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 MODEL:
 ! A Simple Transportation Problem ;
 ! This version checks if there is a feasible solution, and
    if not, calls the DEBUG analysis;
  ! Keywords:  CALC, Debug, Distribution, Infeasibility, Infeasible,
      LINGO, Shipping, Transportation;
 SETS:
     SOURCE      : CAP;
     CUSTOMER    : DEM;
     ROUTE( SOURCE, CUSTOMER)     : SCOST, SHIPT;
 ENDSETS
 ! Here are the parameters;
    DATA:
      SOURCE =  BILOXI LAX TAMPA; ! Names of supply points;
       CAP   =   30,    25,  15 ; ! Their capacities;
!  Names of demand points;
   CUSTOMER =   AURORA CASPER TONOPAH LUDLOW;
       DEM   =    24,    20,    95,    21 ;  ! Notice, the 95 for TONOPAH seems
suspicious;
       SCOST =     6,     2,     6,     7,
                   4,     9,     5,     3,
                   8,     8,     1,     5 ;
    ENDDATA
!-----------------------------------------------------;

SUBMODEL TRANIT:
! Variables:
    SHIPT( i, j) = amount shipped from source i to destination j;
! The objective;
    MIN = OBJ;
    OBJ = @SUM( ROUTE: SCOST * SHIPT); ! Cost of shipments;
! The demand constraints;
    @FOR( CUSTOMER( J):
      [DMRO]  @SUM( SOURCE( I): SHIPT( I, J)) = DEM( J));
! The supply constraints;
    @FOR( SOURCE( I):
      [CPRO] @SUM( CUSTOMER( J): SHIPT( I, J)) <= CAP( I));
ENDSUBMODEL
CALC:
  @SET( 'TERSEO',3); ! Output level (0:verbose, 1:terse, 2:only errors, 3:none);
  @SOLVE( TRANIT);
  ISTAT = @STATUS();! 0: Optimal to tolerance. 1: infeasible, 2: unbounded,
                      3: undetermined, 4: Feasible,  5: Infeasible/unbounded in
preprocessor,
                      6: Local optimum, 7: locally infeasible, 8: Objective cutoff
reached,
                      9: numeric error;
  @IFC( ISTAT #EQ# 0:
    @WRITE(' Optimal feasible solution found. Cost= ', OBJ, @NEWLINE(1));
! Display the shipments;
    @FOR( ROUTE( I, J) | SHIPT( I, J) #GT# 0:
      @WRITE(' Ship ', @FORMAT( SHIPT(I,J),'5.1f'),' from ',
        @FORMAT( SOURCE(i),'7s'),' to ', @FORMAT( CUSTOMER(j),'7s'), @NEWLINE(1));
        );
   @ELSE
    @WRITE(' Model is infeasible, do DEBUG analysis', @NEWLINE( 1));
    @SET( 'TERSEO',0); ! Output level (0:verbose, 1:terse, 2:only errors, 3:none);
    ! If using LINGO interactively, can execute DEBUG by clicking on:
       Solver -> Debug ;
    @DEBUG( TRANIT);   ! Find a small set of rows that are infeasible;
 );
ENDCALC
END
```