

CONFIDENTIAL

DECLASSIFIED

SERVICE



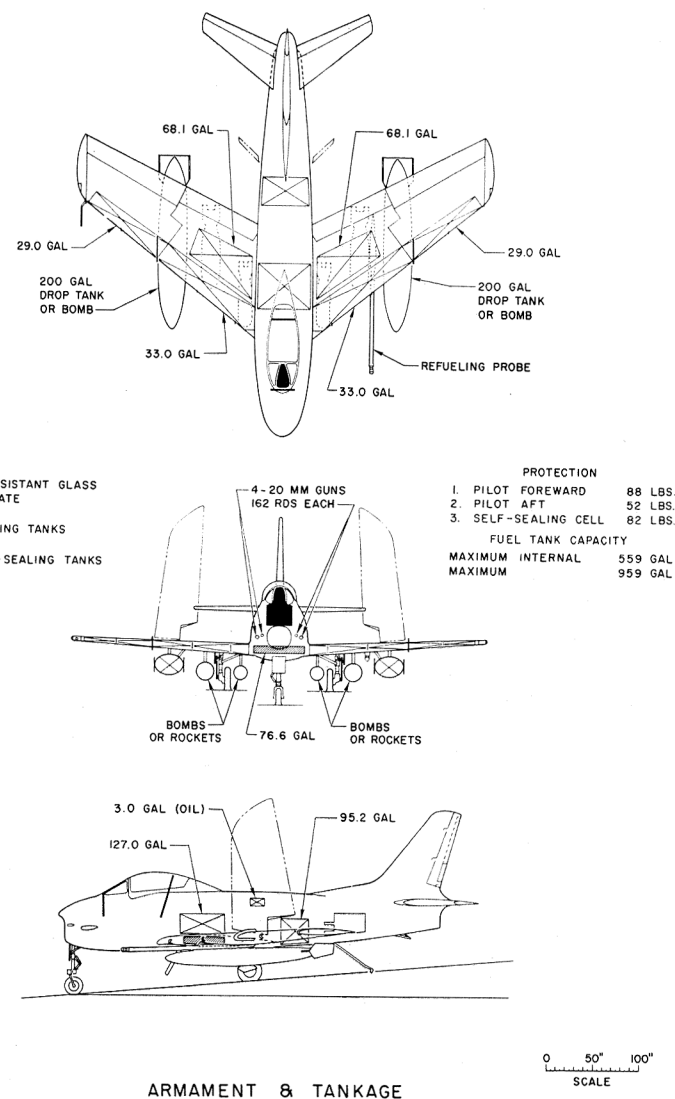
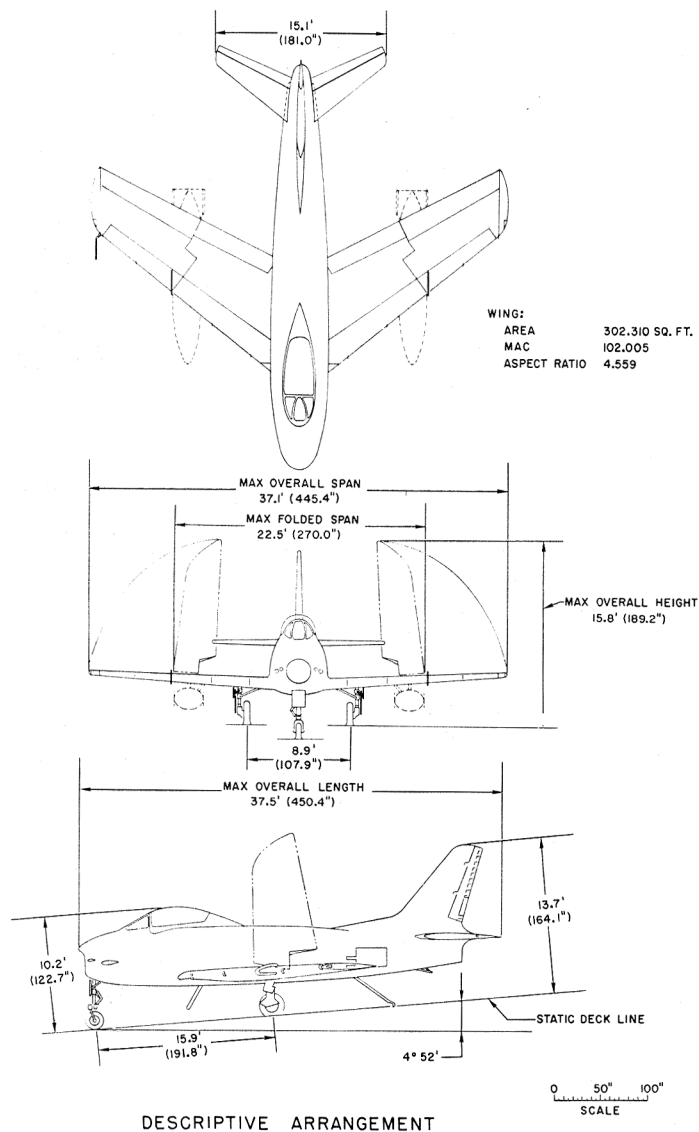
STANDARD AIRCRAFT CHARACTERISTICS

