

1938 Series

General Technical Policies  
& Information  
Bulletins

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**General Technical Policies**

1

Number

10/26/37

Date

**SUBJECT****AND Information****1938 Bulletin Series****Effective October 1st****TO ALL MASTER DEALERS**

In the classification and registration of Hudson built cars for 1938, the name "Hudson" will be used in the designation of all models and the name "Terraplane" becomes "Hudson Terraplane".

Included in the Hudson Terraplane group are the Hudson Terraplane Utility, Hudson Terraplane Business, Hudson Terraplane DeLuxe and Hudson Terraplane Super series cars. The Hudson Six group consists of the Hudson Six Custom series and in the Hudson light group are the Hudson Eight DeLuxe and the Hudson Eight Custom series models.

The Utility Coach and Coupe models, which have been referred to as commercial cars heretofore, are classified as passenger cars for 1938

Specifications and other information pertinent to the registration and licensing of our passenger car models follow:

	Serial <u>Nos.</u>	No. of <u>Cyl.</u>	<u>Bore</u>	<u>Stroke</u>	A.M.A. HP. <u>Rating</u>	Seatg. <u>Cap.</u>	Wheel <u>Base</u>	Weight <u>Lbs.</u>
<u>HUDSON</u>								
Terraplane 6 - Utility Series	801,50							
Utility Coupe	&	6	3"	5"	21.6	3	117"	2840
Utility Coach		6	3"	5"	21.6	6	117"	2835
Utility Touring Coach	Up	6	3"	5"	21.6	6	117"	2840
Sedan	88,174	6	3"	5"	21.6	6	124"	2965
Touring Sedan	& Up	6	3"	5"	21.6	6	124"	2970
<u>HUDSON</u>								
<u>Terraplane 6 - Deluxe Series</u>								
Brougham	81,119	6	3"	5"	21.6	6		2820
Touring Brougham		6	3"	5"	21.6	6		2825
Sedan		6	3"	5"	21.6	6		2885
Touring Sedan	&	6	3"	5"	21.6	6		2890
3-Pass. Coupe		6	3"	5"	21.6	3		2725
Victoria Coupe		6	3"	5"	21.6	3-5		2775
Convertible Coupe		6	3"	5"	21.6	3		2780
Convertible Brougham	Up	6	3"	5"	21.6	6		

(OVER)

	<u>Serial Nos.</u>	<u>No. of Cyl.</u>	<u>Bore</u>	<u>Stroke</u>	<u>A.M.A. HP. Rating</u>	<u>Seatg. Cap.</u>	<u>Wheel Base</u>	<u>Weight Lbs.</u>
<u>HUDSON</u>								
<u>Terraplane 6 - Super Series</u>								
Brougham	82,153	6	3"	5"	21.6	6	117"	2820
Touring Brougham		6	3"	5"	21.6	6	117"	2825
Sedan		6	3"	5"	21.6	6	117"	2885
Touring Sedan	&	6	3"	5"	21.6	6	117"	2890
3-Pass. Coupe		6	3"	5"	21.6	3	117"	2725
Victoria Coupe		6	3"	5"	21.6	3-5	117"	2775
Convertible Coupe		6	3"	5"	21.6	3	117"	2780
Convertible Brougham	Up	6	3"	5"	21.6	6	117"	
<u>HUDSON</u>								
<u>Six - Custom Series</u>								
Brougham	83,131	6	3"	5"	21.6	6	122"	2935
Touring Brougham		6	3"	5"	21.6	6	122"	2940
Sedan		6	3"	5"	21.6	6	122"	3005
Touring Sedan		6	3"	5"	21.6	6	122"	3010
3-Pass. Coupe	&	6	3"	5"	21.6	3	122"	2825
Victoria Coupe		6	3"	5"	21.6	3-5	122"	2880
Convertible Coupe		6	3"	5"	21.6	3	122"	2895
Convertible Brougham	Up	6	3"	5"	21.6	6	122"	
<u>HUDSON</u>								
<u>Eight - Deluxe Series</u>								
Brougham	84,101	8	3"	4½"	28.8	6	122"	3115
Touring Brougham		8	3"	4½"	28.8	6	122"	3120
Sedan		8	3"	4½"	28.8	6	122"	3155
Touring Sedan		8	3"	4½"	28.8	6	122"	3160
3-Pass. Coupe	&	8	3"	4½"	28.8	3	122"	3010
Victoria Coupe		8	3"	4½"	28.8	3-5	122"	3060
Convertible Coupe		8	3"	4½"	28.8	3	122"	3050
Convertible Brougham	Up	8	3"	4½"	28.8	6	122"	
<u>HUDSON</u>								
<u>Eight - Custom Series</u>								
Brougham	85,160	8	3"	4½"	28.8	6	122"	3140
Touring Brougham		8	3"	4½"	28.8	6	122"	3145
Sedan		8	3"	4½"	28.8	6	122"	3190
Touring Sedan	&	8	3"	4½"	28.8	6	122"	3195
3-Pass. Coupe		8	3"	4½"	28.8	3	122"	3020
Victoria Coupe	Up	8	3"	4½"	28.8	6	122"	3080
Sedan	87,161	8	3"	4½"	28.8	6	122"	3279
Touring Sedan	& Up	8	3"	4½"	28.8	6	122"	3275

