

## NAG Library Chapter Contents

### F07 – Linear Equations (LAPACK)

F07 Chapter Introduction

Routine Name	Mark of Introduction	Purpose
F07AAF (DGESV)	21	DGESV nagf_lapack_dgesv Computes the solution to a real system of linear equations
F07ABF (DGESVX)	21	DGESVX nagf_lapack_dgesvx Uses the $LU$ factorization to compute the solution, error-bound and condition estimate for a real system of linear equations
F07ACF (DSGESV)	22	DSGESV nagf_lapack_dsgesv Computes the solution to a real system of linear equations using mixed precision arithmetic
F07ADF (DGETRF)	15	DGETRF nagf_lapack_dgetrf $LU$ factorization of real $m$ by $n$ matrix
F07AEF (DGETRS)	15	DGETRS nagf_lapack_dgetrs Solution of real system of linear equations, multiple right-hand sides, matrix already factorized by F07ADF (DGETRF)
F07AFF (DGEEQU)	21	DGEEQU nagf_lapack_dgeequ Computes row and column scalings intended to equilibrate a general real matrix and reduce its condition number
F07AGF (DGECON)	15	DGECON nagf_lapack_dgecon Estimate condition number of real matrix, matrix already factorized by F07ADF (DGETRF)
F07AHF (DGERFS)	15	DGERFS nagf_lapack_dgerfs Refined solution with error bounds of real system of linear equations, multiple right-hand sides
F07AJF (DGETRI)	15	DGETRI nagf_lapack_dgetri Inverse of real matrix, matrix already factorized by F07ADF (DGETRF)
F07ANF (ZGESV)	21	ZGESV nagf_lapack_zgesv Computes the solution to a complex system of linear equations
F07APF (ZGESVX)	21	ZGESVX nagf_lapack_zgesvx Uses the $LU$ factorization to compute the solution, error-bound and condition estimate for a complex system of linear equations
F07AQF (ZCGESV)	22	ZCGESV nagf_lapack_zcgesv Computes the solution to a complex system of linear equations using mixed precision arithmetic
F07ARF (ZGETRF)	15	ZGETRF nagf_lapack_zgetrf $LU$ factorization of complex $m$ by $n$ matrix

F07ASF (ZGETRS)	15	ZGETRS nagf_lapack_zgetrs Solution of complex system of linear equations, multiple right-hand sides, matrix already factorized by F07ARF (ZGETRF)
F07ATF (ZGEEQU)	21	ZGEEQU nagf_lapack_zgeequ Computes row and column scalings intended to equilibrate a general complex matrix and reduce its condition number
F07AUF (ZGECON)	15	ZGECON nagf_lapack_zgecon Estimate condition number of complex matrix, matrix already factorized by F07ARF (ZGETRF)
F07AVF (ZGERFS)	15	ZGERFS nagf_lapack_zgerfs Refined solution with error bounds of complex system of linear equations, multiple right-hand sides
F07AWF (ZGETRI)	15	ZGETRI nagf_lapack_zgetri Inverse of complex matrix, matrix already factorized by F07ARF (ZGETRF)
F07BAF (DGBSV)	21	DGBSV nagf_lapack_dgbsv Computes the solution to a real banded system of linear equations
F07BBF (DGBSVX)	21	DGBSVX nagf_lapack_dgbsvx Uses the <i>LU</i> factorization to compute the solution, error-bound and condition estimate for a real banded system of linear equations
F07BDF (DGBTRF)	15	DGBTRF nagf_lapack_dgbtrf <i>LU</i> factorization of real <i>m</i> by <i>n</i> band matrix
F07BEF (DGBTRS)	15	DGBTRS nagf_lapack_dgbtrs Solution of real band system of linear equations, multiple right-hand sides, matrix already factorized by F07BDF (DGBTRF)
F07BFF (DGBEQU)	21	DGBEQU nagf_lapack_dgbequ Computes row and column scalings intended to equilibrate a real banded matrix and reduce its condition number
F07BGF (DGBCON)	15	DGBCON nagf_lapack_dgbcon Estimate condition number of real band matrix, matrix already factorized by F07BDF (DGBTRF)
F07BHF (DGBRFS)	15	DGBRFS nagf_lapack_dgbrfs Refined solution with error bounds of real band system of linear equations, multiple right-hand sides
F07BNF (ZGBSV)	21	ZGBSV nagf_lapack_zgbsv Computes the solution to a complex banded system of linear equations
F07BPF (ZGBSVX)	21	ZGBSVX nagf_lapack_zgbsvx Uses the <i>LU</i> factorization to compute the solution, error-bound and condition estimate for a complex banded system of linear equations