FJ-3/3M "FURY"

NORTH AMERICAN

DECLASSIFIED

Standard Aircraft Characteristics NAVAER 1335A (REV. 1-55)



Standard Aircraft Characteristics NAVAER 1335B (Rev. 1-55)

POWER PLANT

NO. & MODEL.....(1) J65-W-4B
 MFR.....Wright Aero Corp.
 TYPE.....Axial Flow
 LENGTH.....124.6 in.
 DIAMETER.....39.0 in.
 AUGMENTATION.....None

RATINGS

	<u>LBS.</u>	@	<u>RPM</u>
MAX.	7650		8300
MIL.	7650		8300
NORM.	6700		8030

Sea Level Static

Spec. No. W.A.D. - N890A

ORDNANCE

GUNS

<u>NO.</u>	<u>SIZE</u>	<u>LOCATION</u>	<u>RDS.</u>
4	20mm	Fwd. Fus.	646

GUN CAMERA.....AN-N-6A
 FIRE CONTROL.....MK 16 - MOD 2
 SIGHT UNIT.....MK 11 - MOD 0

EXTERNAL STORES

Airplanes 136118 and subsequent

Inboard stations:

5-in. HVAR
 500 lb. G.P. bomb
 Aero 6 series rocket pack
 260 lb. frag. bomb
 250 lb. low drag bomb

Intermediate stations:

5-in. HVAR
 500 lb. G.P. bomb
 1000 lb. G.P. bomb
 250 lb. low drag bomb
 500 lb. low drag bomb
 1000 lb. low drag bomb
 Sidewinder
 Aero 6,7, and 9 series rocket pack
 260 lb. frag. bomb

MISSION AND DESCRIPTION

The primary mission of the FJ-3 airplane is the destruction of enemy aircraft in flight. The secondary mission is to attack enemy ground or waterborne installations by employment of gun fire, bombs, and/or other destructive agents.

The FJ-3 airplane is a single seat, carrier-based, day fighter capable of operating from an H4-1, H8, C7, and C11 catapult and a MK 5 or MK 7 arresting gear. Special features of this airplane are sweptback wing and tail, hydraulic speed brakes, hydraulic power-operated irreversible controls with artificial feel for the all-movable horizontal tail and ailerons.

The cockpit is provided with differential pressurization, adequate heating and cooling, a jettisonable canopy, an ejection-type seat, and anti-G suit provisions.

Max. design dive speed - 590 kn. EAS at 5000 ft.

Max. design Mach No. - 1.18 at 25,000 ft.

The FJ-3 is basically an FJ-2 modified to incorporate the J65-W-4B engine and an inlet area of 470 square miles. The wing slats are replaced by a fuel carrying extended cambered leading edge.

DEVELOPMENT

First flight (J65-W-4B engine).....December 1955

Service use (J65-W-4B engine).....January 1956

DIMENSIONS

WING
 AREA.....302.3 sq. ft.
 SPAN.....37' - 1"
 ASPECT RATIO.....4.57
 SWEEPBACK.....35 deg.
 M.A.C.8' - 6"
 LENGTH.....37' - 7"
 HEIGHT.....13' - 8"
 TREAD.....9' - 0"

WEIGHTS

<u>LOADINGS</u>	<u>LBS.</u>	<u>L.F.</u>
EMPTY	12,205	-
BASIC	12,657	-
DESIGN	16,482	6.50
COMBAT	15,669	6.84
MAX. T.O. (FIELD)	23,919	3.80
(CAT.)	23,919	-
MAX. LAND (FIELD)	20,065	-
(ARREST)	14,916	-

All weights are actual.