**General Technical Policies**

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Number

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**SUBJECT****AND Information****1938 Bulletin Series****Effective October 1st****CONVERTIBLE  
BROUGHAM  
WEIGHTS**

You will note that the shipping weights of the convertible Brougham models are not given. Information concerning this detail will be passed on in the form of a revision of this bulletin just as soon as this model enters production and certified weights are available.

**CAR AND  
ENGINE  
NUMBERS**

Some revisions have been made in the car serial and engine numbering methods for 1938. In accordance with past practice, the first two digits at the left of the car serial number represent the year and model designations which range from 80 to 88 inclusive, excepting 86. These correspond to the 70 to 78 models for 1937. The first car built for 1938 carried this information followed by the starting number 101, and all cars built thereafter, were numbered in consecutive numerical order, irrespective of series or model. Thus for 1938 we have no duplication of car numbers in the various series.

With reference to engine number, on the first 1938 cars this is stamped on the left side of the cylinder block near the cylinder head and is different from the car serial number. On the later production cars, the engine bears the same number as the car and the location has been changed to the top of the cylinder block, at the right, between numbers 1 and 2 exhaust manifold flanges. In the new location, the number may be easily seen by raising the right side of the bonnet.

E. T. Blum

Technical Service Manager.

**General Technical Policies**

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Number

**AND Information**

10/29/37

Date

**1938 Bulletin Series****Effective October 1st****SUBJECT**

PRE-DELIVERY  
500- MILE AND  
1500-MILE  
INSPECTION  
CARDS

Included in a recent mailing were samples of the 1938 Pre-Delivery, 500-mile and 1500-mile new car Inspection Cards, also a pad of Product Performance Report sheets to be used in reporting to us conditions requiring correction on our new cars.

The operations listed for checking during the various inspections are the result of careful study, as is also their sequence which was rearranged some time ago to cut down the time required, and minimize the possibility of some of the items being overlooked. Because of the importance of these inspections we urge that you see to it that the work is properly done and that some of the operations are not skimmed or passed up entirely. We find it necessary to stress this because of the tendency on the part of some individuals to regard certain of the items as being unnecessary.

Experience, however, has definitely shown that conscientious effort in this direction pays big dividends in increased owner satisfaction, especially during the critical period of ownership and materially reduces the expense involved in free service, as well as replacement and out of warranty cost to the owner.

As heretofore, the Pre-Delivery, 500-mile and 1500-mile new car Inspection Cards may be obtained separately as required, from the factory Service Department, the price being seventy-five cents per hundred in lots of 100 or more, of each.

After the cards have been checked and filled in upon completion of the inspections, it is important that they be filed for future reference.

PRODUCT  
PERFOR-  
MANCE  
REPORTS

In the matter of Product Performance Reports, we again solicit your earnest cooperation in their use as a medium of reporting to us, difficulties encountered on the 1938 models. Some improvement has been noted within the past year in this respect, but the conditions which come to our attention in scrutinizing claims and other means of information, indicate quite conclusively that the report forms are not being used as extensively as they should be.