F07BRF (ZGBTRF)	15	ZGBTRF nagf_lapack_zgbtrf <i>LU</i> factorization of complex $m$ by $n$ band matrix
F07BSF (ZGBTRS)	15	ZGBTRS nagf_lapack_zgbtrs Solution of complex band system of linear equations, multiple right-hand sides, matrix already factorized by F07BRF (ZGBTRF)
F07BTF (ZGBEQU)	21	ZGBEQU nagf_lapack_zgbequ Computes row and column scalings intended to equilibrate a complex banded matrix and reduce its condition number
F07BUF (ZGBCON)	15	ZGBCON nagf_lapack_zgbcon Estimate condition number of complex band matrix, matrix already factorized by F07BRF (ZGBTRF)
F07BVF (ZGBRFS)	15	ZGBRFS nagf_lapack_zgbrfs Refined solution with error bounds of complex band system of linear equations, multiple right-hand sides
F07CAF (DGTSV)	21	DGTSV nagf_lapack_dgtsv Computes the solution to a real tridiagonal system of linear equations
F07CBF (DGTSVX)	21	DGTSVX nagf_lapack_dgtsvx Uses the <i>LU</i> factorization to compute the solution, error-bound and condition estimate for a real tridiagonal system of linear equations
F07CDF (DGTTRF)	21	DGTTRF nagf_lapack_dgttrf <i>LU</i> factorization of real tridiagonal matrix
F07CEF (DGTTTRS)	21	DGTTTRS nagf_lapack_dgttrs Solves a real tridiagonal system of linear equations using the <i>LU</i> factorization computed by F07CDF (DGTTRF)
F07CGF (DGTCON)	21	DGTCON nagf_lapack_dgtcon Estimates the reciprocal of the condition number of a real tridiagonal matrix using the <i>LU</i> factorization computed by F07CDF (DGTTRF)
F07CHF (DGTRFS)	21	DGTRFS nagf_lapack_dgtrfs Refined solution with error bounds of real tridiagonal system of linear equations, multiple right-hand sides
F07CNF (ZGTSV)	21	ZGTSV nagf_lapack_zgtsv Computes the solution to a complex tridiagonal system of linear equations
F07CPF (ZGTSVX)	21	ZGTSVX nagf_lapack_zgtsvx Uses the <i>LU</i> factorization to compute the solution, error-bound and condition estimate for a complex tridiagonal system of linear equations
F07CRF (ZGTTRF)	21	ZGTTRF nagf_lapack_zgttrf <i>LU</i> factorization of complex tridiagonal matrix

