304]:** FUEL\_ON\_BOARD\_VALID

**[FMUDATA-303]:** AUTO\_REFUEL\_COMPLETE

**[FMUDATA-305]:** DEFUEL\_VALVE\_OPEN\_CMD

**[FMUDATA-306]:** DEFUEL\_VALVE\_CLOSE\_CMD