Since the Product Performance Report is solely for the purpose of enabling us to classify and collate information relating to the behavior of our cars in the hands of owners, and is the basis of any action taken to correct conditions, it will be seen that unless they are properly used and sent in to us,

there is a strong probability that the development of service remedies to take care of situations in the field, will be seriously delayed. There-fore, please send in separate reports covering anything you find wrong with our cars, since in the final analysis, the number of such reports covering a given condition, rather than their seeming importance, governs the action taken by our Engineering, Manufacturing and Inspection Departments.

Additional pads of Product Performance Report forms will be forwarded upon receipt of information concerning your requirements.

E. J. Blum

Technical Service Manager

**General Technical Policies****AND Information****1938 Bulletin Series****Effective October 1st****3**

Number

1/14/38

Date

**SUBJECT****MECHANICAL  
PROCEDURE  
MANUAL  
SUPPLE-  
MENTS**

The 1938 supplementary pages for the Mechanical Procedure Manual have been printed and distribution to the field is now being made. In addition to data pertaining to the servicing of the 1938 Hudson and Hudson Terraplane models, the revised sheets incorporate corrected information and procedure changes applying to the other car models covered in the manual, on the basis of recent experience.

In accordance with our established practice, the pages have been grouped in sections, each sheet showing page and section numbers. Letter affixes after the page numbers indicate additional pages which should be inserted in the manual in numerical and alphabetical order. Be sure to destroy the old sheets as soon as they have been replaced with the later ones. To assist in identification, the date of issue is printed at the bottom of each page.

In making distribution of the 1938 supplementary pages, we are sending one set to each distributor and dealer of record to take care of the manual in use in his service department. Extra supplements will be sent to distributors and dealers for any additional manuals in use in their organizations and by employees who have purchased them, upon receipt of information giving us the purchasers' names and addresses and the Serial numbers of the manuals. In the case of any undelivered manuals in stock, simply mention "undelivered" and give the serial numbers.

It is important that this service information be given to the field as soon as possible and that the new pages be inserted in the manuals promptly upon arrival. New manuals in stock should, of course, be brought up to date by inserting the supplementary pages before delivering them. In order to accomplish this, an immediate canvass should be made of your own and employee needs and a list sent us giving the PURCHASERS' NAMES and ADDRESSES and THE SERIAL NUMBERS OF THE MANUALS for which inserts are desired.

Information covering the operations and procedures to be followed in servicing the new Hudson 112 model is being compiled, and revised or additional pages for the manual will be printed and distributed as soon as this work has been completed.

E. J. Blum

Technical Service Manager.

**General Technical Policies****AND Information****1938 Bulletin Series****Effective October 1st**

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Number  
2/7/38

Date

**SUBJECT****CAR  
LOADING  
CHANGE**

Effective with shipments of Hudson 112 models beginning February 3d, a new method of securing the front ends of both floor and staged cars in rail shipments is being followed, which minimizes the possibility of front spring breakage due to rough handling in transit.

In the new method a special anchor plate is attached to each frame side rail at the front end, held in place by the front bumper bracket bolts. The front hold down chains, which secure the car to the loading frame or the freight car floor, are attached to these plates thus relieving the front springs of undue stresses.

These plates, of course, must not be allowed to remain on the cars but should be removed and discarded at the time of unloading or during the new car pre-delivery inspection. This operation simply entails the removal and replacement of the two front bumper to frame bolt nuts on each side of the car.

**HIGH  
OUTPUT  
GENERATOR  
AND  
REGULATOR**

Whenever radios are installed in the Hudson 112 cars, it is important that the Optional Equipment, High Output Generator and Current Regulator Assembly, also be fitted, in order to insure adequate capacity and protection to the electrical system.

As you know, the Standard Generator used on the Hudson 112 model has a peak output of 17 to 19 amperes while the optional equipment generator with regulator assembly is capable of a 29 to 32 ampere charging rate. The Current Regulator Assembly, which is also known as the Generator Charge Control Kit, should always be installed with the High Rate Generator because if not and the charging rate is stepped up to the proper value to take care of radio installation, there is a strong possibility that difficulty, due to burned out light bulbs or radio tubes, might result. The Current Regulator Assembly cannot be installed with the Standard Generator on the Hudson 112.