F07CSF (ZGTTRS)	21	ZGTTRS nag_lapack_zgtrrs Solves a complex tridiagonal system of linear equations using the <i>LU</i> factorization computed by F07CDF (DGTTRF)
F07CUF (ZGTCON)	21	ZGTCON nag_lapack_zgtcon Estimates the reciprocal of the condition number of a complex tridiagonal matrix using the <i>LU</i> factorization computed by F07CDF (DGTTRF)
F07CVF (ZGTRFS)	21	ZGTRFS nag_lapack_zgtrfs Refined solution with error bounds of complex tridiagonal system of linear equations, multiple right-hand sides
F07FAF (DPOSV)	21	DPOSV nag_lapack_dposv Computes the solution to a real symmetric positive definite system of linear equations
F07FBF (DPOSVX)	21	DPOSVX nag_lapack_dposvx Uses the Cholesky factorization to compute the solution, error-bound and condition estimate for a real symmetric positive definite system of linear equations
F07FCF (DSPOSV)	23	DSPOSV nag_lapack_dsposv Computes the solution to a real symmetric positive definite system of linear equations using mixed precision arithmetic
F07FDF (DPOTRF)	15	DPOTRF nag_lapack_dpotrf Cholesky factorization of real symmetric positive definite matrix
F07FEF (DPOTRS)	15	DPOTRS nag_lapack_dpotsr Solution of real symmetric positive definite system of linear equations, multiple right-hand sides, matrix already factorized by F07FDF (DPOTRF)
F07FFF (DPOEQU)	21	DPOEQU nag_lapack_dpoequ Computes row and column scalings intended to equilibrate a real symmetric positive definite matrix and reduce its condition number
F07FGF (DPOCON)	15	DPOCON nag_lapack_dpocon Estimate condition number of real symmetric positive definite matrix, matrix already factorized by F07FDF (DPOTRF)
F07FHF (DPORFS)	15	DPORFS nag_lapack_dporfs Refined solution with error bounds of real symmetric positive definite system of linear equations, multiple right-hand sides
F07FJF (DPOTRI)	15	DPOTRI nag_lapack_dpotri Inverse of real symmetric positive definite matrix, matrix already factorized by F07FDF (DPOTRF)
F07FNF (ZPOSV)	21	ZPOSV nag_lapack_zposv Computes the solution to a complex Hermitian positive definite system of linear equations

F07FPF (ZPOSVX)	21	ZPOSVX nagf_lapack_zposvx Uses the Cholesky factorization to compute the solution, error-bound and condition estimate for a complex Hermitian positive definite system of linear equations
F07FQF (ZCPOSV)	23	ZCPOSV nagf_lapack_zcposv Computes the solution to a complex Hermitian positive definite system of linear equations using mixed precision arithmetic
F07FRF (ZPOTRF)	15	ZPOTRF nagf_lapack_zpotrf Cholesky factorization of complex Hermitian positive definite matrix
F07FSF (ZPOTRS)	15	ZPOTRS nagf_lapack_zpotrs Solution of complex Hermitian positive definite system of linear equations, multiple right-hand sides, matrix already factorized by F07FRF (ZPOTRF)
F07FTF (ZPOEQU)	21	ZPOEQU nagf_lapack_zpoequ Computes row and column scalings intended to equilibrate a complex Hermitian positive definite matrix and reduce its condition number
F07FUF (ZPOCON)	15	ZPOCON nagf_lapack_zpocon Estimate condition number of complex Hermitian positive definite matrix, matrix already factorized by F07FRF (ZPOTRF)
F07FVF (ZPORFS)	15	ZPORFS nagf_lapack_zporfs Refined solution with error bounds of complex Hermitian positive definite system of linear equations, multiple right-hand sides
F07FWF (ZPOTRI)	15	ZPOTRI nagf_lapack_zpotri Inverse of complex Hermitian positive definite matrix, matrix already factorized by F07FRF (ZPOTRF)
F07GAF (DPPSV)	21	DPPSV nagf_lapack_dppsv Computes the solution to a real symmetric positive definite system of linear equations, packed storage
F07GBF (DPPSVX)	21	DPPSVX nagf_lapack_dppsvx Uses the Cholesky factorization to compute the solution, error-bound and condition estimate for a real symmetric positive definite system of linear equations, packed storage
F07GDF (DPPTRF)	15	DPPTRF nagf_lapack_dpptrf Cholesky factorization of real symmetric positive definite matrix, packed storage
F07GEF (DPPTRS)	15	DPPTRS nagf_lapack_dpptrs Solution of real symmetric positive definite system of linear equations, multiple right-hand sides, matrix already factorized by F07GDF (DPPTRF), packed storage
F07GFF (DPPEQU)	21	DPPEQU nagf_lapack_dppequ Computes row and column scalings intended to equilibrate a real symmetric positive definite matrix and reduce its condition number, packed storage