FUEL AND OIL

<u>GALS</u>	<u>NO. TANKS</u>	<u>LOCATION</u>
124.0	4	Wing L.E.
212.8	3	Wing
222.2	2	Fuselage
400.0	2	External

FUEL GRADE.....JP-5
 FUEL SPEC.....(applicable) MIL-F-5624

OIL

CAPACITY (Gals.).....3.0 or 4.2
 GRADE.....1010
 SPEC.....(applicable) MIL-O-6081

ELECTRONICS

UHF TRANSMTR-REC.....AN/ARC-27A
 UHF AUTO DIR FINDER.....AN/ARA-25
 IFF TRANSPONDOR.....AN/APX-6B
 RADAR.....AN/APG-30 and
 AN/APG-30A
 RADIO COMPASS.....AN/ARN-14E
 PROVISIONS FOR GUNSIGHT
 ROLL STAB.....AN/ARN-21 and
 AN/APA-89

PERFORMANCE SUMMARY						
TAKE-OFF LOADING CONDITION	(1) GENERAL PURPOSE FIGHTER	(3) GENERAL PURPOSE FIGHTER 2-200 Gal. Ext. Fuel	(5) GENERAL PURPOSE FIGHTER 2-200 Gal. Ext. Fuel and 2-Sidewinders	(7) GROUND SUPPORT 2-200 Gal. Ext. Fuel 2 Aero 6B and 2 Aero X7A rocket packages	(9) FERRY 2-200 Gal. Ext. Fuel	
TAKE-OFF WEIGHT lb.	17,189	20,287	21,024	21,876	20,287	
Fuel JP-5 lb.	3801	6521	6521	6521	6521	
Payload lb.	347	347	657	1494	- -	
Wing loading lb./sq.ft.	56.9	67.1	69.5	72.4	67.1	
Stall speed - power-off kn.	115.3	123.3	125.5	128	123.3	
Take-off run at S.L. - calm ft.	1760	2520	2750	2970	2550	
Take-off run at S.L. 25 kn. wind ft.	1140	1600	1730	1880	1600	
Take-off to clear 50 ft. - calm ft.	2750	3700	3950	4200	3700	
Max. speed/altitude (A) kn./ft.	592/S.L.	552/10,000	539/15,000	500/20,000	552/10,000	
Rate of climb at S.L. (A) fpm.	7600	5750	5400	4850	5750	
Time: S.L. to 20,000 ft. (A) min.	3.1	4.2	4.5	5.0	4.2	
Time: S.L. to 30,000 ft. (A) min.	5.2	7.5	8.0	9.8	7.5	
Service ceiling (100 fpm) (A) ft.	49,000	44,000	42,200	39,600	44,100	
Combat range n.mi.	860	1550	1490	1035	1550	
Average cruising speed kn.	457	454	450	429	455	
Cruising altitude(s) ft.	43,300/45,700	40,500/45,500	40,100/45,000	38,500/44,300	40,500/45,500	
Combat radius/Mission time n.mi./hr.	200/1.2	560/2.8	515/2.6	245/1.5 (D)	- /3.3	
Average cruising speed kn.	459	455	447	440	- -	
CAP Loiter @ 40,000 ft./Mission time hr./hr.	- -	- -	1.8/2.9 (C)	- -	- -	
IFR Radius/Mission time n.mi./hr.	- -	1075/5.4 (B)	965/4.8	- -	- -	
COMBAT LOADING CONDITION	(2) 60% Internal Fuel	(4) Full Internal Fuel Tanks Off	(6) Full Internal Fuel SW's retained Tanks off	(8) Full Internal Fuel Rocket Packs retained Tanks off		
COMBAT WEIGHT lb.	15,669	17,189	17,926	18,778		
Engine power	Military	Military	Military	Military		
Fuel lb.	2281	3801	3801	3801		
Combat speed/combat altitude kn./ft.	541/35,000	537/35,000	532/35,000	510/35,000		
Rate of climb/combat altitude fpm/ft.	4000/35,000	3600/35,000	3200/35,000	2100/35,000		
Combat ceiling (500 fpm) ft.	49,000	47,200	45,700	42,300		
Rate of climb at S.L. fpm.	8450	7600	7200	6375		
Max. speed at S.L. kn.	592	592	582	520		
Max. speed/altitude kn./ft.	592/S.L.	592/S.L.	582/S.L.	534/20,000		
LANDING WEIGHT lb.	14,165	14,330	14,771	14,789		
Fuel lb.	777	942	956	963		
Stall speed - power-off/with approach power kn.	104.7/102.7	105.2/103.2	106.9/104.9	107/105		
Distance - ground run/over 50 ft. obstacle ft./ft.	3250/4450	3300/4500	3400/4650	3400/4650		