**LOOSE  
FAN  
BELTS**

Our investigation of the few complaints we have received on run down batteries has shown that in a vast majority of cases the difficulty is directly chargeable to loose and slipping fan bolts. It must be borne in mind that considerably more power is required to drive the high output generator of later year makes of cars and fan belt conditions which were of little importance in connection with the older, smaller units, now can seriously impair generator output and performance. Therefore, when complaints of run down batteries, low generator charging rate or failure of the generator dash signal light to go out immediately after starting the engine are registered, the fan belt condition and adjustment should be looked into. Anti-freeze solution, grease and oil and dirt deposited on the sides of the belt tend to glaze the surfaces and destroy its frictional properties resulting in slippage, even with proper tension.

(OVER)

Cooling system and oil leaks should be corrected and when the belt has become too badly saturated, glazed or worn, it should be replaced with a new one. Paint on the belt also aggravates slippage and should be removed. Proper adjustment of the belt calls for 3/4" of slack, measured by placing a straight edge on the generator and fan pulleys and pressing the belt downward at a point midway between these pulleys. A fan belt looser than this will cause slippage even when in good condition, while a belt too tightly adjusted will shorten the life of the generator and water pump bearings.

**LOOSE  
GROUND  
STRAPS**

Another point which should be carefully checked when seeking a cause for run down batteries is the battery ground strap. Looseness of the ground strap, either at the battery or frame ends, introduces a high resistance and prevents the generator from properly charging the battery. When inspecting this detail also be sure to check the bond or connection between the battery terminal and the strap proper as some cases of looseness at this point have also been reported.

**BATTERY  
CHARGING**

Although we have called attention from time to time to the necessity of properly checking and servicing batteries on new cars, reports received from the field indicate that this is not generally being done. The service rendered by the battery during its life and the operation of the entire electrical system is so greatly dependent upon the care given the battery during this critical period, that we urge you to see that the batteries of all new cars in storage or on the show room floor are periodically checked and kept properly charged.

If you will make it a point to do this and be sure that the battery of every new car shows a gravity reading of at least 1280 before the car is placed in service, complaints of run down batteries and related difficulties will be at a minimum.

E. J. Blum

Technical Service Manager

# General Technical Policies

## AND Information

1938 Bulletin Series

Effective October 1st

6

Number

5/9/38

Date

### SUBJECT

#### PREPARING THE HUDSON 112 FOR DEMONSTRATING USE

#### DRIVING NEW CAR

One of the first requisites in the preparation of a car for successful demonstrating work is that it be properly "broken in". This is of vital importance in order to allow the working parts of the engine and other units to gradually accustom themselves to fast acceleration and high speed driving and cannot be accomplished by merely driving the car considerable distances at certain fixed speeds.

Generally speaking, a car driven at speeds not in excess of 30 miles per hour for a thousand or more miles may develop into a good 30 mile an hour car, but there is always a possibility that trouble may be encountered if it is suddenly opened up and driven hard for any distance.

#### PERFORM INSPECTION OPERATIONS

In the case of a brand new car which is to be used as a demonstrator, the standard new car pre-delivery inspection operations should first be performed, checking each operation listed on the inspection card. After this has been carefully done the actual "break-in" may begin, adhering closely to the following recommended driving procedure.

#### BREAKING- IN PROCEDURE

Drive the car steadily for about two hours at speeds not in excess of 40 miles per hour. Next, step up the speed to 50 miles an hour, holding it there for a few seconds only and then letting it drop back to 30 miles per hour. After driving a few minutes at this speed, gradually accelerate to 50 miles per hour, hold it there for a few seconds and slow down again. Do this continuously for an hour, then stop up the speed to 55 miles per hour and do the same thing, dropping down and picking up speed for the next three hours or until approximately 250 miles have been covered. After this amount of driving, the speed can be increased to 60 miles per hour, but as before, be careful to hold this speed only momentarily, then drop back to 35 miles per hour. After three or four additional hours of this kind of driving, the car should be sufficiently well broken in for use as a demonstrator, although if time is not a factor, a still better job could be done by continuing this procedure for a few days.