F07GGF (DPPCON)	15	DPPCON nagf_lapack_dppcon Estimate condition number of real symmetric positive definite matrix, matrix already factorized by F07GDF (DPPTRF), packed storage
F07GHF (DPPRFS)	15	DPPRFS nagf_lapack_dpprfs Refined solution with error bounds of real symmetric positive definite system of linear equations, multiple right-hand sides, packed storage
F07GJF (DPPTRI)	15	DPPTRI nagf_lapack_dpptri Inverse of real symmetric positive definite matrix, matrix already factorized by F07GDF (DPPTRF), packed storage
F07GNF (ZPPSV)	21	ZPPSV nagf_lapack_zppsv Computes the solution to a complex Hermitian positive definite system of linear equations, packed storage
F07GPF (ZPPSVX)	21	ZPPSVX nagf_lapack_zppsvx Uses the Cholesky factorization to compute the solution, error-bound and condition estimate for a complex Hermitian positive definite system of linear equations, packed storage
F07GRF (ZPPTRF)	15	ZPPTRF nagf_lapack_zpptrf Cholesky factorization of complex Hermitian positive definite matrix, packed storage
F07GSF (ZPPTRS)	15	ZPPTRS nagf_lapack_zpptrs Solution of complex Hermitian positive definite system of linear equations, multiple right-hand sides, matrix already factorized by F07GRF (ZPPTRF), packed storage
F07GTF (ZPPEQU)	21	ZPPEQU nagf_lapack_zppequ Computes row and column scalings intended to equilibrate a complex Hermitian positive definite matrix and reduce its condition number, packed storage
F07GUF (ZPPCON)	15	ZPPCON nagf_lapack_zppcon Estimate condition number of complex Hermitian positive definite matrix, matrix already factorized by F07GRF (ZPPTRF), packed storage
F07GVF (ZPPRFS)	15	ZPPRFS nagf_lapack_zpprfs Refined solution with error bounds of complex Hermitian positive definite system of linear equations, multiple right-hand sides, packed storage
F07GWF (ZPPTRI)	15	ZPPTRI nagf_lapack_zpptri Inverse of complex Hermitian positive definite matrix, matrix already factorized by F07GRF (ZPPTRF), packed storage
F07HAF (DPBSV)	21	DPBSV nagf_lapack_dpbsv Computes the solution to a real symmetric positive definite banded system of linear equations

F07HBF (DPBSVX)	21	DPBSVX nagf_lapack_dpbsvx Uses the Cholesky factorization to compute the solution, error-bound and condition estimate for a real symmetric positive definite banded system of linear equations
F07HDF (DPBTRF)	15	DPBTRF nagf_lapack_dpbtrf Cholesky factorization of real symmetric positive definite band matrix
F07HEF (DPBTRS)	15	DPBTRS nagf_lapack_dpbtrs Solution of real symmetric positive definite band system of linear equations, multiple right-hand sides, matrix already factorized by F07HDF (DPBTRF)
F07HFF (DPBEQU)	21	DPBEQU nagf_lapack_dpbequ Computes row and column scalings intended to equilibrate a real symmetric positive definite banded matrix and reduce its condition number
F07HGF (DPBCON)	15	DPBCON nagf_lapack_dpbcon Estimate condition number of real symmetric positive definite band matrix, matrix already factorized by F07HDF (DPBTRF)
F07HHF (DPBRFS)	15	DPBRFS nagf_lapack_dpbrfs Refined solution with error bounds of real symmetric positive definite band system of linear equations, multiple right-hand sides
F07HNF (ZPBSV)	21	ZPBSV nagf_lapack_zpbsv Computes the solution to a complex Hermitian positive definite banded system of linear equations
F07HPF (ZPBSVX)	21	ZPBSVX nagf_lapack_zpbsvx Uses the Cholesky factorization to compute the solution, error-bound and condition estimate for a complex Hermitian positive definite banded system of linear equations
F07HRF (ZPBTRF)	15	ZPBTRF nagf_lapack_zpbtrf Cholesky factorization of complex Hermitian positive definite band matrix
F07HSF (ZPBTRS)	15	ZPBTRS nagf_lapack_zpbtrs Solution of complex Hermitian positive definite band system of linear equations, multiple right-hand sides, matrix already factorized by F07HRF (ZPBTRF)
F07HTF (ZPBEQU)	21	ZPBEQU nagf_lapack_zpbequ Computes row and column scalings intended to equilibrate a complex Hermitian positive definite banded matrix and reduce its condition number
F07HUF (ZPBCON)	15	ZPBCON nagf_lapack_zpbcon Estimate condition number of complex Hermitian positive definite band matrix, matrix already factorized by F07HRF (ZPBTRF)