NOTES

PERFORMANCE BASIS: Contractor's and NATC flight test data.
RANGE and RADIUS based on flight test fuel consumption increased by 5%.

(A) MILITARY RATED THRUST

(B) IN-FLIGHT REFUELING: Outbound from A3D-2 tanker. 3490 lb. fuel transferred at 655 n.mi. out. If wing tanks are dropped just prior to combat, combat radius reduced 370 n.mi., mission time reduced 1.6 hr.

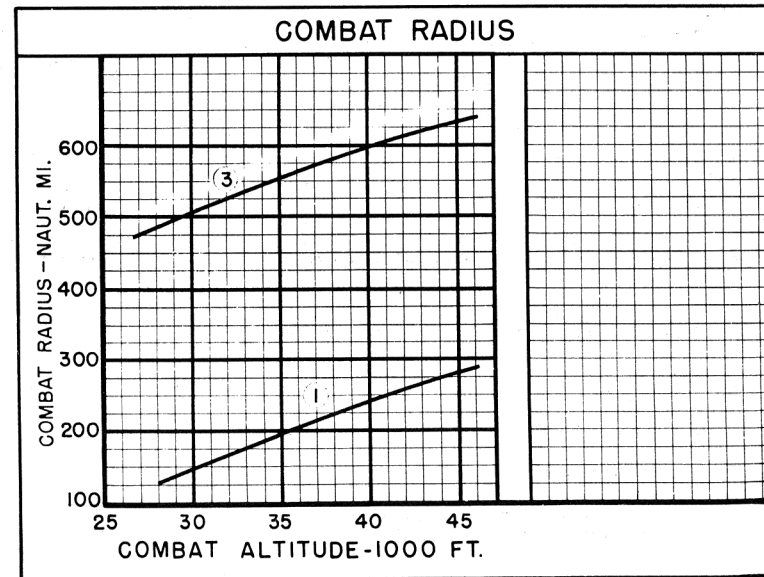
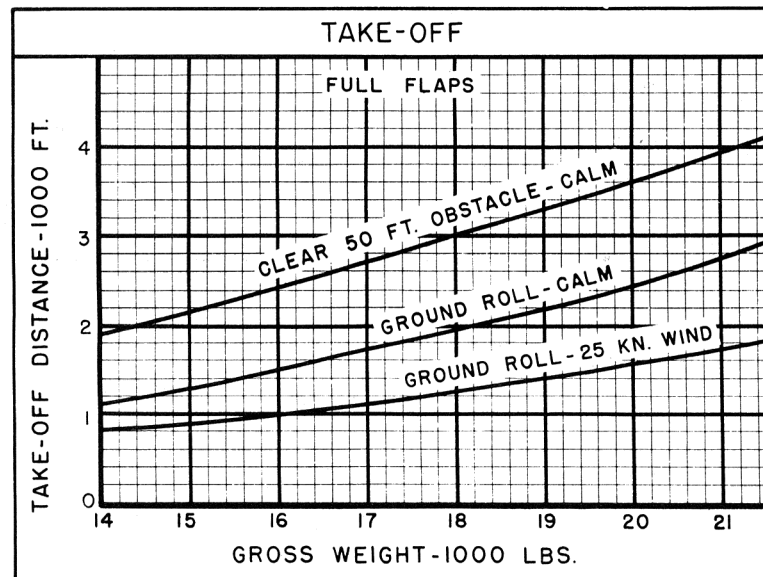
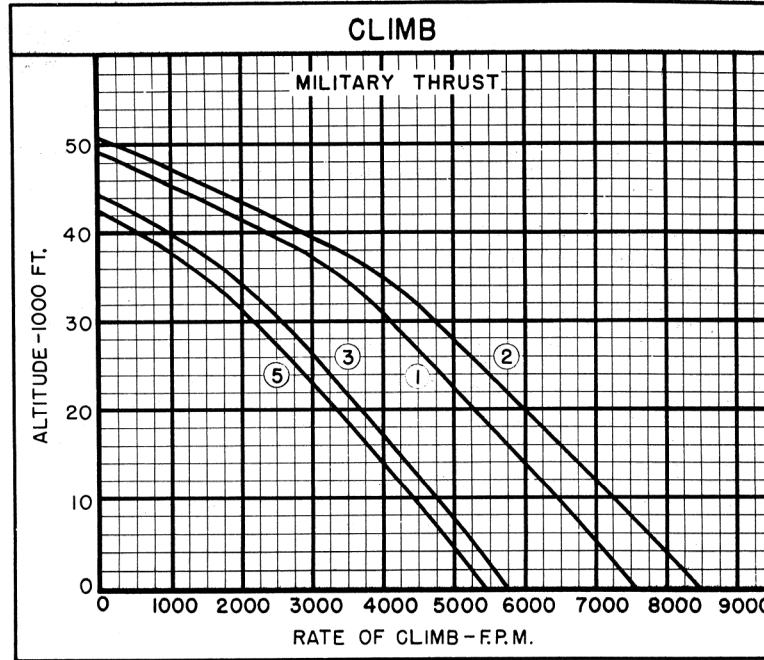
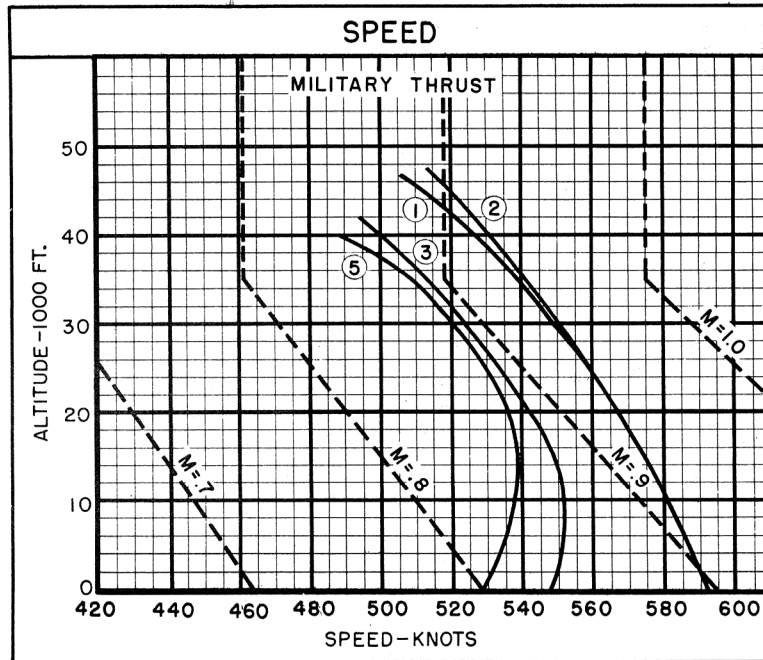
(C) One IFR from A3D-2 tanker at loiter altitude at the end of original loiter period will extend loiter and mission time 2.2 hr.

(D) For four (4) 500 lb. G.P. Bombs in lieu of 2 Aero 6B and 2 Aero X7A rocket packages, Combat Radius is 225 n.mi., Mission Time is 1.4 hr.

All loadings include guns and ammunition; Wing tanks are dropped when empty

Mission Time: any time where fuel is used and distance gained including CAP loiter, Combat and Refueling allowance time.

NAVAER-1335D (Rev. 1-55)



○ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics NAVAER 1335E (Rev. 1-55)

NOTES

SPOTTING: A total of 78 airplanes (wings folded) can be accommodated in a landing spot on the flight and hangar decks of a CVA-19 class angled deck carrier.

GENERAL PURPOSE FIGHTER

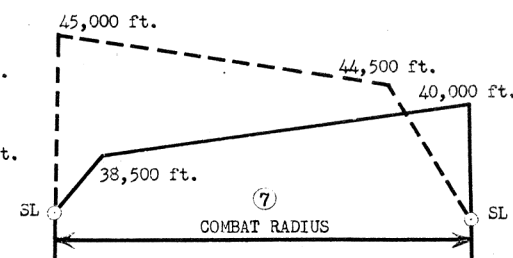
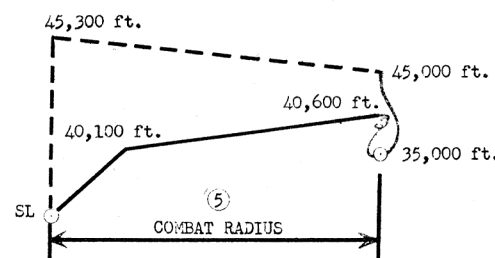
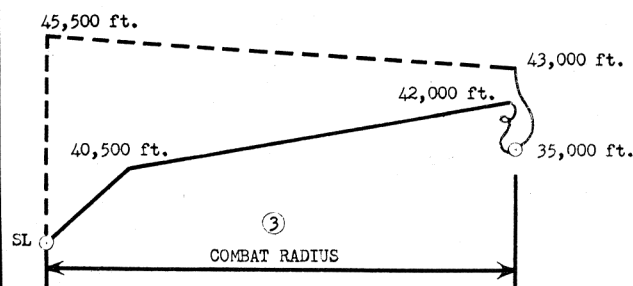
WARM-UP, TAKE-OFF ACCELERATE: 5 minutes at normal rated thrust at sea level.
 CLIMB: On course to optimum cruise altitude with military rated thrust.
 CRUISE-OUT: At altitudes and speeds for maximum range.
 DESCEND: To 35,000 feet (No fuel used, no distance gained).
 COMBAT: At 35,000 feet for 20 minutes at military rated thrust (Combat concluded at initial cruise-back altitude).
 CRUISE-BACK: At altitudes and speeds for maximum range.
 RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.

COMBAT AIR PATROL

WARM-UP, TAKE-OFF, ACCELERATE: 5 minutes at normal rated thrust at sea level.
 CLIMB: On course to optimum cruise altitude with military rated thrust.
 CRUISE-OUT: To patrol station 150 n.mi. from base at altitudes and speeds for maximum range.
 LOITER: On station at speed for maximum endurance at end cruise-out altitude.
 COMBAT: 20 minutes at maximum speed with military rated thrust (Combat concluded at initial cruise-back altitude).
 CRUISE-BACK: To base 150 n.mi. at altitudes and speeds for maximum range.
 RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.

GROUND SUPPORT FIGHTER

WARM-UP, TAKE-OFF, ACCELERATE: 5 minutes at normal rated thrust at sea level.
 CLIMB: On course to optimum cruise altitude with military rated thrust.
 CRUISE-OUT: At altitudes and speeds for maximum range.
 DESCEND: To sea level (No fuel used, no distance gained).
 LOITER: 10 minutes at speed for maximum endurance.
 COMBAT: At sea level for 10 minutes at military rated thrust.
 CLIMB: On course to optimum cruise altitude with military rated thrust.
 CRUISE-BACK: At altitudes and speeds for maximum range.
 RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.



If JP-4 fuel is used, the following are applicable:

	△ WEIGHT	△ RANGE	△ RADIUS	△ MISSION TIME
① General Purpose Fighter, clean	- 167 lb.	- 70 n. mi.	- 35 n. mi.	- .15 hr.
③ General Purpose Fighter, 2-200 gal. external tanks	- 287 lb.	- 100 n. mi.	- 50 n. mi.	- .22 hr.
⑤ Combat Air Patrol, 2-200 gal. external tanks + 2 Sidewinders	- 287 lb.	- 95 n. mi.	- -	- .24 hr.

with ③ loading and in-flight refueling, 155 lb. less fuel is received, the refueling point decreased by 45 n. mi., Combat Radius decreased by 60 n. mi. and Mission Time decreased by .26 hr.

○ LOADING CONDITION COLUMN NUMBER