#### PREPARING CAR FOR ECONOMY DEMONSTRATIONS

Upon completion of the break-in process, the car should be returned to the shop and the following details carefully gone into:

1. CHECK TIRE PRESSURE. Front tires should be inflated to exactly 24 lbs. and the rear tires to 32 lbs. on all models. Pressures should be checked every day and in hot weather this should be done after the car has been run and the tires warmed up.

(OVER)

- BRAKE ADJUSTMENT 2. CHECK BRAKE ADJUSTMENT. Brakes must be adjusted to stop the car properly and at the same time there must be no tendency to drag this would cut down the gasoline mileage and impair performance. All wheels must rotate freely with the car jacked up and the brakes released.
- WHEEL BEARING 3. CHECK WHEEL BEARING ADJUSTMENT. Like the brakes, the wheel bearings must be adjusted so no excess looseness exists and at the same time, the wheels turn easily.
- HEAT CONTROL VALVE 4. EXHAUST MANIFOLD HEAT CONTROL VALVE SETTING. Good fuel economy and performance depend to a great extent on the correct amount of heat for proper fuel vaporization. For cold weather operation, set the valve to the "W" or winter position and for normal spring and summer temperatures, to the straight up and down position midway between the letters "h" and "S" on the manifold. Do not set the valve to the extreme forward or "S" position unless the car is driven continuously under extreme high temperature conditions.
- ENGINE OIL DRAIN 5. DRAIN ENGINE OIL RESERVOIR and refill with 4-1/2 quarts of S.A.E.-10 engine oil of good quality. (The use of light oil is essential in securing best fuel mileage and performance.)
- AIR CLEANER 6. CLEAN AND RE-OIL CARBURETOR AIR CLEANER using S.A.E. 10. oil. Cleaning the element and using light oil will minimize restriction and promote fuel economy although more frequent service attention will be needed than when the regular heavier oils are used for this purpose.
- COMPRESSION 7. CHECK COMPRESSION OF EACH CYLINDER WITH GAUGE. Compression should be good and the variation between the different cylinders should not exceed 5 lbs.
- SPARK 8. CHECK DISTRIBUTOR SPARK ADVANCE. Make sure distributor automatic, advance mechanism operates freely and advances the spark properly throughout its entire range. Lubricate mechanism.
- CONTACT POINTS 9. CHECK DISTRIBUTOR CONTACT POINTS. See that points are clean, make full surface contact and are adjusted to .020" gap.
- WIRING 10. COIL TO DISTRIBUTOR WIRE. Pull high tension wire from center of distributor head and out through the hole in the lower bracket through which the other high tension wires pass. Reconnect wire to distributor head leaving it out of the bracket. (On late cars this will not be necessary as this has been done in production.) See that other wires are firmly in place in the distributor cap and are in good condition.

# General Technical Policies

## AND Information

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Number

5/9/38

Date

#### SUBJECT

SPARK  
PLUGS

11. CHECK SPARK PLUGS. Spark plugs must be in good condition, clean, and adjusted to .032" gap.

IGNITION  
TIMING

12. CHECK IGNITION TIMING. Standard factory setting calls for points separating 1/4" ahead of dead center, which will serve as a starting point in determining the proper advance for best fuel economy. This should be supplemented by tests on the road in which the spark position is changed to obtain the maximum advance consistent with good engine operation, and the antiknock quality of the fuel.

CARBURETOR

13. CHECK CARBURETOR. See that needle valve seat, jets and other parts are free of dirt and foreign matter. Measure float level - this should be exactly 3/8" from top of float to bottom of cover. Inspect the operation of the anti-percolating valve to make sure that it opens properly when the throttle is closed. The operation of the vacuum controlled metering rod has an important bearing on fuel economy and performance. Check to make sure that the metering rod piston is free and moves smoothly up and down in its bore and that the link does not bind.