F07HVF (ZPBRFS)	15	ZPBRFS nagf_lapack_zpbrfs Refined solution with error bounds of complex Hermitian positive definite band system of linear equations, multiple right-hand sides
F07JAF (DPTSV)	21	DPTSV nagf_lapack_dptsv Computes the solution to a real symmetric positive definite tridiagonal system of linear equations
F07JBF (DPTSVX)	21	DPTSVX nagf_lapack_dptsvx Uses the $LDL^T$ factorization to compute the solution, error-bound and condition estimate for a real symmetric positive definite tridiagonal system of linear equations
F07JDF (DPTTRF)	21	DPTTRF nagf_lapack_dpstrf Computes the $LDL^T$ factorization of a real symmetric positive definite tridiagonal matrix
F07JEF (DPTTRS)	21	DPTTRS nagf_lapack_dpstrs Solves a real symmetric positive definite tridiagonal system using the $LDL^T$ factorization computed by F07JDF (DPTTRF)
F07JGF (DPTCON)	21	DPTCON nagf_lapack_dpstrcon Computes the reciprocal of the condition number of a real symmetric positive definite tridiagonal system using the $LDL^T$ factorization computed by F07JDF (DPTTRF)
F07JHF (DPTRFS)	21	DPTRFS nagf_lapack_dpstrfs Refined solution with error bounds of real symmetric positive definite tridiagonal system of linear equations, multiple right-hand sides
F07JNF (ZPTSV)	21	ZPTSV nagf_lapack_zptsv Computes the solution to a complex Hermitian positive definite tridiagonal system of linear equations
F07JPF (ZPTSVX)	21	ZPTSVX nagf_lapack_zptsvx Uses the $LDL^T$ factorization to compute the solution, error-bound and condition estimate for a complex Hermitian positive definite tridiagonal system of linear equations
F07JRF (ZPTTRF)	21	ZPTTRF nagf_lapack_zptstrf Computes the $LDL^H$ factorization of a complex Hermitian positive definite tridiagonal matrix
F07JSF (ZPTTRS)	21	ZPTTRS nagf_lapack_zptstrs Solves a complex Hermitian positive definite tridiagonal system using the $LDL^H$ factorization computed by F07JRF (ZPTTRF)
F07JUF (ZPTCON)	21	ZPTCON nagf_lapack_zptstrcon Computes the reciprocal of the condition number of a complex Hermitian positive definite tridiagonal system using the $LDL^H$ factorization computed by F07JRF (ZPTTRF)