FUEL  
MILEAGE

The subject of fuel economy can be the basis of a good deal of inconsistent discussion and it may not be generally understood that gasoline mileage figures mean very little unless we consider the conditions under which they were obtained. Car speed for example, is one factor which has a tremendous influence on the gasoline mileage obtainable with any make of car and the figures given in the following table show how this applies to the Hudson 112 models:

EXPERIENCE  
TABLE

20 miles per hour.....	23 - 25.6 miles per gallon
30 miles per hour.....	21.5 miles per gallon
40 miles per hour.....	20 miles per gallon
50 miles per hour .....	18.5 miles per gallon
60 miles per hour .....	16.5 miles per gallon
70 miles per hour .....	14.5 miles per gallon

PRECAUTION

These results represent averages of a number of actual tests made under favorable conditions and can be duplicated by almost any Hudson 112 which has been properly tuned-up. In order to clarify any misunderstanding regarding gasoline mileage claims, it should be borne in mind that it is general practice throughout the industry to use the mileage figures obtained in 20 to 30 mile per hour tests as the basis of fuel economy advertising.

(OVER)

OTHER  
FACTORS  
AFFECTING  
MILEAGE

In addition to the necessity of driving at the lower speeds In order to secure the best possible fuel mileage, the following points are perhaps quite as important and must be observed:

SELECTED  
COURSE

Select a course on which the fewest possible number of traffic lights and stop streets will be encountered. Remember that every time you stop and start the car enough fuel is used to propel it a considerable distance on a level road.

RACING  
ENGINE

Refrain from racing the engine or running it faster than the proper idling speed when waiting at traffic intersections. Shut off the engine in the case of an extended wait.

STARTING

When starting the car after a stop, stay in low and second speeds only long enough to pick up the load and get in motion. Attaining excessive speed in low or second gear or staying in these gears longer than necessary, results in an extravagant waste of fuel and will defeat any mileage test.

CONSTANT  
SPEED

Maintain a constant speed as nearly as possible throughout the test. Slowing down and accelerating consumes extra fuel and is therefore not conducive to economy.

LEVEL  
ROUTE

It is desirable to use a level route for mileage demonstrating as hill climbing calls for open throttle driving and additional power. When possible, test runs should include driving both way of the road in order to cancel out the effects of wind.

ECONOMY  
TESTER

Make your "car get ready tests" and all of your DEMONSTRATIONS with a GASOLINE ECONOMY TESTER.

SPECIAL  
CARBURETOR  
EQUIPMENT

Let us EMPHASIZE here that the internal operating mechanisms of all Hudson 112 Carburetors from the beginning of production are exactly alike. This statement is made so that you will not be confused should you note certain differing parts numbers. We further wish to EMPHASIZE that it is not only unnecessary to substitute other metering rods for purposes of attempting to get additional economy but that such changes SHOULD NOT BE MADE.

B. J. Blum

Technical Service Manager.

**General Technical Policies****AND Information****1938 Bulletin Series****Effective October 1st**

8

Number

7-29-38

Date

**SUBJECT****ENGINE  
OILS**

From information reaching us, it is evident that there is some misunderstanding in the field in regard to our recommendations concerning the proper type of engine oil to be used in Hudson and Hudson Terraplane cars.

It appears that in certain sections there is a leaning toward the use of the lighter oils principally those of S.A.E. 10 and 20 viscosity instead of the heavier S.A.E. 30 oils, which should be practically in universal use throughout the country in our cars at this season of the year. The use of these light oils is, of course, advocated by us but only for the colder months of the year when proper fluidity for efficient lubrication and easy starting are problems with which car owners are confronted.

The matter of the proper oil to use in order to insure the best possible results in our cars under all seasonal and operating conditions, has been given a great deal of attention by our Engineering Department and the table of recommended oil viscosities, which we have been using for some time, was evolved after considerable research work and experimentation. In light of our experience, therefore, and because of the importance of oil viscosity as related to proper engine operation and owner satisfaction we ask that you instruct your owners and service personnel to adhere strictly to the following recommendations, regardless of their own opinions or the suggestion of others.

For minimum air temperatures of +50°F.- Use S.A.E. 30 oil

For minimum air temperatures of +10°F. - Use 20 W oil

For minimum air temperatures of -10°F. - Use 10 W oil

For minimum air temperatures of -30°F. - Use 10 W oil and  
10% kerosene

As you know, the subject of engine oils is completely covered in the lubrication chart and text of the Instruction Book or Owner Manual provided with every car, as well as in the Mechanical Procedure Manual and the large Lubrication Wall Charts which have been supplied to all Distributors and Dealers.

E. J. Blum

Technical Service Manager