F07JVF (ZPTRFS)	21	ZPTRFS nagf_lapack_zptrfs Refined solution with error bounds of complex Hermitian positive definite tridiagonal system of linear equations, multiple right-hand sides
F07KDF (DPSTRF)	23	DPSTRF nagf_lapack_dpstrf Cholesky factorization, with complete pivoting, of a real, symmetric, positive semidefinite matrix
F07KRF (ZPSTRF)	23	ZPSTRF nagf_lapack_zpstrf Cholesky factorization of complex Hermitian positive semidefinite matrix
F07MAF (DSYSV)	21	DSYSV nagf_lapack_dsysv Computes the solution to a real symmetric system of linear equations
F07MBF (DSYSVX)	21	DSYSVX nagf_lapack_dsysvx Uses the diagonal pivoting factorization to compute the solution to a real symmetric system of linear equations
F07MDF (DSYTRF)	15	DSYTRF nagf_lapack_dsytrf Bunch–Kaufman factorization of real symmetric indefinite matrix
F07MEF (DSYTRS)	15	DSYTRS nagf_lapack_dsytrs Solution of real symmetric indefinite system of linear equations, multiple right-hand sides, matrix already factorized by F07MDF (DSYTRF)
F07MGF (DSYCON)	15	DSYCON nagf_lapack_dsycon Estimate condition number of real symmetric indefinite matrix, matrix already factorized by F07MDF (DSYTRF)
F07MHF (DSYRFS)	15	DSYRFS nagf_lapack_dsyrfs Refined solution with error bounds of real symmetric indefinite system of linear equations, multiple right-hand sides
F07MJF (DSYTRI)	15	DSYTRI nagf_lapack_dsytri Inverse of real symmetric indefinite matrix, matrix already factorized by F07MDF (DSYTRF)
F07MNF (ZHESV)	21	ZHESV nagf_lapack_zhesv Computes the solution to a complex Hermitian system of linear equations
F07MPF (ZHESVX)	21	ZHESVX nagf_lapack_zhesvx Uses the diagonal pivoting factorization to compute the solution to a complex Hermitian system of linear equations
F07MRF (ZHETRF)	15	ZHETRF nagf_lapack_zhetrf Bunch–Kaufman factorization of complex Hermitian indefinite matrix
F07MSF (ZHETRS)	15	ZHETRS nagf_lapack_zhetrs Solution of complex Hermitian indefinite system of linear equations, multiple right-hand sides, matrix already factorized by F07MRF (ZHETRF)

F07MUF (ZHECON)	15	ZHECON nagf_lapack_zhecon Estimate condition number of complex Hermitian indefinite matrix, matrix already factorized by F07MRF (ZHETRF)
F07MVF (ZHERFS)	15	ZHERFS nagf_lapack_zherfs Refined solution with error bounds of complex Hermitian indefinite system of linear equations, multiple right-hand sides
F07MWF (ZHETRI)	15	ZHETRI nagf_lapack_zhetri Inverse of complex Hermitian indefinite matrix, matrix already factorized by F07MRF (ZHETRF)
F07NNF (ZSYSV)	21	ZSYSV nagf_lapack_zsysv Computes the solution to a complex symmetric system of linear equations
F07NPF (ZSYSVX)	21	ZSYSVX nagf_lapack_zsysvx Uses the diagonal pivoting factorization to compute the solution to a complex symmetric system of linear equations
F07NRF (ZSYTRF)	15	ZSYTRF nagf_lapack_zsytrf Bunch–Kaufman factorization of complex symmetric matrix
F07NSF (ZSYTRS)	15	ZSYTRS nagf_lapack_zsytrs Solution of complex symmetric system of linear equations, multiple right-hand sides, matrix already factorized by F07NRF (ZSYTRF)
F07NUF (ZSYCON)	15	ZSYCON nagf_lapack_zsycon Estimate condition number of complex symmetric matrix, matrix already factorized by F07NRF (ZSYTRF)
F07NVF (ZSYRFS)	15	ZSYRFS nagf_lapack_zsyarfs Refined solution with error bounds of complex symmetric system of linear equations, multiple right-hand sides
F07NWF (ZSYTRI)	15	ZSYTRI nagf_lapack_zsytri Inverse of complex symmetric matrix, matrix already factorized by F07NRF (ZSYTRF)
F07PAF (DSPSV)	21	DSPSV nagf_lapack_dspsv Computes the solution to a real symmetric system of linear equations, packed storage
F07PBF (DSPSVX)	21	DSPSVX nagf_lapack_dspsvx Uses the diagonal pivoting factorization to compute the solution to a real symmetric system of linear equations, packed storage. Error bounds and a condition estimate are also computed.
F07PDF (DSPTRF)	15	DSPTRF nagf_lapack_dsptrf Bunch–Kaufman factorization of real symmetric indefinite matrix, packed storage
F07PEF (DSPTRS)	15	DSPTRS nagf_lapack_dsptrs Solution of real symmetric indefinite system of linear equations, multiple right-hand sides, matrix already factorized by F07PDF (DSPTRF), packed storage

F07PGF (DSPCON)	15	DSPCON nagf_lapack_dspcon Estimate condition number of real symmetric indefinite matrix, matrix already factorized by F07PDF (DSPTRF), packed storage
F07PHF (DSPRFS)	15	DSPRFS nagf_lapack_dsprfs Refined solution with error bounds of real symmetric indefinite system of linear equations, multiple right-hand sides, packed storage
F07PJF (DSPTRI)	15	DSPTRI nagf_lapack_dsptri Inverse of real symmetric indefinite matrix, matrix already factorized by F07PDF (DSPTRF), packed storage
F07PNF (ZHPSV)	21	ZHPSV nagf_lapack_zhpsv Computes the solution to a complex Hermitian system of linear equations, packed storage
F07PPF (ZHPSVX)	21	ZHPSVX nagf_lapack_zhpsvx Uses the diagonal pivoting factorization to compute the solution to a complex, Hermitian, system of linear equations, error bounds and condition estimates. Packed storage
F07PRF (ZHPTRF)	15	ZHPTRF nagf_lapack_zhptrf Bunch–Kaufman factorization of complex Hermitian indefinite matrix, packed storage
F07PSF (ZHPTRS)	15	ZHPTRS nagf_lapack_zhptrs Solution of complex Hermitian indefinite system of linear equations, multiple right-hand sides, matrix already factorized by F07PRF (ZHPTRF), packed storage
F07PUF (ZHPCON)	15	ZHPCON nagf_lapack_zhpcon Estimate condition number of complex Hermitian indefinite matrix, matrix already factorized by F07PRF (ZHPTRF), packed storage
F07PVF (ZHPRFS)	15	ZHPRFS nagf_lapack_zhprfs Refined solution with error bounds of complex Hermitian indefinite system of linear equations, multiple right-hand sides, packed storage
F07PWF (ZHPTRI)	15	ZHPTRI nagf_lapack_zhptri Inverse of complex Hermitian indefinite matrix, matrix already factorized by F07PRF (ZHPTRF), packed storage
F07QNF (ZSPSV)	21	ZSPSV nagf_lapack_zspsv Computes the solution to a complex symmetric system of linear equations, packed storage
F07QPF (ZSPSVX)	21	ZSPSVX nagf_lapack_zspsvx Uses the diagonal pivoting factorization to compute the solution to a complex, symmetric, system of linear equations, error bounds and condition estimates. Packed storage
F07QRF (ZSPTRF)	15	ZSPTRF nagf_lapack_zsptrf Bunch–Kaufman factorization of complex symmetric matrix, packed storage

F07QSF (ZSPTRS)	15	ZSPTRS nagf_lapack_zsprts Solution of complex symmetric system of linear equations, multiple right-hand sides, matrix already factorized by F07QRF (ZSPTRF), packed storage
F07QUF (ZSPCON)	15	ZSPCON nagf_lapack_zspcon Estimate condition number of complex symmetric matrix, matrix already factorized by F07QRF (ZSPTRF), packed storage
F07QVF (ZSPRFS)	15	ZSPRFS nagf_lapack_zsprfs Refined solution with error bounds of complex symmetric system of linear equations, multiple right-hand sides, packed storage
F07QWF (ZSPTRI)	15	ZSPTRI nagf_lapack_zsptri Inverse of complex symmetric matrix, matrix already factorized by F07QRF (ZSPTRF), packed storage
F07TEF (DTRTRS)	15	DTRTRS nagf_lapack_dtrtrs Solution of real triangular system of linear equations, multiple right-hand sides
F07TGF (DTRCON)	15	DTRCON nagf_lapack_dtrcon Estimate condition number of real triangular matrix
F07THF (DTRRFS)	15	DTRRFS nagf_lapack_dtrrfs Error bounds for solution of real triangular system of linear equations, multiple right-hand sides
F07TJF (DTRTRI)	15	DTRTRI nagf_lapack_dtrtri Inverse of real triangular matrix
F07TSF (ZTRTRS)	15	ZTRTRS nagf_lapack_ztrtrs Solution of complex triangular system of linear equations, multiple right-hand sides
F07TUF (ZTRCON)	15	ZTRCON nagf_lapack_ztrcon Estimate condition number of complex triangular matrix
F07TVF (ZTRRFS)	15	ZTRRFS nagf_lapack_ztrrfs Error bounds for solution of complex triangular system of linear equations, multiple right-hand sides
F07TWF (ZTRTRI)	15	ZTRTRI nagf_lapack_ztrtri Inverse of complex triangular matrix
F07UEF (DTPTRS)	15	DTPTRS nagf_lapack_dtptrs Solution of real triangular system of linear equations, multiple right-hand sides, packed storage
F07UGF (DTPCON)	15	DTPCON nagf_lapack_dtpcon Estimate condition number of real triangular matrix, packed storage
F07UHF (DTPRFS)	15	DTPRFS nagf_lapack_dtparfs Error bounds for solution of real triangular system of linear equations, multiple right-hand sides, packed storage

F07UJF (DTPTRI)	15	DTPTRI nagf_lapack_dtptri Inverse of real triangular matrix, packed storage
F07USF (ZTPTRS)	15	ZTPTRS nagf_lapack_ztptrs Solution of complex triangular system of linear equations, multiple right-hand sides, packed storage
F07UUF (ZTPCON)	15	ZTPCON nagf_lapack_ztpcon Estimate condition number of complex triangular matrix, packed storage
F07UVF (ZTPRFS)	15	ZTPRFS nagf_lapack_ztparfs Error bounds for solution of complex triangular system of linear equations, multiple right-hand sides, packed storage
F07UWF (ZTPTRI)	15	ZTPTRI nagf_lapack_ztptri Inverse of complex triangular matrix, packed storage
F07VEF (DTBTRS)	15	DTBTRS nagf_lapack_dtbtrs Solution of real band triangular system of linear equations, multiple right-hand sides
F07VGF (DTBCON)	15	DTBCON nagf_lapack_dtbcon Estimate condition number of real band triangular matrix
F07VHF (DTBRFS)	15	DTBRFS nagf_lapack_dtbtrfs Error bounds for solution of real band triangular system of linear equations, multiple right-hand sides
F07VSF (ZTBTRS)	15	ZTBTRS nagf_lapack_ztbtrs Solution of complex band triangular system of linear equations, multiple right-hand sides
F07VUF (ZTBCON)	15	ZTBCON nagf_lapack_ztbcon Estimate condition number of complex band triangular matrix
F07VVF (ZTBRFS)	15	ZTBRFS nagf_lapack_ztbtrfs Error bounds for solution of complex band triangular system of linear equations, multiple right-hand sides
F07WDF (DPFTRF)	23	DPFTRF nagf_lapack_dpfrf Cholesky factorization of real symmetric positive definite matrix, Rectangular Full Packed format
F07WEF (DPFTRS)	23	DPFTRS nagf_lapack_dpfrtrs Solution of real symmetric positive definite system of linear equations, multiple right-hand sides, coefficient matrix already factorized by F07WDF (DPFTRF), Rectangular Full Packed format
F07WJF (DPFTRI)	23	DPFTRI nagf_lapack_dpfrtri Inverse of real symmetric positive definite matrix, matrix already factorized by F07WDF (DPFTRF), Rectangular Full Packed format
F07WKF (DTFTRI)	23	DTFTRI nagf_lapack_dtftri Inverse of real triangular matrix, Rectangular Full Packed format

F07WRF (ZPFTRF)	23	ZPFTRF nag_lapack_zpftrf Cholesky factorization of complex Hermitian positive definite matrix, Rectangular Full Packed format
F07WSF (ZPFTRS)	23	ZPFTRS nag_lapack_zpftrs Solution of complex Hermitian positive definite system of linear equations, multiple right-hand sides, coefficient matrix already factorized by F07WRF (ZPFTRF), Rectangular Full Packed format
F07WWF (ZPFTRI)	23	ZPFTRI nag_lapack_zpftri Inverse of complex Hermitian positive definite matrix, matrix already factorized by F07WRF (ZPFTRF), Rectangular Full Packed format
F07WXF (ZTFTRI)	23	ZTFTRI nag_lapack_ztftri Inverse of complex triangular matrix, Rectangular Full Packed